



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 28, 2014 – 12:17 AM GMT

PDB ID : 2B9P
Title : 50S ribosomal subunit from a crystal structure of the ribosome in complex with tRNAs and mRNA with a stop codon in the A-site. This file contains the 50S subunit from a crystal structure of the ribosome in complex with tRNAs and mRNA with a stop codon in the A-site and is described in remark 400.
Authors : Petry, S.; Brodersen, D.E.; Murphy IV, F.V.; Dunham, C.M.; Selmer, M.; Tarry, M.J.; Kelley, A.C.; Ramakrishnan, V.
Deposited on : 2005-10-12
Resolution : 6.46 Å(reported)

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

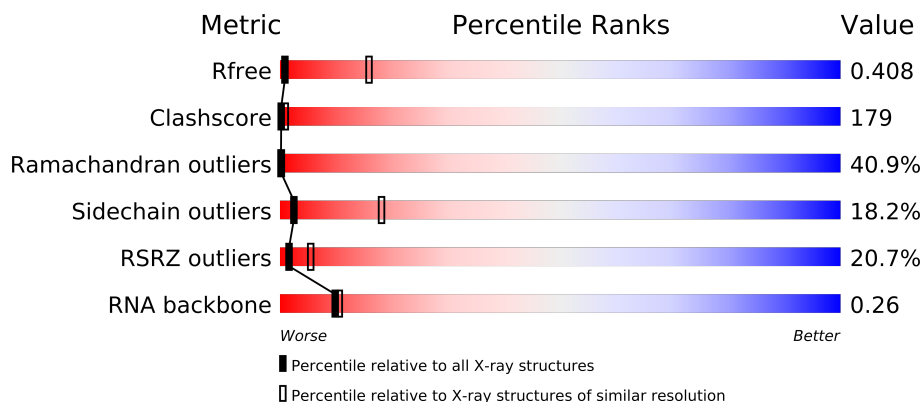
The following versions of software and data (see [references](#)) were used in the production of this report:

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

1 Overall quality at a glance

The reported resolution of this entry is 6.46 Å.

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







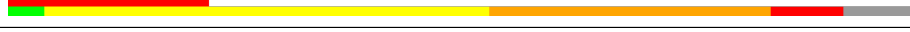





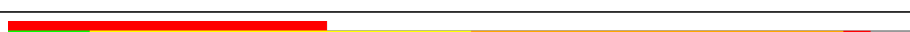

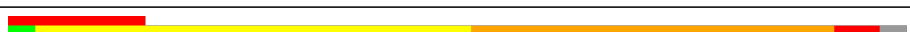




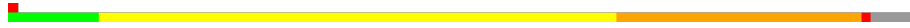

Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	66092	1095 (9.00-3.50)
Clashscore	79885	1033 (9.00-3.52)
Ramachandran outliers	78287	1289 (9.00-3.50)
Sidechain outliers	78261	1264 (9.00-3.50)
RSRZ outliers	66119	1094 (9.00-3.50)
RNA backbone	1838	1045 (10.00-2.80)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density.

Mol	Chain	Length	Quality of chain
1	B	123	
2	A	2916	
3	D	173	
4	E	338	
5	F	246	
6	G	176	
7	H	177	
8	I	149	
9	N	145	
10	O	122	
11	P	164	
12	Q	138	

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Mol	Chain	Length	Quality of chain
13	S	186	
14	T	66	
15	W	113	
16	X	84	
17	Y	119	
18	Z	253	
19	R	118	
20	U	118	
21	V	100	
22	2	70	
23	3	60	
24	0	91	
25	4	73	
26	5	60	
27	6	82	
28	7	47	
29	8	64	
30	9	36	
31	K	141	

2 Entry composition

There are 31 unique types of molecules in this entry. The entry contains 87269 atoms, of which 0 are hydrogen and 0 are deuterium.

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

- Molecule 1 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	B	123	Total	C	N	O	P	0	0	0
			2637	1175	488	852	122			

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	-1	A	-	INSERTION	GB 48271

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	A	2814	Total	C	N	O	P	0	0	0
			60600	26974	11331	19482	2813			

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	493	G	-	INSERTION	GB 48268

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	D	173	Total	C	N	O	S	0	0	0
			1308	820	246	236	6			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	E	191	Total	C	N	O	S	0	0	0
			1507	940	290	273	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	F	189	Total	C	N	O	S	0	0	0
			1430	872	255	302	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	G	122	Total	C	N	O	S	0	0	0
			957	597	176	180	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	H	164	Total	C	N	O	S	0	0	0
			1251	787	225	237	2			

- Molecule 8 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	I	148	Total	C	N	O	S	0	0	0
			1145	727	205	212	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	N	117	Total	C	N	O	S	0	0	0
			917	570	164	180	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	O	122	Total	C	N	O	S	0	0	0
			937	585	180	169	3			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
11	P	84	Total	C	N	O	0	0	0
			639	391	109	139			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	Q	138	Total	C	N	O	S	0	0	0
			1081	678	208	192	3			

- Molecule 13 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	S	113	Total	C	N	O	S	0	0	0
			866	536	165	164	1			

- Molecule 14 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	T	52	Total	C	N	O	S	0	0	0
			406	242	74	85	5			

- Molecule 15 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	W	108	Total	C	N	O		0	0	0
			860	542	169	149				

- Molecule 16 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	X	76	Total	C	N	O	S	0	0	0
			602	366	102	131	3			

- Molecule 17 is a protein called 50S ribosomal protein 24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	Y	110	Total	C	N	O		0	0	0
			879	531	166	182				

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	Z	177	Total	C	N	O	S	0	0	0
			1360	859	238	257	6			

- Molecule 19 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
19	R	105	Total	C	N	O			
			855	536	174	145	0	0	0

- Molecule 20 is a protein called 50S ribosomal protein L20.

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

- Molecule 21 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	V	100	Total	C	N	O	S		
			787	495	146	145	1	0	0

- Molecule 22 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
22	2	64	Total	C	N	O	S		
			494	301	93	99	1	0	0

- Molecule 23 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
23	3	60	Total	C	N	O	S		
			477	303	91	82	1	0	0

- Molecule 24 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
24	0	86	Total	C	N	O	S		
			641	402	124	114	1	0	0

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
25	4	73	Total	C	N	O	S		
			604	382	110	108	4	0	0

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	6	53	Total	C	N	O	S	0	0	0
			431	274	80	76	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	7	46	Total	C	N	O	S	0	0	0
			383	230	91	60	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	8	63	Total	C	N	O	S	0	0	0
			496	312	101	78	5			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	9	35	Total	C	N	O	S	0	0	0
			285	172	64	45	4			

- Molecule 31 is a protein called 50S ribosomal protein L11.

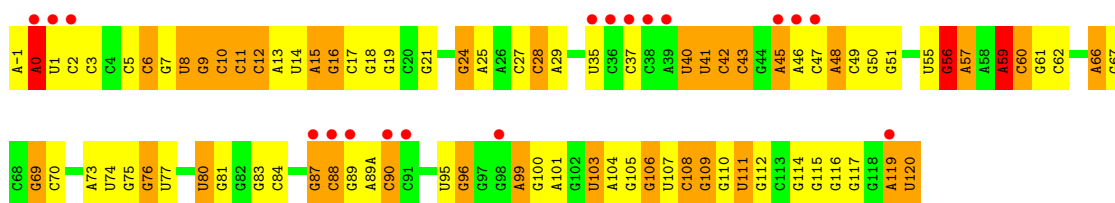
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	K	133	Total	C	N	O	S	0	0	0
			999	642	169	182	6			

3 Residue-property plots

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

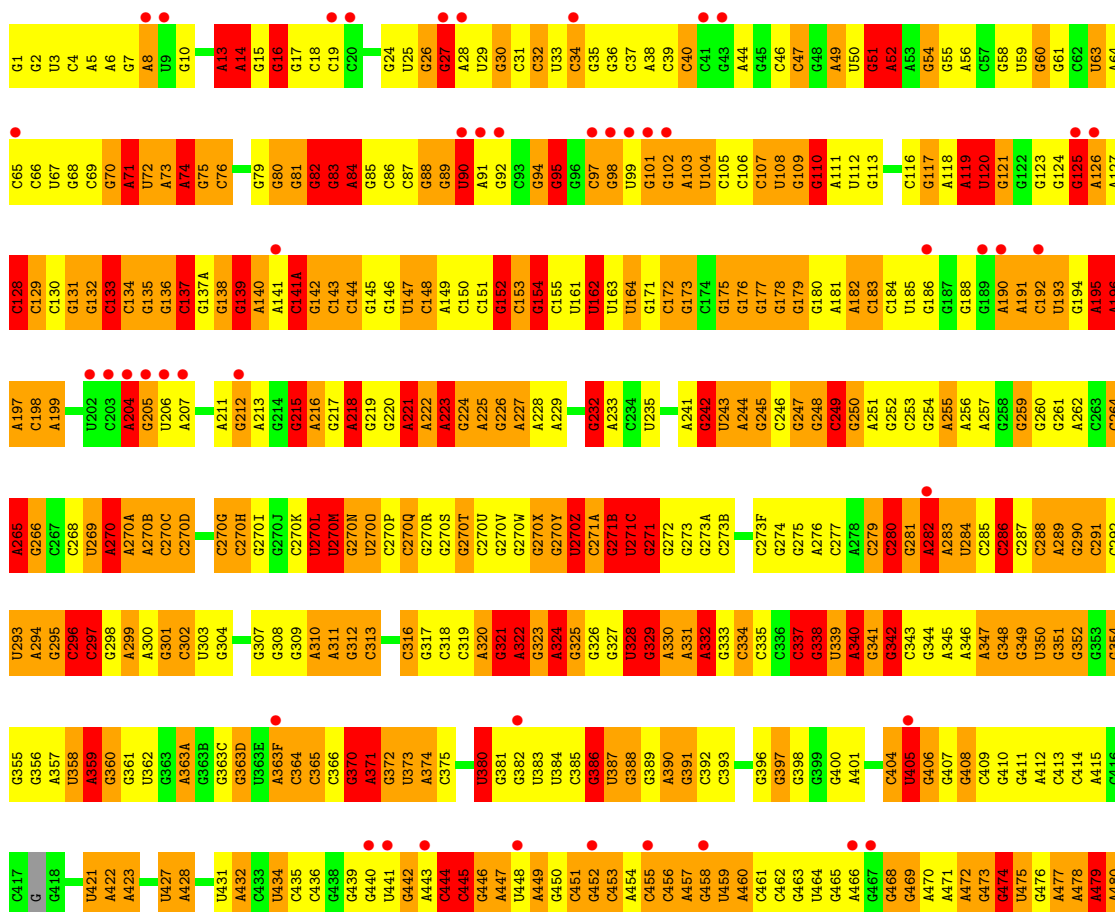
• Molecule 1: 5S ribosomal RNA

Chain B: 



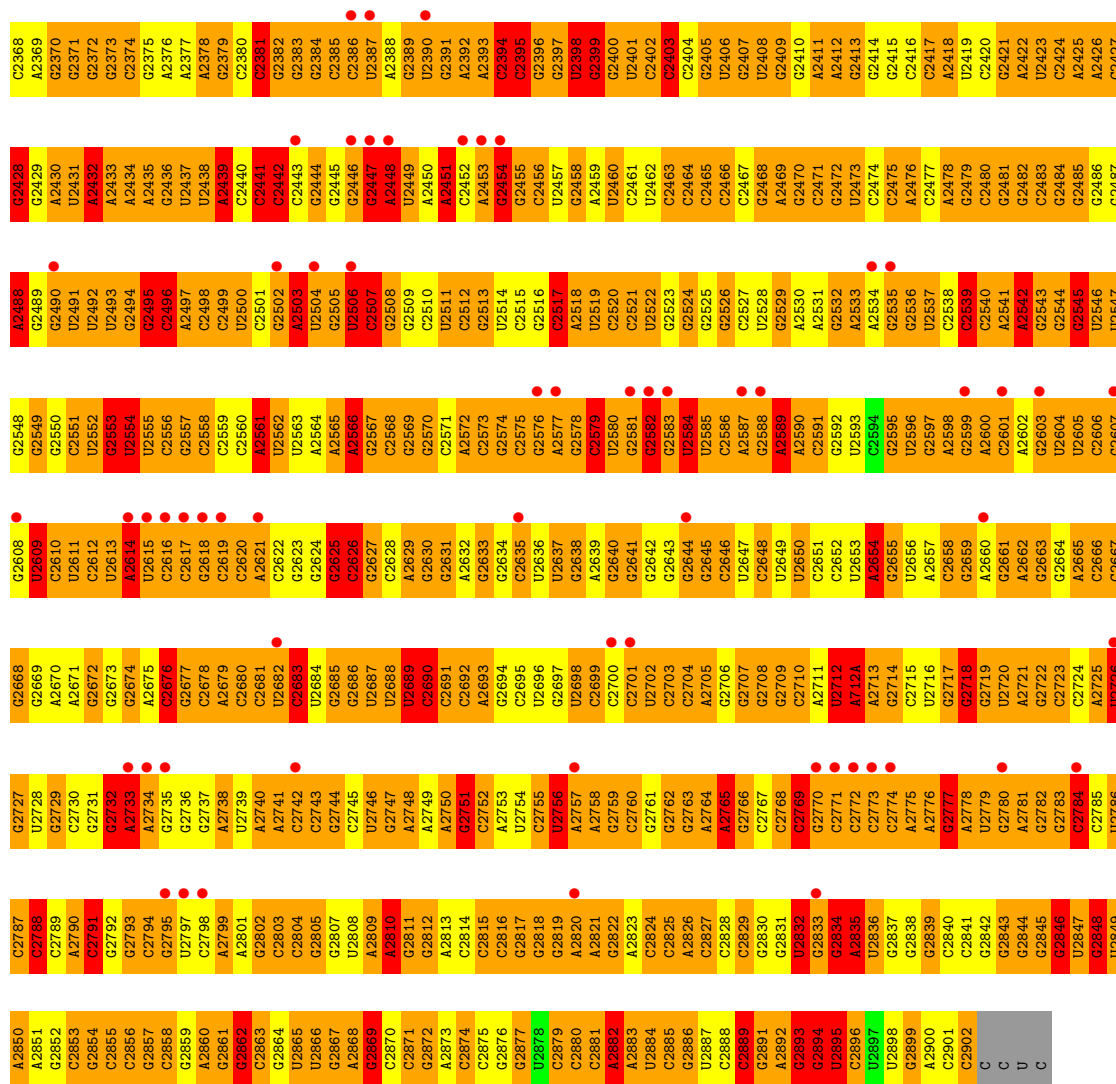
• Molecule 2: 23S ribosomal RNA

Chain A: 



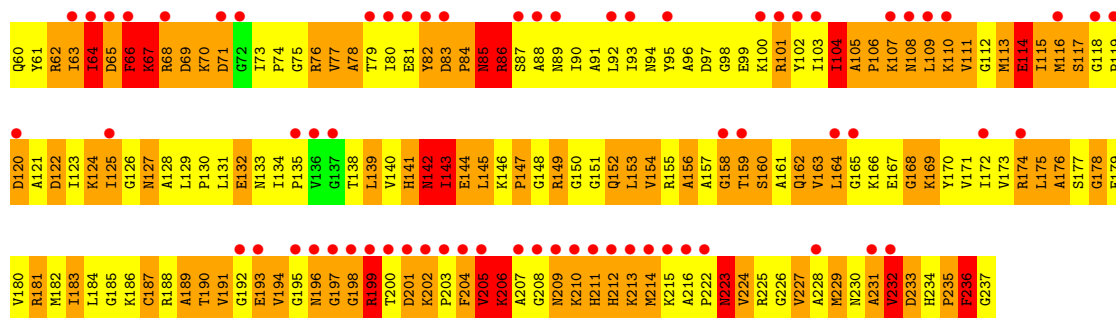
G1338	G1271	G1209	A1085	A1020	U958	C594	U828	G763	A705	G	A608	A547	G481
G1339	A1272	A1210	A1086	A1021	A959	U956	A829	G769	A706	C	A609	A548	A482
U1340	G1273	G1211	A1087	U1022	A960	A956	G830	G770	G707	G	G609A	G549	A483
U1341	G1274	G1212	A1088	U1023	C961	C957	G831	G771	C708	G	G610	G550	C484
A1342	A1275	A1213	G1152	G1024	G982	C958	U832	C772	U709	C	C611	G551	C485
G1343	A1276	A1214	G1153	G1025	U963	A959	U833	U773	G710	C	G612	G552	C486
G1344	G1277	G1215	G1154	U1026	C964	C902	C834	A774	G711	C	U613	U553	C487
C1345	A1278	G1216	A1155	A1027	C965	C903	A835	G775	G712	C	U614	U554	G488
	G1279	C1217	G1092	A1028	G966	C904	G836	G776	G713	C	U615	U555	G489
		C1218	G1093	A1029	G967	C905	C837	A777	U714	C	A616	U557	G491
		G1219	A1096	G1030	G968	U905	C838	G778	G715	C	G617	G558	A492
		U1220	U1097	G1031	U969	G906	U839	U779	A716	C	C618A	G559	G493
		C1221	A1098	G1032	C970	U907	C840	G780	G717	C	G619	G560	G494
		C1222	G1099	U1033	C971	C908		A781	A718	C	U620	G561	G495
		G1223	G1100	U1034	G972	A909	G845	A782	C719	C	G621	G562	G496
		U1224	U1101	U1035	G973	A910	C846	A783	C720	C	A621	G563	G497
		G1225	C1102	G1036	G974	A911	U847	G784	C721	C	G622	C564	G498
		C1226	A1103		G975	C912	G848	G785	A722	C	G623	C565	U499
		A1227	C1104	C1040	G976	C914	A849	C786	G723	C	G624	U566	G500
		G1228	U1105	C1041	G977	C915	C850	U787	U724	C	G625	A567	A501
		U1229	G1106		G978	C916	U851	G788	G725	C	G626	U568	A502
		C1230	U1107	G1044	G979	G917	G852	A789	G726	C	A627	U569	A503
			G1108	A1045	G979	A917	G853	C790	A727	C	G628	G570	G504
			C1109	A1046	G980	G918	G854	C791	G728	C	G629	A571	A505
			G1110		A981	G919	G855	C792	G729	C	G630	A572	G506
			G1111	C1049	C982	G920	C856	A793	C730	C	A631	G573	A507
			A1112	A1050	A983	G921	C857	G794	C731	C	A632	C574	C509
			U1113	U1051	G984	U922	U858	C795	C732	C	A633	A575	G509
			G1114	G1052	C985	C923	G859	C796	G733	C	G634	U576	C510
			G1115	A1054	C986		U860	C797	A734	C	C635	G577	U511
			C1116	G1055	G987	G928	A861	G798	A735	C	G636	A578	G512
			G1117	G1056	A988	G929	G862	G799	C736	C	A637	G579	A513
			C1118	A1057	G989	U930	A863	A800	C737	C	G638	G580	A514
			U1119	U1058	A990	G931	C864	G801	G738	C	U639	C581	A515
			G1120	G1059	C991	G932	C865	A802	C739	C	G640	G582	C516
				C1119	C992	A933	C866	U803	U740	C	C641	G583	C517
				G1121	G993	G934	C867	A804	G741	C	G642	G584	G518
				G1122	C994	C935	U868	C805	G742	C	A643	G585	U519
				G1123	C995	C936	G869	C806	G743	C	G644	A586	G520
				G1124	G996	U937	A870	U807		C	C645	C587	G521
				G1125	C997	G938	U871	G808	A746	C	A646	C588	U525
				G1126	A998	G939	A872	C909	U747	C	G647	C589	A526
				G1127	U999	G940	G873	U810	G748	C	G648	A528	A529
				U1128	A1000	G942	G874	U811	C749	C	G649	C529	G530
				G1129		G943	G875	C812	A750	C	U688	C591	C531
				U1130	G1003	U944	U876	U813	A751	C	G689	G592	A532
				G1131	C1004	G945	U877	C814	A752	C	G690	G593	G533
				U1132	C1005	A945	A878	C815	C753	C	G691	U594	U534
				C1133	C1006	G946	G879	C816	C754	C	C692	C595	C535
				G1134	C1007	G947	G880	C817		C	G693	G596	A536
				U1135	C1008	G948	G881	G818	C758	C	G696	U597	C541
				G1136	A1009	C949	G882	A819	G759	C	G697	G598	G532
				C1137	A1010	G950	U882	A820	G760	C	G698	G599	U534
				G1138	U1011	C951	C885	A821	A761	C	C699	G600	G535
				C1139	G1012	G952	C886	U822	U762	C	A699	G601	A536
				G1140	U1013	A953	A887	G823	G763	C	G700	G602	G537
				U1141	C1013	G954	C888	A824	A764	C	G701	G603	C541
				G1142	G1014	C955	A890	C825	G765	C	G702	G604	G544
				U1143	U1015	G956	A891	U826	G766	C	U703	G605	U606
				C1144	G1016	C957	A892	U827	U767	C	G704	U607	C546

G2308	C2248	C	A2057	G1986	C1834	G1860	U1798	G1728	C1656	A1529	C1463	G1401
A2309	U2249	C	A2058	G1997	G1935	G1861	G1799	A1729	C1657	G1530	C1466	C1402
A2310	G2250	U	A2059	G1998	G1936	G1862	C1800	U1730	C1658	C1531	G1466	C1403
A2311	G2251	G	A2060	C1999	A1937	G1870	C1801	G1731	U1659	C1532	C1467	C1404
C2312	G2252	U	G2061	G2000	A1938	C1871	A1802	A1732	C1660	G1533	C1468	U1405
C2313	G2253	G	A2062	A2001	U1939	A1872	A1803	G1733	G1661	G1534	C1469	U1406
C2314	C2254	G	C2063	G2002	U1940	A1873	C1804	C1734	C1662	U1535	G1470	C1407
C2315	G2255	G	C2064	G2003	C1941	G1878	U1805	G1735	C1663	A1536	A1471	C1408
C2316	G2256	G	C2065	C2006	C1942	C1879	C1806	C1741	A1664	C1537	C1472	C1409
C2317	U2257	G	C2066	C2007	U1943	C1880	G1807	C1742	A1665	G1538	G1473	G1410
C2318	G2258	C	G2067	C2008	U1944	C1881	U1808	G1743	G1666	G1539	C1474	C1411
C2319	G2259	C	U2068	G2009	G1945	C1882	A1809	G1746	G1667	U1540	C1475	A1412
C2320	G2260	U	G2069	G2010	U1946	G1883	A1810	G1747	A1668	U1541	G1476	
G2321	C2261	G	G2070	G2011	C1947	A1884	C1811		A1669	G1542	U1477	U1415
A2322	U2262	G	A2071	U2011	G1948	A1885	A1812	C1751	C1670	G1543	G1478	G1416
C2323	G2263	G	G2072	G2012	G1949	C1886	G1813	C1752	U1671	C1544	G1479	C1417
C2324	G2264	A	A2073	A2013	G1950	C1887	G1814	G1753	G1672	G1545	G1480	G1418
G2325	U2265	A	U2074	A2014	U1951	G1888	A1815	G1754	U1673	A545A	A1482	A1419
C2326	A2266	C	A2075	A2015	U1952	A1889	G1816	A1755	G1674	C1546	G1483	U1420
A2267	C2267	C	U2076	U2016	A1953	A1890	C1817	G1756	C1675	G1547	G1484	G1421
A2268	A2268	C	A2077	U2017	G1954	A1891	U1818	G1757	C1676	C1548	G1485	G1422
A2269	A2269	C	C2078	G2018	U1955	C1895	U1819	G1758	A1677	G1552	U1489	G1423
G2330	G2270	C	U2079	A2019	U1956	C1896	U1820	A1759	G1678	G1553	A1490	G1424
G2331	G2271	G	G2080	A2020	C1957	G1896	A1821	A1760	U1679	A1554	G1425	G1426
G2332	U2272	C	G2081	C2021	C1958	G1897	G1822	C1761	U1680	G1555	G1491	G1427
A2333	A2273	C	A2082	U2022	G1959	C1899	G1823	A1762	G1681	G1556	G1492	C1428
G2334	A2274	C	G2083	G2023	A1960	G1900	G1824	G1763	G1682	C1557	C1493	C1429
C2335	C2275	U	C2084	G2024	C1961	A1901	A1825	G1764	C1683	C1558	A1494	G1430
A2336	G2276	C	C2085	C2025	G1962	C1902	G1826	C1765	C1684	G1559	A1495	U1431
G2337	G2277	G	U2086	G2026	U1963	G1903	C1827	U1766	C1685	G1560	A1496	C1432
G2338	U2278	G	G2087	G2027	G1964	G1904	G1828	G1767	C1686	G1561	U1497	C1433
G2339	G2279	G	G2088	U2028	C1965	C1905	A1829	U1768	G1687	G1562	C1498	U1434
G2340	U2280	U	U2089	G2029	C1966	G1906	C1830	G1769	U1688	C1563	C1499	U1437
G2341	G2281	G	G2090	A2030	C1967	G1907	G1831	G1770	A1689	C1564	G1500	C1438
C2342	G2282	G	U2091	A2031	G1968	C1908	C1832	G1771	A1690	A1565	C1501	A1439
C2343	C2283	G	U2092	G2032	A1969	C1909	U1833	G1772	C1691	A1566	C1502	U1440
U2344	G2284	G	G2093	A2033	A1970	G1910	U1834	A1773	U1692	A1567	G1441	G1443
C2345	C2285	G	G2094	U2034	A1971	U1911	U1835	C1774	U1693	G1568	A444A	G1444
A2346	A2286	G	C2095	G2035	A1972	A1912	C1836	U1775	C1694	A1569	C1506	G1447
C2347	A2287	G	U2096	C2036	A1973	A1913	C1837	G1776	G1695	A1570	A1507	G1448
U2348	G2288	A	C2097	G2037	C1974	C1914	C1838	U1777	G1696	A1571	C1508	A1449
G2349	G2289	G	U2098	G2038	G1975	U1915	G1839	U1778	C1697	A1572	C1509	G1443
G2350	G2290	G	U2099	C2039	U1976	A1916	G1840	U1779	A1698	G1573	A1511	G1444
C2351	U2291	C	C2100	C2040	A1977	U1917	U1841	A1780	G1699	C1574	G1512	G1447
A2352	C2292	G	C2103	U2041	A1978	A1918	G1842	C1781	A1701	C1575	C1513	G1448
G2353	G2293	C	G2104	C2042	G1980	A1919	C1843	A1782	G1702	U1576	U1514	A1449
C2354	C2294	C	C2105	C2043	A1981	G1921	C1844	A1783	G1703	U1577	C1515	G449A
C2355	G2295	G	G	C2044	C1982	G1922	A1847	A1784	G1704	U1578	U1516	C1450
C2356	U2296	G	C2045	C2045	C1983	U1923	U1848	A1785	G1705	A1579	G1517	C1451
U2357	G2297	U	C	G2046	C1984	U1924	A1849	A1786	G1706	C1580	C1518	A1453
C2358	A2298	G	U2047	U2047	G1984	C1925	U1851	A1787	U1706	G1581	G1519	U1454
C2359	G2299	A	G2048	G2048	C1988	C1926	U1852	C1789	G1707	G1582	U1520	G1455
A2360	G2300	A	G	C2049	G1989	U1926	A1853	A1789	C1708	A1583	G1456	G1456
A2361	C2301	A	C2050	A2050	C1990	A1927	A1854	G1790	U1709	C1585	G1521	G1457
C2362	G2302	A	U2051	U1991	G1990	A1928	A1855	A1791	C1710	A1586	U1523	C1458
C2363	G2303	U	G2052	G2052	U1993	G1929	G1856	G1792	G1651	A1587	U1524	G1459
C2364	G2304	C	G2053	G2053	G1992	C1930	G1857		A1652	C1588	G1525	A1460
C2365	A2305	C	A2054	A2054	U1993	U1931	G1858	C1795	G1653	G1595	G1526	G1461
A2366	G2306	G	C2055	C1994	C1994	A1932	G1726	U1796	A1654	A1596	G1527	C1462
G2367	G2307	C	A	G2056	U1995	G1933	A1859	C1797	U1727		A1528	



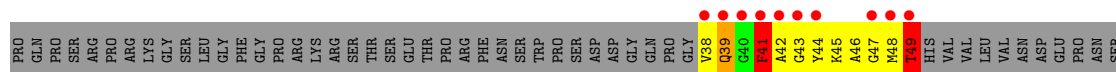
• Molecule 3: 50S ribosomal protein L2

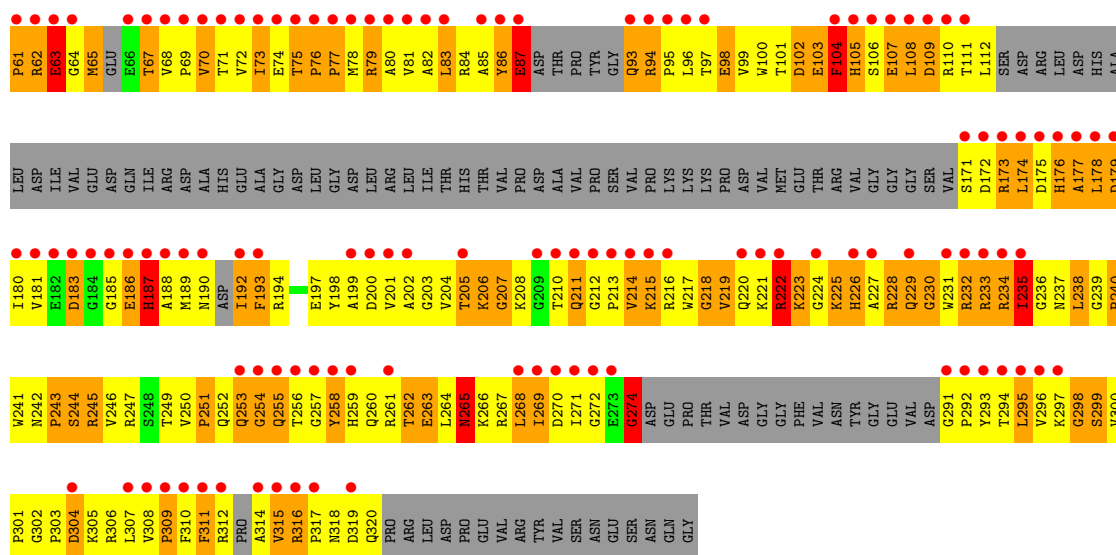
Chain D:



• Molecule 4: 50S ribosomal protein L3

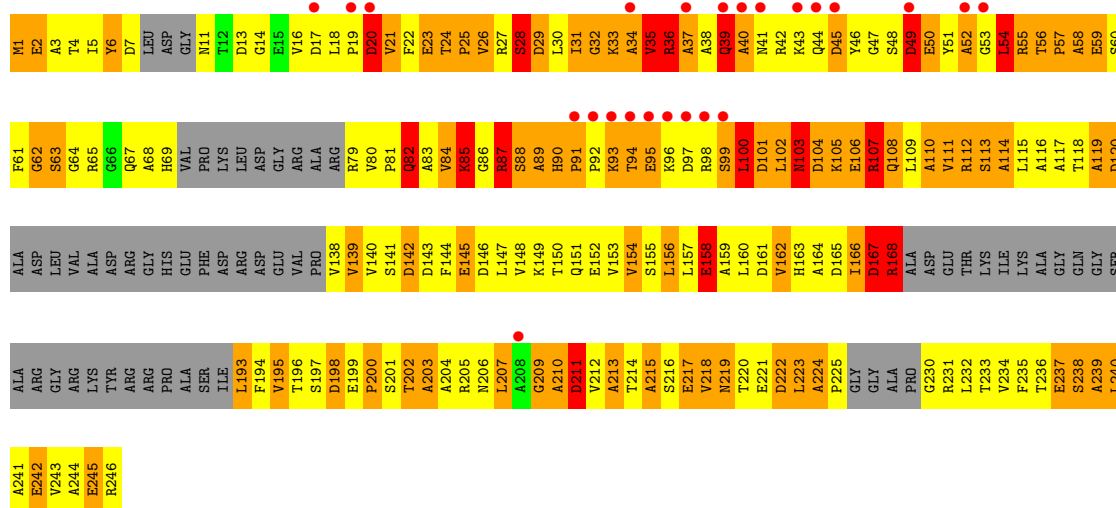
Chain E:





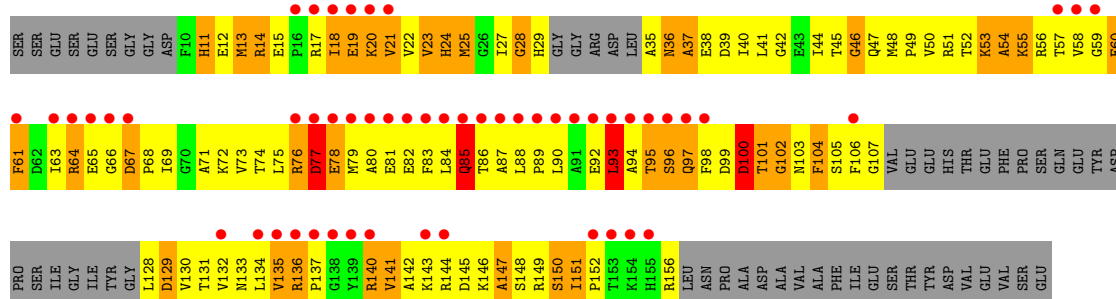
• Molecule 5: 50S ribosomal protein L4

Chain F:



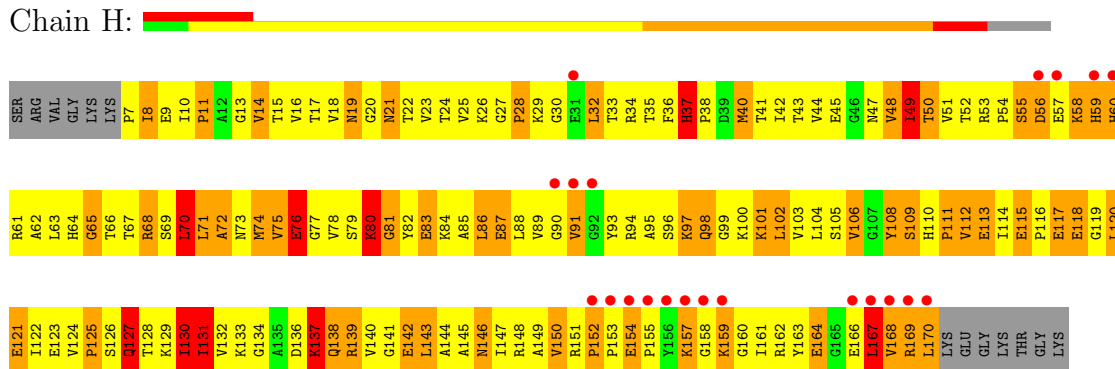
• Molecule 6: 50S ribosomal protein L5

Chain G:



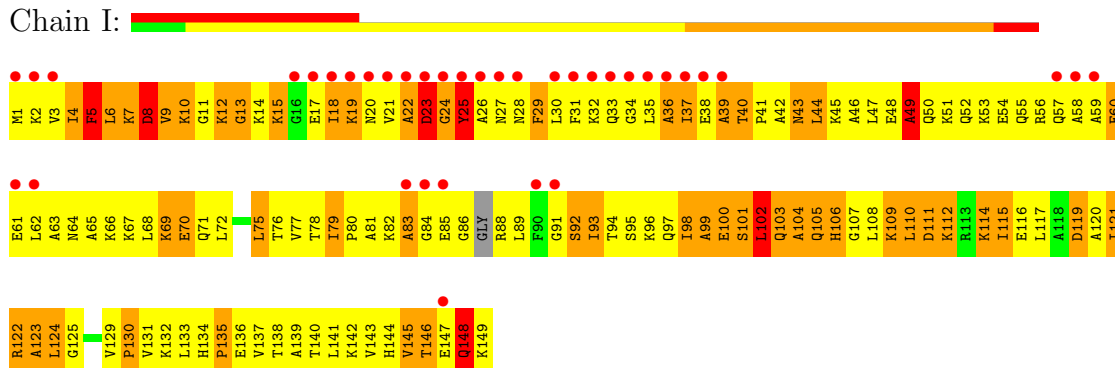
• Molecule 7: 50S ribosomal protein L6

Chain H:



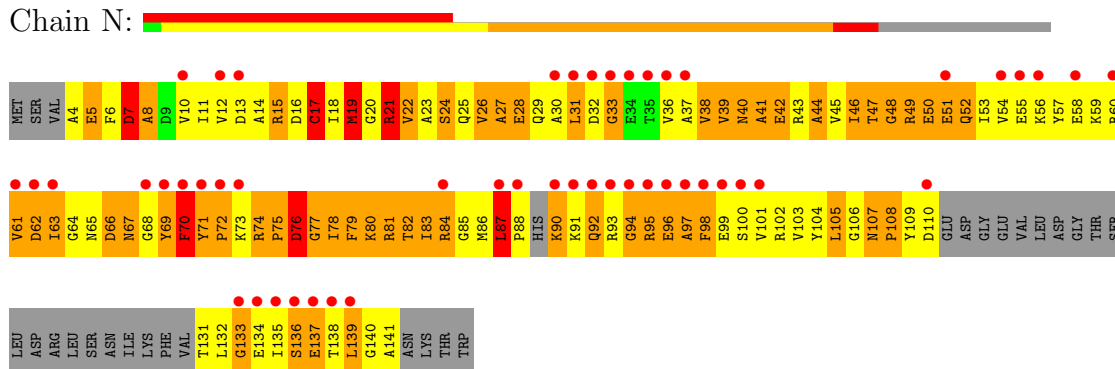
• Molecule 8: 50S ribosomal protein L9

Chain I:



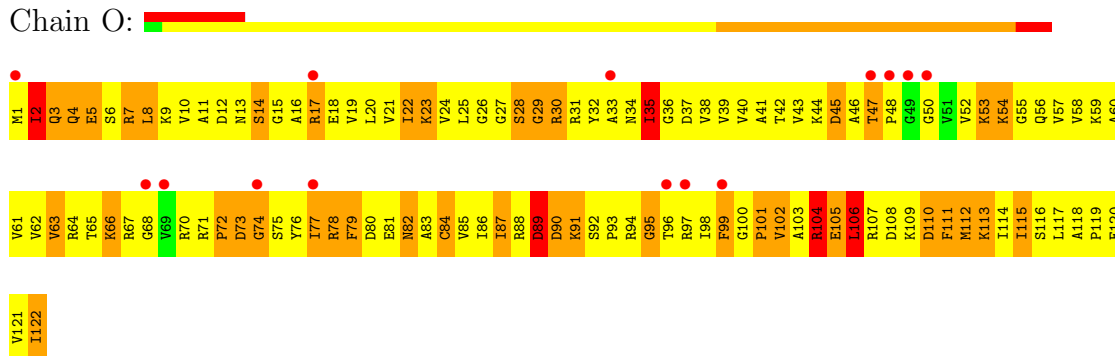
• Molecule 9: 50S ribosomal protein L13

Chain N:



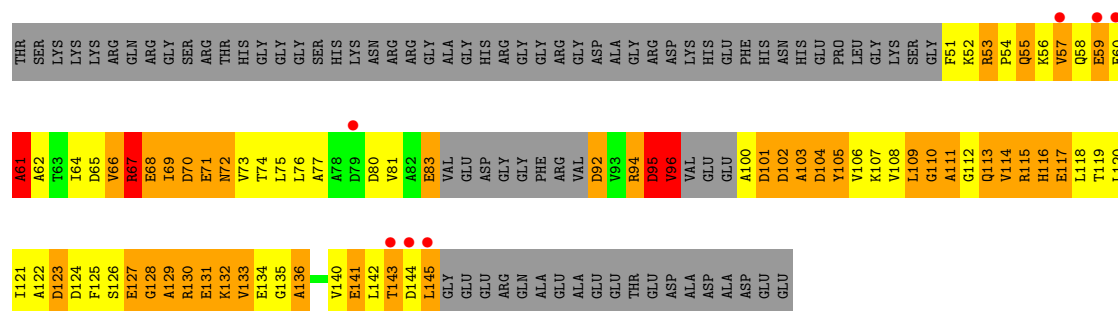
• Molecule 10: 50S ribosomal protein L14

Chain O:



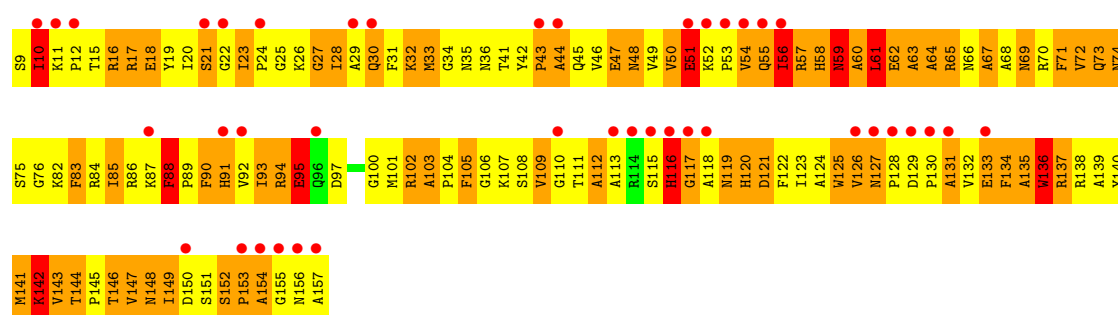
• Molecule 11: 50S ribosomal protein L15

Chain P:



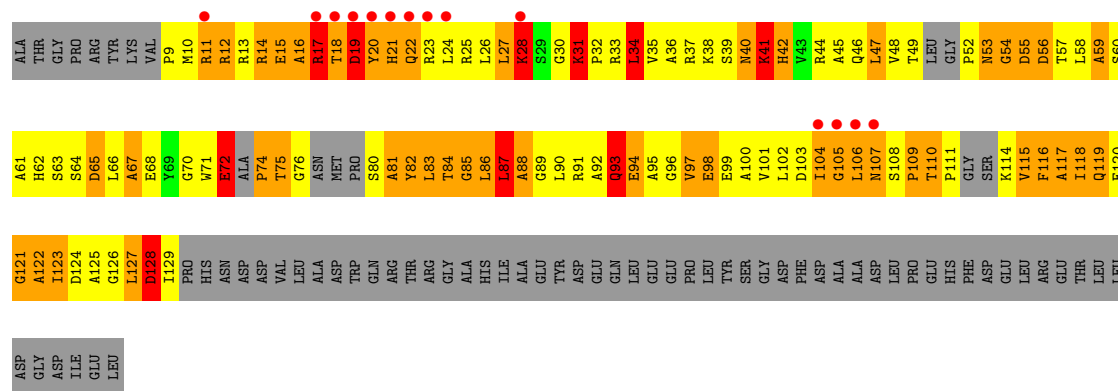
• Molecule 12: 50S ribosomal protein L16

Chain Q:



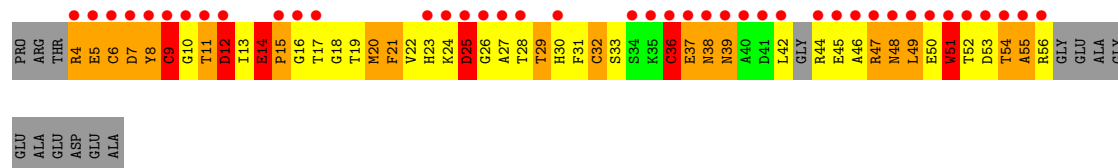
• Molecule 13: 50S ribosomal protein L18

Chain S:

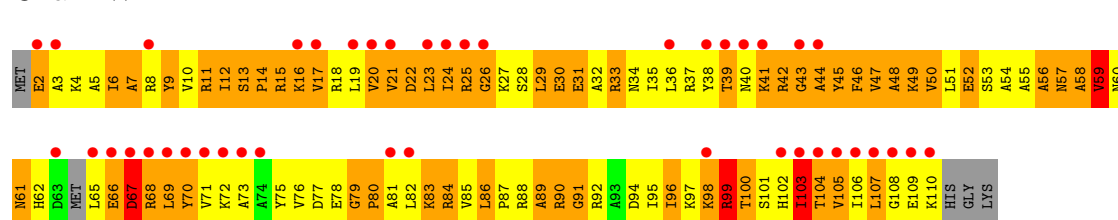


• Molecule 14: 50S ribosomal protein L19

Chain T:

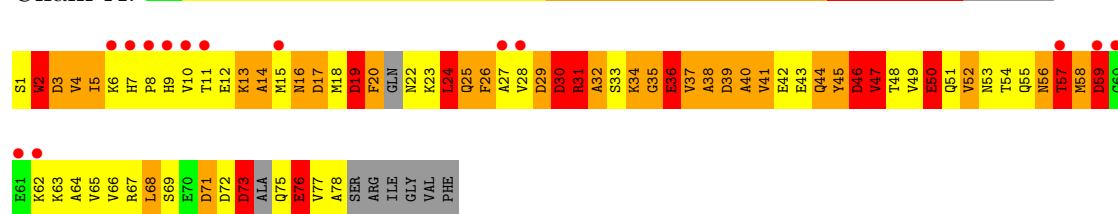


Chain W:



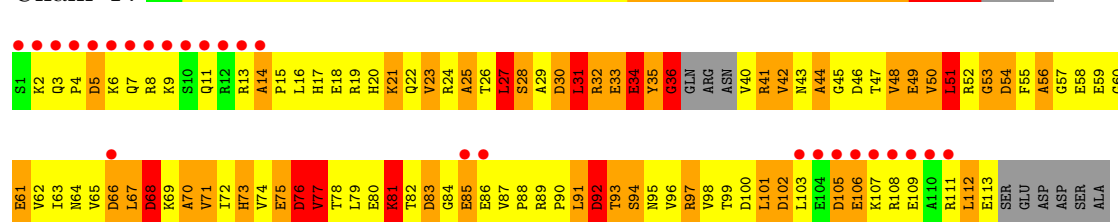
- Molecule 16: 50S ribosomal protein L23

Chain X:



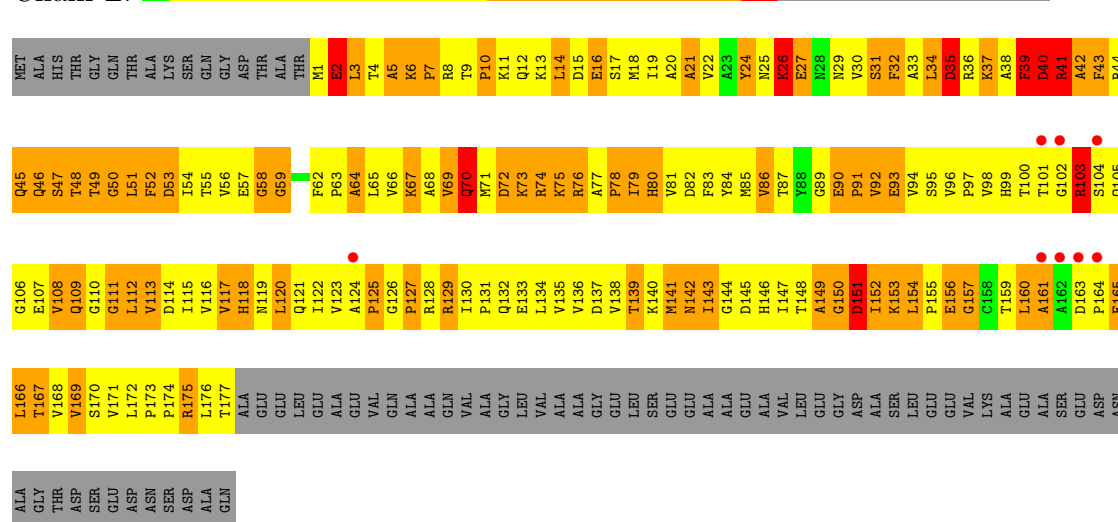
- Molecule 17: 50S ribosomal protein 24

Chain Y:



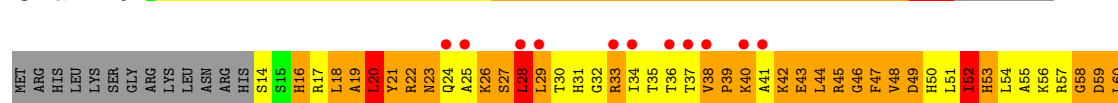
- Molecule 18: 50S ribosomal protein CTC

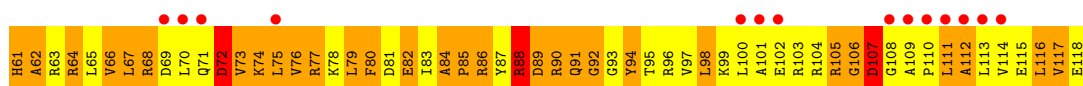
Chain Z:



- Molecule 19: 50S ribosomal protein L17

Chain R:





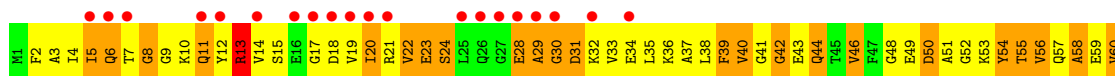
• Molecule 20: 50S ribosomal protein L20

Chain U:



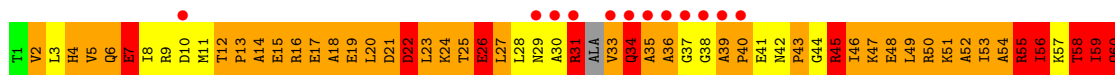
• Molecule 21: 50S ribosomal protein L21

Chain V:



• Molecule 22: 50S ribosomal protein L29

Chain 2:



• Molecule 23: 50S ribosomal protein L30

Chain 3:



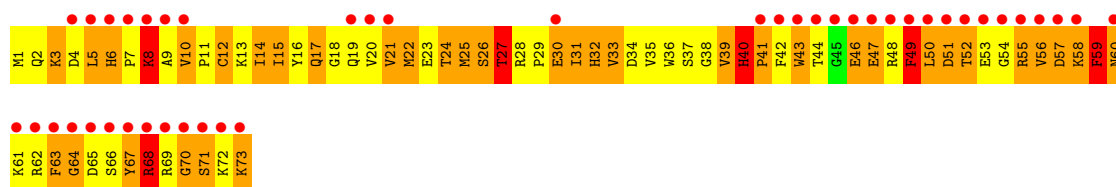
• Molecule 24: 50S ribosomal protein L27

Chain 0:



• Molecule 25: 50S ribosomal protein L31

Chain 4:



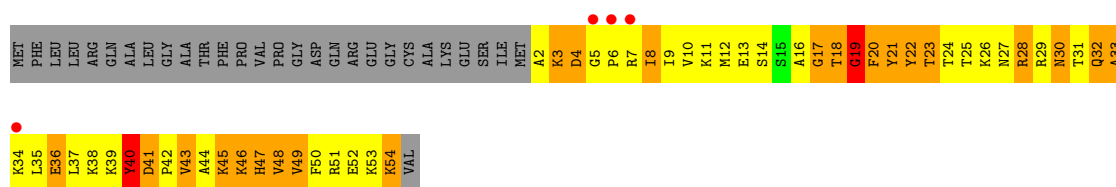
• Molecule 26: 50S ribosomal protein L32

Chain 5:



• Molecule 27: 50S ribosomal protein L33

Chain 6:



• Molecule 28: 50S ribosomal protein L34

Chain 7:



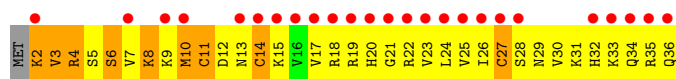
• Molecule 29: 50S ribosomal protein L35

Chain 8:



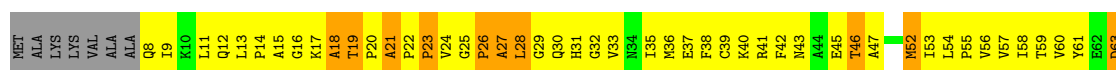
• Molecule 30: 50S ribosomal protein L36

Chain 9:



• Molecule 31: 50S ribosomal protein L11

Chain K:





4 Data and refinement statistics

Property	Value	Source
Space group	P 43 21 2	Depositor
Cell constants a, b, c, α , β , γ	517.41 Å 517.41 Å 365.38 Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	40.00 – 6.46 99.57 – 6.00	Depositor EDS
% Data completeness (in resolution range)	99.9 (40.00-6.46) 99.7 (99.57-6.00)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.13	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.87 (at 6.19 Å)	Xtriage
Refinement program	CNS	Depositor
R, R_{free}	0.354 , 0.361 0.413 , 0.408	Depositor DCC
R_{free} test set	6060 reflections (4.93%)	DCC
Wilson B-factor (Å ²)	240.8	Xtriage
Anisotropy	0.222	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.07 , 35.2	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning	$\langle L \rangle = 0.46$, $\langle L^2 \rangle = 0.29$	Xtriage
Outliers	0 of 123103 reflections	Xtriage
F_o, F_c correlation	0.79	EDS
Total number of atoms	87269	wwPDB-VP
Average B, all atoms (Å ²)	289.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.58% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	B	1.25	6/2950 (0.2%)	1.44	25/4602 (0.5%)
2	A	1.17	153/67839 (0.2%)	1.46	906/105818 (0.9%)
3	D	0.38	0/1328	0.60	0/1783
4	E	0.65	4/1540 (0.3%)	1.07	7/2078 (0.3%)
5	F	0.76	3/1444 (0.2%)	0.83	1/1954 (0.1%)
6	G	0.25	0/971	0.46	0/1304
7	H	0.54	1/1272 (0.1%)	0.80	3/1721 (0.2%)
8	I	0.32	0/1156	0.71	3/1544 (0.2%)
9	N	0.35	0/927	0.55	0/1245
10	O	0.32	0/946	0.57	0/1269
11	P	1.59	3/643 (0.5%)	1.31	5/870 (0.6%)
12	Q	0.32	0/1106	0.53	0/1490
13	S	1.13	3/877 (0.3%)	0.69	1/1179 (0.1%)
14	T	0.39	0/412	0.70	0/554
15	W	0.75	3/869 (0.3%)	0.75	4/1166 (0.3%)
16	X	0.49	1/608 (0.2%)	1.04	3/820 (0.4%)
17	Y	0.26	0/887	0.83	3/1195 (0.3%)
18	Z	0.32	1/1385 (0.1%)	0.62	3/1883 (0.2%)
19	R	0.30	0/867	0.50	0/1162
20	U	0.64	1/994 (0.1%)	0.74	3/1323 (0.2%)
21	V	0.82	1/796 (0.1%)	0.91	3/1058 (0.3%)
22	2	0.37	0/497	1.00	2/668 (0.3%)
23	3	0.31	0/482	0.50	0/646
24	0	0.38	1/649 (0.2%)	0.87	3/860 (0.3%)
25	4	0.89	2/620 (0.3%)	0.54	0/831
26	5	0.36	0/469	0.90	3/629 (0.5%)
27	6	0.32	0/438	0.55	1/583 (0.2%)
28	7	0.38	0/387	0.64	0/509
29	8	0.91	2/503 (0.4%)	0.92	3/657 (0.5%)
30	9	0.33	0/286	0.59	0/375
31	K	0.27	1/1014 (0.1%)	0.44	0/1363
All	All	1.06	186/95162 (0.2%)	1.33	982/143139 (0.7%)

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
3	D	0	1
4	E	0	3
5	F	0	4
7	H	0	1
8	I	0	1
11	P	0	1
13	S	0	1
16	X	0	1
17	Y	0	1
22	2	0	1
26	5	0	1
31	K	0	1
All	All	0	17

All (186) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A	2199	A	O3'-P	-71.04	0.75	1.61
2	A	1546	C	O3'-P	-51.62	0.99	1.61
2	A	2196	C	O3'-P	-48.04	1.03	1.61
2	A	1545	A	O3'-P	45.79	2.16	1.61
2	A	2454	G	O3'-P	-44.69	1.07	1.61
2	A	2889	C	O3'-P	-43.48	1.08	1.61
2	A	1142	U	O3'-P	38.88	2.07	1.61
1	B	59	A	O3'-P	-37.97	1.15	1.61
2	A	324	A	O3'-P	37.59	2.06	1.61
2	A	1924	C	O3'-P	-37.38	1.16	1.61
2	A	1029	A	O3'-P	-36.91	1.16	1.61
2	A	2625	G	O3'-P	-35.56	1.18	1.61
2	A	280	C	O3'-P	34.99	2.03	1.61
2	A	1525	G	O3'-P	34.43	2.02	1.61
2	A	1124	C	O3'-P	34.22	2.02	1.61
2	A	1988	C	O3'-P	-34.18	1.20	1.61
2	A	1163	G	O3'-P	-33.21	1.21	1.61
2	A	223	A	O3'-P	32.91	2.00	1.61
2	A	1404	C	O3'-P	32.43	2.00	1.61
2	A	460	A	O3'-P	-30.93	1.24	1.61
2	A	176	G	O3'-P	-29.60	1.25	1.61
2	A	1019	U	O3'-P	28.98	1.96	1.61
2	A	1055	G	O3'-P	28.58	1.95	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A	232	G	O3'-P	27.65	1.94	1.61
11	P	96	VAL	C-N	-27.56	0.70	1.34
2	A	2769	C	O3'-P	-27.43	1.28	1.61
2	A	2810	A	O3'-P	-27.34	1.28	1.61
1	B	0	A	O3'-P	27.27	1.93	1.61
2	A	1667	G	O3'-P	-27.01	1.28	1.61
2	A	130	C	O3'-P	-26.92	1.28	1.61
2	A	1419	A	O3'-P	26.69	1.93	1.61
2	A	110	G	O3'-P	-26.23	1.29	1.61
2	A	14	A	O3'-P	-25.56	1.30	1.61
2	A	601	C	O3'-P	25.31	1.91	1.61
13	S	128	ASP	C-N	24.38	1.90	1.34
2	A	2344	U	O3'-P	-23.71	1.32	1.61
1	B	24	G	O3'-P	-22.46	1.34	1.61
2	A	793	A	O3'-P	-22.33	1.34	1.61
2	A	1626	G	O3'-P	-22.30	1.34	1.61
11	P	61	ALA	C-N	22.28	1.85	1.34
21	V	91	THR	C-N	21.99	1.84	1.34
1	B	-1	A	O3'-P	-21.91	1.34	1.61
2	A	2062	A	O3'-P	-21.71	1.35	1.61
2	A	316	C	O3'-P	20.97	1.86	1.61
2	A	2243	U	O3'-P	20.94	1.86	1.61
2	A	2644	G	O3'-P	-20.89	1.36	1.61
2	A	1991	U	O3'-P	19.97	1.85	1.61
2	A	2322	A	O3'-P	-19.85	1.37	1.61
5	F	168	ARG	C-N	-19.27	0.89	1.34
2	A	2040	C	O3'-P	-19.23	1.38	1.61
2	A	1361	G	O3'-P	-19.19	1.38	1.61
2	A	359	A	O3'-P	19.13	1.84	1.61
2	A	405	U	O3'-P	-18.51	1.39	1.61
2	A	468	G	O3'-P	-18.49	1.39	1.61
2	A	2009	G	O3'-P	18.44	1.83	1.61
2	A	1646	C	O3'-P	-18.36	1.39	1.61
2	A	584	C	O3'-P	-18.32	1.39	1.61
2	A	837	C	O3'-P	18.30	1.83	1.61
2	A	271(B)	G	O3'-P	-18.28	1.39	1.61
2	A	2566	A	O3'-P	18.25	1.83	1.61
11	P	83	GLU	C-N	17.99	1.75	1.34
4	E	87	GLU	C-N	17.94	1.75	1.34
2	A	2882	A	O3'-P	17.71	1.82	1.61
29	8	46	LYS	C-N	17.52	1.64	1.33
2	A	809	G	O3'-P	-17.25	1.40	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	H	80	LYS	C-N	-16.95	1.02	1.33
13	S	72	GLU	C-N	16.89	1.66	1.34
20	U	50	ARG	C-N	-16.51	0.96	1.34
2	A	432	A	O3'-P	16.50	1.80	1.61
2	A	1905	C	O3'-P	-16.46	1.41	1.61
2	A	2225	A	O3'-P	16.37	1.80	1.61
25	4	40	HIS	C-N	16.18	1.65	1.34
5	F	103	ASN	C-N	-16.18	0.96	1.34
2	A	474	G	O3'-P	16.17	1.80	1.61
2	A	1706	U	O3'-P	15.92	1.80	1.61
2	A	1143	A	O3'-P	15.87	1.80	1.61
2	A	271	G	O3'-P	15.68	1.79	1.61
2	A	117	G	O3'-P	15.49	1.79	1.61
2	A	427	U	O3'-P	-15.41	1.42	1.61
2	A	1189	A	O3'-P	-15.35	1.42	1.61
2	A	297	C	O3'-P	-15.34	1.42	1.61
2	A	509	C	O3'-P	-15.05	1.43	1.61
2	A	264	C	O3'-P	-14.99	1.43	1.61
2	A	1970	A	O3'-P	14.58	1.78	1.61
2	A	2835	A	O3'-P	-14.42	1.43	1.61
2	A	2258	C	O3'-P	-14.00	1.44	1.61
2	A	817	C	O3'-P	13.87	1.77	1.61
2	A	1208	C	O3'-P	-13.84	1.44	1.61
2	A	1630	G	O3'-P	-13.82	1.44	1.61
13	S	31	LYS	C-N	13.75	1.60	1.34
2	A	2712	U	O3'-P	-13.70	1.44	1.61
2	A	2421	G	O3'-P	-13.60	1.44	1.61
2	A	2609	U	O3'-P	13.33	1.77	1.61
2	A	56	A	O3'-P	-13.23	1.45	1.61
2	A	1255	U	O3'-P	-12.82	1.45	1.61
25	4	8	LYS	C-N	12.81	1.63	1.34
2	A	1275	A	O3'-P	12.71	1.76	1.61
2	A	1294	U	O3'-P	-12.38	1.46	1.61
2	A	2295	C	O3'-P	-12.29	1.46	1.61
15	W	2	GLU	C-N	-12.20	1.06	1.34
2	A	270	A	O3'-P	-12.19	1.46	1.61
2	A	670	A	O3'-P	-11.99	1.46	1.61
2	A	1834	U	O3'-P	11.85	1.75	1.61
2	A	1751	C	O3'-P	11.83	1.75	1.61
2	A	44	A	O3'-P	11.58	1.75	1.61
2	A	636	G	O3'-P	11.57	1.75	1.61
2	A	1302	A	O3'-P	11.46	1.74	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A	1466	G	O3'-P	11.45	1.74	1.61
2	A	1961	C	O3'-P	-11.39	1.47	1.61
2	A	445	C	O3'-P	-11.28	1.47	1.61
2	A	148	C	O3'-P	11.21	1.74	1.61
2	A	2381	C	O3'-P	-11.21	1.47	1.61
15	W	79	GLY	C-N	-11.21	1.12	1.34
1	B	69	G	O3'-P	11.16	1.74	1.61
15	W	99	ARG	C-N	10.82	1.58	1.34
2	A	864	G	O3'-P	10.78	1.74	1.61
2	A	2090	G	O3'-P	-10.61	1.48	1.61
2	A	1444	G	O3'-P	10.60	1.73	1.61
2	A	1307	A	O3'-P	-10.52	1.48	1.61
2	A	1978	A	O3'-P	-10.22	1.48	1.61
2	A	1150	C	O3'-P	10.00	1.73	1.61
2	A	2732	G	O3'-P	-9.96	1.49	1.61
2	A	578	A	O3'-P	-9.71	1.49	1.61
2	A	712(A)	A	O3'-P	9.65	1.72	1.61
2	A	2370	G	O3'-P	-9.43	1.49	1.61
2	A	32	C	O3'-P	-9.39	1.49	1.61
2	A	1449	A	O3'-P	-9.32	1.50	1.61
2	A	2281	C	O3'-P	-9.25	1.50	1.61
4	E	49	THR	C-N	-9.20	1.16	1.34
16	X	73	ASP	C-N	8.98	1.54	1.34
2	A	183	C	O3'-P	-8.93	1.50	1.61
2	A	1681	G	O3'-P	-8.86	1.50	1.61
2	A	2447	G	O3'-P	8.67	1.71	1.61
2	A	2287	A	O3'-P	8.63	1.71	1.61
2	A	1828	G	O3'-P	-8.60	1.50	1.61
2	A	1004	C	O3'-P	8.58	1.71	1.61
2	A	532	A	O3'-P	-8.54	1.50	1.61
2	A	525	U	O3'-P	-8.32	1.51	1.61
2	A	1237	A	O3'-P	-8.16	1.51	1.61
2	A	2433	A	O3'-P	-7.99	1.51	1.61
2	A	1564	C	O3'-P	-7.85	1.51	1.61
2	A	101	G	N9-C4	7.77	1.44	1.38
2	A	70	G	O3'-P	-7.73	1.51	1.61
2	A	103	A	O3'-P	7.69	1.70	1.61
2	A	2718	G	O3'-P	7.67	1.70	1.61
2	A	2394	C	O3'-P	7.46	1.70	1.61
2	A	8	A	O3'-P	-7.38	1.52	1.61
18	Z	92	VAL	C-N	7.30	1.50	1.34
2	A	761	A	O3'-P	7.11	1.69	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A	2894	G	O3'-P	7.05	1.69	1.61
2	A	340	A	O3'-P	-6.89	1.52	1.61
2	A	734	A	O3'-P	6.83	1.69	1.61
2	A	776	G	C3'-O3'	6.82	1.51	1.42
2	A	940	G	O3'-P	6.73	1.69	1.61
2	A	1189	A	C3'-O3'	6.73	1.51	1.42
2	A	2674	G	O3'-P	6.61	1.69	1.61
2	A	1851	U	O3'-P	6.53	1.69	1.61
4	E	274	GLY	C-N	6.49	1.44	1.33
2	A	1791	A	O3'-P	-6.45	1.53	1.61
29	8	24	ALA	C-N	6.36	1.48	1.34
2	A	2545	G	O3'-P	6.29	1.68	1.61
2	A	624	C	O3'-P	-6.13	1.53	1.61
5	F	28	SER	C-N	6.13	1.48	1.34
24	0	18	PRO	C-N	-6.12	1.20	1.34
2	A	1339	G	O3'-P	-6.05	1.53	1.61
2	A	101	G	C3'-O3'	6.04	1.50	1.42
2	A	1428	C	O3'-P	5.98	1.68	1.61
2	A	801	G	C3'-O3'	5.95	1.50	1.42
2	A	2869	G	O3'-P	-5.94	1.54	1.61
2	A	1917	U	C3'-O3'	5.82	1.50	1.42
2	A	212	G	O3'-P	5.70	1.68	1.61
2	A	1944	U	O3'-P	5.67	1.68	1.61
2	A	1247	A	O3'-P	5.67	1.68	1.61
2	A	686	G	O3'-P	5.64	1.68	1.61
2	A	817	C	C1'-N1	5.50	1.57	1.48
2	A	613	U	C1'-N1	5.43	1.56	1.48
2	A	1620	G	O3'-P	5.42	1.67	1.61
2	A	944	G	C3'-O3'	5.37	1.49	1.42
2	A	739	G	N9-C4	5.31	1.42	1.38
2	A	990	A	O3'-P	5.24	1.67	1.61
2	A	974(A)	C	C1'-N1	5.19	1.56	1.48
1	B	106	G	O3'-P	-5.18	1.54	1.61
31	K	86	GLU	C-N	-5.14	1.22	1.34
2	A	1914	C	C1'-N1	5.11	1.56	1.48
2	A	2582	G	O3'-P	-5.10	1.55	1.61
4	E	258	TYR	C-N	5.09	1.45	1.34

All (982) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	712(A)	A	P-O3'-C3'	-43.62	67.36	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	2199	A	O3'-P-O5'	-43.07	22.17	104.00
1	B	24	G	P-O3'-C3'	32.35	158.52	119.70
2	A	1545	A	P-O3'-C3'	-28.07	86.01	119.70
4	E	49	THR	O-C-N	-27.52	68.81	121.10
11	P	83	GLU	O-C-N	-27.07	79.38	122.70
2	A	1525	G	P-O3'-C3'	-26.57	87.82	119.70
5	F	168	ARG	O-C-N	-24.62	83.30	122.70
2	A	1545	A	OP2-P-O3'	23.20	156.25	105.20
2	A	223	A	P-O3'-C3'	-22.35	92.88	119.70
2	A	1924	C	P-O3'-C3'	-20.68	94.89	119.70
2	A	232	G	P-O3'-C3'	-20.67	94.89	119.70
2	A	1630	G	P-O3'-C3'	20.15	143.88	119.70
16	X	73	ASP	O-C-N	-18.91	92.44	122.70
21	V	91	THR	CA-C-N	-18.71	76.05	117.20
22	2	31	ARG	O-C-N	-18.58	92.98	122.70
1	B	24	G	O3'-P-O5'	18.43	139.03	104.00
7	H	80	LYS	O-C-N	-18.40	91.93	123.20
2	A	2889	C	OP2-P-O3'	-18.19	65.19	105.20
2	A	1055	G	O3'-P-O5'	17.91	138.04	104.00
2	A	1546	C	O3'-P-O5'	-17.30	71.13	104.00
2	A	2447	G	P-O3'-C3'	17.04	140.15	119.70
13	S	72	GLU	O-C-N	-16.97	88.86	121.10
4	E	49	THR	CA-C-N	16.90	164.42	117.10
11	P	96	VAL	O-C-N	16.87	149.69	122.70
17	Y	36	GLY	O-C-N	-16.78	95.85	122.70
2	A	1546	C	OP2-P-O3'	16.50	141.50	105.20
2	A	1905	C	P-O3'-C3'	16.46	139.45	119.70
2	A	1108	U	OP1-P-O3'	-16.18	69.59	105.20
2	A	1140	C	C1'-O4'-C4'	-16.15	96.98	109.90
2	A	70	G	P-O3'-C3'	16.02	138.93	119.70
2	A	2506	U	P-O3'-C3'	15.99	138.88	119.70
1	B	59	A	O3'-P-O5'	-15.67	74.23	104.00
4	E	87	GLU	O-C-N	-15.57	97.78	122.70
21	V	91	THR	C-N-CA	-15.56	82.79	121.70
2	A	101	G	N3-C4-C5	-15.54	120.83	128.60
24	0	18	PRO	O-C-N	-15.43	98.02	122.70
7	H	80	LYS	CA-C-N	15.12	146.45	116.20
2	A	2090	G	P-O3'-C3'	14.89	137.57	119.70
16	X	73	ASP	C-N-CA	14.86	158.84	121.70
2	A	712(A)	A	O3'-P-O5'	-14.80	75.88	104.00
2	A	2889	C	O3'-P-O5'	14.65	131.84	104.00
17	Y	36	GLY	C-N-CA	14.58	158.16	121.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	223	A	OP1-P-O3'	14.51	137.12	105.20
4	E	49	THR	C-N-CD	-14.49	88.72	120.60
2	A	101	G	C2-N3-C4	14.40	119.10	111.90
2	A	1189	A	P-O3'-C3'	14.20	136.74	119.70
2	A	1546	C	P-O3'-C3'	14.16	136.69	119.70
1	B	106	G	P-O3'-C3'	-13.85	103.08	119.70
2	A	232	G	OP2-P-O3'	13.67	135.27	105.20
26	5	30	LEU	O-C-N	-13.58	100.98	122.70
2	A	148	C	P-O3'-C3'	-13.41	103.61	119.70
2	A	316	C	P-O3'-C3'	-12.90	104.22	119.70
11	P	96	VAL	CA-C-N	-12.89	88.84	117.20
18	Z	92	VAL	O-C-N	12.88	143.31	122.70
2	A	2381	C	P-O3'-C3'	12.82	135.09	119.70
7	H	80	LYS	C-N-CA	12.79	149.16	122.30
2	A	1108	U	P-O3'-C3'	-12.76	104.39	119.70
2	A	2090	G	O3'-P-O5'	12.70	128.14	104.00
2	A	931	G	C1'-O4'-C4'	-12.53	99.88	109.90
2	A	776	G	P-O3'-C3'	12.50	134.70	119.70
2	A	1545	A	OP1-P-O3'	-12.50	77.71	105.20
2	A	1545	A	O3'-P-O5'	-12.31	80.61	104.00
2	A	670	A	P-O3'-C3'	12.28	134.44	119.70
2	A	2810	A	P-O3'-C3'	-12.23	105.03	119.70
2	A	627	A	C1'-O4'-C4'	-12.19	100.15	109.90
2	A	2454	G	P-O3'-C3'	-12.14	105.13	119.70
2	A	801	G	P-O3'-C3'	12.07	134.19	119.70
8	I	49	ALA	O-C-N	12.07	142.01	122.70
2	A	1525	G	OP1-P-O3'	-12.01	78.77	105.20
2	A	1266	G	C1'-O4'-C4'	-12.00	100.30	109.90
2	A	101	G	N9-C1'-C2'	11.86	129.41	114.00
8	I	49	ALA	CA-C-N	-11.84	91.15	117.20
29	8	24	ALA	O-C-N	-11.78	103.84	122.70
2	A	1586	A	P-O3'-C3'	11.72	133.76	119.70
2	A	1055	G	P-O3'-C3'	-11.66	105.71	119.70
2	A	1630	G	OP1-P-O3'	11.61	130.73	105.20
2	A	1924	C	OP1-P-O3'	-11.56	79.78	105.20
2	A	1108	U	O3'-P-O5'	11.51	125.86	104.00
2	A	1673	U	C1'-O4'-C4'	-11.48	100.72	109.90
2	A	101	G	C8-N9-C4	-11.45	101.82	106.40
2	A	2199	A	OP2-P-O3'	11.43	130.35	105.20
2	A	359	A	OP1-P-O3'	11.30	130.07	105.20
24	0	18	PRO	CA-C-N	11.26	141.97	117.20
2	A	2042	A	C1'-O4'-C4'	-11.26	100.89	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	421	U	P-O3'-C3'	11.25	133.19	119.70
2	A	30	G	P-O3'-C3'	11.14	133.07	119.70
2	A	2496	C	P-O3'-C3'	-11.14	106.33	119.70
15	W	79	GLY	O-C-N	11.04	142.08	121.10
2	A	301	G	C1'-O4'-C4'	-10.99	101.11	109.90
2	A	1124	C	P-O3'-C3'	10.96	132.85	119.70
8	I	49	ALA	C-N-CA	-10.86	94.56	121.70
2	A	2219	G	P-O3'-C3'	-10.82	106.71	119.70
2	A	2832	U	C3'-C2'-C1'	-10.80	92.86	101.50
2	A	101	G	N3-C4-N9	10.77	132.46	126.00
2	A	1324	G	P-O3'-C3'	10.72	132.57	119.70
2	A	1992	G	P-O3'-C3'	10.69	132.52	119.70
2	A	1751	C	P-O3'-C3'	-10.67	106.90	119.70
2	A	148	C	O3'-P-O5'	-10.63	83.81	104.00
2	A	101	G	C5-C6-N1	10.62	116.81	111.50
2	A	1255	U	P-O3'-C3'	-10.59	106.99	119.70
2	A	101	G	C4-N9-C1'	10.57	140.24	126.50
20	U	50	ARG	O-C-N	10.56	139.60	122.70
2	A	944	G	P-O3'-C3'	10.48	132.28	119.70
2	A	1444	G	P-O3'-C3'	10.37	132.14	119.70
2	A	1941	C	C3'-C2'-C1'	-10.30	93.26	101.50
2	A	1980	G	P-O3'-C3'	10.28	132.04	119.70
2	A	1525	G	O3'-P-O5'	10.27	123.52	104.00
2	A	117	G	P-O3'-C3'	-10.26	107.39	119.70
2	A	280	C	P-O3'-C3'	10.16	131.89	119.70
2	A	945	A	O4'-C1'-N9	10.16	116.33	108.20
24	O	18	PRO	C-N-CA	10.10	146.94	121.70
2	A	2287	A	P-O3'-C3'	-10.00	107.70	119.70
2	A	1265	A	P-O3'-C3'	9.95	131.64	119.70
2	A	1248	G	P-O3'-C3'	9.92	131.61	119.70
2	A	2433	A	P-O3'-C3'	-9.91	107.81	119.70
2	A	2042	A	O4'-C1'-N9	9.89	116.11	108.20
2	A	1237	A	P-O3'-C3'	9.88	131.56	119.70
2	A	1206	G	C4'-C3'-C2'	-9.87	92.73	102.60
2	A	52	A	P-O3'-C3'	9.86	131.53	119.70
2	A	1247	A	P-O3'-C3'	9.85	131.52	119.70
2	A	242	G	C1'-O4'-C4'	-9.82	102.04	109.90
2	A	1559	G	C3'-C2'-C1'	-9.81	93.65	101.50
2	A	223	A	OP2-P-O3'	-9.75	83.75	105.20
2	A	386	G	C1'-O4'-C4'	-9.73	102.12	109.90
18	Z	92	VAL	CA-C-N	-9.69	95.89	117.20
2	A	1140	C	O4'-C1'-N1	9.62	115.90	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	1275	A	P-O3'-C3'	9.51	131.12	119.70
2	A	2506	U	OP1-P-O3'	9.48	126.06	105.20
4	E	274	GLY	CA-C-N	-9.47	97.26	116.20
2	A	2769	C	P-O3'-C3'	-9.46	108.35	119.70
2	A	294	A	C3'-C2'-C1'	-9.33	94.03	101.50
2	A	139	G	P-O3'-C3'	9.26	130.81	119.70
2	A	1819	A	P-O3'-C3'	9.26	130.81	119.70
2	A	282	A	C3'-C2'-C1'	-9.20	94.14	101.50
1	B	11	C	P-O3'-C3'	-9.19	108.67	119.70
2	A	973	A	C4'-C3'-C2'	-9.11	93.49	102.60
17	Y	36	GLY	CA-C-N	9.06	137.14	117.20
2	A	2090	G	OP2-P-O3'	-9.01	85.39	105.20
2	A	1542	G	C3'-C2'-C1'	-8.97	94.32	101.50
15	W	79	GLY	C-N-CD	8.97	147.24	128.40
2	A	148	C	OP2-P-O3'	8.96	124.92	105.20
1	B	56	G	P-O3'-C3'	8.96	130.45	119.70
2	A	1634	A	P-O3'-C3'	8.94	130.43	119.70
20	U	50	ARG	CA-C-N	-8.93	97.56	117.20
2	A	32	C	P-O3'-C3'	8.89	130.37	119.70
2	A	911	A	P-O3'-C3'	8.88	130.35	119.70
2	A	800	A	P-O3'-C3'	8.85	130.32	119.70
2	A	2545	G	P-O3'-C3'	-8.85	109.08	119.70
2	A	30	G	O3'-P-O5'	-8.79	87.30	104.00
2	A	2381	C	OP1-P-O3'	8.76	124.47	105.20
2	A	1183	G	O4'-C1'-N9	8.75	115.20	108.20
2	A	1070	A	C1'-O4'-C4'	-8.73	102.92	109.90
2	A	654	A	C3'-C2'-C1'	-8.73	94.52	101.50
2	A	1255	U	O3'-P-O5'	8.72	120.58	104.00
2	A	296	C	O4'-C1'-N1	8.65	115.12	108.20
2	A	691	C	C3'-C2'-C1'	-8.65	94.58	101.50
2	A	846	C	P-O3'-C3'	8.65	130.08	119.70
2	A	1943	U	P-O3'-C3'	8.64	130.07	119.70
1	B	106	G	OP2-P-O3'	8.64	124.21	105.20
2	A	1970	A	P-O3'-C3'	8.64	130.06	119.70
2	A	135	G	C3'-C2'-C1'	-8.63	94.60	101.50
11	P	96	VAL	C-N-CA	-8.62	100.16	121.70
2	A	1751	C	OP2-P-O3'	8.61	124.15	105.20
2	A	1742	C	C4'-C3'-C2'	-8.61	93.99	102.60
2	A	176	G	P-O3'-C3'	8.59	130.00	119.70
16	X	73	ASP	CA-C-N	8.55	136.00	117.20
2	A	972	G	C4'-C3'-C2'	-8.53	94.07	102.60
2	A	752	A	P-O3'-C3'	8.53	129.94	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	284	U	C1'-O4'-C4'	-8.47	103.12	109.90
2	A	444	C	O4'-C1'-N1	8.47	114.98	108.20
2	A	1955	U	O4'-C1'-N1	8.47	114.98	108.20
2	A	2336	A	P-O3'-C3'	8.47	129.87	119.70
2	A	359	A	OP2-P-O3'	-8.46	86.59	105.20
2	A	458	G	P-O3'-C3'	8.41	129.80	119.70
2	A	1925	C	C3'-C2'-C1'	-8.41	94.77	101.50
2	A	232	G	OP1-P-O3'	-8.41	86.70	105.20
2	A	1022	G	P-O3'-C3'	8.41	129.79	119.70
2	A	265	A	P-O3'-C3'	8.38	129.76	119.70
2	A	2398	U	C3'-C2'-C1'	-8.32	94.84	101.50
2	A	74	A	P-O3'-C3'	8.29	129.65	119.70
18	Z	92	VAL	C-N-CA	-8.29	100.98	121.70
2	A	791	C	C1'-O4'-C4'	-8.25	103.30	109.90
2	A	83	G	P-O3'-C3'	8.22	129.57	119.70
2	A	960	A	P-O3'-C3'	8.22	129.57	119.70
2	A	1349	A	O3'-P-O5'	8.21	119.61	104.00
2	A	940	G	P-O3'-C3'	8.21	129.55	119.70
2	A	1419	A	C1'-O4'-C4'	-8.20	103.34	109.90
2	A	2810	A	O3'-P-O5'	8.20	119.57	104.00
2	A	1545	A	C1'-O4'-C4'	-8.19	103.34	109.90
2	A	714	U	C3'-C2'-C1'	-8.19	94.95	101.50
2	A	973	A	O4'-C1'-N9	8.18	114.75	108.20
2	A	1955	U	C1'-O4'-C4'	-8.17	103.37	109.90
20	U	50	ARG	C-N-CA	-8.15	101.33	121.70
2	A	1520	U	C3'-C2'-C1'	-8.12	95.01	101.50
2	A	1307	A	P-O3'-C3'	8.11	129.44	119.70
2	A	1183	G	O4'-C4'-C3'	-8.11	95.89	104.00
2	A	2219	G	N9-C1'-C2'	-8.11	103.08	112.00
2	A	1742	C	O4'-C1'-N1	8.07	114.66	108.20
2	A	2506	U	OP2-P-O3'	-8.06	87.47	105.20
2	A	1954	G	P-O3'-C3'	8.04	129.34	119.70
29	8	24	ALA	CA-C-N	8.02	134.85	117.20
2	A	2690	C	P-O3'-C3'	-8.00	110.10	119.70
2	A	2045	C	C1'-O4'-C4'	-8.00	103.50	109.90
2	A	739	G	N3-C4-C5	-7.98	124.61	128.60
29	8	24	ALA	C-N-CA	7.96	141.59	121.70
2	A	1427	A	P-O3'-C3'	7.95	129.24	119.70
2	A	1463	C	O4'-C1'-N1	7.94	114.55	108.20
2	A	280	C	O3'-P-O5'	-7.92	88.95	104.00
2	A	2825	C	C3'-C2'-C1'	-7.92	95.17	101.50
2	A	1961	C	OP2-P-O3'	7.91	122.59	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	1552	G	P-O3'-C3'	7.90	129.18	119.70
2	A	2857	G	C3'-C2'-C1'	-7.90	95.18	101.50
2	A	1143	A	O4'-C1'-N9	7.87	114.50	108.20
2	A	1669	A	C1'-O4'-C4'	-7.87	103.60	109.90
2	A	329	G	P-O3'-C3'	7.86	129.13	119.70
2	A	119	A	P-O3'-C3'	7.86	129.13	119.70
2	A	793	A	P-O3'-C3'	7.86	129.13	119.70
2	A	699	A	P-O3'-C3'	7.85	129.12	119.70
2	A	1988	C	OP2-P-O3'	-7.85	87.94	105.20
2	A	2021	C	N1-C2-O2	7.84	123.61	118.90
2	A	2488	A	C3'-C2'-C1'	-7.84	95.23	101.50
2	A	1646	C	OP1-P-O3'	7.82	122.41	105.20
2	A	331	A	P-O3'-C3'	7.82	129.08	119.70
2	A	509	C	P-O3'-C3'	-7.80	110.34	119.70
2	A	289	A	C1'-O4'-C4'	-7.78	103.67	109.90
2	A	1466	G	P-O3'-C3'	-7.78	110.37	119.70
2	A	2893	G	C3'-C2'-C1'	-7.77	95.29	101.50
2	A	974(A)	C	C6-N1-C2	-7.75	117.20	120.30
2	A	2584	U	C3'-C2'-C1'	-7.75	95.30	101.50
2	A	613	U	O4'-C1'-N1	7.74	114.39	108.20
2	A	832	G	O4'-C1'-N9	7.72	114.38	108.20
2	A	2712	U	P-O3'-C3'	7.72	128.97	119.70
2	A	931	G	O4'-C1'-N9	7.72	114.37	108.20
2	A	1706	U	P-O3'-C3'	7.71	128.95	119.70
2	A	2019	A	C3'-C2'-C1'	-7.71	95.33	101.50
2	A	961	C	P-O3'-C3'	7.71	128.95	119.70
2	A	120	U	C1'-O4'-C4'	-7.67	103.76	109.90
2	A	2626	C	C3'-C2'-C1'	-7.67	95.36	101.50
2	A	1100	C	P-O3'-C3'	7.65	128.88	119.70
11	P	83	GLU	CA-C-N	7.65	134.03	117.20
2	A	1820	U	P-O3'-C3'	7.63	128.85	119.70
4	E	274	GLY	O-C-N	-7.63	110.24	123.20
2	A	530	G	O4'-C1'-N9	7.62	114.30	108.20
2	A	679	C	C3'-C2'-C1'	-7.62	95.40	101.50
2	A	1255	U	O4'-C1'-N1	7.62	114.30	108.20
1	B	59	A	OP2-P-O3'	7.62	121.96	105.20
2	A	2228	G	P-O3'-C3'	-7.62	110.56	119.70
2	A	2057	A	P-O3'-C3'	-7.60	110.58	119.70
1	B	80	U	O4'-C1'-N1	7.60	114.28	108.20
2	A	1239	G	N9-C1'-C2'	7.55	123.82	114.00
2	A	574	C	P-O3'-C3'	7.54	128.75	119.70
2	A	2033	A	P-O3'-C3'	7.54	128.75	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	1208	C	P-O3'-C3'	7.52	128.73	119.70
2	A	2049	G	P-O3'-C3'	7.52	128.72	119.70
2	A	125	G	C1'-O4'-C4'	-7.50	103.90	109.90
2	A	1964	G	P-O3'-C3'	7.50	128.69	119.70
2	A	342	G	O4'-C1'-N9	7.49	114.19	108.20
2	A	1664	A	C3'-C2'-C1'	-7.49	95.51	101.50
2	A	738	G	C3'-C2'-C1'	7.46	107.47	101.50
2	A	1404	C	P-O3'-C3'	7.46	128.66	119.70
2	A	1239	G	C8-N9-C4	-7.44	103.42	106.40
2	A	1630	G	OP2-P-O3'	-7.42	88.87	105.20
2	A	2228	G	OP2-P-O3'	7.42	121.52	105.20
2	A	117	G	O3'-P-O5'	-7.41	89.93	104.00
2	A	573	G	N9-C1'-C2'	7.40	123.62	114.00
2	A	832	G	C1'-O4'-C4'	-7.40	103.98	109.90
2	A	2503	A	C3'-C2'-C1'	-7.40	95.58	101.50
2	A	1772	G	C4'-C3'-C2'	-7.38	95.22	102.60
2	A	196	A	P-O3'-C3'	7.37	128.54	119.70
2	A	101	G	N1-C6-O6	-7.36	115.48	119.90
2	A	1130	U	P-O3'-C3'	7.35	128.52	119.70
2	A	1363	C	C3'-C2'-C1'	-7.35	95.62	101.50
15	W	79	GLY	CA-C-N	-7.35	96.52	117.10
2	A	2545	G	OP2-P-O3'	-7.33	89.07	105.20
2	A	2059	A	C1'-O4'-C4'	-7.33	104.04	109.90
2	A	1800	C	O4'-C4'-C3'	-7.32	96.68	104.00
2	A	2448	A	C1'-O4'-C4'	-7.32	104.04	109.90
2	A	559	G	P-O3'-C3'	7.32	128.48	119.70
2	A	1890	A	OP1-P-O3'	7.31	121.28	105.20
2	A	1944	U	O3'-P-O5'	7.31	117.89	104.00
2	A	2589	A	C4'-C3'-C2'	-7.29	95.31	102.60
2	A	2433	A	OP2-P-O3'	7.29	121.23	105.20
2	A	1961	C	P-O3'-C3'	-7.28	110.96	119.70
2	A	2035	G	N3-C4-N9	7.28	130.37	126.00
2	A	527	C	P-O3'-C3'	7.27	128.43	119.70
2	A	1826	G	O4'-C1'-N9	7.24	113.99	108.20
2	A	1924	C	OP2-P-O3'	7.21	121.06	105.20
2	A	1924	C	O3'-P-O5'	7.20	117.68	104.00
2	A	101	G	N7-C8-N9	7.19	116.69	113.10
2	A	2080	G	C1'-O4'-C4'	-7.17	104.16	109.90
2	A	1183	G	C4'-C3'-C2'	-7.17	95.43	102.60
2	A	1938	A	P-O3'-C3'	7.17	128.31	119.70
2	A	1988	C	P-O3'-C3'	7.17	128.31	119.70
2	A	1237	A	C1'-O4'-C4'	-7.17	104.17	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	2055	C	P-O3'-C3'	7.17	128.30	119.70
2	A	2286	A	C3'-C2'-C1'	-7.16	95.78	101.50
1	B	69	G	P-O3'-C3'	-7.15	111.12	119.70
2	A	128	C	P-O3'-C3'	7.15	128.28	119.70
2	A	2848	G	C3'-C2'-C1'	-7.14	95.78	101.50
2	A	13	A	P-O3'-C3'	7.13	128.26	119.70
2	A	1190	G	C5'-C4'-O4'	7.13	117.66	109.10
4	E	49	THR	C-N-CA	7.12	151.92	122.00
2	A	363(F)	A	C3'-C2'-C1'	-7.12	95.80	101.50
2	A	2734	A	C3'-C2'-C1'	-7.12	95.81	101.50
2	A	1249	U	O4'-C1'-N1	7.11	113.89	108.20
2	A	804	A	C1'-O4'-C4'	-7.10	104.22	109.90
2	A	1085	A	P-O3'-C3'	7.09	128.21	119.70
2	A	578	A	P-O3'-C3'	-7.08	111.20	119.70
2	A	2589	A	C1'-O4'-C4'	-7.07	104.25	109.90
2	A	71	A	P-O3'-C3'	7.05	128.16	119.70
2	A	2832	U	C1'-O4'-C4'	-7.04	104.27	109.90
1	B	119	A	C3'-C2'-C1'	-7.03	95.88	101.50
2	A	1181	C	P-O3'-C3'	7.02	128.13	119.70
2	A	945	A	O4'-C4'-C3'	-7.02	96.98	104.00
2	A	1890	A	P-O3'-C3'	7.01	128.12	119.70
2	A	1851	U	OP1-P-O3'	6.99	120.58	105.20
2	A	14	A	P-O3'-C3'	6.99	128.09	119.70
2	A	204	A	P-O3'-C3'	6.99	128.09	119.70
2	A	830	G	P-O3'-C3'	6.98	128.08	119.70
2	A	1828	G	P-O3'-C3'	6.98	128.08	119.70
2	A	264	C	P-O3'-C3'	-6.98	111.33	119.70
2	A	101	G	C8-N9-C1'	-6.97	117.93	127.00
2	A	52	A	OP1-P-O3'	6.97	120.54	105.20
2	A	1968	G	C3'-C2'-C1'	-6.97	95.92	101.50
2	A	289	A	O4'-C1'-N9	6.96	113.77	108.20
2	A	1266	G	P-O3'-C3'	6.95	128.04	119.70
2	A	2381	C	O3'-P-O5'	-6.95	90.79	104.00
2	A	971	C	O4'-C1'-N1	6.95	113.76	108.20
2	A	615	G	C3'-C2'-C1'	6.94	107.05	101.50
2	A	1251	C	C1'-O4'-C4'	-6.94	104.35	109.90
2	A	1988	C	OP1-P-O3'	6.94	120.46	105.20
2	A	1673	U	O4'-C1'-N1	6.93	113.75	108.20
2	A	2756	U	C1'-O4'-C4'	-6.93	104.35	109.90
2	A	1265	A	C1'-O4'-C4'	-6.93	104.36	109.90
1	B	66	A	P-O3'-C3'	6.92	128.01	119.70
2	A	51	G	C3'-C2'-C1'	6.92	107.03	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	2545	G	O3'-P-O5'	6.92	117.14	104.00
2	A	223	A	C1'-O4'-C4'	-6.90	104.38	109.90
2	A	215	G	P-O3'-C3'	6.88	127.96	119.70
2	A	1905	C	OP2-P-O3'	-6.88	90.06	105.20
2	A	2451	A	P-O3'-C3'	6.88	127.96	119.70
2	A	2042	A	C5'-C4'-O4'	6.87	117.34	109.10
2	A	2834	G	C4'-C3'-C2'	-6.87	95.73	102.60
2	A	2432	A	C1'-O4'-C4'	-6.86	104.41	109.90
2	A	1210	A	P-O3'-C3'	6.85	127.92	119.70
2	A	2448	A	O4'-C1'-N9	6.84	113.68	108.20
2	A	1180	C	P-O3'-C3'	6.84	127.91	119.70
2	A	2258	C	O4'-C1'-N1	6.84	113.67	108.20
2	A	971	C	OP2-P-O3'	6.84	120.25	105.20
2	A	1980	G	O4'-C1'-N9	-6.84	102.73	108.20
2	A	2258	C	C1'-O4'-C4'	-6.81	104.45	109.90
2	A	2595	G	C3'-C2'-C1'	-6.81	96.05	101.50
2	A	1179	C	P-O3'-C3'	6.81	127.87	119.70
2	A	2240	C	C1'-O4'-C4'	-6.79	104.47	109.90
2	A	90	U	P-O3'-C3'	6.79	127.85	119.70
2	A	686	G	OP2-P-O3'	6.77	120.10	105.20
1	B	24	G	OP2-P-O3'	-6.77	90.31	105.20
2	A	2508	G	N9-C1'-C2'	-6.77	104.56	112.00
2	A	1475	G	C3'-C2'-C1'	-6.77	96.09	101.50
2	A	1996	C	C5-C6-N1	6.77	124.38	121.00
2	A	1914	C	O4'-C1'-C2'	-6.76	99.04	105.80
2	A	1742	C	O4'-C4'-C3'	-6.75	97.25	104.00
2	A	787	U	O4'-C4'-C3'	-6.74	97.26	104.00
2	A	1779	U	C3'-C2'-C1'	-6.74	96.11	101.50
2	A	788	A	P-O3'-C3'	6.73	127.78	119.70
2	A	945	A	C1'-O4'-C4'	-6.73	104.51	109.90
2	A	1586	A	OP1-P-O3'	6.73	120.01	105.20
2	A	1800	C	C3'-C2'-C1'	-6.73	96.12	101.50
2	A	1247	A	OP1-P-O3'	6.72	119.98	105.20
2	A	886	C	P-O3'-C3'	6.71	127.75	119.70
2	A	587	C	P-O3'-C3'	6.71	127.75	119.70
2	A	2047	U	P-O3'-C3'	6.69	127.73	119.70
2	A	1743	G	N9-C1'-C2'	6.69	122.70	114.00
2	A	2394	C	O3'-P-O5'	6.68	116.70	104.00
2	A	740	U	C3'-C2'-C1'	6.68	106.84	101.50
2	A	2035	G	N3-C4-C5	-6.67	125.27	128.60
2	A	973	A	C1'-O4'-C4'	-6.66	104.57	109.90
2	A	2451	A	C4'-C3'-C2'	-6.66	95.94	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	739	G	C3'-C2'-C1'	6.66	106.83	101.50
2	A	1742	C	C3'-C2'-C1'	-6.65	96.18	101.50
2	A	1616	A	O4'-C1'-N9	-6.64	102.89	108.20
2	A	1984	G	O4'-C1'-N9	6.64	113.51	108.20
2	A	1341	U	P-O3'-C3'	6.63	127.66	119.70
2	A	984	A	C4'-C3'-C2'	-6.62	95.98	102.60
2	A	525	U	O3'-P-O5'	-6.61	91.44	104.00
2	A	655	A	P-O3'-C3'	6.60	127.62	119.70
2	A	1423	G	C3'-C2'-C1'	-6.59	96.23	101.50
2	A	221	A	P-O3'-C3'	6.59	127.60	119.70
2	A	152	G	C3'-C2'-C1'	-6.54	96.27	101.50
2	A	2689	U	C1'-O4'-C4'	-6.53	104.67	109.90
2	A	1914	C	C2-N1-C1'	6.53	125.98	118.80
2	A	714	U	O4'-C1'-N1	6.52	113.42	108.20
2	A	120	U	P-O3'-C3'	6.51	127.52	119.70
2	A	1583	A	C1'-O4'-C4'	-6.51	104.69	109.90
2	A	2561	A	C3'-C2'-C1'	-6.50	96.30	101.50
2	A	1618	A	P-O3'-C3'	6.50	127.50	119.70
2	A	2021	C	N3-C2-O2	-6.49	117.36	121.90
2	A	2896	C	C3'-C2'-C1'	-6.48	96.31	101.50
2	A	791	C	P-O3'-C3'	6.48	127.48	119.70
2	A	2644	G	C3'-C2'-C1'	-6.48	96.31	101.50
2	A	2030	A	P-O3'-C3'	6.48	127.47	119.70
2	A	2398	U	C4'-C3'-C2'	-6.47	96.12	102.60
2	A	8	A	P-O3'-C3'	6.47	127.47	119.70
2	A	1008	C	P-O3'-C3'	6.47	127.46	119.70
2	A	713	G	C3'-C2'-C1'	-6.46	96.34	101.50
2	A	348	G	P-O3'-C3'	6.45	127.44	119.70
2	A	2267	A	O4'-C1'-N9	6.45	113.36	108.20
2	A	809	G	O3'-P-O5'	-6.45	91.75	104.00
2	A	1239	G	N3-C4-C5	-6.44	125.38	128.60
2	A	817	C	C6-N1-C2	-6.44	117.72	120.30
2	A	141(A)	C	O4'-C1'-N1	6.44	113.35	108.20
2	A	1552	G	C3'-C2'-C1'	-6.43	96.35	101.50
2	A	1522	G	C3'-C2'-C1'	-6.43	96.36	101.50
2	A	1968	G	O4'-C4'-C3'	-6.43	97.57	104.00
2	A	324	A	OP2-P-O3'	6.43	119.34	105.20
2	A	1055	G	OP2-P-O3'	-6.42	91.07	105.20
2	A	147	U	O4'-C1'-N1	6.42	113.33	108.20
2	A	271	G	P-O3'-C3'	6.41	127.40	119.70
2	A	1187	G	P-O3'-C3'	6.41	127.40	119.70
2	A	1544	C	O4'-C1'-N1	6.41	113.33	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	1667	G	C3'-C2'-C1'	6.41	106.63	101.50
1	B	11	C	OP2-P-O3'	6.40	119.29	105.20
2	A	301	G	O4'-C1'-N9	6.40	113.32	108.20
2	A	1980	G	C2'-C3'-O3'	6.39	123.93	113.70
2	A	1732	A	C1'-O4'-C4'	-6.39	104.79	109.90
2	A	532	A	P-O3'-C3'	6.39	127.37	119.70
2	A	71	A	C1'-O4'-C4'	-6.39	104.79	109.90
1	B	90	C	O4'-C1'-N1	6.38	113.30	108.20
2	A	699	A	OP1-P-O3'	6.38	119.23	105.20
2	A	1239	G	C4-N9-C1'	6.37	134.78	126.50
2	A	103	A	P-O3'-C3'	6.36	127.33	119.70
2	A	1088	A	C1'-O4'-C4'	-6.36	104.81	109.90
2	A	2238	G	C1'-O4'-C4'	-6.35	104.82	109.90
2	A	1183	G	C3'-C2'-C1'	-6.34	96.42	101.50
2	A	1702	G	C3'-C2'-C1'	-6.34	96.42	101.50
2	A	2040	C	O3'-P-O5'	-6.34	91.95	104.00
2	A	627	A	C4'-C3'-C2'	-6.34	96.26	102.60
2	A	2542	A	P-O3'-C3'	6.33	127.30	119.70
2	A	456	C	O4'-C1'-N1	6.33	113.26	108.20
2	A	2019	A	P-O3'-C3'	6.33	127.30	119.70
2	A	2345	G	C1'-O4'-C4'	-6.33	104.83	109.90
2	A	1439	A	O4'-C1'-N9	6.33	113.26	108.20
2	A	1621	U	O4'-C1'-N1	6.33	113.26	108.20
2	A	1266	G	C4'-C3'-C2'	-6.32	96.28	102.60
2	A	676	A	C1'-O4'-C4'	-6.31	104.85	109.90
2	A	1926	U	C3'-C2'-C1'	-6.30	96.46	101.50
2	A	2062	A	O4'-C1'-N9	6.30	113.24	108.20
2	A	1559	G	C4'-C3'-C2'	-6.29	96.31	102.60
2	A	2428	G	C4'-C3'-C2'	-6.29	96.31	102.60
2	A	264	C	O3'-P-O5'	-6.29	92.06	104.00
2	A	1571	A	O4'-C1'-C2'	-6.29	99.51	105.80
2	A	1747	G	O4'-C1'-N9	6.27	113.22	108.20
2	A	1825	A	C1'-O4'-C4'	-6.27	104.88	109.90
2	A	2517	C	P-O3'-C3'	6.27	127.23	119.70
2	A	712(A)	A	OP2-P-O3'	6.27	119.00	105.20
2	A	1939	U	O4'-C1'-N1	6.27	113.21	108.20
2	A	2718	G	P-O3'-C3'	6.27	127.22	119.70
2	A	322	A	C4'-C3'-C2'	-6.26	96.34	102.60
2	A	1536	A	P-O3'-C3'	6.26	127.21	119.70
2	A	1941	C	C4'-C3'-C2'	-6.25	96.35	102.60
2	A	1055	G	OP1-P-O3'	-6.25	91.46	105.20
2	A	626	U	O4'-C4'-C3'	-6.25	97.75	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	102	G	O4'-C4'-C3'	-6.24	97.76	104.00
2	A	1183	G	C5'-C4'-O4'	6.24	116.59	109.10
2	A	1970	A	O4'-C1'-N9	6.24	113.19	108.20
2	A	2267	A	P-O3'-C3'	-6.24	112.21	119.70
2	A	2021	C	C2-N1-C1'	6.24	125.66	118.80
2	A	2062	A	C1'-O4'-C4'	-6.23	104.91	109.90
2	A	328	U	C2-N1-C1'	6.23	125.18	117.70
2	A	1239	G	N7-C8-N9	6.23	116.22	113.10
2	A	899	A	C3'-C2'-C1'	-6.23	96.52	101.50
2	A	527	C	C3'-C2'-C1'	6.23	106.48	101.50
2	A	1230	C	O4'-C1'-N1	6.22	113.17	108.20
2	A	1527	G	C8-N9-C4	-6.21	103.92	106.40
2	A	321	G	C3'-C2'-C1'	6.21	106.47	101.50
2	A	597	U	O4'-C1'-N1	6.20	113.16	108.20
2	A	2788	C	C3'-C2'-C1'	-6.20	96.54	101.50
2	A	1542	G	C4'-C3'-C2'	-6.20	96.40	102.60
2	A	1248	G	N9-C1'-C2'	6.20	122.05	114.00
2	A	2856	C	C3'-C2'-C1'	-6.19	96.55	101.50
2	A	574	C	C1'-O4'-C4'	-6.19	104.95	109.90
2	A	1917	U	P-O3'-C3'	6.19	127.13	119.70
2	A	532	A	C1'-O4'-C4'	-6.18	104.95	109.90
2	A	1961	C	O3'-P-O5'	-6.18	92.26	104.00
1	B	24	G	OP1-P-O3'	-6.17	91.63	105.20
2	A	571	A	C1'-O4'-C4'	-6.16	104.97	109.90
2	A	2692	C	C4'-C3'-C2'	-6.16	96.44	102.60
2	A	2252	G	C3'-C2'-C1'	-6.15	96.58	101.50
2	A	1210	A	C1'-O4'-C4'	-6.14	104.99	109.90
2	A	687	C	C3'-C2'-C1'	6.14	106.41	101.50
2	A	535	C	C3'-C2'-C1'	-6.13	96.59	101.50
2	A	2091	U	C3'-C2'-C1'	-6.13	96.60	101.50
2	A	1552	G	C4'-C3'-C2'	-6.13	96.47	102.60
2	A	2287	A	OP2-P-O3'	6.12	118.67	105.20
2	A	1758	G	O4'-C1'-N9	6.12	113.10	108.20
2	A	1313	U	O4'-C1'-N1	6.12	113.09	108.20
2	A	2683	C	C4'-C3'-C2'	-6.11	96.49	102.60
2	A	363(D)	G	O4'-C1'-N9	6.11	113.09	108.20
2	A	2886	G	C3'-C2'-C1'	-6.11	96.61	101.50
2	A	2016	U	P-O3'-C3'	6.11	127.03	119.70
2	A	1253	A	N9-C1'-C2'	6.10	121.94	114.00
2	A	363(D)	G	C1'-O4'-C4'	-6.10	105.02	109.90
2	A	1796	U	C1'-O4'-C4'	-6.10	105.02	109.90
2	A	2219	G	OP1-P-OP2	-6.10	110.46	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	1202	C	C2-N1-C1'	6.09	125.50	118.80
2	A	2399	G	C3'-C2'-C1'	-6.08	96.63	101.50
2	A	1585	C	C3'-C2'-C1'	6.08	106.36	101.50
2	A	1604	C	O4'-C1'-N1	6.08	113.06	108.20
2	A	710	G	C3'-C2'-C1'	-6.07	96.64	101.50
2	A	777	A	O4'-C1'-N9	6.07	113.06	108.20
2	A	456	C	C4'-C3'-C2'	-6.07	96.53	102.60
2	A	974(A)	C	C3'-C2'-C1'	6.07	106.35	101.50
2	A	525	U	O4'-C1'-N1	6.06	113.05	108.20
2	A	1625	C	P-O3'-C3'	6.06	126.97	119.70
2	A	669	G	C3'-C2'-C1'	6.05	106.34	101.50
2	A	1647	G	P-O3'-C3'	6.04	126.95	119.70
2	A	734	A	O3'-P-O5'	-6.04	92.52	104.00
2	A	2267	A	C4'-C3'-C2'	-6.04	96.56	102.60
2	A	2224	G	OP1-P-OP2	-6.03	110.55	119.60
2	A	1206	G	C1'-O4'-C4'	-6.02	105.08	109.90
2	A	1108	U	OP2-P-O3'	6.02	118.44	105.20
2	A	1991	U	C3'-C2'-C1'	-6.02	96.69	101.50
2	A	460	A	P-O3'-C3'	-6.01	112.48	119.70
26	5	30	LEU	CA-C-N	6.01	130.42	117.20
2	A	296	C	C4'-C3'-C2'	-6.00	96.60	102.60
2	A	503	A	C3'-C2'-C1'	6.00	106.30	101.50
2	A	1824	G	C4'-C3'-C2'	-5.99	96.61	102.60
2	A	154	G	N3-C4-C5	-5.99	125.61	128.60
2	A	525	U	OP1-P-O3'	5.98	118.36	105.20
2	A	2832	U	O4'-C1'-C2'	-5.98	99.82	105.80
2	A	270(L)	U	P-O3'-C3'	5.97	126.86	119.70
2	A	586	A	N9-C1'-C2'	-5.97	105.44	112.00
2	A	775	G	C3'-C2'-C1'	5.96	106.27	101.50
2	A	984	A	C1'-O4'-C4'	-5.96	105.13	109.90
2	A	1131	G	P-O3'-C3'	5.96	126.85	119.70
2	A	1912	A	C1'-O4'-C4'	-5.96	105.13	109.90
2	A	945	A	C4'-C3'-C2'	-5.95	96.65	102.60
2	A	1239	G	O4'-C1'-N9	5.95	112.96	108.20
2	A	351	G	C4'-C3'-C2'	-5.93	96.67	102.60
2	A	371	A	P-O3'-C3'	5.93	126.82	119.70
2	A	2218	G	O3'-P-O5'	-5.93	92.72	104.00
2	A	787	U	C4'-C3'-C2'	-5.93	96.67	102.60
2	A	294	A	O4'-C4'-C3'	-5.92	98.08	104.00
2	A	1437	C	P-O3'-C3'	5.92	126.81	119.70
2	A	1183	G	C1'-O4'-C4'	-5.92	105.16	109.90
2	A	2245	U	C1'-O4'-C4'	-5.92	105.16	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	1498	C	C2-N1-C1'	5.92	125.31	118.80
2	A	120	U	O4'-C1'-N1	5.92	112.93	108.20
2	A	2584	U	N1-C1'-C2'	-5.92	105.49	112.00
2	A	1207	C	C1'-O4'-C4'	-5.91	105.17	109.90
2	A	1507	A	C1'-O4'-C4'	-5.91	105.17	109.90
2	A	2196	C	P-O3'-C3'	-5.90	112.62	119.70
2	A	1664	A	C8-N9-C4	-5.90	103.44	105.80
2	A	779	U	O4'-C1'-N1	5.90	112.92	108.20
1	B	11	C	OP1-P-O3'	-5.89	92.25	105.20
2	A	962	G	P-O3'-C3'	5.89	126.76	119.70
2	A	1206	G	O4'-C1'-N9	5.89	112.91	108.20
2	A	148	C	O4'-C1'-N1	5.88	112.90	108.20
2	A	508	G	P-O3'-C3'	5.88	126.76	119.70
2	A	1241	A	N7-C8-N9	5.88	116.74	113.80
2	A	102	G	O4'-C1'-N9	5.88	112.90	108.20
2	A	1011	G	C1'-O4'-C4'	-5.88	105.20	109.90
2	A	2035	G	C2-N3-C4	5.87	114.83	111.90
2	A	371	A	O4'-C1'-N9	5.86	112.89	108.20
2	A	1836	C	C3'-C2'-C1'	-5.86	96.81	101.50
2	A	685	A	P-O3'-C3'	5.86	126.73	119.70
2	A	787	U	C5'-C4'-O4'	5.86	116.13	109.10
2	A	190	A	C1'-O4'-C4'	-5.85	105.22	109.90
2	A	2035	G	C5-C6-N1	5.85	114.42	111.50
2	A	1489	U	C1'-O4'-C4'	-5.85	105.22	109.90
2	A	1102	C	C2-N1-C1'	5.84	125.23	118.80
2	A	1241	A	C8-N9-C4	-5.84	103.46	105.80
2	A	445	C	C1'-O4'-C4'	-5.83	105.23	109.90
2	A	1944	U	P-O3'-C3'	5.83	126.70	119.70
2	A	767	U	O4'-C1'-N1	5.83	112.86	108.20
2	A	27	G	C8-N9-C4	-5.83	104.07	106.40
2	A	1342	A	P-O3'-C3'	5.83	126.69	119.70
2	A	316	C	OP1-P-O3'	-5.82	92.39	105.20
2	A	1489	U	P-O3'-C3'	5.82	126.69	119.70
2	A	1930	G	P-O3'-C3'	5.82	126.68	119.70
2	A	791	C	C3'-C2'-C1'	5.82	106.16	101.50
2	A	602	G	P-O3'-C3'	5.82	126.68	119.70
2	A	359	A	P-O3'-C3'	-5.81	112.72	119.70
2	A	1482	U	C3'-C2'-C1'	-5.80	96.86	101.50
2	A	2895	U	C4'-C3'-C2'	-5.79	96.81	102.60
2	A	296	C	O4'-C4'-C3'	-5.78	98.22	104.00
2	A	332	A	P-O3'-C3'	5.78	126.64	119.70
2	A	1339	G	P-O3'-C3'	5.78	126.64	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	1890	A	OP2-P-O3'	-5.78	92.48	105.20
2	A	2076	U	C3'-C2'-C1'	-5.78	96.88	101.50
2	A	1476	C	C1'-O4'-C4'	-5.78	105.28	109.90
2	A	1809	A	O4'-C1'-N9	5.78	112.82	108.20
2	A	1914	C	N1-C2-O2	5.77	122.36	118.90
1	B	-1	A	O4'-C1'-N9	5.76	112.81	108.20
2	A	512	G	C8-N9-C4	-5.76	104.09	106.40
2	A	110	G	O3'-P-O5'	-5.76	93.06	104.00
2	A	1181	C	O4'-C1'-N1	5.76	112.81	108.20
2	A	352	G	N7-C8-N9	5.76	115.98	113.10
2	A	1808	U	C2-N1-C1'	5.76	124.61	117.70
2	A	792	G	C1'-O4'-C4'	-5.75	105.30	109.90
2	A	1757	U	C3'-C2'-C1'	-5.75	96.90	101.50
2	A	498	G	C8-N9-C4	-5.74	104.10	106.40
1	B	106	G	OP1-P-O3'	-5.74	92.58	105.20
2	A	459	U	O4'-C1'-N1	5.74	112.79	108.20
2	A	1266	G	O4'-C1'-N9	5.73	112.79	108.20
2	A	133	C	O4'-C1'-N1	5.73	112.78	108.20
2	A	2554	U	C4'-C3'-C2'	-5.72	96.88	102.60
2	A	2045	C	C5'-C4'-O4'	5.72	115.96	109.10
2	A	2825	C	P-O3'-C3'	-5.72	112.84	119.70
2	A	503	A	P-O3'-C3'	5.72	126.56	119.70
2	A	688	U	C1'-O4'-C4'	-5.71	105.33	109.90
2	A	380	U	C3'-C2'-C1'	-5.70	96.94	101.50
2	A	280	C	OP1-P-O3'	5.69	117.72	105.20
2	A	793	A	O3'-P-O5'	5.69	114.81	104.00
2	A	421	U	O3'-P-O5'	5.68	114.80	104.00
2	A	2539	C	C4'-C3'-C2'	-5.68	96.92	102.60
2	A	1730	U	O4'-C1'-N1	5.68	112.74	108.20
2	A	646	A	C3'-C2'-C1'	5.68	106.04	101.50
2	A	2553	G	C4'-C3'-C2'	-5.68	96.92	102.60
2	A	1667	G	N3-C4-C5	-5.67	125.76	128.60
2	A	2579	C	C3'-C2'-C1'	-5.67	96.96	101.50
2	A	1905	C	O3'-P-O5'	5.67	114.78	104.00
21	V	91	THR	O-C-N	5.67	131.77	122.70
2	A	1378	A	P-O3'-C3'	5.67	126.50	119.70
2	A	218	A	C1'-O4'-C4'	-5.65	105.38	109.90
2	A	1669	A	P-O3'-C3'	5.65	126.48	119.70
2	A	1796	U	O4'-C1'-N1	5.65	112.72	108.20
15	W	79	GLY	C-N-CA	-5.65	98.27	122.00
1	B	69	G	OP1-P-O3'	-5.65	92.77	105.20
2	A	1914	C	C6-N1-C2	-5.65	118.04	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	70	G	OP2-P-O3'	5.65	117.62	105.20
2	A	1261	C	O3'-P-O5'	-5.64	93.27	104.00
2	A	1509	C	N1-C2-O2	5.64	122.29	118.90
1	B	0	A	O4'-C1'-N9	5.63	112.71	108.20
2	A	271(C)	U	OP2-P-O3'	5.63	117.59	105.20
2	A	1132	A	C1'-O4'-C4'	-5.63	105.40	109.90
2	A	1914	C	N1-C1'-C2'	5.63	121.31	114.00
2	A	352	G	C8-N9-C4	-5.62	104.15	106.40
2	A	1070	A	O4'-C1'-N9	5.61	112.69	108.20
2	A	1984	G	C4'-C3'-C2'	-5.61	96.99	102.60
2	A	2022	U	O3'-P-O5'	-5.60	93.35	104.00
2	A	162	U	C3'-C2'-C1'	5.60	105.98	101.50
2	A	1668	A	P-O3'-C3'	5.60	126.42	119.70
2	A	2524	G	C4'-C3'-C2'	-5.59	97.01	102.60
2	A	2824	C	C3'-C2'-C1'	-5.59	97.03	101.50
2	A	1626	G	OP2-P-O3'	5.59	117.49	105.20
2	A	1924	C	C6-N1-C2	-5.59	118.06	120.30
2	A	1437	C	C4'-C3'-C2'	-5.58	97.02	102.60
2	A	101	G	C6-N1-C2	-5.58	121.75	125.10
2	A	1914	C	N3-C2-O2	-5.58	118.00	121.90
2	A	563	G	N3-C4-C5	-5.58	125.81	128.60
2	A	1991	U	O3'-P-O5'	5.56	114.57	104.00
2	A	817	C	O4'-C1'-N1	5.56	112.65	108.20
2	A	946	G	O4'-C1'-N9	5.56	112.65	108.20
2	A	1251	C	N1-C2-O2	5.56	122.23	118.90
2	A	1442	G	O4'-C1'-N9	5.55	112.64	108.20
2	A	134	C	O4'-C1'-N1	5.55	112.64	108.20
2	A	286	C	O4'-C1'-N1	5.55	112.64	108.20
2	A	973	A	C5'-C4'-C3'	5.55	124.87	116.00
2	A	479	A	O4'-C1'-N9	5.54	112.63	108.20
2	A	2003	G	C1'-O4'-C4'	-5.54	105.47	109.90
2	A	270(M)	U	C2-N1-C1'	5.54	124.34	117.70
2	A	1970	A	C1'-O4'-C4'	-5.54	105.47	109.90
2	A	2317	C	C4'-C3'-C2'	-5.53	97.07	102.60
2	A	1669	A	C4'-C3'-C2'	-5.53	97.07	102.60
2	A	848	G	C3'-C2'-C1'	-5.53	97.08	101.50
2	A	1498	C	N1-C1'-C2'	5.53	121.19	114.00
2	A	342	G	O4'-C4'-C3'	-5.53	98.47	104.00
2	A	1211	U	P-O3'-C3'	5.52	126.33	119.70
2	A	2846	G	P-O3'-C3'	5.52	126.33	119.70
2	A	16	G	C5'-C4'-O4'	5.52	115.72	109.10
1	B	28	C	O4'-C1'-N1	5.52	112.61	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	530	G	C1'-O4'-C4'	-5.52	105.49	109.90
2	A	2855	C	C3'-C2'-C1'	-5.52	97.09	101.50
2	A	462	C	O4'-C1'-N1	5.51	112.61	108.20
2	A	815	C	O4'-C1'-N1	5.51	112.61	108.20
2	A	1214	A	C1'-O4'-C4'	-5.51	105.49	109.90
2	A	1056	G	C1'-O4'-C4'	-5.51	105.49	109.90
2	A	1653	G	C3'-C2'-C1'	5.51	105.91	101.50
2	A	232	G	O3'-P-O5'	-5.50	93.56	104.00
2	A	1968	G	C4'-C3'-C2'	-5.50	97.10	102.60
2	A	2454	G	O3'-P-O5'	5.50	114.44	104.00
2	A	1206	G	C3'-C2'-C1'	-5.49	97.11	101.50
2	A	1088	A	O4'-C1'-N9	5.49	112.59	108.20
2	A	434	U	C3'-C2'-C1'	5.48	105.89	101.50
2	A	625	G	C3'-C2'-C1'	-5.48	97.11	101.50
2	A	774	A	O4'-C1'-N9	5.48	112.58	108.20
2	A	1763	G	P-O3'-C3'	5.48	126.28	119.70
2	A	1025	G	C4'-C3'-C2'	-5.48	97.12	102.60
2	A	2370	G	OP1-P-O3'	5.48	117.25	105.20
2	A	516	C	C6-N1-C2	-5.48	118.11	120.30
2	A	1664	A	N7-C8-N9	5.47	116.53	113.80
2	A	458	G	C3'-C2'-C1'	5.47	105.87	101.50
2	A	1924	C	C4'-C3'-C2'	-5.47	97.13	102.60
2	A	81	G	P-O3'-C3'	5.46	126.26	119.70
2	A	117	G	OP2-P-O3'	5.46	117.22	105.20
2	A	1102	C	N1-C2-O2	5.46	122.18	118.90
2	A	1976	U	C1'-O4'-C4'	-5.46	105.53	109.90
2	A	27	G	N3-C4-C5	-5.46	125.87	128.60
2	A	1286	A	C3'-C2'-C1'	5.46	105.87	101.50
2	A	1935	G	C3'-C2'-C1'	5.46	105.86	101.50
2	A	1706	U	OP2-P-O3'	5.45	117.20	105.20
2	A	627	A	O4'-C1'-N9	5.45	112.56	108.20
2	A	1528	A	C5'-C4'-O4'	5.45	115.64	109.10
2	A	1249	U	C3'-C2'-C1'	-5.44	97.14	101.50
2	A	2726	U	C1'-O4'-C4'	-5.44	105.55	109.90
2	A	1420	U	N1-C1'-C2'	5.44	121.07	114.00
2	A	1520	U	C5-C6-N1	5.44	125.42	122.70
2	A	2010	G	O4'-C1'-N9	5.44	112.55	108.20
22	2	31	ARG	C-N-CA	-5.44	108.10	121.70
2	A	1140	C	C5'-C4'-O4'	5.43	115.62	109.10
2	A	1885	A	O4'-C1'-N9	5.43	112.55	108.20
2	A	564	C	C4'-C3'-C2'	-5.43	97.17	102.60
2	A	1423	G	O4'-C4'-C3'	-5.43	98.57	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	2310	A	C4'-C3'-C2'	-5.42	97.17	102.60
2	A	2395	C	C3'-C2'-C1'	-5.42	97.17	101.50
2	A	1313	U	C4'-C3'-C2'	-5.41	97.19	102.60
2	A	1888	G	O4'-C1'-N9	5.41	112.53	108.20
2	A	137	C	C3'-C2'-C1'	5.41	105.83	101.50
2	A	2442	C	P-O3'-C3'	-5.41	113.21	119.70
26	5	30	LEU	C-N-CA	5.41	135.22	121.70
2	A	1767	C	O4'-C1'-N1	5.40	112.52	108.20
2	A	2267	A	O4'-C4'-C3'	-5.39	98.61	104.00
2	A	498	G	C3'-C2'-C1'	-5.39	97.19	101.50
2	A	943	U	C4'-C3'-C2'	-5.39	97.21	102.60
2	A	932	G	C3'-C2'-C1'	5.39	105.81	101.50
2	A	1283	G	C3'-C2'-C1'	-5.39	97.19	101.50
2	A	817	C	P-O3'-C3'	5.38	126.16	119.70
2	A	1206	G	O4'-C4'-C3'	-5.38	98.61	104.00
2	A	30	G	C3'-C2'-C1'	5.38	105.80	101.50
2	A	1181	C	C1'-O4'-C4'	-5.38	105.60	109.90
2	A	1124	C	OP1-P-O3'	5.37	117.02	105.20
2	A	987	G	O4'-C1'-N9	5.37	112.50	108.20
2	A	52	A	O3'-P-O5'	-5.37	93.80	104.00
2	A	530	G	P-O3'-C3'	5.37	126.14	119.70
2	A	626	U	O4'-C1'-N1	5.36	112.49	108.20
2	A	2441	C	P-O3'-C3'	-5.36	113.26	119.70
2	A	2733	A	C4'-C3'-C2'	-5.36	97.24	102.60
2	A	47	C	O4'-C1'-N1	5.36	112.49	108.20
2	A	488	G	C4'-C3'-C2'	-5.36	97.24	102.60
2	A	1939	U	C3'-C2'-C1'	5.36	105.79	101.50
2	A	1190	G	O4'-C4'-C3'	-5.35	98.65	104.00
2	A	1600	C	O4'-C1'-N1	5.35	112.48	108.20
2	A	1283	G	P-O3'-C3'	-5.35	113.28	119.70
2	A	665	C	O4'-C1'-N1	5.34	112.47	108.20
2	A	845	G	C3'-C2'-C1'	5.34	105.77	101.50
2	A	739	G	N3-C4-N9	5.34	129.20	126.00
2	A	973	A	O4'-C4'-C3'	-5.34	98.66	104.00
2	A	1534	G	C4'-C3'-C2'	-5.34	97.26	102.60
2	A	2690	C	O3'-P-O5'	-5.34	93.86	104.00
2	A	2036	C	O4'-C1'-N1	5.33	112.47	108.20
2	A	2076	U	P-O3'-C3'	5.33	126.10	119.70
2	A	1386	C	O4'-C1'-N1	5.33	112.46	108.20
2	A	1247	A	C3'-C2'-C1'	5.33	105.76	101.50
2	A	1261	C	P-O3'-C3'	5.32	126.09	119.70
2	A	288	C	C3'-C2'-C1'	-5.32	97.24	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	997	G	C4'-C3'-C2'	-5.32	97.28	102.60
2	A	566	U	C3'-C2'-C1'	5.32	105.75	101.50
2	A	1791	A	P-O3'-C3'	-5.32	113.32	119.70
2	A	1142	U	P-O3'-C3'	-5.31	113.32	119.70
2	A	2865	U	C1'-O4'-C4'	-5.31	105.65	109.90
2	A	1515	C	P-O3'-C3'	5.31	126.07	119.70
2	A	1800	C	C4'-C3'-C2'	-5.31	97.29	102.60
2	A	2052	G	O4'-C1'-N9	5.31	112.45	108.20
2	A	1054	A	C1'-O4'-C4'	-5.30	105.66	109.90
2	A	2668	G	C3'-C2'-C1'	-5.30	97.26	101.50
2	A	105	C	O4'-C1'-N1	5.30	112.44	108.20
2	A	578	A	OP2-P-O3'	5.30	116.86	105.20
2	A	218	A	C4'-C3'-C2'	-5.30	97.30	102.60
2	A	1329	U	P-O3'-C3'	5.30	126.06	119.70
2	A	338	G	C3'-C2'-C1'	5.30	105.74	101.50
2	A	1835	G	N3-C4-C5	-5.30	125.95	128.60
2	A	594	U	O4'-C1'-N1	5.29	112.44	108.20
2	A	271(C)	U	O3'-P-O5'	-5.29	93.94	104.00
2	A	750	A	C3'-C2'-C1'	5.29	105.73	101.50
2	A	242	G	P-O3'-C3'	5.29	126.05	119.70
2	A	1772	G	O4'-C1'-N9	5.29	112.43	108.20
1	B	119	A	C4'-C3'-C2'	-5.28	97.32	102.60
2	A	2370	G	P-O3'-C3'	5.28	126.03	119.70
2	A	321	G	P-O3'-C3'	5.28	126.03	119.70
2	A	612	G	P-O3'-C3'	5.27	126.03	119.70
2	A	2751	G	C1'-O4'-C4'	-5.27	105.68	109.90
2	A	1626	G	C3'-C2'-C1'	5.27	105.72	101.50
2	A	469	G	N3-C4-C5	-5.27	125.97	128.60
2	A	1772	G	C5'-C4'-O4'	5.27	115.42	109.10
2	A	2320	A	C3'-C2'-C1'	5.27	105.71	101.50
2	A	2334	G	C1'-O4'-C4'	-5.27	105.69	109.90
2	A	130	C	P-O3'-C3'	-5.26	113.38	119.70
2	A	2676	C	C3'-C2'-C1'	-5.26	97.29	101.50
2	A	1567	A	C3'-C2'-C1'	5.26	105.71	101.50
2	A	340	A	O3'-P-O5'	5.25	113.98	104.00
2	A	1402	C	O4'-C1'-N1	5.25	112.40	108.20
2	A	889	C	O4'-C1'-N1	5.25	112.40	108.20
2	A	270(Z)	U	P-O3'-C3'	5.25	126.00	119.70
2	A	1586	A	C3'-C2'-C1'	5.25	105.70	101.50
2	A	1153	C	C2-N1-C1'	5.24	124.57	118.80
2	A	32	C	OP1-P-O3'	5.24	116.73	105.20
2	A	1800	C	C5'-C4'-O4'	5.24	115.39	109.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	8	A	O3'-P-O5'	5.24	113.95	104.00
2	A	468	G	O3'-P-O5'	-5.24	94.05	104.00
2	A	1539	G	C1'-O4'-C4'	-5.24	105.71	109.90
2	A	1727	U	C1'-O4'-C4'	-5.24	105.71	109.90
2	A	2336	A	OP1-P-O3'	5.23	116.71	105.20
2	A	148	C	C1'-O4'-C4'	-5.23	105.72	109.90
27	6	19	GLY	N-CA-C	-5.23	100.03	113.10
2	A	242	G	O4'-C1'-N9	5.23	112.38	108.20
2	A	791	C	O4'-C1'-N1	5.23	112.38	108.20
2	A	935	C	C1'-O4'-C4'	-5.23	105.72	109.90
2	A	370	G	P-O3'-C3'	5.22	125.97	119.70
2	A	95	G	P-O3'-C3'	-5.22	113.43	119.70
2	A	1270	C	P-O3'-C3'	5.22	125.97	119.70
2	A	1312	U	C3'-C2'-C1'	5.22	105.68	101.50
2	A	2726	U	O4'-C1'-N1	5.22	112.38	108.20
2	A	2264	C	C4'-C3'-C2'	-5.22	97.38	102.60
1	B	-1	A	OP1-P-O3'	5.22	116.68	105.20
2	A	456	C	C6-N1-C2	-5.22	118.21	120.30
2	A	2614	A	C3'-C2'-C1'	5.21	105.67	101.50
2	A	244	A	C3'-C2'-C1'	-5.21	97.33	101.50
2	A	801	G	C2'-C3'-O3'	5.21	122.04	113.70
2	A	1409	C	O4'-C1'-N1	5.21	112.37	108.20
2	A	548	A	C3'-C2'-C1'	5.21	105.67	101.50
2	A	2777	G	C1'-O4'-C4'	-5.21	105.73	109.90
2	A	974(A)	C	N1-C1'-C2'	5.20	120.77	114.00
2	A	479	A	C1'-O4'-C4'	-5.20	105.74	109.90
2	A	135	G	C4'-C3'-C2'	-5.20	97.40	102.60
2	A	616	A	C3'-C2'-C1'	5.20	105.66	101.50
2	A	1941	C	N1-C2-O2	5.20	122.02	118.90
2	A	2403	C	C4'-C3'-C2'	-5.20	97.40	102.60
2	A	196	A	N9-C1'-C2'	5.20	120.76	114.00
2	A	764	A	N9-C1'-C2'	5.20	120.76	114.00
2	A	2209	C	C4'-C3'-C2'	-5.20	97.40	102.60
2	A	141(A)	C	C6-N1-C2	-5.20	118.22	120.30
2	A	177	G	P-O3'-C3'	5.20	125.93	119.70
2	A	1212	G	P-O3'-C3'	5.20	125.94	119.70
2	A	1996	C	C6-N1-C2	-5.19	118.22	120.30
2	A	271(C)	U	P-O3'-C3'	-5.19	113.47	119.70
2	A	1554	A	P-O3'-C3'	5.19	125.93	119.70
2	A	2267	A	C1'-O4'-C4'	-5.19	105.75	109.90
2	A	335	C	O4'-C1'-N1	5.19	112.35	108.20
2	A	661	C	C4'-C3'-C2'	-5.19	97.41	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	1206	G	C5'-C4'-O4'	5.19	115.33	109.10
2	A	164	U	C3'-C2'-C1'	5.19	105.65	101.50
2	A	1255	U	C5'-C4'-O4'	5.19	115.33	109.10
2	A	1640	C	P-O3'-C3'	5.19	125.92	119.70
2	A	935	C	O4'-C1'-N1	5.18	112.35	108.20
2	A	2091	U	O4'-C1'-N1	5.18	112.35	108.20
2	A	153	C	O4'-C1'-N1	5.18	112.34	108.20
2	A	1566	A	C1'-O4'-C4'	-5.18	105.76	109.90
2	A	80	G	C3'-C2'-C1'	-5.18	97.36	101.50
2	A	1697	G	C3'-C2'-C1'	-5.18	97.36	101.50
2	A	688	U	O4'-C1'-N1	5.17	112.34	108.20
2	A	814	C	C1'-O4'-C4'	-5.17	105.76	109.90
2	A	71	A	O4'-C1'-N9	5.17	112.34	108.20
2	A	1979	C	C4'-C3'-C2'	-5.17	97.43	102.60
2	A	2508	G	N3-C4-C5	5.17	131.19	128.60
2	A	1829	A	O4'-C1'-N9	-5.17	104.06	108.20
2	A	2471	C	C4'-C3'-C2'	-5.17	97.43	102.60
2	A	2086	U	O4'-C1'-N1	5.17	112.33	108.20
2	A	1570	A	C3'-C2'-C1'	-5.17	97.37	101.50
2	A	218	A	O4'-C1'-N9	5.16	112.33	108.20
2	A	337	C	O4'-C1'-N1	5.16	112.33	108.20
2	A	761	A	N7-C8-N9	5.16	116.38	113.80
2	A	2234	G	C4'-C3'-C2'	-5.16	97.44	102.60
2	A	95	G	O4'-C4'-C3'	-5.16	98.84	104.00
2	A	1169	G	O4'-C1'-N9	5.15	112.32	108.20
2	A	1404	C	O3'-P-O5'	-5.15	94.21	104.00
2	A	1476	C	C5'-C4'-O4'	5.15	115.28	109.10
2	A	264	C	OP2-P-O3'	5.15	116.53	105.20
2	A	585	G	O5'-C5'-C4'	-5.15	101.92	111.70
2	A	1653	G	P-O3'-C3'	5.15	125.88	119.70
2	A	2848	G	C1'-O4'-C4'	-5.15	105.78	109.90
2	A	1835	G	C8-N9-C4	-5.14	104.34	106.40
2	A	2007	C	C3'-C2'-C1'	-5.14	97.39	101.50
2	A	151	C	O4'-C1'-N1	5.14	112.31	108.20
2	A	2084	C	P-O3'-C3'	-5.14	113.53	119.70
2	A	1349	A	P-O3'-C3'	-5.14	113.53	119.70
2	A	1983	C	O4'-C1'-N1	5.14	112.31	108.20
2	A	2488	A	P-O3'-C3'	-5.14	113.54	119.70
1	B	69	G	OP2-P-O3'	5.13	116.50	105.20
2	A	79	G	C3'-C2'-C1'	-5.13	97.39	101.50
2	A	2418	A	C3'-C2'-C1'	5.13	105.61	101.50
2	A	2595	G	C4'-C3'-C2'	-5.13	97.47	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	101	G	P-O3'-C3'	5.13	125.85	119.70
2	A	195	A	O4'-C1'-N9	5.12	112.30	108.20
2	A	1559	G	O4'-C1'-C2'	-5.12	100.68	105.80
2	A	2022	U	N1-C2-O2	5.12	126.38	122.80
2	A	1132	A	O4'-C1'-N9	5.11	112.29	108.20
2	A	449(A)	G	C3'-C2'-C1'	5.11	105.59	101.50
2	A	1474	C	O4'-C1'-N1	5.11	112.29	108.20
2	A	1939	U	C2-N1-C1'	5.11	123.83	117.70
2	A	2062	A	OP2-P-O3'	5.11	116.44	105.20
2	A	1568	G	C3'-C2'-C1'	5.11	105.59	101.50
2	A	2855	C	C4'-C3'-C2'	-5.11	97.49	102.60
2	A	912	C	O4'-C1'-N1	5.10	112.28	108.20
2	A	2495	G	P-O3'-C3'	5.10	125.83	119.70
2	A	865	C	N1-C2-O2	5.10	121.96	118.90
2	A	1491	G	P-O3'-C3'	5.10	125.82	119.70
2	A	1827	C	O4'-C1'-N1	5.10	112.28	108.20
2	A	271(B)	G	O3'-P-O5'	5.10	113.69	104.00
2	A	1915	U	P-O3'-C3'	5.10	125.82	119.70
2	A	2040	C	OP2-P-O3'	5.10	116.41	105.20
2	A	740	U	O4'-C1'-N1	5.09	112.27	108.20
2	A	1805	U	O4'-C1'-N1	5.09	112.27	108.20
2	A	1653	G	N9-C1'-C2'	5.08	120.61	114.00
2	A	1527	G	O4'-C1'-N9	5.08	112.27	108.20
2	A	1727	U	O4'-C1'-N1	5.08	112.27	108.20
2	A	2885	C	C3'-C2'-C1'	-5.08	97.43	101.50
2	A	82	G	C3'-C2'-C1'	5.08	105.56	101.50
2	A	670	A	O4'-C1'-N9	5.08	112.26	108.20
2	A	602	G	C3'-C2'-C1'	5.08	105.56	101.50
2	A	957	A	P-O3'-C3'	5.08	125.79	119.70
2	A	1917	U	O4'-C1'-N1	5.08	112.26	108.20
2	A	299	A	C8-N9-C4	-5.07	103.77	105.80
2	A	529	A	P-O3'-C3'	5.07	125.79	119.70
2	A	563	G	C5'-C4'-O4'	5.07	115.18	109.10
2	A	971	C	O3'-P-O5'	-5.07	94.37	104.00
2	A	1297	C	O4'-C1'-N1	5.07	112.25	108.20
2	A	270(Q)	C	O4'-C1'-N1	5.07	112.25	108.20
2	A	801	G	O4'-C1'-N9	-5.06	104.15	108.20
2	A	32	C	O4'-C1'-N1	5.06	112.25	108.20
2	A	738	G	N3-C4-C5	-5.06	126.07	128.60
2	A	1265	A	N9-C1'-C2'	5.06	120.57	114.00
2	A	1335	U	O4'-C1'-N1	5.06	112.25	108.20
2	A	1025	G	O4'-C4'-C3'	-5.05	98.95	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	1779	U	P-O3'-C3'	-5.05	113.64	119.70
2	A	2765	A	C3'-C2'-C1'	5.05	105.54	101.50
2	A	699	A	O3'-P-O5'	-5.05	94.40	104.00
2	A	712	G	C3'-C2'-C1'	-5.05	97.46	101.50
2	A	809	G	OP2-P-O3'	5.05	116.31	105.20
2	A	1288	U	C3'-C2'-C1'	5.05	105.54	101.50
2	A	1621	U	C3'-C2'-C1'	-5.05	97.46	101.50
2	A	1351	C	O4'-C1'-N1	5.05	112.24	108.20
2	A	1657	C	C3'-C2'-C1'	-5.05	97.46	101.50
2	A	1542	G	O4'-C4'-C3'	-5.05	98.95	104.00
2	A	825	C	P-O3'-C3'	5.04	125.75	119.70
2	A	2862	G	C3'-C2'-C1'	5.04	105.54	101.50
2	A	81	G	OP1-P-O3'	5.04	116.29	105.20
2	A	1657	C	C5-C6-N1	5.04	123.52	121.00
2	A	984	A	C5'-C4'-C3'	5.04	124.07	116.00
2	A	1966	A	C3'-C2'-C1'	5.04	105.53	101.50
2	A	2045	C	O4'-C1'-N1	5.04	112.23	108.20
2	A	188	G	O4'-C1'-N9	5.04	112.23	108.20
2	A	1266	G	C5'-C4'-C3'	5.04	124.06	116.00
2	A	1527	G	N7-C8-N9	5.04	115.62	113.10
2	A	1306	C	O4'-C1'-N1	5.03	112.23	108.20
2	A	1667	G	C8-N9-C4	-5.03	104.39	106.40
2	A	2511	U	C4'-C3'-C2'	-5.03	97.57	102.60
2	A	2227	A	P-O3'-C3'	-5.03	113.67	119.70
2	A	472	A	P-O3'-C3'	-5.03	113.67	119.70
2	A	1240	U	C5-C6-N1	5.03	125.21	122.70
2	A	1520	U	O4'-C1'-N1	5.03	112.22	108.20
2	A	1930	G	O4'-C1'-N9	5.03	112.22	108.20
2	A	1420	U	P-O3'-C3'	5.02	125.73	119.70
2	A	1480	G	N7-C8-N9	5.02	115.61	113.10
2	A	1313	U	C1'-O4'-C4'	-5.02	105.88	109.90
2	A	2791	C	C3'-C2'-C1'	5.02	105.52	101.50
2	A	84	A	C3'-C2'-C1'	5.02	105.52	101.50
2	A	249	C	N1-C1'-C2'	-5.02	106.48	112.00
2	A	270(H)	C	O4'-C1'-N1	5.02	112.21	108.20
2	A	624	C	P-O3'-C3'	5.02	125.72	119.70
2	A	977	G	C4'-C3'-C2'	-5.02	97.58	102.60
2	A	1278	A	C4'-C3'-C2'	-5.02	97.58	102.60
2	A	1710	C	O4'-C1'-N1	5.02	112.22	108.20
2	A	2460	U	N1-C1'-C2'	-5.02	106.48	112.00
2	A	1914	C	P-O3'-C3'	5.02	125.72	119.70
2	A	1998	G	C3'-C2'-C1'	-5.01	97.49	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	2218	G	OP1-P-O3'	5.01	116.23	105.20
2	A	2318	G	C3'-C2'-C1'	5.01	105.51	101.50
2	A	2561	A	C4'-C3'-C2'	-5.01	97.59	102.60
2	A	2507	C	C4'-C3'-C2'	-5.01	97.59	102.60
2	A	2654	A	C3'-C2'-C1'	5.01	105.51	101.50
2	A	782	A	C1'-O4'-C4'	-5.01	105.89	109.90
2	A	2784	C	C1'-O4'-C4'	-5.00	105.90	109.90
2	A	500	G	C3'-C2'-C1'	-5.00	97.50	101.50
2	A	1247	A	O3'-P-O5'	-5.00	94.49	104.00
2	A	1525	G	OP2-P-O3'	5.00	116.21	105.20
2	A	740	U	P-O3'-C3'	5.00	125.70	119.70
2	A	766	C	O4'-C1'-N1	5.00	112.20	108.20
2	A	1005	C	C6-N1-C2	-5.00	118.30	120.30
2	A	1999	C	O4'-C1'-N1	5.00	112.20	108.20
2	A	2439	A	N9-C1'-C2'	-5.00	106.50	112.00

There are no chirality outliers.

All (17) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
22	2	31	ARG	Mainchain
26	5	30	LEU	Mainchain
3	D	213	LYS	Peptide
4	E	274	GLY	Mainchain,Peptide
4	E	49	THR	Mainchain
5	F	103	ASN	Mainchain
5	F	168	ARG	Mainchain,Peptide
5	F	28	SER	Mainchain
7	H	80	LYS	Mainchain
8	I	49	ALA	Mainchain
31	K	86	GLU	Mainchain
11	P	96	VAL	Peptide
13	S	31	LYS	Mainchain
16	X	73	ASP	Mainchain
17	Y	36	GLY	Mainchain

5.2 Close contacts ⓘ

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

and the number in parentheses is this value normalized per 1000 atoms of the molecule in the chain. The Symm-Clashes column gives symmetry related clashes, in the same way as for the Clashes column.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	B	2637	0	1339	219	1
2	A	60600	0	30522	11003	138
3	D	1308	0	1346	1086	0
4	E	1507	0	1478	1144	3
5	F	1430	0	1357	1085	0
6	G	957	0	952	662	0
7	H	1251	0	1291	754	0
8	I	1145	0	1225	625	0
9	N	917	0	896	771	2
10	O	937	0	993	612	0
11	P	639	0	605	482	0
12	Q	1081	0	1047	920	0
13	S	866	0	866	677	0
14	T	406	0	359	163	0
15	W	860	0	909	557	0
16	X	602	0	558	460	0
17	Y	879	0	860	755	0
18	Z	1360	0	1378	902	0
19	R	855	0	904	579	0
20	U	978	0	996	895	0
21	V	787	0	782	635	0
22	2	494	0	504	393	0
23	3	477	0	527	460	0
24	0	641	0	661	531	0
25	4	604	0	587	470	0
26	5	457	0	456	279	0
27	6	431	0	454	289	0
28	7	383	0	409	382	0
29	8	496	0	539	347	0
30	9	285	0	312	198	0
31	K	999	0	1064	573	0
All	All	87269	0	56176	25597	142

Clashscore is defined as the number of clashes calculated for the entry per 1000 atoms (including hydrogens) of the entry. The overall clashscore for this entry is 179.

All (25597) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:5:33:CYS:SG	26:5:36:CYS:HB2	1.24	1.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2470:G:C2	2:A:2471:C:C5	1.81	1.68
28:7:30:ILE:HA	28:7:33:ARG:CD	1.21	1.67
2:A:2712:U:C6	2:A:712(A):A:C8	1.77	1.67
2:A:2580:U:C6	2:A:2581:G:C8	1.82	1.66
3:D:73:ILE:HG21	3:D:95:TYR:CD2	1.30	1.65
2:A:2352:A:C2	24:0:30:VAL:CG1	1.78	1.64
2:A:1799:G:C2	3:D:153:LEU:HD21	1.26	1.64
7:H:43:THR:HG23	7:H:52:THR:CG2	1.23	1.64
4:E:71:THR:HG21	4:E:299:SER:CB	1.26	1.64
2:A:911:A:C5	12:Q:16:ARG:HG2	1.25	1.64
19:R:58:GLY:HA2	19:R:80:PHE:CE2	1.26	1.63
24:0:37:LEU:HB3	24:0:69:PHE:CD2	1.26	1.63
27:6:32:GLN:CB	27:6:35:LEU:HD12	1.25	1.63
17:Y:103:LEU:HD21	17:Y:112:LEU:CD2	1.25	1.63
17:Y:73:HIS:CA	17:Y:91:LEU:HD11	1.26	1.63
2:A:2625:G:H3'	2:A:2626:C:C5	1.30	1.63
2:A:2712:U:C2'	2:A:712(A):A:H5''	1.18	1.63
2:A:2355:C:C4'	24:0:21:LEU:HD13	1.25	1.62
7:H:10:ILE:CG2	7:H:14:VAL:HG11	1.26	1.62
21:V:11:GLN:HE22	21:V:22:VAL:CG2	1.06	1.62
3:D:92:LEU:HD11	3:D:102:TYR:CE1	1.29	1.62
2:A:2316:C:H4'	6:G:151:ILE:CD1	1.15	1.62
12:Q:85:ILE:HG22	12:Q:122:PHE:CG	1.17	1.62
8:I:95:SER:HA	8:I:98:ILE:CG1	1.25	1.61
2:A:849:A:C2	23:3:21:ALA:HB1	1.29	1.61
18:Z:39:PHE:HA	18:Z:43:PHE:CE2	1.24	1.61
2:A:2226:C:C2	2:A:2227:A:H1'	1.19	1.61
2:A:25:U:H5''	15:W:80:PRO:CD	1.30	1.61
2:A:994:C:C2	20:U:53:LYS:HD3	1.36	1.60
2:A:2354:G:C2	24:0:32:LYS:HE3	1.36	1.60
17:Y:45:GLY:HA2	17:Y:62:VAL:CG1	1.29	1.60
3:D:128:ALA:CB	3:D:190:THR:HG22	1.15	1.60
11:P:77:ALA:HA	11:P:81:VAL:CB	1.23	1.60
17:Y:101:LEU:HD22	17:Y:103:LEU:CG	1.31	1.60
2:A:2313:C:C5'	6:G:72:LYS:HG3	1.26	1.59
4:E:71:THR:CG2	4:E:299:SER:HB2	1.12	1.59
29:8:50:LEU:CD2	29:8:51:ALA:H	1.03	1.59
11:P:65:ASP:CB	11:P:109:LEU:HB3	1.25	1.59
2:A:16:G:H4'	26:5:18:MET:SD	1.42	1.59
2:A:2470:G:N2	2:A:2471:C:C2	1.67	1.59
17:Y:71:VAL:CG2	17:Y:93:THR:HG23	1.23	1.59
9:N:13:ASP:HA	9:N:38:VAL:CG1	1.23	1.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:535:C:C4'	20:U:53:LYS:HE2	1.27	1.59
30:9:25:VAL:CB	30:9:34:GLN:HB3	1.26	1.59
2:A:2360:A:N7	2:A:2361:A:C8	1.69	1.59
5:F:147:LEU:CD1	5:F:156:LEU:HD11	1.17	1.59
19:R:38:VAL:CG1	19:R:39:PRO:HD3	1.30	1.59
19:R:38:VAL:HG12	19:R:39:PRO:CD	1.23	1.59
17:Y:103:LEU:CD2	17:Y:112:LEU:HD21	1.19	1.59
2:A:1151:G:C4'	20:U:81:ASN:HD21	1.16	1.59
5:F:96:LYS:HB2	5:F:98:ARG:CZ	1.11	1.58
7:H:129:LYS:C	7:H:130:ILE:HD12	1.21	1.58
23:3:20:LYS:HA	23:3:23:LEU:CD1	1.30	1.58
2:A:2740:A:H2'	2:A:2741:A:C8	1.13	1.58
30:9:7:VAL:CG1	30:9:34:GLN:HG2	1.21	1.58
2:A:1665:A:C4'	10:O:66:LYS:HZ3	1.07	1.58
3:D:128:ALA:HB2	3:D:190:THR:CB	1.10	1.58
20:U:59:ARG:HA	20:U:62:ILE:CG1	1.15	1.58
2:A:2768:C:N3	2:A:2769:C:C5	1.71	1.58
9:N:10:VAL:CG1	9:N:36:VAL:HG22	1.15	1.58
2:A:2832:U:H5'	2:A:2832:U:C6	1.34	1.58
2:A:2785:C:C4'	4:E:99:VAL:HA	1.22	1.58
23:3:23:LEU:CA	23:3:28:LEU:HD12	1.31	1.57
15:W:19:LEU:CD2	26:5:25:LEU:HG	1.25	1.57
2:A:2331:G:H4'	24:0:70:ILE:CG1	1.27	1.57
3:D:175:LEU:CD2	3:D:180:VAL:HA	1.32	1.57
9:N:15:ARG:CB	9:N:43:ARG:HG2	1.20	1.57
20:U:59:ARG:CA	20:U:62:ILE:HG12	1.22	1.57
2:A:2432:A:H2	2:A:2433:A:C6	1.18	1.57
3:D:213:LYS:CG	3:D:215:LYS:HB2	1.27	1.57
9:N:13:ASP:CA	9:N:38:VAL:CG1	1.78	1.57
18:Z:69:VAL:CG2	18:Z:81:VAL:HG13	1.26	1.57
8:I:68:LEU:CD2	8:I:108:LEU:HD13	1.16	1.57
2:A:2543:G:H2'	2:A:2544:G:C8	1.40	1.57
2:A:2227:A:N1	2:A:2228:G:C6	1.70	1.57
9:N:65:ASN:HB2	9:N:69:TYR:CD1	1.31	1.57
9:N:58:GLU:HA	9:N:61:VAL:CG2	1.34	1.57
26:5:45:ILE:HG23	26:5:52:TYR:CD1	1.36	1.57
20:U:92:ARG:CA	20:U:95:LEU:HD11	1.26	1.57
23:3:8:LEU:CD2	23:3:31:LEU:HA	1.20	1.57
2:A:2826:A:C6	2:A:2827:C:C6	1.90	1.56
27:6:19:GLY:HA3	27:6:42:PRO:CG	1.32	1.56
2:A:1826:G:P	3:D:227:VAL:HG21	1.45	1.56
25:4:7:PRO:CD	25:4:56:VAL:HG21	1.33	1.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:7:LYS:HG3	8:I:12:LYS:CG	1.25	1.56
19:R:20:LEU:CD1	19:R:21:TYR:N	1.68	1.56
2:A:2313:C:H5'	6:G:72:LYS:CG	1.29	1.56
2:A:2574:G:C4	2:A:2575:C:C5	1.90	1.56
17:Y:78:THR:CG2	17:Y:88:PRO:HA	1.26	1.56
28:7:17:GLY:HA2	28:7:44:VAL:CG2	1.09	1.56
2:A:2579:C:C6	2:A:2579:C:H5''	1.41	1.55
2:A:2581:G:N1	2:A:2610:C:C6	1.70	1.55
2:A:2209:C:C2'	2:A:2210:G:H3'	1.36	1.55
10:O:35:ILE:CG2	10:O:63:VAL:HA	1.34	1.55
19:R:77:ARG:CB	19:R:77:ARG:HH11	1.04	1.55
5:F:47:GLY:HA2	5:F:92:PRO:CG	1.35	1.55
2:A:2316:C:C4'	6:G:151:ILE:HD12	1.33	1.55
3:D:128:ALA:CB	3:D:190:THR:CG2	1.80	1.55
6:G:19:GLU:HB3	6:G:135:VAL:CG2	1.16	1.55
11:P:77:ALA:CA	11:P:81:VAL:HB	1.37	1.55
2:A:911:A:C5	12:Q:16:ARG:CG	1.79	1.55
12:Q:140:TYR:CD1	12:Q:147:VAL:HG11	1.33	1.55
20:U:14:HIS:CE1	20:U:36:PHE:HZ	1.25	1.55
11:P:94:ARG:HB2	11:P:120:LEU:CD2	1.17	1.54
1:B:59:A:O3'	1:B:60:C:P	1.15	1.54
18:Z:71:MET:CG	18:Z:78:PRO:HD3	1.09	1.54
2:A:2296:U:C4	13:S:16:ALA:HB2	1.40	1.54
5:F:81:PRO:HA	5:F:87:ARG:CG	1.36	1.54
20:U:92:ARG:HA	20:U:95:LEU:CD1	1.07	1.54
17:Y:101:LEU:CG	17:Y:112:LEU:HD11	1.33	1.54
2:A:2287:A:C2	2:A:2289:G:C1'	1.90	1.54
2:A:2785:C:H4'	4:E:99:VAL:CA	1.35	1.54
17:Y:45:GLY:CA	17:Y:62:VAL:HG11	1.36	1.54
19:R:44:LEU:CD1	19:R:48:VAL:HG21	1.37	1.54
21:V:19:VAL:CG1	21:V:21:ARG:NH1	1.69	1.54
17:Y:101:LEU:HD22	17:Y:103:LEU:CD1	1.33	1.54
30:9:25:VAL:CB	30:9:34:GLN:CB	1.82	1.53
3:D:103:ILE:CG1	3:D:104:ILE:CD1	1.80	1.53
2:A:2556:C:H2'	2:A:2557:G:C5'	1.34	1.53
17:Y:55:PHE:CZ	17:Y:89:ARG:NH1	1.71	1.53
30:9:7:VAL:CG1	30:9:34:GLN:CG	1.83	1.53
8:I:95:SER:CB	8:I:98:ILE:HD12	1.09	1.53
2:A:2322:A:C5	2:A:2323:G:C8	1.94	1.53
2:A:2813:A:H2'	2:A:2814:C:C6	1.41	1.53
9:N:27:ALA:CA	9:N:30:ALA:CB	1.82	1.53
10:O:99:PHE:CE2	14:T:24:LYS:HE2	1.01	1.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:Y:55:PHE:CZ	17:Y:89:ARG:CZ	1.88	1.53
28:7:30:ILE:CD1	28:7:33:ARG:NH1	1.72	1.53
2:A:1782:C:C2	2:A:2609:U:C6	1.97	1.53
17:Y:73:HIS:C	17:Y:91:LEU:HD11	1.23	1.52
10:O:35:ILE:HG23	10:O:63:VAL:CA	1.37	1.52
21:V:50:ASP:CB	21:V:53:LYS:HG3	1.37	1.52
6:G:145:ASP:HB3	13:S:15:GLU:C	1.25	1.52
2:A:2331:G:C4'	24:O:70:ILE:HG13	1.36	1.52
2:A:2254:C:C2'	2:A:2255:G:H5'	1.38	1.52
20:U:99:ALA:HB2	20:U:106:PHE:CE2	1.43	1.52
23:3:23:LEU:HA	23:3:28:LEU:CD1	1.37	1.52
6:G:19:GLU:CB	6:G:135:VAL:CG2	1.81	1.52
9:N:52:GLN:HA	9:N:55:GLU:CD	1.23	1.52
9:N:10:VAL:HG11	9:N:36:VAL:CG2	1.05	1.52
2:A:2066:C:C2	2:A:2445:G:N2	1.77	1.52
3:D:131:LEU:HD13	3:D:171:VAL:CG2	1.40	1.52
2:A:2580:U:C5	2:A:2581:G:C8	1.98	1.51
7:H:86:LEU:CA	7:H:148:ARG:NH2	1.68	1.51
10:O:99:PHE:CE2	14:T:24:LYS:CE	1.92	1.51
5:F:47:GLY:CA	5:F:92:PRO:HB2	1.29	1.51
10:O:25:LEU:CD2	10:O:40:VAL:HG23	1.09	1.51
16:X:24:LEU:O	16:X:26:PHE:CE1	1.63	1.51
2:A:2225:A:H4'	2:A:2226:C:C5'	1.34	1.51
2:A:2712:U:C5	2:A:712(A):A:C8	1.95	1.51
17:Y:63:ILE:CD1	17:Y:75:GLU:N	1.69	1.51
6:G:102:GLY:CA	6:G:134:LEU:HD12	1.39	1.51
2:A:2584:U:C6	2:A:2585:U:C6	1.95	1.51
3:D:213:LYS:HG3	3:D:215:LYS:CB	1.41	1.51
4:E:205:THR:HG21	4:E:259:HIS:CA	1.40	1.51
20:U:49:ASP:CA	20:U:52:ASN:ND2	1.71	1.51
8:I:95:SER:CB	8:I:98:ILE:CD1	1.85	1.51
2:A:2403:C:N4	2:A:2415:G:C6	1.79	1.51
2:A:10:G:N2	2:A:2629:A:C2	1.77	1.51
2:A:2850:A:C2	19:R:61:HIS:CE1	1.95	1.51
5:F:81:PRO:CB	5:F:87:ARG:HB3	1.37	1.51
29:8:26:LYS:CG	29:8:45:GLY:H	1.24	1.50
10:O:35:ILE:HD11	10:O:65:THR:CG2	1.41	1.50
2:A:2865:U:C4	2:A:2866:U:H5	1.29	1.50
10:O:63:VAL:CG1	10:O:102:VAL:HG13	1.33	1.50
2:A:2584:U:C6	2:A:2585:U:C5	1.97	1.50
10:O:99:PHE:CD2	14:T:24:LYS:HE2	1.47	1.50
2:A:535:C:H4'	20:U:53:LYS:CE	1.03	1.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:135:PRO:CG	3:D:138:THR:HG21	1.38	1.50
23:3:40:THR:CG2	23:3:43:ILE:CD1	1.85	1.50
21:V:94:LYS:C	21:V:95:ILE:CD1	1.76	1.50
15:W:20:VAL:CG1	15:W:47:VAL:HG21	1.40	1.50
5:F:22:PHE:CZ	5:F:115:LEU:HB3	1.45	1.49
20:U:13:ARG:HH11	20:U:13:ARG:CB	0.86	1.49
3:D:73:ILE:CG2	3:D:95:TYR:CD2	1.89	1.49
3:D:146:LYS:CD	3:D:147:PRO:HD2	1.39	1.49
2:A:2225:A:C4'	2:A:2226:C:H5'	1.41	1.49
2:A:2450:A:H5''	2:A:2497:A:N6	1.19	1.49
4:E:39:GLN:NE2	4:E:174:LEU:HD11	1.22	1.49
5:F:91:PRO:HB2	5:F:92:PRO:CD	1.32	1.49
20:U:99:ALA:HB2	20:U:106:PHE:CZ	1.46	1.49
2:A:104:U:H3	17:Y:17:HIS:CE1	1.29	1.49
2:A:2657:A:N7	2:A:2658:C:C5	1.78	1.49
4:E:74:GLU:HA	4:E:293:TYR:CD2	1.46	1.49
15:W:32:ALA:CB	15:W:35:ILE:HD12	1.39	1.49
6:G:28:GLY:CA	6:G:69:ILE:HD13	1.38	1.49
5:F:36:ARG:CA	5:F:39:GLN:HE22	1.24	1.49
2:A:2406:U:C4	11:P:55:GLN:HB3	1.48	1.49
2:A:2353:G:H1	2:A:2364:C:N4	1.03	1.49
9:N:25:GLN:HA	9:N:28:GLU:CG	1.41	1.49
2:A:2826:A:C6	2:A:2827:C:C5	2.01	1.48
4:E:44:TYR:HA	4:E:309:PRO:CD	1.39	1.48
5:F:225:PRO:C	5:F:231:ARG:HG3	1.12	1.48
12:Q:85:ILE:HG22	12:Q:122:PHE:CB	1.39	1.48
5:F:47:GLY:CA	5:F:92:PRO:CG	1.88	1.48
12:Q:49:VAL:CG2	12:Q:121:ASP:H	1.26	1.48
9:N:15:ARG:HB3	9:N:43:ARG:CG	1.03	1.48
2:A:2785:C:C1'	4:E:100:TRP:CD1	1.90	1.48
17:Y:73:HIS:CA	17:Y:91:LEU:CD1	1.91	1.48
2:A:2355:C:H4'	24:O:21:LEU:CD1	1.05	1.48
2:A:2785:C:H1'	4:E:100:TRP:CD1	0.98	1.48
2:A:1669:A:C8	10:O:4:GLN:OE1	1.66	1.48
9:N:27:ALA:CA	9:N:30:ALA:HB3	1.39	1.48
23:3:31:LEU:CD2	23:3:32:GLN:H	1.25	1.48
9:N:12:VAL:C	9:N:38:VAL:HG13	1.30	1.48
2:A:2653:U:C2	2:A:2654:A:N6	1.82	1.48
2:A:2597:G:H2'	2:A:2598:A:C8	1.47	1.48
17:Y:78:THR:HG22	17:Y:88:PRO:CA	1.44	1.47
18:Z:91:PRO:CD	18:Z:127:PRO:HB3	1.41	1.47
20:U:74:MET:CE	20:U:78:THR:HG21	1.00	1.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:W:20:VAL:HG11	15:W:47:VAL:CG2	1.41	1.47
2:A:1062:G:N2	31:K:92:PRO:HG3	1.25	1.47
26:5:12:SER:HB3	26:5:15:LYS:NZ	1.22	1.47
23:3:20:LYS:C	23:3:23:LEU:HG	1.31	1.47
29:8:16:ILE:HG13	29:8:22:VAL:CG2	1.43	1.47
2:A:2416:C:OP1	11:P:51:PHE:CE2	1.66	1.47
4:E:210:THR:HA	4:E:216:ARG:NH2	1.30	1.47
2:A:29:U:H4'	20:U:11:ARG:NH1	1.28	1.47
20:U:14:HIS:CE1	20:U:36:PHE:CZ	2.00	1.47
2:A:2286:A:H5'	2:A:2287:A:C4'	1.38	1.47
2:A:2432:A:C2	2:A:2433:A:C6	2.03	1.47
4:E:39:GLN:CD	4:E:174:LEU:HD11	1.33	1.47
4:E:79:ARG:O	4:E:187:HIS:CE1	1.67	1.47
2:A:2410:G:H2'	2:A:2411:A:C8	1.47	1.47
4:E:79:ARG:HH12	4:E:104:PHE:C	1.02	1.47
29:8:26:LYS:CD	29:8:44:LYS:CA	1.89	1.47
15:W:19:LEU:HD22	26:5:25:LEU:CG	1.40	1.47
11:P:144:ASP:C	11:P:145:LEU:HD12	1.27	1.46
12:Q:89:PRO:O	12:Q:90:PHE:CD1	1.66	1.46
30:9:25:VAL:HB	30:9:34:GLN:CB	1.03	1.46
2:A:2446:G:C2	2:A:2501:C:H5	1.31	1.46
2:A:2579:C:H6	2:A:2579:C:C5'	1.21	1.46
17:Y:71:VAL:HG22	17:Y:93:THR:CG2	1.41	1.46
8:I:103:GLN:HE21	8:I:110:LEU:N	1.11	1.46
31:K:15:ALA:CB	31:K:46:THR:HB	1.46	1.46
2:A:1364:G:H3'	25:4:3:LYS:CD	1.38	1.46
28:7:30:ILE:CA	28:7:33:ARG:HD2	1.45	1.46
3:D:175:LEU:CG	3:D:179:GLU:C	1.81	1.46
9:N:45:VAL:O	9:N:46:ILE:CG1	1.63	1.46
2:A:2259:G:N2	2:A:2282:G:C5	1.82	1.46
2:A:2287:A:C2	2:A:2289:G:H1'	1.45	1.46
3:D:74:PRO:CG	3:D:96:ALA:HB2	1.42	1.46
19:R:38:VAL:CG1	19:R:39:PRO:CD	1.84	1.46
18:Z:68:ALA:O	18:Z:69:VAL:CG2	1.64	1.46
21:V:50:ASP:HB2	21:V:53:LYS:CG	1.43	1.46
22:2:55:ARG:CA	22:2:58:THR:OG1	1.63	1.46
2:A:2740:A:C2'	2:A:2741:A:H8	1.25	1.46
4:E:205:THR:CG2	4:E:259:HIS:CA	1.94	1.46
25:4:46:GLU:O	25:4:47:GLU:CG	1.64	1.46
2:A:2470:G:C2	2:A:2471:C:C4	2.01	1.46
4:E:72:VAL:C	4:E:73:ILE:HD13	1.19	1.45
25:4:7:PRO:HD2	25:4:56:VAL:CG2	1.44	1.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2561:A:O2'	10:O:40:VAL:CG1	1.64	1.45
2:A:1151:G:H4'	20:U:81:ASN:ND2	1.25	1.45
2:A:2258:C:C5	2:A:2426:A:O4'	1.68	1.45
2:A:2638:G:N2	2:A:2778:A:H62	1.08	1.45
2:A:994:C:C2	20:U:53:LYS:CD	1.94	1.45
10:O:1:MET:C	10:O:2:ILE:HD12	1.15	1.45
15:W:82:LEU:CD2	15:W:98:LYS:O	1.64	1.45
2:A:2531:A:H2'	2:A:2532:G:C5'	1.46	1.45
2:A:1568:G:C5'	3:D:60:GLN:HE21	1.25	1.45
3:D:158:GLY:HA2	3:D:194:VAL:CG1	1.46	1.45
3:D:80:ILE:O	3:D:80:ILE:CD1	1.65	1.45
11:P:65:ASP:HB3	11:P:109:LEU:CB	1.46	1.45
2:A:2626:C:H2'	2:A:2627:G:C5'	1.45	1.44
7:H:73:ASN:HB3	7:H:137:LYS:NZ	1.24	1.44
29:8:26:LYS:HG3	29:8:45:GLY:N	1.28	1.44
2:A:2652:C:C6	2:A:2653:U:C5	2.05	1.44
2:A:2698:U:O2	2:A:2699:C:C6	1.69	1.44
31:K:37:GLU:CB	31:K:41:ARG:NH1	1.77	1.44
6:G:49:PRO:HB3	6:G:72:LYS:C	1.36	1.44
9:N:19:MET:HA	9:N:19:MET:CE	1.44	1.44
2:A:2698:U:O2	2:A:2699:C:C5	1.70	1.44
8:I:7:LYS:CD	8:I:12:LYS:NZ	1.78	1.44
17:Y:41:ARG:O	17:Y:112:LEU:CB	1.65	1.44
2:A:2570:G:H2'	2:A:2571:C:C6	1.52	1.44
5:F:52:ALA:HA	5:F:55:ARG:NE	1.27	1.44
2:A:2447:G:C4	2:A:2500:U:H5	1.35	1.44
1:B:50:G:OP2	13:S:74:PRO:CG	1.65	1.44
11:P:94:ARG:HD3	11:P:120:LEU:CD2	1.40	1.44
4:E:71:THR:CG2	4:E:299:SER:CB	1.84	1.44
6:G:19:GLU:CB	6:G:135:VAL:HG21	1.39	1.44
28:7:21:ARG:CZ	28:7:43:THR:HG23	1.47	1.44
2:A:2810:A:C8	2:A:2811:G:O4'	1.66	1.44
7:H:166:GLU:C	7:H:167:LEU:HD23	1.07	1.44
9:N:15:ARG:CD	9:N:43:ARG:HD2	1.42	1.44
9:N:95:ARG:N	9:N:98:PHE:HE1	1.15	1.44
2:A:911:A:C4	12:Q:16:ARG:HG2	1.50	1.44
21:V:91:THR:C	21:V:92:ALA:CB	1.83	1.44
18:Z:172:LEU:HD23	18:Z:173:PRO:N	1.33	1.44
18:Z:2:GLU:C	18:Z:54:ILE:HG21	1.32	1.44
27:6:28:ARG:HB3	27:6:28:ARG:NH1	1.31	1.44
5:F:3:ALA:HB3	5:F:16:VAL:C	1.37	1.44
18:Z:172:LEU:HD23	18:Z:173:PRO:CD	1.46	1.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:68:LEU:HD21	8:I:108:LEU:CD1	0.98	1.44
2:A:535:C:C4'	20:U:53:LYS:CE	1.87	1.43
3:D:73:ILE:CG2	3:D:95:TYR:HD2	1.20	1.43
2:A:2638:G:H21	2:A:2778:A:N6	0.95	1.43
19:R:44:LEU:HD13	19:R:48:VAL:CG2	1.47	1.43
24:O:65:GLY:C	24:O:66:LYS:CD	1.86	1.43
28:7:17:GLY:CA	28:7:44:VAL:CG2	1.95	1.43
11:P:94:ARG:CB	11:P:120:LEU:CD2	1.94	1.43
2:A:2579:C:C2'	2:A:2580:U:H5'	1.48	1.43
11:P:92:ASP:CB	11:P:118:LEU:HD13	1.49	1.43
12:Q:16:ARG:CB	12:Q:16:ARG:HH11	1.27	1.43
23:3:40:THR:CG2	23:3:43:ILE:HD13	0.95	1.43
2:A:2315:G:OP1	6:G:20:LYS:CD	1.64	1.43
2:A:994:C:H5	21:V:72:ARG:NH1	1.15	1.43
2:A:2447:G:C5	2:A:2500:U:C5	2.07	1.43
2:A:825:C:H4'	2:A:2428:G:N7	1.26	1.43
31:K:38:PHE:CD2	31:K:67:THR:HG22	1.51	1.43
2:A:2090:G:C6	2:A:2230:G:O6	1.70	1.43
2:A:2556:C:C2'	2:A:2557:G:H5'	0.98	1.43
2:A:495:G:C4'	15:W:57:ASN:ND2	1.82	1.43
2:A:2306:C:N4	2:A:2311:A:H2	1.12	1.43
21:V:61:VAL:CG1	21:V:95:ILE:HG22	1.49	1.43
2:A:2679:A:N3	4:E:300:VAL:CG1	1.78	1.43
20:U:76:TYR:O	20:U:80:ILE:CD1	1.65	1.43
6:G:28:GLY:HA2	6:G:69:ILE:CD1	1.46	1.43
2:A:2810:A:C2'	2:A:2811:G:H5'	0.96	1.42
3:D:208:GLY:HA2	3:D:210:LYS:NZ	1.27	1.42
21:V:11:GLN:NE2	21:V:22:VAL:CG2	1.74	1.42
16:X:5:ILE:CG2	16:X:6:LYS:H	1.17	1.42
2:A:2735:G:C6	2:A:2770:G:N2	1.87	1.42
2:A:598:G:H21	5:F:33:LYS:NZ	1.01	1.42
11:P:94:ARG:CD	11:P:120:LEU:HD23	1.46	1.42
20:U:8:ILE:CA	20:U:11:ARG:HD3	1.44	1.42
21:V:60:VAL:O	21:V:98:ILE:CB	1.67	1.42
7:H:104:LEU:HB2	7:H:151:ARG:NH1	1.25	1.42
27:6:12:MET:SD	27:6:54:LYS:HB3	1.60	1.42
5:F:196:THR:HA	5:F:236:THR:CG2	1.50	1.42
11:P:76:LEU:C	11:P:81:VAL:HG21	1.32	1.42
2:A:2352:A:C2	24:O:30:VAL:HG11	1.44	1.42
8:I:7:LYS:CG	8:I:12:LYS:HG2	1.48	1.42
2:A:104:U:N3	17:Y:17:HIS:HE1	1.15	1.42
2:A:2813:A:C2'	2:A:2814:C:H6	1.30	1.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:Q:87:LYS:O	12:Q:88:PHE:CD2	1.72	1.42
13:S:31:LYS:HB3	13:S:32:PRO:CD	1.46	1.42
3:D:149:ARG:CB	3:D:152:GLN:HE22	1.32	1.42
24:0:45:PHE:CD1	24:0:78:PHE:HA	1.52	1.42
27:6:45:LYS:O	27:6:46:LYS:CE	1.66	1.42
2:A:125:G:H5''	28:7:19:ARG:NH1	1.33	1.42
2:A:2484:G:N2	2:A:2485:G:C1'	1.83	1.42
2:A:2579:C:H2'	2:A:2580:U:C5'	1.48	1.42
2:A:2698:U:C2	2:A:2699:C:C5	2.06	1.42
3:D:77:VAL:CB	3:D:113:MET:HA	1.31	1.42
4:E:205:THR:CG2	4:E:259:HIS:N	1.83	1.42
21:V:39:PHE:O	21:V:40:VAL:CG2	1.64	1.42
21:V:74:TYR:CD1	21:V:86:HIS:O	1.70	1.42
2:A:1:G:H1	2:A:2902:C:N4	0.92	1.42
2:A:2355:C:C4'	24:0:21:LEU:CD1	1.79	1.41
6:G:21:VAL:HG13	6:G:132:VAL:CG2	1.48	1.41
10:O:63:VAL:HG13	10:O:102:VAL:CG1	0.96	1.41
27:6:46:LYS:HA	27:6:46:LYS:NZ	1.19	1.41
2:A:2093:G:H1'	2:A:2198:A:N1	1.29	1.41
2:A:2228:G:C8	2:A:2229:C:C6	2.08	1.41
4:E:211:GLN:C	4:E:216:ARG:HD2	1.37	1.41
20:U:74:MET:CE	20:U:78:THR:CG2	1.97	1.41
18:Z:6:LYS:O	18:Z:31:SER:CB	1.66	1.41
2:A:2330:G:N2	2:A:2331:G:H1'	1.34	1.41
5:F:223:LEU:HD12	5:F:224:ALA:N	1.08	1.41
21:V:50:ASP:H	21:V:53:LYS:CE	1.30	1.41
24:0:43:THR:HG21	24:0:75:GLY:CA	1.48	1.41
4:E:74:GLU:HA	4:E:293:TYR:CE2	1.53	1.41
6:G:98:PHE:HA	6:G:104:PHE:CD2	1.53	1.41
7:H:104:LEU:CB	7:H:151:ARG:NH1	1.84	1.41
2:A:1021:A:C8	9:N:49:ARG:NH1	1.89	1.41
2:A:2021:C:OP2	26:5:15:LYS:CE	1.66	1.41
2:A:2437:U:H5'	2:A:2598:A:C2	1.53	1.41
9:N:94:GLY:C	9:N:98:PHE:HE1	1.19	1.41
2:A:2515:C:N4	2:A:2569:G:H1	1.10	1.41
6:G:28:GLY:C	6:G:69:ILE:CD1	1.88	1.41
29:8:26:LYS:HD2	29:8:44:LYS:CA	0.93	1.40
2:A:2652:C:C5	2:A:2653:U:C4	2.09	1.40
3:D:77:VAL:HB	3:D:113:MET:CA	1.47	1.40
17:Y:55:PHE:CE2	17:Y:89:ARG:NH1	1.89	1.40
18:Z:116:VAL:HG23	18:Z:169:VAL:CG2	1.50	1.40
18:Z:67:LYS:HA	18:Z:67:LYS:NZ	1.29	1.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2354:G:N2	24:0:32:LYS:HE3	1.35	1.40
2:A:2652:C:C5	2:A:2653:U:C5	2.09	1.40
11:P:83:GLU:C	11:P:92:ASP:N	1.75	1.40
12:Q:46:VAL:CB	12:Q:124:ALA:O	1.65	1.40
12:Q:142:LYS:CG	12:Q:143:VAL:H	1.28	1.40
2:A:963:U:H1'	2:A:2250:G:N2	1.33	1.40
12:Q:140:TYR:HD1	12:Q:147:VAL:CG1	1.28	1.40
2:A:2573:C:H6	2:A:2573:C:C5'	1.32	1.40
2:A:2684:U:H1'	10:O:70:ARG:NH2	1.11	1.40
3:D:131:LEU:HD11	3:D:183:ILE:CG2	1.49	1.40
24:0:67:VAL:CG1	24:0:74:LYS:HG2	1.52	1.40
24:0:45:PHE:CE1	24:0:78:PHE:CD2	2.08	1.40
11:P:94:ARG:CG	11:P:120:LEU:HD23	1.50	1.40
25:4:6:HIS:ND1	25:4:56:VAL:HG23	1.34	1.40
28:7:21:ARG:NH1	28:7:43:THR:HG23	1.08	1.40
2:A:2832:U:C5'	2:A:2832:U:C6	2.04	1.40
4:E:45:LYS:HE3	4:E:303:PRO:CG	1.52	1.39
9:N:135:ILE:O	9:N:139:LEU:CD1	1.69	1.39
2:A:2364:C:N1	24:0:32:LYS:NZ	1.66	1.39
2:A:2285:C:C4'	2:A:2288:A:N6	1.82	1.39
18:Z:172:LEU:CG	18:Z:173:PRO:HD2	1.49	1.39
28:7:30:ILE:HA	28:7:33:ARG:CG	1.48	1.39
2:A:2786:U:C5'	4:E:100:TRP:O	1.67	1.39
3:D:175:LEU:HG	3:D:179:GLU:C	1.03	1.39
3:D:92:LEU:HD11	3:D:102:TYR:CD1	1.56	1.39
4:E:87:GLU:C	4:E:93:GLN:N	1.75	1.39
31:K:18:ALA:O	31:K:19:THR:CG2	1.69	1.39
31:K:42:PHE:CZ	31:K:58:ILE:HD11	1.58	1.39
2:A:6:A:H5'	9:N:4:ALA:N	1.38	1.39
2:A:1952:A:C2	10:O:22:ILE:HG23	1.57	1.39
2:A:2848:G:N2	2:A:2849:U:H3	1.14	1.39
18:Z:163:ASP:CG	18:Z:164:PRO:HD2	1.40	1.39
23:3:31:LEU:CD2	23:3:32:GLN:N	1.81	1.39
2:A:2748:A:N7	2:A:2749:A:C2	1.89	1.39
29:8:55:TRP:CZ3	29:8:59:LYS:HE3	1.54	1.39
12:Q:45:GLN:NE2	12:Q:153:PRO:HB2	1.38	1.39
20:U:59:ARG:C	20:U:62:ILE:HG12	1.42	1.39
17:Y:33:GLU:OE1	17:Y:34:GLU:CG	1.70	1.39
3:D:103:ILE:HG12	3:D:104:ILE:CD1	0.93	1.39
7:H:10:ILE:CG2	7:H:14:VAL:CG1	1.98	1.39
2:A:1545:A:H5'	2:A:545(A):A:P	1.62	1.39
2:A:2485:G:C2'	2:A:2486:G:H5'	1.50	1.39

