



Full wwPDB X-ray Structure Validation Report ⓘ

Oct 26, 2023 – 11:50 AM EDT

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.36
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36

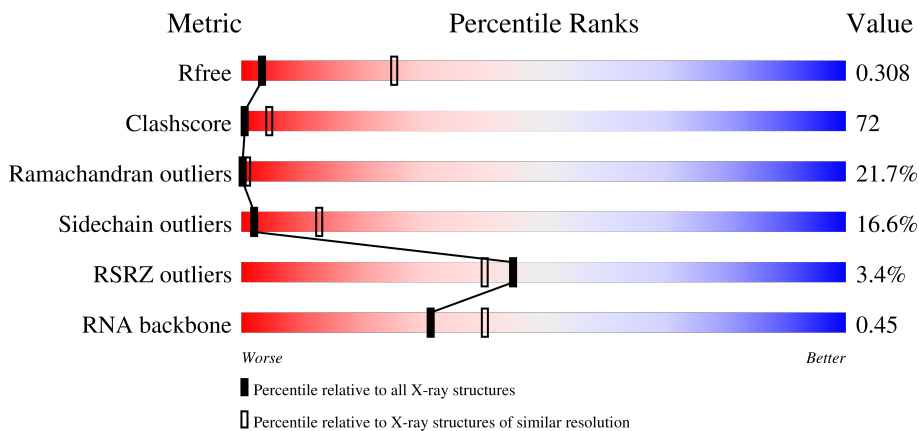
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.50 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.



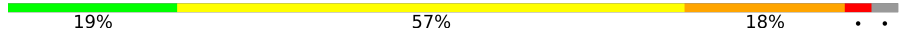


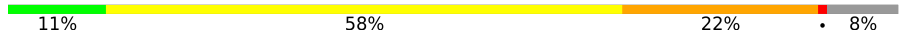


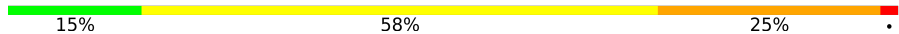
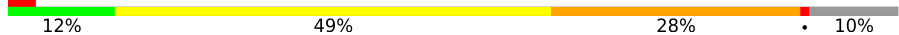
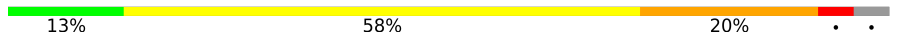
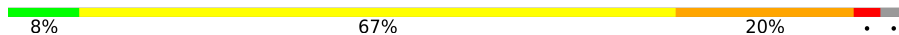
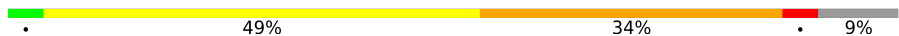

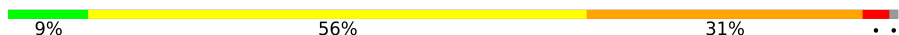
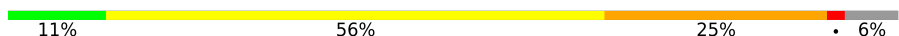
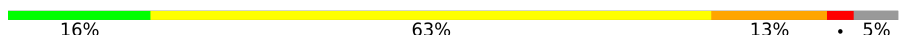







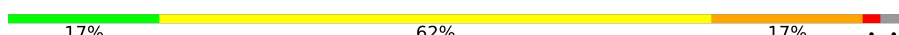


Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1659 (3.60-3.40)
Clashscore	141614	1036 (3.58-3.42)
Ramachandran outliers	138981	1005 (3.58-3.42)
Sidechain outliers	138945	1006 (3.58-3.42)
RSRZ outliers	127900	1559 (3.60-3.40)
RNA backbone	3102	1002 (4.00-3.00)

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

Mol	Chain	Length	Quality of chain
1	X	2880	
2	Z	123	
3	A	274	

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Mol	Chain	Length	Quality of chain
4	B	211	
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	

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Mol	Chain	Length	Quality of chain
29	3	66	<p>74% 92% 5%</p>
30	4	37	<p>8% 5% 78% 16%</p>

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	ZLD	X	2911	-	-	X	-

2 Entry composition [i](#)

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
			Total	C	N	O	P			
1	X	2686	57651	25718	10642	18606	2685	0	0	0

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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
			Total	C	N	O	S			
13	K	113	878	541	178	157	2	0	0	0

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- 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

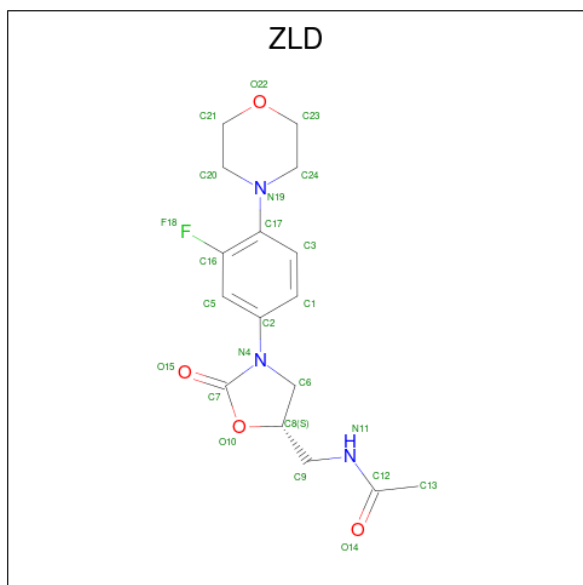
- Molecule 30 is a protein called 50S ribosomal protein L36.

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

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

- Molecule 32 is N-[[[(5S)-3-(3-fluoro-4-morpholin-4-ylphenyl)-2-oxo-1,3-oxazolidin-5-yl]methyl]acetamide (three-letter code: ZLD) (formula: C₁₆H₂₀FN₃O₄).

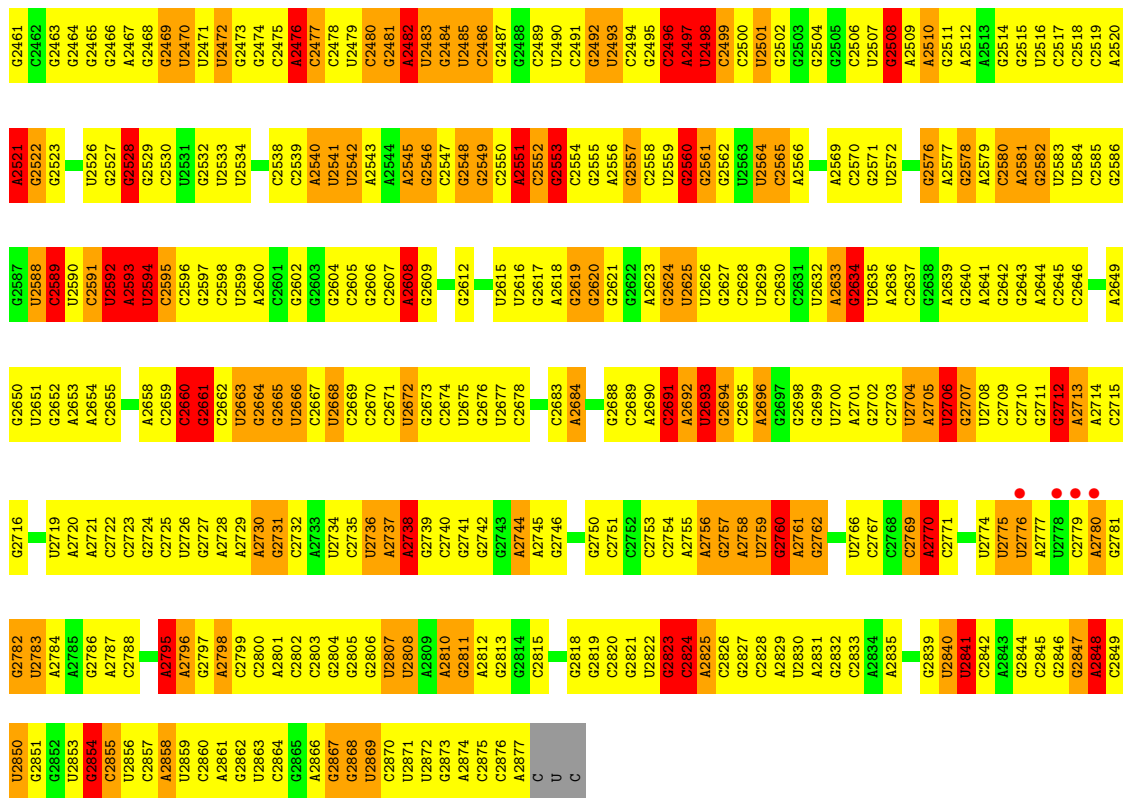


Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
32	X	1	Total	C	F	N	O	0	0
			24	16	1	3	4		

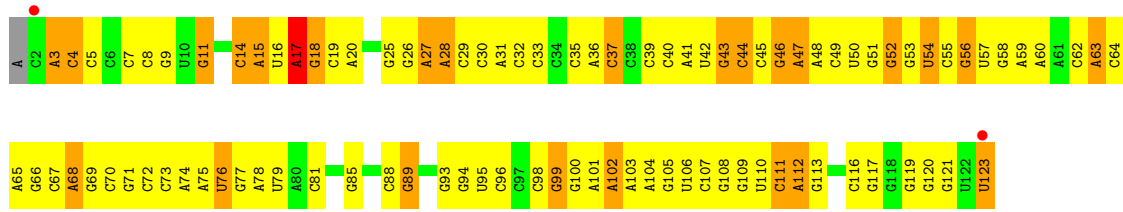
- Molecule 33 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
33	Y	1	Total	Zn	0	0
			1	1		
33	4	1	Total	Zn	0	0
			1	1		

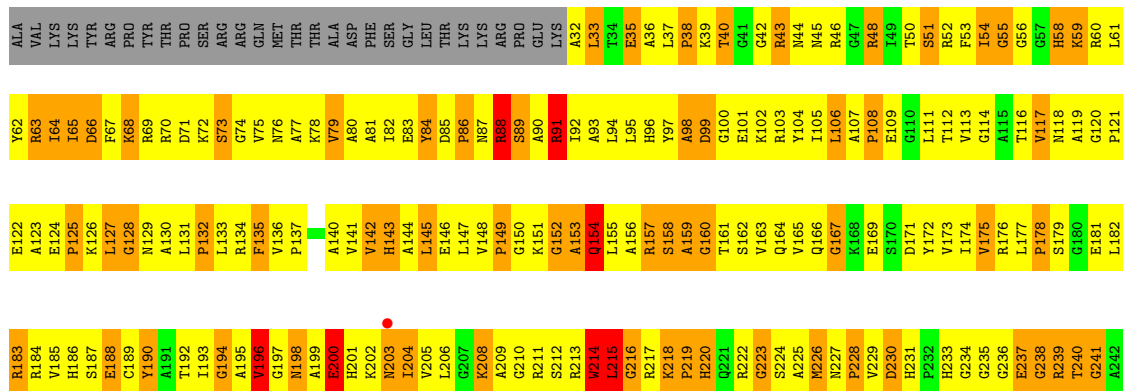
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U2402	C2340	C2276	G2213	A	U2030	G1970	U1848	C1786	C1726	C1661	A1596
C2403	G2341	G2214	G2214	G	A2031	C1971	G1849	U1787	A1597	C1662	A1597
A2404	U2342	A2281	G2215	A	G2032	C1972	G1850	C1788	C1727	C1663	A1598
A2405	C2343	G2282	G2216	G	C2033	C1973	U1789	U1789	C1728	C1664	U1599
C2406	G2344	G2283	U2217	U	A2034	U1974	G1790	G1790	C1729	C1665	G1601
G2407	A2345	U2284	G2218	A	G2035	G1975	G1854	C1791	C1731	C1666	U1600
G2408	C2346	U2285	U2219	C	G2036	A1976	G1855	C1792	C1732	C1667	G1602
A2409	C2347	G2286	A2220	G	A2037	C1977	U1856	C1793	U1733	G1668	A1603
U2410	A2348	G2287	G2221	A	C2038	U1978	G1857	A1794	U1734	A1669	A1604
A2411	G2349	U2288	U2222	U	G2039	C1979	G1858	C1795	G1735	G1670	G1605
A2412	G2350	A2289	U2223	C	A2040	A1980	A1859	A1672	G1736	A1672	A1606
A2413	G2351	A2290	U2224	C	A2041	A1981	A1860	A1798	G1737	A1673	U1547
A2414	A2352	U2291	G2225	G	A2042	C1982	G1861	A1800	U1738	C1674	U1548
G2415	G2353	C2292	A2226	G	A2043	U1983	G1862	A1801	U1739	C1675	C1549
U2416	G2354	C2227	G2166	G	G2044	A1984	U1863	A1802	G1740	U1676	C1550
U2417	A2355	U2228	G2167	G	A2045	G1985	G1864	A1803	G1741	U1679	G1552
A2418	A2356	G2229	G2168	G	C2046	G1986	G1865	U1804	G1742	G1679	C1615
C2419	A2357	G2230	C2170	A	C2047	G1987	G1866	G1805	C1743	U1680	G1516
C2420	U2358	G2231	U2171	G	C2048	A1988	A1867	G1806	C1744	A1681	A1555
C2421	U2359	G2232	U2172	C	C2049	C1989	A1868	A1807	C1745	A1682	A1556
C2422	G2360	G2233	G2173	C	G2050	U1990	A1869	C1808	C1746	G1683	U1618
G2423	C2361	U2236	G2174	U	U2051	C1991	U1870	G1809	G1747	A1619	G1557
G2424	G2362	C2237	A2175	C	G2052	G1992	G1871	U1810	C1821	C1620	G1558
G2425	A2363	G2238	U2176	G	G2053	G1993	A1872	A1811	G1748	G1622	A1559
G2426	C2364	C2239	U2177	G	A2054	U1994	A1873	U1812	A1750	C1623	A1560
A2427	U2365	C2305	U2178	A	C2055	G1995	G1874	U1813	A1751	A1624	A1561
U2428	C2366	A2306	G2179	A	C2056	A1996	U1875	A1814	U1752	A1625	G1562
A2429	A2367	A2307	U2180	A	U2057	A1997	C1876	G1815	G1753	A1626	U1564
A2430	C2368	C2308	A2181	C	U2058	A1998	C1877	G1816	G1754	G1627	G1565
C2431	U2369	G2309	A2182	U	U2059	U1999	C1878	U1817	G1755	C1628	G1566
A2432	G2370	G2310	G2183	G	A2060	U2000	U1879	G1818	C1756	A1629	A1567
A2433	A2371	U2311	C2184	G	C2061	G2001	G1880	U1819	C1757	A1630	A1568
G2434	C2372	A2312	U2185	C	U2064	A2002	U1881	A1820	C1758	C1631	A1569
C2435	C2373	G2313	G2186	C	A2003	A2003	A1882	A1821	A1632	A1632	C1570
U2436	C2374	U2249	A2187	U	U2065	U2004	A1883	C1822	G1760	C1633	C1571
G2437	G2375	G2250	A2188	U	U2066	U2005	A1884	G1823	G1761	A1634	C1572
A2438	C2376	U2251	G2189	U	G2067	G2006	C1885	C1824	C1762	G1635	G1573
U2439	U2385	G2317	A2190	U	U2068	G2007	G1886	C1825	G1763	C1703	A1574
C2440	G2379	U2318	A2191	U	G2069	C2008	G1887	U1826	A1764	G1704	C1575
U2441	U2380	G2319	U2192	G	G2070	C2009	C1888	U1827	C1765	U1575	G1576
C2442	A2381	G2320	G2193	G	G2071	U2009	G	C1828	C1766	A1706	G1577
C2443	C2382	C2321	A2194	U	C2072	G2010	C	C1829	G1767	C1707	U1578
C2444	C2383	U2322	C2195	G	A2073	U2011	C	C1830	G1768	C1708	G1579
C2445	G2384	U2323	U2196	C	U2074	A2012	C	G1831	U1769	U1709	C1580
C2446	U2385	G2324	U2197	G	U2075	A2013	G	G1832	U1770	G1644	A1581
G2447	G2386	A2325	U2198	G	G2076	A2014	A	U1833	A1771	U1645	C1582
A2448	U2387	C2326	C2199	G	G2077	G2015	U	G1834	C1711	U1646	A1583
G2449	G2388	U2327	G2200	G	A2078	A2016	A	C1835	C1772	U1647	G1584
A2450	C2389	C2264	G2201	U	G2079	U2017	C	C1836	A1774	C1648	A1585
G2451	A2390	A2265	G2202	A	U2080	G2018	U	G1837	A1775	A1650	A1586
U2452	G2391	A2266	G2203	G	U2081	C2019	A	U1838	A1776	U1651	A1587
C2453	C2392	A2267	A2204	G	G2082	G2020	A	G1839	A1777	C1652	A1588
C2454	G2393	G2268	C2205	C	G2083	G2021	A	A1840	U1778	G1653	G1589
A2455	A2394	G2269	G2206	A	U2085	C2022	A	G1841	C1779	A1654	U1590
U2456	C2395	U2270	U2086	A	A2086	U2024	C	G1842	A1780	G1720	G1591
A2457	G2396	C2271	U2087	C	U2087	A2025	G	U1843	C1781	G1721	U1592
U2458	U2397	A2272	G2209	G	U2088	C2026	U	C1844	A1782	A1657	A1593
C2459	A2398	C2273	C2210	G	C2089	C2027	G	A1845	G1783	U1723	U1594
G2460	C2398	C2274	U2211	U	U2090	C2028	C	A1846	C1784	G1659	A1595

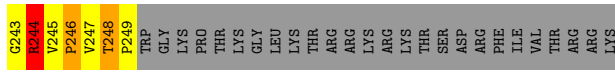


• Molecule 2: rRNA-5S ribosomal RNA



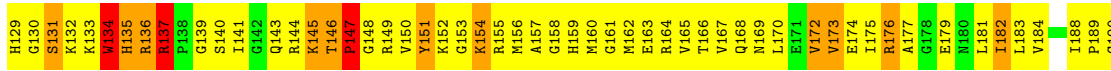
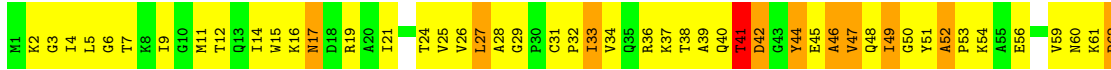
• Molecule 3: 50S ribosomal protein L2





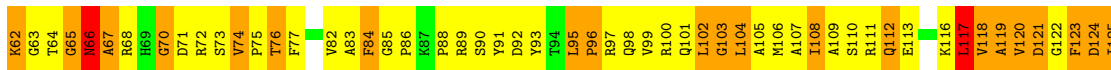
- Molecule 4: 50S ribosomal protein L3

Chain B: 19% 57% 18%



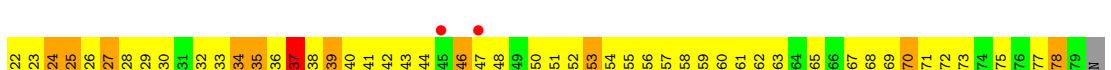
- Molecule 5: 50S ribosomal protein L4

Chain C: 9% 53% 29% 5%



- Molecule 6: 50S ribosomal protein L5

Chain D: 2% 10% 62% 24%



- Molecule 7: 50S ribosomal protein L6

M124
K125
I126
V127
S128
L129
A130
P131
E132
V133
L134

• Molecule 11: 50S ribosomal protein L15

Chain I: 3% 12% 49% 28% 10%

MET LYS LEU H4 H5 L6 K7 P8 T9 P10 G11 S12 S13 K14 D15 D16 K17 K18 R18 V19 G20 R21 R22 G23 G24 G25 T26 D27 K28 R29 T29 R30 G31 R32 R33 G34 H34 K35 G36 G37 Q37 K38 S39 R40 R41 G42 G43 G44 R45 G46 G47 A47 F48 F49 E50 G51 G52 G53 S54 S55 R56 L57 L58 A58 R59 L60

P61 K62 R63 G64 F65 N66 N67 V68 G69 T70 T71 T72 E73 K76 L77 S78 Q79 L80 Q81 D82 L83 E84 E85 D86 T87 F88 D89 R90 R91 D91 L92 L93 E94 A95 Y96 R97 L98 V99 R100 R101 N102 N103 G104 R105 V106 K107 L108 L109 A110 S111 G112 E113 I114 S115 R116 L117 V118 T119 V120 R121

V122 D123 A124 A125 A129 I130 K131 A132 V133 E134 A135 A136 G137 G138 R139 V140 V141 L142 F143 E144 VAL THR GLN GLN ASP ASP ALA ALA LYS ALA GLU

• Molecule 12: 50S ribosomal protein L16

Chain J: 13% 58% 20%

MET MET LEU LEU PRO K6 K7 T8 F9 R10 R11 R12 Q13 F14 R15 G16 R17 R18 R19 G20 D21 A22 K23 G24 G25 D26 Y27 Y28 A29 F30 Y33 G34 L35 L36 A37 K38 E39 P40 G101 R102 A41 W42 L43 F45 S45 S46 Q47 L48 E49 A50 C51 R52 L53 V54 M55 K56 R57 H58 F59 R60 R61

G62 G63 K64 L65 Y66 R67 R68 L69 F70 P71 D72 K73 P74 V75 T76 K77 R78 P79 A80 E81 T82 R83 K86 G87 K88 G89 V91 Y91 E92 Y93 Y94 Y95 S96 Y97 V98 A97 K99 P100 G101 R102 A41 W42 L43 F45 S45 S46 Q47 L48 E49 A50 C51 R52 L53 V54 M55 K56 R57 H58 F59 R60 R61

G123 H124 K125 L126 P127 I128 Q129 K131 M132 V133 K134 R135 E136 Q137 Y138 E140 A141 G142

• Molecule 13: 50S ribosomal protein L17

Chain K: 8% 67% 20%

MET ARG H3 G4 K5 A6 G7 R8 R9 L10 M11 N12 M13 S14 S15 R16 R17 V18 W18 A19 L20 A21 R22 A23 A24 A25 T26 R27 L28 L29 R30 R31 G32 G33 R34 Q35 Q36 T37 L38 T39 A40 A41 R42 E43 L44 R45 P46 F47 M10 M11 O50 L51 L52 T53 T54 A55 A56 G57 D58 D59 L60

H61 S62 R63 R64 V65 N66 A67 Q68 L70 D73 D74 V75 V76 R77 K78 W79 R80 R81 R82 W83 A84 P85 K86 Y87 R90 P91 G92 G93 Y94 R95 R96 R97 L98 R99 V100 G101 T102 R103 R104 G105 D106 G107 V108 T109 M10 A111 L112 L113 E114 L115 VAL

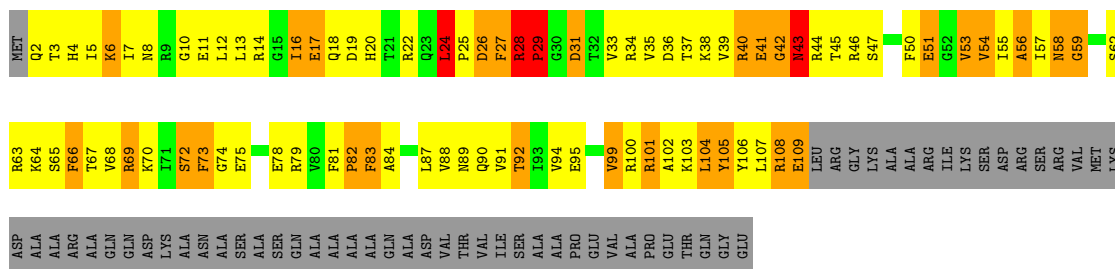
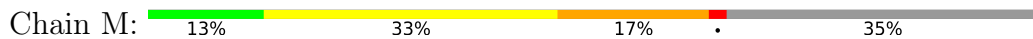
• Molecule 14: 50S ribosomal protein L18

Chain L: 49% 34% 9%

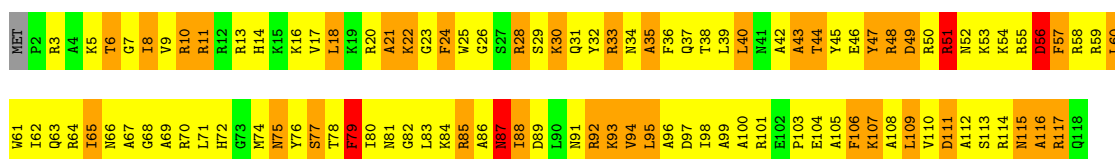
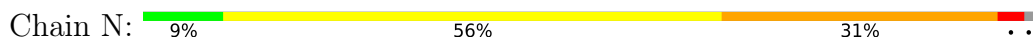
MET ALA THR R8 R9 R10 L11 R12 T13 R14 R15 V16 R17 R18 T19 T20 T21 R22 A23 A24 A25 G26 R27 L27 R28 L29 D30 S31 Y32 Y33 R34 S35 S36 K37 H37 L38 Y39 A40 Q41 I42 I43 D44 D45 S46 R47 C48 E49 T50 L51 A52 A53 A54 A55 S56 A57 A58 L59 R60

S61 G62 N63 R64 T65 D66 T67 A68 A69 V70 V71 G72 K73 A74 A75 A76 A77 A78 A79 A80 E81 R82 G83 G84 T84 K85 G86 R87 W88 F89 D90 R91 G92 S93 Y94 K95 Y96 H97 G98 R99 V100 K101 A102 L103 A104 D105 A106 S46 R47 C48 E49 T50 L51 A52 A53 A54 A55 S56 A57 A58 L59 R60

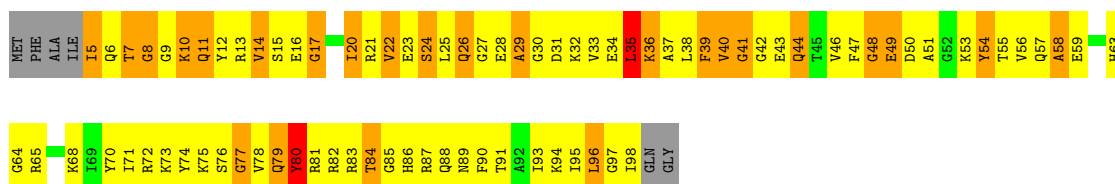
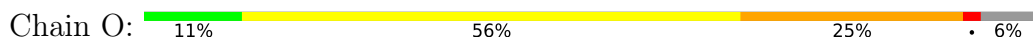
• Molecule 15: 50S ribosomal protein L19



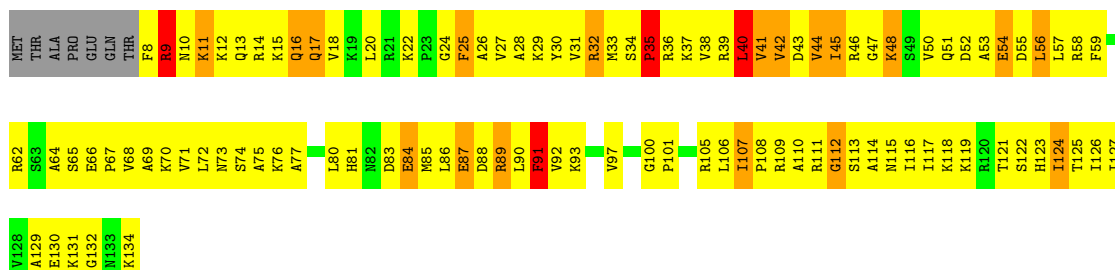
• Molecule 16: 50S ribosomal protein L20



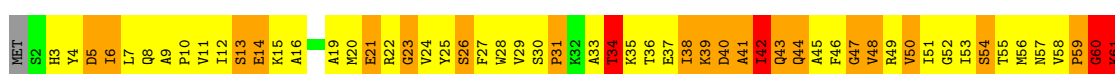
• Molecule 17: 50S ribosomal protein L21



• Molecule 18: 50S ribosomal protein L22



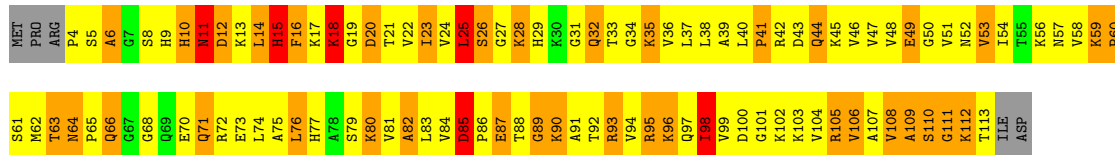
• Molecule 19: 50S ribosomal protein L23





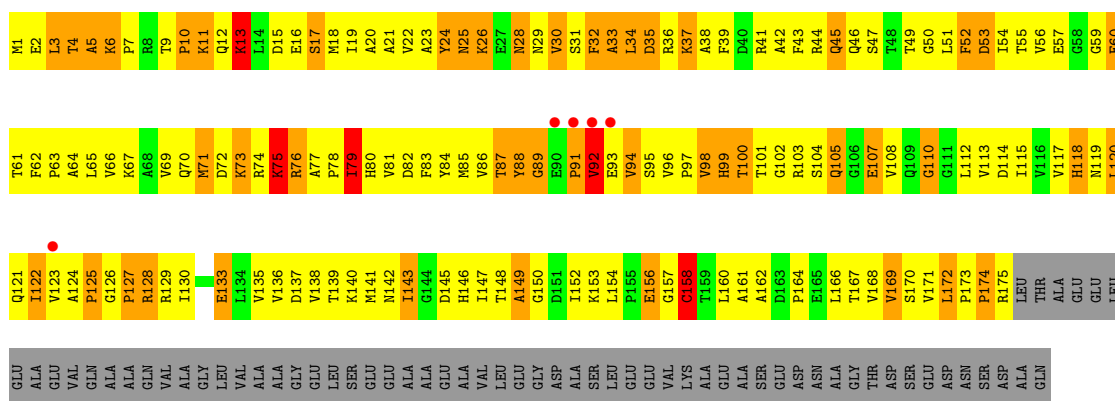
- Molecule 20: 50S ribosomal protein L24

Chain R: 5% 53% 32% 5%



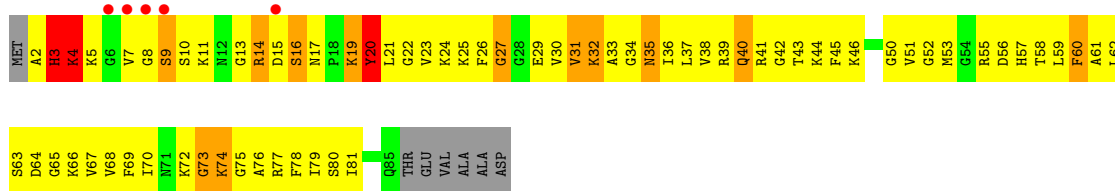
- Molecule 21: 50S ribosomal protein L25

Chain S: 2% 9% 43% 20% 26%



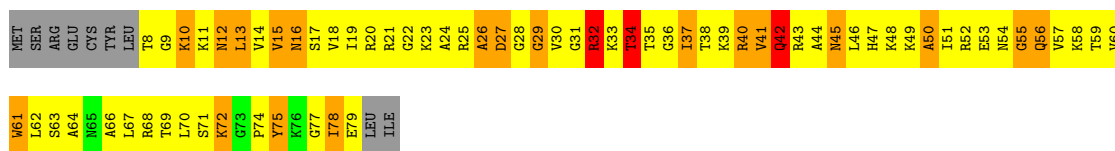
- Molecule 22: 50S ribosomal protein L27

Chain T: 5% 14% 62% 13% 8%



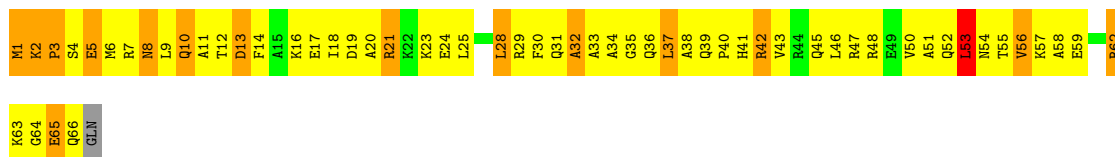
- Molecule 23: 50S ribosomal protein L28

Chain U: 58% 23% 11%



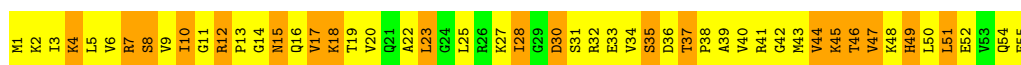
- Molecule 24: 50S ribosomal protein L29

Chain V: 12% 63% 22%



- Molecule 25: 50S ribosomal protein L30

Chain W: 9% 56% 35%



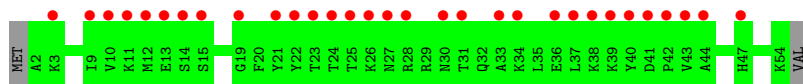
- Molecule 26: 50S ribosomal protein L32

Chain Y: 17% 62% 17%



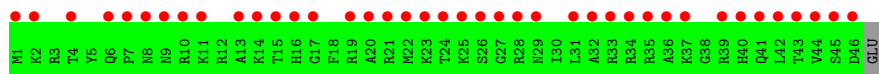
- Molecule 27: 50S ribosomal protein L33

Chain 1: 56% 96%



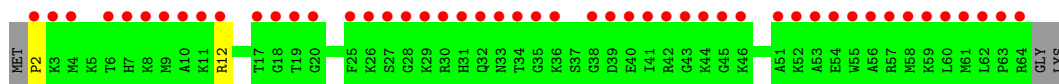
- Molecule 28: 50S ribosomal protein L34

Chain 2: 85% 98%



- Molecule 29: 50S ribosomal protein L35

Chain 3: 74% 92% 5%



- Molecule 30: 50S ribosomal protein L36

Chain 4: 8% 5% 78% 16%



4 Data and refinement statistics

Property	Value	Source
Space group	I 2 2 2	Depositor
Cell constants a, b, c, α , β , γ	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
$\langle I/\sigma(I) \rangle$ ¹	1.84 (at 3.31Å)	Xtrriage
Refinement program	CNS 1.1	Depositor
R, R_{free}	0.259 , 0.280 0.268 , 0.308	Depositor DCC
R_{free} test set	15358 reflections (4.97%)	wwPDB-VP
Wilson B-factor (Å ²)	68.5	Xtrriage
Anisotropy	0.152	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.14 , 37.6	EDS
L-test for twinning ²	$\langle L \rangle = 0.42$, $\langle L^2 \rangle = 0.24$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.86	EDS
Total number of atoms	83657	wwPDB-VP
Average B, all atoms (Å ²)	40.0	wwPDB-VP

Xtrriage'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.*

¹Intensities estimated from amplitudes.

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

5 Model quality i

5.1 Standard geometry i

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

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

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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 [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	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	M	1	0	0	0	0
31	X	30	0	0	0	0
31	Z	4	0	0	0	0
32	X	24	0	19	22	0
33	4	1	0	0	0	0
33	Y	1	0	0	0	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
21:S:54:ILE:HG13	21:S:62:PHE:HB2	1.19	1.14
25:W:25:LEU:HD22	25:W:30:ASP:HB3	1.28	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
1:X:2225:G:H2'	1:X:2226:A:H8	1.14	1.13
5:C:18:PRO:HG2	5:C:105:ALA:HB1	1.30	1.13
13:K:3:HIS:ND1	13:K:5:LYS:HE3	1.61	1.13
1:X:666:U:H2'	1:X:667:U:H4'	1.15	1.12
3:A:247:VAL:HG23	3:A:248:THR:HG23	1.13	1.13
5:C:7:ILE:HB	5:C:120:VAL:H	1.04	1.12
9:G:100:TYR:HB2	9:G:116:ARG:NH1	1.61	1.13
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
6:D:39:GLY:HA2	6:D:86:GLY:HA2	1.33	1.11
14:L:85:LYS:HG2	14:L:86:GLN:HE21	1.15	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
1:X:2616:U:H5''	4:B:82:ARG:HH21	0.98	1.10
8:F:75:MET:HA	8:F:78:LEU:HB3	1.32	1.10
16:N:66:ASN:HB3	16:N:76:TYR:HB2	1.32	1.10
16:N:85:ARG:HB3	16:N:116:ALA:HB1	1.18	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
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
18:P:109:ARG:HD2	18:P:115:ASN:HD21	1.17	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
10:H:23:ARG:HH12	10:H:25:LEU:HG	1.07	1.09
19:Q:12:ILE:HD12	19:Q:13:SER:H	1.16	1.09
1:X:1128:G:H2'	1:X:1129:A:H5''	1.25	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
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
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
14:L:31:VAL:HB	14:L:38:ILE:HD11	1.34	1.08
1:X:317:U:H2'	1:X:318:G:H5''	1.31	1.07
3:A:69:ARG:HD2	3:A:130:ALA:HB2	1.32	1.07
9:G:33:ILE:HB	9:G:34:PRO:HD2	1.09	1.07
30:4:18:ARG:HD3	30:4:23:VAL:HG22	1.33	1.07
1:X:82:G:H22	1:X:100:G:H2'	1.16	1.07
7:E:16:THR:HG22	7:E:18:ASN:HD21	1.18	1.07
14:L:30:SER:N	14:L:43:ILE:HD11	1.69	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
10:H:27:SER:HB3	10:H:50:ILE:HG13	1.35	1.06
11:I:73:GLU:HB2	11:I:106:VAL:HA	1.30	1.06
17:O:12:TYR:HB2	17:O:39:PHE:HB2	1.38	1.06
30:4:15:LYS:HB2	30:4:26:ILE:HG13	1.34	1.06
1:X:1914:U:H6	1:X:1914:U:H5'	1.20	1.06
1:X:2056:C:C2'	1:X:2057:U:H5''	1.85	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
4:B:85:ALA:H	4:B:86:PRO:HD2	1.21	1.05
10:H:81:ILE:HG13	10:H:117:GLU:OE1	1.56	1.05
14:L:42:ILE:HB	14:L:52:ALA:HB3	1.37	1.05
1:X:1690:U:H2'	1:X:1691:G:H5''	1.38	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)
11:I:108:LEU:HB2	11:I:122:VAL:HG11	1.35	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
3:A:231:HIS:CD2	3:A:233:HIS:H	1.75	1.04
9:G:67:ARG:HB2	9:G:70:PHE:HA	1.37	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
1:X:2212:U:H2'	1:X:2213:G:C8	1.94	1.03
24:V:38:ALA:O	24:V:40:PRO:HD3	1.58	1.03
17:O:36:LYS:HE3	17:O:56:VAL:HG13	1.39	1.03
1:X:1525:A:H3'	1:X:1526:U:C6	1.93	1.03
1:X:2225:G:H2'	1:X:2226:A:C8	1.93	1.03
16:N:66:ASN:CB	16:N:70:ARG:HH12	1.72	1.03
21:S:172:LEU:HD23	21:S:173:PRO:HD2	1.39	1.03
1:X:336:A:H2'	1:X:337:G:H8	1.20	1.03
1:X:1095:A:C2'	1:X:1096:A:H5''	1.89	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
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
1:X:1348:C:H2'	1:X:1349:A:H8	1.24	1.02
13:K:100:VAL:HG12	13:K:101:GLY:H	1.23	1.02
1:X:333:A:C5'	5:C:162:ARG:HD2	1.89	1.01
1:X:1023:U:H3	9:G:53:ARG:HD2	1.25	1.01
1:X:1508:G:H5'	1:X:1509:A:C5'	1.90	1.01
1:X:2713:A:H61	4:B:203:LYS:HE3	1.24	1.01
5:C:176:ASN:ND2	5:C:178:TYR:HB3	1.74	1.01
6:D:40:LEU:HG	6:D:150:ARG:HE	1.19	1.01
9:G:67:ARG:HD3	9:G:70:PHE:CA	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
1:X:1673:C:C5'	4:B:136:ARG:HD3	1.91	1.01
20:R:48:VAL:HG12	20:R:50:GLY:H	1.25	1.01
23:U:41:VAL:HG23	23:U:42:GLN:N	1.74	1.01
1:X:2222:U:H2'	1:X:2223:U:H6	1.26	1.00
4:B:116:VAL:HG22	4:B:136:ARG:HE	1.17	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:116:ARG:HD2	9:G:119:LEU:HD12	1.43	1.00
13:K:79:VAL:HA	13:K:83:VAL:CG2	1.89	1.00
21:S:123:VAL:H	21:S:161:ALA:HB2	0.88	1.00
1:X:313:U:H2'	1:X:314:G:H8	1.24	1.00
1:X:451:A:H2'	1:X:452:G:C8	1.96	1.00
1:X:538:A:H5'	9:G:142:ARG:NH2	1.75	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
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: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
1:X:988:G:H5'	16:N:55:ARG:HH12	1.25	1.00
5:C:47:THR:HA	5:C:82:VAL:HB	1.41	1.00
1:X:333:A:H5''	5:C:162:ARG:CD	1.91	1.00
8:F:105:VAL:HG13	8:F:128:VAL:HG11	1.44	1.00
9:G:66:HIS:HA	16:N:67:ALA:HB1	1.39	1.00
13:K:11:ASN:HD21	13:K:17:ARG:NH1	1.60	1.00
15:M:99:VAL:HG21	15:M:104:LEU:HD21	1.42	1.00
1:X:1281:A:H1'	1:X:2592:U:H5	1.05	0.99
10:H:13:ASN:ND2	10:H:109:ARG:HG2	1.77	0.99
11:I:88:PHE:HB2	11:I:93:LEU:HD12	1.41	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
1:X:1698:C:O2'	1:X:1753:A:H2'	1.61	0.99
1:X:2581:A:H3'	1:X:2582:G:H5''	1.42	0.99
3:A:91:ARG:HD2	3:A:198:ASN:HA	1.45	0.99
5:C:39:ARG:HH21	5:C:91:TYR:HB2	1.27	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
12:J:27:TYR:HB2	12:J:137:VAL:HG11	1.45	0.99
15:M:66:PHE:HE2	15:M:81:PHE:HB2	1.23	0.99
5:C:164:VAL:HB	5:C:166:TRP:CZ3	1.97	0.98
9:G:65:LYS:CG	9:G:66:HIS:H	1.75	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:46:GLN:HB3	21:S:50:GLY:HA3	1.42	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
6:D:71:LYS:HD2	6:D:73:SER:OG	1.63	0.98
11:I:94:GLU:HB3	11:I:97:ARG:HE	1.24	0.98
11:I:72:TYR:HA	11:I:105:PRO:HG2	1.40	0.98
1:X:1448:A:H61	1:X:1574:A:H61	1.05	0.98
1:X:2394:G:H3'	11:I:63:ARG:NH1	1.77	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
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
1:X:2787:A:H2'	1:X:2788:C:H6	1.24	0.98
20:R:94:VAL:HB	20:R:107:ALA:HB3	1.44	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
15:M:69:ARG:HH11	15:M:69:ARG:HG3	1.25	0.97
30:4:18:ARG:HG2	30:4:23:VAL:HA	1.43	0.97
5:C:109:ALA:O	5:C:113:GLU:HG3	1.64	0.97
9:G:87:GLN:HE21	9:G:87:GLN:H	1.11	0.97
1:X:2482:A:H1'	32:X:2911:ZLD:H13B	1.47	0.97
5:C:170:LEU:HD21	5:C:175:VAL:HA	1.43	0.97
6:D:111:ILE:HB	6:D:114:PHE:HB2	1.46	0.97
1:X:332:C:C1'	5:C:159:ARG:HE	1.78	0.97
17:O:10:LYS:HG3	17:O:11:GLN:HE21	1.29	0.97
1:X:29:U:H4'	16:N:11:ARG:HH12	1.24	0.96
14:L:28:ARG:HG3	14:L:43:ILE:HD13	1.46	0.96
19:Q:52:GLY:O	19:Q:80:VAL:HG23	1.65	0.96
23:U:20:ARG:HB2	23:U:43:ARG:HD2	1.43	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
12:J:23:LYS:HA	21:S:73:LYS:NZ	1.80	0.96
21:S:3:LEU:HA	21:S:34:LEU:HB3	1.46	0.96
1:X:1086:C:H2'	1:X:1087:C:H5''	1.43	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:75:THR:O	4:B:76:ARG:HB3	1.65	0.96
19:Q:7:LEU:HD11	24:V:30:PHE:CE2	1.99	0.96
23:U:51:ILE:CG1	23:U:59:THR:HB	1.94	0.96
1:X:984:A:H1'	1:X:1202:U:C6	1.99	0.96
1:X:1949:A:O2'	1:X:2572:U:H5'	1.66	0.96
1:X:2222:U:H2'	1:X:2223:U:C6	1.99	0.96
5:C:7:ILE:HB	5:C:120:VAL:N	1.80	0.96
12:J:57:ARG:HG2	12:J:57:ARG:HH11	1.29	0.96
24:V:3:PRO:O	24:V:6:MET:HB3	1.65	0.96
1:X:517:A:H5''	1:X:518:A:H5'	1.43	0.96
1:X:2551:A:C8	4:B:144:ARG:HD3	2.00	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
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
17:O:25:LEU:HB2	17:O:32:LYS:HE2	1.46	0.96
1:X:333:A:H3'	5:C:162:ARG:CZ	1.96	0.95
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:1517:C:H4'	3:A:96:HIS:NE2	1.79	0.95
9:G:65:LYS:HG3	9:G:66:HIS:H	1.32	0.95
1:X:1919:A:H2	1:X:1926:U:H3	0.97	0.95
1:X:1122:A:C2	1:X:1123:G:H1'	2.01	0.95
7:E:127:GLU:HG3	7:E:129:THR:H	1.29	0.95
12:J:27:TYR:HB3	12:J:137:VAL:HG21	1.46	0.95
14:L:33:ARG:NH1	14:L:100:VAL:HA	1.79	0.95
1:X:336:A:H2'	1:X:337:G:C8	2.00	0.95
1:X:2375:G:H4'	23:U:32:ARG:O	1.66	0.95
6:D:4:LEU:HA	6:D:7:LYS:HB2	1.44	0.95
6:D:100:LEU:O	6:D:104:ILE:HG13	1.67	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:1926:U:H4'	1:X:1927:U:H3'	1.47	0.95
1:X:2708:U:H2'	1:X:2709:C:C6	2.02	0.95
4:B:85:ALA:N	4:B:86:PRO:HD2	1.78	0.95
9:G:121:LYS:O	9:G:123:PRO:HD3	1.65	0.95
16:N:51:ARG:HB3	16:N:51:ARG:NH1	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
13:K:99:ARG:HG2	13:K:99:ARG:HH11	1.31	0.95
18:P:44:VAL:HG23	18:P:45:ILE:H	1.30	0.95
1:X:128:C:H2'	1:X:129:A:H5''	1.46	0.94
1:X:504:G:H4'	18:P:27:VAL:CG1	1.97	0.94
1:X:971:A:H61	12:J:83:ARG:HH22	1.16	0.94
1:X:1524:C:H5''	1:X:1525:A:H8	1.27	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
1:X:1586:A:H5'	3:A:38:PRO:HG3	1.47	0.94
5:C:13:ARG:H	5:C:13:ARG:NE	1.65	0.94
6:D:13:ARG:HB3	6:D:14:PRO:HD3	1.48	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
1:X:1587:A:H2'	1:X:1588:A:C8	2.02	0.94
25:W:3:ILE:HG22	25:W:4:LYS:H	1.31	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
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
21:S:97:PRO:HA	21:S:119:ASN:HA	1.47	0.94
1:X:1185:C:H2'	1:X:1186:G:H3'	1.46	0.94
13:K:100:VAL:HG12	13:K:101:GLY:N	1.79	0.94
1:X:797:A:C5	3:A:229:VAL:HG21	2.03	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
9:G:33:ILE:HB	9:G:34:PRO:CD	1.96	0.94
2:Z:64:C:H2'	2:Z:65:A:H8	1.32	0.93
3:A:142:VAL:HG12	3:A:193:ILE:HA	1.47	0.93
14:L:8:ARG:HB2	14:L:8:ARG:HH11	1.32	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
1:X:2736:U:O2'	1:X:2737:A:H5''	1.69	0.93
9:G:47:SER:O	9:G:49:VAL:N	2.01	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:X:731:A:H2'	1:X:732:G:H5'	1.50	0.93
1:X:833:A:H1'	1:X:954:U:H1'	1.47	0.93
1:X:2218:G:H5'	3:A:249:PRO:HB3	1.47	0.93
1:X:48:A:H4'	1:X:49:U:H5'	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: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
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
15:M:66:PHE:CE2	15:M:81:PHE:HB2	2.04	0.92
1:X:556:A:H1'	1:X:558:G:H21	1.33	0.92
22:T:40:GLN:HE22	22:T:43:THR:HA	1.30	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
2:Z:30:C:OP1	14:L:37:HIS:HB3	1.70	0.92
14:L:33:ARG:HH12	14:L:103:LEU:HB3	1.30	0.92
4:B:4:ILE:HD13	4:B:28:ALA:HB1	1.51	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
1:X:1218:C:H2'	1:X:1219:C:H6	1.33	0.92
1:X:1710:U:H5'	1:X:1711:C:C5	2.04	0.92
16:N:74:MET:HE2	16:N:79:PHE:HA	1.51	0.92
21:S:94:VAL:HB	21:S:125:PRO:HB3	1.50	0.92
1:X:2074:U:H3'	1:X:2075:U:H5''	1.47	0.92
1:X:2240:C:O2'	1:X:2241:U:H5'	1.69	0.92
3:A:35:GLU:O	3:A:64:ILE:HD11	1.69	0.92
13:K:24:GLN:HB3	13:K:44:LEU:HD22	1.52	0.92
30:4:7:VAL:HG13	30:4:34:GLN:HE21	1.35	0.92
1:X:1087:C:OP1	8:F:94:LYS:HE3	1.70	0.91
24:V:13:ASP:HA	24:V:16:LYS:HD3	1.51	0.91
1:X:169:C:C2'	1:X:170:U:H5'	1.99	0.91
1:X:1953:A:H5'	1:X:1954:A:OP1	1.69	0.91
1:X:2020:G:H2'	1:X:2021:G:C8	2.05	0.91
3:A:67:PHE:HB3	3:A:153:ALA:H	1.33	0.91
11:I:77:LEU:HB2	11:I:111:SER:H	1.33	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
14:L:54:ALA:H	14:L:75:LEU:HD13	1.35	0.91
22:T:40:GLN:NE2	22:T:43:THR:HA	1.84	0.91
25:W:51:LEU:HD23	25:W:51:LEU:H	1.34	0.91
1:X:1171:A:H2'	1:X:1172:U:H6	1.35	0.91
16:N:66:ASN:HB2	16:N:70:ARG:NH1	1.84	0.91
23:U:51:ILE:HG23	23:U:59:THR:HA	1.48	0.91
1:X:788:G:H5'	1:X:790:A:H1'	1.52	0.91
1:X:1074:G:H21	8:F:91:THR:HA	1.36	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
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
1:X:1838:G:H2'	1:X:1839:A:O4'	1.70	0.91
14:L:8:ARG:HB2	14:L:8:ARG:NH1	1.85	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
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
1:X:482:A:H2'	1:X:483:A:O4'	1.71	0.91
1:X:1242:A:H2'	1:X:1243:G:H8	1.36	0.91
1:X:1595:A:H2'	1:X:1596:A:O4'	1.70	0.91
7:E:136:ILE:H	7:E:136:ILE:HD12	1.34	0.91
1:X:634:G:H2'	1:X:635:C:H6	1.35	0.90
1:X:1091:C:H1'	8:F:127:THR:HA	1.53	0.90
1:X:663:G:H3'	1:X:664:C:C4'	2.01	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
26:Y:32:GLU:HG2	26:Y:37:HIS:O	1.71	0.90
20:R:92:THR:HB	20:R:95:ARG:HH22	1.34	0.90
20:R:108:VAL:HG22	20:R:109:ALA:H	1.33	0.90
23:U:10:LYS:HD3	23:U:11:LYS:N	1.87	0.90
1:X:168:A:H2'	1:X:169:C:H6	1.35	0.90
1:X:651:C:H2'	1:X:652:C:H5''	1.51	0.90
1:X:1108:U:H2'	1:X:1109:A:O4'	1.70	0.90
3:A:131:LEU:HD23	3:A:131:LEU:H	1.34	0.90
1:X:1333:G:H22	1:X:1344:C:H5	1.19	0.90
2:Z:39:C:H5''	2:Z:40:C:C5	2.06	0.90
11:I:76:LYS:HB3	11:I:79:GLN:CG	2.00	0.90
1:X:557:U:H4'	1:X:558:G:O4'	1.71	0.90
9:G:61:ARG:HE	9:G:65:LYS:HE2	1.36	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:67:ARG:HD3	9:G:70:PHE:HA	1.53	0.90
25:W:2:LYS:HB3	25:W:54:GLN:HB3	1.51	0.90
13:K:3:HIS:ND1	13:K:5:LYS:CE	2.34	0.90
1:X:82:G:N2	1:X:100:G:H2'	1.86	0.90
2:Z:72:C:H2'	2:Z:73:C:C6	2.06	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:2476:A:H1'	1:X:2477:C:H5	1.35	0.89
1:X:2594:U:H5'	1:X:2594:U:H6	1.37	0.89
3:A:62:TYR:HE1	3:A:88:ARG:HH22	1.17	0.89
3:A:244:ARG:N	3:A:244:ARG:HD3	1.86	0.89
21:S:3:LEU:HD21	21:S:33:ALA:H	1.37	0.89
17:O:29:ALA:HA	17:O:59:GLU:HB3	1.54	0.89
24:V:7:ARG:HD2	24:V:8:ASN:N	1.88	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
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
9:G:33:ILE:CB	9:G:34:PRO:HD2	1.99	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
2:Z:42:U:H1'	2:Z:47:A:N6	1.87	0.89
6:D:15:ALA:O	6:D:18:GLN:HB2	1.73	0.89
9:G:158:HIS:HA	9:G:161:GLN:HB2	1.53	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
11:I:85:ASP:CA	11:I:116:ARG:HH12	1.85	0.89
16:N:88:ILE:HG13	17:O:49:GLU:HB2	1.53	0.89
22:T:32:LYS:HG2	22:T:33:ALA:H	1.37	0.89
30:4:15:LYS:CB	30:4:26:ILE:HG13	2.03	0.89
1:X:2850:U:H5'	1:X:2850:U:H6	1.37	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
19:Q:26:SER:HB3	19:Q:79:ILE:HG13	1.52	0.89
25:W:25:LEU:CD2	25:W:30:ASP:HB3	2.02	0.89
7:E:124:ALA:O	7:E:131:ILE:HG23	1.73	0.88
1:X:173:A:OP2	11:I:53:ARG:HD2	1.72	0.88
1:X:635:C:H2'	1:X:636:G:H5''	1.56	0.88
1:X:841:G:H2'	1:X:842:A:C8	2.07	0.88
1:X:2422:C:O2'	1:X:2423:G:H5'	1.72	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1448:A:H61	1:X:1574:A:N6	1.72	0.88
1:X:1466:C:H2'	1:X:1467:U:O4'	1.73	0.88
1:X:1729:C:H2'	1:X:1730:G:H8	1.35	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:356:A:H2'	1:X:357:A:H8	1.37	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
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
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
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:538:A:H3'	1:X:538:A:N3	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
3:A:172:TYR:HB3	3:A:184:ARG:HG2	1.56	0.88
11:I:94:GLU:CB	11:I:97:ARG:HE	1.87	0.88
12:J:15:ARG:HD3	12:J:73:LYS:NZ	1.88	0.88
20:R:59:LYS:N	20:R:60:PRO:HD3	1.88	0.88
1:X:2170:C:H3'	1:X:2171:U:H5''	1.55	0.88
1:X:2447:G:HO2'	1:X:2448:A:H8	1.22	0.88
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
9:G:87:GLN:HE21	9:G:87:GLN:N	1.71	0.87
1:X:554:U:O2'	1:X:555:U:H1'	1.73	0.87
1:X:1914:U:H5'	1:X:1914:U:C6	2.09	0.87
22:T:25:LYS:HE2	22:T:36:ILE:O	1.73	0.87
1:X:946:U:H2'	1:X:947:C:H6	1.38	0.87
11:I:94:GLU:HB3	11:I:97:ARG:NE	1.89	0.87
15:M:99:VAL:HG22	15:M:100:ARG:H	1.39	0.87
23:U:20:ARG:HD2	23:U:43:ARG:CZ	2.03	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
9:G:164:GLN:O	9:G:165:VAL:HG13	1.75	0.87
18:P:89:ARG:HD3	18:P:132:GLY:N	1.90	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:10:GLN:HB2	24:V:12:THR:HG23	1.56	0.87
4:B:174:GLU:HB3	4:B:183:LEU:HD12	1.57	0.87
1:X:402:A:C8	1:X:2392:G:H4'	2.09	0.87
1:X:921:A:H2'	1:X:924:C:C5	2.10	0.87
1:X:1859:A:H2'	1:X:1860:A:H8	1.38	0.87
5:C:39:ARG:NH2	5:C:91:TYR:HB2	1.90	0.87
14:L:73:LYS:HE3	14:L:109:GLU:HG2	1.55	0.87
1:X:1218:C:H2'	1:X:1219:C:C6	2.10	0.87
1:X:2807:U:H5'	1:X:2807:U:H6	1.37	0.87
1:X:2856:U:H2'	1:X:2857:C:H6	1.39	0.87
18:P:50:VAL:HB	18:P:90:LEU:O	1.74	0.87
1:X:98:U:H5''	1:X:99:U:H5''	1.54	0.87
4:B:28:ALA:HB3	4:B:92:ASN:HD22	1.38	0.87
7:E:9:ILE:HG13	7:E:50:LEU:HD23	1.57	0.87
12:J:12:LYS:O	12:J:13:GLN:HB2	1.74	0.87
18:P:64:ALA:O	18:P:67:PRO:HD2	1.75	0.87
19:Q:7:LEU:HD11	24:V:30:PHE:HE2	1.38	0.87
1:X:76:C:H5'	1:X:76:C:H6	1.40	0.87
1:X:2482:A:O2'	32:X:2911:ZLD:C13	2.23	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
25:W:38:PRO:HB3	25:W:41:ARG:NH2	1.89	0.87
3:A:102:LYS:O	3:A:103:ARG:HG3	1.74	0.86
6:D:57:LEU:HA	6:D:60:ILE:HD11	1.55	0.86
18:P:89:ARG:NH2	18:P:132:GLY:HA2	1.89	0.86
1:X:1512:A:H2'	1:X:1514:C:C5	2.09	0.86
9:G:156:HIS:HB2	9:G:157:PRO:HD3	1.55	0.86
1:X:303:C:O5'	1:X:303:C:H6	1.58	0.86
1:X:2672:U:H2'	1:X:2673:G:C8	2.10	0.86
2:Z:45:C:H2'	6:D:92:ARG:CZ	2.06	0.86
4:B:91:VAL:HG12	4:B:92:ASN:H	1.40	0.86
14:L:33:ARG:HH11	14:L:100:VAL:HA	1.36	0.86
1:X:2482:A:C8	32:X:2911:ZLD:C13	2.57	0.86
3:A:93:ALA:CB	3:A:107:ALA:HB2	2.04	0.86
3:A:165:VAL:O	3:A:166:GLN:HG3	1.74	0.86
20:R:97:GLN:CB	20:R:101:GLY:HA2	2.06	0.86
26:Y:16:ARG:HH11	26:Y:20:ARG:HH12	1.23	0.86
1:X:653:G:C2'	1:X:654:A:H5''	2.02	0.86
1:X:1812:U:H3	3:A:200:GLU:HA	1.40	0.86
1:X:2308:A:H2'	1:X:2309:G:C8	2.10	0.86
1:X:2757:G:H5''	1:X:2758:A:H5''	1.57	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2796:A:OP2	13:K:3:HIS:CE1	2.28	0.86
1:X:1587:A:H2'	1:X:1588:A:H8	1.39	0.86
17:O:12:TYR:HB2	17:O:39:PHE:CB	2.05	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:H	14:L:91:ARG:CD	1.89	0.86
21:S:36:ARG:HH11	21:S:37:LYS:HB2	1.39	0.86
1:X:317:U:C2'	1:X:318:G:H5''	2.06	0.86
6:D:69:LYS:HA	6:D:84:PRO:HA	1.57	0.86
6:D:72:LYS:HA	6:D:81:GLN:HA	1.58	0.86
6:D:100:LEU:HG	6:D:104:ILE:HD11	1.56	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
1:X:597:U:H2'	1:X:598:U:C6	2.11	0.86
1:X:2218:G:O4'	3:A:249:PRO:HG3	1.74	0.86
2:Z:30:C:H42	2:Z:58:G:H1	1.19	0.86
2:Z:67:C:H2'	2:Z:111:C:H42	1.41	0.86
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
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
1:X:1949:A:C2	1:X:2572:U:H1'	2.11	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:1004:A:H2	17:O:21:ARG:HH22	1.19	0.85
1:X:137:A:C5	1:X:138:G:H1'	2.11	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:83:A:C2	1:X:98:U:H1'	2.11	0.85
1:X:1380:C:H2'	1:X:1381:G:H5'	1.58	0.85
1:X:1692:C:O2'	1:X:1693:A:H5'	1.76	0.85
6:D:137:ILE:HG13	6:D:138:PHE:CE1	2.12	0.85
16:N:56:ASP:O	16:N:59:ARG:N	2.08	0.85
1:X:1281:A:C1'	1:X:2592:U:C5	2.41	0.85
1:X:2482:A:C8	32:X:2911:ZLD:H13	2.12	0.85
4:B:27:LEU:O	4:B:27:LEU:HD23	1.76	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
5:C:102:LEU:O	5:C:102:LEU:HD23	1.77	0.85
6:D:65:PRO:HA	6:D:89:VAL:HG13	1.58	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1729:C:H2'	1:X:1730:G:C8	2.12	0.85
1:X:2482:A:H4'	1:X:2483:U:OP1	1.76	0.85
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
3:A:93:ALA:HB2	3:A:107:ALA:CB	2.03	0.85
3:A:212:SER:O	3:A:215:LEU:HD12	1.76	0.85
5:C:132:ASN:O	5:C:135:SER:HB3	1.77	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
1:X:1200:G:N2	1:X:1201:G:H1'	1.92	0.85
1:X:1323:G:H3'	1:X:1324:G:N2	1.92	0.85
2:Z:15:A:O2'	2:Z:16:U:H5''	1.76	0.85
10:H:19:ILE:H	10:H:19:ILE:HD13	1.40	0.85
10:H:23:ARG:NH1	10:H:25:LEU:HG	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
4:B:16:LYS:O	4:B:17:ASN:HB2	1.76	0.84
5:C:176:ASN:ND2	5:C:179:ASP:H	1.74	0.84
21:S:42:ALA:HA	21:S:45:GLN:HE21	1.42	0.84
1:X:27:G:N2	1:X:522:G:O2'	2.09	0.84
1:X:1838:G:H3'	1:X:1839:A:H8	1.43	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:542:A:H2	1:X:2004:U:H2'	1.37	0.84
1:X:969:U:C2	12:J:17:ARG:HD2	2.13	0.84
1:X:1060:C:O2	1:X:1124:U:H4'	1.77	0.84
1:X:2710:C:O2'	1:X:2711:G:H5'	1.77	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
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
1:X:1286:U:H4'	1:X:1288:A:OP2	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: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
1:X:969:U:C4	12:J:17:ARG:HB2	2.13	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

