



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 28, 2014 – 05:56 PM GMT

PDB ID : 2QBE
Title : Crystal structure of the bacterial ribosome from Escherichia coli in complex with ribosome recycling factor (RRF). This file contains the 50S subunit of the first 70S ribosome, with RRF bound. The entire crystal structure contains two 70S ribosomes and is described in remark 400.
Authors : Borovinskaya, M.A.; Pai, R.D.; Zhang, W.; Schuwirth, B.-S.; Holton, J.M.; Hirokawa, G.; Kaji, H.; Kaji, A.; Cate, J.H.D.
Deposited on : 2007-06-16
Resolution : 3.30 Å(reported)

This is a full wwPDB validation report for a publicly released PDB entry.
We welcome your comments at validation@mail.wwpdb.org
A user guide is available at <http://wwpdb.org/ValidationPDFNotes.html>

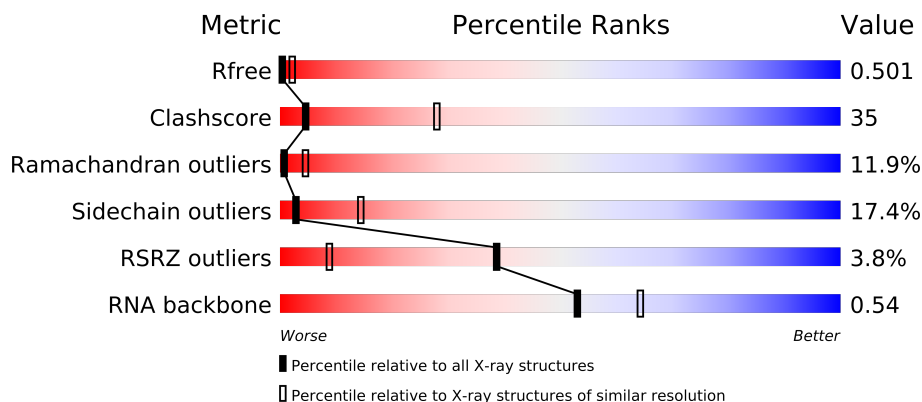
The following versions of software and data (see [references](#)) were used in the production of this report:

MolProbity	:	4.02b-467
Mogul	:	1.15 2013
Xtriage (Phenix)	:	dev-1323
EDS	:	stable22639
Percentile statistics	:	21963
Refmac	:	5.8.0049
CCP4	:	6.3.0 (Settle)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP)	:	stable22683

1 Overall quality at a glance

The reported resolution of this entry is 3.30 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	66092	1341 (3.40-3.20)
Clashscore	79885	1696 (3.40-3.20)
Ramachandran outliers	78287	1664 (3.40-3.20)
Sidechain outliers	78261	1662 (3.40-3.20)
RSRZ outliers	66119	1342 (3.40-3.20)
RNA backbone	1838	1042 (3.90-2.70)

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. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density.

Mol	Chain	Length	Quality of chain
1	A	120	
2	B	2904	
3	I	141	
4	C	272	
5	D	209	
6	K	123	
7	P	114	
8	E	201	
9	Y	58	
10	0	56	
11	4	38	
12	1	54	

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Mol	Chain	Length	Quality of chain
13	3	64	
14	V	94	
15	2	46	
16	L	144	
17	M	136	
18	X	63	
19	H	149	
20	J	142	
21	N	127	
22	O	117	
23	Q	117	
24	S	110	
25	U	103	
26	F	178	
27	G	176	
28	R	103	
29	T	100	
30	Z	78	
31	W	84	
32	6	185	

The following table lists non-polymeric compounds that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Geometry	Electron density
33	MG	B	3032	-	X
33	MG	B	3044	-	X
33	MG	B	3141	-	X
33	MG	B	3194	-	X
33	MG	B	3344	-	X
33	MG	B	3400	-	X
33	MG	B	3521	-	X
33	MG	B	3561	-	X

2 Entry composition

There are 35 unique types of molecules in this entry. The entry contains 91734 atoms, of which 0 are hydrogen and 0 are deuterium.

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 5S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	117	Total	C	N	O	P	0	0	0
			2507	1116	459	815	117			

- Molecule 2 is a RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	2841	Total	C	N	O	P	0	0	0
			60995	27210	11229	19715	2841			

- Molecule 3 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	I	141	Total	C	N	O	S	0	0	0
			1032	651	179	196	6			

- Molecule 4 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	C	271	Total	C	N	O	S	0	0	0
			2082	1288	423	364	7			

- Molecule 5 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	D	209	Total	C	N	O	S	0	0	0
			1565	979	288	294	4			

- Molecule 6 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	K	121	Total	C	N	O	S	0	0	0
			930	582	179	164	5			

- Molecule 7 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	P	114	Total	C	N	O	S	0	0	0
			917	574	179	163	1			

- Molecule 8 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	E	201	Total	C	N	O	S	0	0	0
			1552	974	283	290	5			

- Molecule 9 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	Y	58	Total	C	N	O	S	0	0	0
			449	281	87	79	2			

- Molecule 10 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	0	56	Total	C	N	O	S	0	0	0
			444	269	94	80	1			

- Molecule 11 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	4	38	Total	C	N	O	S	0	0	0
			302	185	65	48	4			

- Molecule 12 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
12	1	50	Total	C	N	O	0	0	0
			409	263	75	71			

- Molecule 13 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	3	64	Total	C	N	O	S	0	0	0
			504	323	105	74	2			

- Molecule 14 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	V	94	Total	C	N	O	S	0	0	0
			753	479	137	134	3			

- Molecule 15 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	2	46	Total	C	N	O	S	0	0	0
			377	228	90	57	2			

- Molecule 16 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	L	143	Total	C	N	O	S	0	0	0
			1045	649	206	189	1			

- Molecule 17 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	M	136	Total	C	N	O	S	0	0	0
			1074	686	205	177	6			

- Molecule 18 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	X	63	Total	C	N	O	S	0	0	0
			509	313	99	95	2			

- Molecule 19 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	H	149	Total	C	N	O	S	0	0	0
			1111	699	197	214	1			

- Molecule 20 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	J	142	Total	C	N	O	S	0	0	0
			1129	714	212	199	4			

- Molecule 21 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	N	120	Total	C	N	O	S	0	0	0
			960	593	196	166	5			

- Molecule 22 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	O	116	Total	C	N	O		0	0	0
			892	552	178	162				

- Molecule 23 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	Q	117	Total	C	N	O		0	0	0
			947	604	192	151				

- Molecule 24 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	S	110	Total	C	N	O	S	0	0	0
			857	532	166	156	3			

- Molecule 25 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	U	102	Total	C	N	O		0	0	0
			779	492	146	141				

- Molecule 26 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	F	178	Total	C	N	O	S	0	0	0
			1420	905	251	258	6			

- Molecule 27 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	G	176	Total	C	N	O	S	0	0	0
			1323	832	243	246	2			

- Molecule 28 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	R	103	Total	C	N	O	S	0	0	0
			816	516	153	145	2			

- Molecule 29 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	T	93	Total	C	N	O	S	0	0	0
			738	466	139	131	2			

- Molecule 30 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	Z	77	Total	C	N	O	S	0	0	0
			625	388	129	106	2			

- Molecule 31 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	W	79	Total	C	N	O	S	0	0	0
			596	367	120	108	1			

- Molecule 32 is a protein called ribosome recycling factor.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	6	185	Total	C	N	O	S	0	0	0
			1478	924	270	282	2			

- Molecule 33 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
33	B	110	Total	Mg	0	0
			110	110		

- Molecule 34 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
34	4	1	Total	Zn	0	0
			1	1		

- Molecule 35 is water.

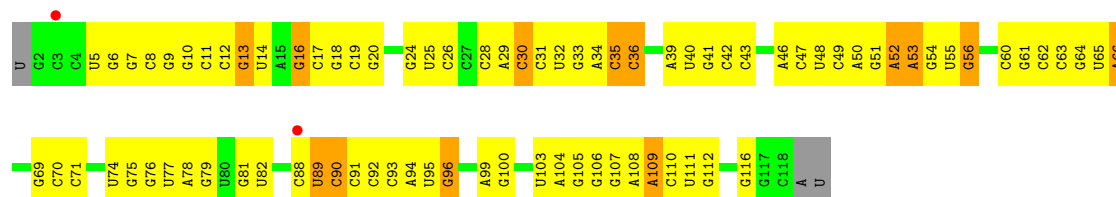
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
35	B	495	Total 495	O 495	0	0
35	C	4	Total 4	O 4	0	0
35	D	1	Total 1	O 1	0	0
35	E	4	Total 4	O 4	0	0
35	L	1	Total 1	O 1	0	0
35	T	1	Total 1	O 1	0	0

3 Residue-property plots

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

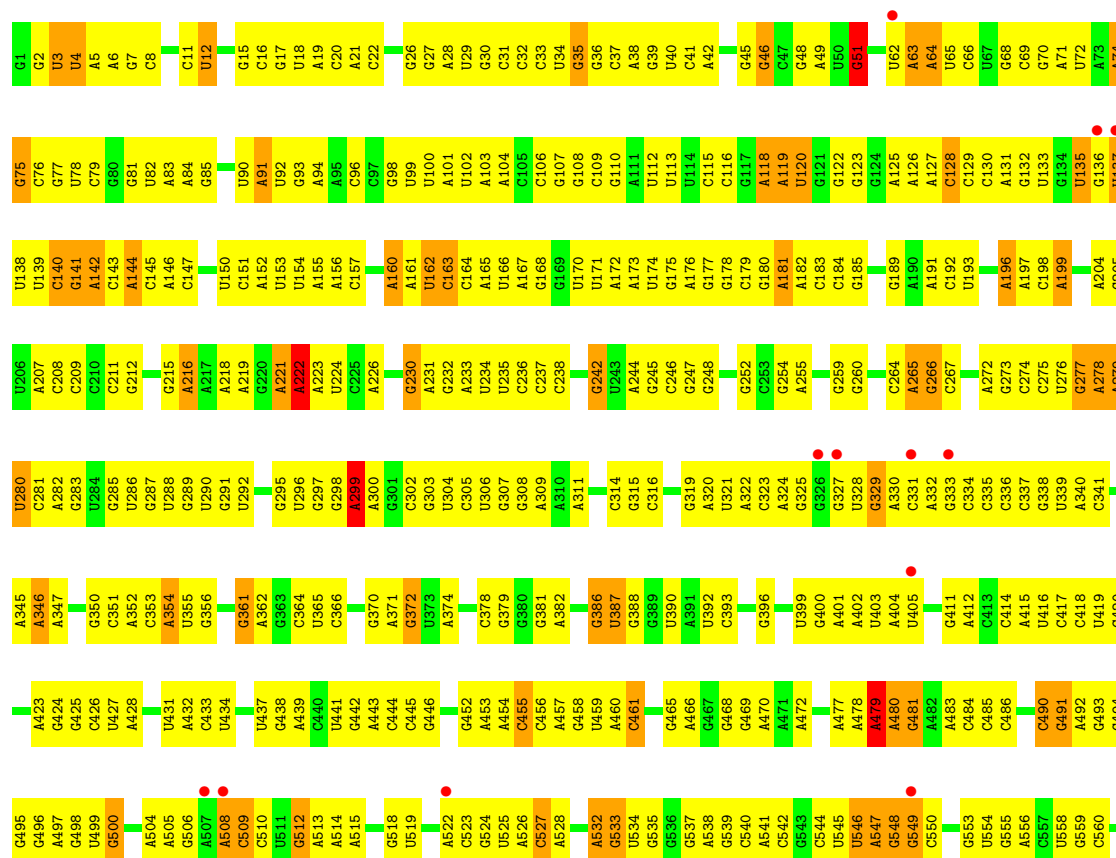
• Molecule 1: 5S rRNA

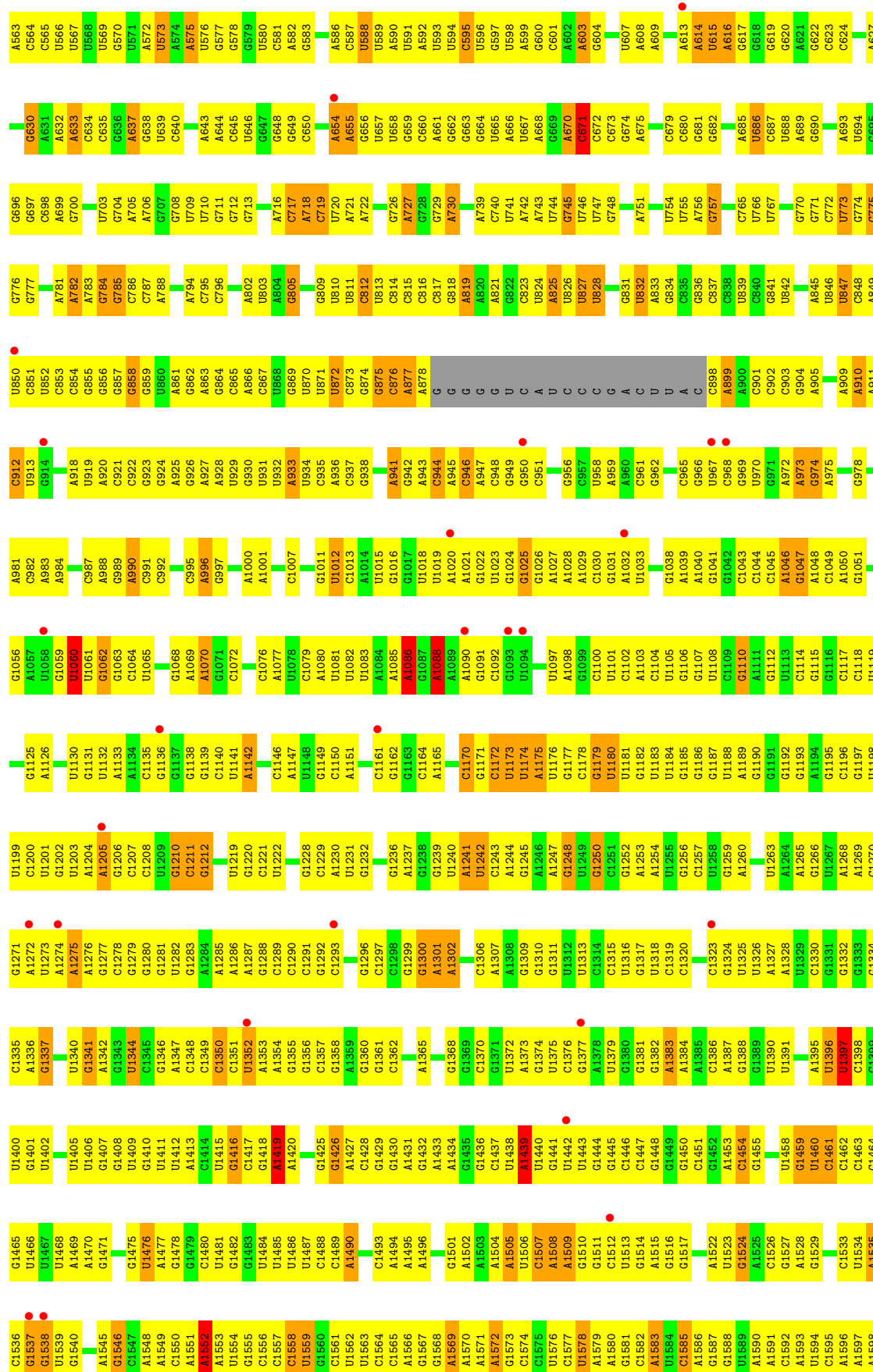
Chain A: 



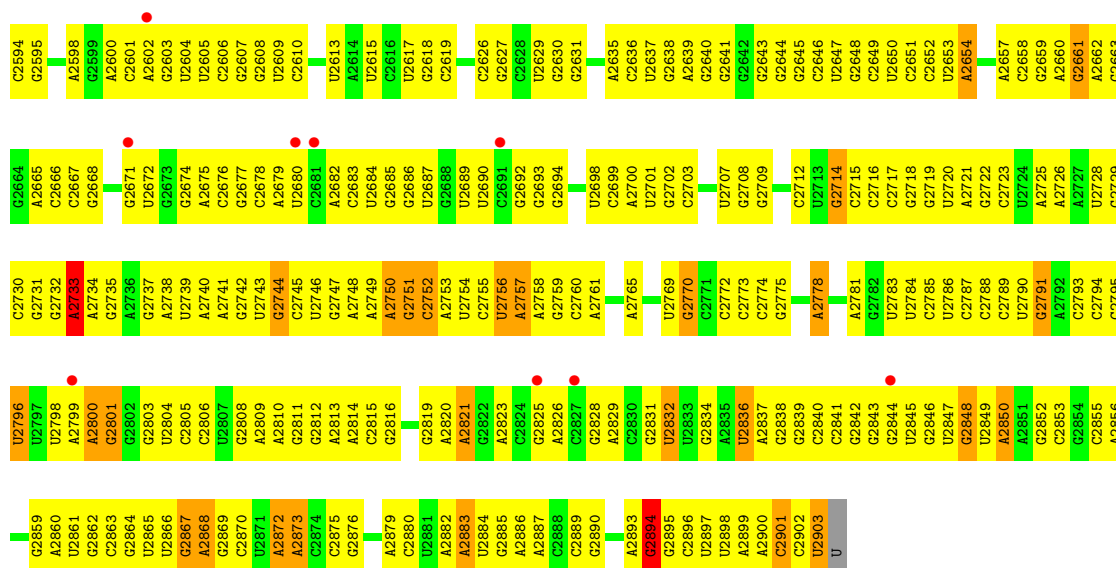
• Molecule 2: 23S rRNA

Chain B: 

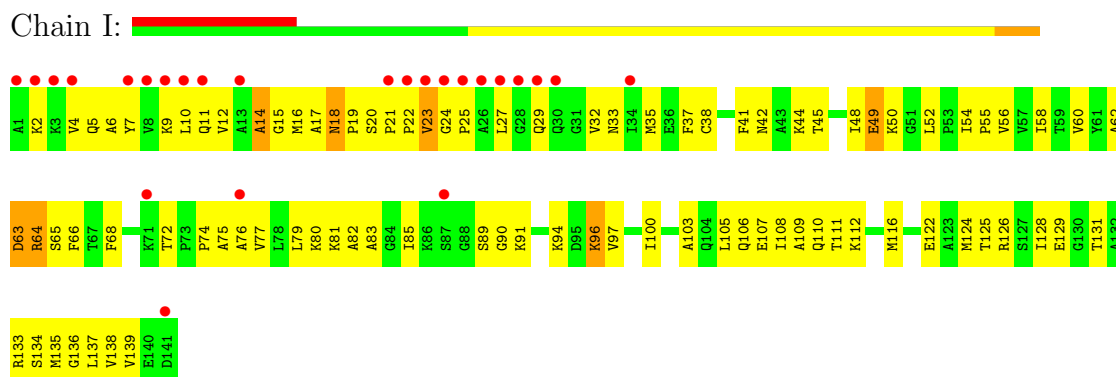




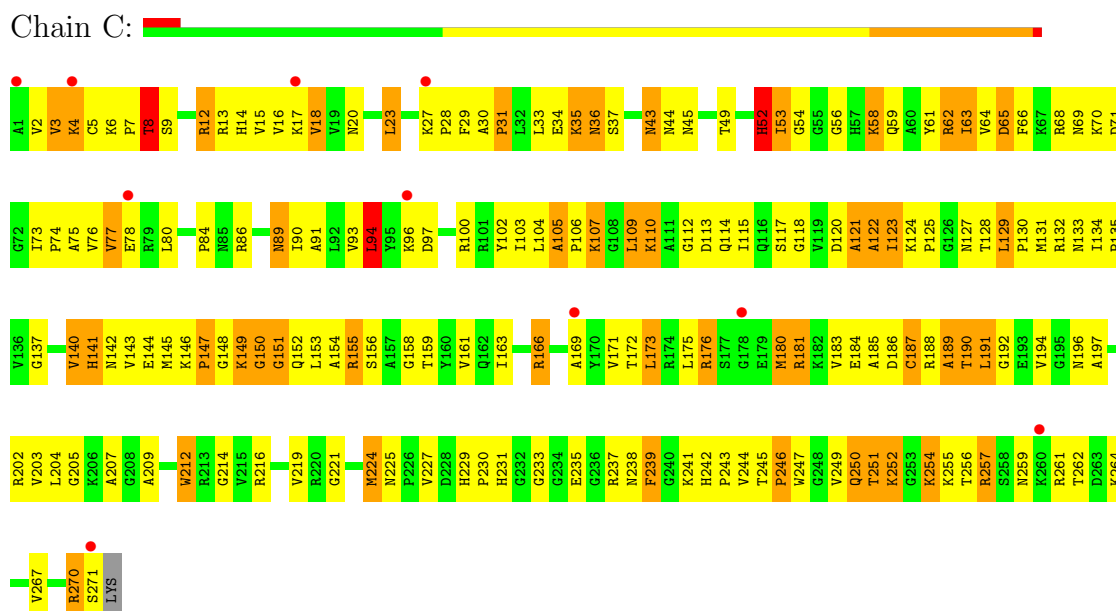
C2512	U2438	A2389	G2303	U2233	A	U	G2049	A1966	C1902	A1821	A1745	G1681	U1599
A2514	C2439	G2370	G2304	G2234	U	G	C2050	G1967	G1903	C1822	A1746	G1682	C1600
C2515	U2440	G2371	U2305	G2235	A	G	C2051	G1968	G1904	G1823	U1747	U1683	U1603
A2516	C2441	G2372	C2306	A2051	C	A	A2052	A1969	C1905	U1824	C1748	G1684	
C2517	G2442	G2373	G2307	G2236	C	G	G2053	U1970	G1906	G1825		C1686	C1607
G2443	C2374	G2308	G2308	G2238	A	G	A2054	U1971	G1907	U1826	A1755	C1687	U1608
G2444	G2375	C2309	G2309	G2239	C	A	C2055	G1972	C1908	U1827	U1756	U1688	A1609
G2445	A2376	C2310	A2310	U2240	C	A	C2056	U1979	C1909	A1828	A1757	A1690	A1610
G2446	A2377	A2241	U2311	A2241	C2179	A	G2057	U1980	G1910	U1830	A1759	A1691	C1611
G2447	A2378	U2312	U2312	G2242	U2180	G		G1984	U1911	G1831	C1760	G1692	C1612
A2448	G2379	U2313	U2313	U2243	U2181	U		G1985	A1912	C1832	C1761	U1693	G1613
U2449	C2380	A2314	A2314	U2244	U2182	G	A2060	G1986	A1913	C1838	A1762	U1694	A1616
A2450	A2381	G2315	G2315	U2245	A2183	G	C2061	C1987	C1914		G1763	C1694	C1617
	G2382			G2246	A2184	G	A2062	G1988	U1915	G1843	C1764		G1622
G2455	G2383	G2319	G2319	G2247	U2185	G	C2063	U1989	A1916	C1844	A1772	G1702	G1623
C2456	U2384	U2320	U2320	C2248	A2186	G	C2064	G1990	A1917	C1845	C1773	G1703	U1624
U2457	G2385	U2321	U2321	U2249	U2187	A	C2065	U1991	A1918	G1846	A1774	C1704	
G2458	A2386	A2322	G2250	G2250	U2188	G	C2066	U1992	A1919	U1847	U1775	A1705	G1632
U2459	U2387	G2251	G2251	C2251	U2189	C	G2067	U1993	G1922	A1848		G1633	G1634
A2531	A2388		G2325	C2254	G2190	U	U2068	C1996	G1922		U1779	G1707	A1634
G2532	G2389	A2461	A2327		U2191	U	A2070	U1997	U1923	A1853		G1708	A1635
C2463	G2391	A2463	A2328	C2260	U2195	G	A2071	C1998	C1924	A1854	A1783	U1709	U1636
G2464	U2392		U2329	C2261	C2196	G	C2072	C1999	C1925	U1855	A1784	G1710	A1637
U2537	U2393		G2330	U2262	U2197	G	C2073	C2000	U1926	G1856	A1785	A1711	C1638
C2538	C2394		C2263	C2263	A2198	G	U2074	C2001	A1927	G1857	A1786	C1639	G1639
C2539	C2395		C2332	C2264	U2199	G	U2075	G2002	A1928	A1858	A1787	A1713	A1640
C2540	G2396		U2265	U2265	A2200	C	U2076		G1929	U1859	C1788	U1714	A1641
			A2334	U2266	C2201	G	A2077	C2008	G1930	G1860	U1716	G1642	G1643
A2471		G2399	A2335	A2267	G2201	G	C2078	G2009	U1931	U1865	A1791	G1717	U1647
G2472	U2400	A2401	A2336	A2268	U2202	G	U2079	A2010	G1932	U1866	G1792	U1718	U1648
C2475	U2402	U2402	G2337	C2269	U2203	G	A2080	G2011	G1933	G1867	C1793	U1719	U1649
U2476	U2403		C2338	C2143	G2204	G	U2081	A2013	C1934	U1869	A1794	U1720	G1649
U2477	A2404		C2339	C2144	A2205	G		A2014	G1935	C1868		G1721	A1652
A2478	G2405		C2340	C2145	C2206	G	U2085	A2015	A1936	C1870	U1796	G1722	G1653
U2479	A2406	C2207	G2341	C2146	C2207	G	U2086	U2016	U1937	C1871	G1797	G1723	A1654
C2480	A2407		G2342	C2147	C2208	G	G2087	A2017	C1937	U1875	U1801	C1727	C1655
U2481	U2408		U2343	C2148	A2211		C2088		A1938	A1876	A1802	G1656	U1657
G2482	G2409	A2211	U2344	U2149	A2212	G	C2089	A2020	U1939	U1870	U1798	G1658	G1659
C2483	G2410	U2212	G2345	C2150	A2213	C	A2090	C2021	U1940	A1871	G1799	G1660	G1660
G2484	A2412	U2213	C2346	U2151	G2263	G	C2091	U2022	G1941	A1872	U1798	G1730	U1661
G2485	C2413		C2347	G2152	G2214	A	U2092	C2023	C1942	G1873	C1800	C1726	C1662
C2486	G2414			C2153	C2215		G2093	G2024	U1943	C1874	A1801	C1727	U1667
	G2415	A2352		A2154	G2216		A2094	C2025		A1876	A1802	C1728	U1668
U2489	C2416	G2415	G2353	G2286	G2217	G	C2096	U2026	U1946	U1880	A1803	G1729	G1669
G2490	A2417	A2287	C2354	C2287	G2218	G	U2097	G2027	C1947	C1881	A1804	C1730	G1670
U2491	U2419	G2269	G2355	G2269	U2219	A	C2098	U2028	G1948	U1882	A1805	G1731	U1671
	C2420	U2356	G2356	G2290	U2220	G	U2098	G2029	G1949	U1882	C1732	U1682	
C2496		U2391	U2357	U2291	G2221	G	U2099	A2030		U1883	A1808	G1733	U1683
A2497	U2423	C2358	U2292	U2292	C2222	C	G2100	A2031	A1952	C1884	A1809	G1734	A1685
C2498	U2424	G2223	G2293	C2223	A2101	C	C2101	C2032	U1955	A1885	A1810	G1686	G1666
C2499	A2425	G2224	G2294	G2224	A2224	G	G2102	A2033	U1956	U1886	G1811	U1736	G1667
U2500	A2426	G2225	C2361	A2225	G2226	A	C2103		C1957	C1887	A1812	G1737	A1668
C2501	C2427	C2362	U2296	U2226	G2226	C	C2104	A2037	U1957	G1888	G1813	G1738	A1669
G2502	G2428	A2227	U2227	A2227	C2227	C	U2105	G2038	C1958	A1889		A1739	
A2503	C2429	C2363	A2298	A2298	G2228	C	U2106	U2039	G1959	A1890	C1816	G1740	G1674
C2504	A2430	U2229	U2299	U2229	U2229	G	G2107	C2040	G1969	A1891	G1817	C1741	A1678
U2505	G2430	C2365	C2300	C2300	A2108	U	A2108	U2041	U1963	C1892	U1818	U1742	A1679
G2506	A2434	U2231	U2302	U2109	U2109	A	C2110	A2042	C1964	U1892	A1819	G1743	U1680
		C2367	C2367	U2303	U2303	G	C2111	C2043	C1965	U1893	A1900	A1679	U1680



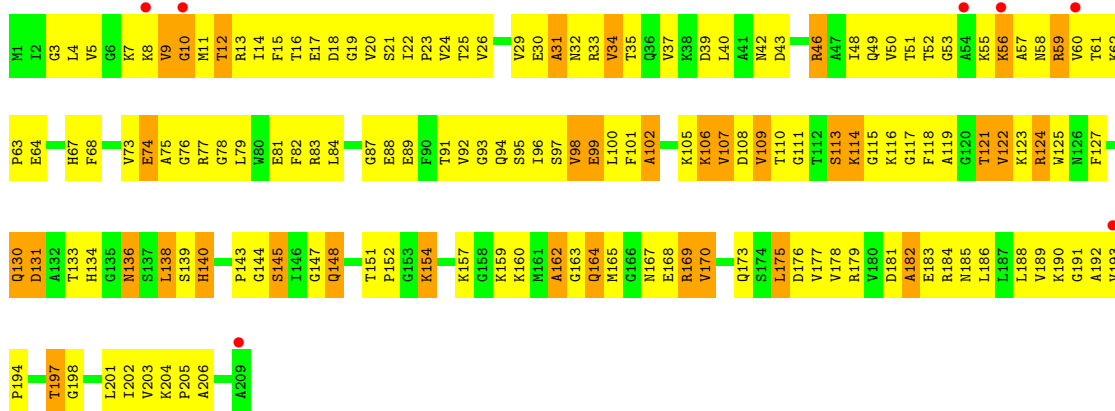
• Molecule 3: 50S ribosomal protein L11



• Molecule 4: 50S ribosomal protein L2

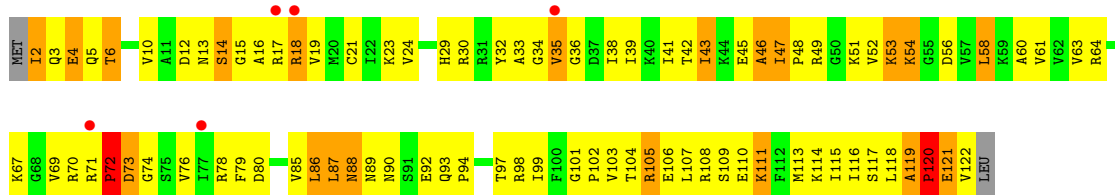


Chain D:



- Molecule 6: 50S ribosomal protein L14

Chain K:



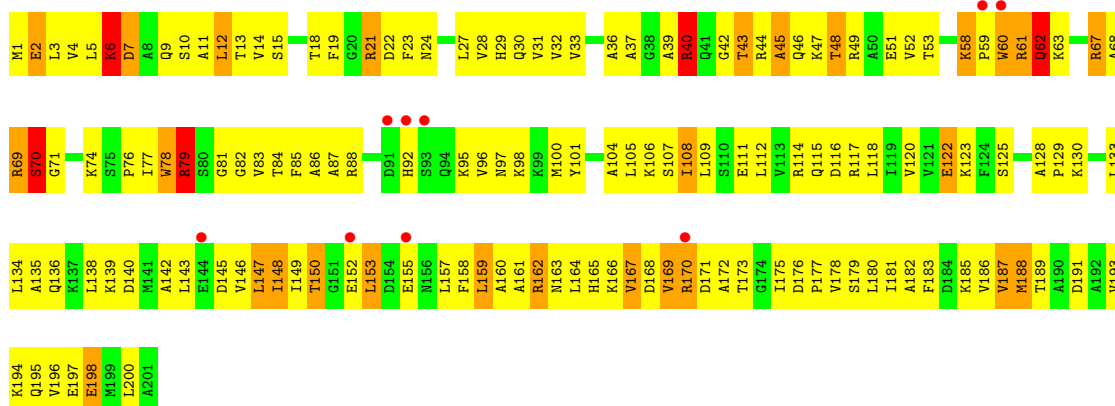
- Molecule 7: 50S ribosomal protein L19

Chain P:



- Molecule 8: 50S ribosomal protein L4

Chain E:



- Molecule 9: 50S ribosomal protein L30

Chain Y: 



- Molecule 10: 50S ribosomal protein L32

Chain 0: 



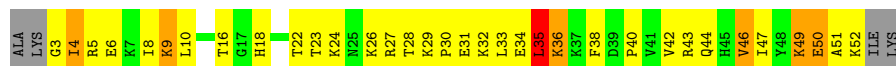
- Molecule 11: 50S ribosomal protein L36

Chain 4: 



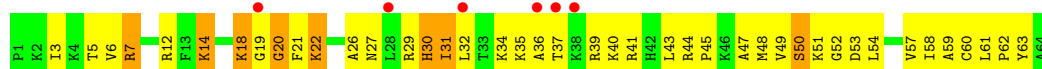
- Molecule 12: 50S ribosomal protein L33

Chain 1: 



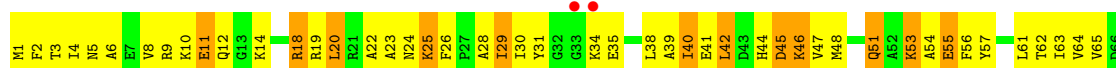
- Molecule 13: 50S ribosomal protein L35

Chain 3: 



- Molecule 14: 50S ribosomal protein L25

Chain V: 



- Molecule 15: 50S ribosomal protein L34

Chain 2: 



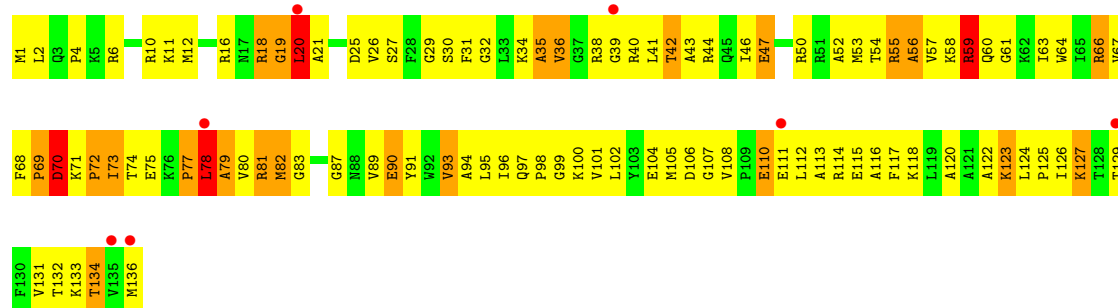
- Molecule 16: 50S ribosomal protein L15

Chain L: 



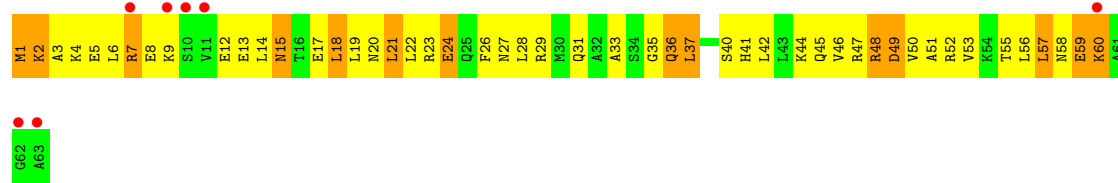
• Molecule 17: 50S ribosomal protein L16

Chain M:



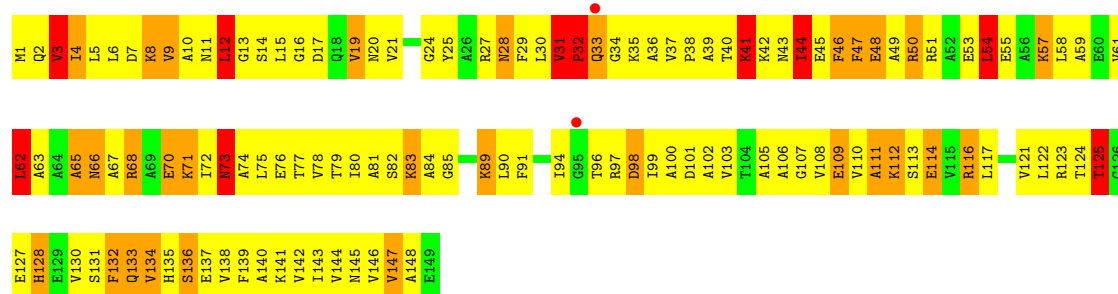
• Molecule 18: 50S ribosomal protein L29

Chain X:



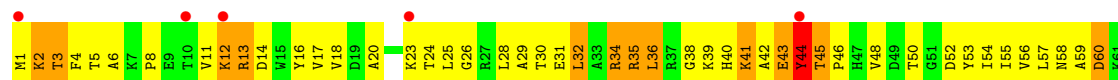
• Molecule 19: 50S ribosomal protein L9

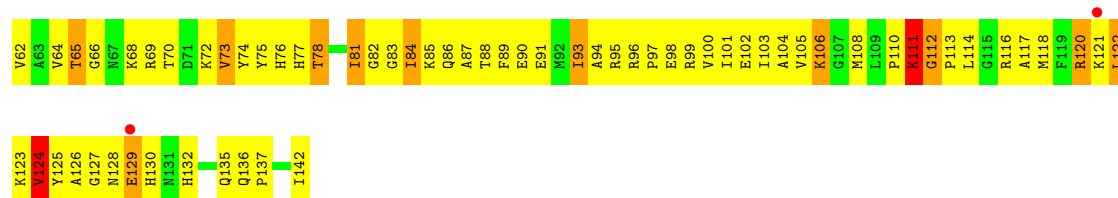
Chain H:



• Molecule 20: 50S ribosomal protein L13

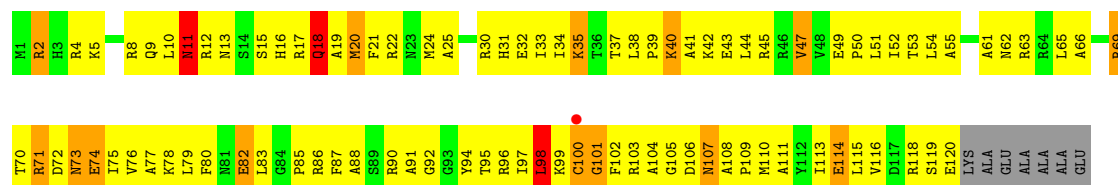
Chain J:





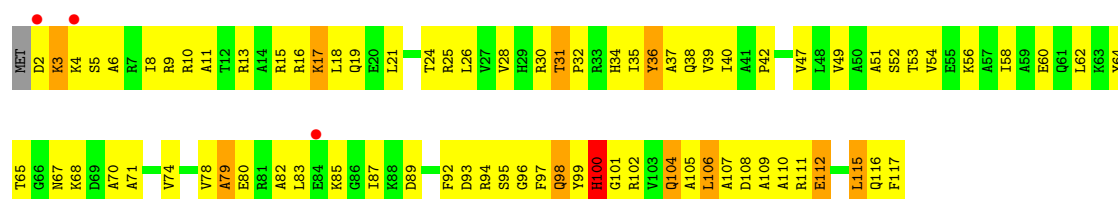
• Molecule 21: 50S ribosomal protein L17

Chain N:



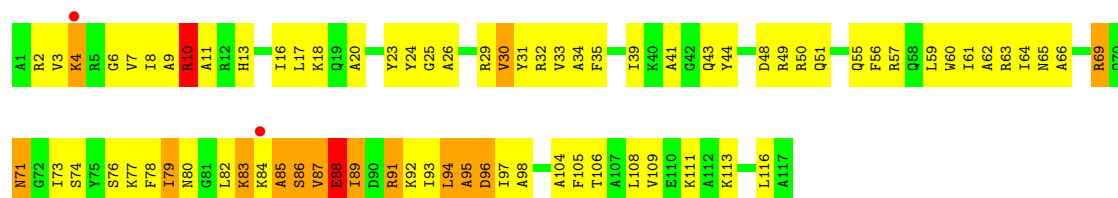
• Molecule 22: 50S ribosomal protein L18

Chain O:



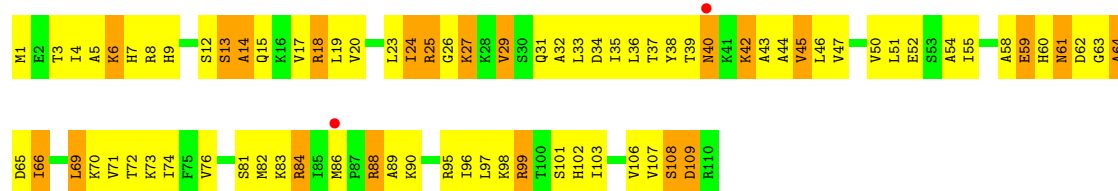
• Molecule 23: 50S ribosomal protein L20

Chain Q:



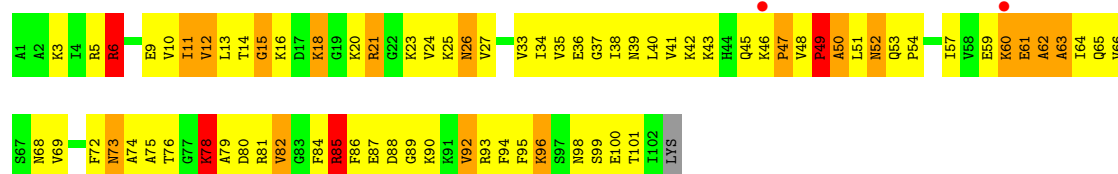
• Molecule 24: 50S ribosomal protein L22

Chain S:



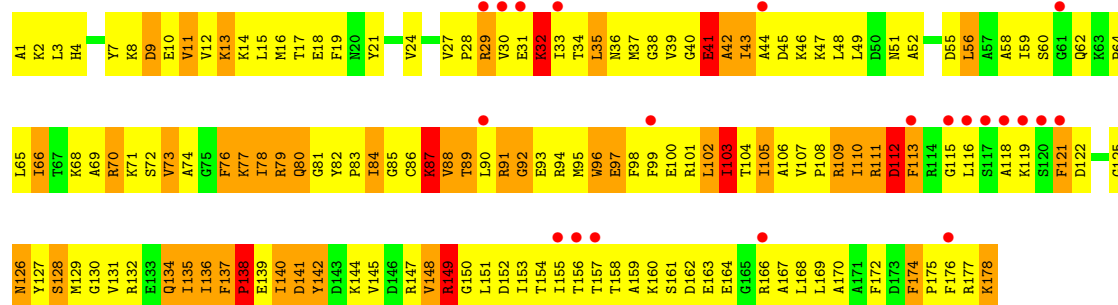
• Molecule 25: 50S ribosomal protein L24

Chain U:



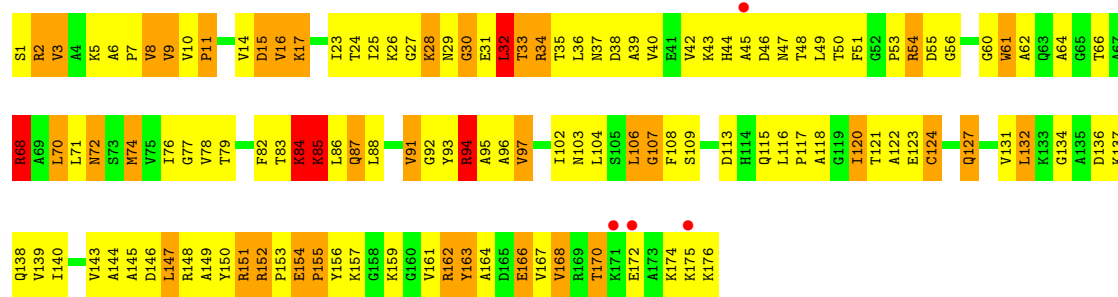
• Molecule 26: 50S ribosomal protein L5

Chain F:



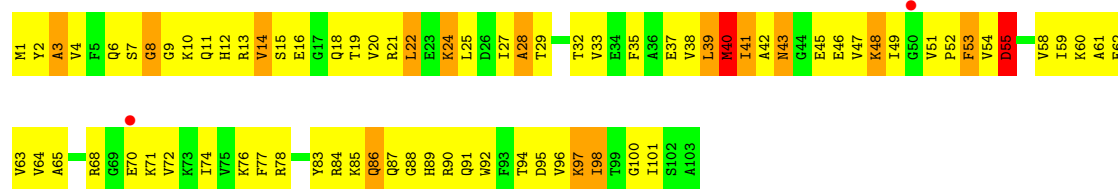
• Molecule 27: 50S ribosomal protein L6

Chain G:



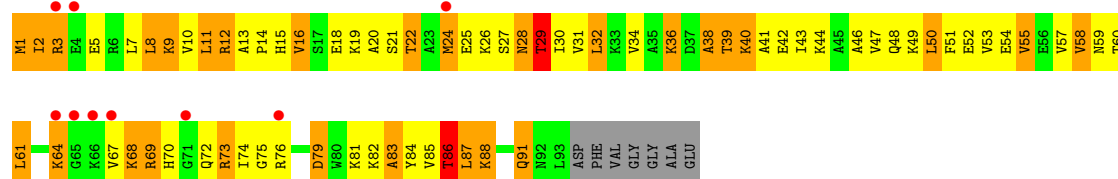
• Molecule 28: 50S ribosomal protein L21

Chain R:

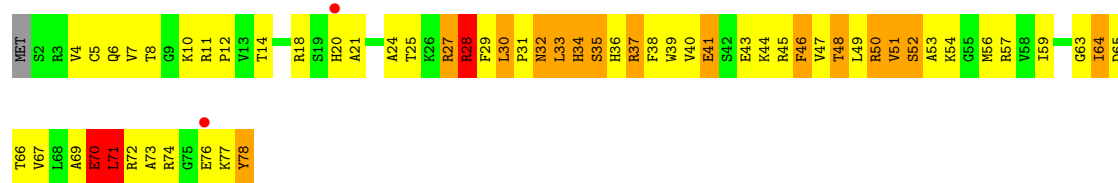


• Molecule 29: 50S ribosomal protein L23

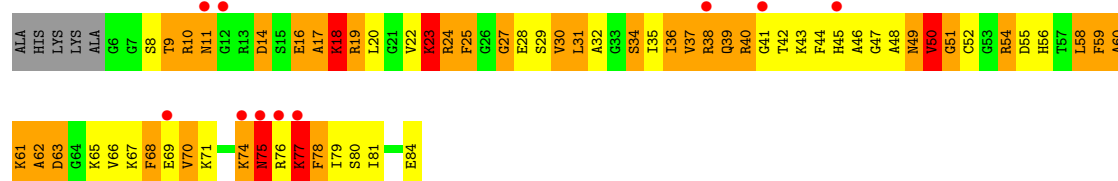
Chain T:



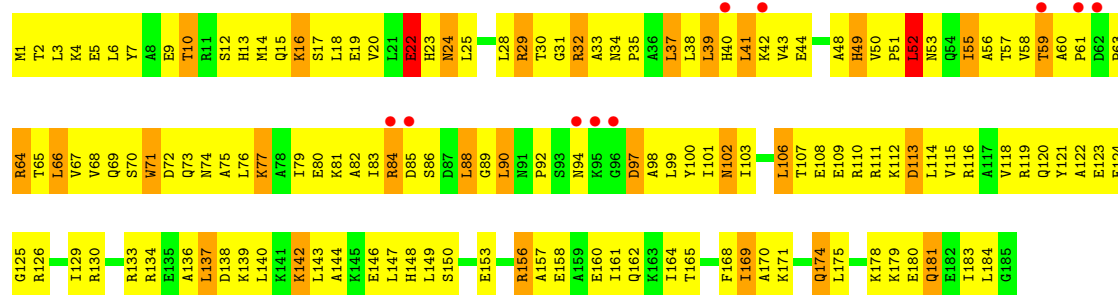
- Molecule 30: 50S ribosomal protein L28

Chain Z: 

- Molecule 31: 50S ribosomal protein L27

Chain W: 

- Molecule 32: ribosome recycling factor

Chain 6: 

4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	207.90Å 378.20Å 736.30Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	40.00 – 3.30 82.86 – 3.32	Depositor EDS
% Data completeness (in resolution range)	85.8 (40.00-3.30) 87.1 (82.86-3.32)	Depositor EDS
R_{merge}	0.10	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.17 (at 3.33Å)	Xtriage
Refinement program	CNS	Depositor
R, R_{free}	0.275 , 0.304 0.496 , 0.501	Depositor DCC
R_{free} test set	26469 reflections (3.58%)	DCC
Wilson B-factor (Å ²)	83.9	Xtriage
Anisotropy	0.393	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.23 , 36.0	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.32$	Xtriage
Outliers	2 of 738833 reflections (0.000%)	Xtriage
F_o, F_c correlation	0.56	EDS
Total number of atoms	91734	wwPDB-VP
Average B, all atoms (Å ²)	70.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.37% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

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	A	0.25	0/2803	0.74	1/4371 (0.0%)
2	B	0.28	6/68314 (0.0%)	0.77	55/106569 (0.1%)
3	I	0.24	0/1046	0.47	0/1410
4	C	0.22	0/2121	0.48	0/2852
5	D	0.24	0/1586	0.49	0/2134
6	K	0.24	0/939	0.55	0/1258
7	P	0.25	0/929	0.50	0/1242
8	E	0.24	0/1571	0.51	0/2113
9	Y	0.23	0/453	0.50	0/605
10	O	0.22	0/450	0.56	0/599
11	4	0.23	0/303	0.47	0/397
12	1	0.27	0/416	0.49	0/554
13	3	0.24	0/513	0.47	0/676
14	V	0.25	0/766	0.43	0/1025
15	2	0.26	0/380	0.48	0/498
16	L	0.23	0/1054	0.49	0/1403
17	M	0.25	0/1093	0.49	0/1460
18	X	0.24	0/510	0.52	0/677
19	H	0.25	0/1122	0.48	0/1515
20	J	0.23	0/1152	0.48	0/1551
21	N	0.24	0/973	0.51	0/1301
22	O	0.23	0/902	0.49	0/1209
23	Q	0.25	0/960	0.49	0/1278
24	S	0.22	0/864	0.52	0/1156
25	U	0.25	0/787	0.47	0/1051
26	F	0.26	0/1444	0.52	0/1937
27	G	0.23	0/1343	0.48	0/1816
28	R	0.25	0/829	0.49	0/1107
29	T	0.23	0/744	0.55	0/994
30	Z	0.25	0/635	0.52	0/848
31	W	0.28	0/603	0.52	0/797
32	6	0.24	0/1497	0.48	0/2017

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
All	All	0.27	6/99102 (0.0%)	0.71	56/148420 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
2	B	0	29

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1086	A	C5-C6	-16.41	1.26	1.41
2	B	1088	A	C6-N1	-10.54	1.28	1.35
2	B	1060	U	C2-N3	7.86	1.43	1.37
2	B	2181	U	C4'-C3'	-7.35	1.45	1.53
2	B	1086	A	N3-C4	-6.62	1.30	1.34
2	B	1086	A	N7-C5	-6.43	1.35	1.39

All (56) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2204	G	O5'-P-OP2	-27.99	77.11	110.70
2	B	2791	G	O5'-P-OP1	-27.68	77.49	110.70
2	B	2204	G	O5'-P-OP1	17.95	132.24	110.70
2	B	2791	G	O5'-P-OP2	17.88	132.16	110.70
2	B	2790	U	OP1-P-O3'	14.44	136.96	105.20
2	B	2203	U	OP2-P-O3'	14.16	136.36	105.20
2	B	2272	U	C5-C4-O4	-11.66	118.91	125.90
2	B	745	G	C5'-C4'-C3'	-8.21	102.87	116.00
2	B	1088	A	N1-C6-N6	-8.19	113.69	118.60
2	B	1397	U	C5'-C4'-C3'	-8.15	102.96	116.00
2	B	1907	G	C4'-C3'-O3'	8.06	129.12	113.00
2	B	2272	U	N3-C4-O4	-8.04	113.77	119.40
2	B	1350	C	C5'-C4'-C3'	-7.93	103.32	116.00
2	B	560	C	C5'-C4'-C3'	-7.53	103.96	116.00
2	B	1600	C	C5'-C4'-C3'	-7.30	104.32	116.00
2	B	1060	U	C5-C4-O4	-7.26	121.54	125.90
2	B	1086	A	C4-C5-C6	7.18	120.59	117.00
2	B	671	C	C5'-C4'-C3'	-7.17	104.53	116.00
2	B	1552	A	N9-C1'-C2'	-6.95	104.35	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	773	U	C5'-C4'-C3'	-6.95	104.88	116.00
2	B	2272	U	O4'-C1'-N1	6.79	113.63	108.20
2	B	1088	A	C5-C6-N6	6.41	128.82	123.70
2	B	2733	A	N9-C1'-C2'	-6.37	104.99	112.00
2	B	508	A	C4'-C3'-O3'	-6.36	96.05	109.40
2	B	2282	G	C5'-C4'-C3'	-6.31	105.90	116.00
2	B	1086	A	C6-C5-N7	-6.29	127.90	132.30
2	B	1439	A	N9-C1'-C2'	-6.22	105.15	112.00
2	B	1337	G	C5'-C4'-C3'	-6.13	106.19	116.00
2	B	2619	C	C5'-C4'-C3'	-6.12	106.22	116.00
2	B	1911	U	C4'-C3'-O3'	6.07	125.15	113.00
2	B	2191	A	C5'-C4'-C3'	-6.05	106.33	116.00
2	B	690	G	C5'-C4'-C3'	-5.96	106.46	116.00
2	B	825	A	C5'-C4'-C3'	-5.89	106.58	116.00
2	B	944	C	C5'-C4'-C3'	-5.88	106.60	116.00
2	B	104	A	C5'-C4'-C3'	-5.86	106.62	116.00
2	B	2283	C	O5'-P-OP2	-5.86	100.43	105.70
2	B	832	U	C5'-C4'-C3'	-5.76	106.78	116.00
2	B	479	A	C4'-C3'-O3'	-5.69	97.44	109.40
2	B	1060	U	N1-C2-O2	-5.65	118.84	122.80
2	B	2790	U	O3'-P-O5'	-5.57	93.41	104.00
2	B	1086	A	C2-N3-C4	-5.47	107.86	110.60
1	A	96	G	C5'-C4'-C3'	-5.44	107.30	116.00
2	B	461	C	C5'-C4'-C3'	-5.41	107.34	116.00
2	B	242	G	C4'-C3'-O3'	-5.40	98.05	109.40
2	B	2471	A	C5'-C4'-C3'	-5.40	107.36	116.00
2	B	2282	G	C2'-C3'-O3'	5.36	122.28	113.70
2	B	1060	U	N3-C2-O2	5.32	125.93	122.20
2	B	2203	U	O3'-P-O5'	-5.32	93.89	104.00
2	B	1344	U	C5'-C4'-C3'	-5.31	107.51	116.00
2	B	2894	G	N9-C1'-C2'	-5.24	106.24	112.00
2	B	595	C	C5'-C4'-C3'	-5.16	107.74	116.00
2	B	1907	G	C4'-C3'-C2'	5.13	107.73	102.60
2	B	2199	A	C5'-C4'-C3'	-5.05	107.92	116.00
2	B	1660	G	C5'-C4'-C3'	-5.04	107.94	116.00
2	B	2103	C	N1-C1'-C2'	5.03	120.54	114.00
2	B	1280	G	C5'-C4'-C3'	-5.00	108.00	116.00

There are no chirality outliers.

All (29) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	B	1060	U	Sidechain
2	B	1086	A	Sidechain
2	B	1088	A	Sidechain
2	B	1419	A	Sidechain
2	B	1439	A	Sidechain
2	B	1546	G	Sidechain
2	B	1572	A	Sidechain
2	B	1828	G	Sidechain
2	B	1964	G	Sidechain
2	B	2062	A	Sidechain
2	B	221	A	Sidechain
2	B	222	A	Sidechain
2	B	2272	U	Sidechain
2	B	2471	A	Sidechain
2	B	2503	A	Sidechain
2	B	2638	G	Sidechain
2	B	2733	A	Sidechain
2	B	2770	G	Sidechain
2	B	2848	G	Sidechain
2	B	2868	A	Sidechain
2	B	299	A	Sidechain
2	B	3	U	Sidechain
2	B	361	G	Sidechain
2	B	500	G	Sidechain
2	B	51	G	Sidechain
2	B	630	G	Sidechain
2	B	633	A	Sidechain
2	B	727	A	Sidechain
2	B	757	G	Sidechain

5.2 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 hydrogens added by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, and the number in parentheses is this value normalized per 1000 atoms of the molecule in the chain. The Symm-Clashes column gives symmetry related clashes, in the same way as for the Clashes column.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2507	0	1270	89	0
2	B	60995	0	30679	2161	0
3	I	1032	0	1088	112	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	C	2082	0	2157	231	0
5	D	1565	0	1616	186	0
6	K	930	0	1000	109	0
7	P	917	0	965	134	0
8	E	1552	0	1619	188	0
9	Y	449	0	491	52	0
10	0	444	0	461	39	0
11	4	302	0	340	50	0
12	1	409	0	440	51	0
13	3	504	0	574	54	0
14	V	753	0	780	86	0
15	2	377	0	418	34	0
16	L	1045	0	1117	138	0
17	M	1074	0	1157	120	0
18	X	509	0	543	56	0
19	H	1111	0	1148	220	0
20	J	1129	0	1162	156	0
21	N	960	0	1000	111	0
22	O	892	0	923	76	0
23	Q	947	0	1022	125	0
24	S	857	0	922	94	0
25	U	779	0	834	111	0
26	F	1420	0	1460	242	0
27	G	1323	0	1374	158	0
28	R	816	0	839	85	0
29	T	738	0	807	120	0
30	Z	625	0	652	63	0
31	W	596	0	610	138	0
32	6	1478	0	1526	204	0
33	B	110	0	0	0	0
34	4	1	0	0	0	0
35	B	495	0	0	5	0
35	C	4	0	0	0	0
35	D	1	0	0	0	0
35	E	4	0	0	0	0
35	L	1	0	0	0	0
35	T	1	0	0	0	0
All	All	91734	0	60994	5338	0

Clashscore is defined as the number of clashes calculated for the entry per 1000 atoms (including hydrogens) of the entry. The overall clashscore for this entry is 35.

All (5338) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:855:G:H21	31:W:23:LYS:HG2	1.08	1.11
16:L:143:GLU:HG2	16:L:144:GLU:H	1.13	1.11
8:E:21:ARG:HD2	8:E:107:SER:HB3	1.29	1.11
19:H:83:LYS:HA	19:H:148:ALA:HA	1.33	1.08
5:D:148:GLN:HG3	5:D:152:PRO:HG2	1.33	1.08
26:F:115:GLY:HA3	26:F:177:ARG:HD2	1.38	1.05
27:G:102:ILE:HG13	27:G:116:LEU:HD11	1.37	1.04
5:D:106:LYS:HB3	5:D:206:ALA:H	1.19	1.04
26:F:62:GLN:HG3	26:F:91:ARG:HH11	1.24	1.02
4:C:144:GLU:HA	4:C:151:GLY:HA2	1.40	1.02
19:H:31:VAL:HB	19:H:32:PRO:HD2	1.41	1.01
26:F:45:ASP:HB3	26:F:48:LEU:HD22	1.42	1.00
21:N:101:GLY:HA2	21:N:110:MET:H	1.25	1.00
2:B:2787:C:H1'	5:D:63:PRO:HG3	1.42	1.00
9:Y:8:GLN:HG2	9:Y:31:ILE:HA	1.44	0.99
32:6:44:GLU:HA	32:6:49:HIS:HA	1.42	0.99
32:6:42:LYS:HA	32:6:51:PRO:HA	1.42	0.99
19:H:90:LEU:HG	19:H:146:VAL:HG11	1.45	0.98
19:H:83:LYS:HB2	19:H:91:PHE:HB2	1.44	0.98
5:D:10:GLY:HA3	5:D:26:VAL:H	1.28	0.98
2:B:460:A:H4'	29:T:72:GLN:HB2	1.44	0.98
22:O:49:VAL:HG21	22:O:82:ALA:HB2	1.45	0.98
2:B:27:G:H22	2:B:512:G:H2'	1.29	0.98
2:B:1283:G:H22	2:B:1286:A:H5'	1.27	0.98
2:B:2269:G:H4'	31:W:19:ARG:HH12	1.24	0.98
32:6:84:ARG:HA	32:6:89:GLY:HA2	1.44	0.98
18:X:29:ARG:HH12	29:T:12:ARG:HA	1.29	0.97
31:W:9:THR:HG23	31:W:10:ARG:HD3	1.47	0.96
5:D:5:VAL:H	5:D:32:ASN:HD21	1.00	0.96
2:B:1203:U:H1'	16:L:4:ASN:HD21	1.30	0.96
19:H:125:THR:HA	19:H:146:VAL:HB	1.46	0.96
2:B:1141:U:H4'	2:B:1142:A:O4'	1.67	0.95
7:P:4:ILE:HG22	7:P:5:LYS:H	1.29	0.95
19:H:134:VAL:HG13	19:H:135:HIS:H	1.31	0.95
32:6:38:LEU:HD12	32:6:66:LEU:HD22	1.46	0.95
11:4:2:LYS:HD2	11:4:4:ARG:HE	1.31	0.94
2:B:1024:G:H3'	2:B:1025:G:H5''	1.49	0.94
5:D:151:THR:HB	5:D:152:PRO:HD3	1.47	0.94
7:P:91:VAL:HG11	7:P:96:LEU:HD11	1.50	0.94
23:Q:91:ARG:HH12	28:R:10:LYS:HB3	1.31	0.94
16:L:124:GLY:N	16:L:143:GLU:HG3	1.83	0.94
5:D:9:VAL:HA	5:D:197:THR:HG23	1.47	0.94
27:G:10:VAL:HG13	27:G:14:VAL:HB	1.45	0.94

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:Z:54:LYS:HA	30:Z:57:ARG:HD3	1.47	0.93
2:B:1309:G:H4'	15:2:7:PRO:HB2	1.50	0.93
26:F:36:ASN:HA	26:F:87:LYS:HA	1.49	0.93
20:J:81:ILE:HG23	20:J:82:GLY:H	1.31	0.93
8:E:108:ILE:HD11	8:E:181:ILE:HG13	1.52	0.92
29:T:11:LEU:HD21	29:T:46:ALA:HB1	1.47	0.92
21:N:101:GLY:HA2	21:N:110:MET:N	1.84	0.92
27:G:30:GLY:HA3	27:G:78:VAL:HA	1.49	0.92
2:B:2471:A:HO2'	2:B:2472:G:H8	0.95	0.92
2:B:958:U:H3	17:M:16:ARG:HB3	1.32	0.92
24:S:24:ILE:HG22	24:S:71:VAL:HG11	1.51	0.92
2:B:2306:C:H2'	2:B:2307:G:H21	1.35	0.92
14:V:42:LEU:HD23	14:V:42:LEU:H	1.34	0.91
2:B:2305:U:H5''	26:F:130:GLY:HA3	1.52	0.91
2:B:1064:C:H4'	3:I:90:GLY:HA2	1.50	0.91
25:U:73:ASN:HD21	25:U:76:THR:H	1.14	0.91
2:B:126:A:H5''	15:2:46:LYS:HE2	1.52	0.91
2:B:1060:U:H5	3:I:131:THR:HG22	1.34	0.91
32:6:66:LEU:HD12	32:6:103:ILE:HD11	1.53	0.90
14:V:42:LEU:HD12	14:V:47:VAL:HG21	1.52	0.90
27:G:34:ARG:HH11	27:G:34:ARG:H	1.18	0.90
22:O:51:ALA:HB3	22:O:78:VAL:HG22	1.51	0.90
17:M:34:LYS:HB3	17:M:129:THR:HG22	1.53	0.90
19:H:14:SER:HB2	19:H:17:ASP:HB2	1.51	0.90
27:G:15:ASP:HB3	27:G:26:LYS:H	1.35	0.90
6:K:47:ILE:HG12	6:K:48:PRO:HD2	1.54	0.90
8:E:5:LEU:HD12	8:E:10:SER:HB2	1.53	0.90
2:B:855:G:N2	31:W:23:LYS:HG2	1.86	0.90
29:T:11:LEU:HD22	29:T:11:LEU:H	1.36	0.89
6:K:35:VAL:HG23	6:K:36:GLY:H	1.35	0.89
5:D:29:VAL:HB	5:D:98:VAL:HG22	1.54	0.89
31:W:24:ARG:HA	31:W:66:VAL:H	1.34	0.89
19:H:90:LEU:HD22	19:H:123:ARG:HG2	1.52	0.89
4:C:144:GLU:HG3	4:C:151:GLY:H	1.35	0.89
2:B:1060:U:N3	2:B:1088:A:N7	2.20	0.89
6:K:105:ARG:H	6:K:105:ARG:HD3	1.35	0.89
2:B:2749:A:H3'	2:B:2750:A:H5''	1.53	0.89
19:H:54:LEU:HD12	19:H:55:GLU:H	1.38	0.89
4:C:183:VAL:HG13	4:C:185:ALA:H	1.35	0.88
7:P:96:LEU:HB3	7:P:99:LEU:HD23	1.55	0.88
16:L:143:GLU:HG2	16:L:144:GLU:N	1.88	0.88
19:H:128:HIS:HB2	19:H:144:VAL:HB	1.54	0.88

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1105:U:H2'	2:B:1106:G:H8	1.39	0.88
31:W:17:ALA:HA	31:W:35:ILE:HG23	1.54	0.88
14:V:72:VAL:HG12	14:V:94:ALA:H	1.36	0.88
6:K:61:VAL:HG13	6:K:87:LEU:HD11	1.56	0.88
21:N:37:THR:HG22	21:N:39:PRO:HD2	1.56	0.88
20:J:17:VAL:HG23	20:J:137:PRO:HB2	1.55	0.87
2:B:858:G:N3	2:B:2268:A:H2'	1.88	0.87
5:D:106:LYS:HB3	5:D:206:ALA:N	1.89	0.87
5:D:46:ARG:HH22	5:D:87:GLY:H	1.19	0.87
3:I:27:LEU:H	3:I:27:LEU:HD23	1.39	0.87
25:U:48:VAL:H	25:U:53:GLN:HB2	1.36	0.87
8:E:111:GLU:HG2	8:E:114:ARG:HH21	1.39	0.87
2:B:856:G:H1'	31:W:23:LYS:HB3	1.56	0.86
27:G:24:THR:HG22	27:G:34:ARG:HB3	1.56	0.86
2:B:1032:A:H1'	11:4:23:ILE:HD13	1.55	0.86
2:B:972:A:H3'	2:B:973:A:H5''	1.55	0.86
2:B:1798:U:H5''	4:C:257:ARG:HB2	1.55	0.86
32:6:43:VAL:HB	32:6:55:ILE:HG21	1.56	0.86
31:W:37:VAL:HG12	31:W:38:ARG:H	1.40	0.86
30:Z:38:PHE:HE2	30:Z:51:VAL:HG21	1.39	0.86
32:6:33:ALA:HA	32:6:103:ILE:HG21	1.56	0.86
5:D:113:SER:HB2	5:D:168:GLU:H	1.41	0.86
31:W:39:GLN:HG3	31:W:42:THR:HB	1.58	0.86
2:B:470:A:H61	29:T:72:GLN:HE22	1.24	0.85
2:B:1283:G:N2	2:B:1286:A:H5'	1.92	0.85
31:W:18:LYS:HA	31:W:36:ILE:HG12	1.57	0.85
31:W:19:ARG:HD3	31:W:36:ILE:HD11	1.57	0.85
2:B:1729:U:H3'	2:B:1730:C:H4'	1.56	0.85
18:X:3:ALA:HA	18:X:6:LEU:HD23	1.59	0.85
26:F:109:ARG:HB3	26:F:135:ILE:HD12	1.57	0.84
19:H:5:LEU:HD11	19:H:12:LEU:HB2	1.58	0.84
31:W:49:ASN:HB2	31:W:60:ALA:HA	1.57	0.84
4:C:103:ILE:HG22	4:C:105:ALA:H	1.41	0.84
32:6:20:VAL:O	32:6:24:ASN:HB2	1.77	0.84
19:H:82:SER:HB3	19:H:146:VAL:HG13	1.60	0.84
2:B:2502:G:H5'	2:B:2503:A:H5''	1.59	0.84
9:Y:12:ALA:HA	9:Y:15:ARG:HD3	1.56	0.84
30:Z:59:ILE:HD13	30:Z:67:VAL:HG21	1.60	0.84
27:G:120:ILE:HD11	27:G:132:LEU:HB2	1.58	0.83
32:6:55:ILE:HG23	32:6:56:ALA:H	1.44	0.83
4:C:180:MET:HB3	4:C:267:VAL:HB	1.60	0.83
24:S:26:GLY:H	24:S:71:VAL:HG13	1.43	0.83