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:47:GLY:HA2	5:F:92:PRO:CB	0.91	1.39
9:N:94:GLY:C	9:N:98:PHE:CE1	1.96	1.39
4:E:79:ARG:NH1	4:E:104:PHE:C	1.75	1.39
20:U:92:ARG:C	20:U:95:LEU:HG	1.42	1.39
31:K:93:LYS:HD3	31:K:96:ILE:CD1	1.53	1.39
27:6:46:LYS:CA	27:6:46:LYS:HZ3	1.34	1.38
2:A:2845:G:O2'	2:A:2846:G:C5'	1.69	1.38
15:W:30:GLU:CA	15:W:33:ARG:HD3	1.51	1.38
2:A:2799:A:H3'	2:A:2801:A:P	1.63	1.38
7:H:86:LEU:H	7:H:131:ILE:CG2	1.35	1.38
13:S:12:ARG:NH1	13:S:20:TYR:CE2	1.73	1.38
13:S:12:ARG:HD2	13:S:20:TYR:CZ	1.58	1.38
17:Y:18:GLU:C	17:Y:21:LYS:HZ2	1.23	1.38
2:A:2893:G:O2'	2:A:2894:G:C1'	1.69	1.38
12:Q:54:VAL:O	12:Q:56:ILE:CD1	1.71	1.38
5:F:47:GLY:C	5:F:92:PRO:CG	1.92	1.38
6:G:28:GLY:CA	6:G:69:ILE:CD1	1.96	1.38
10:O:63:VAL:CG1	10:O:102:VAL:CG1	1.91	1.38
11:P:112:GLY:C	11:P:113:GLN:NE2	1.76	1.38
18:Z:71:MET:HG2	18:Z:78:PRO:CD	0.92	1.38
28:7:21:ARG:O	28:7:24:THR:CG2	1.72	1.38
2:A:2228:G:N7	2:A:2229:C:C6	1.90	1.38
2:A:2776:A:H1'	2:A:2778:A:C8	1.58	1.38
4:E:76:PRO:HB2	4:E:77:PRO:CD	1.49	1.38
15:W:90:ARG:NH1	15:W:90:ARG:HB2	1.14	1.38
5:F:52:ALA:CB	5:F:55:ARG:NH2	1.85	1.38
5:F:81:PRO:CA	5:F:87:ARG:HG2	1.49	1.38
27:6:48:VAL:O	27:6:50:PHE:CE1	1.76	1.38
28:7:30:ILE:O	28:7:33:ARG:CB	1.71	1.38
8:I:102:LEU:HD12	8:I:103:GLN:N	1.07	1.38
31:K:117:ASN:ND2	31:K:127:ILE:HD11	1.34	1.38
29:8:16:ILE:CG1	29:8:22:VAL:HG22	1.51	1.38
3:D:208:GLY:CA	3:D:210:LYS:NZ	1.83	1.38
2:A:29:U:C4'	20:U:11:ARG:HH12	1.36	1.38
2:A:125:G:C5'	28:7:19:ARG:HH11	1.35	1.38
29:8:26:LYS:HD2	29:8:44:LYS:N	1.37	1.38
2:A:2287:A:N6	2:A:2344:U:C5	1.92	1.38
2:A:2583:G:C2'	2:A:2584:U:O2	1.69	1.38
7:H:143:LEU:HD23	7:H:144:ALA:N	1.32	1.38
11:P:62:ALA:N	11:P:107:LYS:CE	1.84	1.38
11:P:62:ALA:O	11:P:107:LYS:CD	1.69	1.38
17:Y:101:LEU:HD11	17:Y:112:LEU:CG	1.53	1.38

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:9:14:CYS:HA	30:9:27:CYS:CB	1.52	1.37
2:A:2482:G:H2'	2:A:2483:C:C5'	1.51	1.37
4:E:205:THR:HG21	4:E:259:HIS:N	1.09	1.37
2:A:1546:C:O3'	2:A:1547:C:P	0.99	1.38
29:8:60:LEU:HD11	29:8:64:ARG:CB	1.51	1.37
8:I:103:GLN:NE2	8:I:110:LEU:H	1.21	1.37
23:3:8:LEU:CD2	23:3:31:LEU:CA	2.01	1.37
3:D:128:ALA:HB2	3:D:190:THR:CA	1.54	1.37
2:A:2768:C:C2'	2:A:2769:C:H5'	1.54	1.37
2:A:1818:U:C5'	3:D:155:ARG:HG3	1.53	1.37
31:K:66:PHE:O	31:K:67:THR:CG2	1.73	1.37
2:A:2406:U:O4	11:P:55:GLN:CB	1.71	1.37
18:Z:172:LEU:CD2	18:Z:173:PRO:HD2	1.53	1.37
2:A:2580:U:C5	2:A:2581:G:N7	1.92	1.37
2:A:2544:G:H5''	2:A:2645:G:N7	1.37	1.37
24:0:46:LYS:HG3	24:0:58:THR:CG2	1.51	1.37
2:A:2251:G:OP1	12:Q:102:ARG:NE	1.57	1.37
21:V:42:GLY:N	21:V:54:TYR:CZ	1.93	1.37
15:W:19:LEU:HD13	26:5:25:LEU:CD2	1.55	1.37
18:Z:163:ASP:CG	18:Z:164:PRO:CD	1.92	1.37
2:A:2616:C:C2'	2:A:2617:C:H5'	1.56	1.36
13:S:27:LEU:CB	13:S:33:ARG:NH2	1.87	1.36
20:U:49:ASP:HA	20:U:52:ASN:ND2	1.06	1.36
2:A:2307:G:H1'	2:A:2311:A:N6	1.40	1.36
2:A:2567:G:N3	2:A:2568:C:C5	1.92	1.36
2:A:2023:G:C4'	2:A:2618:G:OP1	1.71	1.36
20:U:61:TRP:O	20:U:65:ILE:CG1	1.74	1.36
21:V:62:GLU:O	21:V:95:ILE:CG2	1.71	1.36
25:4:16:TYR:O	25:4:17:GLN:CG	1.73	1.36
2:A:2267:A:H5''	2:A:2268:A:OP1	1.20	1.36
2:A:2464:C:N4	2:A:2487:G:C6	1.94	1.36
2:A:1568:G:C4'	3:D:60:GLN:HE21	1.36	1.36
13:S:46:GLN:O	13:S:47:LEU:CD2	1.73	1.36
20:U:44:THR:CG2	21:V:77:GLY:O	1.71	1.36
2:A:2528:U:P	30:9:30:VAL:HG11	1.64	1.36
11:P:66:VAL:HB	11:P:67:ARG:CZ	1.16	1.36
17:Y:28:SER:HB3	17:Y:99:THR:CB	1.52	1.36
24:0:36:ILE:C	24:0:68:VAL:HG13	1.45	1.36
4:E:211:GLN:O	4:E:216:ARG:CD	1.72	1.36
4:E:45:LYS:HZ1	4:E:303:PRO:N	0.90	1.36
5:F:217:GLU:O	5:F:218:VAL:CG2	1.73	1.36
20:U:92:ARG:H	21:V:10:LYS:NZ	1.16	1.36

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:6:21:TYR:CZ	27:6:43:VAL:HG23	1.60	1.36
7:H:101:LYS:CE	7:H:115:GLU:HB2	1.56	1.36
7:H:120:LEU:C	7:H:121:GLU:OE1	1.63	1.36
2:A:495:G:C4'	15:W:57:ASN:HD21	1.36	1.36
2:A:2470:G:N2	2:A:2471:C:N3	1.65	1.36
2:A:2578:G:N7	4:E:237:ASN:ND2	1.74	1.36
9:N:27:ALA:HA	9:N:30:ALA:CB	0.89	1.36
21:V:42:GLY:HA3	21:V:54:TYR:CE2	1.60	1.36
2:A:2336:A:O2'	2:A:2337:G:C5'	1.74	1.35
4:E:233:ARG:O	4:E:234:ARG:CG	1.71	1.35
24:0:65:GLY:O	24:0:66:LYS:HD2	1.20	1.35
5:F:243:VAL:HA	5:F:246:ARG:CD	1.54	1.35
5:F:34:ALA:HB2	5:F:110:ALA:CB	1.55	1.35
10:O:25:LEU:CD2	10:O:40:VAL:CG2	2.04	1.35
21:V:61:VAL:HG12	21:V:95:ILE:CG2	1.52	1.35
31:K:37:GLU:CA	31:K:41:ARG:HH11	1.36	1.35
9:N:106:GLY:O	9:N:107:ASN:ND2	1.58	1.35
24:0:37:LEU:N	24:0:68:VAL:HG13	1.39	1.35
28:7:34:ARG:NH1	28:7:42:LEU:HA	1.35	1.35
2:A:2195:C:C5	2:A:2195:C:OP2	1.77	1.35
2:A:965:C:O2'	2:A:2272:U:C6	1.77	1.35
2:A:2446:G:C2	2:A:2501:C:C5	2.12	1.35
2:A:2574:G:C5	2:A:2575:C:C5	1.91	1.35
6:G:49:PRO:CB	6:G:72:LYS:O	1.72	1.35
11:P:117:GLU:OE2	11:P:136:ALA:C	1.64	1.35
2:A:2018:G:N2	20:U:34:ASN:ND2	1.69	1.35
2:A:2737:G:H1	2:A:2767:C:N4	1.22	1.35
3:D:143:ILE:O	3:D:152:GLN:N	1.57	1.35
3:D:156:ALA:O	3:D:196:ASN:ND2	1.58	1.35
4:E:70:VAL:HG11	4:E:296:VAL:N	1.41	1.35
5:F:59:GLU:O	5:F:61:PHE:CD2	1.79	1.35
2:A:2785:C:H2'	2:A:2786:U:C6	1.60	1.35
2:A:2820:A:H5''	2:A:2820:A:N3	1.38	1.35
2:A:2745:C:H1'	7:H:142:GLU:CG	1.55	1.35
5:F:215:ALA:HB1	5:F:238:SER:O	1.27	1.35
7:H:148:ARG:NH1	7:H:163:TYR:HA	1.42	1.35
9:N:13:ASP:N	9:N:38:VAL:CG1	1.87	1.35
2:A:1140:C:C5	9:N:49:ARG:HG3	1.61	1.35
19:R:20:LEU:CD1	19:R:21:TYR:CD2	2.10	1.35
2:A:2306:C:N4	2:A:2311:A:C2	1.88	1.35
24:0:46:LYS:CG	24:0:58:THR:HG23	1.55	1.35
2:A:1826:G:P	3:D:227:VAL:CG2	2.14	1.35

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:T:28:THR:O	14:T:29:THR:HG23	1.17	1.35
21:V:40:VAL:HG12	21:V:51:ALA:O	1.24	1.35
2:A:2564:A:H2'	2:A:2565:A:C8	1.60	1.35
2:A:974:G:N7	21:V:80:TYR:CE1	1.94	1.35
5:F:238:SER:O	5:F:241:ALA:CB	1.72	1.35
5:F:245:GLU:N	5:F:245:GLU:OE2	1.60	1.35
9:N:65:ASN:CB	9:N:69:TYR:HD1	1.40	1.35
2:A:1996:C:OP2	10:O:31:ARG:NH2	1.57	1.35
2:A:2636:U:C4'	4:E:84:ARG:HH22	1.40	1.35
7:H:15:THR:CG2	7:H:26:LYS:HB2	1.54	1.35
4:E:94:ARG:HB3	4:E:95:PRO:CD	1.54	1.35
20:U:98:ILE:O	20:U:100:ALA:N	1.56	1.35
20:U:88:ILE:HG21	21:V:55:THR:OG1	1.26	1.35
22:2:52:ALA:O	22:2:56:ILE:CG1	1.71	1.35
3:D:183:ILE:CG2	3:D:184:LEU:H	1.34	1.34
12:Q:67:ALA:CB	12:Q:70:ARG:NH1	1.88	1.34
17:Y:73:HIS:HA	17:Y:91:LEU:CD1	1.52	1.34
29:8:8:LYS:O	29:8:10:ALA:N	1.59	1.34
29:8:16:ILE:CG2	29:8:21:LYS:O	1.75	1.34
2:A:2286:A:H5'	2:A:2287:A:C5'	1.57	1.34
7:H:97:LYS:O	7:H:98:GLN:HG3	1.21	1.34
23:3:20:LYS:O	23:3:23:LEU:CG	1.75	1.34
2:A:825:C:H4'	2:A:2428:G:C5	1.63	1.34
2:A:2717:G:N3	2:A:2718:G:C8	1.95	1.34
5:F:62:GLY:HA3	5:F:65:ARG:NH2	1.38	1.34
17:Y:43:ASN:ND2	17:Y:101:LEU:CD2	1.90	1.34
27:6:32:GLN:HB3	27:6:35:LEU:CD1	1.55	1.34
30:9:7:VAL:HG12	30:9:34:GLN:CD	1.47	1.34
2:A:2826:A:N6	2:A:2827:C:C5	1.91	1.34
3:D:118:GLY:O	3:D:129:LEU:HD11	1.20	1.34
12:Q:67:ALA:O	12:Q:71:PHE:CD1	1.78	1.34
15:W:76:VAL:HG23	15:W:102:HIS:O	1.19	1.34
2:A:1080:C:O2'	31:K:126:LYS:HB2	1.18	1.34
7:H:104:LEU:HB2	7:H:151:ARG:CZ	1.56	1.34
2:A:2485:G:C5'	12:Q:144:THR:HG22	1.58	1.34
13:S:27:LEU:HB2	13:S:33:ARG:NH2	1.05	1.34
2:A:1364:G:H2'	25:4:3:LYS:NZ	1.42	1.34
2:A:2583:G:H2'	2:A:2584:U:C2	1.61	1.34
3:D:175:LEU:HD21	3:D:180:VAL:CA	1.55	1.34
4:E:44:TYR:CE1	4:E:308:VAL:HA	1.62	1.34
2:A:1:G:N1	2:A:2902:C:N4	1.71	1.34
2:A:2051:A:O2'	4:E:238:LEU:CG	1.74	1.34

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:21:VAL:CG1	6:G:132:VAL:HG23	1.58	1.34
2:A:2718:G:OP1	14:T:38:ASN:ND2	1.57	1.34
18:Z:51:LEU:HD23	18:Z:52:PHE:N	1.38	1.34
2:A:2020:A:N7	26:5:9:LYS:CE	1.87	1.34
9:N:134:GLU:O	9:N:138:THR:CG2	1.74	1.34
9:N:83:ILE:CG1	9:N:84:ARG:H	1.17	1.34
29:8:58:MET:SD	29:8:61:MET:HG3	1.67	1.34
2:A:2785:C:C1'	4:E:100:TRP:HD1	1.30	1.34
17:Y:30:ASP:OD2	17:Y:31:LEU:HD21	1.19	1.34
2:A:2592:G:N7	2:A:2593:U:C5	1.95	1.34
2:A:2688:U:O2	2:A:2719:G:C2	1.80	1.34
2:A:1665:A:O3'	10:O:66:LYS:CE	1.74	1.34
28:7:30:ILE:HD13	28:7:33:ARG:CD	1.58	1.33
2:A:2352:A:C2	24:0:30:VAL:HG12	1.48	1.33
2:A:973:A:N1	21:V:81:ARG:CD	1.76	1.33
5:F:5:ILE:HB	5:F:14:GLY:O	1.23	1.33
7:H:166:GLU:C	7:H:167:LEU:CD2	1.95	1.33
11:P:52:LYS:HD3	11:P:53:ARG:NH1	1.42	1.33
7:H:166:GLU:O	7:H:167:LEU:CD2	1.76	1.33
2:A:2043:C:C5	2:A:2777:G:H1'	1.61	1.33
2:A:2353:G:N2	2:A:2364:C:N3	1.71	1.33
3:D:128:ALA:CB	3:D:190:THR:CB	2.03	1.33
20:U:92:ARG:O	20:U:95:LEU:CG	1.76	1.33
17:Y:73:HIS:HA	17:Y:91:LEU:CG	1.57	1.33
2:A:2768:C:C4	2:A:2769:C:H5	1.45	1.33
5:F:36:ARG:HA	5:F:39:GLN:NE2	1.40	1.33
22:2:7:GLU:CD	22:2:8:ILE:HG13	1.47	1.33
2:A:1059:G:O2'	31:K:112:LYS:NZ	1.58	1.33
8:I:48:GLU:O	8:I:52:GLN:HG3	1.25	1.33
5:F:81:PRO:HB3	5:F:87:ARG:CB	1.56	1.33
10:O:35:ILE:HG23	10:O:63:VAL:N	1.37	1.33
10:O:77:ILE:HD11	10:O:79:PHE:CE2	1.62	1.33
11:P:114:VAL:O	11:P:115:ARG:CG	1.75	1.33
13:S:35:VAL:HA	13:S:103:ASP:CB	1.42	1.33
2:A:2320:A:N6	13:S:9:PRO:HG3	1.40	1.33
17:Y:45:GLY:CA	17:Y:62:VAL:CG1	1.98	1.33
18:Z:91:PRO:CG	18:Z:127:PRO:HB3	1.58	1.33
2:A:1665:A:C4'	10:O:66:LYS:NZ	1.87	1.33
2:A:2689:U:H5'	2:A:2690:C:C5'	1.57	1.33
2:A:2785:C:H2'	2:A:2786:U:C5	1.64	1.33
5:F:48:SER:N	5:F:92:PRO:CG	1.92	1.33
28:7:34:ARG:CD	28:7:42:LEU:CD2	2.06	1.33

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2556:C:C2'	2:A:2557:G:C5'	1.94	1.33
25:4:21:VAL:CG1	25:4:22:MET:H	1.38	1.33
4:E:107:GLU:HB3	4:E:110:ARG:NE	1.35	1.33
2:A:2552:U:H5''	2:A:2553:G:OP2	1.29	1.32
3:D:135:PRO:HG2	3:D:138:THR:CG2	1.55	1.32
11:P:114:VAL:HG23	11:P:132:LYS:CB	1.57	1.32
18:Z:126:GLY:O	18:Z:129:ARG:HB2	1.18	1.32
5:F:59:GLU:HB2	5:F:61:PHE:CE2	1.65	1.32
21:V:5:ILE:O	21:V:6:GLN:HG2	1.19	1.32
2:A:1338:G:O2'	16:X:13:LYS:NZ	1.61	1.32
28:7:21:ARG:HB3	28:7:31:LEU:CD1	1.59	1.32
2:A:2450:A:OP1	2:A:2497:A:N7	1.62	1.32
17:Y:101:LEU:O	17:Y:103:LEU:HG	1.24	1.32
18:Z:37:LYS:O	18:Z:41:ARG:NH1	1.59	1.32
24:0:61:ALA:O	24:0:62:LEU:CD1	1.76	1.32
2:A:2225:A:C5'	2:A:2226:C:H5'	1.59	1.32
2:A:2320:A:C2	2:A:2333:A:C2	2.17	1.32
4:E:180:ILE:CA	4:E:183:ASP:OD2	1.74	1.32
5:F:52:ALA:HB2	5:F:55:ARG:NH2	1.00	1.32
9:N:95:ARG:N	9:N:98:PHE:CE1	1.96	1.32
11:P:67:ARG:NH1	11:P:111:ALA:O	1.62	1.32
20:U:27:SER:O	20:U:29:SER:N	1.57	1.32
6:G:28:GLY:C	6:G:69:ILE:HD13	1.42	1.32
2:A:1614:A:N6	15:W:88:ARG:CB	1.92	1.32
10:O:7:ARG:CD	10:O:44:LYS:HE3	1.58	1.32
2:A:2018:G:H21	20:U:34:ASN:ND2	0.83	1.32
2:A:2258:C:N4	2:A:2426:A:C1'	1.91	1.32
2:A:2698:U:C2	2:A:2699:C:H5	1.42	1.32
2:A:2810:A:H2'	2:A:2811:G:C5'	0.85	1.32
2:A:531:C:O2	20:U:28:ARG:NH2	1.58	1.32
2:A:2679:A:C2	4:E:300:VAL:CG2	2.12	1.32
2:A:535:C:O2'	20:U:53:LYS:CG	1.75	1.32
17:Y:43:ASN:HD21	17:Y:101:LEU:CD2	1.40	1.32
9:N:106:GLY:C	9:N:107:ASN:ND2	1.82	1.32
2:A:2355:C:O3'	24:0:21:LEU:HD11	1.16	1.32
2:A:684:G:OP1	28:7:16:HIS:NE2	1.59	1.32
2:A:1665:A:H4'	10:O:66:LYS:NZ	1.39	1.32
19:R:78:LYS:O	19:R:82:GLU:HB2	1.18	1.32
20:U:7:GLY:C	20:U:8:ILE:HD12	1.50	1.32
2:A:2364:C:C1'	24:0:32:LYS:NZ	1.92	1.32
23:3:16:PRO:HB2	23:3:19:GLN:CD	1.45	1.32
2:A:2617:C:H2'	2:A:2618:G:C5'	1.58	1.32

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:Q:69:ASN:HD22	12:Q:70:ARG:N	1.24	1.32
30:9:7:VAL:O	30:9:8:LYS:CE	1.76	1.32
2:A:126:A:C6	28:7:18:PHE:CE2	2.17	1.32
2:A:2850:A:H2	19:R:61:HIS:CE1	1.33	1.32
2:A:997:G:OP1	20:U:93:LYS:HE2	1.28	1.32
2:A:2315:G:H5'	6:G:133:ASN:ND2	1.44	1.32
12:Q:16:ARG:NH1	12:Q:16:ARG:HB3	0.99	1.32
2:A:911:A:C6	12:Q:16:ARG:HG2	1.65	1.32
12:Q:85:ILE:CG2	12:Q:122:PHE:CG	2.10	1.32
17:Y:101:LEU:CD2	17:Y:103:LEU:CG	2.07	1.32
2:A:2056:G:N2	26:5:4:HIS:O	1.63	1.32
2:A:2581:G:N1	2:A:2610:C:H6	0.82	1.32
2:A:2678:C:C2	2:A:2679:A:C8	2.17	1.32
2:A:2749:A:O4'	7:H:62:ALA:CB	1.76	1.32
2:A:2865:U:C4	2:A:2866:U:C5	2.18	1.32
2:A:2712:U:C2'	2:A:712(A):A:C5'	2.08	1.32
12:Q:140:TYR:CD1	12:Q:147:VAL:CG1	2.02	1.32
12:Q:91:HIS:O	12:Q:111:THR:HG23	1.16	1.32
21:V:30:GLY:O	21:V:33:VAL:HG23	1.22	1.32
21:V:62:GLU:C	21:V:95:ILE:HG23	1.48	1.32
8:I:77:VAL:CG2	8:I:141:LEU:HD11	1.60	1.32
16:X:4:VAL:HG22	22:2:24:LYS:NZ	1.40	1.32
23:3:19:GLN:O	23:3:23:LEU:HD21	1.27	1.31
2:A:2314:C:C5'	6:G:22:VAL:HG11	1.60	1.31
2:A:245:G:H5'	11:P:55:GLN:O	1.29	1.31
5:F:223:LEU:CD1	5:F:224:ALA:N	1.93	1.31
10:O:66:LYS:NZ	10:O:67:ARG:HD3	1.42	1.31
20:U:107:LYS:O	20:U:110:VAL:HB	1.29	1.31
2:A:2842:G:C2'	2:A:2843:G:H5'	1.58	1.31
3:D:65:ASP:OD1	3:D:66:PHE:N	1.59	1.31
5:F:168:ARG:NH1	5:F:209:GLY:O	1.62	1.31
8:I:95:SER:CA	8:I:98:ILE:HG13	1.59	1.31
2:A:1364:G:C2'	25:4:3:LYS:HZ2	1.42	1.31
2:A:2709:G:C2'	2:A:2710:C:H5'	1.57	1.31
11:P:76:LEU:C	11:P:81:VAL:CG2	1.96	1.31
15:W:85:VAL:O	15:W:86:LEU:HD23	1.20	1.31
29:8:5:LYS:O	29:8:7:HIS:N	1.61	1.31
2:A:2574:G:H5''	2:A:2575:C:OP2	1.19	1.31
3:D:118:GLY:O	3:D:129:LEU:CD1	1.78	1.31
2:A:1799:G:N2	3:D:153:LEU:HD21	1.43	1.31
5:F:47:GLY:CA	5:F:92:PRO:HG2	1.54	1.31
5:F:84:VAL:C	5:F:85:LYS:HD2	1.51	1.31

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:5:44:HIS:CA	26:5:52:TYR:OH	1.78	1.31
2:A:2647:U:O2'	2:A:2648:C:H5'	1.20	1.31
4:E:180:ILE:HG22	4:E:186:GLU:O	1.14	1.31
7:H:137:LYS:HD2	7:H:138:GLN:N	1.42	1.31
2:A:2397:G:C6	2:A:2420:C:O2	1.81	1.31
2:A:2679:A:H2	4:E:300:VAL:CG2	1.39	1.31
2:A:2717:G:C2	2:A:2718:G:N7	1.98	1.31
7:H:73:ASN:CB	7:H:137:LYS:HZ1	1.41	1.31
31:K:79:LEU:CD2	31:K:137:ILE:HD13	1.59	1.31
2:A:1952:A:H2	10:O:22:ILE:CG2	1.43	1.31
2:A:2470:G:N2	2:A:2471:C:C4	1.90	1.31
5:F:48:SER:N	5:F:92:PRO:HG2	1.46	1.31
29:8:6:THR:O	29:8:8:LYS:N	1.63	1.31
2:A:1568:G:O5'	3:D:60:GLN:CG	1.75	1.31
21:V:65:ARG:O	21:V:93:ILE:HG23	1.20	1.31
18:Z:34:LEU:HD13	18:Z:39:PHE:CZ	1.65	1.31
31:K:37:GLU:CA	31:K:41:ARG:NH1	1.90	1.31
6:G:81:GLU:O	6:G:85:GLN:HG2	1.20	1.31
18:Z:95:SER:OG	18:Z:122:ILE:HG12	1.13	1.31
28:7:30:ILE:HD11	28:7:33:ARG:NH1	0.99	1.31
2:A:2584:U:C5	2:A:2585:U:C6	2.17	1.31
2:A:856:C:H5'	24:0:25:LYS:NZ	1.42	1.31
5:F:163:HIS:O	5:F:166:ILE:CB	1.78	1.31
5:F:168:ARG:O	5:F:168:ARG:HD2	1.20	1.31
2:A:85:G:P	17:Y:65:VAL:HG11	1.71	1.31
2:A:856:C:C5'	24:0:25:LYS:HZ1	1.40	1.31
2:A:2485:G:O2'	2:A:2486:G:C5'	1.77	1.31
2:A:2768:C:H2'	2:A:2769:C:C5'	1.61	1.31
3:D:71:ASP:OD1	3:D:118:GLY:HA2	1.19	1.31
21:V:4:ILE:HD11	21:V:13:ARG:CD	1.61	1.31
15:W:36:LEU:HD11	15:W:47:VAL:CG1	1.59	1.31
2:A:856:C:O2'	24:0:24:LYS:CB	1.79	1.30
2:A:2488:A:H2'	2:A:2489:G:C5'	1.59	1.30
2:A:2555:U:C2'	2:A:2556:C:H5'	1.60	1.30
10:O:110:ASP:O	10:O:111:PHE:CG	1.83	1.30
14:T:4:ARG:O	14:T:5:GLU:CG	1.78	1.30
2:A:2212:A:C2'	2:A:2213:U:C5	2.12	1.30
4:E:45:LYS:NZ	4:E:303:PRO:O	1.62	1.30
20:U:94:VAL:C	20:U:98:ILE:CD1	1.99	1.30
21:V:42:GLY:CA	21:V:54:TYR:CZ	2.12	1.30
2:A:1082:U:O4'	31:K:118:ALA:HB2	1.15	1.30
2:A:2051:A:C8	2:A:2614:A:N6	1.95	1.30

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2262:U:O2'	2:A:2263:C:H5''	1.24	1.30
2:A:2313:C:OP1	6:G:51:ARG:CD	1.80	1.30
2:A:2657:A:C8	2:A:2658:C:C5	2.17	1.30
7:H:42:ILE:O	7:H:52:THR:HG21	1.21	1.30
11:P:66:VAL:CB	11:P:67:ARG:CZ	2.01	1.30
13:S:34:LEU:CD2	13:S:102:LEU:HA	1.59	1.30
2:A:2468:G:O6	2:A:2481:G:C6	1.84	1.30
3:D:149:ARG:HB2	3:D:152:GLN:NE2	0.99	1.30
20:U:65:ILE:HG22	20:U:76:TYR:CE2	1.65	1.30
2:A:593:G:C5'	29:8:62:LEU:HD21	1.61	1.30
2:A:2249:U:H3	2:A:2253:G:P	1.53	1.30
2:A:2517:C:O2'	2:A:2518:A:H5''	1.28	1.30
2:A:1818:U:O5'	3:D:155:ARG:CG	1.75	1.30
7:H:121:GLU:OE2	7:H:134:GLY:HA2	1.29	1.30
11:P:70:ASP:O	11:P:74:THR:HG23	1.24	1.30
19:R:113:LEU:HD13	19:R:114:VAL:N	1.45	1.30
8:I:89:LEU:CD1	8:I:93:ILE:HG22	1.59	1.30
6:G:59:GLY:O	6:G:60:GLU:HG3	1.30	1.30
2:A:2314:C:H5''	6:G:22:VAL:CG1	1.60	1.30
2:A:2826:A:C5	2:A:2827:C:C5	2.20	1.30
4:E:171:SER:O	4:E:175:ASP:HB2	1.13	1.30
10:O:1:MET:N	10:O:32:TYR:HD2	1.26	1.30
10:O:77:ILE:CD1	10:O:78:ARG:N	1.93	1.30
2:A:2316:C:C4'	6:G:151:ILE:CD1	1.98	1.30
2:A:2718:G:H2'	2:A:2719:G:C8	1.66	1.30
2:A:2741:A:O2'	2:A:2742:C:C5'	1.78	1.30
9:N:38:VAL:O	9:N:39:VAL:HG13	1.21	1.30
10:O:66:LYS:HZ2	10:O:67:ARG:CD	1.44	1.30
12:Q:49:VAL:HG22	12:Q:121:ASP:N	1.44	1.30
16:X:24:LEU:C	16:X:25:GLN:OE1	1.70	1.30
2:A:2226:C:C2	2:A:2227:A:C1'	2.13	1.30
5:F:164:ALA:CA	5:F:232:LEU:HD12	1.62	1.30
10:O:77:ILE:HD13	10:O:78:ARG:N	0.98	1.30
2:A:25:U:H4'	15:W:79:GLY:CA	1.60	1.30
2:A:2195:C:H5	2:A:2195:C:OP2	1.07	1.30
2:A:1782:C:O2	2:A:2609:U:C6	1.81	1.30
2:A:1995:U:OP1	4:E:220:GLN:NE2	1.63	1.30
26:5:33:CYS:SG	26:5:36:CYS:CB	2.19	1.29
2:A:2397:G:N1	2:A:2420:C:O2	1.62	1.29
2:A:2712:U:C5	2:A:712(A):A:N7	2.00	1.29
5:F:225:PRO:C	5:F:231:ARG:CG	1.99	1.29
21:V:34:GLU:O	21:V:35:LEU:HD23	1.23	1.29

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2333:A:N9	2:A:2335:A:C2	2.01	1.29
31:K:9:ILE:CD1	31:K:31:HIS:HB3	1.62	1.29
2:A:1526:G:N2	2:A:545(A):A:N7	1.80	1.29
2:A:440:G:P	17:Y:6:LYS:NZ	2.03	1.29
17:Y:28:SER:CB	17:Y:99:THR:OG1	1.80	1.29
18:Z:69:VAL:CG1	18:Z:81:VAL:HG22	1.62	1.29
2:A:2792:G:N2	2:A:2804:C:C2	1.99	1.29
2:A:592:G:N3	29:8:3:LYS:CE	1.94	1.29
3:D:175:LEU:CD1	3:D:180:VAL:N	1.93	1.29
2:A:1568:G:H5'	3:D:60:GLN:NE2	1.43	1.29
6:G:145:ASP:HB3	13:S:15:GLU:O	1.26	1.29
2:A:2:G:N2	2:A:2902:C:O2	1.61	1.29
3:D:139:LEU:HD12	3:D:139:LEU:O	1.27	1.29
2:A:2258:C:C5	2:A:2426:A:C4'	2.14	1.29
3:D:143:ILE:O	3:D:152:GLN:HB2	1.29	1.29
2:A:2210:G:O6	3:D:148:GLY:HA2	1.15	1.29
4:E:180:ILE:HG21	4:E:187:HIS:CA	1.62	1.29
4:E:222:ARG:HD3	4:E:232:ARG:C	1.53	1.29
4:E:45:LYS:NZ	4:E:303:PRO:N	1.79	1.29
5:F:205:ARG:HG2	5:F:212:VAL:CG2	1.62	1.29
11:P:61:ALA:C	11:P:62:ALA:N	1.85	1.29
12:Q:58:HIS:HB3	12:Q:111:THR:O	1.27	1.29
19:R:20:LEU:HD13	19:R:21:TYR:CA	1.60	1.29
18:Z:172:LEU:CD2	18:Z:173:PRO:CD	2.05	1.29
2:A:1205:U:O2	5:F:232:LEU:HD11	1.26	1.29
2:A:2225:A:C4'	2:A:2226:C:C5'	2.02	1.29
2:A:2385:C:N3	2:A:2386:C:C5	2.01	1.29
3:D:75:GLY:CA	3:D:115:ILE:O	1.79	1.29
4:E:39:GLN:OE1	4:E:174:LEU:HD21	1.19	1.29
2:A:2799:A:O2'	2:A:2802:G:C2	1.86	1.29
28:7:34:ARG:CD	28:7:42:LEU:HD23	1.61	1.29
2:A:2206:C:O2'	2:A:2207:C:H5'	1.11	1.29
4:E:82:ALA:O	4:E:83:LEU:HG	1.14	1.29
5:F:91:PRO:CB	5:F:92:PRO:HD3	1.62	1.29
18:Z:147:ILE:O	18:Z:168:VAL:HB	1.30	1.29
6:G:27:ILE:O	6:G:69:ILE:CG2	1.81	1.29
31:K:101:THR:O	31:K:105:ILE:HG13	1.29	1.29
29:8:4:MET:HA	29:8:5:LYS:NZ	1.17	1.29
2:A:2285:C:O4'	2:A:2288:A:N6	1.58	1.29
2:A:2691:C:O2'	2:A:2692:C:H5'	1.22	1.29
2:A:558:G:OP1	9:N:91:LYS:C	1.67	1.29
2:A:1791:A:OP1	3:D:210:LYS:CD	1.79	1.29

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:N:12:VAL:O	9:N:38:VAL:HG13	1.16	1.29
15:W:85:VAL:CA	15:W:95:ILE:HG12	1.62	1.29
24:0:46:LYS:HE3	24:0:58:THR:OG1	1.21	1.29
27:6:48:VAL:O	27:6:50:PHE:CD1	1.85	1.29
2:A:2103:C:O2	2:A:2187:G:N1	1.63	1.29
2:A:2259:G:C2	2:A:2282:G:C6	2.19	1.29
12:Q:133:GLU:C	12:Q:133:GLU:OE1	1.68	1.29
17:Y:101:LEU:HD21	17:Y:112:LEU:CD2	1.62	1.29
2:A:144:C:H5'	16:X:36:GLU:CD	1.52	1.29
2:A:1614:A:N6	15:W:88:ARG:HB2	0.96	1.29
2:A:2470:G:N3	2:A:2471:C:C6	2.01	1.28
5:F:147:LEU:CD1	5:F:156:LEU:CD1	2.12	1.28
19:R:72:ASP:O	19:R:76:VAL:CG2	1.81	1.28
29:8:16:ILE:HG23	29:8:21:LYS:O	1.14	1.28
2:A:2498:C:O2'	2:A:2499:C:H5''	1.34	1.28
2:A:2571:C:O2'	4:E:243:PRO:HD3	1.29	1.28
2:A:2636:U:H4'	4:E:84:ARG:NH2	1.47	1.28
2:A:2043:C:N4	2:A:2777:G:C4	2.00	1.28
5:F:201:SER:O	5:F:204:ALA:HB3	1.29	1.28
9:N:95:ARG:O	9:N:98:PHE:CD1	1.86	1.28
19:R:44:LEU:O	19:R:48:VAL:HG23	1.31	1.28
13:S:53:ASN:O	13:S:55:ASP:N	1.66	1.28
23:3:1:MET:CE	23:3:3:ARG:HD2	1.61	1.28
2:A:598:G:N2	5:F:33:LYS:NZ	1.80	1.28
10:O:99:PHE:O	10:O:119:PRO:HG3	1.32	1.28
12:Q:17:ARG:O	12:Q:18:GLU:CG	1.79	1.28
2:A:2378:A:N3	13:S:26:LEU:HD23	1.46	1.28
2:A:989:G:OP1	23:3:31:LEU:HD12	1.16	1.28
23:3:51:ALA:O	23:3:53:LEU:N	1.66	1.28
2:A:1818:U:C5'	3:D:155:ARG:CG	2.11	1.28
5:F:147:LEU:HD12	5:F:156:LEU:CD1	1.62	1.28
9:N:45:VAL:O	9:N:46:ILE:HG12	1.16	1.28
21:V:94:LYS:O	21:V:95:ILE:HD12	1.21	1.28
2:A:545(A):A:OP2	2:A:1546:C:N4	1.66	1.28
24:0:24:LYS:HG2	24:0:56:ASP:OD2	1.21	1.28
2:A:2644:G:H8	2:A:2644:G:O5'	1.07	1.28
2:A:2653:U:O2	2:A:2654:A:N6	1.61	1.28
2:A:850:C:H4'	23:3:18:ASP:CG	1.51	1.28
3:D:146:LYS:NZ	3:D:184:LEU:HD11	1.46	1.28
5:F:112:ARG:O	5:F:114:ALA:N	1.66	1.28
5:F:52:ALA:CB	5:F:55:ARG:CZ	2.08	1.28
12:Q:58:HIS:O	12:Q:61:LEU:HG	1.30	1.28

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:V:42:GLY:HA3	21:V:54:TYR:CZ	1.66	1.28
6:G:105:SER:OG	6:G:131:THR:HG22	1.33	1.28
2:A:2218:G:O2'	3:D:146:LYS:HE3	1.32	1.28
2:A:2642:G:O2'	2:A:2643:G:H5'	1.18	1.28
7:H:40:MET:HG2	7:H:64:HIS:CE1	1.69	1.28
12:Q:85:ILE:CG2	12:Q:122:PHE:HB3	1.63	1.28
25:4:30:GLU:C	25:4:31:ILE:HD13	1.52	1.28
25:4:68:ARG:CD	25:4:72:LYS:HG2	1.63	1.28
2:A:2261:C:OP2	24:0:14:ARG:CG	1.82	1.28
2:A:2494:G:C2	2:A:2495:G:C8	2.22	1.28
8:I:29:PHE:O	8:I:33:GLN:NE2	1.67	1.28
12:Q:34:GLY:HA2	12:Q:74:ASN:O	1.28	1.28
18:Z:130:ILE:O	18:Z:130:ILE:HD12	1.29	1.28
2:A:2212:A:O2'	2:A:2213:U:H5	1.06	1.28
5:F:111:VAL:O	5:F:114:ALA:HB3	1.21	1.28
13:S:99:GLU:OE1	13:S:128:ASP:CB	1.80	1.28
2:A:2491:U:O2'	2:A:2492:U:C5'	1.81	1.28
2:A:2580:U:C6	2:A:2581:G:H8	1.27	1.28
3:D:175:LEU:HD11	3:D:180:VAL:N	1.49	1.28
5:F:4:THR:O	5:F:139:VAL:HG21	1.32	1.28
6:G:145:ASP:CB	13:S:15:GLU:C	2.00	1.28
22:2:2:VAL:O	22:2:4:HIS:ND1	1.63	1.28
16:X:24:LEU:C	16:X:26:PHE:CE1	2.05	1.28
23:3:31:LEU:HD23	23:3:32:GLN:N	0.96	1.27
2:A:2457:U:C2'	2:A:2458:G:H5'	1.62	1.27
5:F:84:VAL:O	5:F:86:GLY:N	1.63	1.27
17:Y:49:GLU:CD	17:Y:97:ARG:NH1	1.86	1.27
1:B:75:G:O2'	18:Z:32:PHE:HD2	1.05	1.27
2:A:2051:A:N7	2:A:2614:A:N6	1.78	1.27
2:A:85:G:O5'	17:Y:65:VAL:HG11	1.24	1.27
3:D:103:ILE:CG1	3:D:104:ILE:HD12	1.47	1.27
3:D:175:LEU:CG	3:D:179:GLU:O	1.76	1.27
6:G:22:VAL:O	6:G:23:VAL:HG13	1.25	1.27
2:A:1665:A:C3'	10:O:66:LYS:HZ3	1.45	1.27
12:Q:125:TRP:O	12:Q:126:VAL:HG23	1.22	1.27
2:A:126:A:N7	28:7:18:PHE:CZ	2.03	1.27
29:8:26:LYS:CD	29:8:45:GLY:H	1.47	1.27
2:A:2297:C:H2'	2:A:2298:A:C8	1.69	1.27
4:E:44:TYR:CD1	4:E:308:VAL:HA	1.69	1.27
11:P:94:ARG:CD	11:P:120:LEU:CD2	2.04	1.27
2:A:2470:G:C2	2:A:2471:C:C6	2.22	1.27
2:A:2821:A:C2	2:A:2822:G:C5	2.21	1.27

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:V:91:THR:O	21:V:92:ALA:CB	1.79	1.27
2:A:2312:U:H5'	6:G:53:LYS:CA	1.62	1.27
2:A:1248:G:OP1	20:U:2:PRO:CB	1.82	1.27
7:H:111:PRO:O	7:H:112:VAL:CG2	1.82	1.27
2:A:2615:U:O2'	2:A:2616:C:H5'	1.34	1.27
2:A:2739:U:H2'	2:A:2740:A:C5'	1.63	1.27
2:A:1021:A:H8	9:N:49:ARG:NH1	1.20	1.27
19:R:72:ASP:O	19:R:76:VAL:HG23	1.10	1.27
20:U:111:ASP:O	20:U:113:SER:N	1.65	1.27
2:A:1826:G:OP1	3:D:227:VAL:CG2	1.81	1.27
2:A:2862:G:O2'	2:A:2863:C:H6	1.08	1.27
12:Q:143:VAL:O	12:Q:144:THR:HG23	1.30	1.27
24:O:65:GLY:C	24:O:66:LYS:HD2	0.89	1.27
23:3:32:GLN:NE2	23:3:32:GLN:O	1.62	1.27
27:6:38:LYS:O	27:6:50:PHE:HB2	1.10	1.27
2:A:1568:G:C5'	3:D:60:GLN:NE2	1.93	1.27
2:A:2333:A:C8	2:A:2335:A:C2	2.22	1.27
5:F:91:PRO:CB	5:F:92:PRO:CD	2.02	1.27
2:A:2286:A:C5'	2:A:2287:A:H5'	1.64	1.27
2:A:2740:A:C2'	2:A:2741:A:C8	2.06	1.27
3:D:110:LYS:NZ	3:D:110:LYS:HA	1.48	1.27
2:A:2771:C:C5'	4:E:316:ARG:HD2	1.65	1.27
5:F:91:PRO:CG	5:F:92:PRO:HD2	1.65	1.27
21:V:91:THR:C	21:V:92:ALA:N	1.84	1.27
10:O:1:MET:C	10:O:2:ILE:CD1	2.02	1.27
14:T:4:ARG:O	14:T:5:GLU:HG3	1.17	1.27
2:A:2453:A:O2'	2:A:2454:G:H5'	1.29	1.27
2:A:2587:A:O2'	2:A:2588:G:H5'	1.30	1.27
2:A:1799:G:N2	3:D:153:LEU:CD2	1.97	1.27
3:D:71:ASP:OD1	3:D:118:GLY:CA	1.83	1.27
4:E:229:GLN:O	4:E:231:TRP:N	1.68	1.27
20:U:4:ALA:O	20:U:6:THR:N	1.65	1.27
2:A:2657:A:C8	2:A:2658:C:H5	1.50	1.26
2:A:2574:G:O2'	4:E:240:PRO:HB3	1.09	1.26
5:F:151:GLN:OE1	5:F:154:VAL:HG21	1.23	1.26
5:F:32:GLY:O	5:F:35:VAL:HG23	1.19	1.26
7:H:123:GLU:O	7:H:130:ILE:HG23	1.18	1.26
11:P:114:VAL:HG21	11:P:133:VAL:N	1.45	1.26
12:Q:59:ASN:ND2	12:Q:60:ALA:H	1.30	1.26
28:7:43:THR:C	28:7:46:ASP:OD2	1.72	1.26
2:A:2210:G:O6	3:D:148:GLY:CA	1.82	1.26
4:E:211:GLN:H	4:E:216:ARG:CZ	1.46	1.26

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:44:TYR:CA	4:E:309:PRO:HG3	1.65	1.26
5:F:231:ARG:O	5:F:232:LEU:HD23	1.09	1.26
6:G:93:LEU:CD1	6:G:94:ALA:H	1.45	1.26
15:W:32:ALA:HA	15:W:35:ILE:CD1	1.63	1.26
2:A:2254:C:H2'	2:A:2255:G:C5'	1.63	1.26
2:A:2558:C:O2	2:A:2559:C:C6	1.86	1.26
17:Y:30:ASP:OD2	17:Y:31:LEU:CD2	1.83	1.26
18:Z:2:GLU:O	18:Z:54:ILE:HG21	1.09	1.26
6:G:71:ALA:O	6:G:72:LYS:HD3	1.33	1.26
10:O:88:ARG:O	10:O:90:ASP:N	1.68	1.26
22:2:30:ALA:C	22:2:34:GLN:HG2	1.54	1.26
11:P:75:LEU:O	11:P:75:LEU:HD23	1.30	1.26
2:A:2364:C:C2	24:0:32:LYS:NZ	2.01	1.26
2:A:2056:G:C2	26:5:4:HIS:O	1.89	1.26
2:A:801:G:OP1	5:F:79:ARG:NE	1.65	1.26
11:P:144:ASP:O	11:P:145:LEU:HD12	1.17	1.26
17:Y:78:THR:CA	17:Y:89:ARG:HG3	1.65	1.26
27:6:37:LEU:O	27:6:38:LYS:HG3	1.35	1.26
2:A:2322:A:C4	2:A:2323:G:H8	1.53	1.26
2:A:2422:A:N3	2:A:2424:C:C5	2.02	1.26
2:A:2544:G:C5'	2:A:2645:G:N7	1.98	1.26
2:A:2815:C:C2'	2:A:2816:C:H5'	1.62	1.26
4:E:74:GLU:CA	4:E:293:TYR:CE2	2.18	1.26
21:V:61:VAL:HA	21:V:98:ILE:CG1	1.66	1.26
2:A:2309:A:H5''	2:A:2310:A:C8	1.69	1.26
7:H:53:ARG:HB3	7:H:56:ASP:OD1	1.25	1.26
2:A:1034:G:P	30:9:18:ARG:HH21	1.58	1.26
6:G:11:HIS:CD2	6:G:15:GLU:OE2	1.88	1.26
28:7:18:PHE:N	28:7:44:VAL:HG21	1.48	1.26
2:A:142(A):A:H4'	9:N:21:ARG:NH2	1.51	1.26
5:F:163:HIS:O	5:F:166:ILE:HB	1.15	1.26
2:A:1287:A:O4'	19:R:104:ARG:HD2	1.09	1.26
7:H:111:PRO:O	7:H:112:VAL:HG23	1.26	1.26
2:A:2197:U:C2'	2:A:2224:G:H22	1.47	1.26
2:A:2225:A:C5'	2:A:2226:C:C5'	2.14	1.26
2:A:2825:C:H6	2:A:2825:C:O5'	1.14	1.26
4:E:62:ARG:O	4:E:63:GLU:CD	1.73	1.26
11:P:77:ALA:N	11:P:81:VAL:HG21	1.51	1.26
2:A:2378:A:O2'	13:S:30:GLY:HA3	1.28	1.26
27:6:37:LEU:HD21	27:6:51:ARG:CG	1.65	1.26
2:A:2712:U:H2'	2:A:712(A):A:C5'	1.63	1.26
2:A:30:G:OP1	20:U:8:ILE:CD1	1.83	1.26

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:146:LYS:HD3	3:D:147:PRO:CD	1.65	1.26
6:G:21:VAL:CG1	6:G:132:VAL:CG2	2.12	1.26
8:I:7:LYS:HD2	8:I:12:LYS:NZ	0.93	1.26
2:A:2012:G:OP1	15:W:98:LYS:HD3	1.30	1.26
16:X:4:VAL:CG2	22:2:24:LYS:NZ	1.98	1.26
31:K:32:GLY:O	31:K:60:VAL:HG11	1.21	1.26
25:4:49:PHE:CZ	25:4:70:GLY:O	1.87	1.26
2:A:2865:U:C5	2:A:2866:U:H5	1.53	1.25
3:D:158:GLY:CA	3:D:194:VAL:HG11	1.63	1.25
3:D:198:GLY:O	3:D:200:THR:N	1.66	1.25
5:F:32:GLY:HA2	5:F:35:VAL:CG2	1.66	1.25
27:6:37:LEU:CD2	27:6:51:ARG:HG2	1.65	1.25
17:Y:86:GLU:O	17:Y:87:VAL:HG23	1.36	1.25
16:X:38:ALA:O	16:X:39:ASP:O	1.53	1.25
24:0:46:LYS:NZ	24:0:60:PHE:O	1.69	1.25
2:A:389:G:OP2	25:4:24:THR:HG22	1.28	1.25
27:6:21:TYR:OH	27:6:43:VAL:HG23	1.35	1.25
2:A:1364:G:OP1	25:4:3:LYS:CG	1.84	1.25
2:A:2766:G:H5'	2:A:2767:C:OP2	1.18	1.25
3:D:74:PRO:HG3	3:D:96:ALA:CB	1.64	1.25
5:F:102:LEU:HB3	5:F:107:ARG:NE	1.50	1.25
7:H:93:TYR:CB	7:H:106:VAL:HG22	1.66	1.25
19:R:63:ARG:NH2	19:R:77:ARG:HG2	1.47	1.25
13:S:105:GLY:O	13:S:106:LEU:HD23	1.37	1.25
15:W:32:ALA:HA	15:W:35:ILE:CG1	1.66	1.25
26:5:19:ARG:O	26:5:21:SER:N	1.68	1.25
29:8:26:LYS:CD	29:8:44:LYS:HA	1.56	1.25
2:A:2776:A:H1'	2:A:2778:A:N7	1.51	1.25
8:I:43:ASN:O	8:I:46:ALA:N	1.68	1.25
9:N:95:ARG:O	9:N:98:PHE:HD1	0.93	1.25
12:Q:67:ALA:HB2	12:Q:70:ARG:NH1	0.94	1.25
16:X:51:GLN:O	16:X:52:VAL:HG23	1.13	1.25
2:A:144:C:H5'	16:X:36:GLU:OE1	1.30	1.25
31:K:79:LEU:HD22	31:K:137:ILE:CD1	1.66	1.25
2:A:2645:G:H4'	2:A:2732:G:O2'	1.28	1.25
2:A:2219:G:H2'	2:A:2224:G:C5'	1.66	1.25
2:A:2296:U:O4	13:S:16:ALA:HB2	1.21	1.25
2:A:1826:G:OP2	3:D:227:VAL:HG21	1.09	1.25
4:E:45:LYS:CE	4:E:303:PRO:HG2	1.67	1.25
2:A:2785:C:C5'	4:E:99:VAL:HG22	1.67	1.25
5:F:96:LYS:H	5:F:98:ARG:NH2	1.35	1.25
6:G:49:PRO:CB	6:G:72:LYS:C	2.04	1.25

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:P:66:VAL:HG23	11:P:109:LEU:O	1.24	1.25
18:Z:13:LYS:O	18:Z:36:ARG:NH2	1.69	1.25
6:G:105:SER:CB	6:G:131:THR:HG22	1.65	1.25
27:6:22:TYR:O	27:6:23:THR:HG23	1.21	1.25
2:A:856:C:O2'	24:0:24:LYS:HB2	1.18	1.25
2:A:2543:G:C5	2:A:2544:G:C6	2.24	1.25
2:A:2674:G:H2'	2:A:2675:A:C8	1.71	1.25
4:E:44:TYR:HA	4:E:309:PRO:CG	1.65	1.25
4:E:72:VAL:O	4:E:73:ILE:HD13	1.24	1.25
9:N:65:ASN:CB	9:N:69:TYR:CD1	2.16	1.25
15:W:82:LEU:O	15:W:84:ARG:HD2	1.34	1.25
2:A:18:C:H4'	20:U:23:GLY:O	1.34	1.25
2:A:2320:A:N3	2:A:2333:A:C6	2.05	1.25
3:D:107:LYS:N	3:D:194:VAL:O	1.70	1.25
3:D:63:ILE:CG2	3:D:64:ILE:H	1.33	1.25
10:O:110:ASP:O	10:O:111:PHE:CD1	1.88	1.25
12:Q:72:VAL:O	12:Q:73:GLN:HG3	1.10	1.25
13:S:109:PRO:O	13:S:116:PHE:CE1	1.89	1.25
29:8:26:LYS:CD	29:8:45:GLY:N	1.99	1.25
2:A:2484:G:N2	2:A:2485:G:O4'	1.69	1.25
12:Q:94:ARG:CD	12:Q:106:GLY:HA2	1.65	1.25
8:I:77:VAL:CG2	8:I:141:LEU:CD1	2.14	1.25
7:H:170:LEU:O	7:H:170:LEU:CD1	1.85	1.25
24:0:67:VAL:HG11	24:0:74:LYS:CG	1.66	1.25
29:8:41:ILE:O	29:8:43:GLY:N	1.69	1.25
2:A:2717:G:C8	2:A:2717:G:H5'	1.70	1.25
2:A:2826:A:C5	2:A:2827:C:C6	2.23	1.25
3:D:208:GLY:CA	3:D:210:LYS:HZ3	1.40	1.25
4:E:70:VAL:CG1	4:E:71:THR:H	1.41	1.25
5:F:205:ARG:CG	5:F:212:VAL:HG21	1.64	1.25
12:Q:17:ARG:O	12:Q:18:GLU:HG3	1.32	1.25
13:S:40:ASN:HA	13:S:114:LYS:NZ	1.51	1.25
24:0:37:LEU:CB	24:0:69:PHE:CD2	2.18	1.25
30:9:7:VAL:O	30:9:8:LYS:HE3	1.09	1.25
2:A:1456:G:N2	2:A:2704:C:C2	2.05	1.25
18:Z:62:PHE:CD2	18:Z:87:THR:HG22	1.70	1.25
31:K:122:GLU:C	31:K:126:LYS:HE3	1.55	1.25
6:G:88:LEU:O	6:G:88:LEU:HD23	1.30	1.25
16:X:75:GLN:HB2	16:X:78:ALA:O	1.30	1.25
28:7:21:ARG:CZ	28:7:43:THR:CG2	2.14	1.24
2:A:10:G:N2	2:A:2629:A:N3	1.84	1.24
5:F:93:LYS:O	5:F:96:LYS:CG	1.83	1.24

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:P:62:ALA:HB3	11:P:105:TYR:O	1.30	1.24
19:R:87:TYR:CE1	19:R:94:TYR:HB3	1.72	1.24
17:Y:48:VAL:CG1	17:Y:49:GLU:H	1.46	1.24
2:A:2252:G:C2'	2:A:2253:G:H5'	1.67	1.24
2:A:2825:C:O5'	2:A:2825:C:C6	1.91	1.24
2:A:849:A:C2	23:3:21:ALA:CB	2.19	1.24
3:D:165:GLY:O	3:D:172:ILE:CB	1.85	1.24
5:F:25:PRO:O	5:F:26:VAL:HG23	1.32	1.24
7:H:146:ASN:O	7:H:150:VAL:HG23	1.36	1.24
9:N:15:ARG:HB3	9:N:43:ARG:CD	1.65	1.24
2:A:2352:A:N1	24:0:30:VAL:CG1	2.00	1.24
23:3:7:LYS:O	23:3:54:VAL:HG21	1.26	1.24
2:A:2447:G:C4	2:A:2500:U:C5	2.22	1.24
5:F:47:GLY:CA	5:F:92:PRO:CB	1.82	1.24
19:R:89:ASP:OD1	19:R:90:ARG:N	1.69	1.24
20:U:99:ALA:HB2	20:U:106:PHE:CD2	1.72	1.24
15:W:19:LEU:CD1	26:5:25:LEU:HD21	1.66	1.24
2:A:2421:G:H5''	27:6:4:ASP:OD1	1.19	1.24
2:A:2051:A:O2'	4:E:238:LEU:CD2	1.83	1.24
2:A:2315:G:OP1	6:G:20:LYS:NZ	1.71	1.24
2:A:2893:G:O2'	2:A:2894:G:H1'	1.21	1.24
5:F:24:THR:HB	5:F:25:PRO:CD	1.61	1.24
19:R:38:VAL:CB	19:R:39:PRO:HD2	1.66	1.24
8:I:95:SER:CA	8:I:98:ILE:CG1	2.09	1.24
22:2:5:VAL:CG1	22:2:6:GLN:H	1.41	1.24
16:X:9:HIS:CE1	16:X:27:ALA:HA	1.70	1.24
7:H:168:VAL:O	7:H:169:ARG:CG	1.85	1.24
24:0:61:ALA:HB2	24:0:81:ILE:CD1	1.67	1.24
24:0:39:ARG:HG2	24:0:69:PHE:CE1	1.71	1.24
2:A:2219:G:O2'	2:A:2224:G:C5'	1.86	1.24
5:F:96:LYS:CA	5:F:98:ARG:CZ	2.15	1.24
7:H:86:LEU:HD13	7:H:87:GLU:N	1.51	1.24
12:Q:54:VAL:O	12:Q:56:ILE:HD13	1.11	1.24
19:R:79:LEU:CD2	19:R:79:LEU:C	2.01	1.24
20:U:43:ALA:O	20:U:45:TYR:N	1.68	1.24
2:A:2528:U:P	30:9:30:VAL:CG1	2.25	1.24
8:I:7:LYS:CG	8:I:12:LYS:CG	2.10	1.24
9:N:61:VAL:HG12	9:N:62:ASP:OD1	1.32	1.24
17:Y:101:LEU:CG	17:Y:112:LEU:CD1	2.16	1.24
22:2:52:ALA:O	22:2:56:ILE:HG13	1.27	1.24
2:A:2354:G:C2	24:0:32:LYS:CE	2.20	1.24
2:A:2509:G:O2'	2:A:2510:C:H5'	1.28	1.24

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2517:C:O2'	2:A:2518:A:C5'	1.83	1.24
2:A:2439:A:H1'	2:A:2587:A:OP1	1.13	1.24
4:E:301:PRO:O	4:E:303:PRO:HD2	1.32	1.24
5:F:52:ALA:HB2	5:F:55:ARG:CZ	1.68	1.24
13:S:128:ASP:C	13:S:129:ILE:N	1.90	1.24
20:U:14:HIS:ND1	20:U:36:PHE:HZ	1.34	1.24
2:A:994:C:O2	20:U:53:LYS:HD3	1.36	1.24
21:V:19:VAL:HG12	21:V:21:ARG:CZ	1.68	1.24
18:Z:39:PHE:HA	18:Z:43:PHE:CD2	1.70	1.24
19:R:101:ALA:O	26:5:41:LEU:CD1	1.86	1.24
2:A:1637:A:H4'	2:A:2711:A:O2'	1.12	1.24
2:A:2710:C:O2'	2:A:2711:A:H5'	1.37	1.24
5:F:96:LYS:CA	5:F:98:ARG:NH1	2.00	1.24
2:A:1665:A:C3'	10:O:66:LYS:NZ	1.99	1.24
20:U:13:ARG:O	20:U:16:LYS:HB2	1.09	1.24
21:V:33:VAL:HB	21:V:63:HIS:CG	1.72	1.24
6:G:27:ILE:O	6:G:69:ILE:HG23	1.29	1.24
31:K:90:SER:O	31:K:91:GLU:HG3	1.11	1.24
9:N:106:GLY:O	9:N:107:ASN:CG	1.76	1.24
12:Q:108:SER:O	12:Q:109:VAL:HG13	1.36	1.24
2:A:2056:G:N1	26:5:4:HIS:O	1.66	1.24
17:Y:28:SER:HB3	17:Y:99:THR:OG1	1.07	1.24
2:A:2246:G:O2'	2:A:2247:A:H5'	1.32	1.24
2:A:2622:C:O2	2:A:2623:G:C8	1.91	1.24
2:A:2717:G:C2	2:A:2718:G:C5	2.26	1.24
6:G:21:VAL:HG13	6:G:132:VAL:CB	1.65	1.24
8:I:7:LYS:HG3	8:I:12:LYS:CD	1.67	1.24
10:O:1:MET:O	10:O:2:ILE:CD1	1.86	1.24
21:V:59:GLU:O	21:V:60:VAL:CG2	1.86	1.24
8:I:95:SER:CA	8:I:98:ILE:CD1	2.13	1.24
2:A:2307:G:C1'	2:A:2311:A:H61	1.49	1.24
2:A:1060:U:OP1	31:K:74:PRO:HA	1.35	1.24
23:3:19:GLN:O	23:3:23:LEU:CD2	1.84	1.23
2:A:2215:G:H2'	2:A:2216:G:C8	1.71	1.23
4:E:193:PHE:CE2	4:E:199:ALA:HB2	1.72	1.23
5:F:238:SER:O	5:F:241:ALA:HB3	1.09	1.23
2:A:2333:A:H1'	2:A:2335:A:C4	1.71	1.23
2:A:2384:G:C5'	2:A:2386:C:OP1	1.85	1.23
2:A:2384:G:H5''	2:A:2386:C:OP1	1.09	1.23
2:A:2847:U:OP2	2:A:2847:U:C6	1.90	1.23
2:A:2316:C:H5'	6:G:142:ALA:CB	1.65	1.23
6:G:24:HIS:O	6:G:25:MET:HG2	1.11	1.23

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:H:43:THR:CG2	7:H:52:THR:CG2	2.14	1.23
16:X:3:ASP:O	16:X:4:VAL:HG13	1.32	1.23
2:A:2352:A:N1	24:0:30:VAL:HG12	1.53	1.23
20:U:103:PRO:O	20:U:107:LYS:HG2	1.30	1.23
21:V:61:VAL:CG2	21:V:97:GLY:HA2	1.69	1.23
24:0:23:VAL:CG1	24:0:24:LYS:H	1.49	1.23
2:A:2044:C:N3	2:A:2624:G:N2	1.86	1.23
2:A:2470:G:N3	2:A:2471:C:C5	2.04	1.23
2:A:2555:U:H2'	2:A:2556:C:C5'	1.68	1.23
3:D:78:ALA:O	3:D:79:THR:HG23	1.32	1.23
7:H:129:LYS:O	7:H:130:ILE:HD12	1.12	1.23
15:W:85:VAL:HA	15:W:95:ILE:CG1	1.68	1.23
18:Z:5:ALA:O	18:Z:33:ALA:HB2	1.38	1.23
22:2:51:LYS:O	22:2:54:ALA:N	1.71	1.23
2:A:1546:C:C3'	2:A:1547:C:P	2.24	1.23
2:A:2508:G:O2'	2:A:2509:G:H5'	1.36	1.23
2:A:2023:G:H4'	2:A:2618:G:OP1	1.06	1.23
2:A:2681:C:O2'	2:A:2682:U:O5'	1.56	1.23
5:F:115:LEU:HG	5:F:246:ARG:NH2	1.51	1.23
8:I:4:ILE:HB	8:I:37:ILE:O	1.33	1.23
13:S:41:LYS:C	13:S:41:LYS:HD3	1.57	1.23
21:V:35:LEU:O	21:V:60:VAL:HG13	1.29	1.23
2:A:2400:G:O2'	27:6:20:PHE:HE1	1.18	1.23
2:A:2507:C:N3	2:A:2583:G:C2	2.07	1.23
2:A:2589:A:C2'	2:A:2590:A:H5''	1.69	1.23
6:G:142:ALA:CB	6:G:151:ILE:HD11	1.67	1.23
9:N:60:ARG:O	9:N:71:TYR:HB3	1.33	1.23
31:K:20:PRO:O	31:K:23:PRO:HD2	1.34	1.23
25:4:21:VAL:HG12	25:4:22:MET:N	1.43	1.23
29:8:23:MET:HA	29:8:23:MET:CE	1.63	1.23
2:A:2573:C:C6	2:A:2573:C:H5'	1.71	1.23
2:A:2584:U:C6	2:A:2584:U:H3'	1.65	1.23
2:A:1260:G:H5''	15:W:83:LYS:NZ	1.53	1.23
17:Y:101:LEU:HD13	17:Y:113:GLU:CB	1.68	1.23
2:A:850:C:C4'	23:3:18:ASP:OD1	1.85	1.23
2:A:2021:C:P	26:5:15:LYS:HE3	1.76	1.23
2:A:2226:C:O2	2:A:2227:A:H1'	1.33	1.23
2:A:2509:G:C2'	2:A:2510:C:H5'	1.67	1.23
12:Q:88:PHE:HB2	12:Q:90:PHE:CE1	1.72	1.23
13:S:34:LEU:CG	13:S:102:LEU:HA	1.69	1.23
20:U:38:THR:CA	20:U:41:ASN:OD1	1.84	1.23
2:A:1599:C:OP1	16:X:33:SER:OG	1.55	1.23

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2309:A:OP2	2:A:2309:A:C4'	1.81	1.23
2:A:1059:G:N2	31:K:127:ILE:HG23	1.53	1.23
6:G:44:ILE:O	6:G:83:PHE:CZ	1.92	1.23
24:0:30:VAL:HG22	24:0:63:SER:OG	1.36	1.23
27:6:2:ALA:HB2	27:6:11:LYS:NZ	1.53	1.23
2:A:2756:U:O2'	2:A:2757:A:C5'	1.86	1.23
2:A:687:C:C4'	28:7:4:THR:HG22	1.67	1.23
4:E:269:ILE:HG23	4:E:297:LYS:NZ	1.53	1.23
5:F:243:VAL:CA	5:F:246:ARG:HD2	1.67	1.23
2:A:2316:C:C5'	6:G:151:ILE:HD11	1.69	1.23
7:H:143:LEU:CD2	7:H:144:ALA:H	1.51	1.23
20:U:88:ILE:CG2	21:V:55:THR:OG1	1.87	1.23
2:A:2246:G:C4	2:A:2426:A:C2	2.26	1.23
2:A:801:G:OP2	5:F:79:ARG:HD3	1.37	1.23
19:R:58:GLY:CA	19:R:80:PHE:CE2	2.22	1.23
21:V:14:VAL:HG21	21:V:19:VAL:CG2	1.68	1.23
21:V:5:ILE:HG23	21:V:39:PHE:CA	1.67	1.23
16:X:3:ASP:OD2	22:2:24:LYS:CD	1.86	1.23
2:A:2312:U:C5'	6:G:53:LYS:HA	1.68	1.23
2:A:94:G:N2	22:2:42:ASN:HD22	1.35	1.23
18:Z:96:VAL:CG1	18:Z:97:PRO:HD2	1.69	1.23
28:7:41:GLN:O	28:7:42:LEU:HG	1.34	1.22
2:A:1665:A:C2'	10:O:66:LYS:NZ	2.00	1.22
4:E:44:TYR:CA	4:E:309:PRO:CG	2.15	1.22
18:Z:168:VAL:O	18:Z:169:VAL:CG2	1.87	1.22
18:Z:69:VAL:CG2	18:Z:81:VAL:CG1	2.18	1.22
18:Z:67:LYS:HD3	18:Z:93:GLU:OE2	1.31	1.22
29:8:26:LYS:CG	29:8:45:GLY:N	1.88	1.22
29:8:26:LYS:CD	29:8:44:LYS:N	2.00	1.22
2:A:1783:A:C2	2:A:2587:A:H2	1.57	1.22
3:D:226:GLY:O	3:D:227:VAL:HG12	1.10	1.22
7:H:73:ASN:CB	7:H:137:LYS:NZ	1.96	1.22
11:P:92:ASP:HB3	11:P:118:LEU:CD1	1.68	1.22
13:S:81:ALA:O	13:S:83:LEU:N	1.72	1.22
13:S:94:GLU:C	13:S:94:GLU:OE1	1.76	1.22
21:V:71:ILE:O	21:V:72:ARG:HG3	1.38	1.22
2:A:2625:G:C3'	2:A:2626:C:C5	2.22	1.22
2:A:564:C:OP1	21:V:79:GLN:HG2	1.07	1.22
5:F:93:LYS:O	5:F:96:LYS:HG3	1.08	1.22
12:Q:65:ARG:CZ	12:Q:122:PHE:CE2	2.22	1.22
28:7:21:ARG:NH1	28:7:43:THR:CG2	2.03	1.22
28:7:17:GLY:CA	28:7:44:VAL:HG21	1.63	1.22

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1790:C:P	3:D:224:VAL:HG13	1.79	1.22
2:A:2209:C:H2'	2:A:2210:G:C3'	1.68	1.22
2:A:2320:A:H62	13:S:9:PRO:CG	1.49	1.22
4:E:205:THR:HG23	4:E:259:HIS:C	1.60	1.22
7:H:15:THR:HG21	7:H:26:LYS:CB	1.68	1.22
12:Q:25:GLY:O	12:Q:26:LYS:HG2	1.34	1.22
1:B:104:A:H1'	18:Z:24:TYR:OH	1.05	1.22
16:X:28:VAL:O	16:X:62:LYS:HB3	1.37	1.22
2:A:1056:G:N1	2:A:1102:C:OP2	1.72	1.22
25:4:59:PHE:O	25:4:61:LYS:N	1.72	1.22
2:A:636:G:OP1	11:P:127:GLU:HG2	1.39	1.22
9:N:18:ILE:O	9:N:22:VAL:HG23	1.36	1.22
21:V:30:GLY:C	21:V:33:VAL:CG2	2.07	1.22
20:U:43:ALA:CB	21:V:75:LYS:HB3	1.67	1.22
1:B:75:G:O2'	18:Z:32:PHE:CD2	1.77	1.22
18:Z:2:GLU:O	18:Z:54:ILE:CG2	1.86	1.22
28:7:34:ARG:HD2	28:7:42:LEU:CD2	1.65	1.22
2:A:1031:G:C4'	30:9:8:LYS:HZ3	1.53	1.22
2:A:1669:A:C8	10:O:4:GLN:CD	2.13	1.22
3:D:183:ILE:O	3:D:184:LEU:HD23	1.06	1.22
5:F:52:ALA:CA	5:F:55:ARG:NE	2.02	1.22
8:I:133:LEU:CD1	8:I:139:ALA:HB2	1.69	1.22
24:0:43:THR:CG2	24:0:75:GLY:HA3	1.68	1.22
23:3:23:LEU:O	23:3:28:LEU:HG	1.36	1.22
2:A:2406:U:N3	11:P:55:GLN:HB3	1.50	1.22
2:A:1456:G:N2	2:A:2704:C:N3	1.86	1.22
2:A:2784:C:OP1	4:E:95:PRO:HG2	1.39	1.22
20:U:36:PHE:O	20:U:39:LEU:HB2	1.38	1.22
20:U:97:ASP:O	20:U:101:ARG:HG2	1.07	1.22
21:V:33:VAL:O	21:V:62:GLU:HA	1.32	1.22
15:W:8:ARG:HG3	15:W:102:HIS:CE1	1.74	1.22
23:3:40:THR:HG21	23:3:43:ILE:CD1	1.58	1.22
25:4:68:ARG:CG	25:4:72:LYS:HG2	1.69	1.22
4:E:205:THR:HG23	4:E:259:HIS:O	1.07	1.22
6:G:145:ASP:CB	13:S:15:GLU:O	1.85	1.22
15:W:11:ARG:O	15:W:12:ILE:HG13	1.39	1.22
18:Z:64:ALA:CB	18:Z:85:MET:HA	1.70	1.22
2:A:2730:C:H4'	4:E:265:ASN:ND2	1.39	1.22
2:A:2734:A:N6	2:A:2735:G:N3	1.88	1.22
2:A:2809:A:O4'	2:A:2811:G:N7	1.72	1.22
19:R:44:LEU:O	19:R:48:VAL:CG2	1.87	1.22
13:S:76:GLY:O	13:S:82:TYR:HB2	1.34	1.22

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:V:71:ILE:O	21:V:72:ARG:CG	1.87	1.22
21:V:94:LYS:O	21:V:95:ILE:CD1	1.82	1.22
17:Y:49:GLU:OE2	17:Y:97:ARG:CZ	1.87	1.22
29:8:23:MET:HE3	29:8:48:PHE:CD2	1.75	1.22
2:A:2771:C:H5'	4:E:316:ARG:CD	1.68	1.22
2:A:2793:G:C6	2:A:2794:C:N4	2.07	1.22
5:F:153:VAL:CG1	5:F:157:LEU:HD21	1.69	1.22
5:F:3:ALA:CB	5:F:16:VAL:O	1.87	1.22
21:V:50:ASP:OD1	21:V:53:LYS:HE3	1.39	1.22
17:Y:29:ALA:O	17:Y:33:GLU:OE2	1.55	1.22
16:X:11:THR:O	16:X:15:MET:HG3	1.08	1.22
31:K:122:GLU:O	31:K:126:LYS:HG3	1.35	1.22
2:A:2768:C:C2	2:A:2769:C:C6	2.28	1.21
10:O:103:ALA:HA	10:O:122:ILE:O	1.39	1.21
12:Q:57:ARG:O	12:Q:58:HIS:O	1.56	1.21
20:U:92:ARG:CA	20:U:95:LEU:CD1	1.91	1.21
27:6:35:LEU:O	27:6:36:GLU:CG	1.87	1.21
2:A:2410:G:C4	2:A:2411:A:N7	2.09	1.21
2:A:2626:C:C2'	2:A:2627:G:C5'	2.17	1.21
4:E:205:THR:CG2	4:E:259:HIS:O	1.88	1.21
13:S:94:GLU:O	13:S:94:GLU:OE1	1.55	1.21
20:U:113:SER:O	20:U:115:ASN:N	1.71	1.21
21:V:11:GLN:NE2	21:V:22:VAL:HG23	1.34	1.21
17:Y:41:ARG:O	17:Y:112:LEU:HB2	1.13	1.21
2:A:592:G:N3	29:8:3:LYS:HE3	1.48	1.21
2:A:2322:A:C6	2:A:2323:G:C8	2.23	1.21
2:A:2786:U:H5'	4:E:100:TRP:O	1.05	1.21
2:A:598:G:N2	5:F:33:LYS:HZ3	1.36	1.21
9:N:77:GLY:O	9:N:79:PHE:N	1.74	1.21
23:3:48:GLU:OE1	23:3:48:GLU:N	1.70	1.21
2:A:911:A:N1	12:Q:16:ARG:HA	1.55	1.21
5:F:230:GLY:O	5:F:231:ARG:CG	1.88	1.21
20:U:6:THR:O	20:U:9:VAL:HG23	1.40	1.21
21:V:57:GLN:NE2	21:V:100:GLY:O	1.72	1.21
17:Y:101:LEU:CD2	17:Y:103:LEU:HD21	1.68	1.21
17:Y:103:LEU:CD2	17:Y:112:LEU:CD2	1.96	1.21
18:Z:151:ASP:HB3	18:Z:153:LYS:NZ	1.55	1.21
16:X:18:MET:HE3	16:X:25:GLN:O	1.40	1.21
2:A:849:A:N3	23:3:21:ALA:HB1	1.52	1.21
2:A:2373:G:O2'	2:A:2374:C:H5'	1.36	1.21
3:D:167:GLU:N	3:D:182:MET:HE1	1.56	1.21
5:F:163:HIS:HB3	5:F:166:ILE:HD12	1.21	1.21

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:97:GLN:HB2	6:G:106:PHE:CE2	1.76	1.21
17:Y:43:ASN:ND2	17:Y:101:LEU:HD21	1.51	1.21
18:Z:39:PHE:CA	18:Z:43:PHE:CE2	2.21	1.21
2:A:2353:G:N1	2:A:2364:C:N4	1.69	1.21
2:A:2581:G:C2	2:A:2610:C:C6	2.29	1.21
2:A:2620:C:O2'	2:A:2621:A:C5'	1.87	1.21
2:A:495:G:H4'	15:W:57:ASN:ND2	0.90	1.21
2:A:600:G:C5'	5:F:30:LEU:HD11	1.68	1.21
12:Q:69:ASN:ND2	12:Q:70:ARG:N	1.88	1.21
18:Z:100:THR:HG22	18:Z:137:ASP:OD1	1.39	1.21
8:I:102:LEU:CD1	8:I:103:GLN:N	2.02	1.21
8:I:75:LEU:CD1	8:I:76:THR:H	1.54	1.21
16:X:6:LYS:NZ	16:X:29:ASP:HA	1.53	1.21
31:K:8:GLN:N	31:K:59:THR:HA	1.53	1.21
7:H:53:ARG:NH1	7:H:56:ASP:HA	1.55	1.21
23:3:1:MET:SD	23:3:3:ARG:HG2	1.78	1.21
28:7:21:ARG:NH2	28:7:43:THR:OG1	1.72	1.21
29:8:52:LYS:O	29:8:54:GLU:N	1.71	1.21
2:A:2051:A:O2'	4:E:238:LEU:HG	1.24	1.21
2:A:2226:C:H2'	2:A:2227:A:O4'	1.05	1.21
2:A:2519:U:OP1	2:A:2519:U:H3'	1.35	1.21
1:B:59:A:C3'	1:B:60:C:P	2.29	1.21
10:O:46:ALA:O	10:O:47:THR:O	1.52	1.21
2:A:2275:C:O2	12:Q:103:ALA:CB	1.89	1.21
18:Z:149:ALA:O	18:Z:152:ILE:HG13	1.36	1.21
2:A:2447:G:C5	2:A:2500:U:H5	1.52	1.21
9:N:60:ARG:O	9:N:71:TYR:CB	1.88	1.21
11:P:128:GLY:CA	11:P:132:LYS:NZ	2.03	1.21
2:A:535:C:C3'	20:U:53:LYS:HE2	1.70	1.21
2:A:1340:U:O4	16:X:57:THR:HG22	1.41	1.21
2:A:138:G:C5'	16:X:43:GLU:HG3	1.69	1.21
31:K:116:LEU:HD13	31:K:117:ASN:N	1.56	1.21
24:0:28:GLY:N	24:0:60:PHE:CD2	1.98	1.21
25:4:55:ARG:O	25:4:56:VAL:O	1.57	1.21
29:8:36:LYS:HD3	29:8:40:GLU:OE1	1.40	1.21
2:A:2348:U:C5'	29:8:42:ARG:HH22	1.52	1.21
2:A:1799:G:C2	3:D:153:LEU:CD2	2.21	1.21
2:A:1566:A:C2	3:D:212:HIS:HA	1.74	1.21
18:Z:100:THR:HA	18:Z:137:ASP:OD2	1.03	1.21
26:5:18:MET:O	26:5:21:SER:CB	1.89	1.21
2:A:2259:G:N2	2:A:2282:G:C4	2.08	1.21
2:A:2319:G:O5'	2:A:2320:A:OP1	1.56	1.21

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2392:A:OP1	29:8:32:GLN:OE1	1.58	1.21
2:A:2663:G:H2'	2:A:2664:G:C8	1.75	1.21
3:D:143:ILE:O	3:D:152:GLN:CB	1.88	1.21
1:B:17:C:OP1	6:G:147:ALA:HA	1.35	1.21
20:U:117:ARG:HD3	20:U:118:GLN:HG2	1.23	1.21
17:Y:31:LEU:HD13	17:Y:113:GLU:OE1	1.36	1.21
18:Z:71:MET:HG2	18:Z:78:PRO:CG	1.71	1.21
6:G:65:GLU:O	6:G:65:GLU:OE1	1.59	1.21
29:8:50:LEU:CD2	29:8:51:ALA:N	1.73	1.20
3:D:103:ILE:CD1	3:D:104:ILE:HD11	1.71	1.20
3:D:210:LYS:CA	3:D:213:LYS:HD3	1.69	1.20
6:G:19:GLU:CB	6:G:135:VAL:HG22	1.57	1.20
2:A:2258:C:N4	2:A:2426:A:H1'	1.50	1.20
2:A:2653:U:H3'	2:A:2654:A:C8	1.76	1.20
2:A:2684:U:H1'	10:O:70:ARG:CZ	1.68	1.20
5:F:230:GLY:O	5:F:231:ARG:HG2	1.07	1.20
24:0:37:LEU:CD1	24:0:69:PHE:HB2	1.70	1.20
23:3:20:LYS:HA	23:3:23:LEU:CG	1.69	1.20
2:A:126:A:C5	28:7:18:PHE:CE2	2.30	1.20
2:A:1500:G:N2	3:D:97:ASP:OD2	1.73	1.20
2:A:2188:C:C4	2:A:2189:U:O4	1.94	1.20
2:A:2219:G:C2'	2:A:2224:G:O5'	1.88	1.20
2:A:2268:A:O4'	2:A:2268:A:OP1	1.57	1.20
2:A:2322:A:C4	2:A:2323:G:C8	2.29	1.20
2:A:337:C:OP1	17:Y:24:ARG:CB	1.89	1.20
3:D:183:ILE:HG22	3:D:184:LEU:N	1.31	1.20
10:O:68:GLY:HA3	10:O:78:ARG:NE	1.55	1.20
20:U:65:ILE:CG2	20:U:76:TYR:HE2	1.54	1.20
18:Z:67:LYS:CD	18:Z:93:GLU:OE2	1.89	1.20
2:A:1263:U:H4'	26:5:16:ARG:CZ	1.69	1.20
2:A:969:U:H4'	23:3:14:GLY:O	1.05	1.20
3:D:92:LEU:CD1	3:D:102:TYR:CD1	2.24	1.20
10:O:25:LEU:HG	10:O:38:VAL:O	1.36	1.20
21:V:30:GLY:CA	21:V:33:VAL:HG21	1.69	1.20
8:I:89:LEU:CD1	8:I:93:ILE:CG2	2.17	1.20
22:2:55:ARG:C	22:2:58:THR:OG1	1.79	1.20
2:A:2310:A:H2'	6:G:55:LYS:CE	1.71	1.20
2:A:931:G:OP1	23:3:27:GLY:HA2	1.40	1.20
29:8:60:LEU:CD1	29:8:64:ARG:HB2	1.71	1.20
2:A:2287:A:N1	2:A:2289:G:H1'	1.56	1.20
2:A:451:C:O3'	5:F:55:ARG:NH2	1.72	1.20
2:A:2684:U:C1'	10:O:70:ARG:NH2	2.04	1.20

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2258:C:C4	2:A:2426:A:C1'	2.24	1.20
2:A:2262:U:O2'	2:A:2263:C:C5'	1.88	1.20
2:A:2313:C:O2'	2:A:2314:C:H5'	1.35	1.20
2:A:2848:G:N2	2:A:2849:U:N3	1.79	1.20
7:H:18:VAL:HG22	7:H:23:VAL:CG2	1.69	1.20
14:T:28:THR:O	14:T:29:THR:CG2	1.89	1.20
25:4:51:ASP:O	25:4:52:THR:CG2	1.89	1.20
2:A:1612:C:C2'	28:7:3:ARG:NE	2.00	1.20
2:A:2819:G:H5''	2:A:2821:A:N6	1.55	1.20
3:D:167:GLU:HB3	3:D:170:TYR:HE1	1.06	1.20
5:F:168:ARG:NH2	5:F:209:GLY:HA2	1.55	1.20
12:Q:145:PRO:O	12:Q:146:THR:OG1	1.59	1.20
21:V:59:GLU:O	21:V:60:VAL:HG23	1.37	1.20
2:A:617:G:H4'	5:F:219:ASN:OD1	1.41	1.20
5:F:225:PRO:HG2	5:F:231:ARG:NH2	1.54	1.20
11:P:62:ALA:N	11:P:107:LYS:HE3	0.89	1.20
20:U:91:ASN:OD1	20:U:95:LEU:HD21	1.37	1.20
2:A:993:G:H4'	21:V:90:PHE:CZ	1.76	1.20
15:W:85:VAL:C	15:W:86:LEU:HD23	1.63	1.20
17:Y:74:VAL:CG1	17:Y:77:VAL:HG23	1.70	1.20
17:Y:55:PHE:CE1	17:Y:89:ARG:NH1	2.07	1.20
8:I:103:GLN:NE2	8:I:110:LEU:N	1.81	1.20
27:6:19:GLY:CA	27:6:42:PRO:HG3	1.70	1.20
29:8:55:TRP:CZ3	29:8:59:LYS:CE	2.24	1.20
2:A:1782:C:O2	2:A:2609:U:O4'	1.56	1.20
2:A:2631:G:H4'	2:A:2892:A:OP1	1.42	1.20
3:D:158:GLY:N	3:D:194:VAL:HG11	1.53	1.20
7:H:101:LYS:NZ	7:H:115:GLU:HB2	1.53	1.20
19:R:34:ILE:CG2	19:R:35:THR:H	1.51	1.20
18:Z:100:THR:HA	18:Z:137:ASP:CG	1.62	1.20
27:6:8:ILE:N	27:6:29:ARG:NH2	1.87	1.20
2:A:687:C:O4'	28:7:4:THR:HG22	1.41	1.20
2:A:1161:C:O2'	21:V:22:VAL:HG11	1.05	1.20
2:A:527:C:O2'	9:N:95:ARG:NH1	1.71	1.20
3:D:63:ILE:O	3:D:64:ILE:HG13	1.38	1.20
4:E:77:PRO:CB	4:E:187:HIS:H	1.55	1.20
7:H:83:GLU:OE2	7:H:84:LYS:N	1.72	1.20
9:N:56:LYS:O	9:N:59:LYS:HB2	1.37	1.20
19:R:79:LEU:HD23	19:R:79:LEU:O	1.38	1.20
10:O:99:PHE:HE2	14:T:24:LYS:CE	1.33	1.20
2:A:144:C:C5'	16:X:36:GLU:OE1	1.89	1.20
2:A:1059:G:C2	31:K:127:ILE:HG23	1.74	1.20

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:K:129:GLU:O	31:K:133:LYS:HG3	1.38	1.20
2:A:1364:G:P	25:4:3:LYS:CG	2.30	1.19
2:A:2357:U:O2'	2:A:2358:G:O5'	1.56	1.19
4:E:221:LYS:NZ	4:E:233:ARG:HG2	1.55	1.19
8:I:7:LYS:CD	8:I:12:LYS:HZ2	1.43	1.19
26:5:57:VAL:CG1	26:5:58:LEU:H	1.55	1.19
27:6:21:TYR:OH	27:6:43:VAL:CG2	1.90	1.19
29:8:23:MET:CE	29:8:48:PHE:HA	1.70	1.19
2:A:994:C:OP2	20:U:54:LYS:HE3	1.37	1.19
11:P:113:GLN:O	11:P:114:VAL:O	1.60	1.19
12:Q:41:THR:HG22	12:Q:125:TRP:CZ3	1.76	1.19
21:V:61:VAL:CA	21:V:98:ILE:HD12	1.73	1.19
2:A:1404:C:O3'	2:A:1405:U:P	2.00	1.19
22:2:30:ALA:O	22:2:34:GLN:HB2	1.39	1.19
22:2:55:ARG:HA	22:2:58:THR:OG1	1.22	1.19
25:4:51:ASP:O	25:4:52:THR:HG23	1.38	1.19
2:A:2021:C:H5	20:U:25:TRP:CZ2	1.59	1.19
3:D:63:ILE:HG22	3:D:64:ILE:N	1.38	1.19
19:R:20:LEU:HD11	19:R:21:TYR:CD2	1.74	1.19
23:3:32:GLN:CD	23:3:32:GLN:O	1.81	1.19
27:6:19:GLY:CA	27:6:42:PRO:CG	2.20	1.19
2:A:2252:G:H2'	2:A:2253:G:C5'	1.73	1.19
2:A:2617:C:C2'	2:A:2618:G:H5'	1.71	1.19
3:D:111:VAL:O	3:D:113:MET:N	1.74	1.19
7:H:82:TYR:CE2	7:H:137:LYS:HB3	1.75	1.19
9:N:19:MET:CB	9:N:46:ILE:HG12	1.69	1.19
20:U:33:ARG:NH1	20:U:33:ARG:HB2	1.57	1.19
16:X:47:VAL:HG12	16:X:69:SER:OG	1.36	1.19
2:A:2526:G:H2'	2:A:2527:C:C5'	1.71	1.19
2:A:2574:G:O2'	4:E:240:PRO:CB	1.89	1.19
2:A:600:G:H5'	5:F:30:LEU:CD1	1.71	1.19
7:H:10:ILE:HG22	7:H:14:VAL:CB	1.70	1.19
9:N:12:VAL:C	9:N:38:VAL:CG1	2.07	1.19
9:N:77:GLY:HA2	9:N:80:LYS:CG	1.72	1.19
21:V:42:GLY:N	21:V:54:TYR:CE1	2.03	1.19
2:A:2355:C:C3'	24:0:21:LEU:HD11	1.72	1.19
2:A:932:G:C5'	23:3:29:ARG:NH2	2.04	1.19
27:6:14:SER:HB2	27:6:51:ARG:O	1.43	1.19
2:A:2700:C:H2'	2:A:2701:C:C4'	1.71	1.19
3:D:167:GLU:HB2	3:D:170:TYR:CD1	1.75	1.19
4:E:211:GLN:N	4:E:216:ARG:CZ	2.05	1.19
12:Q:134:PHE:O	12:Q:137:ARG:HB3	1.39	1.19

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2018:G:N2	20:U:34:ASN:HD21	1.31	1.19
21:V:19:VAL:CB	21:V:21:ARG:NH1	2.03	1.19
18:Z:20:ALA:C	18:Z:34:LEU:HD21	1.52	1.19
2:A:95:G:C5'	22:2:41:GLU:OE1	1.90	1.19
2:A:1710:C:O2'	2:A:2858:C:N4	1.75	1.19
29:8:55:TRP:CE3	29:8:59:LYS:HE3	1.76	1.19
2:A:965:C:C4'	2:A:2273:A:N3	2.05	1.19
2:A:2717:G:C2	2:A:2718:G:C8	2.30	1.19
2:A:2808:U:C2	2:A:2892:A:C6	2.30	1.19
2:A:637:A:H8	11:P:111:ALA:CB	1.53	1.19
5:F:163:HIS:HA	5:F:166:ILE:HG13	1.24	1.19
6:G:38:GLU:HG2	6:G:41:LEU:CD1	1.71	1.19
24:0:43:THR:HG21	24:0:75:GLY:N	1.55	1.19
2:A:16:G:C4'	26:5:18:MET:SD	2.30	1.19
2:A:911:A:C6	12:Q:16:ARG:CG	2.22	1.19
3:D:118:GLY:O	3:D:129:LEU:CG	1.91	1.19
3:D:70:LYS:HG3	3:D:73:ILE:CD1	1.71	1.19
4:E:200:ASP:HA	4:E:266:LYS:HD2	1.22	1.19
13:S:108:SER:O	13:S:110:THR:N	1.74	1.19
17:Y:33:GLU:OE1	17:Y:34:GLU:HG3	1.05	1.19
31:K:121:LEU:HA	31:K:125:MET:CE	1.72	1.19
27:6:8:ILE:CA	27:6:29:ARG:HH21	1.54	1.19
2:A:2870:C:O2	2:A:2871:C:O4'	1.61	1.19
1:B:50:G:P	13:S:74:PRO:HG2	1.82	1.19
5:F:167:ASP:OD2	5:F:232:LEU:HG	1.03	1.19
5:F:217:GLU:O	5:F:218:VAL:HG23	1.05	1.19
20:U:76:TYR:O	20:U:80:ILE:HD12	1.04	1.19
2:A:1031:G:H4'	30:9:8:LYS:NZ	1.55	1.19
2:A:2045:C:N4	2:A:2623:G:H1	1.40	1.19
2:A:993:G:C4'	21:V:90:PHE:CE2	2.26	1.19
12:Q:49:VAL:CG2	12:Q:121:ASP:N	2.01	1.19
20:U:97:ASP:O	20:U:101:ARG:CG	1.90	1.19
21:V:14:VAL:CG2	21:V:19:VAL:HG21	1.70	1.19
21:V:61:VAL:HA	21:V:98:ILE:CD1	1.72	1.19
2:A:337:C:OP1	17:Y:24:ARG:HB2	1.03	1.19
8:I:77:VAL:HG21	8:I:141:LEU:CD1	1.72	1.19
16:X:12:GLU:O	16:X:16:ASN:OD1	1.61	1.19
16:X:6:LYS:HB3	16:X:27:ALA:O	1.42	1.19
16:X:9:HIS:HD1	16:X:26:PHE:C	1.47	1.19
2:A:2320:A:H2	2:A:2333:A:N3	1.40	1.18
2:A:2403:C:N4	2:A:2415:G:O6	1.63	1.18
2:A:2659:G:H2'	2:A:2661:G:OP2	1.43	1.18

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:103:ASN:O	5:F:104:ASP:O	1.60	1.18
5:F:102:LEU:N	5:F:107:ARG:HH21	1.38	1.18
13:S:33:ARG:O	13:S:35:VAL:HG23	1.42	1.18
2:A:2225:A:H5'	2:A:2226:C:C5'	1.70	1.18
2:A:2258:C:C4	2:A:2426:A:O4'	1.96	1.18
2:A:2589:A:H2'	2:A:2590:A:C5'	1.73	1.18
2:A:2785:C:O2'	2:A:2786:U:O5'	1.60	1.18
4:E:268:LEU:HD23	4:E:269:ILE:N	1.56	1.18
2:A:2679:A:C2	4:E:300:VAL:HG22	1.75	1.18
9:N:19:MET:HB2	9:N:46:ILE:CG1	1.74	1.18
9:N:83:ILE:HG13	9:N:84:ARG:N	1.15	1.18
2:A:2309:A:H5'	2:A:2310:A:OP2	1.40	1.18
23:3:9:VAL:CG2	23:3:54:VAL:HA	1.73	1.18
2:A:2880:C:H42	2:A:2881:C:N4	1.41	1.18
19:R:61:HIS:HA	19:R:64:ARG:CD	1.73	1.18
13:S:46:GLN:O	13:S:47:LEU:HD23	1.01	1.18
28:7:21:ARG:O	28:7:24:THR:HG23	1.43	1.18
29:8:50:LEU:HD23	29:8:51:ALA:N	0.86	1.18
2:A:1129:A:C2	2:A:2570:G:C1'	2.25	1.18
2:A:1568:G:H3'	3:D:60:GLN:NE2	1.57	1.18
2:A:1665:A:O2'	10:O:66:LYS:NZ	1.74	1.18
2:A:2488:A:C2'	2:A:2489:G:H5'	1.74	1.18
2:A:2583:G:H2'	2:A:2584:U:O2	1.04	1.18
2:A:2711:A:OP2	2:A:2714:G:OP1	1.57	1.18
2:A:2746:U:H4'	7:H:138:GLN:HA	1.24	1.18
5:F:215:ALA:CB	5:F:238:SER:O	1.91	1.18
20:U:65:ILE:CD1	20:U:96:ALA:HB2	1.71	1.18
17:Y:23:VAL:HG23	17:Y:67:LEU:HD21	1.25	1.18
2:A:2528:U:C5	2:A:2530:A:C4	2.30	1.18
2:A:2869:G:C5	2:A:2870:C:C5	2.10	1.18
2:A:2712:U:C6	2:A:712(A):A:N7	2.08	1.18
3:D:61:TYR:OH	3:D:214:MET:CE	1.91	1.18
11:P:69:ILE:CG1	11:P:70:ASP:H	1.57	1.18
12:Q:127:ASN:HB3	12:Q:128:PRO:CD	1.72	1.18
2:A:25:U:C5'	15:W:80:PRO:HD3	1.72	1.18
23:3:7:LYS:O	23:3:54:VAL:CG2	1.88	1.18
2:A:2043:C:OP2	2:A:2779:U:O4	1.60	1.18
2:A:2746:U:O2	2:A:2759:G:N2	1.74	1.18
5:F:219:ASN:O	5:F:222:ASP:CB	1.90	1.18
19:R:33:ARG:HA	19:R:114:VAL:O	1.42	1.18
14:T:12:ASP:O	14:T:13:ILE:HG13	1.42	1.18
15:W:29:LEU:O	15:W:31:GLU:N	1.76	1.18

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:Z:159:THR:O	18:Z:160:LEU:HD13	1.41	1.18
22:2:5:VAL:HG12	22:2:6:GLN:N	1.38	1.18
27:6:12:MET:C	27:6:13:GLU:OE1	1.82	1.18
27:6:5:GLY:O	27:6:7:ARG:N	1.74	1.18
29:8:7:HIS:O	29:8:10:ALA:HB3	1.40	1.18
2:A:2206:C:O2'	2:A:2207:C:C5'	1.91	1.18
2:A:2258:C:OP1	24:0:4:LYS:NZ	1.76	1.18
2:A:2616:C:O2'	2:A:2617:C:C5'	1.91	1.18
2:A:2776:A:H4'	2:A:2778:A:OP1	1.44	1.18
3:D:103:ILE:CG1	3:D:104:ILE:HD11	1.52	1.18
7:H:87:GLU:HG3	7:H:162:ARG:O	1.43	1.18
7:H:86:LEU:HD13	7:H:86:LEU:C	1.63	1.18
17:Y:101:LEU:CD2	17:Y:103:LEU:CD2	2.20	1.18
17:Y:64:ASN:O	17:Y:72:ILE:HG23	1.41	1.18
18:Z:69:VAL:HG21	18:Z:81:VAL:CG1	1.73	1.18
23:3:53:LEU:CD2	23:3:54:VAL:HG13	1.72	1.18
28:7:7:PRO:C	28:7:8:ASN:HD22	1.43	1.18
29:8:36:LYS:CD	29:8:40:GLU:OE1	1.90	1.18
8:I:37:ILE:CG2	8:I:38:GLU:H	1.55	1.18
21:V:4:ILE:CD1	21:V:13:ARG:HG2	1.74	1.18
21:V:91:THR:C	21:V:92:ALA:HB3	1.50	1.18
21:V:94:LYS:C	21:V:95:ILE:HD12	0.80	1.18
15:W:30:GLU:HA	15:W:33:ARG:CD	1.72	1.18
2:A:223:A:O3'	2:A:224:G:P	2.00	1.18
2:A:1675:C:N3	4:E:225:LYS:HG2	1.58	1.18
2:A:2009:G:H1'	19:R:107:ASP:O	1.43	1.18
2:A:2303:G:H4'	6:G:99:ASP:CB	1.64	1.18
2:A:2739:U:H2'	2:A:2740:A:H5'	1.26	1.18
3:D:92:LEU:CD1	3:D:102:TYR:CE1	2.26	1.18
4:E:256:THR:HA	4:E:259:HIS:HE1	1.02	1.18
8:I:13:GLY:HA2	8:I:15:LYS:CE	1.72	1.18
2:A:557:U:C5'	9:N:92:GLN:HE21	1.57	1.18
10:O:4:GLN:O	10:O:21:VAL:O	1.58	1.18
2:A:2320:A:C6	13:S:9:PRO:HB3	1.79	1.18
27:6:19:GLY:HA2	27:6:44:ALA:CB	1.74	1.18
30:9:7:VAL:CG1	30:9:34:GLN:CD	2.01	1.18
2:A:2228:G:N7	2:A:2229:C:C5	2.11	1.18
2:A:2302:G:C6	2:A:2315:G:O6	1.95	1.18
4:E:214:VAL:HG21	4:E:221:LYS:NZ	1.56	1.18
15:W:104:THR:O	15:W:105:VAL:CG1	1.92	1.18
2:A:85:G:O5'	17:Y:65:VAL:CG1	1.92	1.18
16:X:18:MET:SD	16:X:25:GLN:N	2.15	1.18

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:3:8:LEU:HD21	23:3:31:LEU:HA	1.26	1.17
2:A:2507:C:C2	2:A:2583:G:N2	2.11	1.17
12:Q:69:ASN:HD22	12:Q:69:ASN:C	1.45	1.17
23:3:20:LYS:O	23:3:23:LEU:HG	1.01	1.17
2:A:388:G:P	25:4:29:PRO:HG3	1.82	1.17
2:A:1492:G:O4'	3:D:97:ASP:OD1	1.61	1.17
2:A:2573:C:C5'	2:A:2573:C:C6	2.24	1.17
2:A:2756:U:O2'	2:A:2757:A:H5'	1.02	1.17
2:A:856:C:C5'	24:0:25:LYS:NZ	2.03	1.17
17:Y:103:LEU:CD1	17:Y:113:GLU:HB3	1.74	1.17
18:Z:46:GLN:O	18:Z:47:SER:O	1.62	1.17
2:A:75:G:O3'	22:2:51:LYS:NZ	1.76	1.17
27:6:41:ASP:HB2	27:6:46:LYS:NZ	1.55	1.17
2:A:2255:G:C2	2:A:2256:G:H1'	1.76	1.17
2:A:2733:A:H1'	4:E:318:ASN:ND2	1.59	1.17
4:E:72:VAL:O	4:E:73:ILE:CD1	1.93	1.17
10:O:34:ASN:O	10:O:35:ILE:O	1.62	1.17
11:P:117:GLU:OE2	11:P:136:ALA:O	1.61	1.17
11:P:76:LEU:O	11:P:81:VAL:HG23	1.41	1.17
13:S:99:GLU:OE1	13:S:128:ASP:HB2	1.02	1.17
21:V:61:VAL:CA	21:V:98:ILE:CD1	2.23	1.17
17:Y:101:LEU:HD11	17:Y:112:LEU:CD1	1.74	1.17
2:A:2546:U:H5'	2:A:2565:A:C2	1.79	1.17
2:A:2618:G:O2'	2:A:2619:C:O5'	1.61	1.17
2:A:2644:G:C8	2:A:2644:G:O5'	1.98	1.17
11:P:57:VAL:HG12	11:P:58:GLN:N	1.51	1.17
20:U:92:ARG:N	21:V:10:LYS:NZ	1.91	1.17
8:I:92:SER:HB3	8:I:122:ARG:NH1	1.58	1.17
8:I:95:SER:HA	8:I:98:ILE:CD1	1.72	1.17
16:X:11:THR:O	16:X:15:MET:CG	1.91	1.17
16:X:5:ILE:HG22	16:X:6:LYS:N	1.25	1.17
2:A:1525:G:O3'	2:A:1526:G:P	2.02	1.17
23:3:59:VAL:O	23:3:60:GLU:CG	1.92	1.17
26:5:12:SER:CB	26:5:15:LYS:HZ1	1.57	1.17
2:A:2219:G:C2'	2:A:2224:G:C5'	2.21	1.17
2:A:2359:C:O2'	2:A:2360:A:O4'	1.61	1.17
2:A:526:A:H2	2:A:2626:C:C1'	1.58	1.17
2:A:2653:U:N3	2:A:2654:A:N6	1.93	1.17
2:A:2865:U:C5	2:A:2866:U:C5	2.33	1.17
7:H:86:LEU:N	7:H:131:ILE:CG2	2.05	1.17
7:H:86:LEU:HA	7:H:148:ARG:NH2	0.86	1.17
12:Q:144:THR:OG1	12:Q:145:PRO:HD3	1.43	1.17

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:0:65:GLY:O	24:0:66:LYS:CD	1.86	1.17
28:7:30:ILE:CD1	28:7:33:ARG:HD3	1.75	1.17
2:A:2603:G:N3	2:A:2604:U:C6	2.13	1.17
4:E:205:THR:CG2	4:E:259:HIS:C	2.11	1.17
4:E:303:PRO:CB	4:E:307:LEU:HD13	1.46	1.17
4:E:44:TYR:C	4:E:309:PRO:HG3	1.63	1.17
7:H:129:LYS:O	7:H:130:ILE:CD1	1.93	1.17
7:H:18:VAL:CG2	7:H:23:VAL:HG22	1.73	1.17
9:N:13:ASP:N	9:N:38:VAL:HG11	1.51	1.17
10:O:79:PHE:HA	14:T:22:VAL:HG22	1.24	1.17
15:W:8:ARG:O	15:W:10:VAL:HG23	1.43	1.17
17:Y:41:ARG:HB2	17:Y:112:LEU:HA	1.24	1.17
18:Z:19:ILE:HB	18:Z:39:PHE:CE1	1.79	1.17
2:A:2386:C:H4'	24:0:39:ARG:NE	1.60	1.17
24:0:49:GLN:NE2	24:0:73:GLY:HA3	1.39	1.17
2:A:2093:G:C5	2:A:2225:A:N7	2.12	1.17
2:A:2439:A:C1'	2:A:2587:A:OP1	1.92	1.17
2:A:2482:G:C2'	2:A:2483:C:H5'	1.74	1.17
2:A:2700:C:H2'	2:A:2701:C:H4'	1.24	1.17
2:A:2754:U:H2'	2:A:2756:U:OP1	0.99	1.17
2:A:2776:A:C1'	2:A:2778:A:N7	2.08	1.17
3:D:128:ALA:HB3	3:D:190:THR:CG2	1.54	1.17
5:F:62:GLY:CA	5:F:65:ARG:NH2	2.06	1.17
2:A:2378:A:N3	13:S:26:LEU:CD2	2.05	1.17
2:A:974:G:N7	21:V:80:TYR:CD1	2.12	1.17
17:Y:35:TYR:OH	17:Y:113:GLU:HG3	1.43	1.17
23:3:40:THR:CB	23:3:43:ILE:HD13	1.74	1.17
2:A:1124:C:O3'	2:A:1125:G:P	2.02	1.17
2:A:1214:A:H2'	2:A:1215:G:C8	1.80	1.17
2:A:2423:U:C5	2:A:2425:A:N6	2.12	1.17
2:A:2657:A:N6	2:A:2664:G:H21	1.39	1.17
2:A:775:G:O2'	2:A:791:C:N4	1.78	1.17
3:D:158:GLY:CA	3:D:194:VAL:CG1	2.17	1.17
5:F:36:ARG:CA	5:F:39:GLN:NE2	2.01	1.17
2:A:616:A:H5''	5:F:42:ARG:HH12	1.09	1.17
13:S:41:LYS:O	13:S:41:LYS:CD	1.93	1.17
20:U:115:ASN:O	20:U:117:ARG:N	1.78	1.17
17:Y:101:LEU:CD2	17:Y:112:LEU:HD11	1.74	1.17
8:I:95:SER:CA	8:I:98:ILE:HD12	1.75	1.17
8:I:95:SER:OG	8:I:98:ILE:CD1	1.79	1.17
24:0:69:PHE:O	24:0:70:ILE:HG23	1.42	1.17
24:0:45:PHE:CZ	24:0:78:PHE:HD2	1.62	1.17

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2226:C:C2'	2:A:2227:A:O4'	1.93	1.17
2:A:2333:A:H1'	2:A:2335:A:C5	1.80	1.17
2:A:2485:G:H5''	12:Q:144:THR:CG2	1.73	1.17
2:A:2543:G:C2'	2:A:2544:G:C8	2.26	1.17
2:A:2688:U:O2	2:A:2719:G:N2	1.76	1.17
2:A:2838:G:H2'	2:A:2839:G:H5'	1.26	1.17
8:I:3:VAL:HG21	8:I:21:VAL:CG2	1.74	1.17
2:A:875:G:OP1	18:Z:146:HIS:CD2	1.98	1.17
18:Z:2:GLU:CA	18:Z:54:ILE:CG2	2.23	1.17
18:Z:2:GLU:N	18:Z:54:ILE:CG2	2.06	1.17
2:A:2021:C:P	26:5:15:LYS:CE	2.32	1.17
2:A:2263:C:C2'	2:A:2264:C:H5'	1.74	1.17
2:A:2507:C:N3	2:A:2583:G:N3	1.91	1.17
2:A:593:G:H5''	29:8:62:LEU:HD21	1.19	1.17
12:Q:20:ILE:HG13	12:Q:21:SER:N	1.59	1.17
18:Z:113:VAL:HG12	18:Z:114:ASP:H	1.04	1.17
2:A:280:C:O3'	2:A:281:G:P	2.03	1.17
25:4:14:ILE:HG23	25:4:16:TYR:CE1	1.81	1.16
2:A:2209:C:O2'	2:A:2210:G:H3'	1.43	1.16
2:A:2292:C:C2	2:A:2293:C:C6	2.32	1.16
2:A:2603:G:C2	2:A:2604:U:C6	2.33	1.16
2:A:2617:C:N3	2:A:2618:G:H8	1.40	1.16
2:A:2754:U:C2'	2:A:2756:U:OP1	1.93	1.16
2:A:2815:C:H5'	26:5:29:ASN:ND2	1.58	1.16
12:Q:49:VAL:CG2	12:Q:119:ASN:O	1.92	1.16
18:Z:92:VAL:O	18:Z:94:VAL:N	1.75	1.16
2:A:2328:A:N6	2:A:2329:G:O6	1.78	1.16
2:A:2586:C:O2	2:A:2587:A:N7	1.76	1.16
2:A:2731:G:N2	2:A:2732:G:N2	1.93	1.16
9:N:58:GLU:CA	9:N:61:VAL:HG23	1.74	1.16
15:W:86:LEU:HB3	15:W:87:PRO:CD	1.74	1.16
8:I:95:SER:O	8:I:98:ILE:HB	0.98	1.16
2:A:2310:A:C2'	6:G:55:LYS:HE2	1.73	1.16
31:K:100:VAL:HG12	31:K:101:THR:H	1.05	1.16
2:A:95:G:H5'	22:2:41:GLU:OE1	1.00	1.16
28:7:30:ILE:CA	28:7:33:ARG:CD	2.11	1.16
2:A:2416:C:OP1	11:P:51:PHE:HE2	1.01	1.16
2:A:199:A:N1	2:A:2433:A:C8	2.14	1.16
2:A:2864:G:O2'	2:A:2865:U:O4'	1.62	1.16
3:D:73:ILE:HG21	3:D:95:TYR:CE2	1.78	1.16
4:E:199:ALA:CB	4:E:312:ARG:O	1.93	1.16
5:F:211:ASP:O	5:F:211:ASP:OD2	1.61	1.16

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:97:GLN:CB	6:G:106:PHE:CE2	2.27	1.16
2:A:245:G:OP2	11:P:53:ARG:NH1	1.76	1.16
12:Q:89:PRO:C	12:Q:90:PHE:CD1	2.17	1.16
21:V:11:GLN:NE2	21:V:22:VAL:HG21	1.54	1.16
2:A:904:C:O4'	18:Z:166:LEU:HD21	1.44	1.16
30:9:7:VAL:HG11	30:9:34:GLN:CG	1.61	1.16
2:A:2094:G:C6	2:A:2196:C:N3	2.14	1.16
5:F:219:ASN:N	5:F:219:ASN:HD22	1.38	1.16
6:G:93:LEU:HD22	6:G:97:GLN:OE1	1.44	1.16
17:Y:101:LEU:CD2	17:Y:103:LEU:HD11	1.74	1.16
2:A:856:C:O3'	24:0:56:ASP:OD2	1.60	1.16
23:3:20:LYS:CA	23:3:23:LEU:HG	1.75	1.16
2:A:2603:G:C2	2:A:2604:U:C5	2.33	1.16
10:O:56:GLN:O	10:O:58:VAL:HG23	1.45	1.16
20:U:13:ARG:O	20:U:16:LYS:CB	1.93	1.16
20:U:21:ALA:HA	20:U:24:PHE:CZ	1.78	1.16
20:U:92:ARG:HA	20:U:95:LEU:HD12	1.20	1.16
15:W:32:ALA:CB	15:W:35:ILE:CD1	2.23	1.16
17:Y:48:VAL:HG12	17:Y:49:GLU:N	1.46	1.16
18:Z:39:PHE:O	18:Z:43:PHE:CD2	1.99	1.16
26:5:45:ILE:HG13	26:5:52:TYR:CE1	1.80	1.16
2:A:2049:G:C2	2:A:2620:C:N3	2.14	1.16
3:D:223:ASN:O	3:D:224:VAL:O	1.63	1.16
5:F:219:ASN:O	5:F:222:ASP:HB2	1.02	1.16
7:H:10:ILE:HG23	7:H:14:VAL:HG11	1.16	1.16
11:P:128:GLY:CA	11:P:132:LYS:HZ2	1.58	1.16
12:Q:45:GLN:HE22	12:Q:153:PRO:CB	1.57	1.16
22:2:13:PRO:HD3	22:2:16:ARG:NH1	1.60	1.16
26:5:25:LEU:O	26:5:26:THR:HG23	1.44	1.16
26:5:44:HIS:HA	26:5:52:TYR:CZ	1.81	1.16
26:5:57:VAL:HG12	26:5:58:LEU:N	1.55	1.16
2:A:2358:G:N2	2:A:2359:C:O4'	1.78	1.16
2:A:2432:A:C2	2:A:2433:A:N1	2.13	1.16
2:A:2491:U:O2'	2:A:2492:U:H5'	1.02	1.16
2:A:2653:U:N3	2:A:2654:A:C6	2.14	1.16
2:A:2741:A:O2'	2:A:2742:C:H5'	1.00	1.16
2:A:459:U:OP2	28:7:40:HIS:CD2	1.99	1.16
2:A:994:C:O2'	20:U:54:LYS:HG2	1.43	1.16
7:H:93:TYR:O	7:H:94:ARG:CG	1.92	1.16
23:3:59:VAL:HG12	23:3:60:GLU:H	1.04	1.16
2:A:2212:A:H2'	2:A:2213:U:C5	1.77	1.16
2:A:2459:A:C8	2:A:2460:U:C5	2.33	1.16

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:526:A:C2	2:A:2626:C:O4'	1.98	1.16
2:A:2768:C:C2	2:A:2769:C:C5	2.33	1.16
2:A:2808:U:C2	2:A:2892:A:N6	2.13	1.16
3:D:168:GLY:O	3:D:170:TYR:N	1.79	1.16
2:A:2052:G:H21	4:E:245:ARG:CG	1.57	1.16
7:H:75:VAL:O	7:H:77:GLY:N	1.75	1.16
12:Q:91:HIS:C	12:Q:111:THR:HG23	1.66	1.16
2:A:494:G:H4'	15:W:6:ILE:CG2	1.75	1.16
17:Y:32:ARG:O	17:Y:34:GLU:N	1.77	1.16
17:Y:63:ILE:HD11	17:Y:75:GLU:CA	1.74	1.16
16:X:13:LYS:O	16:X:16:ASN:OD1	1.64	1.16
6:G:29:HIS:N	6:G:69:ILE:HD13	1.59	1.16
3:D:139:LEU:CD1	3:D:139:LEU:O	1.93	1.16
16:X:47:VAL:HG11	16:X:69:SER:HB3	1.20	1.16
2:A:1278:A:OP1	19:R:36:THR:OG1	1.60	1.16
5:F:96:LYS:CB	5:F:98:ARG:CZ	1.80	1.16
8:I:7:LYS:CD	8:I:12:LYS:HG2	1.74	1.16
9:N:135:ILE:O	9:N:139:LEU:HD13	1.34	1.16
10:O:98:ILE:HD11	10:O:117:LEU:CB	1.71	1.16
20:U:13:ARG:NH1	20:U:13:ARG:HB2	0.83	1.16
17:Y:101:LEU:CD2	17:Y:103:LEU:CD1	2.24	1.16
23:3:53:LEU:HD23	23:3:54:VAL:HG13	1.28	1.16
29:8:58:MET:O	29:8:60:LEU:N	1.77	1.16
2:A:1568:G:C3'	3:D:60:GLN:NE2	2.08	1.16
2:A:2020:A:N7	26:5:9:LYS:HE2	1.22	1.16
2:A:2592:G:C8	2:A:2593:U:C5	2.34	1.16
2:A:2869:G:C6	2:A:2870:C:C5	2.34	1.16
2:A:965:C:H5'	2:A:2273:A:C1'	1.76	1.16
2:A:1818:U:H3'	3:D:155:ARG:HG2	1.16	1.16
3:D:80:ILE:HB	3:D:82:TYR:CE1	1.81	1.16
5:F:34:ALA:CB	5:F:110:ALA:HB1	1.75	1.16
9:N:42:GLU:O	9:N:132:LEU:O	1.60	1.16
20:U:28:ARG:HA	20:U:31:GLN:HB2	1.18	1.16
21:V:30:GLY:O	21:V:33:VAL:CG2	1.91	1.16
17:Y:101:LEU:CD2	17:Y:112:LEU:HD21	1.76	1.16
9:N:10:VAL:CB	9:N:36:VAL:HA	1.76	1.16
2:A:1620:G:C1'	28:7:1:MET:N	2.09	1.16
2:A:1665:A:O3'	10:O:66:LYS:HE2	0.98	1.15
2:A:2801:A:C2	2:A:2895:U:O2'	1.96	1.15
3:D:66:PHE:O	3:D:67:LYS:HD2	1.41	1.15
2:A:2679:A:N3	4:E:300:VAL:HG11	1.45	1.15
12:Q:59:ASN:ND2	12:Q:60:ALA:N	1.93	1.15

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:Q:67:ALA:O	12:Q:71:PHE:CE1	1.98	1.15
21:V:91:THR:O	21:V:92:ALA:HB2	1.32	1.15
17:Y:101:LEU:CD1	17:Y:112:LEU:CD1	2.24	1.15
29:8:17:THR:OG1	29:8:19:THR:OG1	1.63	1.15
2:A:2633:G:N3	2:A:2634:G:C8	2.15	1.15
2:A:1827:C:H41	3:D:225:ARG:NH1	1.41	1.15
4:E:218:GLY:O	4:E:219:VAL:CG2	1.94	1.15
5:F:144:PHE:CE2	5:F:156:LEU:HD13	1.80	1.15
20:U:99:ALA:CB	20:U:106:PHE:CZ	2.28	1.15
2:A:72:U:H5'	16:X:2:TRP:CH2	1.81	1.15
2:A:2009:G:H5''	15:W:41:LYS:HD2	1.18	1.15
3:D:104:ILE:N	3:D:104:ILE:HD12	1.57	1.15
3:D:204:PHE:HD1	3:D:204:PHE:N	1.43	1.15
10:O:98:ILE:CD1	10:O:117:LEU:CB	2.23	1.15
2:A:1156:A:OP1	20:U:55:ARG:CZ	1.94	1.15
26:5:45:ILE:CG2	26:5:52:TYR:CD1	2.28	1.15
2:A:2061:G:N7	2:A:2501:C:H1'	1.61	1.15
2:A:2776:A:N3	2:A:2778:A:C5	2.15	1.15
4:E:205:THR:O	4:E:206:LYS:HG3	1.47	1.15
4:E:268:LEU:HD23	4:E:269:ILE:H	0.99	1.15
2:A:617:G:OP1	5:F:221:GLU:CD	1.84	1.15
5:F:51:TYR:O	5:F:55:ARG:CA	1.94	1.15
2:A:637:A:C8	11:P:111:ALA:CB	2.27	1.15
18:Z:92:VAL:HG13	18:Z:124:ALA:CB	1.76	1.15
2:A:2311:A:OP2	6:G:55:LYS:HE3	1.45	1.15
31:K:46:THR:HG22	31:K:54:LEU:HD12	1.20	1.15
2:A:2215:G:O2'	2:A:2216:G:H5'	1.41	1.15
10:O:62:VAL:CA	10:O:84:CYS:SG	2.34	1.15
10:O:66:LYS:HG3	10:O:82:ASN:HD21	1.01	1.15
19:R:104:ARG:HA	19:R:105:ARG:NH2	1.60	1.15
17:Y:46:ASP:HA	17:Y:102:ASP:OD2	0.99	1.15
24:O:77:ARG:O	24:O:78:PHE:O	1.63	1.15
2:A:2197:U:O2'	2:A:2198:A:H5''	1.42	1.15
4:E:174:LEU:O	4:E:177:ALA:HB3	1.40	1.15
4:E:205:THR:CG2	4:E:259:HIS:CB	2.23	1.15
6:G:19:GLU:OE1	6:G:135:VAL:HG22	1.43	1.15
9:N:138:THR:OG1	9:N:139:LEU:HD13	1.43	1.15
16:X:6:LYS:HE3	16:X:29:ASP:N	1.60	1.15
22:2:29:ASN:O	22:2:34:GLN:CD	1.85	1.15
23:3:30:ARG:HG3	23:3:30:ARG:HH11	1.04	1.15
2:A:2218:G:O2'	3:D:146:LYS:CE	1.92	1.15
2:A:2373:G:C6	2:A:2374:C:N4	2.15	1.15

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:998:C:H5''	20:U:84:LYS:NZ	1.61	1.15
3:D:85:ASN:OD1	3:D:86:ARG:NH2	1.78	1.15
4:E:74:GLU:CA	4:E:293:TYR:HE2	1.57	1.15
5:F:153:VAL:HG13	5:F:157:LEU:CD2	1.74	1.15
5:F:151:GLN:OE1	5:F:154:VAL:CG2	1.95	1.15
2:A:2745:C:C1'	7:H:142:GLU:OE2	1.94	1.15
12:Q:57:ARG:O	12:Q:61:LEU:HG	1.47	1.15
20:U:44:THR:O	20:U:47:TYR:HB2	1.45	1.15
20:U:61:TRP:O	20:U:65:ILE:HG12	1.00	1.15
2:A:2386:C:C4'	24:O:39:ARG:HH21	1.58	1.15
2:A:2761:G:H2'	2:A:2762:G:H5'	1.19	1.15
3:D:141:HIS:CE1	3:D:191:VAL:O	1.99	1.15
5:F:3:ALA:HB3	5:F:16:VAL:O	0.98	1.15
6:G:93:LEU:HD22	6:G:106:PHE:CD2	1.80	1.15
11:P:114:VAL:HG23	11:P:132:LYS:HB3	1.23	1.15
17:Y:101:LEU:HG	17:Y:112:LEU:CD1	1.76	1.15
31:K:106:GLU:O	31:K:110:LYS:HE3	1.44	1.15
2:A:1364:G:O5'	25:4:3:LYS:HD3	1.45	1.15
2:A:2592:G:C5	2:A:2593:U:C5	2.35	1.15
2:A:2815:C:O2'	2:A:2816:C:C5'	1.94	1.15
2:A:2832:U:H5'	2:A:2832:U:C5	1.82	1.15
2:A:994:C:C2	20:U:53:LYS:HD2	1.78	1.15
2:A:2679:A:C2	4:E:300:VAL:HG21	1.80	1.15
2:A:801:G:P	5:F:79:ARG:NE	2.19	1.15
19:R:52:ILE:HG22	19:R:53:HIS:N	1.54	1.15
21:V:31:ASP:O	21:V:63:HIS:HB2	1.47	1.15
1:B:104:A:C1'	18:Z:24:TYR:OH	1.95	1.15
25:4:5:LEU:CB	25:4:56:VAL:HG13	1.76	1.15
2:A:1140:C:N4	9:N:49:ARG:HD2	1.61	1.15
2:A:1457:A:N1	2:A:2703:C:N4	1.94	1.15
5:F:47:GLY:C	5:F:92:PRO:HG3	1.63	1.15
7:H:159:LYS:H	7:H:162:ARG:NH2	1.43	1.15
7:H:63:LEU:O	7:H:66:THR:HG22	1.45	1.15
7:H:85:ALA:HA	7:H:131:ILE:CG2	1.75	1.15
9:N:45:VAL:N	9:N:132:LEU:HB2	1.24	1.15
13:S:47:LEU:HD12	13:S:58:LEU:CD2	1.76	1.15
18:Z:64:ALA:HB3	18:Z:85:MET:CA	1.75	1.15
2:A:2205:C:O2'	2:A:2228:G:N2	1.81	1.14
2:A:2410:G:N3	2:A:2411:A:C8	2.15	1.14
2:A:2580:U:H5	2:A:2581:G:N7	1.33	1.14
2:A:2768:C:N3	2:A:2769:C:H5	1.16	1.14
4:E:205:THR:HG22	4:E:259:HIS:HB2	1.26	1.14

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:N:20:GLY:O	9:N:22:VAL:N	1.79	1.14
9:N:15:ARG:NE	9:N:40:ASN:ND2	1.95	1.14
11:P:71:GLU:O	11:P:74:THR:N	1.80	1.14
19:R:77:ARG:CB	19:R:77:ARG:NH1	1.72	1.14
20:U:73:GLY:O	20:U:74:MET:HG2	1.47	1.14
2:A:25:U:C5'	15:W:80:PRO:CD	2.24	1.14
18:Z:112:LEU:HD23	18:Z:113:VAL:N	1.61	1.14
24:0:61:ALA:HB2	24:0:81:ILE:HD13	1.28	1.14
23:3:20:LYS:CA	23:3:23:LEU:CD1	2.24	1.14
2:A:2320:A:N6	13:S:9:PRO:CG	2.06	1.14
4:E:211:GLN:NE2	4:E:216:ARG:H	1.40	1.14
7:H:129:LYS:C	7:H:130:ILE:CD1	2.15	1.14
7:H:44:VAL:HA	7:H:49:ILE:CG2	1.78	1.14
9:N:134:GLU:O	9:N:138:THR:HG23	0.97	1.14
12:Q:56:ILE:N	12:Q:56:ILE:HD13	1.48	1.14
13:S:23:ARG:NH2	13:S:37:ARG:NH2	1.94	1.14
18:Z:103:ARG:HG2	18:Z:139:THR:HG22	1.17	1.14
16:X:47:VAL:CG1	16:X:69:SER:CB	2.24	1.14
24:0:23:VAL:HG12	24:0:24:LYS:H	1.07	1.14
24:0:37:LEU:CD1	24:0:70:ILE:CD1	2.24	1.14
2:A:2364:C:H5''	24:0:38:VAL:HG12	1.19	1.14
29:8:26:LYS:HD2	29:8:44:LYS:C	1.67	1.14
2:A:2265:U:C2	2:A:2266:A:N7	2.15	1.14
4:E:205:THR:HA	4:E:261:ARG:HD2	1.22	1.14
4:E:48:MET:O	4:E:49:THR:HG22	1.48	1.14
5:F:147:LEU:HD11	5:F:156:LEU:HD11	1.16	1.14
5:F:52:ALA:CA	5:F:55:ARG:HB3	1.77	1.14
10:O:64:ARG:NH2	10:O:100:GLY:HA3	1.62	1.14
10:O:77:ILE:C	10:O:77:ILE:HD13	1.58	1.14
20:U:8:ILE:N	20:U:8:ILE:HD12	1.61	1.14
2:A:2343:C:H5'	2:A:2374:C:OP1	1.44	1.14
2:A:2432:A:H2	2:A:2433:A:C5	1.64	1.14
2:A:2528:U:C5	2:A:2530:A:N3	2.14	1.14
2:A:2626:C:C2'	2:A:2627:G:H5''	1.78	1.14
2:A:2052:G:H4'	4:E:239:GLY:O	1.47	1.14
8:I:95:SER:O	8:I:98:ILE:CB	1.94	1.14
2:A:1598:C:H5''	16:X:34:LYS:CG	1.77	1.14
6:G:56:ARG:CG	6:G:65:GLU:HB2	1.77	1.14
2:A:1082:U:O4'	31:K:118:ALA:CB	1.95	1.14
31:K:129:GLU:CG	31:K:133:LYS:HE3	1.68	1.14
30:9:32:HIS:O	30:9:34:GLN:N	1.79	1.14
2:A:2064:C:H1'	2:A:2450:A:C6	1.83	1.14

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2425:A:O2'	2:A:2426:A:OP2	1.62	1.14
2:A:2717:G:C5'	2:A:2717:G:H8	1.59	1.14
1:B:47:C:O3'	13:S:107:ASN:ND2	1.79	1.14
3:D:175:LEU:HD12	3:D:179:GLU:CB	1.78	1.14
2:A:1827:C:N4	3:D:225:ARG:HH12	1.43	1.14
5:F:215:ALA:HB1	5:F:241:ALA:HB3	1.20	1.14
5:F:32:GLY:C	5:F:35:VAL:HG23	1.66	1.14
12:Q:51:GLU:HA	12:Q:118:ALA:HB2	1.26	1.14
12:Q:56:ILE:CD1	12:Q:56:ILE:H	1.47	1.14
15:W:85:VAL:HG12	15:W:95:ILE:HD11	1.20	1.14
18:Z:120:LEU:O	18:Z:121:GLN:HG3	1.46	1.14
23:3:18:ASP:OD2	23:3:49:LYS:NZ	1.80	1.14
26:5:18:MET:O	26:5:21:SER:OG	1.62	1.14
30:9:3:VAL:O	30:9:5:SER:N	1.81	1.14
2:A:2254:C:O2'	2:A:2255:G:H5'	1.46	1.14
2:A:2334:G:H21	13:S:12:ARG:HG3	1.06	1.14
2:A:2626:C:C2'	2:A:2627:G:H5'	1.78	1.14
2:A:2821:A:H2	2:A:2822:G:C4	1.66	1.14
2:A:2842:G:H2'	2:A:2843:G:H5'	1.29	1.14
4:E:44:TYR:C	4:E:74:GLU:OE1	1.84	1.14
5:F:102:LEU:H	5:F:107:ARG:NH2	1.46	1.14
5:F:94:THR:O	5:F:96:LYS:N	1.81	1.14
12:Q:67:ALA:HB2	12:Q:70:ARG:CZ	1.76	1.14
19:R:61:HIS:CA	19:R:64:ARG:HD3	1.76	1.14
13:S:35:VAL:CA	13:S:103:ASP:CB	2.25	1.14
8:I:95:SER:OG	8:I:98:ILE:HD12	0.97	1.14
22:2:55:ARG:O	22:2:58:THR:OG1	1.65	1.14
2:A:1917:U:H3'	2:A:1918:A:H8	1.02	1.14
24:0:39:ARG:HG2	24:0:69:PHE:CZ	1.81	1.14
2:A:2287:A:H2	2:A:2289:G:C1'	1.41	1.14
3:D:167:GLU:CB	3:D:170:TYR:CE1	2.31	1.14
6:G:151:ILE:HD13	6:G:156:ARG:NH2	1.63	1.14
7:H:137:LYS:CD	7:H:138:GLN:H	1.60	1.14
15:W:65:LEU:O	15:W:69:LEU:HD21	1.45	1.14
15:W:11:ARG:NH2	15:W:98:LYS:HB3	1.61	1.14
2:A:2317:C:C5'	6:G:150:SER:HA	1.77	1.14
2:A:825:C:C4'	2:A:2428:G:N7	2.10	1.14
5:F:47:GLY:N	5:F:92:PRO:HB2	1.60	1.14
6:G:76:ARG:O	6:G:77:ASP:O	1.64	1.14
9:N:66:ASP:O	9:N:68:GLY:N	1.79	1.14
13:S:61:ALA:CB	13:S:88:ALA:HB2	1.76	1.14
16:X:4:VAL:CG2	22:2:24:LYS:HZ2	1.53	1.14

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:105:SER:OG	6:G:131:THR:CG2	1.95	1.14
2:A:1059:G:N3	31:K:127:ILE:HG23	1.63	1.14
15:W:90:ARG:NH1	15:W:90:ARG:CB	2.10	1.14
29:8:4:MET:HB2	29:8:7:HIS:CE1	1.83	1.14
2:A:324:A:O3'	2:A:325:G:P	2.06	1.14
4:E:72:VAL:C	4:E:73:ILE:CD1	2.16	1.14
4:E:77:PRO:HB2	4:E:187:HIS:N	1.62	1.14
11:P:113:GLN:N	11:P:113:GLN:NE2	1.95	1.14
12:Q:58:HIS:HA	12:Q:61:LEU:HD12	1.18	1.14
19:R:36:THR:HG21	19:R:40:LYS:HB3	1.18	1.14
2:A:2296:U:C4	13:S:16:ALA:CB	2.29	1.14
18:Z:105:GLN:C	18:Z:142:ASN:HD21	1.51	1.14
2:A:2386:C:C4'	24:0:39:ARG:NH2	2.10	1.14
24:0:37:LEU:CD1	24:0:70:ILE:HD13	1.78	1.14
23:3:8:LEU:HD23	23:3:31:LEU:HA	1.18	1.14
28:7:34:ARG:HD3	28:7:42:LEU:CD2	1.73	1.14
2:A:2292:C:N3	2:A:2293:C:C5	2.15	1.14
2:A:2447:G:C2	2:A:2500:U:O4	2.00	1.14
2:A:2472:G:H2'	2:A:2475:C:N4	1.60	1.14
2:A:593:G:H5''	29:8:62:LEU:CD2	1.77	1.14
3:D:75:GLY:HA3	3:D:115:ILE:O	1.37	1.14
4:E:71:THR:HG21	4:E:299:SER:OG	1.47	1.14
7:H:96:SER:O	7:H:97:LYS:O	1.64	1.14
9:N:60:ARG:HA	9:N:71:TYR:CD2	1.82	1.14
10:O:62:VAL:HA	10:O:84:CYS:SG	1.86	1.14
10:O:92:SER:HB2	10:O:113:LYS:HZ3	1.07	1.14
21:V:43:GLU:C	21:V:44:GLN:NE2	2.00	1.14
31:K:22:PRO:HG2	31:K:23:PRO:HD3	1.25	1.14
8:I:51:LYS:O	8:I:55:GLN:HG3	1.47	1.14
7:H:53:ARG:HH11	7:H:56:ASP:CA	1.60	1.14
28:7:30:ILE:C	28:7:33:ARG:HB2	1.66	1.13
29:8:26:LYS:HE3	29:8:45:GLY:N	1.61	1.13
3:D:149:ARG:CB	3:D:152:GLN:NE2	1.95	1.13
3:D:80:ILE:HD13	3:D:82:TYR:CE1	1.82	1.13
4:E:44:TYR:CA	4:E:309:PRO:CD	2.22	1.13
5:F:51:TYR:O	5:F:55:ARG:HB3	1.44	1.13
11:P:64:ILE:HD12	11:P:106:VAL:CA	1.77	1.13
2:A:2379:G:OP1	13:S:30:GLY:HA2	1.47	1.13
23:3:20:LYS:HD3	23:3:23:LEU:CD1	1.76	1.13
2:A:2303:G:C5'	6:G:99:ASP:HB3	1.78	1.13
2:A:2678:C:N3	2:A:2679:A:C8	2.16	1.13
3:D:66:PHE:CD2	3:D:66:PHE:O	2.00	1.13

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:7:LYS:CB	8:I:12:LYS:HD3	1.77	1.13
9:N:19:MET:HE2	9:N:22:VAL:HG21	1.30	1.13
10:O:13:ASN:O	10:O:15:GLY:N	1.78	1.13
17:Y:51:LEU:HA	17:Y:97:ARG:NH2	1.63	1.13
18:Z:3:LEU:HD21	18:Z:38:ALA:HB3	1.14	1.13
2:A:1151:G:O2'	20:U:81:ASN:ND2	1.81	1.13
22:2:30:ALA:O	22:2:34:GLN:CB	1.95	1.13
2:A:1080:C:O2	31:K:127:ILE:HG12	1.46	1.13
9:N:105:LEU:HG	9:N:106:GLY:H	1.12	1.13
2:A:1287:A:O4'	19:R:104:ARG:CD	1.95	1.13
2:A:1364:G:H3'	25:4:3:LYS:HD2	1.17	1.13
2:A:1612:C:C2	28:7:3:ARG:NH1	2.16	1.13
2:A:2315:G:C5'	6:G:133:ASN:HD22	1.61	1.13
2:A:2470:G:N2	2:A:2471:C:N1	1.96	1.13
2:A:2768:C:O2'	2:A:2769:C:H5'	1.47	1.13
2:A:526:A:C2	2:A:2626:C:C1'	2.31	1.13
3:D:210:LYS:HA	3:D:213:LYS:CD	1.77	1.13
3:D:81:GLU:O	3:D:83:ASP:OD2	1.64	1.13
6:G:142:ALA:HB2	6:G:151:ILE:CG1	1.77	1.13
6:G:145:ASP:HB3	13:S:15:GLU:CA	1.75	1.13
9:N:25:GLN:CA	9:N:28:GLU:HG2	1.77	1.13
9:N:15:ARG:CB	9:N:43:ARG:CG	1.94	1.13
11:P:64:ILE:CD1	11:P:106:VAL:HA	1.77	1.13
12:Q:72:VAL:O	12:Q:73:GLN:CG	1.94	1.13
19:R:77:ARG:NH1	19:R:77:ARG:HB2	0.82	1.13
13:S:35:VAL:HA	13:S:103:ASP:HB3	1.14	1.13
17:Y:103:LEU:HD22	17:Y:108:ARG:O	1.44	1.13
2:A:856:C:O2'	24:0:24:LYS:CG	1.95	1.13
25:4:5:LEU:HB2	25:4:56:VAL:HG13	1.16	1.13
30:9:4:ARG:O	30:9:36:GLN:CG	1.97	1.13
2:A:2453:A:O2'	2:A:2454:G:C5'	1.95	1.13
17:Y:73:HIS:C	17:Y:91:LEU:CD1	2.06	1.13
18:Z:100:THR:CA	18:Z:137:ASP:OD2	1.97	1.13
2:A:749:C:H2'	2:A:750:A:H8	1.11	1.13
24:0:37:LEU:HD13	24:0:69:PHE:HB2	1.20	1.13
2:A:2386:C:H4'	24:0:39:ARG:CZ	1.77	1.13
2:A:1457:A:C2	2:A:2703:C:N4	2.16	1.13
2:A:1809:A:N6	25:4:3:LYS:HG2	1.63	1.13
2:A:2339:G:H2'	2:A:2340:G:H8	1.12	1.13
2:A:2570:G:C2'	2:A:2571:C:H6	1.61	1.13
2:A:2574:G:C8	2:A:2575:C:H5	1.66	1.13
2:A:850:C:H4'	23:3:18:ASP:OD1	0.96	1.13

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:994:C:O2	20:U:53:LYS:CD	1.90	1.13
5:F:168:ARG:O	5:F:168:ARG:CD	1.96	1.13
5:F:6:TYR:CD2	5:F:140:VAL:HA	1.83	1.13
7:H:101:LYS:NZ	7:H:115:GLU:CB	2.10	1.13
12:Q:23:ILE:H	12:Q:24:PRO:HD3	1.08	1.13
14:T:12:ASP:O	14:T:13:ILE:CG1	1.95	1.13
17:Y:46:ASP:CA	17:Y:102:ASP:OD2	1.95	1.13
26:5:45:ILE:HG23	26:5:52:TYR:CE1	1.83	1.13
2:A:572:A:H2'	2:A:573:G:H1'	1.20	1.13
2:A:963:U:C1'	2:A:2250:G:N2	2.11	1.13
2:A:1819:A:H2'	3:D:177:SER:CA	1.78	1.13
4:E:201:VAL:H	4:E:266:LYS:CD	1.60	1.13
7:H:55:SER:CB	7:H:60:HIS:HB2	1.78	1.13
19:R:96:ARG:HD2	19:R:115:GLU:OE1	1.47	1.13
17:Y:66:ASP:HB2	17:Y:71:VAL:O	1.47	1.13
2:A:2759:G:O2'	2:A:2760:C:H5'	1.48	1.13
2:A:2832:U:H1'	2:A:2834:G:H21	1.06	1.13
4:E:205:THR:HG21	4:E:259:HIS:CB	1.77	1.13
5:F:1:MET:O	5:F:3:ALA:N	1.79	1.13
9:N:13:ASP:N	9:N:38:VAL:HG13	1.55	1.13
10:O:1:MET:N	10:O:32:TYR:CD2	2.16	1.13
10:O:35:ILE:HD12	10:O:35:ILE:N	1.63	1.13
11:P:114:VAL:CG2	11:P:132:LYS:CB	2.27	1.13
12:Q:91:HIS:O	12:Q:111:THR:CG2	1.97	1.13
17:Y:33:GLU:CD	17:Y:34:GLU:HG3	1.68	1.13
2:A:2838:G:C2'	2:A:2839:G:H5'	1.77	1.13
3:D:143:ILE:O	3:D:152:GLN:CA	1.97	1.13
3:D:85:ASN:ND2	3:D:86:ARG:NE	1.96	1.13
4:E:44:TYR:CA	4:E:309:PRO:HD3	1.79	1.13
5:F:51:TYR:O	5:F:55:ARG:CB	1.97	1.13
2:A:2674:G:H4'	10:O:30:ARG:CG	1.77	1.13
12:Q:48:ASN:OD1	12:Q:121:ASP:HB3	1.48	1.13
13:S:104:ILE:O	13:S:106:LEU:N	1.78	1.13
20:U:56:ASP:O	20:U:60:LEU:CD2	1.96	1.13
2:A:1599:C:P	16:X:33:SER:OG	2.07	1.13
16:X:56:ASN:HD22	16:X:56:ASN:N	1.34	1.13
16:X:44:GLN:OE1	16:X:45:TYR:N	1.80	1.13
7:H:168:VAL:O	7:H:169:ARG:HG2	0.96	1.13
24:0:38:VAL:O	24:0:40:GLN:HG3	1.42	1.13
24:0:36:ILE:C	24:0:68:VAL:CG1	2.15	1.13
28:7:17:GLY:CA	28:7:44:VAL:HG22	1.66	1.13
29:8:55:TRP:HZ3	29:8:59:LYS:CE	1.60	1.13

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2090:G:C5	2:A:2230:G:O6	2.00	1.13
2:A:2526:G:C5	2:A:2527:C:C5	2.36	1.13
2:A:2709:G:O2'	2:A:2710:C:H5'	1.46	1.13
7:H:40:MET:HB2	7:H:64:HIS:NE2	1.61	1.13
9:N:52:GLN:CA	9:N:55:GLU:CD	2.17	1.13
25:4:42:PHE:O	25:4:61:LYS:HE3	1.42	1.12
2:A:747:U:OP1	26:5:2:ALA:HB3	1.48	1.12
2:A:1665:A:H4'	10:O:66:LYS:CE	1.78	1.12
5:F:215:ALA:O	5:F:242:GLU:HG3	1.49	1.12
9:N:13:ASP:CA	9:N:38:VAL:HG11	1.51	1.12
9:N:63:ILE:HD12	9:N:71:TYR:CE2	1.83	1.12
11:P:65:ASP:CB	11:P:109:LEU:CB	2.14	1.12
11:P:124:ASP:O	11:P:125:PHE:CD2	2.01	1.12
16:X:24:LEU:HD11	16:X:68:LEU:HD22	1.24	1.13
2:A:2305:A:C3'	2:A:2306:C:H5''	1.77	1.13
2:A:1062:G:H22	31:K:92:PRO:CG	1.62	1.13
31:K:37:GLU:HA	31:K:41:ARG:NH1	1.58	1.13
27:6:35:LEU:O	27:6:36:GLU:HG3	0.96	1.12
2:A:1162:G:H4'	21:V:23:GLU:CB	1.76	1.12
2:A:2332:U:C1'	2:A:2336:A:N6	2.11	1.12
2:A:2432:A:H2'	2:A:2432:A:N3	1.54	1.12
2:A:2495:G:H4'	12:Q:101:MET:CG	1.78	1.12
2:A:2554:U:H3'	2:A:2554:U:C6	1.82	1.12
2:A:2839:G:O2'	19:R:92:GLY:HA3	1.47	1.12
5:F:164:ALA:HA	5:F:232:LEU:HD12	1.14	1.12
5:F:167:ASP:CG	5:F:232:LEU:HG	1.69	1.12
5:F:62:GLY:CA	5:F:65:ARG:HH21	1.58	1.12
7:H:44:VAL:CA	7:H:49:ILE:HG22	1.78	1.12
10:O:21:VAL:HA	10:O:41:ALA:HB2	1.29	1.12
15:W:36:LEU:HD11	15:W:47:VAL:HG11	1.27	1.12
18:Z:91:PRO:HD2	18:Z:127:PRO:HB3	1.23	1.12
23:3:1:MET:HE1	23:3:3:ARG:HD2	1.14	1.12
2:A:2492:U:O2'	2:A:2493:U:O5'	1.65	1.12
2:A:2565:A:H5''	2:A:2566:A:OP2	1.48	1.12
2:A:2570:G:N3	2:A:2571:C:C5	2.16	1.12
2:A:2617:C:N3	2:A:2618:G:C8	2.16	1.12
2:A:2893:G:HO2'	2:A:2894:G:C1'	1.49	1.12
18:Z:69:VAL:HG12	18:Z:70:GLN:H	1.06	1.12
24:0:42:GLY:CA	24:0:66:LYS:HA	1.78	1.12
2:A:1031:G:H4'	30:9:8:LYS:CE	1.79	1.12
2:A:2364:C:H1'	24:0:32:LYS:NZ	1.60	1.12
2:A:2526:G:C2'	2:A:2527:C:H5'	1.78	1.12

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2507:C:C2	2:A:2583:G:C2	2.37	1.12
5:F:33:LYS:HA	5:F:36:ARG:HG3	1.20	1.12
12:Q:123:ILE:CG2	12:Q:125:TRP:HB2	1.79	1.12
19:R:100:LEU:HD23	19:R:112:ALA:CA	1.80	1.12
13:S:35:VAL:CA	13:S:103:ASP:HB3	1.79	1.12
18:Z:30:VAL:O	18:Z:31:SER:O	1.68	1.12
2:A:1479:G:H2'	2:A:1480:G:H8	1.05	1.12
24:0:45:PHE:CZ	24:0:78:PHE:CD2	2.36	1.12
24:0:61:ALA:CB	24:0:81:ILE:HD13	1.79	1.12
23:3:16:PRO:CB	23:3:19:GLN:CD	2.17	1.12
2:A:1031:G:H4'	30:9:8:LYS:CD	1.80	1.12
2:A:1799:G:N2	3:D:153:LEU:CG	2.13	1.12
2:A:17:G:OP1	26:5:13:LYS:NZ	1.82	1.12
2:A:1809:A:H62	25:4:3:LYS:HG2	1.07	1.12
2:A:2259:G:N2	2:A:2282:G:C6	2.12	1.12
2:A:199:A:C2	2:A:2433:A:C5	2.37	1.12
2:A:2530:A:C2'	2:A:2531:A:H5''	1.79	1.12
2:A:2741:A:C2'	2:A:2742:C:H5'	1.79	1.12
4:E:180:ILE:CG2	4:E:186:GLU:O	1.95	1.12
2:A:2822:G:OP1	4:E:207:GLY:CA	1.97	1.12
7:H:42:ILE:O	7:H:52:THR:CG2	1.96	1.12
7:H:43:THR:CG2	7:H:52:THR:HG23	1.78	1.12
9:N:75:PRO:HD3	9:N:136:SER:OG	1.46	1.12
12:Q:62:GLU:O	12:Q:63:ALA:O	1.65	1.12
21:V:50:ASP:H	21:V:53:LYS:CD	1.62	1.12
24:0:37:LEU:O	24:0:40:GLN:HG3	1.49	1.12
23:3:22:ALA:HA	23:3:46:ASN:HD21	1.05	1.12
2:A:2474:C:H2'	2:A:2475:C:H5'	1.31	1.12
2:A:2633:G:C2	2:A:2634:G:N7	2.17	1.12
4:E:256:THR:HA	4:E:259:HIS:CE1	1.83	1.12
4:E:71:THR:HG22	4:E:299:SER:HB2	1.18	1.12
4:E:74:GLU:CB	4:E:293:TYR:HE2	1.60	1.12
5:F:52:ALA:CA	5:F:55:ARG:HE	1.60	1.12
7:H:10:ILE:HG22	7:H:14:VAL:HB	1.31	1.12
2:A:558:G:OP2	9:N:91:LYS:HB3	1.49	1.12
2:A:974:G:O3'	21:V:82:ARG:NH2	1.81	1.12
8:I:95:SER:HB2	8:I:98:ILE:CD1	1.79	1.12
16:X:14:ALA:CA	16:X:17:ASP:CG	2.17	1.12
16:X:17:ASP:HA	16:X:20:PHE:CE1	1.84	1.12
2:A:1545:A:H5'	2:A:545(A):A:OP2	1.47	1.12
17:Y:9:LYS:HE3	17:Y:13:ARG:NH1	1.64	1.12
25:4:5:LEU:HD23	25:4:5:LEU:H	1.07	1.12

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:6:32:GLN:CB	27:6:35:LEU:CD1	2.19	1.12
29:8:23:MET:HE3	29:8:48:PHE:HD2	0.95	1.12
29:8:60:LEU:CD2	29:8:60:LEU:C	2.18	1.12
2:A:2689:U:H5'	2:A:2690:C:H5'	1.29	1.12
2:A:1791:A:OP1	3:D:210:LYS:HD3	1.36	1.12
5:F:168:ARG:CZ	5:F:209:GLY:HA2	1.79	1.12
8:I:4:ILE:HG22	8:I:4:ILE:O	1.49	1.12
9:N:12:VAL:HG13	9:N:13:ASP:H	1.15	1.12
17:Y:43:ASN:ND2	17:Y:101:LEU:HD23	1.62	1.12
18:Z:112:LEU:HD23	18:Z:113:VAL:H	1.02	1.12
24:0:39:ARG:O	24:0:40:GLN:O	1.66	1.12
25:4:6:HIS:CG	25:4:56:VAL:HG23	1.85	1.12
2:A:1031:G:H4'	30:9:8:LYS:HZ3	1.03	1.12
2:A:2082:A:N6	2:A:2239:G:O6	1.83	1.12
2:A:2267:A:C5'	2:A:2268:A:OP1	1.97	1.12
2:A:242:G:H3'	29:8:5:LYS:HZ3	1.12	1.12
4:E:205:THR:CG2	4:E:259:HIS:HB2	1.80	1.12
5:F:167:ASP:O	5:F:168:ARG:HG3	1.49	1.12
11:P:144:ASP:C	11:P:145:LEU:CD1	2.18	1.12
12:Q:48:ASN:O	12:Q:121:ASP:HB2	1.47	1.12
17:Y:101:LEU:CD1	17:Y:113:GLU:HB2	1.79	1.12
17:Y:29:ALA:O	17:Y:33:GLU:CD	1.87	1.12
18:Z:129:ARG:HE	18:Z:129:ARG:HA	1.09	1.12
16:X:22:ASN:HA	16:X:68:LEU:HD11	1.21	1.12
31:K:121:LEU:CA	31:K:125:MET:HE2	1.79	1.12
25:4:50:LEU:O	25:4:51:ASP:O	1.67	1.12
2:A:2354:G:N3	24:0:32:LYS:CE	2.12	1.12
24:0:36:ILE:HB	24:0:68:VAL:HG11	1.27	1.12
27:6:40:TYR:O	27:6:47:HIS:HA	1.47	1.12
2:A:2332:U:H1'	2:A:2336:A:N6	1.64	1.12
2:A:2355:C:O3'	24:0:21:LEU:CD1	1.98	1.12
2:A:2397:G:C6	2:A:2420:C:C2	2.37	1.12
2:A:2740:A:O2'	2:A:2741:A:H5'	1.50	1.12
5:F:167:ASP:OD2	5:F:232:LEU:CG	1.96	1.12
7:H:10:ILE:HD11	7:H:49:ILE:CG1	1.78	1.12
11:P:128:GLY:HA2	11:P:132:LYS:HZ2	0.98	1.12
12:Q:16:ARG:CB	12:Q:16:ARG:NH1	1.96	1.12
15:W:23:LEU:O	15:W:25:ARG:N	1.83	1.12
18:Z:172:LEU:HG	18:Z:173:PRO:HD2	1.13	1.12
2:A:2052:G:H21	4:E:245:ARG:HG2	1.08	1.12
2:A:2232:U:H2'	2:A:2233:U:H5'	1.14	1.12
2:A:2391:G:O2'	2:A:2392:A:H5'	1.47	1.12

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:193:PHE:CE2	4:E:199:ALA:CB	2.31	1.12
2:A:600:G:H5''	5:F:27:ARG:NH1	1.64	1.12
8:I:29:PHE:O	8:I:33:GLN:CD	1.86	1.12
18:Z:105:GLN:HB2	18:Z:141:MET:SD	1.88	1.12
8:I:116:GLU:HG2	8:I:132:LYS:HE3	1.29	1.12
8:I:68:LEU:HB3	8:I:72:LEU:HD11	1.15	1.12
8:I:116:GLU:HG2	8:I:132:LYS:CE	1.80	1.12
8:I:141:LEU:CD1	8:I:142:LYS:O	1.98	1.12
6:G:57:THR:HG22	6:G:58:VAL:H	1.08	1.12
4:E:107:GLU:HB3	4:E:110:ARG:CZ	1.78	1.12
6:G:81:GLU:O	6:G:85:GLN:CG	1.97	1.12
23:3:1:MET:SD	23:3:3:ARG:CG	2.37	1.11
2:A:2414:G:N3	2:A:2415:G:C8	2.17	1.11
2:A:2530:A:H2'	2:A:2531:A:H5''	1.22	1.11
2:A:2748:A:C8	2:A:2749:A:C4	2.38	1.11
3:D:167:GLU:O	3:D:170:TYR:CD1	2.01	1.11
4:E:214:VAL:CG2	4:E:221:LYS:HZ1	1.63	1.11
5:F:45:ASP:O	5:F:46:TYR:CD1	2.03	1.11
5:F:46:TYR:O	5:F:92:PRO:O	1.65	1.11
11:P:112:GLY:C	11:P:113:GLN:CD	2.09	1.11
18:Z:91:PRO:HG2	18:Z:127:PRO:CB	1.80	1.11
30:9:19:ARG:O	30:9:22:ARG:HB2	1.47	1.11
2:A:2570:G:N3	2:A:2571:C:C6	2.17	1.11
2:A:2679:A:N3	4:E:300:VAL:HG13	1.56	1.11
4:E:70:VAL:HG12	4:E:71:THR:N	1.38	1.11
5:F:32:GLY:O	5:F:35:VAL:CG2	1.96	1.11
11:P:77:ALA:HB2	11:P:81:VAL:CG1	1.79	1.11
12:Q:56:ILE:HG12	12:Q:113:ALA:O	1.48	1.11
13:S:106:LEU:O	13:S:107:ASN:O	1.66	1.11
9:N:10:VAL:HG11	9:N:36:VAL:HG23	1.24	1.11
31:K:117:ASN:ND2	31:K:127:ILE:CD1	2.12	1.11
2:A:2315:G:OP1	6:G:20:LYS:CE	1.96	1.11
2:A:2431:U:C2	2:A:2433:A:OP2	2.02	1.11
2:A:2633:G:C2	2:A:2634:G:C5	2.37	1.11
2:A:2678:C:O2	2:A:2679:A:C1'	1.98	1.11
2:A:965:C:H4'	2:A:2273:A:N3	1.63	1.11
3:D:128:ALA:HB2	3:D:190:THR:HB	1.22	1.11
2:A:1818:U:O5'	3:D:155:ARG:HG3	0.94	1.11
4:E:268:LEU:CD2	4:E:269:ILE:N	2.13	1.11
9:N:78:ILE:O	9:N:82:THR:HG23	1.48	1.11
10:O:99:PHE:CD2	14:T:24:LYS:CE	2.23	1.11
14:T:50:GLU:O	14:T:52:THR:N	1.84	1.11

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:W:32:ALA:CA	15:W:35:ILE:CD1	2.27	1.11
26:5:44:HIS:HA	26:5:52:TYR:OH	0.94	1.11
2:A:2813:A:C2'	2:A:2814:C:C6	2.14	1.11
3:D:118:GLY:O	3:D:129:LEU:CD2	1.98	1.11
3:D:66:PHE:C	3:D:67:LYS:CD	2.18	1.11
4:E:39:GLN:NE2	4:E:174:LEU:CD1	2.12	1.11
5:F:51:TYR:C	5:F:55:ARG:HB3	1.70	1.11
10:O:98:ILE:HD11	10:O:117:LEU:HB2	1.33	1.11
12:Q:49:VAL:HG23	12:Q:121:ASP:H	1.14	1.11
21:V:5:ILE:HD12	21:V:12:TYR:CZ	1.85	1.11
31:K:20:PRO:HG2	31:K:23:PRO:HG2	1.28	1.11
31:K:9:ILE:CD1	31:K:31:HIS:CB	2.28	1.11
28:7:17:GLY:C	28:7:44:VAL:HG21	1.70	1.11
2:A:1012:U:O2	9:N:21:ARG:CZ	1.99	1.11
2:A:2227:A:C2	2:A:2228:G:C2	2.37	1.11
2:A:2287:A:O2'	2:A:2288:A:OP2	1.67	1.11
2:A:2296:U:O4	13:S:16:ALA:CB	1.98	1.11
2:A:2482:G:C5	2:A:2483:C:C5	2.39	1.11
2:A:2592:G:C8	2:A:2593:U:H5	1.69	1.11
2:A:2752:C:N4	2:A:2753:A:C2	2.19	1.11
2:A:687:C:O4'	28:7:4:THR:CG2	1.98	1.11
7:H:101:LYS:CG	7:H:115:GLU:HA	1.78	1.11
2:A:1665:A:C2'	10:O:66:LYS:HZ1	1.61	1.11
18:Z:6:LYS:O	18:Z:31:SER:HB3	1.26	1.11
25:4:23:GLU:OE2	25:4:29:PRO:CB	1.99	1.11
2:A:1140:C:C4	9:N:49:ARG:NE	2.18	1.11
2:A:2330:G:C2'	2:A:2331:G:H5'	1.81	1.11
2:A:2356:C:P	24:O:21:LEU:HD11	1.90	1.11
3:D:181:ARG:HB3	3:D:181:ARG:NH1	1.63	1.11
4:E:303:PRO:HB2	4:E:307:LEU:CD1	1.80	1.11
7:H:166:GLU:O	7:H:167:LEU:HD22	1.45	1.11
12:Q:49:VAL:CG1	12:Q:119:ASN:O	1.99	1.11
12:Q:65:ARG:O	12:Q:68:ALA:HB3	1.46	1.11
13:S:41:LYS:O	13:S:41:LYS:HD3	0.96	1.11
20:U:86:ALA:HB3	20:U:90:LEU:HD21	1.33	1.11
21:V:30:GLY:HA3	21:V:33:VAL:HG21	1.11	1.11
18:Z:116:VAL:CA	18:Z:169:VAL:HG22	1.79	1.11
18:Z:159:THR:HG23	18:Z:160:LEU:H	0.96	1.11
6:G:29:HIS:CE1	6:G:64:ARG:NH1	2.17	1.11
31:K:105:ILE:CG2	31:K:128:ILE:HG21	1.81	1.11
31:K:105:ILE:HG23	31:K:128:ILE:HG21	1.33	1.11
2:A:440:G:OP2	17:Y:3:GLN:OE1	1.68	1.11

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:969:U:C4'	23:3:14:GLY:O	1.97	1.11
2:A:1137:G:OP1	9:N:60:ARG:NH2	1.82	1.11
2:A:2295:C:N4	2:A:2337:G:H1	1.48	1.11
2:A:2302:G:C6	2:A:2315:G:C6	2.38	1.11
4:E:180:ILE:HA	4:E:183:ASP:CG	1.71	1.11
4:E:269:ILE:HG23	4:E:297:LYS:HZ3	0.96	1.11
5:F:168:ARG:CZ	5:F:209:GLY:CA	2.28	1.11
6:G:102:GLY:CA	6:G:134:LEU:CD1	2.27	1.11
9:N:12:VAL:CG1	9:N:13:ASP:H	1.61	1.11
9:N:38:VAL:O	9:N:39:VAL:CG1	1.98	1.11
9:N:15:ARG:CA	9:N:43:ARG:HG2	1.81	1.11
19:R:104:ARG:HA	19:R:105:ARG:HH21	1.04	1.11
17:Y:14:ALA:HB1	17:Y:15:PRO:CD	1.79	1.11
2:A:2285:C:H4'	2:A:2288:A:N6	1.62	1.11
2:A:2360:A:C8	2:A:2361:A:C8	2.39	1.11
2:A:2463:C:C2	2:A:2464:C:C5	2.39	1.11
2:A:2526:G:H2'	2:A:2527:C:H5'	1.11	1.11
2:A:1953:A:N3	2:A:2560:C:H1'	1.63	1.11
7:H:23:VAL:HG12	7:H:74:MET:HE3	1.15	1.11
12:Q:42:TYR:O	12:Q:125:TRP:HH2	1.34	1.11
20:U:108:ALA:O	20:U:110:VAL:N	1.82	1.11
21:V:54:TYR:O	21:V:56:VAL:N	1.81	1.11
15:W:29:LEU:HG	15:W:33:ARG:HD2	1.32	1.11
17:Y:72:ILE:HG22	17:Y:73:HIS:H	1.12	1.11
18:Z:3:LEU:HB3	18:Z:34:LEU:HA	1.11	1.11
16:X:9:HIS:CE1	16:X:27:ALA:CA	2.34	1.11
16:X:47:VAL:CG1	16:X:69:SER:HB3	1.79	1.11
25:4:18:GLY:H	25:4:33:VAL:HG21	1.10	1.11
26:5:40:LYS:HE2	26:5:46:CYS:HB2	1.31	1.11
2:A:1142:U:O3'	2:A:142(A):A:P	2.07	1.11
2:A:2066:C:O2	2:A:2445:G:N2	1.83	1.11
2:A:2327:A:N1	2:A:2328:A:C2	2.19	1.11
2:A:2334:G:N2	13:S:12:ARG:HG3	1.65	1.11
2:A:244:A:O2'	11:P:56:LYS:HA	1.49	1.11
7:H:36:PHE:CD2	7:H:70:LEU:CD1	2.31	1.11
11:P:101:ASP:O	11:P:102:ASP:OD1	1.67	1.11
11:P:66:VAL:HG12	11:P:67:ARG:H	1.01	1.11
19:R:85:PRO:O	19:R:87:TYR:N	1.83	1.11
21:V:19:VAL:HG12	21:V:21:ARG:NH1	1.40	1.11
15:W:30:GLU:CA	15:W:33:ARG:CD	2.26	1.11
17:Y:45:GLY:C	17:Y:62:VAL:CG1	2.17	1.11
17:Y:71:VAL:CG2	17:Y:93:THR:H	1.62	1.11

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2235:G:H2'	2:A:2236:C:H6	1.01	1.11
2:A:2331:G:H4'	24:0:70:ILE:HG12	1.32	1.11
2:A:2476:A:N7	2:A:2477:C:C5	2.19	1.11
2:A:2623:G:N2	2:A:2624:G:C4	2.19	1.11
11:P:116:HIS:CD2	11:P:118:LEU:HD11	1.85	1.11
12:Q:142:LYS:O	12:Q:143:VAL:HG22	1.46	1.11
2:A:994:C:N3	20:U:53:LYS:HD3	1.63	1.11
21:V:30:GLY:O	21:V:63:HIS:HB2	1.49	1.11
18:Z:168:VAL:O	18:Z:169:VAL:HG23	0.94	1.11
8:I:75:LEU:HD13	8:I:76:THR:H	1.00	1.11
6:G:27:ILE:C	6:G:69:ILE:HG21	1.71	1.11
31:K:109:ALA:HB2	31:K:128:ILE:CD1	1.80	1.11
24:0:49:GLN:NE2	24:0:73:GLY:CA	2.10	1.10
4:E:71:THR:HG23	4:E:299:SER:HB2	1.31	1.10
4:E:44:TYR:CE1	4:E:308:VAL:CA	2.34	1.10
2:A:2303:G:H5'	6:G:99:ASP:HB3	1.17	1.10
10:O:77:ILE:C	10:O:77:ILE:CD1	2.12	1.10
12:Q:65:ARG:NH2	12:Q:85:ILE:HB	1.63	1.10
19:R:19:ALA:O	19:R:22:ARG:HB3	1.50	1.10
13:S:32:PRO:HG2	13:S:100:ALA:CB	1.81	1.10
21:V:61:VAL:N	21:V:98:ILE:HD12	1.66	1.10
17:Y:47:THR:O	17:Y:98:VAL:HG13	1.49	1.10
2:A:2509:G:C2	2:A:2580:U:O2	2.03	1.10
2:A:1783:A:N1	2:A:2587:A:H2	1.49	1.10
2:A:2716:U:H2'	2:A:2717:G:C5'	1.80	1.10
2:A:2785:C:H1'	4:E:100:TRP:NE1	1.65	1.10
4:E:269:ILE:HD12	4:E:269:ILE:H	0.95	1.10
2:A:600:G:O2'	5:F:109:LEU:HD11	1.51	1.10
5:F:200:PRO:HB3	5:F:212:VAL:CG1	1.81	1.10
5:F:47:GLY:C	5:F:92:PRO:HG2	1.60	1.10
2:A:994:C:O3'	20:U:54:LYS:HE2	1.49	1.10
17:Y:51:LEU:CA	17:Y:97:ARG:HH21	1.64	1.10
18:Z:26:LYS:O	18:Z:27:GLU:CG	1.98	1.10
8:I:92:SER:HA	8:I:122:ARG:HG3	1.14	1.10
16:X:22:ASN:HA	16:X:68:LEU:CD1	1.80	1.10
27:6:42:PRO:HG2	27:6:44:ALA:HB3	1.14	1.10
4:E:214:VAL:CG2	4:E:221:LYS:NZ	2.12	1.10
5:F:1:MET:C	5:F:18:LEU:HG	1.44	1.10
6:G:102:GLY:HA3	6:G:134:LEU:CD1	1.81	1.10
6:G:19:GLU:HB2	6:G:135:VAL:HG21	1.31	1.10
11:P:128:GLY:HA3	11:P:132:LYS:HZ3	1.17	1.10
11:P:69:ILE:HA	11:P:73:VAL:HG23	1.32	1.10

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:125:G:H3'	28:7:19:ARG:NH1	1.65	1.10
30:9:14:CYS:HA	30:9:27:CYS:HB2	1.28	1.10
2:A:2287:A:C2	2:A:2289:G:N9	2.18	1.10
2:A:2469:A:H8	2:A:2469:A:H5'	1.15	1.10
2:A:2059:A:C6	2:A:2503:A:N7	2.03	1.10
2:A:2556:C:O2'	2:A:2557:G:H5'	1.49	1.10
2:A:2848:G:N2	2:A:2867:G:H1'	1.66	1.10
4:E:267:ARG:HD3	4:E:297:LYS:HD3	1.29	1.10
8:I:7:LYS:NZ	8:I:8:ASP:OD1	1.82	1.10
12:Q:56:ILE:O	12:Q:112:ALA:CB	1.99	1.10
20:U:46:GLU:O	20:U:49:ASP:HB2	1.50	1.10
20:U:59:ARG:O	20:U:62:ILE:N	1.84	1.10
17:Y:50:VAL:HG12	17:Y:51:LEU:N	1.64	1.10
18:Z:24:TYR:O	18:Z:84:TYR:HA	1.47	1.10
8:I:115:ILE:CG1	8:I:131:VAL:HG13	1.78	1.10
2:A:148:C:H2'	2:A:149:A:C8	1.86	1.10
22:2:7:GLU:OE2	22:2:8:ILE:HG13	1.51	1.10
16:X:24:LEU:CB	16:X:26:PHE:HZ	1.65	1.10
2:A:1917:U:H3'	2:A:1918:A:C8	1.85	1.10
2:A:2552:U:O2	2:A:2554:U:H5''	1.49	1.10
2:A:2811:G:N2	2:A:2891:G:N3	1.84	1.10
2:A:932:G:C5'	23:3:24:LYS:HZ3	1.62	1.10
4:E:39:GLN:CD	4:E:174:LEU:CD1	2.20	1.10
6:G:20:LYS:HA	6:G:76:ARG:HB3	1.20	1.10
9:N:58:GLU:CA	9:N:61:VAL:CG2	2.28	1.10
13:S:31:LYS:HB3	13:S:32:PRO:HD2	1.14	1.10
17:Y:101:LEU:HD13	17:Y:113:GLU:HB2	1.16	1.10
29:8:26:LYS:CE	29:8:45:GLY:N	2.13	1.10
2:A:1789:A:H4'	3:D:224:VAL:HG11	1.12	1.10
2:A:2197:U:H2'	2:A:2224:G:H22	1.03	1.10
2:A:2315:G:OP1	6:G:20:LYS:HD2	1.39	1.10
2:A:2628:C:H1'	2:A:2781:A:H2'	1.31	1.10
2:A:965:C:H5'	2:A:2273:A:H1'	1.12	1.10
4:E:211:GLN:O	4:E:216:ARG:HD2	0.93	1.10
4:E:62:ARG:O	4:E:63:GLU:OE2	1.66	1.10
4:E:79:ARG:O	4:E:187:HIS:NE2	1.83	1.10
5:F:157:LEU:HB2	5:F:158:GLU:OE2	1.43	1.10
7:H:10:ILE:HG21	7:H:14:VAL:HG11	1.26	1.10
11:P:77:ALA:HB2	11:P:81:VAL:HG11	1.19	1.10
13:S:109:PRO:HA	13:S:115:VAL:HG11	1.23	1.10
2:A:138:G:H5''	16:X:43:GLU:HG3	1.17	1.10
6:G:28:GLY:C	6:G:69:ILE:HD11	1.69	1.10

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:K:37:GLU:HB3	31:K:41:ARG:NH1	1.46	1.10
31:K:37:GLU:CG	31:K:41:ARG:HH12	1.62	1.10
29:8:4:MET:CA	29:8:5:LYS:NZ	2.13	1.10
29:8:60:LEU:C	29:8:60:LEU:HD23	1.69	1.10
2:A:2094:G:O6	2:A:2196:C:N4	1.83	1.10
2:A:2406:U:O4	11:P:55:GLN:HB2	1.41	1.10
2:A:2423:U:C6	2:A:2423:U:H5'	1.87	1.10
2:A:2438:U:OP1	2:A:2599:G:O2'	1.68	1.10
2:A:2677:G:O2'	2:A:2678:C:H5'	1.51	1.10
3:D:166:LYS:O	3:D:167:GLU:CD	1.89	1.10
4:E:263:GLU:CG	4:E:266:LYS:HE2	1.82	1.10
5:F:102:LEU:CD2	5:F:106:GLU:OE1	1.99	1.10
5:F:37:ALA:HB1	5:F:102:LEU:HB2	1.25	1.10
9:N:45:VAL:O	9:N:46:ILE:HG13	1.48	1.10
19:R:75:LEU:O	19:R:77:ARG:N	1.84	1.10
23:3:8:LEU:HD23	23:3:31:LEU:CA	1.68	1.10
28:7:11:LYS:O	28:7:13:ALA:N	1.85	1.10
2:A:2216:G:C2'	2:A:2217:G:H5'	1.81	1.10
2:A:2498:C:O2'	2:A:2499:C:C5'	2.00	1.10
2:A:2623:G:H21	2:A:2624:G:C1'	1.64	1.10
3:D:128:ALA:HB2	3:D:190:THR:CG2	1.56	1.10
2:A:617:G:P	5:F:221:GLU:OE1	2.10	1.10
8:I:7:LYS:HB2	8:I:14:LYS:HE2	1.22	1.10
12:Q:58:HIS:HA	12:Q:61:LEU:CD1	1.82	1.10
21:V:34:GLU:O	21:V:35:LEU:CD2	2.00	1.10
21:V:33:VAL:HB	21:V:63:HIS:CD2	1.87	1.10
16:X:25:GLN:OE1	16:X:25:GLN:N	1.83	1.10
2:A:2722:G:N1	2:A:2723:C:C4	2.19	1.10
2:A:1799:G:O6	3:D:177:SER:HB2	1.51	1.10
2:A:2227:A:N1	2:A:2228:G:N1	1.99	1.10
2:A:2393:A:O2'	2:A:2394:C:O5'	1.69	1.10
2:A:2827:C:O2	2:A:2828:C:C6	2.04	1.10
2:A:2893:G:O3'	2:A:2894:G:H4'	1.49	1.10
2:A:2052:G:N2	4:E:245:ARG:HG2	1.65	1.10
8:I:43:ASN:O	8:I:45:LYS:N	1.82	1.10
2:A:557:U:H4'	9:N:92:GLN:NE2	1.65	1.10
19:R:100:LEU:HD23	19:R:112:ALA:C	1.72	1.10
19:R:36:THR:CG2	19:R:40:LYS:CB	2.29	1.10
20:U:44:THR:OG1	21:V:77:GLY:O	1.70	1.10
17:Y:101:LEU:HD22	17:Y:103:LEU:HG	1.28	1.10
25:4:15:ILE:N	25:4:15:ILE:HD12	1.67	1.10
27:6:32:GLN:CA	27:6:35:LEU:HD12	1.82	1.10