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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:70:A:H4'	1:X:71:A:O5'	1.75	0.84
1:X:726:G:H2'	1:X:727:U:C2	2.12	0.84
1:X:1053:G:H2'	1:X:1054:C:H6	1.42	0.84
1:X:1928:G:H2'	1:X:1929:U:H6	1.43	0.84
1:X:2180:U:H2'	1:X:2203:G:H22	1.42	0.84
1:X:2404:A:H4'	1:X:2405:A:C5'	2.07	0.84
16:N:30:LYS:HZ2	16:N:30:LYS:HB3	1.43	0.84
21:S:16:GLU:O	21:S:18:MET:HG2	1.77	0.84
1:X:1003:C:H4'	17:O:71:ILE:HD13	1.57	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: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
23:U:50:ALA:C	23:U:52:ARG:HH22	1.81	0.83
1:X:886:A:H1'	12:J:30:PHE:CE1	2.13	0.83
1:X:1452:U:O2'	1:X:1453:A:H5'	1.78	0.83
2:Z:106:U:O2'	21:S:67:LYS:HG2	1.78	0.83
3:A:217:ARG:HG2	3:A:218:LYS:HG3	1.60	0.83
5:C:95:LEU:HD23	5:C:96:PRO:HD2	1.60	0.83
10:H:116:ARG:HH11	15:M:38:LYS:HZ2	1.24	0.83
14:L:85:LYS:HG2	14:L:86:GLN:NE2	1.93	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
23:U:28:GLY:HA3	23:U:32:ARG:CB	2.08	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
17:O:15:SER:HA	17:O:95:ILE:HB	1.60	0.83
1:X:648:A:H4'	1:X:649:G:C5'	2.08	0.83
1:X:2712:G:H3'	1:X:2713:A:C5'	2.08	0.83
23:U:48:LYS:HG2	23:U:49:LYS:N	1.94	0.83
1:X:455:A:H1'	1:X:1215:A:O4'	1.78	0.83
2:Z:64:C:H2'	2:Z:65:A:C8	2.13	0.83
5:C:39:ARG:HH21	5:C:91:TYR:CB	1.91	0.83
16:N:5:LYS:C	16:N:7:GLY:H	1.80	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
1:X:2811:G:H2'	1:X:2812:A:C8	2.14	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
19:Q:25:TYR:OH	19:Q:87:SER:HA	1.79	0.83
3:A:72:LYS:HE2	3:A:97:TYR:CD2	2.14	0.83
4:B:195:LEU:HB2	15:M:3:THR:CG2	2.09	0.83
6:D:153:ASP:C	6:D:154:ILE:HD12	1.99	0.83
16:N:93:LYS:HZ3	17:O:5:ILE:HG22	1.43	0.83
19:Q:20:MET:O	19:Q:22:ARG:N	2.11	0.83
22:T:53:MET:CE	22:T:59:LEU:HD11	2.07	0.83
24:V:46:LEU:O	24:V:50:VAL:HG23	1.78	0.83
1:X:1264:C:C5'	16:N:13:ARG:NH1	2.41	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
7:E:103:LEU:HD12	7:E:104:GLU:H	1.44	0.83
20:R:14:LEU:HD22	20:R:41:PRO:HA	1.58	0.83
1:X:1673:C:H5''	4:B:136:ARG:HB3	1.58	0.83
7:E:130:ARG:O	7:E:131:ILE:HD13	1.78	0.83
9:G:70:PHE:HB2	16:N:64:ARG:NE	1.94	0.83
13:K:49:GLU:OE1	13:K:95:THR:HB	1.78	0.83
19:Q:77:LYS:HG2	19:Q:79:ILE:HD11	1.61	0.83
21:S:102:GLY:O	21:S:138:VAL:HG21	1.79	0.83
21:S:112:LEU:HD12	21:S:113:VAL:N	1.93	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
1:X:1956:G:H2'	1:X:1957:C:H6	1.44	0.82
9:G:105:GLY:O	9:G:106:TYR:C	2.17	0.82
10:H:64:VAL:HG22	10:H:106:ARG:NH2	1.94	0.82
15:M:55:ILE:O	15:M:56:ALA:HB2	1.78	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
1:X:1630:A:N1	18:P:114:ALA:HB2	1.94	0.82
8:F:72:THR:N	8:F:73:PRO:HD3	1.95	0.82
20:R:14:LEU:HD23	20:R:14:LEU:H	1.45	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
16:N:85:ARG:CB	16:N:116:ALA:HB1	2.07	0.82
23:U:71:SER:C	23:U:72:LYS:HE2	1.99	0.82
1:X:1045:G:H2'	1:X:1046:U:C6	2.14	0.82
5:C:24:SER:HA	5:C:27:LEU:HD23	1.60	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:112:LEU:HD12	21:S:113:VAL:H	1.44	0.82
26:Y:47:PRO:HG2	26:Y:48:ASN:H	1.44	0.82
1:X:512:A:H4'	18:P:15:LYS:HB3	1.60	0.82
1:X:1416:A:H2'	1:X:1417:C:C6	2.13	0.82
6:D:35:VAL:HG22	6:D:90:THR:HA	1.60	0.82
10:H:62:GLY:O	10:H:65:LYS:HE3	1.78	0.82
19:Q:74:ASP:O	19:Q:75:ARG:HG3	1.79	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
1:X:2331:A:C2	22:T:33:ALA:HB1	2.14	0.82
3:A:84:TYR:HE2	3:A:91:ARG:HG2	1.45	0.82
14:L:33:ARG:NH1	14:L:103:LEU:HB3	1.93	0.82
16:N:39:LEU:O	16:N:42:ALA:N	2.11	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
5:C:123:PHE:O	5:C:125:ILE:N	2.13	0.82
7:E:56:SER:HB2	7:E:61:HIS:CG	2.15	0.82
16:N:16:LYS:O	16:N:20:ARG:HG3	1.78	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
1:X:1373:G:N2	1:X:1374:G:H1'	1.93	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
21:S:54:ILE:HB	21:S:62:PHE:N	1.94	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
3:A:119:ALA:HB1	3:A:130:ALA:HB3	1.59	0.82
10:H:116:ARG:HD3	15:M:40:ARG:HB3	1.61	0.82
12:J:8:THR:HG22	12:J:70:PHE:CZ	2.14	0.82
12:J:15:ARG:HB3	12:J:73:LYS:HZ2	1.42	0.82
17:O:10:LYS:CD	17:O:37:ALA:HB3	2.08	0.82
1:X:67:G:H2'	1:X:68:C:C6	2.15	0.82
1:X:148:C:H3'	1:X:149:A:C8	2.14	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: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
8:F:77:TYR:HB2	8:F:112:LYS:HZ1	1.45	0.82
18:P:9:ARG:HB3	18:P:13:GLN:HG3	1.62	0.82
23:U:9:GLY:H	23:U:14:VAL:HG22	1.44	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:U:50:ALA:CB	23:U:52:ARG:HH22	1.93	0.82
1:X:173:A:N6	1:X:844:G:H21	1.78	0.81
1:X:836:G:H2'	1:X:837:U:H6	1.45	0.81
1:X:1673:C:H5''	4:B:136:ARG:HD3	1.61	0.81
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
8:F:116:LEU:HD22	8:F:118:ALA:HB3	1.60	0.81
2:Z:32:C:H2'	2:Z:33:C:H5'	1.61	0.81
11:I:30:ALA:HB2	11:I:34:HIS:CE1	2.15	0.81
13:K:14:SER:OG	13:K:15:SER:N	2.08	0.81
17:O:26:GLN:HG2	17:O:27:GLY:H	1.45	0.81
1:X:3:U:H2'	1:X:4:C:H6	1.46	0.81
1:X:693:A:H2'	1:X:694:G:C8	2.15	0.81
1:X:1524:C:H5''	1:X:1525:A:C8	2.15	0.81
1:X:1822:C:O5'	1:X:1822:C:H6	1.62	0.81
1:X:2482:A:C1'	32:X:2911:ZLD:H13B	2.10	0.81
3:A:238:GLY:O	3:A:239:ARG:HG3	1.79	0.81
4:B:167:VAL:HG13	4:B:170:LEU:HD11	1.63	0.81
5:C:125:ILE:HD12	5:C:133:PHE:HA	1.62	0.81
11:I:32:ARG:O	11:I:32:ARG:HD3	1.79	0.81
11:I:72:TYR:CB	11:I:107:LYS:HB2	2.08	0.81
30:4:9:LYS:HB3	30:4:14:CYS:SG	2.21	0.81
1:X:38:G:H1	1:X:453:U:H3	1.25	0.81
3:A:134:ARG:HG3	3:A:135:PHE:CD2	2.15	0.81
4:B:134:TRP:H	4:B:134:TRP:HD1	1.27	0.81
9:G:151:TYR:HB3	9:G:157:PRO:HG3	1.62	0.81
12:J:23:LYS:HA	21:S:73:LYS:HZ1	1.45	0.81
14:L:43:ILE:HD12	14:L:43:ILE:H	1.46	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
22:T:66:LYS:O	22:T:68:VAL:HG23	1.81	0.81
1:X:228:A:H5'	11:I:53:ARG:HG2	1.62	0.81
1:X:813:A:H4'	1:X:814:G:O5'	1.81	0.81
1:X:1253:C:H2'	1:X:1254:G:H5'	1.63	0.81
3:A:200:GLU:HG3	3:A:202:LYS:HB2	1.59	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:1264:C:H5''	16:N:13:ARG:NH1	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
1:X:2005:U:H4'	1:X:2006:G:OP1	1.81	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:146:THR:HB	4:B:147:PRO:HD2	1.62	0.81
7:E:16:THR:HG22	7:E:18:ASN:ND2	1.95	0.81
9:G:32:TYR:OH	9:G:35:LYS:HE2	1.81	0.81
9:G:105:GLY:N	9:G:110:LEU:HD12	1.95	0.81
14:L:29:LEU:HB3	14:L:89:PHE:HA	1.61	0.81
18:P:87:GLU:HA	18:P:90:LEU:HD11	1.61	0.81
19:Q:20:MET:O	19:Q:23:GLY:N	2.14	0.81
21:S:24:TYR:HB3	21:S:29:ASN:OD1	1.79	0.81
23:U:54:ASN:C	23:U:56:GLN:H	1.80	0.81
24:V:4:SER:HB3	24:V:7:ARG:NH2	1.95	0.81
2:Z:30:C:N4	2:Z:58:G:H1	1.78	0.81
3:A:243:GLY:C	3:A:244:ARG:HD3	2.00	0.81
6:D:69:LYS:CE	6:D:84:PRO:HG3	2.10	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
22:T:53:MET:HE3	22:T:59:LEU:HD11	1.62	0.81
1:X:491:A:H5''	20:R:74:LEU:HD11	1.63	0.81
1:X:1517:C:H4'	3:A:96:HIS:CE1	2.15	0.81
1:X:2311:U:C4'	1:X:2315:A:H62	1.94	0.81
1:X:2564:U:H3	32:X:2911:ZLD:C21	1.93	0.81
14:L:67:THR:O	14:L:71:VAL:HG12	1.81	0.81
15:M:29:PRO:HA	15:M:54:VAL:HG12	1.62	0.81
18:P:109:ARG:HD2	18:P:115:ASN:ND2	1.95	0.81
23:U:28:GLY:CA	23:U:32:ARG:HB3	2.10	0.81
23:U:53:GLU:HB2	23:U:56:GLN:O	1.80	0.81
3:A:33:LEU:HD21	3:A:63:ARG:NH2	1.95	0.81
5:C:125:ILE:CD1	5:C:133:PHE:HA	2.11	0.81
6:D:132:ILE:CB	6:D:152:MET:HB2	2.07	0.81
17:O:39:PHE:CE1	17:O:46:VAL:HG21	2.15	0.81
23:U:48:LYS:CG	23:U:49:LYS:H	1.94	0.81
1:X:788:G:H5'	1:X:790:A:C1'	2.11	0.81
1:X:1349:A:H2'	1:X:1350:G:C8	2.16	0.81
1:X:1859:A:H2'	1:X:1860:A:C8	2.16	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
10:H:75:VAL:HG12	10:H:118:LEU:HD11	1.61	0.81
1:X:1151:U:H5'	1:X:1153:A:C5'	2.08	0.80
4:B:65:GLY:HA2	4:B:68:ALA:HB3	1.62	0.80
9:G:84:ASN:HA	9:G:153:GLY:O	1.80	0.80
25:W:39:ALA:O	25:W:43:MET:HG2	1.80	0.80
1:X:333:A:H3'	5:C:162:ARG:NH1	1.96	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2528:G:H2'	1:X:2529:G:H8	1.46	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
5:C:128:ALA:HB2	5:C:159:ARG:CZ	2.11	0.80
10:H:19:ILE:HG22	10:H:55:VAL:HA	1.62	0.80
1:X:403:A:H3'	1:X:403:A:OP2	1.81	0.80
1:X:2871:U:H2'	1:X:2872:U:C6	2.16	0.80
3:A:108:PRO:HB3	3:A:143:HIS:CE1	2.17	0.80
4:B:115:GLY:HA3	4:B:136:ARG:HD2	1.63	0.80
7:E:103:LEU:HB2	7:E:123:PHE:CE2	2.15	0.80
9:G:103:TYR:HB3	9:G:107:GLN:HE21	1.45	0.80
11:I:77:LEU:HB3	11:I:112:GLY:N	1.97	0.80
16:N:88:ILE:HG12	17:O:48:GLY:C	2.02	0.80
21:S:117:VAL:CG2	21:S:168:VAL:HG13	2.12	0.80
1:X:1122:A:H2	1:X:1123:G:H1'	1.45	0.80
1:X:1122:A:O2'	1:X:1123:G:H4'	1.80	0.80
1:X:1151:U:C5'	1:X:1153:A:H5'	2.05	0.80
1:X:2418:A:H4'	1:X:2419:C:O5'	1.80	0.80
5:C:7:ILE:CB	5:C:120:VAL:H	1.92	0.80
16:N:74:MET:O	16:N:75:ASN:HB3	1.78	0.80
21:S:51:LEU:HD23	21:S:65:LEU:HD13	1.61	0.80
25:W:50:LEU:HB2	25:W:51:LEU:HD23	1.64	0.80
1:X:1135:C:H2'	1:X:1136:G:H8	1.47	0.80
1:X:1595:A:O5'	1:X:1595:A:H8	1.65	0.80
6:D:113:ASP:HB3	6:D:115:ARG:NH1	1.97	0.80
21:S:42:ALA:CA	21:S:45:GLN:HE21	1.94	0.80
25:W:54:GLN:HG2	25:W:55:GLU:CD	2.02	0.80
1:X:128:C:C2'	1:X:129:A:H5''	2.11	0.80
1:X:1219:C:H4'	11:I:7:LYS:H	1.47	0.80
1:X:1644:G:O2'	1:X:1645:U:H5'	1.81	0.80
1:X:2397:A:H2'	1:X:2398:U:O4'	1.82	0.80
3:A:43:ARG:HH21	3:A:54:ILE:HG13	1.46	0.80
6:D:60:ILE:HG13	6:D:61:THR:N	1.95	0.80
11:I:30:ALA:H	11:I:34:HIS:CG	1.98	0.80
14:L:32:TYR:H	14:L:38:ILE:HD12	1.47	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
20:R:37:LEU:HD21	20:R:49:GLU:HG3	1.63	0.80
21:S:3:LEU:HD13	21:S:4:THR:N	1.94	0.80
21:S:148:THR:HA	21:S:166:LEU:O	1.80	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
1:X:2728:A:O2'	7:E:66:GLY:HA3	1.80	0.80
1:X:2728:A:H2'	1:X:2729:A:H8	1.46	0.80
4:B:72:VAL:HG12	4:B:73:ALA:N	1.96	0.80
5:C:122:GLY:HA3	5:C:136:TRP:CZ3	2.17	0.80
1:X:530:G:H2'	1:X:531:G:H8	1.46	0.80
3:A:75:VAL:HG12	3:A:76:ASN:O	1.82	0.80
11:I:11:GLY:H	11:I:14:LYS:CB	1.95	0.80
21:S:36:ARG:HE	21:S:37:LYS:H	1.28	0.80
1:X:16:G:O2'	1:X:17:G:H5'	1.82	0.80
1:X:631:G:H5'	1:X:632:A:OP1	1.81	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
19:Q:61:LYS:H	19:Q:72:ARG:HD3	1.45	0.80
4:B:117:MET:HA	4:B:121:ASN:O	1.81	0.80
5:C:130:THR:O	5:C:133:PHE:HB3	1.82	0.80
14:L:99:ARG:HG3	14:L:100:VAL:N	1.95	0.80
19:Q:24:VAL:HG22	19:Q:81:ARG:HB2	1.62	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:687:G:C2'	1:X:688:A:H5'	2.13	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
20:R:107:ALA:HB1	20:R:111:GLY:HA2	1.62	0.79
1:X:1034:U:H2'	1:X:1035:G:H5'	1.63	0.79
8:F:129:ALA:HB1	8:F:133:ARG:CZ	2.13	0.79
11:I:32:ARG:NH2	17:O:79:GLN:HA	1.98	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
21:S:127:PRO:O	21:S:128:ARG:HG2	1.82	0.79
1:X:57:G:H2'	1:X:58:C:C6	2.16	0.79
1:X:148:C:H3'	1:X:149:A:H8	1.46	0.79
1:X:2020:G:H2'	1:X:2021:G:H8	1.44	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
14:L:63:ASN:CB	14:L:66:ASP:HB2	2.10	0.79
1:X:33:C:O2'	1:X:34:U:H5''	1.81	0.79
1:X:403:A:H4'	1:X:404:A:O5'	1.81	0.79
7:E:45:GLN:HA	7:E:50:LEU:HA	1.64	0.79
17:O:26:GLN:HG3	17:O:63:HIS:CD2	2.18	0.79
1:X:921:A:H2'	1:X:924:C:H5	1.48	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:136:ILE:HG22	7:E:137:ASP:H	1.45	0.79
9:G:72:PRO:O	9:G:74:MET:N	2.16	0.79
9:G:124:GLU:OE1	9:G:124:GLU:N	2.15	0.79
16:N:32:TYR:O	16:N:35:ALA:HB3	1.83	0.79
18:P:90:LEU:HA	18:P:129:ALA:O	1.81	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
14:L:15:ARG:HG2	14:L:15:ARG:HH11	1.48	0.79
1:X:2604:G:H2'	1:X:2605:C:C6	2.18	0.79
3:A:184:ARG:HH11	3:A:184:ARG:HG3	1.48	0.79
8:F:81:LYS:HZ1	8:F:84:GLY:HA3	1.48	0.79
11:I:90:ARG:O	11:I:121:HIS:HB2	1.82	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
4:B:136:ARG:O	4:B:137:ARG:HB2	1.82	0.79
5:C:7:ILE:O	5:C:120:VAL:HB	1.82	0.79
5:C:176:ASN:HD22	5:C:179:ASP:N	1.81	0.79
10:H:55:VAL:O	10:H:55:VAL:HG12	1.80	0.79
11:I:72:TYR:HB3	11:I:107:LYS:CB	2.13	0.79
12:J:98:VAL:HG12	12:J:99:LYS:N	1.98	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
1:X:414:A:H5'	1:X:414:A:H8	1.48	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
2:Z:36:A:H4'	2:Z:37:C:C5	2.18	0.79
8:F:101:ASN:O	8:F:104:GLN:HG2	1.82	0.79
20:R:5:SER:O	20:R:6:ALA:HB2	1.81	0.79
23:U:49:LYS:HB3	23:U:61:TRP:CD2	2.18	0.79
1:X:41:G:O2'	1:X:42:G:H5'	1.82	0.78
1:X:1914:U:H6	1:X:1914:U:C5'	1.94	0.78
1:X:2175:A:H2'	1:X:2176:U:H6	1.48	0.78
24:V:10:GLN:HG3	24:V:12:THR:OG1	1.82	0.78
1:X:2245:A:H4'	1:X:2246:A:N3	1.97	0.78
5:C:5:ASN:HA	5:C:118:VAL:CG2	2.13	0.78
10:H:9:ASP:HB2	10:H:95:ALA:CB	2.14	0.78
12:J:44:LYS:HD3	12:J:47:GLN:CD	2.02	0.78
1:X:332:C:H1'	5:C:159:ARG:NE	1.98	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:1277:G:OP1	26:Y:19:ARG:NH2	2.14	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2447:G:O2'	1:X:2448:A:H8	1.65	0.78
6:D:132:ILE:HB	6:D:152:MET:CB	2.12	0.78
10:H:116:ARG:HB2	10:H:116:ARG:NH1	1.98	0.78
14:L:27:LEU:HD23	14:L:44:ASP:HB2	1.66	0.78
18:P:45:ILE:O	18:P:48:LYS:HG2	1.83	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: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
1:X:2867:G:H4'	1:X:2868:G:O5'	1.80	0.78
6:D:10:ASP:N	6:D:14:PRO:HD2	1.98	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
19:Q:3:HIS:ND1	19:Q:41:ALA:HA	1.99	0.78
1:X:807:A:H2'	1:X:808:C:C6	2.17	0.78
1:X:2047:C:H1'	1:X:2429:A:C6	2.17	0.78
7:E:137:ASP:HB3	7:E:140:LEU:HB2	1.65	0.78
20:R:10:HIS:HB2	20:R:44:GLN:HE22	1.49	0.78
1:X:955:G:H5'	1:X:956:A:H5''	1.63	0.78
1:X:2372:A:H2'	1:X:2373:C:C6	2.18	0.78
1:X:2379:G:O2'	1:X:2380:U:H5'	1.83	0.78
3:A:76:ASN:HA	3:A:118:ASN:HA	1.65	0.78
4:B:152:LYS:HD2	9:G:106:TYR:H	1.48	0.78
7:E:131:ILE:HG22	7:E:132:ASP:N	1.99	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:1043:A:H5''	30:4:9:LYS:NZ	1.99	0.78
1:X:1188:A:H3'	1:X:1189:G:C8	2.17	0.78
7:E:136:ILE:HD12	7:E:136:ILE:N	1.98	0.78
17:O:20:ILE:HD12	17:O:21:ARG:N	1.99	0.78
18:P:57:LEU:CD1	18:P:69:ALA:HA	2.14	0.78
1:X:400:U:C5	23:U:23:LYS:HD3	2.15	0.78
1:X:2018:G:H4'	1:X:2019:C:OP2	1.82	0.78
5:C:151:VAL:HG11	5:C:175:VAL:HG13	1.65	0.78
5:C:164:VAL:O	5:C:166:TRP:N	2.16	0.78
6:D:111:ILE:CB	6:D:114:PHE:HB2	2.12	0.78
12:J:86:LYS:O	12:J:88:LYS:HG3	1.83	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
14:L:73:LYS:HG3	14:L:110:GLY:CA	2.14	0.78
1:X:2289:A:H2	6:D:79:LEU:HD21	1.49	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2781:G:C2'	1:X:2782:G:H5''	2.14	0.78
21:S:54:ILE:CG1	21:S:62:PHE:HB2	2.09	0.78
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
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
13:K:74:ASP:HA	13:K:77:ARG:NH1	1.98	0.77
17:O:23:GLU:HG3	17:O:91:THR:HG21	1.66	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:1781:C:P	3:A:219:PRO:HB2	2.24	0.77
1:X:2408:G:H5'	1:X:2409:A:OP2	1.84	0.77
4:B:60:ASN:HB3	4:B:62:PRO:HD2	1.66	0.77
9:G:67:ARG:CB	9:G:70:PHE:HA	2.14	0.77
26:Y:35:GLN:O	26:Y:37:HIS:N	2.17	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
3:A:82:ILE:HD12	3:A:82:ILE:N	1.99	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
12:J:65:ILE:HA	12:J:107:VAL:HG12	1.66	0.77
16:N:62:ILE:HG23	16:N:76:TYR:CD1	2.19	0.77
1:X:1385:C:H1'	1:X:2192:U:C5	2.19	0.77
4:B:9:ILE:HD11	4:B:27:LEU:HB3	1.65	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
20:R:37:LEU:HB2	20:R:47:VAL:O	1.83	0.77
1:X:683:A:H5''	11:I:45:LYS:N	1.99	0.77
1:X:717:G:H2'	1:X:739:G:H22	1.50	0.77
1:X:836:G:H2'	1:X:837:U:C6	2.19	0.77
1:X:1043:A:H5''	30:4:9:LYS:HZ1	1.48	0.77
1:X:2016:A:O4'	1:X:2016:A:OP2	2.03	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
9:G:157:PRO:C	9:G:161:GLN:HE21	1.88	0.77
10:H:100:ASN:O	10:H:102:GLN:N	2.17	0.77
21:S:98:VAL:HG12	21:S:118:HIS:O	1.83	0.77
1:X:94:C:O2'	24:V:40:PRO:HD2	1.85	0.77
1:X:1012:A:H2'	1:X:1013:G:O4'	1.85	0.77
1:X:1467:U:H3'	1:X:1467:U:H6	1.48	0.77
1:X:1882:G:O2'	1:X:1883:A:H5''	1.85	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:43:ARG:HD2	3:A:43:ARG:N	1.98	0.77
3:A:97:TYR:HB2	3:A:101:GLU:OE1	1.84	0.77
10:H:9:ASP:HB2	10:H:95:ALA:HB2	1.65	0.77
21:S:71:MET:HA	21:S:78:PRO:HA	1.67	0.77
1:X:34:U:H1'	20:R:4:PRO:HA	1.65	0.77
1:X:635:C:C2'	1:X:636:G:H5''	2.14	0.77
6:D:135:GLN:HG2	6:D:152:MET:SD	2.25	0.77
7:E:24:PHE:HB2	7:E:35:VAL:O	1.84	0.77
9:G:107:GLN:HA	9:G:110:LEU:HG	1.66	0.77
18:P:42:VAL:O	18:P:42:VAL:HG12	1.85	0.77
1:X:682:G:H4'	1:X:683:A:OP1	1.83	0.77
1:X:1468:A:C8	1:X:1468:A:O5'	2.38	0.77
1:X:2082:C:H2'	1:X:2083:G:H5''	1.66	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
1:X:2324:G:N3	1:X:2360:C:H2'	2.00	0.77
1:X:2781:G:H2'	1:X:2782:G:H5''	1.67	0.77
10:H:29:ILE:HD12	10:H:30:GLY:H	1.47	0.77
11:I:88:PHE:HB3	11:I:90:ARG:CD	2.15	0.77
1:X:1958:G:H2'	1:X:1959:U:C6	2.19	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
23:U:50:ALA:HB3	23:U:52:ARG:HH12	1.48	0.77
1:X:871:U:HO2'	1:X:2247:A:H2'	1.49	0.77
1:X:1675:C:OP1	4:B:134:TRP:NE1	2.18	0.77
4:B:91:VAL:HB	4:B:93:VAL:HG12	1.65	0.77
7:E:154:PRO:HA	7:E:160:LYS:O	1.84	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
15:M:31:ASP:OD1	15:M:95:GLU:HG2	1.85	0.77
15:M:69:ARG:HH11	15:M:69:ARG:CG	1.98	0.77
21:S:115:ILE:HA	21:S:169:VAL:HG12	1.65	0.77
23:U:19:ILE:HA	23:U:42:GLN:HA	1.64	0.77
1:X:352:G:O2'	1:X:353:G:H5'	1.83	0.76
1:X:542:A:H3'	16:N:28:ARG:HE	1.50	0.76
1:X:760:U:C6	26:Y:3:LYS:HE2	2.20	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
9:G:159:SER:C	9:G:161:GLN:H	1.84	0.76
21:S:59:GLY:O	21:S:60:GLU:HG3	1.84	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:452:G:N2	5:C:40:ARG:HH22	1.83	0.76
1:X:1770:U:H5	1:X:1775:A:N7	1.82	0.76
1:X:2036:G:O2'	1:X:2037:A:H5'	1.84	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
2:Z:63:A:H2'	2:Z:64:C:C6	2.20	0.76
9:G:155:THR:HG23	9:G:156:HIS:H	1.50	0.76
10:H:29:ILE:HG13	10:H:30:GLY:N	1.98	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
23:U:52:ARG:HG2	23:U:52:ARG:HH21	1.49	0.76
1:X:1787:U:H2'	1:X:1788:C:H6	1.50	0.76
1:X:2272:A:H5''	14:L:15:ARG:HH22	1.51	0.76
3:A:165:VAL:HG12	3:A:166:GLN:H	1.49	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
16:N:68:GLY:O	16:N:71:LEU:HB3	1.85	0.76
1:X:604:U:H2'	1:X:605:G:C8	2.19	0.76
1:X:1128:G:C3'	1:X:1129:A:H5''	2.15	0.76
10:H:16:ALA:HA	10:H:58:ALA:CB	2.14	0.76
11:I:47:ALA:C	11:I:49:PHE:H	1.88	0.76
14:L:91:ARG:H	14:L:91:ARG:HD2	1.49	0.76
15:M:34:ARG:NH2	15:M:66:PHE:CZ	2.53	0.76
18:P:62:ARG:NH2	26:Y:25:LEU:HD11	2.00	0.76
1:X:1437:A:H2'	1:X:1438:G:H8	1.51	0.76
3:A:43:ARG:CZ	3:A:55:GLY:HA2	2.14	0.76
4:B:31:CYS:HB3	4:B:49:ILE:HD11	1.66	0.76
5:C:112:GLN:HA	5:C:116:LYS:HD3	1.67	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
15:M:28:ARG:CB	15:M:29:PRO:CD	2.64	0.76
1:X:632:A:H2'	1:X:633:G:H5'	1.66	0.76
1:X:2644:A:O2'	1:X:2645:C:H5'	1.85	0.76
4:B:31:CYS:HB3	4:B:49:ILE:CD1	2.15	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
25:W:38:PRO:HA	25:W:41:ARG:CZ	2.14	0.76
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
1:X:2824:C:O2	1:X:2824:C:H2'	1.84	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)
6:D:38:GLU:HB3	6:D:87:ILE:HB	1.67	0.76
6:D:124:GLY:HA2	6:D:163:ASP:OD2	1.85	0.76
16:N:31:GLN:O	16:N:35:ALA:HB2	1.85	0.76
21:S:37:LYS:HG2	21:S:38:ALA:N	1.99	0.76
22:T:30:VAL:HG13	22:T:65:GLY:O	1.85	0.76
23:U:72:LYS:HE2	23:U:72:LYS:N	2.01	0.76
1:X:155:G:O2'	1:X:156:G:H5'	1.86	0.76
1:X:1006:C:N3	9:G:31:THR:OG1	2.18	0.76
1:X:2284:U:H3'	1:X:2285:U:H5''	1.67	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
13:K:97:ILE:HD12	13:K:97:ILE:N	2.01	0.76
1:X:450:C:H2'	1:X:451:A:C8	2.21	0.76
1:X:693:A:H2'	1:X:694:G:H8	1.48	0.76
2:Z:46:G:H5'	6:D:92:ARG:NH2	2.00	0.76
3:A:146:GLU:HG3	3:A:152:GLY:O	1.86	0.76
4:B:2:LYS:HD3	4:B:95:ILE:HG13	1.68	0.76
7:E:87:LEU:N	7:E:131:ILE:O	2.18	0.76
8:F:116:LEU:HD11	8:F:127:THR:HB	1.68	0.76
10:H:1:MET:HA	10:H:45:ALA:O	1.86	0.76
13:K:33:ARG:HD3	13:K:112:LEU:HD12	1.67	0.76
14:L:97:HIS:O	14:L:101:LYS:HB2	1.85	0.76
16:N:47:TYR:CE2	16:N:51:ARG:NH2	2.53	0.76
16:N:51:ARG:HH11	16:N:51:ARG:CG	1.99	0.76
1:X:43:A:H2'	1:X:44:G:H8	1.50	0.76
1:X:627:A:H2'	1:X:628:A:H8	1.49	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:1885:C:H5'	3:A:244:ARG:HD2	1.67	0.75
4:B:31:CYS:HB3	4:B:49:ILE:HG13	1.66	0.75
16:N:47:TYR:O	16:N:51:ARG:HD3	1.87	0.75
18:P:36:ARG:NH2	26:Y:20:ARG:NH2	2.33	0.75
20:R:22:VAL:HG11	20:R:80:LYS:CE	2.16	0.75
24:V:31:GLN:HB3	24:V:37:LEU:HB2	1.66	0.75
1:X:796:A:H8	1:X:797:A:H4'	1.52	0.75
1:X:1673:C:H2'	1:X:1674:C:H6	1.50	0.75
3:A:36:ALA:CB	3:A:63:ARG:HA	2.16	0.75
5:C:44:SER:HB3	5:C:88:PRO:HD3	1.68	0.75
5:C:112:GLN:HB3	5:C:116:LYS:HD3	1.66	0.75
7:E:90:ARG:HH21	7:E:163:ARG:NH1	1.83	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:36:ILE:HG21	12:J:131:LYS:HE2	1.67	0.75
12:J:106:GLU:N	12:J:106:GLU:OE1	2.18	0.75
15:M:50:PHE:CE1	15:M:79:ARG:HG3	2.21	0.75
17:O:33:VAL:HG12	17:O:57:GLN:HG2	1.66	0.75
1:X:459:A:C2	1:X:466:A:C8	2.74	0.75
1:X:512:A:H2'	1:X:513:A:H5'	1.68	0.75
1:X:640:C:H4'	1:X:660:G:H21	1.51	0.75
1:X:2178:U:H2'	1:X:2179:C:H6	1.50	0.75
3:A:208:LYS:HA	3:A:208:LYS:HE3	1.68	0.75
5:C:155:GLU:O	5:C:157:THR:N	2.18	0.75
7:E:125:VAL:HG13	7:E:131:ILE:HD11	1.68	0.75
11:I:62:LYS:CE	11:I:64:GLY:HA3	2.16	0.75
20:R:96:LYS:NZ	20:R:105:ARG:HG3	2.01	0.75
1:X:178:C:O2	1:X:178:C:H2'	1.85	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
16:N:25:TRP:O	16:N:28:ARG:HB2	1.86	0.75
19:Q:12:ILE:HD12	19:Q:13:SER:N	1.98	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
3:A:39:LYS:HD3	3:A:62:TYR:HB2	1.67	0.75
3:A:104:TYR:C	3:A:105:ILE:HD12	2.07	0.75
6:D:46:ASP:CB	6:D:49:ALA:HB3	2.16	0.75
20:R:84:VAL:HA	20:R:90:LYS:HE2	1.66	0.75
21:S:147:ILE:HB	21:S:169:VAL:HG23	1.67	0.75
23:U:20:ARG:HG2	23:U:39:LYS:HE3	1.69	0.75
24:V:42:ARG:NH1	24:V:45:GLN:HE22	1.84	0.75
1:X:48:A:H1'	1:X:50:G:C2	2.22	0.75
1:X:177:U:O4	1:X:225:G:C2	2.39	0.75
1:X:211:U:H3	1:X:442:A:H61	1.35	0.75
1:X:1142:G:H4'	9:G:103:TYR:CE2	2.22	0.75
1:X:1670:G:H4'	1:X:1671:A:OP1	1.87	0.75
1:X:1805:G:N3	3:A:50:THR:HG21	2.01	0.75
1:X:2355:A:H2	14:L:89:PHE:CZ	2.03	0.75
1:X:2691:C:O2'	1:X:2692:A:O5'	2.05	0.75
2:Z:39:C:H5''	2:Z:40:C:H5	1.48	0.75
9:G:35:LYS:HB3	9:G:69:ASP:OD2	1.87	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:482:A:O2'	1:X:483:A:H5'	1.86	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:634:G:H2'	1:X:635:C:C6	2.20	0.75
1:X:2197:U:H2'	1:X:2198:U:C6	2.20	0.75
1:X:2526:U:H2'	1:X:2527:G:H8	1.50	0.75
6:D:41:GLY:HA2	6:D:44:LYS:O	1.86	0.75
7:E:43:VAL:CG2	7:E:52:VAL:HG22	2.16	0.75
10:H:64:VAL:HG22	10:H:106:ARG:HH21	1.52	0.75
11:I:62:LYS:HD3	29:3:12:ARG:CA	2.16	0.75
11:I:89:ASP:HB3	11:I:120:VAL:HG13	1.69	0.75
24:V:7:ARG:HD2	24:V:7:ARG:C	2.06	0.75
26:Y:6:VAL:HG22	26:Y:7:PRO:HD2	1.68	0.75
1:X:24:G:H2'	1:X:25:U:O4'	1.84	0.75
1:X:1069:G:H3'	1:X:1070:G:H5''	1.69	0.75
15:M:39:VAL:O	15:M:41:GLU:N	2.20	0.75
21:S:79:ILE:HD13	21:S:79:ILE:O	1.86	0.75
23:U:32:ARG:HG2	23:U:33:LYS:H	1.52	0.75
24:V:14:PHE:HD2	24:V:57:LYS:HB2	1.52	0.75
24:V:25:LEU:HD21	24:V:47:ARG:HD2	1.69	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:2496:C:O2'	1:X:2497:A:H3'	1.86	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
10:H:24:VAL:CG1	10:H:42:LYS:HG2	2.17	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
1:X:503:G:H2'	1:X:504:G:O4'	1.85	0.74
1:X:1189:G:H8	1:X:1189:G:O5'	1.70	0.74
1:X:1790:G:O6	3:A:178:PRO:HG2	1.86	0.74
1:X:1871:G:H3'	1:X:1871:G:N3	2.02	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:88:G:C3'	1:X:89:A:H5''	2.14	0.74
1:X:859:U:H2'	1:X:859:U:O2	1.85	0.74
1:X:1136:G:C6	1:X:1137:A:N6	2.56	0.74
1:X:1675:C:OP1	4:B:134:TRP:CE2	2.40	0.74
1:X:2482:A:O2'	32:X:2911:ZLD:H13A	1.86	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
23:U:48:LYS:CG	23:U:49:LYS:N	2.50	0.74
25:W:54:GLN:HG2	25:W:55:GLU:OE1	1.87	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)
1:X:2457:A:H5'	30:4:31:LYS:HG2	1.69	0.74
2:Z:43:G:H5'	2:Z:44:C:H5'	1.68	0.74
4:B:93:VAL:O	4:B:94:ASP:HB2	1.84	0.74
6:D:160:ALA:HB1	6:D:165:GLU:HB2	1.68	0.74
8:F:85:ILE:HD13	8:F:89:SER:H	1.52	0.74
1:X:57:G:H2'	1:X:58:C:H6	1.52	0.74
1:X:173:A:P	11:I:53:ARG:HH21	2.11	0.74
1:X:1741:G:O2'	1:X:1742:G:H5'	1.87	0.74
1:X:1947:G:H4'	1:X:1948:C:OP2	1.88	0.74
4:B:152:LYS:HB2	9:G:106:TYR:HB3	1.69	0.74
6:D:128:TYR:HB3	6:D:156:ILE:HB	1.69	0.74
8:F:75:MET:O	8:F:79:ILE:HG12	1.87	0.74
9:G:45:ASP:HB2	9:G:83:ILE:HD11	1.67	0.74
1:X:116:A:H5'	1:X:117:A:C8	2.23	0.74
1:X:168:A:H2'	1:X:169:C:C6	2.21	0.74
1:X:476:G:H2'	1:X:477:A:C8	2.23	0.74
1:X:1223:G:H5''	1:X:1224:A:H5'	1.68	0.74
1:X:2082:C:H2'	1:X:2083:G:C5'	2.17	0.74
1:X:2556:A:H5''	1:X:2557:G:H5'	1.67	0.74
5:C:54:THR:HG22	5:C:55:GLY:O	1.88	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
22:T:21:LEU:HD11	22:T:41:ARG:NE	2.00	0.74
1:X:1755:G:N2	1:X:1756:C:C2	2.56	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:556:A:H1'	1:X:558:G:N2	2.03	0.74
7:E:39:THR:C	7:E:41:LEU:H	1.89	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
1:X:322:A:O2'	1:X:343:A:H4'	1.87	0.74
1:X:2048:C:H2'	1:X:2049:C:H6	1.51	0.74
1:X:2691:C:O2'	1:X:2692:A:H8	1.69	0.74
6:D:167:ARG:HG3	6:D:177:PHE:CE2	2.22	0.74
8:F:79:ILE:HA	8:F:82:ALA:HB2	1.70	0.74
9:G:154:GLU:OE1	9:G:154:GLU:N	2.21	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
14:L:82:LYS:HB3	14:L:84:ILE:HG13	1.70	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:51:ARG:CB	16:N:51:ARG:NH1	2.42	0.74
21:S:3:LEU:HD11	21:S:32:PHE:HA	1.67	0.74
1:X:29:U:C4'	16:N:11:ARG:NH1	2.50	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
3:A:187:SER:C	3:A:189:CYS:H	1.91	0.74
6:D:136:LEU:HD23	6:D:141:ILE:HG22	1.69	0.74
7:E:44:ARG:NH2	7:E:46:ASP:HB2	2.03	0.74
13:K:74:ASP:HA	13:K:77:ARG:HH12	1.53	0.74
16:N:30:LYS:HB3	16:N:30:LYS:NZ	2.01	0.74
23:U:20:ARG:HB2	23:U:43:ARG:CD	2.17	0.74
25:W:38:PRO:N	25:W:41:ARG:NH1	2.35	0.74
30:4:10:MET:HB2	30:4:32:HIS:CD2	2.23	0.74
1:X:439:C:H2'	1:X:440:U:H6	1.53	0.74
1:X:1017:C:H1'	9:G:134:MET:CE	2.17	0.74
1:X:1736:C:H2'	1:X:1737:G:C8	2.23	0.74
1:X:2799:C:H2'	1:X:2800:C:O4'	1.86	0.74
4:B:19:ARG:HE	4:B:21:ILE:HD11	1.53	0.74
5:C:74:VAL:HG23	5:C:76:THR:H	1.51	0.74
6:D:133:LYS:O	6:D:151:GLY:HA2	1.87	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
12:J:106:GLU:N	12:J:106:GLU:CD	2.41	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
23:U:49:LYS:HB3	23:U:61:TRP:CE3	2.22	0.74
1:X:244:C:H3'	1:X:245:C:H5''	1.68	0.73
1:X:651:C:C2'	1:X:652:C:H5''	2.18	0.73
1:X:1045:G:H2'	1:X:1046:U:H6	1.52	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
1:X:2289:A:C2	6:D:79:LEU:HD21	2.23	0.73
1:X:2751:C:C5'	4:B:203:LYS:HD3	2.18	0.73
6:D:47:SER:HA	6:D:50:ILE:HG13	1.68	0.73
12:J:75:VAL:HG12	12:J:76:THR:H	1.52	0.73
12:J:98:VAL:HG12	12:J:99:LYS:H	1.53	0.73
14:L:29:LEU:HD23	14:L:89:PHE:HB3	1.70	0.73
30:4:18:ARG:HA	30:4:22:ARG:O	1.88	0.73
1:X:936:A:O2'	1:X:937:C:H5'	1.87	0.73
1:X:1503:G:H2'	1:X:1504:G:C8	2.23	0.73
1:X:1512:A:H2'	1:X:1514:C:H5	1.53	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:46:G:H5'	6:D:92:ARG:CZ	2.18	0.73
6:D:135:GLN:O	6:D:141:ILE:HG13	1.88	0.73
16:N:70:ARG:HG3	16:N:70:ARG:HH11	1.53	0.73
19:Q:61:LYS:H	19:Q:72:ARG:HA	1.53	0.73
1:X:333:A:OP1	5:C:162:ARG:HB2	1.86	0.73
1:X:889:C:H2'	1:X:890:U:C6	2.24	0.73
1:X:1078:A:OP1	1:X:1078:A:H3'	1.89	0.73
1:X:2212:U:H2'	1:X:2213:G:H8	1.49	0.73
1:X:2620:G:H5''	9:G:104:THR:CG2	2.19	0.73
7:E:50:LEU:HG	7:E:51:LEU:H	1.53	0.73
10:H:83:ARG:HH11	15:M:40:ARG:HG3	1.51	0.73
11:I:106:VAL:HG23	11:I:123:ASP:HB2	1.71	0.73
16:N:101:ARG:C	16:N:103:PRO:HD3	2.09	0.73
1:X:320:A:O3'	20:R:27:GLY:HA2	1.87	0.73
1:X:2484:G:OP2	32:X:2911:ZLD:H9	1.89	0.73
2:Z:88:C:O2'	2:Z:89:G:H5'	1.87	0.73
5:C:5:ASN:HA	5:C:118:VAL:HG21	1.68	0.73
5:C:22:VAL:HA	5:C:106:MET:SD	2.28	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
1:X:404:A:H1'	1:X:424:G:H1'	1.69	0.73
1:X:469:G:N2	1:X:480:G:H2'	2.03	0.73
1:X:648:A:H4'	1:X:649:G:H5'	1.70	0.73
1:X:1060:C:H1'	1:X:1124:U:O2'	1.88	0.73
1:X:1071:U:H5''	1:X:1072:U:OP1	1.88	0.73
1:X:1313:U:H4'	1:X:1314:A:O5'	1.89	0.73
1:X:2307:A:H2'	1:X:2308:A:C8	2.24	0.73
3:A:236:GLY:O	3:A:237:GLU:HB2	1.87	0.73
10:H:19:ILE:HD13	10:H:19:ILE:N	2.01	0.73
11:I:99:VAL:O	11:I:101:ARG:HG2	1.87	0.73
12:J:36:ILE:CG2	12:J:131:LYS:HE2	2.19	0.73
15:M:14:ARG:HH22	15:M:18:GLN:NE2	1.86	0.73
16:N:51:ARG:H	16:N:51:ARG:CD	2.00	0.73
19:Q:60:GLY:H	19:Q:72:ARG:HH11	1.35	0.73
23:U:64:ALA:O	23:U:67:LEU:HB3	1.88	0.73
1:X:919:U:OP1	12:J:26:ASP:HB2	1.88	0.73
1:X:1333:G:N2	1:X:1344:C:N4	2.35	0.73
1:X:2077:G:H22	1:X:2179:C:H1'	1.54	0.73
6:D:38:GLU:O	6:D:40:LEU:HD12	1.89	0.73
10:H:116:ARG:HD2	15:M:38:LYS:HZ2	1.51	0.73
11:I:44:GLY:O	11:I:45:LYS:HB3	1.87	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:11:ASN:C	20:R:11:ASN:HD22	1.92	0.73
21:S:6:LYS:HD2	21:S:31:SER:HB2	1.69	0.73
24:V:62:ARG:CB	24:V:62:ARG:HH11	2.00	0.73
1:X:1231:A:H2'	1:X:1232:U:C6	2.24	0.73
1:X:1919:A:H5''	1:X:1920:A:O4'	1.89	0.73
1:X:2395:C:O2'	1:X:2396:C:H5''	1.87	0.73
1:X:2570:C:P	3:A:239:ARG:HH11	2.11	0.73
1:X:2824:C:P	15:M:100:ARG:HH11	2.12	0.73
10:H:28:GLY:O	10:H:35:THR:HG23	1.89	0.73
21:S:6:LYS:HB2	21:S:31:SER:CB	2.19	0.73
22:T:3:HIS:HB2	22:T:5:LYS:HD3	1.69	0.73
23:U:17:SER:HB2	23:U:44:ALA:HA	1.70	0.73
30:4:30:VAL:C	30:4:32:HIS:H	1.91	0.73
1:X:686:C:O2'	1:X:687:G:H5'	1.87	0.73
1:X:2326:C:H2'	1:X:2327:U:C6	2.24	0.73
3:A:142:VAL:O	3:A:163:VAL:HG12	1.88	0.73
9:G:93:LYS:HB3	9:G:96:ASP:OD1	1.89	0.73
11:I:88:PHE:HB3	11:I:90:ARG:HD2	1.71	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:48:A:H1'	1:X:50:G:N3	2.04	0.73
1:X:1056:U:OP1	1:X:1058:G:H4'	1.89	0.73
1:X:1173:G:H4'	17:O:22:VAL:HG23	1.70	0.73
1:X:1519:G:H2'	1:X:1520:G:H8	1.52	0.73
3:A:48:ARG:HD2	3:A:48:ARG:N	2.02	0.73
5:C:22:VAL:HG22	5:C:106:MET:HG3	1.71	0.73
9:G:33:ILE:HD13	9:G:33:ILE:H	1.51	0.73
24:V:55:THR:O	24:V:58:ALA:HB3	1.88	0.73
1:X:1657:A:H2'	1:X:1658:A:O4'	1.89	0.73
1:X:2307:A:H2'	1:X:2308:A:H8	1.53	0.73
1:X:2404:A:H4'	1:X:2405:A:H5''	1.71	0.73
1:X:2484:G:OP2	32:X:2911:ZLD:C9	2.37	0.73
3:A:217:ARG:HG2	3:A:218:LYS:N	2.03	0.73
6:D:175:LEU:HD23	6:D:177:PHE:HE1	1.52	0.73
11:I:11:GLY:O	11:I:14:LYS:N	2.22	0.73
12:J:15:ARG:CD	12:J:73:LYS:HG3	2.19	0.73
14:L:99:ARG:CG	14:L:100:VAL:H	2.02	0.73
17:O:20:ILE:HD12	17:O:21:ARG:H	1.54	0.73
1:X:1575:C:H4'	1:X:1576:G:OP1	1.89	0.72
2:Z:104:A:H2'	2:Z:105:G:O4'	1.88	0.72
3:A:95:LEU:HB2	3:A:105:ILE:HD11	1.70	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:96:HIS:HE1	3:A:100:GLY:HA2	1.53	0.72
6:D:111:ILE:HA	6:D:137:ILE:HG22	1.70	0.72
11:I:94:GLU:HB3	11:I:97:ARG:NH1	2.03	0.72
13:K:98:LEU:HD22	26:Y:56:GLN:HG2	1.71	0.72
14:L:37:HIS:NE2	14:L:39:TYR:OH	2.22	0.72
14:L:42:ILE:CB	14:L:52:ALA:HB3	2.17	0.72
22:T:4:LYS:NZ	22:T:4:LYS:HB3	2.03	0.72
1:X:1885:C:C4'	3:A:244:ARG:HD2	2.19	0.72
1:X:2015:G:H2'	4:B:145:LYS:NZ	2.05	0.72
1:X:2541:U:H4'	10:H:23:ARG:HH11	1.54	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
1:X:2737:A:N3	1:X:2737:A:H2'	2.03	0.72
3:A:77:ALA:HB2	3:A:97:TYR:HA	1.69	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
13:K:46:PRO:O	13:K:50:GLN:HB2	1.89	0.72
19:Q:88:ILE:O	19:Q:92:ALA:HB2	1.89	0.72
30:4:18:ARG:HG2	30:4:23:VAL:CA	2.18	0.72
1:X:3:U:H2'	1:X:4:C:C6	2.24	0.72
1:X:886:A:H1'	12:J:30:PHE:HE1	1.52	0.72
1:X:1171:A:H2'	1:X:1172:U:C6	2.22	0.72
1:X:1519:G:H2'	1:X:1520:G:C8	2.24	0.72
1:X:2284:U:C3'	1:X:2285:U:H5''	2.18	0.72
1:X:2501:U:O2'	1:X:2626:U:H5''	1.89	0.72
3:A:247:VAL:CG2	3:A:248:THR:HG23	2.08	0.72
13:K:79:VAL:HA	13:K:83:VAL:HG22	1.69	0.72
17:O:10:LYS:HG3	17:O:11:GLN:H	1.54	0.72
23:U:20:ARG:HD2	23:U:43:ARG:NH2	2.04	0.72
1:X:638:A:O2'	1:X:639:G:O4'	2.06	0.72
1:X:840:U:H2'	1:X:2051:U:C2	2.24	0.72
1:X:986:A:H4'	16:N:48:ARG:NH1	2.02	0.72
1:X:2035:G:O2'	1:X:2036:G:H5'	1.89	0.72
1:X:2728:A:H2'	1:X:2729:A:C8	2.24	0.72
4:B:60:ASN:O	4:B:64:GLN:HG3	1.89	0.72
5:C:107:ALA:HB1	5:C:180:ILE:HD13	1.70	0.72
13:K:52:ILE:HG13	13:K:53:THR:N	2.03	0.72
14:L:73:LYS:HG3	14:L:110:GLY:HA3	1.72	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
23:U:48:LYS:HG2	23:U:49:LYS:H	1.51	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:4:27:CYS:HB3	30:4:32:HIS:HB3	1.70	0.72
1:X:2264:C:H5'	1:X:2267:A:N6	2.05	0.72
1:X:2777:A:N7	18:P:134:LYS:HD3	2.03	0.72
3:A:75:VAL:HG11	3:A:98:ALA:HB3	1.71	0.72
5:C:104:LEU:O	5:C:107:ALA:N	2.23	0.72
6:D:39:GLY:HA2	6:D:86:GLY:CA	2.16	0.72
6:D:113:ASP:HB3	6:D:115:ARG:HH12	1.53	0.72
9:G:61:ARG:HE	9:G:65:LYS:CE	2.02	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
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
21:S:54:ILE:HB	21:S:62:PHE:H	1.53	0.72
26:Y:56:GLN:HE21	26:Y:56:GLN:H	1.37	0.72
1:X:427:C:H1'	1:X:1856:U:H1'	1.71	0.72
1:X:663:G:C3'	1:X:664:C:H4'	2.19	0.72
1:X:1017:C:H1'	9:G:134:MET:HE3	1.71	0.72
1:X:2691:C:H5''	1:X:2694:G:H5''	1.71	0.72
3:A:172:TYR:HD2	3:A:186:HIS:HB3	1.55	0.72
17:O:71:ILE:N	17:O:84:THR:O	2.21	0.72
24:V:1:MET:SD	24:V:2:LYS:HG2	2.29	0.72
1:X:1949:A:H1'	1:X:2572:U:H4'	1.71	0.72
1:X:2394:G:C3'	11:I:63:ARG:HH11	1.93	0.72
1:X:2807:U:H5'	1:X:2807:U:C6	2.23	0.72
1:X:2825:A:H2'	1:X:2826:C:H6	1.54	0.72
2:Z:3:A:H2'	2:Z:4:C:C5'	2.20	0.72
2:Z:42:U:H1'	2:Z:47:A:H61	1.53	0.72
3:A:133:LEU:HD23	3:A:189:CYS:O	1.89	0.72
7:E:97:LYS:HE3	7:E:104:GLU:CG	2.19	0.72
11:I:47:ALA:C	11:I:49:PHE:N	2.38	0.72
11:I:124:ALA:HA	11:I:142:LEU:HD21	1.71	0.72
19:Q:12:ILE:CD1	19:Q:13:SER:H	1.98	0.72
23:U:50:ALA:CB	23:U:52:ARG:HH12	2.02	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
13:K:33:ARG:CG	13:K:114:GLU:HB3	2.19	0.72
20:R:23:ILE:HD13	20:R:23:ILE:H	1.54	0.72
20:R:44:GLN:HB3	20:R:77:HIS:HD1	1.55	0.72
1:X:1148:G:H21	9:G:134:MET:CE	2.02	0.72
1:X:2722:C:H2'	1:X:2723:C:C6	2.24	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2751:C:H5''	4:B:203:LYS:HD3	1.71	0.72
1:X:2825:A:H2'	1:X:2826:C:C6	2.25	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
4:B:21:ILE:N	4:B:21:ILE:HD12	2.05	0.72
4:B:120:TRP:O	4:B:121:ASN:HB2	1.88	0.72
7:E:88:GLU:HB3	7:E:163:ARG:HB2	1.72	0.72
9:G:158:HIS:CA	9:G:161:GLN:HB2	2.20	0.72
1:X:149:A:H2'	1:X:150:A:C8	2.25	0.72
1:X:173:A:H5'	1:X:174:A:OP2	1.90	0.72
1:X:640:C:H4'	1:X:660:G:N2	2.04	0.72
1:X:1783:G:P	3:A:206:LEU:HD12	2.30	0.72
1:X:2331:A:H2	22:T:33:ALA:HB1	1.54	0.72
5:C:13:ARG:NE	5:C:13:ARG:N	2.38	0.72
7:E:155:ASP:OD1	7:E:157:TYR:HB2	1.90	0.72
8:F:76:SER:HB3	8:F:111:THR:HB	1.72	0.72
1:X:43:A:H2'	1:X:44:G:C8	2.24	0.71
1:X:633:G:O2'	1:X:634:G:H5'	1.89	0.71
1:X:1128:G:H2'	1:X:1129:A:C5'	2.13	0.71
1:X:1391:A:O2'	1:X:1392:U:C6	2.42	0.71
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:712:A:H2'	1:X:713:G:O4'	1.90	0.71
1:X:1180:A:O5'	1:X:1180:A:H8	1.72	0.71
1:X:1508:G:C5'	1:X:1509:A:H5''	2.06	0.71
3:A:92:ILE:CD1	3:A:104:TYR:HB3	2.19	0.71
6:D:65:PRO:HA	6:D:89:VAL:CG1	2.21	0.71
6:D:132:ILE:HG21	6:D:138:PHE:HZ	1.54	0.71
8:F:81:LYS:NZ	8:F:84:GLY:HA3	2.04	0.71
8:F:101:ASN:HB3	8:F:104:GLN:HG2	1.70	0.71
9:G:110:LEU:N	9:G:110:LEU:HD23	2.05	0.71
12:J:70:PHE:C	12:J:70:PHE:CD2	2.64	0.71
14:L:101:LYS:HG2	14:L:105:ASP:OD2	1.90	0.71
20:R:59:LYS:N	20:R:60:PRO:CD	2.51	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
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
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
5:C:24:SER:O	5:C:27:LEU:N	2.23	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:68:ARG:HG2	5:C:68:ARG:O	1.88	0.71
10:H:10:VAL:HG21	10:H:16:ALA:O	1.90	0.71
1:X:1173:G:C1'	17:O:21:ARG:HH21	1.99	0.71
1:X:1193:G:H2'	1:X:1194:U:H5''	1.71	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
15:M:5:ILE:HD13	15:M:7:ILE:CG1	2.20	0.71
19:Q:7:LEU:C	19:Q:7:LEU:HD13	2.10	0.71
21:S:44:ARG:HB3	21:S:45:GLN:HE22	1.55	0.71
25:W:25:LEU:HD22	25:W:30:ASP:CB	2.16	0.71
26:Y:16:ARG:HH11	26:Y:20:ARG:NH1	1.88	0.71
1:X:1051:U:H2'	1:X:1052:C:O4'	1.90	0.71
1:X:1554:G:O2'	1:X:1555:A:H5'	1.90	0.71
1:X:1625:A:H1'	1:X:1632:A:O2'	1.90	0.71
1:X:1727:C:H4'	1:X:2833:C:O2	1.91	0.71
1:X:1850:G:H1	1:X:1867:A:H2'	1.53	0.71
1:X:2208:U:H2'	1:X:2209:G:H8	1.55	0.71
1:X:2482:A:O2'	32:X:2911:ZLD:H13B	1.90	0.71
3:A:43:ARG:HD2	3:A:43:ARG:H	1.55	0.71
6:D:105:ASN:HA	6:D:109:PRO:HG2	1.72	0.71
7:E:127:GLU:OE2	7:E:130:ARG:HB2	1.90	0.71
8:F:73:PRO:HD2	8:F:76:SER:OG	1.91	0.71
8:F:99:LYS:HA	8:F:138:THR:OG1	1.89	0.71
11:I:97:ARG:O	11:I:98:LEU:HB2	1.89	0.71
14:L:39:TYR:O	14:L:41:GLN:N	2.22	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
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
1:X:1053:G:H2'	1:X:1054:C:C6	2.25	0.71
1:X:1766:U:H2'	1:X:1767:G:H5'	1.71	0.71
1:X:2078:G:H2'	1:X:2079:A:C8	2.25	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
4:B:170:LEU:HB3	4:B:184:VAL:CG1	2.21	0.71
5:C:22:VAL:HG13	5:C:27:LEU:HD21	1.73	0.71
7:E:7:GLN:CA	7:E:69:ARG:HE	2.03	0.71
9:G:119:LEU:HD12	9:G:126:VAL:HG13	1.72	0.71
13:K:17:ARG:NH1	13:K:20:LEU:HD22	2.04	0.71
13:K:91:PRO:O	13:K:92:GLY:O	2.09	0.71
17:O:39:PHE:CD1	17:O:46:VAL:HG21	2.25	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Y:56:GLN:HE21	26:Y:56:GLN:N	1.88	0.71
1:X:139:A:H2'	1:X:140:G:H8	1.56	0.71
1:X:1061:A:H2'	1:X:1062:G:C8	2.19	0.71
1:X:2355:A:C2	14:L:89:PHE:CZ	2.78	0.71
1:X:2538:C:O2'	1:X:2539:C:H5'	1.91	0.71
3:A:125:PRO:HB3	3:A:193:ILE:HD11	1.72	0.71
4:B:165:VAL:HG12	4:B:189:PRO:HG2	1.70	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
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
20:R:22:VAL:HG11	20:R:80:LYS:NZ	2.06	0.71
23:U:22:GLY:HA3	23:U:39:LYS:HE2	1.71	0.71
1:X:208:C:H2'	1:X:209:G:O4'	1.91	0.71
1:X:621:U:H2'	1:X:622:U:C6	2.26	0.71
1:X:647:G:O2'	1:X:649:G:H4'	1.91	0.71
1:X:1495:G:H5'	1:X:1574:A:C2	2.25	0.71
2:Z:53:G:OP2	14:L:64:LYS:HE3	1.90	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
9:G:155:THR:C	9:G:157:PRO:HD2	2.11	0.71
11:I:52:GLY:O	11:I:55:ARG:HB2	1.90	0.71
11:I:56:LEU:HD13	11:I:56:LEU:C	2.11	0.71
15:M:44:ARG:NH1	15:M:46:ARG:HH22	1.88	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: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
1:X:2071:G:N2	1:X:2072:C:H1'	2.05	0.71
1:X:2796:A:H2'	1:X:2797:G:C8	2.25	0.71
4:B:149:ARG:HH12	9:G:106:TYR:HD1	1.38	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
12:J:66:TYR:O	12:J:106:GLU:OE1	2.09	0.71
16:N:47:TYR:HE1	17:O:73:LYS:HZ3	1.37	0.71
30:4:18:ARG:CD	30:4:23:VAL:HG22	2.16	0.71
1:X:107:G:N2	1:X:108:G:H1'	2.06	0.71
1:X:789:G:C5	1:X:806:A:N7	2.59	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2271:C:OP1	14:L:18:ARG:NH2	2.24	0.71
1:X:2355:A:C2	14:L:89:PHE:CE1	2.79	0.71
7:E:38:ASN:HB2	7:E:41:LEU:HD22	1.73	0.71
10:H:29:ILE:CG1	10:H:30:GLY:N	2.54	0.71
11:I:30:ALA:CB	11:I:34:HIS:CE1	2.74	0.71
16:N:47:TYR:CE2	16:N:51:ARG:NE	2.58	0.71
20:R:14:LEU:HD23	20:R:14:LEU:N	2.06	0.71
23:U:22:GLY:CA	23:U:39:LYS:HE2	2.21	0.71
1:X:50:G:H1'	1:X:116:A:H61	1.56	0.70
1:X:81:C:H2'	1:X:82:G:O4'	1.91	0.70
1:X:1075:C:H5''	8:F:85:ILE:CG2	2.21	0.70
1:X:2048:C:H2'	1:X:2049:C:C6	2.26	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
12:J:23:LYS:HA	21:S:73:LYS:HZ3	1.53	0.70
14:L:70:ALA:O	14:L:74:ALA:HB2	1.91	0.70
15:M:43:ASN:C	15:M:43:ASN:HD22	1.94	0.70
15:M:104:LEU:HD13	15:M:106:TYR:CZ	2.24	0.70
16:N:85:ARG:HG2	16:N:116:ALA:O	1.90	0.70
21:S:56:VAL:HG12	21:S:57:GLU:H	1.56	0.70
1:X:460:U:O4	1:X:592:G:H1'	1.92	0.70
2:Z:70:C:H2'	2:Z:71:G:O4'	1.91	0.70
3:A:210:GLY:HA2	3:A:213:ARG:HG2	1.73	0.70
8:F:110:LYS:HA	8:F:113:MET:HE1	1.73	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
1:X:554:U:HO2'	1:X:555:U:H1'	1.55	0.70
1:X:1517:C:H4'	3:A:96:HIS:CD2	2.27	0.70
6:D:5:LYS:H	6:D:7:LYS:H	1.39	0.70
6:D:47:SER:HA	6:D:50:ILE:CD1	2.22	0.70
9:G:61:ARG:HH22	9:G:78:ASP:HB2	1.56	0.70
15:M:104:LEU:O	15:M:107:LEU:N	2.19	0.70
17:O:58:ALA:HB1	17:O:94:LYS:O	1.92	0.70
23:U:22:GLY:H	23:U:39:LYS:CG	2.03	0.70
1:X:29:U:H4'	16:N:11:ARG:NH1	2.03	0.70
1:X:568:G:O2'	1:X:569:C:H5'	1.92	0.70
1:X:635:C:H2'	1:X:636:G:C5'	2.20	0.70
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:2795:A:H4'	13:K:5:LYS:HG2	1.72	0.70
4:B:3:GLY:HA3	4:B:81:PHE:HE1	1.57	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:72:LYS:CA	6:D:81:GLN:HA	2.21	0.70
16:N:28:ARG:HG2	16:N:38:THR:OG1	1.91	0.70
20:R:56:LYS:HA	20:R:68:GLY:O	1.91	0.70
21:S:3:LEU:HD11	21:S:32:PHE:CA	2.21	0.70
1:X:882:C:H2'	1:X:883:A:H8	1.57	0.70
1:X:1080:A:H4'	1:X:1081:A:C8	2.26	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: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
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
16:N:40:LEU:HD23	16:N:40:LEU:H	1.57	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:2506:C:H5''	30:4:30:VAL:HB	1.74	0.70
4:B:133:LYS:O	4:B:134:TRP:O	2.09	0.70
5:C:117:LEU:CD2	5:C:187:VAL:HA	2.21	0.70
6:D:22:TYR:CZ	6:D:29:PRO:HD3	2.26	0.70
7:E:101:LYS:O	7:E:123:PHE:CD1	2.44	0.70
12:J:76:THR:HB	12:J:88:LYS:O	1.91	0.70
17:O:11:GLN:HA	17:O:38:LEU:O	1.90	0.70
19:Q:60:GLY:N	19:Q:72:ARG:HH11	1.88	0.70
1:X:879:A:C2	1:X:926:C:H5''	2.26	0.70
1:X:1175:A:O2'	1:X:1176:U:H5'	1.91	0.70
1:X:1939:U:O2	1:X:1939:U:H2'	1.91	0.70
1:X:2034:A:OP1	4:B:137:ARG:NH2	2.25	0.70
1:X:2041:A:H8	1:X:2041:A:O5'	1.75	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
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
26:Y:16:ARG:HD3	26:Y:20:ARG:NH2	2.06	0.70
1:X:48:A:C4'	1:X:49:U:H5'	2.20	0.70
1:X:537:C:C5	1:X:2759:U:H3'	2.23	0.70
1:X:847:C:C2	1:X:848:A:C8	2.79	0.70
1:X:1055:A:C2'	1:X:1056:U:H5''	2.21	0.70
1:X:1253:C:H2'	1:X:1254:G:C5'	2.21	0.70
1:X:1996:A:C2'	1:X:1997:A:H5'	2.22	0.70
1:X:2269:G:N2	1:X:2322:U:H1'	2.07	0.70
1:X:2713:A:N6	4:B:203:LYS:HE3	2.01	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2737:A:OP2	30:4:19:ARG:HA	1.91	0.70
4:B:119:ARG:HA	4:B:160:MET:HE1	1.72	0.70
5:C:14:THR:HG22	5:C:15:ILE:H	1.57	0.70
6:D:99:PHE:HA	6:D:102:LYS:HD2	1.74	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:538:A:N6	1:X:2025:A:H2'	2.06	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
1:X:2581:A:H5'	1:X:2582:G:OP2	1.92	0.70
4:B:37:LYS:HA	4:B:42:ASP:OD2	1.91	0.70
6:D:143:TYR:HE1	6:D:148:LYS:HA	1.57	0.70
10:H:16:ALA:HA	10:H:58:ALA:HB2	1.73	0.70
14:L:37:HIS:NE2	14:L:39:TYR:CE1	2.60	0.70
1:X:304:A:H2'	1:X:305:A:H5''	1.73	0.70
1:X:741:G:N2	1:X:743:A:H1'	2.07	0.70
3:A:147:LEU:CD2	3:A:155:LEU:HD11	2.22	0.70
5:C:22:VAL:HG21	5:C:110:SER:OG	1.91	0.70
6:D:73:SER:O	6:D:80:ARG:N	2.25	0.70
9:G:85:ALA:O	9:G:87:GLN:N	2.24	0.70
12:J:27:TYR:CB	12:J:137:VAL:HG11	2.21	0.70
12:J:134:LYS:N	12:J:134:LYS:HD2	2.07	0.70
13:K:99:ARG:HH11	13:K:99:ARG:CG	2.05	0.70
20:R:54:ILE:HA	20:R:71:GLN:HA	1.73	0.70
23:U:31:GLY:HA2	23:U:32:ARG:CZ	2.22	0.70
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
1:X:638:A:O2'	1:X:639:G:C8	2.42	0.69
1:X:879:A:H2'	1:X:879:A:N3	2.06	0.69
1:X:2409:A:C2	11:I:54:SER:HB3	2.27	0.69
2:Z:3:A:H2'	2:Z:4:C:H5'	1.73	0.69
7:E:107:ILE:HD13	7:E:107:ILE:H	1.56	0.69
7:E:161:GLY:O	7:E:163:ARG:HG3	1.91	0.69
9:G:123:PRO:HD2	9:G:124:GLU:OE1	1.92	0.69
12:J:61:ARG:HH12	21:S:175:ARG:HD2	1.57	0.69
17:O:36:LYS:HB3	17:O:39:PHE:CE2	2.27	0.69
20:R:18:LYS:HD3	20:R:19:GLY:N	2.07	0.69
21:S:24:TYR:HA	21:S:28:ASN:O	1.91	0.69
21:S:103:ARG:O	21:S:139:THR:HA	1.92	0.69
1:X:173:A:H61	1:X:844:G:N2	1.88	0.69
1:X:833:A:N3	1:X:954:U:O2'	2.25	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:925:U:H4'	1:X:926:C:OP1	1.92	0.69
1:X:2310:G:N2	1:X:2364:C:C4	2.60	0.69
1:X:2839:G:H2'	1:X:2840:U:C6	2.27	0.69
4:B:67:PHE:CD2	4:B:74:PRO:HA	2.27	0.69
5:C:128:ALA:HB2	5:C:159:ARG:NH2	2.07	0.69
6:D:57:LEU:HA	6:D:60:ILE:CD1	2.22	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
16:N:62:ILE:HG22	16:N:66:ASN:HD22	1.57	0.69
18:P:107:ILE:O	18:P:107:ILE:HG23	1.91	0.69
19:Q:34:THR:HG23	19:Q:37:GLU:HB2	1.74	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
22:T:5:LYS:N	22:T:5:LYS:HD2	2.07	0.69
1:X:67:G:H2'	1:X:68:C:H6	1.53	0.69
1:X:198:A:H5''	1:X:199:A:H5'	1.74	0.69
1:X:1354:A:O2'	19:Q:54:SER:HB3	1.92	0.69
1:X:2057:U:H5'	1:X:2057:U:C6	2.27	0.69
1:X:2332:G:H4'	22:T:32:LYS:HE2	1.74	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
3:A:143:HIS:C	3:A:145:LEU:N	2.45	0.69
10:H:29:ILE:CD1	10:H:30:GLY:H	2.06	0.69
11:I:56:LEU:HD13	11:I:56:LEU:O	1.91	0.69
11:I:76:LYS:HB3	11:I:79:GLN:HG2	1.74	0.69
11:I:114:ILE:O	11:I:114:ILE:HD13	1.92	0.69
12:J:23:LYS:C	12:J:25:GLY:H	1.94	0.69
14:L:8:ARG:HH11	14:L:8:ARG:CB	2.05	0.69
14:L:99:ARG:CG	14:L:100:VAL:N	2.53	0.69
17:O:79:GLN:O	17:O:80:TYR:CB	2.39	0.69
21:S:42:ALA:C	21:S:45:GLN:HE21	1.96	0.69
21:S:117:VAL:HG22	21:S:168:VAL:HG13	1.74	0.69
1:X:1118:G:H2'	1:X:1119:U:H5''	1.72	0.69
1:X:2194:A:H2'	1:X:2195:C:O4'	1.93	0.69
1:X:2498:U:C4'	1:X:2499:C:OP1	2.39	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
6:D:119:PRO:HG2	6:D:120:ASN:H	1.57	0.69
17:O:14:VAL:O	17:O:14:VAL:HG12	1.92	0.69
24:V:64:GLY:C	24:V:66:GLN:H	1.96	0.69
1:X:613:A:H5''	1:X:668:A:N6	2.07	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:666:U:C2'	1:X:667:U:H4'	2.08	0.69
1:X:920:G:P	12:J:24:GLY:HA3	2.32	0.69
1:X:1505:U:H2'	1:X:1506:C:H5''	1.74	0.69
1:X:1517:C:H5'	3:A:102:LYS:HZ3	1.56	0.69
1:X:1830:C:N4	1:X:1881:U:H3'	2.06	0.69
1:X:2417:U:O2'	1:X:2419:C:OP1	2.10	0.69
3:A:186:HIS:NE2	3:A:188:GLU:HB2	2.07	0.69
7:E:27:LYS:HG2	7:E:32:GLU:HB2	1.74	0.69
12:J:33:TYR:O	12:J:106:GLU:HA	1.92	0.69
15:M:44:ARG:NH1	15:M:46:ARG:NH2	2.41	0.69
18:P:80:LEU:CD2	18:P:87:GLU:HB3	2.21	0.69
19:Q:30:SER:O	19:Q:76:LYS:HD3	1.92	0.69
20:R:8:SER:O	20:R:10:HIS:N	2.26	0.69
23:U:50:ALA:C	23:U:52:ARG:NH2	2.45	0.69
1:X:1051:U:H3'	1:X:1051:U:H6	1.57	0.69
1:X:1281:A:H1'	1:X:2592:U:C4	2.25	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:1997:A:H2'	1:X:1998:A:C8	2.27	0.69
3:A:91:ARG:HD2	3:A:198:ASN:CA	2.21	0.69
5:C:41:GLY:HA3	5:C:89:ARG:O	1.93	0.69
5:C:112:GLN:CA	5:C:116:LYS:HD3	2.22	0.69
6:D:45:GLU:HB2	6:D:78:LYS:HZ3	1.58	0.69
12:J:15:ARG:HB3	12:J:73:LYS:NZ	2.06	0.69
18:P:34:SER:O	18:P:37:LYS:HB3	1.93	0.69
18:P:46:ARG:HA	18:P:92:VAL:HG11	1.73	0.69
22:T:58:THR:C	22:T:59:LEU:HD22	2.13	0.69
25:W:28:ILE:HD13	25:W:28:ILE:N	2.07	0.69
1:X:1431:U:H4'	1:X:1604:A:C4'	2.22	0.69
1:X:1440:G:H3'	1:X:1441:A:H5''	1.75	0.69
1:X:1621:C:H5'	1:X:1626:A:N6	2.07	0.69
6:D:4:LEU:HA	6:D:7:LYS:CB	2.21	0.69
6:D:60:ILE:CG1	6:D:61:THR:H	1.99	0.69
11:I:7:LYS:O	11:I:9:THR:HG23	1.92	0.69
13:K:44:LEU:O	13:K:44:LEU:HD12	1.93	0.69
14:L:32:TYR:O	14:L:34:SER:N	2.25	0.69
18:P:45:ILE:HG22	18:P:46:ARG:N	2.06	0.69
19:Q:68:PHE:N	19:Q:68:PHE:CD2	2.60	0.69
23:U:54:ASN:O	23:U:56:GLN:N	2.26	0.69
24:V:2:LYS:H	24:V:3:PRO:HD3	1.57	0.69
30:4:30:VAL:HG23	30:4:31:LYS:HD3	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:328:A:H2'	1:X:329:C:C6	2.28	0.69
1:X:1003:C:H4'	17:O:71:ILE:CD1	2.21	0.69
1:X:1513:U:H5''	1:X:1514:C:OP2	1.92	0.69
1:X:1713:G:C6	1:X:1714:A:C5	2.81	0.69
1:X:1923:U:H4'	1:X:1924:C:O5'	1.93	0.69
1:X:2294:U:O2'	6:D:125:ARG:HG3	1.92	0.69
1:X:2750:G:O2'	4:B:203:LYS:HE2	1.93	0.69
3:A:43:ARG:NH2	3:A:55:GLY:HA2	2.07	0.69
3:A:90:ALA:O	3:A:92:ILE:N	2.26	0.69
4:B:115:GLY:CA	4:B:136:ARG:HD2	2.22	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
7:E:101:LYS:HG3	7:E:117:PRO:HD2	1.74	0.69
7:E:104:GLU:OE2	7:E:114:ILE:HG12	1.92	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
12:J:35:LEU:HD11	12:J:130:THR:OG1	1.92	0.69
15:M:50:PHE:CE1	15:M:79:ARG:CG	2.75	0.69
15:M:104:LEU:HD12	15:M:107:LEU:HD22	1.75	0.69
18:P:71:VAL:HG12	18:P:126:ILE:HG22	1.74	0.69
19:Q:74:ASP:O	19:Q:75:ARG:NH1	2.25	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
21:S:46:GLN:CB	21:S:50:GLY:HA3	2.22	0.69
1:X:59:G:H1'	1:X:73:A:C2	2.28	0.69
1:X:455:A:H2	1:X:1258:G:N3	1.91	0.69
1:X:1044:U:H5	30:4:16:VAL:O	1.76	0.69
1:X:2042:A:OP1	5:C:66:ASN:ND2	2.26	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
3:A:143:HIS:C	3:A:145:LEU:H	1.95	0.69
5:C:149:LEU:CD1	5:C:170:LEU:HB2	2.17	0.69
6:D:30:ARG:HB2	6:D:159:THR:CG2	2.23	0.69
6:D:38:GLU:HG3	6:D:40:LEU:HD11	1.73	0.69
9:G:61:ARG:NE	9:G:65:LYS:HE2	2.08	0.69
22:T:3:HIS:CG	22:T:4:LYS:N	2.61	0.69
25:W:23:LEU:HD13	25:W:51:LEU:HD11	1.74	0.69
1:X:143:A:H2'	1:X:144:U:H6	1.57	0.69
1:X:755:C:H2'	1:X:756:C:C6	2.28	0.69
1:X:857:U:H3'	1:X:858:G:C8	2.28	0.69
1:X:1971:C:O2'	1:X:1972:G:H5'	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2532:G:C2	1:X:2533:U:H1'	2.27	0.69
1:X:2798:A:H2'	1:X:2799:C:H5'	1.74	0.69
2:Z:45:C:H2'	6:D:92:ARG:HE	1.58	0.69
11:I:54:SER:OG	11:I:59:ARG:NH1	2.26	0.69
14:L:33:ARG:HG3	14:L:38:ILE:HB	1.74	0.69
21:S:56:VAL:HG12	21:S:57:GLU:N	2.07	0.69
26:Y:11:THR:O	26:Y:12:SER:O	2.10	0.69
30:4:18:ARG:HG2	30:4:23:VAL:HG13	1.75	0.69
1:X:492:G:H1'	1:X:516:G:N2	2.08	0.68
1:X:1069:G:C3'	1:X:1070:G:H5''	2.22	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
5:C:130:THR:HA	5:C:160:ALA:HB1	1.73	0.68
7:E:84:THR:HB	7:E:134:SER:CB	2.23	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
11:I:89:ASP:OD2	11:I:120:VAL:HG22	1.93	0.68
14:L:37:HIS:O	14:L:37:HIS:CG	2.45	0.68
17:O:10:LYS:HD3	17:O:37:ALA:HB3	1.74	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
1:X:2637:C:N4	1:X:2643:G:N2	2.40	0.68
7:E:137:ASP:HB3	7:E:140:LEU:HD12	1.76	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
10:H:100:ASN:HD21	10:H:104:GLU:HG3	1.58	0.68
25:W:13:PRO:HD2	25:W:16:GLN:NE2	2.09	0.68
1:X:627:A:H2'	1:X:628:A:C8	2.29	0.68
1:X:751:G:H1'	1:X:772:G:N2	2.08	0.68
1:X:811:G:OP2	5:C:56:ARG:HG3	1.92	0.68
1:X:1372:A:C5	1:X:1373:G:N7	2.61	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
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
7:E:44:ARG:O	7:E:51:LEU:N	2.25	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
16:N:93:LYS:O	16:N:94:VAL:HG23	1.94	0.68
1:X:242:A:O2'	1:X:243:G:H4'	1.92	0.68
1:X:1339:U:H5''	1:X:1994:U:H1'	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2433:G:O2'	1:X:2434:G:H5'	1.93	0.68
1:X:2598:C:O2'	1:X:2599:U:H5'	1.93	0.68
3:A:217:ARG:O	3:A:219:PRO:N	2.27	0.68
4:B:9:ILE:HD13	15:M:12:LEU:HD13	1.75	0.68
4:B:61:LYS:HB3	4:B:62:PRO:HD3	1.75	0.68
10:H:116:ARG:NH1	15:M:38:LYS:HZ2	1.90	0.68
15:M:17:GLU:HG3	15:M:62:SER:HB3	1.75	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
21:S:6:LYS:HB2	21:S:31:SER:HB3	1.74	0.68
21:S:45:GLN:CD	21:S:45:GLN:N	2.45	0.68
23:U:22:GLY:H	23:U:39:LYS:HG3	1.59	0.68
23:U:32:ARG:CG	23:U:33:LYS:H	2.06	0.68
23:U:51:ILE:O	23:U:52:ARG:HD3	1.93	0.68
24:V:42:ARG:CZ	24:V:45:GLN:HE22	2.06	0.68
25:W:14:GLY:HA2	25:W:17:VAL:HG23	1.75	0.68
1:X:218:A:H1'	1:X:220:U:C5	2.28	0.68
1:X:403:A:H5''	1:X:404:A:OP1	1.93	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
1:X:604:U:H2'	1:X:605:G:H8	1.57	0.68
1:X:1138:A:H2'	1:X:1139:A:H5''	1.75	0.68
1:X:1745:C:H2'	1:X:1746:A:O4'	1.92	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
3:A:173:VAL:CG1	3:A:174:ILE:H	2.05	0.68
8:F:101:ASN:HB3	8:F:104:GLN:CG	2.23	0.68
9:G:131:VAL:HG11	9:G:148:LEU:HD13	1.75	0.68
10:H:23:ARG:HH21	10:H:23:ARG:CG	2.06	0.68
14:L:38:ILE:HG13	14:L:39:TYR:N	2.08	0.68
15:M:89:ASN:ND2	15:M:90:GLN:NE2	2.42	0.68
18:P:17:GLN:HG2	18:P:18:VAL:HG23	1.73	0.68
18:P:35:PRO:O	18:P:38:VAL:N	2.26	0.68
21:S:113:VAL:HG22	21:S:171:VAL:HG22	1.74	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
5:C:151:VAL:N	5:C:187:VAL:O	2.26	0.68
11:I:108:LEU:CB	11:I:122:VAL:HG11	2.18	0.68
20:R:92:THR:CB	20:R:95:ARG:HH22	2.06	0.68
1:X:192:G:H4'	1:X:193:A:O5'	1.94	0.68
1:X:760:U:O2'	18:P:109:ARG:HD3	1.92	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1430:G:H2'	1:X:1431:U:O4'	1.93	0.68
1:X:1459:U:H4'	1:X:1460:G:OP1	1.92	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
15:M:89:ASN:ND2	15:M:90:GLN:HE22	1.92	0.68
17:O:36:LYS:HD2	17:O:55:THR:HA	1.75	0.68
1:X:2340:C:H2'	1:X:2341:G:O4'	1.94	0.68
1:X:2546:G:H2'	1:X:2547:C:H6	1.59	0.68
1:X:2701:A:H2'	1:X:2702:G:H8	1.58	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
11:I:72:TYR:CD2	11:I:105:PRO:HB2	2.29	0.68
1:X:124:A:C2	1:X:125:A:C2	2.82	0.68
1:X:304:A:OP1	1:X:304:A:H4'	1.93	0.68
1:X:1287:A:N3	1:X:1310:C:H1'	2.09	0.68
1:X:2306:A:H2'	1:X:2307:A:C8	2.29	0.68
1:X:2379:G:C2'	1:X:2380:U:H5'	2.24	0.68
5:C:44:SER:HB3	5:C:88:PRO:CD	2.23	0.68
7:E:150:LYS:O	7:E:152:ARG:N	2.27	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
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
15:M:34:ARG:NH2	15:M:66:PHE:CE2	2.62	0.68
1:X:63:A:O3'	19:Q:71:GLN:HB2	1.95	0.68
1:X:706:A:O2'	1:X:707:U:H5'	1.95	0.68
1:X:1715:A:H4'	1:X:1716:G:O5'	1.94	0.68
3:A:212:SER:O	3:A:215:LEU:N	2.27	0.68
6:D:40:LEU:HA	6:D:150:ARG:HH21	1.59	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
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
10:H:116:ARG:HD3	15:M:40:ARG:CB	2.23	0.68
12:J:136:GLU:HA	12:J:138:TYR:HE2	1.58	0.68
16:N:88:ILE:HG13	17:O:49:GLU:CB	2.24	0.68
22:T:53:MET:SD	22:T:57:HIS:HA	2.34	0.68
1:X:442:A:H2'	1:X:443:A:C8	2.29	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1450:G:H2'	1:X:1451:C:O4'	1.94	0.67
2:Z:17:A:OP2	2:Z:110:U:C2'	2.42	0.67
5:C:15:ILE:HG22	5:C:17:LEU:HD22	1.76	0.67
5:C:165:SER:C	5:C:166:TRP:HE3	1.95	0.67
6:D:85:VAL:HG23	6:D:86:GLY:H	1.59	0.67
7:E:102:ALA:HB2	7:E:116:GLU:HA	1.76	0.67
8:F:85:ILE:HG22	8:F:86:GLY:N	2.09	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
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
20:R:97:GLN:HA	20:R:103:LYS:O	1.94	0.67
24:V:2:LYS:HA	24:V:6:MET:CE	2.24	0.67
1:X:321:A:OP1	20:R:27:GLY:N	2.15	0.67
1:X:1018:C:H3'	1:X:1019:U:C5'	2.24	0.67
1:X:1118:G:C2'	1:X:1119:U:H5''	2.24	0.67
1:X:1514:C:O4'	1:X:1593:C:H5'	1.93	0.67
1:X:2270:U:O2'	1:X:2271:C:H5'	1.93	0.67
2:Z:46:G:H1'	2:Z:49:C:N4	2.09	0.67
4:B:116:VAL:HG13	4:B:136:ARG:HH21	1.59	0.67
6:D:35:VAL:O	6:D:154:ILE:HG23	1.93	0.67
9:G:140:GLN:HG2	9:G:144:MET:HE3	1.74	0.67
14:L:32:TYR:C	14:L:34:SER:H	1.96	0.67
16:N:29:SER:C	16:N:30:LYS:HD2	2.14	0.67
24:V:4:SER:C	24:V:6:MET:N	2.47	0.67
25:W:28:ILE:H	25:W:28:ILE:CD1	2.04	0.67
1:X:698:A:H1'	1:X:701:U:O4	1.94	0.67
1:X:805:G:N7	1:X:2419:C:H1'	2.10	0.67
1:X:1095:A:H3'	1:X:1096:A:H5''	1.75	0.67
1:X:1168:G:O2'	25:W:28:ILE:HD11	1.95	0.67
1:X:1264:C:P	16:N:13:ARG:HH12	2.18	0.67
1:X:2313:G:N2	14:L:17:VAL:HB	2.10	0.67
2:Z:45:C:H2'	6:D:92:ARG:NH1	2.08	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
6:D:136:LEU:C	6:D:137:ILE:HG12	2.14	0.67
7:E:9:ILE:O	7:E:11:VAL:HG23	1.94	0.67
11:I:94:GLU:HB3	11:I:97:ARG:CZ	2.25	0.67
12:J:113:GLU:HA	12:J:116:LYS:CB	2.24	0.67
26:Y:33:CYS:O	26:Y:37:HIS:HA	1.95	0.67
1:X:437:G:O2'	1:X:438:G:H5'	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:957:G:H2'	1:X:958:G:H8	1.60	0.67
1:X:972:C:H5'	1:X:973:U:OP2	1.95	0.67
1:X:1441:A:C2	1:X:1586:A:OP2	2.48	0.67
1:X:1931:G:O2'	1:X:1932:G:H5'	1.95	0.67
1:X:2689:C:O2'	1:X:2690:A:H5'	1.95	0.67
3:A:52:ARG:CZ	3:A:247:VAL:HG11	2.24	0.67
9:G:93:LYS:HD3	9:G:93:LYS:N	2.08	0.67
12:J:64:LYS:H	12:J:64:LYS:HD2	1.59	0.67
17:O:38:LEU:HD13	17:O:39:PHE:N	2.10	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
23:U:15:VAL:O	23:U:16:ASN:HB2	1.94	0.67
23:U:63:SER:HB3	23:U:66:ALA:HB2	1.76	0.67
30:4:25:VAL:HB	30:4:34:GLN:H	1.59	0.67
1:X:20:C:H2'	1:X:21:A:H8	1.60	0.67
1:X:178:C:OP2	23:U:40:ARG:HD2	1.94	0.67
1:X:580:A:O2'	1:X:582:G:OP2	2.12	0.67
1:X:1816:G:OP1	3:A:52:ARG:HG3	1.95	0.67
1:X:1909:U:H5'	1:X:1911:A:OP2	1.94	0.67
1:X:2811:G:H2'	1:X:2812:A:H8	1.59	0.67
5:C:110:SER:HA	5:C:113:GLU:OE1	1.95	0.67
7:E:84:THR:HB	7:E:134:SER:HB2	1.75	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
12:J:35:LEU:HD23	12:J:105:PHE:HD2	1.58	0.67
14:L:41:GLN:OE1	14:L:50:THR:HG21	1.95	0.67
23:U:33:LYS:O	23:U:34:THR:HB	1.95	0.67
23:U:51:ILE:HG23	23:U:59:THR:CA	2.20	0.67
1:X:13:A:O2'	1:X:15:G:N7	2.25	0.67
1:X:350:U:H6	1:X:350:U:O5'	1.76	0.67
1:X:492:G:H1'	1:X:516:G:H21	1.58	0.67
1:X:1090:C:H2'	1:X:1091:C:H6	1.59	0.67
1:X:1135:C:H2'	1:X:1136:G:C8	2.28	0.67
1:X:1281:A:C2'	1:X:2592:U:H5	2.06	0.67
1:X:1461:C:H2'	1:X:1462:C:H6	1.59	0.67
1:X:1493:A:H2'	1:X:1494:G:O4'	1.94	0.67
1:X:1753:A:H8	1:X:1753:A:O5'	1.76	0.67
2:Z:53:G:C5'	14:L:64:LYS:HD2	2.24	0.67
3:A:162:SER:HB3	3:A:195:ALA:HB2	1.75	0.67
11:I:11:GLY:H	11:I:14:LYS:HB2	1.60	0.67
14:L:33:ARG:NH1	14:L:103:LEU:CB	2.58	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:M:89:ASN:HD22	15:M:90:GLN:NE2	1.92	0.67
23:U:26:ALA:HB2	23:U:35:THR:HG23	1.75	0.67
24:V:48:ARG:C	24:V:50:VAL:H	1.96	0.67
1:X:394:U:H2'	1:X:395:G:C8	2.30	0.67
1:X:626:A:O2'	5:C:176:ASN:HB2	1.94	0.67
1:X:999:A:C5	25:W:10:ILE:HG21	2.30	0.67
1:X:1739:G:H2'	1:X:1740:G:C8	2.30	0.67
1:X:1781:C:OP1	3:A:219:PRO:CB	2.32	0.67
1:X:2176:U:H2'	1:X:2177:U:O4'	1.94	0.67
4:B:19:ARG:HG3	4:B:21:ILE:HD11	1.77	0.67
5:C:180:ILE:HG13	5:C:186:LEU:HD22	1.76	0.67
6:D:88:LYS:O	6:D:89:VAL:HG22	1.94	0.67
9:G:66:HIS:O	9:G:70:PHE:CE1	2.48	0.67
14:L:60:LYS:HA	14:L:67:THR:HG21	1.75	0.67
15:M:28:ARG:HB3	15:M:29:PRO:HD3	1.76	0.67
16:N:66:ASN:CB	16:N:76:TYR:HB2	2.18	0.67
17:O:28:GLU:O	17:O:29:ALA:HB3	1.95	0.67
20:R:16:PHE:N	20:R:16:PHE:CD2	2.61	0.67
22:T:25:LYS:CA	22:T:29:GLU:OE1	2.42	0.67
1:X:199:A:N6	1:X:209:G:H1'	2.10	0.67
1:X:1095:A:H2'	1:X:1096:A:C5'	2.19	0.67
1:X:1211:G:C4	1:X:1212:U:C5	2.82	0.67
1:X:2437:G:H2'	1:X:2469:G:H1	1.59	0.67
3:A:132:PRO:HA	3:A:190:TYR:HA	1.76	0.67
3:A:246:PRO:O	3:A:248:THR:O	2.13	0.67
10:H:25:LEU:CD1	10:H:52:VAL:HG23	2.25	0.67
11:I:94:GLU:HA	11:I:97:ARG:CG	2.24	0.67
12:J:8:THR:HG22	12:J:70:PHE:HZ	1.60	0.67
13:K:41:ALA:O	13:K:44:LEU:N	2.24	0.67
16:N:79:PHE:HE1	16:N:106:PHE:CE1	2.13	0.67
19:Q:63:LYS:HE2	19:Q:65:VAL:N	2.10	0.67
20:R:92:THR:C	20:R:95:ARG:NH2	2.48	0.67
1:X:227:G:O2'	11:I:53:ARG:NE	2.28	0.67
1:X:647:G:H4'	1:X:649:G:O3'	1.95	0.67
1:X:774:A:H3'	1:X:774:A:H8	1.59	0.67
1:X:864:C:O2'	1:X:865:A:H5'	1.94	0.67
1:X:1055:A:H2'	1:X:1056:U:H5''	1.75	0.67
1:X:1539:U:H2'	1:X:1540:C:H6	1.60	0.67
1:X:2467:A:O2'	1:X:2468:G:H5'	1.95	0.67
1:X:2827:G:H2'	1:X:2828:C:H6	1.60	0.67
2:Z:107:C:H5''	21:S:84:TYR:CE1	2.30	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:136:ILE:HG22	7:E:137:ASP:N	2.10	0.67
9:G:67:ARG:CD	9:G:70:PHE:HA	2.23	0.67
12:J:78:LYS:HE3	12:J:80:ALA:C	2.14	0.67
22:T:27:GLY:HA2	22:T:67:VAL:O	1.94	0.67
23:U:14:VAL:O	23:U:15:VAL:HG22	1.95	0.67
1:X:741:G:H21	1:X:743:A:H1'	1.60	0.67
1:X:1278:A:O2'	1:X:1279:G:O5'	2.10	0.67
1:X:1966:C:O2'	1:X:1967:U:H5'	1.94	0.67
1:X:2302:G:H1	1:X:2311:U:H5	1.42	0.67
1:X:2827:G:H2'	1:X:2828:C:C6	2.30	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
18:P:24:GLY:O	18:P:127:ILE:HA	1.94	0.67
20:R:11:ASN:O	20:R:11:ASN:ND2	2.27	0.67
21:S:152:ILE:CD1	21:S:152:ILE:H	2.07	0.67
24:V:56:VAL:HA	24:V:59:GLU:CD	2.15	0.67
1:X:125:A:H5''	1:X:126:C:O4'	1.95	0.66
1:X:622:U:H2'	1:X:623:G:O4'	1.96	0.66
1:X:801:A:O2'	1:X:802:A:OP2	2.08	0.66
1:X:1281:A:H2'	1:X:1282:A:H8	1.60	0.66
1:X:1605:A:O2'	1:X:1606:C:H5'	1.94	0.66
1:X:1977:C:O2'	1:X:1978:U:H5'	1.94	0.66
1:X:2286:G:C6	1:X:2287:G:H1'	2.30	0.66
1:X:2767:C:H1'	4:B:62:PRO:HG3	1.77	0.66
3:A:84:TYR:CE2	3:A:91:ARG:HG2	2.29	0.66
5:C:5:ASN:HD22	5:C:5:ASN:N	1.92	0.66
6:D:53:ALA:HB1	6:D:57:LEU:HD21	1.76	0.66
6:D:73:SER:O	6:D:79:LEU:HB3	1.95	0.66
7:E:42:THR:O	7:E:53:GLU:N	2.21	0.66
8:F:125:ALA:O	8:F:128:VAL:HB	1.95	0.66
9:G:157:PRO:O	9:G:159:SER:N	2.26	0.66
10:H:97:VAL:O	10:H:97:VAL:HG12	1.94	0.66
12:J:136:GLU:HA	12:J:138:TYR:CE2	2.30	0.66
16:N:86:ALA:C	16:N:88:ILE:N	2.48	0.66
18:P:44:VAL:HG23	18:P:45:ILE:N	2.08	0.66
20:R:93:ARG:HH12	20:R:108:VAL:HG23	1.59	0.66
21:S:112:LEU:O	21:S:172:LEU:N	2.28	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
1:X:1615:C:OP1	19:Q:35:LYS:N	2.26	0.66
2:Z:107:C:C2'	2:Z:108:G:H5'	2.26	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:70:ARG:C	3:A:72:LYS:H	1.97	0.66
6:D:5:LYS:O	6:D:8:TYR:HB3	1.94	0.66
6:D:63:GLN:OE1	6:D:89:VAL:HG12	1.95	0.66
6:D:80:ARG:HD3	6:D:83:MET:SD	2.35	0.66
9:G:75:ILE:HG13	9:G:140:GLN:CG	2.24	0.66
10:H:116:ARG:HD2	15:M:38:LYS:HZ3	1.59	0.66
20:R:59:LYS:H	20:R:60:PRO:HD3	1.60	0.66
21:S:53:ASP:HB3	21:S:61:THR:HG23	1.76	0.66
22:T:42:GLY:O	22:T:57:HIS:HB3	1.96	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
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
5:C:44:SER:CB	5:C:88:PRO:HD3	2.25	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:60:A:H8	1:X:60:A:OP1	1.79	0.66
1:X:596:C:N4	11:I:36:GLY:HA3	2.11	0.66
1:X:741:G:C2	1:X:743:A:C4	2.83	0.66
1:X:1919:A:H1'	1:X:1923:U:N3	2.11	0.66
1:X:2185:U:H2'	1:X:2186:G:C8	2.31	0.66
1:X:2625:U:H2'	1:X:2626:U:O4'	1.95	0.66
4:B:182:ILE:O	4:B:183:LEU:HD23	1.96	0.66
5:C:35:LEU:O	5:C:38:ARG:N	2.27	0.66
7:E:109:TYR:HE1	7:E:152:ARG:NH2	1.92	0.66
14:L:69:ALA:HB2	14:L:102:ALA:HB1	1.78	0.66
17:O:93:ILE:O	17:O:93:ILE:HG13	1.94	0.66
18:P:50:VAL:HG11	18:P:90:LEU:HB2	1.77	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:139:A:H2'	1:X:140:G:C8	2.30	0.66
1:X:530:G:H2'	1:X:531:G:C8	2.30	0.66
1:X:1276:U:C1'	26:Y:10:LYS:HG3	2.24	0.66
1:X:1524:C:H3'	1:X:1525:A:H5''	1.77	0.66
1:X:1885:C:C5'	3:A:244:ARG:HD2	2.25	0.66
1:X:2332:G:O2'	22:T:35:ASN:ND2	2.29	0.66
1:X:2404:A:H1'	1:X:2406:C:C4	2.31	0.66
2:Z:47:A:H5'	2:Z:48:A:OP2	1.95	0.66
9:G:82:VAL:HB	9:G:150:VAL:HG13	1.76	0.66
10:H:83:ARG:NH1	15:M:40:ARG:HG3	2.11	0.66
12:J:36:ILE:HD12	12:J:131:LYS:HE3	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:36:ILE:HD11	12:J:103:VAL:HG22	1.76	0.66
12:J:64:LYS:HD3	12:J:108:ALA:O	1.95	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
17:O:56:VAL:CA	17:O:97:GLY:HA3	2.26	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
21:S:148:THR:O	21:S:150:GLY:N	2.28	0.66
1:X:124:A:H2'	1:X:125:A:C8	2.30	0.66
1:X:224:G:H4'	1:X:399:G:C5	2.30	0.66
1:X:589:C:H4'	16:N:31:GLN:OE1	1.94	0.66
1:X:1071:U:H1'	1:X:1073:G:H5'	1.78	0.66
1:X:1231:A:H2'	1:X:1232:U:H6	1.61	0.66
1:X:1790:G:N2	3:A:155:LEU:HA	2.10	0.66
1:X:1812:U:C2	3:A:159:ALA:HB1	2.31	0.66
1:X:2247:A:H8	1:X:2247:A:H5''	1.61	0.66
1:X:2272:A:C5'	14:L:15:ARG:NH2	2.58	0.66
5:C:112:GLN:CD	5:C:116:LYS:HB2	2.16	0.66
6:D:45:GLU:HB2	6:D:78:LYS:NZ	2.09	0.66
7:E:7:GLN:N	7:E:69:ARG:HE	1.94	0.66
14:L:60:LYS:O	14:L:61:SER:OG	2.14	0.66
16:N:40:LEU:HD23	16:N:40:LEU:N	2.11	0.66
17:O:64:GLY:O	17:O:89:ASN:HA	1.96	0.66
18:P:89:ARG:HH21	18:P:132:GLY:HA2	1.61	0.66
1:X:199:A:H61	1:X:209:G:H1'	1.59	0.66
1:X:343:A:H1'	1:X:346:C:N4	2.10	0.66
1:X:469:G:O2'	1:X:470:U:OP2	2.14	0.66
1:X:1066:G:H2'	1:X:1067:G:C8	2.31	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
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:15:ARG:CD	12:J:73:LYS:HZ2	2.09	0.66
12:J:113:GLU:C	12:J:115:ALA:H	1.99	0.66
13:K:24:GLN:HB3	13:K:44:LEU:CD2	2.25	0.66
18:P:32:ARG:HH12	18:P:119:LYS:HB3	1.60	0.66
1:X:540:G:O2'	1:X:542:A:C2	2.44	0.66
1:X:774:A:H3'	1:X:774:A:C8	2.31	0.66
1:X:1463:A:O2'	1:X:1464:A:H5'	1.96	0.66
1:X:1811:A:OP2	1:X:1811:A:H8	1.77	0.66
2:Z:76:U:H2'	2:Z:77:G:O4'	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:123:U:O2	2:Z:123:U:H2'	1.95	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
8:F:101:ASN:HB3	8:F:104:GLN:CD	2.15	0.66
9:G:115:ALA:O	9:G:118:ALA:HB3	1.95	0.66
10:H:25:LEU:HD11	10:H:52:VAL:CG2	2.24	0.66
16:N:64:ARG:O	16:N:66:ASN:N	2.29	0.66
20:R:24:VAL:HB	20:R:29:HIS:O	1.96	0.66
21:S:54:ILE:HG22	21:S:54:ILE:O	1.95	0.66
21:S:123:VAL:HG23	21:S:161:ALA:HB1	1.77	0.66
25:W:38:PRO:CA	25:W:41:ARG:CZ	2.74	0.66
1:X:888:G:H4'	21:S:167:THR:OG1	1.95	0.66
1:X:1513:U:H3'	1:X:1513:U:OP2	1.95	0.66
1:X:2185:U:H2'	1:X:2186:G:H8	1.60	0.66
1:X:2407:G:H5''	1:X:2408:G:OP1	1.95	0.66
2:Z:19:C:H2'	2:Z:20:A:O4'	1.95	0.66
3:A:96:HIS:CE1	3:A:100:GLY:HA2	2.31	0.66
5:C:7:ILE:CG1	5:C:119:ALA:HB1	2.26	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
20:R:10:HIS:HB2	20:R:44:GLN:NE2	2.10	0.66
25:W:38:PRO:HB3	25:W:41:ARG:HH22	1.61	0.66
1:X:1467:U:C4	1:X:1473:U:N3	2.64	0.66
1:X:1674:C:H2'	1:X:1675:C:C6	2.30	0.66
1:X:1838:G:H3'	1:X:1839:A:C8	2.27	0.66
1:X:2240:C:H3'	22:T:17:ASN:OD1	1.96	0.66
6:D:126:GLY:O	6:D:127:ASN:O	2.14	0.66
8:F:118:ALA:HB1	8:F:123:ALA:CB	2.26	0.66
9:G:67:ARG:HD3	9:G:70:PHE:CB	2.25	0.66
10:H:124:MET:O	10:H:127:VAL:HG12	1.96	0.66
14:L:33:ARG:HH22	14:L:103:LEU:H	1.42	0.66
14:L:99:ARG:HG3	14:L:100:VAL:H	1.60	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
18:P:37:LYS:NZ	18:P:64:ALA:N	2.44	0.66
21:S:142:ASN:O	21:S:171:VAL:HB	1.95	0.66
22:T:51:VAL:HG23	22:T:81:ILE:HD11	1.78	0.66
22:T:74:LYS:O	22:T:76:ALA:N	2.29	0.66
1:X:83:A:H2	1:X:98:U:H1'	1.60	0.65
1:X:393:U:O2'	1:X:394:U:H5'	1.95	0.65
1:X:872:G:H2'	1:X:928:G:C6	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:136:ARG:HG2	4:B:137:ARG:N	2.10	0.65
4:B:141:ILE:CG2	4:B:150:VAL:HB	2.26	0.65
6:D:169:LEU:HA	6:D:172:SER:OG	1.96	0.65
8:F:75:MET:HA	8:F:78:LEU:CB	2.20	0.65
9:G:34:PRO:O	9:G:69:ASP:OD1	2.14	0.65
14:L:31:VAL:HG23	14:L:32:TYR:N	2.10	0.65
19:Q:66:GLY:C	19:Q:68:PHE:H	1.97	0.65
21:S:30:VAL:HG12	21:S:31:SER:N	2.10	0.65
1:X:1056:U:H4'	1:X:1058:G:H1'	1.78	0.65
1:X:1069:G:H2'	1:X:1070:G:O4'	1.96	0.65
1:X:1137:A:H4'	1:X:1138:A:H5''	1.77	0.65
1:X:1193:G:H2'	1:X:1194:U:O4'	1.96	0.65
1:X:1218:C:O2'	11:I:8:PRO:HA	1.94	0.65
1:X:1415:C:O2'	1:X:1416:A:H5'	1.95	0.65
6:D:88:LYS:HG2	6:D:89:VAL:N	2.11	0.65
6:D:132:ILE:HG13	6:D:154:ILE:CD1	2.26	0.65
7:E:131:ILE:HG22	7:E:132:ASP:H	1.61	0.65
9:G:84:ASN:HB3	9:G:87:GLN:HE22	1.61	0.65
