



# Full wwPDB X-ray Structure Validation Report ⓘ

Feb 1, 2016 – 08:15 AM GMT

PDB ID : 3DLL  
Title : The oxazolidinone antibiotics perturb the ribosomal peptidyl-transferase center and effect tRNA positioning  
Authors : Wilson, D.N.; Schlutzen, F.; Harms, J.M.; Starosta, A.L.; Connell, S.R.; Fucini, P.  
Deposited on : 2008-06-27  
Resolution : 3.50 Å(reported)

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

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

MolProbity : 4.02b-467  
Mogul : 1.7 (RC4), CSD as536be (2015)  
Xtriage (Phenix) : 1.9-1692  
EDS : rb-20026688  
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)  
Refmac : 5.8.0135  
CCP4 : 6.5.0  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : trunk26865

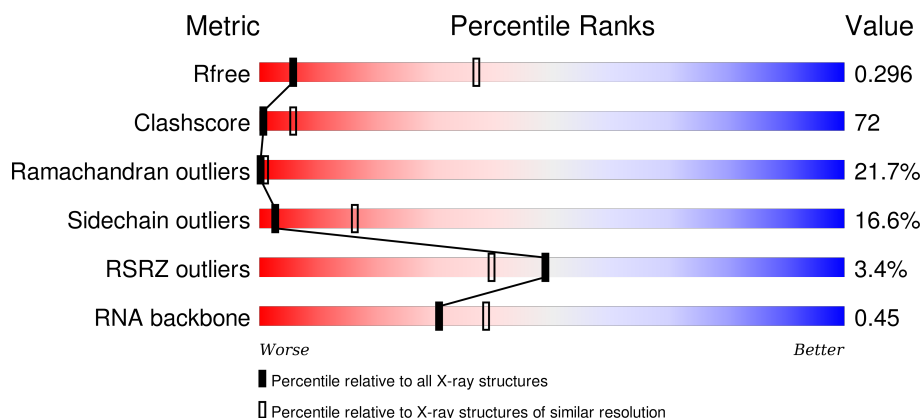
# 1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

## *X-RAY DIFFRACTION*

The reported resolution of this entry is 3.50 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
$R_{free}$	91344	1051 (3.60-3.40)
Clashscore	102246	1157 (3.60-3.40)
Ramachandran outliers	100387	1120 (3.60-3.40)
Sidechain outliers	100360	1121 (3.60-3.40)
RSRZ outliers	91569	1058 (3.60-3.40)
RNA backbone	2183	1050 (4.20-2.80)

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

Mol	Chain	Length	Quality of chain
1	X	2880	<div> <div>2%</div> <div>11% 53% 22% 7% 7%</div> </div>
2	Z	123	<div> <div>2%</div> <div>21% 57% 20% ..</div> </div>
3	A	274	<div> <div>6% 46% 24% . 20%</div> </div>
4	B	211	<div> <div>19% 57% 18% . .</div> </div>


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Mol	Chain	Length	Quality of chain
5	C	205	
6	D	180	
7	E	185	
8	F	144	
9	G	174	
10	H	134	
11	I	156	
12	J	142	
13	K	116	
14	L	114	
15	M	166	
16	N	118	
17	O	100	
18	P	134	
19	Q	95	
20	R	115	
21	S	237	
22	T	91	
23	U	81	
24	V	67	
25	W	55	
26	Y	60	
27	1	55	
28	2	47	
29	3	66	

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Mol	Chain	Length	Quality of chain
30	4	37	

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
32	MG	M	167	-	-	-	X
32	MG	X	2885	-	-	-	X
32	MG	X	2889	-	-	-	X
32	MG	X	2896	-	-	-	X
32	MG	X	2899	-	-	-	X
32	MG	X	2903	-	-	-	X
32	MG	X	2907	-	-	-	X
32	MG	X	2909	-	-	-	X
33	ZLD	X	2911	-	-	X	X

## 2 Entry composition

There are 33 unique types of molecules in this entry. The entry contains 83657 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a RNA chain called rRNA-23S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	X	2686	Total	C	N	O	P	0	0	0
			57651	25718	10642	18606	2685			

- Molecule 2 is a RNA chain called rRNA-5S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	Z	122	Total	C	N	O	P	0	0	0
			2598	1161	476	840	121			

- Molecule 3 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	A	218	Total	C	N	O	S	0	0	0
			1637	1017	326	292	2			

- Molecule 4 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	B	205	Total	C	N	O	S	0	0	0
			1539	965	295	271	8			

- Molecule 5 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	C	197	Total	C	N	O	S	0	0	0
			1506	935	287	282	2			

- Molecule 6 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	D	177	Total	C	N	O	S	0	0	0
			1400	892	247	254	7			

- Molecule 7 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	E	171	Total	C	N	O	S	0	0	0
			1286	812	237	236	1			

- Molecule 8 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	F	70	Total	C	N	O	S	0	0	0
			504	314	90	97	3			

- Molecule 9 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	G	142	Total	C	N	O	S	0	0	0
			1114	704	209	198	3			

- Molecule 10 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	H	134	Total	C	N	O	S	0	0	0
			997	614	198	180	5			

- Molecule 11 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	I	141	Total	C	N	O		0	0	0
			1067	655	216	196				

- Molecule 12 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	J	136	Total	C	N	O	S	0	0	0
			1090	696	202	185	7			

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
J	1	MET	-	INITIATING METHIONINE	UNP Q9RXJ5

- Molecule 13 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	K	113	Total	C	N	O	S	0	0	0
			878	541	178	157	2			

- Molecule 14 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	L	104	Total	C	N	O		0	0	0
			779	476	161	142				

- Molecule 15 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	M	108	Total	C	N	O		0	0	0
			871	543	172	156				

- Molecule 16 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	N	117	Total	C	N	O	S	0	0	0
			978	608	210	159	1			

- Molecule 17 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	O	94	Total	C	N	O		0	0	0
			741	465	139	137				

- Molecule 18 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	P	127	Total	C	N	O	S	0	0	0
			1014	639	199	174	2			

- Molecule 19 is a protein called 50S ribosomal protein L23.

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

- Molecule 20 is a protein called 50S ribosomal protein L24.

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

- Molecule 21 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	S	175	Total	C	N	O	S	0	0	0
			1345	849	236	254	6			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	T	84	Total	C	N	O	S	0	0	0
			625	393	122	109	1			

- Molecule 23 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	U	72	Total	C	N	O	S	0	0	0
			552	341	116	95				

- Molecule 24 is a protein called 50S ribosomal protein L29.

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

- Molecule 25 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	W	55	Total	C	N	O	S	0	0	0
			424	264	82	76	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	Y	58	Total	C	N	O	S	0	0	0
			457	281	94	77	5			

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



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
27	1	53	Total C 53 53	0	0	53

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
28	2	46	Total C 46 46	0	0	46

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
29	3	63	Total C 63 63	0	0	63

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
30	4	37	Total C N O S 297 179 66 47 5	0	0	0

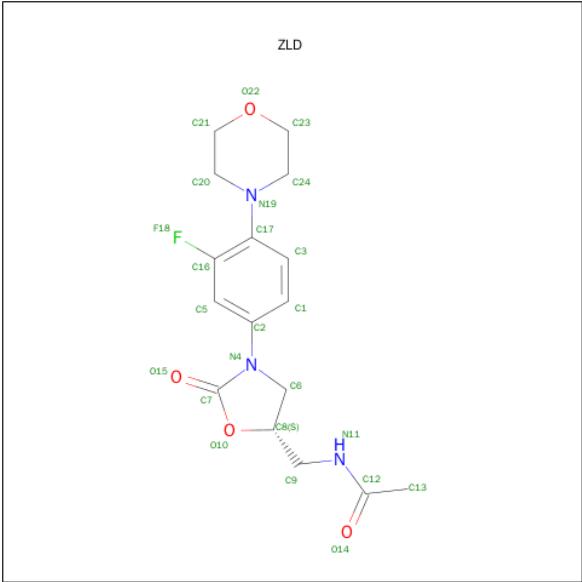
- Molecule 31 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
31	Y	1	Total Zn 1 1	0	0
31	4	1	Total Zn 1 1	0	0

- Molecule 32 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
32	X	30	Total Mg 30 30	0	0
32	Z	4	Total Mg 4 4	0	0
32	M	1	Total Mg 1 1	0	0

- Molecule 33 is N-{|(5S)-3-(3-FLUORO-4-MORPHOLIN-4-YLPHENYL)-2-OXO-1,3-OXAZOLIDIN-5-YL|METHYL}ACETAMIDE (three-letter code: ZLD) (formula: C<sub>16</sub>H<sub>20</sub>FN<sub>3</sub>O<sub>4</sub>).

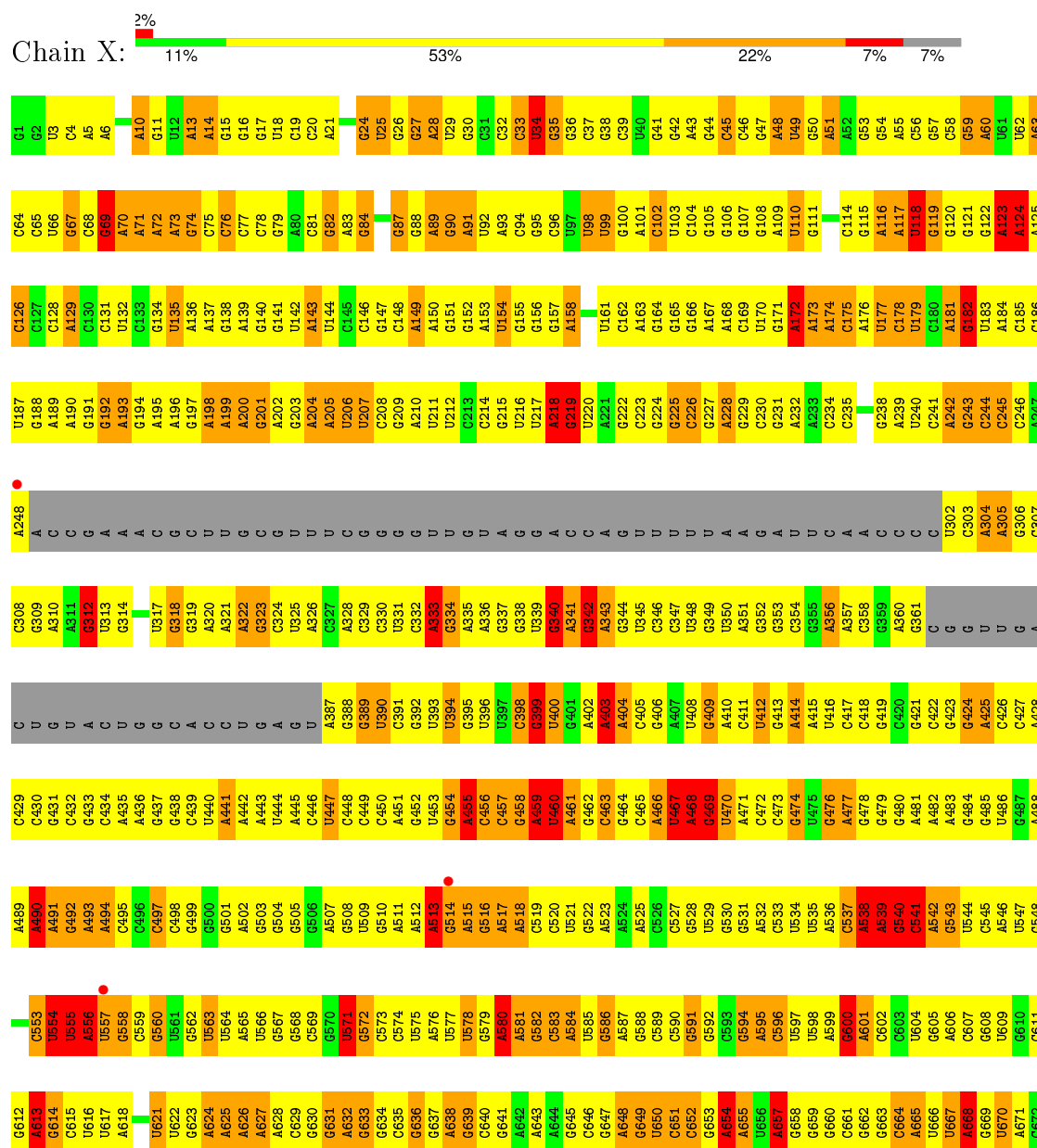


Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
33	X	1	Total	C	F	N	O	0	0
			24	16	1	3	4		

### 3 Residue-property plots

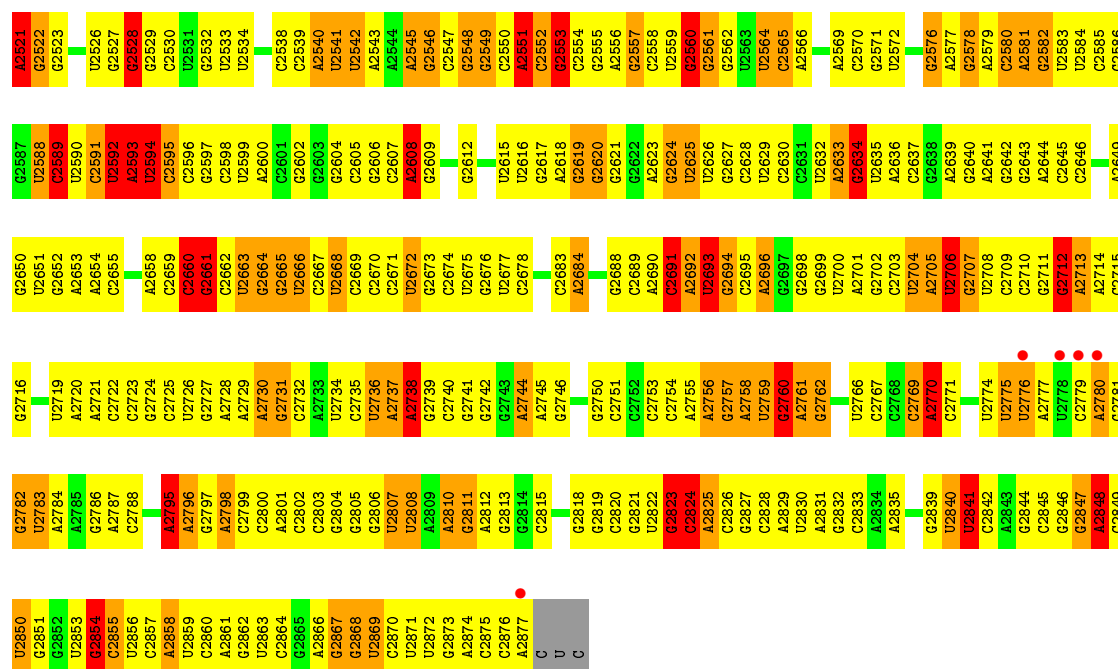
These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according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

#### • Molecule 1: rRNA-23S ribosomal RNA

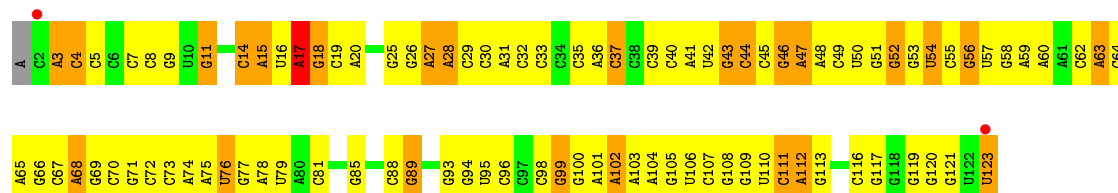




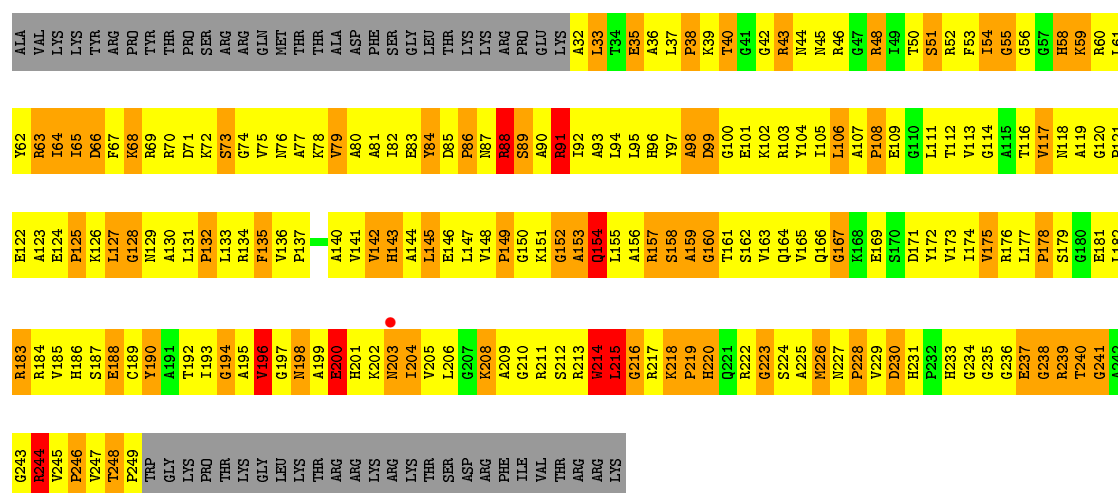
G2461	A2401	A2339	U2275	U2212	G	C	G2029	G1969	C	G1847	A1785	C1725	A1596
G2462	U2402	C2340	C2276	G2213	A	U	U2030	G1970	U1909	U1848	C1786	C1726	A1597
G2463	C2341	G2341	C2281	G2214	A	G	A2031	G1971	A1910	G1849	C1787	C1727	C1598
G2464	A2404	U2342	C2281	G2215	A	C	G2032	G1972	A1911	G1850	C1788	A1728	G1599
G2465	A2405	C2343	G2282	G2216	U	G	C2033	C1973	G1912	A1851	U1789	C1729	G1600
G2466	A2406	G2344	G2283	G2217	A	U	A2034	U1974	G1913	G1852	G1790	G1730	U1601
G2467	G2407	A2345	G2284	G2218	C	A	G2035	G1975	U1914	U1853	C1791	G1731	G1602
G2468	G2408	U2346	U2285	G2219	C	G	G2036	U1976	A1915	G1854	C1792	U1732	A1603
G2469	A2409	G2347	G2286	A2220	A	G	A2037	G1977	G1916	G1855	U1733	U1733	A1604
U2470	U2410	A2348	G2287	G2221	C	A	G2038	U1978	C1917	U1856	A1793	C1734	A1605
U2471	A2411	G2349	U2287	G2222	C	U	G2039	C1979	G1918	G1857	A1794	C1735	A1606
U2472	A2412	G2350	U2288	U2223	C	A	A2040	A1980	A1919	U1858	C1795	C1736	A1607
G2473	A2413	G2351	U2224	U2224	C	A	G2041	A1981	A1920	A1859	A1799	G1737	U1608
G2474	A2414	A2352	G2225	G2225	G	A	A2042	C1982	U1921	A1860	A1799	G1737	U1608
C2475	G2415	G2353	A2226	A2226	G	U	A2043	C1983	A1922	G1861	A1800	U1738	G1609
A2476	U2416	G2354	G2227	G2227	G	U	G2044	U1984	U1923	C1862	C1792	U1738	A1604
C2477	U2417	G2355	U2228	U2228	G	A	A2045	G1985	C1924	U1863	A1802	G1740	A1605
C2478	A2418	A2356	G2229	G2229	G	A	G2046	G1986	C1925	G1864	G1741	G1741	A1606
U2479	C2419	A2357	G2230	G2230	A	A	C2047	G1987	U1926	G1865	U1804	G1742	A1607
C2480	C2420	U2358	G2231	G2231	G	C	G2048	A1988	U1927	A1866	G1805	G1743	U1608
G2481	C2421	G2359	G2232	G2232	C	C	C2049	C1989	U1928	A1867	A1806	G1744	G1609
A2482	C2422	G2360	G2233	G2233	C	U	G2050	U1990	U1929	A1869	C1808	A1746	A1618
U2483	G2423	G2361	U2236	U2236	C	U	U2051	C1991	G1930	U1870	G1809	G1747	G1619
G2484	G2424	G2362	G2237	G2237	A	G	G2052	G1992	G1931	A1871	U1810	U1748	C1620
U2485	G2425	C2363	G2238	G2238	C	C	G2053	G1993	G1932	A1872	A1811	G1749	C1621
C2486	G2426	C2364	G2239	G2239	G	G	A2054	U1994	G1933	A1873	U1812	A1750	G1622
G2487	A2427	U2365	G2240	G2240	A	A	G2055	G1995	A1936	C1874	A1813	A1751	C1623
G2488	U2428	G2366	U2241	U2241	C	A	C2056	A1996	A1937	C1875	U1752	A1752	A1624
C2489	A2429	A2367	G2242	G2242	A	U	U2057	A1997	C1938	C1876	G1815	A1753	A1625
U2490	A2430	G2368	C2243	C2243	C	C	G2058	A1998	U1939	C1877	G1816	G1754	A1626
C2491	C2431	U2369	C2244	A2182	U	U	U2059	U1999	U1940	C1878	U1817	G1755	C1627
G2492	A2432	G2370	A2245	A2245	G	G	A2060	U2000	C1941	G1879	G1818	C1756	C1628
U2493	C2433	U2371	A2246	A2246	C	U	G2061	G2001	C1942	U1880	U1819	C1757	A1630
C2494	G2434	C2372	A2247	A2247	C	C	U2064	A2002	G1943	C1881	G1820	C1758	A1631
G2495	U2435	G2373	A2248	A2248	U	U	U2067	A2003	A1944	A1882	A1821	A1759	A1632
C2496	U2436	G2374	U2249	U2249	C	U	G2068	U2004	C1945	A1883	C1822	G1760	C1633
A2497	G2437	G2375	G2250	G2250	A	U	U2069	U2005	G1946	A1884	G1823	G1761	A1634
U2498	A2438	G2376	U2251	U2251	U	U	C2068	G2006	U1947	C1885	C1824	C1762	G1635
C2499	U2439	G2377	A2252	A2252	C	C	U2069	G2007	C1948	G1886	C1825	G1763	U1639
U2501	C2440	U2378	A2253	A2253	G	G	G2070	C2008	A1949	G1887	U1826	A1764	G1704
G2502	C2441	G2380	G2254	G2254	G	G	C2071	U2009	G1950	C1888	G1827	C1765	U1705
G2503	C2442	A2381	G2255	G2255	U	U	G2072	G2010	G1951	G1828	C1829	U1766	A1706
C2504	C2443	C2382	G2256	G2256	G	G	A2073	U2011	A1952	C1829	G1829	G1767	G1642
G2505	G2444	C2383	A2257	A2257	U	U	U2074	A2012	A1953	C	C1830	U1768	A1643
C2506	C2445	G2384	G2258	G2258	C	C	U2075	A2013	A1954	C	G1831	U1769	A1644
U2507	G2446	U2385	G2261	G2261	G	G	G2076	A2014	A1954	G	U1832	U1770	G1645
G2508	A2447	G2386	C2262	C2262	U	U	G2077	G2015	G1955	U	U1833	A1771	U1646
A2509	U2448	U2387	C2263	C2263	G	G	G2078	A2016	G1956	A	G1834	C1772	G1647
U2510	G2449	U2388	G2264	G2264	G	G	A2079	U2017	C1957	C	C1835	C1773	C1648
G2511	A2450	G2389	C2265	C2265	A	U	U2080	G2018	G1958	U	A1774	A1774	A1649
U2512	G2451	A2390	A2266	A2266	C	C	U2081	C2019	U1959	C	G1837	A1775	A1650
C2513	A2452	G2391	G2267	G2267	G	G	C2082	G2020	A1960	A	G1838	A1776	U1651
G2514	C2453	A2392	A2267	A2267	G	G	G2083	G2021	A1961	U	G1839	A1777	G1652
U2515	A2454	G2393	G2268	G2268	C	C	G2084	C2022	C1962	A	A1840	U1778	C1653
G2516	U2455	A2394	G2269	G2269	A	A	G2085	C2023	G1963	A	G1841	C1779	A1654
U2517	A2456	C2395	U2270	U2270	C	C	U2086	U2024	A1964	C	G1842	A1780	C1655
C2517	U2457	U2396	C2271	C2271	A	A	U2087	A2025	U1965	G	U1843	C1781	U1656
U2518	G2458	G2397	A2272	A2272	G	G	U2088	C2026	C1966	U	A1844	A1782	A1657
C2519	U2459	U2398	C2273	C2273	C	C	U2089	C2027	U1967	G	G1783	U1723	A1658
A2520	G2460	C2398	C2274	C2274	U	U	U2090	C2028	G1968	C	C1784	C1784	G1659



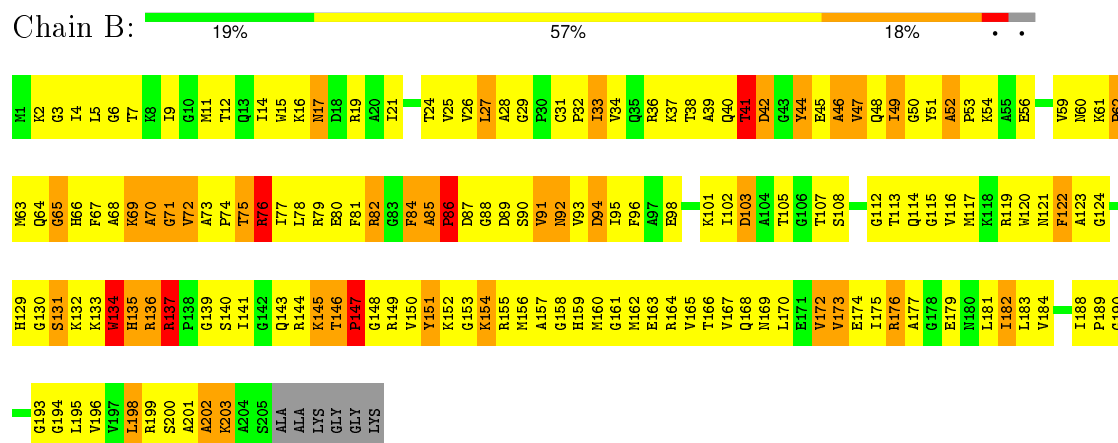
• Molecule 2: rRNA-5S ribosomal RNA



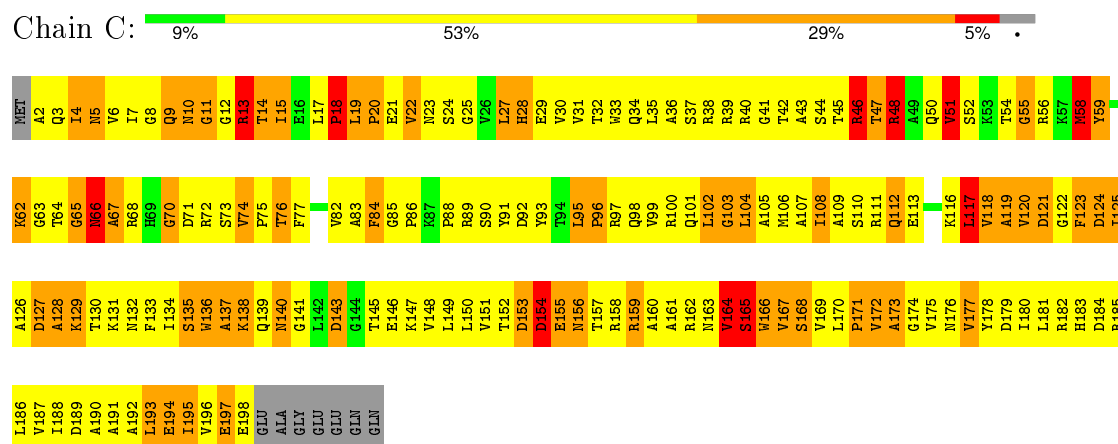
• Molecule 3: 50S ribosomal protein L2



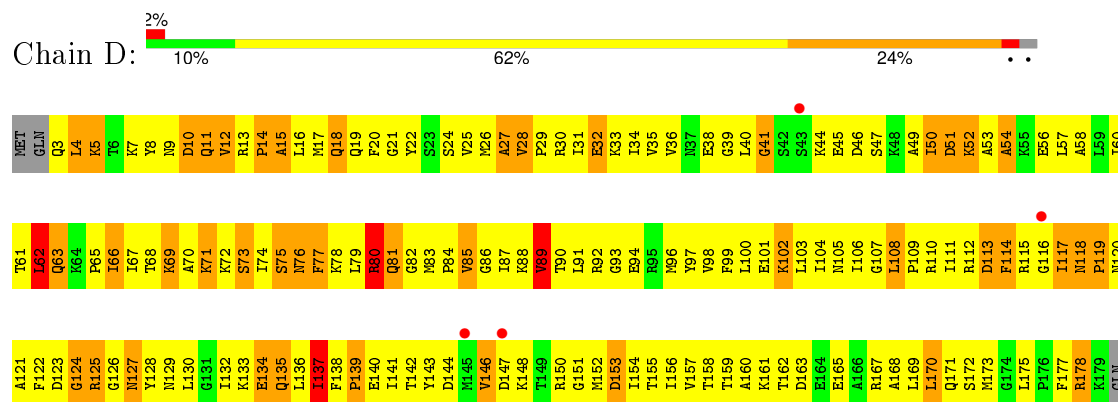
• Molecule 4: 50S ribosomal protein L3



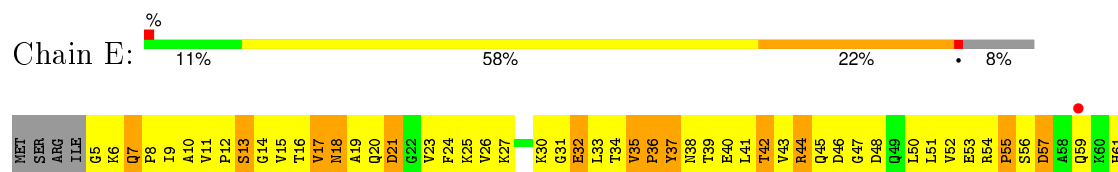
• Molecule 5: 50S ribosomal protein L4

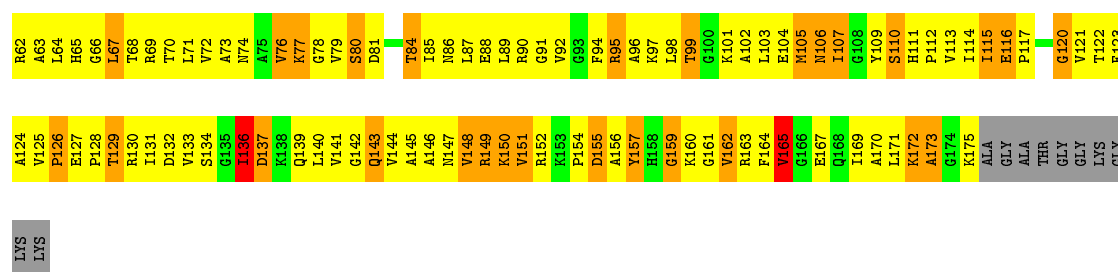


• Molecule 6: 50S ribosomal protein L5

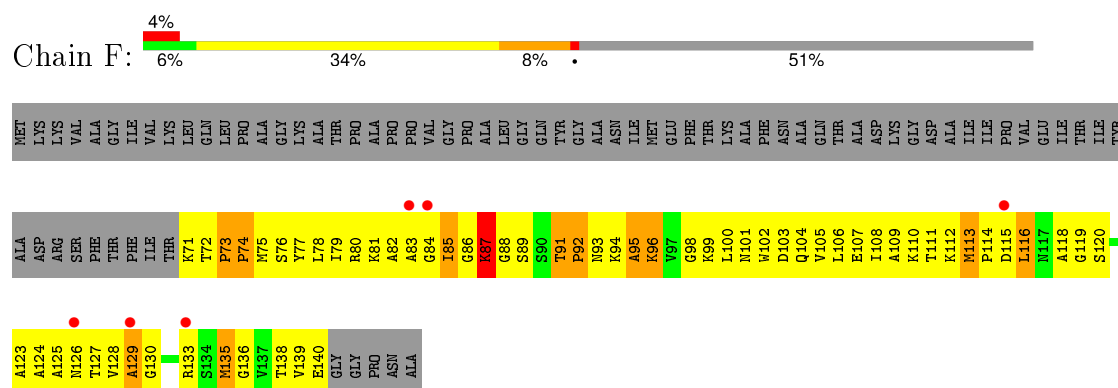


• Molecule 7: 50S ribosomal protein L6

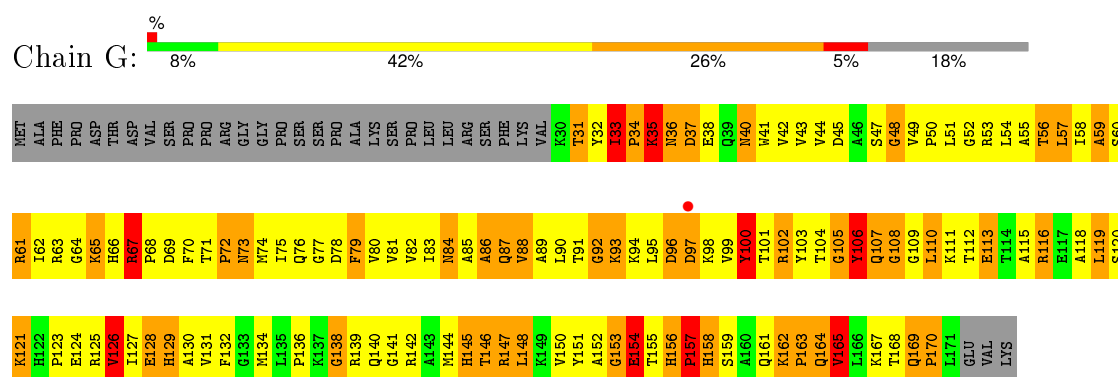




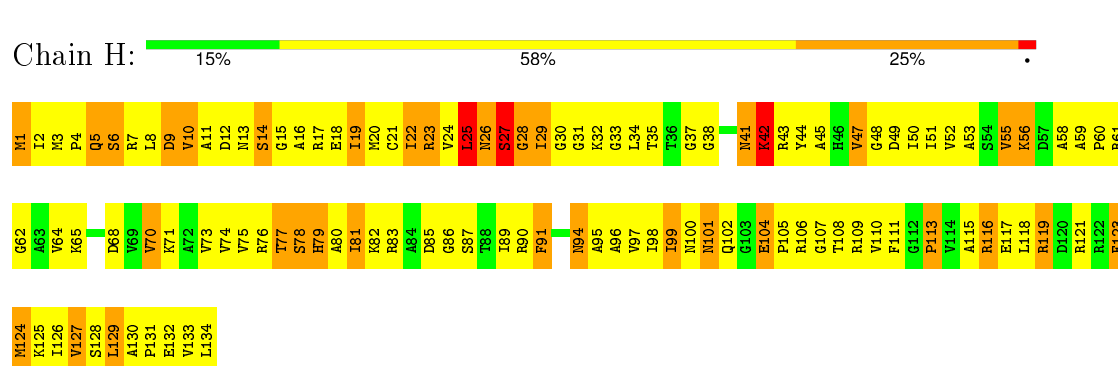
• Molecule 8: 50S ribosomal protein L11



• Molecule 9: 50S ribosomal protein L13



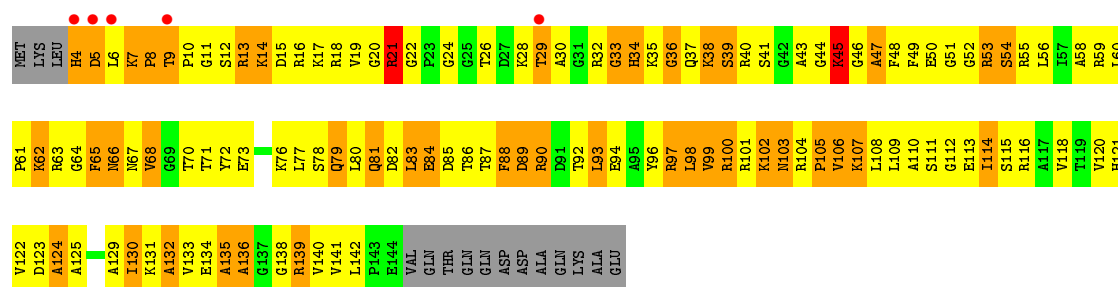
• Molecule 10: 50S ribosomal protein L14



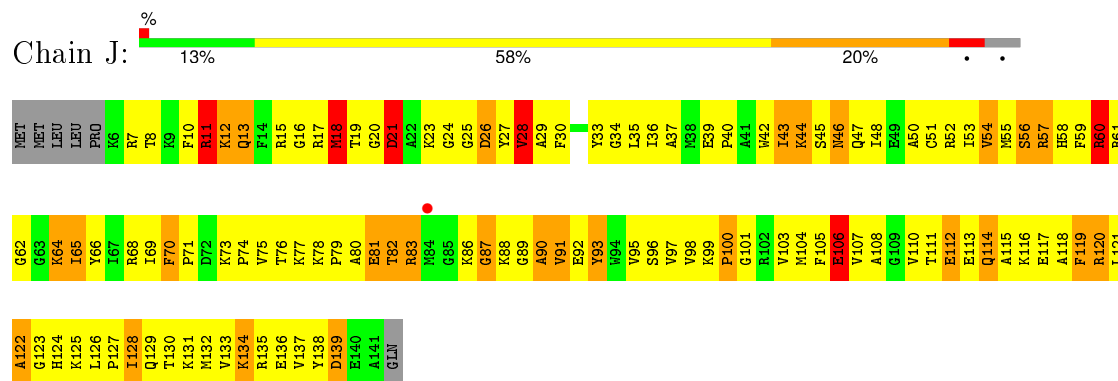
• Molecule 11: 50S ribosomal protein L15



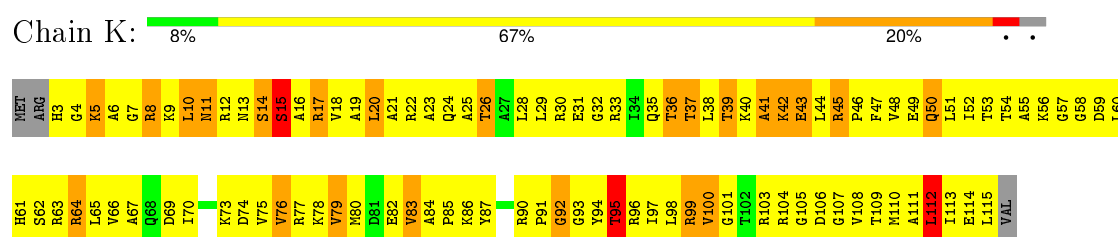




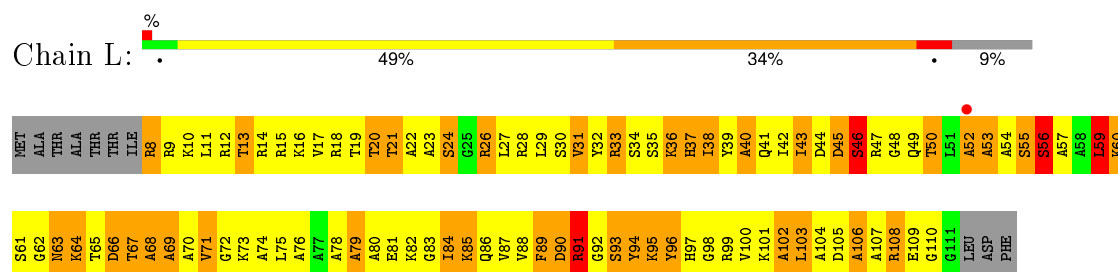
• Molecule 12: 50S ribosomal protein L16



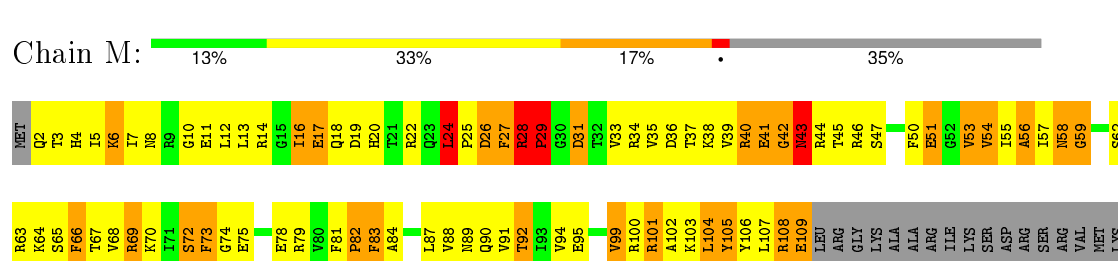
• Molecule 13: 50S ribosomal protein L17



• Molecule 14: 50S ribosomal protein L18



• Molecule 15: 50S ribosomal protein L19



ASP  
ALA  
ALA  
ARG  
ALA  
GLN  
GLN  
ASP  
LYS  
ALA  
ALA  
ASU  
ALA  
SER  
ALA  
SER  
GLN  
ALA  
ALA  
ALA  
ALA  
ALA  
GLN  
ASP  
VAL  
THR  
VAL  
ILE  
SER  
ALA  
ALA  
PRO  
GLU  
VAL  
ALA  
PRO  
GLU  
THR  
GLN  
GLU

• Molecule 16: 50S ribosomal protein L20

Chain N: 9% 56% 31% . .

MET  
F2  
R3  
A4  
I5  
T6  
G7  
I8  
V9  
R10  
R11  
R12  
R13  
R14  
R15  
R16  
R17  
R18  
R19  
R20  
R21  
R22  
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R24  
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R26  
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R40  
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R42  
R43  
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R45  
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R49  
R50  
R51  
R52  
R53  
R54  
R55  
R56  
R57  
R58  
R59  
R60

• Molecule 17: 50S ribosomal protein L21

Chain O: 11% 56% 25% . 6%

MET  
PHE  
ALA  
ILE  
I5  
Q6  
T7  
G8  
G9  
K10  
K11  
K12  
K13  
K14  
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K16  
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K18  
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K131  
K132  
K133  
K134

• Molecule 18: 50S ribosomal protein L22

Chain P: 16% 63% 13% . 5%

MET  
THR  
PRO  
GLU  
THR  
F8  
R9  
K10  
K11  
K12  
K13  
K14  
K15  
K16  
K17  
K18  
K19  
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• Molecule 19: 50S ribosomal protein L23

Chain Q: 9% 52% 33% . .

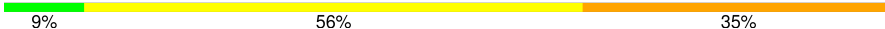
MET  
S2  
R3  
Y4  
D5  
I6  
L7  
R8  
A9  
P10  
V11  
W12  
S13  
E14  
K15  
A16  
A17  
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A134

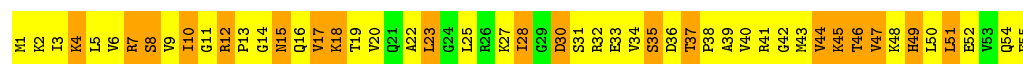
• Molecule 20: 50S ribosomal protein L24

Chain R: 5% 53% 32% 5% .

MET  
PRO  
ARG  
P4  
S5  
A6  
G7  
S8  
H9  
H10  
H11  
H12  
H13  
H14  
H15  
H16  
H17  
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H133  
H134



Chain W: 



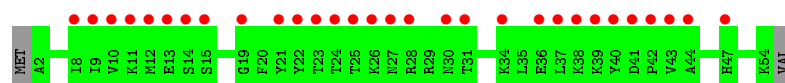
- Molecule 26: 50S ribosomal protein L32

Chain Y: 

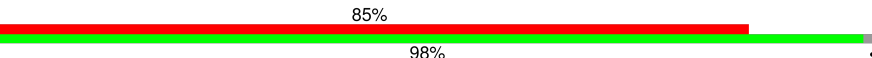


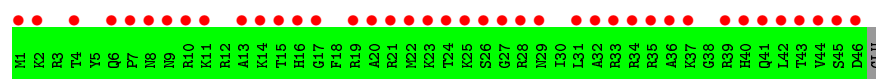
- Molecule 27: 50S ribosomal protein L33

Chain 1: 



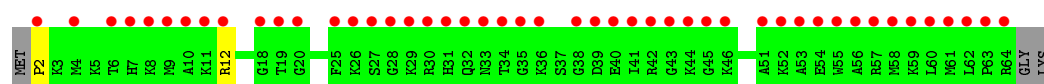
- Molecule 28: 50S ribosomal protein L34

Chain 2: 




- Molecule 29: 50S ribosomal protein L35

Chain 3: 



- Molecule 30: 50S ribosomal protein L36

Chain 4: 



## 4 Data and refinement statistics

Property	Value	Source
Space group	I 2 2 2	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	169.70Å 410.00Å 695.00Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	29.98 – 3.50 30.06 – 3.30	Depositor EDS
% Data completeness (in resolution range)	90.5 (29.98-3.50) 85.7 (30.06-3.30)	Depositor EDS
$R_{merge}$	(Not available)	Depositor
$R_{sym}$	0.13	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.84 (at 3.31Å)	Xtriage
Refinement program	CNS 1.1	Depositor
R, $R_{free}$	0.259 , 0.280 0.250 , 0.296	Depositor DCC
$R_{free}$ test set	13552 reflections (5.22%)	DCC
Wilson B-factor (Å <sup>2</sup> )	68.5	Xtriage
Anisotropy	0.152	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.14 , 38.0	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.42$ , $\langle L^2 \rangle = 0.24$	Xtriage
Outliers	1 of 308916 reflections (0.000%)	Xtriage
$F_o, F_c$ correlation	0.86	EDS
Total number of atoms	83657	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	40.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.47% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

<sup>2</sup>Theoretical values of  $\langle |L| \rangle$ ,  $\langle L^2 \rangle$  for acentric reflections are 0.5, 0.375 respectively for untwinned datasets, and 0.333, 0.2 for perfectly twinned datasets.

## 5 Model quality ⓘ

### 5.1 Standard geometry ⓘ

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# $ Z  > 5$	RMSZ	# $ Z  > 5$
1	X	0.83	19/64561 (0.0%)	0.93	192/100708 (0.2%)
2	Z	0.56	0/2904	0.78	0/4525
3	A	0.62	0/1669	0.95	1/2254 (0.0%)
4	B	0.76	0/1567	0.99	1/2105 (0.0%)
5	C	0.62	0/1529	0.92	1/2070 (0.0%)
6	D	0.50	0/1419	0.79	0/1903
7	E	0.49	0/1308	0.80	0/1771
8	F	0.51	0/510	0.82	0/688
9	G	0.62	0/1138	0.95	2/1539 (0.1%)
10	H	0.75	0/1007	0.99	2/1352 (0.1%)
11	I	0.66	1/1081 (0.1%)	0.98	0/1448
12	J	0.68	1/1113 (0.1%)	0.87	0/1486
13	K	0.90	0/886	1.07	1/1188 (0.1%)
14	L	0.53	0/785	0.84	0/1048
15	M	0.76	0/884	1.24	5/1186 (0.4%)
16	N	0.64	0/994	0.84	0/1323
17	O	0.60	0/750	0.92	1/1000 (0.1%)
18	P	0.76	0/1027	0.99	1/1373 (0.1%)
19	Q	0.62	0/737	0.93	2/988 (0.2%)
20	R	0.53	0/835	0.91	3/1121 (0.3%)
21	S	0.51	0/1370	0.82	0/1862
22	T	0.59	0/633	0.89	0/838
23	U	0.57	0/556	0.92	0/741
24	V	0.51	0/537	0.82	0/714
25	W	0.54	0/426	0.86	0/568
26	Y	0.71	0/469	1.01	0/629
30	4	0.48	0/298	0.77	0/390
All	All	0.78	21/90993 (0.0%)	0.92	212/136818 (0.2%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is

detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	X	0	228
2	Z	0	4
9	G	0	1
17	O	0	1
All	All	0	234

All (21) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	X	2594	U	P-OP2	17.32	1.78	1.49
1	X	2594	U	P-OP1	-13.28	1.26	1.49
1	X	2592	U	P-OP2	-12.20	1.28	1.49
1	X	28	A	C5-C6	-6.98	1.34	1.41
1	X	1333	G	N9-C4	-6.33	1.32	1.38
1	X	1632	A	C5-C6	-6.32	1.35	1.41
1	X	1668	G	C5-C6	-6.19	1.36	1.42
1	X	1336	G	C5-C6	-5.94	1.36	1.42
1	X	586	G	C5-C6	-5.94	1.36	1.42
1	X	1273	G	C5-C6	-5.85	1.36	1.42
1	X	2018	G	C5-C6	-5.81	1.36	1.42
1	X	1963	G	C5-C6	-5.73	1.36	1.42
11	I	29	THR	CA-CB	5.65	1.68	1.53
1	X	461	A	C5-C6	-5.58	1.36	1.41
1	X	2591	C	N1-C2	-5.51	1.34	1.40
12	J	18	MET	CG-SD	5.46	1.95	1.81
1	X	2592	U	P-OP1	5.34	1.58	1.49
1	X	1664	G	N9-C4	-5.24	1.33	1.38
1	X	1344	C	N3-C4	-5.18	1.30	1.33
1	X	1278	A	C5-C6	-5.14	1.36	1.41
1	X	699	G	N9-C4	-5.13	1.33	1.38

All (212) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	M	28	ARG	C-N-CD	-19.65	77.37	120.60
1	X	2594	U	O5'-P-OP2	-18.88	88.04	110.70
1	X	2592	U	O5'-P-OP2	-15.03	92.18	105.70
1	X	2592	U	N1-C1'-C2'	14.74	133.17	114.00
1	X	2592	U	C1'-O4'-C4'	-12.24	100.11	109.90
1	X	2560	G	N9-C1'-C2'	11.44	128.87	114.00

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	X	123	A	N9-C1'-C2'	11.30	128.69	114.00
1	X	2854	G	N9-C1'-C2'	11.15	128.49	114.00
1	X	2593	A	OP1-P-O3'	10.51	128.31	105.20
1	X	1353	A	N9-C1'-C2'	10.26	127.34	114.00
1	X	2428	U	N1-C1'-C2'	9.92	126.89	114.00
1	X	1342	U	N1-C1'-C2'	9.65	126.55	114.00
1	X	1278	A	N9-C1'-C2'	9.24	126.02	114.00
1	X	2823	G	N9-C1'-C2'	9.07	125.79	114.00
1	X	460	U	N1-C1'-C2'	9.01	125.72	114.00
1	X	1285	A	N9-C1'-C2'	9.00	125.70	114.00
1	X	824	U	N1-C1'-C2'	8.78	125.41	114.00
1	X	2313	G	N9-C1'-C2'	8.67	125.27	114.00
15	M	28	ARG	C-N-CA	8.63	158.25	122.00
1	X	1260	A	N9-C1'-C2'	8.62	125.21	114.00
1	X	2589	C	N1-C1'-C2'	8.38	124.89	114.00
1	X	218	A	N9-C1'-C2'	8.38	124.89	114.00
1	X	1723	U	N1-C1'-C2'	8.17	124.62	114.00
1	X	2592	U	C6-N1-C1'	-8.02	109.97	121.20
1	X	1153	A	C2'-C3'-O3'	7.96	127.02	109.50
1	X	1975	G	C2'-C3'-O3'	7.87	126.81	109.50
1	X	968	C	N1-C1'-C2'	7.84	124.20	114.00
1	X	2592	U	C2-N1-C1'	7.80	127.07	117.70
1	X	1979	C	C2'-C3'-O3'	7.74	126.53	109.50
1	X	2592	U	C3'-C2'-C1'	-7.69	95.35	101.50
1	X	2795	A	N9-C1'-C2'	7.67	123.97	114.00
1	X	1278	A	O4'-C1'-N9	7.57	114.26	108.20
1	X	2760	G	N9-C1'-C2'	7.57	123.84	114.00
13	K	112	LEU	CA-CB-CG	7.54	132.63	115.30
1	X	1278	A	C1'-O4'-C4'	-7.51	103.89	109.90
1	X	2591	C	OP2-P-O3'	7.50	121.69	105.20
1	X	2496	C	C2'-C3'-O3'	7.43	125.85	109.50
1	X	2034	A	N9-C1'-C2'	7.42	123.65	114.00
1	X	459	A	N9-C1'-C2'	7.39	123.61	114.00
9	G	108	GLY	N-CA-C	-7.39	94.63	113.10
1	X	1142	G	N9-C1'-C2'	7.34	123.54	114.00
1	X	2363	G	N9-C1'-C2'	7.34	123.54	114.00
1	X	2370	G	N9-C1'-C2'	7.34	123.54	114.00
1	X	2841	U	C2'-C3'-O3'	7.31	125.58	109.50
1	X	801	A	N9-C1'-C2'	7.29	123.47	114.00
1	X	1033	G	N9-C1'-C2'	7.27	123.45	114.00
1	X	1265	G	N9-C1'-C2'	7.27	123.45	114.00
1	X	2841	U	N1-C1'-C2'	7.25	123.43	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	X	1791	C	N1-C1'-C2'	7.25	123.42	114.00
4	B	146	THR	C-N-CD	-7.24	104.66	120.60
1	X	172	A	O4'-C1'-N9	7.22	113.98	108.20
1	X	804	C	N1-C1'-C2'	7.19	123.35	114.00
1	X	580	A	N9-C1'-C2'	7.18	123.34	114.00
1	X	2044	G	N9-C1'-C2'	7.17	123.33	114.00
1	X	1771	A	N9-C1'-C2'	7.14	123.29	114.00
1	X	1357	U	N1-C1'-C2'	7.07	123.19	114.00
1	X	2712	G	N9-C1'-C2'	7.04	123.16	114.00
1	X	2551	A	N9-C1'-C2'	7.04	123.15	114.00
1	X	985	G	N9-C1'-C2'	7.03	123.13	114.00
1	X	2592	U	O4'-C1'-N1	7.00	113.80	108.20
1	X	683	A	N9-C1'-C2'	6.99	123.09	114.00
1	X	1710	U	N1-C1'-C2'	6.98	123.07	114.00
1	X	1337	G	N9-C1'-C2'	6.95	123.04	114.00
1	X	2217	G	N9-C1'-C2'	6.92	123.00	114.00
1	X	777	A	C2'-C3'-O3'	6.87	124.69	113.70
1	X	2660	C	N1-C1'-C2'	6.81	122.86	114.00
1	X	1279	G	N9-C1'-C2'	-6.67	104.67	112.00
1	X	2706	U	N1-C1'-C2'	6.63	122.62	114.00
1	X	2706	U	C2'-C3'-O3'	6.60	124.26	113.70
1	X	2254	C	N1-C1'-C2'	6.58	122.55	114.00
20	R	28	LYS	N-CA-C	-6.58	93.24	111.00
1	X	2324	G	N9-C1'-C2'	6.57	122.54	114.00
1	X	2592	U	O4'-C1'-C2'	-6.57	99.23	105.80
1	X	312	G	N9-C1'-C2'	6.55	122.52	114.00
18	P	56	LEU	N-CA-C	-6.53	93.37	111.00
1	X	555	U	N1-C1'-C2'	6.50	122.46	114.00
1	X	1313	U	O4'-C1'-N1	6.50	113.40	108.20
1	X	1807	A	N9-C1'-C2'	6.47	122.41	114.00
1	X	2497	A	N9-C1'-C2'	6.47	122.41	114.00
1	X	804	C	C4'-C3'-O3'	-6.46	95.83	109.40
1	X	2693	U	N1-C1'-C2'	6.43	122.36	114.00
1	X	1975	G	N9-C1'-C2'	6.41	122.33	114.00
1	X	1926	U	N1-C1'-C2'	6.37	122.28	114.00
1	X	2476	A	N9-C1'-C2'	6.32	122.21	114.00
1	X	554	U	N1-C1'-C2'	6.30	122.20	114.00
1	X	1289	A	O5'-P-OP2	-6.26	100.06	105.70
1	X	2592	U	N1-C2-N3	-6.26	111.15	114.90
1	X	1632	A	N9-C1'-C2'	6.24	122.12	114.00
1	X	940	G	N9-C1'-C2'	6.22	122.09	114.00
1	X	2589	C	OP1-P-O3'	6.22	118.88	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	X	995	A	N9-C1'-C2'	6.19	122.05	114.00
1	X	1152	C	N1-C1'-C2'	6.19	122.05	114.00
17	O	11	GLN	N-CA-C	6.14	127.58	111.00
1	X	571	U	N1-C1'-C2'	6.03	121.84	114.00
1	X	513	A	N9-C1'-C2'	6.00	121.79	114.00
1	X	2854	G	C4'-C3'-O3'	-5.97	96.86	109.40
1	X	2593	A	N9-C1'-C2'	5.96	121.75	114.00
1	X	1664	G	N9-C1'-C2'	5.96	121.75	114.00
1	X	1624	A	N9-C1'-C2'	5.96	121.75	114.00
1	X	1749	G	O4'-C1'-N9	5.94	112.95	108.20
1	X	1345	G	N9-C1'-C2'	5.94	121.72	114.00
1	X	1326	U	N1-C1'-C2'	5.94	121.72	114.00
1	X	1775	A	C2'-C3'-O3'	5.93	123.19	113.70
1	X	1000	G	N9-C1'-C2'	5.92	121.70	114.00
1	X	182	G	N9-C1'-C2'	5.92	121.69	114.00
1	X	2592	U	OP1-P-OP2	5.91	128.46	119.60
1	X	1301	U	N1-C1'-C2'	5.88	121.65	114.00
1	X	1772	C	N1-C1'-C2'	5.85	121.60	114.00
1	X	1439	G	C2'-C3'-O3'	5.85	123.06	113.70
15	M	29	PRO	CA-N-CD	-5.83	103.33	111.50
1	X	613	A	N9-C1'-C2'	5.83	121.58	114.00
1	X	333	A	N9-C1'-C2'	5.81	121.56	114.00
1	X	2050	G	C5'-C4'-O4'	-5.79	102.15	109.10
1	X	1651	U	N1-C1'-C2'	5.76	121.49	114.00
1	X	1409	U	N1-C1'-C2'	5.76	121.49	114.00
1	X	555	U	C5'-C4'-C3'	5.75	125.20	116.00
9	G	35	LYS	N-CA-C	-5.75	95.48	111.00
1	X	1266	G	C1'-O4'-C4'	-5.72	105.32	109.90
1	X	1142	G	C4'-C3'-O3'	-5.70	97.44	109.40
1	X	1314	A	N9-C1'-C2'	5.70	121.41	114.00
1	X	1357	U	C2'-C3'-O3'	5.69	122.80	113.70
1	X	469	G	N9-C1'-C2'	5.69	121.39	114.00
1	X	688	A	N9-C1'-C2'	5.68	121.39	114.00
1	X	747	A	C5'-C4'-C3'	5.68	125.09	116.00
1	X	1264	C	N1-C1'-C2'	5.68	121.38	114.00
3	A	88	ARG	N-CA-C	5.67	126.29	111.00
1	X	1071	U	N1-C1'-C2'	5.66	121.36	114.00
1	X	814	G	OP1-P-O3'	5.66	117.65	105.20
19	Q	61	LYS	N-CA-C	5.66	126.28	111.00
1	X	2482	A	N9-C1'-C2'	5.66	121.35	114.00
1	X	2409	A	N9-C1'-C2'	5.65	121.35	114.00
1	X	2594	U	OP2-P-O3'	5.64	117.61	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	X	2521	A	N9-C1'-C2'	5.63	121.32	114.00
20	R	98	ILE	N-CA-C	-5.63	95.80	111.00
1	X	842	A	N9-C1'-C2'	5.60	121.28	114.00
1	X	2437	G	N9-C1'-C2'	5.60	121.28	114.00
10	H	25	LEU	CA-CB-CG	5.58	128.12	115.30
1	X	467	U	N1-C1'-C2'	5.57	121.25	114.00
1	X	2824	C	N1-C1'-C2'	5.57	121.24	114.00
1	X	468	A	N9-C1'-C2'	5.55	121.22	114.00
1	X	182	G	C1'-O4'-C4'	-5.54	105.47	109.90
1	X	657	A	N9-C1'-C2'	5.54	121.20	114.00
1	X	1153	A	O4'-C1'-N9	-5.53	103.78	108.20
1	X	1019	U	N1-C1'-C2'	5.53	121.19	114.00
1	X	1315	A	C5'-C4'-O4'	-5.53	102.47	109.10
5	C	58	MET	N-CA-C	5.53	125.92	111.00
1	X	399	G	N9-C1'-C2'	5.49	121.14	114.00
1	X	172	A	C1'-O4'-C4'	-5.49	105.51	109.90
1	X	2608	A	C2'-C3'-O3'	5.47	122.45	113.70
1	X	668	A	N9-C1'-C2'	5.46	121.10	114.00
1	X	2634	G	O4'-C1'-N9	5.46	112.57	108.20
1	X	2480	C	N1-C1'-C2'	5.45	121.08	114.00
20	R	25	LEU	CA-CB-CG	5.44	127.81	115.30
1	X	2769	C	O4'-C1'-N1	5.43	112.54	108.20
1	X	2528	G	OP1-P-O3'	5.42	117.13	105.20
1	X	684	C	C5'-C4'-C3'	-5.42	107.34	116.00
1	X	2199	C	C5'-C4'-O4'	5.41	115.59	109.10
1	X	2770	A	C2'-C3'-O3'	5.41	122.35	113.70
1	X	1373	G	C5-C6-O6	-5.40	125.36	128.60
1	X	2661	G	O5'-P-OP1	-5.39	100.84	105.70
1	X	814	G	N9-C1'-C2'	5.38	121.00	114.00
1	X	1812	U	N1-C1'-C2'	5.37	120.99	114.00
1	X	1715	A	N9-C1'-C2'	5.37	120.98	114.00
1	X	1467	U	O4'-C1'-N1	-5.36	103.91	108.20
1	X	490	A	N9-C1'-C2'	5.36	120.97	114.00
1	X	1398	G	O4'-C1'-N9	5.36	112.49	108.20
1	X	2770	A	N9-C1'-C2'	5.36	120.97	114.00
1	X	118	U	N1-C1'-C2'	5.36	120.97	114.00
1	X	1633	C	N1-C1'-C2'	5.35	120.95	114.00
1	X	2017	U	N1-C1'-C2'	5.34	120.94	114.00
1	X	1279	G	O4'-C1'-N9	5.33	112.46	108.20
1	X	1313	U	C5'-C4'-C3'	5.33	124.52	116.00
1	X	742	G	N9-C1'-C2'	5.32	120.92	114.00
1	X	154	U	N1-C1'-C2'	5.29	120.88	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	X	1052	C	N1-C1'-C2'	5.29	120.88	114.00
1	X	2848	A	N9-C1'-C2'	5.29	120.87	114.00
15	M	59	GLY	N-CA-C	5.28	126.30	113.10
1	X	2592	U	C5-C6-N1	5.27	125.33	122.70
1	X	182	G	O4'-C1'-N9	5.26	112.41	108.20
19	Q	60	GLY	N-CA-C	5.26	126.24	113.10
1	X	1410	U	N1-C1'-C2'	5.25	120.82	114.00
1	X	1777	A	O4'-C1'-N9	5.24	112.39	108.20
1	X	843	G	N9-C1'-C2'	5.23	120.80	114.00
1	X	1250	A	N9-C1'-C2'	5.23	120.80	114.00
1	X	2634	G	C1'-O4'-C4'	-5.23	105.72	109.90
15	M	88	VAL	CB-CA-C	-5.22	101.48	111.40
10	H	9	ASP	CB-CG-OD1	-5.21	113.61	118.30
1	X	972	C	O4'-C1'-N1	5.21	112.36	108.20
1	X	1266	G	N9-C1'-C2'	5.19	120.75	114.00
1	X	340	G	O4'-C1'-N9	5.19	112.35	108.20
1	X	2447	G	N9-C1'-C2'	5.18	120.74	114.00
1	X	172	A	C8-N9-C1'	5.17	137.01	127.70
1	X	538	A	C2'-C3'-O3'	5.17	121.97	113.70
1	X	814	G	C2'-C3'-O3'	5.17	121.97	113.70
1	X	172	A	C4-N9-C1'	-5.16	117.01	126.30
1	X	600	G	N9-C1'-C2'	5.15	120.70	114.00
1	X	541	C	N1-C1'-C2'	5.15	120.70	114.00
1	X	2405	A	N9-C1'-C2'	5.13	120.67	114.00
1	X	2738	A	N9-C1'-C2'	-5.11	106.38	112.00
1	X	69	G	O4'-C1'-N9	5.11	112.29	108.20
1	X	1685	A	C4'-C3'-C2'	5.11	107.71	102.60
1	X	1036	G	C2'-C3'-O3'	5.09	121.85	113.70
1	X	1712	G	N9-C1'-C2'	5.09	120.61	114.00
1	X	1633	C	C5'-C4'-O4'	5.09	115.20	109.10
1	X	1923	U	N1-C1'-C2'	5.08	120.61	114.00
1	X	1632	A	C4'-C3'-O3'	-5.08	98.74	109.40
1	X	2427	A	OP1-P-O3'	5.05	116.31	105.20
1	X	1338	G	N9-C1'-C2'	5.04	120.55	114.00
1	X	1562	G	N9-C1'-C2'	5.04	120.55	114.00
1	X	2016	A	N9-C1'-C2'	5.03	120.54	114.00
1	X	1363	C	N1-C1'-C2'	-5.03	106.47	112.00
1	X	2075	U	C2'-C3'-O3'	5.01	121.72	113.70

There are no chirality outliers.

All (234) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
9	G	106	TYR	Sidechain
17	O	80	TYR	Sidechain
1	X	10	A	Sidechain
1	X	1000	G	Sidechain
1	X	1005	U	Sidechain
1	X	1006	C	Sidechain
1	X	1010	U	Sidechain
1	X	1016	C	Sidechain
1	X	1030	U	Sidechain
1	X	1136	G	Sidechain
1	X	1141	U	Sidechain
1	X	1143	A	Sidechain
1	X	1152	C	Sidechain
1	X	1153	A	Sidechain
1	X	1155	G	Sidechain
1	X	118	U	Sidechain
1	X	1206	G	Sidechain
1	X	1210	C	Sidechain
1	X	1212	U	Sidechain
1	X	122	G	Sidechain
1	X	1228	G	Sidechain
1	X	123	A	Sidechain
1	X	1236	G	Sidechain
1	X	124	A	Sidechain
1	X	1242	A	Sidechain
1	X	1247	U	Sidechain
1	X	1250	A	Sidechain
1	X	1251	G	Sidechain
1	X	126	C	Sidechain
1	X	1260	A	Sidechain
1	X	1281	A	Sidechain
1	X	1285	A	Sidechain
1	X	1296	G	Sidechain
1	X	1301	U	Sidechain
1	X	1314	A	Sidechain
1	X	1322	G	Sidechain
1	X	1325	U	Sidechain
1	X	1326	U	Sidechain
1	X	1342	U	Sidechain
1	X	1353	A	Sidechain
1	X	1373	G	Sidechain
1	X	1393	G	Sidechain
1	X	1398	G	Sidechain

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Mol	Chain	Res	Type	Group
1	X	1403	U	Sidechain
1	X	1408	A	Sidechain
1	X	1413	U	Sidechain
1	X	1429	A	Sidechain
1	X	1441	A	Sidechain
1	X	1442	C	Sidechain
1	X	1459	U	Sidechain
1	X	1469	U	Sidechain
1	X	1473	U	Sidechain
1	X	149	A	Sidechain
1	X	1510	A	Sidechain
1	X	1562	G	Sidechain
1	X	1574	A	Sidechain
1	X	1575	C	Sidechain
1	X	1623	C	Sidechain
1	X	1629	G	Sidechain
1	X	1635	G	Sidechain
1	X	1647	U	Sidechain
1	X	165	G	Sidechain
1	X	1651	U	Sidechain
1	X	1654	A	Sidechain
1	X	1661	C	Sidechain
1	X	1664	G	Sidechain
1	X	1665	C	Sidechain
1	X	1673	C	Sidechain
1	X	1682	A	Sidechain
1	X	1688	U	Sidechain
1	X	1692	C	Sidechain
1	X	1697	U	Sidechain
1	X	1707	A	Sidechain
1	X	1709	U	Sidechain
1	X	1710	U	Sidechain
1	X	1711	C	Sidechain
1	X	172	A	Sidechain
1	X	1723	U	Sidechain
1	X	1746	A	Sidechain
1	X	1747	G	Sidechain
1	X	1748	U	Sidechain
1	X	1749	G	Sidechain
1	X	175	C	Sidechain
1	X	1759	A	Sidechain
1	X	1762	C	Sidechain

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Mol	Chain	Res	Type	Group
1	X	1766	U	Sidechain
1	X	177	U	Sidechain
1	X	1771	A	Sidechain
1	X	1777	A	Sidechain
1	X	1778	U	Sidechain
1	X	178	C	Sidechain
1	X	1789	U	Sidechain
1	X	179	U	Sidechain
1	X	1814	G	Sidechain
1	X	1923	U	Sidechain
1	X	1938	U	Sidechain
1	X	1947	G	Sidechain
1	X	1965	U	Sidechain
1	X	1974	U	Sidechain
1	X	1975	G	Sidechain
1	X	1980	A	Sidechain
1	X	1994	U	Sidechain
1	X	1996	A	Sidechain
1	X	1999	U	Sidechain
1	X	2004	U	Sidechain
1	X	201	G	Sidechain
1	X	2013	A	Sidechain
1	X	2016	A	Sidechain
1	X	2039	G	Sidechain
1	X	2045	A	Sidechain
1	X	2061	C	Sidechain
1	X	2064	U	Sidechain
1	X	207	U	Sidechain
1	X	218	A	Sidechain
1	X	2189	A	Sidechain
1	X	219	G	Sidechain
1	X	2192	U	Sidechain
1	X	2216	G	Sidechain
1	X	2258	G	Sidechain
1	X	226	C	Sidechain
1	X	2311	U	Sidechain
1	X	2313	G	Sidechain
1	X	2324	G	Sidechain
1	X	2352	A	Sidechain
1	X	2385	U	Sidechain
1	X	24	G	Sidechain
1	X	2410	U	Sidechain

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Mol	Chain	Res	Type	Group
1	X	2412	A	Sidechain
1	X	2419	C	Sidechain
1	X	2426	G	Sidechain
1	X	2428	U	Sidechain
1	X	2431	C	Sidechain
1	X	2434	G	Sidechain
1	X	2472	U	Sidechain
1	X	2479	U	Sidechain
1	X	2487	G	Sidechain
1	X	2493	U	Sidechain
1	X	2498	U	Sidechain
1	X	25	U	Sidechain
1	X	2508	G	Sidechain
1	X	2510	A	Sidechain
1	X	2528	G	Sidechain
1	X	2540	A	Sidechain
1	X	2541	U	Sidechain
1	X	2542	U	Sidechain
1	X	2548	G	Sidechain
1	X	2549	G	Sidechain
1	X	2553	G	Sidechain
1	X	2557	G	Sidechain
1	X	2576	G	Sidechain
1	X	2588	U	Sidechain
1	X	2592	U	Sidechain
1	X	2620	G	Sidechain
1	X	2663	U	Sidechain
1	X	2664	G	Sidechain
1	X	2665	G	Sidechain
1	X	2666	U	Sidechain
1	X	2672	U	Sidechain
1	X	2684	A	Sidechain
1	X	2691	C	Sidechain
1	X	2696	A	Sidechain
1	X	2704	U	Sidechain
1	X	2738	A	Sidechain
1	X	2760	G	Sidechain
1	X	2823	G	Sidechain
1	X	2824	C	Sidechain
1	X	2841	U	Sidechain
1	X	2854	G	Sidechain
1	X	34	U	Sidechain

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Mol	Chain	Res	Type	Group
1	X	340	G	Sidechain
1	X	342	G	Sidechain
1	X	356	A	Sidechain
1	X	389	G	Sidechain
1	X	390	U	Sidechain
1	X	394	U	Sidechain
1	X	396	U	Sidechain
1	X	403	A	Sidechain
1	X	455	A	Sidechain
1	X	457	C	Sidechain
1	X	459	A	Sidechain
1	X	460	U	Sidechain
1	X	462	G	Sidechain
1	X	467	U	Sidechain
1	X	469	G	Sidechain
1	X	474	G	Sidechain
1	X	476	G	Sidechain
1	X	477	A	Sidechain
1	X	518	A	Sidechain
1	X	539	A	Sidechain
1	X	540	G	Sidechain
1	X	541	C	Sidechain
1	X	555	U	Sidechain
1	X	556	A	Sidechain
1	X	563	U	Sidechain
1	X	571	U	Sidechain
1	X	578	U	Sidechain
1	X	591	G	Sidechain
1	X	594	G	Sidechain
1	X	600	G	Sidechain
1	X	613	A	Sidechain
1	X	621	U	Sidechain
1	X	650	U	Sidechain
1	X	654	A	Sidechain
1	X	670	U	Sidechain
1	X	681	A	Sidechain
1	X	683	A	Sidechain
1	X	684	C	Sidechain
1	X	685	U	Sidechain
1	X	707	U	Sidechain
1	X	708	G	Sidechain
1	X	713	G	Sidechain

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Mol	Chain	Res	Type	Group
1	X	715	U	Sidechain
1	X	752	G	Sidechain
1	X	757	U	Sidechain
1	X	758	G	Sidechain
1	X	760	U	Sidechain
1	X	761	G	Sidechain
1	X	768	U	Sidechain
1	X	771	C	Sidechain
1	X	774	A	Sidechain
1	X	792	U	Sidechain
1	X	814	G	Sidechain
1	X	815	A	Sidechain
1	X	824	U	Sidechain
1	X	872	G	Sidechain
1	X	873	U	Sidechain
1	X	956	A	Sidechain
1	X	974	U	Sidechain
1	X	98	U	Sidechain
1	X	993	C	Sidechain
2	Z	11	G	Sidechain
2	Z	17	A	Sidechain
2	Z	52	G	Sidechain
2	Z	89	G	Sidechain

## 5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	X	57651	0	29049	4430	0
2	Z	2598	0	1328	213	0
3	A	1637	0	1673	471	0
4	B	1539	0	1600	358	0
5	C	1506	0	1525	400	0
6	D	1400	0	1481	437	0
7	E	1286	0	1336	330	0
8	F	504	0	530	125	0
9	G	1114	0	1144	371	0
10	H	997	0	1046	213	1

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
11	I	1067	0	1103	324	0
12	J	1090	0	1125	259	0
13	K	878	0	930	165	1
14	L	779	0	820	275	0
15	M	871	0	894	204	0
16	N	978	0	1020	288	0
17	O	741	0	756	242	0
18	P	1014	0	1096	191	0
19	Q	726	0	753	197	0
20	R	825	0	881	271	0
21	S	1345	0	1372	323	0
22	T	625	0	655	144	0
23	U	552	0	604	192	0
24	V	533	0	558	133	0
25	W	424	0	470	103	0
26	Y	457	0	462	86	0
27	1	53	0	0	0	0
28	2	46	0	0	0	0
29	3	63	0	0	2	0
30	4	297	0	329	83	0
31	4	1	0	0	0	0
31	Y	1	0	0	0	0
32	M	1	0	0	0	0
32	X	30	0	0	0	0
32	Z	4	0	0	0	0
33	X	24	0	19	22	0
All	All	83657	0	54559	9938	1

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 72.

All (9938) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1281:A:H1'	1:X:2592:U:C5	1.68	1.26
1:X:2198:U:H3'	1:X:2199:C:C4'	1.66	1.24
1:X:2198:U:C3'	1:X:2199:C:H4'	1.68	1.23
1:X:1781:C:OP1	3:A:219:PRO:HB2	1.41	1.20
1:X:1281:A:C1'	1:X:2592:U:H5	1.55	1.20
1:X:2712:G:H3'	1:X:2713:A:H5'	1.21	1.20
16:N:51:ARG:HH11	16:N:51:ARG:HB3	1.04	1.17

