



Full wwPDB EM Validation Report ⓘ

Mar 5, 2026 – 03:54 AM UTC

PDB ID : 3BBX / pdb_00003bbx
EMDB ID : EMD-1455
Title : The Hsp15 protein fitted into the low resolution Cryo-EM map of the 50S.nc-tRNA.Hsp15 complex
Authors : Jiang, L.; Abrahams, J.P.
Deposited on : 2007-11-11
Resolution : 10.00 Å(reported)
Based on initial model : 2AW4

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

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

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

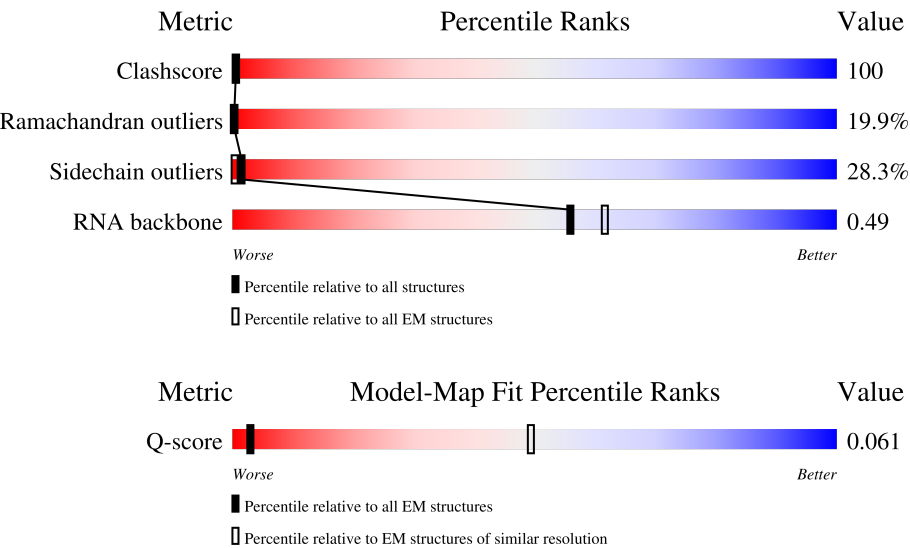
EMDB validation analysis : 0.0.1.dev132
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 10.00 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.



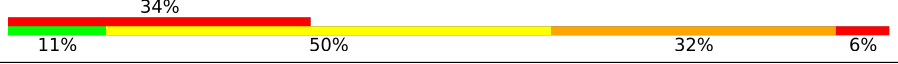
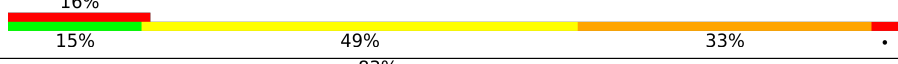
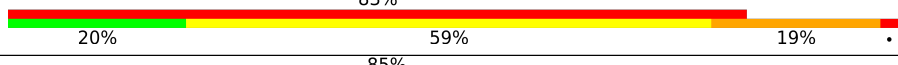
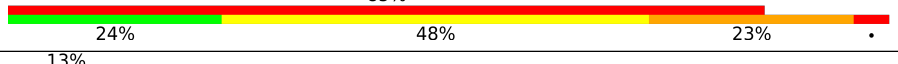
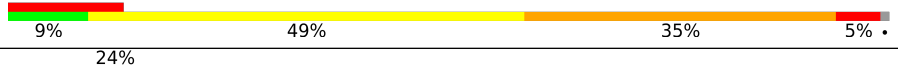
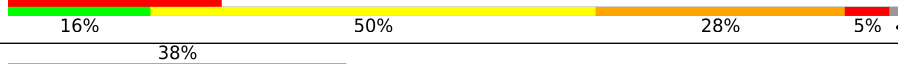
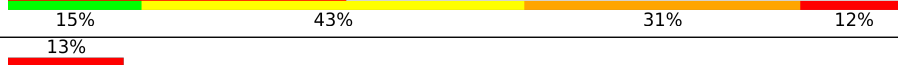
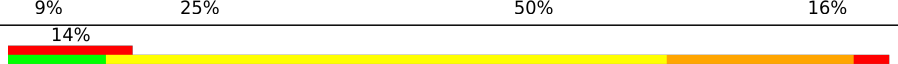
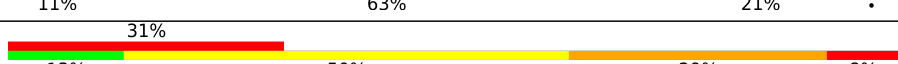
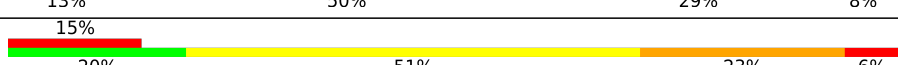
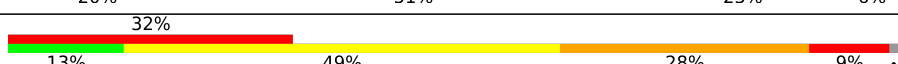
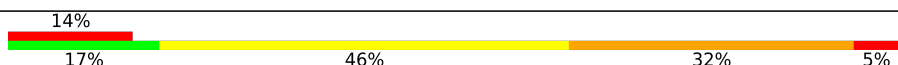
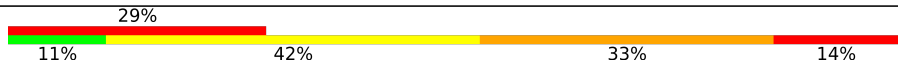
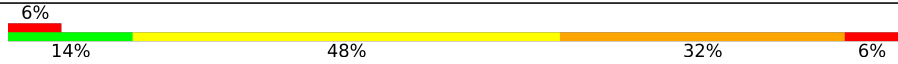
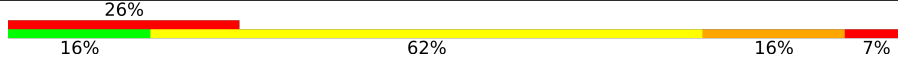
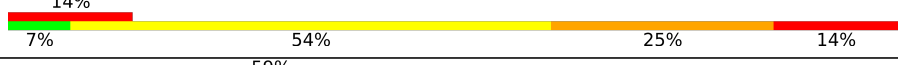
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	61 (13.50 - 14.50)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	120	11% 21% 64% 12% .
2	B	2904	12% 20% 66% 13% .
3	V	94	38% 26% 53% 20% .

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Mol	Chain	Length	Quality of chain
4	C	273	
5	D	209	
6	E	201	
7	F	178	
8	G	176	
9	H	149	
10	J	142	
11	K	123	
12	L	144	
13	M	136	
14	N	127	
15	O	117	
16	P	114	
17	Q	117	
18	R	103	
19	S	110	
20	T	100	
21	U	103	
22	W	84	
23	X	63	
24	Y	58	
25	Z	70	
26	0	56	
27	1	54	
28	2	46	

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Mol	Chain	Length	Quality of chain
29	3	64	14% 28% 47% 38%
30	4	38	13% 45% 34% 47% 5%

2 Entry composition

There are 32 unique types of molecules in this entry. The entry contains 89335 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, 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 ribosomal RNA.

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
2	B	2902	Total	C	N	O	P	0	61
			61056	27210	11229	19715	2902		

- Molecule 3 is a protein called 50S ribosomal protein L25.

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
4	C	267	Total	C	N	O	S	0	0
			2053	1271	416	359	7		

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

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

- Molecule 6 is a protein called 50S ribosomal protein L4.

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

- Molecule 7 is a protein called 50S ribosomal protein L5.

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

- Molecule 8 is a protein called 50S ribosomal protein L6.

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

- Molecule 9 is a protein called 50S ribosomal protein L9.

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
10	J	140	Total	C	N	O	S	0	0
			1112	704	210	194	4		

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
12	L	144	Total	C	N	O	S	0	0
			1053	654	207	190	2		

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
14	N	127	Total	C	N	O	S	0	0
			1008	621	204	178	5		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
15	O	117	Total	C	N	O	S	0	0
			900	557	179	163	1		

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
20	T	99	Total	C	N	O	S	0	0
			777	491	145	139	2		

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

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

- Molecule 22 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms				AltConf	Trace
22	W	84	Total	C	N	O	S	
			634	391	129	113	1	0

- Molecule 23 is a protein called 50S ribosomal protein L29.

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

- Molecule 24 is a protein called 50S ribosomal protein L30.

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

- Molecule 25 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms				AltConf	Trace
25	Z	70	Total	C	N	O	S	
			549	339	104	100	6	0

- Molecule 26 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms				AltConf	Trace
26	0	56	Total	C	N	O	S	
			444	269	94	80	1	0

- Molecule 27 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms				AltConf	Trace
27	1	54	Total	C	N	O		
			441	284	81	76	0	0

- Molecule 28 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	2	46	Total	C	N	O	S	0	0
			377	228	90	57	2		

- Molecule 29 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	3	64	Total	C	N	O	S	0	0
			504	323	105	74	2		

- Molecule 30 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	4	38	Total	C	N	O	S	0	0
			302	185	65	48	4		

- Molecule 31 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
31	B	92	Total	Mg	0
			92	92	
31	C	1	Total	Mg	0
			1	1	
31	E	3	Total	Mg	0
			3	3	
31	L	4	Total	Mg	0
			4	4	
31	Q	2	Total	Mg	0
			2	2	
31	S	2	Total	Mg	0
			2	2	
31	T	2	Total	Mg	0
			2	2	
31	U	1	Total	Mg	0
			1	1	
31	2	3	Total	Mg	0
			3	3	

- Molecule 32 is water.

Mol	Chain	Residues	Atoms		AltConf
32	B	443	Total	O	0
			443	443	

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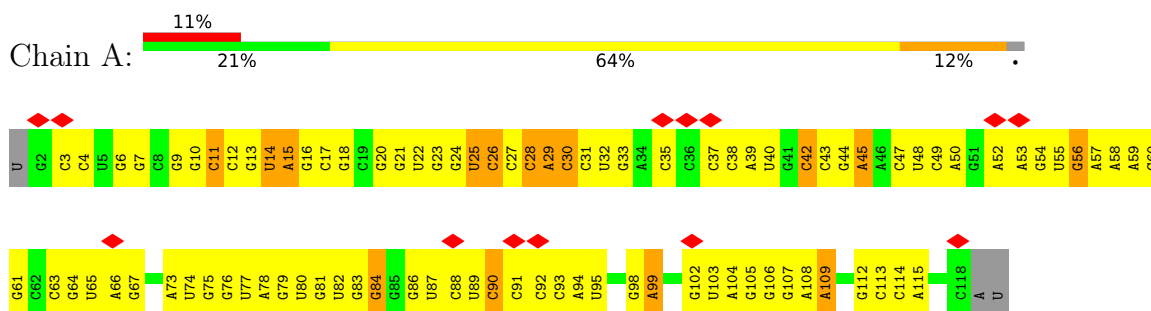
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Mol	Chain	Residues	Atoms		AltConf
32	C	1	Total 1	O 1	0
32	D	1	Total 1	O 1	0
32	E	18	Total 18	O 18	0
32	L	8	Total 8	O 8	0
32	Q	7	Total 7	O 7	0
32	S	7	Total 7	O 7	0
32	T	5	Total 5	O 5	0
32	U	5	Total 5	O 5	0
32	2	11	Total 11	O 11	0

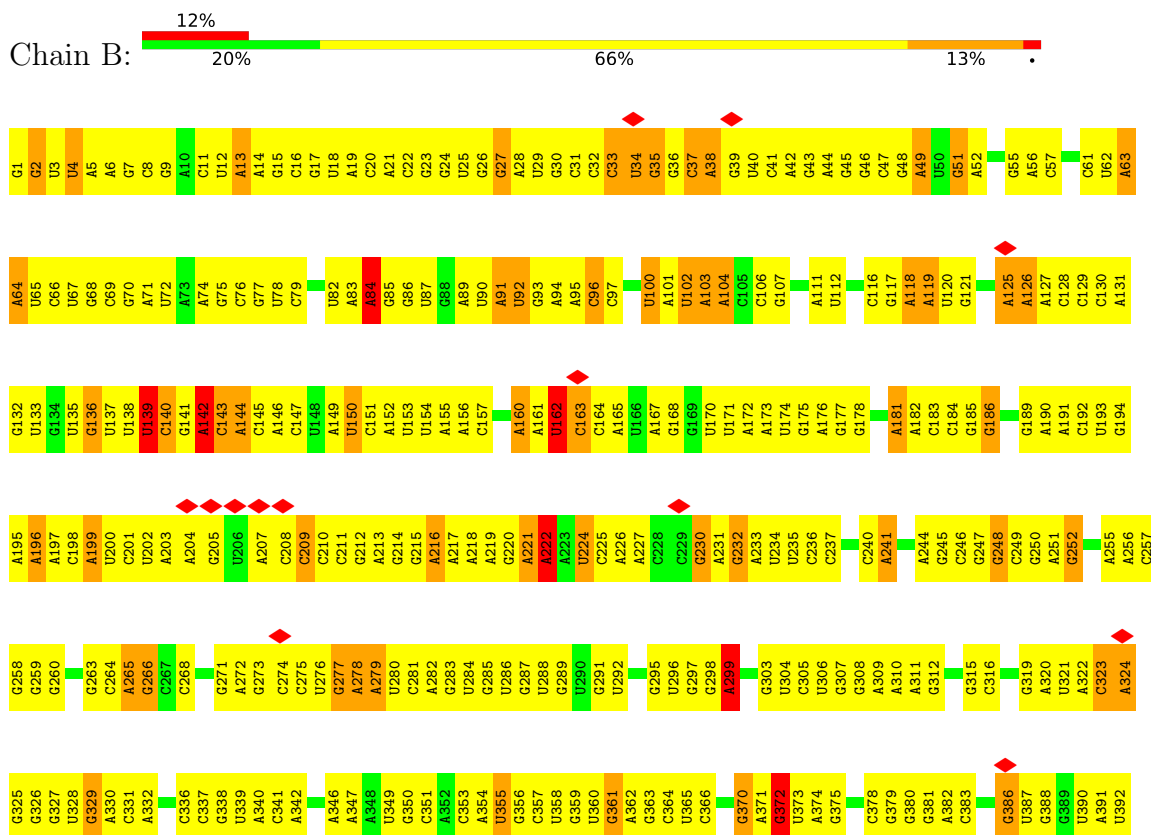
3 Residue-property plots

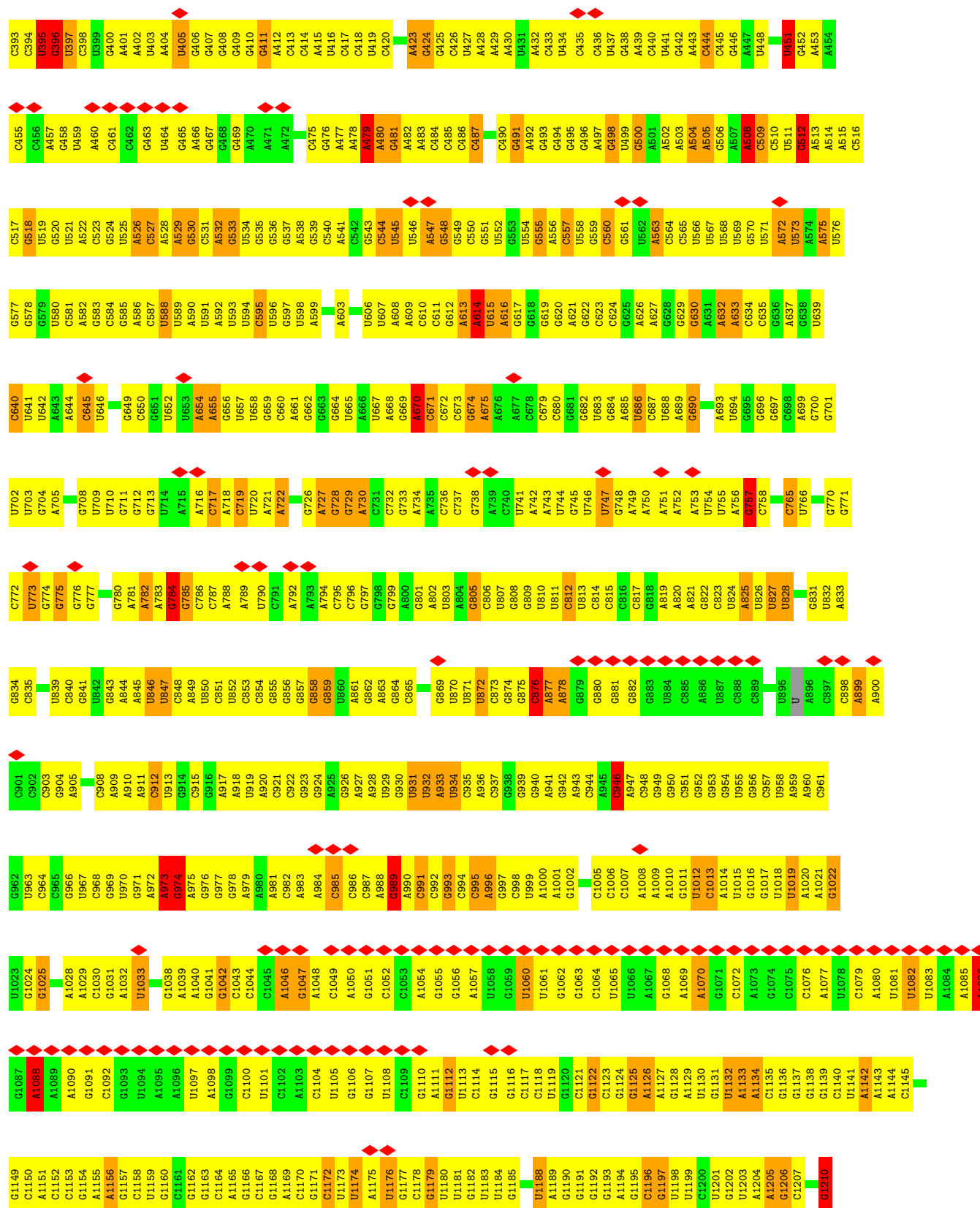
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map 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 diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). 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 ribosomal RNA



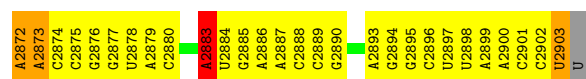
• Molecule 2: 23S ribosomal RNA



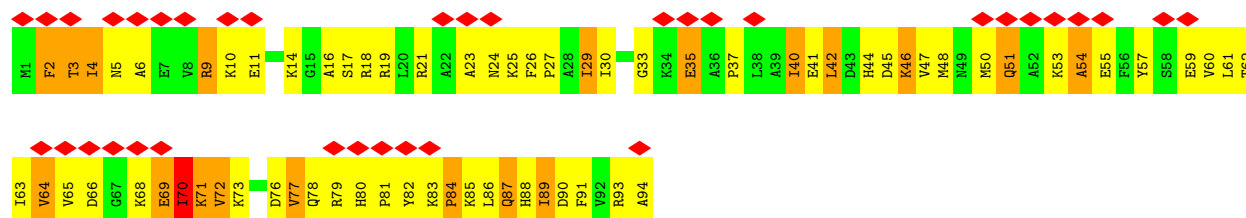


G1980	A1981	U1982	G1983	G1984	G1985	C1986	A1987	G1988	G1989	A1990	U1991	G1992	U1993	C1994	G1995	C1996	A1997	U1998	C1999	G2000	C2001	G2002	A2003	G2004	A2005	C2006	U2007	G2008	A2009	G2010	A2011	A2012	A2013	A2014	A2015	U2016	U2017	G2018	A2019	A2020	C2021	U2022	C2023	G2024	G2025	C2026	U2027	U2028	G2029	A2030	C2031	G2032	A2033	U2034	G2035	C2036	U2037	G2038	C2039	G2040
U1917	A1918	A1919	G1920	G1921	G1922	G1923	C1924	A1927	A1928	G1929	G1930	A1932	G1933	G1934	G1935	C1936	A1937	A1938	U1939	U1940	U1943	U1944	G1945	U1946	C1947	G1948	G1949	U1951	A1952	G1953	A1954	U1955	U1956	U1957	C1958	G1959	A1960	C1961	G1962	U1963	G1964	C1965	A1966	C1967	G1968	G1969	A1969	U1970	U1971	G1972	G1973	C1974	G1975	U1976	A1977	U1978	U1979			
A1766	G1767	C1768	G1769	C1790	A1791	G1792	U1793	C1794	A1795	U1796	U1797	U1798	C1800	A1801	A1802	C1803	C1804	A1805	C1806	C1807	A1808	A1809	A1810	U1811	U1812	C1813	G1814	A1815	C1816	G1817	U1818	A1819	U1820	A1821	G1822	C1823	G1824	U1825	C1826	U1827	G1828	A1829	C1830	G1831	C1832	C1833	G1838	G1839	G1842	C1843	C1844	G1845	G1846	A1847	A1848					
U1851	U1852	A1853	U1854	U1855	U1856	U1857	A1858	U1859	C1860	A1861	G1862	G1863	U1864	U1865	A1866	C1867	C1868	U1869	C1870	A1871	A1872	A2003	U1944	G1945	U1946	C1947	G1948	G1949	U1951	A1952	G1953	A1954	U1955	U1956	U1957	C1958	G1959	A1960	C1961	G1962	U1963	G1964	C1965	A1966	C1967	G1968	G1969	A1969	U1970	U1971	G1972	G1973	C1974	G1975	U1976	A1977	U1978	U1979		
A1766	G1767	C1768	G1769	C1790	A1791	G1792	U1793	C1794	A1795	U1796	U1797	U1798	C1800	A1801	A1802	C1803	C1804	A1805	C1806	C1807	A1808	A1809	A1810	U1811	U1812	C1813	G1814	A1815	C1816	G1817	U1818	A1819	U1820	A1821	G1822	C1823	G1824	U1825	C1826	U1827	G1828	A1829	C1830	G1831	C1832	C1833	G1838	G1839	G1842	C1843	C1844	G1845	G1846	A1847	A1848					
U1851	U1852	A1853	U1854	U1855	U1856	U1857	A1858	U1859	C1860	A1861	G1862	G1863	U1864	U1865	A1866	C1867	C1868	U1869	C1870	A1871	A1872	A2003	U1944	G1945	U1946	C1947	G1948	G1949	U1951	A1952	G1953	A1954	U1955	U1956	U1957	C1958	G1959	A1960	C1961	G1962	U1963	G1964	C1965	A1966	C1967	G1968	G1969	A1969	U1970	U1971	G1972	G1973	C1974	G1975	U1976	A1977	U1978	U1979		
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U1851	U1852	A1853	U1854	U1855	U1856	U1857	A1858	U1859	C1860	A1861	G1862	G1863	U1864	U1865	A1866	C1867	C1868	U1869	C1870	A1871	A1872	A2003	U1944	G1945	U1946	C1947	G1948	G1949	U1951	A1952	G1953	A1954	U1955	U1956	U1957	C1958	G1959	A1960	C1961	G1962	U1963	G1964	C1965	A1966	C1967	G1968	G1969	A1969	U1970	U1971	G1972	G1973	C1974	G1975	U1976	A1977	U1978	U1979		
A1766	G1767	C1768	G1769	C1790	A1791	G1792	U1793	C1794	A1795	U1796	U1797	U1798	C1800	A1801	A1802	C1803	C1804	A1805	C1806	C1807	A1808	A1809	A1810	U1811	U1812	C1813	G1814	A1815	C1816	G1817	U1818	A1819	U1820	A1821	G1822	C1823	G1824	U1825	C1826	U1827	G1828	A1829	C1830	G1831	C1832	C1833	G1838	G1839	G1842	C1843	C1844	G1845	G1846	A1847	A1848					
U1851	U1852	A1853	U1854	U1855	U1856	U1857	A1858	U1859	C1860	A1861	G1862	G1863	U1864	U1865	A1866	C1867	C1868	U1869	C1870	A1871	A1872	A2003	U1944	G1945	U1946	C1947	G1948	G1949	U1951	A1952	G1953	A1954	U1955	U1956	U1957	C1958	G1959	A1960	C1961	G1962	U1963	G1964	C1965	A1966	C1967	G1968	G1969	A1969	U1970	U1971	G1972	G1973	C1974	G1975	U1976	A1977	U1978	U1979		
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A1766	G1767	C1768	G1769	C1790	A1791	G1792	U1793	C1794	A1795	U1796	U1797	U1798	C1800	A1801	A1802	C1803	C1804	A1805	C1806	C1807	A1808	A1809	A1810	U1811	U1812	C1813	G1814	A1815	C1816	G1817	U1818	A1819	U1820	A1821	G1822	C1823	G1824	U1825	C1826	U1827	G1828	A1829	C1830	G1831	C1832	C1833	G1838	G1839	G1842	C1843	C1844	G1845	G1846	A1847	A1848					
U18																																																												

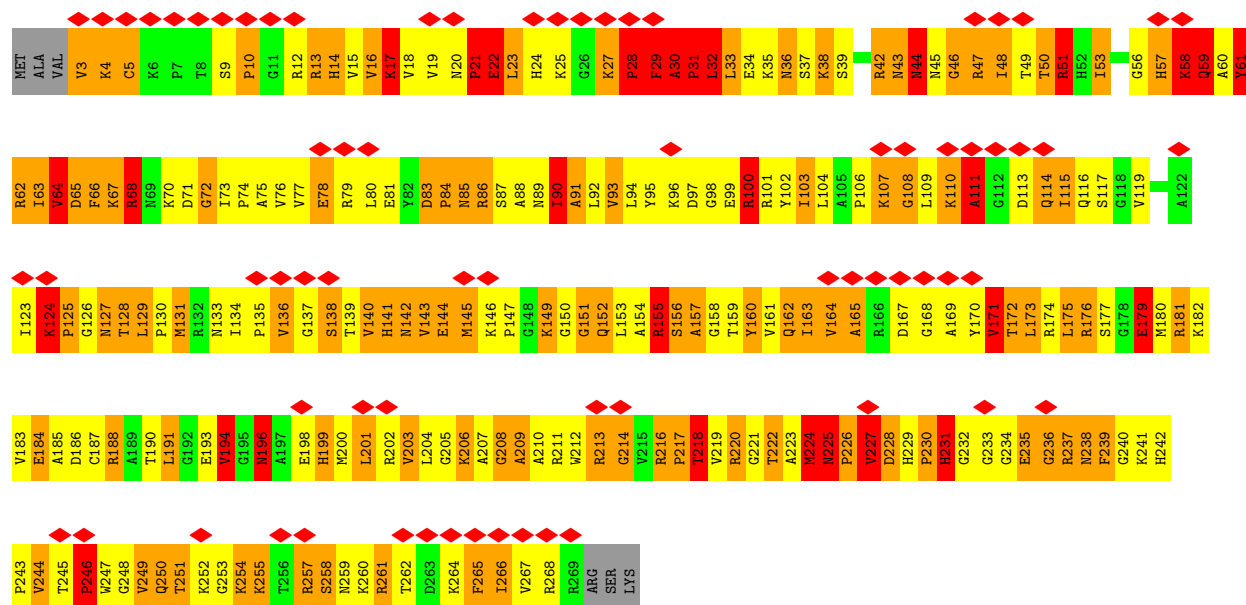




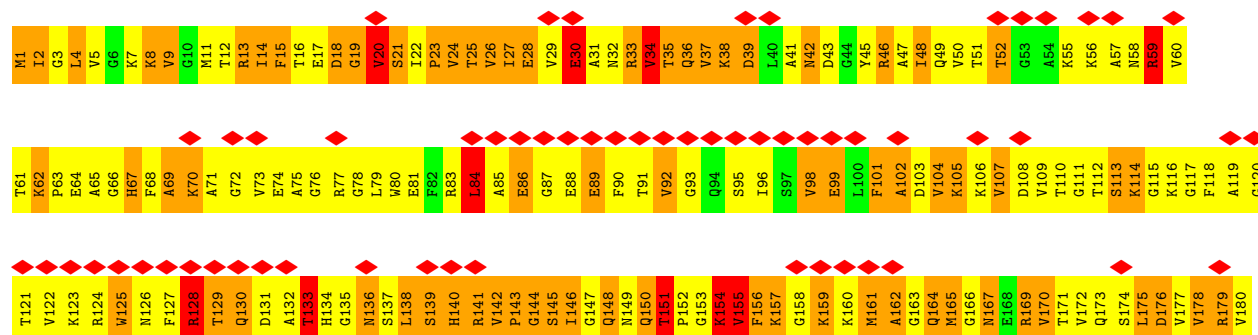
• Molecule 3: 50S ribosomal protein L25

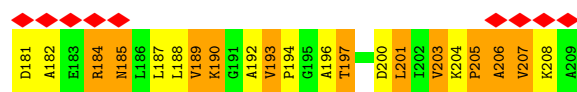


• Molecule 4: 50S ribosomal protein L2

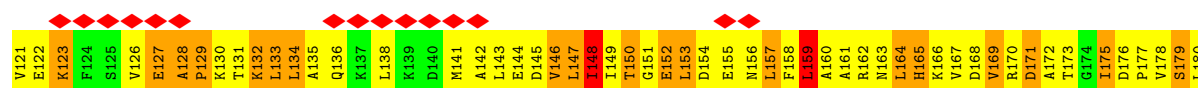
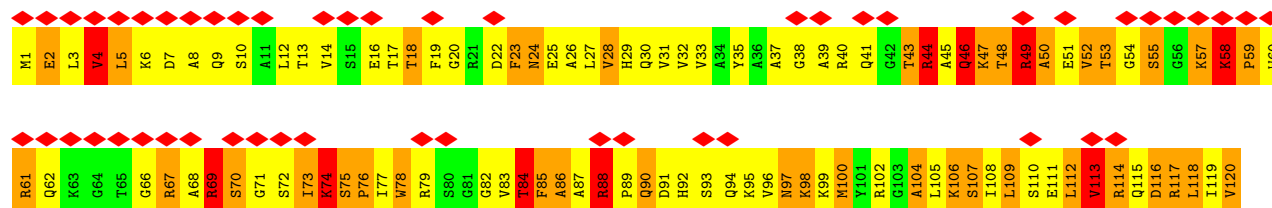
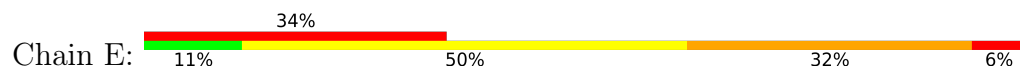


• Molecule 5: 50S ribosomal protein L3

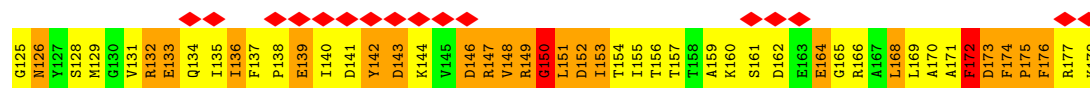
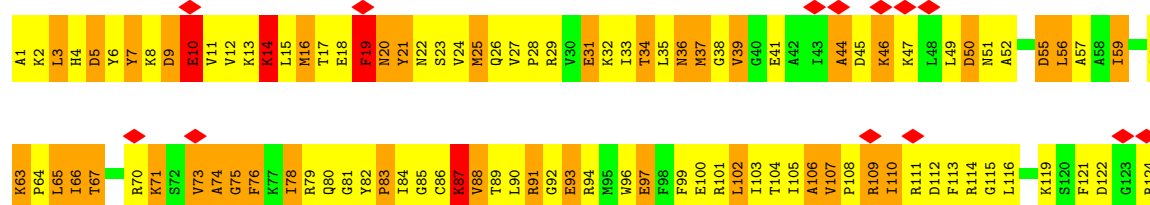
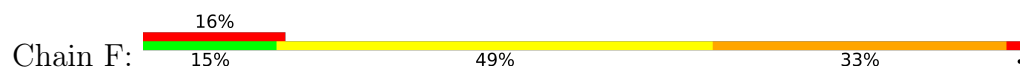




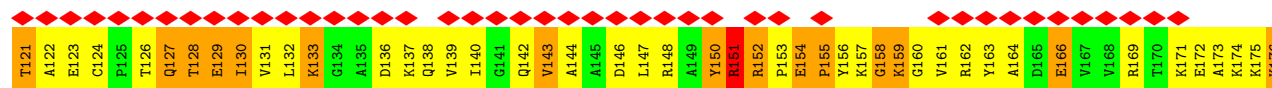
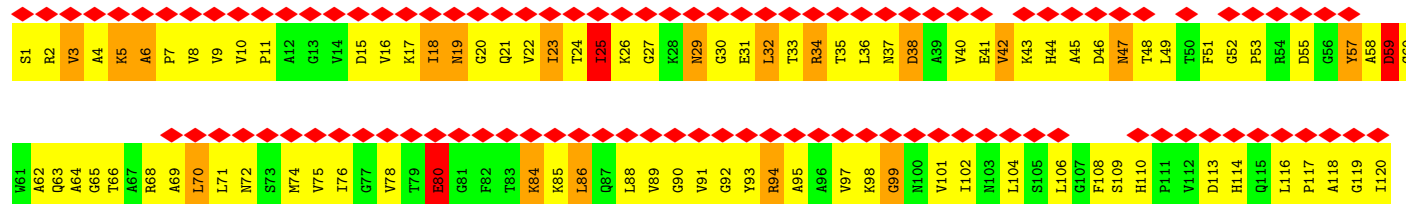
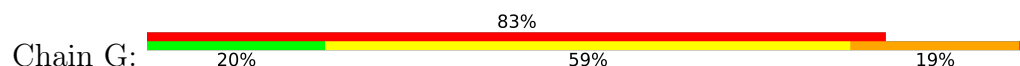
• Molecule 6: 50S ribosomal protein L4



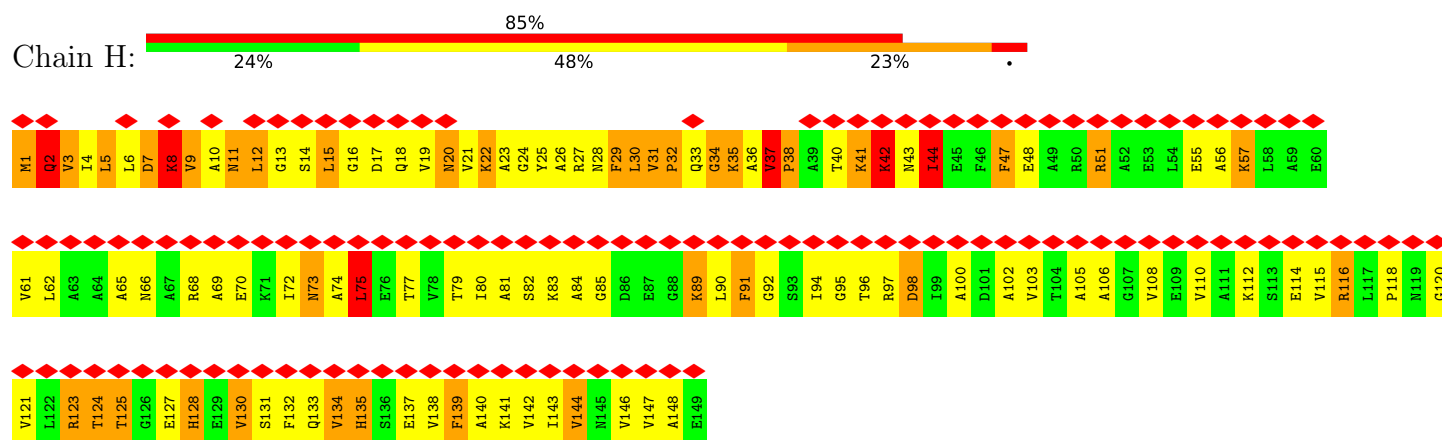
• Molecule 7: 50S ribosomal protein L5



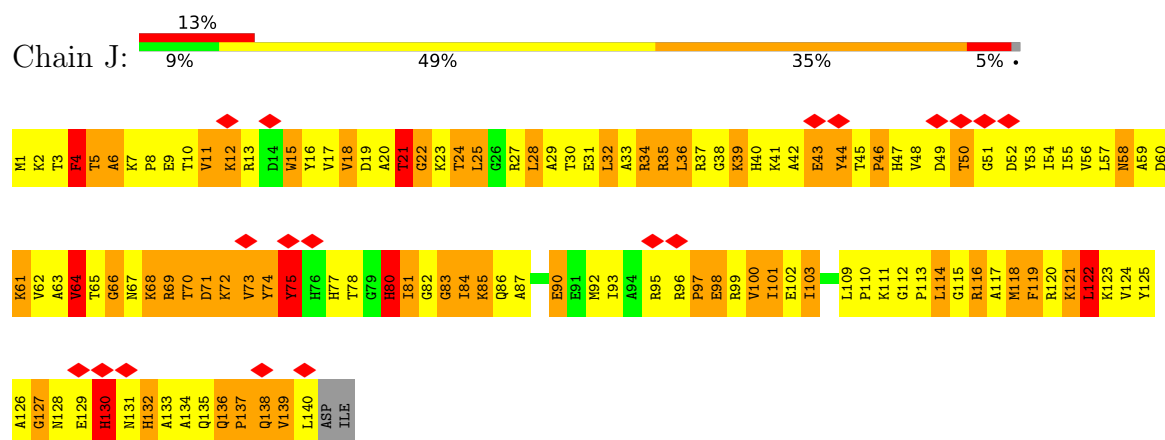
• Molecule 8: 50S ribosomal protein L6



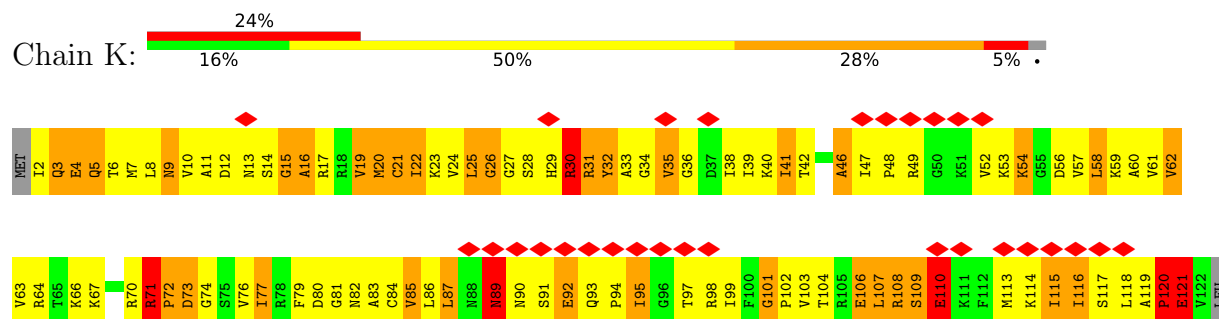
• Molecule 9: 50S ribosomal protein L9



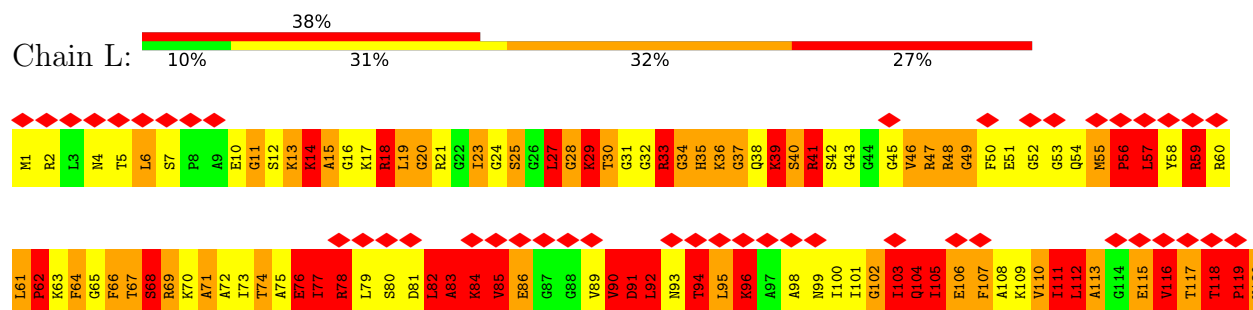
• Molecule 10: 50S ribosomal protein L13



• Molecule 11: 50S ribosomal protein L14

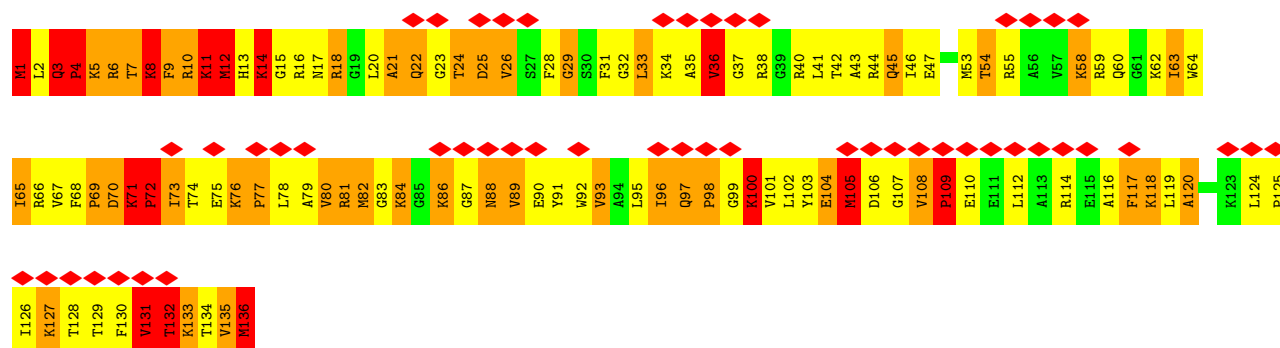
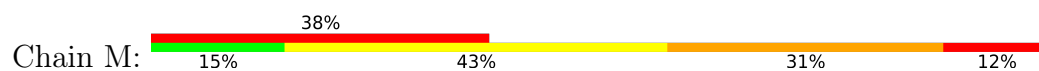


• Molecule 12: 50S ribosomal protein L15

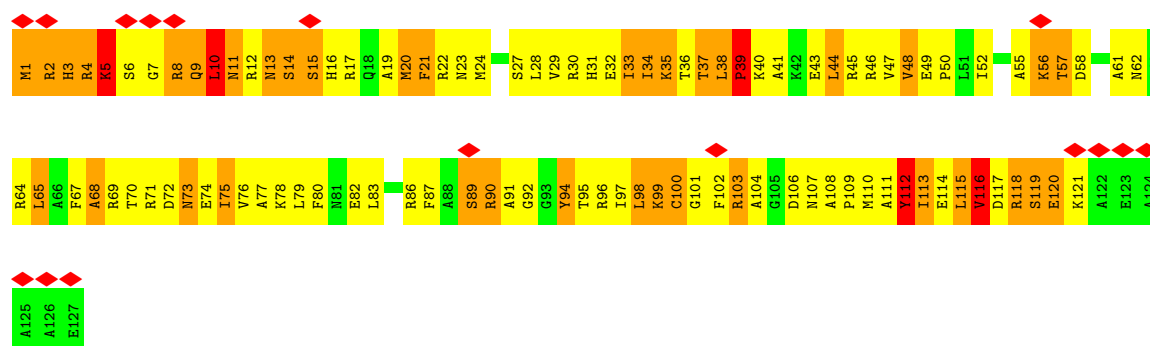
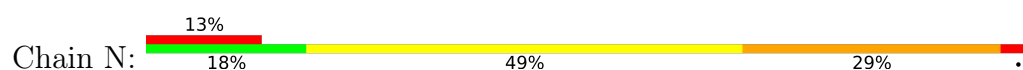




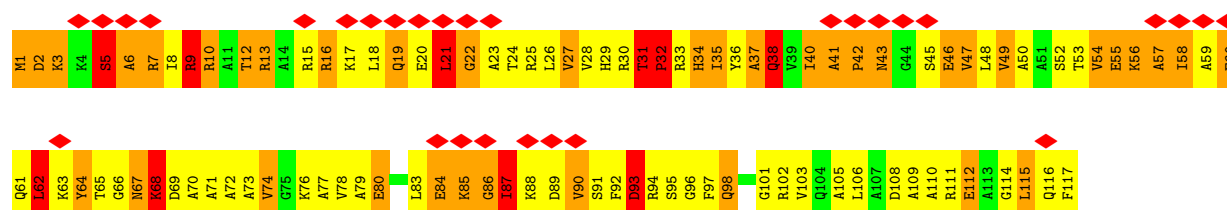
• Molecule 13: 50S ribosomal protein L16



• Molecule 14: 50S ribosomal protein L17

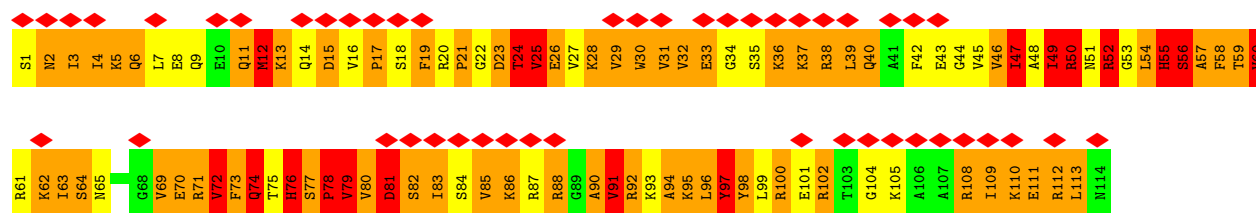


• Molecule 15: 50S ribosomal protein L18

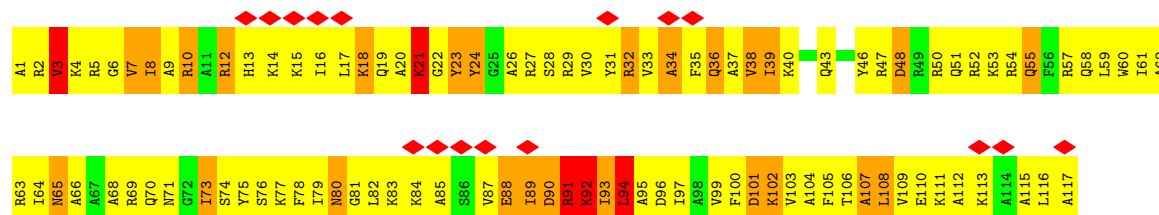
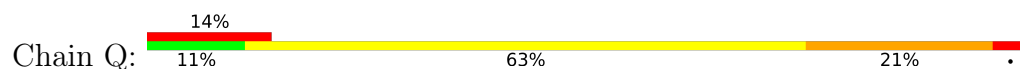


• Molecule 16: 50S ribosomal protein L19

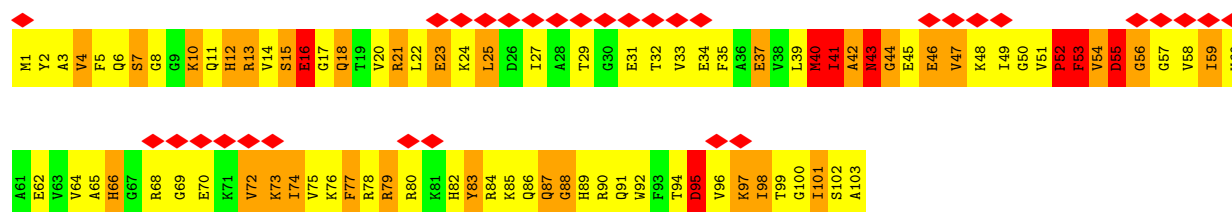
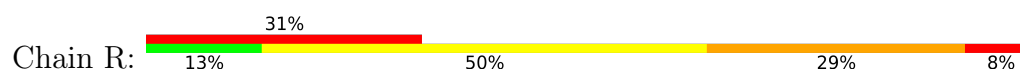




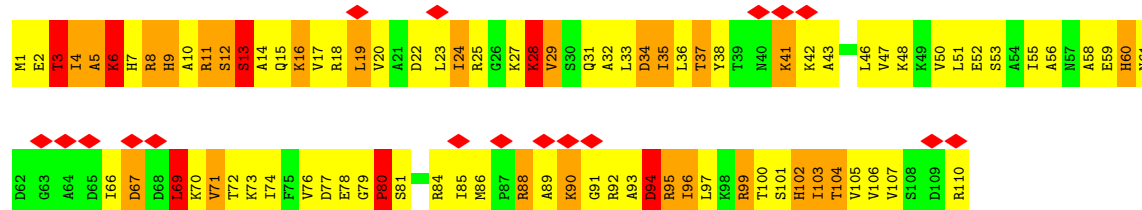
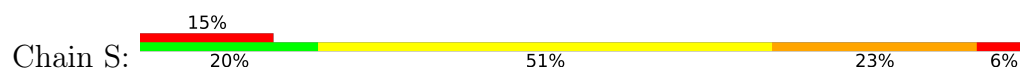
• Molecule 17: 50S ribosomal protein L20



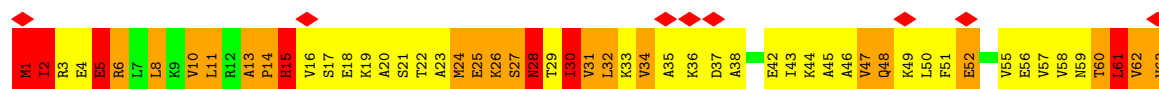
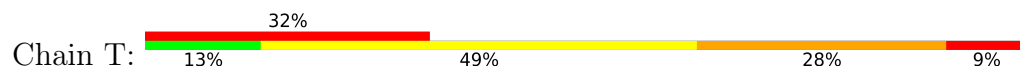
• Molecule 18: 50S ribosomal protein L21



• Molecule 19: 50S ribosomal protein L22

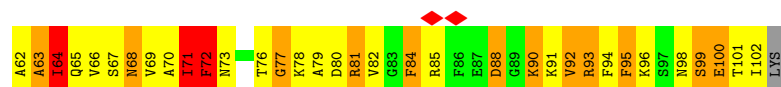
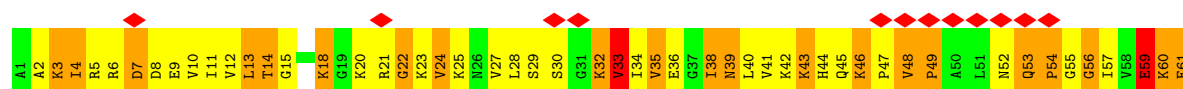
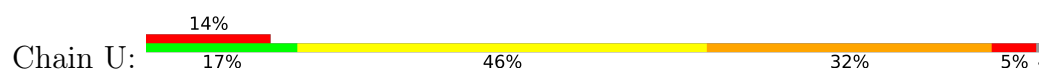


• Molecule 20: 50S ribosomal protein L23

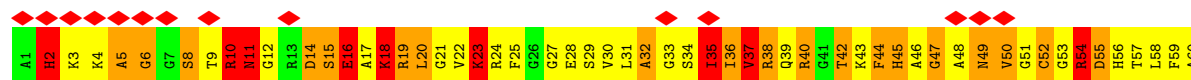




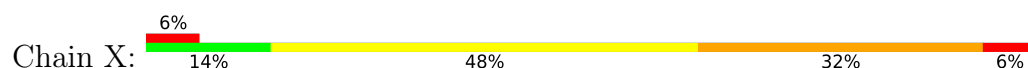
• Molecule 21: 50S ribosomal protein L24



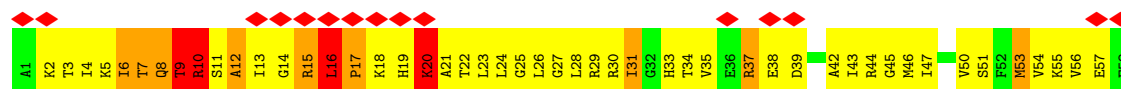
• Molecule 22: 50S ribosomal protein L27



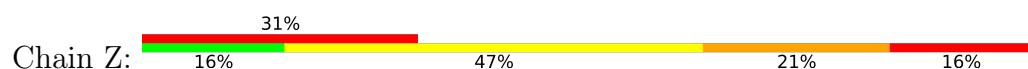
• Molecule 23: 50S ribosomal protein L29

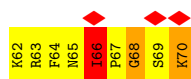


• Molecule 24: 50S ribosomal protein L30



• Molecule 25: 50S ribosomal protein L31





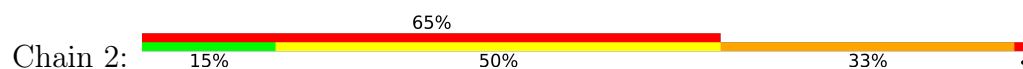
• Molecule 26: 50S ribosomal protein L32



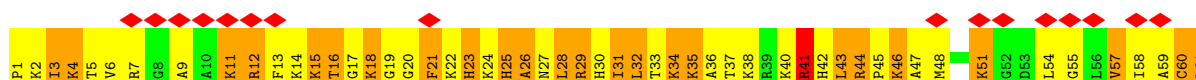
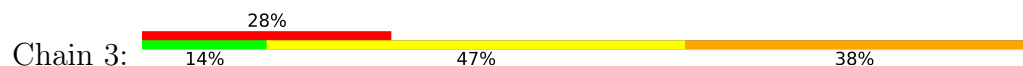
• Molecule 27: 50S ribosomal protein L33



• Molecule 28: 50S ribosomal protein L34



• Molecule 29: 50S ribosomal protein L35



• Molecule 30: 50S ribosomal protein L36



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	Not provided	
Resolution determination method	Not provided	
CTF correction method	CTF correction of each particle	Depositor
Microscope	FEI TECNAI F20	Depositor
Voltage (kV)	200	Depositor
Electron dose ($e^-/\text{\AA}^2$)	Not provided	
Minimum defocus (nm)	1.5	Depositor
Maximum defocus (nm)	3.5	Depositor
Magnification	50000	Depositor
Image detector	KODAK SO-163 FILM	Depositor
Maximum map value	9.232	Depositor
Minimum map value	-0.000	Depositor
Average map value	0.265	Depositor
Map value standard deviation	0.975	Depositor
Recommended contour level	2.48	Depositor
Map size ($\text{\AA}$)	325.12, 325.12, 325.12	wwPDB
Map dimensions	128, 128, 128	wwPDB
Map angles ($^\circ$)	90, 90, 90	wwPDB
Pixel spacing ($\text{\AA}$)	2.54, 2.54, 2.54	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: 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	0.29	0/2801	0.62	0/4363
2	B	0.38	14/68281 (0.0%)	0.81	127/106437 (0.1%)
3	V	0.39	0/766	0.81	1/1025 (0.1%)
4	C	0.52	0/2092	1.23	25/2813 (0.9%)
5	D	0.53	0/1586	1.17	16/2134 (0.7%)
6	E	0.55	2/1571 (0.1%)	1.39	24/2113 (1.1%)
7	F	0.42	0/1444	1.38	32/1937 (1.7%)
8	G	0.39	0/1343	1.00	7/1816 (0.4%)
9	H	2.63	24/1121 (2.1%)	1.12	6/1512 (0.4%)
10	J	0.43	0/1135	1.06	10/1529 (0.7%)
11	K	0.44	0/939	1.46	21/1258 (1.7%)
12	L	0.96	6/1062 (0.6%)	2.35	66/1413 (4.7%)
13	M	0.68	2/1093 (0.2%)	1.43	24/1460 (1.6%)
14	N	0.47	0/1021	1.17	17/1364 (1.2%)
15	O	0.36	0/910	1.08	13/1219 (1.1%)
16	P	0.79	1/929 (0.1%)	2.02	43/1242 (3.5%)
17	Q	0.53	1/960 (0.1%)	1.25	9/1278 (0.7%)
18	R	1.37	7/829 (0.8%)	1.75	24/1107 (2.2%)
19	S	0.35	0/864	0.93	4/1156 (0.3%)
20	T	0.54	1/784 (0.1%)	1.06	9/1048 (0.9%)
21	U	0.41	0/787	1.09	9/1051 (0.9%)
22	W	0.44	0/642	1.34	15/848 (1.8%)
23	X	0.37	0/510	1.10	4/677 (0.6%)
24	Y	0.42	0/453	0.85	1/605 (0.2%)
25	Z	0.57	0/559	1.51	10/745 (1.3%)
26	0	0.79	1/450 (0.2%)	1.63	17/599 (2.8%)
27	1	0.42	0/448	0.91	1/594 (0.2%)
28	2	0.41	0/380	0.96	2/498 (0.4%)
29	3	0.58	0/513	1.15	4/676 (0.6%)
30	4	0.55	1/303 (0.3%)	1.11	3/397 (0.8%)
All	All	0.52	60/96576 (0.1%)	0.95	544/144914 (0.4%)

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	61
4	C	0	3
10	J	0	2
12	L	0	1
16	P	0	1
17	Q	0	1
18	R	0	1
All	All	0	70

All (60) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	2789	C	O3'-P	35.88	2.15	1.61
2	B	2390	U	O3'-P	-21.91	1.28	1.61
2	B	2626	C	O3'-P	18.85	1.89	1.61
18	R	54	VAL	N-CA	-18.45	1.23	1.46
18	R	54	VAL	CA-CB	17.62	1.78	1.54
2	B	2582	G	O3'-P	17.09	1.86	1.61
2	B	1417	C	O3'-P	-15.61	1.37	1.61
2	B	1250	G	O3'-P	-15.60	1.37	1.61
18	R	54	VAL	CA-C	14.84	1.71	1.52
2	B	1580	A	O3'-P	13.62	1.81	1.61
18	R	53	PHE	CB-CG	13.48	1.81	1.50
2	B	973	A	O3'-P	13.21	1.80	1.61
2	B	674	G	O3'-P	-13.04	1.41	1.61
18	R	53	PHE	CA-CB	10.90	1.70	1.53
26	0	52	LYS	N-CA	8.68	1.56	1.46
2	B	2196	C	O3'-P	8.16	1.73	1.61
2	B	1086	A	C5-C6	-8.01	1.25	1.41
13	M	136	MET	SD-CE	7.97	1.99	1.79
20	T	2	ILE	N-CA	-7.48	1.36	1.46
12	L	84	LYS	CA-C	7.47	1.62	1.52
9	H	37	VAL	CA-C	7.39	1.60	1.52
6	E	46	GLN	CB-CG	7.29	1.74	1.52
18	R	53	PHE	C-N	-7.12	1.24	1.33
16	P	25	VAL	CA-CB	-7.09	1.44	1.54
9	H	72	ILE	CA-CB	6.75	1.60	1.53
9	H	115	VAL	CA-CB	6.72	1.60	1.54
9	H	3	VAL	CA-C	6.42	1.58	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	R	55	ASP	N-CA	6.33	1.54	1.46
9	H	32	PRO	CA-C	6.22	1.58	1.52
2	B	2191	A	O3'-P	-6.00	1.52	1.61
9	H	143	ILE	CA-C	5.87	1.59	1.52
13	M	8	LYS	CA-C	-5.83	1.46	1.53
9	H	123	ARG	NE-CZ	5.75	1.39	1.33
9	H	130	VAL	CA-C	5.70	1.57	1.53
2	B	2052	A	C4'-C3'	-5.68	1.44	1.52
9	H	44	ILE	CA-CB	5.67	1.62	1.54
9	H	116	ARG	NE-CZ	5.60	1.39	1.33
9	H	36	ALA	C-N	5.59	1.39	1.33
6	E	100	MET	SD-CE	-5.54	1.65	1.79
9	H	31	VAL	CA-C	5.50	1.58	1.52
17	Q	3	VAL	CA-C	-5.45	1.46	1.52
30	4	1	MET	SD-CE	-5.45	1.66	1.79
12	L	15	ALA	CA-CB	-5.44	1.46	1.53
9	H	128	HIS	CE1-NE2	5.39	1.38	1.32
9	H	31	VAL	C-N	5.33	1.39	1.33
12	L	118	THR	CA-CB	5.33	1.61	1.53
9	H	79	THR	CA-C	5.30	1.58	1.53
9	H	51	ARG	CA-C	5.27	1.57	1.52
2	B	1248	G	C4'-C3'	5.22	1.60	1.53
9	H	10	ALA	CA-C	5.21	1.59	1.52
9	H	2	GLN	CA-C	5.19	1.58	1.52
12	L	84	LYS	N-CA	5.15	1.52	1.46
9	H	97	ARG	NE-CZ	5.14	1.38	1.33
12	L	46	VAL	CA-CB	-5.13	1.50	1.55
9	H	144	VAL	N-CA	5.12	1.52	1.46
9	H	114	GLU	N-CA	5.09	1.52	1.46
9	H	11	ASN	N-CA	5.09	1.52	1.45
9	H	75	LEU	N-CA	5.05	1.52	1.46
9	H	128	HIS	CG-ND1	5.03	1.43	1.38
12	L	85	VAL	N-CA	5.02	1.52	1.46

All (544) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	1250	G	O3'-P-O5'	-59.73	14.41	104.00
2	B	1250	G	P-O3'-C3'	-53.80	39.50	120.20
2	B	1417	C	O3'-P-O5'	-52.99	24.52	104.00
2	B	1580	A	O3'-P-O5'	-48.21	31.68	104.00
2	B	2582	G	P-O3'-C3'	-43.60	54.80	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	973	A	O3'-P-O5'	40.29	164.43	104.00
2	B	2390	U	O3'-P-O5'	36.67	159.01	104.00
2	B	2789	C	O3'-P-O5'	27.21	144.81	104.00
2	B	2626	C	P-O3'-C3'	-25.10	82.55	120.20
2	B	973	A	P-O3'-C3'	-24.85	82.92	120.20
2	B	1196	C	P-O3'-C3'	22.63	154.14	120.20
2	B	1417	C	P-O3'-C3'	-21.06	88.61	120.20
2	B	2582	G	OP1-P-O3'	-20.10	47.70	108.00
2	B	2789	C	P-O3'-C3'	-20.06	90.11	120.20
2	B	2582	G	OP2-P-O3'	19.40	166.21	108.00
6	E	74	LYS	N-CA-C	-19.24	90.79	112.72
6	E	73	ILE	N-CA-C	19.18	131.71	113.10
2	B	2390	U	OP1-P-O3'	-18.92	51.23	108.00
2	B	1580	A	P-O3'-C3'	-18.25	92.83	120.20
2	B	2390	U	P-O3'-C3'	-17.52	93.92	120.20
18	R	54	VAL	CB-CA-C	17.46	139.93	111.29
2	B	973	A	OP1-P-O3'	-16.98	57.08	108.00
12	L	6	LEU	N-CA-C	16.92	134.23	111.90
16	P	40	GLN	N-CA-C	-16.85	89.05	112.13
18	R	54	VAL	N-CA-C	-16.52	74.98	109.34
12	L	105	ILE	N-CA-C	16.50	133.97	108.89
2	B	1196	C	O3'-P-O5'	-15.20	81.20	104.00
2	B	2582	G	O3'-P-O5'	-13.82	83.27	104.00
12	L	76	GLU	N-CA-C	-13.54	92.27	110.55
12	L	103	ILE	N-CA-C	13.53	127.75	107.99
16	P	72	VAL	N-CA-C	13.42	137.26	109.34
16	P	54	LEU	N-CA-C	13.42	126.59	108.07
18	R	54	VAL	N-CA-CB	-13.42	89.09	111.23
17	Q	3	VAL	CB-CA-C	-13.32	94.58	112.02
12	L	18	ARG	N-CA-C	13.18	128.59	108.96
2	B	2052	A	C5'-C4'-C3'	-12.85	96.72	116.00
12	L	118	THR	CA-C-N	12.85	135.90	119.84
12	L	118	THR	C-N-CA	12.85	135.90	119.84
12	L	112	LEU	N-CA-C	-12.37	89.92	109.72
12	L	39	LYS	N-CA-C	-12.37	94.72	111.54
16	P	70	GLU	N-CA-C	12.24	128.13	107.93
18	R	53	PHE	CA-C-O	12.22	136.03	121.36
16	P	14	GLN	N-CA-C	-12.15	93.43	112.99
18	R	43	ASN	N-CA-C	-11.74	97.24	113.56
13	M	5	LYS	N-CA-C	-11.67	85.94	110.80
18	R	46	GLU	N-CA-C	11.61	130.85	107.41
2	B	1196	C	OP1-P-O3'	11.54	142.62	108.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	R	40	MET	N-CA-C	-11.32	99.47	113.28
2	B	2626	C	OP2-P-O3'	11.12	141.36	108.00
12	L	59	ARG	N-CA-C	-11.03	100.36	114.04
18	R	50	GLY	N-CA-C	-11.02	95.60	111.03
17	Q	3	VAL	N-CA-C	-11.00	100.19	110.53
4	C	238	ASN	N-CA-C	10.96	127.42	111.96
10	J	115	GLY	N-CA-C	-10.93	98.78	112.77
7	F	106	ALA	N-CA-C	10.91	126.31	111.90
16	P	79	VAL	N-CA-C	10.84	131.88	109.34
16	P	28	LYS	N-CA-C	-10.82	91.76	108.96
5	D	146	ILE	N-CA-C	10.75	123.22	108.17
28	2	41	ARG	N-CA-C	-10.72	99.39	111.82
25	Z	20	ASN	N-CA-C	10.69	124.61	108.46
2	B	2791	G	O5'-P-OP1	-10.57	76.28	108.00
12	L	86	GLU	N-CA-C	-10.53	98.73	112.41
6	E	84	THR	N-CA-C	10.47	133.10	110.80
2	B	37	C	C4'-C3'-O3'	10.45	128.68	113.00
12	L	25	SER	N-CA-C	-10.43	99.91	111.28
16	P	71	ARG	N-CA-C	10.39	132.93	110.80
11	K	90	ASN	N-CA-C	10.31	123.78	111.82
7	F	50	ASP	N-CA-C	-10.28	100.85	113.50
10	J	80	HIS	N-CA-C	10.27	127.07	113.30
13	M	6	ARG	N-CA-C	-10.25	95.11	110.28
5	D	133	THR	N-CA-C	10.24	122.03	111.07
18	R	54	VAL	CG1-CB-CG2	-10.22	88.32	110.80
12	L	85	VAL	N-CA-C	-10.16	88.20	109.34
12	L	89	VAL	N-CA-C	-10.10	103.50	113.20
7	F	133	GLU	N-CA-C	10.07	120.07	108.49
11	K	13	ASN	N-CA-C	10.06	121.97	108.38
2	B	973	A	OP2-P-O3'	-10.04	77.87	108.00
12	L	5	THR	CA-C-N	10.03	136.82	122.08
12	L	5	THR	C-N-CA	10.03	136.82	122.08
5	D	19	GLY	N-CA-C	-10.02	101.30	115.43
17	Q	8	ILE	N-CA-C	-9.96	103.77	113.53
26	0	52	LYS	CB-CA-C	-9.94	92.90	109.80
5	D	143	PRO	N-CA-C	-9.91	99.45	113.81
13	M	132	THR	N-CA-C	9.89	131.86	110.80
2	B	2789	C	OP1-P-O3'	-9.89	78.34	108.00
17	Q	7	VAL	N-CA-C	9.85	121.85	110.62
18	R	53	PHE	N-CA-CB	9.84	126.45	110.41
6	E	88	ARG	CA-C-N	9.80	129.93	119.05
6	E	88	ARG	C-N-CA	9.80	129.93	119.05

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	R	44	GLY	N-CA-C	-9.79	100.87	114.67
7	F	107	VAL	N-CA-C	-9.72	98.51	112.61
21	U	33	VAL	N-CA-C	9.62	116.50	106.21
7	F	74	ALA	N-CA-C	9.62	124.38	110.24
12	L	68	SER	N-CA-C	9.58	131.21	110.80
5	D	151	THR	N-CA-C	9.58	119.36	108.25
2	B	2790	U	OP1-P-O3'	9.53	136.58	108.00
12	L	102	GLY	CA-C-N	-9.48	110.76	122.90
12	L	102	GLY	C-N-CA	-9.48	110.76	122.90
12	L	105	ILE	CA-C-N	9.33	133.76	120.79
12	L	105	ILE	C-N-CA	9.33	133.76	120.79
16	P	29	VAL	N-CA-C	-9.30	93.94	107.98
13	M	25	ASP	N-CA-C	9.26	122.76	108.96
12	L	138	ALA	N-CA-C	9.16	122.81	108.79
26	O	51	ARG	CA-C-N	9.16	137.83	121.89
26	O	51	ARG	C-N-CA	9.16	137.83	121.89
19	S	41	LYS	N-CA-C	-9.07	93.85	108.55
12	L	126	ARG	N-CA-C	9.06	130.11	110.80
16	P	51	ASN	N-CA-C	9.06	122.43	108.30
11	K	91	SER	N-CA-C	-9.04	91.88	108.24
6	E	88	ARG	N-CA-C	9.03	116.26	108.13
12	L	20	GLY	N-CA-C	9.01	128.77	112.02
2	B	479	A	C4'-C3'-O3'	-8.99	95.92	109.40
8	G	158	GLY	N-CA-C	-8.96	103.27	114.92
5	D	136	ASN	N-CA-C	-8.95	101.94	112.86
12	L	28	GLY	N-CA-C	-8.92	103.63	115.40
4	C	30	ALA	CA-C-N	-8.89	108.72	119.84
4	C	30	ALA	C-N-CA	-8.89	108.72	119.84
12	L	137	ALA	N-CA-C	-8.88	102.35	113.01
4	C	264	LYS	N-CA-C	8.88	123.50	109.65
25	Z	43	PHE	N-CA-C	-8.84	95.36	109.59
22	W	11	ASN	N-CA-C	8.82	129.58	110.80
2	B	2626	C	OP1-P-O3'	-8.78	81.65	108.00
2	B	139	U	N1-C1'-C2'	-8.78	100.83	114.00
2	B	2390	U	OP2-P-O3'	-8.64	82.07	108.00
4	C	138	SER	N-CA-C	-8.62	102.66	113.01
12	L	77	ILE	N-CA-C	-8.53	91.61	109.34
7	F	51	ASN	N-CA-C	-8.49	102.63	113.16
12	L	14	LYS	N-CA-C	-8.48	92.74	110.80
2	B	1350	C	C5'-C4'-C3'	-8.42	103.36	116.00
12	L	78	ARG	N-CA-C	8.41	128.72	110.80
26	O	52	LYS	N-CA-CB	8.39	124.64	110.71

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	773	U	C5'-C4'-C3'	-8.37	103.44	116.00
4	C	32	LEU	N-CA-C	8.31	128.51	110.80
23	X	33	ALA	N-CA-C	8.30	128.47	110.80
21	U	33	VAL	CB-CA-C	-8.29	103.94	113.22
4	C	83	ASP	CA-C-N	8.26	130.17	119.84
4	C	83	ASP	C-N-CA	8.26	130.17	119.84
29	3	34	LYS	N-CA-C	-8.25	103.12	113.02
6	E	107	SER	N-CA-C	-8.23	103.25	113.20
13	M	3	GLN	CA-C-N	8.19	130.08	119.84
13	M	3	GLN	C-N-CA	8.19	130.08	119.84
15	O	6	ALA	N-CA-C	-8.19	104.44	114.75
22	W	10	ARG	N-CA-C	8.18	128.22	110.80
2	B	2791	G	O5'-P-OP2	8.16	132.47	108.00
26	0	4	GLN	N-CA-C	-8.15	98.18	108.45
10	J	71	ASP	N-CA-C	8.14	116.57	108.75
18	R	53	PHE	O-C-N	8.13	132.16	123.06
12	L	92	LEU	N-CA-C	8.08	128.02	110.80
14	N	5	LYS	N-CA-C	8.08	128.01	110.80
12	L	67	THR	N-CA-C	8.05	127.95	110.80
12	L	118	THR	C-N-CD	-8.00	92.19	125.00
25	Z	41	HIS	CA-C-N	7.98	129.81	119.84
25	Z	41	HIS	C-N-CA	7.98	129.81	119.84
5	D	144	GLY	N-CA-C	-7.97	103.76	115.63
12	L	125	LEU	N-CA-C	-7.91	93.95	110.80
6	E	85	PHE	N-CA-C	-7.91	99.63	111.81
25	Z	51	VAL	N-CA-C	-7.85	105.06	111.81
16	P	6	GLN	N-CA-C	-7.85	103.85	113.19
5	D	154	LYS	N-CA-C	-7.85	94.09	110.80
2	B	670	A	C4'-C3'-O3'	7.80	121.11	109.40
2	B	825	A	C5'-C4'-C3'	-7.79	104.32	116.00
26	0	52	LYS	N-CA-C	-7.76	94.51	108.48
18	R	53	PHE	N-CA-C	-7.74	98.01	110.32
2	B	38	A	C5'-C4'-C3'	-7.73	104.41	116.00
9	H	120	GLY	N-CA-C	-7.71	102.67	112.54
14	N	15	SER	N-CA-C	-7.70	102.52	112.23
13	M	29	GLY	N-CA-C	7.70	117.21	110.21
2	B	1417	C	OP2-P-O3'	7.68	131.05	108.00
2	B	2626	C	O3'-P-O5'	-7.64	92.53	104.00
12	L	86	GLU	CB-CG-CD	7.60	125.52	112.60
9	H	105	ALA	N-CA-C	-7.59	104.02	113.20
17	Q	94	LEU	N-CA-C	-7.59	103.91	113.01
13	M	8	LYS	N-CA-C	-7.57	95.35	108.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	F	47	LYS	N-CA-C	-7.54	103.00	111.14
2	B	2052	A	O4'-C4'-C3'	7.54	111.53	104.00
2	B	1580	A	OP2-P-O3'	-7.53	85.41	108.00
16	P	78	PRO	N-CA-C	7.53	127.98	112.47
13	M	65	ILE	N-CA-C	-7.53	97.62	108.53
16	P	82	SER	N-CA-C	7.52	126.81	110.80
14	N	6	SER	N-CA-C	-7.48	97.69	108.60
25	Z	68	GLY	N-CA-C	-7.45	95.53	113.18
16	P	81	ASP	N-CA-C	-7.45	94.94	110.80
7	F	150	GLY	N-CA-C	7.44	130.80	113.18
20	T	28	ASN	N-CA-C	-7.42	100.25	110.35
14	N	2	ARG	N-CA-C	-7.40	95.04	110.80
12	L	127	VAL	N-CA-C	7.39	124.72	109.34
14	N	4	ARG	N-CA-C	7.39	126.54	110.80
16	P	71	ARG	CA-C-N	7.36	135.22	121.97
16	P	71	ARG	C-N-CA	7.36	135.22	121.97
9	H	37	VAL	N-CA-C	7.35	124.75	108.88
7	F	73	VAL	N-CA-C	7.33	124.59	109.34
2	B	2790	U	O3'-P-O5'	-7.32	93.03	104.00
13	M	131	VAL	N-CA-C	7.31	124.55	109.34
6	E	75	SER	CA-C-N	7.31	128.97	119.84
6	E	75	SER	C-N-CA	7.31	128.97	119.84
2	B	1818	U	C4'-C3'-O3'	-7.30	102.05	113.00
2	B	2259	U	C5'-C4'-C3'	-7.30	105.06	116.00
22	W	10	ARG	CA-C-N	7.27	135.43	121.54
22	W	10	ARG	C-N-CA	7.27	135.43	121.54
11	K	89	ASN	N-CA-C	7.26	126.27	110.80
16	P	74	GLN	N-CA-C	-7.25	98.81	109.11
26	0	5	ASN	N-CA-C	7.25	126.24	110.80
25	Z	42	PRO	N-CA-C	7.24	127.39	112.47
11	K	71	ARG	CA-C-N	-7.24	110.79	119.84
11	K	71	ARG	C-N-CA	-7.24	110.79	119.84
12	L	71	ALA	N-CA-C	-7.24	99.73	110.23
8	G	80	GLU	N-CA-C	7.23	119.16	111.28
15	O	86	GLY	N-CA-C	7.22	123.23	113.99
30	4	34	LYS	N-CA-C	-7.22	104.46	113.55
7	F	164	GLU	N-CA-C	-7.21	103.42	111.71
7	F	14	LYS	N-CA-C	-7.21	95.45	110.80
26	0	6	LYS	CA-C-N	7.21	128.85	119.84
26	0	6	LYS	C-N-CA	7.21	128.85	119.84
14	N	100	CYS	N-CA-C	-7.19	95.49	110.80
25	Z	26	SER	N-CA-C	7.15	126.03	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	K	101	GLY	CA-C-N	7.15	127.60	120.52
11	K	101	GLY	C-N-CA	7.15	127.60	120.52
12	L	86	GLU	N-CA-CB	-7.15	99.40	111.20
13	M	3	GLN	C-N-CD	-7.14	95.71	125.00
26	O	52	LYS	CA-CB-CG	7.14	128.38	114.10
4	C	28	PRO	CA-C-N	7.14	135.17	121.54
4	C	28	PRO	C-N-CA	7.14	135.17	121.54
26	O	27	LEU	N-CA-C	7.12	121.39	110.36
4	C	28	PRO	N-CA-C	7.08	127.06	112.47
2	B	1417	C	OP1-P-O3'	-7.07	86.78	108.00
10	J	4	PHE	N-CA-C	-7.05	95.79	110.80
11	K	30	ARG	N-CA-C	-7.03	99.49	109.96
15	O	58	ILE	N-CA-C	-7.03	106.07	111.62
22	W	14	ASP	N-CA-C	7.01	119.35	110.24
7	F	20	ASN	N-CA-C	7.00	125.71	110.80
10	J	32	LEU	N-CA-C	-6.99	105.28	113.88
23	X	17	GLU	N-CA-C	-6.98	104.57	113.23
21	U	32	LYS	N-CA-C	6.98	120.78	109.40
15	O	93	ASP	N-CA-C	-6.96	97.55	108.90
2	B	1250	G	C4'-C3'-O3'	6.96	119.83	109.40
12	L	83	ALA	N-CA-C	-6.95	96.01	110.80
2	B	1125	G	C4'-C3'-O3'	-6.93	102.60	113.00
6	E	48	THR	N-CA-C	6.93	116.46	108.49
16	P	50	ARG	N-CA-C	-6.92	96.06	110.80
12	L	77	ILE	CA-C-N	-6.91	108.35	121.54
12	L	77	ILE	C-N-CA	-6.91	108.35	121.54
11	K	54	LYS	N-CA-C	6.90	119.77	108.52
30	4	18	LYS	N-CA-C	6.90	121.68	112.30
20	T	76	ARG	N-CA-C	6.89	117.13	108.45
15	O	16	ARG	N-CA-C	-6.88	104.85	113.18
12	L	94	THR	N-CA-C	6.87	125.43	110.80
6	E	50	ALA	N-CA-C	-6.83	104.93	113.20
11	K	21	CYS	N-CA-C	-6.75	99.03	109.76
12	L	129	LYS	N-CA-C	-6.75	103.99	111.82
16	P	73	PHE	N-CA-C	-6.74	98.73	109.59
6	E	159	LEU	N-CA-C	-6.74	105.13	113.15
17	Q	48	ASP	N-CA-C	6.73	118.61	111.28
2	B	2266	A	C4'-C3'-O3'	-6.71	99.33	109.40
7	F	44	ALA	N-CA-C	6.71	121.18	113.19
4	C	25	LYS	N-CA-C	-6.71	104.05	111.36
16	P	58	PHE	N-CA-C	-6.71	102.15	111.81
6	E	46	GLN	CB-CG-CD	6.70	124.00	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
16	P	109	ILE	N-CA-C	-6.70	95.40	109.34
22	W	16	GLU	N-CA-C	6.70	125.06	110.80
10	J	5	THR	N-CA-C	-6.67	100.60	110.48
15	O	5	SER	N-CA-C	6.67	117.28	107.88
18	R	53	PHE	CA-C-N	6.67	133.97	121.97
18	R	53	PHE	C-N-CA	6.67	133.97	121.97
2	B	2501	C	C4'-C3'-O3'	-6.67	103.00	113.00
26	0	13	GLY	N-CA-C	-6.66	107.01	114.40
20	T	62	VAL	N-CA-C	6.65	123.18	109.34
14	N	14	SER	N-CA-C	-6.64	105.16	113.20
12	L	139	GLY	N-CA-C	6.64	128.91	113.18
12	L	111	ILE	N-CA-C	-6.62	95.56	109.34
22	W	74	LYS	CB-CA-C	-6.60	107.94	115.79
11	K	79	PHE	N-CA-C	-6.58	98.18	108.90
2	B	2575	C	C2'-C3'-O3'	-6.56	103.86	113.70
22	W	3	LYS	N-CA-C	-6.56	101.92	111.30
13	M	82	MET	N-CA-C	-6.55	105.16	113.02
16	P	80	VAL	N-CA-C	6.54	122.94	109.34
5	D	13	ARG	N-CA-C	-6.54	100.59	109.54
9	H	106	ALA	N-CA-C	-6.54	107.17	114.62
13	M	4	PRO	N-CA-C	-6.53	99.01	112.47
16	P	77	SER	CA-C-N	6.52	127.99	119.84
16	P	77	SER	C-N-CA	6.52	127.99	119.84
5	D	20	VAL	N-CA-C	-6.51	103.52	110.36
2	B	745	G	C5'-C4'-C3'	-6.50	106.24	116.00
20	T	2	ILE	CB-CA-C	6.50	121.95	111.29
16	P	5	LYS	N-CA-C	-6.50	104.99	113.12
6	E	46	GLN	CA-CB-CG	6.49	127.09	114.10
2	B	268	C	C5'-C4'-C3'	-6.45	106.32	116.00
20	T	2	ILE	N-CA-C	-6.45	95.92	109.34
2	B	675	A	C4'-C3'-O3'	-6.45	103.33	113.00
26	0	22	THR	N-CA-C	6.44	119.21	109.41
8	G	38	ASP	N-CA-C	6.43	117.95	111.07
16	P	47	ILE	N-CA-C	6.43	122.72	109.34
18	R	52	PRO	CA-C-N	-6.43	111.07	122.07
18	R	52	PRO	C-N-CA	-6.43	111.07	122.07
18	R	53	PHE	CA-CB-CG	6.43	120.23	113.80
2	B	38	A	N9-C1'-C2'	6.42	121.63	112.00
5	D	179	ARG	N-CA-C	6.41	116.53	108.45
16	P	36	LYS	N-CA-C	6.41	119.18	109.95
2	B	37	C	C3'-C2'-O2'	-6.40	101.09	110.70
2	B	2336	A	C2'-C3'-O3'	6.40	119.10	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	1236	G	C4'-C3'-O3'	-6.39	103.41	113.00
2	B	2619	C	C5'-C4'-C3'	-6.38	106.42	116.00
6	E	58	LYS	N-CA-C	6.36	123.86	109.81
18	R	54	VAL	CA-C-N	6.34	133.66	121.54
18	R	54	VAL	C-N-CA	6.34	133.66	121.54
16	P	49	ILE	N-CA-C	6.33	122.50	109.34
27	1	47	ILE	N-CA-C	6.32	122.48	109.34
2	B	2641	G	N9-C1'-C2'	-6.31	102.53	112.00
6	E	73	ILE	CA-C-O	6.31	124.87	119.38
16	P	95	LYS	N-CA-C	-6.30	103.68	112.25
5	D	15	PHE	N-CA-C	-6.28	102.20	110.43
2	B	690	G	C5'-C4'-C3'	-6.26	106.61	116.00
2	B	1196	C	OP2-P-O3'	-6.24	89.29	108.00
12	L	123	ARG	N-CA-C	-6.22	97.56	110.80
26	0	51	ARG	CA-C-O	-6.22	111.62	120.51
7	F	91	ARG	N-CA-C	-6.19	106.69	114.56
16	P	33	GLU	CB-CA-C	-6.18	109.47	116.63
25	Z	60	PHE	N-CA-C	-6.18	97.64	110.80
7	F	172	PHE	N-CA-C	-6.16	97.68	110.80
4	C	31	PRO	N-CA-C	6.16	125.15	112.47
13	M	11	LYS	N-CA-C	6.15	123.89	110.80
2	B	1251	C	C5'-C4'-C3'	6.14	124.42	115.20
16	P	63	ILE	N-CA-C	-6.14	100.86	109.21
12	L	41	ARG	N-CA-C	6.11	123.82	110.80
4	C	64	VAL	N-CA-C	6.11	122.05	109.34
11	K	81	GLY	N-CA-C	-6.10	102.20	110.80
6	E	116	ASP	N-CA-C	6.08	118.82	108.90
7	F	107	VAL	N-CA-CB	6.08	114.33	110.50
7	F	119	LYS	N-CA-C	6.06	119.03	109.39
14	N	118	ARG	CD-NE-CZ	6.06	132.89	124.40
18	R	88	GLY	N-CA-C	-6.06	98.82	113.18
22	W	11	ASN	N-CA-CB	-6.06	100.25	110.49
4	C	21	PRO	N-CA-C	6.05	124.93	112.47
8	G	109	SER	N-CA-C	-6.05	101.46	110.23
22	W	2	HIS	N-CA-C	6.05	123.68	110.80
20	T	2	ILE	N-CA-CB	-6.05	101.25	111.23
2	B	37	C	C2'-C3'-O3'	-6.04	104.64	113.70
12	L	130	GLY	N-CA-C	-6.03	105.49	112.73
2	B	395	U	C4'-C3'-O3'	-6.02	103.97	113.00
8	G	129	GLU	N-CA-C	6.01	119.03	109.65
2	B	2282	G	C4'-C3'-O3'	6.01	118.41	109.40
13	M	24	THR	N-CA-C	5.99	119.74	111.71

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	C	100	ARG	N-CA-C	5.99	118.55	107.60
4	C	179	GLU	CB-CA-C	-5.99	109.66	116.54
30	4	2	LYS	N-CA-C	-5.99	104.88	111.82
2	B	784	G	C4'-C3'-O3'	-5.96	104.06	113.00
7	F	19	PHE	N-CA-C	-5.96	98.12	110.80
2	B	1250	G	C4'-C3'-C2'	5.95	108.55	102.60
6	E	189	THR	CB-CA-C	-5.95	109.70	116.54
12	L	124	GLY	N-CA-C	-5.93	106.98	115.64
18	R	16	GLU	N-CA-C	-5.92	104.17	111.40
21	U	46	LYS	N-CA-C	-5.92	100.31	109.79
2	B	1397	U	C5'-C4'-C3'	-5.92	106.33	115.20
16	P	57	ALA	N-CA-C	-5.90	98.23	110.80
2	B	150	U	C5'-C4'-C3'	-5.89	107.16	116.00
16	P	64	SER	N-CA-C	5.88	118.31	108.02
2	B	2903	U	C4'-C3'-O3'	5.87	121.81	113.00
15	O	41	ALA	N-CA-C	-5.87	101.98	110.08
23	X	34	SER	N-CA-C	-5.87	98.31	110.80
22	W	54	ARG	N-CA-C	5.85	117.76	110.91
2	B	2050	C	C4'-C3'-O3'	-5.85	104.22	113.00
11	K	77	ILE	CB-CA-C	-5.85	103.06	111.19
12	L	127	VAL	CA-C-N	5.85	132.71	121.54
12	L	127	VAL	C-N-CA	5.85	132.71	121.54
2	B	2103	C	C4'-C3'-O3'	-5.84	104.23	113.00
12	L	122	VAL	N-CA-C	5.84	116.81	108.93
16	P	91	VAL	N-CA-C	5.83	121.46	109.34
19	S	24	ILE	N-CA-C	5.83	116.26	107.75
16	P	52	ARG	N-CA-C	-5.82	98.40	110.80
2	B	403	U	C4'-C3'-O3'	-5.81	104.28	113.00
6	E	44	ARG	N-CA-C	5.81	123.17	110.80
12	L	84	LYS	N-CA-C	5.81	123.17	110.80
13	M	100	LYS	N-CA-C	5.80	117.51	107.93
24	Y	20	LYS	N-CA-C	-5.80	105.04	111.36
2	B	2430	A	C4'-C3'-O3'	-5.80	104.30	113.00
26	O	54	ILE	N-CA-C	5.80	116.21	107.75
12	L	62	PRO	CA-N-CD	-5.79	103.89	112.00
22	W	15	SER	N-CA-C	5.79	116.73	108.74
2	B	848	C	C5'-C4'-C3'	-5.79	107.32	116.00
16	P	104	GLY	N-CA-C	5.78	126.87	113.18
10	J	75	TYR	N-CA-C	-5.76	99.94	108.99
11	K	117	SER	N-CA-C	-5.75	106.11	113.02
2	B	1363	C	C5'-C4'-C3'	-5.75	107.37	116.00
10	J	122	LEU	N-CA-C	-5.75	105.89	114.64

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	3	41	ARG	N-CA-C	-5.75	98.52	108.69
13	M	7	THR	N-CA-C	-5.74	102.95	110.53
2	B	2575	C	C5'-C4'-C3'	5.72	124.59	116.00
16	P	72	VAL	CB-CA-C	-5.72	101.91	111.29
12	L	45	GLY	CA-C-N	-5.72	117.37	122.97
12	L	45	GLY	C-N-CA	-5.72	117.37	122.97
7	F	25	MET	N-CA-C	-5.71	105.98	113.12
2	B	1210	G	C4'-C3'-O3'	5.70	117.96	109.40
12	L	65	GLY	N-CA-C	-5.70	102.73	112.30
17	Q	107	ALA	N-CA-C	-5.70	106.28	113.18
21	U	49	PRO	N-CA-C	-5.70	100.73	112.47
28	2	4	THR	N-CA-C	5.70	122.93	110.80
2	B	2192	U	C5'-C4'-C3'	-5.69	107.46	116.00
7	F	146	ASP	N-CA-C	-5.69	103.61	110.44
2	B	1240	U	C4'-C3'-O3'	-5.68	104.48	113.00
2	B	508	A	C4'-C3'-O3'	-5.66	104.51	113.00
26	0	48	TYR	N-CA-C	-5.65	105.50	112.90
2	B	2053	G	C4'-C3'-O3'	5.65	121.47	113.00
15	O	46	GLU	N-CA-C	-5.65	106.23	113.01
22	W	72	GLY	CA-C-N	5.64	126.90	119.84
22	W	72	GLY	C-N-CA	5.64	126.90	119.84
21	U	99	SER	CB-CA-C	-5.64	108.24	116.53
6	E	94	GLN	N-CA-C	-5.64	101.35	110.32
2	B	375	G	C5'-C4'-C3'	-5.64	107.55	116.00
2	B	2430	A	N9-C1'-C2'	5.63	120.45	112.00
7	F	110	ILE	N-CA-C	5.63	117.69	108.97
12	L	96	LYS	N-CA-C	5.63	118.72	109.72
20	T	1	MET	N-CA-C	-5.63	95.25	111.00
2	B	1552	A	C4'-C3'-O3'	5.62	121.43	113.00
12	L	119	PRO	CA-N-CD	-5.61	104.15	112.00
2	B	2471	A	C4'-C3'-O3'	5.61	117.81	109.40
11	K	106	GLU	N-CA-C	-5.61	106.28	113.23
2	B	614	A	C4'-C3'-O3'	-5.61	100.99	109.40
29	3	11	LYS	N-CA-C	5.61	117.25	111.03
2	B	1664	A	C5'-C4'-C3'	-5.60	107.61	116.00
16	P	86	LYS	N-CA-C	5.59	117.81	109.25
2	B	1237	A	N9-C1'-C2'	5.59	120.39	112.00
18	R	42	ALA	N-CA-C	-5.58	105.60	113.20
7	F	10	GLU	N-CA-C	5.58	122.69	110.80
11	K	16	ALA	N-CA-C	5.57	122.65	110.80
13	M	108	VAL	CA-C-N	5.57	126.80	119.84
13	M	108	VAL	C-N-CA	5.57	126.80	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2733	A	N9-C1'-C2'	-5.56	103.66	112.00
18	R	56	GLY	N-CA-C	-5.56	100.00	113.18
2	B	372	G	C4'-C3'-O3'	-5.56	101.06	109.40
2	B	1600	C	C5'-C4'-C3'	-5.56	107.66	116.00
2	B	1523	U	C4'-C3'-O3'	-5.55	104.67	113.00
7	F	132	ARG	N-CA-C	5.55	120.06	112.68
6	E	146	VAL	N-CA-C	-5.54	105.73	112.76
4	C	48	ILE	N-CA-C	5.53	120.84	109.34
4	C	111	ALA	N-CA-C	5.52	122.56	110.80
2	B	2790	U	C4'-C3'-O3'	-5.51	104.73	113.00
2	B	560	C	C5'-C4'-C3'	-5.51	107.73	116.00
2	B	299	A	N9-C1'-C2'	5.51	120.27	112.00
13	M	10	ARG	N-CA-C	5.51	122.53	110.80
14	N	118	ARG	NE-CZ-NH1	5.50	127.00	121.50
15	O	43	ASN	N-CA-C	-5.49	107.83	114.75
2	B	139	U	C1'-C2'-O2'	-5.48	103.59	111.80
16	P	37	LYS	N-CA-C	-5.47	99.14	110.80
20	T	27	SER	N-CA-C	5.47	117.54	108.13
2	B	1237	A	C4'-C3'-O3'	-5.47	104.80	113.00
9	H	91	PHE	N-CA-C	-5.47	105.91	113.18
10	J	21	THR	N-CA-C	-5.46	106.69	113.19
29	3	61	LEU	N-CA-C	-5.46	103.19	110.07
7	F	106	ALA	CA-C-N	-5.44	116.81	120.24
7	F	106	ALA	C-N-CA	-5.44	116.81	120.24
2	B	2502	G	C4'-C3'-O3'	-5.43	104.86	113.00
4	C	44	ASN	N-CA-C	-5.42	99.24	110.80
7	F	78	ILE	N-CA-C	-5.42	100.39	107.88
2	B	931	U	C4'-C3'-O3'	-5.42	104.86	113.00
7	F	65	LEU	N-CA-C	-5.41	107.22	113.88
10	J	71	ASP	CB-CA-C	-5.40	108.59	116.53
12	L	19	LEU	N-CA-C	5.40	118.31	107.41
2	B	2052	A	C4'-C3'-C2'	-5.39	97.21	102.60
2	B	1552	A	N9-C1'-C2'	-5.39	103.92	112.00
2	B	974	G	C4'-C3'-O3'	-5.38	101.32	109.40
14	N	44	LEU	N-CA-C	5.38	116.83	111.07
2	B	1254	A	C4'-C3'-O3'	-5.38	104.93	113.00
4	C	89	ASN	CB-CA-C	-5.36	109.41	115.79
7	F	109	ARG	N-CA-C	5.36	118.98	112.23
21	U	53	GLN	N-CA-C	-5.36	97.97	109.81
12	L	49	GLY	N-CA-C	-5.34	106.65	114.61
2	B	1818	U	N1-C1'-C2'	5.32	119.98	112.00
11	K	92	GLU	N-CA-C	5.32	117.75	110.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	G	154	GLU	CA-C-N	5.31	126.48	119.84
8	G	154	GLU	C-N-CA	5.31	126.48	119.84
2	B	1294	U	C5'-C4'-C3'	-5.30	108.05	116.00
2	B	876	C	C4'-C3'-O3'	5.30	120.95	113.00
2	B	2267	A	C4'-C3'-O3'	-5.30	105.05	113.00
11	K	5	GLN	N-CA-C	-5.30	99.51	110.80
12	L	77	ILE	O-C-N	-5.29	115.95	122.57
2	B	557	C	C3'-C2'-O2'	5.29	118.64	110.70
17	Q	3	VAL	N-CA-CB	5.29	117.34	110.57
12	L	121	THR	N-CA-C	-5.28	101.70	109.62
13	M	1	MET	CG-SD-CE	5.27	112.50	100.90
14	N	10	LEU	N-CA-C	-5.27	101.06	109.07
16	P	62	LYS	N-CA-C	-5.27	99.57	110.80
2	B	1250	G	C5'-C4'-C3'	-5.26	107.30	115.20
2	B	84	A	C4'-C3'-O3'	-5.26	101.51	109.40
6	E	73	ILE	CA-C-N	5.26	131.19	122.73
6	E	73	ILE	C-N-CA	5.26	131.19	122.73
7	F	107	VAL	CB-CA-C	-5.25	108.78	114.35
15	O	12	THR	N-CA-C	5.25	117.41	111.11
25	Z	22	MET	N-CA-C	-5.25	105.11	112.25
19	S	35	ILE	N-CA-C	-5.25	106.42	112.98
2	B	989	G	C4'-C3'-O3'	-5.24	105.14	113.00
13	M	135	VAL	N-CA-C	5.24	115.44	108.11
5	D	144	GLY	CA-C-O	5.23	124.18	118.95
2	B	2199	A	C5'-C4'-C3'	-5.23	108.16	116.00
12	L	115	GLU	N-CA-C	5.22	118.06	109.76
14	N	118	ARG	NH1-CZ-NH2	-5.21	112.52	119.30
16	P	13	LYS	N-CA-C	-5.21	100.02	108.41
14	N	4	ARG	CA-C-N	5.20	131.46	121.54
14	N	4	ARG	C-N-CA	5.20	131.46	121.54
5	D	145	SER	N-CA-CB	-5.18	101.74	110.49
21	U	32	LYS	CA-C-N	5.17	126.51	121.65
21	U	32	LYS	C-N-CA	5.17	126.51	121.65
2	B	595	C	C5'-C4'-C3'	-5.16	108.26	116.00
2	B	1419	A	C4'-C3'-O3'	-5.16	105.26	113.00
2	B	27	G	C4'-C3'-O3'	-5.16	105.27	113.00
7	F	71	LYS	N-CA-C	5.15	117.64	109.24
5	D	151	THR	CA-C-N	-5.15	113.41	119.84
5	D	151	THR	C-N-CA	-5.15	113.41	119.84
3	V	2	PHE	CB-CA-C	-5.14	109.10	115.89
4	C	90	ILE	N-CA-C	5.14	120.03	109.34
2	B	2197	U	C4'-C3'-O3'	-5.13	101.70	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
16	P	31	VAL	N-CA-C	-5.13	100.99	108.17
17	Q	3	VAL	O-C-N	5.13	127.23	121.90
22	W	37	VAL	N-CA-C	5.12	120.00	109.34
2	B	380	G	C5'-C4'-C3'	-5.12	108.32	116.00
2	B	1419	A	N9-C1'-C2'	5.11	119.67	112.00
4	C	123	ILE	N-CA-C	5.11	111.68	106.21
2	B	451	U	C4'-C3'-O3'	-5.11	105.34	113.00
4	C	42	ARG	N-CA-C	5.11	117.88	110.17
2	B	512	G	C4'-C3'-O3'	-5.10	105.35	113.00
20	T	24	MET	N-CA-C	5.10	117.94	107.69
7	F	79	ARG	N-CA-C	5.10	117.40	110.88
16	P	30	TRP	N-CA-C	-5.10	102.65	110.30
12	L	116	VAL	N-CA-C	5.09	119.93	109.34
19	S	94	ASP	N-CA-C	5.08	116.59	107.80
15	O	62	LEU	N-CA-C	-5.08	104.97	110.91
12	L	69	ARG	N-CA-C	-5.08	102.69	110.30
11	K	121	GLU	N-CA-C	5.07	121.59	110.80
13	M	8	LYS	CA-C-O	-5.06	116.29	122.41
14	N	68	ALA	N-CA-C	5.06	118.90	112.12
2	B	2471	A	C5'-C4'-C3'	-5.04	107.63	115.20
14	N	38	LEU	N-CA-C	-5.04	106.00	113.16
2	B	162	U	C4'-C3'-O3'	5.04	116.96	109.40
26	O	3	GLN	N-CA-C	-5.04	101.79	109.65
12	L	82	LEU	N-CA-C	5.03	121.50	110.80
15	O	31	THR	CA-C-N	5.02	126.12	119.84
15	O	31	THR	C-N-CA	5.02	126.12	119.84
14	N	64	ARG	N-CA-C	-5.02	106.41	112.54
23	X	7	ARG	N-CA-C	5.02	121.50	110.80
13	M	71	LYS	N-CA-C	5.02	120.91	109.81
7	F	143	ASP	N-CA-C	-5.02	100.11	110.80
4	C	57	HIS	N-CA-C	5.02	116.43	109.31
9	H	15	LEU	N-CA-C	-5.02	107.51	113.38
2	B	2529	G	C4'-C3'-O3'	-5.01	105.48	113.00
11	K	110	GLU	N-CA-C	5.01	121.47	110.80
2	B	1082	U	N1-C1'-C2'	5.00	119.51	112.00

There are no chirality outliers.

All (70) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	B	1060	U	Sidechain
2	B	1086	A	Sidechain

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Mol	Chain	Res	Type	Group
2	B	1088	A	Sidechain
2	B	1119	U	Sidechain
2	B	1215	G	Sidechain
2	B	1240	U	Sidechain
2	B	1247	A	Sidechain
2	B	1347	A	Sidechain
2	B	136	G	Sidechain
2	B	1377	G	Sidechain
2	B	139	U	Sidechain
2	B	1419	A	Sidechain
2	B	142	A	Sidechain
2	B	1426	G	Sidechain
2	B	143	C	Sidechain
2	B	1432	G	Sidechain
2	B	1439	A	Sidechain
2	B	1450	G	Sidechain
2	B	1462	C	Sidechain
2	B	1546	G	Sidechain
2	B	1572	A	Sidechain
2	B	1814	G	Sidechain
2	B	1828	G	Sidechain
2	B	1869	G	Sidechain
2	B	1964	G	Sidechain
2	B	2052	A	Sidechain
2	B	2138	G	Sidechain
2	B	221	A	Sidechain
2	B	222	A	Sidechain
2	B	2267	A	Sidechain
2	B	2272	U	Sidechain
2	B	2285	C	Sidechain
2	B	2318	G	Sidechain
2	B	232	G	Sidechain
2	B	2471	A	Sidechain
2	B	2508	G	Sidechain
2	B	2575	C	Sidechain
2	B	2638	G	Sidechain
2	B	2641	G	Sidechain
2	B	2733	A	Sidechain
2	B	2770	G	Sidechain
2	B	2834	G	Sidechain
2	B	2848	G	Sidechain
2	B	2857	G	Sidechain

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Mol	Chain	Res	Type	Group
2	B	2868	A	Sidechain
2	B	2883	A	Sidechain
2	B	299	A	Sidechain
2	B	361	G	Sidechain
2	B	370	G	Sidechain
2	B	396	G	Sidechain
2	B	487	C	Sidechain
2	B	500	G	Sidechain
2	B	51	G	Sidechain
2	B	526	A	Sidechain
2	B	630	G	Sidechain
2	B	633	A	Sidechain
2	B	727	A	Sidechain
2	B	729	G	Sidechain
2	B	757	G	Sidechain
2	B	942	G	Sidechain
2	B	946	C	Sidechain
4	C	160	TYR	Sidechain
4	C	29	PHE	Sidechain
4	C	61	TYR	Sidechain
10	J	75	TYR	Sidechain
10	J	80	HIS	Sidechain
12	L	66	PHE	Sidechain
16	P	97	TYR	Sidechain
17	Q	46	TYR	Sidechain
18	R	53	PHE	Mainchain

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2507	0	1261	549	0
2	B	61056	0	30280	9673	0
3	V	753	0	777	241	0
4	C	2053	0	2111	777	0
5	D	1565	0	1597	825	0
6	E	1552	0	1611	599	0
7	F	1420	0	1451	484	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
8	G	1323	0	1367	227	0
9	H	1111	0	1146	146	0
10	J	1112	0	1141	323	0
11	K	930	0	997	294	0
12	L	1053	0	1114	696	0
13	M	1074	0	1136	526	0
14	N	1008	0	1040	293	0
15	O	900	0	927	272	0
16	P	917	0	958	327	0
17	Q	947	0	1016	435	0
18	R	816	0	831	342	0
19	S	857	0	915	294	0
20	T	777	0	832	289	0
21	U	779	0	832	218	0
22	W	634	0	654	299	0
23	X	509	0	528	238	0
24	Y	449	0	487	179	0
25	Z	549	0	546	180	0
26	0	444	0	444	331	0
27	1	441	0	485	153	0
28	2	377	0	408	329	0
29	3	504	0	563	267	0
30	4	302	0	336	148	0
31	2	3	0	0	0	0
31	B	92	0	0	0	0
31	C	1	0	0	0	0
31	E	3	0	0	0	0
31	L	4	0	0	0	0
31	Q	2	0	0	0	0
31	S	2	0	0	0	0
31	T	2	0	0	0	0
31	U	1	0	0	0	0
32	2	11	0	0	8	0
32	B	443	0	0	273	0
32	C	1	0	0	1	0
32	D	1	0	0	0	0
32	E	18	0	0	5	0
32	L	8	0	0	7	0
32	Q	7	0	0	2	0
32	S	7	0	0	0	0
32	T	5	0	0	16	0
32	U	5	0	0	6	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
All	All	89335	0	57791	14566	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 100.

All (14566) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1417:C:C5	2:B:1418:G:C5	1.77	1.72
2:B:827:U:P	2:B:2446:G:H5'	1.30	1.69
2:B:5:A:C2	2:B:2899:A:C5	1.79	1.68
1:A:57:A:C4	7:F:12:VAL:HG13	1.19	1.68
2:B:2848:G:C8	16:P:96:LEU:HD23	1.24	1.67
2:B:1947:C:C5	2:B:1987:A:H5'	1.22	1.67
2:B:584:C:C5	17:Q:5:ARG:CZ	1.76	1.65
2:B:1118:C:H4'	3:V:84:PRO:CG	1.22	1.65
1:A:59:A:C4	7:F:25:MET:HB3	1.20	1.65
2:B:1768:C:H1'	2:B:1961:C:C5	1.29	1.65
2:B:1975:G:C5'	2:B:1979:U:H5	1.04	1.65
2:B:1673:G:H5''	2:B:1944:U:C5'	1.20	1.64
2:B:1767:G:C8	2:B:1959:G:H2'	1.11	1.64
20:T:73:ARG:HD2	28:2:42:LEU:CG	1.19	1.63
2:B:1998:A:H5''	11:K:29:HIS:CE1	1.27	1.63
5:D:16:THR:CA	16:P:79:VAL:HG11	1.22	1.62
2:B:1653:G:C2	5:D:141:ARG:HG3	1.35	1.62
5:D:16:THR:HA	16:P:79:VAL:CG1	1.29	1.62
3:V:57:TYR:CE1	13:M:131:VAL:HG21	1.34	1.62
2:B:1659:G:H1'	5:D:134:HIS:CG	1.21	1.61
2:B:1953:A:C8	2:B:1991:U:C5	1.79	1.61
1:A:60:C:C4	7:F:23:SER:HB2	1.30	1.61
2:B:1668:A:C6	2:B:2551:C:H4'	1.11	1.61
1:A:14:U:C1'	1:A:107:G:H4'	1.27	1.61
2:B:1903:G:H5''	4:C:239:PHE:CD2	1.31	1.61
2:B:2848:G:C2'	16:P:96:LEU:CD2	1.76	1.61
2:B:570:G:H22	2:B:2499:C:C5'	1.01	1.60
2:B:580:U:C5'	17:Q:32:ARG:HB3	1.28	1.60
2:B:670:A:C2'	12:L:47:ARG:CA	1.77	1.60
1:A:59:A:C4	7:F:25:MET:CB	1.77	1.60
2:B:789:A:C5'	28:2:4:THR:HG23	1.23	1.60
6:E:25:GLU:CG	12:L:17:LYS:CB	1.75	1.60
2:B:8:C:C5'	10:J:121:LYS:CE	1.79	1.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:687:C:C5'	28:2:6:GLN:CB	1.79	1.59
2:B:1796:U:H4'	4:C:251:THR:CG2	1.13	1.59
2:B:8:C:C4'	10:J:121:LYS:HE3	1.24	1.59
2:B:2216:G:H5'	25:Z:44:PHE:CE1	1.30	1.59
2:B:2347:C:H1'	27:1:45:HIS:CE1	1.11	1.59
18:R:54:VAL:CA	18:R:54:VAL:CB	1.78	1.59
2:B:9:G:C6	2:B:2895:G:C6	1.88	1.59
2:B:669:G:C5'	12:L:47:ARG:HG2	1.18	1.59
2:B:1295:C:P	14:N:71:ARG:HB2	1.43	1.59
1:A:80:U:C4'	2:B:917:A:H2	1.10	1.58
2:B:96:C:C4'	23:X:42:LEU:HD11	1.22	1.58
2:B:1752:C:C4'	2:B:2861:U:H4'	1.22	1.58
2:B:1799:G:C8	4:C:175:LEU:HD13	1.11	1.58
2:B:61:C:C4'	23:X:25:GLN:HA	1.33	1.58
2:B:1664:A:H2'	2:B:2561:U:C4'	1.18	1.58
2:B:2899:A:C5'	10:J:137:PRO:HD3	1.32	1.58
2:B:1580:A:C6	2:B:1581:G:C2	1.92	1.58
2:B:1664:A:C2'	2:B:2561:U:H4'	1.25	1.58
2:B:1340:U:H4'	2:B:1394:U:C3'	1.25	1.58
2:B:1818:U:C5	4:C:154:ALA:CB	1.85	1.58
2:B:2261:C:C2	2:B:2327:A:C2	1.88	1.58
5:D:8:LYS:CE	16:P:1:SER:HB3	1.15	1.58
2:B:584:C:C6	17:Q:5:ARG:HD3	1.35	1.57
2:B:584:C:H5	17:Q:5:ARG:CZ	1.08	1.57
2:B:1118:C:C4'	3:V:84:PRO:HG2	1.18	1.57
2:B:1818:U:C4	4:C:154:ALA:CB	1.82	1.57
3:V:84:PRO:CG	13:M:127:LYS:HE2	1.15	1.57
2:B:2876:G:H5''	16:P:2:ASN:CA	1.10	1.57
2:B:2495:G:C5'	13:M:82:MET:HE2	1.14	1.57
2:B:1417:C:N4	2:B:1418:G:C2	1.68	1.56
1:A:29:A:C2	7:F:24:VAL:HG21	1.39	1.56
2:B:1807:G:H5''	4:C:47:ARG:CB	1.32	1.56
1:A:88:C:C4	13:M:20:LEU:HB2	1.06	1.56
2:B:96:C:H5''	23:X:39:GLN:CB	1.20	1.56
2:B:930:G:H5'	24:Y:27:GLY:CA	1.13	1.56
2:B:1124:G:C4'	30:4:21:GLY:CA	1.82	1.56
2:B:1664:A:C2'	11:K:40:LYS:HG2	1.20	1.56
5:D:8:LYS:HE3	16:P:1:SER:CB	1.33	1.56
6:E:112:LEU:HD22	12:L:11:GLY:CA	1.28	1.56
1:A:80:U:H4'	2:B:917:A:C2	1.41	1.56
2:B:5:A:C6	2:B:2899:A:N6	1.73	1.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:654:A:C2	29:3:18:LYS:CG	1.88	1.56
2:B:2312:U:H5'	7:F:71:LYS:CA	1.29	1.56
2:B:1953:A:N7	2:B:1991:U:C6	1.73	1.55
2:B:2761:A:C1'	8:G:142:GLN:NE2	1.68	1.55
2:B:483:A:H5'	21:U:45:GLN:CA	1.10	1.55
2:B:659:G:C4'	6:E:97:ASN:HD21	1.18	1.55
2:B:1784:A:H5'	2:B:2590:A:C4'	1.33	1.55
1:A:74:U:H1'	3:V:37:PRO:CG	1.33	1.55
2:B:1997:C:C4	2:B:2549:G:H5''	1.37	1.55
2:B:2880:C:H4'	14:N:90:ARG:CD	1.33	1.55
1:A:90:C:H1'	13:M:21:ALA:CB	1.34	1.55
2:B:96:C:H4'	23:X:42:LEU:CD1	1.34	1.55
2:B:1124:G:C4'	30:4:21:GLY:HA3	1.31	1.54
2:B:2575:C:C5'	5:D:150:GLN:H	1.03	1.54
2:B:997:G:C5'	17:Q:91:ARG:HE	1.20	1.54
2:B:1673:G:C5'	2:B:1944:U:H5'	1.12	1.54
2:B:1818:U:C5	4:C:154:ALA:HB3	1.02	1.54
2:B:45:G:H5'	2:B:46:G:C4'	1.34	1.54
2:B:826:U:C5'	2:B:2448:A:N6	1.70	1.54
1:A:31:C:C4'	7:F:8:LYS:HE3	1.33	1.53
2:B:5:A:C4	2:B:2899:A:N1	1.74	1.53
2:B:483:A:C5'	21:U:45:GLN:HA	1.31	1.53
2:B:532:A:N6	2:B:2020:A:C1'	1.68	1.53
2:B:23:G:N2	19:S:78:GLU:CG	1.71	1.53
2:B:2009:A:H5''	2:B:2823:A:C1'	1.33	1.53
2:B:61:C:H5''	23:X:25:GLN:CB	1.33	1.53
1:A:80:U:C4'	2:B:917:A:C2	1.90	1.53
2:B:1223:G:C2'	18:R:78:ARG:HH22	1.19	1.53
2:B:2459:A:H1'	13:M:76:LYS:CG	1.33	1.53
2:B:1670:C:N4	2:B:1955:U:C5'	1.69	1.52
2:B:2757:A:C2	8:G:66:THR:HG21	1.43	1.52
2:B:453:A:C2	28:2:39:ARG:NH2	1.74	1.52
2:B:1759:A:C5	2:B:2697:G:H5'	1.42	1.52
2:B:1807:G:C5'	4:C:47:ARG:HB2	1.35	1.52
2:B:2876:G:C5'	16:P:2:ASN:HA	1.14	1.52
20:T:73:ARG:CB	28:2:42:LEU:HD23	1.38	1.52
1:A:57:A:C8	7:F:12:VAL:CG1	1.89	1.52
2:B:1009:A:C4'	17:Q:61:ILE:HD11	1.32	1.52
2:B:4:U:C2	2:B:2900:A:N1	1.73	1.52
2:B:2245:U:C5	2:B:2442:C:N3	1.73	1.52
2:B:86:G:N2	23:X:45:GLN:HG2	1.23	1.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:654:A:C2	29:3:18:LYS:HG2	1.01	1.51
2:B:1827:U:C2'	2:B:1970:A:C3'	1.83	1.51
2:B:2539:C:C4'	30:4:2:LYS:HE2	1.39	1.51
2:B:2887:A:C4	26:0:27:LEU:HD13	1.41	1.51
2:B:1947:C:C6	2:B:1987:A:H5'	1.45	1.51
2:B:2848:G:C8	16:P:96:LEU:CD2	1.88	1.51
2:B:1938:A:C4	2:B:2591:C:H5'	1.42	1.51
2:B:2757:A:N1	8:G:66:THR:CG2	1.73	1.51
2:B:1818:U:C4	4:C:154:ALA:HB3	1.01	1.51
14:N:120:GLU:HA	26:0:51:ARG:CB	1.37	1.51
20:T:73:ARG:CZ	28:2:43:THR:CA	1.83	1.51
1:A:74:U:C1'	3:V:37:PRO:HG2	1.32	1.51
2:B:1998:A:C2	11:K:4:GLU:CG	1.90	1.50
2:B:2575:C:P	5:D:150:GLN:HG3	1.48	1.50
17:Q:101:ASP:CG	18:R:2:TYR:HE2	1.11	1.50
1:A:88:C:H5	13:M:20:LEU:C	1.11	1.50
2:B:2245:U:H2'	2:B:2442:C:N4	1.26	1.50
2:B:2484:G:C2'	13:M:44:ARG:NH1	1.69	1.50
2:B:1768:C:C1'	2:B:1961:C:C5	1.92	1.50
2:B:587:C:C2	12:L:38:GLN:CA	1.94	1.50
2:B:587:C:C2	12:L:38:GLN:N	1.74	1.50
2:B:2245:U:C4	2:B:2442:C:C2	1.96	1.50
2:B:2285:C:H5''	27:1:29:LYS:NZ	1.18	1.50
20:T:73:ARG:CD	28:2:42:LEU:HG	1.05	1.50
2:B:1655:A:O2'	2:B:2512:C:C6	1.64	1.50
2:B:2009:A:C5'	2:B:2823:A:H1'	1.41	1.50
17:Q:101:ASP:CG	18:R:2:TYR:CE2	1.91	1.49
2:B:811:U:O2	2:B:1251:C:C6	1.64	1.49
2:B:1654:A:N7	5:D:143:PRO:CA	1.76	1.49
2:B:1767:G:H8	2:B:1959:G:C2'	0.85	1.49
2:B:2331:G:H4'	22:W:69:GLU:CD	1.36	1.49
2:B:855:G:H21	22:W:23:LYS:CE	1.22	1.49
2:B:1664:A:C4'	11:K:40:LYS:CG	1.91	1.49
2:B:2007:U:H5'	5:D:162:ALA:CB	1.38	1.49
2:B:126:A:N6	20:T:74:ILE:CG2	1.70	1.49
2:B:1009:A:H4'	17:Q:61:ILE:CD1	1.41	1.48
2:B:1659:G:H1'	5:D:134:HIS:CD2	1.36	1.48
2:B:1971:U:C2	4:C:237:ARG:HB2	1.47	1.48
2:B:2848:G:N9	16:P:96:LEU:CD2	1.72	1.48
2:B:1654:A:C5'	5:D:128:ARG:HB2	1.37	1.48
2:B:2017:U:C4	26:0:3:GLN:CG	1.80	1.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:584:C:C6	17:Q:5:ARG:CD	1.93	1.48
2:B:1659:G:C1'	5:D:134:HIS:CD2	1.81	1.48
2:B:1796:U:C5'	4:C:251:THR:HG23	1.43	1.48
1:A:56:G:C1'	7:F:24:VAL:HG13	1.40	1.48
2:B:183:C:H5'	2:B:433:C:C4'	1.41	1.48
2:B:1417:C:C4	2:B:1418:G:C4	2.02	1.48
2:B:1653:G:H3'	5:D:126:ASN:CA	1.41	1.48
2:B:2575:C:H5''	5:D:150:GLN:CA	1.44	1.48
2:B:1796:U:C5'	4:C:251:THR:CG2	1.88	1.48
1:A:14:U:H1'	1:A:107:G:C4'	1.43	1.47
2:B:1992:G:C8	2:B:2550:G:H5'	1.28	1.47
12:L:60:ARG:HD3	29:3:7:ARG:NE	1.29	1.47
2:B:482:A:C4'	21:U:43:LYS:HE3	1.39	1.47
2:B:532:A:C6	2:B:2020:A:H1'	1.48	1.47
2:B:2582:G:C2	2:B:2583:G:C1'	1.96	1.47
1:A:88:C:N4	13:M:20:LEU:HB2	1.24	1.47
2:B:584:C:H5	17:Q:5:ARG:NH1	1.02	1.47
2:B:671:C:H5''	12:L:39:LYS:CG	1.45	1.47
2:B:2091:C:C2	2:B:2228:G:C6	2.02	1.47
17:Q:101:ASP:OD2	18:R:2:TYR:CE2	1.66	1.47
2:B:592:A:N3	29:3:2:LYS:HG3	1.18	1.46
2:B:1827:U:C2'	2:B:1970:A:H3'	1.00	1.46
2:B:1951:U:O2	2:B:1991:U:C5	1.67	1.46
1:A:57:A:C5	7:F:12:VAL:CG1	1.96	1.46
2:B:693:A:C4'	2:B:1354:A:H4'	1.41	1.46
2:B:728:G:C4'	4:C:16:VAL:HG11	1.43	1.46
2:B:1203:U:H5''	12:L:14:LYS:NZ	1.18	1.46
2:B:1340:U:H4'	2:B:1394:U:C4'	1.46	1.46
2:B:2216:G:C5'	25:Z:44:PHE:CE1	1.96	1.46
2:B:587:C:C2	12:L:38:GLN:HA	1.48	1.46
2:B:1124:G:H4'	30:4:20:ASP:C	1.36	1.46
2:B:1997:C:C2	2:B:2549:G:H8	1.29	1.46
2:B:1118:C:H5''	13:M:127:LYS:CE	1.45	1.46
2:B:2091:C:O2	2:B:2228:G:C2	1.69	1.46
2:B:2418:A:O2'	27:1:20:TYR:CG	1.69	1.46
6:E:30:GLN:CB	12:L:19:LEU:HB2	1.45	1.46
2:B:458:G:C8	28:2:39:ARG:O	1.65	1.45
2:B:593:U:C4'	29:3:2:LYS:HZ2	1.29	1.45
2:B:668:A:C8	12:L:49:GLY:N	1.76	1.45
2:B:1257:C:C4'	6:E:77:ILE:HG22	1.45	1.45
2:B:1417:C:N4	2:B:1418:G:N1	1.62	1.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2880:C:C4'	14:N:90:ARG:HD2	1.44	1.45
2:B:670:A:H2'	12:L:47:ARG:CA	1.18	1.45
2:B:687:C:H5''	28:2:6:GLN:CB	1.35	1.45
2:B:1759:A:C2	2:B:2697:G:O4'	1.67	1.45
2:B:1773:A:OP1	2:B:1972:G:C8	1.67	1.45
2:B:1223:G:H2'	18:R:78:ARG:NH2	1.28	1.45
2:B:2063:C:H41	2:B:2253:G:P	1.38	1.45
2:B:2484:G:C3'	13:M:44:ARG:NH1	1.76	1.45
2:B:1252:G:N7	17:Q:35:PHE:CE1	1.85	1.45
2:B:5:A:C5	2:B:2899:A:C6	2.05	1.44
2:B:7:G:N1	2:B:2897:U:C2	1.83	1.44
2:B:1128:G:N3	2:B:2517:C:H4'	1.16	1.44
2:B:1759:A:N1	2:B:2697:G:H4'	1.21	1.44
2:B:1771:C:C5	2:B:1974:C:OP1	1.68	1.44
6:E:112:LEU:CD1	12:L:12:SER:O	1.65	1.44
1:A:59:A:N3	7:F:25:MET:HB2	1.29	1.44
2:B:61:C:H4'	23:X:25:GLN:CA	1.43	1.44
2:B:96:C:C4'	23:X:42:LEU:CD1	1.83	1.44
2:B:320:A:H2'	6:E:131:THR:CG2	1.44	1.44
2:B:1248:G:C8	17:Q:1:ALA:HA	1.50	1.44
2:B:2512:C:C5'	5:D:146:ILE:HG12	1.41	1.44
6:E:112:LEU:HD13	12:L:11:GLY:C	1.41	1.44
1:A:57:A:N9	7:F:12:VAL:HG13	1.13	1.44
2:B:5:A:C4	2:B:2899:A:C6	2.02	1.44
2:B:412:A:N6	2:B:2410:G:N1	1.63	1.44
2:B:1994:C:C3'	2:B:2551:C:H42	1.10	1.44
2:B:2061:G:C5'	2:B:2252:G:H4'	1.42	1.44
2:B:197:A:N3	2:B:2443:C:H1'	1.26	1.44
2:B:2261:C:C1'	2:B:2327:A:N1	1.81	1.44
3:V:79:ARG:HB3	13:M:134:THR:CG2	1.11	1.44
2:B:4:U:O2	2:B:2900:A:C2	1.67	1.44
2:B:1163:G:H4'	18:R:91:GLN:NE2	1.21	1.44
2:B:1799:G:C8	4:C:175:LEU:CD1	1.99	1.44
1:A:88:C:N4	13:M:38:ARG:HD3	1.16	1.43
2:B:1799:G:N7	4:C:175:LEU:HD13	1.13	1.43
3:V:84:PRO:HG3	13:M:127:LYS:CE	0.98	1.43
2:B:215:G:N2	2:B:432:A:H61	1.04	1.43
2:B:587:C:O4'	12:L:38:GLN:CB	1.65	1.43
2:B:667:U:O4	12:L:48:ARG:CD	1.66	1.43
2:B:1995:U:C5	2:B:2549:G:C6	1.89	1.43
20:T:73:ARG:CZ	28:2:43:THR:HA	0.96	1.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:56:G:H1'	7:F:24:VAL:CG1	1.44	1.43
2:B:589:U:OP2	12:L:27:LEU:CD2	1.65	1.43
2:B:1827:U:H2'	2:B:1970:A:C2'	1.43	1.43
2:B:1975:G:H5''	2:B:1979:U:C5	0.91	1.43
1:A:57:A:C5	7:F:12:VAL:HG11	1.51	1.43
2:B:2575:C:H5''	5:D:150:GLN:N	1.26	1.43
2:B:815:C:C6	18:R:84:ARG:NH1	1.87	1.43
6:E:112:LEU:HD13	12:L:12:SER:N	1.28	1.43
2:B:580:U:H5''	17:Q:32:ARG:CB	1.49	1.42
2:B:997:G:H5''	17:Q:91:ARG:NE	1.27	1.42
2:B:2009:A:C5'	2:B:2823:A:C1'	1.90	1.42
1:A:56:G:C1'	7:F:24:VAL:CG1	1.92	1.42
1:A:57:A:N6	7:F:24:VAL:HB	1.10	1.42
2:B:1196:C:H2'	2:B:1197:G:C8	1.55	1.42
2:B:1997:C:N3	2:B:2549:G:H5''	1.26	1.42
2:B:2272:U:OP1	22:W:15:SER:CB	1.66	1.42
2:B:593:U:O4'	29:3:2:LYS:CD	1.65	1.42
2:B:1995:U:C5	2:B:2550:G:C6	2.07	1.42
2:B:2330:G:H1'	22:W:36:ILE:CD1	1.50	1.42
2:B:592:A:C5'	29:3:1:PRO:HA	1.30	1.42
2:B:671:C:C6	12:L:39:LYS:CE	2.03	1.42
2:B:2016:U:OP2	19:S:92:ARG:CB	1.65	1.42
2:B:2347:C:C1'	27:1:45:HIS:CE1	2.00	1.42
17:Q:110:GLU:HB2	18:R:52:PRO:CG	1.49	1.42
2:B:1128:G:N3	2:B:2517:C:C4'	1.79	1.42
2:B:1766:G:N7	2:B:1958:C:H2'	1.11	1.42
1:A:90:C:C1'	13:M:21:ALA:HB2	1.46	1.41
2:B:2350:C:H3'	29:3:38:LYS:NZ	1.34	1.41
6:E:26:ALA:N	12:L:18:ARG:HE	0.91	1.41
2:B:1163:G:C4'	18:R:91:GLN:NE2	1.83	1.41
2:B:1417:C:C5	2:B:1418:G:C6	2.06	1.41
2:B:1665:A:C5'	11:K:57:VAL:CG1	1.98	1.41
2:B:1951:U:O2	2:B:1991:U:C4	1.74	1.41
2:B:45:G:C5'	2:B:46:G:O4'	1.67	1.41
2:B:587:C:N1	12:L:38:GLN:N	1.68	1.41
2:B:1339:G:H5'	2:B:1393:A:C4	1.54	1.41
2:B:1657:U:C4	5:D:130:GLN:NE2	1.86	1.41
2:B:2244:U:C2'	2:B:2433:A:H3'	1.29	1.41
2:B:2261:C:H1'	2:B:2327:A:N1	1.29	1.41
2:B:1225:G:C4'	18:R:87:GLN:HG3	1.13	1.41
2:B:1827:U:H2'	2:B:1970:A:C3'	1.40	1.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:V:84:PRO:HD3	13:M:127:LYS:NZ	1.33	1.41
2:B:2005:A:C2'	5:D:143:PRO:HD2	1.49	1.41
2:B:671:C:C5'	12:L:39:LYS:HG2	1.49	1.40
2:B:1124:G:C3'	30:4:21:GLY:HA3	1.22	1.40
20:T:73:ARG:HB3	28:2:42:LEU:CD2	1.51	1.40
2:B:811:U:C2	2:B:1251:C:C6	2.07	1.40
2:B:2748:A:H4'	8:G:69:ALA:CB	1.52	1.40
2:B:2887:A:N3	26:0:27:LEU:CD1	1.84	1.40
19:S:41:LYS:HD2	26:0:21:LEU:CB	1.47	1.40
2:B:1262:A:H3'	19:S:95:ARG:NH2	1.35	1.40
2:B:2017:U:H3'	26:0:4:GLN:CB	1.46	1.40
2:B:2272:U:P	22:W:15:SER:HA	1.62	1.40
2:B:2582:G:N2	2:B:2583:G:H1'	1.10	1.40
1:A:57:A:C4	7:F:12:VAL:CG1	2.02	1.40
2:B:1759:A:C6	2:B:2697:G:H5'	1.56	1.40
2:B:2014:A:N3	2:B:2611:C:H2'	1.08	1.40
2:B:1903:G:C5'	4:C:239:PHE:CD2	2.03	1.40
2:B:1953:A:H8	2:B:1991:U:C5	1.21	1.40
2:B:2312:U:H5'	7:F:71:LYS:CB	1.49	1.40
3:V:88:HIS:CD2	13:M:136:MET:CG	2.01	1.40
2:B:482:A:H4'	21:U:43:LYS:CE	1.49	1.39
2:B:570:G:H2'	2:B:2030:A:N6	1.33	1.39
2:B:588:U:H5''	12:L:27:LEU:CB	1.49	1.39
2:B:593:U:H4'	29:3:2:LYS:NZ	1.32	1.39
2:B:630:G:H5'	29:3:44:ARG:NE	1.09	1.39
2:B:659:G:H4'	6:E:97:ASN:ND2	1.08	1.39
2:B:1225:G:H21	18:R:85:LYS:NZ	1.14	1.39
2:B:1752:C:C5'	2:B:2861:U:H4'	1.49	1.39
2:B:1796:U:C4'	4:C:251:THR:HG23	0.93	1.39
2:B:1953:A:C8	2:B:1991:U:C6	2.00	1.39
2:B:2068:U:O4	2:B:2395:C:C2	1.75	1.39
2:B:2582:G:C6	2:B:2583:G:C8	2.10	1.39
2:B:2888:C:C6	26:0:27:LEU:HD11	1.57	1.39
2:B:1664:A:O2'	11:K:40:LYS:CG	1.70	1.39
2:B:2814:A:H2'	26:0:39:ARG:CD	1.50	1.39
2:B:516:C:C5'	2:B:1262:A:H4'	1.49	1.39
2:B:1664:A:H4'	11:K:40:LYS:CB	1.51	1.39
6:E:23:PHE:CD2	12:L:17:LYS:HD2	1.57	1.39
20:T:73:ARG:NE	28:2:43:THR:CA	1.81	1.39
1:A:30:C:C5	15:O:33:ARG:NH2	1.82	1.39
2:B:564:C:C2'	2:B:578:G:H1	1.34	1.39

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:857:G:C5'	22:W:55:ASP:OD1	1.68	1.39
2:B:1668:A:C6	2:B:2551:C:C4'	2.03	1.39
2:B:1815:A:H3'	4:C:85:ASN:ND2	1.24	1.39
2:B:2575:C:C4'	5:D:150:GLN:H	1.15	1.39
2:B:2848:G:C2'	16:P:96:LEU:HD22	0.92	1.39
2:B:5:A:C5	2:B:2899:A:N6	1.86	1.39
2:B:2575:C:C5'	5:D:150:GLN:N	1.78	1.39
2:B:2867:G:N7	16:P:20:ARG:HD2	1.15	1.39
2:B:926:G:N2	24:Y:42:ALA:HB1	1.26	1.38
2:B:2261:C:H1'	2:B:2327:A:C6	1.57	1.38
2:B:9:G:C6	2:B:2895:G:N1	1.86	1.38
2:B:183:C:H5'	2:B:433:C:C5'	1.50	1.38
2:B:1654:A:H4'	5:D:125:TRP:CZ3	1.58	1.38
2:B:1766:G:N7	2:B:1958:C:C2'	1.83	1.38
2:B:1797:G:C5'	4:C:253:GLY:HA2	1.52	1.38
2:B:1828:G:C1'	2:B:1970:A:N3	1.82	1.38
2:B:2068:U:H5	2:B:2394:C:C2	1.39	1.38
1:A:88:C:C4	13:M:20:LEU:CB	2.02	1.38
2:B:930:G:C5'	24:Y:27:GLY:HA2	1.50	1.38
2:B:2199:A:C8	2:B:2225:A:C4	2.09	1.38
2:B:2258:C:C2	2:B:2425:A:C4'	1.87	1.38
2:B:2512:C:H5'	5:D:146:ILE:CG1	1.40	1.38
1:A:88:C:N4	13:M:20:LEU:CB	1.84	1.38
2:B:989:G:C5'	24:Y:12:ALA:HB2	1.53	1.38
2:B:2000:C:H5''	11:K:32:TYR:OH	1.21	1.38
2:B:1163:G:C5'	18:R:91:GLN:NE2	1.86	1.38
2:B:1654:A:N7	5:D:143:PRO:C	1.76	1.38
2:B:1998:A:H2	11:K:4:GLU:CG	1.27	1.38
2:B:2262:U:H5'	2:B:2328:A:C2	1.54	1.37
1:A:60:C:N3	7:F:23:SER:HB2	1.35	1.37
2:B:416:U:O4	2:B:2407:A:C2	1.77	1.37
2:B:1366:A:OP1	25:Z:1:MET:CE	1.69	1.37
2:B:1665:A:C5'	11:K:57:VAL:HG12	1.51	1.37
2:B:2761:A:H1'	8:G:142:GLN:NE2	1.27	1.37
2:B:1654:A:C8	5:D:143:PRO:O	1.77	1.37
2:B:1971:U:O2	4:C:237:ARG:CB	1.72	1.37
2:B:2334:U:H4'	15:O:9:ARG:CA	1.54	1.37
2:B:2359:C:N4	2:B:2428:G:O6	1.57	1.37
2:B:2461:A:C5'	13:M:78:LEU:HD11	1.53	1.37
2:B:2484:G:H2'	13:M:44:ARG:NH1	1.24	1.37
2:B:2786:U:H4'	5:D:65:ALA:O	1.22	1.37

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:659:G:C1'	6:E:97:ASN:OD1	1.72	1.37
2:B:855:G:H21	22:W:23:LYS:NZ	1.16	1.37
2:B:1029:A:N1	30:4:6:SER:O	1.58	1.37
2:B:2334:U:C2	15:O:12:THR:HA	1.57	1.37
6:E:26:ALA:CA	12:L:18:ARG:HE	1.20	1.37
1:A:59:A:N9	7:F:25:MET:HB3	1.09	1.37
1:A:88:C:C5	13:M:20:LEU:C	2.00	1.37
2:B:584:C:C5	17:Q:5:ARG:NE	1.88	1.37
2:B:728:G:H4'	4:C:16:VAL:CG1	1.53	1.37
2:B:2005:A:H2'	5:D:143:PRO:CD	1.52	1.37
2:B:2478:A:C5'	30:4:32:LYS:HD2	1.53	1.37
1:A:81:G:H4'	2:B:919:U:C5'	1.55	1.36
2:B:654:A:N1	29:3:18:LYS:HG2	1.37	1.36
2:B:1820:U:OP1	4:C:176:ARG:NH2	1.57	1.36
2:B:1960:A:N1	2:B:1986:C:C1'	1.84	1.36
2:B:2061:G:H5'	2:B:2252:G:C4'	1.55	1.36
2:B:2069:G:C5'	2:B:2432:A:H3'	1.52	1.36
1:A:88:C:C5	13:M:20:LEU:CA	2.09	1.36
2:B:1124:G:H4'	30:4:21:GLY:N	1.38	1.36
2:B:2867:G:C8	16:P:20:ARG:HD2	1.58	1.36
1:A:60:C:C4	7:F:23:SER:CB	2.09	1.36
2:B:989:G:C4'	24:Y:12:ALA:HB2	1.54	1.36
2:B:1417:C:C4	2:B:1418:G:C2	2.14	1.36
2:B:1662:U:C4'	11:K:6:THR:H	1.30	1.36
2:B:1673:G:C2'	2:B:1956:U:H5'	1.54	1.36
2:B:2478:A:H5'	30:4:32:LYS:CD	1.55	1.36
17:Q:111:LYS:N	18:R:52:PRO:HB3	1.39	1.36
2:B:1999:C:C3'	11:K:31:ARG:HB3	1.52	1.36
2:B:2056:G:C4	2:B:2577:A:C2	2.14	1.36
2:B:2258:C:C2	2:B:2425:A:H4'	0.98	1.36
2:B:197:A:O2'	2:B:2443:C:C4'	1.73	1.35
2:B:415:A:N6	2:B:2407:A:C2	1.94	1.35
2:B:649:G:N2	29:3:44:ARG:CZ	1.87	1.35
2:B:1656:C:C5'	2:B:2510:C:H3'	1.45	1.35
2:B:630:G:C5'	29:3:44:ARG:NE	1.88	1.35
2:B:686:U:C2	28:2:11:LYS:C	2.04	1.35
2:B:687:C:C5'	28:2:6:GLN:HB3	0.89	1.35
2:B:1656:C:C5'	2:B:2511:U:C5	1.98	1.35
2:B:1673:G:C2'	2:B:1956:U:C5'	2.02	1.35
2:B:2347:C:H1'	27:1:45:HIS:NE2	1.33	1.35
20:T:73:ARG:NE	28:2:43:THR:HA	1.33	1.35

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:592:A:H5'	29:3:1:PRO:CA	1.54	1.35
2:B:811:U:N3	2:B:1251:C:C4	1.94	1.35
2:B:1163:G:H4'	18:R:91:GLN:CD	1.52	1.35
2:B:1340:U:C4'	2:B:1394:U:O3'	1.72	1.35
2:B:1652:A:O2'	5:D:123:LYS:N	1.57	1.35
2:B:1767:G:C8	2:B:1959:G:C2'	1.74	1.35
2:B:2002:G:C2'	5:D:132:ALA:N	1.88	1.35
2:B:2887:A:N3	26:0:27:LEU:HD13	1.02	1.35
2:B:1225:G:N2	18:R:85:LYS:NZ	1.72	1.35
2:B:1971:U:C2	4:C:237:ARG:CB	2.07	1.35
2:B:1992:G:C8	2:B:2550:G:C5'	2.03	1.35
2:B:95:A:H5'	23:X:33:ALA:C	1.48	1.35
2:B:570:G:C2'	2:B:2030:A:H62	1.39	1.35
2:B:989:G:C3'	24:Y:12:ALA:CB	2.05	1.35
2:B:1820:U:OP1	4:C:176:ARG:CZ	1.73	1.35
2:B:7:G:C6	2:B:2897:U:N3	1.94	1.34
2:B:8:C:C4'	10:J:121:LYS:CE	2.01	1.34
2:B:1637:A:N3	2:B:2697:G:O2'	1.60	1.34
2:B:1670:C:N4	2:B:1955:U:H5'	1.03	1.34
2:B:1971:U:N3	4:C:239:PHE:CE1	1.94	1.34
2:B:2574:G:O2'	5:D:151:THR:CB	1.75	1.34
2:B:2848:G:C1'	16:P:96:LEU:CD2	2.03	1.34
2:B:880:G:P	2:B:900:A:C6	2.19	1.34
2:B:1667:G:N2	2:B:2550:G:O2'	1.57	1.34
2:B:1771:C:C4	2:B:1974:C:OP1	1.80	1.34
2:B:2015:A:P	19:S:88:ARG:CB	2.16	1.34
2:B:96:C:C5'	23:X:39:GLN:HB3	1.57	1.34
2:B:2257:U:C6	2:B:2450:A:O4'	1.79	1.34
2:B:2348:U:C5'	27:1:39:ASP:HB3	1.57	1.34
2:B:2582:G:N2	2:B:2583:G:C1'	1.90	1.34
6:E:25:GLU:HG2	12:L:17:LYS:CB	1.39	1.34
2:B:1278:C:H4'	14:N:27:SER:OG	1.24	1.34
2:B:1664:A:C3'	11:K:40:LYS:CG	2.04	1.34
2:B:1766:G:C3'	2:B:1959:G:H4'	1.58	1.34
2:B:2068:U:H5	2:B:2394:C:N3	1.25	1.34
2:B:196:A:N1	2:B:2060:A:N6	1.72	1.34
2:B:482:A:H5''	21:U:43:LYS:NZ	1.42	1.34
2:B:989:G:N7	24:Y:13:ILE:C	1.83	1.34
2:B:1580:A:C3'	2:B:1581:G:C8	2.06	1.34
2:B:1759:A:C6	2:B:2697:G:C5'	2.10	1.34
2:B:1902:C:O3'	4:C:239:PHE:CA	1.76	1.34

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2067:G:C5'	2:B:2424:C:O2'	1.74	1.34
2:B:2311:A:C2	7:F:75:GLY:HA3	1.63	1.34
2:B:2574:G:O2'	5:D:151:THR:CG2	1.73	1.34
2:B:2848:G:H2'	16:P:96:LEU:CD2	1.36	1.34
2:B:593:U:C4'	29:3:2:LYS:NZ	1.85	1.33
2:B:1371:G:C4'	2:B:1810:A:H1'	1.58	1.33
2:B:1998:A:C5'	11:K:29:HIS:CE1	2.10	1.33
2:B:2281:A:O2'	2:B:2389:G:N2	1.60	1.33
2:B:2811:G:OP1	5:D:61:THR:CB	1.76	1.33
2:B:1417:C:C6	2:B:1418:G:N7	1.97	1.33
2:B:1664:A:C3'	11:K:40:LYS:HG3	1.55	1.33
2:B:1674:G:C4	2:B:1956:U:C4	2.16	1.33
2:B:2461:A:O4'	13:M:78:LEU:CD2	1.76	1.33
2:B:2749:A:H5'	8:G:65:GLY:CA	1.56	1.33
2:B:2848:G:N9	16:P:96:LEU:HD23	1.23	1.33
1:A:57:A:H8	7:F:16:MET:CG	1.41	1.33
2:B:183:C:C5'	2:B:433:C:H5'	1.58	1.33
2:B:530:G:O2'	2:B:2035:G:N3	1.60	1.33
2:B:654:A:C2	29:3:18:LYS:NZ	1.95	1.33
2:B:789:A:C5'	28:2:4:THR:CG2	2.04	1.33
2:B:1276:A:H4'	14:N:20:MET:SD	1.69	1.33
2:B:1807:G:P	4:C:48:ILE:HG12	1.66	1.33
2:B:2281:A:H1'	2:B:2388:A:C6	1.64	1.33
6:E:181:ILE:HG12	12:L:15:ALA:N	1.04	1.33
2:B:607:U:OP2	6:E:98:LYS:NZ	1.60	1.33
2:B:669:G:C5'	12:L:47:ARG:CG	2.05	1.33
2:B:1270:C:P	2:B:2012:G:H5''	1.66	1.33
2:B:1673:G:H2'	2:B:1956:U:C5'	1.58	1.33
2:B:1813:G:N2	4:C:51:ARG:HD2	1.44	1.33
32:B:3142:HOH:O	29:3:17:GLY:CA	1.70	1.33
6:E:112:LEU:CD1	12:L:12:SER:C	2.00	1.33
6:E:179:SER:O	12:L:13:LYS:NZ	1.62	1.33
20:T:73:ARG:NE	28:2:43:THR:N	1.75	1.33
2:B:483:A:C5'	21:U:45:GLN:CA	1.93	1.33
2:B:1252:G:C6	17:Q:35:PHE:CB	1.94	1.33
2:B:1567:G:O2'	4:C:32:LEU:CD2	1.73	1.33
2:B:1654:A:N7	5:D:143:PRO:O	1.56	1.33
2:B:2018:G:C4'	26:0:5:ASN:OD1	1.73	1.33
2:B:2637:U:H4'	5:D:43:ASP:CB	1.57	1.33
2:B:2641:G:OP1	10:J:84:ILE:HG21	1.25	1.33
2:B:6:A:C6	2:B:2898:U:N3	1.97	1.32

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:466:A:C5'	28:2:44:VAL:HG12	1.59	1.32
2:B:789:A:H5''	28:2:4:THR:CG2	1.57	1.32
2:B:789:A:C4'	28:2:3:ARG:NH2	1.91	1.32
2:B:1620:G:C5	32:B:3079:HOH:O	1.76	1.32
2:B:1650:A:O2'	14:N:2:ARG:HD2	1.21	1.32
2:B:1666:G:H21	2:B:2559:C:C1'	1.42	1.32
2:B:1951:U:O2'	2:B:1991:U:H6	1.01	1.32
2:B:2216:G:H5''	25:Z:44:PHE:CD1	1.64	1.32
2:B:2330:G:O2'	22:W:70:VAL:HG22	1.25	1.32
2:B:671:C:H5'	12:L:39:LYS:CE	1.55	1.32
2:B:1338:G:OP1	20:T:18:GLU:HA	1.15	1.32
2:B:1657:U:O4	5:D:130:GLN:CG	1.75	1.32
3:V:84:PRO:CD	13:M:127:LYS:NZ	1.89	1.32
2:B:8:C:C5'	10:J:121:LYS:HE3	1.44	1.32
2:B:8:C:H4'	10:J:121:LYS:CE	1.57	1.32
2:B:532:A:N6	2:B:2020:A:H1'	1.00	1.32
2:B:1759:A:N1	2:B:2697:G:C4'	1.91	1.32
2:B:2091:C:C2	2:B:2228:G:N1	1.97	1.32
2:B:2269:G:O5'	22:W:19:ARG:CB	1.76	1.32
2:B:2460:U:H1'	13:M:78:LEU:CA	1.54	1.32
2:B:23:G:N2	19:S:78:GLU:CB	1.89	1.32
2:B:193:U:H5'	2:B:802:A:O2'	1.24	1.32
2:B:728:G:H4'	4:C:16:VAL:CG2	1.59	1.32
2:B:1790:C:O2'	2:B:1829:A:C5'	1.75	1.32
2:B:1947:C:C5	2:B:1987:A:C5'	2.12	1.32
2:B:2286:G:C6	27:1:33:LEU:HD13	1.63	1.32
1:A:56:G:N9	7:F:24:VAL:CG1	1.91	1.32
1:A:57:A:H2'	7:F:27:VAL:CA	1.57	1.32
2:B:320:A:OP2	6:E:132:LYS:CB	1.78	1.32
2:B:1818:U:OP1	4:C:157:ALA:HB3	1.29	1.32
2:B:1854:A:N7	2:B:2235:G:OP2	1.59	1.32
2:B:2262:U:C5'	2:B:2328:A:H2	1.31	1.32
6:E:25:GLU:CG	12:L:17:LYS:HB3	0.85	1.32
6:E:30:GLN:H	12:L:19:LEU:CD2	1.40	1.32
2:B:87:U:C2	23:X:41:HIS:HB2	1.54	1.31
2:B:125:A:C5'	28:2:19:ARG:NH2	1.93	1.31
2:B:1030:C:O2'	30:4:8:LYS:CG	1.76	1.31
2:B:1663:G:C4'	11:K:21:CYS:O	1.77	1.31
2:B:2334:U:C4'	15:O:9:ARG:HA	1.59	1.31
6:E:23:PHE:HE2	12:L:17:LYS:CG	1.42	1.31
20:T:71:GLY:O	28:2:35:ARG:NH2	1.59	1.31

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:686:U:O4'	28:2:11:LYS:CB	1.79	1.31
2:B:1338:G:P	20:T:18:GLU:HA	1.70	1.31
2:B:1664:A:C2'	11:K:40:LYS:CG	2.07	1.31
2:B:1752:C:C4'	2:B:2861:U:C4'	2.07	1.31
2:B:2002:G:O6	5:D:130:GLN:CA	1.68	1.31
2:B:2004:G:C5	5:D:142:VAL:CG2	2.10	1.31
2:B:2068:U:C5	2:B:2394:C:N3	1.97	1.31
2:B:671:C:C5	12:L:39:LYS:NZ	1.99	1.31
2:B:989:G:H3'	24:Y:12:ALA:CB	1.58	1.31
2:B:1654:A:N7	5:D:121:THR:HG21	1.44	1.31
2:B:1938:A:C1'	2:B:2591:C:H4'	1.58	1.31
2:B:2261:C:O2	2:B:2327:A:N1	1.61	1.31
2:B:2749:A:C5'	8:G:65:GLY:HA3	1.58	1.31
2:B:1638:C:O2'	2:B:2699:C:C6	1.70	1.31
2:B:2459:A:C2'	13:M:76:LYS:O	1.71	1.31
2:B:2867:G:N7	16:P:20:ARG:CD	1.90	1.31
2:B:930:G:C5'	24:Y:27:GLY:CA	2.04	1.31
2:B:989:G:C8	24:Y:13:ILE:O	1.84	1.31
2:B:2786:U:C4'	5:D:65:ALA:O	1.79	1.31
2:B:396:G:H4'	25:Z:3:LYS:NZ	1.41	1.30
2:B:810:U:O4'	2:B:1254:A:C5	1.82	1.30
2:B:996:A:H5'	32:B:3036:HOH:O	1.20	1.30
2:B:2063:C:H5	2:B:2253:G:C5'	1.25	1.30
17:Q:107:ALA:O	18:R:52:PRO:HA	1.29	1.30
2:B:505:A:N1	32:B:3431:HOH:O	1.61	1.30
2:B:756:A:C8	32:B:3429:HOH:O	1.81	1.30
2:B:1340:U:H4'	2:B:1394:U:O3'	1.14	1.30
2:B:1673:G:N1	2:B:2605:U:OP1	1.61	1.30
2:B:1971:U:O4	4:C:239:PHE:CZ	1.84	1.30
2:B:2312:U:C5'	7:F:71:LYS:HB2	1.60	1.30
2:B:2636:C:O2'	5:D:80:TRP:CZ3	1.69	1.30
2:B:2899:A:H5'	10:J:137:PRO:CD	1.60	1.30
2:B:414:C:N3	2:B:2409:G:C6	2.00	1.30
2:B:812:C:C5	12:L:33:ARG:CB	2.11	1.30
2:B:989:G:C3'	24:Y:12:ALA:HB2	1.60	1.30
6:E:26:ALA:CA	12:L:18:ARG:NE	1.73	1.30
2:B:87:U:O2	23:X:41:HIS:HB2	1.25	1.30
2:B:183:C:H5'	2:B:433:C:O4'	1.29	1.30
2:B:197:A:C2'	2:B:2443:C:H4'	1.61	1.30
2:B:785:G:C5	32:B:3016:HOH:O	1.77	1.30
2:B:851:C:O3'	24:Y:45:GLY:CA	1.77	1.30

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1257:C:O4'	6:E:77:ILE:CG2	1.79	1.30
2:B:1580:A:H5''	2:B:1581:G:OP2	1.17	1.30
2:B:654:A:N3	29:3:18:LYS:CE	1.93	1.30
2:B:1252:G:N1	17:Q:35:PHE:HB2	1.46	1.30
2:B:1819:A:C2'	4:C:176:ARG:HB2	1.62	1.30
2:B:1999:C:H4'	11:K:31:ARG:CB	1.59	1.30
2:B:2091:C:N3	2:B:2228:G:C6	2.00	1.30
2:B:2245:U:C2'	2:B:2442:C:H42	1.43	1.30
6:E:181:ILE:CG1	12:L:15:ALA:N	1.95	1.30
2:B:1662:U:C1'	11:K:4:GLU:O	1.65	1.29
2:B:2393:U:P	29:3:31:ILE:HD13	1.72	1.29
2:B:2495:G:H5''	13:M:82:MET:CE	1.55	1.29
2:B:811:U:C2	2:B:1251:C:C5	2.20	1.29
2:B:2067:G:H5'	2:B:2424:C:O2'	1.13	1.29
2:B:2575:C:H1'	5:D:148:GLN:CB	1.36	1.29
2:B:2820:A:OP1	14:N:5:LYS:HD3	1.33	1.29
20:T:73:ARG:NH2	28:2:43:THR:HA	1.46	1.29
2:B:87:U:O2	23:X:41:HIS:CB	1.81	1.29
2:B:882:G:P	2:B:898:C:C1'	2.21	1.29
2:B:926:G:H21	24:Y:42:ALA:CB	1.43	1.29
2:B:1340:U:H2'	2:B:1603:A:OP1	1.17	1.29
2:B:1455:G:N1	2:B:2704:C:O2	1.64	1.29
2:B:1666:G:C2'	2:B:2559:C:O2'	1.79	1.29
2:B:1759:A:C2	2:B:2697:G:C4'	2.14	1.29
2:B:1828:G:H3'	2:B:1972:G:N9	1.46	1.29
2:B:1953:A:H3'	2:B:1991:U:O4	1.11	1.29
2:B:2507:C:C4	2:B:2583:G:C2	2.19	1.29
2:B:1664:A:O2'	11:K:40:LYS:HG2	1.16	1.29
2:B:2092:U:N3	2:B:2228:G:O6	1.66	1.29
2:B:1961:C:N4	2:B:1985:C:O2	1.64	1.29
3:V:79:ARG:CB	13:M:134:THR:HG21	1.06	1.29
1:A:88:C:C5	13:M:20:LEU:HB2	1.66	1.28
2:B:15:G:O2'	26:0:17:SER:CB	1.79	1.28
2:B:671:C:C5	12:L:39:LYS:HD2	1.67	1.28
2:B:882:G:P	2:B:898:C:H1'	1.73	1.28
2:B:1417:C:N3	2:B:1418:G:C4	2.00	1.28
2:B:1670:C:C4	2:B:1955:U:H6	1.51	1.28
1:A:59:A:H1'	7:F:25:MET:CG	1.61	1.28
2:B:458:G:C8	28:2:39:ARG:HB2	1.68	1.28
2:B:1417:C:C6	2:B:1418:G:C5	2.20	1.28
2:B:1567:G:O2'	4:C:32:LEU:HD21	1.22	1.28

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1774:C:N3	2:B:1829:A:C8	1.99	1.28
2:B:2064:C:H5'	2:B:2255:G:OP2	1.20	1.28
2:B:2245:U:C2'	2:B:2442:C:N4	1.92	1.28
2:B:671:C:C6	12:L:39:LYS:CD	2.15	1.28
2:B:855:G:N2	22:W:23:LYS:CE	1.96	1.28
2:B:989:G:OP2	24:Y:11:SER:CA	1.80	1.28
2:B:2331:G:C4'	22:W:69:GLU:CD	2.07	1.28
2:B:2575:C:OP1	5:D:150:GLN:HG3	1.30	1.28
3:V:82:TYR:CB	13:M:34:LYS:HD2	1.64	1.28
3:V:86:LEU:CG	13:M:134:THR:HG22	1.61	1.28
2:B:6:A:N6	2:B:2898:U:C4	2.01	1.28
2:B:789:A:C4'	28:2:3:ARG:HH21	1.45	1.28
2:B:1128:G:C4'	2:B:2517:C:H5''	1.62	1.28
2:B:1133:A:C8	2:B:2026:U:O2'	1.68	1.28
2:B:1657:U:O4	5:D:130:GLN:NE2	1.59	1.28
2:B:1820:U:OP1	4:C:176:ARG:NE	1.67	1.28
2:B:1971:U:O2	4:C:238:ASN:N	1.63	1.28
2:B:2015:A:P	19:S:88:ARG:HB2	1.72	1.28
3:V:88:HIS:CD2	13:M:136:MET:HG3	1.61	1.28
1:A:56:G:N9	7:F:24:VAL:HG13	1.47	1.28
1:A:59:A:N3	7:F:25:MET:CB	1.84	1.28
2:B:57:C:H5''	20:T:78:SER:OG	1.30	1.28
2:B:1128:G:O4'	2:B:2517:C:H5''	1.29	1.28
2:B:1133:A:C2	2:B:2026:U:O2	1.86	1.28
2:B:1654:A:C8	5:D:121:THR:CB	2.16	1.28
2:B:1663:G:C8	11:K:5:GLN:OE1	1.85	1.28
2:B:1664:A:H4'	11:K:40:LYS:CG	1.53	1.28
2:B:1752:C:H4'	2:B:2861:U:C4'	1.63	1.28
2:B:2091:C:O2	2:B:2228:G:N3	1.65	1.28
2:B:9:G:C5	2:B:2895:G:N1	2.00	1.27
2:B:607:U:OP1	6:E:98:LYS:HG2	1.11	1.27
2:B:1252:G:N1	17:Q:35:PHE:CB	1.96	1.27
2:B:1567:G:N2	4:C:31:PRO:HA	1.45	1.27
2:B:1774:C:O2	2:B:1829:A:N7	1.67	1.27
2:B:1819:A:O2'	4:C:176:ARG:HB2	1.14	1.27
2:B:1855:U:C2	2:B:2234:G:H3'	1.68	1.27
2:B:1997:C:C2	2:B:2549:G:C8	2.20	1.27
6:E:26:ALA:N	12:L:18:ARG:NE	1.73	1.27
2:B:452:G:N1	28:2:39:ARG:NH2	1.82	1.27
2:B:670:A:H2'	12:L:47:ARG:CB	1.61	1.27
2:B:958:U:C5	13:M:16:ARG:HG2	1.67	1.27

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1366:A:OP1	25:Z:1:MET:HE1	1.23	1.27
2:B:1806:C:O4'	4:C:50:THR:HB	1.27	1.27
2:B:2090:A:H5''	2:B:2093:G:P	1.75	1.27
2:B:2507:C:C4	2:B:2583:G:N1	2.03	1.27
2:B:57:C:H4'	20:T:78:SER:CB	1.62	1.27
2:B:192:C:O2'	2:B:802:A:H1'	1.17	1.27
2:B:321:U:OP2	6:E:130:LYS:HA	1.35	1.27
2:B:1032:A:C5'	30:4:16:ILE:HG12	1.64	1.27
2:B:1666:G:N3	2:B:2559:C:C2'	1.94	1.27
2:B:1673:G:H3'	2:B:1955:U:O2'	1.33	1.27
2:B:2017:U:C4	26:0:3:GLN:HG2	1.21	1.27
2:B:2244:U:C2'	2:B:2433:A:C3'	2.01	1.27
2:B:2347:C:O2	27:1:45:HIS:NE2	1.65	1.27
2:B:2884:U:O4	26:0:41:HIS:HB2	1.19	1.27
1:A:31:C:O4'	7:F:8:LYS:CE	1.82	1.27
1:A:57:A:N7	7:F:12:VAL:CG1	1.94	1.27
2:B:1673:G:O2'	2:B:1956:U:C5'	1.82	1.27
2:B:2017:U:H2'	26:0:4:GLN:C	1.59	1.27
2:B:855:G:N2	22:W:23:LYS:NZ	1.80	1.27
2:B:1975:G:C5'	2:B:1979:U:C5	1.86	1.27
2:B:2494:G:N3	13:M:80:VAL:O	1.66	1.27
6:E:26:ALA:HB1	12:L:20:GLY:N	1.46	1.27
12:L:60:ARG:HD3	29:3:7:ARG:CZ	1.62	1.27
2:B:45:G:C5'	2:B:46:G:C4'	2.13	1.26
2:B:95:A:N1	23:X:41:HIS:CG	1.68	1.26
2:B:215:G:H21	2:B:432:A:N6	1.32	1.26
2:B:1184:U:H5'	24:Y:29:ARG:NE	1.49	1.26
2:B:1417:C:C6	2:B:1418:G:C8	2.23	1.26
2:B:1580:A:C6	2:B:1581:G:N3	2.03	1.26
2:B:1666:G:C6	2:B:2549:G:N2	2.04	1.26
2:B:1815:A:C3'	4:C:85:ASN:HD22	1.47	1.26
2:B:1995:U:C6	2:B:2550:G:O6	1.88	1.26
2:B:2245:U:C4	2:B:2442:C:N3	2.00	1.26
2:B:2272:U:OP1	22:W:15:SER:HB3	1.09	1.26
2:B:2582:G:N3	2:B:2583:G:O4'	1.66	1.26
17:Q:107:ALA:O	18:R:52:PRO:CA	1.82	1.26
2:B:61:C:C5'	23:X:25:GLN:HB2	1.63	1.26
2:B:2065:C:H4'	2:B:2258:C:N4	1.49	1.26
2:B:2090:A:H5''	2:B:2093:G:OP1	1.16	1.26
2:B:2245:U:C6	2:B:2442:C:N3	2.02	1.26
6:E:25:GLU:HG3	12:L:17:LYS:CB	1.42	1.26

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:59:ARG:O	29:3:11:LYS:HE2	1.15	1.26
14:N:118:ARG:NH2	26:0:51:ARG:HA	1.50	1.26
17:Q:29:ARG:NH2	26:0:9:ARG:HD3	1.49	1.26
1:A:57:A:C2'	7:F:27:VAL:HG13	1.65	1.26
2:B:587:C:H42	12:L:41:ARG:CG	1.31	1.26
2:B:699:A:H3'	2:B:700:G:C5'	1.62	1.26
2:B:699:A:C3'	2:B:700:G:H4'	1.65	1.26
2:B:1030:C:OP2	13:M:117:PHE:CE1	1.87	1.26
2:B:1194:A:C2	32:B:3085:HOH:O	1.82	1.26
2:B:1668:A:N1	2:B:2551:C:O3'	1.66	1.26
2:B:1903:G:H5''	4:C:239:PHE:CE2	1.68	1.26
2:B:2298:A:H5''	32:B:3175:HOH:O	1.17	1.26
2:B:2344:U:O2'	27:1:37:LYS:HG2	1.12	1.26
2:B:2350:C:C3'	29:3:38:LYS:NZ	1.96	1.26
2:B:2811:G:OP1	5:D:61:THR:HB	1.24	1.26
1:A:43:C:O2	7:F:91:ARG:CD	1.83	1.26
2:B:1246:A:OP1	12:L:23:ILE:CG2	1.84	1.26
2:B:1418:G:N2	2:B:1581:G:O6	1.69	1.26
2:B:1766:G:H3'	2:B:1959:G:C4'	1.62	1.26
2:B:1997:C:H42	2:B:2549:G:C5'	1.49	1.26
2:B:2069:G:H5'	2:B:2432:A:C3'	1.64	1.26
2:B:2277:G:OP2	22:W:9:THR:HA	1.28	1.26
2:B:2501:C:H3'	32:B:3331:HOH:O	1.33	1.26
3:V:84:PRO:CG	13:M:127:LYS:CE	1.84	1.26
6:E:180:LEU:O	12:L:13:LYS:HG2	1.30	1.26
17:Q:90:ASP:OD2	18:R:10:LYS:CG	1.84	1.26
1:A:31:C:O4'	7:F:8:LYS:HE3	1.27	1.26
1:A:49:C:OP1	15:O:72:ALA:N	1.68	1.26
1:A:80:U:C5'	2:B:917:A:C2	2.19	1.26
2:B:94:A:H3'	23:X:36:GLN:CA	1.62	1.26
2:B:1270:C:OP2	2:B:2012:G:H5''	1.28	1.26
2:B:1654:A:H5''	5:D:128:ARG:CB	1.66	1.26
2:B:1664:A:O2'	11:K:40:LYS:CD	1.82	1.26
2:B:1668:A:C2	2:B:2551:C:O2'	1.69	1.26
2:B:1676:A:C2	2:B:2552:U:OP2	1.86	1.26
2:B:1992:G:N2	2:B:2549:G:C5	1.89	1.26
2:B:1999:C:C4'	11:K:31:ARG:HB3	1.65	1.26
6:E:112:LEU:HD13	12:L:12:SER:CA	1.66	1.26
2:B:397:U:OP1	25:Z:49:ARG:O	1.52	1.25
2:B:1124:G:C1'	30:4:21:GLY:CA	2.02	1.25
2:B:1278:C:H4'	14:N:27:SER:CB	1.64	1.25

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1652:A:C2	5:D:141:ARG:O	1.88	1.25
2:B:1938:A:C4	2:B:2591:C:C5'	2.19	1.25
2:B:1971:U:O2	4:C:237:ARG:HB2	1.13	1.25
2:B:23:G:O2'	19:S:77:ASP:HB3	1.37	1.25
2:B:662:G:OP1	12:L:24:GLY:CA	1.84	1.25
2:B:2090:A:N7	2:B:2092:U:O2'	1.64	1.25
2:B:2091:C:O2	2:B:2228:G:C4	1.88	1.25
2:B:2271:G:P	22:W:18:LYS:HD2	1.74	1.25
1:A:58:A:N7	7:F:27:VAL:HG23	1.52	1.25
2:B:811:U:N3	2:B:1251:C:C5	2.03	1.25
2:B:1030:C:HO2'	30:4:8:LYS:CG	1.46	1.25
2:B:1184:U:C5	24:Y:30:ARG:NH2	2.02	1.25
2:B:1275:A:C2'	14:N:20:MET:CE	2.14	1.25
6:E:23:PHE:CE2	12:L:17:LYS:HD2	1.70	1.25
2:B:484:C:C5'	21:U:46:LYS:NZ	1.98	1.25
2:B:667:U:H3'	12:L:49:GLY:CA	1.67	1.25
2:B:777:G:H8	32:B:3041:HOH:O	0.97	1.25
2:B:1752:C:C5'	2:B:2861:U:C4'	2.14	1.25
2:B:2363:G:H5'	32:B:3325:HOH:O	1.29	1.25
1:A:59:A:C1'	7:F:25:MET:HB3	1.65	1.25
2:B:458:G:H8	28:2:39:ARG:CB	1.47	1.25
2:B:1417:C:C4	2:B:1418:G:C5	2.18	1.25
2:B:1995:U:H5'	2:B:2557:G:C5	1.70	1.25
1:A:49:C:OP1	15:O:72:ALA:CB	1.84	1.25
2:B:452:G:H1	28:2:39:ARG:NH2	1.33	1.25
2:B:786:C:C5	32:B:3016:HOH:O	1.66	1.25
2:B:1133:A:C5	2:B:2026:U:O2'	1.89	1.25
2:B:1275:A:H2'	14:N:20:MET:CE	1.67	1.25
2:B:2002:G:H2'	5:D:132:ALA:CA	1.65	1.25
2:B:45:G:O3'	2:B:46:G:N9	1.69	1.24
2:B:466:A:C5'	28:2:44:VAL:CG1	2.14	1.24
2:B:971:G:OP2	2:B:974:G:N2	1.70	1.24
2:B:1248:G:N7	17:Q:1:ALA:HA	1.52	1.24
2:B:1672:A:C4	2:B:2604:U:H5''	1.70	1.24
2:B:1997:C:N4	2:B:2549:G:H5''	1.52	1.24
2:B:2575:C:O2	5:D:148:GLN:HA	1.30	1.24
2:B:537:G:O2'	10:J:4:PHE:CZ	1.87	1.24
2:B:619:G:H5''	32:B:3235:HOH:O	1.09	1.24
2:B:1839:G:H1'	2:B:1927:A:C5	1.18	1.24
2:B:1996:C:O2	2:B:2549:G:N7	1.67	1.24
2:B:2002:G:H2'	5:D:132:ALA:N	0.93	1.24

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2500:U:H3'	32:B:3335:HOH:O	1.11	1.24
2:B:2582:G:C5	2:B:2583:G:C8	2.26	1.24
2:B:15:G:OP1	26:O:20:ALA:HB3	1.38	1.24
2:B:770:G:OP1	28:2:10:LEU:HD13	1.08	1.24
2:B:1124:G:O4'	30:4:21:GLY:HA2	1.38	1.24
2:B:1340:U:C4'	2:B:1394:U:H4'	1.38	1.24
2:B:1654:A:C8	5:D:121:THR:HG21	1.72	1.24
2:B:1759:A:N3	2:B:2697:G:O4'	1.70	1.24
2:B:1764:C:N4	2:B:1957:C:O2	1.70	1.24
2:B:1774:C:C4	2:B:1830:C:C5	2.14	1.24
2:B:2582:G:C6	2:B:2583:G:N7	2.05	1.24
32:B:3142:HOH:O	29:3:17:GLY:HA3	1.29	1.24
3:V:57:TYR:CZ	13:M:131:VAL:HG21	1.72	1.24
1:A:57:A:C8	7:F:16:MET:HG3	1.72	1.24
1:A:57:A:C1'	7:F:27:VAL:HG13	1.67	1.24
2:B:569:U:O4	2:B:2499:C:OP1	1.53	1.24
2:B:1417:C:C2	2:B:1418:G:N9	2.06	1.24
2:B:1566:A:C4'	4:C:58:LYS:CG	2.14	1.24
2:B:1668:A:N6	2:B:2551:C:H5''	1.50	1.24
2:B:1673:G:N2	2:B:2605:U:H5''	1.51	1.24
2:B:1998:A:C2	11:K:4:GLU:HG3	1.57	1.24
2:B:2257:U:C5	2:B:2450:A:O4'	1.90	1.24
2:B:2270:A:H3'	22:W:18:LYS:CD	1.66	1.24
6:E:112:LEU:HD11	12:L:12:SER:C	1.62	1.24
1:A:90:C:O2'	13:M:21:ALA:CB	1.85	1.24
2:B:9:G:O6	2:B:2895:G:O6	1.53	1.24
2:B:552:U:C5'	32:B:3202:HOH:O	1.81	1.24
2:B:1668:A:C5	2:B:2551:C:H4'	1.72	1.24
2:B:1828:G:O3'	2:B:1972:G:C5	1.81	1.24
2:B:2009:A:H5'	2:B:2823:A:O4'	1.12	1.24
2:B:2272:U:OP2	22:W:15:SER:HA	1.13	1.24
2:B:1567:G:H21	4:C:31:PRO:CA	1.38	1.23
2:B:1666:G:H22	2:B:2550:G:N2	1.35	1.23
2:B:1666:G:N2	2:B:2559:C:H1'	1.53	1.23
2:B:2461:A:H5'	13:M:78:LEU:CD1	1.68	1.23
2:B:2507:C:N3	2:B:2583:G:C2	2.05	1.23
5:D:16:THR:O	16:P:79:VAL:CG1	1.85	1.23
1:A:57:A:C8	7:F:16:MET:CG	2.18	1.23
2:B:5:A:C2	2:B:2899:A:C4	2.24	1.23
2:B:125:A:C2	32:B:3371:HOH:O	1.66	1.23
2:B:827:U:OP2	2:B:2446:G:C5'	1.86	1.23