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:H:48:GLU:N	19:H:50:ARG:HH21	1.76	0.83
23:Q:77:LYS:HB3	23:Q:116:LEU:HD21	1.58	0.83
25:U:42:LYS:HG3	25:U:57:ILE:HG21	1.60	0.83
2:B:79:C:O2'	2:B:346:A:H1'	1.78	0.83
26:F:126:ASN:HD22	26:F:156:THR:HA	1.40	0.83
32:6:60:ALA:HA	32:6:66:LEU:HA	1.60	0.83
5:D:11:MET:HE1	5:D:192:ALA:H	1.43	0.83
19:H:49:ALA:H	19:H:50:ARG:NH2	1.77	0.83
20:J:58:ASN:HA	20:J:127:GLY:HA2	1.60	0.82
2:B:2269:G:H4'	31:W:19:ARG:NH1	1.93	0.82
23:Q:63:ARG:HH12	23:Q:96:ASP:HA	1.44	0.82
2:B:1060:U:C2	2:B:1088:A:N7	2.47	0.82
11:4:7:VAL:HG13	11:4:8:LYS:H	1.44	0.82
29:T:47:VAL:HB	29:T:55:VAL:HG21	1.62	0.82
3:I:129:GLU:HB3	3:I:133:ARG:HH12	1.41	0.82
26:F:62:GLN:HG3	26:F:91:ARG:NH1	1.94	0.82
2:B:1105:U:H2'	2:B:1106:G:C8	2.15	0.82
2:B:1812:U:H2'	2:B:1813:G:H8	1.45	0.82
2:B:1437:C:H2'	2:B:1438:U:C6	2.15	0.82
21:N:83:LEU:HA	21:N:86:ARG:HB2	1.60	0.82
2:B:666:A:H4'	16:L:48:ARG:HD2	1.62	0.81
27:G:84:LYS:HG2	27:G:85:LYS:H	1.45	0.81
2:B:1178:C:H2'	2:B:1179:G:C8	2.15	0.81
5:D:148:GLN:HG3	5:D:152:PRO:CG	2.11	0.81
4:C:129:LEU:HD23	4:C:130:PRO:HD2	1.62	0.81
2:B:1812:U:H1'	4:C:43:ASN:HD21	1.45	0.81
3:I:55:PRO:HD3	3:I:74:PRO:HD3	1.62	0.81
2:B:558:U:OP1	20:J:113:PRO:HG2	1.80	0.81
11:4:10:LEU:HD12	11:4:33:HIS:HA	1.61	0.80
23:Q:91:ARG:NH1	28:R:11:GLN:H	1.79	0.80
2:B:1060:U:C5	3:I:131:THR:HG22	2.14	0.80
32:6:77:LYS:HE2	32:6:94:ASN:HD21	1.45	0.80
22:O:53:THR:HB	22:O:65:THR:HG22	1.61	0.80
28:R:24:LYS:HA	28:R:94:THR:HG23	1.61	0.80
19:H:29:PHE:O	19:H:33:GLN:HB3	1.81	0.80
19:H:134:VAL:HG13	19:H:135:HIS:N	1.97	0.80
24:S:4:ILE:HG22	24:S:106:VAL:HG13	1.63	0.80
30:Z:40:VAL:HG21	30:Z:43:GLU:HB3	1.62	0.80
30:Z:31:PRO:HB2	30:Z:33:LEU:HD11	1.63	0.80
4:C:105:ALA:HB1	4:C:109:LEU:HD12	1.62	0.80
6:K:119:ALA:HB3	6:K:120:PRO:HD3	1.63	0.80
20:J:29:ALA:HA	20:J:32:LEU:HD12	1.63	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1082:U:C4	2:B:1086:A:C2	2.69	0.80
29:T:73:ARG:HH21	29:T:73:ARG:HB3	1.45	0.80
8:E:155:GLU:HA	8:E:158:PHE:HB3	1.61	0.80
32:6:32:ARG:HE	32:6:37:LEU:HD23	1.47	0.80
7:P:50:ARG:HB3	7:P:57:ALA:N	1.97	0.80
28:R:2:TYR:HB2	28:R:42:ALA:HB2	1.63	0.80
32:6:67:VAL:HB	32:6:98:ALA:HB1	1.64	0.80
2:B:1092:C:OP1	2:B:2475:C:H4'	1.82	0.79
24:S:66:ILE:HD13	24:S:66:ILE:H	1.45	0.79
12:1:46:VAL:HG22	12:1:47:ILE:H	1.47	0.79
2:B:137:U:H2'	2:B:138:U:O4'	1.82	0.79
25:U:85:ARG:HD3	25:U:86:PHE:H	1.46	0.79
16:L:90:VAL:HB	16:L:122:VAL:HA	1.64	0.79
26:F:43:ILE:HG23	26:F:44:ALA:H	1.47	0.79
32:6:42:LYS:HB3	32:6:49:HIS:O	1.82	0.79
7:P:7:LEU:H	7:P:7:LEU:HD12	1.47	0.79
2:B:275:C:H2'	2:B:276:U:O4'	1.82	0.79
2:B:2133:G:H22	2:B:2156:G:H1	1.28	0.79
13:3:41:ARG:HG3	13:3:44:ARG:HH22	1.46	0.79
26:F:72:SER:HA	26:F:78:ILE:HG22	1.65	0.79
7:P:110:LYS:HD2	7:P:110:LYS:H	1.47	0.79
2:B:222:A:N6	2:B:232:G:H1'	1.97	0.79
30:Z:7:VAL:HG13	30:Z:8:THR:HG23	1.61	0.79
2:B:345:A:H1'	2:B:346:A:H2	1.47	0.79
7:P:61:ARG:NH1	7:P:100:ARG:HA	1.97	0.79
2:B:161:A:H3'	2:B:162:U:H5''	1.63	0.79
26:F:110:ILE:HA	26:F:111:ARG:CZ	2.13	0.79
2:B:142:A:H2'	2:B:143:C:O4'	1.83	0.79
6:K:99:ILE:HD13	6:K:118:LEU:HD22	1.63	0.79
22:O:3:LYS:HZ3	22:O:3:LYS:H	1.29	0.79
21:N:72:ASP:HB3	21:N:75:ILE:HG12	1.63	0.79
4:C:140:VAL:HG12	4:C:141:HIS:H	1.47	0.78
26:F:64:PRO:HA	26:F:88:VAL:HG22	1.65	0.78
27:G:84:LYS:HG3	27:G:132:LEU:N	1.96	0.78
2:B:2264:C:H41	31:W:11:ASN:ND2	1.81	0.78
25:U:34:ILE:HG12	25:U:63:ALA:HB2	1.66	0.78
4:C:231:HIS:HA	4:C:241:LYS:HE3	1.65	0.78
7:P:99:LEU:HD13	7:P:102:ARG:HG3	1.65	0.78
2:B:2769:U:H2'	2:B:2770:G:H8	1.48	0.78
2:B:2180:U:H2'	2:B:2181:U:H5	1.47	0.78
2:B:674:G:H1'	8:E:69:ARG:HD2	1.65	0.78
21:N:107:ASN:HD21	24:S:40:ASN:HD22	1.31	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:F:163:GLU:HA	26:F:166:ARG:HH11	1.48	0.78
2:B:276:U:O2'	2:B:277:G:H5'	1.83	0.78
3:I:21:PRO:HB2	3:I:22:PRO:HD3	1.63	0.78
14:V:9:ARG:NH2	14:V:12:GLN:HA	1.99	0.78
32:6:113:ASP:HA	32:6:116:ARG:NE	1.99	0.78
29:T:50:LEU:H	29:T:50:LEU:HD22	1.47	0.78
5:D:10:GLY:HA3	5:D:26:VAL:N	1.99	0.77
19:H:57:LYS:HG3	19:H:58:LEU:H	1.48	0.77
2:B:2356:U:H5''	31:W:16:GLU:HG3	1.65	0.77
7:P:50:ARG:HB3	7:P:57:ALA:H	1.48	0.77
26:F:35:LEU:HD23	26:F:153:ILE:HG12	1.66	0.77
29:T:67:VAL:HB	29:T:76:ARG:HG2	1.66	0.77
14:V:62:THR:HG22	14:V:71:LYS:HG2	1.67	0.77
26:F:11:VAL:HG12	26:F:12:VAL:H	1.48	0.77
22:O:24:THR:HG22	22:O:42:PRO:HD3	1.66	0.77
16:L:92:LEU:H	16:L:92:LEU:HD23	1.49	0.77
28:R:39:LEU:HB2	28:R:49:ILE:HG12	1.65	0.77
27:G:96:ALA:HB3	27:G:103:ASN:HB3	1.66	0.77
6:K:76:VAL:H	7:P:72:VAL:HG23	1.48	0.77
2:B:704:G:H1'	2:B:727:A:N6	1.98	0.77
2:B:479:A:O2'	2:B:481:G:H5'	1.85	0.77
2:B:321:U:OP2	8:E:130:LYS:HA	1.84	0.77
2:B:1993:U:H4'	5:D:133:THR:HG21	1.66	0.77
26:F:66:ILE:HD11	26:F:83:PRO:HB3	1.67	0.77
16:L:79:LEU:HB3	16:L:115:GLU:O	1.85	0.77
2:B:2498:C:O2'	2:B:2499:C:H5'	1.85	0.77
29:T:57:VAL:HG22	29:T:58:VAL:H	1.49	0.77
19:H:5:LEU:HD21	19:H:12:LEU:HD12	1.65	0.77
20:J:25:LEU:HD22	20:J:26:GLY:H	1.49	0.77
29:T:15:HIS:HB3	29:T:31:VAL:HG23	1.66	0.77
5:D:24:VAL:HG21	5:D:188:LEU:HB3	1.66	0.77
3:I:106:GLN:O	3:I:110:GLN:HG3	1.85	0.77
5:D:53:GLY:HA3	5:D:77:ARG:HG3	1.66	0.77
2:B:1812:U:H2'	2:B:1813:G:C8	2.20	0.77
2:B:1019:U:H2'	2:B:1020:A:C8	2.20	0.77
6:K:14:SER:HB2	6:K:51:LYS:H	1.50	0.77
28:R:4:VAL:HG23	28:R:39:LEU:HG	1.67	0.77
4:C:166:ARG:HB3	4:C:171:VAL:HG22	1.66	0.77
19:H:4:ILE:HD11	19:H:43:ASN:HB3	1.67	0.76
2:B:28:A:H61	2:B:512:G:H1'	1.51	0.76
18:X:29:ARG:HH11	29:T:12:ARG:NE	1.84	0.76
25:U:73:ASN:ND2	25:U:76:THR:H	1.84	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:U:26:ASN:HD21	25:U:34:ILE:HD12	1.50	0.76
3:I:27:LEU:HD12	3:I:32:VAL:HG11	1.66	0.76
27:G:148:ARG:HA	27:G:161:VAL:HB	1.66	0.76
6:K:43:ILE:HG22	6:K:54:LYS:HA	1.67	0.76
2:B:1178:C:H2'	2:B:1179:G:H8	1.49	0.76
20:J:35:ARG:HG3	20:J:40:HIS:HE2	1.50	0.76
27:G:87:GLN:N	27:G:87:GLN:HE21	1.83	0.76
2:B:1311:G:H21	2:B:1603:A:H62	1.30	0.76
2:B:924:G:H4'	31:W:24:ARG:NH2	2.00	0.76
2:B:2472:G:H2'	2:B:2475:C:H42	1.51	0.76
2:B:2743:U:H2'	2:B:2744:G:O4'	1.85	0.76
2:B:717:C:H3'	2:B:718:A:H5''	1.68	0.76
31:W:51:GLY:HA3	31:W:59:PHE:HB2	1.66	0.76
19:H:89:LYS:HE3	19:H:123:ARG:HB3	1.66	0.76
2:B:770:G:H5''	15:2:10:LEU:HD12	1.65	0.76
16:L:103:ILE:H	16:L:103:ILE:HD12	1.50	0.76
8:E:44:ARG:HG3	8:E:44:ARG:HH21	1.52	0.75
3:I:33:ASN:HD21	3:I:64:ARG:HH11	1.34	0.75
2:B:1064:C:C4'	3:I:90:GLY:HA2	2.16	0.75
22:O:15:ARG:HH21	22:O:95:SER:HB3	1.51	0.75
17:M:19:GLY:HA2	17:M:98:PRO:HD2	1.67	0.75
2:B:654:A:H2'	2:B:655:A:H5''	1.69	0.75
2:B:1597:A:H5''	2:B:1598:A:H5'	1.69	0.75
2:B:1406:U:H2'	2:B:1407:G:H8	1.50	0.75
2:B:670:A:H4'	2:B:671:C:H5'	1.69	0.75
6:K:70:ARG:HB3	6:K:76:VAL:HG22	1.67	0.75
2:B:90:U:H3'	2:B:91:A:H5''	1.68	0.75
2:B:1171:G:C3'	2:B:1172:C:H4'	2.16	0.75
20:J:6:ALA:HB3	20:J:45:THR:HG21	1.67	0.75
19:H:53:GLU:HG2	19:H:57:LYS:HE2	1.68	0.75
2:B:1447:C:H2'	2:B:1448:G:H8	1.51	0.75
5:D:5:VAL:H	5:D:32:ASN:ND2	1.82	0.75
23:Q:94:LEU:HD12	28:R:13:ARG:HB2	1.68	0.75
27:G:104:LEU:HD11	27:G:147:LEU:HD23	1.68	0.75
16:L:78:ARG:HD3	16:L:80:SER:OG	1.87	0.75
2:B:1406:U:H2'	2:B:1407:G:C8	2.22	0.75
2:B:1171:G:H3'	2:B:1172:C:H4'	1.67	0.75
16:L:116:VAL:HG13	16:L:117:THR:H	1.52	0.75
2:B:2039:U:H2'	2:B:2040:G:H8	1.52	0.75
2:B:919:U:H2'	2:B:920:A:C8	2.21	0.75
23:Q:91:ARG:NH1	28:R:10:LYS:HB3	2.02	0.75
29:T:39:THR:HG23	29:T:41:ALA:H	1.51	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:X:17:GLU:HB3	18:X:53:VAL:HG11	1.69	0.75
5:D:186:LEU:HD21	7:P:3:ILE:HD11	1.69	0.74
5:D:148:GLN:CG	5:D:152:PRO:HG2	2.15	0.74
30:Z:64:ILE:HD12	30:Z:64:ILE:H	1.52	0.74
8:E:29:HIS:NE2	16:L:8:PRO:HG3	2.02	0.74
29:T:87:LEU:HD12	29:T:91:GLN:HG2	1.69	0.74
2:B:1064:C:H4'	3:I:90:GLY:CA	2.18	0.74
2:B:2306:C:H2'	2:B:2307:G:N2	2.02	0.74
4:C:144:GLU:HG3	4:C:151:GLY:N	2.01	0.74
4:C:102:TYR:O	4:C:103:ILE:HG13	1.86	0.74
2:B:222:A:H61	2:B:232:G:H1'	1.52	0.74
31:W:24:ARG:HD3	31:W:65:LYS:HG2	1.69	0.74
2:B:27:G:N2	2:B:512:G:H2'	2.01	0.74
4:C:80:LEU:HD23	4:C:91:ALA:HB2	1.69	0.74
2:B:404:A:H4'	2:B:405:U:H5'	1.68	0.74
2:B:2800:A:H2'	2:B:2801:G:O4'	1.87	0.74
19:H:14:SER:CB	19:H:17:ASP:HB2	2.17	0.74
2:B:1727:C:H2'	2:B:1728:C:C6	2.23	0.74
19:H:82:SER:HB2	19:H:94:ILE:HD11	1.70	0.74
2:B:1173:U:C4	2:B:1174:U:H1'	2.23	0.74
2:B:2143:C:H2'	2:B:2144:G:C4'	2.18	0.74
2:B:2653:U:O2'	27:G:109:SER:HB2	1.86	0.74
32:6:30:THR:H	32:6:37:LEU:HD21	1.53	0.74
2:B:1558:C:H4'	2:B:1559:U:C5'	2.18	0.74
2:B:643:A:N3	12:1:43:ARG:HD2	2.03	0.73
7:P:56:SER:HB2	7:P:75:THR:HG21	1.70	0.73
2:B:2306:C:H3'	2:B:2307:G:C5'	2.17	0.73
2:B:784:G:N1	4:C:227:VAL:HG11	2.02	0.73
24:S:82:MET:HB2	24:S:98:LYS:HB2	1.70	0.73
13:3:18:LYS:HD2	13:3:19:GLY:N	2.03	0.73
2:B:988:A:P	9:Y:11:SER:HB3	2.29	0.73
10:0:41:HIS:HB3	21:N:99:LYS:HB2	1.70	0.73
28:R:49:ILE:HD13	28:R:53:PHE:N	2.03	0.73
2:B:144:A:H2'	2:B:145:C:C6	2.23	0.73
11:4:7:VAL:HG23	11:4:35:GLN:HB2	1.70	0.73
3:I:122:GLU:O	3:I:126:ARG:HG3	1.88	0.73
2:B:704:G:H1'	2:B:727:A:H61	1.54	0.73
31:W:77:LYS:O	31:W:78:PHE:HB2	1.89	0.73
26:F:32:LYS:HA	26:F:95:MET:HG3	1.70	0.73
2:B:673:C:H5''	8:E:76:PRO:HD2	1.70	0.73
17:M:2:LEU:HD23	17:M:46:ILE:HD11	1.70	0.73
30:Z:40:VAL:HG22	30:Z:45:ARG:O	1.88	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
32:6:64:ARG:HA	32:6:103:ILE:HB	1.71	0.73
24:S:70:LYS:HE2	24:S:72:THR:HG22	1.71	0.73
21:N:45:ARG:HG3	21:N:95:THR:HG21	1.71	0.73
2:B:345:A:H1'	2:B:346:A:C2	2.23	0.72
20:J:57:LEU:HG	20:J:128:ASN:H	1.54	0.72
2:B:1655:A:H5'	5:D:118:PHE:HB2	1.71	0.72
2:B:2478:A:H5'	11:4:32:LYS:HE2	1.71	0.72
2:B:2284:A:OP2	12:1:5:ARG:HG3	1.88	0.72
19:H:85:GLY:HA3	19:H:91:PHE:HE1	1.53	0.72
29:T:15:HIS:H	29:T:32:LEU:HA	1.55	0.72
3:I:20:SER:HB3	3:I:21:PRO:HD3	1.69	0.72
32:6:76:LEU:HD23	32:6:77:LYS:HZ1	1.55	0.72
2:B:903:C:H2'	2:B:904:G:C8	2.23	0.72
2:B:2758:A:H2'	2:B:2759:G:O4'	1.89	0.72
29:T:44:LYS:O	29:T:48:GLN:HG2	1.90	0.72
20:J:73:VAL:HG23	20:J:74:TYR:H	1.54	0.72
8:E:146:VAL:HG11	8:E:187:VAL:HG23	1.71	0.72
28:R:19:THR:HG22	28:R:97:LYS:HA	1.70	0.72
23:Q:7:VAL:HG23	23:Q:8:ILE:HD12	1.70	0.72
3:I:77:VAL:HA	3:I:80:LYS:HE2	1.72	0.72
6:K:102:PRO:HA	6:K:120:PRO:HB3	1.70	0.72
19:H:63:ALA:HA	19:H:66:ASN:HD21	1.55	0.72
4:C:156:SER:O	4:C:194:VAL:HG11	1.89	0.72
32:6:178:LYS:O	32:6:181:GLN:HG3	1.90	0.72
19:H:31:VAL:CB	19:H:32:PRO:HD2	2.18	0.72
5:D:55:LYS:HZ2	5:D:55:LYS:HB3	1.54	0.72
18:X:1:MET:HB3	18:X:4:LYS:HB3	1.71	0.72
17:M:71:LYS:HE3	17:M:73:ILE:HD11	1.71	0.72
25:U:3:LYS:HB3	25:U:82:VAL:HG21	1.72	0.72
7:P:56:SER:HB2	7:P:75:THR:CG2	2.20	0.72
14:V:40:ILE:H	14:V:40:ILE:HD13	1.54	0.72
7:P:4:ILE:HG22	7:P:5:LYS:N	2.04	0.72
19:H:116:ARG:HB3	19:H:131:SER:H	1.52	0.72
2:B:1082:U:N3	2:B:1086:A:C2	2.58	0.72
21:N:2:ARG:HA	21:N:5:LYS:HD3	1.72	0.72
19:H:27:ARG:HG2	19:H:27:ARG:HH21	1.54	0.72
20:J:45:THR:H	20:J:46:PRO:HD3	1.55	0.72
28:R:4:VAL:HA	28:R:12:HIS:O	1.90	0.72
19:H:63:ALA:HA	19:H:66:ASN:ND2	2.05	0.72
2:B:1872:A:H2'	2:B:1873:G:O4'	1.89	0.72
32:6:180:GLU:HA	32:6:183:ILE:HG22	1.72	0.71
17:M:10:ARG:HH11	17:M:89:VAL:HG22	1.53	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:S:29:VAL:HA	24:S:32:ALA:HB3	1.71	0.71
2:B:704:G:H2'	2:B:726:G:H22	1.53	0.71
2:B:616:A:H3'	2:B:617:G:H8	1.55	0.71
2:B:470:A:H61	29:T:72:GLN:NE2	1.87	0.71
2:B:1244:A:H5''	16:L:8:PRO:HD3	1.72	0.71
2:B:1060:U:C4	2:B:1088:A:N6	2.58	0.71
22:O:3:LYS:H	22:O:3:LYS:NZ	1.87	0.71
25:U:40:LEU:HB3	25:U:59:GLU:HG2	1.73	0.71
2:B:1309:G:OP1	15:2:9:VAL:HG12	1.90	0.71
25:U:85:ARG:HD3	25:U:86:PHE:N	2.04	0.71
2:B:1859:U:H2'	2:B:1860:G:C8	2.25	0.71
7:P:20:ARG:HG3	7:P:21:PRO:HD2	1.70	0.71
27:G:10:VAL:HG21	27:G:16:VAL:HG21	1.73	0.71
5:D:34:VAL:HB	5:D:48:ILE:HD11	1.70	0.71
19:H:73:ASN:HD22	19:H:73:ASN:N	1.88	0.71
26:F:87:LYS:HG3	26:F:88:VAL:H	1.56	0.71
7:P:50:ARG:HB2	7:P:56:SER:HB3	1.72	0.71
2:B:1019:U:H2'	2:B:1020:A:H8	1.56	0.71
2:B:1197:G:H2'	2:B:1198:U:H6	1.56	0.71
28:R:91:GLN:HG3	28:R:92:TRP:H	1.56	0.71
19:H:103:VAL:HG21	19:H:110:VAL:H	1.56	0.71
2:B:1729:U:H3'	2:B:1730:C:C4'	2.21	0.71
4:C:80:LEU:HD11	4:C:109:LEU:HG	1.71	0.71
27:G:120:ILE:HG13	27:G:140:ILE:HG22	1.71	0.71
5:D:105:LYS:HD2	5:D:177:VAL:HG22	1.72	0.71
2:B:742:A:H2'	2:B:743:A:C8	2.25	0.71
2:B:2267:A:H5''	2:B:2268:A:H5'	1.73	0.70
31:W:46:ALA:HB2	31:W:78:PHE:HD1	1.55	0.70
8:E:23:PHE:HA	8:E:107:SER:HB2	1.72	0.70
31:W:37:VAL:HG13	31:W:55:ASP:O	1.90	0.70
7:P:54:LEU:HA	7:P:76:HIS:HD2	1.57	0.70
2:B:1993:U:H4'	5:D:133:THR:CG2	2.21	0.70
29:T:69:ARG:CZ	29:T:69:ARG:HA	2.20	0.70
4:C:144:GLU:HB3	4:C:187:CYS:HB3	1.73	0.70
18:X:14:LEU:O	18:X:18:LEU:HB2	1.91	0.70
2:B:282:A:H2'	2:B:283:G:C8	2.27	0.70
2:B:1902:C:H4'	4:C:241:LYS:O	1.91	0.70
2:B:1920:C:H3'	2:B:1921:G:H8	1.55	0.70
20:J:3:THR:HB	20:J:44:TYR:OH	1.92	0.70
30:Z:71:LEU:HD13	30:Z:76:GLU:HB3	1.73	0.70
2:B:181:A:H2'	2:B:182:A:C8	2.27	0.70
31:W:39:GLN:HG2	31:W:40:ARG:N	2.05	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:W:37:VAL:HG12	31:W:38:ARG:N	2.06	0.70
2:B:718:A:H3'	2:B:719:C:H6	1.56	0.70
2:B:1172:C:H3'	2:B:1173:U:C6	2.26	0.70
2:B:784:G:O2'	2:B:785:G:H5''	1.91	0.70
16:L:123:ARG:HA	16:L:143:GLU:HB3	1.74	0.70
19:H:27:ARG:H	19:H:31:VAL:CG2	2.05	0.70
32:6:81:LYS:O	32:6:84:ARG:HG2	1.91	0.70
18:X:1:MET:O	18:X:5:GLU:HG2	1.92	0.70
21:N:85:PRO:HA	21:N:88:ALA:HB2	1.73	0.70
2:B:246:C:H2'	2:B:247:G:H5'	1.73	0.70
2:B:2598:A:H5''	4:C:233:GLY:HA2	1.72	0.70
7:P:4:ILE:C	7:P:6:GLN:H	1.95	0.70
11:4:9:LYS:HB3	11:4:16:ILE:HD11	1.71	0.70
2:B:2039:U:H2'	2:B:2040:G:C8	2.26	0.70
2:B:172:A:H2'	2:B:173:A:C8	2.27	0.70
2:B:1063:G:H1'	3:I:134:SER:O	1.90	0.70
25:U:85:ARG:NH1	25:U:86:PHE:H	1.89	0.70
2:B:2443:C:H2'	2:B:2444:G:H8	1.57	0.70
17:M:40:ARG:HD3	17:M:93:VAL:HG21	1.72	0.70
24:S:17:VAL:C	24:S:19:LEU:H	1.94	0.70
7:P:89:GLY:HA2	7:P:112:ARG:N	2.07	0.70
26:F:126:ASN:HB3	26:F:156:THR:HA	1.73	0.70
25:U:81:ARG:HD2	25:U:96:LYS:HG3	1.73	0.70
5:D:34:VAL:CG1	5:D:94:GLN:H	2.05	0.69
5:D:116:LYS:HB3	5:D:118:PHE:CE2	2.27	0.69
2:B:1429:G:H2'	2:B:1430:G:H8	1.57	0.69
14:V:80:HIS:HB3	14:V:83:LYS:O	1.92	0.69
25:U:49:PRO:HA	25:U:53:GLN:HG3	1.74	0.69
2:B:1594:U:H2'	2:B:1595:C:C6	2.26	0.69
17:M:66:ARG:HB3	17:M:66:ARG:HH11	1.56	0.69
32:6:29:ARG:HE	32:6:32:ARG:HD2	1.57	0.69
19:H:6:LEU:HD13	19:H:36:ALA:HA	1.73	0.69
19:H:51:ARG:N	19:H:51:ARG:HD2	2.07	0.69
2:B:62:U:H3'	2:B:63:A:C8	2.27	0.69
23:Q:94:LEU:HD21	28:R:11:GLN:HB2	1.73	0.69
6:K:102:PRO:HB3	6:K:121:GLU:HG3	1.72	0.69
20:J:35:ARG:HG3	20:J:40:HIS:NE2	2.07	0.69
17:M:19:GLY:HA2	17:M:97:GLN:HB2	1.72	0.69
19:H:78:VAL:O	19:H:143:ILE:HG13	1.92	0.69
2:B:2304:G:H22	2:B:2312:U:H3	1.40	0.69
26:F:101:ARG:NH1	26:F:138:PRO:HB2	2.08	0.69
26:F:58:ALA:HB3	26:F:139:GLU:HG2	1.74	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:F:64:PRO:HA	26:F:88:VAL:CG2	2.23	0.69
25:U:84:PHE:O	25:U:85:ARG:HB2	1.92	0.69
2:B:2346:A:H3'	2:B:2347:C:H5''	1.73	0.69
2:B:992:C:H4'	28:R:74:ILE:HD13	1.75	0.69
27:G:23:ILE:HD11	27:G:42:VAL:HG11	1.74	0.69
2:B:1437:C:H2'	2:B:1438:U:H6	1.57	0.69
17:M:96:ILE:HD11	17:M:126:ILE:HG12	1.74	0.69
27:G:155:PRO:HA	27:G:170:THR:HG22	1.75	0.69
2:B:1565:C:H5''	4:C:17:LYS:NZ	2.08	0.69
26:F:137:PHE:HB2	26:F:138:PRO:HD2	1.75	0.69
2:B:2328:A:H2'	2:B:2329:U:C6	2.28	0.69
28:R:49:ILE:HD13	28:R:53:PHE:H	1.56	0.69
27:G:3:VAL:O	27:G:68:ARG:HG3	1.93	0.69
2:B:1813:G:N3	4:C:49:THR:HG21	2.07	0.69
8:E:148:ILE:HA	8:E:187:VAL:HB	1.75	0.69
2:B:1681:G:N3	2:B:1762:A:H2'	2.08	0.69
4:C:20:ASN:HD22	4:C:23:LEU:HD13	1.57	0.69
2:B:1241:A:H2'	2:B:1242:U:H5'	1.73	0.69
25:U:73:ASN:HD21	25:U:76:THR:N	1.91	0.69
2:B:2749:A:C3'	2:B:2750:A:H5''	2.21	0.69
5:D:17:GLU:H	5:D:17:GLU:CD	1.95	0.69
3:I:105:LEU:HD11	3:I:139:VAL:HG11	1.74	0.69
19:H:48:GLU:H	19:H:50:ARG:HH21	1.41	0.69
13:3:5:THR:HG22	13:3:62:PRO:HD2	1.75	0.69
19:H:21:VAL:HG21	19:H:25:TYR:HD2	1.58	0.69
2:B:570:G:H2'	2:B:2030:A:N7	2.08	0.69
2:B:307:G:N2	2:B:309:A:H3'	2.08	0.68
2:B:265:A:O2'	2:B:266:G:H4'	1.94	0.68
21:N:33:ILE:HG22	21:N:114:GLU:HB2	1.73	0.68
2:B:1387:A:H2'	2:B:1388:G:H8	1.57	0.68
29:T:12:ARG:HB3	29:T:12:ARG:NH1	2.07	0.68
8:E:158:PHE:HA	8:E:169:VAL:HG21	1.75	0.68
2:B:1174:U:H4'	2:B:1176:U:O4	1.93	0.68
2:B:2680:U:OP2	5:D:114:LYS:HB3	1.92	0.68
2:B:1916:A:H5''	2:B:1917:U:OP2	1.94	0.68
27:G:115:GLN:H	27:G:115:GLN:CD	1.96	0.68
2:B:2064:C:H2'	2:B:2065:C:C6	2.28	0.68
5:D:106:LYS:O	5:D:107:VAL:HB	1.93	0.68
2:B:141:G:C6	29:T:2:ILE:HG23	2.28	0.68
2:B:1469:A:H2'	2:B:1470:A:C8	2.28	0.68
2:B:721:A:H2'	2:B:722:A:C8	2.28	0.68
2:B:1485:U:H2'	2:B:1486:U:C6	2.28	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1639:C:H2'	2:B:1640:A:H5'	1.74	0.68
2:B:2502:G:H5'	2:B:2503:A:C5'	2.23	0.68
4:C:175:LEU:HD11	4:C:181:ARG:HG3	1.75	0.68
2:B:1171:G:C5	2:B:1172:C:H1'	2.29	0.68
2:B:643:A:H61	2:B:2370:G:H1'	1.57	0.68
2:B:871:U:H2'	2:B:872:U:C6	2.28	0.68
2:B:1060:U:O2	2:B:1088:A:N7	2.27	0.68
2:B:1447:C:H2'	2:B:1448:G:C8	2.28	0.68
15:2:30:VAL:HA	15:2:33:ARG:NH2	2.09	0.68
2:B:2804:U:H2'	2:B:2805:C:C6	2.28	0.68
4:C:243:PRO:O	4:C:250:GLN:HA	1.93	0.68
19:H:116:ARG:HB2	19:H:131:SER:O	1.93	0.68
29:T:39:THR:HG22	29:T:42:GLU:HG2	1.74	0.68
29:T:2:ILE:HB	29:T:3:ARG:HD3	1.76	0.68
17:M:43:ALA:O	17:M:46:ILE:HG12	1.94	0.68
19:H:2:GLN:O	19:H:3:VAL:HG22	1.93	0.68
32:6:38:LEU:HA	32:6:41:LEU:HD13	1.75	0.68
20:J:45:THR:OG1	20:J:48:VAL:HB	1.93	0.68
25:U:39:ASN:HB3	25:U:62:ALA:HB3	1.74	0.68
21:N:12:ARG:HG2	21:N:16:HIS:ND1	2.08	0.68
21:N:12:ARG:HG3	21:N:13:ASN:H	1.58	0.68
2:B:38:A:O2'	8:E:43:THR:HA	1.94	0.68
2:B:1125:G:H4'	11:4:37:GLN:NE2	2.09	0.68
2:B:675:A:H4'	8:E:62:GLN:HE22	1.58	0.68
32:6:156:ARG:NH2	32:6:160:GLU:HB2	2.09	0.68
23:Q:57:ARG:NH1	23:Q:61:ILE:HD11	2.08	0.68
22:O:74:VAL:O	22:O:78:VAL:HG23	1.94	0.68
19:H:9:VAL:HB	19:H:12:LEU:O	1.93	0.68
2:B:2769:U:H2'	2:B:2770:G:C8	2.29	0.68
2:B:1198:U:H4'	23:Q:8:ILE:HD11	1.75	0.68
2:B:1874:C:H2'	2:B:1875:G:O4'	1.94	0.68
2:B:2461:A:H2'	2:B:2462:C:C6	2.29	0.68
18:X:33:ALA:HB1	29:T:14:PRO:HD2	1.76	0.67
10:0:8:THR:HG23	10:0:11:LYS:H	1.59	0.67
7:P:45:VAL:N	7:P:60:VAL:HG12	2.08	0.67
5:D:49:GLN:HE22	5:D:67:HIS:CE1	2.12	0.67
9:Y:5:LYS:HB2	9:Y:57:GLU:HB2	1.75	0.67
20:J:40:HIS:CE1	20:J:41:LYS:HG3	2.29	0.67
17:M:21:ALA:HB2	17:M:100:LYS:HG2	1.76	0.67
2:B:720:U:H2'	2:B:721:A:C8	2.29	0.67
25:U:11:ILE:HA	25:U:21:ARG:HG2	1.76	0.67
4:C:94:LEU:HB2	4:C:100:ARG:HG2	1.75	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:R:60:LYS:H	28:R:100:GLY:HA3	1.59	0.67
29:T:29:THR:HA	29:T:86:THR:HA	1.76	0.67
3:I:25:PRO:O	3:I:29:GLN:HG2	1.94	0.67
2:B:1870:C:H2'	2:B:1871:A:N3	2.09	0.67
2:B:1346:G:O2'	2:B:1347:A:H5'	1.94	0.67
2:B:324:A:H2'	2:B:325:G:O4'	1.94	0.67
5:D:16:THR:HB	5:D:18:ASP:OD1	1.94	0.67
2:B:28:A:N6	2:B:512:G:H1'	2.09	0.67
32:6:32:ARG:NE	32:6:37:LEU:HD23	2.09	0.67
14:V:53:LYS:HD3	14:V:55:GLU:H	1.59	0.67
26:F:107:VAL:HG11	26:F:175:PRO:HG3	1.75	0.67
21:N:38:LEU:HB3	21:N:39:PRO:HD3	1.76	0.67
4:C:43:ASN:ND2	4:C:44:ASN:H	1.92	0.67
8:E:44:ARG:HG3	8:E:44:ARG:NH2	2.08	0.67
2:B:1412:U:H2'	2:B:1413:A:C8	2.29	0.67
19:H:57:LYS:HE3	19:H:58:LEU:HB2	1.77	0.67
2:B:142:A:H1'	29:T:2:ILE:HG22	1.75	0.67
7:P:88:ARG:HB2	7:P:112:ARG:NH1	2.09	0.67
2:B:2859:G:H2'	2:B:2860:A:C8	2.29	0.67
23:Q:63:ARG:NH1	23:Q:96:ASP:HA	2.10	0.67
2:B:972:A:C3'	2:B:973:A:H5''	2.25	0.67
2:B:2152:G:N3	2:B:2152:G:H2'	2.09	0.67
16:L:82:LEU:HD23	16:L:90:VAL:HG21	1.75	0.67
20:J:77:HIS:CD2	20:J:84:ILE:H	2.13	0.67
2:B:135:U:H2'	2:B:136:G:C8	2.29	0.67
25:U:98:ASN:OD1	25:U:100:GLU:HB2	1.95	0.67
2:B:2243:U:H2'	2:B:2244:U:C6	2.30	0.67
2:B:693:A:H2'	2:B:694:U:C6	2.29	0.67
3:I:10:LEU:HD13	3:I:12:VAL:HG13	1.75	0.67
20:J:20:ALA:HA	20:J:23:LYS:HG3	1.75	0.67
30:Z:14:THR:HA	30:Z:28:ARG:HA	1.76	0.67
2:B:364:C:H2'	2:B:365:U:C6	2.30	0.67
19:H:80:ILE:O	19:H:146:VAL:HA	1.95	0.67
8:E:181:ILE:HG12	16:L:2:ARG:HH21	1.58	0.67
8:E:5:LEU:HD22	8:E:122:GLU:HG3	1.75	0.67
14:V:70:ILE:HD13	14:V:70:ILE:H	1.58	0.67
2:B:1440:U:H2'	2:B:1441:G:H8	1.60	0.67
2:B:1219:U:H2'	2:B:1220:G:C8	2.29	0.67
9:Y:2:LYS:HG2	9:Y:3:THR:H	1.58	0.67
2:B:1515:A:H2'	2:B:1516:G:O4'	1.94	0.67
2:B:1107:G:H2'	2:B:1108:U:C6	2.30	0.67
2:B:2557:G:H2'	2:B:2558:C:C6	2.30	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:D:107:VAL:HG13	5:D:203:VAL:HG23	1.76	0.66
19:H:134:VAL:HG22	19:H:135:HIS:N	2.10	0.66
29:T:15:HIS:O	29:T:16:VAL:C	2.33	0.66
27:G:122:ALA:HA	27:G:132:LEU:HA	1.78	0.66
27:G:106:LEU:HD12	27:G:151:ARG:HD3	1.76	0.66
19:H:31:VAL:HB	19:H:32:PRO:CD	2.23	0.66
2:B:1722:A:H2'	2:B:1723:G:C8	2.29	0.66
2:B:136:G:H2'	2:B:137:U:C6	2.30	0.66
32:6:118:VAL:HG11	32:6:180:GLU:HB2	1.77	0.66
28:R:28:ALA:O	28:R:63:VAL:HG21	1.96	0.66
32:6:44:GLU:CA	32:6:49:HIS:HA	2.22	0.66
8:E:69:ARG:O	8:E:70:SER:HB3	1.94	0.66
13:3:6:VAL:HB	13:3:60:CYS:HB3	1.77	0.66
2:B:2103:C:H2'	2:B:2104:C:O4'	1.95	0.66
2:B:1908:C:C2	2:B:1909:C:H1'	2.30	0.66
11:4:12:ARG:HG3	11:4:13:ASN:HD22	1.59	0.66
27:G:11:PRO:HD2	27:G:14:VAL:HG21	1.75	0.66
5:D:169:ARG:O	5:D:170:VAL:HG22	1.94	0.66
2:B:145:C:H2'	2:B:146:A:H8	1.59	0.66
8:E:58:LYS:O	8:E:60:TRP:N	2.28	0.66
6:K:43:ILE:HD12	6:K:43:ILE:H	1.60	0.66
2:B:2805:C:H2'	2:B:2806:C:H6	1.60	0.66
2:B:2134:A:H2'	2:B:2135:A:H8	1.59	0.66
27:G:34:ARG:HH11	27:G:34:ARG:N	1.91	0.66
31:W:37:VAL:HG11	31:W:38:ARG:HH11	1.61	0.66
2:B:322:A:OP1	8:E:162:ARG:HD2	1.96	0.66
2:B:162:U:H4'	2:B:163:C:OP1	1.96	0.66
2:B:2645:G:H4'	2:B:2732:G:H2'	1.78	0.66
6:K:41:ILE:HG13	6:K:42:THR:H	1.60	0.66
4:C:250:GLN:HG2	4:C:254:LYS:HG3	1.76	0.66
2:B:1505:A:H2'	2:B:1506:U:C6	2.31	0.66
23:Q:104:ALA:HA	28:R:46:GLU:OE1	1.95	0.66
31:W:43:LYS:HD2	31:W:79:ILE:HD11	1.76	0.66
2:B:1012:U:O4	20:J:30:THR:HG21	1.94	0.66
2:B:151:C:H2'	2:B:152:A:H8	1.61	0.66
2:B:287:G:H2'	2:B:288:U:C6	2.30	0.66
2:B:2591:C:H2'	2:B:2592:G:C8	2.30	0.66
26:F:91:ARG:HD3	26:F:91:ARG:N	2.11	0.66
4:C:76:VAL:HG12	4:C:114:GLN:HG2	1.77	0.66
2:B:1229:C:H2'	2:B:1230:A:H8	1.60	0.66
9:Y:7:THR:O	9:Y:54:VAL:HA	1.96	0.66
20:J:1:MET:HG2	20:J:2:LYS:NZ	2.11	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2180:U:H2'	2:B:2181:U:C5	2.31	0.66
2:B:687:C:H5'	15:2:4:THR:O	1.96	0.66
16:L:55:MET:HE2	16:L:56:PRO:HD2	1.77	0.66
17:M:21:ALA:CB	17:M:100:LYS:HG2	2.26	0.66
2:B:721:A:H2'	2:B:722:A:H8	1.61	0.66
6:K:18:ARG:HB2	6:K:45:GLU:HG3	1.76	0.66
22:O:79:ALA:HB2	22:O:110:ALA:HA	1.78	0.66
2:B:1381:G:H2'	2:B:1382:G:H5'	1.76	0.66
30:Z:6:GLN:NE2	30:Z:50:ARG:H	1.94	0.66
2:B:2267:A:N6	2:B:2272:U:C4	2.64	0.66
26:F:77:LYS:HG3	26:F:79:ARG:CZ	2.26	0.66
5:D:34:VAL:HA	5:D:50:VAL:HG12	1.78	0.66
27:G:143:VAL:O	27:G:147:LEU:HD12	1.95	0.66
17:M:40:ARG:HB2	17:M:93:VAL:CG2	2.26	0.66
25:U:20:LYS:HB3	25:U:38:ILE:HD11	1.77	0.66
29:T:5:GLU:HA	29:T:8:LEU:HD12	1.78	0.66
29:T:55:VAL:HG22	29:T:87:LEU:HD23	1.76	0.65
17:M:36:VAL:HB	17:M:127:LYS:O	1.95	0.65
7:P:88:ARG:HG3	7:P:112:ARG:HB3	1.78	0.65
23:Q:10:ARG:CZ	23:Q:10:ARG:HB2	2.25	0.65
2:B:1287:A:OP1	21:N:104:ALA:HB3	1.96	0.65
14:V:79:ARG:HB3	14:V:79:ARG:HH11	1.60	0.65
2:B:1579:A:H2'	2:B:1580:A:C8	2.30	0.65
2:B:2636:C:H2'	2:B:2637:U:C6	2.31	0.65
2:B:2867:G:H2'	2:B:2867:G:N3	2.11	0.65
26:F:125:GLY:HA2	26:F:162:ASP:HA	1.78	0.65
30:Z:5:CYS:HB2	30:Z:10:LYS:HB2	1.78	0.65
2:B:62:U:H3'	2:B:63:A:H8	1.62	0.65
2:B:264:C:H2'	2:B:265:A:H5''	1.78	0.65
2:B:1942:C:H1'	32:6:133:ARG:HH22	1.61	0.65
25:U:12:VAL:HG22	25:U:69:VAL:HG12	1.79	0.65
2:B:813:U:H2'	2:B:814:C:H6	1.62	0.65
19:H:114:GLU:HB3	19:H:134:VAL:HA	1.77	0.65
14:V:70:ILE:HG12	14:V:72:VAL:HG13	1.77	0.65
2:B:981:A:H4'	2:B:2037:A:H5'	1.77	0.65
2:B:2066:C:O2'	2:B:2067:G:H5'	1.96	0.65
32:6:108:GLU:HA	32:6:111:ARG:HB2	1.78	0.65
21:N:24:MET:HG2	21:N:44:LEU:HD13	1.78	0.65
9:Y:8:GLN:CG	9:Y:31:ILE:HA	2.24	0.65
5:D:51:THR:CG2	5:D:76:GLY:HA3	2.26	0.65
27:G:84:LYS:HG3	27:G:131:VAL:C	2.17	0.65
25:U:85:ARG:NE	25:U:85:ARG:HA	2.10	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:L:56:PRO:HD2	16:L:59:ARG:HG3	1.78	0.65
22:O:79:ALA:HA	22:O:115:LEU:HD23	1.79	0.65
2:B:1709:U:H2'	2:B:1710:G:H8	1.62	0.65
31:W:23:LYS:NZ	31:W:24:ARG:HG3	2.12	0.65
32:6:55:ILE:HG13	32:6:56:ALA:N	2.10	0.65
14:V:80:HIS:CD2	14:V:83:LYS:H	2.14	0.65
2:B:1219:U:H2'	2:B:1220:G:H8	1.62	0.65
2:B:1853:A:N1	2:B:2087:G:H1'	2.11	0.65
3:I:7:TYR:HB2	3:I:58:ILE:O	1.96	0.65
2:B:224:U:O4	2:B:420:C:H5'	1.97	0.65
2:B:17:G:H2'	2:B:18:U:C6	2.31	0.65
2:B:2291:U:H2'	2:B:2292:U:C6	2.31	0.65
31:W:23:LYS:O	31:W:66:VAL:HB	1.97	0.65
26:F:101:ARG:HH12	26:F:138:PRO:HB2	1.62	0.65
29:T:57:VAL:HG12	29:T:86:THR:OG1	1.96	0.65
2:B:773:U:H5'	2:B:774:G:OP2	1.97	0.65
2:B:2213:U:O2	2:B:2213:U:H2'	1.96	0.65
2:B:2306:C:H3'	2:B:2307:G:H5''	1.79	0.65
32:6:18:LEU:HD21	32:6:171:LYS:HD2	1.78	0.65
19:H:116:ARG:NH1	19:H:133:GLN:HB2	2.12	0.65
2:B:996:A:O3'	23:Q:91:ARG:HG2	1.97	0.65
28:R:96:VAL:HG23	28:R:98:ILE:HD11	1.79	0.65
27:G:1:SER:HA	27:G:5:LYS:HE3	1.77	0.65
27:G:93:TYR:O	27:G:94:ARG:HG3	1.97	0.65
29:T:20:ALA:O	29:T:24:MET:HB2	1.97	0.65
26:F:104:THR:C	26:F:108:PRO:HG2	2.17	0.65
11:4:15:LYS:O	11:4:16:ILE:HB	1.97	0.65
20:J:62:VAL:HG11	20:J:101:ILE:HD11	1.79	0.65
2:B:643:A:N6	2:B:2370:G:H1'	2.12	0.65
2:B:246:C:C2'	2:B:247:G:H5'	2.27	0.65
23:Q:97:ILE:HD11	23:Q:108:LEU:HD11	1.77	0.65
2:B:2271:G:O2'	2:B:2272:U:H5'	1.97	0.64
26:F:30:VAL:HG22	26:F:168:LEU:HD11	1.78	0.64
3:I:129:GLU:HB3	3:I:133:ARG:NH1	2.10	0.64
2:B:1552:A:H2'	2:B:1553:A:H5'	1.79	0.64
4:C:77:VAL:HA	4:C:93:VAL:HA	1.80	0.64
4:C:75:ALA:HB1	4:C:93:VAL:HG22	1.79	0.64
20:J:23:LYS:HE3	20:J:142:ILE:HG23	1.78	0.64
5:D:37:VAL:HG23	5:D:91:THR:HA	1.77	0.64
2:B:2188:U:H2'	2:B:2189:U:C6	2.32	0.64
2:B:2841:C:H2'	2:B:2842:G:H8	1.62	0.64
26:F:127:TYR:HB2	26:F:155:ILE:HD13	1.80	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:P:63:ILE:HG12	7:P:68:GLY:HA2	1.78	0.64
2:B:479:A:N3	2:B:481:G:H5"	2.13	0.64
17:M:66:ARG:CZ	17:M:101:VAL:HG11	2.27	0.64
2:B:1470:A:H3'	2:B:1471:G:H8	1.62	0.64
4:C:58:LYS:O	4:C:59:GLN:HB2	1.97	0.64
2:B:845:A:C2	2:B:847:U:H1'	2.32	0.64
26:F:116:LEU:HB3	26:F:176:PHE:HA	1.78	0.64
32:6:32:ARG:HH22	32:6:88:LEU:HD23	1.62	0.64
7:P:50:ARG:CB	7:P:56:SER:HB3	2.28	0.64
2:B:2645:G:H3'	2:B:2646:C:H5'	1.79	0.64
2:B:2615:U:C2	10:0:3:GLN:HA	2.32	0.64
2:B:154:U:H2'	2:B:155:A:H8	1.62	0.64
32:6:58:VAL:HG12	32:6:66:LEU:HD23	1.79	0.64
23:Q:94:LEU:C	23:Q:96:ASP:H	2.00	0.64
2:B:1915:U:H2'	2:B:1916:A:O4'	1.96	0.64
2:B:2109:U:H2'	2:B:2109:U:O2	1.97	0.64
24:S:58:ALA:HB1	24:S:69:LEU:HD21	1.78	0.64
26:F:31:GLU:O	26:F:32:LYS:HD3	1.98	0.64
19:H:41:LYS:O	19:H:44:ILE:N	2.24	0.64
27:G:132:LEU:H	27:G:132:LEU:HD23	1.61	0.64
2:B:2371:G:H2'	2:B:2372:U:H5"	1.78	0.64
2:B:1858:A:N6	2:B:1884:G:H1'	2.12	0.64
2:B:215:G:H4'	2:B:216:A:H4'	1.78	0.64
13:3:49:VAL:HG21	13:3:54:LEU:HD13	1.79	0.64
2:B:849:A:H2'	2:B:850:U:C6	2.33	0.64
22:O:49:VAL:HG11	22:O:82:ALA:HA	1.79	0.64
31:W:10:ARG:O	31:W:11:ASN:HB2	1.96	0.64
14:V:63:ILE:HB	14:V:70:ILE:HD11	1.80	0.64
2:B:138:U:H3'	2:B:140:C:C2	2.33	0.64
2:B:2145:C:H3'	2:B:2146:C:C5'	2.28	0.64
4:C:173:LEU:HD22	4:C:173:LEU:H	1.62	0.64
4:C:89:ASN:O	4:C:105:ALA:HB3	1.97	0.64
2:B:558:U:O2'	2:B:559:G:H5'	1.98	0.64
5:D:114:LYS:HB2	5:D:116:LYS:HE3	1.80	0.64
2:B:2794:C:H2'	2:B:2795:C:C6	2.32	0.64
2:B:1138:G:H2'	2:B:1139:G:O4'	1.98	0.64
19:H:82:SER:HB3	19:H:146:VAL:CG1	2.26	0.64
2:B:581:C:H2'	2:B:582:A:C8	2.33	0.64
32:6:70:SER:OG	32:6:75:ALA:HB3	1.97	0.64
5:D:24:VAL:CG2	5:D:188:LEU:HB3	2.28	0.64
6:K:19:VAL:HG12	6:K:43:ILE:HA	1.80	0.64
20:J:13:ARG:O	20:J:52:ASP:HA	1.98	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2143:C:H2'	2:B:2144:G:H4'	1.80	0.64
2:B:154:U:H2'	2:B:155:A:C8	2.32	0.64
5:D:10:GLY:CA	5:D:26:VAL:H	2.08	0.64
32:6:15:GLN:O	32:6:19:GLU:HG3	1.98	0.64
14:V:4:ILE:HD12	14:V:63:ILE:HG13	1.79	0.64
21:N:8:ARG:HH21	21:N:39:PRO:HB3	1.63	0.64
12:1:36:LYS:HG2	12:1:47:ILE:HG13	1.80	0.64
2:B:163:C:H2'	2:B:164:C:O4'	1.97	0.64
2:B:1469:A:H2'	2:B:1470:A:H8	1.62	0.64
27:G:166:GLU:HG2	27:G:168:VAL:HG23	1.79	0.64
2:B:1786:A:H1'	2:B:1938:A:N6	2.13	0.64
2:B:545:U:C4	2:B:547:A:H5'	2.32	0.64
5:D:32:ASN:HA	5:D:51:THR:O	1.97	0.64
5:D:5:VAL:N	5:D:32:ASN:HD21	1.85	0.64
5:D:168:GLU:O	5:D:170:VAL:HG13	1.98	0.64
17:M:40:ARG:HB2	17:M:93:VAL:HG22	1.79	0.64
2:B:1885:A:H2'	2:B:1886:U:O4'	1.98	0.64
8:E:112:LEU:HD13	8:E:186:VAL:HG11	1.80	0.63
29:T:22:THR:HA	29:T:25:GLU:HB3	1.80	0.63
2:B:587:C:O2'	16:L:19:LEU:HD13	1.98	0.63
2:B:2841:C:H2'	2:B:2842:G:C8	2.34	0.63
9:Y:18:LYS:O	9:Y:22:THR:HG23	1.97	0.63
23:Q:30:VAL:HG22	23:Q:31:TYR:H	1.61	0.63
23:Q:17:LEU:HD13	23:Q:30:VAL:O	1.98	0.63
3:I:89:SER:HA	3:I:97:VAL:HG21	1.80	0.63
8:E:176:ASP:O	8:E:180:LEU:HG	1.98	0.63
27:G:43:LYS:HB2	27:G:50:THR:OG1	1.98	0.63
24:S:36:LEU:HD22	24:S:36:LEU:H	1.62	0.63
2:B:1060:U:O4	2:B:1088:A:N6	2.31	0.63
2:B:2653:U:H3'	2:B:2654:A:H2'	1.78	0.63
2:B:947:A:HO2'	2:B:984:A:H2	1.46	0.63
2:B:1049:C:H2'	2:B:1050:A:H8	1.63	0.63
2:B:45:G:H5''	2:B:46:G:H5'	1.81	0.63
32:6:19:GLU:HA	32:6:22:GLU:HB2	1.80	0.63
27:G:17:LYS:HZ2	27:G:17:LYS:HA	1.63	0.63
27:G:33:THR:HA	27:G:34:ARG:NH1	2.12	0.63
2:B:2071:A:H2'	2:B:2072:C:C6	2.33	0.63
17:M:71:LYS:HD3	17:M:95:LEU:HD13	1.80	0.63
2:B:2091:C:H1'	30:Z:34:HIS:CD2	2.34	0.63
19:H:94:ILE:HA	19:H:98:ASP:OD1	1.99	0.63
2:B:1794:A:H2'	2:B:1795:C:C6	2.33	0.63
2:B:670:A:H5''	16:L:42:SER:HB2	1.80	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:871:U:H2'	2:B:872:U:H6	1.63	0.63
19:H:68:ARG:HH21	19:H:71:LYS:HE2	1.63	0.63
2:B:1535:A:O2'	2:B:1536:C:H5'	1.99	0.63
27:G:83:THR:HA	27:G:84:LYS:NZ	2.13	0.63
21:N:72:ASP:O	21:N:76:VAL:HG13	1.99	0.63
2:B:903:C:H2'	2:B:904:G:H8	1.62	0.63
2:B:2662:A:H2'	2:B:2663:G:O4'	1.98	0.63
31:W:28:GLU:HG3	31:W:29:SER:H	1.63	0.63
31:W:24:ARG:NE	31:W:65:LYS:HE3	2.13	0.63
19:H:116:ARG:HG2	19:H:131:SER:HB2	1.80	0.63
29:T:55:VAL:HA	29:T:87:LEU:HA	1.80	0.63
3:I:11:GLN:HA	3:I:55:PRO:HA	1.80	0.63
2:B:2425:A:H5'	2:B:2427:C:O4'	1.99	0.63
2:B:1484:U:H2'	2:B:1485:U:C6	2.33	0.63
2:B:1486:U:H2'	2:B:1487:U:H6	1.64	0.63
27:G:72:ASN:O	27:G:76:ILE:HG12	1.98	0.63
2:B:1790:C:O2'	4:C:207:ALA:HB2	1.99	0.63
28:R:76:LYS:HB2	28:R:85:LYS:HB3	1.81	0.63
26:F:76:PHE:O	26:F:77:LYS:HB2	1.97	0.63
19:H:27:ARG:H	19:H:31:VAL:HG23	1.63	0.63
19:H:31:VAL:O	19:H:32:PRO:C	2.34	0.63
2:B:2787:C:C1'	5:D:63:PRO:HG3	2.24	0.63
2:B:2471:A:O2'	2:B:2472:G:H8	1.74	0.63
20:J:82:GLY:O	20:J:84:ILE:HG22	1.99	0.63
2:B:1063:G:C1'	3:I:134:SER:O	2.47	0.63
2:B:1652:A:OP1	21:N:8:ARG:HD3	1.99	0.63
16:L:116:VAL:HG13	16:L:117:THR:N	2.13	0.63
2:B:528:A:N1	2:B:2042:A:H2'	2.14	0.63
2:B:968:C:H2'	2:B:969:G:H8	1.63	0.63
16:L:93:ASN:O	16:L:95:LEU:N	2.32	0.63
2:B:2302:U:H2'	2:B:2303:G:C8	2.34	0.63
26:F:74:ALA:HB3	26:F:77:LYS:O	1.98	0.63
30:Z:40:VAL:CG2	30:Z:43:GLU:HB3	2.29	0.63
29:T:32:LEU:H	29:T:83:ALA:HB3	1.63	0.63
19:H:40:THR:O	19:H:42:LYS:N	2.31	0.63
2:B:1440:U:H2'	2:B:1441:G:C8	2.34	0.63
2:B:713:G:H21	2:B:718:A:H2	1.43	0.63
24:S:82:MET:HE1	24:S:84:ARG:HH22	1.63	0.63
2:B:743:A:O2'	2:B:744:U:H5'	1.99	0.63
19:H:3:VAL:HA	19:H:39:ALA:N	2.14	0.63
12:1:32:LYS:HA	12:1:51:ALA:O	1.98	0.63
2:B:2658:C:H5'	27:G:159:LYS:HZ3	1.62	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1930:G:O2'	2:B:1968:G:N1	2.31	0.63
32:6:79:ILE:HA	32:6:82:ALA:HB3	1.81	0.63
2:B:1028:A:H2'	2:B:1029:A:C8	2.34	0.63
23:Q:91:ARG:HE	23:Q:94:LEU:HD22	1.64	0.63
2:B:2364:C:H4'	31:W:55:ASP:OD1	1.98	0.63
2:B:90:U:H3'	2:B:91:A:C5'	2.26	0.63
2:B:528:A:C2	2:B:2043:C:H4'	2.34	0.63
20:J:117:ALA:HA	20:J:120:ARG:HH21	1.62	0.63
32:6:58:VAL:HG12	32:6:59:THR:H	1.62	0.62
2:B:136:G:H2'	2:B:137:U:C5	2.34	0.62
3:I:20:SER:O	3:I:25:PRO:HD2	1.99	0.62
25:U:78:LYS:HD3	25:U:79:ALA:H	1.64	0.62
2:B:1205:A:C6	8:E:165:HIS:HB2	2.34	0.62
2:B:2229:U:H2'	2:B:2230:G:H8	1.63	0.62
2:B:2898:U:H2'	2:B:2899:A:H8	1.64	0.62
2:B:2458:G:H1'	2:B:2460:U:O4	1.98	0.62
1:A:104:A:H2'	1:A:105:G:O4'	1.99	0.62
26:F:41:GLU:O	26:F:43:ILE:HG22	1.98	0.62
2:B:2443:C:H2'	2:B:2444:G:C8	2.34	0.62
2:B:2654:A:N1	2:B:2665:A:H5''	2.15	0.62
2:B:2805:C:H2'	2:B:2806:C:C6	2.33	0.62
32:6:157:ALA:O	32:6:161:ILE:HG12	1.99	0.62
2:B:833:A:H2'	2:B:834:G:C8	2.34	0.62
30:Z:38:PHE:CE2	30:Z:51:VAL:HG21	2.29	0.62
19:H:100:ALA:HB1	19:H:112:LYS:HA	1.79	0.62
19:H:116:ARG:HH11	19:H:133:GLN:HB2	1.63	0.62
2:B:1082:U:N3	2:B:1086:A:C6	2.68	0.62
8:E:166:LYS:O	8:E:167:VAL:HB	1.99	0.62
13:3:41:ARG:HA	13:3:44:ARG:NH1	2.13	0.62
13:3:44:ARG:N	13:3:45:PRO:HD2	2.14	0.62
2:B:1873:G:O2'	2:B:1874:C:H5'	1.99	0.62
2:B:2021:C:OP1	10:0:8:THR:HG21	2.00	0.62
23:Q:104:ALA:HA	28:R:46:GLU:CD	2.19	0.62
25:U:25:LYS:HE3	25:U:36:GLU:HG3	1.81	0.62
32:6:39:LEU:HD12	32:6:40:HIS:N	2.15	0.62
2:B:30:G:H2'	2:B:31:C:C6	2.34	0.62
2:B:1412:U:H2'	2:B:1413:A:H8	1.65	0.62
2:B:1229:C:H2'	2:B:1230:A:C8	2.34	0.62
4:C:124:LYS:HZ3	4:C:124:LYS:HB3	1.64	0.62
2:B:27:G:HO2'	2:B:28:A:H8	1.46	0.62
5:D:97:SER:HB3	5:D:99:GLU:CD	2.20	0.62
14:V:80:HIS:HD2	14:V:82:TYR:H	1.46	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:W:35:ILE:HG12	31:W:35:ILE:O	1.99	0.62
25:U:86:PHE:CE1	25:U:88:ASP:HB3	2.33	0.62
20:J:23:LYS:HE3	20:J:142:ILE:HA	1.80	0.62
2:B:189:G:H2'	2:B:205:G:N2	2.15	0.62
19:H:108:VAL:C	19:H:109:GLU:HG3	2.19	0.62
2:B:1458:U:O2'	2:B:1459:G:H5''	2.00	0.62
2:B:580:U:H2'	2:B:581:C:C6	2.35	0.62
27:G:9:VAL:HG22	27:G:48:THR:HG22	1.81	0.62
24:S:26:GLY:N	24:S:71:VAL:HG13	2.12	0.62
2:B:545:U:N3	2:B:547:A:H5'	2.15	0.62
2:B:936:A:H2'	2:B:937:C:C6	2.35	0.62
11:4:16:ILE:HG13	11:4:25:VAL:HG22	1.82	0.62
8:E:145:ASP:HB2	8:E:166:LYS:HE2	1.81	0.62
2:B:988:A:C8	9:Y:13:ILE:HD12	2.34	0.62
25:U:40:LEU:HA	25:U:60:LYS:O	2.00	0.62
23:Q:105:PHE:HA	23:Q:108:LEU:HG	1.82	0.62
27:G:162:ARG:HG3	27:G:166:GLU:HG3	1.80	0.62
23:Q:30:VAL:HG11	23:Q:33:VAL:HG13	1.82	0.62
8:E:48:THR:HG22	8:E:86:ALA:HB3	1.80	0.62
2:B:1810:A:H2'	2:B:1811:G:O4'	1.99	0.62
22:O:94:ARG:HD2	22:O:97:PHE:O	2.00	0.62
26:F:106:ALA:HA	26:F:135:ILE:HD11	1.81	0.62
2:B:27:G:H1'	2:B:513:A:N6	2.14	0.62
19:H:100:ALA:CB	19:H:112:LYS:HA	2.30	0.62
29:T:39:THR:C	29:T:41:ALA:H	2.03	0.62
6:K:119:ALA:HB3	6:K:120:PRO:CD	2.28	0.62
2:B:1921:G:N2	2:B:1922:G:C6	2.68	0.62
2:B:171:U:H2'	2:B:172:A:C8	2.34	0.62
32:6:109:GLU:HA	32:6:112:LYS:HE3	1.82	0.62
2:B:751:A:H5'	24:S:90:LYS:HA	1.80	0.62
2:B:1779:U:H5	2:B:1784:A:N7	1.98	0.62
2:B:2819:G:H2'	2:B:2821:A:N7	2.15	0.62
26:F:106:ALA:N	26:F:108:PRO:HD2	2.15	0.62
29:T:32:LEU:HG	29:T:83:ALA:HB2	1.82	0.62
3:I:85:ILE:HD13	3:I:137:LEU:HD21	1.80	0.62
2:B:197:A:N6	2:B:2430:A:H2'	2.15	0.62
2:B:1149:G:H2'	2:B:1150:C:C6	2.35	0.62
16:L:135:ILE:HG23	16:L:136:GLU:N	2.14	0.62
26:F:110:ILE:CG2	26:F:113:PHE:HB3	2.30	0.62
29:T:32:LEU:N	29:T:83:ALA:HB3	2.15	0.62
2:B:1722:A:H2'	2:B:1723:G:H8	1.64	0.62
27:G:137:LYS:O	27:G:140:ILE:HG13	2.00	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:79:C:HO2'	2:B:346:A:H1'	1.65	0.62
20:J:11:VAL:HA	20:J:12:LYS:HZ3	1.65	0.62
2:B:813:U:H2'	2:B:814:C:C6	2.35	0.62
27:G:167:VAL:HG23	27:G:168:VAL:H	1.64	0.62
16:L:65:GLY:O	16:L:66:PHE:HB3	2.00	0.62
32:6:3:LEU:HD12	32:6:143:LEU:HD23	1.81	0.62
2:B:2297:A:N6	2:B:2319:G:H1'	2.14	0.62
2:B:2336:A:H1'	2:B:2337:G:OP1	2.00	0.61
26:F:148:VAL:O	26:F:149:ARG:HG2	2.00	0.61
27:G:26:LYS:HB2	27:G:32:LEU:HG	1.82	0.61
23:Q:73:ILE:HD11	23:Q:77:LYS:HD3	1.81	0.61
28:R:25:LEU:H	28:R:94:THR:HG21	1.65	0.61
2:B:2384:U:H5''	2:B:2386:A:OP1	2.00	0.61
8:E:52:VAL:HG11	8:E:81:GLY:HA3	1.82	0.61
2:B:2872:A:O2'	2:B:2873:A:H5''	2.00	0.61
8:E:194:LYS:O	8:E:197:GLU:HB3	2.00	0.61
30:Z:18:ARG:NH1	30:Z:24:ALA:HB2	2.15	0.61
1:A:5:U:H2'	1:A:6:G:H8	1.65	0.61
22:O:39:VAL:HB	22:O:49:VAL:HG22	1.80	0.61
19:H:41:LYS:O	19:H:45:GLU:N	2.33	0.61
22:O:83:LEU:HD12	22:O:87:ILE:O	2.00	0.61
2:B:1171:G:C4	2:B:1172:C:H1'	2.36	0.61
16:L:51:GLU:OE1	16:L:56:PRO:HA	1.99	0.61
2:B:1050:A:H2'	2:B:1051:G:H8	1.65	0.61
1:A:104:A:H5'	14:V:75:GLN:HE21	1.64	0.61
2:B:2537:U:H2'	2:B:2538:C:C6	2.35	0.61
1:A:111:U:H2'	1:A:112:G:H8	1.64	0.61
31:W:18:LYS:HG3	31:W:19:ARG:CZ	2.30	0.61
27:G:116:LEU:H	27:G:116:LEU:HD12	1.65	0.61
32:6:83:ILE:HG22	32:6:90:LEU:H	1.65	0.61
27:G:107:GLY:HA3	27:G:151:ARG:NH2	2.15	0.61
2:B:1173:U:H2'	2:B:1174:U:C4'	2.30	0.61
2:B:1175:A:H8	2:B:1175:A:OP1	1.83	0.61
2:B:1306:C:H2'	2:B:1307:A:H8	1.66	0.61
4:C:14:HIS:O	4:C:203:VAL:HG11	2.00	0.61
26:F:116:LEU:H	26:F:176:PHE:C	2.04	0.61
2:B:1794:A:H2'	2:B:1795:C:H6	1.66	0.61
2:B:320:A:H4'	2:B:322:A:N7	2.15	0.61
7:P:13:LYS:HD2	7:P:76:HIS:HA	1.81	0.61
2:B:2732:G:H3'	2:B:2733:A:H5'	1.80	0.61
2:B:1593:A:H2'	2:B:1594:U:C6	2.35	0.61
2:B:1488:C:O2'	2:B:1489:C:H5'	2.00	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2783:U:H2'	2:B:2784:U:C6	2.35	0.61
2:B:2886:A:H62	10:0:39:ARG:CZ	2.14	0.61
20:J:45:THR:HG23	20:J:45:THR:O	2.01	0.61
7:P:50:ARG:HB2	7:P:56:SER:CB	2.30	0.61
19:H:67:ALA:O	19:H:71:LYS:HD3	2.01	0.61
2:B:1387:A:H2'	2:B:1388:G:C8	2.35	0.61
2:B:1164:C:H2'	2:B:1165:A:H8	1.65	0.61
31:W:19:ARG:HE	31:W:19:ARG:H	1.47	0.61
29:T:39:THR:CG2	29:T:42:GLU:H	2.13	0.61
27:G:84:LYS:HG2	27:G:85:LYS:N	2.15	0.61
2:B:1919:A:H3'	2:B:1920:C:C5	2.36	0.61
2:B:1164:C:H2'	2:B:1165:A:C8	2.36	0.61
2:B:3:U:HO2'	2:B:4:U:H6	1.47	0.61
17:M:57:VAL:HA	17:M:112:LEU:HD11	1.82	0.61
1:A:66:A:H61	1:A:107:G:H2'	1.65	0.61
3:I:18:ASN:N	3:I:19:PRO:HD2	2.14	0.61
2:B:703:U:H2'	2:B:704:G:O4'	2.00	0.61
2:B:1175:A:H2'	2:B:1176:U:O4'	2.00	0.61
24:S:13:SER:O	24:S:101:SER:HB3	2.00	0.61
12:1:9:LYS:O	12:1:9:LYS:HG2	2.01	0.61
6:K:78:ARG:HG3	7:P:70:GLU:HB3	1.82	0.61
2:B:2747:G:O6	2:B:2755:C:H5''	2.00	0.61
2:B:2649:C:H2'	2:B:2650:U:H6	1.65	0.61
4:C:270:ARG:HB3	4:C:270:ARG:HH11	1.66	0.61
21:N:106:ASP:C	21:N:108:ALA:H	2.04	0.61
32:6:84:ARG:HB2	32:6:84:ARG:HH11	1.66	0.61
2:B:1203:U:H3'	2:B:1204:A:H5''	1.81	0.61
2:B:1024:G:C3'	2:B:1025:G:H5''	2.26	0.61
5:D:8:LYS:HB2	5:D:201:LEU:HD11	1.82	0.61
15:2:10:LEU:O	15:2:14:ARG:HG2	2.00	0.61
17:M:35:ALA:HB3	17:M:99:GLY:N	2.16	0.61
17:M:35:ALA:O	17:M:36:VAL:HB	2.01	0.61
2:B:1889:A:H2'	2:B:1890:A:C8	2.36	0.61
1:A:32:U:H4'	1:A:52:A:N6	2.16	0.61
2:B:575:A:O2'	2:B:576:U:H5'	1.99	0.61
19:H:127:GLU:HA	19:H:144:VAL:O	2.01	0.61
26:F:103:ILE:H	26:F:107:VAL:HG23	1.66	0.61
2:B:580:U:O2'	2:B:581:C:H5'	2.01	0.61
32:6:39:LEU:HD12	32:6:40:HIS:H	1.65	0.61
20:J:44:TYR:O	20:J:45:THR:HB	2.01	0.61
29:T:25:GLU:HA	29:T:28:ASN:O	2.00	0.61
2:B:958:U:H3	17:M:16:ARG:CB	2.11	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1729:U:C3'	2:B:1730:C:H4'	2.30	0.61
24:S:15:GLN:O	24:S:19:LEU:HB2	2.00	0.61
2:B:2150:C:H2'	2:B:2151:U:C6	2.36	0.61
2:B:1381:G:C2'	2:B:1382:G:H5'	2.30	0.61
2:B:496:G:H1'	24:S:61:ASN:ND2	2.16	0.61
2:B:1048:A:H62	2:B:1110:G:H21	1.49	0.61
2:B:688:U:O2'	2:B:689:A:H5'	2.00	0.61
2:B:1015:U:H2'	2:B:1016:G:C8	2.36	0.61
19:H:80:ILE:HD13	19:H:98:ASP:HB2	1.83	0.60
26:F:32:LYS:HE2	26:F:34:THR:HG22	1.83	0.60
32:6:58:VAL:HG12	32:6:59:THR:N	2.16	0.60
19:H:112:LYS:HE2	19:H:113:SER:N	2.16	0.60
19:H:114:GLU:HB3	19:H:133:GLN:C	2.21	0.60
24:S:29:VAL:HG23	24:S:70:LYS:HA	1.82	0.60
2:B:1439:A:C6	2:B:1552:A:N7	2.69	0.60
2:B:1558:C:H4'	2:B:1559:U:H5'	1.82	0.60
24:S:18:ARG:HB3	24:S:76:VAL:HG22	1.82	0.60
32:6:125:GLY:O	32:6:129:ILE:HG13	2.01	0.60
25:U:35:VAL:HB	25:U:38:ILE:HB	1.82	0.60
25:U:35:VAL:HB	25:U:38:ILE:CB	2.31	0.60
8:E:46:GLN:HG3	8:E:87:ALA:HB3	1.83	0.60
2:B:2080:A:OP1	30:Z:20:HIS:HB3	2.01	0.60
2:B:2741:A:H2'	2:B:2742:G:O4'	2.01	0.60
2:B:639:U:H2'	2:B:640:C:C6	2.35	0.60
2:B:581:C:H2'	2:B:582:A:H8	1.66	0.60
19:H:50:ARG:H	19:H:50:ARG:NE	1.99	0.60
2:B:1173:U:N3	2:B:1174:U:H1'	2.16	0.60
2:B:2800:A:H2'	2:B:2801:G:C1'	2.31	0.60
5:D:118:PHE:HZ	5:D:123:LYS:HZ3	1.48	0.60
2:B:519:U:H4'	24:S:73:LYS:NZ	2.17	0.60
2:B:2734:A:H2'	2:B:2735:G:O4'	2.01	0.60
2:B:812:C:H5'	16:L:21:ARG:O	2.00	0.60
1:A:109:A:H2'	1:A:110:C:C6	2.36	0.60
4:C:134:ILE:HD11	4:C:163:ILE:HG13	1.83	0.60
8:E:161:ALA:HB1	8:E:167:VAL:HG13	1.83	0.60
2:B:2425:A:H5''	2:B:2426:A:H3'	1.82	0.60
24:S:55:ILE:O	24:S:58:ALA:HB3	2.00	0.60
2:B:1139:G:O2'	2:B:1140:C:H5'	2.01	0.60
2:B:2834:G:H1'	2:B:2883:A:N6	2.16	0.60
2:B:184:C:H2'	2:B:185:G:H8	1.67	0.60
2:B:522:A:H2'	2:B:523:C:C6	2.35	0.60
2:B:1275:A:H2'	2:B:1276:A:O4'	2.02	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:F:58:ALA:HB2	26:F:140:ILE:HG13	1.83	0.60
24:S:66:ILE:CD1	24:S:66:ILE:H	2.13	0.60
2:B:274:C:H2'	2:B:275:C:O4'	2.01	0.60
26:F:1:ALA:O	26:F:4:HIS:HB3	2.02	0.60
17:M:97:GLN:O	17:M:100:LYS:HB2	2.01	0.60
2:B:2810:A:H2'	2:B:2811:G:O4'	2.00	0.60
25:U:64:ILE:HG13	25:U:65:GLN:N	2.16	0.60
28:R:21:ARG:HB3	28:R:95:ASP:OD1	2.01	0.60
31:W:18:LYS:CA	31:W:36:ILE:HG12	2.31	0.60
32:6:76:LEU:HB3	32:6:77:LYS:HZ2	1.66	0.60
28:R:7:SER:HB2	28:R:22:LEU:HD13	1.84	0.60
8:E:108:ILE:HD13	8:E:108:ILE:O	2.01	0.60
2:B:2145:C:H3'	2:B:2146:C:H5''	1.81	0.60
29:T:9:LYS:H	29:T:9:LYS:HD2	1.65	0.60
31:W:74:LYS:HE2	31:W:74:LYS:HA	1.84	0.60
26:F:58:ALA:CB	26:F:139:GLU:HG2	2.32	0.60
29:T:13:ALA:O	29:T:32:LEU:HB2	2.02	0.60
7:P:75:THR:HG23	7:P:76:HIS:N	2.16	0.60
8:E:60:TRP:O	8:E:61:ARG:HB2	2.00	0.60
2:B:1230:A:H2'	2:B:1231:U:H6	1.66	0.60
2:B:2537:U:H2'	2:B:2538:C:H6	1.66	0.60
17:M:75:GLU:HG3	17:M:90:GLU:HB2	1.83	0.60
2:B:2008:C:H2'	2:B:2009:A:H8	1.66	0.60
26:F:108:PRO:O	26:F:110:ILE:HG23	2.01	0.60
32:6:30:THR:C	32:6:32:ARG:H	2.04	0.60
32:6:80:GLU:O	32:6:83:ILE:HG12	2.01	0.60
20:J:3:THR:HB	20:J:44:TYR:CE1	2.37	0.60
27:G:15:ASP:HB2	27:G:26:LYS:HB3	1.83	0.60
24:S:24:ILE:HG23	24:S:32:ALA:HB1	1.82	0.60
2:B:1726:C:H2'	2:B:1727:C:C6	2.37	0.60
9:Y:15:ARG:HG2	9:Y:53:MET:SD	2.41	0.60
7:P:62:LYS:O	7:P:63:ILE:HB	2.00	0.60
27:G:148:ARG:HD3	27:G:152:ARG:HD3	1.84	0.60
4:C:16:VAL:H	4:C:203:VAL:HG12	1.66	0.60
2:B:82:U:H2'	2:B:83:A:C8	2.37	0.60
2:B:1464:G:H2'	2:B:1465:G:H8	1.67	0.60
19:H:79:THR:CG2	19:H:145:ASN:HB2	2.31	0.60
27:G:17:LYS:HB3	27:G:24:THR:OG1	2.01	0.60
18:X:20:ASN:O	18:X:24:GLU:HB3	2.02	0.60
17:M:43:ALA:HB2	17:M:69:PRO:HB3	1.84	0.60
13:3:60:CYS:C	13:3:62:PRO:HD3	2.22	0.60
4:C:94:LEU:HA	4:C:100:ARG:HA	1.83	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:Q:105:PHE:O	23:Q:109:VAL:HG23	2.02	0.60
2:B:1395:A:H4'	2:B:1397:U:C5	2.36	0.60
2:B:620:G:N3	2:B:620:G:H5'	2.17	0.60
1:A:48:U:H2'	1:A:49:C:C6	2.36	0.60
2:B:1545:A:H2'	2:B:1546:G:O4'	2.02	0.60
27:G:10:VAL:HG23	27:G:47:ASN:O	2.01	0.60
4:C:123:ILE:HD12	4:C:135:PRO:HD2	1.83	0.60
31:W:37:VAL:HG12	31:W:38:ARG:HD3	1.83	0.60
2:B:90:U:H2'	2:B:91:A:C2	2.36	0.60
7:P:88:ARG:HB2	7:P:112:ARG:CZ	2.31	0.60
2:B:1592:C:H2'	2:B:1593:A:H8	1.67	0.60
1:A:75:G:H1'	14:V:29:ILE:HG12	1.82	0.60
26:F:72:SER:HB2	26:F:80:GLN:H	1.67	0.60
2:B:1723:G:H3'	2:B:1724:G:H8	1.67	0.60
32:6:114:LEU:HD23	32:6:183:ILE:HD11	1.82	0.60
2:B:1857:G:H1'	2:B:1885:A:N6	2.17	0.60
19:H:1:MET:O	19:H:20:ASN:HA	2.01	0.60
2:B:1486:U:H2'	2:B:1487:U:C6	2.37	0.60
2:B:549:G:H3'	2:B:549:G:OP2	2.02	0.60
8:E:1:MET:O	8:E:13:THR:HA	2.02	0.60
2:B:1400:U:H2'	2:B:1401:G:C8	2.37	0.60
13:3:37:THR:HA	13:3:40:LYS:HE2	1.84	0.60
2:B:1372:U:HO2'	2:B:2212:A:H8	1.47	0.60
2:B:1747:U:H2'	2:B:1748:C:H6	1.67	0.60
2:B:918:A:H2'	2:B:919:U:H5'	1.83	0.59
31:W:23:LYS:HZ3	31:W:24:ARG:HG3	1.67	0.59
30:Z:30:LEU:N	30:Z:30:LEU:HD23	2.17	0.59
32:6:28:LEU:HD11	32:6:121:TYR:HE2	1.67	0.59
5:D:51:THR:HG21	5:D:76:GLY:HA3	1.84	0.59
2:B:996:A:H4'	23:Q:91:ARG:CD	2.32	0.59
8:E:161:ALA:C	8:E:163:ASN:H	2.05	0.59
21:N:80:PHE:O	21:N:85:PRO:HD3	2.02	0.59
19:H:1:MET:HB3	19:H:21:VAL:O	2.02	0.59
2:B:1230:A:H2'	2:B:1231:U:C6	2.36	0.59
23:Q:10:ARG:NH1	23:Q:10:ARG:HB2	2.17	0.59
2:B:2109:U:H2'	2:B:2110:G:H5'	1.84	0.59
2:B:2885:G:H2'	2:B:2886:A:O4'	2.01	0.59
22:O:28:VAL:HG11	22:O:92:PHE:CZ	2.37	0.59
2:B:1038:G:H2'	2:B:1039:A:C8	2.37	0.59
2:B:794:A:H2'	2:B:795:C:C6	2.36	0.59
24:S:20:VAL:HG23	24:S:23:LEU:HD12	1.84	0.59
2:B:2331:G:H21	2:B:2336:A:H8	1.49	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:43:C:H4'	26:F:91:ARG:HD2	1.82	0.59
2:B:2301:C:H2'	2:B:2302:U:C6	2.37	0.59
26:F:168:LEU:HD13	26:F:169:LEU:N	2.16	0.59
2:B:142:A:C1'	29:T:2:ILE:HG22	2.31	0.59
17:M:19:GLY:H	17:M:38:ARG:HH12	1.49	0.59
2:B:1533:C:H2'	2:B:1534:U:H6	1.67	0.59
2:B:1097:U:H2'	2:B:1098:A:H5'	1.83	0.59
19:H:84:ALA:HA	19:H:89:LYS:O	2.03	0.59
26:F:103:ILE:HD11	26:F:174:PHE:HA	1.84	0.59
27:G:42:VAL:HA	27:G:50:THR:O	2.02	0.59
3:I:27:LEU:H	3:I:27:LEU:CD2	2.14	0.59
29:T:73:ARG:NH2	29:T:73:ARG:HB3	2.15	0.59
2:B:144:A:H2'	2:B:145:C:H6	1.66	0.59
2:B:1197:G:H2'	2:B:1198:U:C6	2.37	0.59
23:Q:9:ALA:C	23:Q:11:ALA:H	2.06	0.59
2:B:2896:C:H2'	2:B:2897:U:C6	2.38	0.59
2:B:2728:U:H2'	2:B:2729:G:C8	2.37	0.59
2:B:1301:A:O2'	2:B:1302:A:H2'	2.01	0.59
19:H:99:ILE:HD12	19:H:144:VAL:HG21	1.83	0.59
18:X:29:ARG:HH12	29:T:12:ARG:CA	2.10	0.59
14:V:80:HIS:CD2	14:V:83:LYS:HB2	2.36	0.59
13:3:41:ARG:HG3	13:3:44:ARG:NH2	2.16	0.59
2:B:247:G:H4'	2:B:386:G:C5	2.37	0.59
25:U:81:ARG:HB2	25:U:96:LYS:HG2	1.82	0.59
2:B:934:U:H2'	2:B:935:C:C6	2.37	0.59