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1827:C:H5'	2:A:1971:A:H4'	1.33	1.10
2:A:2225:A:H5''	2:A:2226:C:H5''	1.33	1.10
2:A:2231:C:H5''	25:4:39:VAL:HG22	1.28	1.10
2:A:2565:A:C5'	2:A:2566:A:OP2	2.00	1.10
2:A:2679:A:H2	4:E:300:VAL:HG22	0.95	1.10
2:A:2781:A:H5''	2:A:2782:G:C5'	1.82	1.10
3:D:140:VAL:HG22	3:D:191:VAL:HG12	1.31	1.10
7:H:90:GLY:HA2	7:H:159:LYS:CG	1.81	1.10
2:A:637:A:H8	11:P:111:ALA:HB2	1.05	1.10
21:V:31:ASP:O	21:V:63:HIS:O	1.69	1.10
21:V:50:ASP:H	21:V:53:LYS:HE3	0.98	1.10
22:2:26:GLU:HG2	22:2:27:LEU:H	0.94	1.10
31:K:109:ALA:HB2	31:K:128:ILE:HD11	1.27	1.10
2:A:1080:C:O2	31:K:127:ILE:CG1	1.99	1.10
2:A:2386:C:C1'	24:0:39:ARG:HH21	1.62	1.09
25:4:46:GLU:C	25:4:47:GLU:HG3	1.72	1.09
30:9:25:VAL:CG2	30:9:34:GLN:HB3	1.82	1.09
2:A:1161:C:O2'	21:V:22:VAL:CG1	2.00	1.09
2:A:2485:G:H5''	12:Q:144:THR:HG22	1.12	1.09
3:D:183:ILE:O	3:D:184:LEU:CD2	1.98	1.09
9:N:61:VAL:CG1	9:N:62:ASP:OD1	1.98	1.09
2:A:2674:G:H4'	10:O:30:ARG:HG2	1.26	1.09
11:P:64:ILE:HD12	11:P:106:VAL:HA	1.16	1.09
19:R:20:LEU:HD13	19:R:21:TYR:N	0.78	1.09
20:U:43:ALA:HB1	21:V:75:LYS:HB3	1.11	1.09
2:A:2261:C:OP2	24:0:14:ARG:HG2	0.94	1.09
24:0:49:GLN:HE22	24:0:73:GLY:CA	1.56	1.09
30:9:25:VAL:CG2	30:9:34:GLN:CB	2.28	1.09
2:A:2227:A:C6	2:A:2228:G:C6	2.38	1.09
2:A:2355:C:C5'	24:0:21:LEU:HD13	1.82	1.09
2:A:2258:C:H5	2:A:2426:A:C4'	1.55	1.09
2:A:2654:A:H61	2:A:2667:C:N4	1.48	1.09
2:A:2819:G:H3'	2:A:2821:A:N6	1.67	1.09
3:D:66:PHE:CD2	3:D:67:LYS:HD2	1.87	1.09
5:F:153:VAL:HG13	5:F:157:LEU:HD21	1.17	1.09
6:G:93:LEU:HD13	6:G:94:ALA:H	1.12	1.09
7:H:25:VAL:CG1	7:H:78:VAL:HG21	1.82	1.09
9:N:15:ARG:HD3	9:N:43:ARG:CD	1.81	1.09
2:A:1140:C:C5	9:N:49:ARG:CG	2.35	1.09
10:O:35:ILE:HD11	10:O:65:THR:HG21	1.11	1.09
12:Q:125:TRP:O	12:Q:126:VAL:CG2	2.00	1.09
12:Q:49:VAL:CG1	12:Q:50:VAL:H	1.65	1.09

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:Y:43:ASN:HD21	17:Y:103:LEU:CD2	1.65	1.09
2:A:1080:C:O3'	31:K:126:LYS:HD3	1.50	1.09
2:A:1620:G:O4'	28:7:1:MET:N	1.84	1.09
2:A:2720:U:O4	2:A:2873:A:N6	1.84	1.09
2:A:2722:G:C2	2:A:2723:C:C4	2.36	1.09
18:Z:143:ILE:CG2	18:Z:144:GLY:H	1.65	1.09
28:7:21:ARG:O	28:7:24:THR:HG22	1.40	1.09
2:A:2044:C:N4	2:A:2624:G:H1	1.50	1.09
2:A:2683:C:H2'	2:A:2684:U:H5'	1.33	1.09
4:E:79:ARG:C	4:E:187:HIS:NE2	2.04	1.09
5:F:103:ASN:HB2	5:F:106:GLU:OE2	1.50	1.09
12:Q:41:THR:O	12:Q:125:TRP:HZ3	1.33	1.09
19:R:78:LYS:O	19:R:82:GLU:CB	1.99	1.09
21:V:39:PHE:C	21:V:40:VAL:HG22	1.72	1.09
23:3:48:GLU:O	23:3:51:ALA:N	1.84	1.09
27:6:13:GLU:OE1	27:6:13:GLU:N	1.84	1.09
29:8:23:MET:HE1	29:8:48:PHE:HA	1.15	1.09
30:9:24:LEU:HD13	30:9:35:ARG:HG3	1.27	1.09
2:A:2421:G:C5'	27:6:4:ASP:OD1	2.00	1.09
2:A:2880:C:H2'	2:A:2881:C:C5'	1.81	1.09
3:D:146:LYS:HD2	3:D:147:PRO:HD2	1.32	1.09
10:O:19:VAL:HG13	10:O:42:THR:O	1.51	1.09
11:P:55:GLN:HG3	11:P:56:LYS:HG2	1.35	1.09
20:U:59:ARG:CA	20:U:62:ILE:CG1	1.94	1.09
21:V:50:ASP:N	21:V:53:LYS:CE	2.16	1.09
15:W:32:ALA:HA	15:W:35:ILE:HG13	1.23	1.09
17:Y:55:PHE:CE2	17:Y:89:ARG:CZ	2.30	1.09
17:Y:74:VAL:N	17:Y:91:LEU:HD11	1.65	1.09
2:A:71:A:O2'	16:X:2:TRP:CZ2	2.05	1.09
22:2:6:GLN:O	22:2:9:ARG:N	1.83	1.09
18:Z:95:SER:OG	18:Z:122:ILE:CG1	1.99	1.09
31:K:52:MET:HA	31:K:52:MET:HE3	1.15	1.09
7:H:17:THR:HB	7:H:24:THR:OG1	1.51	1.09
2:A:2093:G:C1'	2:A:2198:A:N1	2.16	1.09
2:A:2332:U:C1'	2:A:2336:A:H62	1.63	1.09
2:A:2546:U:C4'	2:A:2565:A:C2	2.35	1.09
2:A:2748:A:N7	2:A:2749:A:N3	1.99	1.09
2:A:2815:C:O2	2:A:2816:C:C6	2.06	1.09
10:O:63:VAL:HG13	10:O:102:VAL:HG11	1.14	1.09
10:O:7:ARG:HD3	10:O:44:LYS:HE3	1.18	1.09
12:Q:94:ARG:CZ	12:Q:105:PHE:O	2.00	1.09
14:T:37:GLU:CG	14:T:38:ASN:H	1.65	1.09

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:U:94:VAL:C	20:U:98:ILE:HD13	1.63	1.09
15:W:82:LEU:HD23	15:W:98:LYS:O	0.92	1.09
17:Y:101:LEU:HD22	17:Y:103:LEU:HD11	1.16	1.09
17:Y:101:LEU:CD1	17:Y:112:LEU:HG	1.82	1.09
17:Y:66:ASP:O	17:Y:68:ASP:N	1.85	1.09
18:Z:4:THR:O	18:Z:33:ALA:HB1	1.51	1.09
28:7:30:ILE:CD1	28:7:33:ARG:CD	2.30	1.09
29:8:60:LEU:HD23	29:8:60:LEU:O	1.51	1.09
2:A:2195:C:H2'	2:A:2196:C:O4'	1.51	1.09
2:A:2251:G:N2	2:A:2252:G:N3	2.01	1.09
2:A:2815:C:H2'	2:A:2816:C:H5'	1.17	1.09
3:D:143:ILE:H	3:D:143:ILE:HD12	1.11	1.09
4:E:74:GLU:CB	4:E:293:TYR:CE2	2.34	1.09
2:A:321:G:H4'	5:F:206:ASN:HB3	1.33	1.09
6:G:93:LEU:CD2	6:G:106:PHE:CD2	2.35	1.09
10:O:47:THR:HB	10:O:48:PRO:HD2	1.18	1.09
10:O:8:LEU:HB2	10:O:83:ALA:HA	1.18	1.09
12:Q:45:GLN:HB3	12:Q:152:SER:HB3	1.12	1.09
2:A:2334:G:H21	13:S:12:ARG:CG	1.65	1.09
13:S:60:SER:O	13:S:88:ALA:HA	1.51	1.09
18:Z:3:LEU:HD21	18:Z:38:ALA:CB	1.80	1.09
2:A:1341:U:O2'	16:X:53:ASN:HB3	1.52	1.09
2:A:1129:A:C2	2:A:2570:G:H1'	1.87	1.09
2:A:1364:G:P	25:4:3:LYS:HG3	1.92	1.09
2:A:2286:A:H5'	2:A:2287:A:H4'	1.34	1.09
2:A:600:G:H5''	5:F:27:ARG:HH11	1.17	1.09
3:D:89:ASN:O	3:D:105:ALA:CB	2.01	1.09
4:E:76:PRO:CB	4:E:77:PRO:HD3	1.83	1.09
6:G:38:GLU:HG2	6:G:41:LEU:HD12	1.19	1.09
2:A:558:G:OP1	9:N:91:LYS:O	1.69	1.09
10:O:98:ILE:CD1	10:O:117:LEU:HB3	1.81	1.09
13:S:23:ARG:O	13:S:33:ARG:NH1	1.86	1.09
20:U:74:MET:HE1	20:U:78:THR:HG21	1.28	1.09
21:V:91:THR:C	21:V:92:ALA:CA	2.20	1.09
17:Y:43:ASN:HD21	17:Y:103:LEU:HD21	1.01	1.09
17:Y:51:LEU:HD12	17:Y:97:ARG:HG2	1.26	1.09
27:6:41:ASP:HB3	27:6:47:HIS:H	1.06	1.09
2:A:1612:C:H2'	28:7:3:ARG:NE	1.11	1.09
2:A:2543:G:C2'	2:A:2544:G:H5'	1.81	1.09
2:A:2821:A:C2	2:A:2822:G:C4	2.38	1.09
2:A:631:A:C2	2:A:2416:C:O4'	2.06	1.09
1:B:89(A):A:N1	12:Q:52:LYS:NZ	2.01	1.09

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:226:GLY:O	3:D:227:VAL:CG1	2.01	1.09
4:E:180:ILE:HG21	4:E:187:HIS:CB	1.82	1.09
2:A:2682:U:C5	4:E:48:MET:CE	2.36	1.09
6:G:98:PHE:CA	6:G:104:PHE:HD2	1.65	1.09
7:H:43:THR:HG23	7:H:52:THR:HG22	1.22	1.09
8:I:5:PHE:O	8:I:36:ALA:CB	2.01	1.09
13:S:32:PRO:CG	13:S:100:ALA:HB1	1.81	1.09
16:X:3:ASP:OD2	22:2:24:LYS:HD2	0.92	1.09
16:X:14:ALA:HA	16:X:17:ASP:CG	1.72	1.09
2:A:2309:A:OP2	2:A:2309:A:O4'	1.66	1.09
22:2:39:ALA:HB3	22:2:40:PRO:HD3	1.34	1.09
18:Z:156:GLU:HG2	18:Z:157:GLY:H	1.00	1.09
25:4:6:HIS:ND1	25:4:56:VAL:CG2	2.14	1.09
28:7:30:ILE:O	28:7:33:ARG:HB2	0.93	1.09
2:A:1130:U:H5''	2:A:2515:C:O2'	1.50	1.09
2:A:2187:G:C2'	2:A:2188:C:H5'	1.82	1.09
2:A:2333:A:C1'	2:A:2335:A:C4	2.35	1.09
2:A:2415:G:N2	2:A:2416:C:C1'	2.07	1.09
2:A:2623:G:N2	2:A:2624:G:N9	2.01	1.09
2:A:2771:C:O2	2:A:2771:C:H2'	1.51	1.09
3:D:213:LYS:HB3	3:D:215:LYS:N	1.64	1.09
5:F:22:PHE:CE2	5:F:115:LEU:HB3	1.86	1.09
7:H:101:LYS:HB3	7:H:114:ILE:O	1.50	1.09
7:H:113:GLU:OE1	7:H:114:ILE:N	1.86	1.09
8:I:7:LYS:HA	8:I:12:LYS:O	1.47	1.09
9:N:80:LYS:O	9:N:83:ILE:HG12	1.53	1.09
10:O:35:ILE:HD11	10:O:65:THR:HG22	1.24	1.09
11:P:57:VAL:CG1	11:P:58:GLN:H	1.63	1.09
20:U:99:ALA:CB	20:U:106:PHE:CE2	2.34	1.09
17:Y:50:VAL:HG12	17:Y:51:LEU:H	0.96	1.09
25:4:42:PHE:O	25:4:57:ASP:HA	1.34	1.09
29:8:16:ILE:HG23	29:8:21:LYS:C	1.72	1.09
30:9:25:VAL:HB	30:9:34:GLN:HB2	1.15	1.09
30:9:4:ARG:O	30:9:36:GLN:HG2	1.50	1.09
2:A:2234:G:H2'	2:A:2235:G:H5'	1.29	1.09
2:A:2328:A:H2'	2:A:2329:G:H8	1.17	1.09
2:A:2618:G:C6	2:A:2619:C:C5	2.31	1.09
2:A:1456:G:C2	2:A:2704:C:N3	2.20	1.09
2:A:911:A:H2'	12:Q:16:ARG:HE	1.07	1.09
2:A:1819:A:OP1	3:D:154:VAL:HA	1.49	1.09
4:E:180:ILE:HG21	4:E:187:HIS:HA	1.14	1.09
2:A:1287:A:H8	19:R:104:ARG:HG2	1.14	1.09

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:Y:57:GLY:CA	17:Y:97:ARG:HH22	1.65	1.09
18:Z:69:VAL:HG22	18:Z:81:VAL:HG13	1.15	1.09
22:2:22:ASP:O	22:2:26:GLU:OE2	1.71	1.09
2:A:71:A:O2'	16:X:2:TRP:HZ2	1.33	1.09
24:0:52:GLY:O	24:0:53:MET:CG	2.00	1.09
24:0:42:GLY:HA2	24:0:66:LYS:HA	1.12	1.08
2:A:2219:G:H2'	2:A:2224:G:O5'	1.40	1.08
2:A:2484:G:N2	2:A:2485:G:H1'	1.66	1.08
2:A:2450:A:C5'	2:A:2497:A:N6	2.15	1.08
2:A:2048:G:H1	2:A:2620:C:N4	1.49	1.08
2:A:2815:C:O2'	2:A:2816:C:H5''	1.48	1.08
3:D:128:ALA:CB	3:D:190:THR:CA	2.25	1.08
4:E:77:PRO:HB3	4:E:187:HIS:C	1.73	1.08
5:F:115:LEU:CG	5:F:246:ARG:HH22	1.64	1.08
6:G:22:VAL:O	6:G:23:VAL:CG1	2.00	1.08
10:O:22:ILE:HB	10:O:40:VAL:O	1.52	1.08
11:P:94:ARG:HD3	11:P:120:LEU:CB	1.83	1.08
2:A:911:A:C5	12:Q:16:ARG:HG3	1.68	1.08
15:W:30:GLU:N	15:W:33:ARG:HD2	1.66	1.08
18:Z:116:VAL:CG2	18:Z:169:VAL:HG21	1.82	1.08
2:A:380:U:O2'	25:4:15:ILE:HB	1.53	1.08
2:A:126:A:N6	28:7:18:PHE:CE2	2.21	1.08
2:A:2093:G:C4	2:A:2225:A:N6	2.20	1.08
2:A:2262:U:C2'	2:A:2263:C:H5'	1.82	1.08
2:A:2498:C:C2'	2:A:2499:C:H5''	1.83	1.08
2:A:2567:G:C2	2:A:2568:C:C5	2.41	1.08
2:A:2572:A:H5''	2:A:2574:G:H5'	1.31	1.08
6:G:49:PRO:HB2	6:G:72:LYS:H	1.11	1.08
7:H:15:THR:HG23	7:H:26:LYS:H	1.18	1.08
2:A:1012:U:O2	9:N:21:ARG:NH1	1.85	1.08
10:O:9:LYS:O	10:O:83:ALA:HB1	1.50	1.08
13:S:47:LEU:HD12	13:S:58:LEU:HD21	1.29	1.08
13:S:63:SER:O	13:S:67:ALA:O	1.71	1.08
15:W:58:ALA:HA	15:W:62:HIS:HB2	1.21	1.08
16:X:3:ASP:CA	22:2:24:LYS:HD3	1.83	1.08
2:A:2312:U:H5'	6:G:53:LYS:CB	1.83	1.08
28:7:34:ARG:CD	28:7:42:LEU:HD21	1.78	1.08
29:8:62:LEU:HB2	29:8:63:PRO:HD3	1.35	1.08
2:A:2239:G:H2'	2:A:2240:C:H6	1.15	1.08
2:A:2360:A:C8	2:A:2361:A:H8	1.70	1.08
2:A:2819:G:H3'	2:A:2821:A:H62	1.14	1.08
3:D:131:LEU:HD13	3:D:171:VAL:HG21	1.24	1.08

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:268:LEU:HD23	4:E:269:ILE:HD12	1.27	1.08
6:G:98:PHE:CA	6:G:104:PHE:CD2	2.35	1.08
7:H:43:THR:CG2	7:H:52:THR:HG22	1.77	1.08
10:O:79:PHE:HA	14:T:22:VAL:CG2	1.82	1.08
2:A:911:A:C8	12:Q:16:ARG:HD2	1.89	1.08
13:S:102:LEU:HD12	13:S:129:ILE:HD12	1.27	1.08
15:W:30:GLU:N	15:W:33:ARG:CD	2.15	1.08
17:Y:50:VAL:CG1	17:Y:51:LEU:H	1.64	1.08
26:5:11:THR:HG21	26:5:19:ARG:HH22	1.11	1.08
2:A:2021:C:OP2	26:5:15:LYS:HE2	1.47	1.08
2:A:1819:A:H2'	3:D:177:SER:HA	1.25	1.08
2:A:2254:C:C2'	2:A:2255:G:C5'	2.23	1.08
2:A:2276:G:OP2	12:Q:104:PRO:HD2	1.52	1.08
5:F:236:THR:O	5:F:239:ALA:N	1.85	1.08
9:N:95:ARG:CA	9:N:98:PHE:CE1	2.35	1.08
11:P:65:ASP:HA	11:P:109:LEU:H	0.99	1.08
20:U:94:VAL:O	20:U:98:ILE:HD12	1.31	1.08
21:V:5:ILE:CG2	21:V:39:PHE:HA	1.83	1.08
21:V:35:LEU:C	21:V:60:VAL:HG13	1.72	1.08
17:Y:79:LEU:HD12	17:Y:80:GLU:H	0.99	1.08
17:Y:71:VAL:HG23	17:Y:93:THR:HG23	1.35	1.08
18:Z:142:ASN:H	18:Z:171:VAL:HG21	0.98	1.08
23:3:8:LEU:HA	23:3:54:VAL:HG11	1.24	1.08
25:4:63:PHE:O	25:4:65:ASP:OD2	1.69	1.08
30:9:14:CYS:CA	30:9:27:CYS:CB	2.31	1.08
2:A:1826:G:OP2	3:D:227:VAL:CG2	2.00	1.08
2:A:2391:G:O2'	2:A:2392:A:OP2	1.70	1.08
2:A:2634:G:H2'	2:A:2635:C:O5'	1.54	1.08
12:Q:17:ARG:C	12:Q:18:GLU:HG3	1.62	1.08
12:Q:28:ILE:HG23	12:Q:62:GLU:HG2	1.15	1.08
15:W:79:GLY:O	15:W:80:PRO:C	1.81	1.08
24:0:46:LYS:HG2	24:0:58:THR:H	1.10	1.08
28:7:30:ILE:CG1	28:7:33:ARG:HD2	1.81	1.08
29:8:4:MET:HB2	29:8:7:HIS:HE1	0.93	1.08
2:A:2271:G:O2'	2:A:2272:U:O5'	1.71	1.08
9:N:48:GLY:O	9:N:53:ILE:HD13	1.54	1.08
10:O:14:SER:CB	10:O:86:ILE:HD12	1.84	1.08
19:R:84:ALA:HB3	19:R:85:PRO:CD	1.83	1.08
6:G:28:GLY:HA2	6:G:69:ILE:HD12	1.14	1.08
24:0:35:ASN:O	24:0:36:ILE:HG12	1.53	1.08
2:A:2012:G:OP1	15:W:98:LYS:CD	2.02	1.08
2:A:2415:G:C6	2:A:2416:C:C5	2.38	1.08

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2579:C:C6	2:A:2579:C:C5'	2.12	1.08
2:A:2731:G:H22	2:A:2732:G:N2	1.47	1.08
2:A:2805:G:H2'	2:A:2807:G:O4'	1.54	1.08
2:A:2745:C:C1'	7:H:142:GLU:HG3	1.82	1.08
10:O:98:ILE:HG22	10:O:99:PHE:H	0.99	1.08
11:P:132:LYS:H	11:P:132:LYS:HD2	0.97	1.08
12:Q:76:GLY:HA3	12:Q:132:VAL:HG11	1.12	1.08
20:U:7:GLY:C	20:U:8:ILE:CD1	2.22	1.08
20:U:92:ARG:N	20:U:95:LEU:HD11	1.69	1.08
15:W:32:ALA:HB1	15:W:35:ILE:HD12	1.19	1.08
15:W:66:GLU:CG	15:W:67:ASP:H	1.66	1.08
25:4:58:LYS:HG2	25:4:62:ARG:HE	1.12	1.08
2:A:2457:U:C4	2:A:2458:G:N3	2.15	1.08
2:A:2485:G:C2'	2:A:2486:G:C5'	2.30	1.08
2:A:2653:U:C2	2:A:2654:A:C6	2.41	1.08
2:A:2739:U:C2'	2:A:2740:A:H5''	1.82	1.08
2:A:2740:A:C2'	2:A:2741:A:H5'	1.81	1.08
2:A:2768:C:H2'	2:A:2769:C:H5'	1.08	1.08
4:E:180:ILE:CG2	4:E:187:HIS:HB3	1.82	1.08
8:I:7:LYS:CD	8:I:12:LYS:HZ3	1.50	1.08
10:O:10:VAL:HG21	10:O:16:ALA:HB3	1.22	1.08
13:S:116:PHE:O	13:S:120:GLU:OE1	1.69	1.08
20:U:21:ALA:CA	20:U:24:PHE:HZ	1.64	1.08
21:V:50:ASP:N	21:V:53:LYS:HE3	1.69	1.08
31:K:89:SER:HB2	31:K:95:LYS:HD3	1.29	1.08
31:K:93:LYS:HA	31:K:96:ILE:CD1	1.84	1.08
4:E:109:ASP:HA	4:E:112:LEU:HB2	1.36	1.08
2:A:1248:G:OP1	20:U:2:PRO:HB2	1.52	1.08
24:0:23:VAL:HG12	24:0:24:LYS:N	1.63	1.08
28:7:42:LEU:O	28:7:46:ASP:OD1	1.72	1.08
2:A:2397:G:C2	2:A:2420:C:O2	2.04	1.08
2:A:2544:G:O2'	2:A:2545:G:H5'	1.50	1.08
2:A:2570:G:C4	2:A:2571:C:C5	2.42	1.08
2:A:782:A:C2	3:D:229:MET:SD	2.47	1.08
3:D:73:ILE:HG22	3:D:95:TYR:HD2	0.91	1.08
2:A:1140:C:H41	9:N:49:ARG:HD2	0.96	1.08
13:S:34:LEU:HG	13:S:102:LEU:HA	1.33	1.08
13:S:49:THR:C	13:S:52:PRO:N	2.07	1.08
20:U:28:ARG:HA	20:U:31:GLN:CB	1.83	1.08
21:V:61:VAL:HA	21:V:98:ILE:HG13	1.22	1.08
2:A:592:G:H2'	29:8:3:LYS:HE3	1.30	1.08
2:A:2094:G:C6	2:A:2196:C:C4	2.40	1.08

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2616:C:H2'	2:A:2617:C:H5'	1.15	1.08
2:A:2674:G:H2'	2:A:2675:A:H8	1.06	1.08
3:D:63:ILE:C	3:D:64:ILE:HG13	1.71	1.08
4:E:210:THR:HG22	4:E:255:GLN:HG2	1.13	1.08
4:E:70:VAL:CG1	4:E:296:VAL:CA	2.32	1.08
21:V:51:ALA:HA	21:V:54:TYR:HD1	1.16	1.08
15:W:24:ILE:O	15:W:25:ARG:O	1.72	1.08
8:I:115:ILE:HG12	8:I:131:VAL:CG1	1.82	1.08
8:I:133:LEU:HD11	8:I:139:ALA:CB	1.83	1.08
31:K:72:THR:OG1	31:K:115:ASP:HB3	1.51	1.08
31:K:90:SER:O	31:K:91:GLU:CG	2.01	1.08
2:A:2:G:N2	2:A:2902:C:C2	2.22	1.08
7:H:170:LEU:HD13	7:H:170:LEU:O	0.92	1.08
2:A:2494:G:C2	2:A:2495:G:N7	2.22	1.07
2:A:2700:C:C3'	2:A:2701:C:H5''	1.83	1.07
5:F:22:PHE:CZ	5:F:115:LEU:CB	2.37	1.07
5:F:27:ARG:O	5:F:31:ILE:HG13	1.32	1.07
2:A:2745:C:C2'	7:H:142:GLU:OE2	2.01	1.07
12:Q:25:GLY:O	12:Q:26:LYS:CG	2.02	1.07
12:Q:57:ARG:N	12:Q:61:LEU:HD21	1.69	1.07
18:Z:78:PRO:O	18:Z:79:ILE:HG13	1.54	1.07
27:6:28:ARG:NH1	27:6:28:ARG:CB	2.17	1.07
30:9:4:ARG:O	30:9:36:GLN:CB	2.02	1.07
2:A:2278:A:P	12:Q:20:ILE:HG22	1.93	1.07
2:A:2317:C:H5'	6:G:150:SER:CB	1.83	1.07
2:A:2258:C:C4	2:A:2426:A:H1'	1.86	1.07
2:A:2657:A:H62	2:A:2664:G:N2	1.50	1.07
2:A:1819:A:H2'	3:D:177:SER:CB	1.83	1.07
4:E:210:THR:CA	4:E:216:ARG:NH2	2.16	1.07
4:E:200:ASP:CA	4:E:266:LYS:HD2	1.84	1.07
10:O:7:ARG:NE	10:O:44:LYS:HE3	1.68	1.07
12:Q:28:ILE:HG22	12:Q:29:ALA:H	1.16	1.07
20:U:21:ALA:HA	20:U:24:PHE:HZ	0.94	1.07
21:V:94:LYS:CA	21:V:95:ILE:HD12	1.84	1.07
18:Z:114:ASP:HB2	18:Z:170:SER:O	1.53	1.07
9:N:10:VAL:HG12	9:N:36:VAL:HG22	1.34	1.07
16:X:31:ARG:O	16:X:32:ALA:O	1.69	1.07
31:K:67:THR:O	31:K:68:PHE:HD1	1.34	1.07
2:A:270(M):U:H4'	2:A:270(N):G:H4'	1.35	1.07
24:0:37:LEU:HG	24:0:68:VAL:HG12	1.29	1.07
26:5:45:ILE:HG13	26:5:52:TYR:HE1	0.92	1.07
30:9:14:CYS:HA	30:9:27:CYS:HB3	1.17	1.07

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2315:G:P	6:G:20:LYS:NZ	2.27	1.07
2:A:2316:C:H5'	6:G:142:ALA:HB1	1.36	1.07
2:A:2531:A:C2'	2:A:2532:G:C5'	2.31	1.07
2:A:2701:C:H3'	2:A:2702:U:C5'	1.84	1.07
2:A:2869:G:H21	2:A:2870:C:H1'	1.09	1.07
3:D:131:LEU:HD13	3:D:171:VAL:HG22	1.16	1.07
3:D:165:GLY:O	3:D:172:ILE:HB	0.90	1.07
5:F:194:PHE:HB2	5:F:211:ASP:O	1.52	1.07
6:G:36:ASN:O	6:G:39:ASP:N	1.86	1.07
10:O:25:LEU:HD21	10:O:40:VAL:CG2	1.73	1.07
10:O:68:GLY:HA3	10:O:78:ARG:HE	1.00	1.07
21:V:61:VAL:HG21	21:V:97:GLY:HA2	1.27	1.07
1:B:75:G:H1'	18:Z:22:VAL:HG22	1.28	1.07
25:4:5:LEU:HB2	25:4:56:VAL:CG1	1.83	1.07
28:7:36:ALA:O	28:7:38:GLY:N	1.87	1.07
2:A:1364:G:OP1	25:4:3:LYS:HG2	1.54	1.07
2:A:2286:A:H5''	2:A:2287:A:H5'	1.33	1.07
2:A:2394:C:C5	2:A:2395:C:N4	2.20	1.07
2:A:2470:G:N2	2:A:2471:C:C6	2.21	1.07
2:A:2472:G:C2'	2:A:2475:C:H42	1.66	1.07
2:A:2554:U:H3'	2:A:2554:U:H6	1.09	1.07
2:A:2573:C:H6	2:A:2573:C:H5'	1.05	1.07
2:A:2682:U:C6	4:E:48:MET:HE2	1.89	1.07
2:A:2819:G:C2	2:A:2821:A:C8	2.41	1.07
1:B:50:G:OP2	13:S:74:PRO:HG2	0.92	1.07
4:E:240:PRO:HB2	4:E:243:PRO:HG2	1.35	1.07
5:F:168:ARG:NH1	5:F:209:GLY:C	2.08	1.07
7:H:15:THR:CG2	7:H:26:LYS:CB	2.27	1.07
9:N:80:LYS:O	9:N:84:ARG:HG3	1.54	1.07
19:R:34:ILE:HG22	19:R:35:THR:N	1.63	1.07
21:V:50:ASP:N	21:V:53:LYS:CD	2.16	1.07
18:Z:154:LEU:HD13	18:Z:160:LEU:HD11	1.35	1.07
18:Z:2:GLU:C	18:Z:54:ILE:CG2	2.22	1.07
8:I:77:VAL:HB	8:I:142:LYS:O	1.52	1.07
2:A:1059:G:N3	31:K:127:ILE:CG2	2.17	1.07
18:Z:96:VAL:HG13	18:Z:97:PRO:HD2	1.27	1.07
2:A:1056:G:O6	2:A:1101:U:H3'	1.53	1.07
2:A:931:G:OP1	23:3:27:GLY:CA	2.03	1.07
2:A:2358:G:C2	2:A:2359:C:O4'	2.08	1.07
2:A:2392:A:C2'	2:A:2393:A:H5'	1.85	1.07
2:A:2885:C:C4	2:A:2886:G:C8	2.42	1.07
2:A:564:C:OP1	21:V:79:GLN:CG	2.01	1.07

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:231:ARG:O	5:F:232:LEU:CD2	2.02	1.07
5:F:237:GLU:O	5:F:239:ALA:N	1.87	1.07
1:B:42:C:O2'	6:G:47:GLN:HA	1.52	1.07
9:N:19:MET:HG2	9:N:46:ILE:HD11	1.35	1.07
9:N:65:ASN:ND2	9:N:69:TYR:CE1	2.23	1.07
11:P:92:ASP:OD1	11:P:94:ARG:HG3	1.53	1.07
18:Z:5:ALA:HB3	18:Z:33:ALA:HA	1.34	1.07
26:5:4:HIS:HB2	26:5:5:PRO:HD3	1.37	1.07
28:7:21:ARG:HB3	28:7:31:LEU:HD11	1.07	1.07
2:A:2348:U:H5''	29:8:42:ARG:HH22	0.98	1.07
2:A:2053:G:OP1	4:E:241:TRP:HA	1.51	1.07
2:A:2216:G:H2'	2:A:2217:G:H5'	1.07	1.07
2:A:2227:A:H2	2:A:2228:G:C2	1.69	1.07
2:A:2334:G:P	13:S:12:ARG:O	2.12	1.07
2:A:2344:U:O2'	2:A:2345:G:O5'	1.72	1.07
2:A:2385:C:N3	2:A:2386:C:C6	2.23	1.07
2:A:1129:A:N1	2:A:2570:G:O4'	1.88	1.07
2:A:2584:U:N1	2:A:2585:U:C5	2.23	1.07
2:A:2680:C:H5'	4:E:302:GLY:H	1.17	1.07
2:A:2681:C:H5	2:A:2727:G:N2	1.51	1.07
2:A:2689:U:C5	2:A:2713:A:N6	2.22	1.07
2:A:974:G:C8	21:V:80:TYR:CD1	2.41	1.07
1:B:59:A:O3'	1:B:60:C:O5'	1.70	1.07
5:F:59:GLU:CB	5:F:61:PHE:HE2	1.68	1.07
8:I:7:LYS:CG	8:I:12:LYS:CD	2.31	1.07
9:N:135:ILE:O	9:N:139:LEU:HD11	1.53	1.07
11:P:114:VAL:CG2	11:P:132:LYS:HB2	1.82	1.07
19:R:104:ARG:CA	19:R:105:ARG:HH21	1.68	1.07
20:U:72:HIS:CE1	20:U:110:VAL:HG11	1.89	1.07
2:A:445:C:H3'	20:U:3:ARG:NH2	1.68	1.07
17:Y:31:LEU:O	17:Y:34:GLU:CG	1.98	1.07
8:I:103:GLN:HE21	8:I:109:LYS:C	1.56	1.07
8:I:77:VAL:HG21	8:I:141:LEU:HD12	1.14	1.07
2:A:75:G:H4'	22:2:51:LYS:HZ1	1.11	1.07
16:X:51:GLN:O	16:X:52:VAL:CG2	2.02	1.07
6:G:44:ILE:HG22	6:G:83:PHE:HE2	1.19	1.07
6:G:44:ILE:O	6:G:83:PHE:CE2	2.07	1.07
23:3:20:LYS:CA	23:3:23:LEU:CG	2.31	1.07
23:3:9:VAL:N	23:3:54:VAL:HG12	1.69	1.07
25:4:7:PRO:HG2	25:4:56:VAL:HG11	1.35	1.07
27:6:14:SER:HB3	27:6:52:GLU:HA	1.27	1.07
2:A:2249:U:N3	2:A:2253:G:OP2	1.88	1.07

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2328:A:C5	2:A:2329:G:N7	2.23	1.07
2:A:2574:G:N7	2:A:2575:C:H5	1.53	1.07
2:A:2577:A:C2	2:A:2614:A:C2	2.42	1.07
2:A:594:U:H5'	29:8:58:MET:HE1	1.29	1.07
2:A:675:A:N3	2:A:2443:C:O2'	1.87	1.07
1:B:18:G:OP1	6:G:149:ARG:HA	1.53	1.07
4:E:214:VAL:HG21	4:E:221:LYS:HZ1	0.94	1.07
9:N:19:MET:HA	9:N:19:MET:HE2	1.13	1.07
11:P:110:GLY:O	11:P:111:ALA:O	1.70	1.07
12:Q:85:ILE:CG2	12:Q:122:PHE:CB	2.16	1.07
13:S:41:LYS:NZ	13:S:68:GLU:OE2	1.86	1.07
20:U:94:VAL:O	20:U:98:ILE:CD1	0.77	1.07
18:Z:37:LYS:C	18:Z:40:ASP:OD1	1.91	1.07
18:Z:69:VAL:HG11	18:Z:81:VAL:HG22	1.37	1.07
2:A:1364:G:C3'	25:4:3:LYS:CD	2.32	1.07
27:6:12:MET:HB2	27:6:27:ASN:ND2	1.70	1.07
27:6:45:LYS:O	27:6:46:LYS:HE2	0.90	1.07
2:A:2215:G:C2'	2:A:2216:G:H8	1.65	1.07
2:A:2468:G:H22	2:A:2481:G:H2'	1.10	1.07
2:A:2731:G:C2	2:A:2732:G:C2	2.42	1.07
2:A:976:C:OP1	20:U:48:ARG:NH1	1.88	1.07
5:F:102:LEU:HB3	5:F:107:ARG:HE	1.07	1.07
5:F:37:ALA:HB3	5:F:102:LEU:HD12	1.35	1.07
9:N:19:MET:CB	9:N:46:ILE:CD1	2.32	1.07
9:N:19:MET:CA	9:N:19:MET:CE	2.29	1.07
2:A:1137:G:O2'	9:N:82:THR:HA	1.52	1.07
10:O:31:ARG:HB2	10:O:32:TYR:CE1	1.89	1.07
11:P:114:VAL:HG21	11:P:132:LYS:C	1.75	1.07
12:Q:127:ASN:HB3	12:Q:128:PRO:HD3	1.08	1.07
14:T:37:GLU:HG2	14:T:38:ASN:H	0.91	1.07
15:W:85:VAL:O	15:W:86:LEU:CD2	2.03	1.07
18:Z:116:VAL:HA	18:Z:169:VAL:HG22	1.11	1.07
18:Z:40:ASP:HB2	18:Z:41:ARG:NE	1.70	1.07
8:I:103:GLN:NE2	8:I:109:LYS:HA	1.70	1.07
8:I:77:VAL:HG11	8:I:143:VAL:HG22	1.08	1.07
2:A:1151:G:C4'	20:U:81:ASN:ND2	1.93	1.07
22:2:62:GLU:O	22:2:64:GLY:N	1.87	1.07
30:9:4:ARG:HA	30:9:36:GLN:HA	1.29	1.07
2:A:1364:G:OP1	25:4:3:LYS:HG3	1.49	1.07
2:A:1819:A:OP2	3:D:153:LEU:HG	1.55	1.07
2:A:2263:C:O2'	2:A:2264:C:H5'	1.52	1.07
2:A:2283:C:N3	2:A:2284:C:H1'	1.69	1.07

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2521:C:C2	2:A:2522:U:C6	2.42	1.07
2:A:2543:G:C8	2:A:2544:G:N7	2.21	1.07
2:A:780:G:N1	3:D:233:ASP:OD2	1.87	1.07
4:E:222:ARG:HG3	4:E:222:ARG:HH11	0.97	1.07
2:A:605:C:O3'	5:F:103:ASN:ND2	1.88	1.07
5:F:223:LEU:O	5:F:225:PRO:N	1.88	1.07
5:F:235:PHE:HB3	5:F:239:ALA:HB1	1.37	1.07
7:H:36:PHE:CD2	7:H:70:LEU:HD13	1.86	1.07
7:H:7:PRO:CD	7:H:68:ARG:HD3	1.84	1.07
2:A:557:U:H5'	9:N:92:GLN:HE21	1.17	1.07
2:A:2684:U:H5'	10:O:76:TYR:OH	1.52	1.07
19:R:37:THR:HA	19:R:111:LEU:HA	1.37	1.07
20:U:8:ILE:N	20:U:11:ARG:HD3	1.69	1.07
20:U:57:PHE:O	20:U:59:ARG:N	1.88	1.07
21:V:93:ILE:HG22	21:V:95:ILE:HD11	1.37	1.07
17:Y:18:GLU:C	17:Y:21:LYS:NZ	2.07	1.07
17:Y:52:ARG:HD2	17:Y:95:ASN:CG	1.74	1.07
17:Y:91:LEU:HD23	17:Y:91:LEU:N	1.68	1.07
24:O:38:VAL:O	24:O:40:GLN:CG	1.97	1.07
2:A:2482:G:C2'	2:A:2483:C:C5'	2.29	1.07
2:A:2574:G:C3'	2:A:2575:C:H6	1.67	1.07
2:A:2839:G:C4	2:A:2840:C:C5	2.43	1.07
5:F:32:GLY:CA	5:F:35:VAL:CG2	2.33	1.07
12:Q:67:ALA:H	12:Q:70:ARG:CZ	1.52	1.07
15:W:96:ILE:HD12	15:W:96:ILE:H	0.96	1.07
18:Z:163:ASP:OD2	18:Z:164:PRO:CD	0.77	1.07
2:A:1248:G:OP1	20:U:2:PRO:HB3	1.54	1.07
27:6:8:ILE:N	27:6:29:ARG:HH21	1.50	1.06
2:A:2495:G:H4'	12:Q:101:MET:HG3	1.35	1.06
2:A:2819:G:C3'	2:A:2821:A:H62	1.68	1.06
2:A:2785:C:C5'	4:E:99:VAL:HA	1.84	1.06
7:H:86:LEU:H	7:H:131:ILE:HG23	0.94	1.06
9:N:87:LEU:HD12	9:N:87:LEU:N	1.70	1.06
11:P:128:GLY:HA2	11:P:132:LYS:NZ	1.65	1.06
18:Z:91:PRO:CG	18:Z:127:PRO:CB	2.31	1.06
28:7:18:PHE:O	28:7:19:ARG:O	1.72	1.06
2:A:2386:C:O4'	24:O:39:ARG:NH2	1.88	1.06
2:A:2465:C:O2	2:A:2485:G:N1	1.87	1.06
5:F:85:LYS:HD2	5:F:85:LYS:N	1.67	1.06
9:N:21:ARG:O	9:N:24:SER:OG	1.70	1.06
12:Q:136:TRP:O	12:Q:139:ALA:N	1.87	1.06
19:R:100:LEU:CD2	19:R:113:LEU:N	2.18	1.06

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:564:C:O4'	20:U:37:GLN:OE1	1.72	1.06
20:U:44:THR:HG21	21:V:78:VAL:HG12	1.36	1.06
15:W:81:ALA:C	15:W:82:LEU:HD22	1.75	1.06
22:2:27:LEU:HD11	22:2:53:ILE:HD13	1.30	1.06
31:K:25:GLY:HA2	31:K:35:ILE:HD13	1.29	1.06
24:0:37:LEU:O	24:0:40:GLN:CG	2.03	1.06
24:0:44:LYS:HA	24:0:64:ASP:OD1	1.52	1.06
2:A:2219:G:C2'	2:A:2224:G:H5'	1.84	1.06
2:A:2273:A:C8	2:A:2274:A:C8	2.43	1.06
2:A:2657:A:N7	2:A:2664:G:N2	2.03	1.06
3:D:118:GLY:O	3:D:129:LEU:HD21	1.49	1.06
3:D:174:ARG:HG2	3:D:174:ARG:HH11	0.95	1.06
4:E:216:ARG:NH1	4:E:253:GLN:HB3	1.69	1.06
7:H:101:LYS:HG3	7:H:115:GLU:HA	1.12	1.06
10:O:25:LEU:HD22	10:O:40:VAL:CG2	1.73	1.06
10:O:7:ARG:NE	10:O:44:LYS:CD	2.17	1.06
17:Y:63:ILE:HD11	17:Y:75:GLU:N	0.74	1.06
2:A:2086:U:N3	2:A:2233:U:O4	1.88	1.06
2:A:2458:G:O6	2:A:2490:G:H2'	1.56	1.06
2:A:1128:A:C6	2:A:2518:A:N6	2.22	1.06
2:A:2556:C:O2'	2:A:2557:G:C5'	2.00	1.06
2:A:2774:C:OP1	2:A:2774:C:H4'	1.47	1.06
3:D:175:LEU:CG	3:D:180:VAL:N	2.11	1.06
3:D:131:LEU:CD1	3:D:183:ILE:CG2	2.32	1.06
4:E:39:GLN:OE1	4:E:174:LEU:CD2	2.04	1.06
13:S:109:PRO:O	13:S:116:PHE:CD1	2.08	1.06
20:U:41:ASN:ND2	20:U:42:ALA:H	1.53	1.06
2:A:535:C:C5'	20:U:53:LYS:CE	2.33	1.06
21:V:95:ILE:N	21:V:95:ILE:HD12	1.68	1.06
31:K:38:PHE:CD2	31:K:67:THR:CG2	2.38	1.06
16:X:47:VAL:CG1	16:X:69:SER:OG	2.02	1.06
2:A:222:A:N6	2:A:232:G:N3	2.03	1.06
2:A:414:C:N4	2:A:2409:G:H1	1.53	1.06
2:A:1364:G:H3'	25:4:3:LYS:HD3	1.25	1.06
2:A:2093:G:C6	2:A:2225:A:N7	2.23	1.06
2:A:2359:C:C4	2:A:2360:A:C2	2.43	1.06
2:A:2392:A:H2'	2:A:2393:A:H5'	1.07	1.06
2:A:337:C:H3'	2:A:338:G:H5"	1.09	1.06
2:A:974:G:N7	21:V:80:TYR:CZ	2.23	1.06
3:D:175:LEU:CD1	3:D:179:GLU:C	2.23	1.06
9:N:31:LEU:O	9:N:33:GLY:N	1.88	1.06
10:O:25:LEU:HD12	10:O:38:VAL:HG12	1.33	1.06

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:Z:67:LYS:CA	18:Z:67:LYS:NZ	2.18	1.06
27:6:41:ASP:HB2	27:6:46:LYS:HZ2	0.90	1.06
2:A:2278:A:H4'	12:Q:19:TYR:HB3	1.33	1.06
2:A:2423:U:C6	2:A:2425:A:C5	2.44	1.06
2:A:2463:C:O2	2:A:2464:C:C5	2.09	1.06
2:A:2645:G:OP2	2:A:2645:G:O4'	1.74	1.06
2:A:2808:U:O2	2:A:2892:A:C6	2.07	1.06
2:A:674:G:C5'	5:F:69:HIS:HA	1.86	1.06
7:H:113:GLU:OE1	7:H:113:GLU:C	1.93	1.06
7:H:85:ALA:O	7:H:148:ARG:NH2	1.68	1.06
8:I:8:ASP:HA	8:I:11:GLY:C	1.69	1.06
2:A:1287:A:H8	19:R:104:ARG:CG	1.66	1.06
19:R:20:LEU:HD12	19:R:21:TYR:CD2	1.88	1.06
2:A:2021:C:C5	20:U:25:TRP:CZ2	2.42	1.06
2:A:446:G:H3'	20:U:5:LYS:NZ	1.68	1.06
21:V:65:ARG:O	21:V:93:ILE:CG2	2.04	1.06
18:Z:2:GLU:N	18:Z:54:ILE:HG23	1.67	1.06
8:I:80:PRO:HB3	8:I:146:THR:HG23	1.10	1.06
16:X:24:LEU:O	16:X:26:PHE:HE1	0.72	1.06
7:H:168:VAL:HG12	7:H:169:ARG:H	1.20	1.06
2:A:1943:U:H1'	2:A:1945:G:H5'	1.32	1.06
2:A:126:A:N7	28:7:18:PHE:CE1	2.23	1.06
2:A:2527:C:O3'	30:9:30:VAL:CG1	2.01	1.06
2:A:1818:U:O2	3:D:153:LEU:HA	1.54	1.06
2:A:2051:A:N6	2:A:2614:A:N7	2.04	1.06
2:A:994:C:H4'	20:U:54:LYS:CE	1.84	1.06
5:F:98:ARG:O	5:F:99:SER:O	1.72	1.06
7:H:93:TYR:CE1	7:H:106:VAL:O	2.09	1.06
9:N:27:ALA:CA	9:N:30:ALA:HB2	1.62	1.06
18:Z:69:VAL:HG13	18:Z:81:VAL:HG22	1.33	1.06
2:A:2320:A:H2	2:A:2333:A:C4	1.72	1.06
2:A:2635:C:O2	2:A:2783:G:N2	1.88	1.06
2:A:872:A:O2'	12:Q:31:PHE:HB2	1.56	1.06
1:B:48:A:P	13:S:107:ASN:ND2	2.29	1.06
1:B:57:A:C2	6:G:17:ARG:NH1	2.24	1.06
5:F:196:THR:HA	5:F:236:THR:HG23	1.11	1.06
5:F:239:ALA:O	5:F:241:ALA:N	1.89	1.06
2:A:801:G:OP2	5:F:79:ARG:CD	2.03	1.06
7:H:140:VAL:O	7:H:143:LEU:CD2	2.03	1.06
9:N:45:VAL:N	9:N:132:LEU:CB	2.15	1.06
10:O:25:LEU:CG	10:O:38:VAL:O	2.04	1.06
10:O:25:LEU:HD22	10:O:40:VAL:HG23	1.08	1.06

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:Q:142:LYS:HG3	12:Q:143:VAL:N	1.39	1.06
12:Q:65:ARG:CZ	12:Q:85:ILE:HB	1.86	1.06
17:Y:29:ALA:O	17:Y:30:ASP:O	1.74	1.06
17:Y:43:ASN:HD21	17:Y:101:LEU:HD21	0.90	1.06
8:I:133:LEU:HD11	8:I:139:ALA:HB2	1.37	1.06
31:K:106:GLU:O	31:K:110:LYS:HG3	1.56	1.06
22:2:39:ALA:HB3	22:2:40:PRO:CD	1.84	1.06
2:A:2352:A:H2	24:0:30:VAL:CG1	1.30	1.06
2:A:2199:A:H3'	2:A:2205:C:C6	1.90	1.06
2:A:2350:C:H2'	2:A:2351:G:H8	1.15	1.06
2:A:2700:C:H3'	2:A:2701:C:H5''	1.10	1.06
2:A:2766:G:C5'	2:A:2767:C:OP2	2.03	1.06
4:E:205:THR:O	4:E:206:LYS:CG	2.01	1.06
6:G:20:LYS:HA	6:G:76:ARG:CB	1.86	1.06
11:P:64:ILE:HB	11:P:107:LYS:O	1.56	1.06
12:Q:31:PHE:CE2	12:Q:85:ILE:O	2.08	1.06
12:Q:87:LYS:O	12:Q:88:PHE:CG	2.09	1.06
20:U:47:TYR:CE2	21:V:74:TYR:O	2.07	1.06
15:W:36:LEU:CD1	15:W:47:VAL:CG1	2.33	1.06
18:Z:26:LYS:HB2	18:Z:84:TYR:OH	1.51	1.06
24:0:61:ALA:O	24:0:62:LEU:HD12	0.88	1.06
25:4:46:GLU:OE1	25:4:54:GLY:HA3	1.54	1.06
2:A:2262:U:H2'	2:A:2263:C:H5'	1.33	1.06
2:A:2862:G:C2'	2:A:2863:C:H6	1.66	1.06
2:A:988:A:OP1	23:3:11:SER:N	1.89	1.06
3:D:222:PRO:O	3:D:224:VAL:HG23	1.56	1.06
7:H:82:TYR:CE1	7:H:137:LYS:HG3	1.90	1.06
9:N:53:ILE:HG23	9:N:135:ILE:CD1	1.86	1.06
9:N:52:GLN:HA	9:N:55:GLU:OE1	1.54	1.06
11:P:67:ARG:O	11:P:71:GLU:HG2	1.55	1.06
11:P:69:ILE:HG13	11:P:70:ASP:N	1.53	1.06
19:R:77:ARG:HH11	19:R:77:ARG:CG	1.66	1.06
13:S:32:PRO:CG	13:S:100:ALA:CB	2.34	1.06
20:U:110:VAL:O	20:U:114:ARG:HG3	1.56	1.06
15:W:67:ASP:CG	15:W:68:ARG:H	1.59	1.06
2:A:2312:U:H5'	6:G:53:LYS:HA	1.08	1.06
31:K:92:PRO:HG3	31:K:134:SER:O	1.54	1.06
2:A:1525:G:H3'	2:A:1526:G:P	1.95	1.06
2:A:1525:G:C3'	2:A:1526:G:P	2.43	1.06
18:Z:143:ILE:HG22	18:Z:144:GLY:N	1.63	1.06
24:0:58:THR:O	24:0:60:PHE:N	1.88	1.05
2:A:2527:C:O3'	30:9:30:VAL:HG12	1.55	1.05

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2302:G:O6	2:A:2315:G:O6	1.72	1.05
2:A:2396:G:P	25:4:28:ARG:NH1	2.28	1.05
3:D:208:GLY:CA	3:D:211:HIS:NE2	2.19	1.05
4:E:70:VAL:CG1	4:E:296:VAL:H	1.68	1.05
4:E:193:PHE:CE2	4:E:311:PHE:HD1	1.72	1.05
2:A:2749:A:O4'	7:H:62:ALA:HB2	0.90	1.05
7:H:86:LEU:HA	7:H:148:ARG:CZ	1.84	1.05
11:P:114:VAL:HG23	11:P:132:LYS:HB2	1.30	1.05
17:Y:103:LEU:HD23	17:Y:108:ARG:HB3	1.35	1.05
17:Y:28:SER:HB3	17:Y:99:THR:CG2	1.85	1.05
18:Z:6:LYS:C	18:Z:31:SER:CB	2.24	1.05
18:Z:71:MET:CB	18:Z:78:PRO:HD3	1.85	1.05
23:3:40:THR:HG21	23:3:43:ILE:HD13	1.17	1.05
27:6:28:ARG:CZ	27:6:28:ARG:HB3	1.84	1.05
29:8:52:LYS:C	29:8:54:GLU:H	1.60	1.05
2:A:1665:A:H4'	10:O:66:LYS:CD	1.85	1.05
2:A:2384:G:H2'	2:A:2386:C:OP2	1.52	1.05
2:A:2488:A:H2'	2:A:2489:G:H5'	1.15	1.05
2:A:25:U:C5'	15:W:79:GLY:HA3	1.85	1.05
2:A:2615:U:O2'	2:A:2616:C:C5'	2.03	1.05
2:A:2838:G:C6	2:A:2839:G:N7	2.24	1.05
2:A:2847:U:C5	2:A:2847:U:OP2	2.08	1.05
2:A:1820:U:O2	3:D:200:THR:CG2	2.03	1.05
6:G:71:ALA:O	6:G:72:LYS:CD	2.03	1.05
11:P:65:ASP:HB2	11:P:109:LEU:HB3	1.14	1.05
12:Q:50:VAL:HG12	12:Q:51:GLU:H	0.91	1.05
13:S:98:GLU:HG3	13:S:99:GLU:H	1.12	1.05
21:V:5:ILE:O	21:V:6:GLN:CG	2.02	1.05
21:V:72:ARG:CA	21:V:88:GLN:HG2	1.81	1.05
18:Z:39:PHE:CA	18:Z:43:PHE:CD2	2.38	1.05
8:I:68:LEU:HD21	8:I:108:LEU:HD12	1.29	1.05
2:A:1151:G:H4'	20:U:81:ASN:CG	1.75	1.05
16:X:24:LEU:CB	16:X:26:PHE:CZ	2.39	1.05
17:Y:84:GLY:O	17:Y:85:GLU:O	1.73	1.05
23:3:20:LYS:CA	23:3:23:LEU:HD11	1.86	1.05
25:4:35:VAL:HG12	25:4:36:TRP:H	1.22	1.05
30:9:7:VAL:HG13	30:9:34:GLN:CG	1.63	1.05
2:A:1697:G:H3'	2:A:1698:A:C5'	1.85	1.05
2:A:2045:C:N3	2:A:2624:G:C2	2.23	1.05
2:A:1966:A:N3	2:A:2593:U:H5'	1.71	1.05
2:A:614:U:H3'	2:A:615:G:H4'	1.31	1.05
3:D:131:LEU:CD1	3:D:171:VAL:CG2	2.34	1.05

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:254:GLY:O	4:E:255:GLN:O	1.74	1.05
5:F:102:LEU:HD22	5:F:103:ASN:H	1.16	1.05
12:Q:17:ARG:N	12:Q:17:ARG:HD3	1.71	1.05
20:U:7:GLY:O	20:U:9:VAL:N	1.88	1.05
23:3:1:MET:SD	23:3:1:MET:O	2.14	1.05
2:A:1031:G:H4'	30:9:8:LYS:HD3	1.35	1.05
2:A:1789:A:O3'	3:D:224:VAL:HG13	1.55	1.05
2:A:199:A:C6	2:A:2433:A:N7	2.23	1.05
2:A:2503:A:H4'	2:A:2504:U:OP1	1.56	1.05
5:F:164:ALA:CB	5:F:232:LEU:CD1	2.34	1.05
5:F:164:ALA:HB1	5:F:232:LEU:HD13	1.39	1.05
7:H:52:THR:O	7:H:54:PRO:HD3	1.56	1.05
9:N:19:MET:HB2	9:N:45:VAL:O	1.55	1.05
9:N:77:GLY:O	9:N:80:LYS:N	1.89	1.05
12:Q:127:ASN:CB	12:Q:128:PRO:CD	2.34	1.05
19:R:33:ARG:HB3	19:R:115:GLU:HB3	1.39	1.05
20:U:27:SER:O	20:U:29:SER:OG	1.72	1.05
2:A:534:U:O2'	20:U:49:ASP:OD1	1.74	1.05
20:U:92:ARG:C	20:U:95:LEU:CG	2.20	1.05
21:V:19:VAL:HB	21:V:21:ARG:NH1	1.68	1.05
17:Y:47:THR:O	17:Y:48:VAL:HG23	1.56	1.05
17:Y:45:GLY:C	17:Y:62:VAL:HG11	1.75	1.05
18:Z:159:THR:O	18:Z:160:LEU:CD1	2.04	1.05
18:Z:37:LYS:HG3	18:Z:41:ARG:NH1	1.71	1.05
18:Z:2:GLU:CA	18:Z:54:ILE:HG23	1.85	1.05
8:I:80:PRO:CB	8:I:146:THR:HG23	1.85	1.05
2:A:1598:C:H5''	16:X:34:LYS:HG2	1.37	1.05
25:4:49:PHE:HZ	25:4:70:GLY:O	1.28	1.05
8:I:59:ALA:HA	8:I:62:LEU:HD12	1.37	1.05
2:A:2355:C:C3'	24:0:21:LEU:CD1	2.30	1.05
28:7:13:ALA:O	28:7:14:LYS:O	1.74	1.05
29:8:23:MET:HA	29:8:23:MET:HE2	1.08	1.05
2:A:2210:G:O2'	2:A:2211:G:OP2	1.74	1.05
2:A:2212:A:O2'	2:A:2213:U:C5	1.89	1.05
2:A:2380:C:H2'	2:A:2381:C:C5'	1.86	1.05
2:A:2470:G:N1	2:A:2471:C:C4	2.24	1.05
2:A:2507:C:C2	2:A:2583:G:N3	2.23	1.05
2:A:2745:C:H1'	7:H:142:GLU:CD	1.75	1.05
3:D:143:ILE:HB	3:D:152:GLN:C	1.75	1.05
5:F:24:THR:HB	5:F:25:PRO:HD2	1.34	1.05
5:F:91:PRO:HG2	5:F:92:PRO:HD2	1.08	1.05
5:F:92:PRO:O	5:F:96:LYS:HD2	1.50	1.05

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:P:62:ALA:HB2	11:P:105:TYR:HB2	1.36	1.05
12:Q:65:ARG:NH2	12:Q:122:PHE:CE2	2.24	1.05
20:U:74:MET:HE2	20:U:78:THR:HG21	1.06	1.05
27:6:37:LEU:CD2	27:6:51:ARG:HA	1.87	1.05
2:A:1783:A:C2	2:A:2587:A:C2	2.45	1.05
5:F:201:SER:O	5:F:204:ALA:CB	2.03	1.05
7:H:85:ALA:CA	7:H:131:ILE:HG21	1.84	1.05
8:I:3:VAL:HG21	8:I:21:VAL:HG23	1.11	1.05
19:R:79:LEU:HD22	19:R:80:PHE:N	1.69	1.05
20:U:99:ALA:CB	20:U:106:PHE:CD2	2.40	1.05
20:U:74:MET:HE3	20:U:78:THR:HG21	1.08	1.05
15:W:75:TYR:CE1	15:W:104:THR:OG1	2.07	1.05
17:Y:23:VAL:HG23	17:Y:67:LEU:CD2	1.83	1.05
16:X:6:LYS:NZ	16:X:29:ASP:CA	2.19	1.05
31:K:93:LYS:CD	31:K:96:ILE:HD11	1.85	1.05
31:K:93:LYS:HD3	31:K:96:ILE:HD11	1.08	1.05
16:X:44:GLN:OE1	16:X:45:TYR:CA	2.03	1.05
23:3:4:LEU:O	23:3:36:VAL:HA	1.57	1.05
25:4:14:ILE:HG21	25:4:37:SER:OG	1.56	1.05
25:4:6:HIS:HB2	25:4:7:PRO:CD	1.85	1.05
2:A:1140:C:N4	9:N:49:ARG:CD	2.20	1.05
2:A:2286:A:C5'	2:A:2287:A:C4'	2.33	1.05
2:A:2389:G:OP1	2:A:2390:U:H5'	1.55	1.05
3:D:131:LEU:CD1	3:D:183:ILE:HG21	1.86	1.05
4:E:79:ARG:HA	4:E:186:GLU:HA	1.38	1.05
6:G:22:VAL:HB	6:G:24:HIS:NE2	1.69	1.05
11:P:144:ASP:O	11:P:145:LEU:CD1	2.04	1.05
11:P:62:ALA:O	11:P:107:LYS:HD2	0.88	1.05
13:S:56:ASP:O	13:S:57:THR:HG23	1.55	1.05
2:A:535:C:O2'	20:U:53:LYS:HG2	0.88	1.05
15:W:104:THR:O	15:W:105:VAL:HG13	1.57	1.05
2:A:1819:A:OP1	3:D:154:VAL:CA	2.04	1.05
2:A:2331:G:C5	2:A:2332:U:N3	2.24	1.05
2:A:2717:G:N2	2:A:2718:G:C5	2.25	1.05
2:A:2785:C:C5	2:A:2786:U:O4	2.10	1.05
2:A:2819:G:H2'	2:A:2821:A:N7	1.71	1.05
4:E:200:ASP:O	4:E:311:PHE:HA	1.55	1.05
4:E:221:LYS:HE3	4:E:233:ARG:CA	1.86	1.05
4:E:201:VAL:HG22	4:E:311:PHE:HB3	1.38	1.05
5:F:34:ALA:HB2	5:F:110:ALA:HB1	1.11	1.05
8:I:7:LYS:CA	8:I:12:LYS:HD3	1.87	1.05
9:N:19:MET:CB	9:N:46:ILE:CG1	2.33	1.05

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:N:18:ILE:O	9:N:22:VAL:CG2	2.03	1.05
2:A:2406:U:H1'	11:P:57:VAL:HG22	1.36	1.05
12:Q:46:VAL:HG12	12:Q:124:ALA:HB3	1.32	1.05
2:A:1287:A:C1'	19:R:104:ARG:HH11	1.70	1.05
13:S:74:PRO:O	13:S:75:THR:O	1.73	1.05
20:U:34:ASN:O	20:U:38:THR:OG1	1.73	1.05
8:I:47:LEU:HD12	8:I:48:GLU:N	1.70	1.05
29:8:29:LYS:O	29:8:30:ARG:O	1.75	1.05
2:A:2286:A:C5'	2:A:2287:A:C5'	2.30	1.05
2:A:2355:C:H4'	24:0:21:LEU:HD12	1.38	1.05
2:A:2584:U:C2'	2:A:2585:U:H5	1.69	1.05
2:A:2647:U:C2'	2:A:2648:C:H5'	1.87	1.05
2:A:2781:A:C5'	2:A:2782:G:O5'	2.04	1.05
2:A:2785:C:H5''	4:E:99:VAL:CG2	1.86	1.05
3:D:131:LEU:N	3:D:187:CYS:O	1.89	1.05
5:F:163:HIS:CA	5:F:166:ILE:HG13	1.87	1.05
5:F:196:THR:HA	5:F:236:THR:HG21	1.36	1.05
2:A:452:G:P	5:F:55:ARG:HH22	1.79	1.05
6:G:24:HIS:O	6:G:25:MET:CG	2.05	1.05
2:A:2313:C:OP1	6:G:51:ARG:HD3	1.52	1.05
2:A:2275:C:O2	12:Q:103:ALA:HB3	1.57	1.05
19:R:79:LEU:HD23	19:R:79:LEU:C	1.61	1.05
20:U:89:ASP:O	20:U:90:LEU:HD23	1.57	1.05
18:Z:20:ALA:O	18:Z:34:LEU:HD21	1.55	1.05
24:0:43:THR:HG21	24:0:75:GLY:HA3	1.07	1.05
28:7:30:ILE:CA	28:7:33:ARG:CG	2.31	1.05
2:A:2198:A:N1	2:A:2225:A:N6	2.04	1.05
2:A:2364:C:H5''	24:0:38:VAL:CG1	1.87	1.05
2:A:2405:G:N2	2:A:2413:G:C6	2.25	1.05
2:A:2485:G:C2	2:A:2486:G:H1'	1.91	1.05
2:A:1566:A:C6	3:D:212:HIS:ND1	2.23	1.05
4:E:205:THR:OG1	4:E:257:GLY:C	1.95	1.05
5:F:4:THR:O	5:F:139:VAL:CG2	2.04	1.05
5:F:157:LEU:O	5:F:159:ALA:N	1.89	1.05
5:F:1:MET:C	5:F:18:LEU:CG	2.23	1.05
5:F:219:ASN:C	5:F:222:ASP:HB2	1.75	1.05
11:P:112:GLY:O	11:P:113:GLN:CD	1.95	1.05
2:A:1218:C:OP2	20:U:15:LYS:NZ	1.88	1.05
18:Z:114:ASP:CB	18:Z:170:SER:O	2.05	1.05
16:X:3:ASP:HA	22:2:24:LYS:CD	1.85	1.05
16:X:33:SER:CA	16:X:37:VAL:HG23	1.87	1.05
15:W:90:ARG:CZ	15:W:90:ARG:HB2	1.82	1.05

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1665:A:H5''	10:O:66:LYS:HD3	1.34	1.04
2:A:2094:G:N1	2:A:2196:C:N3	2.03	1.04
2:A:2228:G:C8	2:A:2229:C:C5	2.45	1.04
2:A:2385:C:O2	2:A:2386:C:C6	2.09	1.04
2:A:729:G:C6	3:D:207:ALA:HA	1.93	1.04
3:D:146:LYS:CD	3:D:147:PRO:CD	2.25	1.04
3:D:175:LEU:HG	3:D:179:GLU:O	0.88	1.04
3:D:175:LEU:HG	3:D:180:VAL:N	1.71	1.04
5:F:163:HIS:O	5:F:166:ILE:CG1	2.05	1.04
9:N:53:ILE:HG23	9:N:135:ILE:HD11	1.38	1.04
10:O:77:ILE:HD13	10:O:78:ARG:CA	1.86	1.04
19:R:34:ILE:HG23	19:R:35:THR:H	1.23	1.04
25:4:23:GLU:OE2	25:4:29:PRO:HB3	1.56	1.04
2:A:2227:A:C2	2:A:2228:G:C4	2.45	1.04
2:A:2234:G:N1	2:A:2235:G:C5	2.25	1.04
2:A:2268:A:C4'	2:A:2268:A:OP1	2.03	1.04
2:A:2572:A:H5''	2:A:2574:G:C5'	1.87	1.04
2:A:2810:A:N7	2:A:2811:G:N9	2.04	1.04
3:D:118:GLY:C	3:D:129:LEU:HD21	1.78	1.04
3:D:85:ASN:CG	3:D:86:ARG:CZ	2.26	1.04
5:F:34:ALA:CB	5:F:110:ALA:CB	2.34	1.04
5:F:200:PRO:CB	5:F:212:VAL:HG11	1.86	1.04
14:T:37:GLU:HG2	14:T:38:ASN:N	1.60	1.04
20:U:65:ILE:HD13	20:U:96:ALA:HB2	1.05	1.04
2:A:30:G:OP1	20:U:8:ILE:HD11	0.87	1.04
21:V:60:VAL:O	21:V:98:ILE:HB	0.88	1.04
17:Y:63:ILE:HG12	17:Y:75:GLU:CD	1.78	1.04
17:Y:78:THR:HA	17:Y:89:ARG:HG3	1.07	1.04
8:I:98:ILE:HG22	8:I:99:ALA:N	1.69	1.04
8:I:133:LEU:CD1	8:I:139:ALA:CB	2.35	1.04
22:2:29:ASN:O	22:2:34:GLN:CG	2.05	1.04
2:A:2309:A:OP2	2:A:2309:A:H4'	1.50	1.04
6:G:29:HIS:N	6:G:69:ILE:CD1	2.15	1.04
27:6:37:LEU:HD23	27:6:51:ARG:HA	1.08	1.04
2:A:2385:C:C2	2:A:2386:C:C6	2.45	1.04
2:A:2785:C:O2	4:E:100:TRP:CD1	2.09	1.04
2:A:1799:G:C6	3:D:177:SER:HB2	1.91	1.04
3:D:208:GLY:HA3	3:D:210:LYS:NZ	1.69	1.04
4:E:271:ILE:HD13	4:E:294:THR:HG22	1.34	1.04
7:H:102:LEU:HD23	7:H:114:ILE:O	1.56	1.04
11:P:117:GLU:HA	11:P:136:ALA:O	1.57	1.04
11:P:66:VAL:O	11:P:68:GLU:N	1.91	1.04

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:P:95:ASP:O	11:P:96:VAL:O	1.75	1.04
12:Q:41:THR:CG2	12:Q:126:VAL:HA	1.85	1.04
2:A:2376:A:H2	13:S:102:LEU:HD22	1.15	1.04
20:U:8:ILE:HA	20:U:11:ARG:HD3	1.06	1.04
20:U:92:ARG:O	20:U:95:LEU:HG	0.89	1.04
25:4:6:HIS:HB2	25:4:7:PRO:HD3	1.32	1.04
30:9:7:VAL:HG13	30:9:34:GLN:HG2	1.21	1.04
2:A:2742:C:H5''	30:9:35:ARG:HH12	1.17	1.04
2:A:2852:G:C2	2:A:2853:C:N3	2.26	1.04
3:D:130:PRO:HB3	3:D:186:LYS:O	1.55	1.04
4:E:180:ILE:HA	4:E:183:ASP:OD2	0.87	1.04
4:E:221:LYS:HE3	4:E:233:ARG:HA	1.09	1.04
4:E:45:LYS:HZ1	4:E:303:PRO:CD	1.70	1.04
6:G:19:GLU:OE1	6:G:135:VAL:HA	1.57	1.04
9:N:95:ARG:CA	9:N:98:PHE:CD1	2.40	1.04
11:P:94:ARG:HD3	11:P:120:LEU:CG	1.85	1.04
12:Q:142:LYS:HE2	12:Q:143:VAL:N	1.70	1.04
13:S:72:GLU:HB3	13:S:74:PRO:HD2	1.35	1.04
20:U:6:THR:O	20:U:7:GLY:O	1.74	1.04
21:V:11:GLN:HE22	21:V:22:VAL:HG21	1.12	1.04
18:Z:120:LEU:CD2	18:Z:120:LEU:H	1.70	1.04
8:I:145:VAL:HG12	8:I:146:THR:H	0.90	1.04
31:K:25:GLY:O	31:K:35:ILE:HD11	1.57	1.04
24:0:43:THR:CG2	24:0:75:GLY:CA	2.31	1.04
28:7:27:GLY:O	28:7:31:LEU:HG	1.57	1.04
2:A:2459:A:C8	2:A:2460:U:C6	2.44	1.04
2:A:998:C:H5''	20:U:84:LYS:HZ1	1.14	1.04
7:H:41:THR:CG2	7:H:52:THR:HB	1.86	1.04
8:I:37:ILE:HG23	8:I:38:GLU:H	1.21	1.04
9:N:51:GLU:O	9:N:53:ILE:N	1.90	1.04
17:Y:101:LEU:HD21	17:Y:103:LEU:CD2	1.81	1.04
27:6:38:LYS:O	27:6:50:PHE:CB	2.04	1.04
2:A:2484:G:H1'	12:Q:142:LYS:HZ2	1.18	1.04
2:A:2543:G:O2'	2:A:2544:G:H5'	1.57	1.04
19:R:38:VAL:CB	19:R:39:PRO:CD	2.22	1.04
21:V:4:ILE:HG12	21:V:13:ARG:HA	1.10	1.04
15:W:32:ALA:CA	15:W:35:ILE:HD12	1.85	1.04
2:A:1076:C:O2'	31:K:91:GLU:HB3	1.55	1.04
16:X:44:GLN:OE1	16:X:45:TYR:CB	2.06	1.04
23:3:3:ARG:HD3	23:3:60:GLU:HB3	1.35	1.04
28:7:13:ALA:O	28:7:16:HIS:O	1.73	1.04
2:A:2287:A:O2'	2:A:2288:A:P	2.14	1.04

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2739:U:C2'	2:A:2740:A:C5'	2.35	1.04
4:E:218:GLY:O	4:E:219:VAL:HG22	1.56	1.04
2:A:557:U:C4'	9:N:92:GLN:HE21	1.71	1.04
19:R:107:ASP:OD1	19:R:109:ALA:N	1.90	1.04
14:T:36:CYS:O	14:T:37:GLU:O	1.74	1.04
20:U:44:THR:CB	21:V:77:GLY:O	2.05	1.04
20:U:44:THR:HG23	21:V:77:GLY:O	1.55	1.04
2:A:2009:G:H5''	15:W:41:LYS:CD	1.72	1.04
15:W:36:LEU:CD1	15:W:47:VAL:HG12	1.88	1.04
1:B:103:U:O2'	18:Z:67:LYS:HG2	1.54	1.04
2:A:2264:C:H2'	2:A:2265:U:O5'	1.56	1.04
2:A:2327:A:C2	2:A:2328:A:C2	2.46	1.04
2:A:2520:C:O2	2:A:2521:C:C6	2.11	1.04
2:A:2573:C:O5'	2:A:2574:G:OP1	1.75	1.04
2:A:2762:G:C5	2:A:2763:G:C5	2.45	1.04
2:A:2808:U:O3'	2:A:2810:A:OP1	1.73	1.04
2:A:2881:C:O2'	2:A:2882:A:O5'	1.76	1.04
2:A:806:C:O2'	2:A:2445:G:O4'	1.73	1.04
7:H:23:VAL:HG12	7:H:74:MET:CE	1.87	1.04
14:T:50:GLU:CA	14:T:55:ALA:HB3	1.88	1.04
2:A:25:U:C4'	15:W:79:GLY:HA2	1.88	1.04
31:K:32:GLY:O	31:K:60:VAL:CG1	2.05	1.04
25:4:18:GLY:H	25:4:33:VAL:CG2	1.70	1.04
2:A:2570:G:C2'	2:A:2571:C:C6	2.38	1.04
2:A:2678:C:O2	2:A:2679:A:C8	2.09	1.04
4:E:222:ARG:CD	4:E:232:ARG:C	2.25	1.04
11:P:77:ALA:CA	11:P:81:VAL:CB	2.07	1.04
12:Q:45:GLN:OE1	12:Q:153:PRO:CD	2.06	1.04
12:Q:56:ILE:O	12:Q:112:ALA:HB1	1.54	1.04
12:Q:94:ARG:HD3	12:Q:106:GLY:CA	1.88	1.04
15:W:55:ALA:HA	15:W:107:LEU:CD1	1.87	1.04
17:Y:31:LEU:H	17:Y:31:LEU:CD2	1.68	1.04
17:Y:87:VAL:CG1	17:Y:88:PRO:HD2	1.87	1.04
18:Z:90:GLU:N	18:Z:91:PRO:HD2	1.67	1.04
2:A:1364:G:O5'	25:4:3:LYS:CD	2.04	1.04
25:4:68:ARG:HD3	25:4:72:LYS:HG2	1.39	1.04
4:E:42:ALA:H	4:E:189:MET:HE1	1.16	1.04
2:A:2316:C:H5'	6:G:151:ILE:HD11	1.10	1.04
7:H:90:GLY:HA2	7:H:159:LYS:HG3	1.05	1.04
10:O:101:PRO:HB2	10:O:122:ILE:CD1	1.86	1.04
12:Q:27:GLY:O	12:Q:62:GLU:OE2	1.74	1.04
19:R:36:THR:HG22	19:R:40:LYS:HB2	1.36	1.04

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:W:76:VAL:CG2	15:W:102:HIS:O	2.06	1.04
15:W:66:GLU:HG2	15:W:67:ASP:H	1.18	1.04
18:Z:112:LEU:HD13	18:Z:142:ASN:HA	1.06	1.04
18:Z:91:PRO:CB	18:Z:127:PRO:HA	1.88	1.04
18:Z:91:PRO:HB2	18:Z:127:PRO:HA	1.09	1.04
16:X:6:LYS:CB	16:X:27:ALA:O	2.05	1.04
16:X:28:VAL:HG22	16:X:62:LYS:O	1.58	1.04
31:K:67:THR:O	31:K:68:PHE:CD1	2.09	1.04
2:A:1709:U:O2'	2:A:2859:G:N3	1.89	1.04
2:A:1620:G:H1'	28:7:1:MET:N	1.70	1.04
24:0:70:ILE:O	24:0:71:ASN:O	1.75	1.03
25:4:10:VAL:H	25:4:11:PRO:HD3	1.13	1.03
2:A:2253:G:O2'	2:A:2254:C:O5'	1.76	1.03
2:A:2320:A:C2	2:A:2333:A:C4	2.44	1.03
2:A:2320:A:C2	2:A:2333:A:N3	2.23	1.03
2:A:2485:G:O2'	2:A:2486:G:H5'	0.86	1.03
2:A:2615:U:H3	26:5:8:LYS:HG2	1.13	1.03
2:A:325:G:H21	17:Y:7:GLN:NE2	1.55	1.03
2:A:527:C:C2'	9:N:95:ARG:NH1	2.20	1.03
2:A:2731:G:OP1	4:E:265:ASN:CB	2.03	1.03
4:E:299:SER:OG	4:E:301:PRO:HD3	1.58	1.03
19:R:36:THR:HG23	19:R:40:LYS:CD	1.87	1.03
21:V:4:ILE:HD11	21:V:13:ARG:CG	1.87	1.03
18:Z:6:LYS:C	18:Z:31:SER:HB3	1.76	1.03
24:0:38:VAL:HA	24:0:40:GLN:CD	1.79	1.03
2:A:2804:C:C5	2:A:2805:G:C6	2.46	1.03
3:D:66:PHE:O	3:D:66:PHE:CG	2.08	1.03
3:D:68:ARG:HH21	3:D:128:ALA:HB3	1.22	1.03
7:H:87:GLU:OE2	7:H:162:ARG:HB2	1.58	1.03
13:S:23:ARG:NH2	13:S:35:VAL:HG21	1.72	1.03
2:A:446:G:H3'	20:U:5:LYS:HZ1	0.91	1.03
21:V:70:TYR:O	21:V:71:ILE:O	1.75	1.03
21:V:59:GLU:CD	21:V:99:GLN:HA	1.77	1.03
8:I:141:LEU:HD13	8:I:142:LYS:N	1.71	1.03
8:I:121:ILE:HG22	8:I:122:ARG:N	1.67	1.03
31:K:73:PRO:HG2	31:K:78:LEU:CD1	1.87	1.03
24:0:65:GLY:HA2	24:0:66:LYS:HZ2	1.20	1.03
27:6:29:ARG:O	27:6:31:THR:N	1.91	1.03
2:A:1131:G:N1	9:N:69:TYR:CE1	2.25	1.03
2:A:1818:U:C3'	3:D:155:ARG:HG2	1.89	1.03
2:A:2620:C:O2'	2:A:2621:A:O5'	1.70	1.03
2:A:2741:A:H2'	2:A:2742:C:H6	1.16	1.03

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2839:G:C5	2:A:2840:C:C5	2.46	1.03
3:D:211:HIS:ND1	3:D:212:HIS:HD2	1.56	1.03
6:G:21:VAL:CG1	6:G:132:VAL:CB	2.33	1.03
10:O:22:ILE:HG13	10:O:41:ALA:HA	1.38	1.03
19:R:100:LEU:HD23	19:R:113:LEU:N	1.73	1.03
19:R:58:GLY:CA	19:R:80:PHE:HE2	1.63	1.03
17:Y:31:LEU:HD23	17:Y:31:LEU:N	1.65	1.03
2:A:2385:C:O2'	24:0:39:ARG:CZ	2.05	1.03
24:0:66:LYS:HD2	24:0:66:LYS:N	1.67	1.03
2:A:1952:A:H1'	2:A:2560:C:O2'	1.56	1.03
2:A:2314:C:O2'	2:A:2315:G:O5'	1.75	1.03
2:A:2320:A:N3	2:A:2333:A:C5	2.25	1.03
2:A:2468:G:O2'	2:A:2469:A:H5'	1.56	1.03
2:A:2783:G:C6	2:A:2784:C:N4	2.25	1.03
2:A:2880:C:C2'	2:A:2881:C:H5'	1.87	1.03
3:D:74:PRO:CG	3:D:96:ALA:CB	2.26	1.03
10:O:45:ASP:HA	10:O:54:LYS:HG3	1.40	1.03
19:R:100:LEU:HD23	19:R:112:ALA:HA	1.35	1.03
19:R:36:THR:CG2	19:R:40:LYS:CD	2.37	1.03
13:S:105:GLY:C	13:S:106:LEU:HD23	1.76	1.03
20:U:38:THR:HA	20:U:41:ASN:OD1	1.23	1.03
21:V:57:GLN:HG2	21:V:58:ALA:H	1.22	1.03
17:Y:87:VAL:HG13	17:Y:88:PRO:HD2	1.06	1.03
17:Y:57:GLY:N	17:Y:97:ARG:HH22	1.57	1.03
6:G:53:LYS:CG	6:G:54:ALA:H	1.71	1.03
6:G:29:HIS:HB3	6:G:69:ILE:HG12	1.39	1.03
31:K:97:VAL:HA	31:K:99:LYS:HZ1	1.22	1.03
6:G:12:GLU:O	6:G:12:GLU:OE1	1.76	1.03
25:4:32:HIS:O	25:4:33:VAL:O	1.75	1.03
29:8:25:PHE:O	29:8:26:LYS:O	1.76	1.03
2:A:2292:C:C2	2:A:2293:C:C5	2.45	1.03
2:A:2313:C:C4	2:A:2314:C:N4	2.26	1.03
2:A:2520:C:H2'	2:A:2521:C:H5'	1.37	1.03
2:A:2546:U:C5'	2:A:2565:A:C2	2.41	1.03
2:A:2616:C:O2'	2:A:2617:C:H5''	1.59	1.03
2:A:2712:U:C5	2:A:712(A):A:H8	1.53	1.03
2:A:2717:G:C4	2:A:2718:G:C8	2.46	1.03
2:A:2839:G:C6	2:A:2840:C:C4	2.47	1.03
2:A:989:G:OP1	23:3:31:LEU:CD1	2.07	1.03
2:A:2682:U:C5	4:E:48:MET:HE1	1.93	1.03
5:F:93:LYS:CA	5:F:96:LYS:HE3	1.60	1.03
2:A:142(A):A:H4'	9:N:21:ARG:HH22	1.06	1.03

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:U:89:ASP:HB3	21:V:51:ALA:HB3	1.40	1.03
17:Y:14:ALA:HB1	17:Y:15:PRO:HD2	1.40	1.03
26:5:29:ASN:O	26:5:30:LEU:O	1.76	1.03
28:7:34:ARG:HD2	28:7:42:LEU:HD21	1.25	1.03
2:A:2268:A:H4'	2:A:2269:A:OP2	1.55	1.03
11:P:66:VAL:HG12	11:P:67:ARG:N	1.69	1.03
12:Q:48:ASN:OD1	12:Q:121:ASP:CB	2.06	1.03
21:V:19:VAL:HG12	21:V:21:ARG:NH2	1.71	1.03
17:Y:71:VAL:HG12	17:Y:72:ILE:H	1.22	1.03
8:I:115:ILE:HG12	8:I:131:VAL:HG13	1.31	1.03
8:I:97:GLN:HA	8:I:100:GLU:OE2	1.57	1.03
8:I:133:LEU:HD12	8:I:139:ALA:HB2	1.39	1.03
2:A:1545:A:O3'	2:A:545(A):A:P	2.16	1.03
7:H:168:VAL:HG12	7:H:169:ARG:N	1.70	1.03
26:5:34:PRO:CG	26:5:36:CYS:SG	2.47	1.03
2:A:2236:C:H2'	2:A:2237:G:H5'	1.35	1.03
2:A:2256:G:C2	2:A:2257:U:C2	2.46	1.03
2:A:2457:U:H2'	2:A:2458:G:O4'	1.58	1.03
2:A:2805:G:H3'	2:A:2807:G:P	1.98	1.03
2:A:2822:G:OP1	4:E:207:GLY:HA2	1.55	1.03
3:D:158:GLY:HA2	3:D:194:VAL:CG2	1.88	1.03
7:H:93:TYR:HB3	7:H:106:VAL:HG22	1.08	1.03
8:I:6:LEU:HB2	8:I:36:ALA:HB2	1.34	1.03
9:N:12:VAL:CG1	9:N:13:ASP:N	2.17	1.03
10:O:35:ILE:CD1	10:O:65:THR:CG2	2.37	1.03
11:P:73:VAL:HG13	11:P:76:LEU:HD23	1.36	1.03
19:R:55:ALA:HA	19:R:80:PHE:CD1	1.92	1.03
15:W:19:LEU:CD1	26:5:25:LEU:CD2	2.29	1.03
15:W:83:LYS:HG2	15:W:97:LYS:HD3	1.36	1.03
18:Z:34:LEU:HD13	18:Z:39:PHE:HZ	0.91	1.03
23:3:37:LEU:CD1	23:3:43:ILE:HG21	1.88	1.03
2:A:2482:G:C6	2:A:2483:C:C5	2.47	1.03
2:A:2737:G:C4	2:A:2738:A:N7	2.26	1.03
2:A:2869:G:N2	2:A:2870:C:H1'	1.74	1.03
2:A:637:A:C8	11:P:111:ALA:HB2	1.91	1.03
3:D:66:PHE:O	3:D:67:LYS:CD	2.07	1.03
3:D:80:ILE:HD12	3:D:80:ILE:O	0.86	1.03
7:H:85:ALA:C	7:H:148:ARG:NH2	2.11	1.03
8:I:21:VAL:HG11	8:I:30:LEU:CD1	1.88	1.03
9:N:12:VAL:O	9:N:38:VAL:CG1	2.05	1.03
2:A:871:U:OP1	12:Q:24:PRO:O	1.75	1.03
8:I:121:ILE:CG2	8:I:122:ARG:H	1.72	1.03

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:2:20:LEU:C	22:2:20:LEU:HD13	1.74	1.03
31:K:89:SER:HB2	31:K:95:LYS:CD	1.87	1.03
31:K:101:THR:O	31:K:105:ILE:CG1	2.07	1.03
3:D:232:VAL:O	3:D:232:VAL:HG23	1.56	1.03
26:5:45:ILE:CG1	26:5:52:TYR:HE1	1.70	1.03
2:A:2235:G:H2'	2:A:2236:C:C6	1.93	1.03
2:A:2436:G:C2'	2:A:2437:U:O5'	2.05	1.03
2:A:2546:U:H5'	2:A:2565:A:N1	1.73	1.03
2:A:1638:C:O3'	2:A:2709:G:N2	1.91	1.03
2:A:2051:A:C4'	4:E:238:LEU:HD21	1.89	1.03
4:E:308:VAL:HG12	4:E:310:PHE:CE1	1.94	1.03
5:F:32:GLY:CA	5:F:35:VAL:HG21	1.89	1.03
7:H:40:MET:HG2	7:H:64:HIS:HE1	0.97	1.03
9:N:95:ARG:C	9:N:98:PHE:HD1	1.61	1.03
2:A:2406:U:O4	11:P:55:GLN:HB3	1.40	1.03
15:W:103:ILE:HG22	15:W:103:ILE:O	1.56	1.03
17:Y:78:THR:HA	17:Y:89:ARG:CG	1.88	1.03
24:0:37:LEU:HD11	24:0:70:ILE:CD1	1.86	1.03
2:A:2542:A:OP2	2:A:2542:A:O4'	1.75	1.03
2:A:2649:U:H2'	2:A:2650:U:H6	1.23	1.03
2:A:2790:A:H5''	2:A:2791:C:OP1	1.57	1.03
2:A:398:G:OP2	25:4:59:PHE:CZ	2.12	1.03
1:B:89(A):A:C2	12:Q:52:LYS:NZ	2.25	1.03
3:D:158:GLY:HA2	3:D:194:VAL:HG13	1.40	1.03
3:D:175:LEU:CG	3:D:180:VAL:HA	1.89	1.03
4:E:82:ALA:O	4:E:83:LEU:CG	2.05	1.03
7:H:102:LEU:H	7:H:102:LEU:HD23	1.24	1.03
10:O:1:MET:O	10:O:2:ILE:HD13	1.58	1.03
19:R:58:GLY:HA2	19:R:80:PHE:CZ	1.93	1.03
19:R:77:ARG:CZ	19:R:77:ARG:HB2	1.87	1.03
17:Y:74:VAL:HG12	17:Y:77:VAL:HG23	1.33	1.03
18:Z:142:ASN:N	18:Z:171:VAL:HG21	1.74	1.03
18:Z:71:MET:HA	18:Z:78:PRO:CA	1.89	1.03
18:Z:91:PRO:CD	18:Z:127:PRO:CB	2.37	1.03
8:I:141:LEU:HD13	8:I:142:LYS:O	1.58	1.03
8:I:98:ILE:HD13	8:I:115:ILE:CD1	1.89	1.03
8:I:115:ILE:HG23	8:I:131:VAL:HG22	1.40	1.03
22:2:30:ALA:O	22:2:34:GLN:CG	2.07	1.03
2:A:1545:A:C5'	2:A:545(A):A:P	2.47	1.03
2:A:1751:C:O4'	2:A:2860:A:C2	2.12	1.03
2:A:2400:G:O3'	27:6:20:PHE:CZ	2.10	1.02
2:A:2571:C:O2'	4:E:243:PRO:CD	2.07	1.02

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2718:G:H2'	2:A:2719:G:H8	0.99	1.02
2:A:491:G:O6	15:W:49:LYS:NZ	1.92	1.02
2:A:775:G:H5'	2:A:777:A:H1'	1.33	1.02
3:D:167:GLU:C	3:D:170:TYR:CD1	2.33	1.02
3:D:75:GLY:O	3:D:115:ILE:N	1.92	1.02
6:G:38:GLU:CG	6:G:41:LEU:HD12	1.89	1.02
6:G:93:LEU:CD1	6:G:94:ALA:N	2.22	1.02
9:N:87:LEU:H	9:N:87:LEU:HD12	1.23	1.02
11:P:112:GLY:HA2	11:P:113:GLN:HE22	1.21	1.02
24:0:37:LEU:HD11	24:0:70:ILE:HD11	1.35	1.02
2:A:932:G:C4'	23:3:24:LYS:HZ3	1.71	1.02
2:A:458:G:H5''	28:7:39:ARG:HD2	1.40	1.02
3:D:167:GLU:O	3:D:168:GLY:O	1.75	1.02
5:F:163:HIS:HB3	5:F:166:ILE:CD1	1.90	1.02
9:N:25:GLN:CA	9:N:28:GLU:CG	2.36	1.02
17:Y:42:VAL:HG12	17:Y:43:ASN:N	1.70	1.02
1:B:75:G:H1'	18:Z:22:VAL:CG2	1.89	1.02
16:X:24:LEU:HB2	16:X:26:PHE:HZ	1.19	1.02
2:A:440:G:OP1	17:Y:6:LYS:HD2	1.55	1.02
28:7:1:MET:O	28:7:1:MET:SD	2.17	1.02
24:0:45:PHE:CE1	24:0:78:PHE:CG	2.46	1.02
26:5:19:ARG:C	26:5:21:SER:H	1.62	1.02
26:5:56:GLN:O	26:5:57:VAL:HG23	1.57	1.02
2:A:2348:U:H5''	29:8:42:ARG:NH2	1.73	1.02
30:9:7:VAL:C	30:9:8:LYS:HE3	1.77	1.02
2:A:2196:C:H5''	2:A:2197:U:OP2	1.56	1.02
2:A:2236:C:C2'	2:A:2237:G:H5'	1.88	1.02
2:A:2520:C:C2'	2:A:2521:C:H5'	1.88	1.02
2:A:2689:U:C5'	2:A:2690:C:H5'	1.88	1.02
7:H:130:ILE:O	7:H:131:ILE:HG23	1.56	1.02
7:H:97:LYS:O	7:H:98:GLN:CG	2.07	1.02
9:N:19:MET:CG	9:N:46:ILE:HD11	1.88	1.02
10:O:25:LEU:CD1	10:O:38:VAL:HG12	1.88	1.02
19:R:60:LEU:HG	19:R:61:HIS:H	1.24	1.02
13:S:23:ARG:CZ	13:S:37:ARG:HH22	1.72	1.02
15:W:80:PRO:HB2	15:W:100:THR:HG21	1.40	1.02
15:W:84:ARG:HB3	15:W:96:ILE:HD11	1.37	1.02
18:Z:120:LEU:N	18:Z:120:LEU:HD23	1.70	1.02
18:Z:159:THR:HG23	18:Z:160:LEU:N	1.71	1.02
24:0:49:GLN:NE2	24:0:49:GLN:O	1.93	1.02
2:A:932:G:H5'	23:3:24:LYS:NZ	1.74	1.02
29:8:30:ARG:HD2	29:8:44:LYS:HD2	1.41	1.02

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2216:G:H2'	2:A:2217:G:C5'	1.89	1.02
2:A:2226:C:O2	2:A:2227:A:C1'	2.01	1.02
2:A:2543:G:C6	2:A:2544:G:C6	2.47	1.02
2:A:2584:U:C6	2:A:2584:U:C3'	2.31	1.02
2:A:2584:U:H2'	2:A:2585:U:H5	1.19	1.02
2:A:2689:U:H5'	2:A:2690:C:H5''	1.33	1.02
3:D:61:TYR:HH	3:D:214:MET:CE	1.66	1.02
3:D:63:ILE:O	3:D:64:ILE:CG1	2.07	1.02
5:F:239:ALA:C	5:F:241:ALA:H	1.57	1.02
5:F:96:LYS:CG	5:F:98:ARG:NH1	2.22	1.02
12:Q:45:GLN:CB	12:Q:152:SER:HB3	1.88	1.02
2:A:1278:A:O3'	19:R:34:ILE:HD12	1.59	1.02
13:S:20:TYR:CE2	13:S:21:HIS:CD2	2.46	1.02
13:S:33:ARG:O	13:S:35:VAL:CG2	2.06	1.02
12:Q:32:LYS:HZ1	18:Z:172:LEU:HD11	1.20	1.02
2:A:1080:C:H4'	31:K:126:LYS:CB	1.89	1.02
2:A:1080:C:C4'	31:K:126:LYS:HB3	1.88	1.02
2:A:1479:G:H2'	2:A:1480:G:C8	1.93	1.02
18:Z:156:GLU:HG2	18:Z:157:GLY:N	1.71	1.02
23:3:23:LEU:O	23:3:28:LEU:CG	2.08	1.02
29:8:61:MET:O	29:8:63:PRO:HD2	1.57	1.02
2:A:2227:A:N1	2:A:2228:G:C5	2.27	1.02
2:A:2328:A:C4	2:A:2329:G:N7	2.27	1.02
2:A:2574:G:C5'	2:A:2575:C:OP2	2.07	1.02
2:A:2693:A:C2	2:A:2694:G:C5	2.48	1.02
2:A:2788:C:H5''	2:A:2789:C:OP2	1.59	1.02
2:A:85:G:OP2	17:Y:65:VAL:HB	1.60	1.02
5:F:214:THR:O	5:F:216:SER:N	1.93	1.02
12:Q:28:ILE:HG23	12:Q:62:GLU:CG	1.87	1.02
20:U:59:ARG:O	20:U:62:ILE:CB	2.08	1.02
2:A:2195:C:C5'	2:A:2195:C:H6	1.72	1.02
2:A:2470:G:N2	2:A:2471:C:C5	2.20	1.02
2:A:2577:A:N1	2:A:2614:A:H2	1.56	1.02
2:A:2709:G:H2'	2:A:2710:C:H5'	1.39	1.02
4:E:180:ILE:CB	4:E:187:HIS:HB3	1.88	1.02
4:E:62:ARG:O	4:E:63:GLU:CG	2.07	1.02
5:F:4:THR:O	5:F:139:VAL:HG11	1.59	1.02
7:H:93:TYR:HE1	7:H:106:VAL:O	1.36	1.02
10:O:1:MET:O	10:O:2:ILE:HD12	1.51	1.02
2:A:2495:G:C4'	12:Q:101:MET:HG3	1.88	1.02
12:Q:65:ARG:NE	12:Q:122:PHE:CE2	2.27	1.02
12:Q:41:THR:OG1	12:Q:126:VAL:HA	1.58	1.02

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:R:38:VAL:HB	19:R:39:PRO:HD2	1.06	1.02
20:U:34:ASN:HA	20:U:37:GLN:HB3	1.39	1.02
17:Y:42:VAL:HG12	17:Y:43:ASN:H	0.88	1.02
17:Y:70:ALA:O	17:Y:93:THR:CG2	2.06	1.02
18:Z:4:THR:C	18:Z:33:ALA:HB1	1.78	1.02
8:I:95:SER:C	8:I:98:ILE:HB	1.80	1.02
2:A:593:G:H5'	29:8:62:LEU:HD21	1.40	1.02
2:A:2314:C:H5''	6:G:22:VAL:HG11	1.06	1.02
2:A:2616:C:O2'	2:A:2617:C:H5'	1.52	1.02
2:A:1637:A:C4'	2:A:2711:A:O2'	2.07	1.02
3:D:167:GLU:HB3	3:D:170:TYR:CE1	1.91	1.02
4:E:174:LEU:H	4:E:174:LEU:HD12	1.23	1.02
4:E:45:LYS:HZ1	4:E:302:GLY:C	1.63	1.02
5:F:164:ALA:HB1	5:F:232:LEU:CD1	1.88	1.02
7:H:102:LEU:HD21	7:H:114:ILE:HB	1.42	1.02
2:A:557:U:H5'	9:N:92:GLN:NE2	1.73	1.02
10:O:7:ARG:NE	10:O:44:LYS:CE	2.23	1.02
15:W:82:LEU:HD21	15:W:100:THR:H	1.17	1.02
17:Y:42:VAL:CG1	17:Y:43:ASN:H	1.72	1.02
24:O:26:PHE:N	24:O:60:PHE:CD1	2.20	1.02
23:3:37:LEU:HD12	23:3:43:ILE:HG21	1.41	1.02
25:4:58:LYS:O	25:4:61:LYS:HG3	1.58	1.02
2:A:1140:C:H1'	2:A:142(A):A:N1	1.75	1.02
2:A:1827:C:N4	3:D:225:ARG:NH1	2.04	1.02
2:A:2446:G:H8	2:A:2446:G:H5'	1.24	1.02
2:A:2768:C:C2'	2:A:2769:C:C5'	2.27	1.02
2:A:911:A:C4	12:Q:16:ARG:CG	2.24	1.02
4:E:190:ASN:O	4:E:192:ILE:N	1.93	1.02
5:F:215:ALA:O	5:F:242:GLU:CG	2.08	1.02
10:O:35:ILE:C	10:O:62:VAL:HB	1.55	1.02
10:O:11:ALA:O	10:O:99:PHE:HB2	1.59	1.02
19:R:107:ASP:CG	19:R:108:GLY:H	1.62	1.02
19:R:107:ASP:CG	19:R:108:GLY:N	2.12	1.02
6:G:145:ASP:CG	13:S:15:GLU:O	1.97	1.02
17:Y:30:ASP:CG	17:Y:31:LEU:CD2	2.28	1.02
31:K:129:GLU:HG2	31:K:133:LYS:HE3	1.06	1.02
2:A:414:C:N3	2:A:2409:G:N2	2.08	1.02
23:3:9:VAL:H	23:3:54:VAL:HG12	1.22	1.02
2:A:459:U:OP1	28:7:40:HIS:HA	1.59	1.02
28:7:18:PHE:H	28:7:44:VAL:CG2	1.72	1.02
29:8:62:LEU:HB2	29:8:63:PRO:CD	1.88	1.02
2:A:126:A:N6	28:7:18:PHE:HE2	1.57	1.02

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2423:U:C6	2:A:2423:U:C5'	2.42	1.02
2:A:2572:A:C5'	2:A:2574:G:H5'	1.89	1.02
3:D:70:LYS:HG3	3:D:73:ILE:HD11	1.41	1.02
3:D:89:ASN:HD21	3:D:199:ARG:NE	1.57	1.02
2:A:1675:C:C2	4:E:225:LYS:HG2	1.94	1.02
5:F:148:VAL:O	5:F:148:VAL:HG12	1.58	1.02
5:F:243:VAL:O	5:F:246:ARG:N	1.91	1.02
5:F:241:ALA:O	5:F:245:GLU:CD	1.98	1.02
5:F:96:LYS:HB2	5:F:98:ARG:NH2	1.73	1.02
2:A:2315:G:C5'	6:G:133:ASN:ND2	2.22	1.02
8:I:4:ILE:CG2	8:I:4:ILE:O	2.07	1.02
17:Y:103:LEU:HA	17:Y:108:ARG:CB	1.89	1.02
12:Q:42:TYR:CE2	18:Z:116:VAL:HG21	1.95	1.02
28:7:32:ALA:HA	28:7:35:ARG:CG	1.90	1.02
2:A:2286:A:H3'	2:A:2286:A:C8	1.95	1.02
2:A:2461:C:N3	2:A:2462:U:C5	2.28	1.02
2:A:2531:A:H2'	2:A:2532:G:H5''	1.38	1.02
2:A:2616:C:C2	2:A:2617:C:C5	2.48	1.02
2:A:2653:U:H2'	2:A:2654:A:N7	1.74	1.02
11:P:94:ARG:HB2	11:P:120:LEU:HD22	1.36	1.02
12:Q:44:ALA:CB	12:Q:126:VAL:O	2.08	1.02
21:V:61:VAL:CG2	21:V:98:ILE:H	1.73	1.02
15:W:82:LEU:HD23	15:W:98:LYS:C	1.79	1.02
18:Z:116:VAL:CG2	18:Z:169:VAL:CG2	2.35	1.02
8:I:103:GLN:NE2	8:I:109:LYS:CA	2.22	1.02
22:2:29:ASN:O	22:2:34:GLN:HG2	1.60	1.02
16:X:11:THR:C	16:X:15:MET:HG3	1.79	1.02
2:A:1340:U:C5	16:X:55:GLN:NE2	2.28	1.02
2:A:1062:G:N2	31:K:92:PRO:CG	2.22	1.02
2:A:1710:C:O2'	2:A:2858:C:C4	2.12	1.02
2:A:1270:C:H4'	2:A:1271:G:H5''	1.39	1.02
2:A:1071:G:H1'	2:A:1090:U:OP1	1.60	1.02
24:0:45:PHE:CD1	24:0:78:PHE:CA	2.42	1.01
23:3:3:ARG:HB2	23:3:60:GLU:HA	1.37	1.01
2:A:1364:G:C2'	25:4:3:LYS:NZ	2.10	1.01
2:A:2626:C:C5'	2:A:2626:C:H6	1.71	1.01
2:A:2781:A:O4'	2:A:2781:A:OP1	1.77	1.01
2:A:527:C:C6	2:A:2779:U:C6	2.48	1.01
3:D:167:GLU:HG2	3:D:182:MET:HE3	1.37	1.01
3:D:141:HIS:CE1	3:D:192:GLY:O	2.12	1.01
3:D:204:PHE:CD1	3:D:204:PHE:N	2.18	1.01
6:G:103:ASN:OD1	6:G:134:LEU:N	1.92	1.01

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:H:10:ILE:HG21	7:H:14:VAL:CG1	1.79	1.01
8:I:6:LEU:HD22	8:I:14:LYS:HD3	1.38	1.01
10:O:92:SER:HB2	10:O:113:LYS:NZ	1.75	1.01
10:O:78:ARG:C	10:O:79:PHE:HD2	1.61	1.01
11:P:141:GLU:HB2	11:P:145:LEU:HD22	1.02	1.01
12:Q:133:GLU:O	12:Q:133:GLU:OE1	1.78	1.01
19:R:25:ALA:O	19:R:29:LEU:HD23	1.60	1.01
20:U:41:ASN:HD22	20:U:42:ALA:N	1.58	1.01
20:U:63:GLN:O	20:U:65:ILE:N	1.92	1.01
23:3:30:ARG:CG	23:3:30:ARG:HH11	1.68	1.01
23:3:33:GLN:NE2	23:3:34:GLU:O	1.94	1.01
2:A:1309:G:OP2	28:7:9:ASN:ND2	1.92	1.01
2:A:2570:G:H2'	2:A:2570:G:N3	1.72	1.01
2:A:2689:U:C5'	2:A:2690:C:C5'	2.36	1.01
2:A:2782:G:OP2	2:A:2782:G:C8	2.13	1.01
3:D:104:ILE:HB	3:D:106:PRO:CD	1.89	1.01
8:I:37:ILE:CG2	8:I:38:GLU:N	2.17	1.01
9:N:25:GLN:HA	9:N:28:GLU:HG2	1.03	1.01
2:A:557:U:C4'	9:N:92:GLN:NE2	2.23	1.01
10:O:35:ILE:CG2	10:O:63:VAL:CA	2.09	1.01
12:Q:58:HIS:CE1	12:Q:59:ASN:HB3	1.95	1.01
14:T:4:ARG:HE	14:T:4:ARG:N	1.57	1.01
14:T:50:GLU:HA	14:T:55:ALA:CB	1.89	1.01
20:U:49:ASP:N	20:U:52:ASN:ND2	1.95	1.01
21:V:50:ASP:OD1	21:V:53:LYS:CE	2.07	1.01
8:I:68:LEU:CD2	8:I:108:LEU:CD1	1.90	1.01
22:2:30:ALA:CA	22:2:34:GLN:HG2	1.89	1.01
16:X:30:ASP:O	16:X:62:LYS:HE2	1.56	1.01
2:A:2305:A:H3'	2:A:2306:C:H5''	1.02	1.01
2:A:2896:C:C6	2:A:2896:C:O5'	2.12	1.01
27:6:28:ARG:HH11	27:6:28:ARG:HB3	1.20	1.01
30:9:25:VAL:CB	30:9:34:GLN:HB2	1.69	1.01
2:A:2330:G:N2	2:A:2331:G:C1'	2.23	1.01
5:F:56:THR:HB	5:F:57:PRO:HD2	1.41	1.01
2:A:2314:C:O2'	6:G:133:ASN:ND2	1.93	1.01
10:O:7:ARG:CD	10:O:44:LYS:CE	2.38	1.01
2:A:1287:A:C4'	19:R:104:ARG:HD2	1.90	1.01
13:S:33:ARG:HB3	13:S:35:VAL:CG2	1.90	1.01
2:A:995:C:P	20:U:54:LYS:HE2	1.99	1.01
15:W:17:VAL:O	15:W:20:VAL:HG23	1.60	1.01
18:Z:53:ASP:CG	18:Z:62:PHE:O	1.98	1.01
23:3:59:VAL:O	23:3:60:GLU:HG3	1.55	1.01

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:6:28:ARG:HH11	27:6:28:ARG:CB	1.72	1.01
28:7:26:SER:O	28:7:29:ASN:HB2	1.59	1.01
28:7:32:ALA:HA	28:7:35:ARG:HG3	1.42	1.01
2:A:2302:G:N1	2:A:2315:G:C6	2.29	1.01
2:A:2336:A:O2'	2:A:2337:G:H5'	0.85	1.01
2:A:2758:A:H3'	2:A:2758:A:P	2.01	1.01
2:A:2812:G:O2'	2:A:2813:A:H5'	1.58	1.01
2:A:2845:G:H2'	2:A:2846:G:H8	1.25	1.01
4:E:70:VAL:CG1	4:E:296:VAL:N	2.22	1.01
5:F:240:LEU:HD22	5:F:243:VAL:HG21	1.38	1.01
7:H:145:ALA:O	7:H:147:ILE:N	1.92	1.01
10:O:61:VAL:HG12	10:O:62:VAL:H	1.18	1.01
2:A:1665:A:C5'	10:O:66:LYS:HD3	1.89	1.01
19:R:20:LEU:O	19:R:22:ARG:N	1.94	1.01
18:Z:138:VAL:O	18:Z:139:THR:OG1	1.79	1.01
8:I:109:LYS:H	8:I:109:LYS:CE	1.74	1.01
8:I:112:LYS:HD3	8:I:112:LYS:N	1.75	1.01
8:I:145:VAL:HG12	8:I:146:THR:N	1.72	1.01
16:X:4:VAL:HG22	22:2:24:LYS:HZ2	0.85	1.01
2:A:58:G:H1	2:A:69:C:H42	1.09	1.01
31:K:129:GLU:HG2	31:K:133:LYS:CE	1.90	1.01
25:4:20:VAL:O	25:4:30:GLU:OE1	1.77	1.01
2:A:2317:C:H5'	6:G:150:SER:CA	1.89	1.01
2:A:2287:A:N6	2:A:2344:U:C6	2.28	1.01
2:A:2410:G:C2'	2:A:2411:A:C8	2.43	1.01
2:A:2580:U:C6	2:A:2581:G:N7	2.18	1.01
2:A:2761:G:C2'	2:A:2762:G:H5'	1.89	1.01
4:E:221:LYS:CE	4:E:233:ARG:HA	1.90	1.01
4:E:61:PRO:HA	4:E:69:PRO:HA	1.38	1.01
8:I:22:ALA:O	8:I:23:ASP:O	1.77	1.01
9:N:50:GLU:HA	9:N:53:ILE:HG21	1.35	1.01
11:P:66:VAL:HG23	11:P:67:ARG:NH2	1.73	1.01
13:S:12:ARG:NH1	13:S:20:TYR:CD2	2.21	1.01
20:U:28:ARG:O	20:U:31:GLN:N	1.92	1.01
20:U:42:ALA:O	20:U:45:TYR:HB2	1.60	1.01
2:A:446:G:C3'	20:U:5:LYS:HZ1	1.73	1.01
15:W:96:ILE:N	15:W:96:ILE:HD12	1.66	1.01
18:Z:163:ASP:OD2	18:Z:164:PRO:CG	2.08	1.01
2:A:2339:G:H2'	2:A:2340:G:C8	1.95	1.01
2:A:2575:C:O2	2:A:2575:C:H2'	1.61	1.01
2:A:2577:A:N1	2:A:2614:A:C2	2.29	1.01
2:A:1968:G:OP1	2:A:2592:G:OP1	1.79	1.01

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2437:U:C5'	2:A:2598:A:C2	2.42	1.01
4:E:45:LYS:HZ1	4:E:303:PRO:CA	1.73	1.01
7:H:146:ASN:O	7:H:150:VAL:CG2	2.08	1.01
8:I:6:LEU:CB	8:I:36:ALA:HB2	1.91	1.01
11:P:65:ASP:CA	11:P:109:LEU:H	1.71	1.01
12:Q:45:GLN:HB3	12:Q:152:SER:CB	1.90	1.01
20:U:27:SER:HB3	20:U:31:GLN:NE2	1.76	1.01
20:U:8:ILE:CA	20:U:11:ARG:CD	2.38	1.01
15:W:8:ARG:O	15:W:10:VAL:N	1.93	1.01
18:Z:24:TYR:CD2	18:Z:84:TYR:HD1	1.79	1.01
2:A:2307:G:C1'	2:A:2311:A:N6	2.15	1.01
31:K:33:VAL:HG22	31:K:60:VAL:CG1	1.89	1.01
16:X:44:GLN:OE1	16:X:45:TYR:HB2	1.60	1.01
29:8:26:LYS:CD	29:8:44:LYS:C	2.24	1.01
2:A:2277:G:O3'	12:Q:15:THR:CB	1.99	1.01
1:B:7:G:O2'	13:S:37:ARG:HG3	1.61	1.01
4:E:229:GLN:C	4:E:231:TRP:H	1.60	1.01
5:F:102:LEU:CD2	5:F:103:ASN:H	1.74	1.01
12:Q:28:ILE:CG2	12:Q:62:GLU:HG2	1.90	1.01
12:Q:85:ILE:HG22	12:Q:122:PHE:CD2	1.95	1.01
14:T:11:THR:HG22	14:T:12:ASP:H	1.20	1.01
27:6:24:THR:O	27:6:25:THR:HG23	1.60	1.01
28:7:34:ARG:NH1	28:7:42:LEU:HD23	1.75	1.01
2:A:1156:A:OP1	20:U:55:ARG:NH1	1.94	1.01
2:A:529:A:H2	2:A:2022:U:OP1	1.44	1.01
2:A:2403:C:O2	2:A:2403:C:H2'	1.56	1.01
2:A:2815:C:H5'	26:5:29:ASN:HD22	0.85	1.01
2:A:458:G:C5'	28:7:39:ARG:HD2	1.91	1.01
3:D:175:LEU:N	3:D:175:LEU:HD23	1.72	1.01
3:D:183:ILE:CG2	3:D:184:LEU:N	1.99	1.01
7:H:166:GLU:CA	7:H:167:LEU:HD23	1.88	1.01
7:H:93:TYR:O	7:H:94:ARG:HG2	1.57	1.01
9:N:139:LEU:HD13	9:N:139:LEU:H	1.21	1.01
13:S:31:LYS:CB	13:S:32:PRO:CD	2.38	1.01
20:U:55:ARG:O	20:U:57:PHE:N	1.93	1.01
15:W:42:ARG:O	15:W:44:ALA:N	1.93	1.01
15:W:85:VAL:HG12	15:W:95:ILE:CD1	1.90	1.01
18:Z:145:ASP:O	18:Z:146:HIS:CD2	2.14	1.01
22:2:13:PRO:HA	22:2:16:ARG:HD2	1.40	1.01
2:A:439:G:H5''	17:Y:6:LYS:HZ3	1.24	1.01
2:A:2722:G:N3	2:A:2723:C:C6	2.28	1.01
2:A:2286:A:H4'	2:A:2287:A:O4'	1.60	1.01

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2528:U:C4	2:A:2530:A:N3	2.29	1.01
2:A:2746:U:O2	2:A:2759:G:C2	2.13	1.01
5:F:193:LEU:HD13	5:F:223:LEU:HB2	1.43	1.01
5:F:59:GLU:O	5:F:61:PHE:CE2	2.13	1.01
8:I:37:ILE:HG22	8:I:38:GLU:N	1.73	1.01
9:N:27:ALA:CB	9:N:30:ALA:HB3	1.91	1.01
10:O:64:ARG:HD3	10:O:81:GLU:HB3	1.42	1.01
12:Q:32:LYS:NZ	18:Z:172:LEU:HD11	1.74	1.01
13:S:31:LYS:HB3	13:S:32:PRO:HD3	1.37	1.01
21:V:40:VAL:HB	21:V:51:ALA:HB1	1.37	1.01
21:V:51:ALA:HA	21:V:54:TYR:CD1	1.95	1.01
2:A:1033:U:C6	2:A:2750:A:H2	1.78	1.01
2:A:1364:G:P	25:4:3:LYS:HG2	1.97	1.01
2:A:1993:U:H4'	4:E:228:ARG:HH21	1.26	1.01
2:A:574:C:H41	2:A:2054:A:C5'	1.73	1.01
2:A:2217:G:O2'	2:A:2218:G:H5'	1.57	1.01
2:A:2597:G:C2'	2:A:2598:A:C8	2.43	1.01
2:A:2726:U:H3'	2:A:2727:G:H8	1.24	1.01
2:A:2839:G:N3	2:A:2840:C:C6	2.29	1.01
6:G:35:ALA:O	6:G:36:ASN:CG	1.99	1.01
10:O:35:ILE:HG21	10:O:63:VAL:HA	1.38	1.01
2:A:2296:U:N3	13:S:16:ALA:HB2	1.74	1.01
20:U:103:PRO:C	20:U:107:LYS:HG2	1.82	1.01
21:V:14:VAL:HG12	21:V:15:SER:N	1.75	1.01
8:I:121:ILE:HG22	8:I:122:ARG:H	0.85	1.01
8:I:77:VAL:HG23	8:I:141:LEU:CD1	1.83	1.01
2:A:76:C:O2'	22:2:55:ARG:HG3	1.61	1.01
2:A:1078:U:O2	2:A:1088:A:H1'	1.61	1.01
2:A:990:A:C6	2:A:1186:G:H1'	1.96	1.00
2:A:1287:A:C8	19:R:104:ARG:HG2	1.94	1.00
2:A:2043:C:C4	2:A:2777:G:N3	2.29	1.00
2:A:2215:G:O2'	2:A:2216:G:C5'	2.09	1.00
2:A:2246:G:O2'	2:A:2247:A:C5'	2.07	1.00
2:A:2253:G:C2'	2:A:2254:C:O5'	2.07	1.00
2:A:2422:A:C4	2:A:2424:C:C5	2.49	1.00
2:A:2552:U:O2	2:A:2554:U:C5'	2.09	1.00
2:A:2570:G:H2'	2:A:2571:C:C5	1.95	1.00
2:A:2589:A:H2'	2:A:2590:A:H5''	1.27	1.00
2:A:2832:U:O2'	2:A:2834:G:N3	1.90	1.00
3:D:167:GLU:CB	3:D:170:TYR:CD1	2.43	1.00
5:F:225:PRO:CG	5:F:231:ARG:NH2	2.20	1.00
7:H:15:THR:HG22	7:H:26:LYS:O	1.59	1.00

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:O:2:ILE:HD13	10:O:33:ALA:O	1.61	1.00
10:O:37:ASP:O	10:O:62:VAL:HG23	1.58	1.00
11:P:114:VAL:O	11:P:115:ARG:HG3	0.83	1.00
12:Q:36:ASN:OD1	18:Z:116:VAL:HG12	1.60	1.00
12:Q:65:ARG:NE	12:Q:85:ILE:HB	1.76	1.00
18:Z:120:LEU:HD23	18:Z:120:LEU:H	0.87	1.00
18:Z:126:GLY:O	18:Z:129:ARG:CB	2.08	1.00
18:Z:39:PHE:HA	18:Z:43:PHE:CZ	1.96	1.00
30:9:10:MET:CB	30:9:32:HIS:HD2	1.75	1.00
2:A:2742:C:C5'	30:9:35:ARG:HH12	1.74	1.00
2:A:2297:C:C2'	2:A:2298:A:H8	1.73	1.00
2:A:2364:C:C1'	24:0:32:LYS:HZ2	1.66	1.00
2:A:2717:G:N2	2:A:2718:G:C4	2.28	1.00
2:A:2633:G:H1	2:A:2785:C:H42	1.09	1.00
2:A:2785:C:O2'	4:E:100:TRP:HB2	1.61	1.00
4:E:206:LYS:O	4:E:257:GLY:HA2	1.61	1.00
4:E:267:ARG:HB2	4:E:297:LYS:HD2	1.42	1.00
5:F:144:PHE:CD2	5:F:156:LEU:HD13	1.94	1.00
11:P:53:ARG:H	11:P:53:ARG:HD2	1.21	1.00
19:R:22:ARG:HG3	19:R:26:LYS:HE3	1.42	1.00
2:A:2850:A:C2	19:R:61:HIS:NE2	2.28	1.00
17:Y:52:ARG:HD2	17:Y:95:ASN:OD1	1.59	1.00
22:2:30:ALA:O	22:2:34:GLN:HG2	1.58	1.00
31:K:73:PRO:HG2	31:K:78:LEU:HD11	1.02	1.00
31:K:73:PRO:CG	31:K:78:LEU:HD11	1.89	1.00
2:A:1944:U:C1'	2:A:1955:U:H1'	1.90	1.00
2:A:2896:C:H6	2:A:2896:C:O5'	1.40	1.00
23:3:8:LEU:HD22	23:3:31:LEU:HA	1.36	1.00
25:4:11:PRO:HA	25:4:40:HIS:CD2	1.96	1.00
2:A:1364:G:C3'	25:4:3:LYS:HD3	1.90	1.00
2:A:687:C:C5'	28:7:4:THR:HG22	1.90	1.00
2:A:1251:C:H5''	20:U:10:ARG:HE	1.22	1.00
2:A:2187:G:O2'	2:A:2188:C:H5'	1.59	1.00
2:A:2343:C:O2'	2:A:2344:U:H5'	1.58	1.00
2:A:2258:C:C5	2:A:2426:A:H4'	1.90	1.00
2:A:2520:C:N3	2:A:2521:C:C5	2.30	1.00
2:A:649:G:O3'	29:8:17:THR:HG21	1.61	1.00
2:A:1819:A:C2'	3:D:177:SER:HA	1.90	1.00
4:E:74:GLU:CA	4:E:293:TYR:CD2	2.41	1.00
7:H:41:THR:HB	7:H:52:THR:HB	1.42	1.00
10:O:98:ILE:HG13	10:O:117:LEU:HB3	1.43	1.00
11:P:83:GLU:O	11:P:92:ASP:N	1.95	1.00

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:Q:49:VAL:HG13	12:Q:50:VAL:H	1.22	1.00
2:A:1162:G:C4'	21:V:23:GLU:HB2	1.89	1.00
15:W:8:ARG:HG2	15:W:9:TYR:N	1.75	1.00
17:Y:45:GLY:HA2	17:Y:62:VAL:HG12	1.42	1.00
2:A:2331:G:O3'	24:O:70:ILE:HB	1.61	1.00
23:3:59:VAL:O	23:3:60:GLU:HG2	1.61	1.00
25:4:42:PHE:O	25:4:57:ASP:CA	1.99	1.00
28:7:44:VAL:C	28:7:46:ASP:H	1.53	1.00
29:8:19:THR:HB	29:8:21:LYS:NZ	1.77	1.00
2:A:2103:C:N3	2:A:2187:G:O6	1.94	1.00
2:A:2188:C:N4	2:A:2189:U:O4	1.95	1.00
2:A:2195:C:O5'	2:A:2195:C:H6	1.44	1.00
2:A:2423:U:C6	2:A:2425:A:C6	2.50	1.00
2:A:199:A:C2	2:A:2433:A:C4	2.49	1.00
2:A:2581:G:N2	2:A:2610:C:C6	2.29	1.00
2:A:2759:G:H2'	2:A:2760:C:O5'	1.58	1.00
2:A:526:A:H2	2:A:2626:C:H1'	1.25	1.00
2:A:1818:U:H5''	3:D:155:ARG:HB2	1.41	1.00
4:E:171:SER:O	4:E:175:ASP:CB	2.08	1.00
2:A:2051:A:H4'	4:E:238:LEU:HD21	1.43	1.00
4:E:303:PRO:HB2	4:E:307:LEU:HD13	1.02	1.00
5:F:96:LYS:CB	5:F:98:ARG:NH1	0.86	1.00
11:P:112:GLY:CA	11:P:113:GLN:HE22	1.74	1.00
12:Q:16:ARG:HB3	12:Q:16:ARG:CZ	1.90	1.00
12:Q:94:ARG:NH1	12:Q:105:PHE:O	1.93	1.00
17:Y:101:LEU:CD2	17:Y:103:LEU:HG	1.79	1.00
17:Y:46:ASP:OD2	17:Y:101:LEU:HA	1.59	1.00
17:Y:43:ASN:HD21	17:Y:112:LEU:HD21	1.23	1.00
18:Z:51:LEU:HD11	18:Z:63:PRO:HB2	1.42	1.00
23:3:40:THR:HG23	23:3:43:ILE:CD1	1.66	1.00
27:6:37:LEU:O	27:6:38:LYS:CG	2.07	1.00
2:A:1826:G:OP1	3:D:227:VAL:HG22	1.58	1.00
2:A:2209:C:N4	2:A:2215:G:H1	1.58	1.00
2:A:2286:A:H8	2:A:2286:A:H3'	1.26	1.00
2:A:2558:C:C2	2:A:2559:C:C5	2.50	1.00
2:A:2640:G:H1	2:A:2774:C:H42	1.02	1.00
2:A:2792:G:N2	2:A:2804:C:N3	2.08	1.00
8:I:7:LYS:HA	8:I:12:LYS:HD3	1.43	1.00
11:P:76:LEU:O	11:P:81:VAL:CG2	2.01	1.00
20:U:36:PHE:O	20:U:39:LEU:CB	2.09	1.00
21:V:42:GLY:CA	21:V:54:TYR:OH	2.09	1.00
2:A:83:G:H5''	17:Y:20:HIS:ND1	1.77	1.00

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:Z:47:SER:O	18:Z:49:THR:N	1.94	1.00
24:0:61:ALA:C	24:0:62:LEU:HD12	1.80	1.00
2:A:2423:U:O2'	2:A:2425:A:H3'	1.62	1.00
2:A:2567:G:O2'	2:A:2568:C:H5'	1.62	1.00
4:E:44:TYR:CG	4:E:307:LEU:O	2.14	1.00
2:A:2316:C:H5'	6:G:142:ALA:HB3	1.42	1.00
7:H:58:LYS:O	7:H:61:ARG:HB3	1.62	1.00
13:S:34:LEU:HD21	13:S:102:LEU:HA	1.42	1.00
13:S:110:THR:OG1	13:S:111:PRO:HD2	1.61	1.00
17:Y:31:LEU:O	17:Y:34:GLU:CB	2.09	1.00
16:X:33:SER:C	16:X:37:VAL:HG23	1.82	1.00
18:Z:95:SER:CB	18:Z:122:ILE:HG12	1.92	1.00
2:A:2857:G:O5'	2:A:2857:G:H8	1.44	1.00
2:A:932:G:C5'	23:3:24:LYS:NZ	2.24	1.00
28:7:8:ASN:HB2	28:7:11:LYS:HB3	1.42	1.00
2:A:2045:C:C4	2:A:2624:G:C2	2.50	1.00
2:A:2234:G:C6	2:A:2235:G:N7	2.29	1.00
2:A:2543:G:C5	2:A:2544:G:C5	2.49	1.00
2:A:2625:G:H3'	2:A:2626:C:C6	1.95	1.00
2:A:2709:G:O2'	2:A:2710:C:C5'	2.09	1.00
2:A:85:G:P	17:Y:65:VAL:CG1	2.48	1.00
2:A:1568:G:C3'	3:D:60:GLN:HE21	1.70	1.00
2:A:2730:C:C4'	4:E:265:ASN:HD21	1.74	1.00
5:F:144:PHE:O	5:F:146:ASP:N	1.93	1.00
12:Q:34:GLY:CA	12:Q:74:ASN:O	2.09	1.00
18:Z:6:LYS:H	18:Z:7:PRO:CD	1.74	1.00
22:2:57:LYS:O	22:2:60:GLN:HB3	1.61	1.00
29:8:16:ILE:CG1	29:8:22:VAL:CG2	2.22	1.00
2:A:2327:A:C2	2:A:2328:A:N3	2.29	1.00
2:A:1669:A:H5''	2:A:2550:G:OP1	1.61	1.00
2:A:2646:C:H2'	2:A:2647:U:H5'	1.42	1.00
2:A:2813:A:H2'	2:A:2814:C:C5	1.96	1.00
4:E:271:ILE:CD1	4:E:294:THR:HG22	1.89	1.00
6:G:21:VAL:CG1	6:G:132:VAL:HB	1.92	1.00
7:H:147:ILE:HD12	7:H:150:VAL:HB	1.41	1.00
7:H:41:THR:CB	7:H:52:THR:HB	1.91	1.00
10:O:66:LYS:HG3	10:O:82:ASN:ND2	1.75	1.00
19:R:21:TYR:HB3	19:R:47:PHE:CD2	1.96	1.00
20:U:33:ARG:HH11	20:U:33:ARG:CB	1.75	1.00
17:Y:77:VAL:O	17:Y:78:THR:HG23	1.61	1.00
18:Z:149:ALA:HA	18:Z:152:ILE:HD11	1.43	1.00
18:Z:159:THR:C	18:Z:160:LEU:CD1	2.30	1.00

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:K:15:ALA:CB	31:K:46:THR:CB	2.40	1.00
2:A:2862:G:C2'	2:A:2863:C:C6	2.43	1.00
2:A:2870:C:O2	2:A:2870:C:H2'	1.62	1.00
4:E:94:ARG:HB3	4:E:95:PRO:HD2	1.04	1.00
5:F:102:LEU:HD21	5:F:106:GLU:OE1	1.61	1.00
5:F:164:ALA:CB	5:F:232:LEU:HD12	1.92	1.00
12:Q:46:VAL:HB	12:Q:124:ALA:O	0.83	1.00
12:Q:31:PHE:HA	12:Q:85:ILE:HD11	1.43	1.00
19:R:36:THR:CG2	19:R:40:LYS:HB3	1.89	1.00
2:A:2305:A:H3'	2:A:2306:C:C5'	1.92	1.00
2:A:1364:G:C5'	25:4:3:LYS:HD3	1.92	1.00
2:A:2457:U:O2'	2:A:2458:G:H5'	1.60	1.00
2:A:14:A:C2	2:A:2625:G:O2'	2.14	1.00
2:A:2682:U:C6	4:E:48:MET:CE	2.44	1.00
2:A:1759:A:C8	2:A:2696:U:O2	2.14	1.00
2:A:2815:C:C2'	2:A:2816:C:C5'	2.38	1.00
2:A:2839:G:C4	2:A:2840:C:C6	2.49	1.00
3:D:66:PHE:C	3:D:67:LYS:HD3	1.80	1.00
6:G:24:HIS:HB3	6:G:72:LYS:HA	1.42	1.00
12:Q:12:PRO:HB2	12:Q:20:ILE:HD11	1.41	1.00
12:Q:94:ARG:CD	12:Q:106:GLY:CA	2.40	1.00
14:T:4:ARG:C	14:T:5:GLU:HG3	1.77	1.00
21:V:62:GLU:HB2	21:V:96:LEU:HD21	1.43	1.00
18:Z:62:PHE:CG	18:Z:87:THR:HG22	1.95	1.00
31:K:22:PRO:HG2	31:K:23:PRO:CD	1.90	1.00
2:A:440:G:OP1	17:Y:6:LYS:CD	2.10	1.00
2:A:1351:C:H2'	2:A:1352:U:H6	1.26	1.00
27:6:21:TYR:CE1	27:6:43:VAL:HG23	1.97	0.99
30:9:10:MET:CB	30:9:32:HIS:CD2	2.45	0.99
2:A:2587:A:O2'	2:A:2588:G:C5'	2.08	0.99
2:A:2654:A:N6	2:A:2667:C:H42	1.59	0.99
2:A:2769:C:O2	2:A:2770:G:O4'	1.78	0.99
5:F:36:ARG:HA	5:F:39:GLN:HE22	0.89	0.99
9:N:58:GLU:O	9:N:61:VAL:HB	1.62	0.99
13:S:61:ALA:HB2	13:S:88:ALA:HB2	1.03	0.99
21:V:4:ILE:HD13	21:V:13:ARG:HG2	1.39	0.99
21:V:62:GLU:N	21:V:98:ILE:HD11	1.74	0.99
24:0:30:VAL:CG2	24:0:63:SER:OG	2.09	0.99
2:A:142(A):A:C4'	9:N:21:ARG:NH2	2.26	0.99
2:A:2403:C:C4	2:A:2415:G:C6	2.50	0.99
2:A:2484:G:C2	2:A:2485:G:O4'	2.15	0.99
2:A:2495:G:H4'	12:Q:101:MET:CB	1.92	0.99

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2599:G:H2'	2:A:2600:A:O4'	1.60	0.99
2:A:2741:A:H2'	2:A:2742:C:O4'	1.62	0.99
2:A:2838:G:C5	2:A:2839:G:N7	2.30	0.99
2:A:931:G:H2'	2:A:932:G:C8	1.96	0.99
4:E:222:ARG:HD3	4:E:232:ARG:CA	1.92	0.99
6:G:97:GLN:OE1	6:G:106:PHE:CE2	2.14	0.99
7:H:93:TYR:CG	7:H:106:VAL:HG22	1.88	0.99
9:N:42:GLU:O	9:N:132:LEU:C	2.00	0.99
10:O:68:GLY:CA	10:O:78:ARG:HE	1.74	0.99
11:P:66:VAL:C	11:P:67:ARG:HE	1.65	0.99
2:A:2376:A:C2	13:S:102:LEU:HD22	1.96	0.99
21:V:20:ILE:CG2	21:V:67:LYS:HD2	1.92	0.99
17:Y:73:HIS:HA	17:Y:91:LEU:HD11	1.12	0.99
31:K:9:ILE:HD11	31:K:31:HIS:HB3	1.01	0.99
2:A:2354:G:N3	24:O:32:LYS:HE3	1.73	0.99
2:A:2273:A:N7	2:A:2274:A:C8	2.30	0.99
2:A:2275:C:O2	12:Q:103:ALA:HB2	1.60	0.99
3:D:146:LYS:HD3	3:D:147:PRO:HD2	1.03	0.99
3:D:161:ALA:C	3:D:162:GLN:NE2	2.16	0.99
5:F:196:THR:HG23	5:F:236:THR:HG21	1.43	0.99
11:P:141:GLU:CB	11:P:145:LEU:HD22	1.93	0.99
12:Q:54:VAL:O	12:Q:56:ILE:N	1.96	0.99
8:I:94:THR:CG2	8:I:96:LYS:HB3	1.90	0.99
31:K:9:ILE:HD13	31:K:31:HIS:CB	1.89	0.99
24:O:36:ILE:CB	24:O:68:VAL:HG11	1.92	0.99
30:9:10:MET:HB3	30:9:32:HIS:CD2	1.97	0.99
2:A:2051:A:O2'	4:E:238:LEU:HD23	1.60	0.99
2:A:2090:G:N1	2:A:2230:G:O6	1.94	0.99
2:A:2555:U:H6	2:A:2555:U:OP2	1.45	0.99
1:B:76:G:OP1	18:Z:10:PRO:HB3	1.61	0.99
3:D:213:LYS:HB3	3:D:215:LYS:H	1.17	0.99
4:E:74:GLU:N	4:E:74:GLU:OE2	1.94	0.99
5:F:37:ALA:CB	5:F:102:LEU:HB2	1.91	0.99
5:F:3:ALA:CB	5:F:16:VAL:C	2.28	0.99
6:G:21:VAL:HG13	6:G:132:VAL:HG23	1.03	0.99
7:H:73:ASN:CG	7:H:137:LYS:HZ1	1.64	0.99
9:N:15:ARG:CD	9:N:43:ARG:CD	2.38	0.99
12:Q:41:THR:HG22	12:Q:125:TRP:CE3	1.95	0.99
19:R:43:GLU:O	19:R:45:ARG:N	1.94	0.99
19:R:93:GLY:O	19:R:95:THR:N	1.95	0.99
17:Y:74:VAL:CG1	17:Y:77:VAL:CG2	2.40	0.99
22:2:55:ARG:O	22:2:58:THR:N	1.96	0.99

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:4:5:LEU:HD12	25:4:60:ASN:ND2	1.77	0.99
28:7:38:GLY:O	28:7:39:ARG:HB2	1.62	0.99
29:8:41:ILE:C	29:8:43:GLY:H	1.65	0.99
2:A:2082:A:C6	2:A:2239:G:C6	2.50	0.99
2:A:2464:C:N4	2:A:2487:G:C5	2.31	0.99
2:A:2576:G:OP1	2:A:2576:G:H3'	1.61	0.99
2:A:2603:G:N1	2:A:2604:U:C5	2.29	0.99
2:A:2821:A:H2	2:A:2822:G:C5	1.67	0.99
2:A:687:C:C4'	28:7:4:THR:CG2	2.40	0.99
6:G:19:GLU:HB2	6:G:135:VAL:CG2	1.79	0.99
2:A:2303:G:C4'	6:G:99:ASP:CB	2.40	0.99
13:S:32:PRO:HG2	13:S:100:ALA:HB1	1.00	0.99
8:I:89:LEU:HD12	8:I:93:ILE:CG2	1.93	0.99
16:X:24:LEU:CD1	16:X:68:LEU:HD22	1.90	0.99
2:A:2386:C:H4'	24:0:39:ARG:NH2	1.72	0.99
2:A:1566:A:H2	3:D:212:HIS:HA	1.19	0.99
2:A:2361:A:C2'	2:A:2362:G:H5'	1.92	0.99
2:A:2710:C:O2'	2:A:2711:A:C5'	2.10	0.99
2:A:398:G:OP1	25:4:58:LYS:NZ	1.95	0.99
2:A:974(A):C:H1'	2:A:989:G:H22	1.24	0.99
3:D:85:ASN:CG	3:D:86:ARG:NE	2.16	0.99
4:E:44:TYR:CD1	4:E:309:PRO:HD3	1.97	0.99
5:F:220:THR:HA	5:F:224:ALA:HB2	1.43	0.99
5:F:5:ILE:HA	5:F:139:VAL:HG11	1.42	0.99
10:O:63:VAL:N	10:O:84:CYS:SG	2.34	0.99
10:O:98:ILE:CG1	10:O:117:LEU:HB3	1.92	0.99
13:S:32:PRO:CD	13:S:100:ALA:HA	1.92	0.99
13:S:87:LEU:HD22	13:S:87:LEU:H	1.26	0.99
15:W:10:VAL:HG13	15:W:46:PHE:HE2	1.23	0.99
15:W:81:ALA:O	15:W:82:LEU:HD13	1.62	0.99
6:G:56:ARG:HG2	6:G:65:GLU:HB2	1.01	0.99
2:A:2755:C:C6	2:A:2755:C:O5'	2.15	0.99
24:0:24:LYS:HG2	24:0:56:ASP:CG	1.82	0.99
25:4:16:TYR:O	25:4:17:GLN:HG3	0.82	0.99
25:4:73:LYS:OXT	25:4:73:LYS:HG3	1.61	0.99
27:6:39:LYS:HA	27:6:50:PHE:HD1	1.23	0.99
2:A:1789:A:H4'	3:D:224:VAL:CG1	1.92	0.99
2:A:2469:A:C8	2:A:2469:A:H5'	1.95	0.99
2:A:2666:C:C3'	2:A:2667:C:H5'	1.93	0.99
3:D:89:ASN:O	3:D:105:ALA:HB1	1.58	0.99
5:F:63:SER:H	5:F:65:ARG:HE	1.04	0.99
2:A:2745:C:H1'	7:H:142:GLU:HG3	1.02	0.99

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:3:VAL:CG2	8:I:21:VAL:HG23	1.92	0.99
2:A:2251:G:C5'	12:Q:102:ARG:NH2	2.26	0.99
18:Z:69:VAL:HG21	18:Z:81:VAL:HG13	1.03	0.99
18:Z:92:VAL:HG13	18:Z:124:ALA:HB2	1.42	0.99
31:K:121:LEU:CD2	31:K:125:MET:CE	2.40	0.99
27:6:22:TYR:O	27:6:23:THR:CG2	2.11	0.99
8:I:65:ALA:HB1	8:I:134:HIS:HB2	1.44	0.99
24:0:43:THR:OG1	24:0:75:GLY:C	2.01	0.99
23:3:20:LYS:HA	23:3:23:LEU:HD11	0.99	0.99
2:A:929:G:H21	23:3:43:ILE:N	1.60	0.99
28:7:34:ARG:HH11	28:7:42:LEU:HD23	1.09	0.99
3:D:100:LYS:O	3:D:101:ARG:HG3	1.62	0.99
5:F:163:HIS:HA	5:F:166:ILE:CG1	1.92	0.99
5:F:243:VAL:O	5:F:246:ARG:CB	2.11	0.99
1:B:43:C:H1'	6:G:47:GLN:NE2	1.76	0.99
10:O:2:ILE:HG22	10:O:21:VAL:HG21	1.42	0.99
11:P:117:GLU:OE2	11:P:136:ALA:CA	2.10	0.99
20:U:31:GLN:O	20:U:33:ARG:N	1.95	0.99
20:U:65:ILE:CG2	20:U:76:TYR:CE2	2.37	0.99
15:W:84:ARG:HB2	15:W:96:ILE:HD13	1.44	0.99
2:A:1545:A:C3'	2:A:545(A):A:P	2.51	0.99
8:I:48:GLU:HG3	8:I:52:GLN:HE21	1.27	0.99
2:A:1620:G:H1'	28:7:1:MET:H3	1.22	0.99
2:A:2331:G:C4'	24:0:70:ILE:CG1	2.12	0.99
2:A:2531:A:C2'	2:A:2532:G:H5'	1.93	0.99
5:F:214:THR:OG1	5:F:216:SER:O	1.81	0.99
11:P:132:LYS:H	11:P:132:LYS:CD	1.74	0.99
11:P:77:ALA:CB	11:P:81:VAL:CG1	2.41	0.99
12:Q:142:LYS:CE	12:Q:143:VAL:N	2.26	0.99
12:Q:58:HIS:CA	12:Q:61:LEU:CD1	2.41	0.99
13:S:32:PRO:HD2	13:S:101:VAL:H	1.27	0.99
15:W:36:LEU:HD11	15:W:47:VAL:HG12	1.40	0.99
31:K:15:ALA:HB1	31:K:46:THR:HB	1.03	0.99
31:K:37:GLU:O	31:K:41:ARG:CD	2.10	0.99
29:8:60:LEU:O	29:8:61:MET:O	1.79	0.99
2:A:1782:C:C2	2:A:2609:U:C5	2.51	0.99
2:A:1791:A:OP1	3:D:210:LYS:HD2	1.60	0.99
2:A:2531:A:H2'	2:A:2532:G:H5'	1.02	0.99
2:A:2712:U:H3'	2:A:2714:G:OP2	1.60	0.99
3:D:110:LYS:HA	3:D:110:LYS:HZ3	0.82	0.99
3:D:143:ILE:HG12	3:D:153:LEU:CB	1.92	0.99
4:E:212:GLY:O	4:E:216:ARG:HG3	1.54	0.99

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:263:GLU:HG3	4:E:266:LYS:HE2	1.00	0.99
5:F:159:ALA:O	5:F:160:LEU:HD23	1.62	0.99
5:F:225:PRO:O	5:F:231:ARG:CG	2.09	0.99
9:N:79:PHE:O	9:N:83:ILE:HG23	1.63	0.99
2:A:2495:G:O2'	12:Q:101:MET:CE	2.11	0.99
20:U:59:ARG:O	20:U:62:ILE:HG12	1.62	0.99
18:Z:39:PHE:O	18:Z:43:PHE:CG	2.16	0.99
18:Z:2:GLU:CA	18:Z:54:ILE:HG21	1.87	0.99
9:N:10:VAL:HB	9:N:36:VAL:CA	1.92	0.99
16:X:9:HIS:ND1	16:X:26:PHE:C	2.15	0.99
31:K:18:ALA:C	31:K:19:THR:HG23	1.81	0.99
23:3:16:PRO:HB2	23:3:19:GLN:CG	1.93	0.98
26:5:11:THR:CG2	26:5:19:ARG:HH22	1.76	0.98
28:7:21:ARG:CB	28:7:31:LEU:HD11	1.92	0.98
2:A:1210:A:H5'	2:A:1211:U:H3'	1.43	0.98
2:A:2022:U:H4'	2:A:2023:G:OP1	1.61	0.98
2:A:2093:G:N7	2:A:2225:A:C5	2.31	0.98
2:A:2219:G:H2'	2:A:2224:G:H5'	1.41	0.98
2:A:2198:A:C6	2:A:2225:A:N6	2.31	0.98
2:A:2239:G:H2'	2:A:2240:C:C6	1.98	0.98
2:A:2277:G:O3'	12:Q:15:THR:OG1	1.80	0.98
2:A:2429:G:C5'	2:A:2430:A:OP2	2.10	0.98
2:A:2616:C:C2	2:A:2617:C:H5	1.81	0.98
4:E:201:VAL:HA	4:E:310:PHE:O	1.61	0.98
2:A:2746:U:C4'	7:H:138:GLN:HA	1.93	0.98
8:I:31:PHE:CE1	8:I:36:ALA:HB3	1.98	0.98
9:N:45:VAL:H	9:N:132:LEU:HD22	1.28	0.98
10:O:101:PRO:CB	10:O:122:ILE:HD11	1.93	0.98
2:A:1666:G:O2'	10:O:6:SER:HB3	1.60	0.98
19:R:34:ILE:CG2	19:R:35:THR:N	2.12	0.98
18:Z:37:LYS:HA	18:Z:40:ASP:OD2	1.61	0.98
17:Y:81:LYS:HD2	17:Y:83:ASP:H	1.28	0.98
2:A:2356:C:H2'	2:A:2357:U:O5'	1.63	0.98
2:A:783:A:H4'	2:A:2588:G:O3'	1.62	0.98
2:A:2654:A:N6	2:A:2667:C:N4	2.11	0.98
2:A:2826:A:C5	2:A:2827:C:H5	1.72	0.98
7:H:130:ILE:HG22	7:H:131:ILE:H	1.27	0.98
7:H:120:LEU:HD13	7:H:143:LEU:HD12	1.43	0.98
7:H:93:TYR:CE1	7:H:106:VAL:C	2.35	0.98
2:A:1140:C:OP1	9:N:18:ILE:HD11	1.61	0.98
9:N:60:ARG:O	9:N:71:TYR:CG	2.16	0.98
19:R:52:ILE:HG22	19:R:53:HIS:H	1.19	0.98

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2378:A:C4	13:S:26:LEU:CD2	2.45	0.98
2:A:563:G:N2	20:U:37:GLN:HE22	1.61	0.98
17:Y:71:VAL:CG1	17:Y:72:ILE:H	1.76	0.98
2:A:138:G:N3	2:A:138:G:H3'	1.78	0.98
2:A:223:A:C3'	2:A:224:G:P	2.51	0.98
27:6:28:ARG:HG3	27:6:30:ASN:HB3	1.44	0.98
2:A:1260:G:C5'	15:W:83:LYS:NZ	2.26	0.98
2:A:1312:U:HO2'	2:A:1314:C:H5	1.11	0.98
2:A:2392:A:C8	2:A:2393:A:C8	2.51	0.98
2:A:2552:U:C2	2:A:2554:U:H5'	1.96	0.98
2:A:2584:U:H6	2:A:2584:U:H3'	1.21	0.98
2:A:2601:C:O2	2:A:2603:G:N7	1.96	0.98
2:A:2647:U:O2'	2:A:2648:C:C5'	2.10	0.98
4:E:263:GLU:HG3	4:E:266:LYS:CE	1.91	0.98
5:F:245:GLU:CD	5:F:245:GLU:H	1.64	0.98
7:H:93:TYR:O	7:H:94:ARG:HG3	1.60	0.98
10:O:37:ASP:HB2	10:O:62:VAL:HG21	1.44	0.98
12:Q:137:ARG:HH11	12:Q:138:ARG:HG2	1.28	0.98
12:Q:47:GLU:OE2	12:Q:151:SER:C	2.02	0.98
19:R:87:TYR:OH	19:R:116:LEU:HB2	1.64	0.98
13:S:34:LEU:HG	13:S:102:LEU:CA	1.93	0.98
21:V:50:ASP:N	21:V:53:LYS:HD2	1.76	0.98
2:A:973:A:N1	21:V:81:ARG:HD2	0.85	0.98
22:2:11:MET:O	22:2:12:THR:O	1.81	0.98
22:2:2:VAL:H	22:2:4:HIS:CE1	1.80	0.98
16:X:6:LYS:HZ1	16:X:29:ASP:HA	1.05	0.98
23:3:7:LYS:O	23:3:54:VAL:CB	2.10	0.98
2:A:1364:G:O5'	25:4:3:LYS:CG	2.10	0.98
2:A:2021:C:OP2	26:5:15:LYS:NZ	1.95	0.98
29:8:26:LYS:CE	29:8:45:GLY:H	1.73	0.98
2:A:2246:G:C2'	2:A:2247:A:H5'	1.92	0.98
2:A:2463:C:C2	2:A:2464:C:H5	1.78	0.98
2:A:2472:G:H2'	2:A:2475:C:H42	0.83	0.98
2:A:2625:G:H2'	2:A:2626:C:C6	1.98	0.98
2:A:612:G:H4'	2:A:616:A:N6	1.78	0.98
2:A:617:G:OP2	5:F:221:GLU:OE1	1.80	0.98
3:D:74:PRO:CD	3:D:96:ALA:HB2	1.93	0.98
5:F:224:ALA:HB3	5:F:225:PRO:HD3	1.43	0.98
2:A:1204:A:HO2'	5:F:230:GLY:N	1.61	0.98
7:H:120:LEU:HD13	7:H:143:LEU:CD1	1.93	0.98
10:O:11:ALA:HB1	10:O:99:PHE:HB3	1.45	0.98
11:P:62:ALA:CA	11:P:107:LYS:HE3	1.94	0.98

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:U:65:ILE:HG22	20:U:76:TYR:HE2	1.00	0.98
2:A:993:G:C4'	21:V:90:PHE:HE2	1.65	0.98
18:Z:91:PRO:HG2	18:Z:127:PRO:CA	1.92	0.98
22:2:3:LEU:O	22:2:4:HIS:HB2	1.59	0.98
2:A:138:G:H5''	16:X:43:GLU:CG	1.92	0.98
31:K:37:GLU:HG2	31:K:41:ARG:HH12	1.22	0.98
8:I:48:GLU:O	8:I:52:GLN:CG	2.11	0.98
24:0:49:GLN:OE1	24:0:74:LYS:O	1.80	0.98
23:3:31:LEU:HD23	23:3:32:GLN:CA	1.93	0.98
26:5:12:SER:CB	26:5:15:LYS:NZ	2.19	0.98
28:7:30:ILE:CB	28:7:33:ARG:HD2	1.91	0.98
30:9:29:ASN:HB2	30:9:32:HIS:ND1	1.78	0.98
2:A:2466:C:OP1	30:9:5:SER:O	1.82	0.98
5:F:115:LEU:HG	5:F:246:ARG:CZ	1.91	0.98
9:N:60:ARG:CA	9:N:71:TYR:CD2	2.46	0.98
10:O:35:ILE:HG23	10:O:62:VAL:C	1.82	0.98
11:P:104:ASP:O	11:P:105:TYR:CD1	2.16	0.98
2:A:2320:A:N1	13:S:13:ARG:HG2	1.78	0.98
13:S:61:ALA:HB2	13:S:88:ALA:CB	1.91	0.98
21:V:61:VAL:HG22	21:V:98:ILE:H	1.23	0.98
21:V:20:ILE:HG23	21:V:67:LYS:HD2	1.43	0.98
2:A:973:A:C2	21:V:81:ARG:HD2	1.99	0.98
2:A:25:U:H4'	15:W:79:GLY:HA2	0.99	0.98
15:W:86:LEU:HB3	15:W:87:PRO:HD2	1.43	0.98
2:A:227:A:N1	2:A:2407:G:H1'	1.77	0.98
24:0:45:PHE:HE1	24:0:78:PHE:CD2	1.62	0.98
23:3:20:LYS:O	23:3:23:LEU:CB	2.11	0.98
25:4:42:PHE:O	25:4:61:LYS:CE	2.10	0.98
2:A:2492:U:C2'	2:A:2493:U:O5'	2.11	0.98
2:A:2520:C:N3	2:A:2521:C:H5	1.59	0.98
2:A:2687:U:H2'	2:A:2687:U:O2	1.61	0.98
5:F:57:PRO:O	5:F:79:ARG:HB2	1.62	0.98
5:F:96:LYS:N	5:F:98:ARG:NH2	2.09	0.98
2:A:2406:U:C4	11:P:55:GLN:CB	2.30	0.98
12:Q:49:VAL:HG22	12:Q:119:ASN:O	1.63	0.98
15:W:103:ILE:O	15:W:103:ILE:CG2	2.08	0.98
22:2:63:GLU:OE2	22:2:63:GLU:O	1.82	0.98
31:K:37:GLU:O	31:K:41:ARG:HD3	1.63	0.98
2:A:2:G:C2	2:A:2902:C:N3	2.31	0.98
2:A:1614:A:H61	15:W:88:ARG:HB2	1.22	0.98
25:4:5:LEU:CD2	25:4:5:LEU:H	1.75	0.98
28:7:43:THR:C	28:7:46:ASP:CG	2.21	0.98

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2567:G:HO2'	2:A:2568:C:H6	1.07	0.98
2:A:2574:G:C2'	2:A:2575:C:H6	1.75	0.98
2:A:2023:G:H5''	2:A:2617:C:O2'	1.61	0.98
2:A:2626:C:O2'	2:A:2627:G:H5''	1.62	0.98
2:A:2869:G:O2'	2:A:2870:C:H5'	1.64	0.98
3:D:175:LEU:CD2	3:D:180:VAL:CA	2.27	0.98
6:G:18:ILE:HG22	6:G:19:GLU:H	1.25	0.98
7:H:101:LYS:CG	7:H:115:GLU:CA	2.40	0.98
19:R:25:ALA:O	19:R:29:LEU:CD2	2.12	0.98
19:R:36:THR:HG21	19:R:40:LYS:CB	1.89	0.98
20:U:30:LYS:O	20:U:32:TYR:HD2	1.45	0.98
21:V:61:VAL:CG2	21:V:97:GLY:CA	2.40	0.98
15:W:84:ARG:CB	15:W:96:ILE:CD1	2.42	0.98
18:Z:13:LYS:O	18:Z:15:ASP:N	1.96	0.98
2:A:75:G:H4'	22:2:51:LYS:NZ	1.79	0.98
2:A:68:G:H2'	2:A:69:C:C6	1.99	0.98
2:A:1351:C:H2'	2:A:1352:U:C6	1.98	0.98
27:6:24:THR:O	27:6:25:THR:CG2	2.11	0.98
2:A:1031:G:C4'	30:9:8:LYS:NZ	2.20	0.98
2:A:1139:G:OP1	9:N:46:ILE:CG2	2.12	0.98
2:A:2219:G:O2'	2:A:2224:G:P	2.22	0.98
2:A:965:C:O2'	2:A:2272:U:H6	1.19	0.98
2:A:242:G:H3'	29:8:5:LYS:NZ	1.78	0.98
2:A:2564:A:H2'	2:A:2565:A:H8	0.96	0.98
2:A:2622:C:C2	2:A:2623:G:C8	2.52	0.98
2:A:2712:U:O2'	2:A:712(A):A:C5'	2.11	0.98
4:E:76:PRO:CB	4:E:77:PRO:CD	2.35	0.98
5:F:102:LEU:HB2	5:F:107:ARG:NH2	1.77	0.98
6:G:24:HIS:C	6:G:129:ASP:OD2	2.01	0.98
8:I:4:ILE:O	8:I:5:PHE:O	1.81	0.98
19:R:110:PRO:O	19:R:111:LEU:O	1.80	0.98
13:S:116:PHE:O	13:S:120:GLU:CD	2.01	0.98
20:U:61:TRP:HZ3	20:U:94:VAL:N	1.61	0.98
21:V:33:VAL:HB	21:V:63:HIS:ND1	1.78	0.98
15:W:69:LEU:N	15:W:69:LEU:HD23	1.77	0.98
18:Z:18:MET:C	18:Z:36:ARG:HG3	1.82	0.98
24:0:46:LYS:CE	24:0:58:THR:OG1	2.11	0.98
29:8:50:LEU:HD23	29:8:51:ALA:CA	1.94	0.98
2:A:1129:A:C2	2:A:2570:G:O4'	2.17	0.98
2:A:1782:C:C2	2:A:2609:U:H6	1.56	0.98
2:A:1820:U:O2	3:D:200:THR:HG23	1.60	0.98
2:A:2094:G:C2	2:A:2196:C:C2	2.50	0.98

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2314:C:OP1	6:G:74:THR:HG22	1.64	0.98
2:A:2428:G:H5''	2:A:2429:G:OP1	1.64	0.98
2:A:2460:U:O2	2:A:2493:U:C5	2.17	0.98
2:A:2848:G:H22	2:A:2867:G:H1'	0.82	0.98
7:H:10:ILE:HG22	7:H:14:VAL:CG1	1.79	0.98
10:O:37:ASP:O	10:O:61:VAL:HG13	1.64	0.98
21:V:49:GLU:HB3	21:V:53:LYS:HD2	1.44	0.98
17:Y:86:GLU:O	17:Y:87:VAL:CG2	2.11	0.98
18:Z:68:ALA:C	18:Z:69:VAL:HG23	1.81	0.98
2:A:145:G:H4'	16:X:1:SER:HB2	1.44	0.98
2:A:396:G:OP1	25:4:10:VAL:HA	1.63	0.98
28:7:44:VAL:O	28:7:46:ASP:N	1.96	0.98
2:A:2459:A:N7	2:A:2460:U:C5	2.31	0.98
2:A:2584:U:H2'	2:A:2585:U:C5	1.98	0.98
2:A:2785:C:C2'	2:A:2786:U:C6	2.46	0.98
4:E:208:LYS:H	4:E:257:GLY:HA3	1.27	0.98
5:F:25:PRO:O	5:F:26:VAL:CG2	2.12	0.98
8:I:7:LYS:CA	8:I:14:LYS:HG2	1.94	0.98
11:P:65:ASP:HA	11:P:109:LEU:N	1.79	0.98
20:U:117:ARG:CD	20:U:118:GLN:HG2	1.93	0.98
20:U:28:ARG:N	20:U:31:GLN:HG3	1.77	0.98
20:U:53:LYS:HA	20:U:56:ASP:OD2	1.64	0.98
15:W:97:LYS:HE3	15:W:99:ARG:NH1	1.79	0.98
8:I:62:LEU:O	8:I:66:LYS:HE2	1.64	0.98
24:0:28:GLY:N	24:0:60:PHE:HD2	1.35	0.97
2:A:2815:C:C5'	26:5:29:ASN:HD22	1.76	0.97
2:A:650:C:H5''	29:8:19:THR:HG23	1.45	0.97
2:A:2248:C:H2'	2:A:2249:U:H5'	1.43	0.97
2:A:2392:A:H2'	2:A:2393:A:C5'	1.94	0.97
2:A:2393:A:H4'	29:8:13:ARG:NH2	1.79	0.97
2:A:2404:C:N4	2:A:2405:G:C6	2.31	0.97
2:A:2595:G:H1'	2:A:2599:G:H22	1.27	0.97
2:A:25:U:H5''	15:W:80:PRO:HD2	1.44	0.97
2:A:2731:G:OP1	4:E:265:ASN:HB3	1.62	0.97
4:E:46:ALA:HB3	4:E:72:VAL:O	1.63	0.97
5:F:36:ARG:O	5:F:39:GLN:OE1	1.81	0.97
7:H:123:GLU:O	7:H:130:ILE:CG2	2.11	0.97
7:H:58:LYS:HG3	7:H:59:HIS:H	1.29	0.97
9:N:19:MET:HB2	9:N:46:ILE:HG12	0.98	0.97
12:Q:45:GLN:OE1	12:Q:153:PRO:HD2	1.62	0.97
12:Q:67:ALA:CB	12:Q:70:ARG:HH11	1.65	0.97
17:Y:49:GLU:HG2	17:Y:59:GLU:HA	1.45	0.97

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:95:SER:HG	8:I:98:ILE:HD12	1.28	0.97
22:2:27:LEU:HD11	22:2:53:ILE:CD1	1.93	0.97
25:4:14:ILE:HB	25:4:37:SER:O	1.63	0.97
29:8:57:ARG:O	29:8:58:MET:O	1.81	0.97
2:A:1809:A:H62	25:4:3:LYS:CG	1.77	0.97
2:A:2226:C:H2'	2:A:2227:A:C4'	1.94	0.97
2:A:2232:U:H2'	2:A:2233:U:C5'	1.93	0.97
2:A:2364:C:C5'	24:0:38:VAL:CG1	2.42	0.97
3:D:140:VAL:HG12	3:D:141:HIS:N	1.77	0.97
3:D:167:GLU:HB2	3:D:170:TYR:HD1	1.20	0.97
3:D:85:ASN:ND2	3:D:86:ARG:CD	2.27	0.97
4:E:201:VAL:H	4:E:266:LYS:HD2	1.29	0.97
2:A:2785:C:H5''	4:E:99:VAL:HG22	0.98	0.97
5:F:243:VAL:O	5:F:246:ARG:HB2	1.64	0.97
7:H:86:LEU:N	7:H:148:ARG:NH2	2.12	0.97
7:H:86:LEU:HD22	7:H:87:GLU:H	1.27	0.97
11:P:52:LYS:CD	11:P:53:ARG:NH1	2.26	0.97
12:Q:142:LYS:O	12:Q:143:VAL:CG2	2.11	0.97
2:A:911:A:N7	12:Q:16:ARG:HG3	1.78	0.97
12:Q:33:MET:HB3	12:Q:83:PHE:HB3	1.43	0.97
19:R:46:GLY:O	19:R:49:ASP:HB3	1.62	0.97
20:U:7:GLY:O	20:U:9:VAL:HG23	1.64	0.97
21:V:30:GLY:CA	21:V:33:VAL:CG2	2.40	0.97
17:Y:101:LEU:HG	17:Y:112:LEU:HD11	0.99	0.97
17:Y:31:LEU:H	17:Y:31:LEU:HD23	0.82	0.97
18:Z:123:VAL:HB	18:Z:159:THR:HG21	1.41	0.97
16:X:35:GLY:O	16:X:37:VAL:N	1.97	0.97
25:4:23:GLU:CD	25:4:29:PRO:HG3	1.84	0.97
28:7:34:ARG:HD3	28:7:42:LEU:HD23	1.29	0.97
2:A:1031:G:C4'	30:9:8:LYS:HD3	1.93	0.97
2:A:2465:C:O2'	2:A:2466:C:O5'	1.82	0.97
2:A:2497:A:O2'	2:A:2498:C:O5'	1.81	0.97
2:A:2532:G:C5'	2:A:2532:G:H8	1.75	0.97
3:D:211:HIS:CE1	3:D:212:HIS:HD2	1.82	0.97
2:A:1568:G:O5'	3:D:60:GLN:HG2	0.83	0.97
4:E:101:THR:O	4:E:103:GLU:HG3	1.64	0.97
9:N:52:GLN:HA	9:N:55:GLU:CG	1.93	0.97
10:O:81:GLU:HG2	10:O:82:ASN:H	1.26	0.97
21:V:61:VAL:HG22	21:V:98:ILE:N	1.78	0.97
28:7:31:LEU:N	28:7:31:LEU:HD23	1.77	0.97
2:A:2276:G:OP2	12:Q:103:ALA:HA	1.64	0.97
2:A:2652:C:C4	2:A:2653:U:C4	2.51	0.97

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2717:G:H5'	2:A:2717:G:H8	0.82	0.97
2:A:919:G:H21	2:A:2268:A:H5'	1.29	0.97
5:F:52:ALA:HB1	5:F:55:ARG:CZ	1.94	0.97
7:H:159:LYS:H	7:H:162:ARG:HH22	0.98	0.97
7:H:34:ARG:HH12	7:H:73:ASN:HB2	1.26	0.97
11:P:57:VAL:HG12	11:P:58:GLN:H	0.80	0.97
19:R:73:VAL:HG12	19:R:77:ARG:CZ	1.93	0.97
20:U:95:LEU:O	20:U:106:PHE:HE1	1.46	0.97
21:V:62:GLU:O	21:V:95:ILE:HG23	0.80	0.97
15:W:11:ARG:HH11	15:W:11:ARG:HG3	1.26	0.97
18:Z:14:LEU:HD21	18:Z:79:ILE:HG21	1.46	0.97
16:X:17:ASP:HA	16:X:20:PHE:HE1	1.18	0.97
16:X:28:VAL:HG11	16:X:64:ALA:CB	1.94	0.97
16:X:4:VAL:CG1	22:2:24:LYS:NZ	2.27	0.97
16:X:4:VAL:HG13	22:2:24:LYS:NZ	1.79	0.97
16:X:6:LYS:CE	16:X:29:ASP:HA	1.93	0.97
31:K:97:VAL:HA	31:K:99:LYS:NZ	1.80	0.97
28:7:18:PHE:N	28:7:44:VAL:CG2	2.27	0.97
2:A:2313:C:OP1	6:G:51:ARG:CB	2.12	0.97
2:A:2436:G:H2'	2:A:2437:U:O5'	1.61	0.97
2:A:2445:G:C2'	2:A:2446:G:H5'	1.94	0.97
2:A:2464:C:C4	2:A:2487:G:C6	2.53	0.97
2:A:2520:C:O2	2:A:2521:C:H6	1.44	0.97
2:A:2678:C:O2	2:A:2679:A:N9	1.97	0.97
2:A:2690:C:H3'	2:A:2690:C:H6	1.27	0.97
2:A:2832:U:H1'	2:A:2834:G:N2	1.78	0.97
3:D:129:LEU:CD2	3:D:130:PRO:HD3	1.93	0.97
2:A:782:A:C2	3:D:233:ASP:OD2	2.16	0.97
4:E:76:PRO:HB3	4:E:292:PRO:HG2	1.44	0.97
9:N:12:VAL:HG12	9:N:13:ASP:N	1.80	0.97
10:O:62:VAL:C	10:O:84:CYS:SG	2.42	0.97
10:O:8:LEU:HD23	10:O:8:LEU:N	1.80	0.97
10:O:95:GLY:O	10:O:97:ARG:N	1.96	0.97
12:Q:50:VAL:HG12	12:Q:51:GLU:N	1.75	0.97
12:Q:65:ARG:NH2	12:Q:122:PHE:CD2	2.32	0.97
20:U:13:ARG:HH11	20:U:13:ARG:CG	1.77	0.97
20:U:27:SER:O	20:U:28:ARG:C	2.01	0.97
18:Z:90:GLU:N	18:Z:91:PRO:CD	2.27	0.97
22:2:26:GLU:HG2	22:2:27:LEU:N	1.77	0.97
16:X:4:VAL:CG2	22:2:24:LYS:HZ1	1.78	0.97
2:A:1080:C:O2'	31:K:126:LYS:CB	2.13	0.97
31:K:100:VAL:HG12	31:K:101:THR:N	1.78	0.97

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:Y:9:LYS:NZ	17:Y:13:ARG:NH2	2.13	0.97
2:A:282:A:N7	2:A:360:G:N2	2.11	0.97
25:4:14:ILE:HG23	25:4:16:TYR:CD1	1.99	0.97
29:8:62:LEU:CB	29:8:63:PRO:HD3	1.94	0.97
2:A:2464:C:H42	2:A:2486:G:H1	1.01	0.97
2:A:2555:U:OP2	2:A:2555:U:C6	2.17	0.97
2:A:2567:G:N3	2:A:2568:C:H5	1.49	0.97
2:A:2695:C:HO2'	2:A:2696:U:H6	1.08	0.97
2:A:2734:A:H5''	2:A:2734:A:H8	1.27	0.97
2:A:2788:C:H5''	2:A:2789:C:P	2.03	0.97
2:A:2801:A:H2	2:A:2895:U:HO2'	0.97	0.97
5:F:115:LEU:O	5:F:118:THR:N	1.97	0.97
5:F:36:ARG:C	5:F:39:GLN:HE22	1.66	0.97
10:O:73:ASP:O	10:O:75:SER:N	1.97	0.97
11:P:77:ALA:CB	11:P:81:VAL:HG11	1.94	0.97
20:U:95:LEU:O	20:U:106:PHE:CE1	2.18	0.97
20:U:26:GLY:O	20:U:27:SER:HB2	1.63	0.97
20:U:95:LEU:O	20:U:98:ILE:HB	1.62	0.97
17:Y:79:LEU:HD12	17:Y:80:GLU:N	1.78	0.97
31:K:42:PHE:CE1	31:K:58:ILE:HD11	2.00	0.97
26:5:33:CYS:HB3	26:5:37:HIS:H	1.29	0.97
24:0:46:LYS:HG2	24:0:58:THR:N	1.79	0.97
23:3:40:THR:OG1	23:3:43:ILE:CD1	2.13	0.97
25:4:5:LEU:C	25:4:7:PRO:HD2	1.84	0.97
2:A:1299:G:H4'	2:A:1301:A:N3	1.79	0.97
2:A:2520:C:C5	2:A:2567:G:C4	2.52	0.97
2:A:2758:A:OP2	2:A:2758:A:C3'	2.12	0.97
4:E:221:LYS:HZ1	4:E:233:ARG:HG2	1.22	0.97
12:Q:85:ILE:CB	12:Q:122:PHE:CD2	2.48	0.97
20:U:59:ARG:HA	20:U:62:ILE:HG13	0.98	0.97
15:W:36:LEU:HD22	15:W:44:ALA:HA	1.44	0.97
22:2:13:PRO:CA	22:2:16:ARG:HD2	1.93	0.97
16:X:30:ASP:O	16:X:62:LYS:CE	2.08	0.97
16:X:33:SER:N	16:X:37:VAL:HG23	1.80	0.97
28:7:34:ARG:NH1	28:7:42:LEU:CA	2.28	0.97
2:A:1939:U:H1'	2:A:2592:G:H4'	1.44	0.97
2:A:1993:U:H4'	4:E:228:ARG:NH2	1.80	0.97
2:A:2554:U:C3'	2:A:2554:U:H6	1.77	0.97
2:A:2613:U:H6	2:A:2613:U:H5'	1.28	0.97
2:A:529:A:C2	2:A:2022:U:OP1	2.18	0.97
9:N:50:GLU:HA	9:N:53:ILE:CG2	1.92	0.97
19:R:33:ARG:CB	19:R:115:GLU:HB3	1.95	0.97

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:R:52:ILE:O	19:R:54:LEU:N	1.98	0.97
14:T:50:GLU:HA	14:T:55:ALA:HB3	0.99	0.97
21:V:19:VAL:HG11	21:V:21:ARG:NH1	1.77	0.97
16:X:24:LEU:C	16:X:26:PHE:HE1	1.52	0.97
23:3:8:LEU:HD22	23:3:31:LEU:CA	1.86	0.97
23:3:26:LEU:HD21	23:3:46:ASN:HB3	1.46	0.97
2:A:1264:G:OP1	26:5:19:ARG:NH1	1.98	0.97
2:A:1807:G:H21	2:A:1809:A:H5'	1.30	0.97
2:A:2259:G:C8	2:A:2260:C:C5	2.52	0.97
2:A:2454:G:C2	2:A:2455:G:H1'	1.99	0.97
3:D:140:VAL:HG12	3:D:141:HIS:H	1.23	0.97
3:D:208:GLY:CA	3:D:210:LYS:HZ1	1.65	0.97
2:A:2785:C:C2'	4:E:100:TRP:HD1	1.77	0.97
6:G:19:GLU:OE1	6:G:135:VAL:CG2	2.13	0.97
19:R:67:LEU:HD13	19:R:68:ARG:N	1.80	0.97
19:R:84:ALA:HB3	19:R:85:PRO:HD3	1.44	0.97
13:S:89:GLY:HA3	13:S:125:ALA:HB1	1.43	0.97
20:U:28:ARG:N	20:U:31:GLN:CD	2.17	0.97
21:V:33:VAL:HB	21:V:63:HIS:CE1	1.98	0.97
21:V:69:ILE:H	21:V:91:THR:HG22	1.27	0.97
18:Z:159:THR:CG2	18:Z:160:LEU:H	1.76	0.97
8:I:101:SER:O	8:I:103:GLN:N	1.98	0.97
6:G:53:LYS:HG2	6:G:54:ALA:N	1.75	0.97
24:0:24:LYS:CG	24:0:56:ASP:OD2	2.13	0.97
28:7:3:ARG:O	28:7:4:THR:HG23	1.64	0.97
2:A:2701:C:H3'	2:A:2702:U:H5''	1.46	0.97
2:A:2776:A:C4	2:A:2778:A:N7	2.33	0.97
2:A:2836:U:O2	2:A:2883:A:C5	2.18	0.97
4:E:99:VAL:HG12	4:E:100:TRP:H	1.26	0.97
4:E:315:VAL:O	4:E:317:PRO:N	1.98	0.97
4:E:79:ARG:HH12	4:E:105:HIS:N	1.61	0.97
7:H:42:ILE:C	7:H:52:THR:HG21	1.86	0.97
10:O:1:MET:CA	10:O:2:ILE:HD12	1.94	0.97
11:P:130:ARG:HA	11:P:133:VAL:HG21	1.46	0.97
12:Q:67:ALA:N	12:Q:70:ARG:CZ	2.03	0.97
19:R:60:LEU:CG	19:R:61:HIS:H	1.75	0.97
13:S:34:LEU:HD11	13:S:103:ASP:H	1.27	0.97
14:T:53:ASP:O	14:T:56:ARG:NE	1.98	0.97
20:U:94:VAL:C	20:U:98:ILE:HD11	1.70	0.97
15:W:12:ILE:O	15:W:14:PRO:HD3	1.65	0.97
17:Y:33:GLU:OE2	17:Y:33:GLU:N	1.98	0.97
17:Y:78:THR:C	17:Y:89:ARG:HG3	1.84	0.97

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:Z:105:GLN:O	18:Z:142:ASN:ND2	1.97	0.97
18:Z:69:VAL:HG22	18:Z:82:ASP:H	1.30	0.97
8:I:120:ALA:O	8:I:121:ILE:O	1.83	0.97
28:7:32:ALA:HA	28:7:35:ARG:CD	1.95	0.96
2:A:1140:C:N4	9:N:49:ARG:NE	2.13	0.96
2:A:1287:A:C1'	19:R:104:ARG:NH1	2.27	0.96
2:A:1287:A:N9	19:R:104:ARG:NH1	2.13	0.96
2:A:2574:G:C4	2:A:2575:C:C6	2.52	0.96
2:A:605:C:H3'	5:F:105:LYS:CE	1.71	0.96
3:D:134:ILE:HG23	3:D:135:PRO:HD2	1.45	0.96
3:D:178:GLY:O	3:D:179:GLU:HG2	1.65	0.96
4:E:269:ILE:N	4:E:269:ILE:HD12	1.79	0.96
4:E:48:MET:O	4:E:49:THR:CG2	2.14	0.96
2:A:2316:C:C5'	6:G:151:ILE:CD1	2.36	0.96
8:I:5:PHE:O	8:I:36:ALA:HB2	1.63	0.96
13:S:111:PRO:C	13:S:114:LYS:N	2.19	0.96
20:U:105:ALA:O	20:U:108:ALA:HB3	1.64	0.96
20:U:56:ASP:O	20:U:60:LEU:HG	1.65	0.96
20:U:8:ILE:HA	20:U:11:ARG:CD	1.94	0.96
17:Y:101:LEU:HD21	17:Y:103:LEU:HD21	0.97	0.96
18:Z:46:GLN:O	18:Z:49:THR:OG1	1.83	0.96
18:Z:71:MET:CG	18:Z:78:PRO:CG	2.36	0.96
22:2:31:ARG:O	22:2:33:VAL:C	1.89	0.96
22:2:7:GLU:CD	22:2:8:ILE:CG1	2.33	0.96
31:K:15:ALA:HB1	31:K:46:THR:CB	1.95	0.96
2:A:1944:U:H1'	2:A:1955:U:H1'	1.44	0.96
28:7:29:ASN:O	28:7:31:LEU:N	1.96	0.96
2:A:1034:G:P	30:9:18:ARG:NH2	2.37	0.96
2:A:2251:G:N2	2:A:2252:G:C4	2.33	0.96
2:A:2494:G:N2	2:A:2495:G:N9	2.13	0.96
2:A:2638:G:N2	2:A:2778:A:N6	1.79	0.96
2:A:2688:U:C2	2:A:2719:G:C2	2.53	0.96
2:A:2788:C:O3'	2:A:2789:C:P	2.24	0.96
2:A:2880:C:N4	2:A:2881:C:N4	2.13	0.96
4:E:193:PHE:HE2	4:E:199:ALA:CB	1.75	0.96
4:E:269:ILE:HG13	4:E:297:LYS:HG3	1.47	0.96
5:F:167:ASP:O	5:F:168:ARG:CG	2.13	0.96
9:N:138:THR:OG1	9:N:139:LEU:CD1	2.06	0.96
9:N:23:ALA:HA	9:N:26:VAL:HG21	1.46	0.96
17:Y:72:ILE:CG2	17:Y:73:HIS:H	1.78	0.96
18:Z:176:LEU:HD23	18:Z:177:THR:N	1.80	0.96
31:K:66:PHE:O	31:K:67:THR:HG23	0.80	0.96