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:71:PRO:HA	12:J:96:SER:HB2	1.23	1.17
16:N:51:ARG:HH11	16:N:51:ARG:CB	1.57	1.16
11:I:85:ASP:HA	11:I:116:ARG:HH12	1.04	1.16
5:C:48:ARG:HB2	5:C:51:VAL:HG22	1.23	1.16
9:G:100:TYR:HB2	9:G:116:ARG:HH12	1.11	1.16
1:X:504:G:H4'	18:P:27:VAL:HG13	1.28	1.15
14:L:63:ASN:HB3	14:L:66:ASP:HB2	1.26	1.15
25:W:25:LEU:HD22	25:W:30:ASP:HB3	1.28	1.14
21:S:54:ILE:HG13	21:S:62:PHE:HB2	1.19	1.14
23:U:51:ILE:HG12	23:U:59:THR:HB	1.16	1.14
1:X:871:U:O2'	1:X:2247:A:H2'	1.46	1.13
1:X:1151:U:H5'	1:X:1153:A:H5'	1.16	1.13
13:K:3:HIS:ND1	13:K:5:LYS:HE3	1.61	1.13
5:C:18:PRO:HG2	5:C:105:ALA:HB1	1.30	1.13
1:X:2225:G:H2'	1:X:2226:A:H8	1.14	1.13
3:A:247:VAL:HG23	3:A:248:THR:HG23	1.13	1.13
9:G:100:TYR:HB2	9:G:116:ARG:NH1	1.61	1.13
5:C:7:ILE:HB	5:C:120:VAL:H	1.04	1.12
1:X:666:U:H2'	1:X:667:U:H4'	1.15	1.12
23:U:41:VAL:HG23	23:U:42:GLN:H	0.97	1.12
1:X:542:A:H5''	16:N:28:ARG:HH21	0.96	1.12
3:A:93:ALA:HB2	3:A:107:ALA:HB2	1.15	1.12
19:Q:35:LYS:HE2	19:Q:53:ILE:HG23	1.26	1.12
1:X:1314:A:O2'	1:X:1315:A:H3'	1.49	1.11
1:X:653:G:H2'	1:X:654:A:H5''	1.20	1.11
14:L:85:LYS:HG2	14:L:86:GLN:HE21	1.15	1.11
6:D:39:GLY:HA2	6:D:86:GLY:HA2	1.33	1.11
11:I:85:ASP:HA	11:I:116:ARG:NH1	1.66	1.11
1:X:332:C:H1'	5:C:159:ARG:HE	1.16	1.10
1:X:1508:G:H5'	1:X:1509:A:H5''	1.12	1.10
20:R:51:VAL:HG21	20:R:76:LEU:HD21	1.25	1.10
16:N:66:ASN:HB3	16:N:76:TYR:HB2	1.32	1.10
1:X:2616:U:H5''	4:B:82:ARG:HH21	0.98	1.10
16:N:85:ARG:HB3	16:N:116:ALA:HB1	1.18	1.10
8:F:75:MET:HA	8:F:78:LEU:HB3	1.32	1.10
6:D:60:ILE:HG13	6:D:61:THR:H	1.15	1.10
14:L:30:SER:H	14:L:43:ILE:HD11	1.03	1.10
18:P:109:ARG:HD2	18:P:115:ASN:HD21	1.17	1.10
6:D:132:ILE:HB	6:D:152:MET:HB2	1.28	1.10
14:L:64:LYS:HE2	14:L:64:LYS:N	1.66	1.10
6:D:69:LYS:HE2	6:D:84:PRO:HG3	1.25	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:66:ASN:HB2	16:N:70:ARG:HH12	1.14	1.09
1:X:623:G:H3'	1:X:624:A:H5''	1.21	1.09
19:Q:12:ILE:HD12	19:Q:13:SER:H	1.16	1.09
10:H:23:ARG:HH12	10:H:25:LEU:HG	1.07	1.09
1:X:2394:G:H3'	11:I:63:ARG:HH11	1.03	1.09
2:Z:46:G:H5'	6:D:92:ARG:HH12	1.18	1.09
14:L:40:ALA:HB2	14:L:103:LEU:HD11	1.24	1.09
1:X:1128:G:H2'	1:X:1129:A:H5''	1.25	1.09
5:C:149:LEU:HD11	5:C:170:LEU:HB2	1.28	1.08
14:L:64:LYS:HE2	14:L:64:LYS:H	0.94	1.08
1:X:2056:C:H2'	1:X:2057:U:H5''	1.35	1.08
14:L:31:VAL:HB	14:L:38:ILE:HD11	1.34	1.08
1:X:451:A:H2'	1:X:452:G:H8	1.14	1.08
1:X:2672:U:H2'	1:X:2673:G:H8	1.19	1.08
9:G:33:ILE:HB	9:G:34:PRO:HD2	1.09	1.07
1:X:317:U:H2'	1:X:318:G:H5''	1.31	1.07
30:4:18:ARG:HD3	30:4:23:VAL:HG22	1.33	1.07
3:A:69:ARG:HD2	3:A:130:ALA:HB2	1.32	1.07
14:L:30:SER:N	14:L:43:ILE:HD11	1.69	1.07
7:E:16:THR:HG22	7:E:18:ASN:HD21	1.18	1.07
1:X:82:G:H22	1:X:100:G:H2'	1.16	1.07
15:M:33:VAL:HG22	15:M:51:GLU:HB2	1.13	1.07
1:X:1167:A:N6	16:N:48:ARG:HG2	1.70	1.06
23:U:28:GLY:HA3	23:U:32:ARG:HB3	1.30	1.06
17:O:12:TYR:HB2	17:O:39:PHE:HB2	1.38	1.06
11:I:73:GLU:HB2	11:I:106:VAL:HA	1.30	1.06
30:4:15:LYS:HB2	30:4:26:ILE:HG13	1.34	1.06
10:H:27:SER:HB3	10:H:50:ILE:HG13	1.35	1.06
1:X:2056:C:C2'	1:X:2057:U:H5''	1.85	1.06
1:X:1914:U:H6	1:X:1914:U:H5'	1.20	1.06
1:X:29:U:C4'	16:N:11:ARG:HH12	1.69	1.06
1:X:1474:A:O2'	1:X:1475:U:H5'	1.54	1.06
11:I:60:LEU:HD12	11:I:61:PRO:HD2	1.11	1.06
1:X:88:G:H3'	1:X:89:A:H5''	1.37	1.06
1:X:1095:A:H2'	1:X:1096:A:H5''	1.37	1.05
7:E:97:LYS:HE3	7:E:104:GLU:HG3	1.39	1.05
10:H:81:ILE:HG13	10:H:117:GLU:OE1	1.56	1.05
4:B:85:ALA:H	4:B:86:PRO:HD2	1.21	1.05
14:L:42:ILE:HB	14:L:52:ALA:HB3	1.37	1.05
11:I:108:LEU:HB2	11:I:122:VAL:HG11	1.35	1.04
5:C:176:ASN:HD21	5:C:178:TYR:HB3	0.95	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1690:U:H2'	1:X:1691:G:H5''	1.38	1.04
25:W:5:LEU:HB2	25:W:25:LEU:HD13	1.36	1.04
11:I:72:TYR:HB2	11:I:107:LYS:HE2	1.37	1.04
21:S:3:LEU:HD21	21:S:32:PHE:HB3	1.38	1.04
9:G:67:ARG:HB2	9:G:70:PHE:HA	1.37	1.04
3:A:231:HIS:CD2	3:A:233:HIS:H	1.75	1.04
21:S:123:VAL:N	21:S:161:ALA:HB2	1.73	1.04
4:B:38:THR:HG22	4:B:40:GLN:H	1.18	1.03
24:V:38:ALA:O	24:V:40:PRO:HD3	1.58	1.03
1:X:2212:U:H2'	1:X:2213:G:C8	1.94	1.03
17:O:36:LYS:HE3	17:O:56:VAL:HG13	1.39	1.03
16:N:66:ASN:CB	16:N:70:ARG:HH12	1.72	1.03
1:X:2225:G:H2'	1:X:2226:A:C8	1.93	1.03
1:X:1525:A:H3'	1:X:1526:U:C6	1.93	1.03
21:S:172:LEU:HD23	21:S:173:PRO:HD2	1.39	1.03
1:X:1173:G:H1'	17:O:21:ARG:HH21	1.22	1.03
11:I:72:TYR:HB3	11:I:107:LYS:HB2	1.36	1.03
16:N:10:ARG:HG2	16:N:13:ARG:HH22	1.16	1.03
1:X:1095:A:C2'	1:X:1096:A:H5''	1.89	1.03
1:X:336:A:H2'	1:X:337:G:H8	1.20	1.03
19:Q:3:HIS:CE1	19:Q:44:GLN:HG3	1.94	1.02
1:X:1141:U:C4	4:B:147:PRO:HD3	1.93	1.02
3:A:173:VAL:HG12	3:A:174:ILE:H	1.24	1.02
13:K:100:VAL:HG12	13:K:101:GLY:H	1.23	1.02
1:X:1348:C:H2'	1:X:1349:A:H8	1.24	1.02
1:X:1023:U:H3	9:G:53:ARG:HD2	1.25	1.01
1:X:333:A:C5'	5:C:162:ARG:HD2	1.89	1.01
1:X:2713:A:H61	4:B:203:LYS:HE3	1.24	1.01
9:G:67:ARG:HD3	9:G:70:PHE:CA	1.90	1.01
6:D:40:LEU:HG	6:D:150:ARG:HE	1.19	1.01
5:C:176:ASN:ND2	5:C:178:TYR:HB3	1.74	1.01
1:X:1508:G:H5'	1:X:1509:A:C5'	1.90	1.01
22:T:25:LYS:HG2	22:T:37:LEU:HA	1.36	1.01
1:X:983:G:H3'	1:X:984:A:H5''	1.40	1.01
1:X:1333:G:N2	1:X:1344:C:H41	1.59	1.01
22:T:45:PHE:HA	22:T:77:ARG:HB2	1.42	1.01
23:U:41:VAL:HG23	23:U:42:GLN:N	1.74	1.01
20:R:48:VAL:HG12	20:R:50:GLY:H	1.25	1.01
1:X:1673:C:C5'	4:B:136:ARG:HD3	1.91	1.01
9:G:116:ARG:HD2	9:G:119:LEU:HD12	1.43	1.00
21:S:123:VAL:H	21:S:161:ALA:HB2	0.88	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:116:VAL:HG22	4:B:136:ARG:HE	1.17	1.00
1:X:2222:U:H2'	1:X:2223:U:H6	1.26	1.00
13:K:79:VAL:HA	13:K:83:VAL:CG2	1.89	1.00
1:X:538:A:H5'	9:G:142:ARG:NH2	1.75	1.00
14:L:52:ALA:HB1	14:L:75:LEU:HD11	1.40	1.00
20:R:97:GLN:HB2	20:R:101:GLY:HA2	1.42	1.00
1:X:451:A:H2'	1:X:452:G:C8	1.96	1.00
1:X:1574:A:O2'	1:X:1575:C:H3'	1.61	1.00
4:B:116:VAL:HG22	4:B:136:ARG:NE	1.76	1.00
1:X:313:U:H2'	1:X:314:G:H8	1.24	1.00
1:X:542:A:C2	1:X:2004:U:H2'	1.97	1.00
2:Z:46:G:C5'	6:D:92:ARG:HH12	1.74	1.00
21:S:3:LEU:HD13	21:S:4:THR:H	1.25	1.00
5:C:47:THR:HA	5:C:82:VAL:HB	1.41	1.00
1:X:988:G:H5'	16:N:55:ARG:HH12	1.25	1.00
1:X:333:A:H5''	5:C:162:ARG:CD	1.91	1.00
9:G:66:HIS:HA	16:N:67:ALA:HB1	1.39	1.00
8:F:105:VAL:HG13	8:F:128:VAL:HG11	1.44	1.00
15:M:99:VAL:HG21	15:M:104:LEU:HD21	1.42	1.00
13:K:11:ASN:HD21	13:K:17:ARG:NH1	1.60	1.00
1:X:1281:A:H1'	1:X:2592:U:H5	1.05	0.99
11:I:88:PHE:HB2	11:I:93:LEU:HD12	1.41	0.99
10:H:13:ASN:ND2	10:H:109:ARG:HG2	1.77	0.99
1:X:663:G:H3'	1:X:664:C:H4'	1.44	0.99
3:A:133:LEU:HB2	3:A:187:SER:HA	1.43	0.99
19:Q:43:GLN:HG2	19:Q:48:VAL:O	1.62	0.99
1:X:400:U:H5	23:U:23:LYS:HD3	1.27	0.99
4:B:33:ILE:H	4:B:33:ILE:HD12	1.26	0.99
1:X:1061:A:H2'	1:X:1062:G:H8	1.27	0.99
1:X:1128:G:C2'	1:X:1129:A:H5''	1.91	0.99
24:V:4:SER:HB3	24:V:7:ARG:HH21	1.27	0.99
5:C:39:ARG:HH21	5:C:91:TYR:HB2	1.27	0.99
3:A:91:ARG:HD2	3:A:198:ASN:HA	1.45	0.99
1:X:2581:A:H3'	1:X:2582:G:H5''	1.42	0.99
1:X:1698:C:O2'	1:X:1753:A:H2'	1.61	0.99
1:X:2197:U:H2'	1:X:2198:U:C5	1.98	0.99
3:A:48:ARG:H	3:A:48:ARG:HD2	1.22	0.99
15:M:66:PHE:HE2	15:M:81:PHE:HB2	1.23	0.99
12:J:27:TYR:HB2	12:J:137:VAL:HG11	1.45	0.99
9:G:65:LYS:CG	9:G:66:HIS:H	1.75	0.98
21:S:46:GLN:HB3	21:S:50:GLY:HA3	1.42	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:164:VAL:HB	5:C:166:TRP:CZ3	1.97	0.98
1:X:2291:U:H5'	6:D:85:VAL:HG21	1.43	0.98
21:S:49:THR:HG21	21:S:96:VAL:HG22	1.44	0.98
11:I:94:GLU:HB3	11:I:97:ARG:HE	1.24	0.98
6:D:71:LYS:HD2	6:D:73:SER:OG	1.63	0.98
11:I:72:TYR:HA	11:I:105:PRO:HG2	1.40	0.98
1:X:2394:G:H3'	11:I:63:ARG:NH1	1.77	0.98
1:X:1448:A:H61	1:X:1574:A:H61	1.05	0.98
1:X:2616:U:H5''	4:B:82:ARG:NH2	1.76	0.98
1:X:2617:G:HO2'	1:X:2618:A:H8	1.00	0.98
13:K:100:VAL:HG23	13:K:112:LEU:HD22	1.46	0.98
20:R:94:VAL:HB	20:R:107:ALA:HB3	1.44	0.98
1:X:2787:A:H2'	1:X:2788:C:H6	1.24	0.98
1:X:1075:C:H5''	8:F:85:ILE:HG21	1.45	0.98
1:X:2271:C:P	14:L:18:ARG:HH22	1.86	0.98
11:I:122:VAL:HG21	11:I:125:ALA:HB2	1.46	0.98
12:J:15:ARG:HD2	12:J:73:LYS:HG3	1.44	0.97
2:Z:46:G:H5'	6:D:92:ARG:NH1	1.80	0.97
30:4:9:LYS:HE2	30:4:16:VAL:HG21	1.46	0.97
3:A:211:ARG:O	3:A:214:TRP:HB2	1.63	0.97
6:D:74:ILE:HG12	6:D:80:ARG:HA	1.47	0.97
30:4:18:ARG:HG2	30:4:23:VAL:HA	1.43	0.97
15:M:69:ARG:HH11	15:M:69:ARG:HG3	1.25	0.97
9:G:87:GLN:H	9:G:87:GLN:HE21	1.11	0.97
5:C:109:ALA:O	5:C:113:GLU:HG3	1.64	0.97
6:D:111:ILE:HB	6:D:114:PHE:HB2	1.46	0.97
5:C:170:LEU:HD21	5:C:175:VAL:HA	1.43	0.97
1:X:2482:A:H1'	33:X:2911:ZLD:H13B	1.47	0.97
17:O:10:LYS:HG3	17:O:11:GLN:HE21	1.29	0.97
1:X:332:C:C1'	5:C:159:ARG:HE	1.78	0.97
14:L:28:ARG:HG3	14:L:43:ILE:HD13	1.46	0.96
23:U:20:ARG:HB2	23:U:43:ARG:HD2	1.43	0.96
19:Q:52:GLY:O	19:Q:80:VAL:HG23	1.65	0.96
1:X:29:U:H4'	16:N:11:ARG:HH12	1.24	0.96
9:G:103:TYR:CE2	9:G:111:LYS:HA	1.98	0.96
9:G:123:PRO:O	9:G:126:VAL:HG23	1.63	0.96
21:S:3:LEU:HA	21:S:34:LEU:HB3	1.46	0.96
12:J:23:LYS:HA	21:S:73:LYS:NZ	1.80	0.96
5:C:119:ALA:HB3	5:C:189:ASP:HA	1.45	0.96
23:U:41:VAL:CG2	23:U:42:GLN:H	1.77	0.96
1:X:1086:C:H2'	1:X:1087:C:H5''	1.43	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:U:51:ILE:CG1	23:U:59:THR:HB	1.94	0.96
19:Q:7:LEU:HD11	24:V:30:PHE:CE2	1.99	0.96
4:B:75:THR:O	4:B:76:ARG:HB3	1.65	0.96
1:X:984:A:H1'	1:X:1202:U:C6	1.99	0.96
12:J:57:ARG:HH11	12:J:57:ARG:HG2	1.29	0.96
5:C:7:ILE:HB	5:C:120:VAL:N	1.80	0.96
1:X:2222:U:H2'	1:X:2223:U:C6	1.99	0.96
24:V:3:PRO:O	24:V:6:MET:HB3	1.65	0.96
1:X:1949:A:O2'	1:X:2572:U:H5'	1.66	0.96
1:X:2551:A:C8	4:B:144:ARG:HD3	2.00	0.96
1:X:517:A:H5''	1:X:518:A:H5'	1.43	0.96
21:S:95:SER:HA	21:S:121:GLN:HA	1.43	0.96
1:X:958:G:H2'	1:X:959:C:C6	2.00	0.96
1:X:538:A:H5'	9:G:142:ARG:HH21	1.28	0.96
13:K:33:ARG:HG3	13:K:114:GLU:HB3	1.48	0.96
17:O:25:LEU:HB2	17:O:32:LYS:HE2	1.46	0.96
1:X:1525:A:H3'	1:X:1526:U:H6	1.26	0.96
1:X:2498:U:H4'	1:X:2499:C:OP1	1.64	0.96
1:X:2188:A:H2'	1:X:2189:A:N7	1.79	0.95
20:R:60:PRO:HA	20:R:65:PRO:HA	1.47	0.95
1:X:333:A:H3'	5:C:162:ARG:CZ	1.96	0.95
9:G:65:LYS:HG3	9:G:66:HIS:H	1.32	0.95
1:X:1517:C:H4'	3:A:96:HIS:NE2	1.79	0.95
1:X:1919:A:H2	1:X:1926:U:H3	0.97	0.95
14:L:33:ARG:NH1	14:L:100:VAL:HA	1.79	0.95
12:J:27:TYR:HB3	12:J:137:VAL:HG21	1.46	0.95
7:E:127:GLU:HG3	7:E:129:THR:H	1.29	0.95
1:X:1122:A:C2	1:X:1123:G:H1'	2.01	0.95
1:X:336:A:H2'	1:X:337:G:C8	2.00	0.95
6:D:100:LEU:O	6:D:104:ILE:HG13	1.67	0.95
6:D:4:LEU:HA	6:D:7:LYS:HB2	1.44	0.95
1:X:2375:G:H4'	23:U:32:ARG:O	1.66	0.95
15:M:104:LEU:HD13	15:M:106:TYR:CE2	1.99	0.95
1:X:958:G:H2'	1:X:959:C:H6	1.30	0.95
25:W:28:ILE:H	25:W:28:ILE:HD13	1.29	0.95
1:X:2708:U:H2'	1:X:2709:C:C6	2.02	0.95
9:G:121:LYS:O	9:G:123:PRO:HD3	1.65	0.95
4:B:85:ALA:N	4:B:86:PRO:HD2	1.78	0.95
1:X:1926:U:H4'	1:X:1927:U:H3'	1.47	0.95
16:N:51:ARG:NH1	16:N:51:ARG:HB3	1.82	0.95
1:X:542:A:H5''	16:N:28:ARG:NH2	1.81	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:62:LYS:HE2	11:I:64:GLY:HA3	1.45	0.95
12:J:35:LEU:HD12	12:J:131:LYS:O	1.67	0.95
18:P:44:VAL:HG23	18:P:45:ILE:H	1.30	0.95
13:K:99:ARG:HG2	13:K:99:ARG:HH11	1.31	0.95
1:X:504:G:H4'	18:P:27:VAL:CG1	1.97	0.94
1:X:1524:C:H5''	1:X:1525:A:H8	1.27	0.94
1:X:971:A:H61	12:J:83:ARG:HH22	1.16	0.94
1:X:128:C:H2'	1:X:129:A:H5''	1.46	0.94
18:P:89:ARG:HD3	18:P:132:GLY:H	1.29	0.94
1:X:2759:U:H4'	1:X:2760:G:H5''	1.48	0.94
6:D:13:ARG:HB3	6:D:14:PRO:HD3	1.48	0.94
5:C:13:ARG:NE	5:C:13:ARG:H	1.65	0.94
1:X:1586:A:H5'	3:A:38:PRO:HG3	1.47	0.94
20:R:98:ILE:HG22	20:R:99:VAL:H	1.33	0.94
1:X:2620:G:H5''	9:G:104:THR:HG21	1.47	0.94
25:W:3:ILE:HG22	25:W:4:LYS:H	1.31	0.94
1:X:1587:A:H2'	1:X:1588:A:C8	2.02	0.94
1:X:1095:A:C3'	1:X:1096:A:H5''	1.97	0.94
1:X:1122:A:H2'	1:X:1123:G:H4'	1.46	0.94
1:X:1292:A:H4'	13:K:31:GLU:OE1	1.68	0.94
21:S:97:PRO:HA	21:S:119:ASN:HA	1.47	0.94
1:X:1668:G:H5'	13:K:39:THR:HG21	1.50	0.94
12:J:44:LYS:HB2	12:J:47:GLN:HG3	1.50	0.94
13:K:100:VAL:HG12	13:K:101:GLY:N	1.79	0.94
1:X:1185:C:H2'	1:X:1186:G:H3'	1.46	0.94
1:X:797:A:C5	3:A:229:VAL:HG21	2.03	0.94
9:G:33:ILE:HB	9:G:34:PRO:CD	1.96	0.94
1:X:1348:C:H2'	1:X:1349:A:C8	2.01	0.94
1:X:1673:C:H5'	4:B:136:ARG:HD3	1.50	0.94
7:E:43:VAL:HG23	7:E:52:VAL:HG22	1.50	0.94
3:A:142:VAL:HG12	3:A:193:ILE:HA	1.47	0.93
14:L:8:ARG:HH11	14:L:8:ARG:HB2	1.32	0.93
2:Z:64:C:H2'	2:Z:65:A:H8	1.32	0.93
9:G:47:SER:O	9:G:49:VAL:N	2.01	0.93
1:X:2736:U:O2'	1:X:2737:A:H5''	1.69	0.93
1:X:333:A:H5''	5:C:162:ARG:HD2	0.95	0.93
1:X:1333:G:H21	1:X:1344:C:H41	0.98	0.93
18:P:41:VAL:O	18:P:43:ASP:N	2.02	0.93
17:O:78:VAL:O	17:O:78:VAL:HG22	1.67	0.93
4:B:119:ARG:HH11	4:B:119:ARG:HG3	1.30	0.93
15:M:103:LYS:O	15:M:104:LEU:HB2	1.65	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:169:C:H2'	1:X:170:U:H5'	1.47	0.93
1:X:1563:U:H2'	1:X:1564:U:C6	2.03	0.93
1:X:833:A:H1'	1:X:954:U:H1'	1.47	0.93
1:X:731:A:H2'	1:X:732:G:H5'	1.50	0.93
1:X:2218:G:H5'	3:A:249:PRO:HB3	1.47	0.93
1:X:1808:C:H5''	3:A:39:LYS:NZ	1.84	0.93
5:C:166:TRP:N	5:C:166:TRP:HE3	1.65	0.93
1:X:48:A:H4'	1:X:49:U:H5'	1.47	0.93
1:X:1563:U:H2'	1:X:1564:U:H6	1.34	0.93
1:X:728:G:H3'	1:X:730:C:OP2	1.69	0.93
1:X:1122:A:C2'	1:X:1123:G:H4'	1.98	0.92
21:S:123:VAL:H	21:S:161:ALA:CB	1.80	0.92
15:M:66:PHE:CE2	15:M:81:PHE:HB2	2.04	0.92
2:Z:17:A:OP2	2:Z:110:U:H2'	1.68	0.92
3:A:63:ARG:HD2	3:A:85:ASP:HB3	1.52	0.92
22:T:40:GLN:HE22	22:T:43:THR:HA	1.30	0.92
1:X:556:A:H1'	1:X:558:G:H21	1.33	0.92
3:A:231:HIS:HD2	3:A:233:HIS:H	1.10	0.92
2:Z:45:C:H2'	6:D:92:ARG:NE	1.85	0.92
14:L:33:ARG:HH12	14:L:103:LEU:HB3	1.30	0.92
2:Z:30:C:OP1	14:L:37:HIS:HB3	1.70	0.92
5:C:176:ASN:HD22	5:C:179:ASP:H	1.14	0.92
11:I:78:SER:HB3	11:I:112:GLY:HA3	1.52	0.92
13:K:82:GLU:O	13:K:86:LYS:HG3	1.68	0.92
4:B:4:ILE:HD13	4:B:28:ALA:HB1	1.51	0.92
16:N:74:MET:HE2	16:N:79:PHE:HA	1.51	0.92
1:X:1218:C:H2'	1:X:1219:C:H6	1.33	0.92
21:S:94:VAL:HB	21:S:125:PRO:HB3	1.50	0.92
1:X:1710:U:H5'	1:X:1711:C:C5	2.04	0.92
1:X:2074:U:H3'	1:X:2075:U:H5''	1.47	0.92
30:4:7:VAL:HG13	30:4:34:GLN:HE21	1.35	0.92
13:K:24:GLN:HB3	13:K:44:LEU:HD22	1.52	0.92
3:A:35:GLU:O	3:A:64:ILE:HD11	1.69	0.92
1:X:2240:C:O2'	1:X:2241:U:H5'	1.69	0.92
24:V:13:ASP:HA	24:V:16:LYS:HD3	1.51	0.91
1:X:1087:C:OP1	8:F:94:LYS:HE3	1.70	0.91
14:L:54:ALA:H	14:L:75:LEU:HD13	1.35	0.91
25:W:51:LEU:HD23	25:W:51:LEU:H	1.34	0.91
3:A:67:PHE:HB3	3:A:153:ALA:H	1.33	0.91
22:T:40:GLN:NE2	22:T:43:THR:HA	1.84	0.91
1:X:1953:A:H5'	1:X:1954:A:OP1	1.69	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:44:LYS:HD3	12:J:47:GLN:NE2	1.85	0.91
1:X:169:C:C2'	1:X:170:U:H5'	1.99	0.91
11:I:77:LEU:HB2	11:I:111:SER:H	1.33	0.91
1:X:2020:G:H2'	1:X:2021:G:C8	2.05	0.91
23:U:51:ILE:HG23	23:U:59:THR:HA	1.48	0.91
16:N:66:ASN:HB2	16:N:70:ARG:NH1	1.84	0.91
1:X:1171:A:H2'	1:X:1172:U:H6	1.35	0.91
1:X:2198:U:H3'	1:X:2199:C:H4'	0.92	0.91
20:R:54:ILE:HG12	20:R:71:GLN:HG2	1.53	0.91
1:X:1074:G:H21	8:F:91:THR:HA	1.36	0.91
1:X:788:G:H5'	1:X:790:A:H1'	1.52	0.91
7:E:105:MET:HB2	7:E:113:VAL:HB	1.53	0.91
1:X:1928:G:H2'	1:X:1929:U:C6	2.06	0.91
17:O:56:VAL:HA	17:O:97:GLY:HA3	1.52	0.91
21:S:36:ARG:HE	21:S:37:LYS:N	1.68	0.91
14:L:8:ARG:NH1	14:L:8:ARG:HB2	1.85	0.91
1:X:1838:G:H2'	1:X:1839:A:O4'	1.70	0.91
7:E:90:ARG:HH21	7:E:163:ARG:HH12	1.19	0.91
1:X:173:A:H61	1:X:844:G:H21	1.13	0.91
7:E:136:ILE:HD12	7:E:136:ILE:H	1.34	0.91
1:X:1242:A:H2'	1:X:1243:G:H8	1.36	0.91
1:X:482:A:H2'	1:X:483:A:O4'	1.71	0.91
1:X:1595:A:H2'	1:X:1596:A:O4'	1.70	0.91
1:X:1091:C:H1'	8:F:127:THR:HA	1.53	0.90
1:X:634:G:H2'	1:X:635:C:H6	1.35	0.90
2:Z:32:C:H1'	2:Z:59:A:H61	1.35	0.90
2:Z:53:G:H5'	14:L:64:LYS:HZ2	1.35	0.90
1:X:663:G:H3'	1:X:664:C:C4'	2.01	0.90
26:Y:32:GLU:HG2	26:Y:37:HIS:O	1.71	0.90
20:R:108:VAL:HG22	20:R:109:ALA:H	1.33	0.90
20:R:92:THR:HB	20:R:95:ARG:HH22	1.34	0.90
23:U:10:LYS:HD3	23:U:11:LYS:N	1.87	0.90
1:X:651:C:H2'	1:X:652:C:H5''	1.51	0.90
3:A:131:LEU:H	3:A:131:LEU:HD23	1.34	0.90
1:X:168:A:H2'	1:X:169:C:H6	1.35	0.90
1:X:1108:U:H2'	1:X:1109:A:O4'	1.70	0.90
1:X:1333:G:H22	1:X:1344:C:H5	1.19	0.90
11:I:76:LYS:HB3	11:I:79:GLN:CG	2.00	0.90
2:Z:39:C:H5''	2:Z:40:C:C5	2.06	0.90
9:G:61:ARG:HE	9:G:65:LYS:HE2	1.36	0.90
9:G:67:ARG:HD3	9:G:70:PHE:HA	1.53	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:2:LYS:HB3	25:W:54:GLN:HB3	1.51	0.90
1:X:557:U:H4'	1:X:558:G:O4'	1.71	0.90
13:K:3:HIS:ND1	13:K:5:LYS:CE	2.34	0.90
2:Z:72:C:H2'	2:Z:73:C:C6	2.06	0.90
1:X:82:G:N2	1:X:100:G:H2'	1.86	0.90
1:X:2272:A:P	14:L:15:ARG:HH21	1.95	0.89
1:X:2199:C:H2'	1:X:2200:G:C8	2.07	0.89
1:X:2594:U:H6	1:X:2594:U:H5'	1.37	0.89
21:S:3:LEU:HD21	21:S:33:ALA:H	1.37	0.89
3:A:62:TYR:HE1	3:A:88:ARG:HH22	1.17	0.89
1:X:2476:A:H1'	1:X:2477:C:H5	1.35	0.89
3:A:244:ARG:N	3:A:244:ARG:HD3	1.86	0.89
24:V:7:ARG:HD2	24:V:8:ASN:N	1.88	0.89
17:O:29:ALA:HA	17:O:59:GLU:HB3	1.54	0.89
1:X:1263:G:H5''	16:N:6:THR:HG22	1.54	0.89
1:X:1349:A:H2'	1:X:1350:G:H8	1.37	0.89
9:G:33:ILE:CB	9:G:34:PRO:HD2	1.99	0.89
5:C:176:ASN:HD21	5:C:178:TYR:CB	1.85	0.89
7:E:84:THR:HA	7:E:134:SER:HA	1.50	0.89
1:X:317:U:H2'	1:X:318:G:C5'	2.03	0.89
4:B:31:CYS:HB3	4:B:49:ILE:CG1	2.03	0.89
9:G:158:HIS:HA	9:G:161:GLN:HB2	1.53	0.89
6:D:15:ALA:O	6:D:18:GLN:HB2	1.73	0.89
2:Z:42:U:H1'	2:Z:47:A:N6	1.87	0.89
21:S:2:GLU:HG2	21:S:55:THR:HB	1.52	0.89
22:T:3:HIS:CG	22:T:4:LYS:H	1.88	0.89
10:H:116:ARG:HB2	10:H:116:ARG:HH11	1.38	0.89
16:N:88:ILE:HG13	17:O:49:GLU:HB2	1.53	0.89
11:I:85:ASP:CA	11:I:116:ARG:HH12	1.85	0.89
30:4:15:LYS:CB	30:4:26:ILE:HG13	2.03	0.89
22:T:32:LYS:HG2	22:T:33:ALA:H	1.37	0.89
25:W:25:LEU:CD2	25:W:30:ASP:HB3	2.02	0.89
19:Q:26:SER:HB3	19:Q:79:ILE:HG13	1.52	0.89
4:B:154:LYS:O	4:B:156:MET:HG3	1.73	0.89
7:E:6:LYS:HB3	7:E:69:ARG:CZ	2.03	0.89
1:X:2850:U:H6	1:X:2850:U:H5'	1.37	0.89
7:E:124:ALA:O	7:E:131:ILE:HG23	1.73	0.88
1:X:2422:C:O2'	1:X:2423:G:H5'	1.72	0.88
1:X:173:A:OP2	11:I:53:ARG:HD2	1.72	0.88
1:X:841:G:H2'	1:X:842:A:C8	2.07	0.88
1:X:635:C:H2'	1:X:636:G:H5''	1.56	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1466:C:H2'	1:X:1467:U:O4'	1.73	0.88
1:X:1448:A:H61	1:X:1574:A:N6	1.72	0.88
3:A:172:TYR:CD2	3:A:186:HIS:HB3	2.07	0.88
18:P:89:ARG:CD	18:P:132:GLY:H	1.87	0.88
1:X:1729:C:H2'	1:X:1730:G:H8	1.35	0.88
1:X:1148:G:H21	9:G:134:MET:HE1	1.38	0.88
21:S:89:GLY:O	21:S:127:PRO:HG3	1.73	0.88
1:X:356:A:H2'	1:X:357:A:H8	1.37	0.88
10:H:116:ARG:HD2	15:M:38:LYS:NZ	1.87	0.88
21:S:100:THR:HG23	21:S:138:VAL:HG11	1.55	0.88
1:X:988:G:H5'	16:N:55:ARG:NH1	1.87	0.88
14:L:60:LYS:HE3	14:L:62:GLY:HA2	1.54	0.88
25:W:3:ILE:HG22	25:W:4:LYS:N	1.89	0.88
1:X:623:G:C3'	1:X:624:A:H5''	2.03	0.88
1:X:775:U:H4'	1:X:776:G:O5'	1.73	0.88
1:X:2261:G:H4'	1:X:2262:C:OP2	1.72	0.88
1:X:538:A:N3	1:X:538:A:H3'	1.89	0.88
1:X:663:G:H3'	1:X:664:C:C5'	2.03	0.88
7:E:44:ARG:O	7:E:50:LEU:HG	1.72	0.88
8:F:118:ALA:HB1	8:F:123:ALA:HB1	1.54	0.88
20:R:38:LEU:HD23	20:R:39:ALA:N	1.89	0.88
11:I:94:GLU:CB	11:I:97:ARG:HE	1.87	0.88
20:R:59:LYS:N	20:R:60:PRO:HD3	1.88	0.88
3:A:172:TYR:HB3	3:A:184:ARG:HG2	1.56	0.88
12:J:15:ARG:HD3	12:J:73:LYS:NZ	1.88	0.88
1:X:2447:G:HO2'	1:X:2448:A:H8	1.22	0.88
1:X:2170:C:H3'	1:X:2171:U:H5''	1.55	0.88
9:G:87:GLN:N	9:G:87:GLN:HE21	1.71	0.87
1:X:313:U:H2'	1:X:314:G:C8	2.10	0.87
1:X:732:G:H2'	1:X:733:G:C8	2.08	0.87
1:X:1914:U:C6	1:X:1914:U:H5'	2.09	0.87
22:T:25:LYS:HE2	22:T:36:ILE:O	1.73	0.87
1:X:554:U:O2'	1:X:555:U:H1'	1.73	0.87
11:I:94:GLU:HB3	11:I:97:ARG:NE	1.89	0.87
23:U:20:ARG:HD2	23:U:43:ARG:CZ	2.03	0.87
15:M:99:VAL:HG22	15:M:100:ARG:H	1.39	0.87
1:X:946:U:H2'	1:X:947:C:H6	1.38	0.87
9:G:164:GLN:O	9:G:165:VAL:HG13	1.75	0.87
1:X:2726:U:H1'	7:E:139:GLN:NE2	1.89	0.87
7:E:149:ARG:HA	7:E:162:VAL:HG11	1.54	0.87
24:V:10:GLN:HB2	24:V:12:THR:HG23	1.56	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:89:ARG:HD3	18:P:132:GLY:N	1.90	0.87
4:B:174:GLU:HB3	4:B:183:LEU:HD12	1.57	0.87
14:L:73:LYS:HE3	14:L:109:GLU:HG2	1.55	0.87
5:C:39:ARG:NH2	5:C:91:TYR:HB2	1.90	0.87
1:X:402:A:C8	1:X:2392:G:H4'	2.09	0.87
1:X:1859:A:H2'	1:X:1860:A:H8	1.38	0.87
1:X:921:A:H2'	1:X:924:C:C5	2.10	0.87
1:X:1218:C:H2'	1:X:1219:C:C6	2.10	0.87
18:P:50:VAL:HB	18:P:90:LEU:O	1.74	0.87
1:X:2856:U:H2'	1:X:2857:C:H6	1.39	0.87
1:X:2807:U:H5'	1:X:2807:U:H6	1.37	0.87
19:Q:7:LEU:HD11	24:V:30:PHE:HE2	1.38	0.87
1:X:98:U:H5''	1:X:99:U:H5''	1.54	0.87
7:E:9:ILE:HG13	7:E:50:LEU:HD23	1.57	0.87
18:P:64:ALA:O	18:P:67:PRO:HD2	1.75	0.87
4:B:28:ALA:HB3	4:B:92:ASN:HD22	1.38	0.87
12:J:12:LYS:O	12:J:13:GLN:HB2	1.74	0.87
9:G:144:MET:O	9:G:146:THR:N	2.08	0.87
17:O:36:LYS:HE3	17:O:56:VAL:CG1	2.05	0.87
1:X:2482:A:O2'	33:X:2911:ZLD:C13	2.23	0.87
1:X:76:C:H5'	1:X:76:C:H6	1.40	0.87
25:W:38:PRO:HB3	25:W:41:ARG:NH2	1.89	0.87
6:D:57:LEU:HA	6:D:60:ILE:HD11	1.55	0.86
3:A:102:LYS:O	3:A:103:ARG:HG3	1.74	0.86
18:P:89:ARG:NH2	18:P:132:GLY:HA2	1.89	0.86
9:G:156:HIS:HB2	9:G:157:PRO:HD3	1.55	0.86
1:X:1512:A:H2'	1:X:1514:C:C5	2.09	0.86
2:Z:45:C:H2'	6:D:92:ARG:CZ	2.06	0.86
14:L:33:ARG:HH11	14:L:100:VAL:HA	1.36	0.86
1:X:2672:U:H2'	1:X:2673:G:C8	2.10	0.86
4:B:91:VAL:HG12	4:B:92:ASN:H	1.40	0.86
1:X:303:C:H6	1:X:303:C:O5'	1.58	0.86
3:A:93:ALA:CB	3:A:107:ALA:HB2	2.04	0.86
20:R:97:GLN:CB	20:R:101:GLY:HA2	2.06	0.86
3:A:165:VAL:O	3:A:166:GLN:HG3	1.74	0.86
1:X:2482:A:C8	33:X:2911:ZLD:C13	2.57	0.86
26:Y:16:ARG:HH11	26:Y:20:ARG:HH12	1.23	0.86
1:X:2757:G:H5''	1:X:2758:A:H5''	1.57	0.86
1:X:2796:A:OP2	13:K:3:HIS:CE1	2.28	0.86
1:X:1812:U:H3	3:A:200:GLU:HA	1.40	0.86
1:X:653:G:C2'	1:X:654:A:H5''	2.02	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2308:A:H2'	1:X:2309:G:C8	2.10	0.86
17:O:12:TYR:HB2	17:O:39:PHE:CB	2.05	0.86
1:X:1587:A:H2'	1:X:1588:A:H8	1.39	0.86
21:S:154:LEU:HD21	21:S:160:LEU:HG	1.56	0.86
11:I:94:GLU:HA	11:I:97:ARG:HG3	1.58	0.86
14:L:91:ARG:CD	14:L:91:ARG:H	1.89	0.86
21:S:36:ARG:HH11	21:S:37:LYS:HB2	1.39	0.86
6:D:100:LEU:HG	6:D:104:ILE:HD11	1.56	0.86
6:D:72:LYS:HA	6:D:81:GLN:HA	1.58	0.86
6:D:69:LYS:HA	6:D:84:PRO:HA	1.57	0.86
1:X:317:U:C2'	1:X:318:G:H5''	2.06	0.86
15:M:102:ALA:O	15:M:103:LYS:HD2	1.75	0.86
8:F:77:TYR:HE1	8:F:80:ARG:HH21	1.21	0.86
2:Z:30:C:H42	2:Z:58:G:H1	1.19	0.86
1:X:2218:G:O4'	3:A:249:PRO:HG3	1.74	0.86
2:Z:67:C:H2'	2:Z:111:C:H42	1.41	0.86
1:X:597:U:H2'	1:X:598:U:C6	2.11	0.86
19:Q:6:ILE:HG22	19:Q:7:LEU:N	1.91	0.85
19:Q:62:ARG:O	19:Q:70:GLY:HA3	1.76	0.85
5:C:166:TRP:N	5:C:166:TRP:CE3	2.43	0.85
15:M:28:ARG:CB	15:M:29:PRO:HD3	2.00	0.85
1:X:2199:C:H2'	1:X:2200:G:H8	1.41	0.85
15:M:33:VAL:HG22	15:M:51:GLU:CB	2.05	0.85
17:O:47:PHE:O	17:O:50:ASP:HB3	1.76	0.85
1:X:1949:A:C2	1:X:2572:U:H1'	2.11	0.85
1:X:1004:A:H2	17:O:21:ARG:HH22	1.19	0.85
1:X:537:C:H5	1:X:2759:U:H3'	1.40	0.85
7:E:97:LYS:H	7:E:104:GLU:HB3	1.41	0.85
1:X:137:A:C5	1:X:138:G:H1'	2.11	0.85
16:N:56:ASP:O	16:N:59:ARG:N	2.08	0.85
6:D:137:ILE:HG13	6:D:138:PHE:CE1	2.12	0.85
1:X:83:A:C2	1:X:98:U:H1'	2.11	0.85
1:X:1692:C:O2'	1:X:1693:A:H5'	1.76	0.85
1:X:1380:C:H2'	1:X:1381:G:H5'	1.58	0.85
1:X:1281:A:C1'	1:X:2592:U:C5	2.41	0.85
4:B:27:LEU:HD23	4:B:27:LEU:O	1.76	0.85
1:X:2482:A:C8	33:X:2911:ZLD:H13	2.12	0.85
4:B:176:ARG:NH2	15:M:16:ILE:HA	1.92	0.85
26:Y:42:SER:O	26:Y:43:HIS:HB2	1.77	0.85
6:D:65:PRO:HA	6:D:89:VAL:HG13	1.58	0.85
5:C:102:LEU:O	5:C:102:LEU:HD23	1.77	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:211:ARG:HA	3:A:214:TRP:CD1	2.12	0.85
4:B:136:ARG:HG2	4:B:137:ARG:H	1.42	0.85
24:V:56:VAL:HA	24:V:59:GLU:OE1	1.76	0.85
1:X:2482:A:H4'	1:X:2483:U:OP1	1.76	0.85
1:X:1729:C:H2'	1:X:1730:G:C8	2.12	0.85
3:A:212:SER:O	3:A:215:LEU:HD12	1.76	0.85
9:G:132:PHE:HB2	9:G:145:HIS:CE1	2.12	0.85
14:L:33:ARG:NH2	14:L:103:LEU:HB2	1.90	0.85
5:C:132:ASN:O	5:C:135:SER:HB3	1.77	0.85
3:A:93:ALA:HB2	3:A:107:ALA:CB	2.03	0.85
1:X:1200:G:N2	1:X:1201:G:H1'	1.92	0.85
2:Z:15:A:O2'	2:Z:16:U:H5''	1.76	0.85
10:H:19:ILE:HD13	10:H:19:ILE:H	1.40	0.85
10:H:23:ARG:NH1	10:H:25:LEU:HG	1.92	0.85
1:X:1323:G:H3'	1:X:1324:G:N2	1.92	0.85
14:L:63:ASN:HB3	14:L:66:ASP:CB	2.06	0.84
22:T:25:LYS:HA	22:T:29:GLU:OE1	1.75	0.84
24:V:2:LYS:HA	24:V:6:MET:HE2	1.59	0.84
21:S:42:ALA:HA	21:S:45:GLN:HE21	1.42	0.84
5:C:176:ASN:ND2	5:C:179:ASP:H	1.74	0.84
4:B:16:LYS:O	4:B:17:ASN:HB2	1.76	0.84
21:S:105:GLN:HE22	21:S:139:THR:HG22	1.41	0.84
24:V:14:PHE:CD2	24:V:57:LYS:HB2	2.11	0.84
1:X:1838:G:H3'	1:X:1839:A:H8	1.43	0.84
1:X:27:G:N2	1:X:522:G:O2'	2.09	0.84
1:X:2710:C:O2'	1:X:2711:G:H5'	1.77	0.84
1:X:542:A:H2	1:X:2004:U:H2'	1.37	0.84
5:C:112:GLN:OE1	5:C:116:LYS:HD2	1.77	0.84
21:S:91:PRO:HG2	21:S:92:VAL:H	1.43	0.84
1:X:1060:C:O2	1:X:1124:U:H4'	1.77	0.84
1:X:969:U:C2	12:J:17:ARG:HD2	2.13	0.84
9:G:63:ARG:HG3	9:G:64:GLY:H	1.41	0.84
24:V:4:SER:C	24:V:6:MET:H	1.76	0.84
6:D:46:ASP:HB3	6:D:49:ALA:HB3	1.59	0.84
11:I:76:LYS:HD3	11:I:79:GLN:NE2	1.93	0.84
1:X:1286:U:H4'	1:X:1288:A:OP2	1.76	0.84
1:X:542:A:C5'	16:N:28:ARG:HH21	1.86	0.84
1:X:1503:G:H2'	1:X:1504:G:H8	1.43	0.84
9:G:104:THR:OG1	9:G:110:LEU:HB3	1.76	0.84
20:R:51:VAL:HG21	20:R:76:LEU:CD2	2.08	0.84
1:X:969:U:C4	12:J:17:ARG:HB2	2.13	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:149:ALA:HB3	21:S:164:PRO:HA	1.59	0.84
23:U:45:ASN:O	23:U:46:LEU:HG	1.77	0.84
1:X:2180:U:H2'	1:X:2203:G:H22	1.42	0.84
16:N:30:LYS:HB3	16:N:30:LYS:HZ2	1.43	0.84
21:S:16:GLU:O	21:S:18:MET:HG2	1.77	0.84
1:X:2404:A:H4'	1:X:2405:A:C5'	2.07	0.84
1:X:1928:G:H2'	1:X:1929:U:H6	1.43	0.84
1:X:726:G:H2'	1:X:727:U:C2	2.12	0.84
1:X:70:A:H4'	1:X:71:A:O5'	1.75	0.84
1:X:1053:G:H2'	1:X:1054:C:H6	1.42	0.84
1:X:1690:U:C2'	1:X:1691:G:H5''	2.06	0.84
1:X:1710:U:H5'	1:X:1711:C:H5	1.42	0.84
1:X:1003:C:H4'	17:O:71:ILE:HD13	1.57	0.84
23:U:50:ALA:C	23:U:52:ARG:HH22	1.81	0.83
1:X:575:U:H2'	1:X:576:A:H8	1.43	0.83
1:X:1673:C:H5'	4:B:136:ARG:HH11	1.43	0.83
3:A:217:ARG:HG2	3:A:218:LYS:HG3	1.60	0.83
10:H:116:ARG:HH11	15:M:38:LYS:HZ2	1.24	0.83
16:N:51:ARG:H	16:N:51:ARG:HD2	1.43	0.83
16:N:91:ASN:O	16:N:93:LYS:HG3	1.77	0.83
17:O:12:TYR:O	17:O:13:ARG:HG2	1.77	0.83
14:L:85:LYS:HG2	14:L:86:GLN:NE2	1.93	0.83
2:Z:106:U:O2'	21:S:67:LYS:HG2	1.78	0.83
5:C:95:LEU:HD23	5:C:96:PRO:HD2	1.60	0.83
23:U:28:GLY:HA3	23:U:32:ARG:CB	2.08	0.83
1:X:1452:U:O2'	1:X:1453:A:H5'	1.78	0.83
1:X:886:A:H1'	12:J:30:PHE:CE1	2.13	0.83
17:O:15:SER:HA	17:O:95:ILE:HB	1.60	0.83
6:D:80:ARG:HD3	6:D:83:MET:HB2	1.58	0.83
13:K:84:ALA:HB3	13:K:85:PRO:HD3	1.60	0.83
23:U:48:LYS:HG2	23:U:49:LYS:N	1.94	0.83
1:X:2712:G:H3'	1:X:2713:A:C5'	2.08	0.83
1:X:648:A:H4'	1:X:649:G:C5'	2.08	0.83
5:C:39:ARG:HH21	5:C:91:TYR:CB	1.91	0.83
1:X:455:A:H1'	1:X:1215:A:O4'	1.78	0.83
16:N:5:LYS:C	16:N:7:GLY:H	1.80	0.83
2:Z:64:C:H2'	2:Z:65:A:C8	2.13	0.83
3:A:206:LEU:O	3:A:211:ARG:HD2	1.77	0.83
5:C:48:ARG:CB	5:C:51:VAL:HG22	2.07	0.83
19:Q:25:TYR:OH	19:Q:87:SER:HA	1.79	0.83
7:E:140:LEU:O	7:E:144:VAL:HG23	1.78	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:15:ARG:HD3	12:J:73:LYS:HZ2	1.43	0.83
18:P:32:ARG:NH1	18:P:119:LYS:HB3	1.93	0.83
1:X:2811:G:H2'	1:X:2812:A:C8	2.14	0.83
16:N:93:LYS:HZ3	17:O:5:ILE:HG22	1.43	0.83
6:D:153:ASP:C	6:D:154:ILE:HD12	1.99	0.83
19:Q:20:MET:O	19:Q:22:ARG:N	2.11	0.83
3:A:72:LYS:HE2	3:A:97:TYR:CD2	2.14	0.83
22:T:53:MET:CE	22:T:59:LEU:HD11	2.07	0.83
4:B:195:LEU:HB2	15:M:3:THR:CG2	2.09	0.83
24:V:46:LEU:O	24:V:50:VAL:HG23	1.78	0.83
6:D:10:ASP:C	6:D:12:VAL:H	1.82	0.83
6:D:132:ILE:HG13	6:D:154:ILE:HD13	1.61	0.83
20:R:14:LEU:HD22	20:R:41:PRO:HA	1.58	0.83
1:X:1264:C:C5'	16:N:13:ARG:NH1	2.41	0.83
7:E:103:LEU:HD12	7:E:104:GLU:H	1.44	0.83
9:G:70:PHE:HB2	16:N:64:ARG:NE	1.94	0.83
19:Q:77:LYS:HG2	19:Q:79:ILE:HD11	1.61	0.83
7:E:130:ARG:O	7:E:131:ILE:HD13	1.78	0.83
21:S:112:LEU:HD12	21:S:113:VAL:N	1.93	0.83
21:S:102:GLY:O	21:S:138:VAL:HG21	1.79	0.83
1:X:1673:C:H5''	4:B:136:ARG:HB3	1.58	0.83
13:K:49:GLU:OE1	13:K:95:THR:HB	1.78	0.83
21:S:168:VAL:HG12	21:S:169:VAL:HG22	1.60	0.83
1:X:1815:G:H2'	1:X:1816:G:H8	1.44	0.82
9:G:105:GLY:O	9:G:106:TYR:C	2.17	0.82
16:N:91:ASN:O	16:N:93:LYS:N	2.12	0.82
17:O:10:LYS:HB2	17:O:37:ALA:H	1.44	0.82
10:H:64:VAL:HG22	10:H:106:ARG:NH2	1.94	0.82
1:X:1956:G:H2'	1:X:1957:C:H6	1.44	0.82
15:M:55:ILE:O	15:M:56:ALA:HB2	1.78	0.82
20:R:14:LEU:H	20:R:14:LEU:HD23	1.45	0.82
8:F:72:THR:N	8:F:73:PRO:HD3	1.95	0.82
1:X:1630:A:N1	18:P:114:ALA:HB2	1.94	0.82
16:N:85:ARG:CB	16:N:116:ALA:HB1	2.07	0.82
2:Z:53:G:H5'	14:L:64:LYS:NZ	1.95	0.82
8:F:77:TYR:HB2	8:F:112:LYS:NZ	1.93	0.82
23:U:71:SER:C	23:U:72:LYS:HE2	1.99	0.82
6:D:98:VAL:HG12	6:D:102:LYS:HE3	1.59	0.82
14:L:75:LEU:O	14:L:78:ALA:HB3	1.80	0.82
5:C:24:SER:HA	5:C:27:LEU:HD23	1.60	0.82
21:S:112:LEU:HD12	21:S:113:VAL:H	1.44	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Y:47:PRO:HG2	26:Y:48:ASN:H	1.44	0.82
1:X:1045:G:H2'	1:X:1046:U:C6	2.14	0.82
6:D:35:VAL:HG22	6:D:90:THR:HA	1.60	0.82
19:Q:74:ASP:O	19:Q:75:ARG:HG3	1.79	0.82
1:X:512:A:H4'	18:P:15:LYS:HB3	1.60	0.82
10:H:62:GLY:O	10:H:65:LYS:HE3	1.78	0.82
1:X:1416:A:H2'	1:X:1417:C:C6	2.13	0.82
16:N:39:LEU:O	16:N:42:ALA:N	2.11	0.82
14:L:33:ARG:NH1	14:L:103:LEU:HB3	1.93	0.82
3:A:84:TYR:HE2	3:A:91:ARG:HG2	1.45	0.82
1:X:2331:A:C2	22:T:33:ALA:HB1	2.14	0.82
1:X:1744:G:N2	1:X:1746:A:H3'	1.94	0.82
1:X:2272:A:H5''	14:L:15:ARG:NH2	1.94	0.82
16:N:16:LYS:O	16:N:20:ARG:HG3	1.78	0.82
5:C:123:PHE:O	5:C:125:ILE:N	2.13	0.82
1:X:667:U:O2	1:X:667:U:H2'	1.78	0.82
1:X:2372:A:H2'	1:X:2373:C:H6	1.44	0.82
7:E:56:SER:HB2	7:E:61:HIS:CG	2.15	0.82
1:X:742:G:N1	3:A:208:LYS:HD3	1.93	0.82
1:X:787:A:H5''	3:A:48:ARG:HH22	1.42	0.82
21:S:54:ILE:HB	21:S:62:PHE:N	1.94	0.82
3:A:36:ALA:HB1	3:A:63:ARG:HA	1.62	0.82
10:H:3:MET:O	10:H:6:SER:HB2	1.80	0.82
16:N:10:ARG:HG2	16:N:13:ARG:NH2	1.94	0.82
1:X:1373:G:N2	1:X:1374:G:H1'	1.93	0.82
10:H:116:ARG:HD3	15:M:40:ARG:HB3	1.61	0.82
17:O:10:LYS:CD	17:O:37:ALA:HB3	2.08	0.82
12:J:8:THR:HG22	12:J:70:PHE:CZ	2.14	0.82
3:A:119:ALA:HB1	3:A:130:ALA:HB3	1.59	0.82
12:J:15:ARG:HB3	12:J:73:LYS:HZ2	1.42	0.82
1:X:216:U:H5''	1:X:601:A:H62	1.45	0.82
1:X:2779:C:H2'	1:X:2780:A:O4'	1.78	0.82
23:U:50:ALA:CB	23:U:52:ARG:HH22	1.93	0.82
1:X:536:A:H5'	1:X:537:C:OP1	1.80	0.82
1:X:1219:C:H5'	11:I:7:LYS:O	1.80	0.82
1:X:67:G:H2'	1:X:68:C:C6	2.15	0.82
8:F:77:TYR:HB2	8:F:112:LYS:HZ1	1.45	0.82
1:X:2722:C:H2'	1:X:2723:C:H6	1.44	0.82
3:A:173:VAL:HG12	3:A:174:ILE:N	1.94	0.82
23:U:9:GLY:H	23:U:14:VAL:HG22	1.44	0.82
18:P:9:ARG:HB3	18:P:13:GLN:HG3	1.62	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:148:C:H3'	1:X:149:A:C8	2.14	0.82
1:X:1816:G:O2'	1:X:1817:U:H5'	1.79	0.81
1:X:2037:A:H2'	26:Y:8:LYS:HE3	1.61	0.81
1:X:173:A:N6	1:X:844:G:H21	1.78	0.81
1:X:1673:C:H5''	4:B:136:ARG:HD3	1.61	0.81
8:F:116:LEU:HD22	8:F:118:ALA:HB3	1.60	0.81
1:X:836:G:H2'	1:X:837:U:H6	1.45	0.81
17:O:26:GLN:HG2	17:O:27:GLY:H	1.45	0.81
2:Z:32:C:H2'	2:Z:33:C:H5'	1.61	0.81
13:K:14:SER:OG	13:K:15:SER:N	2.08	0.81
11:I:30:ALA:HB2	11:I:34:HIS:CE1	2.15	0.81
11:I:32:ARG:HD3	11:I:32:ARG:O	1.79	0.81
1:X:3:U:H2'	1:X:4:C:H6	1.46	0.81
11:I:72:TYR:CB	11:I:107:LYS:HB2	2.08	0.81
5:C:125:ILE:HD12	5:C:133:PHE:HA	1.62	0.81
30:4:9:LYS:HB3	30:4:14:CYS:SG	2.21	0.81
1:X:1524:C:H5''	1:X:1525:A:C8	2.15	0.81
1:X:1822:C:H6	1:X:1822:C:O5'	1.62	0.81
3:A:238:GLY:O	3:A:239:ARG:HG3	1.79	0.81
1:X:2482:A:C1'	33:X:2911:ZLD:H13B	2.10	0.81
4:B:167:VAL:HG13	4:B:170:LEU:HD11	1.63	0.81
1:X:693:A:H2'	1:X:694:G:C8	2.15	0.81
9:G:151:TYR:HB3	9:G:157:PRO:HG3	1.62	0.81
14:L:43:ILE:HD12	14:L:43:ILE:H	1.46	0.81
12:J:23:LYS:HA	21:S:73:LYS:HZ1	1.45	0.81
3:A:134:ARG:HG3	3:A:135:PHE:CD2	2.15	0.81
19:Q:39:LYS:O	19:Q:43:GLN:HB2	1.81	0.81
20:R:108:VAL:HG22	20:R:109:ALA:N	1.94	0.81
1:X:38:G:H1	1:X:453:U:H3	1.25	0.81
4:B:134:TRP:H	4:B:134:TRP:HD1	1.27	0.81
22:T:66:LYS:O	22:T:68:VAL:HG23	1.81	0.81
1:X:813:A:H4'	1:X:814:G:O5'	1.81	0.81
5:C:4:ILE:HA	5:C:13:ARG:HH22	1.45	0.81
23:U:32:ARG:HD2	23:U:34:THR:H	1.45	0.81
1:X:228:A:H5'	11:I:53:ARG:HG2	1.62	0.81
3:A:200:GLU:HG3	3:A:202:LYS:HB2	1.59	0.81
1:X:1253:C:H2'	1:X:1254:G:H5'	1.63	0.81
23:U:54:ASN:C	23:U:56:GLN:H	1.80	0.81
4:B:146:THR:HB	4:B:147:PRO:HD2	1.62	0.81
9:G:105:GLY:N	9:G:110:LEU:HD12	1.95	0.81
9:G:32:TYR:OH	9:G:35:LYS:HE2	1.81	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2005:U:H4'	1:X:2006:G:OP1	1.81	0.81
14:L:29:LEU:HB3	14:L:89:PHE:HA	1.61	0.81
21:S:24:TYR:HB3	21:S:29:ASN:OD1	1.79	0.81
19:Q:20:MET:O	19:Q:23:GLY:N	2.14	0.81
7:E:16:THR:HG22	7:E:18:ASN:ND2	1.95	0.81
1:X:1264:C:H5''	16:N:13:ARG:NH1	1.95	0.81
24:V:4:SER:HB3	24:V:7:ARG:NH2	1.95	0.81
1:X:1919:A:H2	1:X:1926:U:N3	1.78	0.81
1:X:1956:G:H2'	1:X:1957:C:C6	2.15	0.81
18:P:87:GLU:HA	18:P:90:LEU:HD11	1.61	0.81
11:I:33:GLY:HA2	17:O:79:GLN:HG3	1.61	0.81
11:I:94:GLU:HB3	11:I:97:ARG:HH11	1.46	0.81
2:Z:30:C:N4	2:Z:58:G:H1	1.78	0.81
6:D:69:LYS:CE	6:D:84:PRO:HG3	2.10	0.81
22:T:53:MET:HE3	22:T:59:LEU:HD11	1.62	0.81
3:A:243:GLY:C	3:A:244:ARG:HD3	2.00	0.81
18:P:109:ARG:HD2	18:P:115:ASN:ND2	1.95	0.81
23:U:53:GLU:HB2	23:U:56:GLN:O	1.80	0.81
14:L:67:THR:O	14:L:71:VAL:HG12	1.81	0.81
23:U:28:GLY:CA	23:U:32:ARG:HB3	2.10	0.81
1:X:1517:C:H4'	3:A:96:HIS:CE1	2.15	0.81
1:X:491:A:H5''	20:R:74:LEU:HD11	1.63	0.81
1:X:2311:U:C4'	1:X:2315:A:H62	1.94	0.81
1:X:2564:U:H3	33:X:2911:ZLD:C21	1.93	0.81
15:M:29:PRO:HA	15:M:54:VAL:HG12	1.62	0.81
23:U:48:LYS:CG	23:U:49:LYS:H	1.94	0.81
17:O:39:PHE:CE1	17:O:46:VAL:HG21	2.15	0.81
6:D:132:ILE:CB	6:D:152:MET:HB2	2.07	0.81
5:C:125:ILE:CD1	5:C:133:PHE:HA	2.11	0.81
3:A:33:LEU:HD21	3:A:63:ARG:NH2	1.95	0.81
1:X:2759:U:H5''	1:X:2760:G:OP1	1.81	0.81
6:D:167:ARG:HG3	6:D:177:PHE:HE2	1.44	0.81
1:X:1349:A:H2'	1:X:1350:G:C8	2.16	0.81
1:X:788:G:H5'	1:X:790:A:C1'	2.11	0.81
1:X:1859:A:H2'	1:X:1860:A:C8	2.16	0.81
10:H:75:VAL:HG12	10:H:118:LEU:HD11	1.61	0.81
9:G:84:ASN:HA	9:G:153:GLY:O	1.80	0.80
1:X:1151:U:H5'	1:X:1153:A:C5'	2.08	0.80
25:W:39:ALA:O	25:W:43:MET:HG2	1.80	0.80
4:B:65:GLY:HA2	4:B:68:ALA:HB3	1.62	0.80
5:C:128:ALA:HB2	5:C:159:ARG:CZ	2.11	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:19:ILE:HG22	10:H:55:VAL:HA	1.62	0.80
1:X:2528:G:H2'	1:X:2529:G:H8	1.46	0.80
1:X:333:A:H3'	5:C:162:ARG:NH1	1.96	0.80
1:X:2856:U:H2'	1:X:2857:C:C6	2.16	0.80
1:X:2871:U:H2'	1:X:2872:U:H6	1.45	0.80
9:G:103:TYR:HB3	9:G:107:GLN:HE21	1.45	0.80
16:N:88:ILE:HG12	17:O:48:GLY:C	2.02	0.80
3:A:108:PRO:HB3	3:A:143:HIS:CE1	2.17	0.80
7:E:103:LEU:HB2	7:E:123:PHE:CE2	2.15	0.80
4:B:115:GLY:HA3	4:B:136:ARG:HD2	1.63	0.80
11:I:77:LEU:HB3	11:I:112:GLY:N	1.97	0.80
21:S:117:VAL:CG2	21:S:168:VAL:HG13	2.12	0.80
1:X:2871:U:H2'	1:X:2872:U:C6	2.16	0.80
1:X:403:A:OP2	1:X:403:A:H3'	1.81	0.80
16:N:74:MET:O	16:N:75:ASN:HB3	1.78	0.80
1:X:1151:U:C5'	1:X:1153:A:H5'	2.05	0.80
25:W:50:LEU:HB2	25:W:51:LEU:HD23	1.64	0.80
21:S:51:LEU:HD23	21:S:65:LEU:HD13	1.61	0.80
5:C:7:ILE:CB	5:C:120:VAL:H	1.92	0.80
1:X:1122:A:O2'	1:X:1123:G:H4'	1.80	0.80
1:X:1122:A:H2	1:X:1123:G:H1'	1.45	0.80
1:X:2418:A:H4'	1:X:2419:C:O5'	1.80	0.80
6:D:113:ASP:HB3	6:D:115:ARG:NH1	1.97	0.80
25:W:54:GLN:HG2	25:W:55:GLU:CD	2.02	0.80
21:S:42:ALA:CA	21:S:45:GLN:HE21	1.94	0.80
1:X:1595:A:H8	1:X:1595:A:O5'	1.65	0.80
1:X:1135:C:H2'	1:X:1136:G:H8	1.47	0.80
3:A:43:ARG:HH21	3:A:54:ILE:HG13	1.46	0.80
16:N:29:SER:O	16:N:30:LYS:HD2	1.81	0.80
17:O:10:LYS:HG3	17:O:11:GLN:N	1.97	0.80
17:O:23:GLU:CG	17:O:91:THR:HG21	2.11	0.80
6:D:60:ILE:HG13	6:D:61:THR:N	1.95	0.80
14:L:32:TYR:H	14:L:38:ILE:HD12	1.47	0.80
21:S:3:LEU:HD13	21:S:4:THR:N	1.94	0.80
1:X:1219:C:H4'	11:I:7:LYS:H	1.47	0.80
20:R:37:LEU:HD21	20:R:49:GLU:HG3	1.63	0.80
1:X:128:C:C2'	1:X:129:A:H5''	2.11	0.80
21:S:148:THR:HA	21:S:166:LEU:O	1.80	0.80
11:I:30:ALA:H	11:I:34:HIS:CG	1.98	0.80
1:X:2397:A:H2'	1:X:2398:U:O4'	1.82	0.80
1:X:1644:G:O2'	1:X:1645:U:H5'	1.81	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2490:U:H2'	1:X:2491:C:C6	2.15	0.80
5:C:122:GLY:HA3	5:C:136:TRP:CZ3	2.17	0.80
1:X:2728:A:H2'	1:X:2729:A:H8	1.46	0.80
1:X:2728:A:O2'	7:E:66:GLY:HA3	1.80	0.80
4:B:72:VAL:HG12	4:B:73:ALA:N	1.96	0.80
21:S:36:ARG:HE	21:S:37:LYS:H	1.28	0.80
11:I:11:GLY:H	11:I:14:LYS:CB	1.95	0.80
3:A:75:VAL:HG12	3:A:76:ASN:O	1.82	0.80
1:X:530:G:H2'	1:X:531:G:H8	1.46	0.80
19:Q:61:LYS:H	19:Q:72:ARG:HD3	1.45	0.80
6:D:82:GLY:O	6:D:83:MET:HG3	1.82	0.80
7:E:101:LYS:HD2	7:E:117:PRO:HG2	1.64	0.80
1:X:631:G:H5'	1:X:632:A:OP1	1.81	0.80
1:X:16:G:O2'	1:X:17:G:H5'	1.82	0.80
14:L:99:ARG:HG3	14:L:100:VAL:N	1.95	0.80
5:C:130:THR:O	5:C:133:PHE:HB3	1.82	0.80
19:Q:24:VAL:HG22	19:Q:81:ARG:HB2	1.62	0.80
4:B:117:MET:HA	4:B:121:ASN:O	1.81	0.80
1:X:840:U:H4'	1:X:841:G:C2	2.16	0.79
1:X:1416:A:H2'	1:X:1417:C:H6	1.46	0.79
1:X:1167:A:H61	16:N:48:ARG:HG2	1.43	0.79
16:N:94:VAL:O	16:N:96:ALA:N	2.14	0.79
1:X:687:G:C2'	1:X:688:A:H5'	2.13	0.79
20:R:107:ALA:HB1	20:R:111:GLY:HA2	1.62	0.79
11:I:32:ARG:NH2	17:O:79:GLN:HA	1.98	0.79
1:X:1034:U:H2'	1:X:1035:G:H5'	1.63	0.79
11:I:121:HIS:HA	11:I:141:VAL:HB	1.62	0.79
19:Q:53:ILE:HD13	19:Q:80:VAL:HB	1.64	0.79
8:F:129:ALA:HB1	8:F:133:ARG:CZ	2.13	0.79
21:S:127:PRO:O	21:S:128:ARG:HG2	1.82	0.79
14:L:63:ASN:CB	14:L:66:ASP:HB2	2.10	0.79
3:A:79:VAL:O	3:A:114:GLY:HA2	1.83	0.79
10:H:25:LEU:HD11	10:H:52:VAL:HG23	1.64	0.79
1:X:2020:G:H2'	1:X:2021:G:H8	1.44	0.79
1:X:148:C:H3'	1:X:149:A:H8	1.46	0.79
1:X:57:G:H2'	1:X:58:C:C6	2.16	0.79
17:O:26:GLN:HG3	17:O:63:HIS:CD2	2.18	0.79
1:X:33:C:O2'	1:X:34:U:H5''	1.81	0.79
7:E:45:GLN:HA	7:E:50:LEU:HA	1.64	0.79
1:X:403:A:H4'	1:X:404:A:O5'	1.81	0.79
9:G:124:GLU:N	9:G:124:GLU:OE1	2.15	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:72:PRO:O	9:G:74:MET:N	2.16	0.79
16:N:32:TYR:O	16:N:35:ALA:HB3	1.83	0.79
7:E:136:ILE:HG22	7:E:137:ASP:H	1.45	0.79
18:P:90:LEU:HA	18:P:129:ALA:O	1.81	0.79
1:X:921:A:H2'	1:X:924:C:H5	1.48	0.79
14:L:15:ARG:HH11	14:L:15:ARG:HG2	1.48	0.79
1:X:356:A:H2'	1:X:357:A:C8	2.17	0.79
1:X:1336:G:OP1	18:P:105:ARG:NH1	2.16	0.79
16:N:91:ASN:HA	17:O:10:LYS:NZ	1.96	0.79
17:O:36:LYS:HD2	17:O:55:THR:CA	2.13	0.79
1:X:2604:G:H2'	1:X:2605:C:C6	2.18	0.79
11:I:90:ARG:O	11:I:121:HIS:HB2	1.82	0.79
8:F:81:LYS:HZ1	8:F:84:GLY:HA3	1.48	0.79
3:A:184:ARG:HG3	3:A:184:ARG:HH11	1.48	0.79
11:I:72:TYR:HB3	11:I:107:LYS:CB	2.13	0.79
21:S:3:LEU:CD2	21:S:32:PHE:HB3	2.13	0.79
21:S:3:LEU:CD2	21:S:33:ALA:H	1.95	0.79
12:J:98:VAL:HG12	12:J:99:LYS:N	1.98	0.79
5:C:176:ASN:HD22	5:C:179:ASP:N	1.81	0.79
5:C:7:ILE:O	5:C:120:VAL:HB	1.82	0.79
10:H:55:VAL:HG12	10:H:55:VAL:O	1.80	0.79
4:B:136:ARG:O	4:B:137:ARG:HB2	1.82	0.79
23:U:49:LYS:HB3	23:U:61:TRP:CD2	2.18	0.79
1:X:1445:A:H2'	1:X:1446:U:H6	1.48	0.79
1:X:2787:A:H2'	1:X:2788:C:C6	2.15	0.79
20:R:5:SER:O	20:R:6:ALA:HB2	1.81	0.79
8:F:101:ASN:O	8:F:104:GLN:HG2	1.82	0.79
2:Z:36:A:H4'	2:Z:37:C:C5	2.18	0.79
1:X:414:A:H5'	1:X:414:A:H8	1.48	0.79
1:X:2175:A:H2'	1:X:2176:U:H6	1.48	0.78
1:X:41:G:O2'	1:X:42:G:H5'	1.82	0.78
1:X:1914:U:C5'	1:X:1914:U:H6	1.94	0.78
24:V:10:GLN:HG3	24:V:12:THR:OG1	1.82	0.78
5:C:5:ASN:HA	5:C:118:VAL:CG2	2.13	0.78
12:J:44:LYS:HD3	12:J:47:GLN:CD	2.02	0.78
1:X:2245:A:H4'	1:X:2246:A:N3	1.97	0.78
10:H:9:ASP:HB2	10:H:95:ALA:CB	2.14	0.78
10:H:116:ARG:HB2	10:H:116:ARG:NH1	1.98	0.78
6:D:132:ILE:HB	6:D:152:MET:CB	2.12	0.78
14:L:27:LEU:HD23	14:L:44:ASP:HB2	1.66	0.78
1:X:332:C:H1'	5:C:159:ARG:NE	1.98	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:45:ILE:O	18:P:48:LYS:HG2	1.83	0.78
1:X:1277:G:OP1	26:Y:19:ARG:NH2	2.14	0.78
1:X:2447:G:O2'	1:X:2448:A:H8	1.65	0.78
1:X:421:G:H2'	1:X:422:C:H6	1.49	0.78
1:X:704:G:H2'	1:X:705:C:H6	1.48	0.78
1:X:2200:G:H2'	1:X:2201:G:C8	2.19	0.78
1:X:2426:G:H4'	1:X:2427:A:O5'	1.83	0.78
11:I:72:TYR:CB	11:I:107:LYS:HE2	2.11	0.78
11:I:80:LEU:O	11:I:84:GLU:HB3	1.84	0.78
6:D:10:ASP:N	6:D:14:PRO:HD2	1.98	0.78
19:Q:3:HIS:ND1	19:Q:41:ALA:HA	1.99	0.78
1:X:1086:C:C2'	1:X:1087:C:H5''	2.13	0.78
1:X:1912:G:O2'	1:X:1913:G:H5'	1.84	0.78
1:X:2867:G:H4'	1:X:2868:G:O5'	1.80	0.78
1:X:2047:C:H1'	1:X:2429:A:C6	2.17	0.78
20:R:10:HIS:HB2	20:R:44:GLN:HE22	1.49	0.78
7:E:137:ASP:HB3	7:E:140:LEU:HB2	1.65	0.78
1:X:807:A:H2'	1:X:808:C:C6	2.17	0.78
4:B:152:LYS:HD2	9:G:106:TYR:H	1.48	0.78
1:X:955:G:H5'	1:X:956:A:H5''	1.63	0.78
3:A:76:ASN:HA	3:A:118:ASN:HA	1.65	0.78
8:F:109:ALA:O	8:F:113:MET:HG3	1.84	0.78
10:H:78:SER:HB2	10:H:94:ASN:OD1	1.83	0.78
1:X:2372:A:H2'	1:X:2373:C:C6	2.18	0.78
7:E:131:ILE:HG22	7:E:132:ASP:N	1.99	0.78
1:X:2379:G:O2'	1:X:2380:U:H5'	1.83	0.78
17:O:20:ILE:HD12	17:O:21:ARG:N	1.99	0.78
1:X:1043:A:H5''	30:4:9:LYS:NZ	1.99	0.78
7:E:136:ILE:N	7:E:136:ILE:HD12	1.98	0.78
18:P:57:LEU:CD1	18:P:69:ALA:HA	2.14	0.78
1:X:1188:A:H3'	1:X:1189:G:C8	2.17	0.78
6:D:111:ILE:CB	6:D:114:PHE:HB2	2.12	0.78
5:C:151:VAL:HG11	5:C:175:VAL:HG13	1.65	0.78
1:X:400:U:C5	23:U:23:LYS:HD3	2.15	0.78
5:C:164:VAL:O	5:C:166:TRP:N	2.16	0.78
1:X:2018:G:H4'	1:X:2019:C:OP2	1.82	0.78
12:J:86:LYS:O	12:J:88:LYS:HG3	1.83	0.78
14:L:73:LYS:HG3	14:L:110:GLY:CA	2.14	0.78
14:L:64:LYS:H	14:L:64:LYS:CE	1.88	0.78
14:L:67:THR:O	14:L:70:ALA:HB3	1.83	0.78
21:S:54:ILE:CG1	21:S:62:PHE:HB2	2.09	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2289:A:H2	6:D:79:LEU:HD21	1.49	0.78
1:X:2781:G:C2'	1:X:2782:G:H5''	2.14	0.78
17:O:23:GLU:HG3	17:O:91:THR:HG21	1.66	0.77
5:C:147:LYS:HB3	5:C:183:HIS:HB3	1.65	0.77
7:E:67:LEU:O	7:E:71:LEU:HD23	1.84	0.77
1:X:732:G:H2'	1:X:733:G:H8	1.48	0.77
1:X:1003:C:O2'	17:O:71:ILE:HD11	1.84	0.77
13:K:74:ASP:HA	13:K:77:ARG:NH1	1.98	0.77
1:X:1781:C:P	3:A:219:PRO:HB2	2.24	0.77
9:G:67:ARG:CB	9:G:70:PHE:HA	2.14	0.77
1:X:33:C:N4	1:X:458:G:O2'	2.16	0.77
1:X:1467:U:H3'	1:X:1468:A:H5'	1.64	0.77
1:X:2408:G:H5'	1:X:2409:A:OP2	1.84	0.77
26:Y:35:GLN:O	26:Y:37:HIS:N	2.17	0.77
4:B:60:ASN:HB3	4:B:62:PRO:HD2	1.66	0.77
16:N:62:ILE:HG23	16:N:76:TYR:CD1	2.19	0.77
6:D:69:LYS:HE2	6:D:84:PRO:CG	2.10	0.77
7:E:127:GLU:HG3	7:E:129:THR:N	1.99	0.77
1:X:683:A:H5''	11:I:45:LYS:H	1.49	0.77
1:X:1623:C:H4'	1:X:1624:A:O5'	1.84	0.77
12:J:65:ILE:HA	12:J:107:VAL:HG12	1.66	0.77
3:A:82:ILE:HD12	3:A:82:ILE:N	1.99	0.77
4:B:9:ILE:HD11	4:B:27:LEU:HB3	1.65	0.77
20:R:37:LEU:HB2	20:R:47:VAL:O	1.83	0.77
11:I:77:LEU:HB3	11:I:112:GLY:H	1.50	0.77
13:K:87:TYR:CE1	13:K:94:TYR:HD2	2.02	0.77
1:X:1385:C:H1'	1:X:2192:U:C5	2.19	0.77
9:G:157:PRO:C	9:G:161:GLN:HE21	1.88	0.77
2:Z:107:C:H2'	2:Z:108:G:H5'	1.65	0.77
3:A:62:TYR:HE1	3:A:88:ARG:NH2	1.81	0.77
1:X:717:G:H2'	1:X:739:G:H22	1.50	0.77
1:X:1043:A:H5''	30:4:9:LYS:HZ1	1.48	0.77
1:X:2016:A:OP2	1:X:2016:A:O4'	2.03	0.77
1:X:683:A:H5''	11:I:45:LYS:N	1.99	0.77
21:S:98:VAL:HG12	21:S:118:HIS:O	1.83	0.77
1:X:836:G:H2'	1:X:837:U:C6	2.19	0.77
10:H:100:ASN:O	10:H:102:GLN:N	2.17	0.77
3:A:43:ARG:N	3:A:43:ARG:HD2	1.98	0.77
1:X:1012:A:H2'	1:X:1013:G:O4'	1.85	0.77
21:S:71:MET:HA	21:S:78:PRO:HA	1.67	0.77
3:A:97:TYR:HB2	3:A:101:GLU:OE1	1.84	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1467:U:H3'	1:X:1467:U:H6	1.48	0.77
1:X:94:C:O2'	24:V:40:PRO:HD2	1.85	0.77
1:X:1882:G:O2'	1:X:1883:A:H5''	1.85	0.77
10:H:9:ASP:HB2	10:H:95:ALA:HB2	1.65	0.77
9:G:107:GLN:HA	9:G:110:LEU:HG	1.66	0.77
6:D:135:GLN:HG2	6:D:152:MET:SD	2.25	0.77
1:X:34:U:H1'	20:R:4:PRO:HA	1.65	0.77
7:E:24:PHE:HB2	7:E:35:VAL:O	1.84	0.77
18:P:42:VAL:HG12	18:P:42:VAL:O	1.85	0.77
1:X:635:C:C2'	1:X:636:G:H5''	2.14	0.77
11:I:88:PHE:HB3	11:I:90:ARG:CD	2.15	0.77
1:X:1468:A:O5'	1:X:1468:A:C8	2.38	0.77
1:X:2324:G:N3	1:X:2360:C:H2'	2.00	0.77
1:X:2082:C:H2'	1:X:2083:G:H5''	1.66	0.77
1:X:682:G:H4'	1:X:683:A:OP1	1.83	0.77
1:X:2781:G:H2'	1:X:2782:G:H5''	1.67	0.77
1:X:2206:C:H2'	1:X:2207:G:O4'	1.85	0.77
1:X:2236:U:H2'	1:X:2237:C:C6	2.20	0.77
10:H:29:ILE:HD12	10:H:30:GLY:H	1.47	0.77
23:U:50:ALA:HB3	23:U:52:ARG:HH12	1.48	0.77
4:B:119:ARG:HA	4:B:160:MET:CE	2.15	0.77
15:M:5:ILE:HD12	15:M:5:ILE:O	1.84	0.77
1:X:1958:G:H2'	1:X:1959:U:C6	2.19	0.77
15:M:31:ASP:OD1	15:M:95:GLU:HG2	1.85	0.77
11:I:85:ASP:HA	11:I:116:ARG:CZ	2.15	0.77
14:L:41:GLN:HA	14:L:53:ALA:HA	1.66	0.77
14:L:68:ALA:O	14:L:71:VAL:HG13	1.83	0.77
1:X:871:U:HO2'	1:X:2247:A:H2'	1.49	0.77
23:U:19:ILE:HA	23:U:42:GLN:HA	1.64	0.77
7:E:154:PRO:HA	7:E:160:LYS:O	1.84	0.77
1:X:1675:C:OP1	4:B:134:TRP:NE1	2.18	0.77
15:M:69:ARG:HH11	15:M:69:ARG:CG	1.98	0.77
4:B:91:VAL:HB	4:B:93:VAL:HG12	1.65	0.77
21:S:115:ILE:HA	21:S:169:VAL:HG12	1.65	0.77
1:X:760:U:C6	26:Y:3:LYS:HE2	2.20	0.76
9:G:159:SER:C	9:G:161:GLN:H	1.84	0.76
1:X:542:A:H3'	16:N:28:ARG:HE	1.50	0.76
21:S:59:GLY:O	21:S:60:GLU:HG3	1.84	0.76
1:X:1749:G:H5'	1:X:1750:A:OP2	1.84	0.76
1:X:2236:U:H2'	1:X:2237:C:H6	1.49	0.76
1:X:352:G:O2'	1:X:353:G:H5'	1.83	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:U:52:ARG:HH21	23:U:52:ARG:HG2	1.49	0.76
9:G:155:THR:HG23	9:G:156:HIS:H	1.50	0.76
1:X:2036:G:O2'	1:X:2037:A:H5'	1.84	0.76
20:R:10:HIS:CB	20:R:44:GLN:HE22	1.99	0.76
20:R:93:ARG:NH1	20:R:108:VAL:HG23	2.00	0.76
1:X:452:G:N2	5:C:40:ARG:HH22	1.83	0.76
2:Z:63:A:H2'	2:Z:64:C:C6	2.20	0.76
1:X:2209:G:H4'	23:U:46:LEU:C	2.05	0.76
2:Z:36:A:H4'	2:Z:37:C:H5	1.48	0.76
10:H:29:ILE:HG13	10:H:30:GLY:N	1.98	0.76
1:X:1770:U:H5	1:X:1775:A:N7	1.82	0.76
5:C:45:THR:HG21	5:C:85:GLY:HA3	1.66	0.76
5:C:170:LEU:HD23	5:C:175:VAL:HG12	1.65	0.76
1:X:1787:U:H2'	1:X:1788:C:H6	1.50	0.76
3:A:165:VAL:HG12	3:A:166:GLN:H	1.49	0.76
1:X:2272:A:H5''	14:L:15:ARG:HH22	1.51	0.76
16:N:68:GLY:O	16:N:71:LEU:HB3	1.85	0.76
15:M:34:ARG:NH2	15:M:66:PHE:CZ	2.53	0.76
14:L:91:ARG:H	14:L:91:ARG:HD2	1.49	0.76
11:I:47:ALA:C	11:I:49:PHE:H	1.88	0.76
10:H:16:ALA:HA	10:H:58:ALA:CB	2.14	0.76
1:X:1128:G:C3'	1:X:1129:A:H5''	2.15	0.76
18:P:62:ARG:NH2	26:Y:25:LEU:HD11	2.00	0.76
1:X:604:U:H2'	1:X:605:G:C8	2.19	0.76
3:A:43:ARG:CZ	3:A:55:GLY:HA2	2.14	0.76
6:D:94:GLU:HA	6:D:97:TYR:HB2	1.68	0.76
14:L:42:ILE:HB	14:L:52:ALA:CB	2.13	0.76
5:C:112:GLN:HA	5:C:116:LYS:HD3	1.67	0.76
1:X:1437:A:H2'	1:X:1438:G:H8	1.51	0.76
4:B:31:CYS:HB3	4:B:49:ILE:HD11	1.66	0.76
15:M:28:ARG:CB	15:M:29:PRO:CD	2.64	0.76
7:E:127:GLU:C	7:E:129:THR:H	1.89	0.76
22:T:70:ILE:HB	22:T:78:PHE:HB2	1.67	0.76
4:B:31:CYS:HB3	4:B:49:ILE:CD1	2.15	0.76
1:X:632:A:H2'	1:X:633:G:H5'	1.66	0.76
25:W:38:PRO:HA	25:W:41:ARG:CZ	2.14	0.76
1:X:2644:A:O2'	1:X:2645:C:H5'	1.85	0.76
16:N:31:GLN:O	16:N:35:ALA:HB2	1.85	0.76
6:D:38:GLU:HB3	6:D:87:ILE:HB	1.67	0.76
21:S:37:LYS:HG2	21:S:38:ALA:N	1.99	0.76
5:C:3:GLN:HG2	5:C:118:VAL:HG13	1.67	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:177:U:H2'	1:X:178:C:O4'	1.85	0.76
1:X:1445:A:H2'	1:X:1446:U:C6	2.21	0.76
22:T:30:VAL:HG13	22:T:65:GLY:O	1.85	0.76
1:X:2824:C:H2'	1:X:2824:C:O2	1.84	0.76
23:U:72:LYS:N	23:U:72:LYS:HE2	2.01	0.76
6:D:124:GLY:HA2	6:D:163:ASP:OD2	1.85	0.76
1:X:1006:C:N3	9:G:31:THR:OG1	2.18	0.76
6:D:101:GLU:HA	6:D:104:ILE:HD12	1.66	0.76
7:E:104:GLU:HA	7:E:104:GLU:OE2	1.85	0.76
1:X:155:G:O2'	1:X:156:G:H5'	1.86	0.76
13:K:97:ILE:N	13:K:97:ILE:HD12	2.01	0.76
1:X:2284:U:H3'	1:X:2285:U:H5''	1.67	0.76
16:N:51:ARG:CG	16:N:51:ARG:HH11	1.99	0.76
16:N:47:TYR:CE2	16:N:51:ARG:NH2	2.53	0.76
2:Z:46:G:H5'	6:D:92:ARG:NH2	2.00	0.76
14:L:97:HIS:O	14:L:101:LYS:HB2	1.85	0.76
3:A:146:GLU:HG3	3:A:152:GLY:O	1.86	0.76
10:H:1:MET:HA	10:H:45:ALA:O	1.86	0.76
1:X:450:C:H2'	1:X:451:A:C8	2.21	0.76
7:E:87:LEU:N	7:E:131:ILE:O	2.18	0.76
4:B:2:LYS:HD3	4:B:95:ILE:HG13	1.68	0.76
13:K:33:ARG:HD3	13:K:112:LEU:HD12	1.67	0.76
8:F:116:LEU:HD11	8:F:127:THR:HB	1.68	0.76
1:X:693:A:H2'	1:X:694:G:H8	1.48	0.76
9:G:65:LYS:HG3	9:G:66:HIS:N	1.99	0.76
17:O:10:LYS:CG	17:O:11:GLN:HE21	1.99	0.76
17:O:10:LYS:HD2	17:O:37:ALA:HB3	1.68	0.76
1:X:627:A:H2'	1:X:628:A:H8	1.49	0.76
1:X:43:A:H2'	1:X:44:G:H8	1.50	0.76
16:N:47:TYR:O	16:N:51:ARG:HD3	1.87	0.75
24:V:31:GLN:HB3	24:V:37:LEU:HB2	1.66	0.75
20:R:22:VAL:HG11	20:R:80:LYS:CE	2.16	0.75
4:B:31:CYS:HB3	4:B:49:ILE:HG13	1.66	0.75
18:P:36:ARG:NH2	26:Y:20:ARG:NH2	2.33	0.75
1:X:1885:C:H5'	3:A:244:ARG:HD2	1.67	0.75
1:X:796:A:H8	1:X:797:A:H4'	1.52	0.75
15:M:50:PHE:CE1	15:M:79:ARG:HG3	2.21	0.75
5:C:44:SER:HB3	5:C:88:PRO:HD3	1.68	0.75
17:O:33:VAL:HG12	17:O:57:GLN:HG2	1.66	0.75
12:J:106:GLU:N	12:J:106:GLU:OE1	2.18	0.75
12:J:36:ILE:HG21	12:J:131:LYS:HE2	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:112:GLN:HB3	5:C:116:LYS:HD3	1.66	0.75
3:A:36:ALA:CB	3:A:63:ARG:HA	2.16	0.75
7:E:90:ARG:HH21	7:E:163:ARG:NH1	1.83	0.75
1:X:1673:C:H2'	1:X:1674:C:H6	1.50	0.75
1:X:2178:U:H2'	1:X:2179:C:H6	1.50	0.75
3:A:208:LYS:HE3	3:A:208:LYS:HA	1.68	0.75
1:X:459:A:C2	1:X:466:A:C8	2.74	0.75
11:I:62:LYS:CE	11:I:64:GLY:HA3	2.16	0.75
1:X:640:C:H4'	1:X:660:G:H21	1.51	0.75
5:C:155:GLU:O	5:C:157:THR:N	2.18	0.75
20:R:96:LYS:NZ	20:R:105:ARG:HG3	2.01	0.75
1:X:512:A:H2'	1:X:513:A:H5'	1.68	0.75
7:E:125:VAL:HG13	7:E:131:ILE:HD11	1.68	0.75
16:N:25:TRP:O	16:N:28:ARG:HB2	1.86	0.75
1:X:178:C:H2'	1:X:178:C:O2	1.85	0.75
19:Q:12:ILE:HD12	19:Q:13:SER:N	1.98	0.75
1:X:824:U:O2	1:X:1263:G:H3'	1.85	0.75
1:X:1736:C:H2'	1:X:1737:G:H8	1.51	0.75
1:X:2282:G:H4'	6:D:122:PHE:HA	1.67	0.75
6:D:46:ASP:CB	6:D:49:ALA:HB3	2.16	0.75
23:U:20:ARG:HG2	23:U:39:LYS:HE3	1.69	0.75
3:A:104:TYR:C	3:A:105:ILE:HD12	2.07	0.75
3:A:39:LYS:HD3	3:A:62:TYR:HB2	1.67	0.75
20:R:84:VAL:HA	20:R:90:LYS:HE2	1.66	0.75
24:V:42:ARG:NH1	24:V:45:GLN:HE22	1.84	0.75
21:S:147:ILE:HB	21:S:169:VAL:HG23	1.67	0.75
1:X:439:C:H2'	1:X:440:U:C6	2.22	0.75
1:X:1607:A:H2'	1:X:1608:U:H6	1.51	0.75
9:G:35:LYS:HB3	9:G:69:ASP:OD2	1.87	0.75
1:X:1142:G:H4'	9:G:103:TYR:CE2	2.22	0.75
1:X:2355:A:H2	14:L:89:PHE:CZ	2.03	0.75
21:S:42:ALA:HA	21:S:45:GLN:NE2	2.01	0.75
23:U:27:ASP:HA	23:U:32:ARG:NH1	2.01	0.75
1:X:177:U:O4	1:X:225:G:C2	2.39	0.75
1:X:1670:G:H4'	1:X:1671:A:OP1	1.87	0.75
1:X:48:A:H1'	1:X:50:G:C2	2.22	0.75
2:Z:39:C:H5"	2:Z:40:C:H5	1.48	0.75
1:X:2691:C:O2'	1:X:2692:A:O5'	2.05	0.75
1:X:211:U:H3	1:X:442:A:H61	1.35	0.75
1:X:1805:G:N3	3:A:50:THR:HG21	2.01	0.75
1:X:2197:U:H2'	1:X:2198:U:C6	2.20	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Y:6:VAL:HG22	26:Y:7:PRO:HD2	1.68	0.75
11:I:89:ASP:HB3	11:I:120:VAL:HG13	1.69	0.75
11:I:62:LYS:HD3	29:3:12:ARG:CA	2.16	0.75
6:D:41:GLY:HA2	6:D:44:LYS:O	1.86	0.75
10:H:64:VAL:HG22	10:H:106:ARG:HH21	1.52	0.75
1:X:2526:U:H2'	1:X:2527:G:H8	1.50	0.75
24:V:7:ARG:HD2	24:V:7:ARG:C	2.06	0.75
7:E:43:VAL:CG2	7:E:52:VAL:HG22	2.16	0.75
1:X:482:A:O2'	1:X:483:A:H5'	1.86	0.75
1:X:634:G:H2'	1:X:635:C:C6	2.20	0.75
15:M:39:VAL:O	15:M:41:GLU:N	2.20	0.75
23:U:32:ARG:HG2	23:U:33:LYS:H	1.52	0.75
1:X:1069:G:H3'	1:X:1070:G:H5''	1.69	0.75
24:V:14:PHE:HD2	24:V:57:LYS:HB2	1.52	0.75
1:X:24:G:H2'	1:X:25:U:O4'	1.84	0.75
21:S:79:ILE:O	21:S:79:ILE:HD13	1.86	0.75
24:V:25:LEU:HD21	24:V:47:ARG:HD2	1.69	0.75
14:L:37:HIS:NE2	14:L:39:TYR:CZ	2.55	0.75
20:R:85:ASP:H	20:R:86:PRO:CD	1.99	0.75
10:H:24:VAL:CG1	10:H:42:LYS:HG2	2.17	0.75
3:A:231:HIS:HD2	3:A:233:HIS:N	1.83	0.75
5:C:62:LYS:HD3	5:C:63:GLY:N	2.01	0.75
1:X:2496:C:O2'	1:X:2497:A:H3'	1.86	0.75
1:X:531:G:H2'	1:X:532:A:H8	1.51	0.75
1:X:862:A:H2'	1:X:863:C:C6	2.21	0.75
1:X:503:G:H2'	1:X:504:G:O4'	1.85	0.74
2:Z:46:G:H5'	6:D:92:ARG:HH22	1.48	0.74
14:L:54:ALA:O	14:L:71:VAL:HG23	1.87	0.74
1:X:1790:G:O6	3:A:178:PRO:HG2	1.86	0.74
1:X:1189:G:O5'	1:X:1189:G:H8	1.70	0.74
1:X:1871:G:H3'	1:X:1871:G:N3	2.02	0.74
23:U:48:LYS:CG	23:U:49:LYS:N	2.50	0.74
9:G:169:GLN:HB2	9:G:170:PRO:HD2	1.69	0.74
11:I:94:GLU:C	11:I:96:TYR:H	1.90	0.74
25:W:54:GLN:HG2	25:W:55:GLU:OE1	1.87	0.74
1:X:88:G:C3'	1:X:89:A:H5''	2.14	0.74
1:X:1675:C:OP1	4:B:134:TRP:CE2	2.40	0.74
1:X:2482:A:O2'	33:X:2911:ZLD:H13A	1.86	0.74
1:X:1136:G:C6	1:X:1137:A:N6	2.56	0.74
1:X:859:U:O2	1:X:859:U:H2'	1.85	0.74
1:X:2178:U:O2'	1:X:2179:C:H5'	1.86	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:160:ALA:HB1	6:D:165:GLU:HB2	1.68	0.74
2:Z:43:G:H5'	2:Z:44:C:H5'	1.68	0.74
8:F:85:ILE:HD13	8:F:89:SER:H	1.52	0.74
4:B:93:VAL:O	4:B:94:ASP:HB2	1.84	0.74
1:X:2457:A:H5'	30:4:31:LYS:HG2	1.69	0.74
4:B:152:LYS:HB2	9:G:106:TYR:HB3	1.69	0.74
9:G:45:ASP:HB2	9:G:83:ILE:HD11	1.67	0.74
6:D:128:TYR:HB3	6:D:156:ILE:HB	1.69	0.74
1:X:173:A:P	11:I:53:ARG:HH21	2.11	0.74
8:F:75:MET:O	8:F:79:ILE:HG12	1.87	0.74
1:X:1947:G:H4'	1:X:1948:C:OP2	1.88	0.74
1:X:57:G:H2'	1:X:58:C:H6	1.52	0.74
1:X:1741:G:O2'	1:X:1742:G:H5'	1.87	0.74
1:X:2556:A:H5''	1:X:2557:G:H5'	1.67	0.74
20:R:54:ILE:HG12	20:R:71:GLN:CG	2.17	0.74
20:R:96:LYS:HE2	20:R:97:GLN:O	1.87	0.74
1:X:1223:G:H5''	1:X:1224:A:H5'	1.68	0.74
1:X:168:A:H2'	1:X:169:C:C6	2.21	0.74
1:X:116:A:H5'	1:X:117:A:C8	2.23	0.74
22:T:21:LEU:HD11	22:T:41:ARG:NE	2.00	0.74
1:X:2082:C:H2'	1:X:2083:G:C5'	2.17	0.74
5:C:54:THR:HG22	5:C:55:GLY:O	1.88	0.74
1:X:476:G:H2'	1:X:477:A:C8	2.23	0.74
1:X:1996:A:H2'	1:X:1997:A:H5'	1.70	0.74
16:N:95:LEU:HA	16:N:98:ILE:HG13	1.69	0.74
25:W:3:ILE:CG2	25:W:4:LYS:H	1.99	0.74
1:X:1755:G:N2	1:X:1756:C:C2	2.56	0.74
9:G:103:TYR:CE2	9:G:111:LYS:CA	2.70	0.74
19:Q:63:LYS:HE2	19:Q:65:VAL:CA	2.17	0.74
20:R:59:LYS:O	20:R:62:MET:HB2	1.88	0.74
7:E:39:THR:C	7:E:41:LEU:H	1.89	0.74
1:X:556:A:H1'	1:X:558:G:N2	2.03	0.74
9:G:154:GLU:N	9:G:154:GLU:OE1	2.21	0.74
16:N:51:ARG:NH1	16:N:51:ARG:CB	2.42	0.74
6:D:167:ARG:HG3	6:D:177:PHE:CE2	2.22	0.74
14:L:82:LYS:HB3	14:L:84:ILE:HG13	1.70	0.74
21:S:3:LEU:HD11	21:S:32:PHE:HA	1.67	0.74
1:X:322:A:O2'	1:X:343:A:H4'	1.87	0.74
8:F:79:ILE:HA	8:F:82:ALA:HB2	1.70	0.74
10:H:97:VAL:HG11	10:H:126:ILE:HD13	1.69	0.74
13:K:41:ALA:O	13:K:43:GLU:N	2.21	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2691:C:O2'	1:X:2692:A:H8	1.69	0.74
1:X:2048:C:H2'	1:X:2049:C:H6	1.51	0.74
16:N:30:LYS:HB3	16:N:30:LYS:NZ	2.01	0.74
6:D:136:LEU:HD23	6:D:141:ILE:HG22	1.69	0.74
23:U:20:ARG:HB2	23:U:43:ARG:CD	2.17	0.74
3:A:187:SER:C	3:A:189:CYS:H	1.91	0.74
1:X:29:U:C4'	16:N:11:ARG:NH1	2.50	0.74
7:E:44:ARG:NH2	7:E:46:ASP:HB2	2.03	0.74
1:X:117:A:H5'	1:X:118:U:OP1	1.86	0.74
1:X:556:A:O2'	1:X:558:G:H1'	1.87	0.74
30:4:10:MET:HB2	30:4:32:HIS:CD2	2.23	0.74
25:W:38:PRO:N	25:W:41:ARG:NH1	2.35	0.74
13:K:74:ASP:HA	13:K:77:ARG:HH12	1.53	0.74
23:U:49:LYS:HB3	23:U:61:TRP:CE3	2.22	0.74
5:C:74:VAL:HG23	5:C:76:THR:H	1.51	0.74
1:X:1017:C:H1'	9:G:134:MET:CE	2.17	0.74
6:D:133:LYS:O	6:D:151:GLY:HA2	1.87	0.74
14:L:33:ARG:HH22	14:L:103:LEU:HB2	1.52	0.74
21:S:54:ILE:HG21	21:S:62:PHE:CD1	2.22	0.74
12:J:106:GLU:CD	12:J:106:GLU:N	2.41	0.74
1:X:2799:C:H2'	1:X:2800:C:O4'	1.86	0.74
7:E:126:PRO:HD2	7:E:130:ARG:O	1.88	0.74
8:F:96:LYS:HB3	8:F:99:LYS:HE2	1.69	0.74
1:X:439:C:H2'	1:X:440:U:H6	1.53	0.74
1:X:1736:C:H2'	1:X:1737:G:C8	2.23	0.74
4:B:19:ARG:HE	4:B:21:ILE:HD11	1.53	0.74
1:X:2751:C:C5'	4:B:203:LYS:HD3	2.18	0.73
1:X:651:C:C2'	1:X:652:C:H5"	2.18	0.73
6:D:47:SER:HA	6:D:50:ILE:HG13	1.68	0.73
14:L:29:LEU:HD23	14:L:89:PHE:HB3	1.70	0.73
12:J:98:VAL:HG12	12:J:99:LYS:H	1.53	0.73
1:X:2289:A:C2	6:D:79:LEU:HD21	2.23	0.73
1:X:1517:C:P	3:A:102:LYS:HZ1	2.11	0.73
1:X:1686:A:H5"	1:X:1687:C:OP2	1.88	0.73
30:4:18:ARG:HA	30:4:22:ARG:O	1.88	0.73
12:J:75:VAL:HG12	12:J:76:THR:H	1.52	0.73
1:X:1045:G:H2'	1:X:1046:U:H6	1.52	0.73
1:X:244:C:H3'	1:X:245:C:H5"	1.68	0.73
16:N:70:ARG:HH11	16:N:70:ARG:HG3	1.53	0.73
6:D:135:GLN:O	6:D:141:ILE:HG13	1.88	0.73
2:Z:46:G:H5'	6:D:92:ARG:CZ	2.18	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:Q:61:LYS:H	19:Q:72:ARG:HA	1.53	0.73
1:X:1512:A:H2'	1:X:1514:C:H5	1.53	0.73
1:X:1503:G:H2'	1:X:1504:G:C8	2.23	0.73
1:X:936:A:O2'	1:X:937:C:H5'	1.87	0.73
10:H:83:ARG:HH11	15:M:40:ARG:HG3	1.51	0.73
1:X:2620:G:H5''	9:G:104:THR:CG2	2.19	0.73
16:N:101:ARG:C	16:N:103:PRO:HD3	2.09	0.73
11:I:106:VAL:HG23	11:I:123:ASP:HB2	1.71	0.73
1:X:2212:U:H2'	1:X:2213:G:H8	1.49	0.73
1:X:333:A:OP1	5:C:162:ARG:HB2	1.86	0.73
7:E:50:LEU:HG	7:E:51:LEU:H	1.53	0.73
1:X:889:C:H2'	1:X:890:U:C6	2.24	0.73
1:X:1078:A:H3'	1:X:1078:A:OP1	1.89	0.73
15:M:24:LEU:HD13	15:M:91:VAL:HG21	1.68	0.73
18:P:27:VAL:CB	18:P:125:THR:HG22	2.18	0.73
5:C:22:VAL:HA	5:C:106:MET:SD	2.28	0.73
5:C:5:ASN:HA	5:C:118:VAL:HG21	1.68	0.73
1:X:320:A:O3'	20:R:27:GLY:HA2	1.87	0.73
1:X:2484:G:OP2	33:X:2911:ZLD:H9	1.89	0.73
2:Z:88:C:O2'	2:Z:89:G:H5'	1.87	0.73
23:U:64:ALA:O	23:U:67:LEU:HB3	1.88	0.73
16:N:51:ARG:H	16:N:51:ARG:CD	2.00	0.73
11:I:99:VAL:O	11:I:101:ARG:HG2	1.87	0.73
1:X:648:A:H4'	1:X:649:G:H5'	1.70	0.73
12:J:36:ILE:CG2	12:J:131:LYS:HE2	2.19	0.73
19:Q:60:GLY:H	19:Q:72:ARG:HH11	1.35	0.73
1:X:1313:U:H4'	1:X:1314:A:O5'	1.89	0.73
10:H:19:ILE:HD13	10:H:19:ILE:N	2.01	0.73
1:X:1071:U:H5''	1:X:1072:U:OP1	1.88	0.73
1:X:1060:C:H1'	1:X:1124:U:O2'	1.88	0.73
1:X:2307:A:H2'	1:X:2308:A:C8	2.24	0.73
1:X:404:A:H1'	1:X:424:G:H1'	1.69	0.73
3:A:236:GLY:O	3:A:237:GLU:HB2	1.87	0.73
15:M:14:ARG:HH22	15:M:18:GLN:NE2	1.86	0.73
1:X:469:G:N2	1:X:480:G:H2'	2.03	0.73
1:X:2077:G:H22	1:X:2179:C:H1'	1.54	0.73
10:H:116:ARG:HD2	15:M:38:LYS:HZ2	1.51	0.73
6:D:38:GLU:O	6:D:40:LEU:HD12	1.89	0.73
21:S:6:LYS:HD2	21:S:31:SER:HB2	1.69	0.73
20:R:11:ASN:HD22	20:R:11:ASN:C	1.92	0.73
1:X:1333:G:N2	1:X:1344:C:N4	2.35	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:44:GLY:O	11:I:45:LYS:HB3	1.87	0.73
24:V:62:ARG:HH11	24:V:62:ARG:CB	2.00	0.73
1:X:919:U:OP1	12:J:26:ASP:HB2	1.88	0.73
1:X:2395:C:O2'	1:X:2396:C:H5''	1.87	0.73
21:S:6:LYS:HB2	21:S:31:SER:CB	2.19	0.73
1:X:2824:C:P	15:M:100:ARG:HH11	2.12	0.73
1:X:2570:C:P	3:A:239:ARG:HH11	2.11	0.73
1:X:1919:A:H5''	1:X:1920:A:O4'	1.89	0.73
22:T:3:HIS:HB2	22:T:5:LYS:HD3	1.69	0.73
30:4:30:VAL:C	30:4:32:HIS:H	1.91	0.73
23:U:17:SER:HB2	23:U:44:ALA:HA	1.70	0.73
10:H:28:GLY:O	10:H:35:THR:HG23	1.89	0.73
1:X:1231:A:H2'	1:X:1232:U:C6	2.24	0.73
9:G:93:LYS:HB3	9:G:96:ASP:OD1	1.89	0.73
16:N:104:GLU:O	16:N:107:LYS:HB3	1.88	0.73
17:O:75:LYS:HB2	17:O:80:TYR:HB3	1.70	0.73
1:X:686:C:O2'	1:X:687:G:H5'	1.87	0.73
11:I:88:PHE:HB3	11:I:90:ARG:HD2	1.71	0.73
3:A:142:VAL:O	3:A:163:VAL:HG12	1.88	0.73
1:X:2326:C:H2'	1:X:2327:U:C6	2.24	0.73
3:A:48:ARG:N	3:A:48:ARG:HD2	2.02	0.73
9:G:33:ILE:HD13	9:G:33:ILE:H	1.51	0.73
1:X:1173:G:H4'	17:O:22:VAL:HG23	1.70	0.73
5:C:22:VAL:HG22	5:C:106:MET:HG3	1.71	0.73
24:V:55:THR:O	24:V:58:ALA:HB3	1.88	0.73
1:X:48:A:H1'	1:X:50:G:N3	2.04	0.73
1:X:1519:G:H2'	1:X:1520:G:H8	1.52	0.73
1:X:1056:U:OP1	1:X:1058:G:H4'	1.89	0.73
3:A:217:ARG:HG2	3:A:218:LYS:N	2.03	0.73
17:O:20:ILE:HD12	17:O:21:ARG:H	1.54	0.73
6:D:175:LEU:HD23	6:D:177:PHE:HE1	1.52	0.73
14:L:99:ARG:CG	14:L:100:VAL:H	2.02	0.73
11:I:11:GLY:O	11:I:14:LYS:N	2.22	0.73
1:X:2404:A:H4'	1:X:2405:A:H5''	1.71	0.73
1:X:1657:A:H2'	1:X:1658:A:O4'	1.89	0.73
12:J:15:ARG:CD	12:J:73:LYS:HG3	2.19	0.73
1:X:2484:G:OP2	33:X:2911:ZLD:C9	2.37	0.73
1:X:2307:A:H2'	1:X:2308:A:H8	1.53	0.73
11:I:94:GLU:HB3	11:I:97:ARG:NH1	2.03	0.72
6:D:111:ILE:HA	6:D:137:ILE:HG22	1.70	0.72
14:L:37:HIS:NE2	14:L:39:TYR:OH	2.22	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:42:ILE:CB	14:L:52:ALA:HB3	2.17	0.72
3:A:95:LEU:HB2	3:A:105:ILE:HD11	1.70	0.72
3:A:96:HIS:HE1	3:A:100:GLY:HA2	1.53	0.72
1:X:1575:C:H4'	1:X:1576:G:OP1	1.89	0.72
13:K:98:LEU:HD22	26:Y:56:GLN:HG2	1.71	0.72
22:T:4:LYS:NZ	22:T:4:LYS:HB3	2.03	0.72
2:Z:104:A:H2'	2:Z:105:G:O4'	1.88	0.72
3:A:105:ILE:HD12	3:A:105:ILE:N	2.04	0.72
6:D:74:ILE:HA	6:D:79:LEU:HB2	1.70	0.72
3:A:77:ALA:HB2	3:A:97:TYR:HA	1.69	0.72
1:X:2541:U:H4'	10:H:23:ARG:HH11	1.54	0.72
30:4:18:ARG:HG2	30:4:23:VAL:CA	2.18	0.72
1:X:2737:A:H2'	1:X:2737:A:N3	2.03	0.72
13:K:46:PRO:O	13:K:50:GLN:HB2	1.89	0.72
1:X:2015:G:H2'	4:B:145:LYS:NZ	2.05	0.72
1:X:1885:C:C4'	3:A:244:ARG:HD2	2.19	0.72
19:Q:88:ILE:O	19:Q:92:ALA:HB2	1.89	0.72
1:X:2615:U:C5'	4:B:80:GLU:HG3	2.17	0.72
1:X:2642:G:O2'	1:X:2643:G:H5'	1.88	0.72
3:A:247:VAL:CG2	3:A:248:THR:HG23	2.08	0.72
17:O:10:LYS:HG3	17:O:11:GLN:H	1.54	0.72
1:X:1171:A:H2'	1:X:1172:U:C6	2.22	0.72
1:X:3:U:H2'	1:X:4:C:C6	2.24	0.72
23:U:20:ARG:HD2	23:U:43:ARG:NH2	2.04	0.72
13:K:79:VAL:HA	13:K:83:VAL:HG22	1.69	0.72
1:X:886:A:H1'	12:J:30:PHE:HE1	1.52	0.72
1:X:2284:U:C3'	1:X:2285:U:H5''	2.18	0.72
1:X:1519:G:H2'	1:X:1520:G:C8	2.24	0.72
1:X:2501:U:O2'	1:X:2626:U:H5''	1.89	0.72
23:U:48:LYS:HG2	23:U:49:LYS:H	1.51	0.72
1:X:2035:G:O2'	1:X:2036:G:H5'	1.89	0.72
1:X:986:A:H4'	16:N:48:ARG:NH1	2.02	0.72
1:X:638:A:O2'	1:X:639:G:O4'	2.06	0.72
14:L:73:LYS:HG3	14:L:110:GLY:HA3	1.72	0.72
5:C:107:ALA:HB1	5:C:180:ILE:HD13	1.70	0.72
1:X:840:U:H2'	1:X:2051:U:C2	2.24	0.72
16:N:7:GLY:O	16:N:9:VAL:HG23	1.89	0.72
20:R:48:VAL:HG12	20:R:50:GLY:N	2.04	0.72
1:X:2728:A:H2'	1:X:2729:A:C8	2.24	0.72
13:K:52:ILE:HG13	13:K:53:THR:N	2.03	0.72
30:4:27:CYS:HB3	30:4:32:HIS:HB3	1.70	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:60:ASN:O	4:B:64:GLN:HG3	1.89	0.72
9:G:61:ARG:HE	9:G:65:LYS:CE	2.02	0.72
16:N:26:GLY:O	16:N:30:LYS:HG2	1.89	0.72
17:O:13:ARG:HB3	17:O:16:GLU:OE2	1.89	0.72
6:D:113:ASP:HB3	6:D:115:ARG:HH12	1.53	0.72
21:S:54:ILE:HB	21:S:62:PHE:H	1.53	0.72
5:C:104:LEU:O	5:C:107:ALA:N	2.23	0.72
3:A:75:VAL:HG11	3:A:98:ALA:HB3	1.71	0.72
6:D:39:GLY:HA2	6:D:86:GLY:CA	2.16	0.72
26:Y:56:GLN:HE21	26:Y:56:GLN:H	1.37	0.72
10:H:13:ASN:HD22	10:H:109:ARG:HG2	1.52	0.72
14:L:10:LYS:O	14:L:14:ARG:HB2	1.90	0.72
1:X:2777:A:N7	18:P:134:LYS:HD3	2.03	0.72
1:X:2264:C:H5'	1:X:2267:A:N6	2.05	0.72
1:X:1017:C:H1'	9:G:134:MET:HE3	1.71	0.72
1:X:663:G:C3'	1:X:664:C:H4'	2.19	0.72
3:A:172:TYR:HD2	3:A:186:HIS:HB3	1.55	0.72
24:V:1:MET:SD	24:V:2:LYS:HG2	2.29	0.72
17:O:71:ILE:N	17:O:84:THR:O	2.21	0.72
1:X:427:C:H1'	1:X:1856:U:H1'	1.71	0.72
1:X:2691:C:H5''	1:X:2694:G:H5''	1.71	0.72
23:U:50:ALA:CB	23:U:52:ARG:HH12	2.02	0.72
11:I:124:ALA:HA	11:I:142:LEU:HD21	1.71	0.72
1:X:2394:G:C3'	11:I:63:ARG:HH11	1.93	0.72
2:Z:42:U:H1'	2:Z:47:A:H61	1.53	0.72
11:I:47:ALA:C	11:I:49:PHE:N	2.38	0.72
3:A:133:LEU:HD23	3:A:189:CYS:O	1.89	0.72
19:Q:12:ILE:CD1	19:Q:13:SER:H	1.98	0.72
7:E:97:LYS:HE3	7:E:104:GLU:CG	2.19	0.72
1:X:2825:A:H2'	1:X:2826:C:H6	1.54	0.72
1:X:1949:A:H1'	1:X:2572:U:H4'	1.71	0.72
1:X:2807:U:C6	1:X:2807:U:H5'	2.23	0.72
2:Z:3:A:H2'	2:Z:4:C:C5'	2.20	0.72
20:R:23:ILE:H	20:R:23:ILE:HD13	1.54	0.72
20:R:44:GLN:HB3	20:R:77:HIS:HD1	1.55	0.72
13:K:33:ARG:CG	13:K:114:GLU:HB3	2.19	0.72
1:X:559:C:H2'	1:X:560:G:C4'	2.19	0.72
1:X:1088:A:H2'	1:X:1089:C:O4'	1.89	0.72
10:H:47:VAL:HG21	10:H:115:ALA:CB	2.19	0.72
1:X:2751:C:H5''	4:B:203:LYS:HD3	1.71	0.72
9:G:158:HIS:CA	9:G:161:GLN:HB2	2.20	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1148:G:H21	9:G:134:MET:CE	2.02	0.72
3:A:126:LYS:O	3:A:128:GLY:N	2.23	0.72
3:A:134:ARG:HG3	3:A:135:PHE:HD2	1.53	0.72
1:X:2722:C:H2'	1:X:2723:C:C6	2.24	0.72
7:E:88:GLU:HB3	7:E:163:ARG:HB2	1.72	0.72
4:B:120:TRP:O	4:B:121:ASN:HB2	1.88	0.72
1:X:2825:A:H2'	1:X:2826:C:C6	2.25	0.72
4:B:21:ILE:N	4:B:21:ILE:HD12	2.05	0.72
1:X:1783:G:P	3:A:206:LEU:HD12	2.30	0.72
1:X:640:C:H4'	1:X:660:G:N2	2.04	0.72
5:C:13:ARG:NE	5:C:13:ARG:N	2.38	0.72
1:X:173:A:H5'	1:X:174:A:OP2	1.90	0.72
8:F:76:SER:HB3	8:F:111:THR:HB	1.72	0.72
1:X:2331:A:H2	22:T:33:ALA:HB1	1.54	0.72
7:E:155:ASP:OD1	7:E:157:TYR:HB2	1.90	0.72
1:X:149:A:H2'	1:X:150:A:C8	2.25	0.72
3:A:213:ARG:C	3:A:215:LEU:H	1.92	0.71
9:G:98:LYS:HB3	9:G:116:ARG:HB2	1.71	0.71
1:X:1391:A:O2'	1:X:1392:U:C6	2.42	0.71
1:X:1128:G:H2'	1:X:1129:A:C5'	2.13	0.71
1:X:633:G:O2'	1:X:634:G:H5'	1.89	0.71
1:X:43:A:H2'	1:X:44:G:C8	2.24	0.71
1:X:712:A:H2'	1:X:713:G:O4'	1.90	0.71
9:G:110:LEU:N	9:G:110:LEU:HD23	2.05	0.71
12:J:70:PHE:CD2	12:J:70:PHE:C	2.64	0.71
6:D:132:ILE:HG21	6:D:138:PHE:HZ	1.54	0.71
6:D:65:PRO:HA	6:D:89:VAL:CG1	2.21	0.71
14:L:101:LYS:HG2	14:L:105:ASP:OD2	1.90	0.71
3:A:92:ILE:CD1	3:A:104:TYR:HB3	2.19	0.71
1:X:1508:G:C5'	1:X:1509:A:H5''	2.06	0.71
20:R:59:LYS:N	20:R:60:PRO:CD	2.51	0.71
8:F:81:LYS:NZ	8:F:84:GLY:HA3	2.04	0.71
24:V:52:GLN:C	24:V:54:ASN:H	1.93	0.71
25:W:37:THR:HG22	25:W:38:PRO:HD2	1.72	0.71
8:F:101:ASN:HB3	8:F:104:GLN:HG2	1.70	0.71
1:X:1180:A:H8	1:X:1180:A:O5'	1.72	0.71
1:X:577:U:C5'	1:X:956:A:H62	2.03	0.71
1:X:589:C:H5''	16:N:31:GLN:HE22	1.55	0.71
5:C:24:SER:O	5:C:27:LEU:N	2.23	0.71
10:H:10:VAL:HG21	10:H:16:ALA:O	1.90	0.71
5:C:68:ARG:HG2	5:C:68:ARG:O	1.88	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2209:G:H4'	23:U:46:LEU:O	1.90	0.71
4:B:72:VAL:HG12	4:B:73:ALA:H	1.53	0.71
1:X:2175:A:H2'	1:X:2176:U:C6	2.26	0.71
9:G:158:HIS:HA	9:G:161:GLN:CB	2.20	0.71
1:X:1173:G:C1'	17:O:21:ARG:HH21	1.99	0.71
25:W:25:LEU:HD22	25:W:30:ASP:CB	2.16	0.71
21:S:44:ARG:HB3	21:S:45:GLN:HE22	1.55	0.71
19:Q:7:LEU:C	19:Q:7:LEU:HD13	2.10	0.71
26:Y:16:ARG:HH11	26:Y:20:ARG:NH1	1.88	0.71
15:M:5:ILE:HD13	15:M:7:ILE:CG1	2.20	0.71
1:X:1193:G:H2'	1:X:1194:U:H5''	1.71	0.71
3:A:43:ARG:H	3:A:43:ARG:HD2	1.55	0.71
17:O:25:LEU:HB2	17:O:32:LYS:CE	2.20	0.71
17:O:36:LYS:CE	17:O:56:VAL:HG13	2.20	0.71
11:I:97:ARG:O	11:I:98:LEU:HB2	1.89	0.71
6:D:105:ASN:HA	6:D:109:PRO:HG2	1.72	0.71
14:L:39:TYR:O	14:L:41:GLN:N	2.22	0.71
8:F:73:PRO:HD2	8:F:76:SER:OG	1.91	0.71
7:E:127:GLU:OE2	7:E:130:ARG:HB2	1.90	0.71
1:X:1727:C:H4'	1:X:2833:C:O2	1.91	0.71
8:F:99:LYS:HA	8:F:138:THR:OG1	1.89	0.71
1:X:2482:A:O2'	33:X:2911:ZLD:H13B	1.90	0.71
1:X:1625:A:H1'	1:X:1632:A:O2'	1.90	0.71
1:X:2208:U:H2'	1:X:2209:G:H8	1.55	0.71
1:X:1554:G:O2'	1:X:1555:A:H5'	1.90	0.71
1:X:1850:G:H1	1:X:1867:A:H2'	1.53	0.71
1:X:1051:U:H2'	1:X:1052:C:O4'	1.90	0.71
1:X:1766:U:H2'	1:X:1767:G:H5'	1.71	0.71
1:X:2708:U:H2'	1:X:2709:C:H6	1.55	0.71
4:B:144:ARG:O	4:B:146:THR:O	2.08	0.71
9:G:119:LEU:HD12	9:G:126:VAL:HG13	1.72	0.71
17:O:39:PHE:CD1	17:O:46:VAL:HG21	2.25	0.71
5:C:22:VAL:HG13	5:C:27:LEU:HD21	1.73	0.71
1:X:623:G:H3'	1:X:624:A:C5'	2.12	0.71
1:X:840:U:H2'	1:X:2051:U:O2	1.90	0.71
26:Y:56:GLN:HE21	26:Y:56:GLN:N	1.88	0.71
13:K:17:ARG:NH1	13:K:20:LEU:HD22	2.04	0.71
7:E:7:GLN:CA	7:E:69:ARG:HE	2.03	0.71
1:X:1053:G:H2'	1:X:1054:C:C6	2.25	0.71
4:B:170:LEU:HB3	4:B:184:VAL:CG1	2.21	0.71
1:X:2078:G:H2'	1:X:2079:A:C8	2.25	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:91:PRO:O	13:K:92:GLY:O	2.09	0.71
9:G:108:GLY:H	9:G:110:LEU:HD21	1.54	0.71
9:G:157:PRO:C	9:G:159:SER:H	1.94	0.71
11:I:107:LYS:HG2	11:I:109:LEU:HD21	1.72	0.71
14:L:33:ARG:HH12	14:L:103:LEU:CB	2.04	0.71
1:X:2355:A:C2	14:L:89:PHE:CZ	2.78	0.71
5:C:112:GLN:CB	5:C:116:LYS:HD3	2.21	0.71
5:C:133:PHE:HD2	5:C:134:ILE:HD13	1.54	0.71
23:U:22:GLY:HA3	23:U:39:LYS:HE2	1.71	0.71
3:A:125:PRO:HB3	3:A:193:ILE:HD11	1.72	0.71
20:R:22:VAL:HG11	20:R:80:LYS:NZ	2.06	0.71
1:X:2538:C:O2'	1:X:2539:C:H5'	1.91	0.71
1:X:1061:A:H2'	1:X:1062:G:C8	2.19	0.71
1:X:139:A:H2'	1:X:140:G:H8	1.56	0.71
4:B:165:VAL:HG12	4:B:189:PRO:HG2	1.70	0.71
9:G:155:THR:C	9:G:157:PRO:HD2	2.11	0.71
16:N:69:ALA:HB2	16:N:79:PHE:HD1	1.55	0.71
16:N:86:ALA:C	16:N:88:ILE:H	1.93	0.71
1:X:647:G:O2'	1:X:649:G:H4'	1.91	0.71
2:Z:53:G:OP2	14:L:64:LYS:HE3	1.90	0.71
1:X:621:U:H2'	1:X:622:U:C6	2.26	0.71
11:I:52:GLY:O	11:I:55:ARG:HB2	1.90	0.71
11:I:56:LEU:C	11:I:56:LEU:HD13	2.11	0.71
1:X:1495:G:H5'	1:X:1574:A:C2	2.25	0.71
4:B:49:ILE:HD13	4:B:50:GLY:N	2.05	0.71
7:E:155:ASP:OD2	7:E:156:ALA:N	2.24	0.71
1:X:208:C:H2'	1:X:209:G:O4'	1.91	0.71
15:M:44:ARG:NH1	15:M:46:ARG:HH22	1.88	0.71
1:X:2071:G:N2	1:X:2072:C:H1'	2.05	0.71
4:B:149:ARG:HH12	9:G:106:TYR:HD1	1.38	0.71
16:N:47:TYR:HE1	17:O:73:LYS:HZ3	1.37	0.71
12:J:66:TYR:O	12:J:106:GLU:OE1	2.09	0.71
1:X:2796:A:H2'	1:X:2797:G:C8	2.25	0.71
5:C:122:GLY:HA3	5:C:136:TRP:HZ3	1.55	0.71
5:C:173:ALA:HB1	5:C:193:LEU:HD13	1.73	0.71
30:4:18:ARG:CD	30:4:23:VAL:HG22	2.16	0.71
1:X:169:C:H2'	1:X:170:U:C5'	2.20	0.71
1:X:704:G:H2'	1:X:705:C:C6	2.26	0.71
1:X:758:G:H2'	1:X:759:C:H5'	1.73	0.71
16:N:47:TYR:CE2	16:N:51:ARG:NE	2.58	0.71
1:X:2355:A:C2	14:L:89:PHE:CE1	2.79	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:U:22:GLY:CA	23:U:39:LYS:HE2	2.21	0.71
20:R:14:LEU:HD23	20:R:14:LEU:N	2.06	0.71
1:X:2271:C:OP1	14:L:18:ARG:NH2	2.24	0.71
7:E:38:ASN:HB2	7:E:41:LEU:HD22	1.73	0.71
1:X:789:G:C5	1:X:806:A:N7	2.59	0.71
1:X:107:G:N2	1:X:108:G:H1'	2.06	0.71
11:I:30:ALA:CB	11:I:34:HIS:CE1	2.74	0.71
10:H:29:ILE:CG1	10:H:30:GLY:N	2.54	0.71
16:N:85:ARG:HG2	16:N:116:ALA:O	1.90	0.70
14:L:70:ALA:O	14:L:74:ALA:HB2	1.91	0.70
12:J:23:LYS:HA	21:S:73:LYS:HZ3	1.53	0.70
5:C:9:GLN:HG2	5:C:120:VAL:HG21	1.73	0.70
5:C:30:VAL:HG11	5:C:177:VAL:HG21	1.73	0.70
1:X:81:C:H2'	1:X:82:G:O4'	1.91	0.70
15:M:104:LEU:HD13	15:M:106:TYR:CZ	2.24	0.70
1:X:1075:C:H5''	8:F:85:ILE:CG2	2.21	0.70
1:X:50:G:H1'	1:X:116:A:H61	1.56	0.70
1:X:2048:C:H2'	1:X:2049:C:C6	2.26	0.70
21:S:56:VAL:HG12	21:S:57:GLU:H	1.56	0.70
15:M:43:ASN:C	15:M:43:ASN:HD22	1.94	0.70
3:A:210:GLY:HA2	3:A:213:ARG:HG2	1.73	0.70
2:Z:70:C:H2'	2:Z:71:G:O4'	1.91	0.70
8:F:110:LYS:HA	8:F:113:MET:HE1	1.73	0.70
1:X:460:U:O4	1:X:592:G:H1'	1.92	0.70
10:H:47:VAL:HG21	10:H:115:ALA:HB3	1.72	0.70
13:K:28:LEU:C	13:K:28:LEU:HD23	2.12	0.70
9:G:61:ARG:HH22	9:G:78:ASP:HB2	1.56	0.70
17:O:58:ALA:HB1	17:O:94:LYS:O	1.92	0.70
6:D:47:SER:HA	6:D:50:ILE:CD1	2.22	0.70
6:D:5:LYS:H	6:D:7:LYS:H	1.39	0.70
23:U:22:GLY:H	23:U:39:LYS:CG	2.03	0.70
1:X:1517:C:H4'	3:A:96:HIS:CD2	2.27	0.70
15:M:104:LEU:O	15:M:107:LEU:N	2.19	0.70
1:X:554:U:HO2'	1:X:555:U:H1'	1.55	0.70
4:B:3:GLY:HA3	4:B:81:PHE:HE1	1.57	0.70
16:N:28:ARG:HG2	16:N:38:THR:OG1	1.91	0.70
21:S:3:LEU:HD11	21:S:32:PHE:CA	2.21	0.70
1:X:2795:A:H4'	13:K:5:LYS:HG2	1.72	0.70
6:D:72:LYS:CA	6:D:81:GLN:HA	2.21	0.70
20:R:56:LYS:HA	20:R:68:GLY:O	1.91	0.70
1:X:29:U:H4'	16:N:11:ARG:NH1	2.03	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1070:G:H5'	1:X:1071:U:H3'	1.73	0.70
1:X:2042:A:O2'	5:C:62:LYS:HE2	1.91	0.70
1:X:635:C:H2'	1:X:636:G:C5'	2.20	0.70
1:X:568:G:O2'	1:X:569:C:H5'	1.92	0.70
16:N:40:LEU:HD23	16:N:40:LEU:H	1.57	0.70
1:X:882:C:H2'	1:X:883:A:H8	1.57	0.70
2:Z:56:G:H2'	2:Z:57:U:C6	2.26	0.70
5:C:192:ALA:O	5:C:195:ILE:HG13	1.91	0.70
22:T:25:LYS:CG	22:T:37:LEU:HA	2.19	0.70
24:V:17:GLU:HA	24:V:17:GLU:OE2	1.90	0.70
1:X:1752:U:H5''	1:X:1753:A:OP2	1.92	0.70
1:X:2299:A:N6	1:X:2312:A:H2'	2.05	0.70
1:X:1091:C:H1'	8:F:127:THR:CA	2.21	0.70
1:X:1625:A:H1'	1:X:1632:A:H1'	1.72	0.70
1:X:1080:A:H4'	1:X:1081:A:C8	2.26	0.70
17:O:11:GLN:HA	17:O:38:LEU:O	1.90	0.70
6:D:22:TYR:CZ	6:D:29:PRO:HD3	2.26	0.70
5:C:117:LEU:CD2	5:C:187:VAL:HA	2.21	0.70
19:Q:60:GLY:N	19:Q:72:ARG:HH11	1.88	0.70
7:E:101:LYS:O	7:E:123:PHE:CD1	2.44	0.70
4:B:133:LYS:O	4:B:134:TRP:O	2.09	0.70
1:X:2506:C:H5''	30:4:30:VAL:HB	1.74	0.70
12:J:76:THR:HB	12:J:88:LYS:O	1.91	0.70
1:X:1175:A:O2'	1:X:1176:U:H5'	1.91	0.70
21:S:4:THR:O	21:S:5:ALA:O	2.10	0.70
21:S:93:GLU:O	21:S:94:VAL:HG23	1.91	0.70
1:X:2034:A:OP1	4:B:137:ARG:NH2	2.25	0.70
26:Y:16:ARG:HD3	26:Y:20:ARG:NH2	2.06	0.70