17:M:110:GLU:O	17:M:114:ARG:HB2	2.02	0.59
31:W:51:GLY:HA3	31:W:59:PHE:CB	2.32	0.59
32:6:75:ALA:O	32:6:79:ILE:HD12	2.02	0.59
4:C:107:LYS:O	4:C:109:LEU:HD22	2.02	0.59
2:B:273:G:O2'	2:B:274:C:H5'	2.03	0.59
6:K:41:ILE:HG13	6:K:42:THR:N	2.17	0.59
18:X:49:ASP:O	18:X:53:VAL:HG23	2.01	0.59
2:B:2666:C:O4'	2:B:2666:C:O2	2.19	0.59
17:M:126:ILE:H	17:M:126:ILE:HD12	1.67	0.59
2:B:1918:A:H5''	2:B:1919:A:OP1	2.02	0.59
2:B:264:C:C2'	2:B:265:A:H5''	2.32	0.59
2:B:2394:C:OP1	16:L:63:LYS:HG2	2.03	0.59
8:E:171:ASP:CG	8:E:172:ALA:H	2.06	0.59
2:B:2893:A:H4'	2:B:2894:G:H5'	1.84	0.59
31:W:18:LYS:HG3	31:W:19:ARG:NE	2.17	0.59
16:L:124:GLY:H	16:L:143:GLU:HG3	1.65	0.59
32:6:44:GLU:HB2	32:6:49:HIS:ND1	2.17	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:Q:96:ASP:C	23:Q:98:ALA:H	2.05	0.59
22:O:51:ALA:HB3	22:O:78:VAL:CG2	2.28	0.59
19:H:5:LEU:O	19:H:6:LEU:HD12	2.03	0.59
17:M:4:PRO:HG2	17:M:70:ASP:HA	1.84	0.59
4:C:159:THR:O	4:C:194:VAL:HG12	2.01	0.59
2:B:2134:A:N1	2:B:2157:G:H4'	2.17	0.59
8:E:15:SER:O	8:E:19:PHE:HB2	2.02	0.59
3:I:91:LYS:HB2	3:I:94:LYS:HD2	1.83	0.59
9:Y:40:THR:O	9:Y:43:ILE:HG23	2.02	0.59
2:B:2106:U:H2'	2:B:2107:G:O4'	2.02	0.59
2:B:1274:A:N3	2:B:1297:C:H1'	2.18	0.59
9:Y:6:ILE:O	9:Y:34:THR:HA	2.02	0.59
14:V:72:VAL:HB	14:V:92:VAL:O	2.02	0.59
6:K:64:ARG:HD2	6:K:102:PRO:O	2.03	0.59
20:J:123:LYS:O	20:J:124:VAL:HG13	2.03	0.59
14:V:9:ARG:HD2	14:V:41:GLU:HB3	1.84	0.59
6:K:15:GLY:HA3	6:K:52:VAL:HG23	1.83	0.59
4:C:202:ARG:NH2	4:C:202:ARG:HB2	2.17	0.59
18:X:15:ASN:O	18:X:19:LEU:HD13	2.03	0.59
2:B:2240:U:O2'	2:B:2241:A:H5'	2.03	0.59
2:B:2182:U:H2'	2:B:2183:A:O4'	2.01	0.59
2:B:2298:A:H2'	2:B:2299:U:O4'	2.03	0.59
31:W:23:LYS:HD2	31:W:24:ARG:N	2.18	0.59
31:W:46:ALA:HB2	31:W:78:PHE:CD1	2.38	0.59
19:H:79:THR:HB	19:H:145:ASN:HB2	1.85	0.59
26:F:137:PHE:O	26:F:139:GLU:N	2.36	0.59
32:6:68:VAL:O	32:6:98:ALA:HA	2.03	0.59
2:B:1021:A:H62	2:B:1141:U:H3	1.49	0.59
29:T:10:VAL:HG21	29:T:42:GLU:HG3	1.84	0.59
2:B:1549:A:H2'	2:B:1550:C:C6	2.38	0.59
2:B:643:A:C4	12:1:43:ARG:HD2	2.37	0.59
2:B:2860:A:O5'	2:B:2860:A:H8	1.86	0.59
23:Q:109:VAL:HG12	23:Q:113:LYS:HE3	1.84	0.59
2:B:1287:A:H3'	2:B:1288:G:N2	2.17	0.59
2:B:2376:A:H2'	2:B:2377:A:O4'	2.02	0.59
6:K:109:SER:HB2	6:K:111:LYS:HZ1	1.67	0.59
5:D:204:LYS:HB2	5:D:205:PRO:HD2	1.85	0.59
32:6:77:LYS:HE2	32:6:94:ASN:ND2	2.16	0.59
7:P:92:ARG:HH11	7:P:92:ARG:HG3	1.67	0.59
20:J:43:GLU:O	20:J:45:THR:N	2.36	0.59
27:G:25:ILE:O	27:G:32:LEU:HA	2.03	0.59
27:G:7:PRO:O	27:G:8:VAL:HB	2.03	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1082:U:C2	2:B:1086:A:C6	2.91	0.59
2:B:1198:U:O2'	23:Q:3:VAL:HG13	2.02	0.59
4:C:93:VAL:HG21	4:C:115:ILE:HD11	1.83	0.59
1:A:107:G:O2'	1:A:108:A:H5'	2.03	0.59
24:S:83:LYS:HD3	24:S:97:LEU:HD12	1.83	0.59
21:N:96:ARG:HH11	21:N:116:VAL:HG23	1.66	0.59
2:B:1714:U:H3'	2:B:1715:G:C5'	2.32	0.59
19:H:7:ASP:CG	19:H:8:LYS:H	2.05	0.59
31:W:39:GLN:CG	31:W:42:THR:HB	2.31	0.59
26:F:115:GLY:CA	26:F:177:ARG:HH11	2.16	0.59
2:B:139:U:C2	29:T:1:MET:HB3	2.38	0.59
2:B:145:C:H2'	2:B:146:A:C8	2.37	0.59
2:B:280:U:H2'	2:B:281:C:C6	2.38	0.59
25:U:26:ASN:ND2	25:U:34:ILE:HD12	2.18	0.59
2:B:1870:C:H5''	2:B:1871:A:C6	2.38	0.59
6:K:113:MET:SD	6:K:116:ILE:HD11	2.43	0.59
2:B:300:A:H2'	2:B:334:C:H1'	1.85	0.59
8:E:49:ARG:O	8:E:74:LYS:HD3	2.02	0.59
2:B:1666:G:H4'	6:K:6:THR:HG23	1.85	0.59
2:B:1259:G:H2'	2:B:1260:A:H8	1.68	0.59
2:B:910:A:H2'	2:B:911:A:C8	2.38	0.59
19:H:59:ALA:HA	19:H:62:LEU:HD21	1.84	0.59
30:Z:66:THR:O	30:Z:69:ALA:HB3	2.03	0.59
26:F:78:ILE:H	26:F:79:ARG:NH1	2.01	0.58
32:6:14:MET:HB3	32:6:168:PHE:CD2	2.37	0.58
24:S:69:LEU:HG	24:S:107:VAL:HG22	1.84	0.58
2:B:2246:G:H2'	2:B:2247:A:C8	2.37	0.58
27:G:10:VAL:CG2	27:G:16:VAL:HG21	2.33	0.58
20:J:81:ILE:HG23	20:J:82:GLY:N	2.10	0.58
8:E:27:LEU:O	8:E:31:VAL:HG23	2.03	0.58
6:K:35:VAL:HG23	6:K:36:GLY:N	2.13	0.58
2:B:1176:U:H2'	2:B:1177:G:O4'	2.04	0.58
2:B:1299:G:H4'	2:B:1301:A:H1'	1.85	0.58
2:B:699:A:H2'	2:B:700:G:O4'	2.03	0.58
16:L:122:VAL:HG23	16:L:143:GLU:OE1	2.03	0.58
2:B:1285:A:H2'	2:B:1286:A:H5''	1.85	0.58
24:S:27:LYS:O	24:S:32:ALA:HB2	2.03	0.58
20:J:25:LEU:HD22	20:J:26:GLY:N	2.17	0.58
16:L:78:ARG:HG3	16:L:81:ASP:OD2	2.02	0.58
2:B:2037:A:H2'	2:B:2038:G:C8	2.38	0.58
18:X:46:VAL:O	18:X:50:VAL:HG23	2.03	0.58
17:M:58:LYS:HB2	17:M:60:GLN:HE21	1.68	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2649:C:H2'	2:B:2650:U:C6	2.39	0.58
5:D:124:ARG:O	5:D:124:ARG:HG3	2.02	0.58
2:B:1684:G:H2'	2:B:1685:C:H6	1.67	0.58
2:B:2302:U:H2'	2:B:2303:G:H8	1.67	0.58
2:B:2313:C:H2'	2:B:2314:A:H8	1.68	0.58
2:B:996:A:H4'	23:Q:91:ARG:HD2	1.85	0.58
2:B:321:U:OP2	8:E:130:LYS:HD3	2.03	0.58
2:B:704:G:C2'	2:B:726:G:H22	2.16	0.58
2:B:1199:U:H2'	2:B:1200:C:C6	2.39	0.58
2:B:740:C:O2'	2:B:741:U:H5'	2.03	0.58
25:U:81:ARG:HB2	25:U:96:LYS:CG	2.33	0.58
21:N:12:ARG:HG3	21:N:13:ASN:N	2.18	0.58
2:B:1381:G:H1'	2:B:1571:A:N1	2.17	0.58
2:B:2895:G:H2'	2:B:2896:C:C6	2.37	0.58
30:Z:70:GLU:O	30:Z:72:ARG:N	2.36	0.58
25:U:5:ARG:HH22	25:U:93:ARG:HD3	1.68	0.58
2:B:1582:C:H2'	2:B:1583:A:O4'	2.04	0.58
14:V:24:ASN:HB3	14:V:44:HIS:HB3	1.84	0.58
19:H:81:ALA:HA	19:H:147:VAL:H	1.68	0.58
26:F:107:VAL:N	26:F:108:PRO:CD	2.67	0.58
26:F:111:ARG:NH2	26:F:113:PHE:HB2	2.17	0.58
4:C:128:THR:HA	4:C:190:THR:HA	1.86	0.58
27:G:10:VAL:H	27:G:47:ASN:HB2	1.67	0.58
27:G:34:ARG:HD3	27:G:34:ARG:N	2.18	0.58
6:K:71:ARG:HG3	6:K:105:ARG:NH2	2.18	0.58
20:J:55:ILE:O	20:J:55:ILE:HG13	2.02	0.58
2:B:1082:U:O4	2:B:1086:A:C2	2.56	0.58
6:K:118:LEU:O	6:K:120:PRO:HD2	2.02	0.58
25:U:85:ARG:HH11	25:U:86:PHE:H	1.52	0.58
2:B:2147:A:H3'	2:B:2148:G:H5'	1.84	0.58
2:B:182:A:H2'	2:B:183:C:C6	2.39	0.58
2:B:1709:U:H2'	2:B:1710:G:C8	2.38	0.58
3:I:5:GLN:HG2	3:I:6:ALA:N	2.18	0.58
22:O:58:ILE:HG22	22:O:62:LEU:HD23	1.86	0.58
28:R:16:GLU:HA	28:R:98:ILE:HG22	1.86	0.58
16:L:6:LEU:HD23	16:L:6:LEU:H	1.68	0.58
2:B:1056:G:H21	2:B:1103:A:H62	1.51	0.58
2:B:1796:U:H2'	2:B:1797:G:H8	1.68	0.58
2:B:2184:A:H2'	2:B:2185:U:C6	2.38	0.58
2:B:2774:C:H2'	2:B:2775:G:O4'	2.03	0.58
2:B:2301:C:H2'	2:B:2302:U:H6	1.69	0.58
26:F:102:LEU:HA	26:F:106:ALA:HB3	1.84	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:C:117:SER:HB3	4:C:128:THR:HB	1.84	0.58
29:T:34:VAL:HG11	29:T:43:ILE:HD11	1.85	0.58
19:H:49:ALA:O	19:H:53:GLU:HB2	2.03	0.58
25:U:51:LEU:H	25:U:53:GLN:NE2	2.02	0.58
7:P:63:ILE:HA	7:P:68:GLY:HA2	1.84	0.58
21:N:55:ALA:HB1	21:N:80:PHE:H	1.69	0.58
26:F:7:TYR:O	26:F:11:VAL:HB	2.03	0.58
6:K:15:GLY:HA2	6:K:46:ALA:HA	1.84	0.58
2:B:91:A:H1'	2:B:92:U:C6	2.38	0.58
17:M:2:LEU:O	17:M:69:PRO:HG3	2.03	0.58
2:B:1386:C:H2'	2:B:1387:A:C8	2.38	0.58
2:B:2109:U:H2'	2:B:2110:G:C5'	2.33	0.58
2:B:2229:U:H2'	2:B:2230:G:C8	2.37	0.58
8:E:87:ALA:O	8:E:88:ARG:HD3	2.03	0.58
25:U:14:THR:O	25:U:18:LYS:HA	2.03	0.58
2:B:1684:G:H2'	2:B:1685:C:C6	2.38	0.58
2:B:857:G:C2'	2:B:858:G:H5'	2.33	0.58
26:F:2:LYS:CE	26:F:100:GLU:HG2	2.34	0.58
26:F:34:THR:O	26:F:89:THR:HA	2.02	0.58
32:6:42:LYS:HE2	32:6:49:HIS:O	2.03	0.58
32:6:66:LEU:O	32:6:100:TYR:HA	2.04	0.58
29:T:57:VAL:HG13	29:T:58:VAL:N	2.19	0.58
19:H:57:LYS:O	19:H:61:VAL:HG12	2.04	0.58
2:B:1805:A:N3	4:C:49:THR:HG23	2.19	0.58
32:6:178:LYS:HA	32:6:181:GLN:HG2	1.86	0.58
2:B:2804:U:H2'	2:B:2805:C:H6	1.68	0.58
25:U:35:VAL:HB	25:U:38:ILE:HG21	1.85	0.58
2:B:1515:A:H4'	2:B:1556:C:O2'	2.03	0.58
27:G:157:LYS:HB3	27:G:159:LYS:HG3	1.85	0.58
1:A:49:C:H2'	1:A:50:A:H8	1.69	0.58
2:B:2088:A:H2'	2:B:2089:C:C6	2.39	0.58
28:R:68:ARG:NH1	28:R:90:ARG:HG2	2.19	0.58
26:F:62:GLN:HB3	26:F:94:ARG:HH12	1.68	0.58
8:E:181:ILE:HG12	16:L:2:ARG:NH2	2.18	0.58
6:K:14:SER:HB2	6:K:51:LYS:N	2.17	0.58
27:G:145:ALA:HA	27:G:148:ARG:HG3	1.85	0.58
6:K:54:LYS:HD2	6:K:54:LYS:H	1.67	0.58
2:B:1170:C:H2'	2:B:1171:G:C8	2.39	0.58
2:B:1198:U:H2'	2:B:1199:U:C6	2.39	0.58
2:B:1799:G:N2	2:B:1818:U:O2'	2.37	0.58
2:B:2213:U:O2	2:B:2213:U:C2'	2.51	0.58
2:B:947:A:H2'	2:B:948:C:C6	2.39	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:775:G:H4'	2:B:776:G:H5'	1.86	0.58
2:B:1935:G:H1'	2:B:1964:G:N2	2.19	0.58
4:C:242:HIS:O	4:C:244:VAL:HG13	2.04	0.58
26:F:37:MET:HB2	26:F:151:LEU:HB2	1.86	0.58
11:4:27:CYS:SG	11:4:33:HIS:ND1	2.77	0.58
27:G:10:VAL:HB	27:G:47:ASN:HB2	1.85	0.58
32:6:106:LEU:HD12	32:6:107:THR:O	2.03	0.58
2:B:1568:G:H4'	4:C:58:LYS:HB3	1.86	0.58
23:Q:30:VAL:HG13	23:Q:31:TYR:N	2.17	0.58
2:B:1683:U:H2'	2:B:1684:G:C8	2.39	0.58
7:P:94:ALA:C	7:P:95:LYS:HD2	2.24	0.58
2:B:455:C:N3	2:B:472:A:H2'	2.18	0.58
2:B:2869:G:H2'	2:B:2870:C:C6	2.39	0.58
26:F:78:ILE:HD11	26:F:84:ILE:HD13	1.85	0.57
26:F:40:GLY:HA2	26:F:84:ILE:HG13	1.86	0.57
1:A:43:C:C4'	26:F:91:ARG:HD2	2.34	0.57
17:M:73:ILE:HG13	17:M:93:VAL:HB	1.86	0.57
5:D:59:ARG:NH2	5:D:59:ARG:HB3	2.19	0.57
1:A:35:C:H2'	1:A:36:C:O4'	2.03	0.57
27:G:53:PRO:HG3	27:G:61:TRP:H	1.69	0.57
23:Q:59:LEU:O	23:Q:62:ALA:HB3	2.04	0.57
28:R:38:VAL:HG13	28:R:54:VAL:HG12	1.85	0.57
5:D:178:VAL:HB	5:D:188:LEU:HB2	1.84	0.57
2:B:1597:A:C5'	2:B:1598:A:H5'	2.33	0.57
17:M:96:ILE:HD11	17:M:126:ILE:CG1	2.34	0.57
3:I:105:LEU:HD11	3:I:139:VAL:CG1	2.34	0.57
21:N:31:HIS:O	21:N:33:ILE:HG13	2.04	0.57
2:B:414:C:H2'	2:B:415:A:C8	2.39	0.57
23:Q:33:VAL:C	23:Q:35:PHE:H	2.06	0.57
2:B:118:A:H5'	2:B:119:A:H8	1.68	0.57
22:O:89:ASP:HA	22:O:116:GLN:O	2.04	0.57
2:B:315:G:H2'	2:B:316:C:C6	2.39	0.57
2:B:254:G:H22	13:3:7:ARG:HH21	1.51	0.57
17:M:42:THR:C	17:M:44:ARG:H	2.07	0.57
7:P:32:VAL:HA	7:P:37:LYS:HA	1.86	0.57
2:B:2314:A:H2'	2:B:2315:G:C8	2.39	0.57
28:R:39:LEU:HA	28:R:49:ILE:HG21	1.85	0.57
19:H:44:ILE:C	19:H:46:PHE:H	2.06	0.57
19:H:54:LEU:HA	19:H:58:LEU:HB2	1.86	0.57
2:B:1551:A:C3'	2:B:1552:A:H5''	2.34	0.57
22:O:15:ARG:HH21	22:O:95:SER:CB	2.17	0.57
2:B:643:A:H2'	2:B:644:A:H8	1.68	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2073:C:H5''	4:C:227:VAL:HG12	1.86	0.57
2:B:1923:U:H2'	2:B:1924:C:C6	2.39	0.57
2:B:1565:C:H5''	4:C:17:LYS:HZ3	1.69	0.57
2:B:682:G:H5'	15:2:26:ASN:CG	2.25	0.57
2:B:155:A:H2'	2:B:156:A:C8	2.39	0.57
2:B:815:C:OP2	28:R:85:LYS:HE2	2.04	0.57
2:B:2884:U:C2	10:0:49:ARG:HG2	2.39	0.57
2:B:1039:A:H1'	14:V:45:ASP:OD1	2.05	0.57
2:B:2052:A:OP1	5:D:145:SER:HA	2.03	0.57
6:K:33:ALA:CB	6:K:39:ILE:HD11	2.35	0.57
3:I:109:ALA:HB1	3:I:124:MET:HG3	1.86	0.57
28:R:43:ASN:ND2	28:R:45:GLU:H	2.02	0.57
8:E:97:ASN:HB2	8:E:100:MET:HG3	1.86	0.57
26:F:162:ASP:O	26:F:166:ARG:HD2	2.04	0.57
19:H:114:GLU:HG2	19:H:132:PHE:CZ	2.40	0.57
19:H:12:LEU:HD13	19:H:19:VAL:HG21	1.87	0.57
21:N:83:LEU:CA	21:N:86:ARG:HB2	2.34	0.57
2:B:2579:C:O2'	5:D:136:ASN:HA	2.04	0.57
17:M:68:PHE:CG	17:M:69:PRO:HD2	2.39	0.57
2:B:2086:U:H2'	2:B:2087:G:C8	2.40	0.57
2:B:534:U:H5'	23:Q:41:ALA:HB1	1.85	0.57
2:B:2078:C:O2'	2:B:2079:U:H5'	2.03	0.57
1:A:49:C:H2'	1:A:50:A:C8	2.40	0.57
5:D:157:LYS:NZ	5:D:157:LYS:HB3	2.19	0.57
4:C:4:LYS:HD2	4:C:5:CYS:H	1.68	0.57
4:C:146:LYS:HB2	4:C:149:LYS:HB2	1.84	0.57
28:R:72:VAL:CG2	28:R:89:HIS:HB3	2.34	0.57
2:B:296:U:H2'	2:B:297:G:C8	2.39	0.57
32:6:38:LEU:HD22	32:6:41:LEU:CD2	2.35	0.57
5:D:34:VAL:HG12	5:D:94:GLN:H	1.69	0.57
8:E:108:ILE:HG12	16:L:2:ARG:HH22	1.70	0.57
4:C:131:MET:HA	4:C:134:ILE:HG12	1.86	0.57
2:B:705:A:N6	2:B:726:G:H1'	2.19	0.57
19:H:103:VAL:HG21	19:H:110:VAL:HG22	1.86	0.57
2:B:2462:C:H2'	2:B:2463:C:C6	2.40	0.57
2:B:969:G:H2'	2:B:970:U:C6	2.38	0.57
2:B:3:U:O2'	2:B:4:U:H6	1.88	0.57
22:O:62:LEU:HD11	22:O:70:ALA:HA	1.87	0.57
2:B:1319:C:O2'	2:B:1320:C:H5'	2.04	0.57
2:B:458:G:N2	2:B:469:G:H2'	2.20	0.57
26:F:102:LEU:O	26:F:103:ILE:HG22	2.04	0.57
2:B:2303:G:H1'	26:F:122:ASP:OD1	2.04	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:C:140:VAL:HG12	4:C:141:HIS:N	2.17	0.57
7:P:19:PHE:HE2	7:P:25:VAL:HG11	1.69	0.57
20:J:3:THR:HG21	23:Q:60:TRP:HE1	1.69	0.57
27:G:8:VAL:HG11	27:G:49:LEU:HB2	1.87	0.57
8:E:111:GLU:HG2	8:E:114:ARG:NH2	2.15	0.57
25:U:35:VAL:HB	25:U:38:ILE:CG2	2.34	0.57
2:B:151:C:H2'	2:B:152:A:C8	2.39	0.57
8:E:48:THR:N	8:E:51:GLU:HG3	2.19	0.57
2:B:2734:A:C2'	2:B:2735:G:H5'	2.34	0.57
28:R:72:VAL:HG23	28:R:89:HIS:HB3	1.87	0.57
3:I:96:LYS:N	3:I:96:LYS:HD2	2.20	0.57
2:B:1842:G:H2'	2:B:1843:C:C6	2.39	0.57
21:N:41:ALA:C	21:N:43:GLU:H	2.06	0.57
2:B:2400:G:O2'	2:B:2401:U:H5'	2.04	0.57
26:F:102:LEU:HD22	26:F:103:ILE:N	2.19	0.57
26:F:62:GLN:HE21	26:F:91:ARG:NE	2.03	0.57
20:J:45:THR:N	20:J:46:PRO:HD3	2.19	0.57
2:B:1102:C:H2'	2:B:1103:A:C8	2.39	0.57
2:B:2646:C:H2'	2:B:2647:U:O4'	2.05	0.57
2:B:1919:A:H3'	2:B:1920:C:H5	1.70	0.57
2:B:150:U:H2'	2:B:151:C:C6	2.40	0.57
2:B:2297:A:H61	2:B:2319:G:H1'	1.70	0.57
18:X:52:ARG:O	18:X:55:THR:HB	2.05	0.57
32:6:52:LEU:HD12	32:6:56:ALA:HB3	1.86	0.57
27:G:140:ILE:HA	27:G:143:VAL:HG22	1.86	0.57
8:E:160:ALA:C	8:E:162:ARG:H	2.08	0.57
2:B:2578:G:H21	5:D:130:GLN:HE22	1.53	0.57
2:B:1405:U:H2'	2:B:1406:U:C6	2.40	0.57
19:H:66:ASN:HD22	19:H:67:ALA:N	2.02	0.57
2:B:2809:A:H2'	2:B:2810:A:C8	2.40	0.57
1:A:32:U:H1'	1:A:52:A:N7	2.19	0.57
2:B:65:U:H2'	2:B:66:C:H6	1.68	0.57
2:B:2025:C:H2'	2:B:2026:U:C6	2.39	0.57
2:B:2254:C:O2	32:6:150:SER:HB2	2.04	0.57
2:B:2449:U:H4'	2:B:2450:A:OP1	2.04	0.57
22:O:35:ILE:HG13	22:O:71:ALA:HB2	1.87	0.57
2:B:857:G:O2'	31:W:19:ARG:HD2	2.05	0.57
31:W:30:VAL:HA	31:W:60:ALA:O	2.05	0.57
2:B:2303:G:H4'	26:F:121:PHE:O	2.04	0.57
4:C:124:LYS:N	4:C:191:LEU:HD13	2.19	0.57
32:6:42:LYS:HA	32:6:51:PRO:CA	2.27	0.57
14:V:80:HIS:HD2	14:V:83:LYS:H	1.52	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:K:120:PRO:HA	7:P:65:ASN:HD21	1.70	0.57
8:E:134:LEU:HD21	8:E:161:ALA:HB2	1.87	0.57
21:N:22:ARG:HG3	21:N:70:THR:HA	1.85	0.57
22:O:15:ARG:NH2	22:O:95:SER:HB3	2.19	0.57
2:B:1558:C:H4'	2:B:1559:U:H5''	1.86	0.57
2:B:1485:U:H2'	2:B:1486:U:H6	1.68	0.57
2:B:419:U:H2'	2:B:420:C:C6	2.39	0.57
2:B:2484:G:OP1	17:M:44:ARG:HD3	2.04	0.57
2:B:303:G:H2'	2:B:304:U:C6	2.40	0.57
7:P:52:ARG:HG2	7:P:52:ARG:HH11	1.70	0.57
4:C:154:ALA:HB2	4:C:161:VAL:HG23	1.87	0.57
2:B:1181:U:H2'	2:B:1182:G:C8	2.40	0.57
2:B:2864:G:H2'	2:B:2865:U:C6	2.39	0.57
31:W:23:LYS:HD2	31:W:24:ARG:H	1.69	0.57
1:A:43:C:O2'	26:F:91:ARG:HD2	2.05	0.57
4:C:66:PHE:HB2	4:C:150:GLY:O	2.04	0.57
2:B:2264:C:H41	31:W:11:ASN:HD21	1.53	0.57
20:J:2:LYS:O	20:J:3:THR:HG23	2.05	0.57
2:B:1599:U:H2'	2:B:1600:C:C6	2.40	0.57
25:U:51:LEU:N	25:U:53:GLN:NE2	2.53	0.57
25:U:42:LYS:HG3	25:U:57:ILE:CG2	2.32	0.57
2:B:329:G:H1	25:U:16:LYS:HG2	1.70	0.57
25:U:11:ILE:O	25:U:12:VAL:HB	2.05	0.57
2:B:2151:U:H2'	2:B:2152:G:H8	1.69	0.57
2:B:414:C:H2'	2:B:415:A:H8	1.68	0.57
2:B:850:U:O2'	9:Y:22:THR:HG22	2.05	0.57
1:A:52:A:OP1	1:A:52:A:H4'	2.05	0.57
2:B:2728:U:H2'	2:B:2729:G:H8	1.69	0.57
4:C:2:VAL:HG23	4:C:3:VAL:H	1.69	0.57
4:C:141:HIS:HB3	4:C:190:THR:OG1	2.05	0.56
32:6:52:LEU:HA	32:6:55:ILE:HG23	1.87	0.56
28:R:4:VAL:CG2	28:R:39:LEU:HG	2.35	0.56
18:X:8:GLU:O	18:X:12:GLU:HB2	2.04	0.56
16:L:18:ARG:C	16:L:19:LEU:HD12	2.26	0.56
27:G:148:ARG:HD3	27:G:152:ARG:NH2	2.20	0.56
2:B:1884:G:HO2'	2:B:1885:A:H8	1.53	0.56
12:1:33:LEU:HB3	12:1:51:ALA:CB	2.34	0.56
2:B:2898:U:H2'	2:B:2899:A:C8	2.39	0.56
6:K:109:SER:HB2	6:K:111:LYS:NZ	2.19	0.56
2:B:1682:G:H2'	2:B:1683:U:C6	2.40	0.56
31:W:65:LYS:HG3	31:W:84:GLU:HB3	1.87	0.56
26:F:102:LEU:HB2	26:F:106:ALA:HB3	1.87	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:4:1:MET:HB3	11:4:34:LYS:HE3	1.88	0.56
23:Q:89:ILE:HB	28:R:11:GLN:HE22	1.69	0.56
20:J:17:VAL:HG23	20:J:137:PRO:CB	2.31	0.56
8:E:158:PHE:HA	8:E:169:VAL:CG2	2.35	0.56
13:3:22:LYS:HA	13:3:48:MET:HA	1.87	0.56
2:B:1857:G:HO2'	2:B:1858:A:H8	1.52	0.56
2:B:181:A:H2'	2:B:182:A:H8	1.68	0.56
2:B:2591:C:H2'	2:B:2592:G:H8	1.70	0.56
21:N:25:ALA:HA	21:N:44:LEU:HD11	1.87	0.56
3:I:89:SER:HB2	3:I:136:GLY:HA3	1.86	0.56
22:O:2:ASP:OD2	22:O:4:LYS:HB3	2.05	0.56
2:B:1061:U:H4'	2:B:1070:A:O3'	2.05	0.56
2:B:582:A:H2'	2:B:583:G:H8	1.70	0.56
32:6:33:ALA:CA	32:6:103:ILE:HG21	2.34	0.56
7:P:5:LYS:NZ	7:P:9:GLN:HB3	2.20	0.56
29:T:11:LEU:CD2	29:T:46:ALA:HB1	2.29	0.56
8:E:27:LEU:HG	8:E:104:ALA:HB2	1.87	0.56
2:B:1102:C:H2'	2:B:1103:A:H8	1.69	0.56
2:B:1728:C:HO2'	2:B:1729:U:H6	1.51	0.56
20:J:99:ARG:O	20:J:103:ILE:HG23	2.05	0.56
14:V:25:LYS:HD3	14:V:41:GLU:OE1	2.05	0.56
4:C:132:ARG:HA	4:C:166:ARG:NH1	2.19	0.56
25:U:12:VAL:HA	25:U:69:VAL:HA	1.88	0.56
12:1:8:ILE:HG23	12:1:51:ALA:HA	1.87	0.56
2:B:1747:U:H2'	2:B:1748:C:C6	2.40	0.56
2:B:1495:A:H2'	2:B:1496:A:C8	2.40	0.56
30:Z:11:ARG:HB3	30:Z:12:PRO:HD2	1.87	0.56
2:B:805:G:OP2	16:L:41:ARG:HD3	2.06	0.56
14:V:89:ILE:HD13	14:V:91:PHE:CZ	2.40	0.56
6:K:94:PRO:HG2	6:K:114:LYS:HD3	1.87	0.56
16:L:110:VAL:HB	16:L:127:VAL:HG23	1.88	0.56
2:B:1904:G:H1'	2:B:1927:A:N1	2.20	0.56
2:B:2455:G:H2'	2:B:2456:C:C6	2.40	0.56
2:B:1192:G:O2'	2:B:1193:G:H5'	2.06	0.56
2:B:192:C:H2'	2:B:193:U:H5'	1.87	0.56
31:W:59:PHE:O	31:W:60:ALA:HB3	2.06	0.56
31:W:59:PHE:O	31:W:60:ALA:CB	2.54	0.56
7:P:4:ILE:HA	7:P:7:LEU:HD13	1.86	0.56
11:4:7:VAL:HG23	11:4:35:GLN:CB	2.34	0.56
29:T:31:VAL:HA	29:T:84:TYR:H	1.70	0.56
2:B:2037:A:H2'	2:B:2038:G:H8	1.70	0.56
2:B:2285:C:OP2	12:1:5:ARG:HD3	2.05	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:1:26:LYS:HD2	12:1:30:PRO:HA	1.88	0.56
1:A:5:U:H2'	1:A:6:G:C8	2.41	0.56
17:M:108:VAL:HG21	17:M:112:LEU:HD12	1.87	0.56
2:B:1316:U:H2'	2:B:1317:G:H8	1.70	0.56
32:6:144:ALA:HA	32:6:149:LEU:HD12	1.88	0.56
26:F:109:ARG:HB3	26:F:135:ILE:CD1	2.35	0.56
2:B:2328:A:H2'	2:B:2329:U:H6	1.70	0.56
29:T:38:ALA:HB3	29:T:81:LYS:NZ	2.21	0.56
21:N:37:THR:HB	21:N:40:LYS:HB2	1.87	0.56
3:I:76:ALA:O	3:I:80:LYS:HG3	2.06	0.56
2:B:2133:G:N2	2:B:2156:G:H1	2.01	0.56
2:B:1173:U:H2'	2:B:1174:U:O4'	2.06	0.56
2:B:5:A:H2'	2:B:6:A:C8	2.40	0.56
2:B:634:C:H2'	2:B:635:C:C6	2.41	0.56
1:A:91:C:O2'	1:A:92:C:H5'	2.06	0.56
2:B:131:A:H2'	2:B:132:G:H8	1.70	0.56
2:B:686:U:H2'	2:B:788:A:N1	2.20	0.56
2:B:1327:A:H2'	2:B:1328:A:O4'	2.06	0.56
1:A:39:A:O2'	1:A:40:U:H5'	2.05	0.56
2:B:2751:G:H2'	2:B:2751:G:N3	2.21	0.56
16:L:82:LEU:C	16:L:84:LYS:H	2.08	0.56
5:D:29:VAL:O	5:D:185:ASN:HB3	2.05	0.56
27:G:148:ARG:HD3	27:G:152:ARG:CD	2.35	0.56
2:B:1429:G:H2'	2:B:1430:G:C8	2.40	0.56
2:B:309:A:N3	2:B:329:G:O2'	2.36	0.56
30:Z:27:ARG:HD2	30:Z:29:PHE:CZ	2.41	0.56
30:Z:35:SER:HA	30:Z:49:LEU:O	2.06	0.56
2:B:1459:G:O2'	2:B:1460:U:H5'	2.06	0.56
2:B:1210:G:H5'	2:B:1212:G:O4'	2.05	0.56
2:B:1700:A:H2'	2:B:1701:A:H5'	1.88	0.56
26:F:16:MET:SD	26:F:21:TYR:HB2	2.46	0.56
2:B:84:A:H4'	2:B:85:G:O5'	2.06	0.56
4:C:74:PRO:HG2	4:C:96:LYS:HG2	1.87	0.56
14:V:61:LEU:HD11	14:V:74:ALA:HB2	1.86	0.56
8:E:67:ARG:HG3	8:E:68:ALA:N	2.20	0.56
27:G:134:GLY:HA3	27:G:140:ILE:HG21	1.87	0.56
2:B:1805:A:H1'	4:C:49:THR:HG23	1.86	0.56
2:B:162:U:O2'	2:B:163:C:H5'	2.06	0.56
2:B:1175:A:C4	2:B:1176:U:H1'	2.41	0.56
13:3:30:HIS:O	13:3:31:ILE:C	2.43	0.56
7:P:112:ARG:HB2	7:P:112:ARG:HH11	1.70	0.56
3:I:10:LEU:HD12	3:I:10:LEU:O	2.05	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:417:C:H2'	2:B:418:C:C6	2.40	0.56
2:B:2658:C:H5'	27:G:159:LYS:NZ	2.20	0.56
2:B:1666:G:H21	6:K:3:GLN:HE22	1.54	0.56
2:B:2720:U:H5''	7:P:52:ARG:NH2	2.21	0.56
2:B:1315:C:H2'	2:B:1316:U:H6	1.71	0.56
2:B:2547:A:H2'	2:B:2548:U:C6	2.40	0.56
2:B:919:U:H2'	2:B:920:A:H8	1.67	0.56
26:F:126:ASN:HD22	26:F:156:THR:CA	2.14	0.56
2:B:2788:C:H2'	2:B:2789:C:C6	2.41	0.56
32:6:67:VAL:HA	32:6:99:LEU:O	2.06	0.56
2:B:78:U:H2'	2:B:79:C:C6	2.41	0.56
2:B:1287:A:N7	21:N:105:GLY:HA3	2.20	0.56
25:U:5:ARG:HH21	25:U:5:ARG:HG2	1.70	0.56
2:B:2438:U:O2'	2:B:2439:A:H5''	2.06	0.56
2:B:1528:A:H2'	2:B:1529:G:O4'	2.06	0.56
24:S:42:LYS:O	24:S:45:VAL:HG22	2.06	0.56
2:B:1257:C:O2'	8:E:79:ARG:HB2	2.06	0.56
2:B:443:A:C8	8:E:40:ARG:HD3	2.41	0.56
4:C:245:THR:O	4:C:247:TRP:N	2.39	0.56
21:N:55:ALA:HA	21:N:80:PHE:CE1	2.40	0.56
21:N:79:LEU:O	21:N:80:PHE:HB2	2.05	0.56
2:B:2675:A:N1	2:B:2732:G:O6	2.39	0.56
2:B:784:G:H5''	4:C:225:ASN:OD1	2.05	0.56
2:B:784:G:C6	4:C:227:VAL:HG11	2.41	0.56
14:V:38:LEU:HD21	14:V:65:VAL:HG21	1.88	0.56
32:6:107:THR:HG22	32:6:108:GLU:N	2.20	0.56
2:B:2187:U:H2'	2:B:2188:U:C6	2.41	0.56
12:1:28:THR:C	12:1:30:PRO:HD3	2.27	0.56
8:E:46:GLN:HG3	8:E:87:ALA:H	1.71	0.56
2:B:1015:U:H2'	2:B:1016:G:H8	1.71	0.56
2:B:1341:G:H2'	2:B:1397:U:O2'	2.06	0.56
2:B:132:G:O2'	2:B:133:U:H5'	2.06	0.56
2:B:41:C:H2'	2:B:42:A:O4'	2.06	0.56
16:L:143:GLU:CG	16:L:144:GLU:H	2.02	0.56
11:4:12:ARG:HG3	11:4:13:ASN:ND2	2.19	0.56
10:0:41:HIS:HB3	21:N:99:LYS:CB	2.36	0.56
2:B:1484:U:H2'	2:B:1485:U:H6	1.70	0.56
2:B:1942:C:H1'	32:6:133:ARG:NH2	2.21	0.56
27:G:162:ARG:CG	27:G:166:GLU:HG3	2.36	0.56
2:B:454:A:H3'	2:B:455:C:H5'	1.88	0.56
4:C:121:ALA:HB3	4:C:129:LEU:HD11	1.87	0.55
23:Q:63:ARG:HH12	23:Q:96:ASP:CA	2.15	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2356:U:C5'	31:W:16:GLU:HG3	2.35	0.55
20:J:11:VAL:HG12	20:J:12:LYS:N	2.21	0.55
18:X:24:GLU:O	18:X:28:LEU:HD23	2.05	0.55
19:H:67:ALA:O	19:H:70:GLU:HG2	2.06	0.55
21:N:33:ILE:HD12	21:N:33:ILE:O	2.06	0.55
2:B:416:U:H2'	2:B:417:C:C6	2.41	0.55
2:B:620:G:O6	8:E:98:LYS:HE2	2.06	0.55
2:B:1070:A:C2	3:I:9:LYS:HE3	2.41	0.55
3:I:14:ALA:HB1	3:I:50:LYS:HA	1.87	0.55
2:B:2516:A:O2'	2:B:2517:C:H5'	2.07	0.55
2:B:1239:G:O2'	2:B:1240:U:H5'	2.06	0.55
23:Q:51:GLN:O	23:Q:55:GLN:HG3	2.05	0.55
2:B:649:G:H2'	2:B:650:C:C6	2.41	0.55
20:J:18:VAL:CG1	20:J:54:ILE:HD11	2.36	0.55
2:B:2216:G:H2'	2:B:2217:G:H8	1.71	0.55
4:C:30:ALA:HA	4:C:33:LEU:HD12	1.88	0.55
5:D:107:VAL:H	5:D:206:ALA:H	1.53	0.55
26:F:65:LEU:HD23	26:F:87:LYS:HD2	1.87	0.55
21:N:52:ILE:HD11	21:N:83:LEU:HD23	1.89	0.55
27:G:87:GLN:H	27:G:87:GLN:HE21	1.53	0.55
14:V:6:ALA:C	14:V:65:VAL:HG12	2.26	0.55
19:H:51:ARG:H	19:H:51:ARG:HD2	1.71	0.55
2:B:365:U:H2'	2:B:366:C:C6	2.41	0.55
2:B:2187:U:H2'	2:B:2188:U:H6	1.70	0.55
24:S:55:ILE:O	24:S:59:GLU:HG2	2.07	0.55
2:B:2757:A:N3	2:B:2757:A:H2'	2.21	0.55
2:B:2848:G:H1'	2:B:2868:A:N6	2.21	0.55
2:B:1061:U:O4'	2:B:1070:A:H1'	2.05	0.55
5:D:121:THR:HG23	5:D:162:ALA:H	1.71	0.55
31:W:75:ASN:C	31:W:75:ASN:HD22	2.09	0.55
26:F:45:ASP:O	26:F:46:LYS:HB2	2.07	0.55
19:H:116:ARG:HH22	19:H:139:PHE:HB3	1.71	0.55
27:G:34:ARG:HG2	27:G:34:ARG:HH11	1.71	0.55
27:G:85:LYS:HA	27:G:131:VAL:HG12	1.87	0.55
2:B:981:A:H2'	2:B:982:C:H5''	1.88	0.55
14:V:76:ASP:HA	17:M:136:MET:HE3	1.87	0.55
2:B:1146:C:H2'	2:B:1147:A:C8	2.42	0.55
2:B:2467:C:H1'	17:M:122:ALA:HB1	1.87	0.55
2:B:1733:G:H2'	2:B:1734:G:C8	2.40	0.55
2:B:2352:A:N1	31:W:30:VAL:HG11	2.21	0.55
2:B:856:G:C1'	31:W:23:LYS:HB3	2.32	0.55
26:F:126:ASN:ND2	26:F:156:THR:HA	2.17	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:F:77:LYS:HG3	26:F:79:ARG:NH2	2.22	0.55
4:C:143:VAL:HB	4:C:153:LEU:HB2	1.88	0.55
18:X:29:ARG:HH11	29:T:12:ARG:HE	1.53	0.55
14:V:4:ILE:HB	14:V:63:ILE:HA	1.87	0.55
2:B:1548:A:H2'	2:B:1549:A:C8	2.41	0.55
20:J:99:ARG:HA	20:J:102:GLU:HB2	1.87	0.55
2:B:1171:G:H3'	2:B:1172:C:C4'	2.36	0.55
4:C:158:GLY:N	4:C:194:VAL:HG13	2.22	0.55
2:B:1910:G:C6	2:B:1921:G:C2	2.94	0.55
2:B:172:A:H2'	2:B:173:A:H8	1.71	0.55
20:J:34:ARG:HD2	20:J:39:LYS:HB3	1.87	0.55
2:B:2849:U:H4'	2:B:2850:A:H5'	1.89	0.55
4:C:16:VAL:N	4:C:203:VAL:HG12	2.21	0.55
7:P:36:LYS:C	7:P:37:LYS:HG2	2.27	0.55
16:L:77:ILE:HB	16:L:109:LYS:O	2.07	0.55
2:B:2500:U:H5'	2:B:2501:C:OP2	2.06	0.55
27:G:66:THR:O	27:G:70:LEU:HB2	2.06	0.55
2:B:1657:U:O2'	2:B:1658:C:H5'	2.07	0.55
2:B:2305:U:C4	26:F:151:LEU:HA	2.41	0.55
26:F:35:LEU:CD2	26:F:153:ILE:HG12	2.35	0.55
7:P:6:GLN:HA	7:P:9:GLN:HG2	1.89	0.55
29:T:54:GLU:HB3	29:T:88:LYS:HB2	1.87	0.55
27:G:17:LYS:HA	27:G:17:LYS:NZ	2.22	0.55
2:B:1729:U:H5'	2:B:1730:C:OP2	2.07	0.55
27:G:97:VAL:HG11	27:G:123:GLU:HA	1.88	0.55
27:G:148:ARG:HD3	27:G:152:ARG:CZ	2.36	0.55
6:K:43:ILE:HD13	6:K:56:ASP:HB2	1.88	0.55
2:B:1908:C:H2'	2:B:1909:C:H4'	1.87	0.55
13:3:49:VAL:HG11	13:3:57:VAL:HG21	1.89	0.55
32:6:6:LEU:HD12	32:6:143:LEU:HD22	1.87	0.55
2:B:634:C:H2'	2:B:635:C:H6	1.72	0.55
4:C:202:ARG:HH21	4:C:202:ARG:HB2	1.72	0.55
2:B:2185:U:H2'	2:B:2186:G:O4'	2.06	0.55
14:V:77:VAL:HG23	14:V:89:ILE:HG22	1.88	0.55
2:B:2567:G:H2'	2:B:2568:U:C6	2.42	0.55
2:B:2722:G:H2'	2:B:2723:C:C6	2.42	0.55
26:F:119:LYS:HA	26:F:121:PHE:CZ	2.41	0.55
8:E:146:VAL:HA	8:E:185:LYS:O	2.07	0.55
7:P:61:ARG:HH21	7:P:61:ARG:HB3	1.72	0.55
2:B:668:A:H2'	2:B:670:A:H62	1.72	0.55
26:F:1:ALA:HB2	26:F:93:GLU:OE2	2.06	0.55
5:D:133:THR:HG23	5:D:134:HIS:N	2.19	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:M:94:ALA:O	17:M:96:ILE:HG23	2.07	0.55
4:C:20:ASN:ND2	4:C:23:LEU:HD13	2.21	0.55
4:C:77:VAL:HG23	4:C:112:GLY:H	1.70	0.55
2:B:532:A:H4'	2:B:533:G:C8	2.42	0.55
2:B:632:A:H2'	2:B:633:A:C8	2.41	0.55
21:N:96:ARG:HG2	21:N:98:LEU:HD22	1.87	0.55
1:A:94:A:H2'	1:A:95:U:O4'	2.06	0.55
20:J:18:VAL:HG12	20:J:54:ILE:HD11	1.88	0.55
2:B:2889:C:O2'	2:B:2890:G:H5'	2.07	0.55
2:B:437:U:H2'	2:B:438:G:C8	2.42	0.55
2:B:2336:A:H61	31:W:40:ARG:HD2	1.72	0.55
19:H:94:ILE:HG22	19:H:99:ILE:HD11	1.88	0.55
2:B:2312:U:O2	26:F:38:GLY:HA3	2.07	0.55
26:F:71:LYS:NZ	26:F:73:VAL:HB	2.22	0.55
5:D:55:LYS:HZ1	5:D:60:VAL:HG13	1.70	0.55
8:E:176:ASP:OD1	8:E:178:VAL:HG12	2.06	0.55
2:B:1407:G:H2'	2:B:1408:G:H8	1.71	0.55
2:B:2391:G:O6	2:B:2425:A:H8	1.88	0.55
2:B:287:G:H2'	2:B:288:U:H6	1.70	0.55
22:O:30:ARG:HD2	22:O:31:THR:N	2.22	0.55
2:B:686:U:H1'	15:2:6:GLN:O	2.07	0.55
5:D:121:THR:O	5:D:122:VAL:HB	2.06	0.55
2:B:2220:U:O2'	2:B:2221:G:H5'	2.07	0.55
22:O:56:LYS:O	22:O:60:GLU:HG3	2.06	0.55
5:D:182:ALA:O	5:D:184:ARG:N	2.38	0.55
4:C:216:ARG:HH11	4:C:216:ARG:HG3	1.71	0.55
19:H:89:LYS:HZ2	19:H:89:LYS:HA	1.71	0.55
26:F:45:ASP:O	26:F:47:LYS:HD3	2.07	0.55
32:6:40:HIS:O	32:6:41:LEU:C	2.45	0.55
32:6:83:ILE:O	32:6:88:LEU:HB2	2.07	0.55
29:T:12:ARG:HB3	29:T:12:ARG:HH11	1.69	0.55
7:P:91:VAL:CG2	7:P:96:LEU:HD21	2.37	0.55
2:B:1796:U:H2'	2:B:1797:G:C8	2.42	0.55
2:B:670:A:H4'	2:B:671:C:C5'	2.36	0.55
3:I:17:ALA:O	3:I:18:ASN:HB3	2.07	0.55
2:B:1018:U:O2'	2:B:1019:U:H5'	2.05	0.55
6:K:19:VAL:HB	6:K:41:ILE:HD11	1.89	0.55
2:B:741:U:H2'	2:B:742:A:C8	2.41	0.55
20:J:34:ARG:HH11	20:J:34:ARG:HG3	1.71	0.55
32:6:111:ARG:O	32:6:115:VAL:HG23	2.07	0.55
3:I:58:ILE:HD12	3:I:58:ILE:N	2.21	0.55
2:B:848:C:H2'	2:B:849:A:H8	1.72	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2899:A:H2'	2:B:2900:A:C8	2.42	0.55
22:O:31:THR:HG23	22:O:34:HIS:O	2.07	0.55
3:I:112:LYS:O	3:I:116:MET:HG3	2.06	0.55
2:B:64:A:H2'	2:B:65:U:C6	2.42	0.55
21:N:90:ARG:HG2	21:N:94:TYR:HD1	1.72	0.55
2:B:608:A:H2'	2:B:609:A:C8	2.41	0.55
24:S:5:ALA:HB3	24:S:54:ALA:HB2	1.89	0.55
17:M:102:LEU:HD22	17:M:102:LEU:H	1.72	0.55
19:H:130:VAL:O	19:H:130:VAL:HG23	2.07	0.55
32:6:51:PRO:O	32:6:55:ILE:HG22	2.07	0.55
19:H:116:ARG:CG	19:H:131:SER:HB2	2.36	0.55
19:H:131:SER:HB3	19:H:140:ALA:O	2.06	0.55
28:R:14:VAL:HG11	28:R:20:VAL:HG21	1.89	0.55
24:S:36:LEU:CD2	24:S:36:LEU:H	2.20	0.55
2:B:1723:G:C2'	2:B:1724:G:H5'	2.36	0.55
2:B:2061:G:H5''	2:B:2503:A:C2	2.42	0.55
3:I:77:VAL:HA	3:I:80:LYS:CE	2.37	0.55
16:L:118:THR:O	16:L:120:VAL:HG23	2.07	0.55
16:L:119:PRO:HG3	16:L:138:ALA:O	2.07	0.55
13:3:14:LYS:O	13:3:21:PHE:O	2.24	0.55
21:N:71:ARG:HH21	21:N:71:ARG:HG2	1.72	0.55
4:C:12:ARG:O	4:C:12:ARG:HD3	2.07	0.55
2:B:127:A:H5''	2:B:128:C:C6	2.41	0.55
2:B:909:A:H2'	2:B:912:C:H5	1.71	0.55
4:C:35:LYS:HG2	4:C:36:ASN:H	1.71	0.55
2:B:858:G:H21	2:B:2268:A:H3'	1.71	0.55
2:B:1441:G:H2'	2:B:1442:U:C6	2.41	0.55
20:J:59:ALA:HB1	20:J:101:ILE:HG13	1.88	0.55
7:P:57:ALA:HA	7:P:73:PHE:O	2.07	0.55
20:J:11:VAL:HG11	20:J:13:ARG:HE	1.71	0.55
19:H:66:ASN:N	19:H:66:ASN:HD22	2.03	0.55
2:B:1859:U:H2'	2:B:1860:G:H8	1.69	0.55
32:6:108:GLU:O	32:6:112:LYS:HG3	2.07	0.55
2:B:2813:A:H2'	2:B:2814:A:H8	1.72	0.55
2:B:2740:A:H2'	2:B:2741:A:C8	2.41	0.55
2:B:2861:U:H2'	2:B:2862:G:H8	1.72	0.55
5:D:56:LYS:CD	5:D:58:ASN:HB3	2.37	0.55
2:B:1000:A:H2'	2:B:1001:A:C8	2.42	0.55
19:H:117:LEU:CD2	19:H:130:VAL:HG12	2.37	0.54
26:F:43:ILE:HG23	26:F:44:ALA:N	2.21	0.54
26:F:90:LEU:C	26:F:91:ARG:HD3	2.27	0.54
8:E:105:LEU:HA	8:E:108:ILE:CG2	2.37	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:E:108:ILE:CD1	8:E:180:LEU:HB2	2.37	0.54
2:B:1104:C:H2'	2:B:1105:U:C6	2.43	0.54
22:O:93:ASP:C	22:O:95:SER:H	2.10	0.54
32:6:118:VAL:HG21	32:6:183:ILE:HG21	1.88	0.54
17:M:35:ALA:HB3	17:M:99:GLY:H	1.72	0.54
2:B:417:C:H2'	2:B:418:C:H6	1.72	0.54
2:B:1316:U:H2'	2:B:1317:G:C8	2.42	0.54
32:6:71:TRP:HA	32:6:71:TRP:CE3	2.42	0.54
23:Q:43:GLN:NE2	28:R:77:PHE:HB3	2.22	0.54
15:2:3:ARG:HA	15:2:3:ARG:NE	2.23	0.54
21:N:65:LEU:HD11	21:N:69:ARG:NH2	2.22	0.54
32:6:67:VAL:HG12	32:6:99:LEU:O	2.06	0.54
8:E:176:ASP:HB3	8:E:179:SER:HB2	1.89	0.54
25:U:85:ARG:CD	25:U:86:PHE:H	2.19	0.54
2:B:170:U:H2'	2:B:171:U:H6	1.72	0.54
2:B:129:C:H2'	2:B:130:C:H6	1.72	0.54
2:B:197:A:H62	2:B:2430:A:H2'	1.71	0.54
22:O:35:ILE:HG13	22:O:71:ALA:CB	2.38	0.54
5:D:7:LYS:HG2	5:D:198:GLY:HA2	1.90	0.54
2:B:864:G:O2'	2:B:865:C:H5'	2.07	0.54
2:B:599:A:O2'	2:B:600:G:H5'	2.06	0.54
17:M:118:LYS:C	17:M:120:ALA:H	2.10	0.54
2:B:1561:C:H2'	2:B:1562:U:C6	2.42	0.54
2:B:49:A:H5''	2:B:51:G:O4'	2.08	0.54
26:F:43:ILE:N	26:F:46:LYS:HZ3	2.05	0.54
19:H:31:VAL:CB	19:H:32:PRO:CD	2.84	0.54
30:Z:31:PRO:HB2	30:Z:33:LEU:CD1	2.35	0.54
32:6:43:VAL:HG21	32:6:52:LEU:HD12	1.88	0.54
32:6:69:GLN:NE2	32:6:98:ALA:HB2	2.22	0.54
31:W:8:SER:O	31:W:9:THR:HB	2.07	0.54
11:4:25:VAL:HG11	11:4:35:GLN:NE2	2.23	0.54
2:B:674:G:H5''	8:E:71:GLY:N	2.22	0.54
12:1:40:PRO:O	12:1:43:ARG:HG3	2.07	0.54
24:S:18:ARG:HB3	24:S:76:VAL:CG2	2.36	0.54
2:B:419:U:H2'	2:B:420:C:H6	1.69	0.54
2:B:2886:A:N7	10:0:39:ARG:NH2	2.52	0.54
22:O:67:ASN:H	22:O:70:ALA:HB3	1.71	0.54
25:U:94:PHE:HB3	25:U:101:THR:HA	1.89	0.54
2:B:1866:A:H2'	2:B:1867:G:O4'	2.07	0.54
2:B:861:A:H2'	2:B:862:G:O4'	2.07	0.54
1:A:13:G:N2	1:A:16:G:N3	2.55	0.54
2:B:2626:C:O2'	2:B:2627:G:H5'	2.08	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:855:G:N3	31:W:23:LYS:HE3	2.22	0.54
26:F:42:ALA:O	26:F:43:ILE:C	2.44	0.54
32:6:77:LYS:O	32:6:80:GLU:HB3	2.07	0.54
8:E:31:VAL:HG21	8:E:104:ALA:CB	2.38	0.54
29:T:29:THR:HB	29:T:86:THR:HG22	1.88	0.54
27:G:24:THR:C	27:G:25:ILE:HD12	2.28	0.54
27:G:82:PHE:CE1	27:G:137:LYS:HE3	2.42	0.54
8:E:58:LYS:H	8:E:58:LYS:HD2	1.69	0.54
16:L:115:GLU:OE1	16:L:115:GLU:N	2.40	0.54
2:B:2040:G:H2'	2:B:2041:U:O4'	2.08	0.54
5:D:49:GLN:HE22	5:D:67:HIS:HE1	1.53	0.54
23:Q:26:ALA:O	23:Q:30:VAL:HG12	2.07	0.54
2:B:2228:G:H2'	2:B:2229:U:C6	2.43	0.54
2:B:598:U:H2'	2:B:599:A:H8	1.72	0.54
17:M:6:ARG:NH1	17:M:6:ARG:HB3	2.22	0.54
2:B:441:U:H2'	2:B:442:G:C8	2.42	0.54
2:B:873:C:H2'	2:B:874:G:H8	1.73	0.54
26:F:92:GLY:O	26:F:95:MET:HB3	2.07	0.54
2:B:2327:A:H2'	2:B:2328:A:C8	2.42	0.54
19:H:131:SER:O	19:H:133:GLN:N	2.40	0.54
8:E:105:LEU:HA	8:E:108:ILE:HG22	1.90	0.54
27:G:34:ARG:HG2	27:G:34:ARG:NH1	2.22	0.54
19:H:44:ILE:O	19:H:48:GLU:HB3	2.07	0.54
20:J:123:LYS:N	20:J:123:LYS:HD2	2.22	0.54
25:U:86:PHE:CD1	25:U:90:LYS:HB2	2.42	0.54
2:B:1171:G:C2'	2:B:1172:C:H4'	2.37	0.54
2:B:18:U:H2'	2:B:19:A:C8	2.42	0.54
13:3:49:VAL:CG2	13:3:54:LEU:HD13	2.37	0.54
22:O:40:ILE:HA	22:O:47:VAL:HA	1.88	0.54
16:L:30:THR:O	16:L:32:GLY:N	2.41	0.54
2:B:566:U:O2'	2:B:567:U:H5'	2.07	0.54
31:W:36:ILE:HB	31:W:39:GLN:NE2	2.22	0.54
30:Z:39:TRP:HE1	30:Z:41:GLU:HG2	1.73	0.54
32:6:64:ARG:O	32:6:102:ASN:HA	2.08	0.54
2:B:1439:A:C5	2:B:1552:A:N6	2.76	0.54
21:N:73:ASN:HA	21:N:76:VAL:HG22	1.90	0.54
2:B:1858:A:H62	2:B:1884:G:H1'	1.72	0.54
3:I:100:ILE:O	3:I:139:VAL:HA	2.07	0.54
2:B:1374:G:H2'	2:B:1375:U:C6	2.43	0.54
2:B:2514:U:H2'	2:B:2515:C:C6	2.43	0.54
2:B:1854:A:N6	2:B:1888:G:H1'	2.23	0.54
22:O:17:LYS:HE2	22:O:21:LEU:HD21	1.88	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:C:261:ARG:O	4:C:261:ARG:HG2	2.07	0.54
26:F:135:ILE:HD11	26:F:137:PHE:HB3	1.90	0.54
32:6:25:LEU:HB3	32:6:179:LYS:HE3	1.90	0.54
32:6:58:VAL:HG22	32:6:68:VAL:HG13	1.90	0.54
5:D:92:VAL:O	5:D:94:GLN:N	2.41	0.54
2:B:1242:U:H2'	2:B:1243:C:C6	2.42	0.54
8:E:108:ILE:HG12	16:L:2:ARG:NH2	2.22	0.54
27:G:71:LEU:HA	27:G:74:MET:SD	2.47	0.54
2:B:141:G:H3'	2:B:142:A:C8	2.43	0.54
25:U:86:PHE:HE1	25:U:88:ASP:HB3	1.71	0.54
2:B:1171:G:H2'	2:B:1172:C:H4'	1.89	0.54
28:R:91:GLN:HG3	28:R:92:TRP:N	2.23	0.54
2:B:741:U:H2'	2:B:742:A:H8	1.73	0.54
2:B:1593:A:H2'	2:B:1594:U:H6	1.72	0.54
2:B:184:C:H2'	2:B:185:G:C8	2.43	0.54
4:C:145:MET:HB2	4:C:152:GLN:NE2	2.23	0.54
2:B:1315:C:O2'	2:B:1316:U:H5'	2.08	0.54
2:B:873:C:H2'	2:B:874:G:C8	2.43	0.54
2:B:1854:A:H62	2:B:1888:G:H8	1.56	0.54
2:B:32:C:O2'	2:B:33:C:H5'	2.08	0.54
2:B:836:G:H2'	2:B:837:C:C6	2.42	0.54
32:6:48:ALA:C	32:6:50:VAL:H	2.11	0.54
2:B:1475:G:H4'	2:B:1476:U:O5'	2.07	0.54
26:F:107:VAL:O	26:F:110:ILE:HG22	2.08	0.54
11:4:13:ASN:HD22	11:4:13:ASN:N	2.05	0.54
20:J:84:ILE:HG23	20:J:84:ILE:O	2.08	0.54
2:B:1553:A:O2'	2:B:1554:U:H2'	2.08	0.54
13:3:18:LYS:HD2	13:3:19:GLY:H	1.72	0.54
13:3:22:LYS:HB2	13:3:48:MET:SD	2.48	0.54
2:B:2282:G:OP1	2:B:2283:C:H1'	2.08	0.54
2:B:693:A:H2'	2:B:694:U:H6	1.72	0.54
2:B:18:U:H2'	2:B:19:A:H8	1.72	0.54
2:B:156:A:H2'	2:B:157:C:C6	2.42	0.54
2:B:2794:C:H2'	2:B:2795:C:H6	1.73	0.54
3:I:89:SER:HA	3:I:97:VAL:CG2	2.37	0.54
2:B:937:C:H2'	2:B:938:G:H8	1.73	0.54
1:A:111:U:H2'	1:A:112:G:C8	2.43	0.54
21:N:106:ASP:OD1	21:N:108:ALA:HB3	2.08	0.54
22:O:58:ILE:O	22:O:62:LEU:HD23	2.07	0.54
31:W:54:ARG:HB2	31:W:54:ARG:NH1	2.23	0.54
1:A:10:G:H2'	1:A:11:C:O4'	2.08	0.54
1:A:60:C:O2'	1:A:61:G:H5'	2.08	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:F:106:ALA:HA	26:F:135:ILE:CD1	2.38	0.54
5:D:107:VAL:HA	5:D:204:LYS:O	2.07	0.54
27:G:46:ASP:CG	27:G:47:ASN:H	2.11	0.54
19:H:6:LEU:HD11	19:H:37:VAL:HG12	1.89	0.54
31:W:37:VAL:CG1	31:W:38:ARG:HD3	2.37	0.54
2:B:1081:U:H5'	3:I:126:ARG:HD2	1.89	0.54
20:J:70:THR:HG22	20:J:90:GLU:CD	2.29	0.54
2:B:2443:C:O2'	2:B:2444:G:H5'	2.08	0.54
32:6:120:GLN:O	32:6:124:GLU:HG3	2.08	0.54
2:B:1913:A:H3'	2:B:1916:A:N1	2.22	0.54
2:B:2636:C:H2'	2:B:2637:U:H6	1.71	0.54
2:B:1038:G:H2'	2:B:1039:A:H8	1.73	0.54
2:B:99:U:H5	25:U:6:ARG:HH22	1.53	0.54
32:6:126:ARG:O	32:6:130:ARG:HG2	2.07	0.54
18:X:31:GLN:HG2	18:X:37:LEU:HB2	1.87	0.54
2:B:1846:G:H3'	2:B:1847:A:C2	2.42	0.54
2:B:1360:G:H2'	2:B:1361:G:H5'	1.90	0.54
30:Z:40:VAL:HG13	30:Z:47:VAL:HG22	1.90	0.54
5:D:109:VAL:HG11	5:D:193:VAL:HG11	1.89	0.54
29:T:34:VAL:HG23	29:T:81:LYS:HB3	1.89	0.54
19:H:42:LYS:HA	19:H:46:PHE:HB2	1.89	0.54
2:B:1724:G:H2'	2:B:1725:U:H6	1.72	0.54
2:B:742:A:H2'	2:B:743:A:H8	1.68	0.54
29:T:69:ARG:HB2	29:T:75:GLY:N	2.23	0.54
2:B:156:A:H2'	2:B:157:C:H6	1.73	0.54
23:Q:29:ARG:O	23:Q:30:VAL:HB	2.07	0.54
12:1:26:LYS:HD3	12:1:52:LYS:HB3	1.90	0.54
2:B:118:A:N3	2:B:178:G:H1'	2.23	0.54
24:S:52:GLU:C	24:S:54:ALA:H	2.11	0.54
16:L:100:ILE:HG12	16:L:100:ILE:O	2.07	0.54
4:C:69:ASN:O	4:C:70:LYS:C	2.45	0.54
2:B:1936:A:H2	2:B:1943:U:C5	2.26	0.54
2:B:1354:A:H2'	2:B:1355:G:O4'	2.07	0.54
2:B:1816:C:H3'	4:C:61:TYR:CE2	2.43	0.54
21:N:34:ILE:HB	21:N:113:ILE:CG2	2.37	0.54
2:B:538:A:H2'	2:B:539:G:O4'	2.08	0.54
10:0:29:VAL:HG22	10:0:30:ASP:N	2.23	0.54
5:D:151:THR:CB	5:D:152:PRO:HD3	2.28	0.53
4:C:71:ASP:O	4:C:73:ILE:HG12	2.07	0.53
7:P:97:TYR:C	7:P:99:LEU:H	2.11	0.53
8:E:147:LEU:HB3	8:E:186:VAL:HG23	1.90	0.53
4:C:104:LEU:H	4:C:104:LEU:HD22	1.73	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1551:A:H3'	2:B:1552:A:H5''	1.89	0.53
3:I:11:GLN:HG3	3:I:11:GLN:O	2.07	0.53
2:B:594:U:H2'	2:B:595:C:H6	1.73	0.53
5:D:105:LYS:HD2	5:D:177:VAL:CG2	2.36	0.53
2:B:282:A:H2'	2:B:283:G:H8	1.70	0.53
15:2:30:VAL:O	15:2:34:ARG:HG3	2.08	0.53
8:E:48:THR:O	8:E:52:VAL:HG23	2.08	0.53
2:B:1259:G:H2'	2:B:1260:A:C8	2.43	0.53
21:N:87:PHE:HB3	21:N:90:ARG:HB3	1.90	0.53
4:C:155:ARG:HH11	4:C:155:ARG:CB	2.21	0.53
2:B:956:G:N2	2:B:959:A:H3'	2.23	0.53
2:B:1043:C:H2'	2:B:1044:C:O4'	2.08	0.53
2:B:165:A:H2'	2:B:166:U:C6	2.43	0.53
2:B:754:U:H2'	2:B:755:U:C6	2.43	0.53
2:B:825:A:H2'	2:B:826:U:O4'	2.08	0.53
2:B:852:U:H2'	2:B:853:C:C6	2.43	0.53
26:F:163:GLU:HA	26:F:166:ARG:HD3	1.90	0.53
9:Y:50:VAL:O	9:Y:54:VAL:HG22	2.08	0.53
29:T:53:VAL:HG11	29:T:87:LEU:HD22	1.91	0.53
21:N:51:LEU:HD21	21:N:70:THR:HG21	1.89	0.53
2:B:2179:C:H2'	2:B:2180:U:O4'	2.07	0.53
2:B:2144:G:C2'	2:B:2146:C:H5'	2.38	0.53
2:B:1920:C:H3'	2:B:1921:G:C8	2.42	0.53
24:S:17:VAL:C	24:S:19:LEU:N	2.61	0.53
21:N:114:GLU:HG2	21:N:115:LEU:N	2.21	0.53
20:J:30:THR:HG23	20:J:31:GLU:H	1.73	0.53
2:B:1097:U:C2'	2:B:1098:A:H5'	2.37	0.53
2:B:1076:C:H4'	3:I:94:LYS:HE3	1.89	0.53
21:N:97:ILE:HD12	21:N:98:LEU:N	2.23	0.53
16:L:41:ARG:HH21	16:L:41:ARG:HG2	1.72	0.53
17:M:134:THR:HG22	17:M:136:MET:H	1.72	0.53
2:B:2358:A:H61	16:L:54:GLN:HE22	1.54	0.53
2:B:2154:A:H2'	2:B:2155:U:O4'	2.09	0.53
26:F:135:ILE:CD1	26:F:137:PHE:HB3	2.37	0.53
2:B:580:U:H2'	2:B:581:C:H6	1.73	0.53
19:H:114:GLU:CD	19:H:114:GLU:N	2.61	0.53
7:P:24:THR:O	7:P:25:VAL:HG22	2.07	0.53
7:P:91:VAL:O	7:P:92:ARG:HB3	2.09	0.53
2:B:1103:A:H3'	2:B:1104:C:H6	1.73	0.53
31:W:37:VAL:CG1	31:W:38:ARG:HH11	2.22	0.53
7:P:59:THR:HA	7:P:71:ARG:O	2.08	0.53
2:B:1590:A:H2'	2:B:1591:A:H8	1.72	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:L:135:ILE:HG21	16:L:142:ILE:HD11	1.90	0.53
14:V:24:ASN:O	14:V:44:HIS:HB2	2.07	0.53
3:I:81:LYS:HG3	3:I:82:ALA:N	2.23	0.53
4:C:6:LYS:C	4:C:8:THR:H	2.12	0.53
2:B:2446:G:H2'	2:B:2447:G:H5'	1.91	0.53
27:G:174:LYS:NZ	27:G:176:LYS:HB3	2.23	0.53
2:B:106:C:H2'	2:B:107:G:H8	1.74	0.53
2:B:445:C:O2'	2:B:446:G:H5'	2.08	0.53
2:B:2852:G:H2'	2:B:2853:C:C6	2.43	0.53
31:W:49:ASN:HD22	31:W:60:ALA:N	2.06	0.53
5:D:10:GLY:O	5:D:11:MET:HB2	2.06	0.53
7:P:4:ILE:CG2	7:P:5:LYS:H	2.12	0.53
27:G:26:LYS:HG2	27:G:27:GLY:N	2.23	0.53
2:B:1080:A:H2'	2:B:1081:U:H6	1.74	0.53
2:B:1439:A:N7	2:B:1440:U:N1	2.56	0.53
8:E:146:VAL:CG1	8:E:187:VAL:HG23	2.37	0.53
3:I:18:ASN:N	3:I:19:PRO:CD	2.71	0.53
2:B:2144:G:H2'	2:B:2146:C:OP2	2.08	0.53
18:X:18:LEU:O	18:X:22:LEU:HB3	2.08	0.53
15:2:33:ARG:HH21	15:2:33:ARG:HB2	1.74	0.53
32:6:14:MET:HG2	32:6:129:ILE:HG23	1.90	0.53
2:B:1107:G:H2'	2:B:1108:U:H6	1.71	0.53
6:K:3:GLN:HG2	6:K:4:GLU:N	2.22	0.53
25:U:6:ARG:O	25:U:24:VAL:HB	2.09	0.53
2:B:1846:G:H2'	2:B:1847:A:O4'	2.07	0.53
2:B:786:C:O2'	2:B:787:C:H5'	2.09	0.53
2:B:2825:G:H2'	2:B:2826:A:H5'	1.89	0.53
20:J:130:HIS:HD2	20:J:132:HIS:HB2	1.73	0.53
2:B:1824:G:O2'	2:B:1825:U:H5'	2.07	0.53
12:1:16:THR:HG21	12:1:42:VAL:HG23	1.89	0.53
31:W:48:ALA:O	31:W:61:LYS:HB2	2.09	0.53
19:H:94:ILE:HG21	19:H:144:VAL:HG11	1.89	0.53
2:B:2313:C:H2'	2:B:2314:A:C8	2.42	0.53
26:F:110:ILE:HA	26:F:111:ARG:NH1	2.23	0.53
26:F:134:GLN:H	26:F:150:GLY:H	1.57	0.53
26:F:42:ALA:O	26:F:46:LYS:N	2.42	0.53
2:B:2787:C:O2'	2:B:2788:C:H5'	2.09	0.53
5:D:51:THR:HG23	5:D:78:GLY:O	2.08	0.53
14:V:80:HIS:CD2	14:V:81:PRO:HD2	2.44	0.53
31:W:37:VAL:CG1	31:W:38:ARG:H	2.17	0.53
7:P:59:THR:OG1	7:P:72:VAL:HG12	2.07	0.53
2:B:1175:A:C5	2:B:1176:U:H1'	2.43	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1924:C:H2'	2:B:1925:C:C6	2.42	0.53
7:P:112:ARG:HB2	7:P:112:ARG:NH1	2.23	0.53
2:B:426:C:O2'	2:B:427:U:H5'	2.09	0.53
2:B:1784:A:H4'	2:B:1785:A:O5'	2.07	0.53
2:B:1533:C:H2'	2:B:1534:U:C6	2.43	0.53
26:F:13:LYS:HG3	26:F:14:LYS:H	1.73	0.53
4:C:64:VAL:O	4:C:65:ASP:HB3	2.08	0.53
2:B:1802:A:H2'	2:B:1803:A:C8	2.44	0.53
24:S:7:HIS:HB2	24:S:50:VAL:HG21	1.91	0.53
2:B:2760:C:O2'	2:B:2761:A:H5'	2.08	0.53
31:W:30:VAL:HG13	31:W:30:VAL:O	2.09	0.53
2:B:2305:U:O2	26:F:150:GLY:HA3	2.09	0.53
4:C:71:ASP:HA	4:C:117:SER:O	2.07	0.53
2:B:2472:G:O6	2:B:2476:A:H4'	2.09	0.53
24:S:36:LEU:HD22	24:S:36:LEU:N	2.22	0.53
19:H:4:ILE:HA	19:H:17:ASP:O	2.08	0.53
2:B:705:A:H61	2:B:726:G:H1'	1.74	0.53
2:B:2064:C:H2'	2:B:2065:C:H6	1.74	0.53
2:B:2838:G:H2'	2:B:2839:G:H8	1.73	0.53
2:B:936:A:H2'	2:B:937:C:H6	1.74	0.53
29:T:7:LEU:O	29:T:7:LEU:HD13	2.09	0.53
13:3:40:LYS:HA	13:3:43:LEU:HD12	1.91	0.53
3:I:52:LEU:HD21	3:I:81:LYS:HZ2	1.74	0.53
2:B:2712:C:H2'	2:B:2714:G:O3'	2.08	0.53
14:V:64:VAL:HG22	14:V:69:GLU:HB3	1.90	0.53
2:B:921:C:H2'	2:B:922:C:C6	2.44	0.53
26:F:177:ARG:CZ	26:F:177:ARG:HA	2.38	0.53
26:F:69:ALA:HB3	26:F:80:GLN:O	2.09	0.53
30:Z:45:ARG:HG2	30:Z:46:PHE:N	2.23	0.53
29:T:40:LYS:HG3	29:T:60:THR:HG23	1.90	0.53
25:U:73:ASN:OD1	25:U:75:ALA:HB3	2.08	0.53
2:B:1199:U:H2'	2:B:1200:C:H6	1.73	0.53
2:B:1942:C:C1'	32:6:133:ARG:HH22	2.21	0.53
25:U:21:ARG:HG3	25:U:21:ARG:HH11	1.74	0.53
9:Y:2:LYS:CG	9:Y:3:THR:H	2.21	0.53
24:S:60:HIS:O	24:S:61:ASN:CB	2.56	0.53
28:R:68:ARG:HH11	28:R:90:ARG:HG2	1.73	0.53
2:B:1932:A:H2'	2:B:1933:G:O4'	2.08	0.53
2:B:2708:G:O2'	2:B:2709:G:H5'	2.08	0.53
5:D:68:PHE:HB3	5:D:73:VAL:HG23	1.89	0.53
2:B:1292:G:H2'	2:B:1293:C:C6	2.43	0.53
32:6:52:LEU:HA	32:6:55:ILE:CG2	2.39	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
32:6:69:GLN:HG2	32:6:98:ALA:HB2	1.90	0.53
19:H:5:LEU:C	19:H:6:LEU:HD12	2.29	0.53
6:K:47:ILE:HG23	6:K:49:ARG:H	1.74	0.53
32:6:12:SER:O	32:6:16:LYS:HD2	2.09	0.53
2:B:594:U:H2'	2:B:595:C:C6	2.44	0.53
2:B:2370:G:H2'	2:B:2371:G:C8	2.43	0.53
9:Y:11:SER:OG	9:Y:13:ILE:HG13	2.08	0.53
4:C:250:GLN:H	4:C:250:GLN:CD	2.12	0.53
2:B:2885:G:N2	10:0:31:LYS:HG2	2.24	0.53
2:B:934:U:H2'	2:B:935:C:H6	1.72	0.53
7:P:94:ALA:O	7:P:95:LYS:HD2	2.09	0.53
2:B:39:G:H2'	2:B:40:U:C6	2.43	0.53
19:H:122:LEU:N	19:H:122:LEU:HD12	2.24	0.53
17:M:26:VAL:CG2	17:M:133:LYS:HA	2.39	0.53
16:L:90:VAL:HB	16:L:122:VAL:HG12	1.91	0.53
2:B:2512:C:H2'	2:B:2513:A:O4'	2.09	0.53
29:T:39:THR:HG22	29:T:42:GLU:CG	2.38	0.53
19:H:45:GLU:HA	19:H:48:GLU:OE1	2.09	0.53
2:B:1032:A:H1'	11:4:23:ILE:CD1	2.35	0.53
2:B:1439:A:N7	2:B:1440:U:C6	2.76	0.53
2:B:136:G:H8	2:B:136:G:P	2.32	0.53
2:B:572:A:H5''	2:B:573:U:OP2	2.08	0.53
27:G:148:ARG:HD2	27:G:149:ALA:N	2.24	0.53
14:V:65:VAL:C	14:V:67:GLY:H	2.12	0.53
2:B:2393:U:H5'	16:L:60:ARG:O	2.09	0.53
2:B:155:A:H2'	2:B:156:A:H8	1.73	0.53
13:3:49:VAL:O	13:3:51:LYS:N	2.42	0.53
2:B:2755:C:O5'	2:B:2755:C:H6	1.91	0.53
2:B:1666:G:O3'	6:K:6:THR:HG23	2.08	0.53
10:0:29:VAL:HG22	10:0:30:ASP:H	1.74	0.53
20:J:100:VAL:O	20:J:104:ALA:HB2	2.08	0.53
2:B:1432:G:O2'	2:B:1433:A:H5'	2.09	0.53
2:B:176:A:O2'	2:B:177:G:H5'	2.09	0.53
31:W:41:GLY:HA2	31:W:44:PHE:CE2	2.43	0.53
32:6:102:ASN:N	32:6:102:ASN:HD22	2.06	0.53
32:6:64:ARG:O	32:6:103:ILE:N	2.41	0.53
32:6:61:PRO:HD3	32:6:67:VAL:HG22	1.90	0.53
27:G:15:ASP:CB	27:G:26:LYS:HB3	2.39	0.53
19:H:4:ILE:HG13	19:H:37:VAL:O	2.09	0.53
20:J:128:ASN:C	20:J:129:GLU:HG3	2.30	0.53
2:B:1812:U:O2'	4:C:43:ASN:ND2	2.41	0.53
2:B:1442:U:H2'	2:B:1443:U:C6	2.44	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:280:U:H2'	2:B:281:C:H6	1.73	0.53
21:N:78:LYS:O	21:N:82:GLU:HB2	2.09	0.53
17:M:69:PRO:HG2	17:M:70:ASP:H	1.74	0.53
12:1:3:GLY:C	12:1:5:ARG:H	2.12	0.53
2:B:743:A:C2'	2:B:744:U:H5'	2.38	0.53
2:B:170:U:H2'	2:B:171:U:C6	2.43	0.53
2:B:496:G:H1'	24:S:61:ASN:HD21	1.73	0.53
7:P:31:VAL:O	7:P:32:VAL:HB	2.07	0.53
26:F:13:LYS:HA	26:F:16:MET:HB2	1.91	0.53
4:C:52:HIS:HA	4:C:216:ARG:HB2	1.90	0.53
2:B:1332:G:H2'	2:B:1332:G:N3	2.23	0.53
2:B:338:G:N2	2:B:339:U:H1'	2.24	0.53
2:B:2359:C:H2'	2:B:2360:G:C8	2.44	0.53
19:H:79:THR:HG22	19:H:145:ASN:HB2	1.91	0.52
11:4:11:CYS:HB3	11:4:33:HIS:HE1	1.74	0.52
19:H:40:THR:O	19:H:41:LYS:C	2.47	0.52
20:J:58:ASN:HA	20:J:127:GLY:CA	2.35	0.52
2:B:276:U:C2'	2:B:277:G:H5'	2.39	0.52
2:B:2143:C:H2'	2:B:2144:G:O4'	2.09	0.52
2:B:1917:U:H2'	2:B:1918:A:O4'	2.09	0.52
2:B:2135:A:H3'	2:B:2136:G:H8	1.74	0.52
24:S:60:HIS:O	24:S:61:ASN:HB2	2.08	0.52
2:B:2415:G:H2'	2:B:2416:C:C6	2.44	0.52
2:B:633:A:O5'	2:B:633:A:H8	1.92	0.52
2:B:2834:G:H1'	2:B:2883:A:H61	1.73	0.52
2:B:1318:U:H2'	2:B:1319:C:C6	2.43	0.52
4:C:30:ALA:N	4:C:31:PRO:HD2	2.24	0.52
5:D:179:ARG:HH11	5:D:179:ARG:HB3	1.73	0.52
2:B:857:G:O2'	2:B:858:G:H5'	2.09	0.52
4:C:153:LEU:HD13	4:C:175:LEU:CD2	2.38	0.52
27:G:10:VAL:CG1	27:G:14:VAL:HB	2.29	0.52
16:L:113:ALA:HB3	16:L:115:GLU:OE1	2.08	0.52
2:B:573:U:N3	2:B:2031:A:OP1	2.38	0.52
2:B:1710:G:O2'	2:B:1711:A:H5'	2.10	0.52
2:B:2793:C:H2'	2:B:2794:C:H6	1.74	0.52
2:B:2415:G:H2'	2:B:2416:C:H6	1.74	0.52
13:3:7:ARG:HG3	13:3:7:ARG:HH11	1.74	0.52
2:B:2215:C:H2'	2:B:2216:G:H8	1.74	0.52
25:U:23:LYS:HD2	25:U:23:LYS:N	2.23	0.52
14:V:51:GLN:HA	14:V:56:PHE:CG	2.44	0.52
2:B:331:C:O2'	2:B:332:A:H5'	2.09	0.52
3:I:49:GLU:CG	3:I:54:ILE:HD11	2.39	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:E:136:GLN:NE2	8:E:139:LYS:HD3	2.24	0.52
16:L:82:LEU:O	16:L:85:VAL:HG12	2.09	0.52
29:T:38:ALA:O	29:T:39:THR:HB	2.09	0.52
2:B:160:A:H1'	2:B:2208:C:O2'	2.09	0.52
17:M:19:GLY:N	17:M:38:ARG:HH22	2.08	0.52
2:B:1172:C:H3'	2:B:1173:U:H6	1.71	0.52
25:U:11:ILE:HD13	25:U:11:ILE:O	2.09	0.52
2:B:285:G:O2'	2:B:286:U:H5'	2.09	0.52
2:B:289:G:H2'	2:B:290:U:O4'	2.09	0.52
10:O:48:TYR:CG	10:O:49:ARG:N	2.77	0.52
3:I:75:ALA:HB2	3:I:112:LYS:HE2	1.90	0.52
1:A:14:U:H1'	1:A:106:G:H21	1.75	0.52
2:B:1269:A:H2'	2:B:1270:C:C6	2.45	0.52
24:S:1:MET:SD	24:S:62:ASP:HB3	2.49	0.52
26:F:104:THR:C	26:F:105:ILE:HG13	2.30	0.52
26:F:56:LEU:HD22	26:F:59:ILE:HD12	1.91	0.52