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1:G:H1	2:A:2902:C:H41	0.97	0.96
26:5:46:CYS:HB3	26:5:47:PRO:HD2	1.47	0.96
2:A:2227:A:C2	2:A:2228:G:C5	2.52	0.96
2:A:2262:U:C2'	2:A:2263:C:C5'	2.42	0.96
2:A:2324:C:H42	2:A:2331:G:H1	1.01	0.96
2:A:2472:G:C2'	2:A:2473:U:OP1	2.13	0.96
2:A:2741:A:H2'	2:A:2742:C:C6	1.98	0.96
2:A:2848:G:N2	2:A:2849:U:C2	2.23	0.96
3:D:146:LYS:HZ2	3:D:184:LEU:HD11	1.25	0.96
3:D:216:ALA:HB1	3:D:223:ASN:HB2	1.46	0.96
4:E:205:THR:C	4:E:206:LYS:HG3	1.85	0.96
6:G:94:ALA:O	6:G:95:THR:OG1	1.80	0.96
12:Q:17:ARG:O	12:Q:18:GLU:HG2	1.61	0.96
17:Y:32:ARG:C	17:Y:33:GLU:OE2	2.03	0.96
17:Y:71:VAL:HG12	17:Y:72:ILE:N	1.76	0.96
17:Y:51:LEU:HA	17:Y:97:ARG:HH21	0.82	0.96
18:Z:116:VAL:HG23	18:Z:169:VAL:HG21	0.96	0.96
4:E:107:GLU:HG2	4:E:110:ARG:NH2	1.79	0.96
2:A:2720:U:OP1	2:A:2720:U:H4'	1.62	0.96
2:A:2386:C:H4'	24:0:39:ARG:HE	1.27	0.96
2:A:389:G:OP2	25:4:24:THR:CG2	2.12	0.96
25:4:33:VAL:O	25:4:34:ASP:OD1	1.82	0.96
2:A:2447:G:C6	2:A:2500:U:C5	2.53	0.96
2:A:2567:G:H2'	2:A:2568:C:C5	1.99	0.96
2:A:2051:A:N6	2:A:2614:A:C8	2.33	0.96
4:E:206:LYS:O	4:E:257:GLY:CA	2.12	0.96
2:A:321:G:H1'	5:F:206:ASN:HD22	1.28	0.96
5:F:196:THR:CA	5:F:236:THR:CG2	2.42	0.96
13:S:76:GLY:O	13:S:82:TYR:CB	2.13	0.96
13:S:87:LEU:O	13:S:90:LEU:N	1.97	0.96
2:A:29:U:C5'	20:U:11:ARG:HH12	1.79	0.96
15:W:96:ILE:H	15:W:96:ILE:CD1	1.74	0.96
17:Y:101:LEU:HD11	17:Y:112:LEU:HG	0.98	0.96
8:I:75:LEU:HD13	8:I:76:THR:N	1.80	0.96
8:I:89:LEU:HD11	8:I:93:ILE:CG2	1.92	0.96
25:4:10:VAL:H	25:4:11:PRO:CD	1.77	0.96
25:4:6:HIS:HB2	25:4:56:VAL:HG21	1.45	0.96
2:A:125:G:N2	28:7:10:ARG:N	2.14	0.96
2:A:2234:G:C2'	2:A:2235:G:H5'	1.94	0.96
2:A:2352:A:C8	2:A:2366:A:N1	2.33	0.96
2:A:2423:U:O2'	2:A:2424:C:OP2	1.82	0.96
2:A:2437:U:C5'	2:A:2598:A:H2	1.77	0.96

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2528:U:H5	2:A:2530:A:C4	1.77	0.96
2:A:2862:G:O2'	2:A:2863:C:O4'	1.82	0.96
2:A:2870:C:O2	2:A:2871:C:C1'	2.13	0.96
2:A:563:G:H21	20:U:37:GLN:NE2	1.61	0.96
2:A:995:C:H1'	20:U:57:PHE:CE2	2.01	0.96
3:D:175:LEU:HD12	3:D:179:GLU:HB2	1.42	0.96
4:E:217:TRP:O	4:E:219:VAL:HG23	1.65	0.96
4:E:201:VAL:N	4:E:266:LYS:HD2	1.77	0.96
4:E:46:ALA:HB3	4:E:72:VAL:C	1.78	0.96
5:F:81:PRO:CB	5:F:87:ARG:CB	2.29	0.96
6:G:20:LYS:CA	6:G:76:ARG:HB3	1.95	0.96
7:H:82:TYR:CD2	7:H:137:LYS:HB3	2.01	0.96
11:P:112:GLY:CA	11:P:113:GLN:NE2	2.27	0.96
11:P:81:VAL:HG12	11:P:81:VAL:O	1.64	0.96
12:Q:49:VAL:CG1	12:Q:50:VAL:N	2.22	0.96
2:A:1287:A:C8	19:R:104:ARG:NH1	2.33	0.96
13:S:122:ALA:O	13:S:125:ALA:HB3	1.66	0.96
21:V:4:ILE:HG12	21:V:13:ARG:CA	1.96	0.96
18:Z:103:ARG:CG	18:Z:139:THR:HG22	1.95	0.96
18:Z:6:LYS:O	18:Z:31:SER:HB2	1.66	0.96
6:G:58:VAL:HG12	6:G:58:VAL:O	1.61	0.96
6:G:64:ARG:HB2	6:G:67:ASP:OD2	1.65	0.96
12:Q:108:SER:O	12:Q:109:VAL:CG1	2.12	0.96
27:6:8:ILE:CA	27:6:29:ARG:NH2	2.27	0.96
30:9:25:VAL:CG1	30:9:34:GLN:HB2	1.95	0.96
2:A:2094:G:O6	2:A:2196:C:C4	2.18	0.96
2:A:2100:G:C4	2:A:2190:G:C2	2.54	0.96
2:A:2333:A:C1'	2:A:2335:A:N3	2.29	0.96
2:A:2457:U:H2'	2:A:2458:G:H5'	1.45	0.96
2:A:2509:G:H2'	2:A:2510:C:H5'	1.45	0.96
2:A:2538:C:O2'	2:A:2539:C:O5'	1.81	0.96
2:A:2574:G:H3'	2:A:2575:C:H6	1.30	0.96
2:A:2845:G:O2'	2:A:2846:G:H5'	0.78	0.96
3:D:85:ASN:OD1	3:D:86:ARG:CZ	2.13	0.96
4:E:176:HIS:O	4:E:179:ASP:HB2	1.64	0.96
2:A:2730:C:H4'	4:E:265:ASN:HD21	0.80	0.96
5:F:197:SER:HB3	5:F:239:ALA:N	1.74	0.96
5:F:52:ALA:N	5:F:55:ARG:HB3	1.81	0.96
2:A:1665:A:C2'	10:O:66:LYS:HZ3	1.71	0.96
11:P:128:GLY:O	11:P:131:GLU:HB2	1.65	0.96
13:S:94:GLU:CD	13:S:94:GLU:C	2.22	0.96
20:U:111:ASP:HA	20:U:114:ARG:HD2	1.45	0.96

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:V:62:GLU:C	21:V:95:ILE:CG2	2.26	0.96
15:W:104:THR:O	15:W:105:VAL:HG12	1.62	0.96
2:A:104:U:C4	17:Y:17:HIS:CE1	2.52	0.96
18:Z:159:THR:C	18:Z:160:LEU:HD12	1.86	0.96
16:X:3:ASP:O	16:X:4:VAL:CG1	2.13	0.96
31:K:9:ILE:HD11	31:K:31:HIS:CB	1.91	0.96
2:A:2227:A:C2	2:A:2228:G:C6	2.52	0.96
2:A:2298:A:C4	2:A:2321:G:N2	2.34	0.96
2:A:2758:A:OP2	2:A:2758:A:O4'	1.83	0.96
2:A:2864:G:H2'	2:A:2865:U:C6	2.01	0.96
2:A:533:G:H1	2:A:560:C:H42	1.13	0.96
2:A:803:U:H2'	2:A:804:A:H5'	1.48	0.96
3:D:61:TYR:OH	3:D:214:MET:HE1	1.65	0.96
4:E:44:TYR:HA	4:E:309:PRO:HD3	0.96	0.96
5:F:52:ALA:HA	5:F:55:ARG:CD	1.95	0.96
7:H:90:GLY:C	7:H:159:LYS:HE3	1.86	0.96
8:I:13:GLY:CA	8:I:15:LYS:NZ	2.28	0.96
10:O:58:VAL:HG12	10:O:59:LYS:N	1.81	0.96
11:P:66:VAL:HB	11:P:67:ARG:NE	1.80	0.96
12:Q:85:ILE:HG23	12:Q:122:PHE:HB3	1.46	0.96
20:U:39:LEU:O	20:U:41:ASN:ND2	1.99	0.96
18:Z:69:VAL:HG22	18:Z:81:VAL:CG1	1.89	0.96
16:X:52:VAL:HG22	16:X:65:VAL:O	1.66	0.96
31:K:117:ASN:CG	31:K:127:ILE:CD1	2.33	0.96
31:K:8:GLN:N	31:K:59:THR:CA	2.28	0.96
6:G:82:GLU:C	6:G:85:GLN:HG3	1.85	0.96
2:A:849:A:N3	23:3:21:ALA:CB	2.21	0.96
27:6:12:MET:SD	27:6:54:LYS:CB	2.53	0.96
2:A:2048:G:C6	2:A:2621:A:C2	2.54	0.96
2:A:2430:A:H2'	2:A:2431:U:H5''	1.48	0.96
2:A:2850:A:N3	19:R:61:HIS:HE1	1.62	0.96
2:A:2887:U:H2'	2:A:2888:C:H6	1.30	0.96
5:F:223:LEU:O	5:F:231:ARG:HD2	1.65	0.96
5:F:22:PHE:HZ	5:F:115:LEU:HD12	1.31	0.96
8:I:13:GLY:HA2	8:I:15:LYS:HE3	1.44	0.96
10:O:77:ILE:CD1	10:O:79:PHE:HE2	1.77	0.96
12:Q:88:PHE:HB2	12:Q:90:PHE:CZ	1.99	0.96
19:R:33:ARG:HB3	19:R:115:GLU:CB	1.96	0.96
20:U:49:ASP:N	20:U:52:ASN:HD21	1.52	0.96
21:V:5:ILE:HG23	21:V:39:PHE:HA	0.96	0.96
9:N:10:VAL:HB	9:N:36:VAL:HA	0.98	0.96
2:A:1598:C:C5'	16:X:34:LYS:CG	2.44	0.96

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:58:ALA:O	8:I:62:LEU:HG	1.64	0.96
2:A:126:A:C8	28:7:18:PHE:CE1	2.53	0.96
2:A:592:G:C2	29:8:3:LYS:CE	2.49	0.96
2:A:1669:A:H8	10:O:4:GLN:OE1	1.37	0.96
2:A:2215:G:H2'	2:A:2216:G:H8	0.79	0.96
2:A:2230:G:O2'	2:A:2231:C:O4'	1.83	0.96
2:A:2285:C:C4'	2:A:2288:A:H61	1.60	0.96
2:A:2320:A:C5	13:S:9:PRO:HB3	2.00	0.96
2:A:2412:A:C2'	2:A:2413:G:H5'	1.94	0.96
2:A:2429:G:H5'	2:A:2430:A:OP2	1.64	0.96
2:A:2607:G:H2'	2:A:2608:G:H5'	1.47	0.96
2:A:2850:A:H2'	2:A:2851:A:H8	1.29	0.96
2:A:2712:U:C6	2:A:712(A):A:H8	1.46	0.96
3:D:151:GLY:O	3:D:152:GLN:OE1	1.81	0.96
4:E:99:VAL:HG12	4:E:100:TRP:N	1.79	0.96
2:A:675:A:P	5:F:69:HIS:O	2.24	0.96
6:G:142:ALA:HB2	6:G:151:ILE:CD1	1.96	0.96
9:N:103:VAL:O	9:N:104:TYR:CD2	2.18	0.96
2:A:564:C:P	21:V:79:GLN:HG2	2.06	0.96
2:A:2309:A:H5''	2:A:2310:A:H8	1.21	0.96
6:G:27:ILE:C	6:G:69:ILE:CG2	2.29	0.96
31:K:65:SER:O	31:K:66:PHE:HB2	1.64	0.96
2:A:1162:G:H4'	21:V:23:GLU:HB2	0.97	0.96
2:A:2249:U:C2	2:A:2253:G:OP2	2.18	0.96
2:A:2661:G:O2'	2:A:2662:A:H5'	1.66	0.96
2:A:2819:G:H5''	2:A:2821:A:H61	1.16	0.96
2:A:2791:C:N4	2:A:2893:G:N7	2.14	0.96
2:A:919:G:N2	2:A:2268:A:C5'	2.29	0.96
4:E:193:PHE:CE2	4:E:311:PHE:CD1	2.53	0.96
5:F:6:TYR:CE2	5:F:140:VAL:HA	2.01	0.96
5:F:217:GLU:C	5:F:218:VAL:HG23	1.82	0.96
5:F:240:LEU:CD2	5:F:243:VAL:HG21	1.95	0.96
10:O:7:ARG:CZ	10:O:44:LYS:HD2	1.96	0.96
19:R:87:TYR:HD1	19:R:94:TYR:CD2	1.84	0.96
16:X:22:ASN:CA	16:X:68:LEU:HD11	1.95	0.96
2:A:1943:U:C1'	2:A:1945:G:H5'	1.96	0.96
24:O:69:PHE:O	24:O:70:ILE:CG2	2.14	0.95
26:5:45:ILE:CG2	26:5:52:TYR:HD1	1.74	0.95
2:A:2324:C:N4	2:A:2331:G:H1	1.63	0.95
2:A:2385:C:O2	2:A:2386:C:O4'	1.84	0.95
2:A:2819:G:N3	2:A:2821:A:N7	2.14	0.95
10:O:7:ARG:HE	10:O:44:LYS:CD	1.77	0.95

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:P:70:ASP:O	11:P:74:THR:CG2	2.13	0.95
19:R:105:ARG:O	19:R:107:ASP:N	1.97	0.95
20:U:44:THR:HA	20:U:47:TYR:CD1	2.00	0.95
17:Y:101:LEU:O	17:Y:103:LEU:CG	2.13	0.95
22:2:7:GLU:OE1	22:2:8:ILE:CG1	2.14	0.95
31:K:42:PHE:CZ	31:K:58:ILE:CD1	2.49	0.95
27:6:40:TYR:N	27:6:50:PHE:CE1	2.33	0.95
28:7:43:THR:O	28:7:45:SER:N	1.97	0.95
30:9:14:CYS:CA	30:9:27:CYS:HB2	1.95	0.95
2:A:631:A:C2	2:A:2415:G:N2	2.35	0.95
2:A:2446:G:N1	2:A:2501:C:C5	2.34	0.95
2:A:2574:G:HO2'	4:E:240:PRO:CB	1.72	0.95
2:A:526:A:N1	2:A:2626:C:O4'	1.99	0.95
2:A:1033:U:C6	2:A:2750:A:C2	2.54	0.95
2:A:2838:G:C4	2:A:2839:G:C8	2.54	0.95
2:A:296:C:H6	2:A:338:G:H21	1.03	0.95
2:A:957:A:OP1	12:Q:95:GLU:CB	2.13	0.95
3:D:131:LEU:CD1	3:D:171:VAL:HG22	1.93	0.95
3:D:106:PRO:CA	3:D:194:VAL:O	2.14	0.95
5:F:32:GLY:HA2	5:F:35:VAL:HG21	0.98	0.95
5:F:39:GLN:O	5:F:40:ALA:O	1.83	0.95
7:H:41:THR:HB	7:H:52:THR:CB	1.96	0.95
8:I:7:LYS:HA	8:I:14:LYS:CG	1.96	0.95
10:O:25:LEU:HD12	10:O:38:VAL:CG1	1.96	0.95
10:O:35:ILE:HA	10:O:62:VAL:C	1.84	0.95
19:R:87:TYR:CD1	19:R:94:TYR:CD2	2.53	0.95
20:U:47:TYR:HE2	21:V:74:TYR:O	1.47	0.95
17:Y:49:GLU:CG	17:Y:59:GLU:HA	1.94	0.95
17:Y:51:LEU:HD12	17:Y:97:ARG:CG	1.96	0.95
17:Y:28:SER:CB	17:Y:99:THR:HG23	1.95	0.95
8:I:77:VAL:HG23	8:I:141:LEU:HD11	0.99	0.95
31:K:122:GLU:HB3	31:K:126:LYS:CE	1.96	0.95
2:A:2615:U:N3	26:5:8:LYS:HG2	1.81	0.95
28:7:43:THR:OG1	28:7:44:VAL:N	1.95	0.95
2:A:2094:G:N1	2:A:2196:C:C2	2.34	0.95
2:A:2698:U:H2'	2:A:2699:C:C6	2.01	0.95
2:A:2753:A:C8	2:A:2754:U:C5	2.53	0.95
2:A:617:G:P	5:F:221:GLU:CD	2.44	0.95
3:D:213:LYS:C	3:D:215:LYS:H	1.60	0.95
4:E:176:HIS:O	4:E:179:ASP:CB	2.14	0.95
9:N:139:LEU:HD13	9:N:139:LEU:N	1.79	0.95
11:P:132:LYS:N	11:P:132:LYS:HD2	1.76	0.95

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2406:U:H3	11:P:55:GLN:HB3	1.30	0.95
12:Q:143:VAL:O	12:Q:144:THR:CG2	2.14	0.95
13:S:19:ASP:O	13:S:21:HIS:N	1.98	0.95
15:W:8:ARG:HD2	15:W:9:TYR:CD1	2.01	0.95
2:A:68:G:H2'	2:A:69:C:H6	1.30	0.95
2:A:2304:G:O4'	6:G:105:SER:HB2	1.64	0.95
24:O:46:LYS:HZ3	24:O:81:ILE:HD11	1.32	0.95
29:8:26:LYS:HD2	29:8:44:LYS:HA	0.98	0.95
2:A:2579:C:C6	2:A:2579:C:C4'	2.50	0.95
2:A:2612:C:O2'	2:A:2613:U:H5''	1.65	0.95
2:A:2649:U:H2'	2:A:2650:U:C6	2.01	0.95
3:D:167:GLU:O	3:D:170:TYR:O	1.84	0.95
4:E:229:GLN:C	4:E:231:TRP:N	2.13	0.95
2:A:2315:G:H5'	6:G:133:ASN:HD22	1.00	0.95
6:G:49:PRO:HB2	6:G:72:LYS:N	1.79	0.95
6:G:93:LEU:HD12	6:G:94:ALA:N	1.80	0.95
7:H:101:LYS:HG3	7:H:115:GLU:CA	1.96	0.95
7:H:84:LYS:HG3	7:H:140:VAL:HG12	1.43	0.95
11:P:141:GLU:HB2	11:P:145:LEU:CD2	1.96	0.95
20:U:15:LYS:O	20:U:16:LYS:O	1.82	0.95
2:A:997:G:P	20:U:93:LYS:HE2	2.06	0.95
21:V:43:GLU:O	21:V:44:GLN:NE2	1.99	0.95
8:I:95:SER:HB2	8:I:98:ILE:HD11	1.44	0.95
16:X:3:ASP:CG	22:2:24:LYS:HD2	1.86	0.95
31:K:96:ILE:O	31:K:97:VAL:HG13	1.67	0.95
2:A:1518:C:H3'	2:A:1519:G:H4'	1.46	0.95
23:3:23:LEU:C	23:3:28:LEU:HD12	1.85	0.95
25:4:58:LYS:HG2	25:4:62:ARG:NE	1.80	0.95
2:A:2232:U:C2'	2:A:2233:U:H5'	1.97	0.95
2:A:2268:A:C4'	2:A:2269:A:OP2	2.14	0.95
2:A:2061:G:N3	2:A:2503:A:H2	1.65	0.95
2:A:2617:C:O2	2:A:2618:G:O4'	1.84	0.95
2:A:2845:G:C2'	2:A:2846:G:H5'	1.95	0.95
2:A:994:C:H4'	20:U:54:LYS:HE3	1.45	0.95
11:P:94:ARG:CB	11:P:120:LEU:HD23	1.79	0.95
12:Q:58:HIS:N	12:Q:61:LEU:HD11	1.81	0.95
18:Z:172:LEU:CG	18:Z:173:PRO:CD	2.39	0.95
22:2:34:GLN:N	22:2:34:GLN:OE1	2.00	0.95
2:A:1081:U:O2'	31:K:117:ASN:HB3	1.67	0.95
27:6:2:ALA:HB2	27:6:11:LYS:HZ2	1.14	0.95
28:7:10:ARG:O	28:7:14:LYS:HG3	1.64	0.95
2:A:2236:C:C3'	2:A:2237:G:H5'	1.97	0.95

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2331:G:O4'	24:O:70:ILE:HG13	1.65	0.95
2:A:558:G:P	9:N:91:LYS:CB	2.55	0.95
3:D:146:LYS:NZ	3:D:184:LEU:CD1	2.29	0.95
6:G:19:GLU:CG	6:G:135:VAL:HG22	1.96	0.95
2:A:2320:A:C6	13:S:9:PRO:CB	2.48	0.95
18:Z:112:LEU:HA	18:Z:174:PRO:HD2	1.48	0.95
18:Z:26:LYS:C	18:Z:27:GLU:HG3	1.86	0.95
18:Z:92:VAL:CG1	18:Z:124:ALA:HB2	1.97	0.95
16:X:25:GLN:CD	16:X:65:VAL:HG22	1.87	0.95
25:4:14:ILE:HG22	25:4:14:ILE:O	1.67	0.95
27:6:8:ILE:HA	27:6:29:ARG:HE	1.28	0.95
29:8:4:MET:HA	29:8:5:LYS:HZ1	1.27	0.95
2:A:2199:A:H3'	2:A:2205:C:H6	1.27	0.95
2:A:963:U:C1'	2:A:2250:G:H21	1.75	0.95
2:A:2251:G:H5''	12:Q:102:ARG:NH2	1.81	0.95
2:A:2300:G:O2'	2:A:2301:C:H5'	1.65	0.95
2:A:2544:G:C2'	2:A:2545:G:H5'	1.95	0.95
2:A:2574:G:C5	2:A:2575:C:H5	1.46	0.95
2:A:2712:U:H5''	2:A:2714:G:O5'	1.64	0.95
2:A:2782:G:OP2	2:A:2782:G:N7	2.00	0.95
5:F:34:ALA:O	5:F:35:VAL:O	1.84	0.95
6:G:100:ASP:O	6:G:102:GLY:N	1.99	0.95
6:G:49:PRO:HB3	6:G:72:LYS:O	0.78	0.95
8:I:7:LYS:N	8:I:14:LYS:HG2	1.38	0.95
11:P:92:ASP:HB2	11:P:118:LEU:HD13	1.46	0.95
12:Q:33:MET:CE	12:Q:34:GLY:O	2.14	0.95
17:Y:53:GLY:O	17:Y:56:ALA:N	2.00	0.95
17:Y:63:ILE:HG12	17:Y:75:GLU:OE2	1.64	0.95
18:Z:13:LYS:C	18:Z:15:ASP:H	1.65	0.95
2:A:139:G:H3'	2:A:141(A):C:O2	1.66	0.95
25:4:48:ARG:HG2	25:4:49:PHE:H	1.30	0.95
2:A:2795:G:N3	2:A:2795:G:H2'	1.80	0.95
25:4:23:GLU:OE2	25:4:29:PRO:HG3	1.66	0.95
28:7:43:THR:O	28:7:46:ASP:CG	2.05	0.95
29:8:58:MET:SD	29:8:61:MET:CG	2.55	0.95
2:A:1127:A:C2	2:A:2518:A:N3	2.35	0.95
2:A:2691:C:O2'	2:A:2692:C:C5'	2.15	0.95
2:A:2742:C:OP1	30:9:35:ARG:NH1	1.98	0.95
3:D:174:ARG:HH11	3:D:174:ARG:CG	1.80	0.95
5:F:94:THR:C	5:F:96:LYS:H	1.70	0.95
7:H:104:LEU:HB3	7:H:151:ARG:NH1	1.80	0.95
7:H:60:HIS:HA	7:H:63:LEU:HB2	1.46	0.95

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:U:99:ALA:CB	20:U:106:PHE:CE1	2.28	0.95
17:Y:43:ASN:ND2	17:Y:103:LEU:HD21	1.81	0.95
17:Y:63:ILE:HD11	17:Y:74:VAL:C	1.85	0.95
17:Y:72:ILE:HG22	17:Y:73:HIS:N	1.72	0.95
17:Y:78:THR:HB	17:Y:87:VAL:O	1.66	0.95
8:I:89:LEU:HD13	8:I:93:ILE:HG22	1.47	0.95
22:2:20:LEU:CD1	22:2:20:LEU:C	2.35	0.95
2:A:1544:C:H2'	2:A:1545:A:H4'	1.48	0.95
25:4:48:ARG:HG2	25:4:49:PHE:N	1.79	0.95
2:A:2670:A:H8	2:A:2670:A:H5''	1.31	0.95
2:A:2262:U:OP2	24:0:14:ARG:NE	2.00	0.95
23:3:59:VAL:HG12	23:3:60:GLU:N	1.77	0.95
2:A:1140:C:H41	9:N:49:ARG:CD	1.80	0.95
2:A:2023:G:C5'	2:A:2617:C:O2'	2.14	0.95
2:A:2219:G:O2'	2:A:2224:G:OP1	1.83	0.95
2:A:2320:A:N6	13:S:9:PRO:CB	2.30	0.95
2:A:2326:C:H2'	2:A:2326:C:O2	1.61	0.95
2:A:2405:G:N2	2:A:2413:G:O6	2.00	0.95
2:A:2422:A:C4	2:A:2424:C:H5	1.84	0.95
2:A:2488:A:H2'	2:A:2489:G:O5'	1.66	0.95
2:A:2543:G:N7	2:A:2544:G:O6	1.99	0.95
2:A:2565:A:O3'	2:A:2566:A:O4'	1.85	0.95
2:A:993:G:H4'	21:V:90:PHE:HZ	1.24	0.95
4:E:70:VAL:HG11	4:E:296:VAL:H	0.95	0.95
5:F:24:THR:HB	5:F:25:PRO:HD3	1.46	0.95
6:G:103:ASN:C	6:G:104:PHE:CD1	2.40	0.95
6:G:142:ALA:CB	6:G:151:ILE:CD1	2.44	0.95
7:H:166:GLU:O	7:H:167:LEU:HD23	1.46	0.95
7:H:55:SER:HB3	7:H:60:HIS:HB2	1.45	0.95
7:H:93:TYR:C	7:H:94:ARG:HG3	1.83	0.95
11:P:64:ILE:CD1	11:P:106:VAL:HG12	1.97	0.95
11:P:128:GLY:HA3	11:P:132:LYS:NZ	1.72	0.95
11:P:77:ALA:N	11:P:81:VAL:CG2	2.24	0.95
12:Q:94:ARG:HD3	12:Q:106:GLY:HA2	0.96	0.95
2:A:2333:A:H3'	13:S:13:ARG:HD3	1.47	0.95
20:U:44:THR:HG21	21:V:77:GLY:O	1.64	0.95
2:A:1260:G:H5''	15:W:83:LYS:HZ3	1.25	0.95
17:Y:33:GLU:CD	17:Y:34:GLU:H	1.69	0.95
18:Z:92:VAL:HA	18:Z:124:ALA:HB1	1.47	0.95
2:A:1059:G:C4	31:K:127:ILE:HD13	2.02	0.95
2:A:6:A:C5'	9:N:4:ALA:N	2.29	0.95
4:E:107:GLU:CB	4:E:110:ARG:NE	2.29	0.95

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:227:A:H61	2:A:2407:G:H8	1.12	0.95
25:4:40:HIS:HB3	25:4:41:PRO:HD3	1.48	0.95
2:A:1264:G:P	26:5:19:ARG:HH12	1.89	0.95
2:A:2313:C:N4	2:A:2314:C:N4	2.14	0.95
2:A:2393:A:OP2	29:8:32:GLN:NE2	2.00	0.95
2:A:2678:C:O2	2:A:2679:A:O4'	1.82	0.95
2:A:2818:G:OP1	2:A:2837:G:O2'	1.83	0.95
2:A:825:C:O3'	2:A:2428:G:C8	2.19	0.95
3:D:103:ILE:HD11	3:D:104:ILE:HD11	1.48	0.95
5:F:113:SER:O	5:F:116:ALA:HB3	1.66	0.95
9:N:54:VAL:HG13	9:N:135:ILE:HA	1.47	0.95
2:A:2320:A:H61	13:S:14:ARG:CA	1.80	0.95
21:V:14:VAL:HG12	21:V:15:SER:H	1.32	0.95
21:V:30:GLY:C	21:V:33:VAL:HG23	1.75	0.95
17:Y:45:GLY:CA	17:Y:62:VAL:HG12	1.90	0.95
18:Z:113:VAL:HG12	18:Z:114:ASP:N	1.82	0.95
18:Z:71:MET:HA	18:Z:78:PRO:HA	1.48	0.95
16:X:68:LEU:N	16:X:68:LEU:HD23	1.79	0.95
2:A:1614:A:C6	15:W:88:ARG:HB2	1.99	0.95
16:X:47:VAL:HB	16:X:69:SER:CB	1.97	0.95
16:X:47:VAL:HG11	16:X:69:SER:CB	1.90	0.95
2:A:2209:C:C2'	2:A:2210:G:C3'	2.32	0.94
2:A:2236:C:H2'	2:A:2237:G:C5'	1.96	0.94
2:A:2066:C:N3	2:A:2445:G:N2	2.14	0.94
2:A:2648:C:C2'	2:A:2649:U:H5'	1.96	0.94
2:A:2888:C:O2	2:A:2889:C:C6	2.20	0.94
4:E:189:MET:O	4:E:190:ASN:CG	2.06	0.94
5:F:243:VAL:O	5:F:246:ARG:CA	2.15	0.94
2:A:801:G:OP1	5:F:79:ARG:CZ	2.15	0.94
8:I:43:ASN:HD22	8:I:43:ASN:N	1.50	0.94
9:N:134:GLU:C	9:N:138:THR:HG23	1.87	0.94
10:O:66:LYS:HD2	10:O:66:LYS:C	1.84	0.94
20:U:56:ASP:O	20:U:60:LEU:CG	2.15	0.94
15:W:41:LYS:O	15:W:42:ARG:O	1.84	0.94
17:Y:30:ASP:CG	17:Y:31:LEU:HD23	1.87	0.94
8:I:80:PRO:HB3	8:I:146:THR:CG2	1.96	0.94
2:A:1080:C:H4'	31:K:126:LYS:HB3	0.97	0.94
31:K:33:VAL:CG2	31:K:60:VAL:HG11	1.96	0.94
2:A:2896:C:C6	2:A:2896:C:H3'	2.02	0.94
14:T:49:LEU:HD23	14:T:49:LEU:C	1.87	0.94
2:A:398:G:OP2	25:4:59:PHE:CE2	2.20	0.94
27:6:29:ARG:HG2	27:6:30:ASN:N	1.80	0.94

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2578:G:C2'	2:A:2579:C:O5'	2.15	0.94
2:A:2631:G:C5	2:A:2632:A:C8	2.54	0.94
2:A:2740:A:H5'	2:A:2740:A:H8	1.31	0.94
2:A:2804:C:C5	2:A:2805:G:N1	2.34	0.94
2:A:599:G:O2'	5:F:30:LEU:HD21	1.67	0.94
7:H:101:LYS:CE	7:H:115:GLU:CB	2.45	0.94
7:H:143:LEU:CD2	7:H:144:ALA:N	2.19	0.94
9:N:136:SER:O	9:N:138:THR:N	2.00	0.94
2:A:1140:C:OP1	9:N:18:ILE:CD1	2.14	0.94
2:A:558:G:P	9:N:91:LYS:HB3	2.06	0.94
13:S:17:ARG:HH11	13:S:18:THR:HA	1.31	0.94
20:U:28:ARG:N	20:U:31:GLN:CG	2.31	0.94
2:A:535:C:C5'	20:U:53:LYS:HE2	1.96	0.94
16:X:4:VAL:HG13	22:2:24:LYS:HZ3	1.32	0.94
22:2:51:LYS:O	22:2:52:ALA:C	2.04	0.94
2:A:1546:C:O3'	2:A:1547:C:OP1	1.85	0.94
14:T:49:LEU:O	14:T:49:LEU:HD23	1.65	0.94
23:3:8:LEU:CD2	23:3:31:LEU:C	2.33	0.94
2:A:650:C:OP1	29:8:19:THR:OG1	1.85	0.94
2:A:2249:U:N3	2:A:2253:G:P	2.39	0.94
2:A:2315:G:P	6:G:20:LYS:HZ2	1.88	0.94
2:A:2412:A:H2'	2:A:2413:G:H5'	1.49	0.94
2:A:2439:A:N3	2:A:2439:A:H2'	1.81	0.94
2:A:2521:C:N3	2:A:2522:U:C6	2.35	0.94
2:A:2574:G:N9	2:A:2575:C:C5	2.33	0.94
2:A:2652:C:O2'	2:A:2653:U:H5'	1.66	0.94
2:A:2826:A:N7	2:A:2827:C:H5	1.65	0.94
2:A:932:G:H5'	23:3:29:ARG:NH2	1.78	0.94
3:D:80:ILE:HD13	3:D:82:TYR:HE1	1.24	0.94
2:A:2749:A:C4'	7:H:62:ALA:HB2	1.97	0.94
10:O:47:THR:HB	10:O:48:PRO:CD	1.97	0.94
12:Q:32:LYS:NZ	18:Z:172:LEU:CD1	2.29	0.94
12:Q:88:PHE:HB2	12:Q:90:PHE:HE1	1.18	0.94
13:S:83:LEU:HD12	13:S:83:LEU:N	1.78	0.94
20:U:8:ILE:H	20:U:11:ARG:HH11	1.05	0.94
20:U:44:THR:OG1	21:V:77:GLY:C	2.03	0.94
17:Y:28:SER:CB	17:Y:99:THR:CG2	2.44	0.94
18:Z:123:VAL:HB	18:Z:159:THR:CG2	1.96	0.94
8:I:68:LEU:HD11	8:I:108:LEU:CD2	1.97	0.94
2:A:193:U:H2'	2:A:194:G:H8	1.32	0.94
26:5:18:MET:O	26:5:21:SER:HB3	1.65	0.94
2:A:1966:A:N3	2:A:2593:U:C5'	2.30	0.94

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2415:G:N2	2:A:2416:C:H1'	1.81	0.94
2:A:2446:G:N2	2:A:2501:C:N4	2.14	0.94
2:A:2487:G:O2'	2:A:2488:A:H5'	1.67	0.94
2:A:2526:G:C2'	2:A:2527:C:C5'	2.42	0.94
2:A:2825:C:H6	2:A:2825:C:C5'	1.80	0.94
3:D:194:VAL:HG23	3:D:195:GLY:H	1.29	0.94
5:F:48:SER:H	5:F:92:PRO:HG2	1.21	0.94
1:B:42:C:H1'	6:G:47:GLN:CA	1.98	0.94
7:H:10:ILE:HD11	7:H:49:ILE:HG13	1.48	0.94
8:I:7:LYS:CA	8:I:12:LYS:O	2.11	0.94
19:R:77:ARG:HH12	19:R:77:ARG:HB2	1.33	0.94
2:A:1453:A:C6	19:R:77:ARG:HD3	2.01	0.94
20:U:115:ASN:O	20:U:116:ALA:C	2.03	0.94
17:Y:53:GLY:O	17:Y:55:PHE:N	2.00	0.94
18:Z:35:ASP:N	18:Z:39:PHE:CE2	2.34	0.94
2:A:749:C:H2'	2:A:750:A:C8	2.00	0.94
8:I:63:ALA:O	8:I:67:LYS:HG2	1.67	0.94
27:6:32:GLN:CG	27:6:35:LEU:HD12	1.96	0.94
2:A:1163:G:H5'	21:V:23:GLU:OE1	1.67	0.94
2:A:2393:A:H4'	29:8:13:ARG:HH21	1.30	0.94
2:A:2432:A:C2	2:A:2433:A:C5	2.48	0.94
2:A:2488:A:C2'	2:A:2489:G:C5'	2.39	0.94
3:D:146:LYS:HZ1	3:D:184:LEU:HD11	1.14	0.94
2:A:2636:U:H4'	4:E:84:ARG:HH22	0.80	0.94
2:A:2317:C:C5'	6:G:150:SER:CA	2.45	0.94
6:G:151:ILE:HD13	6:G:156:ARG:HH22	1.32	0.94
7:H:55:SER:O	7:H:57:GLU:HG2	1.68	0.94
10:O:98:ILE:HG22	10:O:99:PHE:N	1.80	0.94
12:Q:87:LYS:O	12:Q:88:PHE:HD2	1.46	0.94
21:V:30:GLY:O	21:V:31:ASP:O	1.85	0.94
17:Y:78:THR:CA	17:Y:89:ARG:CG	2.44	0.94
17:Y:73:HIS:HD2	17:Y:88:PRO:HB2	1.31	0.94
18:Z:118:HIS:O	18:Z:120:LEU:HD23	1.66	0.94
18:Z:112:LEU:CD1	18:Z:142:ASN:HA	1.97	0.94
2:A:6:A:O2'	9:N:6:PHE:HD2	1.50	0.94
14:T:42:LEU:C	14:T:44:ARG:N	2.21	0.94
27:6:8:ILE:H	27:6:8:ILE:HD13	1.32	0.94
2:A:2254:C:O2'	2:A:2255:G:C5'	2.14	0.94
2:A:2450:A:C2	2:A:2451:A:C4	2.55	0.94
2:A:2509:G:O2'	2:A:2510:C:C5'	2.15	0.94
2:A:2537:U:H2'	2:A:2538:C:H6	1.32	0.94
2:A:2543:G:N7	2:A:2544:G:C6	2.36	0.94

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:25:U:C4'	15:W:79:GLY:CA	2.43	0.94
2:A:2617:C:H2'	2:A:2618:G:H5'	0.95	0.94
2:A:2617:C:C2	2:A:2618:G:H8	1.84	0.94
2:A:2689:U:C4'	2:A:2690:C:H5'	1.98	0.94
2:A:2693:A:N1	2:A:2694:G:C6	2.36	0.94
2:A:495:G:H4'	15:W:57:ASN:CG	1.86	0.94
4:E:203:GLY:HA3	4:E:303:PRO:CD	1.97	0.94
6:G:102:GLY:HA2	6:G:134:LEU:HD12	1.49	0.94
2:A:2313:C:OP1	6:G:51:ARG:HD2	1.64	0.94
7:H:120:LEU:CD1	7:H:143:LEU:HD12	1.97	0.94
9:N:50:GLU:CA	9:N:53:ILE:CG2	2.36	0.94
9:N:77:GLY:HA2	9:N:80:LYS:HG3	1.44	0.94
19:R:20:LEU:HD11	19:R:21:TYR:HD2	1.17	0.94
20:U:61:TRP:HZ3	20:U:94:VAL:H	0.99	0.94
21:V:4:ILE:CD1	21:V:13:ARG:CG	2.44	0.94
15:W:67:ASP:OD1	15:W:68:ARG:N	1.99	0.94
17:Y:55:PHE:CE2	17:Y:89:ARG:NH2	2.35	0.94
8:I:98:ILE:HD13	8:I:115:ILE:HD12	1.48	0.94
25:4:23:GLU:OE2	25:4:29:PRO:CG	2.14	0.94
2:A:2093:G:N7	2:A:2225:A:N7	2.15	0.94
2:A:2313:C:H5'	6:G:72:LYS:CB	1.98	0.94
2:A:2315:G:OP1	6:G:20:LYS:HD3	1.68	0.94
2:A:2804:C:H5	2:A:2805:G:C6	1.84	0.94
2:A:2832:U:H6	2:A:2832:U:C5'	1.58	0.94
2:A:965:C:C1'	2:A:2273:A:C2	2.49	0.94
3:D:213:LYS:HG2	3:D:215:LYS:O	1.68	0.94
4:E:233:ARG:O	4:E:234:ARG:HG3	0.77	0.94
5:F:102:LEU:HD22	5:F:106:GLU:HB2	1.50	0.94
5:F:102:LEU:HD23	5:F:106:GLU:OE1	1.65	0.94
5:F:111:VAL:O	5:F:114:ALA:CB	2.14	0.94
2:A:2317:C:C5'	6:G:150:SER:CB	2.46	0.94
7:H:101:LYS:CG	7:H:115:GLU:HB2	1.97	0.94
11:P:92:ASP:HB3	11:P:118:LEU:HD13	0.95	0.94
19:R:22:ARG:CG	19:R:26:LYS:HE3	1.97	0.94
19:R:38:VAL:HG11	19:R:39:PRO:HD3	1.44	0.94
2:A:2333:A:H2'	13:S:13:ARG:HG3	1.49	0.94
20:U:110:VAL:O	20:U:113:SER:OG	1.84	0.94
17:Y:28:SER:OG	17:Y:30:ASP:OD1	1.84	0.94
18:Z:39:PHE:HD2	18:Z:39:PHE:N	1.66	0.94
16:X:14:ALA:HA	16:X:17:ASP:OD2	1.68	0.94
7:H:168:VAL:C	7:H:169:ARG:HG2	1.88	0.94
24:0:41:ARG:H	24:0:67:VAL:CG2	1.80	0.94

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:0:41:ARG:H	24:0:67:VAL:HG22	1.33	0.94
23:3:26:LEU:HD12	23:3:28:LEU:HD11	1.48	0.94
2:A:932:G:C5'	23:3:29:ARG:HH21	1.81	0.94
27:6:37:LEU:HD23	27:6:51:ARG:CA	1.95	0.94
27:6:21:TYR:CZ	27:6:43:VAL:CG2	2.47	0.94
2:A:2331:G:N7	2:A:2332:U:C4	2.36	0.94
2:A:2416:C:C2'	2:A:2417:C:H5''	1.98	0.94
2:A:2574:G:H2'	2:A:2575:C:C6	2.02	0.94
2:A:2642:G:C2'	2:A:2643:G:H5'	1.96	0.94
3:D:198:GLY:O	3:D:200:THR:HG23	1.65	0.94
2:A:1789:A:C4'	3:D:224:VAL:HG11	1.98	0.94
3:D:66:PHE:C	3:D:67:LYS:HD2	1.86	0.94
5:F:220:THR:CA	5:F:224:ALA:HB2	1.97	0.94
8:I:7:LYS:HG3	8:I:12:LYS:CB	1.97	0.94
12:Q:41:THR:CG2	12:Q:125:TRP:CE3	2.51	0.94
12:Q:58:HIS:O	12:Q:61:LEU:N	2.00	0.94
12:Q:31:PHE:CA	12:Q:85:ILE:HD11	1.97	0.94
19:R:36:THR:HG23	19:R:40:LYS:HD2	1.46	0.94
2:A:495:G:H21	15:W:61:ASN:HD21	1.05	0.94
25:4:2:GLN:O	25:4:3:LYS:HG3	1.65	0.94
27:6:12:MET:O	27:6:25:THR:OG1	1.86	0.94
28:7:31:LEU:HD23	28:7:31:LEU:H	1.32	0.94
29:8:9:MET:O	29:8:12:ARG:O	1.86	0.94
2:A:2332:U:H1'	2:A:2336:A:H62	1.21	0.94
2:A:2394:C:C4	2:A:2395:C:N3	2.35	0.94
2:A:746:A:O2'	2:A:2611:U:O2'	1.82	0.94
2:A:2049:G:N2	2:A:2620:C:C2	2.36	0.94
2:A:2048:G:N1	2:A:2621:A:C2	2.36	0.94
2:A:2776:A:N3	2:A:2778:A:N7	2.16	0.94
2:A:2810:A:C1'	2:A:2811:G:H5'	1.97	0.94
2:A:2820:A:C5'	2:A:2820:A:N3	2.29	0.94
2:A:526:A:C2	2:A:2626:C:H1'	1.98	0.94
2:A:527:C:H2'	9:N:95:ARG:HH11	1.32	0.94
3:D:143:ILE:N	3:D:143:ILE:HD12	1.82	0.94
4:E:211:GLN:C	4:E:216:ARG:CD	2.28	0.94
2:A:2730:C:C4'	4:E:265:ASN:ND2	2.28	0.94
9:N:58:GLU:HG2	9:N:61:VAL:HG21	1.50	0.94
9:N:90:LYS:O	9:N:90:LYS:HD2	1.68	0.94
12:Q:89:PRO:O	12:Q:90:PHE:CG	2.21	0.94
20:U:59:ARG:O	20:U:62:ILE:CG1	2.15	0.94
15:W:8:ARG:HG2	15:W:9:TYR:H	1.30	0.94
17:Y:101:LEU:HD21	17:Y:112:LEU:HD21	0.96	0.94

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:Y:73:HIS:HA	17:Y:91:LEU:CD2	1.98	0.94
2:A:1598:C:O3'	16:X:33:SER:OG	1.86	0.94
6:G:27:ILE:O	6:G:29:HIS:N	2.00	0.94
31:K:112:LYS:C	31:K:114:PRO:HD2	1.87	0.94
31:K:52:MET:HA	31:K:52:MET:CE	1.97	0.94
2:A:2755:C:C5'	2:A:2755:C:H6	1.80	0.94
23:3:11:SER:OG	23:3:13:ILE:HG12	1.68	0.94
2:A:1669:A:N9	10:O:4:GLN:OE1	2.00	0.94
2:A:2228:G:N7	2:A:2229:C:N1	2.14	0.94
2:A:2364:C:O2'	2:A:2365:G:H5'	1.68	0.94
2:A:2567:G:C2	2:A:2568:C:C4	2.56	0.94
2:A:2808:U:N3	2:A:2892:A:C5	2.36	0.94
2:A:446:G:OP2	20:U:3:ARG:CZ	2.15	0.94
3:D:208:GLY:N	3:D:211:HIS:NE2	2.16	0.94
4:E:211:GLN:H	4:E:216:ARG:NE	1.66	0.94
4:E:269:ILE:HG13	4:E:297:LYS:CG	1.98	0.94
7:H:101:LYS:HG2	7:H:115:GLU:CB	1.98	0.94
7:H:120:LEU:CA	7:H:121:GLU:OE1	2.16	0.94
10:O:77:ILE:HD13	10:O:78:ARG:H	1.28	0.94
19:R:38:VAL:HG12	19:R:39:PRO:N	1.72	0.94
19:R:52:ILE:CG2	19:R:53:HIS:N	2.26	0.94
22:2:8:ILE:HA	22:2:11:MET:CG	1.98	0.94
18:Z:143:ILE:HG22	18:Z:144:GLY:H	0.79	0.94
2:A:125:G:C3'	28:7:19:ARG:NH1	2.30	0.94
2:A:1032:A:OP1	30:9:8:LYS:CG	2.15	0.94
3:D:130:PRO:N	3:D:188:ARG:HG2	1.83	0.94
4:E:216:ARG:HH21	4:E:255:GLN:HA	1.33	0.94
5:F:59:GLU:HB2	5:F:61:PHE:HE2	0.81	0.94
6:G:74:THR:O	6:G:75:LEU:HG	1.68	0.94
7:H:40:MET:CG	7:H:64:HIS:CE1	2.51	0.94
10:O:35:ILE:CD1	10:O:65:THR:HG21	1.95	0.94
11:P:73:VAL:HG13	11:P:76:LEU:CD2	1.97	0.94
12:Q:58:HIS:C	12:Q:61:LEU:HG	1.87	0.94
12:Q:65:ARG:O	12:Q:68:ALA:CB	2.15	0.94
17:Y:73:HIS:CA	17:Y:91:LEU:CG	2.33	0.94
18:Z:130:ILE:O	18:Z:130:ILE:CD1	2.15	0.94
18:Z:37:LYS:O	18:Z:41:ARG:CZ	2.14	0.94
8:I:68:LEU:HD22	8:I:108:LEU:HD13	1.47	0.94
22:2:47:LYS:O	22:2:48:GLU:O	1.84	0.94
16:X:25:GLN:HE22	16:X:65:VAL:HG13	1.32	0.94
24:O:7:VAL:HG12	24:O:7:VAL:O	1.67	0.94
23:3:20:LYS:HD3	23:3:23:LEU:HD12	1.50	0.93

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:4:7:PRO:O	25:4:8:LYS:HB2	1.68	0.93
27:6:14:SER:CB	27:6:51:ARG:O	2.16	0.93
2:A:684:G:OP1	28:7:16:HIS:CE1	2.21	0.93
2:A:1783:A:N1	2:A:2587:A:C2	2.35	0.93
2:A:2258:C:N4	2:A:2426:A:O4'	1.93	0.93
2:A:2415:G:H21	2:A:2416:C:C1'	1.81	0.93
2:A:2468:G:C8	2:A:2476:A:N1	2.35	0.93
2:A:2605:U:O2	2:A:2606:C:H5	1.51	0.93
2:A:2717:G:N1	2:A:2718:G:N7	2.15	0.93
2:A:2043:C:H5	2:A:2777:G:H1'	0.95	0.93
2:A:911:A:N9	12:Q:16:ARG:HD2	1.82	0.93
1:B:104:A:H1'	18:Z:24:TYR:CZ	2.03	0.93
3:D:138:THR:O	3:D:162:GLN:HA	1.68	0.93
4:E:80:ALA:HB2	4:E:187:HIS:CD2	2.03	0.93
2:A:2313:C:H5''	6:G:51:ARG:HH11	1.31	0.93
2:A:2745:C:H1'	7:H:142:GLU:OE2	1.64	0.93
8:I:5:PHE:O	8:I:36:ALA:HB1	1.67	0.93
2:A:2684:U:C5'	10:O:76:TYR:OH	2.07	0.93
11:P:69:ILE:O	11:P:71:GLU:N	2.01	0.93
17:Y:101:LEU:CD1	17:Y:112:LEU:CG	2.41	0.93
17:Y:17:HIS:O	17:Y:20:HIS:HB3	1.68	0.93
2:A:138:G:H8	16:X:42:GLU:OE1	1.50	0.93
16:X:6:LYS:CE	16:X:29:ASP:N	2.31	0.93
31:K:106:GLU:O	31:K:110:LYS:CE	2.16	0.93
2:A:2392:A:N7	2:A:2393:A:C5	2.36	0.93
2:A:2554:U:C3'	2:A:2554:U:C6	2.44	0.93
2:A:2023:G:H5''	2:A:2617:C:HO2'	1.32	0.93
2:A:2762:G:C8	2:A:2763:G:N7	2.36	0.93
2:A:2880:C:H2'	2:A:2881:C:H5'	0.96	0.93
4:E:197:GLU:O	4:E:268:LEU:N	2.01	0.93
5:F:115:LEU:HG	5:F:246:ARG:HH22	1.15	0.93
7:H:30:GLY:HA3	7:H:78:VAL:O	1.68	0.93
9:N:50:GLU:CA	9:N:53:ILE:HG21	1.95	0.93
13:S:41:LYS:CD	13:S:41:LYS:C	2.32	0.93
15:W:13:SER:O	15:W:17:VAL:HG23	1.66	0.93
2:A:494:G:H4'	15:W:6:ILE:HG22	1.46	0.93
18:Z:91:PRO:HB2	18:Z:127:PRO:CA	1.98	0.93
6:G:82:GLU:O	6:G:85:GLN:CD	2.07	0.93
28:7:20:ALA:O	28:7:21:ARG:C	2.06	0.93
2:A:2195:C:C6	2:A:2195:C:O5'	2.21	0.93
2:A:963:U:C2'	2:A:2250:G:H21	1.82	0.93
2:A:2320:A:H1'	2:A:2333:A:N6	1.83	0.93

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2333:A:C1'	2:A:2335:A:C2	2.50	0.93
2:A:2592:G:C5	2:A:2593:U:C6	2.56	0.93
2:A:2048:G:N1	2:A:2620:C:N4	2.16	0.93
2:A:2781:A:H5''	2:A:2782:G:H5'	1.47	0.93
2:A:831:G:H3'	2:A:944:G:H22	1.31	0.93
2:A:2210:G:C6	3:D:148:GLY:CA	2.51	0.93
3:D:174:ARG:HG2	3:D:174:ARG:NH1	1.77	0.93
6:G:14:ARG:HA	6:G:137:PRO:HD3	1.49	0.93
9:N:15:ARG:CB	9:N:43:ARG:CD	2.36	0.93
12:Q:127:ASN:CB	12:Q:128:PRO:HD3	1.97	0.93
12:Q:49:VAL:HG12	12:Q:50:VAL:N	1.84	0.93
12:Q:56:ILE:CG1	12:Q:113:ALA:O	2.16	0.93
20:U:107:LYS:O	20:U:108:ALA:O	1.86	0.93
17:Y:23:VAL:CG2	17:Y:67:LEU:HD21	1.98	0.93
8:I:103:GLN:HE21	8:I:109:LYS:CA	1.81	0.93
2:A:1603:A:H2'	2:A:1604:C:C6	2.02	0.93
11:P:75:LEU:O	11:P:75:LEU:CD2	2.16	0.93
2:A:1181:C:HO2'	2:A:1182:A:H8	1.08	0.93
2:A:1799:G:N2	3:D:153:LEU:HG	1.80	0.93
2:A:2098:U:H3	2:A:2191:G:H1	1.06	0.93
2:A:2328:A:C6	2:A:2329:G:O6	2.21	0.93
2:A:2348:U:H3'	29:8:42:ARG:CZ	1.98	0.93
2:A:2523:G:N2	2:A:2541:A:N3	2.16	0.93
2:A:2640:G:H1	2:A:2774:C:N4	1.65	0.93
2:A:2842:G:C2	2:A:2876:G:C2	2.56	0.93
3:D:110:LYS:CA	3:D:110:LYS:HZ3	1.79	0.93
3:D:196:ASN:HA	3:D:199:ARG:HD3	1.48	0.93
4:E:180:ILE:HG21	4:E:187:HIS:HB3	1.46	0.93
4:E:71:THR:HG21	4:E:299:SER:CA	1.97	0.93
9:N:87:LEU:HB3	9:N:88:PRO:CD	1.97	0.93
9:N:95:ARG:HA	9:N:98:PHE:CD1	2.03	0.93
22:2:59:ILE:HG23	22:2:60:GLN:H	1.32	0.93
16:X:28:VAL:O	16:X:30:ASP:N	2.01	0.93
29:8:36:LYS:CE	29:8:40:GLU:OE1	2.16	0.93
30:9:10:MET:HB2	30:9:32:HIS:HD2	1.32	0.93
2:A:2546:U:O4'	2:A:2565:A:C2	2.22	0.93
2:A:712(A):A:H5'	2:A:2714:G:OP2	1.67	0.93
2:A:806:C:O2'	2:A:2445:G:C4'	2.15	0.93
4:E:210:THR:HG22	4:E:255:GLN:CG	1.97	0.93
4:E:271:ILE:HG12	4:E:294:THR:HA	1.46	0.93
9:N:21:ARG:HA	9:N:24:SER:HB3	1.48	0.93
11:P:68:GLU:O	11:P:71:GLU:HG3	1.68	0.93

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:911:A:H2'	12:Q:16:ARG:NE	1.82	0.93
1:B:12:C:N3	13:S:10:MET:CE	2.31	0.93
13:S:16:ALA:O	13:S:17:ARG:HB3	1.68	0.93
21:V:14:VAL:CG1	21:V:15:SER:H	1.81	0.93
21:V:20:ILE:O	21:V:21:ARG:NH2	2.00	0.93
21:V:42:GLY:CA	21:V:54:TYR:CE2	2.42	0.93
17:Y:31:LEU:CD1	17:Y:101:LEU:HB2	1.99	0.93
8:I:68:LEU:CB	8:I:72:LEU:HD11	1.96	0.93
2:A:1526:G:N2	2:A:545(A):A:C8	2.31	0.93
24:0:37:LEU:HD12	24:0:70:ILE:HD13	1.48	0.93
24:0:45:PHE:CG	24:0:78:PHE:HA	2.02	0.93
2:A:2292:C:C4	2:A:2293:C:C5	2.56	0.93
2:A:2604:U:O2	2:A:2605:U:C6	2.21	0.93
2:A:2836:U:O2	2:A:2883:A:C6	2.20	0.93
2:A:2845:G:HO2'	2:A:2846:G:H5'	1.31	0.93
2:A:674:G:H5''	5:F:69:HIS:HA	1.50	0.93
2:A:919:G:N2	2:A:2268:A:H5''	1.82	0.93
4:E:269:ILE:CD1	4:E:269:ILE:H	1.77	0.93
6:G:142:ALA:HB2	6:G:151:ILE:HG12	1.51	0.93
9:N:61:VAL:HG22	9:N:139:LEU:HB2	1.47	0.93
11:P:65:ASP:HB3	11:P:109:LEU:HB2	1.49	0.93
12:Q:87:LYS:C	12:Q:88:PHE:CG	2.37	0.93
2:A:2378:A:C4	13:S:26:LEU:HD21	2.04	0.93
20:U:117:ARG:HD3	20:U:118:GLN:CG	1.97	0.93
15:W:10:VAL:HB	15:W:101:SER:O	1.68	0.93
15:W:39:THR:HA	26:5:28:PRO:HG3	1.50	0.93
16:X:33:SER:C	16:X:37:VAL:CG2	2.37	0.93
16:X:55:GLN:C	16:X:56:ASN:HD22	1.69	0.93
2:A:1078:U:C2	2:A:1088:A:H1'	2.04	0.93
31:K:18:ALA:O	31:K:19:THR:HG23	0.77	0.93
2:A:1907:G:H1	2:A:1923:U:H3	0.98	0.93
23:3:1:MET:CE	23:3:3:ARG:CD	2.46	0.93
2:A:388:G:OP2	25:4:29:PRO:HG3	1.66	0.93
28:7:34:ARG:HH11	28:7:42:LEU:CD2	1.79	0.93
29:8:55:TRP:CE3	29:8:59:LYS:CE	2.48	0.93
2:A:1782:C:N3	2:A:2609:U:C6	2.36	0.93
2:A:2209:C:H2'	2:A:2210:G:H3'	0.93	0.93
2:A:2520:C:C2	2:A:2521:C:C5	2.56	0.93
2:A:2526:G:C5	2:A:2527:C:H5	1.85	0.93
4:E:271:ILE:HG23	4:E:293:TYR:O	1.67	0.93
5:F:196:THR:C	5:F:236:THR:OG1	2.07	0.93
8:I:28:ASN:O	8:I:32:LYS:HB2	1.65	0.93

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:O:99:PHE:O	10:O:119:PRO:CG	2.16	0.93
12:Q:49:VAL:HG21	12:Q:120:HIS:HA	1.50	0.93
14:T:38:ASN:OD1	14:T:39:ASN:N	2.02	0.93
21:V:4:ILE:HD11	21:V:13:ARG:HD3	1.51	0.93
17:Y:70:ALA:O	17:Y:93:THR:HG21	1.68	0.93
8:I:98:ILE:HG22	8:I:99:ALA:H	1.24	0.93
22:2:8:ILE:O	22:2:11:MET:HG2	1.69	0.93
31:K:42:PHE:HZ	31:K:58:ILE:CD1	1.81	0.93
16:X:76:GLU:OE1	16:X:77:VAL:N	2.01	0.93
24:0:43:THR:HG21	24:0:75:GLY:H	1.30	0.93
25:4:7:PRO:CG	25:4:56:VAL:HG11	1.99	0.93
26:5:12:SER:HB3	26:5:15:LYS:HZ2	1.28	0.93
15:W:19:LEU:CG	26:5:25:LEU:HG	1.97	0.93
27:6:12:MET:HE3	27:6:54:LYS:H	1.33	0.93
2:A:1139:G:OP1	9:N:46:ILE:HG23	1.68	0.93
2:A:2330:G:H2'	2:A:2331:G:H5'	1.48	0.93
2:A:2357:U:O2'	2:A:2358:G:C5'	2.16	0.93
2:A:2542:A:O2'	2:A:2543:G:C8	2.20	0.93
2:A:2574:G:C2'	2:A:2575:C:C6	2.52	0.93
2:A:2652:C:H2'	2:A:2653:U:H6	1.32	0.93
2:A:2661:G:N3	2:A:2662:A:N7	2.17	0.93
2:A:2741:A:HO2'	2:A:2742:C:H5'	1.30	0.93
2:A:565:C:O2'	2:A:1253:A:C2	2.22	0.93
3:D:143:ILE:HG12	3:D:153:LEU:HB3	1.51	0.93
2:A:1819:A:OP1	3:D:155:ARG:N	2.00	0.93
4:E:221:LYS:NZ	4:E:233:ARG:CG	2.32	0.93
5:F:111:VAL:O	5:F:112:ARG:O	1.86	0.93
9:N:25:GLN:HA	9:N:28:GLU:HG3	1.49	0.93
10:O:68:GLY:HA2	10:O:78:ARG:HG2	1.50	0.93
12:Q:41:THR:O	12:Q:125:TRP:CZ3	2.21	0.93
14:T:21:PHE:O	14:T:22:VAL:CG1	2.17	0.93
15:W:11:ARG:O	15:W:12:ILE:CG1	2.16	0.93
15:W:84:ARG:HB3	15:W:96:ILE:CD1	1.99	0.93
17:Y:31:LEU:O	17:Y:32:ARG:O	1.86	0.93
18:Z:142:ASN:H	18:Z:171:VAL:CG2	1.82	0.93
18:Z:141:MET:CA	18:Z:171:VAL:HG11	1.97	0.93
8:I:68:LEU:HB3	8:I:72:LEU:CD1	1.99	0.93
31:K:71:LYS:C	31:K:72:THR:N	2.22	0.93
2:A:2246:G:N9	2:A:2426:A:C2	2.35	0.93
2:A:2455:G:H2'	2:A:2456:C:H5'	1.51	0.93
2:A:2881:C:H2'	2:A:2882:A:H8	1.32	0.93
4:E:269:ILE:HD11	4:E:296:VAL:CA	1.99	0.93

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:45:LYS:NZ	4:E:302:GLY:C	2.20	0.93
5:F:164:ALA:HA	5:F:232:LEU:CD1	1.97	0.93
8:I:5:PHE:HB3	8:I:17:GLU:O	1.69	0.93
9:N:88:PRO:HB2	9:N:90:LYS:N	1.84	0.93
12:Q:137:ARG:HD3	12:Q:138:ARG:N	1.83	0.93
12:Q:65:ARG:HH21	12:Q:85:ILE:HB	1.24	0.93
18:Z:103:ARG:HD3	18:Z:103:ARG:H	1.34	0.93
18:Z:35:ASP:N	18:Z:39:PHE:CZ	2.36	0.93
18:Z:34:LEU:CD1	18:Z:39:PHE:HZ	1.81	0.93
18:Z:71:MET:CG	18:Z:78:PRO:CD	1.89	0.93
22:2:2:VAL:H	22:2:4:HIS:HE1	0.96	0.93
31:K:121:LEU:HD22	31:K:125:MET:CE	1.99	0.93
27:6:2:ALA:CB	27:6:11:LYS:NZ	2.31	0.93
2:A:126:A:C5	28:7:18:PHE:CZ	2.54	0.93
2:A:2584:U:H6	2:A:2585:U:C6	1.84	0.93
2:A:2597:G:C6	2:A:2598:A:N6	2.36	0.93
2:A:2689:U:H4'	2:A:2690:C:H5'	1.48	0.93
2:A:2893:G:O3'	2:A:2894:G:C4'	2.16	0.93
2:A:451:C:OP1	5:F:49:ASP:N	2.01	0.93
2:A:605:C:H3'	5:F:105:LYS:HE2	1.51	0.93
2:A:994:C:C5	21:V:72:ARG:NH1	2.08	0.93
2:A:1818:U:H5''	3:D:155:ARG:CB	1.97	0.93
4:E:177:ALA:O	4:E:179:ASP:N	2.00	0.93
5:F:34:ALA:HB2	5:F:110:ALA:HB2	1.48	0.93
5:F:225:PRO:O	5:F:231:ARG:HG3	1.68	0.93
9:N:78:ILE:O	9:N:82:THR:CG2	2.17	0.93
12:Q:145:PRO:C	12:Q:146:THR:HG1	1.71	0.93
12:Q:94:ARG:NE	12:Q:106:GLY:HA3	1.84	0.93
15:W:23:LEU:HD22	15:W:24:ILE:N	1.84	0.93
17:Y:78:THR:C	17:Y:89:ARG:CG	2.34	0.93
18:Z:62:PHE:CD2	18:Z:87:THR:CG2	2.51	0.93
31:K:66:PHE:C	31:K:67:THR:HG23	1.88	0.93
28:7:18:PHE:H	28:7:44:VAL:HG21	1.17	0.92
2:A:1646:C:H5''	2:A:1647:G:H5'	1.48	0.92
2:A:2330:G:O2'	24:0:71:ASN:OD1	1.86	0.92
2:A:2431:U:H2'	2:A:2432:A:H3'	1.50	0.92
2:A:2448:A:OP2	2:A:2498:C:OP1	1.86	0.92
2:A:2623:G:N2	2:A:2624:G:C1'	2.31	0.92
2:A:2653:U:H3'	2:A:2654:A:H8	1.16	0.92
2:A:2748:A:H8	2:A:2749:A:C4	1.84	0.92
2:A:2804:C:C6	2:A:2805:G:N1	2.37	0.92
2:A:2819:G:N3	2:A:2821:A:C8	2.36	0.92

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2842:G:O2'	2:A:2843:G:H5'	1.66	0.92
2:A:2852:G:H1	2:A:2865:U:H3	0.97	0.92
2:A:673:C:C1'	5:F:82:GLN:OE1	2.17	0.92
2:A:919:G:H21	2:A:2268:A:C5'	1.81	0.92
4:E:218:GLY:O	4:E:219:VAL:HG23	1.68	0.92
4:E:67:THR:O	4:E:68:VAL:HG23	1.69	0.92
7:H:14:VAL:HG12	7:H:14:VAL:O	1.67	0.92
11:P:130:ARG:O	11:P:133:VAL:HB	1.69	0.92
13:S:81:ALA:HB3	13:S:117:ALA:HB1	1.49	0.92
21:V:40:VAL:CG1	21:V:51:ALA:O	2.16	0.92
15:W:32:ALA:HB2	15:W:35:ILE:HD12	1.49	0.92
17:Y:74:VAL:HG12	17:Y:74:VAL:O	1.65	0.92
16:X:56:ASN:ND2	16:X:56:ASN:N	2.11	0.92
2:A:380:U:HO2'	25:4:15:ILE:HB	1.26	0.92
2:A:1612:C:H2'	28:7:3:ARG:HE	1.25	0.92
2:A:2262:U:HO2'	2:A:2263:C:H5''	1.19	0.92
2:A:2322:A:OP1	2:A:2322:A:O4'	1.87	0.92
2:A:2555:U:H2'	2:A:2556:C:H5'	0.94	0.92
2:A:2628:C:O2	2:A:2781:A:O2'	1.86	0.92
2:A:2689:U:C6	2:A:2713:A:N1	2.36	0.92
2:A:2734:A:N6	2:A:2735:G:C2	2.33	0.92
2:A:34:C:H2'	2:A:455:C:H41	1.31	0.92
2:A:747:U:OP2	26:5:2:ALA:N	2.02	0.92
3:D:158:GLY:HA2	3:D:194:VAL:CB	1.97	0.92
4:E:222:ARG:H	4:E:222:ARG:HD2	1.33	0.92
4:E:233:ARG:C	4:E:234:ARG:HG3	1.87	0.92
4:E:79:ARG:NH1	4:E:104:PHE:CA	2.32	0.92
7:H:85:ALA:HA	7:H:131:ILE:HG21	0.94	0.92
7:H:91:VAL:HG12	7:H:91:VAL:O	1.67	0.92
8:I:13:GLY:HA2	8:I:15:LYS:NZ	1.84	0.92
11:P:114:VAL:C	11:P:115:ARG:HG3	1.89	0.92
2:A:2406:U:H1'	11:P:57:VAL:CG2	1.99	0.92
20:U:69:ALA:HA	20:U:79:PHE:CZ	2.04	0.92
8:I:132:LYS:HA	8:I:138:THR:CG2	1.99	0.92
16:X:8:PRO:O	16:X:10:VAL:HG23	1.69	0.92
16:X:2:TRP:O	16:X:3:ASP:O	1.87	0.92
24:0:37:LEU:HG	24:0:68:VAL:CG1	1.98	0.92
24:0:65:GLY:CA	24:0:66:LYS:HD2	2.00	0.92
23:3:43:ILE:N	23:3:43:ILE:HD12	1.84	0.92
27:6:16:ALA:O	27:6:48:VAL:HG11	1.68	0.92
2:A:2207:C:N3	2:A:2218:G:N1	2.16	0.92
2:A:2414:G:C2	2:A:2415:G:N7	2.37	0.92

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2638:G:O2'	2:A:2639:A:C8	2.21	0.92
2:A:2852:G:N2	2:A:2853:C:O2	2.03	0.92
3:D:74:PRO:HA	3:D:116:MET:CE	1.99	0.92
3:D:135:PRO:CG	3:D:138:THR:CG2	2.28	0.92
4:E:76:PRO:HB2	4:E:77:PRO:HD3	0.92	0.92
6:G:18:ILE:HG22	6:G:19:GLU:N	1.81	0.92
7:H:96:SER:HA	7:H:124:VAL:HG21	1.50	0.92
10:O:10:VAL:HG13	10:O:12:ASP:OD1	1.70	0.92
11:P:109:LEU:HD13	11:P:110:GLY:N	1.85	0.92
19:R:38:VAL:HB	19:R:39:PRO:CD	1.93	0.92
19:R:63:ARG:HH21	19:R:77:ARG:HG2	1.20	0.92
17:Y:35:TYR:HH	17:Y:113:GLU:HG3	1.15	0.92
18:Z:69:VAL:HG12	18:Z:70:GLN:N	1.84	0.92
18:Z:91:PRO:HD2	18:Z:127:PRO:CB	1.97	0.92
16:X:25:GLN:C	16:X:26:PHE:CD1	2.43	0.92
2:A:223:A:H3'	2:A:224:G:P	2.08	0.92
23:3:40:THR:HG21	23:3:43:ILE:CG1	1.98	0.92
25:4:46:GLU:OE1	25:4:54:GLY:CA	2.15	0.92
28:7:34:ARG:O	28:7:35:ARG:O	1.85	0.92
28:7:8:ASN:HB2	28:7:11:LYS:CB	1.98	0.92
2:A:1301:A:HO2'	2:A:1302:A:H8	0.95	0.92
2:A:2228:G:H5''	2:A:2228:G:H8	1.29	0.92
2:A:2469:A:H61	2:A:2481:G:H1'	1.34	0.92
2:A:2552:U:C2	2:A:2554:U:C5'	2.53	0.92
2:A:2572:A:OP2	4:E:242:ASN:N	2.01	0.92
2:A:2717:G:C8	2:A:2717:G:C5'	2.43	0.92
2:A:2822:G:OP1	4:E:207:GLY:C	2.08	0.92
2:A:557:U:C5'	9:N:92:GLN:NE2	2.31	0.92
2:A:592:G:H21	29:8:3:LYS:HE2	1.31	0.92
2:A:965:C:O4'	2:A:2273:A:N3	2.02	0.92
4:E:206:LYS:O	4:E:208:LYS:N	2.02	0.92
5:F:163:HIS:CB	5:F:166:ILE:HD12	1.98	0.92
6:G:14:ARG:HA	6:G:137:PRO:CD	1.99	0.92
7:H:86:LEU:N	7:H:131:ILE:HG22	1.82	0.92
9:N:87:LEU:HB3	9:N:88:PRO:HD2	1.51	0.92
12:Q:41:THR:HG21	12:Q:126:VAL:CA	1.98	0.92
20:U:39:LEU:O	20:U:41:ASN:N	2.03	0.92
18:Z:26:LYS:O	18:Z:27:GLU:HG3	1.66	0.92
18:Z:67:LYS:CA	18:Z:67:LYS:HZ1	1.79	0.92
18:Z:79:ILE:O	18:Z:80:HIS:ND1	2.02	0.92
2:A:131:G:N2	2:A:149:A:N1	2.17	0.92
9:N:106:GLY:C	9:N:107:ASN:HD22	1.67	0.92

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:X:47:VAL:HB	16:X:69:SER:HB2	1.50	0.92
7:H:108:TYR:O	7:H:109:SER:HB3	1.68	0.92
23:3:50:VAL:HB	23:3:53:LEU:HD12	1.49	0.92
26:5:45:ILE:N	26:5:52:TYR:CE1	2.37	0.92
28:7:30:ILE:CG1	28:7:33:ARG:CD	2.47	0.92
2:A:2333:A:C8	2:A:2335:A:H2	1.81	0.92
2:A:2373:G:C2	2:A:2374:C:C4	2.58	0.92
2:A:2445:G:H2'	2:A:2446:G:H5'	1.51	0.92
2:A:2603:G:C6	2:A:2604:U:C5	2.58	0.92
2:A:2737:G:H2'	2:A:2738:A:H8	1.33	0.92
2:A:2790:A:C5'	2:A:2791:C:OP1	2.17	0.92
2:A:2862:G:H2'	2:A:2863:C:C6	2.03	0.92
5:F:102:LEU:CB	5:F:107:ARG:NE	2.33	0.92
5:F:147:LEU:HD12	5:F:156:LEU:HD11	0.93	0.92
9:N:45:VAL:C	9:N:46:ILE:CG1	2.36	0.92
11:P:67:ARG:CZ	11:P:111:ALA:O	2.16	0.92
2:A:1152:C:H5''	20:U:80:ILE:CG2	1.99	0.92
21:V:60:VAL:C	21:V:98:ILE:HB	1.90	0.92
16:X:18:MET:HE1	16:X:25:GLN:HB2	1.49	0.92
7:H:53:ARG:HH11	7:H:56:ASP:HA	0.78	0.92
2:A:2385:C:O2'	24:0:39:ARG:NH2	2.02	0.92
29:8:16:ILE:CB	29:8:22:VAL:HG22	1.99	0.92
30:9:4:ARG:CA	30:9:36:GLN:HA	2.00	0.92
2:A:2210:G:C5	3:D:148:GLY:HA3	2.04	0.92
2:A:2287:A:H62	2:A:2344:U:H5	1.12	0.92
2:A:2354:G:N2	24:0:32:LYS:CE	2.29	0.92
2:A:2631:G:C6	2:A:2632:A:C8	2.57	0.92
2:A:2825:C:H2'	2:A:2826:A:O4'	1.70	0.92
2:A:963:U:H1'	2:A:2250:G:H21	1.26	0.92
20:U:28:ARG:H	20:U:31:GLN:CD	1.70	0.92
20:U:76:TYR:O	20:U:80:ILE:CG1	2.18	0.92
17:Y:30:ASP:O	17:Y:34:GLU:HG3	1.58	0.92
17:Y:57:GLY:HA2	17:Y:97:ARG:HH22	1.31	0.92
2:A:2216:G:C2'	2:A:2217:G:C5'	2.45	0.92
2:A:2488:A:O2'	2:A:2489:G:H5'	1.70	0.92
2:A:2552:U:N3	2:A:2554:U:H5'	1.84	0.92
2:A:598:G:H21	5:F:33:LYS:HZ1	1.13	0.92
1:B:28:C:OP1	13:S:44:ARG:NH2	2.03	0.92
3:D:106:PRO:HA	3:D:194:VAL:O	1.67	0.92
4:E:190:ASN:O	4:E:192:ILE:CA	2.18	0.92
4:E:200:ASP:HA	4:E:266:LYS:CD	2.00	0.92
8:I:13:GLY:C	8:I:15:LYS:HD2	1.90	0.92

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:7:LYS:HG3	8:I:12:LYS:HG2	1.00	0.92
11:P:68:GLU:O	11:P:71:GLU:CG	2.17	0.92
20:U:13:ARG:HH12	20:U:13:ARG:HB2	1.27	0.92
20:U:44:THR:HA	20:U:47:TYR:HD1	1.34	0.92
21:V:74:TYR:CE1	21:V:87:ARG:C	2.43	0.92
15:W:8:ARG:O	15:W:10:VAL:CG2	2.17	0.92
18:Z:149:ALA:HB3	18:Z:165:GLU:N	1.82	0.92
8:I:68:LEU:HD21	8:I:108:LEU:HD11	1.49	0.92
2:A:1151:G:C3'	20:U:81:ASN:HD21	1.83	0.92
4:E:107:GLU:O	4:E:110:ARG:HG3	1.70	0.92
26:5:51:TYR:O	26:5:52:TYR:HB2	1.66	0.92
28:7:22:MET:O	28:7:24:THR:N	2.03	0.92
28:7:43:THR:CA	28:7:46:ASP:OD1	2.17	0.92
2:A:1462:C:H4'	2:A:2703:C:H5'	1.51	0.92
2:A:2410:G:H2'	2:A:2411:A:N7	1.84	0.92
3:D:129:LEU:HD23	3:D:130:PRO:HD3	1.48	0.92
2:A:1568:G:C4'	3:D:60:GLN:NE2	2.16	0.92
3:D:70:LYS:HG3	3:D:73:ILE:HD13	1.48	0.92
4:E:45:LYS:NZ	4:E:303:PRO:C	2.23	0.92
5:F:32:GLY:CA	5:F:35:VAL:HG23	1.98	0.92
6:G:49:PRO:HD3	6:G:73:VAL:HG22	1.51	0.92
7:H:74:MET:O	7:H:78:VAL:HG23	1.68	0.92
9:N:13:ASP:HA	9:N:38:VAL:HG12	0.92	0.92
2:A:1140:C:C5	9:N:49:ARG:CD	2.52	0.92
12:Q:67:ALA:CB	12:Q:70:ARG:CZ	2.36	0.92
13:S:27:LEU:CA	13:S:33:ARG:NH2	2.33	0.92
13:S:81:ALA:HB1	13:S:118:ILE:N	1.85	0.92
22:2:59:ILE:HG12	22:2:60:GLN:N	1.84	0.92
2:A:1603:A:H2'	2:A:1604:C:H6	1.30	0.92
31:K:121:LEU:HB3	31:K:125:MET:HE3	1.52	0.92
2:A:1062:G:C2	31:K:134:SER:OG	2.23	0.92
31:K:11:LEU:CD1	31:K:28:LEU:HD11	1.99	0.92
18:Z:96:VAL:HG12	18:Z:97:PRO:HD2	1.52	0.92
25:4:41:PRO:HB2	25:4:57:ASP:HB3	1.48	0.92
2:A:2350:C:H2'	2:A:2351:G:C8	2.04	0.92
2:A:2251:G:C8	2:A:2450:A:H4'	2.05	0.92
2:A:248:G:N2	2:A:2431:U:C4'	2.33	0.92
2:A:2515:C:N4	2:A:2569:G:N1	1.82	0.92
2:A:2617:C:C2'	2:A:2618:G:C5'	2.37	0.92
2:A:2051:A:N1	2:A:2618:G:O6	2.02	0.92
2:A:2619:C:O2'	2:A:2620:C:H5'	1.70	0.92
2:A:2698:U:H2'	2:A:2699:C:H6	1.30	0.92

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2711:A:OP2	2:A:2714:G:P	2.28	0.92
2:A:2759:G:C2'	2:A:2760:C:O5'	2.17	0.92
2:A:337:C:H3'	2:A:338:G:C5'	1.98	0.92
2:A:650:C:C5'	29:8:19:THR:HG23	2.00	0.92
2:A:2712:U:O2'	2:A:712(A):A:H5''	1.66	0.92
3:D:175:LEU:CG	3:D:180:VAL:CA	2.45	0.92
6:G:19:GLU:CD	6:G:135:VAL:HG22	1.89	0.92
7:H:102:LEU:CD2	7:H:114:ILE:O	2.18	0.92
12:Q:76:GLY:CA	12:Q:132:VAL:HG11	2.00	0.92
20:U:72:HIS:CE1	20:U:110:VAL:HG21	2.04	0.92
15:W:71:VAL:HG12	15:W:106:ILE:O	1.68	0.92
17:Y:79:LEU:CD1	17:Y:80:GLU:H	1.82	0.92
16:X:24:LEU:HB3	16:X:26:PHE:CZ	2.01	0.92
6:G:53:LYS:HG2	6:G:54:ALA:H	1.27	0.92
2:A:2212:A:C2'	2:A:2213:U:H5	1.62	0.92
2:A:2378:A:O2'	13:S:30:GLY:CA	2.17	0.92
2:A:2384:G:H5''	2:A:2386:C:P	2.09	0.92
2:A:2400:G:O3'	27:6:20:PHE:HZ	1.47	0.92
2:A:2436:G:C6	2:A:2437:U:C4	2.56	0.92
2:A:2468:G:O2'	2:A:2469:A:H8	1.51	0.92
4:E:99:VAL:O	4:E:100:TRP:CD2	2.22	0.92
5:F:111:VAL:HA	5:F:220:THR:HG22	1.51	0.92
5:F:24:THR:CB	5:F:25:PRO:CD	2.46	0.92
9:N:136:SER:O	9:N:137:GLU:C	2.08	0.92
9:N:19:MET:CG	9:N:46:ILE:CD1	2.47	0.92
10:O:35:ILE:CD1	10:O:65:THR:HG22	1.99	0.92
10:O:98:ILE:CG2	10:O:99:PHE:H	1.83	0.92
11:P:116:HIS:HD2	11:P:118:LEU:HD11	1.29	0.92
12:Q:57:ARG:O	12:Q:61:LEU:CG	2.17	0.92
12:Q:85:ILE:HB	12:Q:122:PHE:CD2	2.05	0.92
12:Q:91:HIS:N	12:Q:111:THR:CG2	2.33	0.92
17:Y:55:PHE:HZ	17:Y:89:ARG:CZ	1.80	0.92
8:I:145:VAL:O	8:I:146:THR:HG22	1.69	0.92
6:G:29:HIS:CE1	6:G:64:ARG:HH12	1.85	0.92
2:A:2833:G:OP1	2:A:2833:G:H8	1.51	0.92
2:A:965:C:C5'	2:A:2273:A:H1'	2.01	0.91
2:A:2317:C:C5	2:A:2318:G:O6	2.23	0.91
2:A:2424:C:O2	2:A:2424:C:H2'	1.68	0.91
2:A:2463:C:N3	2:A:2464:C:H5	1.68	0.91
2:A:2468:G:N2	2:A:2481:G:H2'	1.83	0.91
2:A:2446:G:N2	2:A:2501:C:H41	1.67	0.91
2:A:2546:U:O4'	2:A:2565:A:H2	1.52	0.91

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2810:A:H2'	2:A:2811:G:H5''	1.50	0.91
2:A:2854:G:C2	2:A:2864:G:C5	2.58	0.91
2:A:592:G:N2	29:8:3:LYS:HE2	1.86	0.91
4:E:199:ALA:HB1	4:E:312:ARG:O	1.68	0.91
5:F:115:LEU:CG	5:F:246:ARG:NH2	2.28	0.91
6:G:14:ARG:HA	6:G:137:PRO:HG3	1.49	0.91
7:H:95:ALA:O	7:H:127:GLN:HA	1.70	0.91
10:O:112:MET:O	10:O:115:ILE:N	2.03	0.91
10:O:78:ARG:C	10:O:79:PHE:CD2	2.43	0.91
13:S:36:ALA:HA	13:S:45:ALA:HB2	1.52	0.91
20:U:40:LEU:CD2	20:U:40:LEU:H	1.83	0.91
2:A:535:C:C4'	20:U:53:LYS:HE3	1.75	0.91
2:A:104:U:N3	17:Y:17:HIS:CE1	2.03	0.91
31:K:123:ALA:N	31:K:126:LYS:HE3	1.85	0.91
6:G:88:LEU:O	6:G:88:LEU:CD2	2.16	0.91
6:G:59:GLY:O	6:G:60:GLU:CG	2.18	0.91
2:A:2386:C:C1'	24:0:39:ARG:NH2	2.33	0.91
23:3:9:VAL:HG22	23:3:54:VAL:HA	1.49	0.91
30:9:11:CYS:SG	30:9:14:CYS:N	2.39	0.91
2:A:2210:G:N7	3:D:148:GLY:HA3	1.83	0.91
2:A:2431:U:O2	2:A:2433:A:OP2	1.87	0.91
2:A:2494:G:N1	2:A:2495:G:C5	2.39	0.91
2:A:2785:C:C4'	4:E:99:VAL:CA	2.15	0.91
3:D:135:PRO:HG3	3:D:138:THR:HG21	1.48	0.91
4:E:45:LYS:CE	4:E:303:PRO:O	2.17	0.91
4:E:70:VAL:HG11	4:E:296:VAL:CA	1.90	0.91
9:N:80:LYS:O	9:N:81:ARG:O	1.88	0.91
11:P:132:LYS:O	11:P:135:GLY:N	2.03	0.91
12:Q:129:ASP:OD1	12:Q:132:VAL:HG23	1.70	0.91
12:Q:33:MET:HB3	12:Q:83:PHE:CB	1.99	0.91
20:U:7:GLY:CA	20:U:8:ILE:HD12	2.00	0.91
21:V:11:GLN:CD	21:V:22:VAL:HG23	1.89	0.91
15:W:90:ARG:CB	15:W:90:ARG:CZ	2.45	0.91
8:I:59:ALA:O	8:I:62:LEU:HB2	1.69	0.91
28:7:43:THR:CA	28:7:46:ASP:OD2	2.17	0.91
2:A:126:A:P	28:7:44:VAL:HG11	2.10	0.91
2:A:1140:C:H5	9:N:49:ARG:CG	1.77	0.91
2:A:1698:A:O2'	2:A:1699:G:H3'	1.70	0.91
2:A:199:A:C6	2:A:2433:A:C8	2.56	0.91
2:A:2255:G:N2	2:A:2256:G:H1'	1.85	0.91
2:A:2474:C:H41	2:A:2529:G:N2	1.68	0.91
2:A:2606:C:H6	2:A:2606:C:H5''	1.34	0.91

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2623:G:O2'	2:A:2825:C:O2'	1.88	0.91
2:A:2740:A:N1	2:A:2764:A:N3	2.18	0.91
2:A:2754:U:H2'	2:A:2756:U:P	2.09	0.91
2:A:2785:C:C5'	4:E:99:VAL:CG2	2.46	0.91
2:A:2316:C:C5'	6:G:142:ALA:HB1	2.00	0.91
9:N:94:GLY:O	9:N:97:ALA:HB3	1.70	0.91
12:Q:12:PRO:HB2	12:Q:20:ILE:CD1	1.99	0.91
12:Q:143:VAL:HG23	12:Q:144:THR:H	1.35	0.91
12:Q:50:VAL:HG12	12:Q:52:LYS:H	1.34	0.91
8:I:145:VAL:CG1	8:I:146:THR:H	1.76	0.91
22:2:4:HIS:O	22:2:8:ILE:HD12	1.69	0.91
2:A:75:G:C3'	22:2:51:LYS:HZ3	1.83	0.91
31:K:117:ASN:OD1	31:K:127:ILE:HD12	1.67	0.91
15:W:21:VAL:HG23	15:W:22:ASP:H	1.36	0.91
2:A:594:U:H5'	29:8:58:MET:CE	2.00	0.91
2:A:2185:C:C2	2:A:2186:G:C8	2.59	0.91
2:A:2341:G:C5	2:A:2342:C:C4	2.58	0.91
2:A:2414:G:C2	2:A:2415:G:C8	2.58	0.91
2:A:2246:G:C4	2:A:2426:A:N3	2.38	0.91
2:A:2620:C:O2'	2:A:2621:A:H5''	1.71	0.91
2:A:2641:G:C6	2:A:2774:C:C4	2.58	0.91
4:E:79:ARG:O	4:E:187:HIS:HE1	1.37	0.91
4:E:45:LYS:CE	4:E:303:PRO:CG	2.33	0.91
11:P:52:LYS:HD3	11:P:53:ARG:HH11	1.16	0.91
13:S:27:LEU:CB	13:S:33:ARG:HH22	1.66	0.91
20:U:25:TRP:O	20:U:28:ARG:NH1	2.03	0.91
20:U:20:ARG:HH12	21:V:75:LYS:CE	1.82	0.91
17:Y:103:LEU:HD22	17:Y:112:LEU:CD2	2.00	0.91
17:Y:87:VAL:HG13	17:Y:88:PRO:CD	1.97	0.91
18:Z:78:PRO:O	18:Z:79:ILE:CG1	2.19	0.91
16:X:14:ALA:N	16:X:17:ASP:OD2	2.02	0.91
16:X:24:LEU:HB2	16:X:26:PHE:CZ	2.03	0.91
14:T:44:ARG:HG3	14:T:45:GLU:H	1.34	0.91
26:5:33:CYS:CB	26:5:37:HIS:N	2.33	0.91
23:3:39:ASP:HA	23:3:44:ARG:HH21	1.34	0.91
27:6:29:ARG:HG2	27:6:30:ASN:H	1.33	0.91
2:A:2013:A:H4'	15:W:96:ILE:HG22	1.52	0.91
2:A:2290:G:C6	2:A:2291:U:N3	2.38	0.91
2:A:2353:G:O2'	24:0:30:VAL:O	1.88	0.91
2:A:2468:G:O2'	2:A:2469:A:C5'	2.18	0.91
2:A:2579:C:C4'	2:A:2579:C:H6	1.84	0.91
2:A:2589:A:C5	2:A:2590:A:N7	2.39	0.91

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2737:G:N3	2:A:2738:A:C8	2.38	0.91
2:A:2887:U:C2	2:A:2888:C:C5	2.58	0.91
3:D:131:LEU:HD12	3:D:184:LEU:O	1.71	0.91
4:E:180:ILE:HB	4:E:187:HIS:HB3	1.50	0.91
5:F:33:LYS:CA	5:F:36:ARG:HG3	2.00	0.91
7:H:127:GLN:O	7:H:130:ILE:HD11	1.70	0.91
11:P:65:ASP:HB3	11:P:109:LEU:HB3	0.94	0.91
2:A:636:G:OP1	11:P:127:GLU:CG	2.19	0.91
12:Q:42:TYR:C	12:Q:125:TRP:HH2	1.74	0.91
12:Q:42:TYR:O	12:Q:125:TRP:CH2	2.23	0.91
19:R:36:THR:HG22	19:R:40:LYS:CB	1.96	0.91
19:R:79:LEU:HD22	19:R:79:LEU:C	1.82	0.91
21:V:57:GLN:CG	21:V:58:ALA:H	1.82	0.91
2:A:104:U:C4	17:Y:17:HIS:HE1	1.89	0.91
2:A:338:G:H5'	17:Y:24:ARG:NH1	1.85	0.91
18:Z:100:THR:CG2	18:Z:137:ASP:OD1	2.17	0.91
18:Z:46:GLN:HB2	18:Z:49:THR:OG1	1.69	0.91
2:A:2311:A:OP2	2:A:2311:A:O4'	1.88	0.91
2:A:932:G:H5''	23:3:29:ARG:HH22	1.36	0.91
23:3:8:LEU:HD22	23:3:31:LEU:C	1.91	0.91
30:9:15:LYS:N	30:9:26:ILE:O	2.01	0.91
2:A:1364:G:H2'	25:4:3:LYS:HZ2	0.77	0.91
2:A:827:U:OP1	2:A:2430:A:OP2	1.88	0.91
2:A:2575:C:H5'	4:E:241:TRP:HE1	1.33	0.91
2:A:2645:G:C4'	2:A:2732:G:O2'	2.18	0.91
2:A:2826:A:C6	2:A:2827:C:H6	1.69	0.91
2:A:321:G:H1'	5:F:206:ASN:ND2	1.86	0.91
2:A:487:C:H1'	15:W:53:SER:OG	1.71	0.91
2:A:592:G:N3	29:8:3:LYS:HE2	1.83	0.91
3:D:133:ASN:O	3:D:134:ILE:HG13	1.68	0.91
3:D:89:ASN:HD21	3:D:199:ARG:HE	1.04	0.91
5:F:163:HIS:CB	5:F:166:ILE:CD1	2.48	0.91
5:F:60:SER:HB3	5:F:69:HIS:HB3	1.51	0.91
7:H:121:GLU:OE1	7:H:121:GLU:N	2.03	0.91
7:H:7:PRO:HD3	7:H:68:ARG:HD3	1.51	0.91
9:N:27:ALA:O	9:N:29:GLN:N	1.95	0.91
2:A:1140:C:H5	9:N:49:ARG:HG3	1.02	0.91
15:W:75:TYR:CD1	15:W:104:THR:OG1	2.22	0.91
18:Z:103:ARG:HG2	18:Z:139:THR:CG2	1.99	0.91
2:A:2309:A:C3'	2:A:2310:A:H5'	2.01	0.91
2:A:2:G:N1	2:A:2902:C:N3	2.19	0.91
2:A:49:A:N6	2:A:176:G:N1	2.19	0.91

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:0:38:VAL:C	24:0:40:GLN:HG3	1.91	0.91
27:6:5:GLY:C	27:6:7:ARG:H	1.74	0.91
2:A:197:A:C6	2:A:2430:A:C8	2.58	0.91
2:A:965:C:O2'	2:A:2272:U:C5	2.24	0.91
2:A:2380:C:H2'	2:A:2381:C:H5'	1.53	0.91
2:A:2434:A:O2'	2:A:2435:A:O5'	1.87	0.91
2:A:2528:U:O4	2:A:2530:A:N3	2.03	0.91
2:A:2657:A:C6	2:A:2665:A:N7	2.38	0.91
4:E:45:LYS:NZ	4:E:303:PRO:CD	2.30	0.91
5:F:52:ALA:HA	5:F:55:ARG:CB	1.99	0.91
7:H:82:TYR:CZ	7:H:137:LYS:CG	2.54	0.91
7:H:36:PHE:CD2	7:H:70:LEU:HD11	2.04	0.91
8:I:7:LYS:CG	8:I:12:LYS:HD3	1.95	0.91
12:Q:49:VAL:HA	12:Q:121:ASP:HB2	1.53	0.91
19:R:107:ASP:CG	19:R:109:ALA:H	1.73	0.91
19:R:19:ALA:O	19:R:22:ARG:CB	2.17	0.91
20:U:57:PHE:HA	20:U:60:LEU:HG	1.51	0.91
8:I:132:LYS:HA	8:I:138:THR:HG21	1.50	0.91
2:A:1417:C:N3	2:A:1581:G:N2	2.19	0.91
29:8:23:MET:CA	29:8:23:MET:CE	2.49	0.91
29:8:26:LYS:HZ2	29:8:44:LYS:H	1.11	0.91
2:A:2197:U:H2'	2:A:2224:G:N2	1.74	0.91
2:A:2226:C:N3	2:A:2227:A:H1'	1.84	0.91
2:A:2343:C:H4'	2:A:2373:G:O3'	1.70	0.91
2:A:2391:G:C2'	2:A:2392:A:OP2	2.17	0.91
2:A:2432:A:N1	2:A:2433:A:N1	2.19	0.91
2:A:2570:G:C2	2:A:2571:C:C5	2.59	0.91
2:A:2603:G:C4	2:A:2604:U:C6	2.59	0.91
2:A:602:G:H21	2:A:655:A:H2'	1.36	0.91
2:A:1818:U:H5''	3:D:155:ARG:CG	1.97	0.91
4:E:222:ARG:HG3	4:E:222:ARG:NH1	1.77	0.91
2:A:1140:C:C4	9:N:49:ARG:CD	2.54	0.91
19:R:85:PRO:C	19:R:87:TYR:H	1.74	0.91
2:A:535:C:HO2'	20:U:53:LYS:HG2	1.12	0.91
6:G:105:SER:HB3	6:G:131:THR:HG22	1.53	0.91
2:A:2262:U:H6	24:0:14:ARG:HH22	0.96	0.91
24:0:33:ALA:HB3	24:0:66:LYS:H	1.35	0.91
25:4:15:ILE:N	25:4:15:ILE:CD1	2.32	0.91
2:A:2346:A:O2'	2:A:2347:C:OP1	1.87	0.91
2:A:2363:C:O2'	24:0:38:VAL:HG11	1.71	0.91
2:A:2493:U:O2	2:A:2493:U:H2'	1.71	0.91
2:A:2625:G:C3'	2:A:2626:C:C6	2.51	0.91

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2678:C:N3	2:A:2679:A:N7	2.19	0.91
2:A:2729:G:C2	2:A:2730:C:C2	2.58	0.91
2:A:2825:C:H5	2:A:2825:C:OP2	1.53	0.91
2:A:322:A:C2	2:A:341:G:C5	2.59	0.91
2:A:338:G:H5'	17:Y:24:ARG:HH11	1.32	0.91
3:D:145:LEU:N	3:D:152:GLN:CB	2.23	0.91
4:E:267:ARG:HD3	4:E:297:LYS:CD	2.01	0.91
4:E:267:ARG:HG3	4:E:297:LYS:HB2	1.51	0.91
1:B:57:A:H2	6:G:17:ARG:HH12	0.98	0.91
12:Q:140:TYR:CD1	12:Q:147:VAL:HG13	2.02	0.91
12:Q:94:ARG:NE	12:Q:106:GLY:CA	2.34	0.91
20:U:65:ILE:HD13	20:U:96:ALA:CB	1.98	0.91
2:A:30:G:P	20:U:8:ILE:HD11	2.10	0.91
15:W:8:ARG:CG	15:W:102:HIS:CE1	2.54	0.91
16:X:3:ASP:HA	22:2:24:LYS:HD3	0.94	0.91
2:A:1598:C:C5'	16:X:34:LYS:HG3	1.99	0.91
25:4:13:LYS:O	25:4:14:ILE:HB	1.67	0.91
2:A:1364:G:OP1	25:4:2:GLN:O	1.87	0.91
28:7:41:GLN:O	28:7:42:LEU:CG	2.18	0.91
2:A:1566:A:N1	3:D:212:HIS:ND1	2.19	0.91
2:A:2428:G:C5'	2:A:2429:G:OP1	2.18	0.91
2:A:2460:U:N3	2:A:2492:U:O4	2.03	0.91
2:A:2558:C:O2	2:A:2559:C:C5	2.24	0.91
2:A:2567:G:C4	2:A:2568:C:H5	1.88	0.91
2:A:2768:C:C4	2:A:2769:C:C5	2.35	0.91
2:A:2821:A:C2'	2:A:2822:G:O4'	2.19	0.91
2:A:342:G:H2'	2:A:343:C:C6	2.05	0.91
2:A:929:G:H1'	23:3:43:ILE:HG13	1.53	0.91
2:A:993:G:C4'	21:V:90:PHE:CZ	2.51	0.91
5:F:215:ALA:C	5:F:242:GLU:HG3	1.92	0.91
7:H:102:LEU:HD22	7:H:122:ILE:HD12	1.53	0.91
7:H:101:LYS:HE2	7:H:115:GLU:HB2	1.53	0.91
9:N:15:ARG:HD3	9:N:43:ARG:HD2	0.93	0.91
9:N:65:ASN:H	9:N:69:TYR:HB2	1.35	0.91
9:N:74:ARG:HB3	9:N:76:ASP:OD2	1.70	0.91
2:A:873:G:H4'	12:Q:32:LYS:HB3	1.52	0.91
21:V:39:PHE:O	21:V:40:VAL:HG22	0.73	0.91
20:U:88:ILE:HG22	21:V:55:THR:CG2	2.00	0.91
2:A:135:G:H1	2:A:144:C:H42	1.17	0.91
2:A:176:G:H3'	2:A:177:G:H8	1.34	0.91
2:A:1449:A:H5'	2:A:1528:A:C2	2.06	0.91
25:4:20:VAL:HG12	25:4:30:GLU:OE1	1.69	0.90

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:4:58:LYS:HG2	25:4:59:PHE:H	1.32	0.90
2:A:2207:C:N3	2:A:2218:G:C6	2.40	0.90
2:A:2246:G:HO2'	2:A:2247:A:H5'	1.22	0.90
2:A:2303:G:H4'	6:G:99:ASP:HB3	1.50	0.90
2:A:2290:G:N2	2:A:2343:C:H1'	1.86	0.90
2:A:2380:C:H2'	2:A:2381:C:H5''	1.49	0.90
2:A:2473:U:H2'	2:A:2473:U:O2	1.67	0.90
2:A:2051:A:C2	2:A:2618:G:C6	2.59	0.90
2:A:2657:A:H62	2:A:2664:G:H21	1.05	0.90
2:A:2746:U:C2	2:A:2759:G:N2	2.37	0.90
1:B:48:A:OP2	13:S:107:ASN:ND2	2.04	0.90
3:D:130:PRO:HA	3:D:188:ARG:HA	1.51	0.90
4:E:214:VAL:HG22	4:E:221:LYS:HD2	1.51	0.90
4:E:87:GLU:O	4:E:94:ARG:N	2.01	0.90
10:O:61:VAL:HG12	10:O:62:VAL:N	1.84	0.90
12:Q:87:LYS:C	12:Q:88:PHE:CD2	2.44	0.90
12:Q:89:PRO:C	12:Q:90:PHE:HD1	1.67	0.90
19:R:41:ALA:HB1	19:R:114:VAL:HG21	1.51	0.90
19:R:44:LEU:HD13	19:R:44:LEU:O	1.70	0.90
19:R:87:TYR:HE1	19:R:94:TYR:HB3	1.13	0.90
20:U:27:SER:O	20:U:29:SER:CA	2.19	0.90
18:Z:6:LYS:H	18:Z:7:PRO:HD3	1.33	0.90
15:W:89:ALA:N	15:W:92:ARG:O	2.04	0.90
23:3:22:ALA:HA	23:3:46:ASN:ND2	1.86	0.90
25:4:30:GLU:O	25:4:31:ILE:HD13	1.70	0.90
29:8:55:TRP:CZ3	29:8:59:LYS:NZ	2.40	0.90
2:A:1022:G:P	9:N:52:GLN:NE2	2.44	0.90
2:A:1205:U:O2	5:F:232:LEU:CD1	2.19	0.90
2:A:2653:U:C2'	2:A:2654:A:N7	2.33	0.90
2:A:2826:A:N1	2:A:2827:C:C6	2.39	0.90
2:A:581:C:P	20:U:33:ARG:HH12	1.94	0.90
3:D:128:ALA:HB1	3:D:190:THR:HG22	1.48	0.90
3:D:80:ILE:CD1	3:D:82:TYR:HE1	1.84	0.90
2:A:2785:C:O2	4:E:100:TRP:NE1	2.04	0.90
5:F:148:VAL:CG1	5:F:148:VAL:O	2.20	0.90
2:A:797:C:H5''	5:F:57:PRO:HB3	1.50	0.90
6:G:14:ARG:HA	6:G:137:PRO:CG	2.00	0.90
7:H:140:VAL:O	7:H:143:LEU:HD23	1.70	0.90
8:I:7:LYS:HA	8:I:14:LYS:HG3	1.53	0.90
9:N:47:THR:OG1	9:N:53:ILE:HD11	1.70	0.90
9:N:95:ARG:C	9:N:98:PHE:CD1	2.40	0.90
19:R:37:THR:O	19:R:38:VAL:O	1.90	0.90

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:U:30:LYS:O	20:U:32:TYR:CD2	2.24	0.90
20:U:91:ASN:C	20:U:95:LEU:HD11	1.92	0.90
21:V:4:ILE:CG1	21:V:13:ARG:HA	2.00	0.90
21:V:61:VAL:C	21:V:98:ILE:HD11	1.92	0.90
18:Z:19:ILE:N	18:Z:36:ARG:CG	2.34	0.90
8:I:109:LYS:H	8:I:109:LYS:HE3	1.34	0.90
2:A:1077:A:O2'	31:K:134:SER:HA	1.71	0.90
8:I:134:HIS:ND1	8:I:135:PRO:HD2	1.86	0.90
29:8:9:MET:O	29:8:14:ILE:HD13	1.70	0.90
2:A:2051:A:H4'	4:E:238:LEU:CD2	2.00	0.90
2:A:2093:G:C5	2:A:2225:A:C5	2.59	0.90
2:A:2494:G:N3	2:A:2495:G:C8	2.38	0.90
2:A:2733:A:N3	4:E:318:ASN:HB2	1.85	0.90
2:A:2739:U:H3'	2:A:2739:U:H6	1.35	0.90
2:A:2740:A:O2'	2:A:2741:A:C5'	2.19	0.90
2:A:2043:C:N4	2:A:2777:G:N3	2.18	0.90
2:A:2804:C:H5	2:A:2805:G:O6	1.54	0.90
3:D:103:ILE:HG12	3:D:104:ILE:HD13	1.50	0.90
3:D:145:LEU:H	3:D:152:GLN:HB2	1.34	0.90
2:A:1566:A:C2	3:D:212:HIS:CA	2.54	0.90
3:D:78:ALA:O	3:D:79:THR:CG2	2.19	0.90
8:I:42:ALA:O	8:I:45:LYS:HB2	1.70	0.90
10:O:111:PHE:O	10:O:112:MET:C	2.08	0.90
11:P:55:GLN:HA	11:P:55:GLN:OE1	1.69	0.90
21:V:28:GLU:OE2	21:V:93:ILE:HB	1.72	0.90
15:W:68:ARG:O	15:W:110:LYS:N	2.04	0.90
22:2:48:GLU:O	22:2:49:LEU:C	2.08	0.90
22:2:4:HIS:N	22:2:8:ILE:HD11	1.86	0.90
1:B:40:U:H3'	1:B:41:U:H5'	1.52	0.90
26:5:33:CYS:HB3	26:5:37:HIS:N	1.86	0.90
25:4:14:ILE:HG22	25:4:37:SER:H	1.37	0.90
2:A:2045:C:O2	26:5:22:HIS:CE1	2.25	0.90
2:A:2227:A:C2	2:A:2228:G:N1	2.37	0.90
2:A:2484:G:N1	2:A:2485:G:C8	2.40	0.90
2:A:2607:G:C2'	2:A:2608:G:H5'	2.01	0.90
2:A:2712:U:H6	2:A:712(A):A:C8	1.67	0.90
3:D:208:GLY:O	3:D:210:LYS:HG2	1.72	0.90
5:F:37:ALA:O	5:F:107:ARG:NH1	2.04	0.90
5:F:164:ALA:CA	5:F:232:LEU:CD1	2.50	0.90
7:H:10:ILE:HD11	7:H:49:ILE:HG12	1.50	0.90
11:P:94:ARG:CG	11:P:120:LEU:CD2	2.27	0.90
12:Q:49:VAL:HG13	12:Q:119:ASN:O	1.71	0.90

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:Y:103:LEU:HA	17:Y:108:ARG:HB2	1.51	0.90
17:Y:90:PRO:C	17:Y:91:LEU:HD23	1.91	0.90
22:2:17:GLU:O	22:2:19:GLU:N	2.04	0.90
2:A:1059:G:H21	31:K:127:ILE:HG23	1.12	0.90
2:A:1082:U:C1'	31:K:118:ALA:HB2	2.02	0.90
6:G:59:GLY:C	6:G:60:GLU:HG3	1.92	0.90
2:A:2721:A:H2'	2:A:2722:G:H8	1.36	0.90
22:2:39:ALA:CB	22:2:40:PRO:HD3	2.01	0.90
24:0:29:GLU:O	24:0:31:VAL:N	2.05	0.90
27:6:54:LYS:HZ3	27:6:54:LYS:HB2	1.33	0.90
28:7:34:ARG:HH11	28:7:42:LEU:HA	1.18	0.90
2:A:2331:G:H21	2:A:2385:C:H5	1.01	0.90
2:A:2504:U:H3'	2:A:2504:U:C6	2.07	0.90
2:A:2605:U:O2'	2:A:2606:C:O5'	1.86	0.90
2:A:2735:G:C6	2:A:2770:G:C2	2.60	0.90
2:A:2850:A:C2	19:R:61:HIS:HE1	1.61	0.90
2:A:532:A:H3'	2:A:533:G:O4'	1.69	0.90
4:E:94:ARG:CB	4:E:95:PRO:CD	2.43	0.90
5:F:62:GLY:N	5:F:65:ARG:NH2	2.18	0.90
19:R:97:VAL:HG13	19:R:114:VAL:HG22	1.53	0.90
2:A:1161:C:HO2'	21:V:22:VAL:HG11	1.26	0.90
21:V:49:GLU:O	21:V:54:TYR:CZ	2.25	0.90
15:W:82:LEU:CD2	15:W:100:THR:H	1.83	0.90
31:K:80:LYS:HD2	31:K:85:ILE:O	1.72	0.90
2:A:439:G:O3'	17:Y:6:LYS:NZ	2.04	0.90
2:A:1482:U:H6	2:A:1482:U:H3'	1.37	0.90
28:7:44:VAL:C	28:7:46:ASP:N	2.24	0.90
2:A:2397:G:C5	2:A:2420:C:O2	2.24	0.90
2:A:2484:G:H2'	2:A:2485:G:C5'	2.02	0.90
2:A:2583:G:C1'	2:A:2584:U:O2	2.19	0.90
2:A:2675:A:H2'	2:A:2676:C:H5'	1.54	0.90
4:E:210:THR:CA	4:E:216:ARG:HH22	1.82	0.90
5:F:223:LEU:C	5:F:223:LEU:HD12	1.87	0.90
5:F:236:THR:O	5:F:239:ALA:CB	2.19	0.90
5:F:81:PRO:CA	5:F:87:ARG:HB3	2.01	0.90
7:H:15:THR:HG23	7:H:26:LYS:N	1.87	0.90
7:H:64:HIS:O	7:H:66:THR:N	2.05	0.90
2:A:2561:A:O2'	10:O:40:VAL:HG11	0.72	0.90
2:A:2406:U:N3	11:P:55:GLN:CB	2.34	0.90
12:Q:50:VAL:CG1	12:Q:51:GLU:H	1.74	0.90
20:U:13:ARG:NH1	20:U:13:ARG:CB	1.68	0.90
21:V:59:GLU:O	21:V:60:VAL:HG22	1.69	0.90

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:495:G:C3'	15:W:57:ASN:HD21	1.84	0.90
17:Y:73:HIS:N	17:Y:91:LEU:CD1	2.29	0.90
18:Z:172:LEU:CD2	18:Z:173:PRO:N	2.27	0.90
18:Z:53:ASP:OD2	18:Z:62:PHE:O	1.88	0.90
6:G:82:GLU:C	6:G:85:GLN:CG	2.37	0.90
2:A:440:G:P	17:Y:3:GLN:CD	2.50	0.90
31:K:52:MET:HE2	31:K:53:ILE:H	1.35	0.90
24:0:42:GLY:HA2	24:0:66:LYS:CA	2.02	0.90
25:4:35:VAL:HG12	25:4:36:TRP:N	1.86	0.90
26:5:45:ILE:HG23	26:5:52:TYR:HD1	1.09	0.90
29:8:23:MET:CE	29:8:48:PHE:HD2	1.81	0.90
2:A:2046:G:OP1	26:5:19:ARG:HA	1.70	0.90
2:A:2258:C:H41	2:A:2426:A:C1'	1.84	0.90
2:A:2366:A:C8	2:A:2367:G:N7	2.40	0.90
2:A:2635:C:C2	2:A:2783:G:N2	2.37	0.90
3:D:106:PRO:O	3:D:107:LYS:O	1.88	0.90
3:D:148:GLY:O	3:D:150:GLY:N	2.05	0.90
2:A:801:G:P	5:F:79:ARG:CZ	2.58	0.90
2:A:2303:G:C5'	6:G:99:ASP:CB	2.49	0.90
7:H:10:ILE:CD1	7:H:49:ILE:HG13	2.02	0.90
12:Q:49:VAL:HG22	12:Q:121:ASP:H	1.00	0.90
19:R:18:LEU:CD1	19:R:19:ALA:N	2.35	0.90
19:R:87:TYR:CD1	19:R:94:TYR:HB3	2.07	0.90
8:I:77:VAL:CG1	8:I:143:VAL:HG22	2.00	0.90
31:K:20:PRO:O	31:K:23:PRO:CD	2.18	0.90
16:X:47:VAL:CB	16:X:69:SER:CB	2.49	0.90
2:A:2722:G:C2	2:A:2723:C:C5	2.59	0.90
2:A:1665:A:C3'	10:O:66:LYS:CE	2.45	0.90
2:A:2041:U:H5'	9:N:70:PHE:CE1	2.07	0.90
2:A:2094:G:C2	2:A:2196:C:O2	2.25	0.90
2:A:2265:U:O2	2:A:2266:A:N7	2.05	0.90
2:A:2331:G:C5	2:A:2332:U:C4	2.58	0.90
2:A:2436:G:N1	2:A:2437:U:C2	2.40	0.90
2:A:2526:G:C6	2:A:2527:C:C5	2.58	0.90
2:A:849:A:H2	23:3:21:ALA:CB	1.66	0.90
3:D:128:ALA:CB	3:D:190:THR:HA	2.00	0.90
3:D:145:LEU:H	3:D:152:GLN:CB	1.55	0.90
5:F:112:ARG:O	5:F:113:SER:C	2.10	0.90
6:G:35:ALA:O	6:G:36:ASN:ND2	2.04	0.90
9:N:23:ALA:HA	9:N:26:VAL:CG2	2.00	0.90
10:O:77:ILE:HD11	10:O:79:PHE:HE2	0.98	0.90
13:S:59:ALA:O	13:S:91:ARG:NH1	2.04	0.90

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:2:52:ALA:O	22:2:56:ILE:CD1	2.14	0.90
6:G:84:LEU:O	6:G:88:LEU:HB2	1.71	0.90
23:3:54:VAL:HG23	23:3:55:ARG:H	1.33	0.90
2:A:2209:C:O2'	2:A:2210:G:C3'	2.19	0.90
2:A:2712:U:O2'	2:A:712(A):A:P	2.30	0.90
2:A:2810:A:H2'	2:A:2811:G:O5'	1.70	0.90
2:A:957:A:C2	2:A:2459:A:H5'	2.05	0.90
1:B:12:C:O2	13:S:10:MET:SD	2.29	0.90
4:E:211:GLN:NE2	4:E:216:ARG:N	2.17	0.90
4:E:216:ARG:HH11	4:E:253:GLN:HB3	1.37	0.90
5:F:196:THR:CA	5:F:236:THR:HG23	2.01	0.90
9:N:15:ARG:NE	9:N:40:ASN:HD21	1.65	0.90
10:O:36:GLY:N	10:O:62:VAL:HB	1.87	0.90
2:A:2683:C:H2'	10:O:76:TYR:OH	1.72	0.90
12:Q:57:ARG:C	12:Q:61:LEU:HG	1.93	0.90
13:S:116:PHE:HA	13:S:119:GLN:OE1	1.70	0.90
20:U:28:ARG:CA	20:U:31:GLN:CG	2.50	0.90
20:U:41:ASN:ND2	20:U:42:ALA:N	2.16	0.90
22:2:27:LEU:CD1	22:2:53:ILE:HD13	2.00	0.90
1:B:99:A:H2'	1:B:100:G:C8	2.07	0.90
2:A:2633:G:O2'	2:A:2634:G:H5'	1.71	0.90
2:A:2695:C:O2'	2:A:2696:U:C6	2.24	0.90
2:A:2848:G:H22	2:A:2867:G:C1'	1.78	0.90
2:A:2880:C:O2'	19:R:90:ARG:HD3	1.72	0.90
3:D:213:LYS:CB	3:D:215:LYS:H	1.83	0.90
4:E:45:LYS:CD	4:E:303:PRO:O	2.19	0.90
4:E:43:GLY:HA3	4:E:75:THR:OG1	1.72	0.90
5:F:195:VAL:HG13	5:F:213:ALA:HB3	1.52	0.90
11:P:94:ARG:CD	11:P:120:LEU:HD22	1.99	0.90
14:T:11:THR:HG22	14:T:12:ASP:N	1.87	0.90
17:Y:31:LEU:O	17:Y:34:GLU:HB2	1.71	0.90
18:Z:90:GLU:H	18:Z:91:PRO:CD	1.85	0.90
8:I:94:THR:HG23	8:I:96:LYS:HB3	1.53	0.90
8:I:95:SER:CB	8:I:98:ILE:HD11	1.98	0.90
17:Y:9:LYS:HZ2	17:Y:13:ARG:NH2	1.68	0.90
23:3:43:ILE:H	23:3:43:ILE:HD12	1.36	0.89
2:A:1262:A:H2	26:5:10:LYS:HE2	1.36	0.89
2:A:1697:G:H3'	2:A:1698:A:H5'	1.52	0.89
2:A:2528:U:OP2	30:9:30:VAL:HG11	1.69	0.89
2:A:2821:A:H2'	2:A:2822:G:C1'	2.01	0.89
4:E:199:ALA:O	4:E:266:LYS:HB2	1.72	0.89
4:E:315:VAL:O	4:E:317:PRO:CD	2.20	0.89

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:44:TYR:O	4:E:74:GLU:OE1	1.90	0.89
5:F:219:ASN:H	5:F:219:ASN:ND2	1.70	0.89
9:N:77:GLY:HA2	9:N:80:LYS:HG2	1.49	0.89
12:Q:41:THR:C	12:Q:125:TRP:HZ3	1.73	0.89
17:Y:101:LEU:CD1	17:Y:103:LEU:HD11	2.02	0.89
8:I:102:LEU:C	8:I:102:LEU:HD12	1.91	0.89
16:X:25:GLN:OE1	16:X:25:GLN:CA	2.20	0.89
8:I:60:GLU:O	8:I:63:ALA:N	2.06	0.89
24:O:23:VAL:CG1	24:O:24:LYS:N	2.19	0.89
2:A:1277:G:N3	19:R:23:ASN:ND2	2.19	0.89
2:A:2241:A:H8	2:A:2241:A:H5'	1.34	0.89
2:A:2248:C:O2	2:A:2248:C:H2'	1.70	0.89
2:A:2330:G:C2	2:A:2331:G:H1'	2.06	0.89
2:A:2327:A:N7	2:A:2388:A:N6	2.19	0.89
2:A:2700:C:H3'	2:A:2701:C:C5'	2.00	0.89
2:A:396:G:H4'	25:4:39:VAL:HG12	1.52	0.89
5:F:84:VAL:C	5:F:85:LYS:CD	2.39	0.89
6:G:18:ILE:CG2	6:G:19:GLU:H	1.85	0.89
7:H:147:ILE:HA	7:H:150:VAL:CG2	2.01	0.89
12:Q:59:ASN:HD22	12:Q:60:ALA:N	1.61	0.89
14:T:21:PHE:C	14:T:22:VAL:HG13	1.93	0.89
31:K:103:LYS:N	31:K:106:GLU:OE1	2.04	0.89
15:W:21:VAL:HG23	15:W:22:ASP:N	1.86	0.89
24:O:28:GLY:HA3	24:O:60:PHE:HB3	1.51	0.89
25:4:7:PRO:HD3	25:4:56:VAL:HG21	1.51	0.89
2:A:2400:G:O2'	27:6:20:PHE:CE1	2.01	0.89
28:7:9:ASN:O	28:7:10:ARG:C	2.07	0.89
2:A:1032:A:OP1	30:9:8:LYS:HG3	1.72	0.89
2:A:1669:A:O3'	2:A:2550:G:OP1	1.91	0.89
2:A:2043:C:C5	2:A:2777:G:C1'	2.53	0.89
2:A:2330:G:H21	2:A:2331:G:H1'	1.09	0.89
2:A:2482:G:H2'	2:A:2483:C:H5'	0.90	0.89
2:A:2492:U:O2'	2:A:2493:U:C5'	2.19	0.89
2:A:2634:G:C2'	2:A:2635:C:O5'	2.20	0.89
2:A:2771:C:N3	2:A:2772:C:C5	2.40	0.89
2:A:527:C:C5	2:A:2779:U:H3'	2.07	0.89
2:A:572:A:H2'	2:A:573:G:C1'	2.02	0.89
2:A:932:G:H5'	23:3:24:LYS:CE	2.02	0.89
3:D:152:GLN:O	3:D:153:LEU:HB2	1.72	0.89
3:D:85:ASN:ND2	3:D:86:ARG:CZ	2.36	0.89
4:E:81:VAL:HB	4:E:100:TRP:CZ3	2.07	0.89
2:A:2578:G:C5	4:E:237:ASN:ND2	2.40	0.89

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:76:ARG:HB2	6:G:77:ASP:OD1	1.71	0.89
7:H:102:LEU:HD12	7:H:104:LEU:HD11	1.54	0.89
7:H:64:HIS:C	7:H:66:THR:H	1.75	0.89
9:N:12:VAL:HG12	9:N:38:VAL:HG21	1.54	0.89
21:V:35:LEU:O	21:V:60:VAL:CG1	2.20	0.89
17:Y:103:LEU:HD13	17:Y:113:GLU:HB3	1.51	0.89
22:2:20:LEU:O	22:2:23:LEU:N	2.05	0.89
22:2:26:GLU:CG	22:2:27:LEU:H	1.82	0.89
16:X:33:SER:O	16:X:37:VAL:HG23	1.71	0.89
31:K:117:ASN:CG	31:K:127:ILE:HD12	1.91	0.89
31:K:45:GLU:O	31:K:47:ALA:N	2.04	0.89
7:H:111:PRO:C	7:H:112:VAL:HG23	1.91	0.89
2:A:1609:A:C6	2:A:1616:A:H2	1.90	0.89
25:4:5:LEU:HD23	25:4:5:LEU:N	1.87	0.89
28:7:12:ARG:O	28:7:15:THR:OG1	1.90	0.89
29:8:26:LYS:CG	29:8:44:LYS:HA	2.03	0.89
2:A:2250:G:H5'	12:Q:102:ARG:HD3	1.53	0.89
2:A:2356:C:H2'	2:A:2357:U:C5'	2.02	0.89
2:A:2553:G:C8	2:A:2554:U:O4'	2.25	0.89
2:A:2578:G:O2'	2:A:2579:C:O5'	1.91	0.89
2:A:2635:C:O2'	2:A:2636:U:O5'	1.91	0.89
2:A:2869:G:N2	2:A:2870:C:C1'	2.35	0.89
3:D:71:ASP:OD1	3:D:118:GLY:N	2.06	0.89
4:E:77:PRO:HB2	4:E:187:HIS:H	0.76	0.89
4:E:70:VAL:HG22	4:E:297:LYS:HA	1.55	0.89
5:F:193:LEU:HD13	5:F:223:LEU:CB	2.01	0.89
7:H:71:LEU:O	7:H:73:ASN:N	2.05	0.89
9:N:61:VAL:HG22	9:N:139:LEU:CB	2.02	0.89
9:N:65:ASN:HB2	9:N:69:TYR:CE1	2.07	0.89
9:N:82:THR:OG1	9:N:83:ILE:N	2.03	0.89
21:V:74:TYR:HD1	21:V:86:HIS:O	1.55	0.89
2:A:1059:G:H21	31:K:127:ILE:CG2	1.84	0.89
2:A:94:G:H21	22:2:42:ASN:HD22	1.19	0.89
3:D:235:PRO:O	3:D:236:PHE:C	2.07	0.89
2:A:1263:U:C4'	26:5:16:ARG:CZ	2.50	0.89
2:A:686:G:O6	28:7:12:ARG:NE	2.05	0.89
2:A:2287:A:HO2'	2:A:2288:A:P	1.91	0.89
2:A:248:G:N2	2:A:2431:U:H4'	1.87	0.89
2:A:2472:G:O2'	2:A:2473:U:OP1	1.90	0.89
2:A:2625:G:C2'	2:A:2626:C:C6	2.55	0.89
2:A:2657:A:N7	2:A:2658:C:C6	2.40	0.89
2:A:2734:A:C5'	2:A:2734:A:H8	1.84	0.89

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2799:A:C5'	2:A:2801:A:OP2	2.20	0.89
2:A:2861:G:H5''	2:A:2861:G:H8	1.36	0.89
4:E:74:GLU:HA	4:E:293:TYR:HD2	1.19	0.89
5:F:243:VAL:HA	5:F:246:ARG:CG	2.03	0.89
5:F:37:ALA:CB	5:F:102:LEU:HD12	2.02	0.89
5:F:52:ALA:O	5:F:54:LEU:N	2.06	0.89
6:G:97:GLN:HB2	6:G:106:PHE:HE2	1.31	0.89
7:H:167:LEU:HD23	7:H:167:LEU:N	1.86	0.89
2:A:2748:A:H2'	7:H:62:ALA:HB1	1.54	0.89
11:P:52:LYS:HD3	11:P:53:ARG:HH12	1.36	0.89
12:Q:65:ARG:NH2	12:Q:85:ILE:C	2.25	0.89
19:R:102:GLU:HG3	19:R:103:ARG:H	1.34	0.89
19:R:97:VAL:HA	19:R:114:VAL:HG13	1.53	0.89
13:S:82:TYR:O	13:S:86:LEU:HG	1.72	0.89
20:U:39:LEU:O	20:U:40:LEU:C	2.11	0.89
21:V:11:GLN:HE22	21:V:22:VAL:CB	1.86	0.89
20:U:88:ILE:HG22	21:V:55:THR:HG21	1.55	0.89
17:Y:78:THR:HG21	17:Y:88:PRO:HA	1.53	0.89
18:Z:26:LYS:N	18:Z:84:TYR:CE1	2.40	0.89
8:I:79:ILE:O	8:I:145:VAL:HG13	1.72	0.89
22:2:47:LYS:O	22:2:48:GLU:C	2.11	0.89
2:A:1416:G:H21	2:A:1582:C:H42	1.20	0.89
23:3:8:LEU:HB3	23:3:32:GLN:N	1.87	0.89
27:6:14:SER:CB	27:6:52:GLU:HA	2.02	0.89
2:A:687:C:H5''	28:7:4:THR:HA	1.51	0.89
2:A:2061:G:N7	2:A:2501:C:C1'	2.35	0.89
2:A:2468:G:N1	2:A:2481:G:C4	2.41	0.89
2:A:2550:G:C4	2:A:2551:C:H5	1.91	0.89
2:A:1457:A:C2	2:A:2703:C:C4	2.61	0.89
2:A:527:C:H5''	2:A:2779:U:O2	1.72	0.89
2:A:2799:A:H5''	2:A:2801:A:OP2	1.70	0.89
2:A:2210:G:C6	3:D:148:GLY:HA2	2.08	0.89
3:D:211:HIS:HD1	3:D:212:HIS:CD2	1.91	0.89
3:D:74:PRO:HG2	3:D:96:ALA:N	1.87	0.89
5:F:115:LEU:CD2	5:F:246:ARG:HH22	1.86	0.89
5:F:91:PRO:HG2	5:F:92:PRO:CD	2.01	0.89
7:H:86:LEU:CD1	7:H:87:GLU:N	2.33	0.89
7:H:93:TYR:CG	7:H:106:VAL:CG2	2.49	0.89
19:R:107:ASP:OD1	19:R:108:GLY:N	2.06	0.89
20:U:86:ALA:HB3	20:U:90:LEU:CD2	2.02	0.89
18:Z:163:ASP:OD2	18:Z:164:PRO:N	2.05	0.89
14:T:45:GLU:O	14:T:48:ASN:ND2	2.05	0.89

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2282:G:N2	2:A:2427:C:O2	2.05	0.89
2:A:2494:G:N2	2:A:2495:G:C8	2.40	0.89
2:A:2555:U:C2'	2:A:2556:C:C5'	2.38	0.89
2:A:2758:A:OP2	2:A:2758:A:C1'	2.20	0.89
2:A:856:C:C4'	24:0:25:LYS:NZ	2.35	0.89
3:D:213:LYS:CB	3:D:215:LYS:HB2	2.02	0.89
3:D:216:ALA:HA	3:D:222:PRO:N	1.86	0.89
3:D:73:ILE:CG2	3:D:95:TYR:CE2	2.44	0.89
4:E:304:ASP:O	4:E:307:LEU:HB2	1.72	0.89
2:A:2303:G:C4'	6:G:99:ASP:HB3	2.01	0.89
7:H:73:ASN:HB3	7:H:137:LYS:HZ3	1.11	0.89
9:N:60:ARG:HA	9:N:71:TYR:CE2	2.07	0.89
9:N:94:GLY:O	9:N:98:PHE:CE1	2.24	0.89
10:O:12:ASP:HB2	10:O:95:GLY:HA3	1.54	0.89
10:O:86:ILE:HG22	10:O:87:ILE:H	1.38	0.89
11:P:53:ARG:CD	11:P:53:ARG:H	1.85	0.89
12:Q:88:PHE:CB	12:Q:90:PHE:HE1	1.86	0.89
19:R:67:LEU:CD2	19:R:71:GLN:HA	2.03	0.89
17:Y:41:ARG:O	17:Y:112:LEU:HB3	1.71	0.89
18:Z:16:GLU:OE1	18:Z:16:GLU:HA	1.73	0.89
8:I:93:ILE:HG13	8:I:93:ILE:O	1.69	0.89
22:2:51:LYS:O	22:2:56:ILE:HD11	1.71	0.89
16:X:39:ASP:O	16:X:41:VAL:N	2.05	0.89
2:A:1340:U:O4	16:X:57:THR:CG2	2.21	0.89
2:A:2898:U:N3	2:A:2899:G:N7	2.21	0.89
9:N:105:LEU:HG	9:N:106:GLY:N	1.86	0.89
2:A:1924:C:C4	2:A:1925:C:C5	2.60	0.89
23:3:22:ALA:O	23:3:26:LEU:HG	1.73	0.89
23:3:8:LEU:HB3	23:3:32:GLN:HA	1.55	0.89
25:4:41:PRO:CG	25:4:57:ASP:OD2	2.21	0.89
29:8:16:ILE:HG13	29:8:22:VAL:HG21	1.50	0.89
2:A:126:A:OP1	28:7:44:VAL:CG1	2.20	0.89
2:A:198:C:H4'	2:A:2243:U:O2'	1.73	0.89
2:A:954:G:O2'	2:A:2274:A:N1	2.04	0.89
2:A:2331:G:C6	2:A:2332:U:N3	2.39	0.89
2:A:2522:U:O2	2:A:2543:G:N1	2.04	0.89
2:A:2528:U:H5	2:A:2530:A:C2	1.90	0.89
2:A:527:C:H2'	9:N:95:ARG:NH1	1.86	0.89
2:A:929:G:H1'	23:3:43:ILE:CG1	2.01	0.89
5:F:150:THR:HB	5:F:207:LEU:CD2	2.02	0.89
5:F:162:VAL:HG12	5:F:163:HIS:H	1.35	0.89
2:A:598:G:N2	5:F:33:LYS:HZ1	1.66	0.89

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2746:U:H4'	7:H:138:GLN:CA	2.02	0.89
9:N:87:LEU:H	9:N:87:LEU:CD1	1.86	0.89
19:R:97:VAL:HG13	19:R:114:VAL:CG2	2.03	0.89
21:V:49:GLU:HA	21:V:53:LYS:NZ	1.88	0.89
20:U:20:ARG:HH12	21:V:75:LYS:NZ	1.71	0.89
17:Y:18:GLU:HB3	17:Y:21:LYS:NZ	1.88	0.89
18:Z:34:LEU:CD1	18:Z:35:ASP:H	1.85	0.89
18:Z:2:GLU:H	18:Z:54:ILE:HG23	1.23	0.89
2:A:71:A:H4'	2:A:72:U:H3'	1.54	0.89
31:K:33:VAL:CG2	31:K:60:VAL:CG1	2.50	0.89
24:0:48:GLY:HA3	24:0:55:ARG:HB2	1.54	0.89
25:4:57:ASP:O	25:4:58:LYS:O	1.90	0.89
27:6:21:TYR:CE1	27:6:43:VAL:CG2	2.55	0.89
29:8:38:GLY:O	29:8:41:ILE:N	2.05	0.89
2:A:1668:A:O5'	10:O:5:GLU:OE2	1.91	0.89
2:A:2013:A:H2'	2:A:2014:A:O4'	1.73	0.89
2:A:2623:G:H21	2:A:2624:G:H1'	1.34	0.89
2:A:2684:U:C1'	10:O:70:ARG:CZ	2.46	0.89
2:A:2712:U:H3'	2:A:2714:G:P	2.12	0.89
2:A:2893:G:OP2	2:A:2893:G:H8	1.56	0.89
3:D:127:ASN:O	3:D:190:THR:HB	1.70	0.89
3:D:213:LYS:HB3	3:D:215:LYS:CA	2.03	0.89
2:A:1152:C:H5''	20:U:80:ILE:HG21	1.52	0.89
21:V:57:GLN:HG2	21:V:58:ALA:N	1.85	0.89
21:V:74:TYR:CE1	21:V:86:HIS:O	2.26	0.89
18:Z:39:PHE:C	18:Z:43:PHE:CD2	2.46	0.89
18:Z:79:ILE:HG22	18:Z:80:HIS:CE1	2.08	0.89
18:Z:92:VAL:O	18:Z:123:VAL:O	1.91	0.89
18:Z:95:SER:HG	18:Z:122:ILE:HG12	1.37	0.89
26:5:34:PRO:HD2	26:5:36:CYS:SG	2.12	0.89
27:6:8:ILE:HA	27:6:29:ARG:NE	1.88	0.89
28:7:8:ASN:O	28:7:9:ASN:O	1.91	0.89
2:A:2246:G:C2	2:A:2247:A:C5	2.60	0.89
2:A:2484:G:H22	2:A:2485:G:C1'	1.80	0.89
2:A:2574:G:H3'	2:A:2575:C:C6	2.06	0.89
2:A:1672:C:O2	2:A:2582:G:O4'	1.90	0.89
2:A:911:A:C4	12:Q:16:ARG:CD	2.57	0.89
2:A:997:G:OP1	20:U:93:LYS:CE	2.19	0.89
3:D:131:LEU:CD1	3:D:171:VAL:HG21	2.00	0.89
5:F:55:ARG:HG3	5:F:56:THR:N	1.87	0.89
7:H:15:THR:HG21	7:H:26:LYS:HB2	0.91	0.89
7:H:148:ARG:HH11	7:H:163:TYR:HA	1.08	0.89

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:O:81:GLU:HG2	10:O:82:ASN:N	1.83	0.89
12:Q:88:PHE:C	12:Q:90:PHE:HE1	1.76	0.89
19:R:60:LEU:HG	19:R:61:HIS:N	1.87	0.89
19:R:55:ALA:HA	19:R:80:PHE:CE1	2.06	0.89
13:S:41:LYS:NZ	13:S:68:GLU:CD	2.26	0.89
15:W:3:ALA:O	15:W:4:LYS:HG3	1.73	0.89
15:W:5:ALA:HB2	15:W:54:ALA:HB2	1.54	0.89
17:Y:11:GLN:HG3	17:Y:21:LYS:HE2	1.53	0.89
16:X:11:THR:C	16:X:15:MET:SD	2.52	0.89
2:A:2309:A:H3'	2:A:2310:A:H5'	1.54	0.89
31:K:107:GLU:HA	31:K:110:LYS:HD2	1.55	0.89
2:A:1080:C:O3'	31:K:126:LYS:CD	2.20	0.89
27:6:32:GLN:HB3	27:6:35:LEU:HD12	0.89	0.88
28:7:24:THR:O	28:7:28:ARG:HG3	1.72	0.88
28:7:21:ARG:HH12	28:7:43:THR:HG23	1.31	0.88
29:8:26:LYS:O	29:8:27:SER:HB2	1.70	0.88
2:A:1027:A:H61	2:A:1126:A:H1'	1.36	0.88
2:A:1993:U:C4'	4:E:228:ARG:HH21	1.86	0.88
2:A:2051:A:N7	2:A:2614:A:C6	2.40	0.88
2:A:2216:G:O2'	2:A:2217:G:H5''	1.71	0.88
2:A:2265:U:C2'	2:A:2266:A:OP1	2.21	0.88
2:A:2316:C:N4	2:A:2317:C:N4	2.20	0.88
2:A:2457:U:C2'	2:A:2458:G:C5'	2.50	0.88
2:A:2468:G:C6	2:A:2481:G:C6	2.61	0.88
2:A:2482:G:H2'	2:A:2483:C:H5''	1.55	0.88
2:A:2531:A:C2	2:A:2658:C:H1'	2.08	0.88
2:A:2535:G:N2	2:A:2536:G:H1'	1.89	0.88
2:A:2543:G:C2'	2:A:2544:G:H8	1.71	0.88
2:A:2606:C:C6	2:A:2606:C:C5'	2.57	0.88
4:E:231:TRP:CE3	4:E:234:ARG:NH2	2.41	0.88
5:F:200:PRO:HB3	5:F:212:VAL:HG11	0.92	0.88
5:F:52:ALA:CB	5:F:55:ARG:NE	2.31	0.88
2:A:1669:A:H1'	10:O:4:GLN:OE1	1.72	0.88
11:P:129:ALA:O	11:P:133:VAL:HG23	1.73	0.88
21:V:40:VAL:O	21:V:51:ALA:CB	2.21	0.88
31:K:75:ALA:O	31:K:77:PHE:N	2.05	0.88
7:H:53:ARG:NH1	7:H:56:ASP:CA	2.29	0.88
2:A:869:G:H1	2:A:908:C:H42	1.19	0.88
27:6:19:GLY:O	27:6:42:PRO:HB2	1.73	0.88
27:6:19:GLY:HA2	27:6:44:ALA:HB3	1.53	0.88
2:A:2018:G:H21	20:U:34:ASN:HD22	1.05	0.88
2:A:2225:A:H4'	2:A:2226:C:O5'	1.65	0.88

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2240:C:H2'	2:A:2240:C:O2	1.71	0.88
2:A:2384:G:C2'	2:A:2386:C:OP2	2.21	0.88
2:A:2410:G:C2'	2:A:2411:A:H8	1.82	0.88
2:A:2446:G:N2	2:A:2501:C:C5	2.40	0.88
2:A:2573:C:P	2:A:2574:G:OP1	2.32	0.88
2:A:2703:C:O2'	2:A:2704:C:O5'	1.91	0.88
2:A:2832:U:C4'	2:A:2832:U:C6	2.56	0.88
2:A:2869:G:C5	2:A:2870:C:H5	1.49	0.88
2:A:495:G:N2	15:W:61:ASN:HD21	1.70	0.88
2:A:1818:U:C5'	3:D:155:ARG:CB	2.51	0.88
2:A:1789:A:OP1	3:D:226:GLY:HA2	1.73	0.88
3:D:68:ARG:O	3:D:69:ASP:OD2	1.91	0.88
4:E:314:ALA:O	4:E:317:PRO:HD3	1.71	0.88
5:F:221:GLU:O	5:F:222:ASP:O	1.91	0.88
5:F:48:SER:N	5:F:92:PRO:HG3	1.70	0.88
8:I:43:ASN:C	8:I:45:LYS:N	2.23	0.88
9:N:66:ASP:C	9:N:68:GLY:N	2.18	0.88
11:P:128:GLY:C	11:P:132:LYS:HD3	1.92	0.88
12:Q:144:THR:HG1	12:Q:145:PRO:HD3	1.32	0.88
12:Q:48:ASN:O	12:Q:48:ASN:OD1	1.92	0.88
14:T:4:ARG:O	14:T:5:GLU:HG2	1.72	0.88
8:I:77:VAL:HG11	8:I:143:VAL:CG2	2.02	0.88
16:X:76:GLU:OE1	16:X:77:VAL:CG2	2.22	0.88
2:A:94:G:N2	22:2:42:ASN:ND2	2.20	0.88
2:A:748:G:H8	2:A:750:A:OP2	1.55	0.88
25:4:6:HIS:HB2	25:4:56:VAL:CG2	2.02	0.88
19:R:101:ALA:O	26:5:41:LEU:HD12	1.73	0.88
28:7:34:ARG:HH12	28:7:42:LEU:HA	1.37	0.88
2:A:2254:C:H2'	2:A:2255:G:H5'	0.91	0.88
2:A:2303:G:H5'	6:G:99:ASP:CB	2.03	0.88
2:A:244:A:O2'	11:P:56:LYS:CA	2.21	0.88
2:A:2064:C:H1'	2:A:2450:A:N6	1.89	0.88
2:A:2550:G:H2'	2:A:2551:C:C6	2.08	0.88
2:A:2684:U:H1'	10:O:70:ARG:HH22	1.29	0.88
2:A:310:A:P	17:Y:53:GLY:H	1.97	0.88
2:A:825:C:H4'	2:A:2428:G:C6	2.07	0.88
3:D:105:ALA:N	3:D:106:PRO:CD	2.35	0.88
5:F:102:LEU:CD2	5:F:106:GLU:CD	2.41	0.88
7:H:91:VAL:N	7:H:159:LYS:HE3	1.87	0.88
9:N:19:MET:HE2	9:N:19:MET:CA	1.98	0.88
10:O:112:MET:O	10:O:114:ILE:N	2.06	0.88
12:Q:51:GLU:HA	12:Q:118:ALA:CB	2.03	0.88

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:R:75:LEU:HA	19:R:78:LYS:HB3	1.52	0.88
17:Y:51:LEU:N	17:Y:51:LEU:HD13	1.88	0.88
17:Y:73:HIS:CE1	17:Y:90:PRO:HA	2.08	0.88
31:K:117:ASN:OD1	31:K:127:ILE:CD1	2.21	0.88
27:6:19:GLY:CA	27:6:44:ALA:CB	2.51	0.88
2:A:771:G:OP2	28:7:11:LYS:NZ	2.06	0.88
2:A:2416:C:H2'	2:A:2417:C:C5'	2.03	0.88
2:A:2476:A:C8	2:A:2477:C:C6	2.60	0.88
2:A:2546:U:C5'	2:A:2565:A:H2	1.84	0.88
2:A:2597:G:C2'	2:A:2598:A:H8	1.83	0.88
2:A:2652:C:C6	2:A:2653:U:C6	2.61	0.88
2:A:2884:U:H2'	2:A:2885:C:O4'	1.73	0.88
2:A:563:G:H21	20:U:37:GLN:HE22	1.15	0.88
4:E:205:THR:HG21	4:E:259:HIS:H	1.11	0.88
4:E:217:TRP:CZ2	4:E:251:PRO:HB3	2.09	0.88
2:A:2314:C:H5'	6:G:22:VAL:HG11	1.52	0.88
7:H:101:LYS:HG2	7:H:115:GLU:CA	2.01	0.88
9:N:95:ARG:O	9:N:98:PHE:N	2.04	0.88
11:P:69:ILE:HA	11:P:73:VAL:CG2	2.01	0.88
21:V:61:VAL:HG22	21:V:97:GLY:CA	2.03	0.88
18:Z:51:LEU:CD1	18:Z:63:PRO:HB2	2.04	0.88
22:2:20:LEU:HD13	22:2:23:LEU:HB2	1.52	0.88
22:2:54:ALA:O	22:2:55:ARG:C	2.09	0.88
31:K:22:PRO:CG	31:K:23:PRO:HD3	2.04	0.88
31:K:37:GLU:C	31:K:41:ARG:HH11	1.77	0.88
24:0:48:GLY:HA3	24:0:55:ARG:CB	2.03	0.88
25:4:16:TYR:C	25:4:17:GLN:HG3	1.92	0.88
2:A:2839:G:C2	2:A:2840:C:C2	2.62	0.88
2:A:2881:C:C2'	2:A:2882:A:O5'	2.21	0.88
3:D:155:ARG:C	3:D:157:ALA:H	1.75	0.88
3:D:184:LEU:HB2	3:D:187:CYS:SG	2.14	0.88
5:F:102:LEU:CB	5:F:107:ARG:CZ	2.52	0.88
7:H:104:LEU:CB	7:H:151:ARG:HH12	1.85	0.88
7:H:83:GLU:CD	7:H:84:LYS:N	2.26	0.88
8:I:2:LYS:CD	8:I:39:ALA:HB2	2.03	0.88
2:A:1140:C:N4	9:N:49:ARG:CZ	2.36	0.88
10:O:63:VAL:HG12	10:O:102:VAL:HG13	1.54	0.88
12:Q:131:ALA:HA	12:Q:134:PHE:CE2	2.08	0.88
12:Q:58:HIS:ND1	12:Q:59:ASN:N	2.20	0.88
19:R:113:LEU:HD13	19:R:113:LEU:C	1.94	0.88
20:U:115:ASN:HD22	20:U:115:ASN:H	1.21	0.88
20:U:74:MET:HE2	20:U:78:THR:CG2	1.81	0.88

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:494:G:H4'	15:W:6:ILE:HG23	1.56	0.88
17:Y:101:LEU:CD2	17:Y:101:LEU:O	2.21	0.88
17:Y:11:GLN:HA	17:Y:21:LYS:HE3	1.53	0.88
17:Y:51:LEU:O	17:Y:52:ARG:HG3	1.72	0.88
17:Y:57:GLY:H	17:Y:97:ARG:NH2	1.70	0.88
18:Z:40:ASP:CG	18:Z:41:ARG:CZ	2.42	0.88
8:I:116:GLU:CG	8:I:132:LYS:HE3	2.03	0.88
2:A:440:G:OP2	17:Y:6:LYS:NZ	2.05	0.88
23:3:30:ARG:NH1	23:3:30:ARG:HG3	1.86	0.88
28:7:30:ILE:O	28:7:33:ARG:CA	2.21	0.88
2:A:126:A:C5	28:7:18:PHE:CD2	2.60	0.88
2:A:2236:C:C2'	2:A:2237:G:C5'	2.50	0.88
2:A:2255:G:C5	2:A:2256:G:C8	2.62	0.88
2:A:2287:A:H2	2:A:2289:G:O4'	1.55	0.88
2:A:2353:G:N2	2:A:2364:C:C4	2.32	0.88
2:A:2354:G:N3	24:0:32:LYS:HE2	1.88	0.88
2:A:2471:C:O2	2:A:2479:G:N2	2.06	0.88
2:A:2626:C:C6	2:A:2626:C:O5'	2.27	0.88
2:A:2688:U:O2	2:A:2719:G:N3	2.06	0.88
2:A:2785:C:HO2'	2:A:2786:U:P	1.97	0.88
3:D:161:ALA:CA	3:D:162:GLN:NE2	2.37	0.88
3:D:167:GLU:C	3:D:170:TYR:CE1	2.46	0.88
3:D:86:ARG:HD2	3:D:86:ARG:N	1.87	0.88
2:A:2680:C:H5'	4:E:302:GLY:N	1.89	0.88
4:E:304:ASP:O	4:E:307:LEU:CB	2.22	0.88
2:A:2770:G:C1'	4:E:316:ARG:HH12	1.70	0.88
5:F:111:VAL:C	5:F:114:ALA:HB3	1.92	0.88
7:H:7:PRO:HD3	7:H:68:ARG:CD	2.03	0.88
9:N:54:VAL:HG22	9:N:135:ILE:HD13	1.55	0.88
2:A:1022:G:O6	9:N:47:THR:CB	2.21	0.88
10:O:90:ASP:O	10:O:92:SER:N	2.07	0.88
12:Q:41:THR:CB	12:Q:126:VAL:HA	2.03	0.88
12:Q:58:HIS:CG	12:Q:59:ASN:H	1.90	0.88
12:Q:57:ARG:C	12:Q:61:LEU:HD21	1.93	0.88
13:S:27:LEU:HB2	13:S:33:ARG:HH21	1.10	0.88
21:V:40:VAL:HG12	21:V:55:THR:HG23	1.53	0.88
20:U:43:ALA:CB	21:V:75:LYS:CB	2.52	0.88
15:W:79:GLY:O	15:W:80:PRO:O	1.92	0.88
18:Z:105:GLN:C	18:Z:142:ASN:ND2	2.25	0.88
31:K:121:LEU:HD22	31:K:125:MET:HE1	1.53	0.88
24:0:64:ASP:O	24:0:66:LYS:NZ	2.06	0.88
25:4:40:HIS:HB3	25:4:41:PRO:CD	2.02	0.88

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:4:41:PRO:HG2	25:4:57:ASP:CB	2.03	0.88
2:A:818:G:N2	2:A:1189:A:H62	1.70	0.88
2:A:1952:A:N3	10:O:22:ILE:HD13	1.88	0.88
2:A:2432:A:C2	2:A:2433:A:C2	2.60	0.88
2:A:2712:U:C3'	2:A:2714:G:OP2	2.20	0.88
2:A:2777:G:C8	2:A:2777:G:O5'	2.26	0.88
2:A:2801:A:H2	2:A:2895:U:H1'	1.37	0.88
2:A:2810:A:N7	2:A:2811:G:C1'	2.37	0.88
2:A:752:A:C5	2:A:1781:C:H1'	2.08	0.88
3:D:143:ILE:C	3:D:152:GLN:HB2	1.93	0.88
2:A:2317:C:H5'	6:G:150:SER:HB2	1.55	0.88
8:I:21:VAL:HG11	8:I:30:LEU:HD12	1.56	0.88
9:N:27:ALA:HA	9:N:30:ALA:HB3	0.92	0.88
9:N:58:GLU:HA	9:N:61:VAL:CB	2.03	0.88
20:U:49:ASP:HA	20:U:52:ASN:CG	1.92	0.88
17:Y:101:LEU:HB3	17:Y:113:GLU:OE1	1.73	0.88
17:Y:41:ARG:CB	17:Y:112:LEU:HA	1.98	0.88
18:Z:176:LEU:HD23	18:Z:176:LEU:C	1.93	0.88
16:X:17:ASP:CA	16:X:20:PHE:CE1	2.56	0.88
2:A:2312:U:H5'	6:G:53:LYS:HB2	1.54	0.88
2:A:1097:U:O4	31:K:31:HIS:CE1	2.27	0.88
17:Y:9:LYS:HE3	17:Y:13:ARG:CZ	2.04	0.88
12:Q:149:ILE:H	12:Q:149:ILE:HD12	1.39	0.88
2:A:2295:C:N4	2:A:2337:G:N1	2.21	0.88
2:A:2348:U:H3'	29:8:42:ARG:NH2	1.89	0.88
2:A:2361:A:H2'	2:A:2362:G:H5'	1.55	0.88
2:A:2458:G:O6	2:A:2490:G:C2'	2.20	0.88
2:A:2463:C:O2	2:A:2464:C:C6	2.26	0.88
2:A:2663:G:H2'	2:A:2664:G:H8	1.35	0.88
2:A:2740:A:C8	2:A:2741:A:N7	2.42	0.88
2:A:446:G:OP2	20:U:3:ARG:NE	2.07	0.88
4:E:222:ARG:HD3	4:E:232:ARG:HA	1.56	0.88
4:E:201:VAL:N	4:E:266:LYS:CD	2.37	0.88
5:F:157:LEU:HB2	5:F:158:GLU:CD	1.93	0.88
10:O:31:ARG:C	10:O:32:TYR:CD1	2.47	0.88
11:P:94:ARG:HB2	11:P:120:LEU:HD21	0.89	0.88
19:R:18:LEU:HD13	19:R:18:LEU:C	1.94	0.88
14:T:28:THR:C	14:T:29:THR:HG23	1.93	0.88
21:V:4:ILE:HD11	21:V:13:ARG:NE	1.87	0.88
17:Y:26:THR:O	17:Y:27:LEU:HG	1.73	0.88
24:O:43:THR:OG1	24:O:75:GLY:O	1.90	0.88
25:4:41:PRO:HB3	25:4:59:PHE:HE1	1.38	0.88

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:5:15:LYS:O	26:5:18:MET:N	2.06	0.88
27:6:19:GLY:HA2	27:6:44:ALA:HB2	1.56	0.88
2:A:1156:A:C8	20:U:55:ARG:NH2	2.41	0.88
2:A:2206:C:C2'	2:A:2207:C:H5'	2.04	0.88
2:A:2366:A:C8	2:A:2367:G:C8	2.62	0.88
2:A:2700:C:C2'	2:A:2701:C:H4'	2.03	0.88
2:A:1664:A:N3	2:A:2726:U:O4	2.06	0.88
2:A:2731:G:N2	2:A:2732:G:C2	2.42	0.88
2:A:2756:U:N3	2:A:2759:G:O6	2.07	0.88
2:A:2810:A:C8	2:A:2811:G:C1'	2.56	0.88
2:A:2813:A:O2'	2:A:2814:C:H6	1.57	0.88
5:F:47:GLY:HA2	5:F:92:PRO:CA	2.03	0.88
7:H:90:GLY:CA	7:H:159:LYS:HG3	2.00	0.88
7:H:43:THR:HG23	7:H:52:THR:HG23	0.88	0.88
9:N:83:ILE:O	9:N:86:MET:N	2.05	0.88
2:A:911:A:C6	12:Q:16:ARG:HA	2.09	0.88
12:Q:57:ARG:C	12:Q:61:LEU:CG	2.42	0.88
13:S:23:ARG:CZ	13:S:37:ARG:NH2	2.35	0.88
21:V:59:GLU:C	21:V:60:VAL:HG23	1.93	0.88
15:W:8:ARG:CG	15:W:9:TYR:H	1.85	0.88
17:Y:55:PHE:HB3	17:Y:58:GLU:OE2	1.73	0.88
22:2:23:LEU:CA	22:2:26:GLU:OE1	2.18	0.88
16:X:20:PHE:HD1	16:X:22:ASN:N	1.70	0.88
2:A:1710:C:O2'	2:A:2858:C:N3	2.05	0.88
23:3:54:VAL:HG23	23:3:55:ARG:N	1.89	0.88
26:5:15:LYS:HZ3	26:5:15:LYS:HB2	1.39	0.88
2:A:1251:C:H5''	20:U:10:ARG:NE	1.88	0.88
2:A:125:G:N2	28:7:10:ARG:HA	1.88	0.88
2:A:2509:G:N3	2:A:2580:U:O2	2.06	0.88
2:A:2589:A:H2'	2:A:2590:A:H5'	1.54	0.88
2:A:2045:C:H42	2:A:2623:G:H1	0.88	0.88
2:A:2653:U:H3	2:A:2654:A:N6	1.71	0.88
2:A:2734:A:N7	2:A:2735:G:C8	2.42	0.88
2:A:2783:G:H8	2:A:2783:G:O5'	1.57	0.88
2:A:2869:G:C2'	2:A:2870:C:H5'	2.03	0.88
2:A:907:U:O2'	12:Q:88:PHE:CZ	2.25	0.88
2:A:994:C:H4'	20:U:54:LYS:HE2	1.55	0.88
2:A:997:G:OP1	20:U:92:ARG:HD2	1.72	0.88
4:E:99:VAL:CG1	4:E:100:TRP:H	1.87	0.88
5:F:39:GLN:OE1	5:F:39:GLN:N	2.07	0.88
5:F:6:TYR:HE2	5:F:140:VAL:HG22	1.37	0.88
7:H:93:TYR:HB3	7:H:106:VAL:CG2	1.99	0.88

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:N:45:VAL:C	9:N:46:ILE:HG13	1.86	0.88
2:A:1137:G:H21	9:N:86:MET:HE1	1.37	0.88
12:Q:65:ARG:HE	12:Q:85:ILE:HB	1.38	0.88
21:V:40:VAL:CB	21:V:51:ALA:HB1	2.03	0.88
17:Y:28:SER:CB	17:Y:99:THR:CB	2.48	0.88
16:X:48:THR:O	16:X:50:GLU:OE2	1.91	0.88
2:A:1801:G:H8	2:A:1801:G:OP1	1.57	0.88
26:5:34:PRO:CD	26:5:36:CYS:SG	2.62	0.87
25:4:14:ILE:HG23	25:4:16:TYR:HE1	1.32	0.87
27:6:39:LYS:HA	27:6:50:PHE:CD1	2.09	0.87
29:8:5:LYS:C	29:8:7:HIS:N	2.26	0.87
2:A:2067:G:H1	2:A:2443:C:N4	1.72	0.87
2:A:2320:A:O5'	2:A:2320:A:H8	1.56	0.87
2:A:2333:A:C4	2:A:2335:A:C2	2.61	0.87
2:A:2425:A:O2'	2:A:2426:A:P	2.32	0.87
2:A:2060:A:O2'	2:A:2502:G:O5'	1.91	0.87
2:A:2546:U:C4'	2:A:2565:A:H2	1.79	0.87
2:A:2657:A:N6	2:A:2664:G:N2	2.12	0.87
2:A:2689:U:C5'	2:A:2690:C:H5''	2.03	0.87
2:A:2735:G:C5	2:A:2770:G:N2	2.42	0.87
2:A:2739:U:O2'	2:A:2740:A:H5''	1.74	0.87
4:E:315:VAL:O	4:E:317:PRO:HD3	1.74	0.87
5:F:230:GLY:C	5:F:231:ARG:CG	2.40	0.87
5:F:59:GLU:O	5:F:61:PHE:HD2	1.55	0.87
6:G:11:HIS:NE2	6:G:15:GLU:OE2	2.05	0.87
7:H:25:VAL:HG12	7:H:78:VAL:HG21	1.56	0.87
11:P:101:ASP:O	11:P:102:ASP:CG	2.13	0.87
19:R:21:TYR:HB3	19:R:47:PHE:CE2	2.08	0.87
19:R:90:ARG:HH22	19:R:117:VAL:HG22	1.38	0.87
21:V:83:ARG:O	21:V:84:THR:OG1	1.89	0.87
18:Z:14:LEU:CD2	18:Z:79:ILE:HG21	2.04	0.87
2:A:1151:G:C2'	20:U:81:ASN:ND2	2.36	0.87
22:2:8:ILE:C	22:2:11:MET:HG2	1.94	0.87
16:X:33:SER:CA	16:X:37:VAL:CG2	2.51	0.87
2:A:1614:A:N7	15:W:88:ARG:HD2	1.88	0.87
25:4:51:ASP:O	25:4:52:THR:HG22	1.75	0.87
2:A:856:C:C4'	24:0:25:LYS:HZ2	1.88	0.87
25:4:32:HIS:O	25:4:34:ASP:OD1	1.92	0.87
2:A:1646:C:H3'	2:A:1647:G:C5'	2.02	0.87
2:A:2093:G:H1'	2:A:2198:A:C6	2.09	0.87
2:A:2482:G:C5	2:A:2483:C:C6	2.62	0.87
2:A:1127:A:N1	2:A:2518:A:N3	2.22	0.87

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2734:A:H5''	2:A:2734:A:C8	2.09	0.87
2:A:856:C:HO2'	24:0:24:LYS:HB2	1.09	0.87
5:F:56:THR:HB	5:F:57:PRO:CD	2.04	0.87
5:F:6:TYR:CE1	5:F:139:VAL:HB	2.08	0.87
7:H:93:TYR:HE1	7:H:106:VAL:C	1.75	0.87
11:P:77:ALA:CA	11:P:81:VAL:CG1	2.51	0.87
12:Q:46:VAL:O	12:Q:124:ALA:C	2.11	0.87
18:Z:6:LYS:C	18:Z:31:SER:OG	2.11	0.87
31:K:93:LYS:HD3	31:K:96:ILE:HD12	1.54	0.87
2:A:2056:G:H1	26:5:4:HIS:C	1.75	0.87
2:A:2266:A:N6	2:A:2273:A:OP2	2.07	0.87
2:A:2581:G:N1	2:A:2610:C:H2'	1.88	0.87
2:A:2689:U:C1'	2:A:2713:A:C2	2.57	0.87
2:A:1759:A:H5'	2:A:2715:C:H1'	1.55	0.87
2:A:2838:G:C5	2:A:2839:G:C8	2.62	0.87
2:A:2862:G:H2'	2:A:2863:C:C5	2.08	0.87
2:A:2881:C:N4	2:A:2882:A:H62	1.72	0.87
3:D:75:GLY:C	3:D:115:ILE:O	2.11	0.87
3:D:73:ILE:HG22	3:D:95:TYR:CD2	1.80	0.87
4:E:221:LYS:HZ3	4:E:233:ARG:HG2	1.37	0.87
5:F:144:PHE:C	5:F:146:ASP:H	1.77	0.87
5:F:197:SER:HB3	5:F:239:ALA:H	1.37	0.87
5:F:164:ALA:CB	5:F:232:LEU:HD13	2.02	0.87
9:N:19:MET:CE	9:N:22:VAL:HG21	2.05	0.87
9:N:19:MET:HB3	9:N:46:ILE:CD1	2.05	0.87
14:T:14:GLU:OE1	14:T:14:GLU:HA	1.74	0.87
15:W:83:LYS:HA	15:W:97:LYS:HG2	1.54	0.87
15:W:85:VAL:CG1	15:W:95:ILE:HD11	2.03	0.87
18:Z:51:LEU:CD2	18:Z:52:PHE:N	2.33	0.87
18:Z:68:ALA:O	18:Z:69:VAL:HG23	0.70	0.87
26:5:15:LYS:O	26:5:16:ARG:C	2.09	0.87
29:8:12:ARG:HD2	29:8:13:ARG:HD2	1.57	0.87
2:A:2406:U:H3	11:P:55:GLN:CB	1.86	0.87
2:A:2484:G:H1'	12:Q:142:LYS:NZ	1.90	0.87
2:A:2642:G:O2'	2:A:2643:G:C5'	2.15	0.87
2:A:2666:C:H3'	2:A:2667:C:H5'	1.56	0.87
2:A:2781:A:H5''	2:A:2782:G:O5'	1.68	0.87
2:A:2821:A:N3	2:A:2822:G:C8	2.42	0.87
2:A:535:C:H4'	20:U:53:LYS:HE3	0.88	0.87
4:E:79:ARG:NH1	4:E:104:PHE:O	2.02	0.87
9:N:95:ARG:HA	9:N:98:PHE:CE1	2.08	0.87
11:P:64:ILE:O	11:P:108:VAL:HA	1.74	0.87

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:P:106:VAL:CG2	11:P:122:ALA:HB1	2.03	0.87
11:P:71:GLU:O	11:P:73:VAL:N	2.07	0.87
12:Q:41:THR:HG21	12:Q:126:VAL:HA	1.52	0.87
12:Q:67:ALA:H	12:Q:70:ARG:NH2	1.72	0.87
12:Q:67:ALA:O	12:Q:71:PHE:HD1	1.28	0.87
17:Y:101:LEU:HD13	17:Y:103:LEU:HD11	1.56	0.87
18:Z:141:MET:N	18:Z:141:MET:SD	2.46	0.87
18:Z:10:PRO:O	18:Z:14:LEU:N	2.08	0.87
9:N:10:VAL:CG1	9:N:36:VAL:CG2	1.97	0.87
16:X:6:LYS:CE	16:X:29:ASP:CA	2.52	0.87
31:K:99:LYS:HG3	31:K:140:VAL:HG21	1.56	0.87
23:3:20:LYS:CD	23:3:23:LEU:HD12	2.02	0.87
23:3:38:GLU:O	23:3:40:THR:HG22	1.74	0.87
26:5:42:SER:O	26:5:43:HIS:HB2	1.74	0.87
2:A:125:G:N2	28:7:10:ARG:CA	2.37	0.87
2:A:2330:G:N1	2:A:2385:C:N4	2.22	0.87
2:A:2378:A:O4'	13:S:101:VAL:HG23	1.74	0.87
2:A:2445:G:O2'	2:A:2446:G:H5'	1.75	0.87
2:A:2633:G:N2	2:A:2634:G:C5	2.42	0.87
2:A:2759:G:O2'	2:A:2760:C:C5'	2.23	0.87
2:A:631:A:H2	2:A:2415:G:N3	1.73	0.87
2:A:2712:U:O2'	2:A:712(A):A:O5'	1.92	0.87
2:A:818:G:H21	2:A:1189:A:N6	1.70	0.87
5:F:212:VAL:O	5:F:212:VAL:HG12	1.72	0.87
6:G:135:VAL:O	6:G:135:VAL:HG12	1.73	0.87
7:H:159:LYS:N	7:H:162:ARG:HH22	1.72	0.87
8:I:25:TYR:HD2	8:I:25:TYR:N	1.70	0.87
9:N:60:ARG:CA	9:N:71:TYR:HD2	1.88	0.87
11:P:64:ILE:HD12	11:P:106:VAL:CB	2.05	0.87
12:Q:140:TYR:CG	12:Q:147:VAL:HG11	2.09	0.87
2:A:911:A:N7	12:Q:16:ARG:CG	2.34	0.87
13:S:56:ASP:O	13:S:57:THR:CG2	2.22	0.87
20:U:5:LYS:O	20:U:7:GLY:N	2.08	0.87
15:W:23:LEU:C	15:W:25:ARG:H	1.76	0.87
15:W:86:LEU:HB3	15:W:87:PRO:HD3	1.56	0.87
6:G:57:THR:HG22	6:G:58:VAL:N	1.90	0.87
2:A:2364:C:H1'	24:0:32:LYS:HZ3	1.27	0.87
15:W:19:LEU:HB3	26:5:25:LEU:HD11	1.55	0.87
29:8:4:MET:HA	29:8:5:LYS:HZ2	1.11	0.87
30:9:20:HIS:C	30:9:22:ARG:H	1.78	0.87
30:9:24:LEU:CD1	30:9:35:ARG:HG3	2.05	0.87
2:A:2210:G:C6	3:D:148:GLY:HA3	2.09	0.87

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2084:C:O2	2:A:2235:G:N2	2.06	0.87
2:A:2373:G:N1	2:A:2374:C:N4	2.22	0.87
2:A:2044:C:C2	2:A:2624:G:N2	2.38	0.87
2:A:2625:G:C8	2:A:2626:C:C4	2.63	0.87
2:A:2626:C:H2'	2:A:2627:G:H5'	0.89	0.87
2:A:2661:G:C4	2:A:2662:A:N7	2.42	0.87
2:A:2706:G:O5'	2:A:2706:G:H8	1.57	0.87
2:A:2679:A:H61	2:A:2728:U:H3	1.23	0.87
3:D:149:ARG:HB2	3:D:152:GLN:HE21	1.38	0.87
4:E:180:ILE:CG2	4:E:187:HIS:CB	2.48	0.87
4:E:211:GLN:O	4:E:216:ARG:NH1	2.07	0.87
5:F:39:GLN:OE1	5:F:40:ALA:N	2.06	0.87
5:F:4:THR:O	5:F:139:VAL:CG1	2.23	0.87
8:I:7:LYS:CG	8:I:12:LYS:HA	2.03	0.87
12:Q:44:ALA:HB1	12:Q:126:VAL:O	1.73	0.87
12:Q:140:TYR:O	12:Q:143:VAL:HG22	1.75	0.87
13:S:27:LEU:C	13:S:27:LEU:HD13	1.93	0.87
13:S:74:PRO:O	13:S:80:SER:N	2.07	0.87
20:U:98:ILE:O	20:U:101:ARG:N	2.08	0.87
18:Z:26:LYS:HB3	18:Z:26:LYS:NZ	1.89	0.87
18:Z:24:TYR:CD2	18:Z:84:TYR:CD1	2.61	0.87
6:G:53:LYS:CG	6:G:54:ALA:N	2.33	0.87
7:H:170:LEU:HD13	7:H:170:LEU:C	1.94	0.87
26:5:25:LEU:O	26:5:26:THR:CG2	2.23	0.87
27:6:8:ILE:HA	27:6:29:ARG:HH21	1.38	0.87
28:7:38:GLY:O	28:7:39:ARG:CB	2.22	0.87
29:8:16:ILE:HG22	29:8:21:LYS:O	1.74	0.87
2:A:14:A:H2	2:A:2625:G:O2'	1.54	0.87
2:A:2044:C:H42	2:A:2624:G:H1	0.89	0.87
2:A:2197:U:C2'	2:A:2224:G:N2	2.30	0.87
2:A:2227:A:N6	2:A:2228:G:O6	2.06	0.87
2:A:2259:G:N7	2:A:2260:C:C4	2.43	0.87
2:A:2317:C:C6	2:A:2318:G:N7	2.43	0.87
2:A:2439:A:H1'	2:A:2587:A:P	2.15	0.87
2:A:1786:A:H2	2:A:2590:A:H1'	1.40	0.87
2:A:2616:C:C2'	2:A:2617:C:C5'	2.44	0.87
2:A:2825:C:H3'	2:A:2825:C:C6	2.10	0.87
2:A:593:G:O2'	29:8:58:MET:HE1	1.75	0.87
1:B:45:A:H1'	6:G:76:ARG:NH1	1.90	0.87
3:D:196:ASN:HA	3:D:199:ARG:CD	2.04	0.87
5:F:106:GLU:O	5:F:109:LEU:HB2	1.74	0.87
6:G:149:ARG:O	6:G:151:ILE:N	2.06	0.87

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:O:29:GLY:O	10:O:30:ARG:O	1.90	0.87
10:O:40:VAL:HG12	10:O:40:VAL:O	1.74	0.87
11:P:67:ARG:HH11	11:P:111:ALA:C	1.77	0.87
2:A:445:C:H3'	20:U:3:ARG:CZ	2.03	0.87
21:V:74:TYR:CZ	21:V:87:ARG:C	2.44	0.87
9:N:105:LEU:CG	9:N:106:GLY:H	1.86	0.87
24:O:52:GLY:O	24:O:53:MET:HG2	1.73	0.87
27:6:45:LYS:C	27:6:46:LYS:HE2	1.95	0.87
28:7:30:ILE:HD11	28:7:33:ARG:HH12	1.39	0.87
29:8:30:ARG:NH2	29:8:41:ILE:HG23	1.88	0.87
2:A:1027:A:N6	2:A:1126:A:H1'	1.89	0.87
2:A:199:A:N1	2:A:2433:A:N7	2.20	0.87
2:A:2247:A:H2'	2:A:2248:C:H6	1.39	0.87
2:A:2400:G:H4'	27:6:20:PHE:CE1	2.09	0.87
2:A:2479:G:OP1	2:A:2537:U:O4'	1.93	0.87
2:A:2695:C:H2'	2:A:2696:U:C6	2.10	0.87
2:A:2699:C:O2	2:A:2699:C:H2'	1.73	0.87
2:A:602:G:O3'	2:A:603:A:H4'	1.70	0.87
2:A:85:G:OP2	17:Y:65:VAL:CB	2.22	0.87
3:D:131:LEU:HD11	3:D:183:ILE:HG21	0.89	0.87
2:A:2218:G:HO2'	3:D:146:LYS:HE3	1.34	0.87
4:E:210:THR:CG2	4:E:255:GLN:HG2	2.03	0.87
7:H:148:ARG:HH12	7:H:164:GLU:H	1.22	0.87
7:H:51:VAL:HG21	7:H:68:ARG:HE	1.38	0.87
13:S:12:ARG:NH1	13:S:20:TYR:HE2	1.37	0.87
13:S:98:GLU:CG	13:S:99:GLU:H	1.88	0.87
21:V:42:GLY:O	21:V:54:TYR:OH	1.93	0.87
12:Q:42:TYR:O	18:Z:119:ASN:ND2	2.06	0.87
8:I:91:GLY:O	8:I:92:SER:O	1.92	0.87
2:A:72:U:C5'	16:X:2:TRP:CH2	2.56	0.87
2:A:1339:G:H5'	16:X:13:LYS:CE	2.05	0.87
2:A:1924:C:N3	2:A:1925:C:C5	2.43	0.87
25:4:68:ARG:CG	25:4:72:LYS:CG	2.52	0.87
29:8:8:LYS:O	29:8:11:LYS:N	2.07	0.87
2:A:2188:C:C4	2:A:2189:U:C4	2.63	0.87
2:A:2313:C:HO2'	2:A:2314:C:H5'	1.34	0.87
2:A:2330:G:C2	2:A:2331:G:C1'	2.57	0.87
2:A:2457:U:C5	2:A:2458:G:N3	2.42	0.87
2:A:1782:C:N3	2:A:2609:U:H6	1.71	0.87
2:A:2657:A:C5	2:A:2664:G:N2	2.41	0.87
2:A:623:G:H2'	2:A:624:C:H6	1.40	0.87
3:D:89:ASN:C	3:D:105:ALA:HB2	1.95	0.87

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:61:PRO:HB3	4:E:69:PRO:HB3	1.56	0.87
5:F:102:LEU:HD21	5:F:106:GLU:CB	2.04	0.87
5:F:140:VAL:HG23	5:F:234:VAL:HB	1.57	0.87
6:G:142:ALA:HB2	6:G:151:ILE:HD11	1.55	0.87
8:I:7:LYS:HG3	8:I:12:LYS:HD3	1.55	0.87
9:N:27:ALA:O	9:N:28:GLU:C	2.12	0.87
9:N:16:ASP:N	9:N:45:VAL:HG23	1.83	0.87
11:P:67:ARG:NE	11:P:67:ARG:N	2.23	0.87
12:Q:36:ASN:HB3	12:Q:41:THR:N	1.90	0.87
20:U:8:ILE:N	20:U:11:ARG:CD	2.38	0.87
15:W:66:GLU:HG2	15:W:67:ASP:N	1.89	0.87
18:Z:141:MET:HA	18:Z:171:VAL:HG11	1.55	0.87
18:Z:85:MET:O	18:Z:86:VAL:HG23	1.75	0.87
8:I:75:LEU:CD1	8:I:76:THR:N	2.36	0.87
2:A:138:G:H2'	2:A:139:G:H4'	1.57	0.87
31:K:121:LEU:HA	31:K:125:MET:HE2	0.88	0.87
2:A:2721:A:N3	2:A:2722:G:C8	2.43	0.87
23:3:3:ARG:HD3	23:3:60:GLU:CB	2.03	0.86
26:5:44:HIS:HA	26:5:52:TYR:HH	1.06	0.86
27:6:41:ASP:HB3	27:6:47:HIS:N	1.90	0.86
28:7:21:ARG:HD2	28:7:31:LEU:HD13	1.57	0.86
2:A:1818:U:H3'	3:D:155:ARG:CG	2.05	0.86
2:A:1952:A:H2	10:O:22:ILE:HG23	0.72	0.86
2:A:2049:G:C2	2:A:2620:C:C2	2.61	0.86
2:A:2250:G:C5'	12:Q:102:ARG:HD3	2.04	0.86
2:A:2439:A:N3	2:A:2439:A:C2'	2.37	0.86
2:A:2653:U:OP2	2:A:2654:A:H3'	1.74	0.86
2:A:1999:C:O2'	2:A:2687:U:O2'	1.78	0.86
3:D:213:LYS:C	3:D:215:LYS:N	2.28	0.86
4:E:222:ARG:CG	4:E:232:ARG:HA	2.05	0.86
4:E:45:LYS:HE2	4:E:301:PRO:HB2	1.54	0.86
6:G:97:GLN:OE1	6:G:106:PHE:HE2	1.56	0.86
6:G:99:ASP:N	6:G:104:PHE:CD2	2.42	0.86
7:H:7:PRO:HD2	7:H:68:ARG:HD3	1.54	0.86
2:A:1022:G:OP2	9:N:52:GLN:NE2	2.08	0.86
10:O:92:SER:CB	10:O:113:LYS:NZ	2.38	0.86
2:A:1665:A:H4'	10:O:66:LYS:HD3	1.54	0.86
18:Z:141:MET:CB	18:Z:171:VAL:HG11	2.05	0.86
31:K:121:LEU:CD2	31:K:125:MET:HE1	2.05	0.86
31:K:93:LYS:HA	31:K:96:ILE:HD11	1.57	0.86
18:Z:156:GLU:CG	18:Z:157:GLY:H	1.81	0.86
24:0:36:ILE:O	24:0:37:LEU:CD2	2.23	0.86

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:8:16:ILE:HD12	29:8:16:ILE:N	1.90	0.86
2:A:2087:G:O6	2:A:2233:U:C5	2.28	0.86
2:A:2234:G:C6	2:A:2235:G:C5	2.62	0.86
2:A:2414:G:C4	2:A:2415:G:C8	2.63	0.86
2:A:910:A:H3'	12:Q:17:ARG:HH21	1.38	0.86
3:D:86:ARG:O	3:D:87:SER:OG	1.92	0.86
4:E:225:LYS:O	4:E:226:HIS:ND1	2.08	0.86
5:F:102:LEU:CD2	5:F:106:GLU:CB	2.53	0.86
7:H:36:PHE:HD2	7:H:70:LEU:HD13	1.39	0.86
9:N:63:ILE:HG21	9:N:71:TYR:OH	1.74	0.86
10:O:25:LEU:HD21	10:O:40:VAL:HG23	0.88	0.86
12:Q:58:HIS:N	12:Q:61:LEU:CD1	2.38	0.86
12:Q:89:PRO:HA	12:Q:113:ALA:HB2	1.57	0.86
2:A:138:G:C8	16:X:42:GLU:OE1	2.28	0.86
2:A:2306:C:O2	6:G:27:ILE:HG12	1.74	0.86
31:K:112:LYS:NZ	31:K:116:LEU:HD23	1.90	0.86
2:A:414:C:H42	2:A:2409:G:H1	0.88	0.86
29:8:6:THR:O	29:8:7:HIS:C	2.13	0.86
2:A:2313:C:O2'	2:A:2314:C:C5'	2.23	0.86
2:A:2517:C:C2	2:A:2542:A:N6	2.43	0.86
2:A:2870:C:O2	2:A:2871:C:C6	2.28	0.86
3:D:104:ILE:N	3:D:104:ILE:CD1	2.32	0.86
3:D:126:GLY:O	3:D:127:ASN:O	1.91	0.86
3:D:216:ALA:HB1	3:D:223:ASN:CB	2.04	0.86
5:F:102:LEU:HD23	5:F:106:GLU:CD	1.95	0.86
5:F:102:LEU:HD21	5:F:106:GLU:HB3	1.58	0.86
5:F:102:LEU:CB	5:F:107:ARG:NH2	2.37	0.86
11:P:114:VAL:HG11	11:P:133:VAL:HA	1.57	0.86
12:Q:31:PHE:CD2	12:Q:85:ILE:O	2.28	0.86
20:U:89:ASP:CB	21:V:51:ALA:HB3	2.03	0.86
20:U:92:ARG:CA	20:U:95:LEU:CG	2.52	0.86
17:Y:49:GLU:OE2	17:Y:97:ARG:NH1	0.72	0.86
6:G:88:LEU:N	6:G:89:PRO:CD	2.38	0.86
25:4:49:PHE:CZ	25:4:71:SER:OG	2.20	0.86
26:5:34:PRO:HG2	26:5:36:CYS:SG	2.14	0.86
24:0:36:ILE:O	24:0:37:LEU:HD23	1.75	0.86
24:0:38:VAL:HA	24:0:40:GLN:NE2	1.89	0.86
28:7:30:ILE:HA	28:7:33:ARG:HD2	0.94	0.86
2:A:1240:U:H3'	2:A:1241:A:H8	1.38	0.86
2:A:2446:G:H21	2:A:2501:C:H41	1.16	0.86
2:A:2561:A:C5	2:A:2562:U:C6	2.64	0.86
2:A:2564:A:C2'	2:A:2565:A:H8	1.84	0.86