14:L:60:LYS:HG2	14:L:62:GLY:H	1.61	0.65
21:S:21:ALA:HA	21:S:81:VAL:O	1.95	0.65
25:W:20:VAL:HA	25:W:23:LEU:HD12	1.78	0.65
1:X:589:C:H4'	16:N:31:GLN:CD	2.17	0.65
1:X:650:U:H2'	1:X:651:C:C6	2.31	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:2527:G:C6	1:X:2540:A:N1	2.63	0.65
1:X:2617:G:P	4:B:82:ARG:HH22	2.20	0.65
3:A:91:ARG:CD	3:A:198:ASN:HA	2.25	0.65
4:B:2:LYS:HG2	4:B:84:PHE:CE1	2.31	0.65
5:C:7:ILE:HG12	5:C:119:ALA:HB1	1.78	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
11:I:76:LYS:HB3	11:I:79:GLN:CD	2.16	0.65
12:J:70:PHE:C	12:J:70:PHE:HD2	1.99	0.65
16:N:106:PHE:HA	16:N:109:LEU:HD12	1.79	0.65
21:S:54:ILE:HG21	21:S:62:PHE:HD1	1.62	0.65
21:S:154:LEU:HD13	21:S:158:CYS:O	1.97	0.65
25:W:38:PRO:CB	25:W:41:ARG:NH2	2.59	0.65
1:X:766:A:O2'	1:X:767:G:H5'	1.97	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1515:U:H2'	1:X:1516:A:H8	1.61	0.65
1:X:1739:G:H2'	1:X:1740:G:H8	1.61	0.65
1:X:2197:U:H2'	1:X:2198:U:H5	1.58	0.65
1:X:2394:G:H5''	11:I:63:ARG:NE	2.10	0.65
1:X:2796:A:C2	1:X:2797:G:C4	2.85	0.65
4:B:24:THR:HG21	4:B:188:ILE:HD13	1.78	0.65
4:B:69:LYS:O	4:B:69:LYS:HD2	1.97	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
9:G:44:VAL:O	9:G:83:ILE:HG12	1.97	0.65
14:L:69:ALA:HB1	14:L:106:ALA:HB2	1.78	0.65
16:N:33:ARG:HH11	16:N:33:ARG:HG3	1.61	0.65
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:497:C:C6	1:X:497:C:H5'	2.32	0.65
1:X:617:U:H3'	1:X:617:U:O2	1.97	0.65
1:X:687:G:O2'	1:X:688:A:H5'	1.94	0.65
1:X:1211:G:H2'	1:X:1212:U:H6	1.61	0.65
1:X:1517:C:H2'	1:X:1518:C:H6	1.61	0.65
1:X:2451:G:H2'	1:X:2454:C:H42	1.62	0.65
1:X:2654:A:H5'	10:H:41:ASN:HB2	1.79	0.65
1:X:2761:A:H5''	1:X:2762:G:H5'	1.78	0.65
2:Z:95:U:H2'	2:Z:96:C:C6	2.32	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
10:H:3:MET:HB2	10:H:4:PRO:HD2	1.78	0.65
11:I:86:THR:OG1	11:I:118:VAL:HG12	1.97	0.65
15:M:34:ARG:NH1	15:M:81:PHE:HB3	2.11	0.65
15:M:43:ASN:O	15:M:43:ASN:ND2	2.21	0.65
17:O:36:LYS:HB3	17:O:39:PHE:HE2	1.60	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:579:G:H5'	1:X:994:A:H2	1.61	0.65
1:X:983:G:H3'	1:X:984:A:C5'	2.21	0.65
1:X:1840:A:H2'	1:X:1841:G:O4'	1.97	0.65
6:D:60:ILE:CD1	6:D:61:THR:HG23	2.27	0.65
9:G:70:PHE:HB2	16:N:64:ARG:CD	2.27	0.65
11:I:7:LYS:C	11:I:9:THR:H	2.00	0.65
14:L:20:THR:HG23	14:L:23:ALA:HB3	1.76	0.65
20:R:75:ALA:C	20:R:76:LEU:HD23	2.17	0.65
24:V:32:ALA:C	24:V:34:ALA:H	2.00	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:4:11:CYS:HB3	30:4:32:HIS:CE1	2.31	0.65
1:X:48:A:C5'	1:X:49:U:H5'	2.26	0.65
1:X:538:A:C2	1:X:2025:A:C6	2.85	0.65
1:X:1935:A:C2	10:H:22:ILE:HD11	2.31	0.65
1:X:2262:C:C2'	1:X:2263:C:H5'	2.26	0.65
3:A:89:SER:HB2	3:A:201:HIS:CE1	2.31	0.65
3:A:213:ARG:C	3:A:215:LEU:N	2.49	0.65
4:B:91:VAL:HG12	4:B:92:ASN:N	2.11	0.65
4:B:152:LYS:CB	9:G:106:TYR:HB3	2.26	0.65
4:B:165:VAL:CG1	4:B:189:PRO:HG2	2.27	0.65
6:D:36:VAL:HG21	6:D:61:THR:HG21	1.79	0.65
11:I:82:ASP:H	11:I:114:ILE:HG21	1.62	0.65
15:M:44:ARG:HD2	15:M:46:ARG:HH21	1.62	0.65
17:O:7:THR:O	17:O:8:GLY:C	2.33	0.65
18:P:36:ARG:HH22	26:Y:20:ARG:NH2	1.94	0.65
24:V:31:GLN:OE1	24:V:37:LEU:HA	1.96	0.65
1:X:542:A:N6	1:X:2003:A:N3	2.45	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
1:X:2331:A:C2	22:T:33:ALA:O	2.49	0.65
1:X:2394:G:OP1	11:I:63:ARG:HD2	1.96	0.65
1:X:2394:G:H2'	1:X:2395:C:C6	2.31	0.65
1:X:2551:A:O2'	1:X:2552:C:OP2	2.14	0.65
2:Z:29:C:O3'	14:L:37:HIS:CD2	2.50	0.65
4:B:40:GLN:O	4:B:41:THR:HG23	1.97	0.65
5:C:172:VAL:O	5:C:174:GLY:N	2.29	0.65
6:D:34:ILE:O	6:D:91:LEU:N	2.28	0.65
7:E:17:VAL:O	7:E:26:VAL:HA	1.95	0.65
9:G:75:ILE:HG13	9:G:140:GLN:HG3	1.77	0.65
13:K:79:VAL:HA	13:K:83:VAL:HG23	1.78	0.65
16:N:17:VAL:HG11	16:N:36:PHE:HB2	1.79	0.65
21:S:67:LYS:CE	21:S:84:TYR:HB2	2.27	0.65
21:S:91:PRO:O	21:S:92:VAL:HG13	1.97	0.65
22:T:53:MET:HG3	22:T:58:THR:O	1.97	0.65
23:U:27:ASP:C	23:U:32:ARG:NE	2.50	0.65
24:V:51:ALA:O	24:V:54:ASN:HB2	1.96	0.65
1:X:1242:A:H2'	1:X:1243:G:C8	2.27	0.65
1:X:1444:C:H2'	1:X:1445:A:H8	1.62	0.65
1:X:1724:C:O2'	1:X:1725:C:H5'	1.96	0.65
1:X:1800:A:C6	1:X:1802:A:C6	2.85	0.65
2:Z:46:G:C4'	6:D:92:ARG:HH12	2.09	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:48:GLN:O	4:B:48:GLN:HG2	1.96	0.65
5:C:46:ARG:HG2	5:C:46:ARG:HH11	1.62	0.65
5:C:117:LEU:HD23	5:C:117:LEU:C	2.18	0.65
7:E:109:TYR:O	7:E:111:HIS:N	2.29	0.65
11:I:94:GLU:CA	11:I:97:ARG:HE	2.09	0.65
12:J:36:ILE:HB	12:J:131:LYS:HG2	1.77	0.65
12:J:113:GLU:HA	12:J:116:LYS:HB2	1.77	0.65
14:L:38:ILE:HD12	14:L:39:TYR:H	1.61	0.65
16:N:64:ARG:O	16:N:67:ALA:N	2.29	0.65
18:P:38:VAL:HG13	18:P:64:ALA:HB1	1.78	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
20:R:105:ARG:HH12	20:R:113:THR:H	1.45	0.65
22:T:23:VAL:HG13	22:T:38:VAL:HG22	1.79	0.65
22:T:43:THR:HG22	22:T:46:LYS:HD2	1.79	0.65
24:V:14:PHE:CE2	24:V:57:LYS:HB2	2.32	0.65
1:X:1186:G:H4'	1:X:1187:A:O5'	1.96	0.65
1:X:1783:G:OP1	3:A:206:LEU:HD12	1.97	0.65
1:X:2039:G:N2	26:Y:4:HIS:O	2.30	0.65
5:C:58:MET:HG3	5:C:59:TYR:N	2.12	0.65
6:D:10:ASP:C	6:D:12:VAL:N	2.50	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
1:X:118:U:H1'	1:X:143:A:C8	2.33	0.64
1:X:403:A:H3'	1:X:403:A:P	2.37	0.64
1:X:498:C:O2	18:P:74:SER:HB2	1.97	0.64
1:X:830:C:O2'	1:X:852:U:H5''	1.97	0.64
1:X:1354:A:H4'	19:Q:56:MET:HG2	1.78	0.64
1:X:1442:C:N4	1:X:1585:A:H5'	2.12	0.64
1:X:1880:G:H2'	1:X:1881:U:H6	1.62	0.64
1:X:2078:G:H2'	1:X:2079:A:H8	1.62	0.64
1:X:2170:C:C3'	1:X:2171:U:H5''	2.26	0.64
1:X:2285:U:H5'	1:X:2286:G:O4'	1.97	0.64
3:A:91:ARG:O	3:A:107:ALA:HB3	1.97	0.64
3:A:101:GLU:OE2	3:A:102:LYS:N	2.31	0.64
5:C:158:ARG:NH2	5:C:171:PRO:HA	2.12	0.64
6:D:97:TYR:HD2	6:D:100:LEU:HD23	1.63	0.64
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
19:Q:55:THR:HG22	19:Q:78:ALA:HA	1.78	0.64
20:R:22:VAL:O	20:R:33:THR:OG1	2.13	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:42:ALA:O	21:S:45:GLN:HG2	1.96	0.64
1:X:673:G:H5'	5:C:93:TYR:CE1	2.32	0.64
1:X:1039:A:C5	1:X:1136:G:N2	2.64	0.64
1:X:2633:A:H4'	1:X:2634:G:OP1	1.96	0.64
3:A:140:ALA:O	3:A:142:VAL:HG13	1.97	0.64
4:B:56:GLU:O	4:B:59:VAL:HG23	1.97	0.64
5:C:162:ARG:HG2	5:C:162:ARG:O	1.95	0.64
6:D:111:ILE:HB	6:D:114:PHE:CB	2.23	0.64
7:E:54:ARG:HG3	7:E:57:ASP:OD2	1.97	0.64
9:G:161:GLN:O	9:G:162:LYS:HG3	1.98	0.64
11:I:11:GLY:H	11:I:14:LYS:HB3	1.61	0.64
11:I:132:ALA:O	11:I:136:ALA:HB3	1.97	0.64
13:K:11:ASN:ND2	13:K:17:ARG:NH1	2.39	0.64
14:L:54:ALA:HB3	14:L:75:LEU:HB2	1.80	0.64
18:P:66:GLU:O	18:P:67:PRO:C	2.34	0.64
21:S:3:LEU:HD11	21:S:33:ALA:N	2.13	0.64
1:X:449:C:O2	1:X:449:C:H2'	1.98	0.64
1:X:490:A:N6	1:X:492:G:C2	2.66	0.64
1:X:1018:C:C5	1:X:1019:U:H5	2.15	0.64
1:X:2196:U:H2'	1:X:2197:U:N1	2.12	0.64
3:A:95:LEU:HD12	3:A:105:ILE:HG12	1.80	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
10:H:4:PRO:O	10:H:5:GLN:CB	2.45	0.64
12:J:92:GLU:O	12:J:93:TYR:HB3	1.96	0.64
12:J:116:LYS:O	12:J:116:LYS:HD3	1.98	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
17:O:33:VAL:CG1	17:O:57:GLN:HG2	2.27	0.64
20:R:98:ILE:HG22	20:R:99:VAL:N	2.09	0.64
21:S:117:VAL:HG23	21:S:117:VAL:O	1.97	0.64
24:V:7:ARG:O	24:V:9:LEU:N	2.30	0.64
1:X:91:A:H3'	1:X:91:A:OP2	1.97	0.64
1:X:333:A:C3'	5:C:162:ARG:NH1	2.59	0.64
1:X:1142:G:H4'	9:G:103:TYR:HE2	1.62	0.64
1:X:2571:G:N1	1:X:2582:G:C6	2.65	0.64
4:B:9:ILE:HD11	4:B:27:LEU:HD22	1.80	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
7:E:35:VAL:HB	7:E:37:TYR:CE1	2.32	0.64
12:J:36:ILE:CB	12:J:131:LYS:HE2	2.27	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:14:SER:O	13:K:15:SER:C	2.35	0.64
13:K:31:GLU:O	13:K:33:ARG:N	2.27	0.64
16:N:82:GLY:O	16:N:116:ALA:HB3	1.98	0.64
19:Q:42:ILE:C	19:Q:42:ILE:HD13	2.18	0.64
1:X:88:G:H3'	1:X:89:A:C5'	2.23	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:1943:A:H2'	1:X:1944:C:O4'	1.97	0.64
6:D:4:LEU:CA	6:D:7:LYS:HB2	2.25	0.64
6:D:7:LYS:O	6:D:12:VAL:HG21	1.98	0.64
16:N:61:TRP:HZ3	16:N:94:VAL:H	1.43	0.64
19:Q:71:GLN:O	19:Q:73:ASN:OD1	2.15	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
21:S:61:THR:HG22	21:S:61:THR:O	1.97	0.64
24:V:37:LEU:CD2	24:V:39:GLN:H	2.10	0.64
26:Y:16:ARG:NH1	26:Y:20:ARG:HH12	1.93	0.64
1:X:53:G:H2'	1:X:54:G:O5'	1.98	0.64
1:X:428:A:H2'	1:X:429:C:C6	2.32	0.64
1:X:490:A:HO2'	1:X:491:A:P	2.20	0.64
1:X:718:A:H62	1:X:739:G:H1'	1.61	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:1118:G:H2'	1:X:1119:U:C5'	2.28	0.64
1:X:1314:A:C2'	1:X:1315:A:H3'	2.28	0.64
1:X:2037:A:C2	1:X:2595:C:N3	2.66	0.64
3:A:202:LYS:C	3:A:204:ILE:H	2.00	0.64
4:B:68:ALA:O	4:B:70:ALA:N	2.24	0.64
5:C:151:VAL:HG11	5:C:175:VAL:CG1	2.27	0.64
6:D:10:ASP:O	6:D:14:PRO:HD2	1.97	0.64
6:D:127:ASN:HA	6:D:158:THR:HG23	1.79	0.64
10:H:25:LEU:HD12	10:H:25:LEU:H	1.63	0.64
12:J:68:ARG:HB3	12:J:68:ARG:HH11	1.61	0.64
18:P:76:LYS:O	18:P:80:LEU:HG	1.98	0.64
25:W:47:VAL:CG2	25:W:51:LEU:HD21	2.28	0.64
1:X:215:G:N2	1:X:216:U:H1'	2.12	0.64
1:X:308:C:O2'	1:X:309:G:H5'	1.98	0.64
1:X:1104:G:H1'	1:X:1110:G:N2	2.12	0.64
1:X:1656:U:O2'	1:X:1657:A:H5''	1.98	0.64
1:X:1812:U:H3	3:A:200:GLU:CA	2.09	0.64
1:X:2256:G:OP2	12:J:86:LYS:HD2	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2509:A:C3'	1:X:2510:A:H5''	2.27	0.64
7:E:107:ILE:O	7:E:107:ILE:HG12	1.97	0.64
10:H:99:ILE:O	10:H:106:ARG:HG3	1.97	0.64
13:K:11:ASN:HD21	13:K:17:ARG:HH12	1.45	0.64
13:K:30:ARG:HG2	13:K:31:GLU:HG3	1.79	0.64
16:N:75:ASN:HD21	16:N:77:SER:HB3	1.63	0.64
22:T:3:HIS:HD2	22:T:5:LYS:HB2	1.63	0.64
22:T:72:LYS:HG3	22:T:78:PHE:CE1	2.32	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:223:C:H2'	1:X:224:G:H5'	1.80	0.64
1:X:482:A:C2'	1:X:483:A:H5'	2.27	0.64
1:X:542:A:N1	1:X:2004:U:H2'	2.13	0.64
1:X:583:C:H4'	1:X:584:A:O5'	1.96	0.64
1:X:691:C:O2'	1:X:692:C:H5'	1.97	0.64
1:X:1217:U:O2'	1:X:1218:C:H5'	1.98	0.64
1:X:1225:G:H2'	1:X:1249:G:N2	2.13	0.64
1:X:1591:U:H2'	1:X:1592:U:O4'	1.98	0.64
1:X:1597:A:H2'	1:X:1598:C:C6	2.33	0.64
1:X:2570:C:O2'	1:X:2571:G:H5'	1.98	0.64
4:B:4:ILE:HG12	4:B:5:LEU:N	2.12	0.64
8:F:91:THR:O	8:F:94:LYS:NZ	2.30	0.64
10:H:9:ASP:O	10:H:96:ALA:N	2.27	0.64
16:N:88:ILE:CG1	17:O:49:GLU:HB2	2.25	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
21:S:64:ALA:HA	21:S:85:MET:HA	1.78	0.64
25:W:14:GLY:HA2	25:W:17:VAL:CG2	2.28	0.64
1:X:328:A:H2'	1:X:329:C:H6	1.61	0.64
1:X:664:C:O5'	1:X:666:U:OP2	2.16	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
1:X:1071:U:C1'	1:X:1073:G:H5'	2.27	0.64
1:X:1467:U:H3'	1:X:1467:U:C6	2.32	0.64
1:X:1812:U:N3	3:A:200:GLU:HA	2.11	0.64
1:X:1830:C:H41	1:X:1881:U:H3'	1.62	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
6:D:40:LEU:CG	6:D:150:ARG:HE	2.03	0.64
14:L:14:ARG:O	14:L:17:VAL:HG12	1.98	0.64
16:N:56:ASP:O	16:N:57:PHE:C	2.34	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
19:Q:6:ILE:CG2	19:Q:7:LEU:N	2.61	0.64
19:Q:29:VAL:HG23	19:Q:30:SER:N	2.11	0.64
1:X:389:G:H2'	1:X:390:U:C6	2.32	0.64
1:X:704:G:O2'	1:X:705:C:H5'	1.98	0.64
1:X:1090:C:H2'	1:X:1091:C:C6	2.33	0.64
1:X:1760:G:O2'	1:X:1761:G:H5'	1.98	0.64
1:X:2294:U:H4'	6:D:127:ASN:ND2	2.13	0.64
1:X:2564:U:H3	32:X:2911:ZLD:H21A	1.63	0.64
2:Z:116:C:H2'	2:Z:117:G:O4'	1.98	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
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
1:X:219:G:N2	1:X:231:G:H2'	2.12	0.63
1:X:814:G:O2'	1:X:815:A:OP1	2.16	0.63
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:1340:C:H2'	1:X:1341:G:O4'	1.98	0.63
1:X:1465:G:H2'	1:X:1466:C:C6	2.34	0.63
1:X:2227:C:H5''	1:X:2228:U:OP2	1.98	0.63
2:Z:31:A:H1'	2:Z:60:A:H61	1.61	0.63
3:A:133:LEU:O	3:A:136:VAL:HB	1.98	0.63
5:C:150:LEU:HA	5:C:187:VAL:HB	1.79	0.63
5:C:176:ASN:O	5:C:180:ILE:HG22	1.98	0.63
6:D:5:LYS:C	6:D:8:TYR:H	2.01	0.63
7:E:44:ARG:NH2	7:E:51:LEU:HB3	2.13	0.63
13:K:16:ALA:O	13:K:18:VAL:N	2.31	0.63
14:L:86:GLN:O	14:L:87:VAL:HG23	1.98	0.63
16:N:5:LYS:C	16:N:7:GLY:N	2.47	0.63
18:P:107:ILE:O	18:P:107:ILE:CG2	2.46	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
1:X:171:G:N2	1:X:179:U:H1'	2.14	0.63
1:X:492:G:H2'	1:X:517:A:N1	2.13	0.63
1:X:589:C:H4'	16:N:31:GLN:NE2	2.12	0.63
1:X:946:U:C2	1:X:947:C:C6	2.86	0.63
1:X:1122:A:H2'	1:X:1123:G:C4'	2.23	0.63
1:X:1453:A:H2'	1:X:1454:U:O4'	1.98	0.63
1:X:2271:C:H4'	1:X:2354:G:O4'	1.97	0.63
1:X:2284:U:H2'	1:X:2285:U:C4'	2.27	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2299:A:H4'	1:X:2300:G:C2	2.33	0.63
1:X:2753:C:O2'	1:X:2754:C:H5'	1.98	0.63
3:A:143:HIS:CD2	3:A:192:THR:HB	2.33	0.63
3:A:224:SER:OG	3:A:225:ALA:N	2.30	0.63
5:C:28:HIS:HA	11:I:15:ASP:OD2	1.99	0.63
13:K:55:ALA:C	13:K:57:GLY:H	2.00	0.63
15:M:50:PHE:HE2	15:M:70:LYS:HB2	1.62	0.63
16:N:71:LEU:HG	16:N:72:HIS:ND1	2.12	0.63
16:N:74:MET:SD	16:N:110:VAL:HG13	2.38	0.63
16:N:88:ILE:HG23	17:O:48:GLY:HA3	1.80	0.63
20:R:111:GLY:C	20:R:112:LYS:HD2	2.19	0.63
1:X:114:C:H2'	1:X:115:G:C8	2.33	0.63
1:X:613:A:H5''	1:X:668:A:H61	1.62	0.63
1:X:638:A:H4'	1:X:639:G:OP1	1.97	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:1501:C:H2'	1:X:1502:G:O4'	1.98	0.63
1:X:1560:A:C6	1:X:1561:A:C6	2.86	0.63
1:X:1812:U:N3	3:A:200:GLU:HB2	2.12	0.63
1:X:2180:U:H2'	1:X:2203:G:N2	2.12	0.63
1:X:2291:U:OP1	6:D:71:LYS:HB2	1.98	0.63
1:X:2395:C:C2'	1:X:2396:C:H5''	2.27	0.63
4:B:101:LYS:HE3	4:B:169:ASN:O	1.98	0.63
5:C:153:ASP:C	5:C:154:ASP:OD1	2.37	0.63
6:D:74:ILE:CA	6:D:79:LEU:HB2	2.29	0.63
7:E:72:VAL:O	7:E:76:VAL:HG23	1.97	0.63
13:K:100:VAL:CG2	13:K:112:LEU:HD22	2.26	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
20:R:105:ARG:HH22	20:R:112:LYS:N	1.95	0.63
23:U:50:ALA:HB3	23:U:52:ARG:NH1	2.13	0.63
25:W:14:GLY:CA	25:W:17:VAL:HG23	2.27	0.63
26:Y:45:ILE:HD13	26:Y:57:VAL:HG22	1.80	0.63
1:X:331:U:O2'	5:C:162:ARG:HD3	1.98	0.63
1:X:1193:G:C2'	1:X:1194:U:H5''	2.29	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
1:X:2336:G:N2	1:X:2339:A:OP2	2.25	0.63
2:Z:28:A:N7	2:Z:29:C:N3	2.47	0.63
2:Z:35:C:H2'	2:Z:36:A:H8	1.63	0.63
5:C:98:GLN:HA	5:C:101:GLN:HG3	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:70:ALA:C	6:D:72:LYS:H	2.01	0.63
19:Q:40:ASP:O	19:Q:44:GLN:HG2	1.99	0.63
22:T:53:MET:HE2	22:T:59:LEU:HD11	1.81	0.63
1:X:134:G:H2'	1:X:135:U:H5'	1.80	0.63
1:X:1175:A:C2	1:X:1176:U:C2	2.86	0.63
1:X:2546:G:H2'	1:X:2547:C:C6	2.33	0.63
4:B:33:ILE:HG21	4:B:47:VAL:HG11	1.79	0.63
4:B:37:LYS:HD2	4:B:42:ASP:OD2	1.98	0.63
5:C:45:THR:C	5:C:47:THR:H	2.02	0.63
5:C:124:ASP:OD2	5:C:136:TRP:HE3	1.80	0.63
6:D:75:SER:H	6:D:79:LEU:HD22	1.63	0.63
6:D:100:LEU:C	6:D:104:ILE:HG13	2.18	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
10:H:100:ASN:O	10:H:100:ASN:OD1	2.17	0.63
14:L:32:TYR:H	14:L:38:ILE:CD1	2.12	0.63
16:N:24:PHE:CE2	16:N:39:LEU:HD21	2.33	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
23:U:34:THR:CG2	23:U:35:THR:N	2.61	0.63
1:X:625:A:N3	1:X:625:A:H2'	2.14	0.63
1:X:1389:C:O2'	1:X:1390:G:H5'	1.98	0.63
1:X:1442:C:H41	1:X:1585:A:H5'	1.63	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
10:H:16:ALA:HA	10:H:58:ALA:HB1	1.81	0.63
15:M:36:ASP:HB2	15:M:87:LEU:O	1.98	0.63
19:Q:63:LYS:HB2	19:Q:70:GLY:CA	2.29	0.63
21:S:4:THR:OG1	21:S:5:ALA:N	2.31	0.63
21:S:15:ASP:HB2	21:S:16:GLU:OE2	1.97	0.63
1:X:1303:U:H2'	1:X:1304:U:H6	1.63	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:1953:A:C5'	1:X:1954:A:OP1	2.45	0.63
1:X:2375:G:H2'	1:X:2376:G:H8	1.63	0.63
1:X:2761:A:H5''	1:X:2762:G:C5'	2.29	0.63
1:X:2796:A:OP2	13:K:3:HIS:HE1	1.80	0.63
1:X:2847:G:H2'	1:X:2848:A:C8	2.34	0.63
1:X:2858:A:H3'	1:X:2859:U:H5'	1.81	0.63
6:D:47:SER:HA	6:D:50:ILE:CG1	2.29	0.63
7:E:6:LYS:HB3	7:E:69:ARG:NH2	2.14	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:39:GLU:OE2	12:J:129:GLN:N	2.31	0.63
12:J:70:PHE:CE2	12:J:71:PRO:O	2.52	0.63
13:K:100:VAL:CG1	13:K:101:GLY:H	2.03	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
20:R:108:VAL:C	20:R:110:SER:H	2.00	0.63
1:X:308:C:H2'	1:X:309:G:O4'	1.99	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:1135:C:C2	1:X:1136:G:C8	2.87	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
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
2:Z:17:A:H1'	2:Z:112:A:C8	2.34	0.63
4:B:60:ASN:HB2	4:B:63:MET:HB2	1.81	0.63
5:C:7:ILE:HG21	5:C:121:ASP:C	2.19	0.63
5:C:46:ARG:O	5:C:51:VAL:HG23	1.99	0.63
6:D:94:GLU:O	6:D:98:VAL:HG23	1.99	0.63
10:H:133:VAL:HG12	10:H:133:VAL:O	1.98	0.63
11:I:81:GLN:HB3	11:I:114:ILE:HG22	1.81	0.63
12:J:66:TYR:HB2	12:J:106:GLU:O	1.99	0.63
16:N:92:ARG:HD3	16:N:92:ARG:H	1.64	0.63
23:U:78:ILE:O	23:U:79:GLU:O	2.17	0.63
26:Y:9:LYS:O	26:Y:10:LYS:C	2.36	0.63
1:X:1107:A:H3'	1:X:1108:U:H5''	1.79	0.63
1:X:1233:A:O2'	1:X:1234:C:OP1	2.15	0.63
1:X:2394:G:H2'	1:X:2395:C:H6	1.64	0.63
3:A:33:LEU:HD21	3:A:63:ARG:CZ	2.29	0.63
3:A:142:VAL:HA	3:A:194:GLY:N	2.14	0.63
4:B:141:ILE:HG21	4:B:150:VAL:HB	1.80	0.63
5:C:128:ALA:O	5:C:130:THR:N	2.32	0.63
11:I:94:GLU:HA	11:I:97:ARG:HE	1.64	0.63
12:J:44:LYS:HB2	12:J:47:GLN:CG	2.26	0.63
13:K:10:LEU:HD12	13:K:17:ARG:HG2	1.81	0.63
16:N:60:LEU:HD21	16:N:64:ARG:NE	2.13	0.63
21:S:20:ALA:CB	21:S:80:HIS:ND1	2.62	0.63
21:S:94:VAL:CB	21:S:125:PRO:HB3	2.25	0.63
23:U:62:LEU:HD21	23:U:67:LEU:HA	1.80	0.63
26:Y:35:GLN:C	26:Y:37:HIS:H	2.01	0.63
30:4:3:VAL:HG22	30:4:35:ARG:HB3	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:4:24:LEU:H	30:4:24:LEU:HD12	1.63	0.63
1:X:143:A:H2'	1:X:144:U:C6	2.34	0.62
1:X:493:A:H4'	20:R:56:LYS:HD2	1.81	0.62
1:X:777:A:O2'	1:X:778:G:OP1	2.16	0.62
1:X:2074:U:H1'	23:U:48:LYS:HE3	1.80	0.62
1:X:2082:C:C2'	1:X:2083:G:H5''	2.28	0.62
1:X:2617:G:O2'	1:X:2618:A:H8	1.76	0.62
7:E:167:GLU:HG3	7:E:169:ILE:HG13	1.81	0.62
12:J:12:LYS:O	12:J:13:GLN:CB	2.46	0.62
13:K:33:ARG:HA	13:K:114:GLU:HA	1.81	0.62
14:L:68:ALA:O	14:L:71:VAL:CG1	2.46	0.62
15:M:55:ILE:O	15:M:56:ALA:CB	2.43	0.62
18:P:38:VAL:O	18:P:39:ARG:C	2.37	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
23:U:50:ALA:HB3	23:U:52:ARG:HH22	1.63	0.62
1:X:166:G:H1	1:X:182:G:HO2'	1.46	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:822:G:H2'	1:X:823:U:O4'	1.99	0.62
1:X:986:A:O3'	16:N:48:ARG:NH1	2.33	0.62
1:X:1380:C:C2'	1:X:1381:G:H5'	2.29	0.62
1:X:2219:U:O2'	1:X:2220:A:H5'	1.99	0.62
1:X:2661:G:O6	1:X:2708:U:H1'	1.99	0.62
6:D:106:ILE:HG21	6:D:139:PRO:HB3	1.81	0.62
7:E:107:ILE:HD13	7:E:107:ILE:N	2.15	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
15:M:50:PHE:CD1	15:M:79:ARG:HG3	2.32	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
20:R:40:LEU:HB3	20:R:43:ASP:HB2	1.80	0.62
1:X:800:U:H3'	1:X:804:C:H41	1.64	0.62
1:X:1233:A:H4'	1:X:1234:C:OP2	1.98	0.62
1:X:1255:A:C6	1:X:1256:C:N4	2.67	0.62
1:X:2665:G:H2'	1:X:2666:U:H6	1.64	0.62
2:Z:29:C:O3'	14:L:37:HIS:HD2	1.81	0.62
3:A:217:ARG:CG	3:A:218:LYS:HG3	2.29	0.62
4:B:21:ILE:N	4:B:21:ILE:CD1	2.62	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)
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
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
25:W:14:GLY:O	25:W:15:ASN:C	2.38	0.62
1:X:1068:A:H62	1:X:1098:G:P	2.22	0.62
1:X:1778:U:H2'	1:X:1779:C:C6	2.33	0.62
1:X:1790:G:H21	3:A:155:LEU:HD23	1.63	0.62
1:X:2409:A:H4'	1:X:2410:U:OP2	1.99	0.62
3:A:165:VAL:HG12	3:A:166:GLN:N	2.14	0.62
4:B:38:THR:HG22	4:B:40:GLN:N	2.03	0.62
5:C:147:LYS:HB3	5:C:183:HIS:CB	2.29	0.62
6:D:29:PRO:HB3	6:D:160:ALA:HB2	1.80	0.62
9:G:90:LEU:HD23	9:G:94:LYS:CB	2.28	0.62
9:G:90:LEU:HD23	9:G:94:LYS:HB2	1.81	0.62
10:H:23:ARG:HB3	10:H:23:ARG:NH2	2.13	0.62
10:H:23:ARG:NH2	10:H:23:ARG:C	2.52	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
15:M:28:ARG:HB2	15:M:29:PRO:CD	2.28	0.62
16:N:10:ARG:CG	16:N:13:ARG:HH22	2.01	0.62
17:O:78:VAL:O	17:O:78:VAL:CG2	2.40	0.62
25:W:2:LYS:HD2	25:W:32:ARG:O	1.99	0.62
1:X:663:G:H3'	1:X:664:C:H5''	1.80	0.62
1:X:774:A:C8	1:X:774:A:O5'	2.52	0.62
1:X:1775:A:H4'	1:X:1776:A:O5'	2.00	0.62
1:X:1777:A:H5''	1:X:1778:U:OP2	2.00	0.62
1:X:1919:A:H62	1:X:1946:U:H3	1.45	0.62
1:X:2355:A:H2	14:L:89:PHE:CE1	2.16	0.62
1:X:2736:U:O2'	1:X:2737:A:C5'	2.46	0.62
1:X:2777:A:C6	18:P:134:LYS:HB2	2.35	0.62
2:Z:15:A:C2'	2:Z:16:U:H5''	2.29	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
6:D:50:ILE:C	6:D:52:LYS:H	2.03	0.62
7:E:7:GLN:N	7:E:69:ARG:NE	2.47	0.62
11:I:62:LYS:HE2	11:I:64:GLY:CA	2.24	0.62
13:K:3:HIS:ND1	13:K:5:LYS:CD	2.63	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
21:S:31:SER:C	21:S:32:PHE:HD2	2.02	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:1:MET:SD	24:V:2:LYS:HE2	2.38	0.62
24:V:48:ARG:C	24:V:50:VAL:N	2.52	0.62
1:X:102:C:H2'	1:X:103:U:C6	2.35	0.62
1:X:421:G:H2'	1:X:422:C:C6	2.32	0.62
1:X:592:G:P	16:N:10:ARG:NH1	2.72	0.62
1:X:1177:U:H2'	1:X:1178:C:C6	2.35	0.62
1:X:1416:A:C2	1:X:1417:C:C2	2.87	0.62
1:X:1420:A:H2'	1:X:1421:U:C6	2.34	0.62
1:X:1468:A:O5'	1:X:1468:A:H8	1.82	0.62
1:X:1971:C:C2'	1:X:1972:G:H5'	2.30	0.62
2:Z:66:G:H2'	2:Z:67:C:O4'	1.99	0.62
3:A:46:ARG:O	3:A:46:ARG:HD3	1.99	0.62
3:A:54:ILE:HD12	3:A:55:GLY:N	2.14	0.62
6:D:34:ILE:HG22	6:D:91:LEU:HD12	1.80	0.62
7:E:154:PRO:HG3	7:E:162:VAL:O	1.99	0.62
13:K:16:ALA:O	13:K:17:ARG:C	2.37	0.62
15:M:22:ARG:HH11	15:M:22:ARG:HG2	1.65	0.62
17:O:29:ALA:O	17:O:30:GLY:C	2.37	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
21:S:103:ARG:HH11	21:S:108:VAL:CG2	2.13	0.62
23:U:53:GLU:CD	23:U:57:VAL:HA	2.19	0.62
25:W:4:LYS:HG2	25:W:52:GLU:O	1.99	0.62
1:X:562:G:H2'	1:X:563:U:O4'	1.99	0.62
1:X:719:A:H2'	1:X:720:A:O4'	2.00	0.62
1:X:765:C:H4'	1:X:766:A:O5'	2.00	0.62
1:X:956:A:C2	1:X:2427:A:N3	2.67	0.62
1:X:1036:G:O2'	1:X:1037:U:OP2	2.14	0.62
1:X:1658:A:N6	1:X:1659:G:C2	2.68	0.62
32:X:2911:ZLD:H20	32:X:2911:ZLD:F18	1.90	0.62
3:A:99:ASP:OD2	3:A:99:ASP:N	2.30	0.62
3:A:173:VAL:O	3:A:174:ILE:HD13	1.99	0.62
6:D:34:ILE:HG23	6:D:155:THR:O	2.00	0.62
9:G:72:PRO:C	9:G:74:MET:N	2.53	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
14:L:9:ARG:O	14:L:12:ARG:N	2.33	0.62
16:N:17:VAL:HA	16:N:20:ARG:HD2	1.81	0.62
20:R:22:VAL:HG13	20:R:81:VAL:O	2.00	0.62
23:U:9:GLY:H	23:U:14:VAL:CG2	2.12	0.62
1:X:17:G:H2'	1:X:18:U:C6	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:19:C:H2'	1:X:20:C:H6	1.65	0.62
1:X:356:A:C2'	1:X:357:A:H8	2.09	0.62
1:X:827:C:OP1	17:O:82:ARG:HA	1.98	0.62
1:X:1074:G:H4'	8:F:135:MET:SD	2.39	0.62
1:X:1671:A:O2'	1:X:1672:A:H5'	1.99	0.62
1:X:1873:A:N7	1:X:1874:G:C8	2.68	0.62
1:X:2035:G:H4'	4:B:143:GLN:O	2.00	0.62
1:X:2271:C:P	14:L:18:ARG:NH2	2.68	0.62
3:A:92:ILE:HD11	3:A:104:TYR:HB3	1.82	0.62
4:B:167:VAL:CG1	4:B:170:LEU:HD11	2.29	0.62
6:D:66:ILE:HG23	6:D:66:ILE:O	1.99	0.62
11:I:135:ALA:O	11:I:136:ALA:HB2	1.99	0.62
12:J:57:ARG:HH11	12:J:57:ARG:CG	2.06	0.62
16:N:30:LYS:NZ	16:N:30:LYS:CB	2.63	0.62
16:N:52:ASN:C	16:N:54:LYS:H	2.01	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:223:C:O2'	1:X:398:C:H5'	2.00	0.62
1:X:2043:A:H62	5:C:68:ARG:HH12	1.48	0.62
2:Z:53:G:H5''	14:L:64:LYS:HD2	1.79	0.62
4:B:75:THR:HG23	4:B:76:ARG:H	1.65	0.62
5:C:110:SER:HA	5:C:113:GLU:CD	2.20	0.62
9:G:48:GLY:HA2	9:G:89:ALA:HB2	1.82	0.62
14:L:104:ALA:O	14:L:108:ARG:HB2	1.99	0.62
15:M:57:ILE:HG13	15:M:57:ILE:O	1.98	0.62
22:T:30:VAL:HA	22:T:65:GLY:O	2.00	0.62
1:X:216:U:H5''	1:X:601:A:N6	2.14	0.62
1:X:497:C:H5'	1:X:497:C:H6	1.63	0.62
1:X:761:G:C8	18:P:110:ALA:HB1	2.35	0.62
1:X:2299:A:H5'	1:X:2300:G:C5	2.35	0.62
1:X:2326:C:H2'	1:X:2327:U:H6	1.64	0.62
1:X:2726:U:C4'	7:E:139:GLN:HG2	2.30	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
9:G:84:ASN:O	9:G:152:ALA:O	2.18	0.62
15:M:5:ILE:HD13	15:M:7:ILE:HB	1.82	0.62
15:M:104:LEU:O	15:M:106:TYR:N	2.33	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
1:X:322:A:O2'	1:X:343:A:C4'	2.48	0.61
1:X:360:A:H3'	1:X:361:G:C8	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:474:G:C6	1:X:478:G:O6	2.53	0.61
1:X:983:G:H5''	1:X:984:A:H5'	1.82	0.61
1:X:1071:U:N1	1:X:1073:G:H5'	2.15	0.61
1:X:1431:U:H4'	1:X:1604:A:H4'	1.82	0.61
1:X:2396:C:H5'	1:X:2396:C:H6	1.64	0.61
6:D:171:GLN:C	6:D:173:MET:H	2.03	0.61
9:G:47:SER:O	9:G:49:VAL:HG23	2.00	0.61
9:G:162:LYS:N	9:G:163:PRO:HD2	2.14	0.61
10:H:97:VAL:O	10:H:99:ILE:HG23	2.00	0.61
14:L:92:GLY:O	14:L:93:SER:OG	2.12	0.61
16:N:56:ASP:OD2	16:N:56:ASP:N	2.31	0.61
16:N:82:GLY:HA3	16:N:117:ARG:HB2	1.82	0.61
18:P:27:VAL:HB	18:P:125:THR:HG22	1.82	0.61
22:T:43:THR:HB	22:T:46:LYS:NZ	2.15	0.61
24:V:29:ARG:O	24:V:32:ALA:HB3	2.00	0.61
30:4:1:MET:SD	30:4:2:LYS:C	2.78	0.61
1:X:402:A:H8	1:X:2392:G:H4'	1.64	0.61
1:X:870:C:H5'	22:T:69:PHE:CE2	2.35	0.61
1:X:917:U:C2'	1:X:918:A:H5'	2.30	0.61
1:X:1492:A:N1	1:X:1531:C:C5	2.68	0.61
1:X:1674:C:H2'	1:X:1675:C:H6	1.64	0.61
1:X:1764:A:H2'	1:X:1765:C:H5'	1.82	0.61
1:X:1804:U:H2'	1:X:1805:G:H8	1.63	0.61
1:X:2060:A:H1'	1:X:2414:A:O4'	2.00	0.61
1:X:2780:A:H2'	1:X:2781:G:C8	2.35	0.61
2:Z:18:G:H2'	2:Z:19:C:H6	1.65	0.61
2:Z:46:G:H4'	6:D:92:ARG:HH12	1.65	0.61
4:B:4:ILE:CD1	4:B:28:ALA:HB1	2.27	0.61
5:C:7:ILE:HG12	5:C:119:ALA:CB	2.30	0.61
5:C:112:GLN:NE2	5:C:116:LYS:HB2	2.15	0.61
6:D:16:LEU:O	6:D:20:PHE:N	2.33	0.61
8:F:106:LEU:O	8:F:110:LYS:HG3	1.99	0.61
12:J:133:VAL:C	12:J:134:LYS:HD2	2.21	0.61
13:K:49:GLU:O	13:K:52:ILE:HG12	2.01	0.61
19:Q:88:ILE:O	19:Q:89:GLU:O	2.17	0.61
21:S:133:GLU:OE2	21:S:135:VAL:HG23	1.99	0.61
23:U:54:ASN:C	23:U:56:GLN:N	2.53	0.61
26:Y:32:GLU:CG	26:Y:37:HIS:O	2.47	0.61
1:X:951:G:H3'	1:X:952:A:H5''	1.81	0.61
1:X:1345:G:C5	1:X:1625:A:C5	2.88	0.61
1:X:1494:G:O2'	1:X:1574:A:H2	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1582:A:OP1	3:A:211:ARG:NH2	2.33	0.61
1:X:2058:U:H2'	1:X:2217:G:N2	2.15	0.61
1:X:2442:C:H2'	1:X:2443:C:H6	1.65	0.61
1:X:2594:U:H5'	1:X:2594:U:C6	2.28	0.61
4:B:119:ARG:HH11	4:B:119:ARG:CG	2.07	0.61
6:D:22:TYR:HD2	6:D:27:ALA:CB	2.13	0.61
9:G:151:TYR:CB	9:G:157:PRO:HB3	2.31	0.61
9:G:158:HIS:HA	9:G:161:GLN:CG	2.31	0.61
10:H:119:ARG:NH2	15:M:41:GLU:OE2	2.33	0.61
11:I:18:ARG:HB2	11:I:21:ARG:HB2	1.81	0.61
11:I:65:PHE:CG	11:I:65:PHE:O	2.52	0.61
12:J:27:TYR:HA	12:J:103:VAL:HG21	1.81	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
22:T:3:HIS:HB2	22:T:5:LYS:CD	2.30	0.61
1:X:1219:C:H4'	11:I:7:LYS:N	2.15	0.61
1:X:1329:U:H2'	1:X:1330:G:H8	1.65	0.61
1:X:1538:A:H2'	1:X:1539:U:C6	2.34	0.61
1:X:2571:G:C2	1:X:2582:G:N1	2.68	0.61
1:X:2827:G:C6	1:X:2828:C:C4	2.89	0.61
3:A:54:ILE:HD12	3:A:55:GLY:H	1.65	0.61
3:A:68:LYS:HG2	3:A:69:ARG: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
11:I:77:LEU:HD23	11:I:112:GLY:O	1.99	0.61
12:J:36:ILE:HB	12:J:131:LYS:CG	2.30	0.61
18:P:106:LEU:CD1	18:P:116:ILE:HG12	2.29	0.61
21:S:36:ARG:O	21:S:39:PHE:N	2.32	0.61
1:X:333:A:C8	5:C:162:ARG:NH1	2.68	0.61
1:X:824:U:H1'	1:X:1264:C:C1'	2.30	0.61
1:X:1077:U:H2'	1:X:1079:G:OP2	2.00	0.61
1:X:1467:U:C6	1:X:1467:U:C3'	2.84	0.61
1:X:1539:U:O2'	1:X:1540:C:H5'	2.00	0.61
1:X:2053:G:C2	1:X:2054:A:C4	2.89	0.61
1:X:2228:U:H5''	1:X:2229:G:OP2	2.00	0.61
1:X:2526:U:H2'	1:X:2527:G:C8	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
6:D:79:LEU:O	6:D:80:ARG:HB3	1.99	0.61
7:E:125:VAL:HG22	7:E:131:ILE:HD12	1.81	0.61
9:G:105:GLY:O	9:G:110:LEU:HG	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
10:H:15:GLY:O	10:H:58:ALA:HB1	2.00	0.61
10:H:83:ARG:HD2	10:H:89:ILE:HD11	1.83	0.61
11:I:90:ARG:HA	11:I:121:HIS:CE1	2.35	0.61
19:Q:78:ALA:C	19:Q:79:ILE:HD12	2.20	0.61
21:S:65:LEU:O	21:S:84:TYR:N	2.30	0.61
22:T:5:LYS:HD2	22:T:5:LYS:H	1.63	0.61
26:Y:15:LYS:HA	26:Y:18:MET:HG2	1.82	0.61
26:Y:51:TYR:CD2	26:Y:54:GLY:O	2.54	0.61
1:X:55:A:H2'	1:X:56:C:H6	1.65	0.61
1:X:171:G:C2	1:X:179:U:H1'	2.35	0.61
1:X:654:A:N3	1:X:655:A:H5''	2.15	0.61
1:X:698:A:H2'	1:X:786:U:O4	2.01	0.61
1:X:1075:C:H2'	1:X:1076:U:H5'	1.81	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
1:X:1781:C:H2'	1:X:1782:A:C5	2.35	0.61
1:X:2509:A:H2'	1:X:2510:A:H5''	1.82	0.61
3:A:128:GLY:H	3:A:193:ILE:HB	1.66	0.61
6:D:14:PRO:O	6:D:17:MET:N	2.33	0.61
9:G:155:THR:HG23	9:G:156:HIS:N	2.15	0.61
11:I:11:GLY:N	11:I:14:LYS:HB3	2.16	0.61
12:J:50:ALA:O	12:J:54:VAL:HG23	2.00	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
19:Q:15:LYS:O	19:Q:19:ALA:HB2	2.01	0.61
1:X:787:A:H5''	3:A:48:ARG:NH2	2.14	0.61
1:X:1061:A:O2'	1:X:1062:G:H5'	2.01	0.61
1:X:1141:U:O2	4:B:149:ARG:NH2	2.34	0.61
1:X:2021:G:H2'	1:X:2022:C:H6	1.65	0.61
1:X:2356:A:H2'	1:X:2357:A:C8	2.36	0.61
1:X:2766:U:OP1	4:B:69:LYS:NZ	2.32	0.61
4:B:168:GLN:NE2	4:B:202:ALA:HB3	2.16	0.61
5:C:172:VAL:O	5:C:173:ALA:C	2.38	0.61
10:H:109:ARG:HA	10:H:129:LEU:HD12	1.81	0.61
12:J:98:VAL:CG1	12:J:99:LYS:H	2.13	0.61
21:S:113:VAL:HA	21:S:171:VAL:HA	1.82	0.61
23:U:20:ARG:CB	23:U:43:ARG:HD2	2.23	0.61
1:X:5:A:H2'	1:X:6:A:C8	2.35	0.61
1:X:224:G:H4'	1:X:399:G:C6	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:579:G:H5'	1:X:994:A:C2	2.35	0.61
1:X:813:A:C2	1:X:815:A:C8	2.89	0.61
1:X:1096:A:H4'	1:X:1097:A:OP1	1.98	0.61
1:X:1109:A:H2'	1:X:1110:G:H5'	1.83	0.61
1:X:1281:A:O2'	1:X:2592:U:C5	2.51	0.61
1:X:2366:U:C1'	22:T:41:ARG:NH1	2.64	0.61
1:X:2482:A:C1'	32:X:2911:ZLD:C13	2.79	0.61
3:A:146:GLU:CD	3:A:150:GLY:O	2.39	0.61
5:C:3:GLN:OE1	5:C:116:LYS:HG3	2.01	0.61
7:E:16:THR:CG2	7:E:18:ASN:HD21	2.06	0.61
7:E:55:PRO:O	7:E:57:ASP:OD1	2.19	0.61
9:G:151:TYR:HB3	9:G:157:PRO:CG	2.30	0.61
12:J:66:TYR:O	12:J:106:GLU:CD	2.39	0.61
13:K:14:SER:O	13:K:16:ALA:N	2.33	0.61
13:K:103:ARG:HD3	13:K:110:MET:SD	2.41	0.61
15:M:35:VAL:CG2	15:M:90:GLN:HG2	2.31	0.61
18:P:107:ILE:HD13	18:P:108:PRO:HD2	1.81	0.61
20:R:105:ARG:HH22	20:R:111:GLY:C	2.03	0.61
24:V:7:ARG:HH11	24:V:8:ASN:HA	1.66	0.61
1:X:469:G:O2'	1:X:470:U:P	2.59	0.61
1:X:490:A:O2'	1:X:491:A:H5'	2.00	0.61
1:X:737:C:O5'	1:X:737:C:H6	1.82	0.61
1:X:1125:G:H2'	1:X:1126:A:H8	1.66	0.61
2:Z:35:C:H2'	2:Z:36:A:C8	2.36	0.61
3:A:243:GLY:HA2	3:A:244:ARG:NH1	2.15	0.61
6:D:80:ARG:HD2	6:D:80:ARG:O	2.01	0.61
9:G:49:VAL:HG11	9:G:54:LEU:HD13	1.81	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
14:L:54:ALA:N	14:L:75:LEU:HD13	2.12	0.61
16:N:52:ASN:O	16:N:56:ASP:OD2	2.18	0.61
21:S:19:ILE:HG23	21:S:79:ILE:C	2.21	0.61
21:S:154:LEU:HD22	21:S:158:CYS:HB2	1.82	0.61
30:4:1:MET:HE1	30:4:34:GLN:CA	2.31	0.61
1:X:216:U:H2'	1:X:217:U:C6	2.35	0.61
1:X:677:G:O2'	1:X:678:G:H5'	2.01	0.61
1:X:971:A:N6	12:J:83:ARG:HH22	1.94	0.61
1:X:1113:C:H2'	1:X:1114:A:H8	1.64	0.61
1:X:1301:U:C2'	1:X:1302:C:OP1	2.47	0.61
1:X:1744:G:O6	1:X:1747:G:C6	2.53	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)
4:B:37:LYS:HA	4:B:42:ASP:CG	2.21	0.61
4:B:103:ASP:OD2	4:B:202:ALA:HB3	2.01	0.61
4:B:116:VAL:N	4:B:136:ARG:HE	1.99	0.61
6:D:100:LEU:HG	6:D:104:ILE:CD1	2.28	0.61
11:I:94:GLU:CB	11:I:97:ARG:HH11	2.13	0.61
19:Q:69:ILE:HD12	19:Q:69:ILE:O	2.01	0.61
20:R:53:VAL:HG21	20:R:74:LEU:HD22	1.83	0.61
21:S:54:ILE:HD12	21:S:85:MET:HE1	1.82	0.61
21:S:93:GLU:OE2	21:S:123:VAL:HG22	2.01	0.61
1:X:322:A:HO2'	1:X:323:G:P	2.24	0.60
1:X:433:G:N2	1:X:434:C:H1'	2.16	0.60
1:X:1288:A:HO2'	1:X:1289:A:C4'	2.14	0.60
1:X:1333:G:N2	1:X:1344:C:C5	2.67	0.60
1:X:1448:A:C2	1:X:1449:C:C2	2.89	0.60
2:Z:57:U:O2'	6:D:24:SER:HB3	2.01	0.60
4:B:181:LEU:HD13	15:M:16:ILE:HD11	1.82	0.60
8:F:105:VAL:CG1	8:F:128:VAL:HG11	2.26	0.60
11:I:88:PHE:CG	11:I:90:ARG:HD2	2.36	0.60
17:O:40:VAL:O	17:O:40:VAL:HG23	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
20:R:28:LYS:O	20:R:29:HIS:HB2	1.99	0.60
21:S:20:ALA:HB3	21:S:80:HIS:CB	2.31	0.60
1:X:425:A:H3'	1:X:426:C:C6	2.35	0.60
1:X:698:A:H4'	1:X:699:G:O5'	2.00	0.60
1:X:1115:C:O2'	1:X:1116:U:H5'	2.01	0.60
1:X:1255:A:H2'	1:X:1256:C:C6	2.36	0.60
1:X:1691:G:H21	1:X:1694:A:H61	1.49	0.60
1:X:1698:C:O2'	1:X:1753:A:C2'	2.43	0.60
1:X:1778:U:H2'	1:X:1779:C:H6	1.65	0.60
1:X:2294:U:H2'	1:X:2295:C:C6	2.36	0.60
1:X:2528:G:H2'	1:X:2529:G:C8	2.34	0.60
2:Z:39:C:H5'	2:Z:40:C:OP2	2.01	0.60
7:E:37:TYR:CD2	7:E:68:THR:HA	2.36	0.60
7:E:121:VAL:HG12	7:E:122:THR:N	2.16	0.60
9:G:108:GLY:N	9:G:110:LEU:HD21	2.16	0.60
11:I:80:LEU:HA	11:I:84:GLU:HB3	1.83	0.60
12:J:77:LYS:HG3	12:J:78:LYS:H	1.66	0.60
17:O:16:GLU:N	17:O:95:ILE:HB	2.17	0.60
20:R:57:ASN:ND2	20:R:59:LYS:HG3	2.15	0.60
22:T:80:SER:O	22:T:81:ILE:HD13	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:9:LEU:HD22	24:V:13:ASP:OD2	2.01	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:758:G:C2'	1:X:759:C:H5'	2.29	0.60
1:X:1188:A:H3'	1:X:1189:G:N7	2.16	0.60
1:X:1468:A:H8	1:X:1468:A:P	2.24	0.60
1:X:1516:A:O2'	3:A:102:LYS:HE2	2.01	0.60
1:X:1725:C:H2'	1:X:1726:C:H6	1.66	0.60
1:X:1923:U:H1'	1:X:1924:C:H5	1.66	0.60
1:X:2217:G:H5''	1:X:2218:G:OP1	2.02	0.60
1:X:2238:G:OP2	22:T:14:ARG:NH2	2.34	0.60
1:X:2580:C:H4'	1:X:2581:A:OP1	2.01	0.60
1:X:2615:U:OP1	4:B:80:GLU:N	2.32	0.60
3:A:50:THR:HG22	3:A:51:SER:N	2.16	0.60
4:B:38:THR:N	4:B:42:ASP:OD1	2.23	0.60
4:B:88:GLY:O	4:B:89:ASP:CG	2.40	0.60
4:B:147:PRO:C	4:B:149:ARG:H	2.05	0.60
4:B:163:GLU:HG3	4:B:164:ARG:H	1.66	0.60
5:C:74:VAL:HG23	5:C:75:PRO:N	2.16	0.60
5:C:131:LYS:O	5:C:134:ILE:HG12	2.01	0.60
9:G:33:ILE:H	9:G:33:ILE:CD1	2.14	0.60
12:J:15:ARG:CB	12:J:73:LYS:HZ2	2.14	0.60
12:J:53:ILE:O	12:J:57:ARG:HG3	2.01	0.60
19:Q:28:TRP:CE3	19:Q:75:ARG:HD2	2.36	0.60
20:R:86:PRO:HD3	20:R:90:LYS:HZ3	1.64	0.60
1:X:118:U:O2	1:X:118:U:H2'	2.02	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
1:X:566:U:O2'	1:X:567:G:H5'	2.01	0.60
1:X:1193:G:C3'	1:X:1194:U:H5''	2.30	0.60
1:X:1662:G:H5''	1:X:1663:C:H5'	1.83	0.60
1:X:2219:U:C2	1:X:2220:A:C8	2.89	0.60
1:X:2698:G:O6	1:X:2699:G:C6	2.54	0.60
4:B:49:ILE:HD13	4:B:49:ILE:C	2.20	0.60
8:F:110:LYS:HA	8:F:113:MET:CE	2.30	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
13:K:45:ARG:HD3	13:K:97:ILE:HD11	1.83	0.60
18:P:64:ALA:C	18:P:67:PRO:HD2	2.21	0.60
20:R:57:ASN:N	20:R:68:GLY:O	2.33	0.60
23:U:32:ARG:NE	23:U:32:ARG:N	2.49	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Y:49:CYS:SG	26:Y:51:TYR:HB2	2.40	0.60
1:X:5:A:H2'	1:X:6:A:H8	1.67	0.60
1:X:632:A:H2'	1:X:633:G:C5'	2.30	0.60
1:X:877:G:H21	1:X:879:A:H61	1.49	0.60
1:X:915:C:H2'	1:X:916:U:C6	2.36	0.60
1:X:1167:A:H62	16:N:48:ARG:HG2	1.63	0.60
1:X:2395:C:H2'	1:X:2396:C:C5'	2.31	0.60
1:X:2422:C:C2'	1:X:2423:G:H5'	2.31	0.60
1:X:2804:G:H4'	15:M:4:HIS:CE1	2.36	0.60
4:B:12:THR:OG1	15:M:17:GLU:OE1	2.19	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
6:D:74:ILE:O	6:D:75:SER:O	2.19	0.60
6:D:106:ILE:O	6:D:110:ARG:HB2	2.01	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
8:F:113:MET:N	8:F:114:PRO:HD2	2.15	0.60
9:G:33:ILE:O	9:G:69:ASP:OD1	2.20	0.60
9:G:108:GLY:N	9:G:110:LEU:HD23	2.15	0.60
11:I:53:ARG:C	11:I:55:ARG:H	2.02	0.60
14:L:55:SER:O	14:L:56:SER:HB2	2.02	0.60
15:M:51:GLU:HG3	15:M:51:GLU:O	2.00	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
21:S:41:ARG:O	21:S:45:GLN:NE2	2.35	0.60
21:S:88:TYR:O	21:S:127:PRO:HB3	2.00	0.60
21:S:103:ARG:HH11	21:S:108:VAL:HG23	1.67	0.60
25:W:36:ASP:O	25:W:41:ARG:NH1	2.34	0.60
1:X:115:G:C6	1:X:117:A:N6	2.69	0.60
1:X:977:G:O2'	1:X:978:U:H5'	2.02	0.60
1:X:1263:G:H5''	16:N:6:THR:CG2	2.30	0.60
1:X:2056:C:O2'	1:X:2057:U:H5''	1.99	0.60
1:X:2781:G:O2'	1:X:2782:G:H5''	2.02	0.60
4:B:112:GLY:O	4:B:159:HIS:HA	2.01	0.60
7:E:85:ILE:HD12	7:E:141:VAL:HG12	1.83	0.60
7:E:95:ARG:HA	7:E:128:PRO:O	2.01	0.60
11:I:62:LYS:HG2	11:I:63:ARG:N	2.16	0.60
12:J:19:THR:HG22	12:J:99:LYS:NZ	2.16	0.60
16:N:79:PHE:CD2	16:N:79:PHE:C	2.74	0.60
17:O:54:TYR:CD1	17:O:54:TYR:N	2.68	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:5:ALA:O	21:S:6:LYS:HB3	2.02	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
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: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:862:A:H2'	1:X:863:C:H6	1.66	0.60
1:X:954:U:OP2	11:I:38:LYS:HG3	2.02	0.60
1:X:1162:A:H2'	1:X:1163:C:H6	1.67	0.60
1:X:1504:G:H2'	1:X:1505:U:O2	2.02	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
1:X:2726:U:H2'	1:X:2727:G:H5'	1.82	0.60
6:D:10:ASP:N	6:D:14:PRO:CD	2.64	0.60
9:G:169:GLN:HB2	9:G:170:PRO:CD	2.31	0.60
16:N:85:ARG:HB3	16:N:116:ALA:CB	2.12	0.60
18:P:72:LEU:HD13	18:P:126:ILE:HD13	1.84	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
21:S:66:VAL:HG13	21:S:81:VAL:CG1	2.32	0.60
26:Y:56:GLN:N	26:Y:56:GLN:NE2	2.48	0.60
1:X:717:G:C2'	1:X:739:G:H22	2.13	0.60
1:X:872:G:H2'	1:X:928:G:N1	2.17	0.60
1:X:983:G:H5''	1:X:984:A:C5'	2.32	0.60
1:X:2043:A:OP2	5:C:65:GLY:HA2	2.01	0.60
1:X:2395:C:H2'	1:X:2396:C:H5'	1.83	0.60
1:X:2625:U:O5'	1:X:2625:U:H6	1.85	0.60
3:A:76:ASN:HA	3:A:117:VAL:O	2.01	0.60
3:A:93:ALA:N	3:A:105:ILE:O	2.25	0.60
4:B:103:ASP:OD2	4:B:168:GLN:HG2	2.02	0.60
4:B:116:VAL:H	4:B:136:ARG:CD	2.13	0.60
4:B:176:ARG:O	4:B:179:GLU:HB3	2.02	0.60
6:D:143:TYR:CE1	6:D:148:LYS:HA	2.37	0.60
11:I:30:ALA:HB3	11:I:34:HIS:ND1	2.17	0.60
12:J:8:THR:HG22	12:J:70:PHE:CE2	2.37	0.60
14:L:68:ALA:O	14:L:70:ALA:N	2.34	0.60
14:L:73:LYS:CE	14:L:109:GLU:HG2	2.30	0.60
17:O:15:SER:HA	17:O:95:ILE:CB	2.29	0.60
19:Q:76:LYS:HG2	19:Q:76:LYS:O	2.01	0.60
24:V:55:THR:O	24:V:59:GLU:HG3	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:12:ARG:HH11	25:W:12:ARG:CG	2.15	0.60
1:X:490:A:O2'	1:X:491:A:C5'	2.49	0.60
1:X:594:G:H2'	1:X:1264:C:N4	2.17	0.60
1:X:627:A:OP1	5:C:34:GLN:HG2	2.02	0.60
1:X:1770:U:C5	1:X:1775:A:N7	2.69	0.60
1:X:2262:C:O2'	1:X:2263:C:H5'	2.02	0.60
1:X:2414:A:C2	1:X:2415:G:C4	2.89	0.60
1:X:2526:U:C4	1:X:2545:A:N7	2.69	0.60
1:X:2823:G:O2'	1:X:2824:C:H6	1.85	0.60
1:X:2851:G:OP1	15:M:8:ASN:HA	2.02	0.60
3:A:65:ILE:HG23	3:A:92:ILE:HD11	1.83	0.60
4:B:121:ASN:O	4:B:122:PHE:C	2.39	0.60
4:B:177:ALA:C	4:B:179:GLU:N	2.53	0.60
11:I:11:GLY:N	11:I:14:LYS:CB	2.65	0.60
16:N:47:TYR:O	16:N:49:ASP:N	2.35	0.60
19:Q:38:ILE:O	19:Q:39:LYS:C	2.38	0.60
26:Y:52:TYR:O	26:Y:53:ASP:HB2	2.01	0.60
1:X:199:A:H5''	1:X:200:A:OP2	2.01	0.60
1:X:446:C:H2'	1:X:447:U:O4'	2.02	0.60
1:X:450:C:H2'	1:X:451:A:H8	1.65	0.60
1:X:875:G:H2'	1:X:876:A:O4'	2.02	0.60
1:X:1699:A:H61	1:X:1723:U:H3	1.49	0.60
1:X:2284:U:H2'	1:X:2285:U:O4'	2.01	0.60
1:X:2306:A:H2'	1:X:2307:A:O4'	2.02	0.60
2:Z:46:G:H4'	6:D:92:ARG:NH1	2.16	0.60
3:A:92:ILE:HD13	3:A:104:TYR:HB3	1.83	0.60
6:D:31:ILE:HD12	6:D:97:TYR:OH	2.02	0.60
6:D:133:LYS:O	6:D:135:GLN:N	2.35	0.60
7:E:9:ILE:HB	7:E:50:LEU:HB3	1.82	0.60
9:G:49:VAL:HG22	9:G:170:PRO:HG2	1.84	0.60
10:H:119:ARG:HG3	10:H:119:ARG:HH11	1.66	0.60
11:I:102:LYS:O	11:I:104:ARG:N	2.34	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
15:M:34:ARG:HD2	15:M:81:PHE:CZ	2.36	0.60
16:N:51:ARG:NH1	16:N:51:ARG:CG	2.60	0.60
1:X:467:U:O2'	1:X:468:A:OP1	2.19	0.59
1:X:494:A:O2'	20:R:68:GLY:HA3	2.01	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:1608:U:H2'	1:X:1609:G:C8	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:2650:G:H2'	1:X:2651:U:H6	1.66	0.59
1:X:2726:U:C2'	1:X:2727:G:H5'	2.32	0.59
3:A:184:ARG:HH11	3:A:184:ARG:CG	2.15	0.59
4:B:84:PHE:CD1	4:B:86:PRO:CD	2.85	0.59
7:E:98:LEU:HG	7:E:99:THR:N	2.16	0.59
7:E:127:GLU:HG2	7:E:130:ARG:HB3	1.84	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
13:K:91:PRO:O	13:K:92:GLY:C	2.40	0.59
14:L:12:ARG:O	14:L:16:LYS:HB2	2.02	0.59
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
20:R:22:VAL:HG11	20:R:80:LYS:HZ1	1.67	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
1:X:55:A:H2'	1:X:56:C:C6	2.37	0.59
1:X:67:G:N2	1:X:73:A:C4	2.70	0.59
1:X:547:U:H2'	1:X:548:G:C8	2.37	0.59
1:X:574:C:H4'	1:X:1266:G:C6	2.37	0.59
1:X:596:C:H41	11:I:36:GLY:HA3	1.66	0.59
1:X:1200:G:H2'	1:X:1201:G:H8	1.66	0.59
1:X:1288:A:O2'	1:X:1289:A:O4'	2.20	0.59
1:X:1324:G:H4'	1:X:1325:U:OP1	2.01	0.59
1:X:1484:G:H2'	1:X:1485:U:C6	2.37	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:2594:U:C2	26:Y:7:PRO:HA	2.37	0.59
1:X:2807:U:H4'	1:X:2808:U:H5''	1.83	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
4:B:24:THR:CG2	4:B:188:ILE:HD13	2.32	0.59
4:B:202:ALA:O	4:B:203:LYS:CB	2.49	0.59
6:D:143:TYR:HE1	6:D:148:LYS:CA	2.16	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:M:55:ILE:HG12	15:M:67:THR:HG22	1.84	0.59
17:O:36:LYS:NZ	17:O:98:ILE:H	1.99	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
24:V:32:ALA:O	24:V:34:ALA:N	2.35	0.59
25:W:47:VAL:HG23	25:W:51:LEU:HD21	1.84	0.59
1:X:460:U:C4	1:X:592:G:H1'	2.37	0.59
1:X:822:G:C2'	1:X:823:U:H5'	2.32	0.59
1:X:847:C:H2'	1:X:848:A:H8	1.67	0.59
1:X:878:C:O2'	1:X:879:A:H5''	2.02	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:1437:A:O2'	1:X:1438:G:H5'	2.02	0.59
1:X:1770:U:C2	1:X:1774:A:N7	2.69	0.59
1:X:2223:U:O2'	1:X:2224:U:H5'	2.02	0.59
3:A:111:LEU:CD2	3:A:127:LEU:HB3	2.32	0.59
7:E:90:ARG:NH2	7:E:163:ARG:HH12	1.95	0.59
11:I:108:LEU:H	11:I:125:ALA:HA	1.67	0.59
16:N:30:LYS:HZ3	16:N:30:LYS:HA	1.65	0.59
18:P:62:ARG:HG3	18:P:62:ARG:NH1	2.17	0.59
20:R:84:VAL:CG1	20:R:88:THR:N	2.65	0.59
21:S:23:ALA:N	21:S:32:PHE:CE1	2.70	0.59
24:V:62:ARG:HH11	24:V:62:ARG:CG	2.14	0.59
1:X:580:A:N7	1:X:584:A:C6	2.70	0.59
1:X:852:U:H2'	1:X:853:C:C6	2.38	0.59
1:X:876:A:P	12:J:23:LYS:HD3	2.43	0.59
1:X:1461:C:H2'	1:X:1462:C:C6	2.37	0.59
1:X:1841:G:H2'	1:X:1842:G:H5'	1.85	0.59
1:X:2035:G:H21	1:X:2036:G:H1'	1.67	0.59
1:X:2042:A:H5''	5:C:65:GLY:CA	2.32	0.59
1:X:2073:A:C6	1:X:2074:U:C4	2.91	0.59
1:X:2350:G:C6	1:X:2351:G:N7	2.71	0.59
2:Z:111:C:H5'	2:Z:111:C:H6	1.67	0.59
4:B:60:ASN:O	4:B:61:LYS:C	2.40	0.59
5:C:33:TRP:O	5:C:36:ALA:HB3	2.02	0.59
12:J:36:ILE:HB	12:J:131:LYS:HE2	1.84	0.59
13:K:106:ASP:OD1	13:K:108:VAL:HB	2.02	0.59
14:L:20:THR:HG22	14:L:24:SER:OG	2.01	0.59
16:N:66:ASN:O	16:N:70:ARG:NH1	2.36	0.59
21:S:67:LYS:HE3	21:S:84:TYR:HB2	1.85	0.59
21:S:115:ILE:HA	21:S:169:VAL:CG1	2.31	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:11:G:H8	1:X:11:G:O5'	1.85	0.59
1:X:687:G:H2'	1:X:688:A:H5'	1.84	0.59
1:X:1314:A:C8	1:X:1316:G:C8	2.91	0.59
1:X:1949:A:C2	1:X:2572:U:C1'	2.84	0.59
1:X:2052:G:N1	1:X:2422:C:C4	2.70	0.59
1:X:2198:U:O3'	1:X:2199:C:H4'	1.99	0.59
1:X:2441:U:H2'	1:X:2442:C:C6	2.37	0.59
1:X:2508:G:OP2	7:E:172:LYS:HE2	2.02	0.59
4:B:117:MET:SD	4:B:124:GLY:HA3	2.42	0.59
7:E:10:ALA:O	7:E:12:PRO:HD2	2.02	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
9:G:61:ARG:HG2	9:G:65:LYS:NZ	2.18	0.59
13:K:75:VAL:O	13:K:78:LYS:N	2.35	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
17:O:10:LYS:HE3	17:O:11:GLN:NE2	2.16	0.59
18:P:105:ARG:O	18:P:116:ILE:HG23	2.02	0.59
20:R:84:VAL:CA	20:R:90:LYS:HE2	2.32	0.59
21:S:100:THR:CG2	21:S:138:VAL:HG11	2.31	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:965:G:C2	1:X:975:C:O2	2.55	0.59
1:X:1412:C:H2'	1:X:1413:U:H6	1.67	0.59
1:X:1467:U:H6	1:X:1467:U:C3'	2.16	0.59
1:X:1607:A:H2'	1:X:1608:U:C6	2.34	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
1:X:2741:G:O2'	1:X:2742:G:H5'	2.02	0.59
1:X:2847:G:H4'	13:K:8:ARG:NH2	2.17	0.59
3:A:202:LYS:C	3:A:204:ILE:N	2.56	0.59
4:B:32:PRO:O	4:B:49:ILE:HA	2.02	0.59
4:B:198:LEU:C	4:B:199:ARG:HG3	2.21	0.59
5:C:34:GLN:O	5:C:38:ARG:HG3	2.02	0.59
6:D:9:ASN:O	6:D:12:VAL:HG23	2.02	0.59
6:D:30:ARG:N	6:D:159:THR:OG1	2.35	0.59
7:E:20:GLN:O	7:E:21:ASP:HB2	2.02	0.59
9:G:106:TYR:OH	9:G:108:GLY:HA2	2.02	0.59
10:H:3:MET:HB2	10:H:4:PRO:CD	2.33	0.59
12:J:36:ILE:HD12	12:J:131:LYS:CE	2.31	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:3:HIS:ND1	13:K:5:LYS:HD2	2.16	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
17:O:23:GLU:O	17:O:25:LEU:N	2.36	0.59
18:P:36:ARG:NH2	26:Y:20:ARG:CZ	2.66	0.59
20:R:18:LYS:HD3	20:R:19:GLY:H	1.66	0.59
1:X:19:C:H2'	1:X:20:C:C6	2.37	0.59
1:X:229:G:O2'	1:X:230:C:H5'	2.02	0.59
1:X:492:G:HO2'	1:X:493:A:P	2.26	0.59
1:X:571:U:O2	1:X:581:A:C4	2.56	0.59
1:X:839:U:OP1	1:X:2408:G:OP2	2.20	0.59
1:X:1007:A:H1'	17:O:6:GLN:HG3	1.84	0.59
1:X:1016:C:H6	1:X:1016:C:OP1	1.86	0.59
1:X:1432:G:H2'	1:X:1594:U:O4	2.03	0.59
1:X:1466:C:H2'	1:X:1467:U:C1'	2.33	0.59
1:X:1774:A:C2	1:X:2566:A:C5	2.90	0.59
1:X:2262:C:H2'	1:X:2263:C:C5'	2.32	0.59
1:X:2578:G:O2'	1:X:2579:A:H5'	2.03	0.59
1:X:2727:G:O6	1:X:2735:C:H5''	2.03	0.59
2:Z:32:C:H2'	2:Z:33:C:C5'	2.30	0.59
3:A:217:ARG:NH2	3:A:218:LYS:HE2	2.18	0.59
5:C:12:GLY:O	5:C:14:THR:N	2.36	0.59
6:D:44:LYS:HB3	6:D:46:ASP:OD2	2.03	0.59
11:I:67:ASN:O	11:I:68:VAL:HB	2.03	0.59
11:I:77:LEU:CB	11:I:111:SER:H	2.11	0.59
12:J:98:VAL:CG1	12:J:99:LYS:N	2.64	0.59
13:K:24:GLN:CB	13:K:44:LEU:HD22	2.30	0.59
17:O:57:GLN:O	17:O:96:LEU:O	2.21	0.59
19:Q:3:HIS:CD2	19:Q:44:GLN:HB2	2.37	0.59
21:S:23:ALA:HB3	21:S:32:PHE:HZ	1.68	0.59
22:T:45:PHE:CZ	22:T:77:ARG:NH1	2.70	0.59
25:W:17:VAL:O	25:W:19:THR:N	2.35	0.59
1:X:688:A:C2	1:X:689:A:N7	2.70	0.59
1:X:764:A:H2	1:X:802:A:H2'	1.68	0.59
1:X:945:G:O2'	1:X:946:U:H5'	2.01	0.59
1:X:1171:A:H1'	17:O:6:GLN:OE1	2.03	0.59
1:X:1442:C:O2'	1:X:1443:G:OP1	2.20	0.59
1:X:2170:C:H2'	1:X:2171:U:C4'	2.32	0.59
1:X:2484:G:O2'	1:X:2485:U:H5'	2.01	0.59
1:X:2501:U:H5'	1:X:2502:G:OP2	2.02	0.59
1:X:2695:C:H2'	1:X:2696:A:H8	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2815:C:H4'	13:K:92:GLY:HA3	1.83	0.59
3:A:238:GLY:O	3:A:239:ARG:CG	2.50	0.59
6:D:14:PRO:O	6:D:16:LEU:N	2.36	0.59
7:E:94:PHE:O	7:E:95:ARG:HB3	2.02	0.59
7:E:163:ARG:NE	7:E:169:ILE:HD12	2.17	0.59
12:J:119:PHE:O	12:J:120:ARG:C	2.39	0.59
14:L:38:ILE:CG1	14:L:39:TYR:N	2.65	0.59
17:O:76:SER:O	17:O:78:VAL:HG12	2.03	0.59
18:P:44:VAL:O	18:P:45:ILE:C	2.40	0.59
21:S:25:ASN:O	21:S:26:LYS:HB2	2.03	0.59
1:X:395:G:H1	1:X:404:A:N6	2.00	0.59
1:X:505:G:OP1	18:P:22:LYS:HE3	2.02	0.59
1:X:686:C:H5''	5:C:74:VAL:HB	1.85	0.59
1:X:731:A:C2'	1:X:732:G:H5'	2.30	0.59
1:X:1087:C:H4'	8:F:94:LYS:NZ	2.18	0.59
1:X:1373:G:N2	1:X:1374:G:C1'	2.65	0.59
1:X:2021:G:H2'	1:X:2022:C:C6	2.38	0.59
1:X:2032:G:N2	1:X:2599:U:C2	2.70	0.59
1:X:2522:G:H5'	1:X:2522:G:H8	1.68	0.59
1:X:2532:G:H1'	1:X:2561:G:N3	2.17	0.59
1:X:2856:U:O2'	1:X:2857:C:H5'	2.02	0.59
4:B:116:VAL:CG2	4:B:136:ARG:HE	2.04	0.59
4:B:119:ARG:HA	4:B:160:MET:HE3	1.84	0.59
5:C:22:VAL:HA	5:C:106:MET:CE	2.33	0.59
6:D:106:ILE:HG22	6:D:139:PRO:HD3	1.84	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
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
12:J:35:LEU:HD23	12:J:105:PHE:CD2	2.38	0.59
16:N:60:LEU:C	16:N:60:LEU:HD13	2.23	0.59
21:S:16:GLU:CD	21:S:16:GLU:N	2.57	0.59
21:S:102:GLY:O	21:S:138:VAL:CG2	2.50	0.59
25:W:44:VAL:O	25:W:45:LYS:C	2.39	0.59
1:X:170:U:O2	1:X:170:U:H2'	2.02	0.59
1:X:1212:U:H2'	1:X:1213:U:C6	2.38	0.59
1:X:1248:G:N7	1:X:1249:G:C6	2.71	0.59
1:X:1545:G:C6	1:X:1559:G:N2	2.71	0.59
1:X:1621:C:C2'	1:X:1622:G:H5'	2.32	0.59
6:D:31:ILE:O	6:D:31:ILE:HG22	2.02	0.59
10:H:116:ARG:CZ	15:M:38:LYS:HD2	2.31	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:51:GLY:O	11:I:55:ARG:NH1	2.35	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
21:S:44:ARG:HB3	21:S:45:GLN:NE2	2.18	0.59
1:X:116:A:N7	1:X:117:A:C4	2.71	0.58
1:X:868:U:H2'	1:X:869:C:C6	2.37	0.58
1:X:964:A:O2'	1:X:965:G:H5'	2.02	0.58
1:X:1216:G:O2'	1:X:1217:U:H5'	2.03	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
1:X:2001:G:H2'	1:X:2002:A:O4'	2.03	0.58
1:X:2491:C:H5''	1:X:2492:G:OP2	2.02	0.58
1:X:2533:U:H2'	1:X:2534:U:C6	2.38	0.58
2:Z:29:C:C5	2:Z:30:C:C5	2.91	0.58
3:A:53:PHE:O	3:A:54:ILE:HG22	2.03	0.58
3:A:197:GLY:C	3:A:199:ALA:N	2.55	0.58
4:B:60:ASN:C	4:B:64:GLN:HG3	2.22	0.58
5:C:153:ASP:O	5:C:154:ASP:CG	2.42	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
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:56:VAL:HA	17:O:97:GLY:CA	2.28	0.58
17:O:76:SER:O	17:O:78:VAL:N	2.35	0.58
18:P:89:ARG:O	18:P:90:LEU:HD23	2.02	0.58
20:R:93:ARG:NH1	20:R:93:ARG:HG2	2.18	0.58
23:U:46:LEU:O	23:U:47:HIS:ND1	2.35	0.58
30:4:1:MET:HE2	30:4:1:MET:HA	1.84	0.58
1:X:172:A:N1	1:X:178:C:C2	2.71	0.58
1:X:248:A:H8	1:X:248:A:O5'	1.85	0.58
1:X:645:G:H2'	1:X:646:C:C6	2.38	0.58
1:X:1226:A:C8	1:X:1250:A:C2	2.91	0.58
1:X:1252:C:O2'	1:X:1253:C:H5''	2.03	0.58
1:X:1264:C:OP1	16:N:13:ARG:NH1	2.36	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:1782:A:N6	1:X:1820:G:O2'	2.35	0.58
1:X:1954:A:O2'	3:A:239:ARG:HB3	2.02	0.58
1:X:2437:G:C2'	1:X:2469:G:H1	2.16	0.58
1:X:2859:U:H2'	1:X:2860:C:H5'	1.85	0.58
2:Z:44:C:O2'	6:D:63:GLN:HG2	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:109:GLU:HB2	3:A:196:VAL:O	2.03	0.58
4:B:172:VAL:O	4:B:172:VAL:HG12	2.03	0.58
5:C:153:ASP:OD2	5:C:172:VAL:HG13	2.03	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
11:I:123:ASP:O	11:I:124:ALA:CB	2.51	0.58
13:K:10:LEU:HD21	13:K:14:SER:H	1.69	0.58
16:N:47:TYR:CE2	16:N:51:ARG:CZ	2.86	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
24:V:14:PHE:O	24:V:18:ILE:HG12	2.02	0.58
1:X:5:A:O2'	1:X:6:A:H5'	2.02	0.58
1:X:611:C:H6	1:X:611:C:H5''	1.68	0.58
1:X:917:U:H2'	1:X:918:A:H5'	1.85	0.58
1:X:1250:A:O2'	1:X:1251:G:O4'	2.22	0.58
1:X:2175:A:O2'	1:X:2176:U:H5'	2.04	0.58
1:X:2262:C:H2'	1:X:2263:C:H5'	1.84	0.58
1:X:2301:A:C6	1:X:2312:A:N6	2.71	0.58
1:X:2417:U:O2'	1:X:2418:A:H5''	2.03	0.58
1:X:2582:G:H2'	1:X:2583:U:O4'	2.02	0.58
1:X:2661:G:H4'	15:M:63:ARG:HD3	1.85	0.58
1:X:2804:G:H2'	1:X:2805:G:H8	1.68	0.58
3:A:89:SER:HB2	3:A:201:HIS:NE2	2.18	0.58
3:A:124:GLU:O	3:A:126:LYS:N	2.36	0.58
6:D:35:VAL:CG2	6:D:90:THR:HG23	2.34	0.58
6:D:53:ALA:C	6:D:57:LEU:HG	2.23	0.58
6:D:113:ASP:HB3	6:D:115:ARG:CZ	2.33	0.58
7:E:69:ARG:O	7:E:72:VAL:HB	2.03	0.58
9:G:59:ALA:O	9:G:62:ILE:N	2.35	0.58
24:V:62:ARG:HH11	24:V:62:ARG:HB3	1.68	0.58
26:Y:35:GLN:C	26:Y:37:HIS:N	2.55	0.58
1:X:63:A:H2'	1:X:63:A:N3	2.19	0.58
1:X:324:C:C2'	1:X:325:U:H5'	2.33	0.58
1:X:1466:C:C2'	1:X:1467:U:O4'	2.50	0.58
1:X:1922:U:H1'	1:X:2570:C:O2'	2.04	0.58
1:X:2386:G:H2'	1:X:2387:U:C6	2.38	0.58
1:X:2571:G:C2	1:X:2582:G:C2	2.92	0.58
1:X:2875:C:O2'	1:X:2876:C:H5'	2.02	0.58
2:Z:43:G:H8	6:D:66:ILE:CD1	2.16	0.58
6:D:30:ARG:HB2	6:D:159:THR:HG23	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:56:GLU:O	6:D:60:ILE:HG12	2.03	0.58
7:E:136:ILE:CG2	7:E:137:ASP:H	2.10	0.58
8:F:85:ILE:HG23	8:F:88:GLY:H	1.69	0.58
9:G:102:ARG:CZ	9:G:112:THR:HG21	2.33	0.58
12:J:81:GLU:HG2	12:J:82:THR:HG23	1.84	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
1:X:621:U:H2'	1:X:622:U:H6	1.67	0.58
1:X:941:U:H2'	1:X:942:U:O4'	2.04	0.58
1:X:1354:A:O2'	1:X:1355:A:OP1	2.19	0.58
9:G:36:ASN:O	9:G:38:GLU:N	2.37	0.58
10:H:23:ARG:NH2	10:H:23:ARG:CB	2.65	0.58
14:L:26:ARG:HH11	14:L:88:VAL:HG22	1.69	0.58
15:M:22:ARG:HD3	15:M:83:PHE:O	2.02	0.58
18:P:9:ARG:CB	18:P:13:GLN:HG3	2.31	0.58
19:Q:68:PHE:H	19:Q:68:PHE:HD2	1.49	0.58
20:R:98:ILE:C	20:R:100:ASP:H	2.04	0.58
20:R:108:VAL:CG2	20:R:109:ALA:H	2.06	0.58
1:X:48:A:H4'	1:X:49:U:C5'	2.28	0.58
1:X:89:A:O2'	1:X:90:G:H5''	2.02	0.58
1:X:389:G:H2'	1:X:390:U:H6	1.69	0.58
1:X:735:G:H2'	1:X:736:G:H5'	1.86	0.58
1:X:1496:G:C2'	1:X:1497:C:O5'	2.51	0.58
1:X:1516:A:N3	3:A:100:GLY:HA3	2.19	0.58
1:X:1960:A:C2'	1:X:1961:A:H5'	2.32	0.58
1:X:2036:G:C2'	1:X:2037:A:H5'	2.34	0.58
1:X:2048:C:H1'	1:X:2428:U:H3	1.69	0.58
1:X:2576:G:H8	1:X:2576:G:O5'	1.87	0.58
2:Z:103:A:N6	2:Z:104:A:C6	2.72	0.58
4:B:4:ILE:CG1	4:B:5:LEU:N	2.66	0.58
4:B:152:LYS:H	9:G:106:TYR:HB3	1.69	0.58
14:L:28:ARG:CG	14:L:43:ILE:HD13	2.27	0.58
16:N:50:ARG:O	16:N:53:LYS:HG2	2.04	0.58
20:R:93:ARG:O	20:R:95:ARG:HD2	2.02	0.58
21:S:91:PRO:CG	21:S:92:VAL:H	2.13	0.58
23:U:52:ARG:HG2	23:U:52:ARG:NH2	2.18	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
1:X:424:G:H3'	1:X:2385:U:O4	2.03	0.58
1:X:746:G:N7	1:X:774:A:C6	2.71	0.58
1:X:1004:A:N3	17:O:88:GLN:NE2	2.52	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1595:A:O5'	1:X:1595:A:C8	2.52	0.58
1:X:2027:C:O2'	1:X:2028:C:H5'	2.03	0.58
1:X:2057:U:C6	1:X:2057:U:C5'	2.86	0.58
1:X:2431:C:C4	1:X:2432:A:C6	2.91	0.58
3:A:67:PHE:HB3	3:A:153:ALA:N	2.11	0.58
4:B:116:VAL:H	4:B:136:ARG:NE	2.01	0.58
6:D:17:MET:HA	6:D:21:GLY:HA2	1.86	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
11:I:30:ALA:CB	11:I:34:HIS:ND1	2.66	0.58
11:I:134:GLU:HG2	11:I:139:ARG:HA	1.85	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
18:P:57:LEU:HD12	18:P:69:ALA:HA	1.85	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
25:W:6:VAL:O	25:W:7:ARG:HG2	2.04	0.58
1:X:240:U:H2'	1:X:241:C:O4'	2.04	0.58
1:X:742:G:H2'	1:X:1766:U:H1'	1.86	0.58
1:X:760:U:O5'	1:X:760:U:H6	1.86	0.58
1:X:939:C:H5''	1:X:940:G:OP2	2.04	0.58
1:X:1051:U:H3'	1:X:1051:U:C6	2.38	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
1:X:2240:C:C2'	1:X:2241:U:H5'	2.34	0.58
1:X:2618:A:H1'	1:X:2758:A:C2	2.39	0.58
1:X:2796:A:C2	1:X:2797:G:C5	2.91	0.58
3:A:217:ARG:HG2	3:A:218:LYS:H	1.69	0.58
4:B:65:GLY:CA	4:B:68:ALA:HB3	2.34	0.58
5:C:37:SER:HB2	5:C:92:ASP:OD2	2.03	0.58
5:C:50:GLN:O	5:C:52:SER:N	2.35	0.58
6:D:53:ALA:O	6:D:57:LEU:HG	2.03	0.58
9:G:163:PRO:O	9:G:165:VAL:HG22	2.03	0.58
11:I:106:VAL:O	11:I:106:VAL:HG12	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
14:L:38:ILE:CG1	14:L:39:TYR:H	2.16	0.58
1:X:322:A:O2'	1:X:323:G:P	2.61	0.58
1:X:742:G:C6	3:A:208:LYS:HD3	2.39	0.58
1:X:955:G:H5'	1:X:956:A:C5'	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:980:G:O3'	25:W:11:GLY:HA2	2.04	0.58
1:X:1128:G:H3'	1:X:1129:A:H5''	1.85	0.58
1:X:1278:A:H2	1:X:1997:A:H62	1.52	0.58
1:X:1295:U:H2'	1:X:1296:G:O4'	2.03	0.58
1:X:2564:U:N3	32:X:2911:ZLD:H21A	2.19	0.58
1:X:2661:G:C2	1:X:2662:C:C6	2.91	0.58
1:X:2804:G:H2'	1:X:2805:G:C8	2.39	0.58
3:A:217:ARG:HG2	3:A:218:LYS:CG	2.33	0.58
4:B:133:LYS:C	4:B:134:TRP:O	2.40	0.58
5:C:83:ALA:O	5:C:85:GLY:N	2.37	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
6:D:13:ARG:HB3	6:D:14:PRO:CD	2.26	0.58
6:D:96:MET:O	6:D:100:LEU:CB	2.52	0.58
7:E:86:ASN:N	7:E:132:ASP:OD2	2.37	0.58
9:G:75:ILE:HD11	9:G:144:MET:HG3	1.85	0.58
18:P:25:PHE:C	18:P:25:PHE:CD2	2.76	0.58
18:P:107:ILE:HB	18:P:117:ILE:HD12	1.86	0.58
20:R:84:VAL:HG13	20:R:88:THR:O	2.03	0.58
21:S:123:VAL:O	21:S:124:ALA:HB3	2.03	0.58
22:T:37:LEU:H	22:T:37:LEU:HD12	1.67	0.58
1:X:76:C:H5'	1:X:76:C:C6	2.29	0.58
1:X:739:G:HO2'	1:X:740:A:P	2.27	0.58
1:X:805:G:N7	1:X:2419:C:C1'	2.67	0.58
1:X:911:A:H2'	1:X:912:A:H8	1.68	0.58
1:X:1004:A:C5	1:X:1005:U:H5	2.21	0.58
1:X:1440:G:H8	1:X:1440:G:O5'	1.87	0.58
1:X:1617:G:OP2	19:Q:56:MET:HE1	2.04	0.58
1:X:2074:U:C3'	1:X:2075:U:H5''	2.27	0.58
1:X:2394:G:O5'	11:I:63:ARG:CZ	2.51	0.58
2:Z:4:C:H2'	2:Z:5:C:O4'	2.04	0.58
4:B:52:ALA:O	4:B:75:THR:O	2.21	0.58
4:B:85:ALA:O	4:B:86:PRO:O	2.21	0.58
6:D:66:ILE:HG22	6:D:88:LYS:O	2.03	0.58
8:F:85:ILE:HA	8:F:88:GLY:HA3	1.86	0.58
9:G:102:ARG:NH2	9:G:112:THR:HG21	2.18	0.58
10:H:65:LYS:N	10:H:68:ASP:OD2	2.31	0.58
12:J:28:VAL:HG23	12:J:137:VAL:HG21	1.85	0.58
17:O:50:ASP:O	17:O:53:LYS:HB2	2.04	0.58
20:R:18:LYS:O	20:R:36:VAL:HB	2.03	0.58
1:X:466:A:H4'	1:X:467:U:O5'	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:494:A:H3'	1:X:495:C:H6	1.68	0.57
1:X:566:U:H2'	1:X:567:G:H8	1.69	0.57
1:X:815:A:C2	1:X:816:U:C2	2.92	0.57
1:X:1018:C:C5	1:X:1019:U:C5	2.92	0.57
1:X:1808:C:H5''	3:A:39:LYS:CE	2.34	0.57
1:X:1863:U:H2'	1:X:1864:G:C8	2.39	0.57
1:X:2725:C:H5'	7:E:146:ALA:HB2	1.84	0.57
3:A:78:LYS:O	3:A:80:ALA:N	2.36	0.57
4:B:116:VAL:N	4:B:136:ARG:NE	2.52	0.57
5:C:146:GLU:HB3	5:C:184:ASP:CB	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
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
17:O:15:SER:OG	17:O:96:LEU:HA	2.04	0.57
17:O:35:LEU:O	17:O:36:LYS:HG3	2.03	0.57
18:P:50:VAL:CG1	18:P:90:LEU:HB2	2.34	0.57
23:U:27:ASP:O	23:U:32:ARG:HG3	2.04	0.57
24:V:31:GLN:HB3	24:V:37:LEU:CB	2.34	0.57
1:X:65:C:O2'	1:X:66:U:H5'	2.04	0.57
1:X:94:C:HO2'	24:V:40:PRO:HD2	1.68	0.57
1:X:541:C:O2'	1:X:542:A:P	2.61	0.57
1:X:605:G:H2'	1:X:606:A:H8	1.70	0.57
1:X:867:G:H2'	1:X:868:U:O4'	2.04	0.57
1:X:1138:A:C2'	1:X:1139:A:H5''	2.33	0.57
1:X:2551:A:N7	4:B:144:ARG:HD3	2.19	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
1:X:2692:A:H5''	1:X:2693:U:OP2	2.04	0.57
1:X:2710:C:C2'	1:X:2711:G:H5'	2.34	0.57
2:Z:47:A:N3	2:Z:47:A:H2'	2.19	0.57
4:B:136:ARG:NH2	4:B:157:ALA:HB2	2.18	0.57
5:C:153:ASP:OD2	5:C:172:VAL:HG22	2.04	0.57
6:D:143:TYR:HA	6:D:146:VAL:HG21	1.85	0.57
6:D:167:ARG:CG	6:D:177:PHE:HE2	2.16	0.57
7:E:73:ALA:O	7:E:77:LYS:HG2	2.04	0.57
11:I:14:LYS:HA	11:I:14:LYS:HE3	1.85	0.57
12:J:70:PHE:HE2	12:J:71:PRO:O	1.86	0.57
14:L:76:ALA:HB2	14:L:107:ALA:HA	1.86	0.57
17:O:76:SER:C	17:O:78:VAL:H	2.07	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:110:SER:OG	20:R:111:GLY:N	2.36	0.57
1:X:116:A:H5'	1:X:117:A:H8	1.67	0.57
1:X:678:G:O2'	1:X:679:C:H5'	2.05	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
1:X:1200:G:H2'	1:X:1201:G:C8	2.39	0.57
1:X:2367:A:N7	1:X:2368:G:C5	2.73	0.57
1:X:2751:C:H5'	4:B:203:LYS:HD3	1.85	0.57
1:X:2876:C:H2'	1:X:2877:A:C8	2.38	0.57
2:Z:4:C:H5'	2:Z:4:C:H6	1.69	0.57
3:A:244:ARG:N	3:A:244:ARG:CD	2.59	0.57
4:B:33:ILE:HG22	4:B:47:VAL:HG12	1.85	0.57
6:D:80:ARG:CD	6:D:83:MET:HB2	2.33	0.57
9:G:151:TYR:HB2	9:G:157:PRO:HB3	1.86	0.57
9:G:155:THR:O	9:G:156:HIS:C	2.42	0.57
9:G:164:GLN:C	9:G:165:VAL:HG22	2.24	0.57
10:H:100:ASN:C	10:H:102:GLN:H	2.08	0.57
11:I:32:ARG:CZ	17:O:81:ARG:NH2	2.67	0.57
14:L:59:LEU:HD22	14:L:61:SER:H	1.70	0.57
18:P:62:ARG:HG3	18:P:62:ARG:HH11	1.69	0.57
22:T:46:LYS:HD3	22:T:76:ALA:CB	2.34	0.57
23:U:43:ARG:HG2	23:U:43:ARG:HH21	1.69	0.57
1:X:29:U:O4'	16:N:11:ARG:NH1	2.37	0.57
1:X:82:G:N2	1:X:100:G:C2'	2.65	0.57
1:X:90:G:H5'	1:X:91:A:C8	2.38	0.57
1:X:94:C:H1'	24:V:40:PRO:HG2	1.86	0.57
1:X:586:G:C6	1:X:587:A:C6	2.91	0.57
1:X:1253:C:C2'	1:X:1254:G:H5'	2.33	0.57
1:X:1385:C:O2'	1:X:1386:A:H5'	2.04	0.57
1:X:1517:C:C4'	3:A:96:HIS:NE2	2.61	0.57
1:X:1807:A:H1'	1:X:1809:G:C8	2.40	0.57
1:X:1850:G:C6	1:X:1868:A:N7	2.72	0.57
1:X:2047:C:O2	1:X:2429:A:N6	2.37	0.57
1:X:2366:U:H1'	22:T:41:ARG:NH1	2.19	0.57
1:X:2482:A:C2'	32:X:2911:ZLD:C13	2.82	0.57
1:X:2624:G:H3'	1:X:2625:U:H5'	1.87	0.57
1:X:2691:C:O2'	1:X:2692:A:C8	2.55	0.57
1:X:2737:A:H61	7:E:67:LEU:HD11	1.69	0.57
2:Z:78:A:O2'	2:Z:79:U:H5'	2.05	0.57
4:B:179:GLU:C	4:B:181:LEU:N	2.58	0.57
8:F:107:GLU:HA	8:F:110:LYS:HB2	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:115:ALA:HA	10:H:134:LEU:OXT	2.05	0.57
11:I:77:LEU:CG	11:I:112:GLY:O	2.53	0.57
20:R:105:ARG:NH2	20:R:111:GLY:C	2.58	0.57
20:R:108:VAL:HG13	20:R:109:ALA:N	2.19	0.57
22:T:35:ASN:HD22	22:T:35:ASN:N	2.03	0.57
30:4:22:ARG:CZ	30:4:37:GLY:HA3	2.35	0.57
1:X:174:A:N1	1:X:840:U:O4	2.37	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
1:X:734:G:H2'	1:X:735:G:H8	1.70	0.57
1:X:889:C:H2'	1:X:890:U:H6	1.67	0.57
1:X:922:A:C2	1:X:923:A:C2	2.92	0.57
1:X:1359:G:H2'	1:X:1360:G:O4'	2.05	0.57
1:X:1552:C:O2	1:X:1553:G:C2	2.58	0.57
1:X:1810:U:OP1	3:A:158:SER:HB3	2.04	0.57
1:X:1918:G:H3'	1:X:1945:C:H42	1.68	0.57
1:X:2070:G:O2'	1:X:2071:G:H5'	2.03	0.57
1:X:2308:A:H2'	1:X:2309:G:H8	1.65	0.57
1:X:2316:G:H2'	1:X:2317:G:H8	1.68	0.57
1:X:2698:G:C6	1:X:2699:G:C5	2.93	0.57
2:Z:14:C:H5	22:T:72:LYS:HD2	1.68	0.57
2:Z:15:A:C6	2:Z:72:C:H5'	2.39	0.57
5:C:181:LEU:HD12	5:C:181:LEU:O	2.04	0.57
6:D:33:LYS:HD2	6:D:90:THR:CG2	2.33	0.57
6:D:133:LYS:C	6:D:151:GLY:HA2	2.24	0.57
7:E:86:ASN:HA	7:E:132:ASP:HB2	1.87	0.57
10:H:108:THR:O	10:H:109:ARG:HB3	2.05	0.57
13:K:3:HIS:CE1	13:K:5:LYS:HD2	2.40	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
18:P:29:LYS:O	18:P:30:TYR:HB2	2.05	0.57
19:Q:28:TRP:CE3	19:Q:75:ARG:HB3	2.40	0.57
21:S:114:ASP:OD1	21:S:115:ILE:N	2.37	0.57
30:4:8:LYS:C	30:4:9:LYS:HE3	2.25	0.57
30:4:25:VAL:CG2	30:4:34:GLN:HB2	2.34	0.57
1:X:541:C:H4'	1:X:542:A:O5'	2.04	0.57
1:X:709:A:C2	1:X:710:C:C2	2.93	0.57
1:X:793:G:H1	3:A:230:ASP:CG	2.08	0.57
1:X:978:U:H2'	1:X:979:A:C8	2.40	0.57
1:X:1469:U:OP1	1:X:1471:G:OP2	2.22	0.57
1:X:1510:A:H2'	1:X:1511:A:H8	1.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2015:G:H2'	4:B:145:LYS:CE	2.35	0.57
1:X:2213:G:C2	1:X:2214:G:C8	2.92	0.57
1:X:2694:G:H8	1:X:2694:G:OP1	1.88	0.57
1:X:2824:C:OP1	15:M:100:ARG:NH1	2.38	0.57
2:Z:63:A:H2'	2:Z:64:C:H6	1.69	0.57
6:D:35:VAL:HG22	6:D:90:THR:HG23	1.86	0.57
6:D:123:ASP:OD1	6:D:125:ARG:HG2	2.05	0.57
7:E:90:ARG:HD3	7:E:163:ARG:HH11	1.68	0.57
10:H:10:VAL:CG1	10:H:98:ILE:HG13	2.34	0.57
14:L:15:ARG:HG2	14:L:15:ARG:NH1	2.12	0.57
17:O:36:LYS:HD2	17:O:55:THR:N	2.19	0.57
18:P:27:VAL:HG23	18:P:125:THR:HG22	1.86	0.57
20:R:11:ASN:O	20:R:12:ASP:C	2.43	0.57
21:S:20:ALA:HB1	21:S:80:HIS:ND1	2.20	0.57
23:U:33:LYS:HD3	23:U:33:LYS:N	2.20	0.57
1:X:34:U:N1	20:R:4:PRO:HB3	2.19	0.57
1:X:353:G:H2'	1:X:354:C:O4'	2.05	0.57
1:X:412:U:H5	23:U:68:ARG:NH1	2.01	0.57
1:X:577:U:H5'	1:X:956:A:H62	1.70	0.57
1:X:618:A:C2	1:X:632:A:N7	2.72	0.57
1:X:1443:G:H2'	1:X:1444:C:C6	2.39	0.57
1:X:1641:C:H2'	1:X:1642:G:H5'	1.85	0.57
1:X:2225:G:C2	1:X:2405:A:H1'	2.40	0.57
1:X:2500:C:H2'	1:X:2501:U:C6	2.40	0.57
1:X:2526:U:C2	1:X:2545:A:N6	2.72	0.57
3:A:218:LYS:O	3:A:219:PRO:C	2.42	0.57
5:C:17:LEU:HD12	5:C:109:ALA:HB2	1.85	0.57
5:C:24:SER:HA	5:C:27:LEU:CD2	2.31	0.57
5:C:48:ARG:H	5:C:48:ARG:HD2	1.69	0.57
5:C:55:GLY:O	5:C:56:ARG:HG2	2.03	0.57
5:C:179:ASP:O	5:C:182:ARG:HB3	2.04	0.57
7:E:35:VAL:HB	7:E:37:TYR:HE1	1.69	0.57
7:E:127:GLU:C	7:E:129:THR:N	2.57	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
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
13:K:51:LEU:O	13:K:54:THR:N	2.37	0.57
14:L:34:SER:HB2	14:L:94:TYR:OH	2.05	0.57
18:P:45:ILE:O	18:P:46:ARG:C	2.43	0.57
19:Q:24:VAL:HG12	19:Q:25:TYR:N	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:53:G:C2'	1:X:54:G:O5'	2.53	0.57
1:X:118:U:O2'	1:X:119:G:OP2	2.21	0.57
1:X:742:G:C4	1:X:1766:U:C2	2.92	0.57
1:X:1075:C:OP1	8:F:85:ILE:HG13	2.05	0.57
1:X:1107:A:C3'	1:X:1108:U:H5''	2.35	0.57
1:X:1258:G:OP2	11:I:17:LYS:NZ	2.32	0.57
1:X:1510:A:C8	1:X:1511:A:N7	2.72	0.57
1:X:1710:U:O2'	1:X:1711:C:OP1	2.23	0.57
1:X:1766:U:H2'	1:X:1767:G:C5'	2.35	0.57
1:X:1810:U:C5	3:A:157:ARG:NH1	2.72	0.57
1:X:1882:G:N2	1:X:1885:C:H41	2.02	0.57
1:X:2180:U:O2'	1:X:2181:A:N7	2.35	0.57
3:A:143:HIS:O	3:A:145:LEU:N	2.38	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
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:HB3	6:D:24:SER:O	2.04	0.57
6:D:22:TYR:CD2	6:D:27:ALA:HB3	2.40	0.57
6:D:75:SER:N	6:D:79:LEU:HD22	2.19	0.57
7:E:163:ARG:HE	7:E:169:ILE:HD12	1.68	0.57
8:F:85:ILE:HD13	8:F:89:SER:N	2.19	0.57
11:I:39:SER:O	11:I:40:ARG:HB2	2.05	0.57
12:J:75:VAL:HG12	12:J:76:THR:N	2.19	0.57
18:P:85:MET:CE	18:P:130:GLU:HG3	2.33	0.57
21:S:117:VAL:HG21	21:S:168:VAL:HG22	1.87	0.57
22:T:31:VAL:HG11	22:T:37:LEU:HD21	1.87	0.57
1:X:137:A:C6	1:X:138:G:H1'	2.39	0.57
1:X:882:C:H2'	1:X:883:A:C8	2.39	0.57
1:X:1075:C:C2'	1:X:1076:U:H5'	2.35	0.57
1:X:1313:U:O2'	1:X:1314:A:P	2.62	0.57
1:X:1496:G:H2'	1:X:1497:C:O5'	2.05	0.57
1:X:1524:C:C3'	1:X:1525:A:H5''	2.33	0.57
1:X:1787:U:H2'	1:X:1788:C:C6	2.37	0.57
1:X:1885:C:H4'	3:A:244:ARG:HD2	1.87	0.57
1:X:1923:U:H1'	1:X:1924:C:C5	2.40	0.57
1:X:2043:A:OP1	5:C:63:GLY:N	2.30	0.57
1:X:2390:A:H2'	1:X:2391:A:C8	2.39	0.57
1:X:2701:A:H2'	1:X:2702:G:C8	2.39	0.57
1:X:2856:U:C2	1:X:2857:C:C5	2.93	0.57
4:B:26:VAL:CG1	4:B:27:LEU:N	2.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:125:ILE:HD12	5:C:133:PHE:CA	2.34	0.57
7:E:51:LEU:HD12	7:E:52:VAL:N	2.20	0.57
7:E:97:LYS:HB2	7:E:104:GLU:HG2	1.87	0.57
9:G:132:PHE:CD1	9:G:145:HIS:CG	2.92	0.57
11:I:7:LYS:O	11:I:7:LYS:HG2	2.04	0.57
20:R:51:VAL:CG2	20:R:76:LEU:HD21	2.18	0.57
25:W:4:LYS:O	25:W:6:VAL:HG13	2.04	0.57
25:W:45:LYS:HA	25:W:45:LYS:HE3	1.85	0.57
1:X:155:G:C2'	1:X:156:G:H5'	2.34	0.57
1:X:492:G:O2'	1:X:493:A:P	2.63	0.57
1:X:640:C:C4	1:X:641:G:N7	2.73	0.57
1:X:914:C:H2'	1:X:915:C:C6	2.40	0.57
1:X:1092:U:H4'	8:F:118:ALA:HB2	1.87	0.57
1:X:1328:C:O2'	1:X:1329:U:H5'	2.05	0.57
1:X:1368:G:O2'	1:X:1369:G:H5'	2.04	0.57
1:X:1431:U:H5''	1:X:1604:A:H1'	1.87	0.57
1:X:1693:A:C2	1:X:1694:A:C4	2.93	0.57
1:X:1766:U:C2'	1:X:1767:G:H5'	2.35	0.57
1:X:1789:U:O2'	1:X:1793:A:H1'	2.05	0.57
1:X:1984:A:H4'	1:X:2668:U:H2'	1.86	0.57
1:X:2623:A:H8	1:X:2623:A:O5'	1.87	0.57
2:Z:42:U:O2'	2:Z:47:A:N6	2.38	0.57
4:B:98:GLU:HA	4:B:172:VAL:HG12	1.87	0.57
4:B:117:MET:O	4:B:121:ASN:HA	2.03	0.57
15:M:18:GLN:HG3	15:M:18:GLN:O	2.05	0.57
23:U:63:SER:HB3	23:U:66:ALA:CB	2.35	0.57
24:V:13:ASP:OD1	24:V:16:LYS:NZ	2.36	0.57
1:X:595:A:H8	1:X:595:A:O5'	1.88	0.56
1:X:665:A:H2	1:X:666:U:C6	2.22	0.56
1:X:788:G:C5'	1:X:790:A:H1'	2.31	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
1:X:1431:U:C5'	1:X:1604:A:H1'	2.35	0.56
1:X:1793:A:C2	1:X:1794:A:C2	2.93	0.56
1:X:1937:G:O2'	1:X:1939:U:C5	2.58	0.56
1:X:2410:U:O2	1:X:2412:A:C8	2.58	0.56
3:A:95:LEU:HB2	3:A:105:ILE:CD1	2.35	0.56
3:A:222:ARG:O	3:A:224:SER:N	2.37	0.56
7:E:96:ALA:HA	7:E:104:GLU:O	2.04	0.56
9:G:84:ASN:C	9:G:86:ALA:H	2.08	0.56
10:H:27:SER:CB	10:H:50:ILE:HG13	2.23	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:73:GLU:OE1	11:I:73:GLU:N	2.38	0.56
11:I:84:GLU:O	11:I:116:ARG:NH2	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
19:Q:26:SER:HB3	19:Q:79:ILE:CG1	2.31	0.56
21:S:23:ALA:HA	21:S:83:PHE:O	2.05	0.56
21:S:152:ILE:CD1	21:S:152:ILE:N	2.67	0.56
24:V:4:SER:HB3	24:V:7:ARG:HE	1.70	0.56
26:Y:51:TYR:HA	26:Y:54:GLY:O	2.05	0.56
30:4:1:MET:HE1	30:4:35:ARG:N	2.20	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:1880:G:H2'	1:X:1881:U:C6	2.41	0.56
1:X:2482:A:C8	32:X:2911:ZLD:H13B	2.41	0.56
1:X:2615:U:P	4:B:80:GLU:HG2	2.45	0.56
3:A:80:ALA:HB3	3:A:94:LEU:HD23	1.87	0.56
4:B:72:VAL:CG1	4:B:73:ALA:H	2.11	0.56
4:B:120:TRP:O	4:B:121:ASN:CB	2.52	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
6:D:58:ALA:O	6:D:62:LEU:HA	2.05	0.56
6:D:112:ARG:O	6:D:113:ASP:HB2	2.05	0.56