23:Q:83:LYS:NZ	23:Q:87:VAL:HA	2.25	0.52
29:T:29:THR:H	29:T:91:GLN:NE2	2.08	0.52
27:G:122:ALA:HB2	27:G:132:LEU:HB3	1.90	0.52
25:U:86:PHE:HB3	25:U:90:LYS:O	2.09	0.52
2:B:655:A:H4'	2:B:656:G:H5'	1.91	0.52
10:O:42:ILE:HG22	10:O:43:THR:O	2.09	0.52
14:V:30:ILE:HG13	14:V:40:ILE:HD12	1.90	0.52
2:B:1639:C:C2'	2:B:1640:A:H5'	2.39	0.52
2:B:2479:U:OP1	2:B:2537:U:H1'	2.08	0.52
1:A:49:C:OP1	22:O:101:GLY:HA3	2.10	0.52
2:B:1316:U:O2'	2:B:1317:G:H5'	2.09	0.52
2:B:526:A:N6	2:B:2626:C:H4'	2.25	0.52
22:O:40:ILE:HG12	22:O:47:VAL:HG13	1.92	0.52
2:B:494:G:H4'	24:S:6:LYS:HG2	1.92	0.52
2:B:2700:A:H2'	2:B:2701:U:C6	2.44	0.52
2:B:2659:G:N2	2:B:2661:G:H5''	2.24	0.52
2:B:1188:U:O2'	2:B:1189:A:H5'	2.08	0.52
26:F:98:PHE:O	26:F:102:LEU:HD12	2.10	0.52
4:C:127:ASN:O	4:C:190:THR:HA	2.09	0.52
4:C:141:HIS:HB3	4:C:190:THR:HG1	1.74	0.52
9:Y:6:ILE:HG22	9:Y:7:THR:H	1.75	0.52
2:B:27:G:H1'	2:B:513:A:H61	1.73	0.52
2:B:1060:U:O2	2:B:1088:A:C8	2.63	0.52
19:H:57:LYS:NZ	19:H:58:LEU:HD13	2.24	0.52
20:J:136:GLN:N	20:J:137:PRO:HD3	2.25	0.52
23:Q:73:ILE:HG23	23:Q:78:PHE:HB2	1.92	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:3:18:LYS:CE	13:3:20:GLY:H	2.22	0.52
16:L:56:PRO:O	16:L:59:ARG:HB2	2.08	0.52
2:B:2784:U:H4'	5:D:42:ASN:O	2.09	0.52
2:B:2880:C:O4'	21:N:91:ALA:HB3	2.09	0.52
2:B:1315:C:H2'	2:B:1316:U:C6	2.45	0.52
29:T:79:ASP:N	29:T:79:ASP:OD2	2.43	0.52
5:D:39:ASP:O	5:D:43:ASP:HB2	2.08	0.52
2:B:1417:C:O5'	2:B:1588:G:H1'	2.08	0.52
22:O:11:ALA:HB2	22:O:96:GLY:N	2.24	0.52
6:K:88:ASN:HD21	6:K:90:ASN:HB3	1.74	0.52
3:I:23:VAL:HG23	3:I:24:GLY:N	2.25	0.52
2:B:2307:G:O6	26:F:40:GLY:HA3	2.10	0.52
7:P:4:ILE:C	7:P:6:GLN:N	2.62	0.52
19:H:135:HIS:C	19:H:137:GLU:H	2.12	0.52
27:G:1:SER:O	27:G:3:VAL:HG22	2.09	0.52
4:C:90:ILE:HD13	4:C:104:LEU:HA	1.90	0.52
2:B:705:A:N6	2:B:726:G:O2'	2.42	0.52
27:G:148:ARG:C	27:G:148:ARG:HD2	2.30	0.52
10:O:21:LEU:HD12	24:S:19:LEU:O	2.08	0.52
19:H:3:VAL:CB	19:H:38:PRO:HA	2.40	0.52
16:L:55:MET:HE1	16:L:59:ARG:CZ	2.39	0.52
4:C:270:ARG:HB3	4:C:270:ARG:NH1	2.24	0.52
2:B:2063:C:O2	2:B:2450:A:N1	2.43	0.52
24:S:46:LEU:O	24:S:50:VAL:HG23	2.09	0.52
2:B:766:U:H2'	2:B:767:U:C6	2.44	0.52
2:B:710:U:H2'	2:B:711:G:H8	1.74	0.52
26:F:115:GLY:HA2	26:F:177:ARG:HH11	1.74	0.52
6:K:99:ILE:H	6:K:118:LEU:HD23	1.75	0.52
8:E:157:LEU:HG	8:E:169:VAL:HG11	1.92	0.52
12:1:10:LEU:HA	12:1:49:LYS:O	2.09	0.52
2:B:592:A:N3	13:3:3:ILE:HD11	2.24	0.52
32:6:116:ARG:O	32:6:120:GLN:HB2	2.10	0.52
18:X:14:LEU:HD22	18:X:57:LEU:HD21	1.92	0.52
4:C:20:ASN:O	4:C:23:LEU:HB2	2.09	0.52
25:U:12:VAL:HG22	25:U:69:VAL:CG1	2.40	0.52
2:B:547:A:H2'	2:B:548:G:H5'	1.91	0.52
2:B:1049:C:H2'	2:B:1050:A:C8	2.43	0.52
2:B:2215:C:H2'	2:B:2216:G:C8	2.45	0.52
22:O:56:LYS:HE3	22:O:60:GLU:OE2	2.08	0.52
2:B:441:U:H2'	2:B:442:G:H8	1.75	0.52
4:C:53:ILE:O	4:C:53:ILE:HG23	2.10	0.52
32:6:184:LEU:O	32:6:184:LEU:HD23	2.09	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:597:G:H21	16:L:12:SER:HA	1.74	0.52
16:L:9:ALA:HB3	16:L:12:SER:OG	2.10	0.52
2:B:877:A:H2'	2:B:899:A:N1	2.25	0.52
2:B:431:U:O2'	2:B:432:A:H5'	2.09	0.52
2:B:483:A:H2'	2:B:484:C:O4'	2.10	0.52
4:C:130:PRO:HG2	4:C:133:ASN:HD22	1.74	0.52
30:Z:41:GLU:O	30:Z:44:LYS:HD2	2.10	0.52
20:J:1:MET:HG2	20:J:2:LYS:HZ3	1.74	0.52
18:X:46:VAL:HA	18:X:49:ASP:HB2	1.91	0.52
10:O:38:LEU:HB3	10:O:41:HIS:CD2	2.44	0.52
23:Q:8:ILE:H	23:Q:8:ILE:HD12	1.73	0.52
2:B:1856:U:H2'	2:B:1857:G:O4'	2.10	0.52
23:Q:104:ALA:O	23:Q:105:PHE:HB3	2.10	0.52
20:J:30:THR:HG23	20:J:31:GLU:N	2.25	0.52
2:B:1459:G:C2'	2:B:1460:U:H5'	2.40	0.52
2:B:1683:U:H2'	2:B:1684:G:H8	1.73	0.52
7:P:31:VAL:HG13	7:P:32:VAL:N	2.25	0.52
16:L:127:VAL:HG23	16:L:131:ALA:HB3	1.92	0.52
2:B:2520:C:O2'	2:B:2521:C:H5'	2.10	0.52
2:B:1562:U:H2'	2:B:1563:U:C6	2.44	0.52
2:B:165:A:H2'	2:B:166:U:H6	1.74	0.52
4:C:6:LYS:HB3	4:C:8:THR:HG22	1.92	0.52
3:I:23:VAL:HG23	3:I:24:GLY:H	1.74	0.52
9:Y:35:VAL:HG22	9:Y:36:GLU:N	2.25	0.52
2:B:2000:C:O2'	2:B:2001:C:H5'	2.09	0.52
4:C:141:HIS:HB2	4:C:192:GLY:O	2.10	0.52
2:B:346:A:H5'	2:B:346:A:N3	2.25	0.52
20:J:72:LYS:HB2	20:J:89:PHE:HB2	1.91	0.52
17:M:4:PRO:HG3	17:M:68:PHE:HE2	1.74	0.52
2:B:729:G:H2'	2:B:1775:U:H1'	1.91	0.52
19:H:85:GLY:HA3	19:H:91:PHE:CE1	2.41	0.52
4:C:117:SER:CB	4:C:128:THR:HB	2.40	0.52
32:6:102:ASN:H	32:6:102:ASN:HD22	1.58	0.52
11:4:1:MET:CE	11:4:36:ARG:HB2	2.39	0.52
20:J:57:LEU:HG	20:J:128:ASN:N	2.24	0.52
19:H:66:ASN:HD22	19:H:67:ALA:H	1.57	0.52
23:Q:97:ILE:HG13	23:Q:105:PHE:HB2	1.93	0.52
2:B:2840:C:H2'	2:B:2841:C:C6	2.45	0.52
2:B:947:A:O2'	2:B:984:A:H2	1.92	0.52
2:B:2657:A:H5''	27:G:91:VAL:HG21	1.92	0.52
2:B:327:G:H2'	2:B:328:U:O4'	2.10	0.52
2:B:598:U:H2'	2:B:599:A:C8	2.44	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:D:175:LEU:HD23	5:D:190:LYS:HB2	1.92	0.52
27:G:172:GLU:OE2	27:G:175:LYS:HE2	2.10	0.52
2:B:2737:G:H2'	2:B:2738:A:C8	2.45	0.52
20:J:75:TYR:CD1	20:J:86:GLN:HB3	2.45	0.52
2:B:1820:U:OP1	4:C:176:ARG:HD2	2.10	0.52
32:6:65:THR:OG1	32:6:102:ASN:HA	2.09	0.51
11:4:27:CYS:HB3	11:4:33:HIS:HB2	1.92	0.51
8:E:28:VAL:O	8:E:32:VAL:HG13	2.10	0.51
2:B:346:A:H2'	2:B:347:A:O4'	2.11	0.51
5:D:12:THR:HG22	5:D:13:ARG:H	1.76	0.51
16:L:79:LEU:HB2	16:L:113:ALA:HB3	1.92	0.51
20:J:11:VAL:HG11	20:J:13:ARG:NE	2.25	0.51
20:J:35:ARG:HG3	20:J:40:HIS:CD2	2.44	0.51
2:B:2073:C:O2'	2:B:2074:U:H5'	2.10	0.51
2:B:30:G:H2'	2:B:31:C:H6	1.74	0.51
14:V:30:ILE:HD12	14:V:38:LEU:HD23	1.92	0.51
2:B:1347:A:H2'	2:B:1348:C:O4'	2.11	0.51
20:J:117:ALA:HA	20:J:120:ARG:NH2	2.25	0.51
2:B:1460:U:H5''	2:B:1461:C:C5	2.45	0.51
22:O:105:ALA:C	22:O:107:ALA:H	2.13	0.51
2:B:2720:U:H2'	2:B:2721:A:C8	2.45	0.51
2:B:2529:G:H4'	27:G:174:LYS:HG3	1.91	0.51
2:B:1820:U:H3	4:C:197:ALA:HA	1.75	0.51
6:K:53:LYS:HD3	6:K:53:LYS:H	1.73	0.51
2:B:69:C:O2'	2:B:70:G:H5'	2.10	0.51
2:B:1539:U:O2	2:B:1539:U:H2'	2.10	0.51
2:B:259:G:O2'	2:B:260:G:H5'	2.10	0.51
2:B:851:C:H2'	2:B:852:U:H6	1.75	0.51
31:W:74:LYS:O	31:W:76:ARG:HG2	2.11	0.51
26:F:2:LYS:NZ	26:F:100:GLU:HG2	2.24	0.51
4:C:124:LYS:HG3	4:C:125:PRO:HD2	1.92	0.51
32:6:88:LEU:O	32:6:90:LEU:HG	2.09	0.51
11:4:9:LYS:N	11:4:9:LYS:HD3	2.26	0.51
23:Q:63:ARG:HH22	23:Q:96:ASP:CA	2.23	0.51
8:E:170:ARG:HH22	8:E:176:ASP:HB2	1.75	0.51
29:T:11:LEU:HA	29:T:34:VAL:HG12	1.93	0.51
2:B:673:C:O2'	2:B:674:G:H5'	2.10	0.51
6:K:19:VAL:HB	6:K:41:ILE:CG1	2.40	0.51
17:M:2:LEU:HD11	17:M:68:PHE:CE1	2.46	0.51
2:B:182:A:H2'	2:B:183:C:H6	1.75	0.51
2:B:1592:C:H2'	2:B:1593:A:C8	2.44	0.51
30:Z:49:LEU:HD21	30:Z:78:TYR:HB2	1.92	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:545:U:H3'	2:B:547:A:OP1	2.11	0.51
2:B:1461:C:H2'	2:B:1462:C:C6	2.46	0.51
8:E:194:LYS:O	8:E:198:GLU:HG2	2.11	0.51
2:B:630:G:H4'	2:B:640:C:O2'	2.10	0.51
2:B:633:A:OP1	16:L:68:SER:HB2	2.11	0.51
2:B:2183:A:H2'	2:B:2184:A:C8	2.45	0.51
2:B:2674:G:H4'	6:K:30:ARG:HD2	1.92	0.51
5:D:68:PHE:HB3	5:D:73:VAL:HA	1.91	0.51
6:K:10:VAL:HG21	6:K:16:ALA:HA	1.92	0.51
8:E:33:VAL:O	8:E:36:ALA:HB3	2.10	0.51
32:6:137:LEU:HD11	32:6:158:GLU:HG2	1.92	0.51
2:B:2539:C:O2'	2:B:2540:C:H5'	2.10	0.51
12:1:22:THR:OG1	12:1:23:THR:N	2.43	0.51
19:H:89:LYS:C	19:H:90:LEU:HD12	2.30	0.51
2:B:513:A:H8	2:B:513:A:O5'	1.92	0.51
2:B:582:A:H2'	2:B:583:G:C8	2.44	0.51
8:E:28:VAL:HA	8:E:104:ALA:HB1	1.93	0.51
14:V:81:PRO:O	17:M:34:LYS:HE2	2.10	0.51
6:K:61:VAL:HG22	6:K:87:LEU:HD21	1.91	0.51
10:0:42:ILE:HG12	21:N:99:LYS:O	2.10	0.51
21:N:45:ARG:O	21:N:49:GLU:HG3	2.10	0.51
2:B:1858:A:H2'	2:B:1859:U:O4'	2.10	0.51
19:H:101:ASP:C	19:H:103:VAL:H	2.14	0.51
2:B:548:G:H4'	2:B:549:G:C5	2.45	0.51
2:B:2897:U:H2'	2:B:2898:U:C6	2.45	0.51
2:B:2813:A:H2'	2:B:2814:A:C8	2.44	0.51
2:B:2882:A:OP1	21:N:96:ARG:HD2	2.09	0.51
2:B:1083:U:H2'	2:B:1085:A:OP2	2.10	0.51
31:W:49:ASN:HD22	31:W:60:ALA:H	1.59	0.51
4:C:122:ALA:O	4:C:124:LYS:N	2.44	0.51
32:6:59:THR:O	32:6:67:VAL:N	2.35	0.51
20:J:44:TYR:C	20:J:44:TYR:CD2	2.81	0.51
28:R:3:ALA:HA	28:R:40:MET:O	2.10	0.51
14:V:63:ILE:HB	14:V:70:ILE:CD1	2.40	0.51
4:C:103:ILE:HG22	4:C:105:ALA:N	2.19	0.51
3:I:125:THR:O	3:I:129:GLU:HG3	2.10	0.51
12:1:35:LEU:O	12:1:36:LYS:HB2	2.10	0.51
2:B:674:G:O3'	8:E:60:TRP:CZ2	2.63	0.51
3:I:17:ALA:O	3:I:18:ASN:CB	2.59	0.51
2:B:718:A:H3'	2:B:719:C:C6	2.40	0.51
2:B:616:A:H4'	8:E:101:TYR:CE2	2.46	0.51
15:2:26:ASN:O	15:2:30:VAL:HG23	2.10	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:2:29:GLN:O	15:2:33:ARG:HB2	2.11	0.51
2:B:2795:C:C2	2:B:2796:U:H1'	2.45	0.51
2:B:2286:G:H4'	2:B:2287:A:O4'	2.10	0.51
17:M:59:ARG:CZ	17:M:60:GLN:HB3	2.40	0.51
2:B:909:A:H2'	2:B:912:C:C5	2.46	0.51
8:E:4:VAL:HG22	8:E:9:GLN:HE22	1.75	0.51
22:O:6:ALA:O	22:O:10:ARG:HG3	2.11	0.51
18:X:29:ARG:NH1	29:T:12:ARG:NE	2.58	0.51
2:B:2329:U:H2'	2:B:2330:G:C8	2.46	0.51
11:4:2:LYS:HD2	11:4:4:ARG:NE	2.13	0.51
8:E:104:ALA:O	8:E:108:ILE:HG22	2.11	0.51
2:B:2543:G:H8	2:B:2543:G:H5'	1.75	0.51
2:B:773:U:H4'	4:C:45:ASN:O	2.11	0.51
2:B:967:U:H2'	2:B:968:C:C6	2.46	0.51
2:B:5:A:H2'	2:B:6:A:H8	1.75	0.51
4:C:30:ALA:HA	4:C:33:LEU:CD1	2.40	0.51
2:B:1947:C:H2'	2:B:1948:G:H8	1.75	0.51
2:B:2639:A:H2'	2:B:2640:G:O4'	2.11	0.51
2:B:2096:C:H2'	2:B:2097:A:H8	1.75	0.51
19:H:78:VAL:HB	19:H:143:ILE:O	2.10	0.51
5:D:151:THR:HB	5:D:152:PRO:CD	2.32	0.51
26:F:169:LEU:HD22	26:F:174:PHE:CE1	2.46	0.51
2:B:470:A:N6	29:T:72:GLN:HE22	2.01	0.51
19:H:114:GLU:CG	19:H:134:VAL:HA	2.40	0.51
11:4:7:VAL:HG13	11:4:8:LYS:N	2.20	0.51
28:R:20:VAL:O	28:R:96:VAL:HG22	2.10	0.51
19:H:57:LYS:HG3	19:H:58:LEU:N	2.19	0.51
7:P:50:ARG:N	7:P:57:ALA:O	2.42	0.51
2:B:2146:C:H1'	2:B:2147:A:H5'	1.93	0.51
2:B:2665:A:H2'	2:B:2666:C:O2	2.11	0.51
20:J:23:LYS:NZ	20:J:142:ILE:HG12	2.25	0.51
9:Y:18:LYS:O	9:Y:21:ALA:HB3	2.11	0.51
1:A:29:A:OP2	22:O:32:PRO:HD2	2.10	0.51
2:B:1582:C:H3'	2:B:1583:A:H8	1.75	0.51
2:B:1656:C:H2'	2:B:1657:U:H6	1.76	0.51
1:A:14:U:H4'	1:A:70:C:O2	2.09	0.51
32:6:123:GLU:HA	32:6:126:ARG:HH11	1.76	0.51
31:W:32:ALA:C	31:W:34:SER:H	2.14	0.51
8:E:37:ALA:C	8:E:39:ALA:H	2.13	0.51
2:B:2365:G:O2'	31:W:59:PHE:HE1	1.93	0.51
26:F:137:PHE:CD2	26:F:137:PHE:N	2.77	0.51
32:6:55:ILE:HG23	32:6:56:ALA:N	2.18	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
32:6:61:PRO:HD2	32:6:65:THR:O	2.10	0.51
7:P:7:LEU:HA	7:P:10:GLU:OE2	2.10	0.51
20:J:3:THR:HB	20:J:44:TYR:CZ	2.45	0.51
2:B:1442:U:H2'	2:B:1443:U:H6	1.76	0.51
20:J:25:LEU:HD23	20:J:101:ILE:HD13	1.91	0.51
21:N:19:ALA:HA	21:N:22:ARG:HB3	1.93	0.51
4:C:132:ARG:HA	4:C:166:ARG:HH11	1.75	0.51
2:B:2462:C:H2'	2:B:2463:C:H6	1.74	0.51
2:B:418:C:H2'	2:B:419:U:C6	2.45	0.51
2:B:17:G:H2'	2:B:18:U:H6	1.74	0.51
2:B:19:A:H2'	2:B:20:C:C6	2.46	0.51
2:B:548:G:H4'	2:B:549:G:C4	2.45	0.51
2:B:296:U:H2'	2:B:297:G:H8	1.74	0.51
23:Q:39:ILE:O	23:Q:43:GLN:HG3	2.10	0.51
2:B:2408:U:H2'	2:B:2409:G:C8	2.45	0.51
2:B:2249:U:H4'	2:B:2275:C:C5	2.46	0.51
2:B:823:C:O2'	2:B:824:U:H5'	2.10	0.51
2:B:1007:C:O3'	20:J:110:PRO:HB3	2.10	0.51
4:C:140:VAL:CG1	4:C:141:HIS:H	2.17	0.51
30:Z:32:ASN:O	30:Z:33:LEU:O	2.29	0.51
2:B:1204:A:N1	2:B:1241:A:N1	2.59	0.51
19:H:114:GLU:HB3	19:H:134:VAL:CA	2.40	0.51
23:Q:86:SER:O	23:Q:88:GLU:N	2.44	0.51
29:T:29:THR:CA	29:T:86:THR:HA	2.41	0.51
14:V:28:ALA:HB3	14:V:42:LEU:HD21	1.93	0.51
14:V:3:THR:HA	14:V:62:THR:OG1	2.10	0.51
20:J:41:LYS:HE3	20:J:52:ASP:OD2	2.11	0.51
2:B:1172:C:H2'	2:B:1173:U:C1'	2.40	0.51
2:B:1386:C:H1'	2:B:1470:A:H1'	1.92	0.51
32:6:109:GLU:HA	32:6:112:LYS:CE	2.40	0.51
2:B:2784:U:H2'	2:B:2785:C:H6	1.76	0.51
22:O:100:HIS:C	22:O:104:GLN:HB2	2.31	0.51
27:G:53:PRO:HG3	27:G:61:TRP:N	2.26	0.51
13:3:7:ARG:HG3	13:3:7:ARG:NH1	2.26	0.51
2:B:437:U:H2'	2:B:438:G:H8	1.76	0.51
2:B:899:A:OP2	2:B:899:A:H8	1.93	0.51
26:F:157:THR:C	26:F:159:ALA:H	2.14	0.51
2:B:499:U:H2'	2:B:500:G:O4'	2.11	0.51
8:E:3:LEU:HB2	8:E:12:LEU:CB	2.41	0.51
2:B:1717:A:H2'	2:B:1718:G:O4'	2.11	0.51
2:B:2395:C:H2'	2:B:2396:G:O4'	2.10	0.51
2:B:921:C:H2'	2:B:922:C:H6	1.75	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:W:24:ARG:HB2	31:W:65:LYS:HB3	1.92	0.51
26:F:33:ILE:HB	26:F:90:LEU:HG	1.93	0.51
22:O:49:VAL:HG12	22:O:85:LYS:HG3	1.92	0.51
5:D:55:LYS:H	5:D:76:GLY:H	1.59	0.51
20:J:44:TYR:HD2	20:J:44:TYR:C	2.15	0.51
2:B:1438:U:N3	2:B:1552:A:N6	2.58	0.51
8:E:138:LEU:HB3	8:E:143:LEU:O	2.10	0.51
25:U:26:ASN:ND2	25:U:26:ASN:N	2.58	0.51
2:B:593:U:H2'	2:B:594:U:C6	2.46	0.51
7:P:44:GLY:HA3	7:P:60:VAL:HG12	1.93	0.51
25:U:64:ILE:HD11	25:U:68:ASN:ND2	2.26	0.51
2:B:1400:U:H2'	2:B:1401:G:H8	1.75	0.51
2:B:2088:A:H2'	2:B:2089:C:H6	1.75	0.51
14:V:76:ASP:H	14:V:90:ASP:HB2	1.75	0.51
2:B:1390:U:O2'	2:B:1391:U:H5'	2.10	0.51
1:A:64:G:H2'	1:A:65:U:C6	2.46	0.51
26:F:95:MET:O	26:F:98:PHE:HB3	2.10	0.51
11:4:2:LYS:CD	11:4:4:ARG:HE	2.14	0.51
25:U:27:VAL:CB	25:U:33:VAL:HG12	2.41	0.51
26:F:7:TYR:HA	26:F:11:VAL:CG2	2.41	0.51
26:F:1:ALA:HB1	26:F:4:HIS:HB3	1.91	0.51
32:6:110:ARG:O	32:6:114:LEU:HD13	2.11	0.51
24:S:15:GLN:HA	24:S:18:ARG:HG2	1.93	0.51
2:B:1870:C:H2'	2:B:1871:A:C2	2.45	0.51
2:B:2230:G:H2'	2:B:2231:U:C6	2.46	0.51
2:B:2755:C:O2'	2:B:2756:U:H2'	2.11	0.51
2:B:1926:U:H3'	2:B:1928:A:OP2	2.11	0.51
24:S:42:LYS:HA	24:S:42:LYS:NZ	2.26	0.51
23:Q:43:GLN:HE21	28:R:77:PHE:HB3	1.76	0.51
15:2:3:ARG:HA	15:2:3:ARG:CZ	2.41	0.51
4:C:6:LYS:CB	4:C:8:THR:HG22	2.41	0.51
14:V:46:LYS:HA	14:V:46:LYS:HE3	1.91	0.51
18:X:13:GLU:HA	18:X:13:GLU:OE2	2.10	0.51
2:B:1114:C:H2'	2:B:1115:G:C8	2.46	0.51
2:B:115:C:O2'	2:B:116:C:H5'	2.10	0.51
2:B:2341:G:H2'	2:B:2342:C:C6	2.46	0.51
2:B:2251:G:OP1	17:M:81:ARG:HD3	2.10	0.51
2:B:1468:U:H2'	2:B:1522:A:N6	2.26	0.51
10:0:51:ARG:O	10:0:52:LYS:HB2	2.10	0.51
4:C:130:PRO:CG	4:C:133:ASN:HD22	2.24	0.50
9:Y:23:LEU:HD23	9:Y:50:VAL:HG11	1.93	0.50
7:P:4:ILE:HA	7:P:7:LEU:CD1	2.42	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:H:114:GLU:HB3	19:H:133:GLN:O	2.11	0.50
2:B:1028:A:N6	2:B:1125:G:H2'	2.25	0.50
2:B:279:A:N6	2:B:361:G:H1'	2.25	0.50
25:U:26:ASN:HD22	25:U:26:ASN:N	2.07	0.50
14:V:3:THR:HA	14:V:62:THR:HG1	1.77	0.50
5:D:136:ASN:ND2	5:D:140:HIS:ND1	2.59	0.50
20:J:40:HIS:ND1	20:J:41:LYS:HG3	2.27	0.50
17:M:19:GLY:CA	17:M:38:ARG:HH22	2.23	0.50
2:B:1908:C:H3'	2:B:1909:C:O4'	2.10	0.50
2:B:2814:A:H2'	2:B:2815:C:H6	1.75	0.50
2:B:633:A:H2'	2:B:634:C:H5'	1.94	0.50
2:B:1666:G:O2'	2:B:1667:G:H5'	2.10	0.50
2:B:192:C:O2'	2:B:802:A:N3	2.40	0.50
2:B:1661:G:O2'	2:B:1662:U:H5'	2.11	0.50
2:B:853:C:H2'	2:B:854:C:H6	1.76	0.50
16:L:125:LEU:H	16:L:143:GLU:CG	2.24	0.50
19:H:79:THR:CB	19:H:145:ASN:HB2	2.41	0.50
26:F:45:ASP:OD1	26:F:47:LYS:HB2	2.10	0.50
5:D:8:LYS:O	5:D:9:VAL:HB	2.11	0.50
8:E:29:HIS:HA	8:E:32:VAL:HG22	1.93	0.50
29:T:14:PRO:HA	29:T:32:LEU:HB3	1.92	0.50
29:T:54:GLU:CB	29:T:88:LYS:HB2	2.41	0.50
19:H:5:LEU:HD12	19:H:17:ASP:HB3	1.93	0.50
8:E:125:SER:HA	8:E:157:LEU:HD22	1.92	0.50
8:E:143:LEU:HB3	8:E:146:VAL:HG21	1.93	0.50
5:D:13:ARG:HD3	5:D:15:PHE:CZ	2.45	0.50
2:B:968:C:H2'	2:B:969:G:C8	2.45	0.50
12:1:9:LYS:HE2	12:1:50:GLU:OE2	2.10	0.50
2:B:776:G:H4'	2:B:777:G:O5'	2.11	0.50
2:B:2862:G:H2'	2:B:2863:C:C6	2.46	0.50
2:B:2344:U:H4'	2:B:2345:G:OP1	2.11	0.50
19:H:34:GLY:O	19:H:35:LYS:HG2	2.11	0.50
25:U:43:LYS:NZ	25:U:45:GLN:HA	2.26	0.50
26:F:177:ARG:CZ	26:F:178:LYS:H	2.24	0.50
28:R:14:VAL:HG23	28:R:15:SER:N	2.26	0.50
2:B:126:A:C5'	15:2:46:LYS:HE2	2.34	0.50
14:V:80:HIS:HB2	14:V:85:LYS:HG3	1.94	0.50
6:K:71:ARG:O	6:K:72:PRO:C	2.50	0.50
5:D:13:ARG:HD3	5:D:15:PHE:CE1	2.47	0.50
8:E:60:TRP:CZ3	8:E:62:GLN:HA	2.46	0.50
2:B:982:C:O2	2:B:982:C:H5'	2.11	0.50
2:B:1857:G:H1'	2:B:1885:A:H62	1.76	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1908:C:H2'	2:B:1909:C:C4'	2.41	0.50
8:E:48:THR:H	8:E:51:GLU:HG3	1.76	0.50
2:B:4:U:O2'	2:B:5:A:H5'	2.10	0.50
8:E:115:GLN:O	8:E:117:ARG:HG3	2.10	0.50
25:U:46:LYS:HG2	25:U:47:PRO:HD2	1.94	0.50
26:F:33:ILE:HG21	26:F:98:PHE:CE2	2.46	0.50
19:H:27:ARG:NH2	19:H:27:ARG:HG2	2.23	0.50
7:P:6:GLN:O	7:P:10:GLU:HB3	2.11	0.50
2:B:1813:G:C2	4:C:49:THR:HG21	2.46	0.50
6:K:102:PRO:CB	6:K:121:GLU:HG3	2.42	0.50
5:D:15:PHE:HA	5:D:20:VAL:O	2.12	0.50
7:P:110:LYS:HD2	7:P:110:LYS:N	2.20	0.50
21:N:49:GLU:HB2	21:N:50:PRO:HD3	1.94	0.50
2:B:1913:A:OP2	2:B:1916:A:N6	2.45	0.50
2:B:2385:C:H2'	2:B:2386:A:C8	2.45	0.50
19:H:3:VAL:HG12	19:H:38:PRO:HA	1.93	0.50
22:O:67:ASN:HB3	22:O:70:ALA:CB	2.41	0.50
3:I:124:MET:O	3:I:128:ILE:HG12	2.11	0.50
7:P:109:ILE:O	7:P:109:ILE:HG13	2.11	0.50
9:Y:30:ARG:NH1	9:Y:33:HIS:HA	2.26	0.50
2:B:2295:C:O2'	2:B:2296:U:H5'	2.10	0.50
1:A:24:G:N7	1:A:56:G:H2'	2.25	0.50
31:W:75:ASN:O	31:W:76:ARG:HB2	2.12	0.50
19:H:82:SER:OG	19:H:90:LEU:HB3	2.12	0.50
32:6:68:VAL:C	32:6:98:ALA:HA	2.32	0.50
11:4:11:CYS:HB3	11:4:33:HIS:CE1	2.47	0.50
32:6:16:LYS:O	32:6:20:VAL:HG23	2.12	0.50
6:K:119:ALA:CB	6:K:120:PRO:CD	2.89	0.50
27:G:87:GLN:HE22	27:G:164:ALA:HB2	1.77	0.50
2:B:1405:U:H2'	2:B:1406:U:H6	1.76	0.50
24:S:12:SER:O	24:S:13:SER:HB3	2.12	0.50
13:3:61:LEU:N	13:3:62:PRO:HD3	2.27	0.50
14:V:79:ARG:HB3	14:V:79:ARG:NH1	2.24	0.50
27:G:153:PRO:HG3	27:G:162:ARG:HB3	1.93	0.50
2:B:946:C:H2'	2:B:947:A:H8	1.76	0.50
2:B:2785:C:H2'	2:B:2786:U:H6	1.76	0.50
2:B:2729:G:H2'	2:B:2730:C:C6	2.46	0.50
2:B:1070:A:H2	3:I:9:LYS:HE3	1.76	0.50
26:F:13:LYS:HG3	26:F:14:LYS:N	2.27	0.50
19:H:83:LYS:O	19:H:90:LEU:HA	2.11	0.50
4:C:128:THR:HA	4:C:190:THR:HG22	1.94	0.50
19:H:112:LYS:C	19:H:114:GLU:H	2.15	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:H:134:VAL:HG22	19:H:135:HIS:H	1.75	0.50
20:J:6:ALA:HB3	20:J:45:THR:CG2	2.37	0.50
29:T:27:SER:O	29:T:28:ASN:HB3	2.12	0.50
9:Y:12:ALA:HB2	9:Y:53:MET:HE1	1.94	0.50
21:N:72:ASP:OD2	21:N:74:GLU:HB3	2.12	0.50
3:I:29:GLN:HA	3:I:29:GLN:HE21	1.76	0.50
16:L:117:THR:O	16:L:138:ALA:HB1	2.12	0.50
18:X:45:GLN:O	18:X:46:VAL:HB	2.12	0.50
23:Q:7:VAL:O	23:Q:11:ALA:HB2	2.12	0.50
2:B:1418:G:H1'	2:B:1580:A:H61	1.77	0.50
2:B:2849:U:H4'	2:B:2850:A:C5'	2.41	0.50
2:B:2793:C:H2'	2:B:2794:C:C6	2.46	0.50
2:B:937:C:H2'	2:B:938:G:C8	2.46	0.50
30:Z:18:ARG:HH11	30:Z:24:ALA:HB2	1.75	0.50
2:B:2755:C:HO2'	2:B:2756:U:H2'	1.76	0.50
2:B:515:A:H2	2:B:1260:A:N3	2.10	0.50
2:B:1210:G:H5'	2:B:1212:G:H5'	1.94	0.50
9:Y:35:VAL:HG22	9:Y:36:GLU:H	1.76	0.50
19:H:24:GLY:O	19:H:28:ASN:HB2	2.11	0.50
2:B:2772:C:H2'	2:B:2773:C:H6	1.77	0.50
31:W:47:GLY:HA3	31:W:80:SER:HB2	1.93	0.50
19:H:90:LEU:HD21	19:H:146:VAL:HG21	1.94	0.50
26:F:163:GLU:CA	26:F:166:ARG:HH11	2.21	0.50
2:B:1023:U:H2'	2:B:1024:G:H5'	1.93	0.50
7:P:103:THR:HG22	7:P:104:GLY:N	2.27	0.50
23:Q:83:LYS:HZ3	23:Q:87:VAL:HA	1.76	0.50
18:X:5:GLU:O	18:X:8:GLU:HB2	2.11	0.50
20:J:112:GLY:H	20:J:113:PRO:HD2	1.75	0.50
7:P:77:SER:OG	7:P:79:VAL:HG22	2.11	0.50
12:1:46:VAL:HG22	12:1:47:ILE:N	2.23	0.50
12:1:3:GLY:O	12:1:4:ILE:HG12	2.12	0.50
19:H:68:ARG:O	19:H:72:ILE:HG22	2.11	0.50
5:D:105:LYS:HA	5:D:177:VAL:HG22	1.94	0.50
2:B:1642:G:O2'	2:B:1643:G:H5'	2.11	0.50
2:B:528:A:C2	2:B:2042:A:H2'	2.46	0.50
2:B:64:A:H2'	2:B:65:U:H6	1.76	0.50
16:L:131:ALA:C	16:L:133:ALA:H	2.14	0.50
1:A:94:A:OP1	14:V:19:ARG:HD3	2.11	0.50
2:B:866:A:H61	2:B:913:U:C1'	2.25	0.50
2:B:1361:G:H2'	2:B:1362:C:C6	2.46	0.50
2:B:350:G:H2'	2:B:351:C:C6	2.47	0.50
24:S:9:HIS:H	24:S:102:HIS:CE1	2.30	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1826:G:H2'	2:B:1827:U:H6	1.77	0.50
32:6:65:THR:HA	32:6:101:ILE:O	2.12	0.50
32:6:32:ARG:NH2	32:6:88:LEU:HD23	2.26	0.50
27:G:9:VAL:O	27:G:11:PRO:HD3	2.12	0.50
8:E:189:THR:O	8:E:193:VAL:HG23	2.12	0.50
4:C:137:GLY:H	4:C:163:ILE:HB	1.77	0.50
25:U:87:GLU:OE2	25:U:88:ASP:HB2	2.11	0.50
21:N:55:ALA:HA	21:N:80:PHE:CD1	2.47	0.50
26:F:11:VAL:O	26:F:12:VAL:HB	2.11	0.50
2:B:1324:G:H1'	2:B:1616:A:N6	2.27	0.50
17:M:2:LEU:HD23	17:M:46:ILE:CD1	2.40	0.50
19:H:73:ASN:ND2	19:H:74:ALA:H	2.09	0.50
21:N:13:ASN:ND2	21:N:13:ASN:H	2.09	0.50
2:B:1505:A:H2'	2:B:1506:U:H6	1.77	0.50
2:B:2840:C:H2'	2:B:2841:C:H6	1.76	0.50
2:B:1149:G:H2'	2:B:1150:C:H6	1.76	0.50
2:B:2784:U:O2'	2:B:2785:C:H5'	2.12	0.50
1:A:109:A:H2'	1:A:110:C:H6	1.77	0.50
25:U:64:ILE:HD11	25:U:68:ASN:HD22	1.76	0.50
2:B:1714:U:H3'	2:B:1715:G:H5'	1.92	0.50
2:B:1561:C:H2'	2:B:1562:U:H6	1.76	0.50
2:B:708:G:H2'	2:B:709:U:C6	2.47	0.50
2:B:1946:U:H2'	2:B:1947:C:H6	1.77	0.50
8:E:3:LEU:HB2	8:E:12:LEU:HB2	1.93	0.50
1:A:63:C:H2'	1:A:64:G:C8	2.47	0.50
2:B:2322:A:N6	2:B:2333:A:H62	2.10	0.50
28:R:78:ARG:HB3	28:R:83:TYR:HB3	1.94	0.50
8:E:140:ASP:C	8:E:142:ALA:H	2.14	0.50
26:F:79:ARG:O	26:F:81:GLY:N	2.44	0.50
2:B:1141:U:H4'	2:B:1142:A:C1'	2.42	0.50
7:P:19:PHE:CE2	7:P:25:VAL:HG11	2.46	0.50
2:B:958:U:O4	17:M:16:ARG:HA	2.12	0.50
18:X:1:MET:HB3	18:X:4:LYS:HD3	1.94	0.50
6:K:102:PRO:HD3	7:P:65:ASN:HB2	1.93	0.50
27:G:145:ALA:O	27:G:148:ARG:HG3	2.12	0.50
12:1:18:HIS:CD2	12:1:40:PRO:HD2	2.47	0.50
2:B:2637:U:OP1	5:D:83:ARG:HD3	2.11	0.50
2:B:847:U:O4'	2:B:847:U:O2	2.29	0.50
2:B:1150:C:H2'	2:B:1151:A:H8	1.77	0.50
22:O:28:VAL:HG13	22:O:28:VAL:O	2.12	0.50
2:B:2515:C:O2'	2:B:2516:A:H5'	2.12	0.50
2:B:106:C:H2'	2:B:107:G:C8	2.47	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1538:G:H2'	2:B:1539:U:H6	1.77	0.50
2:B:1265:A:H8	2:B:1265:A:OP1	1.94	0.50
13:3:26:ALA:O	13:3:27:ASN:HB2	2.12	0.50
13:3:35:LYS:HG2	13:3:39:ARG:NH2	2.27	0.50
2:B:1511:G:H2'	2:B:1512:C:C6	2.47	0.50
23:Q:65:ASN:O	23:Q:69:ARG:HB2	2.12	0.50
7:P:28:LYS:O	7:P:81:ASP:HB3	2.12	0.50
2:B:2206:C:O2'	2:B:2207:C:H5'	2.12	0.50
2:B:854:C:O2'	2:B:855:G:H5'	2.12	0.49
31:W:49:ASN:CB	31:W:60:ALA:HA	2.35	0.49
19:H:90:LEU:HB2	19:H:123:ARG:CD	2.41	0.49
11:4:25:VAL:O	11:4:26:ILE:HD13	2.12	0.49
11:4:3:VAL:HG23	11:4:4:ARG:H	1.77	0.49
5:D:110:THR:HG21	5:D:169:ARG:HH11	1.77	0.49
4:C:80:LEU:HD21	4:C:109:LEU:HG	1.93	0.49
2:B:1439:A:N7	2:B:1440:U:C2	2.79	0.49
2:B:139:U:N3	29:T:1:MET:HB3	2.26	0.49
2:B:138:U:C2	2:B:140:C:H1'	2.47	0.49
5:D:136:ASN:HD21	5:D:140:HIS:N	2.10	0.49
2:B:364:C:H2'	2:B:365:U:C5	2.47	0.49
2:B:2556:C:H2'	2:B:2557:G:O4'	2.12	0.49
2:B:848:C:H2'	2:B:849:A:C8	2.46	0.49
2:B:2895:G:H2'	2:B:2896:C:H6	1.77	0.49
32:6:150:SER:OG	32:6:153:GLU:HG3	2.12	0.49
2:B:1182:G:H2'	2:B:1183:U:O4'	2.12	0.49
8:E:67:ARG:HG2	8:E:67:ARG:NH1	2.27	0.49
2:B:40:U:H2'	2:B:41:C:C6	2.47	0.49
2:B:1100:C:H2'	2:B:1101:U:H6	1.76	0.49
2:B:782:A:N7	4:C:219:VAL:HG21	2.27	0.49
2:B:2828:G:O2'	2:B:2829:A:H5'	2.12	0.49
16:L:92:LEU:HD22	16:L:124:GLY:HA3	1.93	0.49
19:H:84:ALA:H	19:H:148:ALA:CB	2.26	0.49
9:Y:8:GLN:OE1	9:Y:23:LEU:HD11	2.12	0.49
11:4:11:CYS:SG	11:4:13:ASN:HB2	2.52	0.49
27:G:9:VAL:HG13	27:G:47:ASN:OD1	2.12	0.49
30:Z:53:ALA:O	30:Z:54:LYS:HB3	2.13	0.49
25:U:53:GLN:N	25:U:54:PRO:CD	2.74	0.49
32:6:20:VAL:HA	32:6:23:HIS:CE1	2.47	0.49
2:B:138:U:H3'	2:B:140:C:O2	2.12	0.49
4:C:239:PHE:O	4:C:241:LYS:HG3	2.12	0.49
29:T:50:LEU:C	29:T:52:GLU:H	2.16	0.49
2:B:2290:G:H2'	2:B:2291:U:C6	2.46	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1536:C:H1'	2:B:1537:G:C2	2.47	0.49
2:B:863:A:H2'	2:B:864:G:C8	2.47	0.49
2:B:1291:C:O2'	2:B:1292:G:H5'	2.13	0.49
2:B:2092:U:H4'	2:B:2093:G:O5'	2.12	0.49
22:O:52:SER:OG	22:O:54:VAL:HG12	2.13	0.49
11:4:17:VAL:HG12	11:4:18:LYS:N	2.27	0.49
20:J:76:HIS:CE1	20:J:85:LYS:HB2	2.47	0.49
2:B:1984:G:O2'	2:B:1985:C:H5'	2.11	0.49
2:B:623:C:H2'	2:B:624:C:H6	1.77	0.49
31:W:24:ARG:HA	31:W:66:VAL:N	2.16	0.49
26:F:105:ILE:C	26:F:108:PRO:HD2	2.32	0.49
4:C:173:LEU:HD22	4:C:181:ARG:O	2.13	0.49
30:Z:51:VAL:O	30:Z:52:SER:HB3	2.13	0.49
2:B:1141:U:OP2	20:J:65:THR:HG21	2.12	0.49
7:P:19:PHE:O	7:P:20:ARG:HB2	2.12	0.49
25:U:51:LEU:O	25:U:52:ASN:C	2.50	0.49
2:B:1725:U:H2'	2:B:1726:C:C6	2.48	0.49
3:I:122:GLU:CD	3:I:122:GLU:H	2.16	0.49
2:B:590:A:H2'	2:B:591:U:C6	2.46	0.49
2:B:673:C:H4'	8:E:77:ILE:HD12	1.94	0.49
26:F:19:PHE:CZ	26:F:164:GLU:HG2	2.46	0.49
2:B:1653:G:H3'	21:N:2:ARG:HG3	1.93	0.49
32:6:114:LEU:O	32:6:118:VAL:HG23	2.13	0.49
32:6:133:ARG:HG3	32:6:165:THR:HG21	1.93	0.49
1:A:30:C:H2'	1:A:31:C:H5'	1.94	0.49
8:E:171:ASP:CG	8:E:172:ALA:N	2.66	0.49
16:L:40:SER:OG	16:L:41:ARG:HG3	2.13	0.49
27:G:35:THR:HG21	27:G:70:LEU:HD12	1.93	0.49
17:M:102:LEU:HD22	17:M:102:LEU:N	2.27	0.49
2:B:2096:C:H2'	2:B:2097:A:C8	2.47	0.49
2:B:2355:G:H4'	31:W:20:LEU:CD1	2.42	0.49
2:B:586:A:H5'	8:E:84:THR:OG1	2.12	0.49
2:B:1248:G:O2'	23:Q:2:ARG:HA	2.12	0.49
20:J:88:THR:HG22	20:J:91:GLU:OE1	2.12	0.49
2:B:659:G:H4'	8:E:95:LYS:HD2	1.94	0.49
2:B:2271:G:C2'	2:B:2272:U:H5'	2.42	0.49
26:F:59:ILE:HG12	26:F:137:PHE:CE2	2.47	0.49
32:6:52:LEU:HD21	32:6:57:THR:HA	1.94	0.49
32:6:38:LEU:HD22	32:6:41:LEU:HD22	1.95	0.49
28:R:14:VAL:CG2	28:R:15:SER:N	2.74	0.49
2:B:1444:G:H2'	2:B:1445:G:C8	2.46	0.49
8:E:160:ALA:O	8:E:161:ALA:HB3	2.12	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:P:45:VAL:H	7:P:60:VAL:HG12	1.77	0.49
4:C:77:VAL:N	4:C:93:VAL:HG23	2.26	0.49
2:B:1273:U:H4'	2:B:1275:A:OP2	2.12	0.49
17:M:74:THR:O	17:M:75:GLU:HG2	2.11	0.49
2:B:2027:G:O2'	2:B:2028:U:H5'	2.12	0.49
5:D:56:LYS:HD3	5:D:58:ASN:HB3	1.93	0.49
2:B:1613:G:O2'	15:2:3:ARG:HD2	2.12	0.49
17:M:63:ILE:HG22	17:M:64:TRP:N	2.26	0.49
2:B:2339:C:H2'	2:B:2340:A:H8	1.77	0.49
2:B:2250:G:H8	2:B:2250:G:O5'	1.94	0.49
2:B:664:G:H2'	2:B:665:U:H6	1.77	0.49
2:B:965:C:HO2'	2:B:2272:U:H6	1.58	0.49
2:B:2314:A:H4'	26:F:34:THR:HG21	1.94	0.49
1:A:43:C:H4'	26:F:91:ARG:CD	2.41	0.49
2:B:28:A:O2'	2:B:583:G:H5'	2.13	0.49
32:6:69:GLN:CG	32:6:98:ALA:HB2	2.42	0.49
19:H:114:GLU:O	19:H:132:PHE:HA	2.13	0.49
23:Q:63:ARG:HH22	23:Q:96:ASP:HA	1.76	0.49
5:D:8:LYS:HD3	5:D:197:THR:H	1.77	0.49
29:T:28:ASN:C	29:T:29:THR:HG23	2.32	0.49
6:K:38:ILE:HD13	6:K:61:VAL:HG12	1.94	0.49
2:B:1549:A:H2'	2:B:1550:C:H6	1.78	0.49
2:B:288:U:O2'	2:B:289:G:H5'	2.12	0.49
2:B:549:G:H3'	2:B:549:G:P	2.53	0.49
4:C:203:VAL:O	4:C:205:GLY:N	2.44	0.49
8:E:3:LEU:HB3	8:E:120:VAL:HG11	1.93	0.49
2:B:1511:G:H2'	2:B:1512:C:H6	1.76	0.49
27:G:77:GLY:C	27:G:79:THR:H	2.16	0.49
27:G:136:ASP:HB3	27:G:139:VAL:HB	1.94	0.49
17:M:54:THR:O	17:M:56:ALA:N	2.45	0.49
2:B:2671:G:H2'	2:B:2672:U:C6	2.47	0.49
31:W:70:VAL:O	31:W:70:VAL:HG13	2.12	0.49
4:C:128:THR:HG23	4:C:190:THR:HG22	1.95	0.49
2:B:1203:U:H3'	2:B:1204:A:C5'	2.42	0.49
17:M:34:LYS:HB2	17:M:131:VAL:CG2	2.42	0.49
19:H:11:ASN:O	19:H:12:LEU:HD23	2.13	0.49
6:K:34:GLY:O	6:K:36:GLY:N	2.45	0.49
14:V:72:VAL:HG11	14:V:93:ARG:HA	1.93	0.49
4:C:109:LEU:H	4:C:109:LEU:CD2	2.26	0.49
7:P:75:THR:CG2	7:P:76:HIS:N	2.74	0.49
21:N:70:THR:HB	21:N:75:ILE:HD11	1.93	0.49
5:D:14:ILE:HG21	5:D:178:VAL:HG11	1.95	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2867:G:C2'	2:B:2867:G:N3	2.75	0.49
1:A:31:C:H2'	1:A:32:U:H6	1.78	0.49
2:B:1401:G:H2'	2:B:1402:U:C6	2.46	0.49
17:M:26:VAL:HB	17:M:104:GLU:OE2	2.12	0.49
2:B:1415:U:O2'	2:B:1416:G:H4'	2.13	0.49
2:B:962:G:H21	2:B:2250:G:H1	1.60	0.49
2:B:1678:A:O2'	2:B:1679:A:H5'	2.13	0.49
2:B:923:G:H1'	31:W:23:LYS:HZ1	1.78	0.49
4:C:141:HIS:CG	4:C:142:ASN:H	2.30	0.49
11:4:1:MET:O	11:4:1:MET:HE2	2.13	0.49
11:4:36:ARG:HG2	11:4:37:GLN:H	1.78	0.49
2:B:2746:U:H4'	27:G:137:LYS:HG3	1.95	0.49
13:3:41:ARG:HA	13:3:44:ARG:HH12	1.76	0.49
2:B:1819:A:H5''	4:C:159:THR:HG21	1.93	0.49
2:B:1922:G:H2'	2:B:1923:U:C6	2.48	0.49
2:B:845:A:N3	2:B:847:U:H1'	2.28	0.49
16:L:135:ILE:HG23	16:L:136:GLU:H	1.78	0.49
1:A:32:U:C4'	1:A:52:A:H62	2.25	0.49
2:B:2880:C:C1'	21:N:91:ALA:HB3	2.43	0.49
2:B:2008:C:H2'	2:B:2009:A:C8	2.47	0.49
2:B:2893:A:C4'	2:B:2894:G:H5'	2.43	0.49
2:B:2722:G:H2'	2:B:2723:C:H6	1.78	0.49
2:B:1845:G:O2'	2:B:1846:G:H5'	2.13	0.49
2:B:1985:C:O2'	2:B:1986:C:H5'	2.12	0.49
2:B:26:G:H1'	2:B:514:A:N6	2.27	0.49
19:H:83:LYS:O	19:H:91:PHE:N	2.46	0.49
4:C:128:THR:HA	4:C:190:THR:CA	2.43	0.49
32:6:51:PRO:O	32:6:53:ASN:N	2.46	0.49
32:6:76:LEU:HB3	32:6:77:LYS:NZ	2.26	0.49
2:B:2261:C:N4	31:W:10:ARG:HB3	2.28	0.49
19:H:114:GLU:CB	19:H:134:VAL:HA	2.43	0.49
19:H:114:GLU:HG3	19:H:134:VAL:HA	1.95	0.49
20:J:44:TYR:CD2	23:Q:59:LEU:HD21	2.48	0.49
2:B:340:A:H2'	2:B:341:C:O4'	2.12	0.49
2:B:146:A:H2'	2:B:147:C:C6	2.48	0.49
26:F:11:VAL:HG12	26:F:12:VAL:N	2.23	0.49
2:B:727:A:OP1	2:B:1431:A:O2'	2.30	0.49
2:B:1912:A:H8	2:B:1916:A:N6	2.10	0.49
2:B:1487:U:H2'	2:B:1488:C:H6	1.77	0.49
2:B:129:C:H2'	2:B:130:C:C6	2.47	0.49
9:Y:2:LYS:HD3	9:Y:2:LYS:H	1.77	0.49
2:B:2415:G:H4'	16:L:66:PHE:HB2	1.94	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2785:C:H2'	2:B:2786:U:C6	2.48	0.49
2:B:564:C:O2'	2:B:565:C:H5'	2.13	0.49
2:B:2700:A:H2'	2:B:2701:U:H6	1.77	0.49
2:B:709:U:H2'	2:B:710:U:C6	2.48	0.49
2:B:2408:U:H2'	2:B:2409:G:H8	1.78	0.49
2:B:2339:C:H2'	2:B:2340:A:C8	2.48	0.49
2:B:1774:C:H2'	2:B:1774:C:O2	2.13	0.49
15:2:44:VAL:O	15:2:45:SER:C	2.50	0.49
31:W:49:ASN:ND2	31:W:50:VAL:N	2.61	0.49
30:Z:47:VAL:O	30:Z:47:VAL:HG23	2.13	0.49
32:6:30:THR:HG21	32:6:179:LYS:HD2	1.94	0.49
23:Q:96:ASP:C	23:Q:98:ALA:N	2.66	0.49
29:T:85:VAL:C	29:T:86:THR:HG23	2.34	0.49
29:T:28:ASN:HB2	29:T:91:GLN:HE22	1.76	0.49
23:Q:77:LYS:HA	23:Q:80:ASN:HB3	1.94	0.49
2:B:1444:G:H2'	2:B:1445:G:H8	1.78	0.49
2:B:1552:A:C2'	2:B:1553:A:H5'	2.41	0.49
3:I:74:PRO:O	3:I:77:VAL:HG22	2.12	0.49
2:B:2651:C:O2'	2:B:2652:C:H5'	2.13	0.49
4:C:94:LEU:HD22	4:C:100:ARG:NH1	2.27	0.49
2:B:1351:C:O2'	2:B:1571:A:H1'	2.13	0.49
29:T:18:GLU:O	29:T:20:ALA:N	2.39	0.49
9:Y:21:ALA:O	9:Y:24:LEU:HB3	2.13	0.49
2:B:218:A:H2'	2:B:219:A:O4'	2.13	0.49
2:B:1760:C:H2'	2:B:1761:C:O4'	2.12	0.49
3:I:2:LYS:NZ	3:I:2:LYS:HB3	2.27	0.49
4:C:18:VAL:HG13	4:C:18:VAL:O	2.13	0.49
2:B:1623:G:O2'	2:B:1624:U:H5'	2.12	0.49
19:H:121:VAL:HG13	19:H:128:HIS:NE2	2.28	0.49
19:H:94:ILE:HG13	19:H:146:VAL:HG22	1.95	0.49
26:F:116:LEU:N	26:F:177:ARG:HB2	2.27	0.49
26:F:169:LEU:HB3	26:F:174:PHE:CD1	2.48	0.49
30:Z:5:CYS:HB3	30:Z:10:LYS:H	1.77	0.49
2:B:459:U:O2'	2:B:460:A:H5'	2.13	0.49
24:S:38:TYR:O	24:S:39:THR:HG23	2.13	0.49
2:B:1080:A:O2'	2:B:1081:U:H5'	2.12	0.49
2:B:1805:A:N3	4:C:49:THR:CG2	2.76	0.49
2:B:1812:U:H4'	4:C:44:ASN:OD1	2.12	0.49
7:P:56:SER:HB2	7:P:75:THR:HG22	1.95	0.49
25:U:81:ARG:NH2	25:U:81:ARG:HG3	2.27	0.49
2:B:21:A:H2'	2:B:22:C:C6	2.48	0.49
2:B:2217:G:O2'	2:B:2218:G:H5'	2.13	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:14:U:C1'	1:A:106:G:H21	2.26	0.49
2:B:623:C:H2'	2:B:624:C:C6	2.48	0.49
21:N:9:GLN:HA	21:N:17:ARG:NE	2.28	0.49
9:Y:4:ILE:HG12	9:Y:39:ASP:OD2	2.12	0.49
2:B:926:G:H2'	2:B:927:A:H8	1.78	0.49
31:W:36:ILE:HB	31:W:39:GLN:HE22	1.78	0.48
26:F:110:ILE:HG21	26:F:113:PHE:HB3	1.95	0.48
26:F:121:PHE:HB3	26:F:127:TYR:CE2	2.48	0.48
7:P:25:VAL:HA	7:P:85:VAL:HA	1.94	0.48
20:J:8:PRO:HG3	20:J:48:VAL:HG22	1.94	0.48
5:D:9:VAL:CA	5:D:197:THR:HG23	2.32	0.48
27:G:30:GLY:CA	27:G:78:VAL:HA	2.33	0.48
2:B:975:A:H1'	2:B:990:A:C2	2.48	0.48
27:G:147:LEU:O	27:G:150:TYR:HB2	2.13	0.48
20:J:69:ARG:O	20:J:90:GLU:HG3	2.13	0.48
2:B:321:U:O4'	8:E:159:LEU:HG	2.11	0.48
5:D:118:PHE:HZ	5:D:123:LYS:NZ	2.10	0.48
2:B:1915:U:H2'	2:B:1916:A:C4'	2.42	0.48
25:U:10:VAL:O	25:U:21:ARG:HA	2.12	0.48
2:B:2557:G:H2'	2:B:2558:C:H6	1.74	0.48
20:J:34:ARG:CD	20:J:39:LYS:HB3	2.43	0.48
2:B:1050:A:H2'	2:B:1051:G:C8	2.47	0.48
2:B:2286:G:H3'	12:1:29:LYS:HZ1	1.78	0.48
2:B:2702:G:H2'	2:B:2703:C:H6	1.78	0.48
1:A:32:U:H4'	1:A:52:A:H62	1.76	0.48
27:G:61:TRP:HA	27:G:61:TRP:CE3	2.47	0.48
16:L:127:VAL:HG22	16:L:128:THR:O	2.13	0.48
16:L:77:ILE:O	16:L:110:VAL:O	2.30	0.48
2:B:1847:A:H4'	2:B:1848:A:C8	2.48	0.48
15:2:19:ARG:NH2	15:2:19:ARG:HB3	2.28	0.48
2:B:527:C:O4'	2:B:527:C:O2	2.26	0.48
19:H:82:SER:HB2	19:H:94:ILE:CD1	2.41	0.48
26:F:168:LEU:O	26:F:169:LEU:HB2	2.13	0.48
26:F:34:THR:O	26:F:35:LEU:HB2	2.14	0.48
23:Q:60:TRP:O	23:Q:64:ILE:HG12	2.13	0.48
20:J:81:ILE:HG12	20:J:82:GLY:N	2.28	0.48
27:G:6:ALA:HB3	27:G:68:ARG:CD	2.43	0.48
19:H:54:LEU:CD1	19:H:55:GLU:H	2.20	0.48
2:B:1104:C:H2'	2:B:1105:U:H6	1.77	0.48
2:B:1727:C:H2'	2:B:1728:C:H6	1.74	0.48
2:B:674:G:C1'	8:E:69:ARG:HD2	2.40	0.48
2:B:480:A:H3'	2:B:481:G:H5"	1.95	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:I:33:ASN:HD21	3:I:64:ARG:NH1	2.06	0.48
3:I:62:ALA:C	3:I:64:ARG:H	2.16	0.48
8:E:15:SER:HB2	8:E:197:GLU:OE2	2.12	0.48
1:A:6:G:H2'	1:A:7:G:H8	1.77	0.48
2:B:2885:G:H21	10:0:31:LYS:HG2	1.78	0.48
4:C:196:ASN:O	4:C:197:ALA:HB3	2.13	0.48
24:S:43:ALA:O	24:S:47:VAL:HG13	2.13	0.48
22:O:16:ARG:HH21	22:O:19:GLN:NE2	2.10	0.48
2:B:2480:C:O2'	2:B:2481:G:H5'	2.12	0.48
10:0:53:VAL:HG12	10:0:54:ILE:H	1.77	0.48
2:B:853:C:O2'	2:B:854:C:H5'	2.13	0.48
30:Z:33:LEU:H	30:Z:52:SER:HB2	1.78	0.48
20:J:44:TYR:CD1	23:Q:63:ARG:HD3	2.48	0.48
2:B:996:A:OP2	28:R:10:LYS:HG2	2.13	0.48
28:R:4:VAL:HG22	28:R:40:MET:HB2	1.96	0.48
29:T:59:ASN:O	29:T:84:TYR:HB2	2.13	0.48
19:H:4:ILE:HG13	19:H:37:VAL:HG13	1.95	0.48
4:C:255:LYS:C	4:C:257:ARG:H	2.15	0.48
20:J:25:LEU:HD13	20:J:26:GLY:N	2.28	0.48
3:I:21:PRO:CB	3:I:22:PRO:HD3	2.40	0.48
5:D:130:GLN:O	5:D:131:ASP:C	2.51	0.48
26:F:66:ILE:HA	26:F:85:GLY:O	2.12	0.48
19:H:73:ASN:ND2	19:H:73:ASN:N	2.59	0.48
2:B:1681:G:O2'	2:B:1762:A:H1'	2.13	0.48
2:B:534:U:H1'	23:Q:44:TYR:HB3	1.96	0.48
23:Q:16:ILE:HG22	23:Q:17:LEU:N	2.28	0.48
2:B:969:G:H2'	2:B:970:U:H6	1.78	0.48
2:B:2896:C:H2'	2:B:2897:U:H6	1.74	0.48
8:E:47:LYS:HB3	8:E:51:GLU:HB2	1.95	0.48
2:B:2547:A:H5''	6:K:29:HIS:NE2	2.28	0.48
3:I:52:LEU:HD12	3:I:52:LEU:N	2.28	0.48
9:Y:16:LEU:HD23	9:Y:19:HIS:CD2	2.48	0.48
4:C:129:LEU:O	4:C:188:ARG:HA	2.14	0.48
32:6:83:ILE:HG13	32:6:92:PRO:HG2	1.95	0.48
5:D:32:ASN:N	5:D:96:ILE:O	2.45	0.48
5:D:97:SER:HB3	5:D:99:GLU:CG	2.44	0.48
20:J:42:ALA:O	20:J:44:TYR:N	2.47	0.48
23:Q:85:ALA:O	23:Q:86:SER:C	2.51	0.48
4:C:134:ILE:HD12	4:C:135:PRO:O	2.14	0.48
31:W:35:ILE:O	31:W:37:VAL:N	2.46	0.48
2:B:1548:A:H2'	2:B:1549:A:H8	1.77	0.48
7:P:63:ILE:H	7:P:69:VAL:HG22	1.78	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:F:8:LYS:HA	26:F:12:VAL:HG21	1.95	0.48
4:C:166:ARG:NH2	4:C:166:ARG:HB2	2.28	0.48
2:B:982:C:H2'	2:B:982:C:O2	2.14	0.48
17:M:69:PRO:C	17:M:71:LYS:H	2.17	0.48
19:H:67:ALA:HB3	19:H:71:LYS:NZ	2.28	0.48
15:2:33:ARG:HH21	15:2:33:ARG:CB	2.25	0.48
2:B:1515:A:H5'	2:B:1557:C:C5'	2.44	0.48
2:B:215:G:C4'	2:B:216:A:H4'	2.42	0.48
12:1:29:LYS:HE2	12:1:31:GLU:OE1	2.12	0.48
8:E:48:THR:HG23	8:E:51:GLU:HG3	1.94	0.48
6:K:2:ILE:HD12	6:K:2:ILE:N	2.29	0.48
2:B:565:C:O2'	2:B:566:U:H5'	2.13	0.48
2:B:1636:U:H2'	2:B:1637:A:C8	2.49	0.48
2:B:2845:U:O2'	2:B:2846:G:H5'	2.13	0.48
31:W:19:ARG:NE	31:W:19:ARG:H	2.11	0.48
30:Z:38:PHE:HZ	30:Z:56:MET:HG2	1.79	0.48
32:6:79:ILE:HD12	32:6:79:ILE:H	1.79	0.48
7:P:7:LEU:H	7:P:7:LEU:CD1	2.23	0.48
11:4:1:MET:HE1	11:4:36:ARG:HB2	1.94	0.48
7:P:92:ARG:HG3	7:P:92:ARG:NH1	2.27	0.48
2:B:1599:U:H2'	2:B:1600:C:H6	1.77	0.48
2:B:1552:A:H2'	2:B:1553:A:C5'	2.43	0.48
2:B:2179:C:H2'	2:B:2180:U:C6	2.48	0.48
8:E:58:LYS:HD3	8:E:60:TRP:CD1	2.49	0.48
2:B:2752:C:O2	2:B:2752:C:H2'	2.12	0.48
2:B:754:U:H2'	2:B:755:U:H6	1.79	0.48
2:B:2100:G:H3'	2:B:2101:A:H8	1.78	0.48
7:P:47:ILE:HG13	7:P:48:ALA:N	2.28	0.48
2:B:2643:G:O2'	2:B:2644:G:H5'	2.14	0.48
2:B:2300:C:H2'	2:B:2301:C:H6	1.78	0.48
26:F:60:SER:HB2	26:F:62:GLN:OE1	2.14	0.48
4:C:140:VAL:CG1	4:C:189:ALA:HB1	2.44	0.48
5:D:62:LYS:N	5:D:63:PRO:CD	2.77	0.48
32:6:52:LEU:HG	32:6:56:ALA:O	2.13	0.48
5:D:48:ILE:HG22	5:D:82:PHE:O	2.13	0.48
20:J:64:VAL:HG22	20:J:68:LYS:CD	2.43	0.48
8:E:32:VAL:HG21	16:L:6:LEU:HD11	1.95	0.48
27:G:32:LEU:HD23	27:G:33:THR:H	1.79	0.48
19:H:54:LEU:HA	19:H:58:LEU:CB	2.43	0.48
25:U:48:VAL:HG13	25:U:48:VAL:O	2.13	0.48
2:B:1736:U:H2'	2:B:1737:G:C8	2.48	0.48
6:K:64:ARG:NH1	6:K:101:GLY:HA3	2.28	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:222:A:N1	2:B:233:A:H5''	2.29	0.48
16:L:19:LEU:HD23	16:L:31:GLY:HA3	1.95	0.48
17:M:12:MET:HB2	17:M:72:PRO:HD2	1.94	0.48
2:B:2282:G:H5'	2:B:2389:G:H1'	1.94	0.48
2:B:1196:C:H2'	2:B:1197:G:C8	2.49	0.48
25:U:40:LEU:HB3	25:U:59:GLU:CG	2.41	0.48
2:B:1508:A:H3'	2:B:1509:A:C4	2.48	0.48
21:N:103:ARG:HG3	21:N:104:ALA:N	2.29	0.48
12:1:24:LYS:HD3	12:1:52:LYS:O	2.13	0.48
12:1:33:LEU:HB3	12:1:51:ALA:HB3	1.94	0.48
20:J:116:ARG:O	20:J:120:ARG:HG2	2.13	0.48
2:B:648:G:H2'	2:B:649:G:H8	1.78	0.48
3:I:52:LEU:HD21	3:I:81:LYS:NZ	2.29	0.48
2:B:1410:G:H2'	2:B:1411:U:C6	2.48	0.48
16:L:3:LEU:O	16:L:5:THR:N	2.46	0.48
16:L:89:VAL:HA	16:L:121:THR:O	2.14	0.48
31:W:49:ASN:HB3	31:W:81:ILE:HG12	1.95	0.48
32:6:84:ARG:HG3	32:6:85:ASP:OD1	2.14	0.48
5:D:48:ILE:HG23	5:D:82:PHE:HB2	1.96	0.48
20:J:64:VAL:O	20:J:65:THR:HG22	2.14	0.48
20:J:2:LYS:NZ	20:J:2:LYS:HB3	2.29	0.48
23:Q:91:ARG:NH1	28:R:11:GLN:N	2.57	0.48
8:E:149:ILE:O	8:E:188:MET:HA	2.14	0.48
16:L:6:LEU:CD2	16:L:6:LEU:H	2.27	0.48
5:D:46:ARG:NH2	5:D:88:GLU:HG3	2.27	0.48
2:B:78:U:H2'	2:B:79:C:H6	1.77	0.48
6:K:43:ILE:HG21	6:K:46:ALA:HB2	1.94	0.48
2:B:19:A:H2'	2:B:20:C:H6	1.78	0.48
2:B:532:A:N3	2:B:532:A:H2'	2.29	0.48
2:B:1150:C:O2'	2:B:1151:A:H5'	2.13	0.48
2:B:2648:G:H2'	2:B:2649:C:C6	2.48	0.48
16:L:21:ARG:HD3	16:L:21:ARG:HA	1.73	0.48
6:K:2:ILE:HA	6:K:33:ALA:H	1.78	0.48
2:B:2861:U:H2'	2:B:2862:G:C8	2.49	0.48
2:B:191:A:H2'	2:B:192:C:C6	2.48	0.48
2:B:2098:U:H2'	2:B:2099:U:O4'	2.14	0.48
17:M:61:GLY:HA2	17:M:107:GLY:HA3	1.95	0.48
2:B:485:C:H2'	2:B:486:C:H6	1.79	0.48
25:U:41:VAL:HG22	25:U:61:GLU:O	2.13	0.48
2:B:2331:G:H2'	2:B:2332:C:C6	2.49	0.48
4:C:118:GLY:H	4:C:121:ALA:HB2	1.78	0.48
2:B:2263:C:H4'	2:B:2329:U:H4'	1.96	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1063:G:H4'	3:I:135:MET:HB3	1.95	0.48
19:H:47:PHE:HA	19:H:50:ARG:NE	2.29	0.48
3:I:56:VAL:CG2	3:I:68:PHE:HB2	2.43	0.48
10:0:41:HIS:N	10:0:41:HIS:CD2	2.81	0.48
2:B:2386:A:H2'	2:B:2387:U:C6	2.49	0.48
2:B:1487:U:H2'	2:B:1488:C:C6	2.49	0.48
6:K:18:ARG:HD2	6:K:45:GLU:HG3	1.96	0.48
2:B:607:U:O4	2:B:620:G:H5''	2.14	0.48
2:B:2247:A:H3'	35:B:3680:HOH:O	2.14	0.48
6:K:24:VAL:HG12	6:K:30:ARG:HH11	1.78	0.48
2:B:1353:A:H2'	2:B:1354:A:C8	2.49	0.48
2:B:351:C:H2'	2:B:352:A:H8	1.79	0.48
5:D:111:GLY:H	5:D:194:PRO:HG2	1.78	0.48
2:B:2545:G:O2'	2:B:2546:U:H5'	2.13	0.48
2:B:2678:C:H2'	2:B:2679:A:C8	2.48	0.48
31:W:67:LYS:O	31:W:68:PHE:HB2	2.13	0.48
8:E:106:LYS:HG3	8:E:200:LEU:HD12	1.95	0.48
2:B:2311:A:C2	26:F:84:ILE:HD11	2.49	0.48
26:F:128:SER:HB3	26:F:154:THR:OG1	2.14	0.48
27:G:102:ILE:HD11	27:G:116:LEU:HD21	1.96	0.48
11:4:27:CYS:CB	11:4:33:HIS:HB2	2.44	0.48
20:J:17:VAL:CG2	20:J:137:PRO:HB2	2.36	0.48
8:E:134:LEU:O	8:E:138:LEU:HG	2.14	0.48
10:0:38:LEU:HB3	10:0:41:HIS:NE2	2.29	0.48
5:D:116:LYS:HB2	5:D:165:MET:HB3	1.95	0.48
2:B:2391:G:P	13:3:34:LYS:HZ3	2.35	0.48
25:U:40:LEU:H	25:U:40:LEU:HD12	1.79	0.48
21:N:13:ASN:OD1	21:N:15:SER:HB3	2.14	0.48
2:B:2838:G:H2'	2:B:2839:G:C8	2.49	0.48
2:B:2821:A:OP2	5:D:115:GLY:HA3	2.13	0.48
2:B:639:U:H2'	2:B:640:C:H6	1.79	0.48
2:B:1275:A:N3	2:B:1275:A:H2'	2.28	0.48
2:B:2216:G:H2'	2:B:2217:G:C8	2.47	0.48
18:X:47:ARG:HH21	18:X:47:ARG:HG3	1.79	0.48
18:X:7:ARG:HA	18:X:7:ARG:CZ	2.43	0.48
26:F:24:VAL:O	26:F:27:VAL:HG22	2.13	0.48
2:B:1335:C:H2'	2:B:1336:A:C8	2.49	0.48
2:B:465:G:H2'	2:B:466:A:C8	2.49	0.48
16:L:125:LEU:H	16:L:143:GLU:HG3	1.79	0.48
23:Q:94:LEU:C	23:Q:96:ASP:N	2.67	0.48
2:B:1600:C:OP1	29:T:81:LYS:HE3	2.14	0.48
2:B:2749:A:P	2:B:2750:A:H3'	2.54	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:H:57:LYS:CG	19:H:58:LEU:N	2.77	0.48
2:B:1652:A:H62	21:N:11:ASN:HD21	1.61	0.48
17:M:71:LYS:HB3	17:M:93:VAL:HG12	1.96	0.48
2:B:1909:C:O2	2:B:1909:C:C2'	2.62	0.48
2:B:2899:A:H2'	2:B:2900:A:H8	1.78	0.48
2:B:2887:A:C4	10:O:39:ARG:NH2	2.80	0.48
3:I:116:MET:SD	3:I:124:MET:HB2	2.54	0.48
2:B:2023:C:H4'	2:B:2617:U:O3'	2.13	0.48
2:B:1183:U:H2'	2:B:1184:U:C6	2.49	0.48
2:B:2360:G:H4'	16:L:61:LEU:HD11	1.96	0.48
14:V:48:MET:O	14:V:51:GLN:HG3	2.13	0.48
2:B:596:U:H2'	2:B:597:G:H8	1.78	0.48
9:Y:52:PHE:HD1	9:Y:52:PHE:H	1.62	0.48
19:H:116:ARG:HB3	19:H:131:SER:N	2.23	0.47
29:T:39:THR:HG23	29:T:41:ALA:N	2.25	0.47
27:G:24:THR:HB	27:G:32:LEU:CD2	2.43	0.47
27:G:25:ILE:HG22	27:G:78:VAL:HG21	1.96	0.47
3:I:85:ILE:CD1	3:I:137:LEU:HD21	2.44	0.47
4:C:106:PRO:O	4:C:109:LEU:HD13	2.13	0.47
2:B:1813:G:H21	4:C:49:THR:HG22	1.78	0.47
2:B:322:A:C2	2:B:340:A:C6	3.02	0.47
2:B:589:U:H2'	2:B:590:A:C8	2.49	0.47
17:M:19:GLY:HA3	17:M:38:ARG:HH22	1.79	0.47
13:3:22:LYS:HA	13:3:47:ALA:O	2.14	0.47
2:B:1924:C:H2'	2:B:1925:C:H6	1.78	0.47
19:H:3:VAL:HB	19:H:38:PRO:HA	1.96	0.47
8:E:52:VAL:HG21	8:E:82:GLY:H	1.79	0.47
17:M:105:MET:SD	17:M:108:VAL:HG11	2.54	0.47
2:B:2078:C:H2'	2:B:2079:U:C6	2.49	0.47
19:H:8:LYS:O	19:H:13:GLY:HA3	2.14	0.47
1:A:95:U:H2'	1:A:96:G:H8	1.79	0.47
2:B:912:C:O2'	2:B:913:U:H5'	2.14	0.47
2:B:1846:G:H3'	2:B:1847:A:N3	2.29	0.47
13:3:12:ARG:HD3	16:L:61:LEU:O	2.13	0.47
8:E:136:GLN:HE22	8:E:139:LYS:HD3	1.79	0.47
2:B:2699:C:H2'	2:B:2700:A:C8	2.49	0.47
2:B:2076:U:O2	2:B:2076:U:O4'	2.31	0.47
2:B:112:U:H2'	2:B:113:U:H5'	1.96	0.47
4:C:27:LYS:HG2	4:C:28:PRO:HD2	1.95	0.47
16:L:134:ALA:HA	16:L:137:ALA:HB3	1.95	0.47
31:W:65:LYS:NZ	31:W:84:GLU:HB2	2.29	0.47
20:J:44:TYR:CD1	23:Q:59:LEU:HD11	2.49	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:771:G:O2'	2:B:772:C:H5'	2.14	0.47
6:K:47:ILE:CG1	6:K:48:PRO:HD2	2.35	0.47
23:Q:78:PHE:CZ	23:Q:82:LEU:HD11	2.49	0.47
4:C:245:THR:C	4:C:247:TRP:H	2.17	0.47
12:1:47:ILE:HD12	12:1:47:ILE:N	2.28	0.47
2:B:139:U:H5''	2:B:140:C:C5	2.49	0.47
2:B:673:C:C2'	2:B:674:G:H5'	2.44	0.47
16:L:17:LYS:HD2	16:L:19:LEU:HD11	1.95	0.47
2:B:1408:G:O2'	2:B:1409:U:H5'	2.14	0.47
2:B:2147:A:H5''	2:B:2148:G:C8	2.50	0.47
2:B:871:U:H5''	17:M:68:PHE:CZ	2.49	0.47
2:B:1641:A:H2'	2:B:1642:G:O4'	2.14	0.47
30:Z:35:SER:HA	30:Z:50:ARG:HA	1.95	0.47
12:1:26:LYS:HD3	12:1:52:LYS:O	2.14	0.47
2:B:2568:U:H2'	2:B:2569:G:O4'	2.13	0.47
4:C:155:ARG:HH11	4:C:155:ARG:HB3	1.79	0.47
2:B:2483:C:O2	17:M:123:LYS:HD2	2.15	0.47
2:B:1523:U:H5''	2:B:1524:G:N7	2.30	0.47
21:N:20:MET:HG3	21:N:21:PHE:N	2.29	0.47
2:B:37:C:O2'	8:E:45:ALA:HA	2.14	0.47
26:F:135:ILE:HG13	26:F:137:PHE:H	1.78	0.47
32:6:30:THR:C	32:6:32:ARG:N	2.66	0.47
20:J:65:THR:HG23	20:J:66:GLY:N	2.29	0.47
23:Q:59:LEU:HD13	23:Q:59:LEU:C	2.35	0.47
28:R:49:ILE:HG21	28:R:53:PHE:C	2.35	0.47
29:T:32:LEU:HG	29:T:83:ALA:CB	2.45	0.47
3:I:135:MET:HG3	3:I:137:LEU:HG	1.96	0.47
21:N:30:ARG:HH12	21:N:74:GLU:CD	2.18	0.47
25:U:27:VAL:HB	25:U:33:VAL:HG12	1.95	0.47
2:B:2369:A:O2'	2:B:2370:G:H5'	2.14	0.47
2:B:1564:C:O2'	2:B:1565:C:H5'	2.14	0.47
22:O:106:LEU:O	22:O:109:ALA:HB3	2.14	0.47
17:M:42:THR:O	17:M:44:ARG:N	2.46	0.47
2:B:131:A:H2'	2:B:132:G:C8	2.48	0.47
9:Y:29:ARG:H	9:Y:33:HIS:CD2	2.32	0.47
2:B:350:G:H2'	2:B:351:C:O4'	2.14	0.47
2:B:927:A:H2'	2:B:928:A:C8	2.50	0.47
4:C:54:GLY:O	4:C:214:GLY:HA2	2.14	0.47
31:W:27:GLY:O	31:W:63:ASP:HA	2.14	0.47
2:B:354:A:H2'	2:B:355:U:C6	2.49	0.47
31:W:59:PHE:CD2	31:W:61:LYS:HD2	2.50	0.47
26:F:119:LYS:C	26:F:121:PHE:H	2.17	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:F:121:PHE:HA	26:F:126:ASN:O	2.15	0.47
26:F:48:LEU:O	26:F:51:ASN:HB2	2.15	0.47
4:C:143:VAL:O	4:C:151:GLY:HA2	2.14	0.47
11:4:15:LYS:HE2	11:4:15:LYS:O	2.14	0.47
28:R:39:LEU:HB3	28:R:53:PHE:HA	1.96	0.47
27:G:84:LYS:HB3	27:G:132:LEU:O	2.15	0.47
20:J:126:ALA:HB3	20:J:129:GLU:OE2	2.14	0.47
20:J:105:VAL:HG21	20:J:122:LEU:HD22	1.96	0.47
26:F:19:PHE:CZ	26:F:164:GLU:HA	2.49	0.47
2:B:90:U:H2'	2:B:91:A:H2	1.77	0.47
2:B:1590:A:H2'	2:B:1591:A:C8	2.49	0.47
9:Y:2:LYS:H	9:Y:2:LYS:CD	2.27	0.47
2:B:2866:U:H4'	2:B:2867:G:H4'	1.96	0.47
2:B:1789:A:H2'	2:B:1790:C:H6	1.80	0.47
12:1:8:ILE:CG2	12:1:51:ALA:HA	2.44	0.47
2:B:189:G:H2'	2:B:205:G:H22	1.77	0.47
2:B:2415:G:C4'	16:L:66:PHE:HB2	2.44	0.47
2:B:3:U:O2'	2:B:4:U:P	2.72	0.47
22:O:100:HIS:CA	22:O:104:GLN:HB2	2.44	0.47
22:O:35:ILE:CG1	22:O:102:ARG:HE	2.27	0.47
2:B:1475:G:H1'	2:B:1476:U:H5	1.78	0.47
18:X:36:GLN:O	18:X:37:LEU:O	2.32	0.47
2:B:1824:G:O3'	4:C:246:PRO:HD3	2.13	0.47
22:O:36:TYR:CD2	22:O:36:TYR:N	2.82	0.47
2:B:2606:C:O2'	2:B:2607:G:H5'	2.14	0.47
2:B:452:G:OP1	8:E:53:THR:HG23	2.13	0.47
2:B:541:A:H2'	2:B:542:C:C6	2.48	0.47
26:F:131:VAL:O	26:F:132:ARG:HB2	2.14	0.47
2:B:2353:G:N3	31:W:30:VAL:HG13	2.30	0.47
4:C:189:ALA:C	4:C:190:THR:HG23	2.34	0.47
2:B:2262:U:H4'	2:B:2328:A:C2	2.49	0.47
5:D:55:LYS:NZ	5:D:55:LYS:HB3	2.26	0.47
28:R:7:SER:OG	28:R:8:GLY:N	2.48	0.47
29:T:40:LYS:HA	29:T:43:ILE:CG2	2.45	0.47
2:B:1063:G:H4'	3:I:135:MET:CB	2.45	0.47
2:B:345:A:N3	2:B:346:A:N1	2.62	0.47
2:B:319:G:H2'	2:B:320:A:O4'	2.15	0.47
24:S:66:ILE:HD13	24:S:66:ILE:N	2.20	0.47
2:B:276:U:H1'	2:B:362:A:H61	1.78	0.47
27:G:88:LEU:O	27:G:88:LEU:HD12	2.14	0.47
2:B:717:C:C3'	2:B:718:A:H5''	2.41	0.47
2:B:2282:G:H4'	2:B:2389:G:O2'	2.15	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1912:A:C6	2:B:1918:A:N3	2.82	0.47
2:B:1429:G:O2'	2:B:1430:G:H5'	2.15	0.47
17:M:66:ARG:HG3	17:M:101:VAL:HG22	1.96	0.47
2:B:2590:A:H2'	2:B:2591:C:H6	1.79	0.47
2:B:2590:A:H2'	2:B:2591:C:C6	2.49	0.47
19:H:106:ALA:C	19:H:108:VAL:H	2.16	0.47
2:B:2811:G:O2'	2:B:2812:G:H5'	2.14	0.47
24:S:73:LYS:HE3	24:S:74:ILE:N	2.30	0.47
7:P:32:VAL:O	7:P:36:LYS:O	2.32	0.47
2:B:1688:U:O2	2:B:1700:A:H5'	2.15	0.47
4:C:6:LYS:O	4:C:8:THR:HG23	2.13	0.47