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:828:U:C6	2:B:2447:G:OP2	1.91	1.23
2:B:1224:U:H5'	18:R:89:HIS:O	1.38	1.23
2:B:1940:U:OP1	2:B:2593:U:H5'	1.35	1.23
2:B:1997:C:N4	2:B:2549:G:C5'	2.01	1.23
2:B:2003:A:H1'	5:D:135:GLY:CA	1.67	1.23
2:B:2006:C:C6	5:D:143:PRO:HD3	1.72	1.23
2:B:2065:C:C1'	2:B:2247:A:N6	1.90	1.23
2:B:2418:A:O2'	27:1:20:TYR:CD2	1.92	1.23
2:B:587:C:O2	12:L:38:GLN:HA	1.36	1.23
2:B:766:U:H5''	32:B:3297:HOH:O	1.05	1.23
2:B:1124:G:C1'	30:4:21:GLY:HA2	1.56	1.23
2:B:1655:A:N9	5:D:146:ILE:HG13	1.51	1.23
2:B:1665:A:O5'	11:K:57:VAL:CB	1.86	1.23
2:B:1768:C:H1'	2:B:1961:C:C6	1.72	1.23
2:B:1975:G:H3'	2:B:1979:U:C6	1.72	1.23
2:B:1995:U:C5'	2:B:2557:G:C5	2.21	1.23
2:B:2007:U:C5'	5:D:162:ALA:CB	2.15	1.23
2:B:2258:C:N1	2:B:2425:A:H4'	1.53	1.23
2:B:2286:G:O6	27:1:33:LEU:C	1.80	1.23
3:V:76:ASP:OD2	13:M:136:MET:C	1.81	1.23
6:E:26:ALA:CB	12:L:20:GLY:H	1.51	1.23
1:A:48:U:O2'	15:O:68:LYS:CA	1.86	1.23
2:B:827:U:OP2	2:B:2446:G:H5'	1.36	1.23
2:B:1128:G:C4	2:B:2517:C:H4'	1.72	1.23
2:B:1417:C:N3	2:B:1418:G:N3	1.86	1.23
2:B:1455:G:O6	2:B:2704:C:N3	1.69	1.23
2:B:1655:A:O2'	2:B:2512:C:C5	1.91	1.23
2:B:1816:C:C1'	4:C:62:ARG:HH21	1.49	1.23
2:B:1826:G:C5'	4:C:242:HIS:HB2	1.68	1.23
2:B:2018:G:H4'	26:0:5:ASN:OD1	1.07	1.23
2:B:2280:G:C1'	2:B:2327:A:O2'	1.84	1.23
2:B:2511:U:O2'	5:D:146:ILE:HG13	1.38	1.23
2:B:2815:C:O4'	26:0:39:ARG:CB	1.87	1.23
2:B:16:C:O3'	26:0:14:MET:CG	1.87	1.23
2:B:536:G:N7	32:B:3009:HOH:O	1.71	1.23
2:B:827:U:OP2	2:B:2446:G:C4'	1.85	1.23
2:B:1011:G:OP2	17:Q:75:TYR:HB3	1.38	1.23
2:B:1275:A:O2'	14:N:20:MET:HE1	1.33	1.23
2:B:1759:A:O2'	2:B:2696:U:O2	1.52	1.23
2:B:2004:G:C5	5:D:142:VAL:HG22	1.71	1.23
2:B:654:A:N3	29:3:18:LYS:CG	2.00	1.22

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:748:G:C8	32:B:3135:HOH:O	1.86	1.22
2:B:792:A:OP1	32:B:3020:HOH:O	1.52	1.22
2:B:922:C:O2	22:W:23:LYS:HD2	1.34	1.22
2:B:971:G:OP1	2:B:974:G:H2'	1.38	1.22
2:B:989:G:C5	24:Y:13:ILE:O	1.89	1.22
2:B:1827:U:H1'	2:B:1900:A:C1'	1.65	1.22
2:B:2876:G:C4'	16:P:2:ASN:HA	1.62	1.22
2:B:76:C:OP1	23:X:48:ARG:HG3	1.40	1.22
2:B:827:U:P	2:B:2446:G:C5'	2.27	1.22
2:B:858:G:H4'	2:B:2268:A:O2'	1.31	1.22
2:B:1580:A:C3'	2:B:1581:G:H8	1.24	1.22
2:B:1999:C:O2	11:K:3:GLN:HG3	1.38	1.22
6:E:181:ILE:HG12	12:L:15:ALA:CA	1.62	1.22
1:A:49:C:C5	15:O:67:ASN:HB2	1.75	1.22
2:B:483:A:O3'	21:U:46:LYS:CE	1.74	1.22
2:B:515:A:O5'	17:Q:29:ARG:NH1	1.73	1.22
2:B:607:U:P	6:E:98:LYS:HG2	1.79	1.22
2:B:649:G:H22	29:3:44:ARG:CZ	1.48	1.22
2:B:659:G:H1'	6:E:97:ASN:OD1	1.22	1.22
2:B:1269:A:C4'	2:B:2013:A:OP1	1.65	1.22
2:B:2246:G:H2'	2:B:2445:G:C2	1.72	1.22
2:B:2460:U:H5'	13:M:76:LYS:O	1.39	1.22
1:A:32:U:OP2	7:F:4:HIS:CD2	1.92	1.22
2:B:84:A:O5'	21:U:91:LYS:NZ	1.73	1.22
2:B:126:A:N6	20:T:74:ILE:HG21	0.89	1.22
2:B:463:G:O6	28:2:43:THR:HG21	1.33	1.22
2:B:528:A:H2	2:B:2044:C:OP1	1.14	1.22
2:B:1275:A:O2'	14:N:20:MET:CE	1.86	1.22
2:B:1770:G:O2'	2:B:1967:C:C4'	1.88	1.22
2:B:1999:C:H4'	11:K:31:ARG:CA	1.68	1.22
2:B:2330:G:O2'	22:W:70:VAL:CG2	1.86	1.22
1:A:80:U:O2'	2:B:918:A:C2'	1.86	1.22
2:B:94:A:C4'	23:X:32:ALA:O	1.88	1.22
2:B:215:G:N2	2:B:432:A:N6	1.83	1.22
2:B:552:U:OP1	32:B:3198:HOH:O	1.57	1.22
2:B:958:U:C6	13:M:16:ARG:HG2	1.74	1.22
2:B:989:G:C4'	24:Y:12:ALA:CB	2.17	1.22
2:B:1550:C:OP1	2:B:1720:U:O2'	1.55	1.22
2:B:1853:A:H1'	2:B:2237:G:N7	1.55	1.22
2:B:1994:C:O5'	2:B:2551:C:C4	1.91	1.22
2:B:2005:A:N6	5:D:141:ARG:C	1.70	1.22

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2014:A:N3	2:B:2611:C:C2'	2.03	1.22
2:B:2091:C:N3	2:B:2228:G:C5	2.08	1.22
2:B:2478:A:OP2	30:4:32:LYS:CG	1.88	1.22
6:E:23:PHE:CE2	12:L:17:LYS:CD	2.21	1.22
13:M:3:GLN:N	13:M:4:PRO:HD2	1.41	1.22
1:A:90:C:C1'	13:M:21:ALA:CB	2.07	1.21
2:B:7:G:C2	2:B:2897:U:O2	1.93	1.21
2:B:15:G:O2'	26:0:17:SER:HB3	1.36	1.21
2:B:448:U:N3	2:B:1259:G:O4'	1.71	1.21
2:B:616:A:O2'	6:E:200:LEU:HD21	1.36	1.21
2:B:1275:A:C2'	14:N:20:MET:HE1	1.70	1.21
2:B:1659:G:H4'	32:B:3280:HOH:O	1.34	1.21
2:B:1670:C:C4'	2:B:2557:G:N2	2.03	1.21
2:B:1998:A:C5'	11:K:29:HIS:HE1	1.49	1.21
2:B:2014:A:H1'	2:B:2611:C:O2'	1.04	1.21
2:B:2582:G:C2	2:B:2583:G:N9	2.05	1.21
2:B:2645:G:OP1	2:B:2732:G:H8	1.21	1.21
2:B:86:G:H21	23:X:45:GLN:CG	1.53	1.21
2:B:649:G:H21	29:3:44:ARG:CD	1.53	1.21
2:B:686:U:O4'	28:2:11:LYS:HB3	1.09	1.21
2:B:728:G:C4'	4:C:16:VAL:HG21	1.69	1.21
2:B:1790:C:O2'	2:B:1829:A:H5''	1.06	1.21
2:B:1805:A:H4'	4:C:51:ARG:N	1.52	1.21
2:B:2495:G:C5'	13:M:82:MET:CE	2.08	1.21
2:B:2848:G:O2'	16:P:96:LEU:HD22	1.39	1.21
2:B:968:C:O3'	24:Y:16:LEU:CD2	1.84	1.21
2:B:1030:C:O2'	30:4:8:LYS:CD	1.86	1.21
2:B:1184:U:OP2	24:Y:30:ARG:HG3	1.41	1.21
2:B:1654:A:C8	5:D:121:THR:CG2	2.24	1.21
2:B:1974:C:C6	2:B:1978:A:N6	2.08	1.21
2:B:2199:A:C5	2:B:2225:A:H1'	1.73	1.21
2:B:728:G:C5'	4:C:16:VAL:HG11	1.71	1.21
2:B:1799:G:N7	4:C:175:LEU:CD1	1.98	1.21
2:B:1818:U:C6	4:C:155:ARG:N	2.09	1.21
3:V:76:ASP:OD2	13:M:136:MET:CA	1.77	1.21
1:A:75:G:O2'	3:V:29:ILE:HG21	1.39	1.21
2:B:5:A:C6	2:B:2899:A:C6	2.23	1.21
2:B:412:A:N6	2:B:2410:G:C6	2.08	1.21
2:B:1223:G:H2'	18:R:78:ARG:CZ	1.70	1.21
2:B:2359:C:N3	2:B:2428:G:N1	1.86	1.21
2:B:2495:G:H8	13:M:80:VAL:CG1	1.54	1.21

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2786:U:C3'	5:D:65:ALA:O	1.86	1.21
2:B:649:G:N2	29:3:44:ARG:NH1	1.87	1.20
2:B:1656:C:C5'	2:B:2510:C:C3'	2.17	1.20
2:B:1939:U:O3'	2:B:2592:G:O3'	1.55	1.20
2:B:2280:G:O4'	2:B:2327:A:O2'	1.58	1.20
2:B:2582:G:OP2	2:B:2583:G:OP2	1.58	1.20
2:B:2645:G:OP1	2:B:2732:G:C8	1.94	1.20
2:B:2645:G:C4'	2:B:2732:G:C2'	2.19	1.20
2:B:9:G:C4	2:B:2895:G:C2	2.30	1.20
2:B:320:A:C3'	6:E:131:THR:HG22	1.70	1.20
2:B:1270:C:OP2	2:B:2012:G:OP1	1.56	1.20
2:B:1664:A:O2'	11:K:40:LYS:CE	1.87	1.20
2:B:2017:U:C2'	26:0:4:GLN:O	1.88	1.20
2:B:2848:G:C1'	16:P:96:LEU:HD23	1.68	1.20
3:V:84:PRO:CD	13:M:127:LYS:HZ1	1.47	1.20
1:A:56:G:O4'	7:F:13:LYS:NZ	1.74	1.20
1:A:57:A:N6	7:F:24:VAL:CB	2.04	1.20
2:B:1653:G:C2	5:D:141:ARG:CG	2.25	1.20
2:B:2199:A:N7	2:B:2225:A:C1'	2.05	1.20
2:B:2245:U:C5	2:B:2442:C:C2	2.21	1.20
2:B:2507:C:N4	2:B:2583:G:C6	2.10	1.20
2:B:45:G:O3'	2:B:46:G:C8	1.87	1.20
2:B:57:C:C5'	20:T:78:SER:OG	1.88	1.20
2:B:320:A:C2'	6:E:131:THR:CG2	2.20	1.20
2:B:448:U:H3	2:B:1259:G:C4'	1.54	1.20
2:B:1032:A:C4'	30:4:16:ILE:HG12	1.72	1.20
2:B:1277:G:H1'	14:N:23:ASN:CB	1.71	1.20
2:B:1676:A:C6	2:B:2552:U:OP1	1.94	1.20
2:B:2459:A:C1'	13:M:76:LYS:HG2	1.69	1.20
2:B:2814:A:O2'	26:0:39:ARG:CB	1.90	1.20
2:B:2876:G:C5'	16:P:2:ASN:CA	1.82	1.20
3:V:57:TYR:CE1	13:M:131:VAL:CG2	2.23	1.20
6:E:30:GLN:N	12:L:19:LEU:CD2	2.05	1.20
2:B:199:A:N1	2:B:2071:A:H8	1.38	1.20
2:B:1203:U:C5'	12:L:14:LYS:NZ	2.04	1.20
2:B:1653:G:OP2	2:B:2725:A:OP1	1.55	1.20
2:B:1665:A:P	11:K:57:VAL:CB	2.20	1.20
2:B:1674:G:N3	2:B:1956:U:C4	2.09	1.20
2:B:1997:C:N3	2:B:2549:G:C5'	2.05	1.20
3:V:86:LEU:HG	13:M:134:THR:CG2	1.72	1.20
17:Q:101:ASP:OD2	18:R:2:TYR:HE2	0.89	1.20

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:49:C:C6	15:O:67:ASN:HB2	1.77	1.19
2:B:9:G:C4	2:B:2895:G:N2	2.11	1.19
2:B:96:C:C5'	23:X:39:GLN:CB	2.11	1.19
2:B:654:A:N3	29:3:18:LYS:HG2	1.55	1.19
2:B:1270:C:OP2	2:B:2012:G:C5'	1.90	1.19
2:B:1417:C:C2	2:B:1418:G:C4	2.30	1.19
2:B:1993:U:C4	2:B:2550:G:H2'	1.77	1.19
2:B:2514:U:O4'	5:D:156:PHE:CE1	1.94	1.19
2:B:2575:C:C5'	5:D:150:GLN:CG	2.20	1.19
2:B:2581:G:C2	2:B:2610:C:C5	2.30	1.19
1:A:93:C:H5''	3:V:18:ARG:HE	1.04	1.19
2:B:7:G:C2	2:B:2897:U:C2	2.29	1.19
2:B:94:A:C5'	23:X:36:GLN:HB3	1.71	1.19
2:B:397:U:C5'	25:Z:49:ARG:HB3	1.70	1.19
2:B:654:A:N6	32:B:3142:HOH:O	1.63	1.19
2:B:989:G:H5''	24:Y:12:ALA:CB	1.70	1.19
2:B:1340:U:C4'	2:B:1394:U:C4'	2.05	1.19
2:B:1654:A:H4'	5:D:125:TRP:CE3	1.76	1.19
2:B:1664:A:C4'	11:K:40:LYS:HG3	1.55	1.19
2:B:1839:G:H1'	2:B:1927:A:C4	1.76	1.19
2:B:1953:A:C3'	2:B:1991:U:O4	1.90	1.19
2:B:2244:U:O2'	2:B:2433:A:H3'	1.33	1.19
2:B:2575:C:H5''	5:D:150:GLN:CG	1.72	1.19
6:E:112:LEU:HB3	12:L:11:GLY:O	1.42	1.19
2:B:505:A:C6	32:B:3431:HOH:O	1.90	1.19
2:B:1750:G:O2'	2:B:2859:G:N1	1.64	1.19
2:B:1771:C:OP1	2:B:1968:G:O4'	1.61	1.19
2:B:1773:A:C2	2:B:1975:G:N1	2.11	1.19
2:B:1784:A:C5'	2:B:2590:A:C4'	2.20	1.19
2:B:1993:U:C5	2:B:2550:G:H2'	1.77	1.19
2:B:2757:A:N1	8:G:66:THR:HG21	0.87	1.19
2:B:2883:A:OP1	26:O:52:LYS:HD3	1.43	1.19
1:A:57:A:O2'	7:F:28:PRO:HD2	1.06	1.19
2:B:1938:A:H5''	2:B:1982:U:H3'	1.24	1.19
2:B:2017:U:H2'	26:O:4:GLN:O	1.05	1.19
2:B:2312:U:C5'	7:F:71:LYS:CB	2.16	1.19
2:B:2876:G:C5'	16:P:2:ASN:C	2.14	1.19
2:B:566:U:H3'	2:B:576:U:O2	1.40	1.19
2:B:668:A:H8	12:L:49:GLY:N	0.90	1.19
2:B:1673:G:C2	2:B:2605:U:OP1	1.95	1.19
2:B:1752:C:C5'	2:B:2861:U:O2'	1.91	1.19

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2017:U:H3'	26:0:4:GLN:CA	1.71	1.19
1:A:29:A:C2	7:F:24:VAL:CG2	2.26	1.18
1:A:88:C:C5	13:M:20:LEU:CB	2.20	1.18
2:B:515:A:P	17:Q:29:ARG:NH1	2.16	1.18
2:B:623:C:C4'	29:3:61:LEU:HD23	1.52	1.18
2:B:1118:C:C3'	3:V:84:PRO:HG2	1.72	1.18
2:B:1194:A:H2	32:B:3085:HOH:O	1.16	1.18
2:B:1580:A:C5'	2:B:1581:G:OP2	1.90	1.18
2:B:2466:C:OP1	30:4:7:VAL:HG22	1.44	1.18
5:D:16:THR:C	16:P:79:VAL:CG1	2.15	1.18
1:A:49:C:OP1	15:O:72:ALA:HB2	1.39	1.18
2:B:1268:A:O3'	2:B:2613:U:C2	1.84	1.18
2:B:1580:A:N6	2:B:1581:G:C2	2.11	1.18
2:B:1664:A:O3'	11:K:40:LYS:HG3	1.44	1.18
2:B:1778:U:H5'	32:B:3065:HOH:O	1.43	1.18
2:B:1889:A:C6	2:B:2236:U:C6	2.26	1.18
2:B:2746:U:H4'	8:G:137:LYS:C	1.68	1.18
2:B:2814:A:O2'	26:0:39:ARG:HB2	1.05	1.18
19:S:41:LYS:HD2	26:0:21:LEU:HB3	1.23	1.18
2:B:61:C:C5'	23:X:25:GLN:CB	2.16	1.18
2:B:671:C:C6	12:L:39:LYS:HD2	1.78	1.18
2:B:1653:G:N2	5:D:141:ARG:HG3	1.58	1.18
2:B:1655:A:H3'	2:B:2511:U:C5'	1.74	1.18
2:B:1828:G:C3'	2:B:1972:G:C8	1.93	1.18
2:B:2063:C:C5	2:B:2253:G:C5'	2.11	1.18
2:B:2281:A:C1'	2:B:2388:A:C6	2.27	1.18
1:A:48:U:C2'	15:O:68:LYS:HA	1.74	1.18
2:B:6:A:C2	2:B:2898:U:C2	2.31	1.18
2:B:570:G:N2	2:B:2499:C:H5''	0.85	1.18
2:B:591:U:C4'	29:3:1:PRO:HD3	1.70	1.18
2:B:667:U:C4	12:L:48:ARG:HG2	1.75	1.18
2:B:674:G:H4'	32:E:219:HOH:O	1.39	1.18
2:B:693:A:C1'	2:B:1354:A:O2'	1.89	1.18
2:B:964:C:H5''	2:B:2250:G:N1	1.57	1.18
2:B:1183:U:O2'	24:Y:29:ARG:HD3	1.40	1.18
2:B:1246:A:OP1	12:L:23:ILE:CB	1.91	1.18
2:B:1340:U:OP2	32:T:103:HOH:O	1.60	1.18
2:B:1417:C:C3'	2:B:1418:G:H8	1.57	1.18
2:B:1654:A:C5'	5:D:128:ARG:CB	2.18	1.18
2:B:1666:G:N2	2:B:2550:G:N2	1.90	1.18
2:B:1807:G:P	4:C:48:ILE:CG1	2.29	1.18

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:31:C:C4'	7:F:8:LYS:CE	2.22	1.18
1:A:57:A:OP1	7:F:16:MET:HB3	1.42	1.18
1:A:81:G:C4'	2:B:919:U:H5'	1.74	1.18
2:B:478:A:C5	32:B:3432:HOH:O	1.84	1.18
2:B:592:A:N3	29:3:2:LYS:CG	2.06	1.18
2:B:693:A:H1'	2:B:1354:A:C1'	1.72	1.18
2:B:1656:C:H5'	2:B:2511:U:C5	1.26	1.18
2:B:1669:A:C6	2:B:2550:G:N2	2.12	1.18
2:B:2000:C:C5'	11:K:32:TYR:CE1	2.27	1.18
2:B:2284:A:OP1	27:1:7:LYS:CB	1.91	1.18
2:B:2815:C:O4'	26:0:39:ARG:HB3	1.02	1.18
2:B:1333:G:N7	32:B:3023:HOH:O	1.76	1.17
2:B:1417:C:C4	2:B:1418:G:N3	2.12	1.17
2:B:1665:A:OP2	11:K:57:VAL:HG13	1.00	1.17
2:B:1759:A:C1'	2:B:2696:U:O2	1.92	1.17
2:B:2645:G:H4'	2:B:2732:G:C2'	1.74	1.17
20:T:71:GLY:O	28:2:35:ARG:CZ	1.90	1.17
2:B:5:A:C2	2:B:2899:A:C6	2.30	1.17
2:B:478:A:N7	32:B:3432:HOH:O	1.66	1.17
2:B:669:G:O3'	2:B:670:A:H2'	1.43	1.17
2:B:1224:U:H2'	18:R:88:GLY:N	1.59	1.17
2:B:1276:A:C4'	14:N:20:MET:SD	2.32	1.17
2:B:1674:G:C4	2:B:1956:U:C5	2.23	1.17
2:B:1773:A:OP1	2:B:1972:G:N9	1.76	1.17
2:B:1947:C:C5	2:B:1986:C:O3'	1.95	1.17
1:A:57:A:H4'	7:F:15:LEU:CB	1.75	1.17
2:B:183:C:C5'	2:B:433:C:C5'	2.18	1.17
2:B:192:C:H2'	2:B:802:A:O2'	1.45	1.17
2:B:496:G:C5'	19:S:1:MET:HE3	1.74	1.17
2:B:654:A:C4	29:3:18:LYS:HG3	1.78	1.17
2:B:1654:A:N7	5:D:143:PRO:HA	1.44	1.17
2:B:1654:A:C2'	2:B:2512:C:OP1	1.92	1.17
2:B:1663:G:H4'	11:K:21:CYS:O	1.02	1.17
2:B:2575:C:O5'	5:D:150:GLN:HG3	1.45	1.17
20:T:73:ARG:HD2	28:2:42:LEU:CB	1.74	1.17
1:A:30:C:N4	15:O:33:ARG:HH22	1.40	1.17
2:B:528:A:C2	2:B:2044:C:OP1	1.98	1.17
2:B:532:A:N6	2:B:2020:A:N9	1.93	1.17
2:B:654:A:C4	29:3:18:LYS:CG	2.27	1.17
2:B:2258:C:O2	2:B:2425:A:C5'	1.92	1.17
5:D:16:THR:CA	16:P:79:VAL:CG1	1.99	1.17

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:28:VAL:CG1	12:L:16:GLY:O	1.92	1.17
20:T:73:ARG:HE	28:2:42:LEU:C	1.51	1.17
21:U:84:PHE:CG	32:U:108:HOH:O	1.93	1.17
2:B:7:G:N2	2:B:2897:U:H1'	1.60	1.17
2:B:9:G:C2	2:B:2895:G:C2	2.32	1.17
2:B:537:G:O2'	10:J:4:PHE:CE1	1.98	1.17
2:B:811:U:H1'	2:B:1251:C:O4'	1.01	1.17
2:B:989:G:OP2	24:Y:11:SER:HA	1.01	1.17
2:B:1417:C:C2	2:B:1418:G:C1'	2.27	1.17
2:B:1768:C:C1'	2:B:1961:C:C6	2.25	1.17
2:B:1853:A:C8	2:B:2236:U:OP2	1.96	1.17
2:B:1855:U:O2	2:B:2234:G:C3'	1.83	1.17
2:B:1995:U:C5	2:B:2550:G:O6	1.91	1.17
2:B:2002:G:C2'	5:D:132:ALA:H	1.52	1.17
2:B:321:U:C2	6:E:129:PRO:HB3	1.80	1.16
2:B:958:U:C5	13:M:16:ARG:CG	2.26	1.16
2:B:1417:C:N1	2:B:1418:G:C8	2.13	1.16
2:B:1791:A:H1'	2:B:1830:C:OP2	1.44	1.16
2:B:1805:A:C4'	4:C:51:ARG:N	2.06	1.16
2:B:1817:G:O2'	4:C:155:ARG:NH2	1.74	1.16
2:B:1902:C:H4'	4:C:240:GLY:N	1.60	1.16
2:B:1938:A:O5'	2:B:1983:G:C8	1.86	1.16
2:B:2575:C:C1'	5:D:148:GLN:CB	2.23	1.16
2:B:5:A:C4	2:B:2899:A:C2	2.34	1.16
2:B:528:A:H2	2:B:2044:C:P	1.69	1.16
2:B:1224:U:OP2	18:R:90:ARG:HB2	1.38	1.16
2:B:1664:A:C4'	11:K:40:LYS:HB3	1.75	1.16
2:B:1767:G:N7	2:B:1959:G:C8	2.13	1.16
2:B:1807:G:P	4:C:48:ILE:CB	2.32	1.16
2:B:2344:U:C3'	27:1:37:LYS:HG3	1.75	1.16
2:B:2876:G:H4'	16:P:2:ASN:C	1.68	1.16
2:B:197:A:N3	2:B:2443:C:C1'	2.08	1.16
2:B:688:U:H5''	28:2:2:LYS:HZ3	1.00	1.16
2:B:1124:G:C4'	30:4:20:ASP:O	1.92	1.16
2:B:1133:A:C4	2:B:2026:U:O2'	1.98	1.16
2:B:1224:U:C5'	18:R:89:HIS:O	1.92	1.16
2:B:1246:A:OP1	12:L:23:ILE:HB	1.43	1.16
2:B:2008:C:P	2:B:2049:G:H4'	1.85	1.16
6:E:112:LEU:HD12	12:L:12:SER:O	1.24	1.16
19:S:15:GLN:OE1	26:0:16:ARG:HG3	1.42	1.16
20:T:73:ARG:CD	28:2:43:THR:N	2.08	1.16

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:57:A:O2'	7:F:28:PRO:CD	1.93	1.16
2:B:94:A:H3'	23:X:36:GLN:HA	1.19	1.16
2:B:674:G:H4'	6:E:70:SER:O	1.42	1.16
2:B:811:U:C1'	2:B:1251:C:O4'	1.94	1.16
2:B:1224:U:OP1	18:R:89:HIS:C	1.86	1.16
2:B:1654:A:C4'	5:D:125:TRP:CZ3	2.26	1.16
2:B:1654:A:C5	5:D:143:PRO:C	2.23	1.16
2:B:1670:C:N3	2:B:1955:U:H6	1.43	1.16
2:B:1828:G:H3'	2:B:1972:G:C8	1.68	1.16
2:B:1839:G:C1'	2:B:1927:A:C5	2.14	1.16
2:B:2018:G:C5'	26:0:5:ASN:OD1	1.93	1.16
1:A:30:C:C4	15:O:33:ARG:NH2	2.14	1.16
1:A:57:A:H2'	7:F:27:VAL:CB	1.75	1.16
2:B:23:G:O2'	19:S:77:ASP:CB	1.92	1.16
2:B:96:C:C5'	23:X:39:GLN:O	1.94	1.16
2:B:661:A:H1'	12:L:21:ARG:O	1.41	1.16
2:B:770:G:OP1	28:2:10:LEU:CD1	1.94	1.16
2:B:1666:G:C2	2:B:2559:C:H1'	1.81	1.16
2:B:1983:G:H4'	2:B:2591:C:O2'	1.44	1.16
2:B:2068:U:C5	2:B:2394:C:C2	2.32	1.16
2:B:2245:U:N1	2:B:2442:C:N4	1.94	1.16
2:B:2311:A:C2	7:F:75:GLY:CA	2.27	1.16
2:B:2312:U:H5'	7:F:71:LYS:N	1.61	1.16
2:B:2461:A:O4'	13:M:78:LEU:HD22	1.34	1.16
2:B:2876:G:C4'	16:P:2:ASN:CA	2.14	1.16
2:B:2883:A:OP1	26:0:52:LYS:CE	1.94	1.16
2:B:2884:U:O4	26:0:41:HIS:CB	1.94	1.16
1:A:30:C:H4'	7:F:25:MET:HE1	1.18	1.15
2:B:1009:A:C4'	17:Q:61:ILE:CD1	2.05	1.15
2:B:1030:C:P	13:M:117:PHE:CE1	2.38	1.15
2:B:1224:U:H5''	18:R:76:LYS:HA	1.26	1.15
2:B:2199:A:N7	2:B:2225:A:N9	1.94	1.15
2:B:2461:A:H5'	13:M:78:LEU:CG	1.76	1.15
2:B:2465:C:O3'	30:4:5:ALA:HB1	1.41	1.15
2:B:2847:U:OP1	16:P:98:TYR:CE1	1.99	1.15
1:A:57:A:C8	7:F:12:VAL:HG13	1.64	1.15
2:B:96:C:C1'	23:X:42:LEU:HD12	1.62	1.15
2:B:125:A:C4'	28:2:19:ARG:HH21	1.58	1.15
2:B:446:G:OP1	17:Q:4:LYS:NZ	1.77	1.15
2:B:584:C:C5	17:Q:5:ARG:CD	2.26	1.15
2:B:584:C:C5	17:Q:5:ARG:NH1	1.89	1.15

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:630:G:C5'	29:3:44:ARG:CD	2.19	1.15
2:B:747:U:C5	2:B:2014:A:H5'	1.80	1.15
2:B:811:U:C4	2:B:1251:C:C4	2.34	1.15
2:B:1664:A:C1'	11:K:40:LYS:HG2	1.75	1.15
2:B:2065:C:O2'	2:B:2425:A:O3'	1.59	1.15
2:B:2460:U:C1'	13:M:78:LEU:HA	1.57	1.15
2:B:2720:U:O2	2:B:2873:A:N7	1.78	1.15
1:A:30:C:H5	15:O:33:ARG:NH2	1.29	1.15
1:A:48:U:O2'	15:O:68:LYS:HA	0.98	1.15
2:B:8:C:H5'	10:J:121:LYS:NZ	1.60	1.15
2:B:292:U:H5''	32:B:3179:HOH:O	0.98	1.15
2:B:320:A:H3'	6:E:131:THR:HG22	1.28	1.15
2:B:398:C:OP2	25:Z:50:ASP:N	1.80	1.15
2:B:465:G:C4'	28:2:12:ARG:NH1	2.10	1.15
2:B:654:A:N7	32:B:3137:HOH:O	1.76	1.15
2:B:1294:U:O3'	14:N:71:ARG:HB2	1.43	1.15
2:B:1295:C:OP2	14:N:71:ARG:HD2	1.47	1.15
2:B:1654:A:C8	5:D:121:THR:HB	1.79	1.15
2:B:2691:C:O4'	2:B:2872:A:C2	1.99	1.15
2:B:2847:U:OP1	16:P:98:TYR:CD1	1.99	1.15
5:D:17:GLU:OE2	16:P:32:VAL:HG11	1.47	1.15
1:A:56:G:C4	7:F:24:VAL:HG13	1.81	1.15
2:B:649:G:N2	29:3:44:ARG:NE	1.94	1.15
2:B:827:U:O5'	2:B:2446:G:H5'	1.44	1.15
2:B:1650:A:O2'	14:N:2:ARG:NH1	1.78	1.15
2:B:1655:A:N7	5:D:144:GLY:C	2.03	1.15
2:B:1890:A:N7	2:B:2236:U:C4'	2.00	1.15
2:B:1976:U:O4	2:B:1979:U:O2	1.62	1.15
2:B:2393:U:OP2	29:3:31:ILE:HG21	1.43	1.15
6:E:30:GLN:N	12:L:19:LEU:HD23	1.58	1.15
2:B:321:U:OP2	6:E:131:THR:N	1.78	1.15
2:B:589:U:O4	12:L:48:ARG:NH1	1.80	1.15
2:B:1807:G:OP1	4:C:48:ILE:CG1	1.82	1.15
2:B:1890:A:N7	2:B:2236:U:H4'	1.16	1.15
2:B:1890:A:C8	2:B:2236:U:H4'	1.79	1.15
2:B:1975:G:H5''	2:B:1979:U:C4	1.82	1.15
2:B:2004:G:C8	5:D:139:SER:C	2.09	1.15
2:B:2004:G:C6	5:D:142:VAL:CG2	2.30	1.15
2:B:2014:A:C1'	2:B:2611:C:O2'	1.93	1.15
2:B:2016:U:OP2	19:S:92:ARG:HB2	1.22	1.15
6:E:180:LEU:O	12:L:13:LYS:CG	1.95	1.15

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:41:ARG:O	32:L:153:HOH:O	1.62	1.15
14:N:118:ARG:HH21	26:O:51:ARG:CA	1.61	1.15
17:Q:101:ASP:OD1	18:R:2:TYR:OH	1.62	1.15
1:A:49:C:OP1	15:O:72:ALA:CA	1.94	1.14
1:A:57:A:C8	7:F:12:VAL:HG12	1.65	1.14
2:B:321:U:C5	6:E:129:PRO:HG2	1.80	1.14
2:B:443:A:OP1	6:E:44:ARG:CZ	1.95	1.14
2:B:671:C:H6	12:L:39:LYS:CD	1.54	1.14
2:B:1257:C:O4'	6:E:77:ILE:HG22	1.32	1.14
2:B:1676:A:C5	2:B:2552:U:OP1	2.00	1.14
2:B:1784:A:C5'	2:B:2590:A:H4'	1.75	1.14
2:B:2178:C:P	2:B:2181:U:OP1	2.04	1.14
2:B:2284:A:P	27:1:7:LYS:CB	2.35	1.14
2:B:2393:U:OP1	29:3:31:ILE:HD12	1.46	1.14
1:A:81:G:H5'	2:B:918:A:H2'	1.25	1.14
2:B:76:C:C4'	23:X:52:ARG:N	2.08	1.14
2:B:1009:A:H4'	17:Q:61:ILE:CG1	1.75	1.14
2:B:1417:C:C4	2:B:1418:G:C6	2.33	1.14
2:B:1664:A:C4'	11:K:40:LYS:CB	2.18	1.14
2:B:2286:G:O6	27:1:33:LEU:O	1.62	1.14
3:V:79:ARG:CG	13:M:134:THR:HG21	1.76	1.14
11:K:71:ARG:HB3	11:K:72:PRO:HD2	1.22	1.14
2:B:23:G:N2	19:S:78:GLU:HB2	1.55	1.14
2:B:199:A:N6	2:B:2433:A:C4	2.15	1.14
2:B:483:A:C3'	21:U:46:LYS:HE3	1.78	1.14
2:B:728:G:H4'	4:C:16:VAL:CB	1.77	1.14
2:B:851:C:O3'	24:Y:45:GLY:HA2	1.42	1.14
2:B:930:G:H5'	24:Y:27:GLY:C	1.72	1.14
2:B:958:U:C4	13:M:16:ARG:HD2	1.83	1.14
2:B:1032:A:H4'	30:4:16:ILE:CG1	1.76	1.14
2:B:1184:U:C5'	24:Y:29:ARG:HE	1.57	1.14
2:B:1669:A:C2'	2:B:2558:C:H1'	1.77	1.14
2:B:2066:C:H5''	2:B:2424:C:O5'	1.45	1.14
2:B:2312:U:C5'	7:F:71:LYS:CA	2.24	1.14
6:E:112:LEU:CD2	12:L:11:GLY:CA	2.25	1.14
2:B:5:A:N1	2:B:2899:A:C5	2.16	1.14
2:B:45:G:H5'	2:B:46:G:O4'	0.97	1.14
2:B:183:C:C5'	2:B:433:C:O4'	1.94	1.14
2:B:556:A:C2	10:J:7:LYS:NZ	2.15	1.14
2:B:880:G:P	2:B:900:A:N6	2.18	1.14
2:B:1009:A:C3'	17:Q:61:ILE:CD1	2.25	1.14

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1340:U:C4'	2:B:1394:U:C3'	2.22	1.14
2:B:1657:U:O4	5:D:130:GLN:CD	1.90	1.14
2:B:1826:G:OP1	4:C:242:HIS:O	1.63	1.14
2:B:2575:C:O5'	5:D:150:GLN:CG	1.96	1.14
6:E:112:LEU:CD1	12:L:12:SER:N	2.08	1.14
6:E:181:ILE:CG2	12:L:15:ALA:HA	1.77	1.14
20:T:43:ILE:CG2	32:T:105:HOH:O	1.91	1.14
1:A:57:A:C5	7:F:12:VAL:HG13	1.72	1.14
2:B:125:A:H4'	28:2:19:ARG:NH2	1.61	1.14
2:B:699:A:C3'	2:B:700:G:C4'	2.26	1.14
2:B:1655:A:H2'	2:B:2511:U:C6	1.83	1.14
2:B:1663:G:H4'	11:K:21:CYS:C	1.53	1.14
2:B:1796:U:H4'	4:C:251:THR:CB	1.77	1.14
2:B:1902:C:C4'	4:C:240:GLY:H	1.61	1.14
2:B:2245:U:C2	2:B:2442:C:C4	2.36	1.14
2:B:2633:G:C1'	5:D:62:LYS:HG3	1.76	1.14
2:B:2645:G:H4'	2:B:2732:G:C3'	1.78	1.14
6:E:30:GLN:H	12:L:19:LEU:HD22	1.06	1.14
1:A:58:A:C2	7:F:25:MET:HE3	1.83	1.13
2:B:61:C:H5''	23:X:25:GLN:CG	1.78	1.13
2:B:448:U:N3	2:B:1259:G:C4'	2.10	1.13
2:B:587:C:H3'	12:L:36:LYS:NZ	1.63	1.13
2:B:989:G:H3'	24:Y:12:ALA:HB1	1.26	1.13
2:B:1666:G:N3	2:B:2559:C:C1'	2.11	1.13
2:B:1945:G:O6	2:B:1985:C:O2	1.66	1.13
2:B:1997:C:C4	2:B:2549:G:C5'	2.30	1.13
2:B:2272:U:P	22:W:15:SER:CA	2.36	1.13
2:B:2531:A:C8	8:G:175:LYS:HB2	1.83	1.13
2:B:183:C:H5''	2:B:433:C:H5'	1.19	1.13
2:B:476:G:H1'	32:B:3430:HOH:O	1.47	1.13
2:B:968:C:O3'	24:Y:16:LEU:HD22	1.38	1.13
2:B:1128:G:C2	2:B:2517:C:O3'	2.00	1.13
2:B:1251:C:N4	32:B:3205:HOH:O	1.79	1.13
2:B:1295:C:P	14:N:71:ARG:CB	2.37	1.13
2:B:1339:G:H5'	2:B:1393:A:N9	1.50	1.13
2:B:1656:C:C2	5:D:144:GLY:O	2.01	1.13
2:B:1997:C:H1'	2:B:2548:U:C5	1.83	1.13
2:B:2350:C:C3'	29:3:38:LYS:HZ2	1.53	1.13
2:B:2532:G:C2	2:B:2662:A:C2	2.37	1.13
2:B:2539:C:O4'	30:4:2:LYS:CE	1.97	1.13
2:B:2575:C:H5''	5:D:150:GLN:CB	1.77	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:182:A:O3'	2:B:433:C:H4'	1.48	1.13
2:B:699:A:C3'	2:B:700:G:H5'	1.76	1.13
2:B:964:C:H5''	2:B:2250:G:C6	1.83	1.13
2:B:1223:G:C3'	18:R:78:ARG:HH22	1.60	1.13
2:B:1248:G:N7	17:Q:1:ALA:CA	2.10	1.13
2:B:1783:A:O2'	2:B:2590:A:C8	1.97	1.13
2:B:2007:U:H5'	5:D:162:ALA:HB3	1.22	1.13
2:B:2282:G:H5'	2:B:2389:G:N2	1.60	1.13
2:B:2348:U:C5'	27:1:39:ASP:CB	2.26	1.13
2:B:2507:C:C2	2:B:2583:G:C2	2.37	1.13
2:B:2876:G:H4'	16:P:2:ASN:O	1.47	1.13
3:V:84:PRO:CG	13:M:127:LYS:NZ	2.10	1.13
6:E:181:ILE:HG12	12:L:14:LYS:C	1.71	1.13
1:A:30:C:H41	15:O:33:ARG:NH2	1.44	1.13
2:B:9:G:O6	2:B:2895:G:C6	1.95	1.13
2:B:671:C:C5'	12:L:39:LYS:CG	2.15	1.13
2:B:728:G:C4'	4:C:16:VAL:CG1	2.15	1.13
2:B:1999:C:O3'	11:K:31:ARG:HB3	1.48	1.13
2:B:2003:A:H1'	5:D:135:GLY:HA3	1.25	1.13
2:B:2090:A:C5'	2:B:2093:G:OP1	1.96	1.13
2:B:2091:C:C2	2:B:2228:G:C5	2.35	1.13
2:B:2199:A:OP1	9:H:29:PHE:CD1	2.02	1.13
2:B:2428:G:P	2:B:2448:A:C2	2.42	1.13
2:B:6:A:C6	2:B:2898:U:C4	2.36	1.13
2:B:781:A:O3'	32:B:3400:HOH:O	1.65	1.13
2:B:814:C:C5	18:R:84:ARG:HA	1.83	1.12
2:B:952:G:H1'	32:B:3381:HOH:O	1.48	1.13
2:B:1126:A:OP2	30:4:4:ARG:O	1.65	1.13
2:B:1277:G:H1'	14:N:23:ASN:HB2	1.28	1.13
2:B:1580:A:H3'	2:B:1581:G:C8	1.75	1.13
2:B:1665:A:P	11:K:57:VAL:CG1	1.04	1.13
2:B:1796:U:H5''	4:C:251:THR:CG2	1.71	1.12
2:B:1805:A:O3'	4:C:50:THR:HA	1.49	1.12
2:B:1994:C:O5'	2:B:2551:C:N4	1.81	1.13
2:B:2063:C:N4	2:B:2253:G:P	2.21	1.12
2:B:2261:C:C2	2:B:2327:A:H2	1.42	1.12
2:B:2640:G:O3'	10:J:78:THR:HG21	1.47	1.13
5:D:16:THR:O	16:P:79:VAL:CB	1.95	1.13
2:B:496:G:H5'	19:S:1:MET:H1	1.08	1.12
2:B:587:C:C1'	12:L:38:GLN:HB2	1.77	1.12
2:B:649:G:H21	29:3:44:ARG:HD3	1.11	1.12

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1128:G:O4'	2:B:2517:C:C5'	1.97	1.12
2:B:1391:U:O2'	32:B:3154:HOH:O	1.61	1.12
2:B:2261:C:O2	2:B:2327:A:N3	1.82	1.12
14:N:118:ARG:HE	26:O:51:ARG:HG3	1.14	1.12
2:B:94:A:O2'	23:X:32:ALA:O	1.64	1.12
2:B:587:C:C6	12:L:38:GLN:N	1.80	1.12
2:B:989:G:C5'	24:Y:12:ALA:CB	2.27	1.12
2:B:1276:A:O2'	14:N:20:MET:HA	1.48	1.12
2:B:1665:A:C4'	2:B:2561:U:OP1	1.84	1.12
2:B:1820:U:C6	4:C:176:ARG:NH2	2.17	1.12
2:B:1996:C:N4	2:B:2561:U:C4	2.17	1.12
2:B:2056:G:C5	2:B:2577:A:C4	2.37	1.12
2:B:2258:C:O4'	2:B:2449:U:H5'	1.50	1.12
2:B:2285:C:C5'	27:1:29:LYS:NZ	2.12	1.12
2:B:2574:G:O2'	5:D:151:THR:HB	1.36	1.12
2:B:2574:G:C2'	5:D:151:THR:CG2	2.28	1.12
6:E:112:LEU:CD1	12:L:12:SER:CA	2.24	1.12
1:A:30:C:N4	15:O:33:ARG:NH2	1.95	1.12
1:A:31:C:H4'	7:F:8:LYS:HG3	1.30	1.12
2:B:414:C:C2	2:B:2409:G:N1	2.17	1.12
2:B:930:G:H5'	24:Y:27:GLY:HA3	1.32	1.12
2:B:1974:C:N1	2:B:1978:A:N6	1.98	1.12
2:B:2091:C:C1'	2:B:2229:U:C2	2.32	1.12
2:B:2312:U:C5'	7:F:71:LYS:N	2.12	1.12
2:B:2501:C:C3'	32:B:3331:HOH:O	1.84	1.12
2:B:2531:A:N7	8:G:175:LYS:HG3	1.64	1.12
12:L:55:MET:HG2	12:L:56:PRO:HD3	1.32	1.12
1:A:81:G:C4'	2:B:919:U:C5'	2.25	1.12
2:B:34:U:H5''	32:B:3165:HOH:O	0.94	1.12
2:B:96:C:O5'	23:X:39:GLN:O	1.66	1.12
2:B:565:C:H5'	2:B:578:G:N2	1.65	1.12
2:B:693:A:H4'	2:B:1354:A:C4'	1.80	1.12
2:B:857:G:H5'	22:W:55:ASP:OD1	0.96	1.12
2:B:1264:A:C2	2:B:2017:U:O4	2.03	1.12
2:B:1340:U:C2'	2:B:1603:A:OP1	1.98	1.12
2:B:1566:A:H4'	4:C:58:LYS:HG3	1.31	1.12
2:B:2018:G:H5''	26:O:5:ASN:CG	1.73	1.12
2:B:2090:A:O3'	9:H:23:ALA:CB	1.98	1.12
2:B:2507:C:C6	2:B:2583:G:N2	2.18	1.12
2:B:2512:C:H5'	5:D:146:ILE:HG13	1.32	1.12
1:A:56:G:H8	7:F:13:LYS:NZ	1.47	1.12