7:E:131:ILE:CG2	7:E:132:ASP:H	2.17	0.56
12:J:15:ARG:HD3	12:J:73:LYS:HZ3	1.67	0.56
16:N:21:ALA:HA	16:N:24:PHE:CE2	2.40	0.56
17:O:5:ILE:HD13	17:O:5:ILE:N	2.19	0.56
17:O:17:GLY:HA2	17:O:93:ILE:O	2.04	0.56
19:Q:42:ILE:HG23	19:Q:43:GLN:N	2.20	0.56
21:S:42:ALA:HA	21:S:45:GLN:HG2	1.86	0.56
22:T:3:HIS:CD2	22:T:5:LYS:H	2.23	0.56
30:4:1:MET:SD	30:4:2:LYS:N	2.78	0.56
1:X:177:U:O4	1:X:225:G:N1	2.39	0.56
1:X:357:A:N3	1:X:357:A:H2'	2.20	0.56
1:X:556:A:H2'	1:X:557:U:C2	2.40	0.56
1:X:661:C:H2'	1:X:662:G:H8	1.70	0.56
1:X:1087:C:O4'	8:F:91:THR:HB	2.06	0.56
1:X:1088:A:H2	1:X:1099:A:N3	2.03	0.56
1:X:1218:C:O4'	11:I:13:ARG:CD	2.53	0.56
1:X:1469:U:P	1:X:1471:G:OP2	2.64	0.56
1:X:1804:U:H2'	1:X:1805:G:C8	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1837:G:H2'	1:X:1838:G:H8	1.71	0.56
1:X:2186:G:H4'	3:A:151:LYS:HE3	1.87	0.56
1:X:2198:U:H5''	1:X:2199:C:OP2	2.06	0.56
1:X:2284:U:C2'	1:X:2285:U:H5''	2.35	0.56
1:X:2352:A:H2'	1:X:2353:G:C8	2.40	0.56
1:X:2437:G:H2'	1:X:2469:G:O6	2.06	0.56
1:X:2473:G:H2'	1:X:2474:G:H8	1.69	0.56
1:X:2509:A:C2'	1:X:2510:A:H5''	2.36	0.56
1:X:2722:C:OP1	30:4:35:ARG:HD2	2.05	0.56
1:X:2726:U:H4'	7:E:139:GLN:HG2	1.87	0.56
1:X:2727:G:H4'	7:E:71:LEU:HD21	1.87	0.56
1:X:2777:A:C5	18:P:134:LYS:HB2	2.40	0.56
1:X:2807:U:H6	1:X:2807:U:C5'	2.13	0.56
3:A:111:LEU:HD22	3:A:127:LEU:HB3	1.87	0.56
3:A:187:SER:C	3:A:189:CYS:N	2.56	0.56
3:A:208:LYS:HA	3:A:208:LYS:CE	2.35	0.56
5:C:31:VAL:O	5:C:35:LEU:HG	2.06	0.56
6:D:122:PHE:HB3	6:D:129:ASN:HD22	1.70	0.56
7:E:84:THR:HB	7:E:134:SER:OG	2.06	0.56
7:E:139:GLN:O	7:E:142:GLY:N	2.39	0.56
8:F:118:ALA:O	8:F:120:SER:N	2.39	0.56
9:G:132:PHE:HD1	9:G:145:HIS:CG	2.24	0.56
10:H:13:ASN:HD21	10:H:109:ARG:HG2	1.66	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
11:I:56:LEU:O	11:I:58:ALA:O	2.22	0.56
11:I:78:SER:CB	11:I:112:GLY:HA3	2.29	0.56
11:I:88:PHE:CB	11:I:90:ARG:HD2	2.34	0.56
12:J:51:CYS:SG	12:J:122:ALA:O	2.58	0.56
17:O:12:TYR:CD2	17:O:40:VAL:HG22	2.40	0.56
18:P:52:ASP:O	18:P:53:ALA:C	2.44	0.56
19:Q:35:LYS:HE2	19:Q:53:ILE:CG2	2.19	0.56
21:S:13:LYS:O	21:S:16:GLU:O	2.23	0.56
23:U:10:LYS:HD3	23:U:11:LYS:HB2	1.87	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
25:W:47:VAL:HG23	25:W:47:VAL:O	2.04	0.56
30:4:18:ARG:NH1	30:4:21:GLY:HA2	2.20	0.56
1:X:201:G:H2'	1:X:202:A:H8	1.69	0.56
1:X:414:A:C2	1:X:415:A:C4	2.93	0.56
1:X:789:G:C5	1:X:806:A:C8	2.94	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:X:930:A:H5''	2:Z:100:G:O2'	2.06	0.56
1:X:1158:A:O2'	1:X:1159:U:H5'	2.05	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:1851:A:O5'	1:X:1851:A:H8	1.88	0.56
1:X:2235:G:H2'	1:X:2236:U:H5'	1.87	0.56
1:X:2484:G:OP2	32:X:2911:ZLD:H9A	2.04	0.56
1:X:2590:U:HO2'	26:Y:2:ALA:N	2.03	0.56
1:X:2725:C:H4'	7:E:142:GLY:CA	2.35	0.56
2:Z:108:G:H5''	21:S:26:LYS:HE3	1.88	0.56
4:B:33:ILE:HA	4:B:49:ILE:HA	1.87	0.56
10:H:29:ILE:HB	10:H:123:PHE:HE2	1.70	0.56
12:J:16:GLY:H	12:J:73:LYS:HZ1	1.53	0.56
15:M:26:ASP:O	15:M:27:PHE:CG	2.59	0.56
15:M:99:VAL:HG22	15:M:100:ARG:N	2.17	0.56
18:P:13:GLN:O	18:P:16:GLN:N	2.29	0.56
21:S:139:THR:O	21:S:140:LYS:C	2.43	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
1:X:357:A:H3'	1:X:358:C:O4'	2.05	0.56
1:X:452:G:H2'	1:X:453:U:C6	2.41	0.56
1:X:1160:C:H2'	1:X:1161:U:O4'	2.05	0.56
1:X:1542:G:N2	1:X:1562:G:H22	2.03	0.56
1:X:1731:C:H3'	1:X:1732:U:C5'	2.35	0.56
1:X:1745:C:OP1	15:M:101:ARG:HD2	2.04	0.56
1:X:2198:U:H3'	1:X:2199:C:C5'	2.35	0.56
1:X:2527:G:C6	1:X:2540:A:C2	2.93	0.56
3:A:135:PHE:CD2	3:A:135:PHE:N	2.74	0.56
6:D:35:VAL:HG12	6:D:36:VAL:N	2.20	0.56
6:D:134:GLU:O	6:D:137:ILE:HG12	2.06	0.56
11:I:44:GLY:O	11:I:45:LYS:CB	2.51	0.56
11:I:62:LYS:HG2	11:I:64:GLY:N	2.21	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
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
21:S:74:ARG:HB3	21:S:75:LYS:HE3	1.88	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:4:LYS:HA	25:W:30:ASP:O	2.05	0.56
1:X:46:C:O2'	1:X:47:G:H5'	2.06	0.56
1:X:120:G:O2'	1:X:121:G:H5'	2.05	0.56
1:X:125:A:H5''	1:X:126:C:C6	2.41	0.56
1:X:166:G:N1	1:X:182:G:O2'	2.35	0.56
1:X:751:G:H1'	1:X:772:G:H22	1.71	0.56
1:X:765:C:C5	1:X:1772:C:C2	2.93	0.56
1:X:789:G:C6	1:X:806:A:N7	2.73	0.56
1:X:867:G:H2'	1:X:868:U:C6	2.41	0.56
1:X:2000:U:O2'	26:Y:9:LYS:HA	2.05	0.56
1:X:2240:C:O2'	1:X:2241:U:C5'	2.49	0.56
3:A:240:THR:OG1	3:A:241:GLY:N	2.39	0.56
6:D:66:ILE:N	6:D:88:LYS:O	2.27	0.56
6:D:111:ILE:O	6:D:114:PHE:HB2	2.06	0.56
11:I:72:TYR:HA	11:I:105:PRO:CG	2.26	0.56
16:N:33:ARG:HG3	16:N:33:ARG:NH1	2.20	0.56
20:R:106:VAL:HG23	20:R:113:THR:OG1	2.05	0.56
1:X:244:C:H2'	1:X:245:C:O4'	2.06	0.56
1:X:633:G:H2'	1:X:634:G:H8	1.70	0.56
1:X:657:A:H2	1:X:658:G:C4	2.22	0.56
1:X:823:U:OP1	1:X:1266:G:N7	2.39	0.56
1:X:1710:U:C5'	1:X:1711:C:C5	2.85	0.56
1:X:1790:G:H21	3:A:155:LEU:HA	1.71	0.56
1:X:2218:G:H5'	3:A:249:PRO:CB	2.29	0.56
1:X:2270:U:H2'	1:X:2271:C:C6	2.40	0.56
1:X:2334:C:O3'	22:T:24:LYS:NZ	2.39	0.56
1:X:2395:C:C2'	1:X:2396:C:C5'	2.83	0.56
1:X:2564:U:H5''	1:X:2565:C:OP1	2.05	0.56
3:A:223:GLY:O	3:A:233:HIS:HB2	2.05	0.56
4:B:28:ALA:HB3	4:B:92:ASN:ND2	2.15	0.56
4:B:154:LYS:O	4:B:155:ARG:C	2.42	0.56
9:G:62:ILE:HG22	9:G:62:ILE:O	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
14:L:79:ALA:HA	14:L:82:LYS:HB2	1.87	0.56
18:P:11:LYS:HG3	18:P:12:LYS:H	1.70	0.56
19:Q:4:TYR:CD2	24:V:23:LYS:HB2	2.40	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
21:S:95:SER:HB3	21:S:119:ASN:HD21	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:T:4:LYS:HB3	22:T:4:LYS:HZ3	1.70	0.56
1:X:408:U:H2'	1:X:409:G:C8	2.41	0.56
1:X:424:G:H3'	1:X:2385:U:C4	2.41	0.56
1:X:613:A:N3	1:X:668:A:C2	2.74	0.56
1:X:663:G:O5'	1:X:664:C:H5''	2.05	0.56
1:X:1174:G:C2	1:X:1175:A:N7	2.74	0.56
1:X:1392:U:O2	1:X:1392:U:H2'	2.06	0.56
1:X:1515:U:O2'	1:X:1516:A:H5'	2.04	0.56
1:X:1597:A:H2'	1:X:1598:C:H6	1.71	0.56
1:X:1744:G:H2'	1:X:1746:A:OP2	2.04	0.56
1:X:1817:U:H2'	1:X:1818:G:O4'	2.06	0.56
1:X:2228:U:H4'	1:X:2229:G:OP2	2.03	0.56
1:X:2661:G:O2'	1:X:2662:C:H5'	2.06	0.56
1:X:2795:A:H4'	13:K:5:LYS:CG	2.36	0.56
4:B:60:ASN:O	4:B:64:GLN:N	2.39	0.56
4:B:77:ILE:HD13	4:B:195:LEU:HD22	1.88	0.56
6:D:169:LEU:O	6:D:171:GLN:N	2.38	0.56
8:F:75:MET:SD	8:F:78:LEU:HD23	2.46	0.56
9:G:79:PHE:CE2	9:G:147:ARG:HG2	2.41	0.56
10:H:5:GLN:HA	10:H:20:MET:HE2	1.87	0.56
10:H:119:ARG:CZ	15:M:41:GLU:HG2	2.36	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
15:M:53:VAL:HG12	15:M:54:VAL:N	2.20	0.56
17:O:5:ILE:HG13	17:O:9:GLY:CA	2.36	0.56
17:O:34:GLU:O	17:O:35:LEU:O	2.24	0.56
19:Q:6:ILE:HG22	19:Q:7:LEU:H	1.66	0.56
19:Q:66:GLY:C	19:Q:68:PHE:N	2.58	0.56
1:X:201:G:N7	1:X:433:G:H4'	2.20	0.56
1:X:1092:U:H4'	8:F:118:ALA:CB	2.35	0.56
1:X:1225:G:H2'	1:X:1249:G:H22	1.70	0.56
1:X:1594:U:H2'	1:X:1595:A:C8	2.41	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
2:Z:109:G:P	21:S:26:LYS:HE2	2.46	0.56
3:A:143:HIS:HD2	3:A:192:THR:HB	1.70	0.56
9:G:67:ARG:NH1	9:G:70:PHE:O	2.39	0.56
10:H:19:ILE:N	10:H:19:ILE:CD1	2.68	0.56
17:O:11:GLN:HE22	17:O:38:LEU:HB3	1.69	0.56
18:P:46:ARG:HA	18:P:92:VAL:CG1	2.36	0.56
18:P:107:ILE:HD13	18:P:108:PRO:CD	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:Q:47:GLY:O	19:Q:48:VAL:HB	2.05	0.56
23:U:20:ARG:HG2	23:U:39:LYS:CE	2.34	0.56
23:U:75:TYR:N	23:U:75:TYR:CD1	2.73	0.56
24:V:62:ARG:O	24:V:66:GLN:HA	2.06	0.56
26:Y:36:CYS:HB3	26:Y:49:CYS:HB3	1.88	0.56
1:X:402:A:C8	1:X:2392:G:C4'	2.87	0.56
1:X:513:A:C6	1:X:516:G:C6	2.94	0.56
1:X:636:G:H5'	1:X:636:G:H8	1.71	0.56
1:X:695:G:O2'	1:X:696:U:H5'	2.06	0.56
1:X:1034:U:C2'	1:X:1035:G:H5'	2.35	0.56
1:X:1394:G:O2'	1:X:1395:A:H5'	2.06	0.56
1:X:1448:A:N6	1:X:1574:A:H61	1.89	0.56
1:X:1525:A:H2'	1:X:1526:U:O4'	2.05	0.56
1:X:1781:C:H4'	3:A:209:ALA:CB	2.36	0.56
1:X:2375:G:H2'	1:X:2376:G:C8	2.39	0.56
1:X:2383:C:H4'	11:I:67:ASN:HD21	1.71	0.56
1:X:2483:U:O5'	1:X:2483:U:H6	1.89	0.56
1:X:2620:G:OP1	9:G:102:ARG:NH2	2.39	0.56
2:Z:3:A:H2'	2:Z:4:C:H5''	1.87	0.56
5:C:34:GLN:OE1	5:C:176:ASN:OD1	2.24	0.56
12:J:119:PHE:CE1	12:J:132:MET:HG3	2.41	0.56
13:K:11:ASN:OD1	13:K:17:ARG:CZ	2.54	0.56
15:M:26:ASP:CG	15:M:27:PHE:H	2.07	0.56
15:M:29:PRO:CA	15:M:54:VAL:HG12	2.33	0.56
16:N:75:ASN:ND2	16:N:77:SER:HB3	2.20	0.56
20:R:51:VAL:HG21	20:R:76:LEU:HD11	1.87	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
23:U:31:GLY:HA2	23:U:32:ARG:NH1	2.20	0.56
25:W:12:ARG:HD2	25:W:13:PRO:HD3	1.88	0.56
1:X:118:U:C2'	1:X:119:G:OP2	2.54	0.55
1:X:343:A:H1'	1:X:346:C:H42	1.71	0.55
1:X:590:C:OP2	16:N:33:ARG:NH1	2.38	0.55
1:X:1135:C:O2'	1:X:1136:G:H5'	2.05	0.55
1:X:1361:G:H2'	1:X:1362:A:H8	1.71	0.55
1:X:1917:C:O2'	1:X:1918:G:H5'	2.05	0.55
1:X:2440:C:H2'	1:X:2441:U:C6	2.41	0.55
1:X:2581:A:H3'	1:X:2582:G:C5'	2.27	0.55
2:Z:16:U:HO2'	2:Z:110:U:C2'	2.19	0.55
6:D:69:LYS:C	6:D:85:VAL:HG22	2.26	0.55
7:E:142:GLY:C	7:E:144:VAL:H	2.10	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:37:ASP:O	9:G:38:GLU:HB3	2.07	0.55
9:G:99:VAL:O	9:G:101:THR:N	2.39	0.55
13:K:48:VAL:HG13	13:K:49:GLU:N	2.21	0.55
14:L:33:ARG:NH1	14:L:100:VAL:CA	2.64	0.55
15:M:69:ARG:HG2	15:M:78:GLU:HG2	1.88	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
21:S:149:ALA:HB3	21:S:164:PRO:CA	2.32	0.55
22:T:16:SER:C	22:T:17:ASN:HD22	2.08	0.55
25:W:9:VAL:O	25:W:12:ARG:HB2	2.05	0.55
1:X:219:G:C2'	1:X:220:U:OP2	2.54	0.55
1:X:463:C:H42	1:X:467:U:H5	1.55	0.55
1:X:1263:G:O2'	1:X:1264:C:H5'	2.06	0.55
1:X:1987:G:C5	1:X:1988:A:C8	2.94	0.55
1:X:2014:A:C6	1:X:2477:C:H1'	2.40	0.55
1:X:2057:U:C5'	1:X:2057:U:H6	2.19	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:2662:C:H2'	1:X:2663:U:H6	1.71	0.55
1:X:2875:C:C2'	1:X:2876:C:H5'	2.37	0.55
2:Z:43:G:H5''	6:D:66:ILE:HD13	1.88	0.55
3:A:39:LYS:O	3:A:40:THR:HB	2.06	0.55
3:A:131:LEU:HD23	3:A:131:LEU:N	2.11	0.55
3:A:213:ARG:O	3:A:215:LEU:N	2.39	0.55
6:D:22:TYR:C	6:D:24:SER:N	2.58	0.55
7:E:120:GLY:O	7:E:136:ILE:HD13	2.06	0.55
9:G:61:ARG:NH1	9:G:78:ASP:OD2	2.38	0.55
9:G:103:TYR:CE2	9:G:111:LYS:CB	2.89	0.55
11:I:94:GLU:C	11:I:96:TYR:N	2.59	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
24:V:52:GLN:C	24:V:54:ASN:N	2.60	0.55
1:X:1698:C:H2'	1:X:1753:A:N3	2.22	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:2071:G:H21	1:X:2072:C:H1'	1.71	0.55
1:X:2311:U:H4'	1:X:2315:A:H62	1.72	0.55
1:X:2445:C:OP1	30:4:4:ARG:HB3	2.06	0.55
1:X:2457:A:H5'	30:4:31:LYS:CG	2.36	0.55
1:X:2463:G:H1'	12:J:125:LYS:HD2	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2486:C:C2	1:X:2562:G:C2	2.94	0.55
1:X:2709:C:H2'	1:X:2710:C:C6	2.41	0.55
1:X:2736:U:H4'	1:X:2737:A:OP1	2.05	0.55
3:A:70:ARG:NH2	3:A:190:TYR:CD2	2.74	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
6:D:32:GLU:N	6:D:157:VAL:O	2.39	0.55
11:I:114:ILE:HD13	11:I:114:ILE:C	2.27	0.55
16:N:78:THR:HG23	16:N:117:ARG:HD2	1.86	0.55
18:P:14:ARG:HA	18:P:17:GLN:HB3	1.89	0.55
21:S:54:ILE:HG13	21:S:62:PHE:CB	2.13	0.55
1:X:522:G:O2'	1:X:523:A:OP2	2.16	0.55
1:X:1113:C:H2'	1:X:1114:A:C8	2.41	0.55
1:X:1129:A:H5'	1:X:1129:A:H8	1.72	0.55
1:X:1276:U:H1'	26:Y:10:LYS:HG3	1.87	0.55
1:X:1324:G:N2	1:X:1324:G:OP2	2.36	0.55
1:X:1810:U:O2'	1:X:1811:A:P	2.64	0.55
1:X:1870:U:O5'	1:X:1870:U:H6	1.89	0.55
1:X:1922:U:O2'	1:X:2571:G:H1'	2.07	0.55
1:X:2188:A:C2	1:X:2189:A:N6	2.75	0.55
2:Z:72:C:H2'	2:Z:73:C:H6	1.66	0.55
3:A:43:ARG:O	3:A:44:ASN:HB3	2.06	0.55
3:A:145:LEU:HD22	3:A:163:VAL:HG21	1.88	0.55
3:A:160:GLY:HA2	3:A:196:VAL:HB	1.88	0.55
5:C:72:ARG:HG3	5:C:77:PHE:CE2	2.41	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
11:I:64:GLY:O	11:I:65:PHE:HB2	2.06	0.55
11:I:106:VAL:HB	11:I:123:ASP:H	1.70	0.55
14:L:28:ARG:HA	14:L:88:VAL:O	2.06	0.55
14:L:73:LYS:H	14:L:106:ALA:HB1	1.72	0.55
15:M:104:LEU:O	15:M:105:TYR:C	2.44	0.55
17:O:10:LYS:CG	17:O:11:GLN:N	2.60	0.55
21:S:3:LEU:HD11	21:S:32:PHE:C	2.27	0.55
21:S:20:ALA:HB3	21:S:80:HIS:HB2	1.87	0.55
21:S:64:ALA:CB	21:S:85:MET:HA	2.36	0.55
21:S:137:ASP:CG	21:S:138:VAL:H	2.10	0.55
24:V:2:LYS:H	24:V:3:PRO:CD	2.20	0.55
1:X:1045:G:H2'	1:X:1046:U:O4'	2.06	0.55
1:X:1211:G:O2'	1:X:1212:U:H5'	2.06	0.55
1:X:1263:G:OP2	1:X:1263:G:H8	1.90	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1715:A:C8	1:X:1717:A:O4'	2.60	0.55
1:X:1936:A:H2	1:X:2528:G:N3	2.05	0.55
1:X:2306:A:C6	1:X:2307:A:C6	2.94	0.55
1:X:2357:A:H1'	14:L:88:VAL:HG11	1.89	0.55
1:X:2776:U:O2	18:P:134:LYS:HD2	2.06	0.55
1:X:2796:A:O2'	1:X:2801:A:N1	2.37	0.55
1:X:2824:C:O2	1:X:2824:C:C2'	2.55	0.55
3:A:97:TYR:O	3:A:99:ASP:N	2.40	0.55
4:B:146:THR:CB	4:B:147:PRO:HD2	2.29	0.55
4:B:165:VAL:CG1	4:B:166:THR:N	2.70	0.55
5:C:22:VAL:HG13	5:C:106:MET:HG2	1.87	0.55
5:C:45:THR:N	5:C:86:PRO:O	2.39	0.55
5:C:48:ARG:C	5:C:50:GLN:H	2.08	0.55
5:C:163:ASN:ND2	5:C:166:TRP:CD1	2.75	0.55
8:F:92:PRO:HG3	8:F:135:MET:C	2.27	0.55
9:G:83:ILE:O	9:G:84:ASN:HB2	2.06	0.55
10:H:27:SER:HA	10:H:50:ILE:HD12	1.87	0.55
11:I:47:ALA:O	11:I:49:PHE:N	2.40	0.55
15:M:50:PHE:CE2	15:M:70:LYS:HD2	2.42	0.55
18:P:72:LEU:O	18:P:75:ALA:N	2.30	0.55
19:Q:51:ILE:CG1	19:Q:83:ALA:HA	2.36	0.55
20:R:98:ILE:HG22	20:R:99:VAL:HG22	1.88	0.55
1:X:436:A:H5''	1:X:437:G:C5'	2.35	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
1:X:1082:G:H1'	1:X:1100:G:C4	2.41	0.55
1:X:1096:A:H2'	1:X:1097:A:C4	2.41	0.55
1:X:1343:C:O2	1:X:1343:C:H2'	2.07	0.55
1:X:1517:C:H5'	3:A:102:LYS:NZ	2.22	0.55
1:X:1698:C:HO2'	1:X:1753:A:H2'	1.70	0.55
1:X:2189:A:H8	1:X:2189:A:O5'	1.88	0.55
1:X:2357:A:H2'	1:X:2358:C:H5'	1.88	0.55
1:X:2729:A:H3'	1:X:2730:A:C5'	2.36	0.55
1:X:2870:C:H2'	1:X:2871:U:H6	1.71	0.55
3:A:77:ALA:HB1	3:A:96:HIS:C	2.27	0.55
4:B:9:ILE:HD11	4:B:27:LEU:CB	2.35	0.55
4:B:45:GLU:O	4:B:46:ALA:HB2	2.04	0.55
4:B:149:ARG:HG3	4:B:150:VAL:N	2.21	0.55
5:C:28:HIS:O	5:C:29:GLU:C	2.43	0.55
6:D:10:ASP:O	6:D:14:PRO:HB2	2.07	0.55
8:F:81:LYS:NZ	8:F:84:GLY:CA	2.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
18:P:34:SER:O	18:P:35:PRO:C	2.43	0.55
20:R:48:VAL:C	20:R:50:GLY:H	2.10	0.55
20:R:64:ASN:HB3	20:R:66:GLN:HB3	1.88	0.55
20:R:96:LYS:O	20:R:104:VAL:HA	2.06	0.55
21:S:39:PHE:HE1	21:S:83:PHE:HZ	1.53	0.55
24:V:25:LEU:HD21	24:V:47:ARG:CD	2.36	0.55
26:Y:47:PRO:HG2	26:Y:48:ASN:N	2.18	0.55
1:X:333:A:C2'	5:C:162:ARG:NH1	2.70	0.55
1:X:540:G:N2	1:X:2005:U:OP1	2.39	0.55
1:X:559:C:H2'	1:X:560:G:O4'	2.04	0.55
1:X:987:G:C2	1:X:988:G:N7	2.75	0.55
1:X:1685:A:N7	1:X:1691:G:C6	2.75	0.55
1:X:1842:G:H2'	1:X:1843:U:H6	1.71	0.55
1:X:1845:A:N1	1:X:2070:G:H1'	2.21	0.55
1:X:1997:A:C2	1:X:1998:A:N1	2.75	0.55
1:X:2728:A:H5'	7:E:6:LYS:NZ	2.22	0.55
3:A:36:ALA:HB1	3:A:62:TYR:O	2.07	0.55
3:A:121:PRO:C	3:A:123:ALA:H	2.10	0.55
3:A:205:VAL:O	3:A:206:LEU:HB2	2.07	0.55
3:A:222:ARG:C	3:A:224:SER:H	2.10	0.55
4:B:151:TYR:HB3	9:G:106:TYR:CE2	2.41	0.55
6:D:16:LEU:HA	6:D:20:PHE:CD1	2.41	0.55
6:D:108:LEU:O	6:D:111:ILE:HG13	2.06	0.55
9:G:110:LEU:N	9:G:110:LEU:CD2	2.70	0.55
11:I:54:SER:O	11:I:59:ARG:HD3	2.06	0.55
15:M:11:GLU:OE2	15:M:14:ARG:NH1	2.38	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
18:P:28:ALA:HB3	18:P:124:ILE:HG12	1.89	0.55
18:P:89:ARG:O	18:P:130:GLU:HA	2.06	0.55
18:P:106:LEU:HD13	18:P:116:ILE:HG12	1.89	0.55
20:R:35:LYS:HB3	20:R:35:LYS:HZ2	1.71	0.55
21:S:113:VAL:HG13	21:S:171:VAL:HG22	1.88	0.55
24:V:18:ILE:HD13	24:V:53:LEU:HD13	1.88	0.55
30:4:11:CYS:HB3	30:4:32:HIS:HE1	1.71	0.55
1:X:242:A:C2'	1:X:243:G:H4'	2.37	0.55
1:X:529:U:H2'	1:X:530:G:H8	1.71	0.55
1:X:1101:U:H2'	1:X:1102:G:C8	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1163:C:O2'	1:X:1164:C:H5'	2.07	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
2:Z:16:U:O2'	2:Z:110:U:H1'	2.06	0.55
2:Z:41:A:O2'	2:Z:48:A:C2	2.60	0.55
3:A:44:ASN:HB2	3:A:48:ARG:O	2.07	0.55
5:C:12:GLY:HA3	5:C:13:ARG:NH2	2.22	0.55
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
9:G:108:GLY:H	9:G:110:LEU:CD2	2.12	0.55
10:H:53:ALA:N	10:H:70:VAL:O	2.40	0.55
12:J:99:LYS:CD	12:J:100:PRO:HD2	2.37	0.55
15:M:35:VAL:HG22	15:M:90:GLN:HG2	1.89	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
18:P:8:PHE:CG	18:P:9:ARG:N	2.74	0.55
18:P:71:VAL:O	18:P:72:LEU:C	2.43	0.55
23:U:26:ALA:O	23:U:27:ASP:O	2.24	0.55
1:X:547:U:H2'	1:X:548:G:H8	1.72	0.55
1:X:683:A:O2'	1:X:684:C:P	2.64	0.55
1:X:1056:U:H4'	1:X:1058:G:C1'	2.35	0.55
1:X:1088:A:O2'	1:X:1089:C:H5'	2.07	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:1354:A:C5'	19:Q:56:MET:HG3	2.36	0.55
1:X:1397:A:C2'	1:X:1398:G:H5''	2.37	0.55
1:X:1555:A:H2'	1:X:1556:A:C8	2.42	0.55
1:X:2015:G:H2'	4:B:145:LYS:HZ1	1.68	0.55
1:X:2705:A:O2'	1:X:2706:U:O5'	2.25	0.55
1:X:2861:A:H2'	1:X:2862:G:O4'	2.07	0.55
2:Z:27:A:N1	2:Z:55:C:H5''	2.21	0.55
2:Z:93:G:OP1	12:J:19:THR:HB	2.07	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
6:D:75:SER:O	6:D:79:LEU:HD13	2.07	0.55
7:E:85:ILE:N	7:E:132:ASP:OD1	2.40	0.55
7:E:109:TYR:HE1	7:E:152:ARG:HH21	1.54	0.55
8:F:87:LYS:HE3	8:F:87:LYS:HA	1.88	0.55
12:J:92:GLU:OE1	12:J:92:GLU:HA	2.06	0.55
15:M:24:LEU:HD13	15:M:91:VAL:CG2	2.36	0.55
20:R:32:GLN:HG2	20:R:33:THR:N	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:98:ILE:CG2	20:R:99:VAL:H	2.15	0.55
21:S:23:ALA:HB3	21:S:32:PHE:CZ	2.42	0.55
24:V:38:ALA:C	24:V:40:PRO:HD3	2.26	0.55
1:X:75:C:H5''	24:V:48:ARG:HG3	1.89	0.55
1:X:612:G:H2'	1:X:668:A:N6	2.21	0.55
1:X:810:U:H2'	1:X:811:G:H8	1.72	0.55
1:X:1404:C:C2	1:X:1406:A:N7	2.74	0.55
1:X:1559:G:C8	1:X:1559:G:H3'	2.42	0.55
1:X:2362:G:H2'	1:X:2363:G:C8	2.42	0.55
3:A:88:ARG:O	3:A:89:SER:CB	2.55	0.55
3:A:129:ASN:O	3:A:131:LEU:HD23	2.07	0.55
3:A:165:VAL:HA	3:A:175:VAL:HG12	1.87	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
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
7:E:26:VAL:C	7:E:27:LYS:HG3	2.26	0.55
8:F:85:ILE:CD1	8:F:89:SER:H	2.19	0.55
9:G:118:ALA:O	9:G:120:SER:N	2.40	0.55
11:I:90:ARG:HA	11:I:121:HIS:CG	2.42	0.55
14:L:33:ARG:HD3	14:L:100:VAL:CA	2.37	0.55
16:N:42:ALA:O	16:N:45:TYR:HB2	2.07	0.55
20:R:37:LEU:N	20:R:47:VAL:O	2.40	0.55
21:S:138:VAL:HA	21:S:141:MET:HE1	1.88	0.55
21:S:143:ILE:O	21:S:143:ILE:HD12	2.07	0.55
26:Y:4:HIS:CB	26:Y:5:PRO:HD3	2.37	0.55
1:X:105:G:O2'	1:X:106:G:H5'	2.07	0.54
1:X:334:G:H5'	5:C:162:ARG:NE	2.23	0.54
1:X:334:G:N7	5:C:164:VAL:HG22	2.22	0.54
1:X:358:C:O5'	1:X:358:C:H6	1.90	0.54
1:X:392:G:N2	1:X:409:G:C4	2.74	0.54
1:X:649:G:C5	1:X:650:U:C5	2.95	0.54
1:X:820:U:OP2	11:I:40:ARG:HD2	2.07	0.54
1:X:1374:G:C2	1:X:1375:C:C6	2.94	0.54
1:X:1439:G:H2'	1:X:1440:G:C8	2.42	0.54
1:X:1507:A:O4'	3:A:99:ASP:HB3	2.07	0.54
1:X:1625:A:O2'	1:X:1632:A:H4'	2.07	0.54
1:X:1791:C:O2	1:X:1791:C:H2'	2.07	0.54
1:X:2179:C:H2'	1:X:2180:U:O4'	2.07	0.54
1:X:2371:A:C4	1:X:2408:G:C6	2.95	0.54
1:X:2383:C:H1'	11:I:65:PHE:HZ	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
6:D:143:TYR:HA	6:D:146:VAL:CG2	2.37	0.54
11:I:120:VAL:O	11:I:140:VAL:HA	2.07	0.54
13:K:52:ILE:CG1	13:K:53:THR:N	2.71	0.54
19:Q:8:GLN:HB2	19:Q:28:TRP:O	2.06	0.54
20:R:93:ARG:O	20:R:95:ARG:CD	2.55	0.54
23:U:29:GLY:N	23:U:32:ARG:HB3	2.22	0.54
25:W:44:VAL:O	25:W:46:THR:N	2.40	0.54
1:X:214:C:H2'	1:X:215:G:H8	1.71	0.54
1:X:2226:A:C2	1:X:2227:C:C4	2.94	0.54
1:X:2273:C:OP1	14:L:11:LEU:HD11	2.06	0.54
1:X:2342:U:O2'	1:X:2343:C:H5'	2.08	0.54
1:X:2815:C:C4'	13:K:92:GLY:HA3	2.37	0.54
1:X:2872:U:O2'	1:X:2873:G:H5'	2.07	0.54
2:Z:16:U:H1'	2:Z:109:G:H21	1.71	0.54
2:Z:71:G:H2'	2:Z:71:G:N3	2.21	0.54
5:C:95:LEU:CD2	5:C:96:PRO:HD2	2.36	0.54
6:D:70:ALA:O	6:D:72:LYS:N	2.40	0.54
6:D:77:PHE:N	6:D:77:PHE:CD1	2.75	0.54
7:E:109:TYR:CE1	7:E:152:ARG:NH2	2.73	0.54
8:F:81:LYS:C	8:F:83:ALA:N	2.58	0.54
10:H:85:ASP:HB3	15:M:87:LEU:HD12	1.89	0.54
12:J:77:LYS:H	12:J:89:GLY:HA3	1.70	0.54
12:J:121:LEU:O	12:J:123:GLY:N	2.41	0.54
13:K:33:ARG:HG3	13:K:114:GLU:CB	2.31	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
30:4:25:VAL:HG21	30:4:34:GLN:HB2	1.89	0.54
1:X:29:U:O2'	16:N:8:ILE:HG22	2.08	0.54
1:X:226:C:OP2	1:X:2373:C:O2'	2.25	0.54
1:X:303:C:H3'	1:X:304:A:H5''	1.89	0.54
1:X:340:G:H5'	1:X:341:A:OP2	2.07	0.54
1:X:412:U:C5	23:U:68:ARG:NH1	2.75	0.54
1:X:512:A:O2'	18:P:15:LYS:HD3	2.07	0.54
1:X:664:C:H5'	1:X:664:C:H6	1.72	0.54
1:X:749:C:O2'	1:X:750:C:H5'	2.08	0.54
1:X:1367:A:C8	1:X:1368:G:C8	2.95	0.54
1:X:1374:G:C2	1:X:1375:C:C5	2.95	0.54
1:X:1468:A:C8	1:X:1468:A:P	3.01	0.54
1:X:1576:G:C6	1:X:1577:G:N7	2.75	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:2245:A:C2	1:X:2251:U:C5	2.96	0.54
1:X:2345:A:H2'	1:X:2346:G:O4'	2.08	0.54
1:X:2347:C:O2'	1:X:2348:A:H5'	2.08	0.54
1:X:2404:A:OP2	1:X:2406:C:H5'	2.07	0.54
1:X:2777:A:N7	18:P:134:LYS:CD	2.70	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
9:G:106:TYR:O	9:G:110:LEU:HG	2.06	0.54
10:H:110:VAL:HG12	10:H:111:PHE:N	2.21	0.54
11:I:80:LEU:HD22	11:I:84:GLU:OE1	2.06	0.54
12:J:59:PHE:O	12:J:60:ARG:C	2.45	0.54
14:L:33:ARG:CZ	14:L:99:ARG:O	2.56	0.54
14:L:36:LYS:HA	14:L:36:LYS:HE3	1.89	0.54
15:M:28:ARG:HB2	15:M:29:PRO:HD2	1.90	0.54
19:Q:53:ILE:HD12	19:Q:54:SER:H	1.72	0.54
20:R:10:HIS:O	20:R:11:ASN:C	2.45	0.54
21:S:60:GLU:HB3	21:S:62:PHE:CZ	2.43	0.54
23:U:20:ARG:HG2	23:U:39:LYS:CD	2.38	0.54
23:U:26:ALA:CB	23:U:35:THR:HG23	2.38	0.54
1:X:14:A:N7	1:X:15:G:C4	2.75	0.54
1:X:211:U:H3	1:X:442:A:N6	2.05	0.54
1:X:320:A:O2'	1:X:340:G:H2'	2.08	0.54
1:X:565:A:H2'	1:X:566:U:C6	2.43	0.54
1:X:590:C:OP1	16:N:33:ARG:HG2	2.06	0.54
1:X:674:U:H2'	1:X:675:C:O4'	2.07	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:986:A:H4'	16:N:48:ARG:HH11	1.73	0.54
1:X:2504:G:N2	1:X:2518:C:C2	2.75	0.54
1:X:2595:C:O2'	1:X:2596:C:H5'	2.08	0.54
1:X:2615:U:H5'	4:B:80:GLU:HG3	1.89	0.54
2:Z:30:C:P	14:L:37:HIS:HB3	2.46	0.54
4:B:116:VAL:HG22	4:B:136:ARG:CG	2.37	0.54
5:C:135:SER:O	5:C:136:TRP:C	2.45	0.54
6:D:57:LEU:HA	6:D:60:ILE:CG1	2.38	0.54
7:E:127:GLU:O	7:E:129:THR:N	2.40	0.54
9:G:132:PHE:HB2	9:G:145:HIS:NE2	2.22	0.54
10:H:73:VAL:HG21	10:H:123:PHE:CE1	2.43	0.54
14:L:45:ASP:CG	14:L:46:SER:H	2.10	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:M:42:GLY:O	15:M:44:ARG:N	2.41	0.54
17:O:93:ILE:HG13	17:O:95:ILE:HD13	1.88	0.54
18:P:27:VAL:CG2	18:P:28:ALA:N	2.70	0.54
18:P:50:VAL:O	18:P:54:GLU:HB2	2.08	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
21:S:95:SER:HA	21:S:121:GLN:CA	2.27	0.54
24:V:21:ARG:O	24:V:24:GLU:HB3	2.06	0.54
1:X:398:C:O2'	1:X:399:G:OP2	2.23	0.54
1:X:686:C:N4	1:X:821:A:C6	2.76	0.54
1:X:872:G:OP2	1:X:872:G:H8	1.91	0.54
1:X:970:A:H62	12:J:83:ARG:HH21	1.54	0.54
1:X:1174:G:C2	1:X:1175:A:C8	2.96	0.54
1:X:1385:C:C2'	1:X:1386:A:H5'	2.37	0.54
1:X:1541:G:H2'	1:X:1542:G:O4'	2.08	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:2405:A:OP1	1:X:2405:A:C8	2.61	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
3:A:82:ILE:N	3:A:82:ILE:CD1	2.70	0.54
3:A:129:ASN:HB2	3:A:131:LEU:HD22	1.90	0.54
4:B:38:THR:O	4:B:40:GLN:N	2.41	0.54
4:B:59:VAL:CG1	4:B:64:GLN:HG2	2.37	0.54
5:C:108:ILE:O	5:C:112:GLN:HG2	2.07	0.54
6:D:97:TYR:CD2	6:D:100:LEU:HD23	2.41	0.54
7:E:7:GLN:H	7:E:8:PRO:CD	2.19	0.54
10:H:2:ILE:HG23	10:H:6:SER:HB3	1.89	0.54
12:J:29:ALA:O	12:J:30:PHE:HB2	2.06	0.54
12:J:128:ILE:HD13	12:J:128:ILE:H	1.72	0.54
13:K:29:LEU:HD22	13:K:79:VAL:HG23	1.87	0.54
14:L:97:HIS:CG	14:L:98:GLY:N	2.74	0.54
14:L:102:ALA:O	14:L:105:ASP:N	2.40	0.54
18:P:27:VAL:CG2	18:P:125:THR:HG22	2.37	0.54
18:P:35:PRO:O	18:P:36:ARG:C	2.46	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
26:Y:8:LYS:O	26:Y:9:LYS:HG2	2.07	0.54
30:4:7:VAL:HG13	30:4:34:GLN:NE2	2.15	0.54
1:X:59:G:H1'	1:X:73:A:H2	1.72	0.54
1:X:222:G:O2'	1:X:223:C:H5'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:332:C:H4'	5:C:159:ARG:HG2	1.90	0.54
1:X:986:A:C6	1:X:1001:A:C8	2.95	0.54
1:X:1006:C:H4'	1:X:1007:A:OP1	2.06	0.54
1:X:1341:G:H2'	1:X:1343:C:C5	2.43	0.54
1:X:1373:G:H21	1:X:1374:G:H1'	1.71	0.54
1:X:1494:G:HO2'	1:X:1574:A:H2	1.53	0.54
1:X:1623:C:O2'	1:X:1624:A:OP2	2.24	0.54
1:X:2035:G:N2	1:X:2036:G:H1'	2.23	0.54
1:X:2196:U:H2'	1:X:2197:U:C1'	2.38	0.54
1:X:2306:A:H2'	1:X:2307:A:N9	2.23	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:2437:G:H2'	1:X:2469:G:N1	2.22	0.54
1:X:2451:G:C2'	1:X:2454:C:H42	2.20	0.54
1:X:2541:U:O2'	1:X:2542:U:H5'	2.08	0.54
1:X:2664:G:O2'	1:X:2665:G:H5'	2.08	0.54
2:Z:27:A:N6	2:Z:55:C:O3'	2.41	0.54
4:B:85:ALA:N	4:B:86:PRO:CD	2.62	0.54
5:C:170:LEU:CD2	5:C:175:VAL:HA	2.28	0.54
6:D:171:GLN:NE2	6:D:177:PHE:HB2	2.22	0.54
9:G:35:LYS:N	9:G:69:ASP:OD2	2.41	0.54
11:I:73:GLU:OE2	11:I:104:ARG:HB3	2.08	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
15:M:26:ASP:O	15:M:27:PHE:CD2	2.61	0.54
17:O:95:ILE:HD13	17:O:95:ILE:N	2.21	0.54
19:Q:10:PRO:HD3	24:V:30:PHE:CE2	2.42	0.54
22:T:59:LEU:HD22	22:T:59:LEU:N	2.22	0.54
24:V:18:ILE:C	24:V:20:ALA:H	2.10	0.54
1:X:62:U:H5''	1:X:63:A:OP1	2.08	0.54
1:X:538:A:N3	1:X:538:A:C3'	2.67	0.54
1:X:557:U:C4'	1:X:558:G:O4'	2.50	0.54
1:X:754:G:C6	1:X:770:U:O2	2.61	0.54
1:X:930:A:C8	1:X:930:A:H3'	2.42	0.54
1:X:1086:C:H3'	1:X:1087:C:C5'	2.38	0.54
1:X:1141:U:O2'	1:X:1142:G:O5'	2.25	0.54
1:X:1301:U:O2'	1:X:1302:C:P	2.66	0.54
1:X:1347:C:O5'	1:X:1347:C:H6	1.90	0.54
1:X:1364:C:O2'	1:X:1587:A:H1'	2.08	0.54
1:X:1672:A:H3'	1:X:1673:C:C6	2.43	0.54
1:X:1873:A:H8	1:X:1873:A:H3'	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2005:U:C4'	1:X:2006:G:OP1	2.54	0.54
1:X:2307:A:OP2	1:X:2307:A:H8	1.91	0.54
2:Z:66:G:O2'	2:Z:67:C:H5'	2.07	0.54
2:Z:77:G:H1'	21:S:22:VAL:HG11	1.89	0.54
3:A:117:VAL:HG22	3:A:129:ASN:OD1	2.07	0.54
3:A:175:VAL:O	3:A:182:LEU:HA	2.06	0.54
4:B:170:LEU:HB3	4:B:184:VAL:HG11	1.88	0.54
5:C:9:GLN:NE2	5:C:120:VAL:HG21	2.22	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
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
13:K:29:LEU:CD1	13:K:70:ILE:HD11	2.38	0.54
15:M:34:ARG:HH21	15:M:91:VAL:HG21	1.72	0.54
15:M:50:PHE:CE1	15:M:79:ARG:HG2	2.42	0.54
16:N:28:ARG:HA	16:N:34:ASN:HB3	1.90	0.54
19:Q:59:PRO:HB2	19:Q:72:ARG:NH1	2.22	0.54
20:R:38:LEU:HD23	20:R:39:ALA:H	1.69	0.54
23:U:41:VAL:O	23:U:42:GLN:HB2	2.07	0.54
30:4:17:VAL:HG12	30:4:18:ARG:N	2.22	0.54
1:X:26:G:C6	1:X:27:G:N1	2.76	0.54
1:X:76:C:OP1	24:V:52:GLN:NE2	2.41	0.54
1:X:104:C:O2'	1:X:105:G:H5'	2.08	0.54
1:X:110:U:C5	1:X:111:G:C5	2.95	0.54
1:X:182:G:O2'	1:X:183:U:OP2	2.21	0.54
1:X:242:A:N6	1:X:440:U:O2'	2.41	0.54
1:X:532:A:C2	1:X:533:C:C2	2.95	0.54
1:X:641:G:H4'	1:X:651:C:O2'	2.08	0.54
1:X:999:A:OP1	25:W:7:ARG:HD3	2.08	0.54
1:X:1182:U:H2'	1:X:1183:C:O4'	2.08	0.54
1:X:1201:G:H5''	17:O:80:TYR:HE2	1.73	0.54
1:X:2240:C:HO2'	1:X:2241:U:H5'	1.69	0.54
1:X:2275:U:H4'	1:X:2276:C:H5'	1.90	0.54
1:X:2333:A:N6	1:X:2343:C:N4	2.55	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
1:X:2812:A:C4	1:X:2813:G:C8	2.96	0.54
4:B:119:ARG:HG2	4:B:120:TRP:NE1	2.23	0.54
5:C:153:ASP:HA	5:C:158:ARG:HH21	1.73	0.54
6:D:156:ILE:HD12	6:D:156:ILE:N	2.23	0.54
7:E:88:GLU:N	7:E:163:ARG:O	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:172:LYS:O	7:E:173:ALA:HB2	2.05	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
11:I:72:TYR:CE2	11:I:105:PRO:HB2	2.43	0.54
14:L:39:TYR:O	14:L:40:ALA:C	2.47	0.54
14:L:45:ASP:O	14:L:46:SER:O	2.25	0.54
15:M:59:GLY:HA3	15:M:64:LYS:HA	1.89	0.54
18:P:31:VAL:HG21	18:P:124:ILE:HG12	1.90	0.54
20:R:96:LYS:H	20:R:105:ARG:H	1.56	0.54
21:S:152:ILE:HG12	21:S:168:VAL:HG21	1.90	0.54
23:U:20:ARG:C	23:U:39:LYS:HD2	2.28	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:554:U:O2	1:X:554:U:H2'	2.08	0.54
1:X:568:G:C2'	1:X:569:C:H5'	2.38	0.54
1:X:1272:G:O2'	1:X:1273:G:H5'	2.08	0.54
1:X:1323:G:H3'	1:X:1324:G:C2	2.43	0.54
1:X:1354:A:H2'	1:X:1410:U:O2'	2.07	0.54
1:X:1431:U:O3'	1:X:1604:A:H4'	2.08	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:2064:U:P	23:U:39:LYS:HZ2	2.30	0.54
1:X:2181:A:O2'	1:X:2182:A:H5'	2.07	0.54
1:X:2344:G:OP1	22:T:55:ARG:N	2.35	0.54
1:X:2616:U:O2	1:X:2762:G:C2	2.61	0.54
1:X:2725:C:H4'	7:E:142:GLY:C	2.28	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
3:A:147:LEU:O	3:A:148:VAL:HG23	2.08	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
7:E:101:LYS:O	7:E:123:PHE:HD1	1.91	0.54
7:E:149:ARG:HA	7:E:162:VAL:HG21	1.90	0.54
9:G:67:ARG:CZ	9:G:70:PHE:O	2.56	0.54
10:H:81:ILE:O	10:H:81:ILE:HD13	2.08	0.54
11:I:104:ARG:HB3	11:I:105:PRO:HD2	1.89	0.54
16:N:74:MET:O	16:N:75:ASN:CB	2.53	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
23:U:19:ILE:HG13	23:U:20:ARG:N	2.23	0.54
1:X:63:A:H5'	19:Q:71:GLN:HB3	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:306:G:C6	1:X:307:C:N4	2.76	0.54
1:X:448:C:H2'	1:X:449:C:H5'	1.90	0.54
1:X:613:A:O2'	1:X:614:G:P	2.66	0.54
1:X:877:G:H21	1:X:879:A:N6	2.05	0.54
1:X:1209:G:O2'	1:X:1210:C:H5'	2.08	0.54
1:X:1278:A:O2'	1:X:1279:G:P	2.66	0.54
1:X:1438:G:H2'	1:X:1439:G:C8	2.43	0.54
1:X:1658:A:N7	1:X:1659:G:C5	2.76	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:1742:G:C6	1:X:1743:C:N4	2.76	0.54
1:X:1838:G:N2	1:X:1878:C:C2	2.76	0.54
1:X:1873:A:C8	1:X:1873:A:H3'	2.43	0.54
1:X:2245:A:O2'	1:X:2246:A:OP2	2.23	0.54
1:X:2306:A:H2'	1:X:2307:A:C1'	2.37	0.54
1:X:2585:C:C2'	1:X:2586:G:H5'	2.38	0.54
4:B:116:VAL:CG2	4:B:136:ARG:HG2	2.38	0.54
5:C:34:GLN:HE22	5:C:177:VAL:HB	1.72	0.54
5:C:136:TRP:HD1	5:C:137:ALA:N	2.06	0.54
12:J:99:LYS:HG3	12:J:100:PRO:HD2	1.90	0.54
14:L:91:ARG:H	14:L:91:ARG:NE	2.06	0.54
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
18:P:42:VAL:O	18:P:43:ASP:OD2	2.26	0.54
18:P:89:ARG:NE	18:P:132:GLY:H	2.06	0.54
21:S:20:ALA:O	21:S:80:HIS:HA	2.07	0.54
21:S:34:LEU:C	21:S:34:LEU:HD12	2.29	0.54
1:X:196:A:H2'	1:X:197:G:H5'	1.89	0.53
1:X:398:C:C2'	1:X:399:G:OP2	2.56	0.53
1:X:425:A:H2'	1:X:425:A:N3	2.22	0.53
1:X:820:U:H2'	1:X:821:A:C8	2.43	0.53
1:X:931:G:C6	1:X:932:G:C5	2.95	0.53
1:X:1080:A:H4'	1:X:1081:A:N7	2.23	0.53
1:X:1314:A:HO2'	1:X:1315:A:H3'	1.66	0.53
1:X:1479:G:O2'	1:X:1480:G:H5'	2.08	0.53
1:X:1854:G:H2'	1:X:1855:G:H8	1.73	0.53
1:X:1937:G:O2'	1:X:1939:U:H5	1.92	0.53
1:X:2204:A:O2'	1:X:2205:C:OP2	2.21	0.53
1:X:2225:G:C4	1:X:2226:A:N7	2.76	0.53
1:X:2672:U:O2'	1:X:2673:G:H5'	2.09	0.53
1:X:2840:U:OP2	1:X:2841:U:H2'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2867:G:OP2	1:X:2867:G:H8	1.90	0.53
2:Z:15:A:C2	2:Z:71:G:H2'	2.44	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
3:A:32:ALA:O	3:A:33:LEU:O	2.26	0.53
3:A:172:TYR:HA	3:A:185:VAL:O	2.08	0.53
4:B:15:TRP:CH2	15:M:84:ALA:HB3	2.42	0.53
4:B:44:TYR:OH	4:B:80:GLU:OE2	2.26	0.53
5:C:158:ARG:O	5:C:160:ALA:N	2.42	0.53
9:G:71:THR:HA	16:N:64:ARG:HH11	1.73	0.53
10:H:7:ARG:NH1	10:H:20:MET:CE	2.71	0.53
11:I:88:PHE:CB	11:I:93:LEU:HD12	2.25	0.53
13:K:97:ILE:N	13:K:97:ILE:CD1	2.72	0.53
15:M:34:ARG:NH1	15:M:81:PHE:CD2	2.76	0.53
19:Q:5:ASP:O	19:Q:7:LEU:N	2.41	0.53
21:S:2:GLU:HG2	21:S:55:THR:CB	2.32	0.53
21:S:100:THR:HG23	21:S:138:VAL:CG1	2.34	0.53
23:U:28:GLY:O	23:U:30:VAL:N	2.41	0.53
26:Y:58:LEU:H	26:Y:58:LEU:HD12	1.73	0.53
1:X:38:G:N3	5:C:42:THR:HB	2.23	0.53
1:X:573:C:H5''	17:O:74:TYR:OH	2.09	0.53
1:X:665:A:H2	1:X:666:U:H6	1.56	0.53
1:X:763:A:H2'	1:X:764:A:H5''	1.89	0.53
1:X:807:A:O2'	1:X:808:C:H5'	2.08	0.53
1:X:1071:U:H4'	1:X:1072:U:O5'	2.08	0.53
1:X:1781:C:O2'	3:A:209:ALA:HB2	2.08	0.53
1:X:1965:U:C2	1:X:1966:C:C5	2.96	0.53
1:X:2198:U:P	1:X:2199:C:H5''	2.48	0.53
1:X:2379:G:H2'	1:X:2380:U:H5'	1.89	0.53
1:X:2496:C:H2'	1:X:2521:A:H62	1.73	0.53
2:Z:7:C:H2'	2:Z:8:C:C6	2.43	0.53
3:A:186:HIS:CD2	3:A:188:GLU:HB2	2.42	0.53
5:C:47:THR:O	5:C:48:ARG:C	2.47	0.53
6:D:10:ASP:O	6:D:12:VAL:N	2.41	0.53
8:F:112:LYS:O	8:F:113:MET:HB2	2.08	0.53
13:K:64:ARG:O	13:K:67:ALA:HB3	2.08	0.53
15:M:5:ILE:HD13	15:M:7:ILE:CB	2.38	0.53
17:O:28:GLU:O	17:O:29:ALA:CB	2.56	0.53
20:R:60:PRO:CA	20:R:65:PRO:HA	2.31	0.53
20:R:107:ALA:CB	20:R:111:GLY:HA2	2.34	0.53
21:S:11:LYS:O	21:S:13:LYS:N	2.40	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:123:VAL:HG23	21:S:161:ALA:CB	2.38	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
1:X:819:C:OP2	11:I:41:SER:HA	2.08	0.53
1:X:946:U:H2'	1:X:947:C:C6	2.30	0.53
1:X:1171:A:C1'	17:O:6:GLN:OE1	2.56	0.53
1:X:1218:C:O4'	11:I:13:ARG:HD3	2.08	0.53
1:X:1430:G:C2	1:X:1431:U:C2	2.96	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
2:Z:7:C:H2'	2:Z:8:C:H6	1.74	0.53
2:Z:67:C:C2'	2:Z:111:C:H42	2.18	0.53
3:A:70:ARG:O	3:A:72:LYS:N	2.41	0.53
3:A:217:ARG:CD	3:A:218:LYS:HG3	2.39	0.53
6:D:17:MET:HE3	6:D:25:VAL:HG12	1.90	0.53
6:D:135:GLN:C	6:D:141:ILE:HG21	2.29	0.53
7:E:44:ARG:HD2	7:E:45:GLN:N	2.24	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
10:H:11:ALA:HB3	10:H:110:VAL:HG13	1.89	0.53
12:J:78:LYS:HE3	12:J:80:ALA:O	2.08	0.53
15:M:54:VAL:HG12	15:M:54:VAL:O	2.08	0.53
16:N:62:ILE:HG23	16:N:76:TYR:CE1	2.44	0.53
18:P:39:ARG:O	18:P:43:ASP:CG	2.47	0.53
18:P:87:GLU:HA	18:P:90:LEU:CD1	2.36	0.53
19:Q:28:TRP:CZ3	19:Q:75:ARG:HD2	2.42	0.53
19:Q:63:LYS:HB2	19:Q:70:GLY:H	1.73	0.53
21:S:32:PHE:HD2	21:S:32:PHE:N	2.06	0.53
25:W:38:PRO:CA	25:W:41:ARG:NH2	2.71	0.53
30:4:10:MET:HE3	30:4:32:HIS:HA	1.91	0.53
1:X:700:C:H2'	1:X:701:U:O4'	2.09	0.53
1:X:828:C:C2	1:X:1207:G:C2	2.97	0.53
1:X:874:A:C4	1:X:929:A:C6	2.97	0.53
1:X:933:G:O2'	1:X:934:G:H5'	2.08	0.53
1:X:1242:A:O2'	1:X:1243:G:H5'	2.08	0.53
1:X:1288:A:O2'	1:X:1289:A:P	2.67	0.53
1:X:1757:C:N3	1:X:1970:G:C6	2.76	0.53
1:X:2380:U:C4	1:X:2381:A:H2	2.26	0.53
1:X:2508:G:O5'	1:X:2509:A:H5''	2.07	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
4:B:68:ALA:O	4:B:71:GLY:N	2.37	0.53
5:C:127:ASP:O	5:C:129:LYS:N	2.42	0.53
7:E:137:ASP:HB3	7:E:140:LEU:CB	2.38	0.53
8:F:71:LYS:C	8:F:73:PRO:HD3	2.28	0.53
8:F:116:LEU:HG	8:F:127:THR:HG21	1.90	0.53
9:G:65:LYS:HB2	9:G:66:HIS:CD2	2.43	0.53
12:J:77:LYS:HG3	12:J:78:LYS:N	2.23	0.53
14:L:59:LEU:HD23	14:L:60:LYS:H	1.74	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
23:U:22:GLY:N	23:U:39:LYS:HE2	2.24	0.53
1:X:90:G:H5'	1:X:91:A:H8	1.73	0.53
1:X:93:A:O2'	1:X:94:C:H5'	2.08	0.53
1:X:389:G:C4	1:X:390:U:C5	2.97	0.53
1:X:453:U:O2'	5:C:40:ARG:NH1	2.42	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
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:1542:G:H22	1:X:1562:G:H22	1.56	0.53
1:X:2468:G:H2'	1:X:2469:G:O4'	2.09	0.53
1:X:2629:U:H2'	1:X:2630:C:H6	1.73	0.53
1:X:2676:G:H2'	1:X:2677:U:C6	2.43	0.53
4:B:96:PHE:CE2	4:B:102:ILE:HG21	2.42	0.53
6:D:94:GLU:O	6:D:98:VAL:N	2.41	0.53
6:D:132:ILE:H	6:D:153:ASP:HA	1.74	0.53
7:E:8:PRO:HD2	7:E:69:ARG:HH11	1.72	0.53
7:E:43:VAL:CG2	7:E:50:LEU:HD21	2.38	0.53
9:G:132:PHE:CD1	9:G:145:HIS:HB2	2.43	0.53
10:H:41:ASN:O	10:H:42:LYS:O	2.26	0.53
12:J:40:PRO:HB3	12:J:99:LYS:HZ2	1.73	0.53
13:K:63:ARG:CZ	13:K:80:MET:HG2	2.38	0.53
13:K:99:ARG:CG	13:K:99:ARG:NH1	2.68	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
19:Q:60:GLY:H	19:Q:72:ARG:CD	2.21	0.53
20:R:71:GLN:C	20:R:71:GLN:OE1	2.46	0.53
20:R:94:VAL:O	20:R:95:ARG:NH1	2.40	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:96:LYS:HZ3	20:R:105:ARG:HG3	1.74	0.53
23:U:49:LYS:HA	23:U:62:LEU:H	1.72	0.53
25:W:34:VAL:HG22	25:W:40:VAL:HG13	1.91	0.53
1:X:71:A:N6	1:X:110:U:H5''	2.24	0.53
1:X:143:A:O2'	1:X:144:U:H5'	2.08	0.53
1:X:574:C:P	17:O:77:GLY:HA2	2.48	0.53
1:X:578:U:O2'	1:X:994:A:N1	2.40	0.53
1:X:715:U:O2'	1:X:716:U:H5'	2.08	0.53
1:X:919:U:H2'	1:X:920:G:H8	1.74	0.53
1:X:955:G:H3'	1:X:955:G:N3	2.23	0.53
1:X:1510:A:H2'	1:X:1511:A:C8	2.43	0.53
1:X:1548:U:H2'	1:X:1549:C:C6	2.43	0.53
1:X:1753:A:O5'	1:X:1753:A:C8	2.60	0.53
1:X:1960:A:H8	1:X:1960:A:O5'	1.92	0.53
1:X:2189:A:O5'	1:X:2189:A:C8	2.62	0.53
1:X:2522:G:H2'	1:X:2523:G:O4'	2.09	0.53
1:X:2714:A:H2'	1:X:2715:C:O4'	2.08	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
4:B:54:LYS:HB2	4:B:75:THR:O	2.08	0.53
4:B:107:THR:HA	4:B:163:GLU:O	2.09	0.53
8:F:72:THR:HG23	8:F:77:TYR:CD2	2.44	0.53
8:F:85:ILE:CD1	8:F:89:SER:N	2.71	0.53
9:G:32:TYR:HD2	16:N:100:ALA:HB1	1.74	0.53
10:H:125:LYS:O	10:H:129:LEU:HD23	2.09	0.53
12:J:113:GLU:C	12:J:115:ALA:N	2.60	0.53
13:K:16:ALA:C	13:K:18:VAL:N	2.59	0.53
13:K:57:GLY:O	13:K:59:ASP:N	2.39	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
16:N:75:ASN:O	16:N:79:PHE:HB3	2.09	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
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
24:V:10:GLN:C	24:V:12:THR:N	2.60	0.53
30:4:13:ASN:O	30:4:15:LYS:HG2	2.09	0.53
1:X:617:U:C5	1:X:632:A:N1	2.76	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:699:G:H4'	1:X:700:C:OP2	2.07	0.53
1:X:1325:U:O2'	1:X:1327:C:C5	2.61	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
1:X:1703:C:H2'	1:X:1704:G:O4'	2.09	0.53
1:X:1935:A:N3	10:H:22:ILE:HD11	2.23	0.53
1:X:2069:U:H2'	1:X:2070:G:C8	2.44	0.53
1:X:2482:A:C2'	32:X:2911:ZLD:H13B	2.39	0.53
1:X:2489:C:C4	1:X:2490:U:C5	2.97	0.53
1:X:2581:A:C5'	1:X:2582:G:OP2	2.57	0.53
1:X:2738:A:C2'	1:X:2739:G:H5'	2.39	0.53
2:Z:3:A:C2'	2:Z:4:C:C5'	2.86	0.53
4:B:9:ILE:CD1	4:B:27:LEU:HB3	2.38	0.53
4:B:119:ARG:NH1	4:B:119:ARG:CG	2.68	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
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
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
22:T:22:GLY:O	22:T:39:ARG:O	2.27	0.53
24:V:7:ARG:NH1	24:V:8:ASN:HA	2.23	0.53
1:X:163:A:O2'	1:X:164:G:H5'	2.08	0.53
1:X:831:G:C2	1:X:1204:G:O6	2.61	0.53
1:X:1070:G:C5'	1:X:1071:U:H3'	2.39	0.53
1:X:1264:C:C5'	16:N:13:ARG:HH12	2.21	0.53
1:X:1679:U:H2'	1:X:1680:U:O4'	2.09	0.53
1:X:1733:U:OP2	1:X:1733:U:H6	1.92	0.53
1:X:1837:G:O2'	1:X:1838:G:H5'	2.09	0.53
1:X:2615:U:O5'	4:B:80:GLU:HG3	2.08	0.53
2:Z:45:C:C2'	6:D:92:ARG:CZ	2.85	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
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
6:D:143:TYR:O	6:D:146:VAL:HG22	2.08	0.53
7:E:13:SER:C	7:E:15:VAL:H	2.12	0.53
7:E:90:ARG:CD	7:E:163:ARG:HH11	2.22	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
15:M:10:GLY:O	15:M:13:LEU:HB2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
18:P:56:LEU:O	18:P:57:LEU:C	2.47	0.53
20:R:98:ILE:N	20:R:98:ILE:HD12	2.23	0.53
22:T:42:GLY:O	22:T:57:HIS:CB	2.56	0.53
23:U:8:THR:HA	23:U:14:VAL:HG22	1.91	0.53
1:X:572:G:N7	1:X:2001:G:C6	2.77	0.53
1:X:717:G:H2'	1:X:739:G:N2	2.21	0.53
1:X:824:U:H1'	1:X:1264:C:O4'	2.09	0.53
1:X:1074:G:H2'	1:X:1075:C:C6	2.44	0.53
1:X:1103:C:N4	1:X:1111:C:H42	2.07	0.53
1:X:1275:A:N3	26:Y:10:LYS:HE2	2.24	0.53
1:X:1301:U:H6	1:X:1301:U:OP2	1.92	0.53
1:X:1505:U:H1'	1:X:1506:C:C5	2.44	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
1:X:1526:U:H2'	1:X:1527:G:H5'	1.91	0.53
1:X:1790:G:C8	1:X:1811:A:N6	2.77	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
1:X:2284:U:H3'	1:X:2284:U:C6	2.44	0.53
1:X:2467:A:H8	1:X:2467:A:O5'	1.92	0.53
1:X:2700:U:C2	1:X:2701:A:C8	2.96	0.53
2:Z:45:C:C2'	6:D:92:ARG:NH1	2.72	0.53
3:A:70:ARG:C	3:A:72:LYS:N	2.62	0.53
3:A:216:GLY:O	3:A:217:ARG:HB2	2.09	0.53
3:A:239:ARG:O	3:A:240:THR:HB	2.09	0.53
12:J:69:ILE:HD13	12:J:104:MET:CG	2.39	0.53
13:K:25:ALA:HB2	13:K:47:PHE:HE2	1.74	0.53
13:K:55:ALA:C	13:K:57:GLY:N	2.62	0.53
16:N:114:ARG:HB3	16:N:114:ARG:CZ	2.39	0.53
20:R:89:GLY:O	20:R:90:LYS:HB3	2.09	0.53
21:S:64:ALA:HA	21:S:86:VAL:H	1.73	0.53
22:T:41:ARG:HE	22:T:41:ARG:HA	1.74	0.53
23:U:29:GLY:H	23:U:32:ARG:HB3	1.73	0.53
23:U:50:ALA:CB	23:U:52:ARG:NH2	2.68	0.53
26:Y:42:SER:O	26:Y:43:HIS:CB	2.51	0.53
1:X:10:A:N1	1:X:2608:A:C2	2.77	0.53
1:X:554:U:O3'	1:X:555:U:C4'	2.57	0.53
1:X:576:A:C2	1:X:577:U:H1'	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:689:A:C2	1:X:690:A:C8	2.96	0.53
1:X:841:G:N7	1:X:842:A:N6	2.56	0.53
1:X:1219:C:H4'	11:I:7:LYS:HD3	1.91	0.53
1:X:1369:G:H2'	1:X:1370:U:O4'	2.09	0.53
1:X:1625:A:C5	1:X:1632:A:C2	2.97	0.53
1:X:1644:G:H2'	1:X:1645:U:H6	1.72	0.53
1:X:1781:C:H4'	3:A:209:ALA:HB2	1.90	0.53
1:X:2039:G:H2'	1:X:2039:G:N3	2.23	0.53
1:X:2055:G:N1	1:X:2417:U:C2	2.77	0.53
1:X:2201:G:C2	1:X:2202:G:C8	2.97	0.53
1:X:2228:U:C5'	1:X:2229:G:OP2	2.57	0.53
1:X:2437:G:O2'	1:X:2439:U:O4	2.24	0.53
1:X:2604:G:H2'	1:X:2605:C:H6	1.74	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
3:A:154:GLN:O	3:A:155:LEU:HD23	2.09	0.53
4:B:67:PHE:CE1	4:B:75:THR:HG22	2.44	0.53
9:G:123:PRO:CD	9:G:124:GLU:OE1	2.57	0.53
11:I:11:GLY:C	11:I:13:ARG:N	2.61	0.53
11:I:62:LYS:CE	11:I:64:GLY:CA	2.84	0.53
18:P:8:PHE:CD2	18:P:9:ARG:N	2.74	0.53
20:R:97:GLN:HB2	20:R:101:GLY:CA	2.28	0.53
21:S:72:ASP:OD1	21:S:75:LYS:CG	2.57	0.53
23:U:43:ARG:NH2	23:U:43:ARG:HG2	2.24	0.53
1:X:77:C:O2'	1:X:78:C:H5'	2.09	0.52
1:X:173:A:H2'	1:X:818:G:O6	2.09	0.52
1:X:322:A:C2'	1:X:323:G:OP1	2.57	0.52
1:X:556:A:O2'	1:X:557:U:O4'	2.26	0.52
1:X:874:A:H2'	1:X:875:G:O4'	2.09	0.52
1:X:1018:C:C6	1:X:1019:U:H5	2.27	0.52
1:X:1032:A:H8	1:X:1032:A:H3'	1.73	0.52
1:X:1563:U:C2	1:X:1564:U:C5	2.97	0.52
1:X:2394:G:C5'	11:I:63:ARG:NE	2.71	0.52
1:X:2451:G:H2'	1:X:2508:G:H22	1.73	0.52
2:Z:107:C:H2'	2:Z:108:G:C5'	2.36	0.52
4:B:33:ILE:HG21	4:B:47:VAL:CG1	2.38	0.52
4:B:152:LYS:H	9:G:106:TYR:HD2	1.57	0.52
5:C:34:GLN:NE2	5:C:177:VAL:HB	2.24	0.52
5:C:104:LEU:O	5:C:105:ALA:C	2.47	0.52
5:C:137:ALA:O	5:C:138:LYS:C	2.47	0.52
6:D:14:PRO:HA	6:D:17:MET:SD	2.48	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:70:ALA:N	6:D:85:VAL:HG22	2.23	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
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
12:J:51:CYS:O	12:J:55:MET:HE2	2.09	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
15:M:102:ALA:C	15:M:103:LYS:HD2	2.29	0.52
17:O:20:ILE:CD1	17:O:21:ARG:N	2.70	0.52
18:P:42:VAL:O	18:P:42:VAL:CG1	2.55	0.52
19:Q:12:ILE:O	19:Q:13:SER:O	2.27	0.52
21:S:43:PHE:CE1	21:S:47:SER:HA	2.44	0.52
23:U:17:SER:OG	23:U:45:ASN:HB2	2.08	0.52
23:U:53:GLU:O	23:U:78:ILE:HG23	2.09	0.52
1:X:172:A:N7	1:X:175:C:H5	2.06	0.52
1:X:388:G:N2	1:X:389:G:H1'	2.24	0.52
1:X:488:A:H8	1:X:488:A:OP1	1.92	0.52
1:X:509:U:H2'	1:X:510:G:H5'	1.90	0.52
1:X:774:A:C8	1:X:774:A:C3'	2.91	0.52
1:X:1032:A:O2'	1:X:1134:C:H5''	2.10	0.52
1:X:1200:G:C2	1:X:1201:G:H1'	2.43	0.52
1:X:1332:G:C2	1:X:1347:C:N3	2.77	0.52
1:X:1533:G:O2'	1:X:1534:A:H5'	2.09	0.52
1:X:2199:C:C2'	1:X:2200:G:H8	2.18	0.52
1:X:2617:G:P	4:B:82:ARG:NH2	2.81	0.52
2:Z:44:C:H1'	6:D:89:VAL:CG1	2.39	0.52
4:B:170:LEU:HB3	4:B:184:VAL:HG13	1.90	0.52
6:D:77:PHE:C	6:D:79:LEU:HD12	2.29	0.52
6:D:92:ARG:CA	6:D:96:MET:HB3	2.39	0.52
7:E:78:GLY:C	7:E:80:SER:N	2.61	0.52
9:G:110:LEU:HD23	9:G:110:LEU:H	1.72	0.52
10:H:91:PHE:N	10:H:91:PHE:CD1	2.77	0.52
12:J:66:TYR:HB2	12:J:106:GLU:HG2	1.91	0.52
12:J:123:GLY:HA2	12:J:126:LEU:HD12	1.91	0.52
13:K:112:LEU:HD21	26:Y:45:ILE:HD11	1.92	0.52
15:M:94:VAL:O	15:M:95:GLU:HB3	2.08	0.52
16:N:50:ARG:O	16:N:52:ASN:N	2.38	0.52
18:P:37:LYS:HZ3	18:P:64:ALA:N	2.07	0.52
20:R:25:LEU:O	20:R:25:LEU:HD22	2.09	0.52
20:R:85:ASP:HB3	20:R:90:LYS:NZ	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Y:13:LYS:HB2	26:Y:16:ARG:HH21	1.73	0.52
1:X:171:G:H2'	1:X:172:A:O4'	2.09	0.52
1:X:767:G:C6	1:X:768:U:O4	2.63	0.52
1:X:1011:A:N1	1:X:1012:A:C2	2.78	0.52
1:X:1095:A:C3'	1:X:1096:A:C5'	2.80	0.52
1:X:1141:U:O4	4:B:147:PRO:HD3	2.07	0.52
1:X:1176:U:O2'	1:X:1177:U:H5'	2.09	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:1621:C:O2'	1:X:1622:G:H5'	2.09	0.52
1:X:2228:U:C4'	1:X:2229:G:OP2	2.57	0.52
1:X:2265:A:H5'	1:X:2266:A:OP1	2.09	0.52
1:X:2356:A:N3	14:L:89:PHE:HE1	2.08	0.52
1:X:2560:G:C5	1:X:2589:C:C4	2.97	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
3:A:33:LEU:HD21	3:A:63:ARG:HH22	1.73	0.52
4:B:152:LYS:N	9:G:106:TYR:HB3	2.24	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
6:D:135:GLN:O	6:D:138:PHE:HD1	1.92	0.52
11:I:7:LYS:N	11:I:7:LYS:HD3	2.24	0.52
11:I:122:VAL:C	11:I:124:ALA:H	2.11	0.52
14:L:95:LYS:HB3	14:L:95:LYS:NZ	2.25	0.52
17:O:40:VAL:HA	17:O:44:GLN:O	2.09	0.52
22:T:43:THR:HB	22:T:46:LYS:HZ2	1.75	0.52
24:V:28:LEU:C	24:V:30:PHE:H	2.12	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
1:X:204:A:N7	1:X:2386:G:H5'	2.25	0.52
1:X:508:G:O2'	1:X:509:U:H5'	2.10	0.52
1:X:520:C:O2	1:X:520:C:H2'	2.08	0.52
1:X:590:C:H2'	1:X:591:G:H8	1.74	0.52
1:X:605:G:H2'	1:X:606:A:C8	2.45	0.52
1:X:669:G:H2'	1:X:670:U:O4'	2.09	0.52
1:X:760:U:C5	26:Y:3:LYS:HE2	2.45	0.52
1:X:887:G:N2	1:X:888:G:H1'	2.25	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
1:X:1710:U:H4'	1:X:1711:C:OP2	2.09	0.52
1:X:1915:A:H2'	1:X:1916:G:H5'	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2201:G:H2'	1:X:2202:G:H8	1.74	0.52
1:X:2620:G:OP2	9:G:102:ARG:NH2	2.42	0.52
1:X:2821:G:C6	1:X:2846:G:N1	2.78	0.52
1:X:2827:G:C5	1:X:2828:C:C4	2.97	0.52
2:Z:108:G:H2'	2:Z:109:G:H8	1.75	0.52
3:A:112:THR:O	3:A:114:GLY:N	2.42	0.52
4:B:32:PRO:HD2	4:B:50:GLY:O	2.10	0.52
6:D:132:ILE:O	6:D:152:MET:O	2.27	0.52
7:E:70:THR:O	7:E:74:ASN:N	2.41	0.52
8:F:78:LEU:HA	8:F:81:LYS:HB2	1.91	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
11:I:99:VAL:O	11:I:100:ARG:C	2.48	0.52
12:J:48:ILE:C	12:J:50:ALA:N	2.61	0.52
14:L:84:ILE:O	14:L:84:ILE:HG22	2.08	0.52
15:M:39:VAL:HA	15:M:45:THR:HA	1.91	0.52
16:N:61:TRP:O	16:N:65:ILE:HG13	2.09	0.52
18:P:112:GLY:O	18:P:113:SER:C	2.48	0.52
20:R:10:HIS:CD2	20:R:44:GLN:NE2	2.77	0.52
21:S:67:LYS:NZ	21:S:84:TYR:HB2	2.23	0.52
1:X:65:C:H2'	1:X:66:U:O4'	2.08	0.52
1:X:238:G:N1	1:X:239:A:C5	2.78	0.52
1:X:343:A:O5'	1:X:343:A:N3	2.43	0.52
1:X:739:G:O2'	1:X:740:A:P	2.67	0.52
1:X:1301:U:O2'	1:X:1302:C:OP1	2.26	0.52
1:X:1404:C:C5	1:X:1407:G:C6	2.98	0.52
1:X:1615:C:P	19:Q:35:LYS:HB2	2.50	0.52
1:X:1714:A:H5''	1:X:1715:A:H3'	1.90	0.52
1:X:1808:C:C5	3:A:62:TYR:CE2	2.98	0.52
1:X:1960:A:H2'	1:X:1961:A:O4'	2.09	0.52
1:X:2015:G:O2'	1:X:2016:A:P	2.67	0.52
1:X:2673:G:N2	1:X:2674:C:C2	2.77	0.52
1:X:2844:G:O2'	1:X:2845:C:H5'	2.09	0.52
3:A:81:ALA:C	3:A:82:ILE:HD12	2.29	0.52
4:B:107:THR:HG23	4:B:163:GLU:O	2.10	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
7:E:39:THR:C	7:E:41:LEU:N	2.61	0.52
7:E:98:LEU:HG	7:E:99:THR:H	1.73	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:47:GLN:NE2	12:J:127:PRO:HG3	2.25	0.52
14:L:79:ALA:O	14:L:83:GLY:N	2.42	0.52
15:M:5:ILE:HD13	15:M:7:ILE:HG12	1.90	0.52
19:Q:26:SER:CB	19:Q:79:ILE:HG13	2.34	0.52
21:S:54:ILE:C	21:S:61:THR:HA	2.30	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
1:X:69:G:H2'	1:X:111:G:O2'	2.10	0.52
1:X:422:C:O2'	1:X:423:G:H5'	2.10	0.52
1:X:725:C:H2'	1:X:726:G:O4'	2.10	0.52
1:X:764:A:C5	1:X:802:A:C2	2.98	0.52
1:X:871:U:O2'	1:X:2247:A:C2'	2.39	0.52
1:X:1052:C:OP2	1:X:1052:C:H6	1.92	0.52
1:X:1301:U:HO2'	1:X:1302:C:P	2.32	0.52
1:X:1463:A:C4	1:X:1479:G:N2	2.78	0.52
1:X:1811:A:OP2	1:X:1811:A:C8	2.62	0.52
1:X:2039:G:C4	1:X:2556:A:C2	2.97	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:2599:U:H2'	1:X:2600:A:H8	1.75	0.52
1:X:2695:C:H2'	1:X:2696:A:C8	2.45	0.52
1:X:2759:U:H1'	1:X:2761:A:C6	2.44	0.52
3:A:135:PHE:HD2	3:A:135:PHE:N	2.08	0.52
5:C:7:ILE:HG21	5:C:122:GLY:N	2.24	0.52
5:C:112:GLN:HB3	5:C:116:LYS:CD	2.37	0.52
5:C:124:ASP:CG	5:C:136:TRP:HE3	2.13	0.52
6:D:32:GLU:HB3	6:D:157:VAL:HB	1.91	0.52
7:E:127:GLU:HG3	7:E:129:THR:CA	2.39	0.52
9:G:62:ILE:CD1	9:G:148:LEU:HB2	2.38	0.52
10:H:55:VAL:HG23	10:H:70:VAL:HG22	1.92	0.52
11:I:29:THR:HA	11:I:34:HIS:CG	2.45	0.52
11:I:77:LEU:HG	11:I:112:GLY:O	2.10	0.52
12:J:33:TYR:O	12:J:106:GLU:CA	2.58	0.52
14:L:21:THR:HG23	14:L:45:ASP:HB2	1.90	0.52
14:L:89:PHE:CD1	14:L:91:ARG:NH2	2.77	0.52
15:M:69:ARG:CG	15:M:69:ARG:NH1	2.67	0.52
15:M:89:ASN:C	15:M:90:GLN:OE1	2.48	0.52
16:N:81:ASN:O	16:N:84:LYS:N	2.42	0.52
18:P:52:ASP:O	18:P:55:ASP:N	2.37	0.52
19:Q:7:LEU:C	19:Q:7:LEU:CD1	2.77	0.52
19:Q:61:LYS:N	19:Q:72:ARG:HA	2.23	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:Q:63:LYS:HB2	19:Q:70:GLY:HA3	1.92	0.52
20:R:95:ARG:NH1	20:R:106:VAL:HA	2.25	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
22:T:46:LYS:HD3	22:T:76:ALA:HB1	1.91	0.52
23:U:22:GLY:N	23:U:39:LYS:HG3	2.23	0.52
25:W:1:MET:HB2	25:W:34:VAL:CG1	2.39	0.52
26:Y:3:LYS:O	26:Y:4:HIS:C	2.48	0.52
1:X:53:G:N1	1:X:54:G:C4	2.78	0.52
1:X:143:A:H8	1:X:143:A:O5'	1.92	0.52
1:X:204:A:N6	1:X:2386:G:O4'	2.42	0.52
1:X:332:C:C1'	5:C:159:ARG:NE	2.61	0.52
1:X:579:G:H2'	1:X:2013:A:C5	2.45	0.52
1:X:600:G:O6	1:X:602:C:N4	2.42	0.52
1:X:760:U:N1	26:Y:3:LYS:HE2	2.24	0.52
1:X:1089:C:H5''	1:X:1090:C:OP1	2.09	0.52
1:X:1741:G:H2'	1:X:1742:G:C5'	2.40	0.52
1:X:1866:G:N2	1:X:1867:A:H2	2.08	0.52
1:X:1947:G:C2	1:X:1950:C:C6	2.98	0.52
1:X:2083:G:H2'	1:X:2084:G:C8	2.44	0.52
1:X:2363:G:H3'	1:X:2365:U:OP1	2.09	0.52
1:X:2526:U:C5	1:X:2545:A:N7	2.77	0.52
1:X:2615:U:OP1	4:B:80:GLU:HG2	2.08	0.52
1:X:2726:U:O2'	1:X:2727:G:H5'	2.09	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
3:A:164:GLN:HB3	3:A:176:ARG:HB3	1.91	0.52
5:C:13:ARG:N	5:C:13:ARG:HE	2.05	0.52
5:C:62:LYS:HD3	5:C:62:LYS:C	2.29	0.52
12:J:117:GLU:C	12:J:119:PHE:N	2.62	0.52
15:M:17:GLU:C	15:M:19:ASP:H	2.13	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
21:S:30:VAL:CG1	21:S:31:SER:N	2.72	0.52
21:S:103:ARG:HG3	21:S:104:SER:N	2.25	0.52
1:X:110:U:H2'	1:X:111:G:O4'	2.10	0.52
1:X:701:U:H5'	1:X:1771:A:C2	2.45	0.52
1:X:788:G:O2'	1:X:789:G:OP2	2.26	0.52
1:X:942:U:O2'	25:W:22:ALA:HA	2.10	0.52
1:X:1008:G:N2	1:X:1009:C:C2	2.77	0.52
1:X:1385:C:H1'	1:X:2192:U:C6	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1450:G:O2'	1:X:1451:C:H5'	2.09	0.52
1:X:2189:A:C2	1:X:2190:A:N7	2.78	0.52
1:X:2225:G:C4	1:X:2226:A:C8	2.98	0.52
1:X:2284:U:H2'	1:X:2285:U:H5''	1.91	0.52
1:X:2440:C:H2'	1:X:2441:U:H6	1.74	0.52
3:A:169:GLU:O	3:A:172:TYR:N	2.43	0.52
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
10:H:26:ASN:HB3	10:H:38:GLY:H	1.75	0.52
12:J:43:ILE:HD13	12:J:127:PRO:HD2	1.91	0.52
13:K:47:PHE:C	13:K:47:PHE:CD2	2.83	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
18:P:47:GLY:H	18:P:92:VAL:HB	1.74	0.52
20:R:45:LYS:HZ3	20:R:77:HIS:CE1	2.25	0.52
24:V:42:ARG:O	24:V:46:LEU:HG	2.09	0.52
1:X:244:C:C3'	1:X:245:C:H5''	2.37	0.52
1:X:502:A:H2'	1:X:503:G:O4'	2.10	0.52
1:X:516:G:O2'	1:X:517:A:P	2.68	0.52
1:X:938:G:H2'	1:X:940:G:C8	2.44	0.52
1:X:954:U:P	11:I:38:LYS:HG3	2.50	0.52
1:X:1014:G:O2'	1:X:1015:U:H5'	2.10	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
1:X:1560:A:N1	1:X:1561:A:C2	2.78	0.52
1:X:2395:C:OP2	11:I:63:ARG:NH1	2.43	0.52
1:X:2703:C:O2'	1:X:2704:U:H5'	2.10	0.52
3:A:52:ARG:NH2	3:A:247:VAL:HG11	2.24	0.52
4:B:31:CYS:CB	4:B:49:ILE:HG13	2.38	0.52
6:D:9:ASN:HA	6:D:13:ARG:CB	2.39	0.52
7:E:54:ARG:HG3	7:E:57:ASP:CG	2.30	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
13:K:84:ALA:O	13:K:87:TYR:N	2.43	0.52
15:M:107:LEU:O	15:M:109:GLU:N	2.39	0.52
16:N:5:LYS:O	16:N:7:GLY:N	2.43	0.52
17:O:16:GLU:N	17:O:16:GLU:OE1	2.43	0.52
23:U:50:ALA:HB3	23:U:52:ARG:NH2	2.25	0.52
24:V:10:GLN:O	24:V:12:THR:N	2.42	0.52
25:W:7:ARG:O	25:W:8:SER:C	2.48	0.52
1:X:214:C:O2'	1:X:215:G:H5'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:324:C:H2'	1:X:325:U:H5'	1.90	0.52
1:X:330:C:H2'	1:X:331:U:H6	1.75	0.52
1:X:452:G:H21	5:C:40:ARG:HH22	1.55	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:795:A:C2	3:A:226:MET:HE2	2.45	0.52
1:X:873:U:H2'	1:X:874:A:O5'	2.10	0.52
1:X:1139:A:O2'	1:X:1140:A:O5'	2.28	0.52
1:X:1209:G:C2	1:X:1210:C:C5	2.98	0.52
1:X:1443:G:H2'	1:X:1444:C:H6	1.74	0.52
1:X:1673:C:H2'	1:X:1674:C:C6	2.38	0.52
1:X:1733:U:N3	1:X:1734:C:C5	2.78	0.52
1:X:1850:G:N7	1:X:1868:A:N6	2.58	0.52
1:X:1861:G:O2'	1:X:1862:C:H5'	2.10	0.52
1:X:2043:A:O2'	1:X:2481:G:O4'	2.27	0.52
1:X:2246:A:H61	1:X:2251:U:H3	1.58	0.52
1:X:2270:U:OP1	1:X:2360:C:H5'	2.10	0.52
1:X:2356:A:H1'	14:L:89:PHE:CZ	2.45	0.52
1:X:2597:G:H21	4:B:150:VAL:HG11	1.75	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
5:C:176:ASN:ND2	5:C:178:TYR:CB	2.58	0.52
9:G:155:THR:O	9:G:158:HIS:N	2.39	0.52
12:J:81:GLU:O	12:J:82:THR:OG1	2.24	0.52
13:K:28:LEU:HD21	13:K:115:LEU:CD2	2.40	0.52
16:N:114:ARG:HH21	16:N:114:ARG:HG2	1.74	0.52
18:P:41:VAL:HG21	18:P:64:ALA:HB3	1.91	0.52
21:S:147:ILE:HG22	21:S:152:ILE:HD11	1.91	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
23:U:9:GLY:N	23:U:14:VAL:HG22	2.19	0.52
1:X:168:A:C4	1:X:169:C:C5	2.98	0.51
1:X:185:C:O2'	1:X:186:C:H5'	2.10	0.51
1:X:463:C:O5'	5:C:46:ARG:NH1	2.43	0.51
1:X:718:A:N6	1:X:739:G:H1'	2.24	0.51
1:X:833:A:H1'	1:X:954:U:O2'	2.10	0.51
1:X:914:C:H2'	1:X:915:C:H6	1.75	0.51
1:X:1058:G:H2'	1:X:1121:G:N2	2.25	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:1172:U:C2	1:X:1173:G:C8	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1185:C:C2'	1:X:1186:G:H3'	2.31	0.51
1:X:1278:A:HO2'	1:X:1279:G:P	2.32	0.51
1:X:1345:G:C6	1:X:1625:A:N7	2.79	0.51
1:X:1469:U:C5'	1:X:1470:G:OP2	2.58	0.51
1:X:1631:C:C5	1:X:1633:C:C4	2.98	0.51
1:X:1758:C:C2	1:X:1759:A:C8	2.98	0.51
1:X:2196:U:C5	1:X:2197:U:C4	2.97	0.51
1:X:2271:C:OP2	14:L:18:ARG:NH2	2.43	0.51
1:X:2559:U:H3'	1:X:2560:G:C2	2.45	0.51
1:X:2661:G:N3	1:X:2662:C:C6	2.78	0.51
1:X:2849:C:O2	1:X:2849:C:H2'	2.10	0.51
2:Z:19:C:O2'	2:Z:20:A:H5'	2.10	0.51
3:A:38:PRO:HA	3:A:61:LEU:HD23	1.91	0.51
3:A:166:GLN:HB2	3:A:174:ILE:O	2.09	0.51
3:A:197:GLY:C	3:A:199:ALA:H	2.12	0.51
4:B:36:ARG:O	4:B:37:LYS:C	2.49	0.51
4:B:177:ALA:C	4:B:179:GLU:H	2.12	0.51
5:C:119:ALA:O	5:C:189:ASP:O	2.28	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
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
6:D:138:PHE:HB2	6:D:141:ILE:HG12	1.92	0.51
9:G:45:ASP:HA	9:G:83:ILE:HG12	1.91	0.51
11:I:65:PHE:O	11:I:66:ASN:C	2.47	0.51
11:I:70:THR:HG22	11:I:71:THR:N	2.25	0.51
12:J:34:GLY:HA2	12:J:106:GLU:HA	1.92	0.51
13:K:33:ARG:HB2	13:K:114:GLU:HB3	1.90	0.51
15:M:50:PHE:HE2	15:M:70:LYS:CB	2.22	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
21:S:1:MET:HE1	21:S:46:GLN:OE1	2.11	0.51
21:S:104:SER:OG	21:S:107:GLU:HB2	2.10	0.51
22:T:51:VAL:HG11	22:T:59:LEU:HB3	1.92	0.51
22:T:55:ARG:HG2	22:T:55:ARG:HH11	1.74	0.51
30:4:8:LYS:HA	30:4:9:LYS:HE3	1.91	0.51
30:4:31:LYS:HD3	30:4:31:LYS:N	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
1:X:317:U:C2'	1:X:318:G:C5'	2.77	0.51
1:X:469:G:H21	1:X:480:G:H2'	1.72	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:575:U:C2	1:X:576:A:C8	2.98	0.51
1:X:735:G:C2'	1:X:736:G:H5'	2.40	0.51
1:X:1060:C:C2	1:X:1124:U:H4'	2.43	0.51
1:X:1286:U:H5''	1:X:1663:C:N4	2.25	0.51
1:X:1431:U:H4'	1:X:1604:A:O4'	2.11	0.51
1:X:2229:G:O4'	1:X:2229:G:N3	2.42	0.51
1:X:2299:A:H2'	1:X:2299:A:N3	2.25	0.51
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
6:D:92:ARG:HA	6:D:96:MET:HB3	1.92	0.51
6:D:123:ASP:O	6:D:125:ARG:N	2.35	0.51
7:E:87:LEU:O	7:E:130:ARG:HA	2.10	0.51
9:G:61:ARG:HH11	9:G:65:LYS:HE2	1.75	0.51
9:G:157:PRO:O	9:G:161:GLN:HG3	2.11	0.51
10:H:64:VAL:O	10:H:65:LYS:HG3	2.10	0.51
11:I:134:GLU:C	11:I:136:ALA:H	2.14	0.51
12:J:56:SER:O	12:J:57:ARG:C	2.47	0.51
12:J:136:GLU:HG3	12:J:136:GLU:O	2.10	0.51
16:N:23:GLY:O	16:N:24:PHE:O	2.28	0.51
16:N:115:ASN:O	16:N:117:ARG:N	2.44	0.51
21:S:69:VAL:HG22	21:S:81:VAL:HG13	1.91	0.51
21:S:72:ASP:OD1	21:S:75:LYS:HG3	2.10	0.51
23:U:37:ILE:HD13	23:U:37:ILE:N	2.26	0.51
1:X:136:A:C8	1:X:137:A:C8	2.99	0.51
1:X:687:G:H2'	1:X:817:A:H61	1.76	0.51
1:X:689:A:C2	1:X:815:A:N6	2.71	0.51
1:X:796:A:C8	1:X:797:A:H4'	2.40	0.51
1:X:1374:G:O2'	1:X:1375:C:H5'	2.10	0.51
1:X:1583:A:H8	1:X:1583:A:OP2	1.94	0.51
1:X:1693:A:C6	1:X:1694:A:C6	2.98	0.51
1:X:2294:U:O2	6:D:125:ARG:NH1	2.44	0.51
1:X:2313:G:O2'	1:X:2314:A:OP1	2.26	0.51
1:X:2343:C:C2'	1:X:2344:G:H5'	2.40	0.51
1:X:2371:A:C8	1:X:2372:A:C8	2.98	0.51
1:X:2490:U:H2'	1:X:2491:C:H6	1.72	0.51
1:X:2507:U:O3'	1:X:2508:G:H8	1.94	0.51
3:A:212:SER:C	3:A:214:TRP:N	2.62	0.51
4:B:93:VAL:O	4:B:94:ASP:CB	2.56	0.51
5:C:31:VAL:HG23	5:C:32:THR:N	2.25	0.51
6:D:38:GLU:O	6:D:40:LEU:CD1	2.58	0.51
7:E:125:VAL:HG13	7:E:131:ILE:CD1	2.39	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
9:G:155:THR:C	9:G:157:PRO:CD	2.78	0.51
12:J:69:ILE:HG21	12:J:104:MET:HG3	1.92	0.51
13:K:18:VAL:O	13:K:19:ALA:C	2.48	0.51
17:O:79:GLN:OE1	17:O:79:GLN:N	2.44	0.51
24:V:64:GLY:C	24:V:66:GLN:N	2.63	0.51
30:4:18:ARG:HD2	30:4:22:ARG:O	2.11	0.51
1:X:26:G:N1	1:X:27:G:N2	2.58	0.51
1:X:35:G:O2'	1:X:36:G:O5'	2.20	0.51
1:X:36:G:H4'	1:X:463:C:C4	2.46	0.51
1:X:166:G:N2	1:X:183:U:C5	2.79	0.51
1:X:1068:A:C8	1:X:1097:A:H2'	2.46	0.51
1:X:1226:A:C2	1:X:1227:A:C4	2.98	0.51
1:X:1313:U:H1'	1:X:1642:G:C2	2.46	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
1:X:1885:C:C5	1:X:1886:G:C8	2.99	0.51
1:X:2058:U:H2'	1:X:2217:G:H22	1.75	0.51
1:X:2311:U:H1'	1:X:2315:A:N7	2.26	0.51
1:X:2859:U:C5	1:X:2860:C:C2	2.98	0.51
4:B:68:ALA:C	4:B:70:ALA:H	2.13	0.51
5:C:22:VAL:HA	5:C:106:MET:CG	2.39	0.51
5:C:147:LYS:O	5:C:184:ASP:HB2	2.09	0.51
5:C:163:ASN:ND2	5:C:166:TRP:CG	2.79	0.51
6:D:99:PHE:HA	6:D:102:LYS:CD	2.39	0.51
6:D:111:ILE:O	6:D:114:PHE:CB	2.59	0.51
9:G:167:LYS:O	9:G:168:THR:HG23	2.10	0.51
10:H:24:VAL:HG11	10:H:42:LYS:HG2	1.91	0.51
13:K:96:ARG:C	13:K:97:ILE:HD12	2.31	0.51
14:L:11:LEU:HA	14:L:14:ARG:HB3	1.92	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
19:Q:19:ALA:O	19:Q:22:ARG:HG2	2.11	0.51
21:S:44:ARG:CB	21:S:45:GLN:HE22	2.21	0.51
24:V:1:MET:HG3	24:V:3:PRO:HD3	1.92	0.51
25:W:2:LYS:HB3	25:W:54:GLN:CB	2.30	0.51
1:X:131:C:C4	1:X:132:U:C4	2.99	0.51
1:X:409:G:O2'	1:X:410:A:H5'	2.09	0.51
1:X:556:A:H8	1:X:556:A:OP2	1.94	0.51
1:X:737:C:H2'	1:X:738:G:C8	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:951:G:C3'	1:X:952:A:H5''	2.41	0.51
1:X:1032:A:H3'	1:X:1032:A:C8	2.45	0.51
1:X:1223:G:H4'	1:X:1224:A:OP2	2.11	0.51
1:X:1385:C:H2'	1:X:1386:A:C5'	2.41	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
1:X:2802:C:H2'	1:X:2803:C:C6	2.42	0.51
3:A:52:ARG:NH2	3:A:247:VAL:CG1	2.73	0.51
3:A:79:VAL:HA	3:A:95:LEU:HD23	1.92	0.51
4:B:24:THR:HG21	4:B:188:ILE:CD1	2.40	0.51
4:B:59:VAL:HG12	4:B:64:GLN:HG2	1.91	0.51
5:C:107:ALA:O	5:C:108:ILE:C	2.49	0.51
7:E:8:PRO:C	7:E:9:ILE:HD13	2.31	0.51
10:H:60:PRO:O	10:H:61:ARG:HB2	2.10	0.51
11:I:29:THR:HA	11:I:34:HIS:CD2	2.44	0.51
11:I:77:LEU:CD2	11:I:112:GLY:O	2.59	0.51
11:I:85:ASP:CA	11:I:116:ARG:HH22	2.22	0.51
11:I:130:ILE:HG22	11:I:131:LYS:N	2.25	0.51
12:J:20:GLY:C	12:J:99:LYS:HE2	2.31	0.51
12:J:61:ARG:NH1	21:S:175:ARG:HD2	2.22	0.51
13:K:87:TYR:CE1	13:K:94:TYR:CD2	2.91	0.51
14:L:33:ARG:HD3	14:L:100:VAL:HA	1.92	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
20:R:49:GLU:HA	20:R:73:GLU:OE2	2.10	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
21:S:107:GLU:OE1	21:S:113:VAL:HG23	2.10	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:501:G:H2'	1:X:502:A:H8	1.76	0.51
1:X:1006:C:H6	1:X:1006:C:H5''	1.75	0.51
1:X:1074:G:N2	8:F:91:THR:HA	2.16	0.51
1:X:1092:U:O5'	1:X:1092:U:H6	1.93	0.51
1:X:1790:G:H21	3:A:155:LEU:CD2	2.24	0.51
1:X:1803:G:O2'	1:X:1804:U:H5'	2.11	0.51
1:X:2012:A:H2'	1:X:2014:A:OP1	2.09	0.51
1:X:2269:G:H22	1:X:2322:U:H1'	1.76	0.51
1:X:2327:U:C4	1:X:2361:G:N2	2.78	0.51
1:X:2559:U:H3'	1:X:2560:G:N3	2.25	0.51
1:X:2659:C:H2'	1:X:2660:C:C6	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2756:A:N6	1:X:2762:G:H1'	2.26	0.51
1:X:2776:U:C6	1:X:2776:U:H3'	2.45	0.51
1:X:2827:G:O2'	1:X:2828:C:H5'	2.10	0.51
2:Z:53:G:H21	2:Z:54:U:H5	1.58	0.51
3:A:183:ARG:HD3	3:A:184:ARG:N	2.25	0.51
3:A:246:PRO:C	3:A:247:VAL:O	2.42	0.51
5:C:21:GLU:O	5:C:22:VAL:O	2.29	0.51
5:C:162:ARG:O	5:C:162:ARG:CG	2.57	0.51
5:C:176:ASN:O	5:C:178:TYR:N	2.44	0.51
7:E:156:ALA:O	7:E:157:TYR:CD1	2.64	0.51
8:F:116:LEU:HD13	8:F:124:ALA:HA	1.93	0.51
10:H:1:MET:N	10:H:79:HIS:HB2	2.26	0.51
10:H:11:ALA:CB	10:H:110:VAL:HG13	2.41	0.51
10:H:12:ASP:HA	10:H:109:ARG:O	2.11	0.51
11:I:32:ARG:NH2	17:O:81:ARG:HE	2.09	0.51
12:J:75:VAL:HG21	12:J:93:TYR:CE2	2.45	0.51
13:K:19:ALA:O	13:K:23:ALA:N	2.33	0.51
13:K:99:ARG:HG3	26:Y:44:HIS:CG	2.46	0.51
15:M:34:ARG:HD3	15:M:81:PHE:CE2	2.45	0.51
15:M:103:LYS:O	15:M:104:LEU:CB	2.44	0.51
22:T:50:GLY:O	22:T:62:LEU:HD23	2.09	0.51
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
24:V:41:HIS:C	24:V:43:VAL:H	2.14	0.51
1:X:218:A:N6	1:X:232:A:H5''	2.25	0.51
1:X:517:A:H5''	1:X:518:A:C5'	2.30	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
1:X:1142:G:C4'	9:G:103:TYR:CE2	2.92	0.51
1:X:1402:G:C5	1:X:1403:U:C5	2.98	0.51
1:X:1430:G:O2'	1:X:1431:U:H5'	2.11	0.51
1:X:1473:U:O2'	1:X:1474:A:P	2.68	0.51
1:X:1705:U:O4'	1:X:1718:A:N6	2.44	0.51
1:X:1975:G:N2	1:X:1979:C:O2	2.40	0.51
1:X:1982:C:H4'	1:X:2703:C:O2	2.11	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:2510:A:N7	7:E:175:LYS:HG2	2.26	0.51
1:X:2594:U:H6	1:X:2594:U:C5'	2.18	0.51
1:X:2629:U:H2'	1:X:2630:C:C6	2.45	0.51
2:Z:36:A:C4'	2:Z:37:C:H5	2.20	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
4:B:179:GLU:CG	4:B:181:LEU:HD12	2.41	0.51
5:C:129:LYS:O	5:C:131:LYS:N	2.40	0.51
6:D:10:ASP:CA	6:D:14:PRO:HD2	2.41	0.51
6:D:116:GLY:HA3	6:D:178:ARG:HG3	1.92	0.51
7:E:84:THR:CB	7:E:134:SER:HB2	2.39	0.51
7:E:133:VAL:HG11	7:E:144:VAL:HG11	1.92	0.51
9:G:61:ARG:NE	9:G:65:LYS:CE	2.70	0.51
9:G:154:GLU:OE1	9:G:156:HIS:CD2	2.64	0.51
11:I:32:ARG:CZ	17:O:81:ARG:CZ	2.88	0.51
11:I:73:GLU:N	11:I:73:GLU:CD	2.64	0.51
14:L:36:LYS:HE2	14:L:65:THR:HG22	1.93	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
18:P:85:MET:HE3	18:P:130:GLU:HG3	1.92	0.51
19:Q:51:ILE:HD11	19:Q:83:ALA:HA	1.93	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
1:X:53:G:C6	1:X:54:G:C5	2.98	0.51
1:X:313:U:C2'	1:X:314:G:H8	2.11	0.51
1:X:334:G:H5'	5:C:162:ARG:HE	1.75	0.51
1:X:677:G:C2'	1:X:678:G:H5'	2.41	0.51
1:X:890:U:H2'	1:X:891:A:H8	1.76	0.51
1:X:987:G:OP1	16:N:48:ARG:NH2	2.44	0.51
1:X:1307:U:H6	1:X:1307:U:H5''	1.75	0.51
1:X:1393:G:C2	1:X:1394:G:C8	2.98	0.51
1:X:1448:A:H2'	1:X:1449:C:C6	2.45	0.51
1:X:1474:A:H1'	1:X:1475:U:H5''	1.93	0.51
1:X:1584:G:H5''	3:A:61:LEU:HG	1.92	0.51
1:X:1685:A:C2	1:X:1976:U:H1'	2.46	0.51
1:X:2263:C:H1'	1:X:2304:G:N2	2.26	0.51
1:X:2306:A:C2'	1:X:2307:A:O4'	2.59	0.51
1:X:2370:G:O2'	1:X:2403:C:N4	2.43	0.51
1:X:2460:G:C2'	1:X:2461:G:OP2	2.59	0.51
1:X:2461:G:H2'	1:X:2461:G:N3	2.25	0.51
1:X:2691:C:C2'	1:X:2692:A:O5'	2.58	0.51
2:Z:27:A:H61	2:Z:55:C:H5''	1.76	0.51
3:A:134:ARG:C	3:A:136:VAL:H	2.13	0.51
3:A:172:TYR:HA	3:A:186:HIS:HA	1.91	0.51
5:C:33:TRP:NE1	5:C:93:TYR:O	2.42	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:54:THR:C	5:C:55:GLY:O	2.48	0.51
6:D:40:LEU:HD12	6:D:40:LEU:N	2.26	0.51
9:G:125:ARG:O	9:G:127:ILE:N	2.44	0.51
10:H:79:HIS:CD2	10:H:80:ALA:H	2.28	0.51
15:M:38:LYS:C	15:M:40:ARG:N	2.63	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
19:Q:33:ALA:O	19:Q:34:THR:C	2.48	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
19:Q:88:ILE:C	19:Q:88:ILE:HD12	2.31	0.51
20:R:86:PRO:O	20:R:87:GLU:HB2	2.11	0.51
20:R:93:ARG:HH11	20:R:93:ARG:CG	2.24	0.51
21:S:20:ALA:HB3	21:S:80:HIS:ND1	2.25	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
23:U:28:GLY:HA3	23:U:32:ARG:CG	2.41	0.51
26:Y:32:GLU:CG	26:Y:39:LYS:HE3	2.41	0.51
1:X:41:G:C2	1:X:451:A:C2	2.99	0.51
1:X:813:A:C4'	1:X:814:G:O5'	2.56	0.51
1:X:938:G:H2'	1:X:940:G:H8	1.75	0.51
1:X:1128:G:C3'	1:X:1129:A:C5'	2.89	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
1:X:1788:C:N3	1:X:1789:U:C5	2.79	0.51
1:X:1849:G:H2'	1:X:1850:G:H8	1.75	0.51
1:X:1928:G:C4	1:X:1929:U:C5	2.99	0.51
1:X:2048:C:H1'	1:X:2428:U:N3	2.26	0.51
1:X:2737:A:OP1	1:X:2737:A:O4'	2.29	0.51
1:X:2839:G:C4	1:X:2840:U:C5	2.99	0.51
2:Z:35:C:O2'	2:Z:36:A:H5'	2.10	0.51
3:A:53:PHE:O	3:A:54:ILE:CG2	2.59	0.51
3:A:243:GLY:CA	3:A:244:ARG:HH11	2.24	0.51
4:B:60:ASN:HB2	4:B:63:MET:H	1.75	0.51
4:B:152:LYS:H	9:G:106:TYR:CB	2.23	0.51
4:B:175:ILE:O	4:B:175:ILE:HG22	2.10	0.51
5:C:104:LEU:HA	5:C:107:ALA:CB	2.41	0.51
6:D:155:THR:C	6:D:156:ILE:HD12	2.32	0.51
9:G:67:ARG:HD3	9:G:70:PHE:O	2.11	0.51
9:G:103:TYR:CZ	9:G:111:LYS:HA	2.44	0.51
10:H:127:VAL:CG1	10:H:128:SER:N	2.73	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:52:ARG:HA	12:J:55:MET:HE3	1.93	0.51
16:N:87:ASN:O	16:N:87:ASN:ND2	2.37	0.51
16:N:94:VAL:HG11	16:N:98:ILE:HD11	1.93	0.51
18:P:27:VAL:CA	18:P:125:THR:HG22	2.40	0.51
18:P:37:LYS:NZ	18:P:64:ALA:HB2	2.26	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
21:S:39:PHE:CZ	21:S:81:VAL:HG21	2.46	0.51
23:U:28:GLY:N	23:U:32:ARG:HE	2.08	0.51
24:V:5:GLU:HA	24:V:8:ASN:CB	2.41	0.51
1:X:141:G:H2'	1:X:142:U:H6	1.76	0.51
1:X:492:G:C2'	1:X:493:A:OP2	2.59	0.51
1:X:599:A:H2'	1:X:600:G:O4'	2.10	0.51
1:X:708:G:OP1	1:X:1393:G:H4'	2.10	0.51
1:X:915:C:H2'	1:X:916:U:C5	2.46	0.51
1:X:968:C:C4	1:X:970:A:C4	2.99	0.51
1:X:1068:A:N7	1:X:1097:A:H2'	2.25	0.51
1:X:1233:A:HO2'	1:X:1234:C:P	2.33	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:1955:G:H2'	1:X:1956:G:H8	1.76	0.51
1:X:2083:G:H1	1:X:2172:U:H3	1.58	0.51
1:X:2235:G:C2'	1:X:2236:U:H5'	2.40	0.51
1:X:2511:G:C5	1:X:2512:A:C5	2.99	0.51
1:X:2606:G:N2	1:X:2757:G:C4	2.79	0.51
1:X:2787:A:N1	1:X:2864:C:C4	2.79	0.51
4:B:133:LYS:O	4:B:133:LYS:HG2	2.10	0.51
4:B:201:ALA:C	4:B:203:LYS:H	2.14	0.51
6:D:132:ILE:HG22	6:D:133:LYS:N	2.26	0.51
7:E:130:ARG:O	7:E:131:ILE:CD1	2.54	0.51
10:H:124:MET:O	10:H:127:VAL:N	2.44	0.51
11:I:10:PRO:HB2	11:I:14:LYS:HG2	1.93	0.51
12:J:105:PHE:C	12:J:106:GLU:CD	2.70	0.51
14:L:90:ASP:N	14:L:90:ASP:OD1	2.43	0.51
17:O:15:SER:CB	17:O:95:ILE:O	2.59	0.51
21:S:10:PRO:O	21:S:13:LYS:HG2	2.10	0.51
1:X:426:C:O5'	1:X:426:C:H6	1.94	0.50
1:X:431:G:O2'	1:X:432:C:H5'	2.11	0.50
1:X:471:A:H3'	1:X:472:C:H6	1.75	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