2:B:2013:A:N3	24:S:88:ARG:NH1	2.61	0.47
4:C:141:HIS:CG	4:C:142:ASN:N	2.81	0.47
9:Y:25:GLY:HA3	9:Y:46:MET:HE3	1.96	0.47
7:P:96:LEU:N	7:P:96:LEU:HD12	2.30	0.47
29:T:29:THR:H	29:T:91:GLN:HE22	1.61	0.47
3:I:27:LEU:HD23	3:I:27:LEU:N	2.20	0.47
4:C:91:ALA:CB	4:C:105:ALA:HB2	2.44	0.47
8:E:148:ILE:HD13	8:E:187:VAL:CG2	2.45	0.47
17:M:69:PRO:HA	17:M:94:ALA:HB2	1.96	0.47
2:B:1857:G:O2'	2:B:1858:A:H8	1.97	0.47
4:C:93:VAL:HG13	4:C:94:LEU:N	2.30	0.47
2:B:1349:C:H2'	2:B:1350:C:H6	1.79	0.47
2:B:532:A:N1	2:B:2020:A:H1'	2.30	0.47
2:B:1568:G:H4'	4:C:58:LYS:CB	2.45	0.47
2:B:4:U:H2'	2:B:5:A:H8	1.80	0.47
2:B:185:G:H4'	2:B:218:A:H4'	1.96	0.47
4:C:2:VAL:HG23	4:C:3:VAL:N	2.30	0.47
2:B:1146:C:H2'	2:B:1147:A:H8	1.77	0.47
2:B:2660:A:H2'	2:B:2661:G:O4'	2.15	0.47
1:A:63:C:H2'	1:A:64:G:H8	1.79	0.47
26:F:29:ARG:H	26:F:29:ARG:CD	2.28	0.47
1:A:54:G:O2'	1:A:55:U:H5'	2.15	0.47
2:B:1731:G:O2'	2:B:1732:C:H5''	2.14	0.47
2:B:851:C:H2'	2:B:852:U:C6	2.49	0.47
31:W:30:VAL:O	31:W:30:VAL:HG22	2.14	0.47
16:L:85:VAL:HG11	16:L:90:VAL:HG22	1.96	0.47
26:F:99:PHE:HA	26:F:102:LEU:CD1	2.44	0.47
4:C:121:ALA:O	4:C:122:ALA:HB2	2.13	0.47
30:Z:5:CYS:HG	30:Z:52:SER:HG	1.62	0.47
22:O:82:ALA:O	22:O:87:ILE:HB	2.15	0.47
20:J:64:VAL:O	20:J:68:LYS:HD2	2.15	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:4:6:SER:O	11:4:7:VAL:C	2.53	0.47
23:Q:91:ARG:HD3	28:R:11:GLN:CG	2.45	0.47
23:Q:63:ARG:HH21	23:Q:64:ILE:HD11	1.78	0.47
2:B:1244:A:H5''	16:L:8:PRO:CD	2.42	0.47
3:I:79:LEU:HD11	3:I:131:THR:OG1	2.14	0.47
2:B:2748:A:H2'	2:B:2749:A:C8	2.50	0.47
27:G:51:PHE:CD2	27:G:68:ARG:HG2	2.50	0.47
19:H:57:LYS:HZ1	19:H:58:LEU:HD22	1.79	0.47
14:V:93:ARG:HH11	14:V:93:ARG:HG3	1.80	0.47
2:B:1550:C:H2'	2:B:1551:A:H8	1.80	0.47
6:K:64:ARG:HH12	6:K:101:GLY:HA3	1.79	0.47
6:K:63:VAL:HG12	6:K:64:ARG:HD3	1.96	0.47
2:B:279:A:C2	2:B:362:A:H4'	2.50	0.47
2:B:2133:G:N3	2:B:2133:G:C2'	2.77	0.47
2:B:2645:G:H3'	2:B:2646:C:C5'	2.45	0.47
8:E:58:LYS:CD	8:E:58:LYS:H	2.28	0.47
2:B:2144:G:N2	2:B:2146:C:H1'	2.29	0.47
12:1:38:PHE:O	12:1:40:PRO:HD3	2.15	0.47
17:M:72:PRO:O	17:M:91:TYR:O	2.31	0.47
32:6:178:LYS:HA	32:6:181:GLN:CG	2.44	0.47
2:B:518:G:H4'	24:S:18:ARG:NH2	2.29	0.47
2:B:1565:C:H5''	4:C:17:LYS:HZ1	1.80	0.47
2:B:1681:G:H2'	2:B:1757:A:N1	2.30	0.47
23:Q:97:ILE:HD11	23:Q:108:LEU:CD1	2.44	0.47
32:6:108:GLU:OE2	32:6:111:ARG:HG2	2.15	0.47
23:Q:20:ALA:HA	23:Q:23:TYR:CE1	2.50	0.47
17:M:108:VAL:HG22	17:M:112:LEU:HB3	1.97	0.47
17:M:57:VAL:O	17:M:60:GLN:HG2	2.15	0.47
2:B:2831:G:OP1	2:B:2834:G:H4'	2.14	0.47
2:B:2863:C:O2'	2:B:2864:G:H5'	2.15	0.47
22:O:4:LYS:O	22:O:8:ILE:HG13	2.15	0.47
2:B:85:G:OP1	25:U:6:ARG:N	2.47	0.47
2:B:538:A:N6	2:B:555:G:O2'	2.45	0.47
2:B:1587:G:O2'	2:B:1588:G:H5'	2.15	0.47
2:B:1946:U:H2'	2:B:1947:C:C6	2.49	0.47
2:B:2200:C:P	30:Z:37:ARG:HB2	2.55	0.47
7:P:83:ILE:O	7:P:83:ILE:HD13	2.14	0.47
2:B:1668:A:O2'	2:B:1674:G:N7	2.45	0.47
2:B:1998:A:H2'	2:B:1999:C:C6	2.50	0.47
2:B:374:A:N6	2:B:400:G:H1'	2.30	0.47
2:B:816:C:O2'	2:B:817:C:H5'	2.14	0.47
2:B:1689:A:O2'	2:B:1690:A:H5'	2.14	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
32:6:169:ILE:HG22	32:6:170:ALA:N	2.30	0.47
30:Z:39:TRP:NE1	30:Z:41:GLU:HG2	2.29	0.47
23:Q:94:LEU:HD21	28:R:11:GLN:CB	2.43	0.47
28:R:1:MET:O	28:R:15:SER:HB3	2.15	0.47
8:E:5:LEU:HD13	8:E:122:GLU:HG2	1.96	0.47
8:E:145:ASP:OD2	8:E:183:PHE:HA	2.15	0.47
12:1:34:GLU:HG2	12:1:49:LYS:HG3	1.95	0.47
26:F:161:SER:OG	26:F:164:GLU:HG3	2.15	0.47
26:F:19:PHE:HE1	26:F:167:ALA:HB2	1.80	0.47
27:G:88:LEU:HD21	27:G:95:ALA:HB2	1.96	0.47
2:B:2578:G:N2	5:D:130:GLN:HE22	2.13	0.47
5:D:14:ILE:HG23	5:D:22:ILE:HB	1.95	0.47
20:J:20:ALA:HA	20:J:23:LYS:CG	2.43	0.47
2:B:289:G:H2'	2:B:290:U:C6	2.49	0.47
2:B:2590:A:O2'	2:B:2591:C:H5'	2.14	0.47
4:C:4:LYS:HE3	4:C:13:ARG:O	2.15	0.47
2:B:2720:U:H2'	2:B:2721:A:H8	1.80	0.47
2:B:912:C:H2'	2:B:913:U:C6	2.49	0.47
26:F:78:ILE:HA	26:F:79:ARG:HE	1.78	0.47
32:6:70:SER:N	32:6:97:ASP:O	2.48	0.47
7:P:105:LYS:HA	7:P:108:ARG:NE	2.30	0.47
23:Q:84:LYS:O	23:Q:86:SER:N	2.48	0.47
27:G:25:ILE:CG2	27:G:78:VAL:HG21	2.45	0.47
24:S:24:ILE:CD1	24:S:36:LEU:HD21	2.45	0.47
19:H:44:ILE:C	19:H:46:PHE:N	2.68	0.47
2:B:1725:U:H2'	2:B:1726:C:H6	1.80	0.47
2:B:1736:U:H2'	2:B:1737:G:O4'	2.14	0.47
8:E:164:LEU:HB2	8:E:167:VAL:CG1	2.45	0.47
2:B:142:A:O2'	2:B:143:C:H5'	2.15	0.47
2:B:592:A:H2'	2:B:593:U:C6	2.50	0.47
2:B:2685:G:OP1	7:P:72:VAL:HG11	2.15	0.47
16:L:112:LEU:O	16:L:112:LEU:HD23	2.15	0.47
2:B:718:A:H2'	2:B:719:C:H5'	1.97	0.47
2:B:2144:G:O2'	2:B:2146:C:H5'	2.14	0.47
5:D:118:PHE:CZ	5:D:123:LYS:HD2	2.49	0.47
21:N:12:ARG:HG3	21:N:13:ASN:ND2	2.30	0.47
2:B:2815:C:H2'	2:B:2816:G:H8	1.80	0.47
2:B:576:U:H2'	2:B:577:G:C8	2.49	0.47
2:B:1300:G:H4'	2:B:1301:A:O5'	2.15	0.47
2:B:2028:U:H2'	2:B:2029:G:C8	2.50	0.47
1:A:9:G:O2'	1:A:10:G:H5'	2.15	0.47
2:B:1585:C:H2'	2:B:1586:A:O4'	2.14	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:E:4:VAL:HG12	8:E:6:LYS:H	1.79	0.47
18:X:27:ASN:N	18:X:27:ASN:HD22	2.13	0.47
22:O:108:ASP:O	22:O:112:GLU:HB2	2.15	0.47
17:M:77:PRO:HB2	17:M:80:VAL:HG11	1.95	0.47
2:B:828:U:H4'	2:B:831:G:N1	2.30	0.47
26:F:141:ASP:HB3	26:F:144:LYS:HB2	1.96	0.47
31:W:69:GLU:O	31:W:77:LYS:HD3	2.15	0.47
9:Y:46:MET:HE2	9:Y:46:MET:HB3	1.83	0.47
9:Y:6:ILE:HG21	9:Y:26:LEU:HD13	1.96	0.47
32:6:86:SER:C	32:6:88:LEU:H	2.17	0.47
11:4:16:ILE:HG13	11:4:25:VAL:CG2	2.44	0.47
23:Q:57:ARG:HH11	23:Q:61:ILE:HD11	1.78	0.47
23:Q:64:ILE:HD12	23:Q:95:ALA:CB	2.45	0.47
29:T:29:THR:CG2	29:T:86:THR:HG22	2.45	0.47
27:G:34:ARG:CD	27:G:34:ARG:N	2.78	0.47
2:B:1439:A:C8	2:B:1440:U:C6	3.03	0.47
2:B:2652:C:O2'	2:B:2653:U:H5'	2.15	0.47
12:1:3:GLY:O	12:1:5:ARG:N	2.48	0.47
2:B:1885:A:H3'	2:B:1886:U:C6	2.49	0.47
2:B:720:U:H2'	2:B:721:A:H8	1.79	0.47
23:Q:30:VAL:CG1	23:Q:33:VAL:HG22	2.44	0.47
21:N:41:ALA:C	21:N:43:GLU:N	2.68	0.47
2:B:65:U:H2'	2:B:66:C:C6	2.49	0.47
8:E:37:ALA:O	8:E:39:ALA:N	2.43	0.47
21:N:102:PHE:H	21:N:109:PRO:HA	1.80	0.47
2:B:857:G:H5'	31:W:68:PHE:CD1	2.50	0.46
2:B:919:U:H6	2:B:919:U:O5'	1.98	0.46
1:A:43:C:H1'	26:F:91:ARG:HH21	1.80	0.46
7:P:5:LYS:HD3	7:P:9:GLN:OE1	2.16	0.46
19:H:112:LYS:HE2	19:H:113:SER:CA	2.45	0.46
19:H:133:GLN:O	19:H:134:VAL:O	2.33	0.46
8:E:109:LEU:HD12	8:E:112:LEU:HD12	1.97	0.46
21:N:8:ARG:NH2	21:N:39:PRO:HB3	2.29	0.46
25:U:88:ASP:CG	25:U:89:GLY:H	2.18	0.46
16:L:80:SER:HB3	16:L:115:GLU:OE2	2.15	0.46
2:B:2148:G:H2'	2:B:2149:U:O4'	2.15	0.46
9:Y:2:LYS:HG2	9:Y:3:THR:N	2.28	0.46
2:B:20:C:H2'	2:B:21:A:H8	1.78	0.46
24:S:59:GLU:HA	24:S:64:ALA:HA	1.97	0.46
8:E:46:GLN:HB3	8:E:86:ALA:HA	1.97	0.46
17:M:53:MET:O	17:M:57:VAL:HG23	2.15	0.46
2:B:2772:C:H2'	2:B:2773:C:C6	2.49	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:Y:4:ILE:HG23	9:Y:56:VAL:HG13	1.97	0.46
2:B:1691:C:O2'	2:B:1692:U:H5'	2.15	0.46
27:G:154:GLU:O	27:G:156:TYR:N	2.41	0.46
20:J:93:ILE:O	20:J:97:PRO:HG3	2.15	0.46
2:B:1720:U:C2'	2:B:1721:G:H5'	2.45	0.46
2:B:1281:G:H2'	2:B:1282:U:C6	2.50	0.46
2:B:923:G:H5'	31:W:25:PHE:CZ	2.50	0.46
26:F:98:PHE:C	26:F:100:GLU:N	2.69	0.46
4:C:153:LEU:HD13	4:C:175:LEU:HD21	1.96	0.46
32:6:68:VAL:HB	32:6:99:LEU:HB2	1.96	0.46
2:B:2472:G:C2'	2:B:2475:C:H42	2.21	0.46
23:Q:94:LEU:HD23	28:R:11:GLN:OE1	2.15	0.46
2:B:1244:A:H5'	16:L:7:SER:OG	2.16	0.46
25:U:48:VAL:N	25:U:53:GLN:HB2	2.18	0.46
2:B:2800:A:N3	2:B:2801:G:H1'	2.30	0.46
13:3:18:LYS:HE3	13:3:20:GLY:H	1.80	0.46
2:B:1640:A:O2'	2:B:1641:A:H5'	2.15	0.46
32:6:10:THR:HG23	32:6:136:ALA:HB2	1.96	0.46
2:B:1907:G:H2'	2:B:1908:C:C5	2.49	0.46
2:B:150:U:H2'	2:B:151:C:H6	1.77	0.46
2:B:2657:A:H2'	2:B:2658:C:O4'	2.15	0.46
1:A:33:G:O2'	1:A:34:A:H5'	2.15	0.46
2:B:1745:A:H2'	2:B:1746:A:C8	2.51	0.46
2:B:679:C:O2'	2:B:680:C:H5'	2.15	0.46
2:B:506:G:H5''	2:B:509:C:O2'	2.14	0.46
2:B:1739:A:H2'	2:B:1740:G:C8	2.50	0.46
2:B:966:G:H5'	2:B:2272:U:C6	2.50	0.46
19:H:77:THR:HG22	19:H:79:THR:HG23	1.96	0.46
1:A:43:C:H1'	26:F:91:ARG:NH2	2.30	0.46
26:F:109:ARG:C	26:F:109:ARG:HD3	2.35	0.46
4:C:124:LYS:O	4:C:127:ASN:HB2	2.15	0.46
20:J:44:TYR:HB2	23:Q:63:ARG:CD	2.45	0.46
6:K:105:ARG:O	6:K:108:ARG:HG2	2.16	0.46
27:G:108:PHE:HE1	27:G:150:TYR:O	1.99	0.46
3:I:129:GLU:CB	3:I:133:ARG:HH12	2.21	0.46
6:K:63:VAL:HG21	6:K:85:VAL:HG23	1.97	0.46
7:P:50:ARG:CB	7:P:57:ALA:H	2.23	0.46
25:U:86:PHE:CG	25:U:87:GLU:N	2.83	0.46
2:B:272:A:H2'	2:B:273:G:C8	2.51	0.46
2:B:2133:G:H2'	2:B:2133:G:N3	2.29	0.46
14:V:9:ARG:HH22	14:V:12:GLN:HA	1.77	0.46
18:X:17:GLU:OE1	18:X:21:LEU:HD11	2.16	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:H:65:ALA:O	19:H:68:ARG:HG2	2.15	0.46
2:B:1279:G:OP1	21:N:35:LYS:HG3	2.16	0.46
20:J:30:THR:O	20:J:34:ARG:HB2	2.15	0.46
2:B:152:A:H2'	2:B:153:U:C6	2.50	0.46
2:B:18:U:H5''	23:Q:23:TYR:O	2.16	0.46
2:B:2702:G:H2'	2:B:2703:C:C6	2.50	0.46
22:O:107:ALA:O	22:O:111:ARG:HB2	2.16	0.46
2:B:1181:U:H2'	2:B:1182:G:H8	1.81	0.46
2:B:131:A:O2'	2:B:132:G:H5'	2.16	0.46
15:2:43:THR:O	15:2:45:SER:N	2.49	0.46
31:W:45:HIS:ND1	31:W:45:HIS:N	2.61	0.46
18:X:23:ARG:HA	18:X:26:PHE:HB3	1.97	0.46
2:B:1046:A:C3'	2:B:1047:G:H5''	2.45	0.46
2:B:1831:G:H2'	2:B:1832:C:C6	2.50	0.46
2:B:832:U:O2'	16:L:46:VAL:HG11	2.16	0.46
8:E:150:THR:CG2	8:E:153:LEU:HB2	2.45	0.46
16:L:95:LEU:HD11	16:L:125:LEU:HD11	1.97	0.46
5:D:191:GLY:O	5:D:192:ALA:HB3	2.15	0.46
5:D:53:GLY:C	5:D:76:GLY:HA2	2.36	0.46
2:B:1119:U:OP1	14:V:83:LYS:HE3	2.16	0.46
4:C:90:ILE:HA	4:C:103:ILE:O	2.15	0.46
14:V:20:LEU:HD23	14:V:25:LYS:HB3	1.97	0.46
2:B:1383:A:H2	2:B:1405:U:O2	1.98	0.46
18:X:17:GLU:HB3	18:X:53:VAL:CG1	2.42	0.46
2:B:1654:A:O2'	5:D:118:PHE:HA	2.16	0.46
2:B:16:C:O2'	2:B:17:G:H5'	2.15	0.46
2:B:825:A:O2'	16:L:54:GLN:HB3	2.15	0.46
27:G:174:LYS:HZ3	27:G:176:LYS:HB3	1.80	0.46
32:6:142:LYS:HE3	32:6:142:LYS:HA	1.97	0.46
28:R:86:GLN:HE21	28:R:86:GLN:HB2	1.52	0.46
2:B:1712:U:H2'	2:B:1713:A:C8	2.50	0.46
32:6:9:GLU:HG2	32:6:13:HIS:CD2	2.50	0.46
26:F:31:GLU:O	26:F:32:LYS:O	2.32	0.46
26:F:74:ALA:HB1	26:F:76:PHE:HD2	1.81	0.46
4:C:140:VAL:O	4:C:141:HIS:HB2	2.16	0.46
2:B:1203:U:H1'	16:L:4:ASN:ND2	2.13	0.46
28:R:40:MET:C	28:R:41:ILE:HD13	2.36	0.46
28:R:62:GLU:O	28:R:96:VAL:HA	2.16	0.46
24:S:71:VAL:O	24:S:71:VAL:HG22	2.15	0.46
2:B:233:A:N6	2:B:428:A:H61	2.14	0.46
21:N:63:ARG:O	21:N:66:ALA:HB3	2.15	0.46
16:L:111:ILE:HG22	16:L:112:LEU:N	2.31	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1323:C:OP1	24:S:84:ARG:HD3	2.15	0.46
2:B:309:A:H4'	25:U:15:GLY:HA3	1.96	0.46
2:B:1470:A:H2'	2:B:1471:G:O4'	2.16	0.46
2:B:2188:U:H2'	2:B:2189:U:H6	1.80	0.46
2:B:523:C:H4'	2:B:540:C:O2	2.15	0.46
2:B:607:U:O4	2:B:619:G:H2'	2.16	0.46
2:B:2729:G:H2'	2:B:2730:C:H6	1.80	0.46
2:B:315:G:H2'	2:B:316:C:H6	1.77	0.46
5:D:181:ASP:C	5:D:181:ASP:OD1	2.53	0.46
14:V:64:VAL:HG13	14:V:68:LYS:O	2.15	0.46
2:B:2093:G:O2'	2:B:2094:A:H5'	2.16	0.46
2:B:1740:G:H2'	2:B:1741:C:O4'	2.15	0.46
2:B:1030:C:O2'	2:B:1031:G:H5'	2.15	0.46
14:V:14:LYS:HE2	14:V:18:ARG:NH2	2.31	0.46
16:L:101:ILE:HG22	16:L:102:GLY:N	2.30	0.46
19:H:89:LYS:HA	19:H:89:LYS:NZ	2.30	0.46
26:F:71:LYS:O	26:F:72:SER:HB3	2.14	0.46
5:D:25:THR:HG21	5:D:193:VAL:HG22	1.96	0.46
22:O:26:LEU:HD13	22:O:39:VAL:HG22	1.98	0.46
7:P:102:ARG:O	7:P:103:THR:HB	2.15	0.46
28:R:11:GLN:HE22	28:R:39:LEU:HD11	1.81	0.46
5:D:201:LEU:C	5:D:202:ILE:HD12	2.36	0.46
24:S:32:ALA:O	24:S:36:LEU:HD23	2.15	0.46
2:B:1724:G:H2'	2:B:1725:U:C6	2.51	0.46
2:B:1443:U:H2'	2:B:1444:G:H8	1.80	0.46
2:B:643:A:C2	12:1:43:ARG:HD2	2.51	0.46
2:B:2849:U:N3	2:B:2867:G:C8	2.84	0.46
2:B:2900:A:H2'	2:B:2901:C:O4'	2.15	0.46
2:B:1370:C:O4'	2:B:1810:A:H2	1.99	0.46
25:U:14:THR:HB	25:U:68:ASN:HB3	1.98	0.46
1:A:48:U:H2'	1:A:49:C:H6	1.78	0.46
6:K:111:LYS:C	6:K:113:MET:H	2.19	0.46
2:B:68:G:H2'	2:B:69:C:C6	2.51	0.46
2:B:1826:G:H2'	2:B:1827:U:C6	2.49	0.46
2:B:2605:U:H2'	2:B:2606:C:C6	2.50	0.46
2:B:1263:U:O2'	10:0:7:PRO:HD2	2.15	0.46
23:Q:79:ILE:HG23	23:Q:79:ILE:O	2.15	0.46
2:B:402:A:H2'	2:B:403:U:O4'	2.15	0.46
2:B:370:G:O2'	2:B:423:A:H3'	2.15	0.46
13:3:50:SER:C	13:3:52:GLY:H	2.18	0.46
2:B:2196:C:O2'	2:B:2197:U:H5'	2.15	0.46
2:B:966:G:H1'	2:B:2267:A:N6	2.31	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:H:90:LEU:HD13	19:H:123:ARG:HB3	1.98	0.46
26:F:102:LEU:HA	26:F:106:ALA:CB	2.45	0.46
26:F:71:LYS:C	26:F:73:VAL:H	2.19	0.46
32:6:28:LEU:HD11	32:6:121:TYR:CE2	2.49	0.46
32:6:58:VAL:HG13	32:6:68:VAL:HA	1.96	0.46
2:B:770:G:O2'	2:B:771:G:H5'	2.15	0.46
17:M:131:VAL:HG12	17:M:132:THR:N	2.31	0.46
19:H:41:LYS:O	19:H:44:ILE:HG13	2.16	0.46
14:V:62:THR:CG2	14:V:71:LYS:HG2	2.40	0.46
2:B:1921:G:N2	2:B:1922:G:O6	2.49	0.46
2:B:2085:U:O2'	2:B:2086:U:H5'	2.16	0.46
1:A:28:C:OP1	22:O:31:THR:HG21	2.15	0.46
2:B:2814:A:H2'	2:B:2815:C:C6	2.51	0.46
2:B:1889:A:H2'	2:B:1890:A:H8	1.80	0.46
2:B:519:U:H4'	24:S:73:LYS:HZ3	1.78	0.46
5:D:157:LYS:HZ2	5:D:157:LYS:HB3	1.81	0.46
2:B:1842:G:H2'	2:B:1843:C:H6	1.79	0.46
2:B:2399:G:O2'	2:B:2400:G:H5'	2.16	0.46
2:B:443:A:H2	2:B:1245:G:N3	2.14	0.46
20:J:104:ALA:O	20:J:108:MET:HG2	2.16	0.46
2:B:823:C:H2'	2:B:824:U:C6	2.51	0.46
2:B:2678:C:H2'	2:B:2679:A:H8	1.81	0.46
14:V:8:VAL:HA	14:V:39:ALA:O	2.16	0.46
2:B:2875:C:H2'	2:B:2876:G:H8	1.80	0.46
8:E:21:ARG:HH11	8:E:106:LYS:CD	2.28	0.46
26:F:106:ALA:O	26:F:135:ILE:HD13	2.16	0.46
26:F:127:TYR:OH	26:F:166:ARG:HG3	2.16	0.46
26:F:41:GLU:HB2	26:F:42:ALA:H	1.63	0.46
9:Y:26:LEU:N	9:Y:46:MET:HE1	2.31	0.46
32:6:51:PRO:C	32:6:53:ASN:H	2.19	0.46
5:D:202:ILE:HD12	5:D:202:ILE:N	2.31	0.46
27:G:9:VAL:HA	27:G:48:THR:HA	1.98	0.46
29:T:39:THR:O	29:T:41:ALA:N	2.49	0.46
2:B:2363:G:O2'	2:B:2364:C:H5'	2.15	0.46
2:B:1439:A:N3	2:B:1553:A:C6	2.84	0.46
20:J:124:VAL:O	20:J:125:TYR:HB2	2.15	0.46
20:J:72:LYS:HB2	20:J:89:PHE:H	1.80	0.46
29:T:50:LEU:O	29:T:51:PHE:HB2	2.15	0.46
27:G:96:ALA:O	27:G:97:VAL:HB	2.16	0.46
2:B:656:G:H2'	2:B:657:U:C6	2.50	0.46
2:B:1407:G:H2'	2:B:1408:G:C8	2.50	0.46
24:S:13:SER:OG	24:S:14:ALA:N	2.47	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:M:57:VAL:HG13	17:M:108:VAL:HG21	1.98	0.46
2:B:2834:G:H2'	2:B:2879:A:H61	1.81	0.46
2:B:2889:C:H2'	2:B:2890:G:C8	2.51	0.46
2:B:11:C:H2'	2:B:12:U:H5'	1.96	0.46
2:B:615:U:O4	8:E:39:ALA:HB2	2.16	0.46
2:B:1334:G:O2'	2:B:1335:C:H5'	2.16	0.46
16:L:69:ARG:HD3	16:L:69:ARG:O	2.16	0.46
3:I:72:THR:HG21	3:I:111:THR:O	2.15	0.46
2:B:603:A:H4'	2:B:604:G:O5'	2.15	0.46
32:6:174:GLN:HG2	32:6:175:LEU:N	2.30	0.46
8:E:109:LEU:O	8:E:112:LEU:HB2	2.14	0.46
16:L:2:ARG:HG2	16:L:2:ARG:O	2.16	0.46
27:G:74:MET:O	27:G:78:VAL:HG22	2.15	0.46
5:D:170:VAL:O	5:D:170:VAL:HG23	2.16	0.46
8:E:58:LYS:HD3	8:E:60:TRP:HD1	1.80	0.46
6:K:19:VAL:O	6:K:19:VAL:HG23	2.15	0.46
25:U:3:LYS:CB	25:U:82:VAL:HG21	2.41	0.46
19:H:25:TYR:CZ	19:H:30:LEU:HD21	2.51	0.46
32:6:10:THR:HG22	32:6:14:MET:CE	2.46	0.46
2:B:2150:C:H2'	2:B:2151:U:H6	1.78	0.46
20:J:34:ARG:NH1	20:J:34:ARG:HG3	2.31	0.46
2:B:1463:C:H2'	2:B:1464:G:C8	2.51	0.46
2:B:1372:U:O2'	2:B:2212:A:H8	1.97	0.46
2:B:933:A:H5'	2:B:934:U:OP2	2.15	0.46
4:C:4:LYS:HD2	4:C:5:CYS:N	2.31	0.46
2:B:1687:G:H2'	2:B:1688:U:C6	2.51	0.46
2:B:1190:G:H5''	16:L:32:GLY:HA2	1.97	0.46
2:B:48:G:N2	2:B:177:G:H21	2.14	0.46
3:I:44:LYS:O	3:I:48:ILE:HG13	2.15	0.46
2:B:710:U:H2'	2:B:711:G:C8	2.50	0.46
2:B:1450:G:C6	2:B:1451:C:N4	2.83	0.46
16:L:70:LYS:O	16:L:73:ILE:HG12	2.15	0.46
16:L:85:VAL:HG13	16:L:85:VAL:O	2.16	0.46
26:F:42:ALA:O	26:F:45:ASP:N	2.49	0.46
5:D:55:LYS:C	5:D:57:ALA:H	2.18	0.46
23:Q:56:PHE:O	23:Q:59:LEU:HB3	2.15	0.46
28:R:39:LEU:HD23	28:R:39:LEU:N	2.31	0.46
27:G:10:VAL:HB	27:G:47:ASN:CB	2.46	0.46
29:T:39:THR:C	29:T:41:ALA:N	2.68	0.46
19:H:47:PHE:HA	19:H:50:ARG:HE	1.81	0.46
8:E:111:GLU:HA	8:E:114:ARG:CZ	2.46	0.46
23:Q:73:ILE:HD11	23:Q:77:LYS:HB2	1.98	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:R:24:LYS:HA	28:R:94:THR:CG2	2.39	0.46
6:K:64:ARG:HG2	6:K:79:PHE:CD2	2.51	0.46
20:J:122:LEU:C	20:J:123:LYS:HD2	2.36	0.46
2:B:274:C:H2'	2:B:275:C:C6	2.51	0.46
17:M:41:LEU:C	17:M:43:ALA:H	2.18	0.46
2:B:1818:U:HO2'	2:B:1819:A:P	2.39	0.46
32:6:14:MET:SD	32:6:165:THR:HA	2.56	0.46
3:I:5:GLN:HG2	3:I:6:ALA:H	1.78	0.46
2:B:74:A:H4'	2:B:75:G:O5'	2.16	0.46
2:B:600:G:H2'	2:B:601:C:C6	2.51	0.46
1:A:16:G:O2'	1:A:17:C:H5'	2.16	0.46
1:A:13:G:H1'	1:A:69:G:N2	2.31	0.46
1:A:61:G:H2'	1:A:62:C:H6	1.81	0.46
2:B:1948:G:O2'	2:B:1949:G:H5'	2.16	0.46
2:B:2099:U:H2'	2:B:2100:G:H8	1.81	0.46
2:B:2603:G:O2'	2:B:2604:U:H5'	2.16	0.46
2:B:1783:A:H5'	2:B:2608:G:H4'	1.96	0.46
3:I:63:ASP:C	3:I:65:SER:H	2.19	0.46
19:H:90:LEU:CG	19:H:146:VAL:HG11	2.32	0.45
26:F:103:ILE:HD11	26:F:174:PHE:CA	2.46	0.45
26:F:102:LEU:C	26:F:104:THR:H	2.19	0.45
26:F:128:SER:HA	26:F:153:ILE:O	2.16	0.45
26:F:168:LEU:HD13	26:F:169:LEU:H	1.78	0.45
8:E:149:ILE:HG23	8:E:188:MET:HA	1.98	0.45
29:T:55:VAL:H	29:T:87:LEU:HB3	1.81	0.45
27:G:8:VAL:HB	27:G:49:LEU:H	1.80	0.45
27:G:106:LEU:O	27:G:108:PHE:N	2.48	0.45
6:K:102:PRO:CA	6:K:120:PRO:HB3	2.44	0.45
20:J:24:THR:O	20:J:25:LEU:HB3	2.15	0.45
2:B:2444:G:OP2	8:E:63:LYS:HD2	2.17	0.45
14:V:62:THR:HA	14:V:71:LYS:HA	1.98	0.45
4:C:166:ARG:CB	4:C:171:VAL:HG22	2.43	0.45
17:M:97:GLN:HB2	17:M:98:PRO:HD2	1.98	0.45
2:B:1348:C:H5'	2:B:1349:C:OP2	2.15	0.45
2:B:2080:A:H2'	2:B:2081:U:C6	2.50	0.45
2:B:179:C:O2'	2:B:180:G:H5'	2.16	0.45
2:B:1292:G:O2'	2:B:1293:C:H5'	2.16	0.45
14:V:1:MET:CE	14:V:2:PHE:H	2.29	0.45
9:Y:35:VAL:HG11	9:Y:37:ARG:NH1	2.30	0.45
2:B:2531:A:H5''	27:G:156:TYR:CZ	2.50	0.45
2:B:942:G:O2'	2:B:943:A:H5'	2.16	0.45
2:B:2553:G:H2'	2:B:2554:U:O4'	2.15	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1161:C:H2'	2:B:1162:G:H8	1.79	0.45
2:B:378:C:O2'	2:B:379:G:H5'	2.16	0.45
30:Z:5:CYS:SG	30:Z:7:VAL:HG12	2.56	0.45
32:6:42:LYS:HG2	32:6:51:PRO:HB3	1.97	0.45
23:Q:91:ARG:HD3	28:R:11:GLN:HG3	1.96	0.45
8:E:108:ILE:HD11	8:E:181:ILE:CG1	2.35	0.45
29:T:53:VAL:HG12	29:T:54:GLU:H	1.80	0.45
24:S:24:ILE:CG2	24:S:32:ALA:HB1	2.47	0.45
2:B:974:G:H1'	2:B:975:A:C8	2.51	0.45
5:D:113:SER:HB3	5:D:167:ASN:N	2.32	0.45
9:Y:12:ALA:HB2	9:Y:53:MET:CE	2.45	0.45
6:K:103:VAL:O	6:K:122:VAL:HB	2.17	0.45
20:J:32:LEU:HD21	20:J:56:VAL:HG22	1.97	0.45
4:C:231:HIS:HA	4:C:241:LYS:CE	2.40	0.45
2:B:588:U:O4	2:B:670:A:H1'	2.15	0.45
2:B:588:U:H2'	2:B:589:U:C6	2.50	0.45
6:K:56:ASP:HB3	6:K:58:LEU:CD2	2.46	0.45
2:B:1616:A:H4'	2:B:1617:C:OP2	2.16	0.45
2:B:870:U:O2'	2:B:871:U:H5'	2.16	0.45
2:B:2389:G:H5''	2:B:2390:U:H5'	1.98	0.45
3:I:138:VAL:HG12	3:I:139:VAL:N	2.31	0.45
4:C:78:GLU:OE1	4:C:100:ARG:HD3	2.16	0.45
2:B:1708:C:O2'	2:B:1709:U:H5'	2.16	0.45
2:B:418:C:H2'	2:B:419:U:H6	1.81	0.45
2:B:533:G:H2'	2:B:534:U:C6	2.51	0.45
1:A:103:U:O2'	14:V:75:GLN:NE2	2.49	0.45
2:B:2734:A:H2'	2:B:2735:G:H5'	1.98	0.45
2:B:2862:G:H2'	2:B:2863:C:H6	1.80	0.45
2:B:68:G:H2'	2:B:69:C:H6	1.81	0.45
2:B:2333:A:H5'	2:B:2335:A:H1'	1.97	0.45
2:B:2362:C:OP1	13:3:39:ARG:NH1	2.50	0.45
2:B:832:U:P	16:L:38:GLN:H	2.38	0.45
5:D:30:GLU:HB2	5:D:52:THR:CG2	2.46	0.45
10:0:55:ALA:C	10:0:56:LYS:HG3	2.36	0.45
30:Z:39:TRP:HB2	30:Z:46:PHE:CE2	2.50	0.45
19:H:135:HIS:C	19:H:137:GLU:N	2.70	0.45
2:B:1726:C:H2'	2:B:1727:C:H6	1.82	0.45
9:Y:15:ARG:HD2	9:Y:15:ARG:N	2.30	0.45
6:K:119:ALA:CB	6:K:120:PRO:HD3	2.39	0.45
20:J:101:ILE:O	20:J:105:VAL:HG13	2.16	0.45
20:J:70:THR:HG22	20:J:90:GLU:OE2	2.16	0.45
12:1:10:LEU:HD23	12:1:35:LEU:HD21	1.98	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:1:36:LYS:HA	12:1:46:VAL:O	2.15	0.45
2:B:231:A:H3'	2:B:232:G:C8	2.51	0.45
18:X:41:HIS:O	18:X:45:GLN:HG3	2.16	0.45
13:3:20:GLY:HA3	13:3:48:MET:HE3	1.97	0.45
2:B:869:G:H2'	2:B:870:U:H6	1.81	0.45
2:B:614:A:H5''	2:B:616:A:N6	2.31	0.45
2:B:1915:U:N3	2:B:1916:A:H1'	2.31	0.45
16:L:135:ILE:CG2	16:L:136:GLU:N	2.79	0.45
14:V:61:LEU:CD1	14:V:74:ALA:HB2	2.47	0.45
22:O:36:TYR:N	22:O:36:TYR:HD2	2.14	0.45
5:D:101:PHE:O	5:D:102:ALA:HB2	2.17	0.45
2:B:2630:G:O2'	2:B:2631:G:H5'	2.17	0.45
24:S:31:GLN:C	24:S:33:LEU:H	2.20	0.45
16:L:75:ALA:N	16:L:105:ILE:HD12	2.31	0.45
2:B:929:U:O2'	2:B:930:G:H5'	2.17	0.45
31:W:76:ARG:HB3	31:W:78:PHE:CE2	2.51	0.45
4:C:128:THR:HG22	4:C:188:ARG:HB3	1.99	0.45
7:P:20:ARG:HH21	7:P:20:ARG:HG2	1.80	0.45
7:P:85:VAL:O	7:P:87:ARG:N	2.47	0.45
23:Q:57:ARG:HA	23:Q:60:TRP:CE3	2.51	0.45
28:R:39:LEU:O	28:R:40:MET:HB2	2.16	0.45
7:P:3:ILE:HD13	7:P:3:ILE:C	2.37	0.45
27:G:132:LEU:N	27:G:132:LEU:HD23	2.30	0.45
2:B:299:A:N6	2:B:322:A:O2'	2.45	0.45
2:B:139:U:C2'	29:T:1:MET:HA	2.46	0.45
2:B:279:A:H2'	2:B:280:U:O5'	2.17	0.45
2:B:1910:G:O5'	2:B:1910:G:H8	1.98	0.45
21:N:35:LYS:HA	21:N:111:ALA:O	2.16	0.45
23:Q:109:VAL:O	23:Q:113:LYS:HG3	2.16	0.45
2:B:545:U:C2	2:B:547:A:H5'	2.51	0.45
2:B:2286:G:H3'	12:1:29:LYS:NZ	2.31	0.45
2:B:2812:G:H2'	2:B:2813:A:C8	2.51	0.45
24:S:97:LEU:N	24:S:97:LEU:HD22	2.31	0.45
8:E:67:ARG:HH11	8:E:67:ARG:HG2	1.81	0.45
2:B:39:G:H2'	2:B:40:U:H6	1.80	0.45
2:B:1865:U:HO2'	2:B:1866:A:H8	1.64	0.45
32:6:130:ARG:HG3	32:6:130:ARG:HH11	1.82	0.45
2:B:711:G:O2'	2:B:712:G:H5'	2.16	0.45
10:0:50:GLY:O	10:0:51:ARG:C	2.54	0.45
25:U:43:LYS:C	25:U:43:LYS:HD3	2.36	0.45
2:B:962:G:N2	2:B:2250:G:H1	2.13	0.45
17:M:55:ARG:HH21	17:M:55:ARG:HG3	1.81	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2600:A:O2'	2:B:2601:C:H5'	2.17	0.45
2:B:2526:G:H2'	2:B:2527:C:H6	1.81	0.45
2:B:2054:A:H2'	10:0:4:GLN:HE22	1.80	0.45
31:W:50:VAL:HG23	31:W:61:LYS:HE3	1.98	0.45
19:H:77:THR:HA	19:H:143:ILE:HD11	1.99	0.45
19:H:84:ALA:H	19:H:148:ALA:HB2	1.79	0.45
26:F:177:ARG:NH2	26:F:178:LYS:H	2.14	0.45
26:F:37:MET:SD	26:F:52:ALA:HB1	2.57	0.45
9:Y:7:THR:HG22	9:Y:9:THR:H	1.81	0.45
32:6:64:ARG:CA	32:6:103:ILE:HB	2.43	0.45
32:6:29:ARG:HG2	32:6:32:ARG:CZ	2.47	0.45
7:P:6:GLN:HA	7:P:9:GLN:OE1	2.16	0.45
7:P:7:LEU:N	7:P:7:LEU:HD12	2.23	0.45
20:J:44:TYR:CE1	23:Q:59:LEU:HD11	2.51	0.45
3:I:32:VAL:HG13	3:I:66:PHE:CD2	2.51	0.45
27:G:140:ILE:O	27:G:144:ALA:HB2	2.16	0.45
7:P:74:GLN:O	7:P:76:HIS:N	2.50	0.45
19:H:66:ASN:ND2	19:H:67:ALA:N	2.64	0.45
2:B:1595:C:H2'	2:B:1596:A:C8	2.52	0.45
2:B:2385:C:H2'	2:B:2386:A:H8	1.81	0.45
21:N:16:HIS:O	21:N:18:GLN:N	2.47	0.45
2:B:2109:U:O2	2:B:2110:G:H5'	2.16	0.45
2:B:948:C:H2'	2:B:949:G:C8	2.52	0.45
2:B:812:C:H5''	2:B:1250:G:O2'	2.16	0.45
2:B:2879:A:H4'	2:B:2880:C:OP1	2.17	0.45
2:B:328:U:O3'	25:U:65:GLN:HG3	2.17	0.45
2:B:1464:G:H2'	2:B:1465:G:C8	2.48	0.45
2:B:337:C:H2'	2:B:338:G:O4'	2.17	0.45
2:B:2699:C:H2'	2:B:2700:A:H8	1.82	0.45
2:B:498:G:H2'	2:B:498:G:N3	2.31	0.45
2:B:2716:C:O2'	2:B:2717:C:H5'	2.17	0.45
24:S:81:SER:HB3	24:S:99:ARG:HA	1.99	0.45
2:B:167:A:H2'	2:B:168:G:O4'	2.15	0.45
2:B:1576:U:O2'	2:B:1577:C:H5'	2.16	0.45
15:2:11:LYS:O	15:2:15:SER:HB2	2.17	0.45
6:K:13:ASN:HD21	6:K:98:ARG:H	1.65	0.45
31:W:44:PHE:HB3	31:W:78:PHE:CD1	2.51	0.45
26:F:177:ARG:NH1	26:F:177:ARG:HA	2.32	0.45
19:H:27:ARG:HE	30:Z:64:ILE:HD11	1.81	0.45
32:6:42:LYS:CA	32:6:51:PRO:HA	2.29	0.45
4:C:89:ASN:HD22	4:C:89:ASN:HA	1.53	0.45
2:B:1082:U:C2	2:B:1086:A:N1	2.85	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:J:103:ILE:HA	20:J:106:LYS:HB3	1.99	0.45
2:B:139:U:C4	29:T:1:MET:HB3	2.51	0.45
25:U:85:ARG:NH1	25:U:86:PHE:N	2.61	0.45
8:E:60:TRP:O	8:E:61:ARG:CB	2.63	0.45
27:G:123:GLU:HG2	27:G:124:CYS:N	2.32	0.45
5:D:14:ILE:HG23	5:D:14:ILE:O	2.16	0.45
2:B:2743:U:H2'	2:B:2744:G:C4'	2.46	0.45
2:B:2391:G:OP1	13:3:34:LYS:HE2	2.16	0.45
2:B:1910:G:C2	2:B:1911:U:N3	2.84	0.45
32:6:14:MET:HB3	32:6:168:PHE:CG	2.51	0.45
25:U:72:PHE:HA	25:U:78:LYS:O	2.17	0.45
23:Q:104:ALA:C	23:Q:106:THR:H	2.19	0.45
23:Q:71:ASN:HD21	23:Q:106:THR:HG23	1.80	0.45
21:N:24:MET:HG2	21:N:44:LEU:HD22	1.98	0.45
16:L:136:GLU:HA	16:L:140:GLY:H	1.82	0.45
1:A:31:C:O2'	1:A:32:U:H5'	2.17	0.45
2:B:2868:A:H2'	2:B:2869:G:C8	2.52	0.45
4:C:15:VAL:HG22	4:C:204:LEU:O	2.16	0.45
21:N:65:LEU:HD11	21:N:69:ARG:CZ	2.46	0.45
25:U:94:PHE:CB	25:U:101:THR:HA	2.47	0.45
2:B:493:G:H2'	2:B:494:G:O4'	2.17	0.45
2:B:596:U:H2'	2:B:597:G:C8	2.51	0.45
2:B:2362:C:OP1	13:3:39:ARG:NE	2.45	0.45
2:B:196:A:H2'	2:B:196:A:N3	2.32	0.45
2:B:1026:G:H2'	2:B:1027:A:C8	2.52	0.45
2:B:2902:C:O2'	2:B:2903:U:H5'	2.17	0.45
31:W:41:GLY:HA2	31:W:44:PHE:CD2	2.52	0.45
31:W:70:VAL:HG23	31:W:75:ASN:ND2	2.32	0.45
26:F:91:ARG:O	26:F:92:GLY:C	2.55	0.45
4:C:124:LYS:NZ	4:C:124:LYS:HB3	2.31	0.45
9:Y:23:LEU:HD13	9:Y:28:LEU:HB2	1.99	0.45
32:6:25:LEU:HD22	32:6:179:LYS:HG2	1.99	0.45
23:Q:91:ARG:HE	23:Q:94:LEU:CD2	2.27	0.45
27:G:26:LYS:HA	27:G:32:LEU:HA	1.97	0.45
3:I:79:LEU:HD23	3:I:108:ILE:CD1	2.47	0.45
17:M:31:PHE:HA	17:M:131:VAL:O	2.17	0.45
14:V:72:VAL:CG1	14:V:93:ARG:HA	2.46	0.45
3:I:19:PRO:HG2	3:I:22:PRO:HB2	1.99	0.45
25:U:60:LYS:HE2	25:U:60:LYS:HA	1.97	0.45
2:B:1535:A:H3'	2:B:1536:C:C6	2.52	0.45
12:1:8:ILE:HG21	12:1:51:ALA:CB	2.47	0.45
16:L:136:GLU:HG2	16:L:140:GLY:O	2.16	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:O:28:VAL:HG21	22:O:106:LEU:HD21	1.99	0.45
2:B:2246:G:H2'	2:B:2247:A:H8	1.77	0.45
2:B:554:U:H2'	2:B:555:G:O4'	2.17	0.45
2:B:1637:A:H5'	2:B:1760:C:O2'	2.16	0.45
2:B:351:C:H2'	2:B:352:A:C8	2.52	0.45
2:B:401:A:H2'	2:B:402:A:C8	2.52	0.45
2:B:208:C:H2'	2:B:209:C:C6	2.51	0.45
32:6:72:ASP:OD1	32:6:74:ASN:HB3	2.17	0.45
2:B:433:C:O2'	2:B:434:U:H5'	2.17	0.45
2:B:569:U:H5''	2:B:821:A:C2	2.52	0.45
2:B:477:A:H2'	2:B:478:A:C8	2.52	0.45
31:W:62:ALA:O	31:W:81:ILE:HD12	2.16	0.45
19:H:127:GLU:HA	19:H:145:ASN:OD1	2.17	0.45
9:Y:51:SER:HA	9:Y:54:VAL:CG2	2.46	0.45
32:6:92:PRO:HB3	32:6:100:TYR:O	2.17	0.45
32:6:76:LEU:HD23	32:6:77:LYS:NZ	2.29	0.45
31:W:9:THR:OG1	31:W:10:ARG:N	2.48	0.45
18:X:6:LEU:C	18:X:8:GLU:H	2.19	0.45
20:J:74:TYR:HB2	20:J:87:ALA:O	2.17	0.45
20:J:69:ARG:O	20:J:89:PHE:HB3	2.17	0.45
8:E:155:GLU:O	8:E:159:LEU:HD13	2.17	0.45
8:E:166:LYS:O	8:E:167:VAL:CB	2.65	0.45
12:1:35:LEU:N	12:1:35:LEU:HD23	2.32	0.45
2:B:2070:A:H2'	2:B:2071:A:C8	2.51	0.45
17:M:126:ILE:N	17:M:126:ILE:HD12	2.30	0.45
2:B:2425:A:H4'	2:B:2426:A:OP2	2.17	0.45
2:B:2839:G:H2'	2:B:2840:C:H6	1.80	0.45
2:B:2840:C:H5''	21:N:53:THR:OG1	2.16	0.45
2:B:948:C:H2'	2:B:949:G:H8	1.81	0.45
2:B:2227:A:H2'	2:B:2228:G:O4'	2.16	0.45
32:6:139:LYS:O	32:6:143:LEU:HD13	2.16	0.45
2:B:794:A:H2'	2:B:795:C:H6	1.78	0.45
18:X:51:ALA:O	18:X:55:THR:N	2.43	0.45
2:B:2100:G:H2'	2:B:2101:A:O4'	2.16	0.45
2:B:2338:C:H2'	2:B:2339:C:C6	2.52	0.45
16:L:89:VAL:O	16:L:89:VAL:HG13	2.16	0.45
2:B:335:C:O2'	2:B:336:C:H5'	2.16	0.45
2:B:2373:G:O2'	2:B:2374:C:H5'	2.17	0.45
2:B:811:U:OP2	16:L:20:GLY:HA2	2.17	0.45
2:B:2778:A:O2'	2:B:2781:A:H5'	2.17	0.45
2:B:922:C:H1'	31:W:22:VAL:HG21	1.98	0.45
4:C:68:ARG:HB2	4:C:128:THR:HG21	1.97	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
32:6:63:PRO:O	32:6:103:ILE:HB	2.17	0.45
19:H:116:ARG:CZ	19:H:131:SER:HB2	2.46	0.45
2:B:1091:G:O2'	2:B:1092:C:H5'	2.17	0.45
26:F:65:LEU:CD2	26:F:87:LYS:HD2	2.46	0.45
29:T:43:ILE:CG2	29:T:58:VAL:HG21	2.47	0.45
29:T:57:VAL:HG22	29:T:58:VAL:N	2.27	0.45
3:I:27:LEU:HB2	3:I:32:VAL:HG21	1.98	0.45
25:U:85:ARG:CZ	25:U:86:PHE:H	2.29	0.45
21:N:107:ASN:HD21	24:S:40:ASN:ND2	2.08	0.45
3:I:19:PRO:HB2	3:I:22:PRO:HD2	1.99	0.45
2:B:2282:G:O3'	2:B:2283:C:H4'	2.16	0.45
18:X:56:LEU:O	18:X:57:LEU:CB	2.65	0.45
17:M:101:VAL:HG13	17:M:101:VAL:O	2.17	0.45
2:B:2065:C:H2'	2:B:2066:C:H6	1.82	0.45
32:6:10:THR:HG22	32:6:14:MET:HE3	1.97	0.45
24:S:69:LEU:HD12	24:S:69:LEU:HA	1.81	0.45
2:B:546:U:OP1	2:B:547:A:OP2	2.35	0.45
2:B:235:U:H2'	2:B:236:C:C6	2.52	0.45
14:V:23:ALA:O	14:V:24:ASN:HB2	2.16	0.45
2:B:1130:U:C2	2:B:2025:C:H5''	2.52	0.45
2:B:810:U:O4	16:L:30:THR:HG22	2.17	0.45
17:M:32:GLY:CA	17:M:104:GLU:HA	2.47	0.45
2:B:622:G:H2'	2:B:623:C:C6	2.52	0.45
2:B:1690:A:H2'	2:B:1691:C:O4'	2.17	0.45
2:B:1739:A:H2'	2:B:1740:G:O4'	2.17	0.45
2:B:2223:G:C2'	2:B:2224:G:H5'	2.47	0.45
2:B:696:G:O2'	2:B:697:G:H5'	2.17	0.45
5:D:61:THR:O	5:D:64:GLU:HB2	2.17	0.45
2:B:1992:G:N2	2:B:1996:C:O2'	2.50	0.45
26:F:134:GLN:HB3	26:F:149:ARG:HB2	1.98	0.45
4:C:175:LEU:HG	4:C:181:ARG:HB2	1.99	0.45
7:P:21:PRO:O	7:P:91:VAL:HG21	2.17	0.45
8:E:32:VAL:HG21	16:L:6:LEU:CD1	2.46	0.45
29:T:30:ILE:O	29:T:85:VAL:HG23	2.17	0.45
29:T:34:VAL:HG21	29:T:43:ILE:CD1	2.47	0.45
29:T:53:VAL:HG12	29:T:54:GLU:N	2.31	0.45
27:G:32:LEU:CD2	27:G:33:THR:H	2.29	0.45
14:V:35:GLU:HG3	14:V:93:ARG:NH1	2.31	0.45
14:V:70:ILE:H	14:V:70:ILE:CD1	2.26	0.45
25:U:51:LEU:H	25:U:53:GLN:HE22	1.65	0.45
23:Q:73:ILE:HG13	23:Q:74:SER:N	2.32	0.45
2:B:320:A:OP1	8:E:130:LYS:HE3	2.16	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:P:13:LYS:CD	7:P:76:HIS:HA	2.46	0.45
12:1:34:GLU:CD	12:1:49:LYS:HD2	2.37	0.45
26:F:4:HIS:O	26:F:7:TYR:HB3	2.16	0.45
5:D:130:GLN:HG3	5:D:140:HIS:O	2.17	0.45
22:O:93:ASP:C	22:O:95:SER:N	2.70	0.45
23:Q:9:ALA:C	23:Q:11:ALA:N	2.71	0.45
18:X:56:LEU:C	18:X:58:ASN:H	2.20	0.45
2:B:1386:C:H2'	2:B:1387:A:H8	1.81	0.45
2:B:1844:C:OP1	4:C:254:LYS:HA	2.17	0.45
24:S:63:GLY:O	24:S:64:ALA:HB2	2.17	0.45
12:1:8:ILE:HG22	12:1:9:LYS:N	2.30	0.45
2:B:219:A:H2	2:B:234:U:O2	2.00	0.45
14:V:29:ILE:HD13	14:V:31:TYR:CE2	2.52	0.45
22:O:105:ALA:O	22:O:107:ALA:N	2.43	0.45
2:B:118:A:OP2	2:B:119:A:H2'	2.17	0.45
1:A:94:A:O2'	1:A:95:U:H5'	2.16	0.45
2:B:873:C:H4'	17:M:64:TRP:NE1	2.32	0.45
2:B:809:G:O2'	2:B:810:U:H5'	2.16	0.45
2:B:553:G:O2'	2:B:554:U:H5'	2.17	0.45
2:B:2100:G:C6	2:B:2190:G:C6	3.04	0.45
4:C:110:LYS:HB3	4:C:113:ASP:OD2	2.16	0.45
2:B:244:A:H2'	2:B:245:G:O4'	2.17	0.45
2:B:108:G:O2'	2:B:109:C:H5'	2.17	0.45
28:R:58:VAL:HG22	28:R:59:ILE:N	2.32	0.45
17:M:78:LEU:HB3	17:M:79:ALA:H	1.51	0.45
2:B:2267:A:H5''	2:B:2268:A:C5'	2.46	0.44
31:W:43:LYS:HE2	31:W:68:PHE:HE1	1.82	0.44
2:B:2300:C:H2'	2:B:2301:C:C6	2.52	0.44
5:D:31:ALA:HA	5:D:97:SER:HA	1.99	0.44
5:D:32:ASN:HB3	5:D:50:VAL:CG2	2.47	0.44
14:V:42:LEU:CD2	14:V:42:LEU:H	2.11	0.44
6:K:71:ARG:HH21	6:K:106:GLU:HG3	1.81	0.44
14:V:72:VAL:CG1	14:V:94:ALA:H	2.18	0.44
20:J:102:GLU:O	20:J:105:VAL:HG22	2.17	0.44
2:B:276:U:HO2'	2:B:277:G:H5'	1.80	0.44
2:B:2543:G:H21	2:B:2646:C:H5''	1.82	0.44
2:B:2284:A:OP1	12:1:3:GLY:O	2.35	0.44
2:B:2389:G:H5''	2:B:2390:U:O4'	2.16	0.44
23:Q:8:ILE:O	23:Q:11:ALA:HB3	2.17	0.44
2:B:171:U:H2'	2:B:172:A:H8	1.80	0.44
4:C:94:LEU:HG	4:C:94:LEU:O	2.17	0.44
3:I:12:VAL:HG23	3:I:41:PHE:CE2	2.53	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:N:103:ARG:HG3	21:N:104:ALA:H	1.82	0.44
2:B:833:A:H2'	2:B:834:G:H8	1.81	0.44
2:B:522:A:H2'	2:B:523:C:H6	1.77	0.44
2:B:1746:A:H2'	2:B:1747:U:C6	2.52	0.44
2:B:911:A:N6	17:M:11:LYS:O	2.50	0.44
14:V:44:HIS:HE1	14:V:86:LEU:H	1.65	0.44
2:B:443:A:H1'	2:B:1201:U:O4'	2.16	0.44
16:L:28:GLY:O	16:L:29:LYS:C	2.55	0.44
30:Z:36:HIS:O	30:Z:48:THR:HA	2.17	0.44
7:P:4:ILE:O	7:P:6:GLN:N	2.49	0.44
11:4:9:LYS:O	11:4:10:LEU:HD23	2.17	0.44
7:P:21:PRO:HG3	7:P:93:LYS:O	2.17	0.44
27:G:10:VAL:HG21	27:G:44:HIS:HE1	1.82	0.44
26:F:87:LYS:CG	26:F:88:VAL:H	2.27	0.44
2:B:1063:G:O4'	3:I:134:SER:O	2.34	0.44
19:H:57:LYS:CG	19:H:58:LEU:H	2.23	0.44
2:B:1439:A:H1'	2:B:1553:A:N6	2.32	0.44
7:P:62:LYS:HB3	7:P:69:VAL:CG2	2.47	0.44
28:R:2:TYR:N	28:R:42:ALA:HB2	2.32	0.44
21:N:73:ASN:HA	21:N:76:VAL:CG2	2.46	0.44
26:F:19:PHE:CE1	26:F:164:GLU:HA	2.52	0.44
27:G:88:LEU:HD13	27:G:93:TYR:HB3	2.00	0.44
6:K:43:ILE:CG2	6:K:46:ALA:HB2	2.47	0.44
17:M:69:PRO:O	17:M:71:LYS:N	2.49	0.44
2:B:1571:A:H2'	2:B:1572:A:C8	2.53	0.44
2:B:1418:G:H1'	2:B:1580:A:N6	2.32	0.44
2:B:234:U:H2'	2:B:235:U:H6	1.82	0.44
2:B:2052:A:O4'	5:D:147:GLY:HA3	2.17	0.44
2:B:2514:U:H2'	2:B:2515:C:H6	1.81	0.44
1:A:14:U:H1'	1:A:106:G:N2	2.33	0.44
2:B:873:C:H4'	17:M:64:TRP:HE1	1.81	0.44
22:O:38:GLN:HB2	22:O:47:VAL:HG11	1.99	0.44
2:B:2825:G:H5''	2:B:2825:G:N3	2.32	0.44
2:B:1760:C:OP1	2:B:2712:C:H5	2.01	0.44
2:B:898:C:H2'	2:B:899:A:C1'	2.47	0.44
2:B:69:C:H2'	2:B:70:G:C8	2.53	0.44
2:B:1716:U:H2'	2:B:1717:A:H8	1.82	0.44
2:B:2341:G:H2'	2:B:2342:C:H6	1.81	0.44
2:B:2526:G:H2'	2:B:2527:C:C6	2.53	0.44
2:B:697:G:H2'	2:B:698:C:C6	2.51	0.44
2:B:1882:U:O2'	2:B:1883:U:H5'	2.17	0.44
2:B:1838:C:N4	2:B:1898:U:H2'	2.32	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1117:C:H2'	2:B:1118:C:C6	2.52	0.44
22:O:18:LEU:HD23	22:O:25:ARG:HD3	1.99	0.44
2:B:730:A:H3'	35:B:4009:HOH:O	2.18	0.44
26:F:99:PHE:HA	26:F:102:LEU:HD11	1.99	0.44
26:F:31:GLU:HB3	26:F:156:THR:O	2.17	0.44
32:6:28:LEU:O	32:6:30:THR:HG23	2.17	0.44
32:6:60:ALA:HB2	32:6:66:LEU:HG	1.99	0.44
19:H:111:ALA:HB3	19:H:114:GLU:CG	2.48	0.44
19:H:114:GLU:HB3	19:H:134:VAL:N	2.32	0.44
11:4:25:VAL:HG11	11:4:35:GLN:HE21	1.80	0.44
20:J:98:GLU:HB3	20:J:124:VAL:HG21	1.99	0.44
8:E:128:ALA:O	8:E:133:LEU:HD12	2.18	0.44
7:P:100:ARG:C	7:P:101:GLU:HG3	2.36	0.44
2:B:160:A:H2'	2:B:161:A:C8	2.52	0.44
25:U:33:VAL:O	25:U:63:ALA:HA	2.18	0.44
2:B:2769:U:O2'	2:B:2770:G:H5'	2.17	0.44
2:B:2031:A:C6	2:B:2498:C:H1'	2.53	0.44
2:B:1221:C:H2'	2:B:1222:U:H6	1.82	0.44
2:B:2292:U:H2'	2:B:2293:G:H8	1.82	0.44
2:B:1906:G:OP2	2:B:1930:G:H8	2.00	0.44
2:B:1809:A:H2'	2:B:1810:A:C8	2.53	0.44
1:A:46:A:H2'	1:A:47:C:O4'	2.18	0.44
22:O:89:ASP:HA	22:O:116:GLN:HB3	2.00	0.44
3:I:109:ALA:HB1	3:I:124:MET:CG	2.47	0.44
2:B:781:A:OP1	4:C:216:ARG:NH2	2.49	0.44
2:B:1739:A:H2'	2:B:1740:G:H8	1.83	0.44
2:B:1979:U:O2'	2:B:1980:G:H5'	2.17	0.44
2:B:1669:A:C8	6:K:5:GLN:HG3	2.52	0.44
14:V:10:LYS:HG2	14:V:11:GLU:HG3	1.98	0.44
31:W:23:LYS:CG	31:W:24:ARG:N	2.79	0.44
19:H:32:PRO:HG3	30:Z:39:TRP:HB3	1.98	0.44
7:P:5:LYS:HZ1	7:P:9:GLN:HB3	1.82	0.44
7:P:103:THR:N	7:P:107:ALA:HB2	2.33	0.44
2:B:1797:G:O3'	4:C:255:LYS:O	2.35	0.44
8:E:134:LEU:CD2	8:E:161:ALA:HB2	2.46	0.44
21:N:51:LEU:O	21:N:54:LEU:HB3	2.17	0.44
21:N:62:ASN:O	21:N:66:ALA:HB2	2.18	0.44
2:B:663:G:OP1	16:L:17:LYS:HG2	2.18	0.44
2:B:2680:U:OP2	5:D:114:LYS:HD2	2.17	0.44
2:B:1923:U:H2'	2:B:1924:C:C5	2.53	0.44
25:U:81:ARG:HH21	25:U:81:ARG:HG3	1.81	0.44
32:6:10:THR:O	32:6:14:MET:HB2	2.17	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2230:G:H2'	2:B:2231:U:H6	1.83	0.44
1:A:28:C:H2'	1:A:29:A:O4'	2.17	0.44
2:B:1299:G:C4'	2:B:1301:A:H1'	2.47	0.44
2:B:1494:A:H2'	2:B:1495:A:C8	2.53	0.44
24:S:51:LEU:O	24:S:54:ALA:HB3	2.18	0.44
2:B:26:G:H1'	2:B:514:A:H61	1.83	0.44
2:B:2678:C:H2'	2:B:2679:A:O4'	2.18	0.44
2:B:2553:G:H2'	2:B:2554:U:C4'	2.47	0.44
7:P:33:GLU:HA	7:P:33:GLU:OE1	2.17	0.44
2:B:841:G:O2'	2:B:842:U:H5'	2.17	0.44
2:B:1704:C:O2'	2:B:1705:A:H5'	2.18	0.44
2:B:2270:A:H2'	2:B:2271:G:O4'	2.18	0.44
26:F:111:ARG:HH11	26:F:135:ILE:HG21	1.82	0.44
26:F:78:ILE:HA	26:F:79:ARG:HH11	1.83	0.44
5:D:97:SER:HB3	5:D:99:GLU:HG3	1.99	0.44
20:J:3:THR:HB	20:J:44:TYR:HE1	1.82	0.44
20:J:44:TYR:HA	23:Q:59:LEU:HD21	2.00	0.44
27:G:28:LYS:O	27:G:30:GLY:N	2.51	0.44
27:G:34:ARG:NH1	27:G:34:ARG:H	2.00	0.44
22:O:37:ALA:CB	22:O:78:VAL:HG21	2.47	0.44
31:W:37:VAL:HG11	31:W:38:ARG:NH1	2.32	0.44
2:B:2179:C:O2'	2:B:2180:U:H5'	2.18	0.44
2:B:2038:G:H2'	2:B:2039:U:C6	2.52	0.44
18:X:41:HIS:O	18:X:44:LYS:HB3	2.17	0.44
2:B:1373:A:H2'	2:B:1374:G:O4'	2.17	0.44
21:N:106:ASP:C	21:N:108:ALA:N	2.69	0.44
2:B:2079:U:H2'	2:B:2080:A:O4'	2.17	0.44
4:C:145:MET:HG3	4:C:152:GLN:CD	2.38	0.44
5:D:68:PHE:C	5:D:73:VAL:HB	2.37	0.44
25:U:46:LYS:HE3	25:U:47:PRO:O	2.18	0.44
2:B:485:C:O2'	2:B:486:C:H5'	2.18	0.44
2:B:1335:C:H2'	2:B:1336:A:H8	1.83	0.44
4:C:209:ALA:HA	4:C:212:TRP:CE2	2.53	0.44
32:6:2:THR:HG23	32:6:5:GLU:OE1	2.18	0.44
2:B:1185:G:H5''	2:B:1186:G:OP1	2.18	0.44
2:B:2676:C:O2'	2:B:2677:G:H5'	2.17	0.44
2:B:2331:G:N2	2:B:2336:A:C8	2.82	0.44
31:W:47:GLY:HA3	31:W:80:SER:CB	2.48	0.44
19:H:128:HIS:C	19:H:130:VAL:H	2.21	0.44
26:F:3:LEU:HD11	26:F:172:PHE:CE1	2.53	0.44
26:F:72:SER:CB	26:F:80:GLN:H	2.29	0.44
2:B:2262:U:H4'	2:B:2328:A:H2	1.83	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:142:A:H1'	29:T:2:ILE:HA	2.00	0.44
21:N:63:ARG:HA	21:N:80:PHE:CE2	2.52	0.44
32:6:113:ASP:HA	32:6:116:ARG:HE	1.81	0.44
5:D:136:ASN:HD21	5:D:139:SER:C	2.20	0.44
2:B:904:G:H2'	2:B:905:A:H8	1.81	0.44
5:D:105:LYS:HE3	5:D:176:ASP:HB3	1.99	0.44
2:B:2383:G:H2'	2:B:2384:U:C6	2.53	0.44
2:B:1221:C:H2'	2:B:1222:U:C6	2.52	0.44
24:S:55:ILE:HD12	24:S:107:VAL:HG11	2.00	0.44
2:B:1536:C:H1'	2:B:1537:G:N2	2.33	0.44
2:B:1789:A:H2'	2:B:1790:C:C6	2.53	0.44
1:A:74:U:H2'	1:A:75:G:O4'	2.18	0.44
2:B:2718:G:H4'	7:P:95:LYS:HB2	1.98	0.44
2:B:242:G:N2	2:B:254:G:H2'	2.32	0.44
2:B:1326:U:H2'	2:B:1327:A:H8	1.83	0.44
5:D:122:VAL:HA	5:D:127:PHE:N	2.31	0.44
10:0:47:TYR:CZ	10:0:52:LYS:HG3	2.52	0.44
2:B:1998:A:H2'	2:B:1999:C:H6	1.82	0.44
6:K:13:ASN:ND2	6:K:98:ARG:H	2.16	0.44
2:B:1480:C:O2'	2:B:1481:U:H5'	2.18	0.44
2:B:2843:G:O2'	2:B:2844:G:H5'	2.16	0.44
26:F:33:ILE:HG21	26:F:98:PHE:HE2	1.83	0.44
26:F:3:LEU:HD12	26:F:96:TRP:HD1	1.81	0.44
5:D:106:LYS:HB3	5:D:206:ALA:CB	2.48	0.44
11:4:36:ARG:O	11:4:37:GLN:C	2.55	0.44
2:B:1072:C:N3	2:B:1092:C:N4	2.64	0.44
28:R:18:GLN:O	28:R:98:ILE:HD13	2.18	0.44
2:B:1064:C:O2'	2:B:1065:U:H5'	2.18	0.44
26:F:7:TYR:O	26:F:12:VAL:HG23	2.18	0.44
17:M:97:GLN:OE1	17:M:97:GLN:N	2.51	0.44
4:C:249:VAL:O	4:C:250:GLN:C	2.56	0.44
2:B:1465:G:H2'	2:B:1466:U:C6	2.52	0.44
2:B:1296:G:O2'	2:B:1297:C:H5'	2.18	0.44
21:N:96:ARG:HG2	21:N:98:LEU:CD2	2.47	0.44
3:I:14:ALA:HA	3:I:45:THR:HG21	1.98	0.44
5:D:181:ASP:OD2	5:D:184:ARG:HD2	2.17	0.44
2:B:1356:G:H2'	2:B:1357:C:C6	2.53	0.44
13:3:12:ARG:NE	16:L:58:TYR:O	2.51	0.44
2:B:494:G:OP1	24:S:8:ARG:HD3	2.17	0.44
2:B:2322:A:N6	2:B:2333:A:N6	2.65	0.44
18:X:59:GLU:CD	18:X:60:LYS:H	2.21	0.44
31:W:28:GLU:H	31:W:31:LEU:HG	1.83	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:L:124:GLY:CA	16:L:143:GLU:HG3	2.47	0.44
26:F:97:GLU:O	26:F:100:GLU:HB3	2.17	0.44
27:G:24:THR:HB	27:G:32:LEU:HD21	1.99	0.44
27:G:32:LEU:O	27:G:33:THR:HG23	2.18	0.44
4:C:169:ALA:O	4:C:185:ALA:HB3	2.18	0.44
3:I:11:GLN:NE2	3:I:74:PRO:HG2	2.32	0.44
2:B:588:U:H1'	8:E:85:PHE:CG	2.53	0.44
18:X:17:GLU:O	18:X:20:ASN:HB2	2.17	0.44
2:B:783:A:H2'	2:B:784:G:O5'	2.17	0.44
8:E:191:ASP:O	8:E:195:GLN:HG3	2.18	0.44
10:O:39:ARG:O	10:O:40:HIS:HB2	2.18	0.44
2:B:2832:U:H5''	2:B:2834:G:H5'	2.00	0.44
25:U:64:ILE:CG1	25:U:65:GLN:N	2.80	0.44
2:B:2247:A:O2'	2:B:2248:C:H5'	2.16	0.44
2:B:2617:U:O2'	2:B:2618:G:H5'	2.18	0.44
1:A:14:U:H5'	1:A:71:C:O4'	2.18	0.44
2:B:1100:C:H2'	2:B:1101:U:C6	2.52	0.44
9:Y:4:ILE:CD1	9:Y:58:GLU:HG3	2.48	0.44
3:I:63:ASP:O	3:I:65:SER:N	2.50	0.44
10:O:12:ARG:HD2	10:O:16:ARG:NH2	2.32	0.44
2:B:2667:C:H2'	2:B:2668:G:O4'	2.16	0.44
2:B:853:C:H2'	2:B:854:C:C6	2.52	0.44
31:W:50:VAL:O	31:W:52:CYS:N	2.51	0.44
21:N:100:CYS:O	21:N:101:GLY:O	2.36	0.44
2:B:460:A:H2'	2:B:461:C:O4'	2.17	0.44
32:6:19:GLU:HA	32:6:22:GLU:OE2	2.18	0.44
8:E:147:LEU:HD21	8:E:179:SER:HB3	2.00	0.44
2:B:1064:C:H2'	2:B:1065:U:O4'	2.18	0.44
19:H:49:ALA:O	19:H:53:GLU:N	2.51	0.44
19:H:57:LYS:HZ1	19:H:58:LEU:HD13	1.82	0.44
6:K:60:ALA:HA	6:K:87:LEU:HG	1.99	0.44
20:J:17:VAL:HG22	20:J:55:ILE:HD11	2.00	0.44
2:B:1805:A:H5''	4:C:247:TRP:CE2	2.52	0.44
8:E:182:ALA:O	8:E:183:PHE:HB2	2.17	0.44
5:D:24:VAL:HG23	5:D:189:VAL:O	2.18	0.44
2:B:2073:C:C5'	4:C:227:VAL:HG12	2.48	0.44
2:B:2900:A:H2'	2:B:2901:C:C6	2.53	0.44
2:B:2241:A:H2'	2:B:2242:G:C8	2.53	0.44
1:A:60:C:H2'	1:A:61:G:H8	1.82	0.44
7:P:47:ILE:HG13	7:P:48:ALA:H	1.82	0.44
2:B:1692:U:H2'	2:B:1694:C:C5	2.53	0.44
21:N:102:PHE:CD1	21:N:102:PHE:N	2.86	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1577:C:H2'	2:B:1578:U:O4'	2.18	0.44
3:I:4:VAL:O	3:I:4:VAL:HG13	2.17	0.44
3:I:38:CYS:O	3:I:42:ASN:ND2	2.51	0.44
2:B:1755:A:H2'	2:B:1756:G:H5'	2.00	0.44
16:L:85:VAL:HG22	16:L:94:THR:HG21	2.00	0.43
26:F:33:ILE:HG22	26:F:90:LEU:HD23	1.99	0.43
9:Y:6:ILE:O	9:Y:34:THR:HG23	2.17	0.43
28:R:20:VAL:HG12	28:R:22:LEU:HD23	2.00	0.43
28:R:11:GLN:NE2	28:R:39:LEU:HD11	2.32	0.43
2:B:1309:G:H4'	15:2:7:PRO:CB	2.35	0.43
6:K:119:ALA:O	6:K:120:PRO:O	2.35	0.43
2:B:298:G:H1'	2:B:340:A:H61	1.83	0.43
20:J:12:LYS:O	20:J:13:ARG:HB2	2.18	0.43
2:B:2074:U:H2'	2:B:2075:U:C6	2.53	0.43
2:B:2803:G:H2'	2:B:2804:U:H6	1.81	0.43
2:B:1966:A:N3	2:B:2592:G:O2'	2.41	0.43
2:B:2532:G:N2	2:B:2663:G:O2'	2.51	0.43
12:1:9:LYS:HD3	12:1:9:LYS:H	1.82	0.43
2:B:1930:G:HO2'	2:B:1968:G:H1	1.51	0.43
2:B:2747:G:O6	2:B:2754:U:H2'	2.18	0.43
2:B:2183:A:C6	2:B:2184:A:N6	2.86	0.43
2:B:2024:G:O2'	2:B:2025:C:H5'	2.18	0.43
2:B:1180:U:H2'	2:B:1181:U:O4'	2.17	0.43
26:F:9:ASP:O	26:F:13:LYS:HG2	2.18	0.43
17:M:26:VAL:HG21	17:M:133:LYS:HA	2.00	0.43
2:B:1716:U:H2'	2:B:1717:A:C8	2.52	0.43
2:B:2198:A:H4'	2:B:2199:A:OP1	2.18	0.43
2:B:1187:G:H5''	28:R:83:TYR:CE2	2.53	0.43
2:B:509:C:H5''	2:B:510:C:OP2	2.18	0.43
2:B:2412:A:H2'	2:B:2413:G:O4'	2.18	0.43
18:X:40:SER:C	18:X:42:LEU:N	2.72	0.43
2:B:1891:G:H2'	2:B:1892:C:C6	2.52	0.43
19:H:90:LEU:HD13	19:H:123:ARG:CB	2.48	0.43
26:F:127:TYR:HB2	26:F:155:ILE:CD1	2.46	0.43
26:F:134:GLN:C	26:F:136:ILE:H	2.21	0.43
11:4:7:VAL:HB	11:4:36:ARG:O	2.17	0.43
2:B:2748:A:H5''	27:G:3:VAL:HG11	1.98	0.43
23:Q:73:ILE:CG2	23:Q:78:PHE:HB2	2.48	0.43
20:J:74:TYR:HE2	20:J:103:ILE:HD11	1.82	0.43
7:P:77:SER:O	7:P:80:VAL:HG12	2.18	0.43
13:3:44:ARG:N	13:3:45:PRO:CD	2.79	0.43
20:J:38:GLY:HA3	20:J:50:THR:O	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1408:G:H2'	2:B:1409:U:H6	1.82	0.43
2:B:93:G:O2'	2:B:94:A:H5'	2.18	0.43
2:B:987:C:H2'	2:B:988:A:O4'	2.18	0.43
2:B:246:C:H2'	2:B:247:G:C5'	2.46	0.43
2:B:1506:U:H2'	2:B:1507:C:C6	2.54	0.43
2:B:534:U:H5'	23:Q:41:ALA:CB	2.48	0.43
29:T:18:GLU:C	29:T:20:ALA:H	2.20	0.43
2:B:1205:A:N1	8:E:165:HIS:HB2	2.33	0.43
1:A:74:U:C4	1:A:75:G:C5	3.07	0.43
2:B:1746:A:O2'	2:B:1747:U:H5'	2.18	0.43
2:B:2882:A:OP1	21:N:96:ARG:CD	2.66	0.43
2:B:1733:G:H2'	2:B:1734:G:H8	1.80	0.43
25:U:94:PHE:HB2	25:U:101:THR:H	1.83	0.43
2:B:1360:G:H2'	2:B:1361:G:C5'	2.48	0.43
2:B:1356:G:H2'	2:B:1357:C:H6	1.82	0.43
3:I:48:ILE:HG22	3:I:49:GLU:HG2	1.99	0.43
8:E:4:VAL:C	8:E:6:LYS:H	2.22	0.43
2:B:827:U:H5'	2:B:828:U:O5'	2.17	0.43
3:I:63:ASP:C	3:I:65:SER:N	2.71	0.43
3:I:103:ALA:O	3:I:107:GLU:HG3	2.18	0.43
2:B:2419:U:OP2	13:3:32:LEU:HD13	2.18	0.43
2:B:76:C:O2'	2:B:77:G:H5'	2.18	0.43
2:B:211:C:O2'	2:B:212:G:H5'	2.18	0.43
5:D:21:SER:CB	6:K:73:ASP:HA	2.48	0.43
2:B:1040:A:H2'	2:B:1041:G:H8	1.82	0.43
2:B:1342:A:HO2'	2:B:1344:U:P	2.41	0.43
2:B:901:C:H2'	2:B:902:C:C6	2.54	0.43
2:B:2305:U:C5	26:F:151:LEU:HA	2.53	0.43
26:F:78:ILE:HD12	26:F:79:ARG:HH11	1.83	0.43
30:Z:7:VAL:HG23	30:Z:67:VAL:HG13	2.01	0.43
32:6:68:VAL:HG11	32:6:79:ILE:HB	2.01	0.43
32:6:68:VAL:HG21	32:6:99:LEU:HD12	2.00	0.43
8:E:188:MET:HG2	8:E:193:VAL:HG22	2.00	0.43
8:E:31:VAL:HG21	8:E:104:ALA:HB2	1.99	0.43
18:X:33:ALA:CB	29:T:14:PRO:HD2	2.46	0.43
25:U:73:ASN:HB2	25:U:95:PHE:CD2	2.53	0.43
27:G:6:ALA:HA	27:G:7:PRO:HD3	1.84	0.43
31:W:37:VAL:HG13	31:W:55:ASP:C	2.38	0.43
4:C:238:ASN:O	4:C:239:PHE:HB2	2.18	0.43
2:B:2543:G:H2'	2:B:2544:G:O4'	2.18	0.43
2:B:591:U:O2'	2:B:592:A:H5'	2.18	0.43
3:I:29:GLN:HA	3:I:29:GLN:NE2	2.32	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2282:G:H5''	2:B:2283:C:O4'	2.19	0.43
23:Q:9:ALA:O	23:Q:11:ALA:N	2.51	0.43
2:B:265:A:H2'	2:B:266:G:O4'	2.17	0.43
25:U:9:GLU:HG3	25:U:21:ARG:HD2	2.00	0.43
30:Z:65:ASP:O	30:Z:69:ALA:N	2.51	0.43
16:L:40:SER:O	16:L:41:ARG:CB	2.66	0.43
2:B:193:U:O3'	2:B:803:U:H4'	2.17	0.43
2:B:443:A:C2	2:B:1245:G:N3	2.86	0.43
5:D:121:THR:HB	5:D:127:PHE:CD1	2.52	0.43
4:C:86:ARG:CZ	4:C:86:ARG:HB3	2.48	0.43
4:C:229:HIS:ND1	4:C:230:PRO:HD2	2.32	0.43
2:B:2016:U:H1'	10:O:2:VAL:HG11	2.00	0.43
2:B:35:G:H2'	2:B:36:G:O4'	2.17	0.43
19:H:90:LEU:HD12	19:H:90:LEU:N	2.33	0.43
5:D:109:VAL:HG11	5:D:193:VAL:CG1	2.49	0.43
5:D:55:LYS:NZ	5:D:60:VAL:HG13	2.33	0.43
11:4:8:LYS:HG3	11:4:9:LYS:HD3	2.01	0.43
23:Q:63:ARG:NH2	23:Q:96:ASP:HA	2.33	0.43
23:Q:91:ARG:NH2	23:Q:93:ILE:HG21	2.34	0.43
6:K:47:ILE:HG23	6:K:48:PRO:CD	2.48	0.43
27:G:8:VAL:HG22	27:G:68:ARG:HH11	1.82	0.43
3:I:32:VAL:HG22	3:I:60:VAL:CG2	2.49	0.43
6:K:64:ARG:HG2	6:K:79:PHE:CG	2.54	0.43
7:P:62:LYS:O	7:P:63:ILE:CB	2.66	0.43
8:E:146:VAL:HB	8:E:148:ILE:HD11	1.99	0.43
29:T:1:MET:HB2	29:T:2:ILE:H	1.60	0.43
21:N:73:ASN:O	21:N:76:VAL:HG22	2.17	0.43
2:B:2498:C:H3'	35:B:3999:HOH:O	2.18	0.43
21:N:114:GLU:HG2	21:N:115:LEU:O	2.19	0.43
14:V:53:LYS:HZ3	14:V:54:ALA:HB3	1.82	0.43
25:U:98:ASN:O	25:U:99:SER:C	2.55	0.43
2:B:2901:C:O2	2:B:2901:C:H2'	2.17	0.43
22:O:106:LEU:HG	22:O:107:ALA:N	2.33	0.43
2:B:314:C:O2'	2:B:315:G:H5'	2.18	0.43
2:B:1131:G:N7	2:B:2025:C:H4'	2.33	0.43
2:B:2025:C:H5'	5:D:154:LYS:NZ	2.34	0.43
2:B:304:U:H2'	2:B:305:C:C6	2.54	0.43
7:P:52:ARG:HG2	7:P:52:ARG:NH1	2.32	0.43
2:B:819:A:OP2	2:B:1187:G:N2	2.49	0.43
2:B:1573:G:H2'	2:B:1574:C:H5'	2.00	0.43
2:B:2683:C:H2'	2:B:2684:U:C6	2.53	0.43
2:B:745:G:H5'	2:B:746:U:OP2	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:F:151:LEU:HD12	26:F:152:ASP:N	2.33	0.43
5:D:11:MET:H	5:D:25:THR:HA	1.83	0.43
7:P:7:LEU:HA	7:P:10:GLU:CD	2.37	0.43
7:P:24:THR:HG22	7:P:43:GLU:OE1	2.18	0.43
8:E:5:LEU:HG	8:E:11:ALA:O	2.19	0.43
5:D:185:ASN:O	5:D:186:LEU:HD12	2.19	0.43
6:K:71:ARG:HG3	6:K:105:ARG:HH21	1.82	0.43