1:X:879:A:C2	1:X:926:C:H5''	2.26	0.70
1:X:2285:U:H5'	1:X:2286:G:C1'	2.21	0.70
1:X:2821:G:H2'	1:X:2822:U:C6	2.26	0.70
1:X:2041:A:O5'	1:X:2041:A:H8	1.75	0.70
1:X:1939:U:H2'	1:X:1939:U:O2	1.91	0.70
1:X:1996:A:C2'	1:X:1997:A:H5'	2.22	0.70
1:X:2713:A:N6	4:B:203:LYS:HE3	2.01	0.70
9:G:108:GLY:N	9:G:110:LEU:CD2	2.54	0.70
16:N:50:ARG:C	16:N:52:ASN:H	1.93	0.70
1:X:537:C:C5	1:X:2759:U:H3'	2.23	0.70
6:D:99:PHE:HA	6:D:102:LYS:HD2	1.74	0.70
5:C:14:THR:HG22	5:C:15:ILE:H	1.57	0.70
1:X:2737:A:OP2	30:4:19:ARG:HA	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:119:ARG:HA	4:B:160:MET:HE1	1.72	0.70
1:X:48:A:C4'	1:X:49:U:H5'	2.20	0.70
1:X:1253:C:H2'	1:X:1254:G:C5'	2.21	0.70
1:X:1055:A:C2'	1:X:1056:U:H5''	2.21	0.70
1:X:847:C:C2	1:X:848:A:C8	2.79	0.70
1:X:2269:G:N2	1:X:2322:U:H1'	2.07	0.70
1:X:538:A:N6	1:X:2025:A:H2'	2.06	0.70
14:L:37:HIS:NE2	14:L:39:TYR:CE1	2.60	0.70
1:X:999:A:N7	25:W:10:ILE:HG21	2.06	0.70
1:X:1808:C:H5''	3:A:39:LYS:HZ3	1.55	0.70
10:H:16:ALA:HA	10:H:58:ALA:HB2	1.73	0.70
4:B:37:LYS:HA	4:B:42:ASP:OD2	1.91	0.70
1:X:2581:A:H5'	1:X:2582:G:OP2	1.92	0.70
6:D:143:TYR:HE1	6:D:148:LYS:HA	1.57	0.70
1:X:741:G:N2	1:X:743:A:H1'	2.07	0.70
9:G:85:ALA:O	9:G:87:GLN:N	2.24	0.70
12:J:134:LYS:HD2	12:J:134:LYS:N	2.07	0.70
12:J:27:TYR:CB	12:J:137:VAL:HG11	2.21	0.70
5:C:22:VAL:HG21	5:C:110:SER:OG	1.91	0.70
23:U:31:GLY:HA2	23:U:32:ARG:CZ	2.22	0.70
3:A:147:LEU:CD2	3:A:155:LEU:HD11	2.22	0.70
6:D:73:SER:O	6:D:80:ARG:N	2.25	0.70
20:R:54:ILE:HA	20:R:71:GLN:HA	1.73	0.70
13:K:99:ARG:CG	13:K:99:ARG:HH11	2.05	0.70
1:X:304:A:H2'	1:X:305:A:H5''	1.73	0.70
9:G:123:PRO:HD2	9:G:124:GLU:OE1	1.92	0.69
17:O:36:LYS:HB3	17:O:39:PHE:CE2	2.27	0.69
1:X:638:A:O2'	1:X:639:G:C8	2.42	0.69
21:S:24:TYR:HA	21:S:28:ASN:O	1.91	0.69
20:R:18:LYS:HD3	20:R:19:GLY:N	2.07	0.69
1:X:2409:A:C2	11:I:54:SER:HB3	2.27	0.69
7:E:161:GLY:O	7:E:163:ARG:HG3	1.91	0.69
21:S:103:ARG:O	21:S:139:THR:HA	1.92	0.69
1:X:879:A:H2'	1:X:879:A:N3	2.06	0.69
1:X:404:A:C1'	1:X:424:G:H1'	2.22	0.69
1:X:436:A:H5''	1:X:437:G:H5'	1.73	0.69
2:Z:3:A:H2'	2:Z:4:C:H5'	1.73	0.69
12:J:61:ARG:HH12	21:S:175:ARG:HD2	1.57	0.69
7:E:107:ILE:H	7:E:107:ILE:HD13	1.56	0.69
9:G:65:LYS:CG	9:G:66:HIS:N	2.46	0.69
16:N:33:ARG:O	16:N:34:ASN:C	2.29	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:62:ILE:HG22	16:N:66:ASN:HD22	1.57	0.69
1:X:833:A:N3	1:X:954:U:O2'	2.25	0.69
6:D:57:LEU:HA	6:D:60:ILE:CD1	2.22	0.69
5:C:128:ALA:HB2	5:C:159:ARG:NH2	2.07	0.69
1:X:173:A:H61	1:X:844:G:N2	1.88	0.69
21:S:105:GLN:HE22	21:S:139:THR:CG2	2.04	0.69
21:S:138:VAL:HG23	21:S:139:THR:N	2.05	0.69
4:B:67:PHE:CD2	4:B:74:PRO:HA	2.27	0.69
1:X:2310:G:N2	1:X:2364:C:C4	2.60	0.69
22:T:5:LYS:N	22:T:5:LYS:HD2	2.07	0.69
1:X:925:U:H4'	1:X:926:C:OP1	1.92	0.69
1:X:2839:G:H2'	1:X:2840:U:C6	2.27	0.69
19:Q:34:THR:HG23	19:Q:37:GLU:HB2	1.74	0.69
18:P:107:ILE:HG23	18:P:107:ILE:O	1.91	0.69
17:O:79:GLN:O	17:O:80:TYR:CB	2.39	0.69
1:X:2594:U:H2'	1:X:2595:C:C6	2.28	0.69
1:X:2594:U:H2'	1:X:2595:C:H6	1.56	0.69
14:L:99:ARG:CG	14:L:100:VAL:N	2.53	0.69
21:S:42:ALA:C	21:S:45:GLN:HE21	1.96	0.69
12:J:23:LYS:C	12:J:25:GLY:H	1.94	0.69
3:A:143:HIS:C	3:A:145:LEU:N	2.45	0.69
1:X:1354:A:O2'	19:Q:54:SER:HB3	1.92	0.69
1:X:67:G:H2'	1:X:68:C:H6	1.53	0.69
1:X:2057:U:H5'	1:X:2057:U:C6	2.27	0.69
11:I:56:LEU:O	11:I:56:LEU:HD13	1.91	0.69
1:X:2332:G:H4'	22:T:32:LYS:HE2	1.74	0.69
14:L:8:ARG:HH11	14:L:8:ARG:CB	2.05	0.69
11:I:114:ILE:O	11:I:114:ILE:HD13	1.92	0.69
11:I:76:LYS:HB3	11:I:79:GLN:HG2	1.74	0.69
21:S:117:VAL:HG22	21:S:168:VAL:HG13	1.74	0.69
1:X:198:A:H5''	1:X:199:A:H5'	1.74	0.69
10:H:29:ILE:CD1	10:H:30:GLY:H	2.06	0.69
1:X:2194:A:H2'	1:X:2195:C:O4'	1.93	0.69
17:O:14:VAL:HG12	17:O:14:VAL:O	1.92	0.69
1:X:2756:A:O2'	1:X:2757:G:OP2	2.10	0.69
6:D:96:MET:O	6:D:100:LEU:HB2	1.91	0.69
1:X:2498:U:C4'	1:X:2499:C:OP1	2.39	0.69
24:V:64:GLY:C	24:V:66:GLN:H	1.96	0.69
6:D:119:PRO:HG2	6:D:120:ASN:H	1.57	0.69
1:X:1118:G:H2'	1:X:1119:U:H5''	1.72	0.69
23:U:50:ALA:C	23:U:52:ARG:NH2	2.45	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:33:TYR:O	12:J:106:GLU:HA	1.92	0.69
1:X:666:U:C2'	1:X:667:U:H4'	2.08	0.69
19:Q:30:SER:O	19:Q:76:LYS:HD3	1.92	0.69
1:X:1517:C:H5'	3:A:102:LYS:HZ3	1.56	0.69
20:R:8:SER:O	20:R:10:HIS:N	2.26	0.69
7:E:27:LYS:HG2	7:E:32:GLU:HB2	1.74	0.69
3:A:186:HIS:NE2	3:A:188:GLU:HB2	2.07	0.69
18:P:80:LEU:CD2	18:P:87:GLU:HB3	2.21	0.69
1:X:2417:U:O2'	1:X:2419:C:OP1	2.10	0.69
1:X:1830:C:N4	1:X:1881:U:H3'	2.06	0.69
1:X:1505:U:H2'	1:X:1506:C:H5''	1.74	0.69
1:X:920:G:P	12:J:24:GLY:HA3	2.32	0.69
15:M:44:ARG:NH1	15:M:46:ARG:NH2	2.41	0.69
1:X:613:A:H5''	1:X:668:A:N6	2.07	0.69
1:X:1281:A:H1'	1:X:2592:U:C4	2.25	0.69
1:X:1997:A:H2'	1:X:1998:A:C8	2.27	0.69
25:W:28:ILE:N	25:W:28:ILE:HD13	2.07	0.69
5:C:112:GLN:CA	5:C:116:LYS:HD3	2.22	0.69
3:A:91:ARG:HD2	3:A:198:ASN:CA	2.21	0.69
6:D:45:GLU:HB2	6:D:78:LYS:HZ3	1.58	0.69
22:T:58:THR:C	22:T:59:LEU:HD22	2.13	0.69
12:J:15:ARG:HB3	12:J:73:LYS:NZ	2.06	0.69
18:P:46:ARG:HA	18:P:92:VAL:HG11	1.73	0.69
18:P:34:SER:O	18:P:37:LYS:HB3	1.93	0.69
1:X:1323:G:H3'	1:X:1324:G:H21	1.57	0.69
1:X:1757:C:O2'	1:X:1758:C:H5'	1.91	0.69
1:X:1051:U:H3'	1:X:1051:U:H6	1.57	0.69
5:C:41:GLY:HA3	5:C:89:ARG:O	1.93	0.69
23:U:54:ASN:O	23:U:56:GLN:N	2.26	0.69
6:D:60:ILE:CG1	6:D:61:THR:H	1.99	0.69
6:D:4:LEU:HA	6:D:7:LYS:CB	2.21	0.69
14:L:32:TYR:O	14:L:34:SER:N	2.25	0.69
11:I:7:LYS:O	11:I:9:THR:HG23	1.92	0.69
1:X:1440:G:H3'	1:X:1441:A:H5''	1.75	0.69
19:Q:68:PHE:N	19:Q:68:PHE:CD2	2.60	0.69
24:V:2:LYS:H	24:V:3:PRO:HD3	1.57	0.69
18:P:45:ILE:HG22	18:P:46:ARG:N	2.06	0.69
13:K:44:LEU:HD12	13:K:44:LEU:O	1.93	0.69
1:X:1431:U:H4'	1:X:1604:A:C4'	2.22	0.69
30:4:30:VAL:HG23	30:4:31:LYS:HD3	1.75	0.69
1:X:1621:C:H5'	1:X:1626:A:N6	2.07	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:43:ARG:NH2	3:A:55:GLY:HA2	2.07	0.69
1:X:2750:G:O2'	4:B:203:LYS:HE2	1.93	0.69
15:M:50:PHE:CE1	15:M:79:ARG:CG	2.75	0.69
9:G:108:GLY:C	9:G:110:LEU:HD23	2.13	0.69
9:G:146:THR:O	9:G:148:LEU:N	2.26	0.69
6:D:22:TYR:HD2	6:D:27:ALA:HB3	1.57	0.69
6:D:60:ILE:HD12	6:D:61:THR:HG23	1.75	0.69
21:S:46:GLN:CB	21:S:50:GLY:HA3	2.22	0.69
12:J:35:LEU:HD11	12:J:130:THR:OG1	1.92	0.69
3:A:90:ALA:O	3:A:92:ILE:N	2.26	0.69
19:Q:74:ASP:O	19:Q:75:ARG:NH1	2.25	0.69
1:X:1513:U:H5''	1:X:1514:C:OP2	1.92	0.69
20:R:25:LEU:O	20:R:26:SER:HB3	1.92	0.69
20:R:51:VAL:CG2	20:R:76:LEU:HD11	2.23	0.69
7:E:104:GLU:OE2	7:E:114:ILE:HG12	1.92	0.69
7:E:101:LYS:HG3	7:E:117:PRO:HD2	1.74	0.69
4:B:115:GLY:CA	4:B:136:ARG:HD2	2.22	0.69
1:X:328:A:H2'	1:X:329:C:C6	2.28	0.69
15:M:104:LEU:HD12	15:M:107:LEU:HD22	1.75	0.69
1:X:1923:U:H4'	1:X:1924:C:O5'	1.93	0.69
18:P:71:VAL:HG12	18:P:126:ILE:HG22	1.74	0.69
1:X:1003:C:H4'	17:O:71:ILE:CD1	2.21	0.69
1:X:2294:U:O2'	6:D:125:ARG:HG3	1.92	0.69
1:X:1713:G:C6	1:X:1714:A:C5	2.81	0.69
9:G:61:ARG:NE	9:G:65:LYS:HE2	2.08	0.69
6:D:38:GLU:HG3	6:D:40:LEU:HD11	1.73	0.69
25:W:23:LEU:HD13	25:W:51:LEU:HD11	1.74	0.69
5:C:149:LEU:CD1	5:C:170:LEU:HB2	2.17	0.69
1:X:455:A:H2	1:X:1258:G:N3	1.91	0.69
3:A:143:HIS:C	3:A:145:LEU:H	1.95	0.69
1:X:59:G:H1'	1:X:73:A:C2	2.28	0.69
1:X:1044:U:H5	30:4:16:VAL:O	1.76	0.69
1:X:2329:C:H2'	1:X:2330:G:O4'	1.93	0.69
1:X:2343:C:OP1	22:T:55:ARG:NE	2.24	0.69
1:X:2042:A:OP1	5:C:66:ASN:ND2	2.26	0.69
22:T:3:HIS:CG	22:T:4:LYS:N	2.61	0.69
6:D:30:ARG:HB2	6:D:159:THR:CG2	2.23	0.69
26:Y:11:THR:O	26:Y:12:SER:O	2.10	0.69
14:L:33:ARG:HG3	14:L:38:ILE:HB	1.74	0.69
2:Z:45:C:H2'	6:D:92:ARG:HE	1.58	0.69
1:X:2798:A:H2'	1:X:2799:C:H5'	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:4:18:ARG:HG2	30:4:23:VAL:HG13	1.75	0.69
11:I:54:SER:OG	11:I:59:ARG:NH1	2.26	0.69
1:X:143:A:H2'	1:X:144:U:H6	1.57	0.69
1:X:1971:C:O2'	1:X:1972:G:H5'	1.92	0.69
21:S:56:VAL:HG12	21:S:57:GLU:N	2.07	0.69
1:X:2532:G:C2	1:X:2533:U:H1'	2.27	0.69
1:X:857:U:H3'	1:X:858:G:C8	2.28	0.69
1:X:755:C:H2'	1:X:756:C:C6	2.28	0.69
17:O:10:LYS:HD3	17:O:37:ALA:HB3	1.74	0.68
11:I:89:ASP:OD2	11:I:120:VAL:HG22	1.93	0.68
14:L:37:HIS:CG	14:L:37:HIS:O	2.45	0.68
5:C:130:THR:HA	5:C:160:ALA:HB1	1.73	0.68
1:X:492:G:H1'	1:X:516:G:N2	2.08	0.68
10:H:23:ARG:CZ	10:H:23:ARG:HB3	2.21	0.68
10:H:71:LYS:O	10:H:99:ILE:HG12	1.92	0.68
1:X:1069:G:C3'	1:X:1070:G:H5''	2.22	0.68
7:E:84:THR:HB	7:E:134:SER:CB	2.23	0.68
1:X:1747:G:H4'	1:X:1749:G:H1'	1.75	0.68
1:X:2787:A:O2'	1:X:2788:C:H5'	1.92	0.68
9:G:127:ILE:HG22	9:G:128:GLU:N	2.06	0.68
9:G:141:GLY:O	9:G:144:MET:HB2	1.93	0.68
25:W:13:PRO:HD2	25:W:16:GLN:NE2	2.09	0.68
7:E:137:ASP:HB3	7:E:140:LEU:HD12	1.76	0.68
10:H:100:ASN:HD21	10:H:104:GLU:HG3	1.58	0.68
1:X:2637:C:N4	1:X:2643:G:N2	2.40	0.68
1:X:779:U:O2'	1:X:780:U:H5'	1.93	0.68
1:X:964:A:OP1	12:J:18:MET:SD	2.51	0.68
4:B:15:TRP:CZ3	15:M:84:ALA:HB3	2.29	0.68
4:B:151:TYR:HB3	9:G:106:TYR:CD2	2.28	0.68
16:N:93:LYS:O	16:N:94:VAL:HG23	1.94	0.68
5:C:14:THR:HG21	5:C:195:ILE:HG22	1.76	0.68
5:C:158:ARG:HB2	5:C:169:VAL:HG11	1.74	0.68
1:X:627:A:H2'	1:X:628:A:C8	2.29	0.68
7:E:105:MET:CB	7:E:113:VAL:HB	2.24	0.68
7:E:105:MET:HA	7:E:105:MET:CE	2.24	0.68
7:E:44:ARG:O	7:E:51:LEU:N	2.25	0.68
1:X:1372:A:C5	1:X:1373:G:N7	2.61	0.68
1:X:811:G:OP2	5:C:56:ARG:HG3	1.92	0.68
1:X:751:G:H1'	1:X:772:G:N2	2.08	0.68
23:U:51:ILE:O	23:U:52:ARG:HD3	1.93	0.68
3:A:217:ARG:O	3:A:219:PRO:N	2.27	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:116:ARG:NH1	15:M:38:LYS:HZ2	1.90	0.68
1:X:2598:C:O2'	1:X:2599:U:H5'	1.93	0.68
21:S:45:GLN:N	21:S:45:GLN:CD	2.45	0.68
21:S:6:LYS:HB2	21:S:31:SER:HB3	1.74	0.68
4:B:9:ILE:HD13	15:M:12:LEU:HD13	1.75	0.68
23:U:32:ARG:CG	23:U:33:LYS:H	2.06	0.68
23:U:22:GLY:H	23:U:39:LYS:HG3	1.59	0.68
20:R:40:LEU:HB2	20:R:45:LYS:H	1.59	0.68
20:R:96:LYS:HG2	20:R:97:GLN:N	2.08	0.68
24:V:42:ARG:CZ	24:V:45:GLN:HE22	2.06	0.68
1:X:242:A:O2'	1:X:243:G:H4'	1.92	0.68
4:B:61:LYS:HB3	4:B:62:PRO:HD3	1.75	0.68
15:M:17:GLU:HG3	15:M:62:SER:HB3	1.75	0.68
1:X:1339:U:H5''	1:X:1994:U:H1'	1.76	0.68
1:X:2433:G:O2'	1:X:2434:G:H5'	1.93	0.68
25:W:14:GLY:HA2	25:W:17:VAL:HG23	1.75	0.68
15:M:89:ASN:ND2	15:M:90:GLN:NE2	2.42	0.68
9:G:131:VAL:HG11	9:G:148:LEU:HD13	1.75	0.68
1:X:546:A:H2'	1:X:547:U:C6	2.28	0.68
1:X:575:U:H2'	1:X:576:A:C8	2.29	0.68
14:L:38:ILE:HG13	14:L:39:TYR:N	2.08	0.68
1:X:218:A:H1'	1:X:220:U:C5	2.28	0.68
10:H:23:ARG:HH21	10:H:23:ARG:CG	2.06	0.68
21:S:113:VAL:HG22	21:S:171:VAL:HG22	1.74	0.68
3:A:173:VAL:CG1	3:A:174:ILE:H	2.05	0.68
1:X:1745:C:H2'	1:X:1746:A:O4'	1.92	0.68
18:P:35:PRO:O	18:P:38:VAL:N	2.26	0.68
18:P:17:GLN:HG2	18:P:18:VAL:HG23	1.73	0.68
1:X:403:A:H5''	1:X:404:A:OP1	1.93	0.68
1:X:1138:A:H2'	1:X:1139:A:H5''	1.75	0.68
8:F:101:ASN:HB3	8:F:104:GLN:CG	2.23	0.68
1:X:604:U:H2'	1:X:605:G:H8	1.57	0.68
1:X:2265:A:H4'	1:X:2266:A:O4'	1.93	0.68
1:X:2658:A:O2'	1:X:2659:C:H5'	1.93	0.68
11:I:108:LEU:CB	11:I:122:VAL:HG11	2.18	0.68
5:C:151:VAL:N	5:C:187:VAL:O	2.26	0.68
20:R:92:THR:CB	20:R:95:ARG:HH22	2.06	0.68
1:X:135:U:H2'	1:X:136:A:C4	2.29	0.68
1:X:670:U:H2'	1:X:671:A:C8	2.28	0.68
1:X:760:U:O2'	18:P:109:ARG:HD3	1.92	0.68
15:M:89:ASN:ND2	15:M:90:GLN:HE22	1.92	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:O:36:LYS:HD2	17:O:55:THR:HA	1.75	0.68
1:X:2291:U:C5'	6:D:85:VAL:HG21	2.21	0.68
7:E:136:ILE:H	7:E:136:ILE:CD1	2.06	0.68
1:X:1459:U:H4'	1:X:1460:G:OP1	1.92	0.68
1:X:1430:G:H2'	1:X:1431:U:O4'	1.93	0.68
1:X:192:G:H4'	1:X:193:A:O5'	1.94	0.68
11:I:72:TYR:CD2	11:I:105:PRO:HB2	2.29	0.68
1:X:2802:C:H2'	1:X:2803:C:H6	1.58	0.68
3:A:78:LYS:HD3	3:A:116:THR:HB	1.74	0.68
3:A:200:GLU:CG	3:A:202:LYS:HB2	2.23	0.68
10:H:23:ARG:HH21	10:H:23:ARG:HG2	1.59	0.68
1:X:2546:G:H2'	1:X:2547:C:H6	1.59	0.68
1:X:2340:C:H2'	1:X:2341:G:O4'	1.94	0.68
1:X:2701:A:H2'	1:X:2702:G:H8	1.58	0.68
15:M:34:ARG:NH2	15:M:66:PHE:CE2	2.62	0.68
5:C:44:SER:HB3	5:C:88:PRO:CD	2.23	0.68
9:G:33:ILE:HD13	9:G:33:ILE:N	2.08	0.68
12:J:28:VAL:HG21	12:J:134:LYS:O	1.94	0.68
12:J:100:PRO:HB3	21:S:74:ARG:HG3	1.76	0.68
1:X:1287:A:N3	1:X:1310:C:H1'	2.09	0.68
13:K:18:VAL:HG12	13:K:22:ARG:HD2	1.75	0.68
14:L:12:ARG:HH21	14:L:13:THR:HG23	1.58	0.68
1:X:2306:A:H2'	1:X:2307:A:C8	2.29	0.68
1:X:304:A:H4'	1:X:304:A:OP1	1.93	0.68
1:X:124:A:C2	1:X:125:A:C2	2.82	0.68
1:X:2379:G:C2'	1:X:2380:U:H5'	2.24	0.68
7:E:150:LYS:O	7:E:152:ARG:N	2.27	0.68
3:A:212:SER:O	3:A:215:LEU:N	2.27	0.68
10:H:116:ARG:HD3	15:M:40:ARG:CB	2.23	0.68
9:G:47:SER:C	9:G:49:VAL:H	1.97	0.68
9:G:51:LEU:CD1	9:G:88:VAL:HG21	2.24	0.68
16:N:88:ILE:HG13	17:O:49:GLU:CB	2.24	0.68
6:D:40:LEU:HA	6:D:150:ARG:HH21	1.59	0.68
12:J:136:GLU:HA	12:J:138:TYR:HE2	1.58	0.68
1:X:63:A:O3'	19:Q:71:GLN:HB2	1.95	0.68
7:E:137:ASP:OD1	7:E:140:LEU:N	2.22	0.68
7:E:144:VAL:O	7:E:147:ASN:HB2	1.94	0.68
22:T:53:MET:SD	22:T:57:HIS:HA	2.34	0.68
1:X:1715:A:H4'	1:X:1716:G:O5'	1.94	0.68
1:X:706:A:O2'	1:X:707:U:H5'	1.95	0.68
2:Z:17:A:OP2	2:Z:110:U:C2'	2.42	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:15:ILE:HG22	5:C:17:LEU:HD22	1.76	0.67
6:D:85:VAL:HG23	6:D:86:GLY:H	1.59	0.67
20:R:97:GLN:HA	20:R:103:LYS:O	1.94	0.67
20:R:37:LEU:HD21	20:R:49:GLU:CG	2.24	0.67
20:R:71:GLN:O	20:R:72:ARG:HG3	1.94	0.67
10:H:99:ILE:HG22	10:H:105:PRO:HA	1.76	0.67
11:I:54:SER:OG	11:I:59:ARG:CZ	2.41	0.67
5:C:165:SER:C	5:C:166:TRP:HE3	1.95	0.67
24:V:2:LYS:HA	24:V:6:MET:CE	2.24	0.67
8:F:85:ILE:HG22	8:F:86:GLY:N	2.09	0.67
1:X:1450:G:H2'	1:X:1451:C:O4'	1.94	0.67
1:X:442:A:H2'	1:X:443:A:C8	2.29	0.67
7:E:102:ALA:HB2	7:E:116:GLU:HA	1.76	0.67
9:G:140:GLN:HG2	9:G:144:MET:HE3	1.74	0.67
16:N:29:SER:C	16:N:30:LYS:HD2	2.14	0.67
1:X:1018:C:H3'	1:X:1019:U:C5'	2.24	0.67
6:D:35:VAL:O	6:D:154:ILE:HG23	1.93	0.67
14:L:32:TYR:C	14:L:34:SER:H	1.96	0.67
2:Z:46:G:H1'	2:Z:49:C:N4	2.09	0.67
25:W:28:ILE:CD1	25:W:28:ILE:H	2.04	0.67
1:X:1514:C:O4'	1:X:1593:C:H5'	1.93	0.67
1:X:321:A:OP1	20:R:27:GLY:N	2.15	0.67
4:B:116:VAL:HG13	4:B:136:ARG:HH21	1.59	0.67
24:V:4:SER:C	24:V:6:MET:N	2.47	0.67
1:X:2270:U:O2'	1:X:2271:C:H5'	1.93	0.67
1:X:1118:G:C2'	1:X:1119:U:H5''	2.24	0.67
11:I:94:GLU:HB3	11:I:97:ARG:CZ	2.25	0.67
6:D:136:LEU:C	6:D:137:ILE:HG12	2.14	0.67
2:Z:45:C:H2'	6:D:92:ARG:NH1	2.08	0.67
1:X:1168:G:O2'	25:W:28:ILE:HD11	1.95	0.67
12:J:113:GLU:HA	12:J:116:LYS:CB	2.24	0.67
5:C:185:ARG:HG2	5:C:185:ARG:HH21	1.60	0.67
5:C:194:GLU:O	5:C:195:ILE:HG23	1.93	0.67
1:X:1264:C:P	16:N:13:ARG:HH12	2.18	0.67
1:X:1095:A:H3'	1:X:1096:A:H5''	1.75	0.67
1:X:2313:G:N2	14:L:17:VAL:HB	2.10	0.67
7:E:9:ILE:O	7:E:11:VAL:HG23	1.94	0.67
1:X:805:G:N7	1:X:2419:C:H1'	2.10	0.67
26:Y:33:CYS:O	26:Y:37:HIS:HA	1.95	0.67
1:X:698:A:H1'	1:X:701:U:O4	1.94	0.67
3:A:52:ARG:CZ	3:A:247:VAL:HG11	2.24	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:93:LYS:HD3	9:G:93:LYS:N	2.08	0.67
17:O:38:LEU:HD13	17:O:39:PHE:N	2.10	0.67
1:X:957:G:H2'	1:X:958:G:H8	1.60	0.67
1:X:1441:A:C2	1:X:1586:A:OP2	2.48	0.67
19:Q:79:ILE:HD12	19:Q:79:ILE:N	2.09	0.67
20:R:96:LYS:HZ2	20:R:105:ARG:HG3	1.60	0.67
30:4:25:VAL:HB	30:4:34:GLN:H	1.59	0.67
1:X:1931:G:O2'	1:X:1932:G:H5'	1.95	0.67
23:U:15:VAL:O	23:U:16:ASN:HB2	1.94	0.67
1:X:437:G:O2'	1:X:438:G:H5'	1.95	0.67
12:J:64:LYS:HD2	12:J:64:LYS:H	1.59	0.67
1:X:2689:C:O2'	1:X:2690:A:H5'	1.95	0.67
1:X:972:C:H5'	1:X:973:U:OP2	1.95	0.67
23:U:63:SER:HB3	23:U:66:ALA:HB2	1.76	0.67
23:U:51:ILE:HG23	23:U:59:THR:CA	2.20	0.67
1:X:1816:G:OP1	3:A:52:ARG:HG3	1.95	0.67
9:G:105:GLY:CA	9:G:110:LEU:HD12	2.25	0.67
9:G:162:LYS:H	9:G:163:PRO:HD2	1.59	0.67
14:L:41:GLN:OE1	14:L:50:THR:HG21	1.95	0.67
12:J:35:LEU:HD23	12:J:105:PHE:HD2	1.58	0.67
5:C:110:SER:HA	5:C:113:GLU:OE1	1.95	0.67
23:U:33:LYS:O	23:U:34:THR:HB	1.95	0.67
1:X:178:C:OP2	23:U:40:ARG:HD2	1.94	0.67
7:E:84:THR:HB	7:E:134:SER:HB2	1.75	0.67
1:X:2811:G:H2'	1:X:2812:A:H8	1.59	0.67
1:X:20:C:H2'	1:X:21:A:H8	1.60	0.67
1:X:1909:U:H5'	1:X:1911:A:OP2	1.94	0.67
1:X:580:A:O2'	1:X:582:G:OP2	2.12	0.67
1:X:1281:A:C2'	1:X:2592:U:H5	2.06	0.67
15:M:89:ASN:HD22	15:M:90:GLN:NE2	1.92	0.67
14:L:33:ARG:NH1	14:L:103:LEU:CB	2.58	0.67
2:Z:53:G:C5'	14:L:64:LYS:HD2	2.24	0.67
11:I:11:GLY:H	11:I:14:LYS:HB2	1.60	0.67
23:U:26:ALA:HB2	23:U:35:THR:HG23	1.75	0.67
1:X:492:G:H1'	1:X:516:G:H21	1.58	0.67
1:X:1493:A:H2'	1:X:1494:G:O4'	1.94	0.67
1:X:1753:A:O5'	1:X:1753:A:H8	1.76	0.67
1:X:1090:C:H2'	1:X:1091:C:H6	1.59	0.67
24:V:48:ARG:C	24:V:50:VAL:H	1.96	0.67
1:X:1135:C:H2'	1:X:1136:G:C8	2.28	0.67
1:X:13:A:O2'	1:X:15:G:N7	2.25	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:162:SER:HB3	3:A:195:ALA:HB2	1.75	0.67
1:X:1461:C:H2'	1:X:1462:C:H6	1.59	0.67
1:X:350:U:O5'	1:X:350:U:H6	1.76	0.67
1:X:2176:U:H2'	1:X:2177:U:O4'	1.94	0.67
1:X:1781:C:OP1	3:A:219:PRO:CB	2.32	0.67
9:G:66:HIS:O	9:G:70:PHE:CE1	2.48	0.67
16:N:66:ASN:CB	16:N:76:TYR:HB2	2.18	0.67
6:D:88:LYS:O	6:D:89:VAL:HG22	1.94	0.67
14:L:60:LYS:HA	14:L:67:THR:HG21	1.75	0.67
1:X:999:A:C5	25:W:10:ILE:HG21	2.30	0.67
5:C:180:ILE:HG13	5:C:186:LEU:HD22	1.76	0.67
1:X:626:A:O2'	5:C:176:ASN:HB2	1.94	0.67
20:R:16:PHE:CD2	20:R:16:PHE:N	2.61	0.67
22:T:25:LYS:CA	22:T:29:GLU:OE1	2.42	0.67
17:O:28:GLU:O	17:O:29:ALA:HB3	1.95	0.67
15:M:28:ARG:HB3	15:M:29:PRO:HD3	1.76	0.67
1:X:394:U:H2'	1:X:395:G:C8	2.30	0.67
4:B:19:ARG:HG3	4:B:21:ILE:HD11	1.77	0.67
1:X:1739:G:H2'	1:X:1740:G:C8	2.30	0.67
3:A:246:PRO:O	3:A:248:THR:O	2.13	0.67
16:N:79:PHE:HE1	16:N:106:PHE:CE1	2.13	0.67
12:J:8:THR:HG22	12:J:70:PHE:HZ	1.60	0.67
11:I:94:GLU:HA	11:I:97:ARG:CG	2.24	0.67
19:Q:63:LYS:HE2	19:Q:65:VAL:N	2.10	0.67
3:A:132:PRO:HA	3:A:190:TYR:HA	1.76	0.67
20:R:92:THR:C	20:R:95:ARG:NH2	2.48	0.67
10:H:25:LEU:CD1	10:H:52:VAL:HG23	2.25	0.67
1:X:1095:A:H2'	1:X:1096:A:C5'	2.19	0.67
13:K:41:ALA:O	13:K:44:LEU:N	2.24	0.67
1:X:199:A:N6	1:X:209:G:H1'	2.10	0.67
1:X:2437:G:H2'	1:X:2469:G:H1	1.59	0.67
1:X:1211:G:C4	1:X:1212:U:C5	2.82	0.67
1:X:774:A:H8	1:X:774:A:H3'	1.59	0.67
9:G:67:ARG:CD	9:G:70:PHE:HA	2.23	0.67
1:X:647:G:H4'	1:X:649:G:O3'	1.95	0.67
2:Z:107:C:H5''	21:S:84:TYR:CE1	2.30	0.67
1:X:227:G:O2'	11:I:53:ARG:NE	2.28	0.67
7:E:136:ILE:HG22	7:E:137:ASP:N	2.10	0.67
22:T:27:GLY:HA2	22:T:67:VAL:O	1.94	0.67
1:X:2827:G:H2'	1:X:2828:C:H6	1.60	0.67
12:J:78:LYS:HE3	12:J:80:ALA:C	2.14	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:U:14:VAL:O	23:U:15:VAL:HG22	1.95	0.67
1:X:1055:A:H2'	1:X:1056:U:H5''	1.75	0.67
1:X:2467:A:O2'	1:X:2468:G:H5'	1.95	0.67
1:X:1539:U:H2'	1:X:1540:C:H6	1.60	0.67
1:X:864:C:O2'	1:X:865:A:H5'	1.94	0.67
1:X:1278:A:O2'	1:X:1279:G:O5'	2.10	0.67
1:X:741:G:H21	1:X:743:A:H1'	1.60	0.67
9:G:96:ASP:O	9:G:98:LYS:N	2.28	0.67
16:N:70:ARG:NH1	16:N:70:ARG:HG3	2.10	0.67
20:R:11:ASN:ND2	20:R:11:ASN:O	2.27	0.67
1:X:2827:G:H2'	1:X:2828:C:C6	2.30	0.67
24:V:56:VAL:HA	24:V:59:GLU:CD	2.15	0.67
1:X:2302:G:H1	1:X:2311:U:H5	1.42	0.67
21:S:152:ILE:CD1	21:S:152:ILE:H	2.07	0.67
18:P:24:GLY:O	18:P:127:ILE:HA	1.94	0.67
1:X:1966:C:O2'	1:X:1967:U:H5'	1.94	0.67
1:X:1281:A:H2'	1:X:1282:A:H8	1.60	0.66
9:G:157:PRO:O	9:G:159:SER:N	2.26	0.66
16:N:86:ALA:C	16:N:88:ILE:N	2.48	0.66
6:D:53:ALA:HB1	6:D:57:LEU:HD21	1.76	0.66
12:J:136:GLU:HA	12:J:138:TYR:CE2	2.30	0.66
5:C:5:ASN:N	5:C:5:ASN:HD22	1.92	0.66
1:X:622:U:H2'	1:X:623:G:O4'	1.96	0.66
3:A:84:TYR:CE2	3:A:91:ARG:HG2	2.29	0.66
6:D:73:SER:O	6:D:79:LEU:HB3	1.95	0.66
20:R:93:ARG:HH12	20:R:108:VAL:HG23	1.59	0.66
8:F:125:ALA:O	8:F:128:VAL:HB	1.95	0.66
10:H:97:VAL:O	10:H:97:VAL:HG12	1.94	0.66
21:S:112:LEU:O	21:S:172:LEU:N	2.28	0.66
18:P:44:VAL:HG23	18:P:45:ILE:N	2.08	0.66
1:X:125:A:H5''	1:X:126:C:O4'	1.95	0.66
1:X:2767:C:H1'	4:B:62:PRO:HG3	1.77	0.66
1:X:2286:G:C6	1:X:2287:G:H1'	2.30	0.66
1:X:1605:A:O2'	1:X:1606:C:H5'	1.94	0.66
7:E:42:THR:O	7:E:53:GLU:N	2.21	0.66
1:X:801:A:O2'	1:X:802:A:OP2	2.08	0.66
1:X:1977:C:O2'	1:X:1978:U:H5'	1.94	0.66
10:H:116:ARG:HD2	15:M:38:LYS:HZ3	1.59	0.66
9:G:75:ILE:HG13	9:G:140:GLN:CG	2.24	0.66
1:X:574:C:H4'	1:X:1266:G:O6	1.95	0.66
1:X:820:U:H2'	1:X:821:A:H8	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:63:GLN:OE1	6:D:89:VAL:HG12	1.95	0.66
6:D:5:LYS:O	6:D:8:TYR:HB3	1.94	0.66
21:S:53:ASP:HB3	21:S:61:THR:HG23	1.76	0.66
2:Z:107:C:C2'	2:Z:108:G:H5'	2.26	0.66
1:X:1615:C:OP1	19:Q:35:LYS:N	2.26	0.66
6:D:80:ARG:HD3	6:D:83:MET:SD	2.35	0.66
3:A:70:ARG:C	3:A:72:LYS:H	1.97	0.66
20:R:59:LYS:H	20:R:60:PRO:HD3	1.60	0.66
22:T:42:GLY:O	22:T:57:HIS:HB3	1.96	0.66
5:C:44:SER:CB	5:C:88:PRO:HD3	2.25	0.66
1:X:1392:U:H5''	1:X:1393:G:OP2	1.95	0.66
1:X:1507:A:H5'	3:A:99:ASP:OD1	1.96	0.66
10:H:4:PRO:O	10:H:5:GLN:HB2	1.93	0.66
21:S:103:ARG:NH2	21:S:107:GLU:HG2	2.10	0.66
1:X:1625:A:C4	1:X:1632:A:N3	2.63	0.66
1:X:2471:U:O2'	1:X:2472:U:H5'	1.95	0.66
1:X:741:G:C2	1:X:743:A:C4	2.83	0.66
17:O:93:ILE:O	17:O:93:ILE:HG13	1.94	0.66
14:L:69:ALA:HB2	14:L:102:ALA:HB1	1.78	0.66
5:C:35:LEU:O	5:C:38:ARG:N	2.27	0.66
20:R:15:HIS:C	20:R:16:PHE:HD2	1.97	0.66
20:R:23:ILE:HD11	20:R:81:VAL:HB	1.78	0.66
1:X:1919:A:H1'	1:X:1923:U:N3	2.11	0.66
18:P:50:VAL:HG11	18:P:90:LEU:HB2	1.77	0.66
4:B:182:ILE:O	4:B:183:LEU:HD23	1.96	0.66
1:X:2625:U:H2'	1:X:2626:U:O4'	1.95	0.66
7:E:109:TYR:HE1	7:E:152:ARG:NH2	1.92	0.66
1:X:2185:U:H2'	1:X:2186:G:C8	2.31	0.66
1:X:596:C:N4	11:I:36:GLY:HA3	2.11	0.66
1:X:60:A:OP1	1:X:60:A:H8	1.79	0.66
10:H:83:ARG:NH1	15:M:40:ARG:HG3	2.11	0.66
17:O:56:VAL:CA	17:O:97:GLY:HA3	2.26	0.66
1:X:1276:U:C1'	26:Y:10:LYS:HG3	2.24	0.66
14:L:27:LEU:HB2	14:L:87:VAL:HG22	1.77	0.66
14:L:38:ILE:CD1	14:L:39:TYR:H	2.08	0.66
2:Z:47:A:H5'	2:Z:48:A:OP2	1.95	0.66
12:J:36:ILE:HD12	12:J:131:LYS:HE3	1.77	0.66
12:J:36:ILE:HD11	12:J:103:VAL:HG22	1.76	0.66
1:X:2404:A:H1'	1:X:2406:C:C4	2.31	0.66
19:Q:50:VAL:HG13	19:Q:80:VAL:CG2	2.26	0.66
19:Q:63:LYS:HE2	19:Q:65:VAL:HA	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1524:C:H3'	1:X:1525:A:H5''	1.77	0.66
1:X:2332:G:O2'	22:T:35:ASN:ND2	2.29	0.66
1:X:1885:C:C5'	3:A:244:ARG:HD2	2.25	0.66
1:X:139:A:H2'	1:X:140:G:C8	2.30	0.66
21:S:148:THR:O	21:S:150:GLY:N	2.28	0.66
1:X:530:G:H2'	1:X:531:G:C8	2.30	0.66
12:J:64:LYS:HD3	12:J:108:ALA:O	1.95	0.66
9:G:82:VAL:HB	9:G:150:VAL:HG13	1.76	0.66
1:X:589:C:H4'	16:N:31:GLN:OE1	1.94	0.66
16:N:40:LEU:N	16:N:40:LEU:HD23	2.11	0.66
14:L:60:LYS:O	14:L:61:SER:OG	2.14	0.66
1:X:2247:A:H5''	1:X:2247:A:H8	1.61	0.66
5:C:112:GLN:CD	5:C:116:LYS:HB2	2.16	0.66
1:X:224:G:H4'	1:X:399:G:C5	2.30	0.66
1:X:1812:U:C2	3:A:159:ALA:HB1	2.31	0.66
1:X:1790:G:N2	3:A:155:LEU:HA	2.10	0.66
6:D:45:GLU:HB2	6:D:78:LYS:NZ	2.09	0.66
1:X:1071:U:H1'	1:X:1073:G:H5'	1.78	0.66
1:X:2272:A:C5'	14:L:15:ARG:NH2	2.58	0.66
18:P:89:ARG:HH21	18:P:132:GLY:HA2	1.61	0.66
7:E:7:GLN:N	7:E:69:ARG:HE	1.94	0.66
1:X:124:A:H2'	1:X:125:A:C8	2.30	0.66
1:X:1231:A:H2'	1:X:1232:U:H6	1.61	0.66
17:O:64:GLY:O	17:O:89:ASN:HA	1.96	0.66
3:A:227:ASN:O	3:A:228:PRO:C	2.33	0.66
9:G:159:SER:C	9:G:161:GLN:N	2.49	0.66
12:J:113:GLU:C	12:J:115:ALA:H	1.99	0.66
1:X:343:A:H1'	1:X:346:C:N4	2.10	0.66
1:X:1066:G:H2'	1:X:1067:G:C8	2.31	0.66
12:J:15:ARG:CD	12:J:73:LYS:HZ2	2.09	0.66
18:P:32:ARG:HH12	18:P:119:LYS:HB3	1.60	0.66
13:K:24:GLN:HB3	13:K:44:LEU:CD2	2.25	0.66
1:X:199:A:H61	1:X:209:G:H1'	1.59	0.66
1:X:469:G:O2'	1:X:470:U:OP2	2.14	0.66
1:X:1539:U:H2'	1:X:1540:C:C6	2.30	0.66
1:X:2585:C:O2'	1:X:2586:G:H5'	1.96	0.66
1:X:774:A:C8	1:X:774:A:H3'	2.31	0.66
9:G:115:ALA:O	9:G:118:ALA:HB3	1.95	0.66
16:N:64:ARG:O	16:N:66:ASN:N	2.29	0.66
1:X:540:G:O2'	1:X:542:A:C2	2.44	0.66
21:S:54:ILE:HG22	21:S:54:ILE:O	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:76:U:H2'	2:Z:77:G:O4'	1.95	0.66
1:X:1811:A:H8	1:X:1811:A:OP2	1.77	0.66
20:R:24:VAL:HB	20:R:29:HIS:O	1.96	0.66
10:H:25:LEU:HD11	10:H:52:VAL:CG2	2.24	0.66
21:S:123:VAL:HG23	21:S:161:ALA:HB1	1.77	0.66
4:B:119:ARG:HG3	4:B:119:ARG:NH1	2.07	0.66
4:B:176:ARG:HH21	15:M:16:ILE:HA	1.58	0.66
25:W:38:PRO:CA	25:W:41:ARG:CZ	2.74	0.66
8:F:101:ASN:HB3	8:F:104:GLN:CD	2.15	0.66
1:X:1463:A:O2'	1:X:1464:A:H5'	1.96	0.66
2:Z:123:U:H2'	2:Z:123:U:O2	1.95	0.66
9:G:51:LEU:HD12	9:G:88:VAL:HG21	1.78	0.66
17:O:10:LYS:CG	17:O:11:GLN:H	2.07	0.66
2:Z:19:C:H2'	2:Z:20:A:O4'	1.95	0.66
5:C:7:ILE:CG1	5:C:119:ALA:HB1	2.26	0.66
3:A:96:HIS:CE1	3:A:100:GLY:HA2	2.31	0.66
1:X:1513:U:OP2	1:X:1513:U:H3'	1.95	0.66
20:R:10:HIS:HB2	20:R:44:GLN:NE2	2.10	0.66
1:X:2407:G:H5''	1:X:2408:G:OP1	1.95	0.66
25:W:38:PRO:HB3	25:W:41:ARG:HH22	1.61	0.66
1:X:2185:U:H2'	1:X:2186:G:H8	1.60	0.66
1:X:888:G:H4'	21:S:167:THR:OG1	1.95	0.66
9:G:67:ARG:HD3	9:G:70:PHE:CB	2.25	0.66
14:L:99:ARG:HG3	14:L:100:VAL:H	1.60	0.66
14:L:33:ARG:HH22	14:L:103:LEU:H	1.42	0.66
1:X:1467:U:C4	1:X:1473:U:N3	2.64	0.66
21:S:142:ASN:O	21:S:171:VAL:HB	1.95	0.66
22:T:74:LYS:O	22:T:76:ALA:N	2.29	0.66
22:T:51:VAL:HG23	22:T:81:ILE:HD11	1.78	0.66
1:X:1674:C:H2'	1:X:1675:C:C6	2.30	0.66
15:M:99:VAL:O	15:M:100:ARG:HG2	1.96	0.66
15:M:104:LEU:HA	15:M:106:TYR:CE2	2.31	0.66
10:H:124:MET:O	10:H:127:VAL:HG12	1.96	0.66
18:P:37:LYS:NZ	18:P:64:ALA:N	2.44	0.66
1:X:2240:C:H3'	22:T:17:ASN:OD1	1.96	0.66
1:X:1838:G:H3'	1:X:1839:A:C8	2.27	0.66
8:F:118:ALA:HB1	8:F:123:ALA:CB	2.26	0.66
6:D:126:GLY:O	6:D:127:ASN:O	2.14	0.66
4:B:141:ILE:CG2	4:B:150:VAL:HB	2.26	0.65
9:G:34:PRO:O	9:G:69:ASP:OD1	2.14	0.65
6:D:169:LEU:HA	6:D:172:SER:OG	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:31:VAL:HG23	14:L:32:TYR:N	2.10	0.65
21:S:30:VAL:HG12	21:S:31:SER:N	2.10	0.65
1:X:872:G:H2'	1:X:928:G:C6	2.31	0.65
19:Q:66:GLY:C	19:Q:68:PHE:H	1.97	0.65
1:X:83:A:H2	1:X:98:U:H1'	1.60	0.65
8:F:75:MET:HA	8:F:78:LEU:CB	2.20	0.65
4:B:136:ARG:HG2	4:B:137:ARG:N	2.10	0.65
1:X:393:U:O2'	1:X:394:U:H5'	1.95	0.65
9:G:84:ASN:HB3	9:G:87:GLN:HE22	1.61	0.65
6:D:132:ILE:HG13	6:D:154:ILE:CD1	2.26	0.65
6:D:88:LYS:HG2	6:D:89:VAL:N	2.11	0.65
14:L:60:LYS:HG2	14:L:62:GLY:H	1.61	0.65
25:W:20:VAL:HA	25:W:23:LEU:HD12	1.78	0.65
21:S:21:ALA:HA	21:S:81:VAL:O	1.95	0.65
1:X:1218:C:O2'	11:I:8:PRO:HA	1.94	0.65
1:X:1069:G:H2'	1:X:1070:G:O4'	1.96	0.65
7:E:131:ILE:HG22	7:E:132:ASP:H	1.61	0.65
1:X:1415:C:O2'	1:X:1416:A:H5'	1.95	0.65
1:X:1137:A:H4'	1:X:1138:A:H5''	1.77	0.65
1:X:1056:U:H4'	1:X:1058:G:H1'	1.78	0.65
1:X:1193:G:H2'	1:X:1194:U:O4'	1.96	0.65
16:N:106:PHE:HA	16:N:109:LEU:HD12	1.79	0.65
1:X:2617:G:P	4:B:82:ARG:HH22	2.20	0.65
1:X:589:C:H4'	16:N:31:GLN:CD	2.17	0.65
12:J:70:PHE:HD2	12:J:70:PHE:C	1.99	0.65
1:X:650:U:H2'	1:X:651:C:C6	2.31	0.65
21:S:54:ILE:HG21	21:S:62:PHE:HD1	1.62	0.65
5:C:7:ILE:HG12	5:C:119:ALA:HB1	1.78	0.65
3:A:91:ARG:CD	3:A:198:ASN:HA	2.25	0.65
6:D:71:LYS:O	6:D:72:LYS:HB2	1.97	0.65
10:H:24:VAL:HG12	10:H:42:LYS:HG2	1.76	0.65
1:X:2527:G:C6	1:X:2540:A:N1	2.63	0.65
4:B:2:LYS:HG2	4:B:84:PHE:CE1	2.31	0.65
11:I:76:LYS:HB3	11:I:79:GLN:CD	2.16	0.65
25:W:38:PRO:CB	25:W:41:ARG:NH2	2.59	0.65
21:S:154:LEU:HD13	21:S:158:CYS:O	1.97	0.65
1:X:1422:C:H2'	1:X:1423:A:C8	2.31	0.65
1:X:1716:G:O3'	1:X:1717:A:H4'	1.96	0.65
1:X:2197:U:H2'	1:X:2198:U:H5	1.58	0.65
9:G:44:VAL:O	9:G:83:ILE:HG12	1.97	0.65
16:N:33:ARG:HG3	16:N:33:ARG:HH11	1.61	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:O:36:LYS:HZ1	17:O:55:THR:C	1.99	0.65
26:Y:6:VAL:CG2	26:Y:7:PRO:HD2	2.26	0.65
1:X:2394:G:H5''	11:I:63:ARG:NE	2.10	0.65
6:D:132:ILE:HG21	6:D:138:PHE:CZ	2.31	0.65
6:D:171:GLN:HE22	6:D:177:PHE:HB2	1.60	0.65
14:L:69:ALA:HB1	14:L:106:ALA:HB2	1.78	0.65
1:X:2796:A:C2	1:X:2797:G:C4	2.85	0.65
1:X:1354:A:OP1	1:X:1618:U:H2'	1.97	0.65
1:X:1409:U:H5''	1:X:1410:U:OP2	1.96	0.65
1:X:1515:U:H2'	1:X:1516:A:H8	1.61	0.65
4:B:24:THR:HG21	4:B:188:ILE:HD13	1.78	0.65
1:X:766:A:O2'	1:X:767:G:H5'	1.97	0.65
1:X:1739:G:H2'	1:X:1740:G:H8	1.61	0.65
4:B:69:LYS:HD2	4:B:69:LYS:O	1.97	0.65
15:M:34:ARG:NH1	15:M:81:PHE:HB3	2.11	0.65
17:O:36:LYS:HB3	17:O:39:PHE:HE2	1.60	0.65
1:X:2761:A:H5''	1:X:2762:G:H5'	1.78	0.65
1:X:687:G:O2'	1:X:688:A:H5'	1.94	0.65
11:I:86:THR:OG1	11:I:118:VAL:HG12	1.97	0.65
6:D:34:ILE:HB	6:D:91:LEU:HB2	1.79	0.65
6:D:80:ARG:HD3	6:D:83:MET:CB	2.27	0.65
1:X:1517:C:H2'	1:X:1518:C:H6	1.61	0.65
10:H:3:MET:HB2	10:H:4:PRO:HD2	1.78	0.65
1:X:2654:A:H5'	10:H:41:ASN:HB2	1.79	0.65
30:4:1:MET:HE1	30:4:34:GLN:C	2.17	0.65
30:4:1:MET:HE1	30:4:34:GLN:HA	1.79	0.65
1:X:617:U:O2	1:X:617:U:H3'	1.97	0.65
1:X:2451:G:H2'	1:X:2454:C:H42	1.62	0.65
15:M:43:ASN:ND2	15:M:43:ASN:O	2.21	0.65
1:X:1211:G:H2'	1:X:1212:U:H6	1.61	0.65
2:Z:95:U:H2'	2:Z:96:C:C6	2.32	0.65
1:X:497:C:H5'	1:X:497:C:C6	2.32	0.65
9:G:70:PHE:HB2	16:N:64:ARG:CD	2.27	0.65
1:X:983:G:H3'	1:X:984:A:C5'	2.21	0.65
6:D:60:ILE:CD1	6:D:61:THR:HG23	2.27	0.65
11:I:7:LYS:C	11:I:9:THR:H	2.00	0.65
24:V:32:ALA:C	24:V:34:ALA:H	2.00	0.65
20:R:75:ALA:C	20:R:76:LEU:HD23	2.17	0.65
30:4:11:CYS:HB3	30:4:32:HIS:CE1	2.31	0.65
14:L:20:THR:HG23	14:L:23:ALA:HB3	1.76	0.65
1:X:1840:A:H2'	1:X:1841:G:O4'	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:579:G:H5'	1:X:994:A:H2	1.61	0.65
3:A:213:ARG:C	3:A:215:LEU:N	2.49	0.65
4:B:152:LYS:CB	9:G:106:TYR:HB3	2.26	0.65
17:O:7:THR:O	17:O:8:GLY:C	2.33	0.65
1:X:538:A:C2	1:X:2025:A:C6	2.85	0.65
6:D:36:VAL:HG21	6:D:61:THR:HG21	1.79	0.65
3:A:89:SER:HB2	3:A:201:HIS:CE1	2.31	0.65
24:V:31:GLN:OE1	24:V:37:LEU:HA	1.96	0.65
1:X:1935:A:C2	10:H:22:ILE:HD11	2.31	0.65
18:P:36:ARG:HH22	26:Y:20:ARG:NH2	1.94	0.65
1:X:48:A:C5'	1:X:49:U:H5'	2.26	0.65
11:I:82:ASP:H	11:I:114:ILE:HG21	1.62	0.65
4:B:91:VAL:HG12	4:B:92:ASN:N	2.11	0.65
1:X:2262:C:C2'	1:X:2263:C:H5'	2.26	0.65
4:B:165:VAL:CG1	4:B:189:PRO:HG2	2.27	0.65
15:M:44:ARG:HD2	15:M:46:ARG:HH21	1.62	0.65
9:G:75:ILE:HG13	9:G:140:GLN:HG3	1.77	0.65
16:N:17:VAL:HG11	16:N:36:PHE:HB2	1.79	0.65
1:X:542:A:N6	1:X:2003:A:N3	2.45	0.65
1:X:2551:A:O2'	1:X:2552:C:OP2	2.14	0.65
1:X:2394:G:H2'	1:X:2395:C:C6	2.31	0.65
1:X:2394:G:OP1	11:I:63:ARG:HD2	1.96	0.65
6:D:34:ILE:O	6:D:91:LEU:N	2.28	0.65
2:Z:29:C:O3'	14:L:37:HIS:CD2	2.50	0.65
21:S:67:LYS:CE	21:S:84:TYR:HB2	2.27	0.65
5:C:172:VAL:O	5:C:174:GLY:N	2.29	0.65
23:U:27:ASP:C	23:U:32:ARG:NE	2.50	0.65
7:E:17:VAL:O	7:E:26:VAL:HA	1.95	0.65
21:S:91:PRO:O	21:S:92:VAL:HG13	1.97	0.65
4:B:40:GLN:O	4:B:41:THR:HG23	1.97	0.65
22:T:53:MET:HG3	22:T:58:THR:O	1.97	0.65
1:X:2331:A:C2	22:T:33:ALA:O	2.49	0.65
13:K:79:VAL:HA	13:K:83:VAL:HG23	1.78	0.65
1:X:1125:G:O2'	1:X:1126:A:H5'	1.96	0.65
1:X:2018:G:O2'	1:X:2019:C:OP1	2.15	0.65
24:V:51:ALA:O	24:V:54:ASN:HB2	1.96	0.65
5:C:46:ARG:HG2	5:C:46:ARG:HH11	1.62	0.65
16:N:64:ARG:O	16:N:67:ALA:N	2.29	0.65
11:I:94:GLU:CA	11:I:97:ARG:HE	2.09	0.65
2:Z:46:G:C4'	6:D:92:ARG:HH12	2.09	0.65
14:L:38:ILE:HD12	14:L:39:TYR:H	1.61	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:113:GLU:HA	12:J:116:LYS:HB2	1.77	0.65
12:J:36:ILE:HB	12:J:131:LYS:HG2	1.77	0.65
5:C:117:LEU:HD23	5:C:117:LEU:C	2.18	0.65
1:X:1444:C:H2'	1:X:1445:A:H8	1.62	0.65
20:R:105:ARG:HH12	20:R:113:THR:H	1.45	0.65
20:R:93:ARG:HG2	20:R:108:VAL:HA	1.79	0.65
20:R:98:ILE:C	20:R:100:ASP:N	2.49	0.65
22:T:43:THR:HG22	22:T:46:LYS:HD2	1.79	0.65
1:X:1724:C:O2'	1:X:1725:C:H5'	1.96	0.65
24:V:14:PHE:CE2	24:V:57:LYS:HB2	2.32	0.65
18:P:38:VAL:HG13	18:P:64:ALA:HB1	1.78	0.65
1:X:1242:A:H2'	1:X:1243:G:C8	2.27	0.65
7:E:109:TYR:O	7:E:111:HIS:N	2.29	0.65
1:X:1800:A:C6	1:X:1802:A:C6	2.85	0.65
22:T:23:VAL:HG13	22:T:38:VAL:HG22	1.79	0.65
4:B:48:GLN:O	4:B:48:GLN:HG2	1.96	0.65
1:X:2039:G:N2	26:Y:4:HIS:O	2.30	0.65
1:X:1783:G:OP1	3:A:206:LEU:HD12	1.97	0.65
5:C:58:MET:HG3	5:C:59:TYR:N	2.12	0.65
9:G:65:LYS:HE3	9:G:66:HIS:HD2	1.61	0.65
17:O:10:LYS:HG3	17:O:11:GLN:NE2	2.08	0.65
6:D:10:ASP:C	6:D:12:VAL:N	2.50	0.65
1:X:1186:G:H4'	1:X:1187:A:O5'	1.96	0.65
9:G:101:THR:HA	9:G:113:GLU:HB3	1.79	0.64
16:N:52:ASN:C	16:N:54:LYS:N	2.48	0.64
6:D:97:TYR:HD2	6:D:100:LEU:HD23	1.63	0.64
21:S:42:ALA:O	21:S:45:GLN:HG2	1.96	0.64
5:C:158:ARG:NH2	5:C:171:PRO:HA	2.12	0.64
3:A:91:ARG:O	3:A:107:ALA:HB3	1.97	0.64
1:X:1442:C:N4	1:X:1585:A:H5'	2.12	0.64
19:Q:55:THR:HG22	19:Q:78:ALA:HA	1.78	0.64
1:X:1354:A:H4'	19:Q:56:MET:HG2	1.78	0.64
3:A:101:GLU:OE2	3:A:102:LYS:N	2.31	0.64
20:R:22:VAL:O	20:R:33:THR:OG1	2.13	0.64
1:X:118:U:H1'	1:X:143:A:C8	2.33	0.64
1:X:1880:G:H2'	1:X:1881:U:H6	1.62	0.64
1:X:2170:C:C3'	1:X:2171:U:H5''	2.26	0.64
1:X:403:A:H3'	1:X:403:A:P	2.37	0.64
1:X:2285:U:H5'	1:X:2286:G:O4'	1.97	0.64
1:X:2078:G:H2'	1:X:2079:A:H8	1.62	0.64
1:X:498:C:O2	18:P:74:SER:HB2	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:830:C:O2'	1:X:852:U:H5''	1.97	0.64
9:G:161:GLN:O	9:G:162:LYS:HG3	1.98	0.64
6:D:111:ILE:HB	6:D:114:PHE:CB	2.23	0.64
14:L:54:ALA:HB3	14:L:75:LEU:HB2	1.80	0.64
21:S:3:LEU:HD11	21:S:33:ALA:N	2.13	0.64
1:X:673:G:H5'	5:C:93:TYR:CE1	2.32	0.64
11:I:11:GLY:H	11:I:14:LYS:HB3	1.61	0.64
3:A:140:ALA:O	3:A:142:VAL:HG13	1.97	0.64
5:C:162:ARG:O	5:C:162:ARG:HG2	1.95	0.64
13:K:11:ASN:ND2	13:K:17:ARG:NH1	2.39	0.64
18:P:66:GLU:O	18:P:67:PRO:C	2.34	0.64
7:E:54:ARG:HG3	7:E:57:ASP:OD2	1.97	0.64
1:X:1039:A:C5	1:X:1136:G:N2	2.64	0.64
4:B:56:GLU:O	4:B:59:VAL:HG23	1.97	0.64
1:X:2633:A:H4'	1:X:2634:G:OP1	1.96	0.64
11:I:132:ALA:O	11:I:136:ALA:HB3	1.97	0.64
1:X:2196:U:H2'	1:X:2197:U:N1	2.12	0.64
17:O:33:VAL:CG1	17:O:57:GLN:HG2	2.27	0.64
1:X:1018:C:C5	1:X:1019:U:H5	2.15	0.64
14:L:62:GLY:O	14:L:64:LYS:NZ	2.28	0.64
14:L:80:ALA:C	14:L:82:LYS:H	1.99	0.64
12:J:116:LYS:HD3	12:J:116:LYS:O	1.98	0.64
3:A:108:PRO:HB3	3:A:143:HIS:HE1	1.60	0.64
3:A:145:LEU:O	3:A:153:ALA:HA	1.97	0.64
3:A:95:LEU:HD12	3:A:105:ILE:HG12	1.80	0.64
20:R:98:ILE:HG22	20:R:99:VAL:N	2.09	0.64
1:X:490:A:N6	1:X:492:G:C2	2.66	0.64
10:H:4:PRO:O	10:H:5:GLN:CB	2.45	0.64
24:V:7:ARG:O	24:V:9:LEU:N	2.30	0.64
12:J:92:GLU:O	12:J:93:TYR:HB3	1.96	0.64
21:S:117:VAL:O	21:S:117:VAL:HG23	1.97	0.64
1:X:449:C:O2	1:X:449:C:H2'	1.98	0.64
1:X:1142:G:H4'	9:G:103:TYR:HE2	1.62	0.64
16:N:82:GLY:O	16:N:116:ALA:HB3	1.98	0.64
6:D:34:ILE:HA	6:D:155:THR:O	1.98	0.64
6:D:65:PRO:HB2	6:D:87:ILE:CG2	2.28	0.64
12:J:36:ILE:CB	12:J:131:LYS:HE2	2.27	0.64
4:B:9:ILE:HD11	4:B:27:LEU:HD22	1.80	0.64
19:Q:42:ILE:HD13	19:Q:42:ILE:C	2.18	0.64
1:X:91:A:H3'	1:X:91:A:OP2	1.97	0.64
13:K:31:GLU:O	13:K:33:ARG:N	2.27	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:333:A:C3'	5:C:162:ARG:NH1	2.59	0.64
13:K:14:SER:O	13:K:15:SER:C	2.35	0.64
1:X:2571:G:N1	1:X:2582:G:C6	2.65	0.64
7:E:35:VAL:HB	7:E:37:TYR:CE1	2.32	0.64
16:N:61:TRP:HZ3	16:N:94:VAL:H	1.43	0.64
6:D:7:LYS:O	6:D:12:VAL:HG21	1.98	0.64
6:D:4:LEU:CA	6:D:7:LYS:HB2	2.25	0.64
21:S:61:THR:O	21:S:61:THR:HG22	1.97	0.64
19:Q:71:GLN:O	19:Q:73:ASN:OD1	2.15	0.64
24:V:37:LEU:CD2	24:V:39:GLN:H	2.10	0.64
20:R:41:PRO:HG2	20:R:42:ARG:H	1.62	0.64
20:R:70:GLU:OE2	20:R:72:ARG:HD2	1.97	0.64
1:X:88:G:H3'	1:X:89:A:C5'	2.23	0.64
1:X:1943:A:H2'	1:X:1944:C:O4'	1.97	0.64
26:Y:16:ARG:NH1	26:Y:20:ARG:HH12	1.93	0.64
1:X:925:U:O2'	1:X:926:C:H5'	1.98	0.64
1:X:1865:C:H2'	1:X:1866:G:O4'	1.96	0.64
1:X:1004:A:OP1	16:N:50:ARG:NH1	2.31	0.64
1:X:1016:C:H2'	1:X:1017:C:C6	2.31	0.64
1:X:2037:A:C2	1:X:2595:C:N3	2.66	0.64
6:D:10:ASP:O	6:D:14:PRO:HD2	1.97	0.64
25:W:47:VAL:CG2	25:W:51:LEU:HD21	2.28	0.64
12:J:68:ARG:HH11	12:J:68:ARG:HB3	1.61	0.64
5:C:151:VAL:HG11	5:C:175:VAL:CG1	2.27	0.64
3:A:202:LYS:C	3:A:204:ILE:H	2.00	0.64
1:X:718:A:H62	1:X:739:G:H1'	1.61	0.64
1:X:1314:A:C2'	1:X:1315:A:H3'	2.28	0.64
1:X:490:A:HO2'	1:X:491:A:P	2.20	0.64
10:H:25:LEU:HD12	10:H:25:LEU:H	1.63	0.64
18:P:76:LYS:O	18:P:80:LEU:HG	1.98	0.64
1:X:53:G:H2'	1:X:54:G:O5'	1.98	0.64
4:B:68:ALA:O	4:B:70:ALA:N	2.24	0.64
1:X:428:A:H2'	1:X:429:C:C6	2.32	0.64
6:D:127:ASN:HA	6:D:158:THR:HG23	1.79	0.64
1:X:1118:G:H2'	1:X:1119:U:C5'	2.28	0.64
16:N:75:ASN:HD21	16:N:77:SER:HB3	1.63	0.64
1:X:1812:U:H3	3:A:200:GLU:CA	2.09	0.64
1:X:1656:U:O2'	1:X:1657:A:H5''	1.98	0.64
10:H:99:ILE:O	10:H:106:ARG:HG3	1.97	0.64
13:K:30:ARG:HG2	13:K:31:GLU:HG3	1.79	0.64
22:T:72:LYS:HG3	22:T:78:PHE:CE1	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:11:ASN:HD21	13:K:17:ARG:HH12	1.45	0.64
24:V:10:GLN:O	24:V:13:ASP:N	2.29	0.64
24:V:16:LYS:O	24:V:20:ALA:HB2	1.97	0.64
1:X:1104:G:H1'	1:X:1110:G:N2	2.12	0.64
22:T:3:HIS:HD2	22:T:5:LYS:HB2	1.63	0.64
1:X:2509:A:C3'	1:X:2510:A:H5''	2.27	0.64
1:X:2256:G:OP2	12:J:86:LYS:HD2	1.97	0.64
1:X:215:G:N2	1:X:216:U:H1'	2.12	0.64
7:E:107:ILE:HG12	7:E:107:ILE:O	1.97	0.64
1:X:308:C:O2'	1:X:309:G:H5'	1.98	0.64
16:N:88:ILE:CG1	17:O:49:GLU:HB2	2.25	0.64
1:X:542:A:N1	1:X:2004:U:H2'	2.13	0.64
1:X:691:C:O2'	1:X:692:C:H5'	1.97	0.64
21:S:64:ALA:HA	21:S:85:MET:HA	1.78	0.64
1:X:1217:U:O2'	1:X:1218:C:H5'	1.98	0.64
1:X:223:C:H2'	1:X:224:G:H5'	1.80	0.64
20:R:17:LYS:HB2	20:R:20:ASP:OD1	1.98	0.64
20:R:35:LYS:NZ	20:R:35:LYS:HB3	2.12	0.64
1:X:1225:G:H2'	1:X:1249:G:N2	2.13	0.64
1:X:2570:C:O2'	1:X:2571:G:H5'	1.98	0.64
8:F:91:THR:O	8:F:94:LYS:NZ	2.30	0.64
4:B:4:ILE:HG12	4:B:5:LEU:N	2.12	0.64
1:X:482:A:C2'	1:X:483:A:H5'	2.27	0.64
1:X:1597:A:H2'	1:X:1598:C:C6	2.33	0.64
10:H:9:ASP:O	10:H:96:ALA:N	2.27	0.64
25:W:14:GLY:HA2	25:W:17:VAL:CG2	2.28	0.64
1:X:583:C:H4'	1:X:584:A:O5'	1.96	0.64
1:X:1591:U:H2'	1:X:1592:U:O4'	1.98	0.64
16:N:56:ASP:O	16:N:57:PHE:C	2.34	0.64
6:D:40:LEU:CG	6:D:150:ARG:HE	2.03	0.64
1:X:664:C:O5'	1:X:666:U:OP2	2.16	0.64
1:X:1812:U:N3	3:A:200:GLU:HA	2.11	0.64
19:Q:29:VAL:HG23	19:Q:30:SER:N	2.11	0.64
19:Q:6:ILE:CG2	19:Q:7:LEU:N	2.61	0.64
1:X:1467:U:C6	1:X:1467:U:H3'	2.32	0.64
1:X:1071:U:C1'	1:X:1073:G:H5'	2.27	0.64
3:A:169:GLU:O	3:A:171:ASP:N	2.31	0.64
4:B:134:TRP:O	4:B:135:HIS:O	2.15	0.64
1:X:328:A:H2'	1:X:329:C:H6	1.61	0.64
14:L:14:ARG:O	14:L:17:VAL:HG12	1.98	0.64
1:X:1830:C:H41	1:X:1881:U:H3'	1.62	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:74:SER:HA	18:P:77:ALA:HB3	1.79	0.64
1:X:734:G:H2'	1:X:735:G:C8	2.33	0.64
1:X:1026:U:O2'	1:X:1027:C:H5'	1.98	0.64
9:G:118:ALA:C	9:G:120:SER:H	2.00	0.64
11:I:86:THR:C	11:I:88:PHE:H	2.01	0.64
4:B:84:PHE:CD1	4:B:86:PRO:HD2	2.33	0.64
4:B:121:ASN:O	4:B:122:PHE:O	2.16	0.64
1:X:2564:U:H3	33:X:2911:ZLD:H21A	1.63	0.64
1:X:1090:C:H2'	1:X:1091:C:C6	2.33	0.64
1:X:704:G:O2'	1:X:705:C:H5'	1.98	0.64
1:X:2294:U:H4'	6:D:127:ASN:ND2	2.13	0.64
1:X:1760:G:O2'	1:X:1761:G:H5'	1.98	0.64
2:Z:116:C:H2'	2:Z:117:G:O4'	1.98	0.64
1:X:389:G:H2'	1:X:390:U:C6	2.32	0.64
1:X:954:U:OP2	11:I:38:LYS:NZ	2.28	0.63
1:X:1018:C:H3'	1:X:1019:U:H5''	1.80	0.63
1:X:814:G:O2'	1:X:815:A:OP1	2.16	0.63
6:D:5:LYS:C	6:D:8:TYR:H	2.01	0.63
14:L:86:GLN:O	14:L:87:VAL:HG23	1.98	0.63
2:Z:31:A:H1'	2:Z:60:A:H61	1.61	0.63
5:C:176:ASN:O	5:C:180:ILE:HG22	1.98	0.63
5:C:150:LEU:HA	5:C:187:VAL:HB	1.79	0.63
1:X:2227:C:H5''	1:X:2228:U:OP2	1.98	0.63
1:X:219:G:N2	1:X:231:G:H2'	2.12	0.63
3:A:133:LEU:O	3:A:136:VAL:HB	1.98	0.63
20:R:105:ARG:HH22	20:R:112:LYS:CA	2.10	0.63
30:4:18:ARG:CG	30:4:23:VAL:HG13	2.28	0.63
16:N:5:LYS:C	16:N:7:GLY:N	2.47	0.63
1:X:1465:G:H2'	1:X:1466:C:C6	2.34	0.63
1:X:1340:C:H2'	1:X:1341:G:O4'	1.98	0.63
13:K:16:ALA:O	13:K:18:VAL:N	2.31	0.63
7:E:44:ARG:NH2	7:E:51:LEU:HB3	2.13	0.63
18:P:107:ILE:CG2	18:P:107:ILE:O	2.46	0.63
15:M:50:PHE:HE2	15:M:70:LYS:HB2	1.62	0.63
16:N:74:MET:SD	16:N:110:VAL:HG13	2.38	0.63
1:X:589:C:H4'	16:N:31:GLN:NE2	2.12	0.63
16:N:88:ILE:HG23	17:O:48:GLY:HA3	1.80	0.63
1:X:2753:C:O2'	1:X:2754:C:H5'	1.98	0.63
5:C:28:HIS:HA	11:I:15:ASP:OD2	1.99	0.63
1:X:171:G:N2	1:X:179:U:H1'	2.14	0.63
3:A:143:HIS:CD2	3:A:192:THR:HB	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:111:GLY:C	20:R:112:LYS:HD2	2.19	0.63
1:X:492:G:H2'	1:X:517:A:N1	2.13	0.63
1:X:1122:A:H2'	1:X:1123:G:C4'	2.23	0.63
1:X:2299:A:H4'	1:X:2300:G:C2	2.33	0.63
1:X:2271:C:H4'	1:X:2354:G:O4'	1.97	0.63
1:X:946:U:C2	1:X:947:C:C6	2.86	0.63
1:X:1453:A:H2'	1:X:1454:U:O4'	1.98	0.63
16:N:71:LEU:HG	16:N:72:HIS:ND1	2.12	0.63
1:X:2284:U:H2'	1:X:2285:U:C4'	2.27	0.63
13:K:55:ALA:C	13:K:57:GLY:H	2.00	0.63
3:A:224:SER:OG	3:A:225:ALA:N	2.30	0.63
23:U:50:ALA:HB3	23:U:52:ARG:NH1	2.13	0.63
1:X:2180:U:H2'	1:X:2203:G:N2	2.12	0.63
4:B:101:LYS:HE3	4:B:169:ASN:O	1.98	0.63
17:O:16:GLU:H	17:O:95:ILE:HB	1.63	0.63
17:O:40:VAL:O	17:O:43:GLU:N	2.31	0.63
1:X:2395:C:C2'	1:X:2396:C:H5''	2.27	0.63
1:X:638:A:H4'	1:X:639:G:OP1	1.97	0.63
5:C:153:ASP:C	5:C:154:ASP:OD1	2.37	0.63
1:X:844:G:O3'	11:I:41:SER:OG	2.12	0.63
1:X:1437:A:H2'	1:X:1438:G:C8	2.32	0.63
1:X:1812:U:N3	3:A:200:GLU:HB2	2.12	0.63
6:D:74:ILE:CA	6:D:79:LEU:HB2	2.29	0.63
1:X:2291:U:OP1	6:D:71:LYS:HB2	1.98	0.63
20:R:105:ARG:HH22	20:R:112:LYS:N	1.95	0.63
13:K:100:VAL:CG2	13:K:112:LEU:HD22	2.26	0.63
26:Y:45:ILE:HD13	26:Y:57:VAL:HG22	1.80	0.63
7:E:72:VAL:O	7:E:76:VAL:HG23	1.97	0.63
1:X:114:C:H2'	1:X:115:G:C8	2.33	0.63
1:X:1501:C:H2'	1:X:1502:G:O4'	1.98	0.63
1:X:613:A:H5''	1:X:668:A:H61	1.62	0.63
25:W:14:GLY:CA	25:W:17:VAL:HG23	2.27	0.63
1:X:1560:A:C6	1:X:1561:A:C6	2.86	0.63
2:Z:28:A:N7	2:Z:29:C:N3	2.47	0.63
5:C:98:GLN:HA	5:C:101:GLN:HG3	1.80	0.63
1:X:1217:U:O2'	11:I:13:ARG:NE	2.28	0.63
1:X:1789:U:C4	1:X:1811:A:C2	2.86	0.63
19:Q:40:ASP:O	19:Q:44:GLN:HG2	1.99	0.63
6:D:70:ALA:C	6:D:72:LYS:H	2.01	0.63
1:X:331:U:O2'	5:C:162:ARG:HD3	1.98	0.63
22:T:53:MET:HE2	22:T:59:LEU:HD11	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:35:C:H2'	2:Z:36:A:H8	1.63	0.63
1:X:1193:G:C2'	1:X:1194:U:H5''	2.29	0.63
1:X:2336:G:N2	1:X:2339:A:OP2	2.25	0.63
5:C:45:THR:C	5:C:47:THR:H	2.02	0.63
16:N:24:PHE:CE2	16:N:39:LEU:HD21	2.33	0.63
1:X:1175:A:C2	1:X:1176:U:C2	2.86	0.63
6:D:100:LEU:C	6:D:104:ILE:HG13	2.18	0.63
14:L:32:TYR:H	14:L:38:ILE:CD1	2.12	0.63
5:C:124:ASP:OD2	5:C:136:TRP:HE3	1.80	0.63
23:U:34:THR:CG2	23:U:35:THR:N	2.61	0.63
19:Q:38:ILE:O	19:Q:42:ILE:HG22	1.98	0.63
19:Q:55:THR:CG2	19:Q:78:ALA:HA	2.28	0.63
6:D:75:SER:H	6:D:79:LEU:HD22	1.63	0.63
4:B:37:LYS:HD2	4:B:42:ASP:OD2	1.98	0.63
4:B:33:ILE:HG21	4:B:47:VAL:HG11	1.79	0.63
1:X:2546:G:H2'	1:X:2547:C:C6	2.33	0.63
7:E:37:TYR:CD2	7:E:68:THR:HG23	2.33	0.63
8:F:116:LEU:HD22	8:F:118:ALA:CB	2.28	0.63
1:X:134:G:H2'	1:X:135:U:H5'	1.80	0.63
10:H:100:ASN:OD1	10:H:100:ASN:O	2.17	0.63
15:M:36:ASP:HB2	15:M:87:LEU:O	1.98	0.63
21:S:15:ASP:HB2	21:S:16:GLU:OE2	1.97	0.63
21:S:4:THR:OG1	21:S:5:ALA:N	2.31	0.63
1:X:1442:C:H41	1:X:1585:A:H5'	1.63	0.63
19:Q:63:LYS:HB2	19:Q:70:GLY:CA	2.29	0.63
10:H:16:ALA:HA	10:H:58:ALA:HB1	1.81	0.63
1:X:1741:G:C2'	1:X:1742:G:H5'	2.28	0.63
1:X:1850:G:H1	1:X:1867:A:C2'	2.11	0.63
1:X:1389:C:O2'	1:X:1390:G:H5'	1.98	0.63
1:X:625:A:H2'	1:X:625:A:N3	2.14	0.63
16:N:75:ASN:OD1	16:N:78:THR:HB	1.99	0.63
16:N:93:LYS:NZ	17:O:5:ILE:HG22	2.12	0.63
1:X:2761:A:H5''	1:X:2762:G:C5'	2.29	0.63
12:J:70:PHE:CE2	12:J:71:PRO:O	2.52	0.63
6:D:47:SER:HA	6:D:50:ILE:CG1	2.29	0.63
12:J:39:GLU:OE2	12:J:129:GLN:N	2.31	0.63
1:X:2796:A:OP2	13:K:3:HIS:HE1	1.80	0.63
1:X:2375:G:H2'	1:X:2376:G:H8	1.63	0.63
20:R:108:VAL:C	20:R:110:SER:H	2.00	0.63
13:K:100:VAL:CG1	13:K:101:GLY:H	2.03	0.63
1:X:1953:A:C5'	1:X:1954:A:OP1	2.45	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2858:A:H3'	1:X:2859:U:H5'	1.81	0.63
7:E:6:LYS:HB3	7:E:69:ARG:NH2	2.14	0.63
1:X:1385:C:H2'	1:X:1386:A:O4'	1.97	0.63
1:X:1452:U:C2'	1:X:1453:A:H5'	2.28	0.63
1:X:2847:G:H2'	1:X:2848:A:C8	2.34	0.63
1:X:1303:U:H2'	1:X:1304:U:H6	1.63	0.63
23:U:78:ILE:O	23:U:79:GLU:O	2.17	0.63
10:H:133:VAL:HG12	10:H:133:VAL:O	1.98	0.63
5:C:46:ARG:O	5:C:51:VAL:HG23	1.99	0.63
16:N:92:ARG:HD3	16:N:92:ARG:H	1.64	0.63
26:Y:9:LYS:O	26:Y:10:LYS:C	2.36	0.63
6:D:94:GLU:O	6:D:98:VAL:HG23	1.99	0.63
2:Z:17:A:H1'	2:Z:112:A:C8	2.34	0.63
12:J:66:TYR:HB2	12:J:106:GLU:O	1.99	0.63
1:X:2247:A:H5''	1:X:2247:A:C8	2.33	0.63
1:X:2795:A:N1	15:M:2:GLN:N	2.46	0.63
5:C:7:ILE:HG21	5:C:121:ASP:C	2.19	0.63
1:X:1404:C:H5'	1:X:1405:A:OP2	1.99	0.63
1:X:1673:C:OP1	4:B:136:ARG:HD2	1.98	0.63
11:I:81:GLN:HB3	11:I:114:ILE:HG22	1.81	0.63
1:X:1135:C:C2	1:X:1136:G:C8	2.87	0.63
4:B:60:ASN:HB2	4:B:63:MET:HB2	1.81	0.63
1:X:764:A:C4	1:X:802:A:C2	2.87	0.63
1:X:831:G:H5'	1:X:852:U:OP1	1.99	0.63
1:X:308:C:H2'	1:X:309:G:O4'	1.99	0.63
23:U:62:LEU:HD21	23:U:67:LEU:HA	1.80	0.63
4:B:141:ILE:HG21	4:B:150:VAL:HB	1.80	0.63
16:N:60:LEU:HD21	16:N:64:ARG:NE	2.13	0.63
1:X:1233:A:O2'	1:X:1234:C:OP1	2.15	0.63
11:I:94:GLU:HA	11:I:97:ARG:HE	1.64	0.63
1:X:2394:G:H2'	1:X:2395:C:H6	1.64	0.63
5:C:128:ALA:O	5:C:130:THR:N	2.32	0.63
3:A:142:VAL:HA	3:A:194:GLY:N	2.14	0.63
3:A:33:LEU:HD21	3:A:63:ARG:CZ	2.29	0.63
30:4:3:VAL:HG22	30:4:35:ARG:HB3	1.81	0.63
21:S:94:VAL:CB	21:S:125:PRO:HB3	2.25	0.63
13:K:10:LEU:HD12	13:K:17:ARG:HG2	1.81	0.63
12:J:44:LYS:HB2	12:J:47:GLN:CG	2.26	0.63
26:Y:35:GLN:C	26:Y:37:HIS:H	2.01	0.63
1:X:1107:A:H3'	1:X:1108:U:H5''	1.79	0.63
21:S:20:ALA:CB	21:S:80:HIS:ND1	2.62	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:4:24:LEU:HD12	30:4:24:LEU:H	1.63	0.63
1:X:2074:U:H1'	23:U:48:LYS:HE3	1.80	0.62
23:U:50:ALA:HB3	23:U:52:ARG:HH22	1.63	0.62
1:X:2617:G:O2'	1:X:2618:A:H8	1.76	0.62
14:L:68:ALA:O	14:L:71:VAL:CG1	2.46	0.62
19:Q:5:ASP:OD2	19:Q:5:ASP:N	2.31	0.62
20:R:23:ILE:H	20:R:23:ILE:CD1	2.10	0.62
20:R:93:ARG:HG2	20:R:93:ARG:HH11	1.64	0.62
1:X:493:A:H4'	20:R:56:LYS:HD2	1.81	0.62
7:E:167:GLU:HG3	7:E:169:ILE:HG13	1.81	0.62
13:K:33:ARG:HA	13:K:114:GLU:HA	1.81	0.62
18:P:38:VAL:O	18:P:39:ARG:C	2.37	0.62
1:X:143:A:H2'	1:X:144:U:C6	2.34	0.62
1:X:777:A:O2'	1:X:778:G:OP1	2.16	0.62
1:X:2082:C:C2'	1:X:2083:G:H5''	2.28	0.62
12:J:12:LYS:O	12:J:13:GLN:CB	2.46	0.62
15:M:55:ILE:O	15:M:56:ALA:CB	2.43	0.62
15:M:50:PHE:CD1	15:M:79:ARG:HG3	2.32	0.62
1:X:2661:G:O6	1:X:2708:U:H1'	1.99	0.62
1:X:986:A:O3'	16:N:48:ARG:NH1	2.33	0.62
17:O:26:GLN:HG3	17:O:63:HIS:NE2	2.14	0.62
17:O:56:VAL:O	17:O:57:GLN:HG3	1.98	0.62
1:X:822:G:H2'	1:X:823:U:O4'	1.99	0.62
11:I:73:GLU:HG3	11:I:101:ARG:HG3	1.81	0.62
11:I:85:ASP:HA	11:I:116:ARG:NH2	2.13	0.62
20:R:40:LEU:HB3	20:R:43:ASP:HB2	1.80	0.62
1:X:594:G:H2'	1:X:1264:C:H42	1.63	0.62
1:X:683:A:C5'	11:I:45:LYS:H	2.11	0.62
1:X:1380:C:C2'	1:X:1381:G:H5'	2.29	0.62
7:E:107:ILE:N	7:E:107:ILE:HD13	2.15	0.62
1:X:166:G:H1	1:X:182:G:HO2'	1.46	0.62
1:X:2219:U:O2'	1:X:2220:A:H5'	1.99	0.62
6:D:106:ILE:HG21	6:D:139:PRO:HB3	1.81	0.62
3:A:217:ARG:CG	3:A:218:LYS:HG3	2.29	0.62
1:X:2665:G:H2'	1:X:2666:U:H6	1.64	0.62
9:G:97:ASP:O	9:G:99:VAL:HG23	2.00	0.62
16:N:80:ILE:O	16:N:84:LYS:N	2.30	0.62
1:X:1233:A:H4'	1:X:1234:C:OP2	1.98	0.62
2:Z:29:C:O3'	14:L:37:HIS:HD2	1.81	0.62
1:X:1255:A:C6	1:X:1256:C:N4	2.67	0.62
6:D:69:LYS:HG2	6:D:84:PRO:HA	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:80:LEU:HD21	18:P:87:GLU:HB3	1.81	0.62
20:R:5:SER:O	20:R:6:ALA:CB	2.47	0.62
4:B:21:ILE:CD1	4:B:21:ILE:N	2.62	0.62
25:W:14:GLY:O	25:W:15:ASN:C	2.38	0.62
1:X:800:U:H3'	1:X:804:C:H41	1.64	0.62
1:X:1778:U:H2'	1:X:1779:C:C6	2.33	0.62
17:O:78:VAL:O	17:O:78:VAL:CG2	2.40	0.62
6:D:29:PRO:HB3	6:D:160:ALA:HB2	1.80	0.62
14:L:37:HIS:CE1	14:L:57:ALA:HB2	2.34	0.62
14:L:68:ALA:O	14:L:71:VAL:N	2.32	0.62
25:W:2:LYS:HD2	25:W:32:ARG:O	1.99	0.62
5:C:147:LYS:HB3	5:C:183:HIS:CB	2.29	0.62
1:X:1790:G:H21	3:A:155:LEU:HD23	1.63	0.62
10:H:23:ARG:HB3	10:H:23:ARG:NH2	2.13	0.62
10:H:23:ARG:C	10:H:23:ARG:NH2	2.52	0.62
16:N:10:ARG:CG	16:N:13:ARG:HH22	2.01	0.62
1:X:2409:A:H4'	1:X:2410:U:OP2	1.99	0.62
1:X:1068:A:H62	1:X:1098:G:P	2.22	0.62
4:B:38:THR:HG22	4:B:40:GLN:N	2.03	0.62
3:A:165:VAL:HG12	3:A:166:GLN:N	2.14	0.62
15:M:28:ARG:HB2	15:M:29:PRO:CD	2.28	0.62
9:G:90:LEU:HD23	9:G:94:LYS:HB2	1.81	0.62
9:G:90:LEU:HD23	9:G:94:LYS:CB	2.28	0.62
1:X:1777:A:H5''	1:X:1778:U:OP2	2.00	0.62
1:X:774:A:C8	1:X:774:A:O5'	2.52	0.62
16:N:86:ALA:O	16:N:88:ILE:N	2.33	0.62
17:O:36:LYS:HD3	17:O:54:TYR:HB2	1.82	0.62
11:I:62:LYS:HE2	11:I:64:GLY:CA	2.24	0.62
6:D:50:ILE:C	6:D:52:LYS:H	2.03	0.62
1:X:2355:A:H2	14:L:89:PHE:CE1	2.16	0.62
21:S:31:SER:C	21:S:32:PHE:HD2	2.02	0.62
2:Z:15:A:C2'	2:Z:16:U:H5''	2.29	0.62
13:K:3:HIS:ND1	13:K:5:LYS:CD	2.63	0.62
5:C:107:ALA:CB	5:C:180:ILE:HD13	2.30	0.62
5:C:112:GLN:HA	5:C:116:LYS:HB3	1.80	0.62
1:X:663:G:H3'	1:X:664:C:H5''	1.80	0.62
1:X:2736:U:O2'	1:X:2737:A:C5'	2.46	0.62
24:V:1:MET:SD	24:V:2:LYS:HE2	2.38	0.62
1:X:1919:A:H62	1:X:1946:U:H3	1.45	0.62
7:E:7:GLN:N	7:E:69:ARG:NE	2.47	0.62
24:V:48:ARG:C	24:V:50:VAL:N	2.52	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1775:A:H4'	1:X:1776:A:O5'	2.00	0.62
1:X:2777:A:C6	18:P:134:LYS:HB2	2.35	0.62
23:U:53:GLU:CD	23:U:57:VAL:HA	2.19	0.62
3:A:54:ILE:HD12	3:A:55:GLY:N	2.14	0.62
15:M:22:ARG:HH11	15:M:22:ARG:HG2	1.65	0.62
1:X:1177:U:H2'	1:X:1178:C:C6	2.35	0.62
6:D:34:ILE:HG22	6:D:91:LEU:HD12	1.80	0.62
25:W:4:LYS:HG2	25:W:52:GLU:O	1.99	0.62
20:R:22:VAL:HG12	20:R:23:ILE:N	2.14	0.62
20:R:84:VAL:HG22	20:R:88:THR:O	1.99	0.62
1:X:592:G:P	16:N:10:ARG:NH1	2.72	0.62
1:X:1468:A:O5'	1:X:1468:A:H8	1.82	0.62
7:E:154:PRO:HG3	7:E:162:VAL:O	1.99	0.62
21:S:103:ARG:HH11	21:S:108:VAL:CG2	2.13	0.62
13:K:16:ALA:O	13:K:17:ARG:C	2.37	0.62
2:Z:66:G:H2'	2:Z:67:C:O4'	1.99	0.62
17:O:29:ALA:O	17:O:30:GLY:C	2.37	0.62
1:X:1416:A:C2	1:X:1417:C:C2	2.87	0.62
1:X:421:G:H2'	1:X:422:C:C6	2.32	0.62
1:X:1420:A:H2'	1:X:1421:U:C6	2.34	0.62
1:X:1971:C:C2'	1:X:1972:G:H5'	2.30	0.62
1:X:102:C:H2'	1:X:103:U:C6	2.35	0.62
3:A:46:ARG:HD3	3:A:46:ARG:O	1.99	0.62
9:G:72:PRO:C	9:G:74:MET:N	2.53	0.62
16:N:17:VAL:HA	16:N:20:ARG:HD2	1.81	0.62
1:X:1036:G:O2'	1:X:1037:U:OP2	2.14	0.62
1:X:956:A:C2	1:X:2427:A:N3	2.67	0.62
6:D:34:ILE:HG23	6:D:155:THR:O	2.00	0.62
12:J:69:ILE:HD13	12:J:104:MET:HG3	1.80	0.62
12:J:117:GLU:C	12:J:119:PHE:H	2.03	0.62
1:X:1658:A:N6	1:X:1659:G:C2	2.68	0.62
3:A:99:ASP:N	3:A:99:ASP:OD2	2.30	0.62
20:R:22:VAL:HG13	20:R:81:VAL:O	2.00	0.62
3:A:173:VAL:O	3:A:174:ILE:HD13	1.99	0.62
14:L:9:ARG:O	14:L:12:ARG:N	2.33	0.62
33:X:2911:ZLD:F18	33:X:2911:ZLD:H20	1.90	0.62
23:U:9:GLY:H	23:U:14:VAL:CG2	2.12	0.62
1:X:562:G:H2'	1:X:563:U:O4'	1.99	0.62
1:X:765:C:H4'	1:X:766:A:O5'	2.00	0.62
1:X:719:A:H2'	1:X:720:A:O4'	2.00	0.62
1:X:2035:G:H4'	4:B:143:GLN:O	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:30:LYS:CB	16:N:30:LYS:NZ	2.63	0.62
16:N:52:ASN:C	16:N:54:LYS:H	2.01	0.62
6:D:66:ILE:O	6:D:66:ILE:HG23	1.99	0.62
12:J:57:ARG:HH11	12:J:57:ARG:CG	2.06	0.62
3:A:92:ILE:HD11	3:A:104:TYR:HB3	1.82	0.62
19:Q:61:LYS:N	19:Q:72:ARG:HD3	2.13	0.62
21:S:103:ARG:CZ	21:S:107:GLU:HB3	2.30	0.62
1:X:1671:A:O2'	1:X:1672:A:H5'	1.99	0.62
1:X:1074:G:H4'	8:F:135:MET:SD	2.39	0.62
1:X:2271:C:P	14:L:18:ARG:NH2	2.68	0.62
1:X:356:A:C2'	1:X:357:A:H8	2.09	0.62
4:B:167:VAL:CG1	4:B:170:LEU:HD11	2.29	0.62
1:X:17:G:H2'	1:X:18:U:C6	2.35	0.62
1:X:19:C:H2'	1:X:20:C:H6	1.65	0.62
11:I:135:ALA:O	11:I:136:ALA:HB2	1.99	0.62
1:X:827:C:OP1	17:O:82:ARG:HA	1.98	0.62
1:X:1873:A:N7	1:X:1874:G:C8	2.68	0.62
15:M:57:ILE:HG13	15:M:57:ILE:O	1.98	0.62
14:L:104:ALA:O	14:L:108:ARG:HB2	1.99	0.62
2:Z:53:G:H5''	14:L:64:LYS:HD2	1.79	0.62
5:C:110:SER:HA	5:C:113:GLU:CD	2.20	0.62
1:X:223:C:O2'	1:X:398:C:H5'	2.00	0.62
22:T:30:VAL:HA	22:T:65:GLY:O	2.00	0.62
4:B:75:THR:HG23	4:B:76:ARG:H	1.65	0.62
1:X:2043:A:H62	5:C:68:ARG:HH12	1.48	0.62
9:G:48:GLY:HA2	9:G:89:ALA:HB2	1.82	0.62
9:G:84:ASN:O	9:G:152:ALA:O	2.18	0.62
17:O:35:LEU:HD22	17:O:36:LYS:N	2.15	0.62
25:W:12:ARG:HG2	25:W:12:ARG:HH11	1.64	0.62
3:A:72:LYS:HE2	3:A:97:TYR:CG	2.34	0.62
7:E:84:THR:OG1	7:E:132:ASP:OD2	2.16	0.62
1:X:2726:U:C4'	7:E:139:GLN:HG2	2.30	0.62
15:M:104:LEU:O	15:M:106:TYR:N	2.33	0.62
1:X:2299:A:H5'	1:X:2300:G:C5	2.35	0.62
1:X:216:U:H5''	1:X:601:A:N6	2.14	0.62
15:M:5:ILE:HD13	15:M:7:ILE:HB	1.82	0.62
1:X:2326:C:H2'	1:X:2327:U:H6	1.64	0.62
1:X:761:G:C8	18:P:110:ALA:HB1	2.35	0.62
1:X:497:C:H6	1:X:497:C:H5'	1.63	0.62
9:G:162:LYS:N	9:G:163:PRO:HD2	2.14	0.61
9:G:47:SER:O	9:G:49:VAL:HG23	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:82:GLY:HA3	16:N:117:ARG:HB2	1.82	0.61
16:N:56:ASP:OD2	16:N:56:ASP:N	2.31	0.61
1:X:983:G:H5'	1:X:984:A:H5'	1.82	0.61
1:X:2396:C:H6	1:X:2396:C:H5'	1.64	0.61
18:P:27:VAL:HB	18:P:125:THR:HG22	1.82	0.61
6:D:171:GLN:C	6:D:173:MET:H	2.03	0.61
24:V:29:ARG:O	24:V:32:ALA:HB3	2.00	0.61
1:X:322:A:O2'	1:X:343:A:C4'	2.48	0.61
10:H:97:VAL:O	10:H:99:ILE:HG23	2.00	0.61
30:4:1:MET:SD	30:4:2:LYS:C	2.78	0.61
1:X:1071:U:N1	1:X:1073:G:H5'	2.15	0.61
22:T:43:THR:HB	22:T:46:LYS:NZ	2.15	0.61
14:L:92:GLY:O	14:L:93:SER:OG	2.12	0.61
1:X:1431:U:H4'	1:X:1604:A:H4'	1.82	0.61
1:X:360:A:H3'	1:X:361:G:C8	2.35	0.61
1:X:474:G:C6	1:X:478:G:O6	2.53	0.61
23:U:54:ASN:C	23:U:56:GLN:N	2.53	0.61
6:D:16:LEU:O	6:D:20:PHE:N	2.33	0.61
2:Z:46:G:H4'	6:D:92:ARG:HH12	1.65	0.61
2:Z:18:G:H2'	2:Z:19:C:H6	1.65	0.61
12:J:133:VAL:C	12:J:134:LYS:HD2	2.21	0.61
1:X:870:C:H5'	22:T:69:PHE:CE2	2.35	0.61
5:C:112:GLN:NE2	5:C:116:LYS:HB2	2.15	0.61
5:C:7:ILE:HG12	5:C:119:ALA:CB	2.30	0.61
8:F:106:LEU:O	8:F:110:LYS:HG3	1.99	0.61
21:S:133:GLU:OE2	21:S:135:VAL:HG23	1.99	0.61
1:X:1674:C:H2'	1:X:1675:C:H6	1.64	0.61
13:K:49:GLU:O	13:K:52:ILE:HG12	2.01	0.61
4:B:4:ILE:CD1	4:B:28:ALA:HB1	2.27	0.61
26:Y:32:GLU:CG	26:Y:37:HIS:O	2.47	0.61
1:X:402:A:H8	1:X:2392:G:H4'	1.64	0.61
1:X:2780:A:H2'	1:X:2781:G:C8	2.35	0.61
1:X:1804:U:H2'	1:X:1805:G:H8	1.63	0.61
19:Q:88:ILE:O	19:Q:89:GLU:O	2.17	0.61
1:X:1492:A:N1	1:X:1531:C:C5	2.68	0.61
1:X:917:U:C2'	1:X:918:A:H5'	2.30	0.61
1:X:2060:A:H1'	1:X:2414:A:O4'	2.00	0.61
1:X:1764:A:H2'	1:X:1765:C:H5'	1.82	0.61
1:X:1582:A:OP1	3:A:211:ARG:NH2	2.33	0.61
10:H:119:ARG:NH2	15:M:41:GLU:OE2	2.33	0.61
9:G:151:TYR:CB	9:G:157:PRO:HB3	2.31	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:158:HIS:HA	9:G:161:GLN:CG	2.31	0.61
16:N:60:LEU:HD21	16:N:64:ARG:HE	1.64	0.61
16:N:62:ILE:O	16:N:66:ASN:ND2	2.32	0.61
1:X:2594:U:H5'	1:X:2594:U:C6	2.28	0.61
1:X:951:G:H3'	1:X:952:A:H5''	1.81	0.61
11:I:65:PHE:CG	11:I:65:PHE:O	2.52	0.61
6:D:22:TYR:HD2	6:D:27:ALA:CB	2.13	0.61
12:J:27:TYR:HA	12:J:103:VAL:HG21	1.81	0.61
1:X:2058:U:H2'	1:X:2217:G:N2	2.15	0.61
1:X:1494:G:O2'	1:X:1574:A:H2	1.83	0.61
4:B:119:ARG:HH11	4:B:119:ARG:CG	2.07	0.61
22:T:3:HIS:HB2	22:T:5:LYS:CD	2.30	0.61
1:X:1345:G:C5	1:X:1625:A:C5	2.88	0.61
11:I:18:ARG:HB2	11:I:21:ARG:HB2	1.81	0.61
1:X:2442:C:H2'	1:X:2443:C:H6	1.65	0.61
3:A:54:ILE:HD12	3:A:55:GLY:H	1.65	0.61
21:S:36:ARG:O	21:S:39:PHE:N	2.32	0.61
12:J:36:ILE:HB	12:J:131:LYS:CG	2.30	0.61
1:X:1219:C:H4'	11:I:7:LYS:N	2.15	0.61
8:F:76:SER:HB2	8:F:112:LYS:HG2	1.81	0.61
10:H:5:GLN:HG3	10:H:20:MET:HE2	1.81	0.61
3:A:68:LYS:HG2	3:A:69:ARG:N	2.15	0.61
1:X:1329:U:H2'	1:X:1330:G:H8	1.65	0.61
1:X:2827:G:C6	1:X:2828:C:C4	2.89	0.61
1:X:2571:G:C2	1:X:2582:G:N1	2.68	0.61
11:I:77:LEU:HD23	11:I:112:GLY:O	1.99	0.61
18:P:106:LEU:CD1	18:P:116:ILE:HG12	2.29	0.61
1:X:1538:A:H2'	1:X:1539:U:C6	2.34	0.61
10:H:83:ARG:HD2	10:H:89:ILE:HD11	1.83	0.61
9:G:105:GLY:O	9:G:110:LEU:HG	2.00	0.61
9:G:155:THR:O	9:G:157:PRO:N	2.33	0.61
9:G:156:HIS:HB2	9:G:157:PRO:CD	2.30	0.61
11:I:90:ARG:HA	11:I:121:HIS:CE1	2.35	0.61
2:Z:43:G:H5''	6:D:66:ILE:CD1	2.30	0.61
2:Z:58:G:H5'	6:D:24:SER:OG	2.00	0.61
21:S:65:LEU:O	21:S:84:TYR:N	2.30	0.61
1:X:2228:U:H5''	1:X:2229:G:OP2	2.00	0.61
19:Q:78:ALA:C	19:Q:79:ILE:HD12	2.20	0.61
6:D:79:LEU:O	6:D:80:ARG:HB3	1.99	0.61
10:H:15:GLY:O	10:H:58:ALA:HB1	2.00	0.61
1:X:2526:U:H2'	1:X:2527:G:C8	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:824:U:H1'	1:X:1264:C:C1'	2.30	0.61
1:X:1467:U:C3'	1:X:1467:U:C6	2.84	0.61
7:E:125:VAL:HG22	7:E:131:ILE:HD12	1.81	0.61
1:X:333:A:C8	5:C:162:ARG:NH1	2.68	0.61
26:Y:15:LYS:HA	26:Y:18:MET:HG2	1.82	0.61
22:T:5:LYS:H	22:T:5:LYS:HD2	1.63	0.61
26:Y:51:TYR:CD2	26:Y:54:GLY:O	2.54	0.61
1:X:1539:U:O2'	1:X:1540:C:H5'	2.00	0.61
1:X:1077:U:H2'	1:X:1079:G:OP2	2.00	0.61
1:X:2053:G:C2	1:X:2054:A:C4	2.89	0.61
1:X:1781:C:H2'	1:X:1782:A:C5	2.35	0.61
9:G:155:THR:HG23	9:G:156:HIS:N	2.15	0.61
1:X:1162:A:H2'	1:X:1163:C:C6	2.35	0.61
1:X:1202:U:H2'	1:X:1203:A:H8	1.65	0.61
6:D:14:PRO:O	6:D:17:MET:N	2.33	0.61
12:J:50:ALA:O	12:J:54:VAL:HG23	2.00	0.61
11:I:11:GLY:N	11:I:14:LYS:HB3	2.16	0.61
1:X:171:G:C2	1:X:179:U:H1'	2.35	0.61
3:A:128:GLY:H	3:A:193:ILE:HB	1.66	0.61
19:Q:15:LYS:O	19:Q:19:ALA:HB2	2.01	0.61
1:X:654:A:N3	1:X:655:A:H5''	2.15	0.61
13:K:100:VAL:CG1	13:K:101:GLY:N	2.54	0.61
15:M:99:VAL:HG13	15:M:100:ARG:N	2.14	0.61
1:X:1075:C:H2'	1:X:1076:U:H5'	1.81	0.61
1:X:2509:A:H2'	1:X:2510:A:H5''	1.82	0.61
1:X:55:A:H2'	1:X:56:C:H6	1.65	0.61
1:X:698:A:H2'	1:X:786:U:O4	2.01	0.61
1:X:787:A:H5''	3:A:48:ARG:NH2	2.14	0.61
4:B:168:GLN:NE2	4:B:202:ALA:HB3	2.16	0.61
1:X:1141:U:O2	4:B:149:ARG:NH2	2.34	0.61
1:X:2356:A:H2'	1:X:2357:A:C8	2.36	0.61
12:J:98:VAL:CG1	12:J:99:LYS:H	2.13	0.61
5:C:172:VAL:O	5:C:173:ALA:C	2.38	0.61
23:U:20:ARG:CB	23:U:43:ARG:HD2	2.23	0.61
21:S:113:VAL:HA	21:S:171:VAL:HA	1.82	0.61
10:H:109:ARG:HA	10:H:129:LEU:HD12	1.81	0.61
1:X:1061:A:O2'	1:X:1062:G:H5'	2.01	0.61
1:X:2021:G:H2'	1:X:2022:C:H6	1.65	0.61
1:X:2766:U:OP1	4:B:69:LYS:NZ	2.32	0.61
1:X:1281:A:O2'	1:X:2592:U:C5	2.51	0.61
15:M:35:VAL:CG2	15:M:90:GLN:HG2	2.31	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:151:TYR:HB3	9:G:157:PRO:CG	2.30	0.61
1:X:5:A:H2'	1:X:6:A:C8	2.35	0.61
1:X:813:A:C2	1:X:815:A:C8	2.89	0.61
12:J:66:TYR:O	12:J:106:GLU:CD	2.39	0.61
5:C:3:GLN:OE1	5:C:116:LYS:HG3	2.01	0.61
1:X:224:G:H4'	1:X:399:G:C6	2.35	0.61
3:A:146:GLU:CD	3:A:150:GLY:O	2.39	0.61
20:R:105:ARG:HH22	20:R:111:GLY:C	2.03	0.61
7:E:16:THR:CG2	7:E:18:ASN:HD21	2.06	0.61
1:X:1096:A:H4'	1:X:1097:A:OP1	1.98	0.61
13:K:14:SER:O	13:K:16:ALA:N	2.33	0.61
24:V:7:ARG:HH11	24:V:8:ASN:HA	1.66	0.61
1:X:2482:A:C1'	33:X:2911:ZLD:C13	2.79	0.61
1:X:2366:U:C1'	22:T:41:ARG:NH1	2.64	0.61
1:X:1109:A:H2'	1:X:1110:G:H5'	1.83	0.61
7:E:55:PRO:O	7:E:57:ASP:OD1	2.19	0.61
18:P:107:ILE:HD13	18:P:108:PRO:HD2	1.81	0.61
1:X:579:G:H5'	1:X:994:A:C2	2.35	0.61
13:K:103:ARG:HD3	13:K:110:MET:SD	2.41	0.61
9:G:49:VAL:HG11	9:G:54:LEU:HD13	1.81	0.61
16:N:52:ASN:O	16:N:56:ASP:OD2	2.18	0.61
14:L:54:ALA:N	14:L:75:LEU:HD13	2.12	0.61
6:D:80:ARG:O	6:D:80:ARG:HD2	2.01	0.61
1:X:490:A:O2'	1:X:491:A:H5'	2.00	0.61
30:4:1:MET:HE1	30:4:34:GLN:CA	2.31	0.61
1:X:1125:G:H2'	1:X:1126:A:H8	1.66	0.61
3:A:243:GLY:HA2	3:A:244:ARG:NH1	2.15	0.61
21:S:154:LEU:HD22	21:S:158:CYS:HB2	1.82	0.61
2:Z:35:C:H2'	2:Z:36:A:C8	2.36	0.61
21:S:19:ILE:HG23	21:S:79:ILE:C	2.21	0.61
1:X:469:G:O2'	1:X:470:U:P	2.59	0.61
1:X:737:C:O5'	1:X:737:C:H6	1.82	0.61
13:K:55:ALA:O	13:K:57:GLY:N	2.33	0.61
14:L:35:SER:OG	14:L:36:LYS:N	2.33	0.61
4:B:103:ASP:OD2	4:B:202:ALA:HB3	2.01	0.61
11:I:94:GLU:CB	11:I:97:ARG:HH11	2.13	0.61
6:D:100:LEU:HG	6:D:104:ILE:CD1	2.28	0.61
21:S:54:ILE:HD12	21:S:85:MET:HE1	1.82	0.61
1:X:677:G:O2'	1:X:678:G:H5'	2.01	0.61
20:R:53:VAL:HG21	20:R:74:LEU:HD22	1.83	0.61
1:X:2655:C:P	10:H:43:ARG:HH12	2.24	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1113:C:H2'	1:X:1114:A:H8	1.64	0.61
21:S:93:GLU:OE2	21:S:123:VAL:HG22	2.01	0.61
4:B:37:LYS:HA	4:B:42:ASP:CG	2.21	0.61
4:B:116:VAL:N	4:B:136:ARG:HE	1.99	0.61
1:X:1744:G:O6	1:X:1747:G:C6	2.53	0.61
1:X:971:A:N6	12:J:83:ARG:HH22	1.94	0.61
1:X:216:U:H2'	1:X:217:U:C6	2.35	0.61
1:X:1301:U:C2'	1:X:1302:C:OP1	2.47	0.61
19:Q:69:ILE:O	19:Q:69:ILE:HD12	2.01	0.61
17:O:40:VAL:HG23	17:O:40:VAL:O	1.98	0.60
17:O:57:GLN:O	17:O:58:ALA:HB2	2.00	0.60
17:O:93:ILE:HG13	17:O:95:ILE:CD1	2.31	0.60
11:I:88:PHE:CG	11:I:90:ARG:HD2	2.36	0.60
2:Z:57:U:O2'	6:D:24:SER:HB3	2.01	0.60
20:R:28:LYS:O	20:R:29:HIS:HB2	1.99	0.60
1:X:322:A:HO2'	1:X:323:G:P	2.24	0.60
8:F:105:VAL:CG1	8:F:128:VAL:HG11	2.26	0.60
1:X:1448:A:C2	1:X:1449:C:C2	2.89	0.60
1:X:1333:G:N2	1:X:1344:C:C5	2.67	0.60
4:B:181:LEU:HD13	15:M:16:ILE:HD11	1.82	0.60
1:X:1288:A:HO2'	1:X:1289:A:C4'	2.14	0.60
1:X:433:G:N2	1:X:434:C:H1'	2.16	0.60
21:S:20:ALA:HB3	21:S:80:HIS:CB	2.31	0.60
1:X:1778:U:H2'	1:X:1779:C:H6	1.65	0.60
9:G:108:GLY:N	9:G:110:LEU:HD21	2.16	0.60
17:O:16:GLU:N	17:O:95:ILE:HB	2.17	0.60
11:I:80:LEU:HA	11:I:84:GLU:HB3	1.83	0.60
1:X:1255:A:H2'	1:X:1256:C:C6	2.36	0.60
20:R:57:ASN:ND2	20:R:59:LYS:HG3	2.15	0.60
1:X:1691:G:H21	1:X:1694:A:H61	1.49	0.60
1:X:2528:G:H2'	1:X:2529:G:C8	2.34	0.60
1:X:1115:C:O2'	1:X:1116:U:H5'	2.01	0.60
7:E:121:VAL:HG12	7:E:122:THR:N	2.16	0.60
22:T:80:SER:O	22:T:81:ILE:HD13	2.00	0.60
24:V:9:LEU:HD22	24:V:13:ASP:OD2	2.01	0.60
1:X:1698:C:O2'	1:X:1753:A:C2'	2.43	0.60
12:J:77:LYS:HG3	12:J:78:LYS:H	1.66	0.60
7:E:37:TYR:CD2	7:E:68:THR:HA	2.36	0.60
2:Z:39:C:H5'	2:Z:40:C:OP2	2.01	0.60
1:X:2294:U:H2'	1:X:2295:C:C6	2.36	0.60
1:X:698:A:H4'	1:X:699:G:O5'	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:425:A:H3'	1:X:426:C:C6	2.35	0.60
4:B:147:PRO:C	4:B:149:ARG:H	2.05	0.60
5:C:74:VAL:HG23	5:C:75:PRO:N	2.16	0.60
9:G:33:ILE:H	9:G:33:ILE:CD1	2.14	0.60
12:J:53:ILE:O	12:J:57:ARG:HG3	2.01	0.60
5:C:131:LYS:O	5:C:134:ILE:HG12	2.01	0.60
19:Q:28:TRP:CE3	19:Q:75:ARG:HD2	2.36	0.60
1:X:1516:A:O2'	3:A:102:LYS:HE2	2.01	0.60
20:R:86:PRO:HD3	20:R:90:LYS:HZ3	1.64	0.60
1:X:2217:G:H5''	1:X:2218:G:OP1	2.02	0.60
1:X:1468:A:P	1:X:1468:A:H8	2.24	0.60
4:B:38:THR:N	4:B:42:ASP:OD1	2.23	0.60
1:X:1725:C:H2'	1:X:1726:C:H6	1.66	0.60
4:B:88:GLY:O	4:B:89:ASP:CG	2.40	0.60
1:X:1923:U:H1'	1:X:1924:C:H5	1.66	0.60
1:X:2580:C:H4'	1:X:2581:A:OP1	2.01	0.60
12:J:15:ARG:CB	12:J:73:LYS:HZ2	2.14	0.60
1:X:632:A:C2	1:X:633:G:C8	2.89	0.60
1:X:683:A:O5'	11:I:45:LYS:HA	2.01	0.60
1:X:1188:A:H3'	1:X:1189:G:N7	2.16	0.60
1:X:2238:G:OP2	22:T:14:ARG:NH2	2.34	0.60
3:A:50:THR:HG22	3:A:51:SER:N	2.16	0.60
1:X:2615:U:OP1	4:B:80:GLU:N	2.32	0.60
1:X:758:G:C2'	1:X:759:C:H5'	2.29	0.60
4:B:163:GLU:HG3	4:B:164:ARG:H	1.66	0.60
11:I:80:LEU:HA	11:I:84:GLU:CB	2.31	0.60
11:I:93:LEU:O	11:I:97:ARG:HG3	2.00	0.60
23:U:32:ARG:NE	23:U:32:ARG:N	2.49	0.60
1:X:177:U:O2	1:X:178:C:H1'	2.02	0.60
1:X:347:C:H4'	20:R:15:HIS:CD2	2.36	0.60
20:R:57:ASN:N	20:R:68:GLY:O	2.33	0.60
8:F:110:LYS:HA	8:F:113:MET:CE	2.30	0.60
4:B:49:ILE:HD13	4:B:49:ILE:C	2.20	0.60
18:P:64:ALA:C	18:P:67:PRO:HD2	2.21	0.60
1:X:118:U:O2	1:X:118:U:H2'	2.02	0.60
13:K:45:ARG:HD3	13:K:97:ILE:HD11	1.83	0.60
1:X:1662:G:H5''	1:X:1663:C:H5'	1.83	0.60
1:X:1193:G:C3'	1:X:1194:U:H5''	2.30	0.60
26:Y:49:CYS:SG	26:Y:51:TYR:HB2	2.40	0.60
1:X:2698:G:O6	1:X:2699:G:C6	2.54	0.60
1:X:2219:U:C2	1:X:2220:A:C8	2.89	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:566:U:O2'	1:X:567:G:H5'	2.01	0.60
15:M:51:GLU:O	15:M:51:GLU:HG3	2.00	0.60
9:G:108:GLY:N	9:G:110:LEU:HD23	2.15	0.60
9:G:33:ILE:O	9:G:69:ASP:OD1	2.20	0.60
1:X:1167:A:H62	16:N:48:ARG:HG2	1.63	0.60
1:X:2422:C:C2'	1:X:2423:G:H5'	2.31	0.60
1:X:5:A:H2'	1:X:6:A:H8	1.67	0.60
1:X:2395:C:H2'	1:X:2396:C:C5'	2.31	0.60
21:S:41:ARG:O	21:S:45:GLN:NE2	2.35	0.60
4:B:26:VAL:HG12	4:B:27:LEU:N	2.16	0.60
5:C:173:ALA:CB	5:C:193:LEU:HD13	2.30	0.60
11:I:53:ARG:C	11:I:55:ARG:H	2.02	0.60
6:D:74:ILE:O	6:D:75:SER:O	2.19	0.60
20:R:14:LEU:CD2	20:R:41:PRO:HA	2.30	0.60
20:R:63:THR:HG22	20:R:64:ASN:HD22	1.65	0.60
8:F:113:MET:N	8:F:114:PRO:HD2	2.15	0.60
7:E:25:LYS:HG2	7:E:27:LYS:HE3	1.82	0.60
7:E:126:PRO:HD2	7:E:131:ILE:HD13	1.84	0.60
7:E:141:VAL:O	7:E:145:ALA:N	2.28	0.60
21:S:103:ARG:HH11	21:S:108:VAL:HG23	1.67	0.60
1:X:632:A:H2'	1:X:633:G:C5'	2.30	0.60
21:S:88:TYR:O	21:S:127:PRO:HB3	2.00	0.60
1:X:877:G:H21	1:X:879:A:H61	1.49	0.60
25:W:36:ASP:O	25:W:41:ARG:NH1	2.34	0.60
4:B:12:THR:OG1	15:M:17:GLU:OE1	2.19	0.60
6:D:106:ILE:O	6:D:110:ARG:HB2	2.01	0.60
1:X:915:C:H2'	1:X:916:U:C6	2.36	0.60
14:L:55:SER:O	14:L:56:SER:HB2	2.02	0.60
1:X:2804:G:H4'	15:M:4:HIS:CE1	2.36	0.60
16:N:79:PHE:CD2	16:N:79:PHE:C	2.74	0.60
17:O:54:TYR:N	17:O:54:TYR:CD1	2.68	0.60
11:I:62:LYS:HG2	11:I:63:ARG:N	2.16	0.60
21:S:5:ALA:O	21:S:6:LYS:HB3	2.02	0.60
12:J:19:THR:HG22	12:J:99:LYS:NZ	2.16	0.60
1:X:2056:C:O2'	1:X:2057:U:H5''	1.99	0.60
1:X:1263:G:H5''	16:N:6:THR:CG2	2.30	0.60
7:E:95:ARG:HA	7:E:128:PRO:O	2.01	0.60
7:E:85:ILE:HD12	7:E:141:VAL:HG12	1.83	0.60
21:S:137:ASP:CG	21:S:138:VAL:N	2.54	0.60
22:T:31:VAL:O	22:T:32:LYS:HB2	2.01	0.60
1:X:115:G:C6	1:X:117:A:N6	2.69	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:U:10:LYS:HD3	23:U:10:LYS:C	2.22	0.60
30:4:27:CYS:SG	30:4:28:SER:N	2.74	0.60
1:X:2781:G:O2'	1:X:2782:G:H5''	2.02	0.60
1:X:977:G:O2'	1:X:978:U:H5'	2.02	0.60
4:B:112:GLY:O	4:B:159:HIS:HA	2.01	0.60
1:X:2189:A:H2'	1:X:2190:A:H8	1.66	0.60
1:X:2708:U:H2'	1:X:2709:C:C5	2.37	0.60
9:G:169:GLN:HB2	9:G:170:PRO:CD	2.31	0.60
1:X:954:U:OP2	11:I:38:LYS:HG3	2.02	0.60
16:N:85:ARG:HB3	16:N:116:ALA:CB	2.12	0.60
1:X:1162:A:H2'	1:X:1163:C:H6	1.67	0.60
6:D:10:ASP:N	6:D:14:PRO:CD	2.64	0.60
21:S:66:VAL:HG13	21:S:81:VAL:CG1	2.32	0.60
19:Q:20:MET:HA	19:Q:24:VAL:O	2.02	0.60
20:R:105:ARG:HH12	20:R:113:THR:N	1.99	0.60
1:X:2726:U:H2'	1:X:2727:G:H5'	1.82	0.60
26:Y:56:GLN:NE2	26:Y:56:GLN:N	2.48	0.60
18:P:72:LEU:HD13	18:P:126:ILE:HD13	1.84	0.60
1:X:559:C:H2'	1:X:560:G:C5'	2.32	0.60
1:X:789:G:H4'	1:X:790:A:O5'	2.01	0.60
1:X:1504:G:H2'	1:X:1505:U:O2	2.02	0.60
1:X:862:A:H2'	1:X:863:C:H6	1.66	0.60
4:B:103:ASP:OD2	4:B:168:GLN:HG2	2.02	0.60
17:O:15:SER:HA	17:O:95:ILE:CB	2.29	0.60
1:X:983:G:H5''	1:X:984:A:C5'	2.32	0.60
12:J:8:THR:HG22	12:J:70:PHE:CE2	2.37	0.60
1:X:2395:C:H2'	1:X:2396:C:H5'	1.83	0.60
14:L:73:LYS:CE	14:L:109:GLU:HG2	2.30	0.60
14:L:68:ALA:O	14:L:70:ALA:N	2.34	0.60
25:W:12:ARG:HH11	25:W:12:ARG:CG	2.15	0.60
1:X:872:G:H2'	1:X:928:G:N1	2.17	0.60
3:A:93:ALA:N	3:A:105:ILE:O	2.25	0.60
3:A:76:ASN:HA	3:A:117:VAL:O	2.01	0.60
1:X:717:G:C2'	1:X:739:G:H22	2.13	0.60
19:Q:76:LYS:HG2	19:Q:76:LYS:O	2.01	0.60
4:B:116:VAL:H	4:B:136:ARG:CD	2.13	0.60
24:V:55:THR:O	24:V:59:GLU:HG3	2.01	0.60
1:X:2043:A:OP2	5:C:65:GLY:HA2	2.01	0.60
4:B:176:ARG:O	4:B:179:GLU:HB3	2.02	0.60
11:I:30:ALA:HB3	11:I:34:HIS:ND1	2.17	0.60
1:X:2625:U:O5'	1:X:2625:U:H6	1.85	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:143:TYR:CE1	6:D:148:LYS:HA	2.37	0.60
16:N:47:TYR:O	16:N:49:ASP:N	2.35	0.60
1:X:627:A:OP1	5:C:34:GLN:HG2	2.02	0.60
11:I:11:GLY:N	11:I:14:LYS:CB	2.65	0.60
3:A:65:ILE:HG23	3:A:92:ILE:HD11	1.83	0.60
19:Q:38:ILE:O	19:Q:39:LYS:C	2.38	0.60
1:X:490:A:O2'	1:X:491:A:C5'	2.49	0.60
1:X:2526:U:C4	1:X:2545:A:N7	2.69	0.60
1:X:594:G:H2'	1:X:1264:C:N4	2.17	0.60
4:B:121:ASN:O	4:B:122:PHE:C	2.39	0.60
1:X:2823:G:O2'	1:X:2824:C:H6	1.85	0.60
26:Y:52:TYR:O	26:Y:53:ASP:HB2	2.01	0.60
1:X:2851:G:OP1	15:M:8:ASN:HA	2.02	0.60
1:X:2262:C:O2'	1:X:2263:C:H5'	2.02	0.60
4:B:177:ALA:C	4:B:179:GLU:N	2.53	0.60
1:X:1770:U:C5	1:X:1775:A:N7	2.69	0.60
1:X:2414:A:C2	1:X:2415:G:C4	2.89	0.60
10:H:119:ARG:HH11	10:H:119:ARG:HG3	1.66	0.60
15:M:34:ARG:HD2	15:M:81:PHE:CZ	2.36	0.60
9:G:49:VAL:HG22	9:G:170:PRO:HG2	1.84	0.60
16:N:51:ARG:CG	16:N:51:ARG:NH1	2.60	0.60
11:I:102:LYS:O	11:I:104:ARG:N	2.34	0.60
6:D:133:LYS:O	6:D:135:GLN:N	2.35	0.60
6:D:31:ILE:HD12	6:D:97:TYR:OH	2.02	0.60
2:Z:46:G:H4'	6:D:92:ARG:NH1	2.16	0.60
14:L:33:ARG:CZ	14:L:103:LEU:HB2	2.32	0.60
14:L:90:ASP:O	14:L:91:ARG:O	2.20	0.60
1:X:875:G:H2'	1:X:876:A:O4'	2.02	0.60
3:A:92:ILE:HD13	3:A:104:TYR:HB3	1.83	0.60
1:X:450:C:H2'	1:X:451:A:H8	1.65	0.60
7:E:9:ILE:HB	7:E:50:LEU:HB3	1.82	0.60
1:X:2306:A:H2'	1:X:2307:A:O4'	2.02	0.60
1:X:199:A:H5''	1:X:200:A:OP2	2.01	0.60
1:X:2284:U:H2'	1:X:2285:U:O4'	2.01	0.60
1:X:446:C:H2'	1:X:447:U:O4'	2.02	0.60
1:X:1699:A:H61	1:X:1723:U:H3	1.49	0.60
16:N:110:VAL:O	16:N:113:SER:HB3	2.01	0.59
17:O:56:VAL:C	17:O:57:GLN:HG3	2.23	0.59
1:X:1238:A:H5'	17:O:85:GLY:H	1.67	0.59
1:X:1276:U:O4'	26:Y:10:LYS:HG3	2.02	0.59
1:X:467:U:O2'	1:X:468:A:OP1	2.19	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:494:A:O2'	20:R:68:GLY:HA3	2.01	0.59
20:R:22:VAL:HG11	20:R:80:LYS:HZ1	1.67	0.59
10:H:7:ARG:NH1	10:H:20:MET:HE3	2.17	0.59
10:H:55:VAL:HG23	10:H:68:ASP:O	2.01	0.59
7:E:127:GLU:HG2	7:E:130:ARG:HB3	1.84	0.59
7:E:98:LEU:HG	7:E:99:THR:N	2.16	0.59
1:X:2726:U:C2'	1:X:2727:G:H5'	2.32	0.59
4:B:84:PHE:CD1	4:B:86:PRO:CD	2.85	0.59
21:S:101:THR:O	21:S:138:VAL:HG22	2.02	0.59
21:S:138:VAL:CG2	21:S:139:THR:N	2.65	0.59
3:A:184:ARG:CG	3:A:184:ARG:HH11	2.15	0.59
14:L:12:ARG:O	14:L:16:LYS:HB2	2.02	0.59
1:X:2081:U:H2'	1:X:2082:C:C6	2.37	0.59
1:X:2294:U:H2'	1:X:2295:C:H6	1.66	0.59
1:X:1608:U:H2'	1:X:1609:G:C8	2.37	0.59
13:K:91:PRO:O	13:K:92:GLY:C	2.40	0.59
1:X:2650:G:H2'	1:X:2651:U:H6	1.66	0.59
4:B:202:ALA:O	4:B:203:LYS:CB	2.49	0.59
10:H:85:ASP:OD2	10:H:87:SER:N	2.27	0.59
15:M:39:VAL:HG12	15:M:45:THR:OG1	2.02	0.59
9:G:103:TYR:CD2	9:G:111:LYS:HA	2.36	0.59
9:G:116:ARG:HD2	9:G:119:LEU:CD1	2.24	0.59
17:O:36:LYS:NZ	17:O:98:ILE:H	1.99	0.59
1:X:1200:G:H2'	1:X:1201:G:H8	1.66	0.59
1:X:574:C:H4'	1:X:1266:G:C6	2.37	0.59
1:X:2594:U:C2	26:Y:7:PRO:HA	2.37	0.59
1:X:547:U:H2'	1:X:548:G:C8	2.37	0.59
25:W:47:VAL:HG23	25:W:51:LEU:HD21	1.84	0.59
3:A:76:ASN:OD1	3:A:118:ASN:HB2	2.03	0.59
3:A:202:LYS:O	3:A:204:ILE:N	2.36	0.59
24:V:32:ALA:O	24:V:34:ALA:N	2.35	0.59
1:X:67:G:N2	1:X:73:A:C4	2.70	0.59
20:R:10:HIS:CD2	20:R:44:GLN:HE21	2.20	0.59
22:T:37:LEU:HD11	22:T:61:ALA:HB2	1.85	0.59
1:X:1822:C:O2'	1:X:1823:G:H5'	2.02	0.59
1:X:1834:G:H2'	1:X:1835:C:C6	2.37	0.59
1:X:1886:G:H2'	1:X:1887:G:H8	1.67	0.59
1:X:2171:U:H4'	1:X:2171:U:OP1	2.01	0.59
1:X:2807:U:H4'	1:X:2808:U:H5''	1.83	0.59
1:X:1324:G:H4'	1:X:1325:U:OP1	2.01	0.59
1:X:1288:A:O2'	1:X:1289:A:O4'	2.20	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:55:A:H2'	1:X:56:C:C6	2.37	0.59
15:M:55:ILE:HG12	15:M:67:THR:HG22	1.84	0.59
4:B:24:THR:CG2	4:B:188:ILE:HD13	2.32	0.59
6:D:143:TYR:HE1	6:D:148:LYS:CA	2.16	0.59
1:X:1484:G:H2'	1:X:1485:U:C6	2.37	0.59
1:X:596:C:H41	11:I:36:GLY:HA3	1.66	0.59
16:N:30:LYS:HZ3	16:N:30:LYS:HA	1.65	0.59
1:X:1004:A:H2	17:O:21:ARG:NH2	1.95	0.59
1:X:1142:G:OP1	9:G:107:GLN:O	2.20	0.59
1:X:822:G:C2'	1:X:823:U:H5'	2.32	0.59
11:I:108:LEU:H	11:I:125:ALA:HA	1.67	0.59
21:S:23:ALA:N	21:S:32:PHE:CE1	2.70	0.59
1:X:1437:A:O2'	1:X:1438:G:H5'	2.02	0.59
20:R:84:VAL:CG1	20:R:88:THR:N	2.65	0.59
1:X:460:U:C4	1:X:592:G:H1'	2.37	0.59
7:E:90:ARG:NH2	7:E:163:ARG:HH12	1.95	0.59
1:X:2223:U:O2'	1:X:2224:U:H5'	2.02	0.59
18:P:62:ARG:HG3	18:P:62:ARG:NH1	2.17	0.59
1:X:878:C:O2'	1:X:879:A:H5''	2.02	0.59
1:X:1770:U:C2	1:X:1774:A:N7	2.69	0.59
24:V:62:ARG:CG	24:V:62:ARG:HH11	2.14	0.59
1:X:847:C:H2'	1:X:848:A:H8	1.67	0.59
3:A:111:LEU:CD2	3:A:127:LEU:HB3	2.32	0.59
1:X:2073:A:C6	1:X:2074:U:C4	2.91	0.59
16:N:66:ASN:O	16:N:70:ARG:NH1	2.36	0.59
1:X:2035:G:H21	1:X:2036:G:H1'	1.67	0.59
21:S:67:LYS:HE3	21:S:84:TYR:HB2	1.85	0.59
12:J:36:ILE:HB	12:J:131:LYS:HE2	1.84	0.59
1:X:876:A:P	12:J:23:LYS:HD3	2.43	0.59
5:C:33:TRP:O	5:C:36:ALA:HB3	2.02	0.59