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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
1:X:1428:G:HO2'	1:X:1429:A:H8	1.59	0.50
1:X:1451:C:H2'	1:X:1452:U:H6	1.76	0.50
1:X:1592:U:O5'	1:X:1592:U:H6	1.94	0.50
1:X:1713:G:C8	1:X:1713:G:H5''	2.46	0.50
1:X:1887:G:O2'	1:X:1888:C:H5'	2.11	0.50
1:X:2411:A:C6	1:X:2412:A:N1	2.79	0.50
1:X:2453:C:H5'	1:X:2454:C:OP2	2.10	0.50
1:X:2674:C:O2'	1:X:2675:U:H5'	2.10	0.50
1:X:2726:U:C1'	7:E:139:GLN:HG2	2.41	0.50
1:X:2870:C:H2'	1:X:2871:U:C6	2.46	0.50
3:A:53:PHE:HA	3:A:217:ARG:HH21	1.76	0.50
3:A:173:VAL:N	3:A:185:VAL:O	2.43	0.50
7:E:56:SER:HB2	7:E:61:HIS:CD2	2.46	0.50
9:G:58:ILE:HG21	9:G:148:LEU:CD1	2.41	0.50
9:G:101:THR:HG1	9:G:103:TYR:HE1	1.59	0.50
10:H:116:ARG:NH1	15:M:38:LYS:CE	2.75	0.50
11:I:87:THR:O	11:I:93:LEU:HB3	2.11	0.50
17:O:23:GLU:O	17:O:24:SER:C	2.48	0.50
20:R:26:SER:OG	20:R:79:SER:HB3	2.11	0.50
20:R:54:ILE:HG23	20:R:71:GLN:HB2	1.93	0.50
21:S:136:VAL:HG12	21:S:137:ASP:N	2.24	0.50
23:U:34:THR:HG23	23:U:35:THR:H	1.76	0.50
25:W:38:PRO:CD	25:W:41:ARG:HH12	2.23	0.50
1:X:64:C:P	19:Q:71:GLN:HB2	2.51	0.50
1:X:101:A:H3'	1:X:102:C:C5	2.46	0.50
1:X:228:A:OP1	11:I:53:ARG:HB3	2.11	0.50
1:X:308:C:C2'	1:X:309:G:H5'	2.42	0.50
1:X:399:G:O2'	1:X:400:U:P	2.69	0.50
1:X:414:A:H5'	1:X:414:A:C8	2.38	0.50
1:X:887:G:O2'	1:X:888:G:H5'	2.11	0.50
1:X:982:C:H2'	1:X:983:G:O4'	2.10	0.50
1:X:1524:C:H3'	1:X:1525:A:C5'	2.41	0.50
1:X:1621:C:H2'	1:X:1622:G:H5'	1.92	0.50
1:X:1919:A:N6	1:X:1946:U:H3	2.09	0.50
1:X:1939:U:O2	1:X:1939:U:C2'	2.56	0.50
1:X:2172:U:O5'	1:X:2172:U:H6	1.93	0.50
1:X:2343:C:OP1	22:T:55:ARG:NH2	2.44	0.50
1:X:2847:G:C2	1:X:2848:A:N6	2.79	0.50
2:Z:67:C:H2'	2:Z:111:C:N4	2.19	0.50
3:A:48:ARG:H	3:A:48:ARG:CD	2.08	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:200:GLU:OE1	3:A:202:LYS:HA	2.11	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
7:E:25:LYS:CG	7:E:27:LYS:HE3	2.41	0.50
7:E:167:GLU:HG2	7:E:169:ILE:HD11	1.93	0.50
8:F:92:PRO:HB3	8:F:136:GLY:HA2	1.93	0.50
9:G:106:TYR:O	9:G:110:LEU:CG	2.58	0.50
12:J:28:VAL:HG21	12:J:135:ARG:HA	1.92	0.50
12:J:58:HIS:CD2	12:J:118:ALA:HB2	2.47	0.50
12:J:59:PHE:CZ	12:J:110:VAL:HG11	2.46	0.50
14:L:54:ALA:CB	14:L:75:LEU:HD13	2.41	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
21:S:25:ASN:HA	21:S:84:TYR:CE1	2.47	0.50
23:U:8:THR:OG1	23:U:13:LEU:HD12	2.10	0.50
24:V:3:PRO:C	24:V:6:MET:HB3	2.31	0.50
30:4:1:MET:HE2	30:4:1:MET:CA	2.41	0.50
30:4:30:VAL:C	30:4:32:HIS:N	2.57	0.50
1:X:29:U:H2'	1:X:30:G:C8	2.46	0.50
1:X:194:G:H2'	1:X:195:A:O4'	2.10	0.50
1:X:234:C:C2'	1:X:235:C:H5'	2.42	0.50
1:X:740:A:OP1	1:X:1445:A:O2'	2.29	0.50
1:X:755:C:H2'	1:X:756:C:H6	1.75	0.50
1:X:1139:A:O2'	1:X:1140:A:O4'	2.12	0.50
1:X:1265:G:O2'	1:X:1266:G:O4'	2.30	0.50
1:X:1529:C:H2'	1:X:1530:U:O4'	2.12	0.50
1:X:1682:A:H2'	1:X:1683:G:H5'	1.93	0.50
1:X:1698:C:HO2'	1:X:1753:A:C2'	2.23	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:1922:U:O2'	1:X:1923:U:P	2.70	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
1:X:2543:A:C2	1:X:2626:U:H4'	2.46	0.50
1:X:2782:G:H2'	1:X:2783:U:O5'	2.12	0.50
2:Z:58:G:H1'	2:Z:59:A:N7	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
3:A:217:ARG:CZ	3:A:218:LYS:HE2	2.42	0.50
4:B:85:ALA:H	4:B:86:PRO:CD	2.09	0.50
4:B:133:LYS:HG3	4:B:137:ARG:HB3	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:5:ASN:HA	5:C:118:VAL:HG23	1.93	0.50
6:D:57:LEU:HD12	6:D:65:PRO:HG3	1.93	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
7:E:150:LYS:C	7:E:152:ARG:N	2.65	0.50
9:G:144:MET:O	9:G:145:HIS:C	2.50	0.50
11:I:134:GLU:HG2	11:I:138:GLY:O	2.12	0.50
12:J:68:ARG:HD3	12:J:103:VAL:HG12	1.91	0.50
13:K:51:LEU:O	13:K:52:ILE:C	2.50	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
16:N:71:LEU:HG	16:N:72:HIS:CE1	2.46	0.50
18:P:9:ARG:CG	18:P:13:GLN:HG3	2.41	0.50
18:P:86:LEU:HB2	18:P:130:GLU:OE1	2.11	0.50
19:Q:31:PRO:O	19:Q:76:LYS:HD2	2.11	0.50
21:S:115:ILE:HG23	21:S:169:VAL:CG1	2.41	0.50
23:U:34:THR:HG23	23:U:35:THR:N	2.26	0.50
1:X:59:G:C6	1:X:62:U:N3	2.80	0.50
1:X:119:G:H2'	1:X:120:G:H8	1.75	0.50
1:X:207:U:O2'	1:X:208:C:H5'	2.11	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:946:U:C2	1:X:947:C:C5	2.99	0.50
1:X:970:A:N6	12:J:83:ARG:NH2	2.60	0.50
1:X:985:G:N2	1:X:1200:G:C8	2.79	0.50
1:X:1190:C:O5'	1:X:1190:C:H6	1.95	0.50
1:X:1231:A:C4	1:X:1232:U:C5	3.00	0.50
1:X:1351:G:N2	1:X:1352:G:H1'	2.26	0.50
1:X:1359:G:C5	1:X:1617:G:N2	2.80	0.50
1:X:1419:G:H2'	1:X:1420:A:O4'	2.12	0.50
1:X:1526:U:H2'	1:X:1527:G:C5'	2.42	0.50
1:X:1655:C:O2	1:X:2677:U:O2'	2.27	0.50
1:X:1692:C:C2'	1:X:1693:A:H5'	2.41	0.50
1:X:1949:A:H2	1:X:2572:U:H1'	1.73	0.50
1:X:2431:C:H2'	1:X:2432:A:C8	2.47	0.50
3:A:72:LYS:NZ	3:A:99:ASP:OD1	2.44	0.50
4:B:4:ILE:CG1	4:B:5:LEU:H	2.23	0.50
4:B:162:MET:HG3	4:B:162:MET:O	2.11	0.50
8:F:73:PRO:CB	8:F:74:PRO:CD	2.90	0.50
11:I:67:ASN:O	11:I:68:VAL:CB	2.59	0.50
16:N:10:ARG:CB	16:N:10:ARG:HH11	2.25	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
21:S:148:THR:C	21:S:152:ILE:HD13	2.31	0.50
23:U:70:LEU:CD2	23:U:74:PRO:HA	2.42	0.50
24:V:5:GLU:HA	24:V:8:ASN:HB2	1.94	0.50
25:W:10:ILE:HG23	25:W:11:GLY:N	2.26	0.50
25:W:38:PRO:HD3	25:W:41:ARG:HH12	1.76	0.50
1:X:537:C:O2'	1:X:538:A:C4	2.65	0.50
1:X:635:C:O2'	1:X:636:G:H5''	2.11	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
1:X:1331:G:N2	1:X:1332:G:H1'	2.26	0.50
1:X:1428:G:H2'	1:X:1428:G:N3	2.26	0.50
1:X:2570:C:H2'	1:X:2571:G:C8	2.46	0.50
1:X:2598:C:C4'	4:B:150:VAL:HG22	2.41	0.50
2:Z:32:C:H1'	2:Z:59:A:N6	2.17	0.50
3:A:177:LEU:HD12	3:A:181:GLU:OE1	2.12	0.50
4:B:49:ILE:CD1	4:B:50:GLY:N	2.73	0.50
5:C:44:SER:HB3	5:C:88:PRO:HG3	1.93	0.50
6:D:27:ALA:O	6:D:28:VAL:O	2.30	0.50
6:D:32:GLU:CD	6:D:157:VAL:HG11	2.31	0.50
6:D:66:ILE:HG22	6:D:88:LYS:C	2.31	0.50
6:D:73:SER:HB3	6:D:79:LEU:HD23	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
12:J:121:LEU:C	12:J:123:GLY:N	2.64	0.50
19:Q:63:LYS:HE2	19:Q:64:ARG:C	2.32	0.50
19:Q:63:LYS:HB2	19:Q:70:GLY:N	2.25	0.50
23:U:11:LYS:O	23:U:12:ASN:ND2	2.44	0.50
1:X:29:U:H2'	1:X:30:G:H8	1.77	0.50
1:X:161:U:H2'	1:X:162:C:C6	2.47	0.50
1:X:342:G:H4'	1:X:343:A:OP1	2.11	0.50
1:X:726:G:H2'	1:X:727:U:N1	2.27	0.50
1:X:1355:A:O2'	1:X:1357:U:OP2	2.20	0.50
1:X:1763:G:H5''	1:X:1764:A:OP2	2.12	0.50
1:X:1809:G:H5'	3:A:88:ARG:HH12	1.76	0.50
1:X:2222:U:C2	1:X:2223:U:C5	3.00	0.50
1:X:2313:G:H21	14:L:17:VAL:HB	1.77	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:120:G:H2'	2:Z:121:G:O4'	2.11	0.50
3:A:58:HIS:ND1	3:A:58:HIS:O	2.40	0.50
6:D:17:MET:HA	6:D:21:GLY:CA	2.42	0.50
7:E:36:PRO:C	7:E:37:TYR:CD1	2.85	0.50
7:E:84:THR:HA	7:E:134:SER:CA	2.33	0.50
9:G:42:VAL:HG12	9:G:43:VAL:N	2.26	0.50
9:G:91:THR:HG22	9:G:92:GLY:N	2.26	0.50
10:H:17:ARG:HE	10:H:59:ALA:HB2	1.77	0.50
10:H:116:ARG:HA	10:H:133:VAL:CG1	2.41	0.50
12:J:57:ARG:HG2	12:J:57:ARG:NH1	2.10	0.50
12:J:113:GLU:HA	12:J:116:LYS:HB3	1.91	0.50
13:K:48:VAL:O	13:K:49:GLU:C	2.50	0.50
14:L:21:THR:HG22	14:L:22:ALA:N	2.26	0.50
14:L:33:ARG:O	14:L:99:ARG:NH1	2.44	0.50
15:M:34:ARG:NH1	15:M:81:PHE:CB	2.74	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
24:V:6:MET:CG	24:V:56:VAL:HG11	2.40	0.50
30:4:1:MET:SD	30:4:1:MET:C	2.90	0.50
1:X:137:A:H2'	1:X:138:G:H5'	1.94	0.50
1:X:488:A:C6	1:X:489:A:C6	2.99	0.50
1:X:623:G:C2	1:X:627:A:C6	3.00	0.50
1:X:683:A:C5'	11:I:45:LYS:N	2.71	0.50
1:X:874:A:H61	1:X:928:G:H1'	1.77	0.50
1:X:968:C:N4	1:X:970:A:C4	2.80	0.50
1:X:1223:G:H4'	1:X:1224:A:H5'	1.94	0.50
1:X:1513:U:OP2	1:X:1514:C:H5	1.95	0.50
1:X:1514:C:C6	1:X:1593:C:H4'	2.47	0.50
1:X:1685:A:H4'	1:X:1686:A:O5'	2.12	0.50
1:X:1910:A:H8	1:X:1910:A:O5'	1.95	0.50
1:X:2243:C:H2'	1:X:2244:C:O4'	2.12	0.50
1:X:2344:G:H4'	22:T:60:PHE:CE2	2.46	0.50
1:X:2650:G:O2'	1:X:2651:U:H5'	2.12	0.50
3:A:105:ILE:O	3:A:107:ALA:N	2.45	0.50
4:B:188:ILE:HG22	4:B:189:PRO:N	2.26	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
9:G:146:THR:HG22	9:G:147:ARG:N	2.26	0.50
10:H:22:ILE:O	10:H:23:ARG:HB2	2.10	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
18:P:39:ARG:O	18:P:40:LEU:C	2.50	0.50
19:Q:38:ILE:O	19:Q:41:ALA:HB3	2.12	0.50
20:R:17:LYS:O	20:R:20:ASP:OD1	2.30	0.50
23:U:20:ARG:CG	23:U:39:LYS:HE3	2.40	0.50
23:U:70:LEU:HD23	23:U:75:TYR:CD1	2.46	0.50
1:X:45:C:N3	1:X:157:G:C2	2.80	0.50
1:X:169:C:O2'	1:X:170:U:H5'	2.11	0.50
1:X:332:C:OP2	5:C:130:THR:HB	2.12	0.50
1:X:481:A:N1	1:X:482:A:C2	2.79	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
1:X:703:A:O2'	1:X:793:G:OP1	2.24	0.50
1:X:917:U:H2'	1:X:918:A:C5'	2.42	0.50
1:X:969:U:C5	12:J:17:ARG:HB2	2.47	0.50
1:X:1142:G:C4	1:X:1143:A:C8	3.00	0.50
1:X:1149:G:P	9:G:98:LYS:HZ3	2.35	0.50
1:X:1249:G:HO2'	1:X:1250:A:P	2.35	0.50
1:X:1572:C:C2'	1:X:1573:G:H5'	2.42	0.50
1:X:1831:G:C5	1:X:1832:G:N7	2.80	0.50
1:X:1856:U:O2'	1:X:1857:G:H5'	2.12	0.50
1:X:1975:G:N2	1:X:1979:C:O2'	2.45	0.50
1:X:2302:G:C6	1:X:2303:C:C4	3.00	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
2:Z:53:G:P	14:L:64:LYS:HZ1	2.34	0.50
4:B:33:ILE:HD11	4:B:88:GLY:O	2.12	0.50
5:C:48:ARG:C	5:C:50:GLN:N	2.65	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
11:I:129:ALA:O	11:I:130:ILE:C	2.48	0.50
12:J:111:THR:OG1	12:J:114:GLN:HB2	2.11	0.50
13:K:25:ALA:HB2	13:K:47:PHE:CE2	2.47	0.50
13:K:33:ARG:HB2	13:K:114:GLU:CB	2.41	0.50
13:K:113:ILE:HG23	13:K:113:ILE:O	2.11	0.50
14:L:46:SER:O	14:L:47:ARG:C	2.50	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:172:A:N7	1:X:175:C:C5	2.80	0.50
1:X:497:C:C6	1:X:497:C:H3'	2.47	0.50
1:X:624:A:H5'	1:X:624:A:N3	2.27	0.50
1:X:683:A:H4'	1:X:684:C:H5'	1.94	0.50
1:X:930:A:C8	1:X:930:A:C3'	2.94	0.50
1:X:1007:A:C6	1:X:1171:A:N1	2.80	0.50
1:X:1287:A:C6	1:X:1315:A:C2	3.00	0.50
1:X:1359:G:C5	1:X:1617:G:C2	3.00	0.50
1:X:1582:A:OP1	3:A:211:ARG:CZ	2.60	0.50
1:X:2289:A:H2	6:D:75:SER:HB2	1.76	0.50
1:X:2301:A:H2'	1:X:2302:G:O4'	2.12	0.50
1:X:2437:G:H2'	1:X:2469:G:C6	2.47	0.50
2:Z:31:A:H1'	2:Z:60:A:N6	2.26	0.50
2:Z:75:A:N1	21:S:29:ASN:CG	2.66	0.50
2:Z:108:G:O2'	2:Z:109:G:H5'	2.12	0.50
3:A:43:ARG:NH2	3:A:54:ILE:HG13	2.23	0.50
3:A:101:GLU:C	3:A:101:GLU:CD	2.70	0.50
5:C:104:LEU:CD1	5:C:175:VAL:HG23	2.42	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
9:G:156:HIS:N	9:G:157:PRO:CD	2.74	0.50
12:J:36:ILE:HG23	12:J:101:GLY:O	2.12	0.50
12:J:112:GLU:O	12:J:116:LYS:HB2	2.11	0.50
16:N:51:ARG:HD2	16:N:51:ARG:N	2.20	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
22:T:21:LEU:HD11	22:T:41:ARG:HE	1.76	0.50
1:X:537:C:O2'	1:X:538:A:C2	2.52	0.49
1:X:719:A:O2'	1:X:720:A:H5'	2.12	0.49
1:X:1499:A:H2'	1:X:1500:U:C6	2.46	0.49
1:X:1566:G:O2'	1:X:1567:A:H5'	2.12	0.49
1:X:1657:A:O2'	1:X:1658:A:H5'	2.12	0.49
1:X:1949:A:HO2'	1:X:2572:U:H5'	1.75	0.49
1:X:2473:G:H2'	1:X:2474:G:C8	2.47	0.49
4:B:33:ILE:CG2	4:B:47:VAL:HG12	2.42	0.49
5:C:44:SER:HB3	5:C:88:PRO:CG	2.42	0.49
5:C:65:GLY:C	5:C:66:ASN:HD22	2.15	0.49
5:C:170:LEU:CD2	5:C:175:VAL:HG12	2.40	0.49
6:D:103:LEU:HA	6:D:107:GLY:H	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:103:TYR:CE2	9:G:111:LYS:HB3	2.47	0.49
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
11:I:30:ALA:HB2	11:I:34:HIS:HE1	1.70	0.49
16:N:79:PHE:C	16:N:79:PHE:HD2	2.15	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
20:R:92:THR:HB	20:R:95:ARG:NH2	2.15	0.49
21:S:24:TYR:OH	21:S:82:ASP:HB3	2.12	0.49
21:S:129:ARG:NH1	21:S:156:GLU:OE2	2.43	0.49
22:T:32:LYS:HB3	22:T:35:ASN:ND2	2.27	0.49
23:U:50:ALA:CA	23:U:52:ARG:HH22	2.24	0.49
1:X:313:U:C2	1:X:314:G:N7	2.80	0.49
1:X:497:C:C6	1:X:497:C:C3'	2.95	0.49
1:X:517:A:C5'	1:X:518:A:H5'	2.30	0.49
1:X:649:G:O2'	1:X:650:U:H5'	2.11	0.49
1:X:809:C:H2'	1:X:810:U:C6	2.47	0.49
1:X:954:U:P	11:I:38:LYS:CG	3.01	0.49
1:X:956:A:C2	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:C4	1:X:2427:A:C2	3.00	0.49
1:X:1022:A:N6	1:X:1162:A:N6	2.60	0.49
1:X:1734:C:C5	1:X:1735:G:H1'	2.47	0.49
1:X:1767:G:C5	1:X:1768:U:C5	3.00	0.49
1:X:1938:U:O2'	1:X:1939:U:H5'	2.12	0.49
1:X:1942:G:N2	1:X:1943:A:N3	2.59	0.49
1:X:2198:U:O5'	1:X:2199:C:H5''	2.12	0.49
1:X:2298:U:O2'	1:X:2299:A:C8	2.61	0.49
1:X:2442:C:O2'	1:X:2443:C:H5'	2.12	0.49
1:X:2496:C:C5	1:X:2521:A:C5	3.01	0.49
1:X:2698:G:C6	1:X:2699:G:C6	3.00	0.49
1:X:2861:A:O2'	26:Y:31:THR:HG23	2.12	0.49
4:B:19:ARG:HG3	4:B:21:ILE:CD1	2.43	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
4:B:179:GLU:C	4:B:181:LEU:H	2.13	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
7:E:37:TYR:HD2	7:E:68:THR:HA	1.76	0.49
8:F:113:MET:N	8:F:114:PRO:CD	2.75	0.49
12:J:21:ASP:N	12:J:99:LYS:HE2	2.26	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:40:LYS:O	13:K:43:GLU:OE2	2.30	0.49
14:L:106:ALA:O	14:L:110:GLY:N	2.45	0.49
15:M:53:VAL:CG1	15:M:54:VAL:N	2.74	0.49
16:N:68:GLY:HA2	16:N:71:LEU:HB3	1.94	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
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
21:S:3:LEU:CD1	21:S:33:ALA:N	2.75	0.49
21:S:74:ARG:O	21:S:76:ARG:N	2.45	0.49
24:V:56:VAL:CA	24:V:59:GLU:OE1	2.55	0.49
26:Y:17:ASP:C	26:Y:19:ARG:H	2.14	0.49
1:X:94:C:H1'	24:V:40:PRO:CG	2.43	0.49
1:X:332:C:C2	5:C:159:ARG:NH1	2.78	0.49
1:X:921:A:C2'	1:X:924:C:C5	2.91	0.49
1:X:1033:G:C8	9:G:93:LYS:NZ	2.74	0.49
1:X:1179:A:C2	1:X:1196:G:C2	3.00	0.49
1:X:1357:U:O2'	1:X:1358:C:OP1	2.18	0.49
1:X:1420:A:H2'	1:X:1421:U:H6	1.76	0.49
1:X:1429:A:H2'	1:X:1429:A:N3	2.26	0.49
1:X:1542:G:H22	1:X:1562:G:H1	1.59	0.49
1:X:1693:A:N1	1:X:1694:A:C2	2.80	0.49
1:X:1744:G:C6	1:X:1747:G:N1	2.80	0.49
1:X:1810:U:C6	3:A:157:ARG:HD2	2.47	0.49
1:X:2043:A:H62	5:C:68:ARG:NH1	2.10	0.49
1:X:2710:C:H4'	4:B:168:GLN:O	2.12	0.49
1:X:2725:C:H5'	7:E:146:ALA:CB	2.42	0.49
3:A:246:PRO:O	3:A:247:VAL:C	2.50	0.49
4:B:76:ARG:HG2	4:B:77:ILE:HG13	1.93	0.49
4:B:195:LEU:HD12	4:B:196:VAL:N	2.26	0.49
7:E:41:LEU:HD23	7:E:68:THR:OG1	2.12	0.49
9:G:85:ALA:O	9:G:88:VAL:HG12	2.12	0.49
12:J:48:ILE:C	12:J:50:ALA:H	2.15	0.49
12:J:110:VAL:CG2	12:J:115:ALA:HB2	2.42	0.49
14:L:8:ARG:HG3	14:L:9:ARG:HG3	1.94	0.49
14:L:34:SER:HA	14:L:94:TYR:CE2	2.46	0.49
14:L:91:ARG:CD	14:L:91:ARG:N	2.67	0.49
16:N:93:LYS:O	16:N:94:VAL:CG2	2.59	0.49
18:P:31:VAL:HG21	18:P:124:ILE:CG1	2.42	0.49
18:P:32:ARG:HA	18:P:121:THR:HG22	1.93	0.49
18:P:97:VAL:HG22	18:P:124:ILE:HA	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:101:THR:HG23	21:S:135:VAL:HG13	1.93	0.49
1:X:116:A:C5'	1:X:117:A:H8	2.24	0.49
1:X:131:C:O2'	1:X:132:U:H5'	2.12	0.49
1:X:219:G:H2'	1:X:231:G:C6	2.47	0.49
1:X:219:G:H2'	1:X:231:G:N1	2.28	0.49
1:X:360:A:H3'	1:X:361:G:H8	1.77	0.49
1:X:558:G:O2'	1:X:559:C:C2	2.61	0.49
1:X:674:U:H1'	11:I:22:GLY:HA3	1.94	0.49
1:X:700:C:N3	1:X:701:U:C2	2.81	0.49
1:X:838:A:C2	1:X:839:U:C2	3.00	0.49
1:X:1019:U:HO2'	1:X:1020:A:H8	1.59	0.49
1:X:1211:G:H2'	1:X:1212:U:C6	2.44	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
1:X:1310:C:H2'	1:X:1311:C:H6	1.76	0.49
1:X:1391:A:O2'	1:X:1392:U:O5'	2.29	0.49
1:X:1560:A:N6	1:X:1561:A:C6	2.81	0.49
1:X:1607:A:C2'	1:X:1608:U:O5'	2.61	0.49
1:X:1811:A:O2'	1:X:1812:U:P	2.69	0.49
1:X:2037:A:C2	1:X:2595:C:C2	3.00	0.49
1:X:2250:G:H8	1:X:2250:G:O5'	1.95	0.49
1:X:2379:G:H2'	1:X:2380:U:C5'	2.41	0.49
1:X:2760:G:O6	9:G:125:ARG:NH1	2.44	0.49
1:X:2850:U:H5'	1:X:2850:U:C6	2.29	0.49
1:X:2861:A:O2'	1:X:2862:G:H5'	2.11	0.49
5:C:164:VAL:C	5:C:166:TRP:H	2.13	0.49
6:D:150:ARG:HG2	6:D:151:GLY:H	1.76	0.49
11:I:7:LYS:O	11:I:9:THR:N	2.45	0.49
11:I:58:ALA:O	11:I:59:ARG:HB2	2.12	0.49
11:I:132:ALA:N	11:I:135:ALA:HB3	2.27	0.49
12:J:112:GLU:HG3	12:J:113:GLU:N	2.26	0.49
13:K:84:ALA:HB3	13:K:85:PRO:CD	2.37	0.49
15:M:5:ILE:O	15:M:5:ILE:CD1	2.58	0.49
18:P:13:GLN:O	18:P:14:ARG:C	2.48	0.49
19:Q:49:ARG:O	19:Q:50:VAL:HG23	2.12	0.49
21:S:42:ALA:HA	21:S:45:GLN:CG	2.42	0.49
23:U:41:VAL:CG2	23:U:42:GLN:N	2.47	0.49
23:U:48:LYS:HG3	23:U:49:LYS:H	1.74	0.49
25:W:1:MET:HB2	25:W:34:VAL:HG12	1.94	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:331:U:H4'	1:X:333:A:N7	2.27	0.49
1:X:968:C:OP1	12:J:78:LYS:HB3	2.12	0.49
1:X:1068:A:H5'	1:X:1069:G:OP2	2.12	0.49
1:X:1171:A:C5	1:X:1172:U:C5	3.00	0.49
1:X:1372:A:C4	1:X:1373:G:C8	3.01	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
1:X:1822:C:H2'	1:X:1823:G:H5'	1.93	0.49
1:X:2171:U:H2'	1:X:2172:U:C6	2.47	0.49
1:X:2388:G:C5	1:X:2389:G:N7	2.80	0.49
1:X:2569:A:O2'	1:X:2570:C:H5'	2.12	0.49
1:X:2873:G:H2'	1:X:2874:A:C8	2.47	0.49
2:Z:43:G:C8	6:D:66:ILE:HD11	2.48	0.49
3:A:43:ARG:O	3:A:44:ASN:CB	2.60	0.49
3:A:97:TYR:CB	3:A:101:GLU:OE1	2.56	0.49
4:B:61:LYS:O	4:B:64:GLN:HB2	2.12	0.49
6:D:47:SER:CA	6:D:50:ILE:HG13	2.38	0.49
8:F:129:ALA:O	8:F:130:GLY:C	2.48	0.49
9:G:65:LYS:NZ	9:G:65:LYS:CB	2.75	0.49
9:G:163:PRO:C	9:G:164:GLN:O	2.46	0.49
10:H:124:MET:O	10:H:125:LYS:C	2.49	0.49
14:L:13:THR:O	14:L:17:VAL:HG12	2.12	0.49
14:L:75:LEU:O	14:L:78:ALA:CB	2.54	0.49
15:M:54:VAL:O	15:M:54:VAL:CG1	2.61	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
18:P:27:VAL:HA	18:P:125:THR:HG22	1.95	0.49
19:Q:50:VAL:O	19:Q:50:VAL:HG12	2.10	0.49
20:R:22:VAL:HG11	20:R:80:LYS:HE3	1.92	0.49
20:R:23:ILE:HD13	20:R:23:ILE:O	2.12	0.49
20:R:96:LYS:HD3	20:R:105:ARG:HB2	1.94	0.49
20:R:105:ARG:NE	20:R:106:VAL:O	2.46	0.49
21:S:79:ILE:HD13	21:S:79:ILE:C	2.32	0.49
21:S:113:VAL:CG2	21:S:171:VAL:HG22	2.40	0.49
21:S:146:HIS:O	21:S:147:ILE:HD13	2.11	0.49
25:W:23:LEU:HD13	25:W:51:LEU:CD1	2.41	0.49
30:4:31:LYS:HD3	30:4:31:LYS:H	1.77	0.49
1:X:353:G:O2'	1:X:354:C:H5'	2.13	0.49
1:X:609:U:O2'	11:I:18:ARG:NH1	2.45	0.49
1:X:712:A:N3	1:X:1650:A:H1'	2.28	0.49
1:X:1079:G:OP2	1:X:1079:G:H8	1.96	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1441:A:H1'	1:X:1442:C:C4	2.47	0.49
1:X:1685:A:C8	1:X:1691:G:C6	3.01	0.49
1:X:2042:A:H5''	5:C:65:GLY:HA3	1.93	0.49
1:X:2080:U:H2'	1:X:2081:U:O4'	2.13	0.49
1:X:2225:G:N1	1:X:2405:A:H1'	2.28	0.49
1:X:2307:A:C6	1:X:2308:A:N6	2.80	0.49
1:X:2798:A:C2'	1:X:2799:C:H5'	2.42	0.49
2:Z:74:A:H2	2:Z:107:C:H41	1.59	0.49
2:Z:112:A:H2'	2:Z:113:G:O4'	2.12	0.49
3:A:108:PRO:CB	3:A:143:HIS:HE1	2.25	0.49
5:C:7:ILE:O	5:C:120:VAL:CB	2.57	0.49
5:C:54:THR:O	5:C:55:GLY:O	2.29	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
6:D:77:PHE:N	6:D:77:PHE:HD1	2.10	0.49
8:F:125:ALA:O	8:F:129:ALA:N	2.41	0.49
11:I:58:ALA:C	11:I:60:LEU:H	2.16	0.49
12:J:28:VAL:HG23	12:J:137:VAL:CG2	2.42	0.49
12:J:70:PHE:CD2	12:J:71:PRO:N	2.81	0.49
14:L:14:ARG:O	14:L:17:VAL:CG1	2.60	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
18:P:107:ILE:HB	18:P:117:ILE:CD1	2.43	0.49
25:W:3:ILE:HG21	25:W:25:LEU:HD11	1.94	0.49
26:Y:6:VAL:HG22	26:Y:7:PRO:CD	2.41	0.49
1:X:6:A:H4'	9:G:159:SER:O	2.13	0.49
1:X:172:A:C2	1:X:227:G:N2	2.81	0.49
1:X:304:A:C5	1:X:356:A:N6	2.80	0.49
1:X:706:A:C2	1:X:707:U:O2	2.65	0.49
1:X:750:C:N3	1:X:751:G:C8	2.81	0.49
1:X:1008:G:O2'	1:X:1009:C:H5'	2.11	0.49
1:X:1093:U:H2'	1:X:1094:C:O4'	2.12	0.49
1:X:1468:A:H5''	1:X:1472:C:N4	2.27	0.49
1:X:1682:A:C2'	1:X:1683:G:H5'	2.43	0.49
1:X:2204:A:H4'	1:X:2205:C:O5'	2.11	0.49
1:X:2264:C:H4'	1:X:2267:A:N7	2.28	0.49
1:X:2265:A:N3	1:X:2266:A:C6	2.81	0.49
1:X:2383:C:H1'	11:I:65:PHE:CZ	2.47	0.49
1:X:2445:C:H5''	30:4:6:SER:HB2	1.93	0.49
1:X:2823:G:O2'	1:X:2824:C:C6	2.65	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2827:G:C5	1:X:2828:C:C5	3.00	0.49
2:Z:44:C:O2	6:D:90:THR:N	2.46	0.49
4:B:149:ARG:NH1	9:G:106:TYR:HD1	2.07	0.49
5:C:150:LEU:N	5:C:150:LEU:HD12	2.28	0.49
6:D:70:ALA:HB2	6:D:85:VAL:HG13	1.95	0.49
6:D:154:ILE:HD12	6:D:154:ILE:N	2.28	0.49
7:E:9:ILE:CB	7:E:50:LEU:HB3	2.42	0.49
7:E:45:GLN:CA	7:E:50:LEU:HA	2.40	0.49
7:E:117:PRO:HB2	7:E:121:VAL:HB	1.95	0.49
8:F:96:LYS:CB	8:F:99:LYS:HE2	2.40	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
9:G:107:GLN:O	9:G:109:GLY:N	2.43	0.49
10:H:78:SER:O	10:H:79:HIS:O	2.30	0.49
12:J:11:ARG:HG3	12:J:11:ARG:NH1	2.26	0.49
12:J:59:PHE:CZ	12:J:110:VAL:HG21	2.48	0.49
14:L:33:ARG:NH1	14:L:100:VAL:O	2.45	0.49
15:M:50:PHE:HD2	15:M:51:GLU:N	2.11	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
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
18:P:117:ILE:HG22	18:P:118:LYS:N	2.27	0.49
21:S:153:LYS:O	21:S:154:LEU:HG	2.13	0.49
22:T:44:LYS:O	22:T:44:LYS:HD2	2.13	0.49
1:X:57:G:C4	1:X:58:C:C5	3.01	0.49
1:X:848:A:C6	1:X:849:G:C5	3.01	0.49
1:X:860:U:O2	1:X:860:U:H2'	2.11	0.49
1:X:915:C:H2'	1:X:916:U:H6	1.76	0.49
1:X:1016:C:H2'	1:X:1017:C:H6	1.73	0.49
1:X:1123:G:H2'	1:X:1124:U:O4'	2.12	0.49
1:X:1314:A:O2'	1:X:1315:A:C3'	2.41	0.49
1:X:1630:A:N6	18:P:112:GLY:O	2.46	0.49
1:X:1984:A:C2	1:X:1985:G:C4	3.01	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:2612:G:O2'	4:B:63:MET:HG2	2.12	0.49
1:X:2709:C:H2'	1:X:2710:C:H6	1.77	0.49
3:A:125:PRO:CB	3:A:193:ILE:HD11	2.40	0.49
4:B:193:GLY:O	15:M:2:GLN:N	2.46	0.49
6:D:135:GLN:HG3	6:D:150:ARG:O	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:96:ALA:HB1	7:E:103:LEU:HD11	1.95	0.49
9:G:34:PRO:C	9:G:69:ASP:OD1	2.51	0.49
9:G:157:PRO:C	9:G:159:SER:N	2.61	0.49
11:I:123:ASP:O	11:I:124:ALA:HB2	2.13	0.49
12:J:54:VAL:HG11	12:J:121:LEU:HB3	1.95	0.49
12:J:68:ARG:HG2	12:J:104:MET:O	2.13	0.49
12:J:77:LYS:CG	12:J:78:LYS:H	2.25	0.49
12:J:83:ARG:HG2	12:J:83:ARG:HH11	1.77	0.49
14:L:21:THR:HG22	14:L:22:ALA:H	1.78	0.49
16:N:21:ALA:O	16:N:22:LYS:C	2.50	0.49
16:N:105:ALA:O	16:N:107:LYS:N	2.45	0.49
25:W:5:LEU:HG	25:W:28:ILE:HG22	1.94	0.49
1:X:27:G:O2'	1:X:28:A:P	2.71	0.49
1:X:152:G:O2'	1:X:153:A:H5'	2.13	0.49
1:X:190:A:O2'	1:X:191:G:H5'	2.12	0.49
1:X:589:C:C5'	16:N:31:GLN:HE22	2.22	0.49
1:X:769:C:H2'	1:X:770:U:H5'	1.95	0.49
1:X:840:U:O2'	1:X:841:G:N2	2.45	0.49
1:X:1065:A:C4	1:X:1117:G:N2	2.81	0.49
1:X:1071:U:C2	1:X:1073:G:H5'	2.48	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:1737:G:H2'	1:X:1738:U:C6	2.48	0.49
1:X:2247:A:H5'	1:X:2248:A:P	2.53	0.49
1:X:2490:U:O4	1:X:2554:C:N3	2.46	0.49
1:X:2529:G:C6	1:X:2538:C:N3	2.80	0.49
1:X:2619:G:C6	1:X:2755:A:C2	3.01	0.49
1:X:2777:A:N6	18:P:134:LYS:HB2	2.27	0.49
1:X:2819:G:C5	1:X:2820:C:C4	3.01	0.49
1:X:2867:G:OP2	1:X:2867:G:C8	2.65	0.49
3:A:65:ILE:O	3:A:66:ASP:HB2	2.12	0.49
3:A:149:PRO:HD3	3:A:189:CYS:SG	2.52	0.49
6:D:60:ILE:O	6:D:99:PHE:CD1	2.66	0.49
6:D:112:ARG:O	6:D:113:ASP:CB	2.60	0.49
7:E:21:ASP:C	7:E:23:VAL:H	2.15	0.49
7:E:91:GLY:HA3	7:E:94:PHE:CD2	2.47	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
9:G:100:TYR:C	9:G:100:TYR:CD1	2.86	0.49
10:H:2:ILE:CG2	10:H:8:LEU:HD11	2.43	0.49
14:L:69:ALA:CB	14:L:106:ALA:HB2	2.40	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
21:S:168:VAL:O	21:S:169:VAL:HG13	2.13	0.49
23:U:20:ARG:HB2	23:U:43:ARG:CG	2.42	0.49
23:U:22:GLY:N	23:U:39:LYS:CD	2.76	0.49
1:X:872:G:H22	1:X:929:A:P	2.35	0.49
1:X:1022:A:C2	1:X:1024:G:C4	3.01	0.49
1:X:1025:A:O2'	1:X:1026:U:H5'	2.12	0.49
1:X:1211:G:C6	1:X:1212:U:O4	2.65	0.49
1:X:1313:U:O2'	1:X:1314:A:OP2	2.29	0.49
1:X:1588:A:C4	1:X:1589:G:C8	3.01	0.49
1:X:1684:G:O2'	1:X:1974:U:O4	2.26	0.49
1:X:1867:A:H3'	1:X:1867:A:H8	1.78	0.49
1:X:1919:A:H1'	1:X:1923:U:C2	2.48	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
1:X:2725:C:H1'	7:E:143:GLN:HG3	1.95	0.49
2:Z:75:A:N6	21:S:29:ASN:OD1	2.41	0.49
3:A:63:ARG:HD2	3:A:85:ASP:CB	2.33	0.49
3:A:72:LYS:HE2	3:A:97:TYR:CB	2.43	0.49
6:D:13:ARG:CB	6:D:14:PRO:HD3	2.32	0.49
6:D:75:SER:O	6:D:76:ASN:C	2.50	0.49
6:D:142:THR:HG22	6:D:144:ASP:HB2	1.95	0.49
7:E:137:ASP:CB	7:E:140:LEU:HD12	2.40	0.49
9:G:158:HIS:N	9:G:161:GLN:HE21	2.11	0.49
10:H:73:VAL:CG2	10:H:123:PHE:HE1	2.26	0.49
11:I:9:THR:O	11:I:13:ARG:CG	2.61	0.49
12:J:23:LYS:O	12:J:25:GLY:N	2.45	0.49
12:J:128:ILE:HG12	12:J:129:GLN:N	2.27	0.49
14:L:33:ARG:HD3	14:L:99:ARG:HG3	1.95	0.49
16:N:40:LEU:HB3	17:O:74:TYR:CD1	2.48	0.49
16:N:76:TYR:O	16:N:80:ILE:HG12	2.12	0.49
18:P:97:VAL:CG1	18:P:122:SER:HB3	2.41	0.49
19:Q:20:MET:O	19:Q:21:GLU:C	2.51	0.49
23:U:22:GLY:N	23:U:39:LYS:CG	2.74	0.49
23:U:70:LEU:HD21	23:U:75:TYR:H	1.78	0.49
1:X:330:C:C2	1:X:331:U:C6	3.01	0.48
1:X:516:G:O2'	1:X:517:A:H8	1.96	0.48
1:X:616:U:H2'	1:X:617:U:O4'	2.13	0.48
1:X:1220:G:O2'	1:X:1221:C:H5'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1483:G:C2	1:X:1541:G:N3	2.81	0.48
1:X:1811:A:OP2	1:X:1811:A:O4'	2.30	0.48
1:X:1811:A:C5'	3:A:161:THR:HG21	2.42	0.48
1:X:1915:A:H2'	1:X:1916:G:C5'	2.43	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
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
4:B:25:VAL:CG2	15:M:16:ILE:HD12	2.43	0.48
4:B:37:LYS:CD	4:B:42:ASP:OD2	2.61	0.48
5:C:7:ILE:HG21	5:C:122:GLY:HA2	1.94	0.48
5:C:24:SER:O	5:C:25:GLY:C	2.50	0.48
5:C:96:PRO:HB2	5:C:99:VAL:CG2	2.43	0.48
6:D:33:LYS:HB2	6:D:91:LEU:O	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
9:G:65:LYS:HE3	9:G:66:HIS:CD2	2.46	0.48
9:G:156:HIS:O	9:G:158:HIS:N	2.45	0.48
11:I:89:ASP:CB	11:I:120:VAL:HG13	2.40	0.48
14:L:37:HIS:CE1	14:L:39:TYR:CE1	3.01	0.48
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
20:R:23:ILE:O	20:R:80:LYS:HA	2.13	0.48
21:S:172:LEU:CD2	21:S:173:PRO:HD2	2.27	0.48
22:T:57:HIS:N	22:T:57:HIS:ND1	2.60	0.48
23:U:14:VAL:O	23:U:16:ASN:ND2	2.46	0.48
23:U:23:LYS:HB2	23:U:35:THR:CG2	2.42	0.48
23:U:32:ARG:CG	23:U:33:LYS:N	2.74	0.48
25:W:44:VAL:O	25:W:47:VAL:HG22	2.13	0.48
26:Y:15:LYS:NZ	26:Y:19:ARG:HH11	2.10	0.48
1:X:490:A:O2'	1:X:492:G:H5''	2.13	0.48
1:X:873:U:C2'	1:X:874:A:O5'	2.61	0.48
1:X:1186:G:O5'	1:X:1187:A:OP1	2.30	0.48
1:X:1215:A:H2'	1:X:1216:G:C8	2.49	0.48
1:X:1312:G:H5''	1:X:1313:U:OP1	2.12	0.48
1:X:1322:G:O2'	1:X:1323:G:H5'	2.14	0.48
1:X:1571:G:H2'	1:X:1572:C:H6	1.77	0.48
1:X:1762:C:H2'	1:X:1763:G:C8	2.48	0.48
1:X:1954:A:H5'	1:X:1955:G:H5''	1.95	0.48
1:X:2064:U:OP1	23:U:20:ARG:CZ	2.61	0.48
1:X:2264:C:H4'	1:X:2267:A:C5	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2268:G:N3	1:X:2268:G:H2'	2.29	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:2664:G:OP1	10:H:90:ARG:NH1	2.46	0.48
1:X:2847:G:O2'	13:K:8:ARG:NH2	2.41	0.48
2:Z:28:A:N7	2:Z:29:C:C4	2.81	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:95:ILE:HG22	4:B:96:PHE:CD1	2.49	0.48
4:B:168:GLN:O	4:B:169:ASN:HB2	2.14	0.48
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
7:E:70:THR:O	7:E:73:ALA:HB3	2.14	0.48
8:F:77:TYR:HE1	8:F:80:ARG:NH2	2.01	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
12:J:128:ILE:HG12	12:J:129:GLN:O	2.13	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
13:K:33:ARG:CB	13:K:114:GLU:HB3	2.43	0.48
17:O:36:LYS:HE3	17:O:56:VAL:N	2.28	0.48
18:P:34:SER:O	18:P:37:LYS:CB	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
20:R:53:VAL:HG21	20:R:74:LEU:HD13	1.95	0.48
21:S:38:ALA:HA	21:S:41:ARG:HB3	1.94	0.48
23:U:69:THR:HG22	23:U:75:TYR:CE1	2.48	0.48
1:X:18:U:O2'	1:X:19:C:H5'	2.13	0.48
1:X:33:C:O2'	1:X:34:U:C5'	2.58	0.48
1:X:43:A:O2'	1:X:44:G:H5'	2.14	0.48
1:X:64:C:H1'	19:Q:68:PHE:CD1	2.48	0.48
1:X:229:G:OP1	11:I:49:PHE:CE1	2.66	0.48
1:X:471:A:H2'	1:X:472:C:O4'	2.11	0.48
1:X:586:G:C6	1:X:587:A:N6	2.81	0.48
1:X:609:U:H1'	11:I:18:ARG:CZ	2.43	0.48
1:X:847:C:O5'	1:X:847:C:H6	1.96	0.48
1:X:1036:G:C4	1:X:1145:C:H1'	2.48	0.48
1:X:1051:U:C6	1:X:1051:U:C3'	2.95	0.48
1:X:1474:A:C2'	1:X:1475:U:H5'	2.39	0.48
1:X:1713:G:H5''	1:X:1713:G:H8	1.76	0.48
1:X:1917:C:C2'	1:X:1918:G:H5'	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2035:G:C2'	1:X:2036:G:H5'	2.43	0.48
1:X:2326:C:H2'	1:X:2327:U:C5	2.49	0.48
1:X:2425:G:H5''	1:X:2426:G:OP2	2.14	0.48
1:X:2541:U:C2'	1:X:2542:U:H5'	2.44	0.48
1:X:2787:A:C2	1:X:2864:C:N3	2.82	0.48
2:Z:57:U:O2	6:D:26:MET:HG3	2.13	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
3:A:184:ARG:CG	3:A:184:ARG:NH1	2.76	0.48
3:A:243:GLY:CA	3:A:244:ARG:NH1	2.76	0.48
5:C:176:ASN:ND2	5:C:178:TYR:H	2.12	0.48
7:E:101:LYS:HG3	7:E:117:PRO:CD	2.41	0.48
8:F:89:SER:CB	8:F:135:MET:O	2.61	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
9:G:162:LYS:O	9:G:163:PRO:O	2.31	0.48
12:J:27:TYR:OH	12:J:131:LYS:NZ	2.40	0.48
13:K:87:TYR:CZ	13:K:94:TYR:HD2	2.31	0.48
14:L:32:TYR:C	14:L:34:SER:N	2.65	0.48
15:M:27:PHE:CZ	15:M:66:PHE:CD1	3.00	0.48
17:O:36:LYS:NZ	17:O:98:ILE:HB	2.29	0.48
18:P:89:ARG:HD3	18:P:132:GLY:CA	2.43	0.48
19:Q:84:GLU:O	19:Q:86:GLN:N	2.46	0.48
21:S:113:VAL:HG22	21:S:171:VAL:HG13	1.94	0.48
24:V:4:SER:HB3	24:V:7:ARG:NE	2.28	0.48
24:V:4:SER:O	24:V:6:MET:N	2.45	0.48
24:V:12:THR:O	24:V:16:LYS:HB3	2.12	0.48
24:V:37:LEU:HD23	24:V:39:GLN:H	1.77	0.48
25:W:2:LYS:O	25:W:54:GLN:N	2.42	0.48
25:W:22:ALA:O	25:W:23:LEU:C	2.51	0.48
26:Y:51:TYR:HA	26:Y:55:ARG:HA	1.95	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
1:X:840:U:H4'	1:X:841:G:N2	2.28	0.48
1:X:921:A:C2'	1:X:924:C:H5	2.21	0.48
1:X:2392:G:H2'	1:X:2393:G:O4'	2.13	0.48
1:X:2441:U:H2'	1:X:2442:C:H6	1.77	0.48
1:X:2819:G:N7	1:X:2820:C:C4	2.81	0.48
5:C:190:ALA:C	5:C:192:ALA:N	2.67	0.48
6:D:53:ALA:O	6:D:56:GLU:N	2.46	0.48
7:E:73:ALA:O	7:E:76:VAL:HB	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:41:ASN:HB2	10:H:42:LYS:H	1.56	0.48
11:I:45:LYS:HD3	11:I:46:GLY:N	2.26	0.48
11:I:58:ALA:C	11:I:60:LEU:N	2.66	0.48
11:I:102:LYS:C	11:I:104:ARG:H	2.17	0.48
14:L:36:LYS:HE3	14:L:36:LYS:CA	2.44	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
16:N:71:LEU:HG	16:N:71:LEU:O	2.12	0.48
18:P:72:LEU:O	18:P:73:ASN:C	2.52	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
22:T:46:LYS:CG	22:T:76:ALA:HB1	2.43	0.48
1:X:34:U:C6	20:R:4:PRO:HB3	2.48	0.48
1:X:190:A:C2	1:X:191:G:C4	3.01	0.48
1:X:319:G:H1'	1:X:511:A:O4'	2.14	0.48
1:X:435:A:C2	1:X:436:A:C5	3.01	0.48
1:X:640:C:C4'	1:X:660:G:H21	2.24	0.48
1:X:741:G:C2	1:X:743:A:N9	2.82	0.48
1:X:942:U:H4'	25:W:22:ALA:O	2.14	0.48
1:X:1017:C:H1'	9:G:134:MET:HE2	1.96	0.48
1:X:1236:G:P	17:O:87:ARG:HH11	2.36	0.48
1:X:1324:G:H2'	1:X:1325:U:C6	2.49	0.48
1:X:1782:A:N1	1:X:1821:A:H5'	2.29	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:2042:A:O2'	5:C:62:LYS:CE	2.59	0.48
1:X:2073:A:C5	1:X:2074:U:C5	3.01	0.48
1:X:2271:C:H2'	1:X:2272:A:C8	2.48	0.48
2:Z:53:G:H5'	14:L:64:LYS:CE	2.43	0.48
2:Z:108:G:O3'	21:S:26:LYS:HE2	2.13	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
3:A:227:ASN:O	3:A:229:VAL:N	2.47	0.48
5:C:47:THR:CA	5:C:82:VAL:HB	2.29	0.48
5:C:158:ARG:HB2	5:C:169:VAL:CG1	2.43	0.48
6:D:171:GLN:HG3	6:D:175:LEU:O	2.13	0.48
8:F:108:ILE:O	8:F:112:LYS:HB2	2.13	0.48
10:H:116:ARG:NH1	15:M:38:LYS:NZ	2.60	0.48
11:I:41:SER:OG	11:I:41:SER:O	2.30	0.48
11:I:73:GLU:OE2	11:I:104:ARG:HB2	2.13	0.48
12:J:89:GLY:O	12:J:90:ALA:C	2.52	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:10:LEU:HG	13:K:17:ARG:HB2	1.94	0.48
13:K:28:LEU:HD23	13:K:28:LEU:O	2.13	0.48
14:L:97:HIS:O	14:L:101:LYS:CB	2.59	0.48
20:R:8:SER:C	20:R:10:HIS:H	2.17	0.48
20:R:63:THR:O	20:R:64:ASN:HB2	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
22:T:80:SER:C	22:T:81:ILE:HD13	2.33	0.48
23:U:23:LYS:CB	23:U:35:THR:HG22	2.44	0.48
1:X:91:A:C2	1:X:92:U:C4	3.02	0.48
1:X:455:A:H1'	1:X:1215:A:C4'	2.44	0.48
1:X:689:A:C8	1:X:2422:C:H1'	2.49	0.48
1:X:800:U:H3'	1:X:804:C:N4	2.28	0.48
1:X:1002:C:OP2	1:X:1200:G:OP2	2.30	0.48
1:X:1281:A:C6	1:X:1996:A:C8	3.02	0.48
1:X:1385:C:H1'	1:X:2192:U:C4	2.48	0.48
1:X:1445:A:O2'	1:X:1446:U:H5'	2.13	0.48
1:X:1822:C:H2'	1:X:1823:G:C5'	2.44	0.48
1:X:2293:G:O2'	1:X:2294:U:H5'	2.14	0.48
1:X:2320:G:H22	1:X:2353:G:H4'	1.78	0.48
1:X:2345:A:H4'	22:T:62:LEU:CD1	2.42	0.48
1:X:2633:A:C4'	1:X:2634:G:OP1	2.61	0.48
1:X:2634:G:O6	10:H:32:LYS:NZ	2.43	0.48
1:X:2726:U:H2'	1:X:2727:G:C5'	2.43	0.48
4:B:195:LEU:HB2	15:M:3:THR:HG22	1.89	0.48
6:D:78:LYS:HG2	6:D:80:ARG:NH1	2.28	0.48
7:E:78:GLY:C	7:E:80:SER:H	2.15	0.48
7:E:97:LYS:O	7:E:98:LEU:HB2	2.13	0.48
10:H:3:MET:SD	10:H:44:TYR:HE1	2.37	0.48
11:I:30:ALA:N	11:I:34:HIS:CG	2.76	0.48
11:I:80:LEU:CA	11:I:84:GLU:HB3	2.43	0.48
16:N:91:ASN:HA	17:O:10:LYS:HZ1	1.72	0.48
20:R:12:ASP:OD1	20:R:12:ASP:O	2.30	0.48
20:R:108:VAL:C	20:R:110:SER:N	2.66	0.48
21:S:3:LEU:HD21	21:S:33:ALA:N	2.18	0.48
22:T:8:GLY:O	22:T:9:SER:O	2.32	0.48
22:T:10:SER:O	22:T:11:LYS:HE3	2.14	0.48
22:T:40:GLN:NE2	22:T:42:GLY:O	2.47	0.48
23:U:20:ARG:O	23:U:39:LYS:HD2	2.14	0.48
1:X:238:G:C2	1:X:239:A:C8	3.02	0.48
1:X:698:A:H5''	1:X:699:G:H5''	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:717:G:HO2'	1:X:718:A:P	2.36	0.48
1:X:795:A:H2	3:A:226:MET:HE2	1.79	0.48
1:X:847:C:N3	1:X:848:A:N7	2.61	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
1:X:921:A:H3'	1:X:924:C:H41	1.79	0.48
1:X:1014:G:N2	1:X:1164:C:N1	2.61	0.48
1:X:1115:C:C2'	1:X:1116:U:H5'	2.44	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
1:X:1337:G:H1'	1:X:1632:A:H62	1.78	0.48
1:X:1373:G:H2'	1:X:1374:G:H5'	1.95	0.48
1:X:1794:A:H2	1:X:1814:G:N3	2.11	0.48
1:X:1838:G:C2	1:X:1878:C:C2	3.02	0.48
1:X:1960:A:O5'	1:X:1960:A:C8	2.65	0.48
1:X:2002:A:H4'	16:N:34:ASN:HD21	1.78	0.48
1:X:2482:A:N9	32:X:2911:ZLD:H13	2.29	0.48
3:A:75:VAL:HG12	3:A:76:ASN:N	2.29	0.48
4:B:33:ILE:CG2	4:B:47:VAL:CG1	2.92	0.48
5:C:45:THR:HG22	5:C:86:PRO:O	2.14	0.48
6:D:96:MET:O	6:D:100:LEU:N	2.45	0.48
6:D:113:ASP:HB3	6:D:115:ARG:NH2	2.28	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
9:G:103:TYR:OH	9:G:111:LYS:HB2	2.13	0.48
9:G:107:GLN:OE1	9:G:107:GLN:N	2.46	0.48
9:G:139:ARG:HG2	9:G:142:ARG:NH2	2.29	0.48
11:I:73:GLU:HG2	11:I:105:PRO:O	2.14	0.48
12:J:99:LYS:CG	12:J:100:PRO:HD2	2.44	0.48
15:M:43:ASN:C	15:M:43:ASN:ND2	2.65	0.48
16:N:3:ARG:NH2	16:N:5:LYS:NZ	2.62	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
20:R:96:LYS:HG2	20:R:97:GLN:O	2.14	0.48
21:S:1:MET:CE	21:S:46:GLN:OE1	2.62	0.48
21:S:98:VAL:HG22	21:S:99:HIS:H	1.78	0.48
24:V:64:GLY:O	24:V:65:GLU:CB	2.61	0.48
1:X:157:G:H5'	1:X:158:A:OP1	2.13	0.48
1:X:188:G:C2	1:X:189:A:C5	3.02	0.48
1:X:760:U:C4	26:Y:3:LYS:HG3	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1107:A:H3'	1:X:1108:U:C5'	2.43	0.48
1:X:1148:G:N2	9:G:134:MET:HE1	2.18	0.48
1:X:1337:G:OP2	18:P:105:ARG:NH1	2.46	0.48
1:X:1354:A:H5'	19:Q:56:MET:HG3	1.93	0.48
1:X:1428:G:H1	1:X:1602:G:P	2.37	0.48
1:X:1811:A:H5''	3:A:161:THR:HG21	1.96	0.48
1:X:2516:U:H2'	1:X:2517:C:H6	1.77	0.48
1:X:2850:U:H2'	1:X:2851:G:O5'	2.14	0.48
2:Z:18:G:C4	2:Z:19:C:C5	3.01	0.48
3:A:121:PRO:HB2	3:A:135:PHE:HE1	1.78	0.48
4:B:119:ARG:HG2	4:B:120:TRP:CE2	2.48	0.48
5:C:129:LYS:HE3	5:C:132:ASN:HB2	1.95	0.48
6:D:17:MET:O	6:D:21:GLY:CA	2.62	0.48
6:D:80:ARG:HD3	6:D:83:MET:CG	2.43	0.48
8:F:89:SER:HB3	8:F:135:MET:O	2.14	0.48
9:G:91:THR:O	9:G:93:LYS:N	2.46	0.48
9:G:127:ILE:O	9:G:128:GLU:C	2.52	0.48
11:I:29:THR:CA	11:I:34:HIS:CD2	2.97	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
13:K:26:THR:HG23	13:K:70:ILE:HG23	1.96	0.48
14:L:90:ASP:C	14:L:91:ARG:O	2.48	0.48
16:N:79:PHE:HE1	16:N:106:PHE:HE1	1.57	0.48
17:O:7:THR:HG22	17:O:8:GLY:N	2.28	0.48
17:O:22:VAL:HA	17:O:91:THR:OG1	2.13	0.48
18:P:83:ASP:O	18:P:84:GLU:O	2.31	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
21:S:95:SER:OG	21:S:121:GLN:HB2	2.12	0.48
26:Y:11:THR:O	26:Y:12:SER:C	2.52	0.48
1:X:77:C:H2'	1:X:78:C:C6	2.49	0.48
1:X:155:G:C4	1:X:156:G:C8	3.02	0.48
1:X:321:A:P	20:R:27:GLY:H	2.32	0.48
1:X:453:U:O2	5:C:40:ARG:NH1	2.47	0.48
1:X:479:G:O2'	1:X:480:G:H5'	2.13	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
1:X:1726:C:H2'	1:X:1727:C:C6	2.49	0.48
1:X:1975:G:O2'	1:X:1976:U:OP2	2.25	0.48
1:X:2174:G:O2'	1:X:2175:A:H5'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2553:G:O2'	4:B:143:GLN:HB3	2.14	0.48
1:X:2740:C:H1'	7:E:143:GLN:HE21	1.79	0.48
1:X:2839:G:H2'	1:X:2840:U:H6	1.78	0.48
3:A:43:ARG:N	3:A:43:ARG:CD	2.67	0.48
3:A:90:ALA:O	3:A:91:ARG:C	2.51	0.48
3:A:146:GLU:HG2	3:A:147:LEU:H	1.77	0.48
3:A:164:GLN:O	3:A:175:VAL:HG12	2.13	0.48
5:C:7:ILE:HG13	5:C:136:TRP:HH2	1.78	0.48
5:C:104:LEU:HA	5:C:107:ALA:HB3	1.96	0.48
6:D:101:GLU:C	6:D:103:LEU:H	2.18	0.48
9:G:72:PRO:C	9:G:74:MET:H	2.16	0.48
12:J:110:VAL:HG21	12:J:115:ALA:HB2	1.95	0.48
12:J:121:LEU:C	12:J:123:GLY:H	2.18	0.48
14:L:33:ARG:HH22	14:L:103:LEU:CB	2.26	0.48
18:P:25:PHE:C	18:P:25:PHE:HD2	2.17	0.48
21:S:13:LYS:HB2	21:S:13:LYS:NZ	2.28	0.48
22:T:41:ARG:NE	22:T:41:ARG:HA	2.28	0.48
25:W:38:PRO:N	25:W:41:ARG:HH12	2.10	0.48
1:X:454:G:H4'	1:X:455:A:OP1	2.12	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
1:X:1034:U:H2'	1:X:1035:G:C5'	2.38	0.48
1:X:1398:G:O2'	1:X:1399:C:O5'	2.32	0.48
1:X:1935:A:H2	1:X:2539:C:O2	1.97	0.48
1:X:1935:A:C6	1:X:1936:A:C6	3.02	0.48
1:X:2529:G:C6	1:X:2530:C:N4	2.82	0.48
1:X:2532:G:N3	1:X:2533:U:H1'	2.28	0.48
1:X:2712:G:H8	1:X:2712:G:OP2	1.96	0.48
1:X:2728:A:O2'	1:X:2729:A:H5'	2.13	0.48
1:X:2826:C:H2'	1:X:2827:G:C5'	2.44	0.48
3:A:183:ARG:CD	3:A:184:ARG:O	2.62	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
6:D:36:VAL:HG22	6:D:154:ILE:HG13	1.95	0.48
7:E:137:ASP:OD1	7:E:139:GLN:HB2	2.14	0.48
9:G:32:TYR:OH	9:G:35:LYS:CE	2.59	0.48
10:H:116:ARG:CD	15:M:38:LYS:HZ2	2.24	0.48
14:L:79:ALA:O	14:L:82:LYS:N	2.47	0.48
17:O:10:LYS:CB	17:O:37:ALA:H	2.22	0.48
17:O:23:GLU:HB3	17:O:32:LYS:HZ3	1.78	0.48
19:Q:57:ASN:HA	19:Q:76:LYS:HA	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
23:U:37:ILE:O	23:U:38:THR:HG23	2.14	0.48
23:U:51:ILE:HG23	23:U:59:THR:CB	2.44	0.48
23:U:51:ILE:O	23:U:52:ARG:CD	2.62	0.48
24:V:4:SER:HB3	24:V:7:ARG:CZ	2.43	0.48
1:X:109:A:H2'	1:X:110:U:C5'	2.44	0.47
1:X:333:A:C2	1:X:351:A:C6	3.02	0.47
1:X:413:G:C8	1:X:413:G:H3'	2.49	0.47
1:X:579:G:H4'	1:X:994:A:C2	2.49	0.47
1:X:884:C:H5''	12:J:70:PHE:CE1	2.48	0.47
1:X:1339:U:OP2	1:X:1339:U:C6	2.66	0.47
1:X:1382:G:C2'	1:X:1383:C:O5'	2.61	0.47
1:X:1495:G:C2	1:X:1530:U:O2	2.67	0.47
1:X:1514:C:O2'	1:X:1515:U:H5'	2.12	0.47
1:X:1549:C:H2'	1:X:1550:C:C6	2.49	0.47
1:X:1759:A:C6	1:X:1760:G:N7	2.82	0.47
1:X:1920:A:N1	1:X:1950:C:H1'	2.28	0.47
1:X:2509:A:H3'	1:X:2510:A:H5''	1.96	0.47
1:X:2699:G:H21	1:X:2847:G:H1	1.61	0.47
1:X:2725:C:O3'	7:E:142:GLY:HA3	2.13	0.47
1:X:2796:A:C6	1:X:2797:G:C6	3.01	0.47
3:A:74:GLY:N	3:A:119:ALA:O	2.47	0.47
3:A:86:PRO:O	3:A:87:ASN:HB2	2.13	0.47
3:A:109:GLU:HG3	3:A:109:GLU:O	2.14	0.47
3:A:217:ARG:NE	3:A:218:LYS:HG3	2.29	0.47
5:C:3:GLN:HE21	5:C:4:ILE:C	2.18	0.47
5:C:9:GLN:CG	5:C:120:VAL:HG21	2.43	0.47
5:C:134:ILE:HD13	5:C:134:ILE:N	2.29	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
6:D:132:ILE:CG2	6:D:152:MET:HB2	2.42	0.47
7:E:137:ASP:O	7:E:141:VAL:HG23	2.14	0.47
9:G:67:ARG:CG	9:G:70:PHE:HA	2.43	0.47
9:G:104:THR:O	9:G:105:GLY:O	2.31	0.47
12:J:27:TYR:HA	12:J:103:VAL:CG2	2.44	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
15:M:46:ARG:CG	15:M:47:SER:H	2.26	0.47
17:O:65:ARG:HH11	17:O:65:ARG:HG2	1.78	0.47
18:P:80:LEU:HD22	18:P:87:GLU:HB3	1.94	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:93:LYS:HB3	18:P:127:ILE:O	2.13	0.47
20:R:22:VAL:HG21	20:R:80:LYS:HZ2	1.79	0.47
20:R:93:ARG:NH2	20:R:109:ALA:N	2.62	0.47
21:S:42:ALA:C	21:S:44:ARG:N	2.66	0.47
22:T:23:VAL:HB	22:T:26:PHE:CZ	2.49	0.47
22:T:52:GLY:N	22:T:62:LEU:HD21	2.29	0.47
23:U:53:GLU:OE2	23:U:57:VAL:HA	2.14	0.47
24:V:41:HIS:C	24:V:43:VAL:N	2.67	0.47
25:W:44:VAL:O	25:W:47:VAL:N	2.47	0.47
1:X:234:C:H2'	1:X:235:C:H5'	1.96	0.47
1:X:588:G:N2	1:X:1275:A:C4	2.82	0.47
1:X:689:A:C2'	1:X:690:A:H5'	2.44	0.47
1:X:717:G:O2'	1:X:718:A:P	2.72	0.47
1:X:761:G:C8	1:X:763:A:C8	3.02	0.47
1:X:968:C:N4	1:X:970:A:N3	2.62	0.47
1:X:1026:U:H2'	1:X:1027:C:C6	2.49	0.47
1:X:1216:G:C2'	1:X:1217:U:H5'	2.44	0.47
1:X:1226:A:C1'	1:X:1250:A:C2	2.98	0.47
1:X:1505:U:H3'	1:X:1505:U:H6	1.80	0.47
1:X:1525:A:H3'	1:X:1526:U:C5	2.45	0.47
1:X:1582:A:C5	3:A:214:TRP:CZ2	3.02	0.47
1:X:1639:U:O2'	1:X:1640:C:H5'	2.14	0.47
1:X:1690:U:C2'	1:X:1691:G:C5'	2.88	0.47
1:X:1727:C:O5'	1:X:1727:C:H6	1.97	0.47
1:X:1856:U:OP1	1:X:2389:G:O2'	2.32	0.47
1:X:2035:G:N2	1:X:2036:G:C4	2.82	0.47
1:X:2261:G:H21	1:X:2369:U:H3	1.60	0.47
1:X:2598:C:O4'	4:B:150:VAL:HG22	2.14	0.47
3:A:128:GLY:N	3:A:193:ILE:HB	2.30	0.47
3:A:145:LEU:HG	3:A:146:GLU:N	2.29	0.47
4:B:105:THR:HG22	4:B:166:THR:HG23	1.95	0.47
5:C:155:GLU:O	5:C:156:ASN:C	2.52	0.47
6:D:60:ILE:CG1	6:D:61:THR:HG23	2.44	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
7:E:140:LEU:HA	7:E:143:GLN:HB2	1.96	0.47
8:F:72:THR:N	8:F:73:PRO:CD	2.74	0.47
10:H:101:ASN:O	10:H:102:GLN:NE2	2.47	0.47
11:I:89:ASP:HB2	11:I:120:VAL:HA	1.95	0.47
11:I:130:ILE:CG2	11:I:131:LYS:N	2.76	0.47
11:I:135:ALA:O	11:I:136:ALA:CB	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:48:VAL:C	13:K:50:GLN:N	2.66	0.47
14:L:66:ASP:C	14:L:68:ALA:H	2.16	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
20:R:94:VAL:C	20:R:95:ARG:HD2	2.34	0.47
21:S:74:ARG:HD3	21:S:75:LYS:NZ	2.28	0.47
24:V:1:MET:O	24:V:2:LYS:HB3	2.14	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
1:X:873:U:O2'	1:X:874:A:H5'	2.14	0.47
1:X:987:G:N3	1:X:988:G:C8	2.83	0.47
1:X:1153:A:O2'	1:X:1154:A:C5'	2.62	0.47
1:X:1248:G:C5	1:X:1249:G:N1	2.83	0.47
1:X:1253:C:C4	1:X:1254:G:C8	3.03	0.47
1:X:1377:G:N3	1:X:1379:A:OP2	2.47	0.47
1:X:1473:U:O2'	1:X:1474:A:OP2	2.25	0.47
1:X:1652:G:H2'	1:X:1653:C:C6	2.49	0.47
1:X:1657:A:H5'	1:X:1657:A:H8	1.79	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:2090:U:C2	1:X:2166:G:C2	3.03	0.47
1:X:2402:U:H4'	1:X:2404:A:N7	2.29	0.47
1:X:2506:C:C5'	30:4:30:VAL:HB	2.42	0.47
1:X:2720:A:N6	1:X:2744:A:C8	2.82	0.47
3:A:111:LEU:HD23	3:A:111:LEU:N	2.28	0.47
4:B:78:LEU:O	4:B:79:ARG:NE	2.48	0.47
4:B:134:TRP:O	4:B:135:HIS:C	2.52	0.47
5:C:13:ARG:H	5:C:13:ARG:CD	2.26	0.47
5:C:15:ILE:HG22	5:C:17:LEU:CD2	2.42	0.47
6:D:17:MET:CA	6:D:21:GLY:HA2	2.44	0.47
7:E:18:ASN:C	7:E:20:GLN:H	2.18	0.47
7:E:149:ARG:CA	7:E:162:VAL:HG11	2.36	0.47
9:G:37:ASP:O	9:G:38:GLU:CB	2.62	0.47
11:I:83:LEU:O	11:I:84:GLU:C	2.52	0.47
11:I:89:ASP:N	11:I:89:ASP:OD1	2.44	0.47
14:L:37:HIS:CD2	14:L:39:TYR:CE1	3.02	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
21:S:89:GLY:O	21:S:127:PRO:CG	2.55	0.47
23:U:17:SER:OG	23:U:44:ALA:O	2.32	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:1:MET:O	25:W:33:GLU:OE2	2.32	0.47
1:X:177:U:OP2	23:U:40:ARG:NH2	2.47	0.47
1:X:310:A:N1	5:C:162:ARG:NH1	2.62	0.47
1:X:540:G:C2	1:X:2005:U:OP1	2.67	0.47
1:X:726:G:N2	1:X:731:A:OP1	2.48	0.47
1:X:793:G:H2'	1:X:795:A:N7	2.29	0.47
1:X:1234:C:H2'	1:X:1235:C:C6	2.48	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:1850:G:C8	1:X:1868:A:N6	2.82	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
1:X:2469:G:H5''	1:X:2470:U:OP1	2.13	0.47
1:X:2620:G:P	9:G:102:ARG:HH21	2.36	0.47
2:Z:53:G:H5'	14:L:64:LYS:HD2	1.94	0.47
3:A:75:VAL:CG1	3:A:76:ASN:N	2.76	0.47
3:A:166:GLN:O	3:A:167:GLY:O	2.32	0.47
4:B:61:LYS:N	4:B:62:PRO:CD	2.77	0.47
4:B:165:VAL:HG12	4:B:166:THR:N	2.28	0.47
5:C:148:VAL:HG12	5:C:149:LEU:N	2.29	0.47
6:D:118:ASN:O	6:D:122:PHE:HZ	1.97	0.47
7:E:133:VAL:O	7:E:141:VAL:HG13	2.14	0.47
9:G:162:LYS:N	9:G:163:PRO:CD	2.78	0.47
10:H:28:GLY:C	10:H:35:THR:H	2.17	0.47
12:J:51:CYS:C	12:J:55:MET:HE2	2.35	0.47
14:L:80:ALA:O	14:L:82:LYS:N	2.44	0.47
15:M:68:VAL:O	15:M:78:GLU:HA	2.14	0.47
16:N:93:LYS:HE3	17:O:10:LYS:NZ	2.29	0.47
19:Q:29:VAL:HG11	19:Q:78:ALA:CB	2.44	0.47
19:Q:45:ALA:HB3	19:Q:46:PHE:CE1	2.50	0.47
20:R:15:HIS:HB2	20:R:82:ALA:HB2	1.96	0.47
20:R:38:LEU:CD2	20:R:39:ALA:N	2.72	0.47
20:R:62:MET:O	20:R:63:THR:C	2.52	0.47
20:R:108:VAL:HG13	20:R:109:ALA:H	1.79	0.47
22:T:60:PHE:HD1	22:T:60:PHE:H	1.59	0.47
23:U:29:GLY:O	23:U:31:GLY:N	2.48	0.47
25:W:4:LYS:HG3	25:W:52:GLU:HB3	1.95	0.47
30:4:18:ARG:HG2	30:4:23:VAL:CG1	2.41	0.47
1:X:242:A:H2'	1:X:243:G:O4'	2.14	0.47
1:X:564:U:H2'	1:X:565:A:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:946:U:O2'	1:X:947:C:H5'	2.13	0.47
1:X:1412:C:H6	1:X:1412:C:O5'	1.97	0.47
1:X:1442:C:HO2'	1:X:1443:G:P	2.37	0.47
1:X:1468:A:H5''	1:X:1472:C:H41	1.79	0.47
1:X:1527:G:H2'	1:X:1528:C:C1'	2.44	0.47
1:X:1658:A:C8	1:X:1659:G:C8	3.02	0.47
1:X:1684:G:H1'	1:X:1974:U:O4	2.14	0.47
1:X:1759:A:C6	1:X:1968:G:C6	3.03	0.47
1:X:1882:G:H21	1:X:1885:C:H41	1.62	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
1:X:2190:A:N6	1:X:2196:U:C4	2.83	0.47
1:X:2411:A:N1	23:U:37:ILE:O	2.48	0.47
1:X:2506:C:O2'	1:X:2507:U:H5'	2.14	0.47
1:X:2640:G:H2'	1:X:2641:A:C8	2.50	0.47
1:X:2787:A:C5	1:X:2788:C:C5	3.03	0.47
3:A:119:ALA:HB1	3:A:130:ALA:CB	2.38	0.47
4:B:144:ARG:O	4:B:146:THR:N	2.47	0.47
4:B:179:GLU:HG2	4:B:181:LEU:HD12	1.96	0.47
5:C:5:ASN:N	5:C:5:ASN:ND2	2.62	0.47
5:C:104:LEU:C	5:C:107:ALA:H	2.17	0.47
5:C:139:GLN:C	5:C:141:GLY:H	2.17	0.47
7:E:167:GLU:HG3	7:E:169:ILE:CG1	2.45	0.47
8:F:102:TRP:CE3	8:F:139:VAL:HG12	2.48	0.47
10:H:116:ARG:NH1	15:M:38:LYS:HE3	2.29	0.47
11:I:90:ARG:NH2	11:I:93:LEU:HG	2.29	0.47
11:I:124:ALA:HA	11:I:142:LEU:CD2	2.42	0.47
14:L:28:ARG:HG3	14:L:43:ILE:CD1	2.32	0.47
17:O:12:TYR:C	17:O:13:ARG:CG	2.83	0.47
18:P:8:PHE:O	18:P:9:ARG:HB2	2.13	0.47
20:R:63:THR:HG22	20:R:64:ASN:ND2	2.29	0.47
20:R:95:ARG:HD2	20:R:95:ARG:N	2.29	0.47
20:R:105:ARG:NH2	20:R:106:VAL:O	2.47	0.47
21:S:122:ILE:HG22	21:S:160:LEU:HA	1.95	0.47
1:X:19:C:H5'	1:X:563:U:OP1	2.14	0.47
1:X:53:G:C6	1:X:54:G:C8	3.03	0.47
1:X:193:A:C4	1:X:445:A:C2	3.03	0.47
1:X:482:A:HO2'	1:X:483:A:H5'	1.78	0.47
1:X:562:G:C6	1:X:563:U:C4	3.03	0.47
1:X:870:C:O2'	1:X:871:U:H5'	2.14	0.47
1:X:932:G:H2'	1:X:933:G:H8	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1082:G:O4'	1:X:1100:G:C5	2.68	0.47
1:X:1142:G:H8	1:X:2008:C:H4'	1.80	0.47
1:X:1258:G:P	11:I:17:LYS:HE2	2.54	0.47
1:X:1366:A:C2	1:X:1367:A:C2	3.02	0.47
1:X:1469:U:O5'	1:X:1470:G:OP2	2.33	0.47
1:X:1517:C:C2	1:X:1518:C:C5	3.03	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
1:X:1984:A:H2'	1:X:1985:G:O4'	2.15	0.47
1:X:2348:A:O2'	1:X:2349:G:H5'	2.14	0.47
1:X:2451:G:O6	1:X:2455:A:H4'	2.15	0.47
1:X:2641:A:H2'	1:X:2642:G:O4'	2.15	0.47
1:X:2726:U:H1'	7:E:139:GLN:HE21	1.74	0.47
2:Z:30:C:H42	2:Z:58:G:H22	1.62	0.47
2:Z:68:A:H61	2:Z:110:U:H3'	1.80	0.47
2:Z:116:C:H6	2:Z:116:C:O5'	1.98	0.47
3:A:217:ARG:C	3:A:219:PRO:N	2.68	0.47
4:B:51:TYR:O	4:B:75:THR:OG1	2.32	0.47
4:B:179:GLU:O	4:B:181:LEU:N	2.47	0.47
5:C:7:ILE:CG2	5:C:122:GLY:HA2	2.45	0.47
5:C:58:MET:HA	5:C:58:MET:HE3	1.97	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
7:E:150:LYS:C	7:E:152:ARG:H	2.18	0.47
9:G:41:TRP:CZ3	9:G:79:PHE:CG	3.02	0.47
10:H:131:PRO:HB2	15:M:73:PHE:CZ	2.49	0.47
18:P:45:ILE:HG13	18:P:53:ALA:HB1	1.96	0.47
18:P:64:ALA:O	18:P:68:VAL:HG23	2.14	0.47
18:P:91:PHE:CE1	18:P:129:ALA:HB3	2.49	0.47
19:Q:38:ILE:HA	19:Q:41:ALA:HB3	1.95	0.47
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
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:107:G:C2	1:X:108:G:N9	2.83	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:344:G:N3	1:X:345:U:C6	2.83	0.47
1:X:536:A:N6	1:X:2605:C:H4'	2.30	0.47
1:X:648:A:H4'	1:X:649:G:C4'	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:654:A:H3'	1:X:655:A:H5'	1.97	0.47
1:X:663:G:H5''	1:X:664:C:OP2	2.14	0.47
1:X:713:G:C6	1:X:746:G:N2	2.83	0.47
1:X:754:G:C6	1:X:770:U:C2	3.03	0.47
1:X:789:G:C6	1:X:806:A:C8	3.01	0.47
1:X:843:G:C6	1:X:2427:A:C8	3.03	0.47
1:X:999:A:C6	25:W:10:ILE:HG21	2.50	0.47
1:X:1084:A:C5	1:X:1085:G:N7	2.82	0.47
1:X:1093:U:O2'	1:X:1094:C:H5'	2.14	0.47
1:X:1201:G:C8	1:X:1201:G:O5'	2.68	0.47
1:X:1326:U:O3'	1:X:1345:G:H5'	2.15	0.47
1:X:1364:C:HO2'	1:X:1587:A:H1'	1.79	0.47
1:X:1782:A:O3'	3:A:206:LEU:HB2	2.15	0.47
1:X:1948:C:C6	1:X:1949:A:C8	3.02	0.47
1:X:2061:C:H1'	1:X:2413:A:N3	2.30	0.47
1:X:2247:A:H5'	1:X:2248:A:OP2	2.14	0.47
1:X:2628:C:H2'	1:X:2629:U:H6	1.80	0.47
1:X:2665:G:C5	1:X:2666:U:C5	3.03	0.47
1:X:2674:C:H2'	1:X:2675:U:C6	2.48	0.47
1:X:2703:C:HO2'	1:X:2704:U:H5'	1.80	0.47
1:X:2725:C:H4'	7:E:142:GLY:HA3	1.95	0.47
1:X:2736:U:H5''	30:4:19:ARG:HG2	1.97	0.47
2:Z:71:G:N2	2:Z:72:C:H1'	2.30	0.47
3:A:93:ALA:O	3:A:105:ILE:N	2.39	0.47
3:A:231:HIS:CD2	3:A:231:HIS:C	2.88	0.47
4:B:95:ILE:N	4:B:95:ILE:CD1	2.78	0.47
4:B:108:SER:OG	4:B:163:GLU:N	2.43	0.47
4:B:200:SER:O	4:B:201:ALA:C	2.51	0.47
5:C:39:ARG:NH2	5:C:91:TYR:CD1	2.82	0.47
5:C:50:GLN:C	5:C:52:SER:H	2.18	0.47
5:C:158:ARG:C	5:C:160:ALA:N	2.67	0.47
6:D:4:LEU:CD1	6:D:7:LYS:HB2	2.45	0.47
6:D:20:PHE:N	6:D:20:PHE:CD1	2.83	0.47
6:D:36:VAL:HG21	6:D:61:THR:CG2	2.44	0.47
6:D:57:LEU:HD23	6:D:60:ILE:HD11	1.95	0.47
7:E:44:ARG:HH22	7:E:51:LEU:HB3	1.78	0.47
7:E:142:GLY:C	7:E:144:VAL:N	2.67	0.47
7:E:145:ALA:O	7:E:148:VAL:N	2.48	0.47
7:E:149:ARG:HA	7:E:162:VAL:CG1	2.36	0.47
8:F:103:ASP:OD1	8:F:106:LEU:HD11	2.15	0.47
9:G:100:TYR:CB	9:G:116:ARG:HH12	2.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:144:MET:C	9:G:146:THR:H	2.17	0.47
10:H:79:HIS:O	10:H:80:ALA:HB2	2.14	0.47
12:J:100:PRO:CB	21:S:74:ARG:HG3	2.44	0.47
14:L:80:ALA:C	14:L:82:LYS:N	2.67	0.47
16:N:14:HIS:NE2	16:N:32:TYR:CE2	2.83	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:82:GLY:CA	16:N:117:ARG:HB2	2.44	0.47
16:N:93:LYS:O	16:N:94:VAL:CB	2.62	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
17:O:5:ILE:HG13	17:O:9:GLY:HA2	1.97	0.47
17:O:86:HIS:CD2	17:O:86:HIS:C	2.88	0.47
18:P:131:LYS:HG3	18:P:132:GLY:O	2.14	0.47
19:Q:34:THR:C	19:Q:36:THR:N	2.67	0.47
19:Q:39:LYS:O	19:Q:40:ASP:C	2.52	0.47
20:R:10:HIS:CG	20:R:44:GLN:NE2	2.83	0.47
20:R:20:ASP:HB3	20:R:83:LEU:CD2	2.45	0.47
20:R:100:ASP:OD1	20:R:103:LYS:HG3	2.15	0.47
21:S:54:ILE:N	21:S:62:PHE:O	2.46	0.47
21:S:127:PRO:C	21:S:129:ARG:H	2.17	0.47
22:T:3:HIS:CD2	22:T:5:LYS:HB2	2.46	0.47
22:T:8:GLY:O	22:T:9:SER:C	2.52	0.47
22:T:16:SER:C	22:T:17:ASN:ND2	2.68	0.47
23:U:54:ASN:CG	23:U:55:GLY:N	2.68	0.47
24:V:4:SER:CB	24:V:7:ARG:HE	2.27	0.47
25:W:3:ILE:CG2	25:W:25:LEU:HD11	2.45	0.47
25:W:37:THR:C	25:W:41:ARG:NH1	2.68	0.47
1:X:432:C:O2'	1:X:433:G:H5'	2.15	0.47
1:X:577:U:O4	1:X:984:A:OP2	2.32	0.47
1:X:580:A:C8	1:X:584:A:N6	2.83	0.47
1:X:594:G:C5	1:X:1264:C:C4	3.03	0.47
1:X:1163:C:H4'	16:N:77:SER:HA	1.97	0.47
1:X:1553:G:H2'	1:X:1554:G:C8	2.50	0.47
1:X:1781:C:H5'	3:A:219:PRO:CG	2.44	0.47
1:X:1910:A:C2	1:X:1911:A:C2	3.03	0.47
1:X:1929:U:C2	1:X:1930:C:C5	3.03	0.47
1:X:2209:G:C2	1:X:2210:C:C5	3.03	0.47
1:X:2550:C:N4	1:X:2553:G:C8	2.83	0.47
1:X:2849:C:H2'	1:X:2850:U:H5'	1.96	0.47
2:Z:9:G:H5'	14:L:32:TYR:CE2	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:77:ALA:HA	3:A:96:HIS:O	2.14	0.47
3:A:129:ASN:CB	3:A:131:LEU:HD22	2.45	0.47
5:C:7:ILE:HG13	5:C:119:ALA:HB1	1.97	0.47
6:D:71:LYS:HD2	6:D:73:SER:HG	1.75	0.47
6:D:88:LYS:C	6:D:89:VAL:HG22	2.35	0.47
7:E:105:MET:O	7:E:106:ASN:HB2	2.14	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
17:O:51:ALA:C	17:O:53:LYS:H	2.17	0.47
18:P:84:GLU:O	18:P:85:MET:HG3	2.14	0.47
19:Q:43:GLN:HG3	19:Q:50:VAL:HG23	1.96	0.47
19:Q:51:ILE:HD11	19:Q:83:ALA:CB	2.44	0.47
20:R:28:LYS:O	20:R:29:HIS:CB	2.61	0.47
20:R:95:ARG:HH12	20:R:107:ALA:H	1.62	0.47
22:T:43:THR:CG2	22:T:46:LYS:HD2	2.43	0.47
22:T:60:PHE:N	22:T:60:PHE:CD1	2.80	0.47
1:X:60:A:OP1	1:X:60:A:C8	2.64	0.47
1:X:157:G:H5'	1:X:158:A:P	2.54	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
1:X:738:G:H8	1:X:738:G:O5'	1.97	0.47
1:X:1164:C:N3	1:X:1165:G:C4	2.83	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
1:X:1319:C:C2	1:X:1320:A:C8	3.02	0.47
1:X:1390:G:H8	1:X:1390:G:O5'	1.97	0.47
1:X:1586:A:C5'	3:A:38:PRO:HG3	2.33	0.47
1:X:1588:A:C2	1:X:1589:G:C8	3.03	0.47
1:X:1810:U:H5	3:A:157:ARG:NH1	2.11	0.47
1:X:1827:G:H1'	1:X:1914:U:N3	2.29	0.47
1:X:2324:G:C2	1:X:2360:C:C2	3.03	0.47
1:X:2560:G:C8	1:X:2589:C:N4	2.83	0.47
1:X:2627:G:O5'	1:X:2627:G:H8	1.97	0.47
1:X:2738:A:H2'	1:X:2739:G:H5'	1.97	0.47
1:X:2776:U:O2	18:P:134:LYS:CD	2.63	0.47
1:X:2871:U:C2	1:X:2872:U:C5	3.03	0.47
2:Z:62:C:H2'	2:Z:63:A:C8	2.50	0.47
3:A:64:ILE:N	3:A:64:ILE:HD12	2.30	0.47
4:B:81:PHE:O	4:B:82:ARG:HB2	2.15	0.47
4:B:182:ILE:C	4:B:183:LEU:HD23	2.34	0.47
7:E:9:ILE:HG21	7:E:50:LEU:HD22	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:105:MET:HA	7:E:105:MET:HE2	1.97	0.47
8:F:129:ALA:HB1	8:F:133:ARG:NE	2.29	0.47
9:G:34:PRO:C	9:G:69:ASP:CG	2.73	0.47
11:I:112:GLY:C	11:I:113:GLU:HG3	2.35	0.47
12:J:136:GLU:C	12:J:138:TYR:CE2	2.88	0.47
13:K:35:GLN:O	13:K:36:THR:HB	2.15	0.47
14:L:79:ALA:CA	14:L:82:LYS:HB2	2.45	0.47
15:M:78:GLU:OE2	15:M:108:ARG:NE	2.48	0.47
17:O:36:LYS:HZ3	17:O:98:ILE:HB	1.80	0.47
18:P:106:LEU:HD12	18:P:106:LEU:HA	1.68	0.47
20:R:58:VAL:HA	20:R:60:PRO:HD3	1.95	0.47
23:U:41:VAL:O	23:U:42:GLN:CB	2.63	0.47
1:X:146:C:H2'	1:X:147:G:O4'	2.15	0.47
1:X:456:C:H4'	5:C:43:ALA:CB	2.45	0.47
1:X:583:C:O2'	1:X:584:A:OP2	2.30	0.47
1:X:613:A:C4	1:X:668:A:C2	3.03	0.47
1:X:617:U:O2	1:X:617:U:C3'	2.61	0.47
1:X:1122:A:N3	1:X:1123:G:H1'	2.29	0.47
1:X:1185:C:H2'	1:X:1186:G:C3'	2.33	0.47
1:X:1228:G:C2'	1:X:1229:C:H5'	2.45	0.47
1:X:1382:G:H2'	1:X:1383:C:O5'	2.14	0.47
1:X:1406:A:N6	19:Q:15:LYS:HG2	2.29	0.47
1:X:1577:G:O2'	1:X:1578:U:H5'	2.15	0.47
1:X:1669:A:N7	1:X:1670:G:C6	2.83	0.47
1:X:2306:A:C6	1:X:2367:A:C2	3.03	0.47
1:X:2344:G:H4'	22:T:60:PHE:CZ	2.50	0.47
1:X:2496:C:HO2'	1:X:2497:A:H3'	1.79	0.47
1:X:2754:C:H2'	1:X:2755:A:C8	2.50	0.47
2:Z:119:G:O2'	2:Z:120:G:H5'	2.15	0.47
3:A:169:GLU:N	3:A:172:TYR:O	2.46	0.47
4:B:123:ALA:O	4:B:124:GLY:O	2.33	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
7:E:38:ASN:HB2	7:E:41:LEU:HB2	1.97	0.47
7:E:125:VAL:HA	7:E:131:ILE:CD1	2.44	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
10:H:48:GLY:HA2	10:H:118:LEU:CD2	2.45	0.47
11:I:73:GLU:OE1	11:I:105:PRO:C	2.53	0.47
13:K:46:PRO:O	13:K:50:GLN:N	2.46	0.47
21:S:6:LYS:H	21:S:7:PRO:CD	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:T:37:LEU:HD23	22:T:67:VAL:HG22	1.97	0.47
23:U:71:SER:OG	23:U:72:LYS:HE2	2.14	0.47
1:X:39:C:O2	5:C:40:ARG:NH2	2.48	0.46
1:X:55:A:O4'	1:X:125:A:C2	2.68	0.46
1:X:192:G:C1'	1:X:193:A:H4'	2.45	0.46
1:X:421:G:C2	1:X:433:G:C4	3.03	0.46
1:X:455:A:N7	5:C:39:ARG:HG3	2.30	0.46
1:X:513:A:C6	1:X:515:A:C6	3.03	0.46
1:X:667:U:O2	1:X:667:U:C2'	2.54	0.46
1:X:818:G:H5'	1:X:819:C:OP2	2.15	0.46
1:X:938:G:HO2'	1:X:939:C:P	2.37	0.46
1:X:954:U:OP2	11:I:38:LYS:CG	2.63	0.46
1:X:1026:U:H2'	1:X:1027:C:H6	1.80	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
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
1:X:1577:G:H2'	1:X:1578:U:O4'	2.15	0.46
1:X:1681:A:C6	1:X:2706:U:C5	3.02	0.46
1:X:1783:G:H1	1:X:1819:U:H3	1.63	0.46
1:X:1824:C:N4	1:X:1825:C:C4	2.83	0.46
1:X:1850:G:O2'	1:X:1851:A:O4'	2.30	0.46
1:X:1970:G:N2	1:X:1971:C:C2	2.82	0.46
1:X:2176:U:O2'	1:X:2177:U:H5'	2.15	0.46
1:X:2306:A:C5	1:X:2307:A:C6	3.03	0.46
1:X:2374:C:O5'	1:X:2374:C:H6	1.98	0.46
1:X:2519:C:C5	1:X:2520:A:N7	2.84	0.46
1:X:2646:C:N3	7:E:110:SER:OG	2.42	0.46
1:X:2796:A:P	13:K:3:HIS:HE1	2.37	0.46
1:X:2859:U:H3	26:Y:52:TYR:HE1	1.60	0.46
4:B:7:THR:O	4:B:9:ILE:HG13	2.15	0.46
4:B:70:ALA:O	4:B:72:VAL:HG23	2.15	0.46
5:C:2:ALA:HA	5:C:13:ARG:HA	1.96	0.46
6:D:103:LEU:C	6:D:105:ASN:N	2.66	0.46
6:D:117:ILE:O	6:D:118:ASN:HB2	2.15	0.46
12:J:15:ARG:HD2	12:J:74:PRO:HD2	1.98	0.46
12:J:27:TYR:CB	12:J:137:VAL:HG21	2.32	0.46
12:J:58:HIS:HD2	12:J:118:ALA:HB2	1.80	0.46
13:K:99:ARG:HG2	13:K:99:ARG:NH1	2.10	0.46
17:O:68:LYS:CE	17:O:85:GLY:HA3	2.45	0.46
18:P:57:LEU:CD1	18:P:69:ALA:CA	2.90	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:16:PHE:CZ	20:R:80:LYS:NZ	2.82	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
22:T:3:HIS:O	22:T:4:LYS:HB3	2.15	0.46
22:T:50:GLY:O	22:T:62:LEU:HB2	2.14	0.46
25:W:51:LEU:H	25:W:51:LEU:CD2	2.12	0.46
26:Y:47:PRO:CG	26:Y:48:ASN:H	2.23	0.46
1:X:208:C:N4	1:X:209:G:N2	2.63	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:333:A:OP1	5:C:162:ARG:CB	2.60	0.46
1:X:456:C:H2'	1:X:457:C:H6	1.79	0.46
1:X:556:A:OP2	1:X:556:A:H3'	2.15	0.46
1:X:601:A:H3'	1:X:602:C:H5'	1.97	0.46
1:X:1324:G:H2'	1:X:1325:U:H6	1.80	0.46
1:X:1404:C:O2	1:X:1406:A:N7	2.48	0.46
1:X:1421:U:O2'	1:X:1422:C:H5'	2.15	0.46
1:X:1422:C:H2'	1:X:1423:A:H8	1.80	0.46
1:X:1460:G:N3	1:X:1563:U:C2	2.83	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
1:X:1795:C:C4	1:X:1806:G:N2	2.83	0.46
1:X:1938:U:O3'	1:X:1939:U:H6	1.97	0.46
1:X:2208:U:C6	1:X:2208:U:H3'	2.50	0.46
1:X:2210:C:H2'	1:X:2211:U:O4'	2.15	0.46
1:X:2460:G:H2'	1:X:2461:G:OP2	2.16	0.46
1:X:2482:A:N9	32:X:2911:ZLD:C13	2.78	0.46
1:X:2750:G:O2'	4:B:203:LYS:CE	2.60	0.46
1:X:2828:C:H2'	1:X:2829:A:H8	1.79	0.46
3:A:202:LYS:O	3:A:204:ILE:O	2.33	0.46
5:C:3:GLN:CG	5:C:118:VAL:HG13	2.41	0.46
6:D:13:ARG:HG2	6:D:13:ARG:HH21	1.81	0.46
7:E:127:GLU:HG3	7:E:127:GLU:O	2.14	0.46
8:F:107:GLU:CG	8:F:110:LYS:HD2	2.45	0.46
9:G:94:LYS:HG2	9:G:95:LEU:HD12	1.97	0.46
9:G:106:TYR:CD1	9:G:107:GLN:N	2.83	0.46
10:H:2:ILE:HB	10:H:45:ALA:HB3	1.98	0.46
11:I:7:LYS:HG2	11:I:9:THR:HG23	1.97	0.46
12:J:36:ILE:HB	12:J:131:LYS:CE	2.43	0.46
14:L:92:GLY:O	14:L:93:SER:CB	2.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:25:PHE:CD2	18:P:26:ALA:N	2.83	0.46
19:Q:3:HIS:C	19:Q:5:ASP:OD2	2.54	0.46
19:Q:76:LYS:O	19:Q:76:LYS:CG	2.63	0.46
19:Q:91:LEU:HD22	19:Q:91:LEU:N	2.31	0.46
21:S:110:GLY:O	21:S:174:PRO:HD3	2.16	0.46
21:S:129:ARG:NH2	21:S:156:GLU:OE2	2.46	0.46
1:X:45:C:OP2	1:X:192:G:H3'	2.16	0.46
1:X:200:A:C2	1:X:421:G:O4'	2.69	0.46
1:X:543:G:C6	1:X:544:U:C4	3.03	0.46
1:X:571:U:O2'	1:X:581:A:H1'	2.15	0.46
1:X:613:A:N3	1:X:668:A:H2	2.13	0.46
1:X:654:A:N3	1:X:654:A:H2'	2.31	0.46
1:X:761:G:C8	1:X:763:A:N7	2.84	0.46
1:X:794:A:H5''	1:X:795:A:N7	2.30	0.46
1:X:953:G:O2'	1:X:1203:A:N3	2.39	0.46
1:X:957:G:O2'	1:X:958:G:H5'	2.16	0.46
1:X:957:G:N2	1:X:983:G:H1'	2.31	0.46
1:X:965:G:O2'	1:X:2253:A:N1	2.42	0.46
1:X:1174:G:C2	1:X:1175:A:C5	3.03	0.46
1:X:1393:G:N3	1:X:1585:A:N6	2.64	0.46
1:X:1517:C:OP1	3:A:102:LYS:NZ	2.49	0.46
1:X:1607:A:O2'	1:X:1608:U:H5'	2.16	0.46
1:X:1800:A:C5	1:X:1802:A:C6	3.03	0.46
1:X:2027:C:H2'	1:X:2028:C:H6	1.81	0.46
1:X:2219:U:O2	1:X:2220:A:C8	2.68	0.46
1:X:2434:G:C6	1:X:2435:C:N4	2.83	0.46
1:X:2776:U:C6	1:X:2776:U:C3'	2.98	0.46
2:Z:74:A:H1'	2:Z:108:G:N2	2.30	0.46
3:A:215:LEU:HD12	3:A:215:LEU:N	2.31	0.46
6:D:5:LYS:O	6:D:8:TYR:N	2.47	0.46
6:D:16:LEU:C	6:D:18:GLN:N	2.68	0.46
6:D:88:LYS:HE2	6:D:90:THR:OG1	2.14	0.46
7:E:103:LEU:HB2	7:E:123:PHE:CD2	2.49	0.46
8:F:92:PRO:HB3	8:F:136:GLY:CA	2.46	0.46
14:L:47:ARG:O	14:L:49:GLN:N	2.48	0.46
17:O:57:GLN:C	17:O:96:LEU:O	2.53	0.46
19:Q:50:VAL:HG13	19:Q:80:VAL:HG23	1.95	0.46
20:R:37:LEU:HD13	20:R:37:LEU:HA	1.78	0.46
22:T:4:LYS:NZ	22:T:4:LYS:CB	2.76	0.46
23:U:70:LEU:HD23	23:U:75:TYR:HD1	1.79	0.46
24:V:1:MET:HG3	24:V:2:LYS:N	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:62:ARG:CG	24:V:62:ARG:NH1	2.76	0.46
25:W:16:GLN:O	25:W:20:VAL:HG23	2.15	0.46
30:4:1:MET:CE	30:4:34:GLN:C	2.82	0.46
30:4:10:MET:HB2	30:4:32:HIS:NE2	2.30	0.46
1:X:209:G:C8	1:X:209:G:H3'	2.50	0.46
1:X:219:G:H2'	1:X:231:G:O6	2.15	0.46
1:X:342:G:O2'	1:X:343:A:OP1	2.26	0.46
1:X:414:A:H2'	1:X:415:A:O4'	2.15	0.46
1:X:602:C:H1'	29:3:2:PRO:CA	2.45	0.46
1:X:612:G:H2'	1:X:668:A:H61	1.81	0.46
1:X:621:U:O2'	1:X:622:U:H5'	2.15	0.46
1:X:645:G:O2'	1:X:646:C:H5'	2.15	0.46
1:X:759:C:H3'	1:X:759:C:H6	1.81	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
1:X:1182:U:N3	1:X:1183:C:C2	2.83	0.46
1:X:1585:A:H4'	3:A:59:LYS:HZ2	1.80	0.46
1:X:1827:G:H1'	1:X:1914:U:C4	2.51	0.46
1:X:2071:G:C2	1:X:2072:C:N1	2.83	0.46
1:X:2608:A:N7	1:X:2869:U:C4	2.83	0.46
2:Z:54:U:OP1	2:Z:54:U:H4'	2.15	0.46
3:A:105:ILE:N	3:A:105:ILE:CD1	2.76	0.46
3:A:172:TYR:HD2	3:A:186:HIS:CB	2.25	0.46
4:B:38:THR:C	4:B:40:GLN:N	2.68	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
7:E:55:PRO:HD2	7:E:61:HIS:ND1	2.30	0.46
9:G:75:ILE:HD11	9:G:144:MET:CG	2.45	0.46
9:G:156:HIS:CB	9:G:157:PRO:HD3	2.35	0.46
10:H:31:GLY:C	10:H:33:GLY:H	2.19	0.46
10:H:81:ILE:HD13	10:H:81:ILE:C	2.35	0.46
10:H:119:ARG:NE	15:M:41:GLU:HG2	2.31	0.46
12:J:115:ALA:C	12:J:117:GLU:N	2.66	0.46
15:M:22:ARG:NH2	15:M:89:ASN:O	2.48	0.46
15:M:37:THR:O	15:M:87:LEU:HD22	2.16	0.46
18:P:32:ARG:O	18:P:33:MET:HG2	2.15	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
21:S:103:ARG:CZ	21:S:107:GLU:HG2	2.45	0.46
23:U:52:ARG:O	23:U:58:LYS:O	2.33	0.46
25:W:39:ALA:C	25:W:43:MET:HG2	2.36	0.46