27:G:7:PRO:O	27:G:8:VAL:CB	2.66	0.43
4:C:123:ILE:HD12	4:C:135:PRO:CD	2.48	0.43
20:J:16:TYR:O	20:J:55:ILE:HG12	2.18	0.43
5:D:46:ARG:HB3	5:D:46:ARG:HH11	1.83	0.43
4:C:91:ALA:HB3	4:C:105:ALA:HB2	2.00	0.43
2:B:1914:C:N3	32:6:23:HIS:CE1	2.86	0.43
6:K:115:ILE:C	6:K:117:SER:H	2.21	0.43
6:K:99:ILE:HG12	6:K:115:ILE:HG13	2.00	0.43
28:R:2:TYR:HB2	28:R:42:ALA:CB	2.43	0.43
12:1:47:ILE:HD12	12:1:47:ILE:H	1.83	0.43
2:B:139:U:O2'	29:T:1:MET:HA	2.19	0.43
21:N:82:GLU:O	21:N:85:PRO:HD2	2.18	0.43
25:U:62:ALA:O	25:U:63:ALA:HB3	2.19	0.43
8:E:70:SER:HB2	8:E:78:TRP:CZ2	2.53	0.43
24:S:17:VAL:O	24:S:19:LEU:N	2.51	0.43
29:T:5:GLU:HA	29:T:8:LEU:HB2	1.99	0.43
23:Q:24:TYR:CG	23:Q:25:GLY:N	2.85	0.43
2:B:866:A:C2'	2:B:867:C:H5'	2.48	0.43
2:B:1824:G:HO2'	2:B:1825:U:H5'	1.83	0.43
2:B:766:U:H2'	2:B:767:U:H6	1.81	0.43
2:B:2095:A:O2'	2:B:2096:C:H5'	2.18	0.43
13:3:36:ALA:O	13:3:39:ARG:HB3	2.18	0.43
7:P:114:ASN:HD22	7:P:114:ASN:HA	1.62	0.43
17:M:20:LEU:HD22	17:M:20:LEU:N	2.34	0.43
15:2:13:ASN:O	15:2:17:GLY:N	2.51	0.43
2:B:1567:G:H2'	4:C:84:PRO:HG3	2.01	0.43
1:A:41:G:O6	26:F:68:LYS:HD3	2.18	0.43
31:W:70:VAL:C	31:W:71:LYS:HD2	2.39	0.43
31:W:79:ILE:HG22	31:W:80:SER:N	2.34	0.43
26:F:101:ARG:HH12	26:F:138:PRO:CB	2.30	0.43
19:H:134:VAL:CG1	19:H:135:HIS:H	2.03	0.43
11:4:3:VAL:HG23	11:4:4:ARG:N	2.33	0.43
23:Q:87:VAL:HG12	23:Q:89:ILE:HD13	2.01	0.43
8:E:108:ILE:HG13	8:E:181:ILE:HD11	2.00	0.43
18:X:6:LEU:H	18:X:6:LEU:HD22	1.83	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:I:126:ARG:HA	3:I:129:GLU:OE2	2.18	0.43
6:K:99:ILE:CD1	6:K:118:LEU:HD22	2.42	0.43
20:J:73:VAL:O	20:J:74:TYR:HB2	2.18	0.43
16:L:78:ARG:HB2	16:L:113:ALA:HB2	2.00	0.43
5:D:114:LYS:HE3	5:D:116:LYS:CG	2.49	0.43
2:B:2281:A:O2'	2:B:2282:G:H5'	2.18	0.43
2:B:265:A:O2'	2:B:266:G:C4'	2.65	0.43
2:B:286:U:H2'	2:B:287:G:C8	2.53	0.43
23:Q:24:TYR:CD1	23:Q:25:GLY:N	2.87	0.43
2:B:6:A:O2'	2:B:7:G:H5'	2.19	0.43
2:B:523:C:H5''	2:B:540:C:O2'	2.17	0.43
2:B:2751:G:OP2	27:G:2:ARG:HD2	2.18	0.43
2:B:2659:G:C2	2:B:2661:G:H5''	2.54	0.43
15:2:43:THR:O	15:2:44:VAL:C	2.55	0.43
5:D:4:LEU:HD23	5:D:101:PHE:CE1	2.54	0.43
1:A:76:G:O2'	1:A:77:U:H5'	2.19	0.43
2:B:2635:A:C5'	5:D:79:LEU:HB2	2.48	0.43
2:B:2496:C:OP1	17:M:82:MET:HB2	2.18	0.43
31:W:23:LYS:C	31:W:66:VAL:HB	2.39	0.43
26:F:69:ALA:HB3	26:F:81:GLY:O	2.18	0.43
5:D:108:ASP:OD2	5:D:206:ALA:HA	2.17	0.43
7:P:6:GLN:HA	7:P:9:GLN:CD	2.39	0.43
23:Q:93:ILE:HG23	23:Q:94:LEU:N	2.34	0.43
6:K:105:ARG:N	6:K:105:ARG:HD3	2.16	0.43
4:C:255:LYS:C	4:C:256:THR:HG23	2.39	0.43
2:B:666:A:H2'	2:B:667:U:C6	2.54	0.43
21:N:51:LEU:HD21	21:N:70:THR:CG2	2.49	0.43
2:B:2283:C:H2'	2:B:2284:A:H5'	2.01	0.43
2:B:182:A:O2'	2:B:183:C:H5'	2.19	0.43
2:B:308:G:H2'	2:B:309:A:O4'	2.19	0.43
2:B:2784:U:H2'	2:B:2785:C:C6	2.54	0.43
14:V:26:PHE:CE2	14:V:44:HIS:HA	2.53	0.43
2:B:2707:U:H2'	2:B:2708:G:C8	2.53	0.43
2:B:2875:C:H2'	2:B:2876:G:C8	2.53	0.43
8:E:30:GLN:HG2	8:E:30:GLN:O	2.19	0.43
2:B:2405:G:HO2'	2:B:2406:A:P	2.42	0.43
15:2:37:LYS:HD3	15:2:39:ARG:CD	2.48	0.43
32:6:119:ARG:O	32:6:122:ALA:HB3	2.19	0.43
2:B:997:G:H5'	23:Q:92:LYS:HZ3	1.83	0.43
2:B:453:A:H5''	35:B:3796:HOH:O	2.19	0.43
2:B:2686:G:H2'	2:B:2687:U:C6	2.54	0.43
32:6:22:GLU:O	32:6:25:LEU:HB2	2.19	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:T:40:LYS:HE3	29:T:59:ASN:HA	2.00	0.43
6:K:71:ARG:CG	6:K:105:ARG:HH21	2.32	0.43
6:K:72:PRO:O	6:K:74:GLY:N	2.52	0.43
32:6:16:LYS:N	32:6:16:LYS:HE3	2.34	0.43
20:J:36:LEU:HD21	20:J:122:LEU:HD13	2.00	0.43
2:B:141:G:OP2	2:B:142:A:N6	2.52	0.43
2:B:671:C:O2'	2:B:672:C:H5'	2.19	0.43
2:B:716:A:H2'	2:B:717:C:O4'	2.17	0.43
2:B:2038:G:H2'	2:B:2039:U:O4'	2.19	0.43
2:B:2072:C:H2'	2:B:2073:C:H6	1.84	0.43
17:M:40:ARG:HB2	17:M:93:VAL:HG21	1.97	0.43
13:3:31:ILE:HG23	13:3:31:ILE:O	2.19	0.43
2:B:1912:A:H3'	2:B:1916:A:N6	2.34	0.43
7:P:23:ASP:HA	7:P:88:ARG:HA	2.01	0.43
3:I:83:ALA:N	3:I:100:ILE:HD11	2.33	0.43
2:B:2463:C:O2'	2:B:2464:G:H5'	2.19	0.43
2:B:2104:C:H2'	2:B:2105:U:C6	2.54	0.43
2:B:1507:C:H5'	2:B:1508:A:OP2	2.19	0.43
2:B:1568:G:H4'	4:C:58:LYS:HG2	1.99	0.43
12:1:29:LYS:N	12:1:30:PRO:HD3	2.33	0.43
1:A:103:U:O2'	1:A:104:A:H5'	2.19	0.43
10:0:39:ARG:HH11	10:0:39:ARG:HG3	1.83	0.43
2:B:524:G:O2'	2:B:525:U:H5'	2.19	0.43
2:B:795:C:O2'	2:B:796:C:H5'	2.19	0.43
32:6:130:ARG:NH1	32:6:130:ARG:HG3	2.34	0.43
2:B:2852:G:H2'	2:B:2853:C:H6	1.83	0.43
2:B:941:A:H2	2:B:1189:A:C2	2.36	0.43
2:B:1523:U:H5''	2:B:1524:G:C8	2.54	0.43
5:D:3:GLY:C	5:D:4:LEU:HD22	2.39	0.43
6:K:13:ASN:HD21	6:K:97:THR:CG2	2.31	0.43
2:B:901:C:H2'	2:B:902:C:H6	1.83	0.43
28:R:55:ASP:N	28:R:55:ASP:OD2	2.51	0.43
16:L:125:LEU:HB2	16:L:143:GLU:OE2	2.18	0.43
16:L:93:ASN:O	16:L:95:LEU:HD12	2.19	0.43
8:E:196:VAL:O	8:E:200:LEU:HD23	2.18	0.43
19:H:94:ILE:O	19:H:121:VAL:HG11	2.18	0.43
9:Y:8:GLN:HB3	9:Y:31:ILE:C	2.39	0.43
11:4:2:LYS:O	11:4:35:GLN:HA	2.18	0.43
5:D:8:LYS:HG2	5:D:9:VAL:N	2.34	0.43
29:T:39:THR:HG23	29:T:42:GLU:H	1.80	0.43
2:B:2749:A:C6	2:B:2750:A:C6	3.07	0.43
27:G:51:PHE:CE2	27:G:68:ARG:HG2	2.54	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:C:131:MET:HA	4:C:134:ILE:CG1	2.47	0.43
2:B:2543:G:H2'	2:B:2544:G:C8	2.54	0.43
27:G:148:ARG:HG2	27:G:163:TYR:CE1	2.53	0.43
20:J:41:LYS:HD2	20:J:50:THR:O	2.19	0.43
2:B:1195:G:O2'	2:B:1196:C:H5'	2.18	0.43
2:B:30:G:OP1	23:Q:4:LYS:HD2	2.18	0.43
19:H:72:ILE:O	19:H:72:ILE:HG23	2.19	0.43
28:R:27:ILE:HG13	28:R:33:VAL:HG11	2.01	0.43
23:Q:109:VAL:CG1	23:Q:113:LYS:HE3	2.46	0.43
27:G:91:VAL:HG23	27:G:92:GLY:H	1.83	0.43
2:B:4:U:H2'	2:B:5:A:C8	2.54	0.43
2:B:2649:C:O2'	2:B:2650:U:H5'	2.18	0.43
22:O:67:ASN:HB3	22:O:70:ALA:HB2	1.99	0.43
14:V:51:GLN:HB2	14:V:57:TYR:OH	2.19	0.43
2:B:2338:C:H2'	2:B:2339:C:H6	1.83	0.43
2:B:372:G:N2	2:B:401:A:OP2	2.52	0.43
24:S:81:SER:CB	24:S:99:ARG:HA	2.49	0.43
14:V:10:LYS:C	14:V:11:GLU:HG3	2.39	0.43
2:B:875:G:H2'	2:B:876:C:N3	2.34	0.43
1:A:19:C:H2'	1:A:20:G:H8	1.84	0.43
31:W:30:VAL:HG21	31:W:59:PHE:CZ	2.53	0.43
7:P:91:VAL:HG21	7:P:96:LEU:HD21	2.01	0.43
25:U:48:VAL:HG22	25:U:48:VAL:O	2.17	0.43
25:U:48:VAL:O	25:U:50:ALA:N	2.52	0.43
2:B:1723:G:C4	2:B:1724:G:C8	3.07	0.43
6:K:63:VAL:HG11	6:K:103:VAL:HG12	2.01	0.43
2:B:675:A:P	8:E:60:TRP:HZ2	2.42	0.43
2:B:657:U:H2'	2:B:658:U:C6	2.54	0.43
2:B:92:U:H2'	2:B:93:G:O4'	2.19	0.43
25:U:3:LYS:HD3	25:U:82:VAL:HB	2.01	0.43
32:6:7:TYR:HB3	32:6:164:ILE:HD11	2.01	0.43
32:6:108:GLU:O	32:6:111:ARG:HB3	2.18	0.43
21:N:24:MET:CG	21:N:44:LEU:HD22	2.49	0.43
2:B:2814:A:H4'	10:O:25:THR:HG21	1.99	0.43
2:B:1275:A:C2	2:B:1276:A:H1'	2.53	0.43
9:Y:43:ILE:O	9:Y:47:ILE:HG12	2.18	0.43
6:K:24:VAL:HG13	6:K:33:ALA:HB2	2.00	0.43
4:C:149:LYS:HG2	4:C:152:GLN:NE2	2.34	0.43
2:B:2547:A:H5'	2:B:2566:A:C2	2.54	0.43
24:S:7:HIS:HB2	24:S:50:VAL:CG2	2.49	0.43
2:B:2714:G:H2'	2:B:2715:C:H6	1.83	0.43
2:B:941:A:H2	2:B:1189:A:H2	1.66	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:D:23:PRO:HB2	5:D:190:LYS:O	2.19	0.43
21:N:102:PHE:N	21:N:102:PHE:HD1	2.17	0.43
1:A:81:G:H2'	1:A:82:U:C6	2.54	0.43
5:D:33:ARG:CZ	5:D:74:GLU:HB3	2.48	0.43
2:B:1376:C:O2'	2:B:1377:G:H5'	2.19	0.43
23:Q:111:LYS:HD3	28:R:48:LYS:HZ2	1.83	0.43
2:B:1742:U:O2'	2:B:1743:G:H5'	2.19	0.43
2:B:381:G:O2'	2:B:382:A:H5'	2.19	0.43
16:L:82:LEU:C	16:L:84:LYS:N	2.72	0.42
26:F:102:LEU:HD13	26:F:102:LEU:C	2.40	0.42
32:6:31:GLY:O	32:6:33:ALA:N	2.52	0.42
32:6:69:GLN:CD	32:6:98:ALA:HB2	2.38	0.42
5:D:55:LYS:H	5:D:75:ALA:HB1	1.84	0.42
2:B:2471:A:O2'	2:B:2472:G:O5'	2.36	0.42
23:Q:87:VAL:O	23:Q:88:GLU:O	2.36	0.42
2:B:1795:C:O2	4:C:252:LYS:HE2	2.18	0.42
2:B:1438:U:C4	2:B:1552:A:N6	2.87	0.42
2:B:322:A:H2'	8:E:163:ASN:HD21	1.84	0.42
29:T:50:LEU:O	29:T:52:GLU:N	2.45	0.42
27:G:148:ARG:CD	27:G:152:ARG:HD3	2.47	0.42
18:X:17:GLU:O	18:X:21:LEU:HG	2.19	0.42
2:B:2072:C:O2'	2:B:2073:C:H5'	2.18	0.42
14:V:40:ILE:N	14:V:40:ILE:HD13	2.28	0.42
2:B:1564:C:H2'	2:B:1565:C:C6	2.54	0.42
2:B:1387:A:H5'	2:B:1469:A:H1'	2.00	0.42
19:H:3:VAL:CG1	19:H:38:PRO:HA	2.49	0.42
32:6:7:TYR:OH	32:6:157:ALA:HA	2.19	0.42
2:B:75:G:H4'	18:X:48:ARG:HH12	1.83	0.42
26:F:13:LYS:NZ	26:F:13:LYS:HB2	2.34	0.42
2:B:1936:A:C2	2:B:1943:U:H5	2.37	0.42
2:B:1468:U:H2'	2:B:1522:A:H61	1.84	0.42
2:B:2199:A:H3'	2:B:2200:C:H6	1.83	0.42
20:J:93:ILE:HG22	20:J:94:ALA:N	2.34	0.42
20:J:96:ARG:N	20:J:97:PRO:HD3	2.33	0.42
18:X:40:SER:C	18:X:42:LEU:H	2.22	0.42
17:M:82:MET:HE2	17:M:82:MET:HB3	1.82	0.42
2:B:1771:C:H2'	2:B:1772:A:H8	1.83	0.42
2:B:2522:U:O2'	2:B:2523:G:H5'	2.19	0.42
20:J:121:LYS:HE3	20:J:121:LYS:HB2	1.76	0.42
4:C:221:GLY:O	4:C:224:MET:HG3	2.19	0.42
2:B:2191:A:H2'	2:B:2192:U:C6	2.54	0.42
28:R:32:THR:HG23	28:R:61:ALA:O	2.19	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:I:15:GLY:O	3:I:16:MET:HB2	2.19	0.42
2:B:2366:A:H4'	31:W:61:LYS:HE2	2.01	0.42
2:B:852:U:H2'	2:B:853:C:H6	1.81	0.42
31:W:30:VAL:HG21	31:W:59:PHE:CE1	2.54	0.42
16:L:95:LEU:HB2	16:L:101:ILE:HG13	2.01	0.42
19:H:90:LEU:HD11	19:H:124:THR:N	2.35	0.42
5:D:107:VAL:N	5:D:206:ALA:H	2.16	0.42
32:6:58:VAL:HG22	32:6:68:VAL:HA	2.01	0.42
11:4:9:LYS:H	11:4:9:LYS:HD3	1.84	0.42
7:P:25:VAL:HA	7:P:85:VAL:CA	2.49	0.42
7:P:24:THR:N	7:P:87:ARG:O	2.50	0.42
20:J:1:MET:SD	20:J:2:LYS:HE2	2.59	0.42
23:Q:63:ARG:HH12	23:Q:96:ASP:HB2	1.84	0.42
27:G:28:LYS:O	27:G:29:ASN:HB3	2.20	0.42
2:B:1060:U:C1'	2:B:1062:G:H5'	2.49	0.42
25:U:26:ASN:ND2	25:U:34:ILE:HB	2.35	0.42
26:F:11:VAL:HG12	26:F:15:LEU:HD11	2.01	0.42
20:J:13:ARG:O	20:J:14:ASP:HB2	2.19	0.42
12:1:3:GLY:C	12:1:5:ARG:N	2.72	0.42
13:3:31:ILE:HG13	13:3:34:LYS:HG2	2.01	0.42
2:B:2287:A:O2'	2:B:2288:A:H3'	2.19	0.42
1:A:7:G:O2'	1:A:8:C:H5'	2.19	0.42
19:H:59:ALA:C	19:H:62:LEU:HD11	2.39	0.42
5:D:125:TRP:CG	5:D:160:LYS:HB3	2.55	0.42
31:W:54:ARG:HB2	31:W:54:ARG:HH11	1.84	0.42
17:M:55:ARG:NH2	17:M:55:ARG:HG3	2.35	0.42
2:B:497:A:H2'	2:B:498:G:O4'	2.18	0.42
2:B:1577:C:H2'	2:B:1578:U:C6	2.54	0.42
2:B:1704:C:H2'	2:B:1705:A:C8	2.53	0.42
2:B:1207:C:H2'	2:B:1208:C:H6	1.84	0.42
4:C:147:PRO:HD3	4:C:184:GLU:HB2	2.02	0.42
1:A:51:G:H5''	22:O:64:TYR:CD2	2.54	0.42
2:B:1821:A:H2'	2:B:1822:C:C6	2.54	0.42
31:W:28:GLU:CG	31:W:29:SER:H	2.29	0.42
31:W:49:ASN:ND2	31:W:60:ALA:N	2.67	0.42
19:H:90:LEU:CD2	19:H:146:VAL:HG21	2.49	0.42
26:F:168:LEU:O	26:F:169:LEU:CB	2.67	0.42
2:B:2306:C:N4	26:F:38:GLY:O	2.49	0.42
26:F:90:LEU:HB3	26:F:95:MET:HA	2.01	0.42
7:P:92:ARG:O	7:P:92:ARG:HG2	2.19	0.42
20:J:44:TYR:O	20:J:45:THR:CB	2.66	0.42
23:Q:63:ARG:HH12	23:Q:96:ASP:CB	2.32	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:S:24:ILE:HD11	24:S:36:LEU:HD11	2.01	0.42
6:K:60:ALA:HB2	6:K:86:LEU:HA	2.00	0.42
18:X:6:LEU:N	18:X:6:LEU:HD22	2.34	0.42
2:B:1993:U:H4'	5:D:133:THR:HG22	2.01	0.42
2:B:2142:A:H2'	2:B:2143:C:O4'	2.20	0.42
2:B:2144:G:N2	2:B:2147:A:H5'	2.34	0.42
17:M:72:PRO:O	17:M:73:ILE:HB	2.18	0.42
18:X:56:LEU:HD13	18:X:56:LEU:HA	1.90	0.42
30:Z:71:LEU:HA	30:Z:71:LEU:HD22	1.89	0.42
2:B:416:U:H2'	2:B:417:C:H6	1.84	0.42
2:B:1788:C:O2'	2:B:1789:A:H5'	2.19	0.42
2:B:2658:C:P	27:G:159:LYS:HZ2	2.42	0.42
1:A:6:G:H2'	1:A:7:G:C8	2.54	0.42
2:B:1829:A:N3	4:C:14:HIS:CE1	2.87	0.42
2:B:6:A:H2'	2:B:7:G:H8	1.83	0.42
30:Z:20:HIS:O	30:Z:21:ALA:HB3	2.20	0.42
2:B:1250:G:OP2	16:L:21:ARG:NH2	2.52	0.42
2:B:1745:A:H2'	2:B:1746:A:H8	1.85	0.42
2:B:72:U:O4'	18:X:51:ALA:HA	2.19	0.42
2:B:2722:G:H4'	21:N:4:ARG:HB2	2.01	0.42
2:B:1947:C:H2'	2:B:1948:G:C8	2.54	0.42
2:B:2098:U:O2'	2:B:2099:U:H5'	2.19	0.42
8:E:2:GLU:C	8:E:3:LEU:HD22	2.39	0.42
2:B:1719:G:O2'	2:B:1720:U:H5'	2.19	0.42
4:C:56:GLY:HA2	4:C:212:TRP:C	2.39	0.42
15:2:21:ARG:HG2	15:2:31:LEU:HD21	2.00	0.42
2:B:1742:U:H2'	2:B:1743:G:C8	2.54	0.42
17:M:124:LEU:HA	17:M:125:PRO:HD3	1.90	0.42
27:G:54:ARG:O	27:G:56:GLY:N	2.52	0.42
8:E:21:ARG:HH11	8:E:106:LYS:HD3	1.84	0.42
32:6:83:ILE:HG21	32:6:90:LEU:HB2	2.00	0.42
32:6:86:SER:C	32:6:88:LEU:N	2.72	0.42
2:B:1241:A:N3	2:B:1241:A:O4'	2.52	0.42
7:P:4:ILE:O	7:P:5:LYS:HB3	2.18	0.42
2:B:2477:U:O2'	11:4:2:LYS:HE3	2.19	0.42
5:D:46:ARG:HH22	5:D:87:GLY:N	2.01	0.42
2:B:1081:U:C5'	3:I:126:ARG:HD2	2.48	0.42
20:J:59:ALA:CB	20:J:101:ILE:HG13	2.49	0.42
2:B:142:A:N3	29:T:2:ILE:O	2.53	0.42
5:D:14:ILE:HA	7:P:11:GLN:HE22	1.84	0.42
2:B:1654:A:O2'	5:D:118:PHE:CB	2.68	0.42
2:B:265:A:N6	2:B:427:U:O2'	2.52	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
32:6:14:MET:CG	32:6:129:ILE:HG23	2.48	0.42
2:B:1779:U:C5	2:B:1784:A:N7	2.84	0.42
30:Z:20:HIS:CD2	30:Z:21:ALA:H	2.38	0.42
2:B:1341:G:C2	2:B:1398:C:H4'	2.54	0.42
2:B:1076:C:H2'	2:B:1077:A:H8	1.84	0.42
2:B:1665:A:O2'	2:B:1666:G:H5'	2.19	0.42
22:O:35:ILE:HD11	22:O:102:ARG:NE	2.34	0.42
2:B:303:G:H2'	2:B:304:U:H6	1.82	0.42
2:B:1927:A:H2'	2:B:1928:A:C8	2.53	0.42
3:I:14:ALA:CB	3:I:50:LYS:HA	2.49	0.42
16:L:61:LEU:HA	16:L:62:PRO:HD3	1.89	0.42
5:D:100:LEU:HD13	5:D:100:LEU:O	2.18	0.42
32:6:72:ASP:C	32:6:74:ASN:H	2.23	0.42
28:R:35:PHE:HB3	28:R:37:GLU:OE1	2.19	0.42
2:B:237:C:O2'	2:B:238:C:H5'	2.19	0.42
2:B:1792:G:O2'	2:B:1793:C:H5'	2.19	0.42
31:W:67:LYS:HG3	31:W:69:GLU:HG3	2.01	0.42
26:F:37:MET:SD	26:F:56:LEU:HD23	2.59	0.42
4:C:66:PHE:HB3	4:C:142:ASN:HD21	1.84	0.42
20:J:45:THR:H	20:J:46:PRO:CD	2.27	0.42
8:E:147:LEU:O	8:E:168:ASP:O	2.37	0.42
3:I:37:PHE:HB2	3:I:66:PHE:CZ	2.55	0.42
20:J:123:LYS:HB3	20:J:124:VAL:H	1.69	0.42
8:E:160:ALA:C	8:E:162:ARG:N	2.73	0.42
29:T:69:ARG:NE	29:T:70:HIS:H	2.16	0.42
2:B:1915:U:C4	2:B:1916:A:H1'	2.55	0.42
30:Z:71:LEU:O	30:Z:74:ARG:HG2	2.19	0.42
17:M:66:ARG:HB2	17:M:101:VAL:HG13	2.00	0.42
2:B:2291:U:H2'	2:B:2292:U:H6	1.80	0.42
2:B:2457:U:O2'	2:B:2458:G:H5'	2.19	0.42
17:M:47:GLU:CD	17:M:50:ARG:HH11	2.23	0.42
29:T:9:LYS:N	29:T:9:LYS:HD2	2.31	0.42
22:O:62:LEU:CD1	22:O:70:ALA:HA	2.48	0.42
2:B:175:G:H2'	2:B:176:A:C8	2.55	0.42
16:L:61:LEU:N	16:L:61:LEU:CD1	2.83	0.42
2:B:494:G:O2'	2:B:495:G:H5'	2.20	0.42
2:B:817:C:H2'	2:B:818:G:O4'	2.19	0.42
2:B:1118:C:OP1	14:V:84:PRO:HD2	2.19	0.42
2:B:2236:U:O2'	2:B:2237:G:H5'	2.18	0.42
2:B:2693:G:O2'	2:B:2694:G:H5'	2.20	0.42
31:W:22:VAL:HA	31:W:68:PHE:HE2	1.83	0.42
2:B:2353:G:H1'	31:W:30:VAL:HG12	2.01	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:C:140:VAL:HG11	4:C:143:VAL:HG22	2.02	0.42
5:D:10:GLY:HA2	5:D:26:VAL:HB	2.01	0.42
32:6:61:PRO:HG2	32:6:67:VAL:HG13	2.00	0.42
7:P:6:GLN:O	7:P:9:GLN:HG2	2.19	0.42
19:H:111:ALA:HB1	19:H:114:GLU:OE2	2.19	0.42
11:4:2:LYS:HG2	11:4:4:ARG:HG3	2.01	0.42
7:P:103:THR:HG22	7:P:104:GLY:H	1.84	0.42
20:J:77:HIS:CD2	20:J:83:GLY:HA3	2.55	0.42
24:S:29:VAL:CA	24:S:32:ALA:HB3	2.46	0.42
31:W:16:GLU:HB2	31:W:17:ALA:H	1.75	0.42
2:B:972:A:OP1	2:B:974:G:H5'	2.20	0.42
4:C:245:THR:C	4:C:247:TRP:N	2.73	0.42
2:B:1550:C:H2'	2:B:1551:A:C8	2.54	0.42
20:J:72:LYS:HD2	20:J:73:VAL:H	1.85	0.42
8:E:145:ASP:HA	8:E:166:LYS:HB3	2.00	0.42
7:P:75:THR:HG23	7:P:76:HIS:ND1	2.34	0.42
26:F:15:LEU:HD22	26:F:167:ALA:HB1	2.01	0.42
2:B:2800:A:H2'	2:B:2801:G:H1'	2.02	0.42
32:6:110:ARG:HG3	32:6:110:ARG:HH11	1.85	0.42
19:H:103:VAL:HG21	19:H:110:VAL:N	2.29	0.42
19:H:103:VAL:CG2	19:H:110:VAL:HG22	2.49	0.42
29:T:69:ARG:HB3	29:T:74:ILE:HA	2.01	0.42
32:6:109:GLU:HG2	32:6:112:LYS:NZ	2.35	0.42
2:B:1853:A:H61	2:B:2087:G:H1'	1.85	0.42
2:B:2457:U:C2'	2:B:2458:G:H5'	2.49	0.42
1:A:35:C:H2'	1:A:36:C:C5'	2.50	0.42
2:B:2617:U:C2'	2:B:2618:G:H5'	2.49	0.42
16:L:40:SER:O	16:L:41:ARG:HB2	2.19	0.42
16:L:110:VAL:CG2	16:L:127:VAL:HB	2.49	0.42
2:B:1759:A:H4'	2:B:2715:C:O4'	2.20	0.42
2:B:2359:C:H4'	13:3:53:ASP:OD2	2.19	0.42
26:F:142:TYR:C	26:F:144:LYS:H	2.23	0.42
2:B:1720:U:O2'	2:B:1721:G:H5'	2.20	0.42
8:E:152:GLU:O	8:E:153:LEU:HB3	2.18	0.42
24:S:31:GLN:O	24:S:35:ILE:HG12	2.20	0.42
2:B:578:G:H5'	2:B:1254:A:OP1	2.19	0.42
27:G:60:GLY:O	27:G:62:ALA:N	2.51	0.42
2:B:1289:C:H2'	2:B:1290:C:H6	1.85	0.42
2:B:291:G:O2'	2:B:292:U:H5'	2.19	0.42
19:H:90:LEU:HD11	19:H:124:THR:O	2.20	0.42
19:H:94:ILE:HG22	19:H:99:ILE:CD1	2.49	0.42
26:F:174:PHE:HB3	26:F:176:PHE:HD1	1.84	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:Z:51:VAL:HG12	30:Z:52:SER:H	1.83	0.42
9:Y:8:GLN:O	9:Y:10:ARG:N	2.52	0.42
22:O:26:LEU:O	22:O:26:LEU:HG	2.19	0.42
2:B:1021:A:O2'	2:B:1023:U:H5'	2.20	0.42
19:H:132:PHE:O	19:H:140:ALA:HB3	2.20	0.42
2:B:1794:A:O2'	2:B:1795:C:H5'	2.19	0.42
2:B:1723:G:H2'	2:B:1724:G:H5'	2.02	0.42
2:B:2745:C:H3'	2:B:2746:U:C6	2.55	0.42
2:B:345:A:C1'	2:B:346:A:H2	2.24	0.42
2:B:141:G:H5''	2:B:142:A:N7	2.35	0.42
29:T:2:ILE:HD13	29:T:2:ILE:N	2.33	0.42
2:B:1454:C:O2	2:B:1454:C:O4'	2.35	0.42
2:B:587:C:H4'	2:B:588:U:C6	2.55	0.42
2:B:674:G:HO2'	8:E:60:TRP:HH2	1.65	0.42
2:B:1924:C:H6	2:B:1924:C:O5'	2.03	0.42
2:B:682:G:H5'	15:2:26:ASN:OD1	2.19	0.42
4:C:94:LEU:HD13	4:C:100:ARG:HH11	1.85	0.42
5:D:18:ASP:OD1	5:D:19:GLY:N	2.53	0.42
30:Z:29:PHE:N	30:Z:29:PHE:CD1	2.88	0.42
2:B:15:G:O2'	2:B:16:C:H5'	2.19	0.42
2:B:533:G:H5'	23:Q:23:TYR:CE2	2.54	0.42
22:O:30:ARG:HB3	22:O:97:PHE:CE1	2.55	0.42
17:M:112:LEU:O	17:M:113:ALA:C	2.57	0.42
24:S:73:LYS:HD2	24:S:73:LYS:HA	1.85	0.42
13:3:37:THR:HA	13:3:40:LYS:CE	2.48	0.42
6:K:109:SER:O	6:K:113:MET:HG2	2.19	0.42
2:B:1582:C:H3'	2:B:1583:A:C8	2.54	0.42
2:B:649:G:H2'	2:B:650:C:H6	1.82	0.42
17:M:67:VAL:HG13	17:M:102:LEU:HA	2.01	0.42
2:B:1803:A:H2'	2:B:1804:C:O4'	2.19	0.42
20:J:114:LEU:O	20:J:118:MET:HG3	2.20	0.42
2:B:490:C:H3'	2:B:491:G:H5''	2.01	0.42
2:B:950:G:H2'	2:B:951:C:C6	2.55	0.42
2:B:2379:G:H2'	2:B:2380:C:C6	2.55	0.42
2:B:392:U:H2'	2:B:393:C:H6	1.84	0.42
31:W:42:THR:O	31:W:43:LYS:HD3	2.19	0.42
31:W:46:ALA:O	31:W:49:ASN:O	2.38	0.42
32:6:77:LYS:O	32:6:81:LYS:HG2	2.20	0.42
29:T:21:SER:O	29:T:25:GLU:N	2.53	0.42
4:C:134:ILE:CD1	4:C:163:ILE:HG13	2.50	0.42
2:B:299:A:H2	2:B:319:G:N3	2.18	0.42
2:B:142:A:OP2	2:B:142:A:H8	2.02	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:162:U:OP1	2:B:162:U:H6	2.03	0.42
6:K:42:THR:O	6:K:43:ILE:C	2.58	0.42
2:B:1408:G:H2'	2:B:1409:U:C6	2.54	0.42
2:B:2390:U:H3'	13:3:34:LYS:HZ1	1.84	0.42
29:T:68:LYS:O	29:T:69:ARG:HB3	2.19	0.42
2:B:1912:A:H61	2:B:1918:A:H1'	1.84	0.42
32:6:133:ARG:O	32:6:136:ALA:HB3	2.20	0.42
2:B:1418:G:C2'	2:B:1580:A:H61	2.32	0.42
16:L:132:ARG:HA	16:L:135:ILE:HG21	2.02	0.42
28:R:64:VAL:O	28:R:95:ASP:HB2	2.20	0.42
2:B:2730:C:H2'	2:B:2731:G:H8	1.83	0.42
2:B:2893:A:C3'	2:B:2894:G:H5'	2.50	0.42
7:P:52:ARG:HB2	7:P:55:HIS:O	2.19	0.42
1:A:92:C:O2'	1:A:93:C:H5'	2.20	0.42
24:S:44:ALA:C	24:S:46:LEU:H	2.23	0.42
8:E:2:GLU:HA	8:E:2:GLU:OE1	2.19	0.42
2:B:355:U:H2'	2:B:356:G:C8	2.55	0.42
1:A:51:G:OP2	22:O:64:TYR:HD2	2.02	0.42
1:A:78:A:H2'	1:A:79:G:O4'	2.20	0.42
2:B:1987:A:H2'	2:B:1988:G:H8	1.84	0.42
19:H:89:LYS:HB3	19:H:90:LEU:H	1.62	0.42
26:F:34:THR:OG1	26:F:154:THR:HB	2.19	0.42
29:T:83:ALA:O	29:T:84:TYR:HB2	2.19	0.42
20:J:73:VAL:HG23	20:J:74:TYR:N	2.29	0.42
7:P:89:GLY:HA2	7:P:111:GLU:HA	2.02	0.42
21:N:31:HIS:C	21:N:33:ILE:H	2.23	0.42
2:B:215:G:H4'	2:B:216:A:OP1	2.20	0.42
2:B:1785:A:H2'	2:B:1787:A:N7	2.34	0.42
16:L:129:LYS:HA	16:L:132:ARG:HG2	2.01	0.42
2:B:2815:C:HO2'	10:0:40:HIS:CE1	2.37	0.42
21:N:43:GLU:O	21:N:47:VAL:HG23	2.20	0.42
1:A:100:G:N2	2:B:863:A:O3'	2.51	0.42
2:B:755:U:H2'	2:B:756:A:C8	2.55	0.42
28:R:78:ARG:HH21	28:R:78:ARG:HG3	1.85	0.42
2:B:207:A:H2'	2:B:208:C:O4'	2.20	0.42
32:6:146:GLU:C	32:6:148:HIS:H	2.22	0.42
2:B:2641:G:H5''	20:J:78:THR:HB	2.02	0.42
31:W:24:ARG:CZ	31:W:65:LYS:HE3	2.50	0.42
19:H:78:VAL:HB	19:H:143:ILE:HG13	2.01	0.42
26:F:105:ILE:O	26:F:109:ARG:HB2	2.20	0.42
26:F:71:LYS:HZ3	26:F:73:VAL:HB	1.84	0.42
26:F:79:ARG:HE	26:F:79:ARG:N	2.18	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:W:8:SER:O	31:W:9:THR:CB	2.67	0.42
19:H:139:PHE:O	19:H:140:ALA:HB2	2.20	0.42
23:Q:64:ILE:HD12	23:Q:95:ALA:HB1	2.02	0.42
27:G:23:ILE:O	27:G:34:ARG:HA	2.20	0.42
21:N:38:LEU:O	21:N:42:LYS:HG3	2.19	0.42
2:B:2503:A:N3	2:B:2503:A:H5'	2.35	0.42
2:B:1443:U:H2'	2:B:1444:G:C8	2.55	0.42
20:J:40:HIS:ND1	20:J:41:LYS:N	2.67	0.42
5:D:114:LYS:HE3	5:D:116:LYS:NZ	2.35	0.42
2:B:2598:A:OP1	4:C:233:GLY:HA2	2.20	0.42
2:B:2461:A:H2'	2:B:2462:C:H6	1.83	0.42
2:B:1351:C:H2'	2:B:1352:U:O4'	2.20	0.42
2:B:2292:U:H2'	2:B:2293:G:C8	2.55	0.42
10:O:3:GLN:HB3	10:O:3:GLN:HE21	1.63	0.42
12:1:31:GLU:CD	12:1:31:GLU:H	2.23	0.42
8:E:46:GLN:HG3	8:E:87:ALA:CB	2.49	0.42
17:M:50:ARG:O	17:M:53:MET:HB3	2.19	0.42
4:C:270:ARG:HG2	4:C:271:SER:N	2.34	0.42
2:B:81:G:H2'	2:B:82:U:O4'	2.20	0.42
32:6:147:LEU:HB2	32:6:149:LEU:CD2	2.50	0.42
2:B:40:U:O2'	2:B:41:C:H5'	2.19	0.42
18:X:35:GLY:O	18:X:36:GLN:O	2.38	0.42
2:B:2698:U:H2'	2:B:2699:C:C6	2.55	0.42
31:W:32:ALA:O	31:W:34:SER:N	2.52	0.42
2:B:926:G:H2'	2:B:927:A:C8	2.54	0.42
17:M:52:ALA:HB2	17:M:123:LYS:HE3	2.01	0.42
2:B:1281:G:O2'	2:B:1282:U:H5'	2.20	0.42
2:B:2191:A:H2'	2:B:2192:U:O4'	2.19	0.42
2:B:1396:U:O4'	2:B:1396:U:O2	2.36	0.42
2:B:922:C:HO2'	31:W:25:PHE:HZ	1.64	0.41
31:W:39:GLN:O	31:W:56:HIS:HB3	2.20	0.41
31:W:49:ASN:CB	31:W:81:ILE:HG12	2.50	0.41
26:F:169:LEU:HA	26:F:172:PHE:HD2	1.84	0.41
26:F:89:THR:O	26:F:91:ARG:CZ	2.68	0.41
23:Q:89:ILE:HB	28:R:11:GLN:NE2	2.34	0.41
8:E:147:LEU:HD12	8:E:149:ILE:HB	2.01	0.41
29:T:11:LEU:H	29:T:11:LEU:CD2	2.16	0.41
24:S:24:ILE:O	24:S:25:ARG:C	2.58	0.41
4:C:43:ASN:ND2	4:C:44:ASN:N	2.65	0.41
2:B:1439:A:C6	2:B:1552:A:C5	3.08	0.41
6:K:115:ILE:C	6:K:117:SER:N	2.74	0.41
2:B:1454:C:O2	21:N:63:ARG:HG2	2.19	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:N:76:VAL:HA	21:N:79:LEU:HD12	2.00	0.41
2:B:587:C:C6	2:B:671:C:H1'	2.54	0.41
4:C:132:ARG:HG3	4:C:132:ARG:O	2.19	0.41
2:B:2390:U:H3'	13:3:34:LYS:NZ	2.35	0.41
2:B:1910:G:C5	2:B:1921:G:N2	2.88	0.41
2:B:2346:A:O4'	2:B:2383:G:O4'	2.38	0.41
2:B:1278:C:O2'	2:B:1279:G:H5'	2.20	0.41
5:D:35:THR:N	5:D:49:GLN:O	2.53	0.41
25:U:11:ILE:O	25:U:12:VAL:CB	2.68	0.41
2:B:2839:G:H2'	2:B:2840:C:C6	2.55	0.41
13:3:21:PHE:CE1	13:3:58:ILE:HG12	2.55	0.41
30:Z:70:GLU:HA	30:Z:73:ALA:CB	2.50	0.41
17:M:42:THR:C	17:M:44:ARG:N	2.73	0.41
1:A:13:G:H2'	1:A:70:C:O2'	2.20	0.41
8:E:37:ALA:C	8:E:39:ALA:N	2.73	0.41
32:6:2:THR:OG1	32:6:5:GLU:HG3	2.20	0.41
2:B:2380:C:H2'	2:B:2381:A:C8	2.54	0.41
2:B:965:C:O2'	2:B:2272:U:H6	2.02	0.41
2:B:923:G:N3	31:W:23:LYS:HE3	2.35	0.41
26:F:134:GLN:HB3	26:F:134:GLN:HE21	1.53	0.41
32:6:83:ILE:HG22	32:6:90:LEU:N	2.32	0.41
2:B:2329:U:H2'	2:B:2330:G:H8	1.85	0.41
7:P:103:THR:H	7:P:107:ALA:HB2	1.85	0.41
28:R:41:ILE:HG12	28:R:47:VAL:HB	2.02	0.41
15:2:9:VAL:HG13	15:2:10:LEU:N	2.36	0.41
16:L:6:LEU:HD23	16:L:6:LEU:N	2.33	0.41
3:I:32:VAL:HG22	3:I:60:VAL:HG21	2.02	0.41
2:B:2060:A:HO2'	2:B:2061:G:P	2.42	0.41
2:B:1080:A:H2'	2:B:1081:U:C6	2.54	0.41
2:B:672:C:O2'	2:B:673:C:H5'	2.20	0.41
5:D:131:ASP:C	5:D:133:THR:H	2.23	0.41
2:B:2371:G:C2'	2:B:2372:U:H5''	2.48	0.41
2:B:2372:U:H5'	2:B:2372:U:H6	1.85	0.41
13:3:20:GLY:HA3	13:3:48:MET:CE	2.49	0.41
2:B:988:A:H2'	9:Y:13:ILE:HD11	2.02	0.41
17:M:2:LEU:HD11	17:M:68:PHE:HE1	1.84	0.41
2:B:2049:G:O2'	2:B:2050:C:H5'	2.19	0.41
2:B:1220:G:H2'	2:B:1221:C:H6	1.85	0.41
2:B:1228:G:O2'	2:B:1229:C:H5'	2.20	0.41
2:B:947:A:H2'	2:B:948:C:H6	1.85	0.41
1:A:47:C:H5'	1:A:48:U:OP2	2.20	0.41
3:I:91:LYS:O	3:I:94:LYS:HB2	2.20	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:686:U:O2	15:2:8:SER:HB3	2.20	0.41
2:B:1210:G:H5''	2:B:1211:C:H3'	2.03	0.41
4:C:29:PHE:C	4:C:31:PRO:HD2	2.40	0.41
2:B:1007:C:H4'	20:J:110:PRO:HB3	2.02	0.41
2:B:2602:A:H3'	2:B:2602:A:OP1	2.20	0.41
2:B:1607:C:H4'	2:B:1608:A:O5'	2.20	0.41
2:B:2489:U:O2'	2:B:2490:G:H5'	2.20	0.41
7:P:27:VAL:HG12	7:P:29:VAL:HG13	2.01	0.41
2:B:920:A:H2'	2:B:921:C:C6	2.55	0.41
31:W:65:LYS:HZ3	31:W:84:GLU:HB2	1.85	0.41
26:F:102:LEU:HD13	26:F:102:LEU:O	2.20	0.41
26:F:90:LEU:HB3	26:F:95:MET:CB	2.51	0.41
19:H:27:ARG:HH11	30:Z:64:ILE:HD11	1.85	0.41
32:6:92:PRO:HG3	32:6:101:ILE:HG12	2.02	0.41
19:H:116:ARG:CD	19:H:131:SER:HB2	2.51	0.41
2:B:996:A:H4'	23:Q:91:ARG:HG2	2.03	0.41
28:R:49:ILE:HG21	28:R:54:VAL:N	2.36	0.41
8:E:188:MET:HG2	8:E:193:VAL:CG2	2.50	0.41
29:T:22:THR:O	29:T:26:LYS:HG2	2.20	0.41
24:S:36:LEU:HA	24:S:39:THR:OG1	2.19	0.41
6:K:35:VAL:HG12	6:K:69:VAL:HG22	2.01	0.41
6:K:104:THR:HB	6:K:106:GLU:OE1	2.20	0.41
8:E:130:LYS:HB2	8:E:133:LEU:HG	2.01	0.41
25:U:86:PHE:HD1	25:U:90:LYS:HB2	1.83	0.41
26:F:7:TYR:HA	26:F:11:VAL:HB	2.01	0.41
2:B:2038:G:H2'	2:B:2039:U:H6	1.86	0.41
2:B:1324:G:H1'	2:B:1616:A:C6	2.56	0.41
32:6:7:TYR:CZ	32:6:160:GLU:HG2	2.55	0.41
24:S:59:GLU:H	24:S:59:GLU:HG2	1.76	0.41
2:B:204:A:H4'	2:B:205:G:OP1	2.21	0.41
2:B:1460:U:H5''	2:B:1461:C:C6	2.55	0.41
8:E:46:GLN:CG	8:E:87:ALA:HB3	2.50	0.41
29:T:7:LEU:HD22	29:T:9:LYS:HE3	2.02	0.41
1:A:48:U:O2'	22:O:100:HIS:HE1	2.04	0.41
2:B:2751:G:H3'	2:B:2752:C:H6	1.85	0.41
26:F:10:GLU:O	26:F:13:LYS:HG3	2.20	0.41
6:K:10:VAL:HG12	6:K:12:ASP:H	1.85	0.41
9:Y:16:LEU:HD23	9:Y:19:HIS:NE2	2.35	0.41
5:D:4:LEU:HD21	5:D:100:LEU:HB3	2.03	0.41
2:B:120:U:H5''	2:B:122:G:OP2	2.21	0.41
10:0:27:LEU:H	10:0:27:LEU:HD12	1.85	0.41
2:B:1958:C:O2'	2:B:1959:G:H5'	2.20	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1526:C:H2'	2:B:1527:G:O4'	2.21	0.41
16:L:123:ARG:HA	16:L:143:GLU:CB	2.48	0.41
26:F:32:LYS:HA	26:F:95:MET:CG	2.47	0.41
30:Z:59:ILE:HG22	30:Z:64:ILE:HG13	2.02	0.41
32:6:18:LEU:HD13	32:6:171:LYS:HB3	2.01	0.41
32:6:18:LEU:HG	32:6:22:GLU:OE2	2.21	0.41
11:4:11:CYS:SG	11:4:33:HIS:CE1	3.13	0.41
7:P:104:GLY:O	7:P:105:LYS:HB2	2.19	0.41
27:G:10:VAL:HG21	27:G:44:HIS:CE1	2.56	0.41
21:N:8:ARG:HB2	21:N:8:ARG:HE	1.65	0.41
2:B:1795:C:O2'	2:B:1796:U:H5'	2.20	0.41
2:B:1439:A:N1	2:B:1552:A:N7	2.68	0.41
5:D:13:ARG:HH12	7:P:74:GLN:HE21	1.68	0.41
2:B:572:A:C2	2:B:2033:A:C2	3.08	0.41
5:D:116:LYS:HD3	5:D:116:LYS:HA	1.96	0.41
2:B:1199:U:H5'	23:Q:4:LYS:HG2	2.02	0.41
14:V:6:ALA:HB3	14:V:65:VAL:HG12	2.02	0.41
2:B:425:G:O2'	2:B:426:C:H5'	2.20	0.41
2:B:2244:U:H1'	2:B:2434:A:C4	2.56	0.41
2:B:1048:A:H2'	2:B:1049:C:O4'	2.20	0.41
1:A:104:A:H5'	14:V:75:GLN:NE2	2.34	0.41
2:B:1808:A:H5''	2:B:1809:A:OP2	2.21	0.41
1:A:32:U:H2'	1:A:33:G:C8	2.55	0.41
2:B:519:U:H4'	24:S:73:LYS:HZ1	1.84	0.41
2:B:1076:C:H2'	2:B:1077:A:C8	2.55	0.41
22:O:5:SER:HA	22:O:8:ILE:HD12	2.03	0.41
2:B:1192:G:C2'	2:B:1193:G:H5'	2.50	0.41
24:S:42:LYS:HA	24:S:42:LYS:HZ2	1.84	0.41
12:1:42:VAL:HG12	12:1:42:VAL:O	2.20	0.41
17:M:26:VAL:HG22	17:M:133:LYS:HA	2.02	0.41
2:B:2097:A:O2'	2:B:2098:U:H5'	2.21	0.41
2:B:664:G:H2'	2:B:665:U:C6	2.55	0.41
15:2:16:HIS:HB2	15:2:44:VAL:HG21	2.01	0.41
2:B:2846:G:H2'	2:B:2847:U:C6	2.55	0.41
6:K:107:LEU:N	6:K:107:LEU:HD12	2.36	0.41
2:B:944:C:H5'	2:B:945:A:C5'	2.50	0.41
2:B:1252:G:N2	23:Q:32:ARG:HB3	2.35	0.41
2:B:2855:C:H2'	2:B:2856:A:H8	1.85	0.41
2:B:2311:A:H3'	2:B:2312:U:C6	2.55	0.41
26:F:109:ARG:O	26:F:109:ARG:HD3	2.21	0.41
26:F:121:PHE:HA	26:F:127:TYR:HA	2.02	0.41
26:F:48:LEU:N	26:F:48:LEU:HD23	2.36	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:F:77:LYS:HG3	26:F:79:ARG:NH1	2.35	0.41
5:D:11:MET:HE1	5:D:192:ALA:N	2.24	0.41
2:B:2471:A:O2'	2:B:2472:G:P	2.79	0.41
23:Q:63:ARG:O	23:Q:66:ALA:N	2.53	0.41
23:Q:94:LEU:O	23:Q:96:ASP:N	2.53	0.41
24:S:24:ILE:HD11	24:S:36:LEU:HD21	2.03	0.41
25:U:73:ASN:ND2	25:U:74:ALA:N	2.68	0.41
21:N:61:ALA:C	21:N:63:ARG:N	2.72	0.41
2:B:662:G:O2'	2:B:663:G:H5'	2.21	0.41
16:L:116:VAL:CG1	16:L:117:THR:H	2.26	0.41
17:M:41:LEU:CD1	17:M:46:ILE:HG22	2.51	0.41
32:6:164:ILE:O	32:6:168:PHE:HD1	2.02	0.41
2:B:129:C:H4'	2:B:1348:C:O2'	2.19	0.41
2:B:1220:G:O2'	2:B:1221:C:H5'	2.20	0.41
2:B:1373:A:OP1	2:B:2213:U:O4	2.39	0.41
12:1:8:ILE:CG2	12:1:9:LYS:N	2.84	0.41
2:B:523:C:O2'	2:B:524:G:H5'	2.20	0.41
3:I:91:LYS:HG3	3:I:91:LYS:O	2.20	0.41
4:C:5:CYS:HB2	4:C:15:VAL:O	2.21	0.41
18:X:48:ARG:O	18:X:51:ALA:HB3	2.21	0.41
2:B:1693:U:H4'	2:B:1694:C:OP2	2.20	0.41
2:B:510:C:O2'	2:B:1236:G:H5'	2.21	0.41
2:B:832:U:O2	16:L:52:GLY:HA2	2.21	0.41
2:B:1771:C:H2'	2:B:1772:A:C8	2.55	0.41
3:I:35:MET:C	3:I:35:MET:SD	2.98	0.41
1:A:89:U:H5'	1:A:90:C:C6	2.55	0.41
2:B:2594:C:O2'	2:B:2595:G:H5'	2.20	0.41
2:B:923:G:O2'	2:B:924:G:H5'	2.20	0.41
31:W:69:GLU:HB3	31:W:70:VAL:H	1.70	0.41
19:H:142:VAL:HG12	19:H:143:ILE:N	2.36	0.41
26:F:102:LEU:CB	26:F:106:ALA:HB3	2.50	0.41
26:F:150:GLY:O	26:F:151:LEU:HB3	2.20	0.41
30:Z:33:LEU:H	30:Z:52:SER:CB	2.32	0.41
32:6:174:GLN:HB3	32:6:174:GLN:HE21	1.51	0.41
32:6:83:ILE:O	32:6:89:GLY:N	2.53	0.41
2:B:2260:C:O2'	2:B:2261:C:H5'	2.21	0.41
19:H:50:ARG:NE	19:H:50:ARG:N	2.66	0.41
19:H:58:LEU:HA	19:H:58:LEU:HD12	1.90	0.41
2:B:1081:U:O2'	2:B:1082:U:H5'	2.21	0.41
8:E:62:GLN:HG2	8:E:63:LYS:HG3	2.02	0.41
2:B:2243:U:O2	2:B:2434:A:C2	2.74	0.41
28:R:27:ILE:HG22	28:R:28:ALA:N	2.35	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1462:C:O2'	2:B:2702:G:H1'	2.20	0.41
2:B:6:A:H2'	2:B:7:G:C8	2.55	0.41
7:P:49:ILE:HG22	7:P:95:LYS:NZ	2.35	0.41
1:A:95:U:H2'	1:A:96:G:C8	2.55	0.41
2:B:2520:C:C6	2:B:2567:G:H1'	2.55	0.41
2:B:1355:G:O2'	2:B:1356:G:H5'	2.20	0.41
4:C:7:PRO:C	4:C:9:SER:H	2.24	0.41
2:B:2852:G:H2'	2:B:2853:C:O4'	2.21	0.41
24:S:7:HIS:HB3	24:S:103:ILE:HB	2.02	0.41
8:E:4:VAL:HG12	8:E:6:LYS:N	2.36	0.41
2:B:2249:U:H4'	2:B:2275:C:H5	1.85	0.41
2:B:875:G:C6	2:B:876:C:N4	2.89	0.41
2:B:123:G:O3'	2:B:1376:C:H4'	2.20	0.41
2:B:8:C:H5''	20:J:53:TYR:OH	2.20	0.41
27:G:38:ASP:CG	27:G:39:ALA:H	2.22	0.41
2:B:2836:U:H2'	2:B:2837:A:H8	1.85	0.41
2:B:855:G:C6	2:B:923:G:C6	3.09	0.41
19:H:90:LEU:O	19:H:123:ARG:CZ	2.69	0.41
26:F:40:GLY:O	26:F:42:ALA:N	2.54	0.41
2:B:2262:U:H2'	2:B:2263:C:H6	1.84	0.41
23:Q:86:SER:HB3	28:R:51:VAL:HA	2.02	0.41
8:E:176:ASP:HA	8:E:177:PRO:HD3	1.95	0.41
8:E:5:LEU:HB2	8:E:10:SER:H	1.86	0.41
4:C:131:MET:CE	4:C:183:VAL:HG11	2.51	0.41
20:J:127:GLY:H	20:J:129:GLU:CD	2.24	0.41
7:P:50:ARG:HD2	7:P:56:SER:HB3	2.03	0.41
21:N:74:GLU:O	21:N:77:ALA:HB3	2.21	0.41
21:N:49:GLU:N	21:N:50:PRO:CD	2.84	0.41
2:B:29:U:H2'	2:B:30:G:C8	2.56	0.41
2:B:386:G:H4'	2:B:387:U:OP2	2.20	0.41
7:P:88:ARG:HB3	7:P:88:ARG:NH2	2.36	0.41
25:U:81:ARG:HB2	25:U:96:LYS:HG3	2.03	0.41
2:B:1348:C:C3'	2:B:1349:C:H5'	2.51	0.41
30:Z:27:ARG:HG3	30:Z:28:ARG:H	1.85	0.41
12:1:51:ALA:O	12:1:52:LYS:C	2.59	0.41
19:H:106:ALA:HB3	19:H:108:VAL:HG23	2.03	0.41
19:H:108:VAL:HG12	19:H:109:GLU:N	2.36	0.41
2:B:6:A:N3	20:J:135:GLN:NE2	2.68	0.41
21:N:96:ARG:CG	21:N:98:LEU:HD22	2.50	0.41
2:B:242:G:H5''	13:3:63:TYR:CE2	2.56	0.41
2:B:305:C:H2'	2:B:306:U:C6	2.55	0.41
2:B:2751:G:H5'	27:G:2:ARG:HD3	2.03	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2010:G:H5''	24:S:42:LYS:HB2	2.03	0.41
2:B:1201:U:H2'	2:B:1202:G:H8	1.85	0.41
2:B:1657:U:O2'	5:D:138:LEU:HD12	2.21	0.41
14:V:2:PHE:CE2	14:V:56:PHE:HA	2.55	0.41
2:B:1268:A:H2'	2:B:1269:A:O4'	2.19	0.41
2:B:622:G:H2'	2:B:623:C:H6	1.86	0.41
16:L:3:LEU:O	16:L:5:THR:HG23	2.21	0.41
2:B:374:A:H61	2:B:400:G:H1'	1.84	0.41
2:B:1161:C:H2'	2:B:1162:G:C8	2.55	0.41
17:M:55:ARG:HG2	17:M:55:ARG:O	2.20	0.41
2:B:1513:U:O2'	2:B:1514:G:H5'	2.21	0.41
2:B:1068:G:C6	2:B:1069:A:N6	2.88	0.41
2:B:1011:G:H5''	23:Q:76:SER:OG	2.19	0.41
17:M:29:GLY:HA2	17:M:106:ASP:HB2	2.02	0.41
32:6:34:ASN:HB2	32:6:35:PRO:HD2	2.02	0.41
27:G:40:VAL:HG22	27:G:64:ALA:HA	2.01	0.41
26:F:128:SER:HB3	26:F:154:THR:HG23	2.03	0.41
1:A:43:C:C2'	26:F:91:ARG:HD2	2.51	0.41
20:J:3:THR:CB	20:J:44:TYR:OH	2.67	0.41
19:H:53:GLU:HA	19:H:57:LYS:HG2	2.03	0.41
14:V:92:VAL:O	14:V:92:VAL:HG12	2.21	0.41
4:C:80:LEU:HD23	4:C:91:ALA:CB	2.46	0.41
27:G:134:GLY:HA3	27:G:140:ILE:CG2	2.51	0.41
20:J:32:LEU:HD13	20:J:105:VAL:HG11	2.02	0.41
8:E:157:LEU:O	8:E:160:ALA:HB3	2.20	0.41
17:M:39:GLY:HA3	17:M:126:ILE:HD11	2.02	0.41
2:B:1655:A:H2	2:B:2049:G:O3'	2.03	0.41
4:C:158:GLY:H	4:C:194:VAL:HG13	1.86	0.41
2:B:1591:A:H2'	2:B:1592:C:O4'	2.21	0.41
4:C:94:LEU:HD13	4:C:100:ARG:NH1	2.36	0.41
2:B:694:U:OP1	2:B:1569:A:H1'	2.21	0.41
2:B:20:C:H2'	2:B:21:A:C8	2.54	0.41
24:S:59:GLU:HB2	24:S:60:HIS:H	1.51	0.41
2:B:2813:A:O2'	2:B:2814:A:H5'	2.20	0.41
2:B:2869:G:H2'	2:B:2870:C:H6	1.82	0.41
2:B:2026:U:H2'	2:B:2027:G:C8	2.56	0.41
2:B:2455:G:H2'	2:B:2456:C:H6	1.84	0.41
3:I:48:ILE:O	3:I:49:GLU:HB3	2.20	0.41
32:6:137:LEU:O	32:6:140:LEU:HB3	2.20	0.41
20:J:110:PRO:HB2	20:J:111:LYS:HD2	2.03	0.41
2:B:2200:C:O2'	2:B:2201:G:H5'	2.20	0.41
2:B:2604:U:O2'	2:B:2605:U:H5'	2.20	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:X:59:GLU:N	18:X:59:GLU:OE2	2.53	0.41
2:B:468:G:N7	15:2:39:ARG:NH2	2.67	0.41
31:W:39:GLN:HG3	31:W:42:THR:CB	2.40	0.41
19:H:31:VAL:O	19:H:33:GLN:N	2.53	0.41
30:Z:30:LEU:HA	30:Z:31:PRO:HD3	1.94	0.41
32:6:171:LYS:HA	32:6:174:GLN:NE2	2.35	0.41
18:X:29:ARG:NH1	29:T:12:ARG:HG2	2.36	0.41
5:D:31:ALA:HA	5:D:96:ILE:O	2.21	0.41
20:J:1:MET:C	20:J:2:LYS:HZ3	2.23	0.41
20:J:83:GLY:O	20:J:84:ILE:C	2.59	0.41
24:S:29:VAL:HG23	24:S:70:LYS:CA	2.50	0.41
24:S:72:THR:HG21	24:S:108:SER:OG	2.21	0.41
6:K:47:ILE:HG23	6:K:48:PRO:N	2.35	0.41
6:K:34:GLY:O	6:K:35:VAL:C	2.59	0.41
27:G:68:ARG:C	27:G:68:ARG:HD2	2.41	0.41
14:V:70:ILE:HD13	14:V:70:ILE:N	2.31	0.41
3:I:37:PHE:HZ	3:I:56:VAL:HG11	1.86	0.41
27:G:122:ALA:CA	27:G:132:LEU:HA	2.47	0.41
23:Q:77:LYS:HE2	23:Q:116:LEU:CD2	2.50	0.41
20:J:58:ASN:C	20:J:60:ASP:H	2.24	0.41
2:B:1079:C:C2	2:B:1080:A:C8	3.09	0.41
2:B:1436:G:O2'	2:B:1437:C:H5'	2.21	0.41
16:L:79:LEU:HG	16:L:111:ILE:O	2.20	0.41
6:K:58:LEU:HD23	6:K:58:LEU:N	2.36	0.41
16:L:96:LYS:HD3	16:L:103:ILE:HA	2.02	0.41
17:M:40:ARG:HB3	17:M:95:LEU:HD12	2.02	0.41
2:B:173:A:H2'	2:B:174:U:C6	2.56	0.41
25:U:21:ARG:HD3	25:U:72:PHE:CG	2.55	0.41
4:C:75:ALA:O	4:C:114:GLN:HA	2.20	0.41
2:B:2838:G:C4	2:B:2839:G:C8	3.08	0.41
13:3:54:LEU:O	13:3:58:ILE:HG13	2.20	0.41
2:B:1906:G:C8	2:B:1929:G:H2'	2.56	0.41
2:B:1930:G:O2'	2:B:1931:U:OP2	2.38	0.41
1:A:52:A:H2'	1:A:53:A:O5'	2.20	0.41
25:U:65:GLN:O	25:U:68:ASN:HB2	2.21	0.41
2:B:1745:A:H2'	2:B:1746:A:O4'	2.20	0.41
2:B:1401:G:H2'	2:B:1402:U:H6	1.85	0.41
22:O:111:ARG:HH21	22:O:117:PHE:C	2.24	0.41
30:Z:63:GLY:C	30:Z:65:ASP:N	2.74	0.41
2:B:1581:G:O2'	2:B:1582:C:H5'	2.21	0.41
22:O:62:LEU:HD13	22:O:62:LEU:HA	1.87	0.41
2:B:178:G:O2'	2:B:179:C:H5'	2.21	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:438:G:H2'	2:B:439:A:H8	1.86	0.41
2:B:978:G:O4'	2:B:1001:A:H2	2.04	0.41
2:B:12:U:O2	2:B:2626:C:H4'	2.20	0.41
18:X:35:GLY:O	18:X:36:GLN:C	2.59	0.41
4:C:6:LYS:HA	4:C:7:PRO:HD3	1.91	0.41
2:B:1824:G:H1'	4:C:251:THR:CG2	2.50	0.41
2:B:492:A:H2'	2:B:493:G:O4'	2.21	0.41
2:B:1416:G:O2'	2:B:1417:C:H6	2.04	0.41
2:B:2093:G:H1'	2:B:2198:A:C2	2.56	0.41
1:A:116:G:H4'	22:O:54:VAL:O	2.20	0.41
2:B:817:C:O2'	2:B:839:U:H5''	2.20	0.41
2:B:208:C:H2'	2:B:209:C:H6	1.84	0.41
20:J:118:MET:HA	20:J:121:LYS:HE2	2.02	0.41
19:H:76:GLU:N	19:H:76:GLU:CD	2.74	0.41
2:B:1419:A:H2	2:B:2211:A:N1	2.18	0.41
24:S:34:ASP:HA	24:S:37:THR:OG1	2.21	0.41
2:B:537:G:H1'	2:B:556:A:N6	2.36	0.41
2:B:748:G:C8	24:S:89:ALA:HB1	2.56	0.41
2:B:637:A:H4'	2:B:638:G:O5'	2.20	0.41
19:H:76:GLU:H	19:H:76:GLU:CD	2.23	0.41
9:Y:44:ARG:HA	9:Y:44:ARG:HD3	1.96	0.41
19:H:96:THR:O	19:H:97:ARG:C	2.59	0.41
2:B:1880:U:H2'	2:B:1881:C:C6	2.56	0.41
4:C:262:THR:C	4:C:264:LYS:H	2.24	0.41
5:D:117:GLY:HA2	5:D:164:GLN:NE2	2.36	0.41
19:H:117:LEU:HD13	19:H:121:VAL:HG23	2.03	0.41
26:F:110:ILE:HD12	26:F:112:ASP:CA	2.51	0.41
26:F:118:ALA:HA	26:F:176:PHE:CE2	2.56	0.41
26:F:174:PHE:HA	26:F:175:PRO:HD2	1.88	0.41
4:C:130:PRO:HA	4:C:188:ARG:HA	2.02	0.41
5:D:8:LYS:HG2	5:D:9:VAL:H	1.86	0.41
29:T:60:THR:HA	29:T:82:LYS:O	2.21	0.41
2:B:1553:A:H2'	2:B:1555:G:N7	2.36	0.41
2:B:139:U:OP2	2:B:140:C:N3	2.54	0.41
2:B:143:C:H2'	2:B:144:A:C1'	2.51	0.41
2:B:670:A:H3'	16:L:43:GLY:H	1.86	0.41
6:K:19:VAL:HB	6:K:41:ILE:CD1	2.51	0.41
2:B:1952:A:OP1	6:K:42:THR:HG21	2.21	0.41
18:X:46:VAL:CA	18:X:49:ASP:HB2	2.51	0.41
25:U:66:VAL:O	25:U:69:VAL:HG22	2.21	0.41
2:B:1516:G:O2'	2:B:1517:G:H5'	2.21	0.41
2:B:1907:G:H2'	2:B:1908:C:C6	2.55	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2393:U:H2'	2:B:2394:C:O4'	2.20	0.41
2:B:1570:A:H2'	2:B:1571:A:C8	2.56	0.41
2:B:415:A:H2'	2:B:416:U:C6	2.56	0.41
2:B:2886:A:N7	10:0:39:ARG:NE	2.66	0.41
2:B:1276:A:O2'	2:B:1277:G:H5'	2.20	0.41
21:N:96:ARG:HH21	21:N:96:ARG:HG2	1.86	0.41
1:A:93:C:O2'	1:A:94:A:H5'	2.21	0.41
14:V:19:ARG:O	14:V:22:ALA:HB3	2.21	0.41
5:D:121:THR:HG22	5:D:125:TRP:HD1	1.86	0.41
21:N:87:PHE:HB3	21:N:90:ARG:CB	2.51	0.41
4:C:7:PRO:O	4:C:9:SER:N	2.54	0.41
2:B:1433:A:H2'	2:B:1434:A:O4'	2.20	0.41
8:E:3:LEU:CD2	8:E:14:VAL:HG22	2.51	0.41
2:B:1607:C:N4	2:B:1622:G:OP2	2.47	0.41
2:B:2518:A:H2'	2:B:2518:A:N3	2.36	0.41
19:H:105:ALA:C	19:H:107:GLY:H	2.25	0.41
11:4:30:GLU:HA	11:4:31:PRO:HD3	1.94	0.41
2:B:660:C:H2'	2:B:661:A:H8	1.86	0.41
28:R:87:GLN:HG2	28:R:88:GLY:N	2.36	0.41
2:B:198:C:C2'	2:B:199:A:H5''	2.51	0.41
16:L:94:THR:O	16:L:97:ALA:N	2.54	0.40
8:E:106:LYS:HE3	8:E:200:LEU:HD12	2.03	0.40
2:B:2513:A:H2	5:D:148:GLN:OE1	2.04	0.40
26:F:110:ILE:HG13	26:F:111:ARG:N	2.35	0.40
26:F:43:ILE:HA	26:F:46:LYS:HE2	2.04	0.40
30:Z:64:ILE:H	30:Z:64:ILE:CD1	2.21	0.40
5:D:55:LYS:HB2	5:D:75:ALA:HB1	2.03	0.40
2:B:2468:A:H2'	2:B:2476:A:C6	2.56	0.40
28:R:7:SER:OG	28:R:12:HIS:CE1	2.74	0.40
8:E:186:VAL:HG13	8:E:186:VAL:O	2.21	0.40
2:B:1063:G:O2'	2:B:1064:C:H5'	2.21	0.40
2:B:1059:G:H2'	2:B:1060:U:C5	2.56	0.40
2:B:1737:G:H8	2:B:1737:G:OP2	2.04	0.40
4:C:109:LEU:N	4:C:109:LEU:CD2	2.84	0.40
2:B:2745:C:H3'	2:B:2746:U:C5	2.56	0.40
2:B:1445:G:H2'	2:B:1446:C:C6	2.56	0.40
21:N:52:ILE:CD1	21:N:83:LEU:HD23	2.50	0.40
8:E:161:ALA:C	8:E:163:ASN:N	2.72	0.40
2:B:2445:G:OP1	8:E:69:ARG:NH2	2.52	0.40
2:B:592:A:C2	13:3:3:ILE:HD11	2.56	0.40
6:K:76:VAL:HB	7:P:72:VAL:CG2	2.51	0.40
2:B:705:A:O2'	2:B:706:A:H5'	2.20	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:739:A:H1'	2:B:740:C:H5	1.87	0.40
25:U:10:VAL:HG21	25:U:35:VAL:CG2	2.52	0.40
16:L:56:PRO:O	16:L:60:ARG:HG3	2.21	0.40
2:B:2636:C:O2'	2:B:2637:U:H5'	2.21	0.40
8:E:195:GLN:C	8:E:197:GLU:N	2.72	0.40
17:M:57:VAL:O	17:M:58:LYS:HB2	2.21	0.40
2:B:2756:U:H4'	2:B:2757:A:O5'	2.20	0.40
2:B:2883:A:OP1	10:O:48:TYR:CE1	2.74	0.40
6:K:4:GLU:OE2	6:K:23:LYS:HA	2.21	0.40
2:B:302:C:H2'	2:B:303:G:H8	1.86	0.40
5:D:125:TRP:CD1	5:D:160:LYS:HB3	2.56	0.40
2:B:438:G:H2'	2:B:439:A:C8	2.56	0.40
1:A:17:C:O2'	1:A:18:G:H5'	2.21	0.40
4:C:259:ASN:C	4:C:261:ARG:H	2.25	0.40
31:W:32:ALA:O	31:W:58:LEU:O	2.38	0.40
2:B:925:A:O2'	2:B:926:G:H5'	2.21	0.40
2:B:378:C:C2'	2:B:379:G:H5'	2.51	0.40
2:B:2223:G:O2'	2:B:2224:G:H5'	2.21	0.40
15:2:17:GLY:O	15:2:21:ARG:HB2	2.21	0.40
17:M:18:ARG:HA	17:M:18:ARG:HD2	1.87	0.40
2:B:2233:U:H2'	2:B:2234:G:C8	2.56	0.40
8:E:173:THR:C	8:E:175:ILE:H	2.25	0.40
16:L:14:LYS:O	16:L:15:ALA:C	2.58	0.40
2:B:226:A:H1'	2:B:230:G:N2	2.36	0.40
28:R:6:GLN:HE22	28:R:9:GLY:C	2.24	0.40
2:B:388:G:N7	2:B:390:U:H2'	2.36	0.40
2:B:2331:G:H2'	2:B:2332:C:H6	1.86	0.40
5:D:148:GLN:CB	5:D:152:PRO:HG2	2.52	0.40
26:F:39:VAL:HG13	26:F:40:GLY:H	1.85	0.40
19:H:32:PRO:CG	30:Z:39:TRP:HB3	2.52	0.40
32:6:60:ALA:CA	32:6:66:LEU:HG	2.51	0.40
20:J:64:VAL:HG13	20:J:68:LYS:HB2	2.02	0.40
29:T:44:LYS:C	29:T:46:ALA:H	2.25	0.40
2:B:958:U:N3	17:M:16:ARG:HB3	2.16	0.40
4:C:123:ILE:O	4:C:123:ILE:HG23	2.21	0.40
31:W:37:VAL:C	31:W:38:ARG:HG2	2.42	0.40
20:J:102:GLU:HG3	20:J:124:VAL:HG11	2.03	0.40
8:E:135:ALA:HA	8:E:138:LEU:HD12	2.03	0.40
7:P:54:LEU:HA	7:P:76:HIS:CD2	2.46	0.40
27:G:95:ALA:HB3	27:G:124:CYS:SG	2.62	0.40
2:B:1172:C:H2'	2:B:1173:U:O4'	2.21	0.40
17:M:66:ARG:HB3	17:M:66:ARG:NH1	2.32	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:19:A:O2'	2:B:20:C:H5'	2.22	0.40
2:B:2839:G:O2'	2:B:2840:C:H5'	2.21	0.40
2:B:197:A:H4'	2:B:2069:G:OP2	2.21	0.40
10:0:39:ARG:HG3	10:0:39:ARG:NH1	2.35	0.40
2:B:1275:A:C2'	2:B:1276:A:O4'	2.69	0.40
2:B:1328:A:H2'	2:B:1330:C:C5	2.57	0.40
24:S:95:ARG:NE	24:S:95:ARG:HA	2.37	0.40
27:G:36:LEU:HD22	27:G:36:LEU:N	2.35	0.40
2:B:278:A:N3	2:B:278:A:H2'	2.36	0.40
4:C:62:ARG:O	4:C:63:ILE:HG12	2.21	0.40
35:B:3871:HOH:O	16:L:99:ASN:HB3	2.21	0.40
2:B:1425:G:H2'	2:B:1426:G:C8	2.56	0.40
2:B:2485:G:O2'	2:B:2486:C:H5'	2.22	0.40
2:B:2266:A:O4'	2:B:2272:U:O4	2.40	0.40
31:W:23:LYS:CE	31:W:24:ARG:HG3	2.51	0.40
19:H:98:ASP:OD2	19:H:99:ILE:HG12	2.22	0.40
2:B:2304:G:H4'	26:F:128:SER:O	2.21	0.40
4:C:120:ASP:O	4:C:121:ALA:C	2.59	0.40
9:Y:51:SER:HA	9:Y:54:VAL:HG22	2.04	0.40
19:H:135:HIS:O	19:H:137:GLU:N	2.55	0.40
29:T:57:VAL:O	29:T:85:VAL:O	2.40	0.40
2:B:1445:G:O2'	2:B:1446:C:H5'	2.22	0.40
20:J:98:GLU:O	20:J:102:GLU:HG3	2.21	0.40
2:B:322:A:P	8:E:163:ASN:HD22	2.43	0.40
2:B:587:C:N3	16:L:33:ARG:NH2	2.67	0.40
2:B:2579:C:H4'	5:D:139:SER:HB2	2.03	0.40
20:J:11:VAL:CG1	20:J:12:LYS:N	2.84	0.40
2:B:2368:C:H2'	2:B:2369:A:H8	1.86	0.40
2:B:1323:C:H2'	2:B:1324:G:H5'	2.02	0.40
2:B:2680:U:P	5:D:114:LYS:HB3	2.61	0.40
2:B:1197:G:C4	2:B:1198:U:C5	3.10	0.40
19:H:66:ASN:ND2	19:H:66:ASN:N	2.67	0.40
2:B:1279:G:H4'	21:N:31:HIS:CD2	2.56	0.40
2:B:1231:U:H2'	2:B:1232:G:H8	1.86	0.40
13:3:21:PHE:HE1	13:3:58:ILE:HG12	1.86	0.40
2:B:2900:A:H2'	2:B:2901:C:C1'	2.52	0.40
2:B:685:A:H1'	2:B:688:U:O4	2.22	0.40
2:B:2834:G:H2'	2:B:2879:A:N6	2.37	0.40
2:B:1341:G:N2	2:B:1398:C:H4'	2.36	0.40
2:B:1358:G:N2	2:B:1372:U:C5	2.89	0.40
6:K:110:GLU:N	6:K:111:LYS:HZ3	2.19	0.40
2:B:2023:C:O2'	2:B:2024:G:H5'	2.22	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2025:C:H2'	2:B:2026:U:H6	1.85	0.40
2:B:2751:G:H3'	2:B:2752:C:C6	2.56	0.40
8:E:40:ARG:NH2	8:E:92:HIS:NE2	2.70	0.40
32:6:48:ALA:O	32:6:50:VAL:HG22	2.22	0.40
2:B:1313:U:H4'	2:B:1332:G:H4'	2.03	0.40
14:V:51:GLN:NE2	14:V:57:TYR:OH	2.54	0.40
2:B:1585:C:O2'	2:B:1586:A:H5'	2.22	0.40
13:3:35:LYS:HG2	13:3:39:ARG:HH21	1.86	0.40
2:B:680:C:H2'	2:B:681:G:C8	2.56	0.40
2:B:401:A:O2'	2:B:402:A:H5'	2.20	0.40
27:G:127:GLN:HB3	27:G:127:GLN:HE21	1.69	0.40
2:B:1490:A:H2'	4:C:97:ASP:OD2	2.22	0.40
2:B:1340:U:H5'	29:T:61:LEU:HD22	2.04	0.40
31:W:29:SER:O	31:W:30:VAL:HB	2.22	0.40
8:E:21:ARG:HE	8:E:106:LYS:HB3	1.86	0.40
26:F:119:LYS:HA	26:F:121:PHE:CE1	2.55	0.40
4:C:142:ASN:O	4:C:189:ALA:HA	2.21	0.40
2:B:2261:C:O2'	2:B:2262:U:H5'	2.21	0.40
7:P:103:THR:O	7:P:104:GLY:C	2.60	0.40
15:2:10:LEU:HD11	15:2:14:ARG:CZ	2.51	0.40
2:B:973:A:OP1	2:B:973:A:H8	2.05	0.40
20:J:29:ALA:O	20:J:32:LEU:HB2	2.21	0.40
5:D:15:PHE:CD2	7:P:77:SER:HA	2.56	0.40
2:B:231:A:H3'	2:B:232:G:H8	1.87	0.40
14:V:9:ARG:CD	14:V:41:GLU:HB3	2.52	0.40
2:B:704:G:O2'	2:B:727:A:N6	2.55	0.40
16:L:116:VAL:O	16:L:118:THR:N	2.54	0.40
2:B:1910:G:O5'	2:B:1910:G:C8	2.74	0.40
24:S:14:ALA:O	24:S:17:VAL:N	2.53	0.40
2:B:2002:G:OP1	21:N:13:ASN:HA	2.22	0.40
4:C:76:VAL:O	4:C:93:VAL:O	2.39	0.40
2:B:17:G:H5''	23:Q:24:TYR:HE1	1.85	0.40
12:1:24:LYS:HE3	12:1:29:LYS:O	2.22	0.40
8:E:194:LYS:HE2	8:E:194:LYS:HB2	1.98	0.40
2:B:1076:C:O2'	2:B:1077:A:H5'	2.22	0.40
19:H:7:ASP:CG	19:H:8:LYS:N	2.74	0.40
2:B:2752:C:H3'	2:B:2753:A:H8	1.86	0.40
2:B:98:G:H22	25:U:6:ARG:HH12	1.69	0.40
17:M:117:PHE:O	17:M:120:ALA:HB3	2.21	0.40
2:B:2714:G:H2'	2:B:2715:C:C6	2.57	0.40
3:I:23:VAL:CG2	3:I:24:GLY:H	2.32	0.40
2:B:708:G:H2'	2:B:709:U:H6	1.86	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:596:U:O2'	2:B:597:G:H5'	2.21	0.40
2:B:2692:G:H1'	2:B:2847:U:O2'	2.21	0.40
2:B:2719:G:H4'	2:B:2846:G:O3'	2.22	0.40
2:B:541:A:H2'	2:B:542:C:H6	1.84	0.40
2:B:680:C:H2'	2:B:681:G:H8	1.85	0.40
2:B:2195:U:O2'	2:B:2196:C:H5'	2.21	0.40
2:B:2419:U:H2'	2:B:2420:C:C6	2.56	0.40
2:B:2015:A:C2	10:0:2:VAL:HG22	2.56	0.40
2:B:122:G:O2'	2:B:123:G:H5'	2.21	0.40
4:C:184:GLU:C	4:C:186:ASP:H	2.24	0.40
2:B:1957:C:H2'	2:B:1958:C:C6	2.56	0.40
28:R:29:THR:O	28:R:29:THR:HG22	2.21	0.40
2:B:535:G:O4'	23:Q:48:ASP:HB3	2.21	0.40
16:L:85:VAL:HG22	16:L:85:VAL:O	2.21	0.40
26:F:137:PHE:O	26:F:138:PRO:C	2.60	0.40
26:F:166:ARG:O	26:F:170:ALA:HB2	2.22	0.40
32:6:29:ARG:HG2	32:6:32:ARG:NH1	2.36	0.40
32:6:88:LEU:HB3	32:6:90:LEU:HD12	2.03	0.40
19:H:112:LYS:C	19:H:114:GLU:N	2.75	0.40
11:4:15:LYS:C	11:4:16:ILE:HD12	2.42	0.40
2:B:2472:G:H1	2:B:2477:U:P	2.44	0.40
20:J:44:TYR:CG	23:Q:59:LEU:HD11	2.57	0.40
27:G:120:ILE:HG12	27:G:121:THR:N	2.37	0.40
6:K:79:PHE:CD2	7:P:69:VAL:HG12	2.56	0.40
25:U:86:PHE:HB2	25:U:92:VAL:HB	2.02	0.40
32:6:113:ASP:HA	32:6:116:ARG:CZ	2.51	0.40
5:D:24:VAL:HA	5:D:189:VAL:O	2.20	0.40
2:B:1349:C:H2'	2:B:1350:C:C6	2.56	0.40
14:V:53:LYS:HA	14:V:53:LYS:HE2	2.02	0.40
25:U:36:GLU:O	25:U:37:GLY:C	2.60	0.40
8:E:48:THR:HG22	8:E:86:ALA:CB	2.48	0.40
8:E:15:SER:HB3	8:E:18:THR:OG1	2.21	0.40
2:B:2564:A:OP1	2:B:2648:G:H4'	2.21	0.40
24:S:73:LYS:HE3	24:S:74:ILE:H	1.86	0.40
2:B:1816:C:H3'	4:C:61:TYR:HE2	1.86	0.40
2:B:2093:G:O5'	19:H:24:GLY:HA3	2.22	0.40
2:B:1669:A:H2'	2:B:1669:A:N3	2.36	0.40
2:B:2191:A:H2'	2:B:2192:U:H6	1.87	0.40
2:B:1420:A:H8	2:B:2211:A:H62	1.66	0.40
2:B:537:G:H1'	2:B:556:A:H61	1.86	0.40
32:6:4:LYS:HB3	32:6:4:LYS:HE2	1.91	0.40
21:N:118:ARG:HE	21:N:118:ARG:HB3	1.64	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1501:G:O2'	2:B:1502:A:H5'	2.20	0.40
2:B:1310:G:H1'	2:B:1611:C:H5'	2.03	0.40
5:D:119:ALA:HB2	5:D:163:GLY:C	2.42	0.40