1:X:2350:G:C6	1:X:2351:G:N7	2.71	0.59
1:X:2042:A:H5''	5:C:65:GLY:CA	2.32	0.59
2:Z:111:C:H6	2:Z:111:C:H5'	1.67	0.59
21:S:115:ILE:HA	21:S:169:VAL:CG1	2.31	0.59
4:B:60:ASN:O	4:B:61:LYS:C	2.40	0.59
1:X:580:A:N7	1:X:584:A:C6	2.70	0.59
1:X:1461:C:H2'	1:X:1462:C:C6	2.37	0.59
14:L:20:THR:HG22	14:L:24:SER:OG	2.01	0.59
1:X:1841:G:H2'	1:X:1842:G:H5'	1.85	0.59
1:X:852:U:H2'	1:X:853:C:C6	2.38	0.59
13:K:106:ASP:OD1	13:K:108:VAL:HB	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2198:U:O3'	1:X:2199:C:H4'	1.99	0.59
9:G:61:ARG:HG2	9:G:65:LYS:NZ	2.18	0.59
17:O:10:LYS:HE3	17:O:11:GLN:NE2	2.16	0.59
1:X:2052:G:N1	1:X:2422:C:C4	2.70	0.59
1:X:687:G:H2'	1:X:688:A:H5'	1.84	0.59
14:L:52:ALA:O	14:L:53:ALA:CB	2.50	0.59
14:L:64:LYS:N	14:L:64:LYS:CE	2.54	0.59
14:L:94:TYR:HB3	14:L:99:ARG:HH21	1.65	0.59
1:X:1314:A:C8	1:X:1316:G:C8	2.91	0.59
20:R:84:VAL:CA	20:R:90:LYS:HE2	2.32	0.59
8:F:73:PRO:CB	8:F:74:PRO:HD2	2.32	0.59
8:F:73:PRO:HB2	8:F:74:PRO:HD2	1.84	0.59
21:S:100:THR:CG2	21:S:138:VAL:HG11	2.31	0.59
4:B:117:MET:SD	4:B:124:GLY:HA3	2.42	0.59
1:X:1949:A:C2	1:X:2572:U:C1'	2.84	0.59
7:E:10:ALA:O	7:E:12:PRO:HD2	2.02	0.59
1:X:2508:G:OP2	7:E:172:LYS:HE2	2.02	0.59
18:P:105:ARG:O	18:P:116:ILE:HG23	2.02	0.59
21:S:147:ILE:CB	21:S:169:VAL:HG23	2.31	0.59
21:S:152:ILE:N	21:S:152:ILE:HD12	2.16	0.59
1:X:2441:U:H2'	1:X:2442:C:C6	2.37	0.59
13:K:75:VAL:O	13:K:78:LYS:N	2.35	0.59
1:X:11:G:O5'	1:X:11:G:H8	1.85	0.59
1:X:2189:A:H2'	1:X:2190:A:C8	2.38	0.59
1:X:2620:G:P	9:G:102:ARG:NH2	2.76	0.59
9:G:106:TYR:OH	9:G:108:GLY:HA2	2.02	0.59
17:O:23:GLU:O	17:O:25:LEU:N	2.36	0.59
6:D:9:ASN:O	6:D:12:VAL:HG23	2.02	0.59
14:L:43:ILE:HD12	14:L:43:ILE:N	2.17	0.59
14:L:98:GLY:O	14:L:99:ARG:C	2.40	0.59
12:J:36:ILE:HD12	12:J:131:LYS:CE	2.31	0.59
13:K:3:HIS:ND1	13:K:5:LYS:HD2	2.16	0.59
5:C:34:GLN:O	5:C:38:ARG:HG3	2.02	0.59
3:A:202:LYS:C	3:A:204:ILE:N	2.56	0.59
1:X:1412:C:H2'	1:X:1413:U:H6	1.67	0.59
20:R:18:LYS:HD3	20:R:19:GLY:H	1.66	0.59
10:H:3:MET:HB2	10:H:4:PRO:CD	2.33	0.59
7:E:20:GLN:O	7:E:21:ASP:HB2	2.02	0.59
1:X:1467:U:C3'	1:X:1467:U:H6	2.16	0.59
1:X:2741:G:O2'	1:X:2742:G:H5'	2.02	0.59
4:B:198:LEU:C	4:B:199:ARG:HG3	2.21	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:32:PRO:O	4:B:49:ILE:HA	2.02	0.59
18:P:36:ARG:NH2	26:Y:20:ARG:CZ	2.66	0.59
6:D:30:ARG:N	6:D:159:THR:OG1	2.35	0.59
1:X:1607:A:H2'	1:X:1608:U:C6	2.34	0.59
1:X:965:G:C2	1:X:975:C:O2	2.55	0.59
1:X:2847:G:H4'	13:K:8:ARG:NH2	2.17	0.59
3:A:217:ARG:NH2	3:A:218:LYS:HE2	2.18	0.59
17:O:57:GLN:O	17:O:96:LEU:O	2.21	0.59
1:X:1007:A:H1'	17:O:6:GLN:HG3	1.84	0.59
1:X:1016:C:OP1	1:X:1016:C:H6	1.86	0.59
11:I:67:ASN:O	11:I:68:VAL:HB	2.03	0.59
6:D:44:LYS:HB3	6:D:46:ASP:OD2	2.03	0.59
2:Z:32:C:H2'	2:Z:33:C:C5'	2.30	0.59
21:S:23:ALA:HB3	21:S:32:PHE:HZ	1.68	0.59
12:J:98:VAL:CG1	12:J:99:LYS:N	2.64	0.59
5:C:12:GLY:O	5:C:14:THR:N	2.36	0.59
1:X:229:G:O2'	1:X:230:C:H5'	2.02	0.59
19:Q:3:HIS:CD2	19:Q:44:GLN:HB2	2.37	0.59
1:X:492:G:HO2'	1:X:493:A:P	2.26	0.59
1:X:1466:C:H2'	1:X:1467:U:C1'	2.33	0.59
1:X:839:U:OP1	1:X:2408:G:OP2	2.20	0.59
1:X:2727:G:O6	1:X:2735:C:H5''	2.03	0.59
22:T:45:PHE:CZ	22:T:77:ARG:NH1	2.70	0.59
11:I:77:LEU:CB	11:I:111:SER:H	2.11	0.59
13:K:24:GLN:CB	13:K:44:LEU:HD22	2.30	0.59
1:X:1432:G:H2'	1:X:1594:U:O4	2.03	0.59
1:X:2262:C:H2'	1:X:2263:C:C5'	2.32	0.59
1:X:19:C:H2'	1:X:20:C:C6	2.37	0.59
1:X:1774:A:C2	1:X:2566:A:C5	2.90	0.59
25:W:17:VAL:O	25:W:19:THR:N	2.35	0.59
1:X:571:U:O2	1:X:581:A:C4	2.56	0.59
1:X:2578:G:O2'	1:X:2579:A:H5'	2.03	0.59
17:O:76:SER:O	17:O:78:VAL:HG12	2.03	0.59
1:X:1171:A:H1'	17:O:6:GLN:OE1	2.03	0.59
1:X:688:A:C2	1:X:689:A:N7	2.70	0.59
6:D:14:PRO:O	6:D:16:LEU:N	2.36	0.59
14:L:38:ILE:CG1	14:L:39:TYR:N	2.65	0.59
21:S:25:ASN:O	21:S:26:LYS:HB2	2.03	0.59
12:J:119:PHE:O	12:J:120:ARG:C	2.39	0.59
1:X:1442:C:O2'	1:X:1443:G:OP1	2.20	0.59
7:E:163:ARG:NE	7:E:169:ILE:HD12	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:94:PHE:O	7:E:95:ARG:HB3	2.02	0.59
3:A:238:GLY:O	3:A:239:ARG:CG	2.50	0.59
1:X:2484:G:O2'	1:X:2485:U:H5'	2.01	0.59
18:P:44:VAL:O	18:P:45:ILE:C	2.40	0.59
1:X:2170:C:H2'	1:X:2171:U:C4'	2.32	0.59
1:X:945:G:O2'	1:X:946:U:H5'	2.01	0.59
1:X:2501:U:H5'	1:X:2502:G:OP2	2.02	0.59
1:X:2815:C:H4'	13:K:92:GLY:HA3	1.83	0.59
1:X:764:A:H2	1:X:802:A:H2'	1.68	0.59
1:X:2695:C:H2'	1:X:2696:A:H8	1.67	0.59
1:X:686:C:H5''	5:C:74:VAL:HB	1.85	0.59
9:G:67:ARG:HD3	9:G:70:PHE:C	2.22	0.59
9:G:67:ARG:HD3	9:G:70:PHE:HB3	1.85	0.59
16:N:60:LEU:HD13	16:N:60:LEU:C	2.23	0.59
1:X:2032:G:N2	1:X:2599:U:C2	2.70	0.59
25:W:44:VAL:O	25:W:45:LYS:C	2.39	0.59
21:S:16:GLU:CD	21:S:16:GLU:N	2.57	0.59
12:J:35:LEU:HD23	12:J:105:PHE:CD2	2.38	0.59
5:C:22:VAL:HA	5:C:106:MET:CE	2.33	0.59
7:E:97:LYS:N	7:E:104:GLU:HB3	2.15	0.59
7:E:131:ILE:CG2	7:E:132:ASP:N	2.65	0.59
21:S:102:GLY:O	21:S:138:VAL:CG2	2.50	0.59
4:B:119:ARG:HA	4:B:160:MET:HE3	1.84	0.59
4:B:116:VAL:CG2	4:B:136:ARG:HE	2.04	0.59
1:X:1087:C:H4'	8:F:94:LYS:NZ	2.18	0.59
1:X:2522:G:H5'	1:X:2522:G:H8	1.68	0.59
1:X:731:A:C2'	1:X:732:G:H5'	2.30	0.59
1:X:2021:G:H2'	1:X:2022:C:C6	2.38	0.59
1:X:2856:U:O2'	1:X:2857:C:H5'	2.02	0.59
1:X:1373:G:N2	1:X:1374:G:C1'	2.65	0.59
1:X:395:G:H1	1:X:404:A:N6	2.00	0.59
1:X:2532:G:H1'	1:X:2561:G:N3	2.17	0.59
6:D:106:ILE:HG22	6:D:139:PRO:HD3	1.84	0.59
1:X:505:G:OP1	18:P:22:LYS:HE3	2.02	0.59
10:H:116:ARG:CZ	15:M:38:LYS:HD2	2.31	0.59
6:D:31:ILE:HG22	6:D:31:ILE:O	2.02	0.59
21:S:44:ARG:HB3	21:S:45:GLN:NE2	2.18	0.59
12:J:28:VAL:CG2	12:J:134:LYS:O	2.51	0.59
13:K:5:LYS:HD3	13:K:5:LYS:N	2.17	0.59
11:I:51:GLY:O	11:I:55:ARG:NH1	2.35	0.59
1:X:1248:G:N7	1:X:1249:G:C6	2.71	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:170:U:O2	1:X:170:U:H2'	2.02	0.59
1:X:1621:C:C2'	1:X:1622:G:H5'	2.32	0.59
1:X:1212:U:H2'	1:X:1213:U:C6	2.38	0.59
1:X:1545:G:C6	1:X:1559:G:N2	2.71	0.59
1:X:2491:C:H5''	1:X:2492:G:OP2	2.02	0.58
3:A:53:PHE:O	3:A:54:ILE:HG22	2.03	0.58
16:N:101:ARG:O	16:N:103:PRO:HD3	2.02	0.58
17:O:15:SER:HB3	17:O:95:ILE:O	2.03	0.58
17:O:76:SER:O	17:O:78:VAL:N	2.35	0.58
17:O:56:VAL:HA	17:O:97:GLY:CA	2.28	0.58
1:X:2001:G:H2'	1:X:2002:A:O4'	2.03	0.58
2:Z:29:C:C5	2:Z:30:C:C5	2.91	0.58
12:J:36:ILE:HG12	12:J:103:VAL:HA	1.85	0.58
13:K:3:HIS:CG	13:K:5:LYS:HE3	2.34	0.58
5:C:153:ASP:O	5:C:154:ASP:CG	2.42	0.58
1:X:1216:G:O2'	1:X:1217:U:H5'	2.03	0.58
3:A:197:GLY:C	3:A:199:ALA:N	2.55	0.58
20:R:93:ARG:NH1	20:R:93:ARG:HG2	2.18	0.58
30:4:1:MET:HA	30:4:1:MET:HE2	1.84	0.58
1:X:1822:C:C2'	1:X:1823:G:H5'	2.33	0.58
1:X:1931:G:C6	1:X:1942:G:C6	2.91	0.58
18:P:89:ARG:O	18:P:90:LEU:HD23	2.02	0.58
1:X:116:A:N7	1:X:117:A:C4	2.71	0.58
23:U:46:LEU:O	23:U:47:HIS:ND1	2.35	0.58
4:B:60:ASN:C	4:B:64:GLN:HG3	2.22	0.58
1:X:2533:U:H2'	1:X:2534:U:C6	2.38	0.58
1:X:964:A:O2'	1:X:965:G:H5'	2.02	0.58
1:X:868:U:H2'	1:X:869:C:C6	2.37	0.58
1:X:1782:A:N6	1:X:1820:G:O2'	2.35	0.58
16:N:47:TYR:CE2	16:N:51:ARG:CZ	2.86	0.58
11:I:123:ASP:O	11:I:124:ALA:CB	2.51	0.58
2:Z:44:C:O2'	6:D:63:GLN:HG2	2.03	0.58
5:C:153:ASP:OD2	5:C:172:VAL:HG13	2.03	0.58
1:X:172:A:N1	1:X:178:C:C2	2.71	0.58
3:A:109:GLU:HB2	3:A:196:VAL:O	2.03	0.58
19:Q:11:VAL:HG21	19:Q:77:LYS:HG3	1.84	0.58
20:R:90:LYS:HD2	20:R:108:VAL:HG11	1.84	0.58
1:X:1226:A:C8	1:X:1250:A:C2	2.91	0.58
1:X:1264:C:OP1	16:N:13:ARG:NH1	2.36	0.58
4:B:172:VAL:HG12	4:B:172:VAL:O	2.03	0.58
13:K:10:LEU:HD21	13:K:14:SER:H	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:14:PHE:O	24:V:18:ILE:HG12	2.02	0.58
1:X:1954:A:O2'	3:A:239:ARG:HB3	2.02	0.58
1:X:2859:U:H2'	1:X:2860:C:H5'	1.85	0.58
7:E:43:VAL:HB	7:E:52:VAL:HG13	1.84	0.58
7:E:44:ARG:CZ	7:E:46:ASP:HB2	2.33	0.58
11:I:77:LEU:HD22	11:I:110:ALA:HA	1.85	0.58
1:X:1252:C:O2'	1:X:1253:C:H5''	2.03	0.58
1:X:2437:G:C2'	1:X:2469:G:H1	2.16	0.58
1:X:1533:G:H2'	1:X:1534:A:H8	1.68	0.58
1:X:1547:U:H2'	1:X:1548:U:C6	2.38	0.58
1:X:645:G:H2'	1:X:646:C:C6	2.38	0.58
1:X:248:A:O5'	1:X:248:A:H8	1.85	0.58
1:X:2175:A:O2'	1:X:2176:U:H5'	2.04	0.58
1:X:2661:G:H4'	15:M:63:ARG:HD3	1.85	0.58
9:G:59:ALA:O	9:G:62:ILE:N	2.35	0.58
1:X:5:A:O2'	1:X:6:A:H5'	2.02	0.58
6:D:113:ASP:HB3	6:D:115:ARG:CZ	2.33	0.58
6:D:53:ALA:C	6:D:57:LEU:HG	2.23	0.58
6:D:35:VAL:CG2	6:D:90:THR:HG23	2.34	0.58
3:A:124:GLU:O	3:A:126:LYS:N	2.36	0.58
3:A:89:SER:HB2	3:A:201:HIS:NE2	2.18	0.58
1:X:1250:A:O2'	1:X:1251:G:O4'	2.22	0.58
1:X:2582:G:H2'	1:X:2583:U:O4'	2.02	0.58
1:X:2301:A:C6	1:X:2312:A:N6	2.71	0.58
7:E:69:ARG:O	7:E:72:VAL:HB	2.03	0.58
1:X:2417:U:O2'	1:X:2418:A:H5''	2.03	0.58
26:Y:35:GLN:C	26:Y:37:HIS:N	2.55	0.58
1:X:2262:C:H2'	1:X:2263:C:H5'	1.84	0.58
24:V:62:ARG:HH11	24:V:62:ARG:HB3	1.68	0.58
1:X:917:U:H2'	1:X:918:A:H5'	1.85	0.58
1:X:2804:G:H2'	1:X:2805:G:H8	1.68	0.58
1:X:611:C:H6	1:X:611:C:H5''	1.68	0.58
9:G:102:ARG:CZ	9:G:112:THR:HG21	2.33	0.58
6:D:56:GLU:O	6:D:60:ILE:HG12	2.03	0.58
2:Z:43:G:H8	6:D:66:ILE:CD1	2.16	0.58
1:X:63:A:N3	1:X:63:A:H2'	2.19	0.58
1:X:1466:C:C2'	1:X:1467:U:O4'	2.50	0.58
7:E:136:ILE:CG2	7:E:137:ASP:H	2.10	0.58
1:X:1922:U:H1'	1:X:2570:C:O2'	2.04	0.58
1:X:2571:G:C2	1:X:2582:G:C2	2.92	0.58
8:F:85:ILE:HG23	8:F:88:GLY:H	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:81:GLU:HG2	12:J:82:THR:HG23	1.84	0.58
1:X:2386:G:H2'	1:X:2387:U:C6	2.38	0.58
6:D:30:ARG:HB2	6:D:159:THR:HG23	1.84	0.58
1:X:2875:C:O2'	1:X:2876:C:H5'	2.02	0.58
1:X:324:C:C2'	1:X:325:U:H5'	2.33	0.58
15:M:22:ARG:HD3	15:M:83:PHE:O	2.02	0.58
14:L:26:ARG:HH11	14:L:88:VAL:HG22	1.69	0.58
1:X:941:U:H2'	1:X:942:U:O4'	2.04	0.58
1:X:621:U:H2'	1:X:622:U:H6	1.67	0.58
19:Q:68:PHE:H	19:Q:68:PHE:HD2	1.49	0.58
1:X:1354:A:O2'	1:X:1355:A:OP1	2.19	0.58
20:R:108:VAL:CG2	20:R:109:ALA:H	2.06	0.58
20:R:98:ILE:C	20:R:100:ASP:H	2.04	0.58
10:H:23:ARG:CB	10:H:23:ARG:NH2	2.65	0.58
1:X:553:C:H4'	1:X:554:U:O5'	2.03	0.58
1:X:600:G:C6	1:X:602:C:C4	2.92	0.58
18:P:9:ARG:CB	18:P:13:GLN:HG3	2.31	0.58
9:G:36:ASN:O	9:G:38:GLU:N	2.37	0.58
23:U:52:ARG:HG2	23:U:52:ARG:NH2	2.18	0.58
1:X:2576:G:O5'	1:X:2576:G:H8	1.87	0.58
4:B:152:LYS:H	9:G:106:TYR:HB3	1.69	0.58
16:N:50:ARG:O	16:N:53:LYS:HG2	2.04	0.58
1:X:2036:G:C2'	1:X:2037:A:H5'	2.34	0.58
14:L:28:ARG:CG	14:L:43:ILE:HD13	2.27	0.58
1:X:1516:A:N3	3:A:100:GLY:HA3	2.19	0.58
20:R:93:ARG:O	20:R:95:ARG:HD2	2.02	0.58
1:X:89:A:O2'	1:X:90:G:H5''	2.02	0.58
21:S:91:PRO:CG	21:S:92:VAL:H	2.13	0.58
1:X:48:A:H4'	1:X:49:U:C5'	2.28	0.58
4:B:4:ILE:CG1	4:B:5:LEU:N	2.66	0.58
1:X:2048:C:H1'	1:X:2428:U:H3	1.69	0.58
2:Z:103:A:N6	2:Z:104:A:C6	2.72	0.58
1:X:735:G:H2'	1:X:736:G:H5'	1.86	0.58
1:X:389:G:H2'	1:X:390:U:H6	1.69	0.58
1:X:1496:G:C2'	1:X:1497:C:O5'	2.51	0.58
1:X:1960:A:C2'	1:X:1961:A:H5'	2.32	0.58
1:X:746:G:N7	1:X:774:A:C6	2.71	0.58
9:G:101:THR:OG1	9:G:103:TYR:HE1	1.86	0.58
9:G:144:MET:C	9:G:146:THR:N	2.56	0.58
17:O:12:TYR:C	17:O:13:ARG:HG2	2.23	0.58
17:O:14:VAL:O	17:O:15:SER:HB2	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1004:A:N3	17:O:88:GLN:NE2	2.52	0.58
6:D:17:MET:HA	6:D:21:GLY:HA2	1.86	0.58
25:W:6:VAL:O	25:W:7:ARG:HG2	2.04	0.58
1:X:34:U:C2	20:R:4:PRO:HB3	2.39	0.58
1:X:171:G:O2'	1:X:172:A:H5'	2.04	0.58
3:A:67:PHE:HB3	3:A:153:ALA:N	2.11	0.58
20:R:10:HIS:CB	20:R:44:GLN:NE2	2.66	0.58
20:R:25:LEU:HD12	20:R:80:LYS:CA	2.34	0.58
1:X:2057:U:C5'	1:X:2057:U:C6	2.86	0.58
4:B:116:VAL:H	4:B:136:ARG:NE	2.01	0.58
18:P:57:LEU:HD12	18:P:69:ALA:HA	1.85	0.58
1:X:1595:A:O5'	1:X:1595:A:C8	2.52	0.58
11:I:30:ALA:CB	11:I:34:HIS:ND1	2.66	0.58
1:X:424:G:H3'	1:X:2385:U:O4	2.03	0.58
1:X:2431:C:C4	1:X:2432:A:C6	2.91	0.58
11:I:134:GLU:HG2	11:I:139:ARG:HA	1.85	0.58
1:X:2027:C:O2'	1:X:2028:C:H5'	2.03	0.58
1:X:760:U:H6	1:X:760:U:O5'	1.86	0.58
3:A:217:ARG:HG2	3:A:218:LYS:H	1.69	0.58
1:X:742:G:H2'	1:X:1766:U:H1'	1.86	0.58
5:C:50:GLN:O	5:C:52:SER:N	2.35	0.58
9:G:163:PRO:O	9:G:165:VAL:HG22	2.03	0.58
1:X:2618:A:H1'	1:X:2758:A:C2	2.39	0.58
11:I:106:VAL:HG12	11:I:106:VAL:O	2.04	0.58
6:D:53:ALA:O	6:D:57:LEU:HG	2.03	0.58
14:L:38:ILE:CG1	14:L:39:TYR:H	2.16	0.58
1:X:2796:A:C2	1:X:2797:G:C5	2.91	0.58
1:X:1359:G:O2'	1:X:1360:G:H5'	2.04	0.58
1:X:1517:C:C4'	3:A:96:HIS:CE1	2.86	0.58
1:X:1572:C:O2'	1:X:1573:G:H5'	2.04	0.58
14:L:12:ARG:HG3	14:L:92:GLY:O	2.02	0.58
14:L:17:VAL:HG13	14:L:18:ARG:N	2.19	0.58
1:X:2240:C:C2'	1:X:2241:U:H5'	2.34	0.58
4:B:65:GLY:CA	4:B:68:ALA:HB3	2.34	0.58
1:X:939:C:H5''	1:X:940:G:OP2	2.04	0.58
1:X:1051:U:C6	1:X:1051:U:H3'	2.38	0.58
5:C:37:SER:HB2	5:C:92:ASP:OD2	2.03	0.58
1:X:240:U:H2'	1:X:241:C:O4'	2.04	0.58
1:X:1278:A:H2	1:X:1997:A:H62	1.52	0.58
3:A:217:ARG:HG2	3:A:218:LYS:CG	2.33	0.58
1:X:742:G:C6	3:A:208:LYS:HD3	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2661:G:C2	1:X:2662:C:C6	2.91	0.58
5:C:83:ALA:O	5:C:85:GLY:N	2.37	0.58
9:G:75:ILE:HD11	9:G:144:MET:HG3	1.85	0.58
1:X:955:G:H5'	1:X:956:A:C5'	2.33	0.58
6:D:96:MET:O	6:D:100:LEU:CB	2.52	0.58
6:D:13:ARG:HB3	6:D:14:PRO:CD	2.26	0.58
1:X:980:G:O3'	25:W:11:GLY:HA2	2.04	0.58
5:C:97:ARG:O	5:C:101:GLN:HG2	2.04	0.58
5:C:111:ARG:C	5:C:113:GLU:H	2.07	0.58
20:R:84:VAL:HG13	20:R:88:THR:O	2.03	0.58
1:X:322:A:O2'	1:X:323:G:P	2.61	0.58
1:X:1128:G:H3'	1:X:1129:A:H5''	1.85	0.58
7:E:86:ASN:N	7:E:132:ASP:OD2	2.37	0.58
21:S:123:VAL:O	21:S:124:ALA:HB3	2.03	0.58
22:T:37:LEU:HD12	22:T:37:LEU:H	1.67	0.58
4:B:133:LYS:C	4:B:134:TRP:O	2.40	0.58
1:X:2564:U:N3	33:X:2911:ZLD:H21A	2.19	0.58
18:P:107:ILE:HB	18:P:117:ILE:HD12	1.86	0.58
1:X:2804:G:H2'	1:X:2805:G:C8	2.39	0.58
18:P:25:PHE:C	18:P:25:PHE:CD2	2.76	0.58
1:X:1295:U:H2'	1:X:1296:G:O4'	2.03	0.58
1:X:2074:U:C3'	1:X:2075:U:H5''	2.27	0.58
9:G:102:ARG:NH2	9:G:112:THR:HG21	2.18	0.58
17:O:50:ASP:O	17:O:53:LYS:HB2	2.04	0.58
1:X:1004:A:C5	1:X:1005:U:H5	2.21	0.58
1:X:2394:G:O5'	11:I:63:ARG:CZ	2.51	0.58
6:D:66:ILE:HG22	6:D:88:LYS:O	2.03	0.58
12:J:28:VAL:HG23	12:J:137:VAL:HG21	1.85	0.58
1:X:1440:G:H8	1:X:1440:G:O5'	1.87	0.58
1:X:739:G:HO2'	1:X:740:A:P	2.27	0.58
1:X:1617:G:OP2	19:Q:56:MET:HE1	2.04	0.58
20:R:18:LYS:O	20:R:36:VAL:HB	2.03	0.58
10:H:65:LYS:N	10:H:68:ASP:OD2	2.31	0.58
4:B:85:ALA:O	4:B:86:PRO:O	2.21	0.58
4:B:52:ALA:O	4:B:75:THR:O	2.21	0.58
8:F:85:ILE:HA	8:F:88:GLY:HA3	1.86	0.58
1:X:805:G:N7	1:X:2419:C:C1'	2.67	0.58
1:X:76:C:H5'	1:X:76:C:C6	2.29	0.58
2:Z:4:C:H2'	2:Z:5:C:O4'	2.04	0.58
1:X:911:A:H2'	1:X:912:A:H8	1.68	0.58
17:O:35:LEU:O	17:O:36:LYS:HG3	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:O:15:SER:OG	17:O:96:LEU:HA	2.04	0.57
1:X:1018:C:C5	1:X:1019:U:C5	2.92	0.57
1:X:466:A:H4'	1:X:467:U:O5'	2.03	0.57
1:X:815:A:C2	1:X:816:U:C2	2.92	0.57
11:I:73:GLU:OE2	11:I:104:ARG:CB	2.52	0.57
11:I:108:LEU:HB2	11:I:122:VAL:CG1	2.22	0.57
12:J:113:GLU:O	12:J:115:ALA:N	2.36	0.57
5:C:146:GLU:HB3	5:C:184:ASP:CB	2.34	0.57
23:U:27:ASP:O	23:U:32:ARG:HG3	2.04	0.57
3:A:78:LYS:O	3:A:80:ALA:N	2.36	0.57
1:X:1808:C:H5''	3:A:39:LYS:CE	2.34	0.57
24:V:31:GLN:HB3	24:V:37:LEU:CB	2.34	0.57
1:X:494:A:H3'	1:X:495:C:H6	1.68	0.57
1:X:2725:C:H5'	7:E:146:ALA:HB2	1.84	0.57
4:B:116:VAL:N	4:B:136:ARG:NE	2.52	0.57
18:P:50:VAL:CG1	18:P:90:LEU:HB2	2.34	0.57
7:E:77:LYS:C	7:E:80:SER:HB3	2.24	0.57
11:I:30:ALA:N	11:I:34:HIS:ND1	2.51	0.57
1:X:1863:U:H2'	1:X:1864:G:C8	2.39	0.57
1:X:566:U:H2'	1:X:567:G:H8	1.69	0.57
1:X:2710:C:C2'	1:X:2711:G:H5'	2.34	0.57
1:X:2551:A:N7	4:B:144:ARG:HD3	2.19	0.57
17:O:76:SER:C	17:O:78:VAL:H	2.07	0.57
1:X:541:C:O2'	1:X:542:A:P	2.61	0.57
12:J:70:PHE:HE2	12:J:71:PRO:O	1.86	0.57
6:D:167:ARG:CG	6:D:177:PHE:HE2	2.16	0.57
2:Z:47:A:H2'	2:Z:47:A:N3	2.19	0.57
5:C:153:ASP:OD2	5:C:172:VAL:HG22	2.04	0.57
11:I:14:LYS:HA	11:I:14:LYS:HE3	1.85	0.57
1:X:65:C:O2'	1:X:66:U:H5'	2.04	0.57
20:R:110:SER:OG	20:R:111:GLY:N	2.36	0.57
1:X:94:C:HO2'	24:V:40:PRO:HD2	1.68	0.57
4:B:136:ARG:NH2	4:B:157:ALA:HB2	2.18	0.57
1:X:2569:A:O3'	3:A:239:ARG:NH1	2.37	0.57
1:X:2570:C:OP1	3:A:239:ARG:NH1	2.34	0.57
7:E:73:ALA:O	7:E:77:LYS:HG2	2.04	0.57
1:X:1138:A:C2'	1:X:1139:A:H5''	2.33	0.57
1:X:605:G:H2'	1:X:606:A:H8	1.70	0.57
1:X:2692:A:H5''	1:X:2693:U:OP2	2.04	0.57
6:D:143:TYR:HA	6:D:146:VAL:HG21	1.85	0.57
1:X:867:G:H2'	1:X:868:U:O4'	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:76:ALA:HB2	14:L:107:ALA:HA	1.86	0.57
1:X:2751:C:H5'	4:B:203:LYS:HD3	1.85	0.57
9:G:155:THR:O	9:G:156:HIS:C	2.42	0.57
9:G:151:TYR:HB2	9:G:157:PRO:HB3	1.86	0.57
9:G:164:GLN:C	9:G:165:VAL:HG22	2.24	0.57
11:I:32:ARG:CZ	17:O:81:ARG:NH2	2.67	0.57
1:X:1200:G:H2'	1:X:1201:G:C8	2.39	0.57
14:L:59:LEU:HD22	14:L:61:SER:H	1.70	0.57
1:X:678:G:O2'	1:X:679:C:H5'	2.05	0.57
23:U:43:ARG:HH21	23:U:43:ARG:HG2	1.69	0.57
6:D:80:ARG:CD	6:D:83:MET:HB2	2.33	0.57
22:T:46:LYS:HD3	22:T:76:ALA:CB	2.34	0.57
4:B:33:ILE:HG22	4:B:47:VAL:HG12	1.85	0.57
1:X:1063:C:H2'	1:X:1064:C:C5	2.39	0.57
1:X:1086:C:C3'	1:X:1087:C:H5''	2.35	0.57
18:P:62:ARG:HG3	18:P:62:ARG:HH11	1.69	0.57
1:X:116:A:H5'	1:X:117:A:H8	1.67	0.57
1:X:2367:A:N7	1:X:2368:G:C5	2.73	0.57
3:A:244:ARG:N	3:A:244:ARG:CD	2.59	0.57
10:H:100:ASN:C	10:H:102:GLN:H	2.08	0.57
2:Z:4:C:H5'	2:Z:4:C:H6	1.69	0.57
1:X:2876:C:H2'	1:X:2877:A:C8	2.38	0.57
1:X:2047:C:O2	1:X:2429:A:N6	2.37	0.57
1:X:1807:A:H1'	1:X:1809:G:C8	2.40	0.57
1:X:1517:C:C4'	3:A:96:HIS:NE2	2.61	0.57
20:R:108:VAL:HG13	20:R:109:ALA:N	2.19	0.57
20:R:105:ARG:NH2	20:R:111:GLY:C	2.58	0.57
8:F:107:GLU:HA	8:F:110:LYS:HB2	1.85	0.57
30:4:22:ARG:CZ	30:4:37:GLY:HA3	2.35	0.57
1:X:82:G:N2	1:X:100:G:C2'	2.65	0.57
1:X:29:U:O4'	16:N:11:ARG:NH1	2.37	0.57
1:X:90:G:H5'	1:X:91:A:C8	2.38	0.57
1:X:2737:A:H61	7:E:67:LEU:HD11	1.69	0.57
1:X:94:C:H1'	24:V:40:PRO:HG2	1.86	0.57
22:T:35:ASN:N	22:T:35:ASN:HD22	2.03	0.57
1:X:2482:A:C2'	33:X:2911:ZLD:C13	2.82	0.57
11:I:77:LEU:CG	11:I:112:GLY:O	2.53	0.57
1:X:2366:U:H1'	22:T:41:ARG:NH1	2.19	0.57
4:B:179:GLU:C	4:B:181:LEU:N	2.58	0.57
1:X:1385:C:O2'	1:X:1386:A:H5'	2.04	0.57
1:X:1253:C:C2'	1:X:1254:G:H5'	2.33	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2691:C:O2'	1:X:2692:A:C8	2.55	0.57
1:X:2624:G:H3'	1:X:2625:U:H5'	1.87	0.57
10:H:115:ALA:HA	10:H:134:LEU:OXT	2.05	0.57
1:X:1850:G:C6	1:X:1868:A:N7	2.72	0.57
1:X:586:G:C6	1:X:587:A:C6	2.91	0.57
2:Z:78:A:O2'	2:Z:79:U:H5'	2.05	0.57
1:X:2070:G:O2'	1:X:2071:G:H5'	2.03	0.57
15:M:50:PHE:HD2	15:M:51:GLU:H	1.53	0.57
17:O:26:GLN:CG	17:O:27:GLY:H	2.15	0.57
1:X:686:C:C2'	1:X:687:G:H5'	2.34	0.57
1:X:690:A:H2'	1:X:691:C:H6	1.69	0.57
6:D:133:LYS:C	6:D:151:GLY:HA2	2.24	0.57
6:D:33:LYS:HD2	6:D:90:THR:CG2	2.33	0.57
2:Z:15:A:C6	2:Z:72:C:H5'	2.39	0.57
13:K:3:HIS:CE1	13:K:5:LYS:HD2	2.40	0.57
1:X:174:A:N1	1:X:840:U:O4	2.37	0.57
1:X:1810:U:OP1	3:A:158:SER:HB3	2.04	0.57
19:Q:28:TRP:CE3	19:Q:75:ARG:HB3	2.40	0.57
1:X:1359:G:H2'	1:X:1360:G:O4'	2.05	0.57
30:4:25:VAL:CG2	30:4:34:GLN:HB2	2.34	0.57
30:4:8:LYS:C	30:4:9:LYS:HE3	2.25	0.57
7:E:86:ASN:HA	7:E:132:ASP:HB2	1.87	0.57
2:Z:14:C:H5	22:T:72:LYS:HD2	1.68	0.57
10:H:108:THR:O	10:H:109:ARG:HB3	2.05	0.57
1:X:2316:G:H2'	1:X:2317:G:H8	1.68	0.57
1:X:2308:A:H2'	1:X:2309:G:H8	1.65	0.57
1:X:922:A:C2	1:X:923:A:C2	2.92	0.57
21:S:114:ASP:OD1	21:S:115:ILE:N	2.37	0.57
1:X:889:C:H2'	1:X:890:U:H6	1.67	0.57
1:X:1552:C:O2	1:X:1553:G:C2	2.58	0.57
1:X:734:G:H2'	1:X:735:G:H8	1.70	0.57
1:X:2698:G:C6	1:X:2699:G:C5	2.93	0.57
1:X:1918:G:H3'	1:X:1945:C:H42	1.68	0.57
18:P:29:LYS:O	18:P:30:TYR:HB2	2.05	0.57
5:C:181:LEU:HD12	5:C:181:LEU:O	2.04	0.57
1:X:793:G:H1	3:A:230:ASP:CG	2.08	0.57
17:O:36:LYS:HD2	17:O:55:THR:N	2.19	0.57
1:X:541:C:H4'	1:X:542:A:O5'	2.04	0.57
18:P:27:VAL:HG23	18:P:125:THR:HG22	1.86	0.57
6:D:35:VAL:HG22	6:D:90:THR:HG23	1.86	0.57
23:U:33:LYS:N	23:U:33:LYS:HD3	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:709:A:C2	1:X:710:C:C2	2.93	0.57
1:X:1510:A:H2'	1:X:1511:A:H8	1.68	0.57
20:R:11:ASN:O	20:R:12:ASP:C	2.43	0.57
10:H:10:VAL:CG1	10:H:98:ILE:HG13	2.34	0.57
7:E:90:ARG:HD3	7:E:163:ARG:HH11	1.68	0.57
1:X:2213:G:C2	1:X:2214:G:C8	2.92	0.57
1:X:2824:C:OP1	15:M:100:ARG:NH1	2.38	0.57
14:L:15:ARG:NH1	14:L:15:ARG:HG2	2.12	0.57
2:Z:63:A:H2'	2:Z:64:C:H6	1.69	0.57
1:X:2015:G:H2'	4:B:145:LYS:CE	2.35	0.57
1:X:978:U:H2'	1:X:979:A:C8	2.40	0.57
6:D:123:ASP:OD1	6:D:125:ARG:HG2	2.05	0.57
1:X:2694:G:OP1	1:X:2694:G:H8	1.88	0.57
21:S:20:ALA:HB1	21:S:80:HIS:ND1	2.20	0.57
1:X:1469:U:OP1	1:X:1471:G:OP2	2.22	0.57
3:A:218:LYS:O	3:A:219:PRO:C	2.42	0.57
5:C:48:ARG:H	5:C:48:ARG:HD2	1.69	0.57
9:G:111:LYS:O	9:G:113:GLU:HG3	2.05	0.57
9:G:125:ARG:NH1	9:G:128:GLU:OE1	2.38	0.57
9:G:44:VAL:HG12	9:G:45:ASP:N	2.17	0.57
9:G:63:ARG:HG3	9:G:64:GLY:N	2.16	0.57
1:X:577:U:H5'	1:X:956:A:H62	1.70	0.57
14:L:34:SER:HB2	14:L:94:TYR:OH	2.05	0.57
5:C:17:LEU:HD12	5:C:109:ALA:HB2	1.85	0.57
5:C:179:ASP:O	5:C:182:ARG:HB3	2.04	0.57
5:C:24:SER:HA	5:C:27:LEU:CD2	2.31	0.57
1:X:34:U:N1	20:R:4:PRO:HB3	2.19	0.57
1:X:2225:G:C2	1:X:2405:A:H1'	2.40	0.57
1:X:1443:G:H2'	1:X:1444:C:C6	2.39	0.57
19:Q:24:VAL:HG12	19:Q:25:TYR:N	2.19	0.57
1:X:1641:C:H2'	1:X:1642:G:H5'	1.85	0.57
1:X:2526:U:C2	1:X:2545:A:N6	2.72	0.57
7:E:127:GLU:C	7:E:129:THR:N	2.57	0.57
18:P:45:ILE:O	18:P:46:ARG:C	2.43	0.57
7:E:35:VAL:HB	7:E:37:TYR:HE1	1.69	0.57
13:K:51:LEU:O	13:K:54:THR:N	2.37	0.57
1:X:618:A:C2	1:X:632:A:N7	2.72	0.57
5:C:55:GLY:O	5:C:56:ARG:HG2	2.03	0.57
1:X:353:G:H2'	1:X:354:C:O4'	2.05	0.57
1:X:2500:C:H2'	1:X:2501:U:C6	2.40	0.57
1:X:412:U:H5	23:U:68:ARG:NH1	2.01	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2180:U:O2'	1:X:2181:A:N7	2.35	0.57
1:X:1766:U:H2'	1:X:1767:G:C5'	2.35	0.57
1:X:742:G:C4	1:X:1766:U:C2	2.92	0.57
11:I:39:SER:O	11:I:40:ARG:HB2	2.05	0.57
6:D:12:VAL:O	6:D:13:ARG:C	2.43	0.57
6:D:17:MET:CE	6:D:25:VAL:HG12	2.35	0.57
6:D:22:TYR:CD2	6:D:27:ALA:HB3	2.40	0.57
6:D:22:TYR:HB3	6:D:24:SER:O	2.04	0.57
5:C:104:LEU:O	5:C:108:ILE:HG12	2.05	0.57
5:C:158:ARG:HG3	5:C:159:ARG:N	2.20	0.57
1:X:1258:G:OP2	11:I:17:LYS:NZ	2.32	0.57
3:A:143:HIS:O	3:A:145:LEU:N	2.38	0.57
1:X:1810:U:C5	3:A:157:ARG:NH1	2.72	0.57
6:D:75:SER:N	6:D:79:LEU:HD22	2.19	0.57
1:X:1510:A:C8	1:X:1511:A:N7	2.72	0.57
7:E:163:ARG:HE	7:E:169:ILE:HD12	1.68	0.57
22:T:31:VAL:HG11	22:T:37:LEU:HD21	1.87	0.57
8:F:85:ILE:HD13	8:F:89:SER:N	2.19	0.57
1:X:1075:C:OP1	8:F:85:ILE:HG13	2.05	0.57
18:P:85:MET:CE	18:P:130:GLU:HG3	2.33	0.57
1:X:118:U:O2'	1:X:119:G:OP2	2.21	0.57
1:X:1710:U:O2'	1:X:1711:C:OP1	2.23	0.57
1:X:1107:A:C3'	1:X:1108:U:H5''	2.35	0.57
1:X:1882:G:N2	1:X:1885:C:H41	2.02	0.57
12:J:75:VAL:HG12	12:J:76:THR:N	2.19	0.57
21:S:117:VAL:HG21	21:S:168:VAL:HG22	1.87	0.57
1:X:53:G:C2'	1:X:54:G:O5'	2.53	0.57
9:G:132:PHE:CD1	9:G:145:HIS:CG	2.92	0.57
1:X:882:C:H2'	1:X:883:A:C8	2.39	0.57
1:X:2390:A:H2'	1:X:2391:A:C8	2.39	0.57
25:W:45:LYS:HA	25:W:45:LYS:HE3	1.85	0.57
25:W:4:LYS:O	25:W:6:VAL:HG13	2.04	0.57
4:B:26:VAL:CG1	4:B:27:LEU:N	2.68	0.57
5:C:125:ILE:HD12	5:C:133:PHE:CA	2.34	0.57
11:I:7:LYS:O	11:I:7:LYS:HG2	2.04	0.57
1:X:1787:U:H2'	1:X:1788:C:C6	2.37	0.57
1:X:1313:U:O2'	1:X:1314:A:P	2.62	0.57
20:R:51:VAL:CG2	20:R:76:LEU:HD21	2.18	0.57
7:E:97:LYS:HB2	7:E:104:GLU:HG2	1.87	0.57
1:X:1524:C:C3'	1:X:1525:A:H5''	2.33	0.57
1:X:1923:U:H1'	1:X:1924:C:C5	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1075:C:C2'	1:X:1076:U:H5'	2.35	0.57
1:X:2043:A:OP1	5:C:63:GLY:N	2.30	0.57
7:E:51:LEU:HD12	7:E:52:VAL:N	2.20	0.57
1:X:1885:C:H4'	3:A:244:ARG:HD2	1.87	0.57
1:X:2856:U:C2	1:X:2857:C:C5	2.93	0.57
1:X:137:A:C6	1:X:138:G:H1'	2.39	0.57
1:X:2701:A:H2'	1:X:2702:G:C8	2.39	0.57
1:X:1496:G:H2'	1:X:1497:C:O5'	2.05	0.57
1:X:1766:U:C2'	1:X:1767:G:H5'	2.35	0.57
1:X:640:C:C4	1:X:641:G:N7	2.73	0.57
2:Z:42:U:O2'	2:Z:47:A:N6	2.38	0.57
1:X:1789:U:O2'	1:X:1793:A:H1'	2.05	0.57
1:X:492:G:O2'	1:X:493:A:P	2.63	0.57
1:X:1693:A:C2	1:X:1694:A:C4	2.93	0.57
4:B:98:GLU:HA	4:B:172:VAL:HG12	1.87	0.57
1:X:1328:C:O2'	1:X:1329:U:H5'	2.05	0.57
4:B:117:MET:O	4:B:121:ASN:HA	2.03	0.57
24:V:13:ASP:OD1	24:V:16:LYS:NZ	2.36	0.57
1:X:155:G:C2'	1:X:156:G:H5'	2.34	0.57
1:X:1431:U:H5''	1:X:1604:A:H1'	1.87	0.57
1:X:1092:U:H4'	8:F:118:ALA:HB2	1.87	0.57
15:M:18:GLN:HG3	15:M:18:GLN:O	2.05	0.57
1:X:1984:A:H4'	1:X:2668:U:H2'	1.86	0.57
23:U:63:SER:HB3	23:U:66:ALA:CB	2.35	0.57
1:X:914:C:H2'	1:X:915:C:C6	2.40	0.57
1:X:1368:G:O2'	1:X:1369:G:H5'	2.04	0.57
1:X:2623:A:H8	1:X:2623:A:O5'	1.87	0.57
9:G:84:ASN:C	9:G:86:ALA:H	2.08	0.56
11:I:84:GLU:O	11:I:116:ARG:NH2	2.38	0.56
11:I:73:GLU:OE1	11:I:73:GLU:N	2.38	0.56
11:I:85:ASP:HA	11:I:116:ARG:HH22	1.69	0.56
11:I:90:ARG:HA	11:I:121:HIS:ND1	2.20	0.56
14:L:79:ALA:O	14:L:82:LYS:HB2	2.05	0.56
21:S:23:ALA:HA	21:S:83:PHE:O	2.05	0.56
1:X:665:A:H2	1:X:666:U:C6	2.22	0.56
3:A:95:LEU:HB2	3:A:105:ILE:CD1	2.35	0.56
1:X:1793:A:C2	1:X:1794:A:C2	2.93	0.56
19:Q:26:SER:HB3	19:Q:79:ILE:CG1	2.31	0.56
30:4:1:MET:HE1	30:4:35:ARG:N	2.20	0.56
10:H:27:SER:CB	10:H:50:ILE:HG13	2.23	0.56
1:X:595:A:O5'	1:X:595:A:H8	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2410:U:O2	1:X:2412:A:C8	2.58	0.56
7:E:96:ALA:HA	7:E:104:GLU:O	2.04	0.56
1:X:1329:U:H2'	1:X:1330:G:C8	2.40	0.56
1:X:1343:C:O2	1:X:1344:C:C6	2.57	0.56
24:V:4:SER:HB3	24:V:7:ARG:HE	1.70	0.56
1:X:788:G:C5'	1:X:790:A:H1'	2.31	0.56
1:X:1431:U:C5'	1:X:1604:A:H1'	2.35	0.56
21:S:152:ILE:CD1	21:S:152:ILE:N	2.67	0.56
1:X:1937:G:O2'	1:X:1939:U:C5	2.58	0.56
26:Y:51:TYR:HA	26:Y:54:GLY:O	2.05	0.56
3:A:222:ARG:O	3:A:224:SER:N	2.37	0.56
16:N:21:ALA:HA	16:N:24:PHE:CE2	2.40	0.56
17:O:17:GLY:HA2	17:O:93:ILE:O	2.04	0.56
17:O:5:ILE:HD13	17:O:5:ILE:N	2.19	0.56
6:D:112:ARG:O	6:D:113:ASP:HB2	2.05	0.56
6:D:58:ALA:O	6:D:62:LEU:HA	2.05	0.56
21:S:42:ALA:HA	21:S:45:GLN:HG2	1.86	0.56
5:C:3:GLN:NE2	5:C:4:ILE:O	2.37	0.56
5:C:9:GLN:HE21	5:C:120:VAL:HG21	1.70	0.56
3:A:80:ALA:HB3	3:A:94:LEU:HD23	1.87	0.56
19:Q:42:ILE:HG23	19:Q:43:GLN:N	2.20	0.56
30:4:1:MET:SD	30:4:2:LYS:N	2.78	0.56
7:E:131:ILE:CG2	7:E:132:ASP:H	2.17	0.56
4:B:120:TRP:O	4:B:121:ASN:CB	2.52	0.56
12:J:15:ARG:HD3	12:J:73:LYS:HZ3	1.67	0.56
1:X:2482:A:C8	33:X:2911:ZLD:H13B	2.41	0.56
1:X:1880:G:H2'	1:X:1881:U:C6	2.41	0.56
22:T:3:HIS:CD2	22:T:5:LYS:H	2.23	0.56
4:B:72:VAL:CG1	4:B:73:ALA:H	2.11	0.56
1:X:2615:U:P	4:B:80:GLU:HG2	2.45	0.56
1:X:615:C:H4'	1:X:669:G:N2	2.20	0.56
1:X:1664:G:H5''	1:X:1665:C:OP1	2.04	0.56
1:X:2198:U:H5''	1:X:2199:C:OP2	2.06	0.56
3:A:208:LYS:CE	3:A:208:LYS:HA	2.35	0.56
9:G:132:PHE:HD1	9:G:145:HIS:CG	2.24	0.56
17:O:12:TYR:CD2	17:O:40:VAL:HG22	2.40	0.56
11:I:88:PHE:CB	11:I:90:ARG:HD2	2.34	0.56
1:X:661:C:H2'	1:X:662:G:H8	1.70	0.56
25:W:47:VAL:O	25:W:47:VAL:HG23	2.04	0.56
21:S:13:LYS:O	21:S:16:GLU:O	2.23	0.56
12:J:51:CYS:SG	12:J:122:ALA:O	2.58	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:31:VAL:O	5:C:35:LEU:HG	2.06	0.56
1:X:177:U:O4	1:X:225:G:N1	2.39	0.56
1:X:1218:C:O4'	11:I:13:ARG:CD	2.53	0.56
3:A:187:SER:C	3:A:189:CYS:N	2.56	0.56
19:Q:35:LYS:HE2	19:Q:53:ILE:CG2	2.19	0.56
10:H:20:MET:HG2	10:H:21:CYS:O	2.04	0.56
10:H:22:ILE:HG22	10:H:52:VAL:C	2.26	0.56
30:4:18:ARG:NH1	30:4:21:GLY:HA2	2.20	0.56
1:X:2722:C:OP1	30:4:35:ARG:HD2	2.05	0.56
11:I:56:LEU:O	11:I:58:ALA:O	2.22	0.56
1:X:2727:G:H4'	7:E:71:LEU:HD21	1.87	0.56
1:X:2726:U:H4'	7:E:139:GLN:HG2	1.87	0.56
7:E:139:GLN:O	7:E:142:GLY:N	2.39	0.56
7:E:84:THR:HB	7:E:134:SER:OG	2.06	0.56
10:H:13:ASN:HD21	10:H:109:ARG:HG2	1.66	0.56
24:V:6:MET:HE2	24:V:56:VAL:HG21	1.87	0.56
24:V:6:MET:CE	24:V:56:VAL:HG21	2.35	0.56
1:X:1087:C:O4'	8:F:91:THR:HB	2.06	0.56
1:X:2352:A:H2'	1:X:2353:G:C8	2.40	0.56
18:P:52:ASP:O	18:P:53:ALA:C	2.44	0.56
1:X:556:A:H2'	1:X:557:U:C2	2.40	0.56
11:I:78:SER:CB	11:I:112:GLY:HA3	2.29	0.56
1:X:1837:G:H2'	1:X:1838:G:H8	1.71	0.56
8:F:118:ALA:O	8:F:120:SER:N	2.39	0.56
1:X:1088:A:H2	1:X:1099:A:N3	2.03	0.56
23:U:10:LYS:HD3	23:U:11:LYS:HB2	1.87	0.56
1:X:357:A:N3	1:X:357:A:H2'	2.20	0.56
1:X:2509:A:C2'	1:X:2510:A:H5''	2.36	0.56
1:X:2807:U:H6	1:X:2807:U:C5'	2.13	0.56
1:X:2284:U:C2'	1:X:2285:U:H5''	2.35	0.56
6:D:122:PHE:HB3	6:D:129:ASN:HD22	1.70	0.56
1:X:1804:U:H2'	1:X:1805:G:C8	2.40	0.56
1:X:2777:A:C5	18:P:134:LYS:HB2	2.40	0.56
1:X:2437:G:H2'	1:X:2469:G:O6	2.06	0.56
1:X:2186:G:H4'	3:A:151:LYS:HE3	1.87	0.56
3:A:111:LEU:HD22	3:A:127:LEU:HB3	1.87	0.56
1:X:1469:U:P	1:X:1471:G:OP2	2.64	0.56
1:X:2473:G:H2'	1:X:2474:G:H8	1.69	0.56
15:M:26:ASP:O	15:M:27:PHE:CG	2.59	0.56
1:X:822:G:O2'	1:X:823:U:H5'	2.06	0.56
1:X:833:A:H1'	1:X:954:U:C1'	2.28	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:108:G:H5''	21:S:26:LYS:HE3	1.88	0.56
1:X:930:A:H5''	2:Z:100:G:O2'	2.06	0.56
1:X:1256:C:H2'	1:X:1257:U:O4'	2.04	0.56
1:X:1391:A:O2'	1:X:1392:U:P	2.64	0.56
1:X:2725:C:H4'	7:E:142:GLY:CA	2.35	0.56
21:S:139:THR:O	21:S:140:LYS:C	2.43	0.56
15:M:99:VAL:HG22	15:M:100:ARG:N	2.17	0.56
4:B:33:ILE:HA	4:B:49:ILE:HA	1.87	0.56
12:J:16:GLY:H	12:J:73:LYS:HZ1	1.53	0.56
1:X:2484:G:OP2	33:X:2911:ZLD:H9A	2.04	0.56
1:X:789:G:C5	1:X:806:A:C8	2.94	0.56
23:U:15:VAL:O	23:U:16:ASN:CB	2.52	0.56
24:V:52:GLN:O	24:V:54:ASN:N	2.39	0.56
18:P:13:GLN:O	18:P:16:GLN:N	2.29	0.56
1:X:414:A:C2	1:X:415:A:C4	2.93	0.56
1:X:201:G:H2'	1:X:202:A:H8	1.69	0.56
1:X:2235:G:H2'	1:X:2236:U:H5'	1.87	0.56
10:H:29:ILE:HB	10:H:123:PHE:HE2	1.70	0.56
1:X:1851:A:O5'	1:X:1851:A:H8	1.88	0.56
1:X:2590:U:HO2'	26:Y:2:ALA:N	2.03	0.56
1:X:1158:A:O2'	1:X:1159:U:H5'	2.05	0.56
1:X:2198:U:H3'	1:X:2199:C:C5'	2.35	0.56
11:I:62:LYS:HG2	11:I:64:GLY:N	2.21	0.56
6:D:134:GLU:O	6:D:137:ILE:HG12	2.06	0.56
6:D:35:VAL:HG12	6:D:36:VAL:N	2.20	0.56
14:L:27:LEU:HD23	14:L:44:ASP:CB	2.35	0.56
14:L:95:LYS:O	14:L:96:TYR:C	2.43	0.56
25:W:4:LYS:HA	25:W:30:ASP:O	2.05	0.56
21:S:74:ARG:HB3	21:S:75:LYS:HE3	1.88	0.56
3:A:135:PHE:CD2	3:A:135:PHE:N	2.74	0.56
20:R:24:VAL:HG11	20:R:29:HIS:HB2	1.86	0.56
20:R:93:ARG:O	20:R:95:ARG:NE	2.38	0.56
1:X:2527:G:C6	1:X:2540:A:C2	2.93	0.56
1:X:452:G:H2'	1:X:453:U:C6	2.41	0.56
22:T:37:LEU:HD11	22:T:61:ALA:N	2.20	0.56
22:T:73:GLY:O	22:T:74:LYS:HB2	2.06	0.56
1:X:1745:C:OP1	15:M:101:ARG:HD2	2.04	0.56
1:X:1731:C:H3'	1:X:1732:U:C5'	2.35	0.56
1:X:357:A:H3'	1:X:358:C:O4'	2.05	0.56
11:I:44:GLY:O	11:I:45:LYS:CB	2.51	0.56
1:X:1542:G:N2	1:X:1562:G:H22	2.03	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1160:C:H2'	1:X:1161:U:O4'	2.05	0.56
16:N:33:ARG:NH1	16:N:33:ARG:HG3	2.20	0.56
1:X:2000:U:O2'	26:Y:9:LYS:HA	2.05	0.56
11:I:72:TYR:HA	11:I:105:PRO:CG	2.26	0.56
6:D:111:ILE:O	6:D:114:PHE:HB2	2.06	0.56
6:D:66:ILE:N	6:D:88:LYS:O	2.27	0.56
20:R:106:VAL:HG23	20:R:113:THR:OG1	2.05	0.56
3:A:240:THR:OG1	3:A:241:GLY:N	2.39	0.56
1:X:120:G:O2'	1:X:121:G:H5'	2.05	0.56
1:X:2240:C:O2'	1:X:2241:U:C5'	2.49	0.56
1:X:789:G:C6	1:X:806:A:N7	2.73	0.56
1:X:125:A:H5''	1:X:126:C:C6	2.41	0.56
1:X:765:C:C5	1:X:1772:C:C2	2.93	0.56
1:X:751:G:H1'	1:X:772:G:H22	1.71	0.56
1:X:166:G:N1	1:X:182:G:O2'	2.35	0.56
1:X:867:G:H2'	1:X:868:U:C6	2.41	0.56
1:X:46:C:O2'	1:X:47:G:H5'	2.06	0.56
9:G:62:ILE:O	9:G:62:ILE:HG22	2.06	0.56
1:X:823:U:OP1	1:X:1266:G:N7	2.39	0.56
1:X:2395:C:C2'	1:X:2396:C:C5'	2.83	0.56
14:L:79:ALA:HA	14:L:82:LYS:HB2	1.87	0.56
1:X:1790:G:H21	3:A:155:LEU:HA	1.71	0.56
19:Q:43:GLN:OE1	19:Q:49:ARG:HA	2.06	0.56
20:R:15:HIS:C	20:R:16:PHE:CD2	2.79	0.56
20:R:92:THR:C	20:R:95:ARG:HH22	2.09	0.56
1:X:2218:G:H5'	3:A:249:PRO:CB	2.29	0.56
3:A:223:GLY:O	3:A:233:HIS:HB2	2.05	0.56
1:X:2334:C:O3'	22:T:24:LYS:NZ	2.39	0.56
4:B:154:LYS:O	4:B:155:ARG:C	2.42	0.56
19:Q:4:TYR:CD2	24:V:23:LYS:HB2	2.40	0.56
1:X:2270:U:H2'	1:X:2271:C:C6	2.40	0.56
1:X:2564:U:H5''	1:X:2565:C:OP1	2.05	0.56
21:S:95:SER:HB3	21:S:119:ASN:HD21	1.71	0.56
4:B:28:ALA:HB3	4:B:92:ASN:ND2	2.15	0.56
1:X:1710:U:C5'	1:X:1711:C:C5	2.85	0.56
1:X:633:G:H2'	1:X:634:G:H8	1.70	0.56
22:T:4:LYS:HB3	22:T:4:LYS:HZ3	1.70	0.56
1:X:244:C:H2'	1:X:245:C:O4'	2.06	0.56
13:K:28:LEU:HD21	13:K:115:LEU:HD23	1.86	0.56
13:K:75:VAL:O	13:K:78:LYS:HB3	2.05	0.56
1:X:657:A:H2	1:X:658:G:C4	2.22	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:11:LYS:HG3	18:P:12:LYS:H	1.70	0.56
1:X:1817:U:H2'	1:X:1818:G:O4'	2.06	0.56
10:H:119:ARG:CZ	15:M:41:GLU:HG2	2.36	0.56
1:X:2661:G:O2'	1:X:2662:C:H5'	2.06	0.56
9:G:79:PHE:CE2	9:G:147:ARG:HG2	2.41	0.56
17:O:34:GLU:O	17:O:35:LEU:O	2.24	0.56
17:O:5:ILE:HG13	17:O:9:GLY:CA	2.36	0.56
1:X:1174:G:C2	1:X:1175:A:N7	2.74	0.56
6:D:169:LEU:O	6:D:171:GLN:N	2.38	0.56
14:L:73:LYS:HB2	14:L:106:ALA:HB1	1.88	0.56
14:L:94:TYR:O	14:L:96:TYR:N	2.32	0.56
1:X:2795:A:H4'	13:K:5:LYS:CG	2.36	0.56
1:X:2228:U:H4'	1:X:2229:G:OP2	2.03	0.56
1:X:663:G:O5'	1:X:664:C:H5''	2.05	0.56
1:X:1392:U:O2	1:X:1392:U:H2'	2.06	0.56
19:Q:66:GLY:C	19:Q:68:PHE:N	2.58	0.56
19:Q:6:ILE:HG22	19:Q:7:LEU:H	1.66	0.56
1:X:1515:U:O2'	1:X:1516:A:H5'	2.04	0.56
8:F:75:MET:SD	8:F:78:LEU:HD23	2.46	0.56
10:H:5:GLN:HA	10:H:20:MET:HE2	1.87	0.56
1:X:1744:G:H2'	1:X:1746:A:OP2	2.04	0.56
4:B:77:ILE:HD13	4:B:195:LEU:HD22	1.88	0.56
1:X:1597:A:H2'	1:X:1598:C:H6	1.71	0.56
15:M:53:VAL:HG12	15:M:54:VAL:N	2.20	0.56
1:X:424:G:H3'	1:X:2385:U:C4	2.41	0.56
4:B:60:ASN:O	4:B:64:GLN:N	2.39	0.56
1:X:613:A:N3	1:X:668:A:C2	2.74	0.56
1:X:408:U:H2'	1:X:409:G:C8	2.41	0.56
9:G:67:ARG:NH1	9:G:70:PHE:O	2.39	0.56
17:O:11:GLN:HE22	17:O:38:LEU:HB3	1.69	0.56
2:Z:109:G:P	21:S:26:LYS:HE2	2.46	0.56
23:U:20:ARG:HG2	23:U:39:LYS:CE	2.34	0.56
3:A:143:HIS:HD2	3:A:192:THR:HB	1.70	0.56
19:Q:47:GLY:O	19:Q:48:VAL:HB	2.05	0.56
1:X:1225:G:H2'	1:X:1249:G:H22	1.70	0.56
10:H:19:ILE:CD1	10:H:19:ILE:N	2.68	0.56
18:P:46:ARG:HA	18:P:92:VAL:CG1	2.36	0.56
1:X:1594:U:H2'	1:X:1595:A:C8	2.41	0.56
1:X:1092:U:H4'	8:F:118:ALA:CB	2.35	0.56
1:X:201:G:N7	1:X:433:G:H4'	2.20	0.56
24:V:62:ARG:O	24:V:66:GLN:HA	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:107:ILE:HD13	18:P:108:PRO:CD	2.36	0.56
26:Y:36:CYS:HB3	26:Y:49:CYS:HB3	1.88	0.56
1:X:1655:C:H4'	1:X:2689:C:O2	2.06	0.56
1:X:1842:G:O2'	1:X:1843:U:H5'	2.05	0.56
23:U:75:TYR:CD1	23:U:75:TYR:N	2.73	0.56
1:X:1781:C:H4'	3:A:209:ALA:CB	2.36	0.56
15:M:26:ASP:CG	15:M:27:PHE:H	2.07	0.56
1:X:2620:G:OP1	9:G:102:ARG:NH2	2.39	0.56
16:N:75:ASN:ND2	16:N:77:SER:HB3	2.20	0.56
1:X:1034:U:C2'	1:X:1035:G:H5'	2.35	0.56
1:X:2383:C:H4'	11:I:67:ASN:HD21	1.71	0.56
25:W:12:ARG:HD2	25:W:13:PRO:HD3	1.88	0.56
21:S:32:PHE:N	21:S:32:PHE:CD2	2.73	0.56
21:S:66:VAL:HA	21:S:82:ASP:O	2.06	0.56
12:J:119:PHE:CE1	12:J:132:MET:HG3	2.41	0.56
5:C:34:GLN:OE1	5:C:176:ASN:OD1	2.24	0.56
23:U:31:GLY:HA2	23:U:32:ARG:NH1	2.20	0.56
1:X:2375:G:H2'	1:X:2376:G:C8	2.39	0.56
1:X:1394:G:O2'	1:X:1395:A:H5'	2.06	0.56
20:R:51:VAL:HG21	20:R:76:LEU:HD11	1.87	0.56
1:X:513:A:C6	1:X:516:G:C6	2.94	0.56
1:X:1525:A:H2'	1:X:1526:U:O4'	2.05	0.56
1:X:1448:A:N6	1:X:1574:A:H61	1.89	0.56
13:K:11:ASN:OD1	13:K:17:ARG:CZ	2.54	0.56
1:X:2483:U:H6	1:X:2483:U:O5'	1.89	0.56
1:X:636:G:H5'	1:X:636:G:H8	1.71	0.56
1:X:402:A:C8	1:X:2392:G:C4'	2.87	0.56
15:M:29:PRO:CA	15:M:54:VAL:HG12	2.33	0.56
1:X:695:G:O2'	1:X:696:U:H5'	2.06	0.56
2:Z:3:A:H2'	2:Z:4:C:H5''	1.87	0.56
9:G:99:VAL:O	9:G:101:THR:N	2.39	0.55
1:X:590:C:OP2	16:N:33:ARG:NH1	2.38	0.55
16:N:69:ALA:HB2	16:N:79:PHE:CD1	2.40	0.55
16:N:93:LYS:NZ	17:O:5:ILE:CG2	2.69	0.55
17:O:15:SER:CA	17:O:95:ILE:HB	2.33	0.55
14:L:33:ARG:NH1	14:L:100:VAL:CA	2.64	0.55
25:W:9:VAL:O	25:W:12:ARG:HB2	2.05	0.55
2:Z:16:U:HO2'	2:Z:110:U:C2'	2.19	0.55
1:X:1361:G:H2'	1:X:1362:A:H8	1.71	0.55
6:D:69:LYS:C	6:D:85:VAL:HG22	2.26	0.55
1:X:343:A:H1'	1:X:346:C:H42	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:142:GLY:C	7:E:144:VAL:H	2.10	0.55
1:X:2581:A:H3'	1:X:2582:G:C5'	2.27	0.55
15:M:69:ARG:HG2	15:M:78:GLU:HG2	1.88	0.55
1:X:118:U:C2'	1:X:119:G:OP2	2.54	0.55
13:K:48:VAL:HG13	13:K:49:GLU:N	2.21	0.55
22:T:16:SER:C	22:T:17:ASN:HD22	2.08	0.55
21:S:149:ALA:HB3	21:S:164:PRO:CA	2.32	0.55
1:X:1135:C:O2'	1:X:1136:G:H5'	2.05	0.55
1:X:2440:C:H2'	1:X:2441:U:C6	2.41	0.55
9:G:37:ASP:O	9:G:38:GLU:HB3	2.07	0.55
1:X:1917:C:O2'	1:X:1918:G:H5'	2.05	0.55
3:A:213:ARG:O	3:A:215:LEU:N	2.39	0.55
1:X:2662:C:H2'	1:X:2663:U:H6	1.71	0.55
9:G:103:TYR:CE2	9:G:111:LYS:CB	2.89	0.55
9:G:61:ARG:NH1	9:G:78:ASP:OD2	2.38	0.55
1:X:463:C:H42	1:X:467:U:H5	1.55	0.55
11:I:94:GLU:C	11:I:96:TYR:N	2.59	0.55
6:D:22:TYR:C	6:D:24:SER:N	2.58	0.55
2:Z:43:G:H5''	6:D:66:ILE:HD13	1.88	0.55
1:X:219:G:C2'	1:X:220:U:OP2	2.54	0.55
3:A:131:LEU:HD23	3:A:131:LEU:N	2.11	0.55
3:A:39:LYS:O	3:A:40:THR:HB	2.06	0.55
19:Q:16:ALA:O	19:Q:19:ALA:N	2.37	0.55
19:Q:48:VAL:HG22	19:Q:49:ARG:N	2.21	0.55
1:X:2057:U:C5'	1:X:2057:U:H6	2.19	0.55
1:X:1263:G:O2'	1:X:1264:C:H5'	2.06	0.55
7:E:120:GLY:O	7:E:136:ILE:HD13	2.06	0.55
1:X:2272:A:P	14:L:15:ARG:NH2	2.74	0.55
1:X:2484:G:O2'	1:X:2485:U:C5'	2.54	0.55
1:X:2014:A:C6	1:X:2477:C:H1'	2.40	0.55
24:V:52:GLN:C	24:V:54:ASN:N	2.60	0.55
1:X:2875:C:C2'	1:X:2876:C:H5'	2.37	0.55
1:X:1987:G:C5	1:X:1988:A:C8	2.94	0.55
1:X:2071:G:H21	1:X:2072:C:H1'	1.71	0.55
1:X:2709:C:H2'	1:X:2710:C:C6	2.41	0.55
16:N:78:THR:HG23	16:N:117:ARG:HD2	1.86	0.55
21:S:54:ILE:HG13	21:S:62:PHE:CB	2.13	0.55
5:C:117:LEU:HD22	5:C:187:VAL:HA	1.86	0.55
5:C:194:GLU:C	5:C:195:ILE:HG12	2.25	0.55
3:A:70:ARG:NH2	3:A:190:TYR:CD2	2.74	0.55
1:X:2736:U:H4'	1:X:2737:A:OP1	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1698:C:H2'	1:X:1753:A:N3	2.22	0.55
1:X:2311:U:H4'	1:X:2315:A:H62	1.72	0.55
11:I:114:ILE:HD13	11:I:114:ILE:C	2.27	0.55
1:X:2457:A:H5'	30:4:31:LYS:CG	2.36	0.55
18:P:14:ARG:HA	18:P:17:GLN:HB3	1.89	0.55
1:X:2486:C:C2	1:X:2562:G:C2	2.94	0.55
1:X:1873:A:C8	1:X:1874:G:C8	2.94	0.55
1:X:2053:G:H2'	1:X:2054:A:C8	2.40	0.55
1:X:2445:C:OP1	30:4:4:ARG:HB3	2.06	0.55
1:X:2463:G:H1'	12:J:125:LYS:HD2	1.87	0.55
6:D:32:GLU:N	6:D:157:VAL:O	2.39	0.55
1:X:2188:A:C2	1:X:2189:A:N6	2.75	0.55
3:A:43:ARG:O	3:A:44:ASN:HB3	2.06	0.55
17:O:10:LYS:CG	17:O:11:GLN:N	2.60	0.55
1:X:1276:U:H1'	26:Y:10:LYS:HG3	1.87	0.55
11:I:106:VAL:HB	11:I:123:ASP:H	1.70	0.55
11:I:64:GLY:O	11:I:65:PHE:HB2	2.06	0.55
14:L:73:LYS:H	14:L:106:ALA:HB1	1.72	0.55
14:L:28:ARG:HA	14:L:88:VAL:O	2.06	0.55
21:S:3:LEU:HD11	21:S:32:PHE:C	2.27	0.55
21:S:64:ALA:CB	21:S:85:MET:HA	2.36	0.55
2:Z:72:C:H2'	2:Z:73:C:H6	1.66	0.55
5:C:129:LYS:O	5:C:130:THR:HB	2.05	0.55
5:C:152:THR:OG1	5:C:154:ASP:OD1	2.23	0.55
3:A:160:GLY:HA2	3:A:196:VAL:HB	1.88	0.55
3:A:145:LEU:HD22	3:A:163:VAL:HG21	1.88	0.55
1:X:1810:U:O2'	1:X:1811:A:P	2.64	0.55
1:X:1129:A:H8	1:X:1129:A:H5'	1.72	0.55
1:X:1113:C:H2'	1:X:1114:A:C8	2.41	0.55
21:S:137:ASP:CG	21:S:138:VAL:H	2.10	0.55
15:M:104:LEU:O	15:M:105:TYR:C	2.44	0.55
24:V:2:LYS:H	24:V:3:PRO:CD	2.20	0.55
1:X:1922:U:O2'	1:X:2571:G:H1'	2.07	0.55
1:X:1324:G:OP2	1:X:1324:G:N2	2.36	0.55
1:X:522:G:O2'	1:X:523:A:OP2	2.16	0.55
21:S:20:ALA:HB3	21:S:80:HIS:HB2	1.87	0.55
5:C:72:ARG:HG3	5:C:77:PHE:CE2	2.41	0.55
1:X:1870:U:H6	1:X:1870:U:O5'	1.89	0.55
15:M:50:PHE:CE2	15:M:70:LYS:HD2	2.42	0.55
4:B:146:THR:CB	4:B:147:PRO:HD2	2.29	0.55
5:C:45:THR:N	5:C:86:PRO:O	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:48:ARG:C	5:C:50:GLN:H	2.08	0.55
9:G:83:ILE:O	9:G:84:ASN:HB2	2.06	0.55
1:X:2357:A:H1'	14:L:88:VAL:HG11	1.89	0.55
1:X:2796:A:O2'	1:X:2801:A:N1	2.37	0.55
5:C:22:VAL:HG13	5:C:106:MET:HG2	1.87	0.55
11:I:47:ALA:O	11:I:49:PHE:N	2.40	0.55
3:A:97:TYR:O	3:A:99:ASP:N	2.40	0.55
20:R:98:ILE:HG22	20:R:99:VAL:HG22	1.88	0.55
1:X:1936:A:H2	1:X:2528:G:N3	2.05	0.55
10:H:27:SER:HA	10:H:50:ILE:HD12	1.87	0.55
1:X:1263:G:H8	1:X:1263:G:OP2	1.90	0.55
5:C:163:ASN:ND2	5:C:166:TRP:CD1	2.75	0.55
1:X:2824:C:O2	1:X:2824:C:C2'	2.55	0.55
8:F:92:PRO:HG3	8:F:135:MET:C	2.27	0.55
18:P:72:LEU:O	18:P:75:ALA:N	2.30	0.55
1:X:2306:A:C6	1:X:2307:A:C6	2.94	0.55
1:X:1045:G:H2'	1:X:1046:U:O4'	2.06	0.55
1:X:2776:U:O2	18:P:134:LYS:HD2	2.06	0.55
4:B:165:VAL:CG1	4:B:166:THR:N	2.70	0.55
1:X:1715:A:C8	1:X:1717:A:O4'	2.60	0.55
1:X:1211:G:O2'	1:X:1212:U:H5'	2.06	0.55
19:Q:51:ILE:CG1	19:Q:83:ALA:HA	2.36	0.55
1:X:2189:A:H8	1:X:2189:A:O5'	1.88	0.55
4:B:149:ARG:HG3	4:B:150:VAL:N	2.21	0.55
16:N:24:PHE:HE2	16:N:39:LEU:HD21	1.71	0.55
17:O:5:ILE:HG12	17:O:6:GLN:N	2.21	0.55
17:O:23:GLU:HG2	17:O:91:THR:CB	2.36	0.55
1:X:577:U:C5'	1:X:956:A:N6	2.70	0.55
1:X:960:U:H2'	1:X:961:G:C8	2.41	0.55
6:D:10:ASP:O	6:D:14:PRO:HB2	2.07	0.55
1:X:2357:A:H2'	1:X:2358:C:H5'	1.88	0.55
21:S:39:PHE:HE1	21:S:83:PHE:HZ	1.53	0.55
4:B:9:ILE:HD11	4:B:27:LEU:CB	2.35	0.55
5:C:28:HIS:O	5:C:29:GLU:C	2.43	0.55
1:X:1517:C:H5'	3:A:102:LYS:NZ	2.22	0.55
3:A:77:ALA:HB1	3:A:96:HIS:C	2.27	0.55
20:R:96:LYS:O	20:R:104:VAL:HA	2.06	0.55
20:R:64:ASN:HB3	20:R:66:GLN:HB3	1.88	0.55
8:F:81:LYS:NZ	8:F:84:GLY:CA	2.70	0.55
1:X:1096:A:H2'	1:X:1097:A:C4	2.41	0.55
1:X:1343:C:H2'	1:X:1343:C:O2	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:48:VAL:C	20:R:50:GLY:H	2.10	0.55
1:X:1698:C:HO2'	1:X:1753:A:H2'	1.70	0.55
1:X:2729:A:H3'	1:X:2730:A:C5'	2.36	0.55
18:P:34:SER:O	18:P:35:PRO:C	2.43	0.55
26:Y:47:PRO:HG2	26:Y:48:ASN:N	2.18	0.55
1:X:2870:C:H2'	1:X:2871:U:H6	1.71	0.55
1:X:436:A:H5''	1:X:437:G:C5'	2.35	0.55
24:V:25:LEU:HD21	24:V:47:ARG:CD	2.36	0.55
4:B:45:GLU:O	4:B:46:ALA:HB2	2.04	0.55
1:X:1082:G:H1'	1:X:1100:G:C4	2.41	0.55
1:X:1997:A:C2	1:X:1998:A:N1	2.75	0.55
1:X:1845:A:N1	1:X:2070:G:H1'	2.21	0.55
3:A:205:VAL:O	3:A:206:LEU:HB2	2.07	0.55
4:B:151:TYR:HB3	9:G:106:TYR:CE2	2.41	0.55
9:G:110:LEU:CD2	9:G:110:LEU:N	2.70	0.55
16:N:60:LEU:HD13	16:N:61:TRP:N	2.22	0.55
17:O:6:GLN:O	17:O:7:THR:CB	2.55	0.55
1:X:540:G:N2	1:X:2005:U:OP1	2.39	0.55
1:X:987:G:C2	1:X:988:G:N7	2.75	0.55
18:P:28:ALA:HB3	18:P:124:ILE:HG12	1.89	0.55
6:D:108:LEU:O	6:D:111:ILE:HG13	2.06	0.55
6:D:16:LEU:HA	6:D:20:PHE:CD1	2.41	0.55
3:A:121:PRO:C	3:A:123:ALA:H	2.10	0.55
3:A:36:ALA:HB1	3:A:62:TYR:O	2.07	0.55
20:R:35:LYS:HZ2	20:R:35:LYS:HB3	1.71	0.55
1:X:1685:A:N7	1:X:1691:G:C6	2.75	0.55
11:I:54:SER:O	11:I:59:ARG:HD3	2.06	0.55
21:S:113:VAL:HG13	21:S:171:VAL:HG22	1.88	0.55
1:X:333:A:C2'	5:C:162:ARG:NH1	2.70	0.55
24:V:18:ILE:HD13	24:V:53:LEU:HD13	1.88	0.55
18:P:89:ARG:O	18:P:130:GLU:HA	2.06	0.55
1:X:2728:A:H5'	7:E:6:LYS:NZ	2.22	0.55
1:X:559:C:H2'	1:X:560:G:O4'	2.04	0.55
30:4:11:CYS:HB3	30:4:32:HIS:HE1	1.71	0.55
18:P:106:LEU:HD13	18:P:116:ILE:HG12	1.89	0.55
15:M:11:GLU:OE2	15:M:14:ARG:NH1	2.38	0.55
1:X:1842:G:H2'	1:X:1843:U:H6	1.71	0.55
3:A:222:ARG:C	3:A:224:SER:H	2.10	0.55
3:A:44:ASN:HB2	3:A:48:ARG:O	2.07	0.55
15:M:35:VAL:HG22	15:M:90:GLN:HG2	1.89	0.55
9:G:108:GLY:H	9:G:110:LEU:CD2	2.12	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:34:PRO:C	9:G:69:ASP:OD2	2.45	0.55
9:G:87:GLN:N	9:G:87:GLN:NE2	2.51	0.55
17:O:11:GLN:HA	17:O:11:GLN:NE2	2.22	0.55
17:O:79:GLN:O	17:O:80:TYR:HB2	2.04	0.55
1:X:1163:C:O2'	1:X:1164:C:H5'	2.07	0.55
2:Z:41:A:O2'	2:Z:48:A:C2	2.60	0.55
2:Z:16:U:O2'	2:Z:110:U:H1'	2.06	0.55
12:J:99:LYS:CD	12:J:100:PRO:HD2	2.37	0.55
5:C:12:GLY:HA3	5:C:13:ARG:NH2	2.22	0.55
23:U:26:ALA:O	23:U:27:ASP:O	2.24	0.55
1:X:1656:U:H4'	1:X:2678:C:H4'	1.89	0.55
1:X:1687:C:O2	4:B:129:HIS:HE1	1.89	0.55
10:H:53:ALA:N	10:H:70:VAL:O	2.40	0.55
18:P:71:VAL:O	18:P:72:LEU:C	2.43	0.55
18:P:8:PHE:CG	18:P:9:ARG:N	2.74	0.55
1:X:529:U:H2'	1:X:530:G:H8	1.71	0.55
1:X:242:A:C2'	1:X:243:G:H4'	2.37	0.55
1:X:1101:U:H2'	1:X:1102:G:C8	2.42	0.55
15:M:24:LEU:HD13	15:M:91:VAL:CG2	2.36	0.55
1:X:2705:A:O2'	1:X:2706:U:O5'	2.25	0.55
4:B:147:PRO:O	4:B:149:ARG:N	2.38	0.55
5:C:45:THR:HG21	5:C:82:VAL:HG11	1.87	0.55
1:X:1166:A:C2'	1:X:1167:A:H5''	2.36	0.55
1:X:1236:G:C2	1:X:1240:G:C2	2.95	0.55
1:X:547:U:H2'	1:X:548:G:H8	1.72	0.55
2:Z:27:A:N1	2:Z:55:C:H5''	2.21	0.55
21:S:23:ALA:HB3	21:S:32:PHE:CZ	2.42	0.55
2:Z:93:G:OP1	12:J:19:THR:HB	2.07	0.55
1:X:1354:A:C5'	19:Q:56:MET:HG3	2.36	0.55
6:D:75:SER:O	6:D:79:LEU:HD13	2.07	0.55
20:R:32:GLN:HG2	20:R:33:THR:N	2.22	0.55
20:R:98:ILE:CG2	20:R:99:VAL:H	2.15	0.55
7:E:85:ILE:N	7:E:132:ASP:OD1	2.40	0.55
24:V:38:ALA:C	24:V:40:PRO:HD3	2.26	0.55
1:X:2861:A:H2'	1:X:2862:G:O4'	2.07	0.55
8:F:87:LYS:HE3	8:F:87:LYS:HA	1.88	0.55
1:X:1088:A:O2'	1:X:1089:C:H5'	2.07	0.55
1:X:2015:G:H2'	4:B:145:LYS:HZ1	1.68	0.55
12:J:92:GLU:OE1	12:J:92:GLU:HA	2.06	0.55
1:X:683:A:O2'	1:X:684:C:P	2.64	0.55
1:X:1397:A:C2'	1:X:1398:G:H5''	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1056:U:H4'	1:X:1058:G:C1'	2.35	0.55
1:X:1555:A:H2'	1:X:1556:A:C8	2.42	0.55
7:E:109:TYR:HE1	7:E:152:ARG:HH21	1.54	0.55
26:Y:4:HIS:CB	26:Y:5:PRO:HD3	2.37	0.55
9:G:118:ALA:O	9:G:120:SER:N	2.40	0.55
16:N:42:ALA:O	16:N:45:TYR:HB2	2.07	0.55
11:I:90:ARG:HA	11:I:121:HIS:CG	2.42	0.55
6:D:17:MET:O	6:D:21:GLY:HA2	2.06	0.55
6:D:35:VAL:HG11	6:D:88:LYS:HG3	1.89	0.55
14:L:33:ARG:HD3	14:L:100:VAL:CA	2.37	0.55
5:C:98:GLN:HA	5:C:101:GLN:CG	2.37	0.55
5:C:136:TRP:CD1	5:C:137:ALA:N	2.75	0.55
3:A:129:ASN:O	3:A:131:LEU:HD23	2.07	0.55
3:A:88:ARG:O	3:A:89:SER:CB	2.55	0.55
1:X:1404:C:C2	1:X:1406:A:N7	2.74	0.55
20:R:37:LEU:N	20:R:47:VAL:O	2.40	0.55
7:E:26:VAL:C	7:E:27:LYS:HG3	2.26	0.55
21:S:138:VAL:HA	21:S:141:MET:HE1	1.88	0.55
3:A:165:VAL:HA	3:A:175:VAL:HG12	1.87	0.55
8:F:85:ILE:CD1	8:F:89:SER:H	2.19	0.55
1:X:2362:G:H2'	1:X:2363:G:C8	2.42	0.55
1:X:75:C:H5''	24:V:48:ARG:HG3	1.89	0.55
1:X:810:U:H2'	1:X:811:G:H8	1.72	0.55
1:X:612:G:H2'	1:X:668:A:N6	2.21	0.55
1:X:1559:G:C8	1:X:1559:G:H3'	2.42	0.55
21:S:143:ILE:O	21:S:143:ILE:HD12	2.07	0.55
1:X:2179:C:H2'	1:X:2180:U:O4'	2.07	0.54
1:X:820:U:OP2	11:I:40:ARG:HD2	2.07	0.54
11:I:120:VAL:O	11:I:140:VAL:HA	2.07	0.54
1:X:2383:C:H1'	11:I:65:PHE:HZ	1.71	0.54
1:X:649:G:C5	1:X:650:U:C5	2.95	0.54
6:D:93:GLY:O	6:D:97:TYR:CD1	2.60	0.54
6:D:96:MET:CG	6:D:97:TYR:N	2.70	0.54
25:W:44:VAL:O	25:W:46:THR:N	2.40	0.54
23:U:29:GLY:N	23:U:32:ARG:HB3	2.22	0.54
1:X:1439:G:H2'	1:X:1440:G:C8	2.42	0.54
1:X:1791:C:O2	1:X:1791:C:H2'	2.07	0.54
19:Q:8:GLN:HB2	19:Q:28:TRP:O	2.06	0.54
1:X:1507:A:O4'	3:A:99:ASP:HB3	2.07	0.54
20:R:93:ARG:O	20:R:95:ARG:CD	2.55	0.54
1:X:2371:A:C4	1:X:2408:G:C6	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:334:G:N7	5:C:164:VAL:HG22	2.22	0.54
1:X:334:G:H5'	5:C:162:ARG:NE	2.23	0.54
13:K:52:ILE:CG1	13:K:53:THR:N	2.71	0.54
1:X:358:C:H6	1:X:358:C:O5'	1.90	0.54
1:X:1374:G:C2	1:X:1375:C:C6	2.94	0.54
1:X:1625:A:O2'	1:X:1632:A:H4'	2.07	0.54
6:D:143:TYR:HA	6:D:146:VAL:CG2	2.37	0.54
1:X:105:G:O2'	1:X:106:G:H5'	2.07	0.54
1:X:392:G:N2	1:X:409:G:C4	2.74	0.54
10:H:85:ASP:HB3	15:M:87:LEU:HD12	1.89	0.54
16:N:25:TRP:CE3	16:N:26:GLY:N	2.76	0.54
21:S:32:PHE:O	21:S:33:ALA:HB2	2.07	0.54
2:Z:16:U:H1'	2:Z:109:G:H21	1.71	0.54
2:Z:71:G:N3	2:Z:71:G:H2'	2.21	0.54
12:J:121:LEU:O	12:J:123:GLY:N	2.41	0.54
5:C:95:LEU:CD2	5:C:96:PRO:HD2	2.36	0.54
1:X:2226:A:C2	1:X:2227:C:C4	2.94	0.54
6:D:70:ALA:O	6:D:72:LYS:N	2.40	0.54
6:D:77:PHE:CD1	6:D:77:PHE:N	2.75	0.54
8:F:81:LYS:C	8:F:83:ALA:N	2.58	0.54
30:4:25:VAL:HG21	30:4:34:GLN:HB2	1.89	0.54
13:K:33:ARG:HG3	13:K:114:GLU:CB	2.31	0.54
1:X:2342:U:O2'	1:X:2343:C:H5'	2.08	0.54
1:X:2273:C:OP1	14:L:11:LEU:HD11	2.06	0.54
12:J:77:LYS:H	12:J:89:GLY:HA3	1.70	0.54
1:X:214:C:H2'	1:X:215:G:H8	1.71	0.54
1:X:2872:U:O2'	1:X:2873:G:H5'	2.07	0.54
1:X:2815:C:C4'	13:K:92:GLY:HA3	2.37	0.54
7:E:109:TYR:CE1	7:E:152:ARG:NH2	2.73	0.54
9:G:106:TYR:O	9:G:110:LEU:HG	2.06	0.54
11:I:80:LEU:HD22	11:I:84:GLU:OE1	2.06	0.54
6:D:14:PRO:O	6:D:15:ALA:C	2.46	0.54
6:D:40:LEU:HG	6:D:150:ARG:NE	2.04	0.54
14:L:33:ARG:CZ	14:L:99:ARG:O	2.56	0.54
21:S:60:GLU:HB3	21:S:62:PHE:CZ	2.43	0.54
12:J:59:PHE:O	12:J:60:ARG:C	2.45	0.54
23:U:26:ALA:CB	23:U:35:THR:HG23	2.38	0.54
1:X:2404:A:OP2	1:X:2406:C:H5'	2.07	0.54
1:X:664:C:H5'	1:X:664:C:H6	1.72	0.54
23:U:20:ARG:HG2	23:U:39:LYS:CD	2.38	0.54
19:Q:53:ILE:HD12	19:Q:54:SER:H	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:10:HIS:O	20:R:11:ASN:C	2.45	0.54
1:X:340:G:H5'	1:X:341:A:OP2	2.07	0.54
1:X:512:A:O2'	18:P:15:LYS:HD3	2.07	0.54
1:X:29:U:O2'	16:N:8:ILE:HG22	2.08	0.54
1:X:1468:A:P	1:X:1468:A:C8	3.01	0.54
1:X:226:C:OP2	1:X:2373:C:O2'	2.25	0.54
1:X:1576:G:C6	1:X:1577:G:N7	2.75	0.54
1:X:2345:A:H2'	1:X:2346:G:O4'	2.08	0.54
1:X:1826:U:O4'	1:X:1952:A:C2	2.60	0.54
1:X:1947:G:C2	1:X:1950:C:C5	2.95	0.54
1:X:303:C:H3'	1:X:304:A:H5''	1.89	0.54
15:M:28:ARG:HB2	15:M:29:PRO:HD2	1.90	0.54
1:X:1374:G:C2	1:X:1375:C:C5	2.95	0.54
1:X:2245:A:C2	1:X:2251:U:C5	2.96	0.54
1:X:2777:A:N7	18:P:134:LYS:CD	2.70	0.54
1:X:749:C:O2'	1:X:750:C:H5'	2.08	0.54
14:L:36:LYS:HE3	14:L:36:LYS:HA	1.89	0.54
1:X:412:U:C5	23:U:68:ARG:NH1	2.75	0.54
1:X:1367:A:C8	1:X:1368:G:C8	2.95	0.54
1:X:2347:C:O2'	1:X:2348:A:H5'	2.08	0.54
10:H:110:VAL:HG12	10:H:111:PHE:N	2.21	0.54
9:G:132:PHE:HB2	9:G:145:HIS:NE2	2.22	0.54
1:X:590:C:OP1	16:N:33:ARG:HG2	2.06	0.54
17:O:93:ILE:HG13	17:O:95:ILE:HD13	1.88	0.54
1:X:2595:C:O2'	1:X:2596:C:H5'	2.08	0.54
1:X:986:A:H4'	16:N:48:ARG:HH11	1.73	0.54
18:P:27:VAL:CG2	18:P:28:ALA:N	2.70	0.54
6:D:57:LEU:HA	6:D:60:ILE:CG1	2.38	0.54
2:Z:30:C:P	14:L:37:HIS:HB3	2.46	0.54
5:C:135:SER:O	5:C:136:TRP:C	2.45	0.54
19:Q:53:ILE:CD1	19:Q:80:VAL:HB	2.36	0.54
20:R:80:LYS:HE3	20:R:80:LYS:C	2.28	0.54
1:X:320:A:O2'	1:X:340:G:H2'	2.08	0.54
7:E:127:GLU:O	7:E:129:THR:N	2.40	0.54
4:B:116:VAL:HG22	4:B:136:ARG:CG	2.37	0.54
21:S:95:SER:HA	21:S:121:GLN:CA	2.27	0.54
18:P:50:VAL:O	18:P:54:GLU:HB2	2.08	0.54
24:V:21:ARG:O	24:V:24:GLU:HB3	2.06	0.54
1:X:14:A:N7	1:X:15:G:C4	2.75	0.54
10:H:73:VAL:HG21	10:H:123:PHE:CE1	2.43	0.54
1:X:211:U:H3	1:X:442:A:N6	2.05	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2615:U:H5'	4:B:80:GLU:HG3	1.89	0.54
15:M:42:GLY:O	15:M:44:ARG:N	2.41	0.54
1:X:754:G:O2'	1:X:755:C:H5'	2.06	0.54
1:X:765:C:O2'	1:X:766:A:OP2	2.22	0.54
1:X:565:A:H2'	1:X:566:U:C6	2.43	0.54
14:L:45:ASP:CG	14:L:46:SER:H	2.10	0.54
1:X:2504:G:N2	1:X:2518:C:C2	2.75	0.54
1:X:674:U:H2'	1:X:675:C:O4'	2.07	0.54
1:X:1174:G:C2	1:X:1175:A:C8	2.96	0.54
1:X:686:C:N4	1:X:821:A:C6	2.76	0.54
26:Y:8:LYS:O	26:Y:9:LYS:HG2	2.07	0.54
18:P:27:VAL:CG2	18:P:125:THR:HG22	2.37	0.54
6:D:97:TYR:CD2	6:D:100:LEU:HD23	2.41	0.54
14:L:102:ALA:O	14:L:105:ASP:N	2.40	0.54
14:L:97:HIS:CG	14:L:98:GLY:N	2.74	0.54
12:J:128:ILE:H	12:J:128:ILE:HD13	1.72	0.54
1:X:872:G:OP2	1:X:872:G:H8	1.91	0.54
5:C:108:ILE:O	5:C:112:GLN:HG2	2.07	0.54
1:X:2405:A:C8	1:X:2405:A:OP1	2.61	0.54
1:X:398:C:O2'	1:X:399:G:OP2	2.23	0.54
3:A:129:ASN:HB2	3:A:131:LEU:HD22	1.90	0.54
19:Q:24:VAL:HG13	19:Q:80:VAL:O	2.07	0.54
20:R:46:VAL:H	20:R:75:ALA:HB1	1.73	0.54
10:H:2:ILE:HG23	10:H:6:SER:HB3	1.89	0.54
1:X:2541:U:H4'	10:H:23:ARG:NH1	2.22	0.54
1:X:2674:C:H2'	1:X:2675:U:H6	1.72	0.54
30:4:7:VAL:HG13	30:4:34:GLN:NE2	2.15	0.54
4:B:38:THR:O	4:B:40:GLN:N	2.41	0.54
13:K:29:LEU:HD22	13:K:79:VAL:HG23	1.87	0.54
1:X:1929:U:H2'	1:X:1930:C:C6	2.42	0.54
1:X:1948:C:C4	1:X:1949:A:C5	2.95	0.54
1:X:970:A:H62	12:J:83:ARG:HH21	1.54	0.54
7:E:7:GLN:H	7:E:8:PRO:CD	2.19	0.54
18:P:35:PRO:O	18:P:36:ARG:C	2.46	0.54
1:X:1385:C:C2'	1:X:1386:A:H5'	2.37	0.54
12:J:29:ALA:O	12:J:30:PHE:HB2	2.06	0.54
4:B:59:VAL:CG1	4:B:64:GLN:HG2	2.37	0.54
3:A:82:ILE:CD1	3:A:82:ILE:N	2.70	0.54
1:X:1541:G:H2'	1:X:1542:G:O4'	2.08	0.54
1:X:2196:U:H2'	1:X:2197:U:C1'	2.38	0.54
15:M:26:ASP:O	15:M:27:PHE:CD2	2.61	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2664:G:O2'	1:X:2665:G:H5'	2.08	0.54
9:G:35:LYS:N	9:G:69:ASP:OD2	2.41	0.54
17:O:95:ILE:HD13	17:O:95:ILE:N	2.21	0.54
1:X:1006:C:H4'	1:X:1007:A:OP1	2.06	0.54
1:X:2035:G:N2	1:X:2036:G:H1'	2.23	0.54
1:X:986:A:C6	1:X:1001:A:C8	2.95	0.54
11:I:73:GLU:OE2	11:I:104:ARG:HB3	2.08	0.54
6:D:171:GLN:NE2	6:D:177:PHE:HB2	2.22	0.54
14:L:33:ARG:CZ	14:L:100:VAL:HA	2.37	0.54
14:L:89:PHE:CD2	14:L:108:ARG:NH1	2.76	0.54
2:Z:27:A:N6	2:Z:55:C:O3'	2.41	0.54
5:C:170:LEU:CD2	5:C:175:VAL:HA	2.28	0.54
1:X:332:C:H4'	5:C:159:ARG:HG2	1.90	0.54
1:X:222:G:O2'	1:X:223:C:H5'	2.08	0.54
19:Q:10:PRO:HD3	24:V:30:PHE:CE2	2.42	0.54
1:X:59:G:H1'	1:X:73:A:H2	1.72	0.54
1:X:2541:U:O2'	1:X:2542:U:H5'	2.08	0.54
4:B:85:ALA:N	4:B:86:PRO:CD	2.62	0.54
1:X:1494:G:HO2'	1:X:1574:A:H2	1.53	0.54
22:T:59:LEU:HD22	22:T:59:LEU:N	2.22	0.54
1:X:1341:G:H2'	1:X:1343:C:C5	2.43	0.54
24:V:18:ILE:C	24:V:20:ALA:H	2.10	0.54
1:X:2311:U:O2	1:X:2311:U:H3'	2.06	0.54
1:X:2366:U:H1'	22:T:41:ARG:HH11	1.72	0.54
1:X:2306:A:H2'	1:X:2307:A:N9	2.23	0.54
1:X:2451:G:C2'	1:X:2454:C:H42	2.20	0.54
1:X:1373:G:H21	1:X:1374:G:H1'	1.71	0.54
1:X:1623:C:O2'	1:X:1624:A:OP2	2.24	0.54
1:X:2437:G:H2'	1:X:2469:G:N1	2.22	0.54
15:M:50:PHE:CE1	15:M:79:ARG:HG2	2.42	0.54
15:M:34:ARG:HH21	15:M:91:VAL:HG21	1.72	0.54
5:C:74:VAL:CG2	5:C:76:THR:H	2.21	0.54
9:G:128:GLU:O	9:G:130:ALA:N	2.33	0.54
16:N:28:ARG:HA	16:N:34:ASN:HB3	1.90	0.54
1:X:1141:U:O2'	1:X:1142:G:O5'	2.25	0.54
1:X:2005:U:C4'	1:X:2006:G:OP1	2.54	0.54
1:X:538:A:N3	1:X:538:A:C3'	2.67	0.54
2:Z:77:G:H1'	21:S:22:VAL:HG11	1.89	0.54
12:J:23:LYS:C	12:J:25:GLY:N	2.61	0.54
12:J:36:ILE:CD1	12:J:103:VAL:HG22	2.37	0.54
1:X:930:A:H3'	1:X:930:A:C8	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:9:GLN:NE2	5:C:120:VAL:HG21	2.22	0.54
23:U:41:VAL:O	23:U:42:GLN:HB2	2.07	0.54
3:A:117:VAL:HG22	3:A:129:ASN:OD1	2.07	0.54
19:Q:59:PRO:HB2	19:Q:72:ARG:NH1	2.22	0.54
1:X:62:U:H5''	1:X:63:A:OP1	2.08	0.54
30:4:17:VAL:HG12	30:4:18:ARG:N	2.22	0.54
3:A:175:VAL:O	3:A:182:LEU:HA	2.06	0.54
1:X:1347:C:H6	1:X:1347:C:O5'	1.90	0.54
1:X:1672:A:H3'	1:X:1673:C:C6	2.43	0.54
13:K:29:LEU:CD1	13:K:70:ILE:HD11	2.38	0.54
1:X:1086:C:H3'	1:X:1087:C:C5'	2.38	0.54
1:X:1364:C:O2'	1:X:1587:A:H1'	2.08	0.54
2:Z:66:G:O2'	2:Z:67:C:H5'	2.07	0.54
1:X:557:U:C4'	1:X:558:G:O4'	2.50	0.54
1:X:2307:A:OP2	1:X:2307:A:H8	1.91	0.54
20:R:38:LEU:HD23	20:R:39:ALA:H	1.69	0.54
4:B:170:LEU:HB3	4:B:184:VAL:HG11	1.88	0.54
1:X:754:G:C6	1:X:770:U:O2	2.61	0.54
1:X:1873:A:H8	1:X:1873:A:H3'	1.72	0.54
1:X:1301:U:O2'	1:X:1302:C:P	2.66	0.54
9:G:69:ASP:O	9:G:70:PHE:HB2	2.07	0.54
11:I:38:LYS:O	11:I:39:SER:HB2	2.07	0.54
1:X:1201:G:H5''	17:O:80:TYR:HE2	1.73	0.54
11:I:72:TYR:CE2	11:I:105:PRO:HB2	2.43	0.54
1:X:641:G:H4'	1:X:651:C:O2'	2.08	0.54
18:P:31:VAL:HG21	18:P:124:ILE:HG12	1.90	0.54
6:D:156:ILE:HD12	6:D:156:ILE:N	2.23	0.54
14:L:39:TYR:O	14:L:40:ALA:C	2.47	0.54
1:X:999:A:OP1	25:W:7:ARG:HD3	2.08	0.54
5:C:153:ASP:HA	5:C:158:ARG:HH21	1.73	0.54
23:U:20:ARG:C	23:U:39:LYS:HD2	2.28	0.54
20:R:96:LYS:H	20:R:105:ARG:H	1.56	0.54
1:X:2726:U:H1'	7:E:139:GLN:CD	2.27	0.54
1:X:2726:U:C2'	7:E:139:GLN:HE21	2.21	0.54
7:E:88:GLU:N	7:E:163:ARG:O	2.40	0.54
1:X:2333:A:N6	1:X:2343:C:N4	2.55	0.54
4:B:119:ARG:HG2	4:B:120:TRP:NE1	2.23	0.54
1:X:2240:C:HO2'	1:X:2241:U:H5'	1.69	0.54
7:E:172:LYS:O	7:E:173:ALA:HB2	2.05	0.54
1:X:76:C:OP1	24:V:52:GLN:NE2	2.41	0.54
1:X:26:G:C6	1:X:27:G:N1	2.76	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:152:ILE:HG12	21:S:168:VAL:HG21	1.90	0.54
1:X:110:U:C5	1:X:111:G:C5	2.95	0.54
1:X:2812:A:C4	1:X:2813:G:C8	2.96	0.54
1:X:532:A:C2	1:X:533:C:C2	2.95	0.54
1:X:242:A:N6	1:X:440:U:O2'	2.41	0.54
1:X:182:G:O2'	1:X:183:U:OP2	2.21	0.54
1:X:104:C:O2'	1:X:105:G:H5'	2.08	0.54
14:L:45:ASP:O	14:L:46:SER:O	2.25	0.54
1:X:1182:U:H2'	1:X:1183:C:O4'	2.08	0.54
1:X:2275:U:H4'	1:X:2276:C:H5'	1.90	0.54
15:M:59:GLY:HA3	15:M:64:LYS:HA	1.89	0.54
1:X:2181:A:O2'	1:X:2182:A:H5'	2.07	0.54
10:H:81:ILE:O	10:H:81:ILE:HD13	2.08	0.54
9:G:67:ARG:CZ	9:G:70:PHE:O	2.56	0.54
16:N:74:MET:O	16:N:75:ASN:CB	2.53	0.54
1:X:2616:U:O2	1:X:2762:G:C2	2.61	0.54
11:I:104:ARG:HB3	11:I:105:PRO:HD2	1.89	0.54
2:Z:46:G:C5'	6:D:92:ARG:HH22	2.18	0.54
2:Z:107:C:H5''	21:S:84:TYR:CD1	2.43	0.54
5:C:116:LYS:O	5:C:117:LEU:CB	2.56	0.54
5:C:118:VAL:O	5:C:119:ALA:HB2	2.07	0.54
23:U:19:ILE:HG13	23:U:20:ARG:N	2.23	0.54
1:X:2064:U:P	23:U:39:LYS:HZ2	2.30	0.54
3:A:147:LEU:O	3:A:148:VAL:HG23	2.08	0.54
1:X:1354:A:H2'	1:X:1410:U:O2'	2.07	0.54
20:R:22:VAL:HG12	20:R:23:ILE:H	1.73	0.54
20:R:40:LEU:O	20:R:44:GLN:HA	2.08	0.54
7:E:101:LYS:O	7:E:123:PHE:HD1	1.91	0.54
1:X:2725:C:H4'	7:E:142:GLY:C	2.28	0.54
7:E:149:ARG:HA	7:E:162:VAL:HG21	1.90	0.54
1:X:2344:G:OP1	22:T:55:ARG:N	2.35	0.54
1:X:1725:C:O2'	1:X:1726:C:H5'	2.07	0.54
1:X:1922:U:H4'	1:X:1923:U:OP2	2.08	0.54
1:X:1431:U:O3'	1:X:1604:A:H4'	2.08	0.54
1:X:554:U:O2	1:X:554:U:H2'	2.08	0.54
1:X:1323:G:H3'	1:X:1324:G:C2	2.43	0.54
1:X:1272:G:O2'	1:X:1273:G:H5'	2.08	0.54
1:X:568:G:C2'	1:X:569:C:H5'	2.38	0.54
1:X:187:U:H2'	1:X:188:G:H8	1.73	0.54
1:X:511:A:H8	1:X:511:A:OP1	1.91	0.54
1:X:1278:A:O2'	1:X:1279:G:P	2.66	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:42:ALA:O	16:N:46:GLU:HG3	2.08	0.54
16:N:79:PHE:CE2	16:N:83:LEU:HD22	2.43	0.54
14:L:91:ARG:H	14:L:91:ARG:NE	2.06	0.54
21:S:34:LEU:C	21:S:34:LEU:HD12	2.29	0.54
12:J:99:LYS:HG3	12:J:100:PRO:HD2	1.90	0.54
5:C:136:TRP:HD1	5:C:137:ALA:N	2.06	0.54
5:C:34:GLN:HE22	5:C:177:VAL:HB	1.72	0.54
1:X:1438:G:H2'	1:X:1439:G:C8	2.43	0.54
1:X:63:A:H5'	19:Q:71:GLN:HB3	1.89	0.54
1:X:1658:A:N7	1:X:1659:G:C5	2.76	0.54
4:B:116:VAL:CG2	4:B:136:ARG:HG2	2.38	0.54
18:P:89:ARG:NE	18:P:132:GLY:H	2.06	0.54
18:P:42:VAL:O	18:P:43:ASP:OD2	2.26	0.54
1:X:2306:A:H2'	1:X:2307:A:C1'	2.37	0.54
1:X:1838:G:N2	1:X:1878:C:C2	2.76	0.54
1:X:306:G:C6	1:X:307:C:N4	2.76	0.54
1:X:877:G:H21	1:X:879:A:N6	2.05	0.54
1:X:2245:A:O2'	1:X:2246:A:OP2	2.23	0.54
21:S:20:ALA:O	21:S:80:HIS:HA	2.07	0.54
1:X:1742:G:C6	1:X:1743:C:N4	2.76	0.54
1:X:613:A:O2'	1:X:614:G:P	2.66	0.54
1:X:1713:G:O6	1:X:1714:A:C6	2.61	0.54
1:X:1714:A:C5'	1:X:1715:A:H3'	2.38	0.54
1:X:1209:G:O2'	1:X:1210:C:H5'	2.08	0.54
1:X:2585:C:C2'	1:X:2586:G:H5'	2.38	0.54
1:X:448:C:H2'	1:X:449:C:H5'	1.90	0.54
1:X:1873:A:C8	1:X:1873:A:H3'	2.43	0.54
15:M:34:ARG:NH1	15:M:81:PHE:CD2	2.76	0.53
4:B:15:TRP:CH2	15:M:84:ALA:HB3	2.42	0.53
9:G:71:THR:HA	16:N:64:ARG:HH11	1.73	0.53
1:X:820:U:H2'	1:X:821:A:C8	2.43	0.53
11:I:88:PHE:CB	11:I:93:LEU:HD12	2.25	0.53
2:Z:30:C:H2'	2:Z:31:A:H5'	1.90	0.53
2:Z:70:C:H2'	2:Z:71:G:C8	2.43	0.53
2:Z:15:A:C2	2:Z:71:G:H2'	2.44	0.53
5:C:158:ARG:O	5:C:160:ALA:N	2.42	0.53
23:U:28:GLY:O	23:U:30:VAL:N	2.41	0.53
1:X:2225:G:C4	1:X:2226:A:N7	2.76	0.53
1:X:398:C:C2'	1:X:399:G:OP2	2.56	0.53
3:A:32:ALA:O	3:A:33:LEU:O	2.26	0.53
19:Q:5:ASP:O	19:Q:7:LEU:N	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1314:A:HO2'	1:X:1315:A:H3'	1.66	0.53
10:H:7:ARG:NH1	10:H:20:MET:CE	2.71	0.53
1:X:2672:U:O2'	1:X:2673:G:H5'	2.09	0.53
21:S:100:THR:HG23	21:S:138:VAL:CG1	2.34	0.53
3:A:172:TYR:HA	3:A:185:VAL:O	2.08	0.53
13:K:97:ILE:CD1	13:K:97:ILE:N	2.72	0.53
21:S:2:GLU:HG2	21:S:55:THR:CB	2.32	0.53
1:X:196:A:H2'	1:X:197:G:H5'	1.89	0.53
1:X:2867:G:H8	1:X:2867:G:OP2	1.90	0.53
4:B:44:TYR:OH	4:B:80:GLU:OE2	2.26	0.53
1:X:1080:A:H4'	1:X:1081:A:N7	2.23	0.53
1:X:1937:G:O2'	1:X:1939:U:H5	1.92	0.53
1:X:2840:U:OP2	1:X:2841:U:H2'	2.09	0.53
1:X:1479:G:O2'	1:X:1480:G:H5'	2.08	0.53
1:X:425:A:H2'	1:X:425:A:N3	2.22	0.53
1:X:2204:A:O2'	1:X:2205:C:OP2	2.21	0.53
1:X:931:G:C6	1:X:932:G:C5	2.95	0.53
1:X:1854:G:H2'	1:X:1855:G:H8	1.73	0.53
26:Y:58:LEU:HD12	26:Y:58:LEU:H	1.73	0.53
1:X:2198:U:P	1:X:2199:C:H5''	2.48	0.53
1:X:1781:C:O2'	3:A:209:ALA:HB2	2.08	0.53
5:C:47:THR:O	5:C:48:ARG:C	2.47	0.53
1:X:573:C:H5''	17:O:74:TYR:OH	2.09	0.53
6:D:10:ASP:O	6:D:12:VAL:N	2.41	0.53
2:Z:7:C:H2'	2:Z:8:C:C6	2.43	0.53
21:S:11:LYS:O	21:S:13:LYS:N	2.40	0.53
1:X:665:A:H2	1:X:666:U:H6	1.56	0.53
20:R:107:ALA:CB	20:R:111:GLY:HA2	2.34	0.53
20:R:60:PRO:CA	20:R:65:PRO:HA	2.31	0.53
8:F:112:LYS:O	8:F:113:MET:HB2	2.08	0.53
1:X:38:G:N3	5:C:42:THR:HB	2.23	0.53
1:X:1071:U:H4'	1:X:1072:U:O5'	2.08	0.53
21:S:123:VAL:HG23	21:S:161:ALA:CB	2.38	0.53
3:A:186:HIS:CD2	3:A:188:GLU:HB2	2.42	0.53
1:X:2496:C:H2'	1:X:2521:A:H62	1.73	0.53
17:O:28:GLU:O	17:O:29:ALA:CB	2.56	0.53
1:X:807:A:O2'	1:X:808:C:H5'	2.08	0.53
1:X:2379:G:H2'	1:X:2380:U:H5'	1.89	0.53
15:M:5:ILE:HD13	15:M:7:ILE:CB	2.38	0.53
1:X:1965:U:C2	1:X:1966:C:C5	2.96	0.53
1:X:763:A:H2'	1:X:764:A:H5''	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:64:ARG:O	13:K:67:ALA:HB3	2.08	0.53
3:A:217:ARG:CD	3:A:218:LYS:HG3	2.39	0.53
9:G:107:GLN:C	9:G:109:GLY:N	2.62	0.53
9:G:162:LYS:H	9:G:163:PRO:CD	2.21	0.53
16:N:62:ILE:HG23	16:N:76:TYR:CE1	2.44	0.53
1:X:1171:A:C1'	17:O:6:GLN:OE1	2.56	0.53
6:D:135:GLN:C	6:D:141:ILE:HG21	2.29	0.53
6:D:17:MET:HE3	6:D:25:VAL:HG12	1.90	0.53
2:Z:7:C:H2'	2:Z:8:C:H6	1.74	0.53
21:S:32:PHE:HD2	21:S:32:PHE:N	2.06	0.53
1:X:1218:C:O4'	11:I:13:ARG:HD3	2.08	0.53
1:X:819:C:OP2	11:I:41:SER:HA	2.08	0.53
1:X:171:G:C6	1:X:179:U:O2	2.61	0.53
1:X:177:U:C4	1:X:225:G:C2	2.96	0.53
1:X:717:G:C2'	1:X:739:G:N2	2.72	0.53
19:Q:63:LYS:HB2	19:Q:70:GLY:H	1.73	0.53
19:Q:28:TRP:CZ3	19:Q:75:ARG:HD2	2.42	0.53
3:A:70:ARG:O	3:A:72:LYS:N	2.41	0.53
12:J:78:LYS:HE3	12:J:80:ALA:O	2.08	0.53
18:P:87:GLU:HA	18:P:90:LEU:CD1	2.36	0.53
7:E:44:ARG:HD2	7:E:45:GLN:N	2.24	0.53
2:Z:67:C:C2'	2:Z:111:C:H42	2.18	0.53
18:P:39:ARG:O	18:P:43:ASP:CG	2.47	0.53
1:X:1430:G:C2	1:X:1431:U:C2	2.96	0.53
30:4:10:MET:HE3	30:4:32:HIS:HA	1.91	0.53
1:X:946:U:H2'	1:X:947:C:C6	2.30	0.53
25:W:38:PRO:CA	25:W:41:ARG:NH2	2.71	0.53
15:M:54:VAL:HG12	15:M:54:VAL:O	2.08	0.53
1:X:1502:G:O2'	1:X:1503:G:H5'	2.07	0.53
1:X:1769:U:C5	1:X:1775:A:C4	2.97	0.53
2:Z:3:A:C2'	2:Z:4:C:H5''	2.37	0.53
10:H:11:ALA:HB3	10:H:110:VAL:HG13	1.89	0.53
9:G:65:LYS:HB2	9:G:66:HIS:CD2	2.43	0.53
14:L:59:LEU:HD23	14:L:60:LYS:H	1.74	0.53
1:X:874:A:C4	1:X:929:A:C6	2.97	0.53
5:C:127:ASP:O	5:C:129:LYS:N	2.42	0.53
23:U:22:GLY:N	23:U:39:LYS:HE2	2.24	0.53
19:Q:8:GLN:O	19:Q:9:ALA:HB2	2.06	0.53
20:R:85:ASP:H	20:R:86:PRO:HD3	1.71	0.53
8:F:71:LYS:C	8:F:73:PRO:HD3	2.28	0.53
7:E:137:ASP:HB3	7:E:140:LEU:CB	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2740:C:C2'	1:X:2741:G:H5'	2.38	0.53
1:X:2862:G:O2'	1:X:2863:U:H5'	2.08	0.53
12:J:77:LYS:HG3	12:J:78:LYS:N	2.23	0.53
1:X:1242:A:O2'	1:X:1243:G:H5'	2.08	0.53
8:F:116:LEU:HG	8:F:127:THR:HG21	1.90	0.53
1:X:2508:G:O5'	1:X:2509:A:H5''	2.07	0.53
1:X:1288:A:O2'	1:X:1289:A:P	2.67	0.53
4:B:68:ALA:O	4:B:71:GLY:N	2.37	0.53
1:X:2380:U:C4	1:X:2381:A:H2	2.26	0.53
1:X:1757:C:N3	1:X:1970:G:C6	2.76	0.53
1:X:700:C:H2'	1:X:701:U:O4'	2.09	0.53
1:X:933:G:O2'	1:X:934:G:H5'	2.08	0.53
1:X:828:C:C2	1:X:1207:G:C2	2.97	0.53
23:U:49:LYS:HA	23:U:62:LEU:H	1.72	0.53
9:G:132:PHE:CD1	9:G:145:HIS:HB2	2.43	0.53
16:N:32:TYR:CE1	16:N:36:PHE:HB2	2.43	0.53
17:O:32:LYS:O	17:O:57:GLN:HA	2.08	0.53
1:X:984:A:C4	1:X:1202:U:C4	2.97	0.53
1:X:1235:C:C2	1:X:1241:G:N2	2.77	0.53
1:X:691:C:H2'	1:X:692:C:H6	1.73	0.53
1:X:960:U:H2'	1:X:961:G:H8	1.73	0.53
1:X:984:A:H1'	1:X:1202:U:N1	2.22	0.53
6:D:132:ILE:H	6:D:153:ASP:HA	1.74	0.53
6:D:94:GLU:O	6:D:98:VAL:N	2.41	0.53
25:W:34:VAL:HG22	25:W:40:VAL:HG13	1.91	0.53
12:J:40:PRO:HB3	12:J:99:LYS:HZ2	1.73	0.53
19:Q:60:GLY:H	19:Q:72:ARG:CD	2.21	0.53
20:R:96:LYS:HZ3	20:R:105:ARG:HG3	1.74	0.53
20:R:71:GLN:OE1	20:R:71:GLN:C	2.46	0.53
20:R:94:VAL:O	20:R:95:ARG:NH1	2.40	0.53
10:H:41:ASN:O	10:H:42:LYS:O	2.26	0.53
1:X:453:U:O2'	5:C:40:ARG:NH1	2.42	0.53
1:X:90:G:H5'	1:X:91:A:H8	1.73	0.53
4:B:96:PHE:CE2	4:B:102:ILE:HG21	2.42	0.53
1:X:93:A:O2'	1:X:94:C:H5'	2.08	0.53
13:K:99:ARG:CG	13:K:99:ARG:NH1	2.68	0.53
7:E:43:VAL:CG2	7:E:50:LEU:HD21	2.38	0.53
7:E:8:PRO:HD2	7:E:69:ARG:HH11	1.72	0.53
1:X:2676:G:H2'	1:X:2677:U:C6	2.43	0.53
1:X:2468:G:H2'	1:X:2469:G:O4'	2.09	0.53
1:X:389:G:C4	1:X:390:U:C5	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1542:G:H22	1:X:1562:G:H22	1.56	0.53
1:X:2629:U:H2'	1:X:2630:C:H6	1.73	0.53
13:K:63:ARG:CZ	13:K:80:MET:HG2	2.38	0.53
1:X:2189:A:C8	1:X:2189:A:O5'	2.62	0.53
1:X:715:U:O2'	1:X:716:U:H5'	2.08	0.53
9:G:32:TYR:HD2	16:N:100:ALA:HB1	1.74	0.53
16:N:75:ASN:O	16:N:79:PHE:HB3	2.09	0.53
1:X:574:C:P	17:O:77:GLY:HA2	2.48	0.53
1:X:955:G:N3	1:X:955:G:H3'	2.23	0.53
14:L:31:VAL:HB	14:L:38:ILE:CD1	2.21	0.53
14:L:60:LYS:C	14:L:62:GLY:H	2.12	0.53
14:L:89:PHE:HD1	14:L:91:ARG:HH12	1.57	0.53
12:J:113:GLU:C	12:J:115:ALA:N	2.60	0.53
1:X:2796:A:H2'	1:X:2797:G:H8	1.70	0.53
3:A:197:GLY:O	3:A:199:ALA:N	2.41	0.53
19:Q:26:SER:HA	19:Q:78:ALA:O	2.09	0.53
19:Q:63:LYS:HD2	19:Q:64:ARG:H	1.73	0.53
1:X:1510:A:H2'	1:X:1511:A:C8	2.43	0.53
20:R:8:SER:O	20:R:11:ASN:N	2.42	0.53
20:R:25:LEU:HD12	20:R:80:LYS:HA	1.89	0.53
20:R:45:LYS:HB3	20:R:75:ALA:HB1	1.91	0.53
20:R:84:VAL:HG11	20:R:88:THR:N	2.24	0.53
8:F:72:THR:HG23	8:F:77:TYR:CD2	2.44	0.53
30:4:13:ASN:O	30:4:15:LYS:HG2	2.09	0.53
13:K:16:ALA:C	13:K:18:VAL:N	2.59	0.53
10:H:125:LYS:O	10:H:129:LEU:HD23	2.09	0.53
4:B:54:LYS:HB2	4:B:75:THR:O	2.08	0.53
24:V:10:GLN:C	24:V:12:THR:N	2.60	0.53
1:X:1753:A:O5'	1:X:1753:A:C8	2.60	0.53
8:F:85:ILE:CD1	8:F:89:SER:N	2.71	0.53
1:X:2522:G:H2'	1:X:2523:G:O4'	2.09	0.53
1:X:143:A:O2'	1:X:144:U:H5'	2.08	0.53
1:X:71:A:N6	1:X:110:U:H5''	2.24	0.53
1:X:919:U:H2'	1:X:920:G:H8	1.74	0.53
1:X:578:U:O2'	1:X:994:A:N1	2.40	0.53
13:K:57:GLY:O	13:K:59:ASP:N	2.39	0.53
4:B:107:THR:HA	4:B:163:GLU:O	2.09	0.53
1:X:1548:U:H2'	1:X:1549:C:C6	2.43	0.53
1:X:1960:A:H8	1:X:1960:A:O5'	1.92	0.53
1:X:2714:A:H2'	1:X:2715:C:O4'	2.08	0.53
1:X:2489:C:C4	1:X:2490:U:C5	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2069:U:H2'	1:X:2070:G:C8	2.44	0.53
11:I:32:ARG:NH2	17:O:81:ARG:NE	2.56	0.53
14:L:70:ALA:O	14:L:74:ALA:CB	2.57	0.53
4:B:9:ILE:CD1	4:B:27:LEU:HB3	2.38	0.53
5:C:4:ILE:HA	5:C:13:ARG:NH2	2.18	0.53
5:C:8:GLY:O	5:C:9:GLN:HB3	2.09	0.53
1:X:1585:A:H4'	3:A:59:LYS:NZ	2.23	0.53
1:X:1656:U:C2'	1:X:1657:A:H5''	2.39	0.53
6:D:69:LYS:HG2	6:D:84:PRO:CA	2.39	0.53
10:H:23:ARG:CG	10:H:23:ARG:NH2	2.69	0.53
1:X:1935:A:N3	10:H:22:ILE:HD11	2.23	0.53
4:B:119:ARG:CG	4:B:119:ARG:NH1	2.68	0.53
24:V:7:ARG:NH1	24:V:8:ASN:HA	2.23	0.53
1:X:2581:A:C5'	1:X:2582:G:OP2	2.57	0.53
1:X:2482:A:C2'	33:X:2911:ZLD:H13B	2.39	0.53
1:X:617:U:C5	1:X:632:A:N1	2.76	0.53
1:X:1325:U:O2'	1:X:1327:C:C5	2.61	0.53
2:Z:3:A:C2'	2:Z:4:C:C5'	2.86	0.53
1:X:699:G:H4'	1:X:700:C:OP2	2.07	0.53
22:T:22:GLY:O	22:T:39:ARG:O	2.27	0.53
1:X:2738:A:C2'	1:X:2739:G:H5'	2.39	0.53
1:X:1703:C:H2'	1:X:1704:G:O4'	2.09	0.53
9:G:138:GLY:O	9:G:142:ARG:HG3	2.08	0.53
9:G:168:THR:O	9:G:169:GLN:O	2.27	0.53
16:N:50:ARG:C	16:N:52:ASN:N	2.61	0.53
16:N:52:ASN:O	16:N:54:LYS:N	2.42	0.53
17:O:36:LYS:NZ	17:O:55:THR:C	2.62	0.53
2:Z:45:C:C2'	6:D:92:ARG:CZ	2.85	0.53
5:C:18:PRO:HG2	5:C:105:ALA:CB	2.22	0.53
5:C:192:ALA:O	5:C:195:ILE:CG1	2.56	0.53
3:A:116:THR:OG1	3:A:117:VAL:N	2.41	0.53
3:A:187:SER:O	3:A:189:CYS:N	2.42	0.53
20:R:98:ILE:N	20:R:98:ILE:HD12	2.23	0.53
1:X:1264:C:C5'	16:N:13:ARG:HH12	2.21	0.53
1:X:1070:G:C5'	1:X:1071:U:H3'	2.39	0.53
7:E:90:ARG:CD	7:E:163:ARG:HH11	2.22	0.53
22:T:42:GLY:O	22:T:57:HIS:CB	2.56	0.53
18:P:56:LEU:O	18:P:57:LEU:C	2.47	0.53
7:E:13:SER:C	7:E:15:VAL:H	2.12	0.53
1:X:1837:G:O2'	1:X:1838:G:H5'	2.09	0.53
23:U:8:THR:HA	23:U:14:VAL:HG22	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2615:U:O5'	4:B:80:GLU:HG3	2.08	0.53
6:D:143:TYR:O	6:D:146:VAL:HG22	2.08	0.53
1:X:831:G:C2	1:X:1204:G:O6	2.61	0.53
15:M:10:GLY:O	15:M:13:LEU:HB2	2.09	0.53
1:X:1733:U:OP2	1:X:1733:U:H6	1.92	0.53
1:X:1679:U:H2'	1:X:1680:U:O4'	2.09	0.53
1:X:163:A:O2'	1:X:164:G:H5'	2.08	0.53
23:U:50:ALA:CB	23:U:52:ARG:NH2	2.68	0.53
3:A:216:GLY:O	3:A:217:ARG:HB2	2.09	0.53
1:X:572:G:N7	1:X:2001:G:C6	2.77	0.53
1:X:1275:A:N3	26:Y:10:LYS:HE2	2.24	0.53
2:Z:45:C:C2'	6:D:92:ARG:NH1	2.72	0.53
21:S:64:ALA:HA	21:S:86:VAL:H	1.73	0.53
12:J:69:ILE:HD13	12:J:104:MET:CG	2.39	0.53
23:U:29:GLY:H	23:U:32:ARG:HB3	1.73	0.53
1:X:1790:G:C8	1:X:1811:A:N6	2.77	0.53
1:X:717:G:H2'	1:X:739:G:N2	2.21	0.53
3:A:70:ARG:C	3:A:72:LYS:N	2.62	0.53
1:X:1511:A:H2'	1:X:1512:A:O4'	2.08	0.53
1:X:1514:C:O4'	1:X:1593:C:C5'	2.57	0.53
20:R:89:GLY:O	20:R:90:LYS:HB3	2.09	0.53
1:X:824:U:H1'	1:X:1264:C:O4'	2.09	0.53
1:X:1526:U:H2'	1:X:1527:G:H5'	1.91	0.53
3:A:239:ARG:O	3:A:240:THR:HB	2.09	0.53
1:X:1074:G:H2'	1:X:1075:C:C6	2.44	0.53
22:T:41:ARG:HA	22:T:41:ARG:HE	1.74	0.53
1:X:1877:C:H2'	1:X:1878:C:C6	2.44	0.53
1:X:2082:C:H2'	1:X:2083:G:H5'	1.91	0.53
26:Y:42:SER:O	26:Y:43:HIS:CB	2.51	0.53
1:X:1505:U:H1'	1:X:1506:C:C5	2.44	0.53
1:X:2284:U:H3'	1:X:2284:U:C6	2.44	0.53
1:X:2700:U:C2	1:X:2701:A:C8	2.96	0.53
1:X:2467:A:H8	1:X:2467:A:O5'	1.92	0.53
13:K:55:ALA:C	13:K:57:GLY:N	2.62	0.53
1:X:1301:U:H6	1:X:1301:U:OP2	1.92	0.53
1:X:1103:C:N4	1:X:1111:C:H42	2.07	0.53
16:N:114:ARG:CZ	16:N:114:ARG:HB3	2.39	0.53
13:K:25:ALA:HB2	13:K:47:PHE:HE2	1.74	0.53
1:X:2039:G:H2'	1:X:2039:G:N3	2.23	0.53
1:X:2201:G:C2	1:X:2202:G:C8	2.97	0.53
1:X:1781:C:H4'	3:A:209:ALA:HB2	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:123:PRO:CD	9:G:124:GLU:OE1	2.57	0.53
1:X:2604:G:H2'	1:X:2605:C:H6	1.74	0.53
1:X:576:A:C2	1:X:577:U:H1'	2.44	0.53
1:X:689:A:C2	1:X:690:A:C8	2.96	0.53
11:I:62:LYS:CE	11:I:64:GLY:CA	2.84	0.53
2:Z:46:G:H1'	2:Z:49:C:H42	1.72	0.53
2:Z:70:C:H2'	2:Z:71:G:H8	1.74	0.53
21:S:72:ASP:OD1	21:S:75:LYS:CG	2.57	0.53
11:I:11:GLY:C	11:I:13:ARG:N	2.61	0.53
1:X:1219:C:H4'	11:I:7:LYS:HD3	1.91	0.53
1:X:2228:U:C5'	1:X:2229:G:OP2	2.57	0.53
1:X:841:G:N7	1:X:842:A:N6	2.56	0.53
23:U:43:ARG:NH2	23:U:43:ARG:HG2	2.24	0.53
3:A:154:GLN:O	3:A:155:LEU:HD23	2.09	0.53
20:R:97:GLN:HB2	20:R:101:GLY:CA	2.28	0.53
4:B:67:PHE:CE1	4:B:75:THR:HG22	2.44	0.53
1:X:2055:G:N1	1:X:2417:U:C2	2.77	0.53
1:X:554:U:O3'	1:X:555:U:C4'	2.57	0.53
1:X:1625:A:C5	1:X:1632:A:C2	2.97	0.53
18:P:8:PHE:CD2	18:P:9:ARG:N	2.74	0.53
1:X:1644:G:H2'	1:X:1645:U:H6	1.72	0.53
1:X:2437:G:O2'	1:X:2439:U:O4	2.24	0.53
1:X:1369:G:H2'	1:X:1370:U:O4'	2.09	0.53
1:X:10:A:N1	1:X:2608:A:C2	2.77	0.53
23:U:53:GLU:O	23:U:78:ILE:HG23	2.09	0.52
4:B:152:LYS:H	9:G:106:TYR:HD2	1.57	0.52
9:G:66:HIS:O	9:G:67:ARG:O	2.27	0.52
9:G:72:PRO:O	9:G:73:ASN:C	2.48	0.52
17:O:20:ILE:CD1	17:O:21:ARG:N	2.70	0.52
1:X:1018:C:C6	1:X:1019:U:H5	2.27	0.52
11:I:64:GLY:O	11:I:65:PHE:CB	2.57	0.52
11:I:73:GLU:OE1	11:I:105:PRO:HG2	2.08	0.52
1:X:2394:G:C5'	11:I:63:ARG:NE	2.71	0.52
6:D:14:PRO:HA	6:D:17:MET:SD	2.48	0.52
14:L:33:ARG:CD	14:L:100:VAL:HA	2.39	0.52
14:L:60:LYS:CA	14:L:67:THR:HG21	2.39	0.52
21:S:43:PHE:CE1	21:S:47:SER:HA	2.44	0.52
2:Z:107:C:H2'	2:Z:108:G:C5'	2.36	0.52
12:J:51:CYS:O	12:J:55:MET:HE2	2.09	0.52
1:X:874:A:H2'	1:X:875:G:O4'	2.09	0.52
5:C:104:LEU:O	5:C:105:ALA:C	2.47	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:137:ALA:O	5:C:138:LYS:C	2.47	0.52
5:C:34:GLN:NE2	5:C:177:VAL:HB	2.24	0.52
1:X:173:A:H2'	1:X:818:G:O6	2.09	0.52
19:Q:12:ILE:O	19:Q:13:SER:O	2.27	0.52
6:D:70:ALA:N	6:D:85:VAL:HG22	2.23	0.52
1:X:322:A:C2'	1:X:323:G:OP1	2.57	0.52
15:M:102:ALA:C	15:M:103:LYS:HD2	2.29	0.52
4:B:33:ILE:HG21	4:B:47:VAL:CG1	2.38	0.52