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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
1:X:1016:C:O2'	9:G:56:THR:HG21	2.16	0.46
1:X:1033:G:C6	1:X:1150:C:C4	3.03	0.46
1:X:1111:C:H2'	1:X:1112:U:H6	1.80	0.46
1:X:1236:G:OP2	17:O:87:ARG:NH1	2.44	0.46
1:X:1277:G:H8	1:X:1277:G:O5'	1.99	0.46
1:X:1487:C:H2'	1:X:1488:G:O4'	2.15	0.46
1:X:1731:C:H2'	1:X:1732:U:H5''	1.98	0.46
1:X:1834:G:H1	1:X:1881:U:H3	1.63	0.46
1:X:2465:G:C2	1:X:2466:G:C4	3.04	0.46
1:X:2507:U:P	30:4:30:VAL:HG21	2.55	0.46
1:X:2508:G:OP2	7:E:172:LYS:CE	2.62	0.46
1:X:2510:A:H4'	7:E:157:TYR:CE2	2.50	0.46
1:X:2714:A:C6	1:X:2715:C:C2	3.04	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
7:E:159:GLY:O	7:E:163:ARG:HD2	2.16	0.46
9:G:106:TYR:CZ	9:G:108:GLY:CA	2.98	0.46
10:H:64:VAL:C	10:H:65:LYS:HG3	2.36	0.46
10:H:85:ASP:CG	10:H:86:GLY:N	2.68	0.46
11:I:52:GLY:C	11:I:55:ARG:HB2	2.36	0.46
13:K:10:LEU:HD21	13:K:14:SER:N	2.30	0.46
14:L:96:TYR:CE1	14:L:101:LYS:HA	2.51	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
18:P:29:LYS:HA	18:P:123:HIS:ND1	2.29	0.46
20:R:105:ARG:NH1	20:R:113:THR:N	2.63	0.46
22:T:4:LYS:HB3	22:T:4:LYS:HZ2	1.79	0.46
1:X:395:G:N1	1:X:404:A:N6	2.60	0.46
1:X:417:C:H6	1:X:417:C:P	2.39	0.46
1:X:433:G:H21	1:X:434:C:H1'	1.79	0.46
1:X:498:C:O4'	18:P:77:ALA:HB1	2.16	0.46
1:X:751:G:C6	1:X:752:G:C2	3.03	0.46
1:X:805:G:C8	1:X:2419:C:H1'	2.50	0.46
1:X:1415:C:C2'	1:X:1416:A:H5'	2.46	0.46
1:X:1529:C:O2'	1:X:1530:U:H5'	2.16	0.46
1:X:1731:C:C3'	1:X:1732:U:C5'	2.94	0.46
1:X:1782:A:O3'	3:A:205:VAL:O	2.34	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2240:C:C2'	1:X:2241:U:C5'	2.93	0.46
1:X:2352:A:H2'	1:X:2353:G:H8	1.78	0.46
1:X:2379:G:N2	1:X:2380:U:H1'	2.30	0.46
1:X:2383:C:H2'	1:X:2384:G:O4'	2.15	0.46
1:X:2414:A:N1	1:X:2415:G:C4	2.84	0.46
1:X:2457:A:N7	1:X:2458:U:C5	2.84	0.46
1:X:2521:A:H5'	1:X:2522:G:OP1	2.16	0.46
1:X:2528:G:N3	1:X:2529:G:C8	2.84	0.46
1:X:2571:G:H2'	1:X:2572:U:O4'	2.14	0.46
1:X:2652:G:H2'	1:X:2653:A:H8	1.80	0.46
2:Z:43:G:H8	6:D:66:ILE:HD11	1.79	0.46
2:Z:101:A:H2'	2:Z:102:A:H5''	1.98	0.46
3:A:142:VAL:O	3:A:163:VAL:CG1	2.63	0.46
4:B:107:THR:O	4:B:190:GLY:HA2	2.16	0.46
5:C:22:VAL:CG2	5:C:110:SER:OG	2.60	0.46
5:C:102:LEU:O	5:C:105:ALA:HB3	2.16	0.46
7:E:104:GLU:OE2	7:E:104:GLU:CA	2.58	0.46
9:G:128:GLU:O	9:G:131:VAL:N	2.47	0.46
11:I:9:THR:O	11:I:13:ARG:HD2	2.16	0.46
11:I:72:TYR:CG	11:I:107:LYS:HB2	2.51	0.46
12:J:70:PHE:HA	12:J:71:PRO:HD3	1.70	0.46
13:K:59:ASP:N	13:K:59:ASP:OD2	2.47	0.46
14:L:10:LYS:O	14:L:14:ARG:N	2.49	0.46
14:L:43:ILE:HG23	14:L:50:THR:CG2	2.45	0.46
18:P:28:ALA:HB1	18:P:31:VAL:CG2	2.46	0.46
18:P:85:MET:HE2	18:P:130:GLU:HG3	1.98	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
21:S:136:VAL:CG1	21:S:137:ASP:N	2.79	0.46
1:X:83:A:N1	1:X:98:U:O2	2.48	0.46
1:X:103:U:C5	1:X:104:C:H5	2.34	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:1004:A:C5	1:X:1005:U:C5	3.03	0.46
1:X:1095:A:H3'	1:X:1096:A:C5'	2.42	0.46
1:X:1121:G:C8	1:X:1121:G:OP2	2.68	0.46
1:X:1142:G:N3	9:G:103:TYR:CD1	2.84	0.46
1:X:1236:G:H2'	1:X:1238:A:OP2	2.15	0.46
1:X:1407:G:C6	1:X:1408:A:C6	3.04	0.46
1:X:1428:G:O2'	1:X:1429:A:H8	1.99	0.46
1:X:1591:U:H2'	1:X:1592:U:C6	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1598:C:H2'	1:X:1599:G:O4'	2.16	0.46
1:X:1629:G:C2	1:X:1633:C:C2	3.04	0.46
1:X:1724:C:N3	1:X:1747:G:C6	2.84	0.46
1:X:1741:G:C2	1:X:1742:G:N9	2.84	0.46
1:X:2392:G:N2	1:X:2393:G:H1'	2.30	0.46
1:X:2492:G:N2	1:X:2493:U:C2	2.83	0.46
1:X:2510:A:H4'	7:E:157:TYR:CZ	2.50	0.46
1:X:2571:G:C2	1:X:2582:G:C6	3.04	0.46
2:Z:65:A:H2'	2:Z:66:G:H8	1.81	0.46
3:A:39:LYS:O	3:A:40:THR:CB	2.64	0.46
3:A:42:GLY:N	3:A:43:ARG:NH1	2.63	0.46
3:A:126:LYS:H	3:A:129:ASN:HD22	1.64	0.46
4:B:93:VAL:O	4:B:93:VAL:HG13	2.16	0.46
4:B:103:ASP:OD2	4:B:202:ALA:CB	2.63	0.46
5:C:131:LYS:HA	5:C:134:ILE:HG12	1.97	0.46
6:D:9:ASN:O	6:D:12:VAL:CG2	2.63	0.46
7:E:50:LEU:CG	7:E:51:LEU:H	2.26	0.46
7:E:121:VAL:O	7:E:122:THR:HG23	2.16	0.46
7:E:155:ASP:OD2	7:E:157:TYR:N	2.49	0.46
11:I:20:GLY:O	11:I:22:GLY:N	2.49	0.46
18:P:40:LEU:CD2	26:Y:25:LEU:HD13	2.45	0.46
20:R:25:LEU:CG	20:R:81:VAL:HG23	2.46	0.46
21:S:28:ASN:HB2	21:S:30:VAL:HG23	1.97	0.46
22:T:34:GLY:N	22:T:61:ALA:O	2.47	0.46
24:V:28:LEU:C	24:V:30:PHE:N	2.68	0.46
24:V:32:ALA:C	24:V:34:ALA:N	2.67	0.46
1:X:184:A:C8	1:X:185:C:C5	3.04	0.46
1:X:482:A:H2'	1:X:483:A:C5'	2.46	0.46
1:X:698:A:H4'	1:X:699:G:C5'	2.46	0.46
1:X:760:U:O4	26:Y:3:LYS:HG3	2.15	0.46
1:X:761:G:C8	18:P:110:ALA:CB	2.98	0.46
1:X:793:G:H2'	1:X:795:A:C5	2.50	0.46
1:X:1069:G:H2'	1:X:1070:G:C4'	2.45	0.46
1:X:1226:A:H62	1:X:1249:G:H1'	1.81	0.46
1:X:1363:C:O2'	1:X:1364:C:H5'	2.16	0.46
1:X:1538:A:C5	1:X:1539:U:C4	3.03	0.46
1:X:1618:U:O4	19:Q:56:MET:SD	2.74	0.46
1:X:1634:A:O2'	1:X:1635:G:H5'	2.16	0.46
1:X:1849:G:N1	1:X:1867:A:N6	2.63	0.46
2:Z:98:C:H2'	2:Z:99:G:C8	2.51	0.46
4:B:34:VAL:HG11	4:B:67:PHE:HD1	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:64:GLN:O	4:B:66:HIS:N	2.49	0.46
4:B:116:VAL:HG22	4:B:136:ARG:CD	2.42	0.46
7:E:30:LYS:HD2	7:E:79:VAL:O	2.16	0.46
7:E:76:VAL:O	7:E:78:GLY:N	2.49	0.46
9:G:69:ASP:O	9:G:70:PHE:CD2	2.69	0.46
9:G:125:ARG:HD2	9:G:129:HIS:CD2	2.51	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
13:K:13:ASN:O	13:K:14:SER:C	2.53	0.46
15:M:34:ARG:NH1	15:M:81:PHE:CG	2.84	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
20:R:96:LYS:CG	20:R:97:GLN:N	2.75	0.46
21:S:93:GLU:HG2	21:S:123:VAL:HA	1.98	0.46
25:W:17:VAL:C	25:W:19:THR:N	2.68	0.46
1:X:26:G:H1'	1:X:525:A:H61	1.79	0.46
1:X:234:C:O2'	1:X:235:C:H5'	2.16	0.46
1:X:303:C:H2'	1:X:304:A:H5''	1.97	0.46
1:X:405:C:C2	1:X:406:G:C8	3.04	0.46
1:X:542:A:N6	1:X:2003:A:H1'	2.30	0.46
1:X:639:G:O2'	1:X:661:C:H1'	2.16	0.46
1:X:764:A:C2	1:X:802:A:C4	3.04	0.46
1:X:810:U:O2'	1:X:811:G:H5'	2.16	0.46
1:X:833:A:C2	1:X:834:A:C4	3.04	0.46
1:X:1094:C:O5'	1:X:1094:C:H6	1.98	0.46
1:X:1118:G:C2'	1:X:1119:U:C5'	2.92	0.46
1:X:1128:G:H3'	1:X:1129:A:C5'	2.45	0.46
1:X:1171:A:C8	1:X:1172:U:H5	2.34	0.46
1:X:1442:C:N4	1:X:1585:A:C5'	2.79	0.46
1:X:1559:G:C8	1:X:1559:G:C3'	2.99	0.46
1:X:1710:U:O2'	1:X:1711:C:P	2.74	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:2281:C:C2	1:X:2282:G:C8	3.04	0.46
1:X:2300:G:H3'	1:X:2300:G:N3	2.31	0.46
1:X:2345:A:H5'	22:T:60:PHE:CZ	2.50	0.46
1:X:2467:A:H2'	1:X:2468:G:O4'	2.16	0.46
3:A:217:ARG:O	3:A:218:LYS:C	2.54	0.46
5:C:197:GLU:HG2	5:C:198:GLU:H	1.80	0.46
7:E:41:LEU:HD11	7:E:64:LEU:HB2	1.97	0.46
9:G:85:ALA:C	9:G:87:GLN:H	2.19	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:103:TYR:HE2	9:G:111:LYS:HB3	1.79	0.46
10:H:22:ILE:HG22	10:H:52:VAL:O	2.15	0.46
13:K:20:LEU:O	13:K:23:ALA:N	2.49	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
18:P:45:ILE:HG13	18:P:53:ALA:HA	1.98	0.46
21:S:24:TYR:O	21:S:25:ASN:HB3	2.16	0.46
23:U:17:SER:OG	23:U:44:ALA:C	2.54	0.46
23:U:32:ARG:N	23:U:32:ARG:CD	2.78	0.46
24:V:57:LYS:O	24:V:57:LYS:HG2	2.16	0.46
1:X:51:A:H2	1:X:155:G:N3	2.14	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
1:X:426:C:HO2'	1:X:1863:U:HO2'	1.64	0.45
1:X:829:C:H2'	1:X:830:C:C6	2.51	0.45
1:X:987:G:C2	1:X:988:G:C8	3.04	0.45
1:X:1007:A:N3	17:O:6:GLN:CD	2.69	0.45
1:X:1063:C:H2'	1:X:1064:C:C6	2.51	0.45
1:X:1373:G:C2'	1:X:1374:G:H5'	2.46	0.45
1:X:1524:C:OP2	1:X:1525:A:N7	2.49	0.45
1:X:1829:C:O2'	1:X:1910:A:H1'	2.17	0.45
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:2861:A:C4	1:X:2862:G:C8	3.04	0.45
1:X:2864:C:H2'	1:X:2864:C:O2	2.16	0.45
2:Z:58:G:H4'	2:Z:59:A:C8	2.51	0.45
3:A:227:ASN:O	3:A:230:ASP:N	2.49	0.45
4:B:133:LYS:O	4:B:133:LYS:CG	2.64	0.45
4:B:161:GLY:O	4:B:162:MET:C	2.54	0.45
5:C:112:GLN:CD	5:C:116:LYS:CB	2.83	0.45
6:D:10:ASP:O	6:D:14:PRO:CD	2.63	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
7:E:85:ILE:C	7:E:132:ASP:CG	2.75	0.45
7:E:127:GLU:OE2	7:E:130:ARG:CB	2.63	0.45
9:G:36:ASN:HB2	9:G:76:GLN:HE22	1.81	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
11:I:14:LYS:HE3	11:I:14:LYS:CA	2.46	0.45
12:J:19:THR:HG23	12:J:99:LYS:HD3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:52:ALA:O	14:L:53:ALA:HB3	2.15	0.45
15:M:19:ASP:HB2	15:M:20:HIS:CD2	2.51	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
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
17:O:90:PHE:CD1	17:O:90:PHE:C	2.88	0.45
21:S:60:GLU:HB3	21:S:62:PHE:CE2	2.51	0.45
22:T:31:VAL:HG13	22:T:67:VAL:CG2	2.45	0.45
22:T:52:GLY:N	22:T:62:LEU:CD2	2.79	0.45
24:V:18:ILE:O	24:V:20:ALA:N	2.40	0.45
26:Y:14:SER:O	26:Y:17:ASP:HB2	2.16	0.45
26:Y:45:ILE:HG21	26:Y:57:VAL:HG22	1.97	0.45
1:X:344:G:C4	1:X:345:U:C5	3.04	0.45
1:X:683:A:C2'	1:X:684:C:OP2	2.64	0.45
1:X:714:G:C6	1:X:715:U:C5	3.04	0.45
1:X:787:A:P	3:A:48:ARG:HH12	2.38	0.45
1:X:796:A:N7	1:X:798:G:C8	2.84	0.45
1:X:941:U:C4	1:X:942:U:C4	3.04	0.45
1:X:969:U:O2'	1:X:970:A:P	2.74	0.45
1:X:1078:A:H3'	1:X:1078:A:P	2.56	0.45
1:X:1235:C:C2	1:X:1241:G:C2	3.04	0.45
1:X:1564:U:C2	1:X:1565:G:C8	3.04	0.45
1:X:1935:A:C6	1:X:1936:A:N1	2.85	0.45
1:X:2002:A:C2'	1:X:2003:A:O5'	2.64	0.45
1:X:2033:C:N4	1:X:2034:A:N1	2.65	0.45
1:X:2225:G:N3	1:X:2226:A:C8	2.85	0.45
1:X:2397:A:C2	1:X:2398:U:H1'	2.51	0.45
1:X:2411:A:N3	23:U:25:ARG:HD2	2.32	0.45
2:Z:62:C:O5'	2:Z:62:C:H6	1.99	0.45
3:A:158:SER:O	3:A:160:GLY:N	2.49	0.45
4:B:32:PRO:O	4:B:49:ILE:HG12	2.16	0.45
7:E:105:MET:HA	7:E:105:MET:HE1	1.98	0.45
7:E:137:ASP:HB3	7:E:140:LEU:CD1	2.45	0.45
9:G:50:PRO:HG2	9:G:53:ARG:HB2	1.96	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
10:H:132:GLU:HG2	10:H:134:LEU:HG	1.98	0.45
11:I:76:LYS:HG3	11:I:111:SER:HB2	1.98	0.45
11:I:86:THR:C	11:I:88:PHE:N	2.67	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
15:M:46:ARG:HG2	15:M:47:SER:H	1.82	0.45
16:N:3:ARG:NH2	16:N:5:LYS:HZ3	2.13	0.45
16:N:24:PHE:CZ	16:N:39:LEU:HD21	2.52	0.45
16:N:79:PHE:CE1	16:N:106:PHE:CE1	3.01	0.45
18:P:72:LEU:HA	18:P:72:LEU:HD12	1.74	0.45
20:R:85:ASP:HB3	20:R:90:LYS:HZ1	1.78	0.45
21:S:18:MET:HB3	21:S:34:LEU:O	2.17	0.45
21:S:41:ARG:O	21:S:41:ARG:HG2	2.15	0.45
21:S:92:VAL:O	21:S:93:GLU:HG3	2.16	0.45
21:S:152:ILE:H	21:S:152:ILE:HD12	1.75	0.45
25:W:10:ILE:CG2	25:W:11:GLY:N	2.78	0.45
26:Y:17:ASP:C	26:Y:19:ARG:N	2.70	0.45
1:X:35:G:HO2'	1:X:36:G:C5'	2.27	0.45
1:X:1017:C:O2	9:G:134:MET:HE3	2.16	0.45
1:X:1029:C:O3'	1:X:1131:G:N2	2.50	0.45
1:X:1135:C:H2'	1:X:1136:G:O4'	2.15	0.45
1:X:1142:G:O2'	1:X:1143:A:P	2.75	0.45
1:X:1330:G:C6	1:X:1331:G:N7	2.84	0.45
1:X:1359:G:C2'	1:X:1360:G:H5'	2.46	0.45
1:X:1867:A:H3'	1:X:1867:A:C8	2.51	0.45
1:X:2015:G:C8	1:X:2015:G:O5'	2.69	0.45
1:X:2018:G:HO2'	1:X:2019:C:P	2.38	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:2357:A:O2'	14:L:88:VAL:HG21	2.16	0.45
1:X:2391:A:O5'	1:X:2391:A:H8	1.99	0.45
1:X:2477:C:OP2	1:X:2478:C:OP2	2.34	0.45
1:X:2728:A:OP1	7:E:70:THR:HG21	2.17	0.45
1:X:2740:C:H1'	7:E:143:GLN:NE2	2.31	0.45
1:X:2757:G:N3	1:X:2759:U:O4	2.48	0.45
1:X:2818:G:N2	1:X:2850:U:C2	2.84	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
2:Z:14:C:C5	22:T:72:LYS:HD2	2.50	0.45
3:A:35:GLU:OE1	3:A:35:GLU:HA	2.17	0.45
4:B:116:VAL:H	4:B:136:ARG:HE	1.59	0.45
4:B:176:ARG:HH21	15:M:16:ILE:HG23	1.81	0.45
5:C:27:LEU:HD11	5:C:106:MET:HB3	1.98	0.45
5:C:58:MET:HB2	5:C:70:GLY:O	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
7:E:96:ALA:HB2	7:E:105:MET:CE	2.46	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
11:I:35:LYS:O	11:I:36:GLY:O	2.35	0.45
16:N:86:ALA:HB1	16:N:88:ILE:CG2	2.47	0.45
18:P:29:LYS:O	18:P:30:TYR:CB	2.64	0.45
1:X:167:A:C8	1:X:184:A:C6	3.05	0.45
1:X:174:A:C6	1:X:840:U:O4	2.70	0.45
1:X:449:C:O2	1:X:449:C:C2'	2.64	0.45
1:X:614:G:C5	1:X:615:C:C5	3.05	0.45
1:X:783:G:C6	1:X:784:U:C4	3.04	0.45
1:X:843:G:H1'	1:X:2427:A:N6	2.32	0.45
1:X:1174:G:N3	1:X:1175:A:C8	2.85	0.45
1:X:1218:C:O2'	1:X:1219:C:H5'	2.16	0.45
1:X:1397:A:H2'	1:X:1398:G:H5''	1.97	0.45
1:X:1411:C:C2	1:X:1412:C:C5	3.04	0.45
1:X:1548:U:O5'	1:X:1548:U:H6	1.99	0.45
1:X:1629:G:H1	1:X:1633:C:H2'	1.82	0.45
1:X:1753:A:H8	1:X:1753:A:P	2.38	0.45
1:X:1791:C:N3	1:X:1810:U:O2	2.49	0.45
1:X:1848:U:O5'	1:X:1848:U:H6	1.99	0.45
1:X:1850:G:H1	1:X:1867:A:C1'	2.29	0.45
1:X:1930:C:N3	1:X:1943:A:C2	2.84	0.45
1:X:2074:U:H4'	23:U:67:LEU:HD22	1.99	0.45
1:X:2080:U:H2'	1:X:2081:U:C6	2.51	0.45
1:X:2246:A:N6	1:X:2251:U:H3	2.14	0.45
1:X:2262:C:H2'	1:X:2263:C:O4'	2.17	0.45
1:X:2271:C:H2'	1:X:2272:A:H8	1.82	0.45
1:X:2274:C:C2'	1:X:2275:U:O5'	2.65	0.45
1:X:2299:A:C4	1:X:2312:A:C6	3.05	0.45
1:X:2549:G:O2'	1:X:2550:C:H5'	2.15	0.45
1:X:2571:G:C5	1:X:2572:U:C4	3.04	0.45
1:X:2775:U:P	1:X:2777:A:OP2	2.74	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
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
6:D:27:ALA:O	6:D:28:VAL:C	2.54	0.45
6:D:101:GLU:O	6:D:103:LEU:N	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:50:LEU:HG	7:E:51:LEU:N	2.26	0.45
7:E:107:ILE:HG13	7:E:152:ARG:HB2	1.99	0.45
8:F:118:ALA:O	8:F:123:ALA:HB3	2.16	0.45
9:G:91:THR:CG2	9:G:92:GLY:N	2.79	0.45
10:H:14:SER:OG	10:H:98:ILE:HD12	2.15	0.45
10:H:110:VAL:CG1	10:H:111:PHE:N	2.79	0.45
11:I:78:SER:O	11:I:82:ASP:HB3	2.15	0.45
11:I:83:LEU:O	11:I:85:ASP:N	2.48	0.45
11:I:134:GLU:OE2	11:I:139:ARG:HG3	2.16	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
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
16:N:108:ALA:O	16:N:110:VAL:N	2.49	0.45
17:O:11:GLN:HB3	17:O:12:TYR:H	1.62	0.45
18:P:9:ARG:HG3	18:P:13:GLN:HG3	1.97	0.45
18:P:107:ILE:HG21	18:P:117:ILE:HD11	1.99	0.45
20:R:8:SER:C	20:R:10:HIS:N	2.67	0.45
23:U:26:ALA:CA	23:U:35:THR:HG23	2.46	0.45
1:X:304:A:H61	1:X:357:A:H62	1.64	0.45
1:X:334:G:H8	5:C:164:VAL:HG13	1.81	0.45
1:X:456:C:H5'	5:C:43:ALA:HB2	1.99	0.45
1:X:541:C:HO2'	1:X:542:A:P	2.39	0.45
1:X:556:A:O2'	1:X:558:G:N3	2.35	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
1:X:843:G:H1'	1:X:2427:A:C6	2.51	0.45
1:X:977:G:H5'	1:X:2251:U:O2	2.16	0.45
1:X:1023:U:C5	9:G:56:THR:HG21	2.52	0.45
1:X:1059:A:H8	1:X:1059:A:OP2	1.99	0.45
1:X:1448:A:N6	1:X:1574:A:N6	2.54	0.45
1:X:1812:U:C2	3:A:200:GLU:HA	2.52	0.45
1:X:1885:C:H5'	3:A:244:ARG:CD	2.43	0.45
1:X:2201:G:N3	1:X:2202:G:C8	2.85	0.45
1:X:2426:G:H4'	1:X:2427:A:C5'	2.47	0.45
1:X:2564:U:C2	32:X:2911:ZLD:H21A	2.51	0.45
3:A:172:TYR:HE2	3:A:186:HIS:HD1	1.64	0.45
6:D:60:ILE:HG13	6:D:61:THR:HG23	1.98	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
7:E:87:LEU:HD23	7:E:164:PHE:HA	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:131:VAL:O	9:G:132:PHE:C	2.55	0.45
10:H:55:VAL:O	10:H:56:LYS:C	2.55	0.45
11:I:51:GLY:O	11:I:55:ARG:CZ	2.64	0.45
12:J:47:GLN:NE2	12:J:127:PRO:CG	2.79	0.45
14:L:33:ARG:NH2	14:L:68:ALA:HB1	2.31	0.45
16:N:99:ALA:HB2	16:N:106:PHE:CD1	2.52	0.45
16:N:105:ALA:C	16:N:107:LYS:N	2.69	0.45
17:O:36:LYS:HE3	17:O:56:VAL:CA	2.46	0.45
18:P:27:VAL:HG22	18:P:28:ALA:N	2.32	0.45
19:Q:3:HIS:CE1	19:Q:44:GLN:CG	2.82	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:OD2	21:S:53:ASP:N	2.50	0.45
21:S:91:PRO:CG	21:S:92:VAL:N	2.79	0.45
21:S:92:VAL:C	21:S:93:GLU:HG3	2.37	0.45
25:W:3:ILE:HG23	25:W:51:LEU:HB2	1.98	0.45
30:4:18:ARG:HH12	30:4:21:GLY:HA2	1.81	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
1:X:151:G:O2'	1:X:152:G:H5'	2.17	0.45
1:X:513:A:O2'	1:X:514:G:H5''	2.16	0.45
1:X:558:G:O2'	1:X:559:C:N1	2.45	0.45
1:X:615:C:C4'	1:X:669:G:N2	2.79	0.45
1:X:695:G:N2	1:X:696:U:C2	2.85	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:919:U:O3'	12:J:24:GLY:HA3	2.17	0.45
1:X:1361:G:O2'	1:X:1362:A:H5'	2.17	0.45
1:X:1423:A:C2	1:X:1609:G:C2	3.04	0.45
1:X:1524:C:C5'	1:X:1525:A:H5''	2.47	0.45
1:X:1710:U:HO2'	1:X:1711:C:P	2.39	0.45
1:X:1713:G:C5	1:X:1714:A:N7	2.84	0.45
1:X:1809:G:C5'	3:A:88:ARG:NH1	2.79	0.45
1:X:1849:G:H1	1:X:1867:A:N6	2.14	0.45
1:X:1942:G:C2	1:X:1943:A:C4	3.05	0.45
1:X:1996:A:C2	1:X:1997:A:C4	3.05	0.45
1:X:2008:C:OP1	4:B:149:ARG:NH2	2.37	0.45
1:X:2337:A:H2'	1:X:2338:C:O4'	2.17	0.45
1:X:2388:G:C6	1:X:2389:G:N7	2.85	0.45
1:X:2735:C:H6	1:X:2735:C:O5'	1.99	0.45
2:Z:108:G:OP1	21:S:84:TYR:OH	2.35	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:141:VAL:O	3:A:194:GLY:N	2.47	0.45
4:B:141:ILE:HG22	4:B:150:VAL:HB	1.97	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
6:D:88:LYS:C	6:D:89:VAL:CG2	2.84	0.45
6:D:119:PRO:O	6:D:120:ASN:C	2.55	0.45
10:H:17:ARG:NE	10:H:59:ALA:HB2	2.31	0.45
10:H:29:ILE:HA	10:H:34:LEU:HD23	1.98	0.45
10:H:90:ARG:O	10:H:90:ARG:HG3	2.16	0.45
10:H:116:ARG:NH2	15:M:41:GLU:OE2	2.48	0.45
11:I:102:LYS:C	11:I:104:ARG:N	2.70	0.45
11:I:134:GLU:HG2	11:I:138:GLY:C	2.37	0.45
12:J:75:VAL:HB	12:J:93:TYR:CE2	2.52	0.45
13:K:20:LEU:O	13:K:21:ALA:C	2.54	0.45
13:K:43:GLU:CD	13:K:43:GLU:C	2.75	0.45
15:M:40:ARG:O	15:M:41:GLU:CG	2.65	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
19:Q:4:TYR:CZ	24:V:23:LYS:HG3	2.52	0.45
19:Q:12:ILE:CD1	19:Q:13:SER:N	2.72	0.45
20:R:23:ILE:CD1	20:R:81:VAL:H	2.29	0.45
21:S:3:LEU:HD22	21:S:34:LEU:HB3	1.98	0.45
30:4:20:HIS:O	30:4:21:GLY:C	2.55	0.45
1:X:5:A:C6	1:X:6:A:C6	3.05	0.45
1:X:167:A:N6	1:X:184:A:H1'	2.31	0.45
1:X:589:C:O2'	1:X:590:C:H5'	2.17	0.45
1:X:607:C:H2'	1:X:608:G:O4'	2.16	0.45
1:X:648:A:H5'	1:X:649:G:OP1	2.17	0.45
1:X:874:A:N9	1:X:929:A:N6	2.65	0.45
1:X:1275:A:C2	26:Y:10:LYS:HE2	2.52	0.45
1:X:1281:A:H2'	1:X:1282:A:C8	2.47	0.45
1:X:1598:C:H2'	1:X:1599:G:C8	2.52	0.45
1:X:1681:A:C6	1:X:2706:U:C4	3.04	0.45
1:X:1847:G:N1	1:X:1871:G:C8	2.85	0.45
1:X:1850:G:H22	1:X:1867:A:C2'	2.29	0.45
1:X:1886:G:H2'	1:X:1887:G:C8	2.49	0.45
1:X:1997:A:C2	1:X:1998:A:C2	3.04	0.45
1:X:2070:G:C4	1:X:2071:G:C8	3.05	0.45
1:X:2411:A:C5	1:X:2412:A:C6	3.04	0.45
1:X:2615:U:O5'	4:B:80:GLU:CG	2.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
5:C:45:THR:CG2	5:C:82:VAL:HG11	2.46	0.45
5:C:154:ASP:OD2	5:C:157:THR:HG21	2.17	0.45
8:F:81:LYS:HZ2	8:F:84:GLY:CA	2.30	0.45
9:G:51:LEU:HD13	9:G:88:VAL:HG21	1.95	0.45
9:G:156:HIS:N	9:G:157:PRO:HD2	2.31	0.45
10:H:27:SER:OG	10:H:49:ASP:HA	2.17	0.45
12:J:62:GLY:HA3	12:J:64:LYS:HE3	1.98	0.45
14:L:63:ASN:O	14:L:67:THR:N	2.48	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:O	17:O:14:VAL:CG1	2.62	0.45
17:O:14:VAL:H	17:O:16:GLU:CD	2.20	0.45
17:O:31:ASP:OD1	17:O:59:GLU:HG2	2.17	0.45
17:O:39:PHE:O	17:O:46:VAL:CG2	2.65	0.45
18:P:8:PHE:O	18:P:9:ARG:CB	2.64	0.45
18:P:74:SER:HA	18:P:77:ALA:CB	2.46	0.45
19:Q:7:LEU:HD11	24:V:30:PHE:CZ	2.50	0.45
20:R:22:VAL:CG1	20:R:80:LYS:HZ1	2.28	0.45
20:R:23:ILE:CD1	20:R:23:ILE:N	2.75	0.45
20:R:48:VAL:C	20:R:50:GLY:N	2.70	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
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:4:C:O2'	1:X:5:A:H5'	2.17	0.45
1:X:105:G:C2'	1:X:106:G:H5'	2.47	0.45
1:X:109:A:H2'	1:X:110:U:H5'	1.99	0.45
1:X:776:G:C2	1:X:778:G:C4	3.05	0.45
1:X:1075:C:C5'	8:F:85:ILE:HG13	2.47	0.45
1:X:1203:A:N3	1:X:1203:A:H2'	2.30	0.45
1:X:1373:G:H21	1:X:1374:G:C1'	2.29	0.45
1:X:1749:G:C5'	1:X:1750:A:OP2	2.60	0.45
1:X:1757:C:HO2'	1:X:1758:C:H5'	1.80	0.45
1:X:1842:G:C5	1:X:1843:U:C5	3.05	0.45
1:X:2514:G:C2	1:X:2515:G:C8	3.05	0.45
1:X:2621:G:OP1	9:G:110:LEU:HD13	2.16	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
5:C:101:GLN:O	5:C:103:GLY:N	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:50:ILE:C	6:D:52:LYS:N	2.68	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
8:F:71:LYS:CG	8:F:114:PRO:HG2	2.47	0.45
11:I:11:GLY:O	11:I:13:ARG:N	2.49	0.45
11:I:106:VAL:CG2	11:I:123:ASP:HB2	2.44	0.45
12:J:28:VAL:HG11	12:J:135:ARG:HA	1.98	0.45
12:J:78:LYS:HD2	12:J:81:GLU:HA	1.99	0.45
15:M:42:GLY:C	15:M:44:ARG:N	2.70	0.45
15:M:66:PHE:HE2	15:M:81:PHE:CB	2.12	0.45
20:R:25:LEU:HG	20:R:81:VAL:CG2	2.47	0.45
20:R:86:PRO:O	20:R:87:GLU:CB	2.64	0.45
23:U:20:ARG:O	23:U:39:LYS:HB3	2.17	0.45
23:U:24:ALA:N	23:U:36:GLY:O	2.47	0.45
23:U:70:LEU:HD23	23:U:70:LEU:HA	1.77	0.45
1:X:38:G:H21	5:C:42:THR:HG21	1.82	0.45
1:X:84:G:O3'	20:R:41:PRO:HG3	2.17	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:732:G:H8	1:X:732:G:O5'	2.00	0.45
1:X:825:C:C2	1:X:1263:G:N1	2.84	0.45
1:X:832:A:OP2	1:X:1201:G:N2	2.46	0.45
1:X:911:A:H2'	1:X:912:A:C8	2.51	0.45
1:X:999:A:H3'	25:W:8:SER:HB2	1.98	0.45
1:X:1062:G:C2	1:X:1063:C:C2	3.04	0.45
1:X:1201:G:H8	1:X:1201:G:O5'	1.99	0.45
1:X:1332:G:N2	1:X:1347:C:C2	2.84	0.45
1:X:1557:G:O2'	1:X:1558:C:H5'	2.16	0.45
1:X:1758:C:O2'	1:X:1759:A:H5'	2.17	0.45
1:X:1816:G:OP2	3:A:220:HIS:CE1	2.70	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
1:X:2676:G:C6	1:X:2690:A:N1	2.85	0.45
1:X:2850:U:C2'	1:X:2851:G:O5'	2.65	0.45
1:X:2875:C:H2'	1:X:2876:C:H5'	1.99	0.45
2:Z:65:A:O2'	2:Z:66:G:H5'	2.16	0.45
3:A:106:LEU:O	3:A:107:ALA:C	2.55	0.45
3:A:172:TYR:HE2	3:A:186:HIS:ND1	2.14	0.45
5:C:22:VAL:CG1	5:C:27:LEU:HD21	2.44	0.45
5:C:163:ASN:O	5:C:167:VAL:HG22	2.16	0.45
5:C:164:VAL:HB	5:C:166:TRP:CH2	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:73:SER:HB3	6:D:79:LEU:CD2	2.47	0.45
7:E:170:ALA:C	7:E:171:LEU:HD12	2.37	0.45
9:G:155:THR:CG2	9:G:156:HIS:H	2.24	0.45
10:H:85:ASP:CG	10:H:87:SER:H	2.15	0.45
11:I:53:ARG:C	11:I:55:ARG:N	2.70	0.45
11:I:62:LYS:CG	11:I:63:ARG:N	2.79	0.45
14:L:11:LEU:HA	14:L:14:ARG:CB	2.46	0.45
17:O:10:LYS:HG3	17:O:11:GLN:HG2	1.98	0.45
20:R:108:VAL:CG2	20:R:109:ALA:N	2.65	0.45
21:S:17:SER:O	21:S:18:MET:SD	2.75	0.45
21:S:98:VAL:HG22	21:S:99:HIS:N	2.32	0.45
23:U:27:ASP:CA	23:U:32:ARG:CZ	2.95	0.45
25:W:5:LEU:HA	25:W:51:LEU:HA	1.98	0.45
26:Y:13:LYS:O	26:Y:17:ASP:OD1	2.35	0.45
1:X:66:U:C2'	1:X:67:G:O5'	2.65	0.45
1:X:387:A:C4	1:X:388:G:C8	3.05	0.45
1:X:429:C:H2'	1:X:430:C:H6	1.82	0.45
1:X:1023:U:OP2	1:X:1023:U:H4'	2.17	0.45
1:X:1136:G:C5	1:X:1137:A:N6	2.85	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:1444:C:H2'	1:X:1445:A:C8	2.46	0.45
1:X:1494:G:O2'	1:X:1574:A:C2	2.68	0.45
1:X:2010:G:C6	1:X:2011:U:N3	2.85	0.45
1:X:2067:U:H2'	1:X:2068:C:C6	2.51	0.45
1:X:2624:G:H8	1:X:2624:G:OP2	2.00	0.45
1:X:2810:A:N6	1:X:2853:U:H2'	2.31	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
3:A:101:GLU:OE2	3:A:101:GLU:C	2.55	0.45
3:A:143:HIS:C	3:A:143:HIS:CD2	2.88	0.45
4:B:102:ILE:HB	4:B:199:ARG:O	2.17	0.45
4:B:107:THR:HG21	4:B:162:MET:CE	2.48	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
6:D:112:ARG:NH1	6:D:134:GLU:OE2	2.50	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:83:GLY:C	14:L:85:LYS:H	2.19	0.45
15:M:104:LEU:CD1	15:M:106:TYR:CZ	2.98	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
17:O:33:VAL:CG2	17:O:33:VAL:O	2.64	0.45
21:S:51:LEU:HD23	21:S:65:LEU:CD1	2.41	0.45
21:S:56:VAL:CG1	21:S:57:GLU:N	2.76	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
24:V:25:LEU:HD11	24:V:47:ARG:CD	2.47	0.45
30:4:3:VAL:HG21	30:4:37:GLY:O	2.17	0.45
30:4:17:VAL:HG21	30:4:26:ILE:CD1	2.47	0.45
30:4:19:ARG:HG3	30:4:19:ARG:HH11	1.82	0.45
1:X:37:C:H2'	1:X:38:G:C8	2.51	0.44
1:X:53:G:C6	1:X:54:G:N7	2.85	0.44
1:X:198:A:C5	1:X:243:G:C5	3.05	0.44
1:X:218:A:H61	1:X:232:A:H5''	1.80	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:719:A:H8	1:X:719:A:O5'	1.99	0.44
1:X:834:A:H62	1:X:983:G:H21	1.65	0.44
1:X:994:A:N7	1:X:995:A:C5	2.86	0.44
1:X:1004:A:C4	1:X:1005:U:H5	2.34	0.44
1:X:1332:G:C2	1:X:1347:C:C2	3.05	0.44
1:X:1373:G:O6	1:X:1385:C:C4	2.70	0.44
1:X:1484:G:H2'	1:X:1485:U:H6	1.82	0.44
1:X:1571:G:C8	1:X:1571:G:OP2	2.69	0.44
1:X:1674:C:C2	1:X:1675:C:C5	3.05	0.44
1:X:1815:G:H2'	1:X:1816:G:C8	2.36	0.44
1:X:1822:C:O5'	1:X:1822:C:C6	2.54	0.44
1:X:1825:C:H2'	1:X:1952:A:C2	2.52	0.44
1:X:1910:A:N1	1:X:1911:A:C2	2.85	0.44
1:X:2040:A:H2	26:Y:2:ALA:HB3	1.81	0.44
1:X:2052:G:C6	1:X:2422:C:N4	2.85	0.44
1:X:2235:G:N2	1:X:2254:C:C4	2.85	0.44
1:X:2273:C:P	14:L:11:LEU:HD11	2.57	0.44
1:X:2338:C:H2'	1:X:2339:A:C8	2.52	0.44
1:X:2421:C:N4	1:X:2422:C:H41	2.15	0.44
1:X:2451:G:C4	1:X:2454:C:N3	2.85	0.44
1:X:2497:A:H5''	1:X:2498:U:OP2	2.17	0.44
1:X:2629:U:C2	1:X:2630:C:C5	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2740:C:O2'	1:X:2741:G:H5'	2.17	0.44
1:X:2769:C:H2'	1:X:2770:A:C8	2.51	0.44
1:X:2780:A:H2'	1:X:2781:G:H8	1.79	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
3:A:236:GLY:O	3:A:237:GLU:CB	2.60	0.44
4:B:113:THR:HA	4:B:158:GLY:O	2.18	0.44
4:B:133:LYS:O	4:B:134:TRP:C	2.54	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
6:D:68:THR:O	6:D:85:VAL:HG23	2.17	0.44
6:D:135:GLN:HG2	6:D:152:MET:CG	2.46	0.44
7:E:121:VAL:CG1	7:E:122:THR:N	2.79	0.44
8:F:79:ILE:HG22	8:F:108:ILE:HD11	1.98	0.44
12:J:19:THR:HG22	12:J:99:LYS:HZ2	1.82	0.44
13:K:39:THR:O	13:K:42:LYS:HB2	2.17	0.44
19:Q:29:VAL:CG1	19:Q:78:ALA:CB	2.95	0.44
19:Q:58:VAL:HA	19:Q:59:PRO:HD2	1.66	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:HG12	20:R:46:VAL:O	2.17	0.44
24:V:4:SER:HA	24:V:7:ARG:HG3	1.99	0.44
1:X:5:A:C2	1:X:6:A:C4	3.05	0.44
1:X:201:G:O6	1:X:433:G:H5'	2.17	0.44
1:X:224:G:C6	1:X:229:G:O6	2.71	0.44
1:X:242:A:H2'	1:X:243:G:C4'	2.46	0.44
1:X:303:C:C3'	1:X:304:A:H5''	2.47	0.44
1:X:512:A:C2'	1:X:513:A:H5'	2.41	0.44
1:X:768:U:H2'	1:X:769:C:C6	2.52	0.44
1:X:930:A:H8	1:X:930:A:O5'	2.00	0.44
1:X:1270:C:H4'	5:C:77:PHE:CE1	2.52	0.44
1:X:1343:C:N3	1:X:1344:C:C5	2.85	0.44
1:X:1391:A:N7	1:X:1393:G:C5	2.85	0.44
1:X:1474:A:H4'	1:X:1475:U:O5'	2.17	0.44
1:X:1567:A:N6	1:X:1568:A:C6	2.86	0.44
1:X:1785:A:O2'	1:X:1883:A:H2'	2.17	0.44
1:X:1960:A:H2'	1:X:1961:A:H5'	2.00	0.44
1:X:2448:A:C2	1:X:2461:G:C8	3.06	0.44
1:X:2659:C:C2	1:X:2660:C:C5	3.05	0.44
1:X:2872:U:O2	1:X:2873:G:C8	2.70	0.44
2:Z:123:U:O2	2:Z:123:U:C2'	2.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:50:GLY:HA3	4:B:75:THR:HG21	1.99	0.44
5:C:58:MET:HA	5:C:58:MET:CE	2.46	0.44
6:D:4:LEU:HD12	6:D:7:LYS:HB2	1.98	0.44
6:D:78:LYS:HG2	6:D:80:ARG:HH11	1.83	0.44
7:E:6:LYS:O	7:E:7:GLN:HG3	2.17	0.44
7:E:37:TYR:CD1	7:E:37:TYR:N	2.85	0.44
7:E:90:ARG:CD	7:E:163:ARG:NH1	2.79	0.44
8:F:98:GLY:O	8:F:138:THR:HG23	2.17	0.44
9:G:70:PHE:CD2	16:N:64:ARG:HD3	2.53	0.44
9:G:78:ASP:O	9:G:79:PHE:C	2.55	0.44
10:H:3:MET:SD	10:H:44:TYR:CE1	3.10	0.44
12:J:116:LYS:HA	12:J:132:MET:CE	2.47	0.44
13:K:45:ARG:CD	13:K:97:ILE:HD11	2.48	0.44
16:N:39:LEU:O	16:N:42:ALA:HB3	2.17	0.44
17:O:36:LYS:O	17:O:51:ALA:CB	2.65	0.44
25:W:42:GLY:O	25:W:43:MET:C	2.56	0.44
26:Y:51:TYR:CA	26:Y:54:GLY:O	2.64	0.44
30:4:8:LYS:N	30:4:34:GLN:HE22	2.14	0.44
1:X:55:A:N6	1:X:69:G:C6	2.86	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:203:G:N2	1:X:204:A:H2	2.14	0.44
1:X:248:A:O5'	1:X:248:A:C8	2.68	0.44
1:X:590:C:H2'	1:X:591:G:C8	2.52	0.44
1:X:629:C:H2'	1:X:630:G:O4'	2.17	0.44
1:X:678:G:O3'	11:I:50:GLU:OE1	2.35	0.44
1:X:708:G:OP1	1:X:1393:G:O2'	2.29	0.44
1:X:720:A:H2'	1:X:721:C:C6	2.53	0.44
1:X:945:G:C6	1:X:946:U:C4	3.05	0.44
1:X:972:C:C5'	1:X:973:U:OP2	2.65	0.44
1:X:1345:G:C4	1:X:1625:A:C6	3.06	0.44
1:X:1463:A:C2'	1:X:1464:A:H5'	2.48	0.44
1:X:1574:A:H2'	1:X:1575:C:H5''	1.98	0.44
1:X:1731:C:C3'	1:X:1732:U:H5''	2.48	0.44
1:X:1809:G:H2'	1:X:1809:G:N3	2.33	0.44
1:X:1914:U:C6	1:X:1914:U:C5'	2.84	0.44
1:X:1997:A:O2'	1:X:1998:A:O4'	2.28	0.44
1:X:2031:A:H2'	1:X:2032:G:O4'	2.17	0.44
1:X:2083:G:H5'	1:X:2083:G:H8	1.82	0.44
1:X:2245:A:H4'	1:X:2246:A:C2	2.51	0.44
1:X:2468:G:C6	1:X:2469:G:C6	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2596:C:O2'	1:X:2597:G:H5'	2.17	0.44
1:X:2767:C:H4'	4:B:61:LYS:HG2	2.00	0.44
1:X:2787:A:O2'	1:X:2788:C:C5'	2.64	0.44
1:X:2804:G:C4'	15:M:4:HIS:CE1	2.99	0.44
1:X:2819:G:C8	1:X:2820:C:C5	3.05	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
3:A:65:ILE:HD11	3:A:88:ARG:CZ	2.47	0.44
4:B:2:LYS:HE2	4:B:84:PHE:HE1	1.82	0.44
4:B:102:ILE:HD13	4:B:172:VAL:HG23	1.99	0.44
5:C:10:ASN:O	5:C:11:GLY:O	2.35	0.44
5:C:14:THR:HG21	5:C:195:ILE:CG2	2.47	0.44
5:C:164:VAL:C	5:C:166:TRP:CE3	2.90	0.44
6:D:100:LEU:HG	6:D:104:ILE:CG1	2.47	0.44
7:E:56:SER:O	7:E:61:HIS:HB2	2.17	0.44
7:E:98:LEU:CG	7:E:99:THR:N	2.80	0.44
9:G:84:ASN:C	9:G:86:ALA:N	2.70	0.44
10:H:18:GLU:HG2	10:H:19:ILE:N	2.32	0.44
11:I:73:GLU:HG3	11:I:101:ARG:CG	2.47	0.44
11:I:121:HIS:CD2	11:I:121:HIS:N	2.84	0.44
13:K:82:GLU:O	13:K:86:LYS:CG	2.54	0.44
14:L:38:ILE:HG13	14:L:39:TYR:H	1.73	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
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
22:T:30:VAL:O	22:T:31:VAL:O	2.35	0.44
22:T:31:VAL:HG11	22:T:37:LEU:CD2	2.47	0.44
1:X:211:U:C5	1:X:212:U:C5	3.05	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
1:X:388:G:C2	1:X:389:G:C8	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:699:G:C4'	1:X:700:C:OP2	2.66	0.44
1:X:760:U:C4	1:X:2592:U:O2	2.70	0.44
1:X:795:A:H5''	1:X:796:A:OP1	2.18	0.44
1:X:1022:A:C6	1:X:1162:A:N6	2.86	0.44
1:X:1056:U:O2	1:X:1058:G:N2	2.50	0.44
1:X:1123:G:C6	1:X:1124:U:N3	2.86	0.44
1:X:1243:G:C2	1:X:1244:U:C2	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1801:C:N4	23:U:49:LYS:NZ	2.66	0.44
1:X:1811:A:O5'	3:A:161:THR:HG21	2.18	0.44
1:X:1845:A:C5	1:X:1872:A:C6	3.05	0.44
1:X:2042:A:H5''	5:C:65:GLY:HA2	1.99	0.44
1:X:2231:G:H8	1:X:2231:G:O5'	1.99	0.44
1:X:2775:U:OP2	1:X:2776:U:C5	2.70	0.44
2:Z:30:C:N4	2:Z:58:G:H22	2.16	0.44
2:Z:63:A:C6	2:Z:64:C:N4	2.86	0.44
3:A:228:PRO:HD3	3:A:235:GLY:N	2.33	0.44
4:B:5:LEU:N	4:B:5:LEU:CD1	2.80	0.44
5:C:143:ASP:OD1	5:C:143:ASP:N	2.50	0.44
6:D:60:ILE:CG1	6:D:61:THR:N	2.68	0.44
6:D:73:SER:CB	6:D:79:LEU:HD23	2.48	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
7:E:86:ASN:HA	7:E:131:ILE:O	2.18	0.44
7:E:127:GLU:O	7:E:127:GLU:CG	2.66	0.44
11:I:94:GLU:HA	11:I:97:ARG:NE	2.32	0.44
12:J:57:ARG:CG	12:J:57:ARG:NH1	2.72	0.44
12:J:112:GLU:C	12:J:112:GLU:OE1	2.55	0.44
13:K:75:VAL:O	13:K:76:VAL:C	2.55	0.44
14:L:38:ILE:HG13	14:L:40:ALA:H	1.83	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
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
23:U:78:ILE:HD13	23:U:78:ILE:C	2.37	0.44
24:V:6:MET:O	24:V:14:PHE:HE1	2.00	0.44
26:Y:16:ARG:CD	26:Y:20:ARG:NH2	2.79	0.44
1:X:24:G:N2	1:X:527:C:C2	2.85	0.44
1:X:218:A:H1'	1:X:220:U:C6	2.52	0.44
1:X:469:G:O2'	1:X:480:G:N1	2.47	0.44
1:X:959:C:O2'	1:X:960:U:H5'	2.18	0.44
1:X:1060:C:N4	1:X:1061:A:N6	2.66	0.44
1:X:1091:C:O2	8:F:127:THR:HG23	2.18	0.44
1:X:1325:U:HO2'	1:X:1327:C:H5	1.62	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:2320:G:N2	1:X:2353:G:H4'	2.33	0.44
1:X:2550:C:O2'	4:B:146:THR:OG1	2.13	0.44
3:A:63:ARG:HD3	3:A:85:ASP:CG	2.38	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
4:B:11:MET:HA	4:B:24:THR:HA	1.98	0.44
4:B:38:THR:C	4:B:40:GLN:H	2.21	0.44
4:B:177:ALA:O	4:B:179:GLU:N	2.51	0.44
5:C:153:ASP:CG	5:C:172:VAL:HA	2.37	0.44
6:D:169:LEU:C	6:D:171:GLN:N	2.71	0.44
7:E:171:LEU:HD12	7:E:171:LEU:N	2.32	0.44
9:G:55:ALA:O	9:G:58:ILE:N	2.51	0.44
9:G:169:GLN:O	9:G:170:PRO:O	2.36	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
12:J:28:VAL:HG11	12:J:134:LYS:O	2.18	0.44
12:J:47:GLN:HE22	12:J:127:PRO:HG3	1.82	0.44
12:J:132:MET:O	12:J:133:VAL:HG13	2.17	0.44
13:K:61:HIS:O	13:K:62:SER:C	2.55	0.44
14:L:96:TYR:CZ	14:L:101:LYS:HG3	2.52	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
18:P:51:GLN:HA	18:P:54:GLU:HB2	2.00	0.44
23:U:12:ASN:O	23:U:13:LEU:O	2.35	0.44
23:U:49:LYS:O	23:U:50:ALA:HB2	2.17	0.44
24:V:59:GLU:HG3	24:V:59:GLU:H	1.49	0.44
26:Y:4:HIS:HB3	26:Y:5:PRO:HD3	2.00	0.44
1:X:306:G:C2	1:X:307:C:C4	3.06	0.44
1:X:338:G:H1'	20:R:10:HIS:HE1	1.83	0.44
1:X:497:C:H6	1:X:497:C:H3'	1.81	0.44
1:X:606:A:C6	1:X:607:C:C4	3.05	0.44
1:X:626:A:O4'	1:X:626:A:OP1	2.36	0.44
1:X:647:G:O6	11:I:107:LYS:HE3	2.17	0.44
1:X:746:G:O6	1:X:774:A:C8	2.71	0.44
1:X:1061:A:N1	1:X:2731:G:C6	2.86	0.44
1:X:1171:A:H1'	17:O:6:GLN:HB3	1.99	0.44
1:X:1331:G:H2'	1:X:1331:G:N3	2.32	0.44
1:X:1344:C:C4	1:X:1346:C:C2	3.05	0.44
1:X:1483:G:N2	1:X:1541:G:H1'	2.33	0.44
1:X:1528:C:OP2	1:X:1528:C:H6	2.01	0.44
1:X:2032:G:C2	1:X:2599:U:N3	2.85	0.44
1:X:2033:C:N4	1:X:2034:A:C6	2.86	0.44
1:X:2198:U:O5'	1:X:2198:U:H6	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2432:A:H2'	1:X:2433:G:C8	2.52	0.44
1:X:2440:C:C2	1:X:2441:U:C5	3.06	0.44
1:X:2463:G:O2'	1:X:2464:G:H5'	2.18	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:2797:G:H2'	1:X:2798:A:H5''	1.99	0.44
2:Z:74:A:C2	2:Z:107:C:N4	2.86	0.44
3:A:64:ILE:HD12	3:A:64:ILE:H	1.83	0.44
3:A:142:VAL:HB	3:A:192:THR:O	2.17	0.44
3:A:175:VAL:O	3:A:182:LEU:HD23	2.18	0.44
5:C:3:GLN:NE2	5:C:4:ILE:N	2.65	0.44
5:C:72:ARG:HG3	5:C:77:PHE:CD2	2.53	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
7:E:50:LEU:CG	7:E:51:LEU:N	2.81	0.44
7:E:89:LEU:O	7:E:129:THR:HG22	2.18	0.44
9:G:45:ASP:CB	9:G:83:ILE:HD11	2.44	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
10:H:104:GLU:H	10:H:104:GLU:HG2	1.18	0.44
11:I:16:ARG:HB3	11:I:17:LYS:H	1.57	0.44
11:I:52:GLY:HA3	11:I:55:ARG:HB2	2.00	0.44
11:I:134:GLU:CG	11:I:139:ARG:HA	2.47	0.44
12:J:117:GLU:OE1	12:J:120:ARG:HD3	2.17	0.44
15:M:31:ASP:O	15:M:94:VAL:HB	2.17	0.44
19:Q:25:TYR:N	19:Q:25:TYR:CD2	2.86	0.44
19:Q:58:VAL:O	19:Q:74:ASP:HA	2.17	0.44
20:R:25:LEU:HG	20:R:81:VAL:HG23	1.98	0.44
21:S:142:ASN:N	21:S:145:ASP:OD1	2.50	0.44
21:S:149:ALA:O	21:S:152:ILE:HB	2.17	0.44
22:T:10:SER:HB2	22:T:11:LYS:HE2	2.00	0.44
24:V:64:GLY:O	24:V:65:GLU:HB3	2.16	0.44
26:Y:16:ARG:HD3	26:Y:20:ARG:HH22	1.82	0.44
1:X:71:A:O2'	1:X:72:A:OP1	2.27	0.44
1:X:166:G:H1	1:X:182:G:C2'	2.28	0.44
1:X:318:G:H5'	1:X:318:G:H8	1.83	0.44
1:X:441:A:N7	1:X:442:A:C5	2.86	0.44
1:X:795:A:C2	3:A:226:MET:CE	3.00	0.44
1:X:947:C:N3	1:X:948:C:C4	2.86	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)
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:1325:U:O2'	1:X:1327:C:C4	2.70	0.44
1:X:1479:G:H2'	1:X:1480:G:C8	2.53	0.44
1:X:1672:A:H3'	1:X:1673:C:C5	2.53	0.44
1:X:1811:A:O2'	1:X:1812:U:OP2	2.31	0.44
1:X:1873:A:C8	1:X:1873:A:C3'	3.00	0.44
1:X:2029:G:C2	1:X:2602:G:C2	3.05	0.44
1:X:2190:A:N3	1:X:2190:A:H2'	2.33	0.44
1:X:2691:C:O2	1:X:2692:A:C8	2.70	0.44
1:X:2775:U:H5'	1:X:2776:U:C5'	2.47	0.44
1:X:2839:G:C4	1:X:2840:U:C4	3.06	0.44
2:Z:11:G:OP2	14:L:16:LYS:NZ	2.44	0.44
2:Z:36:A:H5''	2:Z:37:C:OP1	2.17	0.44
5:C:97:ARG:O	5:C:100:ARG:N	2.51	0.44
6:D:52:LYS:HD3	6:D:56:GLU:OE2	2.17	0.44
6:D:136:LEU:HD23	6:D:141:ILE:CG2	2.45	0.44
7:E:20:GLN:H	7:E:20:GLN:HG3	1.43	0.44
7:E:33:LEU:CD2	7:E:35:VAL:HG13	2.46	0.44
7:E:89:LEU:HD11	7:E:95:ARG:O	2.17	0.44
9:G:153:GLY:O	9:G:154:GLU:HG3	2.17	0.44
10:H:8:LEU:HD12	10:H:8:LEU:N	2.32	0.44
11:I:11:GLY:N	11:I:14:LYS:HB2	2.28	0.44
13:K:28:LEU:C	13:K:28:LEU:CD2	2.83	0.44
14:L:10:LYS:O	14:L:14:ARG:CB	2.64	0.44
17:O:36:LYS:HZ1	17:O:98:ILE:H	1.64	0.44
19:Q:76:LYS:O	19:Q:77:LYS:C	2.55	0.44
21:S:19:ILE:HG22	21:S:20:ALA:O	2.18	0.44
25:W:38:PRO:HA	25:W:41:ARG:NH2	2.32	0.44
26:Y:33:CYS:HA	26:Y:34:PRO:HD3	1.71	0.44
1:X:36:G:H4'	1:X:463:C:C5	2.53	0.44
1:X:177:U:O4	1:X:225:G:N2	2.49	0.44
1:X:209:G:H3'	1:X:209:G:H8	1.83	0.44
1:X:304:A:N7	1:X:356:A:N6	2.66	0.44
1:X:633:G:H2'	1:X:634:G:C8	2.52	0.44
1:X:665:A:H2'	1:X:665:A:N3	2.33	0.44
1:X:1006:C:C2	9:G:31:THR:OG1	2.69	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:1261:G:OP2	5:C:86:PRO:HB3	2.18	0.44
1:X:1337:G:OP2	18:P:105:ARG:CZ	2.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1379:A:C5	1:X:1380:C:C4	3.06	0.44
1:X:1517:C:C5'	3:A:102:LYS:HZ3	2.29	0.44
1:X:1756:C:O2'	1:X:1757:C:H5'	2.18	0.44
1:X:1774:A:N1	1:X:2566:A:C4	2.86	0.44
1:X:2040:A:H2'	1:X:2041:A:C8	2.53	0.44
1:X:2184:C:H2'	1:X:2185:U:C6	2.53	0.44
1:X:2538:C:C2'	1:X:2539:C:H5'	2.47	0.44
1:X:2664:G:C6	1:X:2705:A:C6	3.05	0.44
1:X:2665:G:H2'	1:X:2666:U:C6	2.48	0.44
1:X:2784:A:C6	1:X:2866:A:C8	3.06	0.44
4:B:15:TRP:CZ3	15:M:84:ALA:CB	3.01	0.44
4:B:114:GLN:N	4:B:158:GLY:O	2.43	0.44
4:B:134:TRP:CD1	4:B:134:TRP:N	2.69	0.44
5:C:130:THR:O	5:C:133:PHE:N	2.50	0.44
6:D:9:ASN:HA	6:D:13:ARG:HB2	2.00	0.44
7:E:139:GLN:O	7:E:140:LEU:C	2.55	0.44
8:F:126:ASN:HA	8:F:129:ALA:CB	2.47	0.44
9:G:127:ILE:O	9:G:130:ALA:HB3	2.18	0.44
14:L:72:GLY:C	14:L:74:ALA:H	2.22	0.44
16:N:20:ARG:NH1	17:O:83:ARG:NH2	2.65	0.44
16:N:87:ASN:HD22	16:N:87:ASN:C	2.17	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
18:P:117:ILE:CG2	18:P:118:LYS:N	2.80	0.44
19:Q:10:PRO:HD3	24:V:30:PHE:CD2	2.53	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
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
21:S:42:ALA:CA	21:S:45:GLN:HG2	2.48	0.44
21:S:96:VAL:N	21:S:120:LEU:O	2.30	0.44
23:U:26:ALA:HB2	23:U:35:THR:CG2	2.45	0.44
24:V:4:SER:O	24:V:7:ARG:NE	2.51	0.44
24:V:9:LEU:HD13	24:V:13:ASP:CG	2.38	0.44
24:V:30:PHE:C	24:V:32:ALA:N	2.67	0.44
30:4:27:CYS:SG	30:4:32:HIS:ND1	2.89	0.44
1:X:28:A:H1'	1:X:523:A:C2	2.52	0.44
1:X:76:C:N4	1:X:108:G:C6	2.86	0.44
1:X:457:C:O2'	1:X:458:G:H5'	2.17	0.44
1:X:492:G:O2'	1:X:517:A:N6	2.51	0.44
1:X:499:G:C2	1:X:503:G:O6	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:548:G:H4'	9:G:34:PRO:HG3	1.99	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:677:G:H2'	1:X:678:G:C5'	2.48	0.44
1:X:1067:G:HO2'	1:X:1097:A:H8	1.64	0.44
1:X:1134:C:O2'	1:X:1135:C:H5'	2.18	0.44
1:X:1168:G:C2	1:X:1169:C:C2	3.06	0.44
1:X:1234:C:H2'	1:X:1235:C:H6	1.83	0.44
1:X:1272:G:H2'	1:X:1273:G:C8	2.53	0.44
1:X:1312:G:N7	1:X:1656:U:H5	2.16	0.44
1:X:1331:G:C6	1:X:1348:C:N4	2.86	0.44
1:X:1502:G:H2'	1:X:1503:G:H8	1.83	0.44
1:X:1509:A:H2'	1:X:1510:A:H5'	1.99	0.44
1:X:1567:A:C5	1:X:1568:A:N7	2.86	0.44
1:X:1625:A:C2	1:X:1632:A:C4	3.06	0.44
1:X:1625:A:N3	1:X:1632:A:C4	2.86	0.44
1:X:1816:G:C2'	1:X:1817:U:H5'	2.46	0.44
1:X:1882:G:O2'	1:X:1883:A:C5'	2.61	0.44
1:X:1948:C:C5	1:X:1949:A:C8	3.05	0.44
1:X:2046:C:O2	1:X:2430:A:C2	2.70	0.44
1:X:2084:G:P	1:X:2084:G:H8	2.40	0.44
1:X:2225:G:C2'	1:X:2226:A:H8	2.05	0.44
1:X:2286:G:H21	1:X:2290:A:N6	2.16	0.44
1:X:2294:U:H4'	6:D:127:ASN:HD22	1.81	0.44
1:X:2343:C:H2'	1:X:2344:G:H5'	1.99	0.44
1:X:2495:G:C4	1:X:2548:G:N2	2.85	0.44
1:X:2527:G:C2	1:X:2528:G:C8	3.06	0.44
1:X:2832:G:N2	1:X:2835:A:OP2	2.51	0.44
3:A:37:LEU:O	3:A:62:TYR:N	2.51	0.44
3:A:96:HIS:HE1	3:A:100:GLY:CA	2.28	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
4:B:36:ARG:HG2	4:B:36:ARG:NH1	2.32	0.44
4:B:163:GLU:CG	4:B:164:ARG:N	2.81	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
6:D:32:GLU:HB3	6:D:157:VAL:CB	2.48	0.44
6:D:52:LYS:HD3	6:D:52:LYS:C	2.38	0.44
6:D:170:LEU:O	6:D:175:LEU:HD22	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:133:VAL:HG11	7:E:144:VAL:CG1	2.47	0.44
14:L:37:HIS:CD2	14:L:39:TYR:HE1	2.36	0.44
15:M:65:SER:HB2	15:M:81:PHE:O	2.17	0.44
17:O:10:LYS:CD	17:O:11:GLN:NE2	2.81	0.44
19:Q:55:THR:HG22	19:Q:78:ALA:CA	2.47	0.44
24:V:9:LEU:HB3	24:V:13:ASP:HB2	2.00	0.44
30:4:1:MET:SD	30:4:35:ARG:HB2	2.58	0.44
1:X:26:G:C2	1:X:27:G:N2	2.86	0.43
1:X:115:G:N1	1:X:117:A:N6	2.66	0.43
1:X:320:A:N3	1:X:340:G:O2'	2.27	0.43
1:X:713:G:H2'	1:X:714:G:O4'	2.18	0.43
1:X:789:G:O6	1:X:2055:G:OP1	2.36	0.43
1:X:812:G:C4	1:X:813:A:N7	2.86	0.43
1:X:1107:A:H2'	1:X:1108:U:H5''	1.99	0.43
1:X:1164:C:H2'	1:X:1165:G:O4'	2.18	0.43
1:X:1288:A:N6	1:X:1309:G:H4'	2.33	0.43
1:X:1345:G:C5	1:X:1625:A:C6	3.06	0.43
1:X:1440:G:H3'	1:X:1441:A:C5'	2.47	0.43
1:X:1526:U:H3'	1:X:1527:G:C8	2.52	0.43
1:X:1720:G:C2	1:X:1721:G:C4	3.05	0.43
1:X:1758:C:N3	1:X:1759:A:C8	2.86	0.43
1:X:1849:G:H8	1:X:1849:G:O5'	2.01	0.43
1:X:2302:G:H2'	1:X:2303:C:O4'	2.17	0.43
1:X:2388:G:C6	1:X:2389:G:C5	3.06	0.43
1:X:2557:G:N9	4:B:139:GLY:O	2.51	0.43
1:X:2670:C:C2	1:X:2671:C:C5	3.06	0.43
1:X:2786:G:OP1	4:B:62:PRO:HD3	2.18	0.43
2:Z:62:C:H2'	2:Z:63:A:O4'	2.18	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
3:A:172:TYR:CD1	3:A:184:ARG:HD2	2.53	0.43
4:B:163:GLU:CG	4:B:164:ARG:H	2.30	0.43
5:C:46:ARG:O	5:C:47:THR:C	2.56	0.43
5:C:67:ALA:O	5:C:68:ARG:HB3	2.18	0.43
5:C:167:VAL:O	5:C:168:SER:HB2	2.18	0.43
6:D:22:TYR:OH	6:D:29:PRO:HD3	2.18	0.43
6:D:126:GLY:O	6:D:127:ASN:C	2.56	0.43
7:E:6:LYS:C	7:E:69:ARG:NE	2.71	0.43
7:E:21:ASP:C	7:E:23:VAL:N	2.70	0.43
7:E:57:ASP:OD1	7:E:57:ASP:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:24:VAL:HA	10:H:51:ILE:HG22	1.99	0.43
10:H:73:VAL:HG21	10:H:123:PHE:CD1	2.53	0.43
10:H:76:ARG:NE	15:M:75:GLU:HG3	2.31	0.43
12:J:97:VAL:O	12:J:97:VAL:HG23	2.18	0.43
14:L:11:LEU:O	14:L:14:ARG:HB3	2.18	0.43
14:L:84:ILE:O	14:L:86:GLN:N	2.51	0.43
15:M:40:ARG:O	15:M:41:GLU:HG3	2.18	0.43
16:N:10:ARG:O	16:N:11:ARG:C	2.55	0.43
17:O:23:GLU:HG2	17:O:91:THR:HB	1.99	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
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
26:Y:36:CYS:C	26:Y:38:GLY:H	2.21	0.43
1:X:107:G:C2	1:X:108:G:C8	3.06	0.43
1:X:148:C:H6	1:X:148:C:OP1	2.01	0.43
1:X:198:A:H4'	1:X:199:A:OP2	2.19	0.43
1:X:310:A:N1	5:C:162:ARG:NH2	2.65	0.43
1:X:394:U:H2'	1:X:395:G:H8	1.80	0.43
1:X:546:A:H2'	1:X:547:U:H6	1.80	0.43
1:X:583:C:C6	1:X:2038:C:H5''	2.54	0.43
1:X:810:U:H2'	1:X:811:G:C8	2.52	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
1:X:1124:U:C2	1:X:1125:G:C8	3.06	0.43
1:X:1255:A:H2'	1:X:1256:C:H6	1.81	0.43
1:X:1494:G:C4	1:X:1495:G:C8	3.06	0.43
1:X:1556:A:H2'	1:X:1557:G:C8	2.53	0.43
1:X:1764:A:C2'	1:X:1765:C:H5'	2.47	0.43
1:X:1790:G:N2	3:A:155:LEU:CD2	2.81	0.43
1:X:1830:C:N4	1:X:1881:U:C3'	2.78	0.43
1:X:1866:G:N2	1:X:1867:A:C2	2.86	0.43
1:X:1996:A:N6	1:X:2592:U:C5	2.86	0.43
1:X:2204:A:H5'	1:X:2205:C:O4'	2.18	0.43
1:X:2294:U:H1'	6:D:123:ASP:OD2	2.18	0.43
1:X:2343:C:H5'	22:T:56:ASP:OD2	2.18	0.43
1:X:2447:G:O2'	1:X:2448:A:C8	2.50	0.43
1:X:2722:C:O2'	1:X:2723:C:H5'	2.18	0.43
3:A:37:LEU:HB3	3:A:38:PRO:HD2	2.00	0.43
3:A:70:ARG:HH21	3:A:190:TYR:H	1.65	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:83:GLU:O	3:A:92:ILE:HG22	2.18	0.43
3:A:177:LEU:O	3:A:179:SER:N	2.51	0.43
4:B:147:PRO:C	4:B:149:ARG:N	2.71	0.43
4:B:194:GLY:HA2	15:M:2:GLN:HB3	2.00	0.43
6:D:49:ALA:HA	6:D:52:LYS:HB2	2.01	0.43
8:F:94:LYS:HE2	8:F:94:LYS:HB2	1.85	0.43
8:F:105:VAL:O	8:F:109:ALA:N	2.35	0.43
9:G:48:GLY:CA	9:G:89:ALA:HB2	2.45	0.43
9:G:106:TYR:CZ	9:G:108:GLY:HA2	2.53	0.43
10:H:2:ILE:CG2	10:H:6:SER:HB3	2.47	0.43
10:H:81:ILE:HD12	10:H:89:ILE:HD12	1.99	0.43
11:I:89:ASP:O	11:I:90:ARG:C	2.57	0.43
15:M:104:LEU:HA	15:M:106:TYR:CD2	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
19:Q:62:ARG:HG3	19:Q:63:LYS:N	2.33	0.43
20:R:93:ARG:HH21	20:R:109:ALA:HA	1.84	0.43
21:S:77:ALA:HA	21:S:78:PRO:HD3	1.89	0.43
21:S:168:VAL:O	21:S:168:VAL:CG1	2.67	0.43
22:T:16:SER:HB3	22:T:17:ASN:H	1.60	0.43
22:T:38:VAL:HG21	22:T:79:ILE:CD1	2.48	0.43
24:V:4:SER:O	24:V:8:ASN:N	2.44	0.43
25:W:1:MET:HA	25:W:55:GLU:O	2.18	0.43
30:4:18:ARG:CA	30:4:22:ARG:O	2.62	0.43
1:X:95:G:N2	1:X:96:C:C2	2.86	0.43
1:X:473:C:H3'	1:X:473:C:H6	1.82	0.43
1:X:565:A:H8	1:X:565:A:O5'	2.00	0.43
1:X:856:A:H2'	1:X:857:U:O4'	2.18	0.43
1:X:1163:C:O3'	16:N:76:TYR:HE2	2.01	0.43
1:X:1310:C:C2	1:X:1311:C:C5	3.06	0.43
1:X:1515:U:C2	1:X:1516:A:C8	3.07	0.43
1:X:1659:G:O2'	1:X:1660:G:H5'	2.19	0.43
1:X:1745:C:OP1	15:M:101:ARG:CD	2.67	0.43
1:X:1851:A:C6	1:X:1867:A:H1'	2.53	0.43
1:X:2034:A:C5	1:X:2593:A:C5	3.07	0.43
1:X:2075:U:O2'	1:X:2076:G:P	2.76	0.43
1:X:2511:G:H2'	1:X:2512:A:C8	2.53	0.43
2:Z:49:C:H2'	2:Z:50:U:H5'	1.99	0.43
2:Z:51:G:O2'	2:Z:52:G:H5'	2.18	0.43
3:A:146:GLU:HG2	3:A:148:VAL:H	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:147:LEU:HD21	3:A:155:LEU:HD11	1.97	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
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
5:C:50:GLN:C	5:C:52:SER:N	2.70	0.43
6:D:34:ILE:C	6:D:91:LEU:HB2	2.39	0.43
7:E:24:PHE:CE1	7:E:37:TYR:O	2.71	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
9:G:108:GLY:C	9:G:110:LEU:CD2	2.84	0.43
10:H:23:ARG:HH21	10:H:24:VAL:N	2.17	0.43
10:H:116:ARG:HH11	15:M:38:LYS:NZ	2.04	0.43
11:I:11:GLY:O	11:I:12:SER:C	2.57	0.43
13:K:10:LEU:HD12	13:K:17:ARG:CG	2.48	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
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
17:O:78:VAL:O	17:O:79:GLN:C	2.56	0.43
19:Q:73:ASN:O	19:Q:74:ASP:HB2	2.18	0.43
25:W:34:VAL:O	25:W:35:SER:O	2.36	0.43
30:4:15:LYS:HB3	30:4:26:ILE:HG13	1.97	0.43
30:4:30:VAL:HG12	30:4:33:LYS:HE3	2.01	0.43
1:X:48:A:H1'	1:X:50:G:C4	2.54	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
1:X:155:G:H2'	1:X:156:G:O4'	2.18	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: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
1:X:647:G:C6	11:I:109:LEU:HD11	2.53	0.43
1:X:689:A:O2'	1:X:690:A:H5'	2.18	0.43
1:X:708:G:C2	1:X:709:A:C8	3.05	0.43
1:X:754:G:H2'	1:X:755:C:H6	1.83	0.43
1:X:873:U:O4	1:X:929:A:N7	2.52	0.43
1:X:1107:A:C2'	1:X:1108:U:H5''	2.47	0.43
1:X:1153:A:N3	1:X:1155:G:C8	2.86	0.43
1:X:1216:G:H8	1:X:1216:G:O5'	2.01	0.43
1:X:1288:A:O2'	1:X:1289:A:O5'	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1479:G:H2'	1:X:1480:G:H8	1.83	0.43
1:X:1791:C:HO2'	1:X:1792:C:P	2.41	0.43
1:X:1830:C:H41	1:X:1882:G:P	2.41	0.43
1:X:1926:U:H4'	1:X:1927:U:C3'	2.34	0.43
1:X:2015:G:O5'	1:X:2015:G:H8	2.02	0.43
1:X:2289:A:C2	6:D:75:SER:HB2	2.54	0.43
1:X:2364:C:H2'	1:X:2365:U:C6	2.54	0.43
1:X:2384:G:N2	1:X:2390:A:N7	2.66	0.43
1:X:2590:U:O2	1:X:2590:U:H2'	2.16	0.43
1:X:2737:A:N3	1:X:2737:A:C2'	2.78	0.43
1:X:2786:G:OP1	4:B:62:PRO:CD	2.67	0.43
1:X:2787:A:C4	1:X:2788:C:C5	3.06	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
4:B:116:VAL:HG22	4:B:136:ARG:HG2	1.98	0.43
5:C:108:ILE:HG12	5:C:108:ILE:H	1.49	0.43
6:D:134:GLU:O	6:D:136:LEU:N	2.52	0.43
7:E:9:ILE:CG2	7:E:50:LEU:HB3	2.49	0.43
8:F:116:LEU:CG	8:F:127:THR:HG21	2.48	0.43
9:G:65:LYS:HG3	9:G:66:HIS:CD2	2.53	0.43
9:G:84:ASN:ND2	9:G:154:GLU:HB3	2.32	0.43
9:G:116:ARG:HD2	9:G:126:VAL:HG13	2.00	0.43
10:H:25:LEU:HD12	10:H:25:LEU:N	2.29	0.43
11:I:43:ALA:O	11:I:44:GLY:C	2.56	0.43
12:J:39:GLU:OE2	12:J:128:ILE:HB	2.18	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
13:K:43:GLU:OE2	13:K:44:LEU:N	2.51	0.43
14:L:91:ARG:HD2	14:L:91:ARG:N	2.24	0.43
15:M:28:ARG:HB3	15:M:28:ARG:HE	1.69	0.43
15:M:91:VAL:HG12	15:M:92:THR:N	2.33	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
21:S:25:ASN:ND2	21:S:28:ASN:ND2	2.66	0.43
1:X:67:G:O2'	1:X:68:C:O5'	2.36	0.43
1:X:346:C:H2'	1:X:347:C:H6	1.84	0.43
1:X:456:C:C5'	5:C:43:ALA:HB2	2.48	0.43
1:X:584:A:OP2	1:X:2038:C:N4	2.51	0.43
1:X:609:U:H1'	11:I:18:ARG:NH2	2.33	0.43
1:X:689:A:H2	1:X:815:A:H61	1.56	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:706:A:H2'	1:X:707:U:O4'	2.19	0.43
1:X:754:G:C4	1:X:755:C:C5	3.07	0.43
1:X:981:C:O2'	1:X:982:C:H5'	2.19	0.43
1:X:1087:C:H4'	8:F:94:LYS:HE3	2.01	0.43
1:X:1142:G:O5'	9:G:107:GLN:HB3	2.19	0.43
1:X:1153:A:H3'	1:X:1153:A:OP2	2.19	0.43
1:X:1165:G:H8	1:X:1165:G:O5'	2.00	0.43
1:X:1260:A:C6	1:X:1262:U:C2	3.07	0.43
1:X:1288:A:H4'	1:X:1289:A:OP1	2.18	0.43
1:X:1492:A:C6	1:X:1531:C:C5	3.06	0.43
1:X:1585:A:N6	1:X:1586:A:C6	2.86	0.43
1:X:1644:G:H2'	1:X:1645:U:C6	2.52	0.43
1:X:1687:C:OP2	1:X:2529:G:OP1	2.36	0.43
1:X:1949:A:N3	1:X:2572:U:O4'	2.50	0.43
1:X:2332:G:H1'	22:T:33:ALA:O	2.18	0.43
1:X:2607:C:H1'	1:X:2761:A:N3	2.33	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
2:Z:47:A:H8	6:D:92:ARG:NE	2.17	0.43
3:A:36:ALA:O	3:A:37:LEU:HD23	2.19	0.43
3:A:137:PRO:HB2	3:A:140:ALA:HB2	2.01	0.43
6:D:31:ILE:HD11	6:D:173:MET:HE2	2.01	0.43
6:D:34:ILE:HD12	6:D:96:MET:HB2	2.00	0.43
6:D:85:VAL:CG2	6:D:86:GLY:H	2.24	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
8:F:81:LYS:HZ2	8:F:84:GLY:HA2	1.84	0.43
8:F:92:PRO:O	8:F:93:ASN:CB	2.67	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
11:I:84:GLU:OE2	11:I:89:ASP:OD1	2.36	0.43
12:J:40:PRO:CB	12:J:99:LYS:HZ2	2.32	0.43
12:J:119:PHE:HE1	12:J:132:MET:HG3	1.82	0.43
12:J:121:LEU:O	12:J:124:HIS:N	2.51	0.43
12:J:136:GLU:OE1	12:J:138:TYR:HE2	2.02	0.43
14:L:37:HIS:CE1	14:L:39:TYR:CZ	3.06	0.43
15:M:4:HIS:CD2	15:M:4:HIS:N	2.86	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:148:C:H2'	1:X:149:A:O4'	2.18	0.43
1:X:169:C:H2'	1:X:170:U:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:215:G:H2'	1:X:216:U:O4'	2.18	0.43
1:X:538:A:N3	1:X:538:A:H5''	2.33	0.43
1:X:649:G:N1	1:X:660:G:C6	2.85	0.43
1:X:688:A:C6	1:X:689:A:N6	2.87	0.43
1:X:712:A:C2	1:X:1650:A:H1'	2.52	0.43
1:X:776:G:H8	1:X:776:G:H3'	1.84	0.43
1:X:972:C:C4'	1:X:973:U:OP2	2.66	0.43
1:X:1153:A:C4	1:X:1155:G:N7	2.86	0.43
1:X:1219:C:H5''	11:I:7:LYS:HE2	2.01	0.43
1:X:1287:A:N1	1:X:1661:C:O2'	2.39	0.43
1:X:1467:U:H3'	1:X:1468:A:C5'	2.40	0.43
1:X:1631:C:C4	1:X:1633:C:C2	3.07	0.43
1:X:1685:A:C6	1:X:1976:U:C6	3.06	0.43
1:X:1963:G:O3'	1:X:1965:U:OP2	2.37	0.43
1:X:2024:U:H2'	1:X:2025:A:O4'	2.19	0.43
1:X:2043:A:O2'	1:X:2044:G:P	2.76	0.43
1:X:2320:G:H2'	1:X:2321:C:H6	1.84	0.43
1:X:2445:C:OP1	30:4:5:SER:N	2.50	0.43
1:X:2490:U:H1'	4:B:139:GLY:HA3	2.00	0.43
1:X:2527:G:C5	1:X:2540:A:C2	3.07	0.43
1:X:2576:G:C6	1:X:2577:A:N6	2.87	0.43
1:X:2726:U:C1'	7:E:139:GLN:NE2	2.72	0.43
2:Z:32:C:H6	2:Z:32:C:O5'	2.01	0.43
3:A:67:PHE:CD2	3:A:153:ALA:HB3	2.53	0.43
3:A:124:GLU:HG3	3:A:126:LYS:HG3	1.99	0.43
4:B:182:ILE:C	4:B:182:ILE:HD13	2.38	0.43
6:D:28:VAL:HA	6:D:29:PRO:HD3	1.95	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
9:G:125:ARG:NH1	9:G:128:GLU:CD	2.72	0.43
10:H:23:ARG:HH12	10:H:25:LEU:CG	2.01	0.43
10:H:27:SER:OG	10:H:121:ARG:NH2	2.52	0.43
11:I:20:GLY:C	11:I:22:GLY:N	2.72	0.43
11:I:73:GLU:HG3	11:I:101:ARG:CB	2.48	0.43
12:J:135:ARG:HB3	12:J:136:GLU:H	1.52	0.43
13:K:38:LEU:HD12	13:K:38:LEU:HA	1.68	0.43
15:M:68:VAL:O	15:M:68:VAL:HG23	2.17	0.43
17:O:5:ILE:HG12	17:O:7:THR:N	2.33	0.43
21:S:67:LYS:N	21:S:82:ASP:O	2.43	0.43
21:S:72:ASP:C	21:S:73:LYS:O	2.57	0.43
21:S:157:GLY:O	21:S:158:CYS:C	2.57	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:U:23:LYS:HB3	23:U:35:THR:HG22	2.00	0.43
30:4:8:LYS:CA	30:4:9:LYS:HE3	2.48	0.43
1:X:230:C:O2'	1:X:231:G:H5'	2.18	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
1:X:615:C:H4'	1:X:669:G:H22	1.82	0.43
1:X:932:G:H2'	1:X:933:G:C8	2.54	0.43
1:X:970:A:H62	12:J:83:ARG:NH2	2.14	0.43
1:X:1076:U:H3	1:X:1084:A:H61	1.66	0.43
1:X:1120:C:N4	1:X:1121:G:N2	2.67	0.43
1:X:1182:U:H5'	1:X:1182:U:H6	1.83	0.43
1:X:1296:G:H2'	1:X:1298:G:OP2	2.19	0.43
1:X:1376:C:O2'	1:X:1377:G:H5'	2.19	0.43
1:X:1439:G:O5'	1:X:1439:G:H8	2.02	0.43
1:X:1469:U:OP2	1:X:1471:G:OP2	2.37	0.43
1:X:1930:C:H2'	1:X:1931:G:H8	1.83	0.43
1:X:1935:A:C5	1:X:1936:A:C6	3.06	0.43
1:X:2198:U:C6	1:X:2199:C:H1'	2.53	0.43
1:X:2737:A:OP2	30:4:19:ARG:CA	2.63	0.43
1:X:2776:U:H3'	1:X:2776:U:H6	1.83	0.43
4:B:19:ARG:NE	4:B:21:ILE:HD11	2.28	0.43
5:C:30:VAL:HA	5:C:95:LEU:HD11	2.00	0.43
5:C:64:THR:O	5:C:65:GLY:O	2.36	0.43
6:D:19:GLN:HB3	6:D:20:PHE:CD1	2.53	0.43
6:D:108:LEU:CB	6:D:109:PRO:HD3	2.48	0.43
6:D:119:PRO:CG	6:D:120:ASN:H	2.28	0.43
7:E:137:ASP:OD1	7:E:139:GLN:N	2.51	0.43
8:F:95:ALA:O	8:F:96:LYS:C	2.56	0.43
9:G:98:LYS:HA	9:G:98:LYS:HD2	1.64	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
10:H:1:MET:HE3	10:H:44:TYR:CE1	2.54	0.43
12:J:55:MET:O	12:J:56:SER:O	2.36	0.43
12:J:59:PHE:CE2	12:J:110:VAL:HG11	2.54	0.43
12:J:131:LYS:HD2	21:S:76:ARG:HE	1.84	0.43
13:K:15:SER:OG	13:K:16:ALA:N	2.52	0.43
13:K:60:LEU:O	13:K:61:HIS:C	2.54	0.43
14:L:33:ARG:HH22	14:L:103:LEU:N	2.13	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
20:R:71:GLN:OE1	20:R:72:ARG:N	2.52	0.43
21:S:43:PHE:O	21:S:43:PHE:CG	2.72	0.43
21:S:43:PHE:CD1	21:S:47:SER:HA	2.53	0.43
21:S:89:GLY:HA2	21:S:127:PRO:CG	2.48	0.43
25:W:5:LEU:HB2	25:W:25:LEU:CD1	2.25	0.43
25:W:17:VAL:HB	25:W:18:LYS:H	1.49	0.43
1:X:67:G:HO2'	1:X:68:C:C4'	2.32	0.43
1:X:172:A:C8	1:X:175:C:N4	2.84	0.43
1:X:198:A:C4	1:X:243:G:C8	3.06	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:623:G:H5'	1:X:624:A:OP2	2.18	0.43
1:X:659:G:H2'	1:X:660:G:O4'	2.19	0.43
1:X:794:A:P	3:A:218:LYS:HD2	2.58	0.43
1:X:805:G:H2'	1:X:2419:C:N3	2.33	0.43
1:X:857:U:H2'	1:X:858:G:O4'	2.18	0.43
1:X:867:G:C5	1:X:868:U:C4	3.06	0.43
1:X:1103:C:H42	1:X:1111:C:H42	1.63	0.43
1:X:1133:G:C2	1:X:1134:C:C5	3.07	0.43
1:X:1142:G:C8	1:X:2008:C:H4'	2.54	0.43
1:X:1542:G:O2'	1:X:1543:G:H5'	2.18	0.43
1:X:1564:U:H2'	1:X:1565:G:H8	1.83	0.43
1:X:1567:A:C6	1:X:1568:A:C5	3.07	0.43
1:X:1573:G:H3'	1:X:1574:A:H5''	2.01	0.43
1:X:1579:G:H2'	1:X:1580:C:H6	1.84	0.43
1:X:1641:C:H2'	1:X:1642:G:C5'	2.48	0.43
1:X:1786:C:H2'	1:X:1787:U:O4'	2.18	0.43
1:X:1815:G:O2'	1:X:1816:G:H5'	2.18	0.43
1:X:1863:U:H2'	1:X:1864:G:H8	1.82	0.43
1:X:2019:C:O2'	1:X:2020:G:H5'	2.19	0.43
1:X:2059:U:O5'	1:X:2217:G:N2	2.52	0.43
1:X:2088:U:HO2'	1:X:2089:C:P	2.42	0.43
1:X:2299:A:C5'	1:X:2300:G:C4	3.02	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:2673:G:C2	1:X:2674:C:C2	3.07	0.43
1:X:2676:G:C2	1:X:2690:A:C2	3.07	0.43
1:X:2872:U:H2'	1:X:2873:G:C8	2.53	0.43
3:A:53:PHE:CD2	3:A:220:HIS:CD2	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:19:LEU:H	5:C:19:LEU:HG	1.49	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
6:D:35:VAL:HG11	6:D:88:LYS:CG	2.49	0.43
6:D:111:ILE:O	6:D:114:PHE:N	2.51	0.43
6:D:138:PHE:CD1	6:D:138:PHE:N	2.87	0.43
8:F:86:GLY:O	8:F:87:LYS:CB	2.66	0.43
9:G:48:GLY:O	9:G:89:ALA:HB3	2.19	0.43
9:G:84:ASN:O	9:G:152:ALA:HA	2.19	0.43
10:H:29:ILE:CB	10:H:123:PHE:HE2	2.31	0.43
10:H:109:ARG:HA	10:H:129:LEU:CD1	2.49	0.43
11:I:78:SER:H	11:I:112:GLY:HA3	1.83	0.43
12:J:117:GLU:O	12:J:119:PHE:N	2.51	0.43
13:K:20:LEU:O	13:K:22:ARG:N	2.52	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
17:O:47:PHE:O	17:O:48:GLY:O	2.36	0.43
18:P:80:LEU:HD21	18:P:87:GLU:CB	2.47	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
25:W:47:VAL:O	25:W:50:LEU:HD12	2.19	0.43
1:X:41:G:N1	1:X:451:A:C6	2.86	0.43
1:X:163:A:H2'	1:X:164:G:H8	1.84	0.43
1:X:171:G:C6	1:X:179:U:C2	3.07	0.43
1:X:174:A:C2	1:X:840:U:O4	2.72	0.43
1:X:338:G:O6	1:X:343:A:C8	2.72	0.43
1:X:476:G:C6	1:X:477:A:N6	2.87	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
1:X:574:C:OP2	17:O:77:GLY:N	2.52	0.43
1:X:592:G:P	16:N:10:ARG:HH12	2.40	0.43
1:X:676:G:C6	1:X:677:G:C5	3.07	0.43
1:X:697:G:C2	1:X:807:A:C2	3.07	0.43
1:X:972:C:H4'	1:X:973:U:OP2	2.19	0.43
1:X:1033:G:C6	1:X:1151:U:C5	3.06	0.43
1:X:1062:G:N2	1:X:1063:C:C2	2.87	0.43
1:X:1469:U:P	1:X:1470:G:OP2	2.76	0.43
1:X:1574:A:HO2'	1:X:1575:C:H3'	1.77	0.43
1:X:1741:G:H2'	1:X:1742:G:H5'	1.96	0.43
1:X:1767:G:C6	1:X:1768:U:C5	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1831:G:C6	1:X:1832:G:N7	2.87	0.43
1:X:1915:A:C2'	1:X:1916:G:H5'	2.48	0.43
1:X:1973:C:H2'	1:X:1974:U:C6	2.53	0.43
1:X:1975:G:C4	1:X:1980:A:N6	2.86	0.43
1:X:1987:G:H2'	1:X:1988:A:H5'	2.00	0.43
1:X:2034:A:N7	1:X:2593:A:N7	2.67	0.43
1:X:2170:C:H3'	1:X:2171:U:C5'	2.36	0.43
1:X:2447:G:C8	1:X:2455:A:C2	3.07	0.43
1:X:2659:C:H2'	1:X:2660:C:H6	1.84	0.43
1:X:2721:A:H2'	1:X:2722:C:H5'	2.01	0.43
1:X:2728:A:C4	1:X:2729:A:C8	3.07	0.43
3:A:76:ASN:HA	3:A:118:ASN:CA	2.42	0.43
4:B:202:ALA:O	4:B:203:LYS:HB3	2.18	0.43
5:C:163:ASN:O	5:C:164:VAL:O	2.37	0.43
6:D:22:TYR:CD2	6:D:28:VAL:N	2.86	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:HG3	6:D:150:ARG:NH1	2.34	0.43
6:D:150:ARG:HG3	6:D:150:ARG:HH11	1.83	0.43
7:E:33:LEU:HD23	7:E:35:VAL:CG2	2.49	0.43
8:F:85:ILE:HG22	8:F:86:GLY:H	1.80	0.43
9:G:66:HIS:CA	16:N:67:ALA:HB1	2.30	0.43
10:H:8:LEU:O	10:H:18:GLU:HG3	2.18	0.43
11:I:4:HIS:HB2	11:I:5:ASP:H	1.50	0.43
11:I:32:ARG:HD2	17:O:81:ARG:HD2	2.01	0.43
11:I:56:LEU:O	11:I:56:LEU:HD22	2.18	0.43
12:J:15:ARG:HB3	12:J:16:GLY:H	1.51	0.43
12:J:19:THR:HG21	12:J:40:PRO:CB	2.48	0.43
13:K:85:PRO:O	13:K:86:LYS:C	2.57	0.43
14:L:19:THR:O	14:L:21:THR:N	2.51	0.43
14:L:68:ALA:C	14:L:70:ALA:N	2.71	0.43
17:O:43:GLU:O	17:O:44:GLN:C	2.56	0.43
19:Q:39:LYS:HE3	19:Q:50:VAL:CG1	2.49	0.43
19:Q:68:PHE:N	19:Q:68:PHE:HD2	2.07	0.43
20:R:29:HIS:CE1	20:R:51:VAL:HA	2.53	0.43
21:S:30:VAL:CG1	21:S:31:SER:H	2.31	0.43
23:U:27:ASP:CA	23:U:32:ARG:NH1	2.78	0.43
24:V:8:ASN:O	24:V:8:ASN:CG	2.57	0.43
26:Y:58:LEU:H	26:Y:58:LEU:CD1	2.31	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:116:A:H3'	1:X:116:A:H8	1.83	0.43
1:X:202:A:H2'	1:X:203:G:O4'	2.19	0.43
1:X:244:C:C4	1:X:245:C:C5	3.07	0.43
1:X:421:G:O5'	1:X:421:G:H8	2.02	0.43
1:X:538:A:H62	1:X:2025:A:H2'	1.82	0.43
1:X:577:U:H4'	1:X:956:A:N6	2.34	0.43
1:X:687:G:H5''	5:C:70:GLY:N	2.33	0.43
1:X:689:A:H8	1:X:2052:G:H21	1.66	0.43
1:X:791:G:C6	1:X:792:U:C2	3.06	0.43
1:X:1032:A:C8	1:X:1032:A:C3'	3.01	0.43
1:X:1162:A:C6	1:X:1163:C:C4	3.07	0.43
1:X:1216:G:HO2'	5:C:178:TYR:HH	1.64	0.43
1:X:1228:G:O2'	1:X:1229:C:H5'	2.19	0.43
1:X:1288:A:O2'	1:X:1289:A:C4'	2.66	0.43
1:X:1358:C:C3'	1:X:1359:G:C5'	2.96	0.43
1:X:1372:A:N7	1:X:1386:A:N1	2.66	0.43
1:X:1462:C:C2	1:X:1463:A:C8	3.06	0.43
1:X:1645:U:H2'	1:X:1646:G:O4'	2.19	0.43
1:X:1692:C:C2	4:B:129:HIS:CD2	3.07	0.43
1:X:1713:G:H8	1:X:1713:G:C5'	2.32	0.43
1:X:1783:G:OP1	3:A:205:VAL:O	2.37	0.43
1:X:1982:C:OP1	1:X:2703:C:O2'	2.35	0.43
1:X:2178:U:H2'	1:X:2179:C:C6	2.41	0.43
1:X:2319:G:C2	1:X:2320:G:N7	2.87	0.43
1:X:2334:C:O2'	22:T:24:LYS:HE3	2.18	0.43
1:X:2379:G:N1	1:X:2380:U:C2	2.87	0.43
1:X:2436:U:O2	1:X:2474:G:C2	2.72	0.43
1:X:2522:G:H5'	1:X:2522:G:C8	2.53	0.43
1:X:2692:A:C5'	1:X:2693:U:OP2	2.67	0.43
1:X:2820:C:O5'	1:X:2820:C:H6	2.02	0.43
1:X:2875:C:H2'	1:X:2876:C:C5'	2.49	0.43
2:Z:57:U:H1'	6:D:26:MET:CG	2.49	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
4:B:131:SER:C	4:B:132:LYS:CG	2.87	0.43
6:D:38:GLU:N	6:D:87:ILE:O	2.36	0.43
11:I:7:LYS:C	11:I:9:THR:N	2.71	0.43
12:J:66:TYR:O	12:J:106:GLU:OE2	2.37	0.43
12:J:119:PHE:O	12:J:123:GLY:N	2.51	0.43
13:K:10:LEU:CD2	13:K:14:SER:H	2.32	0.43
16:N:7:GLY:O	16:N:8:ILE:HG12	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
19:Q:90:ALA:C	19:Q:92:ALA:H	2.21	0.43
21:S:64:ALA:HB2	21:S:85:MET:SD	2.59	0.43
30:4:18:ARG:HG3	30:4:23:VAL:HG13	2.01	0.43
1:X:203:G:C2	1:X:204:A:C2	3.07	0.42
1:X:222:G:H2'	1:X:223:C:H6	1.84	0.42
1:X:510:G:N2	1:X:512:A:H3'	2.34	0.42
1:X:617:U:O2	1:X:617:U:H5''	2.18	0.42
1:X:674:U:O2'	1:X:675:C:H5'	2.19	0.42
1:X:748:A:H3'	1:X:749:C:C6	2.55	0.42
1:X:764:A:C2	1:X:802:A:H2'	2.51	0.42
1:X:965:G:C6	1:X:966:A:C5	3.07	0.42
1:X:985:G:O2'	1:X:986:A:P	2.77	0.42
1:X:1017:C:C2	1:X:1148:G:N2	2.87	0.42
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:1219:C:C5'	11:I:7:LYS:O	2.61	0.42
1:X:1441:A:O2'	1:X:1442:C:P	2.76	0.42
1:X:1524:C:H6	1:X:1525:A:C8	2.36	0.42
1:X:1775:A:O2'	1:X:1776:A:OP2	2.33	0.42
1:X:1805:G:H21	3:A:50:THR:CG2	2.32	0.42
1:X:1861:G:H2'	1:X:1862:C:O4'	2.19	0.42
1:X:2245:A:C4'	1:X:2246:A:C2	3.02	0.42
1:X:2465:G:N2	1:X:2466:G:C4	2.87	0.42
1:X:2548:G:O2'	1:X:2549:G:H5'	2.19	0.42
1:X:2740:C:H2'	1:X:2741:G:H5'	2.00	0.42
6:D:123:ASP:C	6:D:125:ARG:H	2.21	0.42
7:E:7:GLN:N	7:E:7:GLN:OE1	2.52	0.42
7:E:18:ASN:O	7:E:20:GLN:HG3	2.19	0.42
7:E:107:ILE:N	7:E:107:ILE:CD1	2.81	0.42
7:E:137:ASP:OD1	7:E:137:ASP:C	2.58	0.42
9:G:67:ARG:O	9:G:70:PHE:CE1	2.72	0.42
11:I:10:PRO:HA	11:I:14:LYS:HB2	2.01	0.42
11:I:70:THR:CG2	11:I:71:THR:N	2.81	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:76:LEU:HD23	20:R:76:LEU:N	2.33	0.42
20:R:105:ARG:CZ	20:R:106:VAL:O	2.67	0.42
21:S:39:PHE:CE2	21:S:43:PHE:HB2	2.54	0.42
21:S:56:VAL:CG1	21:S:57:GLU:H	2.27	0.42
21:S:75:LYS:CE	21:S:75:LYS:H	2.32	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
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
1:X:136:A:C8	1:X:137:A:N7	2.88	0.42
1:X:204:A:N6	1:X:2386:G:C8	2.87	0.42
1:X:302:U:C4	1:X:361:G:N2	2.87	0.42
1:X:405:C:O2'	1:X:406:G:H5'	2.18	0.42
1:X:632:A:H3'	1:X:632:A:N3	2.34	0.42
1:X:683:A:O5'	11:I:45:LYS:CA	2.66	0.42
1:X:698:A:C8	1:X:786:U:O4	2.72	0.42
1:X:793:G:C2	1:X:795:A:C2	3.07	0.42
1:X:812:G:C8	1:X:813:A:C8	3.07	0.42
1:X:919:U:H2'	1:X:920:G:C8	2.54	0.42
1:X:923:A:H2	1:X:2256:G:N3	2.17	0.42
1:X:1016:C:H5'	1:X:1023:U:OP2	2.20	0.42
1:X:1082:G:C8	1:X:1082:G:O5'	2.71	0.42
1:X:1181:C:H2'	1:X:1182:U:C5'	2.49	0.42
1:X:1223:G:C5'	1:X:1224:A:H5'	2.42	0.42
1:X:1572:C:H2'	1:X:1573:G:H5'	2.01	0.42
1:X:1759:A:N1	1:X:1760:G:C5	2.87	0.42
1:X:1825:C:H2'	1:X:1952:A:H2	1.84	0.42
1:X:1843:U:N3	1:X:1844:C:C5	2.87	0.42
1:X:1886:G:N3	1:X:1887:G:C8	2.87	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:2228:U:H2'	1:X:2231:G:OP2	2.19	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
1:X:2800:C:C5	1:X:2801:A:N7	2.87	0.42
1:X:2827:G:H2'	1:X:2828:C:O4'	2.19	0.42
1:X:2860:C:H2'	1:X:2861:A:O5'	2.19	0.42
3:A:54:ILE:N	3:A:217:ARG:HB3	2.34	0.42
4:B:79:ARG:NH1	4:B:195:LEU:HD21	2.34	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:134:GLU:O	6:D:134:GLU:HG2	2.18	0.42
7:E:20:GLN:O	7:E:21:ASP:CB	2.67	0.42
7:E:33:LEU:HD23	7:E:35:VAL:CG1	2.49	0.42
7:E:69:ARG:NH2	7:E:69:ARG:HG2	2.34	0.42
7:E:148:VAL:O	7:E:151:VAL:HG23	2.19	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
10:H:23:ARG:HH21	10:H:23:ARG:CB	2.29	0.42
12:J:68:ARG:CB	12:J:68:ARG:NH1	2.82	0.42
12:J:86:LYS:O	12:J:87:GLY:C	2.58	0.42
14:L:11:LEU:O	14:L:11:LEU:HD23	2.18	0.42
14:L:78:ALA:O	14:L:80:ALA:N	2.52	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
17:O:71:ILE:HB	17:O:84:THR:O	2.18	0.42
18:P:45:ILE:HD11	18:P:56:LEU:HB2	2.00	0.42
20:R:40:LEU:O	20:R:44:GLN:CA	2.66	0.42
21:S:45:GLN:NE2	21:S:45:GLN:N	2.66	0.42
23:U:62:LEU:HD23	23:U:67:LEU:CD1	2.49	0.42
24:V:41:HIS:O	24:V:43:VAL:N	2.53	0.42
25:W:2:LYS:HE2	25:W:31:SER:HB2	2.00	0.42
1:X:64:C:H1'	19:Q:68:PHE:HD1	1.84	0.42
1:X:118:U:O2'	1:X:119:G:C5'	2.68	0.42
1:X:168:A:N3	1:X:169:C:C5	2.88	0.42
1:X:215:G:H21	1:X:216:U:H1'	1.84	0.42
1:X:313:U:C2	1:X:314:G:C8	3.08	0.42
1:X:404:A:C6	1:X:405:C:N3	2.86	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:572:G:C6	1:X:2001:G:C5	3.07	0.42
1:X:640:C:H4'	1:X:660:G:C2	2.54	0.42
1:X:653:G:H8	1:X:653:G:H3'	1.84	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
1:X:1173:G:C4	1:X:1174:G:C8	3.07	0.42
1:X:1189:G:H2'	1:X:1190:C:O4'	2.20	0.42
1:X:1198:C:O5'	1:X:1198:C:H6	2.02	0.42
1:X:2073:A:N6	1:X:2074:U:O4	2.51	0.42
1:X:2208:U:C6	1:X:2208:U:C3'	3.02	0.42
1:X:2557:G:N2	1:X:2558:C:C2	2.87	0.42
1:X:2606:G:C5	1:X:2607:C:C4	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2712:G:OP2	1:X:2712:G:C8	2.73	0.42
1:X:2862:G:N2	1:X:2863:U:C2	2.87	0.42
2:Z:58:G:H4'	2:Z:59:A:H8	1.83	0.42
3:A:133:LEU:CB	3:A:187:SER:HA	2.31	0.42
3:A:227:ASN:C	3:A:229:VAL:N	2.68	0.42
4:B:11:MET:O	4:B:12:THR:HB	2.19	0.42
4:B:49:ILE:CG1	4:B:50:GLY:N	2.82	0.42
5:C:65:GLY:C	5:C:66:ASN:ND2	2.72	0.42
5:C:73:SER:O	5:C:74:VAL:O	2.37	0.42
5:C:158:ARG:HG3	5:C:159:ARG:H	1.83	0.42
6:D:10:ASP:N	6:D:10:ASP:OD1	2.53	0.42
6:D:138:PHE:O	6:D:140:GLU:N	2.47	0.42
7:E:17:VAL:C	7:E:18:ASN:CG	2.77	0.42
7:E:45:GLN:NE2	7:E:48:ASP:O	2.51	0.42
9:G:32:TYR:O	9:G:33:ILE:O	2.37	0.42
9:G:158:HIS:C	9:G:161:GLN:HB2	2.40	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
10:H:47:VAL:HG21	10:H:115:ALA:HB2	1.99	0.42
10:H:100:ASN:ND2	10:H:104:GLU:HG3	2.29	0.42
11:I:7:LYS:HG2	11:I:9:THR:CG2	2.49	0.42
12:J:20:GLY:CA	12:J:99:LYS:HE2	2.49	0.42
12:J:54:VAL:CG1	12:J:121:LEU:HB3	2.49	0.42
14:L:55:SER:O	14:L:56:SER:CB	2.67	0.42
15:M:39:VAL:C	15:M:41:GLU:N	2.72	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
16:N:110:VAL:O	16:N:111:ASP:C	2.56	0.42
19:Q:6:ILE:O	19:Q:7:LEU:C	2.57	0.42
19:Q:34:THR:C	19:Q:36:THR:H	2.22	0.42
21:S:9:THR:HG23	21:S:10:PRO:HD2	2.01	0.42
23:U:29:GLY:O	23:U:30:VAL:C	2.58	0.42
23:U:70:LEU:CD2	23:U:75:TYR:HD1	2.31	0.42
24:V:25:LEU:HD11	24:V:47:ARG:HG2	2.01	0.42
1:X:322:A:HO2'	1:X:343:A:H5'	1.84	0.42
1:X:330:C:H2'	1:X:331:U:C6	2.55	0.42
1:X:471:A:H3'	1:X:472:C:C6	2.54	0.42
1:X:649:G:N1	1:X:660:G:N1	2.66	0.42
1:X:831:G:C2	1:X:1204:G:C6	3.08	0.42
1:X:861:G:C4	1:X:862:A:C8	3.07	0.42
1:X:870:C:H5'	22:T:69:PHE:CD2	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:872:G:H2'	1:X:928:G:O6	2.19	0.42
1:X:1018:C:C4	1:X:1019:U:H5	2.36	0.42
1:X:1210:C:C2	1:X:1211:G:C8	3.07	0.42
1:X:1248:G:C6	1:X:1249:G:N1	2.87	0.42
1:X:1356:G:N3	1:X:1397:A:H2	2.17	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
1:X:1503:G:C4	1:X:1504:G:N7	2.88	0.42
1:X:1690:U:H2'	1:X:1691:G:C5'	2.27	0.42
1:X:1719:G:O2'	1:X:1720:G:H5'	2.20	0.42
1:X:1730:G:C6	1:X:1731:C:C4	3.07	0.42
1:X:1774:A:C2	1:X:2566:A:C4	3.07	0.42
1:X:1791:C:C2	1:X:1810:U:O2	2.72	0.42
1:X:1918:G:C5	1:X:1945:C:C5	3.08	0.42
1:X:1935:A:N3	1:X:2539:C:O2'	2.33	0.42
1:X:2010:G:C6	1:X:2011:U:C4	3.08	0.42
1:X:2070:G:H2'	1:X:2071:G:H8	1.85	0.42
1:X:2286:G:H21	1:X:2290:A:H62	1.66	0.42
1:X:2299:A:H5'	1:X:2300:G:C4	2.53	0.42
1:X:2807:U:HO2'	1:X:2808:U:P	2.42	0.42
2:Z:54:U:H2'	2:Z:55:C:O4'	2.18	0.42
3:A:155:LEU:O	3:A:156:ALA:C	2.58	0.42
3:A:166:GLN:HB2	3:A:174:ILE:HG22	2.00	0.42
4:B:133:LYS:HG3	4:B:137:ARG:CB	2.48	0.42
5:C:31:VAL:O	5:C:32:THR:C	2.56	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
6:D:75:SER:HB2	6:D:79:LEU:CD1	2.48	0.42
6:D:135:GLN:HG2	6:D:152:MET:HG2	2.02	0.42
7:E:155:ASP:OD2	7:E:155:ASP:C	2.58	0.42
7:E:155:ASP:CG	7:E:157:TYR:HB2	2.38	0.42
8:F:109:ALA:O	8:F:112:LYS:C	2.58	0.42
9:G:80:VAL:HG12	9:G:81:VAL:N	2.34	0.42
10:H:23:ARG:NH2	10:H:24:VAL:N	2.67	0.42
10:H:73:VAL:O	10:H:73:VAL:HG13	2.20	0.42
10:H:97:VAL:O	10:H:98:ILE:C	2.57	0.42
11:I:77:LEU:HD22	11:I:110:ALA:CA	2.50	0.42
11:I:89:ASP:OD2	11:I:120:VAL:HG13	2.19	0.42
12:J:106:GLU:OE1	12:J:106:GLU:O	2.37	0.42
15:M:89:ASN:CG	15:M:90:GLN:OE1	2.58	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)
17:O:76:SER:C	17:O:78:VAL:N	2.72	0.42
18:P:100:GLY:N	18:P:121:THR:O	2.52	0.42
19:Q:63:LYS:HE3	19:Q:68:PHE:O	2.19	0.42
20:R:52:ASN:OD1	20:R:53:VAL:N	2.53	0.42
20:R:56:LYS:HE2	20:R:56:LYS:HB3	1.70	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
21:S:91:PRO:HG3	21:S:125:PRO:HG3	2.02	0.42
22:T:26:PHE:CD1	22:T:26:PHE:N	2.87	0.42
26:Y:15:LYS:C	26:Y:17:ASP:N	2.71	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:456:C:C4'	5:C:43:ALA:HB2	2.50	0.42
1:X:473:C:H3'	1:X:473:C:C6	2.54	0.42
1:X:531:G:N3	1:X:532:A:C8	2.87	0.42
1:X:565:A:H2'	1:X:566:U:H6	1.84	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
1:X:1939:U:C4	1:X:1940:C:C5	3.07	0.42
1:X:2010:G:H2'	1:X:2011:U:O4'	2.20	0.42
1:X:2043:A:O2'	1:X:2044:G:OP2	2.32	0.42
1:X:2170:C:H2'	1:X:2171:U:H4'	2.01	0.42
1:X:2177:U:O2'	1:X:2178:U:H5'	2.19	0.42
1:X:2240:C:H2'	1:X:2241:U:O5'	2.19	0.42
1:X:2299:A:H61	1:X:2312:A:C3'	2.31	0.42
1:X:2325:A:HO2'	1:X:2326:C:P	2.42	0.42
1:X:2445:C:N3	1:X:2464:G:C2	2.88	0.42
1:X:2507:U:H2'	1:X:2509:A:O5'	2.18	0.42
1:X:2726:U:C1'	7:E:139:GLN:HE21	2.33	0.42
1:X:2759:U:H4'	1:X:2760:G:C5'	2.35	0.42
3:A:165:VAL:CG1	3:A:166:GLN:H	2.27	0.42
4:B:70:ALA:O	4:B:71:GLY:C	2.58	0.42
4:B:188:ILE:HD12	4:B:188:ILE:N	2.34	0.42
5:C:45:THR:HB	5:C:86:PRO:HD2	2.01	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
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:O	6:D:66:ILE:CG2	2.67	0.42
7:E:33:LEU:HD23	7:E:35:VAL:HG13	2.01	0.42
10:H:81:ILE:HD11	10:H:83:ARG:HG2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:127:VAL:HG12	10:H:128:SER:N	2.35	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
12:J:36:ILE:HG22	12:J:37:ALA:O	2.19	0.42
12:J:42:TRP:CE3	12:J:95:VAL:HG21	2.55	0.42
12:J:139:ASP:OD1	21:S:71:MET:HE1	2.19	0.42
16:N:65:ILE:HD13	16:N:95:LEU:HD23	2.01	0.42
20:R:81:VAL:HG11	20:R:90:LYS:H	1.85	0.42
21:S:146:HIS:HA	21:S:170:SER:HB2	2.00	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
25:W:34:VAL:CG2	25:W:40:VAL:HG13	2.49	0.42
30:4:1:MET:SD	30:4:35:ARG:CB	3.08	0.42
1:X:13:A:N3	1:X:15:G:C6	2.87	0.42
1:X:59:G:O6	1:X:62:U:C2	2.72	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:202:A:O2'	1:X:234:C:H4'	2.19	0.42
1:X:228:A:C5'	11:I:53:ARG:HG2	2.43	0.42
1:X:540:G:C6	1:X:2005:U:H5''	2.55	0.42
1:X:1247:U:O4	1:X:1248:G:N1	2.53	0.42
1:X:1279:G:C8	1:X:1279:G:H3'	2.54	0.42
1:X:1343:C:O2	1:X:1343:C:C2'	2.68	0.42
1:X:1501:C:O2'	1:X:1502:G:H5'	2.19	0.42
1:X:1741:G:C2	1:X:1742:G:C8	3.07	0.42
1:X:1744:G:C6	1:X:1747:G:C2	3.07	0.42
1:X:1807:A:O2'	1:X:1808:C:H4'	2.20	0.42
1:X:1823:G:C6	1:X:1824:C:N4	2.88	0.42
1:X:2015:G:HO2'	1:X:2016:A:P	2.42	0.42
1:X:2086:U:H2'	1:X:2087:U:C6	2.55	0.42
1:X:2225:G:N2	1:X:2405:A:O2'	2.52	0.42
1:X:2484:G:O6	1:X:2555:G:H2'	2.20	0.42
1:X:2661:G:H2'	1:X:2662:C:H6	1.85	0.42
1:X:2775:U:OP2	1:X:2776:U:H5	2.03	0.42
1:X:2863:U:H2'	1:X:2864:C:H6	1.84	0.42
2:Z:8:C:H2'	2:Z:9:G:C8	2.54	0.42
3:A:46:ARG:O	3:A:46:ARG:CG	2.66	0.42
4:B:36:ARG:HG2	4:B:36:ARG:HH11	1.83	0.42
5:C:10:ASN:O	5:C:10:ASN:OD1	2.37	0.42
5:C:158:ARG:O	5:C:159:ARG:C	2.57	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:18:GLN:C	6:D:20:PHE:H	2.22	0.42
6:D:30:ARG:O	6:D:158:THR:HA	2.20	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
7:E:85:ILE:C	7:E:132:ASP:OD2	2.58	0.42
9:G:100:TYR:CD1	9:G:100:TYR:O	2.72	0.42
11:I:49:PHE:O	11:I:50:GLU:HG2	2.19	0.42
11:I:121:HIS:CA	11:I:141:VAL:HB	2.40	0.42
12:J:55:MET:O	12:J:56:SER:C	2.58	0.42
13:K:11:ASN:ND2	13:K:12:ARG:HE	2.18	0.42
15:M:24:LEU:HB3	15:M:25:PRO:HD2	2.02	0.42
17:O:79:GLN:OE1	17:O:79:GLN:CA	2.67	0.42
19:Q:40:ASP:O	19:Q:41:ALA:O	2.36	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
21:S:66:VAL:HG13	21:S:81:VAL:HG13	2.00	0.42
21:S:127:PRO:O	21:S:129:ARG:N	2.41	0.42
23:U:27:ASP:C	23:U:32:ARG:CZ	2.88	0.42
24:V:18:ILE:C	24:V:20:ALA:N	2.73	0.42
1:X:32:C:N4	1:X:33:C:N4	2.67	0.42
1:X:140:G:N1	1:X:141:G:C5	2.88	0.42
1:X:201:G:C2	1:X:202:A:C5	3.08	0.42
1:X:318:G:N2	1:X:320:A:H3'	2.35	0.42
1:X:824:U:O2'	1:X:1264:C:C4'	2.67	0.42
1:X:885:A:H2	12:J:30:PHE:HZ	1.68	0.42
1:X:1040:A:C8	1:X:1041:G:C8	3.08	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
1:X:1918:G:C6	1:X:1945:C:C5	3.08	0.42
1:X:1920:A:C5	1:X:1922:U:C5	3.08	0.42
1:X:2184:C:C4	1:X:2185:U:C4	3.07	0.42
1:X:2241:U:H5	22:T:17:ASN:ND2	2.17	0.42
1:X:2272:A:C6	1:X:2319:G:C6	3.07	0.42
1:X:2528:G:C2	1:X:2529:G:N7	2.87	0.42
1:X:2626:U:O5'	1:X:2626:U:H6	2.02	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
1:X:2859:U:H5	1:X:2860:C:C4	2.37	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:48:A:C5	2:Z:49:C:C4	3.07	0.42
3:A:91:ARG:HG3	3:A:198:ASN:OD1	2.19	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
5:C:45:THR:C	5:C:47:THR:N	2.72	0.42
5:C:55:GLY:C	5:C:56:ARG:HG2	2.40	0.42
6:D:71:LYS:O	6:D:72:LYS:CB	2.65	0.42
6:D:142:THR:O	6:D:146:VAL:CG1	2.67	0.42
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
8:F:94:LYS:O	8:F:95:ALA:HB2	2.19	0.42
15:M:50:PHE:CD2	15:M:51:GLU:N	2.87	0.42
15:M:72:SER:O	15:M:73:PHE:HB2	2.20	0.42
16:N:68:GLY:O	16:N:71:LEU:N	2.52	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
18:P:74:SER:O	18:P:74:SER:OG	2.34	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
21:S:34:LEU:C	21:S:34:LEU:CD1	2.88	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
23:U:37:ILE:O	23:U:38:THR:CG2	2.68	0.42
1:X:102:C:H2'	1:X:103:U:O4'	2.20	0.42
1:X:162:C:H2'	1:X:163:A:H8	1.84	0.42
1:X:173:A:OP1	11:I:53:ARG:NH2	2.53	0.42
1:X:350:U:O5'	1:X:350:U:C6	2.65	0.42
1:X:444:U:O2'	1:X:445:A:H5'	2.19	0.42
1:X:521:U:H5''	1:X:522:G:OP2	2.20	0.42
1:X:525:A:H2	1:X:1273:G:N3	2.18	0.42
1:X:534:U:H2'	1:X:535:U:C6	2.55	0.42
1:X:580:A:O2'	1:X:581:A:O5'	2.38	0.42
1:X:637:G:H8	1:X:637:G:O5'	2.03	0.42
1:X:678:G:H4'	11:I:50:GLU:OE1	2.19	0.42
1:X:776:G:C2	1:X:778:G:N3	2.88	0.42
1:X:797:A:C6	3:A:229:VAL:HG21	2.49	0.42
1:X:1171:A:C4	1:X:1172:U:C5	3.08	0.42
1:X:1171:A:N3	17:O:6:GLN:HG2	2.35	0.42
1:X:1208:A:C2	1:X:1209:G:C4	3.08	0.42
1:X:1217:U:O5'	1:X:1217:U:H6	2.02	0.42
1:X:1333:G:N2	1:X:1344:C:C4	2.86	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1359:G:C6	1:X:1617:G:N1	2.88	0.42
1:X:1484:G:N2	1:X:1539:U:O2	2.52	0.42
1:X:1621:C:H2'	1:X:1622:G:C5'	2.49	0.42
1:X:1713:G:C4	1:X:1714:A:C8	3.08	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:2090:U:H1'	1:X:2166:G:N2	2.35	0.42
1:X:2338:C:H2'	1:X:2339:A:H8	1.85	0.42
1:X:2401:A:C2	1:X:2403:C:N3	2.87	0.42
1:X:2484:G:C2'	1:X:2485:U:H5'	2.49	0.42
1:X:2642:G:H2'	1:X:2643:G:O5'	2.20	0.42
2:Z:44:C:H1'	6:D:89:VAL:HG13	2.01	0.42
3:A:134:ARG:H	3:A:187:SER:HB2	1.83	0.42
4:B:51:TYR:O	4:B:52:ALA:HB3	2.20	0.42
7:E:144:VAL:O	7:E:145:ALA:C	2.56	0.42
9:G:61:ARG:NH1	9:G:65:LYS:HE2	2.34	0.42
10:H:23:ARG:HH22	10:H:25:LEU:N	2.17	0.42
11:I:9:THR:C	11:I:13:ARG:HH21	2.20	0.42
11:I:76:LYS:CB	11:I:79:GLN:HG2	2.45	0.42
11:I:88:PHE:HB3	11:I:90:ARG:HD3	1.95	0.42
11:I:107:LYS:HA	11:I:124:ALA:O	2.19	0.42
16:N:48:ARG:O	16:N:52:ASN:HB2	2.20	0.42
19:Q:55:THR:CB	19:Q:78:ALA:HA	2.50	0.42
21:S:74:ARG:HD3	21:S:75:LYS:HE3	2.02	0.42
21:S:113:VAL:CG1	21:S:171:VAL:HG22	2.49	0.42
21:S:148:THR:O	21:S:149:ALA:C	2.58	0.42
23:U:54:ASN:OD1	23:U:55:GLY:N	2.52	0.42
26:Y:58:LEU:O	26:Y:59:ALA:C	2.58	0.42
30:4:11:CYS:SG	30:4:27:CYS:SG	3.17	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
1:X:541:C:O2'	1:X:542:A:OP2	2.38	0.42
1:X:584:A:C2	1:X:585:U:C5	3.07	0.42
1:X:668:A:O2'	1:X:669:G:O4'	2.36	0.42
1:X:689:A:H2	1:X:690:A:C8	2.37	0.42
1:X:742:G:C5	3:A:208:LYS:HB3	2.54	0.42
1:X:937:C:O2'	1:X:938:G:H5'	2.19	0.42
1:X:945:G:C5	1:X:946:U:C5	3.07	0.42
1:X:1056:U:C4'	1:X:1058:G:H1'	2.48	0.42
1:X:1087:C:H4'	8:F:94:LYS:CE	2.50	0.42
1:X:1271:C:H2'	1:X:1272:G:O5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:X:1375:C:C2	1:X:1376:C:C6	3.07	0.42
1:X:1397:A:H2'	1:X:1398:G:C5'	2.49	0.42
1:X:1622:G:H4'	1:X:1624:A:C2	2.55	0.42
1:X:1713:G:C6	1:X:1714:A:C6	3.08	0.42
1:X:2355:A:N1	14:L:91:ARG:NH2	2.67	0.42
1:X:2507:U:P	7:E:172:LYS:HZ1	2.42	0.42
1:X:2640:G:O2'	1:X:2641:A:H5'	2.20	0.42
1:X:2826:C:O2'	1:X:2827:G:H5'	2.20	0.42
2:Z:101:A:H8	2:Z:101:A:O5'	2.02	0.42
3:A:67:PHE:CB	3:A:153:ALA:H	2.18	0.42
3:A:72:LYS:O	3:A:73:SER:C	2.59	0.42
3:A:120:GLY:O	3:A:123:ALA:CB	2.68	0.42
3:A:212:SER:O	3:A:213:ARG:C	2.59	0.42
4:B:14:ILE:HG22	4:B:15:TRP:N	2.35	0.42
4:B:153:GLY:O	4:B:154:LYS:C	2.56	0.42
5:C:35:LEU:O	5:C:36:ALA:C	2.57	0.42
5:C:193:LEU:O	5:C:195:ILE:N	2.42	0.42
7:E:16:THR:HB	7:E:27:LYS:O	2.19	0.42
8:F:92:PRO:O	8:F:93:ASN:HB2	2.20	0.42
8:F:139:VAL:HG12	8:F:140:GLU:H	1.85	0.42
9:G:34:PRO:HA	9:G:69:ASP:CG	2.40	0.42
9:G:65:LYS:CB	9:G:65:LYS:HZ2	2.33	0.42
9:G:119:LEU:C	9:G:121:LYS:N	2.72	0.42
10:H:81:ILE:HG12	10:H:82:LYS:N	2.34	0.42
12:J:36:ILE:HG12	12:J:103:VAL:HG22	2.02	0.42
13:K:73:LYS:O	13:K:74:ASP:C	2.56	0.42
14:L:32:TYR:HB3	14:L:39:TYR:CD1	2.55	0.42
14:L:101:LYS:O	14:L:104:ALA:HB3	2.19	0.42
15:M:57:ILE:HG22	15:M:66:PHE:CB	2.50	0.42
17:O:40:VAL:O	17:O:41:GLY:C	2.58	0.42
18:P:48:LYS:O	18:P:92:VAL:HG23	2.20	0.42
18:P:107:ILE:HA	18:P:108:PRO:HD2	1.73	0.42
19:Q:34:THR:O	19:Q:36:THR:N	2.53	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
20:R:48:VAL:O	20:R:50:GLY:N	2.52	0.42
21:S:117:VAL:O	21:S:118:HIS:C	2.58	0.42
1:X:51:A:C2	1:X:155:G:N3	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:67:G:C2	1:X:73:A:C8	3.07	0.42
1:X:91:A:H2'	1:X:92:U:C6	2.54	0.42
1:X:441:A:N7	1:X:442:A:N7	2.68	0.42
1:X:459:A:C2	1:X:466:A:H8	2.30	0.42
1:X:540:G:O6	1:X:2006:G:P	2.78	0.42
1:X:841:G:O6	1:X:2226:A:H1'	2.20	0.42
1:X:973:U:H4'	1:X:2475:C:O2'	2.20	0.42
1:X:1443:G:C5	1:X:1584:G:C6	3.07	0.42
1:X:1675:C:H2'	1:X:1676:U:H6	1.85	0.42
1:X:1682:A:N6	1:X:1683:G:C5	2.87	0.42
1:X:1809:G:H5''	3:A:88:ARG:NH1	2.35	0.42
1:X:1914:U:C6	1:X:1914:U:C4'	3.03	0.42
1:X:2043:A:C2	1:X:2481:G:C6	3.08	0.42
1:X:2055:G:C6	1:X:2417:U:N3	2.87	0.42
1:X:2190:A:OP1	1:X:2190:A:C4'	2.68	0.42
1:X:2266:A:C2	1:X:2325:A:N7	2.88	0.42
1:X:2387:U:O2'	1:X:2388:G:H5'	2.20	0.42
1:X:2476:A:H1'	1:X:2477:C:C5	2.28	0.42
1:X:2548:G:C2'	1:X:2549:G:H5'	2.50	0.42
1:X:2634:G:O2'	1:X:2635:U:OP2	2.31	0.42
1:X:2670:C:N3	1:X:2671:C:C5	2.88	0.42
1:X:2727:G:H4'	7:E:71:LEU:CD2	2.50	0.42
1:X:2784:A:N6	1:X:2866:A:C8	2.87	0.42
3:A:119:ALA:CB	3:A:130:ALA:HB3	2.40	0.42
3:A:183:ARG:HD3	3:A:184:ARG:H	1.84	0.42
4:B:31:CYS:HA	4:B:32:PRO:HD3	1.69	0.42
4:B:64:GLN:C	4:B:66:HIS:N	2.73	0.42
5:C:6:VAL:HG12	5:C:7:ILE:HD13	2.02	0.42
5:C:124:ASP:OD2	5:C:136:TRP:CE3	2.69	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
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
8:F:100:LEU:N	8:F:138:THR:OG1	2.51	0.42
8:F:139:VAL:HG12	8:F:140:GLU:N	2.33	0.42
10:H:55:VAL:O	10:H:55:VAL:CG1	2.54	0.42
11:I:80:LEU:C	11:I:84:GLU:HB3	2.40	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:M:44:ARG:HH11	15:M:46:ARG:NH2	2.14	0.42
16:N:63:GLN:HA	16:N:66:ASN:HD21	1.85	0.42
18:P:59:PHE:CD1	26:Y:30:LEU:HD11	2.55	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
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
23:U:10:LYS:CD	23:U:11:LYS:HB2	2.48	0.42
23:U:50:ALA:CB	23:U:52:ARG:NH1	2.74	0.42
24:V:17:GLU:OE2	24:V:17:GLU:CA	2.64	0.42
25:W:38:PRO:N	25:W:41:ARG:CZ	2.83	0.42
1:X:314:G:C6	1:X:326:A:C2	3.08	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
1:X:404:A:H2'	1:X:405:C:O4'	2.20	0.41
1:X:454:G:N2	1:X:456:C:C2	2.88	0.41
1:X:536:A:N6	1:X:2605:C:C4'	2.83	0.41
1:X:605:G:C2	1:X:606:A:C5	3.08	0.41
1:X:609:U:H5'	11:I:18:ARG:HD3	2.01	0.41
1:X:757:U:C2'	1:X:758:G:H5'	2.50	0.41
1:X:964:A:C2'	1:X:965:G:H5'	2.50	0.41
1:X:978:U:H2'	1:X:979:A:H8	1.82	0.41
1:X:1071:U:C5'	1:X:1072:U:OP1	2.64	0.41
1:X:1148:G:O2'	9:G:130:ALA:O	2.37	0.41
1:X:1158:A:H2'	1:X:1159:U:H6	1.84	0.41
1:X:1235:C:H2'	1:X:1236:G:O4'	2.20	0.41
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
1:X:1399:C:O2'	1:X:1400:A:H5'	2.20	0.41
1:X:1423:A:H2'	1:X:1424:U:H6	1.84	0.41
1:X:1617:G:N7	1:X:1618:U:C4	2.88	0.41
1:X:1969:G:C2	1:X:1970:G:C8	3.08	0.41
1:X:2438:A:N6	1:X:2473:G:C6	2.88	0.41
1:X:2628:C:O5'	1:X:2628:C:H6	2.02	0.41
1:X:2839:G:C6	1:X:2840:U:O4	2.73	0.41
1:X:2847:G:H4'	13:K:8:ARG:HH21	1.84	0.41
3:A:145:LEU:CG	3:A:146:GLU:N	2.83	0.41
4:B:181:LEU:HA	4:B:181:LEU:HD23	1.68	0.41
5:C:72:ARG:HG3	5:C:77:PHE:HE2	1.84	0.41
6:D:53:ALA:HB1	6:D:57:LEU:CG	2.50	0.41
6:D:108:LEU:HB2	6:D:109:PRO:HD3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
8:F:103:ASP:HB3	8:F:106:LEU:HD12	2.01	0.41
8:F:116:LEU:CD1	8:F:124:ALA:HA	2.50	0.41
11:I:89:ASP:CB	11:I:120:VAL:HA	2.50	0.41
13:K:48:VAL:O	13:K:50:GLN:N	2.53	0.41
14:L:26:ARG:NH1	14:L:88:VAL:HG22	2.35	0.41
14:L:32:TYR:O	14:L:32:TYR:CG	2.73	0.41
14:L:102:ALA:O	14:L:104:ALA:N	2.53	0.41
15:M:101:ARG:HE	15:M:101:ARG:HB3	1.09	0.41
17:O:70:TYR:CD2	17:O:83:ARG:NH1	2.88	0.41
19:Q:16:ALA:HA	19:Q:19:ALA:HB3	2.02	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
21:S:168:VAL:C	21:S:169:VAL:HG22	2.39	0.41
22:T:55:ARG:HG2	22:T:55:ARG:NH1	2.34	0.41
30:4:17:VAL:HG23	30:4:26:ILE:HG12	2.02	0.41
1:X:32:C:C4	1:X:33:C:N4	2.88	0.41
1:X:118:U:O2'	1:X:119:G:P	2.79	0.41
1:X:234:C:H2'	1:X:235:C:C5'	2.50	0.41
1:X:239:A:C8	1:X:240:U:C5	3.08	0.41
1:X:463:C:C2	1:X:465:C:C5	3.08	0.41
1:X:501:G:H2'	1:X:502:A:C8	2.53	0.41
1:X:556:A:OP2	1:X:556:A:C8	2.72	0.41
1:X:647:G:C5	11:I:109:LEU:HD11	2.55	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:683:A:O2'	1:X:684:C:OP2	2.38	0.41
1:X:873:U:H3	1:X:929:A:H62	1.64	0.41
1:X:992:A:C6	1:X:2011:U:H4'	2.55	0.41
1:X:1166:A:O2'	1:X:1167:A:H5''	2.20	0.41
1:X:1231:A:C5	1:X:1232:U:C4	3.09	0.41
1:X:1476:G:C5	1:X:1477:C:C4	3.08	0.41
1:X:1484:G:H1	1:X:1539:U:H3	1.68	0.41
1:X:1699:A:C8	1:X:1748:U:C4	3.07	0.41
1:X:1874:G:C6	1:X:1875:C:N3	2.88	0.41
1:X:2056:C:C3'	1:X:2057:U:H5''	2.47	0.41
1:X:2085:G:O2'	1:X:2086:U:H5'	2.20	0.41
1:X:2264:C:C5'	1:X:2267:A:N6	2.79	0.41
1:X:2452:U:C5	1:X:2453:C:C4	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2540:A:C2'	1:X:2541:U:O5'	2.68	0.41
1:X:2691:C:O2'	1:X:2692:A:P	2.78	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:2777:A:H2'	1:X:2777:A:N3	2.35	0.41
4:B:107:THR:CG2	4:B:163:GLU:O	2.68	0.41
5:C:35:LEU:O	5:C:38:ARG:HB2	2.21	0.41
5:C:145:THR:HG22	5:C:146:GLU:OE2	2.20	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
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
8:F:85:ILE:HG22	8:F:87:LYS:H	1.84	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
10:H:116:ARG:NE	15:M:38:LYS:HD2	2.34	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
15:M:99:VAL:O	15:M:100:ARG:CG	2.65	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
19:Q:40:ASP:O	19:Q:41:ALA:C	2.58	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
24:V:42:ARG:HD2	24:V:45:GLN:OE1	2.21	0.41
25:W:16:GLN:OE1	25:W:49:HIS:NE2	2.52	0.41
1:X:219:G:H2'	1:X:220:U:OP2	2.20	0.41
1:X:320:A:C2'	1:X:340:G:H2'	2.50	0.41
1:X:601:A:H3'	1:X:602:C:C5'	2.51	0.41
1:X:677:G:H2'	1:X:678:G:H5'	2.02	0.41
1:X:691:C:N3	1:X:692:C:C5	2.88	0.41
1:X:741:G:H4'	1:X:742:G:OP2	2.19	0.41
1:X:867:G:C6	1:X:868:U:N3	2.88	0.41
1:X:873:U:H2'	1:X:874:A:H8	1.86	0.41
1:X:1088:A:C2'	1:X:1089:C:H5'	2.50	0.41
1:X:1330:G:C4	1:X:1331:G:C8	3.07	0.41
1:X:1505:U:H3'	1:X:1505:U:C6	2.55	0.41
1:X:1517:C:H2'	1:X:1518:C:C6	2.50	0.41
1:X:1533:G:C6	1:X:1534:A:N7	2.88	0.41
1:X:1811:A:H4'	1:X:1812:U:C5'	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1820:G:O2'	1:X:1821:A:C5'	2.68	0.41
1:X:1851:A:N6	1:X:1867:A:N3	2.68	0.41
1:X:2037:A:N1	1:X:2595:C:C4	2.88	0.41
1:X:2055:G:C2	1:X:2417:U:O2	2.73	0.41
1:X:2174:G:C6	1:X:2175:A:C5	3.09	0.41
1:X:2331:A:N1	22:T:33:ALA:O	2.53	0.41
1:X:2403:C:H2'	1:X:2408:G:O2'	2.21	0.41
1:X:2526:U:C5	1:X:2545:A:C5	3.07	0.41
1:X:2557:G:N7	4:B:140:SER:CB	2.83	0.41
1:X:2644:A:C2'	1:X:2645:C:H5'	2.49	0.41
1:X:2705:A:O2'	1:X:2706:U:P	2.78	0.41
1:X:2720:A:N7	1:X:2744:A:N7	2.68	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
3:A:62:TYR:CE1	3:A:88:ARG:NH2	2.72	0.41
3:A:163:VAL:O	3:A:163:VAL:HG13	2.19	0.41
5:C:147:LYS:C	5:C:183:HIS:HB3	2.40	0.41
5:C:176:ASN:ND2	5:C:178:TYR:N	2.68	0.41
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
9:G:62:ILE:O	9:G:62:ILE:CG2	2.68	0.41
11:I:105:PRO:C	11:I:106:VAL:CG2	2.88	0.41
13:K:65:LEU:HD23	13:K:65:LEU:HA	1.70	0.41
13:K:90:ARG:HA	13:K:91:PRO:HD3	1.72	0.41
14:L:38:ILE:HD12	14:L:39:TYR:N	2.34	0.41
15:M:6:LYS:O	15:M:7:ILE:HG12	2.20	0.41
15:M:58:ASN:OD1	15:M:58:ASN:N	2.53	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
18:P:28:ALA:O	18:P:31:VAL:HG23	2.21	0.41
23:U:34:THR:HG22	23:U:35:THR:N	2.35	0.41
23:U:51:ILE:C	23:U:52:ARG:HH21	2.22	0.41
24:V:3:PRO:HB2	24:V:4:SER:H	1.53	0.41
24:V:31:GLN:O	24:V:35:GLY:N	2.53	0.41
25:W:12:ARG:HA	25:W:13:PRO:HD3	1.80	0.41
1:X:15:G:C5	1:X:16:G:N7	2.89	0.41
1:X:357:A:C5	1:X:358:C:H1'	2.55	0.41
1:X:441:A:C8	1:X:442:A:N7	2.88	0.41
1:X:521:U:O4	1:X:522:G:N2	2.52	0.41
1:X:579:G:C5'	1:X:994:A:C2	3.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:594:G:H2'	1:X:595:A:N7	2.34	0.41
1:X:679:C:H2'	1:X:680:U:C6	2.55	0.41
1:X:720:A:C5	1:X:721:C:C4	3.09	0.41
1:X:779:U:O2'	1:X:780:U:C5'	2.65	0.41
1:X:969:U:N1	12:J:17:ARG:HD2	2.34	0.41
1:X:1022:A:C6	1:X:1162:A:C6	3.08	0.41
1:X:1049:C:C2	1:X:1129:A:C2	3.07	0.41
1:X:1091:C:O2	8:F:127:THR:HA	2.21	0.41
1:X:1355:A:C2'	1:X:1357:U:OP2	2.67	0.41
1:X:1546:C:H2'	1:X:1547:U:H6	1.86	0.41
1:X:1686:A:H5''	1:X:2529:G:OP1	2.19	0.41
1:X:1838:G:C2	1:X:1878:C:N3	2.88	0.41
1:X:1918:G:C4	1:X:1945:C:C4	3.09	0.41
1:X:1940:C:O2'	1:X:1941:C:H5'	2.21	0.41
1:X:2035:G:HO2'	1:X:2036:G:H5'	1.82	0.41
1:X:2237:C:H5'	22:T:14:ARG:CD	2.50	0.41
1:X:2245:A:N3	1:X:2251:U:C5	2.89	0.41
1:X:2306:A:C5	1:X:2367:A:N1	2.88	0.41
1:X:2343:C:O2'	1:X:2344:G:H5'	2.20	0.41
1:X:2517:C:H2'	1:X:2518:C:H6	1.84	0.41
1:X:2602:G:H4'	1:X:2800:C:O2	2.20	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
3:A:46:ARG:O	3:A:46:ARG:CD	2.68	0.41
3:A:126:LYS:HE2	3:A:126:LYS:HB3	1.93	0.41
4:B:183:LEU:HD21	15:M:16:ILE:HD13	2.02	0.41
5:C:154:ASP:HB2	5:C:157:THR:CG2	2.50	0.41
5:C:185:ARG:HG2	5:C:185:ARG:NH2	2.30	0.41
6:D:119:PRO:HG2	6:D:120:ASN:N	2.28	0.41
10:H:89:ILE:HG22	10:H:90:ARG:N	2.35	0.41
12:J:46:ASN:O	12:J:50:ALA:N	2.53	0.41
12:J:95:VAL:HG23	12:J:96:SER:N	2.35	0.41
13:K:57:GLY:C	13:K:59:ASP:H	2.20	0.41
15:M:104:LEU:C	15:M:106:TYR:N	2.73	0.41
16:N:117:ARG:HH21	16:N:117:ARG:HG3	1.84	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
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
19:Q:89:GLU:HB3	19:Q:90:ALA:H	1.63	0.41
20:R:60:PRO:O	20:R:65:PRO:HA	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:U:21:ARG:CA	23:U:39:LYS:HD2	2.50	0.41
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
1:X:181:A:C4	1:X:183:U:O4	2.74	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:312:G:O2'	1:X:313:U:O5'	2.37	0.41
1:X:347:C:N3	1:X:348:U:C4	2.89	0.41
1:X:464:G:C6	1:X:465:C:N4	2.89	0.41
1:X:489:A:N6	1:X:491:A:C6	2.88	0.41
1:X:1018:C:O4'	9:G:134:MET:O	2.38	0.41
1:X:1023:U:H3	9:G:53:ARG:HH21	1.67	0.41
1:X:1028:G:C6	1:X:1157:G:C6	3.08	0.41
1:X:1111:C:H2'	1:X:1112:U:C6	2.56	0.41
1:X:1174:G:N2	1:X:1175:A:C4	2.88	0.41
1:X:1249:G:O2'	1:X:1250:A:P	2.78	0.41
1:X:1300:A:N7	13:K:105:GLY:HA3	2.35	0.41
1:X:1467:U:N3	1:X:1473:U:O2	2.54	0.41
1:X:1482:U:H2'	1:X:1483:G:C8	2.55	0.41
1:X:1504:G:N3	1:X:1505:U:O2	2.53	0.41
1:X:1554:G:C2	1:X:1555:A:C4	3.08	0.41
1:X:1930:C:C2	1:X:1931:G:C8	3.08	0.41
1:X:1996:A:H2'	1:X:1997:A:C5'	2.46	0.41
1:X:2036:G:H2'	1:X:2037:A:H5'	2.02	0.41
1:X:2270:U:HO2'	1:X:2271:C:H5'	1.86	0.41
1:X:2621:G:N2	1:X:2753:C:C2	2.89	0.41
1:X:2683:C:C5	1:X:2684:A:N7	2.88	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
2:Z:25:G:C6	2:Z:63:A:N1	2.88	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
4:B:24:THR:CG2	4:B:188:ILE:CD1	2.97	0.41
5:C:128:ALA:O	5:C:160:ALA:HB2	2.21	0.41
6:D:53:ALA:HB1	6:D:57:LEU:HD11	2.02	0.41
7:E:102:ALA:HB1	7:E:115:ILE:C	2.40	0.41
8:F:112:LYS:HB3	8:F:113:MET:H	1.69	0.41
9:G:65:LYS:NZ	9:G:65:LYS:HB3	2.36	0.41
9:G:100:TYR:OH	9:G:129:HIS:CE1	2.74	0.41
11:I:54:SER:C	11:I:56:LEU:H	2.24	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:122:VAL:HG22	11:I:140:VAL:CG1	2.51	0.41
12:J:119:PHE:CD1	12:J:132:MET:SD	3.14	0.41
13:K:37:THR:N	13:K:110:MET:HE3	2.35	0.41
17:O:36:LYS:O	17:O:51:ALA:HB1	2.19	0.41
19:Q:24:VAL:CG1	19:Q:25:TYR:N	2.84	0.41
21:S:44:ARG:CB	21:S:45:GLN:NE2	2.81	0.41
21:S:75:LYS:HE3	21:S:75:LYS:H	1.85	0.41
24:V:17:GLU:HB3	24:V:53:LEU:HD11	2.02	0.41
24:V:29:ARG:C	24:V:32:ALA:HB3	2.40	0.41
24:V:48:ARG:O	24:V:48:ARG:HG2	2.17	0.41
1:X:98:U:C6	1:X:98:U:O5'	2.73	0.41
1:X:529:U:H2'	1:X:530:G:C8	2.53	0.41
1:X:540:G:O6	1:X:2006:G:OP1	2.38	0.41
1:X:742:G:C2	3:A:208:LYS:HD3	2.54	0.41
1:X:759:C:C3'	1:X:759:C:C6	3.04	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
1:X:1137:A:H4'	1:X:1138:A:C5'	2.48	0.41
1:X:1285:A:O2'	1:X:1286:U:OP1	2.36	0.41
1:X:1355:A:C5	1:X:1358:C:N4	2.88	0.41
1:X:1625:A:C6	1:X:1632:A:C2	3.09	0.41
1:X:1646:G:C5	1:X:1647:U:C4	3.08	0.41
1:X:2033:C:H1'	4:B:156:MET:HE1	2.01	0.41
1:X:2035:G:C2	1:X:2036:G:N9	2.88	0.41
1:X:2298:U:O2'	1:X:2299:A:O4'	2.38	0.41
1:X:2404:A:O2'	1:X:2405:A:P	2.79	0.41
1:X:2561:G:N2	1:X:2562:G:H1'	2.35	0.41
1:X:2636:A:C8	1:X:2637:C:C5	3.08	0.41
3:A:79:VAL:CG2	3:A:95:LEU:HD21	2.50	0.41
3:A:211:ARG:HA	3:A:214:TRP:CG	2.54	0.41
4:B:68:ALA:C	4:B:70:ALA:N	2.72	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
6:D:124:GLY:O	6:D:125:ARG:HD3	2.20	0.41
7:E:54:ARG:HE	7:E:62:ARG:HG2	1.86	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
8:F:112:LYS:O	8:F:113:MET:CB	2.68	0.41
9:G:69:ASP:O	16:N:64:ARG:CZ	2.68	0.41
10:H:9:ASP:H	10:H:95:ALA:HA	1.85	0.41
10:H:53:ALA:O	10:H:70:VAL:N	2.37	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:64:LYS:H	12:J:64:LYS:CD	2.26	0.41
13:K:66:VAL:O	13:K:67:ALA:C	2.59	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
15:M:6:LYS:O	15:M:7:ILE:HD13	2.21	0.41
15:M:46:ARG:CG	15:M:47:SER:N	2.83	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
19:Q:34:THR:OG1	19:Q:37:GLU:N	2.47	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
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
23:U:11:LYS:C	23:U:12:ASN:CG	2.79	0.41
1:X:54:G:C2	1:X:55:A:C8	3.09	0.41
1:X:103:U:H6	1:X:103:U:O5'	2.03	0.41
1:X:116:A:H3'	1:X:116:A:C8	2.56	0.41
1:X:344:G:C2	1:X:345:U:C6	3.08	0.41
1:X:592:G:OP2	16:N:10:ARG:NH1	2.54	0.41
1:X:825:C:H1'	1:X:1263:G:C2	2.56	0.41
1:X:970:A:N6	12:J:83:ARG:HH21	2.17	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
1:X:1134:C:N3	1:X:1135:C:C5	2.89	0.41
1:X:1218:C:H1'	11:I:8:PRO:O	2.20	0.41
1:X:1273:G:H2'	1:X:1274:C:C6	2.55	0.41
1:X:1366:A:N1	1:X:1367:A:C2	2.89	0.41
1:X:1528:C:H5'	1:X:1529:C:OP2	2.21	0.41
1:X:1596:A:N6	1:X:1597:A:C6	2.89	0.41
1:X:1634:A:O2'	1:X:1635:G:OP1	2.27	0.41
1:X:1672:A:H3'	1:X:1673:C:H6	1.84	0.41
1:X:1790:G:HO2'	1:X:1791:C:P	2.42	0.41
1:X:2015:G:H2'	4:B:145:LYS:HE2	2.03	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
1:X:2222:U:H2'	1:X:2223:U:C5	2.48	0.41
1:X:2519:C:C4	1:X:2520:A:C5	3.09	0.41
1:X:2665:G:H2'	1:X:2666:U:O4'	2.20	0.41
1:X:2725:C:H2'	1:X:2726:U:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2821:G:C6	1:X:2846:G:C2	3.09	0.41
1:X:2826:C:C2'	1:X:2827:G:H5'	2.50	0.41
2:Z:30:C:C2'	2:Z:31:A:H5'	2.49	0.41
3:A:79:VAL:HG22	3:A:95:LEU:HD21	2.03	0.41
3:A:160:GLY:HA2	3:A:196:VAL:CB	2.50	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
4:B:123:ALA:C	4:B:124:GLY:O	2.56	0.41
6:D:4:LEU:HD12	6:D:5:LYS:N	2.35	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
7:E:30:LYS:HE3	7:E:79:VAL:O	2.20	0.41
7:E:45:GLN:CD	7:E:47:GLY:O	2.59	0.41
7:E:54:ARG:NE	7:E:57:ASP:OD2	2.54	0.41
8:F:77:TYR:O	8:F:81:LYS:HB2	2.21	0.41
9:G:71:THR:HA	9:G:72:PRO:HD3	1.82	0.41
9:G:71:THR:CA	16:N:64:ARG:HH11	2.34	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
10:H:101:ASN:C	10:H:102:GLN:HE21	2.24	0.41
12:J:47:GLN:HE22	12:J:127:PRO:CG	2.34	0.41
12:J:62:GLY:HA3	12:J:64:LYS:NZ	2.36	0.41
14:L:45:ASP:N	14:L:45:ASP:OD1	2.54	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
15:M:99:VAL:HG22	15:M:101:ARG:HG2	2.01	0.41
16:N:112:ALA:O	16:N:113:SER:C	2.59	0.41
18:P:36:ARG:HH22	26:Y:20:ARG:HH21	1.68	0.41
19:Q:40:ASP:HA	19:Q:43:GLN:HE21	1.85	0.41
19:Q:53:ILE:C	19:Q:54:SER:OG	2.59	0.41
21:S:30:VAL:HG12	21:S:31:SER:H	1.82	0.41
21:S:87:THR:O	21:S:88:TYR:CB	2.69	0.41
22:T:70:ILE:HD12	22:T:78:PHE:HB3	2.03	0.41
30:4:1:MET:CE	30:4:35:ARG:HB2	2.50	0.41
1:X:200:A:C5	1:X:435:A:C8	3.09	0.41
1:X:393:U:HO2'	1:X:394:U:H5'	1.84	0.41
1:X:459:A:C4	1:X:484:G:C8	3.09	0.41
1:X:544:U:H2'	1:X:545:C:C6	2.56	0.41
1:X:579:G:H2'	1:X:2013:A:C6	2.56	0.41
1:X:632:A:C2'	1:X:633:G:H5'	2.44	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:765:C:HO2'	1:X:766:A:P	2.40	0.41
1:X:776:G:H3'	1:X:776:G:C8	2.56	0.41
1:X:785:U:H2'	1:X:786:U:H6	1.85	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
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:1063:C:H2'	1:X:1064:C:H5	1.82	0.41
1:X:1265:G:H1	16:N:37:GLN:NE2	2.18	0.41
1:X:1271:C:O2'	1:X:1272:G:H5'	2.21	0.41
1:X:1401:G:O2'	1:X:1402:G:H5'	2.20	0.41
1:X:1546:C:H2'	1:X:1547:U:C6	2.56	0.41
1:X:1782:A:H61	1:X:1820:G:C2'	2.34	0.41
1:X:1850:G:C6	1:X:1867:A:C4	3.09	0.41
1:X:2035:G:N2	1:X:2036:G:C1'	2.83	0.41
1:X:2306:A:C5	1:X:2367:A:C2	3.09	0.41
1:X:2329:C:O2'	1:X:2330:G:H5'	2.20	0.41
1:X:2344:G:P	22:T:55:ARG:H	2.40	0.41
1:X:2483:U:O5'	1:X:2483:U:C6	2.71	0.41
1:X:2634:G:HO2'	1:X:2643:G:H1	1.69	0.41
1:X:2661:G:C2	1:X:2662:C:N1	2.88	0.41
2:Z:25:G:C6	2:Z:63:A:C6	3.09	0.41
2:Z:75:A:N6	2:Z:76:U:C2	2.88	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
3:A:218:LYS:N	3:A:219:PRO:CD	2.84	0.41
5:C:101:GLN:HB2	5:C:102:LEU:H	1.76	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
7:E:24:PHE:CB	7:E:35:VAL:O	2.61	0.41
8:F:91:THR:O	8:F:91:THR:OG1	2.27	0.41
8:F:92:PRO:C	8:F:93:ASN:OD1	2.59	0.41
9:G:36:ASN:OD1	9:G:37:ASP:N	2.54	0.41
9:G:64:GLY:HA3	9:G:67:ARG:HE	1.86	0.41
9:G:65:LYS:HB2	9:G:65:LYS:HZ2	1.85	0.41
9:G:156:HIS:C	9:G:158:HIS:H	2.24	0.41
9:G:168:THR:C	9:G:169:GLN:O	2.57	0.41
9:G:169:GLN:CB	9:G:170:PRO:CD	2.96	0.41
11:I:73:GLU:CG	11:I:105:PRO:O	2.68	0.41
12:J:42:TRP:HE3	12:J:95:VAL:HG11	1.85	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
13:K:66:VAL:O	13:K:69:ASP:N	2.33	0.41
14:L:15:ARG:HD3	14:L:15:ARG:HA	1.92	0.41
14:L:103:LEU:O	14:L:103:LEU:HD23	2.21	0.41
15:M:22:ARG:HH11	15:M:24:LEU:HD23	1.85	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
18:P:28:ALA:N	18:P:124:ILE:O	2.54	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
21:S:6:LYS:HB2	21:S:31:SER:C	2.41	0.41
21:S:26:LYS:HB2	21:S:26:LYS:HE3	1.85	0.41
21:S:103:ARG:HH11	21:S:108:VAL:HG22	1.84	0.41
22:T:19:LYS:O	22:T:20:TYR:CB	2.68	0.41
30:4:3:VAL:HG13	30:4:37:GLY:H	1.85	0.41
1:X:53:G:C5	1:X:54:G:C8	3.09	0.41
1:X:205:A:N3	1:X:207:U:H1'	2.35	0.41
1:X:209:G:C8	1:X:209:G:C3'	3.04	0.41
1:X:228:A:H2'	1:X:229:G:H5'	2.03	0.41
1:X:333:A:H3'	5:C:162:ARG:NE	2.33	0.41
1:X:341:A:O2'	1:X:342:G:OP1	2.35	0.41
1:X:410:A:H2'	1:X:411:C:O4'	2.21	0.41
1:X:425:A:H3'	1:X:426:C:C5	2.55	0.41
1:X:507:A:H2'	1:X:508:G:C8	2.55	0.41
1:X:572:G:C6	1:X:2001:G:C4	3.09	0.41
1:X:609:U:C1'	11:I:18:ARG:CZ	2.99	0.41
1:X:653:G:H3'	1:X:653:G:C8	2.56	0.41
1:X:701:U:C5'	1:X:1771:A:C2	3.04	0.41
1:X:923:A:C5	12:J:12:LYS:HE3	2.56	0.41
1:X:924:C:C2	1:X:925:U:C5	3.09	0.41
1:X:942:U:P	25:W:32:ARG:HH12	2.43	0.41
1:X:966:A:C2	1:X:974:U:C2	3.08	0.41
1:X:1018:C:C4	1:X:1019:U:C5	3.09	0.41
1:X:1028:G:C6	1:X:1157:G:O6	2.73	0.41
1:X:1043:A:C5'	30:4:9:LYS:HZ1	2.27	0.41
1:X:1068:A:N3	1:X:1068:A:H2'	2.35	0.41
1:X:1188:A:H8	1:X:1188:A:O5'	2.04	0.41
1:X:1373:G:O6	1:X:1385:C:N3	2.54	0.41
1:X:1391:A:N7	1:X:1393:G:C6	2.89	0.41
1:X:1443:G:H3'	1:X:1443:G:OP2	2.21	0.41
1:X:1461:C:C2	1:X:1462:C:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1463:A:C6	1:X:1479:G:N1	2.89	0.41
1:X:1483:G:C4	1:X:1541:G:N2	2.89	0.41
1:X:1513:U:H3'	1:X:1513:U:P	2.61	0.41
1:X:1600:U:H5'	1:X:1601:U:OP1	2.21	0.41
1:X:1625:A:N3	1:X:1632:A:N3	2.69	0.41
1:X:1668:G:C2	1:X:1990:U:C2	3.09	0.41
1:X:1693:A:C2	1:X:1694:A:N3	2.89	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:2089:C:C4	1:X:2090:U:C5	3.09	0.41
1:X:2190:A:H2	1:X:2194:A:N1	2.19	0.41
1:X:2241:U:H4'	1:X:2307:A:H2	1.85	0.41
1:X:2339:A:C2	1:X:2340:C:H1'	2.55	0.41
1:X:2388:G:C5	1:X:2389:G:C8	3.09	0.41
1:X:2411:A:C6	1:X:2412:A:C6	3.09	0.41
1:X:2433:G:H2'	1:X:2434:G:H8	1.86	0.41
1:X:2477:C:O2'	1:X:2478:C:H5'	2.21	0.41
1:X:2491:C:N3	1:X:2492:G:C8	2.88	0.41
1:X:2499:C:C4	1:X:2546:G:C8	3.09	0.41
1:X:2577:A:H5''	3:A:235:GLY:HA3	2.01	0.41
1:X:2715:C:H2'	1:X:2716:G:O4'	2.21	0.41
1:X:2724:G:C2	1:X:2741:G:C4	3.09	0.41
1:X:2781:G:H8	1:X:2781:G:O5'	2.04	0.41
1:X:2796:A:N1	1:X:2797:G:C6	2.88	0.41
1:X:2800:C:C5	1:X:2801:A:C8	3.09	0.41
1:X:2802:C:C2	1:X:2803:C:C5	3.09	0.41
1:X:2806:G:O4'	1:X:2858:A:C2	2.74	0.41
1:X:2829:A:C2	1:X:2830:U:C2	3.09	0.41
1:X:2859:U:H5	1:X:2860:C:C2	2.39	0.41
2:Z:42:U:C1'	2:Z:47:A:H61	2.29	0.41
2:Z:75:A:H2'	2:Z:75:A:N3	2.36	0.41
2:Z:93:G:N2	2:Z:94:G:H1'	2.36	0.41
3:A:53:PHE:O	3:A:54:ILE:O	2.39	0.41
3:A:210:GLY:O	3:A:214:TRP:N	2.53	0.41
4:B:48:GLN:O	4:B:48:GLN:CG	2.62	0.41
4:B:96:PHE:CE2	4:B:102:ILE:CG2	3.04	0.41
4:B:116:VAL:O	4:B:117:MET:C	2.56	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
6:D:69:LYS:HA	6:D:85:VAL:H	1.86	0.41
7:E:5:GLY:O	7:E:6:LYS:HG3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:24:PHE:O	7:E:35:VAL:O	2.38	0.41
7:E:85:ILE:O	7:E:132:ASP:HA	2.20	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:164:PHE:O	7:E:167:GLU:HB2	2.21	0.41
9:G:40:ASN:CB	9:G:78:ASP:HB3	2.51	0.41
9:G:116:ARG:C	9:G:118:ALA:N	2.74	0.41
9:G:154:GLU:CD	9:G:155:THR:H	2.24	0.41
10:H:1:MET:HG2	10:H:79:HIS:ND1	2.35	0.41
10:H:9:ASP:HB2	10:H:95:ALA:HB1	1.98	0.41
10:H:89:ILE:HG12	15:M:79:ARG:CD	2.50	0.41
10:H:130:ALA:HA	10:H:131:PRO:HD2	1.88	0.41
11:I:78:SER:N	11:I:112:GLY:HA3	2.35	0.41
12:J:36:ILE:CG2	12:J:101:GLY:O	2.68	0.41
12:J:39:GLU:HA	12:J:40:PRO:HD3	1.73	0.41
12:J:59:PHE:HE2	12:J:114:GLN:O	2.03	0.41
12:J:59:PHE:CE1	12:J:110:VAL:HG11	2.56	0.41
12:J:81:GLU:HG2	12:J:82:THR:N	2.36	0.41
13:K:37:THR:O	13:K:38:LEU:C	2.58	0.41
13:K:45:ARG:CB	13:K:46:PRO:CD	2.99	0.41
14:L:15:ARG:NH1	14:L:15:ARG:CG	2.81	0.41
14:L:87:VAL:CG1	14:L:88:VAL:N	2.84	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
17:O:40:VAL:O	17:O:40:VAL:CG2	2.68	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
19:Q:29:VAL:HG11	19:Q:78:ALA:HB2	2.03	0.41
20:R:100:ASP:OD1	20:R:102:LYS:C	2.60	0.41
21:S:36:ARG:HE	21:S:37:LYS:CA	2.31	0.41
21:S:70:GLN:HE21	21:S:71:MET:HE2	1.85	0.41
21:S:92:VAL:HG23	21:S:93:GLU:H	1.85	0.41
21:S:98:VAL:HG13	21:S:115:ILE:HG21	2.03	0.41
22:T:43:THR:HB	22:T:46:LYS:HZ1	1.84	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
23:U:28:GLY:CA	23:U:32:ARG:HE	2.34	0.41
24:V:16:LYS:HG2	24:V:17:GLU:N	2.36	0.41
24:V:24:GLU:OE2	24:V:46:LEU:CD1	2.69	0.41
24:V:30:PHE:O	24:V:31:GLN:C	2.57	0.41
26:Y:9:LYS:O	26:Y:11:THR:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:13:A:N1	1:X:535:U:C2	2.89	0.41
1:X:33:C:O2'	1:X:34:U:OP1	2.31	0.41
1:X:188:G:H2'	1:X:189:A:C8	2.56	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
1:X:527:C:O2'	18:P:39:ARG:NH2	2.51	0.41
1:X:528:G:C6	1:X:529:U:O4	2.74	0.41
1:X:546:A:C6	1:X:547:U:C4	3.09	0.41
1:X:677:G:H2'	1:X:678:G:O5'	2.21	0.41
1:X:739:G:O2'	1:X:740:A:H8	2.04	0.41
1:X:814:G:P	5:C:50:GLN:NE2	2.94	0.41
1:X:825:C:C4	1:X:1263:G:O6	2.74	0.41
1:X:938:G:C2'	1:X:939:C:OP2	2.69	0.41
1:X:1016:C:H4'	1:X:1023:U:O4'	2.21	0.41
1:X:1017:C:O2'	1:X:1018:C:H5'	2.21	0.41
1:X:1067:G:N2	1:X:1114:A:H62	2.19	0.41
1:X:1281:A:C2'	1:X:2592:U:C5	2.92	0.41
1:X:1317:G:O2'	1:X:1318:A:H5'	2.21	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:1512:A:H1'	1:X:1593:C:O2'	2.21	0.41
1:X:1789:U:N3	1:X:1811:A:C2	2.89	0.41
1:X:1858:C:N3	1:X:1859:A:C5	2.89	0.41
1:X:1956:G:C4	1:X:1957:C:C5	3.09	0.41
1:X:1973:C:O2'	1:X:1974:U:O4'	2.38	0.41
1:X:2007:G:O2'	1:X:2008:C:H5'	2.21	0.41
1:X:2034:A:C8	1:X:2593:A:N6	2.89	0.41
1:X:2189:A:C4	1:X:2190:A:N7	2.89	0.41
1:X:2248:A:C6	1:X:2249:U:C4	3.09	0.41
1:X:2262:C:C2'	1:X:2263:C:C5'	2.94	0.41
1:X:2284:U:C3'	1:X:2285:U:C5'	2.96	0.41
1:X:2707:G:H2'	1:X:2708:U:H6	1.86	0.41
1:X:2779:C:C6	1:X:2780:A:C8	3.09	0.41
1:X:2801:A:C6	1:X:2802:C:C4	3.09	0.41
2:Z:18:G:N2	2:Z:71:G:H1'	2.36	0.41
2:Z:32:C:C5	2:Z:33:C:C5	3.08	0.41
2:Z:39:C:H2'	2:Z:39:C:O2	2.21	0.41
2:Z:39:C:H3'	2:Z:40:C:C6	2.56	0.41
2:Z:81:C:H6	2:Z:81:C:O5'	2.04	0.41
3:A:75:VAL:CG1	3:A:98:ALA:HB3	2.48	0.41
3:A:88:ARG:O	3:A:89:SER:OG	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:131:LEU:N	3:A:131:LEU:CD2	2.79	0.41
3:A:147:LEU:HG	3:A:155:LEU:HD11	2.02	0.41
3:A:182:LEU:HA	3:A:182:LEU:HD23	1.88	0.41
3:A:200:GLU:OE1	3:A:202:LYS:CA	2.69	0.41
5:C:56:ARG:HA	5:C:71:ASP:OD2	2.21	0.41
6:D:65:PRO:HB3	6:D:89:VAL:HG21	2.02	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
7:E:42:THR:HB	7:E:53:GLU:HB2	2.03	0.41
8:F:81:LYS:HD2	8:F:81:LYS:HA	1.79	0.41
8:F:101:ASN:C	8:F:104:GLN:HG2	2.40	0.41
11:I:30:ALA:N	11:I:34:HIS:CE1	2.88	0.41
11:I:105:PRO:O	11:I:106:VAL:HG22	2.21	0.41
12:J:83:ARG:HG2	12:J:83:ARG:NH1	2.35	0.41
14:L:9:ARG:O	14:L:10:LYS:C	2.59	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
17:O:38:LEU:O	17:O:39:PHE:HB3	2.20	0.41
18:P:66:GLU:HB3	18:P:67:PRO:HD3	2.02	0.41
19:Q:55:THR:HB	19:Q:77:LYS:O	2.20	0.41
19:Q:69:ILE:HD12	19:Q:69:ILE:C	2.41	0.41
20:R:35:LYS:NZ	20:R:35:LYS:CB	2.84	0.41
21:S:160:LEU:HD22	21:S:162:ALA:HB3	2.04	0.41
23:U:10:LYS:HD3	23:U:11:LYS:CB	2.51	0.41
23:U:20:ARG:CG	23:U:43:ARG:HD2	2.51	0.41
24:V:25:LEU:HD11	24:V:47:ARG:HD3	2.03	0.41
1:X:15:G:C6	1:X:16:G:C5	3.09	0.40
1:X:34:U:H1'	20:R:4:PRO:CA	2.42	0.40
1:X:83:A:O3'	1:X:84:G:O4'	2.39	0.40
1:X:155:G:C2'	1:X:156:G:C5'	3.00	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:429:C:H2'	1:X:430:C:O4'	2.21	0.40
1:X:452:G:H22	5:C:40:ARG:HH22	1.65	0.40
1:X:539:A:C2	1:X:2006:G:C8	3.09	0.40
1:X:613:A:O4'	1:X:668:A:N1	2.54	0.40
1:X:649:G:C2	1:X:661:C:C2	3.09	0.40
1:X:696:U:C2'	1:X:697:G:O5'	2.69	0.40
1:X:741:G:N2	1:X:743:A:C1'	2.82	0.40
1:X:760:U:H2'	18:P:109:ARG:HE	1.86	0.40
1:X:825:C:H1'	1:X:1263:G:N2	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1086:C:H2'	1:X:1086:C:O2	2.21	0.40
1:X:1188:A:H8	1:X:1188:A:P	2.44	0.40
1:X:1204:G:H2'	1:X:1205:G:C8	2.56	0.40
1:X:1236:G:N2	1:X:1240:G:C4	2.89	0.40
1:X:1286:U:C6	1:X:1986:G:H4'	2.55	0.40
1:X:1621:C:H5'	1:X:1626:A:C6	2.56	0.40
1:X:1656:U:C2'	1:X:1657:A:C5'	2.99	0.40
1:X:1842:G:H2'	1:X:1843:U:O4'	2.21	0.40
1:X:2042:A:C5	1:X:2482:A:C2	3.08	0.40
1:X:2202:G:H2'	1:X:2203:G:H8	1.87	0.40
1:X:2667:C:C5	1:X:2699:G:C5	3.09	0.40
1:X:2824:C:O2'	1:X:2825:A:P	2.79	0.40
2:Z:85:G:H5''	25:W:49:HIS:CD2	2.56	0.40
3:A:173:VAL:CG1	3:A:174:ILE:N	2.65	0.40
5:C:44:SER:HB2	5:C:88:PRO:HD3	2.02	0.40
5:C:82:VAL:CG1	5:C:85:GLY:HA3	2.51	0.40
6:D:5:LYS:C	6:D:7:LYS:N	2.69	0.40
6:D:36:VAL:O	6:D:36:VAL:HG12	2.19	0.40
6:D:71:LYS:O	6:D:71:LYS:HD3	2.21	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
7:E:89:LEU:CD2	7:E:94:PHE:HB3	2.51	0.40
11:I:114:ILE:O	11:I:115:SER:HB3	2.20	0.40
13:K:18:VAL:CG1	13:K:22:ARG:HD2	2.47	0.40
13:K:98:LEU:HD11	13:K:114:GLU:OE1	2.21	0.40
13:K:115:LEU:HD23	13:K:115:LEU:HA	1.60	0.40
14:L:21:THR:CG2	14:L:22:ALA:H	2.33	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
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
20:R:38:LEU:HD23	20:R:38:LEU:C	2.40	0.40
24:V:20:ALA:O	24:V:23:LYS:HB3	2.21	0.40
1:X:118:U:O2	1:X:118:U:C2'	2.68	0.40
1:X:427:C:H2'	1:X:428:A:C8	2.56	0.40
1:X:456:C:H4'	5:C:43:ALA:HB2	2.03	0.40
1:X:537:C:O2'	1:X:538:A:C6	2.74	0.40
1:X:556:A:H1'	1:X:558:G:C2	2.55	0.40
1:X:643:A:H4'	11:I:67:ASN:CB	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:683:A:HO2'	1:X:684:C:P	2.42	0.40
1:X:787:A:C5'	3:A:48:ARG:HH22	2.24	0.40
1:X:858:G:C8	1:X:858:G:OP2	2.74	0.40
1:X:989:G:H2'	1:X:990:A:O4'	2.21	0.40
1:X:1038:U:O2	1:X:2466:G:O3'	2.40	0.40
1:X:1075:C:H5'	8:F:85:ILE:HG13	2.04	0.40
1:X:1193:G:C5	1:X:1194:U:C5	3.10	0.40
1:X:1197:U:O2'	1:X:1198:C:H5'	2.21	0.40
1:X:1285:A:HO2'	1:X:1286:U:P	2.44	0.40
1:X:1291:G:OP1	13:K:36:THR:HB	2.21	0.40
1:X:1330:G:C6	1:X:1349:A:N6	2.89	0.40
1:X:1476:G:H2'	1:X:1477:C:O4'	2.22	0.40
1:X:1517:C:C5'	3:A:102:LYS:NZ	2.85	0.40
1:X:1780:A:C5	1:X:1781:C:C4	3.09	0.40
1:X:1811:A:H3'	3:A:178:PRO:HB2	2.02	0.40
1:X:1989:C:O5'	1:X:1989:C:H6	2.04	0.40
1:X:2060:A:C4	1:X:2414:A:C8	3.09	0.40
1:X:2239:C:H2'	1:X:2240:C:H6	1.86	0.40
1:X:2311:U:O2	1:X:2311:U:C3'	2.70	0.40
1:X:2431:C:N4	1:X:2432:A:C6	2.90	0.40
1:X:2450:A:N6	1:X:2451:G:C2	2.88	0.40
1:X:2661:G:C2'	1:X:2662:C:H5'	2.51	0.40
1:X:2688:G:C6	1:X:2689:C:N3	2.89	0.40
1:X:2757:G:C1'	1:X:2759:U:H5	2.33	0.40
1:X:2866:A:C6	1:X:2867:G:C2	3.09	0.40
2:Z:53:G:H5'	14:L:64:LYS:CD	2.51	0.40
3:A:121:PRO:C	3:A:123:ALA:N	2.75	0.40
3:A:183:ARG:HD2	3:A:184:ARG:O	2.21	0.40
3:A:197:GLY:O	3:A:198:ASN:C	2.59	0.40
5:C:9:GLN:HE21	5:C:120:VAL:HG11	1.87	0.40
5:C:22:VAL:HA	5:C:106:MET:HG3	2.03	0.40
5:C:83:ALA:O	5:C:84:PHE:C	2.60	0.40
5:C:102:LEU:HD23	5:C:102:LEU:C	2.38	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
6:D:105:ASN:CA	6:D:109:PRO:HG2	2.48	0.40
7:E:68:THR:O	7:E:72:VAL:HG23	2.21	0.40
8:F:101:ASN:CB	8:F:104:GLN:HG2	2.46	0.40
9:G:156:HIS:CB	9:G:157:PRO:CD	2.95	0.40
10:H:22:ILE:O	10:H:23:ARG:CB	2.69	0.40
10:H:74:VAL:HA	10:H:96:ALA:HB2	2.02	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
11:I:45:LYS:HG2	11:I:46:GLY:H	1.86	0.40
11:I:97:ARG:O	11:I:98:LEU:CB	2.64	0.40
12:J:79:PRO:O	12:J:80:ALA:HB3	2.21	0.40
12:J:112:GLU:OE1	12:J:116:LYS:HB2	2.21	0.40
13:K:94:TYR:HE1	13:K:96:ARG:NH1	2.18	0.40
14:L:59:LEU:CD2	14:L:61:SER:H	2.32	0.40
15:M:69:ARG:CG	15:M:78:GLU:HG2	2.51	0.40
16:N:86:ALA:O	16:N:89:ASP:N	2.30	0.40
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
19:Q:51:ILE:CD1	19:Q:83:ALA:HA	2.52	0.40
19:Q:79:ILE:N	19:Q:79:ILE:CD1	2.80	0.40
21:S:4:THR:N	21:S:33:ALA:O	2.51	0.40
22:T:37:LEU:HD12	22:T:37:LEU:N	2.33	0.40
23:U:10:LYS:HD3	23:U:11:LYS:CA	2.48	0.40
1:X:33:C:C2'	1:X:34:U:H5''	2.52	0.40
1:X:224:G:C5	1:X:229:G:O6	2.75	0.40
1:X:467:U:HO2'	1:X:468:A:P	2.44	0.40
1:X:513:A:C6	1:X:515:A:N6	2.89	0.40
1:X:627:A:O2'	1:X:628:A:O4'	2.37	0.40
1:X:698:A:C2	1:X:702:A:C6	3.09	0.40
1:X:859:U:C1'	1:X:860:U:C5	3.05	0.40
1:X:1075:C:H4'	8:F:89:SER:O	2.21	0.40
1:X:1212:U:H2'	1:X:1213:U:H6	1.86	0.40
1:X:1295:U:C4	1:X:1296:G:C5	3.09	0.40
1:X:1371:G:N7	1:X:1384:G:C6	2.89	0.40
1:X:1408:A:C5	1:X:1411:C:C4	3.09	0.40
1:X:1474:A:N3	1:X:1474:A:H2'	2.36	0.40
1:X:1483:G:C2	1:X:1541:G:C2	3.10	0.40
1:X:1564:U:H2'	1:X:1565:G:C8	2.57	0.40
1:X:1625:A:C4	1:X:1632:A:C2	3.09	0.40
1:X:1675:C:H2'	1:X:1676:U:C6	2.56	0.40
1:X:1801:C:N4	23:U:49:LYS:HZ3	2.18	0.40
1:X:2237:C:H5'	22:T:14:ARG:HD3	2.03	0.40
1:X:2314:A:C4	1:X:2316:G:C8	3.10	0.40
1:X:2334:C:H5'	22:T:25:LYS:NZ	2.36	0.40
1:X:2355:A:N1	14:L:91:ARG:CZ	2.84	0.40
1:X:2425:G:C2	1:X:2480:C:C5	3.09	0.40
1:X:2501:U:O2	1:X:2501:U:H2'	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2546:G:C4	1:X:2547:C:C5	3.09	0.40
1:X:2695:C:O2'	1:X:2696:A:H5'	2.21	0.40
1:X:2831:A:N6	1:X:2832:G:C6	2.90	0.40
3:A:78:LYS:CD	3:A:116:THR:HB	2.47	0.40
3:A:245:VAL:HB	3:A:246:PRO:HD2	2.02	0.40
4:B:56:GLU:C	4:B:59:VAL:HG23	2.41	0.40
5:C:111:ARG:C	5:C:113:GLU:N	2.73	0.40
6:D:7:LYS:HD3	6:D:7:LYS:HA	1.91	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
10:H:29:ILE:HA	10:H:34:LEU:HA	2.03	0.40
11:I:47:ALA:O	11:I:48:PHE:C	2.56	0.40
13:K:45:ARG:HD3	13:K:95:THR:CG2	2.51	0.40
18:P:57:LEU:O	18:P:59:PHE:N	2.54	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
21:S:168:VAL:HG12	21:S:168:VAL:O	2.21	0.40
22:T:3:HIS:O	22:T:4:LYS:CB	2.69	0.40
23:U:23:LYS:HB2	23:U:35:THR:HG21	2.02	0.40
23:U:53:GLU:O	23:U:78:ILE:CG2	2.69	0.40
1:X:64:C:C1'	19:Q:68:PHE:HD1	2.34	0.40
1:X:107:G:C2	1:X:108:G:H1'	2.56	0.40
1:X:119:G:H4'	1:X:143:A:H5'	2.02	0.40
1:X:205:A:H1'	1:X:207:U:O4'	2.21	0.40
1:X:219:G:HO2'	1:X:231:G:H1	1.70	0.40
1:X:490:A:O2'	1:X:491:A:O5'	2.39	0.40
1:X:498:C:O2	18:P:74:SER:CB	2.68	0.40
1:X:501:G:H2'	1:X:502:A:O4'	2.21	0.40
1:X:665:A:C2	1:X:666:U:C6	3.07	0.40
1:X:684:C:H2'	1:X:685:U:C6	2.56	0.40
1:X:797:A:N7	3:A:229:VAL:HG21	2.35	0.40
1:X:938:G:O2'	1:X:939:C:H6	2.05	0.40
1:X:994:A:N7	1:X:995:A:C6	2.89	0.40
1:X:1006:C:H5''	1:X:1006:C:C6	2.55	0.40
1:X:1043:A:H2'	1:X:1044:U:H5'	2.03	0.40
1:X:1109:A:C2'	1:X:1110:G:H5'	2.49	0.40
1:X:1149:G:P	9:G:98:LYS:NZ	2.94	0.40
1:X:1164:C:H2'	1:X:1164:C:O2	2.21	0.40
1:X:1234:C:C2	1:X:1235:C:C5	3.10	0.40
1:X:1336:G:O6	1:X:1337:G:C6	2.75	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1571:G:H2'	1:X:1572:C:C6	2.55	0.40
1:X:1624:A:C5	1:X:1627:C:C4	3.09	0.40
1:X:1755:G:C2	1:X:1756:C:C6	3.09	0.40
1:X:1769:U:H5	1:X:1775:A:C2	2.39	0.40
1:X:1820:G:OP2	1:X:1820:G:C8	2.74	0.40
1:X:1826:U:O2	1:X:1826:U:H2'	2.21	0.40
1:X:1992:G:H1'	13:K:107:GLY:HA3	2.02	0.40
1:X:2088:U:O2'	1:X:2089:C:OP1	2.32	0.40
1:X:2241:U:H2'	1:X:2242:C:H6	1.87	0.40
1:X:2245:A:C4'	1:X:2246:A:N3	2.75	0.40
1:X:2412:A:O5'	1:X:2412:A:H8	2.04	0.40
1:X:2451:G:H22	1:X:2456:U:H5''	1.87	0.40
1:X:2522:G:C6	1:X:2523:G:C6	3.10	0.40
2:Z:30:C:H42	2:Z:58:G:N2	2.19	0.40
3:A:193:ILE:HA	3:A:193:ILE:HD13	1.96	0.40
3:A:206:LEU:HD23	3:A:211:ARG:HG2	2.03	0.40
4:B:16:LYS:HD2	4:B:173:VAL:HG13	2.03	0.40
4:B:202:ALA:O	4:B:203:LYS:HB2	2.21	0.40
7:E:104:GLU:OE2	7:E:114:ILE:CG1	2.67	0.40
9:G:42:VAL:O	9:G:81:VAL:N	2.55	0.40
9:G:103:TYR:CZ	9:G:111:LYS:CA	3.05	0.40
12:J:40:PRO:HB3	12:J:99:LYS:HD2	2.03	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
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
18:P:33:MET:HE2	18:P:37:LYS:HD2	2.03	0.40
19:Q:90:ALA:C	19:Q:92:ALA:N	2.74	0.40
20:R:52:ASN:O	20:R:53:VAL:HB	2.22	0.40
21:S:84:TYR:O	21:S:85:MET:C	2.58	0.40
21:S:107:GLU:OE1	21:S:112:LEU:HA	2.21	0.40
22:T:2:ALA:O	22:T:3:HIS:HB3	2.21	0.40
23:U:29:GLY:C	23:U:31:GLY:N	2.74	0.40
23:U:51:ILE:N	23:U:52:ARG:NH2	2.69	0.40
23:U:75:TYR:O	23:U:77:GLY:N	2.44	0.40
25:W:2:LYS:CD	25:W:32:ARG:O	2.68	0.40
1:X:88:G:N1	1:X:89:A:C6	2.89	0.40
1:X:118:U:H4'	1:X:119:G:H5''	2.03	0.40
1:X:162:C:O2'	1:X:163:A:H5'	2.21	0.40
1:X:178:C:O2	1:X:178:C:C2'	2.49	0.40
1:X:188:G:H2'	1:X:189:A:H8	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:218:A:C4	1:X:220:U:C4	3.09	0.40
1:X:469:G:C2'	1:X:470:U:OP2	2.68	0.40
1:X:696:U:H2'	1:X:697:G:O5'	2.22	0.40
1:X:788:G:H4'	1:X:789:G:O5'	2.21	0.40
1:X:824:U:HO2'	1:X:825:C:P	2.44	0.40
1:X:938:G:H2'	1:X:939:C:OP2	2.21	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
1:X:994:A:N6	1:X:995:A:C2	2.89	0.40
1:X:1023:U:H5	9:G:56:THR:HG21	1.87	0.40
1:X:1249:G:O2'	1:X:1250:A:O5'	2.35	0.40
1:X:1281:A:C5	1:X:1996:A:N7	2.89	0.40
1:X:1385:C:C2'	1:X:1386:A:C5'	2.98	0.40
1:X:1460:G:N3	1:X:1460:G:H2'	2.37	0.40
1:X:1526:U:H3'	1:X:1527:G:H8	1.85	0.40
1:X:1584:G:H4'	3:A:59:LYS:O	2.22	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:1925:C:H2'	1:X:1926:U:C6	2.56	0.40
1:X:2044:G:O6	32:X:2911:ZLD:H6	2.21	0.40
1:X:2071:G:N2	1:X:2072:C:C1'	2.80	0.40
1:X:2216:G:H5''	1:X:2217:G:OP1	2.22	0.40
1:X:2311:U:C5'	1:X:2315:A:H62	2.33	0.40
1:X:2388:G:C4	1:X:2389:G:C8	3.09	0.40
1:X:2569:A:C2	1:X:2584:U:C2	3.10	0.40
1:X:2571:G:H2'	1:X:2572:U:C6	2.56	0.40
3:A:36:ALA:HB1	3:A:63:ARG:CA	2.44	0.40
3:A:176:ARG:HA	3:A:181:GLU:O	2.22	0.40
4:B:4:ILE:HD11	4:B:29:GLY:O	2.20	0.40
4:B:6:GLY:HA2	4:B:27:LEU:O	2.21	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
5:C:7:ILE:CG2	5:C:120:VAL:O	2.69	0.40
5:C:74:VAL:CG2	5:C:76:THR:HG23	2.52	0.40
6:D:16:LEU:O	6:D:20:PHE:HB2	2.22	0.40
6:D:111:ILE:HG12	6:D:137:ILE:CG2	2.51	0.40
6:D:142:THR:O	6:D:146:VAL:HG11	2.21	0.40
9:G:119:LEU:HD13	9:G:126:VAL:HG22	2.02	0.40
12:J:120:ARG:O	12:J:123:GLY:N	2.48	0.40
13:K:100:VAL:H	13:K:111:ALA:HA	1.86	0.40
14:L:20:THR:CG2	14:L:23:ALA:HB3	2.45	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:Q:54:SER:C	19:Q:55:THR:CG2	2.90	0.40
21:S:16:GLU:O	21:S:18:MET:N	2.54	0.40
21:S:24:TYR:CD1	21:S:24:TYR:N	2.89	0.40
21:S:103:ARG:NH1	21:S:107:GLU:HB3	2.35	0.40
23:U:15:VAL:HG23	23:U:16:ASN:N	2.36	0.40
23:U:32:ARG:HE	23:U:32:ARG:H	1.69	0.40
23:U:41:VAL:O	23:U:42:GLN:OE1	2.39	0.40
23:U:49:LYS:HB3	23:U:61:TRP:CZ3	2.55	0.40
26:Y:51:TYR:CD2	26:Y:54:GLY:C	2.95	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 0
4	B	203/211 (96%)	124 (61%)	47 (23%)	32 (16%)	0 2
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 0
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 3
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 6
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	2
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	1
16	N	115/118 (98%)	56 (49%)	30 (26%)	29 (25%)	0	0
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	5
19	Q	91/95 (96%)	44 (48%)	23 (25%)	24 (26%)	0	0
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	0
26	Y	56/60 (93%)	31 (55%)	17 (30%)	8 (14%)	0	3
30	4	35/37 (95%)	22 (63%)	11 (31%)	2 (6%)	1	16
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 [i](#)