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:36:G:C5	32:B:3117:HOH:O	2.01	1.12
2:B:94:A:C2'	23:X:32:ALA:O	1.97	1.12
2:B:465:G:H4'	28:2:12:ARG:NH1	1.63	1.12
2:B:480:A:N6	32:B:3432:HOH:O	1.81	1.12
2:B:518:G:C5'	19:S:15:GLN:HB3	1.79	1.12
2:B:520:G:OP1	19:S:22:ASP:OD1	1.67	1.12
2:B:649:G:N2	29:3:44:ARG:CD	2.13	1.12
2:B:659:G:C4'	6:E:97:ASN:ND2	1.88	1.12
2:B:930:G:C4'	24:Y:27:GLY:HA2	1.80	1.12
2:B:1340:U:O3'	2:B:1395:A:H5'	1.49	1.12
2:B:1650:A:O2'	14:N:2:ARG:CD	1.97	1.12
2:B:1657:U:O3'	32:B:3337:HOH:O	1.67	1.12
2:B:1773:A:OP1	2:B:1972:G:C1'	1.97	1.12
2:B:2000:C:H5''	11:K:32:TYR:CZ	1.85	1.12
6:E:112:LEU:CD1	12:L:11:GLY:C	2.23	1.12
14:N:98:LEU:CD1	26:0:53:VAL:HA	1.72	1.12
1:A:56:G:C4	7:F:24:VAL:CG1	2.32	1.11
2:B:452:G:H1	28:2:39:ARG:CZ	1.63	1.11
2:B:826:U:C5	2:B:2447:G:OP1	2.02	1.11
2:B:1224:U:H4'	18:R:76:LYS:O	1.47	1.11
2:B:1601:G:OP2	20:T:61:LEU:HD12	1.50	1.11
2:B:1827:U:H1'	2:B:1900:A:H1'	1.24	1.11
2:B:2501:C:O5'	32:B:3331:HOH:O	1.68	1.11
2:B:2680:U:OP1	5:D:114:LYS:N	1.83	1.11
2:B:2814:A:H2'	26:0:39:ARG:HD3	1.15	1.11
17:Q:29:ARG:NH2	26:0:9:ARG:CD	2.12	1.11
1:A:88:C:N4	13:M:38:ARG:CD	2.13	1.11
2:B:9:G:N1	2:B:2895:G:C6	2.15	1.11
2:B:412:A:N6	2:B:2411:A:N3	1.98	1.11
2:B:412:A:N6	2:B:2411:A:C4	2.18	1.11
2:B:552:U:H5'	32:B:3202:HOH:O	1.43	1.11
2:B:566:U:C3'	2:B:576:U:O2	1.98	1.11
2:B:587:C:N3	12:L:38:GLN:N	1.90	1.11
2:B:814:C:O4'	18:R:85:LYS:HG3	1.44	1.11
2:B:964:C:C5'	2:B:2250:G:H1	1.61	1.11
2:B:1653:G:C3'	5:D:126:ASN:HA	1.80	1.11
2:B:1665:A:P	11:K:57:VAL:HG13	0.68	1.11
2:B:1938:A:N3	2:B:2591:C:H5'	1.65	1.11
2:B:2034:U:O4	32:B:3302:HOH:O	1.67	1.11
2:B:2284:A:P	27:1:7:LYS:HB2	1.90	1.11
2:B:2484:G:H3'	13:M:44:ARG:NH1	1.62	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2575:C:C5'	5:D:150:GLN:HG2	1.81	1.11
2:B:2820:A:OP1	14:N:5:LYS:HB2	1.49	1.11
2:B:2883:A:OP1	26:0:52:LYS:CD	1.97	1.11
20:T:73:ARG:HD3	28:2:42:LEU:HG	1.26	1.11
2:B:96:C:O4'	23:X:42:LEU:HD12	1.51	1.11
2:B:671:C:H5'	12:L:39:LYS:HE3	1.11	1.11
2:B:858:G:O4'	2:B:2268:A:H2'	1.41	1.11
2:B:915:C:OP1	22:W:52:CYS:SG	2.09	1.11
2:B:926:G:N2	24:Y:42:ALA:CB	2.07	1.11
2:B:1620:G:C6	32:B:3079:HOH:O	1.89	1.11
2:B:1673:G:O2'	2:B:1956:U:H5''	0.95	1.11
2:B:1948:G:H3'	2:B:1988:G:H5'	1.14	1.11
2:B:2248:C:O2	2:B:2449:U:O2'	1.65	1.11
2:B:2330:G:C1'	22:W:36:ILE:HD11	1.78	1.11
2:B:2347:C:C1'	27:1:45:HIS:NE2	2.08	1.11
1:A:57:A:N7	7:F:12:VAL:HG11	1.58	1.11
2:B:782:A:H8	32:B:3400:HOH:O	0.78	1.11
2:B:1774:C:H4'	2:B:1976:U:C4	1.86	1.11
2:B:2017:U:C4	26:0:3:GLN:HG3	1.85	1.11
20:T:71:GLY:O	28:2:35:ARG:NE	1.83	1.11
1:A:32:U:OP2	7:F:4:HIS:NE2	1.81	1.11
1:A:88:C:C5	13:M:20:LEU:O	2.03	1.11
2:B:199:A:N1	2:B:2071:A:C8	2.19	1.11
2:B:321:U:OP1	6:E:130:LYS:HE2	1.48	1.11
2:B:583:G:OP1	17:Q:6:GLY:O	1.69	1.11
2:B:858:G:O3'	2:B:2268:A:H1'	1.51	1.11
2:B:989:G:H5''	24:Y:12:ALA:HB2	1.22	1.11
2:B:1124:G:H4'	30:4:20:ASP:O	1.44	1.11
2:B:1203:U:C5'	12:L:14:LYS:HZ1	1.61	1.11
2:B:1654:A:O2'	5:D:125:TRP:HZ3	1.30	1.11
2:B:2056:G:C8	2:B:2577:A:C6	2.37	1.11
2:B:2575:C:H1'	5:D:148:GLN:HB3	1.32	1.11
2:B:2814:A:C4	26:0:39:ARG:HD2	1.85	1.11
5:D:8:LYS:HD2	16:P:5:LYS:HE3	1.29	1.11
2:B:5:A:H1'	2:B:2899:A:C2	1.85	1.10
2:B:8:C:H5'	10:J:121:LYS:CE	1.28	1.10
2:B:94:A:C3'	23:X:36:GLN:HB3	1.76	1.10
2:B:654:A:N3	29:3:18:LYS:HE2	1.64	1.10
2:B:669:G:H5''	12:L:47:ARG:CG	1.75	1.10
2:B:679:C:H5''	32:B:2997:HOH:O	0.94	1.10
2:B:688:U:H5''	28:2:2:LYS:NZ	1.67	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1266:G:OP1	26:0:15:ARG:HD3	1.50	1.10
2:B:1670:C:C4	2:B:1955:U:C6	2.38	1.10
2:B:1796:U:H5'	4:C:251:THR:HG21	1.28	1.10
2:B:1828:G:O3'	2:B:1972:G:N7	1.84	1.10
2:B:1945:G:O6	2:B:1985:C:C1'	1.76	1.10
2:B:2000:C:H5'	11:K:32:TYR:CE1	1.87	1.10
2:B:2009:A:C5'	2:B:2823:A:O4'	1.92	1.10
2:B:2198:A:H4'	9:H:29:PHE:CD1	1.77	1.10
2:B:2246:G:N2	2:B:2425:A:OP2	1.84	1.10
2:B:2282:G:H5'	2:B:2389:G:H21	0.98	1.10
2:B:2461:A:C5'	13:M:78:LEU:HD21	1.81	1.10
2:B:2761:A:O4'	8:G:142:GLN:NE2	1.80	1.10
2:B:23:G:N2	19:S:78:GLU:HG3	1.36	1.10
2:B:72:U:O4'	23:X:54:LYS:HG2	1.49	1.10
2:B:1340:U:H1'	2:B:1604:C:P	1.91	1.10
2:B:2262:U:H1'	2:B:2328:A:H1'	1.27	1.10
2:B:2348:U:O5'	27:1:39:ASP:HB3	1.50	1.10
2:B:2386:A:H4'	22:W:38:ARG:HD3	1.30	1.10
6:E:179:SER:O	12:L:13:LYS:CE	1.97	1.10
1:A:30:C:C4'	7:F:25:MET:HE1	1.80	1.10
1:A:59:A:H1'	7:F:25:MET:HG3	1.33	1.10
2:B:398:C:C5'	2:B:2230:G:O2'	2.00	1.10
2:B:516:C:OP2	26:0:9:ARG:HG3	1.50	1.10
2:B:928:A:O2'	24:Y:37:ARG:HG3	1.50	1.10
2:B:1368:G:H2'	2:B:1808:A:N6	1.64	1.10
2:B:1664:A:H1'	2:B:2561:U:O2'	1.51	1.10
2:B:1818:U:C6	4:C:154:ALA:C	2.29	1.10
2:B:1947:C:C6	2:B:1987:A:C5'	2.33	1.10
2:B:2002:G:C2'	5:D:132:ALA:CB	2.29	1.10
2:B:2091:C:C2	2:B:2228:G:C2	2.36	1.10
2:B:2495:G:C8	13:M:80:VAL:HG12	1.86	1.10
2:B:2637:U:H4'	5:D:43:ASP:HB2	1.28	1.10
2:B:2786:U:O3'	5:D:65:ALA:O	1.68	1.10
2:B:2820:A:O4'	14:N:4:ARG:HD3	1.49	1.10
3:V:89:ILE:CG2	13:M:133:LYS:CB	2.29	1.10
17:Q:90:ASP:OD2	18:R:10:LYS:HG3	1.42	1.10
2:B:4:U:O2	2:B:2900:A:N1	1.58	1.10
2:B:397:U:P	25:Z:49:ARG:O	2.09	1.10
2:B:586:A:C2	2:B:810:U:O2	1.96	1.10
2:B:670:A:C2'	12:L:47:ARG:HA	1.46	1.10
2:B:992:C:H4'	18:R:79:ARG:NE	1.53	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1030:C:P	13:M:117:PHE:CZ	2.43	1.10
2:B:1030:C:OP1	13:M:118:LYS:HA	1.51	1.10
2:B:1339:G:C4	2:B:1603:A:O2'	2.05	1.10
2:B:1366:A:P	25:Z:1:MET:HE3	1.91	1.10
2:B:1666:G:N2	2:B:2559:C:C1'	2.07	1.10
2:B:1995:U:C5	2:B:2549:G:O6	2.01	1.10
14:N:118:ARG:HH22	26:O:55:ALA:HB3	1.01	1.10
14:N:120:GLU:CA	26:O:51:ARG:CB	2.30	1.10
18:R:54:VAL:CB	18:R:54:VAL:N	2.15	1.10
1:A:31:C:C5'	7:F:8:LYS:HE3	1.82	1.10
1:A:57:A:C8	7:F:16:MET:HG2	1.86	1.10
2:B:593:U:O4'	29:3:2:LYS:HD3	0.95	1.10
2:B:623:C:O3'	29:3:61:LEU:HB3	1.47	1.10
2:B:1124:G:H4'	30:4:21:GLY:CA	1.56	1.10
2:B:1662:U:H4'	11:K:6:THR:N	1.39	1.10
2:B:1664:A:O2'	11:K:40:LYS:HE2	1.50	1.10
2:B:1670:C:H5'	2:B:2557:G:H21	1.07	1.10
2:B:1806:C:P	4:C:50:THR:HA	1.92	1.10
2:B:1855:U:O2	2:B:2234:G:H3'	1.15	1.10
2:B:2062:A:H2'	2:B:2253:G:H4'	1.31	1.10
2:B:2090:A:O3'	9:H:23:ALA:C	1.95	1.10
2:B:2641:G:OP1	10:J:84:ILE:CG2	2.00	1.10
1:A:56:G:C8	7:F:13:LYS:NZ	2.19	1.09
1:A:59:A:OP1	7:F:160:LYS:HE2	1.43	1.09
2:B:669:G:C4'	12:L:47:ARG:HG2	1.61	1.09
2:B:1032:A:H4'	30:4:16:ILE:HG12	1.18	1.09
2:B:1767:G:C8	2:B:1959:G:C3'	2.33	1.09
2:B:1772:A:OP2	2:B:1968:G:H4'	1.52	1.09
2:B:2334:U:OP2	15:O:7:ARG:HA	1.51	1.09
2:B:2575:C:H5'	5:D:151:THR:HG22	1.15	1.09
2:B:2876:G:H5''	16:P:2:ASN:C	1.73	1.09
2:B:687:C:OP1	28:2:6:GLN:NE2	1.85	1.09
2:B:812:C:N4	12:L:33:ARG:CB	2.07	1.09
2:B:1651:G:O4'	14:N:2:ARG:NH1	1.85	1.09
2:B:1668:A:N6	2:B:2551:C:C5'	2.14	1.09
2:B:1783:A:O2'	2:B:2590:A:H8	1.30	1.09
2:B:1818:U:C3'	4:C:159:THR:HG21	1.83	1.09
2:B:1951:U:H3'	2:B:1990:C:O5'	1.28	1.09
2:B:2007:U:H5'	5:D:162:ALA:HB2	1.12	1.09
2:B:2899:A:H5'	10:J:136:GLN:N	1.67	1.09
1:A:43:C:C2	7:F:91:ARG:HD3	1.88	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:125:A:C4'	28:2:19:ARG:NH2	2.11	1.09
2:B:320:A:P	6:E:132:LYS:HG2	1.90	1.09
2:B:496:G:H5''	19:S:1:MET:HE3	1.10	1.09
2:B:580:U:H5'	17:Q:32:ARG:HB3	1.19	1.09
2:B:827:U:C5	2:B:2246:G:O2'	2.05	1.09
2:B:1654:A:C5	5:D:143:PRO:O	2.05	1.09
2:B:1998:A:C4	2:B:2548:U:O2'	2.01	1.09
2:B:2004:G:C6	5:D:142:VAL:HG23	1.88	1.09
2:B:2199:A:C5	2:B:2225:A:C1'	2.35	1.09
2:B:2358:A:N6	2:B:2428:G:C2	2.21	1.09
2:B:2502:G:O6	32:B:3348:HOH:O	1.69	1.09
3:V:89:ILE:HG21	13:M:133:LYS:HB3	1.29	1.09
12:L:60:ARG:CD	29:3:7:ARG:CD	2.27	1.09
1:A:76:G:C4'	13:M:136:MET:HE1	1.83	1.09
1:A:90:C:O2'	13:M:21:ALA:HB1	1.45	1.09
2:B:125:A:C5'	28:2:19:ARG:HH21	1.59	1.09
2:B:415:A:N1	2:B:2408:U:H1'	1.46	1.09
2:B:649:G:N2	29:3:44:ARG:HD3	1.67	1.09
2:B:747:U:C5	2:B:2014:A:C5'	2.33	1.09
2:B:754:U:OP1	2:B:1619:G:O3'	1.61	1.09
2:B:789:A:H4'	28:2:3:ARG:NH2	1.54	1.09
2:B:855:G:N2	22:W:23:LYS:HZ3	1.41	1.09
2:B:929:U:O2	24:Y:25:GLY:O	1.68	1.09
2:B:1118:C:C5'	13:M:127:LYS:CE	2.30	1.09
2:B:1263:U:OP1	26:O:8:THR:CA	2.00	1.09
2:B:1269:A:H4'	2:B:2013:A:OP1	1.38	1.09
2:B:1806:C:O3'	4:C:48:ILE:CA	1.93	1.09
2:B:1807:G:OP1	4:C:47:ARG:HB3	1.50	1.09
2:B:2067:G:C2	2:B:2430:A:C2	2.41	1.09
2:B:2582:G:N1	2:B:2583:G:N9	1.99	1.09
4:C:20:ASN:HB3	4:C:202:ARG:HB3	1.34	1.09
17:Q:29:ARG:HH21	26:O:9:ARG:CD	1.64	1.09
17:Q:110:GLU:HB2	18:R:52:PRO:HG3	1.35	1.09
1:A:45:A:C8	7:F:91:ARG:HG3	1.87	1.09
2:B:320:A:OP2	6:E:132:LYS:CG	2.00	1.09
2:B:478:A:C6	32:B:3432:HOH:O	2.01	1.09
2:B:586:A:H5'	6:E:85:PHE:HE1	1.12	1.09
2:B:693:A:H1'	2:B:1354:A:O2'	1.44	1.09
2:B:1009:A:C3'	17:Q:61:ILE:HD12	1.83	1.09
2:B:1339:G:N3	2:B:1603:A:O2'	1.83	1.09
2:B:1825:U:O2'	4:C:249:VAL:HB	1.32	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1888:G:H1'	2:B:2234:G:H2'	1.28	1.09
2:B:1997:C:C2'	2:B:2548:U:O5'	2.01	1.09
2:B:2015:A:P	19:S:88:ARG:HB3	1.83	1.09
2:B:2056:G:C6	2:B:2577:A:C4	2.41	1.09
2:B:2091:C:H2'	2:B:2228:G:H1	0.96	1.09
2:B:2317:A:OP1	7:F:124:ARG:NH2	1.85	1.09
2:B:2344:U:O2'	27:1:37:LYS:CG	2.01	1.09
2:B:2348:U:H5'	27:1:39:ASP:CB	1.83	1.09
2:B:2484:G:H2'	13:M:44:ARG:CZ	1.72	1.09
2:B:2531:A:N1	2:B:2662:A:N1	2.00	1.09
2:B:2884:U:H2'	26:0:48:TYR:CE2	1.87	1.09
4:C:30:ALA:H	4:C:31:PRO:HD3	1.12	1.09
1:A:57:A:C2'	7:F:27:VAL:HA	1.82	1.08
2:B:16:C:O3'	26:0:14:MET:HG3	0.91	1.08
2:B:96:C:H5''	23:X:39:GLN:HB2	1.22	1.08
2:B:197:A:C2	2:B:2443:C:H1'	1.88	1.08
2:B:415:A:N1	2:B:2408:U:C1'	2.12	1.08
2:B:1030:C:O2'	30:4:8:LYS:HD3	1.47	1.08
2:B:1340:U:O3'	2:B:1395:A:C5'	1.99	1.08
2:B:1658:C:P	32:B:3337:HOH:O	2.09	1.08
2:B:1666:G:C1'	2:B:2559:C:O2'	1.99	1.08
2:B:1759:A:C6	2:B:2697:G:C4'	2.33	1.08
2:B:1774:C:C4	2:B:1830:C:H5	1.48	1.08
2:B:1818:U:OP1	4:C:157:ALA:CB	2.01	1.08
2:B:2063:C:H5	2:B:2253:G:H5''	1.06	1.08
2:B:2263:C:H5'	2:B:2329:U:O2'	1.53	1.08
10:J:39:LYS:HZ1	17:Q:66:ALA:HB1	1.12	1.08
2:B:24:G:H1'	19:S:78:GLU:CB	1.56	1.08
2:B:145:C:C5'	32:B:3188:HOH:O	2.00	1.08
2:B:396:G:C4'	25:Z:3:LYS:NZ	2.15	1.08
2:B:570:G:N2	2:B:2499:C:C5'	1.77	1.08
2:B:1796:U:H5'	4:C:251:THR:OG1	1.52	1.08
2:B:2090:A:C5	2:B:2092:U:O2'	2.07	1.08
2:B:2495:G:H5'	13:M:82:MET:HE2	1.27	1.08
2:B:2679:A:O3'	5:D:113:SER:OG	1.69	1.08
16:P:52:ARG:HB3	16:P:60:VAL:HG11	1.30	1.08
19:S:41:LYS:CD	26:0:21:LEU:CB	2.26	1.08
2:B:674:G:H5''	6:E:71:GLY:HA3	1.14	1.08
2:B:686:U:N3	28:2:12:ARG:N	2.02	1.08
2:B:1128:G:H22	2:B:2518:A:C3'	1.62	1.08
2:B:1224:U:P	18:R:89:HIS:O	2.11	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1417:C:O2	2:B:1418:G:H1'	1.54	1.08
2:B:1674:G:OP2	2:B:1955:U:C1'	1.96	1.08
2:B:1816:C:H1'	4:C:62:ARG:HH21	0.97	1.08
2:B:1995:U:H5''	2:B:2557:G:N7	1.68	1.08
1:A:58:A:H2	7:F:25:MET:HE3	1.07	1.08
1:A:88:C:C5	13:M:20:LEU:N	2.20	1.08
2:B:45:G:H4'	2:B:46:G:H1'	1.30	1.08
2:B:56:A:H4'	20:T:76:ARG:H	1.19	1.08
2:B:465:G:H4'	28:2:12:ARG:CZ	1.83	1.08
2:B:580:U:H5''	17:Q:32:ARG:CA	1.82	1.08
2:B:858:G:C4'	2:B:2268:A:O2'	2.01	1.08
2:B:958:U:OP2	13:M:16:ARG:N	1.69	1.08
2:B:1126:A:H5''	30:4:37:GLN:NE2	1.68	1.08
2:B:1818:U:OP2	4:C:88:ALA:HB2	1.52	1.08
2:B:1998:A:H2	11:K:4:GLU:HG2	0.92	1.08
2:B:2348:U:H5'	27:1:39:ASP:C	1.79	1.08
2:B:2461:A:H5'	13:M:78:LEU:HD11	1.18	1.08
2:B:2539:C:H4'	30:4:2:LYS:HE2	1.13	1.08
2:B:2574:G:O2'	5:D:151:THR:HG22	1.42	1.08
2:B:2575:C:OP1	5:D:150:GLN:CG	1.99	1.08
2:B:458:G:O4'	28:2:39:ARG:NH1	1.87	1.08
2:B:518:G:H4'	19:S:15:GLN:H	1.17	1.08
2:B:589:U:O4	12:L:48:ARG:NH2	1.86	1.08
2:B:693:A:H1'	2:B:1354:A:C2'	1.84	1.08
2:B:1118:C:H4'	3:V:84:PRO:CB	1.82	1.08
2:B:1670:C:OP2	2:B:1944:U:N3	1.73	1.08
2:B:1766:G:C6	2:B:1958:C:C2	2.42	1.08
2:B:1992:G:N2	2:B:2549:G:N7	1.62	1.08
2:B:2245:U:C1'	2:B:2442:C:H42	1.67	1.08
2:B:2269:G:C1'	22:W:20:LEU:C	2.16	1.08
2:B:2347:C:O2'	27:1:39:ASP:N	1.87	1.08
2:B:2355:G:H4'	22:W:31:LEU:HB2	1.08	1.08
14:N:120:GLU:HA	26:0:51:ARG:HB3	1.14	1.08
1:A:57:A:N9	7:F:12:VAL:CG1	1.97	1.07
1:A:80:U:C5'	2:B:917:A:N1	2.17	1.07
2:B:76:C:O2'	23:X:52:ARG:HA	1.53	1.07
2:B:76:C:H4'	23:X:52:ARG:N	1.38	1.07
2:B:94:A:C4'	23:X:36:GLN:HB3	1.84	1.07
2:B:458:G:C8	28:2:39:ARG:C	2.30	1.07
2:B:483:A:H5'	21:U:45:GLN:CB	1.84	1.07
2:B:516:C:H4'	2:B:1262:A:H5'	1.33	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:607:U:OP1	6:E:98:LYS:CG	2.01	1.07
2:B:750:A:OP1	2:B:1615:C:C5	2.07	1.07
2:B:824:U:OP1	2:B:2273:A:H4'	1.52	1.07
2:B:972:A:OP2	2:B:974:G:C5'	2.03	1.07
2:B:1417:C:H3'	2:B:1418:G:H8	1.02	1.07
2:B:1669:A:H1'	2:B:2558:C:O2'	1.51	1.07
2:B:1768:C:N1	2:B:1961:C:H5	1.50	1.07
2:B:1853:A:N7	2:B:2235:G:H3'	1.69	1.07
2:B:2305:U:O4	7:F:39:VAL:HG13	1.54	1.07
2:B:2478:A:H5'	30:4:32:LYS:CE	1.83	1.07
2:B:2575:C:C4'	5:D:150:GLN:N	1.83	1.07
3:V:76:ASP:HB3	13:M:136:MET:HA	1.35	1.07
6:E:112:LEU:HD22	12:L:11:GLY:HA3	1.28	1.07
6:E:184:ASP:HA	12:L:12:SER:OG	1.50	1.07
1:A:81:G:C5'	2:B:919:U:H5'	1.83	1.07
2:B:662:G:P	12:L:24:GLY:H	1.78	1.07
2:B:1128:G:N3	2:B:2517:C:O3'	1.85	1.07
2:B:1418:G:OP1	2:B:1588:G:H4'	1.54	1.07
2:B:1668:A:N6	2:B:2551:C:H4'	1.68	1.07
2:B:1670:C:O4'	2:B:2557:G:N2	1.87	1.07
2:B:1752:C:H5'	2:B:2861:U:C4'	1.77	1.07
2:B:1938:A:C1'	2:B:1983:G:H5'	1.83	1.07
2:B:1938:A:O2'	2:B:2591:C:C3'	2.02	1.07
2:B:1945:G:O6	2:B:1985:C:H1'	1.48	1.07
2:B:2014:A:H5''	32:B:3343:HOH:O	1.51	1.07
2:B:2197:U:O4	2:B:2225:A:C5'	2.02	1.07
2:B:2284:A:OP1	27:1:7:LYS:HB3	1.52	1.07
2:B:2495:G:C8	13:M:80:VAL:CG1	2.37	1.07
2:B:2575:C:C5'	5:D:150:GLN:C	2.27	1.07
2:B:2597:G:H5''	4:C:234:GLY:CA	1.83	1.07
5:D:16:THR:O	16:P:79:VAL:HG12	1.49	1.07
2:B:94:A:H4'	23:X:32:ALA:O	1.55	1.07
2:B:414:C:C4	2:B:2409:G:C6	2.43	1.07
2:B:584:C:H5''	17:Q:3:VAL:CG2	1.83	1.07
2:B:667:U:C5	12:L:48:ARG:HG2	1.88	1.07
2:B:809:G:OP2	32:B:3351:HOH:O	1.73	1.07
2:B:1030:C:O2'	30:4:8:LYS:HG2	1.35	1.07
2:B:1768:C:H5'	2:B:1960:A:C3'	1.61	1.07
2:B:1889:A:N7	2:B:2235:G:O3'	1.82	1.07
2:B:2005:A:N6	5:D:141:ARG:CA	2.16	1.07
2:B:2269:G:C2'	22:W:20:LEU:O	2.03	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2461:A:O4'	13:M:78:LEU:HD21	1.54	1.07
2:B:2539:C:C4'	30:4:2:LYS:CE	2.32	1.07
2:B:5:A:N3	2:B:2899:A:C2	2.23	1.07
2:B:5:A:N3	2:B:2899:A:C4	2.22	1.07
2:B:320:A:OP2	6:E:132:LYS:HB3	1.49	1.07
2:B:516:C:OP2	26:0:9:ARG:CG	2.02	1.07
2:B:575:A:OP2	2:B:2030:A:C2	2.07	1.07
2:B:675:A:OP1	6:E:58:LYS:CD	2.02	1.07
2:B:812:C:C5	12:L:33:ARG:HB2	1.83	1.07
2:B:1133:A:N9	2:B:2026:U:O2'	1.86	1.07
2:B:1277:G:C1'	14:N:23:ASN:HB2	1.84	1.07
2:B:1371:G:H4'	2:B:1810:A:C1'	1.84	1.07
2:B:1656:C:H5''	2:B:2510:C:H3'	1.11	1.07
2:B:1665:A:H4'	2:B:2561:U:OP1	1.30	1.07
2:B:1807:G:OP1	4:C:48:ILE:HG12	1.04	1.07
2:B:1938:A:C5'	2:B:1983:G:H8	1.68	1.07
2:B:2004:G:C4	5:D:142:VAL:HG21	1.90	1.07
2:B:2017:U:C3'	26:0:4:GLN:N	2.18	1.07
2:B:2063:C:O2'	2:B:2254:C:C3'	2.01	1.07
2:B:2065:C:C4'	2:B:2258:C:H42	1.67	1.07
2:B:2272:U:OP2	22:W:15:SER:CA	2.02	1.07
2:B:2428:G:H3'	2:B:2448:A:N1	1.69	1.07
2:B:2748:A:H4'	8:G:69:ALA:HB2	1.30	1.07
6:E:23:PHE:CE2	12:L:17:LYS:CG	2.35	1.07
12:L:61:LEU:HB3	12:L:62:PRO:HD2	1.12	1.07
2:B:9:G:N1	2:B:2895:G:C5	2.23	1.07
2:B:16:C:H5''	26:0:14:MET:HA	1.36	1.07
2:B:56:A:O2'	20:T:77:ARG:O	1.73	1.07
2:B:483:A:H4'	21:U:45:GLN:C	1.78	1.07
2:B:518:G:H5'	19:S:15:GLN:HB3	1.07	1.07
2:B:538:A:O4'	10:J:4:PHE:CZ	1.82	1.07
2:B:812:C:H41	12:L:33:ARG:HB2	1.18	1.07
2:B:1252:G:C6	17:Q:35:PHE:HB3	1.78	1.07
2:B:1666:G:OP2	11:K:57:VAL:HG21	1.55	1.07
2:B:1759:A:C5	2:B:2697:G:C5'	2.33	1.07
2:B:1998:A:C2	11:K:4:GLU:CD	2.31	1.07
2:B:2017:U:H3'	26:0:4:GLN:N	1.69	1.07
2:B:2258:C:H1'	2:B:2449:U:C6	1.88	1.07
2:B:2459:A:C1'	13:M:76:LYS:CG	2.29	1.07
2:B:2888:C:C6	26:0:27:LEU:CD1	2.36	1.07
3:V:84:PRO:HG2	13:M:127:LYS:HE2	1.37	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:48:THR:HG22	6:E:49:ARG:H	0.97	1.07
24:Y:16:LEU:HB2	24:Y:17:PRO:HD3	1.37	1.07
1:A:30:C:H2'	7:F:8:LYS:CE	1.85	1.06
2:B:659:G:H21	6:E:100:MET:HE1	1.14	1.06
2:B:699:A:H3'	2:B:700:G:C4'	1.84	1.06
2:B:788:A:H4'	28:2:4:THR:OG1	1.52	1.06
2:B:1258:U:H4'	6:E:79:ARG:HD3	1.34	1.06
2:B:1654:A:C5	5:D:121:THR:HG21	1.91	1.06
2:B:1665:A:C8	2:B:2561:U:O4'	2.08	1.06
2:B:1670:C:H4'	2:B:2557:G:C2	1.90	1.06
2:B:1767:G:N2	2:B:1961:C:C4	2.23	1.06
2:B:1828:G:H3'	2:B:1972:G:C4	1.89	1.06
2:B:2067:G:N1	2:B:2430:A:H2	1.51	1.06
4:C:124:LYS:HB2	4:C:125:PRO:HD3	1.10	1.06
6:E:181:ILE:CG1	12:L:15:ALA:CA	2.06	1.06
2:B:532:A:N1	2:B:2019:A:N3	2.03	1.06
2:B:564:C:H2'	2:B:578:G:N1	1.26	1.06
2:B:591:U:H4'	29:3:1:PRO:HD3	1.28	1.06
2:B:667:U:H3'	12:L:49:GLY:HA2	1.10	1.06
2:B:669:G:O5'	12:L:47:ARG:CD	2.02	1.06
2:B:687:C:H4'	28:2:6:GLN:HB2	1.28	1.06
2:B:828:U:C6	2:B:2447:G:P	2.45	1.06
2:B:1580:A:C5	2:B:1581:G:C2	2.32	1.06
2:B:1947:C:H5	2:B:1986:C:O3'	1.04	1.06
2:B:1997:C:H42	2:B:2549:G:H5'	1.19	1.06
2:B:2016:U:H6	26:0:2:VAL:HA	1.18	1.06
2:B:2258:C:C5	2:B:2425:A:O2'	2.07	1.06
2:B:2262:U:O3'	2:B:2329:U:H1'	1.54	1.06
2:B:2270:A:OP2	22:W:19:ARG:HG2	1.48	1.06
2:B:2575:C:P	5:D:150:GLN:CG	2.43	1.06
2:B:2759:G:N3	8:G:138:GLN:NE2	2.01	1.06
2:B:2899:A:H4'	10:J:136:GLN:HB2	1.37	1.06
1:A:14:U:C2'	1:A:107:G:H4'	1.84	1.06
1:A:56:G:C1'	7:F:24:VAL:HG12	1.82	1.06
2:B:192:C:O2'	2:B:802:A:C1'	2.04	1.06
2:B:463:G:O6	28:2:43:THR:CG2	2.03	1.06
2:B:580:U:C5'	17:Q:32:ARG:CB	2.17	1.06
2:B:587:C:H3'	12:L:36:LYS:HZ3	1.09	1.06
2:B:687:C:C4'	28:2:6:GLN:CB	2.34	1.06
2:B:1659:G:C1'	5:D:134:HIS:CG	2.14	1.06
2:B:1666:G:OP2	11:K:57:VAL:CG2	2.04	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2005:A:O4'	5:D:142:VAL:HG11	1.24	1.06
2:B:2017:U:H3'	26:0:4:GLN:HB2	1.35	1.06
2:B:2017:U:C3'	26:0:4:GLN:CB	2.32	1.06
2:B:2263:C:C5'	2:B:2329:U:O2'	2.04	1.06
4:C:107:LYS:HB2	4:C:194:VAL:HG11	1.36	1.06
18:R:74:ILE:HA	18:R:90:ARG:HE	1.15	1.06
2:B:183:C:C5'	2:B:433:C:C4'	2.33	1.06
2:B:1118:C:H5''	13:M:127:LYS:HE2	1.36	1.06
2:B:1257:C:C4'	6:E:77:ILE:CG2	2.33	1.06
2:B:1342:A:OP1	20:T:59:ASN:HB3	1.55	1.06
2:B:1361:G:H4'	2:B:2214:C:N4	1.69	1.06
2:B:1636:U:H1'	2:B:1760:C:O2	1.56	1.06
2:B:1670:C:C5'	2:B:2557:G:H21	1.66	1.06
2:B:1767:G:H8	2:B:1959:G:C3'	1.67	1.06
2:B:1773:A:N3	2:B:1975:G:C6	2.24	1.06
2:B:1994:C:H3'	2:B:2551:C:N4	1.08	1.06
2:B:2286:G:O6	27:1:33:LEU:HD13	1.56	1.06
2:B:2334:U:O3'	15:O:12:THR:HG21	1.51	1.06
2:B:2348:U:H5'	27:1:39:ASP:O	1.54	1.06
2:B:2358:A:N6	2:B:2428:G:N1	2.03	1.06
2:B:2582:G:N1	2:B:2583:G:C8	2.21	1.06
2:B:2636:C:O2'	5:D:80:TRP:HZ3	1.12	1.06
2:B:2876:G:C4'	16:P:2:ASN:O	2.03	1.06
2:B:2899:A:C5'	10:J:137:PRO:CD	2.23	1.06
5:D:17:GLU:CG	16:P:80:VAL:HG23	1.85	1.06
6:E:27:LEU:CB	12:L:19:LEU:HD12	1.33	1.06
2:B:5:A:N9	2:B:2899:A:N1	2.03	1.06
2:B:57:C:H4'	20:T:78:SER:HB3	1.29	1.06
2:B:61:C:H3'	23:X:29:ARG:NH1	1.43	1.06
2:B:95:A:N1	23:X:41:HIS:CD2	2.23	1.06
2:B:528:A:C5'	10:J:113:PRO:HG3	1.86	1.06
2:B:687:C:H5''	28:2:6:GLN:CG	1.85	1.06
2:B:1029:A:C2	2:B:2466:C:H4'	1.91	1.06
2:B:1118:C:H5''	13:M:127:LYS:HE3	1.09	1.06
2:B:1655:A:C4	5:D:146:ILE:HG13	1.89	1.06
2:B:1774:C:C2	2:B:1829:A:N7	2.24	1.06
2:B:1815:A:C3'	4:C:85:ASN:ND2	2.08	1.06
2:B:1976:U:H3'	2:B:1979:U:C5'	1.85	1.06
2:B:1995:U:C6	2:B:2550:G:C6	2.42	1.06
2:B:2005:A:N1	5:D:128:ARG:CD	2.19	1.06
2:B:2018:G:C5'	26:0:5:ASN:CG	2.29	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2330:G:C1'	22:W:36:ILE:CD1	2.33	1.06
2:B:2348:U:H5'	27:1:39:ASP:CA	1.86	1.06
2:B:2355:G:H4'	22:W:31:LEU:CB	1.85	1.06
2:B:2746:U:H4'	8:G:137:LYS:O	1.54	1.06
2:B:329:G:O6	21:U:64:ILE:HG12	1.55	1.05
2:B:458:G:O5'	28:2:39:ARG:NH1	1.87	1.05
2:B:478:A:N6	32:B:3432:HOH:O	1.88	1.05
2:B:505:A:C2	32:B:3430:HOH:O	2.09	1.05
2:B:527:C:O2	2:B:2043:C:O4'	1.73	1.05
2:B:1163:G:H4'	18:R:91:GLN:CG	1.86	1.05
2:B:1650:A:C2'	14:N:2:ARG:NH1	2.19	1.05
2:B:1826:G:OP1	4:C:242:HIS:HB3	1.55	1.05
2:B:1999:C:H5''	11:K:31:ARG:HE	1.16	1.05
2:B:2244:U:O2'	2:B:2433:A:C3'	1.87	1.05
2:B:2848:G:N9	16:P:96:LEU:HD21	1.66	1.05
2:B:2883:A:P	26:0:52:LYS:HE2	1.96	1.05
3:V:57:TYR:CZ	13:M:131:VAL:CG2	2.37	1.05
5:D:24:VAL:HG21	5:D:193:VAL:HG11	1.37	1.05
6:E:30:GLN:HB2	12:L:19:LEU:CB	1.85	1.05
1:A:58:A:C8	7:F:27:VAL:HG23	1.90	1.05
2:B:292:U:OP1	32:B:3179:HOH:O	1.68	1.05
2:B:1030:C:P	13:M:118:LYS:HA	1.96	1.05
2:B:1163:G:C4'	18:R:91:GLN:CD	2.18	1.05
2:B:1752:C:C5'	2:B:2861:U:C3'	2.34	1.05
2:B:2243:U:C6	25:Z:18:CYS:SG	2.50	1.05
2:B:2347:C:O2'	27:1:39:ASP:HB2	1.54	1.05
2:B:2393:U:P	29:3:31:ILE:CD1	2.44	1.05
2:B:2814:A:C2'	26:0:39:ARG:CG	2.35	1.05
2:B:9:G:C2	2:B:2895:G:N3	2.22	1.05
2:B:96:C:C3'	23:X:42:LEU:HD11	1.78	1.05
2:B:139:U:O4	20:T:3:ARG:HB2	1.55	1.05
2:B:397:U:H5''	25:Z:49:ARG:CB	1.85	1.05
2:B:414:C:C4	2:B:2409:G:O6	2.09	1.05
2:B:466:A:H5'	28:2:44:VAL:HG12	1.06	1.05
2:B:494:G:O2'	19:S:5:ALA:O	1.74	1.05
2:B:586:A:OP1	6:E:85:PHE:CZ	2.09	1.05
2:B:588:U:C5'	12:L:27:LEU:CB	2.35	1.05
2:B:858:G:C4'	2:B:2268:A:C2'	2.35	1.05
2:B:1340:U:C3'	2:B:1394:U:O3'	1.93	1.05
2:B:1417:C:O2	2:B:1418:G:C1'	2.04	1.05
2:B:2257:U:P	2:B:2450:A:H4'	1.94	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2355:G:C4'	22:W:31:LEU:HB2	1.87	1.05
2:B:2789:C:O3'	2:B:2790:U:P	2.15	1.05
17:Q:29:ARG:HH21	26:O:9:ARG:NE	1.52	1.05
2:B:145:C:H5''	32:B:3188:HOH:O	1.54	1.05
2:B:484:C:H5''	21:U:46:LYS:NZ	1.70	1.05
2:B:687:C:O4'	28:2:5:PHE:O	1.72	1.05
2:B:1250:G:H5''	2:B:1251:C:OP2	1.52	1.05
2:B:1368:G:N2	2:B:1808:A:C2	2.15	1.05
2:B:1807:G:C1'	4:C:45:ASN:OD1	2.03	1.05
2:B:1816:C:H1'	4:C:62:ARG:NH2	1.70	1.05
1:A:80:U:C2'	2:B:918:A:O2'	2.04	1.05
2:B:61:C:C3'	23:X:29:ARG:NH1	1.90	1.05
2:B:414:C:C2	2:B:2409:G:C6	2.43	1.05
2:B:487:C:H4'	19:S:56:ALA:HB1	1.39	1.05
2:B:1819:A:O2'	4:C:176:ARG:CB	2.03	1.05
2:B:2270:A:H3'	22:W:18:LYS:HD2	1.35	1.05
2:B:2428:G:OP1	2:B:2448:A:N3	1.89	1.05
2:B:2888:C:H6	26:O:27:LEU:CD1	1.67	1.05
6:E:112:LEU:HD22	12:L:11:GLY:HA2	1.13	1.05
2:B:5:A:N3	2:B:2899:A:C5	2.23	1.04
2:B:45:G:C4'	2:B:46:G:O4'	2.04	1.04
2:B:495:G:OP1	19:S:6:LYS:HD3	1.56	1.04
2:B:567:U:O4'	2:B:576:U:O4'	1.75	1.04
2:B:661:A:H5''	12:L:23:ILE:HA	1.39	1.04
2:B:1276:A:N7	32:B:3143:HOH:O	1.90	1.04
2:B:1580:A:N3	2:B:1581:G:H1'	1.38	1.04
2:B:1665:A:H5'	11:K:40:LYS:HE3	1.39	1.04
2:B:1670:C:N4	2:B:1955:U:C4'	2.20	1.04
2:B:1767:G:C8	2:B:1959:G:N9	2.25	1.04
2:B:1796:U:C4'	4:C:251:THR:CB	2.34	1.04
2:B:2261:C:O2	2:B:2327:A:C2	0.70	1.04
2:B:2359:C:N4	2:B:2428:G:C6	2.23	1.04
2:B:2899:A:C5'	10:J:136:GLN:H	1.70	1.04
6:E:25:GLU:HG3	12:L:17:LYS:CG	1.86	1.04
14:N:120:GLU:HA	26:O:51:ARG:CG	1.87	1.04
2:B:15:G:O3'	26:O:17:SER:HA	1.55	1.04
2:B:137:U:O2	20:T:4:GLU:CG	2.05	1.04
2:B:592:A:O2'	29:3:2:LYS:O	1.74	1.04
2:B:826:U:H3'	2:B:2446:G:H5''	1.37	1.04
2:B:1417:C:H3'	2:B:1418:G:C8	1.92	1.04
2:B:1670:C:C2	2:B:1955:U:C5	2.44	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1767:G:C8	2:B:1959:G:C1'	2.40	1.04
2:B:1827:U:C1'	2:B:1900:A:H1'	1.86	1.04
2:B:2018:G:C4'	26:0:5:ASN:CG	2.15	1.04
2:B:2258:C:O2	2:B:2425:A:H4'	1.56	1.04
2:B:2495:G:H8	13:M:80:VAL:HG12	1.09	1.04
2:B:2640:G:O3'	10:J:78:THR:CG2	2.02	1.04
2:B:2814:A:H2'	26:0:39:ARG:CG	1.88	1.04
2:B:2899:A:H5''	10:J:136:GLN:CB	1.87	1.04
12:L:55:MET:HG3	29:3:5:THR:CG2	1.86	1.04
14:N:98:LEU:HD11	26:0:53:VAL:HA	1.09	1.04
1:A:80:U:H5'	2:B:917:A:C2	1.87	1.04
2:B:220:G:O2'	2:B:233:A:C2	2.10	1.04
2:B:320:A:H5''	6:E:130:LYS:HZ1	1.19	1.04
2:B:483:A:O3'	21:U:46:LYS:HE3	1.22	1.04
2:B:588:U:H5''	12:L:27:LEU:HB3	1.34	1.04
2:B:682:G:H4'	28:2:26:ASN:CB	1.88	1.04
2:B:789:A:H5'	28:2:4:THR:HG23	1.12	1.04
2:B:1128:G:N2	2:B:2517:C:H1'	1.72	1.04
2:B:1262:A:H3'	19:S:95:ARG:CZ	1.57	1.04
2:B:1752:C:H5''	2:B:2861:U:O3'	1.57	1.04
2:B:1759:A:C2'	2:B:2696:U:O2	2.04	1.04
2:B:1767:G:N2	2:B:1961:C:N4	2.05	1.04
2:B:1902:C:H4'	4:C:240:GLY:H	0.91	1.04
2:B:1938:A:H5''	2:B:1982:U:C3'	1.76	1.04
2:B:2004:G:O4'	5:D:139:SER:N	1.84	1.04
20:T:43:ILE:HG22	32:T:105:HOH:O	1.51	1.04
1:A:37:C:O2	15:O:69:ASP:OD1	1.74	1.04
1:A:57:A:C1'	7:F:27:VAL:CG1	2.34	1.04
1:A:59:A:H1'	7:F:25:MET:CB	1.87	1.04
1:A:88:C:H41	13:M:20:LEU:HB3	1.22	1.04
2:B:4:U:C2	2:B:2900:A:C6	2.46	1.04
2:B:4:U:N3	2:B:2900:A:N6	2.06	1.04
2:B:6:A:N6	2:B:2898:U:O4	1.89	1.04
2:B:443:A:OP1	6:E:44:ARG:NH2	1.90	1.04
2:B:1152:C:OP2	17:Q:83:LYS:NZ	1.90	1.04
2:B:1249:U:OP1	12:L:31:GLY:HA3	1.56	1.04
2:B:1277:G:H4'	14:N:24:MET:HB2	1.37	1.04
2:B:1971:U:O2	4:C:237:ARG:C	1.99	1.04
2:B:2091:C:H1'	2:B:2229:U:C2	1.91	1.04
2:B:2260:C:O2	2:B:2388:A:N3	1.90	1.04
2:B:2263:C:C4'	2:B:2329:U:H4'	1.86	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:V:79:ARG:HD3	13:M:129:THR:OG1	1.55	1.04
5:D:8:LYS:HZ1	16:P:1:SER:N	1.55	1.04
6:E:128:ALA:HB3	6:E:129:PRO:HD3	1.39	1.04
14:N:118:ARG:HH21	26:O:51:ARG:HA	0.92	1.04
2:B:397:U:O5'	25:Z:49:ARG:C	2.01	1.04
2:B:589:U:O4	12:L:48:ARG:CZ	2.06	1.04
2:B:811:U:H1'	2:B:1251:C:C1'	1.85	1.04
2:B:1009:A:O3'	17:Q:61:ILE:HD12	1.58	1.04
2:B:1663:G:OP2	11:K:5:GLN:NE2	1.89	1.04
2:B:1669:A:N6	2:B:2550:G:H21	1.55	1.04
2:B:1783:A:H2'	2:B:2590:A:P	1.93	1.04
2:B:1992:G:C8	2:B:2549:G:O3'	1.94	1.04
2:B:2582:G:P	2:B:2583:G:OP2	2.15	1.04
2:B:2626:C:C2'	2:B:2627:G:H5'	1.87	1.04
3:V:79:ARG:NE	13:M:134:THR:HG23	1.73	1.04
5:D:8:LYS:CE	16:P:1:SER:CB	2.06	1.04
6:E:153:LEU:HD13	6:E:193:VAL:HG21	1.38	1.04
12:L:60:ARG:CD	29:3:7:ARG:CZ	2.35	1.04
17:Q:101:ASP:OD1	18:R:2:TYR:CE2	2.09	1.04
17:Q:110:GLU:HB2	18:R:52:PRO:HG2	1.08	1.04
21:U:84:PHE:CA	32:U:108:HOH:O	2.05	1.04
2:B:9:G:N3	2:B:2895:G:C2	2.26	1.03
2:B:699:A:H3'	2:B:700:G:H5'	1.05	1.03
2:B:747:U:C5'	32:B:3133:HOH:O	2.05	1.03
2:B:858:G:O2'	2:B:2268:A:H1'	1.54	1.03
2:B:1580:A:N3	2:B:1581:G:C1'	2.16	1.03
2:B:1771:C:H5''	2:B:1967:C:O3'	1.57	1.03
2:B:1784:A:H5'	2:B:2590:A:C5'	1.87	1.03
2:B:1797:G:H5'	4:C:253:GLY:CA	1.87	1.03
2:B:1805:A:C4'	4:C:51:ARG:H	1.64	1.03
2:B:2016:U:OP2	19:S:92:ARG:HB3	1.56	1.03
2:B:2284:A:P	27:1:7:LYS:HB3	1.98	1.03
1:A:29:A:H5''	15:O:33:ARG:CD	1.88	1.03
1:A:57:A:H8	7:F:16:MET:HG3	1.01	1.03
2:B:321:U:OP2	6:E:130:LYS:CA	2.06	1.03
2:B:532:A:N6	2:B:2020:A:C4	2.20	1.03
2:B:630:G:H5''	29:3:44:ARG:CD	1.77	1.03
2:B:1257:C:H4'	6:E:77:ILE:HG22	1.41	1.03
2:B:1278:C:C4'	14:N:27:SER:OG	2.06	1.03
2:B:1654:A:C4'	5:D:125:TRP:CE3	2.38	1.03
2:B:1670:C:N3	2:B:1955:U:C6	2.24	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1767:G:H22	2:B:1961:C:N4	1.56	1.03
2:B:1805:A:H4'	4:C:51:ARG:CA	1.89	1.03
2:B:1853:A:H1'	2:B:2237:G:C5	1.93	1.03
2:B:1951:U:C3'	2:B:1990:C:O5'	1.92	1.03
2:B:1958:C:N4	2:B:1987:A:N7	2.05	1.03
2:B:2063:C:C5	2:B:2253:G:O5'	2.08	1.03
2:B:2312:U:O4'	7:F:71:LYS:HB3	1.55	1.03
2:B:2348:U:C5'	27:1:39:ASP:O	2.06	1.03
2:B:2526:G:H21	30:4:1:MET:HB3	1.18	1.03
2:B:2876:G:H5''	16:P:2:ASN:N	1.73	1.03
20:T:73:ARG:NE	28:2:42:LEU:C	2.12	1.03
2:B:5:A:C2	2:B:2899:A:N7	2.26	1.03
2:B:72:U:O4	23:X:58:ASN:ND2	1.90	1.03
2:B:94:A:H5''	23:X:36:GLN:HB3	1.39	1.03
2:B:458:G:H8	28:2:39:ARG:HB2	0.90	1.03
2:B:667:U:C3'	12:L:49:GLY:HA2	1.87	1.03
2:B:1638:C:O2'	2:B:2699:C:C5	2.09	1.03
2:B:1774:C:O3'	2:B:1976:U:C4	2.11	1.03
2:B:1818:U:O2	4:C:152:GLN:O	1.75	1.03
2:B:1953:A:H3'	2:B:1991:U:C4	1.94	1.03
2:B:2720:U:H3	2:B:2873:A:N6	1.55	1.03
3:V:77:VAL:CG2	13:M:134:THR:HG23	1.86	1.03
1:A:29:A:C5'	15:O:33:ARG:HD2	1.89	1.03
2:B:5:A:N3	2:B:2899:A:C6	2.26	1.03
2:B:414:C:O2	2:B:2409:G:C2	2.11	1.03
2:B:452:G:C2	28:2:39:ARG:NH2	2.27	1.03
2:B:809:G:N2	2:B:1254:A:C2	1.90	1.03
2:B:997:G:C5'	17:Q:91:ARG:HG3	1.88	1.03
2:B:1668:A:H2'	2:B:1954:G:H3'	1.35	1.03
2:B:1759:A:C6	2:B:2697:G:H4'	1.92	1.03
2:B:1819:A:C2'	4:C:176:ARG:CB	2.37	1.03
2:B:1826:G:OP1	4:C:242:HIS:CB	2.07	1.03
2:B:1903:G:P	4:C:239:PHE:HA	1.98	1.03
2:B:2005:A:C2	5:D:128:ARG:HD2	1.92	1.03
2:B:2258:C:O2	2:B:2425:A:H5''	1.51	1.03
2:B:2331:G:H4'	22:W:69:GLU:CG	1.89	1.03
6:E:27:LEU:CB	12:L:19:LEU:CD1	1.80	1.03
22:W:24:ARG:HB2	22:W:59:PHE:HB2	1.38	1.03
1:A:43:C:O2	7:F:91:ARG:CG	2.06	1.03
2:B:6:A:N1	2:B:2898:U:C2	2.24	1.03
2:B:686:U:O2	28:2:11:LYS:CA	2.07	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:989:G:H5''	24:Y:12:ALA:CA	1.88	1.03
2:B:1163:G:H5''	18:R:91:GLN:NE2	1.64	1.03
2:B:1338:G:H5''	20:T:18:GLU:O	1.56	1.03
2:B:1368:G:H2'	2:B:1808:A:H61	1.20	1.03
2:B:1636:U:O2'	2:B:1760:C:H1'	1.53	1.03
2:B:1653:G:H3'	5:D:126:ASN:HA	1.07	1.03
2:B:1665:A:OP1	11:K:57:VAL:CG1	1.95	1.03
2:B:1671:U:H5''	2:B:2554:U:C4	1.93	1.03
2:B:1752:C:H5''	2:B:2861:U:O2'	1.56	1.03
2:B:1813:G:H21	4:C:51:ARG:CD	1.70	1.03
2:B:1828:G:C8	2:B:1970:A:O2'	2.10	1.03
2:B:1952:A:N7	2:B:1991:U:H5'	1.74	1.03
2:B:1976:U:H3'	2:B:1979:U:H5'	1.35	1.03
2:B:2002:G:O2'	5:D:133:THR:N	1.92	1.03
2:B:2575:C:C5'	5:D:150:GLN:CA	2.30	1.03
2:B:2814:A:C2'	26:0:39:ARG:CD	2.36	1.03
2:B:2815:C:C4'	26:0:39:ARG:HB3	1.88	1.03
3:V:88:HIS:O	13:M:134:THR:O	1.77	1.03
6:E:23:PHE:HE2	12:L:17:LYS:CD	1.64	1.03
6:E:28:VAL:HG11	12:L:16:GLY:O	1.57	1.03
12:L:60:ARG:C	29:3:7:ARG:NH2	2.17	1.03
17:Q:90:ASP:OD2	18:R:10:LYS:HG2	1.57	1.03
1:A:57:A:H1'	7:F:27:VAL:HG13	1.37	1.02
1:A:59:A:C1'	7:F:25:MET:CB	2.35	1.02
2:B:586:A:H61	2:B:810:U:C4'	1.72	1.02
2:B:623:C:C4'	29:3:61:LEU:CD2	2.37	1.02
2:B:693:A:C4'	2:B:1354:A:C4'	2.36	1.02
2:B:1118:C:C5'	13:M:127:LYS:HE2	1.85	1.02
2:B:1278:C:C4'	14:N:27:SER:CB	2.36	1.02
2:B:1654:A:C2'	5:D:125:TRP:HZ3	1.72	1.02
2:B:1668:A:N3	2:B:2551:C:O2'	1.91	1.02
2:B:2004:G:C4	5:D:142:VAL:CG2	2.40	1.02
2:B:2006:C:H6	5:D:143:PRO:HD3	0.99	1.02
2:B:2270:A:H5'	22:W:17:ALA:O	1.59	1.02
2:B:2271:G:O5'	22:W:18:LYS:HD2	1.50	1.02
2:B:2526:G:N2	30:4:1:MET:HB3	1.73	1.02
2:B:2640:G:C3'	10:J:78:THR:HG21	1.88	1.02
5:D:16:THR:C	16:P:79:VAL:HG12	1.79	1.02
2:B:667:U:C4	12:L:48:ARG:HD3	1.93	1.02
2:B:674:G:H5''	6:E:71:GLY:CA	1.88	1.02
2:B:699:A:C4'	2:B:700:G:H4'	1.89	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:856:G:O2'	22:W:23:LYS:HA	1.56	1.02
2:B:943:A:H5''	32:B:3067:HOH:O	1.56	1.02
2:B:1225:G:H4'	18:R:87:GLN:HG3	1.40	1.02
2:B:1659:G:C5'	32:B:3377:HOH:O	2.07	1.02
2:B:2512:C:H5''	5:D:146:ILE:HG12	1.35	1.02
5:D:16:THR:O	16:P:79:VAL:HB	1.58	1.02
2:B:321:U:OP1	6:E:130:LYS:CE	2.08	1.02
2:B:693:A:H1'	2:B:1354:A:H1'	1.40	1.02
2:B:756:A:N9	32:B:3429:HOH:O	1.83	1.02
2:B:989:G:H8	24:Y:13:ILE:N	1.56	1.02
2:B:1128:G:N2	2:B:2518:A:C3'	2.15	1.02
2:B:1224:U:C2'	18:R:88:GLY:N	2.08	1.02
2:B:1654:A:O2'	5:D:125:TRP:CZ3	2.03	1.02
2:B:1655:A:C5	5:D:144:GLY:O	1.91	1.02
2:B:1938:A:O2'	2:B:2591:C:O3'	1.76	1.02
2:B:1974:C:C2	2:B:1978:A:C6	2.47	1.02
2:B:2285:C:H41	27:1:24:LYS:HD3	1.24	1.02
2:B:2428:G:P	2:B:2448:A:N3	2.32	1.02
2:B:2484:G:C2'	13:M:44:ARG:CZ	2.18	1.02
6:E:179:SER:C	12:L:13:LYS:HZ3	1.66	1.02
12:L:60:ARG:CD	29:3:7:ARG:NE	2.21	1.02
2:B:483:A:C2'	21:U:46:LYS:HE3	1.90	1.02
2:B:588:U:H5''	12:L:27:LEU:CA	1.88	1.02
2:B:592:A:C5'	29:3:1:PRO:CA	2.21	1.02
2:B:671:C:H5''	12:L:39:LYS:CB	1.88	1.02
2:B:728:G:C3'	4:C:16:VAL:HG11	1.89	1.02
2:B:944:C:P	32:B:3067:HOH:O	2.16	1.02
2:B:1196:C:C2'	2:B:1197:G:C8	2.43	1.02
2:B:1248:G:N7	17:Q:1:ALA:CB	2.22	1.02
2:B:1371:G:H4'	2:B:1810:A:H1'	1.03	1.02
2:B:1566:A:C4'	4:C:58:LYS:HG3	1.83	1.02
2:B:1656:C:N3	5:D:144:GLY:O	1.92	1.02
2:B:1768:C:O4'	2:B:1961:C:C6	2.10	1.02
2:B:1771:C:OP1	2:B:1968:G:C8	2.12	1.02
2:B:2022:U:C4	32:B:3303:HOH:O	2.13	1.02
2:B:2245:U:H5''	2:B:2431:U:O4	1.25	1.02
2:B:2393:U:OP1	29:3:31:ILE:CD1	2.07	1.02
6:E:181:ILE:HG23	12:L:14:LYS:O	1.59	1.02
12:L:60:ARG:HD3	29:3:7:ARG:CD	1.82	1.02
1:A:30:C:H2'	7:F:8:LYS:HE2	1.38	1.02
1:A:31:C:H4'	7:F:8:LYS:CG	1.89	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:125:A:H5'	28:2:19:ARG:NH2	1.71	1.02
2:B:412:A:C5	2:B:2411:A:C2	2.48	1.02
2:B:414:C:N3	2:B:2409:G:C5	2.27	1.02
2:B:466:A:H5'	28:2:44:VAL:CG1	1.84	1.02
2:B:588:U:C5'	12:L:27:LEU:HB3	1.90	1.02
2:B:588:U:H4'	12:L:29:LYS:N	1.74	1.02
2:B:654:A:H2	29:3:18:LYS:NZ	1.39	1.02
2:B:667:U:C4	12:L:48:ARG:CD	2.42	1.02
2:B:857:G:H5''	22:W:55:ASP:HB2	1.34	1.02
2:B:1819:A:H3'	4:C:176:ARG:HE	1.21	1.02
2:B:1825:U:O2'	4:C:249:VAL:CB	2.08	1.02
2:B:2065:C:H1'	2:B:2247:A:N6	1.54	1.02
2:B:2198:A:O4'	9:H:29:PHE:CE2	2.04	1.02
2:B:2245:U:C1'	2:B:2442:C:N4	2.23	1.02
2:B:2347:C:O2'	27:1:39:ASP:CB	2.07	1.02
2:B:2531:A:C8	8:G:175:LYS:CG	2.42	1.02
2:B:2899:A:H5'	10:J:137:PRO:HD3	1.03	1.02
1:A:59:A:OP1	7:F:160:LYS:CE	2.07	1.01
1:A:88:C:C6	13:M:20:LEU:N	2.27	1.01
2:B:38:A:N3	6:E:46:GLN:NE2	1.94	1.01
2:B:564:C:C2'	2:B:578:G:N1	1.96	1.01
2:B:667:U:C4	12:L:48:ARG:CG	2.42	1.01
2:B:671:C:C5	12:L:39:LYS:CD	2.34	1.01
2:B:2016:U:C6	26:0:2:VAL:HA	1.93	1.01
2:B:2197:U:H3	2:B:2225:A:H5''	1.25	1.01
2:B:2350:C:C2'	29:3:38:LYS:NZ	2.21	1.01
1:A:37:C:O2	15:O:69:ASP:N	1.93	1.01
2:B:320:A:C2'	6:E:131:THR:HG21	1.85	1.01
2:B:412:A:C6	2:B:2411:A:N3	2.28	1.01
2:B:458:G:H1'	28:2:41:ARG:CZ	1.90	1.01
2:B:465:G:C5'	28:2:12:ARG:HH12	1.71	1.01
2:B:671:C:C5	12:L:39:LYS:CE	2.39	1.01
2:B:1294:U:O3'	14:N:71:ARG:CB	2.08	1.01
2:B:1638:C:H5''	2:B:2710:C:O2	1.60	1.01
2:B:1652:A:H2	5:D:141:ARG:O	1.27	1.01
2:B:1654:A:H2'	2:B:2512:C:OP1	1.57	1.01
2:B:1774:C:O3'	2:B:1976:U:O4	1.75	1.01
2:B:2216:G:C5'	25:Z:44:PHE:CD1	2.29	1.01
2:B:2280:G:H1'	2:B:2327:A:O2'	1.54	1.01
2:B:2331:G:C4'	22:W:69:GLU:OE1	2.08	1.01
2:B:2757:A:C2	8:G:66:THR:CG2	2.31	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2899:A:C4'	10:J:136:GLN:HB2	1.90	1.01
3:V:89:ILE:CG2	13:M:133:LYS:HB3	1.88	1.01
6:E:26:ALA:HA	12:L:18:ARG:NE	1.37	1.01
1:A:57:A:OP1	7:F:16:MET:CB	2.05	1.01
1:A:81:G:H4'	2:B:919:U:H5''	1.03	1.01
2:B:56:A:H4'	20:T:76:ARG:N	1.74	1.01
2:B:669:G:O5'	12:L:47:ARG:HD3	1.55	1.01
2:B:682:G:O3'	28:2:26:ASN:ND2	1.94	1.01
2:B:687:C:C4'	28:2:6:GLN:HB3	1.91	1.01
2:B:1225:G:N2	18:R:85:LYS:HZ3	1.44	1.01
2:B:1580:A:C5	2:B:1581:G:N3	1.97	1.01
2:B:1666:G:N3	2:B:2559:C:O2'	1.93	1.01
2:B:1673:G:C2'	2:B:1956:U:H5''	1.78	1.01
2:B:1795:C:O2'	4:C:251:THR:OG1	1.79	1.01
2:B:1853:A:N7	2:B:2236:U:OP2	1.94	1.01
2:B:2261:C:C2'	2:B:2327:A:N1	2.23	1.01
2:B:2595:G:O6	4:C:235:GLU:HB3	1.60	1.01
3:V:86:LEU:CD1	13:M:134:THR:HG22	1.90	1.01
6:E:28:VAL:C	12:L:19:LEU:CD2	2.32	1.01
13:M:3:GLN:C	13:M:5:LYS:H	1.58	1.01
17:Q:111:LYS:H	18:R:52:PRO:HB3	1.25	1.01
24:Y:10:ARG:HE	24:Y:31:ILE:HG13	1.21	1.01
2:B:45:G:H4'	2:B:46:G:C1'	1.90	1.01
2:B:587:C:N4	12:L:41:ARG:HG3	1.65	1.01
2:B:671:C:C5'	12:L:39:LYS:HE3	1.90	1.01
2:B:693:A:H4'	2:B:1354:A:H4'	1.01	1.01
2:B:1223:G:C2'	18:R:78:ARG:NH2	1.98	1.01
2:B:1655:A:N3	5:D:146:ILE:HA	1.71	1.01
2:B:1806:C:O4'	4:C:50:THR:CB	2.08	1.01
2:B:1826:G:H5''	4:C:242:HIS:HB2	1.38	1.01
2:B:2281:A:C1'	2:B:2388:A:N1	2.23	1.01
3:V:76:ASP:C	13:M:133:LYS:HA	1.77	1.01
6:E:30:GLN:CB	12:L:19:LEU:CB	2.37	1.01
14:N:98:LEU:HD11	26:0:53:VAL:CA	1.90	1.01
1:A:49:C:C6	15:O:67:ASN:CB	2.44	1.01
2:B:458:G:H1'	28:2:41:ARG:NH2	1.76	1.01
2:B:587:C:OP2	12:L:36:LYS:HB2	1.60	1.01
2:B:671:C:C6	12:L:39:LYS:HE3	1.91	1.01
2:B:958:U:C5	13:M:16:ARG:HD2	1.94	1.01
2:B:1131:G:N1	2:B:2024:G:C2	2.26	1.01
2:B:1997:C:O2'	2:B:2548:U:H6	1.43	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2199:A:C8	2:B:2225:A:N9	2.27	1.01
2:B:2507:C:N3	2:B:2583:G:N3	2.07	1.01
2:B:2575:C:H5'	5:D:151:THR:CG2	1.91	1.01
2:B:2820:A:OP1	14:N:5:LYS:CD	2.08	1.01
3:V:88:HIS:HD2	13:M:136:MET:HG3	0.91	1.01
6:E:181:ILE:HG21	12:L:15:ALA:HA	1.38	1.01
2:B:94:A:C3'	23:X:36:GLN:CB	2.39	1.00
2:B:321:U:C4	6:E:129:PRO:CG	2.43	1.00
2:B:469:G:O6	28:2:40:ALA:HA	1.59	1.00
2:B:557:C:O2'	10:J:47:HIS:O	1.79	1.00
2:B:587:C:C4	12:L:38:GLN:N	1.97	1.00
2:B:654:A:C2	29:3:18:LYS:CD	2.44	1.00
2:B:668:A:N1	12:L:48:ARG:NH1	2.02	1.00
2:B:851:C:O2'	24:Y:45:GLY:N	1.93	1.00
2:B:1124:G:C4'	30:4:20:ASP:C	2.28	1.00
2:B:1128:G:N3	2:B:2517:C:C3'	2.23	1.00
2:B:1129:A:N3	2:B:2517:C:O4'	1.94	1.00
2:B:1133:A:N7	2:B:2026:U:O2'	1.77	1.00
2:B:1338:G:P	20:T:18:GLU:CA	2.41	1.00
2:B:1637:A:C4	2:B:2697:G:O2'	2.13	1.00
2:B:1652:A:C2'	5:D:123:LYS:N	1.95	1.00
2:B:1902:C:O3'	4:C:239:PHE:HA	0.84	1.00
2:B:1971:U:C2	4:C:237:ARG:HB3	1.93	1.00
2:B:1999:C:O3'	11:K:31:ARG:HD3	1.60	1.00
2:B:2000:C:C5'	11:K:32:TYR:OH	2.09	1.00
2:B:2065:C:C4'	2:B:2258:C:N4	2.20	1.00
2:B:2515:C:O3'	32:B:3028:HOH:O	1.79	1.00
2:B:2531:A:O4'	8:G:174:LYS:O	1.79	1.00
2:B:2539:C:O4'	30:4:2:LYS:HE2	1.55	1.00
19:S:41:LYS:HD2	26:0:21:LEU:HB2	1.23	1.00
2:B:96:C:H1'	23:X:41:HIS:C	1.86	1.00
2:B:593:U:C1'	29:3:2:LYS:HD3	1.91	1.00
2:B:812:C:N4	12:L:33:ARG:HB2	1.71	1.00
2:B:1653:G:C3'	5:D:126:ASN:CA	2.37	1.00
2:B:1765:U:N3	2:B:1958:C:O2	1.95	1.00
2:B:1828:G:O3'	2:B:1970:A:C5	2.09	1.00
2:B:1938:A:C5	2:B:2591:C:H5'	1.96	1.00
2:B:2000:C:C5'	11:K:32:TYR:CZ	2.43	1.00
2:B:2018:G:C5'	26:0:5:ASN:ND2	2.24	1.00
2:B:2092:U:C4	2:B:2228:G:O6	2.13	1.00
2:B:2311:A:O3'	7:F:71:LYS:CG	2.08	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:V:79:ARG:NE	13:M:134:THR:CG2	2.24	1.00
3:V:82:TYR:HB3	13:M:34:LYS:CD	1.90	1.00
11:K:66:LYS:HG2	11:K:80:ASP:HA	1.40	1.00
17:Q:110:GLU:CB	18:R:52:PRO:HG2	1.90	1.00
20:T:73:ARG:NH1	28:2:43:THR:O	1.93	1.00
1:A:57:A:H2'	7:F:27:VAL:HA	1.00	1.00
1:A:59:A:N9	7:F:25:MET:CB	1.99	1.00
1:A:90:C:C2'	13:M:21:ALA:CB	2.40	1.00
2:B:15:G:O3'	26:0:17:SER:CB	2.10	1.00
2:B:24:G:H5''	19:S:8:ARG:HH22	1.24	1.00
2:B:667:U:O4	12:L:48:ARG:HD3	0.83	1.00
2:B:810:U:O4'	2:B:1254:A:C4	2.14	1.00
2:B:1296:G:O3'	2:B:2709:G:O2'	1.78	1.00
2:B:1365:A:O3'	25:Z:1:MET:HE3	1.60	1.00
2:B:1771:C:C5'	2:B:1968:G:H5'	1.92	1.00
2:B:1938:A:H1'	2:B:2591:C:H4'	1.41	1.00
2:B:1997:C:O2'	2:B:2547:A:H2'	1.60	1.00
2:B:2069:G:H8	2:B:2433:A:OP2	1.44	1.00
2:B:2262:U:H4'	2:B:2329:U:C2	1.95	1.00
2:B:2280:G:H4'	2:B:2327:A:H4'	1.43	1.00
2:B:2312:U:H5'	7:F:71:LYS:HA	1.41	1.00
2:B:2507:C:C2	2:B:2583:G:N3	2.30	1.00
2:B:2582:G:C2	2:B:2583:G:H1'	1.78	1.00
18:R:78:ARG:HB3	18:R:87:GLN:HA	1.42	1.00
20:T:73:ARG:CD	28:2:42:LEU:CG	1.98	1.00
1:A:57:A:C2'	7:F:27:VAL:CG1	2.38	1.00
2:B:483:A:C5'	21:U:45:GLN:C	2.35	1.00
2:B:1664:A:C3'	11:K:40:LYS:HG2	1.76	1.00
2:B:1773:A:C2	2:B:1975:G:C6	2.50	1.00
2:B:2002:G:C2'	5:D:132:ALA:HB3	1.79	1.00
2:B:2461:A:C5'	13:M:78:LEU:CD1	2.32	1.00
2:B:2658:C:H4'	8:G:157:LYS:HZ1	1.22	1.00
2:B:2867:G:C5	16:P:20:ARG:CD	2.44	1.00
1:A:57:A:C2'	7:F:28:PRO:HD2	1.90	1.00
2:B:789:A:H5''	28:2:4:THR:HG23	1.03	1.00
2:B:1620:G:N7	32:B:3079:HOH:O	1.82	1.00
2:B:1855:U:C2	2:B:2234:G:C3'	2.38	1.00
2:B:1996:C:O2	2:B:2549:G:C5	2.15	1.00
2:B:2270:A:C8	22:W:18:LYS:HB2	1.96	1.00
2:B:2330:G:H1'	22:W:36:ILE:HD11	1.02	1.00
2:B:2574:G:H2'	5:D:151:THR:CG2	1.91	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:197:A:O2'	2:B:2443:C:H4'	0.83	1.00
2:B:659:G:C3'	6:E:97:ASN:HD21	1.73	1.00
2:B:1339:G:O2'	2:B:1394:U:C5'	2.09	1.00
2:B:1889:A:C6	2:B:2236:U:H6	1.76	1.00
2:B:2645:G:C4'	2:B:2732:G:H2'	1.75	1.00
3:V:79:ARG:HD3	13:M:129:THR:CB	1.87	1.00
2:B:565:C:C6	2:B:578:G:O6	2.14	1.00
2:B:588:U:H5''	12:L:27:LEU:HB2	1.43	1.00
2:B:593:U:H4'	29:3:2:LYS:HZ3	1.24	1.00
2:B:1163:G:H5''	18:R:91:GLN:HE22	1.17	1.00
2:B:1657:U:O4	5:D:130:GLN:HG3	1.61	1.00
2:B:1659:G:H5''	32:B:3377:HOH:O	1.59	1.00
2:B:1999:C:H4'	11:K:31:ARG:HA	1.43	1.00
2:B:2461:A:C4'	13:M:78:LEU:HD11	1.92	1.00
2:B:2848:G:H2'	16:P:96:LEU:CG	1.92	1.00
17:Q:101:ASP:OD1	18:R:2:TYR:CZ	2.13	1.00
2:B:6:A:N6	2:B:2897:U:C4	2.28	0.99
2:B:7:G:O6	2:B:2897:U:C4	2.14	0.99
2:B:465:G:C4'	28:2:12:ARG:HH12	1.69	0.99
2:B:516:C:H5'	2:B:1262:A:H4'	1.01	0.99
2:B:570:G:O3'	2:B:571:U:C1'	2.08	0.99
2:B:587:C:N1	12:L:38:GLN:CA	2.11	0.99
2:B:686:U:O2	28:2:11:LYS:N	1.95	0.99
2:B:989:G:O4'	24:Y:12:ALA:HB3	1.60	0.99
2:B:1133:A:N1	2:B:2026:U:O2	1.93	0.99
2:B:1774:C:H4'	2:B:1976:U:O4	1.59	0.99
2:B:1783:A:N9	2:B:2590:A:OP2	1.95	0.99
2:B:1796:U:C5'	4:C:251:THR:HG21	1.81	0.99
2:B:1971:U:C4	4:C:239:PHE:CZ	2.50	0.99
2:B:2378:A:N3	15:O:92:PHE:CE1	2.30	0.99
5:D:17:GLU:HG3	16:P:80:VAL:HG23	1.01	0.99
19:S:15:GLN:OE1	26:0:16:ARG:CG	2.10	0.99
28:2:3:ARG:N	32:2:96:HOH:O	1.95	0.99
1:A:56:G:N9	7:F:24:VAL:HG11	1.77	0.99
1:A:58:A:H5'	7:F:28:PRO:HD3	1.42	0.99
2:B:24:G:H5''	19:S:8:ARG:NH2	1.77	0.99
2:B:465:G:H4'	28:2:12:ARG:NH2	1.76	0.99
2:B:482:A:H5''	21:U:43:LYS:CE	1.91	0.99
2:B:551:G:OP2	10:J:2:LYS:HE2	1.58	0.99
2:B:1338:G:H3'	20:T:18:GLU:CG	1.91	0.99
2:B:1671:U:C5'	2:B:2554:U:C5	2.45	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1783:A:O2'	2:B:2590:A:O4'	1.81	0.99
2:B:1938:A:C2'	2:B:2591:C:H4'	1.90	0.99
2:B:2478:A:OP2	30:4:32:LYS:HG3	1.61	0.99
2:B:23:G:O2'	19:S:77:ASP:OD2	1.80	0.99
2:B:570:G:C2	2:B:2499:C:H5''	1.96	0.99
2:B:587:C:C1'	12:L:38:GLN:CB	2.36	0.99
2:B:671:C:C6	12:L:39:LYS:NZ	2.22	0.99
2:B:1663:G:O4'	11:K:5:GLN:N	1.96	0.99
2:B:2256:G:N2	2:B:2449:U:O3'	1.94	0.99
2:B:2597:G:C5'	4:C:234:GLY:HA2	1.92	0.99
18:R:53:PHE:HB3	18:R:55:ASP:N	1.76	0.99
1:A:56:G:N3	7:F:24:VAL:HG22	1.76	0.99
1:A:58:A:H2	7:F:25:MET:CE	1.75	0.99
2:B:9:G:C2	2:B:2895:G:C4	2.50	0.99
2:B:86:G:N2	23:X:45:GLN:CG	2.19	0.99
2:B:452:G:N2	28:2:39:ARG:HH22	1.59	0.99
2:B:971:G:OP1	2:B:974:G:N3	1.96	0.99
2:B:2063:C:O2'	2:B:2254:C:O3'	1.79	0.99
6:E:180:LEU:C	12:L:13:LYS:CG	2.30	0.99
1:A:24:G:O6	7:F:22:ASN:O	1.80	0.99
2:B:516:C:H5'	2:B:1262:A:C4'	1.92	0.99
2:B:699:A:H1'	2:B:1634:A:C6	1.96	0.99
2:B:1953:A:H8	2:B:1991:U:H5	1.11	0.99
6:E:23:PHE:HD2	12:L:17:LYS:HD2	1.25	0.99
2:B:2091:C:H2'	2:B:2228:G:N1	1.57	0.99
3:V:84:PRO:HG3	13:M:127:LYS:CD	1.92	0.99
10:J:11:VAL:HG13	10:J:12:LYS:H	1.25	0.99
14:N:44:LEU:HD23	14:N:113:ILE:HD12	1.44	0.99
2:B:654:A:C6	29:3:18:LYS:HG2	1.96	0.99
2:B:1759:A:C2	2:B:2697:G:C1'	2.46	0.99
2:B:1799:G:O2'	4:C:181:ARG:NH2	1.95	0.99
2:B:2091:C:C2'	2:B:2228:G:H1	1.75	0.99
2:B:2575:C:O4'	5:D:151:THR:CG2	2.11	0.99
2:B:2633:G:H1'	5:D:62:LYS:HG3	1.40	0.99
5:D:154:LYS:HZ2	5:D:156:PHE:HA	1.27	0.99
14:N:121:LYS:N	26:0:51:ARG:HG2	1.78	0.99
19:S:41:LYS:CD	26:0:21:LEU:HB2	1.75	0.99
2:B:15:G:O3'	26:0:17:SER:CA	2.11	0.99
2:B:201:C:H4'	2:B:251:A:N1	1.76	0.99
2:B:467:G:C3'	28:2:34:ARG:HH12	1.58	0.99
2:B:518:G:O2'	19:S:14:ALA:HB1	1.61	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:532:A:C6	2:B:2020:A:C1'	2.24	0.99
2:B:1674:G:C2	2:B:1956:U:O4	2.16	0.99
2:B:1938:A:OP1	2:B:1982:U:C4	2.16	0.99
2:B:2069:G:N2	2:B:2245:U:H5	1.56	0.99
2:B:2344:U:H3'	27:1:37:LYS:HG3	1.44	0.99
13:M:3:GLN:H	13:M:4:PRO:CD	1.74	0.99
2:B:728:G:C4'	4:C:16:VAL:CG2	2.33	0.99
2:B:811:U:C2	2:B:1251:C:N1	2.30	0.99
2:B:1417:C:C5	2:B:1418:G:C4	2.39	0.99
2:B:1417:C:N1	2:B:1418:G:N9	2.09	0.99
2:B:1755:A:N6	2:B:2695:U:H5'	1.77	0.99
2:B:2312:U:O4'	7:F:71:LYS:CB	2.11	0.99
2:B:130:C:O2	32:B:3272:HOH:O	1.80	0.99
2:B:463:G:C6	28:2:43:THR:HG21	1.97	0.99
2:B:654:A:N3	29:3:18:LYS:NZ	2.04	0.99
2:B:989:G:H5''	24:Y:12:ALA:N	1.77	0.99
2:B:1827:U:H2'	2:B:1970:A:H2'	1.41	0.99
2:B:1997:C:H2'	2:B:2548:U:O5'	1.62	0.99
2:B:1999:C:C4'	11:K:31:ARG:HA	1.92	0.99
2:B:2016:U:P	32:B:3311:HOH:O	2.20	0.99
2:B:2092:U:C2	2:B:2228:G:O6	2.15	0.99
2:B:2270:A:C8	22:W:20:LEU:HB3	1.92	0.99
2:B:2640:G:O2'	10:J:78:THR:HG21	1.61	0.99
2:B:750:A:OP1	2:B:1615:C:C4	1.82	0.98
2:B:780:G:H2'	32:B:3401:HOH:O	1.63	0.98
2:B:1368:G:H2'	2:B:1808:A:C6	1.98	0.98
2:B:1752:C:H5''	2:B:2861:U:C3'	1.91	0.98
2:B:1888:G:O4'	2:B:2234:G:O2'	1.80	0.98
1:A:56:G:O5'	7:F:13:LYS:NZ	1.95	0.98
1:A:57:A:C6	7:F:24:VAL:HB	1.97	0.98
2:B:1654:A:O2'	2:B:2512:C:OP1	1.81	0.98
2:B:1664:A:C8	11:K:23:LYS:HB2	1.99	0.98
2:B:2245:U:O4	2:B:2442:C:C2	2.15	0.98
16:P:25:VAL:HG13	16:P:88:ARG:H	1.25	0.98
24:Y:9:THR:HB	24:Y:54:VAL:HA	1.45	0.98
2:B:1252:G:N7	17:Q:35:PHE:CD1	2.27	0.98
2:B:1266:G:H22	19:S:96:ILE:HG12	1.26	0.98
2:B:2065:C:H1'	2:B:2247:A:C6	1.72	0.98
3:V:84:PRO:HG3	13:M:127:LYS:NZ	1.73	0.98
5:D:170:VAL:HG13	5:D:171:THR:H	1.27	0.98
6:E:115:GLN:HB3	12:L:10:GLU:HB3	1.42	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:24:G:C2	19:S:78:GLU:OE1	2.16	0.98
2:B:57:C:H5''	20:T:78:SER:HG	1.17	0.98
2:B:414:C:C2	2:B:2409:G:C2	2.51	0.98
2:B:1655:A:O2'	2:B:2512:C:H6	1.42	0.98
2:B:1839:G:C1'	2:B:1927:A:C4	2.42	0.98
2:B:2246:G:C5'	2:B:2444:G:O6	2.11	0.98
2:B:2538:C:O2'	30:4:2:LYS:NZ	1.95	0.98
2:B:2876:G:C5'	16:P:2:ASN:O	2.09	0.98
2:B:587:C:H42	12:L:41:ARG:HG3	0.82	0.98
2:B:752:A:H3'	32:2:95:HOH:O	1.63	0.98
2:B:2022:U:N3	32:B:3305:HOH:O	1.95	0.98
2:B:2068:U:C5	2:B:2394:C:O2	2.14	0.98
2:B:2578:G:N7	5:D:148:GLN:O	1.96	0.98
2:B:24:G:C1'	19:S:78:GLU:CB	2.41	0.98
2:B:45:G:O3'	2:B:46:G:C1'	2.10	0.98
2:B:77:G:H5'	23:X:52:ARG:HA	1.42	0.98
2:B:518:G:H4'	19:S:15:GLN:N	1.77	0.98
2:B:997:G:H5'	17:Q:91:ARG:HG3	1.44	0.98
2:B:1417:C:C3'	2:B:1418:G:C8	2.46	0.98
2:B:1665:A:H61	2:B:2549:G:N2	1.61	0.98
2:B:4:U:N3	2:B:2900:A:C6	2.30	0.98
2:B:570:G:N1	2:B:2499:C:OP1	1.96	0.98
2:B:654:A:C2	29:3:18:LYS:CE	2.42	0.98
2:B:1030:C:OP1	13:M:118:LYS:CA	2.10	0.98
2:B:1947:C:C4	2:B:1987:A:H5'	1.97	0.98
2:B:2065:C:C2	2:B:2246:G:C5	2.51	0.98
2:B:2090:A:C2	2:B:2091:C:O4'	2.15	0.98
2:B:2531:A:C8	8:G:175:LYS:CB	2.45	0.98
12:L:59:ARG:O	29:3:11:LYS:CE	2.12	0.98
12:L:77:ILE:HB	12:L:110:VAL:HG22	1.46	0.98
25:Z:3:LYS:HB2	25:Z:51:VAL:HG21	1.45	0.98
2:B:413:C:N3	2:B:2410:G:O6	1.94	0.98
2:B:1118:C:C4'	13:M:127:LYS:HE2	1.93	0.98
2:B:1650:A:C2'	14:N:2:ARG:HH11	1.77	0.98
2:B:2009:A:OP1	2:B:2823:A:C4	2.17	0.98
2:B:2048:G:H4'	2:B:2823:A:C6	1.99	0.98
2:B:2331:G:H4'	22:W:69:GLU:OE1	1.62	0.98
6:E:30:GLN:CA	12:L:19:LEU:HD23	1.92	0.98
10:J:39:LYS:NZ	17:Q:66:ALA:HB1	1.79	0.98
2:B:1677:A:N1	2:B:1954:G:C6	2.31	0.98
2:B:1783:A:C4	2:B:2590:A:OP2	2.17	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2003:A:C1'	5:D:135:GLY:HA3	1.94	0.98
2:B:2245:U:H2'	2:B:2442:C:H41	1.20	0.98
2:B:2484:G:O3'	13:M:44:ARG:HD3	1.46	0.98
2:B:2515:C:H4'	32:B:3028:HOH:O	1.63	0.98
2:B:2575:C:H5'	5:D:150:GLN:C	1.88	0.98
2:B:2582:G:N1	2:B:2583:G:C4	2.30	0.98
3:V:86:LEU:HG	13:M:134:THR:HG22	1.01	0.98
2:B:137:U:H2'	20:T:4:GLU:OE2	1.64	0.98
2:B:682:G:H4'	28:2:26:ASN:CG	1.88	0.98
2:B:1827:U:O2	2:B:1900:A:H1'	1.62	0.98
2:B:1999:C:O2	11:K:3:GLN:CG	2.11	0.98
2:B:2597:G:H5''	4:C:234:GLY:HA2	1.00	0.98
2:B:197:A:C8	2:B:2444:G:H5'	1.99	0.97
2:B:218:A:N6	2:B:430:A:C5	2.06	0.97
2:B:529:A:C2	2:B:2023:C:OP2	2.16	0.97
2:B:1417:C:C4	2:B:1418:G:N1	2.22	0.97
2:B:1655:A:C8	5:D:146:ILE:HG13	1.99	0.97
2:B:1945:G:C4	2:B:1986:C:H5'	1.99	0.97
2:B:2070:A:C4	2:B:2245:U:C5	2.41	0.97
2:B:2347:C:C2'	27:1:39:ASP:HB2	1.94	0.97
2:B:2637:U:H4'	5:D:43:ASP:HB3	1.44	0.97
20:T:73:ARG:CB	28:2:42:LEU:CD2	2.22	0.97
2:B:144:A:OP1	20:T:37:ASP:OD1	1.81	0.97
2:B:397:U:H5''	25:Z:49:ARG:HB3	0.97	0.97
2:B:458:G:C8	28:2:39:ARG:CA	2.47	0.97
2:B:662:G:OP1	12:L:24:GLY:HA2	1.64	0.97
2:B:958:U:C4	13:M:16:ARG:CD	2.47	0.97
2:B:1128:G:N2	2:B:2518:A:H3'	1.40	0.97
2:B:1567:G:O2'	4:C:32:LEU:HD22	1.62	0.97
2:B:1653:G:N2	5:D:141:ARG:H	1.61	0.97
2:B:1653:G:H21	5:D:141:ARG:N	1.62	0.97
2:B:1771:C:C5'	2:B:1967:C:O3'	2.11	0.97
2:B:1805:A:H4'	4:C:51:ARG:H	1.03	0.97
2:B:1815:A:C4'	4:C:85:ASN:HB3	1.94	0.97
2:B:2270:A:H3'	22:W:18:LYS:HD3	1.45	0.97
2:B:2311:A:H1'	7:F:74:ALA:O	1.63	0.97
2:B:2459:A:H2'	13:M:76:LYS:O	1.21	0.97
20:T:71:GLY:C	28:2:35:ARG:HE	1.70	0.97
2:B:416:U:O4	2:B:2407:A:H2	1.21	0.97
2:B:514:A:C2	2:B:1260:A:O2'	2.17	0.97
2:B:855:G:H21	22:W:23:LYS:HE2	1.28	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1128:G:H22	2:B:2518:A:H3'	0.86	0.97
2:B:1938:A:H1'	2:B:2591:C:C4'	1.93	0.97
13:M:28:PHE:HB3	13:M:102:LEU:HD21	1.44	0.97
1:A:43:C:N3	7:F:91:ARG:HD3	1.78	0.97
2:B:589:U:P	12:L:27:LEU:HD22	2.04	0.97
2:B:1338:G:H3'	20:T:18:GLU:HG2	1.47	0.97
2:B:1782:U:OP1	2:B:2588:G:O2'	1.54	0.97
2:B:2003:A:C2'	5:D:139:SER:HB2	1.94	0.97
2:B:2006:C:H6	5:D:143:PRO:CD	1.76	0.97
2:B:2899:A:C4'	10:J:136:GLN:H	1.75	0.97
6:E:26:ALA:H	12:L:18:ARG:HE	1.06	0.97
1:A:56:G:C2	7:F:24:VAL:HG22	1.99	0.97
2:B:94:A:C5'	23:X:36:GLN:CB	2.42	0.97
2:B:810:U:H5''	2:B:1253:A:H5'	1.45	0.97
2:B:1654:A:H8	5:D:121:THR:HB	1.24	0.97
2:B:1666:G:C2	2:B:2559:C:C1'	2.43	0.97
2:B:1799:G:N2	4:C:153:LEU:CA	2.28	0.97
2:B:2244:U:H2'	2:B:2433:A:H3'	1.01	0.97
2:B:2575:C:H5''	5:D:150:GLN:C	1.89	0.97
2:B:2633:G:H1'	5:D:62:LYS:CG	1.93	0.97
3:V:79:ARG:CD	13:M:129:THR:CB	2.41	0.97
14:N:10:LEU:H	14:N:17:ARG:HH12	1.12	0.97
16:P:28:LYS:HD3	16:P:44:GLY:H	1.29	0.97
1:A:32:U:P	7:F:4:HIS:CD2	2.56	0.97
2:B:197:A:C1'	2:B:2443:C:O3'	2.12	0.97
2:B:505:A:H2	32:B:3430:HOH:O	1.45	0.97
2:B:566:U:C1'	2:B:577:G:C8	2.47	0.97
2:B:566:U:O4'	2:B:577:G:C8	2.17	0.97
2:B:958:U:C6	13:M:16:ARG:CG	2.45	0.97
2:B:1339:G:C5'	2:B:1393:A:C4	2.48	0.97
2:B:1599:U:H5''	20:T:81:LYS:NZ	1.79	0.97
2:B:1889:A:N7	2:B:2235:G:C3'	2.17	0.97
2:B:2000:C:P	11:K:31:ARG:HD3	2.02	0.97
2:B:2258:C:C2	2:B:2425:A:C5'	2.46	0.97
2:B:2459:A:H1'	13:M:76:LYS:HG2	0.97	0.97
2:B:2748:A:C4'	8:G:69:ALA:CB	2.43	0.97
2:B:2887:A:C4	26:O:27:LEU:CD1	2.35	0.97
3:V:82:TYR:HB3	13:M:34:LYS:HD2	0.97	0.97
11:K:64:ARG:H	11:K:83:ALA:HB3	1.26	0.97
2:B:84:A:C5'	21:U:91:LYS:NZ	2.28	0.97
2:B:201:C:C4'	2:B:251:A:N1	2.15	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:220:G:H4'	2:B:234:U:C1'	1.94	0.97
2:B:675:A:OP1	6:E:58:LYS:CE	2.12	0.97
2:B:1659:G:H1'	5:D:134:HIS:ND1	1.79	0.97
2:B:1939:U:O3'	2:B:2592:G:C3'	1.90	0.97
2:B:2286:G:O6	27:1:33:LEU:CD1	2.12	0.97
2:B:2514:U:O4'	5:D:156:PHE:CZ	2.17	0.97
2:B:94:A:H5''	23:X:36:GLN:CB	1.93	0.97
2:B:539:G:H5'	10:J:7:LYS:H	1.29	0.97
2:B:811:U:C4	2:B:1251:C:N4	2.33	0.97
2:B:1417:C:C2'	2:B:1418:G:C8	2.46	0.97
2:B:1666:G:H1'	2:B:2559:C:C2'	1.94	0.97
2:B:1669:A:C1'	2:B:2558:C:H1'	1.95	0.97
2:B:1815:A:C3'	4:C:85:ASN:HB3	1.73	0.97
2:B:2007:U:C4'	5:D:162:ALA:CB	2.43	0.97
2:B:2478:A:H5'	30:4:32:LYS:HD2	1.09	0.97
2:B:5:A:H1'	2:B:2899:A:H2	1.18	0.97
2:B:76:C:O2'	23:X:52:ARG:CA	2.13	0.97
2:B:192:C:C2'	2:B:802:A:O2'	2.12	0.97
2:B:586:A:H61	2:B:810:U:H4'	1.26	0.97
2:B:1128:G:N2	2:B:2517:C:O3'	1.95	0.97
2:B:1314:C:H1'	2:B:1604:C:H4'	1.45	0.97
2:B:1671:U:H5'	2:B:2554:U:C5	1.99	0.97
2:B:2244:U:H2'	2:B:2433:A:C3'	1.76	0.97
2:B:2331:G:C1'	22:W:69:GLU:OE2	2.12	0.97
2:B:2345:G:OP2	27:1:45:HIS:ND1	1.98	0.97
2:B:2746:U:C4'	8:G:137:LYS:O	2.13	0.97
2:B:396:G:H4'	25:Z:3:LYS:HZ1	0.87	0.97
2:B:482:A:C5'	21:U:43:LYS:NZ	2.26	0.97
2:B:858:G:O3'	2:B:2268:A:O2'	1.81	0.97
2:B:1341:G:O4'	20:T:84:TYR:CE1	2.17	0.97
2:B:1755:A:H61	2:B:2695:U:H5'	1.26	0.97
2:B:1770:G:O2'	2:B:1967:C:H4'	1.62	0.97
2:B:145:C:C3'	32:B:3188:HOH:O	2.13	0.96
2:B:448:U:H3	2:B:1259:G:C1'	1.78	0.96
2:B:1656:C:H4'	2:B:2510:C:C2	1.99	0.96
29:3:34:LYS:HB3	29:3:35:LYS:HE2	1.48	0.96
2:B:320:A:C2'	6:E:131:THR:HG22	1.86	0.96
2:B:530:G:O2'	2:B:2035:G:C2	2.18	0.96
2:B:1248:G:C8	17:Q:1:ALA:CA	2.45	0.96
2:B:1296:G:H5''	2:B:2709:G:H4'	1.46	0.96
2:B:1672:A:N3	2:B:2604:U:H5''	1.80	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1819:A:H3'	4:C:176:ARG:NE	1.79	0.96
2:B:1953:A:C8	2:B:1991:U:C4	2.53	0.96
2:B:1958:C:O2	2:B:1987:A:N1	1.67	0.96
1:A:90:C:O2'	13:M:21:ALA:HB3	1.63	0.96
1:A:93:C:C5'	3:V:18:ARG:HE	1.79	0.96
2:B:45:G:H5'	2:B:46:G:C5'	1.94	0.96
2:B:482:A:C5'	21:U:43:LYS:CE	2.43	0.96
2:B:518:G:H5'	19:S:15:GLN:CB	1.96	0.96
2:B:584:C:C4	17:Q:5:ARG:CZ	2.48	0.96
2:B:1009:A:O2'	17:Q:61:ILE:HD12	1.65	0.96
2:B:1131:G:O6	2:B:2024:G:H2'	1.65	0.96
2:B:1650:A:HO2'	14:N:2:ARG:HD2	0.92	0.96
2:B:1783:A:H2'	2:B:2590:A:O5'	1.65	0.96
2:B:1827:U:O2'	2:B:1970:A:H3'	1.65	0.96
13:M:3:GLN:C	13:M:5:LYS:N	2.15	0.96
2:B:682:G:H4'	28:2:26:ASN:HB3	1.42	0.96
2:B:1118:C:H4'	13:M:127:LYS:HE2	1.46	0.96
2:B:1764:C:H42	2:B:1949:G:H22	1.08	0.96
2:B:1993:U:C5	2:B:2550:G:C2'	2.49	0.96
2:B:2067:G:O3'	2:B:2431:U:OP2	1.83	0.96
2:B:2246:G:H2'	2:B:2426:A:C2	2.01	0.96
2:B:2574:G:C2'	5:D:151:THR:HG22	1.89	0.96
2:B:2582:G:C4	2:B:2583:G:C8	2.52	0.96
2:B:630:G:C5'	29:3:44:ARG:HE	1.64	0.96
2:B:1021:A:H62	2:B:1141:U:H3	1.01	0.96
2:B:1669:A:O2'	2:B:2558:C:H1'	1.63	0.96
2:B:1773:A:C6	2:B:1830:C:C4	2.53	0.96
2:B:1974:C:C2	2:B:1978:A:N6	2.33	0.96
2:B:2003:A:H2'	5:D:139:SER:HB2	1.44	0.96
2:B:2056:G:N3	2:B:2577:A:C2	2.33	0.96
2:B:2575:C:H4'	5:D:150:GLN:N	1.31	0.96
5:D:8:LYS:HD2	16:P:5:LYS:CE	1.95	0.96
17:Q:73:ILE:HG23	17:Q:77:LYS:HB2	1.47	0.96
2:B:95:A:C5'	23:X:33:ALA:C	2.38	0.96
2:B:515:A:OP1	17:Q:29:ARG:NH1	1.97	0.96
2:B:1252:G:N7	17:Q:35:PHE:CZ	2.32	0.96
2:B:1275:A:H2'	14:N:20:MET:SD	2.06	0.96
2:B:1664:A:O4'	11:K:40:LYS:HB3	1.64	0.96
2:B:1974:C:H2'	2:B:1978:A:N7	1.80	0.96
2:B:2018:G:H4'	26:0:5:ASN:CG	1.85	0.96
2:B:2269:G:C2'	22:W:20:LEU:C	2.37	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2285:C:H5''	27:1:29:LYS:HZ2	1.14	0.96
2:B:2507:C:N1	2:B:2583:G:N2	2.12	0.96
2:B:2819:G:OP1	14:N:5:LYS:HE3	1.66	0.96
5:D:17:GLU:HG3	16:P:80:VAL:CG2	1.95	0.96
1:A:59:A:C2	7:F:25:MET:HB2	2.00	0.96
2:B:61:C:C5'	23:X:25:GLN:CA	2.43	0.96
2:B:96:C:C4'	23:X:42:LEU:HD12	1.80	0.96
2:B:1203:U:H5''	12:L:14:LYS:HZ2	1.21	0.96
2:B:1270:C:OP2	2:B:2012:G:P	2.24	0.96
2:B:2009:A:OP1	2:B:2823:A:C8	2.18	0.96
2:B:2460:U:C5'	13:M:76:LYS:O	2.13	0.96
2:B:7:G:C6	2:B:2897:U:C2	2.45	0.96
2:B:587:C:O4'	12:L:38:GLN:HB2	0.78	0.96
2:B:1783:A:C2'	2:B:2590:A:O5'	2.13	0.96
2:B:1828:G:C3'	2:B:1972:G:C5	2.41	0.96
2:B:2006:C:C6	5:D:143:PRO:CD	2.47	0.96
2:B:2199:A:H8	2:B:2225:A:C4	1.75	0.96
2:B:2333:A:H4'	2:B:2334:U:H5''	1.48	0.96
4:C:124:LYS:HB2	4:C:125:PRO:CD	1.96	0.96
13:M:3:GLN:N	13:M:4:PRO:CD	2.27	0.96
1:A:56:G:H1'	7:F:24:VAL:HG12	1.37	0.96
1:A:76:G:O4'	13:M:136:MET:HE1	1.66	0.96
2:B:199:A:N1	2:B:2433:A:C2	2.04	0.96
2:B:584:C:O3'	17:Q:3:VAL:HG21	1.66	0.96
2:B:1250:G:C5'	2:B:1251:C:OP2	1.96	0.96
2:B:1263:U:OP1	26:O:8:THR:HA	1.08	0.96
2:B:1674:G:C4	2:B:1956:U:O4	2.16	0.96
2:B:2245:U:C2	2:B:2442:C:N4	2.33	0.96
2:B:2247:A:C4'	2:B:2445:G:H2'	1.93	0.96
2:B:2642:G:H5''	10:J:81:ILE:C	1.89	0.96
2:B:23:G:O2'	19:S:77:ASP:CG	2.09	0.96
2:B:127:A:H61	20:T:74:ILE:HG22	1.26	0.96
2:B:398:C:OP2	25:Z:50:ASP:CA	2.13	0.96
2:B:592:A:O2'	29:3:2:LYS:C	1.97	0.96
2:B:752:A:C3'	32:2:95:HOH:O	2.14	0.96
2:B:1938:A:C1'	2:B:2591:C:C4'	2.43	0.96
2:B:1993:U:C6	2:B:2551:C:H6	1.82	0.96
2:B:2258:C:O4'	2:B:2449:U:C5'	2.13	0.96
2:B:2263:C:H5'	2:B:2329:U:C2'	1.95	0.96
1:A:93:C:H5''	3:V:18:ARG:NE	1.81	0.95
2:B:126:A:H2'	20:T:76:ARG:HD2	1.46	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:570:G:H2'	2:B:2030:A:C6	1.82	0.95
2:B:827:U:OP2	2:B:2446:G:O4'	1.84	0.95
2:B:1225:G:N2	18:R:85:LYS:HZ1	1.63	0.95
2:B:1653:G:H5''	5:D:126:ASN:H	1.28	0.95
2:B:1664:A:H4'	11:K:40:LYS:HG3	1.23	0.95
2:B:1774:C:C2	2:B:1829:A:C8	2.54	0.95
2:B:1971:U:O2	4:C:237:ARG:CA	2.12	0.95
2:B:8:C:C5'	10:J:121:LYS:NZ	2.23	0.95
2:B:200:U:O2'	2:B:386:G:N2	1.99	0.95
2:B:220:G:N1	2:B:428:A:OP2	1.99	0.95
2:B:321:U:P	6:E:130:LYS:HE2	2.06	0.95
2:B:570:G:C2'	2:B:2030:A:N6	2.09	0.95
2:B:1752:C:H4'	2:B:2861:U:C5'	1.95	0.95
2:B:1771:C:H5''	2:B:1968:G:H5'	1.46	0.95
2:B:1798:U:OP1	4:C:255:LYS:HB2	1.66	0.95
2:B:2459:A:H1'	13:M:76:LYS:HG3	1.44	0.95
4:C:42:ARG:HG2	4:C:43:ASN:H	1.29	0.95
2:B:137:U:O2	20:T:4:GLU:HG3	1.65	0.95
2:B:495:G:OP1	19:S:6:LYS:CD	2.14	0.95
2:B:519:U:O3'	19:S:18:ARG:NH2	1.93	0.95
2:B:520:G:H5'	19:S:18:ARG:NH2	1.82	0.95
2:B:528:A:C2	2:B:2044:C:P	2.56	0.95
2:B:1666:G:C2'	2:B:2559:C:HO2'	1.68	0.95
2:B:1670:C:C2	2:B:1955:U:H5	1.81	0.95
2:B:1768:C:O4'	2:B:1961:C:H6	1.43	0.95
2:B:2005:A:N1	5:D:128:ARG:HD2	1.80	0.95
2:B:2091:C:C2'	2:B:2228:G:N1	2.30	0.95
2:B:2269:G:O5'	22:W:19:ARG:HB2	0.88	0.95
2:B:29:U:C2'	32:B:3227:HOH:O	2.13	0.95
2:B:467:G:H3'	28:2:34:ARG:HH12	1.26	0.95
2:B:2000:C:H4'	11:K:32:TYR:HE1	1.31	0.95
2:B:2899:A:H5'	10:J:136:GLN:H	1.25	0.95
6:E:30:GLN:HB3	12:L:19:LEU:HB2	1.45	0.95
23:X:28:LEU:HB3	23:X:34:SER:HA	1.46	0.95
1:A:88:C:N4	13:M:20:LEU:HB3	1.77	0.95
1:A:88:C:H42	13:M:38:ARG:HD3	1.14	0.95
2:B:495:G:OP1	19:S:6:LYS:CE	2.13	0.95
2:B:809:G:O3'	2:B:1254:A:O5'	1.75	0.95
2:B:964:C:H5''	2:B:2250:G:H1	1.09	0.95
2:B:1250:G:OP2	12:L:32:GLY:CA	2.15	0.95
2:B:2019:A:N6	32:B:3306:HOH:O	1.98	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2262:U:H1'	2:B:2328:A:C1'	1.95	0.95
2:B:2493:U:H1'	13:M:78:LEU:O	1.64	0.95
6:E:112:LEU:HD22	12:L:11:GLY:C	1.92	0.95
12:L:60:ARG:CD	29:3:7:ARG:HD3	1.96	0.95
14:N:120:GLU:HA	26:0:51:ARG:HB2	1.45	0.95
17:Q:111:LYS:CA	18:R:52:PRO:HB3	1.95	0.95
2:B:396:G:H5'	25:Z:3:LYS:HZ2	1.32	0.95
2:B:532:A:N1	2:B:2019:A:C2	2.34	0.95
2:B:687:C:C4'	28:2:5:PHE:O	2.15	0.95
2:B:958:U:C5	13:M:16:ARG:CD	2.48	0.95
2:B:1338:G:O4'	20:T:18:GLU:CD	2.10	0.95
2:B:1983:G:C4'	2:B:2591:C:O2'	2.14	0.95
2:B:2269:G:O2'	22:W:20:LEU:O	1.84	0.95
2:B:2848:G:C1'	16:P:96:LEU:HD22	1.80	0.95
2:B:483:A:OP1	21:U:45:GLN:HB3	1.67	0.95
2:B:487:C:H4'	19:S:56:ALA:CB	1.96	0.95
2:B:528:A:C2	2:B:2043:C:O3'	2.19	0.95
2:B:964:C:C5'	2:B:2250:G:N1	2.24	0.95
2:B:1338:G:OP1	20:T:18:GLU:CA	2.12	0.95
2:B:1784:A:H5'	2:B:2590:A:H4'	0.97	0.95
20:T:47:VAL:CG2	32:T:107:HOH:O	2.15	0.95
2:B:495:G:H4'	19:S:4:ILE:HB	1.47	0.95
2:B:1366:A:OP1	25:Z:1:MET:HE3	1.61	0.95
2:B:2312:U:H5''	7:F:70:ARG:C	1.92	0.95
1:A:90:C:C2'	13:M:21:ALA:HB1	1.97	0.95
2:B:483:A:H4'	21:U:45:GLN:O	1.65	0.95
2:B:496:G:H5'	19:S:1:MET:N	1.80	0.95
2:B:570:G:H2'	2:B:2030:A:H62	0.79	0.95
2:B:1807:G:P	4:C:48:ILE:HB	2.02	0.95
2:B:1996:C:C2	2:B:2549:G:C6	2.55	0.95
2:B:2069:G:H22	2:B:2245:U:H5	1.12	0.95
2:B:2514:U:C4'	5:D:156:PHE:CE1	2.49	0.95
2:B:2514:U:H5'	5:D:156:PHE:CD1	2.02	0.95
6:E:25:GLU:HB3	12:L:18:ARG:HD3	1.46	0.95
6:E:48:THR:CG2	6:E:49:ARG:H	1.79	0.95
10:J:100:VAL:HG13	10:J:101:ILE:HG22	1.49	0.95
14:N:119:SER:O	26:0:51:ARG:HG2	1.67	0.95
2:B:57:C:C4'	20:T:78:SER:CB	2.45	0.95
2:B:336:C:OP1	21:U:81:ARG:CD	2.14	0.95
2:B:583:G:OP1	17:Q:6:GLY:C	2.08	0.95
2:B:686:U:C2	28:2:11:LYS:O	2.20	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1124:G:C5'	30:4:20:ASP:O	2.14	0.95
2:B:1250:G:O6	32:B:3439:HOH:O	1.82	0.95
2:B:1262:A:C3'	19:S:95:ARG:CZ	2.38	0.95
2:B:1673:G:C5'	2:B:1944:U:C5'	2.00	0.95
2:B:1807:G:N9	4:C:45:ASN:OD1	1.79	0.95
2:B:2582:G:C2	2:B:2583:G:C8	2.55	0.95
1:A:57:A:C4'	7:F:15:LEU:CB	2.44	0.94
2:B:586:A:H5'	6:E:85:PHE:CE1	2.01	0.94
2:B:687:C:H5''	28:2:6:GLN:CD	1.91	0.94
2:B:1601:G:OP2	20:T:61:LEU:CD1	2.15	0.94
2:B:1654:A:H5'	5:D:128:ARG:CB	1.91	0.94
2:B:2393:U:O5'	29:3:31:ILE:HD13	1.67	0.94
3:V:79:ARG:HB3	13:M:134:THR:HG22	1.44	0.94
2:B:16:C:C3'	26:0:14:MET:HG3	1.97	0.94
2:B:448:U:O4	2:B:1259:G:O2'	1.84	0.94
2:B:738:G:H5'	32:B:3298:HOH:O	1.64	0.94
2:B:1223:G:H2'	18:R:78:ARG:NH1	1.81	0.94
2:B:1767:G:C5'	2:B:1959:G:O2'	2.15	0.94
2:B:1768:C:C5'	2:B:1960:A:H3'	1.93	0.94
2:B:1997:C:O2	2:B:2549:G:H8	1.50	0.94
17:Q:111:LYS:N	18:R:52:PRO:CB	2.30	0.94
2:B:1196:C:C2'	2:B:1197:G:H8	1.78	0.94
2:B:2269:G:H1'	22:W:20:LEU:C	1.90	0.94
3:V:84:PRO:HD3	13:M:127:LYS:HZ1	0.78	0.94
12:L:35:HIS:NE2	32:L:155:HOH:O	1.98	0.94
20:T:47:VAL:HG21	32:T:107:HOH:O	1.65	0.94
2:B:580:U:H4'	17:Q:32:ARG:H	1.31	0.94
2:B:1158:C:H5'	24:Y:10:ARG:HE	1.31	0.94
2:B:1828:G:H1'	2:B:1970:A:N3	0.90	0.94
2:B:2017:U:OP2	26:0:4:GLN:NE2	2.00	0.94
2:B:2197:U:N3	2:B:2225:A:H5''	1.82	0.94
5:D:149:ASN:HB3	5:D:150:GLN:HG2	1.49	0.94
1:A:29:A:N3	7:F:24:VAL:CG2	2.30	0.94
2:B:446:G:OP2	17:Q:2:ARG:NH1	2.01	0.94
2:B:458:G:C8	28:2:39:ARG:CB	2.39	0.94
2:B:674:G:C5'	6:E:71:GLY:HA3	1.96	0.94
2:B:675:A:OP1	6:E:58:LYS:HE3	1.67	0.94
2:B:686:U:C4'	28:2:11:LYS:HB3	1.88	0.94
2:B:687:C:H4'	28:2:6:GLN:CB	1.93	0.94
2:B:827:U:O5'	2:B:2446:G:C5'	2.04	0.94
2:B:1217:U:H5''	17:Q:14:LYS:HZ1	1.30	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1650:A:H2'	14:N:2:ARG:NH1	1.80	0.94
2:B:1774:C:H1'	2:B:1975:G:N1	1.79	0.94
2:B:1903:G:C5'	4:C:239:PHE:HD2	1.51	0.94
2:B:1997:C:O2'	2:B:2548:U:O5'	1.85	0.94
2:B:2014:A:C1'	2:B:2611:C:HO2'	1.77	0.94
2:B:2016:U:OP2	32:B:3311:HOH:O	1.84	0.94
2:B:2333:A:HO2'	15:O:7:ARG:HB3	1.29	0.94
2:B:398:C:H5'	2:B:2230:G:O2'	1.68	0.94
2:B:547:A:H3'	2:B:548:G:H8	1.28	0.94
2:B:565:C:O4'	2:B:578:G:C2	2.20	0.94
2:B:584:C:OP1	17:Q:3:VAL:C	2.11	0.94
2:B:687:C:H5'	28:2:6:GLN:HB3	0.95	0.94
8:G:15:ASP:HB3	8:G:26:LYS:HB2	1.47	0.94
2:B:84:A:C5'	21:U:91:LYS:HZ2	1.80	0.94
2:B:1798:U:OP1	4:C:255:LYS:CB	2.14	0.94
2:B:1936:A:O3'	2:B:1984:G:H2'	1.67	0.94
2:B:2008:C:OP2	2:B:2049:G:H4'	1.66	0.94
2:B:2064:C:C5	2:B:2254:C:OP2	2.21	0.94
2:B:2495:G:H5''	13:M:82:MET:HE2	0.94	0.94
5:D:8:LYS:NZ	16:P:1:SER:H1	1.65	0.94
6:E:28:VAL:C	12:L:19:LEU:HD21	1.90	0.94
1:A:29:A:OP2	15:O:34:HIS:CE1	2.20	0.94
1:A:50:A:H8	15:O:66:GLY:HA2	1.32	0.94
1:A:58:A:C2'	7:F:25:MET:O	2.16	0.94
2:B:76:C:C4'	23:X:52:ARG:H	1.72	0.94
2:B:94:A:C3'	23:X:36:GLN:CA	2.46	0.94
2:B:789:A:C4'	28:2:4:THR:CG2	2.45	0.94
2:B:857:G:H5''	22:W:55:ASP:CB	1.98	0.94
2:B:997:G:C4'	17:Q:91:ARG:HE	1.81	0.94
2:B:1652:A:H2'	5:D:123:LYS:N	1.83	0.94
2:B:1676:A:C2	2:B:2552:U:P	2.61	0.94
2:B:1769:U:O3'	2:B:1964:G:N1	2.01	0.94
2:B:1770:G:H2'	2:B:1939:U:H3	1.28	0.94
2:B:1818:U:C4	4:C:154:ALA:HB2	1.99	0.94
2:B:1864:U:H4'	2:B:2410:G:H1'	1.50	0.94
2:B:1960:A:C2	2:B:1986:C:H1'	2.02	0.94
2:B:1975:G:H3'	2:B:1979:U:H6	1.28	0.94
2:B:2007:U:C4'	5:D:162:ALA:HB1	1.98	0.94
2:B:2311:A:N3	7:F:74:ALA:C	2.26	0.94
2:B:2311:A:N3	7:F:74:ALA:O	2.00	0.94
6:E:23:PHE:HE2	12:L:17:LYS:HG3	1.28	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:48:ASP:HA	17:Q:51:GLN:HG2	1.50	0.94
17:Q:111:LYS:HD2	18:R:53:PHE:HD1	1.33	0.94
2:B:87:U:C2	23:X:41:HIS:CB	2.30	0.94
2:B:585:G:O3'	32:B:3207:HOH:O	1.85	0.94
2:B:1264:A:N1	19:S:93:ALA:CA	2.25	0.94
2:B:1669:A:O2'	2:B:2558:C:C1'	2.16	0.94
2:B:1768:C:N3	2:B:1936:A:OP1	1.97	0.94
2:B:2056:G:C6	2:B:2577:A:N3	2.36	0.94
10:J:73:VAL:HB	10:J:75:TYR:HE1	1.33	0.94
1:A:50:A:C8	15:O:66:GLY:HA2	2.03	0.94
2:B:667:U:C3'	12:L:49:GLY:CA	2.43	0.94
2:B:1673:G:C3'	2:B:1955:U:O2'	2.15	0.94
2:B:1767:G:O5'	2:B:1959:G:O2'	1.86	0.94
2:B:1976:U:C3'	2:B:1979:U:H5'	1.86	0.94
2:B:2000:C:C5'	11:K:32:TYR:HE1	1.78	0.94
6:E:25:GLU:CB	12:L:17:LYS:HB3	1.96	0.94
2:B:6:A:N6	2:B:2897:U:O4	2.01	0.93
2:B:61:C:H5''	23:X:25:GLN:HB2	0.96	0.93
2:B:565:C:O4'	2:B:578:G:N1	2.01	0.93
2:B:789:A:H4'	28:2:4:THR:CG2	1.98	0.93
2:B:855:G:H22	22:W:23:LYS:HD2	1.33	0.93
2:B:1960:A:N1	2:B:1986:C:H1'	0.92	0.93
2:B:1997:C:O2'	2:B:2548:U:C6	2.18	0.93
2:B:2350:C:H3'	29:3:38:LYS:HZ3	1.19	0.93
1:A:43:C:O2	7:F:91:ARG:HD3	1.60	0.93
2:B:642:U:C5'	2:B:2350:C:OP1	2.16	0.93
2:B:729:G:P	4:C:16:VAL:HG13	2.07	0.93
2:B:1133:A:N1	2:B:2026:U:C2	2.32	0.93
2:B:1654:A:N7	5:D:121:THR:CG2	2.28	0.93
2:B:1666:G:N2	2:B:2559:C:N1	1.94	0.93
2:B:1670:C:H42	2:B:1955:U:H5'	1.26	0.93
2:B:1768:C:C1'	2:B:1961:C:H5	1.51	0.93
2:B:2067:G:C5'	2:B:2424:C:C2'	2.40	0.93
2:B:2500:U:C3'	32:B:3335:HOH:O	1.79	0.93
2:B:2880:C:H5'	14:N:90:ARG:NH1	1.82	0.93
23:X:30:MET:HG3	23:X:31:GLN:H	1.33	0.93
1:A:57:A:HO2'	7:F:28:PRO:HD2	1.27	0.93
2:B:412:A:C6	2:B:2410:G:N1	2.36	0.93
2:B:809:G:H5'	2:B:1255:U:C5'	1.98	0.93
2:B:826:U:H3'	2:B:2446:G:C5'	1.98	0.93
2:B:1128:G:C1'	2:B:2517:C:C5'	2.46	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1666:G:N2	2:B:2550:G:C2	2.29	0.93
2:B:1677:A:N1	2:B:1954:G:N1	1.69	0.93
2:B:2004:G:H1	5:D:130:GLN:HE22	1.14	0.93
2:B:2574:G:H2'	5:D:151:THR:HG21	1.44	0.93
2:B:5:A:N1	2:B:2899:A:C6	2.35	0.93
2:B:94:A:C3'	23:X:32:ALA:O	2.17	0.93
2:B:220:G:O4'	2:B:234:U:O2'	1.86	0.93
2:B:448:U:OP2	32:B:3006:HOH:O	1.86	0.93
2:B:782:A:C5	32:B:3398:HOH:O	2.16	0.93
2:B:1127:A:H61	2:B:2464:G:H4'	1.30	0.93
2:B:1223:G:H2'	18:R:78:ARG:HH22	0.82	0.93
2:B:1263:U:OP2	19:S:95:ARG:NH2	2.00	0.93
2:B:1674:G:OP2	2:B:1955:U:H1'	1.69	0.93
2:B:1799:G:C6	4:C:175:LEU:HB3	2.04	0.93
2:B:1824:G:H4'	4:C:247:TRP:CZ3	2.04	0.93
2:B:2582:G:C2	2:B:2583:G:O4'	2.10	0.93
16:P:47:ILE:HG22	16:P:48:ALA:H	1.33	0.93
2:B:443:A:P	6:E:44:ARG:NH1	2.42	0.93
2:B:682:G:H5'	28:2:26:ASN:OD1	1.67	0.93
2:B:699:A:C2'	2:B:700:G:H4'	1.70	0.93
2:B:948:C:H4'	2:B:984:A:C2	2.04	0.93
2:B:1417:C:C2	2:B:1418:G:H1'	1.99	0.93
2:B:2017:U:C2'	26:0:4:GLN:C	2.39	0.93
2:B:2063:C:N4	2:B:2253:G:OP2	2.02	0.93
5:D:8:LYS:CD	16:P:5:LYS:HE3	1.99	0.93
2:B:458:G:H8	28:2:39:ARG:CA	1.78	0.93
2:B:630:G:H5'	29:3:44:ARG:CD	1.92	0.93
2:B:1770:G:O2'	2:B:1967:C:O4'	1.63	0.93
2:B:1855:U:N3	2:B:2234:G:O3'	2.02	0.93
2:B:2258:C:H1'	2:B:2449:U:H6	1.34	0.93
2:B:2285:C:C5'	27:1:29:LYS:HZ3	1.75	0.93
2:B:922:C:O2'	22:W:25:PHE:CE1	2.21	0.93
2:B:1060:U:N3	2:B:1088:A:N7	2.17	0.93
2:B:1249:U:P	12:L:31:GLY:HA3	2.09	0.93
2:B:1663:G:H8	11:K:5:GLN:OE1	1.41	0.93
2:B:1999:C:O2	11:K:3:GLN:NE2	2.00	0.93
2:B:2177:C:P	2:B:2180:U:H5'	2.09	0.93
2:B:2334:U:N1	15:O:12:THR:HA	1.77	0.93
2:B:2428:G:H3'	2:B:2448:A:C6	2.02	0.93
2:B:2888:C:O4'	26:0:27:LEU:HD12	1.66	0.93
2:B:398:C:H5''	2:B:2230:G:O2'	1.66	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1936:A:N3	2:B:1985:C:H4'	1.84	0.93
10:J:16:TYR:HB2	10:J:54:ILE:HG22	1.48	0.93
17:Q:104:ALA:HB1	18:R:45:GLU:OE1	1.68	0.93
2:B:415:A:N6	2:B:2408:U:C4	2.27	0.93
2:B:458:G:N9	28:2:39:ARG:O	2.00	0.93
2:B:533:G:OP1	17:Q:23:TYR:O	1.87	0.93
2:B:586:A:OP1	6:E:85:PHE:HZ	1.49	0.93
2:B:811:U:C2	2:B:1251:C:C4	2.53	0.93
2:B:972:A:OP2	2:B:974:G:H5''	1.67	0.93
2:B:1030:C:HO2'	30:4:8:LYS:HG2	0.77	0.93
2:B:2064:C:C5'	2:B:2255:G:OP2	2.14	0.93
2:B:2256:G:C2	2:B:2447:G:N2	2.37	0.93
2:B:2272:U:OP1	22:W:15:SER:CA	2.16	0.93
3:V:84:PRO:CD	13:M:127:LYS:HZ3	1.74	0.93
5:D:138:LEU:HD23	5:D:138:LEU:H	1.34	0.93
1:A:57:A:C2'	7:F:27:VAL:HG22	1.91	0.93
2:B:321:U:C4	6:E:129:PRO:HG2	2.02	0.93
2:B:781:A:C4'	32:B:3064:HOH:O	2.09	0.93
2:B:855:G:C4'	22:W:24:ARG:HH22	1.76	0.93
2:B:1032:A:H5''	30:4:16:ILE:HG12	1.50	0.93
2:B:1262:A:C3'	19:S:95:ARG:HH22	1.81	0.93
2:B:1580:A:C4'	2:B:1581:G:H8	1.77	0.93
2:B:1766:G:C5	2:B:1958:C:O2	2.22	0.93
2:B:2720:U:N3	2:B:2873:A:N6	2.15	0.93
1:A:90:C:H1'	13:M:21:ALA:HB1	1.50	0.92
2:B:584:C:C5	17:Q:5:ARG:HD3	1.95	0.92
2:B:882:G:P	2:B:898:C:O4'	2.28	0.92
2:B:1938:A:N9	2:B:2591:C:H4'	1.82	0.92
2:B:2014:A:H1'	2:B:2611:C:HO2'	1.23	0.92
2:B:2640:G:C2'	10:J:78:THR:HG21	1.99	0.92
2:B:467:G:C3'	28:2:34:ARG:NH1	2.29	0.92
2:B:662:G:OP1	12:L:24:GLY:N	2.01	0.92
2:B:964:C:H5''	2:B:2250:G:O6	1.70	0.92
2:B:1674:G:N3	2:B:1956:U:O4	2.01	0.92
2:B:1773:A:OP1	2:B:1972:G:O4'	1.80	0.92
2:B:2261:C:H1'	2:B:2327:A:N6	1.82	0.92
2:B:2814:A:N3	26:0:39:ARG:CG	2.32	0.92
4:C:20:ASN:HB2	4:C:203:VAL:HG13	1.51	0.92
9:H:82:SER:H	9:H:146:VAL:HG13	1.33	0.92
14:N:121:LYS:H	26:0:51:ARG:HG2	1.29	0.92
1:A:49:C:C5	15:O:67:ASN:CB	2.52	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:88:C:H41	13:M:38:ARG:HD3	1.32	0.92
2:B:398:C:P	25:Z:50:ASP:H	1.91	0.92
2:B:575:A:OP1	2:B:2030:A:C6	2.22	0.92
2:B:673:C:C5'	6:E:76:PRO:HD2	1.99	0.92
2:B:1663:G:N7	11:K:5:GLN:OE1	2.02	0.92
2:B:1940:U:H2'	2:B:1984:G:O2'	1.69	0.92
2:B:2286:G:C6	27:1:33:LEU:CD1	2.51	0.92
20:T:30:ILE:HG21	32:T:104:HOH:O	1.70	0.92
2:B:516:C:C5'	2:B:1262:A:C4'	2.44	0.92
2:B:528:A:H5''	10:J:113:PRO:HG3	1.49	0.92
2:B:673:C:H5''	6:E:76:PRO:HD2	1.50	0.92
2:B:958:U:H2'	13:M:18:ARG:H	1.34	0.92
2:B:1658:C:C4	5:D:138:LEU:HD11	2.04	0.92
2:B:1995:U:H5'	2:B:2557:G:C6	2.04	0.92
2:B:2003:A:C3'	5:D:139:SER:HB2	2.00	0.92
2:B:2637:U:C4'	5:D:43:ASP:CB	2.47	0.92
2:B:2789:C:C3'	2:B:2790:U:P	2.58	0.92
5:D:2:ILE:HG21	5:D:204:LYS:HA	1.50	0.92
22:W:35:ILE:HG23	22:W:36:ILE:H	1.34	0.92
2:B:76:C:C3'	23:X:52:ARG:N	2.30	0.92
2:B:997:G:H5'	17:Q:91:ARG:CG	2.00	0.92
21:U:84:PHE:HB3	21:U:92:VAL:HG22	1.49	0.92
2:B:398:C:H3'	25:Z:49:ARG:NH2	1.84	0.92
2:B:482:A:H5''	21:U:43:LYS:HZ1	1.24	0.92
2:B:496:G:O2'	19:S:61:ASN:OD1	1.86	0.92
2:B:566:U:O4'	2:B:577:G:N9	2.03	0.92
2:B:589:U:C4	12:L:48:ARG:NH1	2.32	0.92
2:B:1143:A:N7	10:J:27:ARG:NH1	2.17	0.92
2:B:1455:G:O6	2:B:2704:C:C2	2.23	0.92
2:B:1767:G:N9	2:B:1959:G:H2'	1.84	0.92
2:B:1796:U:C3'	4:C:251:THR:HG23	1.97	0.92
12:L:78:ARG:HG2	12:L:99:ASN:HB3	1.48	0.92
1:A:80:U:O4'	2:B:917:A:H2	1.51	0.92
2:B:482:A:C4'	21:U:43:LYS:CE	2.22	0.92
2:B:858:G:C4'	2:B:2268:A:H2'	1.95	0.92
2:B:1124:G:C3'	30:4:21:GLY:CA	2.19	0.92
2:B:1815:A:H4'	4:C:85:ASN:HB3	1.50	0.92
2:B:1820:U:P	4:C:176:ARG:NH2	2.43	0.92
2:B:1992:G:H8	2:B:2550:G:C5'	1.59	0.92
2:B:2258:C:H2'	2:B:2425:A:O4'	1.70	0.92
2:B:2640:G:O2'	10:J:78:THR:CG2	2.17	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:V:77:VAL:N	13:M:132:THR:O	1.78	0.92
14:N:118:ARG:NH2	26:O:55:ALA:HB3	1.85	0.92
19:S:50:VAL:HG11	19:S:103:ILE:HG21	1.51	0.92
2:B:29:U:H2'	32:B:3227:HOH:O	1.68	0.92
2:B:96:C:H5''	23:X:39:GLN:HB3	0.94	0.92
2:B:728:G:H5''	4:C:16:VAL:HG11	1.49	0.92
2:B:943:A:O3'	32:B:3067:HOH:O	1.87	0.92
2:B:1225:G:OP2	18:R:78:ARG:CZ	2.18	0.92
2:B:1806:C:C6	4:C:50:THR:HG21	2.05	0.92
2:B:2848:G:C8	16:P:96:LEU:HD21	1.99	0.92
3:V:76:ASP:CB	13:M:136:MET:HA	2.00	0.92
6:E:25:GLU:HG3	12:L:17:LYS:HB3	1.03	0.92
9:H:3:VAL:HB	9:H:37:VAL:HB	1.50	0.92
1:A:57:A:H62	7:F:24:VAL:HB	1.11	0.92
2:B:1759:A:H1'	2:B:2696:U:O2	1.29	0.92
2:B:1813:G:H21	4:C:51:ARG:HD2	0.78	0.92
2:B:1951:U:C2'	2:B:1991:U:C6	2.52	0.92
2:B:2334:U:OP2	15:O:7:ARG:CA	2.17	0.92
2:B:2641:G:P	10:J:84:ILE:HG21	2.10	0.92
2:B:2681:C:OP1	5:D:114:LYS:CE	2.15	0.92
1:A:31:C:H4'	7:F:8:LYS:HE3	1.50	0.92
2:B:1252:G:H1	17:Q:35:PHE:CB	1.82	0.92
2:B:1264:A:N1	19:S:93:ALA:HA	1.35	0.92
2:B:1805:A:C3'	4:C:51:ARG:N	2.33	0.92
2:B:2061:G:C8	2:B:2252:G:O5'	2.22	0.92
2:B:2899:A:C5'	10:J:136:GLN:HB2	2.00	0.92
5:D:8:LYS:NZ	16:P:1:SER:CB	2.33	0.92
2:B:7:G:O6	2:B:2897:U:N3	2.02	0.91
2:B:567:U:C1'	32:B:3347:HOH:O	2.16	0.91
2:B:654:A:C4	29:3:18:LYS:HG2	1.98	0.91
2:B:997:G:C5'	17:Q:91:ARG:NE	1.98	0.91
2:B:1124:G:O4'	30:4:21:GLY:CA	1.98	0.91
2:B:1340:U:O3'	2:B:1394:U:O3'	1.86	0.91
2:B:2645:G:H4'	2:B:2732:G:H2'	1.39	0.91
2:B:5:A:C1'	2:B:2899:A:C2	2.53	0.91
2:B:515:A:H1'	2:B:1261:C:H1'	1.49	0.91
2:B:580:U:H5''	17:Q:32:ARG:HB3	0.95	0.91
2:B:789:A:H4'	28:2:4:THR:HG22	1.50	0.91
2:B:1654:A:C5	5:D:143:PRO:CA	2.38	0.91
2:B:1666:G:N3	2:B:2559:C:H1'	1.79	0.91
2:B:2065:C:H4'	2:B:2258:C:H41	1.29	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2247:A:H1'	2:B:2426:A:O2'	1.70	0.91
2:B:2478:A:H5''	30:4:32:LYS:HD2	1.50	0.91
2:B:2512:C:C5'	5:D:146:ILE:CG1	2.15	0.91
2:B:321:U:C2	6:E:129:PRO:CB	2.52	0.91
2:B:1266:G:O5'	26:0:15:ARG:NE	2.02	0.91
2:B:1780:A:OP1	2:B:2588:G:O2'	1.87	0.91
2:B:2334:U:C2	15:O:12:THR:CA	2.50	0.91
2:B:2515:C:C3'	32:B:3028:HOH:O	2.19	0.91
6:E:23:PHE:CD2	12:L:17:LYS:CD	2.49	0.91
6:E:25:GLU:CG	12:L:17:LYS:CG	2.46	0.91
12:L:55:MET:HG3	29:3:5:THR:HG21	1.53	0.91
21:U:78:LYS:HE3	21:U:96:LYS:HB2	1.50	0.91
2:B:458:G:C1'	28:2:41:ARG:CZ	2.39	0.91
2:B:1250:G:H4'	17:Q:8:ILE:HD11	1.51	0.91
2:B:1339:G:C5'	2:B:1393:A:N9	2.32	0.91
2:B:1853:A:C1'	2:B:2237:G:N7	2.32	0.91
2:B:2009:A:H5'	2:B:2823:A:C1'	1.76	0.91
2:B:2576:G:OP1	5:D:149:ASN:O	1.67	0.91
2:B:2885:G:N7	26:0:48:TYR:CE2	2.38	0.91
10:J:25:LEU:HG	10:J:64:VAL:H	1.32	0.91
2:B:8:C:H4'	10:J:121:LYS:HE3	0.93	0.91
2:B:15:G:O2'	26:0:17:SER:OG	1.86	0.91
2:B:126:A:H61	20:T:74:ILE:HG21	1.18	0.91
2:B:220:G:C4'	2:B:234:U:O2'	2.19	0.91
2:B:586:A:H61	2:B:810:U:C3'	1.77	0.91
2:B:770:G:P	28:2:10:LEU:HD13	2.09	0.91
2:B:858:G:O3'	2:B:2268:A:C1'	2.19	0.91
2:B:926:G:H22	24:Y:42:ALA:HB1	1.29	0.91
2:B:930:G:H5'	24:Y:27:GLY:HA2	0.95	0.91
2:B:1257:C:O4'	6:E:77:ILE:HG23	1.69	0.91
2:B:1752:C:C5'	2:B:2861:U:C2'	2.47	0.91
2:B:1799:G:N2	4:C:153:LEU:HA	1.85	0.91
2:B:1998:A:C2	11:K:4:GLU:HG2	1.79	0.91
2:B:2035:G:C6	32:B:3307:HOH:O	2.23	0.91
2:B:2582:G:C6	2:B:2583:G:C5	2.58	0.91
2:B:2848:G:C4	16:P:96:LEU:HD21	2.05	0.91
2:B:45:G:C4'	2:B:46:G:C1'	2.49	0.91
2:B:1128:G:H21	2:B:2517:C:C2'	1.84	0.91
2:B:2056:G:N7	2:B:2577:A:C5	2.39	0.91
2:B:2261:C:O3'	2:B:2387:U:O2	1.89	0.91
2:B:2277:G:OP2	22:W:9:THR:CA	2.19	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2351:G:OP2	29:3:38:LYS:HD2	1.70	0.91
2:B:2359:C:O2	2:B:2428:G:N2	2.03	0.91
2:B:2418:A:O2'	27:1:20:TYR:CD1	2.20	0.91
2:B:2511:U:O2'	5:D:146:ILE:HA	1.70	0.91
2:B:2820:A:O5'	14:N:4:ARG:HD2	1.70	0.91
27:1:12:SER:HA	27:1:50:GLU:HB3	1.52	0.91
2:B:4:U:H3	2:B:2900:A:N6	1.68	0.91
2:B:76:C:O3'	23:X:52:ARG:CA	2.17	0.91
2:B:125:A:H4'	28:2:19:ARG:CZ	2.01	0.91
2:B:669:G:O3'	2:B:670:A:O5'	1.89	0.91
2:B:1673:G:HO2'	2:B:1956:U:H5''	1.34	0.91
2:B:1750:G:N3	2:B:2859:G:N2	2.18	0.91
2:B:2004:G:C2	5:D:142:VAL:HG21	2.05	0.91
2:B:2630:G:O4'	2:B:2894:G:C4	2.23	0.91
6:E:27:LEU:HD22	12:L:19:LEU:HG	1.50	0.91
10:J:73:VAL:HB	10:J:75:TYR:CE1	2.06	0.91
17:Q:88:GLU:CA	18:R:53:PHE:CZ	2.46	0.91
2:B:8:C:C4'	10:J:121:LYS:NZ	2.33	0.91
2:B:30:G:C8	32:B:3227:HOH:O	2.22	0.91
2:B:500:G:OP1	21:U:40:LEU:HD12	1.71	0.91
2:B:584:C:H41	17:Q:5:ARG:NH2	1.69	0.91
2:B:662:G:OP1	12:L:24:GLY:C	2.14	0.91
2:B:688:U:C5'	28:2:2:LYS:HZ3	1.83	0.91
2:B:747:U:H5	2:B:2014:A:H5'	1.19	0.91
2:B:1797:G:H4'	4:C:254:LYS:HE2	1.50	0.91
2:B:1826:G:H5''	4:C:242:HIS:CB	2.00	0.91
2:B:2467:C:OP1	30:4:8:LYS:NZ	2.03	0.91
3:V:14:LYS:HZ2	3:V:18:ARG:HD2	1.36	0.91
2:B:235:U:O2'	2:B:430:A:C2	2.23	0.91
2:B:467:G:H3'	28:2:34:ARG:NH1	1.86	0.91
2:B:1674:G:C8	2:B:1956:U:H5	1.77	0.91
2:B:1767:G:O5'	2:B:1960:A:P	2.28	0.91
2:B:1785:A:O3'	2:B:1938:A:N7	2.00	0.91
2:B:1952:A:OP2	2:B:1990:C:OP1	1.88	0.91
2:B:1971:U:O4	4:C:239:PHE:HZ	1.38	0.91
2:B:2255:G:C6	2:B:2450:A:C6	2.58	0.91
2:B:2284:A:OP2	27:1:7:LYS:HB2	1.70	0.91
2:B:2899:A:C5'	10:J:136:GLN:CB	2.48	0.91
1:A:14:U:O2'	1:A:107:G:C4'	2.12	0.91
2:B:1275:A:C2'	14:N:20:MET:HE2	1.99	0.91
2:B:1450:G:H21	2:B:1452:G:H1	1.14	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1662:U:O2	11:K:4:GLU:C	2.14	0.91
2:B:1774:C:C4'	2:B:1976:U:O4	2.19	0.91
2:B:1796:U:C4'	4:C:251:THR:CG2	1.79	0.91
2:B:2007:U:OP1	2:B:2050:C:H5'	1.69	0.91
2:B:2017:U:N3	26:0:3:GLN:CG	2.28	0.91
4:C:19:VAL:HG12	4:C:20:ASN:H	1.35	0.91
4:C:124:LYS:CB	4:C:125:PRO:HD3	2.00	0.91
6:E:115:GLN:CB	12:L:10:GLU:HB3	1.98	0.91
12:L:79:LEU:HA	12:L:113:ALA:HB3	1.50	0.91
14:N:120:GLU:CA	26:0:51:ARG:HB3	1.99	0.91
2:B:465:G:H5'	28:2:12:ARG:HH12	1.33	0.90
2:B:483:A:C4'	21:U:45:GLN:C	2.44	0.90
2:B:520:G:H5'	19:S:18:ARG:HH21	1.34	0.90
2:B:679:C:OP1	32:B:2997:HOH:O	1.89	0.90
2:B:1203:U:C5'	12:L:14:LYS:HZ2	1.78	0.90
2:B:1819:A:H2'	4:C:176:ARG:HG3	1.52	0.90
2:B:1853:A:N3	2:B:2237:G:C5	2.39	0.90
2:B:1937:A:H2'	2:B:1984:G:C8	2.06	0.90
12:L:61:LEU:CB	12:L:62:PRO:HD2	1.94	0.90
2:B:15:G:O3'	26:0:17:SER:OG	1.89	0.90
2:B:87:U:O2	23:X:41:HIS:HB3	1.69	0.90
2:B:96:C:H5''	23:X:39:GLN:CA	2.01	0.90
2:B:484:C:H5'	21:U:46:LYS:NZ	1.85	0.90
2:B:1224:U:O4'	18:R:89:HIS:CA	2.08	0.90
2:B:1417:C:C1'	2:B:1418:G:C8	2.54	0.90
2:B:1654:A:H5'	5:D:128:ARG:CA	1.87	0.90
2:B:1668:A:N1	2:B:2551:C:C3'	2.33	0.90
2:B:1797:G:H5'	4:C:253:GLY:HA2	0.93	0.90
2:B:2067:G:H4'	2:B:2429:G:O2'	1.72	0.90
2:B:2347:C:H1'	27:1:45:HIS:HE1	1.31	0.90
2:B:2461:A:C4'	13:M:78:LEU:HD21	1.99	0.90
2:B:2885:G:C8	26:0:48:TYR:HE2	1.89	0.90
3:V:79:ARG:HG2	13:M:134:THR:OG1	1.68	0.90
5:D:118:PHE:HA	5:D:164:GLN:HA	1.52	0.90
17:Q:90:ASP:HA	18:R:10:LYS:HE2	1.51	0.90
2:B:5:A:N1	2:B:2899:A:N7	2.19	0.90
2:B:567:U:C1'	2:B:576:U:O4'	2.19	0.90
2:B:812:C:H5	12:L:33:ARG:CB	1.64	0.90
2:B:1340:U:H5'	2:B:1394:U:O2'	1.71	0.90
2:B:1455:G:C6	2:B:2704:C:O2	2.24	0.90
2:B:1663:G:C5'	11:K:21:CYS:O	2.19	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2347:C:C1'	27:1:45:HIS:HE1	1.83	0.90
6:E:60:TRP:HE1	6:E:73:ILE:HD11	1.32	0.90
1:A:31:C:O4'	7:F:8:LYS:NZ	2.04	0.90
2:B:9:G:C5	2:B:2895:G:C2	2.58	0.90
2:B:964:C:C5'	2:B:2250:G:O6	2.19	0.90
2:B:1030:C:OP2	13:M:117:PHE:HE1	1.46	0.90
2:B:1273:U:OP1	2:B:1647:U:C2	2.21	0.90
2:B:1656:C:C4'	2:B:2510:C:C2	2.47	0.90
2:B:1768:C:C5'	2:B:1960:A:C3'	2.31	0.90
2:B:1782:U:O4'	2:B:2607:G:N2	2.05	0.90
2:B:2000:C:C4'	11:K:32:TYR:HE1	1.83	0.90
2:B:2067:G:H5'	2:B:2424:C:C2'	2.00	0.90
2:B:2067:G:C2	2:B:2430:A:H2	1.85	0.90
2:B:2306:C:N4	7:F:76:PHE:CZ	2.39	0.90
2:B:2511:U:O2'	5:D:146:ILE:CA	2.19	0.90
2:B:2582:G:H21	2:B:2583:G:H1'	1.34	0.90
11:K:71:ARG:HB3	11:K:72:PRO:CD	2.02	0.90
18:R:47:VAL:HG22	18:R:48:LYS:H	1.34	0.90
20:T:73:ARG:CZ	28:2:43:THR:C	2.44	0.90
1:A:29:A:H5''	15:O:33:ARG:HD2	1.44	0.90
1:A:58:A:C5'	7:F:21:TYR:CZ	2.49	0.90
2:B:480:A:N6	32:B:3430:HOH:O	2.04	0.90
2:B:654:A:N3	29:3:18:LYS:CD	2.35	0.90
2:B:777:G:C8	32:B:3041:HOH:O	1.81	0.90
2:B:1246:A:OP1	12:L:23:ILE:HG21	1.69	0.90
2:B:1938:A:O2'	2:B:2591:C:H4'	1.71	0.90
6:E:28:VAL:HG13	12:L:16:GLY:O	1.69	0.90
11:K:26:GLY:HA3	11:K:30:ARG:HE	1.35	0.90
2:B:84:A:P	21:U:91:LYS:HD3	2.12	0.90
2:B:699:A:H1'	2:B:1634:A:N1	1.87	0.90
2:B:1009:A:O2'	17:Q:61:ILE:CD1	2.19	0.90
2:B:1163:G:H4'	18:R:91:GLN:HE21	1.09	0.90
2:B:1275:A:C5	14:N:16:HIS:HD2	1.89	0.90
2:B:1636:U:O2'	2:B:1760:C:C1'	2.19	0.90
2:B:1797:G:C5'	4:C:253:GLY:CA	2.45	0.90
2:B:2003:A:H4'	5:D:136:ASN:OD1	1.70	0.90
2:B:2459:A:H1'	13:M:76:LYS:CB	2.02	0.90
3:V:79:ARG:NH1	13:M:129:THR:OG1	2.04	0.90
6:E:48:THR:HG22	6:E:49:ARG:N	1.81	0.90
1:A:74:U:O2'	3:V:37:PRO:HB2	1.71	0.90
2:B:584:C:OP1	17:Q:3:VAL:HB	1.71	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:671:C:C5'	12:L:39:LYS:HB3	2.01	0.90
2:B:801:G:N7	6:E:51:GLU:CD	2.29	0.90
2:B:973:A:O2'	2:B:974:G:P	2.28	0.90
2:B:992:C:H4'	18:R:79:ARG:HE	1.14	0.90
2:B:1128:G:C1'	2:B:2517:C:H5''	2.00	0.90
2:B:1264:A:H1'	2:B:2016:U:H3	1.37	0.90
2:B:1266:G:OP2	26:O:12:ARG:HG2	1.72	0.90
2:B:1764:C:H42	2:B:1949:G:N2	1.70	0.90
2:B:1770:G:C2'	2:B:1939:U:H3	1.84	0.90
2:B:1945:G:O6	2:B:1985:C:C2	2.25	0.90
2:B:2070:A:C5	2:B:2245:U:C6	2.50	0.90
1:A:81:G:H5'	2:B:919:U:H5'	1.51	0.90
2:B:125:A:N1	32:B:3371:HOH:O	1.82	0.90
2:B:589:U:OP2	12:L:27:LEU:HD22	0.72	0.90
2:B:789:A:N9	28:2:5:PHE:HZ	1.70	0.90
2:B:801:G:C6	6:E:50:ALA:HB3	2.07	0.90
2:B:964:C:C5'	2:B:2250:G:C6	2.54	0.90
2:B:1938:A:O5'	2:B:1983:G:H8	1.33	0.90
2:B:1938:A:O2'	2:B:2591:C:C4'	2.18	0.90
2:B:1953:A:N7	2:B:1991:U:N1	2.18	0.90
2:B:2067:G:N1	2:B:2430:A:C2	2.40	0.90
2:B:2216:G:OP1	25:Z:44:PHE:CG	2.25	0.90
2:B:2646:C:OP2	2:B:2732:G:H3'	1.70	0.90
9:H:83:LYS:HB3	9:H:91:PHE:HB2	1.54	0.90
1:A:75:G:O2'	3:V:29:ILE:HD13	1.71	0.90
2:B:564:C:O4'	17:Q:36:GLN:CD	2.15	0.90
2:B:1666:G:N3	2:B:2559:C:H2'	1.87	0.90
2:B:1995:U:H6	2:B:2558:C:H42	1.15	0.90
2:B:2245:U:N1	2:B:2442:C:C4	2.40	0.90
2:B:2511:U:O2'	5:D:146:ILE:CG1	2.19	0.90
1:A:37:C:O2	15:O:69:ASP:CB	2.19	0.90
1:A:43:C:C2	7:F:91:ARG:CD	2.53	0.90
1:A:56:G:H8	7:F:13:LYS:HZ1	1.10	0.90
2:B:125:A:H4'	28:2:19:ARG:HH21	1.15	0.90
2:B:671:C:H5	12:L:39:LYS:HD2	1.34	0.90
2:B:785:G:C6	32:B:3016:HOH:O	2.01	0.90
2:B:1936:A:H8	2:B:1984:G:N2	1.70	0.90
2:B:2527:C:H5''	30:4:31:PRO:HG3	1.52	0.90
6:E:184:ASP:CA	12:L:12:SER:OG	2.12	0.90
13:M:3:GLN:O	13:M:6:ARG:N	2.04	0.90
2:B:458:G:C5'	28:2:39:ARG:HH11	1.85	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:482:A:C5'	21:U:43:LYS:HZ1	1.82	0.89
2:B:623:C:H4'	29:3:61:LEU:HD23	1.55	0.89
2:B:669:G:C3'	2:B:670:A:H2'	1.90	0.89
2:B:1248:G:N7	17:Q:1:ALA:HB1	1.86	0.89
2:B:1339:G:N1	2:B:1603:A:N3	2.20	0.89
2:B:1796:U:H4'	4:C:251:THR:HG22	1.54	0.89
2:B:1888:G:C1'	2:B:2234:G:O2'	2.19	0.89
2:B:2006:C:C5	5:D:142:VAL:HA	2.07	0.89
2:B:2008:C:OP1	2:B:2049:G:C4'	2.18	0.89
2:B:2199:A:C8	2:B:2225:A:N3	2.39	0.89
2:B:2494:G:C2	13:M:81:ARG:HD2	2.07	0.89
2:B:2575:C:H5'	5:D:150:GLN:O	1.71	0.89
28:2:42:LEU:HD11	28:2:44:VAL:HG13	1.53	0.89
2:B:756:A:O4'	32:B:3429:HOH:O	1.88	0.89
2:B:1361:G:H4'	2:B:2214:C:C4	2.01	0.89
2:B:1368:G:N2	2:B:1808:A:N3	2.13	0.89
2:B:1774:C:H1'	2:B:1975:G:H1	1.32	0.89
2:B:2331:G:H1'	22:W:69:GLU:OE2	1.71	0.89
2:B:2460:U:H5'	13:M:76:LYS:C	1.97	0.89
11:K:103:VAL:HB	11:K:107:LEU:HD23	1.52	0.89
12:L:85:VAL:HG21	12:L:98:ALA:H	1.35	0.89
17:Q:30:VAL:HG12	17:Q:32:ARG:H	1.37	0.89
17:Q:92:LYS:HA	17:Q:95:ALA:HB2	1.54	0.89
2:B:1797:G:H5''	4:C:253:GLY:HA2	1.54	0.89
2:B:2561:U:O3'	11:K:40:LYS:HE2	1.71	0.89
13:M:3:GLN:H	13:M:4:PRO:HD2	1.00	0.89
21:U:23:LYS:HG3	21:U:24:VAL:HG23	1.50	0.89
1:A:57:A:C4'	7:F:15:LEU:HB2	2.02	0.89
2:B:415:A:C2	2:B:2408:U:H1'	2.07	0.89
2:B:453:A:H2	28:2:39:ARG:NH2	1.63	0.89
2:B:922:C:O2	22:W:23:LYS:CD	2.21	0.89
2:B:989:G:C8	24:Y:13:ILE:N	2.40	0.89
2:B:1128:G:O4'	2:B:2517:C:C4'	2.20	0.89
2:B:1818:U:C6	4:C:154:ALA:HB3	2.04	0.89
2:B:2004:G:O2'	5:D:137:SER:O	1.88	0.89
2:B:2635:A:OP1	5:D:77:ARG:HG3	1.72	0.89
3:V:77:VAL:HG21	13:M:134:THR:HG23	1.53	0.89
24:Y:6:ILE:HG22	24:Y:56:VAL:HG23	1.54	0.89
2:B:321:U:C4	6:E:129:PRO:HG3	2.05	0.89
2:B:448:U:N3	2:B:1259:G:H4'	1.85	0.89
2:B:1124:G:H1'	30:4:21:GLY:HA2	1.52	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1782:U:H2'	2:B:2589:A:N7	1.86	0.89
2:B:1807:G:OP1	4:C:47:ARG:CB	2.20	0.89
23:X:36:GLN:HE22	23:X:38:GLN:HE22	1.13	0.89
2:B:584:C:C6	17:Q:5:ARG:HD2	2.05	0.89
2:B:789:A:H5''	28:2:4:THR:HG21	1.54	0.89
2:B:1251:C:P	17:Q:8:ILE:HD11	2.13	0.89
2:B:1888:G:H1'	2:B:2234:G:C2'	2.02	0.89
2:B:2005:A:H1'	5:D:145:SER:OG	1.73	0.89
2:B:2056:G:C5	2:B:2577:A:N3	2.41	0.89
2:B:2333:A:O2'	15:O:7:ARG:HB3	1.70	0.89
2:B:2461:A:C4'	13:M:78:LEU:CD1	2.50	0.89
2:B:2507:C:C2	2:B:2583:G:N2	2.40	0.89
4:C:53:ILE:HG12	4:C:218:THR:HA	1.55	0.89
18:R:54:VAL:H	18:R:54:VAL:HB	1.37	0.89
1:A:88:C:C6	13:M:20:LEU:O	2.25	0.89
2:B:687:C:C4'	28:2:6:GLN:HB2	1.96	0.89
2:B:815:C:C6	18:R:84:ARG:CZ	2.56	0.89
2:B:1188:U:OP1	18:R:83:TYR:CZ	2.25	0.89
2:B:1217:U:OP2	17:Q:14:LYS:NZ	2.06	0.89
2:B:1636:U:HO2'	2:B:1760:C:C2'	1.85	0.89
2:B:1656:C:C5'	2:B:2511:U:H5	1.57	0.89
2:B:1766:G:C5	2:B:1958:C:H2'	2.08	0.89
2:B:1796:U:H5'	4:C:251:THR:CG2	2.02	0.89
2:B:1995:U:OP1	2:B:2557:G:N7	2.05	0.89
2:B:2311:A:H2	7:F:75:GLY:HA3	1.33	0.89
6:E:180:LEU:C	12:L:13:LYS:HG2	1.92	0.89
1:A:60:C:N4	7:F:23:SER:HB2	1.86	0.89
2:B:675:A:OP1	6:E:58:LYS:CG	2.21	0.89
2:B:686:U:O2	28:2:11:LYS:CB	2.20	0.89
6:E:30:GLN:HB2	12:L:19:LEU:HB2	0.90	0.89
17:Q:88:GLU:HA	18:R:53:PHE:CZ	2.06	0.89
2:B:756:A:C1'	32:B:3429:HOH:O	2.17	0.89
2:B:2013:A:N7	2:B:2613:U:OP1	2.05	0.89
2:B:2884:U:H2'	26:0:48:TYR:HE2	1.36	0.89
6:E:180:LEU:O	12:L:13:LYS:HB3	1.71	0.89
6:E:183:PHE:O	12:L:12:SER:HB2	1.73	0.89
11:K:8:LEU:HD23	11:K:82:ASN:HB3	1.53	0.89
1:A:74:U:C2'	3:V:37:PRO:HG2	2.02	0.89
2:B:9:G:P	10:J:121:LYS:NZ	2.46	0.89
2:B:15:G:C2'	26:0:17:SER:HB3	2.02	0.89
2:B:1263:U:H5'	26:0:8:THR:N	1.88	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1417:C:H5	2:B:1418:G:C6	1.83	0.89
2:B:1799:G:N2	4:C:153:LEU:HB3	1.88	0.89
2:B:1995:U:H6	2:B:2550:G:O6	1.55	0.89
2:B:1999:C:O3'	11:K:31:ARG:CB	2.21	0.89
2:B:2061:G:H1'	2:B:2253:G:H5'	1.54	0.89
2:B:2848:G:H2'	16:P:96:LEU:CB	2.03	0.89
2:B:97:C:H4'	23:X:46:VAL:CB	2.03	0.88
2:B:416:U:C4	2:B:2407:A:H2	1.91	0.88
2:B:564:C:N3	2:B:578:G:O6	1.66	0.88
2:B:1031:G:O4'	30:4:8:LYS:HB3	1.73	0.88
2:B:1827:U:OP1	2:B:1902:C:OP1	1.91	0.88
2:B:1971:U:H3	4:C:239:PHE:HE1	0.90	0.88
2:B:1994:C:H2'	2:B:2550:G:O6	1.72	0.88
2:B:1995:U:C5	2:B:2550:G:C5	2.61	0.88
2:B:1999:C:C4'	11:K:31:ARG:CB	2.34	0.88
2:B:2271:G:O5'	22:W:18:LYS:CD	1.91	0.88
1:A:56:G:C1'	7:F:13:LYS:HZ3	1.86	0.88
2:B:97:C:H4'	23:X:46:VAL:HB	1.53	0.88
2:B:659:G:O4'	6:E:97:ASN:OD1	1.91	0.88
2:B:789:A:C8	28:2:5:PHE:HZ	1.90	0.88
2:B:855:G:N2	22:W:23:LYS:CD	2.36	0.88
2:B:1998:A:N1	11:K:4:GLU:HG3	1.85	0.88
2:B:2814:A:C1'	26:0:39:ARG:HG3	2.03	0.88
3:V:4:ILE:HB	3:V:63:ILE:HA	1.55	0.88
2:B:466:A:H5''	28:2:44:VAL:CG1	2.01	0.88
2:B:481:G:OP2	21:U:43:LYS:NZ	2.06	0.88
2:B:564:C:H1'	17:Q:36:GLN:NE2	1.88	0.88
2:B:669:G:H5''	12:L:47:ARG:HG2	0.89	0.88
2:B:688:U:C5'	28:2:2:LYS:NZ	2.36	0.88
2:B:1654:A:N3	2:B:2512:C:H5''	1.88	0.88
2:B:1664:A:H4'	11:K:40:LYS:HB3	1.37	0.88
2:B:1771:C:P	2:B:1968:G:O4'	2.31	0.88
2:B:2003:A:C2	5:D:138:LEU:N	2.33	0.88
2:B:2005:A:O4'	5:D:142:VAL:CG1	2.08	0.88
2:B:2246:G:C2'	2:B:2445:G:C2	2.54	0.88
2:B:2270:A:C3'	22:W:18:LYS:CD	2.50	0.88
2:B:2461:A:C5'	13:M:78:LEU:CD2	2.52	0.88
2:B:2898:U:O2'	10:J:137:PRO:HD2	1.73	0.88
4:C:30:ALA:N	4:C:31:PRO:HD3	1.89	0.88
6:E:25:GLU:HG3	12:L:17:LYS:CD	2.02	0.88
25:Z:36:VAL:HA	25:Z:42:PRO:HD3	1.55	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:3:12:ARG:HB3	29:3:23:HIS:HA	1.55	0.88
2:B:482:A:H5''	21:U:45:GLN:HG2	1.54	0.88
2:B:516:C:H4'	2:B:1262:A:C5'	2.03	0.88
2:B:780:G:C2'	32:B:3401:HOH:O	2.19	0.88
2:B:815:C:C5	18:R:84:ARG:NH1	2.40	0.88
2:B:1673:G:H21	2:B:2605:U:H5''	1.31	0.88
2:B:1770:G:C2'	2:B:1939:U:N3	2.37	0.88
2:B:2016:U:O2	26:0:3:GLN:HB3	1.73	0.88
2:B:2633:G:O4'	5:D:62:LYS:HG3	1.72	0.88
2:B:2880:C:H4'	14:N:90:ARG:HD3	1.53	0.88
2:B:2885:G:C8	26:0:48:TYR:CE2	2.62	0.88
2:B:6:A:N6	2:B:2897:U:N3	2.21	0.88
2:B:483:A:C4'	21:U:45:GLN:HA	2.02	0.88
2:B:584:C:OP1	17:Q:4:LYS:N	1.93	0.88
2:B:1651:G:C4'	14:N:2:ARG:NH1	2.32	0.88
2:B:1670:C:H5'	2:B:2557:G:N2	1.88	0.88
2:B:2269:G:P	22:W:19:ARG:HG3	2.14	0.88
2:B:2848:G:C8	16:P:96:LEU:CG	2.57	0.88
6:E:29:HIS:N	12:L:19:LEU:HD22	1.88	0.88
6:E:29:HIS:HA	12:L:17:LYS:O	1.74	0.88
2:B:72:U:C4	23:X:58:ASN:ND2	2.38	0.88
2:B:161:A:H3'	2:B:162:U:H5''	1.56	0.88
2:B:858:G:O2'	2:B:2268:A:C1'	2.16	0.88
2:B:1009:A:C2'	17:Q:61:ILE:CD1	2.51	0.88
2:B:1257:C:O2'	6:E:77:ILE:O	1.90	0.88
2:B:1340:U:HO3'	2:B:1395:A:H5'	1.33	0.88
2:B:1752:C:O4'	2:B:2861:U:H4'	1.72	0.88
2:B:2197:U:C4	2:B:2225:A:H5''	2.07	0.88
2:B:2245:U:O4'	2:B:2433:A:O3'	1.91	0.88
2:B:2257:U:C6	2:B:2450:A:C4'	2.57	0.88
2:B:2899:A:H5''	10:J:137:PRO:HD3	1.55	0.88
20:T:43:ILE:HG21	32:T:105:HOH:O	1.62	0.88
2:B:23:G:N2	19:S:78:GLU:CD	2.32	0.88
2:B:412:A:C6	2:B:2411:A:C2	2.61	0.88
2:B:483:A:O2'	21:U:46:LYS:CE	2.22	0.88
2:B:682:G:O3'	28:2:26:ASN:CG	2.16	0.88
2:B:1009:A:C2'	17:Q:61:ILE:HD12	2.02	0.88
2:B:1131:G:N1	2:B:2024:G:N2	2.22	0.88
2:B:1188:U:OP1	18:R:83:TYR:CE2	2.27	0.88
2:B:1599:U:H5''	20:T:81:LYS:HZ1	1.31	0.88
2:B:1652:A:H5''	5:D:116:LYS:HZ1	1.38	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1663:G:OP1	11:K:7:MET:CE	2.20	0.88
2:B:1665:A:H5'	11:K:40:LYS:CE	2.03	0.88
2:B:1666:G:H2'	2:B:2559:C:O2'	1.73	0.88
2:B:1951:U:O2'	2:B:1991:U:C6	1.86	0.88
2:B:320:A:H5''	6:E:130:LYS:NZ	1.87	0.88
2:B:588:U:H5'	12:L:29:LYS:O	1.72	0.88
2:B:826:U:H5'	2:B:2448:A:N6	1.01	0.88
2:B:1184:U:H5'	24:Y:29:ARG:HE	0.74	0.88
2:B:1770:G:P	2:B:1964:G:H1	1.96	0.88
2:B:1773:A:P	2:B:1972:G:N9	2.47	0.88
2:B:1995:U:C5'	2:B:2557:G:C6	2.57	0.88
2:B:2281:A:O4'	2:B:2388:A:N1	2.06	0.88
5:D:165:MET:HE3	5:D:166:GLY:H	1.36	0.88
2:B:193:U:C5'	2:B:802:A:O2'	2.19	0.88
2:B:452:G:N2	28:2:39:ARG:NH2	2.22	0.88
2:B:515:A:H1'	2:B:1261:C:C1'	2.02	0.88
2:B:592:A:H5'	29:3:1:PRO:CB	2.02	0.88
2:B:1653:G:H3'	5:D:126:ASN:C	1.85	0.88
2:B:1669:A:H1'	2:B:2558:C:H1'	1.55	0.88
2:B:1997:C:O2'	2:B:2548:U:P	2.30	0.88
3:V:77:VAL:C	13:M:132:THR:O	1.98	0.88
2:B:575:A:P	2:B:2030:A:C2	2.67	0.88
2:B:812:C:H41	12:L:33:ARG:CB	1.57	0.88
2:B:826:U:OP2	2:B:2448:A:C8	2.10	0.88
2:B:2247:A:O3'	2:B:2445:G:H2'	1.73	0.88
15:O:26:LEU:HB2	15:O:93:ASP:HA	1.54	0.88
16:P:108:ARG:HD2	16:P:108:ARG:H	1.38	0.88
2:B:76:C:H1'	23:X:55:THR:OG1	1.74	0.87
2:B:584:C:C3'	17:Q:3:VAL:HG21	2.04	0.87
2:B:1262:A:C3'	19:S:95:ARG:NH2	2.30	0.87
2:B:1339:G:H5'	2:B:1393:A:C8	2.10	0.87
2:B:1799:G:H22	4:C:153:LEU:CB	1.87	0.87
2:B:1855:U:H3	2:B:2234:G:C3'	1.86	0.87
2:B:2642:G:H5''	10:J:81:ILE:HG23	1.55	0.87
5:D:8:LYS:NZ	16:P:1:SER:N	2.21	0.87
6:E:25:GLU:HG2	12:L:17:LYS:CA	2.03	0.87
6:E:112:LEU:CD2	12:L:11:GLY:HA2	1.97	0.87
8:G:26:LYS:HA	8:G:31:GLU:HG2	1.54	0.87
2:B:336:C:OP1	21:U:81:ARG:HD3	1.74	0.87
2:B:518:G:O3'	19:S:15:GLN:HA	1.72	0.87
2:B:752:A:C2'	32:2:95:HOH:O	2.22	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1655:A:C2'	2:B:2511:U:C6	2.57	0.87
2:B:1676:A:N1	2:B:2552:U:P	2.47	0.87
2:B:1819:A:H2'	4:C:176:ARG:HB2	1.55	0.87
2:B:1999:C:O3'	11:K:31:ARG:CD	2.20	0.87
2:B:2091:C:C6	2:B:2229:U:N3	2.09	0.87
2:B:2255:G:O6	2:B:2450:A:N6	2.07	0.87
10:J:71:ASP:CG	10:J:72:LYS:H	1.80	0.87
12:L:111:ILE:H	12:L:111:ILE:HD13	1.38	0.87
1:A:50:A:OP1	15:O:65:THR:O	1.62	0.87
1:A:75:G:O2'	3:V:29:ILE:CG2	2.22	0.87
2:B:76:C:H4'	23:X:52:ARG:H	1.08	0.87
2:B:396:G:C4'	25:Z:3:LYS:HZ1	1.80	0.87
2:B:565:C:C6	2:B:578:G:C6	2.62	0.87
2:B:652:U:H5''	32:B:3141:HOH:O	1.74	0.87
2:B:675:A:OP1	6:E:58:LYS:HG2	1.74	0.87
2:B:1674:G:OP2	2:B:1944:U:O4'	1.91	0.87
2:B:1752:C:H5''	2:B:2861:U:C2'	2.04	0.87
2:B:2007:U:C5'	5:D:162:ALA:HB3	1.89	0.87
2:B:2061:G:H1'	2:B:2253:G:C5'	2.04	0.87
2:B:2344:U:C2'	27:1:37:LYS:HG2	2.04	0.87
5:D:9:VAL:CA	16:P:5:LYS:HD3	2.01	0.87
16:P:24:THR:HG21	16:P:111:GLU:HG2	1.55	0.87
1:A:80:U:H4'	2:B:917:A:N1	1.89	0.87
2:B:197:A:H1'	2:B:2443:C:O3'	1.43	0.87
2:B:812:C:H5	12:L:33:ARG:CA	1.86	0.87
2:B:972:A:OP2	2:B:974:G:H5'	1.71	0.87
2:B:1011:G:OP1	17:Q:75:TYR:N	2.06	0.87
2:B:1126:A:H5''	30:4:37:GLN:HE22	1.39	0.87
2:B:1668:A:N1	2:B:2551:C:H4'	1.88	0.87
2:B:1903:G:P	4:C:239:PHE:CA	2.59	0.87
2:B:1938:A:N1	2:B:2590:A:H4'	1.87	0.87
2:B:2007:U:C5'	5:D:162:ALA:HB2	1.91	0.87
2:B:2009:A:OP1	2:B:2823:A:N9	2.07	0.87
2:B:2270:A:C4	22:W:20:LEU:HB3	2.00	0.87
2:B:2281:A:H1'	2:B:2388:A:N1	1.84	0.87
2:B:2884:U:C5	26:0:41:HIS:ND1	2.43	0.87
8:G:32:LEU:HD21	8:G:74:MET:HB3	1.57	0.87
10:J:7:LYS:HD2	10:J:49:ASP:HB2	1.54	0.87
20:T:58:VAL:HG13	32:T:105:HOH:O	1.74	0.87
1:A:49:C:H2'	15:O:66:GLY:HA2	1.56	0.87
2:B:520:G:C5'	19:S:18:ARG:HH21	1.87	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:537:G:HO2'	10:J:4:PHE:HZ	1.15	0.87
2:B:654:A:N1	29:3:18:LYS:HA	1.90	0.87
2:B:755:U:H2'	32:B:3429:HOH:O	1.74	0.87
2:B:1118:C:C5'	13:M:127:LYS:HE3	1.99	0.87
2:B:1224:U:P	18:R:90:ARG:HB2	2.13	0.87
2:B:2263:C:H5'	2:B:2329:U:C1'	2.05	0.87
20:T:73:ARG:CG	28:2:42:LEU:HG	2.02	0.87
2:B:6:A:N1	2:B:2897:U:C2	2.43	0.87
2:B:8:C:O3'	10:J:121:LYS:NZ	2.06	0.87
2:B:1773:A:C6	2:B:1830:C:N3	2.43	0.87
2:B:1783:A:C2'	2:B:2590:A:P	2.62	0.87
2:B:1940:U:OP1	2:B:2593:U:C5'	2.23	0.87
2:B:2056:G:C5	2:B:2577:A:C2	2.62	0.87
4:C:181:ARG:HH12	4:C:260:LYS:HD2	1.38	0.87
6:E:183:PHE:O	12:L:12:SER:CB	2.22	0.87
7:F:33:ILE:HG22	7:F:155:ILE:HG12	1.56	0.87
1:A:57:A:C2'	7:F:27:VAL:CB	2.53	0.87
2:B:1128:G:H4'	2:B:2517:C:H5''	1.56	0.87
2:B:1131:G:H2'	2:B:2026:U:P	1.98	0.87
2:B:1654:A:H3'	5:D:128:ARG:HG2	1.57	0.87
2:B:1889:A:C5	2:B:2236:U:C6	2.56	0.87
2:B:2067:G:N7	2:B:2246:G:O4'	2.07	0.87
2:B:2575:C:C5'	5:D:151:THR:HG22	2.02	0.87
17:Q:33:VAL:HG13	17:Q:34:ALA:H	1.40	0.87
2:B:1141:U:H4'	2:B:1142:A:O4'	1.74	0.87
2:B:1283:G:H22	2:B:1286:A:H5'	1.37	0.87
2:B:1340:U:OP2	20:T:19:LYS:NZ	2.06	0.87
2:B:1417:C:N4	2:B:1418:G:C6	2.41	0.87
2:B:1816:C:C1'	4:C:62:ARG:NH2	2.32	0.87
2:B:2014:A:H1'	2:B:2611:C:C2'	2.04	0.87
2:B:2017:U:N3	26:0:3:GLN:HG3	1.86	0.87
2:B:2069:G:C8	2:B:2433:A:OP2	2.27	0.87
3:V:51:GLN:O	13:M:130:PHE:HZ	1.57	0.87
29:3:7:ARG:HH21	29:3:11:LYS:HZ1	1.19	0.87
2:B:72:U:C5	23:X:58:ASN:ND2	2.40	0.87
2:B:398:C:C4'	2:B:2231:U:H5'	2.04	0.87
2:B:412:A:N7	2:B:2411:A:C2	2.43	0.87
2:B:453:A:N3	28:2:39:ARG:NH2	2.21	0.87
2:B:556:A:N3	10:J:7:LYS:NZ	2.23	0.87
2:B:593:U:O4'	29:3:2:LYS:CE	2.23	0.87
2:B:662:G:OP1	12:L:25:SER:N	2.08	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:855:G:H4'	22:W:24:ARG:HH22	1.40	0.87
2:B:1225:G:H21	18:R:85:LYS:HZ2	1.19	0.87
2:B:2065:C:O2'	2:B:2258:C:N3	2.07	0.87
2:B:2749:A:H5'	8:G:65:GLY:HA3	0.88	0.87
1:A:50:A:C5'	15:O:65:THR:O	2.23	0.86
1:A:58:A:C1'	7:F:25:MET:O	2.18	0.86
2:B:197:A:O2'	2:B:2443:C:C5'	2.22	0.86
2:B:801:G:O6	6:E:50:ALA:HB3	1.73	0.86
2:B:812:C:C5	12:L:33:ARG:HB3	1.80	0.86
2:B:1011:G:OP1	17:Q:74:SER:C	2.18	0.86
2:B:1270:C:P	2:B:2012:G:C5'	2.59	0.86
2:B:1362:C:OP1	2:B:2215:C:O4'	1.92	0.86
2:B:1657:U:O4	5:D:130:GLN:HG2	1.74	0.86
2:B:1659:G:O3'	32:B:3280:HOH:O	1.92	0.86
2:B:1995:U:H5	2:B:2550:G:C6	1.86	0.86
2:B:2270:A:C8	22:W:20:LEU:CB	2.51	0.86
6:E:128:ALA:CB	6:E:129:PRO:HD3	2.03	0.86
11:K:70:ARG:HB3	11:K:76:VAL:HG22	1.55	0.86
14:N:1:MET:HE3	14:N:3:HIS:H	1.40	0.86
16:P:26:GLU:HB3	16:P:46:VAL:HG22	1.55	0.86
24:Y:9:THR:HA	24:Y:55:LYS:HG3	1.55	0.86
1:A:59:A:C4	7:F:25:MET:HB2	1.73	0.86
2:B:6:A:C6	2:B:2898:U:C2	2.62	0.86
2:B:496:G:C5'	19:S:1:MET:H1	1.88	0.86
2:B:565:C:O5'	2:B:577:G:N1	2.04	0.86
2:B:654:A:H2'	2:B:655:A:H5''	1.55	0.86
2:B:1580:A:N6	2:B:1581:G:N2	2.22	0.86
2:B:1855:U:N3	2:B:2234:G:C3'	2.38	0.86
8:G:29:ASN:HB2	8:G:78:VAL:HA	1.54	0.86
1:A:59:A:C4	7:F:25:MET:CA	2.58	0.86
2:B:220:G:H4'	2:B:234:U:O4'	1.75	0.86
2:B:320:A:H2'	6:E:131:THR:HG21	0.88	0.86
2:B:1673:G:H5''	2:B:1944:U:H5''	1.55	0.86
2:B:1820:U:H6	4:C:176:ARG:NH2	1.73	0.86
2:B:2017:U:C2'	26:O:4:GLN:N	2.36	0.86
2:B:2582:G:OP2	2:B:2583:G:P	2.33	0.86
1:A:43:C:O2	7:F:91:ARG:HG2	1.73	0.86
1:A:56:G:H1'	7:F:24:VAL:HG13	1.02	0.86
2:B:482:A:C5'	21:U:43:LYS:HE3	2.03	0.86
2:B:587:C:H2'	12:L:36:LYS:HD2	1.58	0.86
2:B:1669:A:C5	2:B:2550:G:N2	2.43	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1670:C:C2	2:B:1955:U:C6	2.62	0.86
2:B:1671:U:H5''	2:B:2554:U:C5	2.09	0.86
2:B:1805:A:C4'	4:C:51:ARG:CA	2.51	0.86
2:B:1993:U:C6	2:B:2551:C:C6	2.61	0.86
2:B:2061:G:C4	2:B:2253:G:O5'	2.29	0.86
2:B:2811:G:H5''	5:D:62:LYS:HE2	1.58	0.86
4:C:229:HIS:NE2	4:C:244:VAL:HG22	1.91	0.86
6:E:27:LEU:CG	12:L:19:LEU:CD1	2.52	0.86
6:E:28:VAL:CA	12:L:19:LEU:HD21	1.99	0.86
6:E:112:LEU:HD13	12:L:11:GLY:O	1.75	0.86
17:Q:16:ILE:HD13	17:Q:34:ALA:HB2	1.57	0.86
19:S:18:ARG:HH12	19:S:25:ARG:HH22	1.20	0.86
2:B:144:A:P	20:T:37:ASP:OD1	2.33	0.86
2:B:593:U:C1'	29:3:2:LYS:CD	2.50	0.86
2:B:753:A:OP1	32:2:95:HOH:O	1.92	0.86
2:B:966:G:N3	32:B:3380:HOH:O	2.08	0.86
2:B:2004:G:N1	5:D:130:GLN:NE2	2.15	0.86
2:B:2061:G:N3	2:B:2253:G:O4'	1.82	0.86
2:B:2230:G:O2'	25:Z:49:ARG:NH1	2.07	0.86
3:V:76:ASP:O	13:M:133:LYS:HA	1.75	0.86
5:D:34:VAL:HG22	5:D:89:GLU:HG2	1.58	0.86
2:B:24:G:H1'	19:S:78:GLU:HB3	1.54	0.86
2:B:809:G:N2	2:B:1254:A:H2	1.32	0.86
2:B:1224:U:C4'	18:R:76:LYS:O	2.22	0.86
2:B:1225:G:H21	18:R:85:LYS:HZ3	0.89	0.86
2:B:1296:G:H5''	2:B:2709:G:C4'	2.04	0.86
2:B:1816:C:H5'	4:C:86:ARG:H	1.41	0.86
2:B:1853:A:N1	2:B:2235:G:C5	2.29	0.86
2:B:1997:C:O2	2:B:2548:U:H2'	1.75	0.86
2:B:1998:A:C4'	11:K:29:HIS:CE1	2.56	0.86
2:B:1999:C:H5''	11:K:31:ARG:NE	1.91	0.86
2:B:2495:G:C8	13:M:80:VAL:HG13	2.10	0.86
2:B:6:A:C6	2:B:2897:U:N3	2.42	0.86
2:B:61:C:C5'	23:X:25:GLN:HA	2.03	0.86
2:B:1659:G:O4'	5:D:134:HIS:CD2	2.28	0.86
2:B:1783:A:C2'	2:B:2590:A:H8	1.88	0.86
2:B:1852:U:C2	2:B:2236:U:OP1	2.29	0.86
3:V:79:ARG:CZ	13:M:134:THR:CG2	2.54	0.86
12:L:82:LEU:HD13	12:L:83:ALA:H	1.39	0.86
1:A:58:A:H2'	7:F:25:MET:O	1.75	0.86
2:B:95:A:OP1	23:X:36:GLN:NE2	2.02	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:529:A:H2	2:B:2023:C:OP2	1.58	0.86
2:B:565:C:N1	2:B:578:G:C6	2.44	0.86
2:B:661:A:C5'	12:L:23:ILE:HA	1.98	0.86
2:B:1032:A:O4'	30:4:16:ILE:HG21	1.75	0.86
2:B:1807:G:H5''	4:C:47:ARG:CA	2.05	0.86
2:B:1816:C:C5	4:C:61:TYR:O	2.28	0.86
2:B:1902:C:C3'	4:C:239:PHE:HA	2.04	0.86
2:B:2350:C:C2'	29:3:38:LYS:HZ2	1.86	0.86
3:V:78:GLN:OE1	13:M:135:VAL:HG12	1.73	0.86
1:A:28:C:H5'	15:O:34:HIS:CE1	2.10	0.86
2:B:482:A:H5''	21:U:43:LYS:HZ3	1.40	0.86
2:B:514:A:N1	2:B:1260:A:O2'	2.09	0.86
2:B:1664:A:O2'	2:B:2561:U:H4'	1.76	0.86
2:B:1818:U:C5	4:C:154:ALA:CA	2.58	0.86
2:B:1951:U:C2	2:B:1991:U:C5	2.64	0.86
2:B:1995:U:C6	2:B:2549:G:O6	2.29	0.86
2:B:2262:U:P	2:B:2387:U:O2	2.34	0.86
2:B:2875:C:O3'	16:P:6:GLN:OE1	1.94	0.86
5:D:115:GLY:HA2	5:D:165:MET:HG3	1.58	0.86
6:E:29:HIS:CA	12:L:17:LYS:O	2.23	0.86
12:L:55:MET:HG3	29:3:5:THR:HG23	1.58	0.86
18:R:54:VAL:CB	18:R:54:VAL:H	1.87	0.86
2:B:125:A:H5'	28:2:19:ARG:HH22	1.38	0.86
2:B:857:G:H5''	22:W:55:ASP:OD1	1.76	0.86
2:B:989:G:N7	24:Y:13:ILE:O	0.71	0.86
2:B:1269:A:OP1	2:B:2012:G:H2'	1.76	0.86
2:B:1785:A:H1'	2:B:2591:C:P	2.15	0.86
2:B:1889:A:C5	2:B:2236:U:H6	1.89	0.86
2:B:2197:U:C4	2:B:2225:A:C5'	2.59	0.86
13:M:69:PRO:HB3	13:M:93:VAL:HG12	1.58	0.86
17:Q:101:ASP:OD2	18:R:2:TYR:CD2	2.29	0.86
2:B:57:C:H4'	20:T:78:SER:CA	2.05	0.85
2:B:95:A:C6	23:X:41:HIS:CG	2.62	0.85
2:B:220:G:H4'	2:B:234:U:C4'	2.05	0.85
2:B:586:A:C5'	6:E:85:PHE:HE1	1.89	0.85
2:B:654:A:C5	29:3:18:LYS:CG	2.59	0.85
2:B:1224:U:H5''	18:R:76:LYS:CA	2.04	0.85
2:B:1773:A:C2	2:B:1975:G:C2	2.64	0.85
2:B:1818:U:H3'	4:C:159:THR:HG21	1.56	0.85
2:B:2347:C:H2'	27:1:39:ASP:HB2	1.57	0.85
2:B:2642:G:OP1	10:J:84:ILE:HG12	1.64	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:143:VAL:HG12	4:C:144:GLU:H	1.39	0.85
6:E:18:THR:HG23	6:E:20:GLY:H	1.41	0.85
6:E:31:VAL:H	12:L:19:LEU:HD23	1.40	0.85
1:A:37:C:O2	15:O:69:ASP:CG	2.18	0.85
2:B:515:A:P	17:Q:29:ARG:HH12	1.90	0.85
2:B:944:C:OP2	32:B:3067:HOH:O	1.91	0.85
2:B:1124:G:H5''	30:4:20:ASP:O	1.74	0.85
2:B:1662:U:C4'	11:K:6:THR:N	2.03	0.85
2:B:1826:G:H5'	4:C:242:HIS:HB2	1.56	0.85
2:B:2015:A:OP1	19:S:94:ASP:OD2	1.93	0.85
2:B:2466:C:OP1	30:4:7:VAL:CG2	2.22	0.85
2:B:2642:G:H5''	10:J:82:GLY:N	1.91	0.85
5:D:14:ILE:HA	5:D:19:GLY:HA2	1.58	0.85
2:B:704:G:H2'	2:B:726:G:H22	1.41	0.85
2:B:931:U:H1'	2:B:1167:C:O2'	1.75	0.85
2:B:1126:A:C5'	30:4:37:GLN:NE2	2.39	0.85
2:B:1790:C:HO2'	2:B:1829:A:H5''	1.07	0.85
2:B:2063:C:C5	2:B:2253:G:H5''	1.94	0.85
2:B:2245:U:C4	2:B:2442:C:O2	2.28	0.85
2:B:2748:A:H4'	8:G:69:ALA:HB3	1.56	0.85
2:B:2786:U:H4'	5:D:65:ALA:C	2.01	0.85
25:Z:63:ARG:CZ	25:Z:63:ARG:HA	2.06	0.85
1:A:58:A:C8	7:F:27:VAL:CG2	2.54	0.85
2:B:496:G:C5'	19:S:1:MET:N	2.39	0.85
2:B:564:C:C1'	17:Q:36:GLN:CD	2.49	0.85
2:B:565:C:O4'	2:B:578:G:C6	2.30	0.85
2:B:789:A:C8	28:2:5:PHE:CZ	2.64	0.85
2:B:1340:U:H1'	2:B:1604:C:OP2	1.75	0.85
2:B:1636:U:O2'	2:B:1760:C:C2'	2.24	0.85
2:B:1752:C:H5'	2:B:2861:U:C2'	2.06	0.85
2:B:2255:G:C6	2:B:2450:A:C5	2.65	0.85
6:E:30:GLN:N	12:L:19:LEU:HD22	1.80	0.85
1:A:79:G:O2'	2:B:861:A:H2	1.58	0.85
1:A:81:G:C4'	2:B:919:U:H5''	1.96	0.85
2:B:45:G:O5'	2:B:46:G:H4'	1.77	0.85
2:B:137:U:O2	20:T:4:GLU:HG2	1.74	0.85
2:B:199:A:N6	2:B:2433:A:N3	2.19	0.85
2:B:220:G:O2'	2:B:233:A:H2	1.59	0.85
2:B:738:G:C5'	32:B:3298:HOH:O	2.24	0.85
2:B:1029:A:C2	30:4:6:SER:O	2.28	0.85
2:B:1124:G:H21	30:4:23:ILE:CG2	1.90	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1454:C:H5	2:B:2705:A:C2	1.94	0.85
2:B:1752:C:H5'	2:B:2861:U:O2'	1.75	0.85
2:B:2262:U:C1'	2:B:2328:A:H1'	2.06	0.85
2:B:2636:C:O2'	5:D:80:TRP:CE3	2.29	0.85
2:B:2884:U:H5	26:O:41:HIS:HD1	1.25	0.85
16:P:47:ILE:HG23	16:P:63:ILE:HG23	1.59	0.85
2:B:593:U:OP1	29:3:60:CYS:SG	2.34	0.85
2:B:687:C:H5'	28:2:6:GLN:O	1.77	0.85
2:B:1131:G:O3'	2:B:2026:U:H4'	1.77	0.85
2:B:1361:G:H4'	2:B:2214:C:H42	1.40	0.85
2:B:1361:G:O2'	2:B:2214:C:C6	2.30	0.85
2:B:1658:C:C2	5:D:138:LEU:HD21	2.11	0.85
2:B:2636:C:H4'	5:D:80:TRP:CE3	2.11	0.85
12:L:29:LYS:HD2	12:L:31:GLY:H	1.42	0.85
15:O:8:ILE:HG22	15:O:10:ARG:HG2	1.56	0.85
2:B:1369:G:N3	2:B:1808:A:C8	2.45	0.85
2:B:1567:G:HO2'	4:C:32:LEU:HD21	1.39	0.85
2:B:2178:C:P	2:B:2181:U:P	2.73	0.85
18:R:1:MET:HA	18:R:46:GLU:HB2	1.58	0.85
25:Z:32:LEU:HD11	25:Z:47:LYS:HG3	1.58	0.85
2:B:57:C:C4'	20:T:78:SER:HB3	2.05	0.85
2:B:96:C:C4'	23:X:39:GLN:HB3	2.07	0.85
2:B:693:A:C3'	2:B:1354:A:H4'	1.98	0.85
2:B:826:U:H5	2:B:2447:G:OP1	1.59	0.85
2:B:1163:G:C5'	18:R:91:GLN:HE22	1.68	0.85
2:B:1224:U:O4'	18:R:89:HIS:CB	2.25	0.85
2:B:1994:C:C3'	2:B:2551:C:N4	1.81	0.85
2:B:2004:G:C2	5:D:138:LEU:HB2	1.89	0.85
2:B:2245:U:C5'	2:B:2431:U:O4	2.13	0.85
2:B:2575:C:C4'	5:D:151:THR:HG23	2.06	0.85
6:E:112:LEU:HD11	12:L:12:SER:O	1.48	0.85
2:B:76:C:O3'	23:X:52:ARG:N	2.10	0.85
2:B:310:A:OP1	21:U:14:THR:HG22	1.75	0.85
2:B:584:C:H5	17:Q:5:ARG:HH11	1.24	0.85
2:B:584:C:H5''	17:Q:3:VAL:HB	1.58	0.85
2:B:586:A:N6	2:B:810:U:H4'	1.91	0.85
2:B:1580:A:C6	2:B:1581:G:N2	2.44	0.85
2:B:2003:A:C8	5:D:139:SER:HA	2.12	0.85
2:B:2532:G:N2	2:B:2662:A:C2	2.45	0.85
6:E:28:VAL:C	12:L:19:LEU:HD22	2.02	0.85
1:A:29:A:H2	7:F:24:VAL:CG2	1.77	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:931:U:C2	2:B:1167:C:O2	2.09	0.85
2:B:1009:A:C3'	17:Q:61:ILE:HD11	2.00	0.85
2:B:1275:A:H2'	14:N:20:MET:HE1	1.41	0.85
2:B:1806:C:O3'	4:C:48:ILE:C	2.02	0.85
2:B:2014:A:C4	2:B:2611:C:H2'	2.12	0.85
2:B:2845:U:OP1	16:P:58:PHE:HZ	1.60	0.85
5:D:8:LYS:NZ	16:P:1:SER:HB3	1.92	0.85
2:B:56:A:OP1	20:T:69:ARG:HB3	1.77	0.84
2:B:95:A:C6	23:X:41:HIS:CD2	2.65	0.84
2:B:534:U:N3	32:B:3014:HOH:O	2.09	0.84
2:B:1224:U:OP1	18:R:89:HIS:O	1.89	0.84
2:B:1266:G:P	26:O:15:ARG:HD3	2.16	0.84
2:B:1338:G:OP2	20:T:18:GLU:HB2	1.75	0.84
2:B:1662:U:H4'	11:K:6:THR:H	0.68	0.84
2:B:1662:U:H1'	11:K:4:GLU:O	1.03	0.84
2:B:1766:G:C8	2:B:1958:C:O2'	2.29	0.84
2:B:1796:U:O4'	4:C:251:THR:HA	1.76	0.84
2:B:1952:A:N7	2:B:1991:U:C5'	2.40	0.84
2:B:2070:A:C5	2:B:2245:U:C5	2.61	0.84
2:B:2248:C:H6	2:B:2446:G:C1'	1.88	0.84
2:B:2880:C:O2'	14:N:90:ARG:HB3	1.76	0.84
7:F:115:GLY:HA3	7:F:177:ARG:HB2	1.58	0.84
1:A:22:U:N3	7:F:22:ASN:HB2	1.91	0.84
2:B:570:G:N9	2:B:2030:A:N6	2.25	0.84
2:B:1663:G:O5'	11:K:5:GLN:CA	2.24	0.84
2:B:2005:A:N1	5:D:128:ARG:HD3	1.91	0.84
2:B:2245:U:C5	2:B:2442:C:O2	2.29	0.84
2:B:2245:U:O2	2:B:2441:U:O4	1.96	0.84
2:B:2275:C:OP1	2:B:2448:A:OP2	1.95	0.84
2:B:2312:U:C5'	7:F:70:ARG:C	2.48	0.84
2:B:2312:U:C4'	7:F:71:LYS:CB	2.55	0.84
2:B:2378:A:H4'	15:O:117:PHE:HD1	1.43	0.84
3:V:77:VAL:O	13:M:132:THR:O	1.94	0.84
22:W:42:THR:HB	22:W:65:LYS:HA	1.56	0.84
1:A:93:C:C5'	3:V:18:ARG:NE	2.36	0.84
2:B:1816:C:C5'	4:C:85:ASN:HB2	1.79	0.84
2:B:2067:G:C2	2:B:2430:A:N3	2.44	0.84
2:B:2502:G:H5'	2:B:2503:A:H5''	1.58	0.84
2:B:589:U:H3	12:L:48:ARG:NH1	1.76	0.84
2:B:697:G:H2'	32:B:3354:HOH:O	1.78	0.84
2:B:728:G:C5'	4:C:16:VAL:CG1	2.50	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:748:G:N9	32:B:3135:HOH:O	1.97	0.84
2:B:753:A:OP1	28:2:1:MET:N	2.08	0.84
2:B:1128:G:H21	2:B:2517:C:C1'	1.89	0.84
2:B:1796:U:H4'	4:C:251:THR:CA	2.07	0.84
2:B:2245:U:C6	2:B:2442:C:C4	2.64	0.84
2:B:2478:A:OP2	30:4:32:LYS:CD	2.24	0.84
2:B:2867:G:C5	16:P:20:ARG:HD2	2.05	0.84
6:E:181:ILE:HG12	12:L:15:ALA:H	1.43	0.84
19:S:41:LYS:NZ	26:0:21:LEU:HB2	1.86	0.84
2:B:61:C:H5''	23:X:25:GLN:HG3	1.59	0.84
2:B:329:G:OP1	21:U:65:GLN:HG3	1.74	0.84
2:B:674:G:OP1	6:E:72:SER:N	2.11	0.84
2:B:1975:G:H5'	2:B:1979:U:H5	1.36	0.84
2:B:2018:G:H5''	26:0:5:ASN:OD1	1.70	0.84
2:B:2495:G:H5''	13:M:82:MET:SD	2.18	0.84
2:B:2531:A:C4'	8:G:174:LYS:O	2.24	0.84
4:C:196:ASN:HB2	4:C:199:HIS:HD2	1.42	0.84
10:J:42:ALA:HB1	17:Q:99:VAL:HG12	1.57	0.84
21:U:84:PHE:CD1	32:U:108:HOH:O	2.19	0.84
2:B:398:C:OP2	25:Z:50:ASP:HA	1.78	0.84
2:B:1666:G:O2'	2:B:2559:C:O3'	1.95	0.84
2:B:1769:U:O3'	2:B:1964:G:C2	2.25	0.84
2:B:1938:A:C2	2:B:2591:C:H5'	2.12	0.84
2:B:2005:A:N6	5:D:141:ARG:HA	1.91	0.84
3:V:76:ASP:OD2	13:M:136:MET:HA	1.76	0.84
5:D:16:THR:HG23	5:D:17:GLU:H	1.43	0.84
2:B:583:G:C3'	17:Q:6:GLY:N	2.39	0.84
2:B:931:U:H1'	2:B:1167:C:H1'	1.58	0.84
2:B:1030:C:OP1	13:M:117:PHE:CE1	2.31	0.84
2:B:1118:C:O3'	3:V:84:PRO:CD	2.26	0.84
2:B:1296:G:C5'	2:B:2709:G:H4'	2.08	0.84
2:B:1653:G:N1	5:D:141:ARG:HG3	1.93	0.84
2:B:1673:G:C6	2:B:2605:U:OP1	2.29	0.84
2:B:2061:G:N3	2:B:2253:G:O5'	2.10	0.84
2:B:2461:A:C4'	13:M:78:LEU:CD2	2.56	0.84
2:B:2848:G:H8	16:P:96:LEU:HD23	1.37	0.84
6:E:153:LEU:H	6:E:171:ASP:HB3	1.42	0.84
15:O:19:GLN:HA	22:W:76:ARG:HH22	1.42	0.84
1:A:60:C:N3	7:F:23:SER:CB	2.26	0.84
1:A:81:G:H5'	2:B:918:A:C2'	2.06	0.84
2:B:139:U:C4	20:T:3:ARG:N	2.45	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1125:G:O5'	30:4:37:GLN:NE2	1.84	0.84
2:B:1672:A:N3	2:B:2604:U:C5'	2.41	0.84
2:B:1954:G:O5'	2:B:1991:U:O4	1.94	0.84
2:B:2256:G:N2	2:B:2449:U:O2'	2.10	0.84
2:B:2272:U:P	22:W:15:SER:CB	2.64	0.84
4:C:23:LEU:HD12	4:C:202:ARG:HH22	1.43	0.84
5:D:38:LYS:HG2	5:D:39:ASP:H	1.42	0.84
18:R:8:GLY:HA3	18:R:22:LEU:HD11	1.60	0.84
2:B:7:G:N2	2:B:2897:U:C1'	2.40	0.84
2:B:811:U:C2	2:B:1251:C:C2	2.66	0.84
2:B:1278:C:O3'	14:N:34:ILE:HG22	1.78	0.84
2:B:1766:G:N7	2:B:1958:C:O2'	2.10	0.84
2:B:1993:U:C4	2:B:2550:G:C2'	2.61	0.84
2:B:1998:A:N6	2:B:2549:G:O5'	1.99	0.84
2:B:2246:G:N2	2:B:2425:A:H5''	1.92	0.84
2:B:2574:G:HO2'	5:D:151:THR:HG22	1.39	0.84
2:B:2575:C:H5''	5:D:150:GLN:HG2	1.48	0.84
2:B:2876:G:H4'	16:P:2:ASN:CA	1.92	0.84
6:E:141:MET:SD	6:E:143:LEU:HB2	2.17	0.84
23:X:24:GLU:HA	23:X:28:LEU:HB2	1.60	0.84
2:B:8:C:H5'	10:J:121:LYS:HZ2	1.40	0.84
2:B:45:G:C5'	2:B:46:G:H4'	2.08	0.84
2:B:84:A:OP2	21:U:91:LYS:HG2	1.76	0.84
2:B:94:A:H4'	23:X:32:ALA:C	2.02	0.84
2:B:94:A:C1'	23:X:32:ALA:O	2.26	0.84
2:B:127:A:N6	20:T:74:ILE:HG22	1.92	0.84
2:B:1277:G:C4'	14:N:24:MET:HB2	2.08	0.84
2:B:1619:G:C5	32:B:3080:HOH:O	2.31	0.84
2:B:1783:A:O2'	2:B:2590:A:O5'	1.95	0.84
2:B:1784:A:C5'	2:B:2590:A:O4'	2.25	0.84
2:B:1826:G:P	4:C:242:HIS:O	2.36	0.84
2:B:2493:U:C1'	13:M:78:LEU:O	2.26	0.84
2:B:2645:G:H4'	2:B:2732:G:H3'	1.60	0.84
6:E:27:LEU:N	12:L:19:LEU:HD13	1.32	0.84
25:Z:41:HIS:HB2	25:Z:42:PRO:HD2	1.58	0.84
2:B:126:A:N6	20:T:74:ILE:HG23	1.91	0.83
2:B:465:G:H4'	28:2:12:ARG:HH12	1.28	0.83
2:B:520:G:P	19:S:18:ARG:HH21	2.00	0.83
2:B:570:G:OP2	32:B:3097:HOH:O	1.95	0.83
2:B:679:C:C5'	32:B:2997:HOH:O	1.68	0.83
2:B:1338:G:C3'	20:T:18:GLU:CG	2.54	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1652:A:H5''	5:D:116:LYS:NZ	1.93	0.83
2:B:1828:G:C3'	2:B:1972:G:C4	2.59	0.83
2:B:2056:G:C4	2:B:2577:A:N1	2.44	0.83
2:B:2056:G:N9	2:B:2577:A:N1	2.25	0.83
2:B:2091:C:N1	2:B:2228:G:N1	2.24	0.83
2:B:2312:U:O5'	7:F:71:LYS:HB2	1.78	0.83
2:B:2344:U:C2'	27:1:37:LYS:CG	2.54	0.83
5:D:16:THR:C	16:P:79:VAL:HG11	1.92	0.83
20:T:73:ARG:NH1	28:2:43:THR:C	2.36	0.83
1:A:57:A:H2'	7:F:27:VAL:CG2	2.08	0.83
2:B:321:U:C5	6:E:129:PRO:CG	2.61	0.83
2:B:852:U:OP1	24:Y:44:ARG:CZ	2.26	0.83
2:B:1268:A:C8	32:B:3127:HOH:O	2.29	0.83
2:B:1672:A:N3	2:B:2604:U:C4'	2.37	0.83
2:B:1759:A:C4	2:B:2697:G:O4'	2.30	0.83
2:B:1799:G:C5	4:C:175:LEU:HD13	2.13	0.83
2:B:2531:A:N7	8:G:175:LYS:CG	2.39	0.83
2:B:2811:G:H5''	5:D:62:LYS:CE	2.09	0.83
2:B:27:G:H22	2:B:512:G:H2'	1.42	0.83
2:B:538:A:H4'	10:J:6:ALA:O	1.72	0.83
2:B:661:A:C1'	12:L:21:ARG:O	2.26	0.83
2:B:1368:G:H2'	2:B:1808:A:N1	1.93	0.83
2:B:1759:A:C2	2:B:2697:G:H4'	1.92	0.83
2:B:1770:G:OP2	2:B:1934:C:H2'	1.76	0.83
2:B:1789:A:H5''	4:C:219:VAL:CG1	2.07	0.83
2:B:1826:G:H5''	4:C:242:HIS:CG	2.12	0.83
2:B:2002:G:O6	5:D:130:GLN:HA	1.03	0.83
2:B:2268:A:O3'	22:W:19:ARG:HG3	1.78	0.83
2:B:2286:G:N1	27:1:33:LEU:HD13	1.91	0.83
2:B:2350:C:H3'	29:3:38:LYS:HZ2	1.03	0.83
2:B:2820:A:OP1	14:N:5:LYS:CB	2.24	0.83
5:D:62:LYS:HG2	5:D:63:PRO:HD3	1.60	0.83
12:L:118:THR:HG23	12:L:119:PRO:HD3	1.59	0.83
15:O:1:MET:HG2	15:O:3:LYS:H	1.43	0.83
2:B:586:A:O2'	12:L:37:GLY:HA2	1.77	0.83
2:B:649:G:H21	29:3:44:ARG:NE	1.68	0.83
2:B:661:A:H1'	12:L:21:ARG:C	2.02	0.83
2:B:1060:U:C2	2:B:1088:A:N7	2.46	0.83
2:B:1807:G:H5'	4:C:47:ARG:N	1.91	0.83
2:B:1997:C:O2	2:B:2548:U:C2'	2.26	0.83
2:B:2000:C:OP1	11:K:31:ARG:HD3	1.77	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2257:U:H6	2:B:2450:A:C4'	1.91	0.83
2:B:2262:U:H5'	2:B:2328:A:H2	0.66	0.83
2:B:2278:A:OP2	22:W:8:SER:CB	2.26	0.83
2:B:2494:G:N3	13:M:80:VAL:C	2.36	0.83
6:E:89:PRO:O	6:E:90:GLN:HG2	1.78	0.83
20:T:73:ARG:HB2	28:2:42:LEU:HB3	1.60	0.83
1:A:14:U:H1'	1:A:107:G:C5'	2.08	0.83
2:B:95:A:C2	23:X:41:HIS:CD2	2.64	0.83
2:B:699:A:O4'	2:B:700:G:C4'	2.23	0.83
2:B:1011:G:H4'	17:Q:74:SER:OG	1.78	0.83
2:B:1766:G:C5	2:B:1958:C:C2	2.65	0.83
2:B:1785:A:H1'	2:B:2591:C:OP1	1.77	0.83
2:B:1971:U:C4	4:C:239:PHE:CE1	2.64	0.83
2:B:2017:U:C3'	26:0:4:GLN:CA	2.52	0.83
2:B:2067:G:C5'	2:B:2429:G:O2'	2.25	0.83
2:B:2069:G:C5	2:B:2244:U:C2'	2.58	0.83
2:B:2258:C:C1'	2:B:2449:U:C6	2.61	0.83
2:B:2428:G:OP1	2:B:2448:A:C4	2.31	0.83
2:B:2899:A:H4'	10:J:136:GLN:HE21	1.42	0.83
29:3:7:ARG:NH2	29:3:11:LYS:HZ1	1.75	0.83
1:A:57:A:H2'	7:F:27:VAL:CG1	2.07	0.83
1:A:57:A:H62	7:F:24:VAL:CB	1.76	0.83
1:A:80:U:C5'	2:B:917:A:H2	1.74	0.83
2:B:181:A:C2	2:B:434:U:C2	2.66	0.83
2:B:1225:G:O5'	18:R:78:ARG:HD2	1.64	0.83
2:B:1339:G:C2	2:B:1603:A:H2'	2.13	0.83
2:B:1636:U:C2'	2:B:1760:C:HO2'	1.91	0.83
2:B:1767:G:N7	2:B:1959:G:N9	2.24	0.83
2:B:2018:G:H5''	26:0:5:ASN:ND2	1.89	0.83
2:B:2531:A:H8	8:G:175:LYS:CB	1.87	0.83
13:M:42:THR:HA	13:M:92:TRP:CD1	2.13	0.83
20:T:64:LYS:HB3	20:T:77:ARG:HD3	1.59	0.83
2:B:23:G:C2	19:S:78:GLU:HB2	2.14	0.83
2:B:308:G:N2	2:B:477:A:C1'	2.41	0.83
2:B:669:G:C4'	12:L:47:ARG:CG	2.17	0.83
2:B:1128:G:N2	2:B:2517:C:C1'	2.41	0.83
2:B:1217:U:P	17:Q:14:LYS:HZ2	2.02	0.83
2:B:1252:G:N1	17:Q:35:PHE:HB3	1.85	0.83
2:B:1262:A:H3'	19:S:95:ARG:HH22	1.03	0.83
2:B:1666:G:O2'	2:B:2559:C:O2'	1.84	0.83
2:B:1764:C:N4	2:B:1949:G:H22	1.77	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1774:C:N3	2:B:1829:A:H8	1.73	0.83
2:B:1796:U:C5'	4:C:251:THR:CB	2.55	0.83
2:B:2461:A:H4'	13:M:78:LEU:HD11	1.61	0.83
2:B:2582:G:H22	2:B:2583:G:H1'	1.41	0.83
2:B:2811:G:OP1	5:D:61:THR:OG1	1.96	0.83
12:L:38:GLN:CD	12:L:39:LYS:H	1.86	0.83
20:T:58:VAL:HG13	20:T:85:VAL:HG12	1.61	0.83
1:A:56:G:C4	7:F:24:VAL:HG11	2.09	0.83
2:B:5:A:N6	2:B:2899:A:N6	2.26	0.83
2:B:630:G:P	29:3:45:PRO:HD2	2.19	0.83
2:B:747:U:H5''	32:B:3133:HOH:O	1.72	0.83
2:B:1774:C:C4'	2:B:1976:U:C4	2.60	0.83
2:B:2272:U:OP2	22:W:18:LYS:NZ	2.11	0.83
2:B:2347:C:C2	27:1:45:HIS:NE2	2.39	0.83
2:B:2635:A:H4'	5:D:78:GLY:O	1.77	0.83
2:B:2814:A:C4	26:0:39:ARG:CD	2.61	0.83
2:B:2888:C:O4'	26:0:27:LEU:CD1	2.26	0.83
2:B:623:C:H4'	29:3:61:LEU:CD2	2.06	0.83
2:B:630:G:H5''	29:3:44:ARG:HD2	1.60	0.83
2:B:1294:U:H5'	14:N:71:ARG:HD3	1.60	0.83
2:B:1630:A:H1'	2:B:2698:U:OP1	1.79	0.83
2:B:1664:A:C1'	2:B:2561:U:O2'	2.27	0.83
2:B:2270:A:OP2	22:W:19:ARG:CG	2.11	0.83
2:B:2507:C:C5	2:B:2583:G:C2	2.66	0.83
2:B:2814:A:N9	26:0:39:ARG:HD2	1.93	0.83
6:E:31:VAL:N	12:L:19:LEU:HD23	1.94	0.83
2:B:9:G:N1	2:B:2895:G:C4	2.46	0.83
2:B:96:C:C5'	23:X:39:GLN:HB2	1.94	0.83
2:B:199:A:N6	2:B:2433:A:C5	2.47	0.83
2:B:331:C:C4'	32:B:3359:HOH:O	2.26	0.83
2:B:586:A:N6	2:B:810:U:C4'	2.42	0.83
2:B:1766:G:C3'	2:B:1959:G:C4'	2.36	0.83
2:B:1999:C:C3'	11:K:31:ARG:CB	2.49	0.83
2:B:2425:A:H5''	2:B:2449:U:C4	2.13	0.83
2:B:2478:A:C5'	30:4:32:LYS:CE	2.57	0.83
2:B:2507:C:N4	2:B:2583:G:N1	2.20	0.83
2:B:2814:A:C2'	26:0:39:ARG:HB2	2.08	0.83
2:B:2884:U:C2'	26:0:48:TYR:CE2	2.60	0.83
10:J:135:GLN:HG2	10:J:137:PRO:HD2	1.60	0.83
28:2:13:ASN:HA	28:2:18:PHE:HB2	1.60	0.83
2:B:321:U:OP2	6:E:130:LYS:C	2.22	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:516:C:P	26:0:9:ARG:HG2	2.19	0.82
2:B:686:U:N3	28:2:9:VAL:O	2.11	0.82
2:B:750:A:H5'	2:B:1617:C:N3	1.94	0.82
2:B:1771:C:H5''	2:B:1968:G:C5'	2.08	0.82
2:B:2257:U:C6	2:B:2450:A:H5'	2.13	0.82
4:C:155:ARG:HE	4:C:157:ALA:HB3	1.44	0.82
14:N:119:SER:O	26:0:51:ARG:CG	2.27	0.82
2:B:592:A:H5'	29:3:1:PRO:HA	0.84	0.82
2:B:1275:A:C5	14:N:16:HIS:CD2	2.67	0.82
2:B:1805:A:C2'	4:C:51:ARG:N	2.24	0.82
2:B:1960:A:C6	2:B:1986:C:O2	2.24	0.82
2:B:1996:C:C2	2:B:2549:G:O6	2.32	0.82
2:B:2004:G:C2	5:D:138:LEU:CB	2.54	0.82
2:B:2063:C:O2'	2:B:2255:G:P	2.37	0.82
2:B:2068:U:H5	2:B:2394:C:O2	1.51	0.82
2:B:2814:A:C2'	26:0:39:ARG:HG3	2.08	0.82
22:W:40:ARG:HH12	22:W:68:PHE:HA	1.43	0.82
2:B:24:G:N3	19:S:78:GLU:HB3	1.93	0.82
2:B:570:G:H3'	2:B:571:U:N3	1.53	0.82
2:B:686:U:O2	28:2:11:LYS:C	2.22	0.82
2:B:948:C:C4'	2:B:984:A:C2	2.61	0.82
2:B:1667:G:N2	2:B:2550:G:C2'	2.21	0.82
2:B:1670:C:C5'	2:B:2557:G:N2	2.33	0.82
2:B:1951:U:H1'	2:B:1991:U:C6	2.15	0.82
3:V:86:LEU:HG	13:M:134:THR:CB	2.09	0.82
13:M:1:MET:HE3	13:M:2:LEU:HG	1.58	0.82
1:A:14:U:C1'	1:A:107:G:C4'	2.23	0.82
1:A:49:C:P	15:O:72:ALA:HB2	2.18	0.82
2:B:192:C:N3	32:B:3396:HOH:O	2.11	0.82
2:B:1339:G:H5'	2:B:1393:A:C5	2.14	0.82
2:B:1639:C:H2'	2:B:1640:A:H5''	1.58	0.82
2:B:1666:G:H1'	2:B:2559:C:H2'	1.60	0.82
2:B:1993:U:H2'	2:B:2551:C:C6	2.14	0.82
2:B:1997:C:N4	2:B:2549:G:H5'	1.81	0.82
2:B:2197:U:O4	2:B:2225:A:H5''	1.79	0.82
2:B:2247:A:C4'	2:B:2445:G:C2'	2.56	0.82
2:B:2899:A:C5'	10:J:136:GLN:N	2.34	0.82
12:L:117:THR:HG21	12:L:120:VAL:HB	1.61	0.82
2:B:654:A:C6	29:3:18:LYS:CG	2.57	0.82
2:B:659:G:N2	6:E:100:MET:HE1	1.94	0.82
2:B:682:G:C4'	28:2:26:ASN:CG	2.52	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:826:U:H5''	2:B:2448:A:N6	1.93	0.82
2:B:1454:C:H5	2:B:2705:A:H2	1.25	0.82
2:B:1938:A:O2'	2:B:2591:C:O2'	1.96	0.82
2:B:1938:A:N1	2:B:2590:A:O3'	2.13	0.82
2:B:1951:U:C2'	2:B:1991:U:H6	1.90	0.82
2:B:2017:U:O5'	26:0:3:GLN:C	2.22	0.82
6:E:172:ALA:HB1	32:E:210:HOH:O	1.79	0.82
2:B:127:A:H62	20:T:75:GLY:C	1.88	0.82
2:B:587:C:P	12:L:36:LYS:HB2	2.19	0.82
2:B:1009:A:H4'	17:Q:61:ILE:HD11	0.86	0.82
2:B:1129:A:O4'	2:B:2517:C:H5'	1.80	0.82
2:B:1662:U:O2	11:K:4:GLU:CA	2.28	0.82
2:B:1805:A:C3'	4:C:51:ARG:H	1.89	0.82
2:B:1828:G:N9	2:B:1970:A:O2'	2.09	0.82
2:B:1948:G:C3'	2:B:1988:G:H5'	2.05	0.82
2:B:2061:G:C4'	2:B:2252:G:H4'	2.09	0.82
2:B:2070:A:C2	2:B:2244:U:O4	2.03	0.82
2:B:2091:C:C4	2:B:2228:G:C6	2.67	0.82
2:B:2257:U:C6	2:B:2450:A:C5'	2.62	0.82
2:B:2286:G:C6	27:1:33:LEU:O	2.33	0.82
2:B:2355:G:H5'	22:W:31:LEU:H	1.42	0.82
5:D:62:LYS:HG2	5:D:63:PRO:CD	2.10	0.82
20:T:64:LYS:HE2	20:T:79:ASP:HB2	1.59	0.82
29:3:11:LYS:HG2	29:3:12:ARG:HG3	1.61	0.82
2:B:811:U:C1'	2:B:1251:C:C1'	2.56	0.82
2:B:958:U:O4	13:M:16:ARG:HD2	1.79	0.82
2:B:1887:C:N3	2:B:2234:G:O3'	2.12	0.82
2:B:2344:U:C3'	27:1:37:LYS:CG	2.56	0.82
2:B:2899:A:H5''	10:J:136:GLN:HB3	1.58	0.82
5:D:119:ALA:HA	5:D:123:LYS:HE2	1.60	0.82
21:U:84:PHE:CA	32:U:109:HOH:O	2.27	0.82
2:B:17:G:H5'	26:0:14:MET:SD	2.20	0.82
2:B:789:A:O4'	28:2:3:ARG:NH2	1.98	0.82
2:B:851:C:O2'	24:Y:42:ALA:O	1.97	0.82
2:B:1250:G:OP2	12:L:32:GLY:HA2	1.78	0.82
2:B:1663:G:C4'	11:K:5:GLN:H	1.91	0.82
2:B:2215:C:O3'	25:Z:44:PHE:CZ	2.33	0.82
2:B:2261:C:C1'	2:B:2327:A:C6	2.47	0.82
2:B:2304:G:H22	2:B:2312:U:H3	1.26	0.82
2:B:2515:C:C4'	32:B:3028:HOH:O	2.23	0.82
2:B:2575:C:O4'	5:D:151:THR:HG21	1.78	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2581:G:C6	2:B:2610:C:C4	2.68	0.82
3:V:76:ASP:OD2	13:M:136:MET:OXT	1.98	0.82
1:A:29:A:N3	7:F:24:VAL:HG21	1.85	0.82
2:B:125:A:O5'	28:2:19:ARG:NH2	2.12	0.82
2:B:1778:U:C5'	32:B:3065:HOH:O	2.10	0.82
2:B:1806:C:O3'	4:C:48:ILE:CB	2.25	0.82
6:E:179:SER:C	12:L:13:LYS:NZ	2.28	0.82
2:B:183:C:O4'	2:B:433:C:C6	2.32	0.82
2:B:396:G:C5'	25:Z:3:LYS:NZ	2.41	0.82
2:B:415:A:C2	2:B:2408:U:O2	2.02	0.82
2:B:423:A:H5'	2:B:424:G:H5''	1.62	0.82
2:B:484:C:H5'	21:U:46:LYS:CE	2.10	0.82
2:B:1251:C:H5''	17:Q:12:ARG:HH12	1.44	0.82
2:B:1258:U:H4'	6:E:79:ARG:CD	2.08	0.82
2:B:2347:C:O2'	27:1:39:ASP:CA	2.28	0.82
7:F:107:VAL:N	7:F:108:PRO:HD2	1.95	0.82
8:G:157:LYS:HG3	8:G:159:LYS:HZ2	1.44	0.82
20:T:58:VAL:CG1	32:T:105:HOH:O	2.28	0.82
22:W:27:GLY:HA2	22:W:60:ALA:HA	1.61	0.82
23:X:22:LEU:HB3	23:X:26:PHE:HB2	1.61	0.82
29:3:12:ARG:NH1	29:3:12:ARG:HB2	1.95	0.82
2:B:96:C:O4'	23:X:39:GLN:O	1.97	0.81
2:B:814:C:O4'	18:R:85:LYS:CG	2.28	0.81
2:B:1663:G:OP1	11:K:7:MET:HE3	1.80	0.81
2:B:1767:G:O5'	2:B:1960:A:O5'	1.94	0.81
2:B:1996:C:N4	2:B:2561:U:O4	2.09	0.81
2:B:2013:A:N6	2:B:2612:C:H3'	1.93	0.81
2:B:2063:C:O2'	2:B:2254:C:C4'	2.22	0.81
2:B:2281:A:H1'	2:B:2388:A:C5	2.15	0.81
2:B:2484:G:O3'	13:M:44:ARG:CD	2.07	0.81
8:G:19:ASN:HB3	8:G:22:VAL:HG13	1.59	0.81
17:Q:93:ILE:HG23	17:Q:94:LEU:HD13	1.61	0.81
1:A:57:A:C2'	7:F:27:VAL:CG2	2.57	0.81
1:A:57:A:H1'	7:F:27:VAL:CG1	2.06	0.81
2:B:528:A:N6	2:B:2042:A:H2'	1.94	0.81
2:B:811:U:N1	2:B:1251:C:C2	2.48	0.81
2:B:1264:A:H1'	2:B:2016:U:N3	1.94	0.81
2:B:1312:U:C4	2:B:1604:C:N3	2.47	0.81
2:B:1637:A:H1'	2:B:2697:G:O2'	1.80	0.81
2:B:1655:A:C8	5:D:146:ILE:CG1	2.62	0.81
2:B:1818:U:O4	4:C:154:ALA:CB	2.29	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1976:U:C4	2:B:1979:U:O2	2.32	0.81
2:B:2092:U:N3	2:B:2228:G:C6	2.47	0.81
2:B:2270:A:C3'	22:W:18:LYS:HD2	2.07	0.81
2:B:2459:A:C2	13:M:79:ALA:O	2.33	0.81
2:B:2574:G:C2'	5:D:151:THR:HG21	2.05	0.81
17:Q:16:ILE:HD12	17:Q:17:LEU:N	1.95	0.81
2:B:35:G:N1	32:B:3117:HOH:O	1.89	0.81
2:B:36:G:C4	32:B:3117:HOH:O	2.29	0.81
2:B:220:G:C4'	2:B:234:U:C1'	2.57	0.81
2:B:220:G:C1'	2:B:234:U:H1'	2.11	0.81
2:B:321:U:O5'	6:E:129:PRO:O	1.99	0.81
2:B:396:G:H5'	25:Z:3:LYS:NZ	1.94	0.81
2:B:642:U:H5'	2:B:2350:C:OP1	1.81	0.81
2:B:948:C:C4'	2:B:984:A:H2	1.94	0.81
2:B:1178:C:H2'	2:B:1179:G:C8	2.16	0.81
2:B:1340:U:C1'	2:B:1603:A:O3'	2.28	0.81
2:B:1372:U:O4'	2:B:2213:U:O4	1.98	0.81
2:B:1670:C:C4'	2:B:2557:G:C2	2.56	0.81
2:B:1766:G:O6	2:B:1958:C:C2	2.34	0.81
2:B:1774:C:O3'	2:B:1976:U:N3	2.14	0.81
2:B:1938:A:H1'	2:B:1983:G:H5'	1.60	0.81
2:B:2067:G:N1	2:B:2245:U:P	2.51	0.81
2:B:2198:A:N3	2:B:2225:A:C2	2.48	0.81
2:B:2257:U:O5'	2:B:2450:A:C5'	2.26	0.81
2:B:2263:C:H5''	2:B:2329:U:O2'	1.79	0.81
2:B:2350:C:C3'	29:3:38:LYS:HZ3	1.77	0.81
2:B:2364:C:H5''	22:W:38:ARG:NH2	1.93	0.81
2:B:2461:A:H5'	13:M:78:LEU:CD2	2.10	0.81
2:B:2532:G:H21	2:B:2663:G:H1'	1.46	0.81
2:B:2867:G:N3	2:B:2867:G:H2'	1.93	0.81
2:B:2888:C:H6	26:0:27:LEU:HD11	0.74	0.81
4:C:23:LEU:H	4:C:202:ARG:NH2	1.77	0.81
13:M:32:GLY:H	13:M:128:THR:HG22	1.45	0.81
18:R:37:GLU:HG2	18:R:62:GLU:H	1.44	0.81
2:B:855:G:N2	22:W:23:LYS:HD2	1.94	0.81
2:B:1184:U:C5	24:Y:30:ARG:CZ	2.64	0.81
2:B:1662:U:H3'	11:K:5:GLN:HE21	1.45	0.81
2:B:1668:A:C2'	2:B:1954:G:H3'	2.10	0.81
2:B:2003:A:H2'	5:D:139:SER:CB	2.09	0.81
2:B:2348:U:H5'	27:1:39:ASP:HB3	1.41	0.81
12:L:67:THR:HG23	12:L:68:SER:H	1.45	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:107:ALA:O	18:R:52:PRO:N	2.12	0.81
1:A:60:C:C4	7:F:23:SER:HB3	2.16	0.81
2:B:463:G:C6	28:2:43:THR:CG2	2.60	0.81
2:B:564:C:H1'	17:Q:36:GLN:CD	2.04	0.81
2:B:810:U:C4'	2:B:1254:A:C5	2.52	0.81
2:B:1029:A:N3	2:B:2466:C:H4'	1.94	0.81
2:B:1225:G:C2	18:R:85:LYS:NZ	2.48	0.81
2:B:1277:G:H1'	14:N:23:ASN:HB3	1.61	0.81
2:B:2015:A:OP2	19:S:93:ALA:HB3	1.80	0.81
2:B:2478:A:C5'	30:4:32:LYS:CD	2.30	0.81
2:B:2527:C:H4'	30:4:31:PRO:HG2	1.62	0.81
2:B:2883:A:P	26:0:52:LYS:CE	2.65	0.81
7:F:7:TYR:HA	7:F:11:VAL:HB	1.61	0.81
25:Z:33:ASN:HB2	25:Z:44:PHE:HB2	1.60	0.81
2:B:96:C:H3'	23:X:39:GLN:HB3	1.61	0.81
2:B:413:C:C2	2:B:2410:G:C6	2.69	0.81
2:B:671:C:H5'	12:L:39:LYS:CD	2.10	0.81
2:B:699:A:C3'	2:B:700:G:C5'	2.26	0.81
2:B:1826:G:N3	2:B:1901:A:OP2	2.12	0.81
2:B:2002:G:H2'	5:D:131:ASP:C	2.01	0.81
3:V:57:TYR:CD1	13:M:131:VAL:HG21	2.12	0.81
6:E:183:PHE:O	12:L:12:SER:OG	1.98	0.81
16:P:9:GLN:HB3	16:P:56:SER:HB2	1.62	0.81
2:B:505:A:N6	32:B:3431:HOH:O	2.03	0.81
2:B:669:G:H4'	2:B:670:A:OP2	1.80	0.81
2:B:686:U:O4'	28:2:11:LYS:HB2	1.81	0.81
2:B:1030:C:OP2	13:M:117:PHE:CZ	2.31	0.81
2:B:1131:G:C2	2:B:2024:G:N2	2.49	0.81
2:B:1820:U:C5	4:C:176:ARG:NH2	2.43	0.81
2:B:2003:A:N9	5:D:139:SER:HA	1.96	0.81
2:B:2886:A:N7	26:0:29:VAL:HG22	1.95	0.81
5:D:91:THR:HG23	5:D:92:VAL:HG12	1.61	0.81
9:H:5:LEU:HD22	9:H:5:LEU:H	1.44	0.81
18:R:5:PHE:HA	18:R:40:MET:HG2	1.61	0.81
1:A:59:A:C5	7:F:25:MET:N	2.49	0.81
2:B:7:G:N1	2:B:2897:U:N3	2.11	0.81
2:B:516:C:C4'	2:B:1262:A:H4'	2.10	0.81
2:B:538:A:O4'	10:J:4:PHE:HZ	1.57	0.81
2:B:589:U:N3	12:L:48:ARG:NH1	2.28	0.81
2:B:882:G:P	2:B:898:C:O2'	2.39	0.81
2:B:1118:C:C4'	3:V:84:PRO:CG	2.04	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1279:G:P	14:N:34:ILE:HG22	2.21	0.81
2:B:1994:C:C4'	2:B:2557:G:N1	2.32	0.81
2:B:2478:A:OP2	30:4:32:LYS:HG2	1.80	0.81
4:C:229:HIS:HE2	4:C:244:VAL:HG22	1.43	0.81
6:E:181:ILE:CG1	12:L:15:ALA:HA	2.04	0.81
2:B:565:C:C1'	2:B:578:G:C6	2.64	0.81
2:B:738:G:H5'	32:B:3301:HOH:O	1.78	0.81
2:B:997:G:H5''	17:Q:91:ARG:HE	0.64	0.81
2:B:1124:G:H1'	30:4:21:GLY:CA	2.09	0.81
2:B:1275:A:O2'	14:N:20:MET:HE2	1.76	0.81
2:B:1668:A:N6	2:B:2551:C:C4'	2.27	0.81
2:B:1853:A:N1	2:B:2235:G:C6	2.49	0.81
2:B:1999:C:O2'	11:K:31:ARG:CB	2.29	0.81
2:B:2002:G:N3	5:D:132:ALA:N	2.29	0.81
2:B:2004:G:N7	5:D:140:HIS:N	2.29	0.81
2:B:2008:C:OP1	2:B:2049:G:H4'	1.75	0.81
2:B:2009:A:OP1	2:B:2823:A:C5	2.34	0.81
2:B:2019:A:P	26:0:5:ASN:O	2.39	0.81
2:B:2269:G:C1'	22:W:20:LEU:O	2.28	0.81
6:E:180:LEU:O	12:L:13:LYS:CB	2.19	0.81
13:M:126:ILE:HG13	13:M:127:LYS:H	1.43	0.81
18:R:1:MET:HA	18:R:46:GLU:CB	2.11	0.81
1:A:90:C:C1'	13:M:21:ALA:HB1	2.04	0.81
2:B:96:C:C3'	23:X:39:GLN:HB3	2.09	0.81
2:B:952:G:C1'	32:B:3381:HOH:O	2.13	0.81
2:B:989:G:H8	24:Y:13:ILE:H	1.28	0.81
2:B:1163:G:C4'	18:R:91:GLN:CG	2.57	0.81
2:B:1224:U:C1'	18:R:89:HIS:CB	2.59	0.81
2:B:1225:G:H8	18:R:78:ARG:HH11	1.27	0.81
2:B:1269:A:OP1	2:B:2012:G:H3'	1.80	0.81
2:B:1655:A:H1'	2:B:2512:C:O4'	1.80	0.81
2:B:1839:G:O4'	2:B:1927:A:C2	2.30	0.81
2:B:2501:C:O5'	32:B:3335:HOH:O	1.97	0.81
2:B:2502:G:C6	32:B:3348:HOH:O	2.26	0.81
2:B:2814:A:H1'	26:0:39:ARG:HG3	1.63	0.81
2:B:72:U:H5	23:X:58:ASN:HD22	1.19	0.80
2:B:569:U:O4	2:B:2499:C:P	2.38	0.80
2:B:659:G:H4'	6:E:97:ASN:CG	2.05	0.80
2:B:1250:G:OP2	12:L:32:GLY:N	2.14	0.80
2:B:1264:A:C1'	2:B:2016:U:H3	1.94	0.80
2:B:1819:A:H2'	4:C:176:ARG:CG	2.11	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2048:G:O4'	2:B:2823:A:N6	2.14	0.80
2:B:2090:A:H3'	2:B:2093:G:OP1	1.82	0.80
2:B:2257:U:C5	2:B:2450:A:C1'	2.64	0.80
5:D:120:GLY:H	5:D:123:LYS:HG3	1.46	0.80
12:L:27:LEU:HD12	12:L:27:LEU:H	1.46	0.80
22:W:40:ARG:NH1	22:W:68:PHE:HA	1.95	0.80
2:B:1030:C:OP1	13:M:117:PHE:CZ	2.35	0.80
2:B:1124:G:O3'	30:4:20:ASP:O	1.98	0.80
2:B:1224:U:C5'	18:R:76:LYS:O	2.29	0.80
2:B:1249:U:C3'	12:L:32:GLY:HA2	2.11	0.80
2:B:1314:C:C6	2:B:1604:C:O2'	2.33	0.80
2:B:1655:A:OP2	5:D:128:ARG:HG2	1.81	0.80
2:B:1665:A:N6	2:B:2549:G:N2	2.28	0.80
2:B:1771:C:H5''	2:B:1968:G:P	2.20	0.80
2:B:1994:C:H2'	2:B:2550:G:C6	2.17	0.80
2:B:2199:A:N7	2:B:2225:A:H1'	1.82	0.80
2:B:2199:A:H5'	2:B:2200:C:C6	2.16	0.80
2:B:2281:A:C4'	2:B:2388:A:H61	1.93	0.80
2:B:2285:C:H41	27:1:24:LYS:CD	1.94	0.80
2:B:2514:U:C4'	5:D:156:PHE:HE1	1.91	0.80
2:B:2642:G:H5''	10:J:81:ILE:CG2	2.11	0.80
2:B:2848:G:H2'	16:P:96:LEU:HB2	1.62	0.80
2:B:2876:G:OP1	16:P:1:SER:C	2.23	0.80
4:C:77:VAL:HG21	4:C:109:LEU:HG	1.64	0.80
6:E:27:LEU:CG	12:L:19:LEU:HD12	2.09	0.80
2:B:95:A:H5'	23:X:34:SER:N	1.94	0.80
2:B:412:A:N6	2:B:2410:G:C2	2.50	0.80
2:B:1417:C:C6	2:B:1418:G:C4	2.64	0.80
2:B:1799:G:N2	4:C:153:LEU:CB	2.44	0.80
2:B:2247:A:C6	2:B:2446:G:N2	2.48	0.80
5:D:17:GLU:CD	16:P:32:VAL:HG11	2.06	0.80
19:S:15:GLN:OE1	26:0:16:ARG:CD	2.29	0.80
22:W:43:LYS:HG2	22:W:76:ARG:HH21	1.44	0.80
2:B:483:A:O2'	21:U:46:LYS:HE3	1.79	0.80
2:B:580:U:C4'	17:Q:32:ARG:H	1.94	0.80
2:B:682:G:O3'	28:2:26:ASN:HB2	1.82	0.80
2:B:1854:A:N6	2:B:2235:G:O4'	2.14	0.80
2:B:1938:A:C4	2:B:2591:C:C4'	2.63	0.80
18:R:47:VAL:HG13	18:R:49:ILE:H	1.46	0.80
22:W:28:GLU:H	22:W:61:LYS:HB2	1.44	0.80
24:Y:15:ARG:HE	24:Y:15:ARG:N	1.79	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:56:G:O4'	7:F:13:LYS:CE	2.29	0.80
2:B:809:G:H5'	2:B:1255:U:H5'	1.64	0.80
2:B:1029:A:O2'	13:M:118:LYS:O	1.99	0.80
2:B:1174:U:H4'	2:B:1176:U:H3	1.46	0.80
2:B:1752:C:H5'	2:B:2861:U:H4'	1.37	0.80
2:B:2069:G:C5	2:B:2244:U:H2'	2.16	0.80
22:W:28:GLU:HB3	22:W:30:VAL:HG23	1.63	0.80
29:3:24:LYS:HA	29:3:45:PRO:HB3	1.61	0.80
30:4:14:CYS:HA	30:4:26:ILE:O	1.82	0.80
2:B:220:G:C4'	2:B:234:U:H1'	2.11	0.80
2:B:1664:A:H2'	2:B:2561:U:O4'	1.81	0.80
2:B:1672:A:N3	2:B:2604:U:H4'	1.94	0.80
2:B:1807:G:OP2	4:C:48:ILE:HB	1.81	0.80
2:B:1828:G:O6	32:B:3095:HOH:O	1.99	0.80
2:B:2294:G:OP1	15:O:98:GLN:HG2	1.80	0.80
2:B:2635:A:C4'	5:D:78:GLY:O	2.29	0.80
1:A:29:A:O5'	15:O:33:ARG:HD2	1.81	0.80
1:A:80:U:H5''	2:B:917:A:N1	1.95	0.80
2:B:26:G:OP2	19:S:80:PRO:HB3	1.82	0.80
2:B:161:A:H1'	2:B:2208:C:H1'	1.64	0.80
2:B:810:U:P	2:B:1254:A:O4'	2.24	0.80
2:B:1995:U:C5'	2:B:2557:G:N7	2.35	0.80
2:B:2014:A:C2	2:B:2611:C:H2'	2.11	0.80
2:B:2056:G:C5	2:B:2577:A:C5	2.70	0.80
2:B:2575:C:C2	5:D:148:GLN:HA	2.17	0.80
2:B:2580:U:H4'	32:B:3285:HOH:O	1.82	0.80
11:K:71:ARG:CB	11:K:72:PRO:HD2	2.09	0.80
20:T:61:LEU:HD12	20:T:62:VAL:H	1.47	0.80
30:4:3:VAL:HB	30:4:35:GLN:HA	1.62	0.80
2:B:482:A:C5'	21:U:45:GLN:HG2	2.11	0.80
2:B:654:A:N1	29:3:18:LYS:CA	2.44	0.80
2:B:661:A:O3'	12:L:24:GLY:N	2.13	0.80
2:B:686:U:N3	28:2:11:LYS:C	2.37	0.80
2:B:1225:G:C8	18:R:78:ARG:HD3	2.17	0.80
2:B:1976:U:OP2	2:B:1979:U:H6	1.63	0.80
2:B:2298:A:C5'	32:B:3175:HOH:O	1.92	0.80
2:B:2428:G:O5'	2:B:2448:A:C2	2.35	0.80
7:F:151:LEU:HD23	7:F:153:ILE:HD11	1.60	0.80
13:M:108:VAL:HG23	13:M:112:LEU:HD11	1.63	0.80
22:W:31:LEU:HD11	22:W:34:SER:HB2	1.62	0.80
2:B:5:A:N9	2:B:2899:A:C2	2.46	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:413:C:N3	2:B:2409:G:O6	2.15	0.80
2:B:483:A:C4'	21:U:45:GLN:CA	2.58	0.80
2:B:566:U:C6	2:B:577:G:N7	2.50	0.80
2:B:669:G:O3'	2:B:670:A:C2'	2.25	0.80
2:B:997:G:C5'	17:Q:91:ARG:CG	2.58	0.80
2:B:1417:C:N4	2:B:1418:G:N2	2.30	0.80
2:B:1752:C:P	2:B:2861:U:O2'	2.40	0.80
2:B:1767:G:C8	2:B:1959:G:H3'	2.16	0.80
5:D:17:GLU:OE2	16:P:32:VAL:CG1	2.29	0.80
2:B:78:U:OP2	23:X:4:LYS:HD3	1.82	0.80
2:B:565:C:C1'	2:B:578:G:C5	2.65	0.80
2:B:671:C:H5''	12:L:39:LYS:HG2	0.82	0.80
2:B:671:C:H6	12:L:39:LYS:CE	1.60	0.80
2:B:1936:A:H3'	2:B:1985:C:C5	2.16	0.80
2:B:2003:A:C3'	5:D:139:SER:CB	2.59	0.80
2:B:2007:U:O4'	5:D:162:ALA:HB1	1.81	0.80
2:B:2090:A:O3'	9:H:23:ALA:HB3	1.79	0.80
6:E:23:PHE:CE2	12:L:17:LYS:HG3	2.10	0.80
6:E:73:ILE:C	6:E:75:SER:H	1.88	0.80
8:G:20:GLY:HA2	8:G:41:GLU:HG2	1.62	0.80
10:J:49:ASP:HA	10:J:114:LEU:HD11	1.64	0.80
13:M:67:VAL:HB	13:M:100:LYS:HG2	1.62	0.80
13:M:107:GLY:C	13:M:109:PRO:HD2	2.06	0.80
15:O:64:TYR:HE1	15:O:74:VAL:HG11	1.47	0.80
17:Q:110:GLU:CB	18:R:52:PRO:CG	2.46	0.80
2:B:197:A:C2'	2:B:2443:C:C4'	2.50	0.79
2:B:287:G:H2'	2:B:288:U:C6	2.18	0.79
2:B:543:G:H2'	2:B:544:C:H5''	1.64	0.79
2:B:667:U:OP2	12:L:51:GLU:N	1.92	0.79
2:B:693:A:O4'	2:B:1354:A:O2'	1.94	0.79
2:B:699:A:C1'	2:B:1634:A:C6	2.62	0.79
2:B:700:G:C8	2:B:734:A:N6	2.50	0.79
2:B:857:G:C5'	22:W:55:ASP:CG	2.54	0.79
2:B:1264:A:H1'	2:B:2016:U:C2	2.17	0.79
2:B:1341:G:C8	32:B:3157:HOH:O	2.35	0.79
2:B:2061:G:C5'	2:B:2252:G:C4'	2.35	0.79
2:B:2068:U:O4	2:B:2395:C:N3	2.14	0.79
6:E:26:ALA:C	12:L:19:LEU:HD13	2.05	0.79
14:N:118:ARG:NE	26:O:51:ARG:HG3	1.97	0.79
16:P:49:ILE:C	16:P:50:ARG:HG3	2.06	0.79
1:A:50:A:O5'	15:O:65:THR:O	1.85	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:458:G:C5'	28:2:39:ARG:NH1	2.45	0.79
2:B:589:U:H3	12:L:48:ARG:HH12	1.30	0.79
2:B:592:A:O5'	29:3:1:PRO:HA	1.80	0.79
2:B:593:U:H4'	29:3:2:LYS:HZ2	0.96	0.79
2:B:693:A:C1'	2:B:1354:A:C1'	2.55	0.79
2:B:1654:A:N3	2:B:2512:C:C5'	2.44	0.79
2:B:1668:A:H61	2:B:2551:C:H5''	1.47	0.79
2:B:2814:A:C2'	26:0:39:ARG:CB	2.59	0.79
2:B:2848:G:H2'	16:P:96:LEU:HD22	0.84	0.79
5:D:8:LYS:HZ1	16:P:1:SER:H1	0.82	0.79
8:G:71:LEU:HA	8:G:74:MET:SD	2.23	0.79
2:B:532:A:C2	2:B:2019:A:N3	2.50	0.79
2:B:556:A:H2	10:J:7:LYS:HZ3	0.81	0.79
2:B:1224:U:OP2	18:R:90:ARG:CB	2.28	0.79
2:B:1250:G:H4'	17:Q:8:ILE:CD1	2.12	0.79
2:B:1652:A:C2	5:D:141:ARG:C	2.58	0.79
2:B:1663:G:H8	11:K:5:GLN:CD	1.88	0.79
2:B:1668:A:C2'	2:B:1954:G:C3'	2.61	0.79
2:B:1936:A:O3'	2:B:1985:C:C6	2.19	0.79
2:B:1945:G:C5	2:B:1986:C:H5'	2.17	0.79
2:B:2067:G:N2	2:B:2430:A:C2	2.51	0.79
2:B:2199:A:N6	2:B:2225:A:O4'	2.14	0.79
2:B:2281:A:H4'	2:B:2388:A:H61	1.47	0.79
2:B:2507:C:C5	2:B:2583:G:N2	2.50	0.79
2:B:2795:C:H2'	2:B:2796:U:O4'	1.82	0.79
2:B:2880:C:C5'	14:N:90:ARG:NH1	2.46	0.79
5:D:8:LYS:HD2	16:P:5:LYS:CD	2.11	0.79
5:D:22:ILE:N	5:D:23:PRO:HD3	1.97	0.79
6:E:27:LEU:HD22	12:L:19:LEU:CG	2.12	0.79
2:B:465:G:H5'	28:2:12:ARG:NH1	1.96	0.79
2:B:607:U:P	6:E:98:LYS:CG	2.67	0.79
2:B:671:C:C5'	12:L:39:LYS:CB	2.52	0.79
2:B:826:U:H2'	2:B:2446:G:OP1	1.82	0.79
2:B:928:A:O2'	24:Y:37:ARG:CG	1.91	0.79
2:B:1249:U:H2'	12:L:32:GLY:HA2	1.63	0.79
2:B:1296:G:O3'	2:B:2710:C:H5'	1.81	0.79
2:B:1580:A:N6	2:B:1581:G:N1	2.30	0.79
2:B:1656:C:H4'	2:B:2510:C:C6	2.11	0.79
2:B:1940:U:C2'	2:B:1984:G:O2'	2.31	0.79
2:B:1976:U:H3'	2:B:1979:U:C4'	2.13	0.79
2:B:1999:C:C2'	11:K:31:ARG:HB3	2.13	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2017:U:O4	26:0:3:GLN:HG2	1.77	0.79
27:1:14:ALA:HA	27:1:48:TYR:HA	1.61	0.79
1:A:30:C:H41	15:O:33:ARG:HH22	0.80	0.79
2:B:7:G:H22	2:B:2897:U:H1'	1.45	0.79
2:B:28:A:OP1	32:B:3007:HOH:O	1.99	0.79
2:B:139:U:O4	20:T:3:ARG:CB	2.30	0.79
2:B:516:C:C1'	2:B:1262:A:OP1	2.29	0.79
2:B:582:A:H5''	17:Q:10:ARG:HA	1.63	0.79
2:B:588:U:O4	12:L:48:ARG:NH2	2.15	0.79
2:B:1341:G:N7	32:B:3157:HOH:O	2.14	0.79
2:B:1769:U:OP2	2:B:1935:G:OP2	1.99	0.79
2:B:1773:A:OP1	2:B:1972:G:H8	1.53	0.79
2:B:1854:A:H4'	2:B:2081:U:OP2	1.82	0.79
2:B:2575:C:C4'	5:D:151:THR:CG2	2.60	0.79
2:B:2759:G:H4'	8:G:34:ARG:NE	1.76	0.79
8:G:157:LYS:HB2	8:G:159:LYS:HG2	1.64	0.79
2:B:4:U:O2	2:B:2900:A:C6	2.33	0.79
2:B:465:G:H4'	28:2:12:ARG:HH22	1.44	0.79
2:B:584:C:H5''	17:Q:3:VAL:CB	2.11	0.79
2:B:654:A:C5	29:3:18:LYS:HG3	2.17	0.79
2:B:855:G:C4'	22:W:24:ARG:NH2	2.45	0.79
2:B:1024:G:H3'	2:B:1025:G:H5''	1.63	0.79
2:B:1154:G:OP1	17:Q:57:ARG:NH1	2.16	0.79
2:B:1658:C:C5	5:D:138:LEU:HD11	2.16	0.79
2:B:2582:G:C4	2:B:2583:G:H8	1.99	0.79
2:B:2645:G:C4'	2:B:2732:G:C3'	2.55	0.79
6:E:181:ILE:HG13	12:L:13:LYS:C	2.07	0.79
30:4:24:ARG:HH12	30:4:36:ARG:HB2	1.48	0.79
2:B:38:A:H2'	2:B:39:G:O4'	1.82	0.79
2:B:1351:C:O2'	2:B:1571:A:H1'	1.82	0.79
2:B:1418:G:OP1	2:B:1588:G:C4'	2.29	0.79
2:B:2263:C:H4'	2:B:2329:U:H4'	1.62	0.79
2:B:2285:C:H5''	27:1:29:LYS:HZ3	0.96	0.79
4:C:140:VAL:O	4:C:193:GLU:HB2	1.83	0.79
9:H:132:PHE:HB3	9:H:140:ALA:HB3	1.65	0.79
15:O:49:VAL:HG22	15:O:50:ALA:H	1.47	0.79
19:S:71:VAL:HA	19:S:106:VAL:O	1.82	0.79
1:A:29:A:H5''	15:O:33:ARG:NE	1.97	0.79
1:A:59:A:N3	7:F:25:MET:HB3	1.73	0.79
2:B:659:G:C4'	6:E:97:ASN:CG	2.56	0.79
2:B:728:G:C3'	4:C:16:VAL:CG1	2.56	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:826:U:C3'	2:B:2446:G:H5''	2.12	0.79
2:B:827:U:P	2:B:2247:A:H4'	2.23	0.79
2:B:964:C:H4'	2:B:2250:G:O6	1.80	0.79
2:B:1566:A:O3'	4:C:58:LYS:CD	2.31	0.79
2:B:1800:C:H5''	4:C:145:MET:HE3	1.63	0.79
2:B:1995:U:H6	2:B:2558:C:N4	1.80	0.79
2:B:2064:C:H5'	2:B:2255:G:P	2.22	0.79
2:B:2256:G:N2	2:B:2447:G:H21	1.78	0.79
2:B:2334:U:H4'	15:O:9:ARG:N	1.98	0.79
2:B:2581:G:C4	2:B:2610:C:N4	2.50	0.79
2:B:2876:G:H5'	16:P:2:ASN:O	1.80	0.79
5:D:2:ILE:HG13	5:D:3:GLY:H	1.48	0.79
15:O:19:GLN:H	22:W:76:ARG:HH12	1.28	0.79
2:B:487:C:C4'	19:S:56:ALA:HB1	2.13	0.79
2:B:500:G:OP1	21:U:40:LEU:CD1	2.31	0.79
2:B:586:A:N6	2:B:810:U:O3'	2.16	0.79
2:B:970:U:H5''	2:B:989:G:O6	1.81	0.79
2:B:1029:A:O3'	13:M:118:LYS:HA	1.83	0.79
2:B:1224:U:H2'	18:R:87:GLN:C	2.07	0.79
2:B:1997:C:O2	2:B:2549:G:C8	2.30	0.79
2:B:2225:A:C2	9:H:25:TYR:CD1	2.71	0.79
2:B:2575:C:H1'	5:D:148:GLN:HB2	1.62	0.79
2:B:2581:G:C5	2:B:2610:C:N4	2.50	0.79
6:E:29:HIS:CB	12:L:17:LYS:O	2.31	0.79
18:R:65:ALA:HB3	18:R:99:THR:H	1.45	0.79
2:B:28:A:H61	2:B:512:G:H1'	1.46	0.79
2:B:811:U:O4	2:B:1251:C:N4	2.16	0.79
2:B:1366:A:P	25:Z:1:MET:CE	2.60	0.79
2:B:1806:C:H6	4:C:50:THR:CB	1.97	0.79
2:B:1997:C:H1'	2:B:2548:U:C6	2.17	0.79
14:N:19:ALA:HA	14:N:22:ARG:HG2	1.65	0.79
19:S:89:ALA:HA	19:S:90:LYS:NZ	1.97	0.79
24:Y:7:THR:HA	24:Y:34:THR:HA	1.63	0.79
2:B:94:A:H3'	23:X:36:GLN:CB	2.07	0.78
2:B:686:U:N1	28:2:11:LYS:O	2.15	0.78
2:B:1339:G:O2'	2:B:1393:A:O3'	2.00	0.78
2:B:1638:C:OP1	2:B:2710:C:O2	2.01	0.78
2:B:1773:A:N6	2:B:1830:C:C4	2.51	0.78
2:B:1939:U:H6	2:B:1983:G:H1'	1.48	0.78
2:B:2090:A:O3'	9:H:23:ALA:HB1	1.79	0.78
2:B:2626:C:H2'	2:B:2627:G:H5'	1.64	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2887:A:N3	26:0:27:LEU:HB2	1.95	0.78
5:D:1:MET:HE3	5:D:84:LEU:HD13	1.65	0.78
12:L:56:PRO:HA	12:L:60:ARG:NH2	1.99	0.78
16:P:13:LYS:NZ	16:P:17:PRO:HG3	1.98	0.78
1:A:57:A:H62	7:F:24:VAL:CG1	1.97	0.78
1:A:76:G:O4'	13:M:136:MET:CE	2.30	0.78
2:B:452:G:H22	28:2:39:ARG:NH1	1.80	0.78
2:B:515:A:C5'	17:Q:29:ARG:HH11	1.95	0.78
2:B:687:C:H5''	28:2:6:GLN:HB3	0.81	0.78
2:B:852:U:H5''	24:Y:44:ARG:NE	1.99	0.78
2:B:858:G:C3'	2:B:2268:A:C1'	2.60	0.78
2:B:1259:G:OP2	32:B:3223:HOH:O	2.01	0.78
2:B:1566:A:H4'	4:C:58:LYS:CG	1.98	0.78
2:B:1971:U:N3	4:C:237:ARG:HB2	1.98	0.78
2:B:1975:G:H3'	2:B:1979:U:C5	2.18	0.78
2:B:1998:A:N3	11:K:4:GLU:CD	2.42	0.78
7:F:36:ASN:HB2	7:F:87:LYS:HA	1.66	0.78
1:A:54:G:C2	7:F:8:LYS:HB3	2.18	0.78
2:B:729:G:O6	2:B:1775:U:O2'	2.00	0.78
2:B:827:U:OP1	2:B:2247:A:H4'	1.82	0.78
2:B:1029:A:H2	2:B:2466:C:H4'	1.48	0.78
2:B:1767:G:C8	2:B:1959:G:C4	2.71	0.78
5:D:5:VAL:HG11	5:D:28:GLU:HA	1.64	0.78
26:0:52:LYS:HA	26:0:52:LYS:NZ	1.97	0.78
2:B:97:C:OP2	23:X:39:GLN:HG2	1.82	0.78
2:B:1269:A:OP1	2:B:2012:G:C3'	2.31	0.78
2:B:1276:A:HO2'	14:N:20:MET:HA	1.45	0.78
2:B:1666:G:N1	2:B:2549:G:N2	2.30	0.78
2:B:1796:U:C5'	4:C:251:THR:OG1	2.31	0.78
2:B:1799:G:HO2'	4:C:181:ARG:HH21	1.30	0.78
2:B:1853:A:H1'	2:B:2237:G:C6	2.13	0.78
2:B:1936:A:C8	2:B:1985:C:H1'	2.18	0.78
2:B:1997:C:O2	2:B:2548:U:N1	2.17	0.78
2:B:2004:G:N7	5:D:139:SER:C	2.40	0.78
2:B:2005:A:C4'	5:D:142:VAL:HG11	2.13	0.78
2:B:2199:A:C5'	2:B:2200:C:C6	2.67	0.78
3:V:79:ARG:CZ	13:M:134:THR:HG23	2.11	0.78
6:E:120:VAL:H	6:E:189:THR:HG23	1.47	0.78
13:M:71:LYS:HD3	13:M:92:TRP:N	1.98	0.78
20:T:11:LEU:HB2	20:T:32:LEU:HD23	1.65	0.78
20:T:96:VAL:HG22	20:T:97:GLY:H	1.48	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1266:G:C5'	26:0:15:ARG:HE	1.95	0.78
2:B:1670:C:H2'	2:B:2552:U:H1'	1.64	0.78
2:B:1773:A:H2	2:B:1975:G:C2	2.01	0.78
2:B:1783:A:H4'	2:B:2590:A:C8	2.19	0.78
2:B:1891:G:N3	2:B:2237:G:OP1	2.15	0.78
2:B:2378:A:H1'	15:O:92:PHE:CD1	2.18	0.78
2:B:2378:A:H5'	15:O:117:PHE:CD1	2.18	0.78
10:J:42:ALA:HB1	17:Q:99:VAL:CG1	2.13	0.78
15:O:48:LEU:HD23	15:O:49:VAL:H	1.49	0.78
1:A:31:C:H5'	7:F:8:LYS:HE3	1.66	0.78
1:A:57:A:HO2'	7:F:28:PRO:CD	1.88	0.78
2:B:45:G:C4'	2:B:46:G:H1'	2.12	0.78
2:B:182:A:O3'	2:B:433:C:C4'	2.30	0.78
2:B:649:G:H21	29:3:44:ARG:NH1	1.67	0.78
2:B:1128:G:H21	2:B:2517:C:H1'	1.46	0.78
2:B:1263:U:P	19:S:95:ARG:NH2	2.55	0.78
2:B:1666:G:C4	2:B:2559:C:O2'	2.37	0.78
2:B:1693:U:O4	2:B:1977:A:C4'	2.31	0.78
2:B:1807:G:C5'	4:C:47:ARG:CA	2.62	0.78
2:B:1938:A:C5'	2:B:1983:G:C8	2.56	0.78
2:B:2247:A:H4'	2:B:2445:G:C2'	2.12	0.78
2:B:2527:C:H5''	30:4:31:PRO:CG	2.12	0.78
14:N:119:SER:HB2	14:N:121:LYS:HG2	1.63	0.78
18:R:53:PHE:CB	18:R:55:ASP:H	1.96	0.78
22:W:17:ALA:HA	22:W:35:ILE:O	1.83	0.78
2:B:465:G:C5'	28:2:12:ARG:NH1	2.42	0.78
2:B:564:C:C1'	17:Q:36:GLN:OE1	2.32	0.78
2:B:1676:A:C6	2:B:2552:U:P	2.77	0.78
2:B:1783:A:OP2	2:B:2588:G:H2'	1.83	0.78
2:B:1799:G:H22	4:C:153:LEU:HB3	1.46	0.78
2:B:1806:C:H6	4:C:50:THR:OG1	1.67	0.78
2:B:1997:C:N3	2:B:2549:G:H8	1.81	0.78
2:B:2003:A:H3'	5:D:139:SER:CB	2.14	0.78
2:B:2270:A:C3'	22:W:18:LYS:HD3	2.11	0.78
2:B:2287:A:O2'	2:B:2288:A:H2'	1.83	0.78
7:F:34:THR:HG23	7:F:89:THR:HG22	1.63	0.78
12:L:60:ARG:CD	29:3:7:ARG:NH1	2.46	0.78
2:B:9:G:N1	2:B:2895:G:N1	2.26	0.78
2:B:24:G:H1'	19:S:78:GLU:HB2	1.61	0.78
2:B:972:A:H3'	2:B:973:A:H5''	1.65	0.78
2:B:989:G:C1'	24:Y:12:ALA:HB3	2.13	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1269:A:OP1	2:B:2012:G:C2'	2.30	0.78
2:B:1657:U:OP1	2:B:2509:G:H2'	1.84	0.78
2:B:1664:A:C2'	2:B:2561:U:C4'	2.08	0.78
2:B:1789:A:OP1	4:C:221:GLY:HA3	1.83	0.78
2:B:1806:C:C4'	4:C:50:THR:HB	2.07	0.78
2:B:1960:A:C5	2:B:1986:C:O2	2.37	0.78
2:B:1996:C:C2	2:B:2549:G:C5	2.72	0.78
2:B:2063:C:C4	2:B:2253:G:O5'	2.37	0.78
2:B:2257:U:O5'	2:B:2450:A:H4'	1.83	0.78
2:B:2348:U:C4'	27:1:39:ASP:CB	2.54	0.78
2:B:2378:A:N3	15:O:92:PHE:HE1	1.78	0.78
32:B:3435:HOH:O	12:L:35:HIS:CE1	2.37	0.78
3:V:79:ARG:CD	13:M:134:THR:HG21	2.14	0.78
11:K:35:VAL:HG23	11:K:36:GLY:H	1.49	0.78
14:N:24:MET:HE3	14:N:44:LEU:HD22	1.66	0.78
14:N:29:VAL:HG21	14:N:75:ILE:HD11	1.66	0.78
24:Y:16:LEU:HB2	24:Y:17:PRO:CD	2.13	0.78
26:O:45:ASP:HB2	26:O:47:TYR:CD1	2.19	0.78
27:1:31:GLU:HG3	27:1:32:LYS:H	1.49	0.78
1:A:58:A:C8	7:F:26:GLN:N	2.37	0.78
2:B:24:G:C1'	19:S:78:GLU:HB2	2.13	0.78
2:B:97:C:H4'	23:X:46:VAL:CG1	2.13	0.78
2:B:516:C:OP2	17:Q:29:ARG:CZ	2.31	0.78
2:B:1133:A:N7	2:B:2026:U:C4'	2.47	0.78
2:B:1225:G:C8	18:R:78:ARG:NH1	2.52	0.78
2:B:1755:A:N6	2:B:2694:G:O2'	2.17	0.78
2:B:1773:A:O2'	2:B:1974:C:C5	2.37	0.78
2:B:1796:U:H5'	4:C:251:THR:CB	2.14	0.78
2:B:2539:C:H4'	30:4:2:LYS:CE	2.05	0.78
4:C:30:ALA:H	4:C:31:PRO:CD	1.93	0.78
10:J:7:LYS:HD3	10:J:48:VAL:HB	1.66	0.78
14:N:114:GLU:HG2	14:N:115:LEU:H	1.48	0.78
19:S:27:LYS:H	19:S:27:LYS:HD2	1.46	0.78
2:B:72:U:O4	23:X:58:ASN:CG	2.26	0.78
2:B:556:A:H2	10:J:7:LYS:NZ	1.67	0.78
2:B:570:G:C8	2:B:2030:A:N6	2.51	0.78
2:B:858:G:H4'	2:B:2268:A:C2'	2.07	0.78
2:B:1152:C:P	17:Q:83:LYS:NZ	2.56	0.78
2:B:1184:U:H5	24:Y:30:ARG:HH12	1.32	0.78
2:B:1766:G:C6	2:B:1958:C:N3	2.52	0.78
2:B:1783:A:OP2	2:B:2589:A:O4'	1.99	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1785:A:H1'	2:B:2590:A:O3'	1.82	0.78
2:B:1807:G:OP2	4:C:48:ILE:CG1	2.30	0.78
2:B:1966:A:N1	2:B:2593:U:O3'	1.99	0.78
2:B:1992:G:C4'	2:B:2551:C:OP2	1.88	0.78
2:B:2056:G:O6	2:B:2577:A:C1'	2.32	0.78
2:B:2258:C:C4'	2:B:2449:U:H5'	2.14	0.78
2:B:2294:G:OP1	15:O:98:GLN:CG	2.25	0.78
2:B:2461:A:H4'	13:M:78:LEU:CD1	2.14	0.78
2:B:2512:C:H5'	5:D:146:ILE:HG12	0.99	0.78
2:B:2645:G:P	2:B:2732:G:H8	2.06	0.78
2:B:2848:G:P	16:P:95:LYS:O	2.41	0.78
10:J:75:TYR:HA	10:J:86:GLN:O	1.84	0.78
18:R:74:ILE:HA	18:R:90:ARG:NE	1.97	0.78
22:W:49:ASN:HB2	22:W:53:GLY:HA3	1.64	0.78
27:1:53:ILE:HD13	27:1:54:LYS:N	1.99	0.78
30:4:24:ARG:HG2	30:4:26:ILE:HG12	1.65	0.78
1:A:29:A:H2	7:F:24:VAL:HG21	0.98	0.77
2:B:320:A:OP2	6:E:132:LYS:CE	2.32	0.77
2:B:1314:C:H6	2:B:1604:C:HO2'	1.30	0.77
2:B:1752:C:C5'	2:B:2861:U:O3'	2.28	0.77
2:B:2016:U:C6	26:0:2:VAL:CA	2.62	0.77
2:B:2245:U:N3	2:B:2442:C:C4	2.51	0.77
2:B:2281:A:O4'	2:B:2388:A:C6	2.35	0.77
4:C:216:ARG:HH11	4:C:216:ARG:HB3	1.48	0.77
13:M:77:PRO:HD3	13:M:86:LYS:HD3	1.65	0.77
28:2:44:VAL:HG23	28:2:45:SER:H	1.49	0.77
2:B:57:C:OP1	20:T:67:VAL:CG1	2.33	0.77
2:B:61:C:OP1	23:X:43:LEU:HD22	1.85	0.77
2:B:516:C:OP2	26:0:9:ARG:HG2	1.82	0.77
2:B:682:G:C5'	28:2:26:ASN:OD1	2.32	0.77
2:B:699:A:H2'	2:B:700:G:O3'	1.84	0.77
2:B:858:G:C3'	2:B:2268:A:O2'	2.33	0.77
2:B:971:G:OP2	2:B:974:G:C2	2.37	0.77
2:B:1010:A:OP1	17:Q:65:ASN:CB	2.32	0.77
2:B:1021:A:N6	2:B:1141:U:H3	1.82	0.77
2:B:1662:U:O2	11:K:4:GLU:O	2.03	0.77
2:B:1663:G:O5'	11:K:21:CYS:O	2.02	0.77
2:B:1940:U:C2'	2:B:1984:G:HO2'	1.96	0.77
2:B:1946:U:O4	2:B:1986:C:C6	2.36	0.77
2:B:2348:U:OP1	27:1:38:PHE:CZ	2.37	0.77
2:B:2581:G:N1	2:B:2610:C:C5	2.52	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:84:THR:HG23	6:E:85:PHE:H	1.48	0.77
13:M:70:ASP:N	13:M:71:LYS:HZ2	1.81	0.77
1:A:56:G:O5'	7:F:13:LYS:HD2	1.81	0.77
2:B:321:U:P	6:E:130:LYS:HA	2.23	0.77
2:B:686:U:C5'	28:2:11:LYS:HB3	2.13	0.77
2:B:1118:C:O3'	3:V:84:PRO:HG2	1.85	0.77
2:B:1340:U:H1'	2:B:1603:A:O3'	1.76	0.77
2:B:1995:U:H5'	2:B:2557:G:C4	2.19	0.77
2:B:2067:G:O5'	2:B:2424:C:O2'	1.97	0.77
2:B:2199:A:H5'	2:B:2200:C:C5	2.20	0.77
2:B:2350:C:C6	29:3:38:LYS:NZ	2.53	0.77
2:B:2351:G:OP2	29:3:38:LYS:CD	2.33	0.77
14:N:120:GLU:CA	26:0:51:ARG:HG2	2.14	0.77
1:A:88:C:H41	13:M:20:LEU:CB	1.70	0.77
2:B:452:G:H22	28:2:39:ARG:HH12	1.32	0.77
2:B:487:C:O2'	19:S:53:SER:HA	1.84	0.77
2:B:585:G:C3'	32:B:3205:HOH:O	2.25	0.77
2:B:1273:U:O4'	2:B:1647:U:C2	2.35	0.77
2:B:1660:G:OP1	32:B:3279:HOH:O	2.02	0.77
2:B:1664:A:O3'	11:K:40:LYS:CG	2.21	0.77
2:B:1938:A:O3'	2:B:2591:C:O2'	1.98	0.77
2:B:2091:C:O4'	2:B:2229:U:O2	2.03	0.77
2:B:2507:C:C4	2:B:2583:G:C6	2.65	0.77
2:B:2575:C:C1'	5:D:148:GLN:HB3	2.00	0.77
2:B:2888:C:H5'	26:0:27:LEU:HG	1.65	0.77
5:D:128:ARG:HD2	5:D:144:GLY:HA3	1.66	0.77
13:M:65:ILE:HG22	13:M:101:VAL:HA	1.66	0.77
16:P:59:THR:HG23	16:P:76:HIS:CD2	2.19	0.77
1:A:30:C:H5	15:O:33:ARG:CZ	1.97	0.77
2:B:649:G:N2	29:3:44:ARG:HH11	1.81	0.77
2:B:670:A:C3'	12:L:47:ARG:N	2.20	0.77
2:B:1779:U:C6	2:B:2589:A:H5''	2.20	0.77
2:B:1816:C:C5	4:C:61:TYR:C	2.62	0.77
2:B:1827:U:C2	2:B:1900:A:H1'	2.19	0.77
2:B:2312:U:C4'	7:F:71:LYS:HB2	2.13	0.77
2:B:2531:A:N6	2:B:2661:G:O6	2.16	0.77
12:L:55:MET:CG	29:3:5:THR:HG21	2.14	0.77
17:Q:93:ILE:HG23	17:Q:94:LEU:H	1.49	0.77
2:B:801:G:O6	6:E:50:ALA:CB	2.32	0.77
2:B:1249:U:C2'	12:L:32:GLY:HA2	2.15	0.77
2:B:1653:G:N2	5:D:141:ARG:CG	2.40	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1974:C:C2'	2:B:1978:A:H62	1.97	0.77
2:B:1976:U:OP2	2:B:1979:U:C6	2.38	0.77
2:B:1993:U:C2'	2:B:2551:C:C6	2.68	0.77
2:B:2198:A:O4'	9:H:29:PHE:CD2	2.37	0.77
13:M:3:GLN:O	13:M:5:LYS:N	2.17	0.77
18:R:90:ARG:HH11	18:R:91:GLN:H	1.33	0.77
2:B:24:G:O3'	19:S:79:GLY:HA2	1.85	0.77
2:B:320:A:OP2	6:E:132:LYS:HB2	1.83	0.77
2:B:444:C:O2'	6:E:47:LYS:HE2	1.85	0.77
2:B:999:U:O4	32:B:3389:HOH:O	2.03	0.77
2:B:1650:A:O2'	14:N:2:ARG:CZ	2.31	0.77
2:B:1654:A:H5''	5:D:128:ARG:HB2	0.78	0.77
2:B:2344:U:HO2'	27:1:37:LYS:CG	1.86	0.77
2:B:2359:C:C4	2:B:2428:G:N1	2.44	0.77
5:D:154:LYS:C	5:D:156:PHE:H	1.91	0.77
14:N:120:GLU:CA	26:0:51:ARG:HB2	2.08	0.77
15:O:19:GLN:HA	22:W:76:ARG:NH2	1.98	0.77
17:Q:110:GLU:OE1	18:R:52:PRO:CG	2.33	0.77
19:S:10:ALA:O	19:S:11:ARG:HB3	1.85	0.77
22:W:16:GLU:HG2	22:W:37:VAL:HG22	1.64	0.77
29:3:41:ARG:HD3	29:3:43:LEU:H	1.49	0.77
30:4:2:LYS:HZ2	30:4:2:LYS:HB3	1.48	0.77
30:4:25:VAL:HB	30:4:33:HIS:O	1.84	0.77
1:A:30:C:H4'	7:F:25:MET:CE	2.07	0.77
1:A:57:A:O4'	7:F:15:LEU:HB2	1.82	0.77
1:A:58:A:H2'	7:F:25:MET:C	2.09	0.77
2:B:84:A:H5''	21:U:91:LYS:NZ	1.99	0.77
2:B:972:A:P	2:B:974:G:H5'	2.25	0.77
2:B:1340:U:H2'	2:B:1603:A:P	2.16	0.77
2:B:1664:A:O3'	11:K:40:LYS:HE3	1.84	0.77
2:B:2532:G:C2	2:B:2662:A:N1	2.52	0.77
4:C:153:LEU:H	4:C:153:LEU:HD23	1.48	0.77
5:D:8:LYS:CD	16:P:1:SER:HB3	2.12	0.77
15:O:50:ALA:HB2	15:O:83:LEU:HD11	1.64	0.77
18:R:53:PHE:CB	18:R:55:ASP:N	2.47	0.77
20:T:24:MET:HG3	20:T:28:ASN:HA	1.65	0.77
2:B:6:A:C5	2:B:2898:U:N3	2.53	0.77
2:B:320:A:P	6:E:132:LYS:CG	2.67	0.77
2:B:370:G:O2'	2:B:423:A:H3'	1.85	0.77
2:B:957:C:O2'	13:M:17:ASN:OD1	2.03	0.77
2:B:1771:C:N4	2:B:1974:C:OP1	2.16	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1997:C:N3	2:B:2549:G:C8	2.52	0.77
2:B:2575:C:C5'	5:D:151:THR:CG2	2.60	0.77
2:B:2645:G:O4'	2:B:2732:G:O2'	2.02	0.77
3:V:80:HIS:HD2	3:V:82:TYR:H	1.32	0.77
2:B:5:A:N3	2:B:2899:A:N3	2.33	0.77
2:B:128:C:OP1	20:T:77:ARG:HB3	1.85	0.77
2:B:728:G:O4'	4:C:16:VAL:HG21	1.85	0.77
2:B:958:U:C2'	13:M:18:ARG:H	1.97	0.77
2:B:1668:A:H2'	2:B:1954:G:C3'	2.12	0.77
2:B:1938:A:H3'	2:B:1983:G:C8	2.07	0.77
2:B:1947:C:N3	2:B:1987:A:O4'	2.18	0.77
2:B:2068:U:O4	2:B:2395:C:O2	2.02	0.77
2:B:2199:A:H4'	9:H:28:ASN:O	1.85	0.77
2:B:2200:C:H5'	9:H:28:ASN:CB	2.15	0.77
2:B:2285:C:C5'	27:1:29:LYS:HZ2	1.85	0.77
4:C:87:SER:O	4:C:157:ALA:HB2	1.84	0.77
4:C:128:THR:HA	4:C:190:THR:HA	1.67	0.77
15:O:67:ASN:HA	15:O:71:ALA:HB3	1.66	0.77
29:3:31:ILE:HG22	29:3:32:LEU:HG	1.64	0.77
1:A:76:G:H4'	13:M:136:MET:HE1	1.66	0.76
2:B:397:U:O5'	25:Z:49:ARG:O	1.96	0.76
2:B:567:U:H1'	32:B:3347:HOH:O	1.83	0.76
2:B:586:A:OP1	6:E:85:PHE:CE1	2.37	0.76
2:B:591:U:C4'	29:3:1:PRO:CD	2.52	0.76
2:B:742:A:H2'	2:B:743:A:H8	1.50	0.76
2:B:1275:A:H3'	2:B:1275:A:N3	1.99	0.76
2:B:1674:G:C8	2:B:1956:U:C5	2.51	0.76
2:B:1752:C:H4'	2:B:2861:U:C3'	2.15	0.76
2:B:1799:G:H22	4:C:153:LEU:CA	1.95	0.76
2:B:1994:C:O5'	2:B:2551:C:C5	2.38	0.76
2:B:2007:U:OP1	2:B:2050:C:C5'	2.33	0.76
2:B:2507:C:N3	2:B:2583:G:C4	2.52	0.76
2:B:2637:U:C4'	5:D:43:ASP:HB3	2.09	0.76
2:B:2788:C:HO2'	2:B:2809:A:C2'	1.96	0.76
10:J:57:LEU:HB3	10:J:128:ASN:HA	1.68	0.76
12:L:61:LEU:HB3	12:L:62:PRO:CD	2.06	0.76
13:M:23:GLY:N	13:M:96:ILE:HD12	2.00	0.76
2:B:584:C:N4	17:Q:5:ARG:NH2	2.32	0.76
2:B:587:C:C3'	12:L:36:LYS:HZ3	1.96	0.76
2:B:616:A:HO2'	6:E:200:LEU:HD21	1.49	0.76
2:B:1338:G:O4'	20:T:18:GLU:OE2	2.02	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1638:C:O2'	2:B:2698:U:O2	2.01	0.76
2:B:1818:U:H5'	4:C:155:ARG:HH21	1.50	0.76
2:B:1951:U:O2	2:B:1991:U:O4	2.03	0.76
2:B:2532:G:N1	2:B:2662:A:H2	1.83	0.76
4:C:257:ARG:O	4:C:261:ARG:HG3	1.85	0.76
2:B:5:A:N6	2:B:2899:A:H62	1.83	0.76
2:B:84:A:OP2	21:U:91:LYS:CG	2.32	0.76
2:B:1203:U:H5''	12:L:14:LYS:CE	2.15	0.76
2:B:2067:G:C5	2:B:2246:G:C4'	2.60	0.76
2:B:2277:G:OP1	22:W:9:THR:HG22	1.85	0.76
2:B:2582:G:O6	2:B:2583:G:N7	2.16	0.76
2:B:2691:C:H1'	2:B:2872:A:N1	2.00	0.76
10:J:81:ILE:HG23	10:J:82:GLY:N	1.99	0.76
12:L:27:LEU:C	12:L:29:LYS:H	1.93	0.76
16:P:52:ARG:O	16:P:60:VAL:HG21	1.85	0.76
20:T:1:MET:HE3	20:T:2:ILE:HB	1.68	0.76
2:B:396:G:C4'	25:Z:3:LYS:HZ3	1.96	0.76
2:B:669:G:O5'	2:B:670:A:N7	2.19	0.76
2:B:855:G:N2	22:W:23:LYS:HE2	1.87	0.76
2:B:1652:A:P	2:B:2723:C:O2'	2.43	0.76
2:B:1905:C:O2'	2:B:1906:G:OP2	2.03	0.76
2:B:2063:C:N4	2:B:2253:G:O5'	2.17	0.76
2:B:2283:C:H3'	2:B:2284:A:O4'	1.86	0.76
2:B:2785:C:O2'	5:D:66:GLY:O	2.02	0.76
12:L:60:ARG:O	29:3:7:ARG:NH2	2.18	0.76
19:S:18:ARG:HH12	19:S:25:ARG:NH2	1.83	0.76
2:B:97:C:H1'	23:X:45:GLN:HB3	1.67	0.76
2:B:538:A:C2'	10:J:7:LYS:H	1.99	0.76
2:B:828:U:N1	2:B:2447:G:OP2	2.19	0.76
2:B:857:G:H5''	22:W:55:ASP:CG	2.11	0.76
2:B:1033:U:O4	8:G:1:SER:N	2.17	0.76
2:B:1276:A:O4'	14:N:20:MET:SD	2.43	0.76
2:B:1947:C:C4	2:B:1987:A:C5'	2.64	0.76
2:B:1951:U:O2'	2:B:1991:U:O4'	2.02	0.76
2:B:1975:G:C3'	2:B:1979:U:C6	2.64	0.76
2:B:2346:A:H3'	2:B:2347:C:H5''	1.67	0.76
5:D:18:ASP:HB3	5:D:20:VAL:HG22	1.68	0.76
7:F:101:ARG:HD2	7:F:105:ILE:HD12	1.68	0.76
2:B:682:G:O3'	28:2:26:ASN:CB	2.33	0.76
2:B:700:G:H8	2:B:734:A:N6	1.84	0.76
2:B:989:G:OP2	24:Y:11:SER:N	2.18	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1674:G:H8	2:B:1955:U:C5'	1.95	0.76
2:B:1771:C:OP1	2:B:1968:G:H8	1.69	0.76
2:B:1818:U:C5	4:C:154:ALA:C	2.63	0.76
2:B:2005:A:N6	5:D:141:ARG:O	2.17	0.76
2:B:2198:A:H4'	9:H:29:PHE:CG	2.19	0.76
23:X:36:GLN:HE22	23:X:38:GLN:NE2	1.84	0.76
2:B:1263:U:O4'	26:O:6:LYS:O	1.97	0.76
2:B:1342:A:OP1	20:T:59:ASN:CB	2.34	0.76
2:B:1656:C:H2'	2:B:2510:C:O2'	1.85	0.76
2:B:1827:U:H1'	2:B:1900:A:C2'	2.14	0.76
2:B:2090:A:H2	2:B:2091:C:O4'	1.66	0.76
2:B:15:G:C3'	26:O:17:SER:CB	2.63	0.76
2:B:144:A:OP1	20:T:37:ASP:CG	2.29	0.76
2:B:397:U:C4'	25:Z:49:ARG:HB3	2.15	0.76
2:B:751:A:OP1	2:B:1614:A:OP2	2.03	0.76
2:B:1030:C:OP1	13:M:118:LYS:N	2.17	0.76
2:B:1268:A:N6	19:S:86:MET:SD	2.55	0.76
2:B:2067:G:N2	2:B:2430:A:N3	2.33	0.76
6:E:27:LEU:HD13	12:L:19:LEU:HD11	1.68	0.76
17:Q:29:ARG:HH21	26:O:9:ARG:HE	1.34	0.76
22:W:6:GLY:C	22:W:8:SER:H	1.94	0.76
2:B:592:A:O2'	29:3:2:LYS:HE2	1.84	0.76
2:B:812:C:C5	12:L:33:ARG:CA	2.66	0.76
2:B:856:G:H1'	22:W:23:LYS:HB2	1.66	0.76
2:B:997:G:C5'	17:Q:91:ARG:CD	2.64	0.76
2:B:1693:U:O4	2:B:1977:A:H4'	1.86	0.76
2:B:1779:U:C4	2:B:2589:A:O3'	2.38	0.76
2:B:1938:A:N1	2:B:2590:A:C3'	2.49	0.76
2:B:2067:G:C2	2:B:2245:U:P	2.68	0.76
2:B:2632:A:O2'	2:B:2811:G:H4'	1.86	0.76
6:E:30:GLN:HB3	12:L:19:LEU:CB	2.08	0.76
13:M:69:PRO:HB2	13:M:71:LYS:HZ1	1.51	0.76
14:N:70:THR:HG21	14:N:75:ILE:HG22	1.68	0.76
19:S:24:ILE:HD13	19:S:36:LEU:HD21	1.65	0.76
20:T:88:LYS:HG2	20:T:89:GLU:H	1.49	0.76
1:A:54:G:H1'	7:F:9:ASP:OD1	1.84	0.76
2:B:57:C:H5'	20:T:77:ARG:O	1.84	0.76
2:B:140:C:H4'	2:B:141:G:H21	1.51	0.76
2:B:814:C:O2'	18:R:86:GLN:HA	1.85	0.76
2:B:850:U:O2'	24:Y:46:MET:HG3	1.85	0.76
2:B:1177:G:H2'	2:B:1178:C:C6	2.20	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1223:G:C2	18:R:76:LYS:NZ	2.54	0.76
2:B:1454:C:H42	14:N:67:PHE:HE1	1.32	0.76
2:B:1774:C:O2	2:B:1829:A:C5	2.38	0.76
2:B:1806:C:O3'	4:C:48:ILE:HB	1.86	0.76
2:B:1903:G:C5'	4:C:239:PHE:CE2	2.50	0.76
2:B:2002:G:O2'	5:D:132:ALA:HB3	1.86	0.76
2:B:2015:A:C5'	19:S:91:GLY:H	1.98	0.76
2:B:2070:A:OP2	2:B:2432:A:N9	1.86	0.76
2:B:2216:G:OP1	25:Z:44:PHE:CD2	2.38	0.76
2:B:2225:A:H2	9:H:25:TYR:HD1	1.32	0.76
2:B:2311:A:O3'	7:F:71:LYS:CB	2.33	0.76
2:B:2344:U:HO2'	27:1:37:LYS:HG2	0.95	0.76
2:B:2575:C:O5'	5:D:150:GLN:HG2	1.73	0.76
10:J:101:ILE:HG23	10:J:102:GLU:H	1.50	0.76
12:L:80:SER:HB2	12:L:113:ALA:H	1.49	0.76
23:X:38:GLN:NE2	23:X:38:GLN:H	1.84	0.76
30:4:4:ARG:O	30:4:4:ARG:HG2	1.84	0.76
2:B:5:A:C5	2:B:2899:A:N1	2.33	0.75
2:B:9:G:C6	2:B:2895:G:C2	2.75	0.75
2:B:583:G:C3'	17:Q:6:GLY:H	1.90	0.75
2:B:587:C:O4'	12:L:38:GLN:CG	2.33	0.75
2:B:789:A:C3'	28:2:3:ARG:NH2	2.49	0.75
2:B:1029:A:H61	30:4:6:SER:HB3	1.51	0.75
2:B:1030:C:OP1	13:M:117:PHE:CD1	2.39	0.75
2:B:1263:U:H4'	26:0:7:PRO:N	1.90	0.75
2:B:1278:C:O4'	14:N:27:SER:HB2	1.86	0.75
2:B:1752:C:OP1	2:B:2861:U:O2'	2.03	0.75
2:B:1767:G:N2	2:B:1961:C:C5	2.53	0.75
2:B:1769:U:H5	2:B:1935:G:P	2.09	0.75
2:B:1816:C:H5'	4:C:86:ARG:N	2.01	0.75
3:V:79:ARG:HA	3:V:86:LEU:HA	1.68	0.75
9:H:128:HIS:HB3	9:H:144:VAL:HB	1.65	0.75
13:M:100:LYS:H	13:M:100:LYS:HE3	1.49	0.75
17:Q:110:GLU:OE1	18:R:52:PRO:HD3	1.85	0.75
2:B:452:G:H22	28:2:39:ARG:NH2	1.83	0.75
2:B:619:G:C5'	32:B:3235:HOH:O	1.86	0.75
2:B:789:A:C1'	28:2:3:ARG:HH21	1.98	0.75
2:B:943:A:C3'	32:B:3067:HOH:O	2.33	0.75
2:B:1340:U:O4'	2:B:1394:U:H4'	1.85	0.75
2:B:1665:A:P	11:K:57:VAL:HG12	1.17	0.75
2:B:1790:C:O2'	2:B:1829:A:H5'	1.82	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1805:A:O3'	4:C:50:THR:CA	2.32	0.75
2:B:1825:U:OP1	4:C:244:VAL:CG2	2.35	0.75
2:B:1999:C:O2'	11:K:31:ARG:HB2	1.87	0.75
4:C:224:MET:HA	4:C:232:GLY:HA2	1.68	0.75
6:E:112:LEU:CG	12:L:11:GLY:C	2.58	0.75
12:L:60:ARG:C	29:3:7:ARG:HH21	1.94	0.75
14:N:28:LEU:HD11	14:N:44:LEU:HD21	1.68	0.75
21:U:7:ASP:CA	21:U:24:VAL:HA	2.15	0.75
25:Z:5:ILE:HB	25:Z:51:VAL:CG1	2.15	0.75
2:B:61:C:H5'	23:X:25:GLN:HB2	1.67	0.75
2:B:587:C:C4'	12:L:38:GLN:HB2	2.12	0.75
2:B:858:G:C3'	2:B:2268:A:H1'	1.92	0.75
2:B:1665:A:C8	2:B:2561:U:H5'	2.17	0.75
2:B:2247:A:C3'	2:B:2445:G:H2'	2.15	0.75
2:B:2261:C:O2'	2:B:2328:A:C2	2.39	0.75
2:B:2761:A:N9	8:G:142:GLN:NE2	2.34	0.75
3:V:35:GLU:HG3	3:V:93:ARG:HD3	1.69	0.75
4:C:179:GLU:HG3	4:C:266:ILE:HG22	1.67	0.75
16:P:26:GLU:HA	16:P:47:ILE:H	1.50	0.75
1:A:79:G:O2'	2:B:861:A:C2	2.39	0.75
2:B:2:G:N2	2:B:2902:C:O2	2.19	0.75
2:B:4:U:N3	2:B:2899:A:N6	2.34	0.75
2:B:23:G:HO2'	19:S:77:ASP:CG	1.91	0.75
2:B:479:A:O2'	2:B:481:G:H5'	1.86	0.75
2:B:989:G:C8	24:Y:13:ILE:C	2.50	0.75
2:B:1248:G:C5	17:Q:1:ALA:O	2.39	0.75
2:B:1580:A:C6	2:B:1581:G:N1	2.54	0.75
2:B:1653:G:H3'	5:D:126:ASN:N	2.00	0.75
2:B:1666:G:H21	2:B:2559:C:H1'	1.15	0.75
2:B:1993:U:OP1	2:B:2551:C:OP1	1.94	0.75
6:E:25:GLU:C	12:L:18:ARG:H	1.94	0.75
6:E:27:LEU:HD23	6:E:100:MET:HE2	1.69	0.75
6:E:59:PRO:HD2	6:E:60:TRP:NE1	2.01	0.75
14:N:120:GLU:HA	26:O:51:ARG:HG2	1.68	0.75
2:B:162:U:H4'	2:B:163:C:OP1	1.86	0.75
2:B:291:G:O3'	32:B:3181:HOH:O	2.04	0.75
2:B:539:G:H5'	10:J:7:LYS:N	2.00	0.75
2:B:584:C:H5''	17:Q:3:VAL:HG21	1.67	0.75
2:B:630:G:OP1	29:3:45:PRO:HD2	1.85	0.75
2:B:1118:C:O3'	3:V:84:PRO:CG	2.34	0.75
2:B:1158:C:C5'	24:Y:10:ARG:HE	1.99	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1417:C:H5'	2:B:1418:G:OP2	1.76	0.75
2:B:1656:C:C2'	2:B:2510:C:O2'	2.12	0.75
2:B:1819:A:O2'	4:C:177:SER:N	2.15	0.75
2:B:1827:U:H1'	2:B:1900:A:C3'	2.15	0.75
2:B:1954:G:P	2:B:1991:U:O4	2.44	0.75
2:B:2091:C:C1'	2:B:2229:U:O2	2.34	0.75
2:B:2257:U:H6	2:B:2450:A:C5'	2.00	0.75
2:B:2270:A:P	22:W:19:ARG:HE	2.09	0.75
3:V:76:ASP:O	13:M:133:LYS:HG2	1.86	0.75
5:D:107:VAL:HA	5:D:205:PRO:O	1.85	0.75
10:J:42:ALA:HB1	17:Q:99:VAL:CB	2.16	0.75
12:L:103:ILE:HD13	12:L:105:ILE:H	1.50	0.75
1:A:56:G:N3	7:F:24:VAL:CG2	2.49	0.75
1:A:59:A:N7	7:F:23:SER:O	2.19	0.75
2:B:28:A:N6	2:B:512:G:H1'	2.02	0.75
2:B:586:A:C5'	6:E:85:PHE:CE1	2.68	0.75
2:B:742:A:H2'	2:B:743:A:C8	2.22	0.75
2:B:1009:A:O3'	17:Q:61:ILE:CD1	2.27	0.75
2:B:1283:G:N2	2:B:1286:A:H5'	2.02	0.75
2:B:2248:C:C6	2:B:2446:G:C1'	2.69	0.75
2:B:2260:C:H4'	2:B:2388:A:O3'	1.87	0.75
6:E:27:LEU:HD22	12:L:19:LEU:CD1	2.17	0.75
10:J:24:THR:C	10:J:25:LEU:HD22	2.12	0.75
12:L:117:THR:HG21	12:L:120:VAL:CB	2.15	0.75
13:M:11:LYS:HG2	13:M:12:MET:H	1.51	0.75
27:1:42:VAL:HG12	27:1:43:ARG:NE	2.00	0.75
2:B:508:A:H2'	2:B:509:C:H5'	1.69	0.75
2:B:516:C:H1'	2:B:1262:A:OP1	1.86	0.75
2:B:575:A:OP1	2:B:2030:A:N1	2.20	0.75
2:B:652:U:H5''	32:B:3138:HOH:O	1.86	0.75
2:B:1580:A:N1	2:B:1581:G:N3	2.35	0.75
2:B:1669:A:H1'	2:B:2558:C:C1'	2.16	0.75
2:B:1783:A:O2'	2:B:2590:A:C4'	2.34	0.75
2:B:1819:A:N3	4:C:177:SER:OG	2.19	0.75
2:B:2263:C:H5'	2:B:2329:U:C4'	2.17	0.75
2:B:2355:G:OP1	22:W:30:VAL:HG13	1.87	0.75
3:V:77:VAL:HG23	13:M:134:THR:HG23	1.55	0.75
6:E:31:VAL:H	12:L:19:LEU:CD2	1.99	0.75
8:G:153:PRO:HG2	8:G:162:ARG:HB3	1.68	0.75
12:L:82:LEU:HD21	12:L:92:LEU:HD12	1.68	0.75
1:A:43:C:O2	7:F:91:ARG:HD2	1.83	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:57:A:N7	7:F:13:LYS:HE2	2.02	0.75
2:B:77:G:H5'	23:X:52:ARG:CA	2.15	0.75
2:B:448:U:C6	32:B:3003:HOH:O	2.39	0.75
2:B:669:G:O5'	12:L:47:ARG:CG	2.31	0.75
2:B:1269:A:O5'	32:B:3129:HOH:O	2.03	0.75
2:B:1651:G:C4'	14:N:2:ARG:HH12	1.85	0.75
2:B:1655:A:H2'	2:B:2511:U:N1	1.84	0.75
2:B:1774:C:C3'	2:B:1976:U:C4	2.69	0.75
2:B:1819:A:C3'	4:C:176:ARG:HE	1.98	0.75
13:M:69:PRO:HB2	13:M:71:LYS:NZ	2.02	0.75
17:Q:88:GLU:OE1	18:R:54:VAL:HB	1.87	0.75
18:R:69:GLY:HA2	18:R:96:VAL:HA	1.69	0.75
2:B:57:C:C4'	20:T:78:SER:OG	2.34	0.75
2:B:812:C:H5	12:L:33:ARG:HA	1.52	0.75
2:B:1262:A:H2'	26:O:6:LYS:O	1.87	0.75
2:B:1818:U:C6	4:C:154:ALA:CA	2.70	0.75
2:B:1937:A:C2'	2:B:1984:G:C8	2.70	0.75
2:B:2386:A:O2'	22:W:38:ARG:HD2	1.87	0.75
2:B:2748:A:H1'	8:G:66:THR:HA	1.67	0.75
10:J:11:VAL:HG13	10:J:12:LYS:N	2.02	0.75
18:R:4:VAL:HA	18:R:12:HIS:HB3	1.69	0.75
20:T:30:ILE:HG23	20:T:31:VAL:N	2.01	0.75
2:B:9:G:N1	2:B:2895:G:C2	2.54	0.74
2:B:45:G:P	2:B:46:G:H4'	2.26	0.74
2:B:465:G:C4'	28:2:12:ARG:CZ	2.56	0.74
2:B:693:A:C1'	2:B:1354:A:C2'	2.56	0.74
2:B:919:U:H2'	2:B:920:A:C8	2.21	0.74
2:B:1455:G:C6	2:B:2704:C:C2	2.73	0.74
2:B:1619:G:N7	32:B:3080:HOH:O	2.18	0.74
2:B:1768:C:N1	2:B:1961:C:C5	2.38	0.74
2:B:2004:G:N3	5:D:142:VAL:HG21	2.02	0.74
2:B:2261:C:H5''	2:B:2387:U:H2'	1.67	0.74
2:B:2334:U:O2	15:O:12:THR:HA	1.86	0.74
2:B:2507:C:C5	2:B:2583:G:N1	2.54	0.74
2:B:2899:A:H5'	10:J:137:PRO:HD2	1.63	0.74
5:D:8:LYS:HA	5:D:197:THR:HG23	1.69	0.74
25:Z:55:GLY:HA2	25:Z:63:ARG:HG3	1.69	0.74
2:B:9:G:N2	2:B:2895:G:C4	2.55	0.74
2:B:55:G:H4'	20:T:70:HIS:ND1	2.02	0.74
2:B:150:U:H2'	2:B:151:C:C6	2.23	0.74
2:B:1128:G:C1'	2:B:2517:C:H4'	2.16	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1905:C:O2'	2:B:1906:G:P	2.44	0.74
2:B:2091:C:C4	2:B:2228:G:O6	2.40	0.74
2:B:2749:A:C5'	8:G:65:GLY:CA	2.39	0.74
3:V:79:ARG:CG	13:M:134:THR:CG2	2.50	0.74
5:D:110:THR:HG22	5:D:171:THR:HA	1.67	0.74
5:D:154:LYS:NZ	5:D:156:PHE:HA	2.00	0.74
6:E:98:LYS:HG3	6:E:99:LYS:N	2.02	0.74
6:E:112:LEU:CD2	12:L:11:GLY:C	2.58	0.74
14:N:100:CYS:HB3	14:N:110:MET:HB2	1.70	0.74
15:O:8:ILE:HG22	15:O:10:ARG:H	1.52	0.74
23:X:49:ASP:HB3	23:X:52:ARG:HH21	1.52	0.74
1:A:93:C:OP2	3:V:14:LYS:NZ	2.20	0.74
2:B:126:A:H2'	20:T:76:ARG:CD	2.15	0.74
2:B:413:C:O2	2:B:2410:G:N1	2.20	0.74
2:B:1654:A:H3'	5:D:128:ARG:CG	2.15	0.74
2:B:1766:G:C2'	2:B:1959:G:C4'	2.64	0.74
2:B:1782:U:H2'	2:B:2589:A:C8	2.22	0.74
2:B:2216:G:H2'	2:B:2217:G:H8	1.53	0.74
2:B:2255:G:O6	2:B:2450:A:C6	2.39	0.74
2:B:2306:C:N3	7:F:76:PHE:CE2	2.56	0.74
2:B:2691:C:C1'	2:B:2872:A:N1	2.49	0.74
4:C:50:THR:C	4:C:51:ARG:HG3	2.12	0.74
7:F:64:PRO:HA	7:F:88:VAL:HG22	1.68	0.74
8:G:120:ILE:HG12	8:G:140:ILE:HG22	1.68	0.74
13:M:41:LEU:HB2	13:M:93:VAL:HG22	1.70	0.74
21:U:84:PHE:HA	32:U:108:HOH:O	1.80	0.74
2:B:4:U:H3	2:B:2899:A:N6	1.83	0.74
2:B:84:A:O5'	21:U:91:LYS:HD3	1.88	0.74
2:B:331:C:H5'	32:B:3359:HOH:O	1.86	0.74
2:B:537:G:C2'	10:J:4:PHE:CZ	2.65	0.74
2:B:590:A:N6	12:L:48:ARG:HH11	1.85	0.74
2:B:703:U:H2'	2:B:704:G:O4'	1.86	0.74
2:B:1010:A:OP1	17:Q:65:ASN:HB2	1.86	0.74
2:B:1639:C:C4'	2:B:2699:C:O2'	2.24	0.74
2:B:1819:A:C2'	4:C:176:ARG:HG3	2.16	0.74
2:B:1855:U:N3	2:B:2234:G:H3'	2.02	0.74
2:B:1974:C:N3	2:B:1978:A:C6	2.55	0.74
2:B:2005:A:N6	5:D:140:HIS:O	2.20	0.74
2:B:2216:G:C5'	25:Z:44:PHE:HE1	1.65	0.74
2:B:2258:C:O2'	2:B:2425:A:H5'	1.87	0.74
2:B:2465:C:H5''	30:4:5:ALA:HB2	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:105:LEU:HD22	6:E:177:PRO:HG2	1.70	0.74
21:U:90:LYS:HD2	21:U:91:LYS:HZ3	1.52	0.74
27:1:12:SER:HB2	27:1:21:THR:O	1.88	0.74
1:A:57:A:O4'	7:F:12:VAL:O	2.06	0.74
2:B:144:A:O5'	20:T:37:ASP:OD1	2.05	0.74
2:B:532:A:C5	2:B:2020:A:H1'	2.20	0.74
2:B:686:U:O2	28:2:11:LYS:HB2	1.87	0.74
2:B:1163:G:C5'	18:R:91:GLN:CD	2.54	0.74
2:B:1454:C:N4	14:N:67:PHE:HE1	1.85	0.74
2:B:1659:G:C4'	32:B:3280:HOH:O	2.06	0.74
2:B:1783:A:C6	2:B:2589:A:OP2	2.31	0.74
2:B:1936:A:H3'	2:B:1984:G:C6	2.07	0.74
2:B:2335:A:H5'	15:O:9:ARG:HE	1.52	0.74
2:B:2724:U:C5'	5:D:116:LYS:NZ	2.49	0.74
2:B:2788:C:C2'	2:B:2809:A:HO2'	2.00	0.74
4:C:127:ASN:HD22	4:C:128:THR:H	1.35	0.74
6:E:27:LEU:CG	12:L:19:LEU:HD11	2.14	0.74
6:E:27:LEU:CD2	12:L:19:LEU:HD12	2.16	0.74
6:E:112:LEU:CB	12:L:11:GLY:O	2.29	0.74
14:N:30:ARG:HB3	14:N:31:HIS:HD1	1.51	0.74
20:T:73:ARG:HD3	28:2:44:VAL:HG22	1.68	0.74
2:B:76:C:OP1	23:X:48:ARG:CG	2.31	0.74
2:B:96:C:O4'	23:X:42:LEU:CD1	2.21	0.74
2:B:593:U:C4'	29:3:2:LYS:HZ3	1.82	0.74
2:B:617:G:OP1	6:E:102:ARG:HD3	1.87	0.74
2:B:686:U:C2	28:2:12:ARG:N	2.49	0.74
2:B:1124:G:H21	30:4:23:ILE:HG23	1.53	0.74
2:B:1277:G:C1'	14:N:23:ASN:CB	2.50	0.74
2:B:1665:A:C5'	11:K:57:VAL:HG11	1.86	0.74
2:B:1807:G:C5'	4:C:47:ARG:N	2.41	0.74
2:B:1825:U:OP1	4:C:244:VAL:HG21	1.87	0.74
2:B:1888:G:C1'	2:B:2234:G:C2'	2.65	0.74
2:B:1993:U:O4	2:B:2550:G:H2'	1.88	0.74
2:B:2086:U:H2'	2:B:2087:G:C8	2.21	0.74
2:B:2245:U:C1'	2:B:2433:A:HO3'	2.00	0.74
2:B:2246:G:H5''	2:B:2444:G:O6	1.57	0.74
5:D:25:THR:HG23	16:P:8:GLU:OE2	1.88	0.74
2:B:6:A:N1	2:B:2898:U:N3	2.27	0.74
2:B:55:G:H4'	20:T:70:HIS:CE1	2.22	0.74
2:B:215:G:N2	2:B:432:A:C6	2.55	0.74
2:B:520:G:P	19:S:18:ARG:NH2	2.58	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:570:G:C4	2:B:2030:A:C6	2.76	0.74
2:B:997:G:H5''	17:Q:91:ARG:CD	2.16	0.74
2:B:1184:U:C5	24:Y:30:ARG:NH1	2.56	0.74
2:B:1938:A:H5'	2:B:1982:U:C2	2.23	0.74
2:B:2246:G:O2'	2:B:2444:G:N2	2.21	0.74
3:V:82:TYR:CB	13:M:34:LYS:CD	2.56	0.74
6:E:60:TRP:NE1	6:E:73:ILE:HD11	2.03	0.74
12:L:30:THR:HA	12:L:36:LYS:NZ	2.03	0.74
12:L:60:ARG:HD2	29:3:7:ARG:HD3	1.68	0.74
20:T:30:ILE:CG2	32:T:104:HOH:O	2.27	0.74
2:B:755:U:H5''	2:B:1272:A:H61	1.53	0.74
2:B:2003:A:N7	5:D:131:ASP:N	2.36	0.74
2:B:2048:G:C4'	2:B:2823:A:N6	2.50	0.74
2:B:2334:U:O3'	15:O:12:THR:CG2	2.28	0.74
2:B:2630:G:H5'	2:B:2894:G:H1'	1.68	0.74
6:E:179:SER:O	12:L:13:LYS:HE2	1.87	0.74
13:M:73:ILE:O	13:M:74:THR:HB	1.88	0.74
2:B:4:U:C2	2:B:2900:A:C2	2.47	0.74
2:B:192:C:HO2'	2:B:802:A:H1'	1.53	0.74
2:B:775:G:H4'	32:B:3043:HOH:O	1.86	0.74
2:B:858:G:C3'	2:B:2268:A:C2'	2.66	0.74
2:B:1770:G:P	2:B:1964:G:N1	2.56	0.74
2:B:2002:G:H2'	5:D:132:ALA:CB	2.04	0.74
2:B:2003:A:H3'	5:D:139:SER:OG	1.87	0.74
2:B:2004:G:C1'	5:D:137:SER:O	2.34	0.74
2:B:2017:U:O4'	26:O:3:GLN:HA	1.87	0.74
2:B:2811:G:C5'	5:D:62:LYS:HD2	2.17	0.74
4:C:117:SER:HB3	4:C:127:ASN:CG	2.12	0.74
5:D:151:THR:O	5:D:152:PRO:C	2.26	0.74
6:E:133:LEU:HD12	6:E:136:GLN:HG3	1.68	0.74
9:H:73:ASN:N	9:H:73:ASN:HD22	1.85	0.74
11:K:101:GLY:O	11:K:119:ALA:HB1	1.87	0.74
22:W:66:VAL:HG22	22:W:67:LYS:N	2.03	0.74
25:Z:3:LYS:HG2	25:Z:8:LYS:HA	1.68	0.74
26:O:29:VAL:HG23	26:O:36:LYS:NZ	2.02	0.74
1:A:57:A:H8	7:F:16:MET:HG2	1.30	0.74
2:B:515:A:P	17:Q:29:ARG:HH11	2.10	0.74
2:B:570:G:H21	2:B:2499:C:H5''	1.44	0.74
2:B:671:C:H6	12:L:39:LYS:CG	2.01	0.74
2:B:1249:U:H2'	12:L:32:GLY:CA	2.18	0.74
2:B:1580:A:C2	2:B:1581:G:N3	2.56	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1818:U:H2'	4:C:153:LEU:CA	2.18	0.74
2:B:1903:G:H5'	4:C:239:PHE:HD2	1.51	0.74
2:B:2004:G:N7	5:D:142:VAL:HG22	2.03	0.74
2:B:2630:G:C8	2:B:2894:G:C6	2.76	0.74
6:E:26:ALA:HA	12:L:18:ARG:CD	2.17	0.74
13:M:9:PHE:HA	13:M:10:ARG:HH21	1.53	0.74
16:P:25:VAL:HG11	16:P:87:ARG:HA	1.68	0.74
22:W:39:GLN:HA	22:W:68:PHE:HA	1.68	0.74
1:A:57:A:H61	7:F:24:VAL:HB	1.45	0.73
1:A:74:U:O2'	3:V:37:PRO:CB	2.36	0.73
2:B:35:G:C2	32:B:3117:HOH:O	2.34	0.73
2:B:76:C:O2'	23:X:51:ALA:C	2.31	0.73
2:B:125:A:C5'	28:2:19:ARG:HH22	1.91	0.73
2:B:135:U:H2'	2:B:136:G:C8	2.23	0.73
2:B:518:G:C4'	19:S:15:GLN:HB3	2.18	0.73
2:B:577:G:C4'	2:B:809:G:OP1	2.36	0.73
2:B:584:C:H6	17:Q:5:ARG:HD3	0.76	0.73
2:B:587:C:OP2	12:L:36:LYS:C	2.31	0.73
2:B:855:G:C2	22:W:23:LYS:NZ	2.56	0.73
2:B:989:G:H3'	24:Y:12:ALA:HB2	1.35	0.73
2:B:1371:G:C5'	2:B:1810:A:H1'	2.17	0.73
2:B:1469:A:H2'	2:B:1470:A:C8	2.22	0.73
2:B:1773:A:C5	2:B:1830:C:N4	2.56	0.73
2:B:1790:C:C2'	2:B:1829:A:H5''	2.17	0.73
2:B:2002:G:N2	5:D:134:HIS:NE2	2.36	0.73
2:B:2248:C:H6	2:B:2446:G:C2'	2.01	0.73
2:B:2353:G:O2'	22:W:29:SER:HB2	1.88	0.73
10:J:7:LYS:HZ3	10:J:48:VAL:HB	1.51	0.73
12:L:110:VAL:HB	12:L:126:ARG:NH2	2.02	0.73
23:X:14:LEU:O	23:X:17:GLU:HB2	1.87	0.73
1:A:54:G:N3	7:F:8:LYS:HB3	2.03	0.73
1:A:57:A:OP1	7:F:16:MET:O	2.06	0.73
2:B:61:C:H5''	23:X:25:GLN:CA	2.11	0.73
2:B:94:A:O2'	23:X:32:ALA:C	2.31	0.73
2:B:483:A:O2'	21:U:46:LYS:HE2	1.86	0.73
2:B:1196:C:H2'	2:B:1197:G:H8	1.01	0.73
2:B:1269:A:H5''	2:B:2012:G:C3'	1.69	0.73
2:B:1750:G:O2'	2:B:2859:G:C2	2.41	0.73
2:B:1855:U:H3	2:B:2235:G:P	2.10	0.73
2:B:2015:A:N7	19:S:88:ARG:CD	2.52	0.73
2:B:2147:A:H5'	2:B:2148:G:H5'	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2269:G:H1'	22:W:20:LEU:O	1.86	0.73
2:B:2532:G:N1	2:B:2662:A:C2	2.55	0.73
2:B:2539:C:O4'	30:4:2:LYS:NZ	2.20	0.73
2:B:2633:G:C1'	5:D:62:LYS:CG	2.56	0.73
19:S:47:VAL:HG12	19:S:103:ILE:HD13	1.70	0.73
20:T:93:LEU:HD22	20:T:93:LEU:H	1.53	0.73
1:A:47:C:H3'	15:O:102:ARG:HD2	1.69	0.73
2:B:5:A:C2	2:B:2898:U:O2	2.39	0.73
2:B:125:A:H3'	2:B:126:A:C5'	2.17	0.73
2:B:859:G:P	2:B:2268:A:O2'	2.47	0.73
2:B:882:G:P	2:B:898:C:C2'	2.76	0.73
2:B:1263:U:C5'	26:0:8:THR:N	2.51	0.73
2:B:1340:U:O3'	2:B:1395:A:P	2.45	0.73
2:B:1673:G:H5''	2:B:1944:U:C4'	2.16	0.73
2:B:1773:A:O2'	2:B:1974:C:C4	2.33	0.73
2:B:1997:C:HO2'	2:B:2547:A:H2'	1.52	0.73
2:B:2069:G:N2	2:B:2245:U:C5	2.47	0.73
2:B:2199:A:N6	2:B:2225:A:C4'	2.52	0.73
2:B:2216:G:H5''	25:Z:44:PHE:HD1	1.43	0.73
2:B:2247:A:H4'	2:B:2445:G:H2'	1.70	0.73
2:B:2815:C:O4'	26:0:39:ARG:CD	2.34	0.73
3:V:76:ASP:CG	13:M:136:MET:OXT	2.31	0.73
5:D:92:VAL:HG13	5:D:93:GLY:H	1.53	0.73
5:D:154:LYS:O	5:D:155:VAL:HG12	1.88	0.73
12:L:56:PRO:C	12:L:60:ARG:HB2	2.14	0.73
12:L:60:ARG:HD2	29:3:7:ARG:NH1	2.03	0.73
2:B:15:G:C3'	26:0:17:SER:HB3	2.18	0.73
2:B:23:G:C1'	19:S:77:ASP:OD2	2.36	0.73
2:B:566:U:C6	2:B:577:G:C5	2.76	0.73
2:B:584:C:H6	17:Q:5:ARG:CD	1.61	0.73
2:B:1314:C:C1'	2:B:1604:C:H4'	2.19	0.73
2:B:1796:U:C4'	4:C:251:THR:CA	2.63	0.73
2:B:1799:G:O6	4:C:175:LEU:HB3	1.88	0.73
2:B:1995:U:C6	2:B:2558:C:N4	2.56	0.73
2:B:2016:U:OP1	32:B:3311:HOH:O	2.05	0.73
2:B:2261:C:N1	2:B:2327:A:N1	2.35	0.73
14:N:76:VAL:HA	14:N:79:LEU:HD12	1.71	0.73
2:B:15:G:C2'	26:0:17:SER:CB	2.64	0.73
2:B:486:C:C6	19:S:60:HIS:HD2	2.04	0.73
2:B:1224:U:O4'	18:R:89:HIS:HB3	1.88	0.73
2:B:1295:C:OP2	14:N:71:ARG:HB2	1.87	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1655:A:C5	2:B:2511:U:H4'	2.23	0.73
2:B:1669:A:O2'	2:B:2558:C:O4'	2.06	0.73
2:B:1818:U:H6	4:C:155:ARG:N	1.80	0.73
2:B:2043:C:C4	2:B:2777:G:C2	2.76	0.73
2:B:2200:C:H5'	9:H:28:ASN:HB3	1.68	0.73
2:B:2247:A:C1'	2:B:2426:A:H1'	1.89	0.73
2:B:2281:A:C4'	2:B:2388:A:N6	2.51	0.73
6:E:112:LEU:CD2	12:L:11:GLY:HA3	2.06	0.73
7:F:116:LEU:HG	7:F:176:PHE:HA	1.68	0.73
10:J:112:GLY:O	10:J:116:ARG:HB2	1.88	0.73
16:P:47:ILE:HG22	16:P:48:ALA:N	2.01	0.73
2:B:686:U:C2	28:2:11:LYS:CA	2.68	0.73
2:B:1128:G:H1'	2:B:2517:C:C5'	2.18	0.73
2:B:1675:C:C5	2:B:2552:U:H5''	1.77	0.73
2:B:1799:G:C5	4:C:175:LEU:HD22	2.23	0.73
2:B:1993:U:O4	2:B:2550:G:C2'	2.37	0.73
2:B:2225:A:C2	9:H:25:TYR:CE1	2.77	0.73
3:V:80:HIS:CD2	3:V:83:LYS:H	2.05	0.73
10:J:71:ASP:CG	10:J:72:LYS:N	2.39	0.73
14:N:118:ARG:HH22	26:0:55:ALA:CB	1.91	0.73
26:0:36:LYS:HG3	26:0:40:HIS:O	1.88	0.73
2:B:34:U:H3'	32:B:3165:HOH:O	1.87	0.73
2:B:56:A:C5'	20:T:75:GLY:HA2	2.18	0.73
2:B:76:C:O2'	23:X:52:ARG:N	2.21	0.73
2:B:675:A:OP1	6:E:58:LYS:HD2	1.86	0.73
2:B:1011:G:OP2	17:Q:75:TYR:CB	2.28	0.73
2:B:1131:G:N2	2:B:2024:G:H22	1.87	0.73
2:B:1143:A:H62	10:J:27:ARG:CZ	2.01	0.73
2:B:1203:U:H3'	2:B:1204:A:H5''	1.70	0.73
2:B:1779:U:H2'	2:B:2589:A:C5'	2.18	0.73
2:B:1783:A:H2'	2:B:2590:A:C5'	2.18	0.73
2:B:2359:C:N3	2:B:2428:G:C2	2.56	0.73
5:D:159:LYS:HD2	5:D:161:MET:HE3	1.69	0.73
6:E:113:VAL:HG23	6:E:117:ARG:CZ	2.18	0.73
13:M:109:PRO:HA	13:M:112:LEU:HB2	1.69	0.73
21:U:69:VAL:HG13	21:U:77:GLY:H	1.54	0.73
2:B:320:A:OP2	6:E:132:LYS:HG2	1.79	0.73
2:B:320:A:P	6:E:132:LYS:HB3	2.28	0.73
2:B:530:G:H5''	2:B:2021:C:O2'	1.88	0.73
2:B:826:U:H5'	2:B:2448:A:H61	1.41	0.73
2:B:1124:G:C4'	30:4:21:GLY:N	2.25	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1126:A:C5'	30:4:37:GLN:HE21	2.02	0.73
2:B:1133:A:N7	2:B:2026:U:C2'	2.39	0.73
2:B:1339:G:O2'	2:B:1394:U:H5''	1.87	0.73
2:B:1659:G:C3'	32:B:3280:HOH:O	2.31	0.73
2:B:1839:G:O4'	2:B:1927:A:N3	2.22	0.73
2:B:1938:A:N9	2:B:2591:C:C4'	2.52	0.73
2:B:1951:U:N3	2:B:1990:C:N4	2.06	0.73
2:B:2007:U:OP2	2:B:2050:C:H5''	1.89	0.73
2:B:2057:G:C4'	26:0:1:ALA:H1	2.00	0.73
2:B:2344:U:O3'	27:1:37:LYS:HG3	1.89	0.73
2:B:2498:C:O2'	2:B:2499:C:H5'	1.89	0.73
2:B:2580:U:C5'	32:B:3285:HOH:O	2.36	0.73
2:B:2581:G:N2	2:B:2610:C:C5	2.56	0.73
3:V:79:ARG:CB	13:M:134:THR:CG2	1.82	0.73
13:M:96:ILE:HG23	13:M:97:GLN:H	1.52	0.73
16:P:28:LYS:HD3	16:P:44:GLY:N	2.03	0.73
17:Q:111:LYS:HB2	18:R:52:PRO:C	2.13	0.73
19:S:19:LEU:HD21	26:0:20:ALA:HB1	1.70	0.73
28:2:13:ASN:HB2	28:2:18:PHE:HD2	1.53	0.73
1:A:31:C:H4'	7:F:8:LYS:CD	2.19	0.73
1:A:57:A:O2'	7:F:27:VAL:HG13	1.87	0.73
2:B:5:A:C2	2:B:2899:A:C8	2.76	0.73
2:B:17:G:P	26:0:14:MET:HG3	2.27	0.73
2:B:570:G:C2'	2:B:2030:A:C6	2.59	0.73
2:B:1248:G:C6	17:Q:1:ALA:O	2.42	0.73
2:B:1294:U:H5'	14:N:71:ARG:HB3	1.69	0.73
2:B:1360:G:H1'	2:B:2212:A:N1	2.03	0.73
2:B:1567:G:H21	4:C:31:PRO:HA	0.59	0.73
2:B:1654:A:H8	5:D:121:THR:CB	1.77	0.73
2:B:1767:G:C5	2:B:1959:G:C8	2.76	0.73
2:B:1827:U:C1'	2:B:1900:A:C1'	2.44	0.73
2:B:2000:C:H5'	11:K:32:TYR:CZ	2.19	0.73
2:B:2004:G:C4	5:D:142:VAL:HG22	2.14	0.73
2:B:2378:A:H1'	15:O:92:PHE:CE1	2.23	0.73
2:B:2880:C:C5'	14:N:90:ARG:HD2	2.16	0.73
7:F:133:GLU:HG2	7:F:147:ARG:HG2	1.71	0.73
24:Y:10:ARG:NE	24:Y:31:ILE:HG13	2.02	0.73
1:A:50:A:H5''	15:O:65:THR:O	1.87	0.73
2:B:321:U:N1	6:E:129:PRO:CB	2.51	0.73
2:B:467:G:O4'	28:2:34:ARG:NH1	2.17	0.73
2:B:996:A:C5'	32:B:3036:HOH:O	1.97	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1178:C:H2'	2:B:1179:G:H8	1.52	0.73
2:B:1184:U:H5	24:Y:30:ARG:NH1	1.87	0.73
2:B:1278:C:C4'	14:N:27:SER:HB2	2.18	0.73
2:B:1342:A:P	20:T:59:ASN:HB3	2.29	0.73
2:B:1664:A:C8	11:K:22:ILE:HD12	2.23	0.73
2:B:1817:G:OP2	4:C:86:ARG:NH1	2.16	0.73
2:B:1936:A:O3'	2:B:1985:C:H6	1.66	0.73
2:B:2003:A:H2'	5:D:139:SER:CA	2.19	0.73
2:B:2015:A:N7	19:S:88:ARG:HD3	2.02	0.73
2:B:2199:A:OP1	9:H:29:PHE:CE1	2.42	0.73
2:B:2724:U:C5'	5:D:116:LYS:HZ1	1.98	0.73
12:L:118:THR:CG2	12:L:119:PRO:HD3	2.19	0.73
24:Y:18:LYS:NZ	24:Y:53:MET:HE2	2.04	0.73
1:A:14:U:C2'	1:A:107:G:C4'	2.59	0.72
2:B:336:C:OP1	21:U:81:ARG:NE	2.21	0.72
2:B:396:G:H4'	25:Z:3:LYS:HZ3	1.48	0.72
2:B:616:A:O2'	6:E:200:LEU:CD2	2.27	0.72
2:B:683:U:P	28:2:26:ASN:HD22	2.12	0.72
2:B:1133:A:H2'	2:B:2027:G:H5'	1.70	0.72
2:B:1223:G:H2'	18:R:78:ARG:HH12	1.51	0.72
2:B:1340:U:C5	2:B:1602:U:H3'	2.23	0.72
2:B:1997:C:O2'	2:B:2547:A:C2'	2.36	0.72
4:C:245:THR:O	4:C:247:TRP:N	2.22	0.72
19:S:66:ILE:H	19:S:66:ILE:HD12	1.54	0.72
2:B:163:C:H2'	2:B:164:C:O4'	1.87	0.72
2:B:989:G:P	24:Y:11:SER:HA	2.27	0.72
2:B:1312:U:C4	2:B:1604:C:C2	2.77	0.72
2:B:1324:G:H1'	2:B:1616:A:N6	2.03	0.72
2:B:1339:G:C5'	32:B:3155:HOH:O	2.37	0.72
2:B:1650:A:HO2'	14:N:2:ARG:CD	1.86	0.72
2:B:1936:A:O3'	2:B:1984:G:C2'	2.36	0.72
2:B:1938:A:OP1	2:B:1982:U:N3	2.20	0.72
2:B:2281:A:H5''	2:B:2326:C:O2'	1.89	0.72
2:B:2328:A:H2'	2:B:2329:U:C6	2.24	0.72
9:H:37:VAL:H	9:H:38:PRO:HD2	1.55	0.72
2:B:564:C:C1'	2:B:578:G:N1	2.52	0.72
2:B:587:C:C1'	12:L:38:GLN:CA	2.67	0.72
2:B:670:A:C1'	12:L:47:ARG:HA	2.17	0.72
2:B:824:U:OP1	2:B:2273:A:C4'	2.34	0.72
2:B:1029:A:H2	2:B:2466:C:C5'	2.02	0.72
2:B:1630:A:C1'	2:B:2698:U:OP1	2.37	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1774:C:C3'	2:B:1976:U:O4	2.37	0.72
2:B:1805:A:C4	4:C:50:THR:HG21	2.24	0.72
2:B:2582:G:O6	2:B:2583:G:C5	2.42	0.72
2:B:2642:G:P	10:J:80:HIS:C	2.61	0.72
6:E:27:LEU:CD2	12:L:19:LEU:CD1	2.67	0.72
9:H:3:VAL:HB	9:H:37:VAL:CB	2.18	0.72
16:P:13:LYS:HZ2	16:P:17:PRO:HG3	1.53	0.72
1:A:60:C:N4	7:F:23:SER:CB	2.46	0.72
2:B:138:U:H2'	2:B:140:C:H1'	1.71	0.72
2:B:459:U:C5'	28:2:41:ARG:HD2	2.09	0.72
2:B:567:U:O4'	2:B:576:U:C1'	2.37	0.72
2:B:1009:A:C4'	17:Q:61:ILE:CG1	2.58	0.72
2:B:1250:G:O2'	2:B:1251:C:H5''	1.90	0.72
2:B:1361:G:O2'	2:B:2214:C:C4	2.42	0.72
2:B:1753:G:OP1	2:B:2862:G:OP1	2.08	0.72
2:B:1818:U:C5	4:C:154:ALA:HB1	2.18	0.72
2:B:2265:U:O4	22:W:14:ASP:OD1	2.08	0.72
2:B:2749:A:C4'	8:G:65:GLY:HA3	2.19	0.72
3:V:24:ASN:O	3:V:44:HIS:HB2	1.89	0.72
10:J:25:LEU:HD12	10:J:62:VAL:HA	1.70	0.72
16:P:23:ASP:H	16:P:93:LYS:HE2	1.54	0.72
29:3:24:LYS:HZ3	29:3:29:ARG:HH22	1.37	0.72
2:B:8:C:C3'	10:J:121:LYS:NZ	2.53	0.72
2:B:24:G:C5'	19:S:8:ARG:HH22	2.00	0.72
2:B:654:A:N1	29:3:18:LYS:CG	2.23	0.72
2:B:667:U:H2'	12:L:49:GLY:HA3	1.70	0.72
2:B:669:G:C5'	12:L:47:ARG:CD	2.64	0.72
2:B:852:U:OP1	24:Y:44:ARG:NH2	2.23	0.72
2:B:1032:A:C4'	30:4:16:ILE:HG21	2.19	0.72
2:B:1223:G:C5	18:R:76:LYS:NZ	2.57	0.72
2:B:1361:G:O2'	2:B:2214:C:C5	2.42	0.72
2:B:1652:A:H5'	5:D:123:LYS:CE	2.16	0.72
2:B:2005:A:C6	5:D:140:HIS:O	2.42	0.72
2:B:2261:C:C2	2:B:2327:A:N1	2.25	0.72
2:B:2358:A:C6	2:B:2428:G:N1	2.57	0.72
6:E:146:VAL:O	6:E:147:LEU:HB2	1.88	0.72
11:K:7:MET:HE1	11:K:20:MET:HB2	1.71	0.72
26:0:45:ASP:HB2	26:0:47:TYR:HD1	1.53	0.72
2:B:527:C:O2	2:B:2043:C:C4'	2.38	0.72
2:B:1125:G:O3'	30:4:37:GLN:HB2	1.90	0.72
2:B:1263:U:C5'	26:0:7:PRO:C	2.62	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1637:A:H1'	2:B:2697:G:H1'	1.71	0.72
2:B:2215:C:HO2'	25:Z:44:PHE:HZ	1.36	0.72
2:B:2334:U:OP2	15:O:7:ARG:C	2.33	0.72
2:B:2417:C:OP2	29:3:30:HIS:CE1	2.41	0.72
2:B:2478:A:H5'	30:4:32:LYS:HE2	1.70	0.72
2:B:2681:C:OP1	5:D:114:LYS:HE3	1.61	0.72
1:A:38:C:O2'	15:O:101:GLY:CA	2.38	0.72
2:B:61:C:P	23:X:43:LEU:HD22	2.30	0.72
2:B:448:U:C5	32:B:3003:HOH:O	2.42	0.72
2:B:584:C:H5''	17:Q:3:VAL:HG23	1.71	0.72
2:B:683:U:P	28:2:26:ASN:ND2	2.63	0.72
2:B:700:G:C1'	2:B:734:A:C5	2.73	0.72
2:B:1772:A:P	2:B:1968:G:H5''	2.30	0.72
2:B:1818:U:C2	4:C:154:ALA:N	2.56	0.72
2:B:2245:U:O4	2:B:2442:C:O2	2.08	0.72
2:B:2334:U:H4'	15:O:9:ARG:HA	0.77	0.72
2:B:2509:G:H1'	32:B:3339:HOH:O	1.89	0.72
2:B:2580:U:H1'	32:B:3341:HOH:O	1.90	0.72
4:C:106:PRO:HD2	4:C:109:LEU:HD22	1.72	0.72
5:D:154:LYS:NZ	5:D:157:LYS:H	1.87	0.72
9:H:84:ALA:HA	9:H:90:LEU:HG	1.70	0.72
12:L:35:HIS:CE1	32:L:155:HOH:O	2.38	0.72
2:B:587:C:N3	12:L:38:GLN:H	1.27	0.72
2:B:805:G:N1	2:B:2060:A:H2'	2.04	0.72
2:B:1223:G:C2'	18:R:78:ARG:HH12	2.02	0.72
2:B:1888:G:C1'	2:B:2234:G:H2'	2.14	0.72
2:B:1936:A:C3'	2:B:1984:G:H2'	2.19	0.72
2:B:1946:U:O4	2:B:1986:C:H6	1.73	0.72
2:B:1994:C:H4'	2:B:2557:G:N1	2.04	0.72
2:B:2090:A:C5'	2:B:2093:G:P	2.69	0.72
2:B:2311:A:C1'	7:F:74:ALA:O	2.36	0.72
2:B:2330:G:O2'	22:W:36:ILE:HD12	1.90	0.72
2:B:2471:A:O2'	2:B:2472:G:H8	1.73	0.72
2:B:2531:A:H8	8:G:175:LYS:CG	1.97	0.72
2:B:2642:G:C5'	10:J:81:ILE:C	2.63	0.72
16:P:5:LYS:C	16:P:7:LEU:H	1.96	0.72
17:Q:33:VAL:HG23	17:Q:37:ALA:HB3	1.71	0.72
18:R:43:ASN:C	18:R:45:GLU:H	1.98	0.72
20:T:24:MET:HE2	20:T:29:THR:H	1.54	0.72
1:A:56:G:N3	7:F:24:VAL:HG13	2.03	0.72
2:B:15:G:OP1	26:0:20:ALA:CB	2.29	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:815:C:H6	18:R:84:ARG:CZ	2.02	0.72
2:B:826:U:C3'	2:B:2446:G:C5'	2.68	0.72
2:B:1655:A:N7	5:D:144:GLY:CA	2.51	0.72
2:B:1913:A:H1'	2:B:1914:C:OP1	1.90	0.72
2:B:1938:A:N1	2:B:2590:A:C4'	2.52	0.72
16:P:59:THR:HG23	16:P:76:HIS:NE2	2.04	0.72
24:Y:54:VAL:HG22	24:Y:55:LYS:H	1.55	0.72
2:B:530:G:O2'	2:B:2035:G:N2	2.23	0.72
2:B:671:C:H5'	12:L:39:LYS:HE2	1.65	0.72
2:B:1486:U:H2'	2:B:1487:U:C6	2.25	0.72
2:B:1668:A:C2	2:B:2551:C:C2'	2.72	0.72
2:B:1819:A:C2'	4:C:176:ARG:CG	2.68	0.72
2:B:2061:G:N3	2:B:2253:G:C4'	2.52	0.72
2:B:2067:G:C4'	2:B:2429:G:O2'	2.38	0.72
2:B:2090:A:C4'	9:H:23:ALA:HB3	2.20	0.72
12:L:85:VAL:HG11	12:L:98:ALA:HB3	1.71	0.72
15:O:17:LYS:HE3	15:O:43:ASN:HB2	1.70	0.72
18:R:42:ALA:HA	18:R:54:VAL:HA	1.71	0.72
2:B:78:U:H2'	2:B:79:C:C6	2.25	0.71
2:B:220:G:H5'	2:B:234:U:O2'	1.90	0.71
2:B:577:G:H4'	2:B:809:G:OP1	1.88	0.71
2:B:851:C:O2'	24:Y:45:GLY:CA	2.38	0.71
2:B:1029:A:O2'	13:M:118:LYS:HG3	1.89	0.71
2:B:1294:U:C5'	14:N:71:ARG:HB3	2.19	0.71
2:B:1295:C:OP2	14:N:71:ARG:CD	2.32	0.71
2:B:1668:A:C6	2:B:2551:C:C3'	2.73	0.71
2:B:1807:G:O4'	4:C:45:ASN:CG	2.34	0.71
2:B:1825:U:O2'	4:C:249:VAL:CG2	2.38	0.71
2:B:2199:A:N7	2:B:2225:A:C8	2.57	0.71
2:B:2272:U:P	22:W:18:LYS:HZ1	2.12	0.71
2:B:2278:A:OP2	22:W:8:SER:HB2	1.89	0.71
5:D:33:ARG:HG3	5:D:93:GLY:HA2	1.71	0.71
11:K:2:ILE:HG22	11:K:67:LYS:NZ	2.04	0.71
21:U:7:ASP:HA	21:U:24:VAL:HA	1.71	0.71
22:W:47:GLY:HA3	22:W:55:ASP:HB3	1.72	0.71
25:Z:59:ARG:HH21	25:Z:62:LYS:NZ	1.88	0.71
28:2:34:ARG:HE	28:2:42:LEU:HD13	1.55	0.71
1:A:80:U:H4'	2:B:918:A:H1'	1.70	0.71
2:B:95:A:H5'	23:X:33:ALA:O	1.88	0.71
2:B:96:C:H5''	23:X:39:GLN:C	2.14	0.71
2:B:852:U:O4'	24:Y:42:ALA:HA	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1653:G:C5'	5:D:126:ASN:H	2.02	0.71
2:B:1664:A:O3'	11:K:57:VAL:CG1	2.34	0.71
2:B:1767:G:H5'	2:B:1959:G:O2'	1.88	0.71
2:B:1796:U:C4'	4:C:251:THR:HA	2.20	0.71
2:B:1890:A:C2	2:B:2236:U:C2'	2.68	0.71
2:B:1999:C:O2	11:K:3:GLN:CD	2.32	0.71
2:B:2090:A:O3'	9:H:23:ALA:CA	2.38	0.71
2:B:2260:C:O3'	2:B:2388:A:H4'	1.87	0.71
12:L:94:THR:HG23	12:L:95:LEU:HD12	1.72	0.71
2:B:7:G:C6	2:B:2897:U:C4	2.73	0.71
2:B:45:G:N2	2:B:182:A:C5	2.57	0.71
2:B:125:A:H4'	28:2:19:ARG:NE	2.04	0.71
2:B:412:A:N6	2:B:2411:A:C2	2.59	0.71
2:B:1060:U:C4	2:B:1088:A:N6	2.58	0.71
2:B:1124:G:C3'	30:4:20:ASP:O	2.37	0.71
2:B:1246:A:OP1	12:L:23:ILE:HG22	1.89	0.71
2:B:1674:G:C8	2:B:1955:U:C5'	2.71	0.71
2:B:1752:C:C4'	2:B:2861:U:C5'	2.64	0.71
2:B:1783:A:C1'	2:B:2590:A:OP2	2.38	0.71
2:B:1949:G:C8	2:B:1987:A:H2'	2.25	0.71
2:B:2225:A:H2	9:H:25:TYR:CD1	2.06	0.71
2:B:2286:G:O6	27:1:33:LEU:CB	2.38	0.71
5:D:62:LYS:CD	5:D:62:LYS:H	2.03	0.71
18:R:53:PHE:HB3	18:R:55:ASP:H	1.47	0.71
2:B:84:A:O5'	21:U:91:LYS:CE	2.38	0.71
2:B:181:A:O2'	2:B:434:U:H4'	1.90	0.71
2:B:448:U:H5	32:B:3007:HOH:O	1.74	0.71
2:B:1666:G:O6	2:B:2549:G:N2	2.12	0.71
2:B:1770:G:H2'	2:B:1939:U:N3	1.97	0.71
2:B:1770:G:OP2	2:B:1934:C:C2'	2.29	0.71
2:B:1975:G:C4'	2:B:1979:U:C5	2.70	0.71
2:B:2197:U:C4	2:B:2225:A:O5'	2.43	0.71
2:B:2575:C:O4'	5:D:151:THR:HG23	1.90	0.71
2:B:2746:U:H1'	8:G:138:GLN:HA	1.71	0.71
2:B:2887:A:C2	26:0:27:LEU:HD13	2.14	0.71
5:D:157:LYS:HZ3	5:D:158:GLY:HA3	1.54	0.71
6:E:118:LEU:HD12	6:E:187:VAL:HG12	1.73	0.71
15:O:17:LYS:HE2	22:W:77:LYS:HD2	1.72	0.71
17:Q:104:ALA:CB	18:R:45:GLU:OE1	2.38	0.71
25:Z:25:ARG:HG3	25:Z:26:SER:N	2.04	0.71
30:4:24:ARG:HA	30:4:34:LYS:O	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2:G:N1	2:B:2902:C:N3	2.38	0.71
2:B:6:A:N6	2:B:2897:U:H3	1.86	0.71
2:B:7:G:H22	2:B:2897:U:C1'	2.00	0.71
2:B:459:U:H5'	28:2:41:ARG:HD2	1.72	0.71
2:B:551:G:P	10:J:2:LYS:HE2	2.29	0.71
2:B:564:C:H2'	2:B:578:G:H1	0.56	0.71
2:B:592:A:C2	29:3:2:LYS:HG3	2.20	0.71
2:B:801:G:C6	6:E:50:ALA:CB	2.73	0.71
2:B:1938:A:C8	2:B:1982:U:H1'	2.24	0.71
2:B:2016:U:C6	26:0:3:GLN:N	2.51	0.71
2:B:2216:G:OP1	25:Z:44:PHE:CD1	2.43	0.71
2:B:2814:A:H2'	26:0:39:ARG:HD2	1.69	0.71
2:B:2846:G:OP2	16:P:53:GLY:HA3	1.91	0.71
6:E:131:THR:O	6:E:134:LEU:HB2	1.90	0.71
20:T:73:ARG:CD	28:2:43:THR:H	2.01	0.71
1:A:22:U:O2	7:F:22:ASN:ND2	2.23	0.71
1:A:48:U:C2'	15:O:68:LYS:CA	2.59	0.71
2:B:16:C:H5''	26:0:14:MET:CA	2.18	0.71
2:B:789:A:O3'	28:2:3:ARG:NH2	2.22	0.71
2:B:1437:C:H2'	2:B:1438:U:C6	2.25	0.71
2:B:1654:A:O4'	5:D:125:TRP:CE3	2.43	0.71
2:B:1666:G:OP2	11:K:57:VAL:HG23	1.90	0.71
2:B:1673:G:H3'	2:B:1955:U:C2'	2.21	0.71
2:B:1773:A:P	2:B:1972:G:C8	2.84	0.71
2:B:1783:A:OP1	2:B:2588:G:N2	2.17	0.71
2:B:2581:G:N1	2:B:2610:C:C4	2.58	0.71
2:B:2723:C:H5''	14:N:3:HIS:HB2	1.72	0.71
5:D:154:LYS:HZ2	5:D:157:LYS:H	1.37	0.71
6:E:27:LEU:CD1	12:L:19:LEU:HD11	2.19	0.71
7:F:107:VAL:HG21	7:F:175:PRO:HG3	1.71	0.71
12:L:120:VAL:HG12	12:L:138:ALA:HB3	1.73	0.71
17:Q:30:VAL:O	17:Q:33:VAL:HG12	1.91	0.71
17:Q:101:ASP:CG	18:R:2:TYR:CZ	2.60	0.71
17:Q:111:LYS:HB2	18:R:52:PRO:CA	2.20	0.71
1:A:81:G:H1'	2:B:919:U:OP1	1.90	0.71
2:B:9:G:N3	2:B:2895:G:N2	2.33	0.71
2:B:146:A:H2'	2:B:147:C:C6	2.25	0.71
2:B:321:U:N3	6:E:129:PRO:HG3	2.05	0.71
2:B:566:U:C2'	2:B:576:U:O2	2.34	0.71
2:B:659:G:H21	6:E:100:MET:CE	2.00	0.71
2:B:775:G:H4'	2:B:776:G:H5'	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1294:U:H5'	14:N:71:ARG:CB	2.20	0.71
2:B:1903:G:P	4:C:239:PHE:H	2.13	0.71
2:B:1997:C:O2	2:B:2548:U:C6	2.44	0.71
2:B:2393:U:O5'	29:3:31:ILE:CD1	2.34	0.71
2:B:2814:A:N3	26:0:39:ARG:CD	2.54	0.71
4:C:107:LYS:H	4:C:194:VAL:HG21	1.55	0.71
5:D:129:THR:O	5:D:130:GLN:HB2	1.89	0.71
6:E:26:ALA:HB1	12:L:20:GLY:H	0.65	0.71
12:L:29:LYS:HD2	12:L:30:THR:H	1.55	0.71
21:U:11:ILE:HB	21:U:69:VAL:HB	1.72	0.71
22:W:66:VAL:HG13	22:W:67:LYS:H	1.56	0.71
2:B:190:A:N6	32:B:3393:HOH:O	2.24	0.71
2:B:265:A:O2'	2:B:266:G:H4'	1.90	0.71
2:B:448:U:C5	32:B:3007:HOH:O	2.43	0.71
2:B:570:G:O3'	2:B:571:U:O4'	2.09	0.71
2:B:614:A:OP1	32:B:3233:HOH:O	2.08	0.71
2:B:812:C:C2	2:B:1250:G:C6	2.79	0.71
2:B:814:C:C6	18:R:84:ARG:HA	2.26	0.71
2:B:858:G:O3'	2:B:2268:A:C2'	2.39	0.71
2:B:1158:C:H5'	24:Y:10:ARG:NE	2.03	0.71
2:B:1163:G:H5'	18:R:91:GLN:NE2	2.03	0.71
2:B:1257:C:C5'	6:E:77:ILE:HG22	2.21	0.71
2:B:1951:U:C1'	2:B:1991:U:C6	2.73	0.71
2:B:1952:A:C8	2:B:1991:U:H5''	2.26	0.71
2:B:1997:C:HO2'	2:B:2548:U:H6	0.73	0.71
14:N:44:LEU:O	14:N:47:VAL:HG22	1.90	0.71
1:A:57:A:H4'	7:F:15:LEU:HB3	1.71	0.71
2:B:118:A:H5'	2:B:119:A:H8	1.56	0.71
2:B:528:A:H61	2:B:2042:A:H2'	1.53	0.71
2:B:964:C:C4'	2:B:2250:G:O6	2.39	0.71
2:B:1083:U:H1'	2:B:1086:A:H61	1.55	0.71
2:B:1131:G:N2	2:B:2024:G:N2	2.39	0.71
2:B:1223:G:C4	18:R:76:LYS:NZ	2.59	0.71
2:B:1664:A:N1	2:B:2560:A:C6	2.47	0.71
2:B:1670:C:C2'	2:B:2552:U:H1'	2.21	0.71
2:B:1949:G:N7	2:B:1987:A:H2'	2.06	0.71
2:B:2005:A:O5'	5:D:142:VAL:CG1	2.39	0.71
2:B:2255:G:C5	2:B:2450:A:C5	2.75	0.71
2:B:2270:A:H5'	22:W:17:ALA:C	2.16	0.71
2:B:2895:G:H2'	2:B:2896:C:C6	2.25	0.71
4:C:110:LYS:HD2	4:C:111:ALA:H	1.56	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:31:VAL:HG22	6:E:96:VAL:HG21	1.72	0.71
12:L:30:THR:HB	12:L:36:LYS:HB2	1.70	0.71
2:B:220:G:HO2'	2:B:233:A:H2	1.27	0.71
2:B:320:A:OP2	6:E:132:LYS:HE2	1.91	0.71
2:B:880:G:P	2:B:900:A:C5	2.81	0.71
2:B:1276:A:H5'	14:N:20:MET:HE1	1.73	0.71
2:B:1454:C:C5	2:B:2705:A:C2	2.78	0.71
2:B:1936:A:C8	2:B:1984:G:N2	2.59	0.71
2:B:1976:U:H3'	2:B:1979:U:H4'	1.72	0.71
2:B:2017:U:C3'	26:O:4:GLN:HB3	2.02	0.71
2:B:2270:A:C8	22:W:18:LYS:CB	2.74	0.71
4:C:180:MET:HB2	4:C:265:PHE:HB3	1.73	0.71
6:E:26:ALA:N	12:L:18:ARG:CD	2.54	0.71
7:F:135:ILE:HD13	7:F:138:PRO:HA	1.73	0.71
13:M:100:LYS:O	13:M:100:LYS:HD2	1.90	0.71
2:B:413:C:N3	2:B:2410:G:C6	2.58	0.70
2:B:815:C:H3'	18:R:84:ARG:NH1	2.06	0.70
2:B:1653:G:N2	5:D:141:ARG:N	2.26	0.70
2:B:2538:C:O4'	30:4:1:MET:SD	2.49	0.70
4:C:141:HIS:CD2	4:C:193:GLU:H	2.07	0.70
5:D:148:GLN:HG3	5:D:151:THR:OG1	1.91	0.70
12:L:82:LEU:HD13	12:L:83:ALA:N	2.05	0.70
25:Z:69:SER:O	25:Z:70:LYS:HB2	1.89	0.70
29:3:41:ARG:HB3	29:3:43:LEU:HD22	1.73	0.70
2:B:24:G:N9	19:S:78:GLU:HB2	2.06	0.70
2:B:686:U:N3	28:2:12:ARG:CA	2.21	0.70
2:B:808:G:N3	6:E:69:ARG:NH2	2.36	0.70
2:B:1133:A:N7	2:B:2026:U:H4'	2.05	0.70
2:B:1183:U:HO2'	24:Y:29:ARG:HD3	1.55	0.70
2:B:1225:G:N7	18:R:78:ARG:NH1	2.39	0.70
2:B:1764:C:N4	2:B:1949:G:N2	2.38	0.70
2:B:1827:U:C2'	2:B:1970:A:C2'	2.38	0.70
2:B:2155:U:H2'	2:B:2156:G:O4'	1.91	0.70
2:B:2281:A:O4'	2:B:2388:A:N6	2.24	0.70
2:B:2575:C:C5'	5:D:150:GLN:HG3	2.03	0.70
2:B:2630:G:H1'	2:B:2894:G:C2	2.26	0.70
5:D:187:LEU:HD23	5:D:188:LEU:N	2.05	0.70
20:T:66:LYS:H	20:T:77:ARG:HA	1.56	0.70
21:U:43:LYS:HA	21:U:57:ILE:HA	1.74	0.70
22:W:24:ARG:HB3	22:W:57:THR:O	1.90	0.70
2:B:57:C:OP1	20:T:67:VAL:HG11	1.92	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:72:U:C6	23:X:54:LYS:HG3	2.26	0.70
2:B:687:C:H5'	28:2:5:PHE:O	1.91	0.70
2:B:687:C:H5'	28:2:6:GLN:CB	1.79	0.70
2:B:700:G:N9	2:B:734:A:N7	2.39	0.70
2:B:1249:U:H3'	12:L:32:GLY:CA	2.21	0.70
2:B:1340:U:C4	2:B:1604:C:C5	2.79	0.70
2:B:1669:A:H1'	2:B:2558:C:C2'	2.21	0.70
2:B:1673:G:H2'	2:B:1956:U:H5'	0.75	0.70
2:B:1938:A:O2'	2:B:2591:C:C2'	2.38	0.70
2:B:1992:G:H4'	2:B:2551:C:OP2	1.25	0.70
2:B:1993:U:H2'	2:B:2551:C:N1	2.05	0.70
2:B:2065:C:C2	2:B:2246:G:C6	2.69	0.70
2:B:2199:A:H8	2:B:2225:A:C5	2.09	0.70
3:V:79:ARG:HE	13:M:134:THR:HG23	1.56	0.70
6:E:27:LEU:CB	12:L:19:LEU:HD11	1.77	0.70
13:M:70:ASP:H	13:M:71:LYS:HZ2	1.37	0.70
21:U:40:LEU:HD13	21:U:41:VAL:N	2.06	0.70
1:A:49:C:H2'	1:A:50:A:H8	1.56	0.70
1:A:49:C:P	15:O:68:LYS:O	2.49	0.70
2:B:444:C:O2'	6:E:47:LYS:CE	2.39	0.70
2:B:531:C:C5	32:B:3307:HOH:O	2.43	0.70
2:B:659:G:C1'	6:E:97:ASN:CG	2.64	0.70
2:B:1223:G:C3'	18:R:78:ARG:NH2	2.36	0.70
2:B:1652:A:H5'	5:D:123:LYS:NZ	2.05	0.70
2:B:2062:A:C2'	2:B:2253:G:H4'	2.16	0.70
2:B:2378:A:H4'	15:O:117:PHE:CD1	2.25	0.70
2:B:2461:A:H5'	13:M:78:LEU:HG	1.71	0.70
2:B:2633:G:H4'	5:D:62:LYS:NZ	2.06	0.70
4:C:127:ASN:HD22	4:C:128:THR:N	1.90	0.70
6:E:29:HIS:HB2	12:L:17:LYS:O	1.77	0.70
12:L:92:LEU:HD21	12:L:96:LYS:HZ3	1.56	0.70
17:Q:29:ARG:HH22	26:0:9:ARG:HD3	1.53	0.70
20:T:73:ARG:HD2	28:2:43:THR:N	2.05	0.70
26:0:31:LYS:HD3	26:0:47:TYR:HE2	1.57	0.70
2:B:197:A:N9	2:B:2444:G:H5'	2.07	0.70
2:B:662:G:P	12:L:24:GLY:N	2.56	0.70
2:B:687:C:C5'	28:2:5:PHE:O	2.40	0.70
2:B:1264:A:N3	2:B:2017:U:C4	2.60	0.70
2:B:1296:G:C3'	2:B:2709:G:O2'	2.40	0.70
2:B:1440:U:H2'	2:B:1441:G:H8	1.56	0.70
2:B:1652:A:N1	5:D:141:ARG:O	2.17	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2245:U:C4	2:B:2442:C:C4	2.80	0.70
2:B:2305:U:O4	7:F:39:VAL:CG1	2.36	0.70
2:B:2347:C:C2'	27:1:39:ASP:CB	2.65	0.70
2:B:2531:A:C8	8:G:175:LYS:HG3	2.16	0.70
5:D:11:MET:HG2	5:D:12:THR:H	1.55	0.70
13:M:108:VAL:N	13:M:109:PRO:HD2	2.06	0.70
14:N:101:GLY:HA2	14:N:109:PRO:HA	1.73	0.70
17:Q:96:ASP:O	17:Q:99:VAL:HG22	1.90	0.70
18:R:66:HIS:H	18:R:98:ILE:HD13	1.57	0.70
25:Z:59:ARG:HE	25:Z:62:LYS:HD2	1.56	0.70
2:B:519:U:O2'	19:S:18:ARG:CZ	2.37	0.70
2:B:538:A:C5'	10:J:6:ALA:HA	2.04	0.70
2:B:624:C:P	29:3:61:LEU:HB3	2.31	0.70
2:B:650:C:H5''	29:3:46:LYS:HG3	1.72	0.70
2:B:814:C:H4'	18:R:86:GLN:CA	1.97	0.70
2:B:993:G:O2'	32:B:3257:HOH:O	1.62	0.70
2:B:1082:U:N3	2:B:1086:A:C6	2.60	0.70
2:B:1127:A:H61	2:B:2464:G:C4'	2.02	0.70
2:B:1779:U:C5	2:B:2589:A:O3'	2.45	0.70
2:B:2281:A:O2'	2:B:2389:G:C2	2.44	0.70
2:B:2626:C:O2'	2:B:2627:G:H5'	1.91	0.70
2:B:2630:G:C8	2:B:2894:G:C5	2.79	0.70
2:B:2867:G:N7	16:P:20:ARG:HD3	2.03	0.70
4:C:22:GLU:HA	4:C:202:ARG:CZ	2.22	0.70
4:C:88:ALA:HB1	4:C:156:SER:HB3	1.71	0.70
10:J:17:VAL:HG13	10:J:57:LEU:HD21	1.73	0.70
14:N:118:ARG:CZ	26:0:51:ARG:HA	2.20	0.70
19:S:8:ARG:CZ	19:S:102:HIS:NE2	2.55	0.70
1:A:59:A:C1'	7:F:25:MET:CG	2.54	0.70
2:B:8:C:C3'	10:J:121:LYS:HZ1	2.04	0.70
2:B:575:A:P	2:B:2030:A:N1	2.64	0.70
2:B:590:A:H2'	2:B:591:U:C6	2.27	0.70
2:B:682:G:C4'	28:2:26:ASN:CB	2.68	0.70
2:B:699:A:C2'	2:B:700:G:C4'	2.55	0.70
2:B:789:A:H4'	28:2:3:ARG:HH22	1.52	0.70
2:B:1184:U:OP2	24:Y:30:ARG:CG	2.32	0.70
2:B:1279:G:OP1	14:N:34:ILE:HG22	1.92	0.70
2:B:1805:A:C4	4:C:50:THR:CG2	2.73	0.70
2:B:2311:A:C4	7:F:75:GLY:O	2.45	0.70
2:B:2867:G:C8	16:P:20:ARG:CD	2.53	0.70
5:D:21:SER:C	5:D:23:PRO:HD3	2.15	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:F:63:LYS:HE2	7:F:64:PRO:HD2	1.73	0.70
14:N:10:LEU:H	14:N:17:ARG:NH1	1.88	0.70
14:N:115:LEU:O	14:N:116:VAL:HG12	1.91	0.70
2:B:397:U:C5'	25:Z:49:ARG:CB	2.56	0.70
2:B:452:G:H22	28:2:39:ARG:CZ	2.04	0.70
2:B:587:C:OP2	12:L:36:LYS:CB	2.39	0.70
2:B:743:A:O2'	2:B:744:U:H5'	1.91	0.70
2:B:971:G:OP1	2:B:974:G:C2'	2.30	0.70
2:B:1029:A:C2	2:B:2466:C:C4'	2.72	0.70
2:B:1152:C:P	17:Q:83:LYS:HZ3	2.13	0.70
2:B:1639:C:O3'	2:B:2699:C:O2'	2.08	0.70
2:B:1655:A:C8	5:D:146:ILE:CD1	2.74	0.70
2:B:1673:G:N2	2:B:2605:U:C5'	2.43	0.70
2:B:1806:C:C4	4:C:45:ASN:CG	2.67	0.70
2:B:1857:G:H2'	2:B:1884:G:H22	1.57	0.70
2:B:1936:A:N3	2:B:1985:C:C4'	2.54	0.70
2:B:1938:A:N3	2:B:2591:C:C5'	2.42	0.70
2:B:1976:U:C4	2:B:1979:U:C2	2.79	0.70
2:B:2064:C:O2	2:B:2256:G:O6	2.10	0.70
2:B:2350:C:N1	29:3:38:LYS:NZ	2.40	0.70
2:B:2609:U:C5	32:B:3364:HOH:O	2.43	0.70
5:D:3:GLY:HA2	5:D:49:GLN:OE1	1.91	0.70
6:E:26:ALA:H	12:L:18:ARG:NE	1.70	0.70
6:E:146:VAL:O	6:E:184:ASP:HB2	1.92	0.70
13:M:40:ARG:HH11	13:M:92:TRP:HE3	1.40	0.70
1:A:80:U:H5'	2:B:917:A:N1	1.96	0.70
2:B:398:C:H5''	2:B:2230:G:HO2'	1.55	0.70
2:B:547:A:H3'	2:B:548:G:C8	2.21	0.70
2:B:580:U:H5''	17:Q:32:ARG:N	2.07	0.70
2:B:1118:C:C5'	3:V:84:PRO:CG	2.69	0.70
2:B:1337:G:OP1	32:B:3100:HOH:O	2.08	0.70
2:B:1791:A:H1'	2:B:1830:C:P	2.30	0.70
2:B:1799:G:C5	4:C:175:LEU:HB3	2.26	0.70
2:B:1818:U:O5'	4:C:155:ARG:C	2.10	0.70
2:B:1854:A:N6	2:B:2234:G:H2'	2.07	0.70
2:B:2015:A:OP2	19:S:93:ALA:CA	2.40	0.70
2:B:2350:C:C2'	29:3:38:LYS:HZ1	2.05	0.70
2:B:2358:A:N6	2:B:2428:G:C6	2.59	0.70
2:B:2428:G:H8	2:B:2448:A:C2	2.09	0.70
2:B:2633:G:H4'	5:D:62:LYS:HZ3	1.56	0.70
5:D:8:LYS:HE3	16:P:1:SER:CA	2.21	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:4:VAL:HB	6:E:117:ARG:HH21	1.56	0.70
6:E:180:LEU:C	12:L:13:LYS:CD	2.45	0.70
12:L:25:SER:HB3	12:L:27:LEU:HG	1.72	0.70
12:L:120:VAL:HG22	12:L:122:VAL:HG22	1.71	0.70
20:T:72:GLN:HG2	28:2:35:ARG:HH11	1.56	0.70
1:A:60:C:C5	7:F:23:SER:CB	2.75	0.70
2:B:6:A:C2	2:B:2898:U:O2	2.45	0.70
2:B:7:G:OP1	10:J:120:ARG:NH1	2.24	0.70
2:B:23:G:H1'	19:S:77:ASP:OD2	1.92	0.70
2:B:414:C:O2	2:B:2409:G:N3	2.25	0.70
2:B:528:A:OP2	10:J:113:PRO:HD3	1.91	0.70
2:B:565:C:H1'	2:B:578:G:C5	2.26	0.70
2:B:649:G:C2	29:3:44:ARG:HD3	2.27	0.70
2:B:1338:G:H3'	20:T:18:GLU:HG3	1.66	0.70
2:B:1655:A:C8	5:D:146:ILE:HD11	2.26	0.70
2:B:1659:G:H1'	5:D:134:HIS:CE1	2.18	0.70
2:B:1665:A:C4	2:B:2561:U:C6	2.79	0.70
2:B:2197:U:O4	2:B:2225:A:O5'	2.10	0.70
2:B:2245:U:C6	2:B:2442:C:N4	2.59	0.70
2:B:2748:A:H4'	8:G:69:ALA:HB1	1.65	0.70
3:V:79:ARG:HG3	13:M:26:VAL:HG13	1.74	0.70
4:C:3:VAL:HG12	4:C:4:LYS:H	1.56	0.70
4:C:74:PRO:HB2	4:C:96:LYS:HE3	1.74	0.70
4:C:110:LYS:HD2	4:C:111:ALA:N	2.07	0.70
1:A:58:A:C2	7:F:25:MET:CE	2.61	0.69
2:B:593:U:C5'	29:3:2:LYS:NZ	2.55	0.69
2:B:1820:U:P	4:C:176:ARG:HE	2.14	0.69
2:B:1949:G:C4	2:B:1987:A:C2	2.80	0.69
2:B:2197:U:N3	2:B:2225:A:C5'	2.55	0.69
2:B:2248:C:C6	2:B:2446:G:C2'	2.75	0.69
2:B:2461:A:O5'	13:M:78:LEU:HD21	1.91	0.69
2:B:2811:G:C5'	5:D:62:LYS:CD	2.70	0.69
2:B:2884:U:O4	26:0:41:HIS:CG	2.44	0.69
4:C:50:THR:O	4:C:51:ARG:HG3	1.89	0.69
1:A:90:C:H1'	13:M:21:ALA:HB2	0.70	0.69
2:B:61:C:C4'	23:X:25:GLN:CA	2.22	0.69
2:B:97:C:H4'	23:X:46:VAL:HG11	1.74	0.69
2:B:481:G:OP2	21:U:43:LYS:HG3	1.92	0.69
2:B:1339:G:C2	2:B:1603:A:C2'	2.74	0.69
2:B:1638:C:O2'	2:B:2698:U:C2	2.45	0.69
2:B:1671:U:H5'	2:B:2554:U:H5	1.54	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1939:U:O5'	2:B:2591:C:O2'	2.09	0.69
2:B:2066:C:H5'	2:B:2425:A:H3'	1.74	0.69
2:B:2269:G:H1'	22:W:21:GLY:C	2.17	0.69
2:B:2724:U:H5'	5:D:116:LYS:HZ1	1.57	0.69
3:V:76:ASP:CG	13:M:136:MET:HA	2.17	0.69
13:M:108:VAL:O	13:M:110:GLU:N	2.25	0.69
17:Q:10:ARG:HA	17:Q:10:ARG:CZ	2.22	0.69
17:Q:52:ARG:NH2	17:Q:55:GLN:HG2	2.07	0.69
18:R:6:GLN:HA	18:R:10:LYS:HA	1.74	0.69
19:S:7:HIS:HB3	19:S:102:HIS:HA	1.72	0.69