18:P:42:VAL:CG1	18:P:42:VAL:O	2.55	0.52
1:X:1563:U:C2	1:X:1564:U:C5	2.97	0.52
1:X:556:A:O2'	1:X:557:U:O4'	2.26	0.52
1:X:2451:G:H2'	1:X:2508:G:H22	1.73	0.52
1:X:77:C:O2'	1:X:78:C:H5'	2.09	0.52
23:U:17:SER:OG	23:U:45:ASN:HB2	2.08	0.52
1:X:1032:A:H8	1:X:1032:A:H3'	1.73	0.52
1:X:2199:C:C2'	1:X:2200:G:H8	2.18	0.52
1:X:774:A:C8	1:X:774:A:C3'	2.91	0.52
15:M:94:VAL:O	15:M:95:GLU:HB3	2.08	0.52
9:G:110:LEU:H	9:G:110:LEU:HD23	1.72	0.52
16:N:50:ARG:O	16:N:52:ASN:N	2.38	0.52
1:X:1200:G:C2	1:X:1201:G:H1'	2.43	0.52
1:X:2617:G:P	4:B:82:ARG:NH2	2.81	0.52
6:D:92:ARG:CA	6:D:96:MET:HB3	2.39	0.52
2:Z:44:C:H1'	6:D:89:VAL:CG1	2.39	0.52
12:J:123:GLY:HA2	12:J:126:LEU:HD12	1.91	0.52
12:J:66:TYR:HB2	12:J:106:GLU:HG2	1.91	0.52
1:X:172:A:N7	1:X:175:C:H5	2.06	0.52
6:D:77:PHE:C	6:D:79:LEU:HD12	2.29	0.52
20:R:25:LEU:HD22	20:R:25:LEU:O	2.09	0.52
20:R:85:ASP:HB3	20:R:90:LYS:NZ	2.24	0.52
1:X:488:A:OP1	1:X:488:A:H8	1.92	0.52
1:X:509:U:H2'	1:X:510:G:H5'	1.90	0.52
10:H:91:PHE:CD1	10:H:91:PHE:N	2.77	0.52
13:K:112:LEU:HD21	26:Y:45:ILE:HD11	1.92	0.52
1:X:1332:G:C2	1:X:1347:C:N3	2.77	0.52
7:E:78:GLY:C	7:E:80:SER:N	2.61	0.52
18:P:37:LYS:HZ3	18:P:64:ALA:N	2.07	0.52
26:Y:13:LYS:HB2	26:Y:16:ARG:HH21	1.73	0.52
4:B:170:LEU:HB3	4:B:184:VAL:HG13	1.90	0.52
1:X:1032:A:O2'	1:X:1134:C:H5''	2.10	0.52
1:X:388:G:N2	1:X:389:G:H1'	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1533:G:O2'	1:X:1534:A:H5'	2.09	0.52
1:X:1141:U:O4	4:B:147:PRO:HD3	2.07	0.52
4:B:152:LYS:N	9:G:106:TYR:HB3	2.24	0.52
17:O:40:VAL:HA	17:O:44:GLN:O	2.09	0.52
1:X:1011:A:N1	1:X:1012:A:C2	2.78	0.52
1:X:1176:U:O2'	1:X:1177:U:H5'	2.09	0.52
11:I:122:VAL:C	11:I:124:ALA:H	2.11	0.52
6:D:135:GLN:O	6:D:138:PHE:HD1	1.92	0.52
1:X:2356:A:N3	14:L:89:PHE:HE1	2.08	0.52
14:L:95:LYS:HB3	14:L:95:LYS:NZ	2.25	0.52
25:W:34:VAL:HG22	25:W:40:VAL:CG1	2.39	0.52
25:W:54:GLN:O	25:W:55:GLU:HG3	2.08	0.52
5:C:133:PHE:O	5:C:134:ILE:C	2.48	0.52
5:C:191:ALA:O	5:C:194:GLU:HB3	2.10	0.52
11:I:7:LYS:N	11:I:7:LYS:HD3	2.24	0.52
1:X:171:G:H2'	1:X:172:A:O4'	2.09	0.52
1:X:2228:U:C4'	1:X:2229:G:OP2	2.57	0.52
3:A:33:LEU:HD21	3:A:63:ARG:HH22	1.73	0.52
24:V:28:LEU:C	24:V:30:PHE:H	2.12	0.52
1:X:1361:G:H2'	1:X:1362:A:C8	2.44	0.52
1:X:1433:A:C8	1:X:1435:G:C6	2.97	0.52
1:X:1095:A:C3'	1:X:1096:A:C5'	2.80	0.52
22:T:43:THR:HB	22:T:46:LYS:HZ2	1.75	0.52
1:X:2728:A:H5'	7:E:6:LYS:HZ1	1.75	0.52
1:X:2781:G:H2'	1:X:2782:G:C5'	2.39	0.52
1:X:1621:C:O2'	1:X:1622:G:H5'	2.09	0.52
1:X:2265:A:H5'	1:X:2266:A:OP1	2.09	0.52
1:X:767:G:C6	1:X:768:U:O4	2.63	0.52
1:X:2560:G:C5	1:X:2589:C:C4	2.97	0.52
1:X:760:U:C5	26:Y:3:LYS:HE2	2.45	0.52
1:X:2201:G:H2'	1:X:2202:G:H8	1.74	0.52
15:M:39:VAL:HA	15:M:45:THR:HA	1.91	0.52
1:X:2620:G:OP2	9:G:102:ARG:NH2	2.42	0.52
9:G:70:PHE:CB	16:N:64:ARG:HG2	2.39	0.52
9:G:85:ALA:C	9:G:87:GLN:N	2.61	0.52
16:N:61:TRP:O	16:N:65:ILE:HG13	2.09	0.52
1:X:590:C:H2'	1:X:591:G:H8	1.74	0.52
1:X:954:U:OP2	11:I:38:LYS:CE	2.57	0.52
1:X:983:G:C3'	1:X:984:A:H5''	2.28	0.52
11:I:99:VAL:O	11:I:100:ARG:C	2.48	0.52
6:D:132:ILE:O	6:D:152:MET:O	2.27	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:84:ILE:O	14:L:84:ILE:HG22	2.08	0.52
21:S:67:LYS:NZ	21:S:84:TYR:HB2	2.23	0.52
2:Z:108:G:H2'	2:Z:109:G:H8	1.75	0.52
12:J:48:ILE:C	12:J:50:ALA:N	2.61	0.52
3:A:112:THR:O	3:A:114:GLY:N	2.42	0.52
20:R:10:HIS:CD2	20:R:44:GLN:NE2	2.77	0.52
1:X:508:G:O2'	1:X:509:U:H5'	2.10	0.52
8:F:78:LEU:HA	8:F:81:LYS:HB2	1.91	0.52
1:X:2827:G:C5	1:X:2828:C:C4	2.97	0.52
4:B:32:PRO:HD2	4:B:50:GLY:O	2.10	0.52
7:E:70:THR:O	7:E:74:ASN:N	2.41	0.52
1:X:1710:U:H4'	1:X:1711:C:OP2	2.09	0.52
18:P:112:GLY:O	18:P:113:SER:C	2.48	0.52
1:X:204:A:N7	1:X:2386:G:H5'	2.25	0.52
1:X:605:G:H2'	1:X:606:A:C8	2.45	0.52
1:X:2821:G:C6	1:X:2846:G:N1	2.78	0.52
1:X:669:G:H2'	1:X:670:U:O4'	2.09	0.52
1:X:887:G:N2	1:X:888:G:H1'	2.25	0.52
1:X:1915:A:H2'	1:X:1916:G:H5'	1.92	0.52
1:X:520:C:H2'	1:X:520:C:O2	2.08	0.52
9:G:70:PHE:HB3	16:N:64:ARG:HG2	1.91	0.52
11:I:72:TYR:HD2	11:I:107:LYS:H	1.56	0.52
14:L:79:ALA:O	14:L:83:GLY:N	2.42	0.52
21:S:54:ILE:C	21:S:61:THR:HA	2.30	0.52
5:C:112:GLN:OE1	5:C:116:LYS:HB2	2.09	0.52
5:C:157:THR:OG1	5:C:158:ARG:N	2.43	0.52
1:X:1808:C:C5	3:A:62:TYR:CE2	2.98	0.52
1:X:739:G:O2'	1:X:740:A:P	2.67	0.52
1:X:1615:C:P	19:Q:35:LYS:HB2	2.50	0.52
19:Q:26:SER:CB	19:Q:79:ILE:HG13	2.34	0.52
1:X:1404:C:C5	1:X:1407:G:C6	2.98	0.52
1:X:65:C:H2'	1:X:66:U:O4'	2.08	0.52
1:X:343:A:N3	1:X:343:A:O5'	2.43	0.52
1:X:2673:G:N2	1:X:2674:C:C2	2.77	0.52
7:E:98:LEU:HG	7:E:99:THR:H	1.73	0.52
12:J:47:GLN:NE2	12:J:127:PRO:HG3	2.25	0.52
7:E:39:THR:C	7:E:41:LEU:N	2.61	0.52
1:X:2015:G:O2'	1:X:2016:A:P	2.67	0.52
21:S:147:ILE:HG22	21:S:152:ILE:CD1	2.40	0.52
23:U:46:LEU:C	23:U:47:HIS:CG	2.83	0.52
3:A:81:ALA:C	3:A:82:ILE:HD12	2.29	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:M:5:ILE:HD13	15:M:7:ILE:HG12	1.90	0.52
1:X:1714:A:H5''	1:X:1715:A:H3'	1.90	0.52
1:X:1301:U:O2'	1:X:1302:C:OP1	2.26	0.52
4:B:107:THR:HG23	4:B:163:GLU:O	2.10	0.52
1:X:1960:A:H2'	1:X:1961:A:O4'	2.09	0.52
1:X:238:G:N1	1:X:239:A:C5	2.78	0.52
1:X:2844:G:O2'	1:X:2845:C:H5'	2.09	0.52
1:X:2039:G:C4	1:X:2556:A:C2	2.97	0.52
26:Y:3:LYS:O	26:Y:4:HIS:C	2.48	0.52
15:M:89:ASN:C	15:M:90:GLN:OE1	2.48	0.52
9:G:62:ILE:CD1	9:G:148:LEU:HB2	2.38	0.52
16:N:81:ASN:O	16:N:84:LYS:N	2.42	0.52
1:X:2599:U:H2'	1:X:2600:A:H8	1.75	0.52
1:X:2759:U:H1'	1:X:2761:A:C6	2.44	0.52
14:L:89:PHE:CD1	14:L:91:ARG:NH2	2.77	0.52
25:W:1:MET:HB2	25:W:34:VAL:CG1	2.39	0.52
21:S:3:LEU:CD1	21:S:4:THR:N	2.69	0.52
21:S:64:ALA:CA	21:S:85:MET:HA	2.40	0.52
12:J:33:TYR:O	12:J:106:GLU:CA	2.58	0.52
1:X:871:U:O2'	1:X:2247:A:C2'	2.39	0.52
5:C:112:GLN:HB3	5:C:116:LYS:CD	2.37	0.52
5:C:7:ILE:HG21	5:C:122:GLY:N	2.24	0.52
5:C:124:ASP:CG	5:C:136:TRP:HE3	2.13	0.52
23:U:22:GLY:N	23:U:39:LYS:HG3	2.23	0.52
3:A:135:PHE:HD2	3:A:135:PHE:N	2.08	0.52
1:X:1811:A:C8	1:X:1811:A:OP2	2.62	0.52
19:Q:63:LYS:HB2	19:Q:70:GLY:HA3	1.92	0.52
19:Q:61:LYS:N	19:Q:72:ARG:HA	2.23	0.52
19:Q:7:LEU:CD1	19:Q:7:LEU:C	2.77	0.52
20:R:95:ARG:NH1	20:R:106:VAL:HA	2.25	0.52
10:H:55:VAL:HG23	10:H:70:VAL:HG22	1.92	0.52
7:E:127:GLU:HG3	7:E:129:THR:CA	2.39	0.52
22:T:46:LYS:HD3	22:T:76:ALA:HB1	1.91	0.52
15:M:69:ARG:NH1	15:M:69:ARG:CG	2.67	0.52
18:P:52:ASP:O	18:P:55:ASP:N	2.37	0.52
1:X:725:C:H2'	1:X:726:G:O4'	2.10	0.52
11:I:77:LEU:HG	11:I:112:GLY:O	2.10	0.52
1:X:69:G:H2'	1:X:111:G:O2'	2.10	0.52
11:I:29:THR:HA	11:I:34:HIS:CG	2.45	0.52
1:X:422:C:O2'	1:X:423:G:H5'	2.10	0.52
1:X:1052:C:H6	1:X:1052:C:OP2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1463:A:C4	1:X:1479:G:N2	2.78	0.52
1:X:764:A:C5	1:X:802:A:C2	2.98	0.52
1:X:1301:U:HO2'	1:X:1302:C:P	2.32	0.52
1:X:2695:C:H2'	1:X:2696:A:C8	2.45	0.52
6:D:32:GLU:HB3	6:D:157:VAL:HB	1.91	0.52
14:L:21:THR:HG23	14:L:45:ASP:HB2	1.90	0.52
1:X:2516:U:H2'	1:X:2517:C:C6	2.45	0.52
1:X:2519:C:C4	1:X:2520:A:N7	2.77	0.52
1:X:760:U:N1	26:Y:3:LYS:HE2	2.24	0.52
15:M:33:VAL:HG23	15:M:94:VAL:CG2	2.40	0.52
15:M:33:VAL:O	15:M:92:THR:HG23	2.10	0.52
1:X:2761:A:H5''	1:X:2762:G:O5'	2.10	0.52
2:Z:9:G:H5'	14:L:32:TYR:CD2	2.45	0.52
21:S:30:VAL:CG1	21:S:31:SER:N	2.72	0.52
12:J:117:GLU:C	12:J:119:PHE:N	2.62	0.52
5:C:13:ARG:HE	5:C:13:ARG:N	2.05	0.52
1:X:332:C:C1'	5:C:159:ARG:NE	2.61	0.52
1:X:2526:U:C5	1:X:2545:A:N7	2.77	0.52
1:X:2726:U:O2'	1:X:2727:G:H5'	2.09	0.52
21:S:103:ARG:HG3	21:S:104:SER:N	2.25	0.52
3:A:164:GLN:HB3	3:A:176:ARG:HB3	1.91	0.52
1:X:1947:G:C2	1:X:1950:C:C6	2.98	0.52
1:X:2363:G:H3'	1:X:2365:U:OP1	2.09	0.52
5:C:62:LYS:C	5:C:62:LYS:HD3	2.29	0.52
1:X:143:A:O5'	1:X:143:A:H8	1.92	0.52
1:X:1089:C:H5''	1:X:1090:C:OP1	2.09	0.52
1:X:2083:G:H2'	1:X:2084:G:C8	2.44	0.52
1:X:53:G:N1	1:X:54:G:C4	2.78	0.52
1:X:600:G:O6	1:X:602:C:N4	2.42	0.52
1:X:204:A:N6	1:X:2386:G:O4'	2.42	0.52
1:X:1741:G:H2'	1:X:1742:G:C5'	2.40	0.52
1:X:2615:U:OP1	4:B:80:GLU:HG2	2.08	0.52
1:X:1866:G:N2	1:X:1867:A:H2	2.08	0.52
15:M:17:GLU:C	15:M:19:ASP:H	2.13	0.52
1:X:579:G:H2'	1:X:2013:A:C5	2.45	0.52
1:X:2189:A:C2	1:X:2190:A:N7	2.78	0.52
16:N:47:TYR:CD2	16:N:51:ARG:NE	2.75	0.52
16:N:94:VAL:HG12	16:N:95:LEU:N	2.24	0.52
1:X:942:U:O2'	25:W:22:ALA:HA	2.10	0.52
1:X:2225:G:C4	1:X:2226:A:C8	2.98	0.52
20:R:45:LYS:HZ3	20:R:77:HIS:CE1	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:17:VAL:HA	7:E:26:VAL:HG13	1.91	0.52
7:E:88:GLU:OE2	7:E:90:ARG:HB2	2.10	0.52
3:A:169:GLU:O	3:A:172:TYR:N	2.43	0.52
18:P:47:GLY:H	18:P:92:VAL:HB	1.74	0.52
12:J:43:ILE:HD13	12:J:127:PRO:HD2	1.91	0.52
1:X:788:G:O2'	1:X:789:G:OP2	2.26	0.52
24:V:42:ARG:O	24:V:46:LEU:HG	2.09	0.52
1:X:1385:C:H1'	1:X:2192:U:C6	2.45	0.52
1:X:110:U:H2'	1:X:111:G:O4'	2.10	0.52
1:X:1450:G:O2'	1:X:1451:C:H5'	2.09	0.52
1:X:2284:U:H2'	1:X:2285:U:H5''	1.91	0.52
1:X:701:U:H5'	1:X:1771:A:C2	2.45	0.52
1:X:2440:C:H2'	1:X:2441:U:H6	1.74	0.52
13:K:47:PHE:C	13:K:47:PHE:CD2	2.83	0.52
1:X:1008:G:N2	1:X:1009:C:C2	2.77	0.52
10:H:26:ASN:HB3	10:H:38:GLY:H	1.75	0.52
23:U:50:ALA:HB3	23:U:52:ARG:NH2	2.25	0.52
3:A:52:ARG:NH2	3:A:247:VAL:HG11	2.24	0.52
9:G:45:ASP:HA	9:G:83:ILE:CG1	2.40	0.52
9:G:97:ASP:O	9:G:99:VAL:N	2.43	0.52
1:X:954:U:P	11:I:38:LYS:HG3	2.50	0.52
17:O:16:GLU:N	17:O:16:GLU:OE1	2.43	0.52
1:X:1014:G:O2'	1:X:1015:U:H5'	2.10	0.52
1:X:2395:C:OP2	11:I:63:ARG:NH1	2.43	0.52
1:X:502:A:H2'	1:X:503:G:O4'	2.10	0.52
6:D:9:ASN:HA	6:D:13:ARG:CB	2.39	0.52
25:W:7:ARG:O	25:W:8:SER:C	2.48	0.52
1:X:516:G:O2'	1:X:517:A:P	2.68	0.52
16:N:5:LYS:O	16:N:7:GLY:N	2.43	0.52
15:M:107:LEU:O	15:M:109:GLU:N	2.39	0.52
4:B:31:CYS:CB	4:B:49:ILE:HG13	2.38	0.52
24:V:10:GLN:O	24:V:12:THR:N	2.42	0.52
13:K:84:ALA:O	13:K:87:TYR:N	2.43	0.52
1:X:1271:C:C2	1:X:1272:G:C8	2.98	0.52
1:X:1451:C:H2'	1:X:1452:U:C6	2.44	0.52
7:E:54:ARG:HG3	7:E:57:ASP:CG	2.30	0.52
1:X:244:C:C3'	1:X:245:C:H5''	2.37	0.52
1:X:938:G:H2'	1:X:940:G:C8	2.44	0.52
1:X:1560:A:N1	1:X:1561:A:C2	2.78	0.52
1:X:2703:C:O2'	1:X:2704:U:H5'	2.10	0.52
1:X:795:A:C2	3:A:226:MET:HE2	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:155:THR:O	9:G:158:HIS:N	2.39	0.52
1:X:2597:G:H21	4:B:150:VAL:HG11	1.75	0.52
1:X:2356:A:H1'	14:L:89:PHE:CZ	2.45	0.52
2:Z:42:U:H1'	2:Z:47:A:H62	1.73	0.52
2:Z:50:U:O2'	2:Z:51:G:H5'	2.10	0.52
1:X:873:U:H2'	1:X:874:A:O5'	2.10	0.52
5:C:176:ASN:ND2	5:C:178:TYR:CB	2.58	0.52
1:X:1443:G:H2'	1:X:1444:C:H6	1.74	0.52
1:X:490:A:O2'	1:X:491:A:H3'	2.10	0.52
1:X:516:G:O2'	1:X:517:A:OP2	2.26	0.52
1:X:452:G:H21	5:C:40:ARG:HH22	1.55	0.52
1:X:330:C:H2'	1:X:331:U:H6	1.75	0.52
22:T:58:THR:O	22:T:59:LEU:HD13	2.09	0.52
22:T:58:THR:HG22	22:T:59:LEU:N	2.25	0.52
1:X:1673:C:H2'	1:X:1674:C:C6	2.38	0.52
1:X:2270:U:OP1	1:X:2360:C:H5'	2.10	0.52
1:X:2043:A:O2'	1:X:2481:G:O4'	2.27	0.52
12:J:81:GLU:O	12:J:82:THR:OG1	2.24	0.52
18:P:41:VAL:HG21	18:P:64:ALA:HB3	1.91	0.52
23:U:9:GLY:N	23:U:14:VAL:HG22	2.19	0.52
21:S:147:ILE:HG22	21:S:152:ILE:HD11	1.91	0.52
1:X:214:C:O2'	1:X:215:G:H5'	2.10	0.52
1:X:1139:A:O2'	1:X:1140:A:O5'	2.28	0.52
1:X:2246:A:H61	1:X:2251:U:H3	1.58	0.52
1:X:1850:G:N7	1:X:1868:A:N6	2.58	0.52
13:K:28:LEU:HD21	13:K:115:LEU:CD2	2.40	0.52
1:X:1209:G:C2	1:X:1210:C:C5	2.98	0.52
1:X:324:C:H2'	1:X:325:U:H5'	1.90	0.52
1:X:1733:U:N3	1:X:1734:C:C5	2.78	0.52
16:N:114:ARG:HH21	16:N:114:ARG:HG2	1.74	0.52
1:X:1861:G:O2'	1:X:1862:C:H5'	2.10	0.52
1:X:1278:A:HO2'	1:X:1279:G:P	2.32	0.51
1:X:2196:U:C5	1:X:2197:U:C4	2.97	0.51
15:M:50:PHE:HE2	15:M:70:LYS:CB	2.22	0.51
1:X:2661:G:N3	1:X:2662:C:C6	2.78	0.51
9:G:45:ASP:HA	9:G:83:ILE:HG12	1.91	0.51
1:X:1172:U:C2	1:X:1173:G:C8	2.98	0.51
1:X:463:C:O5'	5:C:46:ARG:NH1	2.43	0.51
1:X:833:A:H1'	1:X:954:U:O2'	2.10	0.51
11:I:65:PHE:O	11:I:66:ASN:C	2.47	0.51
6:D:138:PHE:HB2	6:D:141:ILE:HG12	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:49:ALA:O	6:D:52:LYS:HB2	2.10	0.51
6:D:94:GLU:CA	6:D:97:TYR:HB2	2.39	0.51
21:S:1:MET:HE1	21:S:46:GLN:OE1	2.11	0.51
2:Z:19:C:O2'	2:Z:20:A:H5'	2.10	0.51
12:J:34:GLY:HA2	12:J:106:GLU:HA	1.92	0.51
5:C:124:ASP:CG	5:C:125:ILE:H	2.13	0.51
5:C:153:ASP:C	5:C:154:ASP:CG	2.69	0.51
5:C:119:ALA:O	5:C:189:ASP:O	2.28	0.51
3:A:197:GLY:C	3:A:199:ALA:H	2.12	0.51
3:A:38:PRO:HA	3:A:61:LEU:HD23	1.91	0.51
1:X:718:A:N6	1:X:739:G:H1'	2.24	0.51
19:Q:28:TRP:CZ3	19:Q:75:ARG:HB3	2.44	0.51
20:R:52:ASN:O	20:R:74:LEU:HB2	2.11	0.51
30:4:8:LYS:HA	30:4:9:LYS:HE3	1.91	0.51
4:B:36:ARG:O	4:B:37:LYS:C	2.49	0.51
21:S:104:SER:OG	21:S:107:GLU:HB2	2.10	0.51
3:A:166:GLN:HB2	3:A:174:ILE:O	2.09	0.51
13:K:33:ARG:HB2	13:K:114:GLU:HB3	1.90	0.51
22:T:51:VAL:HG11	22:T:59:LEU:HB3	1.92	0.51
22:T:55:ARG:HH11	22:T:55:ARG:HG2	1.74	0.51
1:X:2271:C:OP2	14:L:18:ARG:NH2	2.43	0.51
1:X:1185:C:C2'	1:X:1186:G:H3'	2.31	0.51
1:X:168:A:C4	1:X:169:C:C5	2.98	0.51
1:X:2849:C:H2'	1:X:2849:C:O2	2.10	0.51
30:4:31:LYS:HD3	30:4:31:LYS:N	2.25	0.51
4:B:177:ALA:C	4:B:179:GLU:H	2.12	0.51
1:X:1345:G:C6	1:X:1625:A:N7	2.79	0.51
1:X:1758:C:C2	1:X:1759:A:C8	2.98	0.51
1:X:1058:G:H2'	1:X:1121:G:N2	2.25	0.51
1:X:914:C:H2'	1:X:915:C:H6	1.75	0.51
1:X:1469:U:C5'	1:X:1470:G:OP2	2.58	0.51
1:X:1082:G:O2'	1:X:1100:G:H3'	2.10	0.51
1:X:1103:C:H42	1:X:1111:C:N4	2.07	0.51
1:X:2559:U:H3'	1:X:2560:G:C2	2.45	0.51
11:I:70:THR:HG22	11:I:71:THR:N	2.25	0.51
1:X:1631:C:C5	1:X:1633:C:C4	2.98	0.51
1:X:185:C:O2'	1:X:186:C:H5'	2.10	0.51
9:G:157:PRO:O	9:G:161:GLN:HG3	2.11	0.51
9:G:61:ARG:HH11	9:G:65:LYS:HE2	1.75	0.51
16:N:115:ASN:O	16:N:117:ARG:N	2.44	0.51
16:N:23:GLY:O	16:N:24:PHE:O	2.28	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2494:C:H2'	1:X:2495:G:C8	2.45	0.51
1:X:2598:C:H4'	4:B:151:TYR:O	2.10	0.51
1:X:575:U:C2	1:X:576:A:C8	2.98	0.51
6:D:92:ARG:HA	6:D:96:MET:HB3	1.92	0.51
21:S:69:VAL:HG22	21:S:81:VAL:HG13	1.91	0.51
12:J:136:GLU:O	12:J:136:GLU:HG3	2.10	0.51
12:J:56:SER:O	12:J:57:ARG:C	2.47	0.51
21:S:72:ASP:OD1	21:S:75:LYS:HG3	2.10	0.51
1:X:2229:G:O4'	1:X:2229:G:N3	2.42	0.51
1:X:317:U:C2'	1:X:318:G:C5'	2.77	0.51
10:H:64:VAL:O	10:H:65:LYS:HG3	2.10	0.51
23:U:37:ILE:N	23:U:37:ILE:HD13	2.26	0.51
7:E:87:LEU:O	7:E:130:ARG:HA	2.10	0.51
1:X:1060:C:C2	1:X:1124:U:H4'	2.43	0.51
1:X:2299:A:N3	1:X:2299:A:H2'	2.25	0.51
1:X:1431:U:H4'	1:X:1604:A:O4'	2.11	0.51
1:X:1286:U:H5''	1:X:1663:C:N4	2.25	0.51
1:X:201:G:H2'	1:X:202:A:C8	2.45	0.51
1:X:203:G:H1'	1:X:205:A:H61	1.75	0.51
6:D:123:ASP:O	6:D:125:ARG:N	2.35	0.51
1:X:469:G:H21	1:X:480:G:H2'	1.72	0.51
11:I:134:GLU:C	11:I:136:ALA:H	2.14	0.51
1:X:735:G:C2'	1:X:736:G:H5'	2.40	0.51
1:X:2490:U:H2'	1:X:2491:C:H6	1.72	0.51
3:A:212:SER:C	3:A:214:TRP:N	2.62	0.51
1:X:796:A:C8	1:X:797:A:H4'	2.40	0.51
9:G:155:THR:C	9:G:157:PRO:CD	2.78	0.51
9:G:35:LYS:CB	9:G:69:ASP:OD2	2.56	0.51
9:G:67:ARG:O	9:G:70:PHE:CD1	2.63	0.51
17:O:79:GLN:OE1	17:O:79:GLN:N	2.44	0.51
1:X:689:A:C2	1:X:815:A:N6	2.71	0.51
1:X:687:G:H2'	1:X:817:A:H61	1.76	0.51
6:D:38:GLU:O	6:D:40:LEU:CD1	2.58	0.51
12:J:69:ILE:HG21	12:J:104:MET:HG3	1.92	0.51
5:C:31:VAL:HG23	5:C:32:THR:N	2.25	0.51
1:X:1693:A:C6	1:X:1694:A:C6	2.98	0.51
30:4:18:ARG:HD2	30:4:22:ARG:O	2.11	0.51
1:X:2371:A:C8	1:X:2372:A:C8	2.98	0.51
7:E:125:VAL:HG13	7:E:131:ILE:CD1	2.39	0.51
1:X:2343:C:C2'	1:X:2344:G:H5'	2.40	0.51
13:K:18:VAL:O	13:K:19:ALA:C	2.48	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2313:G:O2'	1:X:2314:A:OP1	2.26	0.51
4:B:93:VAL:O	4:B:94:ASP:CB	2.56	0.51
1:X:2507:U:O3'	1:X:2508:G:H8	1.94	0.51
1:X:136:A:C8	1:X:137:A:C8	2.99	0.51
1:X:1374:G:O2'	1:X:1375:C:H5'	2.10	0.51
1:X:2294:U:O2	6:D:125:ARG:NH1	2.44	0.51
24:V:64:GLY:C	24:V:66:GLN:N	2.63	0.51
1:X:1583:A:H8	1:X:1583:A:OP2	1.94	0.51
9:G:167:LYS:O	9:G:168:THR:HG23	2.10	0.51
16:N:64:ARG:O	16:N:65:ILE:C	2.49	0.51
17:O:35:LEU:CD2	17:O:36:LYS:N	2.73	0.51
1:X:36:G:H4'	1:X:463:C:C4	2.46	0.51
1:X:35:G:O2'	1:X:36:G:O5'	2.20	0.51
6:D:111:ILE:O	6:D:114:PHE:CB	2.59	0.51
6:D:99:PHE:HA	6:D:102:LYS:CD	2.39	0.51
25:W:2:LYS:HB3	25:W:54:GLN:CB	2.30	0.51
21:S:44:ARG:CB	21:S:45:GLN:HE22	2.21	0.51
5:C:147:LYS:O	5:C:184:ASP:HB2	2.09	0.51
5:C:22:VAL:HA	5:C:106:MET:CG	2.39	0.51
1:X:1788:C:C2	1:X:1789:U:C5	2.98	0.51
1:X:1808:C:H5	3:A:62:TYR:CD2	2.29	0.51
19:Q:19:ALA:O	19:Q:22:ARG:HG2	2.11	0.51
1:X:1313:U:H1'	1:X:1642:G:C2	2.46	0.51
1:X:1226:A:C2	1:X:1227:A:C4	2.98	0.51
10:H:24:VAL:HG11	10:H:42:LYS:HG2	1.91	0.51
1:X:2058:U:H2'	1:X:2217:G:H22	1.75	0.51
1:X:1068:A:C8	1:X:1097:A:H2'	2.46	0.51
5:C:163:ASN:ND2	5:C:166:TRP:CG	2.79	0.51
24:V:1:MET:HG3	24:V:3:PRO:HD3	1.92	0.51
1:X:2859:U:C5	1:X:2860:C:C2	2.98	0.51
14:L:11:LEU:HA	14:L:14:ARG:HB3	1.92	0.51
1:X:2311:U:H1'	1:X:2315:A:N7	2.26	0.51
13:K:96:ARG:C	13:K:97:ILE:HD12	2.31	0.51
1:X:1885:C:C5	1:X:1886:G:C8	2.99	0.51
1:X:26:G:N1	1:X:27:G:N2	2.58	0.51
4:B:68:ALA:C	4:B:70:ALA:H	2.13	0.51
1:X:166:G:N2	1:X:183:U:C5	2.79	0.51
3:A:52:ARG:NH2	3:A:247:VAL:CG1	2.73	0.51
15:M:24:LEU:CB	15:M:25:PRO:CD	2.88	0.51
16:N:32:TYR:O	16:N:33:ARG:O	2.29	0.51
1:X:951:G:C3'	1:X:952:A:H5''	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:85:ASP:CA	11:I:116:ARG:HH22	2.22	0.51
14:L:33:ARG:HD3	14:L:100:VAL:HA	1.92	0.51
21:S:25:ASN:HD21	21:S:28:ASN:ND2	2.09	0.51
21:S:42:ALA:C	21:S:44:ARG:H	2.13	0.51
12:J:20:GLY:C	12:J:99:LYS:HE2	2.31	0.51
1:X:2802:C:H2'	1:X:2803:C:C6	2.42	0.51
5:C:107:ALA:O	5:C:108:ILE:C	2.49	0.51
3:A:79:VAL:HA	3:A:95:LEU:HD23	1.92	0.51
20:R:49:GLU:HA	20:R:73:GLU:OE2	2.10	0.51
1:X:1223:G:H4'	1:X:1224:A:OP2	2.11	0.51
21:S:107:GLU:OE1	21:S:113:VAL:HG23	2.10	0.51
7:E:8:PRO:C	7:E:9:ILE:HD13	2.31	0.51
1:X:556:A:OP2	1:X:556:A:H8	1.94	0.51
11:I:77:LEU:CD2	11:I:112:GLY:O	2.59	0.51
13:K:87:TYR:CE1	13:K:94:TYR:CD2	2.91	0.51
1:X:131:C:C4	1:X:132:U:C4	2.99	0.51
1:X:1385:C:H2'	1:X:1386:A:C5'	2.41	0.51
11:I:29:THR:HA	11:I:34:HIS:CD2	2.44	0.51
1:X:1032:A:C8	1:X:1032:A:H3'	2.45	0.51
4:B:59:VAL:HG12	4:B:64:GLN:HG2	1.91	0.51
1:X:1849:G:N2	1:X:1850:G:O6	2.43	0.51
1:X:2658:A:C5'	4:B:165:VAL:HG21	2.40	0.51
4:B:24:THR:HG21	4:B:188:ILE:CD1	2.40	0.51
12:J:61:ARG:NH1	21:S:175:ARG:HD2	2.22	0.51
1:X:737:C:H2'	1:X:738:G:C8	2.44	0.51
1:X:409:G:O2'	1:X:410:A:H5'	2.09	0.51
11:I:130:ILE:HG22	11:I:131:LYS:N	2.25	0.51
10:H:60:PRO:O	10:H:61:ARG:HB2	2.10	0.51
3:A:246:PRO:C	3:A:247:VAL:O	2.42	0.51
15:M:34:ARG:HD3	15:M:81:PHE:CE2	2.45	0.51
11:I:32:ARG:NH2	17:O:81:ARG:HE	2.09	0.51
1:X:1006:C:H6	1:X:1006:C:H5''	1.75	0.51
1:X:2756:A:N6	1:X:2762:G:H1'	2.26	0.51
1:X:501:G:H2'	1:X:502:A:H8	1.76	0.51
2:Z:53:G:H21	2:Z:54:U:H5	1.58	0.51
5:C:176:ASN:O	5:C:178:TYR:N	2.44	0.51
5:C:21:GLU:O	5:C:22:VAL:O	2.29	0.51
1:X:1790:G:H21	3:A:155:LEU:CD2	2.24	0.51
10:H:1:MET:N	10:H:79:HIS:HB2	2.26	0.51
3:A:183:ARG:HD3	3:A:184:ARG:N	2.25	0.51
5:C:162:ARG:CG	5:C:162:ARG:O	2.57	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:T:51:VAL:HG22	22:T:61:ALA:HA	1.93	0.51
22:T:56:ASP:OD1	22:T:58:THR:OG1	2.21	0.51
22:T:50:GLY:O	22:T:62:LEU:HD23	2.09	0.51
15:M:103:LYS:O	15:M:104:LEU:CB	2.44	0.51
1:X:2827:G:O2'	1:X:2828:C:H5'	2.10	0.51
13:K:19:ALA:O	13:K:23:ALA:N	2.33	0.51
10:H:12:ASP:HA	10:H:109:ARG:O	2.11	0.51
1:X:1074:G:N2	8:F:91:THR:HA	2.16	0.51
13:K:99:ARG:HG3	26:Y:44:HIS:CG	2.46	0.51
8:F:116:LEU:HD13	8:F:124:ALA:HA	1.93	0.51
1:X:1092:U:H6	1:X:1092:U:O5'	1.93	0.51
1:X:2012:A:H2'	1:X:2014:A:OP1	2.09	0.51
7:E:156:ALA:O	7:E:157:TYR:CD1	2.64	0.51
12:J:75:VAL:HG21	12:J:93:TYR:CE2	2.45	0.51
1:X:20:C:H2'	1:X:21:A:C8	2.44	0.51
1:X:21:A:C6	1:X:530:G:C6	2.98	0.51
1:X:1803:G:O2'	1:X:1804:U:H5'	2.11	0.51
1:X:2327:U:C4	1:X:2361:G:N2	2.78	0.51
1:X:2776:U:C6	1:X:2776:U:H3'	2.45	0.51
1:X:2659:C:H2'	1:X:2660:C:C6	2.46	0.51
1:X:2269:G:H22	1:X:2322:U:H1'	1.76	0.51
10:H:11:ALA:CB	10:H:110:VAL:HG13	2.41	0.51
1:X:2559:U:H3'	1:X:2560:G:N3	2.25	0.51
24:V:41:HIS:C	24:V:43:VAL:H	2.14	0.51
1:X:1998:A:H1'	26:Y:3:LYS:HG2	1.92	0.51
1:X:2198:U:C4	1:X:2199:C:C2	2.99	0.51
1:X:1142:G:C4'	9:G:103:TYR:CE2	2.92	0.51
9:G:154:GLU:OE1	9:G:156:HIS:CD2	2.64	0.51
9:G:61:ARG:NE	9:G:65:LYS:CE	2.70	0.51
16:N:39:LEU:HB3	17:O:72:ARG:HH12	1.76	0.51
17:O:11:GLN:C	17:O:39:PHE:HB3	2.31	0.51
11:I:32:ARG:CZ	17:O:81:ARG:CZ	2.88	0.51
1:X:2594:U:H6	1:X:2594:U:C5'	2.18	0.51
1:X:540:G:N3	1:X:2004:U:O2'	2.44	0.51
1:X:952:A:H2'	1:X:953:G:O4'	2.11	0.51
11:I:73:GLU:CD	11:I:73:GLU:N	2.64	0.51
6:D:10:ASP:CA	6:D:14:PRO:HD2	2.41	0.51
2:Z:45:C:C3'	6:D:92:ARG:NH1	2.74	0.51
2:Z:75:A:N1	21:S:29:ASN:ND2	2.58	0.51
5:C:129:LYS:O	5:C:131:LYS:N	2.40	0.51
1:X:218:A:N6	1:X:232:A:H5"	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:517:A:H5''	1:X:518:A:C5'	2.30	0.51
1:X:1975:G:N2	1:X:1979:C:O2	2.40	0.51
1:X:1473:U:O2'	1:X:1474:A:P	2.68	0.51
7:E:133:VAL:HG11	7:E:144:VAL:HG11	1.92	0.51
7:E:84:THR:CB	7:E:134:SER:HB2	2.39	0.51
21:S:103:ARG:HH22	21:S:107:GLU:HG2	1.76	0.51
24:V:6:MET:HG3	24:V:56:VAL:HG11	1.92	0.51
18:P:85:MET:HE3	18:P:130:GLU:HG3	1.92	0.51
1:X:1430:G:O2'	1:X:1431:U:H5'	2.11	0.51
1:X:2510:A:N7	7:E:175:LYS:HG2	2.26	0.51
4:B:179:GLU:CG	4:B:181:LEU:HD12	2.41	0.51
2:Z:36:A:C4'	2:Z:37:C:H5	2.20	0.51
14:L:36:LYS:HE2	14:L:65:THR:HG22	1.93	0.51
19:Q:51:ILE:HD11	19:Q:83:ALA:HA	1.93	0.51
1:X:2629:U:H2'	1:X:2630:C:C6	2.45	0.51
1:X:1982:C:H4'	1:X:2703:C:O2	2.11	0.51
1:X:1402:G:C5	1:X:1403:U:C5	2.98	0.51
1:X:1705:U:O4'	1:X:1718:A:N6	2.44	0.51
6:D:116:GLY:HA3	6:D:178:ARG:HG3	1.92	0.51
15:M:38:LYS:C	15:M:40:ARG:N	2.63	0.51
9:G:125:ARG:O	9:G:127:ILE:N	2.44	0.51
1:X:987:G:OP1	16:N:48:ARG:NH2	2.44	0.51
16:N:60:LEU:HA	16:N:63:GLN:OE1	2.11	0.51
16:N:66:ASN:CG	16:N:70:ARG:HH12	2.14	0.51
6:D:40:LEU:HD12	6:D:40:LEU:N	2.26	0.51
2:Z:27:A:H61	2:Z:55:C:H5''	1.76	0.51
21:S:35:ASP:OD1	21:S:38:ALA:N	2.43	0.51
21:S:72:ASP:N	21:S:77:ALA:O	2.43	0.51
5:C:33:TRP:NE1	5:C:93:TYR:O	2.42	0.51
23:U:28:GLY:HA3	23:U:32:ARG:CG	2.41	0.51
1:X:677:G:C2'	1:X:678:G:H5'	2.41	0.51
3:A:134:ARG:C	3:A:136:VAL:H	2.13	0.51
1:X:1584:G:H5''	3:A:61:LEU:HG	1.92	0.51
1:X:1393:G:C2	1:X:1394:G:C8	2.98	0.51
19:Q:42:ILE:HG23	19:Q:43:GLN:H	1.74	0.51
19:Q:62:ARG:NH1	19:Q:73:ASN:ND2	2.59	0.51
20:R:86:PRO:O	20:R:87:GLU:HB2	2.11	0.51
20:R:93:ARG:CG	20:R:93:ARG:HH11	2.24	0.51
10:H:79:HIS:CD2	10:H:80:ALA:H	2.28	0.51
1:X:1685:A:C2	1:X:1976:U:H1'	2.46	0.51
1:X:1474:A:H1'	1:X:1475:U:H5''	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2370:G:O2'	1:X:2403:C:N4	2.43	0.51
1:X:1448:A:H2'	1:X:1449:C:C6	2.45	0.51
3:A:172:TYR:HA	3:A:186:HIS:HA	1.91	0.51
1:X:334:G:H5'	5:C:162:ARG:HE	1.75	0.51
1:X:313:U:C2'	1:X:314:G:H8	2.11	0.51
1:X:2306:A:C2'	1:X:2307:A:O4'	2.59	0.51
26:Y:32:GLU:CG	26:Y:39:LYS:HE3	2.41	0.51
1:X:2263:C:H1'	1:X:2304:G:N2	2.26	0.51
1:X:2461:G:N3	1:X:2461:G:H2'	2.25	0.51
1:X:2460:G:C2'	1:X:2461:G:OP2	2.59	0.51
1:X:53:G:C6	1:X:54:G:C5	2.98	0.51
5:C:54:THR:C	5:C:55:GLY:O	2.48	0.51
1:X:2691:C:C2'	1:X:2692:A:O5'	2.58	0.51
21:S:20:ALA:HB3	21:S:80:HIS:ND1	2.25	0.51
1:X:890:U:H2'	1:X:891:A:H8	1.76	0.51
19:Q:88:ILE:HD12	19:Q:88:ILE:C	2.31	0.51
19:Q:33:ALA:O	19:Q:34:THR:C	2.48	0.51
1:X:1307:U:H5''	1:X:1307:U:H6	1.75	0.51
3:A:53:PHE:O	3:A:54:ILE:CG2	2.59	0.51
4:B:152:LYS:H	9:G:106:TYR:CB	2.23	0.51
9:G:103:TYR:CZ	9:G:111:LYS:HA	2.44	0.51
9:G:67:ARG:HD3	9:G:70:PHE:O	2.11	0.51
16:N:94:VAL:HG11	16:N:98:ILE:HD11	1.93	0.51
1:X:813:A:C4'	1:X:814:G:O5'	2.56	0.51
18:P:27:VAL:CA	18:P:125:THR:HG22	2.40	0.51
6:D:155:THR:C	6:D:156:ILE:HD12	2.32	0.51
21:S:39:PHE:CZ	21:S:81:VAL:HG21	2.46	0.51
12:J:52:ARG:HA	12:J:55:MET:HE3	1.93	0.51
5:C:104:LEU:HA	5:C:107:ALA:CB	2.41	0.51
23:U:28:GLY:N	23:U:32:ARG:HE	2.08	0.51
1:X:1788:C:N3	1:X:1789:U:C5	2.79	0.51
1:X:1354:A:H4'	19:Q:56:MET:CG	2.41	0.51
1:X:1658:A:N6	1:X:1659:G:N3	2.58	0.51
20:R:16:PHE:CE2	20:R:80:LYS:NZ	2.77	0.51
20:R:93:ARG:NH2	20:R:108:VAL:HG22	2.26	0.51
1:X:1128:G:C3'	1:X:1129:A:C5'	2.89	0.51
1:X:41:G:C2	1:X:451:A:C2	2.99	0.51
1:X:2737:A:OP1	1:X:2737:A:O4'	2.29	0.51
10:H:127:VAL:CG1	10:H:128:SER:N	2.73	0.51
24:V:5:GLU:HA	24:V:8:ASN:CB	2.41	0.51
1:X:1928:G:C4	1:X:1929:U:C5	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:37:LYS:NZ	18:P:64:ALA:HB2	2.26	0.51
3:A:243:GLY:CA	3:A:244:ARG:HH11	2.24	0.51
2:Z:35:C:O2'	2:Z:36:A:H5'	2.10	0.51
4:B:60:ASN:HB2	4:B:63:MET:H	1.75	0.51
1:X:2048:C:H1'	1:X:2428:U:N3	2.26	0.51
1:X:938:G:H2'	1:X:940:G:H8	1.75	0.51
1:X:1849:G:H2'	1:X:1850:G:H8	1.75	0.51
1:X:2839:G:C4	1:X:2840:U:C5	2.99	0.51
16:N:87:ASN:O	16:N:87:ASN:ND2	2.37	0.51
4:B:175:ILE:HG22	4:B:175:ILE:O	2.10	0.51
4:B:201:ALA:C	4:B:203:LYS:H	2.14	0.51
17:O:15:SER:CB	17:O:95:ILE:O	2.59	0.51
1:X:1233:A:HO2'	1:X:1234:C:P	2.33	0.51
1:X:2606:G:N2	1:X:2757:G:C4	2.79	0.51
6:D:132:ILE:HG22	6:D:133:LYS:N	2.26	0.51
14:L:90:ASP:OD1	14:L:90:ASP:N	2.43	0.51
21:S:10:PRO:O	21:S:13:LYS:HG2	2.10	0.51
12:J:105:PHE:C	12:J:106:GLU:CD	2.70	0.51
11:I:10:PRO:HB2	11:I:14:LYS:HG2	1.93	0.51
1:X:708:G:OP1	1:X:1393:G:H4'	2.10	0.51
1:X:492:G:C2'	1:X:493:A:OP2	2.59	0.51
1:X:1068:A:N7	1:X:1097:A:H2'	2.25	0.51
7:E:130:ARG:O	7:E:131:ILE:CD1	2.54	0.51
4:B:133:LYS:HG2	4:B:133:LYS:O	2.10	0.51
10:H:124:MET:O	10:H:127:VAL:N	2.44	0.51
1:X:1955:G:H2'	1:X:1956:G:H8	1.76	0.51
1:X:2787:A:N1	1:X:2864:C:C4	2.79	0.51
1:X:968:C:C4	1:X:970:A:C4	2.99	0.51
1:X:2083:G:H1	1:X:2172:U:H3	1.58	0.51
1:X:141:G:H2'	1:X:142:U:H6	1.76	0.51
1:X:1503:G:C2	1:X:1504:G:C5	2.99	0.51
1:X:1504:G:H5''	1:X:1505:U:OP2	2.11	0.51
1:X:599:A:H2'	1:X:600:G:O4'	2.10	0.51
1:X:2235:G:C2'	1:X:2236:U:H5'	2.40	0.51
1:X:915:C:H2'	1:X:916:U:C5	2.46	0.51
1:X:2511:G:C5	1:X:2512:A:C5	2.99	0.51
3:A:53:PHE:HA	3:A:217:ARG:HH21	1.76	0.50
10:H:116:ARG:NH1	15:M:38:LYS:CE	2.75	0.50
9:G:101:THR:HG1	9:G:103:TYR:HE1	1.59	0.50
9:G:58:ILE:HG21	9:G:148:LEU:CD1	2.41	0.50
17:O:23:GLU:O	17:O:24:SER:C	2.48	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:953:G:H1'	1:X:1203:A:H2	1.76	0.50
11:I:87:THR:O	11:I:93:LEU:HB3	2.11	0.50
1:X:641:G:N2	1:X:643:A:H3'	2.26	0.50
1:X:873:U:C4	1:X:2247:A:C8	2.99	0.50
23:U:34:THR:HG23	23:U:35:THR:H	1.76	0.50
20:R:54:ILE:HG23	20:R:71:GLN:HB2	1.93	0.50
20:R:26:SER:OG	20:R:79:SER:HB3	2.11	0.50
1:X:2674:C:O2'	1:X:2675:U:H5'	2.10	0.50
1:X:2411:A:C6	1:X:2412:A:N1	2.79	0.50
1:X:2726:U:C1'	7:E:139:GLN:HG2	2.41	0.50
21:S:136:VAL:HG12	21:S:137:ASP:N	2.24	0.50
3:A:173:VAL:N	3:A:185:VAL:O	2.43	0.50
1:X:1887:G:O2'	1:X:1888:C:H5'	2.11	0.50
1:X:2453:C:H5'	1:X:2454:C:OP2	2.10	0.50
25:W:38:PRO:CD	25:W:41:ARG:HH12	2.23	0.50
1:X:1451:C:H2'	1:X:1452:U:H6	1.76	0.50
7:E:56:SER:HB2	7:E:61:HIS:CD2	2.46	0.50
1:X:2870:C:H2'	1:X:2871:U:C6	2.46	0.50
1:X:431:G:O2'	1:X:432:C:H5'	2.11	0.50
1:X:1713:G:H5''	1:X:1713:G:C8	2.46	0.50
1:X:1592:U:O5'	1:X:1592:U:H6	1.94	0.50
1:X:426:C:O5'	1:X:426:C:H6	1.94	0.50
1:X:471:A:H3'	1:X:472:C:H6	1.75	0.50
1:X:1428:G:HO2'	1:X:1429:A:H8	1.59	0.50
3:A:48:ARG:H	3:A:48:ARG:CD	2.08	0.50
9:G:106:TYR:O	9:G:110:LEU:CG	2.58	0.50
16:N:91:ASN:HA	17:O:10:LYS:HZ2	1.76	0.50
16:N:94:VAL:CG1	16:N:98:ILE:HD11	2.41	0.50
1:X:982:C:H2'	1:X:983:G:O4'	2.10	0.50
14:L:54:ALA:CB	14:L:75:LEU:HD13	2.41	0.50
21:S:25:ASN:HA	21:S:84:TYR:CE1	2.47	0.50
12:J:59:PHE:CZ	12:J:110:VAL:HG11	2.46	0.50
12:J:28:VAL:HG21	12:J:135:ARG:HA	1.92	0.50
5:C:7:ILE:HG22	5:C:120:VAL:O	2.12	0.50
5:C:146:GLU:O	5:C:148:VAL:HG23	2.12	0.50
1:X:228:A:OP1	11:I:53:ARG:HB3	2.11	0.50
1:X:399:G:O2'	1:X:400:U:P	2.69	0.50
3:A:200:GLU:OE1	3:A:202:LYS:HA	2.11	0.50
1:X:64:C:P	19:Q:71:GLN:HB2	2.51	0.50
30:4:1:MET:CA	30:4:1:MET:HE2	2.41	0.50
7:E:25:LYS:CG	7:E:27:LYS:HE3	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:167:GLU:HG2	7:E:169:ILE:HD11	1.93	0.50
1:X:1524:C:H3'	1:X:1525:A:C5'	2.41	0.50
1:X:2343:C:OP1	22:T:55:ARG:NH2	2.44	0.50
24:V:3:PRO:C	24:V:6:MET:HB3	2.31	0.50
1:X:1919:A:N6	1:X:1946:U:H3	2.09	0.50
8:F:92:PRO:HB3	8:F:136:GLY:HA2	1.93	0.50
2:Z:67:C:H2'	2:Z:111:C:N4	2.19	0.50
23:U:8:THR:OG1	23:U:13:LEU:HD12	2.10	0.50
30:4:30:VAL:C	30:4:32:HIS:N	2.57	0.50
1:X:2172:U:O5'	1:X:2172:U:H6	1.93	0.50
1:X:414:A:H5'	1:X:414:A:C8	2.38	0.50
1:X:1621:C:H2'	1:X:1622:G:H5'	1.92	0.50
1:X:1939:U:O2	1:X:1939:U:C2'	2.56	0.50
1:X:887:G:O2'	1:X:888:G:H5'	2.11	0.50
1:X:308:C:C2'	1:X:309:G:H5'	2.42	0.50
1:X:2847:G:C2	1:X:2848:A:N6	2.79	0.50
1:X:101:A:H3'	1:X:102:C:C5	2.46	0.50
12:J:58:HIS:CD2	12:J:118:ALA:HB2	2.47	0.50
3:A:217:ARG:CZ	3:A:218:LYS:HE2	2.42	0.50
9:G:144:MET:O	9:G:145:HIS:C	2.50	0.50
1:X:1265:G:O2'	1:X:1266:G:O4'	2.30	0.50
6:D:57:LEU:HD12	6:D:65:PRO:HG3	1.93	0.50
14:L:33:ARG:O	14:L:99:ARG:CZ	2.59	0.50
14:L:67:THR:O	14:L:68:ALA:O	2.30	0.50
2:Z:58:G:H1'	2:Z:59:A:N7	2.26	0.50
12:J:68:ARG:HD3	12:J:103:VAL:HG12	1.91	0.50
5:C:5:ASN:HA	5:C:118:VAL:HG23	1.93	0.50
23:U:34:THR:HG23	23:U:35:THR:N	2.26	0.50
3:A:146:GLU:OE2	3:A:150:GLY:O	2.29	0.50
3:A:200:GLU:O	3:A:202:LYS:N	2.44	0.50
1:X:1808:C:H5''	3:A:39:LYS:HZ1	1.71	0.50
1:X:1810:U:H4'	1:X:1811:A:OP2	2.11	0.50
1:X:740:A:OP1	1:X:1445:A:O2'	2.29	0.50
19:Q:31:PRO:O	19:Q:76:LYS:HD2	2.11	0.50
6:D:70:ALA:C	6:D:72:LYS:N	2.65	0.50
6:D:85:VAL:HG23	6:D:86:GLY:N	2.24	0.50
1:X:29:U:H2'	1:X:30:G:C8	2.46	0.50
4:B:85:ALA:H	4:B:86:PRO:CD	2.09	0.50
1:X:1529:C:H2'	1:X:1530:U:O4'	2.12	0.50
4:B:133:LYS:HG3	4:B:137:ARG:HB3	1.92	0.50
1:X:1922:U:O2'	1:X:1923:U:P	2.70	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1698:C:HO2'	1:X:1753:A:C2'	2.23	0.50
1:X:2299:A:H61	1:X:2312:A:H3'	1.77	0.50
1:X:2312:A:H4'	1:X:2313:G:O5'	2.12	0.50
18:P:86:LEU:HB2	18:P:130:GLU:OE1	2.11	0.50
13:K:51:LEU:O	13:K:52:ILE:C	2.50	0.50
21:S:115:ILE:HG23	21:S:169:VAL:CG1	2.41	0.50
1:X:2782:G:H2'	1:X:2783:U:O5'	2.12	0.50
18:P:9:ARG:CG	18:P:13:GLN:HG3	2.41	0.50
1:X:1139:A:O2'	1:X:1140:A:O4'	2.12	0.50
1:X:234:C:C2'	1:X:235:C:H5'	2.42	0.50
16:N:71:LEU:HG	16:N:72:HIS:CE1	2.46	0.50
1:X:2543:A:C2	1:X:2626:U:H4'	2.46	0.50
7:E:150:LYS:C	7:E:152:ARG:N	2.65	0.50
1:X:755:C:H2'	1:X:756:C:H6	1.75	0.50
11:I:134:GLU:HG2	11:I:138:GLY:O	2.12	0.50
1:X:194:G:H2'	1:X:195:A:O4'	2.10	0.50
1:X:1682:A:H2'	1:X:1683:G:H5'	1.93	0.50
16:N:46:GLU:OE2	17:O:72:ARG:HD3	2.11	0.50
17:O:75:LYS:HB2	17:O:80:TYR:CB	2.40	0.50
1:X:985:G:N2	1:X:1200:G:C8	2.79	0.50
11:I:67:ASN:O	11:I:68:VAL:CB	2.59	0.50
25:W:10:ILE:HG23	25:W:11:GLY:N	2.26	0.50
1:X:227:G:O2'	11:I:53:ARG:CZ	2.60	0.50
1:X:709:A:H2'	1:X:710:C:O4'	2.12	0.50
1:X:1359:G:C5	1:X:1617:G:N2	2.80	0.50
1:X:59:G:C6	1:X:62:U:N3	2.80	0.50
3:A:72:LYS:NZ	3:A:99:ASP:OD1	2.44	0.50
8:F:73:PRO:CB	8:F:74:PRO:CD	2.90	0.50
1:X:1692:C:C2'	1:X:1693:A:H5'	2.41	0.50
16:N:10:ARG:CB	16:N:10:ARG:HH11	2.25	0.50
1:X:1526:U:H2'	1:X:1527:G:C5'	2.42	0.50
24:V:5:GLU:HA	24:V:8:ASN:HB2	1.94	0.50
1:X:1949:A:H2	1:X:2572:U:H1'	1.73	0.50
1:X:970:A:N6	12:J:83:ARG:NH2	2.60	0.50
1:X:119:G:H2'	1:X:120:G:H8	1.75	0.50
4:B:4:ILE:CG1	4:B:5:LEU:H	2.23	0.50
1:X:946:U:C2	1:X:947:C:C5	2.99	0.50
25:W:38:PRO:HD3	25:W:41:ARG:HH12	1.76	0.50
21:S:148:THR:C	21:S:152:ILE:HD13	2.31	0.50
1:X:207:U:O2'	1:X:208:C:H5'	2.11	0.50
1:X:1190:C:H6	1:X:1190:C:O5'	1.95	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1419:G:H2'	1:X:1420:A:O4'	2.12	0.50
1:X:1231:A:C4	1:X:1232:U:C5	3.00	0.50
1:X:2431:C:H2'	1:X:2432:A:C8	2.47	0.50
1:X:1655:C:O2	1:X:2677:U:O2'	2.27	0.50
4:B:162:MET:HG3	4:B:162:MET:O	2.11	0.50
23:U:70:LEU:CD2	23:U:74:PRO:HA	2.42	0.50
1:X:1351:G:N2	1:X:1352:G:H1'	2.26	0.50
1:X:2598:C:C4'	4:B:150:VAL:HG22	2.41	0.50
5:C:44:SER:HB3	5:C:88:PRO:HG3	1.93	0.50
9:G:50:PRO:O	9:G:51:LEU:C	2.49	0.50
11:I:32:ARG:NH1	17:O:81:ARG:NH2	2.60	0.50
1:X:537:C:O2'	1:X:538:A:C4	2.65	0.50
6:D:27:ALA:O	6:D:28:VAL:O	2.30	0.50
6:D:66:ILE:HG22	6:D:88:LYS:C	2.31	0.50
2:Z:32:C:H1'	2:Z:59:A:N6	2.17	0.50
12:J:121:LEU:C	12:J:123:GLY:N	2.64	0.50
19:Q:63:LYS:HB2	19:Q:70:GLY:N	2.25	0.50
19:Q:63:LYS:HE2	19:Q:64:ARG:C	2.32	0.50
6:D:73:SER:HB3	6:D:79:LEU:HD23	1.93	0.50
3:A:177:LEU:HD12	3:A:181:GLU:OE1	2.12	0.50
1:X:1331:G:N2	1:X:1332:G:H1'	2.26	0.50
4:B:49:ILE:CD1	4:B:50:GLY:N	2.73	0.50
1:X:2570:C:H2'	1:X:2571:G:C8	2.46	0.50
1:X:635:C:O2'	1:X:636:G:H5''	2.11	0.50
23:U:11:LYS:O	23:U:12:ASN:ND2	2.44	0.50
1:X:808:C:O2'	1:X:809:C:H5'	2.11	0.50
1:X:858:G:P	1:X:858:G:H8	2.35	0.50
6:D:32:GLU:CD	6:D:157:VAL:HG11	2.31	0.50
1:X:1428:G:H2'	1:X:1428:G:N3	2.26	0.50
10:H:116:ARG:HA	10:H:133:VAL:CG1	2.41	0.50
15:M:34:ARG:NH1	15:M:81:PHE:CB	2.74	0.50
9:G:91:THR:HG22	9:G:92:GLY:N	2.26	0.50
16:N:14:HIS:CE1	16:N:32:TYR:CD2	3.00	0.50
16:N:69:ALA:HB1	16:N:75:ASN:H	1.76	0.50
6:D:17:MET:HA	6:D:21:GLY:CA	2.42	0.50
14:L:33:ARG:O	14:L:99:ARG:NH1	2.44	0.50
2:Z:31:A:H2'	2:Z:32:C:O4'	2.12	0.50
2:Z:32:C:C2'	2:Z:33:C:H5'	2.38	0.50
2:Z:71:G:N2	2:Z:72:C:C1'	2.74	0.50
12:J:113:GLU:HA	12:J:116:LYS:HB3	1.91	0.50
12:J:57:ARG:HG2	12:J:57:ARG:NH1	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1809:G:H5'	3:A:88:ARG:HH12	1.76	0.50
1:X:1355:A:O2'	1:X:1357:U:OP2	2.20	0.50
1:X:342:G:H4'	1:X:343:A:OP1	2.11	0.50
10:H:17:ARG:HE	10:H:59:ALA:HB2	1.77	0.50
30:4:1:MET:C	30:4:1:MET:SD	2.90	0.50
1:X:29:U:H2'	1:X:30:G:H8	1.77	0.50
7:E:84:THR:HA	7:E:134:SER:CA	2.33	0.50
1:X:2222:U:C2	1:X:2223:U:C5	3.00	0.50
24:V:6:MET:CG	24:V:56:VAL:HG11	2.40	0.50
1:X:2313:G:H21	14:L:17:VAL:HB	1.77	0.50
7:E:36:PRO:C	7:E:37:TYR:CD1	2.85	0.50
1:X:726:G:H2'	1:X:727:U:N1	2.27	0.50
13:K:48:VAL:O	13:K:49:GLU:C	2.50	0.50
1:X:1763:G:H5''	1:X:1764:A:OP2	2.12	0.50
14:L:21:THR:HG22	14:L:22:ALA:N	2.26	0.50
1:X:161:U:H2'	1:X:162:C:C6	2.47	0.50
2:Z:120:G:H2'	2:Z:121:G:O4'	2.11	0.50
9:G:42:VAL:HG12	9:G:43:VAL:N	2.26	0.50
3:A:58:HIS:ND1	3:A:58:HIS:O	2.40	0.50
9:G:146:THR:HG22	9:G:147:ARG:N	2.26	0.50
11:I:88:PHE:O	11:I:93:LEU:HB2	2.12	0.50
11:I:92:THR:C	11:I:94:GLU:H	2.15	0.50
1:X:874:A:H61	1:X:928:G:H1'	1.77	0.50
5:C:104:LEU:O	5:C:108:ILE:N	2.43	0.50
5:C:190:ALA:C	5:C:192:ALA:H	2.12	0.50
1:X:623:G:C2	1:X:627:A:C6	3.00	0.50
23:U:20:ARG:CG	23:U:39:LYS:HE3	2.40	0.50
3:A:105:ILE:O	3:A:107:ALA:N	2.45	0.50
19:Q:38:ILE:O	19:Q:41:ALA:HB3	2.12	0.50
1:X:1514:C:C6	1:X:1593:C:H4'	2.47	0.50
1:X:1513:U:OP2	1:X:1514:C:H5	1.95	0.50
20:R:17:LYS:O	20:R:20:ASP:OD1	2.30	0.50
1:X:1223:G:H4'	1:X:1224:A:H5'	1.94	0.50
1:X:488:A:C6	1:X:489:A:C6	2.99	0.50
10:H:22:ILE:O	10:H:23:ARG:HB2	2.10	0.50
1:X:1685:A:H4'	1:X:1686:A:O5'	2.12	0.50
1:X:2344:G:H4'	22:T:60:PHE:CE2	2.46	0.50
13:K:13:ASN:CG	13:K:13:ASN:O	2.48	0.50
13:K:17:ARG:NH1	13:K:20:LEU:CD2	2.74	0.50
1:X:968:C:N4	1:X:970:A:C4	2.80	0.50
18:P:39:ARG:O	18:P:40:LEU:C	2.50	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:683:A:C5'	11:I:45:LYS:N	2.71	0.50
1:X:137:A:H2'	1:X:138:G:H5'	1.94	0.50
4:B:188:ILE:HG22	4:B:189:PRO:N	2.26	0.50
1:X:1910:A:O5'	1:X:1910:A:H8	1.95	0.50
1:X:2650:G:O2'	1:X:2651:U:H5'	2.12	0.50
23:U:70:LEU:HD23	23:U:75:TYR:CD1	2.46	0.50
1:X:2243:C:H2'	1:X:2244:C:O4'	2.12	0.50
1:X:703:A:O2'	1:X:793:G:OP1	2.24	0.50
5:C:48:ARG:C	5:C:50:GLN:N	2.65	0.50
1:X:1149:G:P	9:G:98:LYS:HZ3	2.35	0.50
16:N:75:ASN:OD1	16:N:78:THR:N	2.45	0.50
16:N:88:ILE:HA	17:O:49:GLU:HG3	1.94	0.50
1:X:1142:G:C4	1:X:1143:A:C8	3.00	0.50
1:X:573:C:O2'	1:X:574:C:H5'	2.12	0.50
1:X:687:G:H5''	5:C:70:GLY:H	1.75	0.50
6:D:11:GLN:C	6:D:15:ALA:HB2	2.32	0.50
6:D:62:LEU:O	6:D:63:GLN:HB2	2.10	0.50
2:Z:53:G:P	14:L:64:LYS:HZ1	2.34	0.50
12:J:111:THR:OG1	12:J:114:GLN:HB2	2.11	0.50
1:X:332:C:OP2	5:C:130:THR:HB	2.12	0.50
19:Q:61:LYS:HG2	19:Q:61:LYS:O	2.12	0.50
20:R:60:PRO:C	20:R:62:MET:H	2.14	0.50
1:X:1249:G:HO2'	1:X:1250:A:P	2.35	0.50
1:X:1975:G:N2	1:X:1979:C:O2'	2.45	0.50
1:X:1572:C:C2'	1:X:1573:G:H5'	2.42	0.50
13:K:33:ARG:HB2	13:K:114:GLU:CB	2.41	0.50
4:B:33:ILE:HD11	4:B:88:GLY:O	2.12	0.50
24:V:2:LYS:N	24:V:3:PRO:HD3	2.26	0.50
24:V:7:ARG:C	24:V:9:LEU:H	2.15	0.50
1:X:2302:G:C6	1:X:2303:C:C4	3.00	0.50
1:X:969:U:C5	12:J:17:ARG:HB2	2.47	0.50
1:X:169:C:O2'	1:X:170:U:H5'	2.11	0.50
1:X:481:A:N1	1:X:482:A:C2	2.79	0.50
1:X:1856:U:O2'	1:X:1857:G:H5'	2.12	0.50
1:X:2639:A:H2'	1:X:2640:G:O4'	2.11	0.50
1:X:2839:G:C5	1:X:2840:U:C4	3.00	0.50
1:X:45:C:N3	1:X:157:G:C2	2.80	0.50
1:X:917:U:H2'	1:X:918:A:C5'	2.42	0.50
14:L:46:SER:O	14:L:47:ARG:C	2.50	0.50
13:K:25:ALA:HB2	13:K:47:PHE:CE2	2.47	0.50
11:I:129:ALA:O	11:I:130:ILE:C	2.48	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1831:G:C5	1:X:1832:G:N7	2.80	0.50
13:K:113:ILE:HG23	13:K:113:ILE:O	2.11	0.50
1:X:1582:A:OP1	3:A:211:ARG:CZ	2.60	0.50
3:A:43:ARG:NH2	3:A:54:ILE:HG13	2.23	0.50
9:G:156:HIS:N	9:G:157:PRO:CD	2.74	0.50
16:N:51:ARG:HD2	16:N:51:ARG:N	2.20	0.50
1:X:1007:A:C6	1:X:1171:A:N1	2.80	0.50
2:Z:31:A:H1'	2:Z:60:A:N6	2.26	0.50
2:Z:108:G:O2'	2:Z:109:G:H5'	2.12	0.50
2:Z:75:A:N1	21:S:29:ASN:CG	2.66	0.50
12:J:112:GLU:O	12:J:116:LYS:HB2	2.11	0.50
12:J:36:ILE:HG23	12:J:101:GLY:O	2.12	0.50
1:X:930:A:C3'	1:X:930:A:C8	2.94	0.50
5:C:104:LEU:CD1	5:C:175:VAL:HG23	2.42	0.50
1:X:624:A:N3	1:X:624:A:H5'	2.27	0.50
1:X:172:A:N7	1:X:175:C:C5	2.80	0.50
1:X:1359:G:C5	1:X:1617:G:C2	3.00	0.50
1:X:1287:A:C6	1:X:1315:A:C2	3.00	0.50
1:X:2289:A:H2	6:D:75:SER:HB2	1.76	0.50
3:A:101:GLU:CD	3:A:101:GLU:C	2.70	0.50
20:R:96:LYS:O	20:R:105:ARG:N	2.45	0.50
20:R:105:ARG:HH22	20:R:112:LYS:HA	1.76	0.50
1:X:2301:A:H2'	1:X:2302:G:O4'	2.12	0.50
7:E:13:SER:O	7:E:15:VAL:N	2.45	0.50
7:E:68:THR:O	7:E:72:VAL:N	2.33	0.50
22:T:21:LEU:HD11	22:T:41:ARG:HE	1.76	0.50
1:X:683:A:H4'	1:X:684:C:H5'	1.94	0.50
1:X:2437:G:H2'	1:X:2469:G:C6	2.47	0.50
1:X:497:C:H3'	1:X:497:C:C6	2.47	0.50
23:U:50:ALA:CA	23:U:52:ARG:HH22	2.24	0.49
5:C:44:SER:HB3	5:C:88:PRO:CG	2.42	0.49
9:G:103:TYR:CE2	9:G:111:LYS:HB3	2.47	0.49
16:N:79:PHE:HD2	16:N:79:PHE:C	2.15	0.49
1:X:537:C:O2'	1:X:538:A:C2	2.52	0.49
6:D:103:LEU:HA	6:D:107:GLY:H	1.77	0.49
21:S:24:TYR:OH	21:S:82:ASP:HB3	2.12	0.49
5:C:170:LEU:CD2	5:C:175:VAL:HG12	2.40	0.49
19:Q:13:SER:OG	19:Q:16:ALA:CB	2.60	0.49
19:Q:57:ASN:C	19:Q:58:VAL:HG23	2.33	0.49
1:X:1657:A:O2'	1:X:1658:A:H5'	2.12	0.49
20:R:92:THR:HB	20:R:95:ARG:NH2	2.15	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:2:ILE:HG21	10:H:8:LEU:HD11	1.93	0.49
10:H:78:SER:HA	10:H:91:PHE:O	2.12	0.49
22:T:32:LYS:HB3	22:T:35:ASN:ND2	2.27	0.49
4:B:33:ILE:CG2	4:B:47:VAL:HG12	2.42	0.49
1:X:1949:A:HO2'	1:X:2572:U:H5'	1.75	0.49
5:C:65:GLY:C	5:C:66:ASN:HD22	2.15	0.49
21:S:129:ARG:NH1	21:S:156:GLU:OE2	2.43	0.49
11:I:30:ALA:HB2	11:I:34:HIS:HE1	1.70	0.49
1:X:719:A:O2'	1:X:720:A:H5'	2.12	0.49
1:X:2473:G:H2'	1:X:2474:G:C8	2.47	0.49
1:X:1566:G:O2'	1:X:1567:A:H5'	2.12	0.49
1:X:1499:A:H2'	1:X:1500:U:C6	2.46	0.49
1:X:2198:U:O5'	1:X:2199:C:H5''	2.12	0.49
1:X:1767:G:C5	1:X:1768:U:C5	3.00	0.49
1:X:954:U:P	11:I:38:LYS:CG	3.01	0.49
17:O:10:LYS:CD	17:O:11:GLN:HE21	2.25	0.49
17:O:78:VAL:C	17:O:79:GLN:O	2.48	0.49
1:X:1022:A:N6	1:X:1162:A:N6	2.60	0.49
1:X:956:A:C4	1:X:2427:A:C2	3.00	0.49
1:X:956:A:N3	1:X:2427:A:C2	2.80	0.49
1:X:956:A:C2	1:X:2427:A:C2	3.00	0.49
1:X:649:G:O2'	1:X:650:U:H5'	2.11	0.49
6:D:49:ALA:C	6:D:52:LYS:HB2	2.32	0.49
6:D:88:LYS:HG2	6:D:89:VAL:H	1.77	0.49
14:L:106:ALA:O	14:L:110:GLY:N	2.45	0.49
21:S:3:LEU:CD1	21:S:33:ALA:N	2.75	0.49
12:J:21:ASP:N	12:J:99:LYS:HE2	2.26	0.49
21:S:74:ARG:O	21:S:76:ARG:N	2.45	0.49
19:Q:3:HIS:HE1	19:Q:40:ASP:OD2	1.95	0.49
19:Q:41:ALA:O	19:Q:42:ILE:C	2.50	0.49
1:X:517:A:C5'	1:X:518:A:H5'	2.30	0.49
8:F:113:MET:N	8:F:114:PRO:CD	2.75	0.49
4:B:116:VAL:CG2	4:B:136:ARG:CG	2.89	0.49
4:B:121:ASN:C	4:B:122:PHE:O	2.49	0.49
1:X:313:U:C2	1:X:314:G:N7	2.80	0.49
24:V:56:VAL:CA	24:V:59:GLU:OE1	2.55	0.49
1:X:1942:G:N2	1:X:1943:A:N3	2.59	0.49
1:X:2861:A:O2'	26:Y:31:THR:HG23	2.12	0.49
1:X:2298:U:O2'	1:X:2299:A:C8	2.61	0.49
1:X:2496:C:C5	1:X:2521:A:C5	3.01	0.49
7:E:37:TYR:HD2	7:E:68:THR:HA	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Y:17:ASP:C	26:Y:19:ARG:H	2.14	0.49
13:K:40:LYS:O	13:K:43:GLU:OE2	2.30	0.49
4:B:179:GLU:C	4:B:181:LEU:H	2.13	0.49
15:M:53:VAL:CG1	15:M:54:VAL:N	2.74	0.49
1:X:809:C:H2'	1:X:810:U:C6	2.47	0.49
16:N:68:GLY:HA2	16:N:71:LEU:HB3	1.94	0.49
4:B:19:ARG:HG3	4:B:21:ILE:CD1	2.43	0.49
1:X:1938:U:O2'	1:X:1939:U:H5'	2.12	0.49
1:X:497:C:C6	1:X:497:C:C3'	2.95	0.49
1:X:2698:G:C6	1:X:2699:G:C6	3.00	0.49
1:X:2442:C:O2'	1:X:2443:C:H5'	2.12	0.49
1:X:1734:C:C5	1:X:1735:G:H1'	2.47	0.49
3:A:246:PRO:O	3:A:247:VAL:C	2.50	0.49
1:X:2710:C:H4'	4:B:168:GLN:O	2.12	0.49
9:G:85:ALA:O	9:G:88:VAL:HG12	2.12	0.49
16:N:93:LYS:O	16:N:94:VAL:CG2	2.59	0.49
1:X:1033:G:C8	9:G:93:LYS:NZ	2.74	0.49
18:P:97:VAL:HG22	18:P:124:ILE:HA	1.95	0.49
18:P:31:VAL:HG21	18:P:124:ILE:CG1	2.42	0.49
14:L:91:ARG:CD	14:L:91:ARG:N	2.67	0.49
14:L:34:SER:HA	14:L:94:TYR:CE2	2.46	0.49
12:J:110:VAL:CG2	12:J:115:ALA:HB2	2.42	0.49
12:J:48:ILE:C	12:J:50:ALA:H	2.15	0.49
1:X:332:C:C2	5:C:159:ARG:NH1	2.78	0.49
1:X:1810:U:C6	3:A:157:ARG:HD2	2.47	0.49
1:X:1357:U:O2'	1:X:1358:C:OP1	2.18	0.49
1:X:1693:A:N1	1:X:1694:A:C2	2.80	0.49
1:X:2725:C:H5'	7:E:146:ALA:CB	2.42	0.49
1:X:94:C:H1'	24:V:40:PRO:CG	2.43	0.49
21:S:101:THR:HG23	21:S:135:VAL:HG13	1.93	0.49
1:X:1744:G:C6	1:X:1747:G:N1	2.80	0.49
4:B:195:LEU:HD12	4:B:196:VAL:N	2.26	0.49
4:B:76:ARG:HG2	4:B:77:ILE:HG13	1.93	0.49
14:L:8:ARG:HG3	14:L:9:ARG:HG3	1.94	0.49
1:X:2043:A:H62	5:C:68:ARG:NH1	2.10	0.49
7:E:41:LEU:HD23	7:E:68:THR:OG1	2.12	0.49
18:P:32:ARG:HA	18:P:121:THR:HG22	1.93	0.49
1:X:921:A:C2'	1:X:924:C:C5	2.91	0.49
1:X:1420:A:H2'	1:X:1421:U:H6	1.76	0.49
1:X:1542:G:H22	1:X:1562:G:H1	1.59	0.49
1:X:1429:A:H2'	1:X:1429:A:N3	2.26	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1179:A:C2	1:X:1196:G:C2	3.00	0.49
23:U:48:LYS:HG3	23:U:49:LYS:H	1.74	0.49
1:X:1019:U:HO2'	1:X:1020:A:H8	1.59	0.49
1:X:2037:A:C2	1:X:2595:C:C2	3.00	0.49
1:X:2760:G:O6	9:G:125:ARG:NH1	2.44	0.49
6:D:150:ARG:HG2	6:D:151:GLY:H	1.76	0.49
25:W:1:MET:HB2	25:W:34:VAL:HG12	1.94	0.49
21:S:42:ALA:HA	21:S:45:GLN:CG	2.42	0.49
12:J:112:GLU:HG3	12:J:113:GLU:N	2.26	0.49
11:I:7:LYS:O	11:I:9:THR:N	2.45	0.49
1:X:219:G:H2'	1:X:231:G:N1	2.28	0.49
1:X:219:G:H2'	1:X:231:G:C6	2.47	0.49
23:U:41:VAL:CG2	23:U:42:GLN:N	2.47	0.49
1:X:1391:A:O2'	1:X:1392:U:O5'	2.29	0.49
1:X:1811:A:O2'	1:X:1812:U:P	2.69	0.49
19:Q:49:ARG:O	19:Q:50:VAL:HG23	2.12	0.49
1:X:1310:C:H2'	1:X:1311:C:H6	1.76	0.49
1:X:1226:A:N9	1:X:1250:A:C2	2.80	0.49
1:X:1264:C:O5'	16:N:13:ARG:NH1	2.41	0.49
11:I:58:ALA:O	11:I:59:ARG:HB2	2.12	0.49
1:X:838:A:C2	1:X:839:U:C2	3.00	0.49
5:C:164:VAL:C	5:C:166:TRP:H	2.13	0.49
1:X:2861:A:O2'	1:X:2862:G:H5'	2.11	0.49
1:X:116:A:C5'	1:X:117:A:H8	2.24	0.49
1:X:558:G:O2'	1:X:559:C:C2	2.61	0.49
13:K:84:ALA:HB3	13:K:85:PRO:CD	2.37	0.49
1:X:2850:U:C6	1:X:2850:U:H5'	2.29	0.49
1:X:131:C:O2'	1:X:132:U:H5'	2.12	0.49
18:P:13:GLN:O	18:P:14:ARG:C	2.48	0.49
1:X:2379:G:H2'	1:X:2380:U:C5'	2.41	0.49
15:M:5:ILE:CD1	15:M:5:ILE:O	2.58	0.49
1:X:1607:A:C2'	1:X:1608:U:O5'	2.61	0.49
1:X:700:C:N3	1:X:701:U:C2	2.81	0.49
1:X:1211:G:H2'	1:X:1212:U:C6	2.44	0.49
11:I:132:ALA:N	11:I:135:ALA:HB3	2.27	0.49
1:X:1560:A:N6	1:X:1561:A:C6	2.81	0.49
1:X:360:A:H3'	1:X:361:G:H8	1.77	0.49
1:X:674:U:H1'	11:I:22:GLY:HA3	1.94	0.49
1:X:2250:G:O5'	1:X:2250:G:H8	1.95	0.49
3:A:43:ARG:O	3:A:44:ASN:CB	2.60	0.49
9:G:163:PRO:C	9:G:164:GLN:O	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:65:LYS:CB	9:G:65:LYS:NZ	2.75	0.49
16:N:34:ASN:O	16:N:35:ALA:C	2.50	0.49
16:N:47:TYR:HE2	16:N:51:ARG:NH2	2.05	0.49
1:X:1171:A:C5	1:X:1172:U:C5	3.00	0.49
18:P:27:VAL:HA	18:P:125:THR:HG22	1.95	0.49
6:D:47:SER:CA	6:D:50:ILE:HG13	2.38	0.49
2:Z:43:G:C8	6:D:66:ILE:HD11	2.48	0.49
14:L:75:LEU:O	14:L:78:ALA:CB	2.54	0.49
25:W:23:LEU:HD13	25:W:51:LEU:CD1	2.41	0.49
1:X:1438:G:O2'	1:X:1439:G:H5'	2.13	0.49
1:X:1811:A:H4'	1:X:1812:U:H5''	1.94	0.49
19:Q:50:VAL:HG12	19:Q:50:VAL:O	2.10	0.49
3:A:97:TYR:CB	3:A:101:GLU:OE1	2.56	0.49
20:R:105:ARG:NE	20:R:106:VAL:O	2.46	0.49
20:R:22:VAL:HG11	20:R:80:LYS:HE3	1.92	0.49
20:R:23:ILE:O	20:R:23:ILE:HD13	2.12	0.49
20:R:96:LYS:HD3	20:R:105:ARG:HB2	1.94	0.49
8:F:129:ALA:O	8:F:130:GLY:C	2.48	0.49
1:X:1068:A:H5'	1:X:1069:G:OP2	2.12	0.49
21:S:113:VAL:CG2	21:S:171:VAL:HG22	2.40	0.49
1:X:331:U:H4'	1:X:333:A:N7	2.27	0.49
10:H:124:MET:O	10:H:125:LYS:C	2.49	0.49
1:X:1822:C:H2'	1:X:1823:G:H5'	1.93	0.49
1:X:2569:A:O2'	1:X:2570:C:H5'	2.12	0.49
14:L:13:THR:O	14:L:17:VAL:HG12	2.12	0.49
1:X:968:C:OP1	12:J:78:LYS:HB3	2.12	0.49
30:4:31:LYS:HD3	30:4:31:LYS:H	1.77	0.49
1:X:2171:U:H2'	1:X:2172:U:C6	2.47	0.49
1:X:76:C:H6	1:X:76:C:C5'	2.19	0.49
1:X:76:C:O2'	1:X:77:C:H5'	2.12	0.49
15:M:54:VAL:CG1	15:M:54:VAL:O	2.61	0.49
1:X:1372:A:C4	1:X:1373:G:C8	3.01	0.49
21:S:146:HIS:O	21:S:147:ILE:HD13	2.11	0.49
1:X:2873:G:H2'	1:X:2874:A:C8	2.47	0.49
1:X:2388:G:C5	1:X:2389:G:N7	2.80	0.49
4:B:61:LYS:O	4:B:64:GLN:HB2	2.12	0.49
21:S:79:ILE:C	21:S:79:ILE:HD13	2.32	0.49
1:X:712:A:N3	1:X:1650:A:H1'	2.28	0.49
15:M:34:ARG:CD	15:M:81:PHE:CE2	2.96	0.49
16:N:75:ASN:OD1	16:N:75:ASN:O	2.31	0.49
17:O:63:HIS:CE1	17:O:91:THR:HG1	2.31	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Y:6:VAL:HG22	26:Y:7:PRO:CD	2.41	0.49
12:J:70:PHE:CD2	12:J:71:PRO:N	2.81	0.49
25:W:3:ILE:HG21	25:W:25:LEU:HD11	1.94	0.49
2:Z:112:A:H2'	2:Z:113:G:O4'	2.12	0.49
2:Z:74:A:H2	2:Z:107:C:H41	1.59	0.49
12:J:28:VAL:HG23	12:J:137:VAL:CG2	2.42	0.49
1:X:2798:A:C2'	1:X:2799:C:H5'	2.42	0.49
5:C:116:LYS:O	5:C:117:LEU:HB3	2.12	0.49
5:C:149:LEU:HD21	5:C:170:LEU:HD22	1.94	0.49
5:C:7:ILE:O	5:C:120:VAL:CB	2.57	0.49
1:X:2225:G:N1	1:X:2405:A:H1'	2.28	0.49
3:A:108:PRO:CB	3:A:143:HIS:HE1	2.25	0.49
1:X:1441:A:H1'	1:X:1442:C:C4	2.47	0.49
6:D:77:PHE:HD1	6:D:77:PHE:N	2.10	0.49
8:F:125:ALA:O	8:F:129:ALA:N	2.41	0.49
1:X:1685:A:C8	1:X:1691:G:C6	3.01	0.49
11:I:58:ALA:C	11:I:60:LEU:H	2.16	0.49
14:L:14:ARG:O	14:L:17:VAL:CG1	2.60	0.49
1:X:2042:A:H5''	5:C:65:GLY:HA3	1.93	0.49
1:X:2307:A:C6	1:X:2308:A:N6	2.80	0.49
1:X:2080:U:H2'	1:X:2081:U:O4'	2.13	0.49
5:C:54:THR:O	5:C:55:GLY:O	2.29	0.49
1:X:353:G:O2'	1:X:354:C:H5'	2.13	0.49
18:P:107:ILE:HB	18:P:117:ILE:CD1	2.43	0.49
1:X:609:U:O2'	11:I:18:ARG:NH1	2.45	0.49
1:X:1079:G:H8	1:X:1079:G:OP2	1.96	0.49
15:M:50:PHE:HD2	15:M:51:GLU:N	2.11	0.49
4:B:149:ARG:NH1	9:G:106:TYR:HD1	2.07	0.49
9:G:107:GLN:O	9:G:109:GLY:N	2.43	0.49
1:X:6:A:H4'	9:G:159:SER:O	2.13	0.49
9:G:61:ARG:HG2	9:G:65:LYS:HZ3	1.78	0.49
9:G:65:LYS:HG2	9:G:66:HIS:H	1.71	0.49
16:N:70:ARG:HH11	16:N:70:ARG:CG	2.24	0.49
17:O:16:GLU:O	17:O:17:GLY:C	2.51	0.49
1:X:2383:C:H1'	11:I:65:PHE:CZ	2.47	0.49
6:D:154:ILE:HD12	6:D:154:ILE:N	2.28	0.49
14:L:33:ARG:NH1	14:L:100:VAL:O	2.45	0.49
2:Z:44:C:O2	6:D:90:THR:N	2.46	0.49
12:J:59:PHE:CZ	12:J:110:VAL:HG21	2.48	0.49
5:C:150:LEU:N	5:C:150:LEU:HD12	2.28	0.49
1:X:172:A:C2	1:X:227:G:N2	2.81	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:70:ALA:HB2	6:D:85:VAL:HG13	1.95	0.49
10:H:78:SER:O	10:H:79:HIS:O	2.30	0.49
1:X:1468:A:H5''	1:X:1472:C:N4	2.27	0.49
7:E:117:PRO:HB2	7:E:121:VAL:HB	1.95	0.49
1:X:2823:G:O2'	1:X:2824:C:C6	2.65	0.49
1:X:2827:G:C5	1:X:2828:C:C5	3.00	0.49
8:F:96:LYS:CB	8:F:99:LYS:HE2	2.40	0.49
7:E:45:GLN:CA	7:E:50:LEU:HA	2.40	0.49
7:E:9:ILE:CB	7:E:50:LEU:HB3	2.42	0.49
18:P:41:VAL:HG12	18:P:42:VAL:N	2.27	0.49
18:P:41:VAL:C	18:P:43:ASP:N	2.63	0.49
1:X:304:A:C5	1:X:356:A:N6	2.80	0.49
21:S:153:LYS:O	21:S:154:LEU:HG	2.13	0.49
1:X:2265:A:N3	1:X:2266:A:C6	2.81	0.49
1:X:2264:C:H4'	1:X:2267:A:N7	2.28	0.49
18:P:117:ILE:HG22	18:P:118:LYS:N	2.27	0.49
1:X:750:C:N3	1:X:751:G:C8	2.81	0.49
1:X:706:A:C2	1:X:707:U:O2	2.65	0.49
1:X:2445:C:H5''	30:4:6:SER:HB2	1.93	0.49
1:X:2204:A:H4'	1:X:2205:C:O5'	2.11	0.49
1:X:1008:G:O2'	1:X:1009:C:H5'	2.11	0.49
1:X:1682:A:C2'	1:X:1683:G:H5'	2.43	0.49
1:X:1093:U:H2'	1:X:1094:C:O4'	2.12	0.49
22:T:44:LYS:O	22:T:44:LYS:HD2	2.13	0.49
12:J:11:ARG:HG3	12:J:11:ARG:NH1	2.26	0.49
1:X:2709:C:H2'	1:X:2710:C:H6	1.77	0.49
9:G:157:PRO:C	9:G:159:SER:N	2.61	0.49
9:G:34:PRO:C	9:G:69:ASP:OD1	2.51	0.49
16:N:105:ALA:O	16:N:107:LYS:N	2.45	0.49
16:N:21:ALA:O	16:N:22:LYS:C	2.50	0.49
1:X:1016:C:H2'	1:X:1017:C:H6	1.73	0.49
11:I:123:ASP:O	11:I:124:ALA:HB2	2.13	0.49
6:D:135:GLN:HG3	6:D:150:ARG:O	2.13	0.49
25:W:5:LEU:HG	25:W:28:ILE:HG22	1.94	0.49
12:J:68:ARG:HG2	12:J:104:MET:O	2.13	0.49
12:J:54:VAL:HG11	12:J:121:LEU:HB3	1.95	0.49
4:B:193:GLY:O	15:M:2:GLN:N	2.46	0.49
3:A:125:PRO:CB	3:A:193:ILE:HD11	2.40	0.49
1:X:1314:A:O2'	1:X:1315:A:C3'	2.41	0.49
7:E:96:ALA:HB1	7:E:103:LEU:HD11	1.95	0.49
1:X:1123:G:H2'	1:X:1124:U:O4'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:77:LYS:CG	12:J:78:LYS:H	2.25	0.49
12:J:83:ARG:HH11	12:J:83:ARG:HG2	1.77	0.49
1:X:2012:A:C2	1:X:2016:A:C5	3.01	0.49
1:X:2508:G:OP2	7:E:172:LYS:NZ	2.45	0.49
1:X:1630:A:N6	18:P:112:GLY:O	2.46	0.49
1:X:57:G:C4	1:X:58:C:C5	3.01	0.49
1:X:2612:G:O2'	4:B:63:MET:HG2	2.12	0.49
1:X:860:U:O2	1:X:860:U:H2'	2.11	0.49
1:X:848:A:C6	1:X:849:G:C5	3.01	0.49
1:X:1984:A:C2	1:X:1985:G:C4	3.01	0.49
1:X:915:C:H2'	1:X:916:U:H6	1.76	0.49
14:L:21:THR:HG22	14:L:22:ALA:H	1.78	0.49
1:X:2490:U:O4	1:X:2554:C:N3	2.46	0.49
9:G:100:TYR:C	9:G:100:TYR:CD1	2.86	0.49
1:X:589:C:C5'	16:N:31:GLN:HE22	2.22	0.49
16:N:64:ARG:C	16:N:66:ASN:N	2.64	0.49
16:N:80:ILE:O	16:N:83:LEU:HB3	2.12	0.49
17:O:70:TYR:HA	17:O:85:GLY:HA2	1.95	0.49
1:X:2619:G:C6	1:X:2755:A:C2	3.01	0.49
6:D:112:ARG:O	6:D:113:ASP:CB	2.60	0.49
6:D:60:ILE:O	6:D:99:PHE:CD1	2.66	0.49
14:L:69:ALA:CB	14:L:106:ALA:HB2	2.40	0.49
1:X:2247:A:H5'	1:X:2248:A:P	2.53	0.49
1:X:840:U:O2'	1:X:841:G:N2	2.45	0.49
23:U:22:GLY:N	23:U:39:LYS:CD	2.76	0.49
23:U:20:ARG:HB2	23:U:43:ARG:CG	2.42	0.49
3:A:149:PRO:HD3	3:A:189:CYS:SG	2.52	0.49
3:A:65:ILE:O	3:A:66:ASP:HB2	2.12	0.49
10:H:2:ILE:CG2	10:H:8:LEU:HD11	2.43	0.49
1:X:2529:G:C6	1:X:2538:C:N3	2.80	0.49
7:E:21:ASP:C	7:E:23:VAL:H	2.15	0.49
1:X:1071:U:C2	1:X:1073:G:H5'	2.48	0.49
7:E:103:LEU:CD1	7:E:104:GLU:H	2.19	0.49
7:E:142:GLY:O	7:E:144:VAL:N	2.46	0.49
7:E:91:GLY:HA3	7:E:94:PHE:CD2	2.47	0.49
1:X:27:G:O2'	1:X:28:A:P	2.71	0.49
21:S:168:VAL:O	21:S:169:VAL:HG13	2.13	0.49
1:X:152:G:O2'	1:X:153:A:H5'	2.13	0.49
1:X:2867:G:C8	1:X:2867:G:OP2	2.65	0.49
1:X:1737:G:H2'	1:X:1738:U:C6	2.48	0.49
1:X:2777:A:N6	18:P:134:LYS:HB2	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:769:C:H2'	1:X:770:U:H5'	1.95	0.49
1:X:1303:U:H2'	1:X:1304:U:C6	2.45	0.49
1:X:1492:A:C6	1:X:1531:C:N4	2.81	0.49
1:X:190:A:O2'	1:X:191:G:H5'	2.12	0.49
1:X:1065:A:C4	1:X:1117:G:N2	2.81	0.49
1:X:2819:G:C5	1:X:2820:C:C4	3.01	0.49
1:X:2198:U:H2'	1:X:2199:C:O2'	2.12	0.49
1:X:2663:U:N3	1:X:2664:G:C8	2.81	0.49
9:G:158:HIS:N	9:G:161:GLN:HE21	2.11	0.49
16:N:76:TYR:O	16:N:80:ILE:HG12	2.12	0.49
16:N:40:LEU:HB3	17:O:74:TYR:CD1	2.48	0.49
1:X:1022:A:C2	1:X:1024:G:C4	3.01	0.49
18:P:97:VAL:CG1	18:P:122:SER:HB3	2.41	0.49
6:D:13:ARG:CB	6:D:14:PRO:HD3	2.32	0.49
14:L:33:ARG:HD3	14:L:99:ARG:HG3	1.95	0.49
2:Z:75:A:N6	21:S:29:ASN:OD1	2.41	0.49
12:J:128:ILE:HG12	12:J:129:GLN:N	2.27	0.49
12:J:23:LYS:O	12:J:25:GLY:N	2.45	0.49
1:X:872:G:H22	1:X:929:A:P	2.35	0.49
11:I:9:THR:O	11:I:13:ARG:CG	2.61	0.49
23:U:22:GLY:N	23:U:39:LYS:CG	2.74	0.49
3:A:63:ARG:HD2	3:A:85:ASP:CB	2.33	0.49
19:Q:20:MET:O	19:Q:21:GLU:C	2.51	0.49
1:X:1313:U:O2'	1:X:1314:A:OP2	2.29	0.49
6:D:75:SER:O	6:D:76:ASN:C	2.50	0.49
3:A:72:LYS:HE2	3:A:97:TYR:CB	2.43	0.49
7:E:137:ASP:CB	7:E:140:LEU:HD12	2.40	0.49
1:X:2725:C:H1'	7:E:143:GLN:HG3	1.95	0.49
1:X:1919:A:H1'	1:X:1923:U:C2	2.48	0.49
1:X:1588:A:C4	1:X:1589:G:C8	3.01	0.49
10:H:73:VAL:CG2	10:H:123:PHE:HE1	2.26	0.49
1:X:1867:A:H8	1:X:1867:A:H3'	1.78	0.49
6:D:142:THR:HG22	6:D:144:ASP:HB2	1.95	0.49
1:X:1211:G:C6	1:X:1212:U:O4	2.65	0.49
1:X:1025:A:O2'	1:X:1026:U:H5'	2.12	0.49
23:U:70:LEU:HD21	23:U:75:TYR:H	1.78	0.49
1:X:1684:G:O2'	1:X:1974:U:O4	2.26	0.49
1:X:2071:G:C2	1:X:2072:C:C6	3.01	0.48
3:A:210:GLY:C	3:A:212:SER:N	2.60	0.48
9:G:156:HIS:O	9:G:158:HIS:N	2.45	0.48
9:G:65:LYS:HE3	9:G:66:HIS:CD2	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:60:LEU:O	16:N:60:LEU:HD22	2.12	0.48
16:N:92:ARG:HD3	16:N:92:ARG:N	2.28	0.48
11:I:89:ASP:CB	11:I:120:VAL:HG13	2.40	0.48
6:D:33:LYS:HB2	6:D:91:LEU:O	2.13	0.48
14:L:37:HIS:CE1	14:L:39:TYR:CE1	3.01	0.48
25:W:44:VAL:O	25:W:47:VAL:HG22	2.13	0.48
5:C:24:SER:O	5:C:25:GLY:C	2.50	0.48
5:C:7:ILE:HG21	5:C:122:GLY:HA2	1.94	0.48
5:C:96:PRO:HB2	5:C:99:VAL:CG2	2.43	0.48
23:U:32:ARG:CG	23:U:33:LYS:N	2.74	0.48
23:U:23:LYS:HB2	23:U:35:THR:CG2	2.42	0.48
1:X:1811:A:C5'	3:A:161:THR:HG21	2.42	0.48
1:X:1811:A:O4'	1:X:1811:A:OP2	2.30	0.48
20:R:23:ILE:O	20:R:80:LYS:HA	2.13	0.48
1:X:516:G:O2'	1:X:517:A:H8	1.96	0.48
4:B:37:LYS:CD	4:B:42:ASP:OD2	2.61	0.48
21:S:172:LEU:CD2	21:S:173:PRO:HD2	2.27	0.48
1:X:330:C:C2	1:X:331:U:C6	3.01	0.48
22:T:57:HIS:ND1	22:T:57:HIS:N	2.60	0.48
1:X:1923:U:O2'	1:X:1924:C:P	2.71	0.48
1:X:1926:U:H5''	1:X:1927:U:OP1	2.13	0.48
7:E:12:PRO:O	7:E:13:SER:O	2.30	0.48
7:E:34:THR:O	7:E:36:PRO:HD3	2.12	0.48
26:Y:15:LYS:NZ	26:Y:19:ARG:HH11	2.10	0.48
1:X:616:U:H2'	1:X:617:U:O4'	2.13	0.48
23:U:14:VAL:O	23:U:16:ASN:ND2	2.46	0.48
4:B:25:VAL:CG2	15:M:16:ILE:HD12	2.43	0.48
1:X:1483:G:C2	1:X:1541:G:N3	2.81	0.48
1:X:1915:A:H2'	1:X:1916:G:C5'	2.43	0.48
1:X:1220:G:O2'	1:X:1221:C:H5'	2.13	0.48
3:A:214:TRP:O	3:A:215:LEU:HG	2.14	0.48
3:A:247:VAL:C	3:A:248:THR:O	2.48	0.48
4:B:168:GLN:O	4:B:169:ASN:HB2	2.14	0.48
1:X:2664:G:OP1	10:H:90:ARG:NH1	2.46	0.48
9:G:105:GLY:O	9:G:106:TYR:O	2.31	0.48
9:G:125:ARG:O	9:G:126:VAL:C	2.51	0.48
17:O:36:LYS:HE3	17:O:56:VAL:N	2.28	0.48
2:Z:28:A:N7	2:Z:29:C:C4	2.81	0.48
21:S:38:ALA:HA	21:S:41:ARG:HB3	1.94	0.48
12:J:128:ILE:HG12	12:J:129:GLN:O	2.13	0.48
1:X:873:U:C2'	1:X:874:A:O5'	2.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:7:ILE:HG21	5:C:122:GLY:CA	2.42	0.48
5:C:14:THR:HG22	5:C:15:ILE:N	2.24	0.48
1:X:1215:A:H2'	1:X:1216:G:C8	2.49	0.48
1:X:2064:U:OP1	23:U:20:ARG:CZ	2.61	0.48
19:Q:14:GLU:HG3	19:Q:15:LYS:N	2.28	0.48
19:Q:16:ALA:O	19:Q:19:ALA:HB3	2.13	0.48
1:X:1312:G:H5''	1:X:1313:U:OP1	2.12	0.48
20:R:53:VAL:HG21	20:R:74:LEU:HD13	1.95	0.48
1:X:490:A:O2'	1:X:492:G:H5''	2.13	0.48
8:F:77:TYR:HE1	8:F:80:ARG:NH2	2.01	0.48
4:B:95:ILE:HG22	4:B:96:PHE:CD1	2.49	0.48
1:X:1571:G:H2'	1:X:1572:C:H6	1.77	0.48
13:K:33:ARG:CB	13:K:114:GLU:HB3	2.43	0.48
13:K:11:ASN:OD1	13:K:17:ARG:NH2	2.45	0.48
13:K:14:SER:O	13:K:17:ARG:N	2.46	0.48
1:X:1954:A:H5'	1:X:1955:G:H5''	1.95	0.48
1:X:2310:G:C6	1:X:2311:U:C5	3.00	0.48
1:X:2351:G:C2	1:X:2352:A:N7	2.81	0.48
1:X:1186:G:O5'	1:X:1187:A:OP1	2.30	0.48
7:E:70:THR:O	7:E:73:ALA:HB3	2.14	0.48
18:P:34:SER:O	18:P:37:LYS:CB	2.61	0.48
1:X:1322:G:O2'	1:X:1323:G:H5'	2.14	0.48
1:X:2264:C:H4'	1:X:2267:A:C5	2.48	0.48
1:X:2847:G:O2'	13:K:8:ARG:NH2	2.41	0.48
1:X:1762:C:H2'	1:X:1763:G:C8	2.48	0.48
23:U:69:THR:HG22	23:U:75:TYR:CE1	2.48	0.48
1:X:2268:G:N3	1:X:2268:G:H2'	2.29	0.48
15:M:27:PHE:CZ	15:M:66:PHE:CD1	3.00	0.48
9:G:162:LYS:O	9:G:163:PRO:O	2.31	0.48
9:G:67:ARG:HB2	9:G:70:PHE:CA	2.26	0.48
9:G:84:ASN:O	9:G:86:ALA:N	2.38	0.48
17:O:36:LYS:NZ	17:O:98:ILE:HB	2.29	0.48
1:X:1036:G:C4	1:X:1145:C:H1'	2.48	0.48
1:X:2035:G:C2'	1:X:2036:G:H5'	2.43	0.48
1:X:2425:G:H5''	1:X:2426:G:OP2	2.14	0.48
14:L:32:TYR:C	14:L:34:SER:N	2.65	0.48
2:Z:57:U:O2	6:D:26:MET:HG3	2.13	0.48
25:W:22:ALA:O	25:W:23:LEU:C	2.51	0.48
25:W:2:LYS:O	25:W:54:GLN:N	2.42	0.48
12:J:27:TYR:OH	12:J:131:LYS:NZ	2.40	0.48
5:C:176:ASN:ND2	5:C:178:TYR:H	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:33:C:O2'	1:X:34:U:C5'	2.58	0.48
1:X:229:G:OP1	11:I:49:PHE:CE1	2.66	0.48
3:A:146:GLU:HG2	3:A:147:LEU:N	2.29	0.48
3:A:148:VAL:O	3:A:149:PRO:C	2.51	0.48
24:V:37:LEU:HD23	24:V:39:GLN:H	1.77	0.48
1:X:64:C:H1'	19:Q:68:PHE:CD1	2.48	0.48
1:X:2541:U:C2'	1:X:2542:U:H5'	2.44	0.48
1:X:1474:A:C2'	1:X:1475:U:H5'	2.39	0.48
7:E:101:LYS:HG3	7:E:117:PRO:CD	2.41	0.48
21:S:113:VAL:HG22	21:S:171:VAL:HG13	1.94	0.48
3:A:184:ARG:CG	3:A:184:ARG:NH1	2.76	0.48
24:V:12:THR:O	24:V:16:LYS:HB3	2.12	0.48
24:V:4:SER:O	24:V:6:MET:N	2.45	0.48
24:V:4:SER:HB3	24:V:7:ARG:NE	2.28	0.48
1:X:2787:A:C2	1:X:2864:C:N3	2.82	0.48
8:F:89:SER:CB	8:F:135:MET:O	2.61	0.48
18:P:89:ARG:HD3	18:P:132:GLY:CA	2.43	0.48
13:K:87:TYR:CZ	13:K:94:TYR:HD2	2.31	0.48
3:A:243:GLY:CA	3:A:244:ARG:NH1	2.76	0.48
1:X:18:U:O2'	1:X:19:C:H5'	2.13	0.48
1:X:43:A:O2'	1:X:44:G:H5'	2.14	0.48
1:X:2326:C:H2'	1:X:2327:U:C5	2.49	0.48
1:X:1051:U:C6	1:X:1051:U:C3'	2.95	0.48
1:X:847:C:O5'	1:X:847:C:H6	1.96	0.48
26:Y:51:TYR:HA	26:Y:55:ARG:HA	1.95	0.48
1:X:1713:G:H8	1:X:1713:G:H5''	1.76	0.48
1:X:609:U:H1'	11:I:18:ARG:CZ	2.43	0.48
1:X:586:G:C6	1:X:587:A:N6	2.81	0.48
1:X:1917:C:C2'	1:X:1918:G:H5'	2.43	0.48
1:X:471:A:H2'	1:X:472:C:O4'	2.11	0.48
19:Q:84:GLU:O	19:Q:86:GLN:N	2.46	0.48
15:M:24:LEU:HB3	15:M:25:PRO:CD	2.43	0.48
15:M:34:ARG:NH2	15:M:91:VAL:HG21	2.28	0.48
11:I:102:LYS:C	11:I:104:ARG:H	2.17	0.48
6:D:53:ALA:O	6:D:56:GLU:N	2.46	0.48
5:C:190:ALA:C	5:C:192:ALA:N	2.67	0.48
1:X:840:U:H4'	1:X:841:G:N2	2.28	0.48
19:Q:16:ALA:C	19:Q:19:ALA:H	2.17	0.48
20:R:56:LYS:CA	20:R:68:GLY:O	2.60	0.48
10:H:41:ASN:HB2	10:H:42:LYS:H	1.56	0.48
11:I:58:ALA:C	11:I:60:LEU:N	2.66	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:T:46:LYS:CG	22:T:76:ALA:HB1	2.43	0.48
18:P:72:LEU:O	18:P:73:ASN:C	2.52	0.48
7:E:73:ALA:O	7:E:76:VAL:HB	2.12	0.48
1:X:2392:G:H2'	1:X:2393:G:O4'	2.13	0.48
1:X:921:A:C2'	1:X:924:C:H5	2.21	0.48
11:I:45:LYS:HD3	11:I:46:GLY:N	2.26	0.48
1:X:139:A:C2	1:X:140:G:C5	3.02	0.48
1:X:807:A:H2'	1:X:808:C:H6	1.75	0.48
16:N:71:LEU:O	16:N:71:LEU:HG	2.12	0.48
1:X:2441:U:H2'	1:X:2442:C:H6	1.77	0.48
14:L:36:LYS:HE3	14:L:36:LYS:CA	2.44	0.48
1:X:2819:G:N7	1:X:2820:C:C4	2.81	0.48
1:X:2073:A:C5	1:X:2074:U:C5	3.01	0.48
3:A:227:ASN:O	3:A:229:VAL:N	2.47	0.48
1:X:1782:A:N1	1:X:1821:A:H5'	2.29	0.48
1:X:741:G:C2	1:X:743:A:N9	2.82	0.48
10:H:116:ARG:NH1	15:M:38:LYS:NZ	2.60	0.48
5:C:47:THR:CA	5:C:82:VAL:HB	2.29	0.48
1:X:1236:G:P	17:O:87:ARG:HH11	2.36	0.48
1:X:1017:C:H1'	9:G:134:MET:HE2	1.96	0.48
11:I:73:GLU:OE2	11:I:104:ARG:HB2	2.13	0.48
1:X:640:C:C4'	1:X:660:G:H21	2.24	0.48
6:D:171:GLN:HG3	6:D:175:LEU:O	2.13	0.48
14:L:97:HIS:O	14:L:101:LYS:CB	2.59	0.48
2:Z:53:G:H5'	14:L:64:LYS:CE	2.43	0.48
1:X:942:U:H4'	25:W:22:ALA:O	2.14	0.48
21:S:16:GLU:CD	21:S:16:GLU:H	2.16	0.48
21:S:64:ALA:HA	21:S:86:VAL:N	2.28	0.48
2:Z:108:G:O3'	21:S:26:LYS:HE2	2.13	0.48
5:C:158:ARG:HB2	5:C:169:VAL:CG1	2.43	0.48
1:X:34:U:C6	20:R:4:PRO:HB3	2.48	0.48
11:I:41:SER:OG	11:I:41:SER:O	2.30	0.48
23:U:23:LYS:CB	23:U:35:THR:HG22	2.44	0.48
3:A:134:ARG:C	3:A:136:VAL:N	2.66	0.48
3:A:144:ALA:O	3:A:145:LEU:O	2.31	0.48
20:R:63:THR:O	20:R:64:ASN:HB2	2.14	0.48
20:R:8:SER:C	20:R:10:HIS:H	2.17	0.48
8:F:108:ILE:O	8:F:112:LYS:HB2	2.13	0.48
22:T:80:SER:C	22:T:81:ILE:HD13	2.33	0.48
13:K:10:LEU:HG	13:K:17:ARG:HB2	1.94	0.48
1:X:2271:C:H2'	1:X:2272:A:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2042:A:O2'	5:C:62:LYS:CE	2.59	0.48
12:J:89:GLY:O	12:J:90:ALA:C	2.52	0.48
1:X:1837:G:H2'	1:X:1838:G:C8	2.49	0.48
1:X:2014:A:H4'	1:X:2015:G:OP2	2.13	0.48
1:X:1324:G:H2'	1:X:1325:U:C6	2.49	0.48
1:X:435:A:C2	1:X:436:A:C5	3.01	0.48
13:K:28:LEU:O	13:K:28:LEU:HD23	2.13	0.48
1:X:319:G:H1'	1:X:511:A:O4'	2.14	0.48
1:X:190:A:C2	1:X:191:G:C4	3.01	0.48
1:X:1281:A:C6	1:X:1996:A:C8	3.02	0.48
16:N:91:ASN:HA	17:O:10:LYS:HZ1	1.72	0.48
1:X:1002:C:OP2	1:X:1200:G:OP2	2.30	0.48
1:X:689:A:C8	1:X:2422:C:H1'	2.49	0.48
11:I:80:LEU:CA	11:I:84:GLU:HB3	2.43	0.48
21:S:3:LEU:HD21	21:S:33:ALA:N	2.18	0.48
1:X:455:A:H1'	1:X:1215:A:C4'	2.44	0.48
23:U:20:ARG:O	23:U:39:LYS:HD2	2.14	0.48
1:X:1445:A:O2'	1:X:1446:U:H5'	2.13	0.48
6:D:78:LYS:HG2	6:D:80:ARG:NH1	2.28	0.48
20:R:108:VAL:C	20:R:110:SER:N	2.66	0.48
20:R:12:ASP:OD1	20:R:12:ASP:O	2.30	0.48
10:H:3:MET:SD	10:H:44:TYR:HE1	2.37	0.48
1:X:91:A:C2	1:X:92:U:C4	3.02	0.48
7:E:97:LYS:O	7:E:98:LEU:HB2	2.13	0.48
1:X:2726:U:H2'	1:X:2727:G:C5'	2.43	0.48
22:T:40:GLN:NE2	22:T:42:GLY:O	2.47	0.48
1:X:2345:A:H4'	22:T:62:LEU:CD1	2.42	0.48
4:B:195:LEU:HB2	15:M:3:THR:HG22	1.89	0.48
1:X:1822:C:H2'	1:X:1823:G:C5'	2.44	0.48
1:X:2320:G:H22	1:X:2353:G:H4'	1.78	0.48
7:E:78:GLY:C	7:E:80:SER:H	2.15	0.48
1:X:1385:C:H1'	1:X:2192:U:C4	2.48	0.48
11:I:30:ALA:N	11:I:34:HIS:CG	2.76	0.48
1:X:2293:G:O2'	1:X:2294:U:H5'	2.14	0.48
1:X:2634:G:O6	10:H:32:LYS:NZ	2.43	0.48
1:X:2633:A:C4'	1:X:2634:G:OP1	2.61	0.48
1:X:800:U:H3'	1:X:804:C:N4	2.28	0.48
22:T:10:SER:O	22:T:11:LYS:HE3	2.14	0.48
22:T:8:GLY:O	22:T:9:SER:O	2.32	0.48
1:X:795:A:H2	3:A:226:MET:HE2	1.79	0.48
5:C:45:THR:HG22	5:C:86:PRO:O	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:107:GLN:N	9:G:107:GLN:OE1	2.46	0.48
9:G:103:TYR:OH	9:G:111:LYS:HB2	2.13	0.48
9:G:139:ARG:HG2	9:G:142:ARG:NH2	2.29	0.48
16:N:31:GLN:O	16:N:35:ALA:CB	2.59	0.48
17:O:12:TYR:CB	17:O:39:PHE:CB	2.87	0.48
17:O:46:VAL:CG1	17:O:51:ALA:HB2	2.43	0.48
1:X:1014:G:N2	1:X:1164:C:N1	2.61	0.48
1:X:2002:A:H4'	16:N:34:ASN:HD21	1.78	0.48
11:I:73:GLU:HG2	11:I:105:PRO:O	2.14	0.48
6:D:113:ASP:HB3	6:D:115:ARG:NH2	2.28	0.48
6:D:96:MET:O	6:D:100:LEU:N	2.45	0.48
21:S:1:MET:CE	21:S:46:GLN:OE1	2.62	0.48
12:J:99:LYS:CG	12:J:100:PRO:HD2	2.44	0.48
3:A:75:VAL:HG12	3:A:76:ASN:N	2.29	0.48
1:X:1794:A:H2	1:X:1814:G:N3	2.11	0.48
1:X:717:G:HO2'	1:X:718:A:P	2.36	0.48
20:R:96:LYS:HG2	20:R:97:GLN:O	2.14	0.48
1:X:1223:G:H5''	1:X:1224:A:C5'	2.39	0.48
1:X:1223:G:H5'	1:X:1225:G:H1'	1.95	0.48
16:N:3:ARG:NH2	16:N:5:LYS:NZ	2.62	0.48
1:X:1115:C:C2'	1:X:1116:U:H5'	2.44	0.48
4:B:33:ILE:CG2	4:B:47:VAL:CG1	2.92	0.48
1:X:2482:A:N9	33:X:2911:ZLD:H13	2.29	0.48
7:E:11:VAL:HG12	7:E:15:VAL:HG11	1.96	0.48
7:E:30:LYS:HZ1	7:E:81:ASP:HA	1.78	0.48
1:X:1838:G:C2	1:X:1878:C:C2	3.02	0.48
1:X:921:A:H3'	1:X:924:C:H41	1.79	0.48
1:X:1373:G:H2'	1:X:1374:G:H5'	1.95	0.48
1:X:1337:G:H1'	1:X:1632:A:H62	1.78	0.48
21:S:98:VAL:HG22	21:S:99:HIS:H	1.78	0.48
1:X:859:U:O2	1:X:859:U:C2'	2.58	0.48
1:X:859:U:H1'	1:X:860:U:C5	2.49	0.48
24:V:64:GLY:O	24:V:65:GLU:CB	2.61	0.48
15:M:43:ASN:C	15:M:43:ASN:ND2	2.65	0.48
1:X:847:C:N3	1:X:848:A:N7	2.61	0.48
1:X:698:A:H5''	1:X:699:G:H5''	1.96	0.48
1:X:1960:A:C8	1:X:1960:A:O5'	2.65	0.48
1:X:238:G:C2	1:X:239:A:C8	3.02	0.48
1:X:760:U:C4	26:Y:3:LYS:HG3	2.49	0.48
9:G:127:ILE:O	9:G:128:GLU:C	2.52	0.48
1:X:1148:G:N2	9:G:134:MET:HE1	2.18	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:91:THR:O	9:G:93:LYS:N	2.46	0.48
16:N:79:PHE:HE1	16:N:106:PHE:HE1	1.57	0.48
17:O:22:VAL:HA	17:O:91:THR:OG1	2.13	0.48
17:O:7:THR:HG22	17:O:8:GLY:N	2.28	0.48
26:Y:11:THR:O	26:Y:12:SER:C	2.52	0.48
6:D:17:MET:O	6:D:21:GLY:CA	2.62	0.48
14:L:90:ASP:C	14:L:91:ARG:O	2.48	0.48
2:Z:18:G:C4	2:Z:19:C:C5	3.01	0.48
12:J:19:THR:HG21	12:J:40:PRO:HB3	1.96	0.48
12:J:99:LYS:HE3	12:J:100:PRO:HD2	1.96	0.48
5:C:129:LYS:HE3	5:C:132:ASN:HB2	1.95	0.48
3:A:121:PRO:HB2	3:A:135:PHE:HE1	1.78	0.48
1:X:1811:A:H5''	3:A:161:THR:HG21	1.96	0.48
19:Q:27:PHE:N	19:Q:27:PHE:CD1	2.81	0.48
19:Q:62:ARG:HH12	19:Q:73:ASN:ND2	2.11	0.48
19:Q:75:ARG:HG3	19:Q:75:ARG:HH11	1.79	0.48
1:X:1354:A:H5'	19:Q:56:MET:HG3	1.93	0.48
6:D:80:ARG:HD3	6:D:83:MET:CG	2.43	0.48
4:B:119:ARG:HG2	4:B:120:TRP:CE2	2.48	0.48
13:K:26:THR:HG23	13:K:70:ILE:HG23	1.96	0.48
8:F:89:SER:HB3	8:F:135:MET:O	2.14	0.48
21:S:95:SER:OG	21:S:121:GLN:HB2	2.12	0.48
18:P:83:ASP:O	18:P:84:GLU:O	2.31	0.48
1:X:1107:A:H3'	1:X:1108:U:C5'	2.43	0.48
1:X:2850:U:H2'	1:X:2851:G:O5'	2.14	0.48
1:X:1337:G:OP2	18:P:105:ARG:NH1	2.46	0.48
11:I:29:THR:CA	11:I:34:HIS:CD2	2.97	0.48
1:X:157:G:H5'	1:X:158:A:OP1	2.13	0.48
1:X:2516:U:H2'	1:X:2517:C:H6	1.77	0.48
1:X:188:G:C2	1:X:189:A:C5	3.02	0.48
1:X:1428:G:H1	1:X:1602:G:P	2.37	0.48
1:X:2174:G:O2'	1:X:2175:A:H5'	2.13	0.48
3:A:43:ARG:N	3:A:43:ARG:CD	2.67	0.48
9:G:72:PRO:C	9:G:74:MET:H	2.16	0.48
1:X:2553:G:O2'	4:B:143:GLN:HB3	2.14	0.48
1:X:813:A:C2	1:X:815:A:H8	2.31	0.48
1:X:883:A:O2'	1:X:884:C:H5'	2.14	0.48
6:D:101:GLU:C	6:D:103:LEU:H	2.18	0.48
14:L:33:ARG:HH22	14:L:103:LEU:CB	2.26	0.48
21:S:13:LYS:HB2	21:S:13:LYS:NZ	2.28	0.48
12:J:110:VAL:HG21	12:J:115:ALA:HB2	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:121:LEU:C	12:J:123:GLY:H	2.18	0.48
5:C:104:LEU:HA	5:C:107:ALA:HB3	1.96	0.48
5:C:7:ILE:HG13	5:C:136:TRP:HH2	1.78	0.48
3:A:146:GLU:HG2	3:A:147:LEU:H	1.77	0.48
3:A:90:ALA:O	3:A:91:ARG:C	2.51	0.48
1:X:321:A:P	20:R:27:GLY:H	2.32	0.48
1:X:1975:G:O2'	1:X:1976:U:OP2	2.25	0.48
1:X:453:U:O2	5:C:40:ARG:NH1	2.47	0.48
1:X:2740:C:H1'	7:E:143:GLN:HE21	1.79	0.48
3:A:164:GLN:O	3:A:175:VAL:HG12	2.13	0.48
1:X:1726:C:H2'	1:X:1727:C:C6	2.49	0.48
1:X:155:G:C4	1:X:156:G:C8	3.02	0.48
22:T:41:ARG:HA	22:T:41:ARG:NE	2.28	0.48
1:X:77:C:H2'	1:X:78:C:C6	2.49	0.48
25:W:38:PRO:N	25:W:41:ARG:HH12	2.10	0.48
1:X:479:G:O2'	1:X:480:G:H5'	2.13	0.48
1:X:2839:G:H2'	1:X:2840:U:H6	1.78	0.48
18:P:25:PHE:HD2	18:P:25:PHE:C	2.17	0.48
23:U:51:ILE:O	23:U:52:ARG:CD	2.62	0.48
23:U:51:ILE:HG23	23:U:59:THR:CB	2.44	0.48
10:H:116:ARG:CD	15:M:38:LYS:HZ2	2.24	0.48
1:X:2712:G:H8	1:X:2712:G:OP2	1.96	0.48
4:B:149:ARG:NH1	9:G:106:TYR:CD1	2.82	0.48
4:B:152:LYS:CD	9:G:106:TYR:H	2.23	0.48
9:G:32:TYR:OH	9:G:35:LYS:CE	2.59	0.48
17:O:23:GLU:HB3	17:O:32:LYS:HZ3	1.78	0.48
17:O:10:LYS:CB	17:O:37:ALA:H	2.22	0.48
1:X:1034:U:H2'	1:X:1035:G:C5'	2.38	0.48
1:X:540:G:C6	1:X:2006:G:OP1	2.66	0.48
1:X:643:A:H4'	11:I:67:ASN:HB2	1.96	0.48
6:D:36:VAL:HG22	6:D:154:ILE:HG13	1.95	0.48
14:L:79:ALA:O	14:L:82:LYS:N	2.47	0.48
1:X:454:G:H4'	1:X:455:A:OP1	2.12	0.48
19:Q:57:ASN:HA	19:Q:76:LYS:HA	1.96	0.48
20:R:25:LEU:HD11	20:R:81:VAL:HG23	1.95	0.48
20:R:44:GLN:HB3	20:R:77:HIS:ND1	2.25	0.48
1:X:1935:A:C6	1:X:1936:A:C6	3.02	0.48
1:X:1935:A:H2	1:X:2539:C:O2	1.97	0.48
1:X:2529:G:C6	1:X:2530:C:N4	2.82	0.48
23:U:37:ILE:O	23:U:38:THR:HG23	2.14	0.48
7:E:137:ASP:OD1	7:E:139:GLN:HB2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:183:ARG:CD	3:A:184:ARG:O	2.62	0.48
1:X:2826:C:H2'	1:X:2827:G:C5'	2.44	0.48
24:V:4:SER:HB3	24:V:7:ARG:CZ	2.43	0.48
1:X:2728:A:O2'	1:X:2729:A:H5'	2.13	0.48
1:X:1398:G:O2'	1:X:1399:C:O5'	2.32	0.48
1:X:2532:G:N3	1:X:2533:U:H1'	2.28	0.48
23:U:53:GLU:OE2	23:U:57:VAL:HA	2.14	0.47
3:A:217:ARG:NE	3:A:218:LYS:HG3	2.29	0.47
15:M:22:ARG:NH1	15:M:24:LEU:CD2	2.77	0.47
15:M:33:VAL:HG23	15:M:51:GLU:OE2	2.13	0.47
9:G:104:THR:O	9:G:105:GLY:O	2.31	0.47
9:G:67:ARG:CG	9:G:70:PHE:HA	2.43	0.47
1:X:884:C:H5''	12:J:70:PHE:CE1	2.48	0.47
6:D:132:ILE:CG2	6:D:152:MET:HB2	2.42	0.47
6:D:10:ASP:H	6:D:14:PRO:CD	2.27	0.47
6:D:53:ALA:CB	6:D:57:LEU:HD11	2.43	0.47
25:W:44:VAL:O	25:W:47:VAL:N	2.47	0.47
21:S:42:ALA:C	21:S:44:ARG:N	2.66	0.47
12:J:27:TYR:HA	12:J:103:VAL:CG2	2.44	0.47
1:X:2796:A:C6	1:X:2797:G:C6	3.01	0.47
5:C:9:GLN:CG	5:C:120:VAL:HG21	2.43	0.47
5:C:134:ILE:N	5:C:134:ILE:HD13	2.29	0.47
5:C:3:GLN:HE21	5:C:4:ILE:C	2.18	0.47
3:A:109:GLU:O	3:A:109:GLU:HG3	2.14	0.47
1:X:1514:C:O2'	1:X:1515:U:H5'	2.12	0.47
20:R:93:ARG:NH2	20:R:109:ALA:N	2.62	0.47
20:R:22:VAL:HG21	20:R:80:LYS:HZ2	1.79	0.47
3:A:74:GLY:N	3:A:119:ALA:O	2.47	0.47
7:E:137:ASP:O	7:E:141:VAL:HG23	2.14	0.47
1:X:2725:C:O3'	7:E:142:GLY:HA3	2.13	0.47
1:X:1495:G:C2	1:X:1530:U:O2	2.67	0.47
1:X:333:A:C2	1:X:351:A:C6	3.02	0.47
22:T:52:GLY:N	22:T:62:LEU:HD21	2.29	0.47
1:X:1920:A:N1	1:X:1950:C:H1'	2.28	0.47
18:P:80:LEU:HD22	18:P:87:GLU:HB3	1.94	0.47
1:X:2509:A:H3'	1:X:2510:A:H5''	1.96	0.47
1:X:109:A:H2'	1:X:110:U:C5'	2.44	0.47
1:X:1759:A:C6	1:X:1760:G:N7	2.82	0.47
15:M:46:ARG:CG	15:M:47:SER:H	2.26	0.47
1:X:1339:U:OP2	1:X:1339:U:C6	2.66	0.47
18:P:93:LYS:HB3	18:P:127:ILE:O	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:579:G:H4'	1:X:994:A:C2	2.49	0.47
22:T:23:VAL:HB	22:T:26:PHE:CZ	2.49	0.47
1:X:2699:G:H21	1:X:2847:G:H1	1.61	0.47
1:X:1549:C:H2'	1:X:1550:C:C6	2.49	0.47
24:V:41:HIS:C	24:V:43:VAL:N	2.67	0.47
1:X:1382:G:C2'	1:X:1383:C:O5'	2.61	0.47
3:A:86:PRO:O	3:A:87:ASN:HB2	2.13	0.47
17:O:65:ARG:HH11	17:O:65:ARG:HG2	1.78	0.47
1:X:413:G:H3'	1:X:413:G:C8	2.49	0.47
1:X:1582:A:C5	3:A:214:TRP:CZ2	3.02	0.47
17:O:20:ILE:CG1	17:O:21:ARG:N	2.77	0.47
17:O:36:LYS:HZ3	17:O:98:ILE:N	2.11	0.47
1:X:588:G:N2	1:X:1275:A:C4	2.82	0.47
1:X:2035:G:N2	1:X:2036:G:C4	2.82	0.47
1:X:2598:C:O4'	4:B:150:VAL:HG22	2.14	0.47
1:X:689:A:C2'	1:X:690:A:H5'	2.44	0.47
11:I:89:ASP:HB2	11:I:120:VAL:HA	1.95	0.47
6:D:111:ILE:HB	6:D:114:PHE:CD1	2.49	0.47
6:D:171:GLN:C	6:D:173:MET:N	2.66	0.47
6:D:60:ILE:CG1	6:D:61:THR:HG23	2.44	0.47
14:L:66:ASP:C	14:L:68:ALA:H	2.16	0.47
21:S:74:ARG:HD3	21:S:75:LYS:NZ	2.28	0.47
5:C:155:GLU:O	5:C:156:ASN:C	2.52	0.47
1:X:1216:G:C2'	1:X:1217:U:H5'	2.44	0.47
3:A:145:LEU:HG	3:A:146:GLU:N	2.29	0.47
3:A:128:GLY:N	3:A:193:ILE:HB	2.30	0.47
1:X:717:G:O2'	1:X:718:A:P	2.72	0.47
20:R:94:VAL:C	20:R:95:ARG:HD2	2.34	0.47
1:X:1226:A:C1'	1:X:1250:A:C2	2.98	0.47
8:F:72:THR:N	8:F:73:PRO:CD	2.74	0.47
1:X:1690:U:C2'	1:X:1691:G:C5'	2.88	0.47
7:E:140:LEU:HA	7:E:143:GLN:HB2	1.96	0.47
1:X:1525:A:H3'	1:X:1526:U:C5	2.45	0.47
1:X:1727:C:H6	1:X:1727:C:O5'	1.97	0.47
24:V:1:MET:O	24:V:2:LYS:HB3	2.14	0.47
1:X:968:C:N4	1:X:970:A:N3	2.62	0.47
13:K:48:VAL:C	13:K:50:GLN:N	2.66	0.47
1:X:2261:G:H21	1:X:2369:U:H3	1.60	0.47
1:X:1505:U:H3'	1:X:1505:U:H6	1.80	0.47
1:X:1856:U:OP1	1:X:2389:G:O2'	2.32	0.47
1:X:234:C:H2'	1:X:235:C:H5'	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:101:ASN:O	10:H:102:GLN:NE2	2.47	0.47
4:B:105:THR:HG22	4:B:166:THR:HG23	1.95	0.47
1:X:761:G:C8	1:X:763:A:C8	3.02	0.47
11:I:135:ALA:O	11:I:136:ALA:CB	2.62	0.47
1:X:1026:U:H2'	1:X:1027:C:C6	2.49	0.47
11:I:130:ILE:CG2	11:I:131:LYS:N	2.76	0.47
1:X:1639:U:O2'	1:X:1640:C:H5'	2.14	0.47
16:N:39:LEU:O	16:N:40:LEU:C	2.50	0.47
17:O:35:LEU:HD22	17:O:36:LYS:C	2.34	0.47
1:X:1153:A:O2'	1:X:1154:A:C5'	2.62	0.47
1:X:2002:A:H2'	1:X:2003:A:O5'	2.13	0.47
1:X:2026:C:N4	1:X:2757:G:C6	2.82	0.47
1:X:987:G:N3	1:X:988:G:C8	2.83	0.47
11:I:83:LEU:O	11:I:84:GLU:C	2.52	0.47
11:I:89:ASP:OD1	11:I:89:ASP:N	2.44	0.47
6:D:17:MET:CA	6:D:21:GLY:HA2	2.44	0.47
14:L:37:HIS:CD2	14:L:39:TYR:CE1	3.02	0.47
25:W:1:MET:O	25:W:33:GLU:OE2	2.32	0.47
1:X:873:U:O2'	1:X:874:A:H5'	2.14	0.47
5:C:13:ARG:CD	5:C:13:ARG:H	2.26	0.47
5:C:15:ILE:HG22	5:C:17:LEU:CD2	2.42	0.47
1:X:2402:U:H4'	1:X:2404:A:N7	2.29	0.47
1:X:1657:A:H8	1:X:1657:A:H5'	1.79	0.47
1:X:1248:G:C5	1:X:1249:G:N1	2.83	0.47
7:E:18:ASN:C	7:E:20:GLN:H	2.18	0.47
1:X:1473:U:O2'	1:X:1474:A:OP2	2.25	0.47
7:E:149:ARG:CA	7:E:162:VAL:HG11	2.36	0.47
4:B:134:TRP:O	4:B:135:HIS:C	2.52	0.47
4:B:78:LEU:O	4:B:79:ARG:NE	2.48	0.47
21:S:89:GLY:O	21:S:127:PRO:CG	2.55	0.47