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone ⓘ

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	
3	I	139/141 (99%)	119 (86%)	15 (11%)	5 (4%)	5	40
4	C	269/272 (99%)	176 (65%)	61 (23%)	32 (12%)	1	4
5	D	207/209 (99%)	123 (59%)	56 (27%)	28 (14%)	0	3
6	K	119/123 (97%)	80 (67%)	25 (21%)	14 (12%)	1	4
7	P	112/114 (98%)	68 (61%)	29 (26%)	15 (13%)	0	3
8	E	199/201 (99%)	126 (63%)	54 (27%)	19 (10%)	1	9
9	Y	56/58 (97%)	39 (70%)	11 (20%)	6 (11%)	1	6
10	0	54/56 (96%)	40 (74%)	5 (9%)	9 (17%)	0	1
11	4	36/38 (95%)	22 (61%)	5 (14%)	9 (25%)	0	0
12	1	48/54 (89%)	37 (77%)	6 (12%)	5 (10%)	1	7
13	3	62/64 (97%)	42 (68%)	14 (23%)	6 (10%)	1	8
14	V	92/94 (98%)	71 (77%)	18 (20%)	3 (3%)	6	43
15	2	44/46 (96%)	36 (82%)	7 (16%)	1 (2%)	10	54
16	L	141/144 (98%)	92 (65%)	31 (22%)	18 (13%)	0	3
17	M	134/136 (98%)	90 (67%)	24 (18%)	20 (15%)	0	2
18	X	61/63 (97%)	40 (66%)	17 (28%)	4 (7%)	2	19
19	H	147/149 (99%)	74 (50%)	50 (34%)	23 (16%)	0	1
20	J	140/142 (99%)	96 (69%)	31 (22%)	13 (9%)	1	9
21	N	118/127 (93%)	84 (71%)	25 (21%)	9 (8%)	2	15