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2652:C:C6	2:A:2653:U:H5	1.83	0.86
3:D:208:GLY:C	3:D:210:LYS:HG2	1.96	0.86
6:G:49:PRO:CB	6:G:72:LYS:H	1.87	0.86
2:A:2749:A:C1'	7:H:62:ALA:HB2	2.05	0.86
8:I:13:GLY:CA	8:I:15:LYS:CE	2.53	0.86
12:Q:36:ASN:C	12:Q:41:THR:HB	1.95	0.86
13:S:110:THR:HG22	13:S:115:VAL:HG23	1.56	0.86
20:U:27:SER:O	20:U:29:SER:CB	2.24	0.86
20:U:6:THR:O	20:U:9:VAL:CG2	2.23	0.86
15:W:104:THR:C	15:W:105:VAL:HG13	1.90	0.86
2:A:25:U:H5'	15:W:79:GLY:HA3	1.55	0.86
8:I:102:LEU:HD12	8:I:103:GLN:CA	2.05	0.86
22:2:24:LYS:HA	22:2:27:LEU:HD12	1.56	0.86
22:2:7:GLU:OE1	22:2:8:ILE:HG13	1.74	0.86
31:K:121:LEU:CB	31:K:125:MET:HE3	2.06	0.86
2:A:1620:G:C1'	28:7:1:MET:H3	1.77	0.86
24:0:49:GLN:O	24:0:73:GLY:HA3	1.76	0.86
2:A:1287:A:C5'	19:R:104:ARG:CD	2.53	0.86
2:A:2484:G:H2'	2:A:2485:G:O5'	1.75	0.86
2:A:2517:C:O2'	2:A:2518:A:O5'	1.87	0.86
2:A:2536:G:C6	2:A:2537:U:N3	2.43	0.86
2:A:2589:A:C6	2:A:2590:A:N7	2.42	0.86
2:A:2648:C:H2'	2:A:2649:U:H5'	1.56	0.86
1:B:56:G:H4'	1:B:57:A:H5''	1.58	0.86
3:D:208:GLY:HA2	3:D:210:LYS:HZ3	0.71	0.86
9:N:15:ARG:CG	9:N:43:ARG:HD2	2.05	0.86
13:S:40:ASN:HA	13:S:114:LYS:HZ2	1.35	0.86
21:V:3:ALA:C	21:V:12:TYR:OH	2.08	0.86
21:V:35:LEU:H	21:V:60:VAL:CG1	1.89	0.86
15:W:19:LEU:HD13	26:5:25:LEU:CG	2.06	0.86
18:Z:67:LYS:HA	18:Z:67:LYS:CE	2.05	0.86
16:X:9:HIS:ND1	16:X:27:ALA:N	2.24	0.86
2:A:1:G:H1	2:A:2902:C:H42	1.10	0.86
25:4:46:GLU:O	25:4:47:GLU:HG3	0.69	0.86
25:4:41:PRO:HG2	25:4:57:ASP:HB2	1.58	0.86
2:A:1669:A:C5'	2:A:2550:G:OP1	2.24	0.86
2:A:2187:G:H2'	2:A:2188:C:O4'	1.75	0.86
2:A:2395:C:H3'	2:A:2395:C:C6	2.09	0.86
2:A:2432:A:N3	2:A:2432:A:C2'	2.37	0.86
2:A:2471:C:H2'	2:A:2472:G:O5'	1.75	0.86
2:A:2558:C:N3	2:A:2559:C:C4	2.43	0.86
2:A:2718:G:C2'	2:A:2719:G:H8	1.87	0.86

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2801:A:C2	2:A:2895:U:H1'	2.10	0.86
3:D:131:LEU:CD1	3:D:183:ILE:HG22	2.06	0.86
4:E:304:ASP:O	4:E:307:LEU:CG	2.23	0.86
5:F:38:ALA:O	5:F:39:GLN:C	2.14	0.86
5:F:81:PRO:CA	5:F:87:ARG:CB	2.53	0.86
9:N:47:THR:OG1	9:N:53:ILE:CD1	2.23	0.86
10:O:75:SER:C	10:O:76:TYR:HD1	1.78	0.86
19:R:93:GLY:C	19:R:95:THR:H	1.79	0.86
13:S:17:ARG:C	13:S:17:ARG:CD	2.43	0.86
14:T:6:CYS:HB3	14:T:9:CYS:O	1.76	0.86
20:U:44:THR:HG21	21:V:78:VAL:CG1	2.04	0.86
21:V:61:VAL:C	21:V:98:ILE:CD1	2.43	0.86
17:Y:108:ARG:O	17:Y:112:LEU:HD23	1.73	0.86
17:Y:46:ASP:HA	17:Y:102:ASP:CG	1.94	0.86
18:Z:129:ARG:NE	18:Z:129:ARG:HA	1.90	0.86
24:O:37:LEU:CG	24:O:68:VAL:HG12	2.06	0.86
25:4:23:GLU:O	25:4:25:MET:N	2.08	0.86
29:8:26:LYS:HG3	29:8:45:GLY:CA	2.03	0.86
29:8:38:GLY:O	29:8:40:GLU:N	2.09	0.86
2:A:1031:G:C5'	30:9:8:LYS:HD3	2.04	0.86
2:A:1780:A:H3'	2:A:1781:C:C5'	2.05	0.86
2:A:2425:A:HO2'	2:A:2426:A:P	1.98	0.86
2:A:2457:U:H2'	2:A:2458:G:C5'	2.05	0.86
2:A:2739:U:H2'	2:A:2740:A:H5''	1.46	0.86
2:A:2752:C:H2'	2:A:2752:C:O2	1.73	0.86
2:A:2768:C:C2	2:A:2769:C:H6	1.86	0.86
2:A:825:C:O3'	2:A:2428:G:N7	2.09	0.86
4:E:268:LEU:CD2	4:E:295:LEU:O	2.23	0.86
9:N:94:GLY:O	9:N:98:PHE:CD1	2.29	0.86
12:Q:65:ARG:CZ	12:Q:122:PHE:HE2	1.88	0.86
12:Q:58:HIS:CG	12:Q:59:ASN:N	2.42	0.86
12:Q:59:ASN:CG	12:Q:60:ALA:H	1.75	0.86
12:Q:65:ARG:HH21	12:Q:85:ILE:CB	1.89	0.86
12:Q:11:LYS:HD2	12:Q:91:HIS:CD2	2.09	0.86
1:B:50:G:OP1	13:S:74:PRO:HB2	1.76	0.86
18:Z:57:GLU:C	18:Z:59:GLY:H	1.76	0.86
8:I:114:LYS:HD2	8:I:132:LYS:O	1.76	0.86
16:X:34:LYS:O	16:X:35:GLY:O	1.91	0.86
2:A:2722:G:C4	2:A:2723:C:C5	2.63	0.86
23:3:16:PRO:HB2	23:3:19:GLN:OE1	1.75	0.86
28:7:21:ARG:NH2	28:7:43:THR:CB	2.38	0.86
2:A:1022:G:O6	9:N:47:THR:HB	1.75	0.86

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1364:G:H8	2:A:1364:G:H5'	1.40	0.86
2:A:2276:G:C2	2:A:2277:G:C8	2.64	0.86
2:A:2573:C:H6	2:A:2573:C:C4'	1.88	0.86
2:A:2642:G:HO2'	2:A:2643:G:H5'	1.35	0.86
2:A:2677:G:O2'	2:A:2678:C:C5'	2.22	0.86
2:A:2768:C:O2	2:A:2769:C:C6	2.28	0.86
2:A:872:A:O2'	12:Q:31:PHE:CB	2.23	0.86
4:E:235:ILE:HG23	4:E:236:GLY:N	1.89	0.86
4:E:43:GLY:O	4:E:309:PRO:O	1.94	0.86
5:F:219:ASN:H	5:F:219:ASN:HD22	0.95	0.86
5:F:84:VAL:C	5:F:86:GLY:H	1.78	0.86
6:G:19:GLU:OE1	6:G:135:VAL:CA	2.23	0.86
12:Q:118:ALA:O	12:Q:119:ASN:HB3	1.75	0.86
12:Q:85:ILE:CG2	12:Q:122:PHE:CD2	2.54	0.86
20:U:14:HIS:ND1	20:U:36:PHE:CZ	2.23	0.86
15:W:10:VAL:HG13	15:W:46:PHE:CE2	2.10	0.86
18:Z:41:ARG:O	18:Z:44:ARG:HB2	1.75	0.86
16:X:38:ALA:O	16:X:39:ASP:C	2.14	0.86
23:3:8:LEU:HB3	23:3:32:GLN:CA	2.06	0.86
26:5:50:GLY:HA2	26:5:57:VAL:HB	1.57	0.86
2:A:126:A:C6	28:7:18:PHE:CD2	2.63	0.86
2:A:458:G:H2'	28:7:40:HIS:CE1	2.10	0.86
2:A:1953:A:H62	2:A:2550:G:H4'	1.39	0.86
2:A:2235:G:C4	2:A:2236:C:C5	2.63	0.86
2:A:2328:A:H2'	2:A:2329:G:C8	2.08	0.86
2:A:2394:C:C4	2:A:2395:C:C4	2.63	0.86
2:A:2469:A:N6	2:A:2481:G:H1'	1.89	0.86
2:A:2484:G:H21	2:A:2485:G:C1'	1.84	0.86
2:A:248:G:N2	2:A:2431:U:O4'	2.09	0.86
2:A:2494:G:N2	2:A:2495:G:C4	2.44	0.86
2:A:2509:G:C2'	2:A:2510:C:C5'	2.52	0.86
2:A:2832:U:C1'	2:A:2834:G:H21	1.86	0.86
2:A:775:G:H2'	2:A:794:G:N7	1.91	0.86
3:D:104:ILE:HD12	3:D:104:ILE:H	1.34	0.86
19:R:43:GLU:OE2	19:R:43:GLU:N	2.08	0.86
13:S:89:GLY:O	13:S:93:GLN:HG3	1.76	0.86
21:V:33:VAL:CB	21:V:63:HIS:CG	2.58	0.86
12:Q:36:ASN:HB2	18:Z:114:ASP:O	1.75	0.86
18:Z:39:PHE:HD2	18:Z:39:PHE:H	0.87	0.86
8:I:94:THR:HG22	8:I:97:GLN:HG3	1.58	0.86
22:2:55:ARG:O	22:2:58:THR:CB	2.23	0.86
2:A:1081:U:H4'	31:K:123:ALA:CB	2.06	0.86

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:K:129:GLU:O	31:K:133:LYS:CG	2.22	0.86
25:4:58:LYS:CD	25:4:62:ARG:HH21	1.89	0.86
26:5:11:THR:HB	26:5:16:ARG:HE	1.40	0.86
2:A:1157:G:O2'	23:3:31:LEU:HD13	1.76	0.86
2:A:1274:A:C6	2:A:1302:A:H2	1.93	0.86
2:A:2416:C:O2	2:A:2417:C:C6	2.29	0.86
2:A:2416:C:O2'	2:A:2417:C:H5''	1.76	0.86
2:A:2061:G:C8	2:A:2501:C:H1'	2.10	0.86
2:A:2768:C:H2'	2:A:2769:C:O5'	1.75	0.86
2:A:2836:U:C2	2:A:2883:A:C6	2.64	0.86
3:D:140:VAL:CG1	3:D:141:HIS:H	1.88	0.86
3:D:160:SER:O	3:D:176:ALA:HB2	1.74	0.86
5:F:214:THR:H	5:F:218:VAL:CG2	1.89	0.86
6:G:22:VAL:HB	6:G:24:HIS:CE1	2.10	0.86
7:H:101:LYS:HZ1	7:H:115:GLU:CB	1.85	0.86
9:N:42:GLU:C	9:N:132:LEU:O	2.14	0.86
11:P:124:ASP:O	11:P:125:PHE:CG	2.28	0.86
12:Q:57:ARG:C	12:Q:61:LEU:CD2	2.44	0.86
20:U:28:ARG:CA	20:U:31:GLN:HG3	2.05	0.86
20:U:33:ARG:HH11	20:U:33:ARG:HB2	1.28	0.86
17:Y:32:ARG:O	17:Y:33:GLU:C	2.14	0.86
17:Y:66:ASP:O	17:Y:67:LEU:C	2.14	0.86
18:Z:37:LYS:C	18:Z:41:ARG:NH1	2.28	0.86
8:I:68:LEU:HD11	8:I:108:LEU:HD21	1.58	0.86
31:K:106:GLU:C	31:K:110:LYS:HE3	1.95	0.86
31:K:106:GLU:O	31:K:110:LYS:CG	2.24	0.86
2:A:1081:U:H1'	31:K:117:ASN:HD22	1.41	0.86
24:0:44:LYS:O	24:0:45:PHE:CD1	2.28	0.85
28:7:24:THR:HG21	28:7:27:GLY:HA3	1.57	0.85
2:A:1006:C:H4'	9:N:28:GLU:OE2	1.75	0.85
2:A:1666:G:N2	2:A:1669:A:H62	1.74	0.85
2:A:2324:C:O2'	2:A:2325:G:OP1	1.94	0.85
2:A:2416:C:H2'	2:A:2417:C:H5'	1.58	0.85
2:A:2584:U:C2'	2:A:2585:U:C5	2.55	0.85
2:A:2049:G:C6	2:A:2620:C:N4	2.43	0.85
2:A:2636:U:O2'	4:E:84:ARG:NH1	2.09	0.85
2:A:2768:C:O2'	2:A:2769:C:C5'	2.23	0.85
2:A:2853:C:H3'	2:A:2853:C:H6	1.40	0.85
3:D:131:LEU:HD11	3:D:183:ILE:HG22	1.57	0.85
4:E:105:HIS:HB2	4:E:108:LEU:HG	1.56	0.85
4:E:265:ASN:C	4:E:265:ASN:HD22	1.78	0.85
5:F:52:ALA:HA	5:F:55:ARG:CG	2.05	0.85

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:452:G:P	5:F:55:ARG:NH2	2.41	0.85
8:I:24:GLY:HA2	8:I:27:ASN:HB3	1.57	0.85
8:I:43:ASN:ND2	8:I:43:ASN:N	2.22	0.85
9:N:46:ILE:HG13	9:N:132:LEU:HD13	1.57	0.85
9:N:25:GLN:O	9:N:26:VAL:C	2.11	0.85
11:P:67:ARG:HE	11:P:67:ARG:N	1.73	0.85
12:Q:15:THR:O	12:Q:16:ARG:HG3	1.75	0.85
12:Q:58:HIS:O	12:Q:61:LEU:CG	2.20	0.85
15:W:32:ALA:HB2	15:W:35:ILE:CD1	2.05	0.85
17:Y:103:LEU:HD11	17:Y:113:GLU:HB3	1.58	0.85
18:Z:172:LEU:HG	18:Z:173:PRO:CD	2.02	0.85
18:Z:48:THR:O	18:Z:48:THR:HG22	1.75	0.85
22:2:61:GLY:O	22:2:64:GLY:N	2.08	0.85
22:2:4:HIS:H	22:2:8:ILE:HD11	1.40	0.85
16:X:9:HIS:CE1	16:X:27:ALA:CB	2.59	0.85
2:A:1613:G:H3'	2:A:1614:A:H5'	1.56	0.85
25:4:6:HIS:CB	25:4:56:VAL:CG2	2.51	0.85
27:6:37:LEU:HD21	27:6:51:ARG:HG2	0.86	0.85
2:A:1665:A:C4'	10:O:66:LYS:CE	2.44	0.85
2:A:1819:A:H5''	3:D:157:ALA:HB2	1.55	0.85
2:A:2198:A:H5'	2:A:2199:A:OP2	1.75	0.85
2:A:2209:C:H42	2:A:2215:G:H1	0.88	0.85
2:A:2330:G:C2	2:A:2331:G:C4	2.65	0.85
2:A:2078:C:H4'	2:A:2434:A:H5'	1.56	0.85
2:A:2530:A:H2'	2:A:2531:A:C5'	2.05	0.85
2:A:2698:U:N3	2:A:2699:C:C5	2.43	0.85
2:A:2854:G:C6	2:A:2864:G:O6	2.29	0.85
4:E:44:TYR:CD1	4:E:309:PRO:CD	2.58	0.85
5:F:149:LYS:HB2	5:F:152:GLU:HG3	1.58	0.85
5:F:168:ARG:NH1	5:F:209:GLY:CA	2.37	0.85
9:N:103:VAL:HG12	9:N:104:TYR:H	1.41	0.85
9:N:49:ARG:O	9:N:53:ILE:HB	1.76	0.85
19:R:46:GLY:O	19:R:49:ASP:CB	2.24	0.85
19:R:77:ARG:O	19:R:81:ASP:OD1	1.93	0.85
17:Y:101:LEU:HD21	17:Y:112:LEU:CG	2.06	0.85
18:Z:39:PHE:O	18:Z:43:PHE:HB2	1.75	0.85
16:X:57:THR:HB	16:X:59:ASP:OD2	1.76	0.85
2:A:2311:A:O2'	2:A:2312:U:O5'	1.94	0.85
7:H:110:HIS:O	7:H:111:PRO:O	1.92	0.85
2:A:856:C:O2'	24:0:24:LYS:CD	2.24	0.85
2:A:932:G:P	23:3:29:ARG:HH21	1.98	0.85
2:A:1791:A:O2'	3:D:204:PHE:HB2	1.74	0.85

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2051:A:H2	2:A:2618:G:C6	1.93	0.85
2:A:2096:U:H3	2:A:2193:G:H1	1.24	0.85
2:A:2227:A:O5'	2:A:2227:A:H8	1.59	0.85
2:A:2547:U:C6	2:A:2566:A:C2	2.64	0.85
2:A:2689:U:O2	2:A:2713:A:OP2	1.95	0.85
2:A:2785:C:C2'	2:A:2786:U:C5	2.55	0.85
2:A:2839:G:H2'	2:A:2840:C:H6	1.41	0.85
2:A:573:G:H3'	2:A:574:C:H5''	1.59	0.85
3:D:162:GLN:CD	3:D:162:GLN:N	2.29	0.85
2:A:1568:G:C5'	3:D:60:GLN:HG2	2.06	0.85
2:A:1817:G:OP1	3:D:63:ILE:HD11	1.75	0.85
4:E:225:LYS:O	4:E:229:GLN:NE2	2.09	0.85
5:F:103:ASN:HB2	5:F:106:GLU:CD	1.94	0.85
5:F:6:TYR:CE2	5:F:140:VAL:CG2	2.60	0.85
5:F:196:THR:CG2	5:F:236:THR:HG21	2.06	0.85
2:A:2313:C:C4'	6:G:72:LYS:HG3	2.05	0.85
8:I:23:ASP:HB2	8:I:25:TYR:CE2	2.11	0.85
9:N:51:GLU:C	9:N:53:ILE:H	1.77	0.85
10:O:101:PRO:O	10:O:102:VAL:HG22	1.75	0.85
10:O:24:VAL:HG11	10:O:32:TYR:O	1.76	0.85
10:O:8:LEU:HB2	10:O:83:ALA:CA	2.06	0.85
11:P:120:LEU:HD11	11:P:122:ALA:HB2	1.57	0.85
12:Q:76:GLY:HA3	12:Q:132:VAL:CG1	2.02	0.85
15:W:66:GLU:CG	15:W:67:ASP:N	2.39	0.85
8:I:121:ILE:H	8:I:121:ILE:HD12	1.40	0.85
22:2:20:LEU:O	22:2:21:ASP:O	1.95	0.85
2:A:58:G:H2'	2:A:73:A:N6	1.90	0.85
24:0:37:LEU:CB	24:0:69:PHE:HD2	1.70	0.85
29:8:26:LYS:HZ2	29:8:44:LYS:N	1.73	0.85
29:8:7:HIS:O	29:8:8:LYS:O	1.94	0.85
2:A:2246:G:N2	2:A:2247:A:C4	2.44	0.85
2:A:2298:A:N9	2:A:2321:G:N2	2.23	0.85
2:A:2395:C:O3'	25:4:28:ARG:HD2	1.76	0.85
2:A:2573:C:C4'	2:A:2573:C:C6	2.59	0.85
2:A:2774:C:C2	2:A:2775:A:C8	2.63	0.85
4:E:210:THR:HA	4:E:216:ARG:HH22	1.03	0.85
6:G:21:VAL:HG11	6:G:132:VAL:CG2	2.04	0.85
2:A:2317:C:H5''	6:G:150:SER:HA	1.55	0.85
6:G:38:GLU:HA	6:G:41:LEU:HG	1.55	0.85
6:G:77:ASP:N	6:G:77:ASP:OD1	2.06	0.85
9:N:19:MET:HB3	9:N:46:ILE:HD13	1.57	0.85
10:O:65:THR:OG1	10:O:67:ARG:HG2	1.76	0.85

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:S:47:LEU:CD1	13:S:58:LEU:HD21	2.06	0.85
13:S:62:HIS:HB2	13:S:65:ASP:CG	1.97	0.85
15:W:32:ALA:O	15:W:35:ILE:N	2.09	0.85
18:Z:25:ASN:OD1	18:Z:26:LYS:N	2.08	0.85
22:2:20:LEU:O	22:2:20:LEU:HD13	1.76	0.85
24:0:61:ALA:CB	24:0:80:SER:O	2.23	0.85
24:0:80:SER:OG	24:0:84:ALA:CB	2.25	0.85
25:4:41:PRO:CB	25:4:57:ASP:OD2	2.21	0.85
28:7:30:ILE:HA	28:7:33:ARG:HG3	1.57	0.85
2:A:2077:A:N7	2:A:2238:G:O6	2.10	0.85
2:A:2255:G:C2	2:A:2256:G:C1'	2.59	0.85
2:A:965:C:H1'	2:A:2273:A:C2	2.10	0.85
2:A:2437:U:H5'	2:A:2598:A:H2	1.14	0.85
2:A:2523:G:N1	2:A:2541:A:C2	2.45	0.85
2:A:2532:G:C5'	2:A:2532:G:C8	2.59	0.85
2:A:1669:A:O3'	2:A:2550:G:P	2.33	0.85
2:A:2785:C:H2'	2:A:2786:U:H6	1.41	0.85
2:A:2826:A:C5	2:A:2827:C:H6	1.76	0.85
4:E:205:THR:HG22	4:E:259:HIS:CB	1.95	0.85
5:F:102:LEU:CD2	5:F:103:ASN:N	2.40	0.85
5:F:6:TYR:CE1	5:F:139:VAL:CB	2.57	0.85
5:F:235:PHE:HB3	5:F:239:ALA:CB	2.06	0.85
9:N:15:ARG:HG2	9:N:43:ARG:HB3	1.56	0.85
9:N:46:ILE:O	9:N:47:THR:O	1.94	0.85
12:Q:41:THR:CG2	12:Q:126:VAL:CA	2.55	0.85
12:Q:89:PRO:O	12:Q:90:PHE:CE1	2.30	0.85
19:R:100:LEU:CD2	19:R:112:ALA:HA	2.05	0.85
19:R:39:PRO:O	19:R:42:LYS:N	2.10	0.85
19:R:39:PRO:O	19:R:41:ALA:N	2.08	0.85
15:W:8:ARG:HD2	15:W:9:TYR:HD1	1.38	0.85
18:Z:92:VAL:HA	18:Z:124:ALA:CB	2.06	0.85
18:Z:24:TYR:N	18:Z:83:PHE:O	2.09	0.85
22:2:52:ALA:C	22:2:56:ILE:CG1	2.35	0.85
2:A:849:A:H2	23:3:21:ALA:HB1	1.02	0.85
28:7:7:PRO:C	28:7:8:ASN:ND2	2.29	0.85
30:9:24:LEU:HD22	30:9:35:ARG:CG	2.06	0.85
2:A:2225:A:C5'	2:A:2226:C:H5''	1.94	0.85
2:A:2286:A:C4'	2:A:2287:A:O4'	2.24	0.85
2:A:2445:G:O2'	2:A:2446:G:C5'	2.24	0.85
2:A:2450:A:H5''	2:A:2497:A:H62	1.04	0.85
2:A:2592:G:C2	2:A:2603:G:C6	2.63	0.85
2:A:2662:A:H2'	2:A:2663:G:H5'	1.56	0.85

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:12:C:N3	13:S:10:MET:HE3	1.92	0.85
1:B:9:G:OP1	13:S:37:ARG:NH2	2.10	0.85
3:D:154:VAL:HG21	3:D:160:SER:HA	1.56	0.85
2:A:1789:A:OP1	3:D:226:GLY:CA	2.23	0.85
4:E:45:LYS:CE	4:E:303:PRO:CD	2.55	0.85
6:G:49:PRO:HG3	6:G:73:VAL:HG23	1.57	0.85
6:G:97:GLN:HB3	6:G:106:PHE:CE2	2.10	0.85
2:A:2485:G:C5'	12:Q:144:THR:CG2	2.41	0.85
18:Z:85:MET:O	18:Z:86:VAL:CG2	2.23	0.85
8:I:115:ILE:HA	8:I:131:VAL:HA	1.58	0.85
2:A:2311:A:H2'	2:A:2312:U:C6	2.10	0.85
2:A:2304:G:H1	2:A:2312:U:H3	1.19	0.85
2:A:2364:C:C5'	24:O:38:VAL:HG12	2.02	0.85
27:6:19:GLY:CA	27:6:44:ALA:HB3	2.06	0.85
2:A:1024:G:N7	2:A:1025:G:C8	2.44	0.85
2:A:1031:G:H5'	30:9:8:LYS:HD3	1.56	0.85
2:A:2252:G:O6	2:A:2253:G:O6	1.93	0.85
2:A:2334:G:N3	13:S:20:TYR:OH	2.10	0.85
2:A:2397:G:N1	2:A:2420:C:C2	2.42	0.85
2:A:2531:A:C2'	2:A:2532:G:H5''	2.03	0.85
2:A:2574:G:C8	2:A:2575:C:C5	2.55	0.85
4:E:240:PRO:CB	4:E:243:PRO:HG2	2.05	0.85
5:F:93:LYS:CB	5:F:96:LYS:HE3	2.07	0.85
2:A:2313:C:C5'	6:G:51:ARG:HH11	1.90	0.85
7:H:101:LYS:HZ1	7:H:115:GLU:HG3	1.40	0.85
7:H:44:VAL:HA	7:H:49:ILE:HG22	0.90	0.85
11:P:69:ILE:HG13	11:P:70:ASP:H	0.70	0.85
2:A:2276:G:OP2	12:Q:104:PRO:CD	2.25	0.85
12:Q:72:VAL:HG21	12:Q:83:PHE:HZ	1.42	0.85
19:R:74:LYS:CA	19:R:77:ARG:HH22	1.89	0.85
18:Z:37:LYS:CG	18:Z:41:ARG:HH12	1.89	0.85
18:Z:24:TYR:HD2	18:Z:84:TYR:HD1	1.24	0.85
16:X:14:ALA:CA	16:X:17:ASP:OD2	2.19	0.85
16:X:55:GLN:O	16:X:63:LYS:N	2.09	0.85
6:G:64:ARG:CB	6:G:67:ASP:OD2	2.24	0.85
2:A:7:G:H5'	9:N:6:PHE:CD2	2.11	0.85
28:7:32:ALA:CA	28:7:35:ARG:HG3	2.06	0.85
29:8:23:MET:CE	29:8:48:PHE:CD2	2.58	0.85
2:A:2080:G:N1	2:A:2241:A:C6	2.45	0.85
2:A:2360:A:N7	2:A:2361:A:N7	2.24	0.85
2:A:2648:C:C4	2:A:2649:U:C4	2.65	0.85
2:A:2782:G:H2'	2:A:2783:G:H5'	1.59	0.85

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2808:U:O2	2:A:2892:A:N1	2.09	0.85
2:A:380:U:O2'	25:4:15:ILE:CB	2.24	0.85
2:A:774:A:H1'	2:A:775:G:C8	2.12	0.85
2:A:932:G:C5'	23:3:29:ARG:HH22	1.86	0.85
3:D:155:ARG:O	3:D:157:ALA:N	2.09	0.85
4:E:70:VAL:HG13	4:E:296:VAL:CA	1.97	0.85
2:A:321:G:H4'	5:F:206:ASN:CB	2.06	0.85
8:I:6:LEU:HB2	8:I:36:ALA:CB	2.06	0.85
9:N:12:VAL:CG1	9:N:38:VAL:HG21	2.07	0.85
19:R:36:THR:CG2	19:R:40:LYS:HD3	2.04	0.85
13:S:17:ARG:HD2	13:S:18:THR:N	1.92	0.85
20:U:42:ALA:O	20:U:43:ALA:O	1.94	0.85
20:U:74:MET:HE3	20:U:78:THR:CG2	1.86	0.85
17:Y:71:VAL:HG22	17:Y:93:THR:CB	2.07	0.85
22:2:24:LYS:C	22:2:26:GLU:OE2	2.15	0.85
22:2:62:GLU:N	22:2:62:GLU:OE1	2.09	0.85
2:A:2306:C:N4	6:G:53:LYS:NZ	2.25	0.85
6:G:56:ARG:HG2	6:G:65:GLU:CB	1.97	0.85
7:H:111:PRO:O	7:H:112:VAL:HG22	1.77	0.85
2:A:2259:G:N7	2:A:2260:C:C5	2.44	0.85
2:A:2313:C:OP1	6:G:51:ARG:HB2	1.74	0.85
2:A:2411:A:O2'	2:A:2412:A:H8	1.59	0.85
2:A:2494:G:C2	2:A:2495:G:C5	2.65	0.85
2:A:2525:G:N1	2:A:2539:C:N4	2.24	0.85
2:A:2045:C:N3	2:A:2624:G:N3	2.24	0.85
2:A:2731:G:H22	2:A:2732:G:H21	1.22	0.85
2:A:2783:G:C4	2:A:2784:C:C5	2.65	0.85
2:A:2827:C:O2	2:A:2828:C:H6	1.50	0.85
2:A:637:A:OP2	11:P:110:GLY:N	2.09	0.85
2:A:988:A:OP2	23:3:11:SER:HB3	1.77	0.85
3:D:145:LEU:N	3:D:152:GLN:HB2	1.88	0.85
3:D:66:PHE:HD2	3:D:67:LYS:HD2	1.42	0.85
3:D:80:ILE:CD1	3:D:82:TYR:CE1	2.59	0.85
4:E:269:ILE:CD1	4:E:295:LEU:O	2.25	0.85
4:E:308:VAL:HG12	4:E:310:PHE:HE1	1.40	0.85
5:F:109:LEU:O	5:F:112:ARG:HB2	1.76	0.85
6:G:25:MET:SD	6:G:129:ASP:HB3	2.16	0.85
10:O:64:ARG:NH2	10:O:100:GLY:CA	2.40	0.85
20:U:99:ALA:HB2	20:U:106:PHE:CE1	1.78	0.85
2:A:993:G:O4'	21:V:90:PHE:HE2	1.34	0.85
15:W:67:ASP:CG	15:W:68:ARG:N	2.24	0.85
24:0:46:LYS:CG	24:0:58:THR:H	1.90	0.85

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:6:19:GLY:HA3	27:6:42:PRO:HG2	1.53	0.85
2:A:31:C:H5''	2:A:1239:G:OP1	1.75	0.85
2:A:2268:A:C5'	2:A:2269:A:OP2	2.25	0.85
2:A:2333:A:H1'	2:A:2335:A:C6	2.12	0.85
3:D:208:GLY:C	3:D:211:HIS:NE2	2.30	0.85
4:E:74:GLU:H	4:E:74:GLU:CD	1.80	0.85
5:F:5:ILE:HB	5:F:14:GLY:C	1.95	0.85
7:H:86:LEU:CD1	7:H:86:LEU:C	2.39	0.85
8:I:4:ILE:CB	8:I:37:ILE:O	2.23	0.85
10:O:7:ARG:NH2	10:O:44:LYS:HD2	1.92	0.85
2:A:1665:A:C1'	10:O:66:LYS:HZ3	1.90	0.85
20:U:43:ALA:HB1	21:V:75:LYS:CB	2.02	0.85
17:Y:71:VAL:CG2	17:Y:93:THR:N	2.39	0.85
18:Z:34:LEU:HD13	18:Z:35:ASP:H	1.42	0.85
16:X:7:HIS:ND1	16:X:8:PRO:HD2	1.92	0.85
2:A:2309:A:H3'	2:A:2310:A:C5'	2.07	0.85
31:K:37:GLU:CB	31:K:41:ARG:HH12	1.59	0.85
2:A:106:C:H2'	2:A:107:C:H5''	1.59	0.85
24:O:22:GLY:O	24:O:23:VAL:O	1.94	0.84
24:O:43:THR:O	24:O:64:ASP:CG	2.15	0.84
24:O:43:THR:CG2	24:O:75:GLY:N	2.40	0.84
23:3:31:LEU:CD2	23:3:32:GLN:HB3	2.07	0.84
2:A:2044:C:C6	2:A:2625:G:N2	2.45	0.84
2:A:2411:A:HO2'	2:A:2412:A:H8	0.87	0.84
2:A:296:C:H6	2:A:338:G:N2	1.75	0.84
2:A:993:G:N2	20:U:54:LYS:NZ	2.25	0.84
3:D:175:LEU:HD11	3:D:180:VAL:H	1.40	0.84
3:D:181:ARG:HB3	3:D:181:ARG:CZ	2.02	0.84
10:O:31:ARG:CB	10:O:32:TYR:CE1	2.60	0.84
11:P:62:ALA:CB	11:P:105:TYR:HB2	2.06	0.84
11:P:117:GLU:OE2	11:P:136:ALA:CB	2.25	0.84
12:Q:35:ASN:CB	12:Q:75:SER:HB2	2.07	0.84
19:R:44:LEU:HD11	19:R:48:VAL:HG21	1.56	0.84
19:R:52:ILE:HG21	19:R:94:TYR:CD1	2.12	0.84
13:S:109:PRO:HA	13:S:115:VAL:CG1	2.05	0.84
15:W:36:LEU:HA	15:W:39:THR:HG22	1.58	0.84
17:Y:47:THR:CG2	17:Y:100:ASP:HB2	2.07	0.84
18:Z:107:GLU:OE2	18:Z:141:MET:HG3	1.77	0.84
2:A:76:C:O2'	22:2:55:ARG:CA	2.25	0.84
18:Z:96:VAL:CG1	18:Z:97:PRO:CD	2.55	0.84
2:A:1479:G:C2'	2:A:1480:G:H8	1.89	0.84
2:A:404:C:H4'	2:A:405:U:H5'	1.56	0.84

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:0:43:THR:O	24:0:64:ASP:OD1	1.94	0.84
23:3:40:THR:HG23	23:3:43:ILE:HD13	0.85	0.84
28:7:7:PRO:O	28:7:8:ASN:ND2	2.10	0.84
2:A:243:U:OP2	29:8:7:HIS:NE2	2.08	0.84
2:A:2314:C:H5''	6:G:22:VAL:HG13	1.57	0.84
2:A:2315:G:P	6:G:20:LYS:HZ3	1.98	0.84
2:A:2369:A:H2'	2:A:2370:G:H8	1.42	0.84
2:A:2060:A:O2'	2:A:2502:G:C5'	2.24	0.84
2:A:452:G:H3'	2:A:453:C:H5''	1.59	0.84
4:E:80:ALA:HB2	4:E:187:HIS:NE2	1.92	0.84
4:E:61:PRO:CA	4:E:69:PRO:HA	2.06	0.84
6:G:107:GLY:O	6:G:129:ASP:N	2.10	0.84
7:H:130:ILE:HG22	7:H:131:ILE:N	1.87	0.84
7:H:82:TYR:CZ	7:H:137:LYS:HB3	2.11	0.84
7:H:8:ILE:HG22	7:H:9:GLU:H	1.41	0.84
11:P:77:ALA:HA	11:P:81:VAL:CG1	2.07	0.84
2:A:446:G:H5'	20:U:5:LYS:HE3	1.59	0.84
21:V:35:LEU:N	21:V:60:VAL:CG1	2.40	0.84
2:A:338:G:OP1	17:Y:21:LYS:HD2	1.76	0.84
18:Z:124:ALA:H	18:Z:159:THR:HG21	1.42	0.84
18:Z:39:PHE:O	18:Z:43:PHE:CB	2.25	0.84
16:X:9:HIS:HE1	16:X:27:ALA:HA	1.34	0.84
2:A:2304:G:H4'	6:G:105:SER:O	1.77	0.84
2:A:2309:A:C5'	2:A:2310:A:C8	2.60	0.84
31:K:92:PRO:CG	31:K:134:SER:O	2.24	0.84
7:H:155:PRO:HB2	7:H:169:ARG:HG3	1.60	0.84
14:T:48:ASN:OD1	14:T:49:LEU:N	2.10	0.84
27:6:35:LEU:C	27:6:36:GLU:HG3	1.98	0.84
2:A:1937:A:H3'	2:A:1938:A:H5''	1.59	0.84
2:A:2236:C:C3'	2:A:2237:G:C5'	2.54	0.84
2:A:2264:C:C2'	2:A:2265:U:O5'	2.23	0.84
2:A:2331:G:H4'	24:0:70:ILE:CB	2.06	0.84
4:E:70:VAL:HG11	4:E:295:LEU:CD2	2.07	0.84
4:E:74:GLU:HB2	4:E:293:TYR:HE2	1.40	0.84
5:F:91:PRO:CB	5:F:92:PRO:HD2	1.88	0.84
10:O:71:ARG:O	10:O:73:ASP:N	2.10	0.84
10:O:77:ILE:HD11	10:O:79:PHE:CD2	2.11	0.84
12:Q:140:TYR:O	12:Q:141:MET:C	2.16	0.84
12:Q:57:ARG:CA	12:Q:61:LEU:HD21	2.06	0.84
13:S:91:ARG:O	13:S:94:GLU:HG3	1.77	0.84
13:S:9:PRO:HG2	13:S:14:ARG:HB3	1.58	0.84
15:W:70:TYR:CD2	15:W:71:VAL:N	2.45	0.84

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:X:30:ASP:O	16:X:31:ARG:O	1.94	0.84
31:K:79:LEU:HD22	31:K:137:ILE:HD13	0.88	0.84
31:K:25:GLY:CA	31:K:35:ILE:HD13	2.07	0.84
31:K:42:PHE:HE2	31:K:56:VAL:HG21	1.41	0.84
31:K:37:GLU:HA	31:K:41:ARG:HH11	1.17	0.84
2:A:1840:G:H1	2:A:1902:C:H42	1.24	0.84
23:3:36:VAL:O	23:3:37:LEU:HD23	1.77	0.84
27:6:16:ALA:C	27:6:18:THR:H	1.78	0.84
27:6:37:LEU:CD2	27:6:51:ARG:CA	2.53	0.84
28:7:43:THR:HA	28:7:46:ASP:OD1	1.77	0.84
2:A:1129:A:N3	2:A:2570:G:H1'	1.92	0.84
2:A:2332:U:O4'	2:A:2336:A:N6	2.09	0.84
2:A:2416:C:N3	2:A:2417:C:C5	2.45	0.84
2:A:2603:G:C6	2:A:2604:U:H5	1.94	0.84
2:A:2693:A:N1	2:A:2694:G:C5	2.45	0.84
2:A:2729:G:C2	2:A:2730:C:O2	2.29	0.84
2:A:2813:A:O2'	2:A:2814:C:C6	2.30	0.84
2:A:292:C:H2'	2:A:293:U:H3	1.41	0.84
2:A:38:A:C2	5:F:46:TYR:OH	2.31	0.84
4:E:222:ARG:HH11	4:E:222:ARG:CG	1.88	0.84
4:E:304:ASP:O	4:E:307:LEU:HG	1.77	0.84
2:A:2784:C:OP1	4:E:95:PRO:CG	2.22	0.84
5:F:52:ALA:CA	5:F:55:ARG:CB	2.54	0.84
2:A:2296:U:O4	6:G:145:ASP:CG	2.15	0.84
7:H:101:LYS:CG	7:H:115:GLU:CB	2.54	0.84
7:H:83:GLU:CD	7:H:83:GLU:C	2.36	0.84
10:O:113:LYS:O	10:O:117:LEU:HD23	1.76	0.84
10:O:17:ARG:NH2	10:O:47:THR:C	2.30	0.84
11:P:66:VAL:CG2	11:P:109:LEU:O	2.15	0.84
12:Q:48:ASN:O	12:Q:121:ASP:CB	2.24	0.84
12:Q:56:ILE:HG22	12:Q:61:LEU:HD22	1.56	0.84
12:Q:72:VAL:CG2	12:Q:135:ALA:HB1	2.07	0.84
13:S:34:LEU:CD1	13:S:103:ASP:H	1.90	0.84
20:U:28:ARG:HA	20:U:31:GLN:CG	2.06	0.84
21:V:49:GLU:HB3	21:V:53:LYS:CD	2.07	0.84
21:V:67:LYS:HE3	21:V:94:LYS:HD2	1.58	0.84
17:Y:45:GLY:HA2	17:Y:62:VAL:HG11	0.90	0.84
16:X:24:LEU:O	16:X:25:GLN:OE1	1.94	0.84
6:G:82:GLU:O	6:G:85:GLN:HG3	1.77	0.84
16:X:45:TYR:OH	16:X:75:GLN:OE1	1.95	0.84
2:A:95:G:O2'	22:2:42:ASN:HB3	1.78	0.84
2:A:2896:C:C6	2:A:2896:C:C3'	2.60	0.84

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:0:24:LYS:CG	24:0:56:ASP:CG	2.45	0.84
24:0:37:LEU:HB3	24:0:69:PHE:CG	2.08	0.84
23:3:26:LEU:HD21	23:3:46:ASN:HD22	1.39	0.84
26:5:13:LYS:HD3	26:5:14:SER:N	1.92	0.84
27:6:45:LYS:O	27:6:46:LYS:NZ	2.10	0.84
28:7:8:ASN:O	28:7:9:ASN:C	2.16	0.84
2:A:1223:C:C5	21:V:87:ARG:NH2	2.44	0.84
2:A:2283:C:C2	2:A:2284:C:H1'	2.12	0.84
2:A:2358:G:N3	2:A:2358:G:H2'	1.91	0.84
2:A:2428:G:O2'	2:A:2429:G:C8	2.29	0.84
2:A:2468:G:H22	2:A:2481:G:C2'	1.90	0.84
2:A:2537:U:H2'	2:A:2538:C:C6	2.12	0.84
3:D:175:LEU:HD11	3:D:180:VAL:CA	2.07	0.84
5:F:153:VAL:CG1	5:F:157:LEU:CD2	2.45	0.84
5:F:223:LEU:O	5:F:224:ALA:C	2.12	0.84
5:F:240:LEU:HA	5:F:243:VAL:HG23	1.60	0.84
7:H:34:ARG:HD2	7:H:36:PHE:CZ	2.12	0.84
2:A:270(O):U:C5	8:I:53:LYS:NZ	2.45	0.84
8:I:6:LEU:HD13	8:I:6:LEU:O	1.76	0.84
10:O:7:ARG:NE	10:O:44:LYS:HD2	1.91	0.84
10:O:17:ARG:HH21	10:O:47:THR:HA	1.42	0.84
10:O:9:LYS:HD3	10:O:81:GLU:OE2	1.78	0.84
11:P:62:ALA:HB2	11:P:104:ASP:O	1.78	0.84
11:P:94:ARG:CB	11:P:120:LEU:HD21	1.80	0.84
12:Q:23:ILE:N	12:Q:24:PRO:HD3	1.91	0.84
2:A:18:C:C4'	20:U:23:GLY:O	2.23	0.84
2:A:1162:G:O2'	21:V:23:GLU:CD	2.16	0.84
15:W:32:ALA:CA	15:W:35:ILE:HG13	2.08	0.84
15:W:85:VAL:CG1	15:W:95:ILE:CD1	2.56	0.84
17:Y:103:LEU:HA	17:Y:108:ARG:HB3	1.56	0.84
2:A:104:U:O4	17:Y:17:HIS:CE1	2.30	0.84
2:A:85:G:C5'	17:Y:65:VAL:HG12	2.07	0.84
17:Y:74:VAL:CB	17:Y:77:VAL:HG23	2.07	0.84
18:Z:113:VAL:HG23	18:Z:174:PRO:HG3	1.58	0.84
18:Z:19:ILE:N	18:Z:36:ARG:HG3	1.91	0.84
31:K:80:LYS:CG	31:K:85:ILE:O	2.25	0.84
31:K:25:GLY:O	31:K:35:ILE:CD1	2.26	0.84
31:K:37:GLU:HB3	31:K:41:ARG:CZ	2.06	0.84
8:I:47:LEU:HD12	8:I:48:GLU:H	1.38	0.84
26:5:15:LYS:NZ	26:5:15:LYS:HB2	1.93	0.84
28:7:17:GLY:HA2	28:7:44:VAL:HG21	1.15	0.84
29:8:4:MET:CA	29:8:5:LYS:HZ2	1.84	0.84

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1260:G:H5''	15:W:83:LYS:HZ1	1.40	0.84
2:A:2051:A:C5	2:A:2614:A:N6	2.43	0.84
2:A:2276:G:O2'	2:A:2277:G:O5'	1.94	0.84
2:A:2411:A:C2	2:A:2412:A:C5	2.66	0.84
2:A:2455:G:C2'	2:A:2456:C:H5'	2.08	0.84
2:A:2484:G:C2	2:A:2485:G:C8	2.66	0.84
2:A:2528:U:C5	2:A:2530:A:C2	2.65	0.84
2:A:2783:G:C5	2:A:2784:C:C5	2.65	0.84
2:A:2886:G:N2	2:A:2887:U:N1	2.25	0.84
2:A:973:A:H2'	2:A:974:G:H5''	1.56	0.84
3:D:146:LYS:HB2	3:D:149:ARG:HG3	1.59	0.84
4:E:226:HIS:HA	4:E:229:GLN:HG3	1.57	0.84
4:E:44:TYR:N	4:E:309:PRO:CG	2.24	0.84
6:G:140:ARG:O	6:G:142:ALA:N	2.10	0.84
7:H:83:GLU:OE1	7:H:84:LYS:C	2.16	0.84
10:O:52:VAL:O	10:O:53:LYS:HB2	1.76	0.84
11:P:117:GLU:OE2	11:P:136:ALA:HB1	1.77	0.84
12:Q:20:ILE:HG13	12:Q:21:SER:H	1.38	0.84
19:R:20:LEU:O	19:R:21:TYR:C	2.16	0.84
19:R:63:ARG:NH2	19:R:77:ARG:CG	2.37	0.84
13:S:24:LEU:HA	13:S:33:ARG:HH22	1.42	0.84
20:U:14:HIS:O	20:U:15:LYS:C	2.10	0.84
20:U:95:LEU:C	20:U:98:ILE:HD13	1.96	0.84
18:Z:35:ASP:H	18:Z:39:PHE:HZ	1.22	0.84
2:A:2:G:C2	2:A:2902:C:C2	2.64	0.84
6:G:12:GLU:O	6:G:12:GLU:CD	2.14	0.84
2:A:2077:A:C4	2:A:2435:A:C8	2.65	0.84
2:A:2411:A:N3	2:A:2412:A:N7	2.26	0.84
2:A:2532:G:O5'	2:A:2532:G:H8	1.60	0.84
2:A:2615:U:HO2'	2:A:2616:C:H5'	1.38	0.84
2:A:2729:G:O2'	2:A:2730:C:H5'	1.75	0.84
3:D:213:LYS:CG	3:D:215:LYS:CB	2.22	0.84
5:F:106:GLU:O	5:F:107:ARG:O	1.94	0.84
5:F:33:LYS:HA	5:F:36:ARG:CG	2.07	0.84
6:G:73:VAL:O	6:G:73:VAL:HG12	1.76	0.84
9:N:46:ILE:HD11	9:N:132:LEU:CD1	2.07	0.84
9:N:46:ILE:HD11	9:N:132:LEU:HD11	1.60	0.84
11:P:113:GLN:N	11:P:113:GLN:HE21	1.71	0.84
19:R:113:LEU:CD1	19:R:114:VAL:N	2.38	0.84
21:V:4:ILE:CD1	21:V:13:ARG:CD	2.52	0.84
15:W:6:ILE:HA	15:W:103:ILE:O	1.77	0.84
22:2:46:ILE:O	22:2:47:LYS:O	1.96	0.84

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:K:26:PRO:O	31:K:27:ALA:O	1.96	0.84
2:A:2722:G:C2	2:A:2723:C:C6	2.65	0.84
22:2:39:ALA:CB	22:2:40:PRO:CD	2.53	0.84
24:0:24:LYS:HG3	24:0:56:ASP:OD1	1.77	0.84
27:6:46:LYS:CA	27:6:46:LYS:NZ	2.12	0.84
2:A:2847:U:H6	2:A:2847:U:OP2	1.61	0.84
2:A:617:G:OP1	5:F:221:GLU:OE1	1.93	0.84
5:F:223:LEU:C	5:F:223:LEU:CD1	2.37	0.84
5:F:241:ALA:O	5:F:245:GLU:OE1	1.59	0.84
10:O:2:ILE:HD12	10:O:2:ILE:N	1.91	0.84
10:O:35:ILE:CG2	10:O:62:VAL:C	2.46	0.84
10:O:68:GLY:CA	10:O:78:ARG:NE	2.37	0.84
12:Q:41:THR:HG21	12:Q:126:VAL:N	1.93	0.84
12:Q:85:ILE:HG22	12:Q:122:PHE:CD1	2.10	0.84
13:S:118:ILE:HG23	13:S:119:GLN:H	1.43	0.84
13:S:23:ARG:HH21	13:S:35:VAL:HG21	1.39	0.84
2:A:29:U:H4'	20:U:11:ARG:HH12	0.67	0.84
20:U:13:ARG:H	20:U:13:ARG:CZ	1.90	0.84
17:Y:19:ARG:N	17:Y:21:LYS:HZ2	1.75	0.84
18:Z:15:ASP:OD1	18:Z:16:GLU:N	2.10	0.84
18:Z:40:ASP:OD2	18:Z:41:ARG:CZ	2.26	0.84
2:A:1546:C:C3'	2:A:1547:C:OP1	2.23	0.84
23:3:3:ARG:CB	23:3:60:GLU:HA	2.07	0.84
29:8:8:LYS:O	29:8:9:MET:C	2.14	0.84
2:A:2423:U:H1'	2:A:2425:A:C4	2.12	0.84
2:A:2504:U:C3'	2:A:2504:U:C6	2.61	0.84
2:A:2561:A:C6	2:A:2562:U:C5	2.65	0.84
2:A:2676:C:H3'	2:A:2676:C:C6	2.13	0.84
2:A:2839:G:C2	2:A:2840:C:N1	2.45	0.84
3:D:140:VAL:HG13	3:D:190:THR:C	1.98	0.84
3:D:75:GLY:O	3:D:115:ILE:O	1.94	0.84
4:E:225:LYS:C	4:E:226:HIS:ND1	2.31	0.84
4:E:256:THR:CA	4:E:259:HIS:HE1	1.89	0.84
4:E:71:THR:CG2	4:E:299:SER:CA	2.55	0.84
5:F:219:ASN:N	5:F:219:ASN:ND2	2.14	0.84
7:H:101:LYS:HZ1	7:H:115:GLU:CG	1.90	0.84
2:A:1140:C:OP1	9:N:18:ILE:CG1	2.25	0.84
13:S:114:LYS:O	13:S:117:ALA:N	2.11	0.84
21:V:40:VAL:CG1	21:V:55:THR:CG2	2.56	0.84
15:W:12:ILE:O	15:W:14:PRO:CD	2.26	0.84
17:Y:101:LEU:CG	17:Y:103:LEU:HD11	2.07	0.84
17:Y:49:GLU:CD	17:Y:97:ARG:HH12	1.60	0.84

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:Y:49:GLU:HG2	17:Y:59:GLU:CA	2.02	0.84
18:Z:147:ILE:O	18:Z:168:VAL:CB	2.23	0.84
18:Z:34:LEU:CD1	18:Z:35:ASP:N	2.41	0.84
24:0:38:VAL:CA	24:0:40:GLN:HG3	2.08	0.84
24:0:43:THR:CG2	24:0:75:GLY:H	1.90	0.84
19:R:101:ALA:O	26:5:41:LEU:HD13	1.78	0.84
2:A:2097:C:N3	2:A:2192:G:N2	2.25	0.84
2:A:2252:G:C8	2:A:2252:G:H3'	2.13	0.84
2:A:2253:G:H2'	2:A:2254:C:O5'	1.78	0.84
2:A:2314:C:C5'	6:G:22:VAL:CG1	2.36	0.84
2:A:2485:G:H2'	2:A:2486:G:C5'	2.05	0.84
2:A:2607:G:H2'	2:A:2608:G:C5'	2.07	0.84
2:A:2657:A:C8	2:A:2658:C:C6	2.65	0.84
2:A:911:A:C6	12:Q:16:ARG:CA	2.60	0.84
3:D:141:HIS:HE1	3:D:192:GLY:O	1.58	0.84
3:D:211:HIS:ND1	3:D:212:HIS:CD2	2.46	0.84
4:E:203:GLY:HA3	4:E:303:PRO:HD3	1.58	0.84
4:E:199:ALA:CA	4:E:312:ARG:O	2.24	0.84
4:E:94:ARG:CB	4:E:95:PRO:HD2	2.00	0.84
2:A:2784:C:O2'	4:E:98:GLU:O	1.95	0.84
6:G:25:MET:N	6:G:129:ASP:OD2	2.10	0.84
1:B:42:C:H5'	6:G:48:MET:HB2	1.59	0.84
6:G:93:LEU:HD22	6:G:106:PHE:HD2	1.39	0.84
8:I:21:VAL:HG11	8:I:30:LEU:HD11	1.57	0.84
9:N:25:GLN:HA	9:N:28:GLU:CB	2.07	0.84
12:Q:56:ILE:HD11	12:Q:115:SER:N	1.93	0.84
12:Q:66:ASN:HB2	12:Q:70:ARG:HH21	1.43	0.84
2:A:957:A:OP1	12:Q:95:GLU:HB2	1.77	0.84
19:R:100:LEU:CD2	19:R:113:LEU:H	1.87	0.84
13:S:81:ALA:CB	13:S:117:ALA:HB1	2.07	0.84
13:S:116:PHE:O	13:S:119:GLN:HB2	1.78	0.84
13:S:87:LEU:CD2	13:S:87:LEU:H	1.90	0.84
20:U:88:ILE:HB	21:V:52:GLY:CA	2.08	0.84
18:Z:18:MET:CA	18:Z:36:ARG:HG3	2.08	0.84
16:X:31:ARG:N	16:X:31:ARG:HE	1.75	0.84
2:A:1350:C:H42	2:A:1381:G:H1	1.22	0.84
24:0:61:ALA:CB	24:0:80:SER:HA	2.07	0.83
23:3:20:LYS:CD	23:3:23:LEU:CD1	2.55	0.83
25:4:6:HIS:HE1	25:4:55:ARG:HB2	1.42	0.83
26:5:57:VAL:HG12	26:5:58:LEU:H	0.73	0.83
2:A:2528:U:OP1	30:9:30:VAL:CG1	2.26	0.83
2:A:2314:C:O2'	2:A:2315:G:C5'	2.26	0.83

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2539:C:H2'	2:A:2540:C:O5'	1.78	0.83
2:A:527:C:H6	2:A:2779:U:C6	1.96	0.83
4:E:267:ARG:CB	4:E:297:LYS:HD2	2.08	0.83
4:E:295:LEU:HD23	4:E:296:VAL:H	1.41	0.83
5:F:96:LYS:N	5:F:98:ARG:CZ	2.41	0.83
7:H:164:GLU:CA	7:H:164:GLU:OE1	2.26	0.83
9:N:136:SER:HA	9:N:139:LEU:CD2	2.08	0.83
10:O:26:GLY:HA3	10:O:30:ARG:NH1	1.93	0.83
10:O:35:ILE:CG2	10:O:63:VAL:N	2.32	0.83
2:A:910:A:N6	12:Q:11:LYS:O	2.11	0.83
14:T:53:ASP:C	14:T:56:ARG:HE	1.81	0.83
15:W:82:LEU:HD21	15:W:98:LYS:O	1.76	0.83
17:Y:18:GLU:CB	17:Y:21:LYS:NZ	2.40	0.83
8:I:121:ILE:O	8:I:122:ARG:HB2	1.75	0.83
22:2:50:ARG:HA	22:2:53:ILE:HD12	1.60	0.83
2:A:2309:A:C5'	2:A:2310:A:OP2	2.24	0.83
2:A:1350:C:N3	2:A:1381:G:N2	2.24	0.83
28:7:30:ILE:CA	28:7:33:ARG:HG3	2.08	0.83
30:9:7:VAL:HG11	30:9:34:GLN:HG2	0.85	0.83
2:A:1669:A:C1'	10:O:4:GLN:OE1	2.24	0.83
2:A:2185:C:H2'	2:A:2186:G:H8	1.41	0.83
2:A:2268:A:H5'	2:A:2269:A:OP2	1.78	0.83
2:A:2293:C:N3	2:A:2339:G:O6	2.11	0.83
2:A:2484:G:H2'	2:A:2485:G:H5'	1.60	0.83
2:A:2543:G:O2'	2:A:2645:G:N7	2.11	0.83
2:A:2648:C:H42	2:A:2672:G:H1	1.25	0.83
2:A:630(A):C:H3'	2:A:1631:A:P	2.18	0.83
5:F:210:ALA:O	5:F:211:ASP:HB3	1.76	0.83
5:F:215:ALA:HB2	5:F:238:SER:C	1.98	0.83
6:G:97:GLN:CD	6:G:106:PHE:CD2	2.51	0.83
8:I:9:VAL:HG12	8:I:9:VAL:O	1.78	0.83
9:N:21:ARG:HA	9:N:24:SER:CB	2.08	0.83
12:Q:20:ILE:CG1	12:Q:21:SER:N	2.38	0.83
12:Q:61:LEU:O	12:Q:62:GLU:C	2.13	0.83
19:R:61:HIS:HA	19:R:64:ARG:HD3	0.89	0.83
13:S:30:GLY:O	13:S:31:LYS:CE	2.26	0.83
2:A:1011:G:OP2	20:U:75:ASN:HB3	1.79	0.83
21:V:67:LYS:HD3	21:V:70:TYR:CE1	2.13	0.83
17:Y:57:GLY:N	17:Y:97:ARG:NH2	2.26	0.83
2:A:2311:A:OP2	6:G:55:LYS:CE	2.25	0.83
2:A:225:A:O2'	2:A:257:A:H4'	1.76	0.83
23:3:20:LYS:O	23:3:23:LEU:N	2.11	0.83

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:4:63:PHE:O	25:4:65:ASP:N	2.11	0.83
2:A:1782:C:O2	2:A:2609:U:C1'	2.27	0.83
2:A:2458:G:C8	2:A:2490:G:N1	2.46	0.83
2:A:2550:G:C4	2:A:2551:C:C5	2.66	0.83
2:A:2679:A:C5	2:A:2680:C:C5	2.66	0.83
2:A:2688:U:N3	2:A:2719:G:C4	2.46	0.83
2:A:564:C:OP2	21:V:79:GLN:CD	2.16	0.83
5:F:52:ALA:HA	5:F:55:ARG:HB3	1.57	0.83
6:G:102:GLY:HA3	6:G:134:LEU:HD12	0.85	0.83
7:H:148:ARG:NH1	7:H:163:TYR:CA	2.34	0.83
7:H:86:LEU:HD13	7:H:87:GLU:CA	2.08	0.83
9:N:70:PHE:O	9:N:71:TYR:HB2	1.76	0.83
10:O:60:ALA:HA	10:O:87:ILE:HD13	1.59	0.83
10:O:66:LYS:NZ	10:O:67:ARG:CD	2.19	0.83
19:R:63:ARG:HH22	19:R:77:ARG:HG2	1.39	0.83
13:S:34:LEU:CD2	13:S:102:LEU:CA	2.52	0.83
20:U:13:ARG:NH1	20:U:13:ARG:CA	2.41	0.83
20:U:92:ARG:N	21:V:10:LYS:HZ2	1.68	0.83
17:Y:55:PHE:CZ	17:Y:89:ARG:NH2	2.46	0.83
18:Z:112:LEU:HD13	18:Z:142:ASN:CA	2.00	0.83
18:Z:69:VAL:CG1	18:Z:70:GLN:H	1.90	0.83
2:A:1614:A:H62	15:W:88:ARG:HB2	1.01	0.83
6:G:90:LEU:O	6:G:92:GLU:OE2	1.95	0.83
24:O:46:LYS:HE3	24:O:58:THR:HG1	1.43	0.83
25:4:14:ILE:HG13	25:4:38:GLY:O	1.78	0.83
26:5:4:HIS:CB	26:5:5:PRO:HD3	2.07	0.83
27:6:36:GLU:C	27:6:52:GLU:CD	2.35	0.83
27:6:37:LEU:C	27:6:38:LYS:HG3	1.97	0.83
28:7:14:LYS:O	28:7:15:THR:C	2.16	0.83
2:A:2740:A:N9	2:A:2741:A:N7	2.25	0.83
2:A:2854:G:N1	2:A:2864:G:C6	2.46	0.83
2:A:514:A:O3'	20:U:32:TYR:OH	1.95	0.83
2:A:592:G:H2'	29:8:3:LYS:CE	2.08	0.83
2:A:610:C:H2'	2:A:611:C:H6	1.42	0.83
5:F:27:ARG:O	5:F:31:ILE:CG1	2.21	0.83
5:F:3:ALA:O	5:F:16:VAL:N	2.09	0.83
10:O:101:PRO:O	10:O:102:VAL:CG2	2.27	0.83
12:Q:142:LYS:CD	12:Q:143:VAL:H	1.91	0.83
2:A:910:A:H2'	12:Q:17:ARG:NH2	1.94	0.83
12:Q:54:VAL:O	12:Q:56:ILE:HD12	1.78	0.83
12:Q:31:PHE:HZ	12:Q:88:PHE:CD2	1.96	0.83
13:S:127:LEU:O	13:S:127:LEU:CD2	2.26	0.83

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:V:3:ALA:CB	21:V:12:TYR:OH	2.26	0.83
21:V:78:VAL:HB	21:V:80:TYR:CD1	2.14	0.83
2:A:693:C:O2'	2:A:1353:A:C2	2.32	0.83
2:A:733:G:OP2	2:A:761:A:N6	2.10	0.83
7:H:80:LYS:O	7:H:81:GLY:O	1.95	0.83
2:A:1809:A:N6	25:4:3:LYS:CG	2.38	0.83
29:8:23:MET:SD	29:8:24:ALA:N	2.52	0.83
30:9:27:CYS:O	30:9:29:ASN:N	2.11	0.83
2:A:1566:A:C6	3:D:212:HIS:CE1	2.66	0.83
2:A:2353:G:C2	2:A:2364:C:N4	2.44	0.83
2:A:2523:G:C2'	2:A:2524:G:H5'	2.08	0.83
2:A:2580:U:H6	2:A:2581:G:C8	1.51	0.83
2:A:2618:G:C5	2:A:2619:C:H5	1.96	0.83
2:A:2628:C:C1'	2:A:2781:A:H2'	2.07	0.83
2:A:2852:G:C2	2:A:2853:C:C2	2.66	0.83
1:B:51:G:OP2	13:S:72:GLU:HG2	1.78	0.83
3:D:141:HIS:HB3	3:D:154:VAL:HG11	1.60	0.83
4:E:174:LEU:O	4:E:177:ALA:CB	2.25	0.83
4:E:226:HIS:HA	4:E:229:GLN:CG	2.01	0.83
5:F:102:LEU:HB2	5:F:107:ARG:CZ	2.08	0.83
9:N:19:MET:HE2	9:N:22:VAL:CG2	2.08	0.83
12:Q:135:ALA:O	12:Q:138:ARG:N	2.11	0.83
21:V:31:ASP:C	21:V:63:HIS:O	2.17	0.83
15:W:24:ILE:HG22	15:W:35:ILE:HB	1.58	0.83
22:2:2:VAL:C	22:2:4:HIS:HD1	1.80	0.83
2:A:76:C:O2'	22:2:55:ARG:HA	1.78	0.83
16:X:13:LYS:O	16:X:16:ASN:N	2.12	0.83
16:X:26:PHE:CD1	16:X:26:PHE:N	2.44	0.83
31:K:46:THR:HG22	31:K:54:LEU:CD1	2.05	0.83
2:A:2722:G:C6	2:A:2723:C:N4	2.47	0.83
23:3:22:ALA:O	23:3:26:LEU:CD1	2.26	0.83
27:6:42:PRO:CG	27:6:44:ALA:HB3	2.04	0.83
27:6:48:VAL:O	27:6:50:PHE:HE1	1.56	0.83
29:8:16:ILE:HG13	29:8:22:VAL:HG22	0.85	0.83
2:A:2219:G:O2'	2:A:2224:G:H5''	1.78	0.83
2:A:2090:G:C2	2:A:2230:G:C6	2.66	0.83
2:A:2430:A:H2'	2:A:2431:U:C5'	2.08	0.83
2:A:248:G:C2	2:A:2431:U:H4'	2.13	0.83
2:A:2552:U:C5'	2:A:2553:G:OP2	2.23	0.83
2:A:2561:A:H2'	2:A:2562:U:O5'	1.79	0.83
2:A:2716:U:H2'	2:A:2717:G:H5'	1.59	0.83
3:D:208:GLY:HA3	3:D:210:LYS:CE	2.08	0.83

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:7:ASP:C	5:F:11:ASN:N	2.31	0.83
5:F:163:HIS:CA	5:F:166:ILE:CD1	2.56	0.83
9:N:61:VAL:CG2	9:N:139:LEU:HB3	2.08	0.83
9:N:13:ASP:C	9:N:38:VAL:HG11	1.99	0.83
10:O:24:VAL:CG1	10:O:32:TYR:O	2.27	0.83
10:O:43:VAL:HB	10:O:55:GLY:N	1.94	0.83
12:Q:46:VAL:HG22	12:Q:156:ASN:ND2	1.94	0.83
18:Z:105:GLN:CB	18:Z:141:MET:SD	2.66	0.83
16:X:23:LYS:HA	16:X:66:VAL:O	1.79	0.83
25:4:41:PRO:HB2	25:4:57:ASP:CB	2.09	0.83
27:6:2:ALA:HB3	27:6:11:LYS:HE3	1.59	0.83
2:A:2013:A:H4'	15:W:96:ILE:CG2	2.08	0.83
2:A:2253:G:O2'	2:A:2254:C:C5'	2.26	0.83
2:A:2315:G:C4'	6:G:133:ASN:HD22	1.92	0.83
2:A:2476:A:C8	2:A:2477:C:C5	2.66	0.83
2:A:2618:G:HO2'	2:A:2619:C:C5'	1.92	0.83
2:A:2659:G:C2'	2:A:2661:G:OP2	2.27	0.83
2:A:26:G:N1	2:A:27:G:N2	2.26	0.83
2:A:2744:G:H2'	2:A:2745:C:H5'	1.59	0.83
2:A:84:A:OP2	17:Y:111:ARG:NH1	2.11	0.83
4:E:199:ALA:HA	4:E:312:ARG:O	1.77	0.83
5:F:6:TYR:CE2	5:F:140:VAL:HG22	2.14	0.83
5:F:239:ALA:C	5:F:241:ALA:N	2.26	0.83
7:H:101:LYS:CD	7:H:115:GLU:HB2	2.07	0.83
7:H:95:ALA:H	7:H:127:GLN:NE2	1.75	0.83
19:R:36:THR:HG23	19:R:40:LYS:HD3	1.59	0.83
19:R:24:GLN:HB2	19:R:44:LEU:HD23	1.60	0.83
2:A:994:C:O2	20:U:53:LYS:HB3	1.79	0.83
20:U:98:ILE:C	20:U:100:ALA:N	2.28	0.83
21:V:71:ILE:O	21:V:72:ARG:HG2	1.77	0.83
18:Z:51:LEU:HD23	18:Z:51:LEU:C	1.98	0.83
24:0:44:LYS:O	24:0:45:PHE:HD1	1.61	0.83
24:0:61:ALA:HB2	24:0:80:SER:O	1.78	0.83
24:0:67:VAL:O	24:0:68:VAL:HG23	1.79	0.83
30:9:7:VAL:O	30:9:8:LYS:HE2	1.75	0.83
2:A:1129:A:O2'	2:A:2515:C:H2'	1.77	0.83
2:A:2297:C:H2'	2:A:2298:A:H8	0.77	0.83
2:A:2457:U:H2'	2:A:2458:G:C4'	2.08	0.83
2:A:2731:G:N2	2:A:2732:G:H21	1.75	0.83
2:A:2780:G:H22	9:N:80:LYS:NZ	1.76	0.83
2:A:443:A:N7	5:F:43:LYS:CD	2.42	0.83
2:A:85:G:C5'	17:Y:65:VAL:CG1	2.57	0.83

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:148:GLY:C	3:D:150:GLY:H	1.82	0.83
3:D:74:PRO:CA	3:D:116:MET:HE2	1.99	0.83
8:I:43:ASN:C	8:I:45:LYS:H	1.80	0.83
11:P:128:GLY:O	11:P:131:GLU:N	2.11	0.83
20:U:27:SER:HB3	20:U:31:GLN:CD	1.99	0.83
15:W:24:ILE:HG22	15:W:35:ILE:CD1	2.08	0.83
17:Y:101:LEU:HD13	17:Y:113:GLU:HB3	1.58	0.83
18:Z:112:LEU:HD23	18:Z:172:LEU:O	1.78	0.83
22:2:7:GLU:OE1	22:2:8:ILE:HG12	1.77	0.83
31:K:19:THR:H	31:K:20:PRO:HD3	1.42	0.83
24:0:70:ILE:HG12	24:0:71:ASN:H	1.44	0.83
28:7:8:ASN:O	28:7:11:LYS:N	2.12	0.83
29:8:12:ARG:O	29:8:13:ARG:O	1.96	0.83
29:8:30:ARG:HG2	29:8:31:HIS:N	1.93	0.83
2:A:2317:C:H5'	6:G:150:SER:HA	1.47	0.83
2:A:2648:C:O2'	2:A:2649:U:H5'	1.77	0.83
2:A:2735:G:N1	2:A:2770:G:C2	2.47	0.83
1:B:48:A:P	13:S:107:ASN:HD21	1.97	0.83
3:D:143:ILE:HB	3:D:153:LEU:N	1.94	0.83
3:D:211:HIS:CE1	3:D:212:HIS:CD2	2.67	0.83
5:F:52:ALA:O	5:F:55:ARG:HG2	1.79	0.83
8:I:7:LYS:HD3	8:I:12:LYS:HZ2	1.44	0.83
8:I:7:LYS:HD2	8:I:12:LYS:CE	2.09	0.83
9:N:50:GLU:O	9:N:51:GLU:O	1.97	0.83
10:O:112:MET:O	10:O:115:ILE:HG13	1.78	0.83
2:A:873:G:OP1	12:Q:30:GLN:OE1	1.97	0.83
13:S:41:LYS:HZ1	13:S:68:GLU:CD	1.81	0.83
20:U:91:ASN:OD1	20:U:95:LEU:CD2	2.25	0.83
21:V:5:ILE:H	21:V:5:ILE:HD12	1.43	0.83
15:W:58:ALA:O	15:W:60:ASN:N	2.12	0.83
17:Y:43:ASN:HD22	17:Y:101:LEU:CD2	1.90	0.83
2:A:76:C:H5'	22:2:51:LYS:HB3	1.60	0.83
16:X:28:VAL:CG1	16:X:64:ALA:HB3	2.08	0.83
2:A:2898:U:N3	2:A:2899:G:C5	2.46	0.83
17:Y:4:PRO:O	17:Y:5:ASP:HB2	1.76	0.83
2:A:2722:G:H2'	2:A:2723:C:H6	1.44	0.83
23:3:50:VAL:O	23:3:53:LEU:HB2	1.79	0.83
2:A:388:G:OP2	25:4:29:PRO:CG	2.27	0.83
2:A:125:G:C4'	28:7:19:ARG:HH11	1.91	0.83
2:A:1819:A:H2'	3:D:177:SER:OG	1.77	0.83
2:A:2263:C:O2'	2:A:2264:C:C5'	2.24	0.83
2:A:2068:U:O2	2:A:2430:A:C2	2.32	0.83

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2066:C:C2	2:A:2445:G:C2	2.67	0.83
2:A:2521:C:H2'	2:A:2522:U:O5'	1.79	0.83
2:A:2542:A:O2'	2:A:2543:G:H8	1.59	0.83
2:A:2578:G:H2'	2:A:2579:C:O5'	1.79	0.83
2:A:2652:C:C5	2:A:2653:U:O4	2.31	0.83
2:A:29:U:H4'	20:U:11:ARG:CZ	2.07	0.83
2:A:466:A:OP1	28:7:34:ARG:NH2	2.11	0.83
2:A:1818:U:O5'	3:D:155:ARG:CB	2.26	0.83
4:E:222:ARG:HG2	4:E:232:ARG:CA	2.09	0.83
4:E:250:VAL:O	4:E:251:PRO:O	1.96	0.83
4:E:46:ALA:CB	4:E:72:VAL:C	2.42	0.83
5:F:242:GLU:O	5:F:245:GLU:HB2	1.78	0.83
7:H:100:LYS:C	7:H:101:LYS:HD2	2.00	0.83
8:I:31:PHE:HE1	8:I:35:LEU:O	1.61	0.83
12:Q:65:ARG:HH22	12:Q:87:LYS:H	1.24	0.83
12:Q:82:LYS:C	12:Q:84:ARG:H	1.79	0.83
19:R:74:LYS:O	19:R:75:LEU:O	1.97	0.83
13:S:12:ARG:HD2	13:S:20:TYR:CE2	2.13	0.83
21:V:62:GLU:HB2	21:V:96:LEU:CD2	2.08	0.83
15:W:69:LEU:HD22	15:W:109:GLU:CB	2.08	0.83
17:Y:28:SER:CA	17:Y:99:THR:OG1	2.27	0.83
18:Z:10:PRO:O	18:Z:14:LEU:HB2	1.79	0.83
18:Z:112:LEU:CD2	18:Z:113:VAL:N	2.41	0.83
18:Z:15:ASP:O	18:Z:16:GLU:HB2	1.76	0.83
18:Z:112:LEU:HA	18:Z:174:PRO:CD	2.09	0.83
8:I:94:THR:HG23	8:I:97:GLN:H	1.42	0.83
8:I:65:ALA:CB	8:I:134:HIS:HB2	2.09	0.83
26:5:12:SER:HG	26:5:14:SER:HG	1.22	0.82
2:A:1263:U:H4'	26:5:16:ARG:NE	1.94	0.82
2:A:1789:A:OP1	3:D:226:GLY:N	2.12	0.82
2:A:2061:G:N3	2:A:2503:A:C2	2.47	0.82
2:A:2380:C:C2'	2:A:2381:C:H5''	2.08	0.82
2:A:2067:G:N2	2:A:2444:G:C4	2.47	0.82
2:A:957:A:H61	2:A:2458:G:H4'	1.41	0.82
2:A:2504:U:O5'	2:A:2504:U:H6	1.60	0.82
2:A:2543:G:C4	2:A:2544:G:C5	2.67	0.82
2:A:2707:G:C2'	2:A:2708:G:O5'	2.26	0.82
2:A:2681:C:C5	2:A:2727:G:N2	2.43	0.82
2:A:2885:C:N4	2:A:2886:G:C8	2.47	0.82
2:A:85:G:P	17:Y:65:VAL:HG21	2.19	0.82
3:D:110:LYS:CA	3:D:110:LYS:NZ	2.38	0.82
3:D:151:GLY:C	3:D:152:GLN:OE1	2.17	0.82

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:161:ALA:CA	3:D:162:GLN:HE22	1.91	0.82
3:D:74:PRO:CA	3:D:116:MET:CE	2.54	0.82
3:D:80:ILE:HD12	3:D:80:ILE:C	1.98	0.82
4:E:180:ILE:CG2	4:E:187:HIS:HA	2.04	0.82
5:F:102:LEU:CD2	5:F:106:GLU:HB2	2.08	0.82
5:F:1:MET:O	5:F:18:LEU:CD2	2.27	0.82
8:I:2:LYS:HG2	8:I:39:ALA:H	1.44	0.82
11:P:109:LEU:HD13	11:P:109:LEU:C	1.99	0.82
12:Q:32:LYS:C	12:Q:32:LYS:HD2	1.99	0.82
12:Q:88:PHE:C	12:Q:90:PHE:CE1	2.52	0.82
2:A:2009:G:C1'	19:R:107:ASP:O	2.26	0.82
20:U:61:TRP:C	20:U:65:ILE:HG12	1.98	0.82
21:V:77:GLY:O	21:V:78:VAL:HG13	1.79	0.82
21:V:67:LYS:O	21:V:91:THR:HB	1.78	0.82
17:Y:103:LEU:CD2	17:Y:108:ARG:O	2.27	0.82
16:X:14:ALA:N	16:X:17:ASP:CG	2.23	0.82
2:A:932:G:H4'	23:3:24:LYS:HZ3	1.42	0.82
25:4:14:ILE:CG2	25:4:16:TYR:CE1	2.62	0.82
25:4:59:PHE:N	25:4:62:ARG:HE	1.76	0.82
2:A:17:G:P	26:5:13:LYS:HZ2	2.01	0.82
2:A:2556:C:O2'	2:A:2557:G:H5''	1.77	0.82
2:A:2589:A:C4	2:A:2590:A:C8	2.67	0.82
2:A:2589:A:C2'	2:A:2590:A:C5'	2.43	0.82
2:A:2633:G:C2	2:A:2634:G:C8	2.61	0.82
2:A:2733:A:C2	4:E:318:ASN:HB2	2.13	0.82
2:A:2799:A:H3'	2:A:2801:A:OP2	1.77	0.82
2:A:337:C:C3'	2:A:338:G:H5''	2.02	0.82
2:A:771:G:OP1	28:7:14:LYS:HD2	1.79	0.82
2:A:586:A:N1	2:A:809:G:O2'	2.12	0.82
5:F:194:PHE:CE2	5:F:204:ALA:O	2.33	0.82
11:P:104:ASP:O	11:P:105:TYR:CG	2.31	0.82
12:Q:133:GLU:OE1	12:Q:134:PHE:N	2.11	0.82
12:Q:17:ARG:H	12:Q:17:ARG:HD3	1.40	0.82
13:S:20:TYR:HE2	13:S:21:HIS:CD2	1.94	0.82
13:S:46:GLN:HB3	13:S:57:THR:HG21	1.60	0.82
13:S:86:LEU:HD23	13:S:124:ASP:HB2	1.60	0.82
21:V:15:SER:O	21:V:97:GLY:O	1.96	0.82
17:Y:78:THR:CG2	17:Y:88:PRO:CA	2.22	0.82
2:A:1078:U:H2'	2:A:1088:A:C4	2.14	0.82
2:A:2354:G:N3	24:0:32:LYS:CG	2.41	0.82
27:6:24:THR:C	27:6:25:THR:HG23	1.99	0.82
2:A:1646:C:C3'	2:A:1647:G:H5'	2.08	0.82

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2195:C:C6	2:A:2195:C:OP2	2.31	0.82
2:A:2463:C:N3	2:A:2464:C:C5	2.45	0.82
2:A:1128:A:N6	2:A:2518:A:H61	1.77	0.82
2:A:2526:G:C4	2:A:2527:C:C6	2.68	0.82
2:A:2581:G:C6	2:A:2610:C:H6	1.94	0.82
2:A:2793:G:N1	2:A:2794:C:N4	2.27	0.82
2:A:2832:U:H6	2:A:2832:U:H5''	1.44	0.82
2:A:2864:G:H2'	2:A:2865:U:H6	1.40	0.82
2:A:993:G:H4'	21:V:90:PHE:CE2	2.02	0.82
3:D:167:GLU:H	3:D:182:MET:HE1	1.40	0.82
2:A:2571:C:HO2'	4:E:243:PRO:HD3	1.37	0.82
12:Q:123:ILE:HG21	12:Q:125:TRP:HB2	1.60	0.82
12:Q:17:ARG:N	12:Q:17:ARG:CD	2.36	0.82
20:U:31:GLN:C	20:U:33:ARG:H	1.79	0.82
15:W:17:VAL:O	15:W:20:VAL:CG2	2.27	0.82
2:A:495:G:C4'	15:W:57:ASN:CG	2.47	0.82
17:Y:101:LEU:HD21	17:Y:112:LEU:CD1	2.09	0.82
17:Y:18:GLU:CA	17:Y:21:LYS:HZ2	1.92	0.82
31:K:15:ALA:HB2	31:K:46:THR:HB	1.58	0.82
2:A:2267:A:OP1	2:A:2267:A:O4'	1.97	0.82
2:A:2364:C:O2'	2:A:2365:G:C5'	2.28	0.82
2:A:2528:U:HO2'	2:A:2529:G:H8	1.25	0.82
2:A:2509:G:OP1	2:A:2555:U:H5'	1.79	0.82
3:D:146:LYS:HZ2	3:D:184:LEU:CD1	1.92	0.82
4:E:79:ARG:NH2	4:E:104:PHE:O	2.10	0.82
5:F:11:ASN:OD1	5:F:160:LEU:HD11	1.78	0.82
12:Q:44:ALA:HB3	12:Q:126:VAL:O	1.79	0.82
21:V:21:ARG:HA	21:V:21:ARG:HE	1.44	0.82
22:2:4:HIS:O	22:2:7:GLU:OE2	1.95	0.82
2:A:2306:C:H42	2:A:2311:A:H2	1.26	0.82
31:K:11:LEU:HD11	31:K:28:LEU:HD21	1.61	0.82
2:A:2261:C:P	24:0:14:ARG:HG2	2.19	0.82
26:5:12:SER:O	26:5:13:LYS:C	2.17	0.82
2:A:2098:U:O2	2:A:2191:G:N2	2.12	0.82
2:A:2256:G:N2	2:A:2257:U:O2	2.13	0.82
2:A:2399:G:N2	2:A:2400:G:H1'	1.94	0.82
2:A:2586:C:C2	2:A:2587:A:N7	2.47	0.82
2:A:2781:A:C5'	2:A:2782:G:C5'	2.57	0.82
2:A:801:G:P	5:F:79:ARG:CD	2.65	0.82
5:F:193:LEU:CD1	5:F:223:LEU:HB2	2.10	0.82
7:H:35:THR:O	7:H:36:PHE:CD1	2.32	0.82
7:H:51:VAL:CG2	7:H:68:ARG:HG2	2.10	0.82

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:N:54:VAL:HG22	9:N:135:ILE:CD1	2.09	0.82
10:O:66:LYS:HZ2	10:O:67:ARG:HD3	0.66	0.82
12:Q:136:TRP:O	12:Q:139:ALA:HB3	1.78	0.82
21:V:21:ARG:HA	21:V:21:ARG:NE	1.95	0.82
20:U:104:GLU:CD	21:V:46:VAL:HG13	1.99	0.82
21:V:66:GLY:C	21:V:67:LYS:N	2.33	0.82
17:Y:71:VAL:CG2	17:Y:93:THR:CG2	2.18	0.82
17:Y:71:VAL:HG22	17:Y:93:THR:N	1.95	0.82
8:I:103:GLN:O	8:I:104:ALA:C	2.16	0.82
22:2:30:ALA:CA	22:2:34:GLN:CG	2.57	0.82
31:K:117:ASN:CG	31:K:127:ILE:HD11	1.98	0.82
2:A:94:G:O3'	22:2:41:GLU:OE2	1.98	0.82
2:A:2262:U:OP2	24:0:14:ARG:CZ	2.28	0.82
23:3:50:VAL:HB	23:3:53:LEU:CD1	2.10	0.82
2:A:2396:G:OP1	25:4:28:ARG:CZ	2.28	0.82
25:4:62:ARG:C	25:4:65:ASP:OD2	2.17	0.82
28:7:14:LYS:O	28:7:16:HIS:N	2.12	0.82
2:A:125:G:H5''	28:7:19:ARG:HH11	0.67	0.82
28:7:21:ARG:CB	28:7:31:LEU:CD1	2.53	0.82
29:8:26:LYS:HD3	29:8:43:GLY:C	1.99	0.82
29:8:55:TRP:O	29:8:56:ALA:O	1.96	0.82
30:9:7:VAL:HG11	30:9:25:VAL:HG23	1.62	0.82
2:A:2022:U:C4	26:5:9:LYS:NZ	2.47	0.82
2:A:2292:C:O2	2:A:2293:C:C6	2.32	0.82
2:A:2423:U:O4'	2:A:2425:A:C8	2.32	0.82
2:A:2468:G:HO2'	2:A:2469:A:H5'	1.43	0.82
2:A:2681:C:O2'	2:A:2682:U:C5'	2.27	0.82
2:A:2695:C:C2'	2:A:2696:U:C6	2.63	0.82
2:A:2703:C:C2'	2:A:2704:C:O5'	2.27	0.82
2:A:2758:A:OP2	2:A:2758:A:C4'	2.27	0.82
2:A:673:C:H4'	5:F:82:GLN:CD	2.00	0.82
6:G:136:ARG:HB3	6:G:137:PRO:HD2	1.62	0.82
9:N:60:ARG:O	9:N:71:TYR:CD2	2.33	0.82
2:A:527:C:C2'	9:N:95:ARG:HH12	1.86	0.82
12:Q:65:ARG:HH21	12:Q:85:ILE:C	1.81	0.82
21:V:19:VAL:HB	21:V:21:ARG:HH11	1.44	0.82
17:Y:14:ALA:CB	17:Y:15:PRO:CD	2.54	0.82
8:I:68:LEU:CG	8:I:108:LEU:HD13	2.10	0.82
8:I:133:LEU:N	8:I:138:THR:HG22	1.93	0.82
2:A:1151:G:O3'	20:U:81:ASN:OD1	1.98	0.82
16:X:17:ASP:N	16:X:17:ASP:OD1	2.13	0.82
16:X:6:LYS:HE3	16:X:29:ASP:H	1.43	0.82

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:44:ILE:O	6:G:83:PHE:HZ	1.58	0.82
2:A:280:C:N3	2:A:283:A:N6	2.26	0.82
23:3:37:LEU:HD12	23:3:43:ILE:CG2	2.09	0.82
27:6:40:TYR:O	27:6:47:HIS:CA	2.27	0.82
2:A:2418:A:H2'	2:A:2419:U:C6	2.15	0.82
2:A:2574:G:C3'	2:A:2575:C:C6	2.59	0.82
2:A:322:A:OP2	2:A:322:A:H8	1.63	0.82
2:A:592:G:O2'	29:8:3:LYS:HG3	1.78	0.82
2:A:675:A:OP1	5:F:69:HIS:O	1.96	0.82
2:A:792:G:N7	2:A:2440:C:H1'	1.93	0.82
3:D:166:LYS:O	3:D:167:GLU:OE2	1.96	0.82
5:F:110:ALA:O	5:F:111:VAL:C	2.17	0.82
5:F:52:ALA:HA	5:F:55:ARG:HE	0.99	0.82
7:H:36:PHE:O	7:H:37:HIS:O	1.98	0.82
9:N:134:GLU:O	9:N:138:THR:CB	2.27	0.82
9:N:58:GLU:HA	9:N:61:VAL:HG23	0.84	0.82
10:O:98:ILE:HG21	10:O:118:ALA:HA	1.61	0.82
11:P:61:ALA:HB1	11:P:107:LYS:CE	2.10	0.82
19:R:29:LEU:H	19:R:29:LEU:HD22	1.44	0.82
6:G:145:ASP:HB3	13:S:15:GLU:HA	1.60	0.82
13:S:17:ARG:C	13:S:17:ARG:HD3	1.99	0.82
18:Z:172:LEU:HD23	18:Z:173:PRO:CG	2.09	0.82
18:Z:19:ILE:N	18:Z:36:ARG:HG2	1.95	0.82
2:A:1062:G:O3'	31:K:76:SER:OG	1.97	0.82
2:A:1064:C:OP1	31:K:87:LYS:HB3	1.80	0.82
15:W:90:ARG:CB	15:W:90:ARG:HH11	1.81	0.82
24:O:46:LYS:N	24:O:46:LYS:HD2	1.93	0.82
2:A:2081:C:C5'	25:4:35:VAL:HG21	2.09	0.82
2:A:1673:U:H5	4:E:225:LYS:HD3	1.45	0.82
2:A:2207:C:O2	2:A:2218:G:C2	2.33	0.82
2:A:2267:A:H5''	2:A:2268:A:O4'	1.80	0.82
2:A:2508:G:N1	2:A:2582:G:O6	2.13	0.82
2:A:2508:G:N2	2:A:2509:G:H1'	1.94	0.82
2:A:2557:G:H2'	2:A:2558:C:H6	1.44	0.82
2:A:2520:C:C5	2:A:2567:G:N9	2.47	0.82
2:A:2595:G:H8	2:A:2595:G:O5'	1.61	0.82
2:A:2716:U:C2	2:A:2717:G:N7	2.48	0.82
4:E:70:VAL:HG13	4:E:296:VAL:CB	2.09	0.82
2:A:1131:G:N1	9:N:69:TYR:CZ	2.46	0.82
10:O:61:VAL:CG1	10:O:62:VAL:H	1.92	0.82
11:P:103:ALA:O	11:P:104:ASP:CG	2.18	0.82
13:S:31:LYS:CB	13:S:32:PRO:HD2	2.06	0.82

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:V:72:ARG:O	21:V:88:GLN:HG2	1.80	0.82
18:Z:91:PRO:CG	18:Z:127:PRO:CA	2.57	0.82
18:Z:172:LEU:CD2	18:Z:173:PRO:CG	2.58	0.82
8:I:108:LEU:HD23	8:I:109:LYS:O	1.80	0.82
2:A:1059:G:N3	31:K:127:ILE:HD13	1.94	0.82
2:A:1546:C:HO3'	2:A:1547:C:P	1.26	0.82
6:G:82:GLU:O	6:G:85:GLN:CG	2.27	0.82
2:A:193:U:H2'	2:A:194:G:C8	2.13	0.82
24:O:77:ARG:O	24:O:79:ILE:HG13	1.80	0.82
23:3:40:THR:CG2	23:3:43:ILE:CG1	2.58	0.82
25:4:58:LYS:CD	25:4:62:ARG:NH2	2.43	0.82
26:5:16:ARG:O	26:5:19:ARG:HB3	1.78	0.82
2:A:592:G:C2	29:8:3:LYS:HE2	2.11	0.82
2:A:1021:A:H8	9:N:49:ARG:HH11	1.25	0.82
2:A:2406:U:H3	11:P:55:GLN:CG	1.92	0.82
2:A:2474:C:H41	2:A:2529:G:H21	1.27	0.82
2:A:2592:G:C4	2:A:2593:U:C6	2.67	0.82
2:A:2633:G:N2	2:A:2634:G:C4	2.48	0.82
2:A:388:G:H2'	2:A:390:A:N7	1.94	0.82
3:D:161:ALA:N	3:D:162:GLN:HE22	1.78	0.82
9:N:61:VAL:CG2	9:N:139:LEU:CB	2.58	0.82
2:A:2566:A:H61	10:O:28:SER:HA	1.43	0.82
11:P:128:GLY:O	11:P:131:GLU:CB	2.27	0.82
12:Q:57:ARG:O	12:Q:61:LEU:CD2	2.27	0.82
20:U:27:SER:C	20:U:29:SER:N	2.32	0.82
21:V:5:ILE:CD1	21:V:12:TYR:CZ	2.63	0.82
15:W:84:ARG:HB2	15:W:96:ILE:CD1	2.05	0.82
17:Y:43:ASN:OD1	17:Y:112:LEU:HD22	1.80	0.82
18:Z:141:MET:O	18:Z:142:ASN:CG	2.18	0.82
22:2:2:VAL:HG12	22:2:3:LEU:H	1.44	0.82
22:2:52:ALA:O	22:2:53:ILE:C	2.17	0.82
31:K:38:PHE:CE2	31:K:66:PHE:C	2.53	0.82
2:A:440:G:P	17:Y:3:GLN:OE1	2.38	0.82
28:7:30:ILE:CD1	28:7:33:ARG:CZ	2.56	0.82
29:8:30:ARG:HH21	29:8:41:ILE:HG23	1.45	0.82
29:8:26:LYS:CD	29:8:43:GLY:C	2.48	0.82
2:A:1301:A:H62	2:A:1303:G:H1'	1.44	0.82
2:A:1780:A:H3'	2:A:1781:C:H5''	1.60	0.82
2:A:965:C:O4'	2:A:2273:A:C2	2.32	0.82
2:A:2347:C:C2	2:A:2348:U:C5	2.68	0.82
2:A:2612:C:O2'	2:A:2613:U:C5'	2.28	0.82
2:A:2678:C:H2'	2:A:2679:A:O5'	1.80	0.82

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:831:G:H3'	2:A:944:G:N2	1.94	0.82
3:D:211:HIS:HD1	3:D:212:HIS:HD2	1.19	0.82
4:E:174:LEU:H	4:E:174:LEU:CD1	1.92	0.82
4:E:214:VAL:HG22	4:E:221:LYS:NZ	1.94	0.82
8:I:43:ASN:HD22	8:I:43:ASN:H	1.27	0.82
9:N:22:VAL:O	9:N:26:VAL:HG23	1.80	0.82
10:O:56:GLN:OE1	10:O:56:GLN:HA	1.78	0.82
12:Q:45:GLN:O	12:Q:155:GLY:O	1.96	0.82
12:Q:88:PHE:O	12:Q:90:PHE:CE1	2.33	0.82
8:I:86:GLY:C	8:I:88:ARG:HA	2.00	0.82
22:2:13:PRO:HA	22:2:16:ARG:CD	2.10	0.82
16:X:37:VAL:O	16:X:38:ALA:C	2.15	0.82
25:4:17:GLN:O	25:4:19:GLN:NE2	2.13	0.81
15:W:19:LEU:HD13	26:5:25:LEU:HD21	0.83	0.81
28:7:30:ILE:HG12	28:7:33:ARG:HD2	1.60	0.81
2:A:2225:A:H4'	2:A:2226:C:H5'	0.94	0.81
2:A:2416:C:C2'	2:A:2417:C:C5'	2.57	0.81
2:A:2457:U:C5	2:A:2458:G:C4	2.68	0.81
2:A:2508:G:O2'	2:A:2509:G:C5'	2.25	0.81
2:A:2525:G:C2	2:A:2539:C:C4	2.68	0.81
2:A:2658:C:H2'	2:A:2659:G:O5'	1.79	0.81
2:A:2741:A:C2'	2:A:2742:C:O4'	2.26	0.81
2:A:2819:G:C5'	2:A:2821:A:N6	2.41	0.81
2:A:338:G:N7	17:Y:21:LYS:HB3	1.95	0.81
2:A:388:G:P	25:4:29:PRO:CG	2.68	0.81
3:D:66:PHE:O	3:D:67:LYS:HB3	1.77	0.81
5:F:230:GLY:C	5:F:231:ARG:HG2	1.99	0.81
5:F:81:PRO:HA	5:F:87:ARG:CB	2.09	0.81
7:H:58:LYS:O	7:H:59:HIS:O	1.96	0.81
7:H:25:VAL:HG11	7:H:78:VAL:HG21	1.62	0.81
11:P:61:ALA:HB1	11:P:107:LYS:HE2	1.61	0.81
13:S:23:ARG:NH2	13:S:37:ARG:HH21	1.75	0.81
20:U:17:VAL:O	20:U:18:LEU:C	2.17	0.81
21:V:3:ALA:HB2	21:V:44:GLN:OE1	1.80	0.81
15:W:70:TYR:HE2	15:W:72:LYS:HA	1.45	0.81
18:Z:2:GLU:HA	18:Z:54:ILE:HG23	1.61	0.81
18:Z:6:LYS:CA	18:Z:31:SER:HB3	2.10	0.81
8:I:88:ARG:HD3	8:I:122:ARG:HB3	1.59	0.81
31:K:121:LEU:CA	31:K:125:MET:CE	2.45	0.81
24:0:23:VAL:HG13	24:0:24:LYS:H	1.42	0.81
23:3:19:GLN:C	23:3:23:LEU:HD21	2.00	0.81
28:7:43:THR:CA	28:7:46:ASP:CG	2.48	0.81

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2278:A:C4'	12:Q:19:TYR:HB3	2.10	0.81
2:A:2416:C:OP1	11:P:51:PHE:CD2	2.34	0.81
2:A:826:U:OP1	2:A:2428:G:H3'	1.79	0.81
2:A:2443:C:C5	2:A:2444:G:N7	2.48	0.81
2:A:807:U:H5'	2:A:2445:G:H4'	1.60	0.81
2:A:2565:A:O3'	2:A:2566:A:C4'	2.27	0.81
2:A:2773:C:O2'	2:A:2774:C:O4'	1.97	0.81
4:E:73:ILE:N	4:E:73:ILE:HD13	1.86	0.81
6:G:38:GLU:HA	6:G:41:LEU:CG	2.08	0.81
8:I:21:VAL:CG1	8:I:30:LEU:HD11	2.10	0.81
10:O:17:ARG:NE	10:O:47:THR:N	2.28	0.81
10:O:53:LYS:O	10:O:56:GLN:HG2	1.81	0.81
2:A:2378:A:C2	13:S:26:LEU:HD23	2.14	0.81
13:S:53:ASN:O	13:S:54:GLY:C	2.17	0.81
21:V:49:GLU:HA	21:V:53:LYS:HZ1	1.42	0.81
18:Z:37:LYS:O	18:Z:40:ASP:CG	2.19	0.81
8:I:77:VAL:CB	8:I:142:LYS:O	2.27	0.81
16:X:18:MET:CE	16:X:25:GLN:HB2	2.10	0.81
31:K:42:PHE:CE2	31:K:56:VAL:HG21	2.15	0.81
2:A:2349:G:OP2	29:8:42:ARG:NE	2.13	0.81
2:A:2041:U:H2'	2:A:2042:A:H5'	1.63	0.81
2:A:2482:G:N7	2:A:2483:C:H5	1.78	0.81
2:A:2520:C:O2'	2:A:2521:C:H5'	1.80	0.81
2:A:2549:G:O2'	2:A:2550:G:H5'	1.81	0.81
2:A:2570:G:H2'	2:A:2571:C:H6	1.00	0.81
2:A:2584:U:C5	2:A:2585:U:N1	2.46	0.81
2:A:2627:G:H8	2:A:2627:G:H5'	1.43	0.81
2:A:2698:U:O2	2:A:2699:C:H6	1.57	0.81
2:A:2729:G:N2	2:A:2730:C:O2	2.14	0.81
2:A:2808:U:N3	2:A:2892:A:C6	2.49	0.81
2:A:2854:G:C2	2:A:2864:G:C6	2.68	0.81
3:D:141:HIS:O	3:D:143:ILE:N	2.14	0.81
3:D:210:LYS:HA	3:D:213:LYS:HD3	0.84	0.81
5:F:197:SER:N	5:F:236:THR:OG1	2.13	0.81
6:G:146:LYS:O	6:G:148:SER:N	2.14	0.81
7:H:10:ILE:CD1	7:H:49:ILE:CG1	2.56	0.81
7:H:119:GLY:O	7:H:121:GLU:OE1	1.96	0.81
9:N:14:ALA:HB3	9:N:40:ASN:HB2	1.60	0.81
12:Q:31:PHE:HE2	12:Q:86:ARG:HA	1.45	0.81
19:R:20:LEU:CG	19:R:21:TYR:N	2.41	0.81
13:S:10:MET:O	13:S:12:ARG:N	2.13	0.81
17:Y:43:ASN:HD21	17:Y:112:LEU:CD2	1.93	0.81

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:Z:69:VAL:HG11	18:Z:81:VAL:CG2	2.10	0.81
24:0:39:ARG:HG2	24:0:69:PHE:HE1	1.41	0.81
24:0:79:ILE:O	24:0:81:ILE:HD12	1.80	0.81
25:4:35:VAL:C	25:4:36:TRP:CD1	2.54	0.81
27:6:41:ASP:CB	27:6:47:HIS:H	1.91	0.81
2:A:1300:U:H1'	2:A:1626:G:N2	1.93	0.81
2:A:2090:G:C4	2:A:2230:G:C6	2.68	0.81
2:A:2242:G:C5	2:A:2243:U:H5	1.98	0.81
2:A:2329:G:H2'	2:A:2330:G:H8	1.44	0.81
2:A:2348:U:C3'	29:8:42:ARG:NH2	2.43	0.81
2:A:10:G:C2	2:A:2629:A:C2	2.66	0.81
2:A:322:A:H1'	2:A:341:G:O4'	1.80	0.81
2:A:34:C:H2'	2:A:455:C:N4	1.94	0.81
2:A:991:C:OP2	2:A:1186:G:OP2	1.97	0.81
4:E:45:LYS:HZ3	4:E:301:PRO:C	1.82	0.81
4:E:304:ASP:OD1	4:E:307:LEU:HD11	1.80	0.81
5:F:220:THR:O	5:F:221:GLU:C	2.19	0.81
5:F:223:LEU:O	5:F:231:ARG:CD	2.28	0.81
6:G:97:GLN:OE1	6:G:106:PHE:CD2	2.33	0.81
6:G:22:VAL:C	6:G:23:VAL:HG13	2.01	0.81
8:I:7:LYS:CB	8:I:12:LYS:CD	2.55	0.81
2:A:1665:A:C4'	10:O:66:LYS:HD3	2.09	0.81
19:R:97:VAL:HG22	19:R:114:VAL:HG11	1.61	0.81
13:S:94:GLU:CD	13:S:95:ALA:N	2.33	0.81
20:U:104:GLU:CD	21:V:46:VAL:CG1	2.48	0.81
20:U:28:ARG:O	20:U:30:LYS:N	2.12	0.81
21:V:11:GLN:HE22	21:V:22:VAL:HG23	0.97	0.81
22:2:20:LEU:O	22:2:21:ASP:C	2.17	0.81
16:X:14:ALA:CA	16:X:17:ASP:OD1	2.28	0.81
31:K:89:SER:CB	31:K:95:LYS:HD3	2.10	0.81
2:A:1805:U:H5'	3:D:235:PRO:CB	2.11	0.81
2:A:1972:A:H2'	2:A:1973:G:H8	1.46	0.81
23:3:12:PRO:HG2	23:3:20:LYS:NZ	1.95	0.81
27:6:47:HIS:O	27:6:48:VAL:HB	1.79	0.81
2:A:2234:G:C2	2:A:2235:G:C8	2.68	0.81
2:A:2330:G:H1	2:A:2385:C:N4	1.77	0.81
2:A:2541:A:H2	2:A:2765:A:H61	1.27	0.81
2:A:2649:U:O2'	2:A:2650:U:O5'	1.98	0.81
2:A:2744:G:C2'	2:A:2745:C:H5'	2.11	0.81
2:A:2523:G:O4'	2:A:2765:A:N7	2.13	0.81
2:A:994:C:O2'	20:U:54:LYS:CG	2.26	0.81
1:B:24:G:H2'	1:B:56:G:O6	1.81	0.81

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:76:G:H4'	18:Z:80:HIS:HB3	1.60	0.81
4:E:205:THR:OG1	4:E:258:TYR:N	2.13	0.81
4:E:79:ARG:HA	4:E:186:GLU:CA	2.11	0.81
8:I:13:GLY:HA3	8:I:15:LYS:NZ	1.95	0.81
8:I:7:LYS:CA	8:I:14:LYS:CG	2.57	0.81
9:N:54:VAL:HA	9:N:135:ILE:HD12	1.60	0.81
2:A:1666:G:P	10:O:66:LYS:HE2	2.21	0.81
11:P:62:ALA:CB	11:P:105:TYR:O	2.21	0.81
12:Q:46:VAL:HG12	12:Q:124:ALA:CB	2.10	0.81
20:U:92:ARG:H	21:V:10:LYS:HZ2	0.83	0.81
18:Z:26:LYS:O	18:Z:27:GLU:CB	2.28	0.81
18:Z:40:ASP:CB	18:Z:41:ARG:CZ	2.59	0.81
2:A:111:A:H4'	22:2:62:GLU:OE2	1.80	0.81
16:X:11:THR:C	16:X:15:MET:CG	2.44	0.81
2:A:1078:U:P	31:K:93:LYS:HG3	2.20	0.81
2:A:1614:A:C5	15:W:88:ARG:HD2	2.16	0.81
2:A:706:A:O5'	2:A:706:A:H8	1.63	0.81
2:A:1364:G:O5'	25:4:3:LYS:HG2	1.76	0.81
2:A:2021:C:P	26:5:15:LYS:HE2	2.09	0.81
26:5:56:GLN:O	26:5:57:VAL:CG2	2.29	0.81
27:6:2:ALA:HB2	27:6:11:LYS:HZ1	1.44	0.81
28:7:30:ILE:O	28:7:33:ARG:N	2.13	0.81
29:8:36:LYS:HE2	29:8:40:GLU:OE1	1.78	0.81
2:A:1287:A:C5'	19:R:104:ARG:HG3	2.10	0.81
2:A:2065:C:N4	2:A:2445:G:H1	1.78	0.81
2:A:2277:G:O3'	12:Q:20:ILE:HG22	1.79	0.81
2:A:2367:G:C2	2:A:2368:C:C5	2.68	0.81
4:E:269:ILE:HD11	4:E:296:VAL:C	2.01	0.81
4:E:267:ARG:CD	4:E:297:LYS:HD3	2.08	0.81
5:F:238:SER:O	5:F:241:ALA:HB2	1.81	0.81
5:F:37:ALA:HB1	5:F:107:ARG:CZ	2.10	0.81
5:F:45:ASP:O	5:F:46:TYR:CG	2.33	0.81
6:G:140:ARG:HA	6:G:143:LYS:NZ	1.96	0.81
6:G:17:ARG:O	6:G:18:ILE:O	1.98	0.81
7:H:36:PHE:HD2	7:H:70:LEU:CD1	1.90	0.81
7:H:41:THR:CB	7:H:52:THR:CB	2.57	0.81
2:A:2674:G:H4'	10:O:30:ARG:HG3	1.62	0.81
12:Q:143:VAL:HG23	12:Q:144:THR:N	1.94	0.81
20:U:59:ARG:C	20:U:62:ILE:CG1	2.33	0.81
17:Y:101:LEU:HD21	17:Y:112:LEU:HD11	1.62	0.81
22:2:15:GLU:O	22:2:17:GLU:N	2.13	0.81
2:A:2722:G:N3	2:A:2723:C:C5	2.48	0.81

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:4:68:ARG:HG2	25:4:72:LYS:HG2	1.58	0.81
27:6:19:GLY:O	27:6:20:PHE:HB2	1.81	0.81
2:A:1287:A:C5'	19:R:104:ARG:HD2	2.11	0.81
2:A:2329:G:H2'	2:A:2330:G:C8	2.16	0.81
2:A:2336:A:HO2'	2:A:2337:G:H5'	0.99	0.81
2:A:2358:G:N2	2:A:2359:C:C4'	2.43	0.81
2:A:2361:A:C2	2:A:2362:G:H1'	2.15	0.81
2:A:2056:G:OP2	2:A:2504:U:OP2	1.97	0.81
2:A:2592:G:N7	2:A:2593:U:C4	2.49	0.81
2:A:2606:C:C6	2:A:2606:C:H5''	2.15	0.81
2:A:2668:G:N2	2:A:2669:G:C4	2.49	0.81
2:A:2707:G:H2'	2:A:2708:G:O5'	1.80	0.81
2:A:2733:A:H1'	4:E:318:ASN:HD21	1.43	0.81
2:A:2762:G:C6	2:A:2763:G:C6	2.68	0.81
2:A:2821:A:O2'	2:A:2822:G:O4'	1.98	0.81
3:D:80:ILE:CB	3:D:82:TYR:CE1	2.63	0.81
4:E:101:THR:OG1	4:E:103:GLU:OE2	1.97	0.81
4:E:185:GLY:O	4:E:187:HIS:CD2	2.33	0.81
5:F:223:LEU:HD12	5:F:224:ALA:CA	2.11	0.81
5:F:22:PHE:HE2	5:F:118:THR:OG1	1.64	0.81
7:H:85:ALA:C	7:H:148:ARG:HH22	1.76	0.81
7:H:151:ARG:O	7:H:161:ILE:HG12	1.80	0.81
9:N:52:GLN:O	9:N:56:LYS:HE2	1.79	0.81
11:P:106:VAL:HG23	11:P:122:ALA:HB1	1.61	0.81
19:R:78:LYS:HG3	19:R:82:GLU:HG3	1.60	0.81
2:A:447:A:OP2	20:U:5:LYS:NZ	2.13	0.81
21:V:12:TYR:O	21:V:13:ARG:HB2	1.81	0.81
21:V:40:VAL:HA	21:V:51:ALA:HA	1.60	0.81
18:Z:64:ALA:CB	18:Z:85:MET:CA	2.44	0.81
8:I:81:ALA:O	8:I:147:GLU:HA	1.80	0.81
2:A:75:G:C4'	22:2:51:LYS:HZ1	1.93	0.81
27:6:8:ILE:HA	27:6:29:ARG:NH2	1.93	0.81
28:7:21:ARG:HH12	28:7:43:THR:H	1.28	0.81
2:A:2742:C:P	30:9:35:ARG:NH1	2.53	0.81
2:A:2188:C:C6	2:A:2189:U:C5	2.68	0.81
2:A:2249:U:O2	2:A:2253:G:OP2	1.97	0.81
2:A:2256:G:N1	2:A:2257:U:C2	2.49	0.81
2:A:2423:U:C5	2:A:2425:A:C6	2.67	0.81
2:A:825:C:C4'	2:A:2428:G:C5	2.57	0.81
2:A:2051:A:N7	2:A:2614:A:N7	2.29	0.81
2:A:2740:A:C8	2:A:2740:A:H5'	2.14	0.81
2:A:2785:C:O2'	4:E:100:TRP:CB	2.29	0.81

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:534:U:O2'	20:U:49:ASP:CG	2.18	0.81
2:A:647:G:H1'	2:A:2351:G:OP1	1.80	0.81
3:D:146:LYS:HD3	3:D:147:PRO:HD3	1.63	0.81
3:D:167:GLU:CB	3:D:170:TYR:HE1	1.74	0.81
4:E:198:TYR:HE2	4:E:265:ASN:O	1.63	0.81
5:F:151:GLN:HA	5:F:154:VAL:HG23	1.61	0.81
7:H:58:LYS:HG3	7:H:59:HIS:N	1.95	0.81
10:O:24:VAL:HG21	10:O:32:TYR:N	1.96	0.81
12:Q:56:ILE:CD1	12:Q:113:ALA:O	2.29	0.81
20:U:43:ALA:O	20:U:44:THR:C	2.16	0.81
20:U:69:ALA:O	20:U:79:PHE:CE1	2.33	0.81
15:W:27:LYS:O	15:W:70:TYR:HB2	1.81	0.81
18:Z:81:VAL:HG12	18:Z:82:ASP:N	1.95	0.81
18:Z:99:HIS:O	18:Z:135:VAL:HG13	1.80	0.81
22:2:54:ALA:O	22:2:56:ILE:N	2.13	0.81
25:4:51:ASP:C	25:4:52:THR:HG23	1.99	0.81
2:A:227:A:N1	2:A:2407:G:C1'	2.40	0.81
24:0:36:ILE:O	24:0:37:LEU:HG	1.81	0.81
26:5:11:THR:HB	26:5:16:ARG:NE	1.96	0.81
30:9:29:ASN:CB	30:9:32:HIS:ND1	2.44	0.81
2:A:2060:A:HO2'	2:A:2502:G:C5'	1.94	0.81
2:A:2286:A:H5'	2:A:2287:A:O4'	1.79	0.81
2:A:2449:U:OP1	2:A:2449:U:O4'	1.98	0.81
2:A:247:G:O6	29:8:11:LYS:NZ	2.12	0.81
2:A:2634:G:C2	2:A:2635:C:C6	2.69	0.81
2:A:612:G:H4'	2:A:616:A:H61	1.43	0.81
2:A:637:A:OP2	11:P:126:SER:OG	1.97	0.81
3:D:158:GLY:CA	3:D:194:VAL:CG2	2.57	0.81
3:D:224:VAL:HG12	3:D:225:ARG:N	1.96	0.81
3:D:74:PRO:HG3	3:D:96:ALA:HB2	0.81	0.81
4:E:222:ARG:CD	4:E:232:ARG:HA	2.11	0.81
2:A:2578:G:N7	4:E:237:ASN:CG	2.32	0.81
4:E:46:ALA:CB	4:E:72:VAL:O	2.28	0.81
9:N:136:SER:OG	9:N:137:GLU:N	2.14	0.81
10:O:1:MET:H1	10:O:32:TYR:HD2	0.83	0.81
12:Q:72:VAL:HG21	12:Q:135:ALA:HB1	1.63	0.81
2:A:1151:G:C2'	20:U:81:ASN:HD21	1.93	0.81
22:2:13:PRO:HD3	22:2:16:ARG:HH11	1.43	0.81
31:K:132:ALA:HB1	31:K:137:ILE:HB	1.62	0.81
24:0:52:GLY:O	24:0:53:MET:HG3	1.81	0.81
2:A:1943:U:H1'	2:A:1945:G:C5'	2.11	0.81
23:3:31:LEU:CD2	23:3:32:GLN:CB	2.59	0.81

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:4:10:VAL:N	25:4:11:PRO:CD	2.44	0.81
2:A:1791:A:P	3:D:210:LYS:CD	2.68	0.81
2:A:2455:G:C2	2:A:2498:C:N4	2.49	0.81
2:A:2533:A:C8	2:A:2534:A:N7	2.49	0.81
2:A:2556:C:H2'	2:A:2557:G:C4'	2.11	0.81
2:A:2557:G:H2'	2:A:2558:C:C6	2.15	0.81
2:A:530:G:H5''	2:A:561:G:O6	1.81	0.81
2:A:873:G:H4'	12:Q:32:LYS:CG	2.09	0.81
1:B:8:U:OP1	13:S:37:ARG:HD2	1.81	0.81
3:D:106:PRO:HB3	3:D:141:HIS:NE2	1.95	0.81
3:D:208:GLY:O	3:D:211:HIS:CD2	2.33	0.81
4:E:105:HIS:ND1	4:E:108:LEU:HD11	1.95	0.81
4:E:216:ARG:NH2	4:E:255:GLN:HA	1.96	0.81
4:E:45:LYS:CE	4:E:301:PRO:HB2	2.10	0.81
10:O:7:ARG:HE	10:O:44:LYS:HD3	1.44	0.81
19:R:47:PHE:O	19:R:48:VAL:C	2.16	0.81
13:S:86:LEU:CD2	13:S:124:ASP:HB2	2.11	0.81
8:I:68:LEU:CG	8:I:108:LEU:CD1	2.59	0.81
16:X:4:VAL:HG22	22:2:24:LYS:CE	2.10	0.81
3:D:235:PRO:O	3:D:236:PHE:O	1.99	0.81
25:4:5:LEU:HA	25:4:56:VAL:HA	1.59	0.81
28:7:30:ILE:HD13	28:7:33:ARG:HD3	0.85	0.81
2:A:584:C:H42	2:A:1256:G:H1	1.29	0.81
2:A:2188:C:C5	2:A:2189:U:C5	2.69	0.81
2:A:2199:A:H2'	2:A:2205:C:O4'	1.80	0.81
2:A:2315:G:O2'	2:A:2316:C:O5'	1.98	0.81
2:A:2447:G:C2	2:A:2500:U:C4	2.69	0.81
2:A:2593:U:H3	2:A:2600:A:H61	1.29	0.81
2:A:2731:G:C2	2:A:2732:G:N2	2.46	0.81
2:A:2627:G:C6	2:A:2777:G:O6	2.34	0.81
4:E:229:GLN:O	4:E:230:GLY:C	2.18	0.81
5:F:217:GLU:O	5:F:218:VAL:HG22	1.80	0.81
7:H:164:GLU:HA	7:H:164:GLU:OE1	1.80	0.81
7:H:32:LEU:HD23	7:H:32:LEU:C	2.02	0.81
8:I:7:LYS:CE	8:I:12:LYS:HG2	2.10	0.81
11:P:67:ARG:NH1	11:P:111:ALA:C	2.32	0.81
19:R:73:VAL:O	19:R:74:LYS:C	2.19	0.81
15:W:86:LEU:HB2	15:W:94:ASP:O	1.81	0.81
18:Z:151:ASP:CB	18:Z:153:LYS:NZ	2.41	0.81
18:Z:71:MET:CG	18:Z:78:PRO:HG3	2.11	0.81
8:I:98:ILE:HD13	8:I:115:ILE:HD13	1.62	0.81
2:A:2309:A:H5''	2:A:2310:A:N7	1.95	0.81

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1924:C:C2	2:A:1925:C:C6	2.69	0.81
2:A:176:G:C3'	2:A:177:G:H8	1.93	0.81
23:3:30:ARG:HE	23:3:33:GLN:HG3	1.44	0.80
2:A:1818:U:C5'	3:D:155:ARG:HB2	2.10	0.80
2:A:2314:C:C2'	2:A:2315:G:O5'	2.29	0.80
2:A:2320:A:C2	2:A:2333:A:N1	2.49	0.80
2:A:2498:C:H2'	2:A:2499:C:H5''	1.62	0.80
2:A:2446:G:N2	2:A:2501:C:C4	2.50	0.80
2:A:2658:C:H2'	2:A:2659:G:C5'	2.10	0.80
2:A:2663:G:O2'	2:A:2664:G:O4'	1.98	0.80
2:A:2683:C:C2'	2:A:2684:U:H5'	2.10	0.80
2:A:2742:C:H5''	30:9:35:ARG:NH1	1.94	0.80
2:A:2758:A:OP2	2:A:2758:A:H3'	1.80	0.80
2:A:856:C:O2'	24:0:24:LYS:HD3	1.80	0.80
2:A:85:G:OP1	17:Y:65:VAL:HG21	1.80	0.80
3:D:130:PRO:CA	3:D:188:ARG:HG2	2.10	0.80
3:D:68:ARG:NH2	3:D:128:ALA:HB3	1.96	0.80
4:E:204:VAL:O	4:E:205:THR:O	1.99	0.80
4:E:62:ARG:O	4:E:63:GLU:HG3	1.80	0.80
5:F:223:LEU:C	5:F:225:PRO:HD2	2.01	0.80
7:H:104:LEU:C	7:H:151:ARG:HH12	1.83	0.80
9:N:58:GLU:HA	9:N:61:VAL:HG21	1.59	0.80
19:R:25:ALA:N	19:R:44:LEU:HD21	1.96	0.80
20:U:78:THR:O	20:U:79:PHE:C	2.17	0.80
20:U:91:ASN:O	20:U:95:LEU:HD11	1.79	0.80
21:V:40:VAL:CG1	21:V:55:THR:HG23	2.11	0.80
15:W:19:LEU:CD2	26:5:25:LEU:CG	2.21	0.80
17:Y:101:LEU:HD23	17:Y:101:LEU:O	1.81	0.80
16:X:18:MET:HE3	16:X:25:GLN:C	2.01	0.80
16:X:4:VAL:HG23	16:X:5:ILE:H	1.46	0.80
2:A:396:G:H5''	25:4:10:VAL:O	1.80	0.80
25:4:14:ILE:CG2	25:4:37:SER:OG	2.28	0.80
25:4:5:LEU:CD2	25:4:5:LEU:N	2.42	0.80
26:5:12:SER:OG	26:5:14:SER:OG	1.98	0.80
26:5:52:TYR:O	26:5:53:ASP:OD1	1.99	0.80
2:A:1612:C:C2'	28:7:3:ARG:HE	1.82	0.80
2:A:1807:G:N2	2:A:1809:A:H5'	1.96	0.80
2:A:2049:G:O2'	4:E:253:GLN:OE1	1.99	0.80
2:A:2227:A:C2	2:A:2228:G:N3	2.48	0.80
2:A:2320:A:H61	13:S:14:ARG:HA	1.46	0.80
2:A:2498:C:H3'	2:A:2498:C:P	2.21	0.80
2:A:2508:G:C2'	2:A:2509:G:H5'	2.10	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2726:U:H3'	2:A:2727:G:C8	2.15	0.80
2:A:2734:A:N6	2:A:2735:G:C4	2.47	0.80
2:A:2810:A:N7	2:A:2811:G:C4	2.49	0.80
2:A:2809:A:C4'	2:A:2811:G:N7	2.45	0.80
2:A:2885:C:N3	2:A:2886:G:C8	2.49	0.80
3:D:100:LYS:O	3:D:101:ARG:CG	2.28	0.80
3:D:168:GLY:C	3:D:170:TYR:H	1.84	0.80
3:D:66:PHE:O	3:D:67:LYS:CB	2.29	0.80
7:H:86:LEU:N	7:H:131:ILE:HG23	1.80	0.80
2:A:142(A):A:O3'	9:N:21:ARG:CZ	2.29	0.80
12:Q:144:THR:OG1	12:Q:145:PRO:CD	2.27	0.80
12:Q:31:PHE:CE2	12:Q:86:ARG:HA	2.16	0.80
20:U:56:ASP:O	20:U:60:LEU:HD21	1.78	0.80
20:U:73:GLY:O	20:U:74:MET:CG	2.28	0.80
17:Y:101:LEU:HD23	17:Y:101:LEU:C	2.01	0.80
18:Z:147:ILE:C	18:Z:168:VAL:HB	2.01	0.80
23:3:1:MET:HE1	23:3:3:ARG:CD	2.04	0.80
29:8:30:ARG:HB3	29:8:44:LYS:HE3	1.62	0.80
2:A:2352:A:C8	2:A:2366:A:C6	2.69	0.80
2:A:2622:C:C2	2:A:2623:G:N7	2.49	0.80
2:A:2815:C:O2'	2:A:2816:C:H5'	1.69	0.80
2:A:2850:A:C5	2:A:2851:A:N7	2.49	0.80
2:A:904:C:O2'	18:Z:166:LEU:HD11	1.82	0.80
4:E:99:VAL:O	4:E:100:TRP:CG	2.34	0.80
9:N:51:GLU:C	9:N:53:ILE:N	2.29	0.80
10:O:58:VAL:CG1	10:O:59:LYS:N	2.45	0.80
13:S:122:ALA:O	13:S:125:ALA:N	2.14	0.80
17:Y:66:ASP:OD2	17:Y:72:ILE:HA	1.82	0.80
18:Z:26:LYS:HB3	18:Z:26:LYS:HZ3	1.45	0.80
2:A:1340:U:C6	16:X:55:GLN:NE2	2.47	0.80
16:X:58:MET:C	16:X:59:ASP:OD2	2.18	0.80
16:X:44:GLN:CD	16:X:44:GLN:C	2.40	0.80
23:3:8:LEU:HA	23:3:54:VAL:CG1	2.11	0.80
27:6:16:ALA:HB2	27:6:50:PHE:CE2	2.16	0.80
2:A:458:G:H2'	28:7:40:HIS:NE2	1.95	0.80
2:A:2052:G:C4'	4:E:239:GLY:O	2.29	0.80
2:A:2212:A:H2'	2:A:2213:U:C6	2.16	0.80
2:A:676:A:C8	2:A:2443:C:H1'	2.16	0.80
2:A:2558:C:N3	2:A:2559:C:C5	2.50	0.80
2:A:2659:G:O2'	2:A:2663:G:N2	2.14	0.80
2:A:2690:C:H6	2:A:2690:C:C3'	1.95	0.80
1:B:77:U:H5'	18:Z:80:HIS:CE1	2.17	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:782:A:H2	3:D:233:ASP:OD2	1.65	0.80
2:A:2785:C:O4'	4:E:98:GLU:O	1.98	0.80
2:A:673:C:C4'	5:F:82:GLN:OE1	2.29	0.80
7:H:127:GLN:HG3	7:H:128:THR:H	1.46	0.80
7:H:90:GLY:CA	7:H:159:LYS:HE3	2.11	0.80
9:N:82:THR:O	9:N:85:GLY:N	2.13	0.80
2:A:1665:A:C1'	10:O:66:LYS:NZ	2.43	0.80
10:O:86:ILE:HG22	10:O:87:ILE:N	1.95	0.80
20:U:103:PRO:O	20:U:107:LYS:CG	2.23	0.80
20:U:33:ARG:CB	20:U:33:ARG:NH1	2.35	0.80
22:2:45:ARG:HG3	22:2:49:LEU:HG	1.64	0.80
22:2:8:ILE:HA	22:2:11:MET:HG2	1.63	0.80
27:6:41:ASP:CB	27:6:46:LYS:HZ2	1.84	0.80
29:8:26:LYS:CB	29:8:44:LYS:HA	2.10	0.80
2:A:593:G:O2'	29:8:58:MET:CE	2.29	0.80
30:9:25:VAL:HB	30:9:34:GLN:CA	2.08	0.80
2:A:1996:C:H2'	2:A:1997:G:H4'	1.63	0.80
2:A:2273:A:N7	2:A:2274:A:N7	2.29	0.80
2:A:2516:G:C4	2:A:2569:G:N2	2.50	0.80
2:A:2543:G:C6	2:A:2544:G:N1	2.49	0.80
2:A:2561:A:C6	2:A:2562:U:C6	2.70	0.80
2:A:2689:U:C6	2:A:2713:A:C6	2.69	0.80
2:A:2695:C:H2'	2:A:2696:U:C5	2.17	0.80
2:A:2703:C:O2'	2:A:2704:C:C5'	2.29	0.80
2:A:2776:A:C1'	2:A:2778:A:C8	2.51	0.80
4:E:180:ILE:CG2	4:E:187:HIS:CA	2.54	0.80
5:F:168:ARG:N	5:F:232:LEU:O	2.14	0.80
6:G:35:ALA:O	6:G:36:ASN:CB	2.30	0.80
7:H:102:LEU:HD21	7:H:114:ILE:CB	2.11	0.80
7:H:23:VAL:CG1	7:H:74:MET:HE3	2.08	0.80
11:P:69:ILE:CA	11:P:73:VAL:HG23	2.11	0.80
12:Q:32:LYS:HZ1	18:Z:172:LEU:CD1	1.90	0.80
20:U:14:HIS:CE1	20:U:36:PHE:CE2	2.69	0.80
20:U:21:ALA:CA	20:U:24:PHE:CZ	2.50	0.80
20:U:36:PHE:O	20:U:37:GLN:O	2.00	0.80
17:Y:91:LEU:CD2	17:Y:91:LEU:N	2.44	0.80
1:B:76:G:OP1	18:Z:32:PHE:CZ	2.23	0.80
2:A:1086:A:O3'	2:A:1087:G:P	2.40	0.80
2:A:2857:G:O5'	2:A:2857:G:C8	2.32	0.80
2:A:51:G:H1'	2:A:118:A:N6	1.97	0.80
31:K:63:ASP:C	31:K:64:LYS:HG3	2.02	0.80
28:7:22:MET:O	28:7:28:ARG:HG3	1.82	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:9:14:CYS:CA	30:9:27:CYS:HB3	1.93	0.80
2:A:2675:A:C2'	2:A:2676:C:H5'	2.10	0.80
2:A:2753:A:N7	2:A:2754:U:C5	2.49	0.80
2:A:2786:U:H5'	4:E:100:TRP:C	2.02	0.80
2:A:2887:U:C2	2:A:2888:C:C6	2.70	0.80
1:B:50:G:OP2	13:S:74:PRO:CB	2.30	0.80
3:D:131:LEU:HG	3:D:187:CYS:HB2	1.63	0.80
4:E:221:LYS:HB3	4:E:222:ARG:HD2	1.63	0.80
4:E:42:ALA:CB	4:E:310:PHE:HA	2.11	0.80
5:F:102:LEU:HD13	5:F:107:ARG:HG2	1.64	0.80
6:G:146:LYS:HG3	13:S:15:GLU:HG3	1.64	0.80
6:G:38:GLU:HA	6:G:41:LEU:CD1	2.12	0.80
7:H:40:MET:CB	7:H:64:HIS:NE2	2.44	0.80
10:O:27:GLY:O	10:O:28:SER:O	2.00	0.80
12:Q:136:TRP:HA	12:Q:136:TRP:CE3	2.15	0.80
19:R:20:LEU:CD1	19:R:21:TYR:CG	2.64	0.80
17:Y:15:PRO:O	17:Y:18:GLU:HB2	1.82	0.80
17:Y:69:LYS:O	17:Y:70:ALA:HB3	1.81	0.80
18:Z:69:VAL:CG1	18:Z:81:VAL:CG2	2.54	0.80
1:B:77:U:H5'	18:Z:80:HIS:ND1	1.96	0.80
22:2:21:ASP:O	22:2:22:ASP:C	2.18	0.80
31:K:38:PHE:CE2	31:K:66:PHE:O	2.35	0.80
2:A:1546:C:H3'	2:A:1547:C:OP1	1.81	0.80
24:0:46:LYS:HG3	24:0:58:THR:CB	2.11	0.80
2:A:932:G:H5'	23:3:24:LYS:HE2	1.64	0.80
30:9:24:LEU:HD13	30:9:35:ARG:CG	2.12	0.80
2:A:2248:C:C2'	2:A:2249:U:H5'	2.11	0.80
2:A:2333:A:C8	2:A:2335:A:N3	2.49	0.80
2:A:2741:A:O2'	2:A:2742:C:C4'	2.28	0.80
2:A:2801:A:H2	2:A:2895:U:C1'	1.94	0.80
2:A:290:G:H2'	2:A:291:C:O4'	1.82	0.80
2:A:326:G:H2'	2:A:327:G:H8	1.47	0.80
2:A:873:G:H4'	12:Q:32:LYS:CB	2.11	0.80
1:B:42:C:H1'	6:G:47:GLN:C	2.02	0.80
1:B:24:G:C5	1:B:56:G:C4	2.68	0.80
3:D:143:ILE:HG12	3:D:153:LEU:CA	2.06	0.80
9:N:63:ILE:HB	9:N:71:TYR:CE1	2.17	0.80
19:R:65:LEU:O	19:R:68:ARG:N	2.15	0.80
13:S:49:THR:N	13:S:55:ASP:CG	2.35	0.80
13:S:98:GLU:HG3	13:S:99:GLU:N	1.95	0.80
14:T:12:ASP:O	14:T:13:ILE:HG12	1.79	0.80
20:U:46:GLU:O	20:U:49:ASP:CB	2.30	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:V:3:ALA:HB3	21:V:12:TYR:OH	1.82	0.80
15:W:11:ARG:CG	15:W:11:ARG:HH11	1.94	0.80
18:Z:112:LEU:CD2	18:Z:172:LEU:O	2.29	0.80
18:Z:52:PHE:O	18:Z:53:ASP:HB2	1.81	0.80
16:X:28:VAL:HG11	16:X:64:ALA:HB3	1.64	0.80
16:X:9:HIS:HB2	16:X:26:PHE:HA	1.64	0.80
31:K:13:LEU:CD2	31:K:24:VAL:CG2	2.58	0.80
31:K:42:PHE:HZ	31:K:58:ILE:HD11	0.98	0.80
15:W:89:ALA:O	15:W:90:ARG:NH1	2.14	0.80
2:A:1751:C:O4'	2:A:2860:A:H2	1.61	0.80
29:8:16:ILE:HD12	29:8:16:ILE:H	1.44	0.80
2:A:1022:G:OP2	9:N:52:GLN:CD	2.19	0.80
2:A:2298:A:H1'	2:A:2321:G:N2	1.96	0.80
2:A:2348:U:C5'	29:8:42:ARG:NH2	2.37	0.80
2:A:25:U:H5''	15:W:80:PRO:HD3	0.80	0.80
2:A:2653:U:C3'	2:A:2654:A:C8	2.61	0.80
2:A:2690:C:H3'	2:A:2690:C:C6	2.16	0.80
2:A:2768:C:N4	2:A:2769:C:H41	1.79	0.80
3:D:140:VAL:CG2	3:D:191:VAL:HG12	2.10	0.80
4:E:222:ARG:NE	4:E:232:ARG:O	2.15	0.80
4:E:42:ALA:HB1	4:E:310:PHE:HA	1.64	0.80
11:P:117:GLU:CD	11:P:136:ALA:C	2.40	0.80
11:P:66:VAL:CG1	11:P:67:ARG:H	1.79	0.80
12:Q:133:GLU:CD	12:Q:134:PHE:N	2.35	0.80
19:R:39:PRO:O	19:R:40:LYS:C	2.20	0.80
19:R:61:HIS:C	19:R:64:ARG:HH11	1.85	0.80
20:U:108:ALA:O	20:U:109:LEU:C	2.19	0.80
20:U:61:TRP:CZ3	20:U:94:VAL:N	2.43	0.80
21:V:30:GLY:HA3	21:V:33:VAL:CG2	2.01	0.80
21:V:30:GLY:C	21:V:33:VAL:HG21	1.89	0.80
21:V:72:ARG:C	21:V:88:GLN:HG2	2.02	0.80
22:2:13:PRO:N	22:2:16:ARG:HD2	1.96	0.80
2:A:1341:U:H4'	16:X:54:THR:O	1.82	0.80
2:A:2310:A:C4	6:G:55:LYS:NZ	2.49	0.80
7:H:155:PRO:O	7:H:169:ARG:HG3	1.82	0.80
2:A:1364:G:C3'	25:4:3:LYS:HZ2	1.95	0.80
27:6:12:MET:HB2	27:6:27:ASN:HD21	1.43	0.80
2:A:126:A:H5''	28:7:18:PHE:HD1	1.47	0.80
2:A:197:A:C5	2:A:2430:A:C8	2.70	0.80
2:A:2252:G:C6	2:A:2253:G:C6	2.70	0.80
2:A:2270:G:O6	2:A:2271:G:C2	2.35	0.80
2:A:2295:C:N3	2:A:2337:G:N2	2.26	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2380:C:C2'	2:A:2381:C:C5'	2.60	0.80
2:A:2470:G:N1	2:A:2471:C:N4	2.29	0.80
2:A:2575:C:H5''	2:A:2576:G:OP2	1.81	0.80
2:A:2679:A:C4	4:E:300:VAL:HG11	2.16	0.80
2:A:2776:A:N9	2:A:2778:A:N7	2.29	0.80
2:A:2813:A:C8	2:A:2814:C:C5	2.70	0.80
2:A:2840:C:N3	2:A:2841:C:C4	2.49	0.80
2:A:953:A:O2'	2:A:2266:A:OP2	1.99	0.80
2:A:1789:A:C4'	3:D:224:VAL:CG1	2.59	0.80
4:E:174:LEU:HD12	4:E:174:LEU:N	1.95	0.80
4:E:214:VAL:HG22	4:E:221:LYS:CD	2.12	0.80
4:E:268:LEU:HD22	4:E:269:ILE:N	1.97	0.80
9:N:21:ARG:C	9:N:24:SER:HG	1.83	0.80
9:N:41:ALA:HB1	9:N:75:PRO:CB	2.12	0.80
12:Q:151:SER:HB3	12:Q:155:GLY:O	1.82	0.80
12:Q:58:HIS:CA	12:Q:61:LEU:HG	2.11	0.80
19:R:75:LEU:O	19:R:78:LYS:N	2.15	0.80
2:A:2021:C:C5	20:U:25:TRP:CH2	2.69	0.80
20:U:80:ILE:HA	20:U:83:LEU:HD12	1.64	0.80
17:Y:89:ARG:HB3	17:Y:90:PRO:HD2	1.64	0.80
18:Z:138:VAL:C	18:Z:139:THR:HG1	1.85	0.80
2:A:874:G:OP1	18:Z:172:LEU:HD11	1.82	0.80
16:X:6:LYS:HZ1	16:X:29:ASP:CA	1.86	0.80
31:K:100:VAL:CG1	31:K:101:THR:H	1.86	0.80
31:K:13:LEU:HD21	31:K:24:VAL:HG22	1.64	0.80
17:Y:81:LYS:HG2	17:Y:82:THR:H	1.47	0.80
4:E:65:MET:O	4:E:65:MET:SD	2.39	0.80
24:O:65:GLY:CA	24:O:66:LYS:HZ2	1.94	0.80
2:A:2010:G:P	15:W:41:LYS:HG3	2.22	0.80
2:A:2067:G:C2	2:A:2444:G:C2	2.70	0.80
2:A:2082:A:N6	2:A:2239:G:C6	2.50	0.80
2:A:2240:C:C2'	2:A:2240:C:O2	2.29	0.80
2:A:2286:A:C3'	2:A:2286:A:C8	2.64	0.80
2:A:2446:G:N1	2:A:2501:C:H5	1.75	0.80
2:A:2509:G:H2'	2:A:2510:C:C5'	2.11	0.80
2:A:2540:C:O2'	2:A:2541:A:O5'	1.99	0.80
2:A:2564:A:C2'	2:A:2565:A:C8	2.55	0.80
2:A:2580:U:C5	2:A:2581:G:H8	1.67	0.80
2:A:2814:C:H2'	2:A:2815:C:C6	2.16	0.80
2:A:2825:C:C6	2:A:2825:C:C3'	2.63	0.80
2:A:854:G:H1	2:A:923:C:H42	1.30	0.80
2:A:99:U:N3	17:Y:107:LYS:HD2	1.97	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1792:G:OP1	3:D:204:PHE:CZ	2.35	0.80
5:F:101:ASP:O	5:F:102:LEU:O	2.00	0.80
5:F:107:ARG:O	5:F:108:GLN:C	2.19	0.80
5:F:214:THR:H	5:F:218:VAL:HG23	1.47	0.80
8:I:7:LYS:N	8:I:14:LYS:CG	2.34	0.80
10:O:63:VAL:HG13	10:O:102:VAL:CB	2.09	0.80
12:Q:142:LYS:HG3	12:Q:143:VAL:H	0.63	0.80
12:Q:82:LYS:HB2	12:Q:125:TRP:CB	2.11	0.80
2:A:1275:A:H61	19:R:19:ALA:CB	1.94	0.80
13:S:83:LEU:CD1	13:S:83:LEU:N	2.43	0.80
20:U:40:LEU:HD23	20:U:40:LEU:H	1.46	0.80
21:V:19:VAL:HG12	21:V:21:ARG:HH22	1.44	0.80
15:W:23:LEU:C	15:W:25:ARG:N	2.34	0.80
15:W:70:TYR:HD2	15:W:71:VAL:N	1.80	0.80
18:Z:40:ASP:HB2	18:Z:41:ARG:CZ	2.10	0.80
22:2:52:ALA:O	22:2:56:ILE:HG12	1.81	0.80
6:G:54:ALA:O	6:G:55:LYS:HB2	1.80	0.80
8:I:52:GLN:HA	8:I:55:GLN:CD	2.02	0.80
8:I:62:LEU:C	8:I:66:LYS:HE2	2.01	0.80
23:3:23:LEU:CA	23:3:28:LEU:CD1	2.19	0.79
23:3:42:ALA:HB3	23:3:43:ILE:HD12	1.63	0.79
29:8:62:LEU:CB	29:8:63:PRO:CD	2.49	0.79
2:A:1287:A:H1'	19:R:104:ARG:NH1	1.95	0.79
2:A:2396:G:OP1	25:4:28:ARG:NH1	2.15	0.79
2:A:2403:C:N4	2:A:2415:G:C5	2.48	0.79
2:A:2445:G:H2'	2:A:2446:G:C8	2.16	0.79
2:A:2464:C:N4	2:A:2486:G:H1	1.80	0.79
2:A:2517:C:C4	2:A:2542:A:C6	2.70	0.79
2:A:2547:U:C5	2:A:2566:A:C4	2.70	0.79
2:A:2666:C:C5	2:A:2667:C:C5	2.70	0.79
2:A:2748:A:N7	2:A:2749:A:C4	2.48	0.79
2:A:2839:G:C2	2:A:2840:C:C6	2.70	0.79
2:A:2865:U:N3	2:A:2866:U:C5	2.50	0.79
7:H:101:LYS:HZ3	7:H:115:GLU:HB2	1.46	0.79
7:H:120:LEU:H	7:H:120:LEU:HD23	1.46	0.79
9:N:75:PRO:CD	9:N:136:SER:OG	2.27	0.79
10:O:78:ARG:O	14:T:22:VAL:HG22	1.82	0.79
11:P:116:HIS:HD2	11:P:118:LEU:CD1	1.95	0.79
11:P:94:ARG:HD3	11:P:120:LEU:HD23	1.10	0.79
12:Q:65:ARG:HE	12:Q:85:ILE:CB	1.94	0.79
13:S:109:PRO:O	13:S:116:PHE:CZ	2.35	0.79
21:V:72:ARG:N	21:V:88:GLN:HG2	1.97	0.79

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:Y:41:ARG:O	17:Y:112:LEU:CA	2.30	0.79
2:A:1482:U:H3'	2:A:1482:U:C6	2.17	0.79
2:A:2364:C:C1'	24:0:32:LYS:HZ3	1.78	0.79
23:3:40:THR:OG1	23:3:43:ILE:HD11	1.81	0.79
2:A:2242:G:C2	2:A:2243:U:C5	2.70	0.79
2:A:2340:G:O2'	2:A:2341:G:O5'	2.00	0.79
2:A:412:A:H61	2:A:2411:A:H1'	1.46	0.79
2:A:2458:G:C5	2:A:2490:G:C2	2.69	0.79
2:A:2544:G:H2'	2:A:2545:G:H8	1.47	0.79
2:A:2584:U:H6	2:A:2584:U:C3'	1.78	0.79
2:A:10:G:N2	2:A:2629:A:C4	2.50	0.79
2:A:2633:G:N3	2:A:2634:G:N7	2.23	0.79
2:A:2893:G:O2'	2:A:2894:G:O4'	1.99	0.79
2:A:963:U:O2'	2:A:2250:G:N2	2.14	0.79
5:F:157:LEU:C	5:F:159:ALA:H	1.85	0.79
2:A:617:G:C4'	5:F:219:ASN:OD1	2.29	0.79
5:F:225:PRO:CG	5:F:231:ARG:HH21	1.95	0.79
5:F:58:ALA:HB2	5:F:79:ARG:N	1.95	0.79
10:O:58:VAL:HG12	10:O:59:LYS:H	1.47	0.79
13:S:127:LEU:O	13:S:127:LEU:HD22	1.81	0.79
13:S:102:LEU:CD1	13:S:129:ILE:HD12	2.08	0.79
20:U:102:GLU:CB	21:V:43:GLU:OE2	2.31	0.79
15:W:30:GLU:H	15:W:33:ARG:HD2	1.44	0.79
2:A:75:G:C4'	22:2:51:LYS:NZ	2.46	0.79
31:K:8:GLN:O	31:K:9:ILE:CG1	2.30	0.79
14:T:42:LEU:O	14:T:44:ARG:HA	1.81	0.79
2:A:1482:U:H1'	2:A:1512:G:H22	1.47	0.79
24:0:48:GLY:O	24:0:54:GLY:O	1.99	0.79
24:0:70:ILE:HG12	24:0:71:ASN:N	1.98	0.79
28:7:42:LEU:O	28:7:43:THR:O	2.01	0.79
29:8:19:THR:CB	29:8:21:LYS:NZ	2.45	0.79
2:A:2060:A:O2'	2:A:2502:G:O4'	2.01	0.79
2:A:919:G:N2	2:A:2268:A:H5'	1.94	0.79
2:A:2464:C:N4	2:A:2487:G:O6	2.14	0.79
2:A:2507:C:N3	2:A:2582:G:N2	2.30	0.79
2:A:2688:U:O2	2:A:2688:U:H2'	1.82	0.79
2:A:2785:C:H4'	4:E:99:VAL:C	2.02	0.79
2:A:2799:A:C3'	2:A:2801:A:P	2.59	0.79
2:A:99:U:H3	17:Y:107:LYS:CD	1.96	0.79
3:D:105:ALA:N	3:D:106:PRO:HD3	1.97	0.79
3:D:131:LEU:HA	3:D:134:ILE:HD12	1.64	0.79
3:D:76:ARG:HD3	3:D:113:MET:CE	2.13	0.79

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:189:MET:O	4:E:190:ASN:CB	2.29	0.79
7:H:85:ALA:CA	7:H:131:ILE:CG2	2.48	0.79
9:N:61:VAL:HG21	9:N:139:LEU:HB3	1.63	0.79
12:Q:102:ARG:O	12:Q:104:PRO:HD3	1.82	0.79
12:Q:138:ARG:HA	12:Q:141:MET:HG3	1.64	0.79
12:Q:67:ALA:HB2	12:Q:70:ARG:HH12	1.44	0.79
13:S:28:LYS:NZ	13:S:28:LYS:HB3	1.96	0.79
13:S:32:PRO:O	13:S:101:VAL:CG1	2.29	0.79
20:U:107:LYS:O	20:U:110:VAL:CB	2.23	0.79
21:V:50:ASP:CA	21:V:53:LYS:HG3	2.12	0.79
15:W:13:SER:O	15:W:14:PRO:C	2.21	0.79
15:W:26:GLY:O	15:W:27:LYS:HG3	1.82	0.79
15:W:82:LEU:HD21	15:W:100:THR:N	1.97	0.79
18:Z:92:VAL:CG1	18:Z:124:ALA:CB	2.56	0.79
22:2:8:ILE:CA	22:2:11:MET:HG2	2.12	0.79
6:G:29:HIS:CE1	6:G:64:ARG:CZ	2.65	0.79
2:A:1062:G:N3	31:K:134:SER:OG	2.16	0.79
25:4:48:ARG:O	25:4:49:PHE:C	2.21	0.79
26:5:45:ILE:CG2	26:5:52:TYR:CE1	2.61	0.79
27:6:32:GLN:HB3	27:6:35:LEU:CG	2.11	0.79
29:8:19:THR:HB	29:8:21:LYS:HZ2	1.44	0.79
29:8:60:LEU:HD11	29:8:64:ARG:HB2	0.81	0.79
30:9:4:ARG:O	30:9:36:GLN:HB3	1.79	0.79
2:A:2317:C:C5	2:A:2318:G:C6	2.70	0.79
2:A:2361:A:C2	2:A:2362:G:C1'	2.65	0.79
2:A:2366:A:N7	2:A:2367:G:C5	2.50	0.79
2:A:2445:G:H2'	2:A:2446:G:H8	1.47	0.79
2:A:2536:G:H2'	2:A:2537:U:H5'	1.63	0.79
2:A:2569:G:C2	2:A:2570:G:N7	2.50	0.79
2:A:2768:C:H42	2:A:2769:C:H41	1.31	0.79
2:A:2799:A:O2'	2:A:2802:G:N3	2.14	0.79
2:A:2842:G:H2'	2:A:2843:G:C5'	2.10	0.79
2:A:322:A:N3	2:A:341:G:C8	2.51	0.79
2:A:2574:G:C2'	4:E:240:PRO:HB3	2.12	0.79
7:H:73:ASN:CG	7:H:137:LYS:NZ	2.27	0.79
7:H:41:THR:HG22	7:H:52:THR:HB	1.65	0.79
20:U:106:PHE:O	20:U:107:LYS:C	2.19	0.79
20:U:113:SER:O	20:U:114:ARG:C	2.19	0.79
17:Y:23:VAL:CG2	17:Y:67:LEU:CD2	2.59	0.79
18:Z:20:ALA:O	18:Z:34:LEU:CD2	2.30	0.79
8:I:102:LEU:CD1	8:I:103:GLN:H	1.80	0.79
8:I:145:VAL:O	8:I:146:THR:CG2	2.29	0.79

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:92:SER:HB3	8:I:122:ARG:HH11	1.43	0.79
2:A:441:U:OP2	17:Y:3:GLN:HG2	1.83	0.79
23:3:22:ALA:CA	23:3:46:ASN:HD21	1.90	0.79
23:3:9:VAL:HG22	23:3:54:VAL:CA	2.12	0.79
27:6:21:TYR:OH	27:6:43:VAL:HG22	1.83	0.79
2:A:1994:C:OP1	4:E:227:ALA:HB1	1.81	0.79
2:A:2089:U:O2	2:A:2231:C:N3	2.16	0.79
2:A:2251:G:N2	2:A:2252:G:C2	2.51	0.79
2:A:2264:C:C4	2:A:2265:U:C5	2.71	0.79
2:A:859:G:O2'	2:A:2268:A:C2	2.36	0.79
2:A:2422:A:H2'	2:A:2424:C:C5	2.17	0.79
2:A:2464:C:H2'	2:A:2465:C:H6	1.46	0.79
2:A:2479:G:C2'	2:A:2480:C:O5'	2.30	0.79
2:A:2450:A:C5'	2:A:2497:A:H62	1.86	0.79
2:A:2555:U:O2'	2:A:2556:C:H5'	1.80	0.79
2:A:2690:C:C3'	2:A:2690:C:C6	2.66	0.79
2:A:2869:G:H21	2:A:2870:C:C1'	1.90	0.79
2:A:605:C:C3'	5:F:105:LYS:CE	2.45	0.79
2:A:929:G:N3	23:3:43:ILE:HG13	1.97	0.79
1:B:24:G:C6	1:B:56:G:N3	2.51	0.79
3:D:183:ILE:C	3:D:184:LEU:HD23	1.99	0.79
2:A:1791:A:P	3:D:210:LYS:HD2	2.22	0.79
9:N:15:ARG:HH12	9:N:40:ASN:HA	1.47	0.79
9:N:65:ASN:N	9:N:68:GLY:O	2.14	0.79
2:A:1131:G:C2	9:N:69:TYR:CE1	2.71	0.79
9:N:83:ILE:HD11	9:N:84:ARG:HG2	1.64	0.79
9:N:94:GLY:O	9:N:97:ALA:N	2.16	0.79
12:Q:49:VAL:HG21	12:Q:120:HIS:CA	2.12	0.79
2:A:2376:A:N6	13:S:109:PRO:HG3	1.96	0.79
1:B:49:C:OP1	13:S:111:PRO:HD2	1.82	0.79
14:T:21:PHE:O	14:T:22:VAL:HG12	1.82	0.79
14:T:54:THR:HG23	14:T:55:ALA:H	1.48	0.79
18:Z:108:VAL:HG12	18:Z:108:VAL:O	1.82	0.79
22:2:27:LEU:CD1	22:2:53:ILE:CD1	2.59	0.79
2:A:1339:G:N2	2:A:1603:A:H8	1.81	0.79
2:A:2304:G:C4'	6:G:105:SER:HB2	2.13	0.79
31:K:89:SER:O	31:K:90:SER:OG	2.01	0.79
4:E:107:GLU:HB3	4:E:110:ARG:CD	2.13	0.79
2:A:484:C:H2'	2:A:485:C:C6	2.18	0.79
23:3:23:LEU:N	23:3:23:LEU:HD23	1.97	0.79
2:A:933:A:OP1	23:3:24:LYS:NZ	2.16	0.79
2:A:2251:G:OP1	12:Q:102:ARG:CZ	2.31	0.79

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2484:G:N2	2:A:2485:G:N9	2.31	0.79
2:A:2603:G:C5	2:A:2604:U:H5	2.00	0.79
2:A:2652:C:H2'	2:A:2653:U:C6	2.17	0.79
2:A:2683:C:C5	2:A:2684:U:C5	2.71	0.79
2:A:2819:G:N2	2:A:2821:A:C8	2.50	0.79
2:A:2845:G:H2'	2:A:2846:G:C8	2.16	0.79
2:A:775:G:HO2'	2:A:791:C:N4	1.79	0.79
3:D:211:HIS:HD1	3:D:212:HIS:H	1.29	0.79
4:E:222:ARG:N	4:E:222:ARG:HD2	1.96	0.79
5:F:112:ARG:O	5:F:114:ALA:CA	2.30	0.79
5:F:150:THR:HB	5:F:207:LEU:HD21	1.62	0.79
7:H:145:ALA:O	7:H:148:ARG:N	2.15	0.79
9:N:54:VAL:HA	9:N:135:ILE:HG23	1.64	0.79
9:N:54:VAL:O	9:N:58:GLU:HG3	1.82	0.79
2:A:1137:G:O2'	9:N:82:THR:CA	2.30	0.79
10:O:22:ILE:CB	10:O:40:VAL:O	2.30	0.79
10:O:1:MET:CB	10:O:2:ILE:HD12	2.12	0.79
19:R:74:LYS:HA	19:R:77:ARG:HH22	1.48	0.79
13:S:127:LEU:C	13:S:127:LEU:HD23	2.02	0.79
20:U:117:ARG:CG	20:U:118:GLN:H	1.92	0.79
15:W:20:VAL:HG11	15:W:47:VAL:HG22	1.61	0.79
17:Y:73:HIS:CE1	17:Y:89:ARG:O	2.35	0.79
18:Z:14:LEU:HD23	18:Z:14:LEU:O	1.81	0.79
22:2:56:ILE:O	22:2:59:ILE:HG23	1.82	0.79
22:2:4:HIS:C	22:2:8:ILE:HD12	2.02	0.79
2:A:1081:U:H5'	31:K:126:LYS:HD2	1.64	0.79
31:K:37:GLU:O	31:K:41:ARG:HD2	1.80	0.79
4:E:109:ASP:HA	4:E:112:LEU:CB	2.11	0.79
2:A:440:G:O5'	17:Y:3:GLN:NE2	2.16	0.79
2:A:2856:C:H3'	2:A:2856:C:C6	2.18	0.79
27:6:16:ALA:C	27:6:48:VAL:HG11	2.02	0.79
2:A:1032:A:OP1	30:9:8:LYS:HG2	1.80	0.79
2:A:2606:C:C2'	2:A:2607:G:O5'	2.30	0.79
2:A:2681:C:O2'	2:A:2682:U:P	2.40	0.79
2:A:2717:G:N1	2:A:2718:G:C5	2.51	0.79
2:A:2862:G:O2'	2:A:2863:C:C6	1.96	0.79
2:A:2712:U:C3'	2:A:712(A):A:H5''	2.10	0.79
3:D:104:ILE:HB	3:D:106:PRO:HD2	1.63	0.79
2:A:1799:G:H21	3:D:153:LEU:CG	1.92	0.79
3:D:213:LYS:CG	3:D:215:LYS:O	2.31	0.79
9:N:27:ALA:HA	9:N:30:ALA:HB2	0.80	0.79
9:N:15:ARG:HD2	9:N:43:ARG:HD2	1.62	0.79

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:Q:28:ILE:HG22	12:Q:29:ALA:N	1.96	0.79
19:R:113:LEU:HD13	19:R:114:VAL:CA	2.12	0.79
21:V:40:VAL:C	21:V:51:ALA:CB	2.51	0.79
17:Y:20:HIS:HA	17:Y:67:LEU:HD21	1.63	0.79
18:Z:67:LYS:HA	18:Z:67:LYS:HZ2	1.44	0.79
18:Z:62:PHE:HB2	18:Z:85:MET:SD	2.22	0.79
8:I:145:VAL:C	8:I:146:THR:HG22	2.03	0.79
22:2:2:VAL:O	22:2:4:HIS:CE1	2.35	0.79
22:2:58:THR:O	22:2:59:ILE:C	2.21	0.79
2:A:2309:A:P	2:A:2309:A:O4'	2.40	0.79
31:K:122:GLU:CA	31:K:126:LYS:HE3	2.13	0.79
31:K:80:LYS:HD2	31:K:86:GLU:O	1.83	0.79
2:A:95:G:O2'	22:2:42:ASN:O	2.01	0.79
2:A:2722:G:C6	2:A:2723:C:C4	2.71	0.79
2:A:2721:A:H2'	2:A:2722:G:C8	2.17	0.79
2:A:856:C:C2'	24:0:24:LYS:HB2	2.11	0.79
24:0:36:ILE:CA	24:0:68:VAL:CG1	2.61	0.79
24:0:28:GLY:CA	24:0:60:PHE:HB3	2.12	0.79
23:3:9:VAL:HG23	23:3:54:VAL:HA	1.62	0.79
27:6:37:LEU:N	27:6:52:GLU:OE2	2.15	0.79
29:8:26:LYS:O	29:8:27:SER:CB	2.30	0.79
2:A:2528:U:P	30:9:30:VAL:HG12	2.11	0.79
2:A:1328:G:H2'	2:A:1330:C:C5	2.18	0.79
2:A:2574:G:H5''	2:A:2575:C:P	2.23	0.79
2:A:2886:G:N2	2:A:2887:U:C2	2.51	0.79
5:F:32:GLY:O	5:F:35:VAL:N	2.14	0.79
5:F:51:TYR:O	5:F:55:ARG:N	2.15	0.79
10:O:34:ASN:O	10:O:35:ILE:C	2.21	0.79
11:P:94:ARG:HD3	11:P:120:LEU:HB2	1.62	0.79
12:Q:45:GLN:NE2	12:Q:153:PRO:CB	2.20	0.79
12:Q:18:GLU:HG2	12:Q:23:ILE:HD11	1.65	0.79
12:Q:91:HIS:O	12:Q:92:VAL:HG13	1.83	0.79
2:A:2376:A:C2	13:S:102:LEU:CD2	2.65	0.79
20:U:47:TYR:CE1	21:V:75:LYS:O	2.22	0.79
21:V:40:VAL:O	21:V:51:ALA:HB2	1.83	0.79
21:V:49:GLU:CB	21:V:53:LYS:HD2	2.12	0.79
21:V:69:ILE:CG2	21:V:88:GLN:HB3	2.12	0.79
15:W:10:VAL:CG1	15:W:46:PHE:HE2	1.96	0.79
18:Z:51:LEU:HD11	18:Z:64:ALA:N	1.98	0.79
31:K:33:VAL:HG23	31:K:60:VAL:HG11	1.63	0.79
2:A:1558:A:C2	2:A:1560:G:H1'	2.17	0.79
25:4:11:PRO:HA	25:4:40:HIS:HD2	1.43	0.79

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:4:68:ARG:HG2	25:4:72:LYS:CB	2.13	0.79
2:A:2776:A:H1'	2:A:2778:A:H8	1.43	0.79
2:A:2785:C:C5	2:A:2786:U:C4	2.70	0.79
2:A:2820:A:H5''	2:A:2820:A:C2	2.18	0.79
2:A:2818:G:N2	2:A:2829:C:N3	2.30	0.79
2:A:328:U:O2'	17:Y:94:SER:CB	2.31	0.79
4:E:102:ASP:CG	4:E:104:PHE:CE1	2.56	0.79
4:E:79:ARG:NH1	4:E:104:PHE:HA	1.98	0.79
5:F:102:LEU:HB3	5:F:107:ARG:CZ	2.13	0.79
5:F:115:LEU:O	5:F:118:THR:OG1	2.01	0.79
5:F:33:LYS:N	5:F:36:ARG:HE	1.80	0.79
5:F:51:TYR:O	5:F:55:ARG:HA	1.81	0.79
11:P:53:ARG:N	11:P:53:ARG:HD2	1.96	0.79
11:P:69:ILE:HB	11:P:73:VAL:HG21	1.63	0.79
11:P:94:ARG:O	11:P:95:ASP:HB3	1.83	0.79
21:V:30:GLY:O	21:V:63:HIS:CB	2.28	0.79
15:W:44:ALA:O	15:W:45:TYR:C	2.21	0.79
18:Z:48:THR:OG1	18:Z:66:VAL:O	1.99	0.79
22:2:27:LEU:O	22:2:30:ALA:N	2.16	0.79
22:2:6:GLN:O	22:2:9:ARG:HB3	1.82	0.79
31:K:116:LEU:HD11	31:K:124:ALA:HA	1.63	0.79
31:K:93:LYS:HA	31:K:96:ILE:CG1	2.12	0.79
4:E:107:GLU:O	4:E:110:ARG:N	2.14	0.79
2:A:1324:G:H1'	2:A:1616:A:N6	1.98	0.79
2:A:885:C:H41	2:A:889:C:H1'	1.47	0.79
24:0:37:LEU:O	24:0:40:GLN:HG2	1.83	0.79
23:3:40:THR:CB	23:3:43:ILE:CD1	2.44	0.79
23:3:51:ALA:C	23:3:53:LEU:H	1.85	0.79
25:4:68:ARG:CZ	25:4:72:LYS:HD3	2.13	0.79
27:6:36:GLU:HB3	27:6:52:GLU:HB2	1.63	0.79
29:8:60:LEU:HD11	29:8:64:ARG:HB3	1.62	0.79
2:A:1826:G:OP1	3:D:227:VAL:HG23	1.81	0.79
2:A:2287:A:C2	2:A:2289:G:C8	2.71	0.79
2:A:2737:G:C4	2:A:2738:A:C8	2.71	0.79
2:A:2843:G:C4	2:A:2844:G:C8	2.71	0.79
2:A:2875:C:N4	2:A:2876:G:C6	2.51	0.79
2:A:396:G:C4'	25:4:39:VAL:CG1	2.61	0.79
2:A:530:G:O6	2:A:2021:C:H3'	1.83	0.79
2:A:905:U:O2'	18:Z:117:VAL:HG13	1.83	0.79
4:E:262:THR:HG1	4:E:266:LYS:NZ	1.81	0.79
7:H:105:SER:O	7:H:106:VAL:HG23	1.82	0.79
8:I:24:GLY:O	8:I:25:TYR:O	2.00	0.79