1:X:2506:C:C5'	30:4:30:VAL:HB	2.42	0.47
1:X:1377:G:N3	1:X:1379:A:OP2	2.47	0.47
23:U:17:SER:OG	23:U:44:ALA:O	2.32	0.47
1:X:1253:C:C4	1:X:1254:G:C8	3.03	0.47
1:X:196:A:C2'	1:X:197:G:H5'	2.44	0.47
1:X:430:C:H1'	1:X:2386:G:N2	2.29	0.47
1:X:736:G:H2'	1:X:737:C:O4'	2.13	0.47
3:A:111:LEU:HD23	3:A:111:LEU:N	2.28	0.47
9:G:37:ASP:O	9:G:38:GLU:CB	2.62	0.47
1:X:1652:G:H2'	1:X:1653:C:C6	2.49	0.47
1:X:2090:U:C2	1:X:2166:G:C2	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2720:A:N6	1:X:2744:A:C8	2.82	0.47
1:X:1279:G:H2'	1:X:1995:G:O6	2.14	0.47
1:X:1820:G:OP2	1:X:1820:G:H8	1.97	0.47
1:X:793:G:H2'	1:X:795:A:N7	2.29	0.47
1:X:2620:G:P	9:G:102:ARG:HH21	2.36	0.47
9:G:162:LYS:N	9:G:163:PRO:CD	2.78	0.47
16:N:93:LYS:HE3	17:O:10:LYS:NZ	2.29	0.47
1:X:1234:C:H2'	1:X:1235:C:C6	2.48	0.47
1:X:540:G:C2	1:X:2005:U:OP1	2.67	0.47
2:Z:53:G:H5'	14:L:64:LYS:HD2	1.94	0.47
14:L:80:ALA:O	14:L:82:LYS:N	2.44	0.47
25:W:4:LYS:HG3	25:W:52:GLU:HB3	1.95	0.47
12:J:51:CYS:C	12:J:55:MET:HE2	2.35	0.47
5:C:148:VAL:HG12	5:C:149:LEU:N	2.29	0.47
23:U:29:GLY:O	23:U:31:GLY:N	2.48	0.47
1:X:177:U:OP2	23:U:40:ARG:NH2	2.47	0.47
3:A:75:VAL:CG1	3:A:76:ASN:N	2.76	0.47
19:Q:45:ALA:HB3	19:Q:46:PHE:CE1	2.50	0.47
19:Q:29:VAL:HG11	19:Q:78:ALA:CB	2.44	0.47
20:R:108:VAL:HG13	20:R:109:ALA:H	1.79	0.47
20:R:15:HIS:HB2	20:R:82:ALA:HB2	1.96	0.47
20:R:62:MET:O	20:R:63:THR:C	2.52	0.47
30:4:18:ARG:HG2	30:4:23:VAL:CG1	2.41	0.47
7:E:133:VAL:O	7:E:141:VAL:HG13	2.14	0.47
3:A:166:GLN:O	3:A:167:GLY:O	2.32	0.47
1:X:310:A:N1	5:C:162:ARG:NH1	2.62	0.47
22:T:60:PHE:HD1	22:T:60:PHE:H	1.59	0.47
1:X:2311:U:H5'	1:X:2315:A:N6	2.29	0.47
1:X:2319:G:H2'	1:X:2320:G:H8	1.79	0.47
1:X:2362:G:H2'	1:X:2363:G:H8	1.78	0.47
15:M:68:VAL:O	15:M:78:GLU:HA	2.14	0.47
1:X:726:G:N2	1:X:731:A:OP1	2.48	0.47
20:R:38:LEU:CD2	20:R:39:ALA:N	2.72	0.47
4:B:61:LYS:N	4:B:62:PRO:CD	2.77	0.47
6:D:118:ASN:O	6:D:122:PHE:HZ	1.97	0.47
10:H:28:GLY:C	10:H:35:THR:H	2.17	0.47
1:X:1850:G:C8	1:X:1868:A:N6	2.82	0.47
4:B:165:VAL:HG12	4:B:166:THR:N	2.28	0.47
1:X:2469:G:H5''	1:X:2470:U:OP1	2.13	0.47
1:X:2190:A:N6	1:X:2196:U:C4	2.83	0.47
10:H:116:ARG:NH1	15:M:38:LYS:HE3	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:144:ARG:O	4:B:146:THR:N	2.47	0.47
17:O:12:TYR:C	17:O:13:ARG:CG	2.83	0.47
1:X:2006:G:C2	1:X:2007:G:C8	3.03	0.47
1:X:2026:C:N3	1:X:2757:G:C2	2.83	0.47
11:I:124:ALA:HA	11:I:142:LEU:CD2	2.42	0.47
11:I:90:ARG:NH2	11:I:93:LEU:HG	2.29	0.47
14:L:28:ARG:HG3	14:L:43:ILE:CD1	2.32	0.47
5:C:104:LEU:C	5:C:107:ALA:H	2.17	0.47
5:C:5:ASN:N	5:C:5:ASN:ND2	2.62	0.47
1:X:1442:C:HO2'	1:X:1443:G:P	2.37	0.47
1:X:1412:C:O5'	1:X:1412:C:H6	1.97	0.47
1:X:1658:A:C8	1:X:1659:G:C8	3.02	0.47
20:R:105:ARG:NH2	20:R:106:VAL:O	2.47	0.47
20:R:63:THR:HG22	20:R:64:ASN:ND2	2.29	0.47
20:R:95:ARG:N	20:R:95:ARG:HD2	2.29	0.47
3:A:119:ALA:HB1	3:A:130:ALA:CB	2.38	0.47
1:X:1468:A:H5''	1:X:1472:C:H41	1.79	0.47
1:X:2411:A:N1	23:U:37:ILE:O	2.48	0.47
7:E:167:GLU:HG3	7:E:169:ILE:CG1	2.45	0.47
1:X:1527:G:H2'	1:X:1528:C:C1'	2.44	0.47
1:X:2787:A:C5	1:X:2788:C:C5	3.03	0.47
1:X:1882:G:H21	1:X:1885:C:H41	1.62	0.47
1:X:2506:C:O2'	1:X:2507:U:H5'	2.14	0.47
1:X:946:U:O2'	1:X:947:C:H5'	2.13	0.47
4:B:179:GLU:HG2	4:B:181:LEU:HD12	1.96	0.47
21:S:122:ILE:HG22	21:S:160:LEU:HA	1.95	0.47
18:P:8:PHE:O	18:P:9:ARG:HB2	2.13	0.47
1:X:242:A:H2'	1:X:243:G:O4'	2.14	0.47
1:X:1759:A:C6	1:X:1968:G:C6	3.03	0.47
1:X:2640:G:H2'	1:X:2641:A:C8	2.50	0.47
1:X:564:U:H2'	1:X:565:A:C8	2.50	0.47
1:X:1684:G:H1'	1:X:1974:U:O4	2.14	0.47
8:F:102:TRP:CE3	8:F:139:VAL:HG12	2.48	0.47
5:C:139:GLN:C	5:C:141:GLY:H	2.17	0.47
3:A:217:ARG:C	3:A:219:PRO:N	2.68	0.47
5:C:58:MET:HE3	5:C:58:MET:HA	1.97	0.47
9:G:41:TRP:CZ3	9:G:79:PHE:CG	3.02	0.47
1:X:1142:G:H8	1:X:2008:C:H4'	1.80	0.47
6:D:101:GLU:HA	6:D:104:ILE:CD1	2.39	0.47
6:D:162:THR:N	6:D:165:GLU:OE2	2.43	0.47
2:Z:30:C:H42	2:Z:58:G:H22	1.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:36:ARG:HH11	21:S:37:LYS:CB	2.19	0.47
21:S:36:ARG:O	21:S:37:LYS:C	2.52	0.47
21:S:50:GLY:O	21:S:65:LEU:CD1	2.62	0.47
2:Z:68:A:H61	2:Z:110:U:H3'	1.80	0.47
1:X:870:C:O2'	1:X:871:U:H5'	2.14	0.47
5:C:7:ILE:CG2	5:C:122:GLY:HA2	2.45	0.47
1:X:1258:G:P	11:I:17:LYS:HE2	2.54	0.47
19:Q:38:ILE:HA	19:Q:41:ALA:HB3	1.95	0.47
1:X:1517:C:C2	1:X:1518:C:C5	3.03	0.47
1:X:2726:U:H1'	7:E:139:GLN:HE21	1.74	0.47
22:T:32:LYS:CG	22:T:33:ALA:H	2.07	0.47
22:T:72:LYS:HG3	22:T:78:PHE:HE1	1.74	0.47
1:X:1673:C:OP1	4:B:136:ARG:CD	2.63	0.47
1:X:1725:C:H2'	1:X:1726:C:C6	2.47	0.47
4:B:51:TYR:O	4:B:75:THR:OG1	2.32	0.47
18:P:45:ILE:HG13	18:P:53:ALA:HB1	1.96	0.47
18:P:91:PHE:CE1	18:P:129:ALA:HB3	2.49	0.47
18:P:64:ALA:O	18:P:68:VAL:HG23	2.14	0.47
1:X:482:A:HO2'	1:X:483:A:H5'	1.78	0.47
1:X:2451:G:O6	1:X:2455:A:H4'	2.15	0.47
4:B:179:GLU:O	4:B:181:LEU:N	2.47	0.47
1:X:53:G:C6	1:X:54:G:C8	3.03	0.47
1:X:562:G:C6	1:X:563:U:C4	3.03	0.47
1:X:19:C:H5'	1:X:563:U:OP1	2.14	0.47
1:X:2641:A:H2'	1:X:2642:G:O4'	2.15	0.47
1:X:1984:A:H2'	1:X:1985:G:O4'	2.15	0.47
7:E:150:LYS:C	7:E:152:ARG:H	2.18	0.47
1:X:193:A:C4	1:X:445:A:C2	3.03	0.47
2:Z:116:C:H6	2:Z:116:C:O5'	1.98	0.47
1:X:1469:U:O5'	1:X:1470:G:OP2	2.33	0.47
1:X:1366:A:C2	1:X:1367:A:C2	3.02	0.47
1:X:1082:G:O4'	1:X:1100:G:C5	2.68	0.47
1:X:2348:A:O2'	1:X:2349:G:H5'	2.14	0.47
1:X:932:G:H2'	1:X:933:G:H8	1.79	0.47
10:H:131:PRO:HB2	15:M:73:PHE:CZ	2.49	0.47
23:U:54:ASN:CG	23:U:55:GLY:N	2.68	0.47
1:X:1782:A:O3'	3:A:206:LEU:HB2	2.15	0.47
1:X:713:G:C6	1:X:746:G:N2	2.83	0.47
4:B:200:SER:O	4:B:201:ALA:C	2.51	0.47
1:X:2665:G:C5	1:X:2666:U:C5	3.03	0.47
5:C:50:GLN:C	5:C:52:SER:H	2.18	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:100:TYR:CB	9:G:116:ARG:HH12	2.02	0.47
16:N:105:ALA:O	16:N:106:PHE:C	2.53	0.47
16:N:115:ASN:O	16:N:116:ALA:C	2.53	0.47
16:N:14:HIS:NE2	16:N:32:TYR:CE2	2.83	0.47
16:N:82:GLY:CA	16:N:117:ARG:HB2	2.44	0.47
1:X:536:A:N6	1:X:2605:C:H4'	2.30	0.47
9:G:144:MET:C	9:G:146:THR:H	2.17	0.47
16:N:56:ASP:O	16:N:58:ARG:N	2.47	0.47
16:N:58:ARG:O	16:N:62:ILE:HG13	2.13	0.47
16:N:93:LYS:O	16:N:94:VAL:CB	2.62	0.47
17:O:5:ILE:HG13	17:O:9:GLY:HA2	1.97	0.47
1:X:1201:G:O5'	1:X:1201:G:C8	2.68	0.47
1:X:843:G:C6	1:X:2427:A:C8	3.03	0.47
1:X:648:A:H4'	1:X:649:G:C4'	2.45	0.47
6:D:20:PHE:CD1	6:D:20:PHE:N	2.83	0.47
6:D:57:LEU:HD23	6:D:60:ILE:HD11	1.95	0.47
6:D:4:LEU:CD1	6:D:7:LYS:HB2	2.45	0.47
6:D:36:VAL:HG21	6:D:61:THR:CG2	2.44	0.47
14:L:80:ALA:C	14:L:82:LYS:N	2.67	0.47
25:W:3:ILE:CG2	25:W:25:LEU:HD11	2.45	0.47
1:X:999:A:C6	25:W:10:ILE:HG21	2.50	0.47
2:Z:71:G:N2	2:Z:72:C:H1'	2.30	0.47
21:S:54:ILE:N	21:S:62:PHE:O	2.46	0.47
1:X:2247:A:H5'	1:X:2248:A:OP2	2.14	0.47
12:J:100:PRO:CB	21:S:74:ARG:HG3	2.44	0.47
5:C:158:ARG:C	5:C:160:ALA:N	2.67	0.47
5:C:39:ARG:NH2	5:C:91:TYR:CD1	2.82	0.47
1:X:173:A:P	11:I:53:ARG:NH2	2.85	0.47
1:X:177:U:C4	1:X:225:G:N2	2.83	0.47
1:X:663:G:H5''	1:X:664:C:OP2	2.14	0.47
3:A:93:ALA:O	3:A:105:ILE:N	2.39	0.47
19:Q:39:LYS:O	19:Q:40:ASP:C	2.52	0.47
1:X:654:A:H3'	1:X:655:A:H5'	1.97	0.47
20:R:100:ASP:OD1	20:R:103:LYS:HG3	2.15	0.47
20:R:10:HIS:CG	20:R:44:GLN:NE2	2.83	0.47
1:X:344:G:N3	1:X:345:U:C6	2.83	0.47
20:R:20:ASP:HB3	20:R:83:LEU:CD2	2.45	0.47
8:F:103:ASP:OD1	8:F:106:LEU:HD11	2.15	0.47
10:H:79:HIS:O	10:H:80:ALA:HB2	2.14	0.47
1:X:2674:C:H2'	1:X:2675:U:C6	2.48	0.47
1:X:2725:C:H4'	7:E:142:GLY:HA3	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:145:ALA:O	7:E:148:VAL:N	2.48	0.47
7:E:142:GLY:C	7:E:144:VAL:N	2.67	0.47
7:E:149:ARG:HA	7:E:162:VAL:CG1	2.36	0.47
1:X:2736:U:H5''	30:4:19:ARG:HG2	1.97	0.47
4:B:95:ILE:N	4:B:95:ILE:CD1	2.78	0.47
3:A:231:HIS:C	3:A:231:HIS:CD2	2.88	0.47
24:V:4:SER:CB	24:V:7:ARG:HE	2.27	0.47
1:X:1948:C:C6	1:X:1949:A:C8	3.02	0.47
1:X:1084:A:C5	1:X:1085:G:N7	2.82	0.47
18:P:131:LYS:HG3	18:P:132:GLY:O	2.14	0.47
1:X:1364:C:HO2'	1:X:1587:A:H1'	1.79	0.47
7:E:44:ARG:HH22	7:E:51:LEU:HB3	1.78	0.47
22:T:16:SER:C	22:T:17:ASN:ND2	2.68	0.47
1:X:789:G:C6	1:X:806:A:C8	3.01	0.47
22:T:3:HIS:CD2	22:T:5:LYS:HB2	2.46	0.47
21:S:127:PRO:C	21:S:129:ARG:H	2.17	0.47
1:X:107:G:C2	1:X:108:G:N9	2.83	0.47
25:W:37:THR:C	25:W:41:ARG:NH1	2.68	0.47
1:X:1326:U:O3'	1:X:1345:G:H5'	2.15	0.47
19:Q:34:THR:C	19:Q:36:THR:N	2.67	0.47
1:X:754:G:C6	1:X:770:U:C2	3.03	0.47
4:B:108:SER:OG	4:B:163:GLU:N	2.43	0.47
1:X:2628:C:H2'	1:X:2629:U:H6	1.80	0.47
1:X:2703:C:HO2'	1:X:2704:U:H5'	1.80	0.47
1:X:1093:U:O2'	1:X:1094:C:H5'	2.14	0.47
22:T:8:GLY:O	22:T:9:SER:C	2.52	0.47
17:O:86:HIS:CD2	17:O:86:HIS:C	2.88	0.47
1:X:2061:C:H1'	1:X:2413:A:N3	2.30	0.47
1:X:1781:C:H5'	3:A:219:PRO:CG	2.44	0.47
17:O:51:ALA:C	17:O:53:LYS:H	2.17	0.47
1:X:1163:C:H4'	16:N:77:SER:HA	1.97	0.47
1:X:2550:C:N4	1:X:2553:G:C8	2.83	0.47
1:X:577:U:O4	1:X:984:A:OP2	2.32	0.47
6:D:88:LYS:C	6:D:89:VAL:HG22	2.35	0.47
2:Z:9:G:H5'	14:L:32:TYR:CE2	2.50	0.47
5:C:7:ILE:HG13	5:C:119:ALA:HB1	1.97	0.47
3:A:129:ASN:CB	3:A:131:LEU:HD22	2.45	0.47
19:Q:43:GLN:HG3	19:Q:50:VAL:HG23	1.96	0.47
6:D:71:LYS:HD2	6:D:73:SER:HG	1.75	0.47
3:A:77:ALA:HA	3:A:96:HIS:O	2.14	0.47
20:R:28:LYS:O	20:R:29:HIS:CB	2.61	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:95:ARG:HH12	20:R:107:ALA:H	1.62	0.47
8:F:77:TYR:HB2	8:F:112:LYS:CE	2.44	0.47
10:H:65:LYS:O	10:H:68:ASP:CG	2.54	0.47
1:X:594:G:C5	1:X:1264:C:C4	3.03	0.47
7:E:105:MET:O	7:E:106:ASN:HB2	2.14	0.47
22:T:43:THR:CG2	22:T:46:LYS:HD2	2.43	0.47
22:T:60:PHE:CD1	22:T:60:PHE:N	2.80	0.47
1:X:1929:U:C2	1:X:1930:C:C5	3.03	0.47
18:P:84:GLU:O	18:P:85:MET:HG3	2.14	0.47
1:X:2849:C:H2'	1:X:2850:U:H5'	1.96	0.47
1:X:2209:G:C2	1:X:2210:C:C5	3.03	0.47
1:X:432:C:O2'	1:X:433:G:H5'	2.15	0.47
1:X:1553:G:H2'	1:X:1554:G:C8	2.50	0.47
1:X:1910:A:C2	1:X:1911:A:C2	3.03	0.47
1:X:580:A:C8	1:X:584:A:N6	2.83	0.47
19:Q:51:ILE:HD11	19:Q:83:ALA:CB	2.44	0.47
4:B:81:PHE:O	4:B:82:ARG:HB2	2.15	0.47
9:G:34:PRO:C	9:G:69:ASP:CG	2.73	0.47
17:O:36:LYS:HZ3	17:O:98:ILE:HB	1.80	0.47
1:X:1164:C:N3	1:X:1165:G:C4	2.83	0.47
14:L:79:ALA:CA	14:L:82:LYS:HB2	2.45	0.47
12:J:136:GLU:C	12:J:138:TYR:CE2	2.88	0.47
1:X:171:G:N1	1:X:179:U:C2	2.83	0.47
1:X:219:G:H2'	1:X:231:G:H1	1.78	0.47
23:U:41:VAL:O	23:U:42:GLN:CB	2.63	0.47
1:X:1586:A:C5'	3:A:38:PRO:HG3	2.33	0.47
1:X:1810:U:H5	3:A:157:ARG:NH1	2.11	0.47
20:R:58:VAL:HA	20:R:60:PRO:HD3	1.95	0.47
1:X:1223:G:H5'	1:X:1225:G:C1'	2.45	0.47
1:X:1250:A:O2'	1:X:1251:G:C4'	2.62	0.47
8:F:129:ALA:HB1	8:F:133:ARG:NE	2.29	0.47
1:X:1827:G:H1'	1:X:1914:U:N3	2.29	0.47
7:E:105:MET:HA	7:E:105:MET:HE2	1.97	0.47
1:X:2324:G:C2	1:X:2360:C:C2	3.03	0.47
15:M:78:GLU:OE2	15:M:108:ARG:NE	2.48	0.47
1:X:1588:A:C2	1:X:1589:G:C8	3.03	0.47
7:E:9:ILE:HG21	7:E:50:LEU:HD22	1.97	0.47
2:Z:62:C:H2'	2:Z:63:A:C8	2.50	0.47
11:I:112:GLY:C	11:I:113:GLU:HG3	2.35	0.47
3:A:64:ILE:N	3:A:64:ILE:HD12	2.30	0.47
4:B:182:ILE:C	4:B:183:LEU:HD23	2.34	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:106:LEU:HD12	18:P:106:LEU:HA	1.68	0.47
1:X:2871:U:C2	1:X:2872:U:C5	3.03	0.47
1:X:2776:U:O2	18:P:134:LYS:CD	2.63	0.47
1:X:157:G:H5'	1:X:158:A:P	2.54	0.47
1:X:60:A:OP1	1:X:60:A:C8	2.64	0.47
1:X:738:G:H8	1:X:738:G:O5'	1.97	0.47
1:X:1390:G:H8	1:X:1390:G:O5'	1.97	0.47
1:X:2627:G:H8	1:X:2627:G:O5'	1.97	0.47
1:X:2738:A:H2'	1:X:2739:G:H5'	1.97	0.47
1:X:2560:G:C8	1:X:2589:C:N4	2.83	0.47
13:K:35:GLN:O	13:K:36:THR:HB	2.15	0.47
1:X:1319:C:C2	1:X:1320:A:C8	3.02	0.47
9:G:40:ASN:HB3	9:G:78:ASP:HB3	1.96	0.47
9:G:61:ARG:NE	9:G:65:LYS:NZ	2.63	0.47
1:X:2754:C:H2'	1:X:2755:A:C8	2.50	0.47
11:I:73:GLU:OE1	11:I:105:PRO:C	2.53	0.47
6:D:36:VAL:HG22	6:D:154:ILE:CG1	2.45	0.47
6:D:96:MET:HG3	6:D:97:TYR:N	2.30	0.47
21:S:6:LYS:H	21:S:7:PRO:CD	2.28	0.47
1:X:456:C:H4'	5:C:43:ALA:CB	2.45	0.47
1:X:1406:A:N6	19:Q:15:LYS:HG2	2.29	0.47
7:E:125:VAL:HA	7:E:131:ILE:CD1	2.44	0.47
1:X:1577:G:O2'	1:X:1578:U:H5'	2.15	0.47
3:A:169:GLU:N	3:A:172:TYR:O	2.46	0.47
22:T:37:LEU:HD23	22:T:67:VAL:HG22	1.97	0.47
1:X:2344:G:H4'	22:T:60:PHE:CZ	2.50	0.47
4:B:123:ALA:O	4:B:124:GLY:O	2.33	0.47
1:X:1669:A:N7	1:X:1670:G:C6	2.83	0.47
1:X:1122:A:N3	1:X:1123:G:H1'	2.29	0.47
1:X:2496:C:HO2'	1:X:2497:A:H3'	1.79	0.47
1:X:1185:C:H2'	1:X:1186:G:C3'	2.33	0.47
7:E:38:ASN:HB2	7:E:41:LEU:HB2	1.97	0.47
13:K:46:PRO:O	13:K:50:GLN:N	2.46	0.47
1:X:2306:A:C6	1:X:2367:A:C2	3.03	0.47
1:X:617:U:O2	1:X:617:U:C3'	2.61	0.47
23:U:71:SER:OG	23:U:72:LYS:HE2	2.14	0.47
10:H:48:GLY:HA2	10:H:118:LEU:CD2	2.45	0.47
1:X:613:A:C4	1:X:668:A:C2	3.03	0.47
1:X:583:C:O2'	1:X:584:A:OP2	2.30	0.47
2:Z:119:G:O2'	2:Z:120:G:H5'	2.15	0.47
1:X:1382:G:H2'	1:X:1383:C:O5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1228:G:C2'	1:X:1229:C:H5'	2.45	0.47
1:X:146:C:H2'	1:X:147:G:O4'	2.15	0.47
1:X:2176:U:O2'	1:X:2177:U:H5'	2.15	0.46
1:X:1783:G:H1	1:X:1819:U:H3	1.63	0.46
1:X:1681:A:C6	1:X:2706:U:C5	3.02	0.46
1:X:954:U:OP2	11:I:38:LYS:CG	2.63	0.46
17:O:68:LYS:CE	17:O:85:GLY:HA3	2.45	0.46
1:X:1147:G:C2	1:X:1148:G:C4	3.03	0.46
1:X:1153:A:O2'	1:X:1154:A:H5''	2.16	0.46
6:D:103:LEU:C	6:D:105:ASN:N	2.66	0.46
25:W:51:LEU:CD2	25:W:51:LEU:H	2.12	0.46
12:J:27:TYR:CB	12:J:137:VAL:HG21	2.32	0.46
4:B:7:THR:O	4:B:9:ILE:HG13	2.15	0.46
1:X:2796:A:P	13:K:3:HIS:HE1	2.37	0.46
5:C:2:ALA:HA	5:C:13:ARG:HA	1.96	0.46
1:X:455:A:N7	5:C:39:ARG:HG3	2.30	0.46
1:X:818:G:H5'	1:X:819:C:OP2	2.15	0.46
1:X:667:U:C2'	1:X:667:U:O2	2.54	0.46
1:X:1354:A:H3'	1:X:1410:U:O2	2.15	0.46
1:X:1433:A:C5	1:X:1435:G:C4	3.03	0.46
20:R:17:LYS:O	20:R:19:GLY:N	2.48	0.46
20:R:21:THR:HA	20:R:35:LYS:HA	1.96	0.46
20:R:58:VAL:C	20:R:60:PRO:HD3	2.36	0.46
20:R:16:PHE:CZ	20:R:80:LYS:NZ	2.82	0.46
1:X:513:A:C6	1:X:515:A:C6	3.03	0.46
1:X:39:C:O2	5:C:40:ARG:NH2	2.48	0.46
1:X:1577:G:H2'	1:X:1578:U:O4'	2.15	0.46
22:T:50:GLY:O	22:T:62:LEU:HB2	2.14	0.46
1:X:1824:C:N4	1:X:1825:C:C4	2.83	0.46
1:X:2859:U:H3	26:Y:52:TYR:HE1	1.60	0.46
12:J:15:ARG:HD2	12:J:74:PRO:HD2	1.98	0.46
18:P:57:LEU:CD1	18:P:69:ALA:CA	2.90	0.46
13:K:99:ARG:HG2	13:K:99:ARG:NH1	2.10	0.46
1:X:2306:A:C5	1:X:2307:A:C6	3.03	0.46
22:T:3:HIS:O	22:T:4:LYS:HB3	2.15	0.46
1:X:55:A:O4'	1:X:125:A:C2	2.68	0.46
26:Y:47:PRO:CG	26:Y:48:ASN:H	2.23	0.46
4:B:70:ALA:O	4:B:72:VAL:HG23	2.15	0.46
1:X:421:G:C2	1:X:433:G:C4	3.03	0.46
6:D:117:ILE:O	6:D:118:ASN:HB2	2.15	0.46
1:X:1970:G:N2	1:X:1971:C:C2	2.82	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:938:G:HO2'	1:X:939:C:P	2.37	0.46
1:X:1850:G:O2'	1:X:1851:A:O4'	2.30	0.46
1:X:192:G:C1'	1:X:193:A:H4'	2.45	0.46
1:X:1026:U:H2'	1:X:1027:C:H6	1.80	0.46
1:X:2519:C:C5	1:X:2520:A:N7	2.84	0.46
12:J:58:HIS:HD2	12:J:118:ALA:HB2	1.80	0.46
1:X:2374:C:H6	1:X:2374:C:O5'	1.98	0.46
1:X:2646:C:N3	7:E:110:SER:OG	2.42	0.46
1:X:2750:G:O2'	4:B:203:LYS:CE	2.60	0.46
9:G:106:TYR:CD1	9:G:107:GLN:N	2.83	0.46
6:D:13:ARG:HG2	6:D:13:ARG:HH21	1.81	0.46
12:J:36:ILE:HB	12:J:131:LYS:CE	2.43	0.46
5:C:3:GLN:CG	5:C:118:VAL:HG13	2.41	0.46
11:I:7:LYS:HG2	11:I:9:THR:HG23	1.97	0.46
1:X:456:C:H2'	1:X:457:C:H6	1.79	0.46
3:A:202:LYS:O	3:A:204:ILE:O	2.33	0.46
1:X:1795:C:C4	1:X:1806:G:N2	2.83	0.46
19:Q:3:HIS:C	19:Q:5:ASP:OD2	2.54	0.46
19:Q:76:LYS:CG	19:Q:76:LYS:O	2.63	0.46
1:X:1404:C:O2	1:X:1406:A:N7	2.48	0.46
1:X:1641:C:C2'	1:X:1642:G:H5'	2.45	0.46
1:X:1656:U:H2'	1:X:1657:A:C5'	2.45	0.46
8:F:107:GLU:CG	8:F:110:LYS:HD2	2.45	0.46
10:H:2:ILE:HB	10:H:45:ALA:HB3	1.98	0.46
7:E:127:GLU:HG3	7:E:127:GLU:O	2.14	0.46
1:X:333:A:OP1	5:C:162:ARG:CB	2.60	0.46
1:X:2828:C:H2'	1:X:2829:A:H8	1.79	0.46
14:L:92:GLY:O	14:L:93:SER:CB	2.64	0.46
1:X:2482:A:N9	33:X:2911:ZLD:C13	2.78	0.46
1:X:1460:G:N3	1:X:1563:U:C2	2.83	0.46
1:X:556:A:OP2	1:X:556:A:H3'	2.15	0.46
21:S:129:ARG:NH2	21:S:156:GLU:OE2	2.46	0.46
1:X:305:A:H2'	1:X:306:G:H5'	1.97	0.46
1:X:306:G:N1	1:X:307:C:C4	2.82	0.46
1:X:2460:G:H2'	1:X:2461:G:OP2	2.16	0.46
1:X:1324:G:H2'	1:X:1325:U:H6	1.80	0.46
1:X:2208:U:H3'	1:X:2208:U:C6	2.50	0.46
1:X:2210:C:H2'	1:X:2211:U:O4'	2.15	0.46
1:X:601:A:H3'	1:X:602:C:H5'	1.97	0.46
1:X:208:C:N4	1:X:209:G:N2	2.63	0.46
1:X:1422:C:H2'	1:X:1423:A:H8	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1421:U:O2'	1:X:1422:C:H5'	2.15	0.46
1:X:1938:U:O3'	1:X:1939:U:H6	1.97	0.46
9:G:94:LYS:HG2	9:G:95:LEU:HD12	1.97	0.46
18:P:25:PHE:CD2	18:P:26:ALA:N	2.83	0.46
21:S:110:GLY:O	21:S:174:PRO:HD3	2.16	0.46
19:Q:91:LEU:N	19:Q:91:LEU:HD22	2.31	0.46
3:A:215:LEU:HD12	3:A:215:LEU:N	2.31	0.46
1:X:794:A:H5'	1:X:795:A:N7	2.30	0.46
17:O:57:GLN:C	17:O:96:LEU:O	2.53	0.46
1:X:1174:G:C2	1:X:1175:A:C5	3.03	0.46
1:X:953:G:O2'	1:X:1203:A:N3	2.39	0.46
1:X:957:G:N2	1:X:983:G:H1'	2.31	0.46
1:X:957:G:O2'	1:X:958:G:H5'	2.16	0.46
6:D:16:LEU:C	6:D:18:GLN:N	2.68	0.46
6:D:5:LYS:O	6:D:8:TYR:N	2.47	0.46
6:D:88:LYS:HE2	6:D:90:THR:OG1	2.14	0.46
25:W:16:GLN:O	25:W:20:VAL:HG23	2.15	0.46
2:Z:74:A:H1'	2:Z:108:G:N2	2.30	0.46
1:X:1393:G:N3	1:X:1585:A:N6	2.64	0.46
19:Q:50:VAL:HG13	19:Q:80:VAL:HG23	1.95	0.46
1:X:654:A:N3	1:X:654:A:H2'	2.31	0.46
1:X:1517:C:OP1	3:A:102:LYS:NZ	2.49	0.46
20:R:37:LEU:HD13	20:R:37:LEU:HA	1.78	0.46
30:4:1:MET:CE	30:4:34:GLN:C	2.82	0.46
7:E:103:LEU:HB2	7:E:123:PHE:CD2	2.49	0.46
24:V:1:MET:HG3	24:V:2:LYS:N	2.30	0.46
8:F:92:PRO:HB3	8:F:136:GLY:CA	2.46	0.46
22:T:4:LYS:CB	22:T:4:LYS:NZ	2.76	0.46
30:4:10:MET:HB2	30:4:32:HIS:NE2	2.30	0.46
1:X:200:A:C2	1:X:421:G:O4'	2.69	0.46
1:X:1607:A:O2'	1:X:1608:U:H5'	2.16	0.46
24:V:62:ARG:CG	24:V:62:ARG:NH1	2.76	0.46
1:X:2776:U:C6	1:X:2776:U:C3'	2.98	0.46
1:X:613:A:N3	1:X:668:A:H2	2.13	0.46
1:X:965:G:O2'	1:X:2253:A:N1	2.42	0.46
1:X:2434:G:C6	1:X:2435:C:N4	2.83	0.46
1:X:45:C:OP2	1:X:192:G:H3'	2.16	0.46
1:X:571:U:O2'	1:X:581:A:H1'	2.15	0.46
1:X:761:G:C8	1:X:763:A:N7	2.84	0.46
1:X:1800:A:C5	1:X:1802:A:C6	3.03	0.46
1:X:2219:U:O2	1:X:2220:A:C8	2.68	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2027:C:H2'	1:X:2028:C:H6	1.81	0.46
23:U:70:LEU:HD23	23:U:75:TYR:HD1	1.79	0.46
14:L:47:ARG:O	14:L:49:GLN:N	2.48	0.46
1:X:543:G:C6	1:X:544:U:C4	3.03	0.46
23:U:52:ARG:O	23:U:58:LYS:O	2.33	0.46
1:X:2071:G:C2	1:X:2072:C:N1	2.83	0.46
10:H:119:ARG:NE	15:M:41:GLU:HG2	2.31	0.46
10:H:81:ILE:HD13	10:H:81:ILE:C	2.35	0.46
15:M:37:THR:O	15:M:87:LEU:HD22	2.16	0.46
15:M:22:ARG:NH2	15:M:89:ASN:O	2.48	0.46
9:G:156:HIS:CB	9:G:157:PRO:HD3	2.35	0.46
9:G:75:ILE:HD11	9:G:144:MET:CG	2.45	0.46
2:Z:54:U:H4'	2:Z:54:U:OP1	2.15	0.46
12:J:115:ALA:C	12:J:117:GLU:N	2.66	0.46
1:X:621:U:O2'	1:X:622:U:H5'	2.15	0.46
1:X:219:G:H2'	1:X:231:G:O6	2.15	0.46
3:A:105:ILE:CD1	3:A:105:ILE:N	2.76	0.46
1:X:1585:A:H4'	3:A:59:LYS:HZ2	1.80	0.46
20:R:24:VAL:O	20:R:31:GLY:N	2.41	0.46
20:R:93:ARG:C	20:R:95:ARG:CZ	2.83	0.46
1:X:342:G:O2'	1:X:343:A:OP1	2.26	0.46
1:X:1827:G:H1'	1:X:1914:U:C4	2.51	0.46
1:X:824:U:H1'	1:X:1264:C:H1'	1.96	0.46
1:X:1095:A:N3	1:X:1116:U:O2'	2.46	0.46
4:B:38:THR:C	4:B:40:GLN:N	2.68	0.46
21:S:103:ARG:CZ	21:S:107:GLU:HG2	2.45	0.46
3:A:172:TYR:HD2	3:A:186:HIS:CB	2.25	0.46
7:E:30:LYS:CD	7:E:79:VAL:O	2.63	0.46
7:E:37:TYR:CE2	7:E:68:THR:HA	2.51	0.46
18:P:32:ARG:O	18:P:33:MET:HG2	2.15	0.46
7:E:55:PRO:HD2	7:E:61:HIS:ND1	2.30	0.46
1:X:602:C:H1'	29:3:2:PRO:CA	2.45	0.46
25:W:39:ALA:C	25:W:43:MET:HG2	2.36	0.46
1:X:414:A:H2'	1:X:415:A:O4'	2.15	0.46
1:X:209:G:H3'	1:X:209:G:C8	2.50	0.46
1:X:759:C:H6	1:X:759:C:H3'	1.81	0.46
1:X:612:G:H2'	1:X:668:A:H61	1.81	0.46
1:X:645:G:O2'	1:X:646:C:H5'	2.15	0.46
1:X:1182:U:N3	1:X:1183:C:C2	2.83	0.46
1:X:2608:A:N7	1:X:2869:U:C4	2.83	0.46
10:H:31:GLY:C	10:H:33:GLY:H	2.19	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:O:26:GLN:HG3	17:O:63:HIS:HE2	1.81	0.46
17:O:35:LEU:O	17:O:36:LYS:CG	2.63	0.46
17:O:33:VAL:HB	17:O:56:VAL:O	2.16	0.46
14:L:37:HIS:O	14:L:38:ILE:O	2.33	0.46
21:S:1:MET:HE2	21:S:52:PHE:CD2	2.50	0.46
12:J:138:TYR:O	12:J:139:ASP:C	2.53	0.46
5:C:136:TRP:C	5:C:136:TRP:CD1	2.88	0.46
1:X:171:G:N2	1:X:172:A:C2	2.84	0.46
1:X:1810:U:H3'	3:A:157:ARG:HG3	1.97	0.46
19:Q:27:PHE:O	19:Q:29:VAL:HG13	2.16	0.46
19:Q:46:PHE:O	19:Q:47:GLY:O	2.34	0.46
19:Q:5:ASP:O	19:Q:6:ILE:C	2.54	0.46
1:X:67:G:O2'	1:X:68:C:O4'	2.33	0.46
6:D:80:ARG:CD	6:D:83:MET:SD	3.03	0.46
1:X:84:G:OP2	20:R:18:LYS:HB3	2.15	0.46
20:R:35:LYS:O	20:R:37:LEU:HD22	2.15	0.46
10:H:17:ARG:H	10:H:58:ALA:HA	1.80	0.46
1:X:2057:U:N3	1:X:2058:U:C4	2.84	0.46
1:X:2330:G:H1'	1:X:2345:A:H61	1.80	0.46
1:X:312:G:C6	1:X:328:A:C6	3.03	0.46
1:X:2320:G:H2'	1:X:2321:C:C6	2.50	0.46
7:E:44:ARG:HH22	7:E:46:ASP:HB2	1.80	0.46
7:E:69:ARG:HG2	7:E:69:ARG:HH21	1.80	0.46
1:X:49:U:H6	1:X:49:U:H5''	1.81	0.46
13:K:48:VAL:HG13	13:K:49:GLU:H	1.80	0.46
1:X:2366:U:O4'	22:T:41:ARG:NH1	2.49	0.46
3:A:243:GLY:C	3:A:244:ARG:CD	2.80	0.46
1:X:2082:C:C2'	1:X:2083:G:C5'	2.90	0.46
1:X:132:U:O2	1:X:140:G:C2	2.69	0.46
18:P:18:VAL:O	18:P:18:VAL:HG12	2.14	0.46
1:X:395:G:H1	1:X:404:A:H61	1.54	0.46
1:X:2386:G:H2'	1:X:2387:U:H6	1.78	0.46
1:X:2284:U:H2'	1:X:2285:U:C5'	2.45	0.46
1:X:244:C:N4	1:X:245:C:C4	2.83	0.46
1:X:1055:A:N3	1:X:1055:A:H5''	2.30	0.46
1:X:584:A:C4	1:X:585:U:C5	3.04	0.46
1:X:2219:U:H2'	1:X:2220:A:H8	1.81	0.46
1:X:1542:G:H22	1:X:1562:G:N2	2.14	0.46
12:J:11:ARG:HG3	12:J:11:ARG:HH11	1.79	0.46
1:X:1320:A:O2'	1:X:1321:A:H5'	2.16	0.46
1:X:1283:C:H5''	1:X:1284:G:O5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:85:ASP:CG	10:H:86:GLY:N	2.68	0.46
9:G:106:TYR:CZ	9:G:108:GLY:CA	2.98	0.46
1:X:1016:C:O2'	9:G:56:THR:HG21	2.16	0.46
16:N:103:PRO:O	16:N:104:GLU:C	2.53	0.46
17:O:23:GLU:HB3	17:O:32:LYS:NZ	2.30	0.46
1:X:1033:G:C6	1:X:1150:C:C4	3.03	0.46
1:X:1236:G:OP2	17:O:87:ARG:NH1	2.44	0.46
1:X:459:A:N1	1:X:466:A:C8	2.84	0.46
1:X:577:U:O5'	1:X:956:A:N6	2.48	0.46
14:L:96:TYR:CE1	14:L:101:LYS:HA	2.51	0.46
11:I:52:GLY:C	11:I:55:ARG:HB2	2.36	0.46
1:X:171:G:C2'	1:X:172:A:H5'	2.45	0.46
1:X:177:U:C5	1:X:225:G:N2	2.83	0.46
20:R:105:ARG:NH1	20:R:113:THR:N	2.63	0.46
10:H:64:VAL:C	10:H:65:LYS:HG3	2.36	0.46
7:E:159:GLY:O	7:E:163:ARG:HD2	2.16	0.46
13:K:10:LEU:HD21	13:K:14:SER:N	2.30	0.46
1:X:2787:A:C2	1:X:2864:C:C2	3.04	0.46
7:E:52:VAL:HB	7:E:65:HIS:NE2	2.30	0.46
1:X:1277:G:H8	1:X:1277:G:O5'	1.99	0.46
1:X:1834:G:H1	1:X:1881:U:H3	1.63	0.46
22:T:4:LYS:HZ2	22:T:4:LYS:HB3	1.79	0.46
1:X:1731:C:H2'	1:X:1732:U:H5''	1.98	0.46
1:X:2507:U:P	30:4:30:VAL:HG21	2.55	0.46
1:X:2510:A:H4'	7:E:157:TYR:CE2	2.50	0.46
1:X:2508:G:OP2	7:E:172:LYS:CE	2.62	0.46
18:P:29:LYS:HA	18:P:123:HIS:ND1	2.29	0.46
1:X:2714:A:C6	1:X:2715:C:C2	3.04	0.46
1:X:1111:C:H2'	1:X:1112:U:H6	1.80	0.46
1:X:1487:C:H2'	1:X:1488:G:O4'	2.15	0.46
1:X:2465:G:C2	1:X:2466:G:C4	3.04	0.46
1:X:1782:A:O3'	3:A:205:VAL:O	2.34	0.46
9:G:128:GLU:O	9:G:131:VAL:N	2.47	0.46
12:J:70:PHE:HA	12:J:71:PRO:HD3	1.70	0.46
11:I:72:TYR:CG	11:I:107:LYS:HB2	2.51	0.46
1:X:2383:C:H2'	1:X:2384:G:O4'	2.15	0.46
18:P:28:ALA:HB1	18:P:31:VAL:CG2	2.46	0.46
2:Z:43:G:H8	6:D:66:ILE:HD11	1.79	0.46
14:L:43:ILE:HG23	14:L:50:THR:CG2	2.45	0.46
2:Z:101:A:H2'	2:Z:102:A:H5''	1.98	0.46
5:C:102:LEU:O	5:C:105:ALA:HB3	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:22:VAL:CG2	5:C:110:SER:OG	2.60	0.46
11:I:9:THR:O	11:I:13:ARG:HD2	2.16	0.46
3:A:142:VAL:O	3:A:163:VAL:CG1	2.63	0.46
20:R:23:ILE:HD13	20:R:81:VAL:H	1.81	0.46
20:R:84:VAL:HG13	20:R:88:THR:N	2.31	0.46
1:X:2528:G:N3	1:X:2529:G:C8	2.84	0.46
7:E:104:GLU:OE2	7:E:104:GLU:CA	2.58	0.46
1:X:1529:C:O2'	1:X:1530:U:H5'	2.16	0.46
21:S:136:VAL:CG1	21:S:137:ASP:N	2.79	0.46
1:X:2571:G:H2'	1:X:2572:U:O4'	2.14	0.46
14:L:10:LYS:O	14:L:14:ARG:N	2.49	0.46
1:X:2352:A:H2'	1:X:2353:G:H8	1.78	0.46
1:X:2521:A:H5'	1:X:2522:G:OP1	2.16	0.46
18:P:85:MET:HE2	18:P:130:GLU:HG3	1.98	0.46
1:X:2240:C:C2'	1:X:2241:U:C5'	2.93	0.46
1:X:805:G:C8	1:X:2419:C:H1'	2.50	0.46
1:X:1731:C:C3'	1:X:1732:U:C5'	2.94	0.46
1:X:2457:A:N7	1:X:2458:U:C5	2.84	0.46
1:X:1415:C:C2'	1:X:1416:A:H5'	2.46	0.46
1:X:395:G:N1	1:X:404:A:N6	2.60	0.46
1:X:433:G:H21	1:X:434:C:H1'	1.79	0.46
1:X:2379:G:N2	1:X:2380:U:H1'	2.30	0.46
1:X:751:G:C6	1:X:752:G:C2	3.03	0.46
1:X:498:C:O4'	18:P:77:ALA:HB1	2.16	0.46
13:K:59:ASP:N	13:K:59:ASP:OD2	2.47	0.46
1:X:2414:A:N1	1:X:2415:G:C4	2.84	0.46
4:B:107:THR:O	4:B:190:GLY:HA2	2.16	0.46
1:X:2652:G:H2'	1:X:2653:A:H8	1.80	0.46
1:X:417:C:P	1:X:417:C:H6	2.39	0.46
1:X:2492:G:N2	1:X:2493:U:C2	2.83	0.46
3:A:42:GLY:N	3:A:43:ARG:NH1	2.63	0.46
4:B:103:ASP:OD2	4:B:202:ALA:CB	2.63	0.46
1:X:1142:G:N3	9:G:103:TYR:CD1	2.84	0.46
1:X:1004:A:C5	1:X:1005:U:C5	3.03	0.46
1:X:1236:G:H2'	1:X:1238:A:OP2	2.15	0.46
6:D:9:ASN:O	6:D:12:VAL:CG2	2.63	0.46
21:S:28:ASN:HB2	21:S:30:VAL:HG23	1.97	0.46
5:C:131:LYS:HA	5:C:134:ILE:HG12	1.97	0.46
3:A:126:LYS:H	3:A:129:ASN:HD22	1.64	0.46
3:A:39:LYS:O	3:A:40:THR:CB	2.64	0.46
24:V:28:LEU:C	24:V:30:PHE:N	2.68	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:32:ALA:C	24:V:34:ALA:N	2.67	0.46
1:X:1407:G:C6	1:X:1408:A:C6	3.04	0.46
20:R:25:LEU:CG	20:R:81:VAL:HG23	2.46	0.46
1:X:83:A:N1	1:X:98:U:O2	2.48	0.46
1:X:1095:A:H3'	1:X:1096:A:C5'	2.42	0.46
7:E:121:VAL:O	7:E:122:THR:HG23	2.16	0.46
22:T:34:GLY:N	22:T:61:ALA:O	2.47	0.46
1:X:1724:C:N3	1:X:1747:G:C6	2.84	0.46
1:X:2571:G:C2	1:X:2582:G:C6	3.04	0.46
7:E:50:LEU:CG	7:E:51:LEU:H	2.26	0.46
2:Z:65:A:H2'	2:Z:66:G:H8	1.81	0.46
18:P:40:LEU:CD2	26:Y:25:LEU:HD13	2.45	0.46
4:B:93:VAL:HG13	4:B:93:VAL:O	2.16	0.46
1:X:1598:C:H2'	1:X:1599:G:O4'	2.16	0.46
7:E:155:ASP:OD2	7:E:157:TYR:N	2.49	0.46
1:X:2510:A:H4'	7:E:157:TYR:CZ	2.50	0.46
1:X:2392:G:N2	1:X:2393:G:H1'	2.30	0.46
1:X:1741:G:C2	1:X:1742:G:N9	2.84	0.46
1:X:1121:G:OP2	1:X:1121:G:C8	2.68	0.46
1:X:1591:U:H2'	1:X:1592:U:C6	2.51	0.46
1:X:387:A:C5	1:X:388:G:C8	3.04	0.46
1:X:390:U:H2'	1:X:391:C:C6	2.51	0.46
1:X:103:U:C5	1:X:104:C:H5	2.34	0.46
11:I:20:GLY:O	11:I:22:GLY:N	2.49	0.46
1:X:1629:G:C2	1:X:1633:C:C2	3.04	0.46
1:X:1428:G:O2'	1:X:1429:A:H8	1.99	0.46
1:X:760:U:O4	26:Y:3:LYS:HG3	2.15	0.46
1:X:793:G:H2'	1:X:795:A:C5	2.50	0.46
15:M:34:ARG:NH1	15:M:81:PHE:CG	2.84	0.46
9:G:125:ARG:HD2	9:G:129:HIS:CD2	2.51	0.46
9:G:69:ASP:O	9:G:70:PHE:CD2	2.69	0.46
16:N:77:SER:O	16:N:78:THR:C	2.53	0.46
16:N:91:ASN:O	16:N:92:ARG:C	2.54	0.46
1:X:1618:U:O4	19:Q:56:MET:SD	2.74	0.46
20:R:96:LYS:CG	20:R:97:GLN:N	2.75	0.46
1:X:1226:A:H62	1:X:1249:G:H1'	1.81	0.46
10:H:2:ILE:HG23	10:H:6:SER:CB	2.45	0.46
10:H:76:ARG:O	10:H:94:ASN:HA	2.16	0.46
1:X:1069:G:H2'	1:X:1070:G:C4'	2.45	0.46
21:S:93:GLU:HG2	21:S:123:VAL:HA	1.98	0.46
4:B:116:VAL:HG22	4:B:136:ARG:CD	2.42	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:13:ASN:O	13:K:14:SER:C	2.53	0.46
4:B:34:VAL:HG11	4:B:67:PHE:HD1	1.81	0.46
1:X:1363:C:O2'	1:X:1364:C:H5'	2.16	0.46
7:E:76:VAL:O	7:E:78:GLY:N	2.49	0.46
7:E:30:LYS:HD2	7:E:79:VAL:O	2.16	0.46
1:X:482:A:H2'	1:X:483:A:C5'	2.46	0.46
4:B:64:GLN:O	4:B:66:HIS:N	2.49	0.46
1:X:1849:G:N1	1:X:1867:A:N6	2.63	0.46
25:W:17:VAL:C	25:W:19:THR:N	2.68	0.46
1:X:698:A:H4'	1:X:699:G:C5'	2.46	0.46
1:X:1538:A:C5	1:X:1539:U:C4	3.03	0.46
1:X:761:G:C8	18:P:110:ALA:CB	2.98	0.46
1:X:184:A:C8	1:X:185:C:C5	3.04	0.46
2:Z:98:C:H2'	2:Z:99:G:C8	2.51	0.46
1:X:1634:A:O2'	1:X:1635:G:H5'	2.16	0.46
3:A:217:ARG:O	3:A:218:LYS:C	2.54	0.46
9:G:103:TYR:HE2	9:G:111:LYS:HB3	1.79	0.46
9:G:85:ALA:C	9:G:87:GLN:H	2.19	0.46
16:N:49:ASP:O	16:N:52:ASN:HB3	2.16	0.46
16:N:74:MET:HE2	16:N:79:PHE:CA	2.34	0.46
1:X:1171:A:C8	1:X:1172:U:H5	2.34	0.46
1:X:542:A:N6	1:X:2003:A:H1'	2.30	0.46
1:X:833:A:C2	1:X:834:A:C4	3.04	0.46
1:X:639:G:O2'	1:X:661:C:H1'	2.16	0.46
21:S:24:TYR:O	21:S:25:ASN:HB3	2.16	0.46
23:U:32:ARG:N	23:U:32:ARG:CD	2.78	0.46
1:X:1442:C:N4	1:X:1585:A:C5'	2.79	0.46
10:H:22:ILE:HG22	10:H:52:VAL:O	2.15	0.46
1:X:1128:G:H3'	1:X:1129:A:C5'	2.45	0.46
1:X:2345:A:H5'	22:T:60:PHE:CZ	2.50	0.46
13:K:20:LEU:O	13:K:23:ALA:N	2.49	0.46
24:V:57:LYS:HG2	24:V:57:LYS:O	2.16	0.46
1:X:2300:G:H3'	1:X:2300:G:N3	2.31	0.46
18:P:45:ILE:HG13	18:P:53:ALA:HA	1.98	0.46
7:E:41:LEU:HD11	7:E:64:LEU:HB2	1.97	0.46
1:X:1710:U:O2'	1:X:1711:C:P	2.74	0.46
1:X:303:C:H2'	1:X:304:A:H5''	1.97	0.46
1:X:26:G:H1'	1:X:525:A:H61	1.79	0.46
23:U:17:SER:OG	23:U:44:ALA:C	2.54	0.46
1:X:405:C:C2	1:X:406:G:C8	3.04	0.46
1:X:234:C:O2'	1:X:235:C:H5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:810:U:O2'	1:X:811:G:H5'	2.16	0.46
1:X:2281:C:C2	1:X:2282:G:C8	3.04	0.46
1:X:1741:G:C2'	1:X:1742:G:C5'	2.94	0.46
1:X:2265:A:H4'	1:X:2266:A:O5'	2.15	0.46
1:X:1118:G:C2'	1:X:1119:U:C5'	2.92	0.46
1:X:2467:A:H2'	1:X:2468:G:O4'	2.16	0.46
1:X:764:A:C2	1:X:802:A:C4	3.04	0.46
1:X:1559:G:C8	1:X:1559:G:C3'	2.99	0.46
1:X:1094:C:O5'	1:X:1094:C:H6	1.98	0.46
5:C:197:GLU:HG2	5:C:198:GLU:H	1.80	0.46
3:A:227:ASN:O	3:A:230:ASP:N	2.49	0.45
15:M:22:ARG:NH1	15:M:24:LEU:HD23	2.30	0.45
15:M:34:ARG:HD3	15:M:81:PHE:CD2	2.51	0.45
9:G:55:ALA:O	9:G:57:LEU:N	2.49	0.45
9:G:69:ASP:O	9:G:70:PHE:CB	2.63	0.45
9:G:69:ASP:O	9:G:70:PHE:HD2	1.99	0.45
16:N:62:ILE:O	16:N:63:GLN:C	2.54	0.45
16:N:86:ALA:HB1	16:N:88:ILE:HG22	1.98	0.45
17:O:12:TYR:CB	17:O:39:PHE:HB2	2.27	0.45
1:X:1007:A:N3	17:O:6:GLN:CD	2.69	0.45
1:X:987:G:C2	1:X:988:G:C8	3.04	0.45
6:D:10:ASP:O	6:D:14:PRO:CD	2.63	0.45
14:L:52:ALA:O	14:L:53:ALA:HB3	2.15	0.45
2:Z:58:G:H4'	2:Z:59:A:C8	2.51	0.45
21:S:60:GLU:HB3	21:S:62:PHE:CE2	2.51	0.45
12:J:19:THR:HG23	12:J:99:LYS:HD3	1.98	0.45
5:C:112:GLN:CD	5:C:116:LYS:CB	2.83	0.45
11:I:14:LYS:CA	11:I:14:LYS:HE3	2.46	0.45
7:E:127:GLU:OE2	7:E:130:ARG:CB	2.63	0.45
7:E:85:ILE:C	7:E:132:ASP:CG	2.75	0.45
1:X:1524:C:OP2	1:X:1525:A:N7	2.49	0.45
26:Y:45:ILE:HG21	26:Y:57:VAL:HG22	1.97	0.45
22:T:52:GLY:N	22:T:62:LEU:CD2	2.79	0.45
22:T:31:VAL:HG13	22:T:67:VAL:CG2	2.45	0.45
4:B:133:LYS:CG	4:B:133:LYS:O	2.64	0.45
1:X:1063:C:H2'	1:X:1064:C:C6	2.51	0.45
24:V:18:ILE:O	24:V:20:ALA:N	2.40	0.45
1:X:2861:A:C4	1:X:2862:G:C8	3.04	0.45
1:X:2864:C:O2	1:X:2864:C:H2'	2.16	0.45
26:Y:14:SER:O	26:Y:17:ASP:HB2	2.16	0.45
1:X:51:A:H2	1:X:155:G:N3	2.14	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1882:G:N2	1:X:1885:C:N4	2.63	0.45
1:X:2261:G:O2'	1:X:2369:U:C5	2.69	0.45
1:X:1373:G:C2'	1:X:1374:G:H5'	2.46	0.45
1:X:150:A:H2'	1:X:151:G:O4'	2.16	0.45
1:X:404:A:O4'	1:X:424:G:H1'	2.16	0.45
15:M:19:ASP:HB2	15:M:20:HIS:CD2	2.51	0.45
6:D:142:THR:HG22	6:D:144:ASP:H	1.81	0.45
6:D:143:TYR:C	6:D:146:VAL:HG22	2.37	0.45
1:X:1829:C:O2'	1:X:1910:A:H1'	2.17	0.45
1:X:829:C:H2'	1:X:830:C:C6	2.51	0.45
1:X:426:C:HO2'	1:X:1863:U:HO2'	1.64	0.45
4:B:161:GLY:O	4:B:162:MET:C	2.54	0.45
9:G:36:ASN:HB2	9:G:76:GLN:HE22	1.81	0.45
17:O:90:PHE:CD1	17:O:90:PHE:C	2.88	0.45
1:X:787:A:P	3:A:48:ARG:HH12	2.38	0.45
1:X:714:G:C6	1:X:715:U:C5	3.04	0.45
1:X:796:A:N7	1:X:798:G:C8	2.84	0.45
9:G:50:PRO:HG2	9:G:53:ARG:HB2	1.96	0.45
16:N:79:PHE:CE1	16:N:106:PHE:CE1	3.01	0.45
16:N:24:PHE:CZ	16:N:39:LEU:HD21	2.52	0.45
1:X:1235:C:C2	1:X:1241:G:C2	3.04	0.45
1:X:2002:A:C2'	1:X:2003:A:O5'	2.64	0.45
11:I:86:THR:C	11:I:88:PHE:N	2.67	0.45
25:W:10:ILE:CG2	25:W:11:GLY:N	2.78	0.45
1:X:941:U:C4	1:X:942:U:C4	3.04	0.45
21:S:18:MET:HB3	21:S:34:LEU:O	2.17	0.45
21:S:41:ARG:HG2	21:S:41:ARG:O	2.15	0.45
12:J:27:TYR:HB2	12:J:137:VAL:CG1	2.31	0.45
12:J:68:ARG:HH11	12:J:68:ARG:CB	2.27	0.45
1:X:2225:G:N3	1:X:2226:A:C8	2.85	0.45
3:A:158:SER:O	3:A:160:GLY:N	2.49	0.45
20:R:85:ASP:HB3	20:R:90:LYS:HZ1	1.78	0.45
1:X:344:G:C4	1:X:345:U:C5	3.04	0.45
10:H:43:ARG:HG3	10:H:44:TYR:CD2	2.51	0.45
10:H:77:THR:C	10:H:79:HIS:N	2.67	0.45
1:X:1935:A:C6	1:X:1936:A:N1	2.85	0.45
16:N:3:ARG:NH2	16:N:5:LYS:HZ3	2.13	0.45
1:X:2411:A:N3	23:U:25:ARG:HD2	2.32	0.45
7:E:105:MET:HE1	7:E:105:MET:HA	1.98	0.45
7:E:137:ASP:HB3	7:E:140:LEU:CD1	2.45	0.45
21:S:92:VAL:O	21:S:93:GLU:HG3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2033:C:N4	1:X:2034:A:N1	2.65	0.45
4:B:32:PRO:O	4:B:49:ILE:HG12	2.16	0.45
18:P:72:LEU:HD12	18:P:72:LEU:HA	1.74	0.45
1:X:969:U:O2'	1:X:970:A:P	2.74	0.45
2:Z:62:C:O5'	2:Z:62:C:H6	1.99	0.45
26:Y:17:ASP:C	26:Y:19:ARG:N	2.70	0.45
1:X:1564:U:C2	1:X:1565:G:C8	3.04	0.45
11:I:76:LYS:HG3	11:I:111:SER:HB2	1.98	0.45
1:X:683:A:C2'	1:X:684:C:OP2	2.64	0.45
21:S:152:ILE:H	21:S:152:ILE:HD12	1.75	0.45
1:X:2397:A:C2	1:X:2398:U:H1'	2.51	0.45
1:X:1078:A:P	1:X:1078:A:H3'	2.56	0.45
10:H:132:GLU:HG2	10:H:134:LEU:HG	1.98	0.45
15:M:46:ARG:HG2	15:M:47:SER:H	1.82	0.45
5:C:58:MET:HB2	5:C:70:GLY:O	2.15	0.45
9:G:44:VAL:CG1	9:G:45:ASP:N	2.80	0.45
9:G:47:SER:C	9:G:49:VAL:N	2.62	0.45
16:N:86:ALA:HB1	16:N:88:ILE:CG2	2.47	0.45
1:X:1017:C:O2	9:G:134:MET:HE3	2.16	0.45
1:X:1142:G:O2'	1:X:1143:A:P	2.75	0.45
1:X:2757:G:N3	1:X:2759:U:O4	2.48	0.45
1:X:35:G:HO2'	1:X:36:G:C5'	2.27	0.45
1:X:2391:A:H8	1:X:2391:A:O5'	1.99	0.45
6:D:4:LEU:HA	6:D:7:LYS:CG	2.47	0.45
6:D:61:THR:HB	6:D:91:LEU:HD21	1.98	0.45
1:X:2357:A:O2'	14:L:88:VAL:HG21	2.16	0.45
5:C:27:LEU:HD11	5:C:106:MET:HB3	1.98	0.45
1:X:1359:G:C2'	1:X:1360:G:H5'	2.46	0.45
7:E:96:ALA:HB2	7:E:105:MET:CE	2.46	0.45
1:X:2740:C:H1'	7:E:143:GLN:NE2	2.31	0.45
1:X:1330:G:C6	1:X:1331:G:N7	2.84	0.45
2:Z:14:C:C5	22:T:72:LYS:HD2	2.50	0.45
4:B:116:VAL:H	4:B:136:ARG:HE	1.59	0.45
1:X:2825:A:C4	1:X:2826:C:C5	3.05	0.45
1:X:2862:G:C6	1:X:2863:U:C4	3.03	0.45
1:X:2728:A:OP1	7:E:70:THR:HG21	2.17	0.45
3:A:35:GLU:OE1	3:A:35:GLU:HA	2.17	0.45
1:X:2018:G:HO2'	1:X:2019:C:P	2.38	0.45
1:X:2015:G:C8	1:X:2015:G:O5'	2.69	0.45
1:X:2477:C:OP2	1:X:2478:C:OP2	2.34	0.45
1:X:2818:G:N2	1:X:2850:U:C2	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:176:ARG:HH21	15:M:16:ILE:HG23	1.81	0.45
1:X:1135:C:H2'	1:X:1136:G:O4'	2.15	0.45
1:X:2236:U:C4	1:X:2237:C:N4	2.85	0.45
1:X:2282:G:HO2'	6:D:122:PHE:HD2	1.62	0.45
1:X:1867:A:C8	1:X:1867:A:H3'	2.51	0.45
11:I:35:LYS:O	11:I:36:GLY:O	2.35	0.45
18:P:29:LYS:O	18:P:30:TYR:CB	2.64	0.45
1:X:1029:C:O3'	1:X:1131:G:N2	2.50	0.45
1:X:2074:U:H4'	23:U:67:LEU:HD22	1.99	0.45
4:B:152:LYS:HD2	9:G:106:TYR:N	2.26	0.45
5:C:44:SER:HA	5:C:86:PRO:O	2.15	0.45
9:G:91:THR:CG2	9:G:92:GLY:N	2.79	0.45
16:N:108:ALA:O	16:N:110:VAL:N	2.49	0.45
16:N:54:LYS:O	16:N:58:ARG:HG3	2.16	0.45
16:N:86:ALA:CB	16:N:88:ILE:HG22	2.47	0.45
17:O:11:GLN:HB3	17:O:12:TYR:H	1.62	0.45
1:X:1174:G:N3	1:X:1175:A:C8	2.85	0.45
1:X:2549:G:O2'	1:X:2550:C:H5'	2.15	0.45
1:X:843:G:H1'	1:X:2427:A:N6	2.32	0.45
11:I:83:LEU:O	11:I:85:ASP:N	2.48	0.45
6:D:101:GLU:O	6:D:103:LEU:N	2.49	0.45
6:D:27:ALA:O	6:D:28:VAL:C	2.54	0.45
14:L:83:GLY:O	14:L:85:LYS:N	2.43	0.45
14:L:94:TYR:CD2	14:L:99:ARG:NH2	2.84	0.45
5:C:148:VAL:HG22	5:C:185:ARG:HB2	1.97	0.45
5:C:179:ASP:O	5:C:183:HIS:ND1	2.44	0.45
1:X:1218:C:O2'	1:X:1219:C:H5'	2.16	0.45
23:U:26:ALA:CA	23:U:35:THR:HG23	2.46	0.45
1:X:174:A:C6	1:X:840:U:O4	2.70	0.45
1:X:1791:C:N3	1:X:1810:U:O2	2.49	0.45
1:X:1411:C:C2	1:X:1412:C:C5	3.04	0.45
20:R:8:SER:C	20:R:10:HIS:N	2.67	0.45
10:H:14:SER:OG	10:H:98:ILE:HD12	2.15	0.45
1:X:1930:C:N3	1:X:1943:A:C2	2.84	0.45
1:X:2571:G:C5	1:X:2572:U:C4	3.04	0.45
1:X:1753:A:P	1:X:1753:A:H8	2.38	0.45
1:X:2271:C:H2'	1:X:2272:A:H8	1.82	0.45
1:X:2299:A:C4	1:X:2312:A:C6	3.05	0.45
7:E:50:LEU:HG	7:E:51:LEU:N	2.26	0.45
11:I:78:SER:O	11:I:82:ASP:HB3	2.15	0.45
8:F:118:ALA:O	8:F:123:ALA:HB3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2262:C:H2'	1:X:2263:C:O4'	2.17	0.45
1:X:2080:U:H2'	1:X:2081:U:C6	2.51	0.45
1:X:1397:A:H2'	1:X:1398:G:H5''	1.97	0.45
18:P:9:ARG:HG3	18:P:13:GLN:HG3	1.97	0.45
1:X:2246:A:N6	1:X:2251:U:H3	2.14	0.45
1:X:2775:U:P	1:X:2777:A:OP2	2.74	0.45
1:X:1850:G:H1	1:X:1867:A:C1'	2.29	0.45
7:E:107:ILE:HG13	7:E:152:ARG:HB2	1.99	0.45
18:P:107:ILE:HG21	18:P:117:ILE:HD11	1.99	0.45
1:X:614:G:C5	1:X:615:C:C5	3.05	0.45
11:I:134:GLU:OE2	11:I:139:ARG:HG3	2.16	0.45
1:X:449:C:C2'	1:X:449:C:O2	2.64	0.45
1:X:1548:U:O5'	1:X:1548:U:H6	1.99	0.45
10:H:110:VAL:CG1	10:H:111:PHE:N	2.79	0.45
1:X:2274:C:C2'	1:X:2275:U:O5'	2.65	0.45
1:X:1629:G:H1	1:X:1633:C:H2'	1.82	0.45
1:X:167:A:C8	1:X:184:A:C6	3.05	0.45
1:X:783:G:C6	1:X:784:U:C4	3.04	0.45
1:X:1848:U:H6	1:X:1848:U:O5'	1.99	0.45
1:X:2201:G:N3	1:X:2202:G:C8	2.85	0.45
1:X:703:A:H5''	1:X:703:A:H8	1.81	0.45
1:X:774:A:H8	1:X:774:A:O5'	1.97	0.45
9:G:131:VAL:O	9:G:132:PHE:C	2.55	0.45
1:X:1023:U:C5	9:G:56:THR:HG21	2.52	0.45
16:N:105:ALA:C	16:N:107:LYS:N	2.69	0.45
16:N:99:ALA:HB2	16:N:106:PHE:CD1	2.52	0.45
17:O:36:LYS:HE3	17:O:56:VAL:CA	2.46	0.45
1:X:2426:G:H4'	1:X:2427:A:C5'	2.47	0.45
1:X:541:C:HO2'	1:X:542:A:P	2.39	0.45
1:X:843:G:H1'	1:X:2427:A:C6	2.51	0.45
18:P:27:VAL:HG22	18:P:28:ALA:N	2.32	0.45
6:D:60:ILE:HG13	6:D:61:THR:HG23	1.98	0.45
14:L:33:ARG:NH2	14:L:68:ALA:HB1	2.31	0.45
25:W:3:ILE:HG23	25:W:51:LEU:HB2	1.98	0.45
21:S:13:LYS:HB2	21:S:18:MET:HB2	1.99	0.45
21:S:41:ARG:NH2	21:S:42:ALA:HB2	2.31	0.45
21:S:53:ASP:N	21:S:53:ASP:OD2	2.50	0.45
1:X:456:C:H5''	5:C:43:ALA:HB2	1.99	0.45
11:I:51:GLY:O	11:I:55:ARG:CZ	2.64	0.45
1:X:1812:U:C2	3:A:200:GLU:HA	2.52	0.45
19:Q:3:HIS:CE1	19:Q:44:GLN:CG	2.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:55:VAL:O	10:H:56:LYS:C	2.55	0.45
30:4:18:ARG:HH12	30:4:21:GLY:HA2	1.81	0.45
7:E:87:LEU:HD23	7:E:164:PHE:HA	1.99	0.45
21:S:92:VAL:C	21:S:93:GLU:HG3	2.37	0.45
21:S:91:PRO:CG	21:S:92:VAL:N	2.79	0.45
1:X:1448:A:N6	1:X:1574:A:N6	2.54	0.45
3:A:172:TYR:HE2	3:A:186:HIS:HD1	1.64	0.45
1:X:334:G:H8	5:C:164:VAL:HG13	1.81	0.45
1:X:2564:U:C2	33:X:2911:ZLD:H21A	2.51	0.45
12:J:47:GLN:NE2	12:J:127:PRO:CG	2.79	0.45
7:E:13:SER:O	7:E:15:VAL:HG13	2.17	0.45
7:E:30:LYS:NZ	7:E:81:ASP:HA	2.32	0.45
1:X:556:A:O2'	1:X:558:G:N3	2.35	0.45
1:X:1885:C:H5'	3:A:244:ARG:CD	2.43	0.45
1:X:304:A:H61	1:X:357:A:H62	1.64	0.45
1:X:977:G:H5'	1:X:2251:U:O2	2.16	0.45
1:X:1059:A:OP2	1:X:1059:A:H8	1.99	0.45
1:X:1996:A:C2	1:X:1997:A:C4	3.05	0.45
10:H:116:ARG:NH2	15:M:41:GLU:OE2	2.48	0.45
10:H:90:ARG:HG3	10:H:90:ARG:O	2.16	0.45
15:M:40:ARG:O	15:M:41:GLU:CG	2.65	0.45
4:B:141:ILE:HG22	4:B:150:VAL:HB	1.97	0.45
16:N:18:LEU:O	16:N:21:ALA:HB3	2.16	0.45
16:N:43:ALA:O	16:N:45:TYR:N	2.49	0.45
17:O:46:VAL:HG12	17:O:51:ALA:HB2	1.98	0.45
1:X:2008:C:OP1	4:B:149:ARG:NH2	2.37	0.45
11:I:102:LYS:C	11:I:104:ARG:N	2.70	0.45
6:D:88:LYS:C	6:D:89:VAL:CG2	2.84	0.45
21:S:3:LEU:HD22	21:S:34:LEU:HB3	1.98	0.45
2:Z:108:G:OP1	21:S:84:TYR:OH	2.35	0.45
5:C:131:LYS:CA	5:C:134:ILE:HG12	2.47	0.45
5:C:176:ASN:ND2	5:C:179:ASP:N	2.50	0.45
3:A:141:VAL:O	3:A:194:GLY:N	2.47	0.45
1:X:1809:G:C5'	3:A:88:ARG:NH1	2.79	0.45
19:Q:12:ILE:CD1	19:Q:13:SER:N	2.72	0.45
1:X:1361:G:O2'	1:X:1362:A:H5'	2.17	0.45
1:X:66:U:O2	1:X:87:G:C2	2.69	0.45
1:X:73:A:H4'	1:X:74:G:O5'	2.15	0.45
20:R:23:ILE:CD1	20:R:81:VAL:H	2.29	0.45
1:X:513:A:O2'	1:X:514:G:H5''	2.16	0.45
10:H:17:ARG:NE	10:H:59:ALA:HB2	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:4:20:HIS:O	30:4:21:GLY:C	2.55	0.45
1:X:2735:C:H6	1:X:2735:C:O5'	1.99	0.45
1:X:1524:C:C5'	1:X:1525:A:H5''	2.47	0.45
13:K:20:LEU:O	13:K:21:ALA:C	2.54	0.45
19:Q:4:TYR:CZ	24:V:23:LYS:HG3	2.52	0.45
1:X:1942:G:C2	1:X:1943:A:C4	3.05	0.45
1:X:558:G:O2'	1:X:559:C:N1	2.45	0.45
1:X:1710:U:HO2'	1:X:1711:C:P	2.39	0.45
13:K:43:GLU:C	13:K:43:GLU:CD	2.75	0.45
12:J:75:VAL:HB	12:J:93:TYR:CE2	2.52	0.45
1:X:151:G:O2'	1:X:152:G:H5'	2.17	0.45
1:X:2388:G:C6	1:X:2389:G:N7	2.85	0.45
1:X:695:G:N2	1:X:696:U:C2	2.85	0.45
10:H:29:ILE:HA	10:H:34:LEU:HD23	1.98	0.45
1:X:1423:A:C2	1:X:1609:G:C2	3.04	0.45
1:X:919:U:O3'	12:J:24:GLY:HA3	2.17	0.45
1:X:1849:G:H1	1:X:1867:A:N6	2.14	0.45
6:D:119:PRO:O	6:D:120:ASN:C	2.55	0.45
1:X:615:C:C4'	1:X:669:G:N2	2.79	0.45
1:X:1713:G:C5	1:X:1714:A:N7	2.84	0.45
1:X:2337:A:H2'	1:X:2338:C:O4'	2.17	0.45
11:I:134:GLU:HG2	11:I:138:GLY:C	2.37	0.45
1:X:734:G:C2	1:X:735:G:C5	3.05	0.45
1:X:917:U:O2'	1:X:918:A:H5'	2.16	0.45
1:X:1281:A:H2'	1:X:1282:A:C8	2.47	0.45
1:X:1997:A:C2	1:X:1998:A:C2	3.04	0.45
23:U:48:LYS:O	23:U:62:LEU:O	2.35	0.45
23:U:62:LEU:CD2	23:U:67:LEU:HD12	2.47	0.45
1:X:2070:G:C4	1:X:2071:G:C8	3.05	0.45
1:X:1681:A:C6	1:X:2706:U:C4	3.04	0.45
5:C:45:THR:CG2	5:C:82:VAL:HG11	2.46	0.45
9:G:156:HIS:N	9:G:157:PRO:HD2	2.31	0.45
9:G:51:LEU:HD13	9:G:88:VAL:HG21	1.95	0.45
16:N:40:LEU:HB3	17:O:74:TYR:CE1	2.51	0.45
16:N:78:THR:HG23	16:N:117:ARG:CD	2.46	0.45
17:O:14:VAL:H	17:O:16:GLU:CD	2.20	0.45
17:O:14:VAL:O	17:O:14:VAL:CG1	2.62	0.45
17:O:39:PHE:O	17:O:46:VAL:CG2	2.65	0.45
1:X:1275:A:C2	26:Y:10:LYS:HE2	2.52	0.45
1:X:589:C:O2'	1:X:590:C:H5'	2.17	0.45
1:X:5:A:C6	1:X:6:A:C6	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:648:A:H5'	1:X:649:G:OP1	2.17	0.45
14:L:63:ASN:O	14:L:67:THR:N	2.48	0.45
2:Z:44:C:H1'	6:D:89:VAL:HG12	1.99	0.45
2:Z:46:G:H1'	2:Z:48:A:H62	1.81	0.45
21:S:51:LEU:CD2	21:S:65:LEU:HD13	2.40	0.45
21:S:74:ARG:CG	21:S:75:LYS:HE3	2.47	0.45
1:X:874:A:N9	1:X:929:A:N6	2.65	0.45
5:C:154:ASP:OD2	5:C:157:THR:HG21	2.17	0.45
19:Q:7:LEU:HD11	24:V:30:PHE:CZ	2.50	0.45
20:R:23:ILE:N	20:R:23:ILE:CD1	2.75	0.45
20:R:22:VAL:CG1	20:R:80:LYS:HZ1	2.28	0.45
8:F:81:LYS:HZ2	8:F:84:GLY:CA	2.30	0.45
10:H:27:SER:OG	10:H:49:ASP:HA	2.17	0.45
1:X:2411:A:C5	1:X:2412:A:C6	3.04	0.45
20:R:48:VAL:C	20:R:50:GLY:N	2.70	0.45
1:X:1598:C:H2'	1:X:1599:G:C8	2.52	0.45
1:X:1886:G:H2'	1:X:1887:G:C8	2.49	0.45
17:O:31:ASP:OD1	17:O:59:GLU:HG2	2.17	0.45
18:P:8:PHE:O	18:P:9:ARG:CB	2.64	0.45
1:X:607:C:H2'	1:X:608:G:O4'	2.16	0.45
1:X:1847:G:N1	1:X:1871:G:C8	2.85	0.45
1:X:2615:U:O5'	4:B:80:GLU:CG	2.64	0.45
1:X:1850:G:H22	1:X:1867:A:C2'	2.29	0.45
12:J:62:GLY:HA3	12:J:64:LYS:HE3	1.98	0.45
18:P:74:SER:HA	18:P:77:ALA:CB	2.46	0.45
1:X:167:A:N6	1:X:184:A:H1'	2.31	0.45
15:M:66:PHE:HE2	15:M:81:PHE:CB	2.12	0.45
1:X:2621:G:OP1	9:G:110:LEU:HD13	2.16	0.45
1:X:1203:A:N3	1:X:1203:A:H2'	2.30	0.45
1:X:4:C:O2'	1:X:5:A:H5'	2.17	0.45
11:I:106:VAL:CG2	11:I:123:ASP:HB2	2.44	0.45
6:D:108:LEU:O	6:D:109:PRO:C	2.55	0.45
6:D:137:ILE:HG13	6:D:138:PHE:HE1	1.76	0.45
6:D:50:ILE:C	6:D:52:LYS:N	2.68	0.45
12:J:28:VAL:HG11	12:J:135:ARG:HA	1.98	0.45
5:C:101:GLN:O	5:C:103:GLY:N	2.50	0.45
5:C:23:ASN:N	5:C:106:MET:SD	2.90	0.45
5:C:96:PRO:HB2	5:C:99:VAL:HG23	1.97	0.45
11:I:11:GLY:O	11:I:13:ARG:N	2.49	0.45
23:U:20:ARG:O	23:U:39:LYS:HB3	2.17	0.45
20:R:25:LEU:HG	20:R:81:VAL:CG2	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:86:PRO:O	20:R:87:GLU:CB	2.64	0.45
8:F:71:LYS:CG	8:F:114:PRO:HG2	2.47	0.45
1:X:1749:G:C5'	1:X:1750:A:OP2	2.60	0.45
1:X:1075:C:C5'	8:F:85:ILE:HG13	2.47	0.45
12:J:78:LYS:HD2	12:J:81:GLU:HA	1.99	0.45
1:X:776:G:C2	1:X:778:G:C4	3.05	0.45
1:X:1373:G:H21	1:X:1374:G:C1'	2.29	0.45
1:X:109:A:H2'	1:X:110:U:H5''	1.99	0.45
1:X:1757:C:HO2'	1:X:1758:C:H5'	1.80	0.45
15:M:42:GLY:C	15:M:44:ARG:N	2.70	0.45
1:X:1842:G:C5	1:X:1843:U:C5	3.05	0.45
1:X:105:G:C2'	1:X:106:G:H5'	2.47	0.45
23:U:70:LEU:HD23	23:U:70:LEU:HA	1.77	0.45
1:X:2514:G:C2	1:X:2515:G:C8	3.05	0.45
23:U:24:ALA:N	23:U:36:GLY:O	2.47	0.45
1:X:1816:G:OP2	3:A:220:HIS:CE1	2.70	0.45
10:H:85:ASP:CG	10:H:87:SER:H	2.15	0.45
9:G:155:THR:CG2	9:G:156:HIS:H	2.24	0.45
17:O:10:LYS:HG3	17:O:11:GLN:HG2	1.98	0.45
1:X:1201:G:H8	1:X:1201:G:O5'	1.99	0.45
1:X:589:C:H4'	16:N:31:GLN:HE22	1.81	0.45
1:X:689:A:H2'	1:X:690:A:H5'	1.99	0.45
1:X:832:A:OP2	1:X:1201:G:N2	2.46	0.45
11:I:62:LYS:CG	11:I:63:ARG:N	2.79	0.45
25:W:5:LEU:HA	25:W:51:LEU:HA	1.98	0.45
1:X:999:A:H3'	25:W:8:SER:HB2	1.98	0.45
21:S:17:SER:O	21:S:18:MET:SD	2.75	0.45
5:C:22:VAL:CG1	5:C:27:LEU:HD21	2.44	0.45
11:I:53:ARG:C	11:I:55:ARG:N	2.70	0.45
23:U:27:ASP:CA	23:U:32:ARG:CZ	2.95	0.45
3:A:106:LEU:O	3:A:107:ALA:C	2.55	0.45
6:D:73:SER:HB3	6:D:79:LEU:CD2	2.47	0.45
20:R:108:VAL:CG2	20:R:109:ALA:N	2.65	0.45
1:X:84:G:O3'	20:R:41:PRO:HG3	2.17	0.45
1:X:38:G:H21	5:C:42:THR:HG21	1.82	0.45
1:X:825:C:C2	1:X:1263:G:N1	2.84	0.45
3:A:172:TYR:HE2	3:A:186:HIS:ND1	2.14	0.45
1:X:1332:G:N2	1:X:1347:C:C2	2.84	0.45
5:C:164:VAL:HB	5:C:166:TRP:CH2	2.47	0.45
5:C:163:ASN:O	5:C:167:VAL:HG22	2.16	0.45
1:X:1062:G:C2	1:X:1063:C:C2	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:11:LEU:HA	14:L:14:ARG:CB	2.46	0.45
1:X:2317:G:C2	1:X:2318:U:C6	3.04	0.45
1:X:2319:G:O2'	1:X:2320:G:H5'	2.17	0.45
2:Z:65:A:O2'	2:Z:66:G:H5'	2.16	0.45
26:Y:13:LYS:O	26:Y:17:ASP:OD1	2.35	0.45
1:X:732:G:H8	1:X:732:G:O5'	2.00	0.45
1:X:2850:U:C2'	1:X:2851:G:O5'	2.65	0.45
21:S:98:VAL:HG22	21:S:99:HIS:N	2.32	0.45
1:X:1758:C:O2'	1:X:1759:A:H5'	2.17	0.45
1:X:1557:G:O2'	1:X:1558:C:H5'	2.16	0.45
1:X:2676:G:C6	1:X:2690:A:N1	2.85	0.45
1:X:2875:C:H2'	1:X:2876:C:H5'	1.99	0.45
1:X:911:A:H2'	1:X:912:A:C8	2.51	0.45
7:E:170:ALA:C	7:E:171:LEU:HD12	2.37	0.45
23:U:49:LYS:HB3	23:U:61:TRP:CE2	2.51	0.45
23:U:52:ARG:O	23:U:53:GLU:HB3	2.17	0.45
17:O:33:VAL:CG2	17:O:33:VAL:O	2.64	0.45
17:O:5:ILE:N	17:O:5:ILE:CD1	2.80	0.45
17:O:15:SER:HA	17:O:95:ILE:CG2	2.47	0.45
1:X:1023:U:OP2	1:X:1023:U:H4'	2.17	0.45
6:D:112:ARG:NH1	6:D:134:GLU:OE2	2.50	0.45
6:D:10:ASP:HA	6:D:14:PRO:HG2	1.99	0.45
6:D:11:GLN:O	6:D:15:ALA:HB2	2.17	0.45
6:D:18:GLN:C	6:D:20:PHE:N	2.70	0.45
14:L:83:GLY:C	14:L:85:LYS:H	2.19	0.45
2:Z:26:G:H4'	2:Z:27:A:O5'	2.17	0.45
2:Z:56:G:H2'	2:Z:57:U:H6	1.81	0.45
21:S:51:LEU:HD23	21:S:65:LEU:CD1	2.41	0.45
12:J:36:ILE:CG1	12:J:103:VAL:HG22	2.47	0.45
12:J:54:VAL:HB	12:J:55:MET:H	1.65	0.45
3:A:143:HIS:C	3:A:143:HIS:CD2	2.88	0.45
1:X:1444:C:H2'	1:X:1445:A:C8	2.46	0.45
1:X:66:U:C2'	1:X:67:G:O5'	2.65	0.45
3:A:101:GLU:C	3:A:101:GLU:OE2	2.55	0.45
30:4:17:VAL:HG21	30:4:26:ILE:CD1	2.47	0.45
30:4:3:VAL:HG21	30:4:37:GLY:O	2.17	0.45
30:4:19:ARG:HG3	30:4:19:ARG:HH11	1.82	0.45
7:E:103:LEU:HD12	7:E:104:GLU:N	2.23	0.45
7:E:139:GLN:CB	7:E:143:GLN:OE1	2.65	0.45
4:B:102:ILE:HB	4:B:199:ARG:O	2.17	0.45
1:X:1494:G:O2'	1:X:1574:A:C2	2.68	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:M:104:LEU:CD1	15:M:106:TYR:CZ	2.98	0.45
1:X:1243:G:N2	1:X:1244:U:C2	2.85	0.45
1:X:1272:G:H2'	1:X:1273:G:H8	1.82	0.45
1:X:1136:G:C5	1:X:1137:A:N6	2.85	0.45
1:X:429:C:H2'	1:X:430:C:H6	1.82	0.45
24:V:25:LEU:HD11	24:V:47:ARG:CD	2.47	0.45
1:X:2624:G:OP2	1:X:2624:G:H8	2.00	0.45
21:S:56:VAL:CG1	21:S:57:GLU:N	2.76	0.45
1:X:387:A:C4	1:X:388:G:C8	3.05	0.45
4:B:107:THR:HG21	4:B:162:MET:CE	2.48	0.45
1:X:2010:G:C6	1:X:2011:U:N3	2.85	0.45
1:X:2810:A:N6	1:X:2853:U:H2'	2.31	0.45
1:X:2067:U:H2'	1:X:2068:C:C6	2.51	0.45
1:X:1815:G:H2'	1:X:1816:G:C8	2.36	0.44
1:X:1004:A:C4	1:X:1005:U:H5	2.34	0.44
1:X:2052:G:C6	1:X:2422:C:N4	2.85	0.44
1:X:2421:C:N4	1:X:2422:C:H41	2.15	0.44
1:X:834:A:H62	1:X:983:G:H21	1.65	0.44
6:D:135:GLN:HG2	6:D:152:MET:CG	2.46	0.44
6:D:49:ALA:CA	6:D:52:LYS:HB2	2.48	0.44
6:D:53:ALA:HB1	6:D:57:LEU:CD2	2.44	0.44
12:J:19:THR:HG22	12:J:99:LYS:HZ2	1.82	0.44
1:X:218:A:H61	1:X:232:A:H5''	1.80	0.44
3:A:145:LEU:HG	3:A:146:GLU:H	1.82	0.44
3:A:200:GLU:OE2	3:A:201:HIS:O	2.35	0.44
19:Q:58:VAL:HA	19:Q:59:PRO:HD2	1.66	0.44
19:Q:29:VAL:CG1	19:Q:78:ALA:CB	2.95	0.44
6:D:68:THR:O	6:D:85:VAL:HG23	2.17	0.44
20:R:18:LYS:HA	20:R:36:VAL:HG11	1.99	0.44
20:R:33:THR:OG1	20:R:34:GLY:N	2.50	0.44
20:R:46:VAL:O	20:R:46:VAL:HG12	2.17	0.44
8:F:79:ILE:HG22	8:F:108:ILE:HD11	1.98	0.44
1:X:37:C:H2'	1:X:38:G:C8	2.51	0.44
7:E:121:VAL:CG1	7:E:122:THR:N	2.79	0.44
1:X:2740:C:O2'	1:X:2741:G:H5'	2.17	0.44
1:X:1571:G:OP2	1:X:1571:G:C8	2.69	0.44
1:X:1332:G:C2	1:X:1347:C:C2	3.05	0.44
4:B:133:LYS:O	4:B:134:TRP:C	2.54	0.44
1:X:1674:C:C2	1:X:1675:C:C5	3.05	0.44
24:V:4:SER:HA	24:V:7:ARG:HG3	1.99	0.44
1:X:1822:C:C6	1:X:1822:C:O5'	2.54	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1825:C:H2'	1:X:1952:A:C2	2.52	0.44
1:X:2273:C:P	14:L:11:LEU:HD11	2.57	0.44
1:X:2497:A:H5''	1:X:2498:U:OP2	2.17	0.44
13:K:39:THR:O	13:K:42:LYS:HB2	2.17	0.44
1:X:2451:G:C4	1:X:2454:C:N3	2.85	0.44
1:X:1373:G:O6	1:X:1385:C:C4	2.70	0.44
1:X:53:G:C6	1:X:54:G:N7	2.85	0.44
1:X:2780:A:H2'	1:X:2781:G:H8	1.79	0.44
1:X:395:G:C6	1:X:404:A:N6	2.85	0.44
1:X:405:C:C4	1:X:406:G:N7	2.85	0.44
1:X:198:A:C5	1:X:243:G:C5	3.05	0.44
1:X:2235:G:N2	1:X:2254:C:C4	2.85	0.44
3:A:236:GLY:O	3:A:237:GLU:CB	2.60	0.44
1:X:2040:A:H2	26:Y:2:ALA:HB3	1.81	0.44
1:X:2338:C:H2'	1:X:2339:A:C8	2.52	0.44
1:X:1910:A:N1	1:X:1911:A:C2	2.85	0.44
1:X:1484:G:H2'	1:X:1485:U:H6	1.82	0.44
1:X:994:A:N7	1:X:995:A:C5	2.86	0.44
1:X:719:A:O5'	1:X:719:A:H8	1.99	0.44
1:X:2629:U:C2	1:X:2630:C:C5	3.05	0.44
1:X:2769:C:H2'	1:X:2770:A:C8	2.51	0.44
4:B:113:THR:HA	4:B:158:GLY:O	2.18	0.44
5:C:58:MET:CE	5:C:58:MET:HA	2.46	0.44
9:G:78:ASP:O	9:G:79:PHE:C	2.55	0.44
16:N:39:LEU:O	16:N:42:ALA:HB3	2.17	0.44
9:G:70:PHE:CD2	16:N:64:ARG:HD3	2.53	0.44
17:O:36:LYS:O	17:O:51:ALA:CB	2.65	0.44
1:X:5:A:C2	1:X:6:A:C4	3.05	0.44
6:D:4:LEU:HD12	6:D:7:LYS:HB2	1.98	0.44
12:J:116:LYS:HA	12:J:132:MET:CE	2.47	0.44
1:X:930:A:O5'	1:X:930:A:H8	2.00	0.44
1:X:224:G:C6	1:X:229:G:O6	2.71	0.44
1:X:1391:A:N7	1:X:1393:G:C5	2.85	0.44
6:D:78:LYS:HG2	6:D:80:ARG:HH11	1.83	0.44
1:X:512:A:C2'	1:X:513:A:H5'	2.41	0.44
10:H:3:MET:SD	10:H:44:TYR:CE1	3.10	0.44
30:4:8:LYS:N	30:4:34:GLN:HE22	2.14	0.44
1:X:1474:A:H4'	1:X:1475:U:O5'	2.17	0.44
7:E:90:ARG:CD	7:E:163:ARG:NH1	2.79	0.44
1:X:1343:C:N3	1:X:1344:C:C5	2.85	0.44
4:B:50:GLY:HA3	4:B:75:THR:HG21	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:F:98:GLY:O	8:F:138:THR:HG23	2.17	0.44
7:E:37:TYR:N	7:E:37:TYR:CD1	2.85	0.44
7:E:6:LYS:O	7:E:7:GLN:HG3	2.17	0.44
13:K:45:ARG:CD	13:K:97:ILE:HD11	2.48	0.44
1:X:1785:A:O2'	1:X:1883:A:H2'	2.17	0.44
1:X:303:C:C3'	1:X:304:A:H5''	2.47	0.44
1:X:2448:A:C2	1:X:2461:G:C8	3.06	0.44
25:W:42:GLY:O	25:W:43:MET:C	2.56	0.44
1:X:2872:U:O2	1:X:2873:G:C8	2.70	0.44
1:X:242:A:H2'	1:X:243:G:C4'	2.46	0.44
1:X:201:G:O6	1:X:433:G:H5'	2.17	0.44
1:X:2659:C:C2	1:X:2660:C:C5	3.05	0.44
26:Y:51:TYR:CA	26:Y:54:GLY:O	2.64	0.44
1:X:768:U:H2'	1:X:769:C:C6	2.52	0.44
2:Z:123:U:O2	2:Z:123:U:C2'	2.65	0.44
1:X:1960:A:H2'	1:X:1961:A:H5'	2.00	0.44
1:X:1270:C:H4'	5:C:77:PHE:CE1	2.52	0.44
1:X:1567:A:N6	1:X:1568:A:C6	2.86	0.44
1:X:1997:A:O2'	1:X:1998:A:O4'	2.28	0.44
9:G:84:ASN:C	9:G:86:ALA:N	2.70	0.44
16:N:17:VAL:O	16:N:20:ARG:HB2	2.18	0.44
17:O:36:LYS:HZ3	17:O:98:ILE:H	1.66	0.44
1:X:2031:A:H2'	1:X:2032:G:O4'	2.17	0.44
1:X:2596:C:O2'	1:X:2597:G:H5'	2.17	0.44
1:X:590:C:H2'	1:X:591:G:C8	2.52	0.44
11:I:121:HIS:N	11:I:121:HIS:CD2	2.84	0.44
11:I:73:GLU:HG3	11:I:101:ARG:CG	2.47	0.44
6:D:100:LEU:HG	6:D:104:ILE:CG1	2.47	0.44
14:L:38:ILE:HG13	14:L:39:TYR:H	1.73	0.44
2:Z:51:G:H5'	14:L:97:HIS:CD2	2.52	0.44
2:Z:57:U:H1'	6:D:26:MET:HG2	1.98	0.44
5:C:14:THR:HG21	5:C:195:ILE:CG2	2.47	0.44
1:X:678:G:O3'	11:I:50:GLU:OE1	2.35	0.44
3:A:65:ILE:HD11	3:A:88:ARG:CZ	2.47	0.44
1:X:1809:G:H2'	1:X:1809:G:N3	2.33	0.44
1:X:708:G:OP1	1:X:1393:G:O2'	2.29	0.44
20:R:35:LYS:HG2	20:R:36:VAL:O	2.16	0.44
20:R:60:PRO:C	20:R:62:MET:N	2.71	0.44
10:H:18:GLU:HG2	10:H:19:ILE:N	2.32	0.44
1:X:1914:U:C6	1:X:1914:U:C5'	2.84	0.44
7:E:98:LEU:CG	7:E:99:THR:N	2.80	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:102:ILE:HD13	4:B:172:VAL:HG23	1.99	0.44
4:B:2:LYS:HE2	4:B:84:PHE:HE1	1.82	0.44
1:X:1574:A:H2'	1:X:1575:C:H5''	1.98	0.44
5:C:164:VAL:C	5:C:166:TRP:CE3	2.90	0.44
22:T:31:VAL:HG11	22:T:37:LEU:CD2	2.47	0.44
22:T:30:VAL:O	22:T:31:VAL:O	2.35	0.44
1:X:2787:A:O2'	1:X:2788:C:C5'	2.64	0.44
13:K:82:GLU:O	13:K:86:LYS:CG	2.54	0.44
1:X:1731:C:C3'	1:X:1732:U:H5''	2.48	0.44
1:X:2083:G:H5'	1:X:2083:G:H8	1.82	0.44
1:X:945:G:C6	1:X:946:U:C4	3.05	0.44
1:X:134:G:C2'	1:X:135:U:H5'	2.45	0.44
1:X:138:G:C2	1:X:139:A:C8	3.06	0.44
1:X:1345:G:C4	1:X:1625:A:C6	3.06	0.44
1:X:55:A:N6	1:X:69:G:C6	2.86	0.44
7:E:56:SER:O	7:E:61:HIS:HB2	2.17	0.44
1:X:2245:A:H4'	1:X:2246:A:C2	2.51	0.44
1:X:203:G:N2	1:X:204:A:H2	2.14	0.44
1:X:2767:C:H4'	4:B:61:LYS:HG2	2.00	0.44
1:X:972:C:C5'	1:X:973:U:OP2	2.65	0.44
1:X:1463:A:C2'	1:X:1464:A:H5'	2.48	0.44
1:X:2468:G:C6	1:X:2469:G:C6	3.06	0.44
1:X:720:A:H2'	1:X:721:C:C6	2.53	0.44
1:X:2804:G:C4'	15:M:4:HIS:CE1	2.99	0.44
1:X:248:A:O5'	1:X:248:A:C8	2.68	0.44
1:X:2819:G:C8	1:X:2820:C:C5	3.05	0.44
1:X:629:C:H2'	1:X:630:G:O4'	2.17	0.44
5:C:10:ASN:O	5:C:11:GLY:O	2.35	0.44
1:X:760:U:C4	1:X:2592:U:O2	2.70	0.44
23:U:78:ILE:HD13	23:U:78:ILE:C	2.37	0.44
1:X:1801:C:N4	23:U:49:LYS:NZ	2.66	0.44
1:X:1845:A:C5	1:X:1872:A:C6	3.05	0.44
3:A:228:PRO:HD3	3:A:235:GLY:N	2.33	0.44
1:X:795:A:H5''	1:X:796:A:OP1	2.18	0.44
16:N:40:LEU:O	16:N:43:ALA:HB3	2.18	0.44
16:N:93:LYS:HZ3	16:N:93:LYS:HB2	1.83	0.44
1:X:1022:A:C6	1:X:1162:A:N6	2.86	0.44
11:I:94:GLU:HA	11:I:97:ARG:NE	2.32	0.44
6:D:111:ILE:HB	6:D:114:PHE:CG	2.52	0.44
6:D:161:LYS:HB3	6:D:165:GLU:OE2	2.16	0.44
6:D:60:ILE:CG1	6:D:61:THR:N	2.68	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:38:ILE:HG13	14:L:40:ALA:H	1.83	0.44
2:Z:30:C:N4	2:Z:58:G:H22	2.16	0.44
12:J:112:GLU:OE1	12:J:112:GLU:C	2.55	0.44
12:J:57:ARG:CG	12:J:57:ARG:NH1	2.72	0.44
1:X:2231:G:O5'	1:X:2231:G:H8	1.99	0.44
1:X:1811:A:O5'	3:A:161:THR:HG21	2.18	0.44
6:D:73:SER:CB	6:D:79:LEU:HD23	2.48	0.44
1:X:339:U:O4	1:X:343:A:C8	2.71	0.44
1:X:343:A:H2'	1:X:345:U:OP2	2.18	0.44
7:E:127:GLU:CG	7:E:127:GLU:O	2.66	0.44
7:E:86:ASN:HA	7:E:131:ILE:O	2.18	0.44
22:T:59:LEU:HD13	22:T:59:LEU:HA	1.72	0.44
22:T:73:GLY:O	22:T:74:LYS:CB	2.66	0.44
1:X:1123:G:C6	1:X:1124:U:N3	2.86	0.44
24:V:6:MET:O	24:V:14:PHE:HE1	2.00	0.44
1:X:2042:A:H5''	5:C:65:GLY:HA2	1.99	0.44
2:Z:63:A:C6	2:Z:64:C:N4	2.86	0.44
26:Y:16:ARG:CD	26:Y:20:ARG:NH2	2.79	0.44
4:B:5:LEU:CD1	4:B:5:LEU:N	2.80	0.44
1:X:1243:G:C2	1:X:1244:U:C2	3.05	0.44
1:X:482:A:C2'	1:X:483:A:C5'	2.93	0.44
1:X:631:G:C5'	1:X:632:A:OP1	2.60	0.44
1:X:211:U:C5	1:X:212:U:C5	3.05	0.44
1:X:1056:U:O2	1:X:1058:G:N2	2.50	0.44
1:X:2775:U:OP2	1:X:2776:U:C5	2.70	0.44
1:X:699:G:C4'	1:X:700:C:OP2	2.66	0.44
1:X:388:G:C2	1:X:389:G:C8	3.05	0.44
13:K:75:VAL:O	13:K:76:VAL:C	2.55	0.44
5:C:143:ASP:OD1	5:C:143:ASP:N	2.50	0.44
26:Y:4:HIS:HB3	26:Y:5:PRO:HD3	2.00	0.44
23:U:49:LYS:O	23:U:50:ALA:HB2	2.17	0.44
3:A:208:LYS:O	3:A:209:ALA:C	2.55	0.44
3:A:219:PRO:O	3:A:220:HIS:O	2.35	0.44
9:G:169:GLN:O	9:G:170:PRO:O	2.36	0.44
9:G:55:ALA:O	9:G:58:ILE:N	2.51	0.44
16:N:74:MET:CE	16:N:79:PHE:HA	2.34	0.44
17:O:6:GLN:O	17:O:7:THR:HB	2.17	0.44
17:O:80:TYR:C	17:O:81:ARG:HG3	2.36	0.44
1:X:2550:C:O2'	4:B:146:THR:OG1	2.13	0.44
1:X:959:C:O2'	1:X:960:U:H5'	2.18	0.44
6:D:169:LEU:C	6:D:171:GLN:N	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:96:TYR:CZ	14:L:101:LYS:HG3	2.52	0.44
12:J:132:MET:O	12:J:133:VAL:HG13	2.17	0.44
12:J:28:VAL:HG11	12:J:134:LYS:O	2.18	0.44
5:C:153:ASP:CG	5:C:172:VAL:HA	2.37	0.44
1:X:218:A:H1'	1:X:220:U:C6	2.52	0.44
3:A:63:ARG:HD3	3:A:85:ASP:CG	2.38	0.44
10:H:25:LEU:HD21	10:H:71:LYS:HE2	1.99	0.44
10:H:76:ARG:NH1	10:H:113:PRO:O	2.51	0.44
4:B:38:THR:C	4:B:40:GLN:H	2.21	0.44
1:X:1569:A:H2'	1:X:1571:G:N7	2.33	0.44
1:X:2033:C:C5	1:X:2034:A:C5	3.06	0.44
1:X:1060:C:N4	1:X:1061:A:N6	2.66	0.44
24:V:59:GLU:HG3	24:V:59:GLU:H	1.49	0.44
1:X:2320:G:N2	1:X:2353:G:H4'	2.33	0.44
18:P:51:GLN:HA	18:P:54:GLU:HB2	2.00	0.44
12:J:47:GLN:HE22	12:J:127:PRO:HG3	1.82	0.44
1:X:24:G:N2	1:X:527:C:C2	2.85	0.44
1:X:1091:C:O2	8:F:127:THR:HG23	2.18	0.44
23:U:12:ASN:O	23:U:13:LEU:O	2.35	0.44
4:B:177:ALA:O	4:B:179:GLU:N	2.51	0.44
1:X:1325:U:HO2'	1:X:1327:C:H5	1.62	0.44
1:X:469:G:O2'	1:X:480:G:N1	2.47	0.44
4:B:11:MET:HA	4:B:24:THR:HA	1.98	0.44
7:E:171:LEU:N	7:E:171:LEU:HD12	2.32	0.44
13:K:61:HIS:O	13:K:62:SER:C	2.55	0.44
1:X:2198:U:O5'	1:X:2198:U:H6	2.00	0.44
1:X:746:G:O6	1:X:774:A:C8	2.71	0.44
15:M:31:ASP:O	15:M:94:VAL:HB	2.17	0.44
9:G:105:GLY:O	9:G:110:LEU:CG	2.65	0.44
9:G:128:GLU:C	9:G:130:ALA:H	2.15	0.44
9:G:45:ASP:CB	9:G:83:ILE:HD11	2.44	0.44
1:X:1171:A:H1'	17:O:6:GLN:HB3	1.99	0.44
1:X:2032:G:C2	1:X:2599:U:N3	2.85	0.44
1:X:647:G:O6	11:I:107:LYS:HE3	2.17	0.44
2:Z:74:A:C2	2:Z:107:C:N4	2.86	0.44
12:J:117:GLU:OE1	12:J:120:ARG:HD3	2.17	0.44
1:X:2797:G:H2'	1:X:2798:A:H5''	1.99	0.44
5:C:101:GLN:C	5:C:103:GLY:N	2.70	0.44
5:C:117:LEU:HD21	5:C:187:VAL:HG22	1.98	0.44
5:C:3:GLN:NE2	5:C:4:ILE:N	2.65	0.44
11:I:16:ARG:HB3	11:I:17:LYS:H	1.57	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:626:A:O4'	1:X:626:A:OP1	2.36	0.44
11:I:52:GLY:HA3	11:I:55:ARG:HB2	2.00	0.44
3:A:142:VAL:HB	3:A:192:THR:O	2.17	0.44
19:Q:25:TYR:CD2	19:Q:25:TYR:N	2.86	0.44
19:Q:58:VAL:O	19:Q:74:ASP:HA	2.17	0.44
1:X:338:G:H1'	20:R:10:HIS:HE1	1.83	0.44
20:R:25:LEU:HG	20:R:81:VAL:HG23	1.98	0.44
7:E:89:LEU:O	7:E:129:THR:HG22	2.18	0.44
1:X:1528:C:H6	1:X:1528:C:OP2	2.01	0.44
21:S:142:ASN:N	21:S:145:ASP:OD1	2.50	0.44
3:A:175:VAL:O	3:A:182:LEU:HD23	2.18	0.44
1:X:1331:G:N3	1:X:1331:G:H2'	2.32	0.44
1:X:1344:C:C4	1:X:1346:C:C2	3.05	0.44
1:X:2033:C:N4	1:X:2034:A:C6	2.86	0.44
1:X:1061:A:N1	1:X:2731:G:C6	2.86	0.44
7:E:50:LEU:CG	7:E:51:LEU:N	2.81	0.44
26:Y:16:ARG:HD3	26:Y:20:ARG:HH22	1.82	0.44
3:A:64:ILE:H	3:A:64:ILE:HD12	1.83	0.44
1:X:306:G:C2	1:X:307:C:C4	3.06	0.44
21:S:149:ALA:O	21:S:152:ILE:HB	2.17	0.44
10:H:104:GLU:H	10:H:104:GLU:HG2	1.18	0.44
1:X:606:A:C6	1:X:607:C:C4	3.05	0.44
24:V:64:GLY:O	24:V:65:GLU:HB3	2.16	0.44
1:X:2636:A:H2'	1:X:2637:C:O4'	2.18	0.44
1:X:2775:U:O5'	1:X:2777:A:OP2	2.36	0.44
1:X:2432:A:H2'	1:X:2433:G:C8	2.52	0.44
1:X:497:C:H3'	1:X:497:C:H6	1.81	0.44
11:I:134:GLU:CG	11:I:139:ARG:HA	2.47	0.44
1:X:2440:C:C2	1:X:2441:U:C5	3.06	0.44
1:X:1483:G:N2	1:X:1541:G:H1'	2.33	0.44
1:X:2463:G:O2'	1:X:2464:G:H5'	2.18	0.44
5:C:72:ARG:HG3	5:C:77:PHE:CD2	2.53	0.44
22:T:10:SER:HB2	22:T:11:LYS:HE2	2.00	0.44
1:X:2190:A:H2'	1:X:2190:A:N3	2.33	0.44
1:X:795:A:C2	3:A:226:MET:CE	3.00	0.44
9:G:153:GLY:O	9:G:154:GLU:HG3	2.17	0.44
17:O:36:LYS:HZ1	17:O:98:ILE:H	1.64	0.44
1:X:1153:A:O2'	1:X:1154:A:O5'	2.36	0.44
1:X:1201:G:H5''	17:O:80:TYR:CE2	2.52	0.44
1:X:957:G:H22	1:X:983:G:H1'	1.81	0.44
1:X:961:G:H2'	1:X:962:C:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:136:LEU:HD23	6:D:141:ILE:CG2	2.45	0.44
6:D:52:LYS:HD3	6:D:56:GLU:OE2	2.17	0.44
1:X:2029:G:C2	1:X:2602:G:C2	3.05	0.44
5:C:97:ARG:O	5:C:100:ARG:N	2.51	0.44
11:I:11:GLY:N	11:I:14:LYS:HB2	2.28	0.44
1:X:1811:A:O2'	1:X:1812:U:OP2	2.31	0.44
19:Q:76:LYS:O	19:Q:77:LYS:C	2.55	0.44
1:X:318:G:H8	1:X:318:G:H5'	1.83	0.44
10:H:8:LEU:N	10:H:8:LEU:HD12	2.32	0.44
7:E:20:GLN:HG3	7:E:20:GLN:H	1.43	0.44
7:E:89:LEU:HD11	7:E:95:ARG:O	2.17	0.44
1:X:1672:A:H3'	1:X:1673:C:C5	2.53	0.44
14:L:10:LYS:O	14:L:14:ARG:CB	2.64	0.44
2:Z:11:G:OP2	14:L:16:LYS:NZ	2.44	0.44
7:E:33:LEU:CD2	7:E:35:VAL:HG13	2.46	0.44
26:Y:33:CYS:HA	26:Y:34:PRO:HD3	1.71	0.44
1:X:947:C:N3	1:X:948:C:C4	2.86	0.44
25:W:38:PRO:HA	25:W:41:ARG:NH2	2.32	0.44
1:X:1325:U:O2'	1:X:1327:C:C4	2.70	0.44
1:X:71:A:O2'	1:X:72:A:OP1	2.27	0.44
2:Z:36:A:H5''	2:Z:37:C:OP1	2.17	0.44
1:X:2691:C:O2	1:X:2692:A:C8	2.70	0.44
1:X:441:A:N7	1:X:442:A:C5	2.86	0.44
21:S:19:ILE:HG22	21:S:20:ALA:O	2.18	0.44
1:X:2775:U:H5'	1:X:2776:U:C5'	2.47	0.44
13:K:28:LEU:CD2	13:K:28:LEU:C	2.83	0.44
1:X:2839:G:C4	1:X:2840:U:C4	3.06	0.44
1:X:1479:G:H2'	1:X:1480:G:C8	2.53	0.44
1:X:166:G:H1	1:X:182:G:C2'	2.28	0.44
1:X:1873:A:C8	1:X:1873:A:C3'	3.00	0.44
4:B:15:TRP:CZ3	15:M:84:ALA:CB	3.01	0.44
1:X:2665:G:H2'	1:X:2666:U:C6	2.48	0.44
1:X:2664:G:C6	1:X:2705:A:C6	3.05	0.44
9:G:127:ILE:O	9:G:130:ALA:HB3	2.18	0.44
1:X:1006:C:C2	9:G:31:THR:OG1	2.69	0.44
17:O:25:LEU:CB	17:O:32:LYS:HE2	2.34	0.44
17:O:38:LEU:HD13	17:O:38:LEU:C	2.39	0.44
16:N:20:ARG:NH1	17:O:83:ARG:NH2	2.65	0.44
1:X:1261:G:OP2	5:C:86:PRO:HB3	2.18	0.44
1:X:36:G:H4'	1:X:463:C:C5	2.53	0.44
6:D:9:ASN:HA	6:D:13:ARG:HB2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:72:GLY:C	14:L:74:ALA:H	2.22	0.44
21:S:42:ALA:CA	21:S:45:GLN:HG2	2.48	0.44
5:C:130:THR:O	5:C:133:PHE:N	2.50	0.44
23:U:26:ALA:HB2	23:U:35:THR:CG2	2.45	0.44
1:X:177:U:O4	1:X:225:G:N2	2.49	0.44
1:X:665:A:H2'	1:X:665:A:N3	2.33	0.44
19:Q:13:SER:OG	19:Q:16:ALA:HB3	2.18	0.44
19:Q:58:VAL:O	19:Q:59:PRO:O	2.36	0.44
19:Q:10:PRO:HD3	24:V:30:PHE:CD2	2.53	0.44
24:V:30:PHE:C	24:V:32:ALA:N	2.67	0.44
1:X:1517:C:C5'	3:A:102:LYS:HZ3	2.29	0.44
20:R:14:LEU:H	20:R:14:LEU:CD2	2.16	0.44
20:R:54:ILE:HG23	20:R:71:GLN:CA	2.48	0.44
8:F:126:ASN:HA	8:F:129:ALA:CB	2.47	0.44
1:X:2538:C:C2'	1:X:2539:C:H5'	2.47	0.44
7:E:139:GLN:O	7:E:140:LEU:C	2.55	0.44
4:B:134:TRP:CD1	4:B:134:TRP:N	2.69	0.44
24:V:9:LEU:HD13	24:V:13:ASP:CG	2.38	0.44
24:V:4:SER:O	24:V:7:ARG:NE	2.51	0.44
21:S:96:VAL:N	21:S:120:LEU:O	2.30	0.44
1:X:1086:C:C3'	1:X:1087:C:C5'	2.94	0.44
1:X:1092:U:C4'	8:F:118:ALA:HB2	2.48	0.44
1:X:633:G:H2'	1:X:634:G:C8	2.52	0.44
1:X:304:A:N7	1:X:356:A:N6	2.66	0.44
30:4:27:CYS:SG	30:4:32:HIS:ND1	2.89	0.44
1:X:1379:A:C5	1:X:1380:C:C4	3.06	0.44
1:X:1337:G:OP2	18:P:105:ARG:CZ	2.65	0.44
1:X:209:G:H3'	1:X:209:G:H8	1.83	0.44
1:X:2784:A:C6	1:X:2866:A:C8	3.06	0.44
1:X:1774:A:N1	1:X:2566:A:C4	2.86	0.44
1:X:1756:C:O2'	1:X:1757:C:H5'	2.18	0.44
1:X:2040:A:H2'	1:X:2041:A:C8	2.53	0.44
18:P:117:ILE:CG2	18:P:118:LYS:N	2.80	0.44
1:X:2184:C:H2'	1:X:2185:U:C6	2.53	0.44
16:N:87:ASN:C	16:N:87:ASN:HD22	2.17	0.44
4:B:114:GLN:N	4:B:158:GLY:O	2.43	0.44
1:X:1816:G:C2'	1:X:1817:U:H5'	2.46	0.44
15:M:65:SER:HB2	15:M:81:PHE:O	2.17	0.44
1:X:548:G:H4'	9:G:34:PRO:HG3	1.99	0.44
17:O:10:LYS:CD	17:O:11:GLN:NE2	2.81	0.44
1:X:1234:C:H2'	1:X:1235:C:H6	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2495:G:C4	1:X:2548:G:N2	2.85	0.44
1:X:574:C:H5''	11:I:32:ARG:HH12	1.83	0.44
1:X:574:C:H5''	11:I:32:ARG:NH1	2.32	0.44
1:X:661:C:H2'	1:X:662:G:C8	2.53	0.44
1:X:661:C:C2	1:X:662:G:C8	3.06	0.44
1:X:499:G:C2	1:X:503:G:O6	2.71	0.44
6:D:170:LEU:O	6:D:175:LEU:HD22	2.18	0.44
6:D:52:LYS:C	6:D:52:LYS:HD3	2.38	0.44
14:L:37:HIS:CD2	14:L:39:TYR:HE1	2.36	0.44
1:X:1168:G:C2	1:X:1169:C:C2	3.06	0.44
5:C:130:THR:O	5:C:131:LYS:C	2.56	0.44
5:C:130:THR:O	5:C:134:ILE:HG12	2.17	0.44
1:X:457:C:O2'	1:X:458:G:H5'	2.17	0.44
1:X:2225:G:C2'	1:X:2226:A:H8	2.05	0.44
1:X:677:G:H2'	1:X:678:G:C5'	2.48	0.44
3:A:37:LEU:O	3:A:62:TYR:N	2.51	0.44
19:Q:55:THR:HG22	19:Q:78:ALA:CA	2.47	0.44
1:X:1312:G:N7	1:X:1656:U:H5	2.16	0.44
3:A:96:HIS:HE1	3:A:100:GLY:CA	2.28	0.44
1:X:1509:A:H2'	1:X:1510:A:H5'	1.99	0.44
1:X:492:G:O2'	1:X:517:A:N6	2.51	0.44
1:X:2527:G:C2	1:X:2528:G:C8	3.06	0.44
30:4:1:MET:SD	30:4:35:ARG:HB2	2.58	0.44
1:X:1067:G:HO2'	1:X:1097:A:H8	1.64	0.44
7:E:133:VAL:HG11	7:E:144:VAL:CG1	2.47	0.44
4:B:36:ARG:HG2	4:B:36:ARG:NH1	2.32	0.44
1:X:1331:G:C6	1:X:1348:C:N4	2.86	0.44
1:X:2343:C:H2'	1:X:2344:G:H5'	1.99	0.44
24:V:9:LEU:HB3	24:V:13:ASP:HB2	2.00	0.44
1:X:1948:C:C5	1:X:1949:A:C8	3.05	0.44
1:X:1882:G:O2'	1:X:1883:A:C5'	2.61	0.44
1:X:2084:G:P	1:X:2084:G:H8	2.40	0.44
4:B:25:VAL:HA	4:B:183:LEU:HD22	2.00	0.44
4:B:25:VAL:HG21	15:M:16:ILE:HD12	2.00	0.44
1:X:76:C:N4	1:X:108:G:C6	2.86	0.44
1:X:1625:A:N3	1:X:1632:A:C4	2.86	0.44
1:X:1625:A:C2	1:X:1632:A:C4	3.06	0.44
1:X:1272:G:H2'	1:X:1273:G:C8	2.53	0.44
1:X:28:A:H1'	1:X:523:A:C2	2.52	0.44
1:X:1502:G:H2'	1:X:1503:G:H8	1.83	0.44
1:X:1134:C:O2'	1:X:1135:C:H5'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2294:U:H4'	6:D:127:ASN:HD22	1.81	0.44
1:X:2286:G:H21	1:X:2290:A:N6	2.16	0.44
4:B:163:GLU:CG	4:B:164:ARG:N	2.81	0.44
6:D:32:GLU:HB3	6:D:157:VAL:CB	2.48	0.44
1:X:1567:A:C5	1:X:1568:A:N7	2.86	0.44
1:X:2832:G:N2	1:X:2835:A:OP2	2.51	0.44
1:X:2046:C:O2	1:X:2430:A:C2	2.70	0.44
1:X:2557:G:N9	4:B:139:GLY:O	2.51	0.43
1:X:713:G:H2'	1:X:714:G:O4'	2.18	0.43
15:M:40:ARG:O	15:M:41:GLU:HG3	2.18	0.43
5:C:46:ARG:O	5:C:47:THR:C	2.56	0.43
17:O:23:GLU:HG2	17:O:91:THR:HB	1.99	0.43
1:X:1164:C:H2'	1:X:1165:G:O4'	2.18	0.43
1:X:812:G:C4	1:X:813:A:N7	2.86	0.43
6:D:22:TYR:OH	6:D:29:PRO:HD3	2.18	0.43
14:L:84:ILE:O	14:L:86:GLN:N	2.51	0.43
2:Z:106:U:O2'	21:S:24:TYR:CZ	2.68	0.43
3:A:124:GLU:HA	3:A:125:PRO:HD2	1.74	0.43
3:A:134:ARG:O	3:A:136:VAL:N	2.51	0.43
1:X:1440:G:H3'	1:X:1441:A:C5'	2.47	0.43
19:Q:30:SER:HA	19:Q:31:PRO:HD3	1.86	0.43
19:Q:61:LYS:HB2	19:Q:72:ARG:NE	2.33	0.43
1:X:320:A:N3	1:X:340:G:O2'	2.27	0.43
10:H:24:VAL:HA	10:H:51:ILE:HG22	1.99	0.43
10:H:76:ARG:NE	15:M:75:GLU:HG3	2.31	0.43
7:E:21:ASP:C	7:E:23:VAL:N	2.70	0.43
16:N:10:ARG:O	16:N:11:ARG:C	2.55	0.43
1:X:1526:U:H3'	1:X:1527:G:C8	2.52	0.43
3:A:172:TYR:CD1	3:A:184:ARG:HD2	2.53	0.43
5:C:167:VAL:O	5:C:168:SER:HB2	2.18	0.43
14:L:11:LEU:O	14:L:14:ARG:HB3	2.18	0.43
1:X:2302:G:H2'	1:X:2303:C:O4'	2.17	0.43
5:C:67:ALA:O	5:C:68:ARG:HB3	2.18	0.43
18:P:80:LEU:O	18:P:84:GLU:N	2.50	0.43
18:P:91:PHE:N	18:P:91:PHE:CD1	2.86	0.43
18:P:91:PHE:N	18:P:91:PHE:HD1	2.16	0.43
7:E:6:LYS:C	7:E:69:ARG:NE	2.71	0.43
2:Z:62:C:H2'	2:Z:63:A:O4'	2.18	0.43
1:X:115:G:N1	1:X:117:A:N6	2.66	0.43
1:X:789:G:O6	1:X:2055:G:OP1	2.36	0.43
1:X:1107:A:H2'	1:X:1108:U:H5''	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1345:G:C5	1:X:1625:A:C6	3.06	0.43
1:X:26:G:C2	1:X:27:G:N2	2.86	0.43
1:X:1288:A:N6	1:X:1309:G:H4'	2.33	0.43
7:E:57:ASP:N	7:E:57:ASP:OD1	2.51	0.43
1:X:2388:G:C6	1:X:2389:G:C5	3.06	0.43
1:X:2786:G:OP1	4:B:62:PRO:HD3	2.18	0.43
10:H:73:VAL:HG21	10:H:123:PHE:CD1	2.53	0.43
6:D:126:GLY:O	6:D:127:ASN:C	2.56	0.43
1:X:1758:C:N3	1:X:1759:A:C8	2.86	0.43
1:X:1849:G:O5'	1:X:1849:G:H8	2.01	0.43
26:Y:36:CYS:C	26:Y:38:GLY:H	2.21	0.43
4:B:163:GLU:CG	4:B:164:ARG:H	2.30	0.43
1:X:1720:G:C2	1:X:1721:G:C4	3.05	0.43
1:X:2670:C:C2	1:X:2671:C:C5	3.06	0.43
12:J:97:VAL:HG23	12:J:97:VAL:O	2.18	0.43
1:X:1996:A:N6	1:X:2592:U:C5	2.86	0.43
10:H:81:ILE:HD12	10:H:89:ILE:HD12	1.99	0.43
4:B:147:PRO:C	4:B:149:ARG:N	2.71	0.43
9:G:106:TYR:CZ	9:G:108:GLY:HA2	2.53	0.43
16:N:37:GLN:O	16:N:40:LEU:HG	2.18	0.43
16:N:49:ASP:O	16:N:53:LYS:N	2.42	0.43
17:O:93:ILE:O	17:O:93:ILE:CG1	2.66	0.43
1:X:546:A:H2'	1:X:547:U:H6	1.80	0.43
1:X:815:A:C4	1:X:816:U:C5	3.07	0.43
1:X:832:A:H2	1:X:953:G:N3	2.15	0.43
11:I:89:ASP:O	11:I:90:ARG:C	2.57	0.43
6:D:49:ALA:HA	6:D:52:LYS:HB2	2.01	0.43
25:W:1:MET:HA	25:W:55:GLU:O	2.18	0.43
21:S:77:ALA:HA	21:S:78:PRO:HD3	1.89	0.43
4:B:194:GLY:HA2	15:M:2:GLN:HB3	2.00	0.43
1:X:1255:A:H2'	1:X:1256:C:H6	1.81	0.43
1:X:1790:G:N2	3:A:155:LEU:CD2	2.81	0.43
3:A:37:LEU:HB3	3:A:38:PRO:HD2	2.00	0.43
3:A:83:GLU:O	3:A:92:ILE:HG22	2.18	0.43
19:Q:62:ARG:HG3	19:Q:63:LYS:N	2.33	0.43
3:A:70:ARG:HH21	3:A:190:TYR:H	1.65	0.43
20:R:93:ARG:HH21	20:R:109:ALA:HA	1.84	0.43
8:F:105:VAL:O	8:F:109:ALA:N	2.35	0.43
10:H:2:ILE:CG2	10:H:6:SER:HB3	2.47	0.43
30:4:18:ARG:CA	30:4:22:ARG:O	2.62	0.43
1:X:2722:C:O2'	1:X:2723:C:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1494:G:C4	1:X:1495:G:C8	3.06	0.43
3:A:177:LEU:O	3:A:179:SER:N	2.51	0.43
1:X:310:A:N1	5:C:162:ARG:NH2	2.65	0.43
1:X:2343:C:H5'	22:T:56:ASP:OD2	2.18	0.43
15:M:104:LEU:HA	15:M:106:TYR:CD2	2.53	0.43
1:X:1124:U:C2	1:X:1125:G:C8	3.06	0.43
24:V:4:SER:O	24:V:8:ASN:N	2.44	0.43
8:F:94:LYS:HB2	8:F:94:LYS:HE2	1.85	0.43
22:T:16:SER:HB3	22:T:17:ASN:H	1.60	0.43
1:X:1830:C:N4	1:X:1881:U:C3'	2.78	0.43
1:X:2447:G:O2'	1:X:2448:A:C8	2.50	0.43
1:X:107:G:C2	1:X:108:G:C8	3.06	0.43
21:S:168:VAL:CG1	21:S:168:VAL:O	2.67	0.43
1:X:148:C:H6	1:X:148:C:OP1	2.01	0.43
1:X:394:U:H2'	1:X:395:G:H8	1.80	0.43
1:X:198:A:H4'	1:X:199:A:OP2	2.19	0.43
1:X:810:U:H2'	1:X:811:G:C8	2.52	0.43
1:X:2294:U:H1'	6:D:123:ASP:OD2	2.18	0.43
1:X:1556:A:H2'	1:X:1557:G:C8	2.53	0.43
1:X:1866:G:N2	1:X:1867:A:C2	2.86	0.43
1:X:583:C:C6	1:X:2038:C:H5''	2.54	0.43
22:T:38:VAL:HG21	22:T:79:ILE:CD1	2.48	0.43
9:G:48:GLY:CA	9:G:89:ALA:HB2	2.45	0.43
1:X:1764:A:C2'	1:X:1765:C:H5'	2.47	0.43
1:X:2204:A:H5'	1:X:2205:C:O4'	2.18	0.43
1:X:2075:U:O2'	1:X:2076:G:P	2.76	0.43
3:A:212:SER:OG	3:A:213:ARG:N	2.51	0.43
3:A:214:TRP:C	3:A:215:LEU:HG	2.38	0.43
10:H:116:ARG:HH11	15:M:38:LYS:NZ	2.04	0.43
15:M:33:VAL:HG23	15:M:94:VAL:HG21	2.00	0.43
15:M:37:THR:CG2	15:M:38:LYS:N	2.82	0.43
5:C:50:GLN:C	5:C:52:SER:N	2.70	0.43
9:G:108:GLY:C	9:G:110:LEU:CD2	2.84	0.43
9:G:61:ARG:HE	9:G:65:LYS:NZ	2.14	0.43
9:G:85:ALA:O	9:G:86:ALA:C	2.57	0.43
16:N:20:ARG:C	16:N:22:LYS:H	2.21	0.43
16:N:57:PHE:O	16:N:58:ARG:C	2.57	0.43
1:X:1163:C:O3'	16:N:76:TYR:HE2	2.01	0.43
17:O:78:VAL:O	17:O:79:GLN:C	2.56	0.43
6:D:34:ILE:C	6:D:91:LEU:HB2	2.39	0.43
2:Z:49:C:H2'	2:Z:50:U:H5'	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:51:G:O2'	2:Z:52:G:H5'	2.18	0.43
25:W:34:VAL:O	25:W:35:SER:O	2.36	0.43
11:I:11:GLY:O	11:I:12:SER:C	2.57	0.43
3:A:146:GLU:HG2	3:A:148:VAL:H	1.83	0.43
3:A:147:LEU:HD21	3:A:155:LEU:HD11	1.97	0.43
19:Q:73:ASN:O	19:Q:74:ASP:HB2	2.18	0.43
1:X:1310:C:C2	1:X:1311:C:C5	3.06	0.43
1:X:1659:G:O2'	1:X:1660:G:H5'	2.19	0.43
1:X:1515:U:C2	1:X:1516:A:C8	3.07	0.43
10:H:23:ARG:HH21	10:H:24:VAL:N	2.17	0.43
30:4:15:LYS:HB3	30:4:26:ILE:HG13	1.97	0.43
1:X:2034:A:C5	1:X:2593:A:C5	3.07	0.43
1:X:1745:C:OP1	15:M:101:ARG:CD	2.67	0.43
13:K:10:LEU:HD12	13:K:17:ARG:CG	2.48	0.43
7:E:24:PHE:CE1	7:E:37:TYR:O	2.71	0.43
30:4:30:VAL:HG12	30:4:33:LYS:HE3	2.01	0.43
1:X:1851:A:C6	1:X:1867:A:H1'	2.53	0.43
1:X:856:A:H2'	1:X:857:U:O4'	2.18	0.43
3:A:222:ARG:C	3:A:224:SER:N	2.69	0.43
4:B:107:THR:CG2	4:B:162:MET:HE3	2.47	0.43
1:X:565:A:O5'	1:X:565:A:H8	2.00	0.43
1:X:2511:G:H2'	1:X:2512:A:C8	2.53	0.43
1:X:95:G:N2	1:X:96:C:C2	2.86	0.43
1:X:473:C:H6	1:X:473:C:H3'	1.82	0.43
15:M:91:VAL:HG12	15:M:92:THR:N	2.33	0.43
9:G:116:ARG:HD2	9:G:126:VAL:HG13	2.00	0.43
9:G:84:ASN:ND2	9:G:154:GLU:HB3	2.32	0.43
9:G:65:LYS:HG3	9:G:66:HIS:CD2	2.53	0.43
16:N:65:ILE:HG21	16:N:80:ILE:HD11	2.00	0.43
17:O:12:TYR:HB2	17:O:39:PHE:CA	2.47	0.43
17:O:23:GLU:HG2	17:O:91:THR:HG21	1.95	0.43
1:X:1153:A:N3	1:X:1155:G:C8	2.86	0.43
1:X:689:A:O2'	1:X:690:A:H5'	2.18	0.43
1:X:2384:G:N2	1:X:2390:A:N7	2.66	0.43
1:X:647:G:C6	11:I:109:LEU:HD11	2.53	0.43
6:D:134:GLU:O	6:D:136:LEU:N	2.52	0.43
14:L:91:ARG:N	14:L:91:ARG:HD2	2.24	0.43
21:S:25:ASN:ND2	21:S:28:ASN:ND2	2.66	0.43
12:J:115:ALA:C	12:J:117:GLU:H	2.21	0.43
12:J:136:GLU:CA	12:J:138:TYR:CE2	2.98	0.43
12:J:39:GLU:OE2	12:J:128:ILE:HB	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:873:U:O4	1:X:929:A:N7	2.52	0.43
5:C:108:ILE:HG12	5:C:108:ILE:H	1.49	0.43
1:X:1216:G:O5'	1:X:1216:G:H8	2.01	0.43
3:A:120:GLY:O	3:A:123:ALA:HB2	2.18	0.43
3:A:158:SER:O	3:A:159:ALA:HB3	2.17	0.43
1:X:1791:C:HO2'	1:X:1792:C:P	2.41	0.43
1:X:708:G:C2	1:X:709:A:C8	3.05	0.43
1:X:2289:A:C2	6:D:75:SER:HB2	2.54	0.43
1:X:317:U:C3'	1:X:318:G:C5'	2.97	0.43
1:X:491:A:H5''	20:R:74:LEU:CD1	2.43	0.43
10:H:25:LEU:HD12	10:H:25:LEU:N	2.29	0.43
1:X:2737:A:C2'	1:X:2737:A:N3	2.78	0.43
4:B:116:VAL:HG22	4:B:136:ARG:HG2	1.98	0.43
1:X:1926:U:H4'	1:X:1927:U:C3'	2.34	0.43
1:X:2787:A:C4	1:X:2788:C:C5	3.06	0.43
1:X:2364:C:H2'	1:X:2365:U:C6	2.54	0.43
7:E:9:ILE:CG2	7:E:50:LEU:HB3	2.49	0.43