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
22	O	114/117 (97%)	87 (76%)	21 (18%)	6 (5%)	3	26
23	Q	115/117 (98%)	81 (70%)	21 (18%)	13 (11%)	1	5
24	S	108/110 (98%)	72 (67%)	21 (19%)	15 (14%)	0	2
25	U	100/103 (97%)	58 (58%)	27 (27%)	15 (15%)	0	2
26	F	176/178 (99%)	106 (60%)	36 (20%)	34 (19%)	0	1
27	G	174/176 (99%)	108 (62%)	41 (24%)	25 (14%)	0	2
28	R	101/103 (98%)	74 (73%)	16 (16%)	11 (11%)	1	6
29	T	91/100 (91%)	52 (57%)	23 (25%)	16 (18%)	0	1
30	Z	75/78 (96%)	50 (67%)	16 (21%)	9 (12%)	1	4
31	W	77/84 (92%)	32 (42%)	20 (26%)	25 (32%)	0	0
32	6	183/185 (99%)	140 (76%)	36 (20%)	7 (4%)	5	37
All	All	3492/3582 (98%)	2315 (66%)	762 (22%)	415 (12%)	1	4

All (415) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	I	18	ASN
4	C	4	LYS
4	C	107	LYS
4	C	141	HIS
4	C	149	LYS
5	D	9	VAL
5	D	10	GLY
5	D	74	GLU
5	D	102	ALA
5	D	106	LYS
5	D	122	VAL
5	D	169	ARG
6	K	35	VAL
6	K	72	PRO
6	K	119	ALA
6	K	120	PRO
7	P	25	VAL
7	P	50	ARG
7	P	64	SER
7	P	75	THR
8	E	45	ALA
8	E	79	ARG

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Mol	Chain	Res	Type
8	E	167	VAL
9	Y	2	LYS
10	0	23	ALA
10	0	42	ILE
10	0	51	ARG
10	0	52	LYS
11	4	7	VAL
13	3	31	ILE
13	3	50	SER
15	2	45	SER
16	L	31	GLY
16	L	89	VAL
16	L	100	ILE
16	L	111	ILE
16	L	116	VAL
17	M	30	SER
17	M	36	VAL
17	M	78	LEU
18	X	2	LYS
18	X	36	GLN
18	X	37	LEU
19	H	3	VAL
19	H	10	ALA
19	H	32	PRO
19	H	33	GLN
19	H	41	LYS
19	H	54	LEU
19	H	125	THR
19	H	132	PHE
19	H	134	VAL
20	J	44	TYR
20	J	45	THR
20	J	81	ILE
20	J	111	LYS
20	J	124	VAL
21	N	11	ASN
23	Q	30	VAL
23	Q	71	ASN
24	S	3	THR
24	S	13	SER
24	S	40	ASN
24	S	61	ASN

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Mol	Chain	Res	Type
25	U	6	ARG
25	U	18	LYS
25	U	49	PRO
25	U	50	ALA
26	F	32	LYS
26	F	43	ILE
26	F	77	LYS
26	F	87	LYS
26	F	103	ILE
26	F	112	ASP
26	F	138	PRO
27	G	11	PRO
27	G	85	LYS
27	G	91	VAL
28	R	55	ASP
29	T	16	VAL
29	T	39	THR
29	T	58	VAL
29	T	64	LYS
29	T	88	LYS
30	Z	33	LEU
30	Z	51	VAL
31	W	9	THR
31	W	16	GLU
31	W	30	VAL
31	W	31	LEU
31	W	50	VAL
31	W	59	PHE
31	W	60	ALA
3	I	14	ALA
3	I	64	ARG
4	C	18	VAL
4	C	35	LYS
4	C	36	ASN
4	C	53	ILE
4	C	63	ILE
4	C	77	VAL
4	C	123	ILE
4	C	140	VAL
4	C	237	ARG
4	C	239	PHE
5	D	34	VAL

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Mol	Chain	Res	Type
5	D	93	GLY
5	D	107	VAL
5	D	136	ASN
5	D	140	HIS
5	D	145	SER
5	D	162	ALA
5	D	164	GLN
5	D	170	VAL
5	D	182	ALA
6	K	6	THR
6	K	18	ARG
6	K	73	ASP
7	P	31	VAL
7	P	32	VAL
7	P	83	ILE
7	P	104	GLY
8	E	7	ASP
8	E	40	ARG
8	E	42	GLY
8	E	187	VAL
9	Y	4	ILE
9	Y	49	ALA
10	O	48	TYR
11	4	8	LYS
12	1	4	ILE
12	1	50	GLU
13	3	29	ARG
14	V	71	LYS
16	L	117	THR
17	M	19	GLY
17	M	20	LEU
17	M	56	ALA
17	M	59	ARG
17	M	69	PRO
17	M	72	PRO
19	H	8	LYS
19	H	62	LEU
19	H	65	ALA
20	J	43	GLU
21	N	98	LEU
21	N	100	CYS
21	N	101	GLY

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Mol	Chain	Res	Type
21	N	119	SER
22	O	99	TYR
23	Q	10	ARG
23	Q	18	LYS
23	Q	85	ALA
23	Q	86	SER
23	Q	87	VAL
23	Q	88	GLU
24	S	14	ALA
24	S	25	ARG
24	S	64	ALA
24	S	96	ILE
25	U	12	VAL
25	U	62	ALA
25	U	85	ARG
25	U	92	VAL
25	U	96	LYS
26	F	78	ILE
26	F	80	GLN
26	F	84	ILE
26	F	92	GLY
26	F	136	ILE
26	F	145	VAL
26	F	148	VAL
26	F	149	ARG
27	G	9	VAL
27	G	55	ASP
27	G	94	ARG
27	G	117	PRO
27	G	118	ALA
27	G	170	THR
28	R	28	ALA
28	R	40	MET
28	R	43	ASN
28	R	65	ALA
29	T	38	ALA
29	T	49	LYS
29	T	83	ALA
29	T	91	GLN
30	Z	77	LYS
31	W	17	ALA
31	W	34	SER

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Mol	Chain	Res	Type
31	W	36	ILE
31	W	51	GLY
31	W	62	ALA
31	W	77	LYS
32	6	22	GLU
32	6	32	ARG
32	6	41	LEU
32	6	52	LEU
3	I	23	VAL
4	C	34	GLU
4	C	37	SER
4	C	52	HIS
4	C	94	LEU
4	C	122	ALA
4	C	246	PRO
5	D	31	ALA
5	D	95	SER
5	D	113	SER
5	D	121	THR
5	D	131	ASP
6	K	4	GLU
6	K	14	SER
6	K	17	ARG
6	K	92	GLU
7	P	30	TRP
7	P	38	ARG
7	P	59	THR
8	E	62	GLN
8	E	69	ARG
8	E	188	MET
9	Y	50	VAL
10	0	26	SER
11	4	20	ASP
13	3	22	LYS
16	L	3	LEU
16	L	5	THR
16	L	9	ALA
16	L	19	LEU
16	L	36	LYS
16	L	53	GLY
16	L	94	THR
16	L	101	ILE

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Mol	Chain	Res	Type
17	M	70	ASP
17	M	77	PRO
17	M	116	ALA
17	M	134	THR
18	X	9	LYS
19	H	12	LEU
19	H	16	GLY
19	H	83	LYS
20	J	41	LYS
21	N	10	LEU
21	N	92	GLY
23	Q	6	GLY
23	Q	91	ARG
23	Q	95	ALA
24	S	18	ARG
24	S	65	ASP
25	U	47	PRO
26	F	9	ASP
26	F	35	LEU
26	F	41	GLU
26	F	66	ILE
26	F	113	PHE
27	G	84	LYS
27	G	151	ARG
29	T	19	LYS
29	T	28	ASN
29	T	29	THR
29	T	36	LYS
30	Z	35	SER
30	Z	70	GLU
30	Z	71	LEU
31	W	11	ASN
31	W	14	ASP
31	W	18	LYS
31	W	37	VAL
31	W	58	LEU
31	W	70	VAL
31	W	75	ASN
32	6	29	ARG
4	C	3	VAL
4	C	8	THR
4	C	121	ALA

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Mol	Chain	Res	Type
4	C	151	GLY
4	C	189	ALA
4	C	254	LYS
5	D	109	VAL
5	D	144	GLY
5	D	175	LEU
5	D	197	THR
6	K	46	ALA
7	P	63	ILE
7	P	113	LEU
8	E	43	THR
9	Y	9	THR
9	Y	34	THR
11	4	4	ARG
11	4	16	ILE
11	4	36	ARG
11	4	37	GLN
12	1	36	LYS
13	3	59	ALA
14	V	25	LYS
16	L	4	ASN
16	L	15	ALA
16	L	66	PHE
17	M	42	THR
17	M	55	ARG
17	M	79	ALA
17	M	83	GLY
19	H	9	VAL
19	H	31	VAL
19	H	73	ASN
19	H	102	ALA
19	H	147	VAL
20	J	13	ARG
20	J	32	LEU
20	J	112	GLY
21	N	18	GLN
22	O	68	LYS
22	O	100	HIS
24	S	27	LYS
24	S	109	ASP
25	U	61	GLU
26	F	28	PRO

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Mol	Chain	Res	Type
26	F	42	ALA
26	F	70	ARG
26	F	82	TYR
26	F	135	ILE
26	F	147	ARG
26	F	158	THR
27	G	45	ALA
27	G	61	TRP
28	R	24	LYS
28	R	101	ILE
29	T	86	THR
30	Z	28	ARG
31	W	27	GLY
31	W	61	LYS
32	6	49	HIS
3	I	49	GLU
4	C	58	LYS
4	C	105	ALA
5	D	183	GLU
6	K	93	GLN
7	P	37	LYS
8	E	6	LYS
8	E	70	SER
10	0	44	ALA
10	0	54	ILE
12	1	35	LEU
12	1	46	VAL
14	V	84	PRO
16	L	85	VAL
17	M	35	ALA
17	M	73	ILE
19	H	44	ILE
19	H	136	SER
20	J	4	PHE
22	O	13	ARG
22	O	79	ALA
22	O	98	GLN
23	Q	34	ALA
25	U	78	LYS
26	F	140	ILE
27	G	15	ASP
27	G	30	GLY

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Mol	Chain	Res	Type
27	G	32	LEU
27	G	68	ARG
27	G	152	ARG
27	G	168	VAL
28	R	8	GLY
30	Z	34	HIS
30	Z	52	SER
31	W	23	LYS
31	W	74	LYS
31	W	78	PHE
4	C	150	GLY
8	E	83	VAL
8	E	96	VAL
8	E	123	LYS
8	E	129	PRO
8	E	162	ARG
11	4	34	LYS
19	H	111	ALA
25	U	63	ALA
26	F	86	CYS
26	F	88	VAL
26	F	110	ILE
27	G	3	VAL
27	G	16	VAL
27	G	97	VAL
27	G	107	GLY
28	R	3	ALA
28	R	52	PRO
28	R	98	ILE
29	T	40	LYS
29	T	55	VAL
4	C	31	PRO
4	C	147	PRO
20	J	84	ILE
24	S	24	ILE
26	F	11	VAL
6	K	43	ILE
8	E	59	PRO
13	3	20	GLY
23	Q	89	ILE
25	U	82	VAL
4	C	148	GLY

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Mol	Chain	Res	Type
5	D	143	PRO
10	O	46	GLY
11	4	21	GLY
17	M	87	GLY
26	F	73	VAL
26	F	105	ILE
27	G	155	PRO
7	P	4	ILE
20	J	73	VAL
21	N	47	VAL
24	S	29	VAL
24	S	45	VAL
27	G	8	VAL
32	6	55	ILE
25	U	15	GLY

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	
3	I	109/109 (100%)	107 (98%)	2 (2%)	71	93
4	C	216/217 (100%)	186 (86%)	30 (14%)	5	25
5	D	164/164 (100%)	146 (89%)	18 (11%)	9	38
6	K	102/104 (98%)	84 (82%)	18 (18%)	3	13
7	P	99/99 (100%)	78 (79%)	21 (21%)	1	7
8	E	165/165 (100%)	136 (82%)	29 (18%)	3	13
9	Y	48/48 (100%)	41 (85%)	7 (15%)	5	23
10	O	47/47 (100%)	37 (79%)	10 (21%)	1	7
11	4	34/34 (100%)	26 (76%)	8 (24%)	1	4
12	1	45/48 (94%)	39 (87%)	6 (13%)	6	27
13	3	51/51 (100%)	47 (92%)	4 (8%)	18	60
14	V	78/78 (100%)	59 (76%)	19 (24%)	1	3
15	2	38/38 (100%)	32 (84%)	6 (16%)	4	18

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
16	L	102/103 (99%)	92 (90%)	10 (10%)	12	45
17	M	109/109 (100%)	90 (83%)	19 (17%)	3	14
18	X	55/55 (100%)	43 (78%)	12 (22%)	1	7
19	H	114/114 (100%)	79 (69%)	35 (31%)	0	1
20	J	116/116 (100%)	96 (83%)	20 (17%)	3	15
21	N	100/103 (97%)	84 (84%)	16 (16%)	3	18
22	O	86/87 (99%)	74 (86%)	12 (14%)	5	25
23	Q	89/89 (100%)	78 (88%)	11 (12%)	7	31
24	S	93/93 (100%)	82 (88%)	11 (12%)	8	34
25	U	83/84 (99%)	71 (86%)	12 (14%)	5	23
26	F	149/149 (100%)	114 (76%)	35 (24%)	1	4
27	G	137/137 (100%)	106 (77%)	31 (23%)	1	5
28	R	84/84 (100%)	71 (84%)	13 (16%)	4	19
29	T	80/84 (95%)	59 (74%)	21 (26%)	1	2
30	Z	67/68 (98%)	52 (78%)	15 (22%)	1	6
31	W	59/62 (95%)	42 (71%)	17 (29%)	0	2
32	6	157/157 (100%)	126 (80%)	31 (20%)	2	9
All	All	2876/2896 (99%)	2377 (83%)	499 (17%)	3	14

All (499) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	I	63	ASP
3	I	96	LYS
4	C	8	THR
4	C	12	ARG
4	C	23	LEU
4	C	43	ASN
4	C	52	HIS
4	C	62	ARG
4	C	65	ASP
4	C	89	ASN
4	C	94	LEU
4	C	109	LEU
4	C	110	LYS
4	C	129	LEU

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Mol	Chain	Res	Type
4	C	155	ARG
4	C	166	ARG
4	C	172	THR
4	C	173	LEU
4	C	176	ARG
4	C	180	MET
4	C	181	ARG
4	C	187	CYS
4	C	190	THR
4	C	191	LEU
4	C	212	TRP
4	C	224	MET
4	C	235	GLU
4	C	250	GLN
4	C	251	THR
4	C	252	LYS
4	C	257	ARG
4	C	270	ARG
5	D	12	THR
5	D	40	LEU
5	D	46	ARG
5	D	56	LYS
5	D	59	ARG
5	D	81	GLU
5	D	84	LEU
5	D	89	GLU
5	D	98	VAL
5	D	99	GLU
5	D	114	LYS
5	D	124	ARG
5	D	130	GLN
5	D	138	LEU
5	D	148	GLN
5	D	154	LYS
5	D	159	LYS
5	D	173	GLN
6	K	2	ILE
6	K	21	CYS
6	K	32	TYR
6	K	47	ILE
6	K	53	LYS
6	K	54	LYS

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Mol	Chain	Res	Type
6	K	58	LEU
6	K	67	LYS
6	K	72	PRO
6	K	80	ASP
6	K	86	LEU
6	K	87	LEU
6	K	88	ASN
6	K	89	ASN
6	K	105	ARG
6	K	111	LYS
6	K	120	PRO
6	K	121	GLU
7	P	3	ILE
7	P	6	GLN
7	P	13	LYS
7	P	19	PHE
7	P	20	ARG
7	P	25	VAL
7	P	33	GLU
7	P	37	LYS
7	P	39	LEU
7	P	43	GLU
7	P	46	VAL
7	P	58	PHE
7	P	60	VAL
7	P	61	ARG
7	P	83	ILE
7	P	84	SER
7	P	100	ARG
7	P	111	GLU
7	P	112	ARG
7	P	113	LEU
7	P	114	ASN
8	E	2	GLU
8	E	6	LYS
8	E	7	ASP
8	E	12	LEU
8	E	21	ARG
8	E	22	ASP
8	E	24	ASN
8	E	40	ARG
8	E	48	THR

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Mol	Chain	Res	Type
8	E	58	LYS
8	E	60	TRP
8	E	61	ARG
8	E	62	GLN
8	E	67	ARG
8	E	70	SER
8	E	78	TRP
8	E	79	ARG
8	E	108	ILE
8	E	116	ASP
8	E	118	LEU
8	E	122	GLU
8	E	147	LEU
8	E	148	ILE
8	E	150	THR
8	E	153	LEU
8	E	159	LEU
8	E	169	VAL
8	E	170	ARG
8	E	198	GLU
9	Y	2	LYS
9	Y	15	ARG
9	Y	23	LEU
9	Y	37	ARG
9	Y	39	ASP
9	Y	43	ILE
9	Y	48	ASN
10	0	3	GLN
10	0	10	SER
10	0	27	LEU
10	0	37	HIS
10	0	38	LEU
10	0	41	HIS
10	0	45	ASP
10	0	51	ARG
10	0	53	VAL
10	0	56	LYS
11	4	1	MET
11	4	9	LYS
11	4	13	ASN
11	4	15	LYS
11	4	20	ASP

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Mol	Chain	Res	Type
11	4	25	VAL
11	4	28	SER
11	4	35	GLN
12	1	6	GLU
12	1	9	LYS
12	1	27	ARG
12	1	35	LEU
12	1	44	GLN
12	1	49	LYS
13	3	7	ARG
13	3	14	LYS
13	3	18	LYS
13	3	30	HIS
14	V	5	ASN
14	V	11	GLU
14	V	18	ARG
14	V	20	LEU
14	V	29	ILE
14	V	34	LYS
14	V	40	ILE
14	V	42	LEU
14	V	45	ASP
14	V	46	LYS
14	V	51	GLN
14	V	53	LYS
14	V	55	GLU
14	V	68	LYS
14	V	70	ILE
14	V	75	GLN
14	V	79	ARG
14	V	87	GLN
14	V	92	VAL
15	2	21	ARG
15	2	25	LYS
15	2	28	ARG
15	2	33	ARG
15	2	39	ARG
15	2	46	LYS
16	L	40	SER
16	L	60	ARG
16	L	69	ARG
16	L	78	ARG

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Mol	Chain	Res	Type
16	L	82	LEU
16	L	91	ASP
16	L	92	LEU
16	L	95	LEU
16	L	118	THR
16	L	123	ARG
17	M	1	MET
17	M	18	ARG
17	M	20	LEU
17	M	25	ASP
17	M	27	SER
17	M	47	GLU
17	M	59	ARG
17	M	66	ARG
17	M	70	ASP
17	M	78	LEU
17	M	81	ARG
17	M	82	MET
17	M	90	GLU
17	M	93	VAL
17	M	110	GLU
17	M	111	GLU
17	M	115	GLU
17	M	123	LYS
17	M	127	LYS
18	X	1	MET
18	X	2	LYS
18	X	7	ARG
18	X	15	ASN
18	X	18	LEU
18	X	21	LEU
18	X	24	GLU
18	X	48	ARG
18	X	49	ASP
18	X	57	LEU
18	X	59	GLU
18	X	60	LYS
19	H	3	VAL
19	H	4	ILE
19	H	12	LEU
19	H	15	LEU
19	H	19	VAL

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Mol	Chain	Res	Type
19	H	28	ASN
19	H	31	VAL
19	H	32	PRO
19	H	41	LYS
19	H	44	ILE
19	H	46	PHE
19	H	47	PHE
19	H	48	GLU
19	H	50	ARG
19	H	54	LEU
19	H	57	LYS
19	H	62	LEU
19	H	66	ASN
19	H	68	ARG
19	H	70	GLU
19	H	71	LYS
19	H	73	ASN
19	H	75	LEU
19	H	89	LYS
19	H	98	ASP
19	H	109	GLU
19	H	112	LYS
19	H	114	GLU
19	H	116	ARG
19	H	125	THR
19	H	128	HIS
19	H	133	GLN
19	H	136	SER
19	H	138	VAL
19	H	141	LYS
20	J	2	LYS
20	J	3	THR
20	J	5	THR
20	J	12	LYS
20	J	28	LEU
20	J	34	ARG
20	J	35	ARG
20	J	36	LEU
20	J	44	TYR
20	J	60	ASP
20	J	65	THR
20	J	78	THR

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Mol	Chain	Res	Type
20	J	93	ILE
20	J	95	ARG
20	J	106	LYS
20	J	111	LYS
20	J	120	ARG
20	J	122	LEU
20	J	124	VAL
20	J	129	GLU
21	N	2	ARG
21	N	11	ASN
21	N	18	GLN
21	N	20	MET
21	N	32	GLU
21	N	35	LYS
21	N	40	LYS
21	N	69	ARG
21	N	71	ARG
21	N	73	ASN
21	N	74	GLU
21	N	82	GLU
21	N	98	LEU
21	N	107	ASN
21	N	114	GLU
21	N	120	GLU
22	O	3	LYS
22	O	9	ARG
22	O	17	LYS
22	O	31	THR
22	O	36	TYR
22	O	80	GLU
22	O	98	GLN
22	O	100	HIS
22	O	104	GLN
22	O	106	LEU
22	O	112	GLU
22	O	115	LEU
23	Q	4	LYS
23	Q	10	ARG
23	Q	13	HIS
23	Q	49	ARG
23	Q	50	ARG
23	Q	69	ARG

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Mol	Chain	Res	Type
23	Q	79	ILE
23	Q	83	LYS
23	Q	88	GLU
23	Q	94	LEU
23	Q	96	ASP
24	S	6	LYS
24	S	42	LYS
24	S	59	GLU
24	S	66	ILE
24	S	69	LEU
24	S	84	ARG
24	S	86	MET
24	S	88	ARG
24	S	99	ARG
24	S	108	SER
24	S	109	ASP
25	U	6	ARG
25	U	11	ILE
25	U	13	LEU
25	U	21	ARG
25	U	26	ASN
25	U	49	PRO
25	U	52	ASN
25	U	60	LYS
25	U	73	ASN
25	U	78	LYS
25	U	80	ASP
25	U	85	ARG
26	F	13	LYS
26	F	17	THR
26	F	18	GLU
26	F	29	ARG
26	F	32	LYS
26	F	41	GLU
26	F	49	LEU
26	F	55	ASP
26	F	56	LEU
26	F	70	ARG
26	F	76	PHE
26	F	79	ARG
26	F	87	LYS
26	F	89	THR

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Mol	Chain	Res	Type
26	F	91	ARG
26	F	96	TRP
26	F	97	GLU
26	F	102	LEU
26	F	103	ILE
26	F	109	ARG
26	F	111	ARG
26	F	112	ASP
26	F	121	PHE
26	F	126	ASN
26	F	128	SER
26	F	129	MET
26	F	134	GLN
26	F	137	PHE
26	F	138	PRO
26	F	141	ASP
26	F	142	TYR
26	F	149	ARG
26	F	160	LYS
26	F	174	PHE
26	F	178	LYS
27	G	2	ARG
27	G	17	LYS
27	G	28	LYS
27	G	31	GLU
27	G	32	LEU
27	G	33	THR
27	G	34	ARG
27	G	37	ASN
27	G	54	ARG
27	G	68	ARG
27	G	70	LEU
27	G	72	ASN
27	G	74	MET
27	G	84	LYS
27	G	85	LYS
27	G	86	LEU
27	G	87	GLN
27	G	94	ARG
27	G	106	LEU
27	G	113	ASP
27	G	120	ILE

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Mol	Chain	Res	Type
27	G	124	CYS
27	G	127	GLN
27	G	132	LEU
27	G	138	GLN
27	G	146	ASP
27	G	147	LEU
27	G	154	GLU
27	G	162	ARG
27	G	163	TYR
27	G	166	GLU
28	R	14	VAL
28	R	22	LEU
28	R	39	LEU
28	R	40	MET
28	R	41	ILE
28	R	48	LYS
28	R	53	PHE
28	R	55	ASP
28	R	70	GLU
28	R	71	LYS
28	R	84	ARG
28	R	86	GLN
28	R	97	LYS
29	T	1	MET
29	T	2	ILE
29	T	3	ARG
29	T	8	LEU
29	T	9	LYS
29	T	11	LEU
29	T	12	ARG
29	T	22	THR
29	T	24	MET
29	T	29	THR
29	T	32	LEU
29	T	36	LYS
29	T	50	LEU
29	T	61	LEU
29	T	64	LYS
29	T	68	LYS
29	T	69	ARG
29	T	73	ARG
29	T	79	ASP

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Mol	Chain	Res	Type
29	T	86	THR
29	T	87	LEU
30	Z	4	VAL
30	Z	25	THR
30	Z	27	ARG
30	Z	28	ARG
30	Z	30	LEU
30	Z	32	ASN
30	Z	37	ARG
30	Z	41	GLU
30	Z	46	PHE
30	Z	48	THR
30	Z	50	ARG
30	Z	64	ILE
30	Z	70	GLU
30	Z	71	LEU
30	Z	78	TYR
31	W	10	ARG
31	W	14	ASP
31	W	18	LYS
31	W	19	ARG
31	W	23	LYS
31	W	24	ARG
31	W	25	PHE
31	W	38	ARG
31	W	39	GLN
31	W	40	ARG
31	W	49	ASN
31	W	50	VAL
31	W	54	ARG
31	W	63	ASP
31	W	68	PHE
31	W	75	ASN
31	W	77	LYS
32	6	1	MET
32	6	10	THR
32	6	16	LYS
32	6	17	SER
32	6	22	GLU
32	6	24	ASN
32	6	37	LEU
32	6	39	LEU

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Mol	Chain	Res	Type
32	6	52	LEU
32	6	59	THR
32	6	64	ARG
32	6	66	LEU
32	6	71	TRP
32	6	73	GLN
32	6	77	LYS
32	6	84	ARG
32	6	88	LEU
32	6	90	LEU
32	6	97	ASP
32	6	102	ASN
32	6	106	LEU
32	6	113	ASP
32	6	134	ARG
32	6	137	LEU
32	6	138	ASP
32	6	142	LYS
32	6	156	ARG
32	6	162	GLN
32	6	169	ILE
32	6	174	GLN
32	6	181	GLN

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (117) such sidechains are listed below:

Mol	Chain	Res	Type
3	I	11	GLN
3	I	29	GLN
3	I	33	ASN
3	I	93	ASN
4	C	14	HIS
4	C	43	ASN
4	C	45	ASN
4	C	59	GLN
4	C	85	ASN
4	C	89	ASN
4	C	133	ASN
4	C	152	GLN
4	C	162	GLN
4	C	238	ASN
5	D	32	ASN

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Mol	Chain	Res	Type
5	D	67	HIS
5	D	126	ASN
5	D	130	GLN
5	D	136	ASN
6	K	3	GLN
6	K	5	GLN
6	K	13	ASN
7	P	6	GLN
7	P	11	GLN
7	P	40	GLN
7	P	114	ASN
8	E	9	GLN
8	E	24	ASN
8	E	29	HIS
8	E	30	GLN
8	E	62	GLN
8	E	136	GLN
8	E	163	ASN
8	E	195	GLN
9	Y	33	HIS
9	Y	48	ASN
10	O	3	GLN
11	4	13	ASN
11	4	37	GLN
12	1	25	ASN
13	3	27	ASN
14	V	44	HIS
14	V	51	GLN
14	V	75	GLN
14	V	80	HIS
14	V	88	HIS
15	2	13	ASN
15	2	16	HIS
16	L	4	ASN
16	L	54	GLN
16	L	99	ASN
16	L	104	GLN
17	M	22	GLN
17	M	60	GLN
17	M	88	ASN
18	X	25	GLN
18	X	27	ASN

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Mol	Chain	Res	Type
18	X	31	GLN
18	X	39	GLN
18	X	41	HIS
18	X	58	ASN
19	H	28	ASN
19	H	43	ASN
19	H	66	ASN
19	H	73	ASN
19	H	133	GLN
20	J	130	HIS
20	J	136	GLN
20	J	138	GLN
21	N	11	ASN
21	N	62	ASN
21	N	73	ASN
21	N	107	ASN
22	O	19	GLN
22	O	38	GLN
23	Q	43	GLN
23	Q	51	GLN
23	Q	71	ASN
23	Q	80	ASN
24	S	40	ASN
24	S	57	ASN
24	S	61	ASN
25	U	26	ASN
25	U	65	GLN
25	U	68	ASN
25	U	73	ASN
26	F	51	ASN
26	F	126	ASN
26	F	134	GLN
27	G	44	HIS
27	G	63	GLN
27	G	87	GLN
27	G	110	HIS
27	G	127	GLN
28	R	6	GLN
28	R	12	HIS
28	R	43	ASN
28	R	86	GLN
29	T	48	GLN

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Mol	Chain	Res	Type
29	T	72	GLN
29	T	91	GLN
29	T	92	ASN
30	Z	20	HIS
30	Z	23	ASN
30	Z	32	ASN
30	Z	34	HIS
30	Z	36	HIS
31	W	11	ASN
31	W	39	GLN
31	W	49	ASN
31	W	75	ASN
32	6	13	HIS
32	6	24	ASN
32	6	91	ASN
32	6	94	ASN
32	6	102	ASN
32	6	174	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	116/120 (96%)	18 (15%)	0
2	B	2837/2904 (97%)	448 (15%)	20 (0%)
All	All	2953/3024 (97%)	466 (15%)	20 (0%)

All (466) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	12	C
1	A	13	G
1	A	16	G
1	A	25	U
1	A	26	C
1	A	30	C
1	A	35	C
1	A	36	C
1	A	42	C
1	A	52	A
1	A	53	A
1	A	56	G

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Mol	Chain	Res	Type
1	A	66	A
1	A	88	C
1	A	89	U
1	A	90	C
1	A	99	A
1	A	109	A
2	B	2	G
2	B	4	U
2	B	12	U
2	B	34	U
2	B	35	G
2	B	46	G
2	B	51	G
2	B	63	A
2	B	64	A
2	B	71	A
2	B	74	A
2	B	75	G
2	B	91	A
2	B	96	C
2	B	100	U
2	B	101	A
2	B	102	U
2	B	103	A
2	B	110	G
2	B	118	A
2	B	119	A
2	B	120	U
2	B	125	A
2	B	128	C
2	B	135	U
2	B	137	U
2	B	140	C
2	B	141	G
2	B	142	A
2	B	144	A
2	B	160	A
2	B	162	U
2	B	163	C
2	B	181	A
2	B	196	A
2	B	199	A

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Mol	Chain	Res	Type
2	B	216	A
2	B	221	A
2	B	222	A
2	B	223	A
2	B	230	G
2	B	248	G
2	B	252	G
2	B	255	A
2	B	265	A
2	B	266	G
2	B	267	C
2	B	277	G
2	B	278	A
2	B	279	A
2	B	280	U
2	B	295	G
2	B	299	A
2	B	311	A
2	B	323	C
2	B	329	G
2	B	330	A
2	B	333	G
2	B	346	A
2	B	353	C
2	B	354	A
2	B	371	A
2	B	372	G
2	B	386	G
2	B	387	U
2	B	396	G
2	B	399	U
2	B	411	G
2	B	412	A
2	B	424	G
2	B	444	C
2	B	455	C
2	B	456	C
2	B	457	A
2	B	479	A
2	B	480	A
2	B	481	G
2	B	490	C

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Mol	Chain	Res	Type
2	B	491	G
2	B	504	A
2	B	505	A
2	B	508	A
2	B	509	C
2	B	512	G
2	B	527	C
2	B	532	A
2	B	533	G
2	B	544	C
2	B	546	U
2	B	547	A
2	B	548	G
2	B	549	G
2	B	550	C
2	B	563	A
2	B	573	U
2	B	575	A
2	B	588	U
2	B	603	A
2	B	613	A
2	B	614	A
2	B	615	U
2	B	616	A
2	B	627	A
2	B	637	A
2	B	645	C
2	B	646	U
2	B	654	A
2	B	655	A
2	B	671	C
2	B	686	U
2	B	717	C
2	B	718	A
2	B	719	C
2	B	730	A
2	B	747	U
2	B	757	G
2	B	765	C
2	B	775	G
2	B	782	A
2	B	784	G

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Mol	Chain	Res	Type
2	B	785	G
2	B	805	G
2	B	812	C
2	B	819	A
2	B	827	U
2	B	828	U
2	B	846	U
2	B	847	U
2	B	859	G
2	B	872	U
2	B	875	G
2	B	876	C
2	B	877	A
2	B	878	A
2	B	899	A
2	B	910	A
2	B	912	C
2	B	931	U
2	B	932	U
2	B	933	A
2	B	941	A
2	B	946	C
2	B	961	C
2	B	973	A
2	B	974	G
2	B	983	A
2	B	989	G
2	B	990	A
2	B	991	C
2	B	995	C
2	B	996	A
2	B	1012	U
2	B	1013	C
2	B	1022	G
2	B	1025	G
2	B	1033	U
2	B	1045	C
2	B	1046	A
2	B	1047	G
2	B	1062	G
2	B	1070	A
2	B	1088	A

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Mol	Chain	Res	Type
2	B	1090	A
2	B	1110	G
2	B	1112	G
2	B	1126	A
2	B	1132	U
2	B	1133	A
2	B	1135	C
2	B	1136	G
2	B	1142	A
2	B	1170	C
2	B	1172	C
2	B	1173	U
2	B	1174	U
2	B	1175	A
2	B	1179	G
2	B	1180	U
2	B	1205	A
2	B	1206	G
2	B	1211	C
2	B	1212	G
2	B	1237	A
2	B	1241	A
2	B	1242	U
2	B	1247	A
2	B	1248	G
2	B	1250	G
2	B	1253	A
2	B	1256	G
2	B	1266	G
2	B	1271	G
2	B	1272	A
2	B	1275	A
2	B	1300	G
2	B	1301	A
2	B	1302	A
2	B	1325	U
2	B	1337	G
2	B	1341	G
2	B	1352	U
2	B	1365	A
2	B	1368	G
2	B	1379	U

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Mol	Chain	Res	Type
2	B	1383	A
2	B	1384	A
2	B	1396	U
2	B	1397	U
2	B	1416	G
2	B	1419	A
2	B	1426	G
2	B	1427	A
2	B	1428	C
2	B	1453	A
2	B	1454	C
2	B	1455	G
2	B	1459	G
2	B	1460	U
2	B	1461	C
2	B	1476	U
2	B	1477	A
2	B	1478	G
2	B	1482	G
2	B	1490	A
2	B	1493	C
2	B	1504	A
2	B	1505	A
2	B	1507	C
2	B	1508	A
2	B	1509	A
2	B	1510	G
2	B	1524	G
2	B	1535	A
2	B	1537	G
2	B	1538	G
2	B	1540	G
2	B	1552	A
2	B	1558	C
2	B	1559	U
2	B	1566	A
2	B	1569	A
2	B	1578	U
2	B	1583	A
2	B	1585	C
2	B	1608	A
2	B	1610	A

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Mol	Chain	Res	Type
2	B	1634	A
2	B	1635	A
2	B	1640	A
2	B	1647	U
2	B	1648	U
2	B	1649	G
2	B	1654	A
2	B	1674	G
2	B	1700	A
2	B	1701	A
2	B	1703	G
2	B	1706	C
2	B	1713	A
2	B	1714	U
2	B	1715	G
2	B	1723	G
2	B	1724	G
2	B	1730	C
2	B	1731	G
2	B	1733	G
2	B	1738	G
2	B	1739	A
2	B	1756	G
2	B	1758	U
2	B	1764	C
2	B	1773	A
2	B	1800	C
2	B	1801	A
2	B	1816	C
2	B	1829	A
2	B	1857	G
2	B	1869	G
2	B	1870	C
2	B	1871	A
2	B	1872	A
2	B	1876	A
2	B	1884	G
2	B	1906	G
2	B	1907	G
2	B	1909	C
2	B	1910	G
2	B	1912	A

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Mol	Chain	Res	Type
2	B	1913	A
2	B	1914	C
2	B	1915	U
2	B	1918	A
2	B	1919	A
2	B	1922	G
2	B	1927	A
2	B	1929	G
2	B	1930	G
2	B	1931	U
2	B	1937	A
2	B	1938	A
2	B	1939	U
2	B	1940	U
2	B	1955	U
2	B	1963	U
2	B	1967	C
2	B	1970	A
2	B	1971	U
2	B	1972	G
2	B	1991	U
2	B	1993	U
2	B	1997	C
2	B	2022	U
2	B	2023	C
2	B	2031	A
2	B	2032	G
2	B	2033	A
2	B	2043	C
2	B	2055	C
2	B	2056	G
2	B	2057	G
2	B	2060	A
2	B	2061	G
2	B	2062	A
2	B	2069	G
2	B	2101	A
2	B	2102	G
2	B	2103	C
2	B	2104	C
2	B	2107	G
2	B	2108	A

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Mol	Chain	Res	Type
2	B	2110	G
2	B	2134	A
2	B	2137	U
2	B	2139	U
2	B	2143	C
2	B	2144	G
2	B	2145	C
2	B	2147	A
2	B	2148	G
2	B	2149	U
2	B	2152	G
2	B	2153	C
2	B	2154	A
2	B	2155	U
2	B	2156	G
2	B	2157	G
2	B	2181	U
2	B	2183	A
2	B	2184	A
2	B	2190	G
2	B	2192	U
2	B	2198	A
2	B	2203	U
2	B	2204	G
2	B	2211	A
2	B	2212	A
2	B	2225	A
2	B	2238	G
2	B	2239	G
2	B	2250	G
2	B	2268	A
2	B	2283	C
2	B	2287	A
2	B	2288	A
2	B	2305	U
2	B	2307	G
2	B	2308	G
2	B	2309	A
2	B	2311	A
2	B	2315	G
2	B	2320	U
2	B	2321	U

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Mol	Chain	Res	Type
2	B	2322	A
2	B	2325	G
2	B	2333	A
2	B	2335	A
2	B	2336	A
2	B	2337	G
2	B	2347	C
2	B	2361	G
2	B	2372	U
2	B	2379	G
2	B	2383	G
2	B	2385	C
2	B	2396	G
2	B	2402	U
2	B	2406	A
2	B	2423	U
2	B	2426	A
2	B	2429	G
2	B	2430	A
2	B	2434	A
2	B	2441	U
2	B	2448	A
2	B	2472	G
2	B	2476	A
2	B	2491	U
2	B	2502	G
2	B	2505	G
2	B	2506	U
2	B	2518	A
2	B	2529	G
2	B	2535	G
2	B	2554	U
2	B	2566	A
2	B	2567	G
2	B	2585	U
2	B	2586	U
2	B	2609	U
2	B	2610	C
2	B	2613	U
2	B	2629	U
2	B	2654	A
2	B	2661	G

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Mol	Chain	Res	Type
2	B	2682	A
2	B	2689	U
2	B	2690	U
2	B	2714	G
2	B	2725	A
2	B	2726	A
2	B	2739	U
2	B	2744	G
2	B	2750	A
2	B	2751	G
2	B	2752	C
2	B	2757	A
2	B	2765	A
2	B	2778	A
2	B	2791	G
2	B	2796	U
2	B	2798	U
2	B	2799	A
2	B	2800	A
2	B	2801	G
2	B	2808	G
2	B	2820	A
2	B	2821	A
2	B	2823	A
2	B	2832	U
2	B	2836	U
2	B	2850	A
2	B	2867	G
2	B	2872	A
2	B	2873	A
2	B	2883	A
2	B	2894	G
2	B	2901	C
2	B	2903	U

All (20) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
2	B	63	A
2	B	162	U
2	B	508	A
2	B	546	U

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Mol	Chain	Res	Type
2	B	670	A
2	B	858	G
2	B	1047	G
2	B	1205	A
2	B	1210	G
2	B	1301	A
2	B	1419	A
2	B	1913	A
2	B	1930	G
2	B	2213	U
2	B	2282	G
2	B	2336	A
2	B	2425	A
2	B	2756	U
2	B	2873	A
2	B	2894	G

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

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

5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

5.6 Ligand geometry ⓘ

Of 111 ligands modelled in this entry, 111 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	117/120 (97%)	-0.01	2 (1%) 67 21	46, 80, 115, 168	0
2	B	2841/2904 (97%)	0.08	74 (2%) 53 13	16, 56, 145, 180	0
3	I	141/141 (100%)	0.88	25 (17%) 2 1	62, 152, 180, 180	0
4	C	271/272 (99%)	0.24	10 (3%) 39 9	9, 45, 87, 170	0
5	D	209/209 (100%)	0.21	7 (3%) 44 10	22, 66, 124, 167	0
6	K	121/123 (98%)	0.16	5 (4%) 35 8	16, 67, 120, 154	0
7	P	114/114 (100%)	0.35	8 (7%) 16 4	27, 77, 122, 160	0
8	E	201/201 (100%)	0.15	9 (4%) 32 7	16, 67, 132, 148	0
9	Y	58/58 (100%)	0.35	1 (1%) 67 21	42, 73, 129, 143	0
10	0	56/56 (100%)	0.55	2 (3%) 41 9	33, 71, 126, 141	0
11	4	38/38 (100%)	0.47	2 (5%) 25 6	23, 75, 134, 149	0
12	1	50/54 (92%)	0.01	0 100 100	43, 79, 117, 132	0
13	3	64/64 (100%)	0.73	6 (9%) 9 3	31, 51, 91, 115	0
14	V	94/94 (100%)	0.10	2 (2%) 60 17	32, 90, 135, 169	0
15	2	46/46 (100%)	0.34	1 (2%) 59 16	13, 40, 87, 121	0
16	L	143/144 (99%)	0.12	4 (2%) 50 12	13, 64, 117, 161	0
17	M	136/136 (100%)	0.23	7 (5%) 27 6	24, 68, 124, 174	0
18	X	63/63 (100%)	0.23	7 (11%) 6 2	20, 86, 141, 171	0
19	H	149/149 (100%)	0.10	2 (1%) 74 27	37, 121, 160, 180	0
20	J	142/142 (100%)	0.31	7 (4%) 28 6	25, 73, 126, 137	0
21	N	120/127 (94%)	0.20	1 (0%) 83 39	20, 65, 117, 173	0
22	O	116/117 (99%)	0.03	3 (2%) 53 13	27, 82, 128, 179	0
23	Q	117/117 (100%)	0.06	2 (1%) 67 21	5, 64, 111, 163	0
24	S	110/110 (100%)	0.12	2 (1%) 65 20	15, 58, 112, 161	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
25	U	102/103 (99%)	0.13	2 (1%) 62 19	26, 75, 130, 171	0
26	F	178/178 (100%)	0.56	21 (11%) 5 2	42, 113, 160, 180	0
27	G	176/176 (100%)	0.10	4 (2%) 57 15	51, 103, 141, 162	0
28	R	103/103 (100%)	0.15	2 (1%) 64 20	27, 86, 128, 157	0
29	T	93/100 (93%)	0.34	9 (9%) 8 2	31, 70, 134, 164	0
30	Z	77/78 (98%)	0.18	2 (2%) 53 13	22, 50, 93, 129	0
31	W	79/84 (94%)	0.63	10 (12%) 4 2	29, 81, 126, 153	0
32	6	185/185 (100%)	0.30	10 (5%) 25 6	33, 116, 167, 180	0
All	All	6510/6606 (98%)	0.18	249 (3%) 38 9	5, 66, 147, 180	0

All (249) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
3	I	27	LEU	11.7
3	I	26	ALA	8.0
26	F	31	GLU	6.9
18	X	63	ALA	6.7
32	6	95	LYS	6.6
17	M	136	MET	6.4
3	I	2	LYS	6.2
3	I	11	GLN	6.2
32	6	96	GLY	6.1
26	F	29	ARG	5.7
3	I	4	VAL	5.7
11	4	12	ARG	5.7
26	F	116	LEU	5.3
26	F	118	ALA	5.3
26	F	30	VAL	5.3
3	I	22	PRO	5.1
2	B	654	A	5.1
32	6	94	ASN	4.9
3	I	25	PRO	4.8
2	B	2585	U	4.7
27	G	172	GLU	4.7
29	T	4	GLU	4.6
2	B	326	G	4.5
22	O	84	GLU	4.4
2	B	914	G	4.3
2	B	1915	U	4.3

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Mol	Chain	Res	Type	RSRZ
2	B	137	U	4.2
7	P	61	ARG	4.1
26	F	119	LYS	4.1
14	V	33	GLY	4.0
3	I	1	ALA	3.9
3	I	34	ILE	3.9
20	J	1	MET	3.8
32	6	84	ARG	3.8
3	I	21	PRO	3.8
26	F	117	SER	3.8
2	B	1914	C	3.8
20	J	12	LYS	3.8
2	B	2102	G	3.7
14	V	34	LYS	3.7
3	I	29	GLN	3.7
2	B	2320	U	3.7
26	F	176	PHE	3.7
28	R	50	GLY	3.7
31	W	77	LYS	3.6
26	F	113	PHE	3.6
7	P	107	ALA	3.6
31	W	69	GLU	3.5
31	W	76	ARG	3.5
8	E	144	GLU	3.5
2	B	2139	U	3.4
2	B	1136	G	3.4
2	B	967	U	3.4
13	3	36	ALA	3.4
2	B	508	A	3.4
31	W	41	GLY	3.4
17	M	135	VAL	3.4
3	I	24	GLY	3.4
2	B	2799	A	3.4
2	B	2602	A	3.4
3	I	23	VAL	3.3
18	X	7	ARG	3.3
27	G	175	LYS	3.3
13	3	38	LYS	3.3
2	B	1293	C	3.3
26	F	90	LEU	3.3
2	B	2145	C	3.2
23	Q	4	LYS	3.2

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Mol	Chain	Res	Type	RSRZ
18	X	9	LYS	3.2
13	3	28	LEU	3.2
26	F	156	THR	3.2
31	W	12	GLY	3.1
27	G	171	LYS	3.1
7	P	70	GLU	3.1
2	B	2355	G	3.1
4	C	271	SER	3.0
26	F	155	ILE	3.0
29	T	64	LYS	3.0
3	I	28	GLY	3.0
8	E	59	PRO	3.0
2	B	1632	A	3.0
32	6	62	ASP	2.9
26	F	33	ILE	2.9
23	Q	84	LYS	2.9
2	B	1442	U	2.9
2	B	2520	C	2.9
20	J	44	TYR	2.9
2	B	1377	G	2.9
13	3	32	LEU	2.9
30	Z	76	GLU	2.9
2	B	2147	A	2.9
2	B	1537	G	2.9
6	K	71	ARG	2.9
6	K	18	ARG	2.9
24	S	40	ASN	2.8
32	6	59	THR	2.8
2	B	1274	A	2.8
17	M	129	THR	2.8
26	F	44	ALA	2.8
3	I	3	LYS	2.8
2	B	1538	G	2.8
2	B	850	U	2.8
29	T	66	LYS	2.8
29	T	67	VAL	2.8
29	T	24	MET	2.8
2	B	2524	G	2.7
8	E	92	HIS	2.7
26	F	166	ARG	2.7
2	B	968	C	2.7
4	C	1	ALA	2.7

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Mol	Chain	Res	Type	RSRZ
16	L	73	ILE	2.7
5	D	54	ALA	2.7
27	G	45	ALA	2.7
2	B	2138	G	2.7
5	D	60	VAL	2.7
5	D	193	VAL	2.7
7	P	71	ARG	2.7
32	6	85	ASP	2.7
2	B	1093	G	2.7
19	H	33	GLN	2.7
29	T	71	GLY	2.6
7	P	67	GLU	2.6
20	J	129	GLU	2.6
5	D	56	LYS	2.6
18	X	62	GLY	2.6
8	E	91	ASP	2.6
4	C	27	LYS	2.6
2	B	2523	G	2.5
2	B	1090	A	2.5
2	B	2071	A	2.5
16	L	116	VAL	2.5
31	W	74	LYS	2.5
20	J	10	THR	2.5
31	W	45	HIS	2.5
25	U	60	LYS	2.5
3	I	141	ASP	2.5
5	D	209	ALA	2.5
2	B	136	G	2.5
2	B	507	A	2.5
2	B	2152	G	2.5
7	P	109	ILE	2.5
8	E	93	SER	2.5
29	T	76	ARG	2.5
6	K	17	ARG	2.5
4	C	96	LYS	2.4
2	B	2321	U	2.4
16	L	71	ALA	2.4
4	C	17	LYS	2.4
10	0	52	LYS	2.4
3	I	7	TYR	2.4
2	B	1020	A	2.4
25	U	46	LYS	2.4

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Mol	Chain	Res	Type	RSRZ
1	A	88	C	2.4
2	B	2442	C	2.4
28	R	70	GLU	2.4
15	2	28	ARG	2.4
2	B	62	U	2.4
2	B	1094	U	2.4
32	6	42	LYS	2.3
16	L	69	ARG	2.3
32	6	40	HIS	2.3
2	B	522	A	2.3
3	I	87	SER	2.3
7	P	43	GLU	2.3
2	B	2070	A	2.3
2	B	1512	C	2.3
2	B	2825	G	2.3
13	3	37	THR	2.3
2	B	1205	A	2.3
8	E	152	GLU	2.3
2	B	2182	U	2.3
2	B	2681	C	2.3
2	B	2319	G	2.3
2	B	1032	A	2.3
29	T	3	ARG	2.3
17	M	20	LEU	2.3
2	B	1802	A	2.3
1	A	3	C	2.3
20	J	121	LYS	2.3
2	B	2249	U	2.2
31	W	11	ASN	2.2
3	I	71	LYS	2.2
2	B	2691	C	2.2
18	X	11	VAL	2.2
2	B	327	G	2.2
2	B	950	G	2.2
31	W	38	ARG	2.2
26	F	157	THR	2.2
3	I	76	ALA	2.2
8	E	155	GLU	2.2
22	O	2	ASP	2.2
4	C	4	LYS	2.2
2	B	2827	C	2.2
4	C	169	ALA	2.2

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Mol	Chain	Res	Type	RSRZ
24	S	86	MET	2.2
31	W	75	ASN	2.2
18	X	10	SER	2.2
2	B	2140	G	2.2
26	F	121	PHE	2.2
29	T	65	GLY	2.2
2	B	1161	C	2.2
22	O	4	LYS	2.2
2	B	1352	U	2.2
13	3	19	GLY	2.1
32	6	61	PRO	2.1
2	B	333	G	2.1
2	B	2089	C	2.1
3	I	13	ALA	2.1
7	P	105	LYS	2.1
3	I	9	LYS	2.1
30	Z	20	HIS	2.1
3	I	8	VAL	2.1
2	B	2141	G	2.1
2	B	331	C	2.1
17	M	111	GLU	2.1
26	F	115	GLY	2.1
4	C	260	LYS	2.1
10	0	46	GLY	2.1
2	B	1323	C	2.1
26	F	61	GLY	2.1
4	C	78	GLU	2.1
6	K	35	VAL	2.1
21	N	100	CYS	2.1
2	B	1058	U	2.1
6	K	77	ILE	2.1
5	D	8	LYS	2.1
20	J	23	LYS	2.1
5	D	10	GLY	2.1
2	B	405	U	2.1
17	M	39	GLY	2.1
9	Y	18	LYS	2.0
2	B	549	G	2.0
11	4	9	LYS	2.0
26	F	99	PHE	2.0
19	H	95	GLY	2.0
8	E	170	ARG	2.0

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Mol	Chain	Res	Type	RSRZ
2	B	1272	A	2.0
18	X	60	LYS	2.0
2	B	2189	U	2.0
3	I	10	LEU	2.0
26	F	120	SER	2.0
2	B	2671	G	2.0
2	B	2680	U	2.0
2	B	2844	G	2.0
2	B	613	A	2.0
4	C	178	GLY	2.0
17	M	78	LEU	2.0
8	E	60	TRP	2.0
3	I	30	GLN	2.0

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

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

6.3 Carbohydrates ⓘ

There are no carbohydrates in this entry.

6.4 Ligands ⓘ

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q < 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(Å ²)	Q<0.9
33	MG	B	3521	1/1	0.65	16.17	38,38,38,38	1
33	MG	B	3194	1/1	0.41	9.32	94,94,94,94	0
33	MG	B	3561	1/1	0.88	8.19	75,75,75,75	1
33	MG	B	3400	1/1	0.38	4.19	17,17,17,17	0
33	MG	B	3344	1/1	0.30	4.17	32,32,32,32	0
33	MG	B	3044	1/1	0.45	4.08	93,93,93,93	0
33	MG	B	3141	1/1	0.26	2.15	47,47,47,47	0
33	MG	B	3032	1/1	0.32	2.01	28,28,28,28	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
33	MG	B	3181	1/1	0.24	1.98	46,46,46,46	0
33	MG	B	3021	1/1	0.32	1.89	52,52,52,52	0
33	MG	B	3550	1/1	0.20	1.89	30,30,30,30	0
33	MG	B	3600	1/1	0.26	1.73	37,37,37,37	0
33	MG	B	3464	1/1	0.22	1.54	57,57,57,57	0
33	MG	B	3496	1/1	0.21	1.17	100,100,100,100	0
33	MG	B	3227	1/1	0.19	0.79	43,43,43,43	0
33	MG	B	3270	1/1	0.21	0.25	70,70,70,70	0
33	MG	B	3590	1/1	0.20	-0.03	36,36,36,36	0
33	MG	B	3169	1/1	0.16	-0.08	28,28,28,28	0
33	MG	B	3509	1/1	0.21	-0.14	78,78,78,78	0
33	MG	B	3206	1/1	0.18	-0.25	41,41,41,41	0
33	MG	B	3471	1/1	0.19	-0.28	35,35,35,35	0
33	MG	B	3130	1/1	0.19	-0.33	44,44,44,44	0
33	MG	B	3265	1/1	0.23	-0.39	69,69,69,69	0
33	MG	B	3555	1/1	0.20	-0.39	51,51,51,51	0
33	MG	B	3418	1/1	0.19	-0.41	44,44,44,44	0
33	MG	B	3369	1/1	0.32	-0.45	31,31,31,31	0
33	MG	B	3516	1/1	0.21	-0.46	51,51,51,51	0
33	MG	B	3096	1/1	0.18	-0.52	59,59,59,59	0
33	MG	B	3359	1/1	0.17	-0.58	41,41,41,41	0
33	MG	B	3157	1/1	0.12	-0.72	34,34,34,34	0
33	MG	B	3232	1/1	0.17	-0.75	60,60,60,60	0
33	MG	B	3240	1/1	0.14	-0.85	123,123,123,123	0
33	MG	B	3085	1/1	0.17	-0.97	40,40,40,40	0
34	ZN	4	617	1/1	0.07	-1.07	55,55,55,55	0
33	MG	B	3014	1/1	0.14	-1.18	47,47,47,47	0
33	MG	B	3028	1/1	0.13	-1.26	24,24,24,24	0
33	MG	B	3289	1/1	0.16	-1.44	28,28,28,28	0
33	MG	B	3476	1/1	0.15	-1.49	38,38,38,38	0
33	MG	B	3212	1/1	0.08	-1.60	39,39,39,39	0
33	MG	B	3038	1/1	0.12	-1.61	74,74,74,74	0
33	MG	B	3201	1/1	0.12	-1.63	35,35,35,35	0
33	MG	B	3607	1/1	0.09	-1.66	42,42,42,42	0
33	MG	B	3326	1/1	0.17	-1.67	31,31,31,31	0
33	MG	B	3145	1/1	0.14	-1.67	49,49,49,49	0
33	MG	B	3612	1/1	0.07	-1.68	56,56,56,56	0
33	MG	B	3499	1/1	0.13	-1.71	75,75,75,75	0
33	MG	B	3217	1/1	0.05	-1.78	23,23,23,23	0
33	MG	B	3353	1/1	0.07	-1.79	38,38,38,38	0
33	MG	B	3001	1/1	0.11	-1.80	35,35,35,35	0
33	MG	B	3457	1/1	0.14	-1.80	63,63,63,63	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
33	MG	B	3596	1/1	0.08	-1.81	31,31,31,31	0
33	MG	B	3056	1/1	0.11	-1.84	70,70,70,70	0
33	MG	B	3331	1/1	0.12	-1.84	37,37,37,37	0
33	MG	B	3066	1/1	0.08	-1.85	32,32,32,32	0
33	MG	B	3221	1/1	0.06	-1.86	98,98,98,98	0
33	MG	B	3577	1/1	0.14	-1.89	20,20,20,20	0
33	MG	B	3428	1/1	0.13	-1.92	21,21,21,21	0
33	MG	B	3078	1/1	0.09	-1.98	58,58,58,58	0
33	MG	B	3061	1/1	0.09	-2.01	30,30,30,30	0
33	MG	B	3531	1/1	0.15	-2.03	25,25,25,25	0
33	MG	B	3276	1/1	0.12	-2.09	30,30,30,30	0
33	MG	B	3382	1/1	0.09	-2.16	21,21,21,21	0
33	MG	B	3164	1/1	0.11	-2.17	46,46,46,46	0
33	MG	B	3050	1/1	0.12	-2.19	87,87,87,87	0
33	MG	B	3282	1/1	0.12	-2.20	26,26,26,26	0
33	MG	B	3188	1/1	0.09	-2.21	34,34,34,34	0
33	MG	B	3135	1/1	0.08	-2.25	23,23,23,23	0
33	MG	B	3349	1/1	0.13	-2.25	47,47,47,47	0
33	MG	B	3364	1/1	0.14	-2.26	52,52,52,52	0
33	MG	B	3110	1/1	0.08	-2.43	37,37,37,37	0
33	MG	B	3090	1/1	0.12	-2.51	34,34,34,34	0
33	MG	B	3450	1/1	0.14	-2.52	47,47,47,47	0
33	MG	B	3394	1/1	0.13	-2.54	43,43,43,43	0
33	MG	B	3586	1/1	0.09	-2.57	65,65,65,65	0
33	MG	B	3488	1/1	0.07	-2.70	56,56,56,56	0
33	MG	B	3412	1/1	0.15	-2.73	25,25,25,25	0
33	MG	B	3480	1/1	0.11	-2.77	30,30,30,30	0
33	MG	B	3321	1/1	0.08	-2.88	41,41,41,41	0
33	MG	B	3376	1/1	0.08	-2.89	40,40,40,40	0
33	MG	B	3528	1/1	0.09	-2.91	21,21,21,21	0
33	MG	B	3423	1/1	0.06	-2.95	70,70,70,70	0
33	MG	B	3124	1/1	0.06	-2.95	43,43,43,43	0
33	MG	B	3505	1/1	0.12	-2.97	38,38,38,38	0
33	MG	B	3175	1/1	0.14	-3.00	40,40,40,40	0
33	MG	B	3389	1/1	0.07	-3.08	45,45,45,45	0
33	MG	B	3007	1/1	0.08	-3.26	12,12,12,12	0
33	MG	B	3537	1/1	0.08	-3.35	37,37,37,37	0
33	MG	B	3568	1/1	0.11	-3.43	22,22,22,22	0
33	MG	B	3573	1/1	0.10	-3.47	38,38,38,38	0
33	MG	B	3103	1/1	0.15	-3.55	45,45,45,45	0
33	MG	B	3433	1/1	0.10	-3.66	37,37,37,37	0
33	MG	B	3582	1/1	0.06	-3.68	20,20,20,20	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
33	MG	B	3253	1/1	0.08	-3.71	70,70,70,70	0
33	MG	B	3246	1/1	0.12	-3.72	53,53,53,53	0
33	MG	B	3492	1/1	0.13	-3.84	45,45,45,45	0
33	MG	B	3259	1/1	0.10	-3.94	41,41,41,41	0
33	MG	B	3439	1/1	0.10	-4.19	43,43,43,43	0
33	MG	B	3406	1/1	0.10	-4.32	35,35,35,35	0
33	MG	B	3484	1/1	0.07	-4.45	38,38,38,38	0
33	MG	B	3072	1/1	0.06	-4.65	36,36,36,36	0
33	MG	B	3235	1/1	0.10	-4.78	22,22,22,22	0
33	MG	B	3316	1/1	0.06	-5.16	57,57,57,57	0
33	MG	B	3302	1/1	0.03	-5.29	25,25,25,25	0
33	MG	B	3444	1/1	0.07	-5.32	36,36,36,36	0
33	MG	B	3151	1/1	0.09	-5.55	28,28,28,28	0
33	MG	B	3295	1/1	0.07	-5.94	35,35,35,35	0
33	MG	B	3543	1/1	0.10	-6.00	101,101,101,101	0
33	MG	B	3512	1/1	0.09	-6.96	31,31,31,31	0
33	MG	B	3117	1/1	0.05	-7.18	20,20,20,20	0
33	MG	B	3309	1/1	0.11	-7.26	61,61,61,61	0
33	MG	B	3338	1/1	0.13	-10.63	33,33,33,33	0

6.5 Other polymers ⓘ

There are no such residues in this entry.