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	6
4	B	155/157 (99%)	132 (85%)	23 (15%)	3	17
5	C	157/163 (96%)	126 (80%)	31 (20%)	1	7
6	D	153/156 (98%)	139 (91%)	14 (9%)	9	36
7	E	136/144 (94%)	119 (88%)	17 (12%)	4	23
8	F	53/107 (50%)	48 (91%)	5 (9%)	8	35
9	G	118/146 (81%)	96 (81%)	22 (19%)	1	8
10	H	103/103 (100%)	80 (78%)	23 (22%)	1	4
11	I	108/121 (89%)	91 (84%)	17 (16%)	2	15
12	J	110/116 (95%)	92 (84%)	18 (16%)	2	13
13	K	90/93 (97%)	71 (79%)	19 (21%)	1	5
14	L	74/82 (90%)	54 (73%)	20 (27%)	0	3
15	M	94/134 (70%)	81 (86%)	13 (14%)	3	20
16	N	96/97 (99%)	80 (83%)	16 (17%)	2	12
17	O	75/79 (95%)	69 (92%)	6 (8%)	12	41
18	P	109/115 (95%)	92 (84%)	17 (16%)	2	16
19	Q	75/76 (99%)	62 (83%)	13 (17%)	2	11
20	R	91/96 (95%)	70 (77%)	21 (23%)	1	4
21	S	149/192 (78%)	123 (83%)	26 (17%)	2	11
22	T	62/67 (92%)	53 (86%)	9 (14%)	3	18
23	U	57/66 (86%)	46 (81%)	11 (19%)	1	7
24	V	54/55 (98%)	45 (83%)	9 (17%)	2	12
25	W	48/48 (100%)	41 (85%)	7 (15%)	3	18
26	Y	51/53 (96%)	45 (88%)	6 (12%)	5	25
30	4	35/35 (100%)	30 (86%)	5 (14%)	3	19
All	All	2417/2716 (89%)	2015 (83%)	402 (17%)	2	13