1:X:155:G:H2'	1:X:156:G:O4'	2.18	0.43
1:X:48:A:H1'	1:X:50:G:C4	2.54	0.43
13:K:43:GLU:OE2	13:K:44:LEU:N	2.51	0.43
8:F:116:LEU:CG	8:F:127:THR:HG21	2.48	0.43
1:X:1107:A:C2'	1:X:1108:U:H5''	2.47	0.43
1:X:2015:G:H8	1:X:2015:G:O5'	2.02	0.43
1:X:1830:C:H41	1:X:1882:G:P	2.41	0.43
1:X:75:C:H2'	1:X:76:C:C5'	2.48	0.43
1:X:78:C:H2'	1:X:79:G:O4'	2.17	0.43
11:I:43:ALA:O	11:I:44:GLY:C	2.56	0.43
15:M:28:ARG:HE	15:M:28:ARG:HB3	1.69	0.43
1:X:1288:A:O2'	1:X:1289:A:O5'	2.36	0.43
1:X:199:A:O2'	1:X:201:G:O4'	2.35	0.43
1:X:205:A:H2'	1:X:206:U:H5'	2.00	0.43
1:X:2786:G:OP1	4:B:62:PRO:CD	2.67	0.43
1:X:2590:U:O2	1:X:2590:U:H2'	2.16	0.43
1:X:754:G:H2'	1:X:755:C:H6	1.83	0.43
1:X:1479:G:H2'	1:X:1480:G:H8	1.83	0.43
1:X:1142:G:O5'	9:G:107:GLN:HB3	2.19	0.43
9:G:51:LEU:O	9:G:52:GLY:C	2.57	0.43
9:G:51:LEU:O	9:G:54:LEU:HB3	2.19	0.43
17:O:11:GLN:NE2	17:O:11:GLN:CA	2.81	0.43
17:O:48:GLY:O	17:O:49:GLU:C	2.56	0.43
1:X:1153:A:H3'	1:X:1153:A:OP2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1165:G:H8	1:X:1165:G:O5'	2.00	0.43
1:X:2607:C:H1'	1:X:2761:A:N3	2.33	0.43
1:X:689:A:H2	1:X:815:A:H61	1.56	0.43
1:X:981:C:O2'	1:X:982:C:H5'	2.19	0.43
11:I:84:GLU:OE2	11:I:89:ASP:OD1	2.36	0.43
6:D:136:LEU:O	6:D:137:ILE:HG12	2.18	0.43
6:D:137:ILE:HG13	6:D:138:PHE:CD1	2.53	0.43
6:D:31:ILE:HD11	6:D:173:MET:HE2	2.01	0.43
2:Z:47:A:H8	6:D:92:ARG:NE	2.17	0.43
6:D:34:ILE:HD12	6:D:96:MET:HB2	2.00	0.43
14:L:37:HIS:CE1	14:L:39:TYR:CZ	3.06	0.43
12:J:121:LEU:O	12:J:124:HIS:N	2.51	0.43
12:J:119:PHE:HE1	12:J:132:MET:HG3	1.82	0.43
12:J:136:GLU:OE1	12:J:138:TYR:HE2	2.02	0.43
12:J:40:PRO:CB	12:J:99:LYS:HZ2	2.32	0.43
1:X:456:C:C5'	5:C:43:ALA:HB2	2.48	0.43
3:A:137:PRO:HB2	3:A:140:ALA:HB2	2.01	0.43
3:A:36:ALA:O	3:A:37:LEU:HD23	2.19	0.43
1:X:1585:A:N6	1:X:1586:A:C6	2.86	0.43
1:X:67:G:O2'	1:X:68:C:O5'	2.36	0.43
6:D:85:VAL:CG2	6:D:86:GLY:H	2.24	0.43
1:X:346:C:H2'	1:X:347:C:H6	1.84	0.43
8:F:81:LYS:HZ2	8:F:84:GLY:HA2	1.84	0.43
1:X:1687:C:OP2	1:X:2529:G:OP1	2.36	0.43
1:X:2332:G:H1'	22:T:33:ALA:O	2.18	0.43
1:X:1949:A:N3	1:X:2572:U:O4'	2.50	0.43
8:F:92:PRO:O	8:F:93:ASN:CB	2.67	0.43
1:X:1087:C:H4'	8:F:94:LYS:HE3	2.01	0.43
1:X:1288:A:H4'	1:X:1289:A:OP1	2.18	0.43
1:X:1644:G:H2'	1:X:1645:U:C6	2.52	0.43
1:X:2776:U:H6	1:X:2776:U:H5''	1.83	0.43
1:X:2855:C:O2'	13:K:90:ARG:HD3	2.18	0.43
1:X:754:G:C4	1:X:755:C:C5	3.07	0.43
1:X:706:A:H2'	1:X:707:U:O4'	2.19	0.43
1:X:584:A:OP2	1:X:2038:C:N4	2.51	0.43
1:X:1492:A:C6	1:X:1531:C:C5	3.06	0.43
1:X:609:U:H1'	11:I:18:ARG:NH2	2.33	0.43
15:M:4:HIS:N	15:M:4:HIS:CD2	2.86	0.43
1:X:1260:A:C6	1:X:1262:U:C2	3.07	0.43
1:X:2490:U:H1'	4:B:139:GLY:HA3	2.00	0.43
1:X:2576:G:C6	1:X:2577:A:N6	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:712:A:C2	1:X:1650:A:H1'	2.52	0.43
9:G:125:ARG:NH1	9:G:128:GLU:CD	2.72	0.43
17:O:5:ILE:HG12	17:O:7:THR:N	2.33	0.43
1:X:1153:A:C4	1:X:1155:G:N7	2.86	0.43
1:X:2024:U:H2'	1:X:2025:A:O4'	2.19	0.43
1:X:538:A:H5''	1:X:538:A:N3	2.33	0.43
1:X:688:A:C6	1:X:689:A:N6	2.87	0.43
11:I:73:GLU:HG3	11:I:101:ARG:CB	2.48	0.43
1:X:649:G:N1	1:X:660:G:C6	2.85	0.43
6:D:28:VAL:HA	6:D:29:PRO:HD3	1.95	0.43
2:Z:32:C:O5'	2:Z:32:C:H6	2.01	0.43
21:S:67:LYS:N	21:S:82:ASP:O	2.43	0.43
12:J:135:ARG:HB3	12:J:136:GLU:H	1.52	0.43
21:S:72:ASP:C	21:S:73:LYS:O	2.57	0.43
1:X:1219:C:H5''	11:I:7:LYS:HE2	2.01	0.43
23:U:23:LYS:HB3	23:U:35:THR:HG22	2.00	0.43
3:A:124:GLU:HG3	3:A:126:LYS:HG3	1.99	0.43
3:A:67:PHE:CD2	3:A:153:ALA:HB3	2.53	0.43
1:X:1287:A:N1	1:X:1661:C:O2'	2.39	0.43
10:H:23:ARG:HH12	10:H:25:LEU:CG	2.01	0.43
1:X:1685:A:C6	1:X:1976:U:C6	3.06	0.43
1:X:2527:G:C5	1:X:2540:A:C2	3.07	0.43
30:4:8:LYS:CA	30:4:9:LYS:HE3	2.48	0.43
10:H:27:SER:OG	10:H:121:ARG:NH2	2.52	0.43
1:X:1467:U:H3'	1:X:1468:A:C5'	2.40	0.43
1:X:2726:U:C1'	7:E:139:GLN:NE2	2.72	0.43
1:X:2320:G:H2'	1:X:2321:C:H6	1.84	0.43
15:M:68:VAL:O	15:M:68:VAL:HG23	2.17	0.43
1:X:2043:A:O2'	1:X:2044:G:P	2.76	0.43
7:E:7:GLN:HA	7:E:69:ARG:HE	1.83	0.43
7:E:9:ILE:HG13	7:E:50:LEU:CD2	2.36	0.43
1:X:169:C:H2'	1:X:170:U:O4'	2.18	0.43
1:X:776:G:H3'	1:X:776:G:H8	1.84	0.43
4:B:182:ILE:HD13	4:B:182:ILE:C	2.38	0.43
21:S:157:GLY:O	21:S:158:CYS:C	2.57	0.43
1:X:215:G:H2'	1:X:216:U:O4'	2.18	0.43
1:X:148:C:H2'	1:X:149:A:O4'	2.18	0.43
1:X:972:C:C4'	1:X:973:U:OP2	2.66	0.43
1:X:1963:G:O3'	1:X:1965:U:OP2	2.37	0.43
13:K:38:LEU:HA	13:K:38:LEU:HD12	1.68	0.43
1:X:2445:C:OP1	30:4:5:SER:N	2.50	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:20:GLY:C	11:I:22:GLY:N	2.72	0.43
1:X:1631:C:C4	1:X:1633:C:C2	3.07	0.43
1:X:2198:U:C6	1:X:2199:C:H1'	2.53	0.43
9:G:101:THR:OG1	9:G:103:TYR:CE1	2.68	0.43
9:G:104:THR:HB	9:G:105:GLY:H	1.43	0.43
9:G:107:GLN:HA	9:G:110:LEU:CG	2.43	0.43
9:G:98:LYS:HA	9:G:98:LYS:HD2	1.64	0.43
16:N:75:ASN:OD1	16:N:75:ASN:C	2.57	0.43
16:N:75:ASN:O	16:N:79:PHE:CB	2.66	0.43
6:D:108:LEU:CB	6:D:109:PRO:HD3	2.48	0.43
6:D:19:GLN:HB3	6:D:20:PHE:CD1	2.53	0.43
14:L:33:ARG:HH22	14:L:103:LEU:N	2.13	0.43
25:W:5:LEU:HB2	25:W:25:LEU:CD1	2.25	0.43
21:S:43:PHE:CG	21:S:43:PHE:O	2.72	0.43
21:S:43:PHE:CD1	21:S:47:SER:HA	2.53	0.43
12:J:59:PHE:CE2	12:J:110:VAL:HG11	2.54	0.43
12:J:55:MET:O	12:J:56:SER:O	2.36	0.43
12:J:131:LYS:HD2	21:S:76:ARG:HE	1.84	0.43
5:C:30:VAL:HA	5:C:95:LEU:HD11	2.00	0.43
1:X:230:C:O2'	1:X:231:G:H5'	2.18	0.43
1:X:1439:G:H8	1:X:1439:G:O5'	2.02	0.43
20:R:71:GLN:OE1	20:R:72:ARG:N	2.52	0.43
1:X:342:G:O2'	1:X:343:A:P	2.77	0.43
1:X:488:A:H2'	1:X:489:A:O4'	2.19	0.43
10:H:1:MET:HE3	10:H:44:TYR:CE1	2.54	0.43
1:X:1935:A:C5	1:X:1936:A:C6	3.06	0.43
7:E:137:ASP:OD1	7:E:139:GLN:N	2.51	0.43
1:X:2737:A:OP2	30:4:19:ARG:CA	2.63	0.43
13:K:15:SER:OG	13:K:16:ALA:N	2.52	0.43
1:X:1930:C:H2'	1:X:1931:G:H8	1.83	0.43
8:F:95:ALA:O	8:F:96:LYS:C	2.56	0.43
1:X:1076:U:H3	1:X:1084:A:H61	1.66	0.43
5:C:64:THR:O	5:C:65:GLY:O	2.36	0.43
18:P:44:VAL:HG23	18:P:45:ILE:HD13	2.01	0.43
18:P:69:ALA:O	18:P:71:VAL:N	2.51	0.43
1:X:970:A:H62	12:J:83:ARG:NH2	2.14	0.43
21:S:89:GLY:HA2	21:S:127:PRO:CG	2.48	0.43
1:X:1376:C:O2'	1:X:1377:G:H5'	2.19	0.43
4:B:19:ARG:NE	4:B:21:ILE:HD11	2.28	0.43
1:X:1120:C:N4	1:X:1121:G:N2	2.67	0.43
1:X:2776:U:H6	1:X:2776:U:H3'	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:119:PRO:CG	6:D:120:ASN:H	2.28	0.43
1:X:615:C:H4'	1:X:669:G:H22	1.82	0.43
25:W:17:VAL:HB	25:W:18:LYS:H	1.49	0.43
1:X:1296:G:H2'	1:X:1298:G:OP2	2.19	0.43
1:X:1469:U:OP2	1:X:1471:G:OP2	2.37	0.43
1:X:1182:U:H5'	1:X:1182:U:H6	1.83	0.43
1:X:932:G:H2'	1:X:933:G:C8	2.54	0.43
13:K:60:LEU:O	13:K:61:HIS:C	2.54	0.43
3:A:53:PHE:CD2	3:A:220:HIS:CD2	3.07	0.43
1:X:1815:G:O2'	1:X:1816:G:H5'	2.18	0.43
1:X:794:A:P	3:A:218:LYS:HD2	2.58	0.43
9:G:84:ASN:O	9:G:152:ALA:HA	2.19	0.43
17:O:47:PHE:O	17:O:48:GLY:O	2.36	0.43
1:X:1142:G:C8	1:X:2008:C:H4'	2.54	0.43
1:X:659:G:H2'	1:X:660:G:O4'	2.19	0.43
6:D:111:ILE:O	6:D:114:PHE:N	2.51	0.43
6:D:138:PHE:N	6:D:138:PHE:CD1	2.87	0.43
6:D:35:VAL:HG11	6:D:88:LYS:CG	2.49	0.43
14:L:33:ARG:HH21	14:L:68:ALA:HB1	1.84	0.43
14:L:75:LEU:O	14:L:78:ALA:N	2.51	0.43
14:L:79:ALA:O	14:L:80:ALA:C	2.56	0.43
25:W:47:VAL:O	25:W:50:LEU:HD12	2.19	0.43
12:J:117:GLU:O	12:J:119:PHE:N	2.51	0.43
5:C:134:ILE:HD13	5:C:134:ILE:H	1.83	0.43
5:C:136:TRP:CD1	5:C:140:ASN:ND2	2.86	0.43
1:X:623:G:H5'	1:X:624:A:OP2	2.18	0.43
1:X:172:A:C8	1:X:175:C:N4	2.84	0.43
1:X:1786:C:H2'	1:X:1787:U:O4'	2.18	0.43
1:X:67:G:HO2'	1:X:68:C:C4'	2.32	0.43
1:X:1641:C:H2'	1:X:1642:G:C5'	2.48	0.43
1:X:318:G:H4'	1:X:1224:A:OP1	2.19	0.43
1:X:510:G:C5	1:X:512:A:OP2	2.72	0.43
1:X:2059:U:O5'	1:X:2217:G:N2	2.52	0.43
1:X:2673:G:C2	1:X:2674:C:C2	3.07	0.43
1:X:1573:G:H3'	1:X:1574:A:H5''	2.01	0.43
21:S:103:ARG:O	21:S:139:THR:CA	2.61	0.43
21:S:140:LYS:HG3	21:S:141:MET:N	2.34	0.43
13:K:20:LEU:O	13:K:22:ARG:N	2.52	0.43
10:H:109:ARG:HA	10:H:129:LEU:CD1	2.49	0.43
8:F:86:GLY:O	8:F:87:LYS:CB	2.66	0.43
1:X:2299:A:C5'	1:X:2300:G:C4	3.02	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:80:LEU:HD21	18:P:87:GLU:CB	2.47	0.43
1:X:1564:U:H2'	1:X:1565:G:H8	1.83	0.43
11:I:78:SER:H	11:I:112:GLY:HA3	1.83	0.43
1:X:2019:C:O2'	1:X:2020:G:H5'	2.19	0.43
1:X:805:G:H2'	1:X:2419:C:N3	2.33	0.43
1:X:2872:U:H2'	1:X:2873:G:C8	2.53	0.43
1:X:1133:G:C2	1:X:1134:C:C5	3.07	0.43
1:X:198:A:C4	1:X:243:G:C8	3.06	0.43
10:H:29:ILE:CB	10:H:123:PHE:HE2	2.31	0.43
1:X:857:U:H2'	1:X:858:G:O4'	2.18	0.43
1:X:2676:G:C2	1:X:2690:A:C2	3.07	0.43
9:G:48:GLY:O	9:G:89:ALA:HB3	2.19	0.43
1:X:1863:U:H2'	1:X:1864:G:H8	1.82	0.43
1:X:867:G:C5	1:X:868:U:C4	3.06	0.43
1:X:1542:G:O2'	1:X:1543:G:H5'	2.18	0.43
1:X:2445:C:H5'	30:4:5:SER:HB3	1.99	0.43
1:X:2627:G:O2'	1:X:2628:C:H5'	2.19	0.43
1:X:1103:C:H42	1:X:1111:C:H42	1.63	0.43
1:X:1567:A:C6	1:X:1568:A:C5	3.07	0.43
1:X:2088:U:HO2'	1:X:2089:C:P	2.42	0.43
1:X:1579:G:H2'	1:X:1580:C:H6	1.84	0.43
5:C:19:LEU:H	5:C:19:LEU:HG	1.49	0.43
1:X:1767:G:C6	1:X:1768:U:C5	3.07	0.43
4:B:202:ALA:O	4:B:203:LYS:HB3	2.18	0.43
9:G:66:HIS:CA	16:N:67:ALA:HB1	2.30	0.43
17:O:43:GLU:O	17:O:44:GLN:C	2.56	0.43
11:I:32:ARG:HD2	17:O:81:ARG:HD2	2.01	0.43
1:X:1033:G:C6	1:X:1151:U:C5	3.06	0.43
1:X:574:C:OP2	17:O:77:GLY:N	2.52	0.43
6:D:103:LEU:O	6:D:104:ILE:C	2.57	0.43
6:D:107:GLY:HA2	6:D:137:ILE:O	2.19	0.43
6:D:150:ARG:HH11	6:D:150:ARG:HG3	1.83	0.43
6:D:150:ARG:HG3	6:D:150:ARG:NH1	2.34	0.43
6:D:22:TYR:CD2	6:D:28:VAL:N	2.86	0.43
14:L:68:ALA:C	14:L:70:ALA:N	2.71	0.43
21:S:30:VAL:CG1	21:S:31:SER:H	2.31	0.43
12:J:19:THR:HG21	12:J:40:PRO:CB	2.48	0.43
23:U:27:ASP:CA	23:U:32:ARG:NH1	2.78	0.43
1:X:174:A:C2	1:X:840:U:O4	2.72	0.43
1:X:171:G:C6	1:X:179:U:C2	3.07	0.43
1:X:676:G:C6	1:X:677:G:C5	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:76:ASN:HA	3:A:118:ASN:CA	2.42	0.43
19:Q:39:LYS:HE3	19:Q:50:VAL:CG1	2.49	0.43
19:Q:68:PHE:HD2	19:Q:68:PHE:N	2.07	0.43
20:R:29:HIS:CE1	20:R:51:VAL:HA	2.53	0.43
1:X:338:G:O6	1:X:343:A:C8	2.72	0.43
10:H:8:LEU:O	10:H:18:GLU:HG3	2.18	0.43
1:X:1975:G:C4	1:X:1980:A:N6	2.86	0.43
1:X:41:G:N1	1:X:451:A:C6	2.86	0.43
1:X:2721:A:H2'	1:X:2722:C:H5'	2.01	0.43
1:X:592:G:P	16:N:10:ARG:HH12	2.40	0.43
11:I:56:LEU:HD22	11:I:56:LEU:O	2.18	0.43
1:X:1574:A:HO2'	1:X:1575:C:H3'	1.77	0.43
5:C:163:ASN:O	5:C:164:VAL:O	2.37	0.43
1:X:2034:A:N7	1:X:2593:A:N7	2.67	0.43
1:X:1062:G:N2	1:X:1063:C:C2	2.87	0.43
24:V:8:ASN:O	24:V:8:ASN:CG	2.57	0.43
8:F:85:ILE:HG22	8:F:86:GLY:H	1.80	0.43
12:J:15:ARG:HB3	12:J:16:GLY:H	1.51	0.43
7:E:33:LEU:HD23	7:E:35:VAL:CG2	2.49	0.43
1:X:2728:A:C4	1:X:2729:A:C8	3.07	0.43
1:X:556:A:H8	1:X:556:A:H3'	1.83	0.43
1:X:557:U:O2'	1:X:558:G:C8	2.70	0.43
13:K:85:PRO:O	13:K:86:LYS:C	2.57	0.43
1:X:2447:G:C8	1:X:2455:A:C2	3.07	0.43
1:X:2170:C:H3'	1:X:2171:U:C5'	2.36	0.43
1:X:697:G:C2	1:X:807:A:C2	3.07	0.43
1:X:1770:U:H5	1:X:1775:A:C8	2.37	0.43
1:X:1804:U:O2'	3:A:45:ASN:HB3	2.19	0.43
1:X:1741:G:H2'	1:X:1742:G:H5'	1.96	0.43
1:X:476:G:C6	1:X:477:A:N6	2.87	0.43
1:X:2659:C:H2'	1:X:2660:C:H6	1.84	0.43
1:X:972:C:H4'	1:X:973:U:OP2	2.19	0.43
1:X:1469:U:P	1:X:1470:G:OP2	2.76	0.43
1:X:1987:G:H2'	1:X:1988:A:H5'	2.00	0.43
14:L:19:THR:O	14:L:21:THR:N	2.51	0.43
26:Y:58:LEU:CD1	26:Y:58:LEU:H	2.31	0.43
1:X:163:A:H2'	1:X:164:G:H8	1.84	0.43
1:X:1915:A:C2'	1:X:1916:G:H5'	2.48	0.43
1:X:1831:G:C6	1:X:1832:G:N7	2.87	0.43
1:X:1973:C:H2'	1:X:1974:U:C6	2.53	0.43
11:I:4:HIS:HB2	11:I:5:ASP:H	1.50	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2178:U:H2'	1:X:2179:C:C6	2.41	0.43
1:X:1783:G:OP1	3:A:205:VAL:O	2.37	0.43
1:X:687:G:H5''	5:C:70:GLY:N	2.33	0.43
16:N:43:ALA:O	16:N:44:THR:C	2.57	0.43
17:O:33:VAL:O	17:O:33:VAL:HG23	2.17	0.43
1:X:1162:A:C6	1:X:1163:C:C4	3.07	0.43
1:X:538:A:H62	1:X:2025:A:H2'	1.82	0.43
1:X:689:A:H8	1:X:2052:G:H21	1.66	0.43
1:X:577:U:H4'	1:X:956:A:N6	2.34	0.43
6:D:38:GLU:N	6:D:87:ILE:O	2.36	0.43
2:Z:57:U:H1'	6:D:26:MET:CG	2.49	0.43
21:S:64:ALA:HB2	21:S:85:MET:SD	2.59	0.43
12:J:119:PHE:O	12:J:123:GLY:N	2.51	0.43
12:J:66:TYR:O	12:J:106:GLU:OE2	2.37	0.43
11:I:7:LYS:C	11:I:9:THR:N	2.71	0.43
1:X:1216:G:HO2'	5:C:178:TYR:HH	1.64	0.43
3:A:33:LEU:CD2	3:A:63:ARG:NH1	2.82	0.43
3:A:83:GLU:OE1	3:A:104:TYR:CE2	2.72	0.43
1:X:1358:C:C3'	1:X:1359:G:C5'	2.96	0.43
1:X:1692:C:C2	4:B:129:HIS:CD2	3.07	0.43
30:4:18:ARG:HG3	30:4:23:VAL:HG13	2.01	0.43
16:N:7:GLY:O	16:N:8:ILE:HG12	2.19	0.43
1:X:2334:C:O2'	22:T:24:LYS:HE3	2.18	0.43
13:K:10:LEU:CD2	13:K:14:SER:H	2.32	0.43
1:X:2319:G:C2	1:X:2320:G:N7	2.87	0.43
1:X:2522:G:C8	1:X:2522:G:H5'	2.53	0.43
1:X:116:A:H8	1:X:116:A:H3'	1.83	0.43
1:X:1372:A:N7	1:X:1386:A:N1	2.66	0.43
1:X:1288:A:O2'	1:X:1289:A:C4'	2.66	0.43
1:X:1032:A:C8	1:X:1032:A:C3'	3.01	0.43
1:X:1645:U:H2'	1:X:1646:G:O4'	2.19	0.43
1:X:202:A:H2'	1:X:203:G:O4'	2.19	0.43
1:X:421:G:O5'	1:X:421:G:H8	2.02	0.43
1:X:2379:G:N1	1:X:2380:U:C2	2.87	0.43
1:X:2692:A:C5'	1:X:2693:U:OP2	2.67	0.43
1:X:244:C:C4	1:X:245:C:C5	3.07	0.43
19:Q:90:ALA:C	19:Q:92:ALA:H	2.21	0.43
1:X:1713:G:H8	1:X:1713:G:C5'	2.32	0.43
1:X:1462:C:C2	1:X:1463:A:C8	3.06	0.43
1:X:2875:C:H2'	1:X:2876:C:C5'	2.49	0.43
1:X:2436:U:O2	1:X:2474:G:C2	2.72	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1982:C:OP1	1:X:2703:C:O2'	2.35	0.43
1:X:2820:C:H6	1:X:2820:C:O5'	2.02	0.43
1:X:1228:G:O2'	1:X:1229:C:H5'	2.19	0.43
4:B:131:SER:C	4:B:132:LYS:CG	2.87	0.43
1:X:791:G:C6	1:X:792:U:C2	3.06	0.43
9:G:67:ARG:O	9:G:70:PHE:CE1	2.72	0.42
17:O:9:GLY:O	17:O:10:LYS:HB3	2.19	0.42
17:O:35:LEU:O	17:O:36:LYS:CB	2.67	0.42
1:X:1017:C:C2	1:X:1148:G:N2	2.87	0.42
1:X:2548:G:O2'	1:X:2549:G:H5'	2.19	0.42
1:X:985:G:O2'	1:X:986:A:P	2.77	0.42
21:S:39:PHE:CE2	21:S:43:PHE:HB2	2.54	0.42
21:S:75:LYS:H	21:S:75:LYS:CE	2.32	0.42
11:I:10:PRO:HA	11:I:14:LYS:HB2	2.01	0.42
1:X:1219:C:C5'	11:I:7:LYS:O	2.61	0.42
1:X:222:G:H2'	1:X:223:C:H6	1.84	0.42
1:X:1441:A:O2'	1:X:1442:C:P	2.76	0.42
19:Q:55:THR:HB	19:Q:78:ALA:HA	2.01	0.42
19:Q:74:ASP:O	19:Q:75:ARG:CG	2.61	0.42
20:R:105:ARG:CZ	20:R:106:VAL:O	2.67	0.42
20:R:76:LEU:HD23	20:R:76:LEU:N	2.33	0.42
1:X:510:G:N2	1:X:512:A:H3'	2.34	0.42
7:E:18:ASN:O	7:E:20:GLN:HG3	2.19	0.42
7:E:137:ASP:C	7:E:137:ASP:OD1	2.58	0.42
1:X:2740:C:H2'	1:X:2741:G:H5'	2.00	0.42
1:X:1524:C:H6	1:X:1525:A:C8	2.36	0.42
22:T:72:LYS:O	22:T:74:LYS:O	2.37	0.42
24:V:10:GLN:C	24:V:12:THR:H	2.21	0.42
12:J:77:LYS:CG	12:J:78:LYS:N	2.82	0.42
12:J:80:ALA:O	12:J:81:GLU:HB3	2.19	0.42
7:E:7:GLN:N	7:E:7:GLN:OE1	2.52	0.42
1:X:617:U:H5''	1:X:617:U:O2	2.18	0.42
1:X:2245:A:C4'	1:X:2246:A:C2	3.02	0.42
1:X:203:G:C2	1:X:204:A:C2	3.07	0.42
1:X:1775:A:O2'	1:X:1776:A:OP2	2.33	0.42
6:D:123:ASP:C	6:D:125:ARG:H	2.21	0.42
1:X:1805:G:H21	3:A:50:THR:CG2	2.32	0.42
21:S:56:VAL:CG1	21:S:57:GLU:H	2.27	0.42
7:E:107:ILE:N	7:E:107:ILE:CD1	2.81	0.42
1:X:965:G:C6	1:X:966:A:C5	3.07	0.42
1:X:748:A:H3'	1:X:749:C:C6	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1210:C:O2'	1:X:1211:G:H5'	2.19	0.42
1:X:1211:G:C4	1:X:1212:U:H5	2.33	0.42
1:X:764:A:C2	1:X:802:A:H2'	2.51	0.42
1:X:674:U:O2'	1:X:675:C:H5'	2.19	0.42
1:X:1861:G:H2'	1:X:1862:C:O4'	2.19	0.42
11:I:70:THR:CG2	11:I:71:THR:N	2.81	0.42
1:X:2465:G:N2	1:X:2466:G:C4	2.87	0.42
23:U:62:LEU:HD23	23:U:67:LEU:CD1	2.49	0.42
3:A:54:ILE:N	3:A:217:ARG:HB3	2.34	0.42
1:X:793:G:C2	1:X:795:A:C2	3.07	0.42
9:G:71:THR:HB	16:N:64:ARG:NH1	2.34	0.42
9:G:79:PHE:CZ	9:G:147:ARG:NE	2.87	0.42
17:O:40:VAL:O	17:O:42:GLY:N	2.52	0.42
17:O:46:VAL:O	17:O:47:PHE:CD1	2.72	0.42
1:X:1016:C:H5'	1:X:1023:U:OP2	2.20	0.42
1:X:812:G:C8	1:X:813:A:C8	3.07	0.42
6:D:134:GLU:HG2	6:D:134:GLU:O	2.18	0.42
6:D:22:TYR:C	6:D:24:SER:H	2.21	0.42
6:D:99:PHE:HD1	6:D:102:LYS:HD2	1.85	0.42
14:L:78:ALA:O	14:L:80:ALA:N	2.52	0.42
25:W:2:LYS:HE2	25:W:31:SER:HB2	2.00	0.42
21:S:45:GLN:NE2	21:S:45:GLN:N	2.66	0.42
12:J:68:ARG:NH1	12:J:68:ARG:CB	2.82	0.42
1:X:2800:C:C5	1:X:2801:A:N7	2.87	0.42
1:X:2228:U:H2'	1:X:2231:G:OP2	2.19	0.42
20:R:40:LEU:O	20:R:44:GLN:CA	2.66	0.42
1:X:1223:G:C5'	1:X:1224:A:H5'	2.42	0.42
10:H:23:ARG:CB	10:H:23:ARG:HH21	2.29	0.42
7:E:20:GLN:O	7:E:21:ASP:CB	2.67	0.42
7:E:148:VAL:O	7:E:151:VAL:HG23	2.19	0.42
1:X:1572:C:H2'	1:X:1573:G:H5'	2.01	0.42
1:X:2827:G:H2'	1:X:2828:C:O4'	2.19	0.42
4:B:79:ARG:NH1	4:B:195:LEU:HD21	2.34	0.42
1:X:1825:C:H2'	1:X:1952:A:H2	1.84	0.42
1:X:1925:C:H2'	1:X:1926:U:C5	2.54	0.42
1:X:1929:U:N3	1:X:1930:C:C4	2.87	0.42
1:X:2860:C:H2'	1:X:2861:A:O5'	2.19	0.42
14:L:11:LEU:HD23	14:L:11:LEU:O	2.18	0.42
1:X:2351:G:H2'	1:X:2351:G:N3	2.34	0.42
1:X:2352:A:C2	1:X:2353:G:C5	3.07	0.42
18:P:45:ILE:HD11	18:P:56:LEU:HB2	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:33:LEU:HD23	7:E:35:VAL:CG1	2.49	0.42
7:E:69:ARG:HG2	7:E:69:ARG:NH2	2.34	0.42
1:X:632:A:H3'	1:X:632:A:N3	2.34	0.42
1:X:1886:G:N3	1:X:1887:G:C8	2.87	0.42
12:J:86:LYS:O	12:J:87:GLY:C	2.58	0.42
1:X:923:A:H2	1:X:2256:G:N3	2.17	0.42
1:X:683:A:O5'	11:I:45:LYS:CA	2.66	0.42
1:X:136:A:C8	1:X:137:A:N7	2.88	0.42
1:X:27:G:C2'	1:X:28:A:OP2	2.67	0.42
1:X:70:A:H4'	1:X:71:A:H3'	2.01	0.42
17:O:71:ILE:HB	17:O:84:THR:O	2.18	0.42
1:X:405:C:O2'	1:X:406:G:H5'	2.18	0.42
1:X:204:A:N6	1:X:2386:G:C8	2.87	0.42
1:X:1759:A:N1	1:X:1760:G:C5	2.87	0.42
1:X:919:U:H2'	1:X:920:G:C8	2.54	0.42
1:X:698:A:C8	1:X:786:U:O4	2.72	0.42
1:X:1843:U:N3	1:X:1844:C:C5	2.87	0.42
1:X:302:U:C4	1:X:361:G:N2	2.87	0.42
1:X:1082:G:O5'	1:X:1082:G:C8	2.71	0.42
1:X:1181:C:H2'	1:X:1182:U:C5'	2.49	0.42
24:V:41:HIS:O	24:V:43:VAL:N	2.53	0.42
1:X:2557:G:N2	1:X:2558:C:C2	2.87	0.42
1:X:2073:A:N6	1:X:2074:U:O4	2.51	0.42
3:A:227:ASN:C	3:A:229:VAL:N	2.68	0.42
15:M:39:VAL:C	15:M:41:GLU:N	2.72	0.42
1:X:2712:G:C8	1:X:2712:G:OP2	2.73	0.42
5:C:73:SER:O	5:C:74:VAL:O	2.37	0.42
9:G:158:HIS:C	9:G:161:GLN:HB2	2.40	0.42
9:G:32:TYR:O	9:G:33:ILE:O	2.37	0.42
16:N:110:VAL:O	16:N:111:ASP:C	2.56	0.42
16:N:24:PHE:HB2	16:N:29:SER:HB2	2.02	0.42
16:N:47:TYR:C	16:N:49:ASP:H	2.22	0.42
1:X:1173:G:C4	1:X:1174:G:C8	3.07	0.42
1:X:572:G:C6	1:X:2001:G:C5	3.07	0.42
1:X:2606:G:C5	1:X:2607:C:C4	3.07	0.42
1:X:640:C:H4'	1:X:660:G:C2	2.54	0.42
6:D:10:ASP:OD1	6:D:10:ASP:N	2.53	0.42
6:D:138:PHE:O	6:D:140:GLU:N	2.47	0.42
2:Z:58:G:H4'	2:Z:59:A:H8	1.83	0.42
21:S:9:THR:HG23	21:S:10:PRO:HD2	2.01	0.42
12:J:54:VAL:CG1	12:J:121:LEU:HB3	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:20:GLY:CA	12:J:99:LYS:HE2	2.49	0.42
5:C:158:ARG:HG3	5:C:159:ARG:H	1.83	0.42
11:I:7:LYS:HG2	11:I:9:THR:CG2	2.49	0.42
23:U:29:GLY:O	23:U:30:VAL:C	2.58	0.42
3:A:133:LEU:CB	3:A:187:SER:HA	2.31	0.42
19:Q:6:ILE:O	19:Q:7:LEU:C	2.57	0.42
1:X:64:C:H1'	19:Q:68:PHE:HD1	1.84	0.42
1:X:653:G:H8	1:X:653:G:H3'	1.84	0.42
7:E:17:VAL:C	7:E:18:ASN:CG	2.77	0.42
1:X:313:U:C2	1:X:314:G:C8	3.08	0.42
4:B:49:ILE:CG1	4:B:50:GLY:N	2.82	0.42
1:X:2862:G:N2	1:X:2863:U:C2	2.87	0.42
5:C:65:GLY:C	5:C:66:ASN:ND2	2.72	0.42
7:E:45:GLN:NE2	7:E:48:ASP:O	2.51	0.42
1:X:168:A:N3	1:X:169:C:C5	2.88	0.42
1:X:118:U:O2'	1:X:119:G:C5'	2.68	0.42
1:X:554:U:O2	1:X:554:U:C2'	2.67	0.42
1:X:554:U:O3'	1:X:555:U:H4'	2.19	0.42
1:X:2208:U:C6	1:X:2208:U:C3'	3.02	0.42
1:X:215:G:H21	1:X:216:U:H1'	1.84	0.42
1:X:404:A:C6	1:X:405:C:N3	2.86	0.42
1:X:1189:G:H2'	1:X:1190:C:O4'	2.20	0.42
10:H:100:ASN:ND2	10:H:104:GLU:HG3	2.29	0.42
24:V:25:LEU:HD11	24:V:47:ARG:HG2	2.01	0.42
1:X:859:U:H1'	1:X:860:U:C4	2.54	0.42
1:X:1056:U:H1'	1:X:1058:G:N3	2.33	0.42
10:H:47:VAL:HG21	10:H:115:ALA:HB2	1.99	0.42
4:B:11:MET:O	4:B:12:THR:HB	2.19	0.42
19:Q:34:THR:C	19:Q:36:THR:H	2.22	0.42
14:L:55:SER:O	14:L:56:SER:CB	2.67	0.42
23:U:70:LEU:CD2	23:U:75:TYR:HD1	2.31	0.42
10:H:26:ASN:HD22	10:H:26:ASN:HA	1.51	0.42
10:H:31:GLY:C	10:H:33:GLY:N	2.72	0.42
1:X:1198:C:O5'	1:X:1198:C:H6	2.02	0.42
1:X:2070:G:H2'	1:X:2071:G:H8	1.85	0.42
15:M:89:ASN:CG	15:M:90:GLN:OE1	2.58	0.42
17:O:76:SER:C	17:O:78:VAL:N	2.72	0.42
1:X:1018:C:C4	1:X:1019:U:H5	2.36	0.42
11:I:89:ASP:OD2	11:I:120:VAL:HG13	2.19	0.42
1:X:649:G:N1	1:X:660:G:N1	2.66	0.42
6:D:135:GLN:HG2	6:D:152:MET:HG2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:54:U:H2'	2:Z:55:C:O4'	2.18	0.42
21:S:34:LEU:HD13	21:S:35:ASP:O	2.19	0.42
21:S:36:ARG:NE	21:S:37:LYS:H	2.05	0.42
12:J:106:GLU:OE1	12:J:106:GLU:O	2.37	0.42
1:X:870:C:H5'	22:T:69:PHE:CD2	2.54	0.42
1:X:872:G:H2'	1:X:928:G:O6	2.19	0.42
5:C:192:ALA:O	5:C:193:LEU:C	2.57	0.42
5:C:193:LEU:C	5:C:195:ILE:H	2.21	0.42
5:C:31:VAL:O	5:C:32:THR:C	2.56	0.42
3:A:155:LEU:O	3:A:156:ALA:C	2.58	0.42
1:X:1791:C:C2	1:X:1810:U:O2	2.72	0.42
19:Q:63:LYS:HE3	19:Q:68:PHE:O	2.19	0.42
1:X:1359:G:C4	1:X:1617:G:N2	2.87	0.42
1:X:1361:G:O6	1:X:1615:C:N4	2.53	0.42
6:D:75:SER:HB2	6:D:79:LEU:CD1	2.48	0.42
20:R:52:ASN:OD1	20:R:53:VAL:N	2.53	0.42
20:R:56:LYS:HB3	20:R:56:LYS:HE2	1.70	0.42
1:X:1248:G:C6	1:X:1249:G:N1	2.87	0.42
1:X:322:A:HO2'	1:X:343:A:H5'	1.84	0.42
8:F:109:ALA:O	8:F:112:LYS:C	2.58	0.42
10:H:23:ARG:NH2	10:H:24:VAL:N	2.67	0.42
10:H:97:VAL:O	10:H:98:ILE:C	2.57	0.42
1:X:1690:U:H2'	1:X:1691:G:C5'	2.27	0.42
1:X:1935:A:N3	1:X:2539:C:O2'	2.33	0.42
21:S:91:PRO:HG3	21:S:125:PRO:HG3	2.02	0.42
3:A:166:GLN:HB2	3:A:174:ILE:HG22	2.00	0.42
1:X:330:C:H2'	1:X:331:U:C6	2.55	0.42
4:B:133:LYS:HG3	4:B:137:ARG:CB	2.48	0.42
1:X:2299:A:H5'	1:X:2300:G:C4	2.53	0.42
18:P:100:GLY:N	18:P:121:THR:O	2.52	0.42
26:Y:15:LYS:C	26:Y:17:ASP:N	2.71	0.42
11:I:77:LEU:HD22	11:I:110:ALA:CA	2.50	0.42
1:X:1730:G:C6	1:X:1731:C:C4	3.07	0.42
7:E:155:ASP:C	7:E:155:ASP:OD2	2.58	0.42
7:E:155:ASP:CG	7:E:157:TYR:HB2	2.38	0.42
1:X:2807:U:HO2'	1:X:2808:U:P	2.42	0.42
1:X:1503:G:C4	1:X:1504:G:N7	2.88	0.42
1:X:1356:G:N3	1:X:1397:A:H2	2.17	0.42
10:H:73:VAL:O	10:H:73:VAL:HG13	2.20	0.42
1:X:1774:A:C2	1:X:2566:A:C4	3.07	0.42
16:N:71:LEU:O	16:N:71:LEU:CG	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2286:G:H21	1:X:2290:A:H62	1.66	0.42
1:X:861:G:C4	1:X:862:A:C8	3.07	0.42
1:X:1210:C:C2	1:X:1211:G:C8	3.07	0.42
22:T:26:PHE:N	22:T:26:PHE:CD1	2.87	0.42
1:X:831:G:C2	1:X:1204:G:C6	3.08	0.42
1:X:1918:G:C5	1:X:1945:C:C5	3.08	0.42
1:X:471:A:H3'	1:X:472:C:C6	2.54	0.42
9:G:80:VAL:HG12	9:G:81:VAL:N	2.34	0.42
1:X:2010:G:C6	1:X:2011:U:C4	3.08	0.42
1:X:1719:G:O2'	1:X:1720:G:H5'	2.20	0.42
1:X:2177:U:O2'	1:X:2178:U:H5'	2.19	0.42
10:H:81:ILE:HD11	10:H:83:ARG:HG2	2.01	0.42
5:C:45:THR:HB	5:C:86:PRO:HD2	2.01	0.42
16:N:65:ILE:HD13	16:N:95:LEU:HD23	2.01	0.42
1:X:2759:U:H4'	1:X:2760:G:C5'	2.35	0.42
12:J:42:TRP:CE3	12:J:95:VAL:HG21	2.55	0.42
11:I:72:TYR:CD2	11:I:107:LYS:HB2	2.55	0.42
11:I:89:ASP:O	11:I:94:GLU:OE1	2.38	0.42
11:I:92:THR:O	11:I:94:GLU:N	2.52	0.42
6:D:9:ASN:HB2	6:D:10:ASP:OD1	2.19	0.42
6:D:53:ALA:O	6:D:56:GLU:HB2	2.19	0.42
6:D:66:ILE:CG2	6:D:66:ILE:O	2.67	0.42
25:W:34:VAL:CG2	25:W:40:VAL:HG13	2.49	0.42
12:J:139:ASP:OD1	21:S:71:MET:HE1	2.19	0.42
12:J:36:ILE:HG22	12:J:37:ALA:O	2.19	0.42
5:C:112:GLN:OE1	5:C:116:LYS:CD	2.58	0.42
5:C:134:ILE:O	5:C:137:ALA:HB3	2.19	0.42
1:X:456:C:C4'	5:C:43:ALA:HB2	2.50	0.42
1:X:1513:U:H4'	1:X:1514:C:OP1	2.18	0.42
1:X:1515:U:H2'	1:X:1516:A:C8	2.46	0.42
20:R:81:VAL:HG11	20:R:90:LYS:H	1.85	0.42
30:4:1:MET:SD	30:4:35:ARG:CB	3.08	0.42
1:X:2726:U:C1'	7:E:139:GLN:HE21	2.33	0.42
3:A:165:VAL:CG1	3:A:166:GLN:H	2.27	0.42
22:T:31:VAL:HB	22:T:32:LYS:H	1.63	0.42
22:T:34:GLY:HA2	22:T:61:ALA:O	2.20	0.42
10:H:127:VAL:HG12	10:H:128:SER:N	2.35	0.42
1:X:2299:A:H61	1:X:2312:A:C3'	2.31	0.42
1:X:2043:A:O2'	1:X:2044:G:OP2	2.32	0.42
7:E:33:LEU:HD23	7:E:35:VAL:HG13	2.01	0.42
1:X:2240:C:H2'	1:X:2241:U:O5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2507:U:H2'	1:X:2509:A:O5'	2.18	0.42
1:X:2170:C:H2'	1:X:2171:U:H4'	2.01	0.42
21:S:146:HIS:HA	21:S:170:SER:HB2	2.00	0.42
4:B:70:ALA:O	4:B:71:GLY:C	2.58	0.42
1:X:531:G:N3	1:X:532:A:C8	2.87	0.42
1:X:207:U:H2'	1:X:208:C:O4'	2.20	0.42
1:X:429:C:O5'	1:X:429:C:H6	2.03	0.42
1:X:2325:A:HO2'	1:X:2326:C:P	2.42	0.42
4:B:188:ILE:N	4:B:188:ILE:HD12	2.34	0.42
1:X:1939:U:C4	1:X:1940:C:C5	3.07	0.42
1:X:565:A:H2'	1:X:566:U:H6	1.84	0.42
1:X:2445:C:N3	1:X:2464:G:C2	2.88	0.42
1:X:2010:G:H2'	1:X:2011:U:O4'	2.20	0.42
1:X:473:C:C6	1:X:473:C:H3'	2.54	0.42
1:X:1279:G:C8	1:X:1279:G:H3'	2.54	0.42
15:M:24:LEU:HB3	15:M:25:PRO:HD2	2.02	0.42
1:X:2661:G:H2'	1:X:2662:C:H6	1.85	0.42
9:G:100:TYR:O	9:G:100:TYR:CD1	2.72	0.42
17:O:79:GLN:OE1	17:O:79:GLN:CA	2.67	0.42
1:X:540:G:C6	1:X:2005:U:H5''	2.55	0.42
11:I:121:HIS:CA	11:I:141:VAL:HB	2.40	0.42
6:D:101:GLU:C	6:D:103:LEU:N	2.72	0.42
6:D:128:TYR:N	6:D:156:ILE:O	2.44	0.42
6:D:18:GLN:C	6:D:20:PHE:H	2.22	0.42
2:Z:8:C:H2'	2:Z:9:G:C8	2.54	0.42
21:S:66:VAL:HG13	21:S:81:VAL:HG13	2.00	0.42
12:J:55:MET:O	12:J:56:SER:C	2.58	0.42
5:C:158:ARG:O	5:C:159:ARG:C	2.57	0.42
11:I:49:PHE:O	11:I:50:GLU:HG2	2.19	0.42
1:X:228:A:C5'	11:I:53:ARG:HG2	2.43	0.42
23:U:27:ASP:C	23:U:32:ARG:CZ	2.88	0.42
1:X:2225:G:N2	1:X:2405:A:O2'	2.52	0.42
1:X:1807:A:O2'	1:X:1808:C:H4'	2.20	0.42
19:Q:40:ASP:O	19:Q:41:ALA:O	2.36	0.42
1:X:59:G:O6	1:X:62:U:C2	2.72	0.42
20:R:40:LEU:O	20:R:44:GLN:N	2.53	0.42
20:R:92:THR:O	20:R:95:ARG:NH2	2.53	0.42
20:R:93:ARG:N	20:R:95:ARG:NH2	2.68	0.42
1:X:1247:U:O4	1:X:1248:G:N1	2.53	0.42
7:E:85:ILE:C	7:E:132:ASP:OD2	2.58	0.42
4:B:36:ARG:HG2	4:B:36:ARG:HH11	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1343:C:C2'	1:X:1343:C:O2	2.68	0.42
1:X:1744:G:C6	1:X:1747:G:C2	3.07	0.42
13:K:11:ASN:ND2	13:K:12:ARG:HE	2.18	0.42
24:V:18:ILE:C	24:V:20:ALA:N	2.73	0.42
1:X:1823:G:C6	1:X:1824:C:N4	2.88	0.42
1:X:2863:U:H2'	1:X:2864:C:H6	1.84	0.42
1:X:2484:G:O6	1:X:2555:G:H2'	2.20	0.42
1:X:2015:G:HO2'	1:X:2016:A:P	2.42	0.42
21:S:127:PRO:O	21:S:129:ARG:N	2.41	0.42
1:X:75:C:H2'	1:X:76:C:H5''	2.02	0.42
1:X:75:C:C2'	1:X:76:C:H5''	2.49	0.42
1:X:1501:C:O2'	1:X:1502:G:H5'	2.19	0.42
1:X:13:A:N3	1:X:15:G:C6	2.87	0.42
1:X:202:A:O2'	1:X:234:C:H4'	2.19	0.42
6:D:30:ARG:O	6:D:158:THR:HA	2.20	0.42
1:X:1741:G:C2	1:X:1742:G:C8	3.07	0.42
1:X:2775:U:OP2	1:X:2776:U:H5	2.03	0.42
3:A:46:ARG:CG	3:A:46:ARG:O	2.66	0.42
5:C:10:ASN:O	5:C:10:ASN:OD1	2.37	0.42
1:X:2086:U:H2'	1:X:2087:U:C6	2.55	0.42
15:M:50:PHE:CD2	15:M:51:GLU:N	2.87	0.42
5:C:45:THR:C	5:C:47:THR:N	2.72	0.42
17:O:26:GLN:CG	17:O:27:GLY:N	2.83	0.42
18:P:27:VAL:HG23	18:P:125:THR:CG2	2.49	0.42
2:Z:27:A:C2	2:Z:55:C:OP1	2.73	0.42
2:Z:30:C:H2'	2:Z:31:A:C5'	2.49	0.42
2:Z:48:A:C5	2:Z:49:C:C4	3.07	0.42
21:S:34:LEU:CD1	21:S:34:LEU:C	2.88	0.42
1:X:32:C:N4	1:X:33:C:N4	2.67	0.42
3:A:140:ALA:O	3:A:141:VAL:C	2.57	0.42
3:A:145:LEU:CG	3:A:146:GLU:H	2.32	0.42
3:A:91:ARG:HG3	3:A:198:ASN:OD1	2.19	0.42
1:X:1313:U:HO2'	1:X:1314:A:P	2.42	0.42
1:X:1658:A:N7	1:X:1659:G:C4	2.88	0.42
6:D:71:LYS:O	6:D:72:LYS:CB	2.65	0.42
20:R:22:VAL:CG1	20:R:23:ILE:N	2.83	0.42
20:R:25:LEU:HD13	20:R:79:SER:O	2.18	0.42
1:X:318:G:N2	1:X:320:A:H3'	2.35	0.42
1:X:2528:G:C2	1:X:2529:G:N7	2.87	0.42
1:X:824:U:O2'	1:X:1264:C:C4'	2.67	0.42
23:U:37:ILE:O	23:U:38:THR:CG2	2.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:132:ASP:OD1	7:E:134:SER:N	2.52	0.42
7:E:140:LEU:N	7:E:143:GLN:OE1	2.52	0.42
1:X:2724:G:N7	1:X:2735:C:H1'	2.35	0.42
1:X:2734:U:H2'	1:X:2736:U:OP2	2.20	0.42
21:S:103:ARG:O	21:S:138:VAL:HG23	2.19	0.42
22:T:42:GLY:O	22:T:57:HIS:CD2	2.73	0.42
1:X:1920:A:C5	1:X:1922:U:C5	3.08	0.42
1:X:2859:U:H5	1:X:2860:C:C4	2.37	0.42
8:F:94:LYS:O	8:F:95:ALA:HB2	2.19	0.42
1:X:2272:A:C6	1:X:2319:G:C6	3.07	0.42
1:X:2241:U:H5	22:T:17:ASN:ND2	2.17	0.42
1:X:140:G:N1	1:X:141:G:C5	2.88	0.42
1:X:885:A:H2	12:J:30:PHE:HZ	1.68	0.42
1:X:201:G:C2	1:X:202:A:C5	3.08	0.42
5:C:55:GLY:C	5:C:56:ARG:HG2	2.40	0.42
16:N:68:GLY:O	16:N:71:LEU:N	2.52	0.42
1:X:2626:U:H6	1:X:2626:U:O5'	2.02	0.42
6:D:142:THR:O	6:D:146:VAL:CG1	2.67	0.42
1:X:2184:C:C4	1:X:2185:U:C4	3.07	0.42
18:P:74:SER:OG	18:P:74:SER:O	2.34	0.42
1:X:1918:G:C6	1:X:1945:C:C5	3.08	0.42
15:M:72:SER:O	15:M:73:PHE:HB2	2.20	0.42
1:X:1040:A:C8	1:X:1041:G:C8	3.08	0.42
23:U:54:ASN:OD1	23:U:55:GLY:N	2.52	0.42
1:X:797:A:C6	3:A:229:VAL:HG21	2.49	0.42
9:G:61:ARG:NH1	9:G:65:LYS:HE2	2.34	0.42
16:N:48:ARG:O	16:N:52:ASN:HB2	2.20	0.42
1:X:1171:A:N3	17:O:6:GLN:HG2	2.35	0.42
1:X:1171:A:C4	1:X:1172:U:C5	3.08	0.42
11:I:107:LYS:HA	11:I:124:ALA:O	2.19	0.42
11:I:88:PHE:HB3	11:I:90:ARG:HD3	1.95	0.42
2:Z:44:C:H1'	6:D:89:VAL:HG13	2.01	0.42
21:S:74:ARG:HD3	21:S:75:LYS:HE3	2.02	0.42
11:I:9:THR:C	11:I:13:ARG:HH21	2.20	0.42
1:X:1217:U:H6	1:X:1217:U:O5'	2.02	0.42
1:X:678:G:H4'	11:I:50:GLU:OE1	2.19	0.42
1:X:173:A:OP1	11:I:53:ARG:NH2	2.53	0.42
3:A:134:ARG:H	3:A:187:SER:HB2	1.83	0.42
19:Q:55:THR:CB	19:Q:78:ALA:HA	2.50	0.42
1:X:1359:G:C6	1:X:1617:G:N1	2.88	0.42
10:H:23:ARG:HH22	10:H:25:LEU:N	2.17	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2401:A:C2	1:X:2403:C:N3	2.87	0.42
7:E:144:VAL:O	7:E:145:ALA:C	2.56	0.42
21:S:113:VAL:CG1	21:S:171:VAL:HG22	2.49	0.42
1:X:1333:G:N2	1:X:1344:C:C4	2.86	0.42
4:B:51:TYR:O	4:B:52:ALA:HB3	2.20	0.42
1:X:1919:A:C2	1:X:1928:G:C8	3.08	0.42
1:X:1926:U:C1'	1:X:1928:G:H5'	2.49	0.42
1:X:2484:G:C2'	1:X:2485:U:H5'	2.49	0.42
11:I:76:LYS:CB	11:I:79:GLN:HG2	2.45	0.42
1:X:776:G:C2	1:X:778:G:N3	2.88	0.42
30:4:11:CYS:SG	30:4:27:CYS:SG	3.17	0.42
1:X:525:A:H2	1:X:1273:G:N3	2.18	0.42
1:X:521:U:H5''	1:X:522:G:OP2	2.20	0.42
21:S:148:THR:O	21:S:149:ALA:C	2.58	0.42
1:X:534:U:H2'	1:X:535:U:C6	2.55	0.42
1:X:1621:C:H2'	1:X:1622:G:C5'	2.49	0.42
1:X:2642:G:H2'	1:X:2643:G:O5'	2.20	0.42
1:X:1713:G:C4	1:X:1714:A:C8	3.08	0.42
1:X:444:U:O2'	1:X:445:A:H5'	2.19	0.42
1:X:2338:C:H2'	1:X:2339:A:H8	1.85	0.42
1:X:580:A:O2'	1:X:581:A:O5'	2.38	0.42
1:X:350:U:C6	1:X:350:U:O5'	2.65	0.42
1:X:1208:A:C2	1:X:1209:G:C4	3.08	0.42
1:X:1484:G:N2	1:X:1539:U:O2	2.52	0.42
1:X:102:C:H2'	1:X:103:U:O4'	2.20	0.42
26:Y:58:LEU:O	26:Y:59:ALA:C	2.58	0.42
1:X:162:C:H2'	1:X:163:A:H8	1.84	0.42
1:X:2090:U:H1'	1:X:2166:G:N2	2.35	0.42
1:X:637:G:H8	1:X:637:G:O5'	2.03	0.42
3:A:212:SER:O	3:A:213:ARG:C	2.59	0.42
1:X:742:G:C5	3:A:208:LYS:HB3	2.54	0.42
4:B:14:ILE:HG22	4:B:15:TRP:N	2.35	0.42
10:H:81:ILE:HG12	10:H:82:LYS:N	2.34	0.42
15:M:57:ILE:HG22	15:M:66:PHE:CB	2.50	0.42
9:G:119:LEU:C	9:G:121:LYS:N	2.72	0.42
9:G:34:PRO:HA	9:G:69:ASP:CG	2.40	0.42
9:G:65:LYS:HZ2	9:G:65:LYS:CB	2.33	0.42
17:O:40:VAL:O	17:O:41:GLY:C	2.58	0.42
1:X:541:C:O2'	1:X:542:A:OP2	2.38	0.42
1:X:689:A:H2	1:X:690:A:C8	2.37	0.42
14:L:101:LYS:O	14:L:104:ALA:HB3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:32:TYR:HB3	14:L:39:TYR:CD1	2.55	0.42
1:X:2355:A:N1	14:L:91:ARG:NH2	2.67	0.42
12:J:36:ILE:HG12	12:J:103:VAL:HG22	2.02	0.42
2:Z:101:A:H8	2:Z:101:A:O5'	2.02	0.42
5:C:193:LEU:O	5:C:195:ILE:N	2.42	0.42
5:C:35:LEU:O	5:C:36:ALA:C	2.57	0.42
3:A:120:GLY:O	3:A:123:ALA:CB	2.68	0.42
3:A:67:PHE:CB	3:A:153:ALA:H	2.18	0.42
1:X:1355:A:H2'	1:X:1357:U:OP2	2.20	0.42
1:X:1359:G:C6	1:X:1617:G:C2	3.08	0.42
3:A:72:LYS:O	3:A:73:SER:C	2.59	0.42
20:R:17:LYS:O	20:R:18:LYS:C	2.58	0.42
20:R:23:ILE:HD13	20:R:23:ILE:N	2.22	0.42
20:R:24:VAL:HG11	20:R:29:HIS:CB	2.50	0.42
7:E:16:THR:HB	7:E:27:LYS:O	2.19	0.42
20:R:48:VAL:O	20:R:50:GLY:N	2.52	0.42
4:B:153:GLY:O	4:B:154:LYS:C	2.56	0.42
1:X:2826:C:O2'	1:X:2827:G:H5'	2.20	0.42
8:F:92:PRO:O	8:F:93:ASN:HB2	2.20	0.42
1:X:1087:C:H4'	8:F:94:LYS:CE	2.50	0.42
18:P:48:LYS:O	18:P:92:VAL:HG23	2.20	0.42
1:X:2507:U:P	7:E:172:LYS:HZ1	2.42	0.42
1:X:945:G:C5	1:X:946:U:C5	3.07	0.42
1:X:1375:C:C2	1:X:1376:C:C6	3.07	0.42
1:X:1271:C:H2'	1:X:1272:G:O5'	2.19	0.42
21:S:117:VAL:O	21:S:118:HIS:C	2.58	0.42
1:X:1397:A:H2'	1:X:1398:G:C5'	2.49	0.42
1:X:15:G:C6	1:X:16:G:N7	2.88	0.42
1:X:200:A:C8	1:X:435:A:O4'	2.73	0.42
13:K:73:LYS:O	13:K:74:ASP:C	2.56	0.42
1:X:1622:G:H4'	1:X:1624:A:C2	2.55	0.42
1:X:937:C:O2'	1:X:938:G:H5'	2.19	0.42
1:X:1056:U:C4'	1:X:1058:G:H1'	2.48	0.42
1:X:2640:G:O2'	1:X:2641:A:H5'	2.20	0.42
19:Q:34:THR:O	19:Q:36:THR:N	2.53	0.42
18:P:107:ILE:HA	18:P:108:PRO:HD2	1.73	0.42
1:X:668:A:O2'	1:X:669:G:O4'	2.36	0.42
1:X:1713:G:C6	1:X:1714:A:C6	3.08	0.42
1:X:584:A:C2	1:X:585:U:C5	3.07	0.42
8:F:139:VAL:HG12	8:F:140:GLU:H	1.85	0.42
23:U:50:ALA:CB	23:U:52:ARG:NH1	2.74	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2190:A:C4'	1:X:2190:A:OP1	2.68	0.42
16:N:63:GLN:HA	16:N:66:ASN:HD21	1.85	0.42
1:X:540:G:O6	1:X:2006:G:P	2.78	0.42
1:X:2548:G:C2'	1:X:2549:G:H5'	2.50	0.42
1:X:459:A:C2	1:X:466:A:H8	2.30	0.42
11:I:80:LEU:C	11:I:84:GLU:HB3	2.40	0.42
6:D:16:LEU:HD13	6:D:29:PRO:HD2	2.02	0.42
6:D:67:ILE:HA	6:D:87:ILE:HA	2.02	0.42
14:L:33:ARG:CZ	14:L:103:LEU:CB	2.97	0.42
14:L:60:LYS:HG2	14:L:62:GLY:N	2.30	0.42
14:L:82:LYS:HB3	14:L:84:ILE:CG1	2.46	0.42
5:C:124:ASP:OD2	5:C:136:TRP:CE3	2.69	0.42
5:C:6:VAL:HG12	5:C:7:ILE:HD13	2.02	0.42
1:X:841:G:O6	1:X:2226:A:H1'	2.20	0.42
1:X:1443:G:C5	1:X:1584:G:C6	3.07	0.42
1:X:1809:G:H5''	3:A:88:ARG:NH1	2.35	0.42
1:X:67:G:C2	1:X:73:A:C8	3.07	0.42
20:R:51:VAL:HG21	20:R:76:LEU:CD1	2.50	0.42
20:R:53:VAL:O	20:R:72:ARG:O	2.37	0.42
10:H:55:VAL:CG1	10:H:55:VAL:O	2.54	0.42
3:A:119:ALA:CB	3:A:130:ALA:HB3	2.40	0.42
1:X:1914:U:C6	1:X:1914:U:C4'	3.03	0.42
1:X:91:A:H2'	1:X:92:U:C6	2.54	0.42
7:E:137:ASP:HB3	7:E:140:LEU:CG	2.49	0.42
7:E:148:VAL:O	7:E:149:ARG:C	2.56	0.42
7:E:164:PHE:O	7:E:165:VAL:C	2.58	0.42
1:X:2727:G:H4'	7:E:71:LEU:CD2	2.50	0.42
3:A:183:ARG:HD3	3:A:184:ARG:H	1.84	0.42
1:X:1675:C:H2'	1:X:1676:U:H6	1.85	0.42
4:B:31:CYS:HA	4:B:32:PRO:HD3	1.69	0.42
24:V:17:GLU:CA	24:V:17:GLU:OE2	2.64	0.42
8:F:100:LEU:N	8:F:138:THR:OG1	2.51	0.42
1:X:2043:A:C2	1:X:2481:G:C6	3.08	0.42
18:P:59:PHE:CD1	26:Y:30:LEU:HD11	2.55	0.42
1:X:51:A:C2	1:X:155:G:N3	2.88	0.42
1:X:2055:G:C6	1:X:2417:U:N3	2.87	0.42
23:U:10:LYS:CD	23:U:11:LYS:HB2	2.48	0.42
1:X:2476:A:H1'	1:X:2477:C:C5	2.28	0.42
22:T:3:HIS:CD2	22:T:5:LYS:N	2.88	0.42
22:T:3:HIS:ND1	22:T:3:HIS:N	2.68	0.42
25:W:38:PRO:N	25:W:41:ARG:CZ	2.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2387:U:O2'	1:X:2388:G:H5'	2.20	0.42
1:X:2784:A:N6	1:X:2866:A:C8	2.87	0.42
4:B:64:GLN:C	4:B:66:HIS:N	2.73	0.42
1:X:441:A:N7	1:X:442:A:N7	2.68	0.42
1:X:2266:A:C2	1:X:2325:A:N7	2.88	0.42
1:X:2634:G:O2'	1:X:2635:U:OP2	2.31	0.42
15:M:44:ARG:HH11	15:M:46:ARG:NH2	2.14	0.42
1:X:973:U:H4'	1:X:2475:C:O2'	2.20	0.42
1:X:1682:A:N6	1:X:1683:G:C5	2.87	0.42
8:F:139:VAL:HG12	8:F:140:GLU:N	2.33	0.42
1:X:2670:C:N3	1:X:2671:C:C5	2.88	0.42
1:X:1148:G:O2'	9:G:130:ALA:O	2.37	0.41
17:O:70:TYR:CD2	17:O:83:ARG:NH1	2.88	0.41
1:X:1235:C:H2'	1:X:1236:G:O4'	2.20	0.41
1:X:536:A:N6	1:X:2605:C:C4'	2.83	0.41
11:I:89:ASP:CB	11:I:120:VAL:HA	2.50	0.41
6:D:108:LEU:HB2	6:D:109:PRO:HD3	2.02	0.41
6:D:136:LEU:O	6:D:137:ILE:HG23	2.20	0.41
6:D:152:MET:O	6:D:153:ASP:HB2	2.20	0.41
6:D:53:ALA:HB1	6:D:57:LEU:CG	2.50	0.41
14:L:102:ALA:O	14:L:104:ALA:N	2.53	0.41
14:L:32:TYR:O	14:L:32:TYR:CG	2.73	0.41
14:L:26:ARG:NH1	14:L:88:VAL:HG22	2.35	0.41
1:X:454:G:N2	1:X:456:C:C2	2.88	0.41
3:A:145:LEU:CG	3:A:146:GLU:N	2.83	0.41
19:Q:16:ALA:HA	19:Q:19:ALA:HB3	2.02	0.41
1:X:1617:G:N7	1:X:1618:U:C4	2.88	0.41
20:R:51:VAL:HG12	20:R:52:ASN:N	2.34	0.41
20:R:64:ASN:C	20:R:66:GLN:N	2.73	0.41
20:R:81:VAL:O	20:R:83:LEU:N	2.53	0.41
1:X:348:U:O3'	20:R:13:LYS:NZ	2.52	0.41
1:X:349:G:P	20:R:13:LYS:NZ	2.93	0.41
8:F:103:ASP:HB3	8:F:106:LEU:HD12	2.01	0.41
30:4:17:VAL:HG23	30:4:26:ILE:HG12	2.02	0.41
1:X:1071:U:C5'	1:X:1072:U:OP1	2.64	0.41
22:T:55:ARG:HG2	22:T:55:ARG:NH1	2.34	0.41
1:X:314:G:C6	1:X:326:A:C2	3.08	0.41
15:M:101:ARG:HB3	15:M:101:ARG:HE	1.09	0.41
13:K:48:VAL:O	13:K:50:GLN:N	2.53	0.41
8:F:116:LEU:CD1	8:F:124:ALA:HA	2.50	0.41
4:B:181:LEU:HD23	4:B:181:LEU:HA	1.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1372:A:C5	1:X:1373:G:C8	3.08	0.41
1:X:1385:C:N3	1:X:1386:A:C8	2.88	0.41
21:S:168:VAL:C	21:S:169:VAL:HG22	2.39	0.41
1:X:1399:C:O2'	1:X:1400:A:H5'	2.20	0.41
1:X:404:A:H2'	1:X:405:C:O4'	2.20	0.41
1:X:978:U:H2'	1:X:979:A:H8	1.82	0.41
1:X:605:G:C2	1:X:606:A:C5	3.08	0.41
1:X:1423:A:H2'	1:X:1424:U:H6	1.84	0.41
1:X:1969:G:C2	1:X:1970:G:C8	3.08	0.41
1:X:757:U:C2'	1:X:758:G:H5'	2.50	0.41
1:X:2839:G:C6	1:X:2840:U:O4	2.73	0.41
1:X:964:A:C2'	1:X:965:G:H5'	2.50	0.41
1:X:2847:G:H4'	13:K:8:ARG:HH21	1.84	0.41
1:X:609:U:H5'	11:I:18:ARG:HD3	2.01	0.41
1:X:2438:A:N6	1:X:2473:G:C6	2.88	0.41
1:X:1158:A:H2'	1:X:1159:U:H6	1.84	0.41
5:C:72:ARG:HG3	5:C:77:PHE:HE2	1.84	0.41
1:X:2628:C:H6	1:X:2628:C:O5'	2.02	0.41
10:H:116:ARG:NE	15:M:38:LYS:HD2	2.34	0.41
9:G:108:GLY:O	9:G:110:LEU:CD2	2.68	0.41
9:G:158:HIS:HA	9:G:161:GLN:CD	2.41	0.41
16:N:79:PHE:O	16:N:80:ILE:C	2.57	0.41
17:O:39:PHE:CE2	17:O:51:ALA:HB1	2.55	0.41
1:X:1166:A:O2'	1:X:1167:A:H5''	2.20	0.41
1:X:2757:G:H1'	1:X:2759:U:H5	1.84	0.41
1:X:2759:U:C5'	1:X:2760:G:OP1	2.58	0.41
1:X:463:C:C2	1:X:465:C:C5	3.08	0.41
1:X:647:G:C5	11:I:109:LEU:HD11	2.55	0.41
1:X:501:G:H2'	1:X:502:A:C8	2.53	0.41
6:D:10:ASP:C	6:D:14:PRO:HD2	2.40	0.41
6:D:61:THR:HA	6:D:99:PHE:CD1	2.54	0.41
6:D:67:ILE:HG23	6:D:87:ILE:HG12	2.02	0.41
14:L:63:ASN:HA	14:L:66:ASP:OD2	2.20	0.41
14:L:68:ALA:O	14:L:69:ALA:C	2.59	0.41
25:W:16:GLN:OE1	25:W:49:HIS:NE2	2.52	0.41
1:X:873:U:H3	1:X:929:A:H62	1.64	0.41
5:C:145:THR:HG22	5:C:146:GLU:OE2	2.20	0.41
5:C:35:LEU:O	5:C:38:ARG:HB2	2.21	0.41
1:X:32:C:C4	1:X:33:C:N4	2.88	0.41
19:Q:40:ASP:O	19:Q:41:ALA:C	2.58	0.41
1:X:2540:A:C2'	1:X:2541:U:O5'	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2056:C:C3'	1:X:2057:U:H5''	2.47	0.41
21:S:140:LYS:HG3	21:S:141:MET:H	1.85	0.41
22:T:50:GLY:O	22:T:62:LEU:CD2	2.68	0.41
15:M:99:VAL:O	15:M:100:ARG:CG	2.65	0.41
8:F:85:ILE:HG22	8:F:87:LYS:H	1.84	0.41
7:E:33:LEU:HD23	7:E:35:VAL:HG22	2.02	0.41
7:E:76:VAL:C	7:E:78:GLY:N	2.72	0.41
1:X:118:U:O2'	1:X:119:G:P	2.79	0.41
1:X:556:A:OP2	1:X:556:A:C8	2.72	0.41
1:X:2452:U:C5	1:X:2453:C:C4	3.08	0.41
24:V:42:ARG:HD2	24:V:45:GLN:OE1	2.21	0.41
1:X:683:A:O2'	1:X:684:C:OP2	2.38	0.41
1:X:234:C:H2'	1:X:235:C:C5'	2.50	0.41
1:X:2691:C:O2'	1:X:2692:A:P	2.78	0.41
1:X:1231:A:C5	1:X:1232:U:C4	3.09	0.41
1:X:2777:A:N3	1:X:2777:A:H2'	2.35	0.41
1:X:2264:C:C5'	1:X:2267:A:N6	2.79	0.41
1:X:668:A:OP2	1:X:668:A:H4'	2.19	0.41
1:X:670:U:H2'	1:X:671:A:H8	1.81	0.41
1:X:1484:G:H1	1:X:1539:U:H3	1.68	0.41
1:X:1874:G:C6	1:X:1875:C:N3	2.88	0.41
4:B:107:THR:CG2	4:B:163:GLU:O	2.68	0.41
1:X:1699:A:C8	1:X:1748:U:C4	3.07	0.41
1:X:239:A:C8	1:X:240:U:C5	3.08	0.41
1:X:992:A:C6	1:X:2011:U:H4'	2.55	0.41
1:X:2085:G:O2'	1:X:2086:U:H5'	2.20	0.41
1:X:1476:G:C5	1:X:1477:C:C4	3.08	0.41
1:X:2557:G:N7	4:B:140:SER:CB	2.83	0.41
23:U:51:ILE:C	23:U:52:ARG:HH21	2.22	0.41
1:X:2174:G:C6	1:X:2175:A:C5	3.09	0.41
1:X:1820:G:O2'	1:X:1821:A:C5'	2.68	0.41
1:X:741:G:H4'	1:X:742:G:OP2	2.19	0.41
1:X:2705:A:O2'	1:X:2706:U:P	2.78	0.41
9:G:62:ILE:O	9:G:62:ILE:CG2	2.68	0.41
16:N:43:ALA:C	16:N:45:TYR:N	2.71	0.41
17:O:13:ARG:HB3	17:O:16:GLU:CD	2.40	0.41
17:O:23:GLU:CG	17:O:91:THR:CG2	2.92	0.41
1:X:2037:A:N1	1:X:2595:C:C4	2.88	0.41
1:X:691:C:N3	1:X:692:C:C5	2.88	0.41
11:I:105:PRO:C	11:I:106:VAL:CG2	2.88	0.41
18:P:28:ALA:O	18:P:31:VAL:HG23	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:31:ILE:HG22	6:D:96:MET:SD	2.61	0.41
6:D:34:ILE:HG22	6:D:91:LEU:CD1	2.48	0.41
14:L:38:ILE:HD12	14:L:39:TYR:N	2.34	0.41
2:Z:41:A:H8	2:Z:41:A:O5'	2.04	0.41
2:Z:44:C:H2'	2:Z:45:C:O4'	2.20	0.41
25:W:12:ARG:HA	25:W:13:PRO:HD3	1.80	0.41
1:X:873:U:H2'	1:X:874:A:H8	1.86	0.41
5:C:176:ASN:ND2	5:C:178:TYR:N	2.68	0.41
5:C:147:LYS:C	5:C:183:HIS:HB3	2.40	0.41
23:U:34:THR:HG22	23:U:35:THR:N	2.35	0.41
1:X:219:G:H2'	1:X:220:U:OP2	2.20	0.41
1:X:677:G:H2'	1:X:678:G:H5'	2.02	0.41
3:A:163:VAL:O	3:A:163:VAL:HG13	2.19	0.41
3:A:62:TYR:CE1	3:A:88:ARG:NH2	2.72	0.41
1:X:1811:A:H4'	1:X:1812:U:C5'	2.50	0.41
24:V:31:GLN:O	24:V:35:GLY:N	2.53	0.41
1:X:1517:C:H2'	1:X:1518:C:C6	2.50	0.41
1:X:320:A:C2'	1:X:340:G:H2'	2.50	0.41
1:X:2526:U:C5	1:X:2545:A:C5	3.07	0.41
1:X:2403:C:H2'	1:X:2408:G:O2'	2.21	0.41
1:X:1330:G:C4	1:X:1331:G:C8	3.07	0.41
1:X:2331:A:N1	22:T:33:ALA:O	2.53	0.41
24:V:3:PRO:HB2	24:V:4:SER:H	1.53	0.41
1:X:2055:G:C2	1:X:2417:U:O2	2.73	0.41
1:X:1088:A:C2'	1:X:1089:C:H5'	2.50	0.41
1:X:1505:U:H3'	1:X:1505:U:C6	2.55	0.41
1:X:601:A:H3'	1:X:602:C:C5'	2.51	0.41
15:M:6:LYS:O	15:M:7:ILE:HG12	2.20	0.41
1:X:2644:A:C2'	1:X:2645:C:H5'	2.49	0.41
1:X:1851:A:N6	1:X:1867:A:N3	2.68	0.41
13:K:90:ARG:HA	13:K:91:PRO:HD3	1.72	0.41
1:X:867:G:C6	1:X:868:U:N3	2.88	0.41
1:X:1533:G:C6	1:X:1534:A:N7	2.88	0.41
1:X:2720:A:N7	1:X:2744:A:N7	2.68	0.41
13:K:65:LEU:HA	13:K:65:LEU:HD23	1.70	0.41
15:M:58:ASN:OD1	15:M:58:ASN:N	2.53	0.41
10:H:89:ILE:HG22	10:H:90:ARG:N	2.35	0.41
16:N:117:ARG:HH21	16:N:117:ARG:HG3	1.84	0.41
1:X:1022:A:C6	1:X:1162:A:C6	3.08	0.41
1:X:2035:G:HO2'	1:X:2036:G:H5'	1.82	0.41
12:J:95:VAL:HG23	12:J:96:SER:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:12:ARG:CG	25:W:12:ARG:NH1	2.78	0.41
25:W:27:LYS:O	25:W:30:ASP:HB2	2.19	0.41
12:J:46:ASN:O	12:J:50:ALA:N	2.53	0.41
1:X:2602:G:H4'	1:X:2800:C:O2	2.20	0.41
5:C:154:ASP:HB2	5:C:157:THR:CG2	2.50	0.41
5:C:185:ARG:NH2	5:C:185:ARG:HG2	2.30	0.41
1:X:679:C:H2'	1:X:680:U:C6	2.55	0.41
23:U:21:ARG:CA	23:U:39:LYS:HD2	2.50	0.41
3:A:126:LYS:HE2	3:A:126:LYS:HB3	1.93	0.41
19:Q:40:ASP:OD1	19:Q:44:GLN:CD	2.58	0.41
19:Q:42:ILE:O	19:Q:46:PHE:HD1	2.04	0.41
1:X:1355:A:C2'	1:X:1357:U:OP2	2.67	0.41
20:R:60:PRO:O	20:R:65:PRO:HA	2.19	0.41
1:X:1686:A:H5''	1:X:2529:G:OP1	2.19	0.41
1:X:1049:C:C2	1:X:1129:A:C2	3.07	0.41
1:X:594:G:H2'	1:X:595:A:N7	2.34	0.41
1:X:2343:C:O2'	1:X:2344:G:H5'	2.20	0.41
15:M:104:LEU:C	15:M:106:TYR:N	2.73	0.41
18:P:44:VAL:O	18:P:48:LYS:HD3	2.20	0.41
18:P:45:ILE:HG13	18:P:53:ALA:CB	2.49	0.41
1:X:969:U:N1	12:J:17:ARG:HD2	2.34	0.41
1:X:2306:A:C5	1:X:2367:A:N1	2.88	0.41
1:X:1838:G:C2	1:X:1878:C:N3	2.88	0.41
1:X:1091:C:O2	8:F:127:THR:HA	2.21	0.41
1:X:357:A:C5	1:X:358:C:H1'	2.55	0.41
4:B:183:LEU:HD21	15:M:16:ILE:HD13	2.02	0.41
1:X:521:U:O4	1:X:522:G:N2	2.52	0.41
1:X:15:G:C5	1:X:16:G:N7	2.89	0.41
1:X:2245:A:N3	1:X:2251:U:C5	2.89	0.41
1:X:2237:C:H5'	22:T:14:ARG:CD	2.50	0.41
1:X:441:A:C8	1:X:442:A:N7	2.88	0.41
19:Q:89:GLU:HB3	19:Q:90:ALA:H	1.63	0.41
1:X:2632:U:H2'	1:X:2633:A:C8	2.55	0.41
1:X:2658:A:H5'	4:B:165:VAL:HG21	2.02	0.41
1:X:1940:C:O2'	1:X:1941:C:H5'	2.21	0.41
6:D:119:PRO:HG2	6:D:120:ASN:N	2.28	0.41
1:X:779:U:O2'	1:X:780:U:C5'	2.65	0.41
1:X:579:G:C5'	1:X:994:A:C2	3.02	0.41
13:K:57:GLY:C	13:K:59:ASP:H	2.20	0.41
3:A:46:ARG:O	3:A:46:ARG:CD	2.68	0.41
1:X:720:A:C5	1:X:721:C:C4	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1546:C:H2'	1:X:1547:U:H6	1.86	0.41
1:X:1918:G:C4	1:X:1945:C:C4	3.09	0.41
1:X:2517:C:H2'	1:X:2518:C:H6	1.84	0.41
1:X:1996:A:H2'	1:X:1997:A:C5'	2.46	0.41
9:G:100:TYR:OH	9:G:129:HIS:CE1	2.74	0.41
1:X:1023:U:H3	9:G:53:ARG:HH21	1.67	0.41
9:G:65:LYS:HB3	9:G:65:LYS:NZ	2.36	0.41
17:O:36:LYS:O	17:O:51:ALA:HB1	2.19	0.41
1:X:1018:C:O4'	9:G:134:MET:O	2.38	0.41
1:X:1174:G:N2	1:X:1175:A:C4	2.88	0.41
1:X:2036:G:H2'	1:X:2037:A:H5'	2.02	0.41
1:X:2621:G:N2	1:X:2753:C:C2	2.89	0.41
1:X:464:G:C6	1:X:465:C:N4	2.89	0.41
11:I:122:VAL:HG22	11:I:140:VAL:CG1	2.51	0.41
6:D:53:ALA:HB1	6:D:57:LEU:HD11	2.02	0.41
21:S:44:ARG:CB	21:S:45:GLN:NE2	2.81	0.41
12:J:119:PHE:CD1	12:J:132:MET:SD	3.14	0.41
21:S:75:LYS:H	21:S:75:LYS:HE3	1.85	0.41
2:Z:100:G:H2'	2:Z:101:A:O4'	2.19	0.41
4:B:6:GLY:CA	4:B:27:LEU:O	2.68	0.41
4:B:7:THR:HG23	4:B:194:GLY:O	2.21	0.41
5:C:128:ALA:O	5:C:160:ALA:HB2	2.21	0.41
19:Q:24:VAL:CG1	19:Q:25:TYR:N	2.84	0.41
24:V:29:ARG:C	24:V:32:ALA:HB3	2.40	0.41
1:X:1249:G:O2'	1:X:1250:A:P	2.78	0.41
1:X:347:C:N3	1:X:348:U:C4	2.89	0.41
1:X:489:A:N6	1:X:491:A:C6	2.88	0.41
8:F:112:LYS:HB3	8:F:113:MET:H	1.69	0.41
1:X:1467:U:N3	1:X:1473:U:O2	2.54	0.41
11:I:54:SER:C	11:I:56:LEU:H	2.24	0.41
1:X:312:G:O2'	1:X:313:U:O5'	2.37	0.41
24:V:17:GLU:HB3	24:V:53:LEU:HD11	2.02	0.41
1:X:1930:C:C2	1:X:1931:G:C8	3.08	0.41
1:X:2270:U:HO2'	1:X:2271:C:H5'	1.86	0.41
2:Z:25:G:C6	2:Z:63:A:N1	2.88	0.41
24:V:48:ARG:O	24:V:48:ARG:HG2	2.17	0.41
1:X:1504:G:N3	1:X:1505:U:O2	2.53	0.41
1:X:197:G:H1	1:X:440:U:H3'	1.85	0.41
1:X:246:C:C4	1:X:437:G:C6	3.08	0.41
1:X:2775:U:H5'	1:X:2776:U:H5'	2.01	0.41
2:Z:3:A:C6	2:Z:4:C:C4	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1554:G:C2	1:X:1555:A:C4	3.08	0.41
4:B:24:THR:CG2	4:B:188:ILE:CD1	2.97	0.41
7:E:102:ALA:HB1	7:E:115:ILE:C	2.40	0.41
1:X:181:A:C4	1:X:183:U:O4	2.74	0.41
13:K:37:THR:N	13:K:110:MET:HE3	2.35	0.41
1:X:1482:U:H2'	1:X:1483:G:C8	2.55	0.41
1:X:1111:C:H2'	1:X:1112:U:C6	2.56	0.41
1:X:1300:A:N7	13:K:105:GLY:HA3	2.35	0.41
1:X:2683:C:C5	1:X:2684:A:N7	2.88	0.41
1:X:1028:G:C6	1:X:1157:G:C6	3.08	0.41
1:X:742:G:C2	3:A:208:LYS:HD3	2.54	0.41
3:A:211:ARG:HA	3:A:214:TRP:CG	2.54	0.41
4:B:201:ALA:O	4:B:203:LYS:N	2.54	0.41
5:C:82:VAL:HG11	5:C:85:GLY:HA3	2.02	0.41
16:N:54:LYS:O	16:N:55:ARG:C	2.57	0.41
16:N:60:LEU:O	16:N:63:GLN:HB2	2.21	0.41
9:G:69:ASP:O	16:N:64:ARG:CZ	2.68	0.41
1:X:540:G:O6	1:X:2006:G:OP1	2.38	0.41
1:X:2035:G:C2	1:X:2036:G:N9	2.88	0.41
1:X:958:G:C4	1:X:959:C:C5	3.09	0.41
1:X:988:G:H2'	1:X:988:G:N3	2.35	0.41
14:L:41:GLN:CD	14:L:50:THR:HG21	2.40	0.41
14:L:98:GLY:O	14:L:101:LYS:N	2.54	0.41
1:X:2404:A:O2'	1:X:2405:A:P	2.79	0.41
3:A:79:VAL:CG2	3:A:95:LEU:HD21	2.50	0.41
19:Q:57:ASN:C	19:Q:58:VAL:CG2	2.88	0.41
19:Q:60:GLY:H	19:Q:72:ARG:HD3	1.85	0.41
1:X:1355:A:C5	1:X:1358:C:N4	2.88	0.41
20:R:58:VAL:CA	20:R:60:PRO:HD3	2.51	0.41
20:R:60:PRO:O	20:R:62:MET:N	2.53	0.41
20:R:93:ARG:NH2	20:R:109:ALA:CA	2.84	0.41
1:X:98:U:C6	1:X:98:U:O5'	2.73	0.41
8:F:112:LYS:O	8:F:113:MET:CB	2.68	0.41
10:H:53:ALA:O	10:H:70:VAL:N	2.37	0.41
7:E:120:GLY:O	7:E:121:VAL:HG23	2.21	0.41
7:E:139:GLN:O	7:E:141:VAL:N	2.54	0.41
1:X:2033:C:H1'	4:B:156:MET:HE1	2.01	0.41
1:X:2298:U:O2'	1:X:2299:A:O4'	2.38	0.41
23:U:11:LYS:C	23:U:12:ASN:CG	2.79	0.41
1:X:1625:A:C6	1:X:1632:A:C2	3.09	0.41
1:X:1285:A:O2'	1:X:1286:U:OP1	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:54:ARG:HE	7:E:62:ARG:HG2	1.86	0.41
4:B:68:ALA:C	4:B:70:ALA:N	2.72	0.41
1:X:1137:A:H4'	1:X:1138:A:C5'	2.48	0.41
1:X:1646:G:C5	1:X:1647:U:C4	3.08	0.41
1:X:529:U:H2'	1:X:530:G:C8	2.53	0.41
10:H:9:ASP:H	10:H:95:ALA:HA	1.85	0.41
15:M:6:LYS:O	15:M:7:ILE:HD13	2.21	0.41
6:D:124:GLY:O	6:D:125:ARG:HD3	2.20	0.41
1:X:2636:A:C8	1:X:2637:C:C5	3.08	0.41
15:M:46:ARG:CG	15:M:47:SER:N	2.83	0.41
1:X:759:C:C3'	1:X:759:C:C6	3.04	0.41
19:Q:34:THR:OG1	19:Q:37:GLU:N	2.47	0.41
1:X:2561:G:N2	1:X:2562:G:H1'	2.35	0.41
12:J:64:LYS:CD	12:J:64:LYS:H	2.26	0.41
13:K:66:VAL:O	13:K:67:ALA:C	2.59	0.41
1:X:2072:C:C2	1:X:2073:A:C8	3.09	0.41
1:X:2074:U:H1'	23:U:48:LYS:CE	2.49	0.41
1:X:2077:G:N1	1:X:2179:C:C2	2.89	0.41
3:A:210:GLY:HA2	3:A:213:ARG:CG	2.47	0.41
3:A:212:SER:O	3:A:214:TRP:N	2.53	0.41
15:M:38:LYS:C	15:M:40:ARG:H	2.23	0.41
15:M:39:VAL:CG1	15:M:45:THR:HG23	2.50	0.41
15:M:89:ASN:ND2	15:M:90:GLN:CD	2.73	0.41
1:X:2665:G:H2'	1:X:2666:U:O4'	2.20	0.41
9:G:105:GLY:O	9:G:110:LEU:CD1	2.68	0.41
9:G:158:HIS:HA	9:G:161:GLN:NE2	2.36	0.41
9:G:71:THR:HA	9:G:72:PRO:HD3	1.82	0.41
16:N:112:ALA:O	16:N:113:SER:C	2.59	0.41
9:G:71:THR:CA	16:N:64:ARG:HH11	2.34	0.41
1:X:1004:A:C4	1:X:1005:U:C5	3.08	0.41
1:X:1014:G:C6	1:X:1015:U:C4	3.09	0.41
6:D:108:LEU:HA	6:D:111:ILE:CD1	2.50	0.41
6:D:136:LEU:N	6:D:141:ILE:HG21	2.35	0.41
6:D:4:LEU:HD12	6:D:5:LYS:N	2.35	0.41
2:Z:30:C:C2'	2:Z:31:A:H5'	2.49	0.41
21:S:30:VAL:HG12	21:S:31:SER:H	1.82	0.41
1:X:1218:C:H1'	11:I:8:PRO:O	2.20	0.41
3:A:160:GLY:HA2	3:A:196:VAL:CB	2.50	0.41
3:A:79:VAL:HG22	3:A:95:LEU:HD21	2.03	0.41
1:X:1790:G:HO2'	1:X:1791:C:P	2.42	0.41
19:Q:40:ASP:HA	19:Q:43:GLN:HE21	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:Q:53:ILE:C	19:Q:54:SER:OG	2.59	0.41
1:X:344:G:C2	1:X:345:U:C6	3.08	0.41
8:F:77:TYR:O	8:F:81:LYS:HB2	2.21	0.41
30:4:1:MET:CE	30:4:35:ARG:HB2	2.50	0.41
1:X:825:C:H1'	1:X:1263:G:C2	2.56	0.41
1:X:592:G:OP2	16:N:10:ARG:NH1	2.54	0.41
1:X:2725:C:H2'	1:X:2726:U:C6	2.56	0.41
1:X:1528:C:H5'	1:X:1529:C:OP2	2.21	0.41
22:T:70:ILE:HD12	22:T:78:PHE:HB3	2.03	0.41
4:B:123:ALA:C	4:B:124:GLY:O	2.56	0.41
1:X:1672:A:H3'	1:X:1673:C:H6	1.84	0.41
1:X:2222:U:H2'	1:X:2223:U:C5	2.48	0.41
15:M:99:VAL:HG22	15:M:101:ARG:HG2	2.01	0.41
1:X:2826:C:C2'	1:X:2827:G:H5'	2.50	0.41
1:X:970:A:N6	12:J:83:ARG:HH21	2.17	0.41
12:J:47:GLN:HE22	12:J:127:PRO:CG	2.34	0.41
7:E:45:GLN:CD	7:E:47:GLY:O	2.59	0.41
7:E:30:LYS:HE3	7:E:79:VAL:O	2.20	0.41
18:P:36:ARG:HH22	26:Y:20:ARG:HH21	1.68	0.41
1:X:116:A:C8	1:X:116:A:H3'	2.56	0.41
1:X:1596:A:N6	1:X:1597:A:C6	2.89	0.41
1:X:2015:G:H2'	4:B:145:LYS:HE2	2.03	0.41
21:S:87:THR:O	21:S:88:TYR:CB	2.69	0.41
1:X:1273:G:H2'	1:X:1274:C:C6	2.55	0.41
1:X:54:G:C2	1:X:55:A:C8	3.09	0.41
7:E:54:ARG:NE	7:E:57:ASP:OD2	2.54	0.41
1:X:1134:C:N3	1:X:1135:C:C5	2.89	0.41
10:H:101:ASN:C	10:H:102:GLN:HE21	2.24	0.41
1:X:2821:G:C6	1:X:2846:G:C2	3.09	0.41
12:J:62:GLY:HA3	12:J:64:LYS:NZ	2.36	0.41
1:X:103:U:O5'	1:X:103:U:H6	2.03	0.41
1:X:1366:A:N1	1:X:1367:A:C2	2.89	0.41
14:L:45:ASP:N	14:L:45:ASP:OD1	2.54	0.41
1:X:2519:C:C4	1:X:2520:A:C5	3.09	0.41
1:X:1634:A:O2'	1:X:1635:G:OP1	2.27	0.41
3:A:218:LYS:N	3:A:219:PRO:CD	2.84	0.41
1:X:1782:A:H61	1:X:1820:G:C2'	2.34	0.41
15:M:22:ARG:HH11	15:M:24:LEU:HD23	1.85	0.41
1:X:2661:G:C2	1:X:2662:C:N1	2.88	0.41
9:G:156:HIS:C	9:G:158:HIS:H	2.24	0.41
9:G:169:GLN:CB	9:G:170:PRO:CD	2.96	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:168:THR:C	9:G:169:GLN:O	2.57	0.41
9:G:65:LYS:HB2	9:G:65:LYS:HZ2	1.85	0.41
9:G:64:GLY:HA3	9:G:67:ARG:HE	1.86	0.41
1:X:1265:G:H1	16:N:37:GLN:NE2	2.18	0.41
17:O:36:LYS:CE	17:O:56:VAL:N	2.84	0.41
17:O:57:GLN:O	17:O:96:LEU:C	2.59	0.41
1:X:1011:A:N6	1:X:1166:A:C8	2.89	0.41
1:X:1035:G:P	1:X:1036:G:O3'	2.79	0.41
1:X:2035:G:N2	1:X:2036:G:C1'	2.83	0.41
1:X:459:A:C4	1:X:484:G:C8	3.09	0.41
1:X:814:G:O6	5:C:48:ARG:HA	2.21	0.41
1:X:982:C:C4	1:X:983:G:C5	3.08	0.41
12:J:42:TRP:HE3	12:J:95:VAL:HG11	1.85	0.41
11:I:73:GLU:CG	11:I:105:PRO:O	2.68	0.41
18:P:28:ALA:N	18:P:124:ILE:O	2.54	0.41
6:D:22:TYR:O	6:D:24:SER:N	2.53	0.41
6:D:53:ALA:O	6:D:54:ALA:C	2.59	0.41
6:D:92:ARG:HH21	6:D:92:ARG:HG3	1.85	0.41
14:L:103:LEU:HD23	14:L:103:LEU:O	2.21	0.41
21:S:26:LYS:HE3	21:S:26:LYS:HB2	1.85	0.41
21:S:6:LYS:HB2	21:S:31:SER:C	2.41	0.41
2:Z:75:A:N6	2:Z:76:U:C2	2.88	0.41
5:C:101:GLN:HB2	5:C:102:LEU:H	1.76	0.41
3:A:141:VAL:HG23	3:A:194:GLY:HA2	2.03	0.41
3:A:147:LEU:HD23	3:A:147:LEU:HA	1.72	0.41
19:Q:47:GLY:O	19:Q:48:VAL:CB	2.68	0.41
20:R:93:ARG:NH1	20:R:108:VAL:CG2	2.77	0.41
30:4:3:VAL:HG13	30:4:37:GLY:H	1.85	0.41
21:S:103:ARG:HH11	21:S:108:VAL:HG22	1.84	0.41
1:X:2344:G:P	22:T:55:ARG:H	2.40	0.41
1:X:2329:C:O2'	1:X:2330:G:H5'	2.20	0.41
1:X:1063:C:H2'	1:X:1064:C:H5	1.82	0.41
8:F:91:THR:OG1	8:F:91:THR:O	2.27	0.41
8:F:92:PRO:C	8:F:93:ASN:OD1	2.59	0.41
14:L:15:ARG:HD3	14:L:15:ARG:HA	1.92	0.41
1:X:2483:U:C6	1:X:2483:U:O5'	2.71	0.41
7:E:24:PHE:CB	7:E:35:VAL:O	2.61	0.41
2:Z:25:G:C6	2:Z:63:A:C6	3.09	0.41
1:X:2306:A:C5	1:X:2367:A:C2	3.09	0.41
1:X:632:A:C2'	1:X:633:G:H5'	2.44	0.41
1:X:776:G:C8	1:X:776:G:H3'	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:75:VAL:HG23	12:J:93:TYR:O	2.20	0.41
1:X:1271:C:O2'	1:X:1272:G:H5'	2.21	0.41
1:X:393:U:HO2'	1:X:394:U:H5'	1.84	0.41
1:X:200:A:C5	1:X:435:A:C8	3.09	0.41
1:X:2634:G:HO2'	1:X:2643:G:H1	1.69	0.41
1:X:1850:G:C6	1:X:1867:A:C4	3.09	0.41
1:X:765:C:HO2'	1:X:766:A:P	2.40	0.41
1:X:785:U:H2'	1:X:786:U:H6	1.85	0.41
1:X:579:G:H2'	1:X:2013:A:C6	2.56	0.41
1:X:1546:C:H2'	1:X:1547:U:C6	2.56	0.41
9:G:36:ASN:OD1	9:G:37:ASP:N	2.54	0.41
13:K:66:VAL:O	13:K:69:ASP:N	2.33	0.41
1:X:1401:G:O2'	1:X:1402:G:H5'	2.20	0.41
1:X:544:U:H2'	1:X:545:C:C6	2.56	0.41
22:T:19:LYS:O	22:T:20:TYR:CB	2.68	0.41
1:X:2491:C:N3	1:X:2492:G:C8	2.88	0.41
1:X:2190:A:H2	1:X:2194:A:N1	2.19	0.41
3:A:53:PHE:O	3:A:54:ILE:O	2.39	0.41
1:X:2577:A:H5''	3:A:235:GLY:HA3	2.01	0.41
3:A:210:GLY:O	3:A:214:TRP:N	2.53	0.41
10:H:89:ILE:HG12	15:M:79:ARG:CD	2.50	0.41
15:M:39:VAL:HG12	15:M:45:THR:HG23	2.02	0.41
15:M:82:PRO:O	15:M:84:ALA:N	2.54	0.41
9:G:154:GLU:CD	9:G:155:THR:H	2.24	0.41
1:X:572:G:C6	1:X:2001:G:C4	3.09	0.41
9:G:116:ARG:C	9:G:118:ALA:N	2.74	0.41
9:G:40:ASN:CB	9:G:78:ASP:HB3	2.51	0.41
17:O:40:VAL:O	17:O:40:VAL:CG2	2.68	0.41
1:X:1018:C:C4	1:X:1019:U:C5	3.09	0.41
26:Y:9:LYS:O	26:Y:11:THR:N	2.53	0.41
2:Z:42:U:C1'	2:Z:47:A:H61	2.29	0.41
14:L:87:VAL:CG1	14:L:88:VAL:N	2.84	0.41
1:X:942:U:P	25:W:32:ARG:HH12	2.43	0.41
21:S:36:ARG:HE	21:S:37:LYS:CA	2.31	0.41
2:Z:75:A:N3	2:Z:75:A:H2'	2.36	0.41
12:J:36:ILE:CG2	12:J:101:GLY:O	2.68	0.41
12:J:59:PHE:HE2	12:J:114:GLN:O	2.03	0.41
2:Z:93:G:N2	2:Z:94:G:H1'	2.36	0.41
12:J:59:PHE:CE1	12:J:110:VAL:HG11	2.56	0.41
12:J:39:GLU:HA	12:J:40:PRO:HD3	1.73	0.41
21:S:70:GLN:HE21	21:S:71:MET:HE2	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2796:A:N1	1:X:2797:G:C6	2.88	0.41
1:X:2802:C:C2	1:X:2803:C:C5	3.09	0.41
5:C:17:LEU:HD13	5:C:17:LEU:HA	1.94	0.41
5:C:29:GLU:O	5:C:32:THR:HB	2.21	0.41
23:U:28:GLY:CA	23:U:32:ARG:HE	2.34	0.41
1:X:228:A:H2'	1:X:229:G:H5'	2.03	0.41
1:X:2800:C:C5	1:X:2801:A:C8	3.09	0.41
23:U:20:ARG:CD	23:U:43:ARG:NH2	2.78	0.41
23:U:22:GLY:H	23:U:39:LYS:CB	2.34	0.41
1:X:1391:A:N7	1:X:1393:G:C6	2.89	0.41
1:X:1443:G:OP2	1:X:1443:G:H3'	2.21	0.41
19:Q:29:VAL:HG11	19:Q:78:ALA:HB2	2.03	0.41
24:V:30:PHE:O	24:V:31:GLN:C	2.57	0.41
1:X:653:G:C8	1:X:653:G:H3'	2.56	0.41
6:D:69:LYS:HA	6:D:85:VAL:H	1.86	0.41
1:X:1513:U:P	1:X:1513:U:H3'	2.61	0.41
1:X:341:A:O2'	1:X:342:G:OP1	2.35	0.41
1:X:507:A:H2'	1:X:508:G:C8	2.55	0.41
20:R:100:ASP:OD1	20:R:102:LYS:C	2.60	0.41
10:H:1:MET:HG2	10:H:79:HIS:ND1	2.35	0.41
1:X:1693:A:C2	1:X:1694:A:N3	2.89	0.41
1:X:1043:A:C5'	30:4:9:LYS:HZ1	2.27	0.41
1:X:2411:A:C6	1:X:2412:A:C6	3.09	0.41
1:X:1068:A:H2'	1:X:1068:A:N3	2.35	0.41
7:E:164:PHE:O	7:E:167:GLU:HB2	2.21	0.41
1:X:2724:G:C2	1:X:2741:G:C4	3.09	0.41
7:E:103:LEU:HD23	7:E:148:VAL:HG22	2.03	0.41
7:E:132:ASP:OD1	7:E:133:VAL:N	2.54	0.41
7:E:85:ILE:O	7:E:132:ASP:HA	2.20	0.41
4:B:96:PHE:CE2	4:B:102:ILE:CG2	3.04	0.41
21:S:92:VAL:HG23	21:S:93:GLU:H	1.85	0.41
1:X:333:A:H3'	5:C:162:ARG:NE	2.33	0.41
22:T:43:THR:HB	22:T:46:LYS:HZ1	1.84	0.41
4:B:116:VAL:O	4:B:117:MET:C	2.56	0.41
1:X:2829:A:C2	1:X:2830:U:C2	3.09	0.41
24:V:16:LYS:HG2	24:V:17:GLU:N	2.36	0.41
1:X:2806:G:O4'	1:X:2858:A:C2	2.74	0.41
1:X:2859:U:H5	1:X:2860:C:C2	2.39	0.41
14:L:15:ARG:NH1	14:L:15:ARG:CG	2.81	0.41
1:X:2499:C:C4	1:X:2546:G:C8	3.09	0.41
12:J:81:GLU:HG2	12:J:82:THR:N	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1668:G:C2	1:X:1990:U:C2	3.09	0.41
7:E:24:PHE:O	7:E:35:VAL:O	2.38	0.41
7:E:5:GLY:O	7:E:6:LYS:HG3	2.20	0.41
18:P:42:VAL:C	18:P:43:ASP:OD2	2.60	0.41
18:P:62:ARG:CZ	26:Y:25:LEU:HD11	2.50	0.41
11:I:78:SER:N	11:I:112:GLY:HA3	2.35	0.41
13:K:45:ARG:CB	13:K:46:PRO:CD	2.99	0.41
1:X:2241:U:H4'	1:X:2307:A:H2	1.85	0.41
1:X:2477:C:O2'	1:X:2478:C:H5'	2.21	0.41
1:X:924:C:C2	1:X:925:U:C5	3.09	0.41
1:X:923:A:C5	12:J:12:LYS:HE3	2.56	0.41
24:V:24:GLU:OE2	24:V:46:LEU:CD1	2.69	0.41
1:X:1373:G:O6	1:X:1385:C:N3	2.54	0.41
1:X:1625:A:N3	1:X:1632:A:N3	2.69	0.41
21:S:98:VAL:HG13	21:S:115:ILE:HG21	2.03	0.41
1:X:53:G:C5	1:X:54:G:C8	3.09	0.41
1:X:2781:G:H8	1:X:2781:G:O5'	2.04	0.41
10:H:9:ASP:HB2	10:H:95:ALA:HB1	1.98	0.41
1:X:205:A:N3	1:X:207:U:H1'	2.35	0.41
1:X:209:G:C3'	1:X:209:G:C8	3.04	0.41
1:X:2388:G:C5	1:X:2389:G:C8	3.09	0.41
1:X:1188:A:H8	1:X:1188:A:O5'	2.04	0.41
1:X:1741:G:N2	1:X:1742:G:H1'	2.36	0.41
1:X:1969:G:N3	1:X:1970:G:C8	2.89	0.41
1:X:966:A:C2	1:X:974:U:C2	3.08	0.41
1:X:2433:G:H2'	1:X:2434:G:H8	1.86	0.41
1:X:2339:A:C2	1:X:2340:C:H1'	2.55	0.41
1:X:701:U:C5'	1:X:1771:A:C2	3.04	0.41
1:X:1461:C:C2	1:X:1462:C:C5	3.09	0.41
1:X:1463:A:C6	1:X:1479:G:N1	2.89	0.41
4:B:48:GLN:O	4:B:48:GLN:CG	2.62	0.41
1:X:609:U:C1'	11:I:18:ARG:CZ	2.99	0.41
13:K:37:THR:O	13:K:38:LEU:C	2.58	0.41
1:X:425:A:H3'	1:X:426:C:C5	2.55	0.41
1:X:1483:G:C4	1:X:1541:G:N2	2.89	0.41
1:X:410:A:H2'	1:X:411:C:O4'	2.21	0.41
1:X:2715:C:H2'	1:X:2716:G:O4'	2.21	0.41
1:X:2089:C:C4	1:X:2090:U:C5	3.09	0.41
10:H:130:ALA:HA	10:H:131:PRO:HD2	1.88	0.41
1:X:1028:G:C6	1:X:1157:G:O6	2.73	0.41
1:X:1600:U:H5'	1:X:1601:U:OP1	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1281:A:C2'	1:X:2592:U:C5	2.92	0.41
1:X:2189:A:C4	1:X:2190:A:N7	2.89	0.41
15:M:34:ARG:HD2	15:M:81:PHE:CE1	2.56	0.41
15:M:82:PRO:O	15:M:83:PHE:C	2.60	0.41
1:X:2707:G:H2'	1:X:2708:U:H6	1.86	0.41
17:O:38:LEU:O	17:O:39:PHE:HB3	2.20	0.41
1:X:1017:C:O2'	1:X:1018:C:H5'	2.21	0.41
1:X:1016:C:H4'	1:X:1023:U:O4'	2.21	0.41
1:X:2007:G:O2'	1:X:2008:C:H5'	2.21	0.41
1:X:546:A:C6	1:X:547:U:C4	3.09	0.41
1:X:814:G:P	5:C:50:GLN:NE2	2.94	0.41
11:I:105:PRO:O	11:I:106:VAL:HG22	2.21	0.41
6:D:150:ARG:CG	6:D:151:GLY:H	2.33	0.41
6:D:151:GLY:O	6:D:152:MET:SD	2.79	0.41
6:D:65:PRO:HB3	6:D:89:VAL:HG21	2.02	0.41
2:Z:32:C:C5	2:Z:33:C:C5	3.08	0.41
2:Z:18:G:N2	2:Z:71:G:H1'	2.36	0.41
1:X:2248:A:C6	1:X:2249:U:C4	3.09	0.41
1:X:2801:A:C6	1:X:2802:C:C4	3.09	0.41
1:X:33:C:O2'	1:X:34:U:OP1	2.31	0.41
1:X:677:G:H2'	1:X:678:G:O5'	2.21	0.41
23:U:20:ARG:CG	23:U:43:ARG:HD2	2.51	0.41
3:A:131:LEU:CD2	3:A:131:LEU:N	2.79	0.41
3:A:147:LEU:HG	3:A:155:LEU:HD11	2.02	0.41
3:A:200:GLU:OE1	3:A:202:LYS:CA	2.69	0.41
3:A:88:ARG:O	3:A:89:SER:OG	2.36	0.41
3:A:75:VAL:CG1	3:A:98:ALA:HB3	2.48	0.41
1:X:1789:U:N3	1:X:1811:A:C2	2.89	0.41
1:X:739:G:O2'	1:X:740:A:H8	2.04	0.41
19:Q:55:THR:HB	19:Q:77:LYS:O	2.20	0.41
1:X:1512:A:H1'	1:X:1593:C:O2'	2.21	0.41
20:R:35:LYS:NZ	20:R:35:LYS:CB	2.84	0.41
8:F:81:LYS:HD2	8:F:81:LYS:HA	1.79	0.41
1:X:825:C:C4	1:X:1263:G:O6	2.74	0.41
1:X:1067:G:N2	1:X:1114:A:H62	2.19	0.41
3:A:182:LEU:HA	3:A:182:LEU:HD23	1.88	0.41
1:X:2034:A:C8	1:X:2593:A:N6	2.89	0.41
1:X:1956:G:C4	1:X:1957:C:C5	3.09	0.41
14:L:9:ARG:O	14:L:10:LYS:C	2.59	0.41
12:J:83:ARG:HG2	12:J:83:ARG:NH1	2.35	0.41
18:P:66:GLU:HB3	18:P:67:PRO:HD3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:527:C:O2'	18:P:39:ARG:NH2	2.51	0.41
23:U:10:LYS:HD3	23:U:11:LYS:CB	2.51	0.41
2:Z:39:C:O2	2:Z:39:C:H2'	2.21	0.41
2:Z:39:C:H3'	2:Z:40:C:C6	2.56	0.41
1:X:2262:C:C2'	1:X:2263:C:C5'	2.94	0.41
1:X:1858:C:N3	1:X:1859:A:C5	2.89	0.41
21:S:160:LEU:HD22	21:S:162:ALA:HB3	2.04	0.41
1:X:1324:G:H1'	1:X:1326:U:O4	2.21	0.41
1:X:1398:G:C2	1:X:1416:A:C4	3.09	0.41
1:X:2779:C:C6	1:X:2780:A:C8	3.09	0.41
11:I:30:ALA:N	11:I:34:HIS:CE1	2.88	0.41
1:X:528:G:C6	1:X:529:U:O4	2.74	0.41
1:X:13:A:N1	1:X:535:U:C2	2.89	0.41
8:F:101:ASN:C	8:F:104:GLN:HG2	2.40	0.41
1:X:196:A:H2'	1:X:197:G:C5'	2.51	0.41
1:X:204:A:N7	1:X:2386:G:C4'	2.84	0.41
5:C:56:ARG:HA	5:C:71:ASP:OD2	2.21	0.41
1:X:2284:U:C3'	1:X:2285:U:C5'	2.96	0.41
24:V:25:LEU:HD11	24:V:47:ARG:HD3	2.03	0.41
1:X:938:G:C2'	1:X:939:C:OP2	2.69	0.41
7:E:42:THR:HB	7:E:53:GLU:HB2	2.03	0.41
19:Q:69:ILE:C	19:Q:69:ILE:HD12	2.41	0.41
1:X:188:G:H2'	1:X:189:A:C8	2.56	0.41
1:X:1973:C:O2'	1:X:1974:U:O4'	2.38	0.41
1:X:1317:G:O2'	1:X:1318:A:H5'	2.21	0.41
2:Z:81:C:H6	2:Z:81:C:O5'	2.04	0.41
1:X:760:U:H2'	18:P:109:ARG:HE	1.86	0.40
1:X:2202:G:H2'	1:X:2203:G:H8	1.87	0.40
1:X:741:G:N2	1:X:743:A:C1'	2.82	0.40
5:C:82:VAL:CG1	5:C:85:GLY:HA3	2.51	0.40
5:C:44:SER:HB2	5:C:88:PRO:HD3	2.02	0.40
16:N:14:HIS:O	16:N:17:VAL:N	2.54	0.40
16:N:88:ILE:HG12	17:O:48:GLY:CA	2.51	0.40
1:X:1016:C:H2'	1:X:1017:C:C5	2.55	0.40
1:X:1020:A:H2'	1:X:1164:C:O2'	2.21	0.40
1:X:1236:G:N2	1:X:1240:G:C4	2.89	0.40
1:X:539:A:C2	1:X:2006:G:C8	3.09	0.40
1:X:649:G:C2	1:X:661:C:C2	3.09	0.40
6:D:36:VAL:O	6:D:36:VAL:HG12	2.19	0.40
6:D:5:LYS:C	6:D:7:LYS:N	2.69	0.40
2:Z:85:G:H5"	25:W:49:HIS:CD2	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:34:U:H1'	20:R:4:PRO:CA	2.42	0.40
1:X:228:A:H2'	1:X:229:G:O4'	2.21	0.40
1:X:399:G:O2'	1:X:400:U:OP1	2.37	0.40
1:X:1656:U:C2'	1:X:1657:A:C5'	2.99	0.40
6:D:71:LYS:O	6:D:71:LYS:HD3	2.21	0.40
1:X:83:A:O3'	1:X:84:G:O4'	2.39	0.40
1:X:452:G:H22	5:C:40:ARG:HH22	1.65	0.40
1:X:825:C:H1'	1:X:1263:G:N2	2.36	0.40
7:E:89:LEU:CD2	7:E:94:PHE:HB3	2.51	0.40
3:A:173:VAL:CG1	3:A:174:ILE:N	2.65	0.40
13:K:98:LEU:HD11	13:K:114:GLU:OE1	2.21	0.40
1:X:2824:C:O2'	1:X:2825:A:P	2.79	0.40
13:K:18:VAL:CG1	13:K:22:ARG:HD2	2.47	0.40
24:V:20:ALA:O	24:V:23:LYS:HB3	2.21	0.40
1:X:1086:C:H2'	1:X:1086:C:O2	2.21	0.40
1:X:2042:A:C5	1:X:2482:A:C2	3.08	0.40
18:P:47:GLY:N	18:P:92:VAL:HB	2.36	0.40
18:P:86:LEU:C	18:P:88:ASP:N	2.73	0.40
7:E:6:LYS:C	7:E:7:GLN:HG3	2.40	0.40
7:E:30:LYS:NZ	7:E:80:SER:O	2.46	0.40
1:X:155:G:C2'	1:X:156:G:C5'	3.00	0.40
11:I:114:ILE:O	11:I:115:SER:HB3	2.20	0.40
20:R:38:LEU:HD23	20:R:38:LEU:C	2.40	0.40
1:X:1286:U:C6	1:X:1986:G:H4'	2.55	0.40
1:X:15:G:C6	1:X:16:G:C5	3.09	0.40
1:X:429:C:H2'	1:X:430:C:O4'	2.21	0.40
1:X:696:U:C2'	1:X:697:G:O5'	2.69	0.40
1:X:1188:A:H8	1:X:1188:A:P	2.44	0.40
1:X:1621:C:H5'	1:X:1626:A:C6	2.56	0.40
13:K:115:LEU:HD23	13:K:115:LEU:HA	1.60	0.40
1:X:613:A:O4'	1:X:668:A:N1	2.54	0.40
1:X:1842:G:H2'	1:X:1843:U:O4'	2.21	0.40
1:X:1204:G:H2'	1:X:1205:G:C8	2.56	0.40
1:X:2667:C:C5	1:X:2699:G:C5	3.09	0.40
14:L:21:THR:CG2	14:L:22:ALA:H	2.33	0.40
1:X:787:A:C5'	3:A:48:ARG:HH22	2.24	0.40
1:X:1780:A:C5	1:X:1781:C:C4	3.09	0.40
1:X:2661:G:C2'	1:X:2662:C:H5'	2.51	0.40
5:C:83:ALA:O	5:C:84:PHE:C	2.60	0.40
9:G:156:HIS:CB	9:G:157:PRO:CD	2.95	0.40
16:N:86:ALA:O	16:N:89:ASP:N	2.30	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:O:33:VAL:HG12	17:O:57:GLN:CG	2.45	0.40
17:O:38:LEU:CD2	17:O:46:VAL:O	2.70	0.40
17:O:50:ASP:O	17:O:53:LYS:CB	2.70	0.40
1:X:2757:G:C1'	1:X:2759:U:H5	2.33	0.40
1:X:537:C:O2'	1:X:538:A:C6	2.74	0.40
11:I:97:ARG:O	11:I:98:LEU:CB	2.64	0.40
1:X:643:A:H4'	11:I:67:ASN:CB	2.51	0.40
6:D:105:ASN:CA	6:D:109:PRO:HG2	2.48	0.40
6:D:13:ARG:NH1	6:D:14:PRO:HG3	2.36	0.40
6:D:38:GLU:C	6:D:87:ILE:H	2.24	0.40
14:L:59:LEU:CD2	14:L:61:SER:H	2.32	0.40
2:Z:53:G:H5'	14:L:64:LYS:CD	2.51	0.40
21:S:4:THR:N	21:S:33:ALA:O	2.51	0.40
12:J:112:GLU:OE1	12:J:116:LYS:HB2	2.21	0.40
5:C:102:LEU:C	5:C:102:LEU:HD23	2.38	0.40
5:C:22:VAL:HA	5:C:106:MET:HG3	2.03	0.40
1:X:456:C:H4'	5:C:43:ALA:HB2	2.03	0.40
5:C:9:GLN:HE21	5:C:120:VAL:HG11	1.87	0.40
3:A:121:PRO:C	3:A:123:ALA:N	2.75	0.40
3:A:197:GLY:O	3:A:198:ASN:C	2.59	0.40
1:X:1811:A:H3'	3:A:178:PRO:HB2	2.02	0.40
19:Q:79:ILE:CD1	19:Q:79:ILE:N	2.80	0.40
1:X:1517:C:C5'	3:A:102:LYS:NZ	2.85	0.40
10:H:22:ILE:O	10:H:23:ARG:CB	2.69	0.40
3:A:183:ARG:HD2	3:A:184:ARG:O	2.21	0.40
1:X:1330:G:C6	1:X:1349:A:N6	2.89	0.40
22:T:37:LEU:HD12	22:T:37:LEU:N	2.33	0.40
1:X:1075:C:H5'	8:F:85:ILE:HG13	2.04	0.40
1:X:2311:U:C3'	1:X:2311:U:O2	2.70	0.40
15:M:69:ARG:CG	15:M:78:GLU:HG2	2.51	0.40
12:J:79:PRO:O	12:J:80:ALA:HB3	2.21	0.40
7:E:68:THR:O	7:E:72:VAL:HG23	2.21	0.40
1:X:118:U:O2	1:X:118:U:C2'	2.68	0.40
1:X:556:A:H1'	1:X:558:G:C2	2.55	0.40
13:K:94:TYR:HE1	13:K:96:ARG:NH1	2.18	0.40
1:X:2239:C:H2'	1:X:2240:C:H6	1.86	0.40
23:U:10:LYS:HD3	23:U:11:LYS:CA	2.48	0.40
1:X:2450:A:N6	1:X:2451:G:C2	2.88	0.40
11:I:45:LYS:HG2	11:I:46:GLY:H	1.86	0.40
1:X:683:A:HO2'	1:X:684:C:P	2.42	0.40
1:X:1285:A:HO2'	1:X:1286:U:P	2.44	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:118:LEU:HD23	10:H:118:LEU:HA	1.68	0.40
8:F:101:ASN:CB	8:F:104:GLN:HG2	2.46	0.40
10:H:74:VAL:HA	10:H:96:ALA:HB2	2.02	0.40
1:X:427:C:H2'	1:X:428:A:C8	2.56	0.40
1:X:2866:A:C6	1:X:2867:G:C2	3.09	0.40
1:X:1193:G:C5	1:X:1194:U:C5	3.10	0.40
1:X:858:G:OP2	1:X:858:G:C8	2.74	0.40
1:X:2431:C:N4	1:X:2432:A:C6	2.90	0.40
1:X:2688:G:C6	1:X:2689:C:N3	2.89	0.40
1:X:2060:A:C4	1:X:2414:A:C8	3.09	0.40
19:Q:51:ILE:CD1	19:Q:83:ALA:HA	2.52	0.40
1:X:1291:G:OP1	13:K:36:THR:HB	2.21	0.40
1:X:1038:U:O2	1:X:2466:G:O3'	2.40	0.40
1:X:1197:U:O2'	1:X:1198:C:H5'	2.21	0.40
1:X:1476:G:H2'	1:X:1477:C:O4'	2.22	0.40
1:X:1989:C:O5'	1:X:1989:C:H6	2.04	0.40
1:X:989:G:H2'	1:X:990:A:O4'	2.21	0.40
1:X:1801:C:N4	23:U:49:LYS:HZ3	2.18	0.40
23:U:53:GLU:O	23:U:78:ILE:CG2	2.69	0.40
3:A:245:VAL:HB	3:A:246:PRO:HD2	2.02	0.40
9:G:59:ALA:O	9:G:60:SER:C	2.59	0.40
9:G:59:ALA:O	9:G:62:ILE:HB	2.21	0.40
1:X:2425:G:C2	1:X:2480:C:C5	3.09	0.40
1:X:467:U:HO2'	1:X:468:A:P	2.44	0.40
6:D:7:LYS:HD3	6:D:7:LYS:HA	1.91	0.40
1:X:2355:A:N1	14:L:91:ARG:CZ	2.84	0.40
5:C:111:ARG:C	5:C:113:GLU:N	2.73	0.40
1:X:33:C:C2'	1:X:34:U:H5''	2.52	0.40
1:X:627:A:O2'	1:X:628:A:O4'	2.37	0.40
11:I:47:ALA:O	11:I:48:PHE:C	2.56	0.40
23:U:23:LYS:HB2	23:U:35:THR:HG21	2.02	0.40
1:X:224:G:C5	1:X:229:G:O6	2.75	0.40
3:A:78:LYS:CD	3:A:116:THR:HB	2.47	0.40
19:Q:53:ILE:HG13	19:Q:54:SER:N	2.36	0.40
19:Q:62:ARG:O	19:Q:63:LYS:CB	2.69	0.40
19:Q:63:LYS:CE	19:Q:65:VAL:HA	2.50	0.40
1:X:1408:A:C5	1:X:1411:C:C4	3.09	0.40
1:X:513:A:C6	1:X:515:A:N6	2.89	0.40
1:X:1474:A:N3	1:X:1474:A:H2'	2.36	0.40
1:X:2334:C:H5'	22:T:25:LYS:NZ	2.36	0.40
1:X:1675:C:H2'	1:X:1676:U:C6	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1075:C:H4'	8:F:89:SER:O	2.21	0.40
1:X:2314:A:C4	1:X:2316:G:C8	3.10	0.40
1:X:2546:G:C4	1:X:2547:C:C5	3.09	0.40
18:P:57:LEU:O	18:P:59:PHE:N	2.54	0.40
1:X:1564:U:H2'	1:X:1565:G:C8	2.57	0.40
13:K:45:ARG:HD3	13:K:95:THR:CG2	2.51	0.40
22:T:3:HIS:O	22:T:4:LYS:CB	2.69	0.40
1:X:1625:A:C4	1:X:1632:A:C2	3.09	0.40
21:S:168:VAL:HG12	21:S:168:VAL:O	2.21	0.40
4:B:56:GLU:C	4:B:59:VAL:HG23	2.41	0.40
1:X:2237:C:H5'	22:T:14:ARG:HD3	2.03	0.40
10:H:29:ILE:HA	10:H:34:LEU:HA	2.03	0.40
1:X:859:U:C1'	1:X:860:U:C5	3.05	0.40
1:X:2501:U:O2	1:X:2501:U:H2'	2.22	0.40
1:X:698:A:C2	1:X:702:A:C6	3.09	0.40
1:X:1212:U:H2'	1:X:1213:U:H6	1.86	0.40
1:X:2695:C:O2'	1:X:2696:A:H5'	2.21	0.40
1:X:1295:U:C4	1:X:1296:G:C5	3.09	0.40
1:X:1483:G:C2	1:X:1541:G:C2	3.10	0.40
1:X:2831:A:N6	1:X:2832:G:C6	2.90	0.40
1:X:1371:G:N7	1:X:1384:G:C6	2.89	0.40
23:U:51:ILE:N	23:U:52:ARG:NH2	2.69	0.40
3:A:206:LEU:HD23	3:A:211:ARG:HG2	2.03	0.40
1:X:797:A:N7	3:A:229:VAL:HG21	2.35	0.40
1:X:1820:G:C8	1:X:1820:G:OP2	2.74	0.40
4:B:202:ALA:O	4:B:203:LYS:HB2	2.21	0.40
9:G:103:TYR:CZ	9:G:111:LYS:CA	3.05	0.40
1:X:1006:C:C6	1:X:1006:C:H5''	2.55	0.40
1:X:1149:G:P	9:G:98:LYS:NZ	2.94	0.40
1:X:1164:C:O2	1:X:1164:C:H2'	2.21	0.40
1:X:1234:C:C2	1:X:1235:C:C5	3.10	0.40
1:X:501:G:H2'	1:X:502:A:O4'	2.21	0.40
2:Z:30:C:H42	2:Z:58:G:N2	2.19	0.40
25:W:2:LYS:CD	25:W:32:ARG:O	2.68	0.40
21:S:84:TYR:O	21:S:85:MET:C	2.58	0.40
12:J:40:PRO:HB3	12:J:99:LYS:HD2	2.03	0.40
23:U:29:GLY:C	23:U:31:GLY:N	2.74	0.40
1:X:219:G:HO2'	1:X:231:G:H1	1.70	0.40
1:X:665:A:C2	1:X:666:U:C6	3.07	0.40
3:A:193:ILE:HA	3:A:193:ILE:HD13	1.96	0.40
1:X:64:C:C1'	19:Q:68:PHE:HD1	2.34	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:52:ASN:O	20:R:53:VAL:HB	2.22	0.40
1:X:490:A:O2'	1:X:491:A:O5'	2.39	0.40
1:X:1043:A:H2'	1:X:1044:U:H5'	2.03	0.40
1:X:2412:A:O5'	1:X:2412:A:H8	2.04	0.40
7:E:104:GLU:OE2	7:E:114:ILE:CG1	2.67	0.40
1:X:1571:G:H2'	1:X:1572:C:C6	2.55	0.40
21:S:107:GLU:OE1	21:S:112:LEU:HA	2.21	0.40
1:X:1826:U:O2	1:X:1826:U:H2'	2.21	0.40
1:X:2522:G:C6	1:X:2523:G:C6	3.10	0.40
18:P:33:MET:HE2	18:P:37:LYS:HD2	2.03	0.40
1:X:119:G:H4'	1:X:143:A:H5'	2.02	0.40
13:K:45:ARG:O	13:K:46:PRO:C	2.59	0.40
13:K:45:ARG:O	13:K:48:VAL:HG12	2.22	0.40
1:X:2241:U:H2'	1:X:2242:C:H6	1.87	0.40
1:X:1109:A:C2'	1:X:1110:G:H5'	2.49	0.40
22:T:2:ALA:O	22:T:3:HIS:HB3	2.21	0.40
1:X:2451:G:H22	1:X:2456:U:H5''	1.87	0.40
1:X:107:G:C2	1:X:108:G:H1'	2.56	0.40
1:X:684:C:H2'	1:X:685:U:C6	2.56	0.40
1:X:1336:G:O6	1:X:1337:G:C6	2.75	0.40
4:B:16:LYS:HD2	4:B:173:VAL:HG13	2.03	0.40
1:X:2245:A:C4'	1:X:2246:A:N3	2.75	0.40
1:X:205:A:H1'	1:X:207:U:O4'	2.21	0.40
1:X:1624:A:C5	1:X:1627:C:C4	3.09	0.40
1:X:1769:U:H5	1:X:1775:A:C2	2.39	0.40
1:X:1755:G:C2	1:X:1756:C:C6	3.09	0.40
1:X:938:G:O2'	1:X:939:C:H6	2.05	0.40
19:Q:90:ALA:C	19:Q:92:ALA:N	2.74	0.40
1:X:994:A:N7	1:X:995:A:C6	2.89	0.40
1:X:498:C:O2	18:P:74:SER:CB	2.68	0.40
14:L:35:SER:C	14:L:36:LYS:HE3	2.41	0.40
18:P:10:ASN:O	18:P:11:LYS:C	2.59	0.40
23:U:75:TYR:O	23:U:77:GLY:N	2.44	0.40
9:G:42:VAL:O	9:G:81:VAL:N	2.55	0.40
1:X:2088:U:O2'	1:X:2089:C:OP1	2.32	0.40
1:X:1992:G:H1'	13:K:107:GLY:HA3	2.02	0.40
1:X:1281:A:C5	1:X:1996:A:N7	2.89	0.40
23:U:49:LYS:HB3	23:U:61:TRP:CZ3	2.55	0.40
1:X:2071:G:N2	1:X:2072:C:C1'	2.80	0.40
5:C:74:VAL:CG2	5:C:76:THR:HG23	2.52	0.40
9:G:119:LEU:HD13	9:G:126:VAL:HG22	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1023:U:H5	9:G:56:THR:HG21	1.87	0.40
1:X:951:G:H2'	1:X:952:A:C4'	2.51	0.40
1:X:981:C:H2'	1:X:982:C:O5'	2.20	0.40
6:D:111:ILE:HG12	6:D:137:ILE:CG2	2.51	0.40
6:D:16:LEU:O	6:D:20:PHE:HB2	2.22	0.40
21:S:16:GLU:O	21:S:18:MET:N	2.54	0.40
21:S:24:TYR:N	21:S:24:TYR:CD1	2.89	0.40
12:J:120:ARG:O	12:J:123:GLY:N	2.48	0.40
4:B:6:GLY:HA2	4:B:27:LEU:O	2.21	0.40
5:C:7:ILE:CG2	5:C:120:VAL:O	2.69	0.40
23:U:32:ARG:H	23:U:32:ARG:HE	1.69	0.40
1:X:178:C:C2'	1:X:178:C:O2	2.49	0.40
1:X:218:A:C4	1:X:220:U:C4	3.09	0.40
23:U:41:VAL:O	23:U:42:GLN:OE1	2.39	0.40
3:A:36:ALA:HB1	3:A:63:ARG:CA	2.44	0.40
1:X:1584:G:H4'	3:A:59:LYS:O	2.22	0.40
19:Q:54:SER:C	19:Q:55:THR:CG2	2.90	0.40
1:X:1249:G:O2'	1:X:1250:A:O5'	2.35	0.40
1:X:2216:G:H5''	1:X:2217:G:OP1	2.22	0.40
1:X:824:U:HO2'	1:X:825:C:P	2.44	0.40
1:X:88:G:N1	1:X:89:A:C6	2.89	0.40
1:X:1526:U:H3'	1:X:1527:G:H8	1.85	0.40
21:S:103:ARG:NH1	21:S:107:GLU:HB3	2.35	0.40
3:A:176:ARG:HA	3:A:181:GLU:O	2.22	0.40
13:K:100:VAL:H	13:K:111:ALA:HA	1.86	0.40
1:X:1925:C:H2'	1:X:1926:U:C6	2.56	0.40
1:X:2571:G:H2'	1:X:2572:U:C6	2.56	0.40
1:X:2569:A:C2	1:X:2584:U:C2	3.10	0.40
1:X:2311:U:C5'	1:X:2315:A:H62	2.33	0.40
1:X:2044:G:O6	33:X:2911:ZLD:H6	2.21	0.40
1:X:1460:G:N3	1:X:1460:G:H2'	2.37	0.40
1:X:118:U:H4'	1:X:119:G:H5''	2.03	0.40
4:B:4:ILE:HD11	4:B:29:GLY:O	2.20	0.40
1:X:788:G:H4'	1:X:789:G:O5'	2.21	0.40
23:U:15:VAL:HG23	23:U:16:ASN:N	2.36	0.40
1:X:1784:C:H2'	1:X:1785:A:O4'	2.22	0.40
1:X:1887:G:C2	1:X:1888:C:C6	3.09	0.40
1:X:1385:C:C2'	1:X:1386:A:C5'	2.98	0.40
1:X:2388:G:C4	1:X:2389:G:C8	3.09	0.40
1:X:696:U:H2'	1:X:697:G:O5'	2.22	0.40
1:X:938:G:H2'	1:X:939:C:OP2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:469:G:C2'	1:X:470:U:OP2	2.68	0.40
4:B:44:TYR:O	4:B:45:GLU:C	2.60	0.40
4:B:45:GLU:O	4:B:46:ALA:CB	2.68	0.40
6:D:142:THR:O	6:D:146:VAL:HG11	2.21	0.40
26:Y:51:TYR:CD2	26:Y:54:GLY:C	2.95	0.40
14:L:20:THR:CG2	14:L:23:ALA:HB3	2.45	0.40
1:X:994:A:N6	1:X:995:A:C2	2.89	0.40
1:X:188:G:H2'	1:X:189:A:H8	1.87	0.40
1:X:162:C:O2'	1:X:163:A:H5'	2.21	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:107:GLY:O	13:K:86:LYS:NZ[8_555]	2.03	0.17