1:A:59:A:N7	7:F:23:SER:C	2.49	0.69
2:B:45:G:N2	2:B:182:A:C4	2.60	0.69
2:B:76:C:HO2'	23:X:51:ALA:C	2.00	0.69
2:B:95:A:H5'	23:X:33:ALA:CA	2.22	0.69
2:B:444:C:O2'	6:E:47:LYS:NZ	2.25	0.69
2:B:593:U:C5'	29:3:2:LYS:HZ3	2.04	0.69
2:B:994:C:OP1	32:B:3255:HOH:O	1.81	0.69
2:B:1770:G:H2'	2:B:1967:C:O2'	1.91	0.69
2:B:1783:A:C4'	2:B:2590:A:C8	2.75	0.69
2:B:1818:U:C1'	4:C:155:ARG:H	2.05	0.69
2:B:2002:G:N2	5:D:134:HIS:CD2	2.60	0.69
2:B:2065:C:C2'	2:B:2258:C:H42	2.05	0.69
2:B:2067:G:C5	2:B:2246:G:O4'	2.45	0.69
2:B:2331:G:H4'	22:W:69:GLU:HG2	1.74	0.69
4:C:27:LYS:N	4:C:28:PRO:CD	2.56	0.69
5:D:37:VAL:HG22	5:D:46:ARG:HE	1.57	0.69
17:Q:110:GLU:OE1	18:R:52:PRO:CD	2.40	0.69
2:B:699:A:H4'	2:B:1634:A:H61	1.54	0.69
2:B:1258:U:C4'	6:E:79:ARG:HB2	2.22	0.69
2:B:1341:G:O4'	20:T:84:TYR:CZ	2.44	0.69
2:B:1594:U:H2'	2:B:1595:C:C6	2.27	0.69
2:B:1638:C:C5'	2:B:2710:C:O2	2.39	0.69
2:B:2056:G:O6	2:B:2577:A:H1'	1.92	0.69
2:B:2064:C:H2'	2:B:2065:C:C6	2.27	0.69
2:B:2575:C:C5'	5:D:150:GLN:O	2.33	0.69
2:B:2883:A:OP1	26:O:52:LYS:HE2	1.80	0.69
4:C:61:TYR:CD2	4:C:84:PRO:HD2	2.28	0.69
4:C:119:VAL:HG22	4:C:133:ASN:HD21	1.58	0.69
6:E:193:VAL:HG12	6:E:194:LYS:HD2	1.73	0.69
25:Z:3:LYS:HE3	25:Z:8:LYS:HA	1.75	0.69
25:Z:63:ARG:HA	25:Z:63:ARG:NE	2.07	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:137:U:C2	20:T:4:GLU:CG	2.76	0.69
2:B:990:A:H1'	2:B:1156:A:C2	2.27	0.69
2:B:1657:U:O2'	2:B:2580:U:H4'	1.93	0.69
2:B:2000:C:H4'	11:K:32:TYR:CE1	2.22	0.69
2:B:2004:G:C6	5:D:142:VAL:HG21	2.24	0.69
2:B:2013:A:N6	2:B:2612:C:C3'	2.55	0.69
2:B:2216:G:H5'	25:Z:44:PHE:HE1	0.75	0.69
2:B:2265:U:O4	22:W:14:ASP:HB2	1.91	0.69
2:B:2899:A:H4'	10:J:136:GLN:H	1.56	0.69
7:F:33:ILE:HG13	7:F:34:THR:H	1.58	0.69
16:P:92:ARG:CZ	16:P:110:LYS:HB3	2.21	0.69
18:R:90:ARG:NH1	18:R:91:GLN:H	1.90	0.69
1:A:56:G:C2	7:F:24:VAL:CG2	2.76	0.69
1:A:74:U:H1'	3:V:37:PRO:CD	2.21	0.69
2:B:94:A:H2'	23:X:34:SER:C	2.17	0.69
2:B:685:A:O5'	28:2:15:SER:OG	2.11	0.69
2:B:789:A:C4'	28:2:3:ARG:HH22	1.95	0.69
2:B:1226:A:N3	18:R:85:LYS:HE2	2.07	0.69
2:B:1264:A:C2	2:B:2017:U:C4	2.80	0.69
2:B:1278:C:O3'	14:N:34:ILE:CG2	2.40	0.69
2:B:1818:U:H2'	4:C:153:LEU:HA	1.73	0.69
2:B:2002:G:H2'	5:D:132:ALA:H	0.87	0.69
2:B:2284:A:OP1	27:1:7:LYS:CA	2.39	0.69
2:B:2348:U:OP1	27:1:38:PHE:CE2	2.46	0.69
2:B:2769:U:H2'	2:B:2770:G:H8	1.58	0.69
7:F:56:LEU:O	7:F:59:ILE:HG22	1.93	0.69
8:G:9:VAL:HG23	8:G:47:ASN:HB2	1.74	0.69
12:L:38:GLN:O	12:L:39:LYS:HG3	1.92	0.69
20:T:8:LEU:H	20:T:8:LEU:HD23	1.56	0.69
21:U:3:LYS:HE3	21:U:81:ARG:NH2	2.08	0.69
2:B:9:G:P	10:J:121:LYS:HZ1	2.09	0.69
2:B:34:U:H3'	32:B:3163:HOH:O	1.92	0.69
2:B:182:A:C2	2:B:432:A:N1	2.60	0.69
2:B:1294:U:H5'	14:N:71:ARG:CD	2.23	0.69
2:B:1339:G:H5'	32:B:3155:HOH:O	1.91	0.69
2:B:1454:C:C5	2:B:2705:A:H2	2.08	0.69
2:B:1656:C:H5'	2:B:2511:U:H5	0.89	0.69
2:B:2002:G:N3	5:D:131:ASP:C	2.24	0.69
2:B:2197:U:H3	2:B:2225:A:C5'	2.03	0.69
2:B:2247:A:C4	2:B:2446:G:N3	2.60	0.69
2:B:2261:C:C1'	2:B:2327:A:N6	2.54	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2350:C:C1'	29:3:38:LYS:NZ	2.56	0.69
2:B:2658:C:C4'	8:G:157:LYS:HZ1	2.00	0.69
5:D:106:LYS:NZ	5:D:208:LYS:HD3	2.07	0.69
6:E:164:LEU:O	6:E:165:HIS:HB2	1.93	0.69
13:M:100:LYS:HE3	13:M:100:LYS:N	2.07	0.69
16:P:70:GLU:HG2	16:P:71:ARG:HG2	1.75	0.69
17:Q:77:LYS:HB3	17:Q:116:LEU:HD11	1.75	0.69
20:T:30:ILE:HG22	20:T:85:VAL:HG22	1.74	0.69
22:W:43:LYS:HG2	22:W:76:ARG:NH2	2.07	0.69
1:A:57:A:C1'	7:F:15:LEU:HB2	2.22	0.69
2:B:6:A:C2	2:B:2898:U:N1	2.61	0.69
2:B:9:G:C6	2:B:2629:U:O4	2.46	0.69
2:B:84:A:H5''	21:U:91:LYS:HZ1	1.56	0.69
2:B:220:G:C4'	2:B:234:U:HO2'	1.98	0.69
2:B:287:G:H2'	2:B:288:U:H6	1.58	0.69
2:B:448:U:C2	2:B:1259:G:O4'	2.46	0.69
2:B:448:U:O2	2:B:1259:G:H5'	1.93	0.69
2:B:566:U:N1	2:B:577:G:C8	2.61	0.69
2:B:586:A:H2	2:B:810:U:O2	1.38	0.69
2:B:654:A:C5	29:3:18:LYS:HG2	2.22	0.69
2:B:673:C:H5'	6:E:76:PRO:HD2	1.74	0.69
2:B:693:A:C1'	2:B:1354:A:C4'	2.71	0.69
2:B:699:A:C4'	2:B:1634:A:H61	2.06	0.69
2:B:729:G:OP2	4:C:16:VAL:CG1	2.40	0.69
2:B:1125:G:P	30:4:37:GLN:NE2	2.64	0.69
2:B:1567:G:HO2'	4:C:32:LEU:CD2	1.96	0.69
2:B:1637:A:N3	2:B:2697:G:C2'	2.54	0.69
2:B:1639:C:C2'	2:B:1640:A:H5''	2.21	0.69
2:B:1660:G:P	32:B:3279:HOH:O	2.50	0.69
2:B:1662:U:O3'	11:K:6:THR:N	2.07	0.69
2:B:1672:A:C4	2:B:2604:U:C5'	2.64	0.69
2:B:1767:G:N7	2:B:1959:G:H3'	2.08	0.69
2:B:1790:C:OP1	4:C:219:VAL:HG21	1.93	0.69
2:B:1998:A:N3	2:B:2548:U:O2'	2.25	0.69
2:B:2271:G:OP2	22:W:18:LYS:HD2	1.91	0.69
2:B:2307:G:H4'	2:B:2311:A:H61	1.58	0.69
2:B:2330:G:H1'	22:W:36:ILE:HD13	1.67	0.69
2:B:2575:C:C1'	5:D:148:GLN:HB2	2.18	0.69
2:B:2815:C:O4'	26:0:39:ARG:CG	2.41	0.69
2:B:2867:G:C5	16:P:20:ARG:NE	2.40	0.69
3:V:86:LEU:HG	13:M:134:THR:CA	2.22	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:25:GLU:CA	12:L:18:ARG:H	2.05	0.69
7:F:107:VAL:N	7:F:108:PRO:CD	2.55	0.69
7:F:126:ASN:N	7:F:126:ASN:HD22	1.87	0.69
9:H:3:VAL:HG22	9:H:21:VAL:HG21	1.75	0.69
12:L:95:LEU:HD12	12:L:95:LEU:H	1.58	0.69
18:R:18:GLN:HE21	18:R:99:THR:HB	1.57	0.69
18:R:78:ARG:CB	18:R:87:GLN:HA	2.20	0.69
21:U:38:ILE:HB	21:U:62:ALA:HB3	1.75	0.69
1:A:33:G:OP1	7:F:1:ALA:HA	1.93	0.69
2:B:484:C:C5'	21:U:46:LYS:HZ1	2.03	0.69
2:B:587:C:H2'	12:L:36:LYS:HB3	1.75	0.69
2:B:1252:G:C5	17:Q:35:PHE:CG	2.36	0.69
2:B:1768:C:C2	2:B:1961:C:C5	2.81	0.69
2:B:1771:C:H2'	2:B:1973:G:OP1	1.93	0.69
2:B:1853:A:N7	2:B:2235:G:H5''	2.07	0.69
2:B:1902:C:C3'	4:C:240:GLY:H	2.05	0.69
2:B:2263:C:O4'	2:B:2329:U:H4'	1.92	0.69
2:B:2636:C:H4'	5:D:80:TRP:CD2	2.28	0.69
3:V:76:ASP:CG	13:M:136:MET:CA	2.64	0.69
5:D:15:PHE:HD2	5:D:18:ASP:HB2	1.58	0.69
6:E:135:ALA:HA	6:E:138:LEU:HB2	1.74	0.69
12:L:85:VAL:CG2	12:L:98:ALA:H	2.06	0.69
12:L:106:GLU:HG2	12:L:107:PHE:H	1.57	0.69
20:T:65:GLY:O	20:T:66:LYS:HB3	1.93	0.69
1:A:49:C:H2'	15:O:66:GLY:CA	2.22	0.69
2:B:467:G:OP2	28:2:42:LEU:HD13	1.92	0.69
2:B:483:A:O4'	21:U:44:HIS:O	2.11	0.69
2:B:1032:A:H4'	30:4:16:ILE:CD1	2.23	0.69
2:B:1800:C:H5''	4:C:145:MET:CE	2.23	0.69
2:B:1818:U:P	4:C:155:ARG:O	2.51	0.69
2:B:1995:U:H5''	2:B:2557:G:C8	2.27	0.69
2:B:2359:C:C2	2:B:2428:G:N2	2.54	0.69
10:J:43:GLU:HG3	10:J:44:TYR:H	1.58	0.69
10:J:99:ARG:HA	10:J:103:ILE:HG13	1.75	0.69
12:L:56:PRO:HA	12:L:60:ARG:CZ	2.23	0.69
12:L:142:ILE:HG13	12:L:143:GLU:H	1.57	0.69
23:X:21:LEU:HD23	23:X:47:ARG:HG3	1.74	0.69
2:B:61:C:O4'	23:X:29:ARG:HB2	1.93	0.68
2:B:220:G:O4'	2:B:234:U:H1'	1.93	0.68
2:B:851:C:C2'	24:Y:45:GLY:CA	2.55	0.68
2:B:1184:U:C5'	24:Y:29:ARG:NE	2.32	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1665:A:N9	2:B:2561:U:O4'	2.24	0.68
2:B:1807:G:OP2	4:C:48:ILE:CB	2.40	0.68
2:B:2090:A:H4'	9:H:23:ALA:HB3	1.75	0.68
2:B:2684:U:OP1	16:P:59:THR:HG22	1.93	0.68
2:B:2720:U:C2	2:B:2873:A:N7	2.59	0.68
5:D:170:VAL:HG13	5:D:171:THR:N	2.06	0.68
20:T:13:ALA:O	20:T:32:LEU:HA	1.92	0.68
1:A:29:A:N3	7:F:24:VAL:HG23	2.06	0.68
2:B:811:U:O3'	2:B:1251:C:H4'	1.93	0.68
2:B:1010:A:C2'	17:Q:76:SER:OG	2.42	0.68
2:B:1270:C:OP2	2:B:2012:G:O5'	2.09	0.68
2:B:1637:A:O3'	2:B:2697:G:N2	2.25	0.68
2:B:1656:C:C4	5:D:144:GLY:O	2.47	0.68
2:B:1664:A:H4'	11:K:40:LYS:CA	2.23	0.68
2:B:1770:G:C2'	2:B:1967:C:O2'	2.41	0.68
2:B:1806:C:O4'	4:C:49:THR:O	2.11	0.68
2:B:2257:U:C4	2:B:2426:A:OP1	2.46	0.68
2:B:2272:U:OP1	22:W:15:SER:HB2	1.89	0.68
2:B:2354:C:O3'	22:W:30:VAL:HA	1.93	0.68
2:B:2691:C:C1'	2:B:2872:A:C2	2.76	0.68
6:E:73:ILE:HG22	6:E:73:ILE:O	1.91	0.68
10:J:100:VAL:HG22	10:J:101:ILE:H	1.59	0.68
11:K:85:VAL:HG11	11:K:115:ILE:HD12	1.73	0.68
13:M:108:VAL:N	13:M:109:PRO:CD	2.56	0.68
1:A:56:G:C8	7:F:24:VAL:HG11	2.28	0.68
1:A:58:A:H5'	7:F:21:TYR:CZ	2.26	0.68
2:B:84:A:O5'	21:U:91:LYS:CD	2.41	0.68
2:B:570:G:C3'	2:B:2030:A:H62	2.06	0.68
2:B:630:G:H5'	29:3:44:ARG:CZ	2.13	0.68
2:B:728:G:H5''	4:C:16:VAL:CG1	2.22	0.68
2:B:1251:C:OP2	17:Q:8:ILE:HD11	1.93	0.68
2:B:1769:U:C5	2:B:1935:G:P	2.65	0.68
2:B:2061:G:C4	2:B:2253:G:P	2.81	0.68
2:B:2350:C:H2'	29:3:38:LYS:NZ	2.09	0.68
2:B:2887:A:N3	26:0:27:LEU:HD12	2.03	0.68
12:L:100:ILE:HG12	12:L:102:GLY:H	1.59	0.68
21:U:60:LYS:HG3	21:U:61:GLU:H	1.58	0.68
21:U:79:ALA:O	21:U:96:LYS:HA	1.92	0.68
25:Z:5:ILE:HD12	25:Z:5:ILE:H	1.59	0.68
28:2:33:ARG:O	28:2:37:LYS:HB2	1.93	0.68
2:B:575:A:OP2	2:B:2030:A:H2	1.69	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:671:C:C4'	12:L:39:LYS:HG2	2.24	0.68
2:B:1257:C:H5'	6:E:77:ILE:HG21	1.74	0.68
2:B:1774:C:C4'	2:B:1976:U:N3	2.55	0.68
2:B:2199:A:C5'	2:B:2200:C:C5	2.77	0.68
2:B:2248:C:C6	2:B:2446:G:H2'	2.28	0.68
2:B:2260:C:O2	2:B:2388:A:H1'	1.93	0.68
2:B:2262:U:C5'	2:B:2328:A:C2	2.20	0.68
2:B:2269:G:O5'	22:W:19:ARG:CG	2.41	0.68
2:B:2460:U:H1'	13:M:78:LEU:HA	0.75	0.68
2:B:2506:U:O2	2:B:2583:G:N2	2.27	0.68
26:O:29:VAL:HG23	26:O:36:LYS:HZ3	1.59	0.68
2:B:94:A:H5''	23:X:36:GLN:HB2	1.74	0.68
2:B:588:U:O3'	12:L:28:GLY:N	2.26	0.68
2:B:654:A:H2	29:3:18:LYS:HZ2	1.36	0.68
2:B:1651:G:O3'	2:B:2723:C:O2'	2.11	0.68
2:B:1664:A:O4'	11:K:40:LYS:CB	2.29	0.68
2:B:1997:C:H2'	2:B:2548:U:H3'	1.74	0.68
2:B:2056:G:C2	2:B:2577:A:C2	2.81	0.68
2:B:2256:G:H21	2:B:2450:A:P	2.17	0.68
2:B:2311:A:O3'	7:F:71:LYS:HG2	1.93	0.68
6:E:181:ILE:CG1	12:L:13:LYS:C	2.67	0.68
10:J:37:ARG:HH21	10:J:110:PRO:HG3	1.58	0.68
11:K:2:ILE:HD11	11:K:8:LEU:HD11	1.74	0.68
15:O:10:ARG:HH11	15:O:10:ARG:HG3	1.59	0.68
17:Q:33:VAL:HG13	17:Q:34:ALA:N	2.08	0.68
17:Q:111:LYS:CA	18:R:52:PRO:CB	2.70	0.68
2:B:191:A:H2'	2:B:192:C:C6	2.29	0.68
2:B:413:C:C2	2:B:2410:G:O6	2.45	0.68
2:B:452:G:N1	28:2:39:ARG:CZ	2.44	0.68
2:B:565:C:C5	2:B:578:G:O6	2.47	0.68
2:B:1275:A:C4	14:N:16:HIS:HD2	2.11	0.68
2:B:1668:A:H62	2:B:2551:C:H5''	1.54	0.68
2:B:1671:U:C5'	2:B:2554:U:C4	2.71	0.68
2:B:1799:G:H4'	2:B:1800:C:O5'	1.92	0.68
2:B:2067:G:H4'	2:B:2429:G:HO2'	1.56	0.68
2:B:2658:C:H4'	8:G:157:LYS:NZ	2.05	0.68
6:E:48:THR:HG23	6:E:86:ALA:HB1	1.76	0.68
6:E:112:LEU:HB3	12:L:11:GLY:C	2.17	0.68
10:J:58:ASN:HA	10:J:126:ALA:HA	1.76	0.68
14:N:73:ASN:N	14:N:73:ASN:HD22	1.91	0.68
18:R:62:GLU:HG3	18:R:103:ALA:HA	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:196:A:C2	2:B:2060:A:N6	2.60	0.68
2:B:331:C:C5'	32:B:3359:HOH:O	2.42	0.68
2:B:642:U:H5''	2:B:2350:C:OP1	1.94	0.68
2:B:827:U:O4	2:B:2067:G:C6	2.42	0.68
2:B:989:G:C5'	24:Y:12:ALA:N	2.54	0.68
2:B:1032:A:C5'	30:4:16:ILE:CG1	2.59	0.68
2:B:1262:A:H4'	26:0:8:THR:CG2	2.13	0.68
2:B:2005:A:H2'	5:D:143:PRO:CG	2.22	0.68
2:B:2199:A:C8	2:B:2225:A:C1'	2.76	0.68
2:B:2466:C:P	30:4:5:ALA:HB1	2.34	0.68
2:B:2645:G:H3'	2:B:2646:C:H5'	1.75	0.68
7:F:174:PHE:N	7:F:175:PRO:CD	2.57	0.68
8:G:40:VAL:HG13	8:G:52:GLY:O	1.92	0.68
10:J:58:ASN:ND2	10:J:128:ASN:HB2	2.09	0.68
10:J:77:HIS:HD2	10:J:85:LYS:H	1.40	0.68
15:O:55:GLU:HG3	15:O:56:LYS:H	1.58	0.68
2:B:9:G:N9	2:B:2895:G:N2	2.42	0.68
2:B:453:A:C2	28:2:39:ARG:CZ	2.71	0.68
2:B:582:A:P	17:Q:10:ARG:HH21	2.13	0.68
2:B:699:A:C1'	2:B:1634:A:N1	2.55	0.68
2:B:1030:C:OP1	13:M:117:PHE:CE2	2.47	0.68
2:B:1182:G:H2'	2:B:1183:U:O4'	1.93	0.68
2:B:1368:G:C2'	2:B:1808:A:N1	2.56	0.68
2:B:1418:G:N2	2:B:1581:G:C6	2.49	0.68
2:B:1485:U:H2'	2:B:1486:U:C6	2.28	0.68
2:B:1666:G:O6	2:B:1953:A:N3	2.27	0.68
2:B:1673:G:H5'	2:B:1944:U:OP2	1.94	0.68
2:B:1949:G:C2	2:B:1987:A:C6	2.82	0.68
2:B:2039:U:H2'	2:B:2040:G:H8	1.59	0.68
2:B:2311:A:C5	7:F:75:GLY:O	2.47	0.68
2:B:2642:G:C5'	10:J:81:ILE:CG2	2.71	0.68
2:B:2885:G:N7	26:0:41:HIS:CE1	2.58	0.68
14:N:72:ASP:HB3	14:N:74:GLU:HG3	1.76	0.68
20:T:73:ARG:CB	28:2:42:LEU:CG	2.70	0.68
25:Z:26:SER:O	25:Z:28:VAL:HG13	1.93	0.68
2:B:220:G:C5'	2:B:234:U:O2'	2.42	0.68
2:B:448:U:C2	2:B:1259:G:C4'	2.77	0.68
2:B:943:A:C5'	32:B:3067:HOH:O	2.27	0.68
2:B:1128:G:O4'	2:B:2517:C:H4'	1.92	0.68
2:B:1131:G:C3'	2:B:2026:U:H4'	2.15	0.68
2:B:1668:A:C2	2:B:2551:C:O3'	2.46	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:11:VAL:HG11	10:J:44:TYR:CE1	2.29	0.68
12:L:78:ARG:HH21	12:L:82:LEU:HD23	1.57	0.68
13:M:38:ARG:HG2	13:M:96:ILE:HG12	1.75	0.68
14:N:118:ARG:HE	26:O:51:ARG:CG	1.99	0.68
23:X:30:MET:HG3	23:X:31:GLN:N	2.07	0.68
23:X:55:THR:HG22	23:X:59:GLU:OE1	1.94	0.68
1:A:29:A:C5'	15:O:33:ARG:CD	2.60	0.68
2:B:495:G:OP1	19:S:6:LYS:HE3	1.92	0.68
2:B:565:C:H5'	2:B:578:G:C2	2.29	0.68
2:B:593:U:O4'	29:3:2:LYS:NZ	2.12	0.68
2:B:594:U:H2'	2:B:595:C:C6	2.29	0.68
2:B:661:A:O3'	12:L:23:ILE:N	2.24	0.68
2:B:850:U:O2'	24:Y:46:MET:HA	1.92	0.68
2:B:931:U:O4	2:B:1184:U:C1'	2.41	0.68
2:B:1654:A:C3'	5:D:125:TRP:HZ3	2.07	0.68
2:B:1827:U:C1'	2:B:1900:A:C4'	2.72	0.68
2:B:1947:C:C4	2:B:1987:A:O4'	2.47	0.68
2:B:1974:C:C5	2:B:1978:A:N6	2.47	0.68
2:B:2003:A:C2'	5:D:139:SER:CB	2.69	0.68
2:B:2069:G:C5'	2:B:2432:A:C3'	2.30	0.68
2:B:2246:G:H2'	2:B:2445:G:N2	2.07	0.68
2:B:2247:A:C5	2:B:2446:G:C2	2.82	0.68
2:B:2301:C:H2'	2:B:2302:U:C6	2.28	0.68
2:B:2811:G:H5'	5:D:62:LYS:CD	2.24	0.68
2:B:2811:G:H5'	5:D:62:LYS:HD2	1.75	0.68
2:B:2831:G:P	5:D:55:LYS:HE2	2.34	0.68
4:C:155:ARG:HH21	4:C:155:ARG:HG2	1.59	0.68
5:D:154:LYS:HZ2	5:D:156:PHE:CA	2.04	0.68
18:R:6:GLN:HB3	18:R:10:LYS:HE3	1.76	0.68
25:Z:5:ILE:HB	25:Z:51:VAL:HG12	1.74	0.68
2:B:215:G:H4'	2:B:216:A:H4'	1.77	0.67
2:B:592:A:N3	29:3:2:LYS:CB	2.55	0.67
2:B:785:G:OP2	32:B:3022:HOH:O	2.12	0.67
2:B:1128:G:H21	2:B:2517:C:C3'	2.08	0.67
2:B:1251:C:H5''	17:Q:12:ARG:NH1	2.08	0.67
2:B:1264:A:H1'	2:B:2016:U:O2	1.92	0.67
2:B:1295:C:OP1	14:N:71:ARG:HB2	1.94	0.67
2:B:1340:U:H4'	2:B:1394:U:C2'	2.19	0.67
2:B:1813:G:N2	4:C:51:ARG:CD	2.39	0.67
2:B:1855:U:N3	2:B:2235:G:P	2.67	0.67
2:B:1891:G:C4	2:B:2237:G:OP1	2.47	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1947:C:C5	2:B:1987:A:P	2.87	0.67
2:B:2061:G:C1'	2:B:2253:G:C5'	2.72	0.67
2:B:2281:A:H4'	2:B:2388:A:N6	2.09	0.67
2:B:2427:C:O5'	2:B:2449:U:H5	1.66	0.67
6:E:119:ILE:HA	6:E:189:THR:HA	1.74	0.67
2:B:199:A:N1	2:B:2433:A:N3	2.41	0.67
2:B:520:G:C5'	19:S:18:ARG:NH2	2.51	0.67
2:B:591:U:H1'	29:3:1:PRO:N	2.00	0.67
2:B:1158:C:C5'	24:Y:10:ARG:HH21	2.06	0.67
2:B:1257:C:C5'	6:E:77:ILE:CG2	2.72	0.67
2:B:1368:G:N2	2:B:1808:A:C4	2.61	0.67
2:B:1368:G:C2'	2:B:1808:A:H61	2.01	0.67
2:B:2091:C:C1'	2:B:2228:G:C2	2.67	0.67
2:B:2347:C:N1	27:1:45:HIS:CE1	2.63	0.67
2:B:2348:U:C5'	27:1:39:ASP:C	2.57	0.67
2:B:2789:C:H3'	2:B:2790:U:P	2.33	0.67
4:C:140:VAL:O	4:C:141:HIS:HB2	1.93	0.67
5:D:109:VAL:HG11	5:D:193:VAL:HG23	1.76	0.67
6:E:23:PHE:CE2	12:L:17:LYS:CB	2.77	0.67
15:O:15:ARG:HH22	15:O:17:LYS:HD2	1.59	0.67
20:T:73:ARG:CG	28:2:42:LEU:CD2	2.71	0.67
2:B:27:G:N2	2:B:512:G:H2'	2.10	0.67
2:B:96:C:C4'	23:X:39:GLN:O	2.41	0.67
2:B:308:G:N2	2:B:477:A:H1'	2.07	0.67
2:B:321:U:N3	6:E:129:PRO:CG	2.57	0.67
2:B:321:U:C6	6:E:129:PRO:HG2	2.27	0.67
2:B:615:U:O2	6:E:35:TYR:CD1	2.31	0.67
2:B:1262:A:O2'	26:0:8:THR:HG22	1.94	0.67
2:B:1654:A:C3'	5:D:125:TRP:CZ3	2.77	0.67
2:B:1997:C:C2'	2:B:2548:U:C6	2.77	0.67
2:B:2090:A:H3'	9:H:23:ALA:O	1.94	0.67
2:B:2256:G:N3	2:B:2450:A:O5'	2.27	0.67
2:B:2311:A:N3	7:F:75:GLY:CA	2.57	0.67
2:B:2334:U:O4	15:O:15:ARG:HG3	1.94	0.67
2:B:2814:A:N3	26:0:39:ARG:HG3	2.09	0.67
4:C:68:ARG:HH21	4:C:190:THR:HG23	1.59	0.67
6:E:44:ARG:HD3	6:E:44:ARG:H	1.60	0.67
6:E:58:LYS:CE	32:E:220:HOH:O	2.41	0.67
13:M:4:PRO:O	13:M:5:LYS:O	2.12	0.67
14:N:98:LEU:O	14:N:111:ALA:HA	1.95	0.67
1:A:37:C:O2	15:O:69:ASP:HB2	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:8:C:C5'	10:J:121:LYS:HZ2	1.96	0.67
2:B:1029:A:C2	2:B:2466:C:C5'	2.77	0.67
2:B:1853:A:C5	2:B:2235:G:H3'	2.30	0.67
2:B:2070:A:C8	2:B:2244:U:C3'	2.66	0.67
2:B:2378:A:C5'	15:O:117:PHE:CD1	2.78	0.67
2:B:2757:A:N1	8:G:66:THR:HG23	2.00	0.67
15:O:40:ILE:HA	15:O:48:LEU:HB3	1.77	0.67
22:W:46:ALA:H	22:W:75:ASN:CG	2.02	0.67
26:O:11:LYS:HG3	26:O:12:ARG:N	2.10	0.67
2:B:593:U:C4'	29:3:2:LYS:CE	2.72	0.67
2:B:781:A:OP2	32:B:3399:HOH:O	2.13	0.67
2:B:869:G:H2'	2:B:870:U:H6	1.58	0.67
2:B:1029:A:H2	2:B:2466:C:H5''	1.59	0.67
2:B:1354:A:H2'	2:B:1355:G:O4'	1.94	0.67
2:B:1664:A:O3'	11:K:57:VAL:HG12	1.91	0.67
2:B:1903:G:OP1	4:C:239:PHE:N	2.26	0.67
2:B:2069:G:C5'	2:B:2433:A:OP2	2.43	0.67
4:C:22:GLU:HA	4:C:202:ARG:NE	2.09	0.67
5:D:34:VAL:HG22	5:D:89:GLU:CG	2.25	0.67
16:P:45:VAL:HG13	16:P:65:ASN:HD22	1.59	0.67
1:A:29:A:O3'	7:F:25:MET:SD	2.53	0.67
1:A:88:C:H42	13:M:38:ARG:CD	1.94	0.67
2:B:91:A:H2'	2:B:92:U:C6	2.29	0.67
2:B:192:C:H2'	2:B:193:U:H5'	1.77	0.67
2:B:219:A:O2'	2:B:235:U:H5'	1.95	0.67
2:B:1143:A:H62	10:J:27:ARG:NH1	1.92	0.67
2:B:1249:U:OP1	12:L:31:GLY:CA	2.40	0.67
2:B:1249:U:H3'	12:L:32:GLY:HA2	1.76	0.67
2:B:1263:U:H5''	26:O:7:PRO:C	2.19	0.67
2:B:1361:G:O2'	2:B:2214:C:N1	2.20	0.67
2:B:1774:C:H1'	2:B:1830:C:N3	2.09	0.67
2:B:1818:U:N1	4:C:155:ARG:N	2.42	0.67
2:B:1997:C:C1'	2:B:2548:U:C5	2.72	0.67
2:B:2348:U:C4'	27:1:39:ASP:CG	2.08	0.67
2:B:2514:U:O4'	5:D:156:PHE:HE1	1.65	0.67
2:B:2538:C:H4'	30:4:1:MET:HE1	1.76	0.67
2:B:2635:A:O2'	5:D:80:TRP:CD1	2.47	0.67
4:C:28:PRO:HB2	4:C:79:ARG:HH21	1.59	0.67
6:E:58:LYS:HE2	32:E:220:HOH:O	1.93	0.67
16:P:22:GLY:HA3	16:P:91:VAL:HG13	1.75	0.67
20:T:71:GLY:C	28:2:35:ARG:NE	2.39	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:73:ARG:CG	28:2:42:LEU:CG	2.69	0.67
1:A:59:A:C6	7:F:24:VAL:N	2.46	0.67
2:B:138:U:H2'	2:B:140:C:C1'	2.25	0.67
2:B:397:U:C5'	25:Z:49:ARG:C	2.68	0.67
2:B:479:A:N3	2:B:481:G:H5''	2.09	0.67
2:B:536:G:O6	32:B:3013:HOH:O	2.10	0.67
2:B:789:A:N9	28:2:5:PHE:CZ	2.60	0.67
2:B:1637:A:C2'	2:B:2697:G:H21	2.05	0.67
2:B:1658:C:C6	32:B:3286:HOH:O	2.42	0.67
2:B:1758:U:H2'	2:B:2696:U:C5'	2.24	0.67
2:B:1826:G:C5'	4:C:242:HIS:CB	2.57	0.67
2:B:1951:U:H3'	2:B:1990:C:P	2.35	0.67
2:B:2093:G:OP1	9:H:23:ALA:O	2.13	0.67
2:B:2501:C:C5'	32:B:3335:HOH:O	2.43	0.67
4:C:181:ARG:NH1	4:C:260:LYS:HD2	2.08	0.67
5:D:149:ASN:CB	5:D:150:GLN:HG2	2.25	0.67
8:G:23:ILE:O	8:G:33:THR:HA	1.95	0.67
10:J:10:THR:HB	10:J:13:ARG:HH12	1.58	0.67
14:N:118:ARG:NH2	26:0:51:ARG:CA	2.35	0.67
2:B:220:G:O2'	2:B:233:A:N3	2.26	0.67
2:B:588:U:C5'	12:L:27:LEU:HB2	2.15	0.67
2:B:811:U:O2	2:B:1251:C:C5	2.21	0.67
2:B:956:G:N2	2:B:959:A:H3'	2.09	0.67
2:B:1754:A:N6	2:B:2694:G:O2'	2.27	0.67
2:B:1818:U:C2'	4:C:155:ARG:H	2.07	0.67
2:B:1819:A:H3'	4:C:176:ARG:CG	2.25	0.67
2:B:1903:G:P	4:C:239:PHE:N	2.67	0.67
2:B:2271:G:O5'	22:W:18:LYS:NZ	2.11	0.67
4:C:19:VAL:HG12	4:C:20:ASN:N	2.08	0.67
4:C:136:VAL:HG12	4:C:165:ALA:HA	1.75	0.67
4:C:171:VAL:HB	4:C:182:LYS:HB3	1.77	0.67
5:D:101:PHE:O	5:D:102:ALA:HB3	1.95	0.67
5:D:170:VAL:HG21	5:D:194:PRO:HG2	1.77	0.67
10:J:7:LYS:NZ	10:J:48:VAL:HB	2.09	0.67
14:N:37:THR:HA	14:N:109:PRO:O	1.95	0.67
17:Q:39:ILE:O	17:Q:43:GLN:HG3	1.95	0.67
27:1:46:VAL:HG22	27:1:47:ILE:H	1.59	0.67
2:B:96:C:C5'	23:X:39:GLN:C	2.68	0.67
2:B:443:A:O5'	6:E:44:ARG:NH1	2.26	0.67
2:B:590:A:N6	12:L:48:ARG:NH1	2.42	0.67
2:B:1799:G:C2	4:C:152:GLN:OE1	2.48	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1936:A:C4'	2:B:1984:G:C2'	2.71	0.67
2:B:1938:A:C2'	2:B:2591:C:HO2'	2.07	0.67
2:B:2484:G:H4'	13:M:44:ARG:HD3	1.76	0.67
2:B:2571:U:O2'	5:D:152:PRO:CG	2.42	0.67
2:B:2641:G:O3'	10:J:84:ILE:HG13	1.94	0.67
2:B:2658:C:H5''	8:G:157:LYS:HE2	1.75	0.67
2:B:2757:A:C2	8:G:66:THR:CB	2.78	0.67
5:D:128:ARG:HD2	5:D:144:GLY:CA	2.25	0.67
5:D:138:LEU:HD23	5:D:138:LEU:N	2.00	0.67
5:D:154:LYS:C	5:D:156:PHE:N	2.51	0.67
8:G:5:LYS:HB3	8:G:68:ARG:NH2	2.10	0.67
8:G:175:LYS:HD3	8:G:176:LYS:N	2.09	0.67
2:B:324:A:H2'	2:B:325:G:O4'	1.95	0.67
2:B:564:C:H1'	17:Q:36:GLN:HE22	1.59	0.67
2:B:633:A:H8	2:B:633:A:O5'	1.78	0.67
2:B:654:A:C5	32:B:3137:HOH:O	2.33	0.67
2:B:682:G:H4'	28:2:26:ASN:OD1	1.93	0.67
2:B:754:U:O3'	2:B:1619:G:H5'	1.95	0.67
2:B:1663:G:O5'	11:K:5:GLN:HA	1.59	0.67
2:B:1827:U:C4'	2:B:1900:A:H4'	2.25	0.67
2:B:2785:C:O3'	5:D:69:ALA:HB2	1.95	0.67
2:B:2876:G:H5''	16:P:1:SER:C	2.19	0.67
3:V:79:ARG:CD	13:M:129:THR:HB	2.25	0.67
4:C:144:GLU:HB2	4:C:146:LYS:O	1.95	0.67
8:G:86:LEU:HB2	8:G:130:ILE:HB	1.76	0.67
9:H:21:VAL:HG22	9:H:22:LYS:H	1.59	0.67
15:O:9:ARG:HA	15:O:12:THR:HG23	1.76	0.67
16:P:77:SER:HB2	16:P:78:PRO:HD3	1.76	0.67
19:S:15:GLN:OE1	26:0:16:ARG:NE	2.28	0.67
19:S:17:VAL:HA	19:S:43:ALA:HB1	1.77	0.67
2:B:16:C:C5'	26:0:14:MET:HA	2.18	0.66
2:B:35:G:C4	32:B:3117:HOH:O	2.28	0.66
2:B:192:C:H2'	2:B:802:A:HO2'	1.59	0.66
2:B:320:A:H4'	2:B:322:A:N7	2.09	0.66
2:B:700:G:H1'	2:B:734:A:C4	2.31	0.66
2:B:1151:A:O2'	17:Q:80:ASN:CG	2.38	0.66
2:B:1797:G:H5''	4:C:253:GLY:CA	2.20	0.66
2:B:1817:G:H2'	4:C:155:ARG:HG2	1.77	0.66
2:B:2331:G:O4'	22:W:69:GLU:CD	2.38	0.66
2:B:2581:G:C2	2:B:2610:C:C4	2.83	0.66
6:E:59:PRO:HD2	6:E:60:TRP:CE2	2.30	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:G:29:ASN:N	8:G:29:ASN:HD22	1.91	0.66
10:J:77:HIS:CD2	10:J:84:ILE:HB	2.29	0.66
16:P:38:ARG:C	16:P:39:LEU:HD12	2.20	0.66
1:A:48:U:O2'	15:O:68:LYS:CB	2.43	0.66
2:B:150:U:H2'	2:B:151:C:H6	1.57	0.66
2:B:197:A:C1'	2:B:2443:C:H4'	2.25	0.66
2:B:693:A:O4'	2:B:1354:A:H4'	1.94	0.66
2:B:700:G:C4	2:B:734:A:N7	2.63	0.66
2:B:789:A:C3'	28:2:3:ARG:HH22	2.08	0.66
2:B:1338:G:C3'	20:T:18:GLU:HG3	2.11	0.66
2:B:1440:U:H2'	2:B:1441:G:C8	2.31	0.66
2:B:1770:G:H5''	2:B:1967:C:C2	2.31	0.66
2:B:1816:C:H5'	4:C:85:ASN:HB2	1.76	0.66
2:B:2280:G:H4'	2:B:2327:A:C4'	2.23	0.66
2:B:2339:C:H2'	2:B:2340:A:C8	2.30	0.66
4:C:92:LEU:O	4:C:93:VAL:HB	1.95	0.66
6:E:128:ALA:HB3	6:E:129:PRO:CD	2.20	0.66
9:H:125:THR:HA	9:H:146:VAL:HB	1.77	0.66
12:L:55:MET:CG	29:3:5:THR:CG2	2.67	0.66
21:U:3:LYS:HE3	21:U:81:ARG:HH22	1.59	0.66
24:Y:20:LYS:HA	24:Y:24:LEU:HB2	1.77	0.66
26:0:35:GLU:CD	26:0:43:THR:HG22	2.20	0.66
26:0:52:LYS:HA	26:0:52:LYS:HZ2	1.60	0.66
1:A:57:A:H2'	7:F:27:VAL:HG22	1.72	0.66
2:B:415:A:C6	2:B:2407:A:C2	2.81	0.66
2:B:1060:U:O2	2:B:1088:A:N7	2.27	0.66
2:B:1129:A:C1'	2:B:2517:C:H5'	2.24	0.66
2:B:1224:U:C1'	18:R:89:HIS:HB2	2.25	0.66
2:B:1263:U:H5'	26:0:7:PRO:C	2.19	0.66
2:B:1285:A:H2'	2:B:1286:A:H5''	1.75	0.66
2:B:1655:A:N7	5:D:146:ILE:CD1	2.58	0.66
2:B:1768:C:C2	2:B:1961:C:H5	2.13	0.66
2:B:1997:C:N3	2:B:2549:G:C4'	2.57	0.66
2:B:2007:U:P	2:B:2050:C:C5'	2.82	0.66
2:B:2216:G:H2'	2:B:2217:G:C8	2.30	0.66
2:B:2428:G:OP2	2:B:2448:A:C2	2.47	0.66
2:B:2495:G:H8	13:M:80:VAL:HG13	1.46	0.66
2:B:2859:G:H2'	2:B:2860:A:C8	2.30	0.66
3:V:79:ARG:NE	13:M:134:THR:HG21	1.99	0.66
4:C:220:ARG:HA	4:C:220:ARG:NE	2.09	0.66
5:D:117:GLY:O	5:D:165:MET:HB2	1.94	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:181:ILE:HG23	12:L:15:ALA:HA	1.76	0.66
6:E:181:ILE:HG13	12:L:13:LYS:CA	2.25	0.66
10:J:41:LYS:HZ3	10:J:46:PRO:HD3	1.61	0.66
11:K:98:ARG:HA	11:K:118:LEU:HD22	1.77	0.66
13:M:8:LYS:HD2	13:M:70:ASP:HA	1.76	0.66
18:R:18:GLN:HB3	18:R:99:THR:HA	1.75	0.66
2:B:519:U:O2'	19:S:18:ARG:NH2	2.28	0.66
2:B:943:A:C4'	32:B:3067:HOH:O	2.44	0.66
2:B:1009:A:O4'	17:Q:61:ILE:HD11	1.95	0.66
2:B:1406:U:H2'	2:B:1407:G:H8	1.60	0.66
2:B:1417:C:N1	2:B:1418:G:C4	2.60	0.66
2:B:1447:C:H2'	2:B:1448:G:H8	1.60	0.66
2:B:1655:A:N9	5:D:146:ILE:CG1	2.45	0.66
2:B:1727:C:H2'	2:B:1728:C:C6	2.31	0.66
2:B:1947:C:H5	2:B:1987:A:P	2.19	0.66
2:B:2016:U:OP2	19:S:92:ARG:CG	2.40	0.66
2:B:2037:A:H2'	2:B:2038:G:C8	2.30	0.66
2:B:2039:U:H2'	2:B:2040:G:C8	2.31	0.66
2:B:2199:A:C4	2:B:2225:A:H1'	2.29	0.66
2:B:2225:A:N1	9:H:25:TYR:HE1	1.93	0.66
2:B:2478:A:OP2	30:4:32:LYS:HD2	1.96	0.66
30:4:20:ASP:OD2	30:4:22:VAL:HG13	1.96	0.66
2:B:61:C:C5'	23:X:25:GLN:HG3	2.26	0.66
2:B:484:C:H5''	21:U:46:LYS:HZ1	1.53	0.66
2:B:528:A:O5'	10:J:113:PRO:HD3	1.95	0.66
2:B:1128:G:C1'	2:B:2517:C:C4'	2.74	0.66
2:B:1459:G:O2'	2:B:1460:U:H5'	1.95	0.66
2:B:1960:A:C5	2:B:1986:C:C2	2.70	0.66
2:B:2048:G:H4'	2:B:2823:A:N6	2.11	0.66
2:B:2324:U:H5'	2:B:2325:G:H5''	1.77	0.66
3:V:26:PHE:HE2	3:V:44:HIS:HA	1.61	0.66
5:D:8:LYS:HZ2	16:P:1:SER:CB	2.07	0.66
12:L:30:THR:HG22	12:L:36:LYS:HZ2	1.60	0.66
13:M:4:PRO:O	13:M:5:LYS:C	2.36	0.66
2:B:57:C:H4'	20:T:78:SER:HA	1.78	0.66
2:B:452:G:H22	28:2:39:ARG:HH22	1.36	0.66
2:B:670:A:H3'	12:L:47:ARG:N	2.09	0.66
2:B:685:A:OP1	28:2:16:HIS:CB	2.44	0.66
2:B:930:G:O4'	24:Y:27:GLY:HA2	1.95	0.66
2:B:1797:G:H4'	4:C:254:LYS:CE	2.22	0.66
2:B:1856:U:H2'	2:B:1857:G:O4'	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1948:G:C3'	2:B:1987:A:O2'	2.42	0.66
2:B:2258:C:O2'	2:B:2427:C:O4'	1.98	0.66
2:B:2311:A:C2	7:F:75:GLY:N	2.64	0.66
2:B:2514:U:H5'	5:D:156:PHE:CE1	2.30	0.66
2:B:2720:U:C4	2:B:2873:A:N6	2.64	0.66
7:F:132:ARG:HD3	7:F:133:GLU:HB2	1.78	0.66
10:J:42:ALA:CB	17:Q:99:VAL:HG12	2.26	0.66
13:M:101:VAL:O	13:M:102:LEU:HD12	1.94	0.66
21:U:95:PHE:HD1	21:U:96:LYS:HG2	1.59	0.66
2:B:398:C:H4'	2:B:2231:U:H5'	1.78	0.66
2:B:484:C:C5'	21:U:46:LYS:CE	2.71	0.66
2:B:496:G:H4'	19:S:1:MET:H3	1.60	0.66
2:B:623:C:O3'	29:3:61:LEU:CB	2.35	0.66
2:B:828:U:H6	2:B:2447:G:P	2.12	0.66
2:B:934:U:H2'	2:B:935:C:C6	2.30	0.66
2:B:1251:C:OP1	17:Q:8:ILE:CD1	2.43	0.66
2:B:1275:A:N7	14:N:16:HIS:CD2	2.38	0.66
2:B:1360:G:O2'	2:B:2212:A:N6	2.28	0.66
2:B:1450:G:N2	2:B:1452:G:H1	1.91	0.66
2:B:1531:C:H2'	2:B:1532:A:C8	2.31	0.66
2:B:1770:G:H4'	2:B:1967:C:C6	2.30	0.66
2:B:1816:C:N3	4:C:63:ILE:C	2.39	0.66
2:B:1951:U:O2'	2:B:1991:U:OP2	2.12	0.66
2:B:2061:G:N1	2:B:2254:C:C5	2.63	0.66
2:B:2258:C:C2	2:B:2425:A:H5''	2.25	0.66
2:B:2277:G:P	22:W:9:THR:HG22	2.36	0.66
2:B:2531:A:N1	2:B:2662:A:C6	2.64	0.66
4:C:22:GLU:HA	4:C:202:ARG:NH2	2.10	0.66
5:D:8:LYS:HD2	16:P:5:LYS:HG3	1.77	0.66
12:L:118:THR:N	12:L:119:PRO:CD	2.56	0.66
25:Z:49:ARG:C	25:Z:51:VAL:H	2.03	0.66
1:A:60:C:H2'	1:A:61:G:C8	2.31	0.66
2:B:15:G:C4'	26:0:17:SER:HB3	2.25	0.66
2:B:72:U:O4'	23:X:54:LYS:CG	2.37	0.66
2:B:588:U:O5'	12:L:27:LEU:HB3	1.94	0.66
2:B:958:U:H3'	13:M:18:ARG:N	2.10	0.66
2:B:1277:G:H4'	14:N:24:MET:CB	2.20	0.66
2:B:2090:A:C6	2:B:2092:U:O2'	2.48	0.66
2:B:2261:C:H5'	2:B:2388:A:O5'	1.96	0.66
2:B:2334:U:N1	15:O:12:THR:CA	2.55	0.66
2:B:2636:C:C2'	5:D:80:TRP:CZ3	2.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2899:A:H5''	10:J:136:GLN:HB2	1.62	0.66
4:C:76:VAL:O	4:C:93:VAL:HA	1.96	0.66
4:C:163:ILE:HG22	4:C:164:VAL:H	1.59	0.66
14:N:34:ILE:N	14:N:34:ILE:HD13	2.11	0.66
18:R:54:VAL:CB	18:R:54:VAL:HA	2.17	0.66
1:A:30:C:H2'	7:F:8:LYS:NZ	2.01	0.66
1:A:81:G:C5'	2:B:919:U:C5'	2.62	0.66
2:B:415:A:N6	2:B:2408:U:C5	2.64	0.66
2:B:587:C:H3'	12:L:36:LYS:HZ2	1.60	0.66
2:B:968:C:H2'	2:B:969:G:H8	1.61	0.66
2:B:1484:U:H2'	2:B:1485:U:C6	2.31	0.66
2:B:1652:A:H2'	5:D:122:VAL:HG12	1.78	0.66
2:B:1752:C:H4'	2:B:2861:U:H5''	1.78	0.66
2:B:1806:C:N3	4:C:45:ASN:OD1	2.10	0.66
2:B:1818:U:P	4:C:155:ARG:C	2.79	0.66
2:B:1819:A:OP2	4:C:153:LEU:HB2	1.95	0.66
2:B:1838:C:N4	2:B:1898:U:H2'	2.11	0.66
2:B:2025:C:H2'	2:B:2026:U:C6	2.31	0.66
2:B:2065:C:O2'	2:B:2426:A:P	2.54	0.66
2:B:2459:A:H4'	13:M:75:GLU:HB3	1.78	0.66
5:D:98:VAL:HA	5:D:101:PHE:CE1	2.30	0.66
9:H:6:LEU:HD12	9:H:15:LEU:HA	1.77	0.66
10:J:67:ASN:O	10:J:70:THR:HG22	1.95	0.66
15:O:37:ALA:O	15:O:38:GLN:HG2	1.96	0.66
1:A:29:A:H5''	15:O:33:ARG:HE	1.61	0.66
2:B:64:A:H2'	2:B:65:U:C6	2.31	0.66
2:B:192:C:O2'	2:B:802:A:O2'	2.14	0.66
2:B:197:A:C1'	2:B:2444:G:H5'	2.26	0.66
2:B:586:A:N3	2:B:810:U:O2	2.29	0.66
2:B:649:G:H21	29:3:44:ARG:HH11	1.34	0.66
2:B:812:C:C5	12:L:33:ARG:HA	2.28	0.66
2:B:1128:G:N9	2:B:2517:C:H4'	2.11	0.66
2:B:1294:U:C4'	14:N:71:ARG:HB3	2.26	0.66
2:B:1653:G:C5'	5:D:123:LYS:C	2.67	0.66
2:B:1662:U:H3'	11:K:5:GLN:NE2	2.11	0.66
2:B:1939:U:P	2:B:2591:C:O2'	2.52	0.66
2:B:2197:U:O4	2:B:2225:A:P	2.54	0.66
2:B:2198:A:H4'	2:B:2199:A:OP1	1.95	0.66
2:B:2261:C:H5''	2:B:2387:U:C2'	2.26	0.66
4:C:155:ARG:NH2	4:C:155:ARG:HG2	2.10	0.66
13:M:12:MET:HG2	13:M:12:MET:O	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:120:GLU:C	26:0:51:ARG:HG2	2.21	0.66
26:0:41:HIS:CG	26:0:48:TYR:HA	2.31	0.66
2:B:279:A:N6	2:B:361:G:H1'	2.10	0.65
2:B:458:G:N7	28:2:39:ARG:N	2.43	0.65
2:B:584:C:N4	17:Q:5:ARG:CZ	2.59	0.65
2:B:1009:A:C1'	17:Q:61:ILE:HD11	2.26	0.65
2:B:1783:A:OP2	2:B:2588:G:C2'	2.44	0.65
2:B:1794:A:H2'	2:B:1795:C:C6	2.31	0.65
2:B:1805:A:H4'	4:C:51:ARG:HA	1.76	0.65
2:B:1953:A:C4	2:B:2550:G:O2'	2.34	0.65
2:B:2015:A:OP2	19:S:93:ALA:CB	2.44	0.65
2:B:2281:A:C1'	2:B:2388:A:N6	2.57	0.65
2:B:2312:U:C4'	7:F:71:LYS:N	2.59	0.65
2:B:2557:G:H2'	2:B:2558:C:C6	2.31	0.65
2:B:2626:C:H2'	2:B:2627:G:C5'	2.26	0.65
3:V:82:TYR:CA	13:M:34:LYS:HD2	2.25	0.65
4:C:53:ILE:HG21	4:C:218:THR:HG23	1.78	0.65
4:C:196:ASN:HB2	4:C:199:HIS:CD2	2.30	0.65
4:C:224:MET:HB2	32:C:274:HOH:O	1.96	0.65
12:L:69:ARG:O	12:L:69:ARG:HG3	1.95	0.65
14:N:49:GLU:HB2	14:N:50:PRO:HD3	1.78	0.65
14:N:62:ASN:ND2	14:N:80:PHE:HB3	2.11	0.65
17:Q:92:LYS:HG2	17:Q:93:ILE:H	1.59	0.65
23:X:19:LEU:O	23:X:22:LEU:HB2	1.96	0.65
1:A:38:C:O2'	15:O:101:GLY:HA2	1.95	0.65
2:B:21:A:O2'	2:B:22:C:H5'	1.97	0.65
2:B:446:G:OP2	17:Q:2:ARG:CZ	2.44	0.65
2:B:616:A:H3'	2:B:617:G:H8	1.62	0.65
2:B:649:G:H21	29:3:44:ARG:CZ	1.79	0.65
2:B:1508:A:H5''	2:B:1509:A:N7	2.11	0.65
2:B:1567:G:N2	4:C:31:PRO:CA	2.11	0.65
2:B:1654:A:C8	5:D:121:THR:OG1	2.49	0.65
2:B:1767:G:C5	2:B:1959:G:C5	2.84	0.65
2:B:2757:A:C6	8:G:66:THR:CG2	2.74	0.65
2:B:2899:A:C5'	10:J:136:GLN:CA	2.74	0.65
4:C:127:ASN:ND2	4:C:128:THR:H	1.94	0.65
6:E:113:VAL:HG23	6:E:117:ARG:NH2	2.11	0.65
10:J:119:PHE:CG	10:J:120:ARG:N	2.63	0.65
13:M:67:VAL:HG21	13:M:95:LEU:HD21	1.78	0.65
18:R:42:ALA:HA	18:R:54:VAL:HG22	1.77	0.65
19:S:52:GLU:HA	19:S:55:ILE:HG22	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:0:8:THR:HG23	26:0:9:ARG:H	1.61	0.65
30:4:14:CYS:SG	30:4:25:VAL:HG12	2.35	0.65
2:B:193:U:H5'	2:B:802:A:HO2'	1.56	0.65
2:B:1184:U:H5'	24:Y:29:ARG:CD	2.27	0.65
2:B:1217:U:P	17:Q:14:LYS:NZ	2.67	0.65
2:B:2007:U:P	2:B:2050:C:H5'	2.36	0.65
2:B:2386:A:O2'	22:W:38:ARG:HB2	1.95	0.65
2:B:2758:A:H2'	2:B:2759:G:O4'	1.97	0.65
4:C:16:VAL:C	4:C:17:LYS:HE2	2.22	0.65
4:C:181:ARG:HH22	4:C:260:LYS:HZ2	1.45	0.65
6:E:116:ASP:HB2	6:E:185:LYS:HA	1.78	0.65
10:J:18:VAL:HG22	10:J:56:VAL:HA	1.78	0.65
22:W:23:LYS:HE3	22:W:24:ARG:O	1.96	0.65
1:A:57:A:N3	7:F:12:VAL:HG22	2.11	0.65
2:B:155:A:H2'	2:B:156:A:C8	2.30	0.65
2:B:700:G:C8	2:B:734:A:N7	2.64	0.65
2:B:1361:G:O2'	2:B:2214:C:C2	2.23	0.65
2:B:1387:A:H2'	2:B:1388:G:H8	1.60	0.65
2:B:1656:C:C1'	2:B:2510:C:H2'	1.86	0.65
2:B:1773:A:O4'	2:B:1973:G:N7	2.29	0.65
2:B:1938:A:H1'	2:B:2591:C:O4'	1.97	0.65
2:B:2876:G:O5'	16:P:2:ASN:HA	1.92	0.65
2:B:2880:C:H5'	14:N:90:ARG:HH11	1.61	0.65
3:V:70:ILE:HG12	3:V:71:LYS:H	1.61	0.65
5:D:83:ARG:HG2	5:D:84:LEU:N	2.11	0.65
5:D:154:LYS:HZ2	5:D:157:LYS:N	1.94	0.65
6:E:149:ILE:HG13	6:E:186:VAL:HG13	1.77	0.65
8:G:86:LEU:HD13	8:G:163:TYR:HA	1.78	0.65
10:J:10:THR:HB	10:J:13:ARG:NH1	2.11	0.65
17:Q:57:ARG:HA	17:Q:60:TRP:HE3	1.62	0.65
17:Q:85:ALA:CB	17:Q:88:GLU:HB2	2.27	0.65
17:Q:90:ASP:OD1	18:R:4:VAL:CG2	2.44	0.65
18:R:53:PHE:CD1	18:R:54:VAL:HB	2.29	0.65
1:A:57:A:N7	7:F:24:VAL:HG12	2.11	0.65
2:B:200:U:H2'	2:B:250:G:O6	1.97	0.65
2:B:340:A:H2'	2:B:341:C:O4'	1.95	0.65
2:B:397:U:O2'	2:B:2231:U:OP1	2.15	0.65
2:B:539:G:C5'	10:J:7:LYS:H	2.06	0.65
2:B:587:C:C3'	12:L:36:LYS:NZ	2.52	0.65
2:B:1128:G:C2	2:B:2518:A:H5'	2.32	0.65
2:B:1662:U:H4'	11:K:6:THR:CA	2.24	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1759:A:N6	2:B:2697:G:C5'	2.58	0.65
2:B:2061:G:O6	2:B:2253:G:O6	2.14	0.65
7:F:33:ILE:HA	7:F:155:ILE:HA	1.77	0.65
9:H:130:VAL:HB	9:H:142:VAL:HB	1.78	0.65
13:M:9:PHE:CG	13:M:10:ARG:N	2.64	0.65
14:N:12:ARG:HD3	14:N:20:MET:HG3	1.78	0.65
22:W:44:PHE:O	22:W:76:ARG:HA	1.96	0.65
2:B:127:A:N6	20:T:75:GLY:C	2.54	0.65
2:B:584:C:C5'	17:Q:3:VAL:HG21	2.27	0.65
2:B:811:U:C4	2:B:1251:C:N3	2.65	0.65
2:B:1224:U:H1'	18:R:89:HIS:HB2	1.78	0.65
2:B:1278:C:H4'	14:N:27:SER:HB3	1.74	0.65
2:B:1534:U:HO2'	2:B:1535:A:H8	1.43	0.65
2:B:1653:G:N2	5:D:140:HIS:HB3	2.11	0.65
2:B:1665:A:N6	2:B:2549:G:C2	2.53	0.65
2:B:1673:G:O5'	2:B:1944:U:H5'	1.81	0.65
2:B:1772:A:P	2:B:1968:G:H4'	2.36	0.65
2:B:1806:C:C6	4:C:50:THR:CG2	2.77	0.65
2:B:2197:U:O2	2:B:2225:A:C8	2.49	0.65
2:B:2574:G:N2	5:D:148:GLN:HB3	2.11	0.65
2:B:2814:A:N3	26:O:39:ARG:HG2	2.11	0.65
5:D:8:LYS:CD	16:P:5:LYS:CE	2.66	0.65
6:E:179:SER:CA	12:L:13:LYS:HZ3	2.10	0.65
13:M:33:LEU:HB2	13:M:101:VAL:CG2	2.27	0.65
13:M:33:LEU:N	13:M:101:VAL:HG22	2.12	0.65
15:O:56:LYS:HE3	15:O:57:ALA:N	2.11	0.65
16:P:38:ARG:HG3	16:P:39:LEU:H	1.62	0.65
20:T:72:GLN:HG2	28:2:35:ARG:NH1	1.94	0.65
20:T:73:ARG:CD	28:2:43:THR:CA	2.68	0.65
2:B:398:C:O4'	2:B:2231:U:H5'	1.95	0.65
2:B:464:U:O2'	28:2:12:ARG:HD2	1.96	0.65
2:B:1184:U:C4	24:Y:30:ARG:NH2	2.48	0.65
2:B:1655:A:N7	5:D:146:ILE:HD11	2.11	0.65
2:B:1665:A:C8	2:B:2561:U:C4'	2.78	0.65
2:B:1771:C:C6	2:B:1939:U:O4	2.50	0.65
2:B:1818:U:C2	4:C:152:GLN:O	2.47	0.65
2:B:2017:U:C3'	26:O:4:GLN:HB2	2.17	0.65
2:B:2056:G:N1	2:B:2577:A:N3	2.44	0.65
2:B:2336:A:H1'	2:B:2337:G:OP1	1.96	0.65
7:F:35:LEU:HA	7:F:153:ILE:HA	1.77	0.65
22:W:32:ALA:O	22:W:66:VAL:HG11	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:61:C:O2	23:X:29:ARG:CG	2.45	0.65
2:B:584:C:H3'	17:Q:5:ARG:HD2	1.79	0.65
2:B:667:U:C2'	12:L:49:GLY:CA	2.75	0.65
2:B:729:G:OP1	4:C:17:LYS:HE3	1.96	0.65
2:B:992:C:C4'	18:R:79:ARG:HE	2.02	0.65
2:B:1127:A:C5	30:4:4:ARG:NH2	2.65	0.65
2:B:1653:G:P	2:B:2725:A:OP1	2.55	0.65
2:B:1769:U:O2'	2:B:1935:G:N3	2.27	0.65
2:B:1855:U:O3'	2:B:2233:U:C5'	2.26	0.65
2:B:1938:A:C2	2:B:2590:A:C3'	2.59	0.65
2:B:2199:A:C6	2:B:2225:A:O4'	2.48	0.65
2:B:2334:U:C5'	15:O:8:ILE:C	2.70	0.65
2:B:2358:A:C6	2:B:2428:G:C2	2.85	0.65
2:B:2539:C:C5'	30:4:2:LYS:HE2	2.24	0.65
4:C:42:ARG:HG2	4:C:43:ASN:N	2.06	0.65
4:C:138:SER:HA	4:C:162:GLN:HG2	1.79	0.65
4:C:170:TYR:O	4:C:171:VAL:HG13	1.97	0.65
5:D:37:VAL:HB	5:D:42:ASN:CG	2.21	0.65
6:E:23:PHE:CE2	12:L:17:LYS:HB2	2.31	0.65
15:O:38:GLN:HA	15:O:50:ALA:HB3	1.77	0.65
16:P:52:ARG:HB3	16:P:60:VAL:CG1	2.18	0.65
20:T:28:ASN:N	20:T:28:ASN:HD22	1.95	0.65
22:W:66:VAL:HG13	22:W:67:LYS:HG3	1.79	0.65
2:B:76:C:O2'	23:X:55:THR:OG1	2.15	0.65
2:B:566:U:O4'	2:B:577:G:C1'	2.44	0.65
2:B:587:C:N4	32:B:3211:HOH:O	2.29	0.65
2:B:1124:G:O3'	30:4:21:GLY:HA3	1.95	0.65
2:B:1158:C:OP1	24:Y:31:ILE:HD12	1.97	0.65
2:B:1360:G:C1'	2:B:2212:A:N1	2.59	0.65
2:B:1889:A:H1'	2:B:2235:G:H21	1.61	0.65
2:B:2062:A:N6	2:B:2252:G:H21	1.94	0.65
2:B:2331:G:C2'	22:W:69:GLU:OE2	2.45	0.65
8:G:25:ILE:O	8:G:31:GLU:HA	1.97	0.65
22:W:23:LYS:NZ	22:W:23:LYS:HB2	2.12	0.65
22:W:31:LEU:HD11	22:W:34:SER:CB	2.27	0.65
29:3:7:ARG:HE	29:3:11:LYS:NZ	1.94	0.65
1:A:81:G:C1'	2:B:919:U:OP1	2.44	0.65
2:B:222:A:H61	2:B:232:G:H1'	1.61	0.65
2:B:394:C:H2'	2:B:395:U:O4'	1.96	0.65
2:B:1373:A:H2'	2:B:1374:G:O4'	1.96	0.65
2:B:1410:G:H2'	2:B:1411:U:C6	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1659:G:H5'	32:B:3377:HOH:O	1.81	0.65
2:B:1766:G:C2	2:B:1948:G:C2	2.85	0.65
2:B:1975:G:C3'	2:B:1979:U:C5	2.79	0.65
2:B:2177:C:P	2:B:2180:U:C5'	2.85	0.65
2:B:2257:U:H6	2:B:2450:A:H5'	1.53	0.65
2:B:2261:C:O3'	2:B:2387:U:H2'	1.96	0.65
2:B:2308:G:H5'	2:B:2309:A:H5''	1.77	0.65
2:B:2339:C:H2'	2:B:2340:A:H8	1.61	0.65
2:B:2511:U:C2'	5:D:146:ILE:HG13	2.27	0.65
2:B:2786:U:O3'	5:D:65:ALA:C	2.35	0.65
3:V:69:GLU:HG2	3:V:70:ILE:N	2.12	0.65
3:V:80:HIS:N	3:V:87:GLN:HE22	1.94	0.65
6:E:26:ALA:HB1	12:L:20:GLY:CA	2.26	0.65
6:E:115:GLN:HA	6:E:185:LYS:HE3	1.79	0.65
9:H:26:ALA:HB1	9:H:31:VAL:HG23	1.79	0.65
18:R:53:PHE:HB3	18:R:55:ASP:HB2	1.79	0.65
18:R:54:VAL:CA	18:R:54:VAL:CG1	2.69	0.65
19:S:34:ASP:H	19:S:37:THR:HG22	1.61	0.65
20:T:63:VAL:HG13	20:T:80:TRP:HB2	1.79	0.65
21:U:78:LYS:HG3	21:U:96:LYS:HE3	1.79	0.65
2:B:458:G:C8	28:2:39:ARG:N	2.66	0.64
2:B:514:A:H2	2:B:1260:A:HO2'	1.35	0.64
2:B:686:U:H3	28:2:12:ARG:N	1.94	0.64
2:B:827:U:C2	2:B:2430:A:N6	2.65	0.64
2:B:852:U:H5''	24:Y:44:ARG:HE	1.60	0.64
2:B:1621:U:O4	32:B:3079:HOH:O	2.14	0.64
2:B:1654:A:O4'	5:D:125:TRP:HE3	1.80	0.64
2:B:1993:U:H5	2:B:2550:G:C2'	2.08	0.64
2:B:2282:G:C5'	2:B:2389:G:H21	1.92	0.64
2:B:2312:U:O4'	7:F:71:LYS:HB2	1.89	0.64
2:B:2732:G:O3'	2:B:2733:A:P	2.55	0.64
4:C:68:ARG:HD3	4:C:103:ILE:CD1	2.27	0.64
8:G:148:ARG:HH21	8:G:153:PRO:HD2	1.62	0.64
13:M:36:VAL:HA	13:M:97:GLN:HG2	1.78	0.64
19:S:6:LYS:HB3	19:S:104:THR:HG22	1.78	0.64
20:T:43:ILE:CG2	32:T:106:HOH:O	2.44	0.64
22:W:66:VAL:HG22	22:W:67:LYS:H	1.60	0.64
24:Y:15:ARG:HH11	24:Y:53:MET:HE1	1.60	0.64
26:O:51:ARG:HD2	26:O:56:LYS:OXT	1.98	0.64
1:A:45:A:N9	7:F:91:ARG:HG3	2.12	0.64
2:B:215:G:C4'	2:B:216:A:H4'	2.27	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:418:C:H2'	2:B:419:U:C6	2.32	0.64
2:B:514:A:H2	2:B:1260:A:O2'	1.74	0.64
2:B:926:G:H21	24:Y:42:ALA:HB1	0.96	0.64
2:B:1223:G:N1	18:R:76:LYS:NZ	2.45	0.64
2:B:1252:G:C2	17:Q:35:PHE:HB2	2.30	0.64
2:B:2270:A:H8	22:W:18:LYS:HB2	1.59	0.64
2:B:2284:A:OP1	27:1:7:LYS:HB2	1.83	0.64
2:B:2305:U:C4	7:F:39:VAL:HG22	2.32	0.64
2:B:2691:C:O4'	2:B:2872:A:H2	1.76	0.64
2:B:2880:C:C4'	14:N:90:ARG:CD	2.29	0.64
6:E:25:GLU:HG2	12:L:17:LYS:HB3	0.65	0.64
6:E:183:PHE:HD1	12:L:13:LYS:HE2	1.62	0.64
9:H:134:VAL:HG13	9:H:135:HIS:H	1.61	0.64
12:L:54:GLN:HB3	12:L:56:PRO:HD2	1.79	0.64
17:Q:97:ILE:HA	17:Q:100:PHE:CZ	2.32	0.64
21:U:39:ASN:ND2	21:U:42:LYS:HE2	2.12	0.64
1:A:31:C:H5'	7:F:8:LYS:CE	2.27	0.64
1:A:49:C:H6	15:O:67:ASN:CB	2.10	0.64
2:B:143:C:H2'	2:B:144:A:C1'	2.27	0.64
2:B:182:A:H4'	2:B:434:U:H5'	1.79	0.64
2:B:275:C:H2'	2:B:276:U:O4'	1.98	0.64
2:B:671:C:H5	12:L:39:LYS:CD	1.98	0.64
2:B:1258:U:C5'	6:E:79:ARG:HB2	2.28	0.64
2:B:1806:C:C4'	4:C:49:THR:O	2.39	0.64
2:B:1839:G:O4'	2:B:1927:A:C4	2.51	0.64
2:B:1949:G:C6	2:B:1987:A:C5	2.85	0.64
2:B:2002:G:C2'	5:D:132:ALA:CA	2.45	0.64
2:B:2004:G:C8	5:D:140:HIS:N	2.59	0.64
2:B:2017:U:O4'	26:O:3:GLN:CA	2.42	0.64
2:B:2019:A:OP1	26:O:5:ASN:O	2.15	0.64
2:B:2056:G:N7	2:B:2577:A:C6	2.59	0.64
2:B:2248:C:C2	2:B:2449:U:O2'	2.43	0.64
2:B:2395:C:H2'	2:B:2396:G:O4'	1.96	0.64
2:B:2800:A:H2'	2:B:2801:G:O4'	1.97	0.64
4:C:143:VAL:O	4:C:152:GLN:HB2	1.97	0.64
13:M:73:ILE:HD11	13:M:92:TRP:HB2	1.79	0.64
13:M:82:MET:HB2	13:M:84:LYS:NZ	2.13	0.64
18:R:53:PHE:O	18:R:54:VAL:O	2.15	0.64
2:B:172:A:H2'	2:B:173:A:C8	2.33	0.64
2:B:565:C:N1	2:B:578:G:O6	2.29	0.64
2:B:570:G:C1'	2:B:2030:A:N6	2.60	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:584:C:O3'	17:Q:3:VAL:CG2	2.44	0.64
2:B:584:C:C5'	17:Q:3:VAL:CG2	2.69	0.64
2:B:789:A:O4'	28:2:5:PHE:CZ	2.51	0.64
2:B:1670:C:N4	2:B:1955:U:O4'	2.31	0.64
2:B:1693:U:O4	2:B:1977:A:O4'	2.15	0.64
2:B:1866:A:H2'	2:B:1867:G:O4'	1.96	0.64
2:B:1995:U:H5	2:B:2550:G:O6	1.62	0.64
2:B:2069:G:H5'	2:B:2433:A:OP2	1.98	0.64
2:B:2428:G:C8	2:B:2448:A:N1	2.65	0.64
2:B:2512:C:O2	5:D:148:GLN:NE2	2.30	0.64
6:E:30:GLN:CB	12:L:19:LEU:HD23	2.28	0.64
14:N:19:ALA:C	14:N:21:PHE:H	2.06	0.64
14:N:24:MET:HE1	14:N:40:LYS:HB3	1.79	0.64
16:P:84:SER:O	16:P:86:LYS:N	2.31	0.64
18:R:5:PHE:HA	18:R:40:MET:CG	2.27	0.64
1:A:9:G:H4'	15:O:46:GLU:HB3	1.78	0.64
2:B:56:A:C4'	20:T:76:ARG:H	2.05	0.64
2:B:61:C:OP1	23:X:43:LEU:HD13	1.96	0.64
2:B:62:U:H3'	2:B:63:A:H8	1.62	0.64
2:B:397:U:O5'	25:Z:50:ASP:N	2.19	0.64
2:B:441:U:H2'	2:B:442:G:H8	1.61	0.64
2:B:486:C:H6	19:S:60:HIS:HD2	1.46	0.64
2:B:632:A:H2'	2:B:633:A:C8	2.33	0.64
2:B:728:G:C4'	4:C:16:VAL:CB	2.60	0.64
2:B:801:G:N7	6:E:51:GLU:OE2	2.31	0.64
2:B:1011:G:P	17:Q:75:TYR:HB3	2.37	0.64
2:B:1015:U:H2'	2:B:1016:G:H8	1.60	0.64
2:B:1031:G:H4'	30:4:9:LYS:H	1.61	0.64
2:B:1224:U:OP1	18:R:89:HIS:CA	2.46	0.64
2:B:1225:G:P	18:R:78:ARG:NE	2.62	0.64
2:B:1386:C:H2'	2:B:1387:A:C8	2.32	0.64
2:B:1412:U:H2'	2:B:1413:A:C8	2.32	0.64
2:B:1664:A:O4'	11:K:40:LYS:CG	2.45	0.64
2:B:1666:G:C1'	2:B:2559:C:C2'	2.64	0.64
2:B:1992:G:C4	2:B:2550:G:C8	2.86	0.64
2:B:2199:A:C8	2:B:2225:A:H1'	2.31	0.64
2:B:2199:A:N6	2:B:2225:A:H4'	2.12	0.64
2:B:2347:C:H2'	27:1:39:ASP:CB	2.24	0.64
2:B:2582:G:C5	2:B:2583:G:H8	2.01	0.64
2:B:2720:U:O2	2:B:2873:A:C8	2.50	0.64
2:B:2898:U:O4'	10:J:135:GLN:NE2	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:119:VAL:HG22	4:C:133:ASN:ND2	2.13	0.64
11:K:71:ARG:O	11:K:72:PRO:C	2.34	0.64
12:L:94:THR:HA	12:L:96:LYS:HE2	1.80	0.64
12:L:94:THR:HB	12:L:103:ILE:HG13	1.78	0.64
18:R:66:HIS:N	18:R:98:ILE:HD13	2.12	0.64
21:U:4:ILE:HG21	21:U:25:LYS:HE2	1.80	0.64
2:B:57:C:OP1	20:T:67:VAL:HG12	1.97	0.64
2:B:263:G:H2'	2:B:264:C:O4'	1.97	0.64
2:B:720:U:H2'	2:B:721:A:C8	2.32	0.64
2:B:773:U:H5'	2:B:774:G:OP2	1.97	0.64
2:B:1223:G:C2'	18:R:78:ARG:NH1	2.57	0.64
2:B:1819:A:C5'	4:C:159:THR:HG22	2.27	0.64
2:B:1903:G:H5''	4:C:239:PHE:HD2	0.94	0.64
2:B:1999:C:O4'	11:K:31:ARG:HA	1.97	0.64
2:B:2261:C:H5'	2:B:2388:A:O4'	1.98	0.64
3:V:77:VAL:HG21	3:V:79:ARG:HH21	1.61	0.64
5:D:23:PRO:HB3	5:D:189:VAL:N	2.11	0.64
6:E:179:SER:HA	12:L:13:LYS:NZ	2.12	0.64
7:F:135:ILE:C	7:F:137:PHE:H	2.05	0.64
16:P:23:ASP:N	16:P:93:LYS:HE2	2.13	0.64
25:Z:25:ARG:HH11	25:Z:25:ARG:HB2	1.60	0.64
1:A:58:A:H5'	7:F:21:TYR:OH	1.97	0.64
2:B:84:A:OP2	21:U:91:LYS:HD3	1.96	0.64
2:B:170:U:H2'	2:B:171:U:C6	2.33	0.64
2:B:413:C:O2	2:B:2410:G:C6	2.51	0.64
2:B:812:C:H5	12:L:33:ARG:HB2	1.38	0.64
2:B:813:U:H2'	2:B:814:C:C6	2.33	0.64
2:B:1010:A:OP1	17:Q:65:ASN:HB3	1.96	0.64
2:B:1223:G:C6	18:R:76:LYS:NZ	2.53	0.64
2:B:1252:G:H1	17:Q:35:PHE:HB3	1.53	0.64
2:B:1295:C:OP1	14:N:71:ARG:CA	2.46	0.64
2:B:1580:A:C4	2:B:1581:G:N3	2.26	0.64
2:B:1663:G:H5'	11:K:22:ILE:HG22	1.79	0.64
2:B:1670:C:C1'	2:B:2551:C:O2	2.46	0.64
2:B:1948:G:H2'	2:B:1988:G:O4'	1.98	0.64
2:B:1952:A:C8	2:B:1991:U:C5'	2.80	0.64
2:B:2228:G:H2'	2:B:2229:U:C6	2.33	0.64
2:B:2820:A:O5'	14:N:4:ARG:CD	2.45	0.64
4:C:66:PHE:O	4:C:68:ARG:N	2.30	0.64
6:E:43:THR:HG23	6:E:44:ARG:NE	2.12	0.64
10:J:39:LYS:CE	17:Q:66:ALA:HB1	2.28	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:78:ARG:N	12:L:110:VAL:HG13	2.13	0.64
13:M:35:ALA:HB3	13:M:97:GLN:C	2.23	0.64
14:N:96:ARG:HH21	14:N:118:ARG:HB3	1.62	0.64
19:S:41:LYS:HG2	26:O:21:LEU:HD22	1.79	0.64
19:S:41:LYS:HZ2	26:O:21:LEU:HB2	1.60	0.64
1:A:76:G:H1'	13:M:136:MET:SD	2.37	0.64
2:B:6:A:N1	2:B:2898:U:C4	2.66	0.64
2:B:441:U:O2'	2:B:442:G:H5'	1.97	0.64
2:B:854:C:H2'	2:B:855:G:H8	1.61	0.64
2:B:1340:U:H3'	2:B:1602:U:O2'	1.98	0.64
2:B:1772:A:P	2:B:1968:G:C5'	2.86	0.64
2:B:1807:G:C5'	4:C:47:ARG:CB	2.21	0.64
2:B:2261:C:C5'	2:B:2388:A:O5'	2.46	0.64
2:B:2261:C:C4'	2:B:2387:U:H2'	2.28	0.64
2:B:2262:U:H1'	2:B:2328:A:C2'	2.27	0.64
2:B:2531:A:N6	2:B:2662:A:C2	2.65	0.64
2:B:2575:C:O5'	5:D:149:ASN:HB3	1.93	0.64
2:B:2789:C:H3'	2:B:2790:U:OP2	1.97	0.64
2:B:2886:A:C6	26:O:48:TYR:OH	2.51	0.64
5:D:37:VAL:HG12	5:D:38:LYS:HZ3	1.63	0.64
9:H:4:ILE:H	9:H:37:VAL:HB	1.63	0.64
9:H:6:LEU:HA	9:H:15:LEU:C	2.23	0.64
10:J:15:TRP:HA	10:J:53:TYR:O	1.98	0.64
13:M:71:LYS:HE2	13:M:91:TYR:HB3	1.79	0.64
18:R:2:TYR:H	18:R:46:GLU:HB2	1.63	0.64
18:R:37:GLU:OE1	18:R:62:GLU:HB2	1.97	0.64
19:S:71:VAL:HG22	19:S:107:VAL:HG12	1.80	0.64
29:3:24:LYS:NZ	29:3:29:ARG:HH22	1.96	0.64
1:A:20:G:H2'	1:A:21:G:H8	1.63	0.64
2:B:686:U:C1'	28:2:8:SER:HG	2.11	0.64
2:B:859:G:OP1	2:B:2268:A:O2'	2.16	0.64
2:B:1128:G:H1'	2:B:2517:C:H5'	1.79	0.64
2:B:1219:U:H2'	2:B:1220:G:C8	2.33	0.64
2:B:1296:G:H5''	2:B:2709:G:O2'	1.98	0.64
2:B:1653:G:C2	5:D:140:HIS:HD2	2.16	0.64
2:B:1654:A:N1	5:D:146:ILE:N	2.46	0.64
2:B:1994:C:C5'	2:B:2551:C:N4	2.42	0.64
2:B:2015:A:OP2	19:S:88:ARG:CB	2.44	0.64
2:B:2199:A:OP1	9:H:29:PHE:HD1	1.77	0.64
2:B:2257:U:O5'	2:B:2450:A:C4'	2.46	0.64
2:B:2306:C:H42	7:F:76:PHE:HZ	1.42	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2461:A:H5''	13:M:78:LEU:HD11	1.70	0.64
2:B:2582:G:N1	2:B:2583:G:C5	2.63	0.64
2:B:2811:G:H5''	5:D:62:LYS:CD	2.28	0.64
2:B:2901:C:H2'	2:B:2902:C:H5'	1.80	0.64
4:C:30:ALA:N	4:C:31:PRO:CD	2.53	0.64
4:C:164:VAL:HB	4:C:167:ASP:OD1	1.98	0.64
9:H:82:SER:N	9:H:146:VAL:HG13	2.07	0.64
11:K:99:ILE:HG12	11:K:115:ILE:HG13	1.80	0.64
1:A:31:C:C4'	7:F:8:LYS:CD	2.75	0.64
2:B:564:C:C4	2:B:578:G:O6	2.50	0.64
2:B:1176:U:H2'	2:B:1177:G:O4'	1.98	0.64
2:B:1277:G:N3	14:N:23:ASN:HB3	2.13	0.64
2:B:2005:A:C2'	5:D:143:PRO:CD	2.37	0.64
2:B:2048:G:C4'	2:B:2823:A:C6	2.80	0.64
2:B:2056:G:C8	2:B:2577:A:N6	2.66	0.64
2:B:2311:A:C2	7:F:75:GLY:C	2.75	0.64
2:B:2420:C:OP2	29:3:34:LYS:NZ	2.25	0.64
2:B:2591:C:H2'	2:B:2592:G:C8	2.33	0.64
2:B:2813:A:H2'	2:B:2814:A:C8	2.33	0.64
2:B:2839:G:O2'	14:N:92:GLY:HA2	1.98	0.64
5:D:130:GLN:NE2	5:D:138:LEU:HD12	2.12	0.64
12:L:29:LYS:HD2	12:L:31:GLY:N	2.12	0.64
12:L:132:ARG:O	12:L:136:GLU:HB3	1.98	0.64
13:M:70:ASP:H	13:M:71:LYS:NZ	1.95	0.64
17:Q:110:GLU:CB	18:R:52:PRO:HG3	2.21	0.64
21:U:9:GLU:HA	21:U:23:LYS:HA	1.80	0.64
25:Z:8:LYS:HD2	25:Z:9:TYR:H	1.63	0.64
29:3:41:ARG:NH1	29:3:42:HIS:HB3	2.13	0.64
1:A:47:C:OP2	15:O:32:PRO:HG3	1.99	0.63
2:B:94:A:O3'	23:X:33:ALA:HA	1.98	0.63
2:B:181:A:H2'	2:B:182:A:H8	1.63	0.63
2:B:282:A:H2'	2:B:283:G:C8	2.32	0.63
2:B:483:A:C5'	21:U:45:GLN:CB	2.58	0.63
2:B:566:U:N1	2:B:577:G:N7	2.45	0.63
2:B:597:G:O2'	12:L:21:ARG:HD2	1.98	0.63
2:B:781:A:H4'	32:B:3064:HOH:O	1.85	0.63
2:B:794:A:H2'	2:B:795:C:C6	2.33	0.63
2:B:877:A:H2'	2:B:899:A:N1	2.13	0.63
2:B:989:G:C8	24:Y:12:ALA:HB3	2.33	0.63
2:B:1217:U:H5''	17:Q:14:LYS:NZ	2.09	0.63
2:B:1225:G:OP2	18:R:78:ARG:NH1	2.30	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1779:U:H2'	2:B:2589:A:H5''	1.80	0.63
2:B:2008:C:H2'	2:B:2009:A:H8	1.63	0.63
2:B:2069:G:C6	2:B:2245:U:H3'	2.19	0.63
2:B:2269:G:N2	22:W:20:LEU:HB2	1.47	0.63
2:B:2626:C:C2'	2:B:2627:G:C5'	2.73	0.63
2:B:2877:G:C5'	16:P:2:ASN:OD1	2.25	0.63
6:E:159:LEU:HA	6:E:169:VAL:HG21	1.80	0.63
12:L:30:THR:HA	12:L:36:LYS:HZ1	1.63	0.63
17:Q:111:LYS:HD2	18:R:53:PHE:CD1	2.24	0.63
2:B:585:G:H3'	32:B:3205:HOH:O	1.90	0.63
2:B:587:C:C6	12:L:36:LYS:HB3	2.33	0.63
2:B:589:U:H2'	2:B:590:A:C8	2.33	0.63
2:B:784:G:O2'	2:B:785:G:H5''	1.97	0.63
2:B:811:U:C6	2:B:1251:C:C2	2.87	0.63
2:B:903:C:H2'	2:B:904:G:H8	1.63	0.63
2:B:946:C:H2'	2:B:947:A:C8	2.33	0.63
2:B:1163:G:C4'	18:R:91:GLN:HE21	1.78	0.63
2:B:1203:U:H5''	12:L:14:LYS:HZ1	0.81	0.63
2:B:1656:C:O2	5:D:145:SER:HB2	1.97	0.63
2:B:2056:G:C2	2:B:2577:A:N3	2.66	0.63
2:B:2063:C:C2	2:B:2254:C:C6	2.87	0.63
2:B:2063:C:H2'	2:B:2255:G:OP2	1.98	0.63
2:B:2538:C:C4'	30:4:1:MET:HE1	2.28	0.63
2:B:2547:A:O3'	11:K:29:HIS:CE1	2.52	0.63
2:B:2722:G:H2'	2:B:2723:C:C6	2.33	0.63
2:B:2899:A:H4'	10:J:136:GLN:CB	2.22	0.63
4:C:29:PHE:HB2	4:C:31:PRO:CD	2.28	0.63
4:C:68:ARG:NH2	4:C:127:ASN:HA	2.12	0.63
5:D:106:LYS:HZ1	5:D:208:LYS:HD3	1.64	0.63
5:D:128:ARG:NH1	5:D:130:GLN:NE2	2.46	0.63
6:E:198:GLU:C	6:E:200:LEU:H	2.05	0.63
8:G:16:VAL:HG21	8:G:44:HIS:NE2	2.14	0.63
9:H:3:VAL:HG13	9:H:21:VAL:HG11	1.79	0.63
10:J:35:ARG:HH21	10:J:40:HIS:N	1.95	0.63
10:J:37:ARG:NH2	10:J:110:PRO:HG3	2.13	0.63
15:O:40:ILE:H	15:O:40:ILE:HD13	1.62	0.63
17:Q:60:TRP:CE2	17:Q:93:ILE:HA	2.34	0.63
2:B:45:G:C3'	2:B:46:G:O4'	2.46	0.63
2:B:97:C:C4'	23:X:46:VAL:HB	2.28	0.63
2:B:142:A:H2'	2:B:143:C:C6	2.34	0.63
2:B:321:U:OP1	6:E:130:LYS:NZ	2.32	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:667:U:H3'	12:L:49:GLY:C	2.23	0.63
2:B:755:U:C5'	2:B:1272:A:H61	2.10	0.63
2:B:929:U:H4'	24:Y:35:VAL:HG11	1.80	0.63
2:B:1265:A:N6	19:S:88:ARG:NH1	2.45	0.63
2:B:1277:G:C3'	14:N:24:MET:HB2	2.29	0.63
2:B:1294:U:O3'	14:N:71:ARG:N	2.31	0.63
2:B:1470:A:H3'	2:B:1471:G:H8	1.62	0.63
2:B:1655:A:C1'	5:D:146:ILE:HG13	2.26	0.63
2:B:1772:A:C8	2:B:1973:G:P	2.91	0.63
2:B:1786:A:N1	2:B:1939:U:C2	2.66	0.63
2:B:1794:A:H2'	2:B:1795:C:H6	1.64	0.63
2:B:1826:G:OP1	4:C:242:HIS:C	2.41	0.63
2:B:2247:A:C1'	2:B:2426:A:O2'	2.45	0.63
2:B:2298:A:C4'	32:B:3175:HOH:O	2.28	0.63
2:B:2888:C:C5'	26:O:27:LEU:HG	2.27	0.63
3:V:84:PRO:N	13:M:127:LYS:HZ3	1.96	0.63
3:V:86:LEU:HG	13:M:134:THR:HA	1.79	0.63
4:C:23:LEU:H	4:C:202:ARG:HH21	1.46	0.63
8:G:6:ALA:HB3	8:G:7:PRO:HD3	1.80	0.63
9:H:124:THR:HG22	9:H:125:THR:H	1.63	0.63
12:L:142:ILE:HG13	12:L:143:GLU:N	2.13	0.63
2:B:5:A:H2	2:B:2898:U:O2	1.80	0.63
2:B:6:A:N1	2:B:2897:U:O2	2.30	0.63
2:B:130:C:C2	32:B:3272:HOH:O	2.41	0.63
2:B:856:G:O2'	22:W:23:LYS:CA	2.41	0.63
2:B:1250:G:C6	32:B:3439:HOH:O	2.39	0.63
2:B:1373:A:O2'	2:B:2211:A:C8	2.51	0.63
2:B:1949:G:N1	2:B:1987:A:C6	2.66	0.63
2:B:2069:G:H5'	2:B:2432:A:H3'	0.71	0.63
2:B:2199:A:C5	2:B:2225:A:O4'	2.51	0.63
32:B:3311:HOH:O	19:S:92:ARG:HB2	1.99	0.63
3:V:76:ASP:O	13:M:133:LYS:CG	2.45	0.63
4:C:20:ASN:HD22	4:C:202:ARG:HA	1.63	0.63
14:N:116:VAL:HG22	14:N:117:ASP:H	1.63	0.63
25:Z:32:LEU:HD22	25:Z:33:ASN:N	2.14	0.63
1:A:42:C:N3	7:F:89:THR:OG1	2.32	0.63
1:A:49:C:H2'	1:A:50:A:C8	2.34	0.63
1:A:80:U:O2'	2:B:918:A:O2'	0.63	0.63
2:B:395:U:H2'	2:B:396:G:N7	2.14	0.63
2:B:483:A:C5'	21:U:45:GLN:HB3	2.28	0.63
2:B:583:G:O3'	17:Q:6:GLY:N	2.16	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:992:C:H2'	2:B:993:G:H8	1.63	0.63
2:B:1151:A:O2'	17:Q:80:ASN:HB2	1.99	0.63
2:B:1789:A:H5''	4:C:219:VAL:HG11	1.79	0.63
2:B:1818:U:O5'	4:C:155:ARG:O	2.15	0.63
2:B:1993:U:O4	2:B:2550:G:O2'	2.17	0.63
2:B:2263:C:C5'	2:B:2329:U:H4'	2.28	0.63
2:B:2635:A:H5''	5:D:78:GLY:O	1.98	0.63
4:C:171:VAL:HG12	4:C:183:VAL:C	2.22	0.63
4:C:222:THR:C	4:C:224:MET:H	2.06	0.63
6:E:147:LEU:O	6:E:148:ILE:HG13	1.98	0.63
10:J:39:LYS:HZ1	17:Q:66:ALA:CB	1.99	0.63
12:L:91:ASP:HA	12:L:123:ARG:HB2	1.80	0.63
12:L:118:THR:CB	12:L:119:PRO:HD3	2.28	0.63
16:P:38:ARG:CG	16:P:39:LEU:H	2.09	0.63
2:B:7:G:N3	2:B:2897:U:O2	2.32	0.63
2:B:197:A:C1'	2:B:2443:C:C4'	2.76	0.63
2:B:398:C:P	25:Z:50:ASP:N	2.65	0.63
2:B:686:U:O4'	28:2:8:SER:OG	2.16	0.63
2:B:1600:C:OP1	20:T:81:LYS:HG3	1.98	0.63
2:B:1665:A:OP1	11:K:57:VAL:HG12	1.71	0.63
2:B:1806:C:H6	4:C:50:THR:CG2	2.10	0.63
2:B:2048:G:H4'	2:B:2823:A:N1	2.13	0.63
2:B:2065:C:C3'	2:B:2258:C:H42	2.10	0.63
2:B:2285:C:N4	27:1:24:LYS:HD3	2.06	0.63
2:B:2833:U:O2	5:D:57:ALA:HB1	1.98	0.63
2:B:2848:G:OP1	16:P:95:LYS:O	2.17	0.63
3:V:5:ASN:HA	3:V:64:VAL:HB	1.79	0.63
4:C:53:ILE:HD13	4:C:218:THR:HG23	1.80	0.63
5:D:8:LYS:CD	16:P:5:LYS:CD	2.77	0.63
6:E:152:GLU:HG2	6:E:153:LEU:N	2.13	0.63
12:L:14:LYS:HZ3	12:L:14:LYS:HA	1.63	0.63
13:M:35:ALA:O	13:M:36:VAL:HG22	1.98	0.63
14:N:37:THR:HG1	14:N:40:LYS:HB2	1.63	0.63
15:O:87:ILE:HG22	15:O:115:LEU:H	1.63	0.63
17:Q:92:LYS:CG	17:Q:93:ILE:H	2.12	0.63
24:Y:9:THR:CB	24:Y:54:VAL:HA	2.26	0.63
25:Z:30:HIS:H	25:Z:48:GLN:CD	2.07	0.63
1:A:49:C:C2'	15:O:66:GLY:CA	2.71	0.63
1:A:88:C:C4	13:M:38:ARG:HD3	2.22	0.63
2:B:194:G:N2	2:B:251:A:O2'	2.32	0.63
2:B:989:G:C5'	24:Y:12:ALA:H	2.12	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1041:G:H2'	2:B:1042:G:C8	2.33	0.63
2:B:1133:A:H2'	2:B:2027:G:C5'	2.28	0.63
2:B:1258:U:H4'	6:E:79:ARG:CB	2.29	0.63
2:B:1297:C:P	2:B:2709:G:O2'	2.56	0.63
2:B:1340:U:C1'	2:B:1604:C:OP2	2.45	0.63
2:B:1455:G:C6	2:B:2704:C:N3	2.62	0.63
2:B:1460:U:H5''	2:B:1461:C:C6	2.34	0.63
2:B:1662:U:O2	11:K:4:GLU:CB	2.47	0.63
2:B:1662:U:C2	11:K:4:GLU:C	2.76	0.63
2:B:1752:C:C4'	2:B:2861:U:O3'	2.47	0.63
2:B:1771:C:OP1	2:B:1968:G:C1'	2.46	0.63
2:B:1806:C:C6	4:C:50:THR:CB	2.81	0.63
2:B:1807:G:O4'	4:C:45:ASN:OD1	2.16	0.63
2:B:1997:C:C1'	2:B:2548:U:C6	2.82	0.63
2:B:2041:U:H2'	2:B:2042:A:C8	2.34	0.63
2:B:2090:A:N1	2:B:2091:C:O4'	2.32	0.63
2:B:2241:A:H2'	2:B:2242:G:C8	2.34	0.63
2:B:2635:A:O3'	5:D:78:GLY:O	2.17	0.63
2:B:2636:C:C4'	5:D:80:TRP:CE3	2.82	0.63
8:G:157:LYS:HG3	8:G:159:LYS:NZ	2.11	0.63
12:L:122:VAL:HG23	12:L:139:GLY:O	1.98	0.63
17:Q:111:LYS:HB2	18:R:52:PRO:CB	2.28	0.63
21:U:39:ASN:HD21	21:U:60:LYS:HB3	1.64	0.63
28:2:3:ARG:HG2	32:2:96:HOH:O	1.99	0.63
2:B:24:G:C4	19:S:78:GLU:HB2	2.33	0.63
2:B:56:A:H5''	20:T:75:GLY:HA2	1.79	0.63
2:B:145:C:C4'	32:B:3188:HOH:O	2.26	0.63
2:B:217:A:N6	2:B:430:A:N7	2.46	0.63
2:B:564:C:C1'	17:Q:36:GLN:NE2	2.61	0.63
2:B:809:G:C5'	2:B:1255:U:C5'	2.76	0.63
2:B:928:A:H5'	24:Y:38:GLU:HG3	1.80	0.63
2:B:1188:U:OP1	18:R:83:TYR:OH	2.16	0.63
2:B:1217:U:OP1	17:Q:14:LYS:HE3	1.97	0.63
2:B:1248:G:C5	17:Q:1:ALA:CA	2.81	0.63
2:B:1258:U:H5'	6:E:79:ARG:HB2	1.80	0.63
2:B:1429:G:H2'	2:B:1430:G:H8	1.64	0.63
2:B:1442:U:H2'	2:B:1443:U:C6	2.34	0.63
2:B:1495:A:H2'	2:B:1496:A:C8	2.34	0.63
2:B:1992:G:C4	2:B:2550:G:H8	2.16	0.63
2:B:2063:C:O2'	2:B:2255:G:OP2	2.17	0.63
2:B:2199:A:C8	2:B:2225:A:C5	2.82	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2460:U:C5'	13:M:77:PRO:HA	1.93	0.63
2:B:2645:G:P	2:B:2732:G:C8	2.88	0.63
4:C:66:PHE:O	4:C:67:LYS:C	2.42	0.63
4:C:159:THR:C	4:C:160:TYR:HD2	2.07	0.63
4:C:231:HIS:ND1	4:C:231:HIS:O	2.31	0.63
5:D:5:VAL:HG11	5:D:29:VAL:N	2.14	0.63
7:F:83:PRO:HG2	7:F:84:ILE:H	1.64	0.63
10:J:8:PRO:HB2	10:J:11:VAL:HB	1.81	0.63
21:U:88:ASP:HB2	21:U:91:LYS:O	1.99	0.63
22:W:30:VAL:HG12	22:W:31:LEU:N	2.14	0.63
25:Z:9:TYR:CZ	25:Z:11:GLU:HB2	2.34	0.63
2:B:9:G:OP2	10:J:121:LYS:NZ	2.28	0.63
2:B:72:U:C6	23:X:54:LYS:NZ	2.67	0.63
2:B:552:U:H5''	32:B:3202:HOH:O	1.67	0.63
2:B:593:U:C1'	29:3:2:LYS:HD2	2.27	0.63
2:B:671:C:H3'	12:L:39:LYS:HE3	1.81	0.63
2:B:1381:G:C2'	2:B:1382:G:H5'	2.29	0.63
2:B:1670:C:H2'	2:B:1955:U:C5	2.34	0.63
2:B:1767:G:O5'	2:B:1959:G:C2'	2.46	0.63
2:B:1819:A:H2'	4:C:176:ARG:CB	2.14	0.63
2:B:2004:G:N1	5:D:142:VAL:HG21	2.13	0.63
2:B:2077:A:H2'	2:B:2078:C:C6	2.34	0.63
2:B:2199:A:N6	2:B:2224:G:O2'	2.26	0.63
2:B:2350:C:C1'	29:3:38:LYS:HZ1	2.11	0.63
2:B:2537:U:H2'	2:B:2538:C:C6	2.34	0.63
2:B:2574:G:N2	5:D:148:GLN:CB	2.59	0.63
4:C:68:ARG:NH2	4:C:190:THR:HG23	2.14	0.63
4:C:141:HIS:CB	4:C:190:THR:HB	2.28	0.63
4:C:143:VAL:HG11	4:C:173:LEU:HD11	1.81	0.63
5:D:2:ILE:HB	5:D:205:PRO:HD3	1.79	0.63
6:E:23:PHE:CE2	12:L:17:LYS:CE	2.81	0.63
8:G:88:LEU:HD11	8:G:95:ALA:HB2	1.81	0.63
11:K:108:ARG:HA	11:K:116:ILE:HG21	1.79	0.63
16:P:1:SER:HA	16:P:4:ILE:HD12	1.80	0.63
16:P:59:THR:O	16:P:60:VAL:HG13	1.99	0.63
19:S:41:LYS:NZ	26:0:21:LEU:CB	2.58	0.63
26:0:35:GLU:C	26:0:37:HIS:H	2.06	0.63
1:A:29:A:H3'	1:A:30:C:H6	1.64	0.62
2:B:26:G:P	19:S:80:PRO:HB3	2.39	0.62
2:B:193:U:H5''	2:B:803:U:H5'	1.81	0.62
2:B:321:U:P	6:E:129:PRO:O	2.56	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:704:G:H1'	2:B:727:A:N6	2.14	0.62
2:B:729:G:OP2	4:C:16:VAL:HG13	1.99	0.62
2:B:1339:G:P	32:B:3155:HOH:O	2.56	0.62
2:B:1535:A:H3'	2:B:1536:C:C6	2.35	0.62
2:B:1772:A:H62	2:B:1974:C:P	2.22	0.62
2:B:1779:U:H2'	2:B:2589:A:H5'	1.81	0.62
2:B:1799:G:C4	4:C:175:LEU:HD22	2.34	0.62
2:B:1997:C:H42	2:B:2549:G:C3'	2.12	0.62
2:B:2245:U:H3'	2:B:2443:C:N4	2.13	0.62
2:B:2311:A:C2	7:F:75:GLY:O	2.52	0.62
2:B:2311:A:C6	7:F:75:GLY:O	2.52	0.62
2:B:2378:A:N3	15:O:92:PHE:CZ	2.66	0.62
2:B:2514:U:C5'	5:D:156:PHE:CE1	2.81	0.62
2:B:2635:A:HO2'	5:D:80:TRP:CD1	2.16	0.62
2:B:2704:C:H2'	2:B:2705:A:O4'	1.99	0.62
7:F:64:PRO:HA	7:F:88:VAL:CG2	2.29	0.62
12:L:60:ARG:HD2	29:3:7:ARG:HH11	1.64	0.62
12:L:91:ASP:HB2	12:L:123:ARG:HH11	1.62	0.62
2:B:486:C:C6	19:S:60:HIS:CD2	2.81	0.62
2:B:989:G:H5''	24:Y:12:ALA:H	1.63	0.62
2:B:1224:U:H4'	18:R:76:LYS:C	2.23	0.62
2:B:1257:C:H5'	6:E:77:ILE:CG2	2.30	0.62
2:B:1339:G:C5'	2:B:1393:A:C8	2.78	0.62
2:B:1827:U:H4'	2:B:1900:A:H4'	1.78	0.62
2:B:2845:U:OP1	16:P:58:PHE:CZ	2.49	0.62
3:V:14:LYS:NZ	3:V:18:ARG:HD2	2.11	0.62
5:D:5:VAL:HG11	5:D:29:VAL:H	1.63	0.62
5:D:167:ASN:ND2	5:D:167:ASN:H	1.96	0.62
6:E:179:SER:CA	12:L:13:LYS:NZ	2.61	0.62
10:J:42:ALA:HB1	17:Q:99:VAL:HB	1.81	0.62
11:K:102:PRO:HA	11:K:121:GLU:HB3	1.80	0.62
12:L:55:MET:N	12:L:56:PRO:CD	2.62	0.62
26:0:32:THR:HG23	26:0:34:GLY:H	1.63	0.62
2:B:57:C:O3'	20:T:78:SER:HB3	1.98	0.62
2:B:192:C:O2'	2:B:802:A:C2'	2.46	0.62
2:B:346:A:H2'	2:B:347:A:O4'	1.99	0.62
2:B:398:C:OP2	25:Z:53:THR:CG2	2.47	0.62
2:B:700:G:N9	2:B:734:A:C5	2.66	0.62
2:B:851:C:C2'	24:Y:42:ALA:O	2.47	0.62
2:B:1029:A:H2	2:B:2466:C:C4'	2.09	0.62
2:B:1097:U:H2'	2:B:1098:A:H5'	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1252:G:H1	17:Q:35:PHE:HB2	1.41	0.62
2:B:1670:C:N4	2:B:1955:U:H5''	2.00	0.62
2:B:2017:U:C2	26:O:4:GLN:O	2.53	0.62
2:B:2056:G:C4	2:B:2577:A:N3	2.57	0.62
2:B:2465:C:H5''	30:4:5:ALA:CB	2.29	0.62
2:B:2631:G:O2'	2:B:2810:A:C2	2.52	0.62
2:B:2746:U:C4'	8:G:137:LYS:C	2.56	0.62
4:C:103:ILE:HG22	4:C:104:LEU:N	2.15	0.62
5:D:142:VAL:HB	5:D:143:PRO:HD2	1.80	0.62
8:G:137:LYS:HA	8:G:140:ILE:HG12	1.80	0.62
10:J:81:ILE:HG12	10:J:82:GLY:H	1.64	0.62
18:R:39:LEU:HD12	18:R:60:LYS:HB2	1.80	0.62
24:Y:9:THR:HB	24:Y:54:VAL:CA	2.25	0.62
25:Z:53:THR:HA	25:Z:56:ARG:HD2	1.81	0.62
2:B:34:U:C3'	32:B:3165:HOH:O	2.40	0.62
2:B:125:A:C6	32:B:3371:HOH:O	2.36	0.62
2:B:181:A:H2'	2:B:182:A:C8	2.35	0.62
2:B:580:U:H5'	17:Q:32:ARG:CB	2.09	0.62
2:B:674:G:C4'	6:E:70:SER:O	2.33	0.62
2:B:728:G:C5'	4:C:16:VAL:CB	2.77	0.62
2:B:785:G:C4	32:B:3016:HOH:O	2.22	0.62
2:B:1224:U:O5'	18:R:89:HIS:O	2.16	0.62
2:B:1276:A:H4'	14:N:20:MET:CE	2.29	0.62
2:B:1796:U:C1'	4:C:251:THR:HA	2.29	0.62
2:B:1945:G:O6	2:B:1985:C:N1	2.32	0.62
2:B:2056:G:C6	2:B:2577:A:N9	2.67	0.62
2:B:2065:C:N1	2:B:2246:G:C5	2.64	0.62
2:B:2286:G:N1	27:1:33:LEU:CD1	2.58	0.62
2:B:2722:G:H2'	2:B:2723:C:H6	1.64	0.62
2:B:2834:G:H1'	2:B:2883:A:N6	2.14	0.62
5:D:60:VAL:HB	5:D:63:PRO:HG2	1.80	0.62
5:D:83:ARG:HG2	5:D:84:LEU:H	1.62	0.62
5:D:140:HIS:O	5:D:142:VAL:N	2.32	0.62
6:E:25:GLU:HB3	12:L:18:ARG:CD	2.25	0.62
7:F:41:GLU:HB2	7:F:45:ASP:N	2.15	0.62
12:L:77:ILE:HG22	12:L:78:ARG:H	1.64	0.62
19:S:89:ALA:HA	19:S:90:LYS:HZ2	1.63	0.62
21:U:27:VAL:HA	21:U:32:LYS:O	1.99	0.62
21:U:35:VAL:HG12	21:U:36:GLU:H	1.64	0.62
1:A:57:A:OP1	7:F:16:MET:C	2.36	0.62
2:B:279:A:C2	2:B:362:A:H4'	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:667:U:O4	12:L:48:ARG:CG	2.31	0.62
2:B:1939:U:H5''	2:B:2591:C:HO2'	1.63	0.62
2:B:2405:G:H1'	2:B:2412:A:H61	1.64	0.62
2:B:2531:A:OP1	8:G:175:LYS:NZ	2.30	0.62
2:B:2899:A:C4'	10:J:136:GLN:N	2.57	0.62
4:C:117:SER:HB3	4:C:127:ASN:ND2	2.14	0.62
5:D:7:LYS:O	16:P:5:LYS:NZ	2.23	0.62
5:D:12:THR:OG1	5:D:14:ILE:HG12	2.00	0.62
15:O:41:ALA:HB3	15:O:45:SER:HB3	1.82	0.62
20:T:50:LEU:C	20:T:52:GLU:H	2.08	0.62
23:X:12:GLU:HB2	23:X:14:LEU:CD1	2.28	0.62
1:A:57:A:C2'	7:F:27:VAL:CA	2.53	0.62
2:B:61:C:C2	23:X:29:ARG:CG	2.64	0.62
2:B:545:U:H2'	2:B:547:A:OP2	2.00	0.62
2:B:584:C:C4'	17:Q:3:VAL:HG21	2.30	0.62
2:B:662:G:H5''	12:L:25:SER:HA	1.80	0.62
2:B:931:U:H1'	2:B:1167:C:C1'	2.28	0.62
2:B:931:U:O4	2:B:1184:U:H1'	1.98	0.62
2:B:931:U:C1'	2:B:1167:C:H1'	2.26	0.62
2:B:948:C:O4'	2:B:984:A:H2	1.82	0.62
2:B:1040:A:H2	2:B:1115:G:H22	1.47	0.62
2:B:1406:U:H2'	2:B:1407:G:C8	2.35	0.62
2:B:1752:C:H4'	2:B:2861:U:O3'	1.98	0.62
2:B:1783:A:O2'	2:B:2590:A:C5'	2.47	0.62
2:B:1997:C:N3	2:B:2549:G:O4'	2.33	0.62
2:B:2090:A:C3'	2:B:2093:G:OP1	2.48	0.62
2:B:2348:U:H5''	27:1:39:ASP:O	1.97	0.62
2:B:2378:A:C4'	15:O:117:PHE:HD1	2.12	0.62
2:B:2899:A:H5'	10:J:136:GLN:CA	2.29	0.62
4:C:224:MET:HG3	4:C:233:GLY:O	1.99	0.62
10:J:102:GLU:HG2	10:J:103:ILE:HG12	1.81	0.62
18:R:68:ARG:HD2	18:R:70:GLU:OE1	1.99	0.62
20:T:72:GLN:NE2	28:2:36:ALA:N	2.48	0.62
2:B:423:A:H5'	2:B:424:G:C5'	2.28	0.62
2:B:814:C:C6	18:R:85:LYS:N	2.68	0.62
2:B:1031:G:C4'	30:4:8:LYS:HB3	2.30	0.62
2:B:1060:U:O4	2:B:1088:A:N6	2.31	0.62
2:B:1485:U:H2'	2:B:1486:U:H6	1.64	0.62
2:B:1767:G:C5	2:B:1959:G:N7	2.68	0.62
2:B:1783:A:N9	2:B:2590:A:P	2.73	0.62
2:B:1783:A:C2'	2:B:2590:A:C5'	2.78	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2006:C:O2'	5:D:162:ALA:HB2	2.00	0.62
2:B:2312:U:P	7:F:71:LYS:HB2	2.40	0.62
2:B:2635:A:OP1	5:D:77:ARG:CG	2.47	0.62
2:B:2725:A:O5'	5:D:126:ASN:OD1	2.18	0.62
5:D:170:VAL:HG11	5:D:194:PRO:HG2	1.80	0.62
11:K:63:VAL:HB	11:K:83:ALA:CB	2.29	0.62
11:K:98:ARG:C	11:K:99:ILE:HD12	2.23	0.62
17:Q:60:TRP:O	17:Q:63:ARG:HG2	2.00	0.62
22:W:17:ALA:O	22:W:35:ILE:HA	2.00	0.62
22:W:49:ASN:HB2	22:W:53:GLY:CA	2.30	0.62
1:A:104:A:H2'	1:A:105:G:O4'	2.00	0.62
2:B:310:A:H5''	21:U:14:THR:CG2	2.29	0.62
2:B:443:A:P	6:E:44:ARG:CZ	2.86	0.62
2:B:577:G:O4'	2:B:809:G:OP1	2.18	0.62
2:B:608:A:H2'	2:B:609:A:C8	2.35	0.62
2:B:1158:C:H6	24:Y:10:ARG:NH2	1.97	0.62
2:B:1340:U:O3'	2:B:1395:A:H5''	1.96	0.62
2:B:1341:G:C4'	20:T:84:TYR:CE1	2.82	0.62
2:B:1484:U:H2'	2:B:1485:U:H6	1.63	0.62
2:B:1652:A:C8	5:D:141:ARG:NH1	2.59	0.62
2:B:1654:A:H5''	5:D:128:ARG:CG	2.30	0.62
2:B:1667:G:O2'	2:B:1954:G:OP2	2.17	0.62
2:B:1768:C:C2	2:B:1962:C:N4	2.63	0.62
2:B:1807:G:O5'	4:C:47:ARG:HB2	1.95	0.62
2:B:1940:U:P	2:B:2592:G:O3'	2.58	0.62
2:B:2005:A:C1'	5:D:143:PRO:HD2	2.26	0.62
2:B:2144:G:H22	2:B:2148:G:H1'	1.64	0.62
2:B:2179:C:H2'	2:B:2180:U:C6	2.34	0.62
2:B:2247:A:C5	2:B:2446:G:N2	2.68	0.62
2:B:2335:A:C5'	15:O:9:ARG:HE	2.12	0.62
3:V:21:ARG:HA	3:V:25:LYS:O	2.00	0.62
6:E:127:GLU:HB2	6:E:130:LYS:HB2	1.80	0.62
7:F:133:GLU:HG3	7:F:134:GLN:H	1.64	0.62
10:J:58:ASN:HA	10:J:127:GLY:N	2.14	0.62
10:J:102:GLU:HG2	10:J:103:ILE:N	2.15	0.62
16:P:27:VAL:HG21	16:P:86:LYS:HB2	1.82	0.62
19:S:28:LYS:HD3	19:S:71:VAL:HG21	1.80	0.62
20:T:3:ARG:HG2	20:T:3:ARG:O	2.00	0.62
27:1:13:SER:N	27:1:50:GLU:HA	2.14	0.62
1:A:91:C:H4'	13:M:22:GLN:HB3	1.80	0.62
2:B:518:G:O3'	19:S:15:GLN:CA	2.47	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:596:U:H2'	2:B:597:G:C8	2.34	0.62
2:B:1590:A:H2'	2:B:1591:A:C8	2.34	0.62
2:B:1773:A:N1	2:B:1830:C:N3	2.46	0.62
2:B:1938:A:C5'	2:B:1982:U:H3'	2.11	0.62
2:B:2258:C:C4	2:B:2425:A:O2'	2.47	0.62
6:E:183:PHE:H	12:L:13:LYS:CG	2.12	0.62
7:F:9:ASP:O	7:F:10:GLU:HB2	2.00	0.62
17:Q:65:ASN:HA	17:Q:75:TYR:HB2	1.81	0.62
21:U:12:VAL:HG11	21:U:18:LYS:H	1.65	0.62
1:A:31:C:C5'	7:F:8:LYS:CE	2.69	0.62
2:B:6:A:C2	2:B:2897:U:O2	2.53	0.62
2:B:15:G:H4'	26:O:17:SER:C	2.24	0.62
2:B:583:G:OP1	17:Q:6:GLY:CA	2.46	0.62
2:B:613:A:O3'	32:B:3232:HOH:O	2.11	0.62
2:B:700:G:C8	2:B:734:A:C5	2.87	0.62
2:B:1131:G:H22	2:B:2024:G:H22	1.48	0.62
2:B:1174:U:H4'	2:B:1176:U:N3	2.13	0.62
2:B:1197:G:H2'	2:B:1198:U:C6	2.35	0.62
2:B:1295:C:OP1	14:N:71:ARG:CB	2.46	0.62
2:B:1580:A:C4'	2:B:1581:G:C8	2.65	0.62
2:B:1752:C:H5'	2:B:2861:U:C1'	2.30	0.62
2:B:1784:A:H5'	2:B:2590:A:H5'	1.77	0.62
2:B:1827:U:H1'	2:B:1900:A:C4'	2.27	0.62
2:B:1951:U:H3	2:B:1990:C:H41	1.45	0.62
2:B:1974:C:H2'	2:B:1978:A:H62	1.64	0.62
2:B:2261:C:C5'	2:B:2387:U:H2'	2.29	0.62
6:E:72:SER:O	6:E:75:SER:HB2	1.99	0.62
6:E:150:THR:HA	6:E:187:VAL:HG23	1.81	0.62
14:N:98:LEU:HB2	14:N:112:TYR:CE1	2.35	0.62
23:X:49:ASP:HB3	23:X:52:ARG:NH2	2.15	0.62
27:1:42:VAL:CG1	27:1:43:ARG:HG3	2.30	0.62
1:A:57:A:C3'	7:F:27:VAL:HG22	2.30	0.61
2:B:13:A:H61	2:B:525:U:H2'	1.63	0.61
2:B:24:G:C4	19:S:78:GLU:CB	2.83	0.61
2:B:199:A:C6	2:B:2433:A:N3	2.32	0.61
2:B:516:C:C4'	2:B:1262:A:C5'	2.78	0.61
2:B:685:A:OP1	28:2:16:HIS:HB2	1.99	0.61
2:B:850:U:O2'	24:Y:46:MET:CG	2.47	0.61
2:B:1030:C:OP1	13:M:117:PHE:CG	2.53	0.61
2:B:1405:U:H2'	2:B:1406:U:C6	2.35	0.61
2:B:1766:G:N7	2:B:1958:C:O2	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1771:C:C3'	2:B:1968:G:H5'	2.30	0.61
2:B:2037:A:H2'	2:B:2038:G:H8	1.65	0.61
2:B:2867:G:C2	16:P:20:ARG:NH1	2.68	0.61
10:J:28:LEU:HD23	10:J:29:ALA:N	2.14	0.61
10:J:41:LYS:NZ	10:J:46:PRO:HD3	2.15	0.61
18:R:79:ARG:HD3	18:R:86:GLN:CD	2.25	0.61
1:A:23:G:C5	7:F:22:ASN:O	2.44	0.61
2:B:639:U:H2'	2:B:640:C:C6	2.35	0.61
2:B:667:U:C2'	12:L:49:GLY:HA3	2.30	0.61
2:B:993:G:H4'	18:R:77:PHE:HE2	1.65	0.61
2:B:1277:G:H1'	14:N:23:ASN:C	2.25	0.61
2:B:1340:U:C5'	2:B:1394:U:O2'	2.48	0.61
2:B:1371:G:H4'	2:B:1810:A:C2'	2.29	0.61
2:B:1997:C:N4	2:B:2549:G:H3'	2.14	0.61
2:B:2348:U:H4'	27:1:40:PRO:O	1.99	0.61
2:B:2784:U:H2'	2:B:2785:C:C6	2.35	0.61
6:E:151:GLY:O	6:E:190:ALA:HB2	2.00	0.61
10:J:25:LEU:HG	10:J:64:VAL:N	2.10	0.61
10:J:90:GLU:O	10:J:93:ILE:HG22	1.98	0.61
14:N:13:ASN:HD22	14:N:15:SER:HB2	1.65	0.61
18:R:42:ALA:CA	18:R:54:VAL:HA	2.30	0.61
19:S:89:ALA:HA	19:S:90:LYS:HZ1	1.64	0.61
21:U:45:GLN:C	21:U:47:PRO:HD3	2.24	0.61
26:0:8:THR:HG23	26:0:9:ARG:N	2.15	0.61
2:B:6:A:N3	2:B:2898:U:O2	2.34	0.61
2:B:94:A:O4'	23:X:32:ALA:O	2.17	0.61
2:B:182:A:C2	2:B:432:A:C2	2.88	0.61
2:B:274:C:H2'	2:B:275:C:O4'	2.00	0.61
2:B:398:C:OP2	25:Z:53:THR:HG22	2.00	0.61
2:B:466:A:H5''	28:2:44:VAL:HG11	1.82	0.61
2:B:581:C:H5'	17:Q:31:TYR:H	1.65	0.61
2:B:990:A:H1'	2:B:1156:A:H2	1.65	0.61
2:B:1011:G:P	17:Q:75:TYR:N	2.73	0.61
2:B:1183:U:H2'	2:B:1184:U:C6	2.35	0.61
2:B:1319:C:O2'	2:B:1320:C:H5'	2.01	0.61
2:B:1590:A:H2'	2:B:1591:A:H8	1.65	0.61
2:B:1653:G:C2'	5:D:126:ASN:HA	2.30	0.61
2:B:1655:A:N9	2:B:2512:C:H5'	2.12	0.61
2:B:1768:C:O5'	2:B:1960:A:C3'	2.48	0.61
2:B:2003:A:C4	5:D:139:SER:N	2.67	0.61
2:B:2005:A:C4'	5:D:142:VAL:CG1	2.76	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2061:G:C1'	2:B:2253:G:H5'	2.21	0.61
2:B:2065:C:O4'	2:B:2247:A:N6	2.32	0.61
2:B:2783:U:H2'	2:B:2784:U:C6	2.35	0.61
3:V:57:TYR:HE1	13:M:130:PHE:HE2	1.48	0.61
12:L:78:ARG:H	12:L:78:ARG:CZ	2.13	0.61
13:M:88:ASN:O	13:M:89:VAL:HG12	2.00	0.61
17:Q:104:ALA:HB1	18:R:45:GLU:CD	2.25	0.61
2:B:15:G:H4'	26:O:17:SER:HB3	1.81	0.61
2:B:61:C:C2	23:X:29:ARG:HG3	2.03	0.61
2:B:1133:A:H2'	2:B:2027:G:H4'	1.82	0.61
2:B:1210:G:H5'	2:B:1212:G:O4'	1.99	0.61
2:B:1639:C:H5'	2:B:2699:C:O2'	2.00	0.61
2:B:1826:G:N3	2:B:1901:A:P	2.73	0.61
2:B:1953:A:N7	2:B:1991:U:H6	1.81	0.61
2:B:2091:C:C1'	2:B:2228:G:N1	2.62	0.61
2:B:2267:A:N6	2:B:2272:U:C4	2.68	0.61
2:B:2626:C:C3'	2:B:2627:G:H5'	2.25	0.61
2:B:2637:U:H4'	5:D:43:ASP:CG	2.25	0.61
3:V:51:GLN:O	13:M:130:PHE:CZ	2.47	0.61
3:V:88:HIS:CD2	13:M:136:MET:HG2	2.20	0.61
6:E:9:GLN:NE2	6:E:120:VAL:HG13	2.16	0.61
16:P:26:GLU:HA	16:P:47:ILE:N	2.16	0.61
16:P:27:VAL:HG12	16:P:47:ILE:HD11	1.82	0.61
17:Q:57:ARG:HD2	17:Q:92:LYS:NZ	2.16	0.61
24:Y:44:ARG:HG3	24:Y:45:GLY:N	2.15	0.61
1:A:30:C:C2'	7:F:8:LYS:NZ	2.63	0.61
1:A:38:C:O2'	15:O:101:GLY:HA3	1.99	0.61
2:B:45:G:C3'	2:B:46:G:C1'	2.78	0.61
2:B:458:G:O2'	28:2:41:ARG:N	2.33	0.61
2:B:854:C:H2'	2:B:855:G:C8	2.34	0.61
2:B:958:U:O4'	13:M:17:ASN:N	2.33	0.61
2:B:1054:A:H2'	2:B:1055:G:H8	1.66	0.61
2:B:1639:C:C5'	2:B:2699:C:O2'	2.47	0.61
2:B:1655:A:H3'	2:B:2511:U:H5''	1.77	0.61
2:B:1772:A:H8	2:B:1973:G:OP1	1.84	0.61
2:B:1874:C:H2'	2:B:1875:G:O4'	2.00	0.61
2:B:2017:U:C1'	26:O:4:GLN:O	2.49	0.61
2:B:2094:A:OP1	9:H:22:LYS:HD2	2.01	0.61
2:B:2347:C:C2	27:1:45:HIS:CE1	2.88	0.61
2:B:2494:G:C2	13:M:80:VAL:O	2.48	0.61
2:B:2577:A:C1'	2:B:2612:C:N4	2.63	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:V:44:HIS:NE2	3:V:85:LYS:HB2	2.16	0.61
4:C:224:MET:HA	4:C:232:GLY:CA	2.30	0.61
5:D:8:LYS:CE	16:P:1:SER:CA	2.78	0.61
8:G:10:VAL:HG12	8:G:47:ASN:O	2.00	0.61
10:J:11:VAL:HG11	10:J:44:TYR:CD1	2.35	0.61
10:J:18:VAL:CG2	10:J:56:VAL:HA	2.30	0.61
10:J:63:ALA:HA	10:J:69:ARG:HD2	1.81	0.61
17:Q:88:GLU:OE1	17:Q:111:LYS:HD2	2.00	0.61
2:B:19:A:H2'	2:B:20:C:C6	2.36	0.61
2:B:448:U:N3	2:B:1259:G:C1'	2.53	0.61
2:B:505:A:N1	32:B:3430:HOH:O	2.25	0.61
2:B:671:C:C4'	12:L:39:LYS:HE3	2.29	0.61
2:B:989:G:OP2	24:Y:10:ARG:C	2.43	0.61
2:B:1117:C:H2'	2:B:1118:C:C6	2.35	0.61
2:B:1658:C:C4'	32:B:3284:HOH:O	2.48	0.61
2:B:1768:C:OP2	2:B:1960:A:H5'	1.55	0.61
2:B:1854:A:H62	2:B:2235:G:C5'	2.12	0.61
2:B:2748:A:C1'	8:G:66:THR:HA	2.28	0.61
4:C:77:VAL:HG23	4:C:115:ILE:HD11	1.83	0.61
4:C:191:LEU:HD22	4:C:191:LEU:O	2.01	0.61
5:D:175:LEU:HD11	5:D:192:ALA:HB3	1.82	0.61
6:E:18:THR:HG23	6:E:20:GLY:N	2.15	0.61
6:E:30:GLN:HB3	12:L:19:LEU:CG	2.30	0.61
6:E:30:GLN:C	12:L:19:LEU:HD23	2.24	0.61
9:H:41:LYS:HD2	9:H:41:LYS:H	1.65	0.61
17:Q:88:GLU:N	18:R:53:PHE:CZ	2.68	0.61
18:R:79:ARG:HD3	18:R:86:GLN:NE2	2.16	0.61
20:T:73:ARG:HB2	28:2:42:LEU:HD23	1.66	0.61
25:Z:15:SER:HB2	25:Z:25:ARG:NH1	2.15	0.61
2:B:5:A:C8	2:B:2899:A:N1	2.68	0.61
2:B:61:C:O2	23:X:29:ARG:HG2	2.00	0.61
2:B:588:U:P	12:L:27:LEU:HB3	2.41	0.61
2:B:827:U:OP2	2:B:2446:G:H4'	1.93	0.61
2:B:946:C:H2'	2:B:947:A:H8	1.66	0.61
2:B:1175:A:H3'	2:B:1176:U:O4'	2.00	0.61
2:B:1566:A:C3'	4:C:58:LYS:CG	2.79	0.61
2:B:2531:A:C8	8:G:175:LYS:HG2	2.35	0.61
2:B:2784:U:H2'	2:B:2785:C:H6	1.65	0.61
4:C:229:HIS:ND1	4:C:230:PRO:HD2	2.16	0.61
7:F:140:ILE:HG22	7:F:142:TYR:H	1.64	0.61
12:L:66:PHE:N	12:L:66:PHE:CD1	2.69	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:10:ARG:HG3	15:O:10:ARG:NH1	2.13	0.61
17:Q:94:LEU:HD13	17:Q:94:LEU:H	1.66	0.61
28:2:8:SER:HG	28:2:11:LYS:HB2	1.66	0.61
29:3:7:ARG:HE	29:3:11:LYS:HZ3	1.46	0.61
1:A:56:G:O2'	7:F:22:ASN:O	2.17	0.61
2:B:466:A:C5'	28:2:44:VAL:HG13	2.26	0.61
2:B:694:U:H5'	2:B:1353:A:O2'	2.00	0.61
2:B:993:G:H4'	18:R:77:PHE:CE2	2.35	0.61
2:B:1225:G:H5'	18:R:78:ARG:HB2	1.82	0.61
2:B:1340:U:P	20:T:19:LYS:NZ	2.74	0.61
2:B:1665:A:H5'	11:K:57:VAL:HG12	1.69	0.61
2:B:1766:G:H3'	2:B:1959:G:H4'	0.72	0.61
2:B:1863:G:H4'	2:B:2411:A:H5''	1.82	0.61
2:B:1938:A:N9	2:B:2591:C:C5'	2.63	0.61
2:B:2056:G:C8	2:B:2577:A:N1	2.67	0.61
2:B:2292:U:H2'	2:B:2293:G:H8	1.65	0.61
2:B:2405:G:H1'	2:B:2412:A:N6	2.15	0.61
2:B:2750:A:P	8:G:3:VAL:CG2	2.70	0.61
2:B:2820:A:OP1	14:N:5:LYS:CG	2.49	0.61
2:B:2852:G:H2'	2:B:2853:C:C6	2.36	0.61
3:V:57:TYR:HE1	13:M:130:PHE:CE2	2.18	0.61
10:J:34:ARG:HB3	10:J:39:LYS:HB2	1.83	0.61
12:L:78:ARG:NH2	12:L:82:LEU:HD23	2.16	0.61
13:M:63:ILE:HD11	13:M:65:ILE:HG23	1.82	0.61
21:U:6:ARG:C	21:U:8:ASP:H	2.07	0.61
30:4:7:VAL:O	30:4:23:ILE:HG21	2.01	0.61
2:B:15:G:C2'	26:0:17:SER:OG	2.47	0.61
2:B:36:G:H2'	2:B:37:C:O4'	2.00	0.61
2:B:76:C:HO2'	23:X:55:THR:CB	2.13	0.61
2:B:183:C:O3'	2:B:432:A:C4'	2.44	0.61
2:B:196:A:H2'	2:B:196:A:N3	2.16	0.61
2:B:534:U:C4	32:B:3014:HOH:O	2.49	0.61
2:B:583:G:OP1	17:Q:5:ARG:O	2.19	0.61
2:B:856:G:H2'	2:B:857:G:C8	2.36	0.61
2:B:948:C:O4'	2:B:984:A:C2	2.54	0.61
2:B:1009:A:H4'	17:Q:61:ILE:HG13	1.76	0.61
2:B:1658:C:H4'	32:B:3284:HOH:O	2.00	0.61
2:B:2261:C:O2'	2:B:2327:A:N1	2.34	0.61
3:V:40:ILE:H	3:V:40:ILE:HD13	1.66	0.61
3:V:70:ILE:N	3:V:70:ILE:HD13	2.16	0.61
3:V:86:LEU:HD11	13:M:134:THR:HG22	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:172:THR:O	4:C:173:LEU:HB2	2.01	0.61
4:C:209:ALA:HB1	4:C:213:ARG:NH1	2.15	0.61
5:D:8:LYS:HD2	16:P:5:LYS:CG	2.30	0.61
5:D:25:THR:CG2	16:P:8:GLU:OE2	2.48	0.61
5:D:157:LYS:NZ	5:D:158:GLY:HA3	2.15	0.61
6:E:170:ARG:HH21	6:E:175:ILE:HD12	1.66	0.61
9:H:116:ARG:HB2	9:H:133:GLN:HB2	1.83	0.61
12:L:54:GLN:C	12:L:56:PRO:HD2	2.25	0.61
14:N:1:MET:HE2	14:N:4:ARG:O	2.00	0.61
14:N:121:LYS:N	26:O:51:ARG:CG	2.61	0.61
15:O:41:ALA:HB1	15:O:42:PRO:HD2	1.82	0.61
16:P:62:LYS:HE2	16:P:74:GLN:HE22	1.66	0.61
16:P:93:LYS:HB3	16:P:96:LEU:HA	1.83	0.61
25:Z:3:LYS:HB2	25:Z:51:VAL:CG2	2.25	0.61
30:4:33:HIS:H	30:4:33:HIS:CD2	2.17	0.61
1:A:7:G:H4'	15:O:36:TYR:CE2	2.34	0.61
1:A:31:C:H4'	7:F:8:LYS:CE	2.11	0.61
1:A:32:U:OP1	7:F:4:HIS:CD2	2.52	0.61
1:A:58:A:C2	7:F:25:MET:SD	2.94	0.61
2:B:143:C:H2'	2:B:144:A:N9	2.16	0.61
2:B:280:U:H2'	2:B:281:C:C6	2.36	0.61
2:B:417:C:H2'	2:B:418:C:H6	1.65	0.61
2:B:649:G:H22	29:3:44:ARG:NE	1.79	0.61
2:B:667:U:C3'	12:L:49:GLY:HA3	2.30	0.61
2:B:684:G:H5'	28:2:16:HIS:HA	1.81	0.61
2:B:700:G:C8	2:B:734:A:C6	2.88	0.61
2:B:789:A:H5'	28:2:4:THR:CG2	2.04	0.61
2:B:1184:U:OP2	24:Y:29:ARG:C	2.42	0.61
2:B:1266:G:O5'	26:O:15:ARG:CD	2.48	0.61
2:B:1341:G:N2	20:T:86:THR:CG2	2.64	0.61
2:B:1359:A:C6	2:B:2212:A:H2	2.19	0.61
2:B:1655:A:N7	5:D:144:GLY:O	2.18	0.61
2:B:1666:G:N1	2:B:2550:G:C2	2.69	0.61
2:B:1765:U:C4	2:B:1958:C:C2	2.83	0.61
2:B:1827:U:C1'	2:B:1900:A:O3'	2.49	0.61
2:B:2015:A:H5''	19:S:91:GLY:H	1.65	0.61
2:B:2178:C:P	2:B:2180:U:O3'	2.59	0.61
2:B:2243:U:OP1	25:Z:19:GLY:CA	2.41	0.61
2:B:2312:U:C4'	7:F:71:LYS:HB3	2.27	0.61
2:B:2494:G:N2	13:M:81:ARG:HD2	2.13	0.61
5:D:8:LYS:NZ	16:P:1:SER:CA	2.64	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:16:THR:N	16:P:79:VAL:HG11	2.09	0.61
11:K:47:ILE:HG23	11:K:48:PRO:HD2	1.83	0.61
18:R:20:VAL:HG13	18:R:97:LYS:NZ	2.16	0.61
19:S:7:HIS:CG	19:S:8:ARG:H	2.19	0.61
1:A:47:C:C3'	15:O:102:ARG:HD2	2.09	0.60
2:B:411:G:H3'	2:B:2406:A:O2'	2.02	0.60
2:B:458:G:C4'	28:2:39:ARG:NH1	2.63	0.60
2:B:463:G:H1	28:2:43:THR:HG22	1.65	0.60
2:B:478:A:N1	2:B:500:G:H4'	2.16	0.60
2:B:580:U:H2'	2:B:581:C:C6	2.35	0.60
2:B:736:C:H6	32:B:3240:HOH:O	1.83	0.60
2:B:882:G:P	2:B:898:C:C4'	2.89	0.60
2:B:1203:U:H3'	2:B:1204:A:C5'	2.31	0.60
2:B:1670:C:H2'	2:B:1955:U:H5	1.65	0.60
2:B:1690:A:H2'	2:B:1691:C:O4'	2.01	0.60
2:B:1773:A:N6	2:B:1830:C:C5	2.69	0.60
2:B:1779:U:O2'	2:B:2589:A:OP1	2.11	0.60
2:B:1783:A:C1'	2:B:2590:A:H8	2.13	0.60
2:B:2217:G:H5''	25:Z:41:HIS:CE1	2.35	0.60
2:B:2301:C:H2'	2:B:2302:U:H6	1.65	0.60
2:B:2378:A:C4'	15:O:117:PHE:CD1	2.83	0.60
2:B:2746:U:C1'	8:G:138:GLN:HA	2.31	0.60
2:B:2804:U:H2'	2:B:2805:C:H6	1.66	0.60
2:B:2872:A:O2'	2:B:2873:A:H5''	2.01	0.60
6:E:128:ALA:CB	6:E:129:PRO:CD	2.79	0.60
12:L:109:LYS:HA	12:L:126:ARG:HB2	1.83	0.60
17:Q:27:ARG:HA	17:Q:33:VAL:HB	1.83	0.60
18:R:35:PHE:HB2	18:R:64:VAL:CG2	2.31	0.60
23:X:22:LEU:HA	23:X:47:ARG:HH12	1.66	0.60
1:A:48:U:H2'	1:A:49:C:C6	2.36	0.60
1:A:57:A:OP2	7:F:21:TYR:HD1	1.84	0.60
2:B:278:A:H2'	2:B:278:A:N3	2.16	0.60
2:B:364:C:H2'	2:B:365:U:C6	2.36	0.60
2:B:486:C:H6	19:S:60:HIS:CD2	2.18	0.60
2:B:742:A:H2	32:B:3428:HOH:O	1.84	0.60
2:B:850:U:C2'	24:Y:46:MET:HG3	2.31	0.60
2:B:1297:C:H5''	2:B:2710:C:H4'	1.83	0.60
2:B:1669:A:N6	2:B:2550:G:N2	2.32	0.60
2:B:1784:A:H5'	2:B:2590:A:O4'	1.85	0.60
2:B:2257:U:C2	2:B:2449:U:O3'	2.51	0.60
2:B:2261:C:C1'	2:B:2327:A:H61	2.13	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2355:G:C5'	22:W:31:LEU:H	2.12	0.60
2:B:2575:C:OP1	5:D:150:GLN:NE2	2.34	0.60
2:B:2788:C:O2'	2:B:2809:A:H1'	2.01	0.60
3:V:57:TYR:CZ	13:M:131:VAL:HG23	2.31	0.60
4:C:37:SER:H	4:C:62:ARG:HB2	1.66	0.60
4:C:146:LYS:HB3	4:C:147:PRO:HD2	1.81	0.60
6:E:48:THR:CG2	6:E:86:ALA:HB1	2.31	0.60
9:H:57:LYS:HG3	9:H:61:VAL:HG21	1.82	0.60
12:L:77:ILE:HG13	12:L:108:ALA:HB1	1.83	0.60
13:M:64:TRP:O	13:M:102:LEU:HB2	2.00	0.60
19:S:92:ARG:HG2	26:O:2:VAL:CG2	2.30	0.60
22:W:40:ARG:NH1	22:W:40:ARG:N	2.49	0.60
1:A:59:A:H1'	7:F:25:MET:HG2	1.74	0.60
2:B:419:U:H2'	2:B:420:C:H6	1.66	0.60
2:B:483:A:H5''	21:U:45:GLN:C	2.26	0.60
2:B:564:C:O4'	17:Q:36:GLN:OE1	2.19	0.60
2:B:971:G:P	2:B:974:G:N3	2.74	0.60
2:B:1163:G:C4'	18:R:91:GLN:HG3	2.31	0.60
2:B:1198:U:H2'	2:B:1199:U:C6	2.35	0.60
2:B:1263:U:C5'	26:O:6:LYS:C	2.60	0.60
2:B:1750:G:C1'	2:B:2859:G:H22	2.13	0.60
2:B:1994:C:O2'	2:B:2558:C:C4	2.55	0.60
2:B:2002:G:C2'	5:D:133:THR:H	2.13	0.60
2:B:2004:G:N1	5:D:138:LEU:HB2	2.14	0.60
2:B:2245:U:N3	2:B:2442:C:N3	2.41	0.60
2:B:2257:U:O5'	2:B:2450:A:H5'	1.97	0.60
2:B:2334:U:H5'	15:O:8:ILE:C	2.26	0.60
2:B:2600:A:O2'	2:B:2601:C:H5'	2.01	0.60
3:V:79:ARG:HG3	13:M:26:VAL:CG1	2.32	0.60
5:D:12:THR:HB	5:D:21:SER:O	2.01	0.60
7:F:34:THR:O	7:F:153:ILE:HA	2.01	0.60
9:H:2:GLN:HE22	9:H:19:VAL:C	2.09	0.60
11:K:99:ILE:HD13	11:K:118:LEU:HD13	1.83	0.60
12:L:38:GLN:C	12:L:40:SER:N	2.53	0.60
12:L:43:GLY:N	32:L:151:HOH:O	2.31	0.60
15:O:35:ILE:N	15:O:35:ILE:HD13	2.17	0.60
2:B:664:G:H2'	2:B:665:U:H6	1.65	0.60
2:B:796:C:H2'	2:B:797:G:H8	1.64	0.60
2:B:921:C:O2'	2:B:922:C:H5'	2.02	0.60
2:B:958:U:H6	13:M:17:ASN:C	2.10	0.60
2:B:1131:G:H1'	2:B:1133:A:N6	2.14	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1276:A:N3	14:N:23:ASN:ND2	2.50	0.60
2:B:1654:A:C4	5:D:143:PRO:O	2.52	0.60
2:B:1722:A:N6	2:B:1738:G:H1'	2.17	0.60
2:B:1773:A:C4'	2:B:1973:G:N7	2.64	0.60
2:B:1854:A:H62	2:B:1888:G:H8	1.47	0.60
2:B:1936:A:C2'	2:B:1984:G:C2	2.80	0.60
2:B:2015:A:C8	19:S:88:ARG:HD3	2.36	0.60
2:B:2502:G:C5	32:B:3348:HOH:O	2.52	0.60
4:C:140:VAL:HG23	4:C:193:GLU:OE2	2.01	0.60
5:D:88:GLU:CG	5:D:89:GLU:H	2.14	0.60
7:F:36:ASN:HD22	7:F:87:LYS:H	1.48	0.60
7:F:107:VAL:H	7:F:108:PRO:HD2	1.63	0.60
12:L:118:THR:H	12:L:119:PRO:CD	2.11	0.60
14:N:116:VAL:HG13	14:N:117:ASP:N	2.17	0.60
16:P:31:VAL:HA	16:P:81:ASP:CB	2.31	0.60
24:Y:3:THR:HG21	24:Y:43:ILE:HB	1.83	0.60
2:B:23:G:C2'	19:S:77:ASP:OD2	2.49	0.60
2:B:443:A:OP1	6:E:44:ARG:NH1	2.28	0.60
2:B:789:A:C1'	28:2:3:ARG:NH2	2.62	0.60
2:B:833:A:H2'	2:B:834:G:C8	2.37	0.60
2:B:992:C:O2'	2:B:993:G:H5'	2.01	0.60
2:B:1082:U:C4	2:B:1086:A:C2	2.89	0.60
2:B:1417:C:O2	2:B:1418:G:O4'	2.19	0.60
2:B:1486:U:H2'	2:B:1487:U:H6	1.66	0.60
2:B:1674:G:OP2	2:B:1955:U:O4'	1.98	0.60
2:B:2256:G:N3	2:B:2447:G:N2	2.49	0.60
2:B:2258:C:C2'	2:B:2425:A:O4'	2.48	0.60
2:B:2531:A:H5'	8:G:174:LYS:O	2.01	0.60
2:B:2531:A:H2	2:B:2662:A:H61	1.47	0.60
2:B:2836:U:H2'	2:B:2837:A:H8	1.65	0.60
6:E:181:ILE:CB	12:L:15:ALA:HA	2.30	0.60
12:L:111:ILE:H	12:L:111:ILE:CD1	2.12	0.60
13:M:58:LYS:C	13:M:60:GLN:H	2.09	0.60
14:N:32:GLU:HA	14:N:115:LEU:HD21	1.82	0.60
15:O:48:LEU:HD23	15:O:49:VAL:N	2.16	0.60
16:P:5:LYS:C	16:P:7:LEU:N	2.55	0.60
17:Q:88:GLU:HA	18:R:53:PHE:HZ	1.64	0.60
17:Q:110:GLU:OE1	18:R:52:PRO:HG3	2.00	0.60
21:U:11:ILE:HB	21:U:69:VAL:CB	2.30	0.60
1:A:58:A:C5	7:F:27:VAL:HG23	2.34	0.60
1:A:76:G:C1'	13:M:136:MET:SD	2.90	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:96:C:H4'	23:X:42:LEU:HD11	0.62	0.60
2:B:116:C:H2'	2:B:117:G:C8	2.36	0.60
2:B:240:C:H3'	2:B:241:A:H5''	1.83	0.60
2:B:535:G:C5	32:B:3009:HOH:O	2.54	0.60
2:B:564:C:H1'	17:Q:36:GLN:OE1	1.98	0.60
2:B:594:U:H2'	2:B:595:C:H6	1.66	0.60
2:B:708:G:H2'	2:B:709:U:C6	2.36	0.60
2:B:922:C:O2'	22:W:25:PHE:HE1	1.83	0.60
2:B:1009:A:C2'	17:Q:61:ILE:HD11	2.24	0.60
2:B:1250:G:O2'	2:B:1251:C:C5'	2.48	0.60
2:B:1264:A:H2	2:B:2017:U:O4	1.76	0.60
2:B:1666:G:C2	2:B:2550:G:C2	2.90	0.60
2:B:1750:G:C2'	2:B:2859:G:H22	2.14	0.60
2:B:1766:G:O6	2:B:1958:C:N3	2.32	0.60
2:B:1853:A:N3	2:B:2237:G:N7	2.49	0.60
2:B:1939:U:C5'	2:B:2591:C:O2'	2.50	0.60
2:B:2266:A:H4'	2:B:2267:A:N7	2.16	0.60
2:B:2292:U:H2'	2:B:2293:G:C8	2.37	0.60
2:B:2724:U:H5'	5:D:116:LYS:NZ	2.14	0.60
4:C:22:GLU:CD	4:C:202:ARG:HE	2.09	0.60
5:D:84:LEU:HD21	5:D:86:GLU:HB2	1.82	0.60
7:F:106:ALA:CB	7:F:136:ILE:HG23	2.30	0.60
8:G:32:LEU:HD21	8:G:74:MET:CB	2.29	0.60
11:K:64:ARG:N	11:K:83:ALA:HB3	2.09	0.60
12:L:27:LEU:HD12	12:L:27:LEU:N	2.16	0.60
13:M:66:ARG:H	13:M:100:LYS:HB2	1.67	0.60
16:P:23:ASP:HA	16:P:49:ILE:HB	1.83	0.60
17:Q:47:ARG:HH22	17:Q:50:ARG:HG2	1.67	0.60
1:A:56:G:C5'	7:F:13:LYS:HD2	2.32	0.60
2:B:2:G:N2	2:B:2902:C:C2	2.69	0.60
2:B:598:U:H2'	2:B:599:A:H8	1.66	0.60
2:B:682:G:C4'	28:2:26:ASN:HB3	2.27	0.60
2:B:684:G:H4'	28:2:16:HIS:ND1	2.16	0.60
2:B:931:U:O4	2:B:1184:U:N1	2.35	0.60
2:B:1030:C:OP1	13:M:117:PHE:CD2	2.55	0.60
2:B:1082:U:O4	2:B:1086:A:C2	2.54	0.60
2:B:1131:G:H1	2:B:2024:G:N2	1.87	0.60
2:B:1552:A:H2'	2:B:1553:A:H5'	1.84	0.60
2:B:1709:U:H2'	2:B:1710:G:H8	1.67	0.60
2:B:1770:G:H5''	2:B:1967:C:C6	2.37	0.60
2:B:1806:C:O2'	4:C:48:ILE:O	2.16	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1826:G:H1'	2:B:1901:A:OP2	2.02	0.60
2:B:1827:U:O4'	2:B:1900:A:O3'	2.19	0.60
2:B:2311:A:N3	7:F:75:GLY:N	2.50	0.60
2:B:2485:G:H8	13:M:44:ARG:NH1	1.99	0.60
2:B:2633:G:H1'	5:D:62:LYS:HG2	1.80	0.60
2:B:2669:G:H2'	2:B:2670:A:H8	1.65	0.60
3:V:82:TYR:HA	13:M:34:LYS:CD	2.32	0.60
4:C:29:PHE:HB2	4:C:31:PRO:HD2	1.83	0.60
6:E:91:ASP:O	6:E:92:HIS:HB2	2.02	0.60
8:G:97:VAL:HG23	8:G:124:CYS:SG	2.41	0.60
10:J:16:TYR:O	10:J:55:ILE:HG22	2.01	0.60
10:J:81:ILE:HG23	10:J:82:GLY:H	1.67	0.60
12:L:47:ARG:HD2	12:L:48:ARG:N	2.17	0.60
16:P:52:ARG:HG2	16:P:54:LEU:HB2	1.83	0.60
16:P:76:HIS:CD2	16:P:76:HIS:H	2.18	0.60
2:B:26:G:H1'	2:B:515:A:N6	2.17	0.60
2:B:466:A:H3'	28:2:34:ARG:CZ	2.31	0.60
2:B:738:G:C5'	32:B:3301:HOH:O	2.42	0.60
2:B:1314:C:H1'	2:B:1604:C:C4'	2.28	0.60
2:B:1339:G:O2'	2:B:1394:U:P	2.60	0.60
2:B:1771:C:O3'	2:B:1968:G:C5'	2.50	0.60
2:B:1799:G:C8	4:C:175:LEU:HD11	2.26	0.60
2:B:1817:G:C8	4:C:86:ARG:HB3	2.37	0.60
2:B:2056:G:N9	2:B:2577:A:C6	2.68	0.60
2:B:2500:U:H5'	2:B:2501:C:OP2	2.02	0.60
2:B:2591:C:H2'	2:B:2592:G:H8	1.65	0.60
2:B:2769:U:H2'	2:B:2770:G:C8	2.37	0.60
3:V:29:ILE:CD1	13:M:136:MET:HE2	2.31	0.60
6:E:3:LEU:O	6:E:4:VAL:HG12	2.02	0.60
6:E:106:LYS:HA	6:E:108:ILE:HD13	1.83	0.60
7:F:125:GLY:HA3	7:F:159:ALA:HB3	1.83	0.60
8:G:173:ALA:HB3	8:G:174:LYS:NZ	2.16	0.60
10:J:7:LYS:C	10:J:9:GLU:H	2.10	0.60
11:K:25:LEU:HD12	11:K:38:ILE:HB	1.84	0.60
12:L:61:LEU:CB	12:L:62:PRO:CD	2.75	0.60
20:T:69:ARG:H	20:T:75:GLY:HA3	1.66	0.60
20:T:73:ARG:CD	28:2:42:LEU:C	2.64	0.60
22:W:66:VAL:HG13	22:W:67:LYS:N	2.16	0.60
26:0:26:SER:HB2	26:0:38:LEU:HD12	1.84	0.60
1:A:57:A:C2	7:F:12:VAL:HG22	2.36	0.60
1:A:60:C:H2'	1:A:61:G:H8	1.63	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:201:C:O2	2:B:251:A:N3	2.35	0.60
2:B:222:A:N6	2:B:232:G:H1'	2.17	0.60
2:B:458:G:N2	2:B:469:G:H2'	2.17	0.60
2:B:687:C:OP1	28:2:6:GLN:CD	2.44	0.60
2:B:687:C:C4'	28:2:5:PHE:C	2.75	0.60
2:B:747:U:H5'	32:B:3133:HOH:O	1.88	0.60
2:B:814:C:H4'	18:R:86:GLN:C	2.27	0.60
2:B:1515:A:H2'	2:B:1516:G:O4'	2.01	0.60
2:B:1662:U:O2	11:K:4:GLU:N	2.34	0.60
2:B:1662:U:C2	11:K:4:GLU:O	2.54	0.60
2:B:1670:C:N1	2:B:1955:U:C5	2.69	0.60
2:B:1768:C:O5'	2:B:1960:A:H3'	2.00	0.60
2:B:1799:G:N7	4:C:175:LEU:CB	2.65	0.60
2:B:1818:U:C1'	4:C:155:ARG:N	2.65	0.60
2:B:1819:A:C3'	4:C:176:ARG:HG3	2.32	0.60
2:B:1947:C:N4	2:B:1986:C:C2	2.55	0.60
2:B:2291:U:H2'	2:B:2292:U:C6	2.35	0.60
2:B:2331:G:O2'	22:W:69:GLU:OE2	2.18	0.60
2:B:2386:A:C4'	22:W:38:ARG:HD3	2.20	0.60
2:B:2461:A:H2'	2:B:2462:C:C6	2.36	0.60
2:B:2880:C:H4'	14:N:90:ARG:HD2	0.62	0.60
6:E:98:LYS:HG3	6:E:99:LYS:H	1.65	0.60
20:T:43:ILE:HG23	32:T:106:HOH:O	2.02	0.60
1:A:88:C:N4	13:M:20:LEU:CD1	2.65	0.60
2:B:72:U:H5	23:X:58:ASN:ND2	1.92	0.60
2:B:94:A:N3	23:X:34:SER:HB3	2.17	0.60
2:B:685:A:P	28:2:15:SER:HG	2.24	0.60
2:B:852:U:C1'	24:Y:42:ALA:HA	2.32	0.60
2:B:936:A:H2'	2:B:937:C:C6	2.37	0.60
2:B:1080:A:H2'	2:B:1081:U:H6	1.67	0.60
2:B:1248:G:C5	17:Q:1:ALA:HB1	2.37	0.60
2:B:1263:U:C6	19:S:95:ARG:NH2	2.70	0.60
2:B:1277:G:O4'	14:N:23:ASN:HB2	2.02	0.60
2:B:1295:C:OP1	14:N:71:ARG:HA	2.01	0.60
2:B:1381:G:H2'	2:B:1382:G:H5'	1.84	0.60
2:B:1469:A:H2'	2:B:1470:A:H8	1.65	0.60
2:B:1629:U:O2	2:B:2698:U:H5''	2.02	0.60
2:B:1766:G:C4	2:B:1948:G:N2	2.70	0.60
2:B:1826:G:P	4:C:242:HIS:HB2	2.42	0.60
2:B:2229:U:H2'	2:B:2230:G:C8	2.37	0.60
2:B:2255:G:N1	2:B:2447:G:N1	2.50	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2306:C:C4	7:F:76:PHE:CZ	2.90	0.60
2:B:2355:G:H5'	22:W:31:LEU:N	2.16	0.60
2:B:2723:C:H5''	14:N:3:HIS:CB	2.31	0.60
3:V:29:ILE:HD11	13:M:136:MET:HE2	1.83	0.60
4:C:226:PRO:HD3	4:C:233:GLY:N	2.17	0.60
10:J:17:VAL:HG23	10:J:139:VAL:HB	1.83	0.60
10:J:64:VAL:HG11	10:J:68:LYS:HD2	1.84	0.60
11:K:60:ALA:HA	11:K:87:LEU:HG	1.83	0.60
11:K:119:ALA:O	11:K:120:PRO:C	2.44	0.60
17:Q:85:ALA:HB1	17:Q:88:GLU:HB2	1.83	0.60
20:T:30:ILE:O	20:T:84:TYR:HA	2.02	0.60
25:Z:25:ARG:HG3	25:Z:26:SER:H	1.65	0.60
26:O:2:VAL:HG22	26:O:3:GLN:H	1.67	0.60
29:3:48:MET:SD	29:3:51:LYS:HG2	2.42	0.60
1:A:14:U:H1'	1:A:107:G:H4'	0.62	0.59
2:B:198:C:C2'	2:B:199:A:H5''	2.32	0.59
2:B:437:U:H2'	2:B:438:G:C8	2.36	0.59
2:B:679:C:P	32:B:2997:HOH:O	2.41	0.59
2:B:685:A:P	28:2:15:SER:OG	2.60	0.59
2:B:859:G:OP1	22:W:19:ARG:NH1	2.32	0.59
2:B:917:A:C2	2:B:918:A:H1'	2.36	0.59
2:B:1118:C:H4'	3:V:84:PRO:HG2	0.67	0.59
2:B:1312:U:N3	2:B:1604:C:C2	2.70	0.59
2:B:1807:G:C1'	4:C:45:ASN:CG	2.72	0.59
2:B:1889:A:C4	2:B:2235:G:H2'	2.15	0.59
2:B:1992:G:H8	2:B:2550:G:H5'	0.80	0.59
2:B:2003:A:C1'	5:D:135:GLY:CA	2.57	0.59
2:B:2005:A:H2'	5:D:143:PRO:HD2	0.70	0.59
2:B:2246:G:C2	2:B:2425:A:OP2	2.55	0.59
2:B:2270:A:C2'	22:W:18:LYS:HD3	2.32	0.59
2:B:2274:A:H2'	2:B:2276:G:OP1	2.02	0.59
2:B:2306:C:C4	7:F:76:PHE:CE2	2.89	0.59
4:C:140:VAL:HG23	4:C:141:HIS:H	1.67	0.59
4:C:220:ARG:HH11	4:C:220:ARG:HG3	1.67	0.59
6:E:23:PHE:HE2	12:L:17:LYS:CB	2.07	0.59
7:F:108:PRO:HA	7:F:113:PHE:CD1	2.37	0.59
8:G:124:CYS:HB3	8:G:129:GLU:O	2.01	0.59
14:N:4:ARG:HG3	14:N:5:LYS:N	2.16	0.59
21:U:84:PHE:HA	32:U:109:HOH:O	1.98	0.59
21:U:94:PHE:HD2	21:U:95:PHE:H	1.50	0.59
27:1:42:VAL:HG13	27:1:43:ARG:N	2.16	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:3:26:ALA:HB1	29:3:29:ARG:CG	2.32	0.59
2:B:7:G:O6	2:B:2897:U:O4	2.19	0.59
2:B:813:U:H5''	18:R:80:ARG:HH12	1.66	0.59
2:B:967:U:H2'	2:B:968:C:C6	2.37	0.59
2:B:1012:U:P	17:Q:74:SER:HB3	2.42	0.59
2:B:1015:U:H2'	2:B:1016:G:C8	2.37	0.59
2:B:1219:U:H2'	2:B:1220:G:H8	1.65	0.59
2:B:1664:A:O2'	2:B:2561:U:O3'	2.19	0.59
2:B:1664:A:C1'	11:K:40:LYS:CG	2.59	0.59
2:B:1783:A:O2'	2:B:2590:A:C1'	2.49	0.59
2:B:1819:A:H3'	4:C:176:ARG:CD	2.32	0.59
2:B:2013:A:N7	2:B:2613:U:P	2.74	0.59
2:B:2575:C:P	5:D:150:GLN:HE21	2.25	0.59
2:B:2577:A:O4'	2:B:2612:C:N4	2.36	0.59
6:E:43:THR:O	6:E:89:PRO:HA	2.02	0.59
6:E:156:ASN:ND2	6:E:157:LEU:HG	2.17	0.59
11:K:11:ALA:HB3	11:K:85:VAL:CG2	2.32	0.59
16:P:47:ILE:CG2	16:P:48:ALA:H	2.11	0.59
19:S:18:ARG:NH1	19:S:25:ARG:HH22	1.97	0.59
29:3:12:ARG:HB2	29:3:12:ARG:HH11	1.64	0.59
2:B:4:U:C4	2:B:2900:A:N6	2.67	0.59
2:B:45:G:C5'	2:B:46:G:C5'	2.69	0.59
2:B:96:C:H1'	23:X:42:LEU:HD12	1.75	0.59
2:B:202:U:H5'	2:B:252:G:O2'	2.01	0.59
2:B:310:A:P	21:U:14:THR:HG22	2.43	0.59
2:B:671:C:H5'	12:L:39:LYS:CG	2.09	0.59
2:B:672:C:O3'	6:E:76:PRO:HG2	2.01	0.59
2:B:827:U:H4'	2:B:2446:G:OP2	2.01	0.59
2:B:1118:C:C5'	3:V:84:PRO:HG2	2.18	0.59
2:B:1637:A:C1'	2:B:2697:G:O2'	2.50	0.59
2:B:1857:G:H1'	2:B:1885:A:N6	2.17	0.59
2:B:2003:A:N9	5:D:135:GLY:HA3	2.16	0.59
2:B:2032:G:O6	2:B:2572:A:C8	2.55	0.59
2:B:2138:G:H2'	2:B:2139:U:C6	2.36	0.59
2:B:2144:G:H2'	2:B:2146:C:OP2	2.01	0.59
2:B:2331:G:C4'	22:W:69:GLU:OE2	2.49	0.59
2:B:2848:G:C8	16:P:96:LEU:HG	2.36	0.59
4:C:37:SER:OG	4:C:38:LYS:N	2.33	0.59
4:C:75:ALA:HB1	4:C:93:VAL:HG13	1.85	0.59
6:E:109:LEU:HD23	6:E:110:SER:N	2.18	0.59
11:K:97:THR:OG1	11:K:98:ARG:HD2	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:7:GLY:O	14:N:8:ARG:HB2	2.01	0.59
21:U:5:ARG:HG2	21:U:6:ARG:H	1.67	0.59
21:U:7:ASP:N	21:U:24:VAL:HA	2.17	0.59
22:W:55:ASP:CG	22:W:56:HIS:N	2.59	0.59
25:Z:66:ILE:HB	25:Z:67:PRO:HD3	1.85	0.59
1:A:57:A:N1	7:F:24:VAL:O	2.35	0.59
2:B:61:C:C4'	23:X:29:ARG:CB	2.78	0.59
2:B:417:C:H2'	2:B:418:C:C6	2.37	0.59
2:B:483:A:H5''	21:U:46:LYS:N	2.17	0.59
2:B:528:A:N1	2:B:2043:C:O3'	2.35	0.59
2:B:531:C:H1'	2:B:2018:G:H22	1.67	0.59
2:B:534:U:OP2	17:Q:21:LYS:HE2	2.03	0.59
2:B:566:U:O2	2:B:576:U:O5'	2.20	0.59
2:B:869:G:H2'	2:B:870:U:C6	2.37	0.59
2:B:997:G:H5'	17:Q:91:ARG:CD	2.28	0.59
2:B:1758:U:H2'	2:B:2696:U:H4'	1.84	0.59
2:B:1785:A:N3	2:B:2591:C:OP1	2.35	0.59
2:B:2064:C:C6	2:B:2254:C:OP2	2.55	0.59
2:B:2228:G:H2'	2:B:2229:U:H6	1.66	0.59
2:B:2236:U:H2'	2:B:2237:G:O4'	2.02	0.59
2:B:2334:U:O2	15:O:12:THR:CA	2.47	0.59
2:B:2547:A:H2'	2:B:2548:U:C6	2.37	0.59
5:D:22:ILE:N	5:D:23:PRO:CD	2.65	0.59
5:D:120:GLY:H	5:D:123:LYS:CG	2.16	0.59
7:F:59:ILE:HD11	7:F:137:PHE:CD2	2.37	0.59
7:F:177:ARG:HG2	7:F:178:LYS:H	1.67	0.59
16:P:99:LEU:HD12	16:P:101:GLU:OE2	2.02	0.59
18:R:37:GLU:CG	18:R:62:GLU:H	2.13	0.59
21:U:81:ARG:N	21:U:81:ARG:HD2	2.17	0.59
2:B:1010:A:OP1	17:Q:61:ILE:O	2.21	0.59
2:B:1192:G:O2'	2:B:1193:G:H5'	2.01	0.59
2:B:1224:U:O2'	18:R:87:GLN:HA	2.02	0.59
2:B:1269:A:P	2:B:2012:G:H3'	2.42	0.59
2:B:1663:G:C8	11:K:5:GLN:CD	2.66	0.59
2:B:1670:C:N1	2:B:1955:U:H5	1.99	0.59
2:B:1936:A:C4'	2:B:1984:G:H2'	2.33	0.59
2:B:1997:C:H42	2:B:2549:G:C4'	2.14	0.59
2:B:2004:G:N1	5:D:142:VAL:CG2	2.65	0.59
2:B:2225:A:N1	9:H:25:TYR:CE1	2.71	0.59
2:B:2359:C:N4	2:B:2428:G:N1	2.48	0.59
2:B:2577:A:H1'	2:B:2612:C:H42	1.68	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2577:A:H1'	2:B:2612:C:N4	2.18	0.59
3:V:46:LYS:O	3:V:50:MET:HG3	2.02	0.59
3:V:77:VAL:CG2	13:M:134:THR:CG2	2.62	0.59
5:D:23:PRO:HB3	5:D:189:VAL:H	1.67	0.59
5:D:52:THR:HG22	5:D:75:ALA:HB1	1.84	0.59
8:G:8:VAL:O	8:G:48:THR:HA	2.02	0.59
14:N:83:LEU:HA	14:N:86:ARG:HD3	1.85	0.59
22:W:39:GLN:C	22:W:40:ARG:HG3	2.26	0.59
2:B:139:U:O2	20:T:2:ILE:HB	2.03	0.59
2:B:414:C:H2'	2:B:415:A:C8	2.36	0.59
2:B:814:C:H4'	18:R:87:GLN:N	2.17	0.59
2:B:1327:A:H2'	2:B:1328:A:O4'	2.02	0.59
2:B:1826:G:OP1	4:C:242:HIS:HB2	1.98	0.59
2:B:1938:A:C3'	2:B:1983:G:C8	2.83	0.59
2:B:2269:G:P	22:W:19:ARG:CG	2.90	0.59
2:B:2306:C:N3	7:F:76:PHE:HE2	2.00	0.59
2:B:2331:G:O4'	22:W:69:GLU:OE1	2.20	0.59
2:B:2527:C:H4'	30:4:31:PRO:CG	2.30	0.59
2:B:2575:C:O2	5:D:147:GLY:O	2.21	0.59
2:B:2759:G:H4'	8:G:34:ARG:HE	1.67	0.59
2:B:2849:U:H4'	2:B:2850:A:H5'	1.84	0.59
4:C:198:GLU:HA	4:C:201:LEU:HB2	1.83	0.59
4:C:224:MET:O	4:C:225:ASN:HB2	2.01	0.59
7:F:102:LEU:HD11	7:F:129:MET:HE1	1.84	0.59
8:G:148:ARG:NH2	8:G:153:PRO:HD2	2.18	0.59
10:J:17:VAL:CG1	10:J:57:LEU:HD21	2.32	0.59
10:J:125:TYR:HE2	10:J:134:ALA:HB2	1.67	0.59
17:Q:102:LYS:HD2	17:Q:102:LYS:H	1.68	0.59
18:R:97:LYS:O	18:R:98:ILE:HB	2.01	0.59
2:B:580:U:O3'	17:Q:31:TYR:N	2.33	0.59
2:B:721:A:H2'	2:B:722:A:C8	2.37	0.59
2:B:747:U:C3'	32:B:3133:HOH:O	2.51	0.59
2:B:1774:C:H4'	2:B:1976:U:N3	2.16	0.59
2:B:1779:U:H5	2:B:1784:A:N7	2.00	0.59
2:B:1993:U:H2'	2:B:2551:C:C2	2.37	0.59
2:B:2330:G:C1'	22:W:36:ILE:HD12	2.30	0.59
2:B:2509:G:C1'	32:B:3339:HOH:O	2.48	0.59
2:B:2527:C:C5'	30:4:31:PRO:CG	2.80	0.59
2:B:2774:C:H2'	2:B:2775:G:O4'	2.02	0.59
2:B:2811:G:OP1	5:D:61:THR:CG2	2.48	0.59
2:B:2883:A:OP1	26:0:52:LYS:HE3	1.95	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2885:G:H8	26:O:48:TYR:HE2	1.47	0.59
3:V:82:TYR:CA	13:M:34:LYS:CD	2.80	0.59
4:C:216:ARG:HB3	4:C:217:PRO:CD	2.33	0.59
11:K:2:ILE:HG22	11:K:67:LYS:HZ1	1.67	0.59
11:K:99:ILE:HG22	11:K:119:ALA:HB2	1.83	0.59
12:L:55:MET:N	12:L:56:PRO:HD2	2.16	0.59
14:N:28:LEU:HD12	14:N:28:LEU:H	1.67	0.59
17:Q:90:ASP:OD1	18:R:4:VAL:HG22	2.02	0.59
22:W:23:LYS:NZ	22:W:24:ARG:HG2	2.18	0.59
22:W:23:LYS:HZ2	22:W:24:ARG:HG2	1.65	0.59
24:Y:7:THR:HB	24:Y:34:THR:HB	1.84	0.59
24:Y:18:LYS:HZ2	24:Y:53:MET:HE2	1.67	0.59
1:A:48:U:O5'	15:O:102:ARG:NH1	2.35	0.59
1:A:52:A:H2'	1:A:53:A:O4'	2.03	0.59
2:B:45:G:OP1	2:B:46:G:H4'	2.03	0.59
2:B:441:U:H2'	2:B:442:G:C8	2.38	0.59
2:B:788:A:C4'	28:2:4:THR:OG1	2.39	0.59
2:B:1171:G:H2'	2:B:1172:C:O4'	2.02	0.59
2:B:1276:A:C2	14:N:23:ASN:ND2	2.70	0.59
2:B:1417:C:C5	2:B:1418:G:N7	2.33	0.59
2:B:1890:A:N7	2:B:2236:U:C5'	2.64	0.59
2:B:1993:U:C5	2:B:2551:C:H6	2.21	0.59
2:B:1994:C:O2'	2:B:2558:C:N3	2.35	0.59
2:B:2000:C:O2'	2:B:2001:C:H5'	2.02	0.59
2:B:2005:A:O5'	5:D:142:VAL:HG12	2.03	0.59
2:B:2057:G:H4'	26:O:1:ALA:H1	1.66	0.59
2:B:2244:U:C6	2:B:2433:A:C4	2.58	0.59
2:B:2304:G:N2	2:B:2312:U:H3	2.00	0.59
2:B:2639:A:H2'	2:B:2640:G:O4'	2.02	0.59
2:B:2642:G:C5'	10:J:81:ILE:HG22	2.32	0.59
2:B:2784:U:H5'	5:D:41:ALA:O	2.03	0.59
9:H:73:ASN:ND2	9:H:74:ALA:H	2.01	0.59
15:O:16:ARG:HG3	15:O:20:GLU:HG3	1.85	0.59
19:S:56:ALA:C	19:S:58:ALA:H	2.11	0.59
21:U:43:LYS:HZ3	21:U:45:GLN:HG2	1.68	0.59
22:W:40:ARG:NH1	22:W:40:ARG:H	2.01	0.59
2:B:25:U:C3'	19:S:81:SER:H	2.13	0.59
2:B:419:U:H2'	2:B:420:C:C6	2.38	0.59
2:B:881:G:P	2:B:899:A:N3	2.75	0.59
2:B:931:U:O4	2:B:1184:U:C2	2.55	0.59
2:B:1263:U:N3	2:B:2017:U:O4	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1665:A:O5'	11:K:57:VAL:CG1	0.71	0.59
2:B:1669:A:H8	2:B:2558:C:HO2'	1.51	0.59
2:B:1676:A:C4	2:B:2552:U:OP1	2.53	0.59
2:B:1759:A:C6	2:B:2697:G:H5''	2.29	0.59
2:B:1819:A:C3'	4:C:176:ARG:CB	2.81	0.59
2:B:2199:A:N7	2:B:2225:A:O4'	2.36	0.59
2:B:2311:A:O3'	7:F:71:LYS:HB2	2.03	0.59
5:D:150:GLN:C	5:D:151:THR:CG2	2.75	0.59
9:H:125:THR:CB	9:H:146:VAL:HB	2.33	0.59
10:J:41:LYS:HD2	10:J:44:TYR:O	2.03	0.59
23:X:44:LYS:HD2	23:X:48:ARG:HE	1.68	0.59
2:B:17:G:H2'	2:B:18:U:C6	2.38	0.59
2:B:190:A:N1	2:B:799:G:H1'	2.18	0.59
2:B:315:G:H2'	2:B:316:C:C6	2.37	0.59
2:B:736:C:C6	32:B:3240:HOH:O	2.50	0.59
2:B:1229:C:H2'	2:B:1230:A:H8	1.68	0.59
2:B:1439:A:C6	2:B:1552:A:N7	2.71	0.59
2:B:1673:G:O6	2:B:2553:G:OP1	2.20	0.59
2:B:1766:G:O6	2:B:1958:C:C4	2.56	0.59
2:B:1771:C:O3'	2:B:1968:G:H5''	2.03	0.59
2:B:1785:A:O2'	2:B:1938:A:N7	2.33	0.59
2:B:1816:C:C6	4:C:61:TYR:O	2.56	0.59
2:B:2008:C:OP1	2:B:2049:G:O4'	2.20	0.59
2:B:2013:A:OP2	2:B:2613:U:C2	2.53	0.59
2:B:2204:G:H5'	4:C:146:LYS:NZ	2.18	0.59
2:B:2217:G:OP1	25:Z:42:PRO:O	2.21	0.59
2:B:2741:A:H2'	2:B:2742:G:O4'	2.02	0.59
2:B:2895:G:H2'	2:B:2896:C:H6	1.68	0.59
4:C:154:ALA:C	4:C:156:SER:H	2.11	0.59
4:C:204:LEU:HB3	4:C:210:ALA:HB1	1.85	0.59
5:D:193:VAL:O	5:D:193:VAL:HG13	2.03	0.59
7:F:161:SER:OG	7:F:164:GLU:HB2	2.03	0.59
13:M:96:ILE:HG23	13:M:97:GLN:N	2.18	0.59
2:B:192:C:C4	32:B:3396:HOH:O	2.53	0.58
2:B:667:U:H2'	12:L:49:GLY:CA	2.32	0.58
2:B:814:C:H5	18:R:84:ARG:HA	1.62	0.58
2:B:1151:A:O2'	17:Q:80:ASN:OD1	2.19	0.58
2:B:1225:G:C5	18:R:88:GLY:CA	2.86	0.58
2:B:1664:A:H5'	11:K:22:ILE:N	2.18	0.58
2:B:1665:A:C8	2:B:2561:U:C5'	2.74	0.58
2:B:1766:G:H8	2:B:1958:C:HO2'	1.42	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1938:A:C4'	2:B:1983:G:H8	2.16	0.58
2:B:2017:U:N1	26:0:4:GLN:O	2.36	0.58
2:B:2063:C:O2'	2:B:2254:C:H3'	2.00	0.58
2:B:2270:A:C5	22:W:20:LEU:HB3	2.38	0.58
2:B:2478:A:P	30:4:32:LYS:CG	2.91	0.58
2:B:2582:G:P	2:B:2583:G:P	2.99	0.58
2:B:2811:G:C5'	5:D:62:LYS:HE2	2.31	0.58
5:D:17:GLU:CG	16:P:80:VAL:CG2	2.66	0.58
5:D:62:LYS:H	5:D:62:LYS:HE3	1.68	0.58
6:E:122:GLU:HB3	6:E:152:GLU:HB2	1.85	0.58
6:E:180:LEU:HA	6:E:186:VAL:HG21	1.84	0.58
8:G:126:THR:C	8:G:128:THR:H	2.11	0.58
10:J:20:ALA:HB1	10:J:59:ALA:HA	1.83	0.58
14:N:35:LYS:HA	14:N:112:TYR:HA	1.83	0.58
18:R:69:GLY:O	18:R:70:GLU:HG3	2.02	0.58
20:T:73:ARG:HD2	28:2:42:LEU:HG	0.63	0.58
21:U:90:LYS:HG3	21:U:91:LYS:H	1.68	0.58
1:A:37:C:O2	15:O:69:ASP:CA	2.51	0.58
1:A:39:A:O2'	1:A:40:U:H5'	2.03	0.58
2:B:412:A:C5	2:B:2411:A:H2	2.15	0.58
2:B:531:C:H5	32:B:3307:HOH:O	1.83	0.58
2:B:539:G:H5'	10:J:7:LYS:C	2.28	0.58
2:B:693:A:H4'	2:B:1354:A:C5'	2.33	0.58
2:B:704:G:H1'	2:B:727:A:H61	1.67	0.58
2:B:811:U:O2	2:B:1251:C:H6	1.69	0.58
2:B:851:C:O2	24:Y:42:ALA:O	2.22	0.58
2:B:1082:U:C4	2:B:1086:A:N1	2.71	0.58
2:B:1118:C:C3'	3:V:84:PRO:CG	2.63	0.58
2:B:1800:C:H3'	4:C:151:GLY:HA3	1.85	0.58
2:B:1998:A:N3	11:K:4:GLU:OE2	2.36	0.58
2:B:2090:A:C5	2:B:2092:U:C2'	2.85	0.58
2:B:2287:A:HO2'	2:B:2288:A:H2'	1.67	0.58
2:B:2813:A:H2'	2:B:2814:A:H8	1.67	0.58
2:B:2814:A:H2'	26:0:39:ARG:CB	2.28	0.58
6:E:25:GLU:C	12:L:18:ARG:N	2.53	0.58
12:L:119:PRO:O	12:L:120:VAL:HB	2.03	0.58
15:O:40:ILE:HG12	15:O:41:ALA:O	2.03	0.58
16:P:97:TYR:O	16:P:98:TYR:HB2	2.03	0.58
17:Q:111:LYS:CB	18:R:52:PRO:HB3	2.33	0.58
20:T:23:ALA:O	20:T:24:MET:HE3	2.03	0.58
22:W:10:ARG:HH11	22:W:10:ARG:CB	2.16	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:183:C:C4'	2:B:433:C:O4'	2.52	0.58
2:B:303:G:H2'	2:B:304:U:C6	2.38	0.58
2:B:495:G:P	19:S:6:LYS:HE3	2.43	0.58
2:B:667:U:C2'	12:L:49:GLY:HA2	2.33	0.58
2:B:1158:C:P	24:Y:10:ARG:HH21	2.25	0.58
2:B:1163:G:O4'	18:R:91:GLN:HG3	2.03	0.58
2:B:1262:A:OP1	19:S:97:LEU:HD11	2.03	0.58
2:B:1373:A:O2'	2:B:2211:A:H8	1.86	0.58
2:B:1620:G:O6	32:B:3079:HOH:O	1.99	0.58
2:B:1771:C:C2'	2:B:1973:G:OP1	2.52	0.58
2:B:1798:U:OP1	4:C:255:LYS:HB3	2.01	0.58
2:B:1819:A:C3'	4:C:176:ARG:CG	2.81	0.58
2:B:2015:A:H5'	19:S:91:GLY:H	1.68	0.58
2:B:2296:U:H4'	2:B:2297:A:OP1	2.02	0.58
2:B:2684:U:OP1	16:P:59:THR:CG2	2.51	0.58
2:B:2688:G:H1'	2:B:2721:A:N6	2.17	0.58
3:V:66:ASP:HB3	3:V:68:LYS:HG2	1.85	0.58
6:E:26:ALA:HA	12:L:18:ARG:CG	2.32	0.58
7:F:13:LYS:HD3	7:F:16:MET:HG3	1.85	0.58
8:G:10:VAL:HG12	8:G:47:ASN:HA	1.86	0.58
8:G:132:LEU:HD11	8:G:144:ALA:HB2	1.85	0.58
9:H:69:ALA:HB2	9:H:139:PHE:O	2.03	0.58
10:J:19:ASP:HB2	10:J:21:THR:HG23	1.84	0.58
12:L:57:LEU:C	12:L:59:ARG:H	2.11	0.58
15:O:16:ARG:NE	15:O:16:ARG:HA	2.18	0.58
17:Q:102:LYS:HD2	17:Q:102:LYS:N	2.17	0.58
19:S:86:MET:O	19:S:94:ASP:HB3	2.03	0.58
20:T:61:LEU:HD12	20:T:62:VAL:N	2.18	0.58
20:T:77:ARG:HG2	20:T:78:SER:H	1.69	0.58
25:Z:44:PHE:HD1	25:Z:44:PHE:H	1.50	0.58
25:Z:69:SER:C	25:Z:70:LYS:HE2	2.28	0.58
28:2:17:GLY:HA2	28:2:21:ARG:NH1	2.17	0.58
29:3:24:LYS:HZ1	29:3:29:ARG:HH12	1.50	0.58
30:4:11:CYS:SG	30:4:12:ARG:N	2.75	0.58
2:B:30:G:H8	32:B:3227:HOH:O	1.72	0.58
2:B:76:C:C2'	23:X:52:ARG:N	2.65	0.58
2:B:997:G:C4'	17:Q:91:ARG:NE	2.54	0.58
2:B:1129:A:OP1	2:B:2517:C:OP1	2.21	0.58
2:B:1417:C:N4	2:B:1418:G:H1	1.92	0.58
2:B:1505:A:H2'	2:B:1506:U:C6	2.38	0.58
2:B:1666:G:C4	2:B:2559:C:C2'	2.82	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1669:A:C2	2:B:2551:C:O2	2.56	0.58
2:B:1770:G:C1'	2:B:1939:U:N3	2.65	0.58
2:B:1784:A:OP2	2:B:2589:A:H1'	2.02	0.58
2:B:1784:A:H5''	2:B:2590:A:O4'	2.02	0.58
2:B:1827:U:O2'	2:B:1970:A:C5'	2.51	0.58
2:B:1973:G:H2'	2:B:1974:C:C6	2.38	0.58
2:B:2067:G:H5''	2:B:2429:G:O2'	2.04	0.58
2:B:2576:G:OP2	5:D:150:GLN:HG2	2.03	0.58
2:B:2635:A:C5'	5:D:78:GLY:O	2.51	0.58
4:C:10:PRO:HD2	4:C:202:ARG:HH12	1.67	0.58
5:D:34:VAL:HG23	5:D:93:GLY:HA3	1.84	0.58
5:D:101:PHE:O	5:D:102:ALA:CB	2.51	0.58
5:D:107:VAL:HG23	5:D:204:LYS:O	2.03	0.58
9:H:8:LYS:HB3	9:H:14:SER:HA	1.84	0.58
10:J:80:HIS:O	10:J:81:ILE:C	2.45	0.58
10:J:139:VAL:O	10:J:140:LEU:HD23	2.03	0.58
17:Q:101:ASP:HB3	17:Q:104:ALA:HB3	1.84	0.58
21:U:29:SER:O	21:U:30:SER:HB2	2.04	0.58
2:B:398:C:C3'	25:Z:49:ARG:NH2	2.40	0.58
2:B:700:G:H1'	2:B:734:A:C5	2.39	0.58
2:B:814:C:H6	18:R:85:LYS:HG2	1.69	0.58
2:B:931:U:H1'	2:B:1167:C:C2'	2.34	0.58
2:B:1314:C:H6	2:B:1604:C:O2'	1.80	0.58
2:B:1771:C:H5'	2:B:1967:C:O3'	1.92	0.58
2:B:1774:C:C5	2:B:1830:C:C5	2.83	0.58
2:B:2262:U:C5'	2:B:2387:U:O2	2.51	0.58
2:B:2347:C:C2'	27:1:45:HIS:NE2	2.65	0.58
2:B:2815:C:O4'	26:0:39:ARG:HD3	1.97	0.58
2:B:2888:C:H2'	2:B:2889:C:C6	2.39	0.58
4:C:68:ARG:HD2	4:C:127:ASN:HD21	1.68	0.58
4:C:139:THR:HA	4:C:193:GLU:OE1	2.03	0.58
6:E:28:VAL:CG2	12:L:16:GLY:O	2.51	0.58
8:G:159:LYS:O	8:G:159:LYS:HG3	2.02	0.58
13:M:31:PHE:CD2	13:M:128:THR:HG21	2.38	0.58
14:N:82:GLU:O	14:N:86:ARG:HG3	2.02	0.58
15:O:17:LYS:O	15:O:21:LEU:HA	2.03	0.58
16:P:47:ILE:HA	16:P:63:ILE:HG23	1.85	0.58
20:T:38:ALA:O	20:T:42:GLU:HB2	2.03	0.58
21:U:13:LEU:HG	21:U:69:VAL:HG22	1.85	0.58
21:U:23:LYS:O	21:U:25:LYS:HG3	2.03	0.58
1:A:50:A:H3'	15:O:65:THR:C	2.28	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:15:G:H4'	26:0:17:SER:O	2.03	0.58
2:B:189:G:H2'	2:B:205:G:N2	2.18	0.58
2:B:363:G:H2'	2:B:364:C:C6	2.38	0.58
2:B:587:C:C2'	12:L:36:LYS:HD2	2.31	0.58
2:B:828:U:H5''	2:B:2060:A:N1	2.13	0.58
2:B:956:G:H22	2:B:959:A:H3'	1.68	0.58
2:B:1009:A:C4'	17:Q:61:ILE:HG13	2.32	0.58
2:B:1550:C:H2'	2:B:1551:A:H8	1.69	0.58
2:B:1769:U:C6	2:B:1935:G:O5'	2.06	0.58
2:B:1887:C:C2	2:B:2234:G:O3'	2.56	0.58
2:B:2015:A:OP2	19:S:93:ALA:N	2.37	0.58
2:B:2257:U:N3	2:B:2449:U:O2	2.16	0.58
2:B:2297:A:N6	2:B:2319:G:H5''	2.18	0.58
2:B:2415:G:H2'	2:B:2416:C:C6	2.38	0.58
2:B:2642:G:C5'	10:J:81:ILE:HG23	2.31	0.58
2:B:2674:G:O3'	2:B:2675:A:P	2.61	0.58
2:B:2809:A:H2'	2:B:2810:A:C8	2.39	0.58
3:V:63:ILE:O	3:V:65:VAL:HG22	2.03	0.58
4:C:164:VAL:HB	4:C:167:ASP:CG	2.29	0.58
7:F:37:MET:HE3	7:F:56:LEU:HD12	1.86	0.58
9:H:82:SER:HB3	9:H:90:LEU:HD23	1.85	0.58
10:J:35:ARG:NE	10:J:35:ARG:HA	2.19	0.58
12:L:77:ILE:HB	12:L:110:VAL:CG2	2.28	0.58
12:L:117:THR:HB	12:L:119:PRO:O	2.02	0.58
13:M:41:LEU:HG	13:M:95:LEU:HD12	1.85	0.58
16:P:13:LYS:HA	16:P:15:ASP:OD1	2.04	0.58
16:P:25:VAL:CG1	16:P:87:ARG:HA	2.33	0.58
26:0:52:LYS:HA	26:0:52:LYS:HZ3	1.67	0.58
29:3:44:ARG:HB3	29:3:45:PRO:HD2	1.84	0.58
1:A:15:A:OP1	1:A:107:G:O2'	2.21	0.58
2:B:565:C:C4'	2:B:578:G:C2	2.85	0.58
2:B:570:G:N9	2:B:2030:A:C6	2.71	0.58
2:B:729:G:P	4:C:16:VAL:CG1	2.88	0.58
2:B:751:A:OP1	2:B:1614:A:P	2.62	0.58
2:B:1299:G:H4'	2:B:1301:A:H1'	1.86	0.58
2:B:1652:A:C5'	5:D:123:LYS:CE	2.55	0.58
2:B:1669:A:C4	2:B:2558:C:O2	2.57	0.58
2:B:1673:G:H5'	2:B:1944:U:C5'	2.21	0.58
2:B:1750:G:H1'	2:B:2859:G:H22	1.68	0.58
2:B:1759:A:N3	2:B:2697:G:C1'	2.61	0.58
2:B:1905:C:HO2'	2:B:1906:G:P	2.24	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1949:G:C2	2:B:1987:A:N1	2.72	0.58
2:B:1974:C:C4	2:B:1978:A:N1	2.71	0.58
2:B:2392:A:OP1	29:3:32:LEU:HD11	2.04	0.58
2:B:2415:G:H2'	2:B:2416:C:H6	1.69	0.58
7:F:126:ASN:N	7:F:126:ASN:ND2	2.51	0.58
8:G:94:ARG:HB2	8:G:94:ARG:HH11	1.68	0.58
12:L:60:ARG:HA	29:3:7:ARG:NE	2.18	0.58
13:M:8:LYS:O	13:M:9:PHE:C	2.47	0.58
14:N:57:THR:OG1	14:N:61:ALA:HB3	2.04	0.58
15:O:108:ASP:HB3	15:O:111:ARG:NH2	2.19	0.58
19:S:103:ILE:HG23	19:S:104:THR:N	2.18	0.58
21:U:11:ILE:HG23	21:U:20:LYS:O	2.04	0.58
1:A:22:U:C2	7:F:22:ASN:HB2	2.38	0.58
2:B:220:G:H4'	2:B:234:U:H4'	1.85	0.58
2:B:276:U:O2'	2:B:277:G:H5'	2.04	0.58
2:B:964:C:P	2:B:2250:G:H1	2.26	0.58
2:B:989:G:C2'	24:Y:12:ALA:CB	2.82	0.58
2:B:1249:U:C3'	12:L:32:GLY:CA	2.81	0.58
2:B:1412:U:H2'	2:B:1413:A:H8	1.69	0.58
2:B:1637:A:N3	2:B:2698:U:O4'	2.34	0.58
2:B:1676:A:N3	2:B:2552:U:OP2	2.34	0.58
2:B:1816:C:H5'	4:C:85:ASN:CB	2.31	0.58
2:B:1971:U:H1'	4:C:238:ASN:H	1.68	0.58
2:B:2311:A:C4	7:F:74:ALA:O	2.55	0.58
2:B:2886:A:C8	26:0:29:VAL:HG22	2.38	0.58
4:C:227:VAL:HG12	4:C:228:ASP:OD1	2.03	0.58
6:E:120:VAL:H	6:E:189:THR:CG2	2.15	0.58
6:E:196:VAL:O	6:E:199:MET:HE2	2.03	0.58
11:K:73:ASP:OD1	11:K:74:GLY:N	2.37	0.58
12:L:94:THR:HB	12:L:103:ILE:CG1	2.34	0.58
19:S:70:LYS:O	19:S:71:VAL:HB	2.04	0.58
1:A:32:U:H2'	1:A:33:G:O4'	2.04	0.58
2:B:184:C:H2'	2:B:185:G:H8	1.68	0.58
2:B:585:G:O6	17:Q:5:ARG:NH2	2.37	0.58
2:B:607:U:OP2	6:E:98:LYS:CE	2.50	0.58
2:B:674:G:OP1	6:E:72:SER:HB2	2.04	0.58
2:B:686:U:C1'	28:2:8:SER:OG	2.52	0.58
2:B:1273:U:C1'	2:B:1647:U:C6	2.85	0.58
2:B:1669:A:C1'	2:B:2558:C:O2'	2.40	0.58
2:B:1785:A:C1'	2:B:2590:A:O3'	2.49	0.58
2:B:1854:A:N6	2:B:2235:G:C5'	2.67	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1998:A:N6	2:B:2549:G:OP1	2.26	0.58
2:B:2328:A:H2'	2:B:2329:U:H6	1.66	0.58
2:B:2527:C:C4'	30:4:31:PRO:HG2	2.33	0.58
5:D:14:ILE:HG21	16:P:78:PRO:HB3	1.86	0.58
9:H:66:ASN:HA	9:H:138:VAL:HG21	1.86	0.58
10:J:61:LYS:HE2	10:J:61:LYS:HA	1.86	0.58
11:K:80:ASP:OD1	16:P:70:GLU:HB3	2.03	0.58
15:O:15:ARG:NH2	15:O:17:LYS:HD2	2.19	0.58
16:P:47:ILE:HG23	16:P:63:ILE:CG2	2.33	0.58
17:Q:27:ARG:HG3	17:Q:32:ARG:NH2	2.19	0.58
21:U:73:ASN:HB2	21:U:96:LYS:NZ	2.18	0.58
2:B:27:G:H1'	2:B:513:A:N6	2.19	0.58
2:B:65:U:H2'	2:B:66:C:H6	1.69	0.58
2:B:929:U:O2	24:Y:25:GLY:C	2.44	0.58
2:B:1204:A:N1	2:B:1241:A:N1	2.52	0.58
2:B:1417:C:C5'	2:B:1418:G:OP2	2.44	0.58
2:B:1666:G:H4'	2:B:2560:A:OP1	2.04	0.58
2:B:1666:G:HO2'	2:B:2560:A:P	2.26	0.58
2:B:1768:C:O2	2:B:1961:C:N4	2.36	0.58
2:B:1827:U:O2	2:B:1900:A:C1'	2.42	0.58
2:B:2003:A:C4	5:D:135:GLY:HA3	2.39	0.58
2:B:2013:A:C2	2:B:2611:C:O2'	2.57	0.58
2:B:2063:C:C2'	2:B:2255:G:OP2	2.51	0.58
2:B:2259:U:H6	2:B:2427:C:N3	2.02	0.58
2:B:2814:A:C2'	26:O:39:ARG:HD2	2.32	0.58
6:E:142:ALA:C	6:E:143:LEU:HD12	2.29	0.58
6:E:153:LEU:HD21	6:E:201:ALA:O	2.04	0.58
7:F:12:VAL:HG22	7:F:27:VAL:HG11	1.86	0.58
17:Q:92:LYS:CA	17:Q:95:ALA:HB2	2.29	0.58
28:2:12:ARG:HH21	28:2:18:PHE:H	1.50	0.58
29:3:16:THR:HG21	29:3:22:LYS:NZ	2.18	0.58
2:B:6:A:N1	2:B:2898:U:N1	2.51	0.57
2:B:24:G:N2	19:S:78:GLU:OE1	2.37	0.57
2:B:272:A:H2'	2:B:273:G:H8	1.69	0.57
2:B:292:U:P	32:B:3179:HOH:O	2.39	0.57
2:B:414:C:C2	2:B:2409:G:C5	2.87	0.57
2:B:416:U:H2'	2:B:417:C:C6	2.39	0.57
2:B:515:A:H5''	17:Q:29:ARG:HH11	1.67	0.57
2:B:607:U:P	6:E:98:LYS:HZ3	2.17	0.57
2:B:930:G:C5'	24:Y:27:GLY:C	2.58	0.57
2:B:966:G:H2'	2:B:967:U:C6	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:977:G:O2'	2:B:978:G:H5'	2.04	0.57
2:B:1224:U:H1'	18:R:89:HIS:CB	2.32	0.57
2:B:1275:A:C4	14:N:16:HIS:CD2	2.87	0.57
2:B:1393:A:N6	20:T:22:THR:HG1	1.96	0.57
2:B:1534:U:H2'	2:B:1536:C:C4	2.39	0.57
2:B:1636:U:O2'	2:B:1760:C:O2'	1.58	0.57
2:B:1636:U:O2	2:B:1760:C:O2	2.22	0.57
2:B:1992:G:N3	2:B:2550:G:C8	2.72	0.57
2:B:2144:G:C4	2:B:2146:C:H5'	2.39	0.57
2:B:2199:A:H5''	2:B:2200:C:C6	2.39	0.57
2:B:2630:G:N9	2:B:2894:G:C6	2.71	0.57
2:B:2646:C:H2'	2:B:2647:U:O4'	2.04	0.57
7:F:174:PHE:N	7:F:175:PRO:HD2	2.18	0.57
9:H:140:ALA:C	9:H:141:LYS:HD3	2.29	0.57
15:O:98:GLN:O	15:O:103:VAL:HG21	2.04	0.57
17:Q:92:LYS:O	17:Q:94:LEU:HD13	2.04	0.57
19:S:32:ALA:C	19:S:33:LEU:HD22	2.29	0.57
20:T:73:ARG:NH2	28:2:43:THR:CA	2.33	0.57
23:X:44:LYS:CD	23:X:48:ARG:HE	2.16	0.57
1:A:63:C:H2'	1:A:64:G:H8	1.69	0.57
2:B:182:A:H2'	2:B:183:C:C6	2.39	0.57
2:B:699:A:C4'	2:B:700:G:C4'	2.51	0.57
2:B:832:U:H2'	2:B:833:A:C8	2.40	0.57
2:B:974:G:H1'	2:B:975:A:C8	2.39	0.57
2:B:989:G:C3'	24:Y:12:ALA:HB1	2.01	0.57
2:B:1244:A:O2'	2:B:1245:G:H5'	2.04	0.57
2:B:1447:C:H2'	2:B:1448:G:C8	2.39	0.57
2:B:1773:A:O4'	2:B:1973:G:C5	2.57	0.57
2:B:1802:A:H2'	2:B:1803:A:C8	2.39	0.57
2:B:2004:G:C5	5:D:142:VAL:HG21	2.06	0.57
2:B:2016:U:H6	26:0:2:VAL:CA	2.02	0.57
3:V:79:ARG:C	3:V:87:GLN:HE22	2.12	0.57
4:C:141:HIS:HB3	4:C:190:THR:HB	1.85	0.57
5:D:15:PHE:CD2	5:D:18:ASP:HB2	2.39	0.57
5:D:31:ALA:HB2	5:D:49:GLN:NE2	2.19	0.57
5:D:138:LEU:N	5:D:138:LEU:CD2	2.66	0.57
6:E:25:GLU:HG3	12:L:17:LYS:HB2	1.72	0.57
6:E:38:GLY:C	6:E:40:ARG:H	2.12	0.57
6:E:50:ALA:O	6:E:74:LYS:HB2	2.04	0.57
11:K:103:VAL:HB	11:K:107:LEU:CD2	2.28	0.57
12:L:77:ILE:HG22	12:L:78:ARG:N	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:3:GLN:OE1	13:M:47:GLU:HB2	2.03	0.57
18:R:37:GLU:HG2	18:R:62:GLU:N	2.16	0.57
27:1:35:LEU:C	27:1:36:LYS:HD2	2.28	0.57
28:2:43:THR:O	28:2:44:VAL:C	2.47	0.57
2:B:308:G:N2	2:B:477:A:O4'	2.37	0.57
2:B:728:G:C5'	4:C:16:VAL:HG21	2.33	0.57
2:B:932:U:H5'	2:B:933:A:OP1	2.05	0.57
2:B:1166:G:H2'	2:B:1167:C:C6	2.39	0.57
2:B:1341:G:N2	20:T:86:THR:HG22	2.20	0.57
2:B:1650:A:O2'	14:N:2:ARG:NE	2.36	0.57
2:B:1657:U:O4'	2:B:2579:C:O2	2.22	0.57
2:B:1681:G:H2'	2:B:1757:A:N1	2.19	0.57
2:B:1932:A:H2'	2:B:1933:G:O4'	2.04	0.57
2:B:2056:G:C6	2:B:2577:A:H1'	2.39	0.57
2:B:2056:G:O6	2:B:2577:A:N9	2.36	0.57
2:B:2278:A:OP2	22:W:8:SER:HB3	2.02	0.57
2:B:2286:G:O6	27:1:33:LEU:CA	2.49	0.57
4:C:12:ARG:NE	4:C:18:VAL:HG11	2.19	0.57
4:C:21:PRO:O	4:C:22:GLU:HB2	2.04	0.57
4:C:124:LYS:CB	4:C:125:PRO:CD	2.71	0.57
7:F:116:LEU:HD12	7:F:176:PHE:CD2	2.39	0.57
10:J:73:VAL:HG23	10:J:74:TYR:H	1.69	0.57
12:L:96:LYS:N	12:L:96:LYS:HD3	2.18	0.57
26:0:42:ILE:HD11	26:0:44:ALA:HB3	1.86	0.57
2:B:18:U:H2'	2:B:19:A:H8	1.69	0.57
2:B:244:A:H2'	2:B:245:G:O4'	2.04	0.57
2:B:364:C:H2'	2:B:365:U:H6	1.67	0.57
2:B:654:A:C6	29:3:18:LYS:CB	2.87	0.57
2:B:657:U:H2'	2:B:658:U:C6	2.39	0.57
2:B:671:C:C3'	12:L:39:LYS:HE3	2.34	0.57
2:B:1638:C:H5''	2:B:2710:C:C2	2.37	0.57
2:B:1666:G:N2	2:B:2550:G:H22	1.99	0.57
2:B:1799:G:H21	4:C:153:LEU:HA	1.66	0.57
2:B:1806:C:C4'	4:C:50:THR:CB	2.44	0.57
2:B:1827:U:H1'	2:B:1900:A:O3'	2.04	0.57
2:B:1843:C:O2'	4:C:250:GLN:HG2	2.04	0.57
2:B:2213:U:O2	2:B:2213:U:C2'	2.52	0.57
2:B:2246:G:H2'	2:B:2247:A:C8	2.38	0.57
2:B:2248:C:H6	2:B:2446:G:H2'	1.67	0.57
2:B:2262:U:H2'	2:B:2263:C:H6	1.69	0.57
2:B:2280:G:C4'	2:B:2327:A:H4'	2.29	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2803:G:H2'	2:B:2804:U:C6	2.39	0.57
4:C:20:ASN:HB2	4:C:203:VAL:CG1	2.31	0.57
5:D:52:THR:HG22	5:D:76:GLY:N	2.20	0.57
6:E:115:GLN:HB2	12:L:11:GLY:O	2.05	0.57
7:F:65:LEU:C	7:F:67:THR:H	2.12	0.57
7:F:102:LEU:O	7:F:107:VAL:HG23	2.04	0.57
12:L:27:LEU:C	12:L:29:LYS:N	2.62	0.57
13:M:88:ASN:N	13:M:88:ASN:HD22	2.02	0.57
13:M:116:ALA:HA	13:M:119:LEU:HD23	1.86	0.57
15:O:13:ARG:HB2	15:O:13:ARG:HH11	1.69	0.57
15:O:58:ILE:HG13	15:O:59:ALA:N	2.19	0.57
16:P:7:LEU:HD13	16:P:7:LEU:O	2.05	0.57
17:Q:10:ARG:HA	17:Q:10:ARG:NE	2.19	0.57
18:R:75:VAL:H	18:R:90:ARG:NE	2.03	0.57
27:1:31:GLU:HB3	27:1:32:LYS:HE3	1.86	0.57
1:A:49:C:OP1	15:O:68:LYS:O	2.22	0.57
2:B:84:A:C5'	21:U:91:LYS:CE	2.82	0.57
2:B:322:A:H5'	2:B:340:A:H1'	1.86	0.57
2:B:566:U:H1'	2:B:577:G:C8	2.37	0.57
2:B:805:G:N1	2:B:2060:A:C2'	2.57	0.57
2:B:930:G:C5'	24:Y:27:GLY:HA3	2.03	0.57
2:B:1032:A:H5'	30:4:16:ILE:HG12	1.75	0.57
2:B:1269:A:H5''	2:B:2012:G:H3'	1.76	0.57
2:B:1580:A:C5'	2:B:1581:G:P	2.73	0.57
2:B:1651:G:H2'	5:D:123:LYS:HD3	1.85	0.57
2:B:1709:U:H2'	2:B:1710:G:C8	2.40	0.57
2:B:1758:U:H2'	2:B:2696:U:H5'	1.85	0.57
2:B:1806:C:C6	4:C:50:THR:OG1	2.53	0.57
2:B:1938:A:C2	2:B:2590:A:O3'	2.57	0.57
2:B:2031:A:H2	2:B:2455:G:HO2'	1.50	0.57
2:B:2189:U:H2'	2:B:2190:G:H8	1.70	0.57
2:B:2308:G:H5''	2:B:2308:G:N3	2.20	0.57
2:B:2419:U:OP2	29:3:34:LYS:CA	2.51	0.57
2:B:2531:A:C5'	8:G:174:LYS:O	2.51	0.57
2:B:2814:A:O2'	26:0:39:ARG:CG	2.42	0.57
3:V:46:LYS:HA	3:V:46:LYS:HE3	1.85	0.57
12:L:55:MET:HG2	12:L:56:PRO:CD	2.22	0.57
13:M:8:LYS:HE2	13:M:8:LYS:H	1.70	0.57
18:R:47:VAL:C	18:R:49:ILE:H	2.11	0.57
19:S:14:ALA:O	19:S:17:VAL:HG22	2.03	0.57
25:Z:25:ARG:HH11	25:Z:25:ARG:CB	2.16	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1:22:THR:O	27:1:23:THR:HG23	2.03	0.57
27:1:42:VAL:HG12	27:1:43:ARG:HG3	1.87	0.57
1:A:76:G:C4'	13:M:136:MET:CE	2.71	0.57
2:B:76:C:C3'	23:X:52:ARG:H	2.04	0.57
2:B:220:G:C4'	2:B:234:U:C2'	2.83	0.57
2:B:528:A:OP2	10:J:113:PRO:CD	2.46	0.57
2:B:732:C:O5'	2:B:733:G:P	2.62	0.57
2:B:1032:A:H5''	30:4:16:ILE:CG1	2.29	0.57
2:B:1252:G:C5	17:Q:35:PHE:CE1	2.57	0.57
2:B:1593:A:H2'	2:B:1594:U:C6	2.39	0.57
2:B:1599:U:H5''	20:T:81:LYS:HZ2	1.66	0.57
2:B:1791:A:C5	2:B:1970:A:N1	2.51	0.57
2:B:1889:A:C5	2:B:2235:G:H2'	2.24	0.57
2:B:2261:C:O3'	2:B:2387:U:C2'	2.52	0.57
2:B:2331:G:H2'	2:B:2332:C:C6	2.40	0.57
2:B:2347:C:OP1	27:1:38:PHE:CD1	2.58	0.57
2:B:2443:C:O2'	2:B:2444:G:H5'	2.04	0.57
2:B:2804:U:H2'	2:B:2805:C:C6	2.38	0.57
5:D:35:THR:HG22	5:D:46:ARG:HH22	1.70	0.57
6:E:115:GLN:HB2	12:L:11:GLY:CA	2.35	0.57
7:F:70:ARG:HA	7:F:80:GLN:HG3	1.85	0.57
8:G:17:LYS:HB3	8:G:24:THR:CG2	2.34	0.57
10:J:41:LYS:HD2	10:J:44:TYR:HB2	1.87	0.57
11:K:47:ILE:HG22	11:K:49:ARG:H	1.68	0.57
14:N:34:ILE:HG12	14:N:34:ILE:O	2.05	0.57
15:O:8:ILE:O	15:O:10:ARG:N	2.38	0.57
16:P:25:VAL:HG13	16:P:88:ARG:N	2.09	0.57
17:Q:27:ARG:HG3	17:Q:32:ARG:HH21	1.69	0.57
19:S:17:VAL:HG23	19:S:76:VAL:HG11	1.85	0.57
21:U:82:VAL:HB	21:U:94:PHE:CD2	2.40	0.57
1:A:57:A:C6	7:F:24:VAL:O	2.57	0.57
2:B:9:G:O6	2:B:2629:U:C4	2.57	0.57
2:B:630:G:OP2	29:3:45:PRO:HD2	2.04	0.57
2:B:705:A:N6	2:B:726:G:H1'	2.20	0.57
2:B:903:C:H2'	2:B:904:G:C8	2.40	0.57
2:B:948:C:H1'	2:B:984:A:N3	2.18	0.57
2:B:1787:A:H4'	4:C:236:GLY:O	2.04	0.57
2:B:1827:U:H2'	2:B:1970:A:O2'	2.03	0.57
2:B:1938:A:C5	2:B:2591:C:C5'	2.71	0.57
2:B:2246:G:C2'	2:B:2426:A:C2	2.80	0.57
2:B:2679:A:O2'	2:B:2680:U:H5'	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2867:G:N3	2:B:2867:G:C2'	2.67	0.57
5:D:45:TYR:CE2	5:D:83:ARG:HG3	2.40	0.57
8:G:42:VAL:HG12	8:G:51:PHE:HD1	1.68	0.57
9:H:116:ARG:HB3	9:H:131:SER:O	2.04	0.57
12:L:77:ILE:HA	12:L:101:ILE:HD13	1.86	0.57
25:Z:59:ARG:HH21	25:Z:62:LYS:HZ2	1.51	0.57
1:A:20:G:H2'	1:A:21:G:C8	2.40	0.57
1:A:59:A:C4	7:F:25:MET:N	2.73	0.57
1:A:86:G:H2'	1:A:87:U:O4'	2.04	0.57
2:B:84:A:OP2	21:U:91:LYS:CD	2.52	0.57
2:B:674:G:H5''	6:E:71:GLY:N	2.20	0.57
2:B:699:A:C2'	2:B:700:G:O3'	2.53	0.57
2:B:997:G:P	17:Q:91:ARG:HG3	2.45	0.57
2:B:1263:U:H5'	26:O:6:LYS:C	2.28	0.57
2:B:1464:G:H2'	2:B:1465:G:H8	1.69	0.57
2:B:1767:G:O4'	2:B:1959:G:H2'	2.04	0.57
2:B:1786:A:C2	2:B:1939:U:C2	2.93	0.57
2:B:1936:A:C3'	2:B:1985:C:C5	2.60	0.57
2:B:1994:C:C2'	2:B:2550:G:C6	2.88	0.57
2:B:2005:A:H3'	5:D:142:VAL:HG12	1.85	0.57
2:B:2428:G:OP2	2:B:2448:A:N3	2.38	0.57
2:B:2636:C:OP1	5:D:79:LEU:HA	2.05	0.57
2:B:2734:A:H2'	2:B:2735:G:H5'	1.86	0.57
5:D:14:ILE:HG22	16:P:79:VAL:CG2	2.34	0.57
10:J:57:LEU:HD12	10:J:128:ASN:C	2.30	0.57
13:M:105:MET:HE3	13:M:106:ASP:C	2.29	0.57
16:P:27:VAL:HG12	16:P:47:ILE:CD1	2.34	0.57
18:R:85:LYS:C	18:R:87:GLN:H	2.13	0.57
22:W:19:ARG:HH22	22:W:71:LYS:HD2	1.70	0.57
1:A:6:G:H2'	1:A:7:G:C8	2.40	0.57
1:A:32:U:H5''	7:F:5:ASP:CG	2.29	0.57
2:B:76:C:C1'	23:X:55:THR:OG1	2.51	0.57
2:B:220:G:H4'	2:B:234:U:C2'	2.34	0.57
2:B:526:A:O2'	2:B:2044:C:O4'	2.21	0.57
2:B:584:C:H41	17:Q:5:ARG:CZ	2.18	0.57
2:B:660:C:H2'	2:B:661:A:C8	2.40	0.57
2:B:948:C:C1'	2:B:984:A:N3	2.68	0.57
2:B:1041:G:H2'	2:B:1042:G:H8	1.68	0.57
2:B:1121:C:H2'	2:B:1122:G:O4'	2.05	0.57
2:B:1799:G:O2'	4:C:181:ARG:CD	2.51	0.57
2:B:1799:G:H21	4:C:152:GLN:C	2.13	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1887:C:H2'	2:B:2234:G:O2'	2.05	0.57
2:B:2015:A:OP2	19:S:93:ALA:C	2.47	0.57
2:B:2069:G:O5'	2:B:2432:A:O4'	2.16	0.57
2:B:2262:U:C3'	2:B:2329:U:H1'	2.33	0.57
6:E:138:LEU:HD22	6:E:144:GLU:HA	1.86	0.57
16:P:8:GLU:HA	16:P:11:GLN:HG3	1.86	0.57
20:T:72:GLN:HE21	28:2:36:ALA:N	2.02	0.57
2:B:143:C:H2'	2:B:144:A:C8	2.40	0.57
2:B:197:A:H2	2:B:2069:G:H21	1.53	0.57
2:B:465:G:C5'	28:2:44:VAL:O	2.53	0.57
2:B:674:G:OP1	6:E:72:SER:CB	2.53	0.57
2:B:864:G:O2'	2:B:865:C:H5'	2.05	0.57
2:B:1130:U:C1'	2:B:2026:U:OP2	2.53	0.57
2:B:1151:A:O2'	17:Q:80:ASN:CB	2.53	0.57
2:B:1799:G:N7	4:C:175:LEU:CG	2.65	0.57
2:B:2350:C:H2'	29:3:38:LYS:HZ2	1.67	0.57
2:B:2748:A:N3	8:G:66:THR:OG1	2.38	0.57
2:B:2773:C:OP1	5:D:169:ARG:NE	2.37	0.57
2:B:2880:C:C5'	14:N:90:ARG:HH11	2.15	0.57
3:V:4:ILE:HD11	3:V:61:LEU:HD12	1.87	0.57
3:V:80:HIS:HB2	3:V:85:LYS:HG3	1.85	0.57
4:C:208:GLY:C	4:C:210:ALA:H	2.12	0.57
5:D:4:LEU:HB2	5:D:201:LEU:O	2.05	0.57
5:D:45:TYR:O	5:D:46:ARG:HG2	2.04	0.57
6:E:149:ILE:HD11	6:E:180:LEU:HD23	1.87	0.57
6:E:152:GLU:O	6:E:153:LEU:HB2	2.04	0.57
7:F:110:ILE:HG22	7:F:112:ASP:H	1.70	0.57
14:N:38:LEU:HB2	14:N:39:PRO:HD3	1.86	0.57
15:O:49:VAL:HG22	15:O:50:ALA:N	2.19	0.57
17:Q:21:LYS:C	17:Q:23:TYR:H	2.12	0.57
22:W:36:ILE:HD12	22:W:70:VAL:HG21	1.86	0.57
22:W:45:HIS:HA	22:W:75:ASN:CB	2.34	0.57
24:Y:13:ILE:HA	24:Y:19:HIS:HE1	1.70	0.57
24:Y:16:LEU:HD12	24:Y:16:LEU:N	2.19	0.57
2:B:397:U:P	25:Z:49:ARG:C	2.80	0.56
2:B:1181:U:H2'	2:B:1182:G:C8	2.40	0.56
2:B:1664:A:N6	2:B:2548:U:H3	2.03	0.56
2:B:1714:U:H3'	2:B:1715:G:C5'	2.34	0.56
2:B:1799:G:N2	4:C:153:LEU:N	2.53	0.56
2:B:2218:G:H2'	2:B:2219:U:C6	2.40	0.56
2:B:2650:U:H2'	2:B:2651:C:C6	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2848:G:C5	16:P:96:LEU:HD21	2.39	0.56
2:B:2898:U:H2'	2:B:2899:A:H8	1.68	0.56
3:V:42:LEU:HB2	3:V:47:VAL:HG21	1.87	0.56
5:D:88:GLU:HG2	5:D:89:GLU:H	1.70	0.56
9:H:81:ALA:HA	9:H:146:VAL:HA	1.87	0.56
13:M:5:LYS:O	13:M:5:LYS:HD2	2.05	0.56
14:N:37:THR:OG1	14:N:40:LYS:HB2	2.04	0.56
15:O:105:ALA:O	15:O:109:ALA:HB2	2.05	0.56
18:R:4:VAL:CA	18:R:12:HIS:HB3	2.33	0.56
18:R:59:ILE:O	18:R:59:ILE:HG13	2.06	0.56
20:T:48:GLN:HG3	20:T:49:LYS:N	2.20	0.56
22:W:42:THR:HG22	22:W:43:LYS:O	2.05	0.56
25:Z:66:ILE:C	25:Z:68:GLY:H	2.13	0.56
29:3:12:ARG:NH2	29:3:55:GLY:HA3	2.20	0.56
29:3:29:ARG:HA	29:3:33:THR:CG2	2.35	0.56
2:B:9:G:N2	2:B:2895:G:N3	2.52	0.56
2:B:182:A:C4'	2:B:434:U:H5'	2.35	0.56
2:B:910:A:H2'	2:B:911:A:C8	2.39	0.56
2:B:1249:U:P	12:L:31:GLY:CA	2.90	0.56
2:B:1550:C:OP1	2:B:1721:G:H5'	2.05	0.56
2:B:1668:A:C5	2:B:2551:C:C4'	2.60	0.56
2:B:1783:A:HO2'	2:B:2590:A:H8	0.62	0.56
2:B:2005:A:C6	5:D:128:ARG:HD3	2.40	0.56
2:B:2032:G:N1	2:B:2572:A:C8	2.73	0.56
2:B:2746:U:O2'	8:G:137:LYS:HG3	2.05	0.56
5:D:118:PHE:CA	5:D:164:GLN:HG3	2.35	0.56
5:D:170:VAL:HG11	5:D:194:PRO:CB	2.35	0.56
6:E:115:GLN:CB	12:L:11:GLY:CA	2.72	0.56
6:E:152:GLU:HB3	6:E:171:ASP:OD2	2.04	0.56
7:F:99:PHE:C	7:F:101:ARG:H	2.13	0.56
11:K:41:ILE:HG23	11:K:42:THR:N	2.19	0.56
12:L:92:LEU:CD2	12:L:96:LYS:HZ3	2.18	0.56
13:M:73:ILE:HD11	13:M:92:TRP:H	1.70	0.56
1:A:7:G:C5'	15:O:36:TYR:CE2	2.89	0.56
1:A:47:C:H5'	15:O:30:ARG:HB3	1.88	0.56
2:B:16:C:C3'	26:O:14:MET:CG	2.72	0.56
2:B:95:A:C5'	23:X:33:ALA:O	2.50	0.56
2:B:144:A:H2'	2:B:145:C:H6	1.68	0.56
2:B:181:A:H2	2:B:434:U:C2	2.21	0.56
2:B:322:A:H5'	2:B:340:A:C1'	2.36	0.56
2:B:433:C:O2'	2:B:434:U:H5'	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:436:C:O2'	2:B:437:U:H5'	2.05	0.56
2:B:467:G:C1'	28:2:34:ARG:HH12	2.17	0.56
2:B:529:A:C8	2:B:2023:C:C5	2.93	0.56
2:B:565:C:O4'	2:B:578:G:C5	2.58	0.56
2:B:960:A:H2	2:B:2496:C:H4'	1.70	0.56
2:B:972:A:C3'	2:B:973:A:H5''	2.33	0.56
2:B:1055:G:HO2'	2:B:1085:A:H2	1.50	0.56
2:B:1128:G:H4'	2:B:2517:C:OP1	2.05	0.56
2:B:1194:A:N3	32:B:3085:HOH:O	2.13	0.56
2:B:1197:G:H2'	2:B:1198:U:H6	1.71	0.56
2:B:1269:A:O4'	2:B:2013:A:OP1	2.22	0.56
2:B:1515:A:H5'	2:B:1557:C:H5'	1.87	0.56
2:B:1537:G:H3'	2:B:1537:G:N3	2.21	0.56
2:B:1548:A:H2'	2:B:1549:A:H8	1.70	0.56
2:B:1566:A:C4'	4:C:58:LYS:HG2	1.87	0.56
2:B:1570:A:H2'	2:B:1571:A:C8	2.40	0.56
2:B:1768:C:O4'	2:B:1961:C:C5	2.40	0.56
2:B:1770:G:C5'	2:B:1967:C:C2	2.89	0.56
2:B:1805:A:C4'	4:C:51:ARG:CB	2.69	0.56
2:B:1855:U:O2	2:B:2234:G:C8	2.58	0.56
2:B:1939:U:H3'	2:B:1983:G:O2'	2.04	0.56
2:B:1950:G:H2'	2:B:1990:C:O4'	2.06	0.56
2:B:2005:A:O2'	5:D:145:SER:HA	2.05	0.56
2:B:2061:G:N7	2:B:2252:G:O5'	2.37	0.56
2:B:2064:C:H2'	2:B:2065:C:H6	1.68	0.56
2:B:2071:A:N6	2:B:2433:A:O2'	2.38	0.56
2:B:2225:A:C2	9:H:25:TYR:HD1	2.12	0.56
2:B:2265:U:O4	22:W:14:ASP:CB	2.54	0.56
2:B:2305:U:C4	7:F:39:VAL:HG13	2.38	0.56
2:B:2428:G:C8	2:B:2448:A:C2	2.93	0.56
2:B:2485:G:H4'	13:M:42:THR:HG21	1.86	0.56
2:B:2581:G:C5	2:B:2610:C:C4	2.93	0.56
2:B:2637:U:H5'	5:D:43:ASP:OD2	2.04	0.56
2:B:2800:A:N3	2:B:2801:G:H1'	2.20	0.56
4:C:225:ASN:O	4:C:227:VAL:N	2.38	0.56
4:C:257:ARG:CZ	4:C:257:ARG:HA	2.36	0.56
5:D:9:VAL:C	16:P:5:LYS:HD3	2.30	0.56
5:D:62:LYS:CE	5:D:62:LYS:H	2.17	0.56
5:D:84:LEU:CD2	5:D:86:GLU:HB2	2.35	0.56
6:E:26:ALA:HA	12:L:18:ARG:HG2	1.86	0.56
7:F:133:GLU:OE1	7:F:147:ARG:HD3	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:G:106:LEU:HD23	8:G:151:ARG:HB2	1.88	0.56
8:G:122:ALA:HA	8:G:131:VAL:O	2.05	0.56
10:J:7:LYS:HZ2	10:J:49:ASP:H	1.52	0.56
13:M:102:LEU:HB3	13:M:104:GLU:OE2	2.05	0.56
16:P:22:GLY:HA2	16:P:93:LYS:HE2	1.87	0.56
16:P:91:VAL:HB	16:P:113:LEU:CB	2.35	0.56
18:R:22:LEU:O	18:R:96:VAL:HG22	2.05	0.56
18:R:42:ALA:C	18:R:44:GLY:N	2.60	0.56
18:R:90:ARG:NH2	18:R:92:TRP:HB3	2.20	0.56
19:S:88:ARG:HD2	19:S:93:ALA:HB3	1.86	0.56
22:W:35:ILE:HG23	22:W:36:ILE:N	2.14	0.56
22:W:45:HIS:ND1	22:W:45:HIS:N	2.52	0.56
26:O:4:GLN:O	26:O:5:ASN:C	2.44	0.56
1:A:30:C:H5	15:O:33:ARG:HH21	0.59	0.56
2:B:584:C:C5'	17:Q:3:VAL:HB	2.32	0.56
2:B:596:U:H2'	2:B:597:G:H8	1.69	0.56
2:B:634:C:H2'	2:B:635:C:C6	2.40	0.56
2:B:958:U:C6	13:M:16:ARG:HG3	2.39	0.56
2:B:971:G:P	2:B:974:G:C2	2.99	0.56
2:B:1128:G:C2	2:B:2517:C:C3'	2.82	0.56
2:B:1548:A:H2'	2:B:1549:A:C8	2.40	0.56
2:B:1638:C:C2'	2:B:2699:C:C6	2.84	0.56
2:B:1670:C:C5	2:B:1955:U:C6	2.93	0.56
2:B:1670:C:H1'	2:B:2551:C:O2	2.03	0.56
2:B:1773:A:C5	2:B:1830:C:C4	2.92	0.56
2:B:1783:A:C1'	2:B:2590:A:P	2.92	0.56
2:B:1864:U:H5''	2:B:2410:G:C4'	2.35	0.56
2:B:1952:A:OP2	2:B:1990:C:P	2.62	0.56
2:B:2150:C:H2'	2:B:2151:U:O4'	2.05	0.56
2:B:2245:U:C2'	2:B:2442:C:H41	1.91	0.56
2:B:2688:G:H1'	2:B:2721:A:H61	1.69	0.56
2:B:2899:A:H4'	10:J:136:GLN:N	2.18	0.56
4:C:242:HIS:N	4:C:243:PRO:CD	2.68	0.56
6:E:29:HIS:CD2	12:L:18:ARG:CG	2.83	0.56
7:F:41:GLU:HB3	7:F:44:ALA:HB3	1.87	0.56
8:G:5:LYS:HB3	8:G:68:ARG:CZ	2.35	0.56
8:G:116:LEU:HD21	8:G:120:ILE:HB	1.88	0.56
10:J:46:PRO:O	10:J:47:HIS:HB2	2.05	0.56
12:L:13:LYS:O	12:L:14:LYS:HB2	2.05	0.56
13:M:14:LYS:NZ	13:M:14:LYS:HB3	2.20	0.56
13:M:33:LEU:HB2	13:M:101:VAL:HG21	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:55:GLU:HB2	15:O:60:GLU:O	2.05	0.56
20:T:64:LYS:HB3	20:T:77:ARG:HH11	1.70	0.56
20:T:73:ARG:HD2	28:2:42:LEU:C	2.29	0.56
20:T:73:ARG:HB3	28:2:42:LEU:HD23	0.60	0.56
25:Z:59:ARG:HE	25:Z:62:LYS:CD	2.19	0.56
29:3:24:LYS:HA	29:3:45:PRO:CB	2.34	0.56
1:A:80:U:O4'	2:B:917:A:C2	2.38	0.56
2:B:126:A:C6	20:T:74:ILE:CG2	2.77	0.56
2:B:413:C:C2	2:B:2410:G:N1	2.74	0.56
2:B:482:A:O3'	21:U:43:LYS:HE2	2.05	0.56
2:B:527:C:O2	2:B:2043:C:C1'	2.53	0.56
2:B:564:C:C4'	17:Q:36:GLN:OE1	2.54	0.56
2:B:575:A:OP2	2:B:2030:A:N1	2.38	0.56
2:B:737:C:O2'	2:B:738:G:H5'	2.05	0.56
2:B:827:U:O4	2:B:2067:G:C5	2.58	0.56
2:B:828:U:H4'	2:B:831:G:N1	2.20	0.56
2:B:1117:C:H2'	2:B:1118:C:H6	1.70	0.56
2:B:1163:G:O2'	2:B:1164:C:H5'	2.06	0.56
2:B:1262:A:H5''	19:S:95:ARG:CD	2.23	0.56
2:B:1301:A:O2'	2:B:1302:A:H2'	2.05	0.56
2:B:1853:A:H8	2:B:2236:U:OP2	1.80	0.56
2:B:1995:U:P	2:B:2557:G:N7	2.76	0.56
2:B:2015:A:H5''	19:S:91:GLY:N	2.21	0.56
2:B:2575:C:OP1	5:D:150:GLN:CD	2.47	0.56
4:C:15:VAL:HG12	4:C:16:VAL:HG23	1.86	0.56
4:C:80:LEU:HA	4:C:91:ALA:HA	1.87	0.56
4:C:144:GLU:OE1	4:C:188:ARG:HG3	2.06	0.56
4:C:164:VAL:HB	4:C:167:ASP:OD2	2.05	0.56
4:C:216:ARG:HH11	4:C:217:PRO:HD2	1.71	0.56
6:E:6:LYS:NZ	6:E:119:ILE:H	2.03	0.56
6:E:106:LYS:HB2	6:E:106:LYS:NZ	2.20	0.56
10:J:25:LEU:HD12	10:J:62:VAL:CA	2.35	0.56
10:J:102:GLU:OE2	10:J:124:VAL:HG11	2.06	0.56
11:K:98:ARG:HD2	11:K:98:ARG:H	1.71	0.56
14:N:33:ILE:N	14:N:33:ILE:HD13	2.21	0.56
16:P:47:ILE:CG2	16:P:63:ILE:HG23	2.34	0.56
17:Q:107:ALA:O	18:R:52:PRO:CG	2.54	0.56
18:R:5:PHE:CG	18:R:6:GLN:N	2.74	0.56
18:R:41:ILE:C	18:R:43:ASN:H	2.11	0.56
19:S:9:HIS:O	19:S:10:ALA:HB3	2.04	0.56
19:S:29:VAL:HG21	19:S:69:LEU:C	2.30	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:W:58:LEU:HA	22:W:79:ILE:HG21	1.87	0.56
25:Z:58:ASP:CG	25:Z:63:ARG:HH11	2.13	0.56
2:B:95:A:C5'	23:X:34:SER:N	2.57	0.56
2:B:196:A:C6	2:B:2060:A:N6	2.63	0.56
2:B:581:C:H5'	17:Q:31:TYR:N	2.20	0.56
2:B:634:C:H2'	2:B:635:C:H6	1.70	0.56
2:B:687:C:H5'	28:2:6:GLN:CA	2.33	0.56
2:B:729:G:H5''	2:B:730:A:H5''	1.86	0.56
2:B:928:A:C2	24:Y:46:MET:HE1	2.40	0.56
2:B:969:G:H2'	2:B:970:U:C6	2.41	0.56
2:B:1371:G:H4'	2:B:1810:A:O2'	2.06	0.56
2:B:1442:U:H2'	2:B:1443:U:H6	1.71	0.56
2:B:1664:A:H2'	2:B:2561:U:H4'	0.59	0.56
2:B:1676:A:H2'	2:B:1677:A:O4'	2.04	0.56
2:B:1773:A:C4	2:B:1975:G:O6	2.58	0.56
2:B:1799:G:H22	4:C:153:LEU:HA	1.55	0.56
2:B:2286:G:O6	27:1:33:LEU:HB2	2.06	0.56
2:B:2641:G:P	10:J:84:ILE:CG2	2.85	0.56
2:B:2840:C:H2'	2:B:2841:C:H6	1.71	0.56
2:B:2898:U:H2'	2:B:2899:A:C8	2.40	0.56
7:F:165:GLY:HA2	7:F:168:LEU:HD21	1.87	0.56
9:H:66:ASN:HB2	9:H:138:VAL:HG11	1.88	0.56
12:L:77:ILE:HD13	12:L:92:LEU:HD13	1.87	0.56
12:L:126:ARG:HE	12:L:127:VAL:N	2.04	0.56
16:P:2:ASN:HD22	16:P:2:ASN:H	1.52	0.56
16:P:38:ARG:HH11	16:P:39:LEU:H	1.52	0.56
18:R:1:MET:HA	18:R:46:GLU:HB3	1.86	0.56
21:U:25:LYS:HG2	21:U:35:VAL:HG22	1.87	0.56
25:Z:47:LYS:HB2	25:Z:51:VAL:HB	1.86	0.56
27:1:31:GLU:O	27:1:33:LEU:HG	2.06	0.56
1:A:26:C:H2'	1:A:27:C:O4'	2.05	0.56
1:A:28:C:H5'	1:A:29:A:OP2	2.05	0.56
2:B:296:U:H2'	2:B:297:G:H8	1.69	0.56
2:B:1141:U:OP2	10:J:68:LYS:NZ	2.39	0.56
2:B:1229:C:H2'	2:B:1230:A:C8	2.40	0.56
2:B:1657:U:O2'	2:B:2580:U:C4'	2.53	0.56
2:B:1759:A:C8	2:B:2696:U:C4'	2.81	0.56
2:B:1769:U:O2'	2:B:1964:G:C2	2.57	0.56
2:B:1799:G:N3	4:C:152:GLN:OE1	2.38	0.56
2:B:1818:U:C6	4:C:155:ARG:CA	2.89	0.56
2:B:1974:C:C4	2:B:1978:A:N6	2.72	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2061:G:C8	2:B:2253:G:OP2	2.57	0.56
2:B:2533:U:H2'	2:B:2534:A:O4'	2.06	0.56
2:B:2556:C:H2'	2:B:2557:G:O4'	2.06	0.56
2:B:2562:U:H4'	11:K:25:LEU:CD2	2.36	0.56
2:B:2595:G:O6	4:C:235:GLU:CB	2.45	0.56
4:C:160:TYR:O	4:C:161:VAL:HG23	2.06	0.56
5:D:62:LYS:H	5:D:62:LYS:HD3	1.71	0.56
6:E:44:ARG:O	6:E:45:ALA:C	2.49	0.56
7:F:33:ILE:HD11	7:F:90:LEU:HD13	1.87	0.56
12:L:38:GLN:NE2	12:L:39:LYS:H	2.03	0.56
13:M:5:LYS:HD3	13:M:91:TYR:CG	2.41	0.56
15:O:76:LYS:HG2	15:O:110:ALA:HB2	1.87	0.56
16:P:47:ILE:HG23	16:P:63:ILE:HA	1.88	0.56
24:Y:16:LEU:HD12	24:Y:16:LEU:H	1.71	0.56
2:B:265:A:HO2'	2:B:266:G:H4'	1.71	0.56
2:B:644:A:O2'	2:B:645:C:H2'	2.05	0.56
2:B:1061:U:O4'	2:B:1070:A:H1'	2.06	0.56
2:B:1654:A:H2'	2:B:2512:C:P	2.45	0.56
2:B:1949:G:C6	2:B:1987:A:C6	2.93	0.56
2:B:2003:A:C4	5:D:139:SER:HA	2.41	0.56
2:B:2009:A:C4'	2:B:2823:A:H1'	2.28	0.56
2:B:2262:U:OP1	2:B:2387:U:O2	2.24	0.56
2:B:2294:G:O2'	2:B:2295:C:H5'	2.06	0.56
2:B:2759:G:C2	8:G:138:GLN:NE2	2.71	0.56
4:C:67:LYS:HG3	4:C:68:ARG:H	1.71	0.56
5:D:29:VAL:HG12	5:D:185:ASN:ND2	2.21	0.56
7:F:46:LYS:O	7:F:50:ASP:HB3	2.06	0.56
10:J:64:VAL:HG12	10:J:65:THR:H	1.71	0.56
12:L:82:LEU:HD22	12:L:86:GLU:OE1	2.06	0.56
20:T:15:HIS:ND1	20:T:31:VAL:HG11	2.21	0.56
20:T:62:VAL:O	20:T:63:VAL:O	2.24	0.56
22:W:21:GLY:HA3	22:W:32:ALA:CB	2.34	0.56
27:1:42:VAL:HG12	27:1:43:ARG:HE	1.71	0.56
2:B:170:U:H2'	2:B:171:U:H6	1.69	0.56
2:B:215:G:H21	2:B:432:A:H61	0.56	0.56
2:B:465:G:O4'	28:2:12:ARG:NH1	2.38	0.56
2:B:654:A:N1	29:3:18:LYS:CB	2.69	0.56
2:B:986:C:O2'	2:B:987:C:H5'	2.05	0.56
2:B:989:G:C8	24:Y:13:ILE:CA	2.88	0.56
2:B:1011:G:H4'	17:Q:74:SER:HG	1.70	0.56
2:B:1031:G:H5'	30:4:8:LYS:HD3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1437:C:H2'	2:B:1438:U:H6	1.67	0.56
2:B:1441:G:H2'	2:B:1442:U:C6	2.41	0.56
2:B:1534:U:H2'	2:B:1536:C:N3	2.21	0.56
2:B:1903:G:O5'	4:C:239:PHE:CD2	2.50	0.56
2:B:2213:U:O2	2:B:2213:U:H2'	2.04	0.56
2:B:2314:A:H2'	2:B:2315:G:C8	2.40	0.56
2:B:2617:U:C2'	2:B:2618:G:H5'	2.35	0.56
2:B:2848:G:O2'	16:P:96:LEU:CD2	2.26	0.56
4:C:27:LYS:HB3	4:C:80:LEU:O	2.06	0.56
14:N:22:ARG:HG3	14:N:23:ASN:N	2.21	0.56
15:O:21:LEU:HD13	15:O:22:GLY:N	2.21	0.56
28:2:21:ARG:HB3	28:2:31:LEU:HD21	1.86	0.56
29:3:7:ARG:NE	29:3:11:LYS:NZ	2.53	0.56
2:B:56:A:H5'	20:T:75:GLY:HA2	1.87	0.56
2:B:82:U:H2'	2:B:83:A:C8	2.41	0.56
2:B:197:A:C8	2:B:2444:G:C5'	2.83	0.56
2:B:407:G:O2'	2:B:408:G:H5'	2.06	0.56
2:B:517:C:OP2	26:O:9:ARG:HA	2.06	0.56
2:B:587:C:C1'	12:L:38:GLN:CG	2.83	0.56
2:B:1125:G:O3'	30:4:37:GLN:CB	2.54	0.56
2:B:1158:C:C4'	24:Y:10:ARG:HE	2.18	0.56
2:B:1393:A:H61	20:T:22:THR:HG1	1.42	0.56
2:B:1653:G:N2	5:D:140:HIS:CD2	2.74	0.56
2:B:1664:A:H4'	11:K:40:LYS:C	2.30	0.56
2:B:1768:C:O4'	2:B:1960:A:H3'	2.06	0.56
2:B:2269:G:H2'	22:W:20:LEU:O	1.97	0.56
2:B:2270:A:O5'	22:W:34:SER:O	2.24	0.56
2:B:2281:A:H1'	2:B:2388:A:C2	2.41	0.56
2:B:2369:A:O2'	2:B:2370:G:H5'	2.06	0.56
2:B:2429:G:OP1	2:B:2448:A:C5	2.58	0.56
2:B:2460:U:C5'	13:M:77:PRO:CA	2.65	0.56
2:B:2494:G:N2	13:M:81:ARG:HB3	2.21	0.56
2:B:2582:G:O5'	2:B:2583:G:P	2.63	0.56
2:B:2729:G:H2'	2:B:2730:C:C6	2.41	0.56
2:B:2749:A:O2'	8:G:62:ALA:HA	2.07	0.56
4:C:155:ARG:O	4:C:157:ALA:N	2.39	0.56
5:D:116:LYS:H	5:D:165:MET:HG3	1.71	0.56
5:D:151:THR:O	5:D:152:PRO:O	2.24	0.56
8:G:85:LYS:HA	8:G:130:ILE:O	2.06	0.56
8:G:97:VAL:HG21	8:G:123:GLU:HA	1.87	0.56
9:H:121:VAL:HG21	9:H:128:HIS:NE2	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:58:ASN:O	10:J:126:ALA:HA	2.05	0.56
11:K:107:LEU:HD11	11:K:115:ILE:HG21	1.87	0.56
12:L:125:LEU:C	12:L:126:ARG:HG3	2.31	0.56
25:Z:5:ILE:HB	25:Z:51:VAL:HG13	1.86	0.56
2:B:125:A:H4'	28:2:19:ARG:HE	1.68	0.55
2:B:125:A:H3'	2:B:126:A:H5''	1.88	0.55
2:B:137:U:C2'	20:T:4:GLU:OE2	2.47	0.55
2:B:172:A:H2'	2:B:173:A:H8	1.70	0.55
2:B:202:U:C5'	2:B:252:G:O2'	2.54	0.55
2:B:395:U:H2'	2:B:396:G:C8	2.41	0.55
2:B:588:U:H4'	12:L:29:LYS:H	1.67	0.55
2:B:668:A:H8	12:L:49:GLY:CA	2.02	0.55
2:B:771:G:O2'	2:B:772:C:H5'	2.06	0.55
2:B:928:A:C2'	24:Y:37:ARG:HG3	2.35	0.55
2:B:1252:G:C5	17:Q:35:PHE:CD2	2.92	0.55
2:B:1263:U:P	19:S:95:ARG:HH22	2.23	0.55
2:B:1270:C:O2'	2:B:1325:U:O2	2.20	0.55
2:B:1332:G:H2'	2:B:1332:G:N3	2.21	0.55
2:B:1666:G:O2'	2:B:2559:C:C3'	2.53	0.55
2:B:1770:G:O2'	2:B:1939:U:O2	2.20	0.55
2:B:1771:C:C4'	2:B:1968:G:H5'	2.36	0.55
2:B:1818:U:H2'	4:C:153:LEU:C	2.31	0.55
2:B:1864:U:H5''	2:B:2410:G:H4'	1.89	0.55
2:B:1938:A:C8	2:B:1982:U:C1'	2.85	0.55
2:B:2015:A:OP2	19:S:88:ARG:HB2	2.03	0.55
2:B:2019:A:OP2	26:0:5:ASN:O	2.23	0.55
2:B:2198:A:C4'	9:H:29:PHE:CD2	2.79	0.55
2:B:2577:A:C1'	2:B:2612:C:H42	2.19	0.55
5:D:4:LEU:HD13	5:D:79:LEU:HD11	1.86	0.55
5:D:11:MET:HG3	16:P:9:GLN:HG2	1.86	0.55
5:D:35:THR:HB	5:D:48:ILE:HB	1.88	0.55
5:D:128:ARG:C	5:D:128:ARG:HE	2.13	0.55
7:F:169:LEU:HA	7:F:172:PHE:CZ	2.42	0.55
9:H:3:VAL:HG22	9:H:21:VAL:HG11	1.88	0.55
11:K:58:LEU:HB3	11:K:89:ASN:HD21	1.70	0.55
16:P:99:LEU:HD21	16:P:109:ILE:HG23	1.88	0.55
17:Q:73:ILE:HG13	17:Q:77:LYS:HD2	1.87	0.55
27:1:42:VAL:CG1	27:1:43:ARG:N	2.69	0.55
28:2:22:MET:HE2	28:2:31:LEU:HG	1.88	0.55
29:3:15:LYS:HG2	29:3:19:GLY:HA2	1.87	0.55
2:B:220:G:C2'	2:B:234:U:H1'	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:272:A:H2'	2:B:273:G:C8	2.41	0.55
2:B:487:C:C4'	19:S:56:ALA:CB	2.77	0.55
2:B:623:C:O4'	29:3:61:LEU:HD23	1.69	0.55
2:B:686:U:H3	28:2:9:VAL:C	2.06	0.55
2:B:796:C:H2'	2:B:797:G:C8	2.41	0.55
2:B:1184:U:C6	24:Y:30:ARG:NH2	2.67	0.55
2:B:1664:A:H5'	11:K:22:ILE:H	1.71	0.55
2:B:1669:A:H2	2:B:2551:C:O2	1.89	0.55
2:B:1716:U:H2'	2:B:1717:A:C8	2.41	0.55
2:B:1827:U:O2'	2:B:1970:A:C3'	2.39	0.55
2:B:1935:G:H1'	2:B:1964:G:N2	2.20	0.55
4:C:63:ILE:HG22	4:C:64:VAL:H	1.70	0.55
4:C:71:ASP:C	4:C:73:ILE:HD12	2.31	0.55
5:D:14:ILE:HG22	16:P:79:VAL:HG23	1.87	0.55
7:F:37:MET:HG2	7:F:86:CYS:HB2	1.88	0.55
9:H:11:ASN:ND2	9:H:12:LEU:H	2.03	0.55
13:M:3:GLN:HG2	13:M:46:ILE:HB	1.89	0.55
13:M:84:LYS:NZ	13:M:84:LYS:H	2.04	0.55
14:N:48:VAL:O	14:N:52:ILE:HG12	2.04	0.55
17:Q:106:THR:O	17:Q:109:VAL:HG22	2.05	0.55
18:R:47:VAL:HG22	18:R:48:LYS:N	2.14	0.55
2:B:6:A:C4	2:B:2898:U:O2	2.59	0.55
2:B:111:A:H2'	2:B:112:U:O4'	2.06	0.55
2:B:190:A:C2	2:B:799:G:H1'	2.42	0.55
2:B:671:C:H6	12:L:39:LYS:HE3	1.40	0.55
2:B:811:U:N1	2:B:1251:C:N1	2.52	0.55
2:B:812:C:OP1	17:Q:12:ARG:NH2	2.39	0.55
2:B:1032:A:H4'	30:4:16:ILE:CB	2.35	0.55
2:B:1038:G:H2'	2:B:1039:A:C8	2.41	0.55
2:B:1128:G:N2	2:B:2517:C:C3'	2.67	0.55
2:B:1242:U:H2'	2:B:1243:C:C6	2.42	0.55
2:B:1553:A:O2'	2:B:1554:U:H2'	2.06	0.55
2:B:1600:C:OP1	20:T:81:LYS:CG	2.55	0.55
2:B:1658:C:OP1	32:B:3337:HOH:O	2.13	0.55
2:B:1765:U:C4	2:B:1958:C:O2	2.60	0.55
2:B:1937:A:C2'	2:B:1984:G:N7	2.66	0.55
2:B:1938:A:N3	2:B:2591:C:O4'	2.40	0.55
2:B:1938:A:N3	2:B:2591:C:C4'	2.69	0.55
2:B:2008:C:H2'	2:B:2009:A:C8	2.40	0.55
2:B:2090:A:C3'	9:H:23:ALA:O	2.54	0.55
2:B:2617:U:H2'	2:B:2618:G:H5'	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2836:U:H2'	2:B:2837:A:C8	2.41	0.55
4:C:257:ARG:HA	4:C:257:ARG:NH1	2.21	0.55
5:D:86:GLU:HG2	5:D:87:GLY:H	1.71	0.55
6:E:23:PHE:HZ	12:L:16:GLY:HA2	1.71	0.55
6:E:112:LEU:CB	12:L:11:GLY:C	2.79	0.55
8:G:102:ILE:HG22	8:G:114:HIS:O	2.06	0.55
10:J:15:TRP:HB3	10:J:53:TYR:CD2	2.41	0.55
10:J:25:LEU:HD13	10:J:25:LEU:N	2.21	0.55
11:K:56:ASP:O	11:K:58:LEU:HG	2.07	0.55
11:K:70:ARG:CB	11:K:76:VAL:HG22	2.31	0.55
15:O:76:LYS:HB2	15:O:106:LEU:HD22	1.88	0.55
16:P:109:ILE:O	16:P:110:LYS:C	2.49	0.55
17:Q:4:LYS:O	17:Q:7:VAL:HG13	2.05	0.55
18:R:20:VAL:HB	18:R:95:ASP:HB2	1.87	0.55
27:1:12:SER:HA	27:1:50:GLU:CB	2.30	0.55
1:A:48:U:C6	15:O:102:ARG:NH1	2.74	0.55
2:B:24:G:N3	19:S:78:GLU:CB	2.67	0.55
2:B:72:U:C6	23:X:54:LYS:CG	2.90	0.55
2:B:414:C:H2'	2:B:415:A:H8	1.71	0.55
2:B:557:C:H1'	10:J:47:HIS:O	2.05	0.55
2:B:746:U:H5''	32:B:3136:HOH:O	2.04	0.55
2:B:811:U:O3'	2:B:1251:C:C4'	2.55	0.55
2:B:922:C:H2'	2:B:923:G:C8	2.42	0.55
2:B:1013:C:H2'	2:B:1014:A:C8	2.40	0.55
2:B:1154:G:OP2	17:Q:57:ARG:NH2	2.39	0.55
2:B:1166:G:H2'	2:B:1167:C:H6	1.72	0.55
2:B:1551:A:H3'	2:B:1552:A:H5''	1.87	0.55
2:B:1580:A:N1	2:B:1581:G:C2	2.62	0.55
2:B:1878:G:H2'	2:B:1879:C:C6	2.41	0.55
2:B:1951:U:H2'	2:B:1953:A:OP2	2.05	0.55
2:B:2312:U:H4'	7:F:71:LYS:N	2.22	0.55
4:C:68:ARG:HD3	4:C:103:ILE:HD11	1.88	0.55
4:C:238:ASN:HB3	4:C:242:HIS:NE2	2.21	0.55
6:E:1:MET:O	6:E:14:VAL:HG22	2.06	0.55
6:E:118:LEU:HD23	6:E:118:LEU:N	2.21	0.55
15:O:54:VAL:O	15:O:62:LEU:HD23	2.06	0.55
21:U:94:PHE:CZ	21:U:100:GLU:HA	2.42	0.55
22:W:44:PHE:CE2	22:W:60:ALA:HB3	2.41	0.55
22:W:44:PHE:HB3	22:W:76:ARG:CG	2.35	0.55
2:B:323:C:H6	6:E:164:LEU:H	1.52	0.55
2:B:397:U:O5'	25:Z:49:ARG:HD3	1.93	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:415:A:N6	2:B:2407:A:H2	1.92	0.55
2:B:718:A:H3'	2:B:719:C:H6	1.71	0.55
2:B:880:G:P	2:B:900:A:N1	2.74	0.55
2:B:898:C:H2'	2:B:899:A:C8	2.41	0.55
2:B:1369:G:O5'	2:B:1808:A:N6	2.39	0.55
2:B:1664:A:C4'	11:K:40:LYS:HG2	1.96	0.55
2:B:1700:A:H2'	2:B:1701:A:H5'	1.87	0.55
2:B:1825:U:O3'	4:C:242:HIS:O	2.24	0.55
2:B:1853:A:N3	2:B:2237:G:C6	2.74	0.55
2:B:1936:A:C1'	2:B:1984:G:H2'	2.36	0.55
2:B:2043:C:N4	2:B:2777:G:C6	2.74	0.55
2:B:2077:A:H2'	2:B:2078:C:H6	1.69	0.55
2:B:2218:G:H2'	2:B:2219:U:H6	1.71	0.55
2:B:2566:A:N1	11:K:28:SER:HB3	2.22	0.55
4:C:129:LEU:HD23	4:C:130:PRO:HD2	1.88	0.55
9:H:82:SER:HB2	9:H:94:ILE:HD11	1.88	0.55
11:K:76:VAL:O	16:P:73:PHE:HA	2.06	0.55
14:N:33:ILE:HD13	14:N:33:ILE:H	1.71	0.55
17:Q:93:ILE:HG23	17:Q:94:LEU:N	2.19	0.55
18:R:62:GLU:CG	18:R:103:ALA:HA	2.36	0.55
19:S:29:VAL:HG11	19:S:69:LEU:HB2	1.89	0.55
21:U:25:LYS:HA	21:U:35:VAL:H	1.71	0.55
2:B:27:G:HO2'	2:B:28:A:H8	1.51	0.55
2:B:308:G:H21	2:B:477:A:H1'	1.72	0.55
2:B:397:U:H4'	25:Z:49:ARG:HB3	1.89	0.55
2:B:700:G:O4'	2:B:734:A:C6	2.59	0.55
2:B:1000:A:H2'	2:B:1001:A:C8	2.42	0.55
2:B:1083:U:H1'	2:B:1086:A:N6	2.19	0.55
2:B:1128:G:C4'	2:B:2517:C:C5'	2.58	0.55
2:B:1152:C:H5'	17:Q:80:ASN:HB2	1.88	0.55
2:B:1181:U:H2'	2:B:1182:G:H8	1.72	0.55
2:B:1263:U:H6	19:S:95:ARG:NH2	2.03	0.55
2:B:1387:A:H2'	2:B:1388:G:C8	2.40	0.55
2:B:1654:A:C1'	5:D:125:TRP:CZ3	2.90	0.55
2:B:1783:A:O3'	2:B:2589:A:N3	2.37	0.55
2:B:1790:C:H1'	2:B:1829:A:H5'	1.88	0.55
2:B:1818:U:H6	4:C:155:ARG:CA	2.18	0.55
2:B:2184:A:H2'	2:B:2185:U:C6	2.42	0.55
2:B:2197:U:C2	2:B:2225:A:C8	2.95	0.55
2:B:2246:G:H3'	2:B:2426:A:N1	2.19	0.55
2:B:2271:G:C5'	22:W:16:GLU:N	2.52	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2528:U:O2'	2:B:2529:G:H3'	2.06	0.55
2:B:2574:G:C2	5:D:148:GLN:HB3	2.41	0.55
2:B:2839:G:H2'	2:B:2840:C:C6	2.42	0.55
4:C:28:PRO:HB2	4:C:79:ARG:NH2	2.20	0.55
5:D:128:ARG:CZ	5:D:130:GLN:CD	2.80	0.55
6:E:194:LYS:HE3	6:E:201:ALA:HB2	1.88	0.55
7:F:173:ASP:O	7:F:173:ASP:CG	2.47	0.55
13:M:3:GLN:HG2	13:M:47:GLU:N	2.20	0.55
15:O:1:MET:HE2	15:O:3:LYS:HB2	1.89	0.55
18:R:53:PHE:O	18:R:54:VAL:C	2.37	0.55
21:U:23:LYS:O	21:U:25:LYS:N	2.39	0.55
21:U:44:HIS:HB2	21:U:55:GLY:C	2.31	0.55
2:B:209:C:H2'	2:B:210:C:H6	1.71	0.55
2:B:310:A:H5''	21:U:14:THR:HG22	1.88	0.55
2:B:582:A:H3'	17:Q:9:ALA:HB1	1.89	0.55
2:B:753:A:H2'	2:B:754:U:C6	2.42	0.55
2:B:973:A:OP1	2:B:973:A:H8	1.89	0.55
2:B:1266:G:N2	19:S:96:ILE:HG12	2.10	0.55
2:B:1951:U:C5	2:B:1989:G:H3'	2.42	0.55
2:B:2004:G:C2'	5:D:137:SER:O	2.55	0.55
2:B:2015:A:P	19:S:93:ALA:H	2.29	0.55
2:B:2358:A:N1	2:B:2428:G:N2	2.55	0.55
2:B:2749:A:H5'	8:G:65:GLY:C	2.25	0.55
5:D:206:ALA:C	5:D:208:LYS:H	2.15	0.55
7:F:121:PHE:CZ	7:F:169:LEU:HD12	2.42	0.55
8:G:86:LEU:HD12	8:G:161:VAL:HG12	1.88	0.55
12:L:103:ILE:HD13	12:L:104:GLN:H	1.70	0.55
15:O:64:TYR:CE1	15:O:74:VAL:HG11	2.34	0.55
16:P:24:THR:CG2	16:P:111:GLU:HG2	2.33	0.55
18:R:35:PHE:HB2	18:R:64:VAL:HG21	1.88	0.55
22:W:6:GLY:O	22:W:8:SER:N	2.40	0.55
25:Z:29:GLY:HA3	25:Z:48:GLN:OE1	2.07	0.55
1:A:7:G:H4'	15:O:36:TYR:CD2	2.41	0.55
2:B:142:A:H2'	2:B:143:C:C5	2.42	0.55
2:B:531:C:C1'	2:B:2018:G:H22	2.13	0.55
2:B:567:U:O4'	2:B:576:U:C4'	2.55	0.55
2:B:641:U:H4'	29:3:41:ARG:HD2	1.89	0.55
2:B:660:C:OP1	6:E:95:LYS:O	2.24	0.55
2:B:770:G:O2'	2:B:771:G:H5'	2.07	0.55
2:B:1506:U:H2'	2:B:1507:C:C6	2.42	0.55
2:B:1637:A:C3'	2:B:2697:G:H21	2.18	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1638:C:H2'	2:B:2699:C:O4'	2.07	0.55
2:B:1654:A:C1'	5:D:125:TRP:HZ3	2.18	0.55
2:B:1662:U:O2'	11:K:4:GLU:O	1.95	0.55
2:B:1663:G:C4	11:K:4:GLU:HG3	2.41	0.55
2:B:1765:U:N3	2:B:1958:C:C2	2.74	0.55
2:B:1799:G:H21	4:C:153:LEU:CA	2.15	0.55
2:B:2240:U:O2'	2:B:2241:A:H5'	2.07	0.55
2:B:2678:C:H2'	2:B:2679:A:C8	2.42	0.55
2:B:2811:G:H5''	5:D:62:LYS:HD2	1.88	0.55
4:C:21:PRO:N	4:C:202:ARG:HD2	2.22	0.55
6:E:48:THR:HG23	6:E:87:ALA:H	1.70	0.55
13:M:71:LYS:C	13:M:71:LYS:HD2	2.32	0.55
15:O:1:MET:HG2	15:O:2:ASP:N	2.21	0.55
15:O:40:ILE:HG22	15:O:48:LEU:O	2.07	0.55
16:P:15:ASP:OD1	16:P:15:ASP:N	2.38	0.55
20:T:96:VAL:HG22	20:T:97:GLY:N	2.18	0.55
23:X:59:GLU:C	23:X:61:ALA:H	2.15	0.55
2:B:11:C:H2'	2:B:12:U:H5'	1.88	0.55
2:B:138:U:O2'	20:T:4:GLU:HB3	2.06	0.55
2:B:199:A:N1	2:B:2244:U:C4	2.74	0.55
2:B:585:G:H21	2:B:810:U:H4'	1.72	0.55
2:B:687:C:H5'	28:2:6:GLN:C	2.31	0.55
2:B:1006:C:O2'	2:B:1007:C:H5'	2.07	0.55
2:B:1030:C:O2'	30:4:8:LYS:CB	2.53	0.55
2:B:1641:A:H2'	2:B:1642:G:O4'	2.07	0.55
2:B:1742:U:H2'	2:B:1743:G:C8	2.42	0.55
2:B:1939:U:H5''	2:B:2591:C:O2'	2.06	0.55
2:B:1974:C:C4	2:B:1978:A:C6	2.95	0.55
2:B:2069:G:O5'	2:B:2432:A:C3'	2.47	0.55
5:D:14:ILE:HG21	16:P:78:PRO:O	2.06	0.55
5:D:167:ASN:H	5:D:167:ASN:HD22	1.53	0.55
8:G:153:PRO:HB3	8:G:158:GLY:O	2.07	0.55
10:J:81:ILE:CG1	10:J:82:GLY:H	2.19	0.55
11:K:16:ALA:N	11:K:46:ALA:HA	2.22	0.55
14:N:32:GLU:HB3	14:N:33:ILE:HD13	1.89	0.55
19:S:15:GLN:CD	26:0:16:ARG:HG3	2.28	0.55
29:3:26:ALA:HB1	29:3:29:ARG:HG3	1.86	0.55
2:B:398:C:H4'	2:B:2231:U:C4'	2.36	0.55
2:B:498:G:O2'	2:B:499:U:H5'	2.07	0.55
2:B:620:G:H5'	2:B:620:G:N3	2.22	0.55
2:B:688:U:OP2	28:2:6:GLN:OE1	2.25	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1118:C:C4'	13:M:127:LYS:CE	2.72	0.55
2:B:1126:A:H5'	30:4:37:GLN:HE21	1.69	0.55
2:B:1339:G:C2	2:B:1603:A:O2'	2.45	0.55
2:B:1816:C:H5'	4:C:85:ASN:CA	2.36	0.55
2:B:1857:G:H2'	2:B:1884:G:N2	2.20	0.55
2:B:1974:C:H2'	2:B:1978:A:C5	2.42	0.55
2:B:1998:A:C2	11:K:4:GLU:OE2	2.58	0.55
2:B:2008:C:H5'	5:D:118:PHE:CD1	2.42	0.55
2:B:2212:A:N7	2:B:2214:C:N4	2.55	0.55
2:B:2276:G:O6	22:W:11:ASN:O	2.24	0.55
2:B:2532:G:N2	2:B:2663:G:H1'	2.18	0.55
2:B:2611:C:HO2'	2:B:2612:C:H5'	1.72	0.55
5:D:9:VAL:HG13	16:P:5:LYS:HD2	1.89	0.55
9:H:37:VAL:N	9:H:38:PRO:HD2	2.20	0.55
11:K:2:ILE:HG23	11:K:33:ALA:O	2.06	0.55
12:L:123:ARG:HB3	12:L:143:GLU:OE1	2.07	0.55
16:P:7:LEU:HD13	16:P:11:GLN:HG2	1.88	0.55
19:S:7:HIS:HB3	19:S:102:HIS:CA	2.36	0.55
19:S:85:ILE:HG22	19:S:86:MET:N	2.22	0.55
20:T:73:ARG:HD3	28:2:43:THR:N	2.14	0.55
27:1:42:VAL:O	27:1:43:ARG:HB2	2.07	0.55
1:A:78:A:H2'	1:A:79:G:O4'	2.07	0.54
2:B:45:G:P	2:B:46:G:H5'	2.47	0.54
2:B:183:C:O4'	2:B:433:C:O4'	2.24	0.54
2:B:587:C:N1	12:L:38:GLN:CB	2.58	0.54
2:B:738:G:C4'	32:B:3301:HOH:O	2.54	0.54
2:B:1097:U:C2'	2:B:1098:A:H5'	2.36	0.54
2:B:1262:A:C1'	19:S:95:ARG:NH1	2.59	0.54
2:B:1339:G:N2	2:B:1603:A:H2'	2.22	0.54
2:B:1348:C:C5	32:B:3414:HOH:O	2.30	0.54
2:B:1759:A:C2	2:B:2697:G:H1'	2.39	0.54
2:B:1770:G:OP1	2:B:1964:G:N1	2.35	0.54
2:B:1807:G:H5'	4:C:47:ARG:CA	2.34	0.54
2:B:2067:G:C2	2:B:2245:U:OP2	2.60	0.54
2:B:2247:A:C4	2:B:2446:G:C2	2.95	0.54
2:B:2893:A:H5''	2:B:2894:G:H5'	1.89	0.54
4:C:129:LEU:CD2	4:C:133:ASN:HB2	2.37	0.54
4:C:222:THR:HA	4:C:231:HIS:CE1	2.42	0.54
5:D:15:PHE:HB3	5:D:18:ASP:HB2	1.89	0.54
5:D:109:VAL:O	5:D:172:VAL:HG22	2.07	0.54
7:F:36:ASN:O	7:F:152:ASP:HB2	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:43:GLU:O	10:J:44:TYR:C	2.50	0.54
16:P:96:LEU:HG	16:P:97:TYR:H	1.72	0.54
20:T:73:ARG:HB2	28:2:42:LEU:CB	2.35	0.54
21:U:99:SER:OG	21:U:102:ILE:HD11	2.07	0.54
2:B:6:A:H2'	2:B:7:G:C8	2.42	0.54
2:B:197:A:C4	2:B:2443:C:H1'	2.27	0.54
2:B:199:A:C2	2:B:2071:A:C8	2.94	0.54
2:B:378:C:O2'	2:B:379:G:H5'	2.07	0.54
2:B:458:G:C1'	28:2:41:ARG:NH2	2.58	0.54
2:B:483:A:HO2'	21:U:46:LYS:CE	2.18	0.54
2:B:548:G:H5''	2:B:549:G:O4'	2.07	0.54
2:B:928:A:H1'	24:Y:37:ARG:CG	2.37	0.54
2:B:1311:G:N2	2:B:1604:C:H42	2.05	0.54
2:B:1653:G:H5''	5:D:126:ASN:N	2.10	0.54
2:B:1815:A:H3'	4:C:85:ASN:HD22	0.57	0.54
2:B:1998:A:H2	11:K:4:GLU:CD	1.86	0.54
2:B:2273:A:H2'	2:B:2274:A:C8	2.42	0.54
3:V:77:VAL:HG21	3:V:79:ARG:HE	1.71	0.54
4:C:155:ARG:HB3	4:C:159:THR:HG21	1.74	0.54
5:D:1:MET:HE3	5:D:84:LEU:HB2	1.89	0.54
6:E:23:PHE:CE2	12:L:17:LYS:HE2	2.42	0.54
6:E:183:PHE:CD1	12:L:13:LYS:HE2	2.42	0.54
7:F:33:ILE:HD11	7:F:90:LEU:HB2	1.90	0.54
10:J:58:ASN:HA	10:J:127:GLY:H	1.71	0.54
13:M:18:ARG:HB3	13:M:40:ARG:NH2	2.21	0.54
14:N:86:ARG:HH21	14:N:116:VAL:CG1	2.20	0.54
16:P:18:SER:HB2	16:P:87:ARG:NE	2.22	0.54
16:P:52:ARG:HH11	16:P:54:LEU:CB	2.19	0.54
20:T:30:ILE:HG22	20:T:84:TYR:O	2.07	0.54
22:W:6:GLY:C	22:W:8:SER:N	2.60	0.54
26:O:9:ARG:O	26:O:11:LYS:N	2.40	0.54
28:2:8:SER:OG	28:2:11:LYS:HB2	2.07	0.54
29:3:23:HIS:CD2	29:3:47:ALA:HA	2.41	0.54
2:B:196:A:H2	2:B:2445:G:OP1	1.89	0.54
2:B:277:G:H5''	2:B:278:A:N7	2.22	0.54
2:B:321:U:N1	6:E:129:PRO:HB2	2.22	0.54
2:B:494:G:O3'	19:S:6:LYS:HG3	2.07	0.54
2:B:592:A:H5'	29:3:1:PRO:HB3	1.86	0.54
2:B:664:G:H2'	2:B:665:U:C6	2.42	0.54
2:B:732:C:C6	2:B:733:G:P	3.01	0.54
2:B:811:U:N3	2:B:1251:C:N4	2.45	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1008:A:H4'	17:Q:58:GLN:OE1	2.07	0.54
2:B:1123:C:H2'	2:B:1124:G:H8	1.73	0.54
2:B:1125:G:H3'	2:B:1126:A:H5''	1.88	0.54
2:B:1133:A:H2'	2:B:2027:G:C4'	2.38	0.54
2:B:1162:G:O2'	2:B:1163:G:H5'	2.06	0.54
2:B:1805:A:C1'	4:C:51:ARG:N	2.69	0.54
2:B:1818:U:OP1	4:C:157:ALA:HB2	2.04	0.54
2:B:1826:G:C2'	2:B:1901:A:OP2	2.56	0.54
2:B:1847:A:H4'	2:B:1848:A:C8	2.41	0.54
2:B:2206:C:O2'	2:B:2207:C:H5'	2.07	0.54
2:B:2270:A:C5'	22:W:17:ALA:O	2.47	0.54
2:B:2590:A:H2'	2:B:2591:C:C6	2.43	0.54
2:B:2785:C:H2'	2:B:2786:U:C6	2.42	0.54
2:B:2794:C:H2'	2:B:2795:C:C6	2.42	0.54
5:D:8:LYS:CD	16:P:5:LYS:HD2	2.37	0.54
9:H:66:ASN:CB	9:H:138:VAL:HG11	2.37	0.54
12:L:77:ILE:HG22	12:L:78:ARG:CZ	2.37	0.54
12:L:78:ARG:NH2	12:L:110:VAL:HG11	2.22	0.54
13:M:69:PRO:O	13:M:70:ASP:HB3	2.05	0.54
13:M:88:ASN:N	13:M:88:ASN:ND2	2.49	0.54
14:N:19:ALA:C	14:N:21:PHE:N	2.62	0.54
15:O:24:THR:OG1	15:O:91:SER:HA	2.07	0.54
17:Q:69:ARG:HG3	17:Q:70:GLN:N	2.23	0.54
20:T:56:GLU:HB2	20:T:86:THR:OG1	2.06	0.54
23:X:45:GLN:NE2	23:X:45:GLN:H	2.05	0.54
28:2:3:ARG:CB	32:2:96:HOH:O	2.55	0.54
1:A:93:C:OP2	3:V:14:LYS:CE	2.56	0.54
2:B:64:A:H2'	2:B:65:U:H6	1.73	0.54
2:B:538:A:O2'	2:B:539:G:H5'	2.08	0.54
2:B:738:G:H4'	32:B:3301:HOH:O	2.07	0.54
2:B:826:U:C3'	2:B:2446:G:H5'	2.37	0.54
2:B:1050:A:C2	2:B:2751:G:O6	2.61	0.54
2:B:1060:U:O2	2:B:1088:A:C8	2.60	0.54
2:B:1259:G:H2'	2:B:1260:A:H8	1.73	0.54
2:B:1768:C:OP2	2:B:1960:A:C5'	2.33	0.54
2:B:1771:C:H2'	2:B:1772:A:C8	2.42	0.54
2:B:1783:A:O3'	2:B:2590:A:O4'	2.25	0.54
2:B:1807:G:H5''	4:C:47:ARG:CG	2.27	0.54
2:B:1938:A:OP1	2:B:1982:U:C5	2.60	0.54
2:B:2069:G:C6	2:B:2244:U:H2'	2.42	0.54
2:B:2258:C:O4'	2:B:2449:U:O5'	2.26	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2640:G:O3'	10:J:78:THR:HG23	2.02	0.54
2:B:2698:U:H2'	2:B:2699:C:C6	2.42	0.54
4:C:114:GLN:HB2	4:C:124:LYS:NZ	2.23	0.54
4:C:128:THR:HG22	4:C:188:ARG:HB2	1.89	0.54
5:D:146:ILE:N	5:D:146:ILE:HD12	2.22	0.54
6:E:187:VAL:HG23	6:E:187:VAL:O	2.07	0.54
7:F:66:ILE:HA	7:F:85:GLY:O	2.08	0.54
10:J:7:LYS:HD2	10:J:49:ASP:CB	2.34	0.54
10:J:35:ARG:HE	10:J:39:LYS:HB3	1.71	0.54
11:K:107:LEU:C	11:K:109:SER:H	2.15	0.54
11:K:108:ARG:HD2	11:K:113:MET:CE	2.37	0.54
12:L:77:ILE:HG22	12:L:78:ARG:NE	2.23	0.54
15:O:20:GLU:HB3	15:O:23:ALA:CB	2.37	0.54
16:P:8:GLU:HA	16:P:11:GLN:CG	2.38	0.54
18:R:48:LYS:HG3	18:R:49:ILE:CD1	2.37	0.54
20:T:24:MET:CE	20:T:29:THR:H	2.20	0.54
20:T:62:VAL:O	20:T:63:VAL:HG12	2.06	0.54
21:U:2:ALA:C	21:U:4:ILE:H	2.16	0.54
27:1:47:ILE:HG13	27:1:48:TYR:H	1.71	0.54
1:A:60:C:H41	7:F:26:GLN:HE21	1.54	0.54
2:B:7:G:N1	2:B:2897:U:N1	2.49	0.54
2:B:15:G:H4'	26:0:17:SER:CA	2.37	0.54
2:B:86:G:H21	23:X:45:GLN:HG2	0.73	0.54
2:B:230:G:H2'	2:B:231:A:H8	1.72	0.54
2:B:1118:C:H5''	13:M:127:LYS:CD	2.29	0.54
2:B:1551:A:C3'	2:B:1552:A:H5''	2.37	0.54
2:B:1674:G:C8	2:B:1955:U:H5'	2.41	0.54
2:B:1824:G:C4'	4:C:247:TRP:CZ3	2.86	0.54
2:B:1826:G:HO2'	2:B:1901:A:H4'	1.73	0.54
2:B:1950:G:OP2	2:B:1988:G:O3'	2.24	0.54
2:B:2007:U:OP1	2:B:2050:C:C4'	2.55	0.54
2:B:2063:C:O5'	2:B:2254:C:OP1	2.25	0.54
2:B:2258:C:C4'	2:B:2449:U:C5'	2.83	0.54
2:B:2485:G:H8	13:M:44:ARG:HH12	1.54	0.54
2:B:2578:G:C5	5:D:148:GLN:O	2.60	0.54
2:B:2666:C:O4'	2:B:2666:C:O2	2.25	0.54
5:D:119:ALA:HA	5:D:123:LYS:CE	2.34	0.54
10:J:99:ARG:O	10:J:100:VAL:HB	2.08	0.54
13:M:3:GLN:HB3	13:M:46:ILE:HB	1.90	0.54
13:M:11:LYS:HG2	13:M:12:MET:N	2.20	0.54
14:N:86:ARG:HH21	14:N:116:VAL:HG11	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:76:HIS:CD2	16:P:76:HIS:N	2.74	0.54
19:S:32:ALA:O	19:S:33:LEU:HD13	2.08	0.54
21:U:100:GLU:O	21:U:102:ILE:HG13	2.08	0.54
23:X:14:LEU:HG	23:X:53:VAL:HG12	1.88	0.54
2:B:24:G:N3	19:S:78:GLU:OE1	2.39	0.54
2:B:94:A:O5'	23:X:36:GLN:CB	2.55	0.54
2:B:131:A:H2'	2:B:132:G:H8	1.73	0.54
2:B:567:U:C4'	32:B:3347:HOH:O	2.55	0.54
2:B:587:C:N4	12:L:41:ARG:CG	2.11	0.54
2:B:588:U:O3'	12:L:28:GLY:CA	2.55	0.54
2:B:597:G:O2'	12:L:21:ARG:CD	2.55	0.54
2:B:811:U:C2	2:B:1251:C:N3	2.76	0.54
2:B:920:A:H2	2:B:2268:A:OP2	1.90	0.54
2:B:1783:A:C2'	2:B:2590:A:C8	2.76	0.54
2:B:1983:G:C4'	2:B:2591:C:HO2'	2.19	0.54
2:B:1992:G:C1'	2:B:2550:G:H8	2.21	0.54
2:B:2065:C:O2	2:B:2246:G:C6	2.61	0.54
2:B:2091:C:C2	2:B:2228:G:C4	2.62	0.54
2:B:2243:U:H6	25:Z:18:CYS:SG	2.24	0.54
2:B:2258:C:H2'	2:B:2425:A:C1'	2.37	0.54
2:B:2627:G:O2'	2:B:2781:A:N1	2.37	0.54
3:V:84:PRO:HG3	13:M:127:LYS:HE2	0.55	0.54
4:C:21:PRO:HG2	4:C:202:ARG:NH1	2.23	0.54
4:C:235:GLU:HG3	4:C:237:ARG:HD3	1.89	0.54
5:D:37:VAL:HG22	5:D:46:ARG:NE	2.21	0.54
5:D:48:ILE:HD12	5:D:80:TRP:HE1	1.72	0.54
5:D:58:ASN:O	5:D:59:ARG:HB2	2.06	0.54
8:G:17:LYS:O	8:G:23:ILE:HD12	2.07	0.54
17:Q:4:LYS:O	17:Q:7:VAL:HG22	2.07	0.54
17:Q:29:ARG:NE	26:O:9:ARG:HG3	2.22	0.54
25:Z:35:ASP:C	25:Z:42:PRO:HB3	2.33	0.54
29:3:27:ASN:HB3	29:3:28:LEU:HG	1.88	0.54
1:A:90:C:H2'	1:A:91:C:O4'	2.07	0.54
2:B:537:G:HO2'	10:J:4:PHE:CE1	1.65	0.54
2:B:540:C:O2'	2:B:541:A:H5'	2.08	0.54
2:B:682:G:C3'	28:2:26:ASN:CG	2.80	0.54
2:B:1010:A:O3'	17:Q:76:SER:OG	2.24	0.54
2:B:1251:C:OP1	17:Q:8:ILE:HD11	2.07	0.54
2:B:1464:G:H2'	2:B:1465:G:C8	2.43	0.54
2:B:1652:A:P	2:B:2724:U:H4'	2.48	0.54
2:B:1828:G:H5''	2:B:1970:A:O5'	1.83	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2009:A:OP1	2:B:2823:A:N7	2.39	0.54
2:B:2061:G:N7	2:B:2252:G:C8	2.75	0.54
2:B:2305:U:C5	7:F:39:VAL:HG22	2.42	0.54
2:B:2683:C:O3'	16:P:59:THR:HG21	2.08	0.54
2:B:2849:U:H4'	2:B:2850:A:C5'	2.38	0.54
32:B:3142:HOH:O	29:3:17:GLY:HA2	1.67	0.54
4:C:37:SER:H	4:C:62:ARG:CB	2.20	0.54
5:D:38:LYS:HG2	5:D:39:ASP:N	2.19	0.54
6:E:123:LYS:HB3	6:E:126:VAL:HG23	1.90	0.54
8:G:84:LYS:HZ3	8:G:84:LYS:HA	1.71	0.54
8:G:137:LYS:HA	8:G:140:ILE:CG1	2.38	0.54
8:G:163:TYR:HB2	8:G:166:GLU:HB2	1.89	0.54
10:J:119:PHE:HE1	10:J:121:LYS:HD3	1.72	0.54
12:L:95:LEU:HD12	12:L:95:LEU:N	2.21	0.54
16:P:83:ILE:HG22	16:P:85:VAL:H	1.72	0.54
17:Q:94:LEU:HD22	17:Q:95:ALA:N	2.23	0.54
17:Q:97:ILE:HD13	17:Q:100:PHE:CZ	2.42	0.54
20:T:30:ILE:CG2	20:T:31:VAL:N	2.71	0.54
26:O:2:VAL:HG22	26:O:3:GLN:N	2.23	0.54
2:B:9:G:C6	2:B:2629:U:C4	2.96	0.54
2:B:365:U:H2'	2:B:366:C:C6	2.43	0.54
2:B:404:A:H4'	2:B:405:U:H5'	1.90	0.54
2:B:413:C:C4	2:B:2410:G:O6	2.61	0.54
2:B:790:U:P	28:2:3:ARG:HH22	2.30	0.54
2:B:845:A:C2	2:B:847:U:H1'	2.42	0.54
2:B:2197:U:O4	2:B:2225:A:H5'	2.00	0.54
2:B:2311:A:O3'	7:F:71:LYS:HG3	1.85	0.54
2:B:2386:A:H4'	22:W:38:ARG:CD	2.21	0.54
2:B:2502:G:N7	32:B:3348:HOH:O	2.40	0.54
2:B:2511:U:C2'	5:D:146:ILE:HA	2.38	0.54
2:B:2581:G:N2	2:B:2610:C:C6	2.75	0.54
2:B:2758:A:N3	8:G:34:ARG:HD3	2.22	0.54
2:B:2771:C:H2'	2:B:2772:C:C6	2.43	0.54
2:B:2785:C:H2'	2:B:2786:U:H6	1.73	0.54
2:B:2849:U:N3	2:B:2867:G:H1'	2.22	0.54
4:C:27:LYS:HA	4:C:79:ARG:NH1	2.23	0.54
4:C:224:MET:HB3	4:C:233:GLY:H	1.72	0.54
7:F:59:ILE:HD13	7:F:59:ILE:O	2.08	0.54
7:F:121:PHE:HE2	7:F:166:ARG:H	1.56	0.54
8:G:5:LYS:HG3	8:G:68:ARG:HB2	1.89	0.54
11:K:104:THR:O	11:K:107:LEU:HB3	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:16:ARG:O	15:O:20:GLU:HB2	2.07	0.54
16:P:63:ILE:O	16:P:72:VAL:HG12	2.07	0.54
19:S:34:ASP:H	19:S:37:THR:CG2	2.20	0.54
22:W:23:LYS:HG3	22:W:24:ARG:N	2.23	0.54
25:Z:40:CYS:O	25:Z:41:HIS:HB3	2.08	0.54
27:1:8:ILE:HG23	27:1:27:ARG:HE	1.72	0.54
2:B:580:U:O2'	17:Q:31:TYR:N	2.30	0.54
2:B:682:G:C4'	28:2:26:ASN:OD1	2.52	0.54
2:B:856:G:H1'	22:W:23:LYS:NZ	2.23	0.54
2:B:871:U:H2'	2:B:872:U:H6	1.72	0.54
2:B:929:U:P	24:Y:37:ARG:NH1	2.49	0.54
2:B:1083:U:H2'	2:B:1085:A:OP2	2.08	0.54
2:B:1316:U:O2'	2:B:1317:G:H5'	2.08	0.54
2:B:1509:A:H5'	2:B:1510:G:H5'	1.89	0.54
2:B:1550:C:P	2:B:1720:U:O2'	2.64	0.54
2:B:1583:A:H4'	2:B:1585:C:C4	2.42	0.54
2:B:1662:U:O2	11:K:3:GLN:HG2	2.07	0.54
2:B:1671:U:OP1	2:B:2554:U:O4	2.26	0.54
2:B:1758:U:H2'	2:B:2696:U:C4'	2.37	0.54
2:B:1768:C:OP2	2:B:1960:A:OP1	2.26	0.54
2:B:2009:A:H5''	2:B:2823:A:N9	2.13	0.54
2:B:2097:A:H2'	2:B:2098:U:C6	2.43	0.54
2:B:2216:G:P	25:Z:44:PHE:CZ	3.01	0.54
2:B:2718:G:H5''	16:P:100:ARG:HD2	1.89	0.54
8:G:60:GLY:O	8:G:63:GLN:HG2	2.08	0.54
10:J:18:VAL:HG22	10:J:55:ILE:O	2.07	0.54
12:L:79:LEU:CA	12:L:113:ALA:HB3	2.31	0.54
16:P:54:LEU:O	16:P:56:SER:N	2.41	0.54
18:R:39:LEU:HG	18:R:41:ILE:CG1	2.37	0.54
19:S:29:VAL:HG22	19:S:71:VAL:HG23	1.89	0.54
20:T:16:VAL:O	20:T:16:VAL:HG13	2.08	0.54
24:Y:3:THR:O	24:Y:6:ILE:HG23	2.08	0.54
2:B:76:C:P	23:X:48:ARG:HG3	2.45	0.54
2:B:136:G:H2'	2:B:137:U:C6	2.43	0.54
2:B:144:A:H2'	2:B:145:C:C6	2.43	0.54
2:B:659:G:O2'	6:E:97:ASN:CG	2.51	0.54
2:B:1054:A:O2'	2:B:1055:G:H5'	2.08	0.54
2:B:1133:A:C2'	2:B:2027:G:H4'	2.37	0.54
2:B:1674:G:C5	2:B:1956:U:O4	2.60	0.54
2:B:1759:A:C4	2:B:2697:G:H5'	2.28	0.54
2:B:1769:U:H5'	2:B:1962:C:C5	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1939:U:H6	2:B:1939:U:H5'	1.72	0.54
2:B:1945:G:H2'	2:B:1946:U:C6	2.43	0.54
2:B:1954:G:H2'	2:B:1990:C:H42	1.73	0.54
2:B:1974:C:C1'	2:B:1978:A:H62	2.21	0.54
2:B:2005:A:C3'	5:D:142:VAL:HG12	2.38	0.54
2:B:2061:G:N2	2:B:2254:C:C6	2.74	0.54
3:V:77:VAL:O	13:M:135:VAL:CG2	2.55	0.54
5:D:142:VAL:HB	5:D:143:PRO:CD	2.37	0.54
14:N:35:LYS:HA	14:N:111:ALA:O	2.08	0.54
15:O:58:ILE:HG13	15:O:59:ALA:H	1.73	0.54
18:R:39:LEU:HD11	18:R:57:GLY:O	2.08	0.54
18:R:53:PHE:HB3	18:R:55:ASP:CA	2.37	0.54
19:S:34:ASP:N	19:S:37:THR:HG22	2.23	0.54
29:3:16:THR:C	29:3:18:LYS:H	2.16	0.54
1:A:80:U:O2'	2:B:918:A:C1'	2.54	0.53
2:B:518:G:H4'	19:S:15:GLN:HB3	1.91	0.53
2:B:598:U:H2'	2:B:599:A:C8	2.42	0.53
2:B:662:G:H5''	12:L:25:SER:CA	2.37	0.53
2:B:811:U:C1'	2:B:1251:C:N1	2.71	0.53
2:B:1340:U:H5'	2:B:1394:U:C2'	2.38	0.53
2:B:1550:C:H2'	2:B:1551:A:C8	2.42	0.53
2:B:1663:G:N2	2:B:2548:U:O2	2.41	0.53
2:B:1671:U:H5''	2:B:2554:U:O4	2.06	0.53
2:B:1724:G:H2'	2:B:1725:U:H6	1.73	0.53
2:B:1767:G:C1'	2:B:1959:G:H2'	2.37	0.53
2:B:1807:G:OP1	4:C:48:ILE:CD1	2.55	0.53
2:B:1821:A:H2'	2:B:1822:C:C6	2.43	0.53
2:B:1903:G:H5'	4:C:239:PHE:CD2	2.25	0.53
2:B:2032:G:C6	2:B:2572:A:C8	2.95	0.53
2:B:2035:G:O6	32:B:3307:HOH:O	2.18	0.53
2:B:2065:C:C2	2:B:2246:G:C4	2.95	0.53
2:B:2270:A:H2'	22:W:18:LYS:HD3	1.90	0.53
2:B:2379:G:H2'	2:B:2380:C:C6	2.43	0.53
2:B:2725:A:OP1	5:D:126:ASN:OD1	2.26	0.53
2:B:2760:C:O2'	2:B:2761:A:H5'	2.07	0.53
4:C:42:ARG:CG	4:C:43:ASN:H	2.11	0.53
5:D:2:ILE:HG21	5:D:203:VAL:O	2.07	0.53
6:E:53:THR:O	6:E:55:SER:N	2.41	0.53
6:E:132:LYS:HB2	6:E:132:LYS:NZ	2.23	0.53
6:E:158:PHE:C	6:E:160:ALA:H	2.16	0.53
13:M:96:ILE:HD13	13:M:97:GLN:CB	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:80:ARG:O	18:R:80:ARG:HG3	2.07	0.53
27:1:51:ALA:C	27:1:52:LYS:HD2	2.33	0.53
1:A:80:U:C4'	2:B:918:A:H1'	2.39	0.53
1:A:91:C:O2'	1:A:92:C:H5'	2.08	0.53
1:A:99:A:H2'	1:A:99:A:N3	2.22	0.53
2:B:49:A:OP1	2:B:49:A:H4'	2.07	0.53
2:B:95:A:OP2	23:X:36:GLN:NE2	2.07	0.53
2:B:346:A:H5'	2:B:346:A:N3	2.22	0.53
2:B:566:U:O4'	2:B:577:G:O4'	2.26	0.53
2:B:585:G:N2	2:B:810:U:H4'	2.23	0.53
2:B:661:A:O3'	12:L:23:ILE:CA	2.57	0.53
2:B:809:G:H21	2:B:1254:A:H2	0.72	0.53
2:B:1024:G:C3'	2:B:1025:G:H5''	2.34	0.53
2:B:1028:A:H2'	2:B:1029:A:C8	2.43	0.53
2:B:1128:G:C2	2:B:2518:A:C5'	2.91	0.53
2:B:1815:A:H4'	4:C:85:ASN:C	2.34	0.53
2:B:2005:A:C5	5:D:140:HIS:O	2.62	0.53
2:B:2061:G:H5'	2:B:2252:G:H4'	0.61	0.53
2:B:2199:A:C6	2:B:2225:A:C1'	2.91	0.53
2:B:2272:U:OP2	22:W:15:SER:C	2.51	0.53
2:B:2428:G:H8	2:B:2448:A:N1	2.03	0.53
2:B:2582:G:N3	2:B:2583:G:C8	2.76	0.53
4:C:172:THR:HG22	4:C:173:LEU:H	1.73	0.53
5:D:16:THR:O	16:P:79:VAL:C	2.51	0.53
6:E:29:HIS:O	6:E:33:VAL:HG23	2.07	0.53
10:J:57:LEU:HD12	10:J:128:ASN:HA	1.89	0.53
27:1:34:GLU:O	27:1:35:LEU:HB3	2.08	0.53
28:2:25:LYS:H	28:2:25:LYS:HE3	1.72	0.53
29:3:4:LYS:HE3	29:3:58:ILE:HB	1.89	0.53
1:A:14:U:C2'	1:A:107:G:O3'	2.56	0.53
1:A:90:C:O4'	13:M:21:ALA:HB2	2.04	0.53
2:B:29:U:H6	32:B:3224:HOH:O	1.92	0.53
2:B:516:C:P	26:O:9:ARG:CG	2.85	0.53
2:B:516:C:O4'	2:B:1262:A:OP1	2.26	0.53
2:B:586:A:H61	2:B:810:U:HO3'	1.56	0.53
2:B:855:G:O3'	22:W:24:ARG:NH1	2.40	0.53
2:B:1278:C:C3'	14:N:27:SER:OG	2.56	0.53
2:B:1359:A:C6	2:B:2212:A:C2	2.96	0.53
2:B:1545:A:H2'	2:B:1546:G:O4'	2.08	0.53
2:B:1573:G:H2'	2:B:1574:C:H5'	1.91	0.53
2:B:1655:A:C5	5:D:146:ILE:CD1	2.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1750:G:H1'	2:B:2859:G:N2	2.23	0.53
2:B:1773:A:N6	2:B:1830:C:C2	2.77	0.53
2:B:1949:G:N1	2:B:1987:A:N6	2.56	0.53
2:B:1974:C:C2	2:B:1978:A:C5	2.96	0.53
2:B:2061:G:H5'	2:B:2252:G:C5'	2.33	0.53
2:B:2065:C:O2	2:B:2246:G:C4	2.61	0.53
4:C:10:PRO:HG2	4:C:23:LEU:HD11	1.90	0.53
4:C:212:TRP:CZ3	4:C:217:PRO:HD3	2.43	0.53
6:E:43:THR:O	6:E:43:THR:HG22	2.08	0.53
6:E:52:VAL:HG22	6:E:53:THR:H	1.72	0.53
9:H:69:ALA:HB2	9:H:140:ALA:HA	1.90	0.53
9:H:121:VAL:HG11	9:H:128:HIS:CD2	2.43	0.53
12:L:117:THR:HG21	12:L:120:VAL:CG1	2.38	0.53
13:M:18:ARG:HB3	13:M:40:ARG:HH22	1.73	0.53
13:M:73:ILE:HG22	13:M:74:THR:N	2.24	0.53
15:O:19:GLN:N	22:W:76:ARG:HH12	2.01	0.53
2:B:41:C:H2'	2:B:42:A:C8	2.42	0.53
2:B:96:C:H1'	23:X:42:LEU:N	2.21	0.53
2:B:520:G:H2'	2:B:521:U:C6	2.44	0.53
2:B:570:G:O3'	2:B:571:U:H1'	2.04	0.53
2:B:809:G:O3'	2:B:1254:A:C8	2.62	0.53
2:B:814:C:C6	18:R:84:ARG:CA	2.92	0.53
2:B:950:G:H2'	2:B:951:C:C6	2.43	0.53
2:B:1046:A:C3'	2:B:1047:G:H5''	2.38	0.53
2:B:1224:U:C4'	18:R:89:HIS:O	2.56	0.53
2:B:1395:A:H4'	2:B:1397:U:C5	2.44	0.53
2:B:1488:C:O2'	2:B:1489:C:H5'	2.09	0.53
2:B:1579:A:H2'	2:B:1580:A:C8	2.43	0.53
2:B:1653:G:H21	5:D:141:ARG:CA	2.21	0.53
2:B:1655:A:C5	5:D:146:ILE:HD12	2.43	0.53
2:B:1664:A:O4'	11:K:23:LYS:HB3	2.08	0.53
2:B:1810:A:H2'	2:B:1811:G:O4'	2.08	0.53
2:B:1826:G:C1'	2:B:1901:A:OP2	2.56	0.53
2:B:1951:U:H3	2:B:1990:C:N4	1.99	0.53
2:B:1993:U:H3'	2:B:2551:C:C5	2.43	0.53
2:B:2004:G:H1'	5:D:137:SER:O	1.60	0.53
2:B:2005:A:H1'	5:D:145:SER:HG	1.71	0.53
2:B:2586:U:H2'	2:B:2587:A:C8	2.44	0.53
3:V:82:TYR:HA	13:M:34:LYS:HG3	1.89	0.53
6:E:149:ILE:HG12	6:E:186:VAL:HG22	1.90	0.53
9:H:2:GLN:N	9:H:21:VAL:HG12	2.22	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:25:LEU:C	11:K:27:GLY:H	2.16	0.53
11:K:59:LYS:HD2	11:K:92:GLU:OE2	2.08	0.53
12:L:117:THR:CG2	12:L:120:VAL:HB	2.36	0.53
15:O:1:MET:HG3	15:O:3:LYS:HE3	1.90	0.53
25:Z:66:ILE:C	25:Z:68:GLY:N	2.64	0.53
2:B:532:A:C6	2:B:2020:A:O4'	2.61	0.53
2:B:623:C:H4'	29:3:61:LEU:HD22	1.86	0.53
2:B:705:A:N6	2:B:726:G:O2'	2.41	0.53
2:B:709:U:H2'	2:B:710:U:C6	2.44	0.53
2:B:1188:U:O2'	2:B:1189:A:H5'	2.08	0.53
2:B:1225:G:C6	18:R:88:GLY:HA3	2.44	0.53
2:B:1361:G:O2'	2:B:2214:C:N3	2.35	0.53
2:B:1853:A:C4	2:B:2237:G:N7	2.77	0.53
2:B:1993:U:C4	2:B:2551:C:C6	2.97	0.53
2:B:2225:A:C2	9:H:25:TYR:HE1	2.24	0.53
2:B:2748:A:C4'	8:G:69:ALA:HB1	2.30	0.53
2:B:2788:C:H4'	2:B:2810:A:H5'	1.91	0.53
2:B:2852:G:H2'	2:B:2853:C:H6	1.72	0.53
3:V:77:VAL:O	13:M:135:VAL:O	2.27	0.53
4:C:160:TYR:CG	4:C:193:GLU:HG2	2.43	0.53
5:D:118:PHE:N	5:D:164:GLN:HG3	2.23	0.53
6:E:183:PHE:O	12:L:13:LYS:HG3	2.09	0.53
6:E:183:PHE:C	12:L:12:SER:HG	2.11	0.53
11:K:102:PRO:HB3	11:K:121:GLU:OE1	2.08	0.53
15:O:87:ILE:HG13	15:O:88:LYS:H	1.73	0.53
17:Q:51:GLN:O	17:Q:54:ARG:HG2	2.07	0.53
18:R:47:VAL:HG13	18:R:49:ILE:N	2.20	0.53
23:X:27:ASN:O	23:X:30:MET:HG2	2.08	0.53
27:1:44:GLN:OE1	27:1:46:VAL:HB	2.09	0.53
1:A:49:C:OP2	15:O:67:ASN:CB	2.57	0.53
1:A:54:G:H2'	1:A:55:U:C6	2.43	0.53
1:A:56:G:O5'	7:F:13:LYS:CD	2.55	0.53
2:B:26:G:H1'	2:B:514:A:N6	2.22	0.53
2:B:161:A:C3'	2:B:162:U:H5''	2.34	0.53
2:B:320:A:N7	6:E:132:LYS:HA	2.24	0.53
2:B:539:G:H5'	10:J:7:LYS:O	2.09	0.53
2:B:997:G:O2'	2:B:998:C:H5'	2.08	0.53
2:B:1013:C:H2'	2:B:1014:A:H8	1.72	0.53
2:B:1444:G:H2'	2:B:1445:G:H8	1.74	0.53
2:B:1654:A:C2	2:B:2512:C:C5'	2.81	0.53
2:B:1770:G:C4'	2:B:1967:C:C6	2.87	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2003:A:C3'	5:D:132:ALA:HA	2.36	0.53
2:B:2007:U:OP1	2:B:2050:C:H4'	2.09	0.53
2:B:2074:U:H2'	2:B:2075:U:C6	2.44	0.53
2:B:2814:A:C1'	26:0:39:ARG:CG	2.77	0.53
4:C:68:ARG:HD3	4:C:103:ILE:HD12	1.91	0.53
5:D:92:VAL:HG13	5:D:93:GLY:N	2.23	0.53
6:E:133:LEU:HD12	6:E:136:GLN:CG	2.38	0.53
6:E:141:MET:SD	6:E:143:LEU:HD22	2.48	0.53
10:J:7:LYS:CD	10:J:48:VAL:HB	2.37	0.53
14:N:113:ILE:HG22	14:N:114:GLU:N	2.22	0.53
15:O:19:GLN:CA	22:W:76:ARG:HH22	2.18	0.53
16:P:16:VAL:O	16:P:17:PRO:O	2.26	0.53
18:R:66:HIS:HA	18:R:98:ILE:HD13	1.89	0.53
1:A:30:C:C4'	7:F:25:MET:CE	2.71	0.53
1:A:43:C:N3	7:F:91:ARG:CD	2.63	0.53
2:B:184:C:H2'	2:B:185:G:C8	2.43	0.53
2:B:448:U:C2	2:B:1259:G:H5'	2.44	0.53
2:B:564:C:O2'	2:B:565:C:H5'	2.00	0.53
2:B:682:G:C3'	28:2:26:ASN:CB	2.86	0.53
2:B:811:U:H1'	2:B:1251:C:N1	2.23	0.53
2:B:1163:G:H5'	18:R:91:GLN:CD	2.29	0.53
2:B:1429:G:H2'	2:B:1430:G:C8	2.41	0.53
2:B:1675:C:C5	2:B:2552:U:C5'	2.56	0.53
2:B:1863:G:O3'	2:B:2411:A:H5'	2.09	0.53
2:B:1975:G:N3	2:B:1978:A:H1'	2.24	0.53
2:B:2004:G:C8	5:D:139:SER:O	2.57	0.53
2:B:2065:C:O2	2:B:2246:G:C2	2.61	0.53
2:B:2216:G:P	25:Z:44:PHE:CE1	3.01	0.53
2:B:2270:A:C4	22:W:20:LEU:CB	2.75	0.53
2:B:2539:C:O2'	2:B:2540:C:H5'	2.09	0.53
2:B:2740:A:H2'	2:B:2741:A:C8	2.44	0.53
3:V:9:ARG:HH12	3:V:27:PRO:HA	1.74	0.53
3:V:63:ILE:HD11	3:V:72:VAL:HG21	1.91	0.53
4:C:23:LEU:N	4:C:202:ARG:NH2	2.51	0.53
8:G:139:VAL:O	8:G:143:VAL:HG23	2.09	0.53
10:J:72:LYS:HB2	10:J:90:GLU:HB2	1.91	0.53
14:N:21:PHE:CE1	14:N:43:GLU:HG2	2.44	0.53
16:P:26:GLU:CB	16:P:46:VAL:HG22	2.32	0.53
16:P:38:ARG:HH11	16:P:39:LEU:N	2.06	0.53
16:P:69:VAL:HG12	16:P:70:GLU:N	2.24	0.53
19:S:33:LEU:HB3	19:S:37:THR:HB	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:X:8:GLU:O	23:X:10:SER:N	2.42	0.53
23:X:14:LEU:HD21	23:X:57:LEU:HB2	1.90	0.53
24:Y:54:VAL:HG22	24:Y:55:LYS:N	2.22	0.53
26:O:11:LYS:HG3	26:O:12:ARG:H	1.72	0.53
27:1:13:SER:H	27:1:50:GLU:HA	1.72	0.53
2:B:4:U:C4	2:B:2899:A:N6	2.75	0.53
2:B:5:A:H2	2:B:2899:A:C8	2.23	0.53
2:B:753:A:H2'	2:B:754:U:H6	1.72	0.53
2:B:826:U:H2'	2:B:2446:G:P	2.49	0.53
2:B:851:C:C2'	24:Y:45:GLY:HA3	1.69	0.53
2:B:1258:U:H4'	6:E:79:ARG:CG	2.38	0.53
2:B:1258:U:C4'	6:E:79:ARG:CB	2.86	0.53
2:B:1666:G:N9	2:B:2559:C:O2'	2.41	0.53
2:B:1766:G:N3	2:B:1948:G:N2	2.56	0.53
2:B:1806:C:C6	4:C:45:ASN:ND2	2.76	0.53
2:B:1816:C:C2'	4:C:62:ARG:NH2	2.71	0.53
2:B:2031:A:H2	2:B:2455:G:O2'	1.92	0.53
2:B:2788:C:O2'	2:B:2809:A:C2'	2.50	0.53
2:B:2848:G:OP1	16:P:95:LYS:HG2	2.09	0.53
3:V:40:ILE:HD13	3:V:40:ILE:N	2.23	0.53
4:C:143:VAL:HG12	4:C:144:GLU:N	2.19	0.53
5:D:5:VAL:HB	5:D:27:ILE:O	2.08	0.53
5:D:192:ALA:O	5:D:193:VAL:HG12	2.08	0.53
6:E:111:GLU:C	6:E:113:VAL:H	2.16	0.53
6:E:132:LYS:HZ2	6:E:133:LEU:HD22	1.74	0.53
10:J:13:ARG:HH11	10:J:13:ARG:HG3	1.73	0.53
10:J:34:ARG:HB3	10:J:39:LYS:HD2	1.89	0.53
13:M:105:MET:O	13:M:105:MET:HE2	2.09	0.53
22:W:43:LYS:HA	22:W:63:ASP:OD1	2.07	0.53
29:3:12:ARG:HB2	29:3:12:ARG:CZ	2.38	0.53
29:3:13:PHE:O	29:3:14:LYS:HG2	2.09	0.53
2:B:6:A:H2'	2:B:7:G:H8	1.74	0.53
2:B:84:A:P	21:U:91:LYS:CD	2.94	0.53
2:B:182:A:H2'	2:B:183:C:H6	1.74	0.53
2:B:355:U:H2'	2:B:356:G:C8	2.44	0.53
2:B:465:G:C4'	28:2:12:ARG:NH2	2.63	0.53
2:B:530:G:C5'	2:B:2021:C:O2'	2.56	0.53
2:B:672:C:O2'	2:B:673:C:H5'	2.09	0.53
2:B:688:U:C5'	28:2:2:LYS:HZ1	2.18	0.53
2:B:815:C:P	18:R:86:GLN:HB3	2.49	0.53
2:B:823:C:O2'	2:B:824:U:H5'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:968:C:H2'	2:B:969:G:C8	2.42	0.53
2:B:1128:G:C2	2:B:2517:C:C4'	2.79	0.53
2:B:1163:G:C1'	18:R:91:GLN:HG3	2.38	0.53
2:B:1341:G:O4'	20:T:84:TYR:CD1	2.60	0.53
2:B:1441:G:H2'	2:B:1442:U:H6	1.73	0.53
2:B:1515:A:H4'	2:B:1556:C:O2'	2.08	0.53
2:B:1688:U:O2	2:B:1700:A:H5'	2.09	0.53
2:B:1799:G:C5	4:C:175:LEU:CB	2.91	0.53
2:B:1997:C:C2	2:B:2548:U:H3'	2.44	0.53
2:B:2092:U:O4	2:B:2227:A:OP2	2.27	0.53
2:B:2186:G:H2'	2:B:2187:U:O4'	2.09	0.53
2:B:2199:A:H62	2:B:2224:G:HO2'	1.53	0.53
2:B:2269:G:C1'	22:W:22:VAL:N	2.72	0.53
2:B:2305:U:O4	7:F:39:VAL:HG22	2.08	0.53
2:B:2728:U:H2'	2:B:2729:G:H8	1.74	0.53
2:B:2746:U:H4'	8:G:137:LYS:CB	2.39	0.53
32:B:3211:HOH:O	12:L:41:ARG:HG3	2.09	0.53
5:D:16:THR:HA	16:P:79:VAL:HG11	0.55	0.53
6:E:44:ARG:HG2	6:E:45:ALA:H	1.73	0.53
6:E:50:ALA:O	6:E:74:LYS:HD2	2.09	0.53
6:E:104:ALA:O	6:E:105:LEU:HD23	2.09	0.53
10:J:46:PRO:C	10:J:48:VAL:H	2.15	0.53
13:M:82:MET:HB2	13:M:84:LYS:CE	2.38	0.53
15:O:73:ALA:HA	15:O:109:ALA:HB2	1.90	0.53
17:Q:23:TYR:O	17:Q:24:TYR:HB2	2.09	0.53
21:U:59:GLU:O	21:U:60:LYS:HB2	2.08	0.53
22:W:23:LYS:HB2	22:W:23:LYS:HZ2	1.74	0.53
1:A:56:G:C4'	7:F:13:LYS:NZ	2.71	0.53
2:B:55:G:H2'	2:B:56:A:H8	1.73	0.53
2:B:320:A:C5'	6:E:130:LYS:NZ	2.68	0.53
2:B:446:G:P	17:Q:2:ARG:CZ	2.97	0.53
2:B:458:G:O5'	28:2:39:ARG:CZ	2.56	0.53
2:B:496:G:H2'	2:B:497:A:O4'	2.09	0.53
2:B:667:U:C6	12:L:49:GLY:HA2	2.44	0.53
2:B:926:G:H2'	2:B:927:A:H8	1.73	0.53
2:B:1082:U:C2	2:B:1086:A:C6	2.97	0.53
2:B:1224:U:O4'	18:R:89:HIS:C	2.51	0.53
2:B:1665:A:N3	2:B:2561:U:C6	2.76	0.53
2:B:1670:C:H4'	2:B:2557:G:N3	2.21	0.53
2:B:1806:C:C5	4:C:50:THR:HG21	2.44	0.53
2:B:1807:G:H5''	4:C:47:ARG:HB2	0.57	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1999:C:OP1	11:K:31:ARG:NH2	2.38	0.53
2:B:2009:A:H5''	2:B:2823:A:H1'	0.56	0.53
2:B:2031:A:C2	2:B:2455:G:O2'	2.61	0.53
2:B:2104:C:H2'	2:B:2105:U:C5	2.44	0.53
2:B:2210:U:N3	2:B:2212:A:N7	2.57	0.53
2:B:2678:C:H2'	2:B:2679:A:H8	1.73	0.53
2:B:2750:A:OP2	8:G:3:VAL:HG23	2.09	0.53
2:B:2787:C:O2'	2:B:2788:C:H5'	2.08	0.53
4:C:68:ARG:HD2	4:C:127:ASN:ND2	2.23	0.53
4:C:247:TRP:HD1	4:C:247:TRP:O	1.92	0.53
6:E:52:VAL:HG13	6:E:53:THR:N	2.23	0.53
8:G:27:GLY:HA3	8:G:78:VAL:HB	1.91	0.53
8:G:171:LYS:O	8:G:172:GLU:HG2	2.08	0.53
10:J:25:LEU:HD12	10:J:62:VAL:HG12	1.91	0.53
18:R:20:VAL:HG13	18:R:97:LYS:HZ2	1.71	0.53
18:R:66:HIS:CA	18:R:98:ILE:HD13	2.38	0.53
19:S:28:LYS:HB3	19:S:71:VAL:HB	1.91	0.53
25:Z:17:SER:N	25:Z:21:VAL:HG23	2.23	0.53
26:O:16:ARG:HA	26:O:19:ASP:OD2	2.09	0.53
2:B:96:C:O3'	23:X:42:LEU:HD11	2.06	0.52
2:B:203:A:H2'	2:B:204:A:C8	2.44	0.52
2:B:515:A:C5'	17:Q:29:ARG:NH1	2.58	0.52
2:B:528:A:O5'	10:J:113:PRO:CD	2.48	0.52
2:B:564:C:C1'	2:B:578:G:H1	2.10	0.52
2:B:588:U:H5''	12:L:27:LEU:HA	1.84	0.52
2:B:728:G:O3'	4:C:16:VAL:HG13	2.08	0.52
2:B:1124:G:C5'	30:4:20:ASP:C	2.75	0.52
2:B:1759:A:N6	2:B:2697:G:H5''	2.24	0.52
2:B:1771:C:H2'	2:B:1772:A:H8	1.74	0.52
2:B:1994:C:C2'	2:B:2551:C:N4	2.65	0.52
2:B:2188:U:H2'	2:B:2189:U:C6	2.44	0.52
2:B:2258:C:H1'	2:B:2449:U:C5	2.42	0.52
2:B:2344:U:H4'	2:B:2345:G:OP1	2.10	0.52
2:B:2511:U:O2'	5:D:146:ILE:N	2.32	0.52
2:B:2514:U:H4'	5:D:156:PHE:HE1	1.72	0.52
2:B:2526:G:H2'	2:B:2527:C:C6	2.44	0.52
2:B:2682:A:H5''	16:P:55:HIS:NE2	2.23	0.52
3:V:89:ILE:O	3:V:89:ILE:HD12	2.08	0.52
4:C:209:ALA:HA	4:C:213:ARG:CZ	2.38	0.52
6:E:25:GLU:CD	12:L:17:LYS:HD3	2.34	0.52
6:E:112:LEU:CD1	12:L:11:GLY:O	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:96:ARG:O	14:N:113:ILE:HA	2.09	0.52
18:R:53:PHE:CB	18:R:55:ASP:HB2	2.39	0.52
19:S:7:HIS:CD2	19:S:8:ARG:H	2.27	0.52
20:T:84:TYR:O	20:T:85:VAL:HG22	2.08	0.52
26:0:46:GLY:O	26:0:52:LYS:HB3	2.10	0.52
29:3:26:ALA:HB3	29:3:29:ARG:CZ	2.38	0.52
1:A:74:U:O2	3:V:37:PRO:HG3	2.09	0.52
2:B:96:C:H4'	23:X:42:LEU:HD13	1.68	0.52
2:B:131:A:H2'	2:B:132:G:C8	2.44	0.52
2:B:1248:G:C5	17:Q:1:ALA:C	2.87	0.52
2:B:1474:U:H2'	2:B:1475:G:H5'	1.91	0.52
2:B:1528:A:H2'	2:B:1529:G:O4'	2.09	0.52
2:B:1773:A:N3	2:B:1975:G:O6	2.41	0.52
2:B:1785:A:H2'	2:B:1787:A:N7	2.24	0.52
2:B:1821:A:C4'	4:C:155:ARG:HD2	2.39	0.52
2:B:1979:U:O2'	2:B:1980:G:H5'	2.09	0.52
2:B:2057:G:C4'	26:0:1:ALA:N	2.71	0.52
2:B:2181:U:H2'	2:B:2182:U:O4'	2.10	0.52
2:B:2501:C:H5'	32:B:3335:HOH:O	2.05	0.52
2:B:2531:A:O4'	8:G:174:LYS:C	2.50	0.52
2:B:2669:G:H2'	2:B:2670:A:C8	2.43	0.52
2:B:2862:G:H2'	2:B:2863:C:C6	2.43	0.52
2:B:2875:C:O3'	16:P:6:GLN:CD	2.52	0.52
2:B:2884:U:C4	26:0:41:HIS:CG	2.97	0.52
2:B:2887:A:C2	26:0:27:LEU:CD1	2.81	0.52
4:C:53:ILE:HD13	4:C:218:THR:CG2	2.39	0.52
5:D:11:MET:HB3	16:P:8:GLU:CG	2.39	0.52
8:G:126:THR:CG2	8:G:128:THR:HG23	2.39	0.52
10:J:19:ASP:OD1	10:J:20:ALA:N	2.42	0.52
10:J:109:LEU:O	10:J:111:LYS:HG3	2.09	0.52
10:J:136:GLN:N	10:J:137:PRO:CD	2.71	0.52
12:L:12:SER:HG	12:L:13:LYS:H	1.57	0.52
14:N:22:ARG:NH1	14:N:69:ARG:HA	2.25	0.52
15:O:53:THR:O	15:O:54:VAL:C	2.52	0.52
17:Q:92:LYS:O	17:Q:94:LEU:N	2.42	0.52
29:3:41:ARG:CZ	29:3:42:HIS:H	2.22	0.52
2:B:496:G:C1'	19:S:61:ASN:OD1	2.58	0.52
2:B:566:U:O2'	2:B:567:U:H5'	2.08	0.52
2:B:680:C:P	32:B:2998:HOH:O	2.66	0.52
2:B:931:U:OP1	24:Y:29:ARG:HD2	2.09	0.52
2:B:934:U:H2'	2:B:935:C:H6	1.71	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1080:A:O2'	2:B:1081:U:H5'	2.10	0.52
2:B:1083:U:C2	2:B:1086:A:N1	2.78	0.52
2:B:1258:U:C5'	6:E:79:ARG:CB	2.87	0.52
2:B:1263:U:H4'	26:0:7:PRO:CD	2.39	0.52
2:B:1263:U:C5'	26:0:7:PRO:N	2.73	0.52
2:B:1340:U:C1'	2:B:1604:C:P	2.81	0.52
2:B:1568:G:OP2	4:C:32:LEU:HD11	2.09	0.52
2:B:1637:A:H1'	2:B:2697:G:C2'	2.39	0.52
2:B:1664:A:O4'	11:K:23:LYS:CB	2.58	0.52
2:B:1736:U:H2'	2:B:1737:G:O4'	2.09	0.52
2:B:1759:A:H8	2:B:2696:U:C4'	2.21	0.52
2:B:1782:U:C4'	2:B:2607:G:N2	2.72	0.52
2:B:1782:U:H6	2:B:2588:G:O4'	1.89	0.52
2:B:1993:U:C5	2:B:2551:C:C6	2.97	0.52
2:B:1997:C:O2'	2:B:2548:U:C5	2.59	0.52
2:B:2017:U:C2'	26:0:4:GLN:CA	2.86	0.52
2:B:2020:A:H5'	17:Q:24:TYR:OH	2.09	0.52
2:B:2298:A:H2'	2:B:2299:U:O4'	2.09	0.52
2:B:2502:G:H5'	2:B:2503:A:C5'	2.34	0.52
4:C:160:TYR:CD2	4:C:193:GLU:HG2	2.44	0.52
6:E:9:GLN:CD	6:E:120:VAL:HG13	2.33	0.52
6:E:88:ARG:NH1	6:E:88:ARG:HB2	2.24	0.52
11:K:84:CYS:O	11:K:85:VAL:HB	2.10	0.52
12:L:90:VAL:HG21	12:L:121:THR:H	1.73	0.52
13:M:96:ILE:O	13:M:97:GLN:HG3	2.09	0.52
16:P:32:VAL:HB	16:P:80:VAL:HG22	1.92	0.52
16:P:61:ARG:NH2	16:P:63:ILE:HD11	2.25	0.52
18:R:47:VAL:C	18:R:49:ILE:N	2.67	0.52
19:S:90:LYS:HE3	19:S:90:LYS:N	2.25	0.52
22:W:28:GLU:C	22:W:30:VAL:H	2.17	0.52
22:W:42:THR:HG21	22:W:66:VAL:HG12	1.90	0.52
29:3:4:LYS:NZ	29:3:59:ALA:H	2.07	0.52
1:A:17:C:O2'	1:A:18:G:H5'	2.09	0.52
1:A:49:C:C6	15:O:67:ASN:CA	2.92	0.52
1:A:49:C:OP2	15:O:67:ASN:HB3	2.10	0.52
2:B:2:G:C2	2:B:2902:C:O2	2.62	0.52
2:B:26:G:H1'	2:B:515:A:H61	1.74	0.52
2:B:220:G:C6	2:B:428:A:OP2	2.61	0.52
2:B:321:U:C6	6:E:129:PRO:CB	2.92	0.52
2:B:1107:G:H2'	2:B:1108:U:O4'	2.10	0.52
2:B:1245:G:H4'	6:E:29:HIS:CE1	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1439:A:C5	2:B:1552:A:N6	2.77	0.52
2:B:1564:C:O2'	2:B:1565:C:H5'	2.10	0.52
2:B:1653:G:C3'	5:D:126:ASN:C	2.62	0.52
2:B:1654:A:C6	5:D:143:PRO:C	2.80	0.52
2:B:1657:U:C5	5:D:130:GLN:NE2	2.71	0.52
2:B:1669:A:HO2'	2:B:2558:C:C1'	2.19	0.52
2:B:1842:G:H2'	2:B:1843:C:H6	1.74	0.52
2:B:1997:C:C4	2:B:2549:G:OP2	2.63	0.52
2:B:2066:C:O2'	2:B:2067:G:H5'	2.07	0.52
2:B:2070:A:C8	2:B:2244:U:H3'	2.44	0.52
2:B:2147:A:H5'	2:B:2148:G:C5'	2.39	0.52
2:B:2199:A:H3'	2:B:2200:C:N1	2.24	0.52
2:B:2268:A:O3'	22:W:19:ARG:CG	2.54	0.52
3:V:21:ARG:HE	3:V:87:GLN:CB	2.23	0.52
4:C:66:PHE:O	4:C:68:ARG:HG2	2.10	0.52
5:D:16:THR:HG23	5:D:17:GLU:N	2.21	0.52
5:D:26:VAL:HG23	5:D:187:LEU:HB3	1.90	0.52
5:D:175:LEU:HD22	5:D:189:VAL:HG12	1.91	0.52
6:E:143:LEU:HD23	6:E:185:LYS:HB2	1.92	0.52
7:F:78:ILE:HG23	7:F:82:TYR:HD1	1.74	0.52
8:G:42:VAL:HG12	8:G:51:PHE:CD1	2.44	0.52
16:P:57:ALA:C	16:P:59:THR:H	2.18	0.52
18:R:42:ALA:HB3	18:R:45:GLU:HB2	1.92	0.52
19:S:8:ARG:NH1	19:S:80:PRO:HD2	2.24	0.52
19:S:86:MET:HB2	19:S:96:ILE:HD11	1.92	0.52
22:W:42:THR:CB	22:W:66:VAL:H	2.22	0.52
25:Z:30:HIS:HE1	25:Z:49:ARG:HB2	1.74	0.52
2:B:18:U:H2'	2:B:19:A:C8	2.43	0.52
2:B:43:G:H2'	2:B:44:A:O4'	2.10	0.52
2:B:45:G:N1	2:B:182:A:C2	2.77	0.52
2:B:72:U:O4	23:X:58:ASN:CB	2.58	0.52
2:B:167:A:H2'	2:B:168:G:O4'	2.10	0.52
2:B:550:C:H6	10:J:1:MET:CG	2.23	0.52
2:B:565:C:C5'	2:B:578:G:C2	2.92	0.52
2:B:718:A:H3'	2:B:719:C:C6	2.44	0.52
2:B:770:G:OP1	28:2:10:LEU:HB3	2.10	0.52
2:B:857:G:O2'	2:B:858:G:H5'	2.09	0.52
2:B:1263:U:C4'	26:0:7:PRO:N	2.53	0.52
2:B:1266:G:C5	32:B:3409:HOH:O	2.54	0.52
2:B:1653:G:N2	5:D:141:ARG:CA	2.72	0.52
2:B:1665:A:C5'	11:K:40:LYS:HE3	2.26	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1759:A:C5	2:B:2697:G:C4'	2.87	0.52
2:B:1951:U:O2	2:B:1991:U:H5	1.73	0.52
2:B:1996:C:C5	2:B:2547:A:N6	2.78	0.52
2:B:2027:G:O2'	2:B:2028:U:H5'	2.08	0.52
2:B:2056:G:C5	2:B:2577:A:C6	2.97	0.52
2:B:2734:A:C2'	2:B:2735:G:H5'	2.39	0.52
4:C:10:PRO:HD2	4:C:23:LEU:HD11	1.91	0.52
4:C:119:VAL:HG22	4:C:130:PRO:HG2	1.92	0.52
4:C:131:MET:HE1	4:C:143:VAL:HG11	1.91	0.52
4:C:222:THR:C	4:C:224:MET:N	2.67	0.52
6:E:24:ASN:O	6:E:24:ASN:CG	2.52	0.52
8:G:137:LYS:O	8:G:140:ILE:HG13	2.09	0.52
9:H:100:ALA:O	9:H:103:VAL:HG22	2.09	0.52
12:L:120:VAL:O	12:L:120:VAL:HG13	2.10	0.52
13:M:96:ILE:HD13	13:M:97:GLN:HB2	1.91	0.52
15:O:2:ASP:HA	15:O:5:SER:O	2.10	0.52
17:Q:68:ALA:HB2	17:Q:105:PHE:HZ	1.75	0.52
18:R:64:VAL:HB	18:R:98:ILE:HD12	1.90	0.52
23:X:36:GLN:NE2	23:X:38:GLN:HE22	1.93	0.52
25:Z:5:ILE:HD13	25:Z:47:LYS:HB3	1.92	0.52
29:3:23:HIS:CD2	29:3:23:HIS:H	2.27	0.52
2:B:62:U:H3'	2:B:63:A:C8	2.44	0.52
2:B:160:A:H2'	2:B:161:A:C8	2.45	0.52
2:B:587:C:C6	12:L:36:LYS:CB	2.93	0.52
2:B:587:C:H4'	2:B:588:U:C6	2.44	0.52
2:B:959:A:OP1	13:M:17:ASN:CA	2.49	0.52
2:B:969:G:H2'	2:B:970:U:H6	1.73	0.52
2:B:1549:A:H2'	2:B:1550:C:C6	2.45	0.52
2:B:1639:C:O3'	2:B:2699:C:O3'	2.27	0.52
2:B:1767:G:N2	2:B:1961:C:H41	2.01	0.52
2:B:1800:C:C5'	4:C:145:MET:HE3	2.38	0.52
2:B:1842:G:H2'	2:B:1843:C:C6	2.45	0.52
2:B:1947:C:C5	2:B:1987:A:O5'	2.62	0.52
2:B:1958:C:N4	2:B:1986:C:N4	2.58	0.52
2:B:2195:U:H2'	2:B:2196:C:C6	2.45	0.52
2:B:2748:A:C5'	8:G:69:ALA:HB1	2.40	0.52
2:B:2848:G:O5'	16:P:96:LEU:HB3	2.08	0.52
4:C:114:GLN:HB2	4:C:124:LYS:HZ1	1.74	0.52
4:C:141:HIS:CG	4:C:190:THR:HB	2.44	0.52
7:F:106:ALA:HB1	7:F:136:ILE:HG23	1.91	0.52
13:M:72:PRO:HB3	13:M:88:ASN:OD1	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:25:VAL:HG11	16:P:86:LYS:O	2.09	0.52
19:S:29:VAL:C	19:S:31:GLN:H	2.15	0.52
29:3:29:ARG:HA	29:3:33:THR:HG23	1.91	0.52
1:A:57:A:C6	7:F:12:VAL:HG11	2.31	0.52
2:B:463:G:N1	28:2:43:THR:CG2	2.71	0.52
2:B:588:U:H4'	12:L:29:LYS:CA	2.40	0.52
2:B:659:G:O4'	6:E:97:ASN:CG	2.47	0.52
2:B:789:A:C4'	28:2:4:THR:HG22	2.23	0.52
2:B:1225:G:C5'	18:R:78:ARG:HD2	2.38	0.52
2:B:1739:A:H2'	2:B:1740:G:C8	2.44	0.52
2:B:2005:A:C4	5:D:143:PRO:CD	2.88	0.52
2:B:2008:C:H5'	5:D:118:PHE:CG	2.45	0.52
2:B:2255:G:O6	2:B:2450:A:C5	2.60	0.52
2:B:2336:A:HO2'	2:B:2337:G:P	2.33	0.52
2:B:2575:C:H4'	5:D:151:THR:HG23	1.91	0.52
3:V:6:ALA:HB1	3:V:41:GLU:O	2.10	0.52
3:V:26:PHE:CE2	3:V:44:HIS:HA	2.44	0.52
3:V:86:LEU:CG	13:M:134:THR:HA	2.39	0.52
4:C:12:ARG:HB2	4:C:18:VAL:HG12	1.91	0.52
4:C:136:VAL:HA	4:C:165:ALA:HA	1.92	0.52
6:E:58:LYS:NZ	32:E:220:HOH:O	2.42	0.52
8:G:104:LEU:HB3	8:G:106:LEU:HD13	1.92	0.52
8:G:126:THR:HG23	8:G:128:THR:HG23	1.91	0.52
10:J:58:ASN:C	10:J:60:ASP:H	2.18	0.52
12:L:14:LYS:NZ	12:L:14:LYS:HA	2.24	0.52
15:O:8:ILE:C	15:O:10:ARG:H	2.18	0.52
17:Q:60:TRP:O	17:Q:64:ILE:HG13	2.10	0.52
20:T:34:VAL:CG1	20:T:43:ILE:HD11	2.39	0.52
20:T:88:LYS:HG2	20:T:89:GLU:N	2.23	0.52
22:W:44:PHE:C	22:W:44:PHE:CD1	2.88	0.52
27:1:46:VAL:C	27:1:47:ILE:HG12	2.34	0.52
2:B:176:A:O2'	2:B:177:G:H5'	2.10	0.52
2:B:1274:A:N3	2:B:1297:C:H1'	2.25	0.52
2:B:1371:G:O4'	2:B:1810:A:H1'	2.08	0.52
2:B:1374:G:H2'	2:B:1375:U:C6	2.45	0.52
2:B:1771:C:OP1	2:B:1968:G:N9	2.41	0.52
2:B:2004:G:C2	5:D:138:LEU:HB3	2.40	0.52
2:B:2066:C:H5''	2:B:2424:C:P	2.48	0.52
2:B:2217:G:C5'	25:Z:41:HIS:CE1	2.89	0.52
2:B:2261:C:O2'	2:B:2328:A:N1	2.43	0.52
2:B:2743:U:H2'	2:B:2744:G:O4'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2814:A:C4	26:0:39:ARG:CG	2.92	0.52
4:C:44:ASN:HA	4:C:49:THR:O	2.09	0.52
5:D:170:VAL:HG11	5:D:194:PRO:CG	2.39	0.52
6:E:141:MET:CG	6:E:143:LEU:HB2	2.40	0.52
6:E:143:LEU:HD21	6:E:185:LYS:HD3	1.92	0.52
7:F:59:ILE:HD11	7:F:137:PHE:CG	2.45	0.52
9:H:40:THR:O	9:H:41:LYS:C	2.52	0.52
12:L:116:VAL:HG12	12:L:117:THR:H	1.75	0.52
16:P:59:THR:HG1	16:P:76:HIS:CG	2.28	0.52
16:P:92:ARG:NH2	16:P:110:LYS:HE2	2.24	0.52
17:Q:111:LYS:O	17:Q:115:ALA:HB2	2.10	0.52
21:U:2:ALA:C	21:U:3:LYS:HD3	2.34	0.52
21:U:38:ILE:CB	21:U:62:ALA:HB3	2.40	0.52
22:W:57:THR:O	22:W:58:LEU:HB3	2.09	0.52
26:0:32:THR:OG1	26:0:42:ILE:HD12	2.10	0.52
30:4:9:LYS:O	30:4:25:VAL:HG13	2.10	0.52
2:B:76:C:O2'	23:X:55:THR:CB	2.58	0.52
2:B:161:A:H62	2:B:165:A:H61	1.58	0.52
2:B:433:C:H2'	2:B:434:U:C6	2.45	0.52
2:B:667:U:H2'	2:B:668:A:O4'	2.10	0.52
2:B:827:U:OP2	2:B:2247:A:O2'	2.28	0.52
2:B:850:U:H1'	24:Y:46:MET:HG2	1.91	0.52
2:B:1010:A:O2'	17:Q:76:SER:OG	2.28	0.52
2:B:1051:G:H2'	2:B:1052:C:C6	2.45	0.52
2:B:1225:G:P	18:R:78:ARG:CZ	2.98	0.52
2:B:1259:G:H2'	2:B:1260:A:C8	2.45	0.52
2:B:1346:G:O2'	2:B:1347:A:H5'	2.08	0.52
2:B:1429:G:O2'	2:B:1430:G:H5'	2.09	0.52
2:B:1594:U:H2'	2:B:1595:C:H6	1.75	0.52
2:B:1633:G:O2'	2:B:1634:A:H5''	2.10	0.52
2:B:1653:G:N2	5:D:141:ARG:CB	2.73	0.52
2:B:1653:G:N3	5:D:141:ARG:CG	2.69	0.52
2:B:2007:U:H4'	5:D:162:ALA:CB	2.36	0.52
2:B:2305:U:H2'	2:B:2306:C:C6	2.45	0.52
2:B:2746:U:H4'	8:G:137:LYS:HB2	1.92	0.52
2:B:2780:G:C6	10:J:99:ARG:NH1	2.60	0.52
3:V:78:GLN:OE1	13:M:135:VAL:CG1	2.52	0.52
4:C:63:ILE:O	4:C:64:VAL:HG13	2.10	0.52
4:C:171:VAL:HB	4:C:182:LYS:CB	2.39	0.52
6:E:88:ARG:HB2	6:E:88:ARG:HH11	1.75	0.52
6:E:149:ILE:CG1	6:E:186:VAL:HG13	2.38	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:150:THR:HB	6:E:171:ASP:OD2	2.10	0.52
7:F:63:LYS:HE2	7:F:64:PRO:CD	2.39	0.52
9:H:3:VAL:CG2	9:H:21:VAL:HG21	2.40	0.52
15:O:76:LYS:HE3	15:O:80:GLU:HB2	1.91	0.52
16:P:84:SER:O	16:P:85:VAL:C	2.53	0.52
19:S:42:LYS:O	19:S:46:LEU:HG	2.09	0.52
21:U:35:VAL:C	21:U:36:GLU:HG2	2.35	0.52
27:1:33:LEU:O	27:1:34:GLU:HG2	2.10	0.52
1:A:74:U:O2'	3:V:37:PRO:CG	2.58	0.52
2:B:100:U:H2'	2:B:100:U:OP1	2.10	0.52
2:B:337:C:H2'	2:B:338:G:O4'	2.10	0.52
2:B:554:U:H2'	2:B:555:G:O4'	2.09	0.52
2:B:585:G:C1'	32:B:3204:HOH:O	2.54	0.52
2:B:854:C:O2'	2:B:855:G:H5'	2.09	0.52
2:B:1262:A:H2	26:0:6:LYS:H	1.57	0.52
2:B:1662:U:O2	11:K:4:GLU:HG2	2.09	0.52
2:B:1682:G:H2'	2:B:1683:U:C6	2.45	0.52
2:B:1799:G:H1'	4:C:145:MET:HE1	1.92	0.52
2:B:1817:G:H8	4:C:86:ARG:HB3	1.75	0.52
2:B:1998:A:H5''	11:K:29:HIS:HE1	0.76	0.52
2:B:2000:C:H5''	11:K:32:TYR:CE1	2.11	0.52
2:B:2419:U:OP2	29:3:34:LYS:HA	2.09	0.52
2:B:2425:A:H5''	2:B:2449:U:O4	2.03	0.52
2:B:2491:U:H5''	2:B:2570:G:C5'	2.40	0.52
2:B:2531:A:C6	2:B:2662:A:N1	2.76	0.52
2:B:2759:G:N3	8:G:138:GLN:CD	2.67	0.52
2:B:2800:A:H2'	2:B:2801:G:C1'	2.39	0.52
2:B:2815:C:C1'	26:0:39:ARG:HB3	2.25	0.52
3:V:23:ALA:O	3:V:24:ASN:HB2	2.10	0.52
4:C:140:VAL:C	4:C:193:GLU:HB2	2.36	0.52
5:D:62:LYS:N	5:D:63:PRO:HD2	2.25	0.52
6:E:181:ILE:CG1	12:L:14:LYS:C	2.63	0.52
6:E:181:ILE:CG2	12:L:15:ALA:CA	2.69	0.52
10:J:36:LEU:HD11	10:J:122:LEU:HD23	1.92	0.52
12:L:55:MET:CB	29:3:5:THR:HG21	2.40	0.52
18:R:78:ARG:HB3	18:R:87:GLN:CA	2.29	0.52
21:U:78:LYS:CE	21:U:96:LYS:HB2	2.34	0.52
1:A:7:G:C5'	15:O:36:TYR:HE2	2.23	0.51
2:B:139:U:H5''	2:B:140:C:C5	2.45	0.51
2:B:565:C:C5'	2:B:578:G:N2	2.57	0.51
2:B:777:G:O4'	32:B:3041:HOH:O	2.19	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:809:G:O3'	2:B:1254:A:H8	1.91	0.51
2:B:828:U:O5'	2:B:2446:G:P	2.68	0.51
2:B:1292:G:H2'	2:B:1293:C:C6	2.46	0.51
2:B:1996:C:N1	2:B:2549:G:O6	2.43	0.51
2:B:2017:U:C4'	26:0:4:GLN:N	2.73	0.51
2:B:2070:A:C6	2:B:2244:U:N3	2.39	0.51
2:B:2247:A:H1'	2:B:2426:A:H1'	1.87	0.51
2:B:2334:U:OP2	15:O:6:ALA:O	2.29	0.51
2:B:2355:G:OP1	22:W:30:VAL:HG22	2.10	0.51
2:B:2393:U:P	29:3:31:ILE:HG21	2.47	0.51
2:B:2848:G:C2'	16:P:96:LEU:HD23	1.98	0.51
6:E:3:LEU:HB2	6:E:12:LEU:HD13	1.91	0.51
6:E:115:GLN:HA	12:L:10:GLU:HG2	1.90	0.51
6:E:130:LYS:HA	6:E:130:LYS:HE2	1.91	0.51
6:E:138:LEU:HD21	6:E:167:VAL:HG21	1.91	0.51
7:F:151:LEU:CD2	7:F:153:ILE:HD11	2.36	0.51
9:H:125:THR:CA	9:H:146:VAL:HB	2.40	0.51
12:L:81:ASP:HB3	12:L:86:GLU:OE2	2.10	0.51
13:M:69:PRO:CB	13:M:93:VAL:HG12	2.37	0.51
13:M:105:MET:HE3	13:M:107:GLY:HA3	1.92	0.51
14:N:75:ILE:HD13	14:N:75:ILE:O	2.11	0.51
15:O:43:ASN:HA	15:O:46:GLU:OE2	2.10	0.51
15:O:54:VAL:HG21	15:O:78:VAL:HG11	1.90	0.51
16:P:29:VAL:O	16:P:31:VAL:HG23	2.10	0.51
17:Q:27:ARG:O	17:Q:33:VAL:HG21	2.10	0.51
18:R:49:ILE:O	18:R:51:VAL:HG23	2.09	0.51
18:R:85:LYS:C	18:R:87:GLN:N	2.66	0.51
21:U:94:PHE:CD2	21:U:95:PHE:N	2.78	0.51
24:Y:9:THR:OG1	24:Y:10:ARG:N	2.42	0.51
25:Z:3:LYS:O	25:Z:3:LYS:HG3	2.09	0.51
1:A:59:A:OP1	7:F:160:LYS:HE3	2.04	0.51
2:B:460:A:H2'	2:B:461:C:O4'	2.10	0.51
2:B:496:G:C5'	19:S:1:MET:H3	2.20	0.51
2:B:675:A:P	6:E:58:LYS:HE3	2.51	0.51
2:B:693:A:C1'	2:B:1354:A:H1'	2.26	0.51
2:B:815:C:OP1	18:R:86:GLN:HB3	2.09	0.51
2:B:975:A:H1'	2:B:990:A:C2	2.45	0.51
2:B:1028:A:N6	2:B:1125:G:H2'	2.24	0.51
2:B:1164:C:H2'	2:B:1165:A:C8	2.46	0.51
2:B:1192:G:C2'	2:B:1193:G:H5'	2.39	0.51
2:B:1767:G:N7	2:B:1959:G:C3'	2.68	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1786:A:N1	2:B:1939:U:C1'	2.70	0.51
2:B:1826:G:O2'	2:B:1901:A:OP2	2.24	0.51
2:B:2061:G:O6	2:B:2253:G:C6	2.43	0.51
2:B:2222:C:O2'	2:B:2223:G:H5'	2.10	0.51
2:B:2256:G:N2	2:B:2447:G:N2	2.48	0.51
2:B:2364:C:H5''	22:W:38:ARG:HH21	1.73	0.51
2:B:2491:U:H5''	2:B:2570:G:H5''	1.93	0.51
2:B:2509:G:C4	32:B:3339:HOH:O	2.44	0.51
2:B:2548:U:OP1	11:K:29:HIS:HE1	1.94	0.51
2:B:2665:A:C2'	2:B:2666:C:H5'	2.40	0.51
2:B:2725:A:P	5:D:126:ASN:OD1	2.68	0.51
2:B:2885:G:N7	26:O:48:TYR:CD2	2.78	0.51
3:V:16:ALA:HA	3:V:19:ARG:HE	1.76	0.51
3:V:41:GLU:C	3:V:42:LEU:HD23	2.35	0.51
3:V:77:VAL:CG2	3:V:79:ARG:HE	2.23	0.51
5:D:5:VAL:HG21	5:D:28:GLU:HA	1.92	0.51
5:D:7:LYS:HA	5:D:26:VAL:HG12	1.92	0.51
5:D:45:TYR:CZ	5:D:83:ARG:HG3	2.45	0.51
10:J:18:VAL:O	10:J:57:LEU:HD23	2.10	0.51
13:M:53:MET:O	13:M:54:THR:HG23	2.10	0.51
14:N:115:LEU:O	14:N:115:LEU:HG	2.10	0.51
16:P:77:SER:H	16:P:78:PRO:CD	2.23	0.51
17:Q:48:ASP:O	17:Q:52:ARG:HB2	2.11	0.51
22:W:36:ILE:HG21	22:W:68:PHE:CD2	2.46	0.51
22:W:69:GLU:HG2	22:W:69:GLU:O	2.10	0.51
1:A:74:U:O2	3:V:37:PRO:CG	2.57	0.51
2:B:95:A:N1	23:X:41:HIS:ND1	2.44	0.51
2:B:146:A:H2'	2:B:147:C:H6	1.72	0.51
2:B:321:U:C6	6:E:129:PRO:CG	2.91	0.51
2:B:354:A:H2'	2:B:355:U:O4'	2.09	0.51
2:B:495:G:H4'	19:S:4:ILE:CB	2.32	0.51
2:B:516:C:H4'	2:B:1262:A:C4'	2.38	0.51
2:B:575:A:O2'	2:B:576:U:H5'	2.10	0.51
2:B:794:A:H2'	2:B:795:C:H6	1.74	0.51
2:B:810:U:P	2:B:1254:A:H5'	2.50	0.51
2:B:859:G:P	2:B:2268:A:HO2'	2.33	0.51
2:B:950:G:H2'	2:B:951:C:H6	1.74	0.51
2:B:1127:A:N7	30:4:4:ARG:NH2	2.58	0.51
2:B:1217:U:OP1	17:Q:14:LYS:CE	2.58	0.51
2:B:1220:G:H2'	2:B:1221:C:C6	2.45	0.51
2:B:1339:G:N3	2:B:1603:A:C2'	2.73	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1444:G:H2'	2:B:1445:G:C8	2.44	0.51
2:B:1669:A:H1'	2:B:2558:C:HO2'	1.69	0.51
2:B:2022:U:C5	32:B:3303:HOH:O	2.53	0.51
2:B:2149:U:O2'	2:B:2150:C:H5'	2.10	0.51
2:B:2257:U:C2'	2:B:2450:A:OP1	2.47	0.51
2:B:2839:G:H2'	2:B:2840:C:H6	1.75	0.51
2:B:2860:A:H8	2:B:2860:A:O5'	1.93	0.51
5:D:13:ARG:HA	5:D:13:ARG:HH11	1.75	0.51
6:E:6:LYS:HB2	6:E:12:LEU:HD11	1.91	0.51
6:E:44:ARG:HD3	6:E:44:ARG:N	2.24	0.51
7:F:66:ILE:HG22	7:F:83:PRO:HB2	1.91	0.51
7:F:107:VAL:HB	7:F:108:PRO:HD3	1.91	0.51
10:J:19:ASP:C	10:J:21:THR:H	2.19	0.51
20:T:31:VAL:O	20:T:83:ALA:O	2.28	0.51
1:A:28:C:H5'	15:O:34:HIS:NE2	2.25	0.51
1:A:49:C:H6	15:O:67:ASN:C	2.17	0.51
2:B:173:A:H2'	2:B:174:U:H6	1.75	0.51
2:B:516:C:O2'	19:S:99:ARG:NH2	2.43	0.51
2:B:518:G:H4'	19:S:15:GLN:CA	2.40	0.51
2:B:814:C:H6	18:R:85:LYS:N	2.08	0.51
2:B:877:A:H2	2:B:900:A:N7	2.07	0.51
2:B:1313:U:H4'	2:B:1332:G:H4'	1.92	0.51
2:B:1571:A:H2'	2:B:1572:A:C8	2.45	0.51
2:B:1722:A:H61	2:B:1738:G:H1'	1.75	0.51
2:B:2003:A:C2'	5:D:139:SER:CA	2.88	0.51
2:B:2017:U:C3'	26:O:4:GLN:C	2.80	0.51
2:B:2261:C:O3'	2:B:2387:U:C2	2.63	0.51
2:B:2269:G:H1'	22:W:22:VAL:N	2.26	0.51
2:B:2330:G:HO2'	22:W:70:VAL:CG2	2.16	0.51
2:B:2334:U:H5'	15:O:9:ARG:N	2.25	0.51
2:B:2729:G:H2'	2:B:2730:C:H6	1.75	0.51
5:D:150:GLN:C	5:D:151:THR:HG22	2.34	0.51
7:F:126:ASN:ND2	7:F:157:THR:H	2.09	0.51
10:J:20:ALA:HB2	10:J:56:VAL:HG13	1.93	0.51
11:K:87:LEU:HA	11:K:95:ILE:H	1.76	0.51
13:M:84:LYS:H	13:M:84:LYS:HZ2	1.57	0.51
14:N:22:ARG:HE	14:N:69:ARG:HE	1.58	0.51
15:O:64:TYR:CD1	15:O:74:VAL:HG21	2.45	0.51
18:R:78:ARG:HD3	18:R:88:GLY:N	2.10	0.51
19:S:71:VAL:HG22	19:S:107:VAL:CG1	2.40	0.51
19:S:79:GLY:O	19:S:80:PRO:C	2.54	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:1:MET:CE	20:T:2:ILE:HB	2.38	0.51
22:W:36:ILE:HG21	22:W:68:PHE:HD2	1.75	0.51
1:A:57:A:O2'	7:F:28:PRO:CG	2.55	0.51
2:B:41:C:H2'	2:B:42:A:H8	1.76	0.51
2:B:76:C:C2'	23:X:52:ARG:HA	2.40	0.51
2:B:156:A:H2'	2:B:157:C:C6	2.45	0.51
2:B:483:A:H5'	21:U:45:GLN:HA	0.52	0.51
2:B:494:G:O2'	2:B:495:G:H5'	2.10	0.51
2:B:705:A:H61	2:B:726:G:H1'	1.76	0.51
2:B:770:G:OP1	28:2:10:LEU:CG	2.57	0.51
2:B:958:U:OP2	13:M:15:GLY:C	2.50	0.51
2:B:1061:U:H4'	2:B:1070:A:O3'	2.11	0.51
2:B:1251:C:C5'	17:Q:12:ARG:HH12	2.18	0.51
2:B:1334:G:O2'	2:B:1335:C:H5'	2.11	0.51
2:B:1655:A:N7	5:D:144:GLY:HA3	2.24	0.51
2:B:1664:A:H8	11:K:23:LYS:HB2	1.69	0.51
2:B:1665:A:C5'	11:K:57:VAL:CB	2.69	0.51
2:B:1888:G:O3'	2:B:2235:G:O2'	2.28	0.51
2:B:1889:A:H2'	2:B:1890:A:C8	2.45	0.51
2:B:1951:U:C6	2:B:1989:G:H3'	2.46	0.51
2:B:2307:G:N3	2:B:2307:G:H2'	2.26	0.51
2:B:2331:G:O4'	22:W:69:GLU:OE2	2.29	0.51
2:B:2378:A:H1'	15:O:92:PHE:HD1	1.70	0.51
3:V:80:HIS:CD2	3:V:81:PRO:HD2	2.46	0.51
6:E:181:ILE:O	12:L:14:LYS:O	2.10	0.51
6:E:198:GLU:C	6:E:200:LEU:N	2.69	0.51
7:F:106:ALA:HB3	7:F:136:ILE:HG23	1.92	0.51
8:G:34:ARG:HG3	8:G:35:THR:N	2.25	0.51
11:K:63:VAL:HB	11:K:83:ALA:HB3	1.91	0.51
12:L:80:SER:O	12:L:116:VAL:HA	2.10	0.51
12:L:82:LEU:HD21	12:L:92:LEU:CD1	2.39	0.51
13:M:34:LYS:HA	13:M:99:GLY:HA3	1.91	0.51
18:R:39:LEU:HD12	18:R:60:LYS:N	2.26	0.51
25:Z:13:THR:HG23	25:Z:25:ARG:HB3	1.91	0.51
27:1:31:GLU:CG	27:1:32:LYS:H	2.20	0.51
30:4:22:VAL:HG11	30:4:36:ARG:HE	1.75	0.51
1:A:56:G:O4'	7:F:24:VAL:HG12	2.09	0.51
1:A:58:A:C5'	7:F:26:GLN:HG2	2.41	0.51
2:B:235:U:O2'	2:B:430:A:N1	2.32	0.51
2:B:801:G:N7	6:E:51:GLU:OE1	2.43	0.51
2:B:920:A:C2	2:B:2268:A:OP2	2.64	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1248:G:C5	17:Q:1:ALA:HA	2.41	0.51
2:B:1599:U:H2'	2:B:1600:C:C6	2.46	0.51
2:B:1663:G:C5'	11:K:22:ILE:HG22	2.38	0.51
2:B:1790:C:C2'	2:B:1829:A:C5'	2.84	0.51
2:B:1799:G:C2	4:C:153:LEU:HB3	2.45	0.51
2:B:1909:C:H2'	2:B:1910:G:H8	1.76	0.51
2:B:1917:U:H2'	2:B:1918:A:H5'	1.93	0.51
2:B:1939:U:O2	2:B:1967:C:H4'	2.11	0.51
2:B:1950:G:OP2	2:B:1988:G:C2'	2.56	0.51
2:B:2065:C:O2	2:B:2246:G:C5	2.61	0.51
2:B:2298:A:C3'	32:B:3175:HOH:O	2.54	0.51
2:B:2412:A:H2'	2:B:2413:G:O4'	2.10	0.51
2:B:2425:A:H5'	2:B:2427:C:O4'	2.10	0.51
2:B:2749:A:OP1	8:G:5:LYS:HD3	2.11	0.51
2:B:2869:G:H2'	2:B:2870:C:C6	2.46	0.51
4:C:139:THR:CG2	4:C:193:GLU:HB3	2.39	0.51
5:D:8:LYS:HD3	16:P:5:LYS:HD2	1.93	0.51
7:F:102:LEU:C	7:F:107:VAL:HG23	2.35	0.51
7:F:126:ASN:OD1	7:F:156:THR:HG23	2.11	0.51
8:G:10:VAL:O	8:G:10:VAL:HG13	2.11	0.51
9:H:35:LYS:O	9:H:37:VAL:HG13	2.10	0.51
10:J:7:LYS:HD3	10:J:48:VAL:CB	2.39	0.51
10:J:78:THR:C	10:J:80:HIS:H	2.19	0.51
12:L:118:THR:N	12:L:119:PRO:HD3	2.21	0.51
14:N:97:ILE:CD1	14:N:113:ILE:HG12	2.41	0.51
17:Q:92:LYS:O	17:Q:93:ILE:CG2	2.59	0.51
19:S:6:LYS:HA	19:S:104:THR:HA	1.92	0.51
20:T:73:ARG:CZ	28:2:43:THR:O	2.55	0.51
1:A:21:G:O2'	1:A:22:U:H5'	2.11	0.51
1:A:57:A:C1'	7:F:12:VAL:O	2.58	0.51
2:B:97:C:C5'	23:X:46:VAL:HG11	2.40	0.51
2:B:220:G:O2'	2:B:234:U:H1'	2.11	0.51
2:B:236:C:O2'	2:B:237:C:H5'	2.09	0.51
2:B:414:C:O2	2:B:2409:G:C4	2.63	0.51
2:B:445:C:O2'	2:B:446:G:H5'	2.10	0.51
2:B:527:C:OP1	2:B:527:C:H4'	2.11	0.51
2:B:588:U:C5'	12:L:29:LYS:O	2.52	0.51
2:B:1029:A:C2	2:B:2466:C:H5''	2.42	0.51
2:B:1225:G:N7	18:R:88:GLY:HA2	2.26	0.51
2:B:1259:G:P	32:B:3223:HOH:O	2.67	0.51
2:B:1541:C:H2'	2:B:1542:U:C6	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1750:G:H2'	2:B:1751:U:C6	2.45	0.51
2:B:1786:A:N1	2:B:1939:U:N1	2.59	0.51
2:B:1819:A:OP2	4:C:153:LEU:CB	2.59	0.51
2:B:1998:A:H5'	2:B:2547:A:C2'	2.33	0.51
2:B:2364:C:H2'	2:B:2365:G:O4'	2.11	0.51
2:B:2748:A:H5'	8:G:69:ALA:HB1	1.91	0.51
2:B:2880:C:C3'	14:N:90:ARG:HD2	2.29	0.51
5:D:108:ASP:CB	5:D:173:GLN:HA	2.40	0.51
5:D:124:ARG:NH2	5:D:163:GLY:HA3	2.25	0.51
6:E:17:THR:O	6:E:18:THR:HG22	2.10	0.51
8:G:102:ILE:O	8:G:113:ASP:HA	2.11	0.51
11:K:104:THR:HB	11:K:106:GLU:OE1	2.10	0.51
12:L:55:MET:HB2	29:3:5:THR:HG21	1.92	0.51
15:O:1:MET:HG2	15:O:2:ASP:H	1.76	0.51
16:P:55:HIS:O	16:P:57:ALA:N	2.44	0.51
22:W:16:GLU:CG	22:W:37:VAL:HG22	2.39	0.51
2:B:65:U:H2'	2:B:66:C:C6	2.46	0.51
2:B:142:A:H8	2:B:142:A:OP2	1.93	0.51
2:B:208:C:H2'	2:B:209:C:C6	2.46	0.51
2:B:516:C:C4'	2:B:1262:A:C4'	2.82	0.51
2:B:588:U:H4'	12:L:28:GLY:C	2.35	0.51
2:B:700:G:C4	2:B:734:A:C8	2.98	0.51
2:B:811:U:C5	2:B:1251:C:N3	2.79	0.51
2:B:852:U:H2'	2:B:853:C:C6	2.45	0.51
2:B:1371:G:C5'	2:B:1810:A:C1'	2.87	0.51
2:B:1417:C:N3	2:B:1418:G:C2	2.52	0.51
2:B:1668:A:N1	2:B:2551:C:C4'	2.48	0.51
2:B:1800:C:C5'	4:C:145:MET:CE	2.89	0.51
2:B:1902:C:H4'	4:C:240:GLY:CA	2.40	0.51
2:B:1999:C:C4'	11:K:31:ARG:CA	2.48	0.51
2:B:2007:U:O4'	5:D:162:ALA:CB	2.52	0.51
2:B:2062:A:N6	2:B:2252:G:N2	2.58	0.51
2:B:2069:G:O2'	2:B:2431:U:C4'	2.58	0.51
2:B:2219:U:O2'	2:B:2220:U:H5'	2.11	0.51
2:B:2229:U:H2'	2:B:2230:G:H8	1.75	0.51
2:B:2258:C:C5	2:B:2425:A:C2'	2.91	0.51
2:B:2297:A:N6	2:B:2319:G:H3'	2.26	0.51
2:B:2347:C:C1'	27:1:45:HIS:HE2	1.97	0.51
2:B:2642:G:OP1	10:J:80:HIS:C	2.54	0.51
2:B:2712:C:H3'	2:B:2714:G:H5''	1.92	0.51
2:B:2803:G:H2'	2:B:2804:U:H6	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2834:G:H1'	2:B:2883:A:H61	1.74	0.51
2:B:2867:G:N3	16:P:20:ARG:NH1	2.55	0.51
2:B:2874:C:H2'	2:B:2875:C:C6	2.46	0.51
5:D:175:LEU:HD13	5:D:189:VAL:HG11	1.92	0.51
7:F:109:ARG:CB	7:F:136:ILE:HG13	2.41	0.51
7:F:136:ILE:C	7:F:138:PRO:HD3	2.36	0.51
8:G:153:PRO:HG3	8:G:160:GLY:C	2.35	0.51
11:K:14:SER:O	11:K:52:VAL:HB	2.11	0.51
13:M:42:THR:HG22	13:M:45:GLN:HB2	1.93	0.51
14:N:52:ILE:HG21	14:N:94:TYR:CE2	2.46	0.51
16:P:61:ARG:NH2	16:P:75:THR:HB	2.25	0.51
16:P:61:ARG:CZ	16:P:61:ARG:HB2	2.41	0.51
16:P:80:VAL:O	16:P:80:VAL:HG13	2.11	0.51
16:P:83:ILE:HB	16:P:85:VAL:HG23	1.93	0.51
19:S:29:VAL:C	19:S:31:GLN:N	2.67	0.51
1:A:47:C:C5'	15:O:30:ARG:HB3	2.41	0.51
1:A:56:G:N3	7:F:24:VAL:CG1	2.68	0.51
1:A:75:G:C2'	3:V:29:ILE:HD13	2.40	0.51
2:B:57:C:C3'	20:T:78:SER:HB3	2.41	0.51
2:B:137:U:C2	20:T:4:GLU:HG2	2.44	0.51
2:B:172:A:O2'	2:B:173:A:H5'	2.11	0.51
2:B:398:C:H4'	2:B:2231:U:C5'	2.40	0.51
2:B:414:C:C5	2:B:2409:G:O6	2.63	0.51
2:B:523:C:O2'	2:B:524:G:H5'	2.11	0.51
2:B:550:C:H6	10:J:1:MET:HG3	1.76	0.51
2:B:589:U:H2'	2:B:590:A:H8	1.76	0.51
2:B:611:C:H2'	2:B:612:G:O4'	2.11	0.51
2:B:682:G:H5'	28:2:26:ASN:CG	2.35	0.51
2:B:930:G:H1'	24:Y:24:LEU:O	2.10	0.51
2:B:991:C:H2'	2:B:992:C:H6	1.75	0.51
2:B:1455:G:N1	2:B:2704:C:C2	2.65	0.51
2:B:1664:A:N1	2:B:2560:A:C5	2.79	0.51
2:B:1665:A:O3'	2:B:2561:U:OP1	2.15	0.51
2:B:1667:G:HO2'	2:B:1954:G:P	2.33	0.51
2:B:1672:A:C2	2:B:2604:U:H5''	2.46	0.51
2:B:1953:A:C3'	2:B:1991:U:C4	2.73	0.51
2:B:2007:U:OP2	2:B:2050:C:C5'	2.57	0.51
2:B:2015:A:P	19:S:89:ALA:H	2.34	0.51
2:B:2049:G:O2'	2:B:2050:C:H5'	2.11	0.51
2:B:2260:C:C4'	2:B:2388:A:H4'	2.35	0.51
2:B:2334:U:P	15:O:7:ARG:C	2.94	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2501:C:C5'	32:B:3334:HOH:O	2.59	0.51
3:V:79:ARG:HD2	13:M:129:THR:HB	1.91	0.51
3:V:84:PRO:CG	13:M:127:LYS:HZ1	1.98	0.51
4:C:156:SER:O	4:C:157:ALA:C	2.54	0.51
5:D:67:HIS:O	5:D:71:ALA:HB3	2.10	0.51
5:D:68:PHE:O	5:D:70:LYS:N	2.40	0.51
5:D:120:GLY:HA2	5:D:162:ALA:HA	1.93	0.51
6:E:153:LEU:HD11	6:E:201:ALA:HA	1.92	0.51
8:G:17:LYS:HB3	8:G:24:THR:HG22	1.93	0.51
8:G:25:ILE:O	8:G:25:ILE:HG23	2.10	0.51
9:H:11:ASN:HD22	9:H:12:LEU:H	1.58	0.51
10:J:13:ARG:NH1	10:J:13:ARG:HG3	2.26	0.51
10:J:84:ILE:HG22	10:J:85:LYS:N	2.26	0.51
16:P:52:ARG:CG	16:P:54:LEU:HB2	2.40	0.51
16:P:78:PRO:C	16:P:79:VAL:HG23	2.36	0.51