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:N:79:PHE:HD1	9:N:79:PHE:N	1.80	0.79
2:A:1952:A:C2	10:O:22:ILE:CG2	2.35	0.79
10:O:58:VAL:CG1	10:O:59:LYS:H	1.95	0.79
2:A:245:G:C5'	11:P:55:GLN:O	2.24	0.79
12:Q:142:LYS:HE2	12:Q:143:VAL:O	1.83	0.79
12:Q:32:LYS:HZ2	18:Z:172:LEU:HD13	1.48	0.79
12:Q:42:TYR:C	12:Q:125:TRP:CH2	2.56	0.79
13:S:49:THR:H	13:S:55:ASP:CG	1.86	0.79
20:U:13:ARG:NH1	20:U:13:ARG:N	2.30	0.79
15:W:55:ALA:CA	15:W:107:LEU:CD1	2.60	0.79
17:Y:47:THR:HG21	17:Y:100:ASP:HB2	1.64	0.79
17:Y:43:ASN:HD22	17:Y:101:LEU:HD23	1.41	0.79
17:Y:74:VAL:N	17:Y:91:LEU:CD1	2.40	0.79
17:Y:55:PHE:CD1	17:Y:89:ARG:NH1	2.51	0.79
18:Z:116:VAL:HA	18:Z:169:VAL:CG2	2.04	0.79
18:Z:151:ASP:HB3	18:Z:153:LYS:HZ3	1.46	0.79
18:Z:4:THR:O	18:Z:33:ALA:CB	2.31	0.79
2:A:2309:A:C5'	2:A:2310:A:H8	1.96	0.79
31:K:132:ALA:HB1	31:K:137:ILE:O	1.83	0.79
2:A:979:G:H3'	2:A:980:A:C5'	2.11	0.79
2:A:2354:G:H21	24:O:32:LYS:HE3	1.45	0.78
23:3:8:LEU:O	23:3:9:VAL:HG13	1.83	0.78
30:9:24:LEU:CD2	30:9:36:GLN:H	1.96	0.78
2:A:1140:C:OP1	9:N:18:ILE:HG13	1.82	0.78
2:A:2227:A:C6	2:A:2228:G:C5	2.70	0.78
2:A:2428:G:H3'	2:A:2428:G:C8	2.18	0.78
2:A:2512:C:OP1	4:E:219:VAL:HG13	1.82	0.78
2:A:2592:G:N2	2:A:2603:G:C6	2.51	0.78
2:A:2737:G:H2'	2:A:2738:A:C8	2.18	0.78
2:A:2793:G:C6	2:A:2794:C:C4	2.70	0.78
2:A:2840:C:H2'	2:A:2841:C:C6	2.17	0.78
2:A:562:U:O2'	2:A:563:G:H5"	1.82	0.78
2:A:599:G:H1	2:A:658:C:H42	1.30	0.78
3:D:143:ILE:CD1	3:D:143:ILE:H	1.81	0.78
3:D:143:ILE:HD13	3:D:153:LEU:N	1.95	0.78
5:F:104:ASP:O	5:F:105:LYS:C	2.22	0.78
7:H:130:ILE:CG2	7:H:131:ILE:H	1.96	0.78
9:N:65:ASN:O	9:N:66:ASP:C	2.21	0.78
2:A:1665:A:N3	10:O:67:ARG:NH1	2.31	0.78
11:P:114:VAL:CG2	11:P:132:LYS:HB3	2.03	0.78
11:P:57:VAL:CG1	11:P:58:GLN:N	2.27	0.78
12:Q:49:VAL:HG21	12:Q:119:ASN:O	1.83	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:U:111:ASP:C	20:U:113:SER:N	2.31	0.78
15:W:32:ALA:CA	15:W:35:ILE:CG1	2.56	0.78
2:A:59:U:O5'	2:A:73:A:N6	2.15	0.78
2:A:352:G:O5'	2:A:352:G:H8	1.66	0.78
2:A:1857:G:H2'	2:A:1858:G:C8	2.17	0.78
2:A:2386:C:H1'	24:0:39:ARG:HH21	1.48	0.78
23:3:20:LYS:C	23:3:23:LEU:CG	2.27	0.78
26:5:11:THR:HG21	26:5:19:ARG:NH2	1.94	0.78
2:A:1667:G:H5''	10:O:5:GLU:OE1	1.84	0.78
2:A:2043:C:C4	2:A:2777:G:C4	2.69	0.78
2:A:574:C:H41	2:A:2054:A:H5'	1.44	0.78
2:A:2252:G:H2'	2:A:2253:G:H5'	0.85	0.78
2:A:2458:G:C8	2:A:2490:G:C6	2.70	0.78
2:A:576:U:OP1	2:A:2503:A:OP1	2.01	0.78
2:A:2507:C:C4	2:A:2583:G:C2	2.71	0.78
2:A:2603:G:N3	2:A:2604:U:H6	1.80	0.78
2:A:2776:A:C4	2:A:2778:A:C5	2.69	0.78
2:A:599:G:H5'	5:F:29:ASP:OD2	1.83	0.78
2:A:604:G:H21	2:A:657:U:H4'	1.47	0.78
3:D:90:ILE:HG21	3:D:103:ILE:N	1.99	0.78
6:G:38:GLU:O	6:G:41:LEU:HB2	1.84	0.78
18:Z:25:ASN:HA	18:Z:84:TYR:CD1	2.18	0.78
16:X:28:VAL:O	16:X:62:LYS:CB	2.27	0.78
2:A:1081:U:H4'	31:K:123:ALA:HB1	1.65	0.78
31:K:20:PRO:HG2	31:K:23:PRO:CG	2.12	0.78
27:6:28:ARG:HG3	27:6:30:ASN:CB	2.12	0.78
27:6:19:GLY:C	27:6:42:PRO:HB2	2.02	0.78
29:8:19:THR:HB	29:8:21:LYS:HZ1	1.46	0.78
29:8:6:THR:C	29:8:8:LYS:N	2.35	0.78
2:A:2352:A:H2	24:0:30:VAL:CB	1.97	0.78
2:A:2418:A:O2'	2:A:2419:U:O4'	2.00	0.78
2:A:2570:G:C2	2:A:2571:C:C6	2.69	0.78
2:A:2593:U:O2	2:A:2600:A:N1	2.15	0.78
2:A:457:A:H1'	2:A:459:U:C2	2.18	0.78
2:A:673:C:C4'	5:F:82:GLN:CD	2.52	0.78
2:A:85:G:P	17:Y:65:VAL:CB	2.71	0.78
3:D:142:ASN:HB2	3:D:190:THR:H	1.48	0.78
3:D:167:GLU:O	3:D:170:TYR:CG	2.36	0.78
3:D:202:LYS:O	3:D:204:PHE:HE1	1.66	0.78
2:A:2578:G:C8	4:E:237:ASN:OD1	2.35	0.78
4:E:42:ALA:HA	4:E:311:PHE:CE2	2.16	0.78
4:E:45:LYS:NZ	4:E:303:PRO:CA	2.37	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:4:THR:O	5:F:139:VAL:CB	2.31	0.78
5:F:5:ILE:CB	5:F:14:GLY:O	2.19	0.78
5:F:163:HIS:C	5:F:166:ILE:HG13	2.03	0.78
2:A:2313:C:H5''	6:G:51:ARG:NH1	1.98	0.78
19:R:61:HIS:O	19:R:64:ARG:N	2.16	0.78
20:U:13:ARG:C	20:U:16:LYS:HB2	2.01	0.78
20:U:25:TRP:HB3	20:U:28:ARG:NH1	1.98	0.78
21:V:33:VAL:HG12	21:V:34:GLU:H	1.45	0.78
15:W:97:LYS:CE	15:W:99:ARG:NH1	2.46	0.78
22:2:6:GLN:HA	22:2:9:ARG:HB3	1.66	0.78
16:X:13:LYS:C	16:X:16:ASN:OD1	2.21	0.78
16:X:9:HIS:CE1	16:X:27:ALA:HB2	2.18	0.78
16:X:75:GLN:CB	16:X:78:ALA:O	2.24	0.78
24:0:36:ILE:O	24:0:36:ILE:HG22	1.83	0.78
2:A:850:C:C4'	23:3:18:ASP:CG	2.42	0.78
2:A:2815:C:C5'	26:5:29:ASN:ND2	2.42	0.78
26:5:6:VAL:HG13	26:5:7:PRO:HD2	1.65	0.78
2:A:2230:G:O2'	2:A:2231:C:C5'	2.32	0.78
2:A:2261:C:O4'	2:A:2388:A:H1'	1.84	0.78
2:A:2313:C:OP1	6:G:51:ARG:CG	2.31	0.78
2:A:2646:C:C2'	2:A:2647:U:H5'	2.13	0.78
2:A:2758:A:C2'	2:A:2759:G:O5'	2.31	0.78
2:A:2831:G:H5'	2:A:2834:G:O2'	1.84	0.78
2:A:2881:C:N4	2:A:2882:A:N6	2.31	0.78
2:A:616:A:H5''	5:F:42:ARG:NH1	1.94	0.78
3:D:61:TYR:OH	3:D:214:MET:HE3	1.82	0.78
4:E:222:ARG:NH2	4:E:234:ARG:HB2	1.98	0.78
4:E:222:ARG:HG2	4:E:232:ARG:N	1.98	0.78
4:E:299:SER:OG	4:E:301:PRO:CD	2.29	0.78
5:F:163:HIS:CA	5:F:166:ILE:CG1	2.56	0.78
5:F:168:ARG:C	5:F:233:THR:HG22	2.00	0.78
6:G:18:ILE:O	6:G:135:VAL:HG11	1.83	0.78
7:H:95:ALA:O	7:H:127:GLN:HB2	1.83	0.78
10:O:106:LEU:H	10:O:106:LEU:HD23	1.46	0.78
2:A:2485:G:H5'	12:Q:144:THR:HG22	1.65	0.78
13:S:32:PRO:HD2	13:S:101:VAL:N	1.98	0.78
21:V:94:LYS:O	21:V:95:ILE:CG1	2.30	0.78
18:Z:37:LYS:O	18:Z:41:ARG:CD	2.32	0.78
2:A:2421:G:OP1	27:6:2:ALA:O	2.00	0.78
28:7:17:GLY:O	28:7:18:PHE:C	2.20	0.78
2:A:1612:C:O2'	28:7:5:TYR:HB2	1.83	0.78
28:7:5:TYR:O	28:7:6:GLN:C	2.22	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1819:A:H5''	3:D:157:ALA:CB	2.13	0.78
2:A:2434:A:HO2'	2:A:2435:A:P	2.05	0.78
2:A:2487:G:H2'	2:A:2488:A:O5'	1.84	0.78
2:A:2604:U:O2'	2:A:2605:U:H5'	1.84	0.78
2:A:2605:U:O2'	2:A:2606:C:C5'	2.32	0.78
2:A:599:G:O2'	5:F:30:LEU:CD2	2.30	0.78
2:A:752:A:C6	2:A:1781:C:H1'	2.18	0.78
2:A:1799:G:N1	3:D:153:LEU:HD21	1.97	0.78
2:A:1818:U:C4'	3:D:155:ARG:HG3	2.13	0.78
10:O:35:ILE:CG1	10:O:62:VAL:HG12	2.10	0.78
10:O:64:ARG:O	10:O:82:ASN:HA	1.83	0.78
10:O:8:LEU:CD2	10:O:8:LEU:N	2.45	0.78
19:R:60:LEU:CD2	19:R:61:HIS:H	1.96	0.78
13:S:127:LEU:O	13:S:128:ASP:O	2.02	0.78
15:W:55:ALA:HA	15:W:107:LEU:HD11	1.65	0.78
18:Z:90:GLU:O	18:Z:92:VAL:HG23	1.83	0.78
16:X:13:LYS:HD3	16:X:13:LYS:H	1.48	0.78
2:A:2310:A:C8	6:G:55:LYS:NZ	2.51	0.78
31:K:80:LYS:CD	31:K:85:ILE:O	2.32	0.78
12:Q:108:SER:O	12:Q:109:VAL:HG22	1.81	0.78
2:A:481:G:OP2	17:Y:81:LYS:HG2	1.84	0.78
15:W:2:GLU:HA	15:W:108:GLY:HA2	1.65	0.78
2:A:1364:G:H3'	25:4:3:LYS:CE	2.14	0.78
2:A:1567:A:N7	3:D:84:PRO:HB3	1.99	0.78
2:A:2089:U:H3	2:A:2231:C:H42	1.32	0.78
2:A:2195:C:C6	2:A:2195:C:C5'	2.62	0.78
2:A:2263:C:H2'	2:A:2264:C:H5'	1.66	0.78
2:A:2330:G:H1	2:A:2385:C:H41	1.29	0.78
2:A:2459:A:H8	2:A:2460:U:C5	2.00	0.78
2:A:2571:C:H2'	2:A:2571:C:O2	1.84	0.78
2:A:2574:G:HO2'	4:E:240:PRO:HB3	0.79	0.78
2:A:2597:G:H2'	2:A:2598:A:H8	1.01	0.78
2:A:2603:G:C4	2:A:2604:U:C5	2.72	0.78
2:A:579:G:H1'	26:5:10:LYS:HZ3	1.48	0.78
2:A:858:U:H5'	24:0:20:TYR:OH	1.83	0.78
2:A:911:A:N1	12:Q:16:ARG:CA	2.44	0.78
3:D:131:LEU:HG	3:D:187:CYS:O	1.82	0.78
9:N:135:ILE:C	9:N:139:LEU:HD11	2.03	0.78
9:N:79:PHE:O	9:N:83:ILE:CG2	2.31	0.78
10:O:14:SER:HB3	10:O:86:ILE:HD12	1.64	0.78
10:O:31:ARG:O	10:O:32:TYR:CG	2.37	0.78
2:A:2278:A:OP1	12:Q:20:ILE:HG22	1.83	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:S:114:LYS:O	13:S:115:VAL:C	2.22	0.78
20:U:46:GLU:O	20:U:47:TYR:O	2.02	0.78
21:V:40:VAL:O	21:V:51:ALA:HB1	1.84	0.78
18:Z:149:ALA:HB3	18:Z:164:PRO:C	2.03	0.78
18:Z:26:LYS:O	18:Z:27:GLU:CD	2.21	0.78
18:Z:51:LEU:HD23	18:Z:52:PHE:CA	2.12	0.78
18:Z:62:PHE:CE2	18:Z:87:THR:HB	2.19	0.78
18:Z:71:MET:HG2	18:Z:78:PRO:HD2	1.53	0.78
2:A:1339:G:H5'	16:X:13:LYS:HE3	1.64	0.78
16:X:50:GLU:CB	16:X:67:ARG:O	2.32	0.78
16:X:5:ILE:CG2	16:X:6:LYS:N	1.93	0.78
6:G:58:VAL:CG1	6:G:58:VAL:O	2.32	0.78
31:K:37:GLU:C	31:K:41:ARG:HD3	2.04	0.78
2:A:1530:G:H21	2:A:1531:C:H5	1.32	0.78
24:0:14:ARG:C	24:0:14:ARG:HD2	2.01	0.78
2:A:849:A:H2	23:3:21:ALA:CA	1.97	0.78
23:3:23:LEU:HA	23:3:28:LEU:HD11	1.59	0.78
2:A:126:A:OP1	28:7:44:VAL:HG13	1.84	0.78
29:8:6:THR:O	29:8:8:LYS:CA	2.32	0.78
2:A:2250:G:H3'	2:A:2250:G:C8	2.18	0.78
2:A:2252:G:C2'	2:A:2253:G:C5'	2.46	0.78
2:A:2395:C:C3'	2:A:2395:C:C6	2.67	0.78
2:A:2466:C:O2'	2:A:2467:C:H5'	1.83	0.78
2:A:2468:G:HO2'	2:A:2469:A:H8	0.79	0.78
2:A:2604:U:C2	2:A:2605:U:C5	2.71	0.78
2:A:2652:C:H5	2:A:2653:U:C4	2.01	0.78
2:A:2657:A:H2'	2:A:2658:C:H5'	1.65	0.78
2:A:2821:A:C2	2:A:2822:G:N7	2.51	0.78
2:A:341:G:H2'	2:A:342:G:O4'	1.83	0.78
2:A:712(A):A:H5'	2:A:2713:A:H5''	1.64	0.78
1:B:103:U:O2'	18:Z:67:LYS:CG	2.31	0.78
3:D:196:ASN:CA	3:D:199:ARG:HD3	2.14	0.78
3:D:81:GLU:O	3:D:82:TYR:C	2.21	0.78
4:E:189:MET:O	4:E:190:ASN:OD1	2.00	0.78
4:E:45:LYS:HZ2	4:E:303:PRO:C	1.81	0.78
4:E:81:VAL:CG1	4:E:100:TRP:HZ3	1.96	0.78
5:F:195:VAL:CG1	5:F:213:ALA:HB3	2.13	0.78
9:N:42:GLU:HA	9:N:133:GLY:HA3	1.66	0.78
10:O:103:ALA:CA	10:O:122:ILE:O	2.28	0.78
12:Q:49:VAL:HA	12:Q:121:ASP:CB	2.14	0.78
19:R:67:LEU:HB2	19:R:76:VAL:HG11	1.63	0.78
19:R:63:ARG:HH21	19:R:77:ARG:CG	1.95	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:U:59:ARG:O	20:U:62:ILE:CA	2.31	0.78
20:U:83:LEU:O	20:U:86:ALA:HB2	1.84	0.78
21:V:39:PHE:CE2	21:V:41:GLY:C	2.57	0.78
2:A:564:C:OP2	21:V:79:GLN:OE1	2.02	0.78
15:W:16:LYS:O	15:W:17:VAL:C	2.22	0.78
17:Y:31:LEU:HD13	17:Y:101:LEU:CB	2.13	0.78
8:I:89:LEU:HD11	8:I:93:ILE:HG21	1.66	0.78
31:K:107:GLU:OE1	31:K:107:GLU:C	2.22	0.78
31:K:93:LYS:CA	31:K:96:ILE:HG13	2.14	0.78
2:A:1103:A:O3'	2:A:1104:C:P	2.42	0.78
24:0:24:LYS:CG	24:0:56:ASP:OD1	2.32	0.78
23:3:8:LEU:HD23	23:3:31:LEU:C	1.98	0.78
2:A:2318:G:O5'	2:A:2318:G:C8	2.37	0.78
2:A:2454:G:N2	2:A:2455:G:H1'	1.97	0.78
2:A:2450:A:OP1	2:A:2497:A:C8	2.37	0.78
2:A:2520:C:C2	2:A:2521:C:H5	1.95	0.78
2:A:2584:U:C1'	2:A:2585:U:H5	1.97	0.78
2:A:2607:G:C6	2:A:2608:G:C2	2.72	0.78
2:A:2618:G:HO2'	2:A:2619:C:P	2.06	0.78
2:A:2679:A:N3	4:E:300:VAL:CG2	2.47	0.78
2:A:2744:G:C4	2:A:2761:G:N2	2.52	0.78
2:A:54:G:H1'	28:7:35:ARG:HH22	1.48	0.78
2:A:974(A):C:H1'	2:A:989:G:N2	1.97	0.78
5:F:196:THR:C	5:F:236:THR:HG1	1.88	0.78
5:F:214:THR:N	5:F:218:VAL:CG2	2.44	0.78
5:F:215:ALA:CA	5:F:242:GLU:HG3	2.14	0.78
5:F:30:LEU:O	5:F:31:ILE:O	2.01	0.78
7:H:121:GLU:CD	7:H:121:GLU:N	2.37	0.78
11:P:66:VAL:HB	11:P:67:ARG:NH1	1.97	0.78
12:Q:56:ILE:O	12:Q:61:LEU:HD11	1.83	0.78
19:R:18:LEU:O	19:R:19:ALA:C	2.22	0.78
19:R:80:PHE:O	19:R:84:ALA:CB	2.32	0.78
20:U:99:ALA:HA	20:U:106:PHE:CB	1.87	0.78
15:W:20:VAL:HG13	15:W:47:VAL:HG21	1.61	0.78
15:W:68:ARG:C	15:W:69:LEU:HD23	2.04	0.78
15:W:81:ALA:HB1	15:W:97:LYS:HD2	1.63	0.78
18:Z:151:ASP:HB3	18:Z:153:LYS:HZ2	1.46	0.78
18:Z:42:ALA:O	18:Z:45:GLN:N	2.17	0.78
6:G:56:ARG:CG	6:G:65:GLU:CB	2.60	0.78
2:A:1059:G:H1'	31:K:127:ILE:HD13	1.66	0.78
31:K:9:ILE:HD13	31:K:31:HIS:HB2	1.65	0.78
2:A:439:G:H5"	17:Y:6:LYS:NZ	1.96	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2722:G:H2'	2:A:2723:C:C6	2.17	0.78
3:D:232:VAL:O	3:D:232:VAL:CG2	2.27	0.78
23:3:19:GLN:O	23:3:23:LEU:HD23	1.82	0.78
23:3:8:LEU:CA	23:3:54:VAL:HG11	2.11	0.78
25:4:14:ILE:C	25:4:15:ILE:HD12	2.05	0.78
26:5:11:THR:CG2	26:5:19:ARG:NH2	2.47	0.78
2:A:2400:G:C2'	27:6:20:PHE:HE1	1.96	0.78
29:8:56:ALA:O	29:8:57:ARG:C	2.22	0.78
29:8:5:LYS:O	29:8:7:HIS:ND1	2.17	0.78
2:A:1671:U:O2'	4:E:225:LYS:NZ	2.15	0.78
2:A:2021:C:OP2	26:5:15:LYS:HE3	1.62	0.78
2:A:2227:A:C6	2:A:2228:G:O6	2.37	0.78
2:A:2264:C:C4	2:A:2277:G:C6	2.71	0.78
2:A:2349:G:C2	2:A:2369:A:C2	2.72	0.78
2:A:2479:G:H2'	2:A:2480:C:O5'	1.84	0.78
2:A:2523:G:H2'	2:A:2524:G:H5'	1.63	0.78
2:A:2652:C:H42	2:A:2668:G:H1	1.29	0.78
2:A:2716:U:C2'	2:A:2717:G:C5'	2.60	0.78
2:A:495:G:H4'	15:W:57:ASN:HD22	1.41	0.78
1:B:74:U:O2	18:Z:29:ASN:ND2	2.15	0.78
3:D:143:ILE:HD13	3:D:153:LEU:H	1.49	0.78
4:E:105:HIS:H	4:E:108:LEU:HD12	1.48	0.78
4:E:79:ARG:C	4:E:187:HIS:CE1	2.50	0.78
4:E:218:GLY:C	4:E:219:VAL:HG23	2.04	0.78
4:E:62:ARG:C	4:E:63:GLU:HG3	2.04	0.78
10:O:17:ARG:NH2	10:O:47:THR:HA	1.99	0.78
2:A:2563:U:H4'	10:O:27:GLY:HA2	1.66	0.78
10:O:66:LYS:C	10:O:66:LYS:CD	2.52	0.78
2:A:911:A:C8	12:Q:16:ARG:CD	2.67	0.78
6:G:146:LYS:HG3	13:S:15:GLU:CG	2.13	0.78
13:S:20:TYR:CE2	13:S:21:HIS:HD2	1.95	0.78
13:S:35:VAL:HG11	13:S:37:ARG:CZ	2.13	0.78
20:U:59:ARG:O	20:U:62:ILE:HB	1.82	0.78
18:Z:71:MET:HG3	18:Z:78:PRO:HG3	1.65	0.78
16:X:18:MET:SD	16:X:24:LEU:HA	2.24	0.78
6:G:29:HIS:HE1	6:G:64:ARG:CZ	1.97	0.78
31:K:25:GLY:HA2	31:K:35:ILE:CD1	2.12	0.78
24:0:36:ILE:H	24:0:68:VAL:HG22	1.49	0.78
2:A:989:G:N7	23:3:13:ILE:HD12	1.98	0.78
2:A:2094:G:C6	2:A:2196:C:N4	2.46	0.78
2:A:2410:G:N3	2:A:2411:A:N7	2.25	0.78
2:A:2446:G:H5'	2:A:2446:G:C8	2.15	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2521:C:O4'	2:A:2565:A:H1'	1.84	0.78
2:A:2544:G:H5'	2:A:2645:G:N7	1.94	0.78
2:A:2729:G:H2'	2:A:2730:C:O4'	1.83	0.78
2:A:2762:G:N7	2:A:2763:G:C5	2.51	0.78
2:A:2827:C:H2'	2:A:2827:C:O2	1.84	0.78
2:A:994:C:OP2	20:U:54:LYS:CE	2.27	0.78
3:D:146:LYS:HD2	3:D:147:PRO:CD	2.07	0.78
3:D:158:GLY:CA	3:D:194:VAL:HG21	2.13	0.78
3:D:162:GLN:OE1	3:D:174:ARG:HB3	1.84	0.78
5:F:32:GLY:O	5:F:35:VAL:CB	2.32	0.78
2:A:801:G:OP2	5:F:79:ARG:NE	2.15	0.78
6:G:93:LEU:HD21	6:G:106:PHE:CD2	2.16	0.78
2:A:2093:G:H4'	8:I:25:TYR:HA	1.66	0.78
9:N:20:GLY:O	9:N:21:ARG:C	2.22	0.78
10:O:103:ALA:HB3	10:O:105:GLU:HG2	1.66	0.78
10:O:10:VAL:CG2	10:O:16:ALA:HB3	2.11	0.78
12:Q:56:ILE:HD11	12:Q:115:SER:H	1.47	0.78
13:S:100:ALA:H	13:S:127:LEU:HD21	1.49	0.78
13:S:72:GLU:CB	13:S:74:PRO:HD2	2.12	0.78
17:Y:92:ASP:O	17:Y:94:SER:N	2.17	0.78
18:Z:40:ASP:OD2	18:Z:41:ARG:NH2	2.16	0.78
2:A:144:C:C5'	16:X:36:GLU:CD	2.39	0.78
31:K:122:GLU:O	31:K:126:LYS:CG	2.27	0.78
2:A:1518:C:H3'	2:A:1519:G:C4'	2.14	0.78
23:3:15:TYR:HB3	23:3:16:PRO:HD2	1.65	0.77
23:3:8:LEU:HD23	23:3:32:GLN:N	1.96	0.77
2:A:1140:C:H4'	2:A:142(A):A:C5	2.19	0.77
2:A:1240:U:H3'	2:A:1241:A:C8	2.19	0.77
2:A:2375:G:N1	2:A:2379:G:C6	2.52	0.77
2:A:2556:C:C3'	2:A:2557:G:H5'	2.09	0.77
2:A:2654:A:H61	2:A:2667:C:H42	1.16	0.77
2:A:535:C:O3'	20:U:53:LYS:HE2	1.83	0.77
3:D:129:LEU:HB3	3:D:130:PRO:HD2	1.66	0.77
3:D:106:PRO:C	3:D:194:VAL:O	2.21	0.77
4:E:240:PRO:HB2	4:E:243:PRO:CG	2.13	0.77
4:E:205:THR:CA	4:E:261:ARG:HD2	2.08	0.77
5:F:37:ALA:HB1	5:F:107:ARG:NH2	1.98	0.77
5:F:167:ASP:HB3	5:F:232:LEU:H	1.48	0.77
2:A:598:G:C2	5:F:33:LYS:NZ	2.52	0.77
10:O:63:VAL:CG1	10:O:102:VAL:HG11	1.88	0.77
12:Q:156:ASN:OD1	12:Q:156:ASN:O	2.01	0.77
19:R:60:LEU:CG	19:R:61:HIS:N	2.45	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:R:91:GLN:O	19:R:92:GLY:O	2.02	0.77
13:S:32:PRO:HD2	13:S:100:ALA:HA	1.64	0.77
1:B:28:C:OP2	13:S:41:LYS:HG3	1.83	0.77
20:U:68:GLY:O	20:U:70:ARG:N	2.17	0.77
21:V:21:ARG:O	21:V:92:ALA:HB1	1.83	0.77
17:Y:101:LEU:CD1	17:Y:112:LEU:HD12	2.14	0.77
17:Y:14:ALA:HB1	17:Y:15:PRO:HD3	1.66	0.77
18:Z:107:GLU:CD	18:Z:107:GLU:H	1.87	0.77
2:A:1341:U:OP2	2:A:1397:U:N3	2.16	0.77
2:A:1339:G:N2	2:A:1603:A:C8	2.52	0.77
31:K:121:LEU:HD23	31:K:125:MET:CE	2.13	0.77
2:A:1364:G:C3'	25:4:3:LYS:HD2	2.06	0.77
28:7:43:THR:HA	28:7:46:ASP:CG	2.04	0.77
29:8:8:LYS:C	29:8:10:ALA:N	2.37	0.77
29:8:7:HIS:O	29:8:10:ALA:CB	2.29	0.77
2:A:2421:G:H5''	2:A:2422:A:OP2	1.84	0.77
2:A:2464:C:C4	2:A:2487:G:N1	2.52	0.77
2:A:2584:U:C6	2:A:2585:U:H6	1.99	0.77
2:A:2626:C:C6	2:A:2626:C:C5'	2.62	0.77
2:A:2810:A:H2'	2:A:2811:G:C4'	2.09	0.77
2:A:2827:C:O2'	2:A:2828:C:H5'	1.83	0.77
2:A:2850:A:C4	2:A:2851:A:N7	2.52	0.77
2:A:397:G:OP1	25:4:40:HIS:C	2.22	0.77
4:E:214:VAL:HG22	4:E:221:LYS:CE	2.14	0.77
4:E:222:ARG:HD3	4:E:233:ARG:N	1.98	0.77
4:E:44:TYR:HE1	4:E:308:VAL:HG13	1.48	0.77
5:F:225:PRO:O	5:F:231:ARG:HG2	1.73	0.77
5:F:231:ARG:C	5:F:232:LEU:HD23	2.02	0.77
5:F:239:ALA:O	5:F:242:GLU:N	2.13	0.77
6:G:38:GLU:CB	6:G:41:LEU:HD12	2.14	0.77
6:G:97:GLN:O	6:G:104:PHE:HB3	1.85	0.77
8:I:13:GLY:CA	8:I:15:LYS:HZ1	1.93	0.77
8:I:43:ASN:ND2	8:I:43:ASN:H	1.81	0.77
9:N:87:LEU:CB	9:N:88:PRO:CD	2.61	0.77
19:R:28:LEU:CD1	19:R:32:GLY:HA2	2.14	0.77
14:T:24:LYS:O	14:T:25:ASP:HB2	1.82	0.77
17:Y:55:PHE:CD2	17:Y:89:ARG:NH1	2.35	0.77
17:Y:73:HIS:HE1	17:Y:90:PRO:HA	1.49	0.77
18:Z:149:ALA:O	18:Z:152:ILE:CG1	2.27	0.77
18:Z:18:MET:C	18:Z:36:ARG:CG	2.52	0.77
2:A:1151:G:C3'	20:U:81:ASN:ND2	2.44	0.77
16:X:14:ALA:HB1	16:X:18:MET:CE	2.13	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1072:C:H42	2:A:1100:C:N4	1.81	0.77
25:4:35:VAL:CG1	25:4:36:TRP:H	1.95	0.77
2:A:1309:G:H21	2:A:1611:C:H5'	1.46	0.77
2:A:1827:C:H41	3:D:225:ARG:HH12	0.96	0.77
2:A:2189:U:HO2'	2:A:2190:G:H8	1.28	0.77
2:A:2287:A:C2	2:A:2289:G:O4'	2.32	0.77
2:A:2331:G:N2	2:A:2385:C:H5	1.80	0.77
2:A:2392:A:C2'	2:A:2393:A:C5'	2.59	0.77
2:A:2436:G:O6	2:A:2437:U:C4	2.38	0.77
2:A:2461:C:N3	2:A:2462:U:H5	1.79	0.77
2:A:603:A:H2'	2:A:604:G:C8	2.19	0.77
3:D:129:LEU:CD2	3:D:130:PRO:CD	2.61	0.77
2:A:2786:U:H5''	4:E:100:TRP:O	1.82	0.77
4:E:235:ILE:CG2	4:E:236:GLY:N	2.47	0.77
7:H:101:LYS:HZ3	7:H:115:GLU:CB	1.94	0.77
7:H:93:TYR:C	7:H:94:ARG:CG	2.46	0.77
10:O:101:PRO:CB	10:O:122:ILE:CD1	2.54	0.77
10:O:77:ILE:CD1	10:O:78:ARG:CA	2.53	0.77
12:Q:32:LYS:HZ2	18:Z:172:LEU:CD1	1.95	0.77
13:S:87:LEU:O	13:S:88:ALA:C	2.23	0.77
20:U:15:LYS:O	20:U:16:LYS:C	2.21	0.77
21:V:19:VAL:O	21:V:21:ARG:HG2	1.83	0.77
15:W:15:ARG:O	15:W:18:ARG:HB2	1.84	0.77
15:W:25:ARG:HG2	15:W:26:GLY:H	1.50	0.77
17:Y:43:ASN:ND2	17:Y:112:LEU:CD2	2.46	0.77
17:Y:14:ALA:CB	17:Y:15:PRO:HD2	2.12	0.77
17:Y:73:HIS:CD2	17:Y:88:PRO:HB2	2.18	0.77
18:Z:172:LEU:HD23	18:Z:173:PRO:CA	2.13	0.77
16:X:33:SER:O	16:X:37:VAL:CG2	2.33	0.77
31:K:86:GLU:O	31:K:87:LYS:O	2.02	0.77
2:A:1056:G:C6	2:A:1102:C:OP2	2.37	0.77
2:A:358:U:H3'	2:A:359:A:H5'	1.65	0.77
8:I:134:HIS:CG	8:I:135:PRO:HD2	2.19	0.77
2:A:476:G:N2	2:A:478:A:H2'	1.99	0.77
24:0:36:ILE:O	24:0:37:LEU:CG	2.32	0.77
24:0:37:LEU:HD13	24:0:69:PHE:CB	2.09	0.77
2:A:396:G:C4'	25:4:39:VAL:HG12	2.13	0.77
27:6:40:TYR:N	27:6:50:PHE:CD1	2.53	0.77
2:A:1260:G:C5'	15:W:83:LYS:HZ1	1.92	0.77
2:A:574:C:N4	2:A:2054:A:C5'	2.47	0.77
2:A:2195:C:C6	2:A:2195:C:P	2.77	0.77
2:A:2264:C:C4	2:A:2277:G:O6	2.38	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2398:U:H3'	2:A:2398:U:C6	2.20	0.77
2:A:2543:G:H2'	2:A:2544:G:H5'	1.66	0.77
2:A:2584:U:C1'	2:A:2585:U:C5	2.67	0.77
2:A:2074:U:HO2'	2:A:2597:G:HO2'	0.90	0.77
2:A:2051:A:N7	2:A:2614:A:C5	2.52	0.77
2:A:2618:G:C6	2:A:2619:C:H5	1.96	0.77
2:A:2700:C:C3'	2:A:2701:C:C5'	2.58	0.77
2:A:2762:G:C5	2:A:2763:G:C6	2.73	0.77
4:E:189:MET:C	4:E:190:ASN:OD1	2.22	0.77
5:F:150:THR:HG23	5:F:203:ALA:HB1	1.66	0.77
5:F:30:LEU:O	5:F:33:LYS:HB2	1.85	0.77
6:G:98:PHE:HA	6:G:104:PHE:HD2	0.90	0.77
7:H:84:LYS:CG	7:H:140:VAL:HG12	2.14	0.77
7:H:84:LYS:O	7:H:131:ILE:CG2	2.32	0.77
11:P:120:LEU:CD1	11:P:122:ALA:HB2	2.15	0.77
12:Q:133:GLU:C	12:Q:133:GLU:CD	2.42	0.77
19:R:18:LEU:HD13	19:R:19:ALA:N	1.99	0.77
19:R:41:ALA:HB1	19:R:114:VAL:CG2	2.14	0.77
19:R:83:ILE:O	19:R:84:ALA:C	2.22	0.77
20:U:33:ARG:HG2	20:U:34:ASN:H	1.48	0.77
17:Y:31:LEU:CD1	17:Y:113:GLU:OE1	2.27	0.77
18:Z:154:LEU:HD13	18:Z:160:LEU:CD1	2.12	0.77
8:I:94:THR:HG21	8:I:96:LYS:HB3	1.63	0.77
31:K:15:ALA:CA	31:K:46:THR:HB	2.12	0.77
24:O:44:LYS:C	24:O:45:PHE:CD1	2.57	0.77
29:8:58:MET:O	29:8:61:MET:N	2.18	0.77
2:A:1456:G:H1	2:A:2704:C:N4	1.83	0.77
2:A:2320:A:N3	2:A:2333:A:N1	2.32	0.77
2:A:2454:G:C2	2:A:2455:G:C1'	2.66	0.77
2:A:2532:G:H8	2:A:2532:G:H5'	1.46	0.77
2:A:2570:G:C2'	2:A:2570:G:N3	2.47	0.77
3:D:129:LEU:HD22	3:D:130:PRO:CD	2.14	0.77
3:D:71:ASP:C	3:D:73:ILE:H	1.86	0.77
5:F:196:THR:CA	5:F:236:THR:HG21	2.11	0.77
7:H:84:LYS:O	7:H:131:ILE:HG22	1.84	0.77
9:N:39:VAL:HA	9:N:103:VAL:CG1	2.14	0.77
9:N:58:GLU:CG	9:N:61:VAL:HG21	2.14	0.77
10:O:21:VAL:HA	10:O:41:ALA:CB	2.12	0.77
12:Q:94:ARG:NH2	12:Q:105:PHE:O	2.18	0.77
19:R:87:TYR:CD1	19:R:94:TYR:HD2	2.00	0.77
20:U:28:ARG:N	20:U:31:GLN:OE1	2.18	0.77
1:B:76:G:O3'	18:Z:80:HIS:CG	2.37	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:114:LYS:O	8:I:115:ILE:O	2.03	0.77
22:2:45:ARG:O	22:2:46:ILE:C	2.22	0.77
31:K:22:PRO:CG	31:K:23:PRO:CD	2.59	0.77
2:A:477:A:H2'	2:A:478:A:C8	2.19	0.77
24:0:41:ARG:O	24:0:74:LYS:HE2	1.84	0.77
23:3:4:LEU:O	23:3:36:VAL:CA	2.33	0.77
23:3:9:VAL:H	23:3:54:VAL:CG1	1.96	0.77
2:A:1652:A:N6	2:A:1653:G:H21	1.83	0.77
2:A:2415:G:C6	2:A:2416:C:H5	2.03	0.77
2:A:2625:G:C3'	2:A:2626:C:H5	1.77	0.77
2:A:2646:C:H2'	2:A:2647:U:C5'	2.14	0.77
2:A:2637:U:O2	2:A:2782:G:N2	2.18	0.77
2:A:2812:G:O2'	2:A:2813:A:C5'	2.32	0.77
2:A:2887:U:O2	2:A:2888:C:C6	2.37	0.77
2:A:326:G:H22	2:A:337:C:H1'	1.50	0.77
2:A:579:G:H1'	26:5:10:LYS:NZ	1.99	0.77
2:A:583:G:P	20:U:10:ARG:NH1	2.57	0.77
3:D:106:PRO:HG3	3:D:141:HIS:CD2	2.20	0.77
3:D:80:ILE:HD13	3:D:82:TYR:CD1	2.19	0.77
5:F:51:TYR:C	5:F:55:ARG:CB	2.45	0.77
7:H:162:ARG:HB3	7:H:166:GLU:HG3	1.64	0.77
8:I:2:LYS:HD2	8:I:39:ALA:HB2	1.67	0.77
9:N:103:VAL:O	9:N:104:TYR:CG	2.37	0.77
10:O:75:SER:O	10:O:76:TYR:CD1	2.38	0.77
12:Q:58:HIS:CB	12:Q:111:THR:O	2.21	0.77
12:Q:46:VAL:O	12:Q:124:ALA:N	2.18	0.77
12:Q:136:TRP:O	12:Q:139:ALA:CB	2.33	0.77
12:Q:28:ILE:HG12	12:Q:62:GLU:OE2	1.84	0.77
12:Q:82:LYS:HG2	12:Q:84:ARG:HG3	1.65	0.77
13:S:76:GLY:C	13:S:82:TYR:HB2	2.04	0.77
20:U:54:LYS:O	20:U:58:ARG:HG3	1.85	0.77
21:V:50:ASP:CG	21:V:53:LYS:HE3	2.04	0.77
18:Z:92:VAL:C	18:Z:94:VAL:N	2.38	0.77
16:X:13:LYS:CA	16:X:16:ASN:OD1	2.32	0.77
16:X:23:LYS:HE2	16:X:67:ARG:NH1	1.99	0.77
2:A:498:G:O2'	17:Y:82:THR:HG23	1.84	0.77
15:W:21:VAL:CG2	15:W:22:ASP:H	1.98	0.77
1:B:100:G:N2	2:A:863:A:H4'	1.99	0.77
28:7:35:ARG:O	28:7:36:ALA:O	2.03	0.77
2:A:2419:U:P	29:8:41:ILE:HD11	2.25	0.77
2:A:2065:C:H42	2:A:2445:G:H1	1.32	0.77
2:A:2264:C:N4	2:A:2277:G:O6	2.17	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2350:C:O2'	2:A:2351:G:O5'	2.01	0.77
2:A:2352:A:N7	2:A:2366:A:C6	2.52	0.77
2:A:2739:U:C6	2:A:2739:U:H3'	2.18	0.77
2:A:2747:G:H2'	2:A:2748:A:H5''	1.66	0.77
2:A:2771:C:O2	2:A:2771:C:C2'	2.30	0.77
2:A:2805:G:C3'	2:A:2807:G:P	2.73	0.77
2:A:772:C:H2'	2:A:773:U:C6	2.19	0.77
2:A:828:U:H2'	2:A:829:A:C8	2.20	0.77
4:E:201:VAL:O	4:E:262:THR:OG1	2.03	0.77
4:E:87:GLU:C	4:E:94:ARG:H	1.87	0.77
5:F:141:SER:OG	5:F:144:PHE:CD1	2.38	0.77
5:F:62:GLY:HA3	5:F:65:ARG:HH21	0.69	0.77
9:N:15:ARG:NH1	9:N:40:ASN:HA	2.00	0.77
9:N:38:VAL:O	9:N:39:VAL:HG22	1.85	0.77
2:A:2041:U:H5'	9:N:70:PHE:HE1	1.49	0.77
10:O:64:ARG:HH22	10:O:100:GLY:HA3	1.43	0.77
12:Q:46:VAL:CA	12:Q:124:ALA:O	2.33	0.77
12:Q:65:ARG:NH2	12:Q:85:ILE:CB	2.47	0.77
13:S:38:LYS:HG2	13:S:106:LEU:HD12	1.65	0.77
20:U:25:TRP:C	20:U:28:ARG:NH1	2.38	0.77
18:Z:53:ASP:CB	18:Z:62:PHE:O	2.33	0.77
8:I:82:LYS:HE3	8:I:149:LYS:O	1.85	0.77
17:Y:5:ASP:O	17:Y:9:LYS:HD3	1.83	0.77
2:A:1673:U:H5	4:E:225:LYS:CD	1.98	0.77
2:A:2385:C:H2'	2:A:2386:C:H5''	1.65	0.77
2:A:2470:G:O6	2:A:2481:G:C2	2.38	0.77
2:A:2717:G:O2'	2:A:2718:G:O5'	2.02	0.77
2:A:974:G:C8	21:V:80:TYR:CG	2.72	0.77
4:E:312:ARG:C	4:E:314:ALA:N	2.38	0.77
4:E:48:MET:C	4:E:49:THR:CG2	2.53	0.77
5:F:6:TYR:HE2	5:F:140:VAL:CG2	1.97	0.77
7:H:98:GLN:HB2	7:H:103:VAL:CG2	2.15	0.77
10:O:63:VAL:HG11	10:O:102:VAL:CG2	2.15	0.77
10:O:88:ARG:O	10:O:90:ASP:OD1	2.03	0.77
11:P:102:ASP:O	11:P:103:ALA:CB	2.33	0.77
12:Q:48:ASN:C	12:Q:48:ASN:OD1	2.23	0.77
2:A:1287:A:C1'	19:R:104:ARG:HD2	2.14	0.77
19:R:33:ARG:CA	19:R:114:VAL:O	2.29	0.77
20:U:91:ASN:O	20:U:95:LEU:CD1	2.33	0.77
21:V:63:HIS:HA	21:V:95:ILE:HG13	1.66	0.77
21:V:60:VAL:C	21:V:98:ILE:HD12	2.05	0.77
15:W:86:LEU:CB	15:W:87:PRO:CD	2.56	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:Y:31:LEU:HD13	17:Y:113:GLU:CD	2.04	0.77
31:K:13:LEU:HD21	31:K:24:VAL:CG2	2.14	0.77
2:A:280:C:C2	2:A:283:A:N6	2.53	0.77
24:0:41:ARG:N	24:0:67:VAL:HG22	1.99	0.77
23:3:6:VAL:HG23	23:3:55:ARG:O	1.85	0.77
25:4:14:ILE:CG2	25:4:16:TYR:HE1	1.97	0.77
25:4:14:ILE:HD12	25:4:16:TYR:CE1	2.20	0.77
25:4:17:GLN:HA	25:4:33:VAL:CB	2.14	0.77
2:A:2371:G:O2'	27:6:47:HIS:NE2	2.18	0.77
2:A:592:G:N2	29:8:3:LYS:CE	2.46	0.77
2:A:2192:G:OP2	2:A:2192:G:H8	1.68	0.77
2:A:2446:G:C5'	2:A:2446:G:H8	1.95	0.77
2:A:2494:G:N1	2:A:2495:G:N7	2.32	0.77
2:A:2825:C:C5	2:A:2825:C:OP2	2.38	0.77
2:A:564:C:P	21:V:79:GLN:CG	2.71	0.77
3:D:129:LEU:HB3	3:D:130:PRO:CD	2.15	0.77
4:E:308:VAL:CG1	4:E:310:PHE:CE1	2.68	0.77
6:G:142:ALA:HB1	6:G:151:ILE:HD11	1.62	0.77
2:A:2745:C:O2	7:H:142:GLU:OE2	2.03	0.77
7:H:147:ILE:O	7:H:161:ILE:CD1	2.32	0.77
7:H:89:VAL:HG12	7:H:159:LYS:HA	1.67	0.77
8:I:6:LEU:HD12	8:I:35:LEU:HA	1.67	0.77
9:N:39:VAL:HG12	9:N:104:TYR:N	1.99	0.77
2:A:2780:G:N2	9:N:80:LYS:NZ	2.33	0.77
10:O:75:SER:O	10:O:76:TYR:HD1	1.67	0.77
12:Q:65:ARG:HH21	12:Q:122:PHE:HD2	1.26	0.77
14:T:53:ASP:HA	14:T:56:ARG:HG2	1.65	0.77
21:V:2:PHE:HA	21:V:15:SER:HB3	1.67	0.77
21:V:49:GLU:O	21:V:54:TYR:CE1	2.37	0.77
15:W:12:ILE:O	15:W:101:SER:OG	2.01	0.77
15:W:70:TYR:O	15:W:107:LEU:HD23	1.85	0.77
18:Z:168:VAL:C	18:Z:169:VAL:HG23	2.01	0.77
18:Z:69:VAL:O	18:Z:70:GLN:NE2	2.18	0.77
2:A:2306:C:N4	6:G:53:LYS:HZ3	1.80	0.77
2:A:1417:C:H42	2:A:1581:G:H1	1.33	0.77
24:0:61:ALA:HB2	24:0:80:SER:HA	1.66	0.77
23:3:1:MET:HE3	23:3:3:ARG:HD2	1.63	0.77
2:A:2046:G:OP1	26:5:19:ARG:CA	2.32	0.77
27:6:16:ALA:HB2	27:6:50:PHE:HE2	1.50	0.77
2:A:2303:G:H4'	6:G:99:ASP:HB2	1.67	0.77
2:A:2356:C:C2'	2:A:2357:U:O5'	2.28	0.77
2:A:2403:C:N3	2:A:2414:G:N2	2.31	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2481:G:O2'	2:A:2482:G:H5'	1.85	0.77
2:A:2645:G:H3'	2:A:2646:C:H5'	1.67	0.77
2:A:2648:C:N4	2:A:2672:G:H1	1.82	0.77
2:A:2679:A:C6	2:A:2680:C:C5	2.72	0.77
2:A:2678:C:O2'	2:A:2679:A:H5'	1.83	0.77
2:A:2689:U:H1'	2:A:2713:A:C2	2.18	0.77
2:A:2006:C:O2'	2:A:2823:A:N3	2.18	0.77
2:A:637:A:C8	11:P:111:ALA:HB1	2.17	0.77
2:A:647:G:OP1	2:A:2352:A:H4'	1.83	0.77
1:B:24:G:O2'	1:B:27:C:N4	2.18	0.77
2:A:2680:C:H4'	4:E:300:VAL:HA	1.67	0.77
4:E:70:VAL:CG1	4:E:71:THR:N	2.13	0.77
4:E:74:GLU:O	4:E:75:THR:OG1	2.01	0.77
5:F:237:GLU:C	5:F:239:ALA:N	2.37	0.77
5:F:240:LEU:HD23	5:F:243:VAL:CG2	2.14	0.77
9:N:27:ALA:C	9:N:30:ALA:HB3	2.05	0.77
11:P:83:GLU:O	11:P:92:ASP:CA	2.33	0.77
12:Q:41:THR:CG2	12:Q:125:TRP:CZ3	2.65	0.77
19:R:111:LEU:O	19:R:112:ALA:HB2	1.85	0.77
2:A:545(A):A:N7	2:A:1546:C:C2	2.53	0.77
25:4:17:GLN:HA	25:4:33:VAL:HB	1.67	0.76
2:A:1365:A:OP2	25:4:3:LYS:HD2	1.84	0.76
2:A:1024:G:H5''	2:A:1025:G:H5''	1.64	0.76
2:A:199:A:N1	2:A:2433:A:C5	2.50	0.76
2:A:2258:C:C5	2:A:2426:A:C1'	2.62	0.76
2:A:2363:C:O2'	2:A:2364:C:H5'	1.84	0.76
2:A:2385:C:C2'	2:A:2386:C:H5''	2.15	0.76
2:A:2423:U:C6	2:A:2425:A:N7	2.54	0.76
2:A:2436:G:O2'	2:A:2437:U:O5'	2.03	0.76
2:A:2579:C:H5''	2:A:2579:C:H6	0.61	0.76
2:A:2635:C:HO2'	2:A:2636:U:P	2.07	0.76
2:A:2880:C:H1'	19:R:91:GLN:O	1.84	0.76
2:A:99:U:N3	17:Y:107:LYS:CD	2.48	0.76
3:D:70:LYS:CG	3:D:73:ILE:HD11	2.16	0.76
4:E:199:ALA:HB2	4:E:312:ARG:O	1.85	0.76
5:F:84:VAL:CA	5:F:85:LYS:HD2	2.00	0.76
5:F:88:SER:O	5:F:89:ALA:CB	2.32	0.76
7:H:95:ALA:O	7:H:127:GLN:CA	2.32	0.76
9:N:39:VAL:O	9:N:40:ASN:CB	2.33	0.76
11:P:94:ARG:CD	11:P:120:LEU:CB	2.64	0.76
11:P:66:VAL:CG2	11:P:67:ARG:NH2	2.07	0.76
19:R:81:ASP:O	19:R:85:PRO:HD2	1.85	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:U:47:TYR:O	20:U:49:ASP:N	2.17	0.76
20:U:80:ILE:N	20:U:83:LEU:HD12	2.00	0.76
20:U:99:ALA:CB	20:U:106:PHE:CG	2.41	0.76
15:W:104:THR:C	15:W:105:VAL:CG1	2.51	0.76
17:Y:11:GLN:HG3	17:Y:21:LYS:CE	2.14	0.76
18:Z:62:PHE:CG	18:Z:87:THR:CG2	2.68	0.76
2:A:988:A:P	23:3:11:SER:H	2.08	0.76
25:4:68:ARG:HG2	25:4:72:LYS:HA	1.68	0.76
2:A:650:C:H5''	29:8:19:THR:CG2	2.15	0.76
2:A:2049:G:N1	2:A:2620:C:C4	2.54	0.76
2:A:2236:C:H3'	2:A:2237:G:H5'	1.67	0.76
2:A:2397:G:C6	2:A:2420:C:N3	2.52	0.76
2:A:2403:C:C5	2:A:2415:G:N1	2.52	0.76
2:A:2463:C:N3	2:A:2487:G:O6	2.18	0.76
2:A:2626:C:OP2	2:A:2626:C:H5	1.67	0.76
2:A:2653:U:C2	2:A:2654:A:C5	2.72	0.76
2:A:2688:U:H2'	2:A:2719:G:N2	2.00	0.76
2:A:2772:C:C4	2:A:2773:C:N4	2.53	0.76
2:A:296:C:N3	2:A:344:G:N2	2.34	0.76
2:A:529:A:O2'	2:A:530:G:C8	2.36	0.76
2:A:650:C:P	29:8:19:THR:HG21	2.26	0.76
2:A:988:A:P	23:3:11:SER:CB	2.73	0.76
1:B:29:A:OP1	13:S:39:SER:O	2.01	0.76
4:E:201:VAL:H	4:E:266:LYS:CE	1.98	0.76
4:E:70:VAL:CG1	4:E:295:LEU:CD2	2.63	0.76
5:F:210:ALA:O	5:F:211:ASP:CB	2.33	0.76
8:I:7:LYS:HG2	8:I:8:ASP:OD1	1.84	0.76
2:A:558:G:P	9:N:91:LYS:HB2	2.24	0.76
10:O:111:PHE:O	10:O:113:LYS:N	2.17	0.76
11:P:94:ARG:CB	11:P:120:LEU:HD22	1.99	0.76
12:Q:142:LYS:C	12:Q:143:VAL:HG22	2.06	0.76
19:R:33:ARG:HG3	19:R:33:ARG:O	1.85	0.76
17:Y:103:LEU:HD22	17:Y:108:ARG:C	2.04	0.76
8:I:108:LEU:HD23	8:I:108:LEU:C	2.05	0.76
22:2:50:ARG:CA	22:2:53:ILE:HD12	2.15	0.76
24:0:37:LEU:HD12	24:0:69:PHE:HB2	1.66	0.76
23:3:25:ALA:O	23:3:27:GLY:N	2.19	0.76
23:3:42:ALA:O	23:3:44:ARG:N	2.19	0.76
25:4:21:VAL:CG1	25:4:22:MET:N	2.12	0.76
25:4:58:LYS:HG2	25:4:59:PHE:N	1.99	0.76
25:4:58:LYS:HD2	25:4:62:ARG:HH21	1.48	0.76
29:8:4:MET:HG2	29:8:5:LYS:H	1.50	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2021:C:OP1	26:5:15:LYS:HE3	1.85	0.76
2:A:2209:C:O2'	2:A:2210:G:H8	1.69	0.76
2:A:2228:G:N7	2:A:2229:C:C4	2.53	0.76
2:A:2285:C:H4'	2:A:2288:A:C6	2.20	0.76
2:A:2501:C:O2'	2:A:2502:G:OP2	2.02	0.76
2:A:2611:U:H3'	2:A:2611:U:H6	1.50	0.76
2:A:2718:G:C2'	2:A:2719:G:C8	2.60	0.76
2:A:322:A:C1'	2:A:341:G:O4'	2.34	0.76
2:A:38:A:H2'	2:A:39:C:C6	2.20	0.76
5:F:243:VAL:HA	5:F:246:ARG:HD2	0.80	0.76
5:F:93:LYS:C	5:F:96:LYS:HE3	2.06	0.76
2:A:2745:C:H2'	7:H:142:GLU:OE2	1.85	0.76
7:H:84:LYS:HG3	7:H:140:VAL:CG1	2.15	0.76
10:O:17:ARG:HE	10:O:47:THR:HA	1.49	0.76
10:O:88:ARG:HG2	10:O:92:SER:O	1.84	0.76
12:Q:57:ARG:O	12:Q:58:HIS:C	2.23	0.76
13:S:75:THR:O	13:S:80:SER:N	2.18	0.76
2:A:446:G:OP2	20:U:3:ARG:CD	2.33	0.76
2:A:974:G:C3'	21:V:82:ARG:NH2	2.48	0.76
18:Z:34:LEU:HD12	18:Z:35:ASP:N	2.00	0.76
22:2:8:ILE:HA	22:2:11:MET:HG3	1.67	0.76
31:K:27:ALA:O	31:K:29:GLY:N	2.18	0.76
16:X:47:VAL:CB	16:X:69:SER:HB3	2.14	0.76
2:A:1416:G:H1'	2:A:1583:A:N1	2.00	0.76
2:A:1364:G:C4'	25:4:3:LYS:HD3	2.15	0.76
2:A:1005:C:H5	2:A:1143:A:H5''	1.50	0.76
2:A:2045:C:N4	2:A:2623:G:N1	2.22	0.76
2:A:2100:G:C5	2:A:2190:G:N1	2.53	0.76
2:A:2207:C:N4	2:A:2218:G:O6	2.18	0.76
2:A:2259:G:C5	2:A:2260:C:C4	2.74	0.76
2:A:2259:G:C2	2:A:2282:G:C5	2.62	0.76
2:A:2359:C:HO2'	2:A:2360:A:C1'	1.97	0.76
2:A:2521:C:C4	2:A:2522:U:C5	2.73	0.76
2:A:2591:C:N4	2:A:2604:U:O4	2.18	0.76
2:A:2049:G:C2	2:A:2620:C:C4	2.73	0.76
2:A:2712:U:C4	2:A:712(A):A:N7	2.53	0.76
2:A:2744:G:N3	2:A:2761:G:N2	2.34	0.76
2:A:531:C:H5'	2:A:532:A:N3	2.00	0.76
2:A:627:A:N6	2:A:636:G:O2'	2.19	0.76
3:D:141:HIS:O	3:D:142:ASN:C	2.24	0.76
3:D:161:ALA:C	3:D:162:GLN:CD	2.43	0.76
5:F:240:LEU:CD2	5:F:243:VAL:CG2	2.62	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:21:VAL:CG2	6:G:132:VAL:HG23	2.15	0.76
1:B:57:A:N3	6:G:13:MET:CE	2.49	0.76
1:B:42:C:O2	6:G:47:GLN:HB3	1.86	0.76
7:H:82:TYR:CE1	7:H:137:LYS:CG	2.67	0.76
7:H:159:LYS:H	7:H:162:ARG:CZ	1.98	0.76
8:I:25:TYR:H	8:I:25:TYR:HD2	0.85	0.76
9:N:54:VAL:CA	9:N:135:ILE:HD12	2.15	0.76
2:A:2640:G:H4'	9:N:70:PHE:CD2	2.21	0.76
10:O:103:ALA:CB	10:O:105:GLU:HG2	2.15	0.76
2:A:1669:A:H8	10:O:4:GLN:CD	1.74	0.76
12:Q:50:VAL:CG1	12:Q:51:GLU:OE1	2.34	0.76
12:Q:76:GLY:C	12:Q:82:LYS:N	2.39	0.76
12:Q:87:LYS:O	12:Q:88:PHE:CB	2.33	0.76
19:R:23:ASN:HA	19:R:26:LYS:HD2	1.67	0.76
13:S:85:GLY:HA3	13:S:121:GLY:HA3	1.66	0.76
20:U:111:ASP:O	20:U:112:ALA:C	2.23	0.76
17:Y:71:VAL:HG21	17:Y:93:THR:H	1.50	0.76
18:Z:130:ILE:C	18:Z:130:ILE:HD12	2.04	0.76
2:A:1059:G:OP1	31:K:115:ASP:OD1	2.03	0.76
8:I:59:ALA:HA	8:I:62:LEU:CD1	2.13	0.76
2:A:2755:C:C6	2:A:2755:C:C5'	2.67	0.76
2:A:2182:G:H2'	2:A:2183:C:C6	2.20	0.76
25:4:68:ARG:HG2	25:4:72:LYS:CG	2.15	0.76
2:A:14:A:H2	2:A:2625:G:HO2'	0.78	0.76
2:A:1675:C:C4	4:E:225:LYS:HG2	2.20	0.76
2:A:1952:A:H1'	2:A:2560:C:HO2'	1.46	0.76
2:A:2332:U:C4'	2:A:2336:A:N6	2.48	0.76
2:A:2334:G:O5'	13:S:12:ARG:O	2.03	0.76
2:A:2465:C:N3	2:A:2485:G:O6	2.19	0.76
2:A:2061:G:H1'	2:A:2503:A:C2	2.20	0.76
2:A:2519:U:C3'	2:A:2519:U:OP1	2.28	0.76
2:A:2045:C:C2	2:A:2624:G:N2	2.53	0.76
2:A:2762:G:N7	2:A:2763:G:N7	2.33	0.76
2:A:2785:C:O2'	4:E:100:TRP:CD1	2.37	0.76
2:A:514:A:H2'	2:A:515:A:C8	2.20	0.76
3:D:167:GLU:HG2	3:D:182:MET:CE	2.13	0.76
3:D:228:ALA:O	3:D:229:MET:O	2.04	0.76
4:E:217:TRP:CD2	4:E:251:PRO:HG3	2.21	0.76
2:A:1656:C:P	4:E:233:ARG:HD3	2.26	0.76
4:E:246:VAL:CG1	4:E:247:ARG:N	2.48	0.76
7:H:124:VAL:O	7:H:124:VAL:HG13	1.84	0.76
7:H:51:VAL:CG2	7:H:68:ARG:CG	2.63	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:H:94:ARG:HB3	7:H:127:GLN:HE22	1.51	0.76
8:I:3:VAL:HG21	8:I:21:VAL:CB	2.16	0.76
9:N:12:VAL:HG12	9:N:38:VAL:HG11	1.66	0.76
9:N:63:ILE:O	9:N:69:TYR:HB3	1.85	0.76
10:O:7:ARG:HD3	10:O:44:LYS:CE	2.05	0.76
12:Q:31:PHE:CZ	12:Q:88:PHE:CD2	2.74	0.76
19:R:79:LEU:CD2	19:R:79:LEU:O	2.17	0.76
20:U:28:ARG:HG2	20:U:29:SER:H	1.48	0.76
17:Y:64:ASN:O	17:Y:66:ASP:OD1	2.04	0.76
18:Z:57:GLU:O	18:Z:59:GLY:N	2.18	0.76
22:2:55:ARG:O	22:2:56:ILE:C	2.23	0.76
2:A:138:G:N7	16:X:39:ASP:OD1	2.18	0.76
2:A:1076:C:H4'	31:K:94:ARG:CZ	2.16	0.76
15:W:90:ARG:HH11	15:W:90:ARG:HB2	0.94	0.76
24:0:46:LYS:CG	24:0:58:THR:N	2.47	0.76
23:3:20:LYS:HD3	23:3:23:LEU:HD11	1.66	0.76
28:7:30:ILE:HA	28:7:33:ARG:CB	2.15	0.76
2:A:458:G:H5'	28:7:39:ARG:CD	2.15	0.76
2:A:1287:A:C8	19:R:104:ARG:CG	2.58	0.76
2:A:1140:C:H4'	2:A:142(A):A:C4	2.21	0.76
2:A:1782:C:O2	2:A:2609:U:N1	2.19	0.76
2:A:747:U:O2	2:A:2015:A:H2	1.68	0.76
2:A:2350:C:N4	2:A:2382:G:N1	2.34	0.76
2:A:2472:G:H2'	2:A:2473:U:OP1	1.84	0.76
2:A:2516:G:C5	2:A:2569:G:N2	2.53	0.76
2:A:2573:C:OP1	2:A:2574:G:OP1	2.02	0.76
2:A:2713:A:H5''	2:A:2714:G:OP2	1.84	0.76
2:A:338:G:C8	17:Y:21:LYS:HB3	2.20	0.76
2:A:380:U:HO2'	25:4:15:ILE:CB	1.99	0.76
2:A:247:G:H4'	2:A:386:G:N3	2.01	0.76
2:A:2712:U:C3'	2:A:712(A):A:C5'	2.64	0.76
2:A:687:C:O2	2:A:787:U:H5''	1.85	0.76
3:D:92:LEU:HD12	3:D:102:TYR:CD1	2.19	0.76
4:E:269:ILE:HA	4:E:297:LYS:HE2	1.66	0.76
5:F:157:LEU:C	5:F:159:ALA:N	2.37	0.76
5:F:209:GLY:O	5:F:210:ALA:O	2.02	0.76
5:F:224:ALA:HB3	5:F:225:PRO:CD	2.16	0.76
5:F:87:ARG:O	5:F:88:SER:OG	2.02	0.76
5:F:47:GLY:HA3	5:F:92:PRO:HG2	1.66	0.76
7:H:166:GLU:OE2	7:H:166:GLU:HA	1.85	0.76
8:I:3:VAL:HG11	8:I:21:VAL:CG2	2.15	0.76
12:Q:129:ASP:CG	12:Q:132:VAL:HG23	2.06	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:115:G:H5'	13:S:59:ALA:HB2	1.67	0.76
21:V:40:VAL:HA	21:V:51:ALA:CA	2.16	0.76
21:V:49:GLU:C	21:V:53:LYS:HD2	2.06	0.76
17:Y:32:ARG:O	17:Y:35:TYR:N	2.17	0.76
8:I:98:ILE:CG2	8:I:99:ALA:N	2.43	0.76
2:A:1063:G:C5'	31:K:135:MET:HG2	2.16	0.76
31:K:37:GLU:CG	31:K:41:ARG:NH1	2.35	0.76
2:A:2:G:C2	2:A:2902:C:O2	2.38	0.76
2:A:2720:U:OP1	2:A:2720:U:C4'	2.34	0.76
2:A:1924:C:C2	2:A:1925:C:C5	2.74	0.76
3:D:234:HIS:O	3:D:237:GLY:HA3	1.85	0.76
2:A:2392:A:OP1	29:8:32:GLN:CD	2.24	0.76
2:A:972:G:N7	2:A:1188:U:O4	2.19	0.76
2:A:1994:C:OP1	4:E:227:ALA:CB	2.34	0.76
2:A:2051:A:C4'	4:E:238:LEU:CD2	2.63	0.76
2:A:2324:C:N3	2:A:2331:G:N2	2.30	0.76
2:A:2370:G:H2'	2:A:2371:G:H8	1.49	0.76
2:A:2393:A:C2'	2:A:2394:C:O5'	2.33	0.76
2:A:2475:C:O2	2:A:2529:G:N2	2.18	0.76
2:A:2539:C:C2'	2:A:2540:C:O5'	2.32	0.76
2:A:1638:C:C3'	2:A:2709:G:H22	1.99	0.76
2:A:2848:G:N2	2:A:2849:U:O2	2.14	0.76
2:A:592:G:C2	29:8:3:LYS:NZ	2.54	0.76
2:A:993:G:O4'	21:V:90:PHE:CE2	2.25	0.76
3:D:143:ILE:HG21	3:D:153:LEU:HB2	1.67	0.76
3:D:167:GLU:N	3:D:170:TYR:O	2.18	0.76
4:E:177:ALA:O	4:E:180:ILE:N	2.19	0.76
4:E:225:LYS:C	4:E:229:GLN:HE21	1.74	0.76
5:F:237:GLU:O	5:F:238:SER:C	2.24	0.76
6:G:156:ARG:HG2	6:G:156:ARG:O	1.83	0.76
7:H:35:THR:O	7:H:36:PHE:CG	2.39	0.76
9:N:46:ILE:CG1	9:N:132:LEU:HD13	2.14	0.76
11:P:110:GLY:HA2	11:P:129:ALA:HB2	1.65	0.76
12:Q:91:HIS:N	12:Q:111:THR:HG23	2.00	0.76
2:A:910:A:C8	12:Q:17:ARG:NH2	2.53	0.76
13:S:31:LYS:HD3	13:S:99:GLU:HB2	1.66	0.76
20:U:94:VAL:CG1	21:V:4:ILE:HD13	2.15	0.76
17:Y:34:GLU:O	17:Y:35:TYR:CD2	2.38	0.76
17:Y:74:VAL:HB	17:Y:77:VAL:CG2	2.14	0.76
18:Z:172:LEU:HD21	18:Z:173:PRO:HG2	1.68	0.76
22:2:23:LEU:HA	22:2:26:GLU:OE1	1.85	0.76
22:2:3:LEU:HB3	22:2:8:ILE:HD11	1.66	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:2:4:HIS:O	22:2:8:ILE:CD1	2.33	0.76
2:A:1078:U:C6	2:A:1088:A:C2	2.74	0.76
2:A:176:G:H3'	2:A:177:G:C8	2.18	0.76
18:Z:131:PRO:O	18:Z:133:GLU:N	2.19	0.76
24:0:67:VAL:HG11	24:0:74:LYS:HG2	0.79	0.76
25:4:18:GLY:N	25:4:33:VAL:CG2	2.49	0.76
25:4:6:HIS:CE1	25:4:56:VAL:H	2.03	0.76
29:8:19:THR:CB	29:8:21:LYS:HZ2	1.98	0.76
2:A:2199:A:C3'	2:A:2205:C:H6	1.99	0.76
2:A:2287:A:O2'	2:A:2288:A:H5'	1.86	0.76
2:A:2343:C:C5'	2:A:2374:C:OP1	2.31	0.76
2:A:2438:U:H4'	2:A:2440:C:OP1	1.85	0.76
2:A:2468:G:C6	2:A:2481:G:N1	2.54	0.76
2:A:2519:U:N3	2:A:2542:A:C5	2.53	0.76
2:A:2579:C:H5''	2:A:2579:C:C5	2.15	0.76
2:A:2581:G:H2'	2:A:2581:G:N3	1.99	0.76
2:A:2604:U:O2	2:A:2604:U:H2'	1.85	0.76
2:A:2626:C:C6	2:A:2626:C:H3'	2.21	0.76
2:A:631:A:H2	2:A:2415:G:C2	2.03	0.76
2:A:994:C:O2	20:U:53:LYS:CG	2.33	0.76
2:A:998:C:H5''	20:U:84:LYS:HZ3	1.51	0.76
1:B:47:C:O3'	13:S:107:ASN:CG	2.23	0.76
4:E:217:TRP:CE3	4:E:251:PRO:HG3	2.21	0.76
5:F:46:TYR:C	5:F:92:PRO:HB2	2.05	0.76
5:F:89:ALA:HB1	5:F:90:HIS:NE2	2.00	0.76
6:G:94:ALA:C	6:G:95:THR:HG1	1.89	0.76
7:H:121:GLU:HG2	7:H:133:LYS:O	1.86	0.76
9:N:20:GLY:C	9:N:22:VAL:N	2.32	0.76
10:O:31:ARG:HB2	10:O:32:TYR:HE1	1.50	0.76
10:O:35:ILE:N	10:O:35:ILE:CD1	2.37	0.76
2:A:957:A:OP1	12:Q:95:GLU:HB3	1.84	0.76
19:R:115:GLU:OE1	26:5:56:GLN:NE2	2.17	0.76
19:R:84:ALA:CB	19:R:85:PRO:CD	2.58	0.76
17:Y:15:PRO:HB2	17:Y:18:GLU:HG3	1.66	0.76
18:Z:100:THR:HG22	18:Z:137:ASP:CG	2.06	0.76
18:Z:107:GLU:O	18:Z:109:GLN:N	2.16	0.76
18:Z:79:ILE:O	18:Z:80:HIS:CG	2.39	0.76
8:I:92:SER:CB	8:I:122:ARG:NH1	2.45	0.76
22:2:52:ALA:C	22:2:56:ILE:HG12	2.06	0.76
4:E:109:ASP:CA	4:E:112:LEU:HB2	1.99	0.76
2:A:1913:A:N1	2:A:1916:A:H2'	2.00	0.76
23:3:4:LEU:N	23:3:37:LEU:O	2.18	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:7:15:THR:OG1	28:7:16:HIS:N	2.17	0.76
28:7:17:GLY:HA2	28:7:44:VAL:HG22	0.77	0.76
2:A:1214:A:H2'	2:A:1215:G:H8	1.46	0.76
2:A:1567:A:H4'	2:A:1568:G:C2	2.21	0.76
2:A:1638:C:H4'	2:A:2710:C:O2	1.86	0.76
2:A:2265:U:O2'	2:A:2266:A:OP1	2.03	0.76
2:A:2638:G:O2'	2:A:2639:A:H8	1.68	0.76
2:A:2731:G:N1	2:A:2732:G:C2	2.53	0.76
2:A:673:C:O4'	5:F:82:GLN:OE1	2.04	0.76
1:B:74:U:H2'	1:B:75:G:H8	1.51	0.76
3:D:194:VAL:HG23	3:D:195:GLY:N	2.01	0.76
2:A:2575:C:OP1	4:E:241:TRP:CD1	2.39	0.76
10:O:3:GLN:HG2	10:O:4:GLN:N	2.01	0.76
10:O:87:ILE:HG23	10:O:92:SER:N	2.00	0.76
12:Q:136:TRP:HA	12:Q:136:TRP:HE3	1.51	0.76
2:A:911:A:C2'	12:Q:16:ARG:HE	1.95	0.76
12:Q:33:MET:HE1	12:Q:34:GLY:O	1.84	0.76
20:U:106:PHE:O	20:U:108:ALA:N	2.18	0.76
20:U:41:ASN:O	20:U:42:ALA:C	2.24	0.76
17:Y:74:VAL:HG11	17:Y:77:VAL:CG2	2.14	0.76
18:Z:62:PHE:CE2	18:Z:87:THR:CG2	2.68	0.76
18:Z:64:ALA:HB3	18:Z:85:MET:HA	0.84	0.76
31:K:28:LEU:HD11	31:K:58:ILE:HD12	1.67	0.76
2:A:359:A:O2'	2:A:360:G:C5	2.39	0.76
2:A:2355:C:C5'	24:O:21:LEU:CD1	2.51	0.76
25:4:13:LYS:O	25:4:14:ILE:CB	2.32	0.76
2:A:242:G:C3'	29:8:5:LYS:HZ3	1.95	0.76
29:8:60:LEU:HD22	29:8:61:MET:N	2.01	0.76
29:8:60:LEU:CD1	29:8:64:ARG:CB	2.47	0.76
2:A:2052:G:N2	4:E:245:ARG:CG	2.35	0.76
2:A:2064:C:C2	2:A:2450:A:N6	2.54	0.76
2:A:2246:G:N3	2:A:2426:A:N3	2.34	0.76
2:A:2321:G:H2'	2:A:2321:G:N3	2.01	0.76
2:A:2285:C:O2	2:A:2384:G:N2	2.19	0.76
2:A:2606:C:H2'	2:A:2607:G:O5'	1.86	0.76
2:A:2617:C:H2'	2:A:2618:G:O5'	1.85	0.76
2:A:2674:G:C2'	2:A:2675:A:H8	1.93	0.76
2:A:911:A:C2	12:Q:16:ARG:HG2	2.19	0.76
2:A:1820:U:O2	3:D:200:THR:HG22	1.86	0.76
3:D:208:GLY:C	3:D:211:HIS:CE1	2.59	0.76
5:F:236:THR:O	5:F:237:GLU:C	2.24	0.76
6:G:103:ASN:O	6:G:104:PHE:CG	2.38	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:19:GLU:HB3	6:G:135:VAL:HG21	1.03	0.76
8:I:4:ILE:C	8:I:5:PHE:CD2	2.60	0.76
9:N:19:MET:HB3	9:N:46:ILE:CG1	2.16	0.76
10:O:122:ILE:H	10:O:122:ILE:HD12	1.51	0.76
12:Q:31:PHE:CZ	12:Q:88:PHE:HD2	2.04	0.76
13:S:36:ALA:HA	13:S:45:ALA:CB	2.15	0.76
20:U:20:ARG:NH1	21:V:75:LYS:CE	2.49	0.76
22:2:49:LEU:O	22:2:50:ARG:C	2.24	0.76
31:K:11:LEU:HD11	31:K:28:LEU:CG	2.16	0.76
4:E:107:GLU:CB	4:E:110:ARG:CZ	2.60	0.76
2:A:2858:C:H2'	2:A:2858:C:O2	1.85	0.76
2:A:2755:C:O5'	2:A:2755:C:H6	1.59	0.76
24:0:18:PRO:HB2	24:0:36:ILE:CD1	2.16	0.75
25:4:58:LYS:O	25:4:61:LYS:CG	2.33	0.75
2:A:1312:U:O2'	2:A:1314:C:H5	1.68	0.75
2:A:1790:C:O2	2:A:1790:C:H2'	1.86	0.75
2:A:2744:G:C6	2:A:2745:C:C4	2.74	0.75
4:E:211:GLN:OE1	4:E:212:GLY:N	2.16	0.75
9:N:65:ASN:CG	9:N:69:TYR:CD1	2.60	0.75
9:N:77:GLY:O	9:N:78:ILE:C	2.22	0.75
13:S:122:ALA:O	13:S:125:ALA:CB	2.32	0.75
20:U:12:ARG:O	20:U:13:ARG:C	2.23	0.75
20:U:17:VAL:HA	20:U:20:ARG:HG3	1.67	0.75
15:W:50:VAL:HG21	15:W:103:ILE:HG21	1.68	0.75
17:Y:102:ASP:O	17:Y:103:LEU:HD23	1.86	0.75
18:Z:25:ASN:HA	18:Z:84:TYR:CE1	2.21	0.75
18:Z:67:LYS:HD2	18:Z:93:GLU:OE2	1.84	0.75
2:A:2307:G:C2'	2:A:2311:A:N6	2.49	0.75
31:K:102:ARG:O	31:K:105:ILE:N	2.19	0.75
31:K:122:GLU:CB	31:K:126:LYS:HE3	2.15	0.75
2:A:865:C:O2'	2:A:866:A:N7	2.18	0.75
23:3:39:ASP:HA	23:3:44:ARG:NH2	2.02	0.75
2:A:1773:A:OP1	2:A:1828:G:H3'	1.84	0.75
2:A:2061:G:C1'	2:A:2503:A:C2	2.69	0.75
2:A:2185:C:H2'	2:A:2186:G:C8	2.21	0.75
2:A:2208:U:H3	2:A:2216:G:H1	0.80	0.75
2:A:2327:A:O2'	2:A:2328:A:O4'	2.01	0.75
2:A:2366:A:N7	2:A:2367:G:N7	2.33	0.75
2:A:2507:C:O2	2:A:2583:G:N3	2.19	0.75
2:A:2548:G:C8	2:A:2548:G:H3'	2.20	0.75
2:A:2586:C:H2'	2:A:2587:A:H5'	1.68	0.75
2:A:2631:G:H2'	2:A:2632:A:O5'	1.85	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2691:C:C2'	2:A:2692:C:H5'	2.16	0.75
6:G:21:VAL:HG13	6:G:132:VAL:CA	2.15	0.75
7:H:116:PRO:HB2	7:H:120:LEU:O	1.86	0.75
7:H:121:GLU:OE2	7:H:134:GLY:CA	2.24	0.75
7:H:15:THR:CG2	7:H:26:LYS:CA	2.63	0.75
2:A:2748:A:C2'	7:H:62:ALA:HB1	2.16	0.75
10:O:21:VAL:CA	10:O:41:ALA:HB2	2.15	0.75
11:P:66:VAL:HB	11:P:110:GLY:O	1.85	0.75
11:P:96:VAL:HG23	11:P:101:ASP:H	1.49	0.75
12:Q:31:PHE:C	12:Q:85:ILE:HD11	2.05	0.75
19:R:46:GLY:O	19:R:50:HIS:N	2.19	0.75
19:R:79:LEU:HD22	19:R:80:PHE:CA	2.17	0.75
20:U:113:SER:C	20:U:115:ASN:N	2.39	0.75
15:W:50:VAL:O	15:W:50:VAL:HG12	1.86	0.75
17:Y:73:HIS:NE2	17:Y:89:ARG:O	2.19	0.75
8:I:108:LEU:CD2	8:I:109:LYS:O	2.34	0.75
22:2:48:GLU:O	22:2:50:ARG:N	2.19	0.75
22:2:50:ARG:O	22:2:53:ILE:HB	1.86	0.75
16:X:33:SER:O	16:X:34:LYS:C	2.23	0.75
16:X:24:LEU:CD1	16:X:68:LEU:CD2	2.64	0.75
25:4:17:GLN:CA	25:4:33:VAL:HB	2.17	0.75
2:A:2329:G:N2	2:A:2386:C:N3	2.33	0.75
2:A:2491:U:HO2'	2:A:2492:U:H5'	0.93	0.75
2:A:2735:G:N1	2:A:2770:G:N2	2.34	0.75
2:A:321:G:H2'	2:A:341:G:H4'	1.69	0.75
2:A:397:G:H5'	25:4:40:HIS:O	1.86	0.75
2:A:574:C:H41	2:A:2054:A:H5''	1.50	0.75
2:A:803:U:C2'	2:A:804:A:H5'	2.16	0.75
3:D:77:VAL:HG12	3:D:77:VAL:O	1.85	0.75
2:A:2575:C:H5'	4:E:241:TRP:NE1	2.00	0.75
7:H:159:LYS:N	7:H:162:ARG:NH2	2.29	0.75
7:H:75:VAL:O	7:H:78:VAL:N	2.18	0.75
8:I:28:ASN:HA	8:I:32:LYS:HG2	1.68	0.75
11:P:73:VAL:CG1	11:P:76:LEU:HD23	2.15	0.75
14:T:21:PHE:O	14:T:22:VAL:HG13	1.83	0.75
21:V:91:THR:O	21:V:92:ALA:HB3	1.63	0.75
15:W:36:LEU:HA	15:W:39:THR:CG2	2.16	0.75
17:Y:57:GLY:HA2	17:Y:97:ARG:NH2	2.00	0.75
17:Y:27:LEU:HD23	17:Y:98:VAL:HG12	1.69	0.75
22:2:17:GLU:O	22:2:18:ALA:C	2.24	0.75
2:A:1518:C:C3'	2:A:1519:G:H4'	2.15	0.75
2:A:1534:G:N2	2:A:1538:G:N3	2.34	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:8:25:PHE:O	29:8:26:LYS:C	2.23	0.75
2:A:1287:A:H8	19:R:104:ARG:CD	2.00	0.75
2:A:1301:A:H62	2:A:1303:G:C1'	1.98	0.75
2:A:1953:A:N6	2:A:2550:G:C4'	2.49	0.75
2:A:2188:C:C5	2:A:2189:U:O4	2.39	0.75
2:A:2325:G:C6	2:A:2326:C:H5	2.04	0.75
2:A:2419:U:OP1	29:8:41:ILE:HD11	1.87	0.75
2:A:2482:G:C6	2:A:2483:C:C6	2.74	0.75
2:A:2516:G:C2	2:A:2569:G:N3	2.55	0.75
2:A:2821:A:C2	2:A:2822:G:C8	2.74	0.75
2:A:746:A:O5'	2:A:2612:C:C5	2.40	0.75
3:D:135:PRO:HG2	3:D:138:THR:HG21	0.78	0.75
3:D:107:LYS:HB2	3:D:195:GLY:HA2	1.69	0.75
3:D:67:LYS:HD3	3:D:67:LYS:N	2.00	0.75
3:D:80:ILE:CG1	3:D:82:TYR:HE1	1.99	0.75
2:A:2512:C:H4'	4:E:235:ILE:HD12	1.69	0.75
4:E:44:TYR:CE1	4:E:308:VAL:CB	2.60	0.75
4:E:63:GLU:O	4:E:67:THR:HA	1.84	0.75
5:F:220:THR:HB	5:F:224:ALA:CB	2.16	0.75
5:F:220:THR:CB	5:F:224:ALA:HB2	2.16	0.75
5:F:220:THR:HB	5:F:224:ALA:HB2	1.67	0.75
5:F:167:ASP:HB3	5:F:232:LEU:N	2.02	0.75
5:F:20:ASP:O	5:F:23:GLU:HB2	1.86	0.75
5:F:87:ARG:O	5:F:88:SER:CB	2.35	0.75
7:H:120:LEU:HD23	7:H:120:LEU:N	2.01	0.75
2:A:2745:C:C2	7:H:142:GLU:OE2	2.39	0.75
7:H:23:VAL:CG1	7:H:74:MET:CE	2.64	0.75
10:O:79:PHE:CA	14:T:22:VAL:CG2	2.64	0.75
11:P:142:LEU:O	11:P:145:LEU:HD13	1.87	0.75
12:Q:136:TRP:O	12:Q:139:ALA:CA	2.34	0.75
12:Q:33:MET:CB	12:Q:83:PHE:HB2	2.17	0.75
13:S:27:LEU:HD13	13:S:28:LYS:N	2.01	0.75
21:V:39:PHE:CD2	21:V:40:VAL:N	2.54	0.75
18:Z:10:PRO:O	18:Z:14:LEU:CB	2.34	0.75
22:2:13:PRO:CD	22:2:16:ARG:NH1	2.45	0.75
16:X:4:VAL:CB	22:2:24:LYS:HZ2	2.00	0.75
2:A:1917:U:C3'	2:A:1918:A:H8	1.93	0.75
2:A:2261:C:C3'	24:0:14:ARG:HH21	2.00	0.75
26:5:46:CYS:C	26:5:48:ASN:H	1.88	0.75
2:A:2400:G:O3'	27:6:20:PHE:CE1	2.39	0.75
2:A:2211:G:N3	2:A:2211:G:H2'	2.00	0.75
2:A:2261:C:H3'	24:0:14:ARG:HH21	1.50	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2298:A:C4	2:A:2321:G:C2	2.75	0.75
2:A:2346:A:H1'	2:A:2383:G:C8	2.21	0.75
2:A:2488:A:H3'	2:A:2488:A:C8	2.20	0.75
2:A:2526:G:H2'	2:A:2527:C:O5'	1.87	0.75
2:A:2526:G:O2'	2:A:2527:C:H5'	1.86	0.75
2:A:2530:A:C3'	2:A:2531:A:H5''	2.17	0.75
2:A:2532:G:C8	2:A:2532:G:O5'	2.39	0.75
2:A:2658:C:C2'	2:A:2659:G:O5'	2.34	0.75
2:A:527:C:H5	2:A:2779:U:H3'	1.48	0.75
2:A:2825:C:O5'	2:A:2825:C:C5	2.40	0.75
3:D:155:ARG:C	3:D:157:ALA:N	2.38	0.75
6:G:151:ILE:CD1	6:G:156:ARG:HH22	1.99	0.75
7:H:102:LEU:H	7:H:102:LEU:CD2	1.98	0.75
7:H:128:THR:HG23	7:H:129:LYS:H	1.52	0.75
9:N:137:GLU:N	9:N:141:ALA:H	1.83	0.75
10:O:1:MET:CB	10:O:2:ILE:CD1	2.64	0.75
11:P:69:ILE:CA	11:P:73:VAL:CG2	2.65	0.75
2:A:1287:A:H5'	19:R:104:ARG:HG3	1.68	0.75
19:R:32:GLY:O	19:R:33:ARG:HB3	1.83	0.75
13:S:32:PRO:HG3	13:S:100:ALA:CB	2.16	0.75
2:A:18:C:O3'	20:U:23:GLY:HA3	1.85	0.75
21:V:46:VAL:O	21:V:46:VAL:HG12	1.86	0.75
17:Y:43:ASN:ND2	17:Y:112:LEU:HD21	1.98	0.75
22:2:62:GLU:O	22:2:63:GLU:C	2.24	0.75
31:K:132:ALA:O	31:K:137:ILE:O	2.04	0.75
6:G:44:ILE:HG22	6:G:83:PHE:CE2	2.12	0.75
2:A:2722:G:N1	2:A:2723:C:N3	2.31	0.75
24:0:50:GLY:C	24:0:52:GLY:H	1.88	0.75
2:A:1418:G:O6	2:A:1577:C:H5''	1.86	0.75
3:D:230:ASN:O	3:D:231:ALA:HB2	1.85	0.75
24:0:20:TYR:O	24:0:21:LEU:O	2.04	0.75
23:3:30:ARG:NH1	23:3:30:ARG:CG	2.38	0.75
25:4:41:PRO:CB	25:4:57:ASP:HB3	2.17	0.75
2:A:770:G:H5'	28:7:10:ARG:HH11	1.52	0.75
2:A:2206:C:HO2'	2:A:2207:C:C4'	1.99	0.75
2:A:2219:G:O2'	2:A:2224:G:H5'	1.71	0.75
2:A:2232:U:C2'	2:A:2233:U:C5'	2.61	0.75
2:A:2495:G:H4'	12:Q:101:MET:HB3	1.67	0.75
2:A:2523:G:O4'	2:A:2765:A:C8	2.40	0.75
2:A:2603:G:C5	2:A:2604:U:C5	2.75	0.75
2:A:2626:C:C6	2:A:2626:C:C3'	2.70	0.75
2:A:2661:G:C6	2:A:2662:A:N6	2.53	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2793:G:O6	2:A:2794:C:N4	2.20	0.75
5:F:103:ASN:O	5:F:107:ARG:HG3	1.85	0.75
2:A:2316:C:O3'	6:G:151:ILE:HG13	1.86	0.75
6:G:24:HIS:C	6:G:25:MET:HG2	2.04	0.75
9:N:19:MET:CA	9:N:19:MET:HE3	2.17	0.75
10:O:17:ARG:NH2	10:O:47:THR:CA	2.49	0.75
11:P:64:ILE:CB	11:P:107:LYS:O	2.23	0.75
13:S:15:GLU:O	13:S:16:ALA:CB	2.31	0.75
20:U:94:VAL:O	20:U:98:ILE:HD11	0.94	0.75
17:Y:78:THR:H	17:Y:89:ARG:CZ	2.00	0.75
18:Z:3:LEU:CB	18:Z:34:LEU:HA	2.05	0.75
6:G:56:ARG:HA	6:G:63:ILE:O	1.86	0.75
31:K:123:ALA:HA	31:K:126:LYS:HD2	1.68	0.75
31:K:132:ALA:CB	31:K:137:ILE:HB	2.15	0.75
31:K:38:PHE:CE2	31:K:67:THR:HG22	2.20	0.75
17:Y:81:LYS:CG	17:Y:82:THR:H	1.96	0.75
2:A:1416:G:N2	2:A:1582:C:H42	1.83	0.75
25:4:68:ARG:CD	25:4:72:LYS:CG	2.57	0.75
2:A:2206:C:O2'	2:A:2207:C:C4'	2.34	0.75
2:A:2302:G:O2'	2:A:2303:G:O5'	2.02	0.75
2:A:2349:G:OP2	29:8:42:ARG:NH2	2.20	0.75
2:A:746:A:OP1	2:A:2612:C:C2	2.40	0.75
2:A:2635:C:N3	2:A:2783:G:N1	2.34	0.75
2:A:2665:A:O2'	2:A:2666:C:O4'	2.03	0.75
2:A:2666:C:C5	2:A:2667:C:C6	2.74	0.75
2:A:2716:U:N3	2:A:2717:G:N7	2.33	0.75
2:A:2734:A:C8	2:A:2734:A:C5'	2.69	0.75
2:A:2741:A:C2'	2:A:2742:C:H6	1.95	0.75
2:A:2852:G:N3	2:A:2853:C:C2	2.55	0.75
2:A:2865:U:C6	2:A:2866:U:C5	2.75	0.75
2:A:592:G:H21	29:8:3:LYS:CE	2.00	0.75
2:A:932:G:H5''	23:3:29:ARG:NH2	1.91	0.75
3:D:222:PRO:O	3:D:224:VAL:CG2	2.25	0.75
5:F:167:ASP:C	5:F:168:ARG:HG3	2.07	0.75
6:G:103:ASN:C	6:G:104:PHE:CG	2.59	0.75
6:G:19:GLU:OE1	6:G:135:VAL:CB	2.34	0.75
6:G:76:ARG:CB	6:G:77:ASP:OD1	2.35	0.75
8:I:12:LYS:O	8:I:14:LYS:HG3	1.86	0.75
10:O:10:VAL:HG21	10:O:16:ALA:CB	2.12	0.75
12:Q:132:VAL:O	12:Q:135:ALA:HB3	1.86	0.75
12:Q:42:TYR:HD2	18:Z:119:ASN:HA	1.49	0.75
19:R:37:THR:HA	19:R:111:LEU:CA	2.15	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:R:62:ALA:CB	19:R:80:PHE:HZ	1.99	0.75
6:G:145:ASP:CB	13:S:15:GLU:CA	2.56	0.75
15:W:68:ARG:O	15:W:110:LYS:HB2	1.86	0.75
22:2:59:ILE:O	22:2:60:GLN:C	2.25	0.75
2:A:1081:U:P	31:K:126:LYS:HD3	2.26	0.75
31:K:109:ALA:CB	31:K:128:ILE:HD11	2.13	0.75
31:K:93:LYS:HA	31:K:96:ILE:HG13	1.69	0.75
14:T:45:GLU:O	14:T:48:ASN:CG	2.25	0.75
2:A:332:A:H2'	2:A:334:C:OP2	1.86	0.75
2:A:983:A:C8	2:A:984:A:H1'	2.22	0.75
23:3:23:LEU:O	23:3:28:LEU:CD1	2.35	0.75
23:3:48:GLU:HG2	23:3:49:LYS:H	1.51	0.75
25:4:6:HIS:CE1	25:4:55:ARG:HB2	2.21	0.75
27:6:8:ILE:HA	27:6:29:ARG:CZ	2.17	0.75
29:8:23:MET:CE	29:8:48:PHE:CA	2.59	0.75
30:9:29:ASN:HD22	30:9:32:HIS:HE1	1.32	0.75
2:A:974(A):C:O4'	2:A:1186:G:N2	2.20	0.75
2:A:1140:C:H4'	2:A:142(A):A:C6	2.22	0.75
2:A:1651:G:H1	2:A:2006:C:H42	1.33	0.75
2:A:2320:A:N1	13:S:13:ARG:CG	2.49	0.75
2:A:2403:C:O2	2:A:2403:C:C2'	2.33	0.75
2:A:806:C:O2'	2:A:2445:G:H4'	1.87	0.75
2:A:2482:G:C2'	2:A:2483:C:H5''	2.14	0.75
2:A:2485:G:N2	2:A:2486:G:H1'	2.01	0.75
2:A:2754:U:C2'	2:A:2756:U:P	2.72	0.75
2:A:2828:C:N3	2:A:2829:C:C4	2.55	0.75
2:A:2881:C:H2'	2:A:2882:A:C8	2.21	0.75
2:A:606:U:H5'	5:F:103:ASN:CG	2.07	0.75
2:A:688:U:H5'	2:A:1780:A:N1	2.01	0.75
4:E:222:ARG:HG2	4:E:232:ARG:HA	1.69	0.75
7:H:82:TYR:CZ	7:H:137:LYS:HG3	2.20	0.75
7:H:86:LEU:HD22	7:H:87:GLU:N	2.01	0.75
2:A:1022:G:O6	9:N:47:THR:HG21	1.87	0.75
10:O:25:LEU:HD12	10:O:38:VAL:CB	2.16	0.75
10:O:66:LYS:HD2	10:O:67:ARG:N	2.00	0.75
2:A:245:G:P	11:P:53:ARG:NH1	2.59	0.75
12:Q:33:MET:HG3	12:Q:83:PHE:CG	2.21	0.75
13:S:30:GLY:O	13:S:31:LYS:HE2	1.86	0.75
15:W:15:ARG:O	15:W:18:ARG:N	2.20	0.75
15:W:24:ILE:HG22	15:W:35:ILE:CB	2.16	0.75
17:Y:50:VAL:CG1	17:Y:51:LEU:N	2.33	0.75
18:Z:115:ILE:O	18:Z:169:VAL:HG13	1.87	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:Z:19:ILE:CB	18:Z:39:PHE:CE1	2.66	0.75
6:G:57:THR:H	6:G:63:ILE:HA	1.50	0.75
2:A:1057:A:N7	2:A:1087:G:P	2.60	0.75
31:K:104:GLN:O	31:K:108:ILE:HG13	1.87	0.75
2:A:300:A:O2'	2:A:318:C:H1'	1.87	0.75
2:A:1022:G:O6	9:N:47:THR:CG2	2.34	0.75
2:A:1966:A:C2	2:A:2593:U:C4'	2.70	0.75
2:A:2100:G:C6	2:A:2190:G:C6	2.74	0.75
2:A:2330:G:O2'	2:A:2331:G:H5'	1.85	0.75
2:A:248:G:H21	2:A:2431:U:C4'	1.98	0.75
2:A:2543:G:N9	2:A:2544:G:N7	2.35	0.75
2:A:2581:G:C2	2:A:2610:C:C5	2.74	0.75
2:A:2615:U:C2'	2:A:2616:C:O5'	2.33	0.75
2:A:2626:C:O5'	2:A:2626:C:H6	1.63	0.75
2:A:2633:G:H1	2:A:2785:C:N4	1.82	0.75
2:A:2671:A:H2'	2:A:2672:G:H8	1.52	0.75
2:A:387:U:H4'	2:A:388:G:O4'	1.87	0.75
2:A:510:C:P	2:A:512:G:H1	2.09	0.75
4:E:235:ILE:HG23	4:E:236:GLY:H	1.51	0.75
4:E:200:ASP:C	4:E:266:LYS:HD2	2.07	0.75
4:E:76:PRO:HB2	4:E:77:PRO:HD2	1.63	0.75
5:F:22:PHE:HZ	5:F:115:LEU:CD1	1.99	0.75
7:H:41:THR:HG22	7:H:52:THR:CB	2.17	0.75
8:I:31:PHE:CZ	8:I:36:ALA:HB3	2.21	0.75
9:N:103:VAL:HG12	9:N:104:TYR:N	2.01	0.75
9:N:87:LEU:CB	9:N:88:PRO:HD2	2.16	0.75
10:O:64:ARG:CD	10:O:81:GLU:HB3	2.17	0.75
2:A:2250:G:H5''	12:Q:102:ARG:HB3	1.67	0.75
2:A:910:A:N7	12:Q:12:PRO:O	2.20	0.75
20:U:52:ASN:O	20:U:53:LYS:C	2.24	0.75
20:U:74:MET:HE1	20:U:78:THR:CG2	1.97	0.75
2:A:974:G:N7	21:V:80:TYR:CG	2.54	0.75
18:Z:116:VAL:CB	18:Z:169:VAL:HG22	2.16	0.75
8:I:92:SER:HA	8:I:122:ARG:CG	2.08	0.75
31:K:79:LEU:HD21	31:K:137:ILE:HG21	1.69	0.75
9:N:108:PRO:HG2	9:N:109:TYR:CD1	2.21	0.75
2:A:1495:A:H2'	2:A:1496:A:N7	2.02	0.75
2:A:882:G:H1	2:A:894:C:H42	1.34	0.75
23:3:37:LEU:HD13	23:3:43:ILE:HG21	1.66	0.74
23:3:44:ARG:O	23:3:48:GLU:OE1	2.05	0.74
28:7:10:ARG:O	28:7:11:LYS:O	2.05	0.74
2:A:2258:C:C6	2:A:2426:A:H4'	2.22	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2414:G:N3	2:A:2415:G:H8	1.85	0.74
2:A:2430:A:C2'	2:A:2431:U:H5''	2.16	0.74
2:A:2512:C:H5''	4:E:219:VAL:CG1	2.17	0.74
2:A:2567:G:C4	2:A:2568:C:C5	2.67	0.74
2:A:2576:G:H3'	2:A:2576:G:P	2.27	0.74
2:A:2604:U:O2	2:A:2605:U:C5	2.40	0.74
2:A:2629:A:N6	2:A:2895:U:O2	2.20	0.74
2:A:2633:G:C4	2:A:2634:G:C8	2.75	0.74
2:A:2564:A:N1	2:A:2647:U:H4'	2.02	0.74
2:A:2641:G:O6	2:A:2773:C:N3	2.20	0.74
2:A:2783:G:H2'	2:A:2784:C:H6	1.50	0.74
2:A:2813:A:C8	2:A:2814:C:H5	2.04	0.74
2:A:2826:A:N7	2:A:2827:C:C5	2.46	0.74
2:A:475:U:H4'	2:A:510:C:H5'	1.69	0.74
3:D:123:ILE:O	3:D:125:ILE:N	2.20	0.74
4:E:200:ASP:O	4:E:311:PHE:CA	2.34	0.74
4:E:222:ARG:H	4:E:222:ARG:CD	1.96	0.74
2:A:2680:C:C4'	4:E:300:VAL:HA	2.17	0.74
5:F:81:PRO:CA	5:F:87:ARG:CG	2.26	0.74
7:H:123:GLU:OE2	7:H:123:GLU:N	2.20	0.74
7:H:15:THR:HG23	7:H:26:LYS:HB2	1.63	0.74
9:N:65:ASN:CB	9:N:69:TYR:CE1	2.69	0.74
9:N:83:ILE:O	9:N:85:GLY:N	2.20	0.74
10:O:105:GLU:O	10:O:106:LEU:C	2.26	0.74
12:Q:72:VAL:CG2	12:Q:135:ALA:CB	2.65	0.74
12:Q:27:GLY:O	12:Q:28:ILE:HG12	1.87	0.74
12:Q:67:ALA:HB2	12:Q:70:ARG:HH11	0.94	0.74
13:S:60:SER:HA	13:S:91:ARG:HD3	1.68	0.74
21:V:69:ILE:CG2	21:V:88:GLN:CB	2.65	0.74
15:W:32:ALA:O	15:W:34:ASN:N	2.20	0.74
17:Y:50:VAL:C	17:Y:51:LEU:HD13	2.07	0.74
17:Y:70:ALA:O	17:Y:71:VAL:HG23	1.87	0.74
18:Z:154:LEU:C	18:Z:154:LEU:HD23	2.07	0.74
31:K:38:PHE:HD2	31:K:67:THR:HG22	1.47	0.74
2:A:1944:U:H1'	2:A:1955:U:C1'	2.16	0.74
2:A:715:G:H2'	2:A:716:A:C8	2.22	0.74
2:A:269:U:H5	2:A:270(Z):U:P	2.10	0.74
2:A:2213:U:H2'	2:A:2213:U:O2	1.86	0.74
2:A:2419:U:O4	29:8:31:HIS:CE1	2.39	0.74
2:A:2473:U:C2'	2:A:2473:U:O2	2.34	0.74
2:A:2468:G:C6	2:A:2481:G:C2	2.74	0.74
3:D:208:GLY:O	3:D:211:HIS:CE1	2.40	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1789:A:H5''	3:D:224:VAL:CG1	2.17	0.74
5:F:140:VAL:CG2	5:F:234:VAL:HB	2.17	0.74
5:F:215:ALA:CB	5:F:241:ALA:HB3	2.09	0.74
6:G:13:MET:O	6:G:15:GLU:N	2.21	0.74
7:H:147:ILE:HD12	7:H:150:VAL:CB	2.18	0.74
11:P:66:VAL:O	11:P:67:ARG:C	2.24	0.74
11:P:94:ARG:O	11:P:95:ASP:CB	2.34	0.74
12:Q:142:LYS:CE	12:Q:142:LYS:C	2.55	0.74
12:Q:31:PHE:HA	12:Q:85:ILE:CD1	2.18	0.74
12:Q:35:ASN:HB2	12:Q:75:SER:HB2	1.68	0.74
13:S:110:THR:OG1	13:S:111:PRO:CD	2.34	0.74
13:S:46:GLN:HB3	13:S:57:THR:CG2	2.16	0.74
21:V:61:VAL:CG2	21:V:98:ILE:N	2.42	0.74
17:Y:92:ASP:C	17:Y:92:ASP:OD1	2.25	0.74
8:I:102:LEU:HD12	8:I:103:GLN:H	0.93	0.74
8:I:76:THR:HB	8:I:144:HIS:CE1	2.22	0.74
2:A:1398:C:H2'	2:A:1399:C:H6	1.52	0.74
31:K:106:GLU:O	31:K:110:LYS:CD	2.35	0.74
24:O:50:GLY:O	24:O:52:GLY:N	2.20	0.74
24:O:79:ILE:O	24:O:81:ILE:CD1	2.34	0.74
2:A:2294:C:C4	2:A:2339:G:O6	2.40	0.74
2:A:2356:C:OP1	24:O:19:LYS:HD2	1.86	0.74
2:A:2496:C:N4	2:A:2497:A:C2	2.55	0.74
2:A:2576:G:H2'	2:A:2576:G:N3	2.02	0.74
2:A:2735:G:O6	2:A:2770:G:N2	2.18	0.74
2:A:2638:G:C4	2:A:2775:A:C2	2.76	0.74
2:A:2850:A:H2'	2:A:2851:A:C8	2.20	0.74
2:A:2886:G:C2	2:A:2887:U:C6	2.76	0.74
3:D:167:GLU:HB2	3:D:170:TYR:CE1	2.06	0.74
3:D:63:ILE:HG22	3:D:64:ILE:H	0.59	0.74
2:A:2785:C:C2	4:E:100:TRP:CD1	2.75	0.74
4:E:99:VAL:CG1	4:E:100:TRP:N	2.46	0.74
2:A:2574:G:O2'	4:E:240:PRO:CA	2.35	0.74
4:E:205:THR:HG23	4:E:259:HIS:N	1.97	0.74
4:E:45:LYS:HE3	4:E:303:PRO:HG2	0.79	0.74
5:F:52:ALA:CB	5:F:55:ARG:HH21	1.75	0.74
8:I:43:ASN:O	8:I:45:LYS:C	2.24	0.74
9:N:39:VAL:O	9:N:40:ASN:HB2	1.85	0.74
9:N:74:ARG:O	9:N:75:PRO:C	2.23	0.74
11:P:77:ALA:CA	11:P:81:VAL:CG2	2.64	0.74
12:Q:49:VAL:CG2	12:Q:120:HIS:HA	2.17	0.74
19:R:90:ARG:HH12	19:R:117:VAL:CG2	2.00	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:V:69:ILE:HG22	21:V:88:GLN:CB	2.18	0.74
18:Z:174:PRO:O	18:Z:175:ARG:HG2	1.86	0.74
22:2:62:GLU:C	22:2:64:GLY:N	2.36	0.74
2:A:138:G:H1'	16:X:42:GLU:HG2	1.69	0.74
6:G:44:ILE:C	6:G:83:PHE:HZ	1.91	0.74
2:A:1818:U:O2	3:D:153:LEU:CA	2.35	0.74
2:A:2191:G:H2'	2:A:2192:G:O4'	1.87	0.74
2:A:2333:A:H1'	2:A:2335:A:C2	2.19	0.74
2:A:2391:G:O2'	2:A:2392:A:P	2.46	0.74
2:A:2441:C:O2'	2:A:2442:C:O5'	2.05	0.74
2:A:2461:C:C2	2:A:2462:U:C6	2.75	0.74
2:A:2555:U:C5	2:A:2556:C:C6	2.75	0.74
2:A:2567:G:H2'	2:A:2568:C:H5	1.50	0.74
2:A:2626:C:C6	2:A:2626:C:C4'	2.70	0.74
2:A:270(P):C:OP2	8:I:45:LYS:HD3	1.87	0.74
2:A:2737:G:N1	2:A:2767:C:N4	1.97	0.74
2:A:2804:C:C6	2:A:2805:G:C6	2.75	0.74
2:A:2818:G:C2	2:A:2829:C:N3	2.54	0.74
2:A:535:C:H4'	20:U:53:LYS:CD	2.12	0.74
2:A:627:A:OP2	2:A:627:A:H4'	1.87	0.74
2:A:2712:U:H5	2:A:712(A):A:C8	1.99	0.74
2:A:1993:U:O2'	4:E:224:GLY:HA3	1.87	0.74
4:E:269:ILE:CA	4:E:297:LYS:HE2	2.17	0.74
5:F:102:LEU:HD22	5:F:103:ASN:N	1.96	0.74
5:F:215:ALA:HA	5:F:239:ALA:HA	1.69	0.74
6:G:102:GLY:HA2	6:G:134:LEU:CD1	2.07	0.74
7:H:41:THR:CG2	7:H:52:THR:CB	2.66	0.74
7:H:55:SER:O	7:H:57:GLU:N	2.20	0.74
8:I:53:LYS:O	8:I:57:GLN:OE1	2.04	0.74
10:O:65:THR:OG1	10:O:67:ARG:CG	2.34	0.74
10:O:87:ILE:HG21	10:O:91:LYS:HA	1.68	0.74
20:U:91:ASN:OD1	20:U:92:ARG:N	2.19	0.74
21:V:57:GLN:O	21:V:58:ALA:HB2	1.87	0.74
21:V:69:ILE:HG22	21:V:88:GLN:HB3	1.69	0.74
17:Y:50:VAL:HG12	17:Y:52:ARG:H	1.50	0.74
8:I:80:PRO:HA	8:I:146:THR:O	1.86	0.74
8:I:93:ILE:CG1	8:I:93:ILE:O	2.35	0.74
22:2:15:GLU:O	22:2:16:ARG:C	2.22	0.74
22:2:22:ASP:O	22:2:23:LEU:C	2.25	0.74
31:K:122:GLU:HB3	31:K:126:LYS:HE3	1.67	0.74
31:K:36:MET:SD	31:K:40:LYS:HE3	2.27	0.74
31:K:8:GLN:C	31:K:9:ILE:HG13	2.07	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1472:A:C2'	2:A:1473:G:H8	1.99	0.74
24:0:35:ASN:O	24:0:36:ILE:CG1	2.33	0.74
23:3:53:LEU:HD22	23:3:54:VAL:HG13	1.67	0.74
2:A:1027:A:C6	2:A:1126:A:N3	2.56	0.74
2:A:2256:G:N2	2:A:2257:U:C2	2.56	0.74
2:A:2422:A:O2'	2:A:2424:C:C6	2.39	0.74
2:A:2489:G:N7	2:A:2490:G:N7	2.35	0.74
2:A:2511:U:O2'	2:A:2512:C:H5'	1.87	0.74
2:A:1638:C:C5'	2:A:2710:C:H1'	2.17	0.74
2:A:2870:C:C2'	2:A:2870:C:O2	2.35	0.74
2:A:859:G:O2'	2:A:2268:A:N3	2.19	0.74
2:A:960:A:C2	2:A:2495:G:N2	2.55	0.74
3:D:140:VAL:HG13	3:D:190:THR:O	1.88	0.74
3:D:140:VAL:HG22	3:D:191:VAL:CG1	2.13	0.74
3:D:224:VAL:HG12	3:D:225:ARG:H	1.51	0.74
5:F:57:PRO:HG2	5:F:58:ALA:H	1.52	0.74
2:A:2317:C:OP1	6:G:150:SER:HA	1.87	0.74
7:H:83:GLU:C	7:H:83:GLU:OE2	2.25	0.74
8:I:31:PHE:CE1	8:I:35:LEU:O	2.40	0.74
8:I:5:PHE:C	8:I:36:ALA:HB2	2.06	0.74
9:N:136:SER:O	9:N:139:LEU:N	2.20	0.74
9:N:53:ILE:CG2	9:N:135:ILE:HD11	2.15	0.74
20:U:43:ALA:HB2	21:V:75:LYS:HB3	1.65	0.74
15:W:55:ALA:N	15:W:107:LEU:HD12	2.02	0.74
15:W:19:LEU:HD22	26:5:25:LEU:CB	2.16	0.74
17:Y:31:LEU:HD12	17:Y:101:LEU:HB2	1.67	0.74
18:Z:91:PRO:HG2	18:Z:127:PRO:C	2.07	0.74
18:Z:12:GLN:O	18:Z:15:ASP:HB3	1.87	0.74
18:Z:19:ILE:HB	18:Z:39:PHE:HE1	1.43	0.74
18:Z:40:ASP:O	18:Z:41:ARG:C	2.25	0.74
18:Z:51:LEU:HD23	18:Z:52:PHE:H	1.49	0.74
22:2:7:GLU:OE2	22:2:8:ILE:CG1	2.32	0.74
16:X:9:HIS:ND1	16:X:26:PHE:O	2.16	0.74
16:X:50:GLU:HB2	16:X:67:ARG:O	1.87	0.74
6:G:65:GLU:OE1	6:G:65:GLU:C	2.25	0.74
6:G:87:ALA:C	6:G:89:PRO:HD2	2.07	0.74
23:3:53:LEU:HD23	23:3:53:LEU:C	2.07	0.74
23:3:6:VAL:CG2	23:3:54:VAL:CG2	2.66	0.74
29:8:60:LEU:HD22	29:8:60:LEU:C	2.06	0.74
2:A:1139:G:O2'	2:A:142(A):A:N3	2.21	0.74
2:A:1363:C:H1'	2:A:1810:A:H1'	1.69	0.74
2:A:2462:U:C2	2:A:2463:C:C6	2.75	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2652:C:C2'	2:A:2653:U:H5'	2.16	0.74
2:A:2678:C:C2	2:A:2679:A:H8	2.04	0.74
2:A:2748:A:C8	2:A:2749:A:C5	2.75	0.74
3:D:175:LEU:H	3:D:175:LEU:HD23	1.47	0.74
5:F:144:PHE:CD2	5:F:156:LEU:CD1	2.71	0.74
7:H:105:SER:O	7:H:106:VAL:CG2	2.35	0.74
7:H:7:PRO:N	7:H:50:THR:HG1	1.85	0.74
9:N:68:GLY:O	9:N:69:TYR:HB2	1.88	0.74
11:P:62:ALA:O	11:P:107:LYS:CE	2.36	0.74
12:Q:49:VAL:CB	12:Q:119:ASN:O	2.36	0.74
13:S:31:LYS:CB	13:S:32:PRO:HD3	2.14	0.74
20:U:68:GLY:O	20:U:71:LEU:N	2.21	0.74
21:V:33:VAL:CB	21:V:63:HIS:CD2	2.70	0.74
21:V:35:LEU:HG	21:V:63:HIS:HE2	1.52	0.74
21:V:94:LYS:CA	21:V:95:ILE:CD1	2.56	0.74
18:Z:100:THR:CA	18:Z:137:ASP:CG	2.50	0.74
8:I:76:THR:HB	8:I:144:HIS:HE1	1.52	0.74
31:K:79:LEU:CD1	31:K:132:ALA:HB2	2.16	0.74
31:K:52:MET:HE3	31:K:52:MET:CA	2.06	0.74
2:A:1906:G:O4'	2:A:1929:G:C8	2.40	0.74
2:A:2386:C:C4'	24:0:39:ARG:CZ	2.58	0.74
23:3:9:VAL:N	23:3:54:VAL:CG1	2.50	0.74
25:4:17:GLN:HA	25:4:33:VAL:CG1	2.18	0.74
26:5:14:SER:O	26:5:15:LYS:C	2.25	0.74
2:A:125:G:C4'	28:7:19:ARG:NH1	2.47	0.74
2:A:2239:G:N3	2:A:2240:C:C6	2.56	0.74
2:A:2265:U:H2'	2:A:2266:A:OP1	1.86	0.74
2:A:2488:A:C6	2:A:2489:G:C5	2.76	0.74
2:A:2636:U:H4'	4:E:84:ARG:CZ	2.17	0.74
2:A:270(O):U:H5	8:I:53:LYS:NZ	1.86	0.74
2:A:2831:G:H1'	2:A:2883:A:C2	2.22	0.74
2:A:995:C:H1'	20:U:57:PHE:CZ	2.23	0.74
3:D:63:ILE:CG2	3:D:64:ILE:N	2.09	0.74
5:F:216:SER:O	5:F:217:GLU:HB2	1.87	0.74
5:F:223:LEU:HD12	5:F:224:ALA:H	0.92	0.74
6:G:93:LEU:HD22	6:G:106:PHE:CE2	2.22	0.74
7:H:104:LEU:CB	7:H:151:ARG:CZ	2.48	0.74
7:H:55:SER:C	7:H:57:GLU:H	1.90	0.74
8:I:13:GLY:CA	8:I:15:LYS:HD2	2.16	0.74
2:A:1137:G:H21	9:N:86:MET:CE	2.00	0.74
10:O:104:ARG:H	10:O:104:ARG:HD2	1.53	0.74
10:O:17:ARG:HB2	10:O:45:ASP:O	1.87	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:R:101:ALA:O	26:5:41:LEU:HD11	1.85	0.74
13:S:33:ARG:HB3	13:S:35:VAL:HG22	1.69	0.74
20:U:117:ARG:NH1	20:U:118:GLN:OE1	2.20	0.74
20:U:98:ILE:O	20:U:99:ALA:C	2.26	0.74
21:V:31:ASP:O	21:V:33:VAL:HG23	1.87	0.74
21:V:40:VAL:CA	21:V:51:ALA:HB1	2.17	0.74
15:W:8:ARG:NE	15:W:102:HIS:HE1	1.85	0.74
17:Y:78:THR:HA	17:Y:89:ARG:H	1.51	0.74
18:Z:26:LYS:HD2	18:Z:27:GLU:OE2	1.87	0.74
18:Z:67:LYS:HA	18:Z:67:LYS:HZ1	0.84	0.74
8:I:116:GLU:HG2	8:I:132:LYS:HE2	1.68	0.74
8:I:115:ILE:HG13	8:I:131:VAL:HG13	1.68	0.74
16:X:28:VAL:CG1	16:X:64:ALA:CB	2.65	0.74
2:A:444:C:OP2	20:U:2:PRO:CG	2.35	0.74
2:A:2859:G:O2'	2:A:2860:A:H5'	1.87	0.74
2:A:358:U:H3'	2:A:359:A:C5'	2.17	0.74
2:A:227:A:N6	2:A:2407:G:C8	2.52	0.74
25:4:4:ASP:OD1	25:4:11:PRO:HG3	1.86	0.74
26:5:42:SER:O	26:5:43:HIS:CB	2.35	0.74
28:7:13:ALA:O	28:7:14:LYS:C	2.25	0.74
29:8:31:HIS:O	29:8:32:GLN:HG2	1.86	0.74
2:A:2043:C:H5	2:A:2777:G:C1'	1.89	0.74
2:A:2264:C:H2'	2:A:2265:U:C5'	2.16	0.74
2:A:2285:C:C1'	2:A:2288:A:N6	2.51	0.74
2:A:2298:A:C5	2:A:2321:G:N1	2.56	0.74
2:A:2317:C:H5	2:A:2318:G:O6	1.66	0.74
2:A:2320:A:N7	13:S:9:PRO:HD3	2.02	0.74
2:A:2393:A:C4'	29:8:13:ARG:NH2	2.51	0.74
2:A:2737:G:N3	2:A:2738:A:N7	2.36	0.74
2:A:328:U:HO2'	17:Y:94:SER:CB	2.01	0.74
3:D:142:ASN:N	3:D:142:ASN:HD22	1.85	0.74
3:D:74:PRO:CG	3:D:96:ALA:CA	2.65	0.74
4:E:198:TYR:HA	4:E:266:LYS:O	1.88	0.74
5:F:138:VAL:O	5:F:139:VAL:HG23	1.88	0.74
2:A:617:G:OP1	5:F:221:GLU:CG	2.35	0.74
5:F:96:LYS:CB	5:F:98:ARG:NH2	2.41	0.74
11:P:112:GLY:O	11:P:113:GLN:OE1	2.06	0.74
12:Q:42:TYR:CD2	18:Z:119:ASN:HA	2.23	0.74
12:Q:68:ALA:CB	12:Q:136:TRP:HZ3	2.01	0.74
20:U:47:TYR:CE2	21:V:74:TYR:C	2.61	0.74
17:Y:103:LEU:CD2	17:Y:112:LEU:HD23	2.14	0.74
2:A:337:C:P	17:Y:24:ARG:HB2	2.25	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:Y:48:VAL:CG1	17:Y:49:GLU:N	2.19	0.74
17:Y:28:SER:OG	17:Y:99:THR:HG23	1.87	0.74
18:Z:141:MET:O	18:Z:142:ASN:ND2	2.20	0.74
18:Z:154:LEU:CD1	18:Z:160:LEU:HD11	2.17	0.74
18:Z:67:LYS:HG3	18:Z:67:LYS:O	1.88	0.74
16:X:4:VAL:CB	22:2:24:LYS:NZ	2.51	0.74
2:A:76:C:O2'	22:2:55:ARG:CG	2.36	0.74
31:K:121:LEU:CB	31:K:125:MET:CE	2.65	0.74
31:K:91:GLU:OE1	31:K:94:ARG:HD2	1.88	0.74
2:A:2407:G:H5''	2:A:2408:U:OP2	1.87	0.74
2:A:311:A:N6	2:A:329:G:H5'	2.02	0.74
24:0:36:ILE:CA	24:0:68:VAL:HG11	2.18	0.74
23:3:16:PRO:CB	23:3:19:GLN:OE1	2.35	0.74
27:6:33:ALA:O	27:6:35:LEU:N	2.21	0.74
27:6:42:PRO:O	27:6:44:ALA:O	2.05	0.74
2:A:1005:C:H1'	9:N:21:ARG:HG3	1.68	0.74
2:A:1697:G:H5''	2:A:1698:A:H5'	1.68	0.74
2:A:2373:G:O2'	2:A:2374:C:C5'	2.29	0.74
2:A:2613:U:H5'	2:A:2613:U:C6	2.17	0.74
2:A:2636:U:C4'	4:E:84:ARG:NH2	2.24	0.74
2:A:2773:C:H2'	2:A:2774:C:H6	1.52	0.74
3:D:143:ILE:CG1	3:D:153:LEU:CA	2.65	0.74
4:E:247:ARG:HB2	4:E:249:THR:OG1	1.88	0.74
5:F:103:ASN:CB	5:F:106:GLU:HG3	2.17	0.74
7:H:104:LEU:HB2	7:H:151:ARG:HH12	1.42	0.74
9:N:65:ASN:ND2	9:N:69:TYR:CD1	2.54	0.74
11:P:130:ARG:HA	11:P:133:VAL:CG2	2.18	0.74
2:A:245:G:P	11:P:53:ARG:CZ	2.76	0.74
2:A:874:G:OP1	12:Q:32:LYS:NZ	2.21	0.74
19:R:43:GLU:C	19:R:45:ARG:N	2.36	0.74
2:A:2840:C:O3'	19:R:53:HIS:CE1	2.41	0.74
19:R:58:GLY:O	19:R:59:ASP:HB3	1.88	0.74
2:A:535:C:H5''	20:U:53:LYS:HZ1	1.53	0.74
20:U:94:VAL:HG11	21:V:4:ILE:HG21	1.70	0.74
21:V:43:GLU:C	21:V:44:GLN:HE21	1.90	0.74
20:U:88:ILE:HG22	21:V:55:THR:OG1	1.86	0.74
15:W:45:TYR:HD2	15:W:46:PHE:N	1.85	0.74
16:X:14:ALA:O	16:X:17:ASP:N	2.21	0.74
2:A:1:G:C2	2:A:2902:C:N4	2.56	0.74
23:3:23:LEU:HA	23:3:28:LEU:HD12	0.74	0.74
2:A:1952:A:C1'	2:A:2560:C:O2'	2.34	0.74
2:A:2051:A:C2'	4:E:238:LEU:CD2	2.66	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2188:C:C5	2:A:2189:U:C4	2.76	0.74
2:A:2320:A:H62	13:S:9:PRO:HG3	0.62	0.74
2:A:1966:A:C2	2:A:2593:U:H5'	2.23	0.74
2:A:2615:U:H2'	2:A:2616:C:C6	2.23	0.74
2:A:2866:U:O2	2:A:2868:A:O2'	2.01	0.74
2:A:2848:G:N1	2:A:2867:G:N3	2.35	0.74
2:A:2838:G:N2	2:A:2881:C:C2	2.56	0.74
2:A:963:U:O2	2:A:2250:G:N2	2.19	0.74
3:D:104:ILE:HB	3:D:106:PRO:HD3	1.68	0.74
3:D:65:ASP:C	3:D:65:ASP:OD1	2.23	0.74
4:E:192:ILE:O	4:E:193:PHE:C	2.24	0.74
4:E:214:VAL:CG2	4:E:221:LYS:HZ2	2.01	0.74
5:F:103:ASN:O	5:F:104:ASP:C	2.14	0.74
5:F:215:ALA:CB	5:F:238:SER:C	2.54	0.74
2:A:673:C:H1'	5:F:82:GLN:OE1	1.86	0.74
6:G:46:GLY:O	6:G:47:GLN:HG3	1.88	0.74
7:H:89:VAL:O	7:H:160:GLY:N	2.21	0.74
12:Q:51:GLU:N	12:Q:51:GLU:OE1	2.20	0.74
12:Q:82:LYS:HB3	12:Q:123:ILE:HG22	1.70	0.74
19:R:18:LEU:HD12	19:R:19:ALA:N	2.02	0.74
20:U:63:GLN:C	20:U:65:ILE:N	2.41	0.74
21:V:78:VAL:HB	21:V:80:TYR:CE1	2.22	0.74
17:Y:48:VAL:HG12	17:Y:49:GLU:H	0.62	0.74
17:Y:63:ILE:CG1	17:Y:75:GLU:OE2	2.36	0.74
8:I:133:LEU:HD11	8:I:139:ALA:HB3	1.70	0.74
22:2:51:LYS:O	22:2:54:ALA:CB	2.36	0.74
16:X:9:HIS:ND1	16:X:27:ALA:CA	2.50	0.74
2:A:1078:U:OP1	31:K:93:LYS:HE3	1.88	0.74
2:A:95:G:O2'	22:2:42:ASN:CB	2.36	0.74
17:Y:81:LYS:HB3	17:Y:81:LYS:NZ	2.03	0.74
23:3:16:PRO:HB3	23:3:19:GLN:NE2	2.03	0.73
25:4:7:PRO:HD2	25:4:56:VAL:CB	2.18	0.73
2:A:1034:G:H5'	30:9:18:ARG:NE	2.02	0.73
2:A:966:G:H1'	2:A:2267:A:N6	2.02	0.73
2:A:2276:G:C2'	2:A:2277:G:O5'	2.35	0.73
2:A:2355:C:H5'	24:0:21:LEU:HD13	1.70	0.73
2:A:2395:C:H6	2:A:2395:C:H3'	1.51	0.73
2:A:2457:U:C5	2:A:2458:G:C2	2.67	0.73
2:A:2458:G:C4	2:A:2490:G:C2	2.75	0.73
2:A:2508:G:N2	2:A:2509:G:C1'	2.50	0.73
2:A:2520:C:C5	2:A:2567:G:C8	2.75	0.73
2:A:2853:C:H2'	2:A:2854:G:O5'	1.88	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:80:U:HO2'	2:A:918:A:H8	1.36	0.73
3:D:175:LEU:CD1	3:D:180:VAL:CA	2.65	0.73
4:E:265:ASN:O	4:E:265:ASN:ND2	2.21	0.73
4:E:268:LEU:HD21	4:E:295:LEU:O	1.88	0.73
7:H:127:GLN:HG3	7:H:128:THR:N	2.03	0.73
7:H:48:VAL:HG23	7:H:49:ILE:H	1.53	0.73
2:A:2780:G:H22	9:N:80:LYS:HZ2	1.35	0.73
10:O:3:GLN:HA	10:O:21:VAL:CG1	2.18	0.73
11:P:66:VAL:C	11:P:67:ARG:NE	2.40	0.73
12:Q:10:ILE:HG13	12:Q:10:ILE:O	1.88	0.73
12:Q:45:GLN:CD	12:Q:153:PRO:HB2	2.09	0.73
12:Q:94:ARG:CG	12:Q:107:LYS:N	2.51	0.73
13:S:17:ARG:HH11	13:S:18:THR:CA	2.01	0.73
20:U:83:LEU:O	20:U:86:ALA:CB	2.36	0.73
20:U:7:GLY:C	20:U:9:VAL:H	1.88	0.73
21:V:95:ILE:N	21:V:95:ILE:CD1	2.33	0.73
17:Y:102:ASP:C	17:Y:108:ARG:HD3	2.07	0.73
6:G:60:GLU:O	6:G:61:PHE:HB2	1.86	0.73
2:A:1101:U:H2'	2:A:1102:C:H6	1.51	0.73
2:A:1427:A:H8	2:A:1427:A:OP1	1.70	0.73
25:4:21:VAL:HG12	25:4:22:MET:H	0.58	0.73
26:5:45:ILE:H	26:5:52:TYR:HE1	1.35	0.73
15:W:37:ARG:HH22	26:5:48:ASN:HD21	1.36	0.73
27:6:12:MET:HE3	27:6:54:LYS:N	2.02	0.73
29:8:9:MET:O	29:8:14:ILE:CD1	2.35	0.73
2:A:1935:G:H2'	2:A:1962:C:N3	2.02	0.73
2:A:2484:G:H22	2:A:2485:G:H1'	1.36	0.73
2:A:2816:C:H2'	2:A:2817:G:O5'	1.88	0.73
2:A:2838:G:C2	2:A:2839:G:C8	2.76	0.73
2:A:310:A:OP1	17:Y:53:GLY:N	2.21	0.73
8:I:7:LYS:CB	8:I:14:LYS:HE2	2.10	0.73
9:N:54:VAL:HG11	9:N:138:THR:HB	1.70	0.73
12:Q:16:ARG:NH1	12:Q:19:TYR:HD1	1.86	0.73
19:R:90:ARG:HH12	19:R:117:VAL:HG21	1.53	0.73
13:S:34:LEU:HG	13:S:102:LEU:C	2.08	0.73
13:S:28:LYS:HB3	13:S:28:LYS:HZ3	1.54	0.73
13:S:46:GLN:C	13:S:47:LEU:HD23	2.04	0.73
13:S:97:VAL:O	13:S:98:GLU:HB3	1.86	0.73
2:A:2319:G:H4'	13:S:9:PRO:CD	2.18	0.73
20:U:82:GLY:O	20:U:85:ARG:HB2	1.87	0.73
20:U:104:GLU:OE2	21:V:46:VAL:CG1	2.35	0.73
17:Y:92:ASP:O	17:Y:93:THR:C	2.24	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:Z:18:MET:HG3	18:Z:35:ASP:HA	1.70	0.73
16:X:4:VAL:HG21	22:2:24:LYS:HZ1	1.51	0.73
16:X:32:ALA:HA	16:X:36:GLU:HG3	1.69	0.73
2:A:2306:C:H42	6:G:53:LYS:HZ2	1.36	0.73
2:A:1620:G:C1'	28:7:1:MET:H2	1.99	0.73
2:A:1489:U:H4'	2:A:1490:A:OP2	1.87	0.73
24:0:65:GLY:O	24:0:66:LYS:CE	2.35	0.73
27:6:17:GLY:O	27:6:18:THR:HB	1.88	0.73
2:A:2187:G:H2'	2:A:2188:C:H5'	1.70	0.73
2:A:2255:G:C6	2:A:2256:G:C8	2.76	0.73
2:A:2349:G:O6	2:A:2350:C:C5	2.42	0.73
2:A:2378:A:C2	13:S:26:LEU:CD2	2.71	0.73
2:A:2404:C:N4	2:A:2405:G:N1	2.36	0.73
2:A:2838:G:C6	2:A:2839:G:C5	2.75	0.73
2:A:974(A):C:C1'	2:A:989:G:H22	2.01	0.73
1:B:59:A:C3'	1:B:60:C:O5'	2.34	0.73
3:D:175:LEU:O	3:D:176:ALA:C	2.26	0.73
3:D:76:ARG:HD3	3:D:113:MET:HE2	1.70	0.73
4:E:42:ALA:HA	4:E:311:PHE:HE2	1.53	0.73
4:E:44:TYR:HD1	4:E:309:PRO:CD	1.98	0.73
5:F:167:ASP:O	5:F:168:ARG:CD	2.36	0.73
2:A:2316:C:C5'	6:G:142:ALA:CB	2.55	0.73
7:H:140:VAL:O	7:H:143:LEU:HD22	1.86	0.73
8:I:43:ASN:HA	8:I:46:ALA:CB	2.18	0.73
8:I:7:LYS:HG3	8:I:12:LYS:CA	2.18	0.73
9:N:79:PHE:CD1	9:N:79:PHE:N	2.52	0.73
10:O:73:ASP:C	10:O:75:SER:H	1.91	0.73
11:P:124:ASP:HB3	11:P:130:ARG:NH2	2.02	0.73
12:Q:146:THR:O	12:Q:147:VAL:HB	1.87	0.73
2:A:873:G:H4'	12:Q:32:LYS:HG2	1.69	0.73
12:Q:75:SER:O	12:Q:132:VAL:HG21	1.88	0.73
13:S:40:ASN:HA	13:S:114:LYS:HZ1	1.54	0.73
14:T:21:PHE:C	14:T:22:VAL:CG1	2.54	0.73
20:U:40:LEU:CD2	20:U:40:LEU:N	2.46	0.73
20:U:80:ILE:CA	20:U:83:LEU:HD12	2.17	0.73
21:V:33:VAL:HB	21:V:63:HIS:NE2	2.02	0.73
17:Y:31:LEU:CD1	17:Y:101:LEU:CB	2.66	0.73
17:Y:101:LEU:HD23	17:Y:103:LEU:HG	1.67	0.73
17:Y:73:HIS:HA	17:Y:91:LEU:HD21	1.69	0.73
16:X:14:ALA:C	16:X:17:ASP:OD1	2.26	0.73
16:X:31:ARG:NE	16:X:31:ARG:CA	2.51	0.73
6:G:105:SER:CB	6:G:131:THR:CG2	2.57	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:K:20:PRO:CG	31:K:23:PRO:HG2	2.15	0.73
2:A:283:A:C2	2:A:360:G:C2	2.76	0.73
2:A:2183:C:H2'	2:A:2184:G:H8	1.53	0.73
2:A:190:A:H2'	2:A:191:A:C8	2.23	0.73
2:A:2048:G:C6	2:A:2621:A:N1	2.57	0.73
2:A:2266:A:H5''	2:A:2267:A:C5	2.22	0.73
2:A:2385:C:O2'	24:0:39:ARG:NH1	2.20	0.73
2:A:2589:A:O2'	2:A:2590:A:H5''	1.88	0.73
2:A:2676:C:O2	2:A:2732:G:N2	2.21	0.73
2:A:2781:A:H5'	2:A:2782:G:O5'	1.86	0.73
2:A:2868:A:O5'	2:A:2868:A:H8	1.71	0.73
4:E:222:ARG:CD	4:E:232:ARG:CA	2.64	0.73
5:F:33:LYS:CA	5:F:36:ARG:CG	2.66	0.73
2:A:443:A:N7	5:F:43:LYS:HD2	2.04	0.73
7:H:63:LEU:O	7:H:66:THR:CG2	2.31	0.73
8:I:3:VAL:HG11	8:I:21:VAL:HG21	1.70	0.73
9:N:39:VAL:HA	9:N:103:VAL:HG13	1.69	0.73
9:N:18:ILE:O	9:N:20:GLY:N	2.21	0.73
10:O:31:ARG:O	10:O:32:TYR:CD1	2.42	0.73
11:P:65:ASP:O	11:P:69:ILE:HG23	1.89	0.73
12:Q:142:LYS:HE2	12:Q:143:VAL:C	2.09	0.73
12:Q:28:ILE:HG23	12:Q:62:GLU:CB	2.18	0.73
12:Q:69:ASN:ND2	12:Q:69:ASN:C	2.21	0.73
19:R:116:LEU:O	19:R:116:LEU:HD12	1.88	0.73
19:R:31:HIS:HD2	19:R:34:ILE:HD11	1.53	0.73
20:U:55:ARG:C	20:U:57:PHE:N	2.41	0.73
17:Y:70:ALA:O	17:Y:93:THR:HG23	1.89	0.73
18:Z:46:GLN:C	18:Z:47:SER:O	2.27	0.73
18:Z:4:THR:O	18:Z:5:ALA:HB3	1.86	0.73
2:A:1078:U:C6	2:A:1088:A:N3	2.56	0.73
16:X:46:ASP:N	16:X:46:ASP:OD1	2.21	0.73
14:T:46:ALA:O	14:T:49:LEU:HB3	1.88	0.73
2:A:2262:U:P	24:0:14:ARG:HH21	2.11	0.73
24:0:71:ASN:O	24:0:72:LYS:C	2.26	0.73
23:3:3:ARG:HB2	23:3:60:GLU:CA	2.18	0.73
25:4:7:PRO:CD	25:4:56:VAL:CG2	2.27	0.73
27:6:19:GLY:HA3	27:6:42:PRO:HG3	0.74	0.73
2:A:1279:G:H5'	19:R:34:ILE:CD1	2.18	0.73
2:A:2228:G:H8	2:A:2229:C:C6	2.01	0.73
2:A:2285:C:C5'	2:A:2288:A:H61	2.01	0.73
2:A:2592:G:N2	2:A:2603:G:C5	2.57	0.73
2:A:2640:G:H4'	9:N:70:PHE:HD2	1.52	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2785:C:H4'	4:E:99:VAL:CB	2.17	0.73
2:A:2892:A:H2'	2:A:2893:G:C1'	2.18	0.73
2:A:34:C:C2'	2:A:455:C:H41	2.01	0.73
2:A:573:G:H2'	2:A:574:C:H3'	1.70	0.73
2:A:850:C:H42	2:A:928:G:H1	1.35	0.73
3:D:128:ALA:HB2	3:D:190:THR:HA	1.57	0.73
3:D:141:HIS:HE1	3:D:191:VAL:O	1.68	0.73
3:D:215:LYS:O	3:D:216:ALA:O	2.06	0.73
4:E:267:ARG:HB2	4:E:297:LYS:CD	2.17	0.73
5:F:196:THR:OG1	5:F:201:SER:N	2.22	0.73
5:F:47:GLY:HA2	5:F:92:PRO:HB2	0.80	0.73
2:A:801:G:OP2	5:F:79:ARG:CZ	2.36	0.73
8:I:50:GLN:HA	8:I:53:LYS:HG2	1.68	0.73
11:P:64:ILE:O	11:P:108:VAL:CA	2.35	0.73
12:Q:91:HIS:CA	12:Q:111:THR:HG23	2.17	0.73
12:Q:51:GLU:OE2	12:Q:148:ASN:HB2	1.88	0.73
14:T:13:ILE:HG22	14:T:14:GLU:OE2	1.89	0.73
20:U:98:ILE:N	20:U:98:ILE:HD12	2.04	0.73
2:A:325:G:N2	17:Y:7:GLN:NE2	2.34	0.73
18:Z:40:ASP:OD1	18:Z:40:ASP:N	2.18	0.73
8:I:105:GLN:O	8:I:107:GLY:N	2.22	0.73
8:I:145:VAL:O	8:I:146:THR:CB	2.34	0.73
2:A:76:C:C3'	22:2:55:ARG:HG3	2.18	0.73
31:K:38:PHE:CE2	31:K:67:THR:CG2	2.71	0.73
16:X:76:GLU:OE1	16:X:77:VAL:HG22	1.88	0.73
2:A:120:U:C2	2:A:150:C:C4	2.76	0.73
31:K:63:ASP:O	31:K:64:LYS:HG3	1.89	0.73
2:A:269:U:H5''	2:A:270(Y):G:H2'	1.70	0.73
2:A:10:G:C2	2:A:2629:A:C4	2.76	0.73
2:A:1279:G:P	19:R:34:ILE:HD12	2.28	0.73
2:A:2025:C:H2'	2:A:2026:C:C6	2.23	0.73
2:A:2330:G:N1	2:A:2331:G:C4	2.56	0.73
2:A:2394:C:C5	2:A:2395:C:C4	2.76	0.73
2:A:2574:G:C4	2:A:2575:C:C4	2.68	0.73
2:A:2816:C:C2'	2:A:2817:G:O5'	2.35	0.73
2:A:342:G:H1	2:A:344:G:N2	1.86	0.73
1:B:116:G:H4'	13:S:64:SER:OG	1.89	0.73
4:E:79:ARG:CZ	4:E:104:PHE:O	2.36	0.73
4:E:193:PHE:CZ	4:E:312:ARG:O	2.42	0.73
4:E:85:ALA:O	4:E:96:LEU:O	2.07	0.73
5:F:56:THR:CB	5:F:57:PRO:CD	2.66	0.73
5:F:63:SER:H	5:F:65:ARG:NE	1.82	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:14:ARG:CA	6:G:137:PRO:HG3	2.18	0.73
10:O:17:ARG:HH21	10:O:47:THR:CA	2.01	0.73
11:P:76:LEU:CA	11:P:81:VAL:HG21	2.17	0.73
12:Q:125:TRP:C	12:Q:126:VAL:HG23	2.05	0.73
12:Q:47:GLU:OE1	12:Q:47:GLU:N	2.22	0.73
12:Q:94:ARG:HG2	12:Q:107:LYS:H	1.54	0.73
13:S:18:THR:C	13:S:19:ASP:OD1	2.27	0.73
2:A:583:G:P	20:U:10:ARG:HH11	2.10	0.73
21:V:5:ILE:HD12	21:V:5:ILE:N	2.04	0.73
21:V:64:GLY:H	21:V:95:ILE:HG13	1.53	0.73
21:V:77:GLY:O	21:V:78:VAL:CG1	2.37	0.73
18:Z:116:VAL:HG23	18:Z:169:VAL:HG22	1.64	0.73
18:Z:91:PRO:N	18:Z:127:PRO:HB3	2.03	0.73
18:Z:141:MET:O	18:Z:142:ASN:CB	2.36	0.73
8:I:141:LEU:HD22	8:I:142:LYS:H	1.53	0.73
8:I:89:LEU:HD12	8:I:93:ILE:HG23	1.68	0.73
2:A:58:G:H1	2:A:69:C:N4	1.83	0.73
31:K:33:VAL:HG22	31:K:60:VAL:HG11	1.61	0.73
8:I:51:LYS:O	8:I:55:GLN:CG	2.30	0.73
25:4:31:ILE:N	25:4:31:ILE:HD13	2.02	0.73
2:A:1566:A:C2	3:D:212:HIS:CG	2.77	0.73
2:A:2241:A:H5'	2:A:2241:A:C8	2.22	0.73
2:A:2341:G:C6	2:A:2342:C:N4	2.57	0.73
2:A:2445:G:C2'	2:A:2446:G:C5'	2.67	0.73
2:A:2468:G:N2	2:A:2481:G:C2'	2.48	0.73
2:A:2532:G:C8	2:A:2532:G:H5'	2.22	0.73
2:A:2579:C:C6	2:A:2579:C:C3'	2.72	0.73
2:A:2689:U:C4	2:A:2713:A:N6	2.57	0.73
2:A:712(A):A:C8	2:A:2713:A:OP1	2.41	0.73
2:A:85:G:H5'	17:Y:65:VAL:HG12	1.69	0.73
3:D:117:SER:HB3	3:D:128:ALA:O	1.88	0.73
5:F:112:ARG:C	5:F:114:ALA:N	2.41	0.73
5:F:92:PRO:O	5:F:93:LYS:C	2.24	0.73
6:G:18:ILE:O	6:G:19:GLU:HB2	1.89	0.73
9:N:68:GLY:O	9:N:69:TYR:CD1	2.42	0.73
12:Q:123:ILE:HG22	12:Q:125:TRP:HB2	1.69	0.73
12:Q:67:ALA:O	12:Q:71:PHE:HE1	1.70	0.73
20:U:110:VAL:C	20:U:113:SER:OG	2.26	0.73
20:U:88:ILE:CG2	21:V:55:THR:CB	2.66	0.73
21:V:63:HIS:N	21:V:63:HIS:ND1	2.35	0.73
21:V:67:LYS:CG	21:V:70:TYR:HE1	2.01	0.73
15:W:23:LEU:HD13	15:W:35:ILE:CG2	2.19	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:W:82:LEU:HD22	15:W:82:LEU:N	2.03	0.73
17:Y:45:GLY:C	17:Y:62:VAL:CB	2.55	0.73
18:Z:45:GLN:HE21	18:Z:45:GLN:N	1.87	0.73
22:2:55:ARG:HA	22:2:58:THR:CB	2.18	0.73
2:A:1059:G:N3	31:K:127:ILE:HG21	2.01	0.73
2:A:482:A:H2'	2:A:482:A:N3	2.02	0.73
2:A:1528:A:H61	2:A:1543:A:H62	1.35	0.73
23:3:7:LYS:O	23:3:54:VAL:HB	1.89	0.73
23:3:9:VAL:HG22	23:3:54:VAL:CB	2.19	0.73
27:6:19:GLY:HA3	27:6:42:PRO:CB	2.17	0.73
27:6:46:LYS:HZ1	27:6:46:LYS:HA	1.52	0.73
29:8:26:LYS:NZ	29:8:44:LYS:N	2.37	0.73
30:9:23:VAL:O	30:9:24:LEU:HD23	1.89	0.73
2:A:2077:A:C4	2:A:2435:A:N7	2.57	0.73
2:A:2287:A:C2'	2:A:2288:A:OP2	2.36	0.73
2:A:2290:G:H21	2:A:2343:C:H1'	1.52	0.73
2:A:2410:G:H2'	2:A:2411:A:H8	1.00	0.73
2:A:2422:A:C2'	2:A:2424:C:C5	2.71	0.73
2:A:2459:A:N7	2:A:2460:U:C6	2.55	0.73
2:A:2528:U:O2'	2:A:2529:G:H8	1.72	0.73
2:A:2605:U:O2	2:A:2606:C:C5	2.40	0.73
2:A:2821:A:N3	2:A:2822:G:N9	2.36	0.73
2:A:2785:C:C2'	4:E:100:TRP:CD1	2.61	0.73
4:E:77:PRO:HB3	4:E:188:ALA:N	2.02	0.73
6:G:128:LEU:O	6:G:129:ASP:CB	2.37	0.73
1:B:42:C:C2'	6:G:47:GLN:HA	2.18	0.73
19:R:14:SER:N	19:R:17:ARG:HG2	2.03	0.73
19:R:38:VAL:HG22	19:R:99:LYS:HE3	1.70	0.73
19:R:24:GLN:CB	19:R:44:LEU:HD23	2.19	0.73
13:S:117:ALA:HA	13:S:120:GLU:CD	2.09	0.73
15:W:70:TYR:O	15:W:107:LEU:HA	1.88	0.73
17:Y:33:GLU:CG	17:Y:34:GLU:H	2.02	0.73
17:Y:47:THR:O	17:Y:48:VAL:CG2	2.35	0.73
18:Z:123:VAL:HA	18:Z:161:ALA:HB3	1.69	0.73
18:Z:26:LYS:CB	18:Z:84:TYR:OH	2.32	0.73
16:X:13:LYS:O	16:X:14:ALA:C	2.26	0.73
17:Y:9:LYS:CE	17:Y:13:ARG:CZ	2.67	0.73
24:0:30:VAL:HG12	24:0:30:VAL:O	1.86	0.73
24:0:49:GLN:C	24:0:49:GLN:HE21	1.93	0.73
30:9:10:MET:HB2	30:9:32:HIS:CD2	2.15	0.73
30:9:7:VAL:CG1	30:9:25:VAL:CG2	2.66	0.73
2:A:1818:U:C4'	3:D:155:ARG:CG	2.66	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2281:C:O2'	2:A:2282:G:O5'	2.05	0.73
2:A:2332:U:C4'	2:A:2336:A:H61	2.02	0.73
2:A:2601:C:N3	2:A:2603:G:O6	2.21	0.73
2:A:2641:G:C6	2:A:2774:C:N4	2.57	0.73
2:A:2666:C:C2'	2:A:2667:C:H5'	2.18	0.73
2:A:2869:G:N2	2:A:2870:C:N1	2.29	0.73
2:A:2880:C:N3	2:A:2881:C:C5	2.56	0.73
2:A:2788:C:H2'	2:A:2892:A:H2	1.54	0.73
2:A:764:A:OP1	3:D:212:HIS:NE2	2.22	0.73
1:B:18:G:O5'	6:G:149:ARG:HD3	1.89	0.73
4:E:39:GLN:HB2	4:E:174:LEU:HG	1.70	0.73
4:E:198:TYR:CE2	4:E:265:ASN:O	2.40	0.73
4:E:86:TYR:O	4:E:87:GLU:O	2.07	0.73
7:H:14:VAL:HG12	7:H:16:VAL:HG23	1.70	0.73
9:N:56:LYS:O	9:N:59:LYS:CB	2.27	0.73
9:N:83:ILE:CG1	9:N:84:ARG:N	1.94	0.73
20:U:51:ARG:O	20:U:52:ASN:O	2.07	0.73
21:V:60:VAL:O	21:V:98:ILE:CA	2.37	0.73
17:Y:63:ILE:CG1	17:Y:75:GLU:N	2.51	0.73
2:A:58:G:H2'	2:A:73:A:C6	2.24	0.73
31:K:38:PHE:CZ	31:K:66:PHE:N	2.57	0.73
16:X:47:VAL:HG12	16:X:69:SER:HG	1.52	0.73
2:A:1609:A:C6	2:A:1616:A:C2	2.76	0.73
25:4:41:PRO:HG2	25:4:57:ASP:OD2	1.87	0.73
2:A:1238:G:C2	2:A:1239:G:H1'	2.24	0.73
2:A:1300:U:H3'	2:A:1635:G:OP1	1.88	0.73
2:A:2330:G:N2	2:A:2331:G:N3	2.37	0.73
2:A:2444:G:C6	2:A:2445:G:C6	2.77	0.73
2:A:2516:G:O2'	2:A:2517:C:O5'	2.06	0.73
2:A:2520:C:C2	2:A:2521:C:C6	2.77	0.73
2:A:2743:C:C2	2:A:2762:G:C2	2.77	0.73
2:A:2767:C:H2'	2:A:2768:C:O5'	1.89	0.73
2:A:2807:G:O6	2:A:2892:A:N7	2.22	0.73
1:B:18:G:OP1	6:G:149:ARG:CA	2.36	0.73
1:B:59:A:O3'	1:B:60:C:C5'	2.36	0.73
3:D:116:MET:HG2	3:D:117:SER:N	2.02	0.73
4:E:200:ASP:H	4:E:312:ARG:H	1.37	0.73
4:E:224:GLY:O	4:E:225:LYS:HB2	1.89	0.73
4:E:70:VAL:HG13	4:E:296:VAL:HB	1.70	0.73
5:F:6:TYR:HE1	5:F:139:VAL:HB	1.50	0.73
5:F:196:THR:HG22	5:F:197:SER:H	1.52	0.73
5:F:193:LEU:HD11	5:F:231:ARG:HB3	1.71	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:93:LEU:HD13	6:G:94:ALA:N	1.96	0.73
7:H:64:HIS:C	7:H:66:THR:N	2.33	0.73
9:N:83:ILE:CD1	9:N:84:ARG:HG2	2.19	0.73
10:O:42:THR:HG22	10:O:57:VAL:HA	1.71	0.73
2:A:910:A:C2'	12:Q:17:ARG:NH2	2.51	0.73
13:S:48:VAL:HA	13:S:55:ASP:OD1	1.89	0.73
10:O:99:PHE:CE2	14:T:24:LYS:NZ	2.56	0.73
2:A:994:C:O2	20:U:53:LYS:CB	2.37	0.73
20:U:5:LYS:O	20:U:6:THR:C	2.28	0.73
15:W:6:ILE:O	15:W:7:ALA:HB2	1.88	0.73
17:Y:87:VAL:CG1	17:Y:88:PRO:CD	2.60	0.73
18:Z:69:VAL:C	18:Z:70:GLN:NE2	2.42	0.73
18:Z:75:LYS:O	18:Z:76:ARG:HB2	1.89	0.73
22:2:63:GLU:C	22:2:63:GLU:OE2	2.28	0.73
16:X:44:GLN:CD	16:X:45:TYR:N	2.41	0.73
2:A:1906:G:C4	2:A:1929:G:C6	2.77	0.73
12:Q:149:ILE:N	12:Q:149:ILE:HD12	2.03	0.73
7:H:20:GLY:O	7:H:21:ASN:HB3	1.88	0.73
24:0:49:GLN:HE22	24:0:73:GLY:HA3	1.04	0.72
2:A:1364:G:P	25:4:2:GLN:O	2.47	0.72
28:7:8:ASN:N	28:7:8:ASN:HD22	1.85	0.72
2:A:2056:G:H22	26:5:4:HIS:C	1.92	0.72
2:A:2207:C:C2	2:A:2218:G:C2	2.77	0.72
2:A:2251:G:OP2	2:A:2496:C:OP2	2.07	0.72
2:A:2287:A:O2'	2:A:2288:A:C5'	2.36	0.72
2:A:2330:G:H2'	2:A:2331:G:C5'	2.18	0.72
2:A:2320:A:C2	2:A:2333:A:C6	2.77	0.72
2:A:2359:C:C4	2:A:2360:A:N1	2.57	0.72
2:A:2066:C:O2	2:A:2445:G:C2	2.42	0.72
2:A:2447:G:C5	2:A:2500:U:C6	2.74	0.72
2:A:2497:A:H2'	2:A:2498:C:OP2	1.88	0.72
2:A:2564:A:C6	2:A:2647:U:H4'	2.23	0.72
2:A:2684:U:C2	2:A:2725:A:N1	2.57	0.72
2:A:2870:C:C2	2:A:2871:C:C6	2.77	0.72
2:A:931:G:P	23:3:27:GLY:HA3	2.29	0.72
1:B:48:A:OP1	13:S:110:THR:HB	1.89	0.72
3:D:200:THR:OG1	3:D:201:ASP:OD2	2.07	0.72
4:E:204:VAL:H	4:E:303:PRO:HG3	1.54	0.72
4:E:205:THR:O	4:E:206:LYS:HG2	1.86	0.72
4:E:212:GLY:C	4:E:214:VAL:H	1.92	0.72
5:F:215:ALA:HB2	5:F:238:SER:O	1.87	0.72
7:H:30:GLY:O	7:H:78:VAL:HG13	1.89	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:N:82:THR:OG1	9:N:83:ILE:HG23	1.89	0.72
9:N:94:GLY:O	9:N:97:ALA:CB	2.35	0.72
12:Q:23:ILE:H	12:Q:24:PRO:CD	1.92	0.72
12:Q:47:GLU:HA	12:Q:124:ALA:H	1.53	0.72
19:R:72:ASP:C	19:R:72:ASP:OD2	2.28	0.72
13:S:82:TYR:O	13:S:86:LEU:CD1	2.37	0.72
13:S:92:ALA:O	13:S:95:ALA:N	2.22	0.72
2:A:581:C:H5'	20:U:32:TYR:HB2	1.70	0.72
2:A:996:A:H5'	20:U:93:LYS:HG3	1.71	0.72
15:W:29:LEU:HG	15:W:30:GLU:H	1.54	0.72
18:Z:113:VAL:CG1	18:Z:114:ASP:H	1.88	0.72
18:Z:125:PRO:O	18:Z:127:PRO:HD3	1.88	0.72
18:Z:3:LEU:HB3	18:Z:34:LEU:CA	2.06	0.72
18:Z:43:PHE:HD2	18:Z:43:PHE:H	1.36	0.72
8:I:115:ILE:CG1	8:I:131:VAL:CG1	2.55	0.72
8:I:98:ILE:CG2	8:I:99:ALA:H	1.98	0.72
16:X:28:VAL:CG2	16:X:62:LYS:O	2.37	0.72
3:D:139:LEU:HD12	3:D:139:LEU:C	2.10	0.72
25:4:41:PRO:CG	25:4:57:ASP:CB	2.67	0.72
25:4:5:LEU:CA	25:4:56:VAL:HG13	2.20	0.72
2:A:2497:A:O2'	2:A:2498:C:P	2.47	0.72
2:A:2570:G:C4	2:A:2571:C:H5	2.02	0.72
2:A:1939:U:C1'	2:A:2592:G:H4'	2.19	0.72
2:A:2615:U:H2'	2:A:2616:C:O5'	1.87	0.72
2:A:2633:G:C4	2:A:2634:G:N7	2.57	0.72
2:A:2801:A:H2	2:A:2895:U:C2'	2.02	0.72
2:A:764:A:OP1	3:D:212:HIS:CD2	2.41	0.72
2:A:856:C:C5'	24:0:25:LYS:HZ2	2.00	0.72
3:D:170:TYR:HB2	3:D:182:MET:SD	2.29	0.72
4:E:173:ARG:HB2	4:E:174:LEU:HD12	1.71	0.72
4:E:201:VAL:H	4:E:266:LYS:NZ	1.86	0.72
10:O:63:VAL:CG1	10:O:102:VAL:CG2	2.67	0.72
12:Q:47:GLU:OE2	12:Q:151:SER:CA	2.37	0.72
13:S:34:LEU:CD1	13:S:103:ASP:N	2.51	0.72
13:S:64:SER:O	13:S:67:ALA:N	2.21	0.72
21:V:36:LYS:HA	21:V:60:VAL:HG22	1.71	0.72
18:Z:125:PRO:HG3	18:Z:130:ILE:HG22	1.71	0.72
8:I:141:LEU:HD13	8:I:142:LYS:C	2.09	0.72
22:2:3:LEU:O	22:2:4:HIS:CB	2.36	0.72
2:A:76:C:H4'	22:2:55:ARG:CD	2.18	0.72
2:A:481:G:OP2	17:Y:81:LYS:CG	2.37	0.72
24:0:49:GLN:NE2	24:0:73:GLY:O	2.04	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:3:22:ALA:O	23:3:26:LEU:CG	2.36	0.72
23:3:26:LEU:CD2	23:3:46:ASN:HD22	2.02	0.72
25:4:10:VAL:N	25:4:11:PRO:HD3	1.96	0.72
2:A:2250:G:H3'	2:A:2250:G:H8	1.53	0.72
2:A:2359:C:C5	2:A:2360:A:C2	2.78	0.72
2:A:2422:A:N3	2:A:2424:C:C6	2.55	0.72
2:A:2450:A:H5''	2:A:2497:A:C6	2.18	0.72
2:A:2575:C:O2	2:A:2575:C:C2'	2.37	0.72
2:A:2619:C:O2'	2:A:2620:C:C5'	2.37	0.72
2:A:2653:U:P	2:A:2654:A:H3'	2.29	0.72
2:A:2700:C:C2'	2:A:2701:C:C4'	2.60	0.72
2:A:2716:U:C2'	2:A:2717:G:H5''	2.20	0.72
2:A:2785:C:C6	2:A:2786:U:C4	2.78	0.72
2:A:2819:G:C4	2:A:2821:A:N7	2.57	0.72
2:A:929:G:O2'	23:3:43:ILE:HG12	1.89	0.72
1:B:24:G:O6	1:B:56:G:H2'	1.89	0.72
4:E:42:ALA:H	4:E:189:MET:CE	2.00	0.72
5:F:153:VAL:HG13	5:F:157:LEU:HD22	1.71	0.72
5:F:223:LEU:HA	5:F:231:ARG:HD2	1.70	0.72
7:H:82:TYR:CZ	7:H:137:LYS:CB	2.72	0.72
8:I:6:LEU:HB3	8:I:35:LEU:O	1.90	0.72
11:P:94:ARG:CZ	11:P:120:LEU:HB2	1.93	0.72
12:Q:46:VAL:O	12:Q:124:ALA:O	2.08	0.72
12:Q:91:HIS:O	12:Q:92:VAL:CG1	2.37	0.72
15:W:24:ILE:HB	15:W:32:ALA:HB1	1.72	0.72
18:Z:150:GLY:H	18:Z:165:GLU:H	1.36	0.72
16:X:9:HIS:H	16:X:26:PHE:HA	1.53	0.72
2:A:1082:U:C4'	31:K:118:ALA:CB	2.66	0.72
28:7:24:THR:CG2	28:7:27:GLY:HA3	2.18	0.72
29:8:14:ILE:CG2	29:8:15:LYS:N	2.52	0.72
29:8:5:LYS:HB3	29:8:60:LEU:HA	1.70	0.72
30:9:19:ARG:O	30:9:22:ARG:CB	2.32	0.72
2:A:2284:C:OP2	27:6:9:ILE:HG13	1.90	0.72
2:A:2298:A:C1'	2:A:2321:G:N2	2.52	0.72
2:A:2068:U:O2	2:A:2430:A:N1	2.22	0.72
2:A:2623:G:N2	2:A:2624:G:H1'	2.00	0.72
2:A:2762:G:N7	2:A:2763:G:C6	2.58	0.72
2:A:2815:C:O2	2:A:2816:C:C5	2.42	0.72
2:A:1492:G:C1'	3:D:97:ASP:OD1	2.37	0.72
4:E:228:ARG:O	4:E:231:TRP:N	2.22	0.72
4:E:45:LYS:HD2	4:E:303:PRO:O	1.90	0.72
5:F:163:HIS:HA	5:F:166:ILE:CD1	2.15	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:168:ARG:CZ	5:F:209:GLY:HA3	2.15	0.72
5:F:36:ARG:O	5:F:39:GLN:CD	2.26	0.72
12:Q:140:TYR:O	12:Q:142:LYS:N	2.22	0.72
19:R:28:LEU:O	19:R:30:THR:N	2.21	0.72
2:A:1453:A:N6	19:R:77:ARG:HD3	2.04	0.72
13:S:121:GLY:O	13:S:125:ALA:N	2.20	0.72
13:S:27:LEU:HB2	13:S:33:ARG:HH22	0.92	0.72
13:S:85:GLY:O	13:S:86:LEU:C	2.26	0.72
2:A:994:C:N3	20:U:53:LYS:CD	2.35	0.72
21:V:62:GLU:CB	21:V:96:LEU:HD21	2.19	0.72
15:W:14:PRO:O	15:W:17:VAL:HB	1.89	0.72
22:2:26:GLU:O	22:2:27:LEU:C	2.27	0.72
24:0:46:LYS:HG3	24:0:58:THR:HG23	0.76	0.72
24:0:48:GLY:CA	24:0:55:ARG:HA	2.18	0.72
26:5:45:ILE:N	26:5:52:TYR:CZ	2.57	0.72
29:8:37:SER:OG	29:8:38:GLY:N	2.21	0.72
2:A:2066:C:N3	2:A:2445:G:C2	2.58	0.72
2:A:2320:A:C2	2:A:2333:A:C5	2.75	0.72
2:A:2354:G:O5'	24:0:31:VAL:HG21	1.89	0.72
2:A:2428:G:H5''	2:A:2429:G:P	2.29	0.72
2:A:2551:C:H2'	2:A:2552:U:H6	1.53	0.72
2:A:2546:U:C5'	2:A:2565:A:N1	2.49	0.72
2:A:2508:G:C2	2:A:2582:G:O6	2.41	0.72
2:A:2656:U:C4	2:A:2665:A:N6	2.57	0.72
2:A:2668:G:H21	2:A:2669:G:H1'	1.54	0.72
2:A:2712:U:O2'	2:A:712(A):A:OP1	2.06	0.72
2:A:2866:U:H5''	2:A:2867:G:OP1	1.90	0.72
2:A:592:G:N2	29:8:3:LYS:NZ	2.38	0.72
4:E:70:VAL:HG11	4:E:295:LEU:HD22	1.71	0.72
5:F:243:VAL:C	5:F:246:ARG:H	1.92	0.72
7:H:102:LEU:CD2	7:H:114:ILE:HB	2.18	0.72
2:A:1138:G:OP1	9:N:82:THR:HG22	1.90	0.72
11:P:67:ARG:NH1	11:P:109:LEU:HD12	2.05	0.72
12:Q:135:ALA:O	12:Q:136:TRP:C	2.28	0.72
19:R:27:SER:O	19:R:30:THR:HB	1.90	0.72
13:S:46:GLN:O	13:S:47:LEU:CG	2.37	0.72
21:V:42:GLY:C	21:V:54:TYR:OH	2.26	0.72
21:V:74:TYR:HE1	21:V:87:ARG:O	1.73	0.72
15:W:27:LYS:HB3	15:W:31:GLU:OE2	1.89	0.72
15:W:24:ILE:HG22	15:W:35:ILE:HD12	1.71	0.72
15:W:82:LEU:O	15:W:84:ARG:CD	2.27	0.72
8:I:103:GLN:CD	8:I:109:LYS:HA	2.08	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:75:G:C3'	22:2:51:LYS:NZ	2.48	0.72
16:X:6:LYS:HD2	16:X:27:ALA:HB1	1.70	0.72
31:K:105:ILE:CG2	31:K:128:ILE:CG2	2.63	0.72
31:K:11:LEU:HD12	31:K:58:ILE:HD12	1.71	0.72
24:0:45:PHE:HZ	24:0:78:PHE:HD2	1.33	0.72
25:4:6:HIS:CB	25:4:56:VAL:HG23	2.19	0.72
25:4:68:ARG:HD3	25:4:72:LYS:CG	2.17	0.72
28:7:36:ALA:O	28:7:37:LYS:C	2.28	0.72
2:A:2021:C:C6	20:U:25:TRP:CH2	2.78	0.72
2:A:2197:U:H2'	2:A:2224:G:H1	1.55	0.72
2:A:2286:A:C5'	2:A:2287:A:O4'	2.37	0.72
2:A:2356:C:H2'	2:A:2357:U:H5'	1.72	0.72
2:A:2487:G:C2'	2:A:2488:A:O5'	2.36	0.72
2:A:2533:A:H2'	2:A:2534:A:C8	2.24	0.72
2:A:2585:U:O2'	2:A:2586:C:OP2	2.06	0.72
2:A:2701:C:H3'	2:A:2702:U:H5'	1.72	0.72
2:A:2886:G:H21	2:A:2887:U:H1'	1.54	0.72
2:A:84:A:C6	2:A:99:U:H1'	2.23	0.72
3:D:181:ARG:CZ	3:D:181:ARG:CB	2.66	0.72
4:E:206:LYS:O	4:E:257:GLY:HA3	1.90	0.72
4:E:269:ILE:CD1	4:E:295:LEU:C	2.57	0.72
5:F:5:ILE:CA	5:F:139:VAL:HG11	2.20	0.72
7:H:106:VAL:O	7:H:106:VAL:HG12	1.87	0.72
7:H:83:GLU:OE1	7:H:85:ALA:N	2.23	0.72
9:N:46:ILE:CD1	9:N:132:LEU:CD1	2.68	0.72
10:O:11:ALA:HB1	10:O:99:PHE:CB	2.18	0.72
12:Q:142:LYS:HE3	12:Q:142:LYS:CA	2.19	0.72
19:R:36:THR:CG2	19:R:40:LYS:HD2	2.10	0.72
20:U:85:ARG:CZ	20:U:116:ALA:O	2.36	0.72
15:W:12:ILE:CG2	15:W:13:SER:N	2.52	0.72
15:W:30:GLU:HA	15:W:33:ARG:HD3	0.77	0.72
17:Y:35:TYR:OH	17:Y:113:GLU:CG	2.31	0.72
2:A:146:G:C2	2:A:147:U:H1'	2.24	0.72
7:H:53:ARG:HD2	7:H:56:ASP:HA	1.70	0.72
27:6:29:ARG:O	27:6:30:ASN:C	2.28	0.72
29:8:30:ARG:CD	29:8:44:LYS:HD2	2.19	0.72
2:A:1030:G:O3'	2:A:1031:G:P	2.47	0.72
2:A:2256:G:C2'	2:A:2257:U:H5'	2.20	0.72
2:A:2468:G:O6	2:A:2481:G:C5	2.42	0.72
2:A:2548:G:H8	2:A:2548:G:H3'	1.55	0.72
2:A:2589:A:N1	2:A:2606:C:N4	2.38	0.72
2:A:2618:G:C5	2:A:2619:C:C5	2.61	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2659:G:H1'	2:A:2663:G:H1	1.53	0.72
2:A:2678:C:C2'	2:A:2679:A:O5'	2.35	0.72
2:A:2717:G:C2	2:A:2718:G:C4	2.76	0.72
2:A:449:A:OP1	5:F:85:LYS:N	2.22	0.72
2:A:825:C:C4'	2:A:2428:G:C6	2.72	0.72
4:E:101:THR:O	4:E:103:GLU:CG	2.37	0.72
4:E:44:TYR:HD1	4:E:309:PRO:HD2	1.55	0.72
6:G:97:GLN:CD	6:G:106:PHE:HD2	1.92	0.72
7:H:41:THR:HG22	7:H:52:THR:CG2	2.18	0.72
7:H:75:VAL:HG12	7:H:76:GLU:N	2.05	0.72
10:O:31:ARG:HB2	10:O:32:TYR:CD1	2.24	0.72
11:P:81:VAL:O	11:P:81:VAL:CG1	2.36	0.72
2:A:910:A:H62	12:Q:12:PRO:CA	2.02	0.72
19:R:105:ARG:N	19:R:105:ARG:NE	2.38	0.72
19:R:58:GLY:HA2	19:R:80:PHE:HE2	0.93	0.72
10:O:79:PHE:CG	14:T:22:VAL:HG21	2.25	0.72
20:U:40:LEU:HD23	20:U:40:LEU:N	2.04	0.72
18:Z:105:GLN:HB2	18:Z:141:MET:CG	2.18	0.72
18:Z:18:MET:HA	18:Z:36:ARG:H	1.55	0.72
18:Z:5:ALA:HB3	18:Z:33:ALA:CA	2.15	0.72
25:4:68:ARG:CB	25:4:72:LYS:HG2	2.20	0.72
19:R:99:LYS:HB3	26:5:44:HIS:NE2	2.05	0.72
2:A:1608:A:H2'	2:A:1611:C:N4	2.05	0.72
2:A:1646:C:C3'	2:A:1647:G:C5'	2.67	0.72
2:A:2028:U:H2'	2:A:2029:G:C8	2.25	0.72
2:A:2468:G:C6	2:A:2481:G:C5	2.78	0.72
2:A:2536:G:C6	2:A:2537:U:C4	2.78	0.72
2:A:2734:A:N7	2:A:2735:G:C5	2.58	0.72
2:A:2766:G:N3	2:A:2766:G:H2'	2.05	0.72
2:A:2810:A:C8	2:A:2811:G:C8	2.78	0.72
3:D:127:ASN:C	3:D:190:THR:HB	2.09	0.72
3:D:89:ASN:C	3:D:105:ALA:CB	2.54	0.72
4:E:77:PRO:CB	4:E:187:HIS:N	2.36	0.72
5:F:96:LYS:H	5:F:98:ARG:CZ	2.01	0.72
7:H:145:ALA:C	7:H:147:ILE:H	1.93	0.72
7:H:58:LYS:HA	7:H:61:ARG:HD2	1.70	0.72
11:P:128:GLY:CA	11:P:132:LYS:HZ3	1.81	0.72
11:P:55:GLN:OE1	11:P:55:GLN:CA	2.38	0.72
2:A:910:A:N6	12:Q:12:PRO:C	2.43	0.72
12:Q:56:ILE:HD13	12:Q:56:ILE:H	0.63	0.72
13:S:40:ASN:HA	13:S:114:LYS:HZ3	1.55	0.72
20:U:115:ASN:C	20:U:117:ARG:N	2.43	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:U:95:LEU:N	20:U:95:LEU:HD23	2.05	0.72
22:2:51:LYS:HA	22:2:54:ALA:HB2	1.72	0.72
16:X:16:ASN:HB2	16:X:20:PHE:CE2	2.25	0.72
2:A:1059:G:H5''	31:K:115:ASP:O	1.88	0.72
24:0:61:ALA:HB3	24:0:81:ILE:HD13	1.71	0.72
23:3:44:ARG:O	23:3:45:GLY:O	2.07	0.72
25:4:5:LEU:HD12	25:4:60:ASN:HD22	1.55	0.72
27:6:32:GLN:HB3	27:6:35:LEU:CB	2.20	0.72
2:A:1034:G:OP2	30:9:18:ARG:NH2	2.21	0.72
2:A:1996:C:H6	2:A:1996:C:H5''	1.53	0.72
2:A:2235:G:C4	2:A:2236:C:C6	2.78	0.72
2:A:2259:G:N1	2:A:2282:G:C6	2.58	0.72
2:A:2378:A:H2'	2:A:2379:G:O5'	1.89	0.72
2:A:2478:A:N7	2:A:2479:G:C8	2.58	0.72
2:A:2550:G:H2'	2:A:2551:C:H6	1.51	0.72
2:A:2649:U:C2'	2:A:2650:U:O5'	2.38	0.72
2:A:2655:G:N3	2:A:2655:G:H3'	2.05	0.72
2:A:2741:A:C2	2:A:2742:C:H1'	2.25	0.72
2:A:2810:A:N7	2:A:2811:G:C8	2.57	0.72
2:A:2623:G:H4'	2:A:2826:A:H1'	1.72	0.72
2:A:2840:C:H5''	19:R:53:HIS:CD2	2.24	0.72
2:A:2854:G:N2	2:A:2864:G:C5	2.58	0.72
4:E:79:ARG:CA	4:E:186:GLU:HA	2.17	0.72
5:F:155:SER:N	5:F:157:LEU:HG	2.05	0.72
6:G:19:GLU:HB3	6:G:135:VAL:HG22	1.09	0.72
11:P:106:VAL:HG21	11:P:122:ALA:CB	2.20	0.72
12:Q:65:ARG:NH2	12:Q:122:PHE:HE2	1.84	0.72
13:S:100:ALA:HB3	13:S:127:LEU:HD21	1.71	0.72
10:O:101:PRO:HD3	14:T:26:GLY:HA2	1.71	0.72
14:T:5:GLU:OE1	14:T:56:ARG:NH2	2.23	0.72
20:U:57:PHE:C	20:U:59:ARG:N	2.41	0.72
15:W:5:ALA:CB	15:W:54:ALA:HB2	2.19	0.72
17:Y:40:VAL:HG12	17:Y:41:ARG:HG2	1.71	0.72
17:Y:49:GLU:HG3	17:Y:59:GLU:HA	1.71	0.72
18:Z:51:LEU:HD21	18:Z:63:PRO:CB	2.20	0.72
22:2:43:PRO:HB2	22:2:46:ILE:H	1.53	0.72
31:K:101:THR:O	31:K:105:ILE:CD1	2.38	0.72
31:K:79:LEU:HD11	31:K:132:ALA:HB2	1.71	0.72
25:4:20:VAL:O	25:4:21:VAL:O	2.07	0.72
2:A:1262:A:C2	26:5:10:LYS:HE2	2.24	0.72
2:A:687:C:O4'	28:7:4:THR:HG21	1.90	0.72
2:A:2283:C:C6	2:A:2389:G:N3	2.57	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2397:G:O6	2:A:2420:C:N3	2.23	0.72
2:A:2606:C:O2	2:A:2607:G:C8	2.43	0.72
2:A:2522:U:O2'	2:A:2647:U:OP1	2.08	0.72
2:A:2652:C:H5	2:A:2653:U:O4	1.73	0.72
2:A:2788:C:H2'	2:A:2892:A:C2	2.24	0.72
2:A:489:G:H3'	2:A:491:G:P	2.29	0.72
2:A:987:G:OP1	23:3:10:LYS:CE	2.37	0.72
4:E:177:ALA:O	4:E:178:LEU:C	2.28	0.72
4:E:295:LEU:CD2	4:E:296:VAL:H	2.03	0.72
7:H:66:THR:CG2	7:H:67:THR:N	2.53	0.72
8:I:21:VAL:O	8:I:22:ALA:HB3	1.89	0.72
9:N:48:GLY:O	9:N:53:ILE:CD1	2.37	0.72
10:O:66:LYS:HZ1	10:O:67:ARG:CZ	2.02	0.72
10:O:95:GLY:C	10:O:97:ARG:H	1.92	0.72
11:P:68:GLU:O	11:P:71:GLU:HG2	1.89	0.72
12:Q:151:SER:HB3	12:Q:155:GLY:C	2.10	0.72
12:Q:58:HIS:CA	12:Q:61:LEU:CG	2.68	0.72
13:S:34:LEU:HD21	13:S:102:LEU:CA	2.15	0.72
20:U:14:HIS:NE2	20:U:36:PHE:CE2	2.58	0.72
20:U:35:ALA:O	20:U:38:THR:OG1	2.07	0.72
21:V:83:ARG:O	21:V:84:THR:HG23	1.90	0.72
17:Y:45:GLY:C	17:Y:62:VAL:HB	2.10	0.72
17:Y:73:HIS:N	17:Y:91:LEU:HD12	2.04	0.72
18:Z:149:ALA:CA	18:Z:152:ILE:HD11	2.20	0.72
18:Z:13:LYS:C	18:Z:36:ARG:HH21	1.89	0.72
18:Z:63:PRO:O	18:Z:64:ALA:CB	2.37	0.72
22:2:30:ALA:HA	22:2:34:GLN:CG	2.18	0.72
31:K:95:LYS:O	31:K:97:VAL:HG22	1.90	0.72
6:G:44:ILE:C	6:G:83:PHE:CZ	2.63	0.72
2:A:95:G:H1'	22:2:42:ASN:HB3	1.72	0.72
2:A:748:G:C8	2:A:750:A:OP2	2.42	0.72
2:A:1472:A:H2'	2:A:1473:G:H8	1.54	0.72
2:A:923:C:C2	24:0:26:PHE:CE2	2.75	0.71
24:0:68:VAL:HG12	24:0:68:VAL:O	1.90	0.71
27:6:16:ALA:CB	27:6:50:PHE:CE2	2.73	0.71
2:A:142(A):A:P	2:A:1143:A:H8	2.12	0.71
2:A:1646:C:H3'	2:A:1647:G:H5'	1.68	0.71
2:A:2404:C:N4	2:A:2405:G:C5	2.57	0.71
2:A:2511:U:C5	2:A:2512:C:C5	2.77	0.71
2:A:2540:C:C2'	2:A:2541:A:O5'	2.37	0.71
2:A:2676:C:C3'	2:A:2676:C:C6	2.73	0.71
2:A:2717:G:O2'	2:A:2718:G:C5'	2.38	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2866:U:H4'	2:A:2867:G:O5'	1.89	0.71
2:A:613:U:O5'	2:A:615:G:H8	1.73	0.71
3:D:175:LEU:HD12	3:D:179:GLU:HB3	1.70	0.71
2:A:1791:A:P	3:D:210:LYS:HD3	2.30	0.71
5:F:102:LEU:H	5:F:107:ARG:HH21	0.75	0.71
7:H:14:VAL:O	7:H:16:VAL:HG23	1.90	0.71
7:H:40:MET:HB2	7:H:54:PRO:HG3	1.72	0.71
8:I:49:ALA:O	8:I:53:LYS:HG2	1.90	0.71
13:S:58:LEU:HG	13:S:58:LEU:O	1.90	0.71
10:O:99:PHE:HD2	14:T:24:LYS:CE	1.97	0.71
18:Z:118:HIS:O	18:Z:120:LEU:CD2	2.38	0.71
16:X:17:ASP:O	16:X:22:ASN:O	2.07	0.71
2:A:72:U:H5'	16:X:2:TRP:CZ3	2.25	0.71
16:X:39:ASP:O	16:X:40:ALA:C	2.27	0.71
31:K:92:PRO:CB	31:K:134:SER:O	2.38	0.71
25:4:48:ARG:HG2	25:4:49:PHE:CD1	2.24	0.71
2:A:1448:G:H5''	2:A:1543:A:H61	1.54	0.71
2:A:350:U:O2	2:A:350:U:H2'	1.90	0.71
27:6:2:ALA:CB	27:6:11:LYS:HZ2	1.98	0.71
27:6:19:GLY:CA	27:6:42:PRO:HG2	2.13	0.71
28:7:19:ARG:O	28:7:20:ALA:C	2.26	0.71
2:A:752:A:N7	2:A:1781:C:O2	2.23	0.71
2:A:2320:A:N6	13:S:14:ARG:CA	2.52	0.71
2:A:2411:A:H2	2:A:2412:A:C5	2.06	0.71
2:A:2431:U:O2	2:A:2431:U:H2'	1.90	0.71
2:A:2454:G:O2'	2:A:2455:G:H5'	1.90	0.71
2:A:2461:C:O2	2:A:2462:U:C6	2.42	0.71
2:A:2716:U:H2'	2:A:2717:G:H5''	1.68	0.71
2:A:458:G:C5'	28:7:39:ARG:CD	2.66	0.71
1:B:17:C:OP1	6:G:147:ALA:CA	2.26	0.71
3:D:115:ILE:HB	3:D:127:ASN:OD1	1.90	0.71
4:E:201:VAL:N	4:E:266:LYS:NZ	2.38	0.71
5:F:58:ALA:CB	5:F:79:ARG:N	2.53	0.71
1:B:18:G:P	6:G:149:ARG:HD3	2.30	0.71
7:H:55:SER:CB	7:H:60:HIS:CB	2.63	0.71
10:O:25:LEU:HD12	10:O:38:VAL:C	2.09	0.71
10:O:35:ILE:HG22	10:O:62:VAL:O	1.89	0.71
11:P:52:LYS:CD	11:P:53:ARG:HH12	1.97	0.71
2:A:2485:G:C4'	12:Q:144:THR:HG22	2.19	0.71
12:Q:23:ILE:O	12:Q:23:ILE:HG22	1.90	0.71
13:S:32:PRO:O	13:S:101:VAL:HG12	1.89	0.71
13:S:23:ARG:HH21	13:S:35:VAL:HG11	1.54	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:U:111:ASP:C	20:U:113:SER:H	1.93	0.71
20:U:27:SER:C	20:U:31:GLN:HG3	2.10	0.71
21:V:39:PHE:O	21:V:40:VAL:CB	2.37	0.71
15:W:24:ILE:CG2	15:W:35:ILE:HB	2.20	0.71