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

Sometimes 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 [i](#)

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 monosaccharides 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
32	ZLD	X	2911	-	26,26,26	1.26	2 (7%)	36,36,36	3.05	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
32	ZLD	X	2911	-	-	9/13/33/33	0/3/3/3

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
32	X	2911	ZLD	O10-C7	3.48	1.40	1.35
32	X	2911	ZLD	C5-C16	2.11	1.41	1.37

All (8) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	X	2911	ZLD	O10-C8-C9	9.66	117.90	109.33
32	X	2911	ZLD	C6-C8-C9	9.32	123.40	113.08
32	X	2911	ZLD	C2-N4-C7	-6.22	119.25	125.91
32	X	2911	ZLD	O15-C7-N4	4.94	132.83	128.91
32	X	2911	ZLD	O10-C7-N4	-4.77	106.55	109.83
32	X	2911	ZLD	C6-N4-C7	4.51	113.89	111.28
32	X	2911	ZLD	C5-C16-C17	-4.07	119.97	123.34
32	X	2911	ZLD	F18-C16-C17	2.40	120.61	118.42

There are no chirality outliers.

All (9) torsion outliers are listed below:

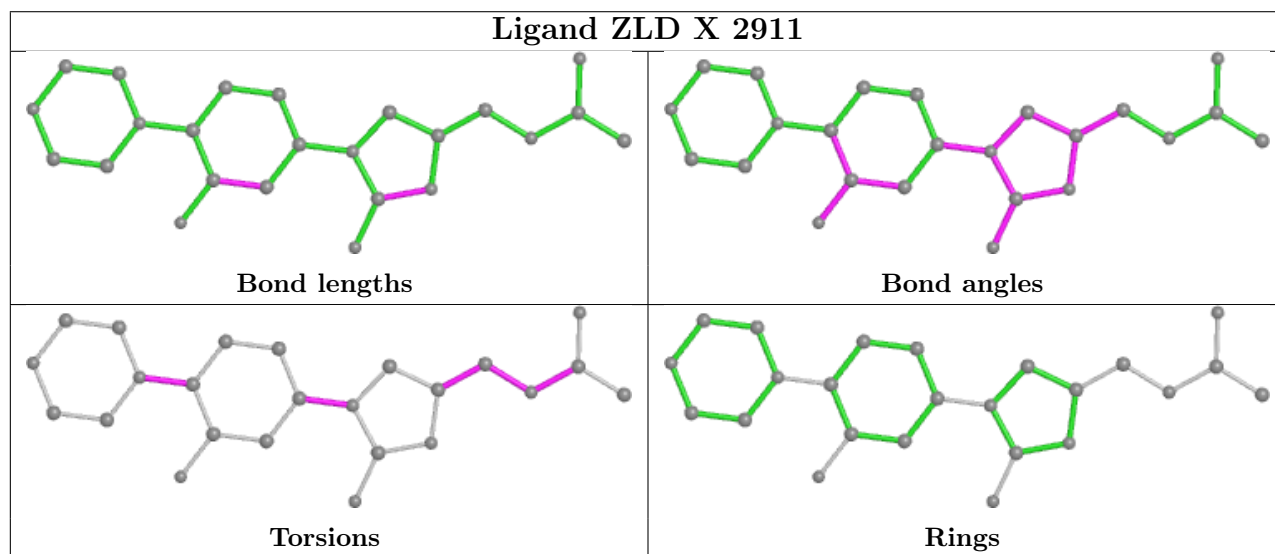
Mol	Chain	Res	Type	Atoms
32	X	2911	ZLD	C5-C2-N4-C7
32	X	2911	ZLD	C1-C2-N4-C7
32	X	2911	ZLD	C6-C8-C9-N11
32	X	2911	ZLD	O10-C8-C9-N11
32	X	2911	ZLD	C13-C12-N11-C9
32	X	2911	ZLD	O14-C12-N11-C9
32	X	2911	ZLD	C16-C17-N19-C20
32	X	2911	ZLD	C3-C17-N19-C20
32	X	2911	ZLD	C8-C9-N11-C12

There are no ring outliers.

1 monomer is involved in 22 short contacts:

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

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.



5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data i

6.1 Protein, DNA and RNA chains i

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	X	2686/2880 (93%)	-0.47	52 (1%) 66 61	1, 35, 97, 115	0
2	Z	122/123 (99%)	0.00	2 (1%) 72 66	28, 74, 94, 101	0
3	A	218/274 (79%)	-0.53	1 (0%) 91 88	8, 44, 57, 63	0
4	B	205/211 (97%)	-0.89	0 100 100	1, 12, 35, 53	0
5	C	197/205 (96%)	-0.57	0 100 100	2, 45, 62, 78	0
6	D	177/180 (98%)	-0.13	3 (1%) 70 64	54, 65, 73, 76	0
7	E	171/185 (92%)	-0.50	0 100 100	38, 59, 72, 76	0
8	F	70/144 (48%)	0.69	9 (12%) 3 4	62, 71, 75, 76	0
9	G	142/174 (81%)	-0.65	1 (0%) 87 83	19, 37, 53, 57	0
10	H	134/134 (100%)	-0.91	0 100 100	1, 8, 30, 42	0
11	I	141/156 (90%)	-0.09	5 (3%) 44 39	10, 54, 69, 84	0
12	J	136/142 (95%)	-0.53	0 100 100	25, 44, 59, 66	0
13	K	113/116 (97%)	-0.91	0 100 100	1, 2, 13, 23	0
14	L	104/114 (91%)	-0.24	0 100 100	38, 54, 61, 67	0
15	M	108/166 (65%)	-0.96	0 100 100	1, 11, 40, 46	0
16	N	117/118 (99%)	-0.77	0 100 100	2, 32, 55, 64	0
17	O	94/100 (94%)	-0.69	0 100 100	13, 46, 63, 66	0
18	P	127/134 (94%)	-0.89	0 100 100	1, 10, 40, 57	0
19	Q	93/95 (97%)	-0.63	0 100 100	23, 36, 60, 63	0
20	R	110/115 (95%)	-0.56	0 100 100	32, 44, 66, 70	0
21	S	175/237 (73%)	-0.17	5 (2%) 51 45	53, 62, 72, 79	0
22	T	84/91 (92%)	-0.05	5 (5%) 21 19	23, 47, 66, 69	0
23	U	72/81 (88%)	-0.40	0 100 100	39, 52, 63, 64	0
24	V	66/67 (98%)	-0.77	0 100 100	34, 52, 72, 76	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2		OWAB(Å ²)	Q<0.9	
25	W	55/55 (100%)	-0.69	0	100	100	32, 41, 57, 66	0
26	Y	58/60 (96%)	-0.82	0	100	100	1, 7, 32, 34	0
27	1	53/55 (96%)	2.51	31 (58%)	0	0	33, 47, 62, 65	0
28	2	46/47 (97%)	3.37	40 (86%)	0	0	1, 12, 25, 35	0
29	3	63/66 (95%)	3.45	49 (77%)	0	0	23, 34, 43, 50	0
30	4	37/37 (100%)	0.52	3 (8%)	12	12	52, 65, 72, 73	0
All	All	5974/6562 (91%)	-0.39	206 (3%)	45	40	1, 41, 84, 115	0

All (206) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
29	3	34	THR	8.7
29	3	33	ASN	8.6
27	1	40	TYR	8.2
29	3	39	ASP	7.6
29	3	32	GLN	7.1
29	3	35	GLY	6.9
29	3	40	GLU	6.9
28	2	36	ALA	6.8
29	3	41	ILE	6.3
29	3	8	LYS	6.2
28	2	29	ASN	6.1
29	3	42	ARG	6.1
29	3	31	HIS	5.9
27	1	23	THR	5.7
29	3	7	HIS	5.4
27	1	25	THR	5.4
8	F	126	ASN	5.3
1	X	727	U	5.2
1	X	1104	G	5.2
29	3	38	GLY	5.1
28	2	7	PRO	5.1
1	X	1522	C	5.0
28	2	26	SER	5.0
29	3	30	ARG	5.0
29	3	36	LYS	5.0
28	2	8	ASN	4.9
28	2	43	THR	4.8
27	1	27	ASN	4.8
29	3	29	LYS	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	28	GLY	4.6
29	3	63	PRO	4.5
28	2	25	LYS	4.5
3	A	203	ASN	4.5
2	Z	2	C	4.5
28	2	24	THR	4.5
28	2	35	ARG	4.4
29	3	45	GLY	4.4
28	2	20	ALA	4.3
29	3	6	THR	4.3
27	1	42	PRO	4.3
27	1	24	THR	4.3
27	1	26	LYS	4.2
1	X	730	C	4.1
27	1	39	LYS	4.1
28	2	23	LYS	4.0
28	2	16	HIS	4.0
1	X	1069	G	3.9
1	X	891	A	3.9
28	2	9	ASN	3.9
28	2	42	LEU	3.9
29	3	44	LYS	3.8
29	3	43	GLY	3.8
28	2	4	THR	3.8
1	X	1523	A	3.8
27	1	44	ALA	3.8
1	X	1099	A	3.8
29	3	10	ALA	3.8
27	1	9	ILE	3.7
30	4	37	GLY	3.7
1	X	2778	U	3.7
1	X	731	A	3.7
28	2	11	LYS	3.7
28	2	39	ARG	3.6
27	1	30	ASN	3.6
28	2	15	THR	3.6
11	I	5	ASP	3.6
28	2	46	ASP	3.6
28	2	28	ARG	3.6

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Mol	Chain	Res	Type	RSRZ
1	X	1187	A	3.5
29	3	27	SER	3.5
1	X	1085	G	3.5
28	2	27	GLY	3.5
29	3	4	MET	3.5
27	1	47	HIS	3.4
29	3	11	LYS	3.4
21	S	91	PRO	3.4
1	X	2088	U	3.4
1	X	1524	C	3.4
28	2	14	LYS	3.4
2	Z	123	U	3.3
29	3	18	GLY	3.3
1	X	2776	U	3.3
29	3	58	MET	3.3
1	X	1086	C	3.3
29	3	12	ARG	3.3
29	3	51	ALA	3.3
28	2	1	MET	3.3
28	2	19	ARG	3.3
1	X	1090	C	3.3
27	1	21	TYR	3.3
1	X	1083	C	3.2
28	2	40	HIS	3.2
28	2	41	GLN	3.2
8	F	129	ALA	3.2
22	T	15	ASP	3.2
29	3	2	PRO	3.2
28	2	34	ARG	3.2
27	1	14	SER	3.2
28	2	32	ALA	3.1
8	F	115	ASP	3.1
28	2	13	ALA	3.1
29	3	46	LYS	3.1
1	X	1189	G	3.1
1	X	1068	A	3.1
11	I	6	LEU	3.1
29	3	56	ALA	3.1
1	X	1734	C	3.1
1	X	726	G	3.1
29	3	60	LEU	3.0
27	1	31	THR	3.0

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Mol	Chain	Res	Type	RSRZ
28	2	6	GLN	3.0
6	D	147	ASP	3.0
29	3	25	PHE	3.0
1	X	514	G	3.0
28	2	10	ARG	3.0
29	3	61	MET	3.0
1	X	2289	A	3.0
11	I	4	HIS	3.0
1	X	1073	G	3.0
29	3	62	LEU	2.9
1	X	1094	C	2.9
8	F	84	GLY	2.9
1	X	2779	C	2.9
28	2	37	LYS	2.9
22	T	9	SER	2.9
1	X	2780	A	2.8
29	3	52	LYS	2.8
27	1	28	ARG	2.8
1	X	1093	U	2.8
1	X	728	G	2.8
1	X	1100	G	2.8
1	X	2409	A	2.8
29	3	64	ARG	2.8
11	I	9	THR	2.8
29	3	9	MET	2.8
1	X	1553	G	2.7
28	2	17	GLY	2.7
27	1	12	MET	2.7
28	2	45	SER	2.7
27	1	10	VAL	2.7
28	2	2	LYS	2.7
22	T	8	GLY	2.6
1	X	1053	G	2.6
27	1	38	LYS	2.6
28	2	44	VAL	2.6
28	2	21	ARG	2.6
28	2	33	ARG	2.6
1	X	248	A	2.6
1	X	2165	A	2.6
22	T	7	VAL	2.6
27	1	36	GLU	2.6
1	X	729	A	2.5

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Mol	Chain	Res	Type	RSRZ
1	X	1525	A	2.5
29	3	19	THR	2.5
1	X	1081	A	2.5
29	3	54	GLU	2.5
21	S	93	GLU	2.5
21	S	123	VAL	2.5
1	X	1186	G	2.5
27	1	11	LYS	2.4
28	2	22	MET	2.4
1	X	2290	A	2.4
1	X	2173	G	2.4
1	X	557	U	2.4
1	X	1082	G	2.4
29	3	26	LYS	2.4
1	X	1095	A	2.4
1	X	1105	U	2.3
28	2	31	LEU	2.3
27	1	37	LEU	2.3
21	S	92	VAL	2.3
30	4	20	HIS	2.3
6	D	145	MET	2.3
1	X	2323	U	2.3
22	T	6	GLY	2.3
27	1	22	TYR	2.3
27	1	19	GLY	2.3
8	F	133	ARG	2.3
8	F	83	ALA	2.3
1	X	2169	A	2.3
27	1	15	SER	2.2
1	X	1121	G	2.2
29	3	59	LYS	2.2
9	G	97	ASP	2.2
29	3	20	GLY	2.2
1	X	1188	A	2.2
6	D	116	GLY	2.1
27	1	13	GLU	2.2
1	X	2175	A	2.1
30	4	19	ARG	2.1
29	3	3	LYS	2.1
21	S	90	GLU	2.1
29	3	57	ARG	2.1
8	F	120	SER	2.1

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Mol	Chain	Res	Type	RSRZ
29	3	53	ALA	2.1
27	1	3	LYS	2.1
1	X	1506	C	2.1
8	F	99	LYS	2.0
29	3	55	TRP	2.0
27	1	33	ALA	2.0
11	I	29	THR	2.0
29	3	17	THR	2.0
8	F	125	ALA	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 monosaccharides 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. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

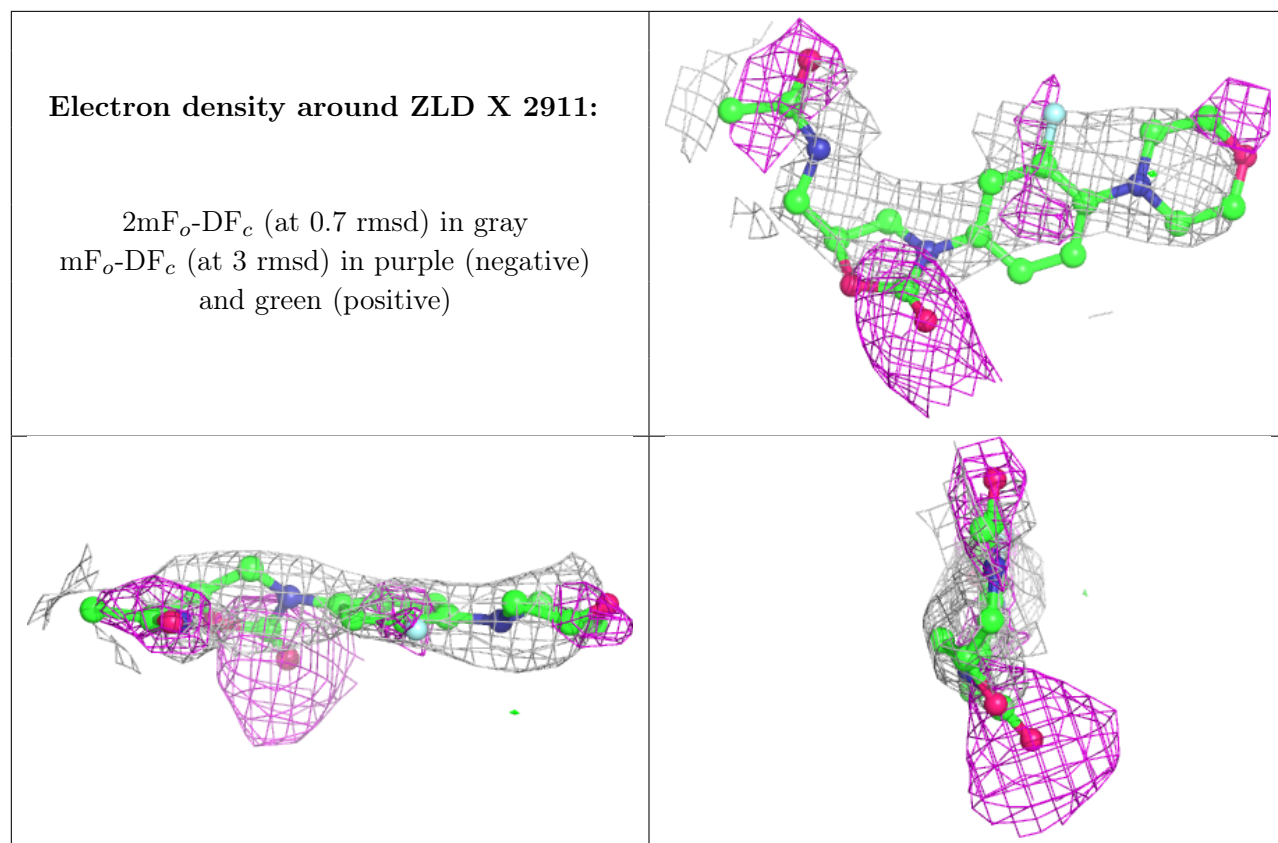
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
31	MG	X	2885	1/1	0.89	0.20	45,45,45,45	0
31	MG	X	2897	1/1	0.90	0.26	1,1,1,1	0
31	MG	Z	124	1/1	0.90	0.20	11,11,11,11	0
32	ZLD	X	2911	24/24	0.90	0.47	28,31,37,37	0
31	MG	X	2900	1/1	0.92	0.51	1,1,1,1	0
31	MG	X	2894	1/1	0.93	0.34	2,2,2,2	0
31	MG	X	2903	1/1	0.93	0.31	1,1,1,1	0
31	MG	X	2910	1/1	0.94	0.26	14,14,14,14	0
31	MG	X	2891	1/1	0.94	0.13	23,23,23,23	0
31	MG	X	2904	1/1	0.94	0.40	1,1,1,1	0
31	MG	X	2889	1/1	0.95	0.44	1,1,1,1	0
31	MG	X	2890	1/1	0.95	0.65	1,1,1,1	0
31	MG	X	2881	1/1	0.95	0.53	10,10,10,10	0
31	MG	Z	126	1/1	0.95	0.13	12,12,12,12	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
31	MG	X	2893	1/1	0.95	0.20	3,3,3,3	0
31	MG	X	2908	1/1	0.96	0.43	48,48,48,48	0
31	MG	X	2882	1/1	0.96	0.39	49,49,49,49	0
31	MG	X	2886	1/1	0.96	0.25	15,15,15,15	0
31	MG	X	2887	1/1	0.96	0.18	37,37,37,37	0
31	MG	X	2905	1/1	0.96	0.34	18,18,18,18	0
31	MG	X	2902	1/1	0.97	0.74	61,61,61,61	0
31	MG	X	2883	1/1	0.97	0.19	1,1,1,1	0
31	MG	X	2898	1/1	0.97	0.42	1,1,1,1	0
31	MG	X	2884	1/1	0.97	0.19	19,19,19,19	0
31	MG	Z	127	1/1	0.97	0.21	3,3,3,3	0
31	MG	X	2907	1/1	0.97	0.62	1,1,1,1	0
31	MG	X	2892	1/1	0.98	0.19	1,1,1,1	0
31	MG	Z	125	1/1	0.98	0.17	1,1,1,1	0
31	MG	X	2901	1/1	0.98	0.36	1,1,1,1	0
31	MG	X	2909	1/1	0.98	0.35	1,1,1,1	0
31	MG	M	167	1/1	0.98	0.56	1,1,1,1	0
31	MG	X	2895	1/1	0.98	0.31	1,1,1,1	0
33	ZN	Y	61	1/1	0.98	0.14	89,89,89,89	0
33	ZN	4	38	1/1	0.98	0.03	78,78,78,78	0
31	MG	X	2888	1/1	0.99	0.36	1,1,1,1	0
31	MG	X	2896	1/1	0.99	0.28	1,1,1,1	0
31	MG	X	2899	1/1	0.99	0.53	1,1,1,1	0
31	MG	X	2906	1/1	0.99	0.09	40,40,40,40	0

The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.



6.5 Other polymers [i](#)

There are no such residues in this entry.