17:Q:92:LYS:O	17:Q:94:LEU:HD22	2.11	0.51
19:S:27:LYS:H	19:S:27:LYS:CD	2.22	0.51
20:T:33:LYS:HE3	20:T:80:TRP:NE1	2.26	0.51
22:W:45:HIS:HA	22:W:75:ASN:HB3	1.92	0.51
22:W:59:PHE:HE2	22:W:81:ILE:HD13	1.76	0.51
25:Z:15:SER:CB	25:Z:23:LYS:HD3	2.41	0.51
1:A:48:U:C3'	15:O:68:LYS:HA	2.38	0.51
1:A:60:C:C5	7:F:23:SER:HB3	2.45	0.51
2:B:139:U:O2	20:T:2:ILE:CB	2.59	0.51
2:B:539:G:C5'	10:J:7:LYS:O	2.59	0.51
2:B:813:U:H2'	2:B:814:C:H6	1.70	0.51
2:B:1289:C:H2'	2:B:1290:C:C6	2.46	0.51
2:B:1340:U:P	20:T:19:LYS:HZ1	2.34	0.51
2:B:1547:C:H2'	2:B:1548:A:H8	1.76	0.51
2:B:1636:U:C2'	2:B:1760:C:O2'	2.48	0.51
2:B:1667:G:O2'	2:B:1954:G:P	2.68	0.51
2:B:1771:C:H5''	2:B:1968:G:O5'	2.11	0.51
2:B:1999:C:O2'	2:B:2000:C:H5'	2.11	0.51
2:B:2297:A:H61	2:B:2319:G:C3'	2.23	0.51
2:B:2511:U:H2'	2:B:2512:C:O4'	2.11	0.51
2:B:2631:G:O2'	2:B:2810:A:N1	2.44	0.51
5:D:35:THR:HG22	5:D:46:ARG:NH2	2.26	0.51
5:D:83:ARG:HG2	5:D:83:ARG:HH11	1.75	0.51
5:D:98:VAL:HA	5:D:101:PHE:CZ	2.46	0.51
8:G:15:ASP:O	8:G:25:ILE:HA	2.11	0.51
9:H:73:ASN:HD22	9:H:73:ASN:H	1.56	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:46:GLU:C	15:O:48:LEU:H	2.18	0.51
19:S:29:VAL:CG2	19:S:71:VAL:HG23	2.41	0.51
25:Z:19:GLY:O	25:Z:20:ASN:HB2	2.11	0.51
25:Z:59:ARG:HG3	25:Z:62:LYS:HB2	1.91	0.51
2:B:418:C:H2'	2:B:419:U:H6	1.75	0.50
2:B:463:G:N1	28:2:43:THR:HG22	2.25	0.50
2:B:1105:U:H2'	2:B:1106:G:C8	2.45	0.50
2:B:1184:U:O2'	2:B:1185:G:H5'	2.12	0.50
2:B:1225:G:C8	18:R:87:GLN:C	2.81	0.50
2:B:1360:G:H2'	2:B:1361:G:H5'	1.93	0.50
2:B:1664:A:C2'	2:B:2561:U:C3'	2.86	0.50
2:B:1770:G:H5''	2:B:1967:C:N1	2.25	0.50
2:B:1796:U:C4'	4:C:251:THR:OG1	2.57	0.50
2:B:1951:U:C4	2:B:1990:C:N4	2.77	0.50
2:B:2015:A:C8	19:S:88:ARG:CD	2.94	0.50
2:B:2076:U:O4'	2:B:2076:U:O2	2.29	0.50
2:B:2199:A:O3'	2:B:2200:C:C6	2.64	0.50
2:B:2465:C:O3'	30:4:5:ALA:CB	2.35	0.50
2:B:2630:G:H5'	2:B:2894:G:C1'	2.38	0.50
4:C:63:ILE:HG21	4:C:90:ILE:HD13	1.92	0.50
4:C:107:LYS:H	4:C:194:VAL:CG2	2.21	0.50
5:D:12:THR:O	5:D:13:ARG:HD2	2.10	0.50
5:D:175:LEU:HB3	5:D:189:VAL:CG1	2.41	0.50
9:H:85:GLY:O	9:H:89:LYS:N	2.43	0.50
10:J:125:TYR:CE2	10:J:134:ALA:HB2	2.45	0.50
12:L:67:THR:O	12:L:68:SER:CB	2.59	0.50
14:N:12:ARG:HD3	14:N:20:MET:HE3	1.93	0.50
22:W:49:ASN:O	22:W:50:VAL:HB	2.11	0.50
24:Y:16:LEU:CB	24:Y:17:PRO:CD	2.88	0.50
26:O:28:SER:O	26:O:32:THR:HG22	2.11	0.50
2:B:15:G:H2'	2:B:16:C:H6	1.77	0.50
2:B:45:G:C5'	2:B:46:G:C1'	2.80	0.50
2:B:183:C:P	2:B:433:C:H4'	2.50	0.50
2:B:185:G:H2'	2:B:186:G:O4'	2.10	0.50
2:B:650:C:C5'	29:3:46:LYS:HG3	2.39	0.50
2:B:686:U:C4'	28:2:11:LYS:CB	2.57	0.50
2:B:687:C:O2'	28:2:4:THR:HA	2.11	0.50
2:B:1164:C:H2'	2:B:1165:A:H8	1.76	0.50
2:B:1231:U:H2'	2:B:1232:G:H8	1.75	0.50
2:B:1339:G:H2'	2:B:1603:A:O2'	2.10	0.50
2:B:1562:U:H2'	2:B:1563:U:C6	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1737:G:H5'	2:B:1738:G:OP2	2.10	0.50
2:B:1768:C:O5'	2:B:1960:A:C5'	2.51	0.50
2:B:1773:A:H5''	2:B:1973:G:N7	2.26	0.50
2:B:1923:U:H2'	2:B:1924:C:C6	2.45	0.50
2:B:1997:C:H42	2:B:2549:G:H3'	1.75	0.50
2:B:2091:C:O2	2:B:2229:U:C6	2.45	0.50
2:B:2418:A:O2'	27:1:20:TYR:CB	2.50	0.50
2:B:2460:U:O4'	13:M:76:LYS:O	2.29	0.50
3:V:21:ARG:NH2	3:V:27:PRO:HG3	2.27	0.50
4:C:181:ARG:NH2	4:C:260:LYS:HZ2	2.07	0.50
6:E:85:PHE:O	6:E:86:ALA:C	2.55	0.50
6:E:176:ASP:OD1	6:E:178:VAL:HG22	2.11	0.50
6:E:179:SER:O	12:L:13:LYS:CD	2.58	0.50
9:H:4:ILE:C	9:H:37:VAL:HG12	2.36	0.50
15:O:8:ILE:HG23	15:O:9:ARG:N	2.26	0.50
18:R:3:ALA:HB3	18:R:14:VAL:O	2.11	0.50
18:R:18:GLN:HA	18:R:99:THR:HA	1.93	0.50
2:B:15:G:O2'	2:B:16:C:H5'	2.09	0.50
2:B:25:U:O3'	19:S:81:SER:N	2.44	0.50
2:B:45:G:N2	2:B:182:A:C6	2.79	0.50
2:B:125:A:C4	32:B:3371:HOH:O	2.54	0.50
2:B:156:A:H2'	2:B:157:C:H6	1.77	0.50
2:B:298:G:H2'	2:B:339:U:O4	2.12	0.50
2:B:958:U:C4	13:M:16:ARG:CG	2.83	0.50
2:B:1248:G:H5''	12:L:29:LYS:HB2	1.94	0.50
2:B:1249:U:C2'	12:L:32:GLY:CA	2.84	0.50
2:B:1487:U:H2'	2:B:1488:C:H6	1.76	0.50
2:B:1621:U:C4	32:B:3079:HOH:O	2.54	0.50
2:B:1653:G:N2	5:D:140:HIS:HD2	2.08	0.50
2:B:1655:A:C5	5:D:146:ILE:HG13	2.44	0.50
2:B:1796:U:O2'	4:C:251:THR:O	2.25	0.50
2:B:1827:U:C2'	2:B:1970:A:H2'	2.27	0.50
2:B:2069:G:C8	2:B:2433:A:P	3.04	0.50
2:B:2269:G:H1'	22:W:21:GLY:N	2.23	0.50
2:B:2386:A:H2'	2:B:2387:U:C6	2.47	0.50
2:B:2427:C:OP1	2:B:2448:A:N9	2.44	0.50
2:B:2455:G:H2'	2:B:2456:C:C6	2.46	0.50
2:B:2516:A:O2'	2:B:2517:C:H5'	2.11	0.50
2:B:2537:U:H2'	2:B:2538:C:H6	1.76	0.50
2:B:2581:G:C2	2:B:2610:C:H5	2.15	0.50
2:B:2723:C:OP1	14:N:3:HIS:HB3	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2748:A:H1'	8:G:66:THR:HG23	1.93	0.50
6:E:104:ALA:C	6:E:105:LEU:HD23	2.35	0.50
7:F:97:GLU:O	7:F:100:GLU:HG3	2.11	0.50
9:H:44:ILE:O	9:H:47:PHE:HD2	1.94	0.50
14:N:87:PHE:HB2	14:N:94:TYR:CZ	2.47	0.50
16:P:8:GLU:N	16:P:8:GLU:OE1	2.45	0.50
16:P:59:THR:HG22	16:P:59:THR:O	2.10	0.50
17:Q:32:ARG:C	17:Q:32:ARG:HD2	2.36	0.50
17:Q:93:ILE:C	17:Q:95:ALA:N	2.69	0.50
19:S:33:LEU:O	19:S:35:ILE:N	2.45	0.50
21:U:43:LYS:HD2	21:U:44:HIS:N	2.26	0.50
1:A:15:A:H1'	1:A:109:A:C8	2.46	0.50
1:A:48:U:O3'	15:O:68:LYS:CA	2.60	0.50
1:A:64:G:O2'	1:A:65:U:H5'	2.12	0.50
2:B:95:A:H5'	23:X:33:ALA:HA	1.93	0.50
2:B:587:C:N1	12:L:38:GLN:H	1.38	0.50
2:B:593:U:H1'	29:3:2:LYS:HD2	1.93	0.50
2:B:660:C:H2'	2:B:661:A:H8	1.75	0.50
2:B:687:C:H4'	28:2:5:PHE:C	2.37	0.50
2:B:1180:U:O2'	2:B:1181:U:H5'	2.10	0.50
2:B:1215:G:O2'	2:B:1216:G:H5'	2.11	0.50
2:B:1339:G:C2	2:B:1603:A:N3	2.79	0.50
2:B:1494:A:H2'	2:B:1495:A:C8	2.47	0.50
2:B:1637:A:H1'	2:B:2697:G:C1'	2.38	0.50
2:B:1663:G:OP1	11:K:7:MET:HE1	2.07	0.50
2:B:1665:A:C5'	11:K:57:VAL:HB	2.41	0.50
2:B:2004:G:O6	5:D:128:ARG:NH1	2.45	0.50
2:B:2045:C:O2'	26:0:18:HIS:NE2	2.41	0.50
2:B:2056:G:C6	2:B:2577:A:C1'	2.95	0.50
2:B:2067:G:H5''	2:B:2424:C:O2	2.12	0.50
2:B:2301:C:O2'	2:B:2302:U:H5'	2.11	0.50
2:B:2386:A:O2'	22:W:38:ARG:CD	2.59	0.50
2:B:2512:C:H2'	2:B:2513:A:O4'	2.11	0.50
2:B:2712:C:H2'	2:B:2714:G:O3'	2.12	0.50
2:B:2776:A:H4'	2:B:2777:G:C5'	2.42	0.50
2:B:2899:A:H2'	2:B:2900:A:C8	2.47	0.50
4:C:212:TRP:C	4:C:214:GLY:H	2.18	0.50
5:D:1:MET:CE	5:D:84:LEU:HD13	2.39	0.50
5:D:62:LYS:HE3	5:D:62:LYS:N	2.27	0.50
5:D:118:PHE:HA	5:D:164:GLN:HG3	1.93	0.50
8:G:84:LYS:HZ2	8:G:85:LYS:N	2.09	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:G:89:VAL:HG21	8:G:162:ARG:HE	1.77	0.50
13:M:34:LYS:O	13:M:124:LEU:HB2	2.11	0.50
13:M:67:VAL:HB	13:M:100:LYS:CG	2.40	0.50
14:N:1:MET:HE3	14:N:3:HIS:N	2.19	0.50
16:P:23:ASP:H	16:P:93:LYS:CE	2.22	0.50
16:P:91:VAL:HB	16:P:113:LEU:HB2	1.93	0.50
19:S:48:LYS:O	19:S:51:LEU:HB3	2.12	0.50
20:T:20:ALA:C	20:T:22:THR:H	2.19	0.50
22:W:10:ARG:HH11	22:W:10:ARG:HB3	1.76	0.50
25:Z:59:ARG:HG3	25:Z:62:LYS:CG	2.41	0.50
2:B:4:U:H1'	2:B:2900:A:H2	1.76	0.50
2:B:24:G:C4	19:S:78:GLU:HB3	2.45	0.50
2:B:310:A:OP1	21:U:14:THR:CG2	2.54	0.50
2:B:582:A:H2'	2:B:583:G:H8	1.75	0.50
2:B:712:G:H2'	2:B:713:G:O4'	2.12	0.50
2:B:1266:G:N7	32:B:3409:HOH:O	2.44	0.50
2:B:1317:G:H2'	2:B:1318:U:O4'	2.11	0.50
2:B:1516:G:H1	2:B:1732:C:N4	2.10	0.50
2:B:1663:G:H5'	11:K:22:ILE:CG2	2.41	0.50
2:B:1664:A:O2'	2:B:2561:U:C4'	2.49	0.50
2:B:1759:A:N7	2:B:2697:G:H5'	2.11	0.50
2:B:1806:C:C5	4:C:45:ASN:ND2	2.80	0.50
2:B:1853:A:N7	2:B:2235:G:C3'	2.59	0.50
2:B:1854:A:N6	2:B:1888:G:H1'	2.25	0.50
2:B:2007:U:H4'	5:D:162:ALA:HB1	1.88	0.50
2:B:2225:A:N6	9:H:29:PHE:CD2	2.79	0.50
2:B:2263:C:H2'	2:B:2264:C:H6	1.77	0.50
2:B:2757:A:H2'	2:B:2757:A:N3	2.26	0.50
2:B:2876:G:H5'	16:P:2:ASN:C	2.20	0.50
2:B:2879:A:H4'	2:B:2880:C:OP1	2.12	0.50
3:V:10:LYS:HG2	3:V:11:GLU:HG3	1.93	0.50
5:D:125:TRP:O	5:D:126:ASN:HB2	2.12	0.50
6:E:141:MET:HG3	6:E:143:LEU:HB2	1.93	0.50
7:F:38:GLY:O	7:F:39:VAL:C	2.55	0.50
7:F:99:PHE:C	7:F:101:ARG:N	2.69	0.50
7:F:103:ILE:HG13	7:F:104:THR:H	1.77	0.50
8:G:154:GLU:OE1	8:G:156:TYR:HB2	2.11	0.50
12:L:93:ASN:O	12:L:94:THR:HB	2.10	0.50
13:M:43:ALA:C	13:M:45:GLN:N	2.68	0.50
13:M:105:MET:HE3	13:M:106:ASP:O	2.10	0.50
13:M:112:LEU:HD12	13:M:112:LEU:N	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:126:ILE:HG13	13:M:127:LYS:N	2.19	0.50
19:S:86:MET:HB2	19:S:96:ILE:CD1	2.42	0.50
21:U:25:LYS:CG	21:U:35:VAL:HA	2.42	0.50
21:U:47:PRO:O	21:U:49:PRO:HD3	2.12	0.50
21:U:52:ASN:O	21:U:54:PRO:HD3	2.11	0.50
21:U:78:LYS:HB3	21:U:96:LYS:HB3	1.93	0.50
23:X:22:LEU:O	23:X:23:ARG:C	2.53	0.50
25:Z:59:ARG:HH21	25:Z:62:LYS:HZ1	1.59	0.50
1:A:47:C:O2'	15:O:30:ARG:NH1	2.45	0.50
2:B:6:A:C5	2:B:2898:U:C2	2.99	0.50
2:B:199:A:C2	2:B:2071:A:H8	2.19	0.50
2:B:320:A:OP2	6:E:132:LYS:CD	2.60	0.50
2:B:565:C:O4'	2:B:578:G:C4	2.65	0.50
2:B:565:C:O3'	2:B:577:G:N2	2.15	0.50
2:B:685:A:P	28:2:16:HIS:HB2	2.52	0.50
2:B:741:U:H2'	2:B:742:A:C8	2.45	0.50
2:B:1759:A:C8	2:B:2696:U:O3'	2.63	0.50
2:B:1784:A:C5'	2:B:2590:A:C5'	2.76	0.50
2:B:1826:G:O2'	2:B:1901:A:H4'	2.11	0.50
2:B:1826:G:N2	2:B:1901:A:OP1	2.44	0.50
2:B:2061:G:N3	2:B:2253:G:C3'	2.75	0.50
2:B:2063:C:O2	2:B:2254:C:C6	2.64	0.50
2:B:2270:A:H3'	22:W:18:LYS:CB	2.41	0.50
2:B:2364:C:H5''	22:W:38:ARG:HH22	1.77	0.50
2:B:2398:U:H2'	2:B:2399:G:H8	1.77	0.50
2:B:2635:A:H4'	5:D:78:GLY:C	2.36	0.50
2:B:2815:C:H1'	26:0:39:ARG:O	2.11	0.50
5:D:74:GLU:HA	5:D:74:GLU:OE1	2.11	0.50
5:D:135:GLY:C	5:D:137:SER:N	2.68	0.50
6:E:43:THR:HG23	6:E:44:ARG:CZ	2.42	0.50
6:E:144:GLU:C	6:E:146:VAL:H	2.19	0.50
6:E:173:THR:O	6:E:175:ILE:HG22	2.12	0.50
9:H:47:PHE:CD1	9:H:47:PHE:C	2.89	0.50
10:J:56:VAL:HG12	10:J:57:LEU:N	2.26	0.50
13:M:74:THR:HA	13:M:87:GLY:O	2.11	0.50
20:T:66:LYS:N	20:T:77:ARG:HA	2.24	0.50
20:T:89:GLU:N	20:T:89:GLU:CD	2.69	0.50
21:U:5:ARG:CG	21:U:6:ARG:H	2.24	0.50
28:2:34:ARG:HE	28:2:42:LEU:CD1	2.23	0.50
1:A:58:A:H2'	1:A:59:A:O4'	2.11	0.50
1:A:113:C:H2'	1:A:114:C:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:511:U:O5'	2:B:511:U:H6	1.95	0.50
2:B:1009:A:O3'	17:Q:61:ILE:CG1	2.60	0.50
2:B:1133:A:C4	2:B:2026:U:C2'	2.80	0.50
2:B:1287:A:O2'	2:B:1288:G:H5'	2.12	0.50
2:B:1654:A:C4	5:D:121:THR:HG21	2.40	0.50
2:B:1656:C:H2'	2:B:1657:U:H6	1.77	0.50
2:B:1773:A:O4'	2:B:1973:G:C6	2.65	0.50
2:B:2090:A:C3'	9:H:23:ALA:C	2.84	0.50
2:B:2195:U:H2'	2:B:2196:C:H6	1.77	0.50
2:B:2352:A:H2'	2:B:2353:G:O4'	2.11	0.50
2:B:2571:U:O2'	5:D:152:PRO:HG2	2.11	0.50
2:B:2574:G:O2'	5:D:151:THR:CA	2.52	0.50
2:B:2636:C:H2'	2:B:2637:U:C6	2.47	0.50
6:E:44:ARG:N	6:E:44:ARG:CD	2.75	0.50
6:E:57:LYS:HA	6:E:57:LYS:HE3	1.94	0.50
9:H:11:ASN:ND2	9:H:12:LEU:N	2.60	0.50
9:H:17:ASP:OD2	9:H:21:VAL:HB	2.11	0.50
10:J:34:ARG:HD3	10:J:39:LYS:HB2	1.92	0.50
18:R:72:VAL:HG23	18:R:73:LYS:N	2.27	0.50
23:X:23:ARG:HH21	23:X:27:ASN:CG	2.20	0.50
27:1:34:GLU:N	27:1:52:LYS:O	2.45	0.50
28:2:17:GLY:HA2	28:2:21:ARG:HH12	1.76	0.50
1:A:37:C:C2	15:O:69:ASP:OD1	2.59	0.50
2:B:72:U:H6	23:X:54:LYS:NZ	2.07	0.50
2:B:415:A:N6	2:B:2407:A:N3	2.52	0.50
2:B:448:U:C4	2:B:1259:G:H4'	2.45	0.50
2:B:533:G:OP1	17:Q:23:TYR:C	2.54	0.50
2:B:702:U:O2'	2:B:703:U:H5'	2.12	0.50
2:B:728:G:H3'	4:C:16:VAL:HG11	1.87	0.50
2:B:958:U:H2'	13:M:18:ARG:O	2.12	0.50
2:B:1225:G:C8	18:R:78:ARG:CD	2.91	0.50
2:B:1362:C:OP1	2:B:2215:C:C1'	2.60	0.50
2:B:1637:A:H2'	2:B:1638:C:C6	2.47	0.50
2:B:1645:G:H5''	2:B:1646:C:H5'	1.93	0.50
2:B:1821:A:H4'	4:C:155:ARG:HD2	1.93	0.50
2:B:1949:G:N3	2:B:1987:A:N1	2.60	0.50
2:B:2015:A:H2'	26:0:1:ALA:C	2.37	0.50
2:B:2048:G:C1'	2:B:2823:A:N6	2.75	0.50
2:B:2073:C:O2'	2:B:2074:U:H5'	2.11	0.50
2:B:2258:C:C6	2:B:2449:U:O4'	2.65	0.50
2:B:2261:C:O2'	2:B:2327:A:C6	2.64	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2347:C:HO2'	27:1:39:ASP:N	2.04	0.50
2:B:2441:U:O2'	2:B:2442:C:H5'	2.12	0.50
2:B:2465:C:O2'	2:B:2466:C:H5'	2.11	0.50
2:B:2658:C:C5'	8:G:157:LYS:NZ	2.75	0.50
2:B:2840:C:H2'	2:B:2841:C:C6	2.46	0.50
2:B:2867:G:C2	16:P:20:ARG:CZ	2.85	0.50
3:V:30:ILE:HD11	3:V:63:ILE:HD12	1.94	0.50
4:C:16:VAL:CA	4:C:17:LYS:HE2	2.42	0.50
4:C:224:MET:HE3	4:C:232:GLY:C	2.36	0.50
4:C:242:HIS:N	4:C:242:HIS:ND1	2.60	0.50
8:G:84:LYS:HB3	8:G:132:LEU:HD12	1.93	0.50
11:K:11:ALA:HB3	11:K:85:VAL:HG23	1.94	0.50
11:K:108:ARG:HH21	16:P:36:LYS:HG3	1.76	0.50
12:L:77:ILE:CD1	12:L:92:LEU:HD22	2.41	0.50
15:O:34:HIS:N	15:O:34:HIS:ND1	2.60	0.50
16:P:90:ALA:HB3	16:P:112:ARG:HA	1.92	0.50
18:R:65:ALA:O	18:R:66:HIS:HB2	2.11	0.50
20:T:3:ARG:HH21	20:T:8:LEU:CD2	2.24	0.50
20:T:5:GLU:CG	20:T:6:ARG:H	2.23	0.50
20:T:29:THR:HG22	20:T:86:THR:HG22	1.94	0.50
22:W:65:LYS:O	22:W:66:VAL:HB	2.12	0.50
25:Z:32:LEU:O	25:Z:46:GLY:HA2	2.12	0.50
1:A:45:A:H5'	7:F:91:ARG:O	2.11	0.50
2:B:34:U:C5'	32:B:3165:HOH:O	1.76	0.50
2:B:61:C:O2	23:X:29:ARG:HG3	2.07	0.50
2:B:207:A:H2'	2:B:208:C:O4'	2.12	0.50
2:B:216:A:C8	2:B:430:A:OP2	2.65	0.50
2:B:586:A:H2'	12:L:36:LYS:O	2.11	0.50
2:B:669:G:O3'	2:B:670:A:P	2.70	0.50
2:B:716:A:H2'	2:B:717:C:O4'	2.12	0.50
2:B:1252:G:C8	17:Q:35:PHE:CZ	2.98	0.50
2:B:1400:U:H2'	2:B:1401:G:H8	1.77	0.50
2:B:1560:G:H2'	2:B:1561:C:C6	2.47	0.50
2:B:1722:A:H2'	2:B:1723:G:C8	2.47	0.50
2:B:1784:A:C5'	2:B:2590:A:H5'	2.42	0.50
2:B:1818:U:C2'	4:C:153:LEU:HA	2.41	0.50
2:B:1828:G:H3'	2:B:1972:G:C1'	2.37	0.50
2:B:2004:G:C8	5:D:142:VAL:HG22	2.46	0.50
2:B:2005:A:O2'	5:D:145:SER:CA	2.60	0.50
2:B:2069:G:O5'	2:B:2432:A:C8	2.65	0.50
6:E:13:THR:HG22	6:E:119:ILE:HD12	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:25:GLU:CG	12:L:17:LYS:CD	2.82	0.50
6:E:145:ASP:C	6:E:147:LEU:N	2.69	0.50
7:F:128:SER:HA	7:F:154:THR:HG23	1.93	0.50
8:G:85:LYS:HB2	8:G:164:ALA:HB2	1.94	0.50
10:J:10:THR:CB	10:J:13:ARG:HH22	2.25	0.50
14:N:9:GLN:HA	14:N:17:ARG:NH1	2.27	0.50
17:Q:19:GLN:O	17:Q:20:ALA:C	2.55	0.50
21:U:35:VAL:HG12	21:U:36:GLU:N	2.27	0.50
23:X:12:GLU:HB2	23:X:14:LEU:HD12	1.93	0.50
23:X:40:SER:O	23:X:42:LEU:HD12	2.09	0.50
28:2:30:VAL:O	28:2:33:ARG:HG3	2.11	0.50
30:4:12:ARG:H	30:4:12:ARG:HD2	1.77	0.50
1:A:61:G:H1	7:F:22:ASN:HD22	1.60	0.49
2:B:189:G:H2'	2:B:205:G:H22	1.76	0.49
2:B:224:U:O4	2:B:420:C:H5'	2.12	0.49
2:B:321:U:C2	6:E:129:PRO:CG	2.94	0.49
2:B:515:A:OP1	17:Q:29:ARG:CZ	2.57	0.49
2:B:532:A:H4'	2:B:533:G:C8	2.46	0.49
2:B:557:C:H2'	2:B:558:U:C6	2.47	0.49
2:B:565:C:O2'	2:B:566:U:H5'	2.12	0.49
2:B:566:U:C4'	2:B:577:G:O4'	2.60	0.49
2:B:630:G:H5'	29:3:44:ARG:HE	0.68	0.49
2:B:770:G:OP1	28:2:10:LEU:CB	2.59	0.49
2:B:825:A:H2'	2:B:826:U:O4'	2.12	0.49
2:B:926:G:H2'	2:B:927:A:C8	2.47	0.49
2:B:1010:A:O2'	2:B:1152:C:H1'	2.12	0.49
2:B:1400:U:H2'	2:B:1401:G:C8	2.46	0.49
2:B:1591:A:H2'	2:B:1592:C:C6	2.47	0.49
2:B:1668:A:C6	2:B:2551:C:O3'	2.55	0.49
2:B:1856:U:C5	2:B:2234:G:OP1	2.65	0.49
2:B:1992:G:N9	2:B:2550:G:H8	2.10	0.49
2:B:2788:C:O4'	2:B:2810:A:O4'	2.30	0.49
3:V:78:GLN:HB2	3:V:88:HIS:O	2.13	0.49
4:C:38:LYS:HD3	4:C:39:SER:O	2.12	0.49
4:C:216:ARG:HB3	4:C:217:PRO:HD2	1.94	0.49
5:D:128:ARG:NE	5:D:129:THR:O	2.45	0.49
6:E:183:PHE:HD1	12:L:13:LYS:CE	2.24	0.49
7:F:107:VAL:HG12	7:F:113:PHE:CE1	2.47	0.49
9:H:35:LYS:HD2	9:H:35:LYS:H	1.77	0.49
14:N:45:ARG:HB2	14:N:49:GLU:OE2	2.12	0.49
18:R:33:VAL:O	18:R:34:GLU:HB2	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:38:ILE:O	21:U:39:ASN:HB2	2.12	0.49
21:U:44:HIS:ND1	21:U:56:GLY:HA3	2.27	0.49
21:U:46:LYS:HB3	21:U:53:GLN:HB3	1.93	0.49
22:W:24:ARG:HD2	22:W:59:PHE:HD1	1.77	0.49
26:O:28:SER:O	26:O:36:LYS:HB2	2.12	0.49
26:O:29:VAL:HB	26:O:36:LYS:HD2	1.93	0.49
2:B:465:G:H5''	28:2:44:VAL:O	2.13	0.49
2:B:485:C:H2'	19:S:60:HIS:CD2	2.47	0.49
2:B:992:C:H2'	2:B:993:G:C8	2.46	0.49
2:B:1547:C:H2'	2:B:1548:A:C8	2.47	0.49
2:B:1664:A:H5'	11:K:22:ILE:CA	2.25	0.49
2:B:1672:A:C2	2:B:2604:U:C5'	2.94	0.49
2:B:1684:G:H2'	2:B:1685:C:C6	2.47	0.49
2:B:1816:C:H5	4:C:61:TYR:C	2.15	0.49
2:B:1971:U:H1'	4:C:238:ASN:ND2	2.27	0.49
2:B:1974:C:N3	2:B:1978:A:N1	2.59	0.49
2:B:2004:G:N2	5:D:145:SER:OG	2.45	0.49
2:B:2192:U:H2'	2:B:2193:G:O4'	2.12	0.49
2:B:2199:A:H5''	2:B:2200:C:C5	2.47	0.49
2:B:2255:G:O6	2:B:2447:G:N1	2.45	0.49
2:B:2665:A:O2'	2:B:2666:C:H5'	2.12	0.49
2:B:2820:A:O4'	14:N:4:ARG:CD	2.41	0.49
3:V:76:ASP:CG	13:M:136:MET:C	2.71	0.49
3:V:77:VAL:HG13	13:M:132:THR:CG2	2.41	0.49
4:C:130:PRO:HD2	4:C:133:ASN:HD22	1.77	0.49
5:D:51:THR:O	5:D:52:THR:HB	2.11	0.49
5:D:170:VAL:HG22	5:D:171:THR:N	2.27	0.49
12:L:117:THR:C	12:L:118:THR:HG22	2.36	0.49
12:L:133:ALA:HA	12:L:136:GLU:OE2	2.12	0.49
13:M:73:ILE:HD13	13:M:90:GLU:HG2	1.94	0.49
13:M:97:GLN:N	13:M:98:PRO:CD	2.75	0.49
14:N:65:LEU:CD1	14:N:68:ALA:HB3	2.43	0.49
16:P:2:ASN:N	16:P:2:ASN:HD22	2.10	0.49
17:Q:13:HIS:O	17:Q:17:LEU:HB2	2.12	0.49
17:Q:33:VAL:O	17:Q:34:ALA:C	2.55	0.49
19:S:24:ILE:O	19:S:74:ILE:HD12	2.11	0.49
22:W:30:VAL:CG1	22:W:31:LEU:N	2.76	0.49
28:2:44:VAL:HG23	28:2:45:SER:N	2.24	0.49
1:A:52:A:H3'	1:A:53:A:C8	2.48	0.49
1:A:76:G:H4'	13:M:136:MET:CE	2.39	0.49
2:B:92:U:H2'	2:B:93:G:O4'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:219:A:C2	2:B:430:A:N1	2.80	0.49
2:B:323:C:O2'	6:E:163:ASN:C	2.55	0.49
2:B:458:G:C4'	28:2:39:ARG:HH11	2.25	0.49
2:B:671:C:O4'	12:L:39:LYS:HG2	2.11	0.49
2:B:964:C:H5'	2:B:2250:G:N1	2.22	0.49
2:B:1025:G:OP1	2:B:1025:G:H8	1.94	0.49
2:B:1296:G:C3'	2:B:2709:G:HO2'	2.19	0.49
2:B:1338:G:C5'	20:T:18:GLU:O	2.46	0.49
2:B:1659:G:N1	5:D:131:ASP:HB3	2.28	0.49
2:B:1668:A:O4'	2:B:1954:G:H5''	2.08	0.49
2:B:1747:U:H2'	2:B:1748:C:C6	2.47	0.49
2:B:1770:G:O2'	2:B:1939:U:C2	2.55	0.49
2:B:1889:A:H1'	2:B:2235:G:N3	2.26	0.49
2:B:2062:A:C6	2:B:2252:G:N2	2.73	0.49
2:B:2068:U:O2'	2:B:2432:A:H4'	2.11	0.49
2:B:2275:C:OP1	2:B:2448:A:P	2.70	0.49
2:B:2334:U:OP2	15:O:8:ILE:N	2.45	0.49
2:B:2361:G:H5''	29:3:28:LEU:HD21	1.93	0.49
2:B:2398:U:H2'	2:B:2399:G:C8	2.48	0.49
2:B:2645:G:O4'	2:B:2732:G:O3'	2.21	0.49
2:B:2898:U:C1'	10:J:135:GLN:HE21	2.25	0.49
4:C:180:MET:HB2	4:C:265:PHE:CB	2.41	0.49
5:D:113:SER:O	5:D:167:ASN:HA	2.13	0.49
6:E:30:GLN:HB3	12:L:19:LEU:HD23	1.95	0.49
8:G:84:LYS:O	8:G:132:LEU:HG	2.12	0.49
10:J:52:ASP:CG	10:J:53:TYR:H	2.20	0.49
11:K:36:GLY:HA2	11:K:62:VAL:O	2.12	0.49
12:L:108:ALA:O	12:L:109:LYS:HB3	2.11	0.49
16:P:92:ARG:HH22	16:P:110:LYS:HE2	1.77	0.49
17:Q:92:LYS:CG	17:Q:93:ILE:N	2.76	0.49
18:R:68:ARG:HD2	18:R:70:GLU:CD	2.37	0.49
20:T:69:ARG:N	20:T:75:GLY:HA3	2.27	0.49
27:1:33:LEU:N	27:1:52:LYS:HB3	2.27	0.49
29:3:7:ARG:CZ	29:3:11:LYS:HZ1	2.24	0.49
2:B:96:C:C1'	23:X:41:HIS:C	2.73	0.49
2:B:586:A:C6	2:B:810:U:C4'	2.83	0.49
2:B:659:G:C3'	6:E:97:ASN:ND2	2.54	0.49
2:B:827:U:H5'	2:B:828:U:O5'	2.12	0.49
2:B:877:A:C2	2:B:900:A:N7	2.80	0.49
2:B:922:C:H2'	2:B:923:G:H8	1.77	0.49
2:B:1171:G:H2'	2:B:1172:C:C1'	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1424:G:H2'	2:B:1425:G:O4'	2.12	0.49
2:B:1568:G:OP2	4:C:32:LEU:CD1	2.61	0.49
2:B:1677:A:N1	2:B:1954:G:C5	2.80	0.49
2:B:1751:U:H2'	2:B:1752:C:C6	2.47	0.49
2:B:1775:U:C5	2:B:1829:A:OP2	2.66	0.49
2:B:1807:G:C4	4:C:45:ASN:OD1	2.60	0.49
2:B:1957:C:H2'	2:B:1958:C:H6	1.78	0.49
2:B:2003:A:N7	5:D:140:HIS:N	2.49	0.49
2:B:2091:C:O4'	2:B:2229:U:C2	2.61	0.49
2:B:2322:A:N6	2:B:2333:A:H62	2.10	0.49
2:B:2459:A:H2	13:M:79:ALA:N	2.09	0.49
2:B:2527:C:C4'	30:4:31:PRO:CG	2.91	0.49
5:D:106:LYS:HA	5:D:176:ASP:HA	1.93	0.49
8:G:26:LYS:CA	8:G:31:GLU:HG2	2.34	0.49
12:L:61:LEU:O	12:L:62:PRO:O	2.29	0.49
13:M:2:LEU:HB3	13:M:4:PRO:HD2	1.94	0.49
13:M:80:VAL:HG12	13:M:81:ARG:N	2.27	0.49
14:N:38:LEU:N	14:N:39:PRO:CD	2.75	0.49
17:Q:16:ILE:HD11	17:Q:31:TYR:CD1	2.47	0.49
19:S:47:VAL:O	19:S:51:LEU:HB2	2.13	0.49
20:T:71:GLY:C	20:T:72:GLN:HG3	2.37	0.49
22:W:35:ILE:HG13	22:W:36:ILE:N	2.27	0.49
22:W:40:ARG:HG3	22:W:40:ARG:HH11	1.77	0.49
29:3:3:ILE:N	29:3:3:ILE:HD13	2.27	0.49
1:A:29:A:H3'	1:A:30:C:C6	2.45	0.49
1:A:60:C:N4	7:F:23:SER:N	2.60	0.49
2:B:97:C:C4'	23:X:46:VAL:HG11	2.41	0.49
2:B:442:G:O3'	6:E:44:ARG:NH1	2.44	0.49
2:B:1312:U:O4	2:B:1604:C:C4	2.66	0.49
2:B:1666:G:H2'	2:B:2559:C:HO2'	1.62	0.49
2:B:1670:C:C2	2:B:2551:C:O2'	2.66	0.49
2:B:1719:G:O2'	2:B:1720:U:H5'	2.13	0.49
2:B:1729:U:C5	2:B:1730:C:H1'	2.48	0.49
2:B:1770:G:C5'	2:B:1967:C:N1	2.72	0.49
2:B:1993:U:O2	2:B:2551:C:O2	2.01	0.49
2:B:2014:A:H2'	2:B:2611:C:O2	2.12	0.49
2:B:2069:G:N7	2:B:2244:U:C2'	2.70	0.49
2:B:2400:G:O2'	2:B:2401:U:H5'	2.12	0.49
2:B:2461:A:H4'	13:M:78:LEU:HD13	1.94	0.49
2:B:2478:A:P	30:4:32:LYS:HG2	2.53	0.49
2:B:2626:C:H2'	2:B:2627:G:O4'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2699:C:HO2'	2:B:2700:A:H5'	1.77	0.49
2:B:2700:A:H2'	2:B:2701:U:H6	1.76	0.49
4:C:131:MET:O	4:C:134:ILE:HB	2.13	0.49
4:C:136:VAL:O	4:C:163:ILE:HB	2.12	0.49
5:D:148:GLN:HB2	5:D:151:THR:HG23	1.95	0.49
6:E:3:LEU:HB2	6:E:12:LEU:HB2	1.94	0.49
11:K:85:VAL:O	11:K:87:LEU:HD23	2.11	0.49
14:N:119:SER:O	26:O:51:ARG:HG3	2.08	0.49
16:P:45:VAL:HG21	16:P:73:PHE:HD1	1.78	0.49
25:Z:59:ARG:NE	25:Z:62:LYS:HD2	2.26	0.49
27:1:15:GLY:HA3	27:1:47:ILE:HD12	1.95	0.49
2:B:125:A:H3'	2:B:126:A:H5'	1.93	0.49
2:B:464:U:N3	2:B:788:A:C2	2.80	0.49
2:B:492:A:H2'	2:B:493:G:O4'	2.13	0.49
2:B:817:C:O2'	2:B:839:U:H5''	2.12	0.49
2:B:827:U:OP2	2:B:2247:A:O3'	2.31	0.49
2:B:929:U:C4'	24:Y:26:LEU:O	2.60	0.49
2:B:997:G:H5''	17:Q:91:ARG:CG	2.37	0.49
2:B:1019:U:H2'	2:B:1020:A:C8	2.47	0.49
2:B:1657:U:OP1	2:B:2509:G:C2'	2.58	0.49
2:B:1692:U:H2'	2:B:1694:C:C5	2.47	0.49
2:B:2177:C:P	2:B:2179:C:O3'	2.70	0.49
2:B:2241:A:H2'	2:B:2242:G:H8	1.78	0.49
2:B:2269:G:HO2'	22:W:33:GLY:N	2.11	0.49
2:B:2776:A:H4'	2:B:2777:G:O5'	2.13	0.49
3:V:26:PHE:HZ	3:V:47:VAL:HB	1.77	0.49
5:D:111:GLY:HA3	5:D:194:PRO:O	2.13	0.49
5:D:170:VAL:HG21	5:D:194:PRO:CG	2.42	0.49
6:E:151:GLY:HA2	6:E:171:ASP:HA	1.95	0.49
9:H:8:LYS:HD3	9:H:8:LYS:O	2.13	0.49
12:L:125:LEU:HA	12:L:142:ILE:O	2.11	0.49
13:M:42:THR:HA	13:M:92:TRP:HD1	1.73	0.49
17:Q:90:ASP:HA	18:R:10:LYS:CE	2.35	0.49
20:T:6:ARG:C	20:T:8:LEU:H	2.21	0.49
21:U:34:ILE:HG23	21:U:61:GLU:HB2	1.94	0.49
24:Y:6:ILE:N	24:Y:6:ILE:HD13	2.28	0.49
24:Y:18:LYS:HZ1	24:Y:53:MET:HE2	1.74	0.49
30:4:11:CYS:HB3	30:4:14:CYS:SG	2.52	0.49
1:A:38:C:O4'	15:O:69:ASP:OD1	2.30	0.49
1:A:82:U:O2'	1:A:83:G:H5'	2.12	0.49
2:B:327:G:H2'	2:B:328:U:C6	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:540:C:H2'	2:B:541:A:H8	1.77	0.49
2:B:689:A:H2'	2:B:690:G:C8	2.47	0.49
2:B:948:C:H2'	2:B:949:G:H8	1.76	0.49
2:B:958:U:C3'	13:M:18:ARG:H	2.19	0.49
2:B:1287:A:H3'	2:B:1288:G:N2	2.28	0.49
2:B:1650:A:H2'	14:N:2:ARG:HH12	1.71	0.49
2:B:1666:G:O2'	2:B:1667:G:H5'	2.12	0.49
2:B:1755:A:H61	2:B:2694:G:HO2'	1.57	0.49
2:B:1919:A:H2'	2:B:1920:C:H5'	1.95	0.49
2:B:2009:A:OP2	2:B:2049:G:OP1	2.30	0.49
2:B:2065:C:O2'	2:B:2258:C:N4	2.44	0.49
2:B:2461:A:H2'	2:B:2462:C:H6	1.78	0.49
2:B:2746:U:H4'	8:G:137:LYS:CA	2.39	0.49
6:E:6:LYS:HB2	6:E:12:LEU:CD1	2.42	0.49
6:E:170:ARG:HH21	6:E:175:ILE:CD1	2.24	0.49
7:F:65:LEU:HD23	7:F:87:LYS:HD2	1.94	0.49
9:H:82:SER:HB3	9:H:90:LEU:CD2	2.43	0.49
13:M:130:PHE:CD2	13:M:131:VAL:HG22	2.47	0.49
14:N:120:GLU:CA	26:0:51:ARG:CG	2.64	0.49
17:Q:35:PHE:HB3	17:Q:39:ILE:HD12	1.95	0.49
19:S:32:ALA:HA	19:S:51:LEU:HD11	1.94	0.49
24:Y:9:THR:HB	24:Y:53:MET:O	2.12	0.49
27:1:7:LYS:HD2	27:1:8:ILE:O	2.12	0.49
28:2:35:ARG:NH1	28:2:39:ARG:HA	2.28	0.49
2:B:121:G:H4'	2:B:149:A:H5'	1.94	0.49
2:B:299:A:N6	2:B:322:A:H1'	2.28	0.49
2:B:440:C:H2'	2:B:441:U:H6	1.77	0.49
2:B:529:A:C5	2:B:2023:C:C6	3.00	0.49
2:B:580:U:C5'	17:Q:32:ARG:H	2.26	0.49
2:B:679:C:O2'	2:B:680:C:H5'	2.13	0.49
2:B:959:A:H2	13:M:81:ARG:HH21	1.59	0.49
2:B:1018:U:O2'	2:B:1019:U:H5'	2.13	0.49
2:B:1133:A:O2'	2:B:2027:G:H4'	2.13	0.49
2:B:1275:A:HO2'	14:N:20:MET:HE1	1.65	0.49
2:B:1654:A:N9	5:D:143:PRO:O	2.37	0.49
2:B:1666:G:O2'	2:B:2559:C:C2'	2.60	0.49
2:B:1853:A:N7	2:B:2235:G:C5'	2.76	0.49
2:B:1994:C:H2'	2:B:2558:C:H42	1.77	0.49
2:B:2185:U:H2'	2:B:2186:G:H8	1.78	0.49
2:B:2221:G:H2'	2:B:2222:C:H6	1.78	0.49
2:B:2248:C:O2'	2:B:2448:A:C5'	2.61	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2263:C:C5'	2:B:2329:U:C4'	2.85	0.49
2:B:2645:G:H3'	2:B:2646:C:C5'	2.42	0.49
2:B:2821:A:H2'	2:B:2822:G:C8	2.48	0.49
2:B:2845:U:O3'	16:P:54:LEU:HG	2.12	0.49
4:C:4:LYS:HG3	4:C:5:CYS:SG	2.53	0.49
5:D:33:ARG:C	5:D:35:THR:H	2.21	0.49
7:F:33:ILE:HG13	7:F:34:THR:N	2.27	0.49
8:G:66:THR:O	8:G:70:LEU:HB2	2.12	0.49
10:J:78:THR:HB	10:J:80:HIS:HD2	1.76	0.49
13:M:65:ILE:HG22	13:M:101:VAL:HG12	1.95	0.49
13:M:65:ILE:HA	13:M:101:VAL:HA	1.94	0.49
14:N:101:GLY:H	14:N:110:MET:HB2	1.78	0.49
17:Q:112:ALA:HA	17:Q:115:ALA:HB3	1.94	0.49
22:W:16:GLU:N	22:W:18:LYS:NZ	2.60	0.49
23:X:47:ARG:O	23:X:47:ARG:HG2	2.13	0.49
24:Y:4:ILE:O	24:Y:5:LYS:HB2	2.11	0.49
1:A:9:G:H4'	15:O:46:GLU:CB	2.42	0.49
2:B:87:U:O4	23:X:41:HIS:CE1	2.53	0.49
2:B:211:C:O2'	2:B:212:G:H5'	2.13	0.49
2:B:233:A:H61	2:B:428:A:H61	1.61	0.49
2:B:295:G:O2'	2:B:296:U:H5'	2.12	0.49
2:B:323:C:C6	6:E:164:LEU:N	2.79	0.49
2:B:609:A:H2'	2:B:610:C:O4'	2.12	0.49
2:B:827:U:O2	2:B:2430:A:N6	2.46	0.49
2:B:1140:C:OP1	10:J:64:VAL:HG11	2.12	0.49
2:B:1263:U:OP2	19:S:95:ARG:CZ	2.60	0.49
2:B:1263:U:H5'	26:O:6:LYS:O	2.12	0.49
2:B:1296:G:H5''	2:B:2709:G:C2'	2.43	0.49
2:B:1340:U:C5	2:B:1602:U:C3'	2.93	0.49
2:B:1723:G:N7	2:B:1737:G:N2	2.61	0.49
2:B:1996:C:N3	2:B:2549:G:C6	2.78	0.49
2:B:2097:A:H2'	2:B:2098:U:H6	1.76	0.49
2:B:2303:G:H2'	2:B:2304:G:H5'	1.94	0.49
2:B:2359:C:C4	2:B:2428:G:C6	2.91	0.49
2:B:2581:G:C6	2:B:2610:C:N3	2.81	0.49
2:B:2657:A:H2'	2:B:2658:C:O4'	2.13	0.49
2:B:2683:C:H2'	2:B:2684:U:C6	2.48	0.49
2:B:2686:G:H2'	2:B:2687:U:C6	2.47	0.49
3:V:6:ALA:HB3	3:V:65:VAL:CG1	2.42	0.49
4:C:140:VAL:HG23	4:C:141:HIS:N	2.28	0.49
4:C:266:ILE:O	4:C:266:ILE:HG13	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:61:THR:HB	5:D:62:LYS:CE	2.43	0.49
5:D:200:ASP:O	5:D:201:LEU:HB2	2.13	0.49
6:E:28:VAL:HA	12:L:19:LEU:HD21	1.88	0.49
11:K:103:VAL:HG22	11:K:121:GLU:O	2.13	0.49
12:L:79:LEU:HD12	12:L:79:LEU:N	2.27	0.49
13:M:8:LYS:HE2	13:M:8:LYS:N	2.27	0.49
13:M:14:LYS:HB3	13:M:14:LYS:HZ2	1.78	0.49
13:M:34:LYS:HD3	13:M:98:PRO:O	2.12	0.49
13:M:101:VAL:C	13:M:102:LEU:HD12	2.37	0.49
16:P:7:LEU:O	16:P:11:GLN:HG2	2.13	0.49
16:P:61:ARG:HH22	16:P:63:ILE:HD11	1.77	0.49
18:R:58:VAL:HG22	18:R:59:ILE:N	2.28	0.49
19:S:28:LYS:CB	19:S:71:VAL:HB	2.42	0.49
20:T:28:ASN:N	20:T:28:ASN:ND2	2.58	0.49
20:T:29:THR:HG22	20:T:86:THR:HA	1.94	0.49
20:T:43:ILE:HG21	32:T:106:HOH:O	2.09	0.49
21:U:27:VAL:HB	21:U:33:VAL:HG13	1.95	0.49
22:W:2:HIS:CE1	22:W:4:LYS:HB3	2.48	0.49
22:W:44:PHE:HB3	22:W:76:ARG:HG2	1.95	0.49
2:B:7:G:H2'	2:B:8:C:O4'	2.13	0.49
2:B:286:U:H2'	2:B:287:G:H8	1.78	0.49
2:B:685:A:H1'	2:B:688:U:O4	2.11	0.49
2:B:813:U:H5''	18:R:80:ARG:NH1	2.27	0.49
2:B:930:G:N3	24:Y:24:LEU:O	2.46	0.49
2:B:1773:A:H2'	2:B:1975:G:O6	2.13	0.49
2:B:1799:G:H21	4:C:153:LEU:N	2.10	0.49
2:B:1938:A:C3'	2:B:1983:G:H8	2.25	0.49
2:B:1940:U:H3'	2:B:1984:G:H4'	1.94	0.49
2:B:1957:C:H2'	2:B:1958:C:C6	2.48	0.49
2:B:2196:C:O2'	2:B:2197:U:H5'	2.13	0.49
2:B:2345:G:OP2	27:1:45:HIS:CE1	2.62	0.49
2:B:2421:G:OP1	27:1:9:LYS:NZ	2.46	0.49
2:B:2887:A:N3	26:0:27:LEU:CB	2.72	0.49
4:C:115:ILE:HG23	4:C:126:GLY:O	2.12	0.49
5:D:13:ARG:HA	5:D:13:ARG:NH1	2.27	0.49
11:K:119:ALA:N	11:K:120:PRO:CD	2.76	0.49
12:L:103:ILE:CD1	12:L:105:ILE:H	2.24	0.49
13:M:95:LEU:HD22	13:M:98:PRO:HG3	1.94	0.49
14:N:75:ILE:HD13	14:N:75:ILE:C	2.38	0.49
17:Q:21:LYS:HB3	17:Q:23:TYR:CD1	2.48	0.49
19:S:6:LYS:HB3	19:S:104:THR:HA	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:93:LEU:HD22	20:T:93:LEU:N	2.25	0.49
22:W:56:HIS:CE1	22:W:58:LEU:HB2	2.48	0.49
23:X:22:LEU:CD2	23:X:25:GLN:HB3	2.43	0.49
26:O:27:LEU:C	26:O:36:LYS:HD3	2.38	0.49
2:B:39:G:H2'	2:B:40:U:H6	1.78	0.48
2:B:173:A:H2'	2:B:174:U:C6	2.48	0.48
2:B:257:C:H2'	2:B:258:G:O4'	2.12	0.48
2:B:292:U:C5'	32:B:3179:HOH:O	1.81	0.48
2:B:496:G:C4'	19:S:1:MET:H3	2.23	0.48
2:B:875:G:H2'	2:B:876:C:O2	2.12	0.48
2:B:932:U:H2'	2:B:934:U:C4	2.48	0.48
2:B:1057:A:C8	2:B:1086:A:C8	3.01	0.48
2:B:1759:A:O2'	2:B:2696:U:C2	2.53	0.48
2:B:1773:A:H5''	2:B:1972:G:C4	2.48	0.48
2:B:2067:G:N2	2:B:2245:U:OP2	2.45	0.48
2:B:2090:A:N6	2:B:2092:U:O2'	2.46	0.48
2:B:2256:G:C2	2:B:2449:U:O3'	2.64	0.48
2:B:2459:A:C1'	13:M:76:LYS:CB	2.76	0.48
2:B:2495:G:O5'	13:M:81:ARG:N	2.35	0.48
2:B:2623:G:O2'	2:B:2624:G:H5'	2.12	0.48
2:B:2648:G:H2'	2:B:2649:C:C6	2.48	0.48
2:B:2783:U:O2'	5:D:42:ASN:HA	2.12	0.48
3:V:60:VAL:HG13	3:V:72:VAL:O	2.12	0.48
5:D:2:ILE:HG13	5:D:3:GLY:N	2.23	0.48
5:D:12:THR:O	16:P:8:GLU:HB3	2.13	0.48
5:D:61:THR:H	5:D:62:LYS:HE3	1.77	0.48
6:E:115:GLN:CB	12:L:10:GLU:CB	2.79	0.48
9:H:62:LEU:HG	9:H:137:GLU:HG2	1.95	0.48
10:J:103:ILE:HG22	10:J:103:ILE:O	2.12	0.48
12:L:21:ARG:NH1	12:L:21:ARG:HB3	2.28	0.48
12:L:82:LEU:HD12	12:L:90:VAL:HG13	1.93	0.48
13:M:73:ILE:HD11	13:M:92:TRP:N	2.28	0.48
18:R:39:LEU:HA	18:R:60:LYS:O	2.12	0.48
18:R:42:ALA:HA	18:R:54:VAL:HG13	1.94	0.48
19:S:31:GLN:C	19:S:33:LEU:N	2.70	0.48
21:U:5:ARG:HG2	21:U:6:ARG:N	2.28	0.48
21:U:6:ARG:C	21:U:8:ASP:N	2.71	0.48
21:U:78:LYS:HB3	21:U:96:LYS:CB	2.43	0.48
22:W:47:GLY:HA2	22:W:67:LYS:HZ3	1.77	0.48
24:Y:8:GLN:O	24:Y:55:LYS:HE2	2.12	0.48
25:Z:49:ARG:O	25:Z:51:VAL:HG23	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:58:A:H5'	7:F:28:PRO:CD	2.29	0.48
1:A:60:C:C2	7:F:23:SER:HB2	2.32	0.48
1:A:92:C:O3'	3:V:18:ARG:NH2	2.42	0.48
2:B:19:A:H2'	2:B:20:C:H6	1.78	0.48
2:B:414:C:N1	2:B:2409:G:N1	2.60	0.48
2:B:414:C:H1'	2:B:2409:G:N2	2.28	0.48
2:B:582:A:H2'	2:B:583:G:C8	2.49	0.48
2:B:607:U:OP1	6:E:98:LYS:CB	2.59	0.48
2:B:624:C:H4'	29:3:60:CYS:O	2.13	0.48
2:B:720:U:H2'	2:B:721:A:H8	1.77	0.48
2:B:747:U:C5	2:B:2014:A:H5''	2.38	0.48
2:B:750:A:H5'	2:B:1617:C:C2	2.46	0.48
2:B:856:G:H1'	22:W:23:LYS:HZ3	1.77	0.48
2:B:1137:G:H2'	2:B:1138:G:O4'	2.13	0.48
2:B:1168:G:H2'	2:B:1169:A:O4'	2.13	0.48
2:B:1196:C:C4	2:B:1197:G:C6	3.01	0.48
2:B:1405:U:H2'	2:B:1406:U:H6	1.74	0.48
2:B:1439:A:N7	2:B:1440:U:C6	2.82	0.48
2:B:1599:U:C5'	20:T:81:LYS:HZ1	2.13	0.48
2:B:1664:A:N1	2:B:2560:A:C4	2.76	0.48
2:B:1666:G:C2'	2:B:1667:G:H5'	2.43	0.48
2:B:1948:G:O2'	2:B:1949:G:H5'	2.13	0.48
2:B:1998:A:N1	11:K:4:GLU:CG	2.55	0.48
2:B:2271:G:H5''	22:W:16:GLU:H	1.77	0.48
2:B:2318:G:O2'	2:B:2319:G:C2	2.65	0.48
2:B:2484:G:C4'	13:M:44:ARG:CD	2.75	0.48
2:B:2630:G:C1'	2:B:2894:G:C2	2.96	0.48
2:B:2788:C:H4'	2:B:2809:A:O2'	2.13	0.48
4:C:29:PHE:HB2	4:C:31:PRO:HD3	1.95	0.48
4:C:172:THR:O	4:C:173:LEU:CB	2.61	0.48
4:C:174:ARG:HG3	4:C:180:MET:SD	2.53	0.48
5:D:34:VAL:CG2	5:D:93:GLY:HA3	2.42	0.48
5:D:38:LYS:HD3	5:D:38:LYS:N	2.28	0.48
5:D:172:VAL:HG21	5:D:175:LEU:HD12	1.94	0.48
5:D:181:ASP:O	5:D:184:ARG:HB3	2.13	0.48
6:E:122:GLU:OE2	6:E:152:GLU:HG3	2.13	0.48
8:G:136:ASP:O	8:G:140:ILE:HG23	2.13	0.48
12:L:4:ASN:C	12:L:6:LEU:H	2.20	0.48
12:L:43:GLY:C	32:L:150:HOH:O	2.56	0.48
12:L:124:GLY:O	12:L:125:LEU:HB2	2.13	0.48
13:M:67:VAL:CG2	13:M:95:LEU:HD21	2.42	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:80:VAL:HG12	13:M:81:ARG:HG2	1.95	0.48
13:M:86:LYS:HD2	13:M:86:LYS:H	1.78	0.48
14:N:116:VAL:O	14:N:117:ASP:HB2	2.13	0.48
17:Q:95:ALA:C	17:Q:97:ILE:H	2.21	0.48
19:S:9:HIS:HB3	19:S:10:ALA:H	1.50	0.48
19:S:28:LYS:HB3	19:S:71:VAL:CG2	2.43	0.48
25:Z:68:GLY:O	25:Z:69:SER:C	2.56	0.48
27:1:20:TYR:O	27:1:21:THR:HB	2.13	0.48
27:1:34:GLU:OE1	27:1:36:LYS:HE2	2.13	0.48
2:B:6:A:C4	2:B:2898:U:C2	3.01	0.48
2:B:199:A:N1	2:B:2244:U:C5	2.40	0.48
2:B:209:C:H2'	2:B:210:C:C6	2.49	0.48
2:B:230:G:H2'	2:B:231:A:C8	2.48	0.48
2:B:567:U:H5''	2:B:808:G:OP1	2.13	0.48
2:B:584:C:H41	17:Q:5:ARG:HH22	1.57	0.48
2:B:593:U:O2'	29:3:57:VAL:HA	2.12	0.48
2:B:624:C:OP1	29:3:61:LEU:O	2.32	0.48
2:B:1128:G:N3	2:B:2517:C:O4'	2.42	0.48
2:B:1158:C:O4'	24:Y:10:ARG:NE	2.45	0.48
2:B:1196:C:N3	2:B:1250:G:C6	2.81	0.48
2:B:1230:A:H2'	2:B:1231:U:H6	1.77	0.48
2:B:1269:A:C5'	2:B:2012:G:C3'	2.59	0.48
2:B:1783:A:C8	2:B:2590:A:OP2	2.65	0.48
2:B:2015:A:C5	19:S:88:ARG:HD3	2.47	0.48
2:B:2056:G:N3	2:B:2577:A:H2	2.03	0.48
2:B:2261:C:O2'	2:B:2327:A:N6	2.47	0.48
3:V:17:SER:HB3	3:V:21:ARG:HH12	1.78	0.48
4:C:87:SER:O	4:C:155:ARG:NH1	2.47	0.48
4:C:115:ILE:HA	4:C:126:GLY:CA	2.42	0.48
4:C:217:PRO:C	4:C:219:VAL:H	2.20	0.48
5:D:11:MET:HE2	5:D:12:THR:O	2.13	0.48
12:L:61:LEU:N	12:L:61:LEU:HD13	2.29	0.48
12:L:64:PHE:CE2	29:3:29:ARG:NH1	2.81	0.48
12:L:140:GLY:O	12:L:141:LYS:O	2.32	0.48
13:M:23:GLY:H	13:M:96:ILE:HD12	1.74	0.48
13:M:109:PRO:HA	13:M:112:LEU:HD22	1.96	0.48
14:N:17:ARG:O	14:N:21:PHE:HB2	2.14	0.48
16:P:85:VAL:O	16:P:87:ARG:NH1	2.46	0.48
19:S:3:THR:HG23	19:S:107:VAL:HG23	1.95	0.48
19:S:4:ILE:HG22	19:S:5:ALA:H	1.78	0.48
19:S:28:LYS:HA	19:S:31:GLN:HB2	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:31:VAL:CG1	20:T:82:LYS:HE3	2.43	0.48
21:U:96:LYS:HE2	21:U:98:ASN:HB3	1.95	0.48
2:B:17:G:C5'	26:0:14:MET:SD	2.95	0.48
2:B:97:C:C1'	23:X:45:GLN:HB3	2.40	0.48
2:B:160:A:C2	2:B:2209:G:H1'	2.49	0.48
2:B:320:A:P	6:E:132:LYS:HE2	2.52	0.48
2:B:398:C:O4'	2:B:2231:U:C5'	2.61	0.48
2:B:478:A:H5''	2:B:479:A:OP2	2.13	0.48
2:B:496:G:H1'	19:S:61:ASN:OD1	2.13	0.48
2:B:822:G:H2'	2:B:823:C:H6	1.79	0.48
2:B:898:C:N3	2:B:899:A:N6	2.61	0.48
2:B:984:A:P	2:B:985:C:H41	2.37	0.48
2:B:991:C:H2'	2:B:992:C:C6	2.48	0.48
2:B:1137:G:O4'	2:B:2038:G:H4'	2.14	0.48
2:B:1144:A:O2'	2:B:1145:C:H5'	2.13	0.48
2:B:1269:A:C5'	2:B:2012:G:H3'	2.40	0.48
2:B:1275:A:N3	2:B:1275:A:C3'	2.75	0.48
2:B:1533:C:O2'	2:B:1534:U:H5'	2.13	0.48
2:B:1661:G:O2'	2:B:1662:U:H5'	2.13	0.48
2:B:1792:G:C2	2:B:1970:A:C5	3.01	0.48
2:B:1917:U:H4'	2:B:1963:U:OP1	2.14	0.48
2:B:1947:C:O2'	2:B:1948:G:H5'	2.13	0.48
2:B:2052:A:N3	2:B:2052:A:H2'	2.29	0.48
2:B:2246:G:H2'	2:B:2247:A:H8	1.70	0.48
2:B:2258:C:C2'	2:B:2425:A:C4'	2.91	0.48
2:B:2330:G:O2'	22:W:36:ILE:CD1	2.60	0.48
2:B:2580:U:H1'	32:B:3338:HOH:O	2.13	0.48
2:B:2634:A:H2'	2:B:2635:A:C8	2.48	0.48
2:B:2746:U:C5'	8:G:137:LYS:O	2.62	0.48
3:V:21:ARG:HE	3:V:87:GLN:HB3	1.78	0.48
4:C:16:VAL:HA	4:C:17:LYS:HE2	1.95	0.48
4:C:179:GLU:HB2	4:C:266:ILE:HG22	1.96	0.48
4:C:185:ALA:C	4:C:187:CYS:H	2.21	0.48
5:D:4:LEU:HD23	5:D:49:GLN:HG2	1.95	0.48
6:E:145:ASP:C	6:E:147:LEU:H	2.20	0.48
9:H:128:HIS:CB	9:H:144:VAL:HB	2.38	0.48
10:J:15:TRP:HB3	10:J:53:TYR:CE2	2.48	0.48
13:M:29:GLY:HA3	13:M:104:GLU:OE2	2.12	0.48
13:M:108:VAL:HG23	13:M:112:LEU:CD1	2.40	0.48
15:O:41:ALA:O	15:O:42:PRO:C	2.56	0.48
19:S:106:VAL:HG12	19:S:107:VAL:N	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:58:VAL:HA	20:T:85:VAL:HA	1.95	0.48
20:T:85:VAL:CG2	20:T:85:VAL:O	2.62	0.48
20:T:88:LYS:CG	20:T:89:GLU:H	2.20	0.48
25:Z:8:LYS:HD2	25:Z:9:TYR:N	2.28	0.48
25:Z:48:GLN:H	25:Z:51:VAL:HB	1.77	0.48
1:A:55:U:O2	7:F:24:VAL:HG11	2.13	0.48
1:A:74:U:H2'	1:A:75:G:O4'	2.13	0.48
1:A:76:G:H2'	1:A:77:U:O4'	2.13	0.48
2:B:64:A:N6	2:B:91:A:N6	2.62	0.48
2:B:233:A:N6	2:B:428:A:H61	2.12	0.48
2:B:235:U:H2'	2:B:236:C:C6	2.47	0.48
2:B:296:U:H2'	2:B:297:G:C8	2.48	0.48
2:B:309:A:H1'	2:B:329:G:N3	2.29	0.48
2:B:398:C:OP2	25:Z:53:THR:HG21	2.13	0.48
2:B:570:G:H22	2:B:2499:C:C4'	2.04	0.48
2:B:570:G:N2	2:B:2499:C:C4'	2.68	0.48
2:B:958:U:H2'	13:M:18:ARG:N	2.16	0.48
2:B:992:C:C4'	18:R:79:ARG:NE	2.44	0.48
2:B:1129:A:O4'	2:B:2517:C:C5'	2.58	0.48
2:B:1314:C:N1	2:B:1604:C:H4'	2.29	0.48
2:B:1347:A:C6	32:B:3414:HOH:O	2.54	0.48
2:B:1526:C:H2'	2:B:1527:G:O4'	2.14	0.48
2:B:1670:C:O4'	2:B:2551:C:O2	2.31	0.48
2:B:1940:U:H2'	2:B:1984:G:HO2'	1.62	0.48
2:B:1951:U:H1'	2:B:1991:U:C5	2.47	0.48
2:B:2004:G:O6	5:D:128:ARG:CZ	2.62	0.48
2:B:2053:G:O2'	2:B:2054:A:H5'	2.13	0.48
2:B:2215:C:HO2'	2:B:2216:G:H5'	1.77	0.48
2:B:2258:C:C1'	2:B:2425:A:H4'	2.40	0.48
2:B:2305:U:C4	7:F:39:VAL:CG2	2.97	0.48
2:B:2355:G:C5'	22:W:31:LEU:HB2	2.41	0.48
2:B:2471:A:O2'	2:B:2472:G:O5'	2.30	0.48
2:B:2671:G:H2'	2:B:2672:U:C6	2.49	0.48
2:B:2692:G:O2'	2:B:2693:G:H5'	2.14	0.48
4:C:168:GLY:O	4:C:169:ALA:HB3	2.14	0.48
4:C:220:ARG:HG3	4:C:220:ARG:NH1	2.26	0.48
5:D:170:VAL:HG11	5:D:194:PRO:HB2	1.95	0.48
6:E:144:GLU:C	6:E:146:VAL:N	2.71	0.48
11:K:20:MET:O	11:K:42:THR:N	2.47	0.48
11:K:40:LYS:HA	11:K:59:LYS:HA	1.94	0.48
12:L:81:ASP:O	12:L:82:LEU:C	2.54	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:110:VAL:HB	12:L:126:ARG:HH22	1.77	0.48
13:M:42:THR:HG23	13:M:45:GLN:H	1.76	0.48
16:P:62:LYS:HG2	16:P:74:GLN:OE1	2.12	0.48
16:P:77:SER:N	16:P:78:PRO:CD	2.76	0.48
16:P:102:ARG:H	16:P:102:ARG:HG3	1.35	0.48
20:T:8:LEU:HD23	20:T:8:LEU:N	2.27	0.48
20:T:84:TYR:C	20:T:85:VAL:HG13	2.39	0.48
21:U:3:LYS:HB2	21:U:3:LYS:NZ	2.28	0.48
29:3:44:ARG:CB	29:3:45:PRO:HD2	2.43	0.48
1:A:30:C:H1'	1:A:58:A:N1	2.29	0.48
2:B:15:G:C3'	26:0:17:SER:OG	2.61	0.48
2:B:336:C:OP1	21:U:81:ARG:CG	2.61	0.48
2:B:401:A:H2'	2:B:402:A:C8	2.49	0.48
2:B:529:A:N7	2:B:2023:C:C5	2.82	0.48
2:B:567:U:N1	2:B:576:U:O4'	2.47	0.48
2:B:575:A:OP1	2:B:2030:A:C2	2.65	0.48
2:B:597:G:O2'	12:L:21:ARG:NE	2.46	0.48
2:B:624:C:OP1	29:3:61:LEU:C	2.56	0.48
2:B:699:A:H3'	2:B:700:G:C3'	2.42	0.48
2:B:1032:A:C4'	30:4:16:ILE:CG2	2.90	0.48
2:B:1638:C:N1	2:B:2698:U:C4'	2.39	0.48
2:B:1796:U:O4'	4:C:251:THR:CA	2.54	0.48
2:B:1806:C:C5	4:C:45:ASN:CG	2.86	0.48
2:B:1902:C:H5'	4:C:242:HIS:HE1	1.78	0.48
2:B:1947:C:H2'	2:B:1987:A:H4'	1.95	0.48
2:B:1965:C:H5''	2:B:1966:A:H2'	1.96	0.48
2:B:2065:C:C1'	2:B:2258:C:H42	2.27	0.48
2:B:2216:G:OP1	25:Z:44:PHE:CE2	2.67	0.48
2:B:2649:C:H2'	2:B:2650:U:H6	1.78	0.48
2:B:2693:G:H21	16:P:95:LYS:NZ	2.11	0.48
2:B:2750:A:OP2	8:G:3:VAL:CG2	2.62	0.48
4:C:155:ARG:O	4:C:156:SER:C	2.57	0.48
4:C:164:VAL:HG12	4:C:164:VAL:O	2.12	0.48
4:C:262:THR:O	4:C:262:THR:HG23	2.14	0.48
5:D:83:ARG:O	5:D:84:LEU:HB3	2.12	0.48
5:D:86:GLU:CG	5:D:87:GLY:H	2.26	0.48
7:F:87:LYS:HB3	7:F:88:VAL:H	1.51	0.48
9:H:134:VAL:HG13	9:H:135:HIS:N	2.27	0.48
10:J:35:ARG:NH2	10:J:40:HIS:N	2.60	0.48
16:P:13:LYS:HE3	16:P:77:SER:HB3	1.96	0.48
17:Q:33:VAL:CG1	17:Q:34:ALA:H	2.19	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:33:VAL:CG2	17:Q:37:ALA:HB3	2.41	0.48
17:Q:52:ARG:CZ	17:Q:55:GLN:HG2	2.44	0.48
23:X:14:LEU:CD2	23:X:57:LEU:HB2	2.44	0.48
23:X:38:GLN:HG2	23:X:39:GLN:N	2.29	0.48
25:Z:59:ARG:HG3	25:Z:62:LYS:CB	2.44	0.48
26:O:35:GLU:OE2	26:O:43:THR:HG22	2.14	0.48
27:1:37:LYS:NZ	27:1:46:VAL:HA	2.29	0.48
28:2:25:LYS:HE3	28:2:25:LYS:N	2.28	0.48
1:A:57:A:C6	7:F:24:VAL:CB	2.75	0.48
2:B:76:C:C2'	23:X:51:ALA:C	2.87	0.48
2:B:162:U:O2'	2:B:163:C:H5'	2.13	0.48
2:B:355:U:H2'	2:B:356:G:H8	1.77	0.48
2:B:411:G:C3'	2:B:2406:A:O2'	2.62	0.48
2:B:458:G:N7	28:2:38:GLY:C	2.72	0.48
2:B:536:G:H21	10:J:47:HIS:CD2	2.31	0.48
2:B:538:A:N3	10:J:7:LYS:HE2	2.28	0.48
2:B:587:C:OP2	12:L:36:LYS:CA	2.62	0.48
2:B:918:A:H2'	2:B:919:U:H5'	1.95	0.48
2:B:1295:C:H2'	2:B:1296:G:C8	2.49	0.48
2:B:1430:G:H2'	2:B:1431:A:H8	1.78	0.48
2:B:1729:U:H2'	2:B:1730:C:H4'	1.95	0.48
2:B:1771:C:N1	2:B:1939:U:O4	2.45	0.48
2:B:1865:U:OP1	2:B:2409:G:O2'	2.32	0.48
2:B:1993:U:H1'	2:B:2552:U:O5'	2.13	0.48
2:B:2329:U:H2'	2:B:2330:G:C8	2.49	0.48
2:B:2378:A:C5'	15:O:117:PHE:HD1	2.24	0.48
4:C:205:GLY:O	4:C:206:LYS:HG2	2.14	0.48
6:E:72:SER:C	6:E:73:ILE:HD13	2.38	0.48
7:F:107:VAL:HG11	7:F:175:PRO:HB2	1.95	0.48
7:F:109:ARG:HG2	7:F:136:ILE:HG13	1.95	0.48
12:L:43:GLY:N	32:L:150:HOH:O	2.45	0.48
13:M:22:GLN:HG2	13:M:23:GLY:N	2.27	0.48
13:M:41:LEU:C	13:M:43:ALA:H	2.21	0.48
13:M:42:THR:O	13:M:44:ARG:N	2.41	0.48
14:N:29:VAL:HB	14:N:75:ILE:HG12	1.96	0.48
16:P:96:LEU:O	16:P:97:TYR:C	2.57	0.48
17:Q:89:ILE:HG12	17:Q:89:ILE:O	2.14	0.48
17:Q:91:ARG:N	17:Q:91:ARG:HD2	2.28	0.48
22:W:44:PHE:CD2	22:W:60:ALA:HB3	2.48	0.48
22:W:45:HIS:CE1	22:W:64:GLY:HA3	2.49	0.48
27:1:15:GLY:CA	27:1:47:ILE:HD12	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:3:12:ARG:HG2	29:3:23:HIS:HB3	1.94	0.48
1:A:27:C:H3'	1:A:28:C:H6	1.78	0.48
1:A:78:A:HO2'	2:B:862:G:HO2'	1.60	0.48
2:B:490:C:H3'	2:B:491:G:H5''	1.96	0.48
2:B:580:U:C5'	17:Q:32:ARG:N	2.76	0.48
2:B:807:U:O2'	2:B:808:G:H5'	2.14	0.48
2:B:814:C:H6	18:R:85:LYS:CG	2.27	0.48
2:B:847:U:O4'	2:B:847:U:O2	2.30	0.48
2:B:1080:A:H2'	2:B:1081:U:C6	2.48	0.48
2:B:1130:U:H1'	2:B:2026:U:OP2	2.13	0.48
2:B:1143:A:C5	10:J:27:ARG:NH1	2.82	0.48
2:B:1668:A:C2	2:B:2551:C:C3'	2.90	0.48
2:B:1951:U:C1'	2:B:1991:U:C5	2.97	0.48
2:B:2063:C:C2	2:B:2254:C:C5	3.01	0.48
2:B:2261:C:H4'	2:B:2387:U:H2'	1.95	0.48
2:B:2459:A:O3'	13:M:75:GLU:HB3	2.14	0.48
2:B:2507:C:N4	2:B:2583:G:O6	2.44	0.48
2:B:2574:G:H2'	5:D:151:THR:HG22	1.71	0.48
4:C:24:HIS:HB2	4:C:27:LYS:HE3	1.96	0.48
4:C:140:VAL:HA	4:C:191:LEU:HA	1.95	0.48
4:C:227:VAL:HG12	4:C:228:ASP:N	2.29	0.48
5:D:84:LEU:O	5:D:85:ALA:HB3	2.14	0.48
5:D:122:VAL:HG21	5:D:141:ARG:HA	1.96	0.48
6:E:78:TRP:HE3	6:E:78:TRP:N	2.12	0.48
7:F:32:LYS:O	7:F:156:THR:N	2.42	0.48
8:G:75:VAL:HG23	8:G:76:ILE:N	2.29	0.48
12:L:51:GLU:O	12:L:52:GLY:C	2.55	0.48
12:L:133:ALA:C	12:L:136:GLU:HG2	2.39	0.48
13:M:109:PRO:O	13:M:112:LEU:HB2	2.14	0.48
16:P:13:LYS:HZ2	16:P:15:ASP:HB2	1.79	0.48
16:P:31:VAL:HA	16:P:81:ASP:HA	1.95	0.48
30:4:25:VAL:HB	30:4:33:HIS:C	2.39	0.48
1:A:56:G:C5'	7:F:13:LYS:NZ	2.77	0.48
1:A:93:C:P	3:V:14:LYS:HZ1	2.37	0.48
2:B:6:A:N1	2:B:2898:U:C6	2.81	0.48
2:B:273:G:H2'	2:B:274:C:C6	2.48	0.48
2:B:350:G:H2'	2:B:351:C:C6	2.49	0.48
2:B:363:G:H2'	2:B:364:C:H6	1.77	0.48
2:B:639:U:H2'	2:B:640:C:H6	1.79	0.48
2:B:670:A:C2'	12:L:47:ARG:CB	2.50	0.48
2:B:811:U:P	12:L:35:HIS:CE1	2.84	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:812:C:H1'	2:B:1250:G:C2	2.48	0.48
2:B:1430:G:H2'	2:B:1431:A:C8	2.48	0.48
2:B:1550:C:H5''	2:B:1720:U:O2'	2.14	0.48
2:B:1654:A:C3'	2:B:2512:C:OP1	2.61	0.48
2:B:1772:A:C8	2:B:1973:G:OP1	2.65	0.48
2:B:1813:G:C2	4:C:51:ARG:HD2	2.38	0.48
2:B:1827:U:C2	2:B:1970:A:O2'	2.67	0.48
2:B:2009:A:P	2:B:2823:A:C8	3.06	0.48
2:B:2430:A:OP1	2:B:2444:G:N2	2.47	0.48
2:B:2531:A:C6	2:B:2661:G:O6	2.67	0.48
2:B:2635:A:OP1	5:D:77:ARG:CD	2.62	0.48
2:B:2783:U:H2'	2:B:2784:U:H6	1.79	0.48
3:V:77:VAL:HG21	3:V:79:ARG:NH2	2.27	0.48
4:C:156:SER:O	4:C:194:VAL:O	2.32	0.48
6:E:18:THR:O	6:E:19:PHE:C	2.57	0.48
7:F:146:ASP:O	7:F:147:ARG:C	2.57	0.48
7:F:165:GLY:HA2	7:F:168:LEU:HD11	1.95	0.48
9:H:83:LYS:CB	9:H:91:PHE:HB2	2.34	0.48
10:J:29:ALA:O	10:J:33:ALA:N	2.44	0.48
12:L:29:LYS:NZ	12:L:31:GLY:HA3	2.24	0.48
12:L:71:ALA:HB1	12:L:74:THR:OG1	2.14	0.48
12:L:126:ARG:O	12:L:127:VAL:HG13	2.13	0.48
17:Q:105:PHE:O	17:Q:109:VAL:HG13	2.13	0.48
21:U:10:VAL:HG21	21:U:25:LYS:HZ2	1.78	0.48
22:W:46:ALA:O	22:W:55:ASP:O	2.32	0.48
25:Z:24:ILE:HG12	25:Z:25:ARG:N	2.28	0.48
25:Z:31:ASP:HA	25:Z:47:LYS:O	2.14	0.48
2:B:138:U:O5'	20:T:4:GLU:OE2	2.31	0.48
2:B:208:C:H2'	2:B:209:C:H6	1.78	0.48
2:B:567:U:C2	2:B:576:U:C6	3.02	0.48
2:B:593:U:H5''	29:3:60:CYS:HB2	1.95	0.48
2:B:1159:U:H2'	2:B:1160:G:H8	1.78	0.48
2:B:1269:A:H2'	2:B:1270:C:C6	2.48	0.48
2:B:1359:A:H2'	2:B:1360:G:O4'	2.13	0.48
2:B:1418:G:H5'	2:B:1587:G:O2'	2.13	0.48
2:B:1652:A:P	2:B:2724:U:C4'	3.01	0.48
2:B:1666:G:O6	2:B:2550:G:H1'	2.14	0.48
2:B:1693:U:O4	2:B:1977:A:C1'	2.62	0.48
2:B:1997:C:C2	2:B:2548:U:H2'	2.46	0.48
2:B:2061:G:N3	2:B:2253:G:C5'	2.76	0.48
2:B:2199:A:C3'	2:B:2200:C:C6	2.97	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2223:G:H2'	2:B:2224:G:H5'	1.96	0.48
2:B:2261:C:H5'	2:B:2388:A:C4'	2.44	0.48
2:B:2428:G:H3'	2:B:2448:A:N6	2.28	0.48
2:B:2888:C:H2'	2:B:2889:C:H6	1.77	0.48
2:B:2898:U:O2'	10:J:137:PRO:CD	2.53	0.48
3:V:72:VAL:O	3:V:94:ALA:HB2	2.14	0.48
3:V:77:VAL:O	13:M:135:VAL:HG23	2.14	0.48
4:C:253:GLY:C	4:C:254:LYS:HZ3	2.22	0.48
6:E:112:LEU:HD13	12:L:12:SER:HA	1.79	0.48
8:G:37:ASN:HB3	8:G:63:GLN:HE22	1.77	0.48
8:G:104:LEU:HB3	8:G:106:LEU:CD1	2.44	0.48
10:J:34:ARG:CG	10:J:39:LYS:HD2	2.44	0.48
10:J:35:ARG:HH21	10:J:40:HIS:H	1.61	0.48
12:L:42:SER:HB3	32:L:149:HOH:O	2.12	0.48
12:L:77:ILE:HG22	12:L:78:ARG:NH2	2.28	0.48
14:N:8:ARG:CZ	14:N:46:ARG:HD2	2.44	0.48
15:O:1:MET:CG	15:O:2:ASP:N	2.72	0.48
16:P:11:GLN:O	16:P:12:MET:HG3	2.14	0.48
19:S:19:LEU:HD21	26:O:20:ALA:CB	2.42	0.48
22:W:66:VAL:O	22:W:67:LYS:C	2.56	0.48
25:Z:5:ILE:HG23	25:Z:63:ARG:HE	1.78	0.48
27:1:29:LYS:O	27:1:30:PRO:C	2.55	0.48
1:A:30:C:C4	15:O:33:ARG:HH21	1.67	0.47
1:A:54:G:H2'	1:A:55:U:H6	1.79	0.47
2:B:94:A:P	23:X:36:GLN:O	2.72	0.47
2:B:570:G:N2	2:B:2499:C:H5'	2.09	0.47
2:B:584:C:P	17:Q:3:VAL:HB	2.53	0.47
2:B:587:C:O5'	2:B:587:C:H6	1.96	0.47
2:B:623:C:O3'	29:3:63:TYR:CE1	2.66	0.47
2:B:652:U:C5'	32:B:3138:HOH:O	2.51	0.47
2:B:783:A:OP1	2:B:1778:U:O3'	2.32	0.47
2:B:826:U:OP1	2:B:2429:G:OP1	2.29	0.47
2:B:827:U:C5	2:B:2246:G:C2'	2.81	0.47
2:B:923:G:O2'	2:B:924:G:H5'	2.13	0.47
2:B:974:G:O4'	2:B:990:A:N6	2.47	0.47
2:B:1220:G:H2'	2:B:1221:C:H6	1.77	0.47
2:B:1566:A:O3'	4:C:58:LYS:HG3	2.14	0.47
2:B:1655:A:C2'	2:B:2511:U:N1	2.65	0.47
2:B:1708:C:H2'	2:B:1709:U:H6	1.78	0.47
2:B:1771:C:O2'	2:B:1772:A:H5'	2.14	0.47
2:B:1789:A:C4'	4:C:219:VAL:HG11	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1902:C:O3'	4:C:239:PHE:CB	2.58	0.47
2:B:2152:G:H2'	2:B:2153:C:C6	2.49	0.47
2:B:2260:C:H4'	2:B:2388:A:H4'	1.95	0.47
2:B:2373:G:H2'	2:B:2374:C:C6	2.49	0.47
2:B:2393:U:C5'	29:3:31:ILE:CD1	2.92	0.47
2:B:2532:G:N3	2:B:2662:A:N1	2.61	0.47
2:B:2633:G:O4'	5:D:62:LYS:CG	2.53	0.47
4:C:16:VAL:O	4:C:16:VAL:HG12	2.14	0.47
4:C:141:HIS:N	4:C:193:GLU:OE2	2.46	0.47
4:C:248:GLY:HA3	4:C:252:LYS:HE3	1.94	0.47
6:E:28:VAL:O	6:E:32:VAL:HG23	2.14	0.47
6:E:72:SER:O	6:E:73:ILE:HD13	2.14	0.47
7:F:35:LEU:O	7:F:36:ASN:HB3	2.14	0.47
10:J:5:THR:HB	10:J:45:THR:HG23	1.96	0.47
12:L:78:ARG:CG	12:L:99:ASN:HB3	2.32	0.47
12:L:96:LYS:O	12:L:100:ILE:HD12	2.14	0.47
17:Q:47:ARG:NE	17:Q:47:ARG:HA	2.26	0.47
17:Q:47:ARG:HH12	17:Q:50:ARG:HD2	1.79	0.47
17:Q:111:LYS:HB2	18:R:52:PRO:HB3	1.92	0.47
18:R:5:PHE:N	18:R:12:HIS:CB	2.77	0.47
18:R:53:PHE:HA	18:R:54:VAL:HB	1.96	0.47
19:S:6:LYS:NZ	19:S:6:LYS:HB2	2.29	0.47
21:U:70:ALA:O	21:U:72:PHE:N	2.47	0.47
25:Z:59:ARG:HE	25:Z:62:LYS:CE	2.27	0.47
28:2:30:VAL:HA	28:2:33:ARG:HD2	1.96	0.47
1:A:45:A:OP1	7:F:92:GLY:HA2	2.14	0.47
1:A:49:C:C2	15:O:68:LYS:HD2	2.16	0.47
2:B:39:G:H2'	2:B:40:U:C6	2.48	0.47
2:B:41:C:O2'	2:B:42:A:H5'	2.13	0.47
2:B:96:C:O4'	23:X:39:GLN:C	2.51	0.47
2:B:152:A:H2'	2:B:153:U:C6	2.49	0.47
2:B:484:C:H5'	21:U:46:LYS:HE3	1.91	0.47
2:B:519:U:P	19:S:15:GLN:HA	2.53	0.47
2:B:580:U:O2'	2:B:581:C:H5'	2.14	0.47
2:B:583:G:C8	17:Q:5:ARG:NH1	2.83	0.47
2:B:591:U:O2	29:3:1:PRO:O	2.32	0.47
2:B:671:C:C4	12:L:39:LYS:NZ	2.74	0.47
2:B:671:C:OP2	12:L:46:VAL:O	2.32	0.47
2:B:840:C:O2'	2:B:841:G:H5'	2.15	0.47
2:B:917:A:H2'	2:B:918:A:O4'	2.14	0.47
2:B:1022:G:N2	2:B:1142:A:C2	2.81	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1183:U:H4'	24:Y:29:ARG:HG3	1.96	0.47
2:B:1277:G:C4	14:N:23:ASN:HB3	2.48	0.47
2:B:1664:A:O2'	11:K:40:LYS:HD3	2.01	0.47
2:B:1889:A:C5	2:B:2235:G:C3'	2.95	0.47
2:B:1971:U:O2'	4:C:237:ARG:HA	2.13	0.47
2:B:1993:U:H2'	2:B:2551:C:C5	2.49	0.47
2:B:2197:U:O2'	2:B:2198:A:H2'	2.14	0.47
2:B:2262:U:H4'	2:B:2329:U:N1	2.28	0.47
2:B:2308:G:H5'	2:B:2309:A:C5'	2.44	0.47
2:B:2543:G:H2'	2:B:2544:G:O4'	2.14	0.47
2:B:2575:C:O4'	5:D:148:GLN:CB	2.60	0.47
2:B:2828:G:O2'	2:B:2829:A:H5'	2.14	0.47
2:B:2860:A:H2'	2:B:2861:U:O4'	2.14	0.47
4:C:36:ASN:HB3	4:C:63:ILE:HD13	1.96	0.47
4:C:168:GLY:C	4:C:170:TYR:H	2.21	0.47
4:C:216:ARG:NH1	4:C:217:PRO:HD2	2.29	0.47
5:D:78:GLY:C	5:D:79:LEU:HD23	2.39	0.47
5:D:141:ARG:O	5:D:142:VAL:C	2.54	0.47
6:E:111:GLU:O	6:E:113:VAL:HG12	2.14	0.47
6:E:115:GLN:C	6:E:185:LYS:HG2	2.39	0.47
7:F:135:ILE:C	7:F:137:PHE:N	2.72	0.47
10:J:49:ASP:O	10:J:50:THR:HB	2.14	0.47
11:K:58:LEU:HB3	11:K:89:ASN:ND2	2.29	0.47
12:L:85:VAL:N	12:L:86:GLU:HG3	2.28	0.47
12:L:95:LEU:H	12:L:95:LEU:CD1	2.27	0.47
13:M:64:TRP:HB3	13:M:102:LEU:HB2	1.96	0.47
13:M:90:GLU:O	13:M:91:TYR:HB2	2.14	0.47
14:N:1:MET:SD	14:N:2:ARG:HD3	2.54	0.47
14:N:65:LEU:HD12	14:N:68:ALA:HB3	1.97	0.47
17:Q:79:ILE:HA	17:Q:82:LEU:HD12	1.97	0.47
17:Q:111:LYS:CB	18:R:52:PRO:CB	2.91	0.47
18:R:53:PHE:HB3	18:R:55:ASP:CB	2.43	0.47
20:T:6:ARG:C	20:T:8:LEU:N	2.68	0.47
22:W:43:LYS:O	22:W:45:HIS:N	2.47	0.47
25:Z:58:ASP:HB3	25:Z:59:ARG:H	1.28	0.47
1:A:49:C:O2'	1:A:50:A:H5'	2.15	0.47
1:A:49:C:H4'	15:O:68:LYS:HB2	1.40	0.47
1:A:58:A:C5'	7:F:28:PRO:HD3	2.29	0.47
2:B:279:A:H61	2:B:361:G:H1'	1.76	0.47
2:B:543:G:C2'	2:B:544:C:H5''	2.38	0.47
2:B:567:U:H4'	32:B:3346:HOH:O	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1009:A:H5''	17:Q:61:ILE:HG13	1.96	0.47
2:B:1132:U:O4	2:B:2039:U:H1'	2.14	0.47
2:B:1241:A:H2'	2:B:1242:U:H5'	1.97	0.47
2:B:1563:U:H2'	2:B:1564:C:C6	2.48	0.47
2:B:1937:A:C8	2:B:1984:G:N9	2.82	0.47
2:B:1938:A:O2'	2:B:1939:U:H5''	2.15	0.47
2:B:1992:G:C5	2:B:2549:G:N3	2.62	0.47
2:B:2006:C:C5	5:D:143:PRO:HD3	2.41	0.47
2:B:2393:U:OP2	29:3:31:ILE:HD13	2.12	0.47
2:B:2581:G:C2	2:B:2610:C:C6	2.94	0.47
3:V:26:PHE:HB2	3:V:27:PRO:HD2	1.95	0.47
4:C:13:ARG:O	4:C:15:VAL:HG23	2.14	0.47
4:C:103:ILE:CG2	4:C:104:LEU:N	2.77	0.47
4:C:163:ILE:HG22	4:C:164:VAL:N	2.27	0.47
4:C:179:GLU:OE2	4:C:267:VAL:HG22	2.14	0.47
6:E:97:ASN:ND2	6:E:97:ASN:N	2.61	0.47
7:F:14:LYS:O	7:F:18:GLU:HB3	2.13	0.47
9:H:73:ASN:N	9:H:73:ASN:ND2	2.59	0.47
9:H:89:LYS:O	9:H:90:LEU:HD12	2.15	0.47
10:J:93:ILE:CD1	10:J:100:VAL:HG11	2.44	0.47
11:K:33:ALA:HB3	11:K:39:ILE:HD11	1.96	0.47
12:L:56:PRO:O	12:L:60:ARG:N	2.44	0.47
12:L:85:VAL:HG12	12:L:86:GLU:CG	2.44	0.47
12:L:116:VAL:HG12	12:L:117:THR:HG23	1.97	0.47
17:Q:59:LEU:HD11	17:Q:63:ARG:NH2	2.29	0.47
17:Q:75:TYR:CZ	17:Q:79:ILE:HD11	2.49	0.47
23:X:43:LEU:HA	23:X:47:ARG:HB3	1.96	0.47
30:4:7:VAL:HG12	30:4:8:LYS:H	1.79	0.47
1:A:74:U:O2'	3:V:37:PRO:HG2	2.13	0.47
2:B:61:C:O2'	23:X:29:ARG:C	2.56	0.47
2:B:571:U:H3	2:B:2030:A:N6	2.13	0.47
2:B:664:G:H5'	2:B:940:G:H5''	1.97	0.47
2:B:675:A:P	6:E:58:LYS:HG2	2.53	0.47
2:B:1140:C:OP1	10:J:64:VAL:CG1	2.62	0.47
2:B:1268:A:O3'	2:B:2613:U:N3	2.40	0.47
2:B:1664:A:C2'	11:K:40:LYS:CE	2.88	0.47
2:B:1692:U:H2'	2:B:1694:C:C4	2.49	0.47
2:B:1769:U:O2	2:B:1936:A:C5'	2.62	0.47
2:B:1818:U:N1	4:C:154:ALA:N	2.62	0.47
2:B:2003:A:H2'	5:D:139:SER:N	2.30	0.47
2:B:2005:A:C3'	5:D:142:VAL:CG1	2.93	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2015:A:P	19:S:89:ALA:N	2.87	0.47
2:B:2025:C:H2'	2:B:2026:U:H6	1.79	0.47
2:B:2147:A:H5'	2:B:2148:G:C4'	2.44	0.47
2:B:2266:A:C4'	2:B:2267:A:N7	2.78	0.47
2:B:2574:G:HO2'	5:D:151:THR:CB	2.15	0.47
2:B:2632:A:HO2'	2:B:2811:G:H4'	1.80	0.47
4:C:10:PRO:CD	4:C:202:ARG:HH12	2.27	0.47
4:C:75:ALA:HB2	4:C:95:TYR:CE1	2.50	0.47
5:D:108:ASP:HB3	5:D:173:GLN:HA	1.96	0.47
7:F:144:LYS:HG2	7:F:144:LYS:O	2.13	0.47
8:G:89:VAL:HG21	8:G:162:ARG:NE	2.30	0.47
10:J:50:THR:OG1	10:J:51:GLY:N	2.47	0.47
13:M:38:ARG:HA	13:M:96:ILE:O	2.14	0.47
13:M:41:LEU:HB2	13:M:93:VAL:CG2	2.43	0.47
17:Q:108:LEU:HD22	18:R:52:PRO:O	2.14	0.47
19:S:20:VAL:O	19:S:23:LEU:HB2	2.14	0.47
20:T:26:LYS:HD2	20:T:27:SER:HB2	1.97	0.47
20:T:73:ARG:NH2	28:2:43:THR:CB	2.78	0.47
21:U:69:VAL:O	21:U:70:ALA:C	2.58	0.47
22:W:44:PHE:O	22:W:76:ARG:CA	2.63	0.47
23:X:45:GLN:H	23:X:45:GLN:HE21	1.61	0.47
24:Y:16:LEU:CB	24:Y:17:PRO:HD3	2.26	0.47
28:2:35:ARG:O	28:2:39:ARG:HA	2.15	0.47
1:A:59:A:N7	7:F:26:GLN:CB	2.60	0.47
1:A:86:G:H3'	1:A:87:U:H6	1.80	0.47
1:A:112:G:O2'	1:A:113:C:H5'	2.14	0.47
2:B:219:A:HO2'	2:B:235:U:H5'	1.77	0.47
2:B:397:U:OP1	25:Z:51:VAL:HG23	2.15	0.47
2:B:570:G:C2	2:B:2499:C:OP1	2.64	0.47
2:B:652:U:C5'	32:B:3141:HOH:O	2.46	0.47
2:B:654:A:C6	29:3:18:LYS:CA	2.95	0.47
2:B:693:A:O4'	2:B:1354:A:C4'	2.59	0.47
2:B:1128:G:C2	2:B:2517:C:C1'	2.97	0.47
2:B:1133:A:H4'	2:B:1134:A:H5''	1.95	0.47
2:B:1196:C:C3'	2:B:1197:G:H8	2.26	0.47
2:B:1205:A:H4'	2:B:1206:G:OP2	2.13	0.47
2:B:1224:U:C1'	18:R:89:HIS:HB3	2.41	0.47
2:B:1273:U:O4'	2:B:1647:U:C6	2.64	0.47
2:B:1438:U:N3	2:B:1552:A:N6	2.62	0.47
2:B:1450:G:N2	2:B:1452:G:N1	2.55	0.47
2:B:1477:A:H2'	2:B:1478:G:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1664:A:O2'	2:B:2561:U:C3'	2.62	0.47
2:B:1670:C:H1'	2:B:2551:C:C2	2.49	0.47
2:B:1870:C:H3'	2:B:1871:A:C8	2.49	0.47
2:B:1995:U:H5	2:B:2550:G:C5	2.17	0.47
2:B:2067:G:H5'	2:B:2429:G:O2'	2.11	0.47
2:B:2068:U:O2'	2:B:2432:A:C5'	2.62	0.47
2:B:2090:A:O3'	9:H:24:GLY:N	2.47	0.47
2:B:2091:C:H1'	2:B:2229:U:O2	2.02	0.47
2:B:2331:G:H2'	2:B:2332:C:H6	1.79	0.47
2:B:2471:A:O2'	2:B:2472:G:C8	2.55	0.47
2:B:2553:G:H2'	2:B:2554:U:C4'	2.44	0.47
2:B:2654:A:N1	2:B:2665:A:H5''	2.28	0.47
2:B:2701:U:O2	14:N:67:PHE:HB3	2.15	0.47
4:C:59:GLN:O	4:C:60:ALA:HB3	2.14	0.47
6:E:58:LYS:HB3	6:E:71:GLY:C	2.39	0.47
7:F:75:GLY:O	7:F:76:PHE:HB2	2.13	0.47
9:H:47:PHE:HE1	9:H:51:ARG:CZ	2.27	0.47
14:N:1:MET:CE	14:N:2:ARG:HB2	2.45	0.47
15:O:30:ARG:O	15:O:31:THR:C	2.57	0.47
15:O:71:ALA:O	15:O:74:VAL:HG23	2.14	0.47
16:P:59:THR:C	16:P:60:VAL:HG22	2.39	0.47
21:U:42:LYS:O	21:U:57:ILE:HG13	2.14	0.47
25:Z:64:PHE:C	25:Z:66:ILE:H	2.22	0.47
26:0:32:THR:HG22	26:0:32:THR:O	2.13	0.47
26:0:35:GLU:C	26:0:37:HIS:N	2.72	0.47
2:B:23:G:C2'	19:S:77:ASP:HB3	2.38	0.47
2:B:26:G:H2'	2:B:27:G:C1'	2.44	0.47
2:B:77:G:P	23:X:52:ARG:HH11	2.38	0.47
2:B:306:U:H2'	2:B:307:G:O4'	2.13	0.47
2:B:466:A:C5'	28:2:44:VAL:HG11	2.28	0.47
2:B:592:A:O2'	29:3:2:LYS:CE	2.57	0.47
2:B:757:G:H2'	2:B:758:C:H5'	1.95	0.47
2:B:765:C:H2'	2:B:766:U:C6	2.48	0.47
2:B:827:U:H2'	2:B:2430:A:H62	1.79	0.47
2:B:978:G:H2'	2:B:979:A:H8	1.80	0.47
2:B:1188:U:C2'	2:B:1189:A:H5'	2.44	0.47
2:B:1189:A:H2'	2:B:1190:G:O4'	2.15	0.47
2:B:1224:U:H5'	18:R:76:LYS:O	2.14	0.47
2:B:1230:A:H2'	2:B:1231:U:C6	2.49	0.47
2:B:1560:G:H2'	2:B:1561:C:H6	1.79	0.47
2:B:1770:G:O2'	2:B:1939:U:N3	2.46	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1812:U:H2'	2:B:1813:G:H8	1.78	0.47
2:B:1846:G:H2'	2:B:1847:A:O4'	2.15	0.47
2:B:1863:G:H4'	2:B:2411:A:C5'	2.45	0.47
2:B:2307:G:H4'	2:B:2311:A:N6	2.29	0.47
2:B:2539:C:C1'	30:4:2:LYS:CE	2.91	0.47
2:B:2752:C:H2'	2:B:2753:A:O4'	2.15	0.47
3:V:78:GLN:HA	13:M:135:VAL:HG22	1.23	0.47
4:C:160:TYR:HA	4:C:193:GLU:CG	2.45	0.47
4:C:179:GLU:CG	4:C:266:ILE:HG22	2.40	0.47
5:D:14:ILE:O	16:P:79:VAL:HG21	2.15	0.47
5:D:15:PHE:HB3	5:D:18:ASP:CB	2.45	0.47
5:D:22:ILE:O	5:D:23:PRO:O	2.33	0.47
5:D:38:LYS:N	5:D:38:LYS:CD	2.78	0.47
6:E:106:LYS:C	6:E:108:ILE:H	2.22	0.47
6:E:191:ASP:C	6:E:193:VAL:H	2.22	0.47
10:J:55:ILE:HA	10:J:122:LEU:O	2.14	0.47
13:M:36:VAL:CG1	13:M:125:PRO:HD2	2.45	0.47
13:M:62:LYS:CB	13:M:104:GLU:HB2	2.44	0.47
15:O:67:ASN:CA	15:O:71:ALA:HB3	2.41	0.47
16:P:18:SER:C	16:P:20:ARG:H	2.22	0.47
17:Q:108:LEU:HA	18:R:52:PRO:HA	1.96	0.47
18:R:35:PHE:HB2	18:R:64:VAL:HG22	1.96	0.47
20:T:73:ARG:HD2	28:2:42:LEU:CA	2.40	0.47
22:W:28:GLU:CB	22:W:30:VAL:HG23	2.41	0.47
26:O:11:LYS:C	26:O:13:GLY:H	2.22	0.47
30:4:24:ARG:NH1	30:4:36:ARG:HB2	2.24	0.47
1:A:59:A:C1'	7:F:25:MET:C	2.86	0.47
2:B:131:A:O2'	2:B:132:G:H5'	2.15	0.47
2:B:198:C:H2'	2:B:199:A:H5''	1.97	0.47
2:B:463:G:O6	28:2:43:THR:HG22	2.07	0.47
2:B:577:G:OP1	2:B:2502:G:C2	2.66	0.47
2:B:673:C:H5''	6:E:76:PRO:CD	2.34	0.47
2:B:728:G:C3'	4:C:16:VAL:HG13	2.44	0.47
2:B:755:U:C2'	32:B:3427:HOH:O	2.62	0.47
2:B:852:U:H5''	24:Y:44:ARG:CZ	2.44	0.47
2:B:1091:G:O2'	2:B:1092:C:H5'	2.15	0.47
2:B:1203:U:O3'	12:L:14:LYS:HD3	2.15	0.47
2:B:1300:G:H4'	2:B:1301:A:O5'	2.13	0.47
2:B:1312:U:O4	2:B:1604:C:N3	2.48	0.47
2:B:1342:A:H5''	20:T:59:ASN:OD1	2.15	0.47
2:B:1413:A:H2'	2:B:1414:C:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1583:A:H4'	2:B:1585:C:N3	2.29	0.47
2:B:1599:U:H2'	2:B:1600:C:H6	1.78	0.47
2:B:1652:A:H2'	5:D:122:VAL:CG1	2.43	0.47
2:B:1655:A:O2'	2:B:2511:U:C6	2.67	0.47
2:B:1655:A:N7	2:B:2511:U:H4'	2.18	0.47
2:B:1670:C:C2'	2:B:1955:U:H5	2.27	0.47
2:B:1759:A:H8	2:B:2696:U:H4'	1.77	0.47
2:B:1766:G:C3'	2:B:1959:G:C3'	2.93	0.47
2:B:1789:A:O3'	4:C:219:VAL:HG11	2.14	0.47
2:B:1827:U:P	2:B:1902:C:OP1	2.72	0.47
2:B:1827:U:O5'	2:B:1971:U:OP2	2.06	0.47
2:B:1902:C:C5'	4:C:242:HIS:HE1	2.27	0.47
2:B:1936:A:H2	2:B:1943:U:C5	2.32	0.47
2:B:1947:C:C2	2:B:1987:A:O4'	2.67	0.47
2:B:1953:A:C5	2:B:2550:G:O2'	2.66	0.47
2:B:1997:C:O2	2:B:2548:U:C1'	2.62	0.47
2:B:2013:A:H62	2:B:2613:U:P	2.38	0.47
2:B:2090:A:C3'	9:H:23:ALA:HB3	2.44	0.47
2:B:2247:A:H2'	2:B:2248:C:C6	2.41	0.47
2:B:2280:G:C4'	2:B:2327:A:HO2'	2.26	0.47
2:B:2312:U:H4'	7:F:70:ARG:H	1.80	0.47
2:B:2317:A:P	7:F:124:ARG:HH21	2.37	0.47
2:B:2348:U:C4'	27:1:39:ASP:HB3	2.24	0.47
2:B:2395:C:H6	2:B:2395:C:O5'	1.98	0.47
2:B:2428:G:OP2	2:B:2448:A:H2	1.97	0.47
2:B:2443:C:H2'	2:B:2444:G:C8	2.50	0.47
2:B:2472:G:H2'	2:B:2475:C:H42	1.79	0.47
2:B:2543:G:H8	2:B:2543:G:H5'	1.79	0.47
2:B:2597:G:H5''	4:C:234:GLY:N	2.28	0.47
2:B:2732:G:O3'	2:B:2733:A:OP1	2.33	0.47
2:B:2773:C:O2'	2:B:2774:C:H5'	2.15	0.47
2:B:2819:G:H2'	2:B:2821:A:N7	2.29	0.47
2:B:2845:U:H5''	16:P:53:GLY:O	2.14	0.47
2:B:2862:G:H2'	2:B:2863:C:H6	1.79	0.47
2:B:2880:C:C5'	14:N:90:ARG:CZ	2.93	0.47
3:V:61:LEU:O	3:V:71:LYS:HA	2.15	0.47
3:V:80:HIS:CA	3:V:87:GLN:HE22	2.28	0.47
4:C:27:LYS:HA	4:C:79:ARG:HH12	1.79	0.47
4:C:141:HIS:O	4:C:143:VAL:HG23	2.14	0.47
4:C:208:GLY:O	4:C:210:ALA:N	2.48	0.47
5:D:62:LYS:HG2	5:D:63:PRO:HD2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:88:GLU:C	5:D:90:PHE:H	2.22	0.47
5:D:130:GLN:O	5:D:140:HIS:ND1	2.48	0.47
6:E:153:LEU:HA	6:E:171:ASP:O	2.15	0.47
6:E:165:HIS:C	6:E:166:LYS:HG3	2.39	0.47
8:G:40:VAL:CG2	8:G:53:PRO:HA	2.44	0.47
10:J:100:VAL:HG22	10:J:101:ILE:N	2.28	0.47
11:K:12:ASP:HB3	11:K:85:VAL:HG13	1.97	0.47
11:K:62:VAL:HA	11:K:83:ALA:O	2.15	0.47
11:K:108:ARG:HH11	11:K:108:ARG:HG3	1.79	0.47
12:L:82:LEU:O	12:L:117:THR:HG22	2.15	0.47
14:N:19:ALA:O	14:N:21:PHE:N	2.47	0.47
14:N:99:LYS:HE2	26:0:40:HIS:CE1	2.49	0.47
15:O:6:ALA:C	15:O:8:ILE:H	2.23	0.47
15:O:26:LEU:HD13	15:O:92:PHE:O	2.14	0.47
15:O:41:ALA:CB	15:O:45:SER:HB3	2.43	0.47
15:O:64:TYR:CE1	15:O:74:VAL:HG21	2.49	0.47
15:O:76:LYS:HB2	15:O:106:LEU:HD13	1.97	0.47
16:P:52:ARG:CB	16:P:60:VAL:HG11	2.22	0.47
16:P:59:THR:HA	16:P:76:HIS:HA	1.95	0.47
17:Q:8:ILE:HG12	32:Q:121:HOH:O	2.14	0.47
18:R:69:GLY:C	18:R:70:GLU:HG3	2.40	0.47
18:R:90:ARG:NH1	18:R:91:GLN:N	2.62	0.47
22:W:39:GLN:HA	22:W:68:PHE:CA	2.43	0.47
22:W:44:PHE:CE2	22:W:80:SER:HA	2.49	0.47
22:W:64:GLY:O	22:W:65:LYS:O	2.33	0.47
24:Y:28:LEU:C	24:Y:29:ARG:HG2	2.39	0.47
25:Z:30:HIS:C	25:Z:48:GLN:HG2	2.39	0.47
25:Z:41:HIS:CB	25:Z:42:PRO:HD2	2.27	0.47
25:Z:59:ARG:CG	25:Z:62:LYS:HB2	2.44	0.47
29:3:20:GLY:O	29:3:21:PHE:C	2.58	0.47
29:3:44:ARG:HB3	29:3:45:PRO:CD	2.43	0.47
2:B:4:U:H1'	2:B:2900:A:C2	2.48	0.47
2:B:414:C:N4	2:B:2409:G:O6	2.45	0.47
2:B:587:C:N1	12:L:38:GLN:HB2	2.20	0.47
2:B:621:A:H2'	2:B:622:G:O4'	2.15	0.47
2:B:623:C:O4'	29:3:61:LEU:CD2	2.39	0.47
2:B:1055:G:O2'	2:B:1085:A:C2	2.66	0.47
2:B:1172:C:H2'	2:B:1173:U:O4'	2.14	0.47
2:B:1480:C:H2'	2:B:1481:U:C6	2.50	0.47
2:B:1516:G:H1	2:B:1732:C:H42	1.63	0.47
2:B:1645:G:C4	32:B:3143:HOH:O	2.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1772:A:O4'	2:B:1973:G:OP1	2.26	0.47
2:B:1783:A:H2'	2:B:2590:A:H5'	1.97	0.47
2:B:1816:C:C2	4:C:62:ARG:NE	2.82	0.47
2:B:1949:G:C2	2:B:1987:A:N6	2.83	0.47
2:B:1997:C:O2	2:B:2548:U:C3'	2.63	0.47
2:B:1999:C:O3'	11:K:31:ARG:CG	2.63	0.47
2:B:2002:G:C2	5:D:134:HIS:NE2	2.83	0.47
2:B:2221:G:H2'	2:B:2222:C:C6	2.49	0.47
2:B:2270:A:C5'	22:W:34:SER:O	2.63	0.47
2:B:2568:U:H2'	2:B:2569:G:O4'	2.15	0.47
2:B:2800:A:C4	2:B:2801:G:H1'	2.50	0.47
4:C:128:THR:CA	4:C:190:THR:HA	2.39	0.47
4:C:137:GLY:C	4:C:139:THR:N	2.69	0.47
5:D:3:GLY:CA	5:D:49:GLN:HE22	2.28	0.47
6:E:121:VAL:HG12	6:E:122:GLU:N	2.30	0.47
6:E:134:LEU:HD22	6:E:138:LEU:HG	1.96	0.47
7:F:6:TYR:O	7:F:11:VAL:HG23	2.15	0.47
11:K:26:GLY:HA3	11:K:30:ARG:NE	2.17	0.47
12:L:60:ARG:HA	29:3:7:ARG:CZ	2.44	0.47
12:L:94:THR:OG1	12:L:103:ILE:HB	2.14	0.47
13:M:95:LEU:HD22	13:M:98:PRO:CG	2.44	0.47
14:N:28:LEU:HD22	14:N:48:VAL:HG11	1.95	0.47
14:N:46:ARG:O	14:N:50:PRO:HG2	2.14	0.47
14:N:57:THR:HG23	14:N:58:ASP:H	1.80	0.47
16:P:22:GLY:CA	16:P:91:VAL:HG13	2.43	0.47
17:Q:5:ARG:O	17:Q:6:GLY:C	2.56	0.47
17:Q:53:LYS:H	17:Q:53:LYS:HD2	1.80	0.47
19:S:17:VAL:HG21	19:S:101:SER:OG	2.15	0.47
25:Z:3:LYS:CD	25:Z:6:HIS:HB3	2.44	0.47
27:1:10:LEU:HD21	27:1:34:GLU:HG3	1.97	0.47
28:2:41:ARG:O	28:2:42:LEU:HB3	2.14	0.47
1:A:52:A:H3'	1:A:53:A:H8	1.80	0.47
2:B:27:G:H1'	2:B:513:A:H61	1.79	0.47
2:B:45:G:H1'	2:B:181:A:N6	2.29	0.47
2:B:199:A:O2'	2:B:248:G:N2	2.47	0.47
2:B:530:G:C5	2:B:2035:G:H4'	2.49	0.47
2:B:668:A:O4'	12:L:49:GLY:HA3	2.14	0.47
2:B:669:G:P	12:L:47:ARG:HD3	2.53	0.47
2:B:1224:U:O4'	18:R:89:HIS:O	2.32	0.47
2:B:1250:G:C5	32:B:3439:HOH:O	2.63	0.47
2:B:1418:G:C5'	2:B:1587:G:O2'	2.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1517:G:O2'	2:B:1518:C:H5'	2.14	0.47
2:B:1637:A:H2'	2:B:1638:C:H6	1.80	0.47
2:B:1652:A:H2'	5:D:122:VAL:C	2.36	0.47
2:B:1653:G:H1'	5:D:122:VAL:HG22	1.75	0.47
2:B:1673:G:C5'	2:B:1944:U:OP2	2.63	0.47
2:B:1714:U:H3'	2:B:1715:G:H5'	1.95	0.47
2:B:1767:G:C6	2:B:1959:G:N7	2.82	0.47
2:B:1770:G:H5''	2:B:1967:C:C4	2.50	0.47
2:B:1804:C:O2'	2:B:1805:A:H5'	2.15	0.47
2:B:1856:U:O4'	2:B:2233:U:H4'	2.05	0.47
2:B:1889:A:H1'	2:B:2235:G:N2	2.27	0.47
2:B:1953:A:C2'	2:B:1991:U:O4	2.59	0.47
2:B:2575:C:O4'	5:D:148:GLN:HB2	2.14	0.47
2:B:2632:A:O2'	2:B:2811:G:C4'	2.58	0.47
2:B:2640:G:O2'	10:J:78:THR:HG22	2.09	0.47
2:B:2776:A:H4'	2:B:2777:G:H5''	1.97	0.47
2:B:2831:G:OP1	5:D:55:LYS:HE2	2.14	0.47
3:V:2:PHE:CB	3:V:61:LEU:HD22	2.45	0.47
4:C:204:LEU:HD12	4:C:211:ARG:HD3	1.97	0.47
5:D:33:ARG:HG3	5:D:93:GLY:CA	2.41	0.47
6:E:147:LEU:HB3	6:E:183:PHE:CD2	2.50	0.47
7:F:82:TYR:HB3	7:F:83:PRO:HD2	1.97	0.47
7:F:148:VAL:O	7:F:149:ARG:C	2.58	0.47
10:J:132:HIS:C	10:J:134:ALA:N	2.72	0.47
13:M:73:ILE:CD1	13:M:92:TRP:H	2.27	0.47
14:N:36:THR:O	14:N:40:LYS:HB2	2.14	0.47
15:O:68:LYS:C	15:O:70:ALA:N	2.72	0.47
17:Q:57:ARG:HD2	17:Q:92:LYS:HZ2	1.80	0.47
18:R:39:LEU:CD1	18:R:60:LYS:HB2	2.44	0.47
18:R:58:VAL:HG22	18:R:59:ILE:HG23	1.96	0.47
19:S:29:VAL:HG21	19:S:70:LYS:N	2.30	0.47
19:S:71:VAL:CG2	19:S:107:VAL:HG12	2.43	0.47
20:T:30:ILE:CG2	20:T:32:LEU:HD13	2.45	0.47
20:T:50:LEU:HD22	20:T:50:LEU:N	2.29	0.47
22:W:19:ARG:NH2	22:W:71:LYS:HD2	2.30	0.47
22:W:21:GLY:HA3	22:W:32:ALA:HB1	1.96	0.47
24:Y:50:VAL:O	24:Y:53:MET:HB2	2.15	0.47
25:Z:29:GLY:C	25:Z:30:HIS:CG	2.91	0.47
26:0:6:LYS:HD3	26:0:6:LYS:HA	1.82	0.47
26:0:42:ILE:HD13	26:0:47:TYR:CE1	2.50	0.47
27:1:9:LYS:HD2	27:1:9:LYS:N	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:2:35:ARG:HH12	28:2:39:ARG:HG2	1.80	0.47
1:A:10:G:H2'	1:A:11:C:O4'	2.15	0.47
1:A:26:C:H2'	1:A:27:C:C6	2.50	0.47
1:A:31:C:O4'	7:F:8:LYS:CD	2.60	0.47
1:A:49:C:H5''	15:O:71:ALA:H	1.80	0.47
2:B:36:G:N9	32:B:3117:HOH:O	2.22	0.47
2:B:45:G:O3'	2:B:46:G:O4'	2.33	0.47
2:B:246:C:C2'	2:B:247:G:H5'	2.45	0.47
2:B:398:C:C4'	2:B:2231:U:C5'	2.84	0.47
2:B:415:A:C4	2:B:2408:U:O2	2.45	0.47
2:B:572:A:H5''	2:B:573:U:OP2	2.15	0.47
2:B:622:G:H2'	2:B:623:C:C6	2.50	0.47
2:B:711:G:H2'	2:B:712:G:O4'	2.15	0.47
2:B:863:A:H2'	2:B:864:G:C8	2.50	0.47
2:B:1031:G:C4'	30:4:8:LYS:CB	2.93	0.47
2:B:1225:G:N2	18:R:85:LYS:HZ2	1.89	0.47
2:B:1454:C:N4	14:N:67:PHE:CE1	2.66	0.47
2:B:1501:G:O2'	2:B:1502:A:H5'	2.15	0.47
2:B:1673:G:C2'	2:B:1955:U:O2'	2.61	0.47
2:B:1785:A:N3	2:B:2591:C:P	2.88	0.47
2:B:2063:C:C2	2:B:2254:C:H6	2.33	0.47
2:B:2069:G:O5'	2:B:2432:A:H8	1.98	0.47
2:B:2083:G:H2'	2:B:2084:C:C6	2.49	0.47
2:B:2220:U:O2'	2:B:2221:G:H5'	2.15	0.47
2:B:2270:A:C8	22:W:20:LEU:N	2.83	0.47
2:B:2576:G:OP2	5:D:150:GLN:CD	2.57	0.47
3:V:16:ALA:HA	3:V:19:ARG:NE	2.29	0.47
4:C:128:THR:HA	4:C:190:THR:CA	2.43	0.47
4:C:170:TYR:C	4:C:171:VAL:HG22	2.40	0.47
4:C:220:ARG:HA	4:C:220:ARG:CZ	2.45	0.47
5:D:16:THR:CA	16:P:79:VAL:HG12	2.10	0.47
7:F:70:ARG:HA	7:F:80:GLN:HE21	1.80	0.47
7:F:133:GLU:O	7:F:134:GLN:HB2	2.14	0.47
7:F:171:ALA:N	7:F:173:ASP:OD1	2.48	0.47
8:G:173:ALA:C	8:G:174:LYS:HD2	2.40	0.47
12:L:84:LYS:HE3	12:L:84:LYS:HA	1.97	0.47
13:M:64:TRP:O	13:M:102:LEU:N	2.47	0.47
13:M:67:VAL:O	13:M:67:VAL:HG13	2.15	0.47
15:O:9:ARG:HA	15:O:12:THR:CG2	2.45	0.47
17:Q:29:ARG:CZ	26:O:9:ARG:HG3	2.45	0.47
20:T:13:ALA:HA	20:T:14:PRO:HD3	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:35:ALA:O	20:T:81:LYS:HD3	2.15	0.47
25:Z:15:SER:HB3	25:Z:23:LYS:HD3	1.97	0.47
2:B:1170:C:O2'	2:B:1171:G:H5'	2.15	0.46
2:B:1260:A:O2'	2:B:1261:C:H5'	2.15	0.46
2:B:1433:A:H2'	2:B:1434:A:O4'	2.15	0.46
2:B:1439:A:N7	2:B:1440:U:N1	2.62	0.46
2:B:1529:G:H2'	2:B:1530:G:C8	2.51	0.46
2:B:1657:U:H2'	32:B:3286:HOH:O	2.14	0.46
2:B:1664:A:C3'	2:B:2561:U:H4'	2.26	0.46
2:B:1664:A:O3'	11:K:40:LYS:CE	2.61	0.46
2:B:1857:G:HO2'	2:B:1858:A:H8	1.59	0.46
2:B:2093:G:C6	2:B:2225:A:H3'	2.50	0.46
2:B:2231:U:H5'	25:Z:49:ARG:NH1	2.31	0.46
2:B:2259:U:O5'	2:B:2427:C:C2	2.68	0.46
2:B:2263:C:H5'	2:B:2329:U:C3'	2.45	0.46
2:B:2728:U:H2'	2:B:2729:G:C8	2.50	0.46
3:V:44:HIS:O	3:V:48:MET:HB3	2.14	0.46
3:V:82:TYR:N	3:V:82:TYR:CD2	2.83	0.46
5:D:4:LEU:CD2	5:D:49:GLN:HG2	2.44	0.46
5:D:24:VAL:CG2	5:D:193:VAL:HG11	2.26	0.46
6:E:44:ARG:CG	6:E:45:ALA:H	2.27	0.46
7:F:56:LEU:HD13	7:F:86:CYS:HB3	1.98	0.46
7:F:67:THR:O	7:F:83:PRO:HA	2.15	0.46
10:J:58:ASN:HA	10:J:126:ALA:CA	2.44	0.46
11:K:107:LEU:O	11:K:107:LEU:HD12	2.14	0.46
12:L:27:LEU:HB2	12:L:28:GLY:H	1.39	0.46
12:L:51:GLU:O	12:L:51:GLU:HG3	2.15	0.46
13:M:6:ARG:HG3	13:M:7:THR:O	2.15	0.46
15:O:8:ILE:C	15:O:10:ARG:N	2.71	0.46
16:P:77:SER:CB	16:P:78:PRO:HD3	2.42	0.46
21:U:10:VAL:O	21:U:11:ILE:HD13	2.15	0.46
1:A:48:U:H2'	1:A:49:C:H6	1.80	0.46
1:A:54:G:O2'	1:A:55:U:H5'	2.16	0.46
1:A:90:C:HO2'	13:M:21:ALA:HB3	1.77	0.46
2:B:8:C:H4'	10:J:121:LYS:NZ	2.13	0.46
2:B:137:U:H2'	2:B:138:U:O4'	2.15	0.46
2:B:233:A:H61	2:B:428:A:N6	2.13	0.46
2:B:976:G:H5'	2:B:1156:A:N6	2.30	0.46
2:B:1125:G:O3'	30:4:37:GLN:NE2	2.30	0.46
2:B:1143:A:N6	10:J:27:ARG:NH1	2.61	0.46
2:B:1248:G:C5'	12:L:29:LYS:HB2	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1278:C:O2'	2:B:1279:G:H5'	2.15	0.46
2:B:1410:G:H2'	2:B:1411:U:H6	1.79	0.46
2:B:1515:A:H5'	2:B:1557:C:C5'	2.45	0.46
2:B:1606:C:H5''	2:B:1607:C:OP1	2.16	0.46
2:B:1665:A:H8	2:B:2561:U:H5'	1.75	0.46
2:B:1724:G:H2'	2:B:1725:U:C6	2.50	0.46
2:B:1733:G:H2'	2:B:1734:G:C8	2.51	0.46
2:B:1767:G:P	2:B:1959:G:O2'	2.73	0.46
2:B:1770:G:H5''	2:B:1967:C:C5	2.50	0.46
2:B:1819:A:H3'	4:C:176:ARG:HG3	1.93	0.46
2:B:1917:U:C2'	2:B:1918:A:H5'	2.45	0.46
2:B:2006:C:HO2'	5:D:162:ALA:HB2	1.80	0.46
2:B:2015:A:OP1	19:S:91:GLY:CA	2.63	0.46
2:B:2043:C:C4	2:B:2777:G:N3	2.83	0.46
2:B:2261:C:O2'	2:B:2262:U:H5'	2.15	0.46
2:B:2263:C:P	2:B:2329:U:H1'	2.55	0.46
2:B:2485:G:H5''	13:M:42:THR:OG1	2.15	0.46
2:B:2631:G:H21	2:B:2810:A:H1'	1.80	0.46
2:B:2820:A:H4'	14:N:4:ARG:HB2	1.96	0.46
4:C:49:THR:O	4:C:50:THR:HB	2.15	0.46
4:C:53:ILE:CD1	4:C:218:THR:HG23	2.45	0.46
4:C:70:LYS:HE3	4:C:99:GLU:HG2	1.97	0.46
4:C:81:GLU:O	4:C:90:ILE:HG22	2.15	0.46
4:C:184:GLU:H	4:C:184:GLU:HG2	1.46	0.46
5:D:150:GLN:O	5:D:151:THR:HG22	2.15	0.46
6:E:17:THR:C	6:E:199:MET:SD	2.98	0.46
9:H:6:LEU:HA	9:H:15:LEU:CA	2.44	0.46
10:J:7:LYS:CE	10:J:48:VAL:HB	2.45	0.46
11:K:8:LEU:O	11:K:19:VAL:HG23	2.16	0.46
11:K:10:VAL:HG11	11:K:15:GLY:O	2.15	0.46
13:M:35:ALA:C	13:M:36:VAL:HG13	2.39	0.46
13:M:62:LYS:HB2	13:M:104:GLU:HB2	1.96	0.46
16:P:52:ARG:HH11	16:P:54:LEU:HB2	1.79	0.46
17:Q:8:ILE:CG1	32:Q:121:HOH:O	2.63	0.46
17:Q:78:PHE:CE1	17:Q:82:LEU:HD21	2.51	0.46
17:Q:97:ILE:HD13	17:Q:100:PHE:HZ	1.79	0.46
18:R:23:GLU:HA	18:R:96:VAL:HG13	1.96	0.46
18:R:42:ALA:HA	18:R:54:VAL:CG2	2.45	0.46
21:U:2:ALA:O	21:U:4:ILE:N	2.46	0.46
25:Z:4:ASP:O	25:Z:5:ILE:C	2.59	0.46
1:A:57:A:C4	7:F:12:VAL:CG2	2.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:57:A:C5	7:F:24:VAL:HA	2.51	0.46
1:A:60:C:H42	7:F:23:SER:N	2.12	0.46
1:A:94:A:H2'	1:A:95:U:O4'	2.14	0.46
2:B:7:G:N2	2:B:2897:U:C2	2.79	0.46
2:B:127:A:H61	20:T:74:ILE:CG2	2.13	0.46
2:B:192:C:HO2'	2:B:802:A:C1'	2.20	0.46
2:B:704:G:C2'	2:B:726:G:H22	2.20	0.46
2:B:989:G:C1'	24:Y:12:ALA:CB	2.84	0.46
2:B:1114:C:H2'	2:B:1115:G:C8	2.50	0.46
2:B:1224:U:H5''	18:R:76:LYS:C	2.40	0.46
2:B:1768:C:C2	2:B:1961:C:N4	2.83	0.46
2:B:1774:C:H42	2:B:1829:A:C4'	1.98	0.46
2:B:1807:G:H1'	4:C:45:ASN:OD1	2.06	0.46
2:B:1958:C:O2	2:B:1987:A:C2	2.60	0.46
2:B:2013:A:N7	2:B:2612:C:O3'	2.48	0.46
2:B:2147:A:C5'	2:B:2148:G:H5'	2.44	0.46
2:B:2749:A:OP1	8:G:4:ALA:O	2.33	0.46
2:B:2788:C:H2'	2:B:2789:C:C6	2.50	0.46
5:D:178:VAL:O	5:D:179:ARG:HG3	2.15	0.46
5:D:184:ARG:O	5:D:184:ARG:HG3	2.14	0.46
6:E:25:GLU:HG3	12:L:17:LYS:HD3	1.94	0.46
9:H:47:PHE:HE1	9:H:51:ARG:NE	2.14	0.46
10:J:122:LEU:HD12	10:J:123:LYS:N	2.30	0.46
10:J:124:VAL:O	10:J:125:TYR:HB2	2.16	0.46
17:Q:34:ALA:O	17:Q:38:VAL:HG12	2.16	0.46
21:U:10:VAL:HG21	21:U:25:LYS:NZ	2.30	0.46
23:X:55:THR:HG22	23:X:59:GLU:CD	2.40	0.46
24:Y:15:ARG:N	24:Y:15:ARG:NE	2.58	0.46
29:3:14:LYS:O	29:3:21:PHE:HB3	2.16	0.46
2:B:15:G:H4'	26:0:17:SER:CB	2.43	0.46
2:B:95:A:N6	23:X:41:HIS:CE1	2.83	0.46
2:B:144:A:O2'	2:B:145:C:H5'	2.16	0.46
2:B:256:A:H2'	2:B:257:C:H6	1.81	0.46
2:B:463:G:C6	28:2:43:THR:HG22	2.47	0.46
2:B:476:G:C1'	32:B:3430:HOH:O	2.26	0.46
2:B:754:U:O3'	2:B:1619:G:C5'	2.63	0.46
2:B:789:A:C1'	28:2:5:PHE:HZ	2.27	0.46
2:B:850:U:H1'	24:Y:46:MET:CG	2.45	0.46
2:B:959:A:O2'	2:B:960:A:H5'	2.16	0.46
2:B:1064:C:O2'	2:B:1065:U:H5'	2.16	0.46
2:B:1183:U:H2'	2:B:1184:U:H6	1.78	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1225:G:C5	18:R:88:GLY:HA3	2.51	0.46
2:B:1359:A:N6	2:B:2212:A:C2	2.83	0.46
2:B:1769:U:O2'	2:B:1964:G:N2	2.48	0.46
2:B:1771:C:O3'	2:B:1968:G:H5'	2.15	0.46
2:B:1971:U:N1	4:C:237:ARG:HB3	2.29	0.46
2:B:1995:U:O2	2:B:2560:A:N7	2.48	0.46
2:B:2028:U:H2'	2:B:2029:G:C8	2.51	0.46
2:B:2093:G:C5	2:B:2225:A:H3'	2.49	0.46
2:B:2213:U:H2'	2:B:2214:C:H5'	1.96	0.46
2:B:2250:G:O5'	2:B:2250:G:H8	1.98	0.46
2:B:2309:A:C5	2:B:2310:C:N3	2.83	0.46
2:B:2617:U:O2'	2:B:2618:G:H5'	2.15	0.46
2:B:2680:U:OP1	5:D:113:SER:C	2.53	0.46
2:B:2896:C:H2'	2:B:2897:U:H6	1.81	0.46
3:V:53:LYS:HD2	3:V:54:ALA:N	2.29	0.46
4:C:230:PRO:O	4:C:231:HIS:HB3	2.16	0.46
5:D:49:GLN:O	5:D:78:GLY:HA2	2.15	0.46
5:D:130:GLN:HG2	5:D:138:LEU:CD1	2.45	0.46
6:E:44:ARG:C	6:E:46:GLN:N	2.68	0.46
6:E:119:ILE:HG23	6:E:189:THR:O	2.15	0.46
14:N:118:ARG:HH21	26:O:51:ARG:N	2.10	0.46
17:Q:101:ASP:OD2	17:Q:104:ALA:HB2	2.14	0.46
18:R:62:GLU:N	18:R:62:GLU:OE1	2.48	0.46
21:U:81:ARG:HH11	21:U:81:ARG:HA	1.81	0.46
22:W:27:GLY:HA2	22:W:60:ALA:CA	2.39	0.46
29:3:11:LYS:HG2	29:3:12:ARG:CG	2.39	0.46
29:3:48:MET:SD	29:3:51:LYS:HE3	2.55	0.46
2:B:94:A:C5	23:X:40:SER:OG	2.69	0.46
2:B:144:A:H2'	2:B:145:C:O4'	2.15	0.46
2:B:215:G:H4'	2:B:216:A:OP1	2.16	0.46
2:B:452:G:N2	28:2:39:ARG:CZ	2.73	0.46
2:B:550:C:O2	2:B:550:C:H2'	2.16	0.46
2:B:766:U:C5'	32:B:3297:HOH:O	1.94	0.46
2:B:904:G:H2'	2:B:905:A:H8	1.81	0.46
2:B:1265:A:N6	19:S:93:ALA:HB1	2.30	0.46
2:B:1399:C:H2'	2:B:1400:U:C6	2.50	0.46
2:B:1652:A:P	2:B:2723:C:HO2'	2.31	0.46
2:B:1656:C:H5''	2:B:2510:C:C3'	2.04	0.46
2:B:1662:U:O2	11:K:4:GLU:CG	2.64	0.46
2:B:1752:C:H5'	2:B:2861:U:O4'	2.12	0.46
2:B:1768:C:O2	2:B:1962:C:N4	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2004:G:C6	5:D:138:LEU:HB2	2.24	0.46
2:B:2099:U:H2'	2:B:2100:G:H8	1.81	0.46
2:B:2199:A:O5'	9:H:29:PHE:HB2	2.15	0.46
2:B:2226:C:H2'	2:B:2227:A:O4'	2.16	0.46
2:B:2258:C:OP2	2:B:2427:C:N4	2.47	0.46
2:B:2789:C:C2'	2:B:2790:U:P	3.03	0.46
2:B:2811:G:O2'	2:B:2812:G:H5'	2.16	0.46
2:B:2898:U:C1'	10:J:135:GLN:NE2	2.78	0.46
3:V:80:HIS:CD2	3:V:83:LYS:HB2	2.50	0.46
4:C:78:GLU:CB	4:C:92:LEU:HD23	2.45	0.46
5:D:30:GLU:N	5:D:30:GLU:CD	2.74	0.46
6:E:128:ALA:O	6:E:157:LEU:HB2	2.15	0.46
6:E:177:PRO:HA	6:E:180:LEU:HD12	1.97	0.46
9:H:100:ALA:HB1	9:H:110:VAL:CG2	2.45	0.46
10:J:125:TYR:OH	10:J:133:ALA:HB3	2.15	0.46
11:K:85:VAL:O	11:K:85:VAL:HG12	2.14	0.46
12:L:80:SER:OG	12:L:116:VAL:HG13	2.15	0.46
12:L:109:LYS:HA	12:L:126:ARG:CB	2.44	0.46
13:M:3:GLN:HE22	13:M:5:LYS:HB2	1.81	0.46
13:M:24:THR:HG23	13:M:25:ASP:OD1	2.16	0.46
13:M:119:LEU:N	13:M:119:LEU:HD22	2.30	0.46
16:P:29:VAL:O	16:P:30:TRP:C	2.56	0.46
16:P:47:ILE:CA	16:P:63:ILE:HG23	2.45	0.46
21:U:68:ASN:HD22	21:U:68:ASN:HA	1.53	0.46
29:3:57:VAL:HG13	29:3:58:ILE:N	2.31	0.46
1:A:88:C:N4	13:M:20:LEU:CG	2.73	0.46
1:A:114:C:H2'	1:A:115:A:H8	1.80	0.46
2:B:61:C:C5'	23:X:25:GLN:CG	2.67	0.46
2:B:95:A:H3'	23:X:35:GLY:HA3	1.04	0.46
2:B:754:U:OP1	2:B:1619:G:H4'	2.09	0.46
2:B:928:A:C2'	24:Y:37:ARG:HD3	2.40	0.46
2:B:998:C:N4	32:B:3391:HOH:O	0.73	0.46
2:B:1047:G:HO2'	2:B:1048:A:P	2.38	0.46
2:B:1295:C:H2'	2:B:1296:G:H8	1.80	0.46
2:B:1341:G:H22	20:T:86:THR:HG22	1.80	0.46
2:B:1537:G:H2'	2:B:1538:G:C4'	2.46	0.46
2:B:1639:C:C3'	2:B:2699:C:O2'	2.64	0.46
2:B:1673:G:H5''	2:B:1944:U:H5'	0.46	0.46
2:B:1750:G:O2'	2:B:2859:G:N2	2.48	0.46
2:B:1770:G:HO2'	2:B:1967:C:H4'	1.76	0.46
2:B:1995:U:N3	2:B:2560:A:C5	2.78	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1999:C:C2'	11:K:31:ARG:CB	2.81	0.46
2:B:2063:C:O2	2:B:2450:A:N1	2.49	0.46
2:B:2249:U:O3'	2:B:2447:G:C5	2.64	0.46
2:B:2285:C:OP2	27:1:26:LYS:HD2	2.16	0.46
2:B:2299:U:H2'	2:B:2300:C:C6	2.50	0.46
2:B:2378:A:H5'	15:O:117:PHE:CG	2.50	0.46
4:C:207:ALA:HA	4:C:211:ARG:HB2	1.98	0.46
5:D:175:LEU:CD2	5:D:190:LYS:HB3	2.45	0.46
6:E:46:GLN:O	6:E:48:THR:OG1	2.24	0.46
6:E:117:ARG:HA	6:E:188:MET:SD	2.56	0.46
9:H:90:LEU:HD13	9:H:123:ARG:O	2.16	0.46
10:J:35:ARG:CZ	10:J:40:HIS:HB2	2.45	0.46
10:J:74:TYR:O	10:J:87:ALA:HA	2.15	0.46
11:K:108:ARG:HE	16:P:36:LYS:HB2	1.81	0.46
12:L:117:THR:HG21	12:L:120:VAL:HG11	1.97	0.46
16:P:24:THR:O	16:P:26:GLU:N	2.49	0.46
16:P:91:VAL:HG12	16:P:92:ARG:N	2.29	0.46
16:P:94:ALA:C	16:P:96:LEU:H	2.23	0.46
19:S:92:ARG:HH12	26:0:4:GLN:NE2	2.14	0.46
22:W:11:ASN:OD1	22:W:12:GLY:N	2.45	0.46
26:0:11:LYS:O	26:0:12:ARG:HB3	2.15	0.46
1:A:22:U:O4	7:F:21:TYR:HA	2.16	0.46
1:A:57:A:C4	7:F:12:VAL:HG22	2.50	0.46
2:B:288:U:O2'	2:B:289:G:H5'	2.15	0.46
2:B:323:C:H6	6:E:164:LEU:N	2.14	0.46
2:B:341:C:O2'	2:B:342:A:H5'	2.16	0.46
2:B:659:G:N2	6:E:100:MET:CE	2.68	0.46
2:B:988:A:H4'	2:B:1155:A:N1	2.31	0.46
2:B:1249:U:OP2	12:L:31:GLY:HA3	2.15	0.46
2:B:1745:A:H2'	2:B:1746:A:C8	2.51	0.46
2:B:1824:G:N2	4:C:249:VAL:HG12	2.31	0.46
2:B:1842:G:O2'	4:C:241:LYS:HE3	2.16	0.46
2:B:1971:U:H2'	4:C:237:ARG:HB3	1.98	0.46
2:B:2316:G:H2'	2:B:2317:A:H8	1.81	0.46
2:B:2426:A:C4	2:B:2446:G:C2	3.04	0.46
2:B:2631:G:N2	2:B:2810:A:H1'	2.31	0.46
3:V:2:PHE:HB2	3:V:61:LEU:HD22	1.97	0.46
4:C:162:GLN:HE21	4:C:162:GLN:HB3	1.53	0.46
4:C:206:LYS:O	4:C:207:ALA:C	2.58	0.46
4:C:250:GLN:O	4:C:251:THR:HB	2.15	0.46
7:F:55:ASP:OD1	7:F:148:VAL:HG11	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:G:40:VAL:HG22	8:G:53:PRO:HA	1.98	0.46
10:J:43:GLU:O	10:J:45:THR:N	2.49	0.46
11:K:23:LYS:HG3	11:K:24:VAL:H	1.81	0.46
11:K:58:LEU:CB	11:K:89:ASN:HD21	2.28	0.46
12:L:78:ARG:CZ	12:L:110:VAL:HG11	2.46	0.46
12:L:85:VAL:CG1	12:L:86:GLU:HG2	2.44	0.46
13:M:42:THR:HG22	13:M:45:GLN:HG2	1.96	0.46
13:M:71:LYS:O	13:M:72:PRO:C	2.58	0.46
19:S:103:ILE:HG23	19:S:104:THR:H	1.80	0.46
20:T:68:LYS:HD3	20:T:68:LYS:C	2.41	0.46
21:U:101:THR:C	21:U:102:ILE:HG13	2.41	0.46
25:Z:65:ASN:O	25:Z:69:SER:HB2	2.16	0.46
1:A:25:U:H5''	1:A:26:C:OP1	2.16	0.46
1:A:55:U:H4'	7:F:13:LYS:HG2	1.66	0.46
1:A:57:A:O2'	7:F:15:LEU:CB	2.63	0.46
2:B:94:A:H3'	23:X:35:GLY:C	2.39	0.46
2:B:116:C:H2'	2:B:117:G:H8	1.78	0.46
2:B:154:U:H2'	2:B:155:A:H8	1.81	0.46
2:B:320:A:OP1	6:E:130:LYS:NZ	2.43	0.46
2:B:398:C:H4'	2:B:2231:U:O4'	2.16	0.46
2:B:412:A:N7	2:B:2411:A:N1	2.63	0.46
2:B:570:G:C1'	2:B:2030:A:C6	2.98	0.46
2:B:577:G:OP1	2:B:2502:G:N1	2.48	0.46
2:B:659:G:C2'	6:E:97:ASN:ND2	2.79	0.46
2:B:682:G:C5'	28:2:26:ASN:CG	2.87	0.46
2:B:702:U:H2'	2:B:703:U:C6	2.51	0.46
2:B:704:G:O2'	2:B:727:A:N6	2.49	0.46
2:B:743:A:C2'	2:B:744:U:H5'	2.46	0.46
2:B:780:G:H21	2:B:783:A:H62	1.64	0.46
2:B:1177:G:H2'	2:B:1178:C:H6	1.76	0.46
2:B:1264:A:H1'	26:0:3:GLN:CG	2.45	0.46
2:B:1704:C:O2'	2:B:1705:A:H5'	2.16	0.46
2:B:1789:A:H2'	2:B:1790:C:C6	2.51	0.46
2:B:1878:G:H2'	2:B:1879:C:H6	1.78	0.46
2:B:1993:U:C1'	2:B:2552:U:O5'	2.57	0.46
2:B:1997:C:N4	2:B:2549:G:C3'	2.76	0.46
2:B:2065:C:O2'	2:B:2425:A:C3'	2.59	0.46
2:B:2199:A:OP2	2:B:2200:C:C4	2.69	0.46
2:B:2617:U:H2'	2:B:2618:G:C5'	2.45	0.46
2:B:2886:A:C2	2:B:2887:A:N7	2.84	0.46
2:B:2896:C:H2'	2:B:2897:U:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:V:4:ILE:O	3:V:63:ILE:HA	2.16	0.46
4:C:63:ILE:HG21	4:C:90:ILE:CD1	2.46	0.46
4:C:84:PRO:O	4:C:86:ARG:N	2.40	0.46
6:E:26:ALA:CA	12:L:20:GLY:H	2.19	0.46
6:E:113:VAL:C	6:E:115:GLN:H	2.24	0.46
6:E:183:PHE:N	12:L:13:LYS:CG	2.78	0.46
7:F:89:THR:C	7:F:90:LEU:HD12	2.41	0.46
8:G:130:ILE:HG21	8:G:147:LEU:HD13	1.97	0.46
10:J:128:ASN:CG	10:J:129:GLU:H	2.22	0.46
10:J:130:HIS:HB3	10:J:131:ASN:H	1.60	0.46
11:K:28:SER:O	11:K:29:HIS:HB2	2.15	0.46
13:M:33:LEU:CD2	13:M:124:LEU:HG	2.45	0.46
13:M:131:VAL:HG23	13:M:132:THR:H	1.80	0.46
14:N:106:ASP:O	14:N:108:ALA:N	2.48	0.46
15:O:18:LEU:C	15:O:18:LEU:HD12	2.40	0.46
15:O:76:LYS:CG	15:O:110:ALA:HB2	2.46	0.46
16:P:13:LYS:CE	16:P:77:SER:HB3	2.46	0.46
17:Q:21:LYS:HD2	17:Q:23:TYR:HE1	1.81	0.46
17:Q:92:LYS:O	17:Q:93:ILE:HG22	2.16	0.46
22:W:66:VAL:CG1	22:W:67:LYS:H	2.21	0.46
25:Z:59:ARG:HG3	25:Z:62:LYS:HG3	1.97	0.46
2:B:77:G:OP2	23:X:52:ARG:NH1	2.49	0.46
2:B:129:C:H2'	2:B:130:C:C6	2.51	0.46
2:B:190:A:N1	2:B:799:G:O2'	2.49	0.46
2:B:551:G:OP2	10:J:2:LYS:CE	2.48	0.46
2:B:671:C:P	12:L:46:VAL:O	2.74	0.46
2:B:754:U:H4'	2:B:1619:G:H5'	1.62	0.46
2:B:808:G:H1'	6:E:69:ARG:NH2	2.30	0.46
2:B:812:C:H2'	2:B:813:U:H6	1.81	0.46
2:B:814:C:H3'	18:R:85:LYS:H	1.09	0.46
2:B:822:G:H2'	2:B:823:C:C6	2.51	0.46
2:B:1275:A:H2	2:B:1645:G:H21	1.64	0.46
2:B:1296:G:C5'	2:B:2709:G:O2'	2.62	0.46
2:B:1863:G:O2'	2:B:2411:A:C4'	2.64	0.46
2:B:1902:C:H5'	4:C:242:HIS:CE1	2.50	0.46
2:B:1938:A:H5'	2:B:1982:U:H2'	1.09	0.46
2:B:1939:U:C3'	2:B:1983:G:O2'	2.64	0.46
2:B:1948:G:H3'	2:B:1987:A:O2'	2.14	0.46
2:B:1979:U:C2'	2:B:1980:G:H5'	2.46	0.46
2:B:2070:A:H8	2:B:2244:U:C3'	1.98	0.46
2:B:2636:C:C1'	5:D:80:TRP:CZ3	2.99	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2643:G:H2'	2:B:2644:G:O4'	2.16	0.46
2:B:2743:U:H3'	2:B:2744:G:H5''	1.96	0.46
2:B:2884:U:C4	26:0:41:HIS:ND1	2.84	0.46
4:C:50:THR:O	4:C:51:ARG:C	2.59	0.46
4:C:242:HIS:N	4:C:243:PRO:HD3	2.30	0.46
4:C:258:SER:HB2	4:C:261:ARG:NH1	2.30	0.46
5:D:13:ARG:O	5:D:15:PHE:N	2.49	0.46
5:D:172:VAL:O	5:D:173:GLN:HB2	2.16	0.46
6:E:7:ASP:C	6:E:9:GLN:H	2.24	0.46
7:F:4:HIS:HB2	7:F:96:TRP:CD1	2.51	0.46
7:F:107:VAL:HB	7:F:108:PRO:CD	2.46	0.46
9:H:1:MET:HA	9:H:21:VAL:O	2.16	0.46
9:H:21:VAL:HG13	9:H:22:LYS:O	2.15	0.46
9:H:147:VAL:HG12	9:H:148:ALA:H	1.80	0.46
10:J:100:VAL:O	10:J:102:GLU:N	2.48	0.46
12:L:85:VAL:HG21	12:L:98:ALA:N	2.16	0.46
12:L:91:ASP:HB2	12:L:123:ARG:HD2	1.97	0.46
13:M:42:THR:HG23	13:M:45:GLN:N	2.30	0.46
14:N:30:ARG:HB3	14:N:31:HIS:ND1	2.26	0.46
14:N:70:THR:HG21	14:N:75:ILE:CG2	2.44	0.46
16:P:13:LYS:NZ	16:P:15:ASP:HB2	2.31	0.46
16:P:29:VAL:O	16:P:44:GLY:HA3	2.15	0.46
21:U:84:PHE:HA	21:U:94:PHE:HD1	1.80	0.46
29:3:13:PHE:O	29:3:13:PHE:CG	2.68	0.46
30:4:3:VAL:HG11	30:4:35:GLN:HG2	1.98	0.46
30:4:27:CYS:C	30:4:29:ALA:N	2.73	0.46
2:B:581:C:H2'	2:B:582:A:C8	2.51	0.46
2:B:614:A:P	32:B:3233:HOH:O	2.74	0.46
2:B:659:G:C2'	6:E:97:ASN:OD1	2.56	0.46
2:B:686:U:H1'	28:2:8:SER:OG	2.15	0.46
2:B:747:U:C5	2:B:2013:A:O2'	2.62	0.46
2:B:993:G:O2'	2:B:994:C:H5'	2.15	0.46
2:B:1196:C:H2'	2:B:1197:G:O4'	2.16	0.46
2:B:1212:G:O2'	2:B:1236:G:N2	2.46	0.46
2:B:1250:G:N7	32:B:3439:HOH:O	2.49	0.46
2:B:1294:U:H4'	14:N:71:ARG:HB3	1.96	0.46
2:B:1311:G:H21	2:B:1604:C:H42	1.63	0.46
2:B:1352:U:O2'	2:B:1353:A:H5'	2.16	0.46
2:B:1541:C:H2'	2:B:1542:U:O4'	2.15	0.46
2:B:1592:C:H2'	2:B:1593:A:H8	1.80	0.46
2:B:1783:A:H1'	2:B:2590:A:OP2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1807:G:P	4:C:47:ARG:HB2	2.56	0.46
2:B:1936:A:O3'	2:B:1984:G:N9	2.28	0.46
2:B:2022:U:C2	32:B:3305:HOH:O	2.47	0.46
2:B:2286:G:H1	27:1:33:LEU:CD1	2.27	0.46
2:B:2494:G:N2	13:M:81:ARG:CD	2.78	0.46
2:B:2507:C:N4	2:B:2583:G:C5	2.78	0.46
2:B:2637:U:C4'	5:D:43:ASP:CG	2.86	0.46
2:B:2693:G:O2'	2:B:2694:G:H5'	2.16	0.46
2:B:2877:G:H2'	2:B:2878:U:C6	2.51	0.46
3:V:63:ILE:HG22	3:V:65:VAL:HG13	1.97	0.46
4:C:21:PRO:HG2	4:C:202:ARG:HH11	1.81	0.46
4:C:27:LYS:N	4:C:28:PRO:HD3	2.31	0.46
4:C:229:HIS:ND1	4:C:230:PRO:CD	2.79	0.46
5:D:2:ILE:CG2	5:D:204:LYS:HA	2.33	0.46
5:D:47:ALA:HB3	5:D:81:GLU:HB2	1.98	0.46
7:F:103:ILE:HA	7:F:107:VAL:HG21	1.98	0.46
13:M:124:LEU:N	13:M:124:LEU:HD23	2.31	0.46
14:N:65:LEU:HD23	14:N:69:ARG:HG3	1.99	0.46
15:O:20:GLU:HB3	15:O:23:ALA:HB2	1.96	0.46
16:P:23:ASP:O	16:P:25:VAL:N	2.48	0.46
17:Q:34:ALA:C	17:Q:38:VAL:HG12	2.41	0.46
20:T:15:HIS:O	20:T:16:VAL:C	2.58	0.46
20:T:57:VAL:HG12	20:T:58:VAL:H	1.81	0.46
20:T:64:LYS:CB	20:T:77:ARG:HD3	2.39	0.46
21:U:73:ASN:HB2	21:U:96:LYS:HZ2	1.81	0.46
23:X:51:ALA:O	23:X:52:ARG:C	2.59	0.46
28:2:13:ASN:OD1	28:2:18:PHE:HB3	2.16	0.46
29:3:11:LYS:C	29:3:12:ARG:HG3	2.41	0.46
1:A:7:G:H5'	15:O:36:TYR:HE2	1.80	0.45
2:B:16:C:H4'	26:0:14:MET:CG	2.46	0.45
2:B:97:C:C4'	23:X:46:VAL:CG1	2.90	0.45
2:B:197:A:O4'	2:B:2443:C:O3'	2.34	0.45
2:B:397:U:H5''	25:Z:49:ARG:CA	2.44	0.45
2:B:570:G:H21	2:B:2499:C:C5'	2.10	0.45
2:B:659:G:C2'	6:E:97:ASN:HD21	2.29	0.45
2:B:1082:U:H2'	2:B:1083:U:O4'	2.16	0.45
2:B:1173:U:O2	2:B:1177:G:C2	2.69	0.45
2:B:1268:A:H3'	32:B:3127:HOH:O	2.16	0.45
2:B:1654:A:C5'	5:D:128:ARG:CG	2.90	0.45
2:B:1665:A:C4	2:B:2561:U:H6	2.33	0.45
2:B:1735:A:H2'	2:B:1736:U:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1759:A:C4	2:B:2697:G:C5'	2.94	0.45
2:B:1766:G:H3'	2:B:1959:G:C3'	2.37	0.45
2:B:1789:A:C5'	4:C:219:VAL:HG11	2.44	0.45
2:B:2002:G:O2'	5:D:133:THR:HB	2.16	0.45
2:B:2071:A:H2'	2:B:2072:C:C6	2.51	0.45
2:B:2105:U:H2'	2:B:2106:U:C6	2.51	0.45
2:B:2255:G:C6	2:B:2447:G:N1	2.83	0.45
2:B:2429:G:OP1	2:B:2448:A:C6	2.69	0.45
2:B:2511:U:O2'	5:D:146:ILE:CB	2.64	0.45
2:B:2771:C:H2'	2:B:2772:C:H6	1.81	0.45
3:V:44:HIS:O	3:V:46:LYS:N	2.49	0.45
4:C:136:VAL:O	4:C:137:GLY:C	2.59	0.45
5:D:20:VAL:HG23	5:D:21:SER:H	1.82	0.45
5:D:164:GLN:HE21	5:D:164:GLN:HB2	1.61	0.45
8:G:90:GLY:HA3	8:G:93:TYR:CD2	2.52	0.45
10:J:128:ASN:CG	10:J:129:GLU:N	2.73	0.45
11:K:99:ILE:CG2	11:K:119:ALA:HB2	2.46	0.45
12:L:60:ARG:CA	29:3:7:ARG:NH2	2.76	0.45
12:L:82:LEU:HD22	12:L:82:LEU:HA	1.49	0.45
14:N:87:PHE:HB2	14:N:94:TYR:OH	2.16	0.45
15:O:8:ILE:CG2	15:O:9:ARG:N	2.78	0.45
16:P:23:ASP:HB3	16:P:24:THR:H	1.45	0.45
16:P:24:THR:HG21	16:P:111:GLU:CG	2.37	0.45
16:P:34:GLY:C	16:P:35:SER:O	2.57	0.45
26:O:29:VAL:HG23	26:O:36:LYS:HZ2	1.78	0.45
2:B:94:A:C3'	23:X:36:GLN:HA	2.13	0.45
2:B:285:G:O2'	2:B:286:U:H5'	2.15	0.45
2:B:321:U:C6	6:E:129:PRO:HB2	2.51	0.45
2:B:514:A:O2'	2:B:515:A:H5'	2.16	0.45
2:B:533:G:H2'	2:B:534:U:C6	2.51	0.45
2:B:656:G:H2'	2:B:657:U:C6	2.52	0.45
2:B:669:G:P	12:L:47:ARG:CD	3.03	0.45
2:B:728:G:H5'	4:C:16:VAL:CB	2.46	0.45
2:B:997:G:H5''	17:Q:91:ARG:HG3	1.86	0.45
2:B:1010:A:H2'	17:Q:76:SER:OG	2.15	0.45
2:B:1127:A:N6	2:B:2464:G:H4'	2.14	0.45
2:B:1340:U:C4	2:B:1604:C:H5	2.32	0.45
2:B:1432:G:O2'	2:B:1433:A:H5'	2.15	0.45
2:B:1826:G:H2'	2:B:1827:U:H6	1.81	0.45
2:B:1854:A:H2'	2:B:1855:U:O4'	2.16	0.45
2:B:1921:G:O2'	2:B:1922:G:H5'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1951:U:C2'	2:B:1991:U:C5	2.97	0.45
2:B:2069:G:H5'	2:B:2433:A:P	2.56	0.45
2:B:2258:C:N1	2:B:2425:A:C4'	2.40	0.45
2:B:2259:U:C6	2:B:2427:C:N3	2.84	0.45
2:B:2270:A:H3'	22:W:18:LYS:HB2	1.97	0.45
2:B:2270:A:O3'	22:W:18:LYS:HD2	2.12	0.45
2:B:2280:G:C4'	2:B:2327:A:C4'	2.91	0.45
2:B:2393:U:O2'	2:B:2394:C:H5'	2.16	0.45
2:B:2428:G:H8	2:B:2448:A:H2	1.61	0.45
2:B:2443:C:H2'	2:B:2444:G:H8	1.81	0.45
2:B:2489:U:O2'	2:B:2490:G:H5'	2.17	0.45
2:B:2531:A:C2	2:B:2662:A:N6	2.84	0.45
2:B:2567:G:H2'	2:B:2568:U:C6	2.52	0.45
2:B:2673:G:H2'	2:B:2674:G:C8	2.51	0.45
2:B:2747:G:H2'	2:B:2748:A:C8	2.51	0.45
7:F:18:GLU:OE2	7:F:18:GLU:HA	2.16	0.45
7:F:135:ILE:HD12	7:F:140:ILE:HD12	1.98	0.45
8:G:51:PHE:CD2	8:G:64:ALA:HA	2.51	0.45
10:J:41:LYS:HG2	10:J:42:ALA:N	2.30	0.45
10:J:81:ILE:CG1	10:J:82:GLY:N	2.79	0.45
10:J:124:VAL:HG12	10:J:125:TYR:O	2.16	0.45
11:K:108:ARG:HH21	16:P:36:LYS:CB	2.29	0.45
13:M:11:LYS:C	13:M:12:MET:SD	2.99	0.45
13:M:71:LYS:HD3	13:M:92:TRP:C	2.41	0.45
13:M:81:ARG:C	13:M:83:GLY:H	2.24	0.45
15:O:108:ASP:O	15:O:112:GLU:CD	2.59	0.45
18:R:14:VAL:HG12	18:R:15:SER:N	2.32	0.45
18:R:18:GLN:CD	18:R:18:GLN:N	2.74	0.45
19:S:34:ASP:HA	19:S:37:THR:HG22	1.97	0.45
20:T:93:LEU:H	20:T:93:LEU:CD2	2.26	0.45
21:U:23:LYS:H	21:U:36:GLU:HG3	1.81	0.45
22:W:74:LYS:O	22:W:75:ASN:CB	2.64	0.45
25:Z:3:LYS:HD2	25:Z:6:HIS:HB3	1.98	0.45
25:Z:31:ASP:O	25:Z:32:LEU:HB3	2.15	0.45
27:1:9:LYS:HD2	27:1:9:LYS:H	1.81	0.45
1:A:14:U:O2'	1:A:107:G:O3'	2.20	0.45
1:A:74:U:H2'	1:A:75:G:C8	2.52	0.45
2:B:64:A:N6	2:B:91:A:H61	2.14	0.45
2:B:97:C:H5'	23:X:42:LEU:HG	1.98	0.45
2:B:587:C:H5''	12:L:29:LYS:O	2.16	0.45
2:B:629:G:H4'	29:3:44:ARG:HH12	1.28	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:827:U:H2'	2:B:2430:A:N6	2.31	0.45
2:B:871:U:H2'	2:B:872:U:C6	2.51	0.45
2:B:1049:C:O2'	2:B:1050:A:H5'	2.16	0.45
2:B:1081:U:O2'	2:B:1082:U:H5'	2.16	0.45
2:B:1277:G:C1'	14:N:23:ASN:HB3	2.37	0.45
2:B:1637:A:N9	2:B:2697:G:O2'	2.49	0.45
2:B:1664:A:C2'	2:B:2561:U:O2'	2.64	0.45
2:B:1667:G:C5	2:B:1953:A:C8	2.94	0.45
2:B:1815:A:H4'	4:C:85:ASN:CB	2.34	0.45
2:B:1992:G:O4'	2:B:2550:G:C8	2.70	0.45
2:B:2015:A:P	19:S:93:ALA:N	2.90	0.45
2:B:2257:U:H5	2:B:2450:A:C1'	2.26	0.45
2:B:2331:G:C5'	22:W:69:GLU:OE1	2.62	0.45
2:B:2353:G:O2'	22:W:29:SER:CB	2.61	0.45
2:B:2438:U:O2'	2:B:2439:A:H5''	2.16	0.45
2:B:2633:G:H2'	2:B:2634:A:O4'	2.16	0.45
2:B:2709:G:HO2'	2:B:2710:C:H5'	1.82	0.45
2:B:2742:G:O2'	2:B:2743:U:H5'	2.16	0.45
2:B:2787:C:O2'	2:B:2810:A:H4'	2.16	0.45
3:V:4:ILE:HG22	3:V:63:ILE:HG23	1.97	0.45
4:C:157:ALA:C	4:C:159:THR:H	2.23	0.45
4:C:207:ALA:O	4:C:208:GLY:C	2.59	0.45
8:G:97:VAL:HG11	8:G:122:ALA:O	2.16	0.45
11:K:35:VAL:HG23	11:K:36:GLY:N	2.27	0.45
12:L:40:SER:C	12:L:41:ARG:HE	2.24	0.45
13:M:96:ILE:HD13	13:M:97:GLN:N	2.31	0.45
13:M:117:PHE:HB2	13:M:124:LEU:HD21	1.97	0.45
14:N:98:LEU:HB2	14:N:112:TYR:HE1	1.81	0.45
14:N:103:ARG:HB2	14:N:110:MET:SD	2.57	0.45
16:P:31:VAL:HA	16:P:81:ASP:HB3	1.97	0.45
16:P:59:THR:HG23	16:P:76:HIS:CE1	2.51	0.45
17:Q:47:ARG:HH22	17:Q:50:ARG:CG	2.29	0.45
17:Q:92:LYS:HD3	17:Q:92:LYS:C	2.41	0.45
18:R:31:GLU:O	18:R:32:THR:HB	2.14	0.45
18:R:41:ILE:O	18:R:54:VAL:HA	2.17	0.45
18:R:47:VAL:HG22	18:R:48:LYS:HG2	1.97	0.45
19:S:27:LYS:HD2	19:S:27:LYS:N	2.23	0.45
19:S:56:ALA:C	19:S:58:ALA:N	2.70	0.45
21:U:42:LYS:O	21:U:43:LYS:HB3	2.17	0.45
21:U:64:ILE:HD13	21:U:65:GLN:H	1.81	0.45
22:W:36:ILE:HD12	22:W:70:VAL:CG2	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:W:42:THR:HB	22:W:66:VAL:H	1.81	0.45
1:A:58:A:H1'	7:F:25:MET:O	2.14	0.45
1:A:63:C:H2'	1:A:64:G:C8	2.49	0.45
2:B:26:G:H1'	2:B:514:A:H61	1.80	0.45
2:B:175:G:H2'	2:B:176:A:C8	2.52	0.45
2:B:415:A:C6	2:B:2407:A:H2	2.33	0.45
2:B:438:G:H2'	2:B:439:A:H8	1.82	0.45
2:B:448:U:O2	2:B:1259:G:C5'	2.64	0.45
2:B:633:A:H2'	2:B:634:C:H5'	1.98	0.45
2:B:728:G:H4'	4:C:16:VAL:HG13	1.75	0.45
2:B:828:U:C1'	2:B:2447:G:OP2	2.65	0.45
2:B:843:G:H2'	2:B:844:A:C8	2.51	0.45
2:B:1262:A:OP2	19:S:95:ARG:HD2	2.17	0.45
2:B:1438:U:H5'	2:B:1516:G:O2'	2.17	0.45
2:B:1710:G:H2'	2:B:1711:A:C8	2.52	0.45
2:B:1733:G:H2'	2:B:1734:G:H8	1.82	0.45
2:B:1799:G:O2'	4:C:181:ARG:HD3	2.15	0.45
2:B:1828:G:O3'	2:B:1972:G:C6	2.39	0.45
2:B:1998:A:H5'	2:B:2547:A:O2'	2.17	0.45
2:B:2005:A:C1'	5:D:145:SER:HG	2.30	0.45
2:B:2015:A:O3'	19:S:89:ALA:O	2.35	0.45
2:B:2061:G:C4	2:B:2253:G:OP2	2.69	0.45
2:B:2152:G:H2'	2:B:2153:C:H6	1.82	0.45
2:B:2269:G:O4'	22:W:22:VAL:HG22	2.15	0.45
2:B:2425:A:H5''	2:B:2426:A:H3'	1.97	0.45
2:B:2526:G:H2'	2:B:2527:C:H6	1.81	0.45
2:B:2631:G:HO2'	2:B:2810:A:H2	1.50	0.45
2:B:2814:A:C1'	26:O:39:ARG:CD	2.95	0.45
2:B:2845:U:C5'	16:P:53:GLY:O	2.64	0.45
2:B:2876:G:OP1	16:P:1:SER:O	2.34	0.45
4:C:10:PRO:CD	4:C:23:LEU:HD11	2.47	0.45
4:C:53:ILE:CG1	4:C:218:THR:HG23	2.47	0.45
4:C:59:GLN:HB3	4:C:60:ALA:H	1.30	0.45
6:E:25:GLU:HA	12:L:17:LYS:HB2	1.98	0.45
6:E:88:ARG:HA	6:E:89:PRO:HD3	1.71	0.45
8:G:35:THR:C	8:G:36:LEU:HD12	2.41	0.45
10:J:7:LYS:HZ3	10:J:48:VAL:CB	2.23	0.45
10:J:25:LEU:HD23	10:J:64:VAL:HA	1.98	0.45
12:L:85:VAL:O	12:L:85:VAL:HG13	2.15	0.45
12:L:110:VAL:HB	12:L:126:ARG:CZ	2.46	0.45
13:M:31:PHE:HA	13:M:128:THR:CG2	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:36:VAL:CA	13:M:97:GLN:HG2	2.45	0.45
14:N:7:GLY:O	14:N:8:ARG:CB	2.63	0.45
16:P:77:SER:H	16:P:78:PRO:HD2	1.81	0.45
21:U:60:LYS:HG3	21:U:61:GLU:N	2.28	0.45
26:O:28:SER:O	26:O:29:VAL:HB	2.16	0.45
29:3:7:ARG:NE	29:3:11:LYS:HZ3	2.11	0.45
2:B:482:A:H4'	21:U:43:LYS:HE3	0.55	0.45
2:B:659:G:O2'	6:E:97:ASN:ND2	2.49	0.45
2:B:686:U:C2	28:2:11:LYS:CB	2.96	0.45
2:B:1249:U:H3'	12:L:32:GLY:N	2.31	0.45
2:B:1266:G:H5'	26:O:15:ARG:HE	1.77	0.45
2:B:1270:C:OP1	2:B:2012:G:H5''	2.10	0.45
2:B:1511:G:H2'	2:B:1512:C:H6	1.81	0.45
2:B:1710:G:H2'	2:B:1711:A:H8	1.81	0.45
2:B:2257:U:O4	2:B:2426:A:OP1	2.34	0.45
2:B:2263:C:H2'	2:B:2264:C:C6	2.52	0.45
2:B:2284:A:OP2	27:1:7:LYS:CB	2.50	0.45
2:B:2348:U:O2'	2:B:2349:G:H5'	2.16	0.45
2:B:2378:A:C2	15:O:92:PHE:CZ	3.05	0.45
2:B:2635:A:O2'	5:D:80:TRP:NE1	2.49	0.45
2:B:2636:C:H1'	5:D:80:TRP:CZ3	2.52	0.45
2:B:2677:G:H2'	2:B:2678:C:C6	2.51	0.45
2:B:2682:A:H5''	16:P:55:HIS:HE2	1.82	0.45
2:B:2867:G:C6	16:P:20:ARG:NE	2.83	0.45
3:V:4:ILE:N	3:V:62:THR:O	2.50	0.45
3:V:82:TYR:HA	13:M:34:LYS:CG	2.46	0.45
5:D:4:LEU:O	5:D:5:VAL:HG13	2.16	0.45
5:D:98:VAL:HA	5:D:101:PHE:HE1	1.80	0.45
5:D:117:GLY:N	5:D:165:MET:HB3	2.32	0.45
5:D:157:LYS:O	5:D:157:LYS:HG3	2.16	0.45
6:E:87:ALA:O	6:E:88:ARG:HG3	2.16	0.45
6:E:178:VAL:HG23	6:E:179:SER:N	2.31	0.45
7:F:165:GLY:HA2	7:F:168:LEU:CG	2.46	0.45
8:G:25:ILE:HG21	8:G:74:MET:HB3	1.98	0.45
8:G:136:ASP:OD1	8:G:138:GLN:HB3	2.17	0.45
9:H:29:PHE:H	9:H:32:PRO:CG	2.29	0.45
9:H:80:ILE:HD11	9:H:102:ALA:HA	1.97	0.45
13:M:3:GLN:CB	13:M:46:ILE:HB	2.46	0.45
14:N:113:ILE:CG2	14:N:114:GLU:N	2.79	0.45
14:N:114:GLU:O	14:N:115:LEU:HB3	2.15	0.45
18:R:41:ILE:O	18:R:41:ILE:HD12	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:70:ALA:O	21:U:71:ILE:C	2.59	0.45
23:X:9:LYS:HE3	23:X:11:VAL:HG13	1.97	0.45
23:X:46:VAL:HG13	23:X:47:ARG:N	2.32	0.45
25:Z:30:HIS:O	25:Z:48:GLN:NE2	2.49	0.45
26:O:43:THR:O	26:O:44:ALA:C	2.58	0.45
2:B:264:C:C2'	2:B:265:A:H5''	2.46	0.45
2:B:522:A:H2'	2:B:523:C:C6	2.52	0.45
2:B:588:U:O3'	12:L:28:GLY:HA2	2.16	0.45
2:B:850:U:H2'	2:B:851:C:C6	2.51	0.45
2:B:873:C:H2'	2:B:874:G:H8	1.82	0.45
2:B:1184:U:H2'	2:B:1185:G:H8	1.81	0.45
2:B:1296:G:OP1	2:B:2709:G:O4'	2.35	0.45
2:B:1300:G:H5'	2:B:1301:A:N3	2.31	0.45
2:B:1347:A:H2'	2:B:1348:C:O4'	2.17	0.45
2:B:1409:U:O2'	2:B:1410:G:H5'	2.16	0.45
2:B:1456:G:O2'	2:B:1457:U:H5'	2.16	0.45
2:B:1881:C:H2'	2:B:1882:U:O4'	2.16	0.45
2:B:2003:A:H5'	5:D:133:THR:N	1.81	0.45
2:B:2242:G:H4'	25:Z:19:GLY:H	1.45	0.45
2:B:2334:U:C4'	15:O:9:ARG:N	2.76	0.45
2:B:2468:A:H2'	2:B:2476:A:C6	2.52	0.45
2:B:2562:U:H4'	11:K:25:LEU:HD22	1.99	0.45
2:B:2576:G:OP2	5:D:150:GLN:CG	2.64	0.45
2:B:2799:A:H4'	2:B:2800:A:C8	2.52	0.45
2:B:2886:A:N7	26:O:29:VAL:CG2	2.73	0.45
4:C:33:LEU:HB3	4:C:34:GLU:H	1.55	0.45
4:C:216:ARG:HB3	4:C:216:ARG:NH1	2.25	0.45
5:D:187:LEU:C	5:D:188:LEU:HD12	2.41	0.45
6:E:26:ALA:CA	12:L:18:ARG:CD	2.79	0.45
6:E:148:ILE:H	6:E:183:PHE:HB3	1.81	0.45
8:G:17:LYS:HD2	8:G:24:THR:HG22	1.98	0.45
8:G:71:LEU:HA	8:G:74:MET:CG	2.46	0.45
8:G:94:ARG:HH12	8:G:127:GLN:CD	2.24	0.45
12:L:127:VAL:HB	12:L:128:THR:H	1.32	0.45
13:M:58:LYS:C	13:M:60:GLN:N	2.71	0.45
13:M:96:ILE:HD13	13:M:96:ILE:C	2.41	0.45
17:Q:93:ILE:C	17:Q:95:ALA:H	2.23	0.45
18:R:2:TYR:N	18:R:46:GLU:HB2	2.30	0.45
19:S:3:THR:CG2	19:S:107:VAL:HG23	2.47	0.45
20:T:3:ARG:HH21	20:T:8:LEU:HD22	1.81	0.45
22:W:40:ARG:NH1	22:W:68:PHE:CA	2.75	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:2:12:ARG:O	28:2:18:PHE:CG	2.70	0.45
2:B:199:A:N1	2:B:2071:A:O4'	2.16	0.45
2:B:416:U:H2'	2:B:417:C:H6	1.79	0.45
2:B:453:A:H2	28:2:39:ARG:CZ	2.18	0.45
2:B:929:U:P	24:Y:37:ARG:HH12	1.71	0.45
2:B:1296:G:H5'	2:B:2709:G:H4'	1.94	0.45
2:B:1534:U:O2'	2:B:1535:A:H8	2.00	0.45
2:B:1938:A:C6	2:B:2591:C:H5'	2.49	0.45
2:B:1946:U:H2'	2:B:1947:C:C6	2.52	0.45
2:B:2259:U:O4'	2:B:2427:C:O2	2.35	0.45
2:B:2350:C:C4'	29:3:38:LYS:HZ3	2.26	0.45
2:B:2681:C:OP1	5:D:196:ALA:HB2	2.17	0.45
2:B:2885:G:H2'	2:B:2886:A:O4'	2.17	0.45
2:B:2889:C:H2'	2:B:2890:G:C8	2.52	0.45
4:C:28:PRO:HD2	4:C:79:ARG:HH22	1.82	0.45
4:C:242:HIS:N	4:C:242:HIS:HD1	2.15	0.45
5:D:205:PRO:O	5:D:206:ALA:HB2	2.17	0.45
10:J:24:THR:O	10:J:25:LEU:HD22	2.16	0.45
12:L:21:ARG:HB3	12:L:21:ARG:CZ	2.47	0.45
15:O:55:GLU:HB2	15:O:61:GLN:HA	1.99	0.45
20:T:16:VAL:O	20:T:16:VAL:HG22	2.17	0.45
20:T:57:VAL:HG12	20:T:58:VAL:N	2.32	0.45
23:X:24:GLU:HG3	23:X:43:LEU:HD11	1.97	0.45
26:O:27:LEU:O	26:O:36:LYS:HB3	2.16	0.45
1:A:49:C:C2'	15:O:66:GLY:HA2	2.32	0.45
2:B:9:G:P	10:J:121:LYS:HZ2	2.26	0.45
2:B:29:U:C5	32:B:3229:HOH:O	2.69	0.45
2:B:55:G:H2'	2:B:56:A:C8	2.51	0.45
2:B:95:A:C4'	23:X:33:ALA:C	2.88	0.45
2:B:139:U:N3	20:T:3:ARG:N	2.62	0.45
2:B:274:C:H2'	2:B:275:C:C6	2.52	0.45
2:B:530:G:C4	2:B:2035:G:H4'	2.51	0.45
2:B:566:U:C4'	2:B:577:G:C1'	2.95	0.45
2:B:673:C:O2'	2:B:674:G:H5'	2.17	0.45
2:B:742:A:C2	32:B:3428:HOH:O	2.56	0.45
2:B:801:G:O6	6:E:50:ALA:HB2	2.16	0.45
2:B:977:G:C2'	2:B:978:G:H5'	2.47	0.45
2:B:1029:A:N6	30:4:6:SER:HB3	2.27	0.45
2:B:1062:G:H2'	2:B:1063:G:H8	1.81	0.45
2:B:1112:G:O2'	2:B:1113:U:H5'	2.16	0.45
2:B:1130:U:C2	2:B:2026:U:OP2	2.70	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1328:A:H2'	2:B:1330:C:C4	2.52	0.45
2:B:1772:A:OP2	2:B:1968:G:C4'	2.43	0.45
2:B:1783:A:C1'	2:B:2590:A:C8	2.97	0.45
2:B:2019:A:OP1	26:0:5:ASN:C	2.60	0.45
2:B:2093:G:H2'	2:B:2094:A:H8	1.82	0.45
2:B:2262:U:H5'	2:B:2387:U:O2	2.16	0.45
2:B:2348:U:C4'	27:1:39:ASP:C	2.90	0.45
2:B:2400:G:H4'	27:1:18:HIS:NE2	2.32	0.45
2:B:2494:G:N3	13:M:80:VAL:CA	2.79	0.45
2:B:2647:U:O2'	2:B:2648:G:H5'	2.17	0.45
2:B:2675:A:N1	2:B:2732:G:O6	2.49	0.45
3:V:54:ALA:O	3:V:57:TYR:N	2.50	0.45
4:C:171:VAL:HA	4:C:183:VAL:O	2.17	0.45
4:C:251:THR:O	4:C:252:LYS:HB2	2.16	0.45
4:C:258:SER:HB2	4:C:261:ARG:HH12	1.82	0.45
5:D:117:GLY:O	5:D:118:PHE:C	2.60	0.45
5:D:170:VAL:CG1	5:D:194:PRO:HG2	2.46	0.45
6:E:48:THR:CG2	6:E:49:ARG:N	2.52	0.45
7:F:2:LYS:O	7:F:3:LEU:CB	2.65	0.45
7:F:3:LEU:HA	7:F:6:TYR:CD1	2.51	0.45
7:F:31:GLU:HB3	7:F:32:LYS:H	1.61	0.45
7:F:87:LYS:O	7:F:88:VAL:HB	2.16	0.45
7:F:107:VAL:HG11	7:F:116:LEU:HD21	1.99	0.45
7:F:172:PHE:CD1	7:F:173:ASP:N	2.84	0.45
8:G:71:LEU:HA	8:G:74:MET:HG3	1.98	0.45
9:H:98:ASP:O	9:H:102:ALA:HB2	2.17	0.45
9:H:130:VAL:O	9:H:142:VAL:N	2.49	0.45
10:J:92:MET:O	10:J:95:ARG:HG3	2.17	0.45
10:J:120:ARG:O	10:J:122:LEU:N	2.37	0.45
11:K:10:VAL:HG13	11:K:19:VAL:HG21	1.99	0.45
12:L:39:LYS:HB2	12:L:46:VAL:HG22	1.98	0.45
13:M:31:PHE:HE2	13:M:110:GLU:HG2	1.81	0.45
13:M:73:ILE:HD13	13:M:90:GLU:OE2	2.15	0.45
16:P:93:LYS:CB	16:P:96:LEU:HD12	2.47	0.45
21:U:25:LYS:HA	21:U:35:VAL:N	2.31	0.45
26:0:31:LYS:NZ	26:0:49:ARG:HA	2.32	0.45
29:3:27:ASN:OD1	29:3:28:LEU:N	2.49	0.45
1:A:37:C:H2'	15:O:69:ASP:CG	2.41	0.45
2:B:18:U:O2	2:B:554:U:H5''	2.16	0.45
2:B:102:U:H4'	2:B:103:A:OP2	2.14	0.45
2:B:495:G:H5'	19:S:6:LYS:HG2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:581:C:H2'	2:B:582:A:H8	1.82	0.45
2:B:699:A:C2'	2:B:700:G:C3'	2.95	0.45
2:B:711:G:O2'	2:B:712:G:H5'	2.16	0.45
2:B:805:G:C5	2:B:2060:A:N7	2.75	0.45
2:B:908:C:O2'	2:B:909:A:H5'	2.16	0.45
2:B:1118:C:O3'	3:V:84:PRO:HD2	2.14	0.45
2:B:1184:U:H2'	2:B:1185:G:C8	2.52	0.45
2:B:1246:A:P	12:L:23:ILE:HB	2.51	0.45
2:B:1262:A:H2	26:O:5:ASN:HA	1.80	0.45
2:B:1265:A:C6	19:S:88:ARG:NH1	2.84	0.45
2:B:1674:G:H8	2:B:1955:U:H5'	1.76	0.45
2:B:1739:A:H2'	2:B:1740:G:O4'	2.16	0.45
2:B:1995:U:H5''	2:B:2557:G:C5	2.11	0.45
2:B:2004:G:N7	5:D:140:HIS:CA	2.80	0.45
2:B:2005:A:N6	5:D:140:HIS:C	2.75	0.45
2:B:2199:A:O4'	2:B:2225:A:C2	2.70	0.45
2:B:2277:G:P	22:W:9:THR:HA	2.47	0.45
2:B:2281:A:C1'	2:B:2388:A:C2	2.97	0.45
2:B:2330:G:O4'	22:W:36:ILE:HD11	2.15	0.45
2:B:2428:G:OP1	2:B:2448:A:C2	2.52	0.45
2:B:2868:A:H2'	2:B:2869:G:C8	2.51	0.45
3:V:57:TYR:OH	13:M:131:VAL:CG2	2.64	0.45
4:C:70:LYS:HG2	4:C:71:ASP:N	2.32	0.45
4:C:78:GLU:HB3	4:C:92:LEU:HD23	1.99	0.45
4:C:198:GLU:C	4:C:200:MET:H	2.24	0.45
7:F:173:ASP:C	7:F:175:PRO:HD2	2.42	0.45
9:H:31:VAL:HG22	9:H:37:VAL:HG22	1.98	0.45
11:K:119:ALA:N	11:K:120:PRO:HD3	2.31	0.45
12:L:6:LEU:N	12:L:6:LEU:HD22	2.31	0.45
12:L:19:LEU:HD22	12:L:19:LEU:N	2.30	0.45
12:L:76:GLU:HA	12:L:109:LYS:O	2.17	0.45
12:L:95:LEU:C	12:L:96:LYS:HD3	2.41	0.45
13:M:21:ALA:C	13:M:96:ILE:HG13	2.42	0.45
19:S:10:ALA:O	19:S:11:ARG:CB	2.62	0.45
23:X:14:LEU:HD12	23:X:14:LEU:N	2.32	0.45
24:Y:22:THR:O	24:Y:26:LEU:N	2.50	0.45
29:3:59:ALA:O	29:3:60:CYS:HB2	2.17	0.45
1:A:57:A:H4'	7:F:15:LEU:CA	1.78	0.45
2:B:45:G:C5'	2:B:46:G:H5'	2.46	0.45
2:B:61:C:C4'	23:X:29:ARG:HB2	2.46	0.45
2:B:76:C:C5'	23:X:51:ALA:H	2.30	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:94:A:C5'	23:X:36:GLN:HB2	2.36	0.45
2:B:222:A:N1	2:B:233:A:H5''	2.31	0.45
2:B:226:A:H2'	2:B:227:A:C8	2.52	0.45
2:B:580:U:O3'	17:Q:32:ARG:N	2.50	0.45
2:B:622:G:H2'	2:B:623:C:H6	1.82	0.45
2:B:630:G:H5''	29:3:44:ARG:HG3	1.26	0.45
2:B:827:U:P	2:B:2247:A:O3'	2.75	0.45
2:B:929:U:O4'	24:Y:37:ARG:NE	2.45	0.45
2:B:1128:G:H4'	2:B:2517:C:C5'	2.38	0.45
2:B:1295:C:P	14:N:71:ARG:CA	3.03	0.45
2:B:1353:A:H2'	2:B:1354:A:C8	2.52	0.45
2:B:1394:U:O2'	2:B:1395:A:H5'	2.16	0.45
2:B:1616:A:H4'	2:B:1617:C:OP2	2.17	0.45
2:B:1665:A:N3	2:B:2561:U:C5	2.85	0.45
2:B:1666:G:C4	2:B:2559:C:H2'	2.47	0.45
2:B:1774:C:O2	2:B:1774:C:H2'	2.15	0.45
2:B:2003:A:H1'	5:D:135:GLY:C	1.75	0.45
2:B:2223:G:C2'	2:B:2224:G:H5'	2.47	0.45
2:B:2258:C:O2	2:B:2425:A:H5'	2.04	0.45
2:B:2553:G:H2'	2:B:2554:U:H4'	1.99	0.45
2:B:2733:A:H3'	2:B:2733:A:C8	2.51	0.45
2:B:2795:C:O5'	2:B:2795:C:H6	2.00	0.45
3:V:66:ASP:C	3:V:68:LYS:H	2.25	0.45
3:V:89:ILE:HD13	3:V:91:PHE:CE1	2.52	0.45
4:C:245:THR:O	4:C:246:PRO:C	2.60	0.45
5:D:5:VAL:HG11	5:D:28:GLU:CA	2.40	0.45
5:D:14:ILE:CG2	16:P:79:VAL:HG23	2.46	0.45
5:D:172:VAL:HG23	5:D:173:GLN:N	2.32	0.45
6:E:26:ALA:CB	12:L:20:GLY:N	2.34	0.45
6:E:113:VAL:HG13	6:E:114:ARG:H	1.82	0.45
6:E:149:ILE:HG13	6:E:149:ILE:O	2.15	0.45
12:L:85:VAL:HG13	12:L:86:GLU:HG2	1.99	0.45
12:L:109:LYS:H	12:L:126:ARG:HB3	1.82	0.45
12:L:117:THR:OG1	12:L:118:THR:N	2.45	0.45
13:M:42:THR:O	13:M:43:ALA:HB3	2.17	0.45
15:O:21:LEU:O	15:O:42:PRO:HB3	2.17	0.45
17:Q:57:ARG:HA	17:Q:60:TRP:CE3	2.47	0.45
18:R:40:MET:O	18:R:41:ILE:C	2.60	0.45
19:S:33:LEU:HD12	19:S:37:THR:HB	1.99	0.45
20:T:60:THR:HG22	20:T:83:ALA:CB	2.47	0.45
20:T:63:VAL:CG1	20:T:80:TRP:HB2	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:71:ILE:C	21:U:71:ILE:HD13	2.42	0.45
21:U:71:ILE:HG23	21:U:72:PHE:N	2.32	0.45
25:Z:66:ILE:O	25:Z:68:GLY:N	2.50	0.45
2:B:48:G:H4'	2:B:52:A:O4'	2.16	0.44
2:B:132:G:H2'	2:B:133:U:C6	2.52	0.44
2:B:221:A:H2'	2:B:266:G:N7	2.32	0.44
2:B:231:A:H3'	2:B:232:G:C8	2.52	0.44
2:B:320:A:OP2	6:E:132:LYS:NZ	2.50	0.44
2:B:483:A:H5''	21:U:45:GLN:CA	2.27	0.44
2:B:801:G:H5''	6:E:57:LYS:NZ	2.32	0.44
2:B:1154:G:OP1	17:Q:57:ARG:CZ	2.64	0.44
2:B:1249:U:H2'	12:L:32:GLY:HA3	1.97	0.44
2:B:1249:U:OP2	12:L:31:GLY:CA	2.65	0.44
2:B:1278:C:C1'	14:N:27:SER:HB2	2.46	0.44
2:B:1662:U:O5'	11:K:5:GLN:HB3	2.17	0.44
2:B:1773:A:N3	2:B:1975:G:C5	2.82	0.44
2:B:1856:U:C6	2:B:2234:G:OP1	2.70	0.44
2:B:2091:C:H1'	2:B:2228:G:C2	2.50	0.44
2:B:2319:G:H3'	2:B:2319:G:N3	2.32	0.44
2:B:2347:C:HO2'	27:1:38:PHE:C	2.25	0.44
2:B:2512:C:H1'	5:D:147:GLY:N	2.32	0.44
2:B:2659:G:N2	2:B:2661:G:H5''	2.32	0.44
2:B:2673:G:H2'	2:B:2674:G:H8	1.81	0.44
2:B:2724:U:C5'	5:D:116:LYS:HZ2	2.30	0.44
4:C:79:ARG:HH11	4:C:79:ARG:HG3	1.82	0.44
4:C:115:ILE:HA	4:C:126:GLY:HA3	1.99	0.44
4:C:139:THR:HG22	4:C:193:GLU:HB3	1.97	0.44
4:C:231:HIS:CD2	4:C:242:HIS:HB3	2.52	0.44
4:C:244:VAL:O	4:C:245:THR:C	2.58	0.44
5:D:170:VAL:CG2	5:D:194:PRO:HG2	2.44	0.44
6:E:108:ILE:H	6:E:108:ILE:HD12	1.83	0.44
7:F:103:ILE:HA	7:F:107:VAL:CG2	2.47	0.44
11:K:25:LEU:O	11:K:30:ARG:HG3	2.17	0.44
11:K:63:VAL:HB	11:K:83:ALA:HB1	1.97	0.44
13:M:71:LYS:HG2	13:M:92:TRP:O	2.17	0.44
16:P:92:ARG:NE	16:P:110:LYS:HB3	2.32	0.44
18:R:42:ALA:C	18:R:54:VAL:HA	2.41	0.44
18:R:88:GLY:O	18:R:89:HIS:HB2	2.17	0.44
19:S:28:LYS:HD3	19:S:29:VAL:H	1.82	0.44
20:T:15:HIS:HB2	20:T:31:VAL:HB	1.98	0.44
21:U:92:VAL:O	21:U:93:ARG:C	2.60	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:3:41:ARG:HB3	29:3:43:LEU:CD2	2.42	0.44
1:A:74:U:H1'	3:V:37:PRO:HG2	0.50	0.44
2:B:106:C:H2'	2:B:107:G:H8	1.82	0.44
2:B:170:U:O2'	2:B:171:U:H5'	2.16	0.44
2:B:390:U:H4'	2:B:391:A:H5'	2.00	0.44
2:B:409:G:O2'	2:B:410:G:H5'	2.18	0.44
2:B:425:G:H2'	2:B:426:C:H6	1.82	0.44
2:B:494:G:O3'	19:S:6:LYS:HE3	2.17	0.44
2:B:518:G:C8	19:S:78:GLU:OE2	2.70	0.44
2:B:570:G:C4	2:B:2030:A:N6	2.84	0.44
2:B:958:U:C6	13:M:17:ASN:N	2.86	0.44
2:B:1128:G:C2	2:B:2517:C:H1'	2.48	0.44
2:B:1188:U:H5''	18:R:83:TYR:OH	2.17	0.44
2:B:1239:G:H2'	2:B:1240:U:C6	2.53	0.44
2:B:1263:U:C5	19:S:95:ARG:NH2	2.86	0.44
2:B:1550:C:H5''	2:B:1720:U:H1'	1.98	0.44
2:B:1672:A:O2'	2:B:1944:U:OP2	2.16	0.44
2:B:1750:G:O2'	2:B:1751:U:H5'	2.17	0.44
2:B:1949:G:C5	2:B:1987:A:C4	3.05	0.44
2:B:1953:A:C2'	2:B:1991:U:C4	3.00	0.44
2:B:2334:U:O5'	15:O:8:ILE:C	2.60	0.44
2:B:2630:G:C4	2:B:2894:G:C6	3.05	0.44
2:B:2811:G:OP1	5:D:62:LYS:HE2	2.17	0.44
3:V:80:HIS:HB3	3:V:83:LYS:O	2.17	0.44
4:C:260:LYS:HB3	4:C:261:ARG:H	1.63	0.44
7:F:15:LEU:HD22	7:F:28:PRO:HG3	1.99	0.44
7:F:110:ILE:HG22	7:F:111:ARG:N	2.32	0.44
9:H:128:HIS:CG	9:H:144:VAL:HB	2.52	0.44
10:J:66:GLY:C	10:J:68:LYS:H	2.25	0.44
11:K:47:ILE:HG22	11:K:49:ARG:N	2.32	0.44
15:O:1:MET:CG	15:O:3:LYS:HE3	2.47	0.44
15:O:68:LYS:C	15:O:70:ALA:H	2.25	0.44
16:P:93:LYS:HD2	16:P:96:LEU:HD12	1.99	0.44
17:Q:22:GLY:HA2	17:Q:28:SER:HB3	1.99	0.44
18:R:22:LEU:O	18:R:96:VAL:HG13	2.16	0.44
19:S:48:LYS:O	19:S:52:GLU:HG3	2.16	0.44
20:T:6:ARG:HG3	20:T:10:VAL:HG13	1.99	0.44
21:U:49:PRO:O	21:U:49:PRO:HG2	2.17	0.44
21:U:60:LYS:CG	21:U:61:GLU:H	2.27	0.44
21:U:62:ALA:O	21:U:63:ALA:C	2.60	0.44
24:Y:18:LYS:O	24:Y:21:ALA:HB3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:Y:53:MET:HE3	24:Y:53:MET:HB3	1.89	0.44
28:2:42:LEU:HG	28:2:43:THR:N	2.31	0.44
29:3:16:THR:C	29:3:18:LYS:N	2.73	0.44
1:A:57:A:HO2'	7:F:15:LEU:HB3	1.83	0.44
2:B:198:C:O2'	2:B:199:A:H5''	2.16	0.44
2:B:483:A:P	21:U:45:GLN:HB3	2.57	0.44
2:B:516:C:OP2	17:Q:29:ARG:NE	2.49	0.44
2:B:765:C:H2'	2:B:766:U:H6	1.82	0.44
2:B:1030:C:H5''	13:M:118:LYS:HB2	1.54	0.44
2:B:1054:A:H2'	2:B:1055:G:C8	2.50	0.44
2:B:1153:C:H5'	17:Q:75:TYR:CE1	2.52	0.44
2:B:1275:A:C1'	14:N:20:MET:HE2	2.46	0.44
2:B:1277:G:O3'	14:N:24:MET:HB2	2.17	0.44
2:B:1525:A:H2'	2:B:1526:C:C6	2.52	0.44
2:B:1566:A:O3'	4:C:58:LYS:CG	2.65	0.44
2:B:1767:G:O3'	2:B:1960:A:O3'	2.35	0.44
2:B:1975:G:C5'	2:B:1979:U:C4	2.67	0.44
2:B:2003:A:H2'	5:D:139:SER:H	1.82	0.44
2:B:2093:G:N7	2:B:2226:C:OP1	2.51	0.44
2:B:2277:G:OP1	22:W:9:THR:CG2	2.62	0.44
2:B:2291:U:H5''	2:B:2380:C:H1'	1.98	0.44
2:B:2460:U:C4'	13:M:76:LYS:O	2.64	0.44
4:C:53:ILE:HG21	4:C:218:THR:CG2	2.45	0.44
5:D:120:GLY:H	5:D:123:LYS:HB2	1.81	0.44
6:E:1:MET:HG3	6:E:2:GLU:N	2.33	0.44
6:E:132:LYS:HZ2	6:E:133:LEU:CD2	2.31	0.44
7:F:176:PHE:O	7:F:177:ARG:HB3	2.17	0.44
8:G:22:VAL:HG23	8:G:33:THR:HG23	1.99	0.44
8:G:51:PHE:HE2	8:G:63:GLN:HE21	1.60	0.44
8:G:84:LYS:HA	8:G:84:LYS:NZ	2.33	0.44
8:G:89:VAL:O	8:G:160:GLY:N	2.50	0.44
12:L:103:ILE:HD11	12:L:105:ILE:HD13	1.99	0.44
13:M:71:LYS:HZ3	13:M:91:TYR:HD2	1.64	0.44
13:M:114:ARG:HH21	13:M:125:PRO:HA	1.81	0.44
16:P:18:SER:OG	16:P:21:PRO:HD3	2.17	0.44
19:S:76:VAL:HG12	19:S:103:ILE:HA	1.97	0.44
20:T:45:ALA:O	20:T:48:GLN:HB3	2.17	0.44
24:Y:47:ILE:HG23	24:Y:54:VAL:HG11	1.98	0.44
25:Z:3:LYS:HA	25:Z:47:LYS:HA	1.99	0.44
26:0:6:LYS:HA	26:0:7:PRO:HD3	1.67	0.44
29:3:28:LEU:HB2	29:3:32:LEU:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:4:11:CYS:SG	30:4:12:ARG:HD2	2.57	0.44
2:B:6:A:C2	2:B:2898:U:H1'	2.52	0.44
2:B:28:A:N6	2:B:512:G:O2'	2.51	0.44
2:B:581:C:C5'	17:Q:13:HIS:HD2	2.24	0.44
2:B:686:U:C6	28:2:11:LYS:O	2.71	0.44
2:B:928:A:H1'	24:Y:37:ARG:HG2	1.98	0.44
2:B:1152:C:O4'	17:Q:76:SER:O	2.35	0.44
2:B:1224:U:O2	18:R:87:GLN:CA	2.51	0.44
2:B:1262:A:C8	19:S:95:ARG:NH1	2.85	0.44
2:B:1273:U:OP1	2:B:1647:U:O2	2.33	0.44
2:B:1313:U:O2	2:B:1313:U:H2'	2.16	0.44
2:B:1360:G:H1	2:B:2212:A:H1'	1.82	0.44
2:B:1511:G:H2'	2:B:1512:C:C6	2.53	0.44
2:B:1585:C:H2'	2:B:1586:A:O4'	2.17	0.44
2:B:1656:C:C4'	2:B:2510:C:C6	2.83	0.44
2:B:1766:G:C2	2:B:1948:G:N2	2.86	0.44
2:B:1855:U:C5	2:B:2234:G:OP1	2.25	0.44
2:B:1937:A:OP2	2:B:1984:G:H3'	2.17	0.44
2:B:1992:G:N3	2:B:2550:G:N7	2.66	0.44
2:B:1997:C:HO2'	2:B:2547:A:C2'	2.24	0.44
2:B:2311:A:N3	7:F:75:GLY:C	2.76	0.44
2:B:2334:U:C5'	15:O:9:ARG:N	2.79	0.44
2:B:2619:C:H2'	2:B:2620:C:C6	2.52	0.44
2:B:2822:G:N7	14:N:1:MET:N	2.65	0.44
2:B:2898:U:H1'	10:J:135:GLN:HE21	1.81	0.44
4:C:155:ARG:O	4:C:155:ARG:NE	2.50	0.44
6:E:112:LEU:HD12	12:L:12:SER:C	2.02	0.44
6:E:146:VAL:O	6:E:147:LEU:CB	2.63	0.44
6:E:173:THR:HA	6:E:201:ALA:O	2.18	0.44
12:L:77:ILE:HG21	12:L:92:LEU:HD13	1.98	0.44
13:M:97:GLN:H	13:M:98:PRO:CD	2.30	0.44
13:M:117:PHE:O	13:M:120:ALA:HB3	2.17	0.44
14:N:32:GLU:HA	14:N:115:LEU:CD2	2.47	0.44
16:P:13:LYS:HZ1	16:P:17:PRO:HG3	1.79	0.44
17:Q:40:LYS:HA	17:Q:43:GLN:HE21	1.82	0.44
20:T:55:VAL:HG13	20:T:86:THR:O	2.18	0.44
27:1:5:ARG:HH11	27:1:5:ARG:HB3	1.82	0.44
1:A:24:G:N7	1:A:56:G:H2'	2.33	0.44
1:A:27:C:H3'	1:A:28:C:C6	2.53	0.44
1:A:91:C:C5'	13:M:22:GLN:OE1	2.65	0.44
1:A:91:C:H5''	13:M:22:GLN:OE1	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:77:G:P	23:X:52:ARG:NH1	2.90	0.44
2:B:129:C:H2'	2:B:130:C:H6	1.81	0.44
2:B:319:G:H2'	2:B:320:A:O4'	2.18	0.44
2:B:465:G:H2'	2:B:466:A:C8	2.53	0.44
2:B:481:G:OP2	21:U:43:LYS:O	2.36	0.44
2:B:585:G:OP2	17:Q:3:VAL:HG11	2.18	0.44
2:B:971:G:OP1	2:B:974:G:C4	2.65	0.44
2:B:1152:C:H5'	17:Q:80:ASN:CB	2.47	0.44
2:B:1184:U:H5	24:Y:30:ARG:CZ	2.19	0.44
2:B:1272:A:N7	2:B:1618:A:H1'	2.32	0.44
2:B:1273:U:O4'	2:B:1647:U:N1	2.50	0.44
2:B:1315:C:H2'	2:B:1316:U:C6	2.52	0.44
2:B:1476:U:O4'	2:B:1732:C:C4	2.71	0.44
2:B:1561:C:H2'	2:B:1562:U:C6	2.52	0.44
2:B:1670:C:C5'	2:B:2557:G:C2	2.97	0.44
2:B:1677:A:N1	2:B:1954:G:C4	2.80	0.44
2:B:1864:U:O2'	2:B:1865:U:H5'	2.17	0.44
2:B:1998:A:C4'	2:B:2547:A:O2'	2.65	0.44
2:B:2005:A:C2	5:D:128:ARG:CD	2.74	0.44
2:B:2015:A:N7	19:S:88:ARG:HD2	2.32	0.44
2:B:2133:G:C2'	2:B:2133:G:N3	2.81	0.44
2:B:2284:A:OP1	27:1:7:LYS:N	2.50	0.44
2:B:2379:G:H2'	2:B:2380:C:H6	1.82	0.44
2:B:2773:C:P	5:D:169:ARG:HH21	2.40	0.44
2:B:2893:A:H4'	2:B:2894:G:O5'	2.18	0.44
3:V:33:GLY:C	3:V:35:GLU:H	2.25	0.44
3:V:81:PRO:HB2	3:V:82:TYR:HD2	1.81	0.44
4:C:32:LEU:HA	4:C:81:GLU:OE1	2.17	0.44
4:C:46:GLY:O	4:C:47:ARG:HB2	2.14	0.44
4:C:179:GLU:CD	4:C:266:ILE:HA	2.42	0.44
4:C:253:GLY:C	4:C:254:LYS:NZ	2.75	0.44
4:C:255:LYS:HZ2	4:C:261:ARG:CZ	2.30	0.44
6:E:120:VAL:HG12	6:E:121:VAL:HG23	1.99	0.44
7:F:41:GLU:OE1	7:F:45:ASP:HA	2.18	0.44
7:F:56:LEU:HA	7:F:59:ILE:CG2	2.48	0.44
8:G:94:ARG:HH11	8:G:94:ARG:CB	2.31	0.44
8:G:108:PHE:CE1	8:G:151:ARG:HD2	2.52	0.44
12:L:40:SER:O	12:L:41:ARG:HB2	2.17	0.44
12:L:72:ALA:HB3	12:L:106:GLU:OE2	2.17	0.44
13:M:31:PHE:CD2	13:M:109:PRO:HB2	2.53	0.44
13:M:98:PRO:HG2	13:M:99:GLY:H	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:75:ILE:HG23	14:N:76:VAL:N	2.33	0.44
15:O:15:ARG:HH12	15:O:17:LYS:HD3	1.83	0.44
17:Q:89:ILE:O	17:Q:90:ASP:C	2.61	0.44
19:S:32:ALA:HA	19:S:51:LEU:CD1	2.48	0.44
21:U:63:ALA:O	21:U:64:ILE:HG22	2.17	0.44
21:U:73:ASN:CG	21:U:96:LYS:HD3	2.43	0.44
22:W:74:LYS:O	22:W:75:ASN:CG	2.61	0.44
24:Y:15:ARG:HE	24:Y:15:ARG:H	1.64	0.44
29:3:23:HIS:HB2	29:3:24:LYS:H	1.47	0.44
1:A:29:A:O2'	7:F:25:MET:SD	2.60	0.44
1:A:76:G:H2'	1:A:77:U:H6	1.82	0.44
2:B:76:C:C3'	23:X:52:ARG:CA	2.91	0.44
2:B:458:G:H5''	28:2:39:ARG:HH11	1.75	0.44
2:B:587:C:C1'	12:L:38:GLN:HA	2.42	0.44
2:B:664:G:O2'	2:B:665:U:H5'	2.17	0.44
2:B:710:U:H2'	2:B:711:G:H8	1.82	0.44
2:B:728:G:H5'	4:C:16:VAL:HB	1.98	0.44
2:B:931:U:OP1	24:Y:29:ARG:CD	2.66	0.44
2:B:958:U:C6	13:M:18:ARG:N	2.86	0.44
2:B:995:C:OP2	17:Q:53:LYS:HE2	2.18	0.44
2:B:1340:U:C5'	2:B:1394:U:C2'	2.95	0.44
2:B:1403:A:H2'	2:B:1404:C:C6	2.53	0.44
2:B:1671:U:H2'	2:B:1673:G:OP2	2.16	0.44
2:B:1768:C:OP2	2:B:1960:A:P	2.76	0.44
2:B:1795:C:HO2'	2:B:1796:U:H5'	1.83	0.44
2:B:1815:A:C3'	4:C:85:ASN:CB	2.45	0.44
2:B:2002:G:C1'	5:D:132:ALA:N	2.75	0.44
2:B:2056:G:C1'	2:B:2577:A:N1	2.80	0.44
2:B:2061:G:C8	2:B:2252:G:C8	3.06	0.44
2:B:2244:U:C6	2:B:2433:A:N3	2.75	0.44
2:B:2261:C:H5''	2:B:2388:A:O5'	2.18	0.44
2:B:2317:A:P	7:F:124:ARG:NH2	2.89	0.44
2:B:2340:A:H2'	2:B:2341:G:H8	1.83	0.44
2:B:2700:A:H2'	2:B:2701:U:C6	2.52	0.44
2:B:2714:G:O2'	2:B:2715:C:H5'	2.18	0.44
2:B:2814:A:C4	26:0:39:ARG:HG3	2.53	0.44
3:V:35:GLU:HB2	3:V:93:ARG:NH1	2.33	0.44
4:C:141:HIS:CG	4:C:142:ASN:H	2.34	0.44
4:C:259:ASN:O	4:C:260:LYS:HB2	2.17	0.44
6:E:27:LEU:CD2	6:E:100:MET:HE2	2.44	0.44
6:E:73:ILE:C	6:E:75:SER:N	2.61	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:132:LYS:HD3	6:E:133:LEU:HD23	2.00	0.44
7:F:7:TYR:OH	7:F:29:ARG:HA	2.17	0.44
10:J:81:ILE:C	10:J:83:GLY:N	2.73	0.44
12:L:71:ALA:O	12:L:72:ALA:C	2.59	0.44
12:L:78:ARG:HD3	12:L:81:ASP:HB2	2.00	0.44
12:L:82:LEU:O	12:L:83:ALA:HB3	2.17	0.44
12:L:84:LYS:C	12:L:86:GLU:HG3	2.43	0.44
14:N:41:ALA:C	14:N:43:GLU:N	2.75	0.44
16:P:31:VAL:HB	16:P:43:GLU:O	2.18	0.44
16:P:36:LYS:HD3	16:P:37:LYS:H	1.82	0.44
17:Q:93:ILE:CG2	17:Q:94:LEU:HD13	2.40	0.44
18:R:7:SER:CB	18:R:21:ARG:HH22	2.30	0.44
19:S:29:VAL:CG2	19:S:69:LEU:HB3	2.48	0.44
20:T:58:VAL:CG2	32:T:105:HOH:O	2.64	0.44
20:T:84:TYR:O	20:T:85:VAL:O	2.36	0.44
21:U:6:ARG:O	21:U:8:ASP:N	2.51	0.44
21:U:13:LEU:O	21:U:15:GLY:N	2.49	0.44
22:W:48:ALA:HA	22:W:54:ARG:HA	1.98	0.44
25:Z:15:SER:HB2	25:Z:25:ARG:HH12	1.81	0.44
1:A:47:C:OP1	15:O:32:PRO:HD3	2.18	0.44
1:A:57:A:O2'	7:F:15:LEU:HD13	2.16	0.44
1:A:60:C:H41	7:F:26:GLN:NE2	2.15	0.44
1:A:78:A:C2	1:A:99:A:C4	3.06	0.44
2:B:67:U:C4	2:B:68:G:N7	2.86	0.44
2:B:69:C:O2'	2:B:70:G:H5'	2.17	0.44
2:B:373:U:O2'	2:B:374:A:H5'	2.18	0.44
2:B:540:C:H2'	2:B:541:A:C8	2.52	0.44
2:B:878:A:OP1	2:B:899:A:N6	2.47	0.44
2:B:948:C:H2'	2:B:949:G:C8	2.52	0.44
2:B:971:G:H2'	2:B:972:A:O4'	2.18	0.44
2:B:1017:G:H2'	2:B:1018:U:C6	2.51	0.44
2:B:1079:C:C2	2:B:1080:A:C8	3.06	0.44
2:B:1708:C:H2'	2:B:1709:U:C6	2.52	0.44
2:B:1953:A:N7	2:B:1991:U:C1'	2.81	0.44
2:B:2082:A:O2'	2:B:2083:G:H5'	2.18	0.44
2:B:2180:U:H2'	2:B:2181:U:C5	2.52	0.44
2:B:2183:A:H2'	2:B:2184:A:C8	2.52	0.44
2:B:2378:A:H5''	15:O:117:PHE:HB3	2.00	0.44
2:B:2814:A:C1'	26:O:39:ARG:HD2	2.46	0.44
4:C:145:MET:O	4:C:184:GLU:HG3	2.18	0.44
4:C:196:ASN:O	4:C:199:HIS:HB2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:152:PRO:C	5:D:153:GLY:O	2.59	0.44
6:E:117:ARG:HA	6:E:188:MET:CE	2.48	0.44
6:E:181:ILE:HG23	12:L:14:LYS:C	2.36	0.44
8:G:20:GLY:O	8:G:21:GLN:C	2.60	0.44
8:G:23:ILE:HG13	8:G:24:THR:N	2.30	0.44
8:G:58:ALA:C	8:G:60:GLY:H	2.25	0.44
9:H:6:LEU:H	9:H:16:GLY:N	2.16	0.44
9:H:83:LYS:HB2	9:H:92:GLY:H	1.83	0.44
10:J:98:GLU:O	10:J:100:VAL:N	2.51	0.44
11:K:23:LYS:CG	11:K:24:VAL:H	2.31	0.44
11:K:71:ARG:HD3	11:K:71:ARG:HA	1.86	0.44
13:M:1:MET:HG2	13:M:64:TRP:CD1	2.53	0.44
14:N:37:THR:HB	14:N:39:PRO:HD2	1.99	0.44
14:N:38:LEU:HG	14:N:109:PRO:HB2	1.99	0.44
14:N:67:PHE:HD2	14:N:73:ASN:HD21	1.64	0.44
15:O:76:LYS:NZ	15:O:79:ALA:HB3	2.33	0.44
15:O:84:GLU:OE1	15:O:85:LYS:HG3	2.17	0.44
18:R:4:VAL:O	18:R:4:VAL:HG13	2.17	0.44
22:W:37:VAL:O	22:W:38:ARG:C	2.61	0.44
23:X:14:LEU:HD22	23:X:57:LEU:HD22	1.99	0.44
24:Y:31:ILE:C	24:Y:33:HIS:H	2.26	0.44
29:3:24:LYS:HE2	29:3:25:HIS:O	2.18	0.44
1:A:56:G:O2'	7:F:22:ASN:C	2.61	0.44
2:B:2:G:C2	2:B:2902:C:C2	3.06	0.44
2:B:49:A:OP1	2:B:51:G:H5'	2.17	0.44
2:B:752:A:O2'	28:2:1:MET:N	2.49	0.44
2:B:1011:G:P	17:Q:75:TYR:CB	3.04	0.44
2:B:1259:G:O2'	2:B:1260:A:H5'	2.17	0.44
2:B:1459:G:C2'	2:B:1460:U:H5'	2.47	0.44
2:B:1513:U:O2'	2:B:1514:G:H5'	2.18	0.44
2:B:1767:G:C5	2:B:1959:G:C4	3.06	0.44
2:B:1773:A:N6	2:B:1830:C:C6	2.86	0.44
2:B:1854:A:N6	2:B:2235:G:H5''	2.31	0.44
2:B:1854:A:H2	2:B:2235:G:O6	1.94	0.44
2:B:1993:U:H3'	2:B:2551:C:C6	2.53	0.44
2:B:1997:C:O2	2:B:2548:U:C2	2.69	0.44
2:B:2182:U:H2'	2:B:2183:A:C8	2.53	0.44
2:B:2245:U:O4'	2:B:2433:A:C3'	2.65	0.44
2:B:2246:G:C6	2:B:2426:A:C8	3.01	0.44
2:B:2370:G:H2'	2:B:2371:G:O4'	2.18	0.44
2:B:2725:A:C5'	5:D:126:ASN:OD1	2.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2789:C:O3'	2:B:2790:U:OP1	2.35	0.44
4:C:23:LEU:HD12	4:C:23:LEU:O	2.18	0.44
4:C:61:TYR:HD2	4:C:84:PRO:HD2	1.76	0.44
4:C:225:ASN:H	4:C:226:PRO:HD3	1.82	0.44
5:D:8:LYS:HE3	16:P:1:SER:HB3	0.45	0.44
6:E:117:ARG:H	6:E:118:LEU:HD23	1.83	0.44
7:F:135:ILE:O	7:F:136:ILE:HB	2.17	0.44
7:F:177:ARG:NE	7:F:178:LYS:N	2.66	0.44
8:G:35:THR:O	8:G:36:LEU:HD12	2.18	0.44
8:G:89:VAL:HB	8:G:160:GLY:H	1.82	0.44
8:G:114:HIS:HB2	8:G:150:TYR:HE2	1.83	0.44
9:H:3:VAL:HB	9:H:37:VAL:CG2	2.48	0.44
10:J:20:ALA:C	10:J:22:GLY:H	2.24	0.44
12:L:91:ASP:CB	12:L:123:ARG:HD2	2.47	0.44
18:R:58:VAL:HG13	18:R:59:ILE:HG12	1.98	0.44
19:S:90:LYS:N	19:S:90:LYS:CE	2.80	0.44
21:U:84:PHE:CA	21:U:94:PHE:HD1	2.30	0.44
22:W:74:LYS:HB3	22:W:75:ASN:H	1.51	0.44
25:Z:3:LYS:CG	25:Z:8:LYS:HA	2.44	0.44
26:0:12:ARG:C	26:0:14:MET:N	2.74	0.44
26:0:26:SER:CB	26:0:38:LEU:HD12	2.47	0.44
30:4:14:CYS:SG	30:4:27:CYS:SG	3.14	0.44
2:B:13:A:O2'	2:B:15:G:N7	2.43	0.44
2:B:28:A:H1'	2:B:513:A:C2	2.52	0.44
2:B:103:A:H2'	2:B:104:A:O4'	2.17	0.44
2:B:144:A:OP1	20:T:37:ASP:CB	2.66	0.44
2:B:357:C:H2'	2:B:358:U:C6	2.53	0.44
2:B:397:U:H5''	25:Z:49:ARG:C	2.41	0.44
2:B:789:A:C4	28:2:5:PHE:CZ	3.06	0.44
2:B:826:U:H5''	2:B:2429:G:P	2.58	0.44
2:B:856:G:HO2'	22:W:23:LYS:HA	1.72	0.44
2:B:1151:A:H2'	2:B:1152:C:C6	2.53	0.44
2:B:1224:U:C5'	18:R:76:LYS:C	2.90	0.44
2:B:1225:G:N7	18:R:88:GLY:CA	2.81	0.44
2:B:1281:G:H2'	2:B:1282:U:O4'	2.18	0.44
2:B:1341:G:H22	20:T:86:THR:CG2	2.31	0.44
2:B:1348:C:H2'	2:B:1349:C:H5'	2.00	0.44
2:B:1463:C:H2'	2:B:1464:G:C8	2.53	0.44
2:B:1704:C:H2'	2:B:1705:A:C8	2.53	0.44
2:B:1745:A:H2'	2:B:1746:A:H8	1.82	0.44
2:B:1764:C:H2'	2:B:1765:U:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1775:U:C6	2:B:1829:A:C8	3.05	0.44
2:B:1847:A:H4'	2:B:1848:A:H8	1.82	0.44
2:B:1938:A:OP1	2:B:1982:U:C2	2.71	0.44
2:B:1938:A:C6	2:B:2590:A:O3'	2.70	0.44
2:B:1976:U:P	2:B:1979:U:H6	2.41	0.44
2:B:1993:U:C3'	2:B:2551:C:C6	3.01	0.44
2:B:2003:A:C2'	5:D:139:SER:HA	2.48	0.44
2:B:2060:A:H5'	32:B:3057:HOH:O	2.18	0.44
2:B:2068:U:H5'	2:B:2432:A:OP2	2.17	0.44
2:B:2271:G:C5'	22:W:16:GLU:H	2.25	0.44
2:B:2283:C:H3'	2:B:2284:A:C4'	2.48	0.44
2:B:2575:C:OP1	5:D:150:GLN:CB	2.64	0.44
2:B:2645:G:C4'	2:B:2732:G:HO3'	2.26	0.44
2:B:2772:C:H2'	2:B:2773:C:H6	1.82	0.44
4:C:141:HIS:ND1	4:C:142:ASN:N	2.64	0.44
5:D:60:VAL:HB	5:D:63:PRO:CG	2.47	0.44
10:J:60:ASP:OD1	10:J:97:PRO:HG2	2.18	0.44
13:M:68:PHE:HA	13:M:69:PRO:HD2	1.80	0.44
14:N:14:SER:HA	14:N:17:ARG:HB2	2.00	0.44
15:O:16:ARG:HA	15:O:16:ARG:HE	1.82	0.44
16:P:27:VAL:HG22	16:P:28:LYS:O	2.18	0.44
16:P:62:LYS:HE2	16:P:74:GLN:NE2	2.30	0.44
17:Q:107:ALA:O	18:R:52:PRO:HG3	2.17	0.44
19:S:34:ASP:HA	19:S:38:TYR:CD2	2.53	0.44
19:S:80:PRO:O	19:S:100:THR:HG22	2.18	0.44
21:U:46:LYS:O	21:U:47:PRO:C	2.59	0.44
21:U:90:LYS:CD	21:U:91:LYS:HZ3	2.26	0.44
24:Y:50:VAL:CA	24:Y:53:MET:HB2	2.48	0.44
26:O:45:ASP:HB3	26:O:54:ILE:O	2.17	0.44
27:1:49:LYS:HG2	27:1:50:GLU:O	2.18	0.44
28:2:13:ASN:O	28:2:16:HIS:N	2.50	0.44
28:2:34:ARG:NE	28:2:42:LEU:HD13	2.26	0.44
1:A:32:U:H5''	7:F:5:ASP:OD1	2.17	0.43
1:A:56:G:C4	7:F:24:VAL:CG2	3.01	0.43
2:B:45:G:O3'	2:B:46:G:C4	2.60	0.43
2:B:138:U:H2'	2:B:140:C:C2	2.53	0.43
2:B:490:C:H4'	2:B:491:G:OP2	2.17	0.43
2:B:552:U:H5''	32:B:3198:HOH:O	2.17	0.43
2:B:587:C:O4'	12:L:38:GLN:HG3	2.14	0.43
2:B:809:G:C5'	2:B:1255:U:H5'	2.42	0.43
2:B:1050:A:C2	2:B:2751:G:C6	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1118:C:O3'	3:V:84:PRO:HD3	2.12	0.43
2:B:1196:C:N3	2:B:1250:G:O6	2.51	0.43
2:B:1228:G:H2'	2:B:1229:C:C6	2.53	0.43
2:B:1277:G:H1'	14:N:24:MET:N	2.32	0.43
2:B:1340:U:HO3'	2:B:1394:U:C2'	2.27	0.43
2:B:1939:U:C6	2:B:1983:G:N3	2.85	0.43
2:B:1940:U:H2'	2:B:1984:G:H4'	2.00	0.43
2:B:1945:G:C5	2:B:1986:C:C5'	2.97	0.43
2:B:1974:C:C2'	2:B:1978:A:N7	2.68	0.43
2:B:2291:U:H2'	2:B:2292:U:H6	1.81	0.43
2:B:2297:A:N6	2:B:2319:G:C5'	2.81	0.43
2:B:2631:G:O2'	2:B:2810:A:H2	1.97	0.43
2:B:2806:C:H2'	2:B:2807:U:O4'	2.18	0.43
2:B:2893:A:H4'	2:B:2894:G:H5'	2.00	0.43
3:V:86:LEU:CD1	13:M:134:THR:CG2	2.80	0.43
4:C:65:ASP:OD2	4:C:101:ARG:HB3	2.18	0.43
5:D:109:VAL:HG22	5:D:203:VAL:HG22	2.00	0.43
7:F:70:ARG:CA	7:F:80:GLN:HE21	2.31	0.43
8:G:21:GLN:HG2	8:G:38:ASP:HA	2.00	0.43
8:G:26:LYS:HG2	8:G:31:GLU:CD	2.42	0.43
8:G:126:THR:C	8:G:128:THR:N	2.75	0.43
10:J:118:MET:O	10:J:119:PHE:C	2.61	0.43
15:O:17:LYS:HE3	15:O:43:ASN:CB	2.44	0.43
15:O:24:THR:HG22	15:O:41:ALA:HA	2.00	0.43
15:O:45:SER:C	15:O:47:VAL:N	2.75	0.43
17:Q:58:GLN:O	17:Q:62:ALA:HB2	2.18	0.43
25:Z:66:ILE:O	25:Z:69:SER:O	2.35	0.43
29:3:38:LYS:C	29:3:40:LYS:H	2.24	0.43
1:A:102:G:O2'	1:A:103:U:H5'	2.18	0.43
2:B:76:C:O2'	23:X:55:THR:HB	2.17	0.43
2:B:144:A:OP1	20:T:37:ASP:HB2	2.17	0.43
2:B:359:G:O2'	2:B:360:U:H5'	2.17	0.43
2:B:438:G:H2'	2:B:439:A:C8	2.54	0.43
2:B:566:U:C4'	2:B:576:U:O2	2.63	0.43
2:B:811:U:C6	12:L:35:HIS:HB3	2.54	0.43
2:B:997:G:H4'	17:Q:91:ARG:NE	2.33	0.43
2:B:1082:U:N3	2:B:1086:A:C2	2.84	0.43
2:B:1152:C:P	17:Q:83:LYS:HZ2	2.37	0.43
2:B:1339:G:HO2'	2:B:1393:A:C3'	2.30	0.43
2:B:1623:G:O2'	2:B:1624:U:H5'	2.18	0.43
2:B:1768:C:O3'	2:B:1962:C:H5	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1799:G:H1'	4:C:152:GLN:NE2	2.32	0.43
2:B:2061:G:N2	2:B:2254:C:C5	2.85	0.43
2:B:2642:G:O2'	2:B:2643:G:H5'	2.18	0.43
2:B:2787:C:H2'	2:B:2788:C:C6	2.53	0.43
4:C:170:TYR:HB3	4:C:185:ALA:HB3	2.00	0.43
5:D:23:PRO:HA	5:D:190:LYS:N	2.33	0.43
5:D:88:GLU:CG	5:D:89:GLU:N	2.80	0.43
6:E:97:ASN:N	6:E:97:ASN:HD22	2.16	0.43
7:F:23:SER:C	7:F:25:MET:N	2.73	0.43
7:F:52:ALA:HA	7:F:148:VAL:CG1	2.49	0.43
8:G:93:TYR:N	8:G:93:TYR:CD1	2.84	0.43
9:H:128:HIS:HB3	9:H:144:VAL:CB	2.43	0.43
10:J:11:VAL:HG22	10:J:12:LYS:N	2.33	0.43
10:J:102:GLU:HG3	10:J:124:VAL:HG11	1.99	0.43
12:L:14:LYS:HZ2	12:L:14:LYS:HB3	1.82	0.43
12:L:75:ALA:C	12:L:76:GLU:O	2.56	0.43
15:O:94:ARG:O	15:O:94:ARG:HG3	2.18	0.43
18:R:58:VAL:HG22	18:R:59:ILE:H	1.83	0.43
19:S:6:LYS:CA	19:S:104:THR:HA	2.48	0.43
20:T:80:TRP:HB3	20:T:81:LYS:H	1.51	0.43
27:1:26:LYS:HD3	27:1:29:LYS:CG	2.49	0.43
27:1:26:LYS:HD3	27:1:29:LYS:CD	2.48	0.43
1:A:49:C:H6	15:O:67:ASN:CA	2.31	0.43
1:A:76:G:C5'	13:M:136:MET:HE1	2.44	0.43
1:A:88:C:H6	13:M:20:LEU:O	1.90	0.43
2:B:140:C:H6	2:B:140:C:OP2	2.00	0.43
2:B:144:A:H8	2:B:144:A:OP2	2.00	0.43
2:B:388:G:N7	2:B:390:U:H2'	2.34	0.43
2:B:392:U:O2'	2:B:393:C:H5'	2.17	0.43
2:B:397:U:C5'	25:Z:49:ARG:O	2.64	0.43
2:B:657:U:H2'	2:B:658:U:H6	1.83	0.43
2:B:659:G:H4'	6:E:97:ASN:HD21	0.66	0.43
2:B:1487:U:H2'	2:B:1488:C:C6	2.52	0.43
2:B:1580:A:N3	2:B:1581:G:N3	2.64	0.43
2:B:1767:G:C8	2:B:1960:A:O5'	2.72	0.43
2:B:1769:U:C5	2:B:1935:G:OP1	2.71	0.43
2:B:1828:G:N3	2:B:1970:A:N3	2.66	0.43
2:B:1902:C:H2'	2:B:1903:G:H5'	2.00	0.43
2:B:1949:G:C5	2:B:1987:A:C5	3.06	0.43
2:B:2004:G:H2'	5:D:142:VAL:HG11	1.99	0.43
2:B:2022:U:O2'	2:B:2617:U:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2290:G:H2'	2:B:2291:U:C6	2.54	0.43
2:B:2320:U:H3'	2:B:2321:U:C5'	2.48	0.43
2:B:2642:G:H5'	10:J:81:ILE:HG22	1.99	0.43
2:B:2650:U:H2'	2:B:2651:C:H6	1.81	0.43
2:B:2747:G:O6	2:B:2755:C:H5''	2.17	0.43
2:B:2880:C:C4'	14:N:90:ARG:HH11	2.31	0.43
3:V:78:GLN:O	13:M:134:THR:O	2.29	0.43
4:C:183:VAL:O	4:C:184:GLU:C	2.61	0.43
6:E:108:ILE:HD12	6:E:108:ILE:N	2.34	0.43
20:T:32:LEU:C	20:T:34:VAL:H	2.25	0.43
20:T:48:GLN:CG	20:T:49:LYS:N	2.81	0.43
21:U:9:GLU:CG	21:U:23:LYS:HB3	2.49	0.43
21:U:46:LYS:HE2	21:U:54:PRO:O	2.19	0.43
25:Z:58:ASP:O	25:Z:59:ARG:HD3	2.18	0.43
27:1:49:LYS:HD2	27:1:49:LYS:N	2.33	0.43
28:2:22:MET:SD	28:2:28:ARG:HG3	2.58	0.43
1:A:14:U:H2'	1:A:107:G:O3'	2.18	0.43
1:A:42:C:N4	7:F:91:ARG:NH1	2.65	0.43
2:B:68:G:H3'	2:B:69:C:H6	1.83	0.43
2:B:77:G:H5'	23:X:52:ARG:CB	2.43	0.43
2:B:138:U:C2'	20:T:4:GLU:CB	2.92	0.43
2:B:224:U:H2'	2:B:225:C:O4'	2.18	0.43
2:B:246:C:H2'	2:B:247:G:H5'	1.99	0.43
2:B:537:G:H4'	10:J:4:PHE:HE1	1.47	0.43
2:B:786:C:O2'	2:B:787:C:H5'	2.19	0.43
2:B:1179:G:O2'	2:B:1180:U:H5'	2.17	0.43
2:B:1205:A:C4'	2:B:1206:G:OP2	2.67	0.43
2:B:1224:U:H2'	18:R:87:GLN:CA	2.48	0.43
2:B:1341:G:O3'	20:T:59:ASN:HB3	2.19	0.43
2:B:1770:G:C5'	2:B:1967:C:C6	3.01	0.43
2:B:1855:U:N3	2:B:2235:G:OP2	2.52	0.43
2:B:1958:C:O2'	2:B:1959:G:H5'	2.18	0.43
2:B:1976:U:O5'	2:B:1978:A:C2'	2.56	0.43
2:B:2015:A:H5'	19:S:88:ARG:C	2.20	0.43
2:B:2070:A:H2'	2:B:2071:A:O4'	2.14	0.43
2:B:2477:U:H4'	2:B:2479:U:O4	2.18	0.43
2:B:2576:G:OP2	5:D:150:GLN:OE1	2.36	0.43
2:B:2645:G:C4'	2:B:2732:G:O3'	2.67	0.43
2:B:2663:G:H2'	2:B:2664:G:C8	2.53	0.43
2:B:2720:U:H2'	2:B:2721:A:C8	2.53	0.43
3:V:2:PHE:O	3:V:3:THR:HG23	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:V:30:ILE:O	3:V:37:PRO:HA	2.17	0.43
4:C:144:GLU:HG2	4:C:150:GLY:HA2	2.00	0.43
4:C:152:GLN:HB3	4:C:153:LEU:H	1.59	0.43
4:C:209:ALA:HA	4:C:213:ARG:NE	2.33	0.43
5:D:4:LEU:O	5:D:4:LEU:HG	2.17	0.43
6:E:30:GLN:CB	12:L:19:LEU:CD2	2.94	0.43
6:E:151:GLY:O	6:E:153:LEU:HD12	2.18	0.43
6:E:154:ASP:OD1	6:E:156:ASN:HB2	2.17	0.43
7:F:170:ALA:HA	7:F:173:ASP:OD2	2.19	0.43
8:G:102:ILE:CG2	8:G:114:HIS:HB3	2.49	0.43
9:H:29:PHE:N	9:H:32:PRO:CG	2.81	0.43
10:J:63:ALA:C	10:J:64:VAL:HG23	2.44	0.43
10:J:68:LYS:HA	10:J:71:ASP:OD1	2.18	0.43
12:L:92:LEU:HD23	12:L:92:LEU:C	2.44	0.43
14:N:73:ASN:N	14:N:73:ASN:ND2	2.62	0.43
14:N:89:SER:O	14:N:91:ALA:N	2.51	0.43
16:P:52:ARG:HG3	16:P:54:LEU:HD12	2.01	0.43
16:P:111:GLU:H	16:P:111:GLU:HG3	1.61	0.43
18:R:42:ALA:C	18:R:44:GLY:H	2.22	0.43
19:S:72:THR:O	19:S:73:LYS:HG2	2.18	0.43
21:U:5:ARG:O	21:U:8:ASP:HB2	2.18	0.43
21:U:65:GLN:C	21:U:67:SER:N	2.76	0.43
22:W:44:PHE:HB3	22:W:76:ARG:HG3	2.00	0.43
23:X:30:MET:CG	23:X:31:GLN:H	2.10	0.43
24:Y:50:VAL:C	24:Y:53:MET:HB2	2.43	0.43
25:Z:9:TYR:CE1	25:Z:11:GLU:HB2	2.53	0.43
29:3:28:LEU:HG	29:3:28:LEU:H	1.45	0.43
29:3:42:HIS:ND1	29:3:42:HIS:C	2.76	0.43
2:B:476:G:N2	2:B:478:A:H3'	2.33	0.43
2:B:586:A:N7	2:B:811:U:O4	2.52	0.43
2:B:684:G:H5'	28:2:15:SER:O	2.19	0.43
2:B:852:U:H2'	2:B:853:C:H6	1.83	0.43
2:B:981:A:C2	2:B:2028:U:H4'	2.54	0.43
2:B:1241:A:H2'	2:B:1242:U:C5'	2.49	0.43
2:B:1683:U:O2'	2:B:1684:G:H5'	2.19	0.43
2:B:1768:C:OP1	2:B:1961:C:OP1	2.36	0.43
2:B:1854:A:C5	2:B:2235:G:OP2	2.56	0.43
2:B:2002:G:C1'	5:D:132:ALA:H	2.22	0.43
2:B:2003:A:N3	5:D:138:LEU:N	2.45	0.43
2:B:2015:A:H5''	19:S:92:ARG:H	1.84	0.43
2:B:2028:U:H2'	2:B:2029:G:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2038:G:H2'	2:B:2039:U:O4'	2.19	0.43
2:B:2094:A:P	9:H:22:LYS:HD2	2.59	0.43
2:B:2269:G:HO2'	22:W:33:GLY:H	1.65	0.43
2:B:2271:G:P	22:W:18:LYS:CD	2.66	0.43
2:B:2812:G:H2'	2:B:2813:A:O4'	2.17	0.43
4:C:57:HIS:HB3	4:C:58:LYS:H	1.63	0.43
4:C:77:VAL:HG23	4:C:115:ILE:CD1	2.48	0.43
4:C:209:ALA:C	4:C:213:ARG:HD2	2.42	0.43
5:D:31:ALA:O	5:D:32:ASN:ND2	2.51	0.43
5:D:167:ASN:ND2	5:D:167:ASN:N	2.65	0.43
6:E:66:GLY:O	6:E:67:ARG:C	2.60	0.43
8:G:117:PRO:O	8:G:118:ALA:C	2.61	0.43
9:H:9:VAL:C	9:H:11:ASN:H	2.27	0.43
9:H:26:ALA:HA	9:H:30:LEU:HB2	2.01	0.43
9:H:29:PHE:H	9:H:32:PRO:HD2	1.83	0.43
10:J:63:ALA:CA	10:J:69:ARG:HD2	2.47	0.43
10:J:101:ILE:HG23	10:J:102:GLU:OE1	2.18	0.43
10:J:114:LEU:O	10:J:117:ALA:HB3	2.18	0.43
11:K:9:ASN:ND2	11:K:9:ASN:H	2.16	0.43
11:K:23:LYS:HG3	11:K:24:VAL:N	2.32	0.43
12:L:91:ASP:OD1	12:L:92:LEU:N	2.51	0.43
18:R:6:GLN:HG3	18:R:7:SER:H	1.83	0.43
18:R:18:GLN:HE21	18:R:99:THR:CB	2.29	0.43
20:T:64:LYS:HA	20:T:64:LYS:HD3	1.87	0.43
23:X:11:VAL:HG22	23:X:11:VAL:O	2.17	0.43
25:Z:6:HIS:H	25:Z:51:VAL:HG13	1.82	0.43
25:Z:49:ARG:C	25:Z:51:VAL:N	2.69	0.43
28:2:3:ARG:CG	32:2:96:HOH:O	2.63	0.43
28:2:13:ASN:HB2	28:2:18:PHE:CD2	2.43	0.43
29:3:24:LYS:HZ3	29:3:29:ARG:NH2	2.11	0.43
1:A:49:C:C5	15:O:67:ASN:HB3	2.48	0.43
1:A:91:C:H4'	13:M:22:GLN:CD	2.44	0.43
2:B:36:G:C2	2:B:37:C:C2	3.07	0.43
2:B:265:A:N6	2:B:427:U:O2'	2.52	0.43
2:B:374:A:H61	2:B:400:G:H1'	1.84	0.43
2:B:391:A:H1'	2:B:411:G:O4'	2.19	0.43
2:B:508:A:N3	2:B:508:A:O4'	2.52	0.43
2:B:559:G:H2'	2:B:560:C:O4'	2.17	0.43
2:B:747:U:H5	2:B:2014:A:C5'	1.92	0.43
2:B:912:C:H2'	2:B:913:U:C6	2.54	0.43
2:B:967:U:H2'	2:B:968:C:H6	1.80	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1129:A:P	2:B:2517:C:OP1	2.77	0.43
2:B:1268:A:H2'	2:B:1269:A:O4'	2.19	0.43
2:B:1476:U:C6	2:B:1732:C:N4	2.86	0.43
2:B:1541:C:O2'	2:B:1542:U:H5'	2.18	0.43
2:B:1659:G:C1'	5:D:134:HIS:CE1	2.74	0.43
2:B:1767:G:N9	2:B:1959:G:C4	2.87	0.43
2:B:1774:C:O2	2:B:1830:C:C2	2.67	0.43
2:B:1799:G:C5	4:C:175:LEU:CD2	2.99	0.43
2:B:1816:C:H5	4:C:61:TYR:O	1.92	0.43
2:B:1820:U:O5'	4:C:176:ARG:NH2	2.52	0.43
2:B:1954:G:OP2	2:B:1990:C:N4	2.52	0.43
2:B:1973:G:H2'	2:B:1974:C:H6	1.80	0.43
2:B:2286:G:H2'	2:B:2287:A:OP2	2.18	0.43
2:B:2334:U:O5'	15:O:8:ILE:O	2.36	0.43
2:B:2708:G:O2'	2:B:2709:G:H5'	2.19	0.43
2:B:2788:C:O2'	2:B:2809:A:C1'	2.65	0.43
2:B:2893:A:H4'	2:B:2894:G:C5'	2.48	0.43
4:C:159:THR:O	4:C:160:TYR:HD2	2.02	0.43
4:C:254:LYS:HB3	4:C:255:LYS:H	1.55	0.43
5:D:8:LYS:HB3	16:P:5:LYS:HE3	0.97	0.43
5:D:14:ILE:HG21	16:P:78:PRO:CB	2.48	0.43
6:E:141:MET:HG3	6:E:143:LEU:HD13	2.00	0.43
7:F:121:PHE:CE2	7:F:166:ARG:N	2.87	0.43
8:G:57:TYR:OH	8:G:59:ASP:HB2	2.18	0.43
8:G:121:THR:HG23	8:G:133:LYS:O	2.19	0.43
10:J:57:LEU:HD12	10:J:128:ASN:CA	2.48	0.43
11:K:47:ILE:O	11:K:48:PRO:C	2.60	0.43
13:M:42:THR:C	13:M:44:ARG:N	2.77	0.43
15:O:67:ASN:HA	15:O:67:ASN:HD22	1.57	0.43
16:P:27:VAL:HG22	16:P:28:LYS:N	2.34	0.43
17:Q:102:LYS:H	17:Q:102:LYS:CD	2.29	0.43
21:U:27:VAL:O	21:U:28:LEU:HG	2.18	0.43
21:U:40:LEU:O	21:U:42:LYS:HD2	2.18	0.43
1:A:15:A:H1'	1:A:109:A:N7	2.33	0.43
1:A:57:A:H3'	7:F:27:VAL:HG22	2.00	0.43
1:A:80:U:C4'	2:B:917:A:N1	2.44	0.43
2:B:6:A:O2'	2:B:7:G:H5'	2.18	0.43
2:B:226:A:N1	2:B:418:C:O2'	2.51	0.43
2:B:286:U:O2'	2:B:287:G:H5'	2.18	0.43
2:B:496:G:C2'	19:S:61:ASN:OD1	2.65	0.43
2:B:500:G:N2	2:B:502:A:H3'	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:567:U:O4'	2:B:576:U:H1'	2.18	0.43
2:B:789:A:O4'	28:2:5:PHE:HZ	2.01	0.43
2:B:920:A:H2'	2:B:921:C:H6	1.84	0.43
2:B:1750:G:HO2'	2:B:2859:G:H1	0.43	0.43
2:B:1824:G:H2'	2:B:1825:U:H6	1.84	0.43
2:B:2003:A:C4	5:D:139:SER:CA	3.02	0.43
2:B:2040:G:H2'	2:B:2041:U:O4'	2.19	0.43
2:B:2047:C:H2'	2:B:2048:G:H8	1.83	0.43
2:B:2200:C:O2	2:B:2226:C:N4	2.51	0.43
2:B:2218:G:OP1	25:Z:41:HIS:ND1	2.47	0.43
2:B:2247:A:C2'	2:B:2426:A:H1'	2.46	0.43
2:B:2263:C:H5'	2:B:2329:U:H1'	1.97	0.43
2:B:2581:G:H2'	2:B:2581:G:N3	2.33	0.43
2:B:2653:U:H2'	2:B:2654:A:C8	2.54	0.43
2:B:2786:U:O2'	5:D:62:LYS:O	2.37	0.43
3:V:77:VAL:HG13	13:M:132:THR:HG23	2.00	0.43
5:D:1:MET:HB2	5:D:84:LEU:HD22	2.01	0.43
5:D:52:THR:N	5:D:75:ALA:HB1	2.33	0.43
6:E:115:GLN:HB2	12:L:11:GLY:C	2.44	0.43
6:E:127:GLU:OE1	6:E:130:LYS:HG3	2.19	0.43
8:G:155:PRO:HB2	8:G:172:GLU:HG3	2.00	0.43
11:K:34:GLY:O	11:K:35:VAL:C	2.62	0.43
11:K:108:ARG:HD2	11:K:113:MET:HE3	2.00	0.43
12:L:55:MET:O	12:L:56:PRO:O	2.36	0.43
12:L:56:PRO:O	12:L:57:LEU:C	2.62	0.43
12:L:84:LYS:HA	12:L:84:LYS:CE	2.49	0.43
13:M:126:ILE:O	13:M:127:LYS:HB2	2.18	0.43
14:N:33:ILE:HG22	14:N:113:ILE:O	2.18	0.43
14:N:34:ILE:O	14:N:36:THR:HG22	2.18	0.43
14:N:78:LYS:O	14:N:82:GLU:HB2	2.19	0.43
16:P:92:ARG:NH2	16:P:110:LYS:HB3	2.34	0.43
19:S:1:MET:HB3	19:S:4:ILE:HG12	1.99	0.43
19:S:88:ARG:HB3	19:S:89:ALA:H	1.50	0.43
25:Z:59:ARG:O	25:Z:60:PHE:CG	2.71	0.43
25:Z:62:LYS:C	25:Z:64:PHE:H	2.26	0.43
1:A:48:U:H6	15:O:102:ARG:NH1	2.16	0.43
1:A:78:A:H61	1:A:98:G:H1'	1.83	0.43
2:B:381:G:O2'	2:B:382:A:H5'	2.19	0.43
2:B:443:A:C5'	6:E:44:ARG:HH12	2.30	0.43
2:B:539:G:H5'	10:J:7:LYS:CA	2.49	0.43
2:B:575:A:OP1	2:B:2030:A:C5	2.71	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:593:U:H5'	29:3:2:LYS:CE	2.49	0.43
2:B:919:U:H6	2:B:919:U:O5'	2.02	0.43
2:B:1038:G:H2'	2:B:1039:A:H8	1.80	0.43
2:B:1270:C:O3'	2:B:1325:U:N3	2.51	0.43
2:B:1277:G:C1'	14:N:24:MET:N	2.82	0.43
2:B:1425:G:H2'	2:B:1426:G:C8	2.54	0.43
2:B:1426:G:H8	2:B:1426:G:OP2	2.01	0.43
2:B:1588:G:H2'	2:B:1589:U:C6	2.54	0.43
2:B:1668:A:N3	2:B:2551:C:HO2'	1.56	0.43
2:B:1739:A:H2'	2:B:1740:G:H8	1.81	0.43
2:B:1789:A:H2'	2:B:1790:C:H6	1.84	0.43
2:B:1807:G:P	4:C:47:ARG:CB	3.05	0.43
2:B:1821:A:H2'	2:B:1822:C:H6	1.83	0.43
2:B:1958:C:C4	2:B:1986:C:N4	2.86	0.43
2:B:2293:G:H2'	2:B:2294:G:O4'	2.19	0.43
2:B:2331:G:H21	2:B:2336:A:H8	1.67	0.43
2:B:2400:G:H4'	27:1:18:HIS:CD2	2.54	0.43
2:B:2459:A:N3	13:M:76:LYS:HB2	2.34	0.43
2:B:2693:G:H21	16:P:95:LYS:HZ1	1.67	0.43
2:B:2716:C:O2'	2:B:2717:C:H5'	2.19	0.43
2:B:2723:C:H2'	2:B:2724:U:O4'	2.19	0.43
2:B:2801:G:H2'	2:B:2802:G:C8	2.54	0.43
3:V:26:PHE:HD2	3:V:44:HIS:HD1	1.65	0.43
4:C:253:GLY:O	4:C:254:LYS:HG3	2.19	0.43
5:D:8:LYS:HZ1	16:P:1:SER:CA	2.26	0.43
5:D:115:GLY:HA2	5:D:165:MET:CE	2.48	0.43
5:D:154:LYS:CD	5:D:157:LYS:H	2.32	0.43
8:G:29:ASN:N	8:G:29:ASN:ND2	2.60	0.43
11:K:87:LEU:CA	11:K:95:ILE:HG22	2.49	0.43
12:L:53:GLY:O	12:L:54:GLN:C	2.61	0.43
12:L:82:LEU:HA	12:L:86:GLU:OE1	2.19	0.43
15:O:86:GLY:O	15:O:89:ASP:HB2	2.18	0.43
16:P:108:ARG:H	16:P:108:ARG:CD	2.14	0.43
17:Q:5:ARG:O	17:Q:9:ALA:HB2	2.18	0.43
17:Q:63:ARG:CZ	17:Q:63:ARG:HB3	2.48	0.43
19:S:70:LYS:O	19:S:71:VAL:CB	2.65	0.43
28:2:9:VAL:O	28:2:10:LEU:C	2.61	0.43
29:3:15:LYS:NZ	29:3:59:ALA:HB1	2.34	0.43
30:4:12:ARG:N	30:4:12:ARG:HD2	2.34	0.43
2:B:1:G:H2'	2:B:2:G:H8	1.83	0.43
2:B:34:U:H6	32:B:3165:HOH:O	2.02	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:55:G:C4'	20:T:70:HIS:CE1	2.99	0.43
2:B:137:U:H6	2:B:137:U:O5'	2.01	0.43
2:B:181:A:O2'	2:B:182:A:H5'	2.18	0.43
2:B:182:A:H2	2:B:432:A:N1	2.11	0.43
2:B:448:U:C4	2:B:1259:G:C1'	3.02	0.43
2:B:701:G:O2'	2:B:702:U:H5'	2.18	0.43
2:B:789:A:H5'	28:2:4:THR:O	2.19	0.43
2:B:1158:C:O4'	24:Y:10:ARG:CZ	2.67	0.43
2:B:1313:U:O2	2:B:1313:U:C2'	2.67	0.43
2:B:1825:U:H5''	4:C:244:VAL:HG23	2.01	0.43
2:B:1952:A:C6	2:B:1992:G:OP2	2.72	0.43
2:B:2056:G:C4	2:B:2577:A:C6	3.05	0.43
2:B:2185:U:H2'	2:B:2186:G:C8	2.54	0.43
2:B:2216:G:OP1	25:Z:44:PHE:CE1	2.71	0.43
2:B:2245:U:O2	2:B:2441:U:C4	2.70	0.43
2:B:2263:C:O4'	2:B:2329:U:C4'	2.63	0.43
2:B:2378:A:C5'	15:O:117:PHE:HB3	2.49	0.43
2:B:2722:G:O2'	2:B:2723:C:H5'	2.18	0.43
3:V:42:LEU:HD12	3:V:47:VAL:HG11	2.01	0.43
4:C:21:PRO:C	4:C:202:ARG:HD2	2.44	0.43
5:D:11:MET:HE3	16:P:9:GLN:HA	1.93	0.43
6:E:133:LEU:HD13	6:E:133:LEU:HA	1.89	0.43
10:J:41:LYS:NZ	10:J:43:GLU:O	2.52	0.43
13:M:87:GLY:C	13:M:88:ASN:HD22	2.27	0.43
15:O:87:ILE:CG1	15:O:88:LYS:H	2.31	0.43
15:O:115:LEU:HD22	15:O:117:PHE:CZ	2.54	0.43
16:P:33:GLU:HB3	16:P:34:GLY:H	1.55	0.43
16:P:47:ILE:HG23	16:P:63:ILE:CB	2.49	0.43
17:Q:29:ARG:NH2	26:O:9:ARG:CG	2.80	0.43
18:R:7:SER:HB2	18:R:21:ARG:HH22	1.83	0.43
20:T:66:LYS:HA	20:T:77:ARG:HA	2.00	0.43
24:Y:22:THR:OG1	24:Y:23:LEU:N	2.51	0.43
30:4:31:PRO:O	30:4:32:LYS:C	2.60	0.43
1:A:89:U:O4	13:M:20:LEU:HG	2.19	0.43
2:B:7:G:C4	2:B:2897:U:O2	2.71	0.43
2:B:18:U:O2'	2:B:19:A:H5'	2.19	0.43
2:B:279:A:H2'	2:B:280:U:H5'	2.00	0.43
2:B:654:A:H2'	2:B:655:A:C5'	2.39	0.43
2:B:749:A:C1'	2:B:1617:C:H1'	2.48	0.43
2:B:989:G:OP2	24:Y:10:ARG:O	2.36	0.43
2:B:1076:C:O2'	2:B:1077:A:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1128:G:N1	2:B:2518:A:H5'	2.34	0.43
2:B:1250:G:OP2	12:L:32:GLY:C	2.60	0.43
2:B:1251:C:C5'	17:Q:12:ARG:NH1	2.79	0.43
2:B:1314:C:H1'	2:B:1604:C:O3'	2.19	0.43
2:B:1654:A:O4'	5:D:125:TRP:CZ3	2.67	0.43
2:B:1767:G:C4	2:B:1959:G:C4	3.07	0.43
2:B:1997:C:N3	2:B:2549:G:OP2	2.51	0.43
2:B:2015:A:C5'	19:S:92:ARG:H	2.32	0.43
2:B:2215:C:O3'	25:Z:44:PHE:CE2	2.72	0.43
2:B:2258:C:H2'	2:B:2427:C:C2	2.40	0.43
2:B:2378:A:C4	15:O:92:PHE:HE1	2.36	0.43
2:B:2898:U:H1'	10:J:135:GLN:HG3	1.15	0.43
3:V:79:ARG:HB3	13:M:134:THR:HG21	0.46	0.43
4:C:153:LEU:CD1	4:C:161:VAL:HG23	2.49	0.43
4:C:226:PRO:O	4:C:227:VAL:HG23	2.19	0.43
5:D:84:LEU:O	5:D:84:LEU:HD12	2.19	0.43
6:E:35:TYR:CD2	6:E:178:VAL:HG21	2.54	0.43
6:E:170:ARG:O	6:E:172:ALA:N	2.52	0.43
6:E:183:PHE:N	12:L:13:LYS:HG3	2.33	0.43
9:H:14:SER:C	9:H:16:GLY:N	2.76	0.43
9:H:32:PRO:C	9:H:34:GLY:H	2.27	0.43
11:K:5:GLN:O	11:K:6:THR:HB	2.17	0.43
12:L:92:LEU:CG	12:L:96:LYS:HZ3	2.32	0.43
13:M:82:MET:HB2	13:M:84:LYS:HD3	2.01	0.43
14:N:120:GLU:CB	26:O:51:ARG:CB	2.95	0.43
15:O:10:ARG:HH11	15:O:10:ARG:CG	2.28	0.43
16:P:22:GLY:O	16:P:90:ALA:O	2.37	0.43
17:Q:16:ILE:CD1	17:Q:34:ALA:HB2	2.39	0.43
18:R:2:TYR:HB2	18:R:44:GLY:O	2.19	0.43
18:R:33:VAL:HB	18:R:35:PHE:CE2	2.54	0.43
19:S:6:LYS:CB	19:S:104:THR:HG22	2.49	0.43
23:X:21:LEU:O	23:X:47:ARG:NH1	2.52	0.43
30:4:22:VAL:HG11	30:4:36:ARG:NE	2.34	0.43
30:4:25:VAL:HG23	30:4:35:GLN:HB2	2.01	0.43
1:A:49:C:O2	15:O:68:LYS:HD2	2.19	0.42
1:A:75:G:N1	1:A:102:G:N2	2.67	0.42
2:B:264:C:O2'	2:B:265:A:H5''	2.19	0.42
2:B:284:U:H2'	2:B:285:G:C8	2.53	0.42
2:B:414:C:C2	2:B:2409:G:C4	3.06	0.42
2:B:558:U:O2'	2:B:559:G:H5'	2.19	0.42
2:B:963:U:H2'	2:B:964:C:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1068:G:C6	2:B:1069:A:N6	2.86	0.42
2:B:1226:A:N3	18:R:85:LYS:CE	2.77	0.42
2:B:1396:U:O2	2:B:1396:U:O4'	2.34	0.42
2:B:1653:G:H22	5:D:140:HIS:HB3	1.83	0.42
2:B:1664:A:HO2'	2:B:2561:U:C3'	2.31	0.42
2:B:1666:G:C5	2:B:2560:A:C1'	2.80	0.42
2:B:1678:A:N1	2:B:1954:G:N1	2.61	0.42
2:B:1792:G:O2'	2:B:1793:C:H5'	2.19	0.42
2:B:1799:G:H8	4:C:175:LEU:CD1	2.05	0.42
2:B:2064:C:N4	2:B:2253:G:OP1	2.52	0.42
2:B:2243:U:O2	2:B:2434:A:C2	2.71	0.42
2:B:2251:G:H8	2:B:2251:G:OP2	2.02	0.42
2:B:2626:C:C3'	2:B:2627:G:C5'	2.95	0.42
2:B:2720:U:O4	2:B:2873:A:N6	2.51	0.42
2:B:2746:U:C4'	8:G:137:LYS:HB2	2.49	0.42
2:B:2805:C:O2'	2:B:2806:C:H5'	2.18	0.42
2:B:2880:C:H5''	14:N:90:ARG:CZ	2.48	0.42
4:C:87:SER:HG	4:C:200:MET:CG	2.32	0.42
5:D:135:GLY:C	5:D:137:SER:H	2.27	0.42
6:E:120:VAL:HG12	6:E:121:VAL:N	2.34	0.42
6:E:149:ILE:HA	6:E:168:ASP:O	2.18	0.42
6:E:177:PRO:O	6:E:178:VAL:C	2.62	0.42
7:F:62:GLN:HB3	7:F:63:LYS:H	1.62	0.42
9:H:65:ALA:O	9:H:138:VAL:HG21	2.19	0.42
10:J:38:GLY:HA2	10:J:41:LYS:HB3	2.01	0.42
10:J:81:ILE:CG2	10:J:82:GLY:N	2.68	0.42
10:J:102:GLU:HG2	10:J:103:ILE:H	1.83	0.42
12:L:67:THR:O	12:L:68:SER:HB2	2.18	0.42
13:M:21:ALA:O	13:M:96:ILE:HG13	2.18	0.42
13:M:29:GLY:H	13:M:102:LEU:HG	1.84	0.42
15:O:21:LEU:C	15:O:23:ALA:N	2.76	0.42
17:Q:107:ALA:O	18:R:52:PRO:CD	2.67	0.42
18:R:4:VAL:HG11	18:R:42:ALA:N	2.34	0.42
21:U:76:THR:O	21:U:77:GLY:C	2.60	0.42
22:W:44:PHE:H	22:W:76:ARG:HG3	1.83	0.42
26:0:29:VAL:CB	26:0:36:LYS:HD2	2.49	0.42
27:1:8:ILE:HG21	27:1:27:ARG:NH2	2.34	0.42
1:A:105:G:O2'	1:A:106:G:H5'	2.19	0.42
2:B:39:G:O2'	2:B:40:U:H5'	2.18	0.42
2:B:125:A:C5	32:B:3371:HOH:O	2.69	0.42
2:B:201:C:O4'	2:B:250:G:C6	2.72	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:308:G:N2	2:B:477:A:N9	2.67	0.42
2:B:518:G:H4'	19:S:15:GLN:CB	2.48	0.42
2:B:567:U:C2'	32:B:3347:HOH:O	2.44	0.42
2:B:669:G:O3'	2:B:670:A:C3'	2.67	0.42
2:B:747:U:H5	2:B:2013:A:O2'	2.01	0.42
2:B:1158:C:H4'	24:Y:31:ILE:HG12	1.56	0.42
2:B:1224:U:C2'	18:R:87:GLN:HA	2.48	0.42
2:B:1668:A:N3	2:B:1670:C:C4	2.87	0.42
2:B:1736:U:H2'	2:B:1737:G:C8	2.54	0.42
2:B:1936:A:C4	2:B:1985:C:C4'	3.02	0.42
2:B:1997:C:C2'	2:B:2548:U:H6	2.21	0.42
2:B:2016:U:H3'	26:O:2:VAL:HG22	1.75	0.42
2:B:2038:G:H2'	2:B:2039:U:C6	2.54	0.42
2:B:2270:A:N6	2:B:2271:G:C2	2.87	0.42
2:B:2279:G:H22	2:B:2327:A:H2	1.61	0.42
2:B:2329:U:H2'	2:B:2330:G:H8	1.84	0.42
2:B:2461:A:H8	13:M:78:LEU:CD2	2.33	0.42
2:B:2582:G:C4	2:B:2583:G:O4'	2.59	0.42
2:B:2630:G:O4'	2:B:2894:G:C5	2.71	0.42
2:B:2630:G:H2'	2:B:2631:G:H8	1.84	0.42
2:B:2737:G:H2'	2:B:2738:A:C8	2.54	0.42
2:B:2899:A:H2'	2:B:2900:A:H8	1.84	0.42
4:C:145:MET:HE1	4:C:152:GLN:NE2	2.35	0.42
4:C:222:THR:O	4:C:224:MET:N	2.52	0.42
5:D:128:ARG:NH2	5:D:130:GLN:HG3	2.34	0.42
5:D:187:LEU:HD23	5:D:187:LEU:C	2.44	0.42
6:E:23:PHE:O	6:E:24:ASN:C	2.62	0.42
6:E:49:ARG:C	6:E:51:GLU:H	2.27	0.42
6:E:118:LEU:CD1	6:E:187:VAL:HG12	2.46	0.42
6:E:181:ILE:CG1	12:L:15:ALA:H	2.12	0.42
6:E:193:VAL:HG12	6:E:194:LYS:N	2.34	0.42
8:G:9:VAL:CG2	8:G:47:ASN:HB2	2.48	0.42
8:G:169:ARG:C	8:G:171:LYS:N	2.77	0.42
10:J:34:ARG:CB	10:J:39:LYS:HD2	2.49	0.42
13:M:11:LYS:O	13:M:12:MET:C	2.62	0.42
13:M:70:ASP:C	13:M:71:LYS:HG3	2.44	0.42
14:N:1:MET:SD	14:N:2:ARG:HB2	2.60	0.42
15:O:114:GLY:O	15:O:115:LEU:C	2.61	0.42
16:P:32:VAL:HG22	16:P:40:GLN:HE21	1.85	0.42
16:P:54:LEU:HB3	16:P:55:HIS:H	1.47	0.42
16:P:56:SER:O	16:P:58:PHE:HD2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:51:VAL:O	18:R:52:PRO:C	2.61	0.42
19:S:5:ALA:C	19:S:6:LYS:HG2	2.43	0.42
20:T:60:THR:HA	20:T:83:ALA:HA	2.01	0.42
25:Z:32:LEU:C	25:Z:33:ASN:OD1	2.62	0.42
29:3:19:GLY:O	29:3:20:GLY:C	2.60	0.42
1:A:23:G:N7	7:F:22:ASN:CA	2.59	0.42
1:A:81:G:O4'	2:B:919:U:H5'	2.17	0.42
2:B:24:G:C4'	19:S:8:ARG:HH22	2.32	0.42
2:B:161:A:H8	2:B:161:A:O5'	2.02	0.42
2:B:372:G:N2	2:B:400:G:H2'	2.34	0.42
2:B:482:A:H3'	21:U:45:GLN:OE1	2.19	0.42
2:B:580:U:O2'	17:Q:30:VAL:HA	2.19	0.42
2:B:586:A:H5''	6:E:85:PHE:CE1	2.53	0.42
2:B:607:U:O4	2:B:620:G:H5''	2.19	0.42
2:B:958:U:P	13:M:15:GLY:C	2.98	0.42
2:B:1115:G:H2'	2:B:1116:G:H8	1.84	0.42
2:B:1224:U:H4'	18:R:78:ARG:HG3	1.77	0.42
2:B:1289:C:H2'	2:B:1290:C:H6	1.83	0.42
2:B:1552:A:C2'	2:B:1553:A:H5'	2.47	0.42
2:B:1561:C:H2'	2:B:1562:U:H6	1.84	0.42
2:B:1636:U:H4'	2:B:1760:C:O2'	2.19	0.42
2:B:1765:U:C4	2:B:1949:G:N2	2.87	0.42
2:B:1828:G:HO3'	2:B:1972:G:N7	1.54	0.42
2:B:1936:A:O4'	2:B:1984:G:C2'	2.67	0.42
2:B:2006:C:H6	5:D:143:PRO:CG	2.28	0.42
2:B:2140:G:H2'	2:B:2141:G:C8	2.54	0.42
2:B:2146:C:H1'	2:B:2147:A:H1'	2.02	0.42
2:B:2256:G:N2	2:B:2449:U:C3'	2.82	0.42
2:B:2312:U:H4'	7:F:70:ARG:N	2.33	0.42
2:B:2820:A:C4'	14:N:4:ARG:HB2	2.49	0.42
3:V:2:PHE:CG	3:V:61:LEU:HD22	2.54	0.42
3:V:77:VAL:HG22	13:M:132:THR:HA	1.65	0.42
4:C:107:LYS:HG3	4:C:108:GLY:N	2.34	0.42
4:C:156:SER:O	4:C:159:THR:N	2.52	0.42
4:C:177:SER:C	4:C:179:GLU:H	2.27	0.42
4:C:219:VAL:O	4:C:220:ARG:NE	2.48	0.42
6:E:161:ALA:O	6:E:162:ARG:HD2	2.19	0.42
7:F:67:THR:OG1	7:F:85:GLY:HA3	2.19	0.42
7:F:133:GLU:CD	7:F:147:ARG:HD3	2.45	0.42
8:G:94:ARG:NH1	8:G:127:GLN:HB2	2.34	0.42
8:G:151:ARG:O	8:G:152:ARG:C	2.61	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:25:LEU:HD12	10:J:62:VAL:CB	2.49	0.42
12:L:85:VAL:HG21	12:L:98:ALA:CB	2.48	0.42
13:M:1:MET:HA	13:M:65:ILE:O	2.19	0.42
14:N:34:ILE:N	14:N:34:ILE:CD1	2.81	0.42
15:O:76:LYS:O	15:O:77:ALA:C	2.62	0.42
17:Q:8:ILE:O	17:Q:9:ALA:C	2.62	0.42
17:Q:59:LEU:CG	17:Q:63:ARG:HH21	2.32	0.42
19:S:8:ARG:HH12	19:S:79:GLY:HA2	1.82	0.42
19:S:9:HIS:C	19:S:11:ARG:H	2.27	0.42
19:S:28:LYS:HB3	19:S:71:VAL:CB	2.49	0.42
21:U:27:VAL:HA	21:U:32:LYS:C	2.43	0.42
25:Z:49:ARG:HH21	25:Z:53:THR:HG21	1.85	0.42
27:1:31:GLU:HB3	27:1:32:LYS:CE	2.49	0.42
29:3:25:HIS:HB3	29:3:26:ALA:H	1.57	0.42
1:A:3:C:H2'	1:A:4:C:O4'	2.20	0.42
1:A:57:A:C2	7:F:12:VAL:CG2	3.03	0.42
1:A:58:A:H2'	7:F:26:GLN:HA	0.99	0.42
2:B:5:A:C2	2:B:2899:A:N9	2.80	0.42
2:B:141:G:H1	20:T:2:ILE:HG21	1.84	0.42
2:B:320:A:OP1	6:E:132:LYS:HG2	2.14	0.42
2:B:428:A:H2'	2:B:429:A:O4'	2.20	0.42
2:B:458:G:N7	28:2:39:ARG:O	2.32	0.42
2:B:503:A:H5''	2:B:504:A:H3'	2.00	0.42
2:B:545:U:H2'	2:B:547:A:P	2.58	0.42
2:B:671:C:C6	12:L:39:LYS:CG	2.86	0.42
2:B:687:C:H2'	2:B:688:U:O4'	2.19	0.42
2:B:953:G:H2'	2:B:954:G:H8	1.84	0.42
2:B:1050:A:H2'	2:B:1051:G:O4'	2.19	0.42
2:B:1072:C:N3	2:B:1092:C:N4	2.66	0.42
2:B:1159:U:H2'	2:B:1160:G:C8	2.53	0.42
2:B:1223:G:N3	18:R:76:LYS:NZ	2.67	0.42
2:B:1260:A:H2'	2:B:1261:C:C6	2.54	0.42
2:B:1304:A:O2'	2:B:1305:C:H5'	2.20	0.42
2:B:1361:G:C4'	2:B:2214:C:C4	2.74	0.42
2:B:1428:C:H2'	2:B:1569:A:OP2	2.20	0.42
2:B:1516:G:N2	2:B:1732:C:N3	2.65	0.42
2:B:1664:A:C1'	11:K:22:ILE:HD12	2.50	0.42
2:B:1668:A:OP2	2:B:1954:G:OP2	2.37	0.42
2:B:1717:A:H2'	2:B:1718:G:O4'	2.19	0.42
2:B:1766:G:N7	2:B:1958:C:C1'	2.74	0.42
2:B:1784:A:H4'	2:B:1938:A:N1	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1887:C:H2'	2:B:2234:G:HO2'	1.82	0.42
2:B:2006:C:H5'	5:D:143:PRO:HG2	1.11	0.42
2:B:2050:C:H2'	2:B:2051:A:C8	2.55	0.42
2:B:2071:A:N6	2:B:2433:A:HO2'	2.16	0.42
2:B:2313:C:O2'	2:B:2314:A:H5'	2.19	0.42
2:B:2373:G:O2'	2:B:2374:C:H5'	2.20	0.42
2:B:2416:C:OP2	29:3:30:HIS:CD2	2.68	0.42
3:V:2:PHE:HB3	3:V:3:THR:H	1.60	0.42
4:C:78:GLU:H	4:C:93:VAL:H	1.66	0.42
5:D:36:GLN:HA	5:D:46:ARG:CZ	2.49	0.42
6:E:4:VAL:HG13	6:E:5:LEU:N	2.33	0.42
6:E:49:ARG:HH11	6:E:49:ARG:CG	2.31	0.42
6:E:176:ASP:CG	6:E:177:PRO:HD2	2.44	0.42
7:F:107:VAL:CG1	7:F:116:LEU:HD21	2.48	0.42
8:G:30:GLY:C	8:G:31:GLU:HG3	2.44	0.42
11:K:25:LEU:C	11:K:27:GLY:N	2.77	0.42
11:K:63:VAL:HG21	11:K:85:VAL:HG21	2.00	0.42
12:L:34:GLY:O	12:L:35:HIS:C	2.62	0.42
12:L:110:VAL:O	12:L:126:ARG:NH2	2.53	0.42
13:M:9:PHE:C	13:M:10:ARG:NE	2.78	0.42
13:M:15:GLY:O	13:M:16:ARG:HB3	2.18	0.42
13:M:82:MET:HB2	13:M:84:LYS:CD	2.49	0.42
13:M:133:LYS:O	13:M:134:THR:C	2.59	0.42
15:O:20:GLU:O	15:O:21:LEU:C	2.61	0.42
20:T:56:GLU:HB3	20:T:57:VAL:HG23	2.01	0.42
21:U:60:LYS:HD2	21:U:60:LYS:HA	1.81	0.42
25:Z:62:LYS:C	25:Z:64:PHE:N	2.77	0.42
26:O:37:HIS:HB3	26:O:38:LEU:H	1.57	0.42
27:1:53:ILE:HD13	27:1:54:LYS:H	1.82	0.42
30:4:23:ILE:O	30:4:24:ARG:O	2.36	0.42
2:B:139:U:H2'	20:T:2:ILE:HA	1.36	0.42
2:B:220:G:O4'	2:B:234:U:C1'	2.63	0.42
2:B:265:A:H2'	2:B:266:G:O4'	2.19	0.42
2:B:560:C:H3'	2:B:561:G:C8	2.54	0.42
2:B:817:C:O2	2:B:839:U:H4'	2.20	0.42
2:B:1050:A:H2	2:B:2751:G:C6	2.37	0.42
2:B:1124:G:N2	30:4:23:ILE:CG2	2.72	0.42
2:B:1652:A:H2'	5:D:122:VAL:CB	2.49	0.42
2:B:1656:C:C2	5:D:145:SER:HB2	2.54	0.42
2:B:1667:G:H8	2:B:1953:A:H5'	1.39	0.42
2:B:1764:C:C4	2:B:1949:G:N2	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1817:G:H4'	4:C:87:SER:H	1.61	0.42
2:B:1821:A:O4'	4:C:155:ARG:HD2	2.19	0.42
2:B:1824:G:H2'	2:B:1825:U:C6	2.54	0.42
2:B:1938:A:H5'	2:B:1982:U:O2	2.18	0.42
2:B:1971:U:N3	4:C:239:PHE:CD1	2.76	0.42
2:B:2061:G:C2	2:B:2254:C:C5	3.07	0.42
2:B:2242:G:OP1	25:Z:21:VAL:HG22	2.20	0.42
2:B:2257:U:H5'	2:B:2450:A:H5''	1.14	0.42
2:B:2265:U:H3'	2:B:2266:A:C5'	2.50	0.42
2:B:2511:U:H4'	5:D:144:GLY:O	2.19	0.42
2:B:2651:C:O2'	2:B:2652:C:H5'	2.20	0.42
2:B:2746:U:C3'	8:G:137:LYS:HG3	2.45	0.42
3:V:80:HIS:HD2	3:V:83:LYS:H	1.59	0.42
3:V:85:LYS:C	3:V:86:LEU:HD12	2.44	0.42
4:C:51:ARG:O	4:C:51:ARG:NE	2.53	0.42
4:C:64:VAL:HB	4:C:65:ASP:H	1.33	0.42
4:C:90:ILE:C	4:C:91:ALA:O	2.63	0.42
4:C:130:PRO:HA	4:C:187:CYS:O	2.19	0.42
5:D:9:VAL:CB	16:P:5:LYS:HD2	2.47	0.42
5:D:140:HIS:HB3	5:D:141:ARG:H	1.61	0.42
5:D:187:LEU:O	5:D:188:LEU:HD12	2.20	0.42
6:E:46:GLN:O	6:E:47:LYS:C	2.63	0.42
6:E:58:LYS:HA	6:E:59:PRO:HD3	1.80	0.42
7:F:173:ASP:OD1	7:F:173:ASP:N	2.52	0.42
11:K:87:LEU:HA	11:K:94:PRO:HA	2.00	0.42
11:K:102:PRO:HA	11:K:121:GLU:CB	2.46	0.42
12:L:90:VAL:HG11	12:L:120:VAL:HG23	2.01	0.42
12:L:96:LYS:HE3	12:L:100:ILE:HG13	2.02	0.42
14:N:116:VAL:C	14:N:118:ARG:H	2.27	0.42
16:P:60:VAL:C	16:P:61:ARG:HG3	2.44	0.42
16:P:93:LYS:HB2	16:P:96:LEU:HD12	2.02	0.42
20:T:29:THR:HB	20:T:85:VAL:O	2.20	0.42
25:Z:30:HIS:O	25:Z:31:ASP:HB3	2.19	0.42
27:1:46:VAL:HG22	27:1:47:ILE:N	2.28	0.42
28:2:42:LEU:HD12	28:2:43:THR:H	1.83	0.42
29:3:27:ASN:OD1	29:3:28:LEU:HD23	2.19	0.42
30:4:14:CYS:SG	30:4:25:VAL:O	2.77	0.42
2:B:607:U:OP2	6:E:98:LYS:CD	2.66	0.42
2:B:635:C:O2'	2:B:639:U:H5''	2.19	0.42
2:B:827:U:H5	2:B:2246:G:O2'	1.87	0.42
2:B:828:U:C3'	2:B:2446:G:OP2	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:904:G:H2'	2:B:905:A:C8	2.54	0.42
2:B:930:G:H4'	24:Y:29:ARG:HH11	1.83	0.42
2:B:1262:A:P	19:S:97:LEU:HD11	2.59	0.42
2:B:1294:U:O3'	14:N:71:ARG:CA	2.65	0.42
2:B:1386:C:H2'	2:B:1387:A:H8	1.82	0.42
2:B:1664:A:N9	11:K:22:ILE:HD12	2.35	0.42
2:B:2006:C:OP1	2:B:2051:A:OP1	2.37	0.42
2:B:2014:A:N7	2:B:2612:C:O2'	2.40	0.42
2:B:2471:A:HO2'	2:B:2472:G:H8	1.49	0.42
2:B:2506:U:N3	2:B:2583:G:N1	2.56	0.42
2:B:2645:G:H4'	2:B:2646:C:OP2	2.19	0.42
3:V:16:ALA:O	3:V:19:ARG:HB2	2.19	0.42
4:C:67:LYS:O	4:C:68:ARG:CB	2.67	0.42
5:D:26:VAL:O	5:D:27:ILE:C	2.62	0.42
5:D:55:LYS:HB2	5:D:55:LYS:NZ	2.34	0.42
6:E:83:VAL:O	6:E:83:VAL:HG13	2.19	0.42
7:F:55:ASP:CG	7:F:148:VAL:HG11	2.44	0.42
8:G:32:LEU:HD11	8:G:74:MET:SD	2.58	0.42
9:H:3:VAL:C	9:H:4:ILE:HG13	2.45	0.42
11:K:9:ASN:O	11:K:84:CYS:HB2	2.20	0.42
11:K:24:VAL:HA	11:K:39:ILE:CD1	2.50	0.42
12:L:55:MET:O	12:L:59:ARG:HG2	2.19	0.42
12:L:57:LEU:HD13	12:L:58:TYR:CE1	2.55	0.42
14:N:1:MET:CG	14:N:2:ARG:H	2.32	0.42
15:O:45:SER:C	15:O:47:VAL:H	2.26	0.42
15:O:88:LYS:C	15:O:90:VAL:H	2.27	0.42
18:R:43:ASN:OD1	18:R:56:GLY:HA3	2.20	0.42
19:S:12:SER:OG	19:S:16:LYS:NZ	2.53	0.42
22:W:21:GLY:HA3	22:W:32:ALA:HA	2.01	0.42
22:W:44:PHE:C	22:W:44:PHE:HD1	2.27	0.42
23:X:44:LYS:HD2	23:X:48:ARG:NE	2.34	0.42
25:Z:59:ARG:HB2	25:Z:60:PHE:H	1.42	0.42
30:4:24:ARG:HD3	30:4:26:ILE:HG23	2.01	0.42
2:B:213:A:H2'	2:B:214:G:C8	2.54	0.42
2:B:483:A:OP1	21:U:45:GLN:OE1	2.37	0.42
2:B:530:G:C2	2:B:2035:G:H5'	2.55	0.42
2:B:593:U:C6	29:3:2:LYS:HD3	2.55	0.42
2:B:684:G:O3'	28:2:16:HIS:HB2	2.20	0.42
2:B:708:G:H2'	2:B:709:U:H6	1.85	0.42
2:B:808:G:C4	6:E:69:ARG:NH2	2.85	0.42
2:B:981:A:H3'	2:B:982:C:C5'	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1149:G:H2'	2:B:1150:C:C6	2.54	0.42
2:B:1266:G:H1	19:S:96:ILE:HG23	1.85	0.42
2:B:1294:U:C3'	14:N:71:ARG:HB2	2.43	0.42
2:B:1338:G:H2'	2:B:1393:A:H1'	2.00	0.42
2:B:1340:U:O3'	2:B:1394:U:O2'	2.20	0.42
2:B:1446:C:O2'	2:B:1447:C:H5'	2.20	0.42
2:B:1636:U:O2'	2:B:1637:A:H5'	2.20	0.42
2:B:1716:U:H2'	2:B:1717:A:H8	1.81	0.42
2:B:1826:G:H2'	2:B:1827:U:C6	2.54	0.42
2:B:1828:G:C8	2:B:1970:A:C2'	3.01	0.42
2:B:1922:G:H2'	2:B:1923:U:O4'	2.19	0.42
2:B:1949:G:O2'	2:B:1988:G:N2	2.52	0.42
2:B:1995:U:N3	2:B:2560:A:N7	2.63	0.42
2:B:2013:A:H62	2:B:2612:C:H3'	1.76	0.42
2:B:2103:C:H3'	2:B:2104:C:O4'	2.19	0.42
2:B:2653:U:H3'	2:B:2654:A:H2'	2.02	0.42
2:B:2683:C:H2'	2:B:2684:U:H6	1.83	0.42
4:C:160:TYR:HA	4:C:193:GLU:HG2	2.00	0.42
4:C:198:GLU:C	4:C:200:MET:N	2.76	0.42
6:E:128:ALA:O	6:E:157:LEU:HD22	2.20	0.42
7:F:103:ILE:HG13	7:F:104:THR:N	2.34	0.42
7:F:150:GLY:O	7:F:151:LEU:HD12	2.20	0.42
10:J:46:PRO:C	10:J:48:VAL:N	2.78	0.42
11:K:24:VAL:HG22	11:K:39:ILE:HD12	2.00	0.42
11:K:99:ILE:HD12	11:K:99:ILE:N	2.34	0.42
13:M:43:ALA:C	13:M:45:GLN:H	2.26	0.42
13:M:109:PRO:N	13:M:112:LEU:HD13	2.35	0.42
14:N:114:GLU:HG2	14:N:115:LEU:N	2.25	0.42
16:P:61:ARG:HB2	16:P:61:ARG:NH1	2.34	0.42
19:S:86:MET:SD	19:S:96:ILE:HD11	2.59	0.42
20:T:62:VAL:O	20:T:63:VAL:CG1	2.67	0.42
22:W:5:ALA:O	22:W:6:GLY:C	2.63	0.42
26:O:28:SER:O	26:O:29:VAL:CB	2.68	0.42
28:2:21:ARG:CB	28:2:31:LEU:HD21	2.49	0.42
1:A:43:C:C2	7:F:91:ARG:HD2	2.47	0.42
2:B:37:C:H4'	2:B:451:U:P	2.60	0.42
2:B:112:U:H4'	23:X:58:ASN:HD21	1.84	0.42
2:B:200:U:H2'	2:B:250:G:C6	2.55	0.42
2:B:372:G:O2'	2:B:373:U:P	2.77	0.42
2:B:408:G:O2'	2:B:409:G:H5'	2.19	0.42
2:B:593:U:H5'	29:3:2:LYS:HZ3	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:642:U:C4'	2:B:2350:C:OP1	2.67	0.42
2:B:834:G:O2'	2:B:835:C:H5'	2.20	0.42
2:B:958:U:H6	13:M:18:ARG:N	2.18	0.42
2:B:1100:C:H2'	2:B:1101:U:H6	1.84	0.42
2:B:1292:G:H2'	2:B:1293:C:H6	1.85	0.42
2:B:1541:C:H2'	2:B:1542:U:H6	1.85	0.42
2:B:1766:G:N7	2:B:1958:C:C2	2.88	0.42
2:B:1792:G:N3	2:B:1970:A:C6	2.88	0.42
2:B:1824:G:O4'	4:C:247:TRP:CH2	2.73	0.42
2:B:2014:A:C2'	2:B:2611:C:O2	2.67	0.42
2:B:2033:A:H1'	2:B:2035:G:OP2	2.20	0.42
2:B:2265:U:H3'	2:B:2266:A:H5''	2.01	0.42
2:B:2378:A:H1'	15:O:92:PHE:HE1	1.82	0.42
2:B:2458:G:H8	2:B:2459:A:H62	1.67	0.42
2:B:2461:A:C8	13:M:78:LEU:CD2	3.03	0.42
2:B:2660:A:H2'	2:B:2661:G:O4'	2.20	0.42
2:B:2691:C:H2'	2:B:2692:G:H8	1.84	0.42
2:B:2768:U:H2'	2:B:2769:U:O4'	2.18	0.42
2:B:2867:G:C6	16:P:20:ARG:CZ	2.80	0.42
4:C:237:ARG:C	4:C:237:ARG:HE	2.27	0.42
5:D:67:HIS:NE2	5:D:72:GLY:N	2.67	0.42
5:D:108:ASP:HB2	5:D:173:GLN:HA	2.00	0.42
8:G:99:GLY:C	8:G:101:VAL:H	2.28	0.42
9:H:81:ALA:CB	9:H:147:VAL:H	2.33	0.42
11:K:114:LYS:O	11:K:118:LEU:HD12	2.19	0.42
12:L:33:ARG:HH11	12:L:34:GLY:HA3	1.85	0.42
12:L:35:HIS:ND1	12:L:35:HIS:O	2.52	0.42
12:L:78:ARG:HG2	12:L:99:ASN:CB	2.34	0.42
19:S:6:LYS:HA	19:S:104:THR:H	1.84	0.42
20:T:15:HIS:CG	20:T:31:VAL:HG11	2.54	0.42
21:U:5:ARG:CG	21:U:6:ARG:N	2.83	0.42
23:X:44:LYS:O	23:X:48:ARG:HD2	2.20	0.42
25:Z:2:LYS:C	25:Z:4:ASP:N	2.75	0.42
25:Z:55:GLY:HA2	25:Z:63:ARG:CG	2.45	0.42
27:1:36:LYS:HD2	27:1:36:LYS:N	2.35	0.42
27:1:46:VAL:O	27:1:47:ILE:HG12	2.20	0.42
30:4:33:HIS:H	30:4:33:HIS:HD2	1.66	0.42
2:B:76:C:O3'	23:X:52:ARG:HA	2.13	0.42
2:B:90:U:O4	2:B:91:A:N6	2.53	0.42
2:B:201:C:O4'	2:B:250:G:N1	2.52	0.42
2:B:448:U:C2	2:B:1259:G:C5'	3.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:820:A:H2'	2:B:821:A:O4'	2.19	0.42
2:B:952:G:C6	2:B:966:G:C6	3.07	0.42
2:B:1009:A:N3	2:B:1153:C:O2'	2.48	0.42
2:B:1337:G:H1'	32:B:3422:HOH:O	2.19	0.42
2:B:1439:A:N7	2:B:1440:U:C2	2.88	0.42
2:B:1746:A:O2'	2:B:1747:U:H5'	2.20	0.42
2:B:1759:A:C4	2:B:2697:G:C4'	2.98	0.42
2:B:2009:A:C5'	2:B:2823:A:N9	2.73	0.42
2:B:2017:U:OP2	26:O:3:GLN:O	2.38	0.42
2:B:2053:G:C2'	2:B:2054:A:H5'	2.50	0.42
2:B:2246:G:O5'	2:B:2444:G:O6	2.37	0.42
2:B:2263:C:H5'	2:B:2329:U:O4'	2.19	0.42
2:B:2265:U:O4	22:W:14:ASP:CG	2.62	0.42
2:B:2682:A:O2'	2:B:2683:C:H5'	2.20	0.42
3:V:79:ARG:CG	13:M:134:THR:CB	2.85	0.42
4:C:140:VAL:CG2	4:C:141:HIS:H	2.28	0.42
4:C:229:HIS:O	4:C:231:HIS:N	2.39	0.42
6:E:38:GLY:C	6:E:40:ARG:N	2.78	0.42
7:F:140:ILE:HG22	7:F:141:ASP:N	2.35	0.42
12:L:55:MET:CG	12:L:56:PRO:HD3	2.24	0.42
12:L:59:ARG:HA	12:L:59:ARG:HD2	1.82	0.42
12:L:92:LEU:HD21	12:L:96:LYS:NZ	2.31	0.42
13:M:10:ARG:HB2	13:M:11:LYS:HE3	2.02	0.42
13:M:100:LYS:O	13:M:101:VAL:HG13	2.20	0.42
14:N:29:VAL:HG12	14:N:78:LYS:HG2	2.02	0.42
14:N:119:SER:C	26:O:51:ARG:HG2	2.42	0.42
16:P:1:SER:O	16:P:2:ASN:C	2.63	0.42
16:P:22:GLY:O	16:P:91:VAL:HA	2.20	0.42
17:Q:47:ARG:HA	17:Q:47:ARG:HD2	1.67	0.42
17:Q:100:PHE:CE2	18:R:13:ARG:NH1	2.88	0.42
18:R:60:LYS:HD2	18:R:60:LYS:HA	1.79	0.42
18:R:78:ARG:HD3	18:R:87:GLN:C	2.39	0.42
20:T:70:HIS:ND1	20:T:74:ILE:HB	2.35	0.42
25:Z:15:SER:O	25:Z:21:VAL:HB	2.19	0.42
26:O:32:THR:C	26:O:34:GLY:H	2.27	0.42
27:1:36:LYS:HB3	27:1:37:LYS:H	1.73	0.42
29:3:35:LYS:O	29:3:36:ALA:HB3	2.20	0.42
2:B:23:G:O2'	2:B:24:G:H5'	2.20	0.42
2:B:34:U:C4'	32:B:3165:HOH:O	2.30	0.42
2:B:197:A:O4'	2:B:2444:G:H5'	2.20	0.42
2:B:544:C:H2'	2:B:545:U:C2	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:567:U:H2'	2:B:568:U:O4'	2.20	0.42
2:B:971:G:P	2:B:974:G:N2	2.87	0.42
2:B:1056:G:N2	2:B:1104:C:N4	2.68	0.42
2:B:1360:G:C2'	2:B:2212:A:N1	2.83	0.42
2:B:1446:C:H2'	2:B:1447:C:C6	2.55	0.42
2:B:1652:A:O2'	5:D:120:GLY:C	2.62	0.42
2:B:1663:G:H5'	11:K:20:MET:HG2	1.76	0.42
2:B:1663:G:N2	2:B:2548:U:C2	2.88	0.42
2:B:1768:C:O2	2:B:1961:C:C4	2.73	0.42
2:B:1784:A:H4'	2:B:1785:A:O5'	2.20	0.42
2:B:1994:C:H2'	2:B:2550:G:N1	2.34	0.42
2:B:2002:G:C2'	5:D:133:THR:N	2.79	0.42
2:B:2005:A:C5'	5:D:142:VAL:HG11	2.50	0.42
2:B:2043:C:N3	2:B:2777:G:C2	2.87	0.42
2:B:2067:G:H1'	2:B:2431:U:OP2	2.20	0.42
2:B:2080:A:H2'	2:B:2081:U:C6	2.55	0.42
2:B:2270:A:C5'	22:W:17:ALA:C	2.91	0.42
2:B:2455:G:H2'	2:B:2456:C:H6	1.85	0.42
2:B:2523:G:O2'	2:B:2524:G:H5'	2.20	0.42
2:B:2563:U:H4'	11:K:27:GLY:HA2	2.00	0.42
2:B:2590:A:H2'	2:B:2591:C:H6	1.83	0.42
3:V:79:ARG:CD	13:M:134:THR:CG2	2.84	0.42
4:C:42:ARG:CG	4:C:43:ASN:N	2.73	0.42
5:D:13:ARG:O	5:D:21:SER:OG	2.38	0.42
5:D:23:PRO:HG2	5:D:178:VAL:HG21	2.02	0.42
5:D:148:GLN:CD	5:D:148:GLN:N	2.78	0.42
10:J:43:GLU:CG	10:J:44:TYR:H	2.23	0.42
10:J:55:ILE:HD13	10:J:132:HIS:NE2	2.35	0.42
10:J:138:GLN:O	10:J:139:VAL:HG13	2.19	0.42
11:K:107:LEU:C	11:K:109:SER:N	2.76	0.42
12:L:30:THR:CB	12:L:36:LYS:HB2	2.44	0.42
12:L:74:THR:O	12:L:75:ALA:C	2.60	0.42
15:O:16:ARG:CG	15:O:20:GLU:HG3	2.48	0.42
15:O:17:LYS:NZ	22:W:77:LYS:HE3	2.35	0.42
16:P:2:ASN:C	16:P:3:ILE:HG13	2.44	0.42
17:Q:52:ARG:NH1	17:Q:55:GLN:HE21	2.17	0.42
17:Q:57:ARG:HD2	17:Q:92:LYS:HZ3	1.83	0.42
17:Q:91:ARG:O	17:Q:94:LEU:HD21	2.20	0.42
19:S:17:VAL:HA	19:S:43:ALA:CB	2.48	0.42
20:T:73:ARG:HD3	28:2:43:THR:C	2.45	0.42
20:T:73:ARG:O	20:T:74:ILE:HD13	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:15:GLY:HA2	21:U:18:LYS:HE2	2.02	0.42
22:W:47:GLY:O	22:W:54:ARG:HA	2.20	0.42
24:Y:29:ARG:O	24:Y:30:ARG:HB2	2.20	0.42
26:O:29:VAL:HG21	26:O:41:HIS:HA	2.02	0.42
27:1:35:LEU:O	27:1:35:LEU:HG	2.20	0.42
29:3:9:ALA:O	29:3:13:PHE:HB3	2.20	0.42
1:A:48:U:C3'	15:O:102:ARG:HG3	2.48	0.41
1:A:57:A:OP2	7:F:21:TYR:C	2.63	0.41
1:A:76:G:O2'	13:M:136:MET:SD	2.75	0.41
2:B:305:C:H2'	2:B:306:U:C6	2.55	0.41
2:B:321:U:N1	6:E:129:PRO:HB3	2.16	0.41
2:B:322:A:OP1	6:E:162:ARG:HG2	2.20	0.41
2:B:338:G:C2	2:B:339:U:H1'	2.55	0.41
2:B:458:G:H22	2:B:469:G:H2'	1.84	0.41
2:B:567:U:C5	2:B:576:U:C2	3.08	0.41
2:B:585:G:OP2	17:Q:3:VAL:CG1	2.67	0.41
2:B:689:A:H2'	2:B:690:G:H8	1.84	0.41
2:B:839:U:H1'	2:B:1191:G:H1'	2.02	0.41
2:B:939:G:O2'	2:B:940:G:H5'	2.20	0.41
2:B:959:A:N6	13:M:83:GLY:HA3	2.35	0.41
2:B:1012:U:OP2	17:Q:74:SER:HB3	2.20	0.41
2:B:1264:A:OP1	26:O:11:LYS:HG2	2.20	0.41
2:B:1296:G:H5''	2:B:2709:G:C3'	2.49	0.41
2:B:1322:A:C2'	2:B:1323:C:H5'	2.50	0.41
2:B:1667:G:N1	2:B:1952:A:C5	2.87	0.41
2:B:1673:G:C5'	2:B:1944:U:H5''	2.24	0.41
2:B:1816:C:C6	4:C:83:ASP:OD1	2.73	0.41
2:B:1994:C:H2'	2:B:2558:C:N4	2.35	0.41
2:B:2199:A:C8	2:B:2225:A:C8	3.03	0.41
2:B:2307:G:O2'	2:B:2311:A:N6	2.52	0.41
2:B:2544:G:H2'	2:B:2545:G:H8	1.85	0.41
2:B:2604:U:O2'	2:B:2605:U:H5'	2.20	0.41
2:B:2630:G:C1'	2:B:2894:G:C4	3.02	0.41
2:B:2648:G:H2'	2:B:2649:C:H6	1.83	0.41
2:B:2745:C:H3'	2:B:2746:U:C6	2.55	0.41
2:B:2845:U:H2'	2:B:2846:G:C8	2.56	0.41
2:B:2849:U:O4	2:B:2867:G:C8	2.73	0.41
4:C:99:GLU:HG3	4:C:100:ARG:N	2.35	0.41
4:C:116:GLN:O	4:C:127:ASN:HB3	2.20	0.41
4:C:156:SER:OG	4:C:194:VAL:O	2.34	0.41
4:C:245:THR:C	4:C:247:TRP:N	2.78	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:13:ARG:HB2	5:D:21:SER:CB	2.50	0.41
5:D:120:GLY:N	5:D:123:LYS:HB2	2.34	0.41
7:F:135:ILE:HG23	7:F:136:ILE:N	2.33	0.41
8:G:18:ILE:HA	8:G:23:ILE:HD13	2.01	0.41
8:G:33:THR:CG2	8:G:34:ARG:N	2.82	0.41
8:G:122:ALA:O	8:G:123:GLU:HG3	2.19	0.41
11:K:108:ARG:HG3	11:K:108:ARG:O	2.17	0.41
12:L:13:LYS:C	12:L:15:ALA:N	2.77	0.41
12:L:33:ARG:NH1	12:L:34:GLY:HA3	2.35	0.41
14:N:120:GLU:CB	26:O:51:ARG:HB2	2.49	0.41
15:O:55:GLU:HA	15:O:62:LEU:HB2	2.01	0.41
16:P:93:LYS:NZ	16:P:97:TYR:CZ	2.86	0.41
17:Q:107:ALA:O	18:R:52:PRO:CB	2.63	0.41
18:R:5:PHE:HD1	18:R:40:MET:CB	2.33	0.41
20:T:25:GLU:CG	20:T:26:LYS:H	2.33	0.41
20:T:30:ILE:HG22	32:T:104:HOH:O	2.10	0.41
20:T:73:ARG:HB2	28:2:42:LEU:CG	2.49	0.41
21:U:13:LEU:HG	21:U:69:VAL:CG2	2.49	0.41
21:U:43:LYS:NZ	21:U:45:GLN:HG2	2.34	0.41
1:A:28:C:C5'	15:O:34:HIS:CE1	2.94	0.41
1:A:30:C:O4'	7:F:25:MET:HE1	2.18	0.41
2:B:36:G:H4'	2:B:451:U:N3	2.34	0.41
2:B:96:C:H3'	23:X:39:GLN:CB	2.41	0.41
2:B:195:A:O2'	2:B:251:A:H4'	2.21	0.41
2:B:241:A:OP1	2:B:241:A:H8	2.04	0.41
2:B:563:A:C8	2:B:2018:G:C5	3.07	0.41
2:B:633:A:H2'	2:B:634:C:C5'	2.49	0.41
2:B:1064:C:H2'	2:B:1065:U:O4'	2.20	0.41
2:B:1105:U:H2'	2:B:1106:G:H8	1.85	0.41
2:B:1196:C:C2	2:B:1197:G:C8	3.08	0.41
2:B:1485:U:O2'	2:B:1486:U:H5'	2.20	0.41
2:B:1531:C:H2'	2:B:1532:A:H8	1.78	0.41
2:B:1556:C:H2'	2:B:1557:C:C6	2.55	0.41
2:B:1783:A:P	2:B:2588:G:H2'	2.59	0.41
2:B:1997:C:O2	2:B:2548:U:H3'	2.21	0.41
2:B:2008:C:P	2:B:2049:G:C4'	2.75	0.41
2:B:2043:C:N4	2:B:2777:G:C5	2.88	0.41
2:B:2062:A:N1	2:B:2252:G:N2	2.68	0.41
2:B:2209:G:H2'	2:B:2210:U:C5	2.54	0.41
2:B:2705:A:H2'	2:B:2706:A:O4'	2.20	0.41
2:B:2820:A:HO2'	2:B:2821:A:P	2.43	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2875:C:H4'	16:P:6:GLN:HG2	2.03	0.41
3:V:44:HIS:CE1	3:V:85:LYS:HB2	2.55	0.41
3:V:77:VAL:HG21	3:V:79:ARG:NE	2.35	0.41
4:C:130:PRO:HA	4:C:188:ARG:HA	2.01	0.41
4:C:251:THR:HG22	4:C:252:LYS:N	2.34	0.41
6:E:30:GLN:HB3	12:L:19:LEU:CD2	2.50	0.41
6:E:48:THR:O	6:E:49:ARG:O	2.38	0.41
6:E:119:ILE:HG23	6:E:189:THR:C	2.45	0.41
6:E:148:ILE:N	6:E:183:PHE:HB3	2.36	0.41
6:E:153:LEU:HD11	6:E:201:ALA:C	2.45	0.41
8:G:37:ASN:HB3	8:G:63:GLN:NE2	2.35	0.41
9:H:19:VAL:O	9:H:20:ASN:C	2.63	0.41
10:J:56:VAL:C	10:J:57:LEU:HD22	2.46	0.41
11:K:72:PRO:C	11:K:74:GLY:N	2.78	0.41
13:M:71:LYS:HG2	13:M:93:VAL:HA	2.02	0.41
13:M:73:ILE:CD1	13:M:92:TRP:N	2.82	0.41
14:N:4:ARG:CG	14:N:5:LYS:N	2.80	0.41
14:N:49:GLU:O	14:N:52:ILE:HB	2.20	0.41
16:P:64:SER:OG	16:P:71:ARG:NH1	2.52	0.41
16:P:108:ARG:C	16:P:110:LYS:H	2.29	0.41
17:Q:16:ILE:H	17:Q:16:ILE:HG13	1.73	0.41
18:R:16:GLU:O	18:R:18:GLN:N	2.51	0.41
18:R:35:PHE:H	18:R:64:VAL:HG22	1.86	0.41
19:S:31:GLN:C	19:S:33:LEU:H	2.28	0.41
20:T:34:VAL:HG13	20:T:43:ILE:HD11	2.01	0.41
21:U:22:GLY:HA2	21:U:36:GLU:HB2	2.01	0.41
21:U:73:ASN:HB2	21:U:96:LYS:HZ3	1.84	0.41
24:Y:20:LYS:HG3	24:Y:24:LEU:HD12	2.01	0.41
26:O:11:LYS:C	26:O:13:GLY:N	2.78	0.41
1:A:83:G:H2'	1:A:84:G:O4'	2.20	0.41
2:B:406:G:H2'	2:B:407:G:H8	1.84	0.41
2:B:592:A:O2'	29:3:2:LYS:CD	2.67	0.41
2:B:1012:U:P	17:Q:74:SER:CB	3.08	0.41
2:B:1019:U:O2'	2:B:1021:A:C2	2.69	0.41
2:B:1403:A:H2'	2:B:1404:C:H6	1.86	0.41
2:B:1663:G:H5''	11:K:20:MET:HE3	1.67	0.41
2:B:1695:G:H2'	2:B:1696:G:O4'	2.20	0.41
2:B:1727:C:H2'	2:B:1728:C:H6	1.81	0.41
2:B:1759:A:C8	2:B:2696:U:H4'	2.53	0.41
2:B:1796:U:H4'	4:C:251:THR:C	2.46	0.41
2:B:1909:C:H2'	2:B:1910:G:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2005:A:C6	5:D:141:ARG:O	2.57	0.41
2:B:2256:G:N2	2:B:2450:A:P	2.87	0.41
2:B:2270:A:H3'	22:W:18:LYS:CG	2.44	0.41
2:B:2373:G:H2'	2:B:2374:C:H6	1.84	0.41
2:B:2798:U:H1'	2:B:2800:A:N6	2.35	0.41
3:V:79:ARG:CZ	3:V:86:LEU:HD11	2.51	0.41
4:C:3:VAL:HG12	4:C:4:LYS:N	2.31	0.41
4:C:163:ILE:C	4:C:164:VAL:HG23	2.45	0.41
4:C:211:ARG:O	4:C:212:TRP:C	2.62	0.41
5:D:36:GLN:CD	5:D:36:GLN:C	2.88	0.41
5:D:170:VAL:O	5:D:171:THR:HB	2.20	0.41
5:D:182:ALA:C	5:D:184:ARG:H	2.28	0.41
6:E:181:ILE:C	12:L:14:LYS:O	2.63	0.41
7:F:34:THR:HA	7:F:89:THR:HA	2.03	0.41
7:F:135:ILE:CG2	7:F:136:ILE:N	2.83	0.41
8:G:18:ILE:HA	8:G:23:ILE:CD1	2.50	0.41
12:L:57:LEU:C	12:L:59:ARG:N	2.75	0.41
12:L:78:ARG:C	12:L:78:ARG:HH11	2.29	0.41
12:L:78:ARG:HB2	12:L:79:LEU:H	1.32	0.41
12:L:82:LEU:HD12	12:L:90:VAL:CG1	2.49	0.41
13:M:36:VAL:HG11	13:M:125:PRO:HD2	2.03	0.41
16:P:38:ARG:CG	16:P:39:LEU:N	2.81	0.41
16:P:52:ARG:HH11	16:P:54:LEU:HB3	1.85	0.41
17:Q:21:LYS:C	17:Q:23:TYR:N	2.78	0.41
17:Q:103:VAL:HG23	17:Q:104:ALA:N	2.35	0.41
20:T:17:SER:OG	20:T:18:GLU:N	2.53	0.41
20:T:30:ILE:HG23	20:T:32:LEU:HD13	2.01	0.41
22:W:31:LEU:O	22:W:66:VAL:HB	2.19	0.41
22:W:36:ILE:O	22:W:37:VAL:HB	2.20	0.41
22:W:54:ARG:C	22:W:55:ASP:O	2.59	0.41
24:Y:28:LEU:HD12	24:Y:28:LEU:N	2.36	0.41
29:3:11:LYS:NZ	29:3:11:LYS:HB2	2.35	0.41
1:A:30:C:H5	15:O:33:ARG:NE	2.17	0.41
1:A:37:C:H2'	15:O:69:ASP:OD1	2.20	0.41
1:A:60:C:C2	7:F:23:SER:CB	2.97	0.41
1:A:92:C:H2'	1:A:93:C:H6	1.86	0.41
2:B:69:C:H2'	2:B:70:G:C8	2.55	0.41
2:B:286:U:H2'	2:B:287:G:C8	2.55	0.41
2:B:325:G:H2'	2:B:326:G:H8	1.85	0.41
2:B:477:A:H2'	2:B:478:A:O4'	2.20	0.41
2:B:662:G:H5''	12:L:25:SER:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:669:G:C4'	2:B:670:A:OP2	2.61	0.41
2:B:828:U:H3'	2:B:2446:G:OP2	2.20	0.41
2:B:849:A:H2'	2:B:850:U:C6	2.55	0.41
2:B:856:G:P	22:W:24:ARG:HH12	2.42	0.41
2:B:863:A:O2'	2:B:864:G:H5'	2.21	0.41
2:B:1206:G:H2'	2:B:1207:C:H6	1.85	0.41
2:B:1258:U:H5'	6:E:79:ARG:CB	2.47	0.41
2:B:1340:U:C4'	2:B:1394:U:O2'	2.68	0.41
2:B:1544:A:H2'	2:B:1545:A:C8	2.56	0.41
2:B:1655:A:H2'	2:B:2511:U:H6	1.67	0.41
2:B:1665:A:O5'	11:K:57:VAL:HG11	0.60	0.41
2:B:1685:C:H2'	2:B:1686:C:H6	1.85	0.41
2:B:1799:G:H1'	4:C:152:GLN:HE22	1.86	0.41
2:B:1818:U:C6	4:C:154:ALA:N	2.88	0.41
2:B:2047:C:H2'	2:B:2048:G:C8	2.54	0.41
2:B:2070:A:N7	2:B:2245:U:C6	2.87	0.41
2:B:2092:U:H4'	2:B:2093:G:O5'	2.20	0.41
2:B:2460:U:H5'	13:M:77:PRO:CA	2.49	0.41
2:B:2678:C:O2'	2:B:2679:A:H5'	2.20	0.41
4:C:42:ARG:NH1	4:C:44:ASN:OD1	2.52	0.41
7:F:18:GLU:O	7:F:19:PHE:HB3	2.20	0.41
8:G:148:ARG:HE	8:G:153:PRO:HD2	1.85	0.41
9:H:40:THR:O	9:H:42:LYS:N	2.54	0.41
9:H:69:ALA:CB	9:H:140:ALA:HA	2.50	0.41
10:J:19:ASP:O	10:J:20:ALA:HB3	2.21	0.41
10:J:30:THR:C	10:J:32:LEU:H	2.28	0.41
10:J:39:LYS:HE3	17:Q:66:ALA:HB1	2.02	0.41
10:J:58:ASN:O	10:J:59:ALA:HB3	2.20	0.41
10:J:90:GLU:C	10:J:90:GLU:OE1	2.63	0.41
10:J:132:HIS:C	10:J:134:ALA:H	2.28	0.41
12:L:55:MET:CG	29:3:5:THR:HG23	2.38	0.41
12:L:72:ALA:H	12:L:106:GLU:CD	2.29	0.41
12:L:101:ILE:HD12	12:L:101:ILE:HA	1.88	0.41
13:M:11:LYS:HE3	13:M:11:LYS:N	2.36	0.41
16:P:26:GLU:CD	16:P:46:VAL:HG13	2.45	0.41
17:Q:102:LYS:HG2	17:Q:103:VAL:N	2.36	0.41
19:S:2:GLU:O	19:S:4:ILE:HD13	2.20	0.41
20:T:6:ARG:O	20:T:8:LEU:N	2.53	0.41
20:T:58:VAL:HG22	32:T:105:HOH:O	2.21	0.41
20:T:64:LYS:HD3	20:T:79:ASP:HA	2.00	0.41
20:T:68:LYS:HE2	20:T:68:LYS:HB2	1.81	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:73:ARG:HB2	28:2:42:LEU:CD2	2.37	0.41
23:X:18:LEU:H	23:X:18:LEU:HD12	1.84	0.41
23:X:42:LEU:C	23:X:45:GLN:HE21	2.27	0.41
24:Y:4:ILE:HG12	24:Y:5:LYS:HG3	2.01	0.41
25:Z:5:ILE:HD12	25:Z:5:ILE:N	2.32	0.41
26:0:47:TYR:HA	26:0:52:LYS:HB2	2.03	0.41
29:3:23:HIS:H	29:3:23:HIS:HD2	1.67	0.41
29:3:44:ARG:CB	29:3:45:PRO:CD	2.97	0.41
30:4:27:CYS:SG	30:4:33:HIS:NE2	2.93	0.41
1:A:56:G:C4'	7:F:13:LYS:HD2	2.50	0.41
2:B:83:A:H2'	2:B:84:A:C8	2.55	0.41
2:B:154:U:O2'	2:B:155:A:H5'	2.21	0.41
2:B:536:G:H21	10:J:47:HIS:HD2	1.69	0.41
2:B:624:C:C6	29:3:62:PRO:HD2	2.55	0.41
2:B:810:U:O4'	2:B:1254:A:C6	2.60	0.41
2:B:811:U:C1'	2:B:1251:C:C2	3.03	0.41
2:B:1011:G:O4'	17:Q:76:SER:CB	2.65	0.41
2:B:1439:A:N1	2:B:1552:A:N7	2.68	0.41
2:B:1666:G:O6	2:B:1953:A:C2	2.73	0.41
2:B:1670:C:C2'	2:B:1955:U:C5	3.01	0.41
2:B:1843:C:H2'	2:B:1844:C:H6	1.84	0.41
2:B:1867:G:O2'	2:B:1868:C:H5'	2.20	0.41
2:B:1981:A:H1'	32:B:3109:HOH:O	2.20	0.41
2:B:2258:C:C6	2:B:2425:A:H1'	2.55	0.41
2:B:2419:U:O2'	2:B:2420:C:H5'	2.21	0.41
2:B:2514:U:H2'	2:B:2515:C:C6	2.56	0.41
4:C:24:HIS:CB	4:C:27:LYS:HE3	2.51	0.41
4:C:137:GLY:C	4:C:139:THR:H	2.26	0.41
4:C:140:VAL:HG22	4:C:161:VAL:O	2.21	0.41
4:C:141:HIS:O	4:C:153:LEU:HD21	2.21	0.41
5:D:110:THR:HG22	5:D:171:THR:CA	2.44	0.41
6:E:26:ALA:CA	12:L:20:GLY:N	2.81	0.41
6:E:181:ILE:HG12	12:L:13:LYS:C	2.44	0.41
8:G:51:PHE:HE2	8:G:63:GLN:NE2	2.18	0.41
9:H:7:ASP:O	9:H:9:VAL:HG23	2.20	0.41
10:J:43:GLU:HG3	10:J:44:TYR:N	2.33	0.41
10:J:99:ARG:NH1	10:J:99:ARG:HB3	2.36	0.41
11:K:119:ALA:O	11:K:121:GLU:N	2.53	0.41
13:M:12:MET:O	13:M:13:HIS:HB2	2.20	0.41
14:N:29:VAL:HG13	14:N:83:LEU:HD13	2.02	0.41
15:O:40:ILE:HD13	15:O:40:ILE:N	2.33	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:92:LYS:HD3	17:Q:92:LYS:N	2.34	0.41
18:R:5:PHE:N	18:R:12:HIS:HB3	2.35	0.41
18:R:82:HIS:ND1	18:R:82:HIS:O	2.53	0.41
20:T:1:MET:C	20:T:3:ARG:H	2.28	0.41
21:U:12:VAL:CG1	21:U:18:LYS:H	2.31	0.41
22:W:75:ASN:HD22	22:W:75:ASN:HA	1.64	0.41
23:X:27:ASN:O	23:X:28:LEU:C	2.62	0.41
29:3:14:LYS:C	29:3:21:PHE:HB3	2.45	0.41
1:A:47:C:O5'	15:O:30:ARG:HB3	2.20	0.41
1:A:92:C:H2'	1:A:93:C:C6	2.55	0.41
2:B:15:G:H2'	2:B:16:C:C6	2.55	0.41
2:B:273:G:H2'	2:B:274:C:H6	1.85	0.41
2:B:383:C:N3	2:B:391:A:N6	2.68	0.41
2:B:426:C:O2'	2:B:427:U:H5'	2.20	0.41
2:B:563:A:C6	2:B:2018:G:C8	3.09	0.41
2:B:851:C:HO2'	24:Y:42:ALA:C	2.15	0.41
2:B:936:A:H2'	2:B:937:C:H6	1.81	0.41
2:B:958:U:C3'	13:M:18:ARG:N	2.76	0.41
2:B:1162:G:O2'	18:R:91:GLN:OE1	2.38	0.41
2:B:1183:U:C2	2:B:1184:U:C5	3.08	0.41
2:B:1441:G:O2'	2:B:1442:U:H5'	2.20	0.41
2:B:1664:A:C4	2:B:2561:U:O2	2.68	0.41
2:B:1673:G:C3'	2:B:1956:U:C5'	2.90	0.41
2:B:1851:U:H2'	2:B:1852:U:C6	2.55	0.41
2:B:2006:C:C6	5:D:143:PRO:N	2.88	0.41
2:B:2659:G:C2	2:B:2661:G:H5''	2.55	0.41
2:B:2708:G:H4'	14:N:68:ALA:HB1	2.02	0.41
2:B:2751:G:N3	2:B:2751:G:H5'	2.34	0.41
4:C:113:ASP:O	4:C:115:ILE:HD12	2.21	0.41
4:C:225:ASN:HD22	4:C:225:ASN:HA	1.50	0.41
5:D:112:THR:O	5:D:113:SER:C	2.63	0.41
6:E:106:LYS:C	6:E:108:ILE:N	2.77	0.41
6:E:169:VAL:C	6:E:171:ASP:N	2.76	0.41
7:F:18:GLU:C	7:F:20:ASN:H	2.29	0.41
7:F:126:ASN:ND2	7:F:126:ASN:H	2.19	0.41
8:G:5:LYS:HE3	8:G:69:ALA:CA	2.51	0.41
8:G:42:VAL:HG23	8:G:43:LYS:N	2.35	0.41
10:J:128:ASN:ND2	10:J:129:GLU:H	2.19	0.41
12:L:78:ARG:C	12:L:80:SER:H	2.28	0.41
13:M:13:HIS:O	13:M:14:LYS:HD2	2.20	0.41
13:M:33:LEU:HD22	13:M:124:LEU:HG	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:63:ILE:HA	13:M:102:LEU:O	2.20	0.41
13:M:95:LEU:HD23	13:M:95:LEU:HA	1.90	0.41
14:N:13:ASN:O	14:N:17:ARG:N	2.49	0.41
15:O:56:LYS:HE3	15:O:57:ALA:CA	2.50	0.41
16:P:62:LYS:HZ2	16:P:102:ARG:NH2	2.19	0.41
17:Q:108:LEU:HD13	17:Q:108:LEU:O	2.21	0.41
18:R:1:MET:CA	18:R:46:GLU:HB2	2.40	0.41
19:S:28:LYS:HB3	19:S:71:VAL:HG21	2.01	0.41
20:T:10:VAL:CG2	20:T:46:ALA:HB2	2.51	0.41
20:T:11:LEU:HD23	20:T:46:ALA:HB1	2.03	0.41
22:W:47:GLY:H	22:W:67:LYS:NZ	2.18	0.41
25:Z:15:SER:HB3	25:Z:23:LYS:CD	2.51	0.41
29:3:15:LYS:C	29:3:16:THR:O	2.63	0.41
1:A:6:G:H2'	1:A:7:G:H8	1.85	0.41
1:A:28:C:C5'	15:O:34:HIS:NE2	2.84	0.41
1:A:73:A:H2'	1:A:73:A:N3	2.36	0.41
2:B:118:A:H1'	2:B:178:G:O4'	2.20	0.41
2:B:263:G:O2'	2:B:429:A:N3	2.52	0.41
2:B:282:A:H2'	2:B:283:G:H8	1.82	0.41
2:B:397:U:OP1	25:Z:51:VAL:CG2	2.68	0.41
2:B:439:A:H2'	2:B:440:C:O4'	2.21	0.41
2:B:440:C:H2'	2:B:441:U:C6	2.55	0.41
2:B:480:A:N3	2:B:499:U:O2'	2.51	0.41
2:B:482:A:C5'	21:U:45:GLN:CG	2.88	0.41
2:B:506:G:H4'	2:B:509:C:O2	2.21	0.41
2:B:557:C:H2'	2:B:558:U:H6	1.84	0.41
2:B:563:A:C5	2:B:2018:G:C8	3.09	0.41
2:B:564:C:O4'	17:Q:36:GLN:CG	2.67	0.41
2:B:852:U:OP1	24:Y:44:ARG:NH1	2.53	0.41
2:B:929:U:H1'	24:Y:26:LEU:HA	2.03	0.41
2:B:1201:U:H2'	2:B:1202:G:H8	1.86	0.41
2:B:1294:U:H5'	14:N:71:ARG:CG	2.51	0.41
2:B:1506:U:H2'	2:B:1507:C:H6	1.84	0.41
2:B:1938:A:C3'	2:B:2591:C:HO2'	2.33	0.41
2:B:2575:C:C5'	5:D:151:THR:HG23	2.41	0.41
2:B:2637:U:C2'	2:B:2638:G:H5'	2.50	0.41
2:B:2784:U:O2'	2:B:2785:C:H5'	2.20	0.41
2:B:2848:G:OP2	16:P:95:LYS:O	2.38	0.41
2:B:2899:A:C4'	10:J:136:GLN:HE21	2.20	0.41
3:V:79:ARG:CG	13:M:26:VAL:CG1	2.97	0.41
4:C:71:ASP:HB3	4:C:72:GLY:H	1.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:247:TRP:CD1	4:C:247:TRP:C	2.98	0.41
5:D:9:VAL:CG1	16:P:5:LYS:HD2	2.50	0.41
5:D:12:THR:CG2	5:D:22:ILE:HD12	2.51	0.41
5:D:159:LYS:C	5:D:159:LYS:HD3	2.46	0.41
6:E:7:ASP:O	6:E:8:ALA:HB3	2.21	0.41
6:E:25:GLU:CD	12:L:17:LYS:CG	2.93	0.41
6:E:120:VAL:N	6:E:189:THR:HG23	2.27	0.41
6:E:144:GLU:HG3	6:E:145:ASP:H	1.84	0.41
6:E:149:ILE:HG23	6:E:183:PHE:CG	2.55	0.41
6:E:186:VAL:O	6:E:188:MET:HE3	2.21	0.41
7:F:65:LEU:C	7:F:67:THR:N	2.78	0.41
7:F:164:GLU:O	7:F:168:LEU:HD21	2.21	0.41
8:G:162:ARG:HA	8:G:166:GLU:OE1	2.20	0.41
9:H:56:ALA:HB3	9:H:57:LYS:NZ	2.35	0.41
9:H:83:LYS:HB2	9:H:92:GLY:N	2.35	0.41
11:K:5:GLN:NE2	11:K:20:MET:HE1	2.32	0.41
12:L:82:LEU:O	12:L:83:ALA:CB	2.69	0.41
13:M:1:MET:H3	13:M:68:PHE:HE1	1.69	0.41
13:M:71:LYS:NZ	13:M:91:TYR:HD2	2.17	0.41
13:M:74:THR:C	13:M:75:GLU:HG3	2.45	0.41
17:Q:12:ARG:O	17:Q:15:LYS:HB3	2.21	0.41
18:R:41:ILE:HD12	18:R:43:ASN:H	1.85	0.41
18:R:78:ARG:CD	18:R:87:GLN:HG2	2.50	0.41
25:Z:30:HIS:HB2	25:Z:31:ASP:H	1.48	0.41
2:B:32:C:H2'	2:B:33:C:H5''	2.03	0.41
2:B:76:C:C2'	23:X:52:ARG:CA	2.98	0.41
2:B:182:A:H1'	2:B:433:C:C2	2.46	0.41
2:B:203:A:H2'	2:B:204:A:H8	1.84	0.41
2:B:563:A:N7	2:B:2018:G:C5	2.89	0.41
2:B:577:G:O4'	32:B:3350:HOH:O	2.22	0.41
2:B:581:C:H5'	17:Q:31:TYR:CA	2.41	0.41
2:B:693:A:H2'	2:B:694:U:C6	2.56	0.41
2:B:852:U:H5'	24:Y:44:ARG:HG3	2.02	0.41
2:B:1097:U:H2'	2:B:1098:A:C5'	2.49	0.41
2:B:1153:C:H5'	17:Q:75:TYR:HE1	1.84	0.41
2:B:1169:A:O2'	2:B:1170:C:H5'	2.21	0.41
2:B:1312:U:C2	2:B:1604:C:C2	3.09	0.41
2:B:1315:C:H2'	2:B:1316:U:H6	1.85	0.41
2:B:1652:A:O2'	5:D:120:GLY:O	2.39	0.41
2:B:1758:U:C2'	2:B:2696:U:H4'	2.50	0.41
2:B:1801:A:N7	4:C:149:LYS:CE	2.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1863:G:O2'	2:B:2411:A:H5'	2.21	0.41
2:B:1888:G:C2'	2:B:2235:G:O2'	2.66	0.41
2:B:1958:C:N4	2:B:1987:A:C5	2.58	0.41
2:B:2204:G:O2'	2:B:2205:A:H5'	2.21	0.41
2:B:2291:U:OP1	2:B:2380:C:O2'	2.38	0.41
2:B:2312:U:H5''	7:F:70:ARG:O	2.18	0.41
2:B:2333:A:C4'	2:B:2334:U:H5''	2.35	0.41
2:B:2428:G:P	2:B:2448:A:H2	2.27	0.41
2:B:2748:A:C4'	8:G:69:ALA:HB3	2.35	0.41
2:B:2815:C:C1'	26:0:39:ARG:O	2.68	0.41
2:B:2821:A:H2'	2:B:2822:G:H8	1.86	0.41
5:D:103:ASP:C	5:D:105:LYS:H	2.28	0.41
5:D:106:LYS:O	5:D:206:ALA:HB2	2.21	0.41
6:E:115:GLN:CA	6:E:185:LYS:HE3	2.49	0.41
6:E:188:MET:O	6:E:194:LYS:NZ	2.54	0.41
8:G:16:VAL:HG12	8:G:17:LYS:N	2.35	0.41
8:G:40:VAL:HG11	8:G:63:GLN:NE2	2.35	0.41
8:G:42:VAL:HA	8:G:51:PHE:HA	2.02	0.41
8:G:89:VAL:HG12	8:G:159:LYS:HA	2.02	0.41
9:H:6:LEU:HD12	9:H:15:LEU:CA	2.47	0.41
11:K:61:VAL:HG23	11:K:84:CYS:O	2.20	0.41
12:L:78:ARG:NH1	12:L:110:VAL:HG11	2.36	0.41
13:M:96:ILE:HD13	13:M:97:GLN:CG	2.51	0.41
13:M:103:TYR:O	13:M:105:MET:N	2.54	0.41
13:M:109:PRO:O	13:M:110:GLU:C	2.64	0.41
14:N:10:LEU:O	14:N:12:ARG:N	2.53	0.41
15:O:21:LEU:O	15:O:22:GLY:C	2.64	0.41
15:O:21:LEU:O	15:O:23:ALA:N	2.53	0.41
16:P:62:LYS:NZ	16:P:102:ARG:HH22	2.17	0.41
17:Q:16:ILE:C	17:Q:18:LYS:N	2.75	0.41
17:Q:35:PHE:C	17:Q:39:ILE:HB	2.46	0.41
17:Q:108:LEU:HD22	17:Q:108:LEU:HA	1.95	0.41
18:R:31:GLU:HB3	18:R:32:THR:H	1.61	0.41
19:S:1:MET:HB3	19:S:4:ILE:CG1	2.50	0.41
20:T:47:VAL:O	20:T:50:LEU:O	2.39	0.41
20:T:88:LYS:HZ2	20:T:90:GLY:H	1.67	0.41
21:U:39:ASN:HD21	21:U:42:LYS:HE2	1.83	0.41
25:Z:3:LYS:CE	25:Z:8:LYS:HA	2.49	0.41
25:Z:5:ILE:CG2	25:Z:63:ARG:HE	2.34	0.41
26:0:16:ARG:O	26:0:19:ASP:HB2	2.21	0.41
27:1:8:ILE:HG21	27:1:27:ARG:HH21	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:45:A:OP1	7:F:93:GLU:N	2.54	0.41
1:A:56:G:N2	7:F:24:VAL:HG22	2.33	0.41
1:A:76:G:H2'	1:A:77:U:C6	2.56	0.41
1:A:80:U:HO2'	1:A:81:G:H8	1.67	0.41
1:A:93:C:P	3:V:14:LYS:NZ	2.94	0.41
2:B:89:A:O2'	2:B:90:U:H5'	2.21	0.41
2:B:138:U:H5''	2:B:139:U:OP1	2.21	0.41
2:B:247:G:OP2	2:B:249:C:N4	2.53	0.41
2:B:322:A:H5'	2:B:340:A:O4'	2.20	0.41
2:B:458:G:C2'	28:2:39:ARG:O	2.69	0.41
2:B:495:G:OP1	19:S:6:LYS:HE2	2.11	0.41
2:B:515:A:H2'	2:B:516:C:O4'	2.20	0.41
2:B:570:G:C6	2:B:2499:C:OP1	2.71	0.41
2:B:583:G:H3'	17:Q:5:ARG:HB2	1.09	0.41
2:B:587:C:OP2	12:L:36:LYS:O	2.39	0.41
2:B:592:A:H2'	2:B:593:U:C6	2.56	0.41
2:B:671:C:P	12:L:46:VAL:C	2.96	0.41
2:B:928:A:C1'	24:Y:37:ARG:CG	2.98	0.41
2:B:1001:A:H2'	2:B:1002:G:O4'	2.21	0.41
2:B:1043:C:O2'	2:B:1044:C:H5'	2.21	0.41
2:B:1110:G:N2	2:B:1111:A:N6	2.69	0.41
2:B:1225:G:N3	18:R:87:GLN:HB3	2.34	0.41
2:B:1322:A:H2'	2:B:1323:C:H5'	2.03	0.41
2:B:1381:G:O2'	2:B:1382:G:H5'	2.21	0.41
2:B:1408:G:O2'	2:B:1409:U:H5'	2.21	0.41
2:B:1439:A:N6	2:B:1440:U:O2	2.50	0.41
2:B:1659:G:C2	5:D:131:ASP:HB3	2.55	0.41
2:B:1783:A:C2'	2:B:2590:A:O4'	2.65	0.41
2:B:1789:A:C5'	4:C:219:VAL:CG1	2.89	0.41
2:B:1936:A:N6	2:B:1963:U:N3	2.66	0.41
2:B:1989:G:H2'	2:B:1990:C:O4'	2.21	0.41
2:B:2000:C:C4'	11:K:32:TYR:CE1	2.71	0.41
2:B:2066:C:C4	2:B:2426:A:C6	3.09	0.41
2:B:2142:A:H2'	2:B:2143:C:C6	2.56	0.41
2:B:2306:C:OP1	2:B:2307:G:H8	2.04	0.41
2:B:2312:U:H6	7:F:71:LYS:HB2	1.85	0.41
2:B:2351:G:OP2	29:3:38:LYS:HD3	2.15	0.41
2:B:2361:G:O2'	2:B:2362:C:H5'	2.21	0.41
2:B:2575:C:P	5:D:150:GLN:NE2	2.92	0.41
2:B:2683:C:O2'	2:B:2684:U:H5'	2.21	0.41
2:B:2733:A:C8	2:B:2733:A:C3'	3.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2886:A:HI'	26:O:30:ASP:HB3	2.03	0.41
3:V:80:HIS:HA	3:V:87:GLN:HE22	1.86	0.41
3:V:84:PRO:HD3	13:M:127:LYS:HZ3	1.40	0.41
4:C:51:ARG:HE	4:C:51:ARG:HB2	1.36	0.41
4:C:70:LYS:HE3	4:C:95:TYR:CD2	2.56	0.41
4:C:114:GLN:O	4:C:115:ILE:HB	2.20	0.41
4:C:222:THR:HG21	4:C:224:MET:HE1	2.03	0.41
4:C:228:ASP:OD1	4:C:228:ASP:N	2.53	0.41
5:D:2:ILE:HG22	5:D:204:LYS:CE	2.51	0.41
5:D:4:LEU:HD13	5:D:79:LEU:CD1	2.51	0.41
5:D:46:ARG:HD2	5:D:80:TRP:CE2	2.56	0.41
5:D:83:ARG:HG2	5:D:83:ARG:NH1	2.34	0.41
6:E:29:HIS:CD2	12:L:18:ARG:HG3	2.55	0.41
6:E:106:LYS:HB2	6:E:106:LYS:HZ2	1.85	0.41
6:E:118:LEU:HD11	6:E:143:LEU:HD22	2.03	0.41
6:E:141:MET:O	6:E:142:ALA:HB3	2.21	0.41
6:E:148:ILE:HB	6:E:185:LYS:O	2.21	0.41
6:E:163:ASN:OD1	6:E:166:LYS:N	2.54	0.41
7:F:24:VAL:HA	7:F:27:VAL:HG23	2.02	0.41
7:F:90:LEU:HD23	7:F:94:ARG:HG2	2.03	0.41
7:F:172:PHE:O	7:F:174:PHE:N	2.53	0.41
8:G:51:PHE:CE2	8:G:63:GLN:NE2	2.89	0.41
8:G:169:ARG:C	8:G:171:LYS:H	2.29	0.41
9:H:37:VAL:O	9:H:38:PRO:C	2.64	0.41
10:J:9:GLU:O	10:J:10:THR:C	2.63	0.41
10:J:39:LYS:HA	10:J:39:LYS:HE2	2.03	0.41
10:J:136:GLN:HB2	10:J:136:GLN:HE21	1.64	0.41
11:K:23:LYS:HE3	11:K:24:VAL:O	2.21	0.41
12:L:60:ARG:HA	29:3:7:ARG:HE	1.83	0.41
12:L:106:GLU:HG2	12:L:107:PHE:N	2.32	0.41
12:L:112:LEU:HD22	12:L:130:GLY:HA3	2.03	0.41
13:M:73:ILE:HD11	13:M:92:TRP:CB	2.46	0.41
14:N:34:ILE:HD13	14:N:34:ILE:H	1.83	0.41
14:N:94:TYR:HB3	14:N:95:THR:H	1.70	0.41
14:N:97:ILE:HD12	14:N:113:ILE:HG12	2.02	0.41
15:O:106:LEU:HD13	15:O:106:LEU:C	2.46	0.41
16:P:57:ALA:C	16:P:59:THR:N	2.79	0.41
17:Q:65:ASN:O	17:Q:69:ARG:HG2	2.21	0.41
17:Q:81:GLY:O	17:Q:82:LEU:C	2.63	0.41
17:Q:88:GLU:CA	18:R:53:PHE:HZ	2.20	0.41
19:S:2:GLU:OE1	19:S:107:VAL:O	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:34:ASP:CA	19:S:37:THR:HG22	2.51	0.41
19:S:71:VAL:HG12	19:S:71:VAL:O	2.21	0.41
19:S:81:SER:OG	19:S:97:LEU:HB3	2.21	0.41
19:S:103:ILE:HG13	19:S:105:VAL:HG23	2.01	0.41
20:T:73:ARG:HD3	28:2:43:THR:H	1.78	0.41
21:U:54:PRO:HB2	21:U:55:GLY:H	1.57	0.41
21:U:78:LYS:HE2	21:U:96:LYS:HE3	2.02	0.41
21:U:95:PHE:CD1	21:U:102:ILE:HD12	2.56	0.41
25:Z:33:ASN:HA	25:Z:45:THR:O	2.21	0.41
25:Z:35:ASP:O	25:Z:42:PRO:HB3	2.21	0.41
28:2:10:LEU:O	28:2:10:LEU:HD23	2.21	0.41
30:4:7:VAL:HB	30:4:35:GLN:NE2	2.36	0.41
1:A:32:U:H5''	7:F:5:ASP:OD2	2.21	0.41
1:A:57:A:C4	7:F:12:VAL:CB	2.94	0.41
1:A:57:A:C6	7:F:24:VAL:CA	3.03	0.41
2:B:448:U:C4	2:B:1259:G:C4'	2.98	0.41
2:B:811:U:N3	2:B:1251:C:N3	2.58	0.41
2:B:1010:A:C3'	17:Q:76:SER:OG	2.69	0.41
2:B:1278:C:H2'	2:B:1279:G:H8	1.86	0.41
2:B:1294:U:C3'	14:N:71:ARG:CB	2.98	0.41
2:B:1342:A:C5'	20:T:59:ASN:OD1	2.69	0.41
2:B:1407:G:H2'	2:B:1408:G:H8	1.84	0.41
2:B:1772:A:P	2:B:1968:G:C4'	3.08	0.41
2:B:1937:A:C8	2:B:1984:G:C1'	3.03	0.41
2:B:1993:U:C5	2:B:2550:G:C3'	3.02	0.41
2:B:1999:C:H4'	11:K:31:ARG:CG	2.40	0.41
2:B:2032:G:H1	2:B:2572:A:H8	1.66	0.41
2:B:2069:G:H3'	2:B:2433:A:C8	1.83	0.41
2:B:2143:C:H2'	2:B:2144:G:O4'	2.20	0.41
2:B:2215:C:O2'	25:Z:44:PHE:HZ	1.97	0.41
2:B:2230:G:H2'	2:B:2231:U:C6	2.56	0.41
2:B:2262:U:C2	2:B:2328:A:H1'	2.56	0.41
2:B:2270:A:H8	22:W:20:LEU:H	1.66	0.41
2:B:2389:G:H5''	2:B:2390:U:O4'	2.20	0.41
2:B:2485:G:C8	13:M:44:ARG:NH2	2.89	0.41
2:B:2520:C:C6	2:B:2567:G:H1'	2.56	0.41
3:V:76:ASP:HA	13:M:132:THR:HG23	2.03	0.41
3:V:90:ASP:N	13:M:133:LYS:HD3	2.19	0.41
6:E:16:GLU:CG	6:E:196:VAL:HG13	2.51	0.41
7:F:108:PRO:HB3	7:F:113:PHE:CE2	2.56	0.41
7:F:165:GLY:HA2	7:F:168:LEU:CD2	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:G:121:THR:O	8:G:133:LYS:HD3	2.20	0.41
9:H:41:LYS:O	9:H:42:LYS:C	2.64	0.41
11:K:76:VAL:HG12	11:K:77:ILE:N	2.36	0.41
12:L:77:ILE:HG13	12:L:108:ALA:CB	2.51	0.41
12:L:133:ALA:HA	12:L:136:GLU:HG2	2.03	0.41
17:Q:78:PHE:CE2	17:Q:82:LEU:HD11	2.56	0.41
17:Q:116:LEU:O	17:Q:117:ALA:C	2.63	0.41
20:T:70:HIS:CG	20:T:74:ILE:HB	2.56	0.41
20:T:88:LYS:HG2	20:T:89:GLU:CD	2.46	0.41
21:U:11:ILE:HB	21:U:69:VAL:CG1	2.51	0.41
23:X:38:GLN:H	23:X:38:GLN:HE21	1.65	0.41
25:Z:25:ARG:HH11	25:Z:25:ARG:CG	2.33	0.41
1:A:48:U:H5'	15:O:102:ARG:H	1.60	0.40
2:B:61:C:OP2	23:X:43:LEU:HD22	2.21	0.40
2:B:127:A:H5''	2:B:128:C:C6	2.56	0.40
2:B:183:C:O5'	2:B:433:C:O4'	2.36	0.40
2:B:193:U:C5'	2:B:803:U:H5'	2.50	0.40
2:B:527:C:O2	2:B:2043:C:H4'	2.19	0.40
2:B:552:U:H4'	32:B:3202:HOH:O	2.14	0.40
2:B:580:U:C4'	17:Q:32:ARG:HB3	2.29	0.40
2:B:597:G:H1'	12:L:21:ARG:HD2	2.02	0.40
2:B:667:U:OP2	12:L:50:PHE:C	2.60	0.40
2:B:682:G:O2'	28:2:26:ASN:HB2	2.20	0.40
2:B:688:U:O2'	2:B:689:A:H5'	2.21	0.40
2:B:846:U:O2	2:B:846:U:H2'	2.20	0.40
2:B:1030:C:C2'	30:4:8:LYS:HG2	2.40	0.40
2:B:1107:G:H2'	2:B:1108:U:C6	2.55	0.40
2:B:1476:U:O4'	2:B:1732:C:C5	2.75	0.40
2:B:1566:A:C3'	4:C:58:LYS:HG3	2.44	0.40
2:B:1817:G:C2'	4:C:155:ARG:HG2	2.47	0.40
2:B:1818:U:C2'	4:C:155:ARG:N	2.81	0.40
2:B:1830:C:H2'	2:B:1831:G:H8	1.86	0.40
2:B:1888:G:N9	2:B:2234:G:O2'	2.53	0.40
2:B:2026:U:C2	2:B:2027:G:C8	3.09	0.40
2:B:2069:G:OP2	2:B:2432:A:O4'	2.38	0.40
2:B:2092:U:C4	2:B:2228:G:C6	2.99	0.40
2:B:2098:U:O2'	2:B:2099:U:H5'	2.21	0.40
2:B:2269:G:N9	22:W:22:VAL:N	2.69	0.40
2:B:2279:G:N2	2:B:2327:A:C2	2.79	0.40
2:B:2305:U:C4	7:F:39:VAL:CG1	3.01	0.40
2:B:2773:C:OP2	5:D:169:ARG:NH2	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:V:79:ARG:NH1	3:V:86:LEU:HD11	2.35	0.40
4:C:50:THR:O	4:C:51:ARG:O	2.39	0.40
5:D:20:VAL:HG23	5:D:21:SER:N	2.36	0.40
5:D:155:VAL:O	5:D:155:VAL:HG13	2.22	0.40
6:E:40:ARG:HD2	6:E:43:THR:OG1	2.20	0.40
8:G:21:GLN:O	8:G:36:LEU:HD13	2.21	0.40
9:H:1:MET:N	9:H:23:ALA:HB2	2.36	0.40
9:H:7:ASP:O	9:H:8:LYS:C	2.63	0.40
9:H:11:ASN:C	9:H:13:GLY:H	2.28	0.40
10:J:10:THR:HG22	10:J:50:THR:HA	2.03	0.40
12:L:79:LEU:O	12:L:81:ASP:OD1	2.39	0.40
13:M:5:LYS:HG3	13:M:91:TYR:HB2	2.03	0.40
14:N:76:VAL:O	14:N:79:LEU:HB2	2.21	0.40
15:O:13:ARG:C	15:O:15:ARG:N	2.78	0.40
16:P:29:VAL:CG2	16:P:47:ILE:HD11	2.51	0.40
17:Q:16:ILE:HD12	17:Q:17:LEU:H	1.77	0.40
17:Q:78:PHE:CZ	17:Q:82:LEU:HD11	2.56	0.40
20:T:50:LEU:C	20:T:52:GLU:N	2.75	0.40
20:T:61:LEU:CD1	20:T:62:VAL:H	2.25	0.40
21:U:13:LEU:HD12	21:U:68:ASN:C	2.46	0.40
21:U:78:LYS:CG	21:U:96:LYS:HE3	2.48	0.40
26:O:28:SER:HB2	26:O:32:THR:O	2.21	0.40
26:O:49:ARG:O	26:O:49:ARG:HG2	2.22	0.40
27:1:7:LYS:O	27:1:7:LYS:HG3	2.20	0.40
1:A:7:G:H4'	15:O:36:TYR:HE2	1.84	0.40
2:B:30:G:H2'	2:B:31:C:C6	2.56	0.40
2:B:536:G:C5	32:B:3009:HOH:O	2.40	0.40
2:B:568:U:C4	2:B:575:A:C6	3.10	0.40
2:B:583:G:H2'	2:B:584:C:H6	1.85	0.40
2:B:624:C:OP1	29:3:63:TYR:CD1	2.74	0.40
2:B:626:A:C2	12:L:79:LEU:HD21	2.57	0.40
2:B:944:C:O2	2:B:944:C:H2'	2.21	0.40
2:B:985:C:H2'	2:B:986:C:H6	1.85	0.40
2:B:1030:C:O2'	2:B:1031:G:H5'	2.21	0.40
2:B:1276:A:O2'	2:B:1277:G:H5'	2.22	0.40
2:B:1772:A:N6	2:B:1974:C:O5'	2.52	0.40
2:B:1773:A:C6	2:B:1830:C:C2	3.09	0.40
2:B:2007:U:H2'	2:B:2008:C:C6	2.56	0.40
2:B:2043:C:C5	2:B:2777:G:N3	2.89	0.40
2:B:2083:G:H2'	2:B:2084:C:H6	1.86	0.40
2:B:2089:C:C2	2:B:2090:A:C8	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2200:C:C5'	9:H:28:ASN:CB	2.93	0.40
2:B:2278:A:C5'	22:W:8:SER:HB3	2.51	0.40
2:B:2316:G:H2'	2:B:2317:A:C8	2.56	0.40
2:B:2385:C:H2'	2:B:2386:A:C8	2.56	0.40
2:B:2492:U:O2'	2:B:2493:U:H5'	2.21	0.40
2:B:2679:A:H4'	5:D:113:SER:OG	2.21	0.40
2:B:2748:A:H1'	8:G:66:THR:CA	2.45	0.40
2:B:2749:A:O2'	8:G:62:ALA:CB	2.69	0.40
2:B:2805:C:H2'	2:B:2806:C:H6	1.86	0.40
2:B:2869:G:H2'	2:B:2870:C:H6	1.86	0.40
32:B:3433:HOH:O	12:L:35:HIS:HE1	2.04	0.40
3:V:79:ARG:NH2	13:M:134:THR:HG23	2.35	0.40
5:D:3:GLY:HA3	5:D:49:GLN:HE22	1.86	0.40
5:D:37:VAL:HG12	5:D:38:LYS:NZ	2.33	0.40
7:F:3:LEU:HD23	7:F:3:LEU:C	2.46	0.40
8:G:119:GLY:C	8:G:120:ILE:HD12	2.46	0.40
8:G:148:ARG:NE	8:G:153:PRO:HD2	2.37	0.40
10:J:56:VAL:HB	10:J:124:VAL:HA	2.03	0.40
11:K:108:ARG:HG3	11:K:108:ARG:NH1	2.35	0.40
12:L:38:GLN:O	12:L:41:ARG:HD3	2.22	0.40
12:L:63:LYS:O	12:L:63:LYS:HG2	2.20	0.40
12:L:121:THR:HA	12:L:139:GLY:HA3	2.03	0.40
19:S:13:SER:OG	19:S:16:LYS:HB2	2.20	0.40
19:S:29:VAL:HG21	19:S:69:LEU:HB3	2.02	0.40
20:T:30:ILE:HG23	20:T:31:VAL:H	1.84	0.40
20:T:59:ASN:C	20:T:60:THR:HG23	2.46	0.40
21:U:70:ALA:HB3	21:U:77:GLY:O	2.20	0.40
21:U:84:PHE:HB3	21:U:92:VAL:O	2.20	0.40
22:W:31:LEU:CD1	22:W:66:VAL:HG23	2.51	0.40
22:W:48:ALA:H	22:W:72:GLY:HA3	1.86	0.40
22:W:77:LYS:HB3	22:W:78:PHE:H	1.70	0.40
27:1:8:ILE:CG2	27:1:27:ARG:HE	2.34	0.40
27:1:26:LYS:HD3	27:1:29:LYS:HD3	2.03	0.40
29:3:54:LEU:HD23	29:3:54:LEU:HA	1.86	0.40
2:B:6:A:C2	2:B:2898:U:C1'	3.04	0.40
2:B:143:C:H4'	20:T:6:ARG:HD2	2.03	0.40
2:B:259:G:H2'	2:B:260:G:H8	1.87	0.40
2:B:458:G:H5''	28:2:39:ARG:HD2	2.03	0.40
2:B:587:C:H1'	12:L:38:GLN:CG	2.52	0.40
2:B:607:U:P	6:E:98:LYS:CD	3.09	0.40
2:B:756:A:H2'	2:B:757:G:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:811:U:C6	2:B:1251:C:N3	2.90	0.40
2:B:1010:A:N3	2:B:1153:C:H1'	2.36	0.40
2:B:1206:G:H2'	2:B:1207:C:C6	2.57	0.40
2:B:1236:G:O2'	2:B:1237:A:O5'	2.39	0.40
2:B:1257:C:C2'	6:E:77:ILE:O	2.68	0.40
2:B:1294:U:C5'	14:N:71:ARG:HD3	2.41	0.40
2:B:1330:C:H2'	2:B:1331:G:H8	1.86	0.40
2:B:1341:G:H2'	2:B:1397:U:O2'	2.21	0.40
2:B:1537:G:H2'	2:B:1538:G:O4'	2.21	0.40
2:B:1607:C:N4	2:B:1622:G:OP2	2.54	0.40
2:B:1656:C:N3	5:D:130:GLN:NE2	2.69	0.40
2:B:1657:U:OP1	2:B:2509:G:N3	2.55	0.40
2:B:1747:U:H2'	2:B:1748:C:H6	1.85	0.40
2:B:1939:U:C5'	2:B:2591:C:HO2'	2.29	0.40
2:B:1976:U:C4	2:B:1979:U:O2'	2.73	0.40
2:B:1995:U:C6	2:B:2550:G:N1	2.88	0.40
2:B:2014:A:C4	2:B:2611:C:C2'	2.89	0.40
2:B:2133:G:N3	2:B:2133:G:H2'	2.37	0.40
2:B:2334:U:P	15:O:7:ARG:HA	2.56	0.40
2:B:2354:C:H4'	22:W:29:SER:C	2.47	0.40
2:B:2361:G:H5''	29:3:28:LEU:CD2	2.51	0.40
2:B:2515:C:H2'	2:B:2516:A:H8	1.86	0.40
2:B:2520:C:O2'	2:B:2521:C:H5'	2.21	0.40
2:B:2649:C:H2'	2:B:2650:U:C6	2.56	0.40
2:B:2813:A:O2'	2:B:2814:A:H5'	2.21	0.40
4:C:68:ARG:CD	4:C:127:ASN:ND2	2.85	0.40
6:E:189:THR:O	6:E:190:ALA:HB3	2.20	0.40
7:F:33:ILE:O	7:F:34:THR:HB	2.21	0.40
7:F:132:ARG:HD3	7:F:132:ARG:C	2.47	0.40
8:G:97:VAL:HG21	8:G:123:GLU:CA	2.52	0.40
10:J:35:ARG:NH2	10:J:40:HIS:H	2.19	0.40
12:L:124:GLY:C	12:L:126:ARG:HG3	2.46	0.40
14:N:12:ARG:HD3	14:N:20:MET:CE	2.51	0.40
14:N:65:LEU:HD12	14:N:65:LEU:HA	1.82	0.40
14:N:72:ASP:CB	14:N:74:GLU:HG3	2.49	0.40
15:O:53:THR:O	15:O:54:VAL:O	2.39	0.40
16:P:19:PHE:O	16:P:20:ARG:HB2	2.21	0.40
16:P:36:LYS:O	16:P:37:LYS:C	2.62	0.40
17:Q:20:ALA:O	17:Q:21:LYS:C	2.65	0.40
17:Q:50:ARG:O	17:Q:53:LYS:HD3	2.21	0.40
18:R:39:LEU:HG	18:R:41:ILE:HD11	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:101:ILE:HG22	18:R:102:SER:H	1.86	0.40
19:S:86:MET:HB3	19:S:94:ASP:HB3	2.03	0.40
26:0:12:ARG:C	26:0:14:MET:H	2.30	0.40
26:0:42:ILE:HG21	26:0:47:TYR:CE1	2.57	0.40
27:1:41:VAL:O	27:1:42:VAL:HG23	2.21	0.40
28:2:18:PHE:HB3	28:2:19:ARG:H	1.62	0.40
29:3:22:LYS:O	29:3:23:HIS:O	2.39	0.40
1:A:56:G:C8	7:F:24:VAL:CG1	2.85	0.40
1:A:56:G:C4'	7:F:13:LYS:CD	3.00	0.40
2:B:46:G:H2'	2:B:47:C:C6	2.57	0.40
2:B:61:C:O2'	23:X:29:ARG:O	2.39	0.40
2:B:321:U:O5'	6:E:129:PRO:C	2.62	0.40
2:B:331:C:O2'	2:B:332:A:H5'	2.21	0.40
2:B:465:G:N1	32:B:3415:HOH:O	2.29	0.40
2:B:514:A:N1	2:B:1261:C:H5'	2.37	0.40
2:B:566:U:H5'	2:B:577:G:H1'	2.03	0.40
2:B:593:U:H5'	29:3:2:LYS:NZ	2.36	0.40
2:B:619:G:H2'	2:B:620:G:H5''	2.04	0.40
2:B:696:G:O2'	2:B:697:G:H5'	2.22	0.40
2:B:710:U:H2'	2:B:711:G:C8	2.56	0.40
2:B:1314:C:H2'	2:B:1314:C:O2	2.21	0.40
2:B:1589:U:H2'	2:B:1590:A:C8	2.56	0.40
2:B:1593:A:H2'	2:B:1594:U:H6	1.83	0.40
2:B:1664:A:C1'	11:K:40:LYS:CB	2.97	0.40
2:B:1672:A:N6	2:B:2605:U:OP2	2.47	0.40
2:B:1791:A:C1'	2:B:1830:C:P	3.07	0.40
2:B:2198:A:C2	9:H:25:TYR:CG	2.91	0.40
2:B:2207:C:H2'	2:B:2208:C:C6	2.57	0.40
2:B:2336:A:C1'	2:B:2337:G:OP1	2.67	0.40
2:B:2538:C:O2'	2:B:2539:C:H5'	2.21	0.40
2:B:2584:U:H6	2:B:2584:U:O5'	2.04	0.40
2:B:2644:G:H2'	2:B:2732:G:O2'	2.22	0.40
2:B:2737:G:H2'	2:B:2738:A:O4'	2.21	0.40
4:C:38:LYS:O	4:C:39:SER:HB3	2.21	0.40
4:C:153:LEU:HD13	4:C:161:VAL:HG23	2.04	0.40
5:D:18:ASP:HB3	5:D:20:VAL:H	1.86	0.40
5:D:103:ASP:O	5:D:104:VAL:HB	2.21	0.40
6:E:181:ILE:HD12	12:L:16:GLY:CA	2.48	0.40
7:F:97:GLU:C	7:F:99:PHE:N	2.79	0.40
8:G:57:TYR:CZ	8:G:59:ASP:HB2	2.57	0.40
8:G:76:ILE:O	8:G:80:GLU:HB2	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:H:29:PHE:H	9:H:32:PRO:CD	2.34	0.40
10:J:20:ALA:C	10:J:22:GLY:N	2.79	0.40
10:J:100:VAL:H	10:J:103:ILE:CG1	2.34	0.40
10:J:118:MET:O	10:J:121:LYS:HB2	2.20	0.40
11:K:23:LYS:CG	11:K:24:VAL:N	2.85	0.40
13:M:45:GLN:NE2	13:M:119:LEU:O	2.54	0.40
14:N:55:ALA:O	14:N:56:LYS:C	2.64	0.40
14:N:77:ALA:HA	14:N:80:PHE:CE2	2.57	0.40
15:O:26:LEU:O	15:O:27:VAL:HB	2.21	0.40
17:Q:97:ILE:HA	17:Q:100:PHE:CE2	2.56	0.40
17:Q:102:LYS:N	17:Q:102:LYS:CD	2.84	0.40
18:R:53:PHE:CG	18:R:54:VAL:HB	2.57	0.40
22:W:31:LEU:HD13	22:W:66:VAL:CG2	2.52	0.40
25:Z:3:LYS:O	25:Z:4:ASP:C	2.65	0.40
26:0:26:SER:OG	26:0:27:LEU:N	2.52	0.40
29:3:41:ARG:HH12	29:3:42:HIS:HB3	1.85	0.40
1:A:45:A:O4'	7:F:91:ARG:HB2	2.21	0.40
1:A:58:A:N3	7:F:25:MET:HE3	2.28	0.40
1:A:81:G:O4'	2:B:919:U:OP1	2.39	0.40
2:B:76:C:H5'	23:X:51:ALA:H	1.86	0.40
2:B:359:G:C2'	2:B:360:U:H5'	2.51	0.40
2:B:475:C:H4'	2:B:510:C:H5'	2.03	0.40
2:B:606:U:H4'	2:B:658:U:H4'	2.03	0.40
2:B:719:C:O2'	2:B:720:U:H5'	2.21	0.40
2:B:833:A:H2'	2:B:834:G:H8	1.85	0.40
2:B:931:U:C1'	2:B:1167:C:O2'	2.59	0.40
2:B:1264:A:C4	26:0:3:GLN:HG3	2.20	0.40
2:B:1331:G:H2'	32:B:3023:HOH:O	2.21	0.40
2:B:1516:G:O2'	2:B:1517:G:H5'	2.22	0.40
2:B:1684:G:H2'	2:B:1685:C:H6	1.86	0.40
2:B:1726:C:H2'	2:B:1727:C:C6	2.57	0.40
2:B:1947:C:C4	2:B:1987:A:C4'	3.04	0.40
2:B:1995:U:C2	2:B:2560:A:N7	2.89	0.40
2:B:2199:A:P	9:H:29:PHE:CD1	3.11	0.40
2:B:2291:U:H5''	2:B:2380:C:O2'	2.22	0.40
2:B:2331:G:H5'	22:W:70:VAL:HG22	2.03	0.40
2:B:2545:G:N3	2:B:2565:A:H2	2.19	0.40
2:B:2581:G:N1	2:B:2610:C:C6	2.88	0.40
2:B:2875:C:H2'	2:B:2876:G:H8	1.86	0.40
3:V:6:ALA:C	3:V:65:VAL:HG12	2.46	0.40
4:C:73:ILE:HA	4:C:74:PRO:HD3	1.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:11:MET:HG2	5:D:12:THR:N	2.31	0.40
7:F:41:GLU:CD	7:F:49:LEU:HG	2.47	0.40
11:K:60:ALA:HA	11:K:87:LEU:CG	2.51	0.40
12:L:77:ILE:C	12:L:78:ARG:HG3	2.47	0.40
13:M:38:ARG:HG3	13:M:38:ARG:NH1	2.36	0.40
15:O:94:ARG:O	15:O:96:GLY:N	2.54	0.40
16:P:50:ARG:HD2	16:P:62:LYS:HB2	2.03	0.40
19:S:2:GLU:O	19:S:3:THR:C	2.65	0.40
20:T:51:PHE:C	20:T:52:GLU:HG3	2.46	0.40
20:T:64:LYS:HB3	20:T:77:ARG:NH1	2.35	0.40
21:U:69:VAL:HG13	21:U:77:GLY:N	2.30	0.40
22:W:40:ARG:CZ	22:W:68:PHE:O	2.69	0.40
23:X:8:GLU:CD	23:X:8:GLU:C	2.90	0.40
25:Z:12:ILE:H	25:Z:12:ILE:HG13	1.26	0.40
25:Z:64:PHE:HA	25:Z:67:PRO:HD2	2.04	0.40
26:O:8:THR:CG2	26:O:9:ARG:N	2.84	0.40
27:1:4:ILE:HG22	27:1:27:ARG:NH1	2.37	0.40
27:1:11:VAL:HG13	27:1:12:SER:N	2.37	0.40
29:3:21:PHE:CD1	29:3:21:PHE:N	2.84	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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	V	92/94 (98%)	62 (67%)	21 (23%)	9 (10%)	0	7
4	C	265/273 (97%)	103 (39%)	82 (31%)	80 (30%)	0	0
5	D	207/209 (99%)	90 (44%)	69 (33%)	48 (23%)	0	1
6	E	199/201 (99%)	99 (50%)	60 (30%)	40 (20%)	0	2
7	F	176/178 (99%)	95 (54%)	48 (27%)	33 (19%)	0	2