17:Y:18:GLU:HB3	17:Y:21:LYS:CE	2.19	0.71
18:Z:114:ASP:CA	18:Z:170:SER:O	2.37	0.71
8:I:141:LEU:HD11	8:I:142:LYS:O	1.90	0.71
22:2:30:ALA:HA	22:2:34:GLN:HG3	1.72	0.71
22:2:5:VAL:CG1	22:2:6:GLN:N	2.13	0.71
22:2:8:ILE:O	22:2:11:MET:CG	2.37	0.71
2:A:404:C:H4'	2:A:405:U:C5'	2.21	0.71
2:A:2364:C:H5'	24:0:38:VAL:CG1	2.18	0.71
24:0:38:VAL:HA	24:0:40:GLN:CG	2.19	0.71
23:3:6:VAL:HA	23:3:55:ARG:O	1.90	0.71
28:7:26:SER:O	28:7:27:GLY:C	2.28	0.71
29:8:13:ARG:HB3	29:8:24:ALA:HB1	1.70	0.71
2:A:1638:C:H5''	2:A:2710:C:H1'	1.72	0.71
2:A:2241:A:H2'	2:A:2242:G:C8	2.25	0.71
2:A:2523:G:C2	2:A:2541:A:N3	2.57	0.71
2:A:2491:U:H5'	2:A:2570:G:H5'	1.70	0.71
2:A:2732:G:OP2	2:A:2732:G:C8	2.43	0.71
2:A:2748:A:C8	2:A:2749:A:N3	2.54	0.71
2:A:2783:G:H8	2:A:2783:G:C5'	2.03	0.71
2:A:2783:G:N1	2:A:2784:C:N4	2.39	0.71
2:A:2880:C:O2'	19:R:90:ARG:CD	2.37	0.71
2:A:614:U:C3'	2:A:615:G:H4'	2.16	0.71
3:D:85:ASN:N	3:D:85:ASN:HD22	1.88	0.71
4:E:47:GLY:CA	4:E:305:LYS:HE2	2.21	0.71
5:F:1:MET:C	5:F:18:LEU:CD2	2.59	0.71
5:F:215:ALA:C	5:F:242:GLU:CG	2.54	0.71
5:F:215:ALA:HA	5:F:242:GLU:HG3	1.72	0.71
2:A:2060:A:OP1	5:F:64:GLY:HA2	1.89	0.71
2:A:673:C:O4'	5:F:82:GLN:NE2	2.22	0.71
6:G:21:VAL:CB	6:G:132:VAL:HG23	2.19	0.71
6:G:140:ARG:HD2	6:G:144:ARG:HH22	1.53	0.71
6:G:95:THR:O	6:G:97:GLN:N	2.23	0.71
7:H:104:LEU:HB3	7:H:151:ARG:HH11	1.55	0.71
7:H:69:SER:O	7:H:70:LEU:C	2.28	0.71
8:I:3:VAL:O	8:I:18:ILE:HA	1.90	0.71
9:N:137:GLU:N	9:N:141:ALA:N	2.29	0.71
12:Q:153:PRO:O	12:Q:154:ALA:CB	2.37	0.71
19:R:80:PHE:O	19:R:84:ALA:HB3	1.90	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:R:45:ARG:HD3	19:R:97:VAL:HG23	1.72	0.71
13:S:17:ARG:CD	13:S:18:THR:N	2.52	0.71
20:U:111:ASP:O	20:U:113:SER:CA	2.37	0.71
21:V:5:ILE:CD1	21:V:12:TYR:CE1	2.73	0.71
21:V:60:VAL:O	21:V:98:ILE:CG1	2.38	0.71
2:A:566:U:OP2	21:V:81:ARG:NE	2.24	0.71
2:A:138:G:C5'	16:X:43:GLU:CG	2.59	0.71
2:A:1398:C:H2'	2:A:1399:C:C6	2.25	0.71
31:K:105:ILE:HG23	31:K:128:ILE:CG2	2.18	0.71
18:Z:95:SER:HA	18:Z:122:ILE:HA	1.72	0.71
23:3:18:ASP:O	23:3:20:LYS:N	2.24	0.71
25:4:18:GLY:N	25:4:33:VAL:HG21	1.96	0.71
27:6:41:ASP:HA	27:6:47:HIS:O	1.90	0.71
27:6:54:LYS:HZ3	27:6:54:LYS:CB	2.02	0.71
30:9:24:LEU:HD22	30:9:35:ARG:HG2	1.70	0.71
2:A:397:G:O2'	2:A:2231:C:H1'	1.89	0.71
2:A:2468:G:O6	2:A:2481:G:N1	2.23	0.71
2:A:2585:U:C2'	2:A:2586:C:OP2	2.38	0.71
2:A:2605:U:H6	2:A:2605:U:C5'	2.02	0.71
2:A:2049:G:N3	2:A:2620:C:N3	2.39	0.71
2:A:531:C:O2	20:U:28:ARG:CZ	2.38	0.71
2:A:574:C:N4	2:A:2054:A:H5''	2.04	0.71
3:D:128:ALA:HB3	3:D:190:THR:HG22	0.72	0.71
3:D:198:GLY:O	3:D:200:THR:CG2	2.38	0.71
3:D:89:ASN:ND2	3:D:199:ARG:NE	2.35	0.71
4:E:204:VAL:H	4:E:303:PRO:CG	2.03	0.71
4:E:211:GLN:CD	4:E:212:GLY:N	2.44	0.71
5:F:20:ASP:O	5:F:21:VAL:O	2.08	0.71
11:P:120:LEU:HD13	11:P:120:LEU:C	2.10	0.71
12:Q:33:MET:CB	12:Q:83:PHE:CB	2.66	0.71
12:Q:93:ILE:O	12:Q:94:ARG:HB2	1.89	0.71
19:R:84:ALA:HB3	19:R:85:PRO:HD2	1.68	0.71
13:S:21:HIS:CD2	13:S:24:LEU:HD12	2.24	0.71
17:Y:26:THR:C	17:Y:27:LEU:HG	2.10	0.71
18:Z:113:VAL:O	18:Z:171:VAL:HA	1.90	0.71
18:Z:26:LYS:NZ	18:Z:26:LYS:CB	2.52	0.71
22:2:5:VAL:O	22:2:6:GLN:C	2.28	0.71
16:X:31:ARG:NE	16:X:31:ARG:N	2.39	0.71
31:K:11:LEU:HD11	31:K:28:LEU:CD2	2.20	0.71
31:K:8:GLN:O	31:K:9:ILE:HG12	1.89	0.71
2:A:49:A:N6	2:A:176:G:H1	1.89	0.71
24:0:61:ALA:C	24:0:62:LEU:CD1	2.48	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:7:27:GLY:O	28:7:28:ARG:C	2.26	0.71
2:A:1134:G:H3'	2:A:1136:G:OP2	1.90	0.71
2:A:125:G:C5'	28:7:19:ARG:NH1	2.13	0.71
2:A:2225:A:C4'	2:A:2226:C:H5''	2.05	0.71
2:A:2093:G:C8	2:A:2225:A:C5	2.78	0.71
2:A:2259:G:C2	2:A:2282:G:N1	2.58	0.71
2:A:2464:C:H2'	2:A:2465:C:C6	2.24	0.71
2:A:2495:G:HO2'	12:Q:101:MET:CE	2.01	0.71
2:A:2496:C:C4	2:A:2497:A:C2	2.77	0.71
2:A:2504:U:O5'	2:A:2504:U:C6	2.42	0.71
2:A:2503:A:C4'	2:A:2504:U:OP1	2.38	0.71
2:A:2521:C:C2'	2:A:2522:U:O5'	2.38	0.71
2:A:2611:U:C5	26:5:4:HIS:NE2	2.58	0.71
2:A:2619:C:O2	2:A:2619:C:H2'	1.90	0.71
2:A:2762:G:C6	2:A:2763:G:C5	2.79	0.71
2:A:2802:G:H2'	2:A:2803:C:H6	1.54	0.71
2:A:2826:A:C4	2:A:2827:C:H6	2.08	0.71
2:A:2838:G:O2'	2:A:2839:G:H5'	1.90	0.71
2:A:2852:G:N3	2:A:2853:C:N3	2.38	0.71
2:A:674:G:H5''	5:F:69:HIS:CA	2.19	0.71
3:D:131:LEU:HB3	3:D:171:VAL:HG21	1.72	0.71
3:D:208:GLY:O	3:D:211:HIS:NE2	2.24	0.71
5:F:214:THR:C	5:F:216:SER:N	2.39	0.71
5:F:30:LEU:O	5:F:31:ILE:C	2.28	0.71
6:G:140:ARG:HA	6:G:143:LYS:HZ3	1.53	0.71
6:G:49:PRO:HD3	6:G:73:VAL:CG2	2.19	0.71
7:H:66:THR:O	7:H:69:SER:OG	2.08	0.71
11:P:73:VAL:O	11:P:76:LEU:HB3	1.91	0.71
20:U:32:TYR:H	20:U:32:TYR:HD2	1.38	0.71
20:U:42:ALA:O	20:U:45:TYR:CB	2.37	0.71
21:V:75:LYS:HE2	21:V:75:LYS:HA	1.70	0.71
17:Y:19:ARG:HG2	17:Y:22:GLN:NE2	2.05	0.71
18:Z:78:PRO:C	18:Z:79:ILE:HG13	2.11	0.71
2:A:138:G:C4'	16:X:43:GLU:HG3	2.20	0.71
24:0:9:SER:O	24:0:10:SER:O	2.09	0.71
24:0:35:ASN:HA	24:0:68:VAL:HG22	1.70	0.71
23:3:31:LEU:CD2	23:3:32:GLN:CA	2.61	0.71
23:3:42:ALA:O	23:3:43:ILE:C	2.28	0.71
28:7:11:LYS:HA	28:7:11:LYS:CE	2.21	0.71
30:9:7:VAL:HG12	30:9:34:GLN:NE2	2.05	0.71
2:A:1259:G:H2'	2:A:1260:G:C8	2.26	0.71
2:A:1666:G:C4'	10:O:67:ARG:NH2	2.53	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2332:U:C2'	2:A:2336:A:H62	2.03	0.71
2:A:2607:G:O2'	2:A:2608:G:H5'	1.91	0.71
3:D:130:PRO:CB	3:D:186:LYS:O	2.35	0.71
9:N:75:PRO:O	9:N:77:GLY:N	2.23	0.71
10:O:1:MET:HB2	10:O:2:ILE:CD1	2.21	0.71
10:O:35:ILE:CG2	10:O:62:VAL:O	2.37	0.71
10:O:3:GLN:O	10:O:4:GLN:C	2.28	0.71
12:Q:142:LYS:HE2	12:Q:143:VAL:CA	2.19	0.71
13:S:76:GLY:O	13:S:83:LEU:CD1	2.39	0.71
14:T:8:TYR:CE1	14:T:54:THR:HB	2.26	0.71
20:U:13:ARG:O	20:U:16:LYS:N	2.24	0.71
2:A:996:A:O3'	20:U:93:LYS:HG2	1.90	0.71
17:Y:80:GLU:HG2	17:Y:86:GLU:HG2	1.72	0.71
18:Z:108:VAL:O	18:Z:109:GLN:HG3	1.91	0.71
18:Z:37:LYS:C	18:Z:40:ASP:CG	2.49	0.71
8:I:75:LEU:HD12	8:I:76:THR:H	1.53	0.71
2:A:1709:U:H1'	2:A:2860:A:H1'	1.72	0.71
28:7:34:ARG:O	28:7:35:ARG:C	2.28	0.71
2:A:2250:G:N7	12:Q:102:ARG:HA	2.05	0.71
2:A:825:C:C3'	2:A:2428:G:N7	2.53	0.71
2:A:2619:C:C2'	2:A:2620:C:H5'	2.21	0.71
2:A:2666:C:H5	2:A:2667:C:C5	2.07	0.71
2:A:2821:A:O3'	4:E:258:TYR:HE2	1.74	0.71
2:A:2825:C:C6	2:A:2825:C:C4'	2.73	0.71
2:A:2838:G:C4	2:A:2839:G:H8	2.08	0.71
2:A:974:G:O6	21:V:80:TYR:OH	2.07	0.71
5:F:202:THR:HG22	5:F:203:ALA:H	1.55	0.71
5:F:22:PHE:O	5:F:23:GLU:O	2.08	0.71
5:F:51:TYR:O	5:F:54:LEU:C	2.28	0.71
5:F:92:PRO:O	5:F:96:LYS:CD	2.07	0.71
6:G:38:GLU:OE2	6:G:71:ALA:CB	2.39	0.71
7:H:101:LYS:CB	7:H:114:ILE:O	2.33	0.71
7:H:66:THR:HG23	7:H:67:THR:N	2.05	0.71
9:N:139:LEU:CD1	9:N:139:LEU:N	2.53	0.71
10:O:56:GLN:O	10:O:58:VAL:CG2	2.33	0.71
10:O:37:ASP:C	10:O:62:VAL:HG23	2.11	0.71
13:S:20:TYR:O	13:S:23:ARG:HB3	1.91	0.71
21:V:51:ALA:O	21:V:55:THR:HG23	1.91	0.71
2:A:2306:C:H42	6:G:53:LYS:NZ	1.88	0.71
2:A:2795:G:C2'	2:A:2795:G:N3	2.53	0.71
2:A:190:A:OP2	2:A:205:G:N2	2.20	0.71
2:A:216:A:H2'	2:A:217:G:C8	2.25	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:686:G:O2'	28:7:6:GLN:OE1	2.06	0.71
30:9:10:MET:HB3	30:9:32:HIS:NE2	2.05	0.71
2:A:1364:G:O6	25:4:2:GLN:OE1	2.08	0.71
2:A:1364:G:H22	2:A:1366:A:H3'	1.55	0.71
2:A:2100:G:H1'	2:A:2190:G:N2	2.06	0.71
2:A:2485:G:C2	2:A:2486:G:C1'	2.73	0.71
2:A:2631:G:C2'	2:A:2632:A:O5'	2.39	0.71
2:A:2793:G:N1	2:A:2794:C:C4	2.59	0.71
2:A:2892:A:H2'	2:A:2893:G:H1'	1.71	0.71
2:A:826:U:C2	2:A:828:U:H1'	2.26	0.71
2:A:974:G:H4'	2:A:974(A):C:OP1	1.91	0.71
3:D:196:ASN:OD1	3:D:196:ASN:O	2.09	0.71
2:A:673:C:C4'	5:F:82:GLN:NE2	2.54	0.71
8:I:1:MET:HG3	8:I:3:VAL:CG2	2.21	0.71
2:A:2093:G:H4'	8:I:29:PHE:CZ	2.26	0.71
9:N:18:ILE:O	9:N:18:ILE:CG2	2.38	0.71
10:O:73:ASP:C	10:O:75:SER:N	2.44	0.71
11:P:61:ALA:HB1	11:P:107:LYS:NZ	2.06	0.71
13:S:61:ALA:CB	13:S:84:THR:O	2.39	0.71
14:T:4:ARG:NE	14:T:4:ARG:N	2.36	0.71
20:U:88:ILE:HB	21:V:52:GLY:HA3	1.71	0.71
21:V:74:TYR:CE1	21:V:87:ARG:O	2.42	0.71
6:G:55:LYS:O	6:G:63:ILE:O	2.09	0.71
31:K:19:THR:H	31:K:20:PRO:CD	2.03	0.71
23:3:1:MET:SD	23:3:3:ARG:HG3	2.30	0.71
2:A:989:G:P	23:3:31:LEU:HD12	2.29	0.71
23:3:59:VAL:C	23:3:60:GLU:HG3	2.10	0.71
26:5:6:VAL:H	26:5:8:LYS:NZ	1.88	0.71
27:6:16:ALA:O	27:6:19:GLY:N	2.24	0.71
27:6:12:MET:HB2	27:6:27:ASN:HD22	1.51	0.71
30:9:7:VAL:CG1	30:9:25:VAL:HG23	2.21	0.71
2:A:1031:G:O2'	30:9:8:LYS:NZ	2.21	0.71
2:A:2081:C:H2'	2:A:2082:A:H8	1.53	0.71
2:A:2367:G:O2'	2:A:2368:C:H5'	1.90	0.71
2:A:2468:G:C8	2:A:2476:A:C2	2.78	0.71
2:A:2520:C:C2'	2:A:2521:C:C5'	2.67	0.71
2:A:2783:G:H2'	2:A:2784:C:C6	2.25	0.71
3:D:186:LYS:O	3:D:187:CYS:O	2.08	0.71
4:E:268:LEU:CD2	4:E:269:ILE:H	1.83	0.71
5:F:163:HIS:O	5:F:166:ILE:HG13	1.86	0.71
6:G:129:ASP:O	6:G:130:VAL:CG1	2.38	0.71
11:P:60:GLU:O	11:P:61:ALA:CB	2.39	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:R:105:ARG:CA	19:R:105:ARG:NE	2.52	0.71
2:A:2379:G:P	13:S:30:GLY:HA2	2.31	0.71
2:A:518:G:H1'	15:W:77:ASP:OD1	1.90	0.71
18:Z:66:VAL:CG2	18:Z:68:ALA:O	2.38	0.71
16:X:33:SER:O	16:X:37:VAL:CB	2.38	0.71
16:X:25:GLN:HE22	16:X:65:VAL:CG1	2.02	0.71
2:A:5:A:HO2'	9:N:4:ALA:N	1.88	0.71
24:O:7:VAL:O	24:O:7:VAL:CG1	2.38	0.71
2:A:108:U:H2'	2:A:109:G:H8	1.56	0.71
2:A:932:G:OP1	23:3:29:ARG:NE	2.23	0.71
27:6:8:ILE:HG23	27:6:30:ASN:H	1.55	0.71
28:7:29:ASN:O	28:7:30:ILE:C	2.29	0.71
2:A:1140:C:H4'	2:A:142(A):A:C2	2.26	0.71
2:A:1364:G:C8	2:A:1364:G:H5'	2.26	0.71
2:A:2213:U:O3'	2:A:2215:G:C8	2.38	0.71
2:A:2320:A:O5'	2:A:2320:A:C8	2.43	0.71
2:A:2402:C:H5''	2:A:2403:C:OP1	1.90	0.71
2:A:2546:U:H4'	2:A:2565:A:C2	2.24	0.71
2:A:2693:A:C2	2:A:2694:G:N7	2.58	0.71
2:A:2762:G:O6	2:A:2763:G:C6	2.44	0.71
2:A:2802:G:H2'	2:A:2803:C:C6	2.25	0.71
2:A:2838:G:C6	2:A:2839:G:C8	2.79	0.71
2:A:623:G:H2'	2:A:624:C:C6	2.26	0.71
2:A:872:A:O2'	12:Q:31:PHE:CG	2.44	0.71
4:E:61:PRO:HB3	4:E:69:PRO:CB	2.20	0.71
5:F:107:ARG:O	5:F:109:LEU:N	2.24	0.71
5:F:166:ILE:O	5:F:168:ARG:HG3	1.91	0.71
5:F:115:LEU:HG	5:F:246:ARG:NH1	2.05	0.71
6:G:23:VAL:HG23	6:G:23:VAL:O	1.91	0.71
7:H:130:ILE:N	7:H:130:ILE:HD12	1.96	0.71
7:H:158:GLY:O	7:H:159:LYS:HB2	1.91	0.71
9:N:12:VAL:CA	9:N:38:VAL:HG22	2.21	0.71
9:N:38:VAL:O	9:N:39:VAL:CB	2.38	0.71
2:A:1140:C:C4	9:N:49:ARG:HD2	2.23	0.71
11:P:66:VAL:CG2	11:P:110:GLY:O	2.39	0.71
11:P:131:GLU:O	11:P:132:LYS:C	2.28	0.71
2:A:1287:A:H5''	19:R:104:ARG:CD	2.20	0.71
21:V:6:GLN:HE22	21:V:10:LYS:HB3	1.56	0.71
15:W:30:GLU:O	15:W:33:ARG:HB2	1.91	0.71
18:Z:69:VAL:HG13	18:Z:81:VAL:CG2	2.16	0.71
22:2:30:ALA:HB1	22:2:46:ILE:CD1	2.20	0.71
2:A:2305:A:N1	2:A:2312:U:O2	2.24	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1315:C:O2'	2:A:1392:A:H1'	1.90	0.71
23:3:12:PRO:HG2	23:3:20:LYS:HZ1	1.53	0.70
28:7:43:THR:O	28:7:46:ASP:OD1	2.08	0.70
29:8:3:LYS:C	29:8:4:MET:HE3	2.11	0.70
2:A:1937:A:N1	2:A:1940:U:H5	1.89	0.70
2:A:2189:U:O2'	2:A:2190:G:H5'	1.90	0.70
2:A:2476:A:C2	2:A:2481:G:N2	2.59	0.70
2:A:2482:G:C5	2:A:2483:C:H5	1.97	0.70
2:A:2631:G:C5	2:A:2632:A:H8	2.07	0.70
2:A:2758:A:H2'	2:A:2759:G:O5'	1.91	0.70
2:A:2815:C:C2	2:A:2816:C:C5	2.79	0.70
2:A:2845:G:HO2'	2:A:2846:G:C4'	2.03	0.70
3:D:141:HIS:CE1	3:D:191:VAL:C	2.63	0.70
3:D:166:LYS:HB2	3:D:171:VAL:HA	1.73	0.70
3:D:166:LYS:HA	3:D:172:ILE:H	1.54	0.70
2:A:2617:C:H1'	4:E:245:ARG:NH2	2.06	0.70
5:F:138:VAL:O	5:F:139:VAL:CB	2.39	0.70
5:F:197:SER:O	5:F:198:ASP:CB	2.39	0.70
2:A:600:G:C5'	5:F:27:ARG:HH11	1.99	0.70
6:G:129:ASP:O	6:G:130:VAL:HG13	1.90	0.70
6:G:19:GLU:HB3	6:G:135:VAL:HG23	1.61	0.70
2:A:2745:C:C1'	7:H:142:GLU:CD	2.51	0.70
7:H:120:LEU:HD13	7:H:143:LEU:HD13	1.73	0.70
7:H:147:ILE:O	7:H:161:ILE:HD13	1.91	0.70
12:Q:130:PRO:C	12:Q:132:VAL:H	1.94	0.70
12:Q:142:LYS:CD	12:Q:143:VAL:N	2.52	0.70
12:Q:58:HIS:O	12:Q:59:ASN:C	2.29	0.70
19:R:28:LEU:O	19:R:31:HIS:N	2.23	0.70
15:W:8:ARG:HG3	15:W:102:HIS:ND1	2.05	0.70
15:W:81:ALA:CB	15:W:97:LYS:HD2	2.20	0.70
17:Y:33:GLU:CG	17:Y:34:GLU:N	2.54	0.70
18:Z:57:GLU:C	18:Z:59:GLY:N	2.43	0.70
8:I:80:PRO:O	8:I:148:GLN:CG	2.39	0.70
16:X:25:GLN:NE2	16:X:65:VAL:HG13	2.03	0.70
16:X:7:HIS:HB2	16:X:8:PRO:CD	2.20	0.70
31:K:122:GLU:C	31:K:126:LYS:CE	2.47	0.70
2:A:1470:G:N2	2:A:1522:G:C2	2.59	0.70
24:0:51:VAL:HG12	24:0:51:VAL:O	1.91	0.70
2:A:2355:C:C4'	24:0:21:LEU:HD11	1.82	0.70
2:A:989:G:C8	23:3:13:ILE:CD1	2.73	0.70
23:3:16:PRO:CB	23:3:19:GLN:NE2	2.54	0.70
28:7:27:GLY:C	28:7:31:LEU:HG	2.10	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:8:26:LYS:HG3	29:8:45:GLY:C	2.10	0.70
2:A:2742:C:C5'	30:9:35:ARG:NH1	2.49	0.70
2:A:563:G:C6	2:A:2018:G:C5	2.79	0.70
2:A:2051:A:N6	2:A:2614:A:C5	2.58	0.70
2:A:2228:G:N7	2:A:2229:C:C2	2.58	0.70
2:A:2242:G:C4	2:A:2243:U:C5	2.78	0.70
2:A:2252:G:C3'	2:A:2252:G:C8	2.74	0.70
2:A:2285:C:H1'	2:A:2288:A:N7	2.06	0.70
2:A:2298:A:C2	2:A:2299:G:H1'	2.27	0.70
2:A:2415:G:C5	2:A:2416:C:H5	2.09	0.70
2:A:2450:A:H2'	2:A:2451:A:H8	1.56	0.70
2:A:2607:G:O6	2:A:2608:G:C2	2.44	0.70
2:A:2681:C:N4	2:A:2725:A:N7	2.39	0.70
2:A:684:G:C2	2:A:775:G:C6	2.79	0.70
2:A:807:U:O4'	2:A:2445:G:H5'	1.90	0.70
5:F:19:PRO:O	5:F:20:ASP:C	2.29	0.70
6:G:14:ARG:H	6:G:14:ARG:HD2	1.55	0.70
9:N:45:VAL:H	9:N:132:LEU:CD2	2.02	0.70
9:N:52:GLN:CA	9:N:55:GLU:OE1	2.29	0.70
9:N:62:ASP:O	9:N:64:GLY:N	2.24	0.70
10:O:105:GLU:O	10:O:107:ARG:N	2.24	0.70
10:O:17:ARG:NE	10:O:47:THR:HA	2.06	0.70
12:Q:45:GLN:CB	12:Q:152:SER:CB	2.62	0.70
13:S:55:ASP:OD1	13:S:56:ASP:N	2.23	0.70
13:S:87:LEU:HD22	13:S:87:LEU:N	2.03	0.70
17:Y:19:ARG:N	17:Y:21:LYS:NZ	2.36	0.70
22:2:59:ILE:HG23	22:2:60:GLN:N	2.06	0.70
15:W:19:LEU:HB3	26:5:25:LEU:CD1	2.21	0.70
2:A:577:G:O2'	2:A:1254:A:OP1	2.09	0.70
2:A:2378:A:C2'	2:A:2379:G:O5'	2.39	0.70
2:A:2415:G:C5	2:A:2416:C:C5	2.79	0.70
2:A:2583:G:N9	2:A:2584:U:O2	2.24	0.70
2:A:2835:A:N6	2:A:2879:C:OP2	2.24	0.70
2:A:2853:C:C6	2:A:2853:C:H3'	2.25	0.70
2:A:495:G:H21	15:W:61:ASN:ND2	1.87	0.70
1:B:59:A:HO3'	1:B:60:C:P	1.47	0.70
2:A:1790:C:OP2	3:D:224:VAL:HG13	1.91	0.70
3:D:65:ASP:CG	3:D:66:PHE:N	2.44	0.70
3:D:68:ARG:O	3:D:69:ASP:CG	2.29	0.70
2:A:1657:C:H5'	4:E:234:ARG:NH1	2.07	0.70
4:E:246:VAL:HG12	4:E:247:ARG:N	2.05	0.70
1:B:42:C:O2'	6:G:47:GLN:HG2	1.92	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:13:GLY:HA3	8:I:15:LYS:HZ2	1.55	0.70
8:I:1:MET:HG3	8:I:3:VAL:HG23	1.73	0.70
9:N:19:MET:CE	9:N:22:VAL:HG11	2.21	0.70
9:N:24:SER:O	9:N:28:GLU:HG2	1.91	0.70
9:N:74:ARG:HD2	9:N:141:ALA:O	1.91	0.70
2:A:1665:A:C4'	10:O:66:LYS:CD	2.64	0.70
12:Q:67:ALA:C	12:Q:71:PHE:CE1	2.64	0.70
19:R:97:VAL:HG22	19:R:114:VAL:CG1	2.22	0.70
13:S:76:GLY:O	13:S:82:TYR:N	2.23	0.70
2:A:995:C:P	20:U:54:LYS:CE	2.78	0.70
15:W:96:ILE:N	15:W:96:ILE:CD1	2.40	0.70
2:A:338:G:C8	17:Y:21:LYS:CB	2.74	0.70
18:Z:2:GLU:O	18:Z:3:LEU:O	2.09	0.70
18:Z:67:LYS:CA	18:Z:67:LYS:CE	2.68	0.70
18:Z:24:TYR:HD2	18:Z:84:TYR:CD1	2.06	0.70
8:I:109:LYS:H	8:I:109:LYS:HE2	1.56	0.70
22:2:35:ALA:O	22:2:36:ALA:C	2.28	0.70
22:2:4:HIS:N	22:2:8:ILE:CD1	2.53	0.70
6:G:29:HIS:CB	6:G:69:ILE:HG12	2.18	0.70
31:K:38:PHE:CG	31:K:67:THR:HG22	2.24	0.70
25:4:70:GLY:O	25:4:71:SER:OG	2.09	0.70
24:0:36:ILE:N	24:0:68:VAL:CG2	2.55	0.70
25:4:56:VAL:HG12	25:4:57:ASP:N	2.06	0.70
28:7:44:VAL:N	28:7:46:ASP:OD2	2.24	0.70
2:A:650:C:OP1	29:8:19:THR:CG2	2.39	0.70
2:A:1031:G:C4'	30:9:8:LYS:CE	2.63	0.70
2:A:1259:G:H2'	2:A:1260:G:H8	1.56	0.70
2:A:1790:C:P	3:D:224:VAL:CG1	2.72	0.70
2:A:2093:G:C8	2:A:2225:A:C6	2.80	0.70
2:A:2086:U:C4	2:A:2233:U:O4	2.44	0.70
2:A:2385:C:O2	2:A:2386:C:H6	1.72	0.70
2:A:2616:C:N3	2:A:2617:C:C5	2.58	0.70
2:A:2712:U:H2'	2:A:712(A):A:H5''	0.70	0.70
3:D:74:PRO:HG2	3:D:96:ALA:CA	2.20	0.70
4:E:202:ALA:HA	4:E:262:THR:HB	1.73	0.70
4:E:228:ARG:O	4:E:230:GLY:N	2.25	0.70
4:E:252:GLN:O	4:E:254:GLY:N	2.21	0.70
6:G:146:LYS:HE3	13:S:15:GLU:OE1	1.92	0.70
9:N:12:VAL:HB	9:N:38:VAL:CG2	2.21	0.70
9:N:14:ALA:H	9:N:40:ASN:ND2	1.88	0.70
10:O:64:ARG:HH22	10:O:100:GLY:CA	2.04	0.70
10:O:20:LEU:HG	10:O:44:LYS:HG2	1.73	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:R:45:ARG:O	19:R:46:GLY:C	2.30	0.70
19:R:67:LEU:HD22	19:R:71:GLN:HA	1.73	0.70
13:S:127:LEU:CD2	13:S:127:LEU:C	2.60	0.70
13:S:93:GLN:C	13:S:93:GLN:OE1	2.29	0.70
20:U:25:TRP:C	20:U:28:ARG:HH11	1.93	0.70
20:U:93:LYS:O	20:U:94:VAL:HG23	1.90	0.70
21:V:39:PHE:HD2	21:V:40:VAL:N	1.89	0.70
15:W:29:LEU:CG	15:W:33:ARG:HD2	2.16	0.70
17:Y:92:ASP:OD1	17:Y:94:SER:N	2.25	0.70
18:Z:35:ASP:OD1	18:Z:37:LYS:N	2.24	0.70
18:Z:45:GLN:NE2	18:Z:45:GLN:N	2.40	0.70
22:2:60:GLN:O	22:2:63:GLU:CB	2.39	0.70
22:2:6:GLN:O	22:2:9:ARG:CA	2.39	0.70
16:X:28:VAL:HG11	16:X:64:ALA:HB2	1.73	0.70
25:4:49:PHE:CE1	25:4:71:SER:OG	2.44	0.70
2:A:1173:G:H22	2:A:1175:U:H3'	1.56	0.70
2:A:1779:U:H3'	2:A:1779:U:H6	1.55	0.70
24:0:38:VAL:HG12	24:0:39:ARG:N	2.06	0.70
27:6:32:GLN:HA	27:6:35:LEU:HD12	1.71	0.70
2:A:1675:C:N3	4:E:225:LYS:CG	2.47	0.70
2:A:746:A:C2'	2:A:2611:U:O2'	2.39	0.70
2:A:2638:G:O6	2:A:2776:A:OP2	2.09	0.70
2:A:2783:G:C6	2:A:2784:C:C4	2.79	0.70
2:A:827:U:OP2	2:A:2429:G:OP2	2.08	0.70
3:D:105:ALA:O	3:D:194:VAL:O	2.08	0.70
5:F:102:LEU:CA	5:F:107:ARG:HH21	2.04	0.70
7:H:137:LYS:CD	7:H:138:GLN:N	2.34	0.70
9:N:19:MET:HE1	9:N:22:VAL:HG11	1.74	0.70
9:N:51:GLU:O	9:N:54:VAL:N	2.25	0.70
9:N:53:ILE:CG2	9:N:54:VAL:N	2.54	0.70
10:O:12:ASP:HA	10:O:97:ARG:O	1.90	0.70
10:O:90:ASP:N	10:O:90:ASP:OD1	2.24	0.70
11:P:114:VAL:CG2	11:P:132:LYS:C	2.58	0.70
12:Q:72:VAL:CG2	12:Q:83:PHE:HZ	2.03	0.70
2:A:1251:C:C5'	20:U:10:ARG:CD	2.69	0.70
20:U:10:ARG:O	20:U:13:ARG:NH1	2.22	0.70
17:Y:11:GLN:O	17:Y:21:LYS:NZ	2.24	0.70
17:Y:78:THR:CA	17:Y:89:ARG:CD	2.67	0.70
2:A:1058:G:N2	31:K:127:ILE:HD11	2.05	0.70
23:3:37:LEU:HB3	23:3:38:GLU:OE1	1.91	0.70
26:5:8:LYS:O	26:5:9:LYS:HB2	1.90	0.70
28:7:24:THR:O	28:7:28:ARG:NE	2.23	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:9:3:VAL:O	30:9:3:VAL:HG12	1.89	0.70
2:A:1567:A:C5	3:D:84:PRO:HB3	2.27	0.70
2:A:1667:G:H8	2:A:1667:G:OP2	1.75	0.70
2:A:2216:G:O2'	2:A:2217:G:C5'	2.40	0.70
2:A:2228:G:H5'	2:A:2229:C:OP2	1.91	0.70
2:A:2262:U:O5'	24:0:14:ARG:NH2	2.25	0.70
2:A:2436:G:C2	2:A:2437:U:C2	2.79	0.70
2:A:2779:U:H5''	2:A:2780:G:O5'	1.91	0.70
2:A:2821:A:H2'	2:A:2822:G:O4'	1.89	0.70
2:A:2821:A:C2'	2:A:2822:G:C1'	2.69	0.70
3:D:211:HIS:C	3:D:213:LYS:N	2.42	0.70
2:A:2679:A:O2'	4:E:300:VAL:HG12	1.92	0.70
2:A:2785:C:H4'	4:E:99:VAL:HA	0.71	0.70
5:F:93:LYS:HB2	5:F:96:LYS:CE	2.22	0.70
10:O:17:ARG:O	10:O:18:GLU:HG3	1.92	0.70
13:S:19:ASP:O	13:S:22:GLN:N	2.21	0.70
14:T:6:CYS:SG	14:T:31:PHE:HA	2.32	0.70
20:U:63:GLN:O	20:U:64:ARG:C	2.28	0.70
18:Z:35:ASP:N	18:Z:39:PHE:HE2	1.86	0.70
22:2:12:THR:HB	22:2:13:PRO:HD2	1.71	0.70
22:2:4:HIS:H	22:2:8:ILE:CD1	2.05	0.70
2:A:2305:A:H5'	2:A:2306:C:OP2	1.91	0.70
31:K:45:GLU:C	31:K:47:ALA:H	1.93	0.70
2:A:740:U:O4	2:A:758:C:H1'	1.91	0.70
29:8:30:ARG:HD2	29:8:44:LYS:CD	2.20	0.70
2:A:2090:G:C5	2:A:2230:G:C6	2.79	0.70
2:A:2330:G:C2	2:A:2331:G:N9	2.60	0.70
2:A:2450:A:H2'	2:A:2451:A:C8	2.27	0.70
2:A:1127:A:C6	2:A:2518:A:C2	2.79	0.70
2:A:2783:G:O5'	2:A:2783:G:C8	2.43	0.70
2:A:2810:A:O2'	2:A:2811:G:H5'	1.88	0.70
2:A:2821:A:H2'	2:A:2822:G:C8	2.26	0.70
2:A:2880:C:C2'	2:A:2881:C:C5'	2.58	0.70
2:A:2888:C:C2	2:A:2889:C:C6	2.79	0.70
2:A:729:G:O2'	2:A:763:G:H4'	1.91	0.70
2:A:965:C:C4'	2:A:2273:A:C2	2.74	0.70
5:F:93:LYS:O	5:F:96:LYS:CD	2.39	0.70
6:G:140:ARG:HD2	6:G:144:ARG:NH2	2.07	0.70
7:H:146:ASN:O	7:H:146:ASN:OD1	2.09	0.70
7:H:153:PRO:HB3	7:H:161:ILE:O	1.92	0.70
7:H:70:LEU:O	7:H:73:ASN:HB2	1.91	0.70
10:O:101:PRO:HB3	10:O:120:GLU:O	1.91	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:Q:82:LYS:HB2	12:Q:125:TRP:HB3	1.74	0.70
12:Q:20:ILE:CG1	12:Q:21:SER:H	2.01	0.70
19:R:51:LEU:O	19:R:54:LEU:HB2	1.91	0.70
13:S:115:VAL:O	13:S:118:ILE:HG22	1.91	0.70
13:S:35:VAL:O	13:S:45:ALA:HB1	1.91	0.70
21:V:83:ARG:O	21:V:84:THR:CB	2.40	0.70
15:W:32:ALA:HA	15:W:35:ILE:HD11	1.69	0.70
8:I:77:VAL:HB	8:I:143:VAL:HA	1.74	0.70
16:X:20:PHE:CD1	16:X:22:ASN:N	2.58	0.70
2:A:2670:A:C8	2:A:2670:A:H5''	2.22	0.70
2:A:382:G:H1	2:A:392:C:H42	1.38	0.70
24:0:36:ILE:CA	24:0:68:VAL:HG13	2.22	0.70
23:3:41:PRO:O	23:3:42:ALA:O	2.10	0.70
2:A:593:G:H5''	29:8:62:LEU:HD23	1.70	0.70
2:A:2358:G:N3	2:A:2359:C:H5'	2.07	0.70
2:A:2372:G:N1	2:A:2373:G:C6	2.59	0.70
2:A:2405:G:C2	2:A:2413:G:O6	2.45	0.70
2:A:2478:A:H2'	2:A:2479:G:H5'	1.73	0.70
2:A:2493:U:O2	2:A:2494:G:O4'	2.08	0.70
2:A:2520:C:C4	2:A:2567:G:C8	2.80	0.70
2:A:1129:A:C4	2:A:2570:G:H1'	2.25	0.70
2:A:2507:C:N1	2:A:2583:G:N2	2.39	0.70
2:A:2045:C:N3	2:A:2624:G:N2	2.40	0.70
2:A:2839:G:O2'	2:A:2840:C:H5'	1.92	0.70
2:A:2789:C:O2'	2:A:2893:G:N2	2.25	0.70
2:A:324:A:H62	2:A:339:U:H1'	1.57	0.70
2:A:874:G:OP1	18:Z:172:LEU:CD1	2.39	0.70
3:D:166:LYS:C	3:D:182:MET:HE1	2.12	0.70
4:E:211:GLN:HG2	4:E:212:GLY:H	1.57	0.70
2:A:2575:C:OP1	4:E:241:TRP:NE1	2.25	0.70
4:E:268:LEU:C	4:E:268:LEU:CD2	2.55	0.70
4:E:268:LEU:CD2	4:E:269:ILE:HD12	2.16	0.70
9:N:136:SER:HA	9:N:139:LEU:HD21	1.72	0.70
12:Q:49:VAL:HG11	12:Q:119:ASN:O	1.90	0.70
12:Q:69:ASN:HD22	12:Q:70:ARG:CA	2.03	0.70
19:R:38:VAL:HG12	19:R:39:PRO:HD3	0.74	0.70
19:R:75:LEU:O	19:R:76:VAL:C	2.29	0.70
13:S:35:VAL:N	13:S:103:ASP:HB3	2.05	0.70
13:S:32:PRO:O	13:S:101:VAL:HG13	1.92	0.70
15:W:43:GLY:O	15:W:44:ALA:O	2.10	0.70
18:Z:159:THR:O	18:Z:160:LEU:HB2	1.90	0.70
28:7:1:MET:C	28:7:1:MET:SD	2.67	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:T:47:ARG:O	14:T:48:ASN:CB	2.40	0.70
2:A:1924:C:N4	2:A:1925:C:N4	2.40	0.70
24:0:49:GLN:CA	24:0:49:GLN:HE21	2.04	0.70
26:5:32:GLU:HG2	26:5:39:LYS:HG2	1.74	0.70
27:6:16:ALA:C	27:6:18:THR:N	2.45	0.70
2:A:2224:G:O2'	2:A:2225:A:H5'	1.91	0.70
2:A:2268:A:H4'	2:A:2268:A:OP1	1.91	0.70
2:A:2287:A:N3	2:A:2289:G:C8	2.60	0.70
2:A:2316:C:N4	2:A:2317:C:C4	2.60	0.70
2:A:2470:G:C4	2:A:2471:C:C5	2.79	0.70
2:A:2536:G:C2'	2:A:2537:U:H5'	2.21	0.70
2:A:2515:C:C4	2:A:2570:G:C6	2.79	0.70
2:A:2692:C:O2	2:A:2847:U:O2'	2.05	0.70
2:A:2688:U:C2	2:A:2719:G:N3	2.58	0.70
2:A:2737:G:C5	2:A:2738:A:N7	2.59	0.70
2:A:2633:G:N2	2:A:2785:C:N3	2.32	0.70
2:A:2825:C:H6	2:A:2825:C:C4'	2.05	0.70
2:A:2840:C:C2	2:A:2841:C:C5	2.80	0.70
2:A:2679:A:C2'	4:E:300:VAL:CG1	2.70	0.70
5:F:5:ILE:HA	5:F:139:VAL:CG1	2.21	0.70
7:H:98:GLN:HB2	7:H:103:VAL:HG21	1.74	0.70
2:A:1007:C:O4'	9:N:86:MET:O	2.10	0.70
10:O:19:VAL:CG1	10:O:42:THR:O	2.36	0.70
12:Q:116:HIS:CD2	12:Q:116:HIS:O	2.45	0.70
13:S:82:TYR:O	13:S:86:LEU:CG	2.38	0.70
20:U:85:ARG:NH1	20:U:116:ALA:O	2.24	0.70
20:U:43:ALA:O	20:U:45:TYR:CA	2.40	0.70
20:U:7:GLY:HA3	20:U:8:ILE:HD12	1.74	0.70
15:W:26:GLY:O	15:W:27:LYS:CG	2.39	0.70
17:Y:43:ASN:O	17:Y:44:ALA:HB3	1.90	0.70
18:Z:41:ARG:H	18:Z:41:ARG:NE	1.90	0.70
2:A:1080:C:O2	31:K:127:ILE:CD1	2.40	0.70
23:3:26:LEU:HB2	23:3:28:LEU:HD21	1.74	0.70
27:6:2:ALA:HB3	27:6:11:LYS:CE	2.21	0.70
2:A:1128:A:N6	2:A:2489:G:O2'	2.25	0.70
2:A:1287:A:C5'	19:R:104:ARG:CG	2.69	0.70
2:A:1327:C:H3'	2:A:1328:G:H8	1.57	0.70
2:A:1666:G:C4'	10:O:67:ARG:HH22	2.05	0.70
2:A:1818:U:C5'	3:D:155:ARG:HG2	2.21	0.70
2:A:2103:C:O2	2:A:2187:G:C2	2.43	0.70
2:A:2320:A:C2	13:S:13:ARG:CG	2.74	0.70
2:A:2328:A:C2'	2:A:2329:G:H8	2.01	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2333:A:N9	2:A:2335:A:N3	2.40	0.70
2:A:2657:A:C2'	2:A:2658:C:H5'	2.22	0.70
2:A:2703:C:O2'	2:A:2704:C:H5'	1.90	0.70
2:A:2870:C:H2'	2:A:2871:C:O4'	1.92	0.70
2:A:2620:C:H4'	4:E:252:GLN:HB2	1.72	0.70
4:E:205:THR:OG1	4:E:257:GLY:O	2.09	0.70
4:E:44:TYR:CB	4:E:307:LEU:O	2.40	0.70
5:F:6:TYR:CE2	5:F:140:VAL:CA	2.74	0.70
8:I:43:ASN:C	8:I:46:ALA:H	1.95	0.70
8:I:7:LYS:HB2	8:I:14:LYS:CE	2.12	0.70
9:N:58:GLU:HG2	9:N:139:LEU:HB3	1.74	0.70
10:O:47:THR:CB	10:O:48:PRO:HD2	2.09	0.70
12:Q:140:TYR:HD1	12:Q:147:VAL:HG11	0.67	0.70
19:R:111:LEU:O	19:R:112:ALA:CB	2.40	0.70
21:V:40:VAL:C	21:V:51:ALA:HB1	2.12	0.70
15:W:58:ALA:O	15:W:59:VAL:C	2.29	0.70
18:Z:125:PRO:CG	18:Z:130:ILE:HG22	2.22	0.70
18:Z:3:LEU:HD22	18:Z:34:LEU:C	2.12	0.70
12:Q:120:HIS:CE1	18:Z:76:ARG:HH12	2.09	0.70
8:I:95:SER:HA	8:I:98:ILE:HG13	0.70	0.70
16:X:14:ALA:HB1	16:X:18:MET:HE2	1.73	0.70
9:N:5:GLU:HA	9:N:109:TYR:CE2	2.27	0.70
3:D:139:LEU:CD1	3:D:139:LEU:C	2.59	0.70
2:A:280:C:O2	2:A:283:A:C6	2.45	0.70
2:A:2833:G:C8	2:A:2833:G:OP1	2.39	0.70
2:A:885:C:N4	2:A:889:C:H1'	2.07	0.70
24:O:25:LYS:C	24:O:60:PHE:HE1	1.91	0.69
23:3:40:THR:HG21	23:3:43:ILE:HG12	1.74	0.69
23:3:50:VAL:O	23:3:51:ALA:C	2.30	0.69
26:5:58:LEU:O	26:5:59:ALA:HB2	1.90	0.69
27:6:33:ALA:C	27:6:35:LEU:H	1.95	0.69
28:7:34:ARG:CZ	28:7:42:LEU:HD23	2.22	0.69
2:A:594:U:H4'	29:8:58:MET:HE2	1.74	0.69
2:A:1251:C:H5'	20:U:10:ARG:HD3	1.73	0.69
2:A:1264:G:OP1	26:5:16:ARG:HG2	1.92	0.69
2:A:1827:C:H2'	2:A:1828:G:O4'	1.91	0.69
2:A:2325:G:C5	2:A:2326:C:H5	2.09	0.69
2:A:2385:C:HO2'	24:O:39:ARG:CZ	2.04	0.69
2:A:2423:U:O2	2:A:2423:U:H2'	1.92	0.69
2:A:830:G:C4	2:A:2448:A:N7	2.60	0.69
2:A:2543:G:C8	2:A:2544:G:C5	2.80	0.69
2:A:2731:G:OP1	4:E:265:ASN:HB2	1.89	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2838:G:C2	2:A:2881:C:N3	2.59	0.69
2:A:2842:G:C3'	2:A:2843:G:H5'	2.22	0.69
3:D:87:SER:O	3:D:156:ALA:HB2	1.92	0.69
5:F:152:GLU:O	5:F:155:SER:HB3	1.92	0.69
5:F:22:PHE:O	5:F:23:GLU:C	2.30	0.69
9:N:15:ARG:O	9:N:16:ASP:HB2	1.91	0.69
9:N:12:VAL:HG12	9:N:38:VAL:CG2	2.22	0.69
9:N:15:ARG:CG	9:N:43:ARG:CG	2.68	0.69
9:N:83:ILE:CG1	9:N:84:ARG:HG2	2.22	0.69
9:N:95:ARG:O	9:N:96:GLU:C	2.28	0.69
15:W:40:ASN:O	15:W:41:LYS:O	2.10	0.69
15:W:56:ALA:O	15:W:58:ALA:N	2.25	0.69
2:A:2012:G:P	15:W:98:LYS:HD3	2.31	0.69
17:Y:102:ASP:HB3	17:Y:108:ARG:NH1	2.06	0.69
18:Z:71:MET:HA	18:Z:78:PRO:CB	2.22	0.69
1:B:77:U:C5'	18:Z:80:HIS:CE1	2.74	0.69
2:A:1078:U:C5	2:A:1088:A:C2	2.80	0.69
4:E:109:ASP:OD2	4:E:112:LEU:HD23	1.91	0.69
25:4:14:ILE:O	25:4:14:ILE:CG2	2.40	0.69
2:A:1818:U:C3'	3:D:155:ARG:CG	2.67	0.69
2:A:2051:A:H2	2:A:2618:G:N1	1.90	0.69
2:A:2226:C:O2	2:A:2227:A:O2'	2.08	0.69
2:A:2265:U:N3	2:A:2266:A:N7	2.39	0.69
2:A:2620:C:O2'	2:A:2621:A:C4'	2.40	0.69
2:A:2740:A:C5'	2:A:2740:A:H8	2.04	0.69
3:D:141:HIS:HE1	3:D:192:GLY:C	1.95	0.69
2:A:2682:U:C6	4:E:48:MET:SD	2.85	0.69
12:Q:152:SER:OG	12:Q:153:PRO:HD2	1.92	0.69
19:R:61:HIS:C	19:R:64:ARG:NH1	2.44	0.69
13:S:115:VAL:O	13:S:117:ALA:N	2.25	0.69
13:S:97:VAL:O	13:S:98:GLU:CB	2.40	0.69
20:U:47:TYR:CD1	21:V:75:LYS:O	2.45	0.69
2:A:994:C:O2'	20:U:54:LYS:HA	1.92	0.69
15:W:14:PRO:HD3	15:W:101:SER:OG	1.92	0.69
15:W:8:ARG:O	15:W:9:TYR:C	2.30	0.69
8:I:101:SER:O	8:I:102:LEU:C	2.31	0.69
22:2:23:LEU:O	22:2:27:LEU:HG	1.93	0.69
22:2:27:LEU:CD2	22:2:49:LEU:HB3	2.22	0.69
2:A:58:G:N2	2:A:70:G:C5	2.59	0.69
2:A:1063:G:H4'	31:K:88:GLY:HA3	1.73	0.69
31:K:132:ALA:CA	31:K:137:ILE:HB	2.22	0.69
2:A:218:A:H2'	2:A:219:G:O4'	1.92	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:0:33:ALA:CB	24:0:66:LYS:H	2.03	0.69
23:3:45:GLY:O	23:3:46:ASN:C	2.31	0.69
25:4:33:VAL:C	25:4:34:ASP:OD1	2.30	0.69
2:A:747:U:P	26:5:2:ALA:HB3	2.32	0.69
2:A:2194:G:C6	2:A:2195:C:N4	2.60	0.69
2:A:2236:C:O2	2:A:2236:C:H2'	1.91	0.69
2:A:2267:A:H5''	2:A:2268:A:P	2.32	0.69
2:A:2359:C:C5	2:A:2360:A:N1	2.60	0.69
2:A:2373:G:H1	2:A:2380:C:H42	1.40	0.69
2:A:2520:C:C6	2:A:2567:G:C1'	2.75	0.69
2:A:2520:C:H2'	2:A:2521:C:C5'	2.20	0.69
2:A:2657:A:C3'	2:A:2658:C:H5'	2.23	0.69
2:A:2657:A:C5	2:A:2658:C:C6	2.80	0.69
2:A:2768:C:HO2'	2:A:2769:C:H5'	1.57	0.69
3:D:110:LYS:O	3:D:111:VAL:C	2.30	0.69
2:A:1658:C:C5'	4:E:230:GLY:HA3	2.21	0.69
5:F:168:ARG:HH12	5:F:209:GLY:C	1.91	0.69
5:F:25:PRO:C	5:F:26:VAL:HG23	2.12	0.69
7:H:52:THR:O	7:H:54:PRO:CD	2.37	0.69
8:I:35:LEU:O	8:I:36:ALA:CB	2.39	0.69
8:I:8:ASP:O	8:I:9:VAL:HB	1.92	0.69
2:A:2780:G:N2	9:N:80:LYS:HZ2	1.88	0.69
12:Q:94:ARG:NE	12:Q:106:GLY:HA2	2.01	0.69
12:Q:49:VAL:CG2	12:Q:120:HIS:CA	2.70	0.69
19:R:37:THR:O	19:R:38:VAL:C	2.29	0.69
19:R:62:ALA:HB1	19:R:80:PHE:HZ	1.55	0.69
13:S:100:ALA:CB	13:S:127:LEU:HD21	2.23	0.69
20:U:104:GLU:OE1	21:V:46:VAL:CG1	2.39	0.69
17:Y:53:GLY:O	17:Y:54:ASP:C	2.30	0.69
17:Y:71:VAL:HG22	17:Y:93:THR:HG23	0.71	0.69
31:K:18:ALA:O	31:K:19:THR:CB	2.40	0.69
31:K:38:PHE:CZ	31:K:66:PHE:C	2.65	0.69
9:N:5:GLU:OE2	9:N:6:PHE:O	2.11	0.69
2:A:280:C:O2	2:A:283:A:N6	2.25	0.69
31:K:63:ASP:O	31:K:64:LYS:CG	2.41	0.69
2:A:2262:U:C5	24:0:14:ARG:NH1	2.59	0.69
24:0:47:ALA:HB1	24:0:73:GLY:O	1.93	0.69
23:3:31:LEU:HD22	23:3:32:GLN:CB	2.21	0.69
28:7:12:ARG:O	28:7:13:ALA:O	2.10	0.69
29:8:60:LEU:CD2	29:8:61:MET:O	2.40	0.69
2:A:196:A:C2	2:A:2068:U:H5	2.11	0.69
2:A:2210:G:O2'	2:A:2211:G:P	2.50	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2233:U:O2	2:A:2234:G:N9	2.25	0.69
2:A:2373:G:C4	2:A:2374:C:C5	2.80	0.69
2:A:2457:U:O2'	2:A:2458:G:C5'	2.40	0.69
2:A:2474:C:C2'	2:A:2475:C:H5'	2.15	0.69
2:A:2517:C:C5	2:A:2542:A:C5	2.80	0.69
2:A:2517:C:N3	2:A:2542:A:N6	2.40	0.69
2:A:2561:A:C5	2:A:2562:U:C5	2.80	0.69
2:A:671:C:N4	2:A:809:G:H1	1.90	0.69
3:D:85:ASN:CG	3:D:86:ARG:NH2	2.44	0.69
6:G:38:GLU:HG2	6:G:41:LEU:HD11	1.70	0.69
7:H:49:ILE:N	7:H:49:ILE:HD12	2.01	0.69
9:N:63:ILE:HB	9:N:71:TYR:CZ	2.26	0.69
10:O:64:ARG:HH21	10:O:100:GLY:HA3	1.57	0.69
10:O:43:VAL:HG23	10:O:56:GLN:H	1.55	0.69
11:P:114:VAL:HG21	11:P:132:LYS:CB	2.22	0.69
19:R:89:ASP:OD1	19:R:90:ARG:CG	2.40	0.69
13:S:76:GLY:C	13:S:80:SER:N	2.46	0.69
20:U:39:LEU:HB3	20:U:40:LEU:HD23	1.74	0.69
20:U:56:ASP:O	20:U:60:LEU:HD23	1.89	0.69
20:U:68:GLY:HA2	20:U:71:LEU:HB2	1.74	0.69
21:V:44:GLN:N	21:V:44:GLN:HE21	1.91	0.69
2:A:2013:A:C4'	15:W:96:ILE:CG2	2.68	0.69
18:Z:51:LEU:HD11	18:Z:64:ALA:H	1.56	0.69
9:N:10:VAL:HG11	9:N:36:VAL:CB	2.16	0.69
2:A:1405:U:H2'	2:A:1406:U:C6	2.26	0.69
31:K:72:THR:HG21	31:K:114:PRO:HB2	1.73	0.69
2:A:359:A:O2'	2:A:360:G:C4	2.43	0.69
24:O:9:SER:O	24:O:10:SER:C	2.30	0.69
27:6:42:PRO:C	27:6:44:ALA:N	2.43	0.69
2:A:1212:G:O2'	2:A:1213:A:H8	1.74	0.69
2:A:2197:U:HO2'	2:A:2198:A:H5''	1.58	0.69
2:A:2341:G:C6	2:A:2342:C:C4	2.80	0.69
2:A:2484:G:C2	2:A:2485:G:C1'	2.74	0.69
2:A:2572:A:N7	4:E:241:TRP:CD1	2.60	0.69
2:A:2740:A:C4	2:A:2741:A:N7	2.60	0.69
2:A:2840:C:O2'	2:A:2841:C:H5'	1.90	0.69
2:A:2880:C:N4	2:A:2881:C:H41	1.91	0.69
4:E:205:THR:OG1	4:E:206:LYS:N	2.24	0.69
2:A:2052:G:H21	4:E:245:ARG:CB	2.05	0.69
4:E:269:ILE:HD12	4:E:295:LEU:O	1.92	0.69
5:F:214:THR:N	5:F:218:VAL:HG21	1.96	0.69
5:F:79:ARG:HG2	5:F:79:ARG:O	1.92	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:146:LYS:O	6:G:147:ALA:C	2.30	0.69
10:O:10:VAL:CG1	10:O:12:ASP:O	2.41	0.69
10:O:78:ARG:O	10:O:79:PHE:CD2	2.45	0.69
12:Q:26:LYS:HE3	12:Q:28:ILE:HD12	1.74	0.69
19:R:56:LYS:NZ	19:R:94:TYR:OH	2.21	0.69
20:U:62:ILE:O	20:U:65:ILE:HB	1.92	0.69
20:U:75:ASN:O	20:U:78:THR:OG1	2.10	0.69
15:W:70:TYR:HD2	15:W:71:VAL:H	1.40	0.69
2:A:139:G:H2'	2:A:141(A):C:O2'	1.93	0.69
31:K:101:THR:OG1	31:K:104:GLN:OE1	2.10	0.69
2:A:1:G:N2	2:A:2902:C:C4	2.59	0.69
2:A:265:A:N6	2:A:428:A:C5	2.61	0.69
23:3:44:ARG:O	23:3:45:GLY:C	2.30	0.69
2:A:397:G:OP2	25:4:10:VAL:HG11	1.92	0.69
25:4:10:VAL:HG12	25:4:10:VAL:O	1.92	0.69
2:A:380:U:OP1	25:4:16:TYR:HA	1.93	0.69
15:W:19:LEU:CD1	26:5:25:LEU:CG	2.67	0.69
28:7:19:ARG:O	28:7:22:MET:N	2.25	0.69
2:A:1134:G:O6	2:A:1137:G:N7	2.25	0.69
2:A:1254:A:N7	2:A:1256:G:C4	2.60	0.69
2:A:1668:A:H1'	2:A:1669:A:C2	2.27	0.69
2:A:2087:G:C6	2:A:2233:U:C6	2.80	0.69
2:A:2210:G:N7	3:D:148:GLY:CA	2.56	0.69
2:A:2228:G:C5'	2:A:2228:G:H8	2.05	0.69
2:A:2251:G:H5''	12:Q:102:ARG:CZ	2.22	0.69
2:A:2267:A:N1	2:A:2272:U:O4	2.26	0.69
2:A:2063:C:O2	2:A:2450:A:N1	2.24	0.69
2:A:2470:G:O6	2:A:2481:G:N2	2.25	0.69
2:A:2455:G:N2	2:A:2498:C:N4	2.40	0.69
2:A:1966:A:C2	2:A:2593:U:H4'	2.28	0.69
2:A:2818:G:N2	2:A:2829:C:C2	2.61	0.69
2:A:310:A:H2'	2:A:312:G:N7	2.08	0.69
2:A:443:A:C8	5:F:43:LYS:HD2	2.27	0.69
2:A:772:C:H2'	2:A:773:U:H6	1.57	0.69
2:A:910:A:N6	12:Q:12:PRO:CA	2.56	0.69
1:B:75:G:O2'	18:Z:32:PHE:CE2	2.40	0.69
4:E:70:VAL:HG22	4:E:297:LYS:CA	2.22	0.69
4:E:307:LEU:O	4:E:309:PRO:HD3	1.92	0.69
4:E:84:ARG:HB2	4:E:174:LEU:HD23	1.74	0.69
5:F:153:VAL:C	5:F:155:SER:N	2.45	0.69
5:F:237:GLU:O	5:F:240:LEU:N	2.26	0.69
7:H:164:GLU:N	7:H:164:GLU:OE1	2.25	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:H:82:TYR:CE2	7:H:137:LYS:CB	2.67	0.69
11:P:69:ILE:O	11:P:70:ASP:C	2.31	0.69
19:R:47:PHE:O	19:R:50:HIS:N	2.25	0.69
19:R:52:ILE:CD1	19:R:94:TYR:HB2	2.23	0.69
13:S:35:VAL:HG11	13:S:37:ARG:NH2	2.08	0.69
20:U:103:PRO:CA	20:U:107:LYS:HE2	2.22	0.69
20:U:63:GLN:O	20:U:66:ASN:N	2.25	0.69
17:Y:101:LEU:O	17:Y:101:LEU:HD22	1.93	0.69
2:A:2898:U:H2'	2:A:2898:U:O2	1.93	0.69
24:O:41:ARG:O	24:O:42:GLY:O	2.10	0.69
25:4:40:HIS:CB	25:4:41:PRO:CD	2.70	0.69
26:5:13:LYS:CD	26:5:14:SER:N	2.56	0.69
2:A:1367:A:O2'	28:7:25:LYS:NZ	2.24	0.69
28:7:26:SER:HA	28:7:29:ASN:HD22	1.57	0.69
2:A:2018:G:H21	20:U:34:ASN:HD21	0.74	0.69
2:A:2043:C:N4	2:A:2777:G:C5	2.59	0.69
2:A:2262:U:C6	24:O:14:ARG:NH2	2.58	0.69
2:A:2333:A:O4'	2:A:2335:A:C4	2.45	0.69
2:A:2394:C:N4	2:A:2395:C:N3	2.39	0.69
2:A:2510:C:N4	2:A:2511:U:C4	2.60	0.69
2:A:2474:C:N4	2:A:2529:G:N2	2.41	0.69
2:A:245:G:H1	2:A:253:C:H42	1.39	0.69
2:A:387:U:H3'	25:4:23:GLU:OE2	1.93	0.69
3:D:73:ILE:HG22	3:D:74:PRO:HD2	1.75	0.69
5:F:147:LEU:HD12	5:F:156:LEU:HD12	1.72	0.69
5:F:42:ARG:NH1	5:F:221:GLU:OE1	2.25	0.69
8:I:7:LYS:HG2	8:I:12:LYS:HA	1.74	0.69
9:N:65:ASN:O	9:N:68:GLY:O	2.11	0.69
10:O:37:ASP:O	10:O:61:VAL:CG1	2.39	0.69
11:P:52:LYS:CE	11:P:53:ARG:HH12	2.05	0.69
12:Q:65:ARG:HH21	12:Q:85:ILE:CA	2.05	0.69
12:Q:67:ALA:HB1	12:Q:71:PHE:CE1	2.28	0.69
19:R:90:ARG:NH1	19:R:117:VAL:HG11	2.07	0.69
14:T:6:CYS:O	14:T:8:TYR:N	2.23	0.69
20:U:66:ASN:O	20:U:68:GLY:N	2.26	0.69
15:W:32:ALA:C	15:W:34:ASN:H	1.96	0.69
17:Y:47:THR:O	17:Y:98:VAL:CG1	2.35	0.69
17:Y:92:ASP:O	17:Y:92:ASP:OD1	2.09	0.69
18:Z:81:VAL:CG1	18:Z:82:ASP:N	2.56	0.69
18:Z:91:PRO:HG2	18:Z:128:ARG:N	2.07	0.69
22:2:35:ALA:O	22:2:37:GLY:N	2.26	0.69
22:2:51:LYS:O	22:2:54:ALA:CA	2.40	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:Q:108:SER:C	12:Q:109:VAL:HG22	2.13	0.69
2:A:1918:A:H2'	2:A:1919:A:N7	2.07	0.69
9:N:8:ALA:HB1	9:N:11:ILE:HD11	1.75	0.69
24:0:37:LEU:CD1	24:0:70:ILE:HD11	2.04	0.69
30:9:13:ASN:O	30:9:14:CYS:C	2.31	0.69
30:9:7:VAL:HG12	30:9:34:GLN:OE1	1.91	0.69
2:A:1131:G:N1	9:N:69:TYR:HE1	1.85	0.69
2:A:1274:A:C6	2:A:1302:A:C2	2.79	0.69
2:A:2247:A:H2'	2:A:2248:C:C6	2.24	0.69
2:A:2344:U:HO2'	2:A:2345:G:P	2.14	0.69
2:A:2423:U:C2'	2:A:2424:C:OP2	2.39	0.69
2:A:2471:C:C2'	2:A:2472:G:O5'	2.41	0.69
2:A:2511:U:C6	2:A:2512:C:C5	2.81	0.69
2:A:2535:G:H2'	2:A:2535:G:N3	2.06	0.69
2:A:1637:A:O2'	2:A:2711:A:H1'	1.93	0.69
2:A:2734:A:H5'	2:A:2735:G:OP2	1.92	0.69
2:A:2822:G:H8	2:A:2822:G:OP2	1.74	0.69
3:D:134:ILE:CG2	3:D:135:PRO:HD2	2.20	0.69
3:D:154:VAL:CG2	3:D:160:SER:HA	2.23	0.69
2:A:673:C:H4'	5:F:82:GLN:OE1	1.92	0.69
6:G:142:ALA:HB3	6:G:151:ILE:HD11	1.71	0.69
11:P:127:GLU:OE1	11:P:127:GLU:HA	1.91	0.69
12:Q:127:ASN:CB	12:Q:128:PRO:HD2	2.23	0.69
2:A:907:U:O2'	12:Q:88:PHE:HZ	1.76	0.69
19:R:24:GLN:CB	19:R:44:LEU:CD2	2.71	0.69
13:S:110:THR:HG22	13:S:115:VAL:CG2	2.21	0.69
13:S:76:GLY:O	13:S:80:SER:O	2.11	0.69
2:A:563:G:H21	20:U:37:GLN:CD	1.95	0.69
21:V:41:GLY:N	21:V:54:TYR:CD1	2.61	0.69
17:Y:31:LEU:HD11	17:Y:99:THR:O	1.93	0.69
18:Z:50:GLY:O	18:Z:51:LEU:CB	2.40	0.69
23:3:33:GLN:CD	23:3:34:GLU:N	2.47	0.69
23:3:50:VAL:O	23:3:51:ALA:O	2.10	0.69
28:7:21:ARG:CZ	28:7:43:THR:OG1	2.41	0.69
2:A:1624:G:H2'	2:A:1625:C:C5	2.27	0.69
2:A:2061:G:C4	2:A:2503:A:C2	2.80	0.69
2:A:2209:C:O2'	2:A:2210:G:C8	2.45	0.69
2:A:2258:C:H5	2:A:2426:A:O4'	1.31	0.69
2:A:2414:G:C4	2:A:2415:G:N7	2.61	0.69
2:A:2483:C:H2'	2:A:2484:G:O5'	1.93	0.69
2:A:2573:C:C6	2:A:2573:C:C3'	2.75	0.69
2:A:2023:G:O4'	2:A:2618:G:OP1	2.09	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2048:G:C2	2:A:2621:A:C2	2.79	0.69
2:A:2631:G:C6	2:A:2632:A:N7	2.59	0.69
2:A:2804:C:C6	2:A:2805:G:C2	2.81	0.69
2:A:2623:G:H4'	2:A:2826:A:C1'	2.23	0.69
2:A:2888:C:H2'	2:A:2889:C:O4'	1.92	0.69
2:A:373:U:C2	2:A:400:G:N2	2.61	0.69
2:A:590:A:O3'	5:F:97:ASP:OD2	2.11	0.69
3:D:163:VAL:O	3:D:165:GLY:N	2.26	0.69
2:A:2512:C:H5''	4:E:219:VAL:HG13	1.74	0.69
2:A:2052:G:H1'	4:E:245:ARG:O	1.91	0.69
5:F:215:ALA:O	5:F:242:GLU:CB	2.40	0.69
5:F:223:LEU:O	5:F:225:PRO:CD	2.41	0.69
5:F:24:THR:CB	5:F:25:PRO:HD3	2.15	0.69
5:F:36:ARG:O	5:F:39:GLN:NE2	2.26	0.69
1:B:42:C:C1'	6:G:47:GLN:HA	2.22	0.69
11:P:67:ARG:HH11	11:P:111:ALA:CA	2.06	0.69
11:P:77:ALA:N	11:P:81:VAL:CB	2.55	0.69
12:Q:65:ARG:NE	12:Q:85:ILE:CB	2.53	0.69
21:V:20:ILE:O	21:V:21:ARG:CZ	2.40	0.69
21:V:33:VAL:HG12	21:V:34:GLU:N	2.08	0.69
8:I:102:LEU:C	8:I:102:LEU:CD1	2.56	0.69
8:I:116:GLU:HG3	8:I:132:LYS:HG3	1.74	0.69
16:X:13:LYS:HA	16:X:16:ASN:ND2	2.07	0.69
2:A:72:U:C5'	16:X:2:TRP:CZ2	2.76	0.69
22:2:26:GLU:O	22:2:29:ASN:N	2.25	0.69
2:A:76:C:C2'	22:2:55:ARG:HG3	2.22	0.69
2:A:2308:G:H5'	2:A:2309:A:OP1	1.91	0.69
2:A:95:G:C1'	22:2:42:ASN:HB3	2.22	0.69
2:A:222:A:N6	2:A:232:G:C2	2.60	0.69
2:A:761:A:H8	2:A:761:A:O5'	1.75	0.69
24:0:46:LYS:CB	24:0:58:THR:HG23	2.21	0.69
27:6:2:ALA:CB	27:6:11:LYS:CE	2.70	0.69
28:7:18:PHE:O	28:7:19:ARG:C	2.30	0.69
28:7:22:MET:O	28:7:23:LYS:C	2.29	0.69
29:8:50:LEU:HD22	29:8:51:ALA:N	2.01	0.69
2:A:1612:C:N1	28:7:3:ARG:CZ	2.55	0.69
2:A:1626:G:N7	2:A:1634:A:H2	1.91	0.69
2:A:1790:C:OP1	3:D:224:VAL:HA	1.93	0.69
2:A:2276:G:C4	2:A:2277:G:H8	2.11	0.69
2:A:2445:G:O2'	2:A:2446:G:H5''	1.93	0.69
2:A:2511:U:C2'	2:A:2512:C:H5'	2.23	0.69
2:A:2548:G:H2'	2:A:2549:G:O5'	1.93	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2520:C:C4	2:A:2567:G:N7	2.61	0.69
2:A:729:G:C5	3:D:207:ALA:HA	2.28	0.69
2:A:775:G:C2'	2:A:794:G:N7	2.56	0.69
2:A:780:G:N1	3:D:233:ASP:CG	2.46	0.69
2:A:962:G:H2'	2:A:963:U:C6	2.28	0.69
3:D:123:ILE:HD12	3:D:123:ILE:H	1.58	0.69
4:E:211:GLN:CG	4:E:212:GLY:N	2.56	0.69
4:E:243:PRO:O	4:E:244:SER:HB2	1.93	0.69
4:E:44:TYR:CG	4:E:309:PRO:HD3	2.28	0.69
4:E:44:TYR:O	4:E:74:GLU:CD	2.30	0.69
5:F:144:PHE:HE2	5:F:156:LEU:HD13	1.52	0.69
5:F:163:HIS:C	5:F:166:ILE:CG1	2.60	0.69
9:N:13:ASP:CA	9:N:38:VAL:HG13	1.82	0.69
9:N:94:GLY:C	9:N:98:PHE:CD1	2.66	0.69
10:O:71:ARG:C	10:O:73:ASP:N	2.46	0.69
11:P:124:ASP:C	11:P:125:PHE:CG	2.63	0.69
13:S:86:LEU:H	13:S:121:GLY:HA2	1.58	0.69
20:U:45:TYR:O	20:U:46:GLU:C	2.31	0.69
15:W:70:TYR:HE2	15:W:72:LYS:CA	2.04	0.69
17:Y:18:GLU:CB	17:Y:21:LYS:HZ2	2.01	0.69
1:B:75:G:C2'	18:Z:32:PHE:CD2	2.74	0.69
18:Z:24:TYR:CB	18:Z:83:PHE:O	2.41	0.69
18:Z:64:ALA:CB	18:Z:85:MET:C	2.61	0.69
2:A:138:G:H1'	16:X:42:GLU:CG	2.23	0.69
2:A:1076:C:H5'	31:K:94:ARG:NH2	2.07	0.69
2:A:1545:A:H3'	2:A:545(A):A:P	2.32	0.69
2:A:931:G:OP1	23:3:27:GLY:HA3	1.90	0.69
23:3:59:VAL:CG1	23:3:60:GLU:H	1.82	0.69
28:7:9:ASN:O	28:7:11:LYS:O	2.10	0.69
29:8:8:LYS:O	29:8:10:ALA:CA	2.41	0.69
2:A:1608:A:H2'	2:A:1611:C:H41	1.57	0.69
2:A:2233:U:O2	2:A:2234:G:C8	2.45	0.69
2:A:2333:A:C4	2:A:2335:A:N1	2.60	0.69
2:A:2411:A:O2'	2:A:2412:A:C5'	2.41	0.69
2:A:2462:U:N3	2:A:2463:C:C5	2.61	0.69
2:A:2487:G:O2'	2:A:2488:A:C5'	2.41	0.69
2:A:2459:A:N1	2:A:2494:G:C4	2.61	0.69
2:A:2561:A:C5	2:A:2562:U:H6	2.11	0.69
2:A:2579:C:C2'	2:A:2580:U:C5'	2.33	0.69
2:A:2638:G:H2'	2:A:2775:A:N1	2.08	0.69
2:A:2776:A:C2	2:A:2778:A:C5	2.81	0.69
2:A:613:U:O5'	2:A:615:G:C8	2.46	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:729:G:N3	2:A:729:G:H3'	2.08	0.69
5:F:96:LYS:C	5:F:98:ARG:CZ	2.42	0.69
7:H:137:LYS:HD2	7:H:138:GLN:H	0.67	0.69
9:N:46:ILE:CD1	9:N:132:LEU:HD13	2.23	0.69
9:N:48:GLY:O	9:N:50:GLU:N	2.26	0.69
2:A:911:A:N9	12:Q:16:ARG:CD	2.53	0.69
12:Q:82:LYS:C	12:Q:84:ARG:N	2.44	0.69
13:S:100:ALA:N	13:S:127:LEU:HD21	2.08	0.69
2:A:2320:A:C6	13:S:13:ARG:HG2	2.27	0.69
20:U:55:ARG:C	20:U:57:PHE:H	1.96	0.69
21:V:74:TYR:CD1	21:V:86:HIS:C	2.65	0.69
22:2:20:LEU:HD12	22:2:21:ASP:N	2.07	0.69
16:X:13:LYS:HA	16:X:16:ASN:HD21	1.59	0.69
31:K:116:LEU:HD13	31:K:116:LEU:C	2.13	0.69
31:K:24:VAL:O	31:K:24:VAL:HG12	1.93	0.69
24:0:52:GLY:O	24:0:53:MET:CB	2.40	0.69
2:A:1879:C:H2'	2:A:1880:C:H6	1.58	0.69
2:A:51:G:H1'	2:A:118:A:H62	1.56	0.69
3:D:121:ALA:O	3:D:122:ASP:HB3	1.92	0.69
25:4:20:VAL:CG1	25:4:30:GLU:OE1	2.41	0.68
26:5:46:CYS:CB	26:5:47:PRO:HD2	2.21	0.68
27:6:29:ARG:O	27:6:31:THR:O	2.12	0.68
29:8:30:ARG:HB3	29:8:44:LYS:CE	2.22	0.68
2:A:585:G:C6	2:A:1251:C:C5	2.80	0.68
2:A:2078:C:C4'	2:A:2434:A:H5'	2.23	0.68
2:A:2356:C:C2'	2:A:2357:U:C5'	2.71	0.68
2:A:2405:G:C2	2:A:2413:G:C6	2.81	0.68
2:A:2485:G:H2'	2:A:2486:G:O4'	1.93	0.68
2:A:2510:C:C4	2:A:2511:U:C4	2.80	0.68
2:A:2597:G:H8	2:A:2597:G:OP2	1.75	0.68
2:A:2668:G:N2	2:A:2669:G:N9	2.41	0.68
2:A:2678:C:H2'	2:A:2679:A:O4'	1.93	0.68
2:A:2709:G:C2'	2:A:2710:C:C5'	2.53	0.68
2:A:2762:G:C5	2:A:2763:G:N7	2.60	0.68
2:A:2854:G:C6	2:A:2864:G:C6	2.80	0.68
2:A:30:G:H2'	2:A:31:C:C6	2.28	0.68
3:D:73:ILE:HB	3:D:95:TYR:HE2	1.57	0.68
5:F:22:PHE:CE2	5:F:115:LEU:C	2.66	0.68
5:F:140:VAL:HG11	5:F:236:THR:HG22	1.74	0.68
10:O:104:ARG:O	10:O:105:GLU:C	2.29	0.68
12:Q:44:ALA:HB3	12:Q:126:VAL:C	2.12	0.68
12:Q:126:VAL:O	12:Q:127:ASN:O	2.10	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1287:A:C4'	19:R:104:ARG:CD	2.65	0.68
19:R:116:LEU:O	19:R:116:LEU:CD1	2.41	0.68
13:S:12:ARG:CD	13:S:20:TYR:CZ	2.55	0.68
13:S:27:LEU:CA	13:S:33:ARG:CZ	2.71	0.68
20:U:13:ARG:CB	20:U:13:ARG:CZ	2.62	0.68
2:A:446:G:C5'	20:U:5:LYS:HE3	2.23	0.68
2:A:814:C:P	21:V:84:THR:HG22	2.33	0.68
15:W:25:ARG:CG	15:W:26:GLY:H	2.06	0.68
15:W:28:SER:O	15:W:29:LEU:O	2.10	0.68
15:W:45:TYR:CD2	15:W:46:PHE:N	2.61	0.68
17:Y:16:LEU:O	17:Y:19:ARG:HB2	1.93	0.68
17:Y:33:GLU:OE1	17:Y:34:GLU:HG2	1.85	0.68
17:Y:74:VAL:HB	17:Y:77:VAL:HG23	1.72	0.68
17:Y:49:GLU:CD	17:Y:97:ARG:HH11	1.75	0.68
18:Z:159:THR:O	18:Z:160:LEU:CB	2.40	0.68
18:Z:1:MET:CE	18:Z:52:PHE:CD2	2.76	0.68
22:2:24:LYS:O	22:2:25:THR:C	2.31	0.68
16:X:28:VAL:HG23	16:X:62:LYS:HB3	1.75	0.68
16:X:39:ASP:O	16:X:42:GLU:N	2.27	0.68
16:X:23:LYS:HA	16:X:67:ARG:HA	1.75	0.68
2:A:1062:G:O2'	31:K:76:SER:OG	2.10	0.68
31:K:56:VAL:HG12	31:K:58:ILE:HG13	1.73	0.68
16:X:76:GLU:OE1	16:X:77:VAL:HG23	1.92	0.68
2:A:2795:G:OP2	2:A:2795:G:C4	2.47	0.68
26:5:33:CYS:SG	26:5:36:CYS:C	2.71	0.68
2:A:2386:C:H1'	24:0:39:ARG:NH2	2.05	0.68
24:0:44:LYS:HB3	24:0:45:PHE:CE1	2.28	0.68
24:0:61:ALA:HB3	24:0:80:SER:O	1.92	0.68
23:3:48:GLU:CG	23:3:49:LYS:H	2.05	0.68
2:A:1363:C:P	25:4:55:ARG:HH22	2.16	0.68
25:4:68:ARG:HG2	25:4:72:LYS:CA	2.23	0.68
2:A:126:A:C8	28:7:18:PHE:CD1	2.81	0.68
28:7:42:LEU:C	28:7:46:ASP:OD1	2.31	0.68
2:A:1637:A:H4'	2:A:2711:A:HO2'	1.53	0.68
2:A:2199:A:H3'	2:A:2205:C:C5	2.28	0.68
2:A:2250:G:C8	2:A:2250:G:C3'	2.75	0.68
2:A:1954:G:N3	2:A:2551:C:H5''	2.08	0.68
2:A:2654:A:H61	2:A:2667:C:H41	1.41	0.68
2:A:2718:G:N2	2:A:2719:G:H1'	2.08	0.68
2:A:2842:G:O2'	2:A:2843:G:C5'	2.41	0.68
2:A:54:G:O2'	28:7:35:ARG:NH2	2.26	0.68
3:D:141:HIS:CE1	3:D:192:GLY:C	2.66	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:175:LEU:CB	3:D:179:GLU:O	2.40	0.68
3:D:93:ILE:HG22	3:D:101:ARG:O	1.93	0.68
4:E:102:ASP:OD2	4:E:104:PHE:HE1	1.74	0.68
6:G:98:PHE:CA	6:G:104:PHE:CE2	2.76	0.68
7:H:91:VAL:CG1	7:H:91:VAL:O	2.41	0.68
9:N:76:ASP:N	9:N:76:ASP:OD2	2.25	0.68
10:O:25:LEU:CD1	10:O:38:VAL:C	2.61	0.68
2:A:1665:A:H1'	10:O:67:ARG:CD	2.24	0.68
2:A:2495:G:O2'	12:Q:101:MET:HE1	1.93	0.68
12:Q:56:ILE:O	12:Q:112:ALA:HB2	1.88	0.68
19:R:49:ASP:O	19:R:52:ILE:HB	1.92	0.68
2:A:2320:A:N6	13:S:14:ARG:HA	2.06	0.68
13:S:49:THR:O	13:S:52:PRO:O	2.11	0.68
20:U:17:VAL:O	20:U:20:ARG:N	2.26	0.68
20:U:72:HIS:CE1	20:U:110:VAL:CG1	2.74	0.68
15:W:23:LEU:CD2	15:W:24:ILE:N	2.56	0.68
17:Y:27:LEU:HD12	17:Y:27:LEU:N	2.07	0.68
18:Z:148:THR:O	18:Z:149:ALA:O	2.11	0.68
8:I:68:LEU:CA	8:I:72:LEU:HD21	2.23	0.68
31:K:93:LYS:H	31:K:96:ILE:CG1	2.06	0.68
6:G:88:LEU:N	6:G:89:PRO:HD3	2.09	0.68
7:H:108:TYR:CD2	7:H:108:TYR:N	2.60	0.68
15:W:21:VAL:CG2	15:W:22:ASP:N	2.54	0.68
2:A:659:C:H2'	2:A:660:G:H8	1.58	0.68
24:O:45:PHE:CE1	24:O:78:PHE:CB	2.76	0.68
24:O:67:VAL:O	24:O:68:VAL:CG2	2.42	0.68
2:A:1139:G:OP1	9:N:19:MET:O	2.12	0.68
2:A:1166:C:N3	2:A:1183:G:N2	2.40	0.68
2:A:2242:G:C4	2:A:2243:U:H5	2.11	0.68
2:A:2318:G:O5'	2:A:2318:G:H8	1.74	0.68
2:A:2363:C:C2'	2:A:2364:C:H5'	2.24	0.68
2:A:2423:U:C6	2:A:2425:A:N6	2.53	0.68
2:A:2056:G:O6	2:A:2577:A:H1'	1.91	0.68
2:A:2023:G:C5'	2:A:2617:C:HO2'	2.00	0.68
2:A:2692:C:N4	2:A:2717:G:H1	1.91	0.68
2:A:2864:G:C2'	2:A:2865:U:C6	2.75	0.68
2:A:2893:G:C8	2:A:2893:G:OP2	2.44	0.68
2:A:514:A:H2'	2:A:515:A:H8	1.56	0.68
2:A:612:G:O2'	2:A:615:G:H2'	1.93	0.68
3:D:119:PRO:N	3:D:129:LEU:HD21	2.07	0.68
3:D:131:LEU:HB3	3:D:171:VAL:HG11	1.75	0.68
3:D:179:GLU:O	3:D:180:VAL:CG2	2.41	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:38:GLU:HA	6:G:41:LEU:HD12	1.74	0.68
6:G:49:PRO:CB	6:G:72:LYS:CA	2.70	0.68
9:N:135:ILE:O	9:N:139:LEU:CD2	2.41	0.68
12:Q:56:ILE:C	12:Q:61:LEU:HD21	2.14	0.68
12:Q:59:ASN:O	12:Q:60:ALA:C	2.31	0.68
19:R:18:LEU:C	19:R:18:LEU:CD1	2.61	0.68
14:T:29:THR:HB	14:T:31:PHE:CE1	2.28	0.68
20:U:95:LEU:H	20:U:95:LEU:HD23	1.58	0.68
17:Y:11:GLN:CA	17:Y:21:LYS:HE3	2.23	0.68
17:Y:63:ILE:CD1	17:Y:75:GLU:CA	2.50	0.68
16:X:18:MET:CE	16:X:25:GLN:H	2.05	0.68
2:A:2305:A:N1	2:A:2312:U:H1'	2.09	0.68
6:G:53:LYS:HG3	6:G:54:ALA:H	1.55	0.68
31:K:52:MET:HE2	31:K:53:ILE:N	2.08	0.68
2:A:414:C:C2	2:A:2409:G:N2	2.59	0.68
2:A:107:C:H6	2:A:107:C:H5'	1.58	0.68
2:A:1689:A:H2'	2:A:1690:A:H8	1.58	0.68
28:7:21:ARG:CZ	28:7:43:THR:CB	2.70	0.68
30:9:7:VAL:HG11	30:9:25:VAL:CG2	2.23	0.68
2:A:1664:A:H3'	2:A:1664:A:C8	2.29	0.68
2:A:2274:A:O3'	2:A:2275:C:H3'	1.92	0.68
2:A:2331:G:H2'	2:A:2332:U:O4'	1.94	0.68
2:A:2344:U:O2'	2:A:2345:G:P	2.50	0.68
2:A:2359:C:N3	2:A:2360:A:C2	2.62	0.68
2:A:2379:G:OP1	13:S:30:GLY:CA	2.34	0.68
2:A:2423:U:H6	2:A:2425:A:N7	1.91	0.68
2:A:2048:G:C2	2:A:2621:A:N3	2.61	0.68
2:A:2810:A:C2'	2:A:2811:G:C5'	1.82	0.68
1:B:42:C:H1'	6:G:47:GLN:CB	2.23	0.68
4:E:190:ASN:O	4:E:192:ILE:HA	1.94	0.68
5:F:39:GLN:CD	5:F:39:GLN:N	2.45	0.68
9:N:81:ARG:O	9:N:82:THR:C	2.30	0.68
10:O:77:ILE:C	10:O:77:ILE:HD12	2.12	0.68
11:P:59:GLU:O	11:P:60:GLU:CG	2.35	0.68
12:Q:153:PRO:O	12:Q:154:ALA:HB3	1.93	0.68
12:Q:41:THR:C	12:Q:125:TRP:CZ3	2.63	0.68
21:V:68:LYS:O	21:V:69:ILE:O	2.09	0.68
17:Y:11:GLN:HA	17:Y:21:LYS:CE	2.23	0.68
18:Z:102:GLY:O	18:Z:103:ARG:C	2.32	0.68
18:Z:6:LYS:N	18:Z:7:PRO:CD	2.51	0.68
18:Z:64:ALA:CB	18:Z:84:TYR:O	2.42	0.68
31:K:113:MET:O	31:K:114:PRO:O	2.11	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:K:55:PRO:HG2	31:K:71:LYS:O	1.93	0.68
2:A:1943:U:N1	2:A:1945:G:H5'	2.09	0.68
24:0:9:SER:OG	24:0:10:SER:N	2.20	0.68
25:4:17:GLN:HA	25:4:33:VAL:HG11	1.74	0.68
25:4:62:ARG:O	25:4:65:ASP:OD2	2.12	0.68
26:5:40:LYS:CD	26:5:49:CYS:SG	2.60	0.68
26:5:58:LEU:O	26:5:59:ALA:CB	2.41	0.68
27:6:16:ALA:HB1	27:6:42:PRO:HD3	1.75	0.68
29:8:22:VAL:H	29:8:48:PHE:HE2	1.36	0.68
29:8:22:VAL:N	29:8:48:PHE:CE2	2.56	0.68
2:A:1455:G:O6	2:A:2705:A:N3	2.26	0.68
2:A:1637:A:O3'	2:A:2711:A:H4'	1.93	0.68
2:A:2077:A:N3	2:A:2435:A:C8	2.62	0.68
2:A:2096:U:O2	2:A:2193:G:N2	2.26	0.68
2:A:2209:C:H2'	2:A:2210:G:O3'	1.94	0.68
2:A:2239:G:C4	2:A:2240:C:C6	2.82	0.68
2:A:2286:A:H1'	2:A:2346:A:H61	1.57	0.68
2:A:2355:C:N4	2:A:2356:C:N4	2.41	0.68
2:A:2369:A:C2'	2:A:2370:G:O5'	2.41	0.68
2:A:2386:C:H2'	2:A:2387:U:C5	2.29	0.68
2:A:2246:G:C2	2:A:2426:A:N3	2.62	0.68
2:A:2486:G:N1	2:A:2487:G:C8	2.62	0.68
2:A:2642:G:C2'	2:A:2643:G:C5'	2.70	0.68
2:A:2854:G:C6	2:A:2855:C:N4	2.61	0.68
2:A:2888:C:N3	2:A:2889:C:C5	2.61	0.68
3:D:188:ARG:O	3:D:189:ALA:HB2	1.93	0.68
2:A:780:G:H1	3:D:233:ASP:CG	1.96	0.68
2:A:2512:C:H4'	4:E:235:ILE:CD1	2.24	0.68
2:A:2679:A:C4	4:E:300:VAL:CG1	2.72	0.68
4:E:94:ARG:HB3	4:E:95:PRO:HD3	1.69	0.68
5:F:110:ALA:O	5:F:112:ARG:N	2.26	0.68
5:F:162:VAL:HG12	5:F:163:HIS:N	2.08	0.68
5:F:242:GLU:O	5:F:245:GLU:CB	2.41	0.68
7:H:104:LEU:CA	7:H:151:ARG:HH12	2.06	0.68
10:O:9:LYS:N	10:O:83:ALA:HB2	2.09	0.68
12:Q:137:ARG:NH1	12:Q:138:ARG:HG2	2.07	0.68
19:R:21:TYR:HB3	19:R:47:PHE:HD2	1.58	0.68
19:R:43:GLU:C	19:R:45:ARG:H	1.95	0.68
19:R:74:LYS:N	19:R:77:ARG:HH22	1.91	0.68
19:R:73:VAL:HG12	19:R:77:ARG:NH2	2.09	0.68
13:S:117:ALA:O	13:S:118:ILE:C	2.31	0.68
13:S:53:ASN:O	13:S:55:ASP:CA	2.42	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:S:83:LEU:O	13:S:85:GLY:N	2.26	0.68
18:Z:37:LYS:O	18:Z:40:ASP:OD1	2.10	0.68
22:2:26:GLU:HA	22:2:29:ASN:HD22	1.57	0.68
22:2:30:ALA:C	22:2:34:GLN:CG	2.42	0.68
31:K:15:ALA:HA	31:K:46:THR:CB	2.23	0.68
23:3:50:VAL:CB	23:3:53:LEU:HD12	2.23	0.68
23:3:6:VAL:HG22	23:3:54:VAL:HG21	1.76	0.68
28:7:21:ARG:C	28:7:24:THR:HG22	2.14	0.68
2:A:1612:C:C2	28:7:3:ARG:CZ	2.77	0.68
2:A:2209:C:N4	2:A:2215:G:N1	2.29	0.68
2:A:2247:A:O2'	2:A:2248:C:H5'	1.94	0.68
2:A:2317:C:H2'	2:A:2318:G:C8	2.29	0.68
2:A:2525:G:N2	2:A:2539:C:C4	2.62	0.68
2:A:2570:G:C2	2:A:2571:C:C4	2.82	0.68
2:A:2737:G:C2	2:A:2738:A:N7	2.61	0.68
2:A:2808:U:OP1	2:A:2809:A:OP2	2.12	0.68
2:A:2810:A:C8	2:A:2811:G:N9	2.61	0.68
2:A:2839:G:C5	2:A:2840:C:C4	2.80	0.68
2:A:746:A:C2'	2:A:2611:U:HO2'	2.07	0.68
1:B:42:C:C1'	6:G:47:GLN:CA	2.71	0.68
3:D:208:GLY:HA3	3:D:211:HIS:NE2	2.09	0.68
5:F:157:LEU:CB	5:F:158:GLU:OE2	2.18	0.68
5:F:163:HIS:CB	5:F:166:ILE:HD11	2.24	0.68
5:F:38:ALA:C	5:F:39:GLN:OE1	2.31	0.68
7:H:10:ILE:HG21	7:H:14:VAL:HG12	1.70	0.68
9:N:12:VAL:CB	9:N:38:VAL:CG2	2.71	0.68
9:N:38:VAL:O	9:N:39:VAL:CG2	2.42	0.68
10:O:101:PRO:CB	10:O:120:GLU:O	2.42	0.68
11:P:120:LEU:CD1	11:P:122:ALA:CB	2.71	0.68
12:Q:140:TYR:CE1	12:Q:147:VAL:HG13	2.29	0.68
12:Q:31:PHE:HZ	12:Q:88:PHE:CE2	2.12	0.68
19:R:100:LEU:HD21	19:R:113:LEU:N	2.06	0.68
13:S:115:VAL:O	13:S:116:PHE:C	2.31	0.68
13:S:24:LEU:O	13:S:27:LEU:HB3	1.94	0.68
21:V:54:TYR:O	21:V:55:THR:C	2.32	0.68
18:Z:163:ASP:CG	18:Z:164:PRO:HD3	1.79	0.68
18:Z:47:SER:O	18:Z:49:THR:OG1	2.12	0.68
8:I:68:LEU:HD11	8:I:108:LEU:CD1	2.24	0.68
22:2:62:GLU:C	22:2:64:GLY:H	1.97	0.68
2:A:72:U:C6	22:2:57:LYS:HD2	2.28	0.68
16:X:58:MET:N	16:X:59:ASP:OD2	2.27	0.68
25:4:58:LYS:O	25:4:61:LYS:N	2.09	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:5:46:CYS:N	26:5:49:CYS:HB2	2.09	0.68
2:A:1799:G:H21	3:D:153:LEU:CD1	2.06	0.68
2:A:1818:U:O2	3:D:153:LEU:HD12	1.94	0.68
2:A:2195:C:C5	2:A:2195:C:P	2.86	0.68
2:A:2195:C:H2'	2:A:2196:C:C4'	2.23	0.68
2:A:2228:G:H5''	2:A:2228:G:C8	2.21	0.68
2:A:2246:G:H2'	2:A:2247:A:H8	1.57	0.68
2:A:2246:G:N3	2:A:2426:A:C2	2.61	0.68
2:A:245:G:OP2	11:P:53:ARG:CZ	2.40	0.68
2:A:2552:U:H3	2:A:2554:U:H5'	1.58	0.68
2:A:2603:G:C4	2:A:2604:U:H6	2.07	0.68
2:A:2734:A:C8	2:A:2735:G:C8	2.81	0.68
2:A:2828:C:N3	2:A:2829:C:C5	2.62	0.68
2:A:674:G:O3'	5:F:69:HIS:O	2.12	0.68
3:D:186:LYS:O	3:D:187:CYS:C	2.32	0.68
4:E:243:PRO:O	4:E:244:SER:CB	2.39	0.68
4:E:76:PRO:CB	4:E:292:PRO:HG2	2.21	0.68
5:F:37:ALA:HB1	5:F:102:LEU:CB	2.16	0.68
9:N:18:ILE:O	9:N:18:ILE:HG23	1.92	0.68
2:A:1131:G:N2	9:N:69:TYR:CZ	2.62	0.68
11:P:106:VAL:CG2	11:P:122:ALA:CB	2.71	0.68
2:A:911:A:C2	12:Q:16:ARG:HA	2.27	0.68
19:R:87:TYR:CE1	19:R:94:TYR:CB	2.66	0.68
13:S:34:LEU:C	13:S:103:ASP:HB3	2.14	0.68
20:U:14:HIS:NE2	20:U:36:PHE:CZ	2.59	0.68
20:U:70:ARG:O	20:U:71:LEU:C	2.30	0.68
21:V:50:ASP:O	21:V:54:TYR:CD1	2.46	0.68
2:A:973:A:C6	21:V:81:ARG:NE	2.53	0.68
15:W:4:LYS:HG2	15:W:106:ILE:HA	1.75	0.68
17:Y:31:LEU:HD13	17:Y:101:LEU:HB2	1.72	0.68
17:Y:43:ASN:ND2	17:Y:103:LEU:CD2	2.45	0.68
22:2:27:LEU:HD21	22:2:53:ILE:HD11	1.73	0.68
16:X:22:ASN:CA	16:X:68:LEU:CD1	2.65	0.68
31:K:11:LEU:HD11	31:K:28:LEU:HD11	1.74	0.68
31:K:13:LEU:HD22	31:K:24:VAL:CG2	2.24	0.68
24:0:8:GLY:O	24:0:9:SER:C	2.32	0.68
2:A:304:G:H1	2:A:313:C:H42	1.41	0.68
25:4:59:PHE:O	25:4:60:ASN:C	2.32	0.68
28:7:35:ARG:NH1	28:7:35:ARG:HB3	2.09	0.68
2:A:2199:A:C5	2:A:2225:A:C2	2.81	0.68
2:A:2261:C:H1'	2:A:2388:A:N3	2.09	0.68
2:A:2269:A:H2'	2:A:2270:G:O5'	1.94	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2356:C:OP2	24:0:21:LEU:HD21	1.94	0.68
2:A:2246:G:H1'	2:A:2426:A:H2	1.59	0.68
2:A:2466:C:N4	2:A:2467:C:N4	2.42	0.68
2:A:2562:U:O2	2:A:2563:U:O4'	2.12	0.68
2:A:2771:C:C2	2:A:2772:C:C5	2.81	0.68
2:A:2888:C:C2	2:A:2889:C:C5	2.82	0.68
1:B:28:C:OP2	13:S:41:LYS:HE3	1.92	0.68
3:D:81:GLU:O	3:D:83:ASP:CG	2.32	0.68
4:E:70:VAL:O	4:E:71:THR:CG2	2.42	0.68
4:E:87:GLU:O	4:E:93:GLN:N	2.27	0.68
5:F:241:ALA:O	5:F:245:GLU:OE2	2.11	0.68
7:H:150:VAL:HG12	7:H:151:ARG:HG2	1.76	0.68
9:N:63:ILE:HG21	9:N:71:TYR:CZ	2.28	0.68
11:P:129:ALA:C	11:P:133:VAL:HG23	2.13	0.68
2:A:1287:A:H5'	19:R:104:ARG:CG	2.24	0.68
2:A:1287:A:H5''	19:R:104:ARG:HG3	1.75	0.68
19:R:20:LEU:HD22	19:R:24:GLN:HG3	1.76	0.68
13:S:12:ARG:HD2	13:S:20:TYR:CE1	2.23	0.68
20:U:10:ARG:O	20:U:11:ARG:C	2.32	0.68
20:U:57:PHE:O	20:U:58:ARG:C	2.30	0.68
15:W:97:LYS:NZ	15:W:99:ARG:HH12	1.89	0.68
15:W:8:ARG:HD2	15:W:9:TYR:CE1	2.28	0.68
18:Z:74:ARG:O	18:Z:76:ARG:N	2.27	0.68
2:A:1341:U:O2'	16:X:53:ASN:CB	2.36	0.68
16:X:68:LEU:N	16:X:68:LEU:CD2	2.53	0.68
22:2:42:ASN:C	22:2:42:ASN:OD1	2.32	0.68
2:A:2856:C:C6	2:A:2856:C:C3'	2.76	0.68
2:A:1520:U:H2'	2:A:1521:G:H5''	1.75	0.68
24:0:37:LEU:C	24:0:69:PHE:CE2	2.67	0.68
24:0:37:LEU:HD11	24:0:71:ASN:ND2	2.09	0.68
23:3:18:ASP:O	23:3:21:ALA:N	2.27	0.68
23:3:32:GLN:CD	23:3:32:GLN:C	2.52	0.68
26:5:6:VAL:HG13	26:5:7:PRO:CD	2.23	0.68
28:7:20:ALA:O	28:7:22:MET:N	2.26	0.68
28:7:30:ILE:CA	28:7:33:ARG:HB2	2.23	0.68
2:A:686:G:C8	28:7:7:PRO:HA	2.28	0.68
29:8:26:LYS:CE	29:8:44:LYS:N	2.57	0.68
30:9:25:VAL:CA	30:9:34:GLN:HB3	2.21	0.68
2:A:125:G:H5''	28:7:19:ARG:CZ	2.20	0.68
2:A:1638:C:OP1	2:A:2711:A:H5'	1.94	0.68
2:A:2189:U:O2'	2:A:2190:G:H8	1.76	0.68
2:A:2543:G:O3'	2:A:2645:G:O6	2.12	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:510:C:O5'	2:A:512:G:N1	2.27	0.68
3:D:146:LYS:CB	3:D:149:ARG:HG3	2.24	0.68
4:E:201:VAL:HG22	4:E:311:PHE:CB	2.20	0.68
4:E:70:VAL:HB	4:E:295:LEU:HD21	1.75	0.68
2:A:600:G:H4'	5:F:109:LEU:HD13	1.74	0.68
5:F:223:LEU:CD1	5:F:224:ALA:CA	2.70	0.68
5:F:35:VAL:O	5:F:36:ARG:C	2.33	0.68
5:F:57:PRO:O	5:F:58:ALA:CB	2.42	0.68
7:H:101:LYS:HE2	7:H:115:GLU:CB	2.19	0.68
7:H:94:ARG:HB3	7:H:127:GLN:NE2	2.09	0.68
7:H:32:LEU:HD11	7:H:34:ARG:HH21	1.58	0.68
7:H:73:ASN:O	7:H:74:MET:C	2.30	0.68
9:N:77:GLY:CA	9:N:80:LYS:HG2	2.23	0.68
13:S:13:ARG:HG2	13:S:13:ARG:O	1.90	0.68
13:S:35:VAL:N	13:S:103:ASP:CB	2.56	0.68
20:U:34:ASN:O	20:U:35:ALA:O	2.11	0.68
20:U:36:PHE:H	20:U:36:PHE:HD1	1.41	0.68
15:W:26:GLY:HA2	15:W:71:VAL:O	1.94	0.68
18:Z:149:ALA:HB1	18:Z:164:PRO:HA	1.75	0.68
18:Z:5:ALA:C	18:Z:33:ALA:HB2	2.12	0.68
2:A:1829:A:H3'	2:A:1830:C:H6	1.59	0.68
2:A:729:G:N2	2:A:1775:U:C6	2.62	0.68
2:A:2099:U:H3	2:A:2190:G:H1	1.42	0.68
2:A:2191:G:N2	2:A:2192:G:H1'	2.09	0.68
2:A:2282:G:C5'	2:A:2283:C:O5'	2.42	0.68
2:A:2283:C:C4	2:A:2284:C:H1'	2.29	0.68
2:A:2298:A:C1'	2:A:2321:G:H22	2.07	0.68
2:A:2520:C:C5	2:A:2567:G:C5	2.82	0.68
2:A:2526:G:C2	2:A:2527:C:C6	2.82	0.68
2:A:2886:G:H21	2:A:2887:U:C1'	2.06	0.68
1:B:37:C:O2	13:S:111:PRO:HG2	1.93	0.68
3:D:70:LYS:O	3:D:70:LYS:HG3	1.92	0.68
5:F:168:ARG:HH22	5:F:209:GLY:HA2	1.55	0.68
5:F:57:PRO:O	5:F:58:ALA:HB3	1.94	0.68
2:A:2303:G:C5'	6:G:99:ASP:CG	2.56	0.68
7:H:120:LEU:HB3	7:H:143:LEU:CD1	2.23	0.68
8:I:6:LEU:HB3	8:I:35:LEU:C	2.13	0.68
9:N:103:VAL:C	9:N:104:TYR:CG	2.68	0.68
10:O:103:ALA:O	10:O:104:ARG:C	2.31	0.68
10:O:20:LEU:HG	10:O:44:LYS:CG	2.23	0.68
10:O:8:LEU:HD23	10:O:8:LEU:H	1.57	0.68
10:O:99:PHE:CD2	14:T:24:LYS:HE3	2.24	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:S:33:ARG:HB3	13:S:35:VAL:HG23	1.74	0.68
13:S:81:ALA:O	13:S:82:TYR:C	2.33	0.68
15:W:100:THR:O	15:W:101:SER:OG	2.11	0.68
15:W:43:GLY:O	15:W:44:ALA:C	2.29	0.68
17:Y:101:LEU:HD11	17:Y:112:LEU:HD12	1.73	0.68
18:Z:79:ILE:O	18:Z:80:HIS:CB	2.42	0.68
8:I:131:VAL:O	8:I:138:THR:HB	1.94	0.68
2:A:545(A):A:C8	2:A:1546:C:C2	2.81	0.68
24:0:46:LYS:NZ	24:0:81:ILE:HD11	2.07	0.67
2:A:2020:A:N7	26:5:9:LYS:CD	2.57	0.67
2:A:2227:A:N1	2:A:2228:G:O6	2.21	0.67
2:A:2235:G:N3	2:A:2236:C:C6	2.63	0.67
2:A:2322:A:C5	2:A:2323:G:N7	2.59	0.67
2:A:2526:G:C4	2:A:2527:C:H6	2.12	0.67
2:A:2555:U:O2'	2:A:2556:C:C5'	2.41	0.67
2:A:2648:C:H2'	2:A:2649:U:C5'	2.24	0.67
2:A:2730:C:H2'	2:A:2731:G:C8	2.29	0.67
2:A:2747:G:C2'	2:A:2748:A:H5''	2.24	0.67
2:A:2822:G:P	4:E:258:TYR:HE2	2.16	0.67
2:A:988:A:OP1	23:3:11:SER:HB2	1.94	0.67
2:A:990:A:N6	2:A:1186:G:N3	2.42	0.67
4:E:104:PHE:HB3	4:E:108:LEU:HD12	1.76	0.67
4:E:198:TYR:CE2	4:E:265:ASN:C	2.68	0.67
5:F:114:ALA:O	5:F:117:ALA:N	2.27	0.67
5:F:34:ALA:O	5:F:35:VAL:C	2.32	0.67
9:N:45:VAL:N	9:N:132:LEU:HD22	2.05	0.67
10:O:110:ASP:O	10:O:111:PHE:CD2	2.44	0.67
11:P:131:GLU:O	11:P:134:GLU:N	2.27	0.67
11:P:94:ARG:CD	11:P:120:LEU:HB2	2.23	0.67
12:Q:72:VAL:HG21	12:Q:135:ALA:CB	2.24	0.67
19:R:20:LEU:HD12	19:R:21:TYR:CG	2.27	0.67
14:T:15:PRO:C	14:T:17:THR:H	1.97	0.67
20:U:92:ARG:HA	20:U:95:LEU:HD11	0.69	0.67
21:V:31:ASP:O	21:V:63:HIS:CB	2.35	0.67
15:W:6:ILE:O	15:W:7:ALA:CB	2.42	0.67
18:Z:106:GLY:H	18:Z:141:MET:HG2	1.59	0.67
18:Z:154:LEU:CD1	18:Z:160:LEU:CD1	2.72	0.67
18:Z:19:ILE:CB	18:Z:39:PHE:HE1	2.05	0.67
22:2:54:ALA:HB3	22:2:55:ARG:HD2	1.75	0.67
2:A:148:C:N3	2:A:149:A:C6	2.63	0.67
16:X:17:ASP:HA	16:X:20:PHE:CZ	2.29	0.67
31:K:79:LEU:HD21	31:K:137:ILE:HD13	1.72	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:6:A:O2'	9:N:6:PHE:CD2	2.32	0.67
17:Y:3:GLN:HB2	17:Y:6:LYS:HD2	1.76	0.67
2:A:1400:G:H2'	2:A:1401:G:C8	2.29	0.67
23:3:3:ARG:HA	23:3:37:LEU:O	1.94	0.67
29:8:13:ARG:HB3	29:8:24:ALA:CB	2.24	0.67
2:A:1239:G:HO2'	2:A:1240:U:H6	1.42	0.67
2:A:2219:G:O2'	2:A:2224:G:O5'	2.02	0.67
2:A:2262:U:H6	24:0:14:ARG:NH2	1.81	0.67
2:A:2508:G:C2'	2:A:2509:G:C5'	2.71	0.67
2:A:2633:G:O2'	2:A:2634:G:C5'	2.42	0.67
2:A:1462:C:C4'	2:A:2703:C:H5'	2.22	0.67
2:A:2689:U:N1	2:A:2713:A:N1	2.42	0.67
2:A:2771:C:O2	2:A:2772:C:C6	2.47	0.67
2:A:2779:U:H4'	2:A:2781:A:N7	2.08	0.67
2:A:2842:G:N2	2:A:2876:G:N3	2.40	0.67
2:A:449:A:OP2	5:F:85:LYS:HB3	1.93	0.67
2:A:911:A:C5	12:Q:16:ARG:CD	2.73	0.67
5:F:103:ASN:HB3	5:F:106:GLU:HG3	1.76	0.67
7:H:102:LEU:HD12	7:H:104:LEU:CD1	2.23	0.67
9:N:79:PHE:HD1	9:N:79:PHE:H	1.40	0.67
10:O:11:ALA:CB	10:O:99:PHE:HB3	2.23	0.67
10:O:101:PRO:HB3	10:O:122:ILE:HD11	1.75	0.67
10:O:77:ILE:CD1	10:O:79:PHE:CE2	2.56	0.67
11:P:120:LEU:HD13	11:P:121:ILE:N	2.09	0.67
12:Q:48:ASN:OD1	12:Q:121:ASP:HB2	1.91	0.67
12:Q:34:GLY:N	12:Q:83:PHE:HB2	2.09	0.67
19:R:45:ARG:HG2	19:R:46:GLY:N	2.08	0.67
13:S:32:PRO:HG3	13:S:100:ALA:HB2	1.76	0.67
13:S:56:ASP:C	13:S:57:THR:HG23	2.14	0.67
2:A:2319:G:H4'	13:S:9:PRO:N	2.09	0.67
20:U:105:ALA:O	20:U:108:ALA:CB	2.39	0.67
15:W:66:GLU:CD	15:W:67:ASP:H	1.97	0.67
2:A:1261:C:OP1	15:W:97:LYS:NZ	2.27	0.67
18:Z:130:ILE:C	18:Z:130:ILE:CD1	2.62	0.67
8:I:115:ILE:CG2	8:I:131:VAL:HG22	2.21	0.67
22:2:13:PRO:HD3	22:2:16:ARG:HH12	1.59	0.67
22:2:7:GLU:CD	22:2:8:ILE:H	1.97	0.67
2:A:111:A:C4'	22:2:62:GLU:OE2	2.41	0.67
16:X:5:ILE:HG13	16:X:40:ALA:HB1	1.76	0.67
31:K:79:LEU:HD23	31:K:79:LEU:C	2.14	0.67
31:K:80:LYS:HG3	31:K:85:ILE:HG23	1.77	0.67
31:K:32:GLY:O	31:K:33:VAL:HG23	1.94	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:444:C:OP2	20:U:2:PRO:HG3	1.94	0.67
7:H:17:THR:HB	7:H:24:THR:HG1	1.59	0.67
2:A:979:G:H3'	2:A:980:A:H5'	1.75	0.67
2:A:668:G:H2'	2:A:670:A:H62	1.58	0.67
2:A:2395:C:H5''	25:4:28:ARG:NH1	2.09	0.67
26:5:28:PRO:HB2	26:5:30:LEU:HG	1.75	0.67
27:6:39:LYS:O	27:6:40:TYR:HD1	1.77	0.67
2:A:126:A:P	28:7:44:VAL:CG1	2.82	0.67
30:9:10:MET:CE	30:9:10:MET:CA	2.73	0.67
2:A:2742:C:OP1	30:9:35:ARG:HD3	1.94	0.67
2:A:1034:G:C5'	30:9:18:ARG:NH2	2.57	0.67
2:A:2206:C:O2'	2:A:2207:C:O4'	2.11	0.67
2:A:2235:G:C5	2:A:2236:C:C5	2.82	0.67
2:A:2423:U:H1'	2:A:2425:A:N9	2.10	0.67
2:A:960:A:H2	2:A:2495:G:H21	1.40	0.67
2:A:2528:U:O2	2:A:2536:G:C2	2.48	0.67
2:A:2739:U:C6	2:A:2739:U:C3'	2.73	0.67
2:A:2742:C:OP1	30:9:35:ARG:CZ	2.42	0.67
2:A:2757:A:H2'	2:A:2758:A:H8	1.60	0.67
2:A:446:G:H5'	20:U:5:LYS:CE	2.24	0.67
1:B:56:G:H4'	1:B:57:A:C5'	2.23	0.67
3:D:213:LYS:CA	3:D:215:LYS:H	2.06	0.67
3:D:74:PRO:CD	3:D:96:ALA:CB	2.64	0.67
4:E:190:ASN:C	4:E:192:ILE:C	2.52	0.67
4:E:222:ARG:CG	4:E:232:ARG:CA	2.69	0.67
2:A:2622:C:H5'	4:E:255:GLN:OE1	1.93	0.67
2:A:321:G:C1'	5:F:206:ASN:HD22	2.03	0.67
6:G:101:THR:O	6:G:102:GLY:C	2.32	0.67
6:G:71:ALA:O	6:G:72:LYS:CE	2.42	0.67
6:G:93:LEU:HD22	6:G:97:GLN:CD	2.14	0.67
2:A:142(A):A:C3'	9:N:21:ARG:NH2	2.57	0.67
11:P:113:GLN:C	11:P:114:VAL:O	2.32	0.67
11:P:92:ASP:HB3	11:P:118:LEU:HB3	1.76	0.67
12:Q:91:HIS:O	12:Q:111:THR:HA	1.95	0.67
19:R:44:LEU:CD1	19:R:48:VAL:CG2	2.30	0.67
19:R:55:ALA:HB1	19:R:80:PHE:HA	1.76	0.67
13:S:9:PRO:CG	13:S:14:ARG:HB3	2.23	0.67
21:V:67:LYS:CD	21:V:70:TYR:CE1	2.77	0.67
21:V:72:ARG:N	21:V:88:GLN:CG	2.56	0.67
15:W:55:ALA:HA	15:W:107:LEU:HD13	1.75	0.67
17:Y:103:LEU:HD22	17:Y:112:LEU:HD23	1.71	0.67
18:Z:129:ARG:HE	18:Z:129:ARG:CA	1.93	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:Z:148:THR:HG22	18:Z:168:VAL:H	1.58	0.67
22:2:13:PRO:CD	22:2:16:ARG:HH11	2.07	0.67
2:A:1339:G:H5'	16:X:13:LYS:NZ	2.08	0.67
31:K:112:LYS:O	31:K:114:PRO:N	2.27	0.67
11:P:75:LEU:C	11:P:75:LEU:HD23	2.13	0.67
2:A:1498:C:H6	2:A:1576:U:HO2'	1.42	0.67
2:A:2396:G:P	25:4:28:ARG:HH11	2.18	0.67
26:5:51:TYR:O	26:5:52:TYR:CB	2.40	0.67
2:A:1005:C:H2'	2:A:1006:C:H6	1.60	0.67
2:A:1273:U:H4'	2:A:1275:A:OP2	1.93	0.67
2:A:2048:G:C6	2:A:2620:C:N4	2.62	0.67
2:A:2376:A:H62	13:S:109:PRO:CG	2.07	0.67
2:A:2283:C:H1'	2:A:2389:G:H21	1.59	0.67
2:A:2422:A:H5''	2:A:2423:U:OP1	1.94	0.67
2:A:2426:A:H8	2:A:2426:A:OP1	1.77	0.67
2:A:1128:A:C5	2:A:2518:A:N6	2.62	0.67
2:A:2543:G:HO2'	2:A:2544:G:H5'	1.54	0.67
2:A:2647:U:H3	2:A:2673:G:H1	1.41	0.67
2:A:2865:U:C5	2:A:2866:U:C6	2.82	0.67
2:A:557:U:H4'	9:N:92:GLN:HE21	1.28	0.67
2:A:650:C:C5'	29:8:19:THR:CG2	2.72	0.67
1:B:76:G:O3'	18:Z:80:HIS:CD2	2.48	0.67
4:E:102:ASP:C	4:E:103:GLU:HG3	2.15	0.67
5:F:138:VAL:O	5:F:139:VAL:HB	1.94	0.67
7:H:130:ILE:CG2	7:H:131:ILE:N	2.57	0.67
12:Q:130:PRO:C	12:Q:132:VAL:N	2.47	0.67
12:Q:69:ASN:ND2	12:Q:70:ARG:CA	2.58	0.67
12:Q:33:MET:HG3	12:Q:83:PHE:CB	2.25	0.67
19:R:52:ILE:HD13	19:R:94:TYR:CB	2.25	0.67
19:R:87:TYR:HD1	19:R:94:TYR:CG	2.13	0.67
20:U:33:ARG:HB2	20:U:33:ARG:CZ	2.24	0.67
20:U:43:ALA:HA	20:U:46:GLU:OE2	1.95	0.67
21:V:12:TYR:CG	21:V:13:ARG:N	2.58	0.67
2:A:25:U:C5'	15:W:80:PRO:HD2	2.10	0.67
18:Z:5:ALA:CB	18:Z:33:ALA:HA	2.19	0.67
8:I:84:GLY:N	8:I:147:GLU:OE2	2.28	0.67
8:I:68:LEU:CD2	8:I:108:LEU:HD11	2.15	0.67
31:K:93:LYS:N	31:K:96:ILE:HG13	2.09	0.67
31:K:69:ILE:HG22	31:K:70:ILE:N	2.09	0.67
7:H:168:VAL:CG1	7:H:169:ARG:H	1.91	0.67
2:A:1056:G:O6	2:A:1101:U:C3'	2.36	0.67
2:A:1071:G:C1'	2:A:1090:U:OP1	2.41	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:3:39:ASP:CG	23:3:40:THR:H	1.96	0.67
25:4:5:LEU:CD2	25:4:9:ALA:HA	2.24	0.67
28:7:30:ILE:CA	28:7:33:ARG:CB	2.72	0.67
2:A:687:C:H5"	28:7:4:THR:HG22	1.76	0.67
2:A:1212:G:O2'	2:A:1213:A:C8	2.46	0.67
2:A:2330:G:N1	2:A:2331:G:N3	2.41	0.67
2:A:2339:G:N3	2:A:2340:G:C8	2.62	0.67
2:A:2711:A:OP2	2:A:2712:U:O3'	2.03	0.67
2:A:2837:G:N1	2:A:2882:A:C6	2.62	0.67
2:A:380:U:H4'	25:4:15:ILE:O	1.94	0.67
2:A:459:U:OP1	28:7:40:HIS:CA	2.41	0.67
2:A:54:G:C1'	28:7:35:ARG:HH22	2.07	0.67
1:B:42:C:O2'	6:G:47:GLN:CA	2.37	0.67
3:D:109:LEU:HD13	3:D:115:ILE:HG12	1.75	0.67
3:D:130:PRO:HA	3:D:188:ARG:HG2	1.76	0.67
5:F:39:GLN:O	5:F:40:ALA:C	2.33	0.67
5:F:85:LYS:CD	5:F:85:LYS:N	2.42	0.67
6:G:19:GLU:HB2	6:G:135:VAL:CG1	2.24	0.67
2:A:2317:C:H5"	6:G:150:SER:CA	2.20	0.67
10:O:10:VAL:HG12	10:O:12:ASP:O	1.94	0.67
12:Q:86:ARG:HH21	12:Q:123:ILE:HD12	1.59	0.67
19:R:72:ASP:O	19:R:76:VAL:HG21	1.91	0.67
13:S:28:LYS:NZ	13:S:28:LYS:CB	2.56	0.67
2:A:995:C:C1'	20:U:57:PHE:CE2	2.76	0.67
21:V:35:LEU:HG	21:V:63:HIS:NE2	2.10	0.67
21:V:5:ILE:HD12	21:V:12:TYR:CE1	2.29	0.67
15:W:69:LEU:N	15:W:69:LEU:CD2	2.50	0.67
18:Z:37:LYS:CA	18:Z:41:ARG:NH1	2.57	0.67
16:X:16:ASN:HB2	16:X:20:PHE:HE2	1.59	0.67
2:A:2311:A:C2	6:G:53:LYS:NZ	2.63	0.67
2:A:256:A:H2'	2:A:257:A:C8	2.29	0.67
3:D:121:ALA:O	3:D:122:ASP:CB	2.43	0.67
24:O:19:LYS:O	24:O:35:ASN:O	2.13	0.67
27:6:32:GLN:HA	27:6:35:LEU:CD1	2.23	0.67
2:A:2044:C:N3	2:A:2624:G:C2	2.62	0.67
2:A:2317:C:H2'	2:A:2318:G:H8	1.59	0.67
2:A:1782:C:N3	2:A:2609:U:C5	2.62	0.67
2:A:2742:C:H2'	2:A:2742:C:O2	1.95	0.67
2:A:2785:C:C6	2:A:2786:U:C5	2.83	0.67
2:A:2007:C:H4'	2:A:2824:C:O2'	1.94	0.67
3:D:181:ARG:HH11	3:D:181:ARG:HB3	1.55	0.67
3:D:211:HIS:O	3:D:213:LYS:N	2.27	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:70:LYS:NZ	3:D:70:LYS:HB3	2.09	0.67
5:F:59:GLU:O	5:F:60:SER:C	2.32	0.67
2:A:2313:C:C5'	6:G:72:LYS:CG	2.17	0.67
7:H:101:LYS:HB2	7:H:113:GLU:CD	2.14	0.67
7:H:10:ILE:CD1	7:H:48:VAL:O	2.41	0.67
7:H:60:HIS:HA	7:H:63:LEU:CB	2.23	0.67
13:S:104:ILE:HG22	13:S:104:ILE:O	1.94	0.67
14:T:8:TYR:O	14:T:10:GLY:N	2.28	0.67
21:V:39:PHE:CZ	21:V:42:GLY:HA2	2.30	0.67
15:W:20:VAL:HG11	15:W:47:VAL:HG21	0.69	0.67
17:Y:58:GLU:H	17:Y:97:ARG:HH12	1.43	0.67
16:X:7:HIS:CB	16:X:8:PRO:CD	2.71	0.67
2:A:1955:U:O2	2:A:1955:U:H2'	1.94	0.67
14:T:44:ARG:CG	14:T:45:GLU:H	2.08	0.67
2:A:2660:A:O5'	2:A:2660:A:H8	1.78	0.67
24:O:39:ARG:CG	24:O:69:PHE:CE1	2.65	0.67
2:A:1162:G:O2'	21:V:23:GLU:OE1	2.11	0.67
2:A:1274:A:N3	2:A:1297:C:H1'	2.08	0.67
2:A:1800:C:C6	2:A:1800:C:H3'	2.30	0.67
2:A:2043:C:P	2:A:2779:U:O4	2.52	0.67
2:A:2208:U:O2'	2:A:2209:C:H5'	1.93	0.67
2:A:2228:G:C8	2:A:2229:C:H6	2.03	0.67
2:A:2357:U:O2'	2:A:2358:G:H5''	1.95	0.67
2:A:2349:G:C6	2:A:2369:A:N1	2.62	0.67
2:A:2450:A:H5''	2:A:2497:A:H61	1.48	0.67
2:A:2470:G:N1	2:A:2471:C:C5	2.51	0.67
2:A:2520:C:C6	2:A:2567:G:H1'	2.29	0.67
2:A:2595:G:H1'	2:A:2599:G:N2	2.05	0.67
2:A:2712:U:H5''	2:A:2714:G:C5'	2.24	0.67
2:A:650:C:H2'	2:A:650:C:O2	1.94	0.67
2:A:674:G:H4'	5:F:69:HIS:HA	1.76	0.67
3:D:103:ILE:CD1	3:D:104:ILE:CD1	2.47	0.67
3:D:75:GLY:N	3:D:115:ILE:O	2.27	0.67
3:D:188:ARG:O	3:D:189:ALA:CB	2.42	0.67
4:E:80:ALA:N	4:E:187:HIS:NE2	2.42	0.67
5:F:32:GLY:C	5:F:35:VAL:CG2	2.44	0.67
7:H:67:THR:HA	7:H:70:LEU:HB2	1.75	0.67
7:H:75:VAL:O	7:H:76:GLU:C	2.31	0.67
11:P:128:GLY:O	11:P:129:ALA:C	2.33	0.67
12:Q:11:LYS:HD2	12:Q:91:HIS:HD2	1.57	0.67
12:Q:91:HIS:C	12:Q:92:VAL:HG13	2.15	0.67
19:R:22:ARG:CG	19:R:26:LYS:CE	2.72	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:U:111:ASP:N	20:U:111:ASP:OD1	2.26	0.67
18:Z:116:VAL:CG2	18:Z:169:VAL:HG22	2.16	0.67
8:I:94:THR:CG2	8:I:97:GLN:HG3	2.25	0.67
2:A:135:G:H1	2:A:144:C:N4	1.91	0.67
31:K:90:SER:C	31:K:91:GLU:HG3	2.11	0.67
2:A:1853:A:H2'	2:A:1854:A:C8	2.30	0.67
24:O:37:LEU:N	24:O:68:VAL:CG1	2.36	0.67
24:O:67:VAL:HG12	24:O:74:LYS:HG2	1.69	0.67
2:A:1252:G:C8	2:A:1253:A:H1'	2.30	0.67
2:A:2215:G:C4	2:A:2216:G:N7	2.62	0.67
2:A:2217:G:O2'	2:A:2218:G:C5'	2.38	0.67
2:A:2234:G:C2	2:A:2235:G:N9	2.63	0.67
2:A:2075:U:C4	2:A:2238:G:C6	2.83	0.67
2:A:2246:G:H2'	2:A:2247:A:H5'	1.74	0.67
2:A:2248:C:O2	2:A:2248:C:C2'	2.43	0.67
2:A:2266:A:C2	2:A:2272:U:C2	2.83	0.67
2:A:2410:G:C2	2:A:2411:A:C8	2.83	0.67
2:A:2520:C:N4	2:A:2567:G:C5	2.63	0.67
2:A:2523:G:C2	2:A:2541:A:C2	2.82	0.67
2:A:2648:C:N4	2:A:2649:U:O4	2.27	0.67
2:A:2652:C:H2'	2:A:2653:U:O4'	1.95	0.67
2:A:97:C:H2'	2:A:98:G:O4'	1.94	0.67
3:D:131:LEU:CG	3:D:187:CYS:HB2	2.23	0.67
3:D:208:GLY:O	3:D:209:ASN:C	2.33	0.67
3:D:208:GLY:O	3:D:210:LYS:CG	2.42	0.67
4:E:197:GLU:O	4:E:267:ARG:HA	1.94	0.67
4:E:269:ILE:HG23	4:E:297:LYS:HZ1	1.56	0.67
4:E:44:TYR:CD1	4:E:308:VAL:CA	2.64	0.67
4:E:70:VAL:CG1	4:E:296:VAL:HB	2.25	0.67
5:F:48:SER:H	5:F:92:PRO:CG	1.82	0.67
5:F:58:ALA:HB2	5:F:79:ARG:HB2	1.77	0.67
1:B:42:C:O2	6:G:74:THR:OG1	2.13	0.67
6:G:95:THR:HG22	6:G:96:SER:N	2.09	0.67
7:H:148:ARG:HH12	7:H:164:GLU:N	1.92	0.67
7:H:23:VAL:CG1	7:H:74:MET:SD	2.83	0.67
7:H:67:THR:O	7:H:70:LEU:HB3	1.95	0.67
10:O:25:LEU:CD1	10:O:38:VAL:O	2.43	0.67
10:O:66:LYS:NZ	10:O:67:ARG:NE	2.43	0.67
20:U:104:GLU:O	20:U:105:ALA:C	2.33	0.67
21:V:4:ILE:CD1	21:V:13:ARG:HD3	2.23	0.67
17:Y:41:ARG:HB2	17:Y:112:LEU:CA	2.13	0.67
2:A:85:G:OP1	17:Y:65:VAL:HG11	1.95	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:Y:74:VAL:O	17:Y:75:GLU:C	2.32	0.67
18:Z:92:VAL:CA	18:Z:124:ALA:CB	2.71	0.67
18:Z:38:ALA:O	18:Z:39:PHE:C	2.33	0.67
8:I:119:ASP:CG	8:I:120:ALA:N	2.47	0.67
8:I:77:VAL:HG12	8:I:77:VAL:O	1.93	0.67
22:2:56:ILE:O	22:2:59:ILE:CG2	2.41	0.67
2:A:1062:G:C4	31:K:134:SER:OG	2.45	0.67
2:A:1085:A:H1'	2:A:1086:A:H4'	1.77	0.67
24:0:18:PRO:HB2	24:0:36:ILE:HD13	1.77	0.67
24:0:29:GLU:HA	24:0:62:LEU:HD22	1.77	0.67
2:A:1184:G:OP1	23:3:29:ARG:HB3	1.95	0.67
2:A:1429:G:H2'	2:A:1430:C:C6	2.30	0.67
2:A:1441:G:H4'	2:A:1628:G:OP1	1.93	0.67
2:A:2230:G:O2'	2:A:2231:C:H5'	1.94	0.67
2:A:2410:G:C4	2:A:2411:A:C5	2.82	0.67
2:A:2430:A:C2'	2:A:2431:U:C5'	2.72	0.67
2:A:2517:C:C4	2:A:2542:A:N6	2.63	0.67
2:A:2528:U:H3'	2:A:2528:U:H6	1.60	0.67
2:A:2543:G:H2'	2:A:2544:G:H8	0.82	0.67
2:A:2561:A:N6	2:A:2562:U:C5	2.63	0.67
2:A:2765:A:N3	2:A:2765:A:H2'	2.08	0.67
3:D:210:LYS:O	3:D:211:HIS:C	2.31	0.67
5:F:201:SER:HB2	5:F:204:ALA:HB3	1.76	0.67
5:F:32:GLY:O	5:F:33:LYS:C	2.31	0.67
12:Q:133:GLU:CG	12:Q:134:PHE:N	2.57	0.67
12:Q:28:ILE:CG2	12:Q:29:ALA:H	1.99	0.67
13:S:47:LEU:H	13:S:57:THR:HG22	1.60	0.67
13:S:64:SER:O	13:S:65:ASP:C	2.33	0.67
20:U:27:SER:CB	20:U:31:GLN:NE2	2.56	0.67
20:U:31:GLN:O	20:U:33:ARG:O	1.96	0.67
2:A:1152:C:H5''	20:U:80:ILE:HG22	1.74	0.67
18:Z:120:LEU:C	18:Z:121:GLN:HG3	2.14	0.67
18:Z:14:LEU:HD21	18:Z:79:ILE:CG2	2.23	0.67
18:Z:37:LYS:CA	18:Z:40:ASP:OD1	2.42	0.67
2:A:1062:G:H4'	31:K:76:SER:OG	1.94	0.67
26:5:23:HIS:O	26:5:24:ALA:HB2	1.93	0.67
21:V:38:LEU:HD23	21:V:38:LEU:N	2.09	0.67
2:A:2354:G:N3	24:0:32:LYS:HG3	2.09	0.67
1:B:83:G:H4'	23:3:52:HIS:CD2	2.30	0.67
25:4:23:GLU:CD	25:4:29:PRO:HB3	2.15	0.67
27:6:24:THR:O	27:6:25:THR:HG22	1.94	0.67
2:A:1566:A:C2	3:D:212:HIS:CB	2.78	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1789:A:O3'	3:D:224:VAL:CG1	2.39	0.67
2:A:2234:G:C2	2:A:2235:G:C4	2.83	0.67
2:A:2289:G:N1	2:A:2290:G:C5	2.63	0.67
2:A:2485:G:H5''	12:Q:144:THR:HG21	1.72	0.67
2:A:2519:U:P	2:A:2519:U:H3'	2.34	0.67
2:A:2491:U:H4'	2:A:2570:G:OP1	1.95	0.67
2:A:2608:G:H8	2:A:2608:G:H3'	1.60	0.67
2:A:2689:U:C6	2:A:2713:A:N6	2.63	0.67
2:A:2814:C:H2'	2:A:2815:C:C5	2.30	0.67
3:D:175:LEU:HD21	3:D:180:VAL:HA	0.67	0.67
2:A:1791:A:O2'	3:D:204:PHE:O	2.12	0.67
3:D:213:LYS:CB	3:D:215:LYS:O	2.43	0.67
2:A:2771:C:H5'	4:E:316:ARG:HD2	0.78	0.67
4:E:48:MET:C	4:E:49:THR:HG23	2.15	0.67
2:A:2317:C:C5'	6:G:150:SER:HB3	2.25	0.67
1:B:45:A:H1'	6:G:76:ARG:HH12	1.58	0.67
7:H:14:VAL:HG12	7:H:16:VAL:CG2	2.25	0.67
8:I:13:GLY:CA	8:I:15:LYS:CD	2.72	0.67
8:I:29:PHE:CD1	8:I:29:PHE:N	2.62	0.67
10:O:122:ILE:HD12	10:O:122:ILE:N	2.10	0.67
10:O:20:LEU:HG	10:O:44:LYS:HD3	1.77	0.67
11:P:102:ASP:O	11:P:103:ALA:HB2	1.95	0.67
12:Q:82:LYS:O	12:Q:84:ARG:N	2.28	0.67
13:S:34:LEU:CG	13:S:102:LEU:CA	2.56	0.67
14:T:15:PRO:O	14:T:17:THR:N	2.25	0.67
20:U:25:TRP:H	20:U:28:ARG:HD2	1.60	0.67
20:U:47:TYR:CZ	21:V:74:TYR:O	2.48	0.67
20:U:65:ILE:CB	20:U:76:TYR:HE2	2.08	0.67
21:V:44:GLN:N	21:V:44:GLN:NE2	2.42	0.67
17:Y:43:ASN:CG	17:Y:112:LEU:HD22	2.16	0.67
17:Y:69:LYS:O	17:Y:70:ALA:CB	2.40	0.67
17:Y:51:LEU:CD2	17:Y:95:ASN:CG	2.64	0.67
8:I:95:SER:HB2	8:I:117:LEU:CD1	2.25	0.67
16:X:52:VAL:CG1	16:X:53:ASN:N	2.57	0.67
16:X:28:VAL:HG23	16:X:62:LYS:CG	2.25	0.67
6:G:57:THR:O	6:G:63:ILE:HB	1.94	0.67
2:A:484:C:H2'	2:A:485:C:H6	1.60	0.67
24:0:38:VAL:CA	24:0:40:GLN:CG	2.73	0.66
24:0:48:GLY:HA2	24:0:56:ASP:H	1.59	0.66
2:A:987:G:OP1	23:3:10:LYS:HE2	1.94	0.66
25:4:43:TRP:HA	25:4:61:LYS:HE3	1.77	0.66
2:A:459:U:OP2	28:7:40:HIS:CG	2.47	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:126:A:OP1	28:7:44:VAL:HG11	1.94	0.66
2:A:1655:A:H4'	4:E:211:GLN:HA	1.76	0.66
2:A:1953:A:H62	2:A:2550:G:C4'	2.05	0.66
2:A:2090:G:C4	2:A:2230:G:O6	2.48	0.66
2:A:2320:A:N6	13:S:14:ARG:CB	2.58	0.66
2:A:2322:A:N7	2:A:2323:G:C8	2.63	0.66
2:A:2334:G:H21	13:S:12:ARG:CD	2.08	0.66
2:A:2447:G:O6	2:A:2501:C:O2	2.14	0.66
2:A:2487:G:HO2'	2:A:2488:A:H5'	1.57	0.66
2:A:2549:G:C2'	2:A:2550:G:H5'	2.24	0.66
1:B:59:A:H3'	1:B:60:C:P	2.35	0.66
3:D:105:ALA:O	3:D:107:LYS:N	2.28	0.66
3:D:119:PRO:CA	3:D:129:LEU:HD21	2.24	0.66
3:D:142:ASN:H	3:D:142:ASN:HD22	1.42	0.66
3:D:224:VAL:CG1	3:D:225:ARG:H	2.07	0.66
4:E:67:THR:O	4:E:68:VAL:CG2	2.43	0.66
2:A:606:U:OP1	5:F:104:ASP:HB2	1.95	0.66
5:F:197:SER:CB	5:F:236:THR:OG1	2.44	0.66
6:G:49:PRO:HG3	6:G:73:VAL:N	2.10	0.66
7:H:8:ILE:HG22	7:H:9:GLU:N	2.10	0.66
2:A:1022:G:P	9:N:52:GLN:HE22	2.15	0.66
9:N:73:LYS:HB3	9:N:140:GLY:HA3	1.77	0.66
9:N:78:ILE:HG22	9:N:79:PHE:CD1	2.30	0.66
12:Q:65:ARG:HE	12:Q:85:ILE:CG2	2.08	0.66
12:Q:72:VAL:O	12:Q:73:GLN:CB	2.43	0.66
12:Q:65:ARG:HH22	12:Q:87:LYS:N	1.91	0.66
19:R:113:LEU:CD1	19:R:113:LEU:C	2.63	0.66
2:A:2320:A:C2	13:S:13:ARG:HG2	2.30	0.66
2:A:445:C:C3'	20:U:3:ARG:NH2	2.54	0.66
2:A:995:C:OP2	20:U:54:LYS:NZ	2.28	0.66
21:V:42:GLY:HA3	21:V:54:TYR:OH	1.83	0.66
17:Y:71:VAL:HG22	17:Y:93:THR:H	1.36	0.66
18:Z:106:GLY:N	18:Z:142:ASN:HD21	1.87	0.66
18:Z:37:LYS:CG	18:Z:41:ARG:NH1	2.44	0.66
18:Z:41:ARG:O	18:Z:44:ARG:CB	2.43	0.66
18:Z:25:ASN:C	18:Z:84:TYR:CE1	2.68	0.66
8:I:112:LYS:N	8:I:112:LYS:CD	2.55	0.66
22:2:20:LEU:CD1	22:2:21:ASP:N	2.58	0.66
16:X:7:HIS:ND1	16:X:8:PRO:CD	2.58	0.66
31:K:109:ALA:HB2	31:K:128:ILE:HD12	1.75	0.66
31:K:65:SER:O	31:K:66:PHE:CB	2.40	0.66
2:A:1357:U:H2'	2:A:1358:G:O4'	1.95	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2262:U:H5	24:0:14:ARG:HH12	1.43	0.66
2:A:989:G:OP2	23:3:11:SER:HB2	1.95	0.66
23:3:16:PRO:HB3	23:3:19:GLN:CD	2.13	0.66
23:3:30:ARG:NE	23:3:33:GLN:HB2	2.10	0.66
2:A:387:U:C3'	25:4:23:GLU:OE2	2.43	0.66
27:6:19:GLY:C	27:6:42:PRO:CB	2.63	0.66
2:A:2399:G:H2'	2:A:2400:G:O5'	1.95	0.66
2:A:826:U:OP1	2:A:2428:G:O5'	2.13	0.66
2:A:2457:U:C3'	2:A:2458:G:H5'	2.17	0.66
2:A:2482:G:C3'	2:A:2483:C:C5'	2.73	0.66
2:A:2511:U:H2'	2:A:2512:C:H5'	1.78	0.66
2:A:2571:C:O2'	4:E:243:PRO:CG	2.43	0.66
2:A:2581:G:N1	2:A:2610:C:C5	2.55	0.66
2:A:2605:U:H2'	2:A:2606:C:C5'	2.25	0.66
2:A:2836:U:C2	2:A:2883:A:N6	2.62	0.66
2:A:324:A:N7	2:A:340:A:H1'	2.10	0.66
2:A:904:C:C1'	18:Z:166:LEU:HD21	2.24	0.66
7:H:75:VAL:HG12	7:H:76:GLU:H	1.60	0.66
7:H:84:LYS:O	7:H:131:ILE:HB	1.94	0.66
14:T:12:ASP:C	14:T:13:ILE:HG13	2.15	0.66
18:Z:29:ASN:O	18:Z:30:VAL:CG2	2.44	0.66
8:I:95:SER:HB2	8:I:117:LEU:HD12	1.77	0.66
31:K:121:LEU:O	31:K:122:GLU:C	2.33	0.66
2:A:1538:G:H2'	2:A:1539:G:H1'	1.77	0.66
2:A:856:C:H5'	24:0:25:LYS:HZ1	0.56	0.66
25:4:41:PRO:HB2	25:4:57:ASP:CG	2.15	0.66
30:9:25:VAL:HB	30:9:34:GLN:HB3	0.67	0.66
30:9:25:VAL:HG11	30:9:34:GLN:HB2	1.75	0.66
2:A:1139:G:OP1	9:N:46:ILE:HG21	1.94	0.66
2:A:1782:C:O2	2:A:2609:U:H6	1.43	0.66
2:A:1996:C:C5'	2:A:1996:C:H6	2.08	0.66
2:A:2460:U:O2	2:A:2493:U:H5	1.74	0.66
2:A:2511:U:C6	2:A:2512:C:H5	2.12	0.66
2:A:2520:C:H5	2:A:2567:G:C4	2.11	0.66
2:A:2691:C:O4'	2:A:2872:G:N7	2.28	0.66
2:A:2740:A:C5	2:A:2764:A:C5	2.82	0.66
2:A:2744:G:N3	2:A:2761:G:C2	2.63	0.66
2:A:2862:G:N3	2:A:2863:C:C6	2.63	0.66
2:A:322:A:H1'	2:A:341:G:C8	2.30	0.66
3:D:108:ASN:CG	3:D:109:LEU:H	1.98	0.66
5:F:195:VAL:HG13	5:F:213:ALA:CB	2.25	0.66
5:F:22:PHE:HE2	5:F:118:THR:HG1	1.42	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:42:C:HI1'	6:G:47:GLN:HB3	1.77	0.66
8:I:23:ASP:HB2	8:I:25:TYR:CD2	2.31	0.66
2:A:1131:G:C4	9:N:65:ASN:CG	2.60	0.66
10:O:93:PRO:HD2	10:O:113:LYS:CD	2.25	0.66
12:Q:33:MET:HG3	12:Q:83:PHE:HB2	1.77	0.66
12:Q:35:ASN:CB	12:Q:75:SER:CB	2.73	0.66
12:Q:84:ARG:O	12:Q:122:PHE:HB3	1.96	0.66
13:S:12:ARG:CZ	13:S:20:TYR:CE2	2.74	0.66
2:A:2320:A:C6	13:S:9:PRO:HG3	2.26	0.66
20:U:20:ARG:HH12	21:V:75:LYS:HE3	1.57	0.66
20:U:93:LYS:O	20:U:94:VAL:CB	2.44	0.66
21:V:3:ALA:O	21:V:12:TYR:CZ	2.31	0.66
2:A:25:U:C4'	15:W:79:GLY:HA3	2.20	0.66
18:Z:110:GLY:C	18:Z:112:LEU:H	1.98	0.66
18:Z:119:ASN:HB3	18:Z:120:LEU:HD23	1.77	0.66
18:Z:35:ASP:CA	18:Z:39:PHE:CZ	2.63	0.66
18:Z:14:LEU:CD2	18:Z:79:ILE:CG2	2.71	0.66
2:A:1063:G:OP2	31:K:77:PHE:HE1	1.79	0.66
16:X:75:GLN:O	16:X:76:GLU:C	2.34	0.66
2:A:94:G:H22	22:2:42:ASN:HD22	1.37	0.66
24:0:11:LYS:O	24:0:12:ASN:O	2.13	0.66
24:0:29:GLU:HA	24:0:29:GLU:OE1	1.95	0.66
25:4:59:PHE:HA	25:4:62:ARG:NE	2.09	0.66
25:4:7:PRO:O	25:4:8:LYS:CB	2.43	0.66
30:9:24:LEU:HD22	30:9:35:ARG:HA	1.75	0.66
2:A:2016:U:H2'	2:A:2017:U:O4'	1.95	0.66
2:A:2212:A:H2'	2:A:2212:A:N3	2.10	0.66
2:A:2278:A:C2'	2:A:2279:G:O5'	2.43	0.66
2:A:2373:G:C5	2:A:2374:C:N4	2.63	0.66
2:A:2376:A:H2'	2:A:2377:A:C8	2.30	0.66
2:A:2526:G:C4	2:A:2527:C:C5	2.82	0.66
2:A:2611:U:C3'	2:A:2611:U:C6	2.78	0.66
2:A:2616:C:N3	2:A:2617:C:H5	1.90	0.66
2:A:2648:C:C4	2:A:2649:U:O4	2.48	0.66
2:A:2677:G:C2'	2:A:2678:C:O5'	2.43	0.66
2:A:2730:C:H2'	2:A:2731:G:H8	1.60	0.66
2:A:974:G:O6	21:V:80:TYR:CZ	2.48	0.66
3:D:71:ASP:CA	3:D:73:ILE:HG13	2.26	0.66
4:E:201:VAL:CA	4:E:310:PHE:O	2.42	0.66
5:F:96:LYS:HB3	5:F:98:ARG:NH1	1.01	0.66
7:H:101:LYS:HG2	7:H:115:GLU:HB2	1.62	0.66
7:H:147:ILE:HA	7:H:150:VAL:HB	1.76	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:N:42:GLU:HA	9:N:133:GLY:CA	2.26	0.66
9:N:56:LYS:N	9:N:56:LYS:HD3	2.10	0.66
11:P:128:GLY:O	11:P:131:GLU:CA	2.44	0.66
13:S:66:LEU:N	13:S:66:LEU:HD12	2.09	0.66
2:A:994:C:HO2'	20:U:54:LYS:HG2	1.55	0.66
2:A:974:G:N7	21:V:80:TYR:CE2	2.62	0.66
18:Z:24:TYR:HB3	18:Z:83:PHE:O	1.96	0.66
8:I:99:ALA:O	8:I:100:GLU:C	2.33	0.66
2:A:1338:G:H4'	16:X:12:GLU:OE1	1.95	0.66
6:G:29:HIS:H	6:G:69:ILE:HD13	1.60	0.66
2:A:1766:U:H2'	2:A:1767:C:C6	2.30	0.66
2:A:989:G:N7	23:3:13:ILE:CD1	2.58	0.66
23:3:37:LEU:CD1	23:3:43:ILE:CG2	2.71	0.66
23:3:26:LEU:CD2	23:3:46:ASN:HB3	2.22	0.66
23:3:7:LYS:HG2	23:3:8:LEU:H	1.60	0.66
26:5:3:LYS:N	26:5:3:LYS:HD3	2.11	0.66
2:A:1568:G:C5'	3:D:60:GLN:CD	2.63	0.66
2:A:965:C:O2'	2:A:2273:A:H2	1.77	0.66
2:A:2489:G:C8	2:A:2490:G:N7	2.63	0.66
2:A:2488:A:C2'	2:A:2489:G:O5'	2.35	0.66
2:A:2525:G:N2	2:A:2539:C:C5	2.64	0.66
2:A:2562:U:N3	2:A:2563:U:C4	2.63	0.66
2:A:2754:U:O2'	2:A:2756:U:P	2.53	0.66
2:A:2785:C:H2'	2:A:2786:U:H5	1.51	0.66
2:A:2815:C:H2'	2:A:2816:C:H6	1.61	0.66
2:A:2853:C:C2'	2:A:2854:G:O5'	2.44	0.66
2:A:2842:G:N1	2:A:2876:G:C2	2.64	0.66
2:A:82:G:H5'	2:A:296:C:OP1	1.95	0.66
2:A:99:U:H3	17:Y:107:LYS:HD2	1.56	0.66
5:F:104:ASP:O	5:F:106:GLU:N	2.28	0.66
5:F:144:PHE:CE2	5:F:156:LEU:CD1	2.70	0.66
5:F:153:VAL:HG11	5:F:207:LEU:HD13	1.77	0.66
5:F:215:ALA:HA	5:F:242:GLU:CG	2.26	0.66
7:H:130:ILE:C	7:H:131:ILE:HG12	2.16	0.66
8:I:8:ASP:HA	8:I:12:LYS:N	2.09	0.66
8:I:3:VAL:CG2	8:I:21:VAL:CG2	2.62	0.66
9:N:68:GLY:O	9:N:69:TYR:CB	2.42	0.66
9:N:90:LYS:NZ	9:N:95:ARG:NH2	2.43	0.66
12:Q:25:GLY:C	12:Q:26:LYS:HG2	2.13	0.66
12:Q:45:GLN:OE1	12:Q:153:PRO:N	2.28	0.66
12:Q:85:ILE:HA	12:Q:122:PHE:HA	1.76	0.66
13:S:72:GLU:HB3	13:S:74:PRO:CD	2.20	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:U:110:VAL:O	20:U:114:ARG:CG	2.37	0.66
17:Y:78:THR:HG22	17:Y:88:PRO:C	2.15	0.66
2:A:270(M):U:H4'	2:A:270(N):G:C4'	2.21	0.66
2:A:1906:G:C8	2:A:1929:G:C4	2.83	0.66
2:A:1529:A:N7	2:A:1543:A:C8	2.64	0.66
2:A:1559:G:C4	2:A:1559:G:H3'	2.30	0.66
24:O:46:LYS:NZ	24:O:60:PHE:C	2.49	0.66
25:4:23:GLU:CG	25:4:29:PRO:HB3	2.26	0.66
2:A:2077:A:C2	2:A:2244:U:N3	2.63	0.66
2:A:2078:C:H4'	2:A:2434:A:C5'	2.26	0.66
2:A:1889:A:N1	2:A:2234:G:O2'	2.28	0.66
2:A:2246:G:N2	2:A:2247:A:C5	2.63	0.66
2:A:2261:C:H3'	24:O:14:ARG:NH2	2.10	0.66
2:A:2266:A:H5''	2:A:2267:A:C4	2.31	0.66
2:A:2269:A:C2'	2:A:2270:G:O5'	2.44	0.66
2:A:2328:A:C6	2:A:2329:G:C6	2.83	0.66
2:A:2424:C:O2	2:A:2424:C:C2'	2.43	0.66
2:A:2431:U:OP2	2:A:2432:A:OP2	2.12	0.66
2:A:2528:U:H5	2:A:2530:A:N3	1.66	0.66
2:A:2606:C:H6	2:A:2606:C:C5'	1.99	0.66
2:A:2678:C:O2'	2:A:2679:A:C5'	2.44	0.66
2:A:2758:A:C3'	2:A:2758:A:P	2.70	0.66
2:A:2762:G:O6	2:A:2763:G:N1	2.28	0.66
2:A:511:U:C5	2:A:512:G:N3	2.64	0.66
2:A:775:G:O2'	2:A:794:G:C8	2.46	0.66
2:A:969:U:H2'	2:A:970:C:O4'	1.95	0.66
3:D:172:ILE:HA	3:D:182:MET:HG2	1.78	0.66
3:D:196:ASN:CB	3:D:199:ARG:HD3	2.26	0.66
2:A:2785:C:C2	4:E:100:TRP:NE1	2.63	0.66
4:E:177:ALA:C	4:E:179:ASP:N	2.45	0.66
2:A:1655:A:H4'	4:E:212:GLY:N	2.11	0.66
4:E:217:TRP:CE2	4:E:251:PRO:CB	2.79	0.66
2:A:2785:C:H5'	4:E:99:VAL:HG22	1.71	0.66
5:F:37:ALA:CB	5:F:102:LEU:CB	2.70	0.66
5:F:202:THR:HG22	5:F:203:ALA:N	2.10	0.66
5:F:56:THR:HG22	5:F:57:PRO:HD3	1.76	0.66
6:G:97:GLN:CD	6:G:106:PHE:CE2	2.69	0.66
7:H:100:LYS:O	7:H:101:LYS:HD2	1.95	0.66
7:H:95:ALA:O	7:H:127:GLN:CB	2.44	0.66
7:H:47:ASN:O	7:H:48:VAL:HG13	1.96	0.66
8:I:7:LYS:HE2	8:I:12:LYS:HG2	1.77	0.66
10:O:3:GLN:HA	10:O:21:VAL:HG11	1.77	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:O:68:GLY:HA2	10:O:78:ARG:CG	2.24	0.66
12:Q:142:LYS:CG	12:Q:143:VAL:N	2.05	0.66
19:R:46:GLY:O	19:R:47:PHE:O	2.14	0.66
19:R:84:ALA:CB	19:R:85:PRO:HD3	2.21	0.66
19:R:83:ILE:O	19:R:85:PRO:N	2.28	0.66
13:S:58:LEU:O	13:S:60:SER:N	2.29	0.66
20:U:34:ASN:OD1	20:U:37:GLN:NE2	2.28	0.66
2:A:994:C:C4'	20:U:54:LYS:HE2	2.23	0.66
18:Z:39:PHE:O	18:Z:40:ASP:O	2.14	0.66
16:X:3:ASP:C	16:X:4:VAL:HG13	2.14	0.66
2:A:2312:U:C5'	6:G:53:LYS:CA	2.44	0.66
31:K:67:THR:O	31:K:68:PHE:CB	2.43	0.66
23:3:12:PRO:HB2	23:3:20:LYS:HE2	1.78	0.66
2:A:2400:G:C4'	27:6:20:PHE:CE1	2.79	0.66
2:A:2465:C:O3'	30:9:5:SER:OG	2.12	0.66
2:A:2075:U:O2'	2:A:2596:U:O2	2.13	0.66
2:A:2080:G:C6	2:A:2241:A:C6	2.84	0.66
2:A:2397:G:C4	2:A:2420:C:O2	2.49	0.66
2:A:2422:A:C2	2:A:2424:C:C5	2.82	0.66
2:A:2461:C:C2	2:A:2462:U:C5	2.83	0.66
2:A:2526:G:C5	2:A:2527:C:C6	2.82	0.66
2:A:2572:A:H5'	2:A:2574:G:H5'	1.75	0.66
2:A:2704:C:H2'	2:A:2705:A:O4'	1.95	0.66
2:A:2744:G:O6	2:A:2745:C:N4	2.29	0.66
2:A:2813:A:H2'	2:A:2814:C:H6	0.75	0.66
2:A:2826:A:N6	2:A:2827:C:C4	2.61	0.66
2:A:372:G:O2'	25:4:63:PHE:CZ	2.48	0.66
2:A:747:U:O2	2:A:2015:A:C2	2.47	0.66
5:F:168:ARG:C	5:F:168:ARG:HD2	2.08	0.66
7:H:51:VAL:HG21	7:H:68:ARG:NE	2.10	0.66
7:H:87:GLU:HB3	7:H:164:GLU:OE1	1.96	0.66
8:I:28:ASN:HA	8:I:32:LYS:CG	2.26	0.66
12:Q:48:ASN:C	12:Q:121:ASP:HB2	2.16	0.66
12:Q:156:ASN:O	12:Q:157:ALA:HB3	1.95	0.66
12:Q:35:ASN:HB3	12:Q:75:SER:CB	2.26	0.66
19:R:96:ARG:O	19:R:96:ARG:HG3	1.96	0.66
13:S:32:PRO:CD	13:S:100:ALA:CA	2.72	0.66
13:S:12:ARG:HD2	13:S:20:TYR:OH	1.93	0.66
20:U:103:PRO:HA	20:U:107:LYS:HE2	1.78	0.66
20:U:40:LEU:HD22	20:U:40:LEU:H	1.60	0.66
2:A:998:C:C5'	20:U:84:LYS:NZ	2.51	0.66
17:Y:92:ASP:OD1	17:Y:94:SER:CB	2.44	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:Z:4:THR:O	18:Z:5:ALA:CB	2.43	0.66
18:Z:85:MET:C	18:Z:86:VAL:HG23	2.15	0.66
2:A:2307:G:H5''	2:A:2307:G:H8	1.61	0.66
2:A:2859:G:H2'	2:A:2860:A:O4'	1.96	0.66
2:A:414:C:H2'	2:A:415:A:H8	1.60	0.66
2:A:2355:C:H5'	24:0:21:LEU:HD22	1.78	0.66
23:3:23:LEU:CB	23:3:28:LEU:HD12	2.21	0.66
23:3:51:ALA:C	23:3:53:LEU:N	2.37	0.66
25:4:5:LEU:HD21	25:4:9:ALA:HA	1.77	0.66
27:6:46:LYS:HA	27:6:46:LYS:CE	2.22	0.66
30:9:7:VAL:HG23	30:9:36:GLN:CG	2.26	0.66
2:A:1658:C:H5''	4:E:230:GLY:HA3	1.76	0.66
2:A:2040:C:H4'	9:N:69:TYR:HE2	1.61	0.66
2:A:2094:G:N2	2:A:2196:C:O2	2.29	0.66
2:A:2253:G:O2'	2:A:2254:C:H5'	1.95	0.66
2:A:2313:C:N4	2:A:2314:C:H41	1.90	0.66
2:A:2330:G:C2	2:A:2331:G:N3	2.64	0.66
2:A:2369:A:H2'	2:A:2370:G:C8	2.29	0.66
2:A:2370:G:H2'	2:A:2371:G:C8	2.30	0.66
2:A:2385:C:HO2'	24:0:39:ARG:NH1	1.92	0.66
2:A:2411:A:C2	2:A:2412:A:C6	2.83	0.66
2:A:2493:U:C2'	2:A:2494:G:O5'	2.44	0.66
2:A:2539:C:N3	2:A:2540:C:C5	2.64	0.66
2:A:2574:G:O3'	2:A:2575:C:O4'	2.13	0.66
2:A:2684:U:O2	2:A:2725:A:N1	2.29	0.66
2:A:2817:G:N1	2:A:2818:G:C4	2.64	0.66
2:A:910:A:C3'	12:Q:17:ARG:HH21	2.07	0.66
3:D:106:PRO:HG3	3:D:141:HIS:HD2	1.61	0.66
3:D:146:LYS:CB	3:D:149:ARG:CG	2.74	0.66
3:D:71:ASP:C	3:D:73:ILE:HG13	2.16	0.66
4:E:224:GLY:O	4:E:225:LYS:CB	2.44	0.66
4:E:238:LEU:N	4:E:238:LEU:HD22	2.11	0.66
4:E:295:LEU:CD2	4:E:296:VAL:N	2.59	0.66
5:F:244:ALA:HB3	5:F:245:GLU:OE2	1.96	0.66
7:H:147:ILE:HD13	7:H:150:VAL:HG11	1.78	0.66
7:H:67:THR:HG23	7:H:70:LEU:HD13	1.77	0.66
8:I:13:GLY:HA2	8:I:15:LYS:HZ1	1.57	0.66
10:O:43:VAL:HG12	10:O:45:ASP:N	2.10	0.66
10:O:52:VAL:O	10:O:53:LYS:CB	2.44	0.66
10:O:64:ARG:NH1	10:O:81:GLU:OE1	2.27	0.66
10:O:68:GLY:HA3	10:O:78:ARG:CZ	2.25	0.66
11:P:130:ARG:CA	11:P:133:VAL:CG2	2.74	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:Q:102:ARG:O	12:Q:104:PRO:CD	2.43	0.66
12:Q:88:PHE:O	12:Q:90:PHE:HE1	1.75	0.66
19:R:24:GLN:HB2	19:R:44:LEU:CD2	2.24	0.66
19:R:44:LEU:O	19:R:48:VAL:HG21	1.93	0.66
13:S:119:GLN:O	13:S:120:GLU:C	2.33	0.66
20:U:49:ASP:CA	20:U:52:ASN:CG	2.54	0.66
20:U:20:ARG:NH1	21:V:75:LYS:NZ	2.43	0.66
17:Y:74:VAL:O	17:Y:74:VAL:CG1	2.39	0.66
18:Z:116:VAL:CB	18:Z:169:VAL:CG2	2.73	0.66
18:Z:1:MET:O	18:Z:2:GLU:HB3	1.95	0.66
18:Z:39:PHE:O	18:Z:43:PHE:HD2	1.77	0.66
18:Z:71:MET:HG3	18:Z:78:PRO:CG	2.21	0.66
22:2:13:PRO:O	22:2:14:ALA:C	2.33	0.66
22:2:51:LYS:O	22:2:54:ALA:HB3	1.96	0.66
6:G:29:HIS:CG	6:G:29:HIS:O	2.47	0.66
2:A:1527:G:O5'	2:A:1527:G:H8	1.79	0.66
12:Q:108:SER:O	12:Q:109:VAL:CG2	2.43	0.66
24:0:39:ARG:CG	24:0:69:PHE:CZ	2.71	0.66
24:0:37:LEU:HD13	24:0:70:ILE:CD1	2.22	0.66
25:4:39:VAL:HG12	25:4:39:VAL:O	1.95	0.66
27:6:32:GLN:HB3	27:6:35:LEU:HB2	1.77	0.66
2:A:2391:G:HO2'	2:A:2392:A:P	2.16	0.66
2:A:2472:G:O2'	2:A:2473:U:P	2.53	0.66
2:A:2597:G:C4	2:A:2598:A:N7	2.64	0.66
2:A:2620:C:C4'	4:E:252:GLN:CG	2.73	0.66
2:A:2712:U:H3'	2:A:2714:G:O5'	1.96	0.66
2:A:600:G:O2'	5:F:109:LEU:CD1	2.37	0.66
2:A:973:A:C2'	2:A:974:G:H5"	2.26	0.66
4:E:199:ALA:O	4:E:200:ASP:OD1	2.14	0.66
4:E:295:LEU:HD23	4:E:296:VAL:N	2.11	0.66
4:E:315:VAL:CG1	4:E:316:ARG:N	2.59	0.66
5:F:214:THR:C	5:F:216:SER:H	1.99	0.66
8:I:22:ALA:O	8:I:25:TYR:HB2	1.96	0.66
8:I:7:LYS:CD	8:I:12:LYS:CG	2.57	0.66
9:N:65:ASN:CA	9:N:68:GLY:O	2.44	0.66
10:O:14:SER:CB	10:O:86:ILE:CD1	2.70	0.66
11:P:101:ASP:O	11:P:102:ASP:CB	2.44	0.66
2:A:1649:G:O2'	19:R:104:ARG:NH1	2.29	0.66
1:B:47:C:C3'	13:S:107:ASN:HD21	2.08	0.66
13:S:80:SER:O	13:S:81:ALA:C	2.34	0.66
20:U:8:ILE:O	20:U:11:ARG:CG	2.43	0.66
20:U:40:LEU:HD21	21:V:83:ARG:HH12	1.61	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:Z:172:LEU:C	18:Z:172:LEU:HD23	2.13	0.66
18:Z:176:LEU:CD2	18:Z:176:LEU:C	2.64	0.66
18:Z:13:LYS:O	18:Z:36:ARG:CZ	2.43	0.66
8:I:121:ILE:CD1	8:I:121:ILE:H	2.08	0.66
2:A:1081:U:H5'	31:K:123:ALA:HA	1.78	0.66
31:K:96:ILE:O	31:K:97:VAL:CG1	2.43	0.66
18:Z:96:VAL:HG12	18:Z:97:PRO:CD	2.21	0.66
2:A:414:C:N4	2:A:2409:G:N1	2.27	0.66
2:A:2896:C:H6	2:A:2896:C:C5'	2.08	0.66
2:A:311:A:H1'	2:A:332:A:C5	2.30	0.66
2:A:1833:U:H2'	2:A:1834:U:H6	1.60	0.66
7:H:28:PRO:HG2	7:H:79:SER:HA	1.78	0.66
23:3:18:ASP:O	23:3:19:GLN:C	2.35	0.66
25:4:41:PRO:CB	25:4:57:ASP:CB	2.73	0.66
25:4:59:PHE:H	25:4:62:ARG:HE	1.41	0.66
2:A:2208:U:O2	2:A:2216:G:N2	2.23	0.66
2:A:2355:C:C4	2:A:2356:C:N4	2.64	0.66
2:A:2356:C:C2'	2:A:2357:U:H5'	2.26	0.66
2:A:2411:A:H2	2:A:2412:A:C6	2.14	0.66
2:A:2581:G:N2	2:A:2610:C:C5	2.63	0.66
2:A:2604:U:H2'	2:A:2605:U:C6	2.31	0.66
2:A:2624:G:H8	2:A:2624:G:O5'	1.78	0.66
2:A:2657:A:C5	2:A:2658:C:C5	2.79	0.66
2:A:2639:A:C4	2:A:2778:A:C2	2.84	0.66
2:A:28:A:N3	20:U:11:ARG:NH2	2.44	0.66
2:A:527:C:C5	2:A:2779:U:C6	2.84	0.66
2:A:856:C:HO2'	24:0:24:LYS:CB	1.84	0.66
3:D:131:LEU:CD1	3:D:187:CYS:HB2	2.26	0.66
3:D:90:ILE:HG21	3:D:102:TYR:C	2.17	0.66
4:E:269:ILE:CG2	4:E:297:LYS:NZ	2.47	0.66
5:F:165:ASP:O	5:F:166:ILE:C	2.34	0.66
5:F:197:SER:O	5:F:198:ASP:HB2	1.96	0.66
5:F:242:GLU:O	5:F:246:ARG:HG3	1.96	0.66
7:H:85:ALA:C	7:H:131:ILE:CG2	2.63	0.66
10:O:25:LEU:HD21	10:O:40:VAL:N	2.11	0.66
2:A:2251:G:O5'	12:Q:102:ARG:NH2	2.28	0.66
12:Q:89:PRO:HA	12:Q:113:ALA:CB	2.26	0.66
2:A:910:A:H62	12:Q:12:PRO:C	1.99	0.66
19:R:85:PRO:O	19:R:88:ARG:N	2.29	0.66
13:S:87:LEU:HA	13:S:90:LEU:HD12	1.78	0.66
10:O:79:PHE:CA	14:T:22:VAL:HG22	2.14	0.66
20:U:34:ASN:HA	20:U:37:GLN:CB	2.21	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:Y:55:PHE:CG	17:Y:89:ARG:NH1	2.64	0.66
8:I:68:LEU:CB	8:I:72:LEU:HD21	2.26	0.66
8:I:89:LEU:HD11	8:I:93:ILE:HG22	1.59	0.66
2:A:1070:A:N1	31:K:12:GLN:OE1	2.29	0.66
2:A:2721:A:C4	2:A:2722:G:N7	2.63	0.66
8:I:63:ALA:O	8:I:67:LYS:HE2	1.96	0.66
2:A:1470:G:H2'	2:A:1519:G:O6	1.95	0.66
2:A:299:A:N3	2:A:319:C:O2'	2.27	0.66
2:A:2262:U:P	24:O:14:ARG:NH2	2.69	0.65
24:O:61:ALA:HB2	24:O:81:ILE:HD11	1.69	0.65
2:A:125:G:H21	28:7:10:ARG:N	1.89	0.65
2:A:2093:G:O6	2:A:2225:A:N7	2.29	0.65
2:A:2278:A:H2'	2:A:2279:G:O5'	1.96	0.65
2:A:2349:G:C6	2:A:2350:C:C6	2.84	0.65
2:A:2372:G:H5''	2:A:2372:G:H8	1.61	0.65
2:A:2373:G:C2	2:A:2374:C:N3	2.64	0.65
2:A:2548:G:H2'	2:A:2549:G:C5'	2.26	0.65
2:A:2572:A:N7	4:E:241:TRP:CG	2.64	0.65
2:A:2605:U:H6	2:A:2605:U:O5'	1.79	0.65
2:A:2615:U:C2'	2:A:2616:C:H5'	2.27	0.65
2:A:2620:C:O2'	2:A:2621:A:O4'	2.14	0.65
2:A:2698:U:H2'	2:A:2698:U:O2	1.94	0.65
2:A:2725:A:C4	2:A:2727:G:C8	2.84	0.65
2:A:2748:A:N7	2:A:2749:A:N1	2.44	0.65
2:A:2839:G:N2	2:A:2840:C:C2	2.64	0.65
2:A:2862:G:N2	2:A:2863:C:C2	2.64	0.65
2:A:322:A:C2	2:A:341:G:C4	2.84	0.65
2:A:575:A:H2'	2:A:576:U:C6	2.31	0.65
2:A:959:A:H2'	2:A:960:A:C8	2.31	0.65
1:B:42:C:H1'	6:G:47:GLN:HA	1.78	0.65
3:D:175:LEU:CD1	3:D:179:GLU:CB	2.67	0.65
3:D:93:ILE:O	3:D:93:ILE:HG23	1.95	0.65
4:E:176:HIS:O	4:E:179:ASP:N	2.29	0.65
4:E:70:VAL:HG11	4:E:295:LEU:HD23	1.78	0.65
4:E:45:LYS:HE3	4:E:303:PRO:CB	2.22	0.65
4:E:62:ARG:C	4:E:63:GLU:CG	2.59	0.65
5:F:223:LEU:CA	5:F:231:ARG:HD2	2.25	0.65
2:A:1255:U:O4	5:F:67:GLN:O	2.13	0.65
6:G:49:PRO:CG	6:G:72:LYS:C	2.63	0.65
9:N:23:ALA:CA	9:N:26:VAL:CG2	2.74	0.65
10:O:19:VAL:HG13	10:O:42:THR:C	2.16	0.65
12:Q:27:GLY:O	12:Q:28:ILE:CG1	2.44	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:R:97:VAL:CA	19:R:114:VAL:HG13	2.26	0.65
13:S:30:GLY:O	13:S:31:LYS:HE3	1.94	0.65
2:A:1754:C:H5'	14:T:39:ASN:ND2	2.11	0.65
20:U:95:LEU:O	20:U:98:ILE:HD13	1.95	0.65
2:A:974:G:C5	21:V:80:TYR:CZ	2.84	0.65
15:W:106:ILE:CG2	15:W:107:LEU:N	2.59	0.65
15:W:24:ILE:CG2	15:W:32:ALA:HB1	2.25	0.65
15:W:47:VAL:O	15:W:51:LEU:HD13	1.96	0.65
18:Z:40:ASP:OD2	18:Z:41:ARG:NH1	2.28	0.65
18:Z:53:ASP:HB2	18:Z:62:PHE:O	1.95	0.65
9:N:10:VAL:CB	9:N:36:VAL:CA	2.64	0.65
2:A:76:C:HO2'	22:2:55:ARG:HA	1.59	0.65
2:A:1545:A:O3'	2:A:545(A):A:H5'	1.96	0.65
22:2:39:ALA:O	22:2:40:PRO:O	2.13	0.65
2:A:1425:G:O2'	2:A:1573:G:N2	2.29	0.65
25:4:41:PRO:HB3	25:4:59:PHE:CE1	2.27	0.65
26:5:10:LYS:HG3	26:5:11:THR:O	1.95	0.65
27:6:16:ALA:O	27:6:18:THR:N	2.29	0.65
27:6:44:ALA:O	27:6:45:LYS:C	2.34	0.65
2:A:2056:G:N2	26:5:5:PRO:HA	2.11	0.65
2:A:2225:A:O2'	2:A:2226:C:OP2	2.13	0.65
2:A:2273:A:N7	2:A:2274:A:C5	2.64	0.65
2:A:2370:G:C2'	2:A:2371:G:O5'	2.44	0.65
2:A:2411:A:C2	2:A:2412:A:N7	2.64	0.65
2:A:2452:C:N4	2:A:2453:A:C6	2.64	0.65
2:A:2458:G:N7	2:A:2490:G:C6	2.64	0.65
2:A:2497:A:C2'	2:A:2498:C:OP2	2.44	0.65
2:A:2574:G:N7	2:A:2575:C:C5	2.40	0.65
2:A:2666:C:OP2	2:A:2667:C:H5	1.78	0.65
2:A:2689:U:O4'	2:A:2713:A:C2	2.49	0.65
2:A:2741:A:OP2	2:A:2742:C:H5	1.79	0.65
2:A:2756:U:C2'	2:A:2757:A:H5'	2.20	0.65
2:A:783:A:H4'	2:A:2589:A:P	2.37	0.65
2:A:910:A:H3'	12:Q:17:ARG:NH2	2.10	0.65
2:A:971:C:OP2	2:A:974(A):C:O2	2.15	0.65
3:D:179:GLU:O	3:D:180:VAL:HG22	1.96	0.65
2:A:1566:A:N6	3:D:212:HIS:CE1	2.64	0.65
4:E:206:LYS:C	4:E:257:GLY:O	2.34	0.65
4:E:198:TYR:CD2	4:E:265:ASN:C	2.69	0.65
4:E:70:VAL:CG1	4:E:296:VAL:CB	2.72	0.65
4:E:86:TYR:O	4:E:94:ARG:O	2.14	0.65
5:F:167:ASP:CB	5:F:232:LEU:N	2.60	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:H:116:PRO:HB2	7:H:120:LEU:C	2.16	0.65
9:N:138:THR:CB	9:N:139:LEU:HD13	2.25	0.65
19:R:20:LEU:CD2	19:R:24:GLN:HG3	2.27	0.65
19:R:32:GLY:O	19:R:33:ARG:CB	2.44	0.65
19:R:45:ARG:HD3	19:R:97:VAL:CG2	2.25	0.65
2:A:2378:A:C1'	13:S:101:VAL:HG23	2.26	0.65
2:A:2376:A:N6	13:S:109:PRO:CG	2.59	0.65
13:S:75:THR:O	13:S:76:GLY:C	2.35	0.65
2:A:1156:A:OP1	20:U:55:ARG:NH2	2.29	0.65
20:U:98:ILE:HG22	20:U:106:PHE:HD1	1.61	0.65
15:W:68:ARG:HH21	15:W:110:LYS:HG3	1.61	0.65
17:Y:19:ARG:C	17:Y:67:LEU:HD22	2.16	0.65
17:Y:30:ASP:CB	17:Y:31:LEU:HD23	2.25	0.65
18:Z:22:VAL:O	18:Z:83:PHE:HB2	1.96	0.65
2:A:76:C:H4'	22:2:55:ARG:HG3	1.78	0.65
16:X:13:LYS:HD3	16:X:13:LYS:N	2.10	0.65
16:X:25:GLN:N	16:X:25:GLN:CD	2.47	0.65
16:X:9:HIS:HB2	16:X:26:PHE:CA	2.25	0.65
31:K:102:ARG:O	31:K:104:GLN:N	2.29	0.65
31:K:42:PHE:CE1	31:K:58:ILE:CD1	2.76	0.65
27:6:14:SER:HB3	27:6:52:GLU:CA	2.14	0.65
28:7:34:ARG:HH11	28:7:42:LEU:CA	1.97	0.65
2:A:2246:G:N3	2:A:2247:A:C8	2.64	0.65
2:A:2498:C:H3'	2:A:2498:C:OP1	1.97	0.65
2:A:2677:G:H2'	2:A:2678:C:O5'	1.96	0.65
2:A:2779:U:C4'	2:A:2781:A:N7	2.59	0.65
2:A:971:C:N4	2:A:972:G:H21	1.94	0.65
3:D:123:ILE:O	3:D:124:LYS:C	2.34	0.65
3:D:125:ILE:HG22	3:D:126:GLY:N	2.11	0.65
3:D:129:LEU:HD22	3:D:130:PRO:HD2	1.78	0.65
3:D:133:ASN:C	3:D:134:ILE:HG13	2.16	0.65
3:D:144:GLU:OE1	3:D:144:GLU:O	2.13	0.65
3:D:172:ILE:HG13	3:D:182:MET:CE	2.26	0.65
2:A:38:A:H1'	5:F:46:TYR:CD2	2.32	0.65
7:H:119:GLY:O	7:H:121:GLU:CD	2.34	0.65
7:H:84:LYS:O	7:H:131:ILE:CB	2.45	0.65
11:P:65:ASP:HB2	11:P:109:LEU:CB	2.06	0.65
11:P:67:ARG:NH1	11:P:111:ALA:CA	2.59	0.65
12:Q:45:GLN:OE1	12:Q:153:PRO:CG	2.45	0.65
13:S:34:LEU:HD21	13:S:102:LEU:HG	1.77	0.65
20:U:95:LEU:CA	20:U:98:ILE:HD13	2.25	0.65
21:V:11:GLN:HE21	21:V:22:VAL:HG21	1.59	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:Y:27:LEU:HD23	17:Y:98:VAL:CG1	2.26	0.65
8:I:68:LEU:HD22	8:I:72:LEU:HD21	1.79	0.65
22:2:6:GLN:CA	22:2:9:ARG:HB3	2.25	0.65
2:A:148:C:N3	2:A:149:A:N6	2.44	0.65
8:I:63:ALA:HA	8:I:66:LYS:CE	2.26	0.65
2:A:270(C):C:P	2:A:365:C:O2'	2.54	0.65
1:B:15:A:H5'	1:B:16:G:N7	2.12	0.65
2:A:931:G:P	23:3:27:GLY:CA	2.85	0.65
28:7:35:ARG:HH11	28:7:35:ARG:HB3	1.61	0.65
29:8:41:ILE:C	29:8:43:GLY:N	2.31	0.65
2:A:2015:A:H8	2:A:2016:U:C6	2.15	0.65
2:A:2032:G:H21	2:A:2055:C:H42	1.44	0.65
2:A:2208:U:H2'	2:A:2209:C:C6	2.31	0.65
2:A:2242:G:C6	2:A:2243:U:C5	2.84	0.65
2:A:2360:A:N7	2:A:2361:A:H8	1.51	0.65
2:A:2416:C:C2	2:A:2417:C:C6	2.84	0.65
2:A:2731:G:N1	2:A:2732:G:N1	2.45	0.65
2:A:2774:C:H2'	2:A:2775:A:H8	1.62	0.65
2:A:2788:C:C5'	2:A:2789:C:P	2.82	0.65
2:A:530:G:C6	2:A:2021:C:C2	2.85	0.65
2:A:987:G:OP2	23:3:15:TYR:OH	2.14	0.65
3:D:77:VAL:HG21	3:D:109:LEU:HB3	1.78	0.65
3:D:175:LEU:HB2	3:D:179:GLU:H	1.60	0.65
3:D:210:LYS:C	3:D:213:LYS:HB2	1.83	0.65
3:D:70:LYS:HB3	3:D:70:LYS:HZ3	1.62	0.65
4:E:193:PHE:CZ	4:E:199:ALA:HB2	2.30	0.65
4:E:73:ILE:O	4:E:293:TYR:HD2	1.80	0.65
5:F:140:VAL:O	5:F:140:VAL:HG12	1.95	0.65
5:F:223:LEU:C	5:F:225:PRO:CD	2.65	0.65
5:F:33:LYS:O	5:F:34:ALA:C	2.31	0.65
6:G:38:GLU:OE2	6:G:71:ALA:HA	1.97	0.65
7:H:130:ILE:O	7:H:131:ILE:CG2	2.40	0.65
8:I:19:LYS:O	8:I:21:VAL:N	2.28	0.65
9:N:38:VAL:HG12	9:N:39:VAL:N	2.10	0.65
9:N:53:ILE:HG23	9:N:135:ILE:HD12	1.75	0.65
9:N:94:GLY:O	9:N:95:ARG:C	2.34	0.65
2:A:1666:G:O4'	10:O:67:ARG:NH2	2.29	0.65
10:O:71:ARG:C	10:O:73:ASP:H	2.00	0.65
11:P:62:ALA:HB3	11:P:105:TYR:C	2.14	0.65
11:P:94:ARG:HD2	11:P:120:LEU:HA	1.77	0.65
12:Q:85:ILE:CA	12:Q:122:PHE:CD2	2.79	0.65
19:R:61:HIS:O	19:R:62:ALA:C	2.34	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1156:A:H8	20:U:55:ARG:HH22	1.42	0.65
20:U:98:ILE:O	20:U:100:ALA:CA	2.43	0.65
2:A:85:G:OP2	17:Y:65:VAL:CG2	2.44	0.65
22:2:4:HIS:O	22:2:5:VAL:O	2.15	0.65
2:A:1398:C:H4'	16:X:23:LYS:NZ	2.12	0.65
2:A:222:A:N6	2:A:232:G:C4	2.64	0.65
2:A:1559:G:C6	2:A:1560:G:H4'	2.32	0.65
2:A:1197:G:C2	2:A:1250:G:C2	2.84	0.65
25:4:59:PHE:N	25:4:62:ARG:NE	2.45	0.65
28:7:27:GLY:O	28:7:31:LEU:CG	2.41	0.65
2:A:1612:C:N1	28:7:3:ARG:NH2	2.43	0.65
29:8:31:HIS:O	29:8:32:GLN:CG	2.44	0.65
29:8:58:MET:HA	29:8:61:MET:HG2	1.79	0.65
2:A:1130:U:H5''	2:A:2515:C:HO2'	1.60	0.65
2:A:2060:A:H1'	2:A:2502:G:C4	2.31	0.65
2:A:2433:A:H2	25:4:32:HIS:CE1	2.14	0.65
2:A:792:G:H2'	2:A:2440:C:N3	2.11	0.65