## 5.3 Torsion angles [i](#)

### 5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	A	216/274 (79%)	109 (50%)	52 (24%)	55 (26%)	0	1
4	B	203/211 (96%)	124 (61%)	47 (23%)	32 (16%)	0	3
5	C	195/205 (95%)	92 (47%)	46 (24%)	57 (29%)	0	0
6	D	175/180 (97%)	78 (45%)	54 (31%)	43 (25%)	0	1
7	E	169/185 (91%)	91 (54%)	42 (25%)	36 (21%)	0	1
8	F	68/144 (47%)	37 (54%)	21 (31%)	10 (15%)	0	4
9	G	140/174 (80%)	66 (47%)	32 (23%)	42 (30%)	0	0
10	H	132/134 (98%)	91 (69%)	26 (20%)	15 (11%)	0	7
11	I	139/156 (89%)	51 (37%)	50 (36%)	38 (27%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
12	J	134/142 (94%)	63 (47%)	46 (34%)	25 (19%)	0	2
13	K	111/116 (96%)	61 (55%)	31 (28%)	19 (17%)	0	3
14	L	102/114 (90%)	48 (47%)	25 (24%)	29 (28%)	0	0
15	M	106/166 (64%)	68 (64%)	17 (16%)	21 (20%)	0	2
16	N	115/118 (98%)	56 (49%)	30 (26%)	29 (25%)	0	1
17	O	92/100 (92%)	52 (56%)	19 (21%)	21 (23%)	0	1
18	P	125/134 (93%)	75 (60%)	35 (28%)	15 (12%)	0	6
19	Q	91/95 (96%)	44 (48%)	23 (25%)	24 (26%)	0	1
20	R	108/115 (94%)	63 (58%)	17 (16%)	28 (26%)	0	1
21	S	173/237 (73%)	97 (56%)	40 (23%)	36 (21%)	0	1
22	T	82/91 (90%)	51 (62%)	16 (20%)	15 (18%)	0	2
23	U	70/81 (86%)	39 (56%)	15 (21%)	16 (23%)	0	1
24	V	64/67 (96%)	32 (50%)	19 (30%)	13 (20%)	0	1
25	W	53/55 (96%)	22 (42%)	18 (34%)	13 (24%)	0	1
26	Y	56/60 (93%)	31 (55%)	17 (30%)	8 (14%)	0	4
30	4	35/37 (95%)	22 (63%)	11 (31%)	2 (6%)	2	23
All	All	2954/3391 (87%)	1563 (53%)	749 (25%)	642 (22%)	0	1

All (642) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	A	33	LEU
3	A	58	HIS
3	A	66	ASP
3	A	91	ARG
3	A	98	ALA
3	A	108	PRO
3	A	113	VAL
3	A	125	PRO
3	A	127	LEU
3	A	145	LEU
3	A	154	GLN
3	A	167	GLY
3	A	190	TYR
3	A	218	LYS
3	A	219	PRO

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Mol	Chain	Res	Type
3	A	220	HIS
3	A	237	GLU
3	A	240	THR
4	B	17	ASN
4	B	41	THR
4	B	70	ALA
4	B	86	PRO
4	B	90	SER
4	B	122	PHE
4	B	134	TRP
4	B	135	HIS
4	B	137	ARG
4	B	147	PRO
4	B	203	LYS
5	C	13	ARG
5	C	22	VAL
5	C	47	THR
5	C	58	MET
5	C	67	ALA
5	C	84	PHE
5	C	123	PHE
5	C	124	ASP
5	C	154	ASP
5	C	155	GLU
5	C	156	ASN
5	C	164	VAL
5	C	165	SER
5	C	167	VAL
5	C	168	SER
5	C	172	VAL
5	C	173	ALA
5	C	196	VAL
6	D	4	LEU
6	D	15	ALA
6	D	28	VAL
6	D	69	LYS
6	D	75	SER
6	D	114	PHE
6	D	121	ALA
6	D	127	ASN
6	D	134	GLU
6	D	137	ILE

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Mol	Chain	Res	Type
7	E	7	GLN
7	E	13	SER
7	E	17	VAL
7	E	55	PRO
7	E	105	MET
7	E	110	SER
7	E	126	PRO
7	E	136	ILE
7	E	151	VAL
7	E	172	LYS
8	F	85	ILE
8	F	87	LYS
8	F	92	PRO
8	F	95	ALA
8	F	113	MET
8	F	119	GLY
9	G	33	ILE
9	G	35	LYS
9	G	37	ASP
9	G	48	GLY
9	G	67	ARG
9	G	68	PRO
9	G	73	ASN
9	G	86	ALA
9	G	92	GLY
9	G	97	ASP
9	G	100	TYR
9	G	145	HIS
9	G	147	ARG
9	G	162	LYS
9	G	165	VAL
9	G	170	PRO
10	H	27	SER
10	H	79	HIS
10	H	101	ASN
11	I	9	THR
11	I	36	GLY
11	I	39	SER
11	I	45	LYS
11	I	62	LYS
11	I	65	PHE
11	I	84	GLU

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Mol	Chain	Res	Type
11	I	98	LEU
11	I	103	ASN
11	I	105	PRO
11	I	124	ALA
11	I	136	ALA
12	J	21	ASP
12	J	28	VAL
12	J	56	SER
12	J	60	ARG
12	J	83	ARG
12	J	90	ALA
12	J	91	VAL
12	J	112	GLU
13	K	6	ALA
13	K	9	LYS
13	K	15	SER
13	K	20	LEU
13	K	32	GLY
13	K	42	LYS
13	K	45	ARG
13	K	92	GLY
13	K	100	VAL
14	L	21	THR
14	L	33	ARG
14	L	38	ILE
14	L	40	ALA
14	L	45	ASP
14	L	46	SER
14	L	53	ALA
14	L	55	SER
14	L	56	SER
14	L	68	ALA
14	L	91	ARG
14	L	93	SER
14	L	95	LYS
15	M	29	PRO
15	M	53	VAL
15	M	105	TYR
16	N	22	LYS
16	N	24	PHE
16	N	33	ARG
16	N	35	ALA

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Mol	Chain	Res	Type
16	N	47	TYR
16	N	48	ARG
16	N	56	ASP
16	N	75	ASN
16	N	77	SER
16	N	92	ARG
16	N	94	VAL
16	N	95	LEU
16	N	107	LYS
16	N	115	ASN
17	O	10	LYS
17	O	24	SER
17	O	35	LEU
17	O	36	LYS
17	O	48	GLY
17	O	80	TYR
18	P	9	ARG
18	P	42	VAL
18	P	45	ILE
18	P	112	GLY
19	Q	5	ASP
19	Q	6	ILE
19	Q	13	SER
19	Q	21	GLU
19	Q	41	ALA
19	Q	48	VAL
19	Q	59	PRO
19	Q	61	LYS
19	Q	87	SER
19	Q	89	GLU
20	R	6	ALA
20	R	9	HIS
20	R	26	SER
20	R	53	VAL
20	R	66	GLN
20	R	82	ALA
20	R	85	ASP
20	R	87	GLU
21	S	5	ALA
21	S	6	LYS
21	S	11	LYS
21	S	12	GLN

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Mol	Chain	Res	Type
21	S	17	SER
21	S	26	LYS
21	S	30	VAL
21	S	33	ALA
21	S	37	LYS
21	S	75	LYS
21	S	88	TYR
21	S	91	PRO
21	S	92	VAL
21	S	118	HIS
21	S	125	PRO
21	S	149	ALA
22	T	3	HIS
22	T	4	LYS
22	T	7	VAL
22	T	9	SER
22	T	19	LYS
22	T	20	TYR
22	T	27	GLY
22	T	31	VAL
23	U	13	LEU
23	U	15	VAL
23	U	27	ASP
23	U	32	ARG
23	U	34	THR
23	U	56	GLN
23	U	60	VAL
24	V	2	LYS
24	V	3	PRO
24	V	8	ASN
24	V	33	ALA
25	W	4	LYS
25	W	17	VAL
25	W	18	LYS
25	W	35	SER
25	W	45	LYS
25	W	49	HIS
26	Y	12	SER
26	Y	36	CYS
3	A	54	ILE
3	A	56	GLY
3	A	73	SER

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Mol	Chain	Res	Type
3	A	89	SER
3	A	106	LEU
3	A	152	GLY
3	A	188	GLU
3	A	194	GLY
3	A	216	GLY
3	A	223	GLY
3	A	234	GLY
3	A	244	ARG
3	A	248	THR
4	B	46	ALA
4	B	71	GLY
4	B	76	ARG
4	B	130	GLY
4	B	136	ARG
4	B	145	LYS
4	B	154	LYS
4	B	202	ALA
5	C	9	GLN
5	C	11	GLY
5	C	14	THR
5	C	15	ILE
5	C	28	HIS
5	C	51	VAL
5	C	65	GLY
5	C	103	GLY
5	C	117	LEU
5	C	125	ILE
5	C	127	ASP
5	C	128	ALA
5	C	159	ARG
5	C	171	PRO
5	C	177	VAL
5	C	194	GLU
6	D	5	LYS
6	D	71	LYS
6	D	89	VAL
6	D	124	GLY
6	D	135	GLN
6	D	153	ASP
6	D	170	LEU
7	E	14	GLY

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Mol	Chain	Res	Type
7	E	19	ALA
7	E	77	LYS
7	E	95	ARG
7	E	106	ASN
7	E	120	GLY
7	E	137	ASP
7	E	143	GLN
7	E	150	LYS
7	E	159	GLY
7	E	165	VAL
8	F	74	PRO
9	G	34	PRO
9	G	59	ALA
9	G	72	PRO
9	G	77	GLY
9	G	79	PHE
9	G	88	VAL
9	G	105	GLY
9	G	128	GLU
9	G	129	HIS
9	G	138	GLY
9	G	146	THR
9	G	153	GLY
9	G	154	GLU
9	G	158	HIS
9	G	163	PRO
10	H	14	SER
10	H	28	GLY
10	H	37	GLY
10	H	113	PRO
10	H	124	MET
11	I	6	LEU
11	I	47	ALA
11	I	68	VAL
11	I	90	ARG
11	I	97	ARG
11	I	132	ALA
11	I	133	VAL
12	J	11	ARG
12	J	13	GLN
12	J	44	LYS
12	J	46	ASN

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Mol	Chain	Res	Type
12	J	54	VAL
12	J	87	GLY
12	J	114	GLN
13	K	7	GLY
13	K	14	SER
13	K	58	GLY
14	L	20	THR
14	L	48	GLY
14	L	52	ALA
14	L	69	ALA
14	L	84	ILE
14	L	85	LYS
14	L	102	ALA
15	M	40	ARG
15	M	43	ASN
15	M	56	ALA
15	M	108	ARG
16	N	51	ARG
16	N	65	ILE
16	N	79	PHE
16	N	87	ASN
16	N	116	ALA
17	O	7	THR
17	O	8	GLY
17	O	17	GLY
17	O	26	GLN
17	O	41	GLY
17	O	77	GLY
18	P	41	VAL
18	P	58	ARG
18	P	70	LYS
18	P	84	GLU
19	Q	47	GLY
19	Q	60	GLY
19	Q	62	ARG
19	Q	70	GLY
19	Q	77	LYS
19	Q	86	GLN
21	S	13	LYS
21	S	25	ASN
21	S	60	GLU
21	S	63	PRO

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Mol	Chain	Res	Type
21	S	73	LYS
21	S	94	VAL
21	S	158	CYS
22	T	15	ASP
22	T	32	LYS
22	T	73	GLY
22	T	74	LYS
22	T	75	GLY
23	U	26	ALA
23	U	29	GLY
23	U	42	GLN
24	V	32	ALA
24	V	53	LEU
25	W	44	VAL
25	W	46	THR
3	A	40	THR
3	A	59	LYS
3	A	65	ILE
3	A	71	ASP
3	A	79	VAL
3	A	132	PRO
3	A	149	PRO
3	A	153	ALA
3	A	203	ASN
3	A	215	LEU
3	A	238	GLY
4	B	39	ALA
4	B	72	VAL
5	C	18	PRO
5	C	48	ARG
5	C	102	LEU
5	C	112	GLN
5	C	135	SER
5	C	140	ASN
6	D	11	GLN
6	D	52	LYS
6	D	62	LEU
6	D	63	GLN
6	D	81	GLN
6	D	85	VAL
6	D	102	LYS
6	D	113	ASP

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Mol	Chain	Res	Type
6	D	119	PRO
6	D	139	PRO
6	D	168	ALA
6	D	178	ARG
7	E	59	GLN
7	E	173	ALA
8	F	96	LYS
9	G	56	THR
9	G	96	ASP
9	G	107	GLN
9	G	119	LEU
9	G	126	VAL
10	H	123	PHE
11	I	21	ARG
11	I	24	GLY
11	I	33	GLY
11	I	37	GLN
11	I	66	ASN
11	I	79	GLN
11	I	81	GLN
11	I	93	LEU
11	I	99	VAL
11	I	100	ARG
11	I	107	LYS
11	I	135	ALA
12	J	26	ASP
12	J	82	THR
12	J	106	GLU
12	J	120	ARG
12	J	122	ALA
12	J	139	ASP
13	K	39	THR
13	K	56	LYS
13	K	93	GLY
13	K	95	THR
14	L	79	ALA
14	L	96	TYR
14	L	106	ALA
15	M	24	LEU
15	M	74	GLY
15	M	104	LEU
16	N	109	LEU

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Mol	Chain	Res	Type
17	O	44	GLN
17	O	49	GLU
17	O	96	LEU
18	P	35	PRO
18	P	40	LEU
18	P	89	ARG
19	Q	34	THR
19	Q	63	LYS
19	Q	92	ALA
20	R	15	HIS
20	R	18	LYS
20	R	49	GLU
20	R	90	LYS
20	R	91	ALA
21	S	127	PRO
21	S	128	ARG
21	S	156	GLU
21	S	174	PRO
22	T	63	SER
23	U	40	ARG
23	U	50	ALA
23	U	55	GLY
25	W	48	LYS
26	Y	37	HIS
26	Y	53	ASP
3	A	55	GLY
3	A	128	GLY
3	A	159	ALA
3	A	196	VAL
3	A	198	ASN
3	A	200	GLU
4	B	52	ALA
4	B	69	LYS
4	B	82	ARG
4	B	94	ASP
4	B	151	TYR
5	C	20	PRO
5	C	66	ASN
5	C	70	GLY
5	C	121	ASP
5	C	126	ALA
5	C	129	LYS

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Mol	Chain	Res	Type
5	C	161	ALA
6	D	14	PRO
6	D	27	ALA
6	D	32	GLU
6	D	51	ASP
6	D	54	ALA
6	D	146	VAL
7	E	63	ALA
7	E	80	SER
7	E	99	THR
7	E	149	ARG
7	E	162	VAL
8	F	73	PRO
9	G	84	ASN
9	G	121	LYS
10	H	5	GLN
10	H	42	LYS
11	I	5	ASP
11	I	102	LYS
12	J	12	LYS
12	J	18	MET
12	J	45	SER
13	K	4	GLY
14	L	26	ARG
14	L	37	HIS
14	L	81	GLU
14	L	103	LEU
15	M	17	GLU
15	M	26	ASP
15	M	27	PHE
15	M	41	GLU
15	M	83	PHE
16	N	106	PHE
16	N	117	ARG
18	P	44	VAL
18	P	81	HIS
18	P	111	ARG
20	R	12	ASP
20	R	64	ASN
20	R	108	VAL
20	R	109	ALA
20	R	110	SER

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Mol	Chain	Res	Type
21	S	4	THR
21	S	87	THR
21	S	110	GLY
21	S	126	GLY
23	U	41	VAL
24	V	5	GLU
24	V	11	ALA
24	V	36	GLN
24	V	63	LYS
25	W	8	SER
25	W	47	VAL
26	Y	5	PRO
26	Y	21	SER
26	Y	43	HIS
30	4	14	CYS
3	A	86	PRO
3	A	178	PRO
3	A	214	TRP
4	B	85	ALA
4	B	148	GLY
5	C	10	ASN
5	C	46	ARG
5	C	74	VAL
5	C	137	ALA
5	C	197	GLU
6	D	18	GLN
6	D	73	SER
6	D	76	ASN
6	D	80	ARG
6	D	118	ASN
7	E	31	GLY
7	E	32	GLU
7	E	40	GLU
7	E	76	VAL
8	F	129	ALA
9	G	156	HIS
9	G	157	PRO
10	H	56	LYS
11	I	19	VAL
11	I	106	VAL
11	I	139	ARG
13	K	36	THR

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Mol	Chain	Res	Type
13	K	41	ALA
14	L	31	VAL
14	L	59	LEU
15	M	16	ILE
15	M	42	GLY
15	M	73	PHE
16	N	6	THR
16	N	11	ARG
16	N	43	ALA
16	N	57	PHE
17	O	29	ALA
17	O	39	PHE
17	O	58	ALA
17	O	79	GLN
18	P	91	PHE
19	Q	75	ARG
20	R	32	GLN
20	R	61	SER
20	R	89	GLY
21	S	10	PRO
21	S	130	ILE
25	W	7	ARG
26	Y	4	HIS
3	A	38	PRO
3	A	241	GLY
4	B	65	GLY
5	C	119	ALA
5	C	120	VAL
5	C	138	LYS
6	D	12	VAL
7	E	112	PRO
7	E	157	TYR
9	G	169	GLN
11	I	8	PRO
11	I	83	LEU
16	N	8	ILE
16	N	21	ALA
16	N	44	THR
19	Q	23	GLY
19	Q	39	LYS
19	Q	42	ILE
19	Q	50	VAL

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Mol	Chain	Res	Type
20	R	11	ASN
20	R	59	LYS
20	R	63	THR
20	R	111	GLY
22	T	13	GLY
23	U	16	ASN
24	V	19	ASP
24	V	42	ARG
25	W	23	LEU
6	D	41	GLY
10	H	55	VAL
20	R	60	PRO
20	R	98	ILE
4	B	173	VAL
10	H	99	ILE
15	M	28	ARG
21	S	79	ILE
21	S	89	GLY
21	S	98	VAL
24	V	56	VAL
3	A	142	VAL
4	B	91	VAL
5	C	55	GLY
9	G	136	PRO
10	H	29	ILE
17	O	14	VAL
5	C	118	VAL
6	D	50	ILE
7	E	36	PRO
7	E	92	VAL
15	M	82	PRO
15	M	99	VAL
20	R	41	PRO
23	U	18	VAL
3	A	160	GLY
4	B	62	PRO
12	J	100	PRO
17	O	40	VAL
30	4	21	GLY

### 5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	A	164/215 (76%)	130 (79%)	34 (21%)	1	8
4	B	155/157 (99%)	132 (85%)	23 (15%)	4	22
5	C	157/163 (96%)	126 (80%)	31 (20%)	1	9
6	D	153/156 (98%)	139 (91%)	14 (9%)	11	45
7	E	136/144 (94%)	119 (88%)	17 (12%)	6	29
8	F	53/107 (50%)	48 (91%)	5 (9%)	11	44
9	G	118/146 (81%)	96 (81%)	22 (19%)	2	11
10	H	103/103 (100%)	80 (78%)	23 (22%)	1	6
11	I	108/121 (89%)	91 (84%)	17 (16%)	3	19
12	J	110/116 (95%)	92 (84%)	18 (16%)	3	17
13	K	90/93 (97%)	71 (79%)	19 (21%)	1	8
14	L	74/82 (90%)	54 (73%)	20 (27%)	0	4
15	M	94/134 (70%)	81 (86%)	13 (14%)	4	25
16	N	96/97 (99%)	80 (83%)	16 (17%)	3	16
17	O	75/79 (95%)	69 (92%)	6 (8%)	15	52
18	P	109/115 (95%)	92 (84%)	17 (16%)	3	20
19	Q	75/76 (99%)	62 (83%)	13 (17%)	2	14
20	R	91/96 (95%)	70 (77%)	21 (23%)	1	5
21	S	149/192 (78%)	123 (83%)	26 (17%)	2	14
22	T	62/67 (92%)	53 (86%)	9 (14%)	4	23
23	U	57/66 (86%)	46 (81%)	11 (19%)	2	10
24	V	54/55 (98%)	45 (83%)	9 (17%)	3	16
25	W	48/48 (100%)	41 (85%)	7 (15%)	4	22
26	Y	51/53 (96%)	45 (88%)	6 (12%)	6	31
30	4	35/35 (100%)	30 (86%)	5 (14%)	4	24
All	All	2417/2716 (89%)	2015 (83%)	402 (17%)	3	16

All (402) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	A	35	GLU
3	A	43	ARG
3	A	48	ARG
3	A	51	SER
3	A	60	ARG
3	A	63	ARG
3	A	64	ILE
3	A	68	LYS
3	A	84	TYR
3	A	88	ARG
3	A	91	ARG
3	A	99	ASP
3	A	117	VAL
3	A	122	GLU
3	A	135	PHE
3	A	143	HIS
3	A	154	GLN
3	A	157	ARG
3	A	158	SER
3	A	175	VAL
3	A	183	ARG
3	A	196	VAL
3	A	200	GLU
3	A	203	ASN
3	A	204	ILE
3	A	208	LYS
3	A	214	TRP
3	A	215	LEU
3	A	226	MET
3	A	228	PRO
3	A	230	ASP
3	A	239	ARG
3	A	244	ARG
3	A	246	PRO
4	B	27	LEU
4	B	33	ILE
4	B	41	THR
4	B	42	ASP
4	B	44	TYR
4	B	47	VAL
4	B	49	ILE
4	B	53	PRO

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Mol	Chain	Res	Type
4	B	75	THR
4	B	76	ARG
4	B	84	PHE
4	B	86	PRO
4	B	87	ASP
4	B	92	ASN
4	B	103	ASP
4	B	131	SER
4	B	134	TRP
4	B	137	ARG
4	B	147	PRO
4	B	172	VAL
4	B	176	ARG
4	B	182	ILE
4	B	198	LEU
5	C	4	ILE
5	C	5	ASN
5	C	13	ARG
5	C	18	PRO
5	C	19	LEU
5	C	20	PRO
5	C	27	LEU
5	C	46	ARG
5	C	48	ARG
5	C	51	VAL
5	C	58	MET
5	C	59	TYR
5	C	62	LYS
5	C	66	ASN
5	C	76	THR
5	C	90	SER
5	C	95	LEU
5	C	96	PRO
5	C	104	LEU
5	C	108	ILE
5	C	117	LEU
5	C	136	TRP
5	C	143	ASP
5	C	153	ASP
5	C	154	ASP
5	C	164	VAL
5	C	165	SER

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Mol	Chain	Res	Type
5	C	166	TRP
5	C	188	ILE
5	C	193	LEU
5	C	195	ILE
6	D	3	GLN
6	D	10	ASP
6	D	51	ASP
6	D	62	LEU
6	D	66	ILE
6	D	77	PHE
6	D	80	ARG
6	D	89	VAL
6	D	108	LEU
6	D	117	ILE
6	D	125	ARG
6	D	130	LEU
6	D	137	ILE
6	D	147	ASP
7	E	18	ASN
7	E	21	ASP
7	E	35	VAL
7	E	37	TYR
7	E	42	THR
7	E	44	ARG
7	E	57	ASP
7	E	67	LEU
7	E	84	THR
7	E	107	ILE
7	E	115	ILE
7	E	116	GLU
7	E	129	THR
7	E	136	ILE
7	E	148	VAL
7	E	155	ASP
7	E	165	VAL
8	F	87	LYS
8	F	91	THR
8	F	115	ASP
8	F	116	LEU
8	F	135	MET
9	G	31	THR
9	G	33	ILE

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Mol	Chain	Res	Type
9	G	36	ASN
9	G	40	ASN
9	G	57	LEU
9	G	61	ARG
9	G	65	LYS
9	G	67	ARG
9	G	87	GLN
9	G	93	LYS
9	G	100	TYR
9	G	102	ARG
9	G	106	TYR
9	G	110	LEU
9	G	113	GLU
9	G	116	ARG
9	G	126	VAL
9	G	148	LEU
9	G	154	GLU
9	G	157	PRO
9	G	164	GLN
9	G	165	VAL
10	H	1	MET
10	H	6	SER
10	H	10	VAL
10	H	19	ILE
10	H	22	ILE
10	H	23	ARG
10	H	25	LEU
10	H	26	ASN
10	H	27	SER
10	H	41	ASN
10	H	42	LYS
10	H	47	VAL
10	H	70	VAL
10	H	77	THR
10	H	78	SER
10	H	81	ILE
10	H	91	PHE
10	H	94	ASN
10	H	104	GLU
10	H	116	ARG
10	H	119	ARG
10	H	127	VAL

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Mol	Chain	Res	Type
10	H	129	LEU
11	I	4	HIS
11	I	7	LYS
11	I	13	ARG
11	I	14	LYS
11	I	21	ARG
11	I	26	THR
11	I	28	LYS
11	I	34	HIS
11	I	38	LYS
11	I	45	LYS
11	I	53	ARG
11	I	54	SER
11	I	88	PHE
11	I	89	ASP
11	I	103	ASN
11	I	114	ILE
11	I	130	ILE
12	J	7	ARG
12	J	10	PHE
12	J	11	ARG
12	J	21	ASP
12	J	28	VAL
12	J	43	ILE
12	J	57	ARG
12	J	60	ARG
12	J	64	LYS
12	J	65	ILE
12	J	70	PHE
12	J	81	GLU
12	J	91	VAL
12	J	93	TYR
12	J	106	GLU
12	J	119	PHE
12	J	128	ILE
12	J	134	LYS
13	K	5	LYS
13	K	8	ARG
13	K	10	LEU
13	K	11	ASN
13	K	15	SER
13	K	17	ARG

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Mol	Chain	Res	Type
13	K	26	THR
13	K	37	THR
13	K	43	GLU
13	K	50	GLN
13	K	64	ARG
13	K	76	VAL
13	K	79	VAL
13	K	83	VAL
13	K	95	THR
13	K	99	ARG
13	K	104	ARG
13	K	109	THR
13	K	112	LEU
14	L	8	ARG
14	L	13	THR
14	L	24	SER
14	L	36	LYS
14	L	43	ILE
14	L	46	SER
14	L	50	THR
14	L	56	SER
14	L	59	LEU
14	L	60	LYS
14	L	63	ASN
14	L	64	LYS
14	L	66	ASP
14	L	67	THR
14	L	71	VAL
14	L	89	PHE
14	L	90	ASP
14	L	91	ARG
14	L	94	TYR
14	L	108	ARG
15	M	6	LYS
15	M	24	LEU
15	M	31	ASP
15	M	43	ASN
15	M	51	GLU
15	M	54	VAL
15	M	58	ASN
15	M	66	PHE
15	M	69	ARG

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Mol	Chain	Res	Type
15	M	72	SER
15	M	92	THR
15	M	101	ARG
15	M	109	GLU
16	N	10	ARG
16	N	18	LEU
16	N	28	ARG
16	N	30	LYS
16	N	40	LEU
16	N	49	ASP
16	N	51	ARG
16	N	56	ASP
16	N	60	LEU
16	N	79	PHE
16	N	85	ARG
16	N	87	ASN
16	N	88	ILE
16	N	93	LYS
16	N	97	ASP
16	N	111	ASP
17	O	5	ILE
17	O	20	ILE
17	O	22	VAL
17	O	35	LEU
17	O	54	TYR
17	O	84	THR
18	P	9	ARG
18	P	11	LYS
18	P	16	GLN
18	P	17	GLN
18	P	20	LEU
18	P	25	PHE
18	P	32	ARG
18	P	35	PRO
18	P	40	LEU
18	P	48	LYS
18	P	54	GLU
18	P	65	SER
18	P	87	GLU
18	P	91	PHE
18	P	101	PRO
18	P	107	ILE

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Mol	Chain	Res	Type
18	P	124	ILE
19	Q	14	GLU
19	Q	26	SER
19	Q	31	PRO
19	Q	34	THR
19	Q	38	ILE
19	Q	40	ASP
19	Q	42	ILE
19	Q	43	GLN
19	Q	44	GLN
19	Q	54	SER
19	Q	68	PHE
19	Q	73	ASN
19	Q	81	ARG
20	R	10	HIS
20	R	11	ASN
20	R	14	LEU
20	R	15	HIS
20	R	16	PHE
20	R	18	LYS
20	R	20	ASP
20	R	23	ILE
20	R	25	LEU
20	R	35	LYS
20	R	44	GLN
20	R	71	GLN
20	R	76	LEU
20	R	80	LYS
20	R	85	ASP
20	R	93	ARG
20	R	95	ARG
20	R	96	LYS
20	R	105	ARG
20	R	106	VAL
20	R	112	LYS
21	S	3	LEU
21	S	13	LYS
21	S	24	TYR
21	S	28	ASN
21	S	32	PHE
21	S	34	LEU
21	S	35	ASP

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Mol	Chain	Res	Type
21	S	45	GLN
21	S	52	PHE
21	S	53	ASP
21	S	71	MET
21	S	75	LYS
21	S	76	ARG
21	S	79	ILE
21	S	92	VAL
21	S	99	HIS
21	S	100	THR
21	S	105	GLN
21	S	107	GLU
21	S	120	LEU
21	S	122	ILE
21	S	133	GLU
21	S	143	ILE
21	S	158	CYS
21	S	169	VAL
21	S	172	LEU
22	T	3	HIS
22	T	4	LYS
22	T	14	ARG
22	T	16	SER
22	T	20	TYR
22	T	35	ASN
22	T	40	GLN
22	T	60	PHE
22	T	64	ASP
23	U	10	LYS
23	U	12	ASN
23	U	32	ARG
23	U	34	THR
23	U	37	ILE
23	U	42	GLN
23	U	45	ASN
23	U	61	TRP
23	U	72	LYS
23	U	75	TYR
23	U	78	ILE
24	V	1	MET
24	V	10	GLN
24	V	13	ASP

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Mol	Chain	Res	Type
24	V	21	ARG
24	V	28	LEU
24	V	37	LEU
24	V	53	LEU
24	V	62	ARG
24	V	65	GLU
25	W	10	ILE
25	W	12	ARG
25	W	15	ASN
25	W	28	ILE
25	W	30	ASP
25	W	37	THR
25	W	51	LEU
26	Y	4	HIS
26	Y	17	ASP
26	Y	25	LEU
26	Y	32	GLU
26	Y	46	CYS
26	Y	56	GLN
30	4	1	MET
30	4	9	LYS
30	4	12	ASP
30	4	18	ARG
30	4	35	ARG

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (82) such sidechains are listed below:

Mol	Chain	Res	Type
3	A	143	HIS
3	A	220	HIS
3	A	231	HIS
4	B	35	GLN
4	B	60	ASN
4	B	129	HIS
4	B	168	GLN
4	B	180	ASN
5	C	5	ASN
5	C	9	GLN
5	C	50	GLN
5	C	61	GLN
5	C	66	ASN
5	C	132	ASN

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Mol	Chain	Res	Type
5	C	140	ASN
5	C	176	ASN
6	D	11	GLN
6	D	129	ASN
6	D	171	GLN
7	E	18	ASN
7	E	20	GLN
7	E	106	ASN
7	E	111	HIS
7	E	139	GLN
9	G	66	HIS
9	G	84	ASN
9	G	87	GLN
9	G	129	HIS
9	G	158	HIS
9	G	161	GLN
9	G	164	GLN
10	H	26	ASN
10	H	79	HIS
10	H	102	GLN
11	I	37	GLN
11	I	67	ASN
11	I	79	GLN
11	I	121	HIS
12	J	13	GLN
12	J	58	HIS
14	L	49	GLN
14	L	86	GLN
15	M	2	GLN
15	M	4	HIS
15	M	18	GLN
15	M	48	GLN
15	M	89	ASN
16	N	31	GLN
16	N	34	ASN
16	N	37	GLN
16	N	66	ASN
16	N	81	ASN
17	O	11	GLN
17	O	63	HIS
17	O	88	GLN
18	P	16	GLN

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Mol	Chain	Res	Type
18	P	17	GLN
18	P	81	HIS
18	P	115	ASN
19	Q	73	ASN
20	R	11	ASN
20	R	44	GLN
20	R	57	ASN
20	R	64	ASN
21	S	28	ASN
21	S	45	GLN
21	S	70	GLN
21	S	119	ASN
21	S	146	HIS
22	T	3	HIS
22	T	17	ASN
22	T	57	HIS
23	U	12	ASN
23	U	16	ASN
24	V	10	GLN
24	V	36	GLN
24	V	45	GLN
26	Y	29	ASN
26	Y	43	HIS
26	Y	44	HIS
26	Y	56	GLN
30	4	34	GLN

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	X	2680/2880 (93%)	678 (25%)	283 (10%)
2	Z	121/123 (98%)	24 (19%)	0
All	All	2801/3003 (93%)	702 (25%)	283 (10%)

All (702) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	X	13	A
1	X	14	A
1	X	27	G
1	X	34	U

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Mol	Chain	Res	Type
1	X	35	G
1	X	45	C
1	X	49	U
1	X	51	A
1	X	59	G
1	X	60	A
1	X	63	A
1	X	67	G
1	X	69	G
1	X	70	A
1	X	71	A
1	X	72	A
1	X	74	G
1	X	76	C
1	X	82	G
1	X	84	G
1	X	87	G
1	X	89	A
1	X	90	G
1	X	91	A
1	X	99	U
1	X	102	C
1	X	110	U
1	X	116	A
1	X	117	A
1	X	118	U
1	X	119	G
1	X	123	A
1	X	124	A
1	X	129	A
1	X	135	U
1	X	143	A
1	X	158	A
1	X	173	A
1	X	174	A
1	X	181	A
1	X	182	G
1	X	193	A
1	X	199	A
1	X	200	A
1	X	204	A
1	X	205	A

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Mol	Chain	Res	Type
1	X	206	U
1	X	210	A
1	X	218	A
1	X	219	G
1	X	225	G
1	X	228	A
1	X	242	A
1	X	243	G
1	X	244	C
1	X	245	C
1	X	304	A
1	X	305	A
1	X	318	G
1	X	323	G
1	X	333	A
1	X	334	G
1	X	335	A
1	X	340	G
1	X	341	A
1	X	342	G
1	X	343	A
1	X	399	G
1	X	400	U
1	X	403	A
1	X	404	A
1	X	409	G
1	X	412	U
1	X	414	A
1	X	416	U
1	X	418	C
1	X	419	G
1	X	424	G
1	X	425	A
1	X	441	A
1	X	447	U
1	X	455	A
1	X	456	C
1	X	458	G
1	X	459	A
1	X	460	U
1	X	461	A
1	X	463	C

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Mol	Chain	Res	Type
1	X	467	U
1	X	468	A
1	X	470	U
1	X	485	G
1	X	486	U
1	X	490	A
1	X	491	A
1	X	492	G
1	X	493	A
1	X	494	A
1	X	497	C
1	X	514	G
1	X	515	A
1	X	517	A
1	X	519	C
1	X	537	C
1	X	538	A
1	X	539	A
1	X	540	G
1	X	541	C
1	X	542	A
1	X	543	G
1	X	554	U
1	X	555	U
1	X	556	A
1	X	558	G
1	X	560	G
1	X	571	U
1	X	572	G
1	X	580	A
1	X	581	A
1	X	582	G
1	X	583	C
1	X	584	A
1	X	595	A
1	X	601	A
1	X	613	A
1	X	614	G
1	X	624	A
1	X	625	A
1	X	626	A
1	X	627	A

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Mol	Chain	Res	Type
1	X	631	G
1	X	632	A
1	X	633	G
1	X	636	G
1	X	639	G
1	X	649	G
1	X	651	C
1	X	652	C
1	X	654	A
1	X	655	A
1	X	657	A
1	X	664	C
1	X	665	A
1	X	667	U
1	X	668	A
1	X	683	A
1	X	684	C
1	X	690	A
1	X	699	G
1	X	700	C
1	X	718	A
1	X	728	G
1	X	730	C
1	X	732	G
1	X	740	A
1	X	742	G
1	X	743	A
1	X	751	G
1	X	752	G
1	X	753	U
1	X	760	U
1	X	766	A
1	X	776	G
1	X	777	A
1	X	778	G
1	X	789	G
1	X	790	A
1	X	795	A
1	X	796	A
1	X	797	A
1	X	798	G
1	X	802	A

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Mol	Chain	Res	Type
1	X	803	C
1	X	804	C
1	X	805	G
1	X	806	A
1	X	813	A
1	X	814	G
1	X	815	A
1	X	818	G
1	X	819	C
1	X	825	C
1	X	832	A
1	X	840	U
1	X	841	G
1	X	843	G
1	X	844	G
1	X	859	U
1	X	871	U
1	X	872	G
1	X	873	U
1	X	874	A
1	X	879	A
1	X	922	A
1	X	926	C
1	X	927	C
1	X	931	G
1	X	939	C
1	X	940	G
1	X	943	U
1	X	952	A
1	X	956	A
1	X	957	G
1	X	964	A
1	X	968	C
1	X	969	U
1	X	970	A
1	X	972	C
1	X	973	U
1	X	983	G
1	X	984	A
1	X	985	G
1	X	986	A
1	X	994	A

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Mol	Chain	Res	Type
1	X	995	A
1	X	996	C
1	X	1006	C
1	X	1007	A
1	X	1014	G
1	X	1016	C
1	X	1017	C
1	X	1019	U
1	X	1021	A
1	X	1022	A
1	X	1023	U
1	X	1024	G
1	X	1032	A
1	X	1033	G
1	X	1034	U
1	X	1036	G
1	X	1037	U
1	X	1044	U
1	X	1050	G
1	X	1051	U
1	X	1053	G
1	X	1056	U
1	X	1057	A
1	X	1058	G
1	X	1059	A
1	X	1068	A
1	X	1070	G
1	X	1071	U
1	X	1072	U
1	X	1073	G
1	X	1077	U
1	X	1078	A
1	X	1079	G
1	X	1081	A
1	X	1082	G
1	X	1086	C
1	X	1087	C
1	X	1090	C
1	X	1096	A
1	X	1097	A
1	X	1098	G
1	X	1099	A

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Mol	Chain	Res	Type
1	X	1100	G
1	X	1108	U
1	X	1119	U
1	X	1122	A
1	X	1123	G
1	X	1129	A
1	X	1137	A
1	X	1138	A
1	X	1139	A
1	X	1140	A
1	X	1141	U
1	X	1142	G
1	X	1143	A
1	X	1145	C
1	X	1146	G
1	X	1152	C
1	X	1153	A
1	X	1154	A
1	X	1155	G
1	X	1161	U
1	X	1167	A
1	X	1168	G
1	X	1182	U
1	X	1185	C
1	X	1186	G
1	X	1187	A
1	X	1189	G
1	X	1192	A
1	X	1194	U
1	X	1200	G
1	X	1220	G
1	X	1224	A
1	X	1233	A
1	X	1234	C
1	X	1240	G
1	X	1250	A
1	X	1251	G
1	X	1253	C
1	X	1260	A
1	X	1261	G
1	X	1262	U
1	X	1263	G

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Mol	Chain	Res	Type
1	X	1264	C
1	X	1265	G
1	X	1266	G
1	X	1269	G
1	X	1278	A
1	X	1279	G
1	X	1284	G
1	X	1285	A
1	X	1288	A
1	X	1289	A
1	X	1300	A
1	X	1301	U
1	X	1302	C
1	X	1313	U
1	X	1314	A
1	X	1315	A
1	X	1316	G
1	X	1324	G
1	X	1325	U
1	X	1326	U
1	X	1333	G
1	X	1334	A
1	X	1338	G
1	X	1339	U
1	X	1342	U
1	X	1343	C
1	X	1346	C
1	X	1354	A
1	X	1355	A
1	X	1356	G
1	X	1358	C
1	X	1359	G
1	X	1365	U
1	X	1370	U
1	X	1378	A
1	X	1392	U
1	X	1398	G
1	X	1399	C
1	X	1405	A
1	X	1410	U
1	X	1411	C
1	X	1428	G

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Mol	Chain	Res	Type
1	X	1429	A
1	X	1430	G
1	X	1432	G
1	X	1433	A
1	X	1434	U
1	X	1435	G
1	X	1440	G
1	X	1441	A
1	X	1442	C
1	X	1443	G
1	X	1454	U
1	X	1460	G
1	X	1464	A
1	X	1467	U
1	X	1468	A
1	X	1469	U
1	X	1470	G
1	X	1474	A
1	X	1475	U
1	X	1476	G
1	X	1482	U
1	X	1490	U
1	X	1497	C
1	X	1498	G
1	X	1505	U
1	X	1506	C
1	X	1513	U
1	X	1514	C
1	X	1524	C
1	X	1525	A
1	X	1527	G
1	X	1528	C
1	X	1531	C
1	X	1551	U
1	X	1553	G
1	X	1554	G
1	X	1562	G
1	X	1570	C
1	X	1571	G
1	X	1574	A
1	X	1575	C
1	X	1576	G

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Mol	Chain	Res	Type
1	X	1582	A
1	X	1583	A
1	X	1585	A
1	X	1594	U
1	X	1601	U
1	X	1602	G
1	X	1603	A
1	X	1608	U
1	X	1609	G
1	X	1618	U
1	X	1619	A
1	X	1624	A
1	X	1625	A
1	X	1626	A
1	X	1627	C
1	X	1631	C
1	X	1632	A
1	X	1633	C
1	X	1635	G
1	X	1648	C
1	X	1651	U
1	X	1652	G
1	X	1657	A
1	X	1663	C
1	X	1664	G
1	X	1665	C
1	X	1670	G
1	X	1671	A
1	X	1685	A
1	X	1686	A
1	X	1692	C
1	X	1698	C
1	X	1699	A
1	X	1710	U
1	X	1711	C
1	X	1713	G
1	X	1715	A
1	X	1716	G
1	X	1717	A
1	X	1718	A
1	X	1724	C
1	X	1732	U

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Mol	Chain	Res	Type
1	X	1733	U
1	X	1747	G
1	X	1749	G
1	X	1750	A
1	X	1752	U
1	X	1754	G
1	X	1755	G
1	X	1758	C
1	X	1764	A
1	X	1771	A
1	X	1772	C
1	X	1773	C
1	X	1776	A
1	X	1778	U
1	X	1782	A
1	X	1790	G
1	X	1791	C
1	X	1792	C
1	X	1793	A
1	X	1800	A
1	X	1801	C
1	X	1802	A
1	X	1807	A
1	X	1808	C
1	X	1811	A
1	X	1812	U
1	X	1813	A
1	X	1820	G
1	X	1821	A
1	X	1825	C
1	X	1830	C
1	X	1831	G
1	X	1842	G
1	X	1864	G
1	X	1883	A
1	X	1910	A
1	X	1912	G
1	X	1914	U
1	X	1919	A
1	X	1920	A
1	X	1922	U
1	X	1923	U

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Mol	Chain	Res	Type
1	X	1924	C
1	X	1925	C
1	X	1926	U
1	X	1927	U
1	X	1928	G
1	X	1937	G
1	X	1938	U
1	X	1939	U
1	X	1946	U
1	X	1947	G
1	X	1948	C
1	X	1949	A
1	X	1950	C
1	X	1953	A
1	X	1954	A
1	X	1955	G
1	X	1961	A
1	X	1964	A
1	X	1974	U
1	X	1976	U
1	X	1979	C
1	X	1980	A
1	X	1996	A
1	X	2003	A
1	X	2004	U
1	X	2005	U
1	X	2006	G
1	X	2014	A
1	X	2015	G
1	X	2016	A
1	X	2019	C
1	X	2026	C
1	X	2034	A
1	X	2035	G
1	X	2038	C
1	X	2039	G
1	X	2044	G
1	X	2045	A
1	X	2046	C
1	X	2050	G
1	X	2051	U
1	X	2052	G

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Mol	Chain	Res	Type
1	X	2057	U
1	X	2073	A
1	X	2075	U
1	X	2076	G
1	X	2083	G
1	X	2089	C
1	X	2171	U
1	X	2181	A
1	X	2189	A
1	X	2190	A
1	X	2191	A
1	X	2192	U
1	X	2199	C
1	X	2204	A
1	X	2205	C
1	X	2217	G
1	X	2218	G
1	X	2229	G
1	X	2230	G
1	X	2238	G
1	X	2241	U
1	X	2245	A
1	X	2246	A
1	X	2247	A
1	X	2262	C
1	X	2266	A
1	X	2267	A
1	X	2268	G
1	X	2275	U
1	X	2276	C
1	X	2285	U
1	X	2286	G
1	X	2287	G
1	X	2288	A
1	X	2291	U
1	X	2298	U
1	X	2300	G
1	X	2301	A
1	X	2307	A
1	X	2313	G
1	X	2314	A
1	X	2315	A

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Mol	Chain	Res	Type
1	X	2316	G
1	X	2323	U
1	X	2324	G
1	X	2325	A
1	X	2326	C
1	X	2356	A
1	X	2362	G
1	X	2364	C
1	X	2369	U
1	X	2381	A
1	X	2382	C
1	X	2386	G
1	X	2396	C
1	X	2402	U
1	X	2403	C
1	X	2405	A
1	X	2406	C
1	X	2408	G
1	X	2410	U
1	X	2414	A
1	X	2418	A
1	X	2419	C
1	X	2420	C
1	X	2427	A
1	X	2428	U
1	X	2437	G
1	X	2438	A
1	X	2452	U
1	X	2455	A
1	X	2470	U
1	X	2476	A
1	X	2477	C
1	X	2481	G
1	X	2482	A
1	X	2483	U
1	X	2484	G
1	X	2485	U
1	X	2486	C
1	X	2492	G
1	X	2497	A
1	X	2498	U
1	X	2499	C

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Mol	Chain	Res	Type
1	X	2501	U
1	X	2508	G
1	X	2521	A
1	X	2522	G
1	X	2545	A
1	X	2546	G
1	X	2552	C
1	X	2553	G
1	X	2561	G
1	X	2565	C
1	X	2578	G
1	X	2581	A
1	X	2582	G
1	X	2588	U
1	X	2589	C
1	X	2591	C
1	X	2592	U
1	X	2593	A
1	X	2594	U
1	X	2595	C
1	X	2608	A
1	X	2609	G
1	X	2619	G
1	X	2624	G
1	X	2625	U
1	X	2633	A
1	X	2634	G
1	X	2649	A
1	X	2660	C
1	X	2661	G
1	X	2668	U
1	X	2669	C
1	X	2691	C
1	X	2692	A
1	X	2693	U
1	X	2694	G
1	X	2705	A
1	X	2706	U
1	X	2707	G
1	X	2712	G
1	X	2713	A
1	X	2719	U

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Mol	Chain	Res	Type
1	X	2730	A
1	X	2731	G
1	X	2732	C
1	X	2736	U
1	X	2737	A
1	X	2738	A
1	X	2744	A
1	X	2745	A
1	X	2746	G
1	X	2757	G
1	X	2758	A
1	X	2759	U
1	X	2760	G
1	X	2761	A
1	X	2762	G
1	X	2770	A
1	X	2771	C
1	X	2774	U
1	X	2775	U
1	X	2776	U
1	X	2780	A
1	X	2782	G
1	X	2783	U
1	X	2795	A
1	X	2796	A
1	X	2798	A
1	X	2807	U
1	X	2808	U
1	X	2810	A
1	X	2811	G
1	X	2823	G
1	X	2824	C
1	X	2825	A
1	X	2840	U
1	X	2841	U
1	X	2842	C
1	X	2847	G
1	X	2850	U
1	X	2854	G
1	X	2855	C
1	X	2858	A
1	X	2867	G

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Mol	Chain	Res	Type
1	X	2868	G
1	X	2869	U
2	Z	3	A
2	Z	4	C
2	Z	14	C
2	Z	15	A
2	Z	17	A
2	Z	18	G
2	Z	27	A
2	Z	28	A
2	Z	37	C
2	Z	43	G
2	Z	44	C
2	Z	46	G
2	Z	47	A
2	Z	54	U
2	Z	56	G
2	Z	63	A
2	Z	68	A
2	Z	69	G
2	Z	76	U
2	Z	99	G
2	Z	102	A
2	Z	111	C
2	Z	112	A
2	Z	123	U

All (283) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	X	13	A
1	X	27	G
1	X	33	C
1	X	48	A
1	X	69	G
1	X	70	A
1	X	71	A
1	X	73	A
1	X	117	A
1	X	118	U
1	X	123	A
1	X	154	U

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Mol	Chain	Res	Type
1	X	173	A
1	X	176	A
1	X	181	A
1	X	182	G
1	X	192	G
1	X	198	A
1	X	199	A
1	X	218	A
1	X	312	G
1	X	322	A
1	X	334	G
1	X	340	G
1	X	341	A
1	X	342	G
1	X	398	C
1	X	399	G
1	X	403	A
1	X	424	G
1	X	454	G
1	X	458	G
1	X	459	A
1	X	460	U
1	X	466	A
1	X	467	U
1	X	468	A
1	X	469	G
1	X	485	G
1	X	490	A
1	X	492	G
1	X	513	A
1	X	516	G
1	X	538	A
1	X	539	A
1	X	540	G
1	X	541	C
1	X	553	C
1	X	557	U
1	X	571	U
1	X	580	A
1	X	582	G
1	X	583	C
1	X	596	C

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Mol	Chain	Res	Type
1	X	613	A
1	X	631	G
1	X	638	A
1	X	648	A
1	X	664	C
1	X	682	G
1	X	683	A
1	X	698	A
1	X	699	G
1	X	717	G
1	X	739	G
1	X	741	G
1	X	752	G
1	X	759	C
1	X	765	C
1	X	775	U
1	X	777	A
1	X	788	G
1	X	789	G
1	X	795	A
1	X	801	A
1	X	802	A
1	X	803	C
1	X	804	C
1	X	805	G
1	X	806	A
1	X	813	A
1	X	814	G
1	X	818	G
1	X	824	U
1	X	842	A
1	X	843	G
1	X	871	U
1	X	872	G
1	X	925	U
1	X	938	G
1	X	939	C
1	X	956	A
1	X	969	U
1	X	972	C
1	X	984	A
1	X	985	G

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Mol	Chain	Res	Type
1	X	994	A
1	X	995	A
1	X	1000	G
1	X	1006	C
1	X	1031	C
1	X	1033	G
1	X	1036	G
1	X	1055	A
1	X	1071	U
1	X	1096	A
1	X	1139	A
1	X	1141	U
1	X	1142	G
1	X	1153	A
1	X	1154	A
1	X	1167	A
1	X	1186	G
1	X	1223	G
1	X	1233	A
1	X	1249	G
1	X	1260	A
1	X	1261	G
1	X	1263	G
1	X	1264	C
1	X	1265	G
1	X	1266	G
1	X	1278	A
1	X	1285	A
1	X	1288	A
1	X	1299	A
1	X	1301	U
1	X	1313	U
1	X	1314	A
1	X	1315	A
1	X	1324	G
1	X	1325	U
1	X	1333	G
1	X	1337	G
1	X	1338	G
1	X	1342	U
1	X	1345	G
1	X	1353	A

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Mol	Chain	Res	Type
1	X	1354	A
1	X	1355	A
1	X	1357	U
1	X	1391	A
1	X	1398	G
1	X	1409	U
1	X	1410	U
1	X	1439	G
1	X	1441	A
1	X	1442	C
1	X	1459	U
1	X	1473	U
1	X	1474	A
1	X	1475	U
1	X	1496	G
1	X	1513	U
1	X	1552	C
1	X	1562	G
1	X	1575	C
1	X	1601	U
1	X	1607	A
1	X	1613	G
1	X	1618	U
1	X	1623	C
1	X	1624	A
1	X	1626	A
1	X	1631	C
1	X	1632	A
1	X	1633	C
1	X	1634	A
1	X	1651	U
1	X	1664	G
1	X	1670	G
1	X	1684	G
1	X	1685	A
1	X	1691	G
1	X	1698	C
1	X	1710	U
1	X	1711	C
1	X	1715	A
1	X	1716	G
1	X	1749	G

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Mol	Chain	Res	Type
1	X	1771	A
1	X	1772	C
1	X	1775	A
1	X	1777	A
1	X	1790	G
1	X	1791	C
1	X	1799	A
1	X	1807	A
1	X	1810	U
1	X	1811	A
1	X	1820	G
1	X	1830	C
1	X	1883	A
1	X	1920	A
1	X	1922	U
1	X	1923	U
1	X	1926	U
1	X	1927	U
1	X	1937	G
1	X	1938	U
1	X	1947	G
1	X	1953	A
1	X	1963	G
1	X	1975	G
1	X	1979	C
1	X	1995	G
1	X	2004	U
1	X	2005	U
1	X	2014	A
1	X	2015	G
1	X	2016	A
1	X	2018	G
1	X	2034	A
1	X	2044	G
1	X	2045	A
1	X	2050	G
1	X	2057	U
1	X	2075	U
1	X	2088	U
1	X	2204	A
1	X	2217	G
1	X	2228	U

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Mol	Chain	Res	Type
1	X	2237	C
1	X	2245	A
1	X	2254	C
1	X	2261	G
1	X	2265	A
1	X	2267	A
1	X	2275	U
1	X	2312	A
1	X	2313	G
1	X	2324	G
1	X	2363	G
1	X	2370	G
1	X	2381	A
1	X	2404	A
1	X	2405	A
1	X	2409	A
1	X	2418	A
1	X	2426	G
1	X	2427	A
1	X	2428	U
1	X	2437	G
1	X	2469	G
1	X	2476	A
1	X	2482	A
1	X	2485	U
1	X	2496	C
1	X	2497	A
1	X	2498	U
1	X	2521	A
1	X	2551	A
1	X	2560	G
1	X	2564	U
1	X	2580	C
1	X	2588	U
1	X	2589	C
1	X	2592	U
1	X	2593	A
1	X	2608	A
1	X	2624	G
1	X	2633	A
1	X	2660	C
1	X	2668	U

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Mol	Chain	Res	Type
1	X	2669	C
1	X	2693	U
1	X	2705	A
1	X	2706	U
1	X	2712	G
1	X	2736	U
1	X	2756	A
1	X	2758	A
1	X	2759	U
1	X	2760	G
1	X	2770	A
1	X	2807	U
1	X	2810	A
1	X	2823	G
1	X	2824	C
1	X	2841	U
1	X	2848	A
1	X	2854	G
1	X	2867	G

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

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

## 5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

## 5.6 Ligand geometry [i](#)

Of 38 ligands modelled in this entry, 37 are monoatomic - leaving 1 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
33	ZLD	X	2911	-	26,26,26	1.22	2 (7%)	35,36,36	2.14	8 (22%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
33	ZLD	X	2911	-	-	2/13/33/33	0/3/3/3

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
33	X	2911	ZLD	C5-C16	2.05	1.41	1.37
33	X	2911	ZLD	O10-C7	3.39	1.40	1.35

All (8) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
33	X	2911	ZLD	C2-N4-C7	-5.48	119.25	125.80
33	X	2911	ZLD	O10-C7-N4	-5.28	106.55	109.97
33	X	2911	ZLD	C5-C16-C17	-4.20	119.97	123.39
33	X	2911	ZLD	F18-C16-C17	2.28	120.61	118.45
33	X	2911	ZLD	C5-C2-N4	2.36	122.59	119.87
33	X	2911	ZLD	O10-C8-C9	2.61	117.90	109.18
33	X	2911	ZLD	C6-N4-C7	4.66	113.89	111.24
33	X	2911	ZLD	O15-C7-N4	4.93	132.83	128.87

There are no chirality outliers.

All (2) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
33	X	2911	ZLD	C13-C12-N11-C9
33	X	2911	ZLD	O14-C12-N11-C9

There are no ring outliers.

1 monomer is involved in 22 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
33	X	2911	ZLD	22	0

## 5.7 Other polymers

There are no such residues in this entry.

## 5.8 Polymer linkage issues

There are no chain breaks in this entry.

## 6 Fit of model and data

### 6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
1	X	2686/2880 (93%)	-0.41	53 (1%) 68 59	1, 35, 97, 115	0
2	Z	122/123 (99%)	0.05	2 (1%) 74 65	28, 74, 94, 101	0
3	A	218/274 (79%)	-0.50	1 (0%) 91 88	8, 44, 57, 63	0
4	B	205/211 (97%)	-0.85	0 100 100	1, 12, 35, 53	0
5	C	197/205 (96%)	-0.52	0 100 100	2, 45, 62, 78	0
6	D	177/180 (98%)	-0.09	4 (2%) 64 54	54, 65, 73, 76	0
7	E	171/185 (92%)	-0.45	1 (0%) 90 85	38, 59, 72, 76	0
8	F	70/144 (48%)	0.72	6 (8%) 13 12	62, 71, 75, 76	0
9	G	142/174 (81%)	-0.59	1 (0%) 89 82	19, 37, 53, 57	0
10	H	134/134 (100%)	-0.87	0 100 100	1, 8, 30, 42	0
11	I	141/156 (90%)	-0.06	5 (3%) 48 38	10, 54, 69, 84	0
12	J	136/142 (95%)	-0.49	1 (0%) 89 82	25, 44, 59, 66	0
13	K	113/116 (97%)	-0.88	0 100 100	1, 2, 13, 23	0
14	L	104/114 (91%)	-0.24	1 (0%) 84 76	38, 54, 61, 67	0
15	M	108/166 (65%)	-0.92	0 100 100	1, 11, 40, 46	0
16	N	117/118 (99%)	-0.73	0 100 100	2, 33, 55, 64	0
17	O	94/100 (94%)	-0.66	0 100 100	13, 46, 63, 66	0
18	P	127/134 (94%)	-0.85	0 100 100	1, 10, 40, 57	0
19	Q	93/95 (97%)	-0.59	0 100 100	23, 36, 60, 63	0
20	R	110/115 (95%)	-0.52	0 100 100	32, 44, 66, 70	0
21	S	175/237 (73%)	-0.10	5 (2%) 55 45	53, 62, 72, 79	0
22	T	84/91 (92%)	-0.01	5 (5%) 25 19	23, 47, 66, 69	0
23	U	72/81 (88%)	-0.34	0 100 100	39, 52, 63, 64	0
24	V	66/67 (98%)	-0.72	0 100 100	34, 52, 72, 76	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2		OWAB(Å <sup>2</sup> )	Q<0.9	
25	W	55/55 (100%)	-0.64	0	100	100	32, 41, 57, 66	0
26	Y	58/60 (96%)	-0.78	0	100	100	1, 7, 32, 34	0
27	1	53/55 (96%)	2.49	30 (56%)	0	0	33, 47, 62, 65	0
28	2	46/47 (97%)	3.35	40 (86%)	0	0	1, 12, 25, 35	0
29	3	63/66 (95%)	3.43	47 (74%)	0	0	23, 34, 43, 50	0
30	4	37/37 (100%)	0.51	3 (8%)	15	12	52, 65, 72, 73	0
All	All	5974/6562 (91%)	-0.34	205 (3%)	49	40	1, 41, 84, 115	0

All (205) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
29	3	34	THR	8.7
29	3	33	ASN	8.7
27	1	40	TYR	8.4
29	3	39	ASP	7.9
29	3	32	GLN	7.3
29	3	40	GLU	7.0
28	2	36	ALA	6.9
29	3	35	GLY	6.8
29	3	41	ILE	6.2
28	2	29	ASN	6.2
29	3	42	ARG	6.1
29	3	8	LYS	6.1
29	3	31	HIS	5.8
27	1	23	THR	5.5
27	1	25	THR	5.4
29	3	7	HIS	5.2
8	F	126	ASN	5.2
1	X	1104	G	5.1
28	2	26	SER	5.1
1	X	1522	C	5.1
29	3	38	GLY	5.1
28	2	7	PRO	5.1
29	3	36	LYS	5.0
1	X	727	U	5.0
28	2	8	ASN	4.9
29	3	30	ARG	4.8
28	2	43	THR	4.8
27	1	27	ASN	4.7
3	A	203	ASN	4.7

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Mol	Chain	Res	Type	RSRZ
27	1	34	LYS	4.7
27	1	43	VAL	4.7
27	1	41	ASP	4.6
29	3	29	LYS	4.6
28	2	24	THR	4.6
29	3	63	PRO	4.4
28	2	25	LYS	4.4
2	Z	2	C	4.4
1	X	1069	G	4.3
29	3	6	THR	4.3
28	2	20	ALA	4.3
29	3	28	GLY	4.3
29	3	45	GLY	4.3
27	1	24	THR	4.3
28	2	35	ARG	4.3
27	1	42	PRO	4.2
1	X	730	C	4.2
27	1	26	LYS	4.1
27	1	39	LYS	4.0
28	2	23	LYS	4.0
1	X	2778	U	4.0
1	X	891	A	3.9
27	1	44	ALA	3.9
28	2	42	LEU	3.8
28	2	9	ASN	3.8
30	4	37	GLY	3.8
28	2	16	HIS	3.8
28	2	46	ASP	3.8
29	3	10	ALA	3.8
29	3	43	GLY	3.8
29	3	44	LYS	3.7
1	X	731	A	3.7
1	X	1099	A	3.7
27	1	9	ILE	3.7
1	X	1085	G	3.6
1	X	1523	A	3.6
28	2	4	THR	3.6
27	1	30	ASN	3.6
28	2	15	THR	3.6
1	X	2088	U	3.6
28	2	11	LYS	3.6
28	2	39	ARG	3.6

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Mol	Chain	Res	Type	RSRZ
28	2	27	GLY	3.5
28	2	28	ARG	3.5
21	S	91	PRO	3.4
29	3	27	SER	3.4
1	X	1086	C	3.4
27	1	47	HIS	3.4
29	3	4	MET	3.4
29	3	11	LYS	3.4
1	X	1187	A	3.3
29	3	58	MET	3.3
1	X	1090	C	3.3
1	X	1068	A	3.3
29	3	51	ALA	3.3
28	2	14	LYS	3.3
2	Z	123	U	3.3
29	3	18	GLY	3.3
22	T	15	ASP	3.3
28	2	41	GLN	3.3
1	X	2776	U	3.3
27	1	14	SER	3.3
27	1	21	TYR	3.2
11	I	5	ASP	3.2
29	3	12	ARG	3.2
28	2	32	ALA	3.2
28	2	34	ARG	3.2
6	D	147	ASP	3.2
28	2	19	ARG	3.2
1	X	726	G	3.2
28	2	1	MET	3.2
28	2	13	ALA	3.1
8	F	129	ALA	3.1
28	2	40	HIS	3.1
29	3	64	ARG	3.1
29	3	56	ALA	3.1
29	3	2	PRO	3.1
1	X	1083	C	3.1
8	F	84	GLY	3.1
28	2	6	GLN	3.0
1	X	2289	A	3.0
29	3	60	LEU	3.0
29	3	46	LYS	3.0
29	3	61	MET	3.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
29	3	25	PHE	3.0
1	X	1524	C	2.9
27	1	31	THR	2.9
29	3	62	LEU	2.9
28	2	10	ARG	2.9
1	X	514	G	2.9
11	I	9	THR	2.9
1	X	2779	C	2.9
28	2	37	LYS	2.9
1	X	1189	G	2.9
1	X	1100	G	2.8
1	X	1734	C	2.8
28	2	45	SER	2.8
8	F	115	ASP	2.8
29	3	52	LYS	2.8
29	3	9	MET	2.8
1	X	1073	G	2.8
1	X	2409	A	2.8
21	S	93	GLU	2.7
11	I	6	LEU	2.7
27	1	28	ARG	2.7
1	X	1093	U	2.7
28	2	17	GLY	2.7
22	T	7	VAL	2.7
1	X	1053	G	2.7
27	1	12	MET	2.7
1	X	1094	C	2.7
29	3	54	GLU	2.7
21	S	123	VAL	2.6
11	I	4	HIS	2.6
1	X	2290	A	2.6
27	1	10	VAL	2.6
28	2	44	VAL	2.6
22	T	9	SER	2.6
1	X	1105	U	2.6
28	2	33	ARG	2.6
1	X	1082	G	2.5
29	3	19	THR	2.5
27	1	38	LYS	2.5
28	2	21	ARG	2.5
8	F	83	ALA	2.5
1	X	248	A	2.5

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Mol	Chain	Res	Type	RSRZ
27	1	15	SER	2.5
1	X	557	U	2.5
1	X	729	A	2.5
1	X	1553	G	2.5
1	X	2780	A	2.5
27	1	36	GLU	2.5
28	2	2	LYS	2.4
28	2	22	MET	2.4
21	S	92	VAL	2.4
1	X	1186	G	2.4
22	T	8	GLY	2.4
1	X	728	G	2.4
27	1	11	LYS	2.4
1	X	1081	A	2.4
1	X	2165	A	2.4
22	T	6	GLY	2.4
28	2	31	LEU	2.3
9	G	97	ASP	2.3
6	D	43	SER	2.3
1	X	2173	G	2.3
27	1	22	TYR	2.3
27	1	37	LEU	2.3
27	1	19	GLY	2.2
29	3	20	GLY	2.2
1	X	2169	A	2.2
29	3	26	LYS	2.2
6	D	145	MET	2.2
7	E	59	GLN	2.2
29	3	59	LYS	2.2
27	1	13	GLU	2.2
29	3	55	TRP	2.2
29	3	53	ALA	2.1
12	J	84	MET	2.1
1	X	1070	G	2.1
8	F	133	ARG	2.1
14	L	52	ALA	2.1
30	4	20	HIS	2.1
21	S	90	GLU	2.1
29	3	57	ARG	2.1
1	X	1506	C	2.1
1	X	1095	A	2.1
30	4	19	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
11	I	29	THR	2.0
6	D	116	GLY	2.0
1	X	1121	G	2.0
1	X	1525	A	2.0
1	X	1098	G	2.0
1	X	2175	A	2.0
1	X	2877	A	2.0
27	1	8	ILE	2.0

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

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

## 6.3 Carbohydrates [i](#)

There are no carbohydrates in this entry.

## 6.4 Ligands [i](#)

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
32	MG	X	2907	1/1	0.97	0.62	47.58	1,1,1,1	0
32	MG	X	2899	1/1	0.99	0.53	45.13	1,1,1,1	0
32	MG	M	167	1/1	0.98	0.55	19.63	1,1,1,1	0
32	MG	X	2889	1/1	0.95	0.43	12.66	1,1,1,1	0
32	MG	X	2909	1/1	0.98	0.36	12.09	1,1,1,1	0
32	MG	X	2903	1/1	0.93	0.31	11.39	1,1,1,1	0
33	ZLD	X	2911	24/24	0.90	0.48	8.50	28,31,37,37	0
32	MG	X	2896	1/1	0.99	0.28	5.66	1,1,1,1	0
32	MG	X	2885	1/1	0.88	0.21	2.47	45,45,45,45	0
32	MG	X	2883	1/1	0.97	0.19	1.61	1,1,1,1	0
31	ZN	Y	61	1/1	0.98	0.13	-0.27	89,89,89,89	0
31	ZN	4	38	1/1	0.98	0.03	-1.94	78,78,78,78	0
32	MG	X	2887	1/1	0.96	0.17	-	37,37,37,37	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
32	MG	X	2888	1/1	0.99	0.38	-	1,1,1,1	0
32	MG	Z	125	1/1	0.98	0.17	-	1,1,1,1	0
32	MG	X	2884	1/1	0.97	0.23	-	19,19,19,19	0
32	MG	X	2900	1/1	0.92	0.52	-	1,1,1,1	0
32	MG	X	2901	1/1	0.98	0.35	-	1,1,1,1	0
32	MG	X	2895	1/1	0.98	0.31	-	1,1,1,1	0
32	MG	Z	127	1/1	0.97	0.20	-	3,3,3,3	0
32	MG	X	2893	1/1	0.95	0.20	-	3,3,3,3	0
32	MG	X	2902	1/1	0.97	0.80	-	61,61,61,61	0
32	MG	X	2881	1/1	0.95	0.50	-	10,10,10,10	0
32	MG	X	2886	1/1	0.96	0.25	-	15,15,15,15	0
32	MG	X	2905	1/1	0.96	0.36	-	18,18,18,18	0
32	MG	X	2882	1/1	0.96	0.38	-	49,49,49,49	0
32	MG	Z	126	1/1	0.95	0.13	-	12,12,12,12	0
32	MG	X	2892	1/1	0.98	0.19	-	1,1,1,1	0
32	MG	X	2897	1/1	0.90	0.27	-	1,1,1,1	0
32	MG	X	2908	1/1	0.96	0.46	-	48,48,48,48	0
32	MG	Z	124	1/1	0.90	0.19	-	11,11,11,11	0
32	MG	X	2891	1/1	0.94	0.11	-	23,23,23,23	0
32	MG	X	2904	1/1	0.94	0.40	-	1,1,1,1	0
32	MG	X	2906	1/1	0.99	0.09	-	40,40,40,40	0
32	MG	X	2890	1/1	0.95	0.65	-	1,1,1,1	0
32	MG	X	2910	1/1	0.94	0.26	-	14,14,14,14	0
32	MG	X	2898	1/1	0.97	0.40	-	1,1,1,1	0
32	MG	X	2894	1/1	0.94	0.36	-	2,2,2,2	0

## 6.5 Other polymers

There are no such residues in this entry.