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
8	G	174/176 (99%)	118 (68%)	39 (22%)	17 (10%)	0	7
9	H	145/149 (97%)	86 (59%)	43 (30%)	16 (11%)	0	5
10	J	138/142 (97%)	69 (50%)	40 (29%)	29 (21%)	0	2
11	K	119/123 (97%)	71 (60%)	32 (27%)	16 (13%)	0	4
12	L	142/144 (99%)	60 (42%)	40 (28%)	42 (30%)	0	0
13	M	134/136 (98%)	69 (52%)	37 (28%)	28 (21%)	0	2
14	N	125/127 (98%)	73 (58%)	35 (28%)	17 (14%)	0	4
15	O	115/117 (98%)	64 (56%)	26 (23%)	25 (22%)	0	1
16	P	112/114 (98%)	39 (35%)	36 (32%)	37 (33%)	0	0
17	Q	115/117 (98%)	81 (70%)	22 (19%)	12 (10%)	0	6
18	R	101/103 (98%)	44 (44%)	31 (31%)	26 (26%)	0	1
19	S	108/110 (98%)	63 (58%)	27 (25%)	18 (17%)	0	2
20	T	97/100 (97%)	42 (43%)	40 (41%)	15 (16%)	0	3
21	U	100/103 (97%)	33 (33%)	46 (46%)	21 (21%)	0	2
22	W	82/84 (98%)	29 (35%)	26 (32%)	27 (33%)	0	0
23	X	61/63 (97%)	28 (46%)	21 (34%)	12 (20%)	0	2
24	Y	56/58 (97%)	29 (52%)	17 (30%)	10 (18%)	0	2
25	Z	68/70 (97%)	29 (43%)	26 (38%)	13 (19%)	0	2
26	0	54/56 (96%)	30 (56%)	15 (28%)	9 (17%)	0	2
27	1	52/54 (96%)	19 (36%)	23 (44%)	10 (19%)	0	2
28	2	44/46 (96%)	23 (52%)	14 (32%)	7 (16%)	0	2
29	3	62/64 (97%)	30 (48%)	25 (40%)	7 (11%)	0	5
30	4	36/38 (95%)	18 (50%)	9 (25%)	9 (25%)	0	1
All	All	3179/3249 (98%)	1596 (50%)	950 (30%)	633 (20%)	0	2

All (633) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	C	21	PRO
4	C	22	GLU
4	C	28	PRO
4	C	29	PHE
4	C	31	PRO
4	C	32	LEU

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Mol	Chain	Res	Type
4	C	47	ARG
4	C	63	ILE
4	C	64	VAL
4	C	67	LYS
4	C	68	ARG
4	C	97	ASP
4	C	103	ILE
4	C	111	ALA
4	C	114	GLN
4	C	124	LYS
4	C	125	PRO
4	C	135	PRO
4	C	141	HIS
4	C	149	LYS
4	C	156	SER
4	C	176	ARG
4	C	209	ALA
4	C	226	PRO
4	C	227	VAL
4	C	239	PHE
4	C	246	PRO
4	C	258	SER
4	C	266	ILE
5	D	9	VAL
5	D	14	ILE
5	D	18	ASP
5	D	23	PRO
5	D	27	ILE
5	D	30	GLU
5	D	33	ARG
5	D	42	ASN
5	D	59	ARG
5	D	84	LEU
5	D	92	VAL
5	D	102	ALA
5	D	114	LYS
5	D	128	ARG
5	D	130	GLN
5	D	139	SER
5	D	141	ARG
5	D	154	LYS
5	D	170	VAL

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Mol	Chain	Res	Type
6	E	4	VAL
6	E	37	ALA
6	E	44	ARG
6	E	46	GLN
6	E	49	ARG
6	E	59	PRO
6	E	84	THR
6	E	86	ALA
6	E	117	ARG
6	E	129	PRO
6	E	147	LEU
6	E	148	ILE
6	E	165	HIS
6	E	196	VAL
7	F	66	ILE
7	F	73	VAL
7	F	76	PHE
7	F	131	VAL
7	F	139	GLU
7	F	149	ARG
7	F	173	ASP
8	G	6	ALA
8	G	19	ASN
8	G	91	VAL
9	H	29	PHE
9	H	38	PRO
9	H	41	LYS
10	J	43	GLU
10	J	44	TYR
10	J	64	VAL
10	J	74	TYR
10	J	100	VAL
10	J	101	ILE
10	J	119	PHE
11	K	35	VAL
11	K	46	ALA
11	K	53	LYS
11	K	71	ARG
11	K	72	PRO
11	K	85	VAL
11	K	89	ASN
11	K	110	GLU

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Mol	Chain	Res	Type
11	K	120	PRO
12	L	40	SER
12	L	56	PRO
12	L	62	PRO
12	L	68	SER
12	L	73	ILE
12	L	85	VAL
12	L	90	VAL
12	L	117	THR
12	L	118	THR
12	L	119	PRO
12	L	120	VAL
12	L	126	ARG
12	L	127	VAL
12	L	141	LYS
13	M	4	PRO
13	M	14	LYS
13	M	69	PRO
13	M	77	PRO
13	M	80	VAL
13	M	98	PRO
13	M	109	PRO
14	N	37	THR
14	N	89	SER
14	N	94	TYR
14	N	107	ASN
14	N	113	ILE
14	N	116	VAL
15	O	37	ALA
15	O	42	PRO
15	O	54	VAL
15	O	63	LYS
16	P	17	PRO
16	P	23	ASP
16	P	24	THR
16	P	52	ARG
16	P	55	HIS
16	P	60	VAL
16	P	72	VAL
16	P	76	HIS
16	P	85	VAL
16	P	90	ALA

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Mol	Chain	Res	Type
16	P	94	ALA
17	Q	34	ALA
17	Q	91	ARG
18	R	11	GLN
18	R	15	SER
18	R	17	GLY
18	R	24	LYS
18	R	47	VAL
18	R	59	ILE
18	R	74	ILE
18	R	95	ASP
18	R	101	ILE
19	S	3	THR
19	S	6	LYS
19	S	67	ASP
19	S	96	ILE
19	S	103	ILE
20	T	5	GLU
20	T	34	VAL
21	U	24	VAL
21	U	54	PRO
21	U	63	ALA
21	U	71	ILE
21	U	92	VAL
22	W	11	ASN
22	W	16	GLU
22	W	18	LYS
22	W	32	ALA
22	W	44	PHE
22	W	66	VAL
22	W	75	ASN
22	W	81	ILE
23	X	7	ARG
23	X	9	LYS
23	X	33	ALA
24	Y	9	THR
24	Y	51	SER
25	Z	7	PRO
25	Z	8	LYS
25	Z	40	CYS
25	Z	58	ASP
25	Z	60	PHE

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Mol	Chain	Res	Type
26	0	10	SER
26	0	29	VAL
26	0	35	GLU
27	1	46	VAL
28	2	4	THR
28	2	44	VAL
29	3	15	LYS
29	3	23	HIS
29	3	31	ILE
29	3	57	VAL
29	3	60	CYS
30	4	5	ALA
30	4	22	VAL
30	4	24	ARG
30	4	29	ALA
3	V	45	ASP
3	V	64	VAL
3	V	71	LYS
4	C	53	ILE
4	C	72	GLY
4	C	90	ILE
4	C	98	GLY
4	C	107	LYS
4	C	140	VAL
4	C	143	VAL
4	C	157	ALA
4	C	163	ILE
4	C	194	VAL
4	C	196	ASN
4	C	208	GLY
4	C	255	LYS
5	D	2	ILE
5	D	34	VAL
5	D	104	VAL
5	D	129	THR
5	D	155	VAL
5	D	162	ALA
5	D	180	VAL
5	D	206	ALA
5	D	207	VAL
6	E	23	PHE
6	E	52	VAL

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Mol	Chain	Res	Type
6	E	61	ARG
6	E	62	GLN
6	E	82	GLY
6	E	90	GLN
6	E	104	ALA
6	E	120	VAL
6	E	128	ALA
6	E	171	ASP
6	E	186	VAL
7	F	3	LEU
7	F	7	TYR
7	F	19	PHE
7	F	31	GLU
7	F	46	LYS
7	F	57	ALA
7	F	67	THR
7	F	75	GLY
7	F	122	ASP
7	F	136	ILE
7	F	148	VAL
7	F	150	GLY
7	F	153	ILE
7	F	162	ASP
7	F	176	PHE
8	G	25	ILE
8	G	151	ARG
8	G	159	LYS
8	G	166	GLU
9	H	8	LYS
9	H	44	ILE
10	J	4	PHE
10	J	6	ALA
10	J	50	THR
10	J	73	VAL
10	J	81	ILE
10	J	83	GLY
10	J	130	HIS
10	J	137	PRO
11	K	25	LEU
11	K	73	ASP
12	L	29	LYS
12	L	34	GLY

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Mol	Chain	Res	Type
12	L	48	ARG
12	L	57	LEU
12	L	77	ILE
12	L	95	LEU
12	L	128	THR
12	L	140	GLY
13	M	11	LYS
13	M	36	VAL
13	M	58	LYS
13	M	86	LYS
13	M	104	GLU
14	N	5	LYS
14	N	8	ARG
14	N	11	ASN
14	N	90	ARG
14	N	112	TYR
15	O	9	ARG
15	O	21	LEU
15	O	28	VAL
15	O	32	PRO
15	O	38	GLN
15	O	47	VAL
15	O	49	VAL
15	O	95	SER
15	O	115	LEU
16	P	49	ILE
16	P	78	PRO
16	P	82	SER
16	P	83	ILE
16	P	91	VAL
16	P	97	TYR
16	P	102	ARG
16	P	112	ARG
18	R	25	LEU
18	R	87	GLN
18	R	97	LYS
18	R	100	GLY
19	S	5	ALA
19	S	8	ARG
19	S	29	VAL
20	T	14	PRO
20	T	30	ILE

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Mol	Chain	Res	Type
20	T	32	LEU
20	T	63	VAL
20	T	65	GLY
20	T	81	LYS
20	T	85	VAL
21	U	21	ARG
21	U	22	GLY
21	U	64	ILE
21	U	77	GLY
22	W	2	HIS
22	W	23	LYS
22	W	37	VAL
22	W	42	THR
22	W	47	GLY
22	W	49	ASN
22	W	50	VAL
22	W	52	CYS
22	W	63	ASP
22	W	65	LYS
22	W	67	LYS
22	W	68	PHE
22	W	72	GLY
23	X	16	THR
23	X	30	MET
23	X	40	SER
23	X	46	VAL
25	Z	4	ASP
25	Z	9	TYR
25	Z	26	SER
25	Z	30	HIS
25	Z	32	LEU
25	Z	39	LYS
26	0	39	ARG
26	0	51	ARG
27	1	5	ARG
27	1	35	LEU
28	2	43	THR
29	3	16	THR
30	4	3	VAL
30	4	17	VAL
3	V	54	ALA
4	C	4	LYS

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Mol	Chain	Res	Type
4	C	51	ARG
4	C	56	GLY
4	C	58	LYS
4	C	59	GLN
4	C	65	ASP
4	C	91	ALA
4	C	93	VAL
4	C	142	ASN
4	C	151	GLY
4	C	164	VAL
4	C	165	ALA
4	C	173	LEU
4	C	214	GLY
5	D	69	ALA
5	D	99	GLU
5	D	140	HIS
5	D	156	PHE
5	D	174	SER
5	D	185	ASN
5	D	190	LYS
5	D	193	VAL
5	D	205	PRO
6	E	54	GLY
6	E	68	ALA
6	E	69	ARG
6	E	93	SER
6	E	127	GLU
6	E	191	ASP
7	F	10	GLU
7	F	14	LYS
7	F	81	GLY
7	F	83	PRO
7	F	87	LYS
7	F	114	ARG
8	G	45	ALA
8	G	127	GLN
9	H	20	ASN
9	H	37	VAL
9	H	42	LYS
9	H	127	GLU
10	J	46	PRO
10	J	121	LYS

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Mol	Chain	Res	Type
10	J	127	GLY
10	J	138	GLN
11	K	3	GLN
11	K	121	GLU
12	L	27	LEU
12	L	64	PHE
12	L	82	LEU
12	L	84	LYS
12	L	91	ASP
12	L	94	THR
12	L	143	GLU
13	M	12	MET
13	M	72	PRO
13	M	81	ARG
13	M	97	GLN
13	M	105	MET
13	M	120	ALA
13	M	127	LYS
13	M	131	VAL
14	N	104	ALA
14	N	115	LEU
15	O	7	ARG
15	O	57	ALA
15	O	68	LYS
16	P	12	MET
16	P	25	VAL
16	P	39	LEU
16	P	56	SER
16	P	81	ASP
16	P	105	LYS
17	Q	23	TYR
17	Q	26	ALA
17	Q	73	ILE
17	Q	88	GLU
17	Q	92	LYS
18	R	7	SER
18	R	10	LYS
18	R	29	THR
18	R	37	GLU
18	R	41	ILE
18	R	72	VAL
18	R	73	LYS

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Mol	Chain	Res	Type
18	R	98	ILE
19	S	11	ARG
19	S	12	SER
19	S	104	THR
20	T	13	ALA
20	T	15	HIS
20	T	74	ILE
20	T	96	VAL
21	U	14	THR
21	U	35	VAL
21	U	39	ASN
21	U	59	GLU
21	U	60	LYS
21	U	72	PHE
22	W	77	LYS
23	X	4	LYS
23	X	28	LEU
24	Y	2	LYS
24	Y	10	ARG
24	Y	12	ALA
24	Y	14	GLY
24	Y	16	LEU
24	Y	57	GLU
27	1	16	THR
27	1	43	ARG
27	1	47	ILE
29	3	26	ALA
4	C	61	TYR
4	C	66	PHE
4	C	224	MET
4	C	230	PRO
4	C	231	HIS
4	C	251	THR
4	C	265	PHE
5	D	73	VAL
5	D	125	TRP
5	D	169	ARG
5	D	201	LEU
6	E	39	ALA
6	E	53	THR
6	E	112	LEU
6	E	123	LYS

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Mol	Chain	Res	Type
6	E	153	LEU
7	F	175	PRO
8	G	11	PRO
8	G	155	PRO
9	H	12	LEU
9	H	75	LEU
10	J	11	VAL
10	J	85	LYS
12	L	23	ILE
12	L	30	THR
12	L	35	HIS
13	M	3	GLN
13	M	21	ALA
13	M	59	ARG
13	M	70	ASP
13	M	71	LYS
14	N	20	MET
15	O	19	GLN
15	O	55	GLU
15	O	80	GLU
16	P	26	GLU
16	P	79	VAL
16	P	96	LEU
16	P	98	TYR
17	Q	21	LYS
17	Q	24	TYR
18	R	21	ARG
18	R	55	ASP
19	S	13	SER
19	S	28	LYS
19	S	34	ASP
19	S	71	VAL
19	S	80	PRO
20	T	61	LEU
20	T	66	LYS
21	U	7	ASP
21	U	18	LYS
22	W	5	ALA
22	W	6	GLY
22	W	38	ARG
23	X	24	GLU
23	X	43	LEU

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Mol	Chain	Res	Type
25	Z	42	PRO
26	0	53	VAL
27	1	21	THR
28	2	36	ALA
30	4	7	VAL
30	4	20	ASP
3	V	55	GLU
4	C	50	THR
4	C	85	ASN
4	C	115	ILE
4	C	218	THR
4	C	225	ASN
4	C	236	GLY
5	D	52	THR
5	D	95	SER
5	D	101	PHE
5	D	189	VAL
7	F	34	THR
7	F	36	ASN
7	F	88	VAL
8	G	42	VAL
9	H	118	PRO
10	J	72	LYS
10	J	97	PRO
10	J	132	HIS
12	L	33	ARG
12	L	83	ALA
12	L	92	LEU
12	L	104	GLN
12	L	113	ALA
12	L	136	GLU
14	N	56	LYS
14	N	102	PHE
15	O	52	SER
15	O	90	VAL
16	P	3	ILE
16	P	19	PHE
16	P	59	THR
16	P	92	ARG
16	P	110	LYS
17	Q	93	ILE
18	R	77	PHE

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Mol	Chain	Res	Type
19	S	69	LEU
19	S	99	ARG
21	U	56	GLY
21	U	84	PHE
23	X	35	GLY
24	Y	17	PRO
24	Y	53	MET
25	Z	66	ILE
26	0	5	ASN
28	2	8	SER
4	C	14	HIS
4	C	17	LYS
4	C	30	ALA
4	C	155	ARG
4	C	223	ALA
5	D	175	LEU
6	E	24	ASN
8	G	32	LEU
8	G	59	ASP
10	J	84	ILE
12	L	37	GLY
17	Q	18	LYS
18	R	4	VAL
27	1	38	PHE
28	2	6	GLN
3	V	72	VAL
3	V	84	PRO
4	C	16	VAL
6	E	113	VAL
8	G	99	GLY
13	M	26	VAL
13	M	89	VAL
14	N	39	PRO
16	P	21	PRO
16	P	69	VAL
17	Q	89	ILE
27	1	30	PRO
28	2	9	VAL
4	C	158	GLY
10	J	18	VAL
10	J	22	GLY
10	J	103	ILE

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Mol	Chain	Res	Type
11	K	26	GLY
12	L	139	GLY
12	L	142	ILE
15	O	27	VAL
15	O	31	THR
22	W	35	ILE
30	4	25	VAL
4	C	108	GLY
4	C	171	VAL
4	C	217	PRO
5	D	98	VAL
5	D	203	VAL
7	F	39	VAL
9	H	9	VAL
9	H	34	GLY
9	H	108	VAL
10	J	66	GLY
11	K	115	ILE
13	M	37	GLY
15	O	87	ILE
21	U	4	ILE
3	V	70	ILE
4	C	46	GLY
6	E	175	ILE
8	G	92	GLY
8	G	130	ILE
9	H	95	GLY
12	L	11	GLY
15	O	22	GLY
18	R	27	ILE
22	W	51	GLY
26	0	34	GLY
27	1	42	VAL
3	V	4	ILE
6	E	76	PRO
11	K	15	GLY
16	P	4	ILE
21	U	48	VAL
26	0	42	ILE

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 PDB entries followed by that with respect to all EM entries.

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	V	78/78 (100%)	63 (81%)	15 (19%)	1	8
4	C	213/218 (98%)	136 (64%)	77 (36%)	0	1
5	D	164/164 (100%)	108 (66%)	56 (34%)	0	1
6	E	165/165 (100%)	116 (70%)	49 (30%)	0	2
7	F	149/149 (100%)	123 (83%)	26 (17%)	2	9
8	G	137/137 (100%)	106 (77%)	31 (23%)	1	6
9	H	114/114 (100%)	83 (73%)	31 (27%)	0	3
10	J	114/116 (98%)	85 (75%)	29 (25%)	0	3
11	K	102/104 (98%)	78 (76%)	24 (24%)	1	5
12	L	103/103 (100%)	57 (55%)	46 (45%)	0	0
13	M	109/109 (100%)	78 (72%)	31 (28%)	0	2
14	N	103/103 (100%)	80 (78%)	23 (22%)	1	6
15	O	87/87 (100%)	56 (64%)	31 (36%)	0	1
16	P	99/99 (100%)	76 (77%)	23 (23%)	1	5
17	Q	89/89 (100%)	67 (75%)	22 (25%)	1	4
18	R	84/84 (100%)	68 (81%)	16 (19%)	1	8
19	S	93/93 (100%)	72 (77%)	21 (23%)	1	6
20	T	83/84 (99%)	54 (65%)	29 (35%)	0	1
21	U	83/84 (99%)	62 (75%)	21 (25%)	0	3
22	W	62/62 (100%)	44 (71%)	18 (29%)	0	2
23	X	55/55 (100%)	36 (66%)	19 (34%)	0	1
24	Y	48/48 (100%)	37 (77%)	11 (23%)	1	6
25	Z	62/62 (100%)	43 (69%)	19 (31%)	0	2
26	0	47/47 (100%)	32 (68%)	15 (32%)	0	2
27	1	48/48 (100%)	30 (62%)	18 (38%)	0	1
28	2	38/38 (100%)	28 (74%)	10 (26%)	0	3

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
29	3	51/51 (100%)	34 (67%)	17 (33%)	0	2
30	4	34/34 (100%)	21 (62%)	13 (38%)	0	1
All	All	2614/2625 (100%)	1873 (72%)	741 (28%)	1	3

All (741) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	V	3	THR
3	V	9	ARG
3	V	29	ILE
3	V	35	GLU
3	V	40	ILE
3	V	42	LEU
3	V	46	LYS
3	V	51	GLN
3	V	59	GLU
3	V	69	GLU
3	V	70	ILE
3	V	73	LYS
3	V	77	VAL
3	V	87	GLN
3	V	89	ILE
4	C	3	VAL
4	C	5	CYS
4	C	9	SER
4	C	10	PRO
4	C	13	ARG
4	C	14	HIS
4	C	17	LYS
4	C	22	GLU
4	C	23	LEU
4	C	27	LYS
4	C	28	PRO
4	C	32	LEU
4	C	33	LEU
4	C	35	LYS
4	C	36	ASN
4	C	38	LYS
4	C	43	ASN
4	C	44	ASN
4	C	51	ARG

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Mol	Chain	Res	Type
4	C	58	LYS
4	C	59	GLN
4	C	62	ARG
4	C	64	VAL
4	C	68	ARG
4	C	78	GLU
4	C	84	PRO
4	C	86	ARG
4	C	94	LEU
4	C	100	ARG
4	C	102	TYR
4	C	110	LYS
4	C	124	LYS
4	C	127	ASN
4	C	128	THR
4	C	129	LEU
4	C	131	MET
4	C	136	VAL
4	C	144	GLU
4	C	145	MET
4	C	152	GLN
4	C	155	ARG
4	C	162	GLN
4	C	171	VAL
4	C	172	THR
4	C	175	LEU
4	C	179	GLU
4	C	181	ARG
4	C	184	GLU
4	C	186	ASP
4	C	188	ARG
4	C	191	LEU
4	C	194	VAL
4	C	196	ASN
4	C	199	HIS
4	C	201	LEU
4	C	203	VAL
4	C	206	LYS
4	C	213	ARG
4	C	216	ARG
4	C	218	THR
4	C	220	ARG

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Mol	Chain	Res	Type
4	C	222	THR
4	C	224	MET
4	C	225	ASN
4	C	227	VAL
4	C	228	ASP
4	C	231	HIS
4	C	235	GLU
4	C	237	ARG
4	C	244	VAL
4	C	246	PRO
4	C	249	VAL
4	C	250	GLN
4	C	254	LYS
4	C	257	ARG
4	C	261	ARG
4	C	268	ARG
5	D	1	MET
5	D	4	LEU
5	D	8	LYS
5	D	20	VAL
5	D	21	SER
5	D	24	VAL
5	D	25	THR
5	D	26	VAL
5	D	28	GLU
5	D	30	GLU
5	D	34	VAL
5	D	35	THR
5	D	36	GLN
5	D	37	VAL
5	D	38	LYS
5	D	39	ASP
5	D	46	ARG
5	D	48	ILE
5	D	50	VAL
5	D	56	LYS
5	D	59	ARG
5	D	62	LYS
5	D	64	GLU
5	D	67	HIS
5	D	70	LYS
5	D	84	LEU

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Mol	Chain	Res	Type
5	D	86	GLU
5	D	89	GLU
5	D	96	ILE
5	D	99	GLU
5	D	105	LYS
5	D	107	VAL
5	D	113	SER
5	D	127	PHE
5	D	128	ARG
5	D	133	THR
5	D	138	LEU
5	D	142	VAL
5	D	148	GLN
5	D	150	GLN
5	D	151	THR
5	D	154	LYS
5	D	155	VAL
5	D	157	LYS
5	D	159	LYS
5	D	160	LYS
5	D	161	MET
5	D	164	GLN
5	D	165	MET
5	D	167	ASN
5	D	176	ASP
5	D	177	VAL
5	D	178	VAL
5	D	184	ARG
5	D	197	THR
5	D	207	VAL
6	E	2	GLU
6	E	4	VAL
6	E	5	LEU
6	E	10	SER
6	E	18	THR
6	E	22	ASP
6	E	28	VAL
6	E	41	GLN
6	E	43	THR
6	E	44	ARG
6	E	46	GLN
6	E	47	LYS

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Mol	Chain	Res	Type
6	E	49	ARG
6	E	55	SER
6	E	57	LYS
6	E	58	LYS
6	E	61	ARG
6	E	67	ARG
6	E	69	ARG
6	E	70	SER
6	E	74	LYS
6	E	78	TRP
6	E	88	ARG
6	E	97	ASN
6	E	98	LYS
6	E	106	LYS
6	E	107	SER
6	E	109	LEU
6	E	113	VAL
6	E	114	ARG
6	E	118	LEU
6	E	132	LYS
6	E	133	LEU
6	E	134	LEU
6	E	148	ILE
6	E	150	THR
6	E	152	GLU
6	E	155	GLU
6	E	157	LEU
6	E	159	LEU
6	E	164	LEU
6	E	169	VAL
6	E	179	SER
6	E	184	ASP
6	E	188	MET
6	E	189	THR
6	E	193	VAL
6	E	197	GLU
6	E	200	LEU
7	F	5	ASP
7	F	9	ASP
7	F	10	GLU
7	F	14	LYS
7	F	16	MET

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Mol	Chain	Res	Type
7	F	17	THR
7	F	21	TYR
7	F	37	MET
7	F	55	ASP
7	F	56	LEU
7	F	59	ILE
7	F	63	LYS
7	F	87	LYS
7	F	93	GLU
7	F	97	GLU
7	F	102	LEU
7	F	126	ASN
7	F	139	GLU
7	F	142	TYR
7	F	143	ASP
7	F	147	ARG
7	F	151	LEU
7	F	152	ASP
7	F	168	LEU
7	F	172	PHE
7	F	174	PHE
8	G	2	ARG
8	G	3	VAL
8	G	5	LYS
8	G	18	ILE
8	G	23	ILE
8	G	25	ILE
8	G	29	ASN
8	G	34	ARG
8	G	46	ASP
8	G	47	ASN
8	G	49	LEU
8	G	55	ASP
8	G	57	TYR
8	G	59	ASP
8	G	70	LEU
8	G	72	ASN
8	G	80	GLU
8	G	84	LYS
8	G	86	LEU
8	G	94	ARG
8	G	98	LYS

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Mol	Chain	Res	Type
8	G	110	HIS
8	G	121	THR
8	G	128	THR
8	G	133	LYS
8	G	143	VAL
8	G	146	ASP
8	G	150	TYR
8	G	151	ARG
8	G	152	ARG
8	G	176	LYS
9	H	1	MET
9	H	2	GLN
9	H	5	LEU
9	H	7	ASP
9	H	8	LYS
9	H	18	GLN
9	H	22	LYS
9	H	27	ARG
9	H	30	LEU
9	H	33	GLN
9	H	35	LYS
9	H	42	LYS
9	H	43	ASN
9	H	47	PHE
9	H	48	GLU
9	H	55	GLU
9	H	57	LYS
9	H	68	ARG
9	H	70	GLU
9	H	73	ASN
9	H	75	LEU
9	H	77	THR
9	H	89	LYS
9	H	96	THR
9	H	98	ASP
9	H	112	LYS
9	H	124	THR
9	H	125	THR
9	H	134	VAL
9	H	135	HIS
9	H	139	PHE
10	J	3	THR

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Mol	Chain	Res	Type
10	J	12	LYS
10	J	15	TRP
10	J	21	THR
10	J	23	LYS
10	J	24	THR
10	J	25	LEU
10	J	28	LEU
10	J	31	GLU
10	J	34	ARG
10	J	35	ARG
10	J	36	LEU
10	J	39	LYS
10	J	58	ASN
10	J	61	LYS
10	J	64	VAL
10	J	68	LYS
10	J	69	ARG
10	J	70	THR
10	J	90	GLU
10	J	96	ARG
10	J	98	GLU
10	J	114	LEU
10	J	116	ARG
10	J	118	MET
10	J	122	LEU
10	J	130	HIS
10	J	136	GLN
10	J	139	VAL
11	K	4	GLU
11	K	9	ASN
11	K	17	ARG
11	K	19	VAL
11	K	20	MET
11	K	22	ILE
11	K	30	ARG
11	K	31	ARG
11	K	32	TYR
11	K	41	ILE
11	K	54	LYS
11	K	58	LEU
11	K	62	VAL
11	K	71	ARG

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Mol	Chain	Res	Type
11	K	86	LEU
11	K	87	LEU
11	K	93	GLN
11	K	95	ILE
11	K	107	LEU
11	K	108	ARG
11	K	109	SER
11	K	110	GLU
11	K	116	ILE
11	K	120	PRO
12	L	1	MET
12	L	2	ARG
12	L	7	SER
12	L	13	LYS
12	L	14	LYS
12	L	18	ARG
12	L	27	LEU
12	L	29	LYS
12	L	33	ARG
12	L	36	LYS
12	L	39	LYS
12	L	41	ARG
12	L	47	ARG
12	L	55	MET
12	L	56	PRO
12	L	57	LEU
12	L	59	ARG
12	L	61	LEU
12	L	70	LYS
12	L	74	THR
12	L	76	GLU
12	L	77	ILE
12	L	78	ARG
12	L	82	LEU
12	L	84	LYS
12	L	90	VAL
12	L	91	ASP
12	L	92	LEU
12	L	96	LYS
12	L	103	ILE
12	L	104	GLN
12	L	105	ILE

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Mol	Chain	Res	Type
12	L	106	GLU
12	L	107	PHE
12	L	110	VAL
12	L	111	ILE
12	L	112	LEU
12	L	115	GLU
12	L	116	VAL
12	L	118	THR
12	L	121	THR
12	L	122	VAL
12	L	126	ARG
12	L	127	VAL
12	L	141	LYS
12	L	143	GLU
13	M	1	MET
13	M	3	GLN
13	M	8	LYS
13	M	9	PHE
13	M	11	LYS
13	M	12	MET
13	M	14	LYS
13	M	18	ARG
13	M	22	GLN
13	M	33	LEU
13	M	36	VAL
13	M	45	GLN
13	M	54	THR
13	M	55	ARG
13	M	63	ILE
13	M	71	LYS
13	M	72	PRO
13	M	73	ILE
13	M	76	LYS
13	M	84	LYS
13	M	88	ASN
13	M	93	VAL
13	M	96	ILE
13	M	100	LYS
13	M	105	MET
13	M	109	PRO
13	M	117	PHE
13	M	118	LYS

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Mol	Chain	Res	Type
13	M	132	THR
13	M	133	LYS
13	M	136	MET
14	N	1	MET
14	N	3	HIS
14	N	9	GLN
14	N	10	LEU
14	N	11	ASN
14	N	13	ASN
14	N	21	PHE
14	N	33	ILE
14	N	34	ILE
14	N	35	LYS
14	N	39	PRO
14	N	48	VAL
14	N	57	THR
14	N	65	LEU
14	N	73	ASN
14	N	75	ILE
14	N	98	LEU
14	N	99	LYS
14	N	103	ARG
14	N	112	TYR
14	N	116	VAL
14	N	119	SER
14	N	120	GLU
15	O	1	MET
15	O	2	ASP
15	O	3	LYS
15	O	5	SER
15	O	9	ARG
15	O	10	ARG
15	O	13	ARG
15	O	21	LEU
15	O	25	ARG
15	O	29	HIS
15	O	31	THR
15	O	32	PRO
15	O	34	HIS
15	O	35	ILE
15	O	38	GLN
15	O	40	ILE

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Mol	Chain	Res	Type
15	O	56	LYS
15	O	60	GLU
15	O	62	LEU
15	O	64	TYR
15	O	67	ASN
15	O	68	LYS
15	O	74	VAL
15	O	84	GLU
15	O	85	LYS
15	O	87	ILE
15	O	93	ASP
15	O	97	PHE
15	O	98	GLN
15	O	112	GLU
15	O	116	GLN
16	P	2	ASN
16	P	11	GLN
16	P	12	MET
16	P	15	ASP
16	P	24	THR
16	P	32	VAL
16	P	38	ARG
16	P	42	PHE
16	P	46	VAL
16	P	47	ILE
16	P	50	ARG
16	P	52	ARG
16	P	55	HIS
16	P	56	SER
16	P	60	VAL
16	P	74	GLN
16	P	76	HIS
16	P	79	VAL
16	P	88	ARG
16	P	100	ARG
16	P	108	ARG
16	P	111	GLU
16	P	113	LEU
17	Q	3	VAL
17	Q	10	ARG
17	Q	12	ARG
17	Q	21	LYS

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Mol	Chain	Res	Type
17	Q	32	ARG
17	Q	36	GLN
17	Q	38	VAL
17	Q	39	ILE
17	Q	55	GLN
17	Q	65	ASN
17	Q	71	ASN
17	Q	80	ASN
17	Q	84	LYS
17	Q	87	VAL
17	Q	90	ASP
17	Q	91	ARG
17	Q	92	LYS
17	Q	94	LEU
17	Q	101	ASP
17	Q	102	LYS
17	Q	108	LEU
17	Q	113	LYS
18	R	12	HIS
18	R	13	ARG
18	R	16	GLU
18	R	18	GLN
18	R	23	GLU
18	R	25	LEU
18	R	40	MET
18	R	41	ILE
18	R	43	ASN
18	R	52	PRO
18	R	53	PHE
18	R	66	HIS
18	R	79	ARG
18	R	83	TYR
18	R	94	THR
18	R	95	ASP
19	S	3	THR
19	S	4	ILE
19	S	6	LYS
19	S	9	HIS
19	S	13	SER
19	S	16	LYS
19	S	19	LEU
19	S	28	LYS

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Mol	Chain	Res	Type
19	S	37	THR
19	S	59	GLU
19	S	60	HIS
19	S	67	ASP
19	S	69	LEU
19	S	80	PRO
19	S	84	ARG
19	S	88	ARG
19	S	90	LYS
19	S	94	ASP
19	S	95	ARG
19	S	102	HIS
19	S	110	ARG
20	T	1	MET
20	T	2	ILE
20	T	5	GLU
20	T	6	ARG
20	T	8	LEU
20	T	10	VAL
20	T	11	LEU
20	T	15	HIS
20	T	21	SER
20	T	25	GLU
20	T	26	LYS
20	T	28	ASN
20	T	30	ILE
20	T	31	VAL
20	T	36	LYS
20	T	44	LYS
20	T	47	VAL
20	T	48	GLN
20	T	52	GLU
20	T	60	THR
20	T	61	LEU
20	T	66	LYS
20	T	68	LYS
20	T	69	ARG
20	T	79	ASP
20	T	85	VAL
20	T	89	GLU
20	T	91	GLN
20	T	94	ASP

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Mol	Chain	Res	Type
21	U	3	LYS
21	U	13	LEU
21	U	33	VAL
21	U	38	ILE
21	U	43	LYS
21	U	48	VAL
21	U	59	GLU
21	U	61	GLU
21	U	64	ILE
21	U	66	VAL
21	U	68	ASN
21	U	71	ILE
21	U	72	PHE
21	U	80	ASP
21	U	81	ARG
21	U	85	ARG
21	U	88	ASP
21	U	90	LYS
21	U	93	ARG
21	U	95	PHE
21	U	100	GLU
22	W	2	HIS
22	W	8	SER
22	W	10	ARG
22	W	18	LYS
22	W	19	ARG
22	W	20	LEU
22	W	23	LYS
22	W	35	ILE
22	W	36	ILE
22	W	40	ARG
22	W	45	HIS
22	W	54	ARG
22	W	55	ASP
22	W	65	LYS
22	W	69	GLU
22	W	76	ARG
22	W	81	ILE
22	W	84	GLU
23	X	2	LYS
23	X	5	GLU
23	X	7	ARG

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Mol	Chain	Res	Type
23	X	8	GLU
23	X	12	GLU
23	X	14	LEU
23	X	15	ASN
23	X	17	GLU
23	X	18	LEU
23	X	34	SER
23	X	36	GLN
23	X	38	GLN
23	X	41	HIS
23	X	42	LEU
23	X	44	LYS
23	X	45	GLN
23	X	50	VAL
23	X	53	VAL
23	X	60	LYS
24	Y	6	ILE
24	Y	7	THR
24	Y	8	GLN
24	Y	9	THR
24	Y	10	ARG
24	Y	15	ARG
24	Y	16	LEU
24	Y	20	LYS
24	Y	31	ILE
24	Y	37	ARG
24	Y	39	ASP
25	Z	4	ASP
25	Z	6	HIS
25	Z	8	LYS
25	Z	12	ILE
25	Z	13	THR
25	Z	15	SER
25	Z	18	CYS
25	Z	24	ILE
25	Z	25	ARG
25	Z	30	HIS
25	Z	32	LEU
25	Z	33	ASN
25	Z	35	ASP
25	Z	40	CYS
25	Z	49	ARG

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Mol	Chain	Res	Type
25	Z	51	VAL
25	Z	58	ASP
25	Z	66	ILE
25	Z	70	LYS
26	0	3	GLN
26	0	4	GLN
26	0	5	ASN
26	0	11	LYS
26	0	12	ARG
26	0	14	MET
26	0	21	LEU
26	0	25	THR
26	0	27	LEU
26	0	29	VAL
26	0	32	THR
26	0	39	ARG
26	0	49	ARG
26	0	51	ARG
26	0	52	LYS
27	1	4	ILE
27	1	5	ARG
27	1	6	GLU
27	1	7	LYS
27	1	8	ILE
27	1	9	LYS
27	1	23	THR
27	1	24	LYS
27	1	32	LYS
27	1	33	LEU
27	1	34	GLU
27	1	36	LYS
27	1	42	VAL
27	1	44	GLN
27	1	47	ILE
27	1	49	LYS
27	1	52	LYS
27	1	53	ILE
28	2	2	LYS
28	2	11	LYS
28	2	12	ARG
28	2	21	ARG
28	2	25	LYS

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Mol	Chain	Res	Type
28	2	26	ASN
28	2	29	GLN
28	2	33	ARG
28	2	45	SER
28	2	46	LYS
29	3	3	ILE
29	3	4	LYS
29	3	6	VAL
29	3	12	ARG
29	3	18	LYS
29	3	21	PHE
29	3	25	HIS
29	3	28	LEU
29	3	29	ARG
29	3	32	LEU
29	3	35	LYS
29	3	37	THR
29	3	41	ARG
29	3	43	LEU
29	3	44	ARG
29	3	46	LYS
29	3	51	LYS
30	4	2	LYS
30	4	4	ARG
30	4	8	LYS
30	4	9	LYS
30	4	10	LEU
30	4	12	ARG
30	4	16	ILE
30	4	19	ARG
30	4	20	ASP
30	4	23	ILE
30	4	33	HIS
30	4	36	ARG
30	4	37	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (102) such sidechains are listed below:

Mol	Chain	Res	Type
3	V	12	GLN
3	V	51	GLN
3	V	75	GLN

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Mol	Chain	Res	Type
3	V	80	HIS
4	C	20	ASN
4	C	36	ASN
4	C	85	ASN
4	C	89	ASN
4	C	127	ASN
4	C	133	ASN
4	C	141	HIS
4	C	162	GLN
4	C	225	ASN
4	C	231	HIS
5	D	32	ASN
5	D	42	ASN
5	D	140	HIS
5	D	149	ASN
5	D	150	GLN
5	D	164	GLN
5	D	167	ASN
5	D	185	ASN
6	E	29	HIS
6	E	46	GLN
6	E	92	HIS
6	E	97	ASN
6	E	136	GLN
6	E	156	ASN
6	E	195	GLN
7	F	22	ASN
7	F	26	GLN
7	F	36	ASN
7	F	80	GLN
7	F	126	ASN
8	G	19	ASN
8	G	21	GLN
8	G	29	ASN
9	H	2	GLN
9	H	11	ASN
9	H	43	ASN
9	H	73	ASN
9	H	145	ASN
10	J	47	HIS
10	J	77	HIS
10	J	131	ASN

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Mol	Chain	Res	Type
10	J	135	GLN
10	J	136	GLN
11	K	5	GLN
11	K	9	ASN
11	K	82	ASN
11	K	88	ASN
12	L	35	HIS
12	L	38	GLN
12	L	54	GLN
12	L	99	ASN
13	M	3	GLN
13	M	45	GLN
14	N	9	GLN
14	N	13	ASN
14	N	16	HIS
14	N	23	ASN
14	N	73	ASN
14	N	81	ASN
14	N	107	ASN
15	O	19	GLN
15	O	67	ASN
15	O	98	GLN
15	O	104	GLN
16	P	40	GLN
16	P	74	GLN
17	Q	13	HIS
17	Q	19	GLN
17	Q	43	GLN
17	Q	55	GLN
18	R	18	GLN
18	R	86	GLN
19	S	9	HIS
19	S	57	ASN
20	T	28	ASN
20	T	72	GLN
21	U	39	ASN
21	U	65	GLN
21	U	68	ASN
22	W	2	HIS
22	W	56	HIS
23	X	25	GLN
23	X	31	GLN

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Mol	Chain	Res	Type
23	X	36	GLN
23	X	38	GLN
23	X	45	GLN
23	X	58	ASN
24	Y	8	GLN
24	Y	19	HIS
25	Z	41	HIS
25	Z	65	ASN
26	0	4	GLN
27	1	25	ASN
29	3	23	HIS
29	3	42	HIS
30	4	13	ASN
30	4	35	GLN
30	4	37	GLN

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	116/120 (96%)	23 (19%)	0
2	B	2810/2904 (96%)	449 (15%)	20 (0%)
All	All	2926/3024 (96%)	472 (16%)	20 (0%)

All (472) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	11	C
1	A	12	C
1	A	13	G
1	A	14	U
1	A	15	A
1	A	16	G
1	A	25	U
1	A	26	C
1	A	28	C
1	A	29	A
1	A	30	C
1	A	35	C
1	A	42	C
1	A	44	G
1	A	45	A

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Mol	Chain	Res	Type
1	A	56	G
1	A	66	A
1	A	67	G
1	A	84	G
1	A	90	C
1	A	99	A
1	A	108	A
1	A	109	A
2	B	2	G
2	B	3	U
2	B	4	U
2	B	13	A
2	B	14	A
2	B	33	C
2	B	34	U
2	B	35	G
2	B	49	A
2	B	63	A
2	B	64	A
2	B	71	A
2	B	74	A
2	B	75	G
2	B	84	A
2	B	85	G
2	B	91	A
2	B	92	U
2	B	96	C
2	B	100	U
2	B	101	A
2	B	102	U
2	B	103	A
2	B	104	A
2	B	118	A
2	B	119	A
2	B	120	U
2	B	125	A
2	B	126	A
2	B	140	C
2	B	142	A
2	B	144	A
2	B	160	A
2	B	162	U

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Mol	Chain	Res	Type
2	B	163	C
2	B	181	A
2	B	186	G
2	B	196	A
2	B	199	A
2	B	209	C
2	B	216	A
2	B	222	A
2	B	224	U
2	B	230	G
2	B	241	A
2	B	248	G
2	B	252	G
2	B	255	A
2	B	265	A
2	B	266	G
2	B	271	G
2	B	277	G
2	B	278	A
2	B	279	A
2	B	311	A
2	B	312	G
2	B	323	C
2	B	324	A
2	B	329	G
2	B	330	A
2	B	349	U
2	B	353	C
2	B	355	U
2	B	371	A
2	B	372	G
2	B	386	G
2	B	387	U
2	B	395	U
2	B	396	G
2	B	397	U
2	B	405	U
2	B	411	G
2	B	423	A
2	B	424	G
2	B	435	C
2	B	444	C

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Mol	Chain	Res	Type
2	B	451	U
2	B	455	C
2	B	457	A
2	B	479	A
2	B	480	A
2	B	481	G
2	B	491	G
2	B	498	G
2	B	504	A
2	B	505	A
2	B	508	A
2	B	509	C
2	B	512	G
2	B	518	G
2	B	527	C
2	B	530	G
2	B	532	A
2	B	533	G
2	B	544	C
2	B	545	U
2	B	546	U
2	B	547	A
2	B	548	G
2	B	555	G
2	B	563	A
2	B	572	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	632	A
2	B	637	A
2	B	640	C
2	B	645	C
2	B	646	U
2	B	654	A
2	B	655	A

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Mol	Chain	Res	Type
2	B	670	A
2	B	671	C
2	B	686	U
2	B	717	C
2	B	719	C
2	B	722	A
2	B	728	G
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
2	B	785	G
2	B	805	G
2	B	806	C
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	876	C
2	B	877	A
2	B	878	A
2	B	899	A
2	B	912	C
2	B	932	U
2	B	933	A
2	B	934	U
2	B	941	A
2	B	946	C
2	B	955	U
2	B	961	C
2	B	973	A
2	B	974	G
2	B	983	A
2	B	985	C
2	B	989	G

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Mol	Chain	Res	Type
2	B	991	C
2	B	993	G
2	B	995	C
2	B	996	A
2	B	1005	C
2	B	1012	U
2	B	1013	C
2	B	1019	U
2	B	1022	G
2	B	1025	G
2	B	1033	U
2	B	1042	G
2	B	1046	A
2	B	1047	G
2	B	1070	A
2	B	1088	A
2	B	1090	A
2	B	1112	G
2	B	1122	G
2	B	1126	A
2	B	1132	U
2	B	1133	A
2	B	1134	A
2	B	1135	C
2	B	1136	G
2	B	1139	G
2	B	1142	A
2	B	1156	A
2	B	1157	G
2	B	1172	C
2	B	1174	U
2	B	1176	U
2	B	1179	G
2	B	1188	U
2	B	1195	G
2	B	1197	G
2	B	1205	A
2	B	1206	G
2	B	1211	C
2	B	1212	G
2	B	1218	G
2	B	1237	A

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Mol	Chain	Res	Type
2	B	1247	A
2	B	1248	G
2	B	1251	C
2	B	1253	A
2	B	1256	G
2	B	1266	G
2	B	1272	A
2	B	1273	U
2	B	1275	A
2	B	1276	A
2	B	1301	A
2	B	1302	A
2	B	1312	U
2	B	1325	U
2	B	1330	C
2	B	1337	G
2	B	1345	C
2	B	1352	U
2	B	1365	A
2	B	1368	G
2	B	1379	U
2	B	1383	A
2	B	1384	A
2	B	1396	U
2	B	1397	U
2	B	1416	G
2	B	1418	G
2	B	1419	A
2	B	1420	A
2	B	1427	A
2	B	1428	C
2	B	1434	A
2	B	1450	G
2	B	1451	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

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Mol	Chain	Res	Type
2	B	1478	G
2	B	1482	G
2	B	1490	A
2	B	1493	C
2	B	1494	A
2	B	1504	A
2	B	1508	A
2	B	1509	A
2	B	1510	G
2	B	1524	G
2	B	1532	A
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	1567	G
2	B	1569	A
2	B	1578	U
2	B	1581	G
2	B	1583	A
2	B	1585	C
2	B	1608	A
2	B	1610	A
2	B	1613	G
2	B	1634	A
2	B	1635	A
2	B	1640	A
2	B	1648	U
2	B	1649	G
2	B	1674	G
2	B	1700	A
2	B	1701	A
2	B	1703	G
2	B	1706	C
2	B	1707	G
2	B	1713	A
2	B	1715	G
2	B	1716	U
2	B	1723	G

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Mol	Chain	Res	Type
2	B	1729	U
2	B	1730	C
2	B	1731	G
2	B	1733	G
2	B	1738	G
2	B	1756	G
2	B	1758	U
2	B	1764	C
2	B	1773	A
2	B	1776	G
2	B	1781	U
2	B	1786	A
2	B	1791	A
2	B	1800	C
2	B	1801	A
2	B	1816	C
2	B	1833	C
2	B	1870	C
2	B	1873	G
2	B	1876	A
2	B	1884	G
2	B	1906	G
2	B	1914	C
2	B	1927	A
2	B	1929	G
2	B	1937	A
2	B	1938	A
2	B	1939	U
2	B	1940	U
2	B	1955	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

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Mol	Chain	Res	Type
2	B	2043	C
2	B	2052	A
2	B	2055	C
2	B	2056	G
2	B	2061	G
2	B	2062	A
2	B	2069	G
2	B	2072	C
2	B	2095	A
2	B	2102	G
2	B	2104	C
2	B	2137	U
2	B	2140	G
2	B	2141	G
2	B	2144	G
2	B	2145	C
2	B	2147	A
2	B	2149	U
2	B	2181	U
2	B	2187	U
2	B	2192	U
2	B	2199	A
2	B	2204	G
2	B	2211	A
2	B	2212	A
2	B	2225	A
2	B	2226	C
2	B	2238	G
2	B	2239	G
2	B	2243	U
2	B	2259	U
2	B	2266	A
2	B	2273	A
2	B	2276	G
2	B	2278	A
2	B	2283	C
2	B	2286	G
2	B	2287	A
2	B	2297	A
2	B	2304	G
2	B	2305	U
2	B	2307	G

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Mol	Chain	Res	Type
2	B	2310	C
2	B	2315	G
2	B	2318	G
2	B	2319	G
2	B	2320	U
2	B	2321	U
2	B	2322	A
2	B	2325	G
2	B	2333	A
2	B	2334	U
2	B	2336	A
2	B	2337	G
2	B	2347	C
2	B	2383	G
2	B	2385	C
2	B	2391	G
2	B	2402	U
2	B	2406	A
2	B	2423	U
2	B	2424	C
2	B	2426	A
2	B	2429	G
2	B	2430	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	2573	C
2	B	2583	G
2	B	2585	U
2	B	2586	U
2	B	2597	G

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Mol	Chain	Res	Type
2	B	2602	A
2	B	2609	U
2	B	2610	C
2	B	2613	U
2	B	2621	G
2	B	2627	G
2	B	2629	U
2	B	2654	A
2	B	2682	A
2	B	2689	U
2	B	2690	U
2	B	2714	G
2	B	2726	A
2	B	2733	A
2	B	2739	U
2	B	2744	G
2	B	2748	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	2797	U
2	B	2800	A
2	B	2801	G
2	B	2808	G
2	B	2820	A
2	B	2821	A
2	B	2836	U
2	B	2850	A
2	B	2866	U
2	B	2867	G
2	B	2872	A
2	B	2873	A
2	B	2883	A
2	B	2903	U

All (20) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
2	B	63	A

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Mol	Chain	Res	Type
2	B	102	U
2	B	162	U
2	B	529	A
2	B	670	A
2	B	858	G
2	B	1205	A
2	B	1210	G
2	B	1236	G
2	B	1250	G
2	B	1301	A
2	B	1580	A
2	B	1913	A
2	B	2198	A
2	B	2258	C
2	B	2282	G
2	B	2336	A
2	B	2390	U
2	B	2425	A
2	B	2756	U

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 110 ligands modelled in this entry, 110 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.

No monomer is involved in short contacts.

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

The following chains have linkage breaks:

Mol	Chain	Number of breaks
2	B	44
1	A	2
9	H	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	B	2450:A	O3'	2451:A	P	28.22
1	B	2059:A	O3'	2060:A	P	25.69
1	B	1679:A	O3'	1680:U	P	25.40
1	B	1760:C	O3'	1761:C	P	22.71
1	B	2433:A	O3'	2434:A	P	20.69
1	B	1646:C	O3'	1647:U	P	16.76
1	B	1977:A	O3'	1978:A	P	15.15
1	B	2157:G	O3'	2158:A	P	14.98
1	B	878:A	O3'	879:G	P	14.90
1	B	2110:G	O3'	2111:U	P	12.54
1	B	909:A	O3'	910:A	P	11.91
1	B	2243:U	O3'	2244:U	P	11.57
1	B	2014:A	O3'	2015:A	P	11.27
1	B	865:C	O3'	866:A	P	10.70
1	B	1828:G	O3'	1829:A	P	8.50
1	B	1129:A	O3'	1130:U	P	8.36
1	B	1270:C	O3'	1271:G	P	7.96
1	H	54:LEU	C	55:GLU	N	7.48
1	B	429:A	O3'	430:A	P	6.66
1	B	570:G	O3'	571:U	P	6.49
1	B	1604:C	O3'	1605:C	P	6.22
1	B	1025:G	O3'	1026:G	P	6.12
1	B	2283:C	O3'	2284:A	P	5.66
1	B	810:U	O3'	811:U	P	5.18
1	B	699:A	O3'	700:G	P	5.09
1	B	1929:G	O3'	1930:G	P	4.95
1	B	2090:A	O3'	2091:C	P	4.95
1	B	1340:U	O3'	1341:G	P	4.50

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	B	45:G	O3'	46:G	P	4.37
1	B	220:G	O3'	221:A	P	4.31
1	B	2199:A	O3'	2200:C	P	4.29
1	A	107:G	O3'	108:A	P	3.33
1	B	1187:G	O3'	1188:U	P	3.20
1	A	69:G	O3'	70:C	P	3.15
1	B	1905:C	O3'	1906:G	P	3.02
1	B	669:G	O3'	670:A	P	2.70
1	B	2674:G	O3'	2675:A	P	2.61
1	B	2732:G	O3'	2733:A	P	2.55
1	B	732:C	O3'	733:G	P	2.29
1	B	2789:C	O3'	2790:U	P	2.15
1	B	2626:C	O3'	2627:G	P	1.89
1	B	2582:G	O3'	2583:G	P	1.86
1	B	973:A	O3'	974:G	P	1.81
1	B	1580:A	O3'	1581:G	P	1.81
1	B	1250:G	O3'	1251:C	P	1.37
1	B	1417:C	O3'	1418:G	P	1.37
1	B	2390:U	O3'	2391:G	P	1.28

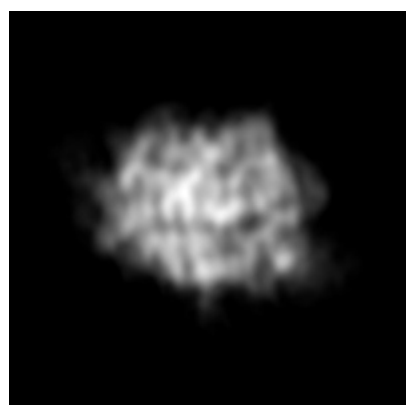
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-1455. These allow visual inspection of the internal detail of the map and identification of artifacts.

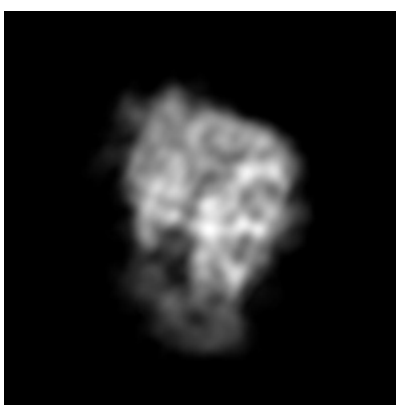
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

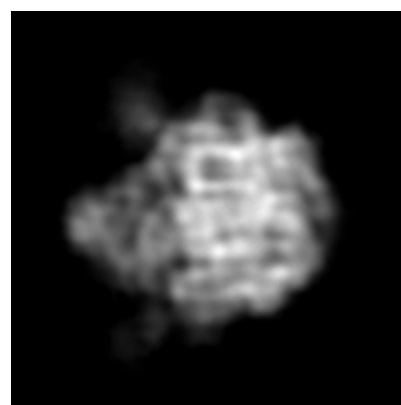
6.1.1 Primary map



X



Y

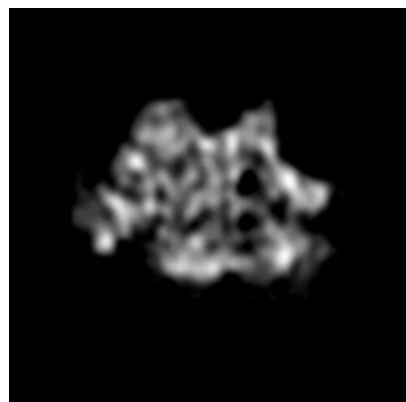


Z

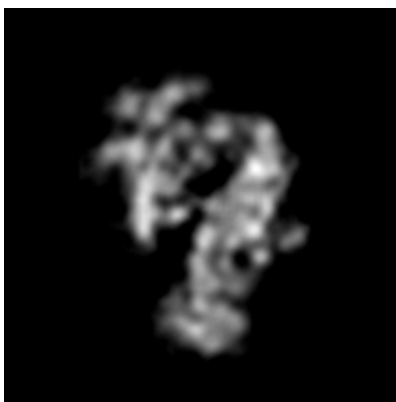
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

6.2.1 Primary map



X Index: 64



Y Index: 64



Z Index: 64

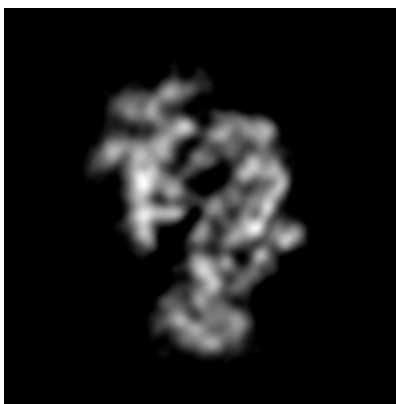
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

6.3.1 Primary map



X Index: 58



Y Index: 62

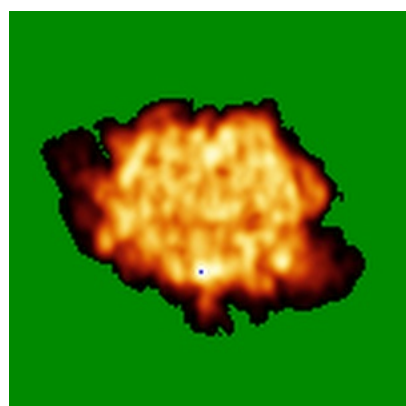


Z Index: 64

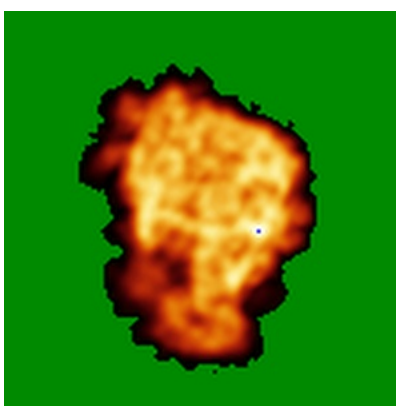
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

6.4.1 Primary map



X



Y

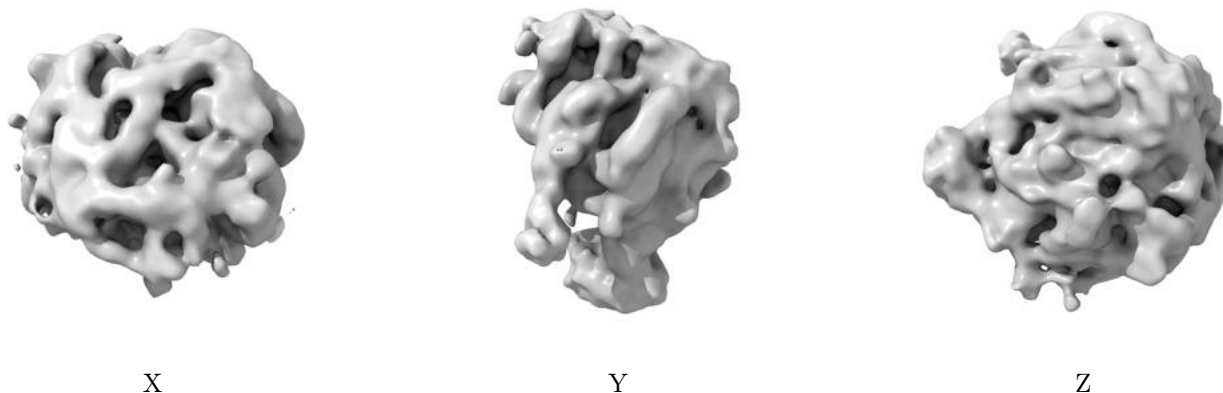


Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 2.48. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

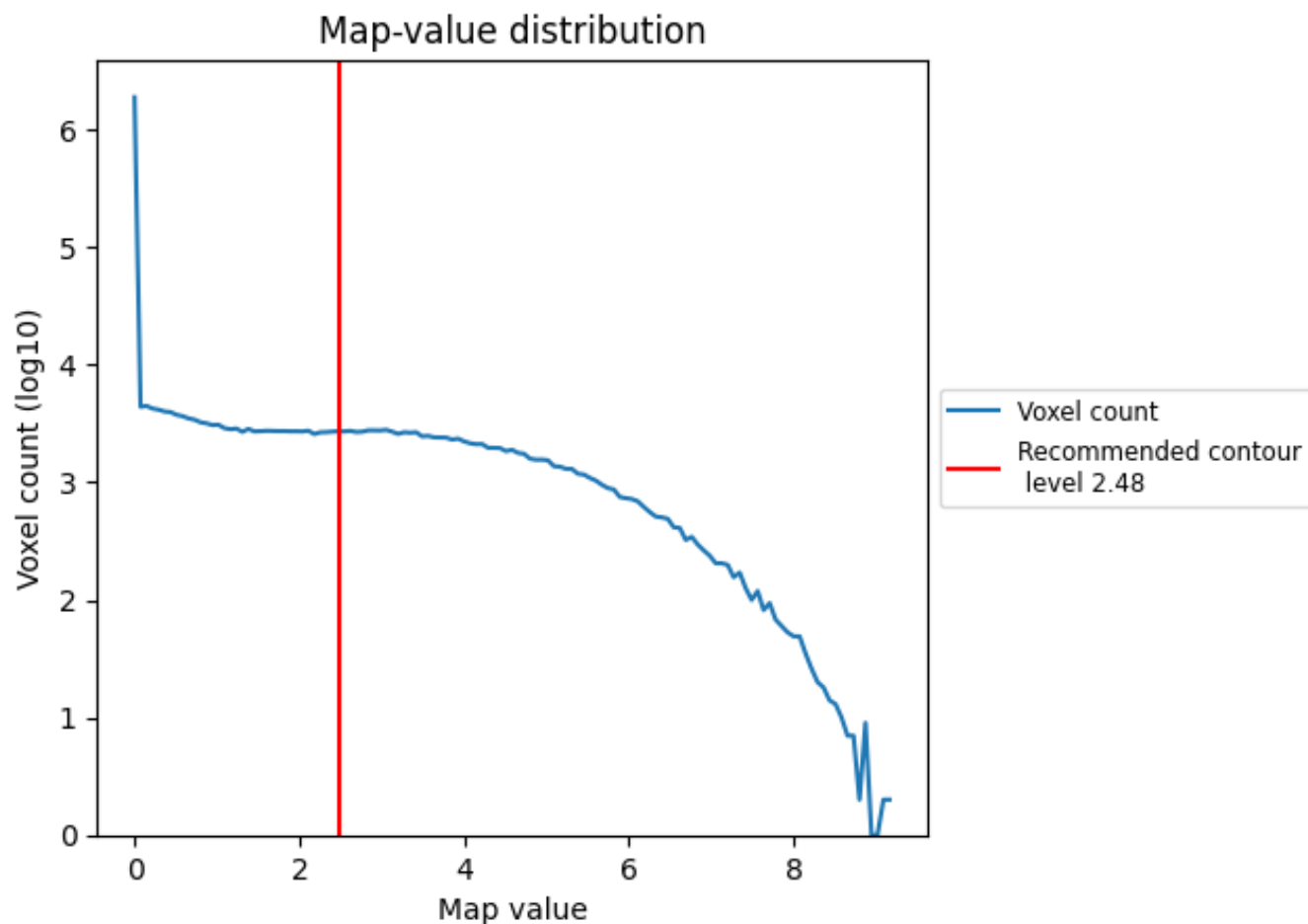
6.6 Mask visualisation [i](#)

This section was not generated. No masks/segmentation were deposited.

7 Map analysis [i](#)

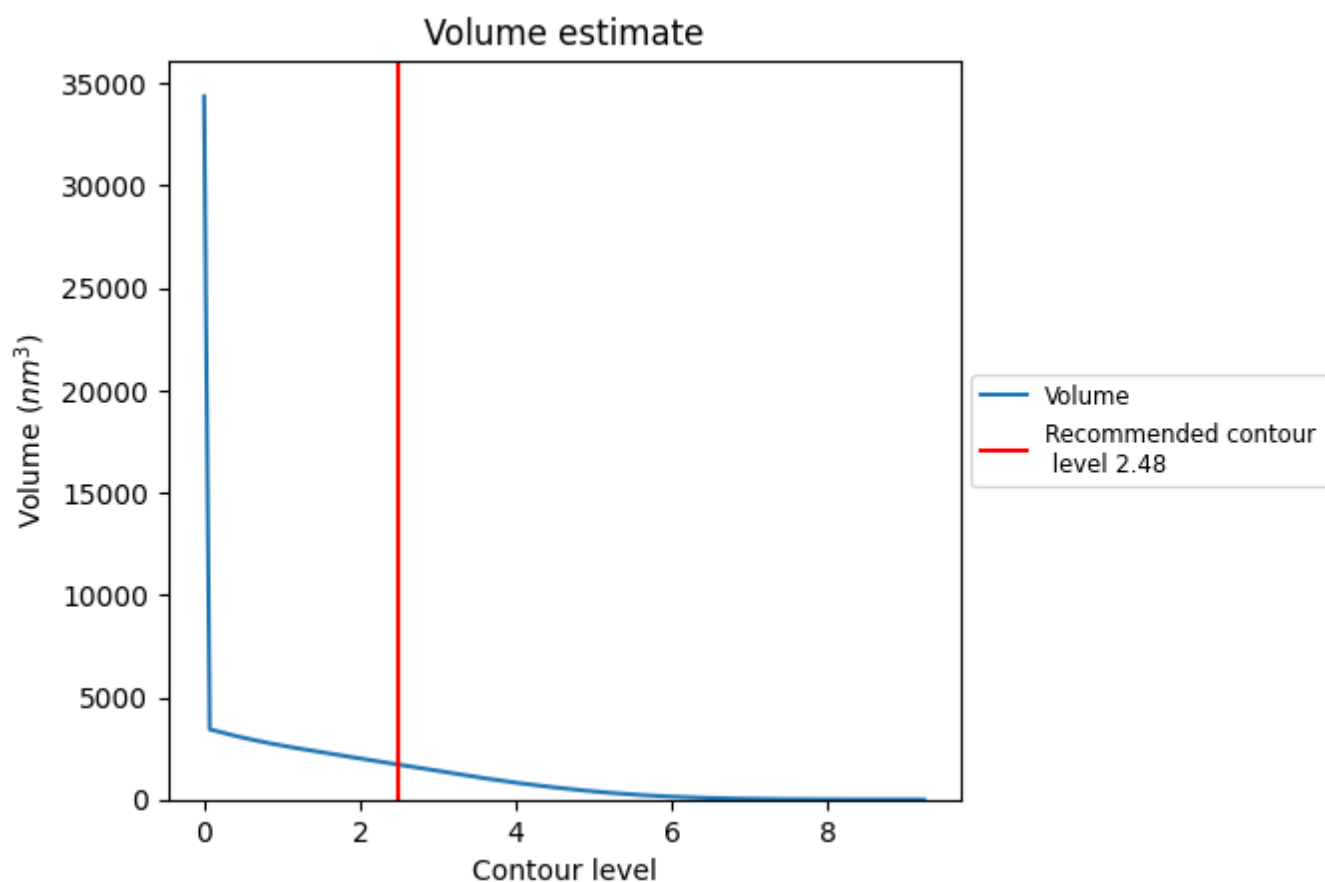
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

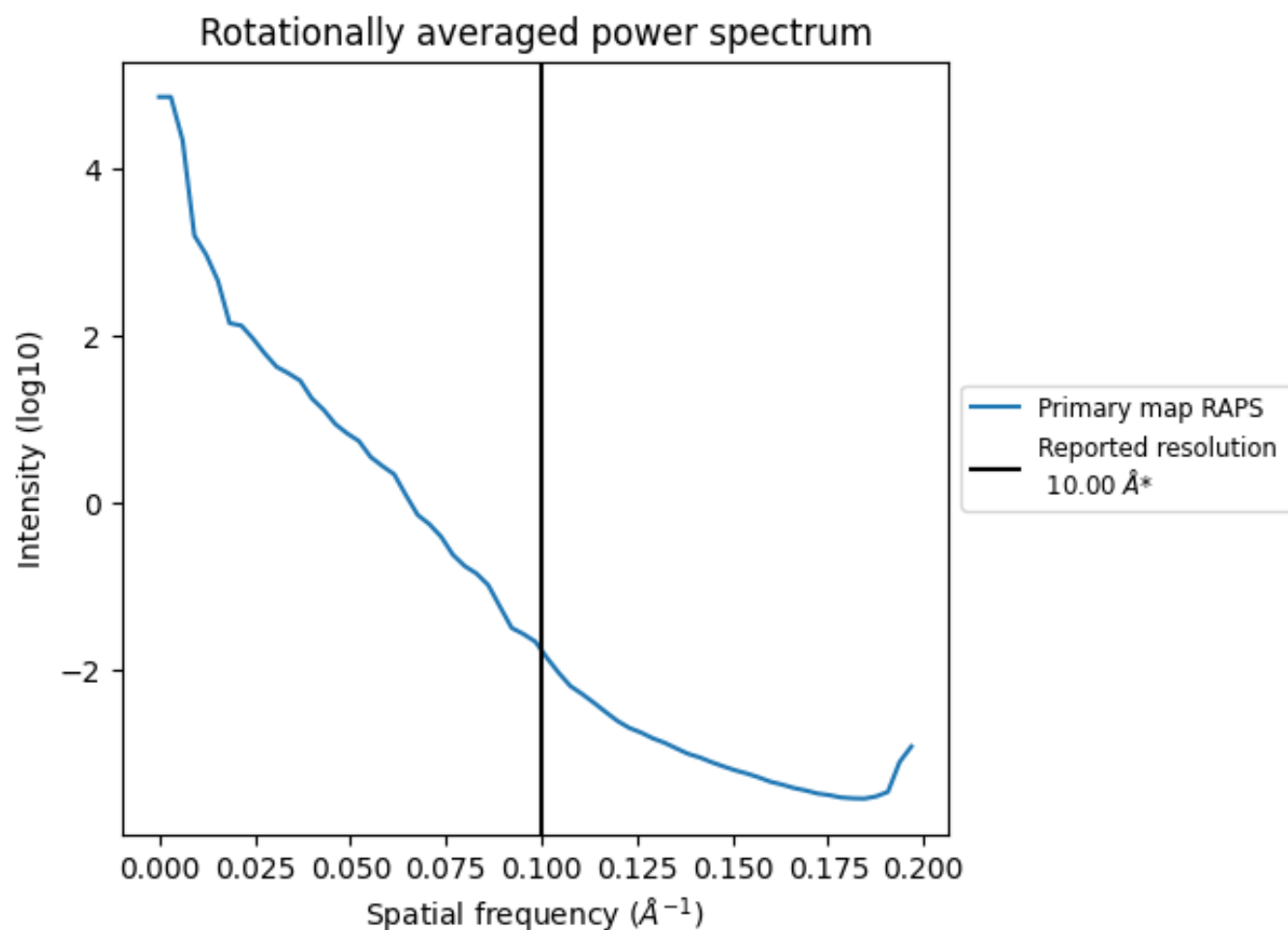
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1718 nm³; this corresponds to an approximate mass of 1552 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum ⓘ



*Reported resolution corresponds to spatial frequency of 0.100 Å⁻¹

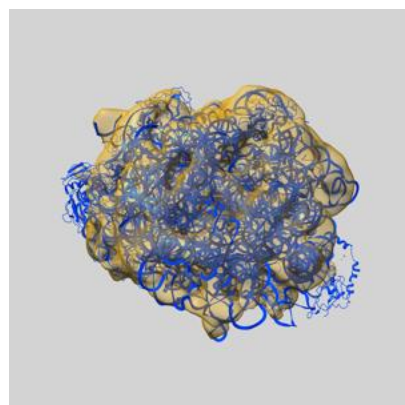
8 Fourier-Shell correlation

This section was not generated. No FSC curve or half-maps provided.

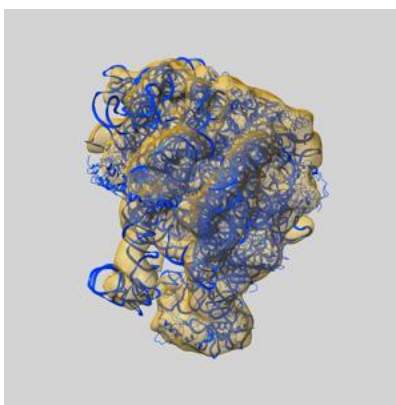
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-1455 and PDB model 3BBX. Per-residue inclusion information can be found in section 3 on page 11.

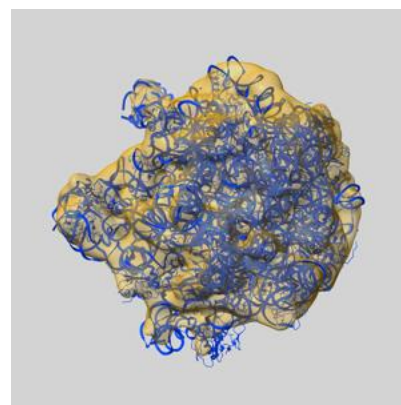
9.1 Map-model overlay [i](#)



X



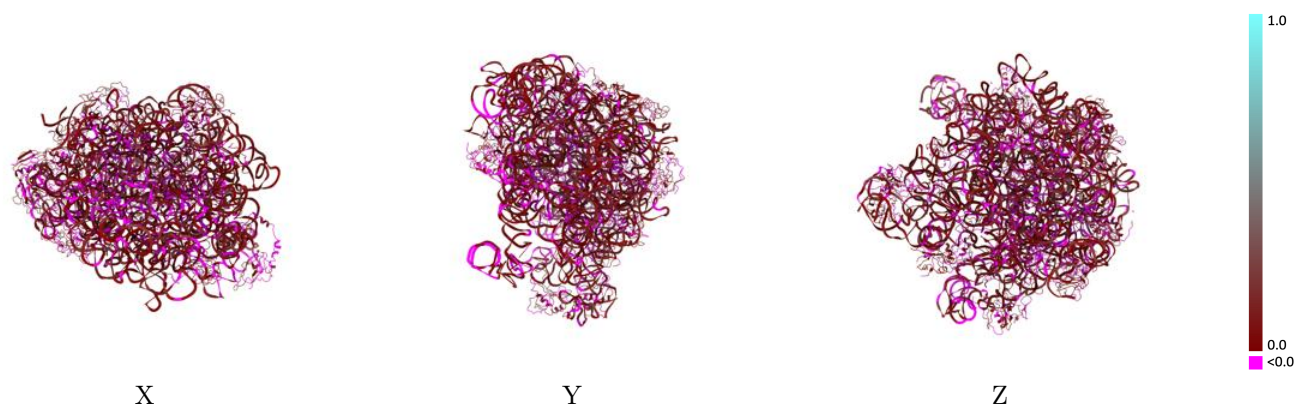
Y



Z

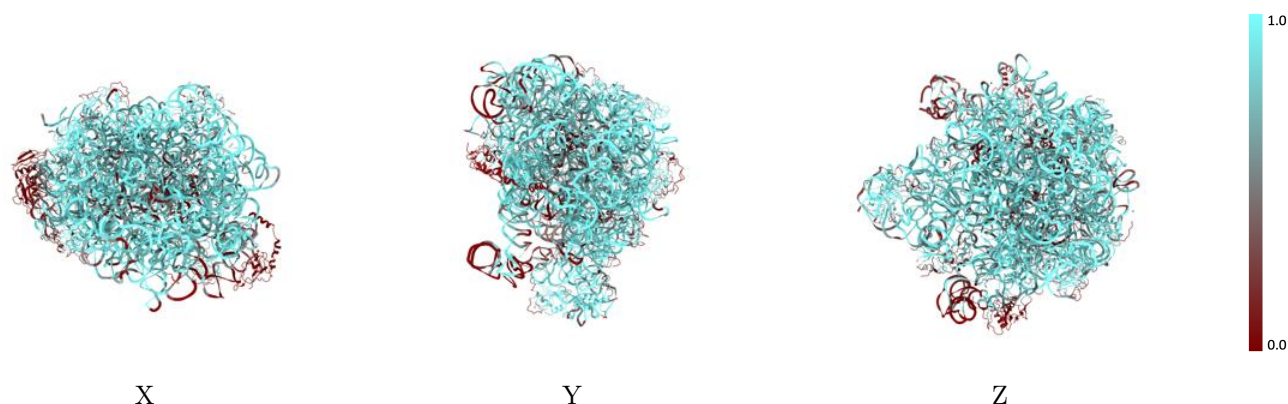
The images above show the 3D surface view of the map at the recommended contour level 2.48 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model [i](#)



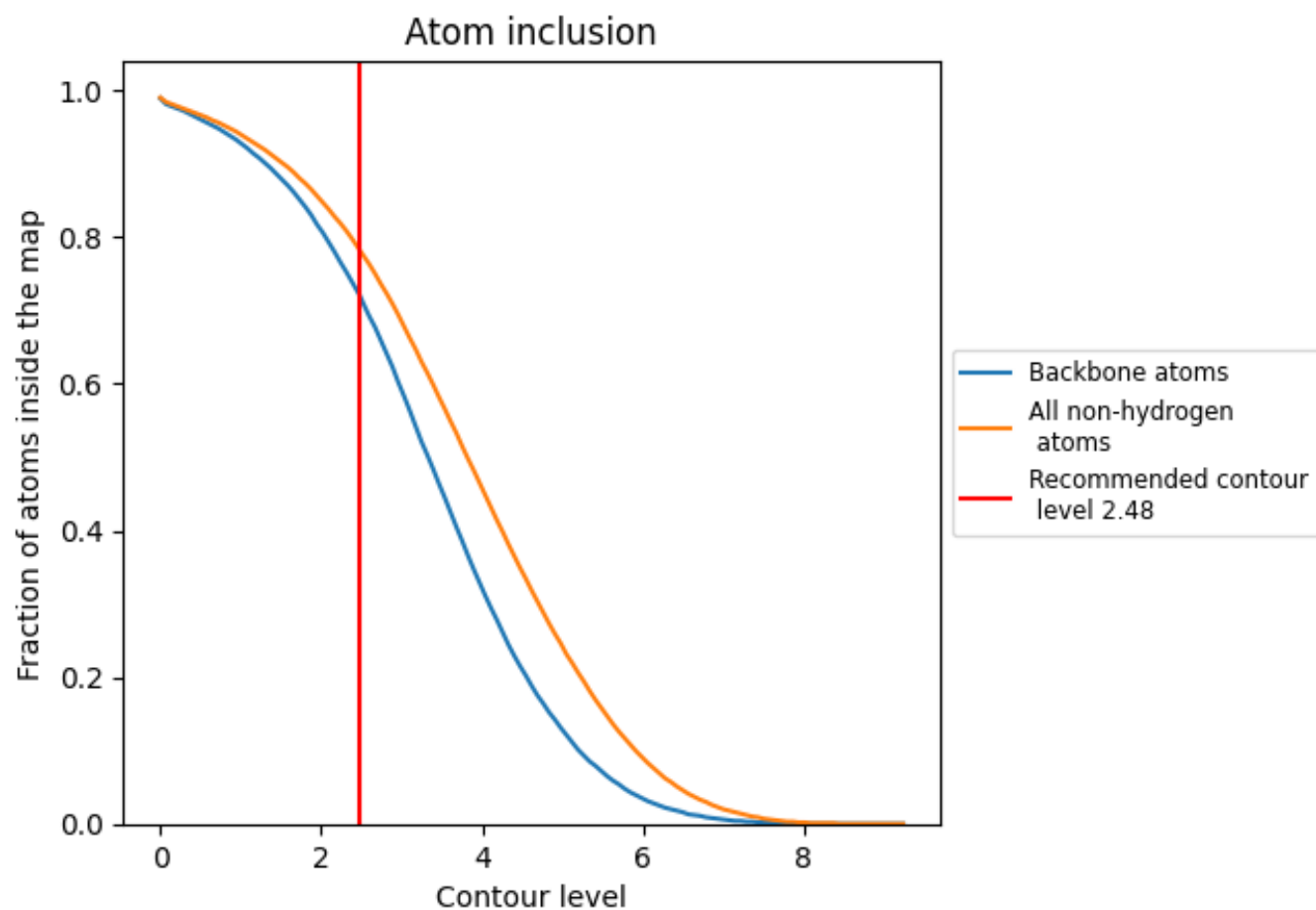
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (2.48).

9.4 Atom inclusion [i](#)



At the recommended contour level, 72% of all backbone atoms, 78% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (2.48) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.7820	 0.0610
0	 0.8390	 0.0380
1	 0.3970	 -0.0230
2	 0.3570	 -0.0240
3	 0.6840	 -0.0280
4	 0.5440	 0.0040
A	 0.8290	 0.0870
B	 0.8390	 0.0740
C	 0.6920	 0.0260
D	 0.6230	 0.0220
E	 0.6380	 0.0220
F	 0.7800	 0.0580
G	 0.1510	 0.0540
H	 0.1540	 0.0020
J	 0.8190	 0.0210
K	 0.7140	 0.0500
L	 0.5640	 0.0090
M	 0.6070	 0.0190
N	 0.8370	 0.0000
O	 0.7390	 0.0250
P	 0.5540	 0.0180
Q	 0.8340	 0.0240
R	 0.6550	 0.0470
S	 0.8100	 0.0580
T	 0.6580	 0.0050
U	 0.8010	 0.0630
V	 0.5890	 0.0760
W	 0.6930	 0.0300
X	 0.8870	 0.0530
Y	 0.7090	 0.0470
Z	 0.6470	 0.0080