2:A:2446:G:H21	2:A:2501:C:N4	1.82	0.65
2:A:2484:G:C2'	2:A:2485:G:O5'	2.41	0.65
2:A:2667:C:C2	2:A:2668:G:C8	2.84	0.65
2:A:2817:G:C2	2:A:2818:G:H1'	2.32	0.65
2:A:326:G:N2	2:A:337:C:H1'	2.10	0.65
2:A:472:A:H2'	2:A:473:G:H5'	1.78	0.65
2:A:558:G:OP1	9:N:91:LYS:CB	2.44	0.65
2:A:566:U:OP2	21:V:81:ARG:CZ	2.44	0.65
3:D:158:GLY:CA	3:D:194:VAL:HG13	2.10	0.65
3:D:209:ASN:O	3:D:212:HIS:HB2	1.96	0.65
4:E:315:VAL:O	4:E:316:ARG:C	2.34	0.65
5:F:107:ARG:O	5:F:110:ALA:N	2.29	0.65
9:N:63:ILE:HD12	9:N:71:TYR:HE2	1.54	0.65
10:O:101:PRO:HB2	10:O:122:ILE:HD12	1.77	0.65
10:O:112:MET:O	10:O:113:LYS:C	2.34	0.65
10:O:17:ARG:NE	10:O:47:THR:CA	2.60	0.65
11:P:76:LEU:HG	11:P:81:VAL:HG23	1.79	0.65
11:P:92:ASP:CB	11:P:118:LEU:CD1	2.42	0.65
2:A:1279:G:H5'	19:R:34:ILE:HD11	1.77	0.65
13:S:122:ALA:O	13:S:125:ALA:CA	2.45	0.65
20:U:33:ARG:N	20:U:35:ALA:HB3	2.11	0.65
20:U:8:ILE:H	20:U:11:ARG:NH1	1.88	0.65
8:I:124:LEU:HG	8:I:125:GLY:N	2.10	0.65
22:2:6:GLN:O	22:2:7:GLU:C	2.34	0.65
16:X:18:MET:CE	16:X:25:GLN:CB	2.74	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:K:116:LEU:HD13	31:K:117:ASN:H	1.57	0.65
2:A:1070:A:C2	31:K:12:GLN:OE1	2.49	0.65
31:K:8:GLN:O	31:K:9:ILE:HG13	1.97	0.65
24:0:48:GLY:O	24:0:55:ARG:HA	1.96	0.65
26:5:44:HIS:CB	26:5:52:TYR:OH	2.43	0.65
30:9:7:VAL:HG12	30:9:25:VAL:CG2	2.25	0.65
2:A:1223:C:N4	21:V:87:ARG:HH21	1.93	0.65
2:A:1366:A:H8	2:A:1366:A:OP2	1.79	0.65
2:A:1462:C:C5'	2:A:2703:C:H5'	2.27	0.65
2:A:2191:G:C2	2:A:2192:G:H1'	2.31	0.65
2:A:2247:A:O2'	2:A:2248:C:C5'	2.45	0.65
2:A:2317:C:C5	2:A:2318:G:N7	2.64	0.65
2:A:2356:C:O2'	2:A:2357:U:H5'	1.96	0.65
2:A:2511:U:H2'	2:A:2512:C:H6	1.62	0.65
2:A:2573:C:H6	2:A:2573:C:O5'	1.79	0.65
2:A:2595:G:C8	2:A:2595:G:H3'	2.32	0.65
2:A:2622:C:H2'	2:A:2623:G:H8	1.61	0.65
2:A:2633:G:H2'	2:A:2634:G:H8	1.60	0.65
2:A:2671:A:C2'	2:A:2672:G:O5'	2.44	0.65
2:A:2712:U:C5'	2:A:2714:G:O5'	2.42	0.65
2:A:2817:G:C6	2:A:2818:G:C5	2.85	0.65
2:A:2870:C:O2	2:A:2871:C:H6	1.79	0.65
2:A:988:A:P	23:3:11:SER:HB2	2.35	0.65
3:D:130:PRO:HA	3:D:188:ARG:CA	2.25	0.65
4:E:198:TYR:CE1	4:E:267:ARG:HB3	2.32	0.65
4:E:269:ILE:HD11	4:E:296:VAL:N	2.11	0.65
5:F:102:LEU:CB	5:F:107:ARG:HH21	2.04	0.65
5:F:138:VAL:O	5:F:139:VAL:CG2	2.44	0.65
6:G:74:THR:O	6:G:75:LEU:CG	2.41	0.65
9:N:63:ILE:CG2	9:N:71:TYR:CZ	2.79	0.65
12:Q:131:ALA:HA	12:Q:134:PHE:HE2	1.62	0.65
12:Q:134:PHE:C	12:Q:137:ARG:HB3	2.16	0.65
19:R:105:ARG:N	19:R:105:ARG:CZ	2.59	0.65
1:B:50:G:P	13:S:74:PRO:CB	2.85	0.65
15:W:29:LEU:O	15:W:30:GLU:C	2.31	0.65
18:Z:51:LEU:CD2	18:Z:51:LEU:C	2.62	0.65
8:I:133:LEU:H	8:I:138:THR:CB	2.09	0.65
31:K:72:THR:CG2	31:K:114:PRO:HB2	2.27	0.65
2:A:1062:G:C3'	31:K:76:SER:OG	2.45	0.65
31:K:93:LYS:CA	31:K:96:ILE:HD11	2.26	0.65
31:K:9:ILE:CD1	31:K:31:HIS:HB2	2.20	0.65
2:A:1545:A:C4'	2:A:545(A):A:P	2.84	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:0:23:VAL:HG12	24:0:26:PHE:HE1	1.60	0.65
24:0:28:GLY:H	24:0:60:PHE:HD2	0.71	0.65
23:3:31:LEU:HD22	23:3:32:GLN:HG3	1.77	0.65
25:4:23:GLU:O	25:4:24:THR:C	2.34	0.65
2:A:2422:A:OP2	27:6:4:ASP:OD1	2.14	0.65
28:7:24:THR:O	28:7:28:ARG:CG	2.44	0.65
2:A:1129:A:C2	2:A:2570:G:C8	2.84	0.65
2:A:1287:A:C8	19:R:104:ARG:CD	2.78	0.65
2:A:2093:G:H1'	2:A:2198:A:C2	2.26	0.65
2:A:2520:C:C4	2:A:2567:G:C5	2.85	0.65
2:A:2597:G:C5	2:A:2598:A:N6	2.64	0.65
2:A:2635:C:N3	2:A:2783:G:N2	2.43	0.65
2:A:2748:A:H2	2:A:2758:A:N7	1.95	0.65
2:A:2783:G:N1	2:A:2784:C:C4	2.65	0.65
2:A:2816:C:H6	2:A:2816:C:H5'	1.60	0.65
2:A:987:G:OP1	23:3:10:LYS:HE3	1.97	0.65
2:A:994:C:O2'	20:U:54:LYS:CA	2.45	0.65
1:B:43:C:H1'	6:G:47:GLN:CD	2.16	0.65
1:B:59:A:H5''	1:B:60:C:OP2	1.97	0.65
2:A:2785:C:O4'	4:E:99:VAL:HA	1.96	0.65
2:A:1204:A:O2'	5:F:230:GLY:N	2.30	0.65
6:G:24:HIS:CB	6:G:72:LYS:HD3	2.27	0.65
7:H:147:ILE:HA	7:H:150:VAL:CB	2.27	0.65
8:I:12:LYS:O	8:I:14:LYS:N	2.29	0.65
8:I:28:ASN:O	8:I:32:LYS:CB	2.44	0.65
8:I:7:LYS:HG3	8:I:12:LYS:HA	1.73	0.65
10:O:75:SER:C	10:O:76:TYR:CD1	2.67	0.65
10:O:90:ASP:O	10:O:91:LYS:C	2.34	0.65
11:P:94:ARG:CD	11:P:120:LEU:HA	2.27	0.65
12:Q:76:GLY:O	12:Q:124:ALA:HA	1.97	0.65
12:Q:67:ALA:C	12:Q:71:PHE:HE1	1.97	0.65
12:Q:85:ILE:HA	12:Q:122:PHE:CB	2.26	0.65
19:R:55:ALA:HB1	19:R:79:LEU:CD2	2.26	0.65
20:U:68:GLY:O	20:U:69:ALA:C	2.33	0.65
20:U:104:GLU:OE2	21:V:46:VAL:HG11	1.96	0.65
20:U:40:LEU:CD2	21:V:83:ARG:NH1	2.60	0.65
15:W:23:LEU:HD13	15:W:35:ILE:HG21	1.77	0.65
17:Y:31:LEU:HD13	17:Y:101:LEU:HB3	1.77	0.65
17:Y:86:GLU:C	17:Y:87:VAL:HG23	2.16	0.65
18:Z:172:LEU:CD2	18:Z:173:PRO:HG2	2.26	0.65
2:A:1063:G:C5'	31:K:135:MET:CG	2.75	0.65
31:K:15:ALA:CA	31:K:46:THR:CB	2.73	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2859:G:C2'	2:A:2860:A:H5'	2.27	0.65
2:A:1906:G:C5	2:A:1929:G:C6	2.85	0.65
2:A:1843:C:H2'	2:A:1844:C:C6	2.32	0.65
24:0:33:ALA:HB2	24:0:65:GLY:HA3	1.79	0.65
23:3:48:GLU:HG2	23:3:49:LYS:N	2.11	0.65
27:6:19:GLY:O	27:6:20:PHE:CB	2.45	0.65
27:6:32:GLN:CA	27:6:35:LEU:CD1	2.62	0.65
27:6:47:HIS:O	27:6:48:VAL:CB	2.45	0.65
30:9:14:CYS:N	30:9:27:CYS:HB2	2.12	0.65
2:A:1969:A:H4'	2:A:1970:A:H5'	1.78	0.65
2:A:2218:G:O2'	3:D:146:LYS:HE2	1.92	0.65
2:A:2090:G:C2	2:A:2230:G:O6	2.48	0.65
2:A:2297:C:O2'	2:A:2298:A:H5'	1.95	0.65
2:A:2637:U:C5	2:A:2638:G:C5	2.84	0.65
2:A:2684:U:N3	2:A:2725:A:N6	2.44	0.65
2:A:712(A):A:H8	2:A:2713:A:OP1	1.80	0.65
2:A:2758:A:OP2	2:A:2758:A:C2'	2.45	0.65
2:A:27:G:C2	2:A:512:G:H2'	2.31	0.65
2:A:2846:G:C2	2:A:2847:U:O2	2.50	0.65
3:D:76:ARG:HA	3:D:114:GLU:H	1.61	0.65
3:D:141:HIS:CD2	3:D:142:ASN:ND2	2.65	0.65
3:D:129:LEU:C	3:D:188:ARG:HG2	2.17	0.65
3:D:198:GLY:C	3:D:200:THR:H	1.99	0.65
3:D:73:ILE:CB	3:D:95:TYR:CE2	2.79	0.65
2:A:1656:C:OP1	4:E:233:ARG:HB3	1.97	0.65
5:F:111:VAL:HA	5:F:220:THR:CG2	2.24	0.65
6:G:146:LYS:HG3	13:S:15:GLU:CD	2.16	0.65
9:N:38:VAL:C	9:N:39:VAL:HG13	2.11	0.65
12:Q:49:VAL:HA	12:Q:121:ASP:CG	2.17	0.65
13:S:83:LEU:O	13:S:84:THR:C	2.35	0.65
15:W:13:SER:HB3	15:W:16:LYS:HD2	1.78	0.65
15:W:17:VAL:O	15:W:20:VAL:CB	2.45	0.65
15:W:36:LEU:HD13	15:W:47:VAL:HB	1.79	0.65
17:Y:28:SER:CB	17:Y:99:THR:HG1	2.06	0.65
17:Y:50:VAL:HG13	17:Y:95:ASN:HB3	1.79	0.65
8:I:92:SER:CA	8:I:122:ARG:HG3	2.09	0.65
8:I:121:ILE:CG2	8:I:122:ARG:N	2.42	0.65
22:2:6:GLN:O	22:2:9:ARG:CB	2.44	0.65
16:X:28:VAL:HG23	16:X:62:LYS:CB	2.27	0.65
2:A:855:G:O2'	24:0:25:LYS:HD3	1.96	0.65
30:9:4:ARG:HA	30:9:36:GLN:CA	2.16	0.65
2:A:1568:G:H5''	3:D:60:GLN:CD	2.15	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:197:A:N6	2:A:248:G:H22	1.95	0.65
2:A:2100:G:C5	2:A:2190:G:C6	2.83	0.65
2:A:2242:G:C5	2:A:2243:U:C5	2.83	0.65
2:A:2246:G:C2'	2:A:2247:A:C5'	2.69	0.65
2:A:2428:G:O2'	2:A:2429:G:N7	2.27	0.65
2:A:2492:U:O2'	2:A:2493:U:H5'	1.95	0.65
2:A:2666:C:H2'	2:A:2667:C:H5'	1.76	0.65
2:A:1455:G:O6	2:A:2705:A:C2	2.50	0.65
2:A:988:A:N6	23:3:13:ILE:HG21	2.11	0.65
2:A:990:A:N6	2:A:1186:G:H1'	2.11	0.65
4:E:45:LYS:CE	4:E:303:PRO:C	2.65	0.65
4:E:45:LYS:HZ3	4:E:302:GLY:N	1.94	0.65
5:F:56:THR:CB	5:F:57:PRO:HD2	2.24	0.65
7:H:113:GLU:OE1	7:H:114:ILE:CA	2.45	0.65
7:H:89:VAL:HG12	7:H:89:VAL:O	1.97	0.65
9:N:136:SER:O	9:N:139:LEU:HD22	1.97	0.65
9:N:21:ARG:CA	9:N:24:SER:HB3	2.25	0.65
9:N:83:ILE:HG13	9:N:84:ARG:CA	2.20	0.65
10:O:66:LYS:CG	10:O:82:ASN:HD21	1.95	0.65
12:Q:46:VAL:CG1	12:Q:124:ALA:O	2.42	0.65
12:Q:142:LYS:HE3	12:Q:142:LYS:C	2.17	0.65
12:Q:75:SER:O	12:Q:129:ASP:OD2	2.15	0.65
13:S:58:LEU:O	13:S:59:ALA:C	2.35	0.65
20:U:40:LEU:HD21	21:V:83:ARG:NH1	2.12	0.65
17:Y:58:GLU:N	17:Y:97:ARG:HH12	1.94	0.65
18:Z:172:LEU:O	18:Z:174:PRO:HD3	1.97	0.65
18:Z:25:ASN:CA	18:Z:84:TYR:CE1	2.80	0.65
18:Z:19:ILE:CA	18:Z:36:ARG:HG2	2.18	0.65
16:X:24:LEU:HD13	16:X:66:VAL:O	1.96	0.65
31:K:102:ARG:C	31:K:106:GLU:OE1	2.35	0.65
31:K:93:LYS:CD	31:K:96:ILE:CD1	2.49	0.65
8:I:65:ALA:HB1	8:I:134:HIS:CB	2.25	0.65
2:A:1805:U:H5'	3:D:235:PRO:CG	2.27	0.65
2:A:1472:A:H2'	2:A:1473:G:C8	2.31	0.65
2:A:2400:G:C3'	27:6:20:PHE:CE1	2.80	0.65
2:A:1135:C:H2'	2:A:1136:G:H8	1.62	0.65
2:A:1753:G:OP1	14:T:51:TRP:HZ3	1.80	0.65
2:A:1800:C:C3'	2:A:1800:C:C6	2.79	0.65
2:A:1996:C:H2'	2:A:1997:G:C4'	2.27	0.65
2:A:2009:G:O2'	19:R:106:GLY:O	2.12	0.65
2:A:2041:U:C2'	2:A:2042:A:H5'	2.27	0.65
2:A:2206:C:H2'	2:A:2207:C:O4'	1.97	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2327:A:C6	2:A:2328:A:C2	2.85	0.65
2:A:2358:G:C2'	2:A:2358:G:N3	2.60	0.65
2:A:244:A:O2'	11:P:56:LYS:CB	2.44	0.65
2:A:2536:G:C5	2:A:2537:U:C4	2.85	0.65
2:A:2657:A:N6	2:A:2665:A:N7	2.45	0.65
2:A:270(H):C:N3	2:A:270(R):G:N2	2.45	0.65
2:A:2799:A:O2'	2:A:2802:G:N1	2.26	0.65
2:A:2840:C:C4	2:A:2841:C:N4	2.65	0.65
2:A:2887:U:H2'	2:A:2888:C:C6	2.22	0.65
2:A:297:C:C5	2:A:298:G:C4	2.85	0.65
2:A:780:G:H2'	2:A:782:A:C8	2.32	0.65
3:D:141:HIS:HE1	3:D:191:VAL:C	1.99	0.65
4:E:221:LYS:HZ3	4:E:233:ARG:CG	2.02	0.65
7:H:104:LEU:CA	7:H:151:ARG:NH1	2.61	0.65
12:Q:122:PHE:HB2	12:Q:136:TRP:CZ2	2.32	0.65
12:Q:45:GLN:HE22	12:Q:153:PRO:HB2	0.65	0.65
12:Q:65:ARG:NE	12:Q:122:PHE:CZ	2.64	0.65
19:R:67:LEU:O	19:R:69:ASP:N	2.30	0.65
19:R:90:ARG:NH1	19:R:117:VAL:CG1	2.60	0.65
19:R:96:ARG:CG	19:R:115:GLU:HG3	2.27	0.65
13:S:16:ALA:O	13:S:17:ARG:CB	2.45	0.65
10:O:79:PHE:CG	14:T:22:VAL:CG2	2.80	0.65
20:U:102:GLU:HB3	21:V:43:GLU:OE2	1.96	0.65
21:V:35:LEU:CA	21:V:60:VAL:HG13	2.27	0.65
21:V:33:VAL:HG23	21:V:63:HIS:HB2	1.79	0.65
2:A:338:G:C5'	17:Y:24:ARG:NH1	2.59	0.65
18:Z:159:THR:C	18:Z:160:LEU:HD13	2.07	0.65
18:Z:37:LYS:CD	18:Z:41:ARG:HH12	2.10	0.65
22:2:20:LEU:HD22	22:2:53:ILE:HG23	1.79	0.65
2:A:1394:U:H4'	2:A:1603:A:H4'	1.78	0.65
16:X:28:VAL:O	16:X:29:ASP:C	2.35	0.65
2:A:2305:A:C3'	2:A:2306:C:C5'	2.64	0.65
2:A:1078:U:C5	2:A:1088:A:H2	2.15	0.65
2:A:1482:U:H2'	2:A:1483:G:H4'	1.79	0.65
24:0:65:GLY:CA	24:0:66:LYS:CD	2.70	0.64
27:6:19:GLY:CA	27:6:42:PRO:CB	2.75	0.64
28:7:11:LYS:O	28:7:12:ARG:C	2.36	0.64
2:A:1028:A:H1'	2:A:2487:G:OP1	1.95	0.64
2:A:1819:A:N9	3:D:177:SER:OG	2.29	0.64
2:A:2064:C:C1'	2:A:2450:A:N6	2.59	0.64
2:A:2195:C:C4	2:A:2196:C:C5	2.85	0.64
2:A:2334:G:O4'	13:S:20:TYR:OH	2.11	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2341:G:C5	2:A:2342:C:N4	2.64	0.64
2:A:2431:U:O2	2:A:2433:A:C8	2.50	0.64
2:A:2479:G:OP1	2:A:2537:U:C1'	2.45	0.64
2:A:2686:G:C5	2:A:2687:U:C6	2.85	0.64
2:A:1759:A:H4'	2:A:2715:C:O4'	1.97	0.64
2:A:2752:C:C2'	2:A:2752:C:O2	2.44	0.64
2:A:2840:C:C4	2:A:2841:C:C4	2.85	0.64
2:A:2842:G:N1	2:A:2876:G:N1	2.44	0.64
2:A:2869:G:C6	2:A:2870:C:C4	2.85	0.64
2:A:342:G:N1	2:A:344:G:N2	2.45	0.64
3:D:224:VAL:CG1	3:D:225:ARG:N	2.60	0.64
4:E:206:LYS:N	4:E:257:GLY:O	2.30	0.64
4:E:70:VAL:HG12	4:E:71:THR:H	0.54	0.64
5:F:236:THR:O	5:F:239:ALA:HB3	1.97	0.64
7:H:32:LEU:HD23	7:H:33:THR:N	2.12	0.64
8:I:7:LYS:CG	8:I:12:LYS:NZ	2.59	0.64
12:Q:94:ARG:HG2	12:Q:107:LYS:N	2.11	0.64
12:Q:86:ARG:NH2	12:Q:123:ILE:HD12	2.11	0.64
12:Q:67:ALA:HB1	12:Q:71:PHE:HE1	1.61	0.64
12:Q:88:PHE:CB	12:Q:90:PHE:CE1	2.60	0.64
13:S:56:ASP:CG	13:S:57:THR:H	2.01	0.64
13:S:74:PRO:O	13:S:75:THR:C	2.35	0.64
20:U:72:HIS:ND1	20:U:110:VAL:HG21	2.12	0.64
17:Y:108:ARG:O	17:Y:112:LEU:CD2	2.42	0.64
18:Z:107:GLU:CD	18:Z:107:GLU:N	2.50	0.64
18:Z:81:VAL:CG1	18:Z:82:ASP:H	2.10	0.64
22:2:7:GLU:CG	22:2:8:ILE:N	2.56	0.64
16:X:18:MET:HE1	16:X:25:GLN:CB	2.26	0.64
16:X:3:ASP:CG	16:X:4:VAL:H	1.99	0.64
2:A:270:A:H2'	2:A:270(A):A:H4'	1.79	0.64
2:A:1949:G:H2'	2:A:1950:G:C8	2.32	0.64
3:D:169:LYS:H	3:D:169:LYS:HZ3	1.45	0.64
27:6:12:MET:CA	27:6:13:GLU:OE1	2.44	0.64
29:8:58:MET:O	29:8:59:LYS:C	2.33	0.64
30:9:14:CYS:SG	30:9:32:HIS:CD2	2.90	0.64
2:A:1140:C:C4	9:N:49:ARG:CZ	2.78	0.64
2:A:1184:G:C2'	2:A:1185:C:H5'	2.26	0.64
2:A:1252:G:OP2	2:A:1252:G:H4'	1.97	0.64
2:A:1492:G:H21	2:A:1493:C:H42	1.45	0.64
2:A:1568:G:H3'	3:D:60:GLN:CD	2.17	0.64
2:A:1996:C:H2'	2:A:1997:G:C5'	2.28	0.64
2:A:2082:A:C5	2:A:2239:G:N1	2.64	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2317:C:C5	2:A:2318:G:C5	2.85	0.64
2:A:2404:C:C4	2:A:2405:G:C5	2.85	0.64
2:A:2424:C:H5'	2:A:2425:A:H5'	1.79	0.64
2:A:2495:G:O2'	12:Q:101:MET:HE2	1.74	0.64
2:A:2543:G:C5	2:A:2544:G:O6	2.43	0.64
2:A:2563:U:H2'	2:A:2565:A:OP2	1.97	0.64
2:A:2574:G:N9	2:A:2575:C:C6	2.62	0.64
2:A:1786:A:C2	2:A:2590:A:H1'	2.29	0.64
2:A:25:U:C5'	15:W:79:GLY:CA	2.62	0.64
2:A:2045:C:C4	2:A:2624:G:N2	2.65	0.64
2:A:2725:A:C2	2:A:2727:G:C8	2.86	0.64
2:A:530:G:H3'	2:A:530:G:OP2	1.97	0.64
3:D:129:LEU:CB	3:D:130:PRO:CD	2.74	0.64
2:A:2572:A:C8	4:E:241:TRP:CD1	2.85	0.64
5:F:81:PRO:O	5:F:82:GLN:CB	2.45	0.64
9:N:135:ILE:O	9:N:136:SER:O	2.14	0.64
10:O:13:ASN:C	10:O:15:GLY:N	2.51	0.64
10:O:79:PHE:HD2	10:O:79:PHE:N	1.95	0.64
11:P:109:LEU:C	11:P:109:LEU:CD1	2.65	0.64
12:Q:47:GLU:OE1	12:Q:150:ASP:O	2.13	0.64
19:R:65:LEU:O	19:R:66:VAL:C	2.35	0.64
19:R:90:ARG:HH12	19:R:117:VAL:CG1	2.10	0.64
1:B:11:C:N4	13:S:11:ARG:HH12	1.95	0.64
20:U:104:GLU:OE1	21:V:46:VAL:HG12	1.98	0.64
15:W:69:LEU:HA	15:W:109:GLU:HA	1.78	0.64
2:A:104:U:O4	17:Y:17:HIS:NE2	2.30	0.64
17:Y:24:ARG:O	17:Y:25:ALA:HB2	1.96	0.64
18:Z:140:LYS:N	18:Z:141:MET:CE	2.60	0.64
18:Z:1:MET:HE2	18:Z:52:PHE:CD2	2.32	0.64
18:Z:46:GLN:O	18:Z:47:SER:C	2.34	0.64
8:I:77:VAL:CG2	8:I:142:LYS:O	2.46	0.64
2:A:144:C:C4'	16:X:36:GLU:OE1	2.45	0.64
2:A:2311:A:O2'	6:G:53:LYS:HG3	1.97	0.64
31:K:100:VAL:CG1	31:K:101:THR:N	2.52	0.64
31:K:19:THR:HG22	31:K:39:CYS:SG	2.38	0.64
2:A:440:G:O5'	17:Y:3:GLN:CD	2.36	0.64
14:T:47:ARG:O	14:T:48:ASN:HB3	1.97	0.64
2:A:1972:A:H2'	2:A:1973:G:C8	2.31	0.64
31:K:63:ASP:O	31:K:64:LYS:CB	2.46	0.64
25:4:16:TYR:O	25:4:17:GLN:CB	2.43	0.64
27:6:28:ARG:CG	27:6:28:ARG:O	2.45	0.64
29:8:26:LYS:HB2	29:8:44:LYS:HA	1.78	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:9:24:LEU:HD22	30:9:36:GLN:H	1.61	0.64
2:A:1638:C:OP1	2:A:2710:C:O2'	2.16	0.64
2:A:2335:A:O2'	2:A:2336:A:C8	2.51	0.64
2:A:2369:A:H2'	2:A:2370:G:O5'	1.97	0.64
2:A:2432:A:N1	2:A:2433:A:C6	2.59	0.64
2:A:2492:U:H2'	2:A:2493:U:O5'	1.95	0.64
2:A:2521:C:O2	2:A:2522:U:O4'	2.15	0.64
2:A:2597:G:H2'	2:A:2598:A:N7	2.05	0.64
2:A:2625:G:C2'	2:A:2626:C:H5'	2.27	0.64
2:A:2633:G:O5'	2:A:2633:G:H8	1.81	0.64
2:A:2715:C:N3	2:A:2716:U:C5	2.65	0.64
2:A:2734:A:N7	2:A:2735:G:C4	2.65	0.64
2:A:2827:C:O2	2:A:2828:C:C5	2.50	0.64
2:A:2839:G:C6	2:A:2840:C:N4	2.64	0.64
2:A:2869:G:H2'	2:A:2870:C:H5'	1.79	0.64
2:A:604:G:N2	2:A:657:U:H4'	2.11	0.64
2:A:963:U:H2'	2:A:964:C:C6	2.32	0.64
4:E:175:ASP:O	4:E:177:ALA:N	2.29	0.64
4:E:256:THR:CA	4:E:259:HIS:CE1	2.73	0.64
4:E:74:GLU:HB3	4:E:293:TYR:CE2	2.27	0.64
4:E:269:ILE:HG13	4:E:297:LYS:HG2	1.76	0.64
4:E:81:VAL:HB	4:E:100:TRP:HZ3	1.62	0.64
5:F:22:PHE:CZ	5:F:115:LEU:HD12	2.23	0.64
2:A:674:G:O3'	5:F:69:HIS:C	2.36	0.64
9:N:75:PRO:O	9:N:76:ASP:C	2.35	0.64
11:P:69:ILE:CB	11:P:73:VAL:HG21	2.27	0.64
12:Q:134:PHE:O	12:Q:137:ARG:CB	2.31	0.64
19:R:100:LEU:HD21	19:R:113:LEU:CB	2.27	0.64
19:R:28:LEU:O	19:R:29:LEU:C	2.36	0.64
13:S:15:GLU:O	13:S:16:ALA:HB2	1.85	0.64
20:U:78:THR:O	20:U:79:PHE:O	2.14	0.64
15:W:56:ALA:O	15:W:57:ASN:C	2.36	0.64
17:Y:23:VAL:HG23	17:Y:67:LEU:HD23	1.75	0.64
18:Z:112:LEU:CD2	18:Z:113:VAL:O	2.45	0.64
2:A:72:U:C4'	22:2:57:LYS:NZ	2.60	0.64
31:K:116:LEU:CD1	31:K:117:ASN:N	2.48	0.64
12:Q:108:SER:O	12:Q:109:VAL:CB	2.45	0.64
2:A:1520:U:C6	2:A:1520:U:H3'	2.32	0.64
2:A:2256:G:P	24:0:5:LYS:HD3	2.23	0.64
24:0:70:ILE:HD13	24:0:70:ILE:N	2.12	0.64
2:A:2046:G:H1'	26:5:22:HIS:ND1	2.13	0.64
26:5:46:CYS:HB3	26:5:47:PRO:CD	2.26	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:6:13:GLU:O	27:6:52:GLU:O	2.16	0.64
2:A:1809:A:N6	25:4:3:LYS:HB3	2.12	0.64
2:A:2032:G:N2	2:A:2055:C:H42	1.94	0.64
2:A:2058:A:H2'	2:A:2059:A:H8	1.63	0.64
2:A:2256:G:C2	2:A:2257:U:O2	2.50	0.64
2:A:245:G:H5'	11:P:55:GLN:C	2.13	0.64
2:A:2548:G:C3'	2:A:2548:G:C8	2.79	0.64
2:A:2619:C:C2'	2:A:2620:C:C5'	2.75	0.64
2:A:2732:G:H8	2:A:2732:G:OP2	1.81	0.64
2:A:2785:C:C4	2:A:2786:U:C4	2.86	0.64
2:A:452:G:N2	2:A:457:A:C2	2.65	0.64
2:A:687:C:N3	2:A:787:U:O3'	2.31	0.64
4:E:72:VAL:O	4:E:73:ILE:HD12	1.96	0.64
5:F:91:PRO:HB2	5:F:92:PRO:HD3	0.66	0.64
6:G:25:MET:O	6:G:71:ALA:HB3	1.97	0.64
2:A:1669:A:C8	10:O:4:GLN:NE2	2.65	0.64
2:A:636:G:OP2	11:P:126:SER:HA	1.98	0.64
12:Q:127:ASN:HB2	12:Q:128:PRO:HD2	1.80	0.64
12:Q:85:ILE:CA	12:Q:122:PHE:HD2	2.10	0.64
12:Q:88:PHE:O	12:Q:90:PHE:CD1	2.51	0.64
13:S:103:ASP:OD2	13:S:105:GLY:N	2.27	0.64
2:A:2296:U:N3	13:S:16:ALA:CB	2.49	0.64
13:S:61:ALA:HB1	13:S:84:THR:O	1.97	0.64
15:W:34:ASN:HD22	26:5:39:LYS:HB2	1.61	0.64
17:Y:43:ASN:ND2	17:Y:112:LEU:CD1	2.61	0.64
18:Z:34:LEU:CD1	18:Z:39:PHE:CZ	2.60	0.64
18:Z:54:ILE:CG2	18:Z:55:THR:N	2.59	0.64
8:I:121:ILE:N	8:I:121:ILE:HD12	2.12	0.64
8:I:80:PRO:O	8:I:148:GLN:HG3	1.96	0.64
22:2:17:GLU:O	22:2:20:LEU:N	2.28	0.64
2:A:1598:C:H5'	16:X:34:LYS:HB2	1.79	0.64
16:X:28:VAL:HG13	16:X:64:ALA:HB3	1.78	0.64
6:G:28:GLY:N	6:G:69:ILE:HD13	2.09	0.64
2:A:1059:G:H1'	31:K:127:ILE:CD1	2.27	0.64
31:K:112:LYS:C	31:K:114:PRO:CD	2.65	0.64
31:K:72:THR:HG1	31:K:115:ASP:HB3	1.62	0.64
24:0:37:LEU:C	24:0:40:GLN:HG3	2.18	0.64
24:0:58:THR:O	24:0:59:LEU:C	2.35	0.64
25:4:46:GLU:OE2	25:4:55:ARG:N	2.30	0.64
27:6:12:MET:CE	27:6:54:LYS:O	2.46	0.64
27:6:8:ILE:O	27:6:28:ARG:HA	1.97	0.64
28:7:43:THR:HA	28:7:46:ASP:OD2	1.95	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2067:G:H1	2:A:2443:C:H42	1.43	0.64
2:A:2411:A:O2'	2:A:2412:A:H5'	1.98	0.64
2:A:2504:U:C5'	2:A:2504:U:H6	2.10	0.64
2:A:2550:G:C6	2:A:2559:C:N3	2.66	0.64
2:A:2699:C:O2	2:A:2699:C:C2'	2.42	0.64
2:A:2740:A:N1	2:A:2764:A:C4	2.42	0.64
2:A:610:C:H2'	2:A:611:C:C6	2.31	0.64
4:E:199:ALA:HA	4:E:312:ARG:C	2.18	0.64
4:E:222:ARG:O	4:E:227:ALA:HA	1.97	0.64
4:E:314:ALA:O	4:E:315:VAL:O	2.15	0.64
5:F:147:LEU:HD11	5:F:156:LEU:CD1	2.02	0.64
6:G:49:PRO:CB	6:G:72:LYS:N	2.52	0.64
6:G:75:LEU:O	6:G:80:ALA:HB2	1.97	0.64
7:H:95:ALA:H	7:H:127:GLN:HE21	1.44	0.64
9:N:101:VAL:O	9:N:102:ARG:CG	2.46	0.64
9:N:82:THR:O	9:N:83:ILE:C	2.36	0.64
11:P:129:ALA:O	11:P:131:GLU:N	2.30	0.64
12:Q:36:ASN:CB	18:Z:114:ASP:O	2.45	0.64
12:Q:35:ASN:HB3	12:Q:75:SER:HB2	1.78	0.64
13:S:109:PRO:HB2	13:S:116:PHE:CZ	2.33	0.64
13:S:128:ASP:O	13:S:129:ILE:HG12	1.97	0.64
13:S:56:ASP:OD1	13:S:57:THR:N	2.30	0.64
20:U:28:ARG:C	20:U:31:GLN:H	1.97	0.64
20:U:53:LYS:CA	20:U:56:ASP:OD2	2.43	0.64
2:A:994:C:N1	20:U:53:LYS:HD2	2.13	0.64
20:U:61:TRP:O	20:U:65:ILE:HG13	1.90	0.64
18:Z:3:LEU:CD2	18:Z:38:ALA:CB	2.70	0.64
8:I:88:ARG:CD	8:I:122:ARG:HB3	2.27	0.64
17:Y:4:PRO:O	17:Y:5:ASP:CB	2.45	0.64
24:0:48:GLY:HA2	24:0:55:ARG:HA	1.78	0.64
24:0:61:ALA:HB2	24:0:80:SER:CA	2.28	0.64
24:0:66:LYS:CD	24:0:66:LYS:N	2.38	0.64
25:4:14:ILE:CG2	25:4:16:TYR:CD1	2.80	0.64
25:4:41:PRO:HG2	25:4:57:ASP:CG	2.17	0.64
28:7:11:LYS:HE3	28:7:11:LYS:CA	2.28	0.64
30:9:11:CYS:H	30:9:32:HIS:HE2	1.46	0.64
2:A:1027:A:C6	2:A:1126:A:C4	2.86	0.64
2:A:2239:G:C4	2:A:2240:C:C5	2.86	0.64
2:A:2662:A:C2	2:A:2663:G:O4'	2.50	0.64
2:A:2725:A:N3	2:A:2727:G:C8	2.65	0.64
2:A:2834:G:H3'	2:A:2834:G:H8	1.63	0.64
2:A:2843:G:C5	2:A:2844:G:N7	2.66	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:322:A:N3	2:A:341:G:C5	2.66	0.64
2:A:581:C:OP1	20:U:33:ARG:NH1	2.28	0.64
1:B:7:G:O2'	13:S:37:ARG:CG	2.44	0.64
3:D:90:ILE:HG23	3:D:91:ALA:N	2.12	0.64
4:E:268:LEU:HD23	4:E:295:LEU:O	1.97	0.64
4:E:268:LEU:C	4:E:297:LYS:HE2	2.18	0.64
6:G:20:LYS:HG2	6:G:76:ARG:HG2	1.80	0.64
7:H:122:ILE:HG12	7:H:132:VAL:HG22	1.78	0.64
7:H:73:ASN:HB3	7:H:137:LYS:HZ1	0.94	0.64
9:N:40:ASN:O	9:N:41:ALA:C	2.35	0.64
9:N:49:ARG:C	9:N:53:ILE:HB	2.17	0.64
9:N:56:LYS:H	9:N:56:LYS:HD3	1.61	0.64
9:N:58:GLU:C	9:N:61:VAL:HB	2.18	0.64
9:N:60:ARG:HA	9:N:63:ILE:HD12	1.79	0.64
10:O:63:VAL:HG13	10:O:102:VAL:HG13	0.64	0.64
11:P:113:GLN:HB2	11:P:115:ARG:CZ	2.27	0.64
1:B:50:G:P	13:S:74:PRO:CG	2.62	0.64
20:U:40:LEU:O	20:U:43:ALA:HB3	1.98	0.64
8:I:133:LEU:HD12	8:I:139:ALA:CB	2.12	0.64
2:A:60:G:N3	2:A:74:A:C6	2.66	0.64
16:X:33:SER:O	16:X:37:VAL:N	2.26	0.64
31:K:11:LEU:CD1	31:K:28:LEU:CD1	2.75	0.64
2:A:1914:C:P	2:A:1916:A:H62	2.21	0.64
18:Z:156:GLU:CG	18:Z:157:GLY:N	2.46	0.64
2:A:1324:G:C1'	2:A:1616:A:H62	2.09	0.64
23:3:48:GLU:O	23:3:51:ALA:CA	2.46	0.64
25:4:46:GLU:N	25:4:53:GLU:O	2.31	0.64
29:8:30:ARG:CG	29:8:31:HIS:N	2.61	0.64
2:A:2349:G:OP2	29:8:42:ARG:CZ	2.45	0.64
2:A:1208:C:H2'	2:A:1209:G:H8	1.63	0.64
2:A:2097:C:H42	2:A:2192:G:H1	1.46	0.64
2:A:2212:A:C1'	2:A:2213:U:C5	2.81	0.64
2:A:2226:C:O2	2:A:2227:A:C2'	2.46	0.64
2:A:2227:A:O5'	2:A:2227:A:C8	2.47	0.64
2:A:2234:G:N1	2:A:2235:G:N7	2.42	0.64
2:A:2236:C:C2'	2:A:2237:G:H5''	2.28	0.64
2:A:2256:G:H2'	2:A:2257:U:H5'	1.80	0.64
2:A:2263:C:C3'	2:A:2264:C:H5'	2.26	0.64
2:A:2520:C:C6	2:A:2567:G:N9	2.66	0.64
2:A:2637:U:O2	2:A:2782:G:C2	2.51	0.64
2:A:2737:G:C6	2:A:2767:C:N4	2.57	0.64
2:A:2853:C:C6	2:A:2853:C:C3'	2.81	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:326:G:H2'	2:A:327:G:C8	2.32	0.64
2:A:854:G:H1	2:A:923:C:N4	1.94	0.64
3:D:60:GLN:N	3:D:62:ARG:HH11	1.95	0.64
4:E:204:VAL:O	4:E:205:THR:C	2.34	0.64
2:A:2774:C:OP2	4:E:260:GLN:NE2	2.30	0.64
5:F:105:LYS:O	5:F:106:GLU:C	2.36	0.64
5:F:6:TYR:HE1	5:F:139:VAL:CB	2.08	0.64
5:F:155:SER:O	5:F:158:GLU:OE2	2.16	0.64
5:F:36:ARG:N	5:F:39:GLN:NE2	2.46	0.64
9:N:12:VAL:HG13	9:N:13:ASP:N	1.95	0.64
9:N:27:ALA:HB1	9:N:30:ALA:HB3	1.79	0.64
9:N:38:VAL:C	9:N:39:VAL:HG22	2.17	0.64
9:N:54:VAL:HG11	9:N:138:THR:CB	2.28	0.64
9:N:93:ARG:O	9:N:94:GLY:C	2.35	0.64
10:O:105:GLU:O	10:O:108:ASP:N	2.31	0.64
10:O:23:LYS:HG3	10:O:24:VAL:N	2.11	0.64
12:Q:143:VAL:CG2	12:Q:144:THR:H	2.06	0.64
12:Q:91:HIS:H	12:Q:111:THR:CG2	2.09	0.64
19:R:43:GLU:O	19:R:44:LEU:C	2.35	0.64
19:R:45:ARG:O	19:R:49:ASP:HB2	1.98	0.64
21:V:83:ARG:O	21:V:84:THR:CG2	2.46	0.64
21:V:93:ILE:O	21:V:95:ILE:CD1	2.45	0.64
15:W:17:VAL:C	15:W:20:VAL:HG23	2.18	0.64
22:2:49:LEU:O	22:2:53:ILE:HG13	1.98	0.64
2:A:1598:C:H5''	16:X:34:LYS:HG3	1.62	0.64
16:X:25:GLN:CA	16:X:26:PHE:CD1	2.81	0.64
6:G:105:SER:OG	6:G:131:THR:HG21	1.96	0.64
2:A:1059:G:C1'	31:K:127:ILE:HD13	2.28	0.64
2:A:1545:A:H3'	2:A:545(A):A:O4'	1.97	0.64
17:Y:9:LYS:HE3	17:Y:13:ARG:HH12	1.59	0.64
2:A:176:G:H21	2:A:177:G:H1'	1.63	0.64
23:3:6:VAL:CG2	23:3:54:VAL:HG23	2.26	0.64
26:5:16:ARG:O	26:5:19:ARG:CB	2.45	0.64
15:W:39:THR:CA	26:5:28:PRO:HG3	2.27	0.64
26:5:46:CYS:H	26:5:49:CYS:HB2	1.63	0.64
2:A:1789:A:H5''	3:D:224:VAL:HG12	1.78	0.64
2:A:2320:A:H61	13:S:13:ARG:C	1.83	0.64
2:A:2452:C:N4	2:A:2453:A:N6	2.46	0.64
2:A:2623:G:H5'	2:A:2826:A:O2'	1.97	0.64
2:A:85:G:P	17:Y:65:VAL:CG2	2.84	0.64
3:D:166:LYS:O	3:D:167:GLU:OE1	2.15	0.64
4:E:44:TYR:CD2	4:E:307:LEU:C	2.70	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:70:VAL:C	4:E:71:THR:HG23	2.18	0.64
5:F:145:GLU:HG3	5:F:196:THR:HG21	1.79	0.64
5:F:223:LEU:C	5:F:231:ARG:HD2	2.17	0.64
5:F:236:THR:O	5:F:239:ALA:CA	2.46	0.64
7:H:67:THR:O	7:H:70:LEU:CB	2.46	0.64
10:O:101:PRO:HA	10:O:120:GLU:O	1.97	0.64
2:A:2727:G:H4'	10:O:70:ARG:CZ	2.28	0.64
12:Q:51:GLU:N	12:Q:51:GLU:CD	2.51	0.64
12:Q:35:ASN:N	12:Q:75:SER:HA	2.13	0.64
19:R:20:LEU:CD2	19:R:24:GLN:CD	2.66	0.64
19:R:89:ASP:OD1	19:R:90:ARG:HG3	1.95	0.64
15:W:72:LYS:HB3	15:W:106:ILE:HG21	1.80	0.64
15:W:23:LEU:CD1	15:W:35:ILE:CG2	2.76	0.64
8:I:145:VAL:O	8:I:146:THR:HB	1.97	0.64
31:K:113:MET:N	31:K:114:PRO:HD2	2.13	0.64
31:K:38:PHE:CZ	31:K:66:PHE:O	2.51	0.64
16:X:75:GLN:O	16:X:77:VAL:N	2.31	0.64
2:A:1742:C:H2'	2:A:1743:G:O4'	1.98	0.64
27:6:21:TYR:CE1	27:6:43:VAL:HG21	2.33	0.64
2:A:1036:G:OP1	7:H:58:LYS:HD2	1.98	0.64
2:A:17:G:P	26:5:13:LYS:NZ	2.65	0.64
2:A:2065:C:N4	2:A:2445:G:N1	2.40	0.64
2:A:2250:G:H5''	12:Q:102:ARG:HD3	1.79	0.64
2:A:2372:G:C2	2:A:2373:G:C5	2.86	0.64
2:A:2392:A:C8	2:A:2393:A:N7	2.65	0.64
2:A:2410:G:N9	2:A:2411:A:N7	2.46	0.64
2:A:2428:G:C3'	2:A:2428:G:C8	2.80	0.64
2:A:2454:G:O2'	2:A:2455:G:C5'	2.46	0.64
2:A:2511:U:H2'	2:A:2512:C:C5'	2.27	0.64
2:A:2561:A:C8	2:A:2561:A:H3'	2.32	0.64
2:A:2576:G:OP1	2:A:2576:G:C3'	2.43	0.64
2:A:2603:G:H2'	2:A:2604:U:O5'	1.97	0.64
2:A:2611:U:C3'	2:A:2611:U:H6	2.11	0.64
2:A:2717:G:C6	2:A:2718:G:N7	2.66	0.64
2:A:2741:A:C2'	2:A:2742:C:C5'	2.57	0.64
2:A:343:C:N3	2:A:344:G:C2	2.66	0.64
2:A:532:A:C3'	2:A:533:G:O4'	2.44	0.64
2:A:930:U:H2'	2:A:931:G:H1'	1.79	0.64
4:E:102:ASP:CG	4:E:104:PHE:HE1	1.96	0.64
4:E:212:GLY:O	4:E:214:VAL:N	2.31	0.64
4:E:228:ARG:O	4:E:229:GLN:C	2.35	0.64
4:E:93:GLN:O	4:E:94:ARG:HG3	1.98	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:11:HIS:O	6:G:15:GLU:HG3	1.98	0.64
6:G:21:VAL:HG22	6:G:132:VAL:HG23	1.80	0.64
6:G:95:THR:HG22	6:G:96:SER:H	1.62	0.64
7:H:10:ILE:CD1	7:H:49:ILE:HG12	2.25	0.64
7:H:87:GLU:OE2	7:H:162:ARG:CB	2.41	0.64
9:N:41:ALA:HB1	9:N:75:PRO:HB3	1.80	0.64
9:N:15:ARG:CG	9:N:43:ARG:CD	2.71	0.64
9:N:94:GLY:O	9:N:95:ARG:O	2.16	0.64
11:P:94:ARG:HG2	11:P:120:LEU:HD23	1.71	0.64
12:Q:51:GLU:CA	12:Q:118:ALA:HB2	2.17	0.64
13:S:33:ARG:CB	13:S:35:VAL:CG2	2.73	0.64
14:T:6:CYS:SG	14:T:31:PHE:CD2	2.91	0.64
21:V:59:GLU:OE2	21:V:99:GLN:HG2	1.98	0.64
15:W:24:ILE:CB	15:W:32:ALA:HB1	2.28	0.64
17:Y:103:LEU:CD2	17:Y:108:ARG:HB3	2.21	0.64
17:Y:29:ALA:O	17:Y:30:ASP:C	2.34	0.64
17:Y:31:LEU:O	17:Y:34:GLU:HG3	1.92	0.64
17:Y:46:ASP:N	17:Y:62:VAL:CB	2.61	0.64
22:2:27:LEU:O	22:2:30:ALA:HB3	1.98	0.64
2:A:1943:U:C1'	2:A:1945:G:C5'	2.74	0.64
2:A:1202:C:C2	2:A:1243:G:N2	2.64	0.64
24:0:36:ILE:H	24:0:68:VAL:CG2	2.10	0.64
25:4:11:PRO:O	25:4:12:CYS:HB2	1.97	0.64
2:A:1364:G:C3'	25:4:3:LYS:NZ	2.58	0.64
25:4:9:ALA:O	25:4:10:VAL:HG23	1.98	0.64
27:6:2:ALA:O	27:6:4:ASP:OD1	2.16	0.64
2:A:1189:A:OP2	2:A:1190:G:N7	2.31	0.64
2:A:1274:A:C5	2:A:1302:A:H2	2.16	0.64
2:A:1456:G:H1	2:A:2704:C:H42	1.46	0.64
2:A:1566:A:C2	3:D:212:HIS:ND1	2.66	0.64
2:A:1697:G:C3'	2:A:1698:A:H5'	2.27	0.64
2:A:2252:G:O5'	2:A:2252:G:H8	1.80	0.64
2:A:2313:C:C4	2:A:2314:C:C4	2.85	0.64
2:A:2421:G:P	27:6:2:ALA:O	2.56	0.64
2:A:2436:G:N1	2:A:2437:U:N3	2.45	0.64
2:A:2515:C:H2'	2:A:2515:C:O2	1.95	0.64
2:A:2605:U:C2'	2:A:2606:C:C5'	2.76	0.64
2:A:2717:G:C4	2:A:2718:G:N7	2.60	0.64
2:A:2737:G:C2	2:A:2738:A:C5	2.85	0.64
2:A:2839:G:N1	2:A:2840:C:C4	2.65	0.64
2:A:2840:C:H2'	2:A:2841:C:H6	1.59	0.64
2:A:397:G:H5''	25:4:59:PHE:HZ	1.61	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:24:G:N7	1:B:56:G:C4	2.66	0.64
3:D:65:ASP:OD1	3:D:66:PHE:CA	2.44	0.64
3:D:81:GLU:O	3:D:82:TYR:O	2.16	0.64
5:F:1:MET:O	5:F:18:LEU:HG	1.97	0.64
7:H:102:LEU:HD13	7:H:122:ILE:HD13	1.79	0.64
7:H:87:GLU:CG	7:H:162:ARG:O	2.34	0.64
7:H:41:THR:HB	7:H:52:THR:OG1	1.97	0.64
11:P:64:ILE:CD1	11:P:106:VAL:CG1	2.73	0.64
19:R:33:ARG:HB2	19:R:115:GLU:HB3	1.77	0.64
20:U:88:ILE:HB	21:V:52:GLY:HA2	1.79	0.64
17:Y:101:LEU:O	17:Y:102:ASP:C	2.36	0.64
17:Y:46:ASP:N	17:Y:62:VAL:HG11	2.12	0.64
17:Y:74:VAL:CB	17:Y:77:VAL:CG2	2.70	0.64
17:Y:58:GLU:H	17:Y:97:ARG:NH1	1.96	0.64
8:I:95:SER:C	8:I:98:ILE:CB	2.53	0.64
16:X:26:PHE:HD1	16:X:26:PHE:N	1.94	0.64
31:K:67:THR:O	31:K:68:PHE:HB2	1.98	0.64
2:A:1559:G:N1	2:A:1560:G:H4'	2.13	0.64
2:A:2262:U:H5	24:O:14:ARG:NH1	1.94	0.63
25:4:23:GLU:CD	25:4:29:PRO:CG	2.57	0.63
2:A:2624:G:H1'	26:5:22:HIS:HE2	1.62	0.63
27:6:19:GLY:CA	27:6:44:ALA:HB2	2.24	0.63
27:6:41:ASP:CB	27:6:46:LYS:NZ	2.47	0.63
2:A:2299:G:H2'	2:A:2300:G:H8	1.63	0.63
2:A:2353:G:H1	2:A:2364:C:H41	1.31	0.63
2:A:2374:C:H2'	2:A:2375:G:C8	2.33	0.63
2:A:2386:C:H2'	2:A:2387:U:C6	2.34	0.63
2:A:2507:C:C5	2:A:2508:G:N7	2.66	0.63
2:A:1129:A:H2	2:A:2570:G:C8	2.16	0.63
2:A:2531:A:H2	2:A:2658:C:H1'	1.59	0.63
2:A:2700:C:H2'	2:A:2701:C:O4'	1.97	0.63
2:A:2881:C:C5	2:A:2882:A:N7	2.66	0.63
1:B:12:C:N3	13:S:10:MET:HE1	2.11	0.63
2:A:2218:G:C2'	3:D:146:LYS:HE3	2.28	0.63
3:D:175:LEU:HD12	3:D:179:GLU:CA	2.27	0.63
2:A:1568:G:C5'	3:D:60:GLN:CG	2.71	0.63
3:D:75:GLY:HA3	3:D:115:ILE:C	2.17	0.63
4:E:222:ARG:CD	4:E:232:ARG:O	2.45	0.63
4:E:201:VAL:HG13	4:E:310:PHE:C	2.18	0.63
2:A:606:U:OP1	5:F:104:ASP:N	2.31	0.63
5:F:150:THR:CB	5:F:207:LEU:HD21	2.28	0.63
5:F:211:ASP:CG	5:F:211:ASP:O	2.36	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:49:PRO:CG	6:G:73:VAL:HG23	2.28	0.63
6:G:93:LEU:CD2	6:G:97:GLN:OE1	2.36	0.63
10:O:43:VAL:HG11	10:O:54:LYS:HA	1.80	0.63
10:O:85:VAL:O	10:O:87:ILE:CD1	2.45	0.63
2:A:389:G:O6	11:P:54:PRO:HB3	1.98	0.63
12:Q:94:ARG:CG	12:Q:107:LYS:H	2.10	0.63
12:Q:12:PRO:CB	12:Q:20:ILE:CD1	2.73	0.63
12:Q:31:PHE:O	12:Q:85:ILE:HD11	1.99	0.63
19:R:19:ALA:O	19:R:20:LEU:O	2.15	0.63
19:R:44:LEU:HD13	19:R:48:VAL:HG21	0.67	0.63
13:S:27:LEU:O	13:S:28:LYS:C	2.36	0.63
20:U:65:ILE:HD11	20:U:96:ALA:HB2	1.76	0.63
15:W:39:THR:OG1	15:W:40:ASN:N	2.31	0.63
15:W:6:ILE:HG12	15:W:7:ALA:H	1.63	0.63
17:Y:71:VAL:HG22	17:Y:93:THR:CA	2.28	0.63
18:Z:3:LEU:O	18:Z:56:VAL:CG2	2.46	0.63
16:X:25:GLN:N	16:X:26:PHE:CE1	2.66	0.63
16:X:6:LYS:HZ2	16:X:29:ASP:CA	2.08	0.63
31:K:102:ARG:O	31:K:103:LYS:C	2.36	0.63
7:H:53:ARG:CB	7:H:56:ASP:OD1	2.21	0.63
23:3:26:LEU:HD21	23:3:46:ASN:ND2	2.11	0.63
25:4:21:VAL:O	25:4:22:MET:HB2	1.97	0.63
26:5:56:GLN:C	26:5:57:VAL:HG23	2.18	0.63
28:7:30:ILE:N	28:7:33:ARG:HD2	2.11	0.63
2:A:1774:C:O3'	2:A:1979:C:O2'	2.10	0.63
2:A:1799:G:H21	3:D:153:LEU:HD11	1.62	0.63
2:A:2436:G:C2	2:A:2437:U:N1	2.66	0.63
2:A:2478:A:N7	2:A:2479:G:N7	2.46	0.63
2:A:2453:A:O3'	2:A:2572:A:O2'	2.15	0.63
2:A:2604:U:H2'	2:A:2605:U:C5	2.33	0.63
2:A:2616:C:H2'	2:A:2617:C:C6	2.32	0.63
2:A:2676:C:H3'	2:A:2676:C:H6	1.61	0.63
2:A:2801:A:C2	2:A:2895:U:C1'	2.76	0.63
2:A:790:C:OP1	2:A:1781:C:N4	2.31	0.63
3:D:103:ILE:HG12	3:D:104:ILE:HD12	0.63	0.63
3:D:105:ALA:H	3:D:106:PRO:HD3	1.61	0.63
4:E:217:TRP:CE2	4:E:251:PRO:HB3	2.33	0.63
4:E:206:LYS:C	4:E:257:GLY:CA	2.67	0.63
7:H:123:GLU:O	7:H:125:PRO:HD2	1.99	0.63
7:H:57:GLU:O	7:H:58:LYS:C	2.37	0.63
10:O:17:ARG:C	10:O:18:GLU:HG3	2.18	0.63
11:P:106:VAL:HG23	11:P:123:ASP:H	1.62	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:Q:33:MET:C	12:Q:83:PHE:HB2	2.18	0.63
19:R:42:LYS:C	19:R:43:GLU:OE2	2.36	0.63
13:S:27:LEU:HA	13:S:33:ARG:CZ	2.27	0.63
13:S:53:ASN:C	13:S:55:ASP:N	2.48	0.63
2:A:535:C:H5''	20:U:53:LYS:CE	2.28	0.63
21:V:39:PHE:CD2	21:V:41:GLY:N	2.66	0.63
17:Y:30:ASP:O	17:Y:31:LEU:C	2.37	0.63
18:Z:67:LYS:CA	18:Z:67:LYS:HZ2	2.05	0.63
8:I:79:ILE:HD12	8:I:79:ILE:N	2.14	0.63
2:A:1338:G:HO2'	16:X:13:LYS:NZ	1.91	0.63
25:4:6:HIS:CG	25:4:56:VAL:CG2	2.63	0.63
26:5:46:CYS:O	26:5:49:CYS:N	2.28	0.63
28:7:43:THR:O	28:7:44:VAL:C	2.36	0.63
28:7:8:ASN:HB2	28:7:11:LYS:HB2	1.80	0.63
2:A:1263:U:C4'	26:5:16:ARG:NH2	2.61	0.63
2:A:1790:C:OP2	3:D:225:ARG:N	2.28	0.63
2:A:2098:U:N3	2:A:2191:G:N1	2.41	0.63
2:A:2103:C:N3	2:A:2187:G:C6	2.65	0.63
2:A:2199:A:C3'	2:A:2205:C:C6	2.76	0.63
2:A:2234:G:N1	2:A:2235:G:C4	2.66	0.63
2:A:2319:G:P	2:A:2320:A:OP1	2.56	0.63
2:A:2345:G:H21	2:A:2381:C:H3'	1.64	0.63
2:A:2391:G:O2'	2:A:2392:A:C5'	2.35	0.63
2:A:2429:G:H5''	2:A:2430:A:OP2	1.94	0.63
2:A:2446:G:N3	2:A:2501:C:H5	1.88	0.63
2:A:2543:G:N7	2:A:2544:G:C5	2.63	0.63
2:A:2653:U:N1	2:A:2654:A:N7	2.46	0.63
2:A:2864:G:C2'	2:A:2865:U:H6	2.09	0.63
2:A:2631:G:C4'	2:A:2892:A:OP1	2.34	0.63
2:A:674:G:C4'	5:F:69:HIS:HA	2.27	0.63
3:D:103:ILE:C	3:D:104:ILE:HD12	2.18	0.63
3:D:175:LEU:HD21	3:D:180:VAL:C	2.18	0.63
4:E:175:ASP:O	4:E:176:HIS:C	2.34	0.63
4:E:198:TYR:CZ	4:E:267:ARG:HB3	2.33	0.63
2:A:2679:A:H2'	4:E:300:VAL:HG13	1.80	0.63
5:F:31:ILE:O	5:F:32:GLY:C	2.35	0.63
7:H:126:SER:O	7:H:128:THR:N	2.31	0.63
7:H:91:VAL:N	7:H:159:LYS:CE	2.61	0.63
8:I:9:VAL:O	8:I:10:LYS:HB3	1.97	0.63
9:N:47:THR:O	9:N:53:ILE:HD11	1.98	0.63
10:O:99:PHE:HD2	14:T:24:LYS:HE3	1.62	0.63
12:Q:118:ALA:O	12:Q:119:ASN:CB	2.46	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:Q:152:SER:O	12:Q:155:GLY:N	2.30	0.63
19:R:55:ALA:CB	19:R:79:LEU:HD21	2.28	0.63
1:B:50:G:P	13:S:74:PRO:HB2	2.37	0.63
20:U:28:ARG:O	20:U:29:SER:C	2.36	0.63
20:U:94:VAL:O	20:U:98:ILE:HD13	0.82	0.63
21:V:61:VAL:HG22	21:V:97:GLY:C	2.19	0.63
15:W:24:ILE:HA	15:W:35:ILE:HD13	1.79	0.63
17:Y:28:SER:HB3	17:Y:99:THR:HG1	1.53	0.63
17:Y:46:ASP:CG	17:Y:98:VAL:CG1	2.67	0.63
8:I:68:LEU:CG	8:I:108:LEU:HD11	2.26	0.63
2:A:144:C:OP1	16:X:36:GLU:OE2	2.16	0.63
16:X:13:LYS:HA	16:X:16:ASN:OD1	1.96	0.63
16:X:14:ALA:HB1	16:X:18:MET:HE1	1.80	0.63
2:A:145:G:C4'	16:X:1:SER:HB2	2.25	0.63
31:K:100:VAL:HG21	31:K:137:ILE:CG2	2.28	0.63
2:A:2898:U:C2	2:A:2899:G:C8	2.86	0.63
2:A:265:A:N6	2:A:281:G:H5'	2.13	0.63
2:A:1482:U:C3'	2:A:1482:U:C6	2.80	0.63
25:4:30:GLU:C	25:4:31:ILE:CD1	2.47	0.63
19:R:100:LEU:C	26:5:44:HIS:CD2	2.72	0.63
2:A:584:C:N4	2:A:1256:G:H1	1.94	0.63
2:A:2579:C:O2'	2:A:2580:U:H5'	1.96	0.63
2:A:2616:C:C2	2:A:2617:C:C6	2.86	0.63
2:A:2619:C:H2'	2:A:2620:C:O5'	1.98	0.63
2:A:2655:G:C2'	2:A:2655:G:N3	2.61	0.63
2:A:2845:G:O2'	2:A:2846:G:C4'	2.41	0.63
2:A:2861:G:H5''	2:A:2861:G:C8	2.26	0.63
2:A:793:A:OP1	2:A:2071:A:O2'	2.15	0.63
2:A:848:G:H2'	2:A:849:A:H8	1.62	0.63
3:D:174:ARG:CG	3:D:174:ARG:NH1	2.49	0.63
2:A:2679:A:C2'	4:E:300:VAL:HG12	2.29	0.63
2:A:2733:A:N3	4:E:318:ASN:CB	2.60	0.63
4:E:45:LYS:N	4:E:74:GLU:OE1	2.31	0.63
5:F:103:ASN:HB2	5:F:106:GLU:CG	2.29	0.63
5:F:20:ASP:O	5:F:21:VAL:C	2.36	0.63
5:F:39:GLN:O	5:F:42:ARG:N	2.30	0.63
9:N:19:MET:HG2	9:N:132:LEU:HD11	1.80	0.63
9:N:60:ARG:CB	9:N:71:TYR:HD2	2.10	0.63
2:A:1006:C:O2'	9:N:86:MET:HB3	1.98	0.63
10:O:17:ARG:HH21	10:O:47:THR:C	2.02	0.63
10:O:14:SER:OG	10:O:86:ILE:HD12	1.98	0.63
11:P:114:VAL:CG2	11:P:133:VAL:N	2.41	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:Q:15:THR:O	12:Q:16:ARG:CG	2.39	0.63
19:R:22:ARG:HG3	19:R:26:LYS:CE	2.23	0.63
13:S:23:ARG:HH21	13:S:35:VAL:CG2	2.10	0.63
13:S:81:ALA:C	13:S:83:LEU:N	2.51	0.63
20:U:113:SER:O	20:U:115:ASN:CA	2.46	0.63
17:Y:20:HIS:HA	17:Y:67:LEU:CD2	2.27	0.63
18:Z:55:THR:HG23	18:Z:58:GLY:HA2	1.80	0.63
8:I:108:LEU:HD23	8:I:109:LYS:N	2.13	0.63
6:G:53:LYS:O	6:G:54:ALA:HB2	1.97	0.63
31:K:132:ALA:O	31:K:137:ILE:C	2.37	0.63
2:A:2651:C:C2	2:A:2670:A:C2	2.85	0.63
2:A:1804:C:H42	2:A:1813:G:H1	1.47	0.63
24:0:36:ILE:N	24:0:68:VAL:HG22	2.12	0.63
25:4:17:GLN:CB	25:4:33:VAL:HB	2.28	0.63
27:6:2:ALA:CB	27:6:11:LYS:HE3	2.28	0.63
2:A:592:G:C2'	29:8:3:LYS:HE3	2.18	0.63
29:8:4:MET:SD	29:8:4:MET:N	2.72	0.63
2:A:1163:G:C2	2:A:1164:G:C8	2.86	0.63
2:A:126:A:OP2	28:7:44:VAL:HG11	1.97	0.63
2:A:1664:A:H8	2:A:1664:A:H3'	1.63	0.63
2:A:2197:U:H2'	2:A:2224:G:N1	2.12	0.63
2:A:2252:G:H3'	2:A:2252:G:H8	1.63	0.63
2:A:2317:C:C4	2:A:2318:G:C6	2.87	0.63
2:A:199:A:N7	2:A:2434:A:N6	2.46	0.63
2:A:2446:G:C5'	2:A:2446:G:C8	2.77	0.63
2:A:2462:U:H1'	2:A:2491:U:O4	1.99	0.63
2:A:2485:G:N3	2:A:2486:G:C1'	2.61	0.63
2:A:1129:A:N1	2:A:2570:G:C1'	2.55	0.63
2:A:2644:G:P	2:A:2644:G:H8	2.21	0.63
2:A:2644:G:N1	2:A:2645:G:N2	2.46	0.63
2:A:2786:U:H2'	2:A:2787:C:H6	1.64	0.63
2:A:2803:C:H2'	2:A:2803:C:O2	1.99	0.63
2:A:2810:A:H8	2:A:2811:G:O4'	1.68	0.63
2:A:291:C:C2'	2:A:292:C:H5'	2.28	0.63
2:A:566:U:OP2	21:V:81:ARG:NH2	2.32	0.63
2:A:602:G:H2'	2:A:655:A:C2	2.34	0.63
2:A:614:U:H3'	2:A:615:G:C4'	2.19	0.63
2:A:825:C:C4'	2:A:2428:G:O6	2.46	0.63
3:D:131:LEU:O	3:D:132:GLU:C	2.36	0.63
3:D:152:GLN:O	3:D:153:LEU:CB	2.44	0.63
2:A:1817:G:OP1	3:D:63:ILE:CD1	2.46	0.63
4:E:192:ILE:O	4:E:194:ARG:HG2	1.99	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:47:GLY:HA2	4:E:305:LYS:HG2	1.79	0.63
5:F:168:ARG:C	5:F:193:LEU:HG	2.18	0.63
2:A:443:A:N7	5:F:43:LYS:HD3	2.13	0.63
6:G:20:LYS:HA	6:G:76:ARG:CG	2.28	0.63
7:H:40:MET:CB	7:H:64:HIS:CE1	2.81	0.63
11:P:114:VAL:HG21	11:P:133:VAL:H	1.54	0.63
19:R:44:LEU:HD13	19:R:48:VAL:HG23	1.72	0.63
10:O:80:ASP:N	14:T:22:VAL:O	2.31	0.63
20:U:17:VAL:O	20:U:20:ARG:HB2	1.99	0.63
2:A:994:C:C3'	20:U:54:LYS:HE2	2.29	0.63
21:V:49:GLU:CA	21:V:53:LYS:HD2	2.28	0.63
17:Y:41:ARG:C	17:Y:112:LEU:CB	2.62	0.63
18:Z:160:LEU:HD12	18:Z:160:LEU:N	2.13	0.63
18:Z:47:SER:O	18:Z:48:THR:C	2.35	0.63
22:2:43:PRO:O	22:2:44:GLY:C	2.34	0.63
22:2:48:GLU:O	22:2:51:LYS:N	2.32	0.63
9:N:5:GLU:N	9:N:109:TYR:HE2	1.97	0.63
2:A:1779:U:H3'	2:A:1779:U:C6	2.34	0.63
24:0:46:LYS:N	24:0:46:LYS:CD	2.60	0.63
24:0:69:PHE:C	24:0:70:ILE:HG23	2.17	0.63
23:3:53:LEU:O	23:3:53:LEU:HD23	1.99	0.63
25:4:63:PHE:HD2	25:4:69:ARG:NH2	1.96	0.63
26:5:31:THR:OG1	26:5:32:GLU:N	2.32	0.63
27:6:11:LYS:HE2	27:6:26:LYS:HE2	1.80	0.63
29:8:52:LYS:C	29:8:54:GLU:N	2.30	0.63
2:A:1034:G:H5'	30:9:18:ARG:CZ	2.28	0.63
2:A:2189:U:C2'	2:A:2190:G:H8	2.12	0.63
2:A:2241:A:H2'	2:A:2242:G:H8	1.64	0.63
2:A:2369:A:O2'	2:A:2370:G:H5'	1.98	0.63
2:A:2396:G:H2'	2:A:2396:G:N3	2.11	0.63
2:A:2454:G:C4	2:A:2455:G:C8	2.87	0.63
2:A:2509:G:C2	2:A:2580:U:C2	2.87	0.63
2:A:2657:A:C6	2:A:2665:A:C5	2.86	0.63
2:A:2523:G:C1'	2:A:2765:A:N7	2.61	0.63
2:A:2881:C:HO2'	2:A:2882:A:P	2.21	0.63
2:A:2887:U:N3	2:A:2888:C:C5	2.66	0.63
4:E:176:HIS:O	4:E:179:ASP:CG	2.36	0.63
4:E:201:VAL:HG13	4:E:310:PHE:O	1.99	0.63
4:E:211:GLN:H	4:E:216:ARG:NH2	1.93	0.63
6:G:47:GLN:HE21	6:G:79:MET:HG3	1.63	0.63
7:H:34:ARG:HH12	7:H:73:ASN:CB	2.07	0.63
2:A:2093:G:H4'	8:I:29:PHE:CE1	2.34	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:39:ALA:O	8:I:44:LEU:HG	1.99	0.63
9:N:12:VAL:CB	9:N:38:VAL:HG21	2.29	0.63
9:N:58:GLU:CA	9:N:61:VAL:HB	2.29	0.63
11:P:94:ARG:HD2	11:P:94:ARG:H	1.64	0.63
12:Q:47:GLU:OE2	12:Q:151:SER:HA	1.99	0.63
12:Q:66:ASN:O	12:Q:68:ALA:N	2.31	0.63
12:Q:85:ILE:HD12	12:Q:85:ILE:N	2.14	0.63
19:R:72:ASP:C	19:R:76:VAL:CG2	2.65	0.63
13:S:87:LEU:O	13:S:90:LEU:HB2	1.98	0.63
8:I:133:LEU:H	8:I:138:THR:HG22	1.61	0.63
8:I:141:LEU:HD13	8:I:142:LYS:CA	2.29	0.63
22:2:31:ARG:C	22:2:34:GLN:N	2.51	0.63
2:A:67:U:H2'	2:A:68:G:C8	2.34	0.63
7:H:169:ARG:HE	7:H:169:ARG:HA	1.63	0.63
2:A:227:A:N6	2:A:2407:G:H8	1.92	0.63
14:T:45:GLU:O	14:T:48:ASN:OD1	2.17	0.63
2:A:1418:G:N2	2:A:1580:A:C2	2.66	0.63
2:A:259:G:H2'	2:A:260:G:H8	1.63	0.63
2:A:1555:G:C8	2:A:1555:G:O5'	2.51	0.63
2:A:1034:G:O5'	30:9:18:ARG:NH2	2.32	0.63
30:9:7:VAL:CG2	30:9:36:GLN:HG3	2.29	0.63
2:A:1278:A:O2'	19:R:27:SER:HB3	1.98	0.63
2:A:1274:A:C5	2:A:1302:A:C2	2.86	0.63
2:A:1819:A:OP1	3:D:154:VAL:C	2.37	0.63
2:A:2314:C:O2'	2:A:2315:G:H5'	1.96	0.63
2:A:2453:A:H61	2:A:2500:U:H3	1.46	0.63
2:A:2637:U:N3	2:A:2782:G:N1	2.47	0.63
2:A:2690:C:H2'	2:A:2691:C:OP2	1.99	0.63
2:A:2774:C:H5''	2:A:2774:C:C6	2.34	0.63
2:A:2843:G:C5	2:A:2844:G:C8	2.86	0.63
2:A:412:A:N6	2:A:2411:A:H1'	2.14	0.63
2:A:511:U:H5	2:A:512:G:N3	1.97	0.63
2:A:827:U:C4	2:A:2430:A:C6	2.86	0.63
3:D:179:GLU:C	3:D:180:VAL:HG23	2.19	0.63
4:E:80:ALA:CB	4:E:187:HIS:NE2	2.61	0.63
6:G:93:LEU:CD2	6:G:106:PHE:HD2	1.94	0.63
6:G:141:VAL:HA	6:G:144:ARG:NH1	2.13	0.63
6:G:141:VAL:HA	6:G:144:ARG:HH11	1.62	0.63
7:H:41:THR:HG22	7:H:52:THR:HG21	1.80	0.63
7:H:71:LEU:O	7:H:72:ALA:C	2.37	0.63
12:Q:130:PRO:HB2	12:Q:134:PHE:CZ	2.34	0.63
12:Q:142:LYS:HE3	12:Q:142:LYS:HA	1.79	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:Q:92:VAL:CG1	12:Q:111:THR:N	2.49	0.63
19:R:36:THR:HG21	19:R:40:LYS:HD3	1.78	0.63
2:A:995:C:OP2	20:U:54:LYS:CE	2.47	0.63
21:V:57:GLN:O	21:V:58:ALA:CB	2.47	0.63
21:V:61:VAL:HG12	21:V:95:ILE:HG22	0.70	0.63
21:V:93:ILE:C	21:V:95:ILE:HD11	2.19	0.63
15:W:14:PRO:HD3	15:W:99:ARG:O	1.99	0.63
17:Y:51:LEU:HD23	17:Y:52:ARG:HG3	1.81	0.63
17:Y:55:PHE:HE2	17:Y:89:ARG:HH22	1.46	0.63
18:Z:64:ALA:HB1	18:Z:84:TYR:O	1.99	0.63
16:X:6:LYS:HD2	16:X:27:ALA:CB	2.28	0.63
31:K:15:ALA:HA	31:K:46:THR:OG1	1.99	0.63
31:K:46:THR:CG2	31:K:54:LEU:HD12	2.12	0.63
17:Y:84:GLY:O	17:Y:85:GLU:C	2.37	0.63
2:A:1801:G:C8	2:A:1801:G:OP1	2.47	0.63
2:A:162:U:H4'	2:A:171:G:H21	1.64	0.63
29:8:16:ILE:CG2	29:8:22:VAL:HG22	2.29	0.63
29:8:50:LEU:CD2	29:8:51:ALA:CA	2.67	0.63
2:A:1156:A:N7	20:U:55:ARG:NH2	2.46	0.63
2:A:2234:G:C5	2:A:2235:G:N7	2.67	0.63
2:A:2286:A:C5'	2:A:2287:A:H4'	2.17	0.63
2:A:2322:A:N3	2:A:2322:A:H2'	2.14	0.63
2:A:2436:G:C6	2:A:2437:U:C5	2.87	0.63
2:A:1028:A:C2	2:A:2486:G:O2'	2.51	0.63
2:A:2538:C:HO2'	2:A:2539:C:P	2.19	0.63
2:A:2679:A:N3	4:E:300:VAL:CB	2.59	0.63
2:A:2716:U:O2'	2:A:2717:G:H5''	1.98	0.63
2:A:2737:G:C6	2:A:2738:A:N6	2.66	0.63
2:A:2819:G:C3'	2:A:2821:A:N6	2.42	0.63
2:A:535:C:C5'	20:U:53:LYS:HZ1	2.12	0.63
2:A:627:A:H2'	2:A:628:G:O4'	1.99	0.63
4:E:211:GLN:N	4:E:216:ARG:NH1	2.45	0.63
2:A:617:G:O3'	5:F:219:ASN:OD1	2.16	0.63
5:F:6:TYR:CD1	5:F:139:VAL:HG12	2.34	0.63
7:H:127:GLN:CG	7:H:128:THR:N	2.61	0.63
11:P:125:PHE:H	11:P:130:ARG:HH21	1.46	0.63
2:A:2251:G:P	12:Q:102:ARG:NE	2.69	0.63
13:S:76:GLY:O	13:S:82:TYR:CA	2.46	0.63
20:U:43:ALA:C	20:U:45:TYR:N	2.51	0.63
20:U:93:LYS:O	20:U:94:VAL:HB	1.99	0.63
21:V:42:GLY:HA3	21:V:54:TYR:HE2	1.56	0.63
18:Z:112:LEU:HD21	18:Z:172:LEU:N	2.14	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:Z:26:LYS:HG2	18:Z:27:GLU:HG3	1.81	0.63
18:Z:46:GLN:C	18:Z:49:THR:HG1	2.00	0.63
8:I:112:LYS:H	8:I:112:LYS:HD3	1.60	0.63
8:I:141:LEU:CD1	8:I:142:LYS:N	2.57	0.63
2:A:1339:G:C5'	16:X:13:LYS:HE3	2.28	0.63
16:X:23:LYS:O	16:X:68:LEU:CD2	2.46	0.63
2:A:2312:U:H5''	6:G:53:LYS:HA	1.76	0.63
3:D:139:LEU:HD13	3:D:139:LEU:O	1.92	0.63
16:X:76:GLU:CD	16:X:77:VAL:HG23	2.19	0.63
18:Z:96:VAL:HG13	18:Z:97:PRO:CD	2.16	0.63
2:A:359:A:O2'	2:A:360:G:C8	2.52	0.63
2:A:1944:U:O4'	2:A:1955:U:H1'	1.99	0.63
2:A:1270:C:C4'	2:A:1271:G:H5''	2.23	0.63
23:3:50:VAL:O	23:3:53:LEU:N	2.26	0.63
27:6:21:TYR:HE1	27:6:43:VAL:HG21	1.64	0.63
30:9:7:VAL:CG1	30:9:34:GLN:NE2	2.60	0.63
2:A:2051:A:C2	2:A:2618:G:O6	2.51	0.63
2:A:2398:U:H6	2:A:2398:U:O5'	1.82	0.63
2:A:2498:C:HO2'	2:A:2499:C:C5'	2.11	0.63
2:A:2745:C:C2'	2:A:2746:U:O5'	2.46	0.63
1:B:37:C:O2	13:S:111:PRO:CG	2.47	0.63
1:B:49:C:OP1	13:S:110:THR:OG1	2.13	0.63
3:D:110:LYS:CE	3:D:110:LYS:HA	2.29	0.63
3:D:116:MET:HG2	3:D:117:SER:H	1.63	0.63
4:E:206:LYS:H	4:E:257:GLY:C	2.01	0.63
6:G:135:VAL:O	6:G:135:VAL:CG1	2.47	0.63
9:N:83:ILE:HG12	9:N:84:ARG:H	1.48	0.63
10:O:3:GLN:HG2	10:O:4:GLN:H	1.63	0.63
11:P:71:GLU:C	11:P:73:VAL:N	2.52	0.63
11:P:77:ALA:HA	11:P:81:VAL:CG2	2.16	0.63
13:S:33:ARG:CB	13:S:35:VAL:HG23	2.29	0.63
20:U:13:ARG:NH1	20:U:13:ARG:H	1.95	0.63
20:U:59:ARG:O	20:U:60:LEU:C	2.36	0.63
21:V:71:ILE:C	21:V:88:GLN:HG3	2.20	0.63
17:Y:55:PHE:O	17:Y:58:GLU:HB2	1.97	0.63
18:Z:119:ASN:HB3	18:Z:120:LEU:CD2	2.29	0.63
18:Z:42:ALA:O	18:Z:43:PHE:C	2.36	0.63
31:K:38:PHE:HZ	31:K:66:PHE:N	1.96	0.63
2:A:1899:G:N2	2:A:1902:C:H41	1.96	0.63
24:0:49:GLN:N	24:0:49:GLN:HE21	1.97	0.62
24:0:68:VAL:O	24:0:69:PHE:HB2	1.93	0.62
2:A:2081:C:H5'	25:4:35:VAL:HG21	1.81	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:4:58:LYS:HD2	25:4:62:ARG:NH2	2.11	0.62
26:5:18:MET:O	26:5:19:ARG:O	2.17	0.62
28:7:33:ARG:O	28:7:34:ARG:C	2.36	0.62
2:A:991:C:C5	2:A:1185:C:N4	2.67	0.62
2:A:1966:A:C2	2:A:2593:U:C5'	2.80	0.62
2:A:2100:G:C1'	2:A:2190:G:N2	2.61	0.62
2:A:2320:A:H61	13:S:14:ARG:N	1.96	0.62
2:A:2354:G:H1'	24:0:32:LYS:HG2	1.80	0.62
2:A:2395:C:H6	2:A:2395:C:C3'	2.09	0.62
2:A:2579:C:C6	2:A:2579:C:H3'	2.34	0.62
2:A:2586:C:O2	2:A:2587:A:C8	2.52	0.62
2:A:2619:C:H2'	2:A:2620:C:C5'	2.28	0.62
2:A:2894:G:H2'	2:A:2894:G:N3	2.14	0.62
3:D:160:SER:O	3:D:176:ALA:CB	2.47	0.62
2:A:1789:A:C5'	3:D:224:VAL:CG1	2.77	0.62
3:D:85:ASN:ND2	3:D:86:ARG:HD2	2.14	0.62
4:E:251:PRO:O	4:E:252:GLN:NE2	2.32	0.62
5:F:104:ASP:HB2	5:F:105:LYS:HD2	1.81	0.62
6:G:23:VAL:HG12	6:G:130:VAL:HB	1.81	0.62
7:H:23:VAL:HG11	7:H:74:MET:SD	2.39	0.62
8:I:5:PHE:C	8:I:36:ALA:CB	2.66	0.62
9:N:95:ARG:O	9:N:97:ALA:N	2.32	0.62
10:O:79:PHE:N	10:O:79:PHE:CD2	2.66	0.62
10:O:11:ALA:C	10:O:99:PHE:HB2	2.18	0.62
11:P:145:LEU:N	11:P:145:LEU:HD12	2.04	0.62
2:A:911:A:N1	12:Q:16:ARG:HG2	2.09	0.62
19:R:22:ARG:HG2	19:R:26:LYS:NZ	2.14	0.62
13:S:122:ALA:HA	13:S:125:ALA:HB3	1.80	0.62
13:S:20:TYR:CD2	13:S:21:HIS:HD2	2.17	0.62
13:S:76:GLY:O	13:S:83:LEU:HD13	1.98	0.62
20:U:28:ARG:CA	20:U:31:GLN:HB2	2.12	0.62
2:A:1152:C:C5'	20:U:80:ILE:HG21	2.27	0.62
21:V:59:GLU:HG2	21:V:100:GLY:H	1.63	0.62
15:W:58:ALA:HA	15:W:62:HIS:CB	2.15	0.62
17:Y:41:ARG:HD2	17:Y:111:ARG:HA	1.81	0.62
2:A:294:A:O2'	17:Y:15:PRO:CG	2.47	0.62
18:Z:15:ASP:O	18:Z:16:GLU:CB	2.46	0.62
18:Z:40:ASP:HB2	18:Z:41:ARG:HE	1.60	0.62
8:I:133:LEU:HB2	8:I:138:THR:HA	1.80	0.62
22:2:24:LYS:O	22:2:26:GLU:OE2	2.17	0.62
6:G:57:THR:N	6:G:63:ILE:HA	2.13	0.62
31:K:56:VAL:HG22	31:K:70:ILE:HG12	1.78	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:66:LYS:O	8:I:69:LYS:HE2	1.99	0.62
2:A:1575:C:H2'	2:A:1576:U:O2	1.99	0.62
2:A:354:G:N3	2:A:355:G:N7	2.47	0.62
17:Y:109:GLU:O	17:Y:109:GLU:HG2	1.97	0.62
25:4:73:LYS:OXT	25:4:73:LYS:CG	2.43	0.62
26:5:15:LYS:O	26:5:16:ARG:O	2.17	0.62
27:6:42:PRO:O	27:6:44:ALA:N	2.32	0.62
28:7:34:ARG:HG2	28:7:35:ARG:N	2.13	0.62
29:8:16:ILE:HG22	29:8:17:THR:N	2.14	0.62
2:A:1657:C:OP1	4:E:232:ARG:C	2.37	0.62
2:A:2053:G:H1'	4:E:245:ARG:HG3	1.79	0.62
2:A:2253:G:O2'	2:A:2254:C:P	2.58	0.62
2:A:2281:C:HO2'	2:A:2282:G:P	2.21	0.62
2:A:2320:A:H1'	2:A:2333:A:H62	1.63	0.62
2:A:2395:C:H6	2:A:2395:C:O5'	1.81	0.62
2:A:2398:U:C6	2:A:2398:U:C3'	2.82	0.62
2:A:2475:C:O2'	2:A:2477:C:P	2.56	0.62
2:A:2472:G:H21	2:A:2529:G:H1	1.47	0.62
2:A:2608:G:C8	2:A:2608:G:H3'	2.34	0.62
2:A:2615:U:C2'	2:A:2616:C:C5'	2.75	0.62
2:A:10:G:C2	2:A:2629:A:C5	2.87	0.62
2:A:2671:A:H2'	2:A:2672:G:C8	2.33	0.62
2:A:2709:G:C3'	2:A:2710:C:H5'	2.28	0.62
2:A:2842:G:H1	2:A:2875:C:H42	1.47	0.62
2:A:496:G:H1'	15:W:61:ASN:HD22	1.64	0.62
2:A:531:C:H3'	2:A:532:A:H4'	1.80	0.62
3:D:161:ALA:N	3:D:162:GLN:NE2	2.45	0.62
3:D:95:TYR:HB2	3:D:99:GLU:O	1.99	0.62
4:E:79:ARG:NH1	4:E:105:HIS:N	2.32	0.62
7:H:128:THR:HG23	7:H:129:LYS:N	2.15	0.62
10:O:101:PRO:CA	10:O:120:GLU:O	2.47	0.62
10:O:31:ARG:C	10:O:32:TYR:CG	2.72	0.62
11:P:104:ASP:O	11:P:105:TYR:CB	2.46	0.62
12:Q:130:PRO:O	12:Q:133:GLU:N	2.31	0.62
13:S:115:VAL:O	13:S:118:ILE:CG2	2.47	0.62
13:S:86:LEU:CD2	13:S:124:ASP:CB	2.76	0.62
2:A:2334:G:N2	13:S:12:ARG:NE	2.47	0.62
14:T:10:GLY:H	14:T:52:THR:HB	1.64	0.62
2:A:994:C:C2'	20:U:54:LYS:HG2	2.28	0.62
17:Y:102:ASP:O	17:Y:103:LEU:CD2	2.47	0.62
18:Z:123:VAL:HB	18:Z:159:THR:HG23	1.81	0.62
18:Z:92:VAL:CA	18:Z:124:ALA:HB1	2.25	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:Z:163:ASP:OD2	18:Z:164:PRO:HD3	0.81	0.62
1:B:75:G:C1'	18:Z:22:VAL:CG2	2.74	0.62
22:2:14:ALA:O	22:2:17:GLU:HB2	1.98	0.62
16:X:25:GLN:HA	16:X:25:GLN:OE1	1.99	0.62
16:X:33:SER:H	16:X:36:GLU:HG3	1.63	0.62
2:A:2310:A:C5	6:G:55:LYS:NZ	2.66	0.62
31:K:85:ILE:O	31:K:86:GLU:O	2.16	0.62
7:H:170:LEU:CD1	7:H:170:LEU:C	2.62	0.62
2:A:2896:C:H6	2:A:2896:C:C3'	2.12	0.62
2:A:8:A:C2	2:A:2896:C:O2	2.52	0.62
2:A:1496:A:O5'	2:A:1496:A:C8	2.51	0.62
2:A:460:A:C8	2:A:461:C:C5	2.87	0.62
2:A:1556:C:H2'	2:A:1557:C:H6	1.64	0.62
2:A:1306:C:H2'	2:A:1307:A:O4'	1.99	0.62
2:A:1216:G:N2	2:A:1234:U:H1'	2.14	0.62
23:3:46:ASN:C	23:3:48:GLU:OE1	2.37	0.62
23:3:51:ALA:O	23:3:52:HIS:C	2.33	0.62
27:6:40:TYR:H	27:6:50:PHE:HE1	1.36	0.62
27:6:54:LYS:HZ2	27:6:54:LYS:HA	1.62	0.62
2:A:1287:A:C8	19:R:104:ARG:HD2	2.34	0.62
2:A:1809:A:O2'	2:A:1810:A:H5'	1.99	0.62
2:A:2081:C:H4'	25:4:35:VAL:HG21	1.82	0.62
2:A:2193:G:H2'	2:A:2194:G:O4'	1.99	0.62
2:A:2205:C:HO2'	2:A:2228:G:N2	1.97	0.62
2:A:2080:G:C6	2:A:2241:A:N1	2.67	0.62
2:A:2334:G:C5'	13:S:12:ARG:O	2.47	0.62
2:A:2418:A:C2'	2:A:2419:U:O4'	2.47	0.62
2:A:2615:U:H2'	2:A:2616:C:H6	1.63	0.62
2:A:2628:C:H1'	2:A:2781:A:C2'	2.20	0.62
2:A:10:G:C2	2:A:2629:A:C6	2.88	0.62
2:A:2663:G:C8	2:A:2664:G:N7	2.67	0.62
2:A:2838:G:C2	2:A:2881:C:C2	2.88	0.62
2:A:307:G:H21	2:A:330:A:H62	1.47	0.62
2:A:602:G:N2	2:A:655:A:H2'	2.10	0.62
2:A:830:G:O6	2:A:2446:G:C1'	2.47	0.62
3:D:172:ILE:N	3:D:182:MET:HE2	2.15	0.62
3:D:197:GLY:O	3:D:199:ARG:N	2.32	0.62
3:D:90:ILE:CG2	3:D:91:ALA:N	2.61	0.62
2:A:2682:U:O2'	4:E:61:PRO:HD3	1.99	0.62
5:F:216:SER:O	5:F:217:GLU:CB	2.48	0.62
7:H:30:GLY:CA	7:H:78:VAL:O	2.46	0.62
8:I:43:ASN:O	8:I:44:LEU:C	2.35	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:N:101:VAL:O	9:N:102:ARG:HG3	1.99	0.62
10:O:65:THR:HG1	10:O:67:ARG:HG2	1.63	0.62
12:Q:58:HIS:N	12:Q:61:LEU:CG	2.62	0.62
12:Q:82:LYS:CB	12:Q:123:ILE:HG22	2.29	0.62
19:R:96:ARG:HG2	19:R:115:GLU:HG3	1.81	0.62
13:S:100:ALA:H	13:S:127:LEU:CD2	2.12	0.62
13:S:97:VAL:HG12	13:S:98:GLU:N	2.13	0.62
20:U:69:ALA:O	20:U:79:PHE:CZ	2.52	0.62
15:W:17:VAL:HA	15:W:20:VAL:HG21	1.80	0.62
17:Y:26:THR:O	17:Y:27:LEU:CG	2.46	0.62
17:Y:32:ARG:O	17:Y:34:GLU:CA	2.47	0.62
22:2:29:ASN:C	22:2:34:GLN:HG2	2.19	0.62
22:2:61:GLY:O	22:2:62:GLU:C	2.38	0.62
16:X:31:ARG:NE	16:X:31:ARG:HA	2.14	0.62
16:X:52:VAL:C	16:X:53:ASN:HD22	2.02	0.62
2:A:440:G:H5''	17:Y:2:LYS:HB3	1.81	0.62
17:Y:81:LYS:HG2	17:Y:82:THR:N	2.12	0.62
2:A:1364:G:C4	25:4:3:LYS:NZ	2.62	0.62
25:4:63:PHE:O	25:4:66:SER:N	2.33	0.62
27:6:48:VAL:HG12	27:6:49:VAL:O	1.99	0.62
29:8:9:MET:O	29:8:14:ILE:CG1	2.48	0.62
2:A:1819:A:OP2	3:D:153:LEU:CG	2.40	0.62
2:A:2075:U:O2'	2:A:2596:U:C2	2.50	0.62
2:A:2258:C:OP2	2:A:2258:C:O4'	2.18	0.62
2:A:2268:A:H3'	2:A:2268:A:C8	2.35	0.62
2:A:2391:G:H2'	2:A:2392:A:OP2	1.98	0.62
2:A:2427:C:H6	2:A:2427:C:H5'	1.64	0.62
2:A:2454:G:C5	2:A:2455:G:C8	2.87	0.62
2:A:2468:G:C2'	2:A:2469:A:H5'	2.29	0.62
2:A:2507:C:N4	2:A:2582:G:N1	2.47	0.62
2:A:2692:C:H2'	2:A:2693:A:O5'	2.00	0.62
2:A:2740:A:C6	2:A:2764:A:C5	2.68	0.62
2:A:2638:G:C2	2:A:2778:A:N6	2.62	0.62
2:A:2779:U:H5'	2:A:2781:A:C8	2.35	0.62
2:A:2837:G:C6	2:A:2882:A:C6	2.87	0.62
2:A:396:G:OP1	25:4:10:VAL:CA	2.43	0.62
2:A:530:G:H1'	2:A:532:A:OP2	1.99	0.62
3:D:119:PRO:O	3:D:133:ASN:ND2	2.31	0.62
4:E:265:ASN:C	4:E:265:ASN:ND2	2.52	0.62
6:G:49:PRO:HB2	6:G:72:LYS:CA	2.28	0.62
7:H:88:LEU:O	7:H:88:LEU:HD23	1.98	0.62
9:N:20:GLY:C	9:N:22:VAL:H	2.01	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:O:71:ARG:NH2	10:O:77:ILE:HG21	2.15	0.62
11:P:67:ARG:O	11:P:68:GLU:C	2.36	0.62
12:Q:50:VAL:HG13	12:Q:51:GLU:OE1	1.98	0.62
12:Q:58:HIS:CE1	12:Q:59:ASN:CB	2.77	0.62
19:R:52:ILE:O	19:R:55:ALA:N	2.32	0.62
6:G:145:ASP:HB2	13:S:15:GLU:CG	2.28	0.62
2:A:535:C:H5''	20:U:53:LYS:NZ	2.15	0.62
21:V:39:PHE:CE2	21:V:41:GLY:CA	2.82	0.62
17:Y:66:ASP:C	17:Y:68:ASP:N	2.53	0.62
18:Z:62:PHE:CE2	18:Z:87:THR:CB	2.82	0.62
18:Z:51:LEU:HA	18:Z:65:LEU:HD12	1.82	0.62
22:2:55:ARG:O	22:2:58:THR:CA	2.48	0.62
22:2:5:VAL:HG12	22:2:6:GLN:H	0.54	0.62
6:G:28:GLY:N	6:G:69:ILE:HG21	2.15	0.62
31:K:11:LEU:HD11	31:K:28:LEU:CD1	2.29	0.62
2:A:1324:G:H1'	2:A:1616:A:H62	1.64	0.62
13:S:70:GLY:O	13:S:71:TRP:CE3	2.52	0.62
24:0:31:VAL:O	24:0:32:LYS:C	2.37	0.62
24:0:43:THR:HG23	24:0:75:GLY:HA3	1.73	0.62
2:A:929:G:N2	23:3:43:ILE:N	2.42	0.62
2:A:249:C:O2	29:8:11:LYS:NZ	2.32	0.62
2:A:2014:A:H2'	2:A:2015:A:C2	2.34	0.62
2:A:2046:G:OP1	26:5:19:ARG:N	2.33	0.62
2:A:2211:G:N3	2:A:2211:G:C2'	2.62	0.62
2:A:2246:G:N1	2:A:2426:A:H1'	2.14	0.62
2:A:2333:A:O4'	2:A:2335:A:N3	2.32	0.62
2:A:830:G:C8	2:A:2448:A:C8	2.87	0.62
2:A:2533:A:H2'	2:A:2534:A:H8	1.64	0.62
2:A:2603:G:H8	2:A:2603:G:H5''	1.64	0.62
2:A:2684:U:C4	2:A:2725:A:N6	2.67	0.62
2:A:2822:G:OP2	2:A:2822:G:C8	2.52	0.62
2:A:2839:G:O2'	19:R:92:GLY:CA	2.38	0.62
2:A:2863:C:N3	2:A:2864:G:N7	2.47	0.62
6:G:47:GLN:NE2	6:G:79:MET:HG3	2.13	0.62
9:N:12:VAL:C	9:N:38:VAL:HG22	2.20	0.62
12:Q:65:ARG:NE	12:Q:122:PHE:CD2	2.67	0.62
12:Q:152:SER:CB	12:Q:153:PRO:HD2	2.29	0.62
2:A:2840:C:O3'	19:R:53:HIS:NE2	2.32	0.62
20:U:117:ARG:CD	20:U:118:GLN:H	2.11	0.62
21:V:33:VAL:O	21:V:62:GLU:CA	2.28	0.62
18:Z:139:THR:O	18:Z:140:LYS:HB2	2.00	0.62
8:I:68:LEU:HA	8:I:72:LEU:HD21	1.81	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1151:G:H4'	20:U:81:ASN:OD1	1.98	0.62
22:2:20:LEU:CD2	22:2:53:ILE:HG23	2.29	0.62
16:X:6:LYS:NZ	16:X:29:ASP:N	2.46	0.62
16:X:52:VAL:CG2	16:X:66:VAL:HG22	2.29	0.62
31:K:75:ALA:HB2	31:K:112:LYS:HZ3	1.62	0.62
2:A:1916:A:H8	2:A:1916:A:OP2	1.82	0.62
2:A:108:U:H2'	2:A:109:G:C8	2.34	0.62
2:A:1358:G:H3'	2:A:1371:G:H1	1.64	0.62
2:A:1222:C:H42	2:A:1227:A:H61	1.45	0.62
23:3:8:LEU:CD2	23:3:32:GLN:N	2.59	0.62
26:5:11:THR:CB	26:5:16:ARG:HE	2.09	0.62
2:A:747:U:C2	2:A:2015:A:H2	2.17	0.62
2:A:2058:A:H2'	2:A:2059:A:C8	2.35	0.62
2:A:2350:C:N4	2:A:2382:G:C6	2.68	0.62
2:A:2389:G:OP1	2:A:2390:U:C5'	2.42	0.62
2:A:827:U:C4	2:A:2430:A:C5	2.88	0.62
2:A:2517:C:HO2'	2:A:2518:A:C5'	1.92	0.62
2:A:2569:G:N1	2:A:2570:G:N7	2.47	0.62
2:A:2595:G:C2	2:A:2597:G:O5'	2.53	0.62
2:A:2605:U:HO2'	2:A:2606:C:P	2.20	0.62
2:A:2653:U:C3'	2:A:2654:A:N7	2.62	0.62
2:A:2739:U:H5	2:A:2763:G:C2	2.17	0.62
2:A:2850:A:C4	2:A:2851:A:C8	2.87	0.62
2:A:535:C:C5'	20:U:53:LYS:NZ	2.62	0.62
2:A:657:U:H2'	2:A:658:C:C6	2.34	0.62
2:A:917:A:H3'	2:A:918:A:H5''	1.82	0.62
2:A:988:A:P	23:3:11:SER:HB3	2.39	0.62
2:A:989:G:C8	23:3:13:ILE:HD11	2.35	0.62
2:A:1492:G:H4'	3:D:99:GLU:OE2	1.99	0.62
5:F:93:LYS:HB2	5:F:96:LYS:HE3	1.80	0.62
6:G:38:GLU:CA	6:G:41:LEU:HD12	2.30	0.62
1:B:42:C:C1'	6:G:47:GLN:C	2.67	0.62
2:A:2745:C:O2	7:H:142:GLU:CD	2.38	0.62
7:H:48:VAL:HG23	7:H:49:ILE:N	2.14	0.62
9:N:21:ARG:HD2	9:N:21:ARG:H	1.64	0.62
9:N:12:VAL:CB	9:N:38:VAL:HG22	2.29	0.62
9:N:61:VAL:HG12	9:N:62:ASP:N	2.13	0.62
11:P:65:ASP:CB	11:P:109:LEU:H	2.13	0.62
11:P:120:LEU:HD12	11:P:122:ALA:HB3	1.81	0.62
12:Q:116:HIS:O	12:Q:117:GLY:C	2.38	0.62
12:Q:130:PRO:O	12:Q:132:VAL:N	2.32	0.62
12:Q:94:ARG:CZ	12:Q:106:GLY:HA3	2.30	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:S:34:LEU:O	13:S:103:ASP:HB3	2.00	0.62
20:U:69:ALA:HB3	20:U:76:TYR:CZ	2.35	0.62
20:U:99:ALA:HA	20:U:106:PHE:HB2	1.76	0.62
15:W:19:LEU:O	15:W:20:VAL:C	2.37	0.62
18:Z:140:LYS:CA	18:Z:141:MET:SD	2.81	0.62
18:Z:151:ASP:HB3	18:Z:153:LYS:HZ1	1.60	0.62
18:Z:5:ALA:O	18:Z:33:ALA:CB	2.31	0.62
18:Z:52:PHE:H	18:Z:65:LEU:HD11	1.64	0.62
18:Z:67:LYS:CB	18:Z:67:LYS:HZ2	2.13	0.62
8:I:144:HIS:CD2	8:I:144:HIS:O	2.52	0.62
8:I:83:ALA:HB2	8:I:89:LEU:HA	1.80	0.62
22:2:60:GLN:O	22:2:63:GLU:HB3	1.99	0.62
2:A:1059:G:C5'	31:K:115:ASP:O	2.46	0.62
2:A:2857:G:H3'	2:A:2857:G:C8	2.34	0.62
2:A:2721:A:O2'	2:A:2874:C:H5'	1.98	0.62
2:A:1906:G:C4	2:A:1929:G:C5	2.87	0.62
2:A:1764:G:C6	2:A:1989:G:C2	2.88	0.62
24:0:24:LYS:O	24:0:25:LYS:HB2	1.98	0.62
24:0:68:VAL:HG21	24:0:72:LYS:HE3	1.82	0.62
23:3:25:ALA:C	23:3:27:GLY:N	2.51	0.62
2:A:1158:C:H4'	23:3:32:GLN:OE1	2.00	0.62
23:3:6:VAL:HG22	23:3:7:LYS:N	2.14	0.62
25:4:47:GLU:OE2	25:4:73:LYS:NZ	2.27	0.62
26:5:40:LYS:HD2	26:5:49:CYS:SG	2.38	0.62
2:A:1294:U:O2'	19:R:26:LYS:CD	2.47	0.62
2:A:1799:G:H21	3:D:153:LEU:HG	1.58	0.62
2:A:1889:A:H2'	2:A:1890:A:C8	2.35	0.62
2:A:2261:C:H2'	2:A:2261:C:O2	1.99	0.62
2:A:2276:G:N3	2:A:2277:G:C8	2.67	0.62
2:A:2347:C:H2'	2:A:2348:U:H6	1.65	0.62
2:A:2495:G:O4'	12:Q:101:MET:HG3	2.00	0.62
2:A:2455:G:N2	2:A:2498:C:H41	1.96	0.62
2:A:2504:U:C6	2:A:2504:U:C4'	2.82	0.62
2:A:2748:A:C2	2:A:2758:A:N7	2.66	0.62
2:A:2756:U:O2	2:A:2756:U:C2'	2.47	0.62
2:A:2772:C:N4	2:A:2773:C:N4	2.47	0.62
2:A:2792:G:H1'	2:A:2805:G:N2	2.14	0.62
2:A:2870:C:N3	2:A:2871:C:C6	2.67	0.62
2:A:307:G:H21	2:A:330:A:N6	1.97	0.62
2:A:397:G:OP1	25:4:40:HIS:HA	2.00	0.62
2:A:971:C:H42	2:A:972:G:H21	1.47	0.62
3:D:213:LYS:O	3:D:215:LYS:HG2	1.99	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:70:VAL:CG1	4:E:295:LEU:HD23	2.29	0.62
5:F:37:ALA:CB	5:F:102:LEU:CD1	2.77	0.62
5:F:93:LYS:CB	5:F:96:LYS:CE	2.78	0.62
7:H:14:VAL:O	7:H:14:VAL:CG1	2.40	0.62
7:H:42:ILE:C	7:H:52:THR:CG2	2.56	0.62
7:H:75:VAL:C	7:H:77:GLY:N	2.47	0.62
7:H:86:LEU:CD2	7:H:87:GLU:H	2.09	0.62
9:N:136:SER:CA	9:N:139:LEU:CD2	2.78	0.62
11:P:128:GLY:O	11:P:132:LYS:HD3	1.99	0.62
12:Q:48:ASN:HD21	12:Q:122:PHE:HD1	1.47	0.62
2:A:2484:G:C1'	12:Q:142:LYS:HZ2	2.03	0.62
2:A:1287:A:N9	19:R:104:ARG:HH11	1.37	0.62
19:R:99:LYS:HA	19:R:112:ALA:HB1	1.81	0.62
13:S:111:PRO:O	13:S:114:LYS:O	2.18	0.62
13:S:23:ARG:HH21	13:S:37:ARG:NH2	1.91	0.62
14:T:8:TYR:O	14:T:53:ASP:HB2	1.99	0.62
20:U:109:LEU:O	20:U:111:ASP:N	2.32	0.62
20:U:93:LYS:N	20:U:93:LYS:HD3	2.13	0.62
21:V:14:VAL:HG21	21:V:19:VAL:HG21	0.77	0.62
17:Y:105:ASP:O	17:Y:108:ARG:N	2.21	0.62
18:Z:17:SER:O	18:Z:36:ARG:N	2.33	0.62
18:Z:70:GLN:O	18:Z:72:ASP:OD2	2.17	0.62
8:I:86:GLY:CA	8:I:88:ARG:N	2.63	0.62
6:G:29:HIS:ND1	6:G:69:ILE:HD11	2.14	0.62
31:K:112:LYS:CE	31:K:116:LEU:HD23	2.30	0.62
31:K:132:ALA:HB1	31:K:137:ILE:CB	2.29	0.62
31:K:28:LEU:HD22	31:K:33:VAL:HG21	1.82	0.62
24:0:6:GLY:O	24:0:8:GLY:N	2.32	0.62
23:3:26:LEU:HD21	23:3:46:ASN:CB	2.26	0.62
2:A:929:G:C1'	23:3:43:ILE:HG13	2.29	0.62
23:3:59:VAL:C	23:3:60:GLU:CG	2.62	0.62
2:A:974(A):C:C6	2:A:1186:G:N1	2.68	0.62
2:A:1284:A:H2'	2:A:1285:G:C8	2.33	0.62
2:A:1666:G:N2	2:A:1669:A:N6	2.46	0.62
2:A:2100:G:N9	2:A:2190:G:N2	2.48	0.62
2:A:2218:G:C4	2:A:2219:G:C8	2.88	0.62
2:A:2218:G:H2'	2:A:2219:G:O5'	2.00	0.62
2:A:2356:C:P	24:0:21:LEU:CD1	2.81	0.62
2:A:2396:G:N2	2:A:2397:G:C8	2.67	0.62
2:A:2397:G:C2	2:A:2398:U:C2	2.88	0.62
2:A:2516:G:N2	2:A:2569:G:H1'	2.14	0.62
2:A:2652:C:C2'	2:A:2653:U:H6	2.11	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2682:U:O4'	4:E:48:MET:HG3	1.98	0.62
3:D:226:GLY:C	3:D:227:VAL:HG12	2.12	0.62
4:E:104:PHE:CB	4:E:108:LEU:HD12	2.29	0.62
4:E:80:ALA:CA	4:E:187:HIS:NE2	2.63	0.62
4:E:242:ASN:N	4:E:243:PRO:HD2	2.14	0.62
2:A:2785:C:H5'	4:E:99:VAL:CG2	2.27	0.62
5:F:196:THR:OG1	5:F:201:SER:OG	1.84	0.62
5:F:1:MET:O	5:F:18:LEU:HD23	1.99	0.62
5:F:52:ALA:HB2	5:F:55:ARG:HH21	0.80	0.62
6:G:24:HIS:CB	6:G:72:LYS:HA	2.26	0.62
9:N:83:ILE:HG13	9:N:84:ARG:HG2	1.81	0.62
9:N:90:LYS:HZ3	9:N:95:ARG:NH2	1.97	0.62
10:O:14:SER:HB3	10:O:86:ILE:CD1	2.30	0.62
11:P:129:ALA:O	11:P:130:ARG:C	2.38	0.62
2:A:2416:C:P	11:P:51:PHE:CE2	2.90	0.62
11:P:66:VAL:CG1	11:P:67:ARG:N	2.43	0.62
19:R:89:ASP:OD1	19:R:90:ARG:CA	2.48	0.62
13:S:27:LEU:CD1	13:S:28:LYS:N	2.63	0.62
13:S:30:GLY:O	13:S:31:LYS:CB	2.47	0.62
20:U:20:ARG:HH11	21:V:75:LYS:HD2	1.65	0.62
15:W:32:ALA:C	15:W:34:ASN:N	2.53	0.62
17:Y:102:ASP:HB3	17:Y:108:ARG:CZ	2.30	0.62
17:Y:43:ASN:ND2	17:Y:102:ASP:O	2.33	0.62
2:A:99:U:H3	17:Y:107:LYS:HD3	1.65	0.62
18:Z:18:MET:HA	18:Z:35:ASP:HA	1.82	0.62
8:I:68:LEU:CD1	8:I:108:LEU:CD1	2.78	0.62
16:X:9:HIS:NE2	16:X:27:ALA:HB2	2.14	0.62
16:X:38:ALA:HB1	16:X:49:VAL:HG13	1.81	0.62
16:X:3:ASP:CA	22:2:24:LYS:CD	2.61	0.62
2:A:1912:A:N7	2:A:1918:A:H2	1.97	0.62
2:A:2721:A:C2	2:A:2722:G:C8	2.87	0.62
2:A:1324:G:H4'	2:A:1616:A:N7	2.14	0.62
2:A:302:C:H2'	2:A:303:U:C6	2.35	0.62
2:A:153:C:H42	2:A:173:G:H1	1.47	0.62
25:4:7:PRO:HD2	25:4:56:VAL:HG21	0.65	0.62
25:4:64:GLY:O	25:4:67:TYR:C	2.38	0.62
28:7:43:THR:C	28:7:46:ASP:OD1	2.35	0.62
2:A:2208:U:H2'	2:A:2209:C:H6	1.63	0.62
2:A:2207:C:C2	2:A:2218:G:N1	2.68	0.62
2:A:2093:G:C4	2:A:2225:A:C6	2.86	0.62
2:A:2246:G:H2'	2:A:2247:A:C8	2.34	0.62
2:A:2266:A:H4'	2:A:2267:A:C2	2.35	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2271:G:HO2'	2:A:2272:U:C5'	2.08	0.62
2:A:2292:C:H42	2:A:2340:G:H1	1.44	0.62
2:A:2403:C:H42	2:A:2414:G:H1	1.46	0.62
2:A:2468:G:N1	2:A:2481:G:C5	2.67	0.62
2:A:2472:G:C2'	2:A:2475:C:N4	2.42	0.62
2:A:2516:G:N7	2:A:2517:C:N4	2.47	0.62
2:A:2572:A:C5'	2:A:2574:G:C5'	2.64	0.62
2:A:2773:C:OP1	4:E:262:THR:HG22	2.00	0.62
2:A:2787:C:O2	2:A:2787:C:H2'	1.98	0.62
2:A:2836:U:H6	2:A:2836:U:H3'	1.64	0.62
2:A:2885:C:N3	2:A:2886:G:C1'	2.63	0.62
2:A:558:G:OP1	9:N:91:LYS:CA	2.47	0.62
2:A:775:G:H22	2:A:788:A:P	2.23	0.62
2:A:1819:A:P	3:D:154:VAL:N	2.72	0.62
2:A:2786:U:C5'	4:E:100:TRP:HB2	2.29	0.62
2:A:2620:C:C4'	4:E:252:GLN:HG2	2.29	0.62
5:F:58:ALA:HB2	5:F:79:ARG:CB	2.30	0.62
6:G:142:ALA:CB	6:G:151:ILE:CG1	2.66	0.62
7:H:15:THR:HG23	7:H:26:LYS:CA	2.29	0.62
7:H:43:THR:HG22	7:H:52:THR:HG22	1.75	0.62
10:O:17:ARG:CZ	10:O:47:THR:HA	2.30	0.62
11:P:114:VAL:HG12	11:P:115:ARG:N	2.15	0.62
2:A:2406:U:H3	11:P:55:GLN:HG3	1.63	0.62
11:P:62:ALA:HB2	11:P:105:TYR:CB	2.22	0.62
14:T:37:GLU:O	14:T:39:ASN:N	2.33	0.62
20:U:28:ARG:CA	20:U:31:GLN:OE1	2.48	0.62
20:U:57:PHE:C	20:U:59:ARG:H	2.03	0.62
15:W:32:ALA:CA	15:W:35:ILE:HD11	2.26	0.62
18:Z:26:LYS:N	18:Z:84:TYR:HE1	1.95	0.62
22:2:26:GLU:O	22:2:29:ASN:HB2	1.99	0.62
22:2:20:LEU:CD2	22:2:53:ILE:CG2	2.77	0.62
31:K:36:MET:HA	31:K:39:CYS:SG	2.39	0.62
2:A:6:A:H4'	9:N:4:ALA:O	1.99	0.62
8:I:62:LEU:O	8:I:66:LYS:HG3	2.00	0.62
2:A:311:A:H62	2:A:329:G:H5'	1.63	0.62
2:A:1980:G:C6	2:A:1982:C:N4	2.68	0.62
2:A:1492:G:C4'	3:D:97:ASP:OD1	2.47	0.62
2:A:1759:A:H5'	2:A:2715:C:C1'	2.29	0.62
2:A:18:C:O3'	20:U:23:GLY:CA	2.47	0.62
2:A:2210:G:C5	3:D:148:GLY:CA	2.78	0.62
2:A:2353:G:C2	2:A:2364:C:N3	2.62	0.62
2:A:676:A:H1'	2:A:2443:C:O4'	2.00	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2488:A:N1	2:A:2489:G:C5	2.68	0.62
2:A:2544:G:C4	2:A:2545:G:C8	2.88	0.62
2:A:2545:G:N2	2:A:2546:U:C2	2.68	0.62
2:A:2581:G:N1	2:A:2610:C:C2'	2.62	0.62
2:A:2641:G:C6	2:A:2774:C:C5	2.88	0.62
2:A:2681:C:H1'	2:A:2682:U:C5	2.35	0.62
2:A:2827:C:C2	2:A:2828:C:C5	2.88	0.62
2:A:2869:G:C2'	2:A:2870:C:C5'	2.77	0.62
2:A:446:G:OP2	20:U:3:ARG:HD3	1.99	0.62
2:A:729:G:H1'	2:A:763:G:O3'	2.00	0.62
1:B:83:G:C5'	23:3:52:HIS:CD2	2.83	0.62
3:D:163:VAL:HG12	3:D:163:VAL:O	2.00	0.62
3:D:71:ASP:HA	3:D:73:ILE:HG13	1.82	0.62
8:I:2:LYS:HG2	8:I:39:ALA:N	2.15	0.62
11:P:77:ALA:CA	11:P:81:VAL:HG11	2.25	0.62
12:Q:131:ALA:HA	12:Q:134:PHE:CD2	2.34	0.62
12:Q:41:THR:OG1	12:Q:126:VAL:CA	2.43	0.62
19:R:52:ILE:C	19:R:54:LEU:H	2.02	0.62
21:V:35:LEU:N	21:V:60:VAL:HG13	2.14	0.62
21:V:72:ARG:O	21:V:74:TYR:CE2	2.53	0.62
15:W:70:TYR:CE2	15:W:72:LYS:N	2.68	0.62
17:Y:32:ARG:C	17:Y:34:GLU:N	2.52	0.62
17:Y:64:ASN:O	17:Y:72:ILE:CG2	2.34	0.62
18:Z:103:ARG:NH1	18:Z:137:ASP:O	2.32	0.62
18:Z:45:GLN:HE21	18:Z:45:GLN:H	1.45	0.62
2:A:1340:U:H5	16:X:55:GLN:NE2	1.93	0.62
25:4:49:PHE:O	25:4:50:LEU:O	2.17	0.62
2:A:1072:C:H42	2:A:1100:C:H42	1.48	0.62
23:3:17:LYS:O	23:3:18:ASP:C	2.37	0.61
28:7:11:LYS:HA	28:7:11:LYS:HE3	1.80	0.61
30:9:7:VAL:HG23	30:9:36:GLN:OE1	2.00	0.61
2:A:1027:A:C5	2:A:1126:A:C2	2.87	0.61
2:A:1268:A:H2'	2:A:1269:A:C8	2.35	0.61
2:A:2314:C:OP1	6:G:74:THR:CG2	2.43	0.61
2:A:2345:G:N2	2:A:2381:C:H3'	2.15	0.61
2:A:2759:G:C2'	2:A:2760:C:C5'	2.78	0.61
2:A:2628:C:O2	2:A:2781:A:C2'	2.47	0.61
2:A:2852:G:C2	2:A:2853:C:O2	2.52	0.61
2:A:322:A:OP2	2:A:322:A:C8	2.50	0.61
2:A:606:U:OP1	5:F:105:LYS:HD2	2.00	0.61
2:A:684:G:N2	2:A:794:G:C2	2.69	0.61
2:A:907:U:O2'	12:Q:88:PHE:CE1	2.51	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:910:A:N6	12:Q:12:PRO:HA	2.14	0.61
3:D:167:GLU:CA	3:D:170:TYR:CD1	2.82	0.61
3:D:71:ASP:C	3:D:73:ILE:N	2.50	0.61
2:A:2771:C:C4'	4:E:316:ARG:HD2	2.29	0.61
5:F:11:ASN:CG	5:F:160:LEU:HD11	2.20	0.61
5:F:16:VAL:HG12	5:F:17:ASP:N	2.14	0.61
7:H:153:PRO:O	7:H:154:GLU:C	2.38	0.61
9:N:15:ARG:HG2	9:N:43:ARG:CB	2.30	0.61
9:N:42:GLU:CA	9:N:132:LEU:O	2.47	0.61
10:O:78:ARG:O	14:T:22:VAL:CG2	2.47	0.61
14:T:6:CYS:SG	14:T:31:PHE:HD2	2.23	0.61
20:U:10:ARG:C	20:U:13:ARG:HH12	2.03	0.61
18:Z:46:GLN:C	18:Z:49:THR:OG1	2.37	0.61
16:X:52:VAL:CG2	16:X:65:VAL:O	2.47	0.61
31:K:93:LYS:CG	31:K:96:ILE:HD11	2.30	0.61
7:H:169:ARG:NE	7:H:169:ARG:HA	2.15	0.61
8:I:63:ALA:HA	8:I:66:LYS:HE2	1.81	0.61
24:O:25:LYS:HE2	24:O:57:HIS:ND1	2.15	0.61
24:O:40:GLN:N	24:O:69:PHE:CZ	2.68	0.61
25:4:47:GLU:HA	25:4:53:GLU:H	1.66	0.61
28:7:33:ARG:HB3	28:7:37:LYS:HD2	1.82	0.61
2:A:594:U:C5'	29:8:58:MET:HE1	2.20	0.61
2:A:1652:A:H62	2:A:1653:G:H21	1.48	0.61
2:A:1819:A:H4'	2:A:1820:U:C5'	2.30	0.61
2:A:198:C:H2'	2:A:199:A:H5''	1.81	0.61
2:A:2018:G:N2	20:U:34:ASN:HD22	1.72	0.61
2:A:2206:C:C2'	2:A:2207:C:O4'	2.47	0.61
2:A:2337:G:C6	2:A:2338:G:O6	2.52	0.61
2:A:2361:A:C3'	2:A:2362:G:H5'	2.31	0.61
2:A:2384:G:O5'	2:A:2386:C:OP1	2.18	0.61
2:A:2476:A:N7	2:A:2477:C:C6	2.66	0.61
2:A:2488:A:C3'	2:A:2488:A:C8	2.83	0.61
2:A:2521:C:N3	2:A:2522:U:C5	2.68	0.61
2:A:2516:G:C6	2:A:2569:G:C2	2.88	0.61
2:A:2618:G:C2'	2:A:2619:C:O5'	2.47	0.61
2:A:2653:U:H3'	2:A:2654:A:N7	2.15	0.61
2:A:2665:A:H5''	2:A:2665:A:C8	2.34	0.61
2:A:2684:U:O4'	10:O:76:TYR:OH	2.07	0.61
2:A:2744:G:C2	2:A:2761:G:C2	2.88	0.61
2:A:2831:G:H1'	2:A:2883:A:N3	2.15	0.61
2:A:2886:G:N2	2:A:2887:U:C1'	2.63	0.61
3:D:160:SER:C	3:D:162:GLN:HE22	2.03	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1799:G:N1	3:D:177:SER:HB2	2.16	0.61
3:D:202:LYS:O	3:D:204:PHE:CE1	2.50	0.61
4:E:81:VAL:CB	4:E:100:TRP:CZ3	2.83	0.61
5:F:141:SER:OG	5:F:144:PHE:CE1	2.51	0.61
5:F:59:GLU:CB	5:F:61:PHE:CE2	2.57	0.61
8:I:24:GLY:O	8:I:25:TYR:C	2.38	0.61
10:O:63:VAL:CG1	10:O:102:VAL:CB	2.75	0.61
10:O:63:VAL:CG1	10:O:102:VAL:HG22	2.30	0.61
11:P:113:GLN:O	11:P:115:ARG:CD	2.48	0.61
11:P:141:GLU:OE1	11:P:141:GLU:O	2.18	0.61
12:Q:43:PRO:O	12:Q:125:TRP:CZ2	2.53	0.61
12:Q:67:ALA:CA	12:Q:71:PHE:HE1	2.14	0.61
19:R:47:PHE:O	19:R:49:ASP:N	2.32	0.61
19:R:62:ALA:HB1	19:R:80:PHE:CZ	2.35	0.61
21:V:61:VAL:HG21	21:V:97:GLY:CA	2.12	0.61
15:W:82:LEU:O	15:W:83:LYS:C	2.38	0.61
18:Z:120:LEU:CD2	18:Z:120:LEU:N	2.43	0.61
18:Z:125:PRO:CG	18:Z:130:ILE:CG2	2.78	0.61
16:X:33:SER:O	16:X:37:VAL:HB	1.99	0.61
31:K:89:SER:HB2	31:K:95:LYS:CE	2.30	0.61
2:A:1270:C:H4'	2:A:1271:G:C5'	2.21	0.61
2:A:1417:C:H3'	2:A:1418:G:H8	1.65	0.61
2:A:1426:G:H5''	2:A:1427:A:H5''	1.81	0.61
24:O:48:GLY:CA	24:O:55:ARG:CA	2.79	0.61
25:4:14:ILE:HG22	25:4:37:SER:N	2.10	0.61
30:9:11:CYS:HB3	30:9:32:HIS:CE1	2.36	0.61
2:A:1029:A:H2'	2:A:1030:G:O4'	2.00	0.61
2:A:199:A:N1	2:A:2433:A:N9	2.48	0.61
2:A:2069:G:C2	2:A:2443:C:C2	2.88	0.61
2:A:2416:C:C2	2:A:2417:C:C5	2.88	0.61
2:A:2423:U:N1	2:A:2425:A:C5	2.68	0.61
2:A:2573:C:OP1	2:A:2575:C:OP2	2.18	0.61
2:A:2693:A:C2	2:A:2694:G:C4	2.87	0.61
2:A:2782:G:C8	2:A:2782:G:P	2.93	0.61
2:A:2814:C:C2	2:A:2815:C:C5	2.87	0.61
2:A:2817:G:C2	2:A:2818:G:C4	2.88	0.61
2:A:963:U:H1'	2:A:2250:G:H22	1.54	0.61
1:B:59:A:C2	1:B:60:C:H1'	2.35	0.61
4:E:39:GLN:CD	4:E:174:LEU:CG	2.68	0.61
4:E:77:PRO:HG2	4:E:186:GLU:HB2	1.82	0.61
7:H:149:ALA:C	7:H:161:ILE:HD11	2.15	0.61
7:H:67:THR:O	7:H:68:ARG:C	2.37	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:N:60:ARG:C	9:N:71:TYR:CD2	2.73	0.61
9:N:63:ILE:CD1	9:N:71:TYR:CE2	2.73	0.61
10:O:86:ILE:CG2	10:O:87:ILE:H	2.11	0.61
12:Q:117:GLY:O	12:Q:118:ALA:HB3	2.01	0.61
12:Q:47:GLU:OE2	12:Q:152:SER:N	2.34	0.61
13:S:103:ASP:C	13:S:105:GLY:H	2.04	0.61
1:B:51:G:OP2	13:S:72:GLU:CG	2.46	0.61
20:U:109:LEU:O	20:U:110:VAL:C	2.37	0.61
2:A:1251:C:O5'	20:U:10:ARG:HG3	2.00	0.61
20:U:117:ARG:NE	20:U:118:GLN:HG2	2.14	0.61
20:U:15:LYS:HG2	20:U:19:LYS:HE2	1.82	0.61
15:W:26:GLY:HA2	15:W:71:VAL:HG23	1.82	0.61
15:W:69:LEU:HD22	15:W:109:GLU:HB2	1.83	0.61
18:Z:26:LYS:HB2	18:Z:84:TYR:HH	1.65	0.61
8:I:80:PRO:O	8:I:148:GLN:HG2	1.99	0.61
8:I:98:ILE:O	8:I:99:ALA:C	2.39	0.61
9:N:36:VAL:HG12	9:N:36:VAL:O	2.00	0.61
31:K:58:ILE:HG23	31:K:67:THR:HA	1.82	0.61
17:Y:9:LYS:HZ1	17:Y:13:ARG:HH22	1.48	0.61
22:2:39:ALA:HB3	22:2:40:PRO:HD2	1.78	0.61
2:A:2896:C:C6	2:A:2896:C:C4'	2.83	0.61
2:A:660:G:H2'	2:A:661:C:C6	2.34	0.61
25:4:17:GLN:HG2	25:4:33:VAL:HG12	1.82	0.61
2:A:126:A:H5''	28:7:18:PHE:CD1	2.34	0.61
2:A:1429:G:O4'	2:A:1568:G:H1'	1.98	0.61
2:A:1610:A:OP2	2:A:1610:A:H8	1.83	0.61
2:A:2233:U:O2	2:A:2234:G:C1'	2.48	0.61
2:A:2400:G:C2	2:A:2401:U:O2	2.54	0.61
2:A:2504:U:C4'	2:A:2504:U:H6	2.13	0.61
2:A:2562:U:H2'	2:A:2562:U:O2	1.99	0.61
2:A:2567:G:H2'	2:A:2568:C:C6	2.35	0.61
2:A:2868:A:C2'	2:A:2869:G:H5'	2.29	0.61
2:A:520:G:P	15:W:25:ARG:HH21	2.23	0.61
3:D:130:PRO:CA	3:D:188:ARG:HA	2.29	0.61
4:E:61:PRO:HB3	4:E:69:PRO:CA	2.30	0.61
5:F:220:THR:OG1	5:F:221:GLU:N	2.33	0.61
7:H:60:HIS:O	7:H:63:LEU:HB3	2.00	0.61
8:I:21:VAL:CG1	8:I:30:LEU:CD1	2.66	0.61
2:A:1140:C:C6	9:N:49:ARG:HG3	2.31	0.61
11:P:77:ALA:HB2	11:P:81:VAL:HG12	1.79	0.61
12:Q:131:ALA:CA	12:Q:134:PHE:CE2	2.83	0.61
12:Q:64:ALA:O	12:Q:65:ARG:C	2.37	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:Q:94:ARG:CZ	12:Q:106:GLY:CA	2.78	0.61
19:R:97:VAL:HG13	19:R:114:VAL:HG21	1.82	0.61
21:V:65:ARG:O	21:V:93:ILE:CB	2.48	0.61
21:V:94:LYS:C	21:V:95:ILE:CG1	2.66	0.61
21:V:61:VAL:HG23	21:V:98:ILE:H	1.62	0.61
22:2:23:LEU:N	22:2:26:GLU:OE1	2.33	0.61
2:A:1063:G:C4'	31:K:135:MET:HG2	2.30	0.61
2:A:865:C:N4	2:A:908:C:N4	2.48	0.61
9:N:7:ASP:O	9:N:8:ALA:HB2	1.98	0.61
2:A:1221:C:H2'	2:A:1221:C:O2	2.01	0.61
2:A:932:G:H4'	23:3:24:LYS:NZ	2.14	0.61
23:3:22:ALA:CA	23:3:46:ASN:ND2	2.58	0.61
25:4:14:ILE:CB	25:4:37:SER:O	2.42	0.61
26:5:8:LYS:O	26:5:9:LYS:CB	2.48	0.61
28:7:26:SER:O	28:7:29:ASN:CB	2.42	0.61
2:A:1301:A:N7	2:A:1303:G:O4'	2.33	0.61
2:A:1327:C:H3'	2:A:1328:G:C8	2.35	0.61
2:A:2215:G:C2'	2:A:2216:G:C8	2.55	0.61
2:A:2219:G:C2	2:A:2224:G:O4'	2.53	0.61
2:A:2276:G:C4	2:A:2277:G:C8	2.89	0.61
2:A:2431:U:N3	2:A:2434:A:OP2	2.32	0.61
2:A:2504:U:C3'	2:A:2504:U:H6	2.11	0.61
2:A:2525:G:N1	2:A:2539:C:C4	2.68	0.61
2:A:2526:G:N7	2:A:2527:C:H5	1.98	0.61
2:A:2688:U:N3	2:A:2719:G:N3	2.49	0.61
2:A:2712:U:C3'	2:A:2714:G:P	2.85	0.61
2:A:2718:G:N3	2:A:2719:G:C8	2.68	0.61
2:A:2805:G:H2'	2:A:2807:G:C4'	2.30	0.61
2:A:2840:C:C2	2:A:2841:C:C6	2.88	0.61
2:A:294:A:O2'	17:Y:15:PRO:HG2	2.01	0.61
2:A:321:G:C2'	2:A:341:G:H4'	2.30	0.61
2:A:527:C:C6	2:A:2779:U:C5	2.89	0.61
2:A:856:C:O2'	24:0:24:LYS:HG2	1.92	0.61
1:B:9:G:OP1	13:S:23:ARG:CZ	2.49	0.61
3:D:154:VAL:HG12	3:D:154:VAL:O	1.98	0.61
4:E:202:ALA:HA	4:E:262:THR:CB	2.30	0.61
4:E:271:ILE:CD1	4:E:294:THR:CG2	2.73	0.61
6:G:51:ARG:NH1	6:G:72:LYS:HB2	2.15	0.61
12:Q:85:ILE:HA	12:Q:122:PHE:HB3	1.81	0.61
19:R:25:ALA:O	19:R:29:LEU:HD22	2.00	0.61
13:S:76:GLY:C	13:S:80:SER:C	2.58	0.61
21:V:50:ASP:CB	21:V:53:LYS:CG	2.28	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:V:5:ILE:HD13	21:V:12:TYR:CE1	2.36	0.61
17:Y:41:ARG:CB	17:Y:112:LEU:CA	2.72	0.61
17:Y:43:ASN:ND2	17:Y:112:LEU:HD11	2.16	0.61
2:A:310:A:OP1	17:Y:52:ARG:HB3	2.01	0.61
18:Z:9:THR:O	18:Z:13:LYS:HB2	2.01	0.61
8:I:129:VAL:O	8:I:131:VAL:HG23	2.00	0.61
8:I:132:LYS:CA	8:I:138:THR:CG2	2.77	0.61
22:2:20:LEU:HD13	22:2:23:LEU:CB	2.29	0.61
2:A:1059:G:N9	31:K:127:ILE:HD13	2.15	0.61
24:0:65:GLY:HA2	24:0:66:LYS:NZ	2.06	0.61
24:0:35:ASN:HA	24:0:68:VAL:CG2	2.29	0.61
25:4:58:LYS:HG2	25:4:62:ARG:CZ	2.31	0.61
28:7:43:THR:O	28:7:46:ASP:N	2.34	0.61
30:9:20:HIS:O	30:9:22:ARG:N	2.32	0.61
2:A:125:G:H22	28:7:10:ARG:N	1.91	0.61
2:A:2198:A:N3	2:A:2198:A:H2'	2.16	0.61
2:A:2252:G:C6	2:A:2253:G:O6	2.54	0.61
2:A:2478:A:H1'	2:A:2529:G:N7	2.16	0.61
2:A:2520:C:O2'	2:A:2521:C:C5'	2.47	0.61
2:A:2549:G:C2	2:A:2550:G:C8	2.88	0.61
2:A:2611:U:H3'	2:A:2611:U:C6	2.32	0.61
2:A:2046:G:N2	2:A:2623:G:C4	2.68	0.61
2:A:2655:G:N3	2:A:2655:G:C3'	2.63	0.61
2:A:2695:C:O2	2:A:2696:U:C5	2.54	0.61
2:A:2734:A:N7	2:A:2735:G:N7	2.48	0.61
2:A:647:G:H2'	2:A:648:G:H8	1.65	0.61
3:D:146:LYS:CG	3:D:147:PRO:HD2	2.25	0.61
4:E:81:VAL:CB	4:E:100:TRP:HZ3	2.13	0.61
4:E:301:PRO:O	4:E:303:PRO:CD	2.27	0.61
2:A:1205:U:C2	5:F:232:LEU:HD11	2.26	0.61
2:A:451:C:P	5:F:49:ASP:H	2.23	0.61
5:F:63:SER:N	5:F:65:ARG:HE	1.87	0.61
6:G:98:PHE:C	6:G:104:PHE:CD2	2.73	0.61
6:G:141:VAL:N	6:G:144:ARG:NH1	2.48	0.61
6:G:75:LEU:HD22	6:G:79:MET:HB3	1.82	0.61
10:O:14:SER:HB2	10:O:86:ILE:HD12	1.81	0.61
12:Q:137:ARG:CD	12:Q:138:ARG:N	2.62	0.61
2:A:2376:A:C6	13:S:119:GLN:NE2	2.67	0.61
13:S:17:ARG:NH1	13:S:18:THR:HA	2.11	0.61
13:S:30:GLY:O	13:S:31:LYS:HB2	2.00	0.61
20:U:26:GLY:O	20:U:27:SER:CB	2.44	0.61
20:U:72:HIS:HE1	20:U:107:LYS:HA	1.66	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:U:88:ILE:CG2	21:V:55:THR:HG21	2.28	0.61
21:V:39:PHE:CE2	21:V:41:GLY:N	2.68	0.61
21:V:40:VAL:CA	21:V:51:ALA:HA	2.31	0.61
21:V:50:ASP:CA	21:V:53:LYS:HE3	2.31	0.61
21:V:59:GLU:CG	21:V:99:GLN:HA	2.31	0.61
21:V:33:VAL:CB	21:V:63:HIS:CE1	2.79	0.61
17:Y:71:VAL:HG12	17:Y:91:LEU:HB2	1.82	0.61
17:Y:74:VAL:O	17:Y:76:ASP:N	2.33	0.61
18:Z:13:LYS:O	18:Z:18:MET:O	2.18	0.61
18:Z:26:LYS:N	18:Z:84:TYR:CZ	2.68	0.61
8:I:133:LEU:HD12	8:I:138:THR:O	1.99	0.61
6:G:27:ILE:O	6:G:69:ILE:HD13	1.99	0.61
2:A:2409:G:O5'	2:A:2409:G:H8	1.82	0.61
2:A:2755:C:C6	2:A:2755:C:C4'	2.84	0.61
2:A:738:G:N2	2:A:739:G:O2'	2.33	0.61
25:4:15:ILE:H	25:4:15:ILE:CD1	2.12	0.61
25:4:5:LEU:C	25:4:6:HIS:ND1	2.53	0.61
30:9:10:MET:HE3	30:9:10:MET:CA	2.31	0.61
30:9:3:VAL:HG12	30:9:5:SER:O	1.99	0.61
2:A:2197:U:H2'	2:A:2224:G:C2	2.29	0.61
2:A:965:C:O4'	2:A:2273:A:C4	2.53	0.61
2:A:2344:U:O2	2:A:2344:U:H2'	1.98	0.61
2:A:2396:G:C8	2:A:2396:G:O5'	2.53	0.61
2:A:2447:G:N1	2:A:2500:U:C4	2.69	0.61
2:A:2514:U:H2'	2:A:2515:C:O4'	1.99	0.61
2:A:2542:A:P	2:A:2542:A:O4'	2.57	0.61
2:A:2557:G:C4	2:A:2558:C:C5	2.89	0.61
2:A:2620:C:H4'	4:E:252:GLN:HG2	1.81	0.61
2:A:969:U:H4'	23:3:14:GLY:C	2.09	0.61
4:E:229:GLN:O	4:E:231:TRP:HD1	1.82	0.61
4:E:74:GLU:HB2	4:E:293:TYR:CE2	2.20	0.61
4:E:303:PRO:HB2	4:E:307:LEU:HB3	1.83	0.61
5:F:193:LEU:HD11	5:F:231:ARG:CB	2.31	0.61
5:F:84:VAL:H	5:F:87:ARG:HE	1.49	0.61
6:G:156:ARG:CG	6:G:156:ARG:O	2.49	0.61
10:O:16:ALA:O	10:O:17:ARG:HG3	2.00	0.61
11:P:94:ARG:CD	11:P:120:LEU:CA	2.79	0.61
11:P:120:LEU:HD12	11:P:122:ALA:CB	2.30	0.61
12:Q:84:ARG:NH2	12:Q:123:ILE:HD12	2.15	0.61
12:Q:136:TRP:CE3	12:Q:139:ALA:CB	2.84	0.61
2:A:1287:A:H5''	19:R:104:ARG:CG	2.31	0.61
2:A:995:C:OP2	20:U:54:LYS:HE2	1.99	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:U:92:ARG:O	20:U:95:LEU:CB	2.47	0.61
21:V:40:VAL:HG12	21:V:55:THR:CG2	2.25	0.61
21:V:67:LYS:HG2	21:V:70:TYR:HE1	1.64	0.61
8:I:80:PRO:CA	8:I:146:THR:HG23	2.31	0.61
9:N:10:VAL:CG1	9:N:36:VAL:HA	2.29	0.61
2:A:7:G:H5'	9:N:6:PHE:HD2	1.65	0.61
2:A:1527:G:O5'	2:A:1527:G:C8	2.53	0.61
15:W:88:ARG:O	15:W:91:GLY:N	2.29	0.61
2:A:865:C:H2'	2:A:865:C:O2	2.01	0.61
2:A:1227:A:H3'	2:A:1227:A:H8	1.65	0.61
24:O:61:ALA:CB	24:O:80:SER:CA	2.78	0.61
23:3:39:ASP:OD1	23:3:40:THR:N	2.30	0.61
2:A:1809:A:N6	25:4:3:LYS:CB	2.62	0.61
25:4:68:ARG:CB	25:4:72:LYS:CG	2.79	0.61
26:5:41:LEU:O	26:5:42:SER:C	2.38	0.61
2:A:1024:G:N2	2:A:1139:G:N2	2.48	0.61
2:A:2246:G:C2	2:A:2247:A:N7	2.69	0.61
2:A:2321:G:N2	2:A:2322:A:H1'	2.15	0.61
2:A:631:A:C2	2:A:2415:G:N3	2.64	0.61
2:A:2459:A:N7	2:A:2460:U:C4	2.69	0.61
2:A:2508:G:H2'	2:A:2509:G:C5'	2.30	0.61
2:A:2519:U:C2	2:A:2542:A:C6	2.88	0.61
2:A:1670:C:P	2:A:2550:G:OP2	2.58	0.61
2:A:2695:C:O2'	2:A:2696:U:O4'	2.19	0.61
2:A:1462:C:H5'	2:A:2703:C:H5'	1.82	0.61
2:A:2706:G:O5'	2:A:2706:G:C8	2.48	0.61
2:A:2882:A:C2'	2:A:2883:A:O5'	2.49	0.61
2:A:974(A):C:H2'	2:A:974(A):C:O2	1.99	0.61
4:E:247:ARG:HD2	4:E:249:THR:OG1	2.01	0.61
5:F:16:VAL:CG1	5:F:17:ASP:N	2.63	0.61
5:F:52:ALA:C	5:F:55:ARG:HB3	2.20	0.61
2:A:1021:A:N7	9:N:49:ARG:NH1	2.44	0.61
10:O:35:ILE:HG13	10:O:62:VAL:HG12	1.82	0.61
10:O:63:VAL:HG11	10:O:102:VAL:HG22	1.81	0.61
11:P:57:VAL:O	11:P:58:GLN:HB3	2.01	0.61
2:A:873:G:H5'	12:Q:32:LYS:H	1.66	0.61
12:Q:46:VAL:C	12:Q:124:ALA:O	2.38	0.61
12:Q:49:VAL:HG22	12:Q:120:HIS:C	2.20	0.61
19:R:102:GLU:HG3	19:R:103:ARG:N	2.12	0.61
19:R:86:ARG:C	19:R:87:TYR:HD2	2.03	0.61
13:S:102:LEU:HD12	13:S:129:ILE:CD1	2.13	0.61
13:S:105:GLY:C	13:S:106:LEU:CD2	2.61	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:S:118:ILE:HG23	13:S:119:GLN:N	2.13	0.61
13:S:27:LEU:CD1	13:S:27:LEU:C	2.66	0.61
20:U:92:ARG:C	20:U:95:LEU:CD1	2.53	0.61
2:A:99:U:N3	17:Y:107:LYS:HD3	2.16	0.61
22:2:35:ALA:O	22:2:38:GLY:N	2.29	0.61
2:A:2310:A:H2'	6:G:55:LYS:HE2	0.79	0.61
31:K:24:VAL:HG13	31:K:28:LEU:HD12	1.82	0.61
31:K:8:GLN:C	31:K:9:ILE:CG1	2.69	0.61
29:8:16:ILE:HG23	29:8:22:VAL:CG2	2.31	0.61
30:9:4:ARG:O	30:9:36:GLN:CA	2.48	0.61
2:A:2296:U:H3'	2:A:2296:U:H6	1.65	0.61
2:A:2423:U:C1'	2:A:2425:A:C8	2.83	0.61
2:A:2425:A:C2'	2:A:2426:A:OP2	2.48	0.61
2:A:2443:C:H2'	2:A:2444:G:O4'	2.01	0.61
2:A:2728:U:H2'	2:A:2729:G:C8	2.36	0.61
2:A:2767:C:H2'	2:A:2768:C:C5'	2.31	0.61
2:A:2854:G:N2	2:A:2864:G:C4	2.69	0.61
2:A:2811:G:N2	2:A:2891:G:H1'	2.16	0.61
2:A:783:A:N1	2:A:785:G:H1'	2.16	0.61
2:A:848:G:H21	2:A:933:A:H1'	1.66	0.61
2:A:974(A):C:C6	2:A:989:G:N1	2.69	0.61
3:D:208:GLY:O	3:D:211:HIS:CG	2.53	0.61
4:E:39:GLN:CB	4:E:174:LEU:HG	2.30	0.61
2:A:2621:A:O2'	4:E:255:GLN:NE2	2.34	0.61
2:A:2821:A:O3'	4:E:258:TYR:CE2	2.53	0.61
5:F:220:THR:CA	5:F:224:ALA:CB	2.76	0.61
5:F:81:PRO:O	5:F:82:GLN:HB3	2.01	0.61
6:G:49:PRO:HG3	6:G:73:VAL:CG2	2.28	0.61
8:I:35:LEU:O	8:I:36:ALA:HB3	2.01	0.61
11:P:67:ARG:HH11	11:P:111:ALA:HB3	1.66	0.61
11:P:128:GLY:O	11:P:129:ALA:O	2.19	0.61
19:R:101:ALA:CA	26:5:41:LEU:HD12	2.31	0.61
13:S:117:ALA:CA	13:S:120:GLU:CD	2.65	0.61
14:T:53:ASP:CA	14:T:56:ARG:HE	2.14	0.61
21:V:40:VAL:CG1	21:V:55:THR:HG22	2.30	0.61
15:W:38:TYR:CD1	26:5:41:LEU:HD21	2.35	0.61
15:W:5:ALA:HB3	15:W:50:VAL:O	2.00	0.61
17:Y:51:LEU:HD22	17:Y:95:ASN:HB3	1.82	0.61
18:Z:125:PRO:HG2	18:Z:130:ILE:CG2	2.30	0.61
18:Z:163:ASP:OD2	18:Z:164:PRO:HD2	0.79	0.61
18:Z:89:GLY:C	18:Z:91:PRO:HD2	2.21	0.61
2:A:1310:G:H1	2:A:1604:C:H42	1.49	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:144:C:H2'	2:A:145:G:H8	1.65	0.61
2:A:551:G:H4'	2:A:1220:A:H2	1.65	0.61
23:3:16:PRO:HB2	23:3:19:GLN:HG2	1.83	0.61
23:3:31:LEU:HD22	23:3:32:GLN:N	2.08	0.61
25:4:14:ILE:HD12	25:4:16:TYR:HE1	1.63	0.61
15:W:19:LEU:CD1	26:5:25:LEU:HG	2.28	0.61
2:A:1031:G:O3'	30:9:8:LYS:HE2	2.01	0.61
2:A:1287:A:H5'	2:A:1287:A:C8	2.36	0.61
2:A:1140:C:H1'	2:A:142(A):A:C6	2.36	0.61
2:A:1800:C:H6	2:A:1800:C:H3'	1.65	0.61
2:A:2429:G:H5'	2:A:2430:A:P	2.41	0.61
2:A:2483:C:C2'	2:A:2484:G:O5'	2.46	0.61
2:A:2503:A:C8	2:A:2503:A:H3'	2.34	0.61
2:A:2605:U:O2'	2:A:2606:C:H5''	2.01	0.61
2:A:2620:C:O2'	2:A:2621:A:P	2.59	0.61
2:A:2733:A:H3'	2:A:2733:A:H8	1.66	0.61
2:A:2740:A:C1'	2:A:2741:A:C8	2.84	0.61
2:A:527:C:C6	2:A:2779:U:H2'	2.36	0.61
2:A:689:A:H2'	2:A:690:G:O4'	2.00	0.61
2:A:784:A:O2'	2:A:785:G:H5''	2.00	0.61
2:A:821:A:O2'	2:A:945:A:H3'	2.00	0.61
1:B:24:G:C8	1:B:56:G:C5	2.89	0.61
3:D:196:ASN:CA	3:D:199:ARG:CD	2.77	0.61
4:E:221:LYS:HE3	4:E:233:ARG:CB	2.31	0.61
4:E:240:PRO:CG	4:E:243:PRO:HG2	2.30	0.61
4:E:247:ARG:HB3	4:E:249:THR:HG23	1.82	0.61
4:E:254:GLY:O	4:E:255:GLN:C	2.39	0.61
5:F:6:TYR:CD1	5:F:139:VAL:HB	2.35	0.61
2:A:321:G:C1'	5:F:206:ASN:ND2	2.63	0.61
5:F:96:LYS:HB2	5:F:98:ARG:NH1	0.68	0.61
8:I:43:ASN:HA	8:I:46:ALA:HB2	1.81	0.61
10:O:13:ASN:O	10:O:14:SER:C	2.37	0.61
10:O:35:ILE:HD12	10:O:62:VAL:CG1	2.30	0.61
11:P:64:ILE:HD13	11:P:106:VAL:HG12	1.81	0.61
13:S:122:ALA:CA	13:S:125:ALA:HB3	2.31	0.61
14:T:10:GLY:O	14:T:11:THR:O	2.19	0.61
21:V:3:ALA:N	21:V:14:VAL:O	2.30	0.61
15:W:66:GLU:O	15:W:69:LEU:CD2	2.48	0.61
17:Y:101:LEU:CD2	17:Y:101:LEU:C	2.66	0.61
17:Y:40:VAL:O	17:Y:41:ARG:HB2	2.00	0.61
18:Z:149:ALA:O	18:Z:150:GLY:C	2.38	0.61
18:Z:81:VAL:HG12	18:Z:82:ASP:H	1.64	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:2:15:GLU:O	22:2:17:GLU:C	2.39	0.61
31:K:20:PRO:C	31:K:22:PRO:HD2	2.21	0.61
2:A:1544:C:C2'	2:A:1545:A:H4'	2.27	0.61
24:0:65:GLY:O	24:0:66:LYS:CG	2.48	0.60
23:3:16:PRO:C	23:3:19:GLN:OE1	2.40	0.60
23:3:5:LYS:CB	23:3:36:VAL:HG12	2.31	0.60
25:4:21:VAL:O	25:4:22:MET:CB	2.49	0.60
25:4:36:TRP:N	25:4:36:TRP:CD1	2.69	0.60
25:4:59:PHE:CA	25:4:62:ARG:NE	2.63	0.60
26:5:45:ILE:CB	26:5:52:TYR:CE1	2.84	0.60
27:6:32:GLN:CG	27:6:35:LEU:CD1	2.67	0.60
2:A:1664:A:N3	2:A:2726:U:C4	2.68	0.60
2:A:2252:G:C6	2:A:2253:G:C5	2.89	0.60
2:A:2458:G:O2'	2:A:2459:A:C8	2.50	0.60
2:A:2504:U:H3'	2:A:2504:U:H6	1.66	0.60
2:A:2553:G:C6	2:A:2554:U:O2	2.54	0.60
2:A:2603:G:H2'	2:A:2604:U:O4'	2.01	0.60
2:A:2051:A:C5	2:A:2614:A:N7	2.69	0.60
2:A:2701:C:C3'	2:A:2702:U:C5'	2.73	0.60
2:A:2752:C:N4	2:A:2753:A:N1	2.49	0.60
2:A:2821:A:N3	2:A:2821:A:H2'	2.16	0.60
2:A:294:A:H3'	2:A:294:A:C8	2.36	0.60
2:A:450:G:OP2	5:F:85:LYS:O	2.19	0.60
7:H:59:HIS:O	7:H:61:ARG:N	2.34	0.60
2:A:142(A):A:O3'	9:N:21:ARG:NH2	2.34	0.60
9:N:20:GLY:O	9:N:22:VAL:CA	2.49	0.60
10:O:17:ARG:HE	10:O:47:THR:CA	2.13	0.60
10:O:17:ARG:CZ	10:O:47:THR:CA	2.79	0.60
12:Q:9:SER:O	12:Q:11:LYS:HE2	2.00	0.60
19:R:20:LEU:CD2	19:R:24:GLN:CG	2.79	0.60
1:B:9:G:OP1	13:S:23:ARG:NH1	2.34	0.60
20:U:117:ARG:CG	20:U:118:GLN:N	2.64	0.60
21:V:20:ILE:HG21	21:V:67:LYS:HD2	1.81	0.60
15:W:23:LEU:CD2	15:W:23:LEU:C	2.69	0.60
15:W:8:ARG:CG	15:W:102:HIS:HE1	2.09	0.60
18:Z:165:GLU:O	18:Z:166:LEU:HB2	2.01	0.60
1:B:75:G:C4	18:Z:22:VAL:HG21	2.36	0.60
18:Z:34:LEU:O	18:Z:35:ASP:CB	2.47	0.60
18:Z:62:PHE:CE1	18:Z:87:THR:HG21	2.36	0.60
2:A:138:G:C8	16:X:42:GLU:CD	2.74	0.60
31:K:114:PRO:C	31:K:116:LEU:H	2.05	0.60
31:K:79:LEU:HD23	31:K:79:LEU:O	2.00	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:K:32:GLY:O	31:K:60:VAL:CB	2.48	0.60
1:B:105:G:H2'	1:B:106:G:H8	1.66	0.60
24:0:61:ALA:HB1	24:0:80:SER:HA	1.82	0.60
24:0:75:GLY:O	24:0:76:ALA:HB2	2.01	0.60
23:3:31:LEU:HD22	23:3:32:GLN:HB3	1.81	0.60
25:4:60:ASN:O	25:4:63:PHE:HB2	2.01	0.60
27:6:8:ILE:N	27:6:8:ILE:HD13	2.05	0.60
30:9:7:VAL:HG21	30:9:36:GLN:HG3	1.83	0.60
2:A:1999:C:C2'	2:A:2687:U:O2'	2.48	0.60
2:A:2218:G:C2'	2:A:2219:G:O5'	2.48	0.60
2:A:2246:G:H1'	2:A:2426:A:C2	2.36	0.60
2:A:2279:G:H2'	2:A:2280:G:H8	1.66	0.60
2:A:2432:A:C2	2:A:2433:A:C4	2.89	0.60
2:A:807:U:C5'	2:A:2445:G:H4'	2.30	0.60
2:A:2555:U:C5	2:A:2556:C:C5	2.89	0.60
2:A:2682:U:H6	4:E:48:MET:SD	2.23	0.60
2:A:2684:U:N3	2:A:2725:A:C6	2.69	0.60
2:A:2776:A:C2	2:A:2778:A:C6	2.88	0.60
2:A:2786:U:H2'	2:A:2787:C:C6	2.35	0.60
2:A:874:G:H1	2:A:903:C:H42	1.47	0.60
3:D:167:GLU:O	3:D:168:GLY:C	2.38	0.60
3:D:175:LEU:HG	3:D:180:VAL:CA	2.24	0.60
2:A:1656:C:OP2	4:E:233:ARG:HD3	2.00	0.60
5:F:167:ASP:CG	5:F:232:LEU:CG	2.59	0.60
9:N:27:ALA:N	9:N:30:ALA:HB2	2.14	0.60
9:N:53:ILE:HG22	9:N:54:VAL:HG23	1.82	0.60
20:U:93:LYS:O	20:U:94:VAL:CG2	2.48	0.60
15:W:84:ARG:CB	15:W:96:ILE:HD11	2.12	0.60
2:A:337:C:P	17:Y:24:ARG:CB	2.86	0.60
18:Z:41:ARG:H	18:Z:41:ARG:HE	1.49	0.60
8:I:115:ILE:HG12	8:I:131:VAL:CG2	2.31	0.60
8:I:86:GLY:C	8:I:88:ARG:CA	2.69	0.60
2:A:405:U:H5''	2:A:406:G:O5'	2.01	0.60
2:A:246:C:O2'	2:A:385:C:H4'	2.02	0.60
24:0:48:GLY:CA	24:0:55:ARG:CB	2.78	0.60
25:4:58:LYS:C	25:4:61:LYS:HG3	2.13	0.60
25:4:6:HIS:CB	25:4:7:PRO:CD	2.65	0.60
26:5:50:GLY:HA2	26:5:57:VAL:CB	2.31	0.60
29:8:12:ARG:O	29:8:14:ILE:HD13	1.99	0.60
29:8:26:LYS:HE3	29:8:45:GLY:CA	2.31	0.60
2:A:1006:C:H1'	9:N:86:MET:SD	2.42	0.60
2:A:14:A:N3	2:A:2625:G:O2'	2.34	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1667:G:H2'	2:A:1991:U:O4	2.01	0.60
2:A:1819:A:C2'	3:D:177:SER:OG	2.48	0.60
2:A:2268:A:P	2:A:2268:A:O4'	2.59	0.60
2:A:2461:C:O2	2:A:2462:U:H6	1.84	0.60
2:A:1127:A:H2	2:A:2518:A:H1'	1.66	0.60
2:A:2537:U:C6	2:A:2538:C:H5	2.19	0.60
2:A:2606:C:C6	2:A:2606:C:H5'	2.34	0.60
2:A:2619:C:H2'	2:A:2620:C:H5'	1.83	0.60
2:A:2741:A:O2'	2:A:2742:C:O4'	2.18	0.60
2:A:2869:G:H2'	2:A:2870:C:C5'	2.31	0.60
2:A:511:U:OP2	2:A:512:G:C5	2.53	0.60
1:B:83:G:H4'	23:3:52:HIS:HD2	1.66	0.60
4:E:229:GLN:O	4:E:231:TRP:CD1	2.54	0.60
2:A:2620:C:C4'	4:E:252:GLN:HB2	2.31	0.60
5:F:195:VAL:O	5:F:236:THR:HG23	2.01	0.60
6:G:151:ILE:CD1	6:G:156:ARG:NH2	2.51	0.60
12:Q:65:ARG:CZ	12:Q:122:PHE:CD2	2.78	0.60
12:Q:16:ARG:H	12:Q:20:ILE:HG12	1.64	0.60
19:R:74:LYS:O	19:R:77:ARG:NH1	2.33	0.60
19:R:58:GLY:C	19:R:80:PHE:HE2	2.03	0.60
6:G:145:ASP:CB	13:S:15:GLU:HA	2.26	0.60
1:B:28:C:P	13:S:41:LYS:HG3	2.40	0.60
13:S:61:ALA:HB1	13:S:84:THR:HG22	1.83	0.60
21:V:69:ILE:HG21	21:V:88:GLN:C	2.21	0.60
18:Z:13:LYS:C	18:Z:15:ASP:N	2.36	0.60
22:2:27:LEU:CD2	22:2:53:ILE:HD11	2.31	0.60
22:2:46:ILE:O	22:2:47:LYS:C	2.40	0.60
2:A:1339:G:H22	2:A:1603:A:H8	1.47	0.60
16:X:4:VAL:HG23	16:X:5:ILE:N	2.16	0.60
2:A:1059:G:N2	31:K:127:ILE:CG2	2.43	0.60
31:K:107:GLU:OE1	31:K:107:GLU:O	2.18	0.60
31:K:112:LYS:O	31:K:114:PRO:CD	2.49	0.60
31:K:116:LEU:HD13	31:K:117:ASN:CA	2.31	0.60
31:K:132:ALA:HA	31:K:137:ILE:HB	1.84	0.60
6:G:60:GLU:O	6:G:61:PHE:CB	2.50	0.60
2:A:414:C:N3	2:A:2409:G:C2	2.68	0.60
24:0:8:GLY:O	24:0:10:SER:N	2.33	0.60
2:A:1350:C:N4	2:A:1381:G:H1	1.97	0.60
2:A:1556:C:H2'	2:A:1557:C:C6	2.36	0.60
25:4:56:VAL:HG12	25:4:57:ASP:H	1.66	0.60
2:A:1752:C:H4'	2:A:2862:G:OP1	2.01	0.60
2:A:1790:C:OP2	3:D:224:VAL:CG1	2.48	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1800:C:H6	2:A:1800:C:C3'	2.14	0.60
2:A:2292:C:H2'	2:A:2293:C:H6	1.66	0.60
2:A:2332:U:H4'	2:A:2336:A:N6	2.17	0.60
2:A:2346:A:HO2'	2:A:2347:C:P	2.22	0.60
2:A:2393:A:O2'	2:A:2394:C:O4'	2.19	0.60
2:A:2415:G:H22	2:A:2416:C:H1'	1.64	0.60
2:A:2468:G:O2'	2:A:2469:A:C8	2.35	0.60
2:A:2597:G:C6	2:A:2598:A:C6	2.88	0.60
2:A:746:A:O5'	2:A:2612:C:C6	2.54	0.60
2:A:2695:C:O2	2:A:2696:U:C4	2.54	0.60
2:A:1456:G:N1	2:A:2704:C:N4	2.50	0.60
2:A:2754:U:O2'	2:A:2756:U:OP2	2.19	0.60
2:A:2758:A:OP2	2:A:2758:A:C8	2.54	0.60
1:B:18:G:H3'	6:G:149:ARG:HH11	1.66	0.60
3:D:175:LEU:CD2	3:D:175:LEU:H	2.10	0.60
3:D:203:PRO:C	3:D:204:PHE:HD1	2.02	0.60
4:E:199:ALA:HA	4:E:314:ALA:HA	1.83	0.60
2:A:2681:C:C4'	4:E:48:MET:SD	2.90	0.60
2:A:617:G:OP1	5:F:221:GLU:CB	2.49	0.60
5:F:26:VAL:HG12	5:F:27:ARG:N	2.16	0.60
6:G:22:VAL:CB	6:G:24:HIS:NE2	2.57	0.60
9:N:22:VAL:HG12	9:N:23:ALA:N	2.16	0.60
9:N:62:ASP:OD1	9:N:62:ASP:N	2.34	0.60
12:Q:36:ASN:C	12:Q:41:THR:CB	2.69	0.60
19:R:90:ARG:HH12	19:R:117:VAL:HG11	1.66	0.60
2:A:447:A:P	20:U:5:LYS:HZ3	2.23	0.60
21:V:5:ILE:O	21:V:6:GLN:CB	2.50	0.60
15:W:11:ARG:CG	15:W:11:ARG:NH1	2.61	0.60
18:Z:69:VAL:CB	18:Z:81:VAL:HG13	2.24	0.60
22:2:60:GLN:O	22:2:61:GLY:C	2.40	0.60
2:A:2307:G:H1'	2:A:2311:A:H61	0.59	0.60
8:I:52:GLN:HA	8:I:55:GLN:CG	2.32	0.60
23:3:20:LYS:O	23:3:23:LEU:CA	2.49	0.60
2:A:1183:G:H5''	23:3:29:ARG:HG3	1.84	0.60
19:R:101:ALA:C	26:5:41:LEU:HD12	2.21	0.60
26:5:57:VAL:CG1	26:5:58:LEU:N	2.29	0.60
27:6:36:GLU:C	27:6:52:GLU:OE2	2.39	0.60
27:6:12:MET:HE1	27:6:54:LYS:O	2.02	0.60
28:7:3:ARG:O	28:7:4:THR:CG2	2.45	0.60
2:A:1952:A:C2	10:O:22:ILE:HD13	2.35	0.60
2:A:2358:G:H5''	2:A:2359:C:OP2	2.01	0.60
2:A:197:A:C5	2:A:2430:A:N7	2.70	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1129:A:N1	2:A:2570:G:C4'	2.64	0.60
2:A:2615:U:C2	26:5:7:PRO:HA	2.36	0.60
2:A:2846:G:H1	2:A:2869:G:H1	1.49	0.60
2:A:533:G:H1	2:A:560:C:N4	1.93	0.60
2:A:598:G:H21	5:F:33:LYS:HZ3	0.61	0.60
3:D:168:GLY:C	3:D:170:TYR:N	2.46	0.60
3:D:208:GLY:H	3:D:211:HIS:CE1	2.19	0.60
2:A:617:G:OP1	5:F:221:GLU:HB2	2.02	0.60
5:F:88:SER:O	5:F:89:ALA:HB2	2.01	0.60
7:H:88:LEU:C	7:H:88:LEU:HD23	2.21	0.60
9:N:12:VAL:HG12	9:N:38:VAL:CG1	2.31	0.60
9:N:83:ILE:HG13	9:N:84:ARG:H	0.45	0.60
10:O:20:LEU:HG	10:O:44:LYS:CD	2.31	0.60
19:R:75:LEU:HD23	19:R:78:LYS:HD3	1.82	0.60
19:R:87:TYR:HE1	19:R:94:TYR:CB	2.03	0.60
13:S:118:ILE:O	13:S:119:GLN:C	2.38	0.60
20:U:115:ASN:H	20:U:115:ASN:ND2	1.94	0.60
2:A:1152:C:O3'	20:U:80:ILE:HD13	2.02	0.60
21:V:50:ASP:CG	21:V:53:LYS:CE	2.65	0.60
21:V:59:GLU:HG2	21:V:100:GLY:N	2.17	0.60
17:Y:66:ASP:H	17:Y:72:ILE:HG12	1.65	0.60
8:I:109:LYS:N	8:I:109:LYS:CE	2.57	0.60
31:K:75:ALA:O	31:K:76:SER:C	2.40	0.60
2:A:1614:A:H62	15:W:88:ARG:CB	1.85	0.60
23:3:11:SER:CB	23:3:13:ILE:HG12	2.31	0.60
2:A:388:G:OP2	25:4:29:PRO:CD	2.50	0.60
25:4:56:VAL:CG1	25:4:57:ASP:H	2.14	0.60
25:4:6:HIS:NE2	25:4:55:ARG:HG3	2.16	0.60
28:7:21:ARG:HD2	28:7:31:LEU:CD1	2.32	0.60
2:A:1140:C:C5	9:N:49:ARG:NE	2.65	0.60
2:A:1818:U:H2'	2:A:1818:U:O2	2.01	0.60
2:A:2093:G:C5	2:A:2225:A:C6	2.89	0.60
2:A:2243:U:O2	2:A:2244:U:C6	2.55	0.60
2:A:2339:G:C4	2:A:2340:G:C8	2.90	0.60
2:A:2351:G:C2	2:A:2365:G:C6	2.90	0.60
2:A:2416:C:O2	2:A:2417:C:H6	1.80	0.60
2:A:2423:U:C1'	2:A:2425:A:C4	2.83	0.60
2:A:2447:G:N7	2:A:2500:U:C5	2.68	0.60
2:A:2531:A:C4	2:A:2532:G:C8	2.89	0.60
2:A:2662:A:H2'	2:A:2663:G:C5'	2.31	0.60
2:A:2684:U:O2	10:O:70:ARG:NH2	2.34	0.60
2:A:2697:G:C6	2:A:2698:U:C5	2.90	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2741:A:N3	2:A:2742:C:H1'	2.17	0.60
2:A:2774:C:H2'	2:A:2774:C:O2	1.99	0.60
2:A:2881:C:H2'	2:A:2882:A:O5'	1.99	0.60
2:A:530:G:H3'	2:A:530:G:P	2.41	0.60
2:A:574:C:N4	2:A:2054:A:H5'	2.11	0.60
2:A:783:A:C2	2:A:785:G:H1'	2.37	0.60
4:E:61:PRO:HD2	4:E:62:ARG:HG3	1.84	0.60
5:F:84:VAL:C	5:F:86:GLY:N	2.44	0.60
2:A:2316:C:C3'	6:G:151:ILE:HD12	2.23	0.60
6:G:35:ALA:C	6:G:36:ASN:CG	2.58	0.60
2:A:2745:C:N1	7:H:142:GLU:OE2	2.34	0.60
7:H:88:LEU:HD11	7:H:94:ARG:HA	1.83	0.60
7:H:89:VAL:O	7:H:159:LYS:HA	2.00	0.60
9:N:15:ARG:CB	9:N:43:ARG:CB	2.77	0.60
9:N:83:ILE:O	9:N:84:ARG:C	2.40	0.60
10:O:100:GLY:O	10:O:101:PRO:O	2.19	0.60
10:O:103:ALA:HB3	10:O:105:GLU:CG	2.31	0.60
10:O:43:VAL:HG12	10:O:45:ASP:H	1.66	0.60
19:R:26:LYS:O	19:R:27:SER:C	2.40	0.60
15:W:79:GLY:C	15:W:80:PRO:O	2.32	0.60
17:Y:101:LEU:HD22	17:Y:103:LEU:CD2	1.99	0.60
2:A:84:A:N7	17:Y:111:ARG:NH2	2.47	0.60
17:Y:33:GLU:HG2	17:Y:34:GLU:N	2.16	0.60
18:Z:116:VAL:C	18:Z:118:HIS:H	2.05	0.60
18:Z:54:ILE:HG23	18:Z:55:THR:N	2.17	0.60
8:I:116:GLU:CG	8:I:132:LYS:HG3	2.32	0.60
2:A:1545:A:O3'	2:A:545(A):A:C5'	2.50	0.60
4:E:109:ASP:HA	4:E:112:LEU:H	1.64	0.60
31:K:52:MET:CE	31:K:53:ILE:H	2.09	0.60
7:H:28:PRO:CG	7:H:79:SER:HA	2.31	0.60
3:D:169:LYS:H	3:D:169:LYS:NZ	1.99	0.60
27:6:28:ARG:O	27:6:28:ARG:HG2	2.01	0.60
2:A:1646:C:C5'	2:A:1647:G:H5'	2.26	0.60
2:A:2264:C:C5	2:A:2265:U:H5	2.20	0.60
2:A:2300:G:H2'	2:A:2301:C:H6	1.66	0.60
2:A:2619:C:C2'	2:A:2620:C:O5'	2.50	0.60
2:A:2626:C:C5	2:A:2626:C:P	2.95	0.60
2:A:2634:G:C6	2:A:2635:C:C5	2.89	0.60
2:A:2740:A:H2'	2:A:2741:A:H5'	1.77	0.60
2:A:2825:C:C5	2:A:2825:C:P	2.94	0.60
2:A:2850:A:N6	2:A:2851:A:N6	2.49	0.60
2:A:535:C:C5'	20:U:53:LYS:HE3	2.21	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1630:G:H2'	2:A:630(A):C:C6	2.37	0.60
2:A:729:G:N1	2:A:1775:U:C4	2.69	0.60
2:A:684:G:C6	2:A:775:G:N7	2.70	0.60
2:A:964:C:O2'	2:A:2273:A:C8	2.55	0.60
2:A:988:A:H4'	2:A:1155:A:H2	1.65	0.60
3:D:204:PHE:CD2	3:D:209:ASN:HB2	2.37	0.60
3:D:77:VAL:CB	3:D:113:MET:CA	2.23	0.60
3:D:85:ASN:HD22	3:D:86:ARG:HD2	1.66	0.60
2:A:2620:C:H4'	4:E:252:GLN:CG	2.31	0.60
6:G:46:GLY:O	6:G:47:GLN:CG	2.49	0.60
9:N:98:PHE:N	9:N:98:PHE:CD1	2.70	0.60
11:P:67:ARG:HH11	11:P:111:ALA:CB	2.15	0.60
12:Q:9:SER:O	12:Q:10:ILE:O	2.20	0.60
19:R:21:TYR:O	19:R:22:ARG:O	2.19	0.60
19:R:38:VAL:O	19:R:39:PRO:C	2.39	0.60
19:R:98:LEU:O	19:R:113:LEU:O	2.19	0.60
13:S:122:ALA:C	13:S:125:ALA:HB3	2.22	0.60
13:S:18:THR:O	13:S:19:ASP:OD1	2.18	0.60
20:U:61:TRP:C	20:U:65:ILE:CG1	2.62	0.60
15:W:17:VAL:HA	15:W:20:VAL:CG2	2.32	0.60
15:W:59:VAL:HG12	15:W:60:ASN:N	2.16	0.60
2:A:495:G:N2	15:W:61:ASN:ND2	2.48	0.60
8:I:92:SER:H	8:I:122:ARG:CZ	2.13	0.60
2:A:76:C:O3'	22:2:55:ARG:HG3	2.01	0.60
16:X:5:ILE:HG22	16:X:6:LYS:CA	2.27	0.60
7:H:53:ARG:NH1	7:H:56:ASP:O	2.35	0.60
2:A:270(K):C:H3'	2:A:270(L):U:O4'	2.01	0.60
2:A:1829:A:H5''	2:A:1830:C:H5	1.65	0.60
2:A:1766:U:H2'	2:A:1767:C:H6	1.67	0.60
2:A:1191:G:H2'	2:A:1192:G:H8	1.66	0.60
23:3:25:ALA:C	23:3:27:GLY:H	2.05	0.60
27:6:54:LYS:HB2	27:6:54:LYS:NZ	2.12	0.60
2:A:126:A:OP2	28:7:17:GLY:CA	2.50	0.60
2:A:1655:A:H5''	4:E:211:GLN:HG2	1.83	0.60
2:A:1799:G:C6	3:D:177:SER:CB	2.77	0.60
2:A:2087:G:C6	2:A:2233:U:C5	2.89	0.60
2:A:2328:A:C4	2:A:2329:G:C8	2.88	0.60
2:A:2330:G:H2'	2:A:2331:G:O4'	2.02	0.60
2:A:2353:G:N2	2:A:2364:C:C2	2.63	0.60
2:A:2357:U:O2'	2:A:2358:G:P	2.59	0.60
2:A:960:A:O4'	2:A:2457:U:H4'	2.02	0.60
2:A:2484:G:C1'	12:Q:142:LYS:NZ	2.62	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2756:U:HO2'	2:A:2757:A:H5'	1.54	0.60
2:A:2740:A:C2	2:A:2764:A:C2	2.90	0.60
2:A:2635:C:N4	2:A:2784:C:H42	2.00	0.60
2:A:2792:G:C6	2:A:2793:G:O6	2.55	0.60
2:A:30:G:H2'	2:A:31:C:H6	1.64	0.60
2:A:558:G:OP1	9:N:92:GLN:N	2.32	0.60
1:B:114:G:H1'	13:S:46:GLN:NE2	2.16	0.60
3:D:128:ALA:CB	3:D:190:THR:HB	2.01	0.60
4:E:77:PRO:CB	4:E:187:HIS:C	2.60	0.60
4:E:63:GLU:OE1	4:E:64:GLY:N	2.35	0.60
4:E:87:GLU:O	4:E:94:ARG:O	2.19	0.60
5:F:93:LYS:HB2	5:F:96:LYS:HE2	1.84	0.60
7:H:64:HIS:O	7:H:67:THR:N	2.35	0.60
8:I:21:VAL:O	8:I:22:ALA:CB	2.49	0.60
9:N:18:ILE:O	9:N:22:VAL:HG21	2.00	0.60
9:N:48:GLY:O	9:N:49:ARG:C	2.40	0.60
10:O:92:SER:HB3	10:O:113:LYS:HZ2	1.67	0.60
12:Q:42:TYR:HB2	12:Q:43:PRO:HD3	1.83	0.60
14:T:13:ILE:CG2	14:T:14:GLU:OE2	2.49	0.60
20:U:111:ASP:O	20:U:113:SER:C	2.39	0.60
20:U:16:LYS:O	20:U:17:VAL:C	2.40	0.60
20:U:86:ALA:CB	20:U:90:LEU:CD2	2.79	0.60
15:W:15:ARG:O	15:W:16:LYS:C	2.40	0.60
18:Z:171:VAL:O	18:Z:171:VAL:HG23	2.02	0.60
18:Z:35:ASP:N	18:Z:39:PHE:HZ	1.88	0.60
18:Z:39:PHE:CD2	18:Z:39:PHE:N	2.40	0.60
8:I:145:VAL:CG1	8:I:146:THR:N	2.47	0.60
22:2:4:HIS:O	22:2:8:ILE:CG1	2.49	0.60
2:A:1397:U:O2	2:A:1397:U:H2'	2.01	0.60
31:K:135:MET:CE	31:K:137:ILE:HG13	2.32	0.60
31:K:80:LYS:HG3	31:K:85:ILE:O	2.02	0.60
31:K:52:MET:CE	31:K:52:MET:CA	2.74	0.60
2:A:701:G:H1	2:A:731:C:H42	1.49	0.60
2:A:444(A):A:H3'	2:A:1460:A:H1'	1.84	0.60
23:3:41:PRO:O	23:3:44:ARG:HB3	2.02	0.60
27:6:29:ARG:CG	27:6:30:ASN:N	2.58	0.60
27:6:32:GLN:HG2	27:6:35:LEU:CD1	2.31	0.60
27:6:54:LYS:NZ	27:6:54:LYS:CB	2.64	0.60
2:A:1182:A:H2'	2:A:1183:G:O4'	2.01	0.60
2:A:1208:C:H2'	2:A:1209:G:C8	2.37	0.60
2:A:1791:A:OP1	3:D:210:LYS:HB3	2.01	0.60
2:A:2226:C:N3	2:A:2227:A:N3	2.49	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2242:G:N1	2:A:2243:U:C5	2.70	0.60
2:A:2259:G:N2	2:A:2282:G:C2	2.70	0.60
2:A:2277:G:N3	2:A:2277:G:H2'	2.16	0.60
2:A:2331:G:C4	2:A:2332:U:C2	2.90	0.60
2:A:2351:G:N2	2:A:2365:G:C5	2.70	0.60
2:A:2411:A:O2'	2:A:2412:A:O5'	2.19	0.60
2:A:2428:G:H3'	2:A:2428:G:H8	1.64	0.60
2:A:2548:G:C2'	2:A:2549:G:O5'	2.48	0.60
2:A:2578:G:H2'	2:A:2579:C:C5'	2.30	0.60
2:A:2662:A:C2	2:A:2663:G:C4'	2.85	0.60
2:A:2679:A:C4	2:A:2680:C:C6	2.90	0.60
2:A:2785:C:C5'	4:E:99:VAL:CA	2.63	0.60
2:A:792:G:H21	2:A:2072:G:H1'	1.67	0.60
2:A:826:U:OP1	2:A:2428:G:C3'	2.48	0.60
3:D:146:LYS:HZ1	3:D:184:LEU:CD1	2.01	0.60
4:E:303:PRO:HB2	4:E:307:LEU:CG	2.30	0.60
9:N:52:GLN:CB	9:N:55:GLU:OE1	2.50	0.60
10:O:110:ASP:O	10:O:111:PHE:CE1	2.53	0.60
10:O:93:PRO:HD2	10:O:113:LYS:HD2	1.84	0.60
12:Q:72:VAL:HG22	12:Q:135:ALA:CB	2.32	0.60
12:Q:68:ALA:HB1	12:Q:136:TRP:CZ3	2.37	0.60
2:A:957:A:P	12:Q:95:GLU:HB3	2.41	0.60
2:A:2376:A:H61	13:S:109:PRO:HG3	1.66	0.60
13:S:86:LEU:H	13:S:121:GLY:CA	2.15	0.60
13:S:48:VAL:CG1	13:S:55:ASP:OD2	2.50	0.60
14:T:6:CYS:O	14:T:7:ASP:CG	2.40	0.60
15:W:14:PRO:CD	15:W:99:ARG:O	2.50	0.60
17:Y:71:VAL:CG1	17:Y:93:THR:H	2.13	0.60
22:2:2:VAL:HG12	22:2:3:LEU:N	2.14	0.60
2:A:76:C:C4'	22:2:55:ARG:HG3	2.31	0.60
4:E:112:LEU:HD13	4:E:112:LEU:C	2.23	0.60
2:A:440:G:OP1	17:Y:6:LYS:NZ	2.35	0.60
2:A:120:U:N3	2:A:150:C:N4	2.50	0.60
2:A:589:C:H42	2:A:668:G:H1	1.47	0.60
24:0:33:ALA:HB2	24:0:65:GLY:CA	2.32	0.60
26:5:15:LYS:HA	26:5:18:MET:CG	2.32	0.60
26:5:46:CYS:O	26:5:48:ASN:N	2.34	0.60
30:9:29:ASN:HD22	30:9:32:HIS:CE1	2.16	0.60
2:A:1127:A:C6	2:A:2518:A:H2	2.20	0.60
2:A:196:A:C2	2:A:805:G:N1	2.70	0.60
2:A:530:G:N2	2:A:2020:A:O2'	2.35	0.60
2:A:528:A:N6	2:A:2042:A:H2'	2.16	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2215:G:C4	2:A:2216:G:C8	2.90	0.60
2:A:2302:G:N1	2:A:2315:G:C5	2.70	0.60
2:A:2315:G:OP2	6:G:20:LYS:NZ	2.34	0.60
2:A:2390:U:H3'	2:A:2390:U:H6	1.67	0.60
2:A:2417:C:C2	2:A:2418:A:C8	2.90	0.60
2:A:2431:U:O4	2:A:2434:A:OP2	2.20	0.60
2:A:2067:G:N1	2:A:2444:G:C6	2.70	0.60
2:A:2521:C:O2	2:A:2522:U:C1'	2.50	0.60
2:A:2528:U:H3'	2:A:2528:U:C6	2.37	0.60
2:A:2550:G:H2'	2:A:2551:C:C5	2.37	0.60
2:A:2686:G:C6	2:A:2687:U:C5	2.90	0.60
2:A:2728:U:O5'	2:A:2728:U:H6	1.85	0.60
2:A:2733:A:H3'	2:A:2733:A:C8	2.37	0.60
2:A:291:C:H2'	2:A:292:C:H5'	1.84	0.60
2:A:515:A:H2'	2:A:516:C:C6	2.37	0.60
2:A:631:A:H2	2:A:2415:G:N2	1.85	0.60
2:A:974:G:H3'	21:V:82:ARG:NH2	2.16	0.60
3:D:175:LEU:CD2	3:D:175:LEU:N	2.46	0.60
3:D:86:ARG:HG2	3:D:88:ALA:HB3	1.84	0.60
5:F:84:VAL:H	5:F:87:ARG:NE	1.99	0.60
7:H:122:ILE:HG22	7:H:123:GLU:N	2.17	0.60
7:H:74:MET:O	7:H:75:VAL:O	2.20	0.60
9:N:135:ILE:O	9:N:139:LEU:CG	2.49	0.60
10:O:92:SER:CB	10:O:113:LYS:HZ2	2.10	0.60
2:A:2485:G:H4'	12:Q:144:THR:HG22	1.84	0.60
2:A:911:A:C8	12:Q:16:ARG:CG	2.85	0.60
19:R:22:ARG:HG2	19:R:26:LYS:HZ1	1.66	0.60
13:S:104:ILE:HG22	13:S:106:LEU:O	2.02	0.60
13:S:118:ILE:O	13:S:121:GLY:N	2.35	0.60
2:A:1251:C:H5'	20:U:10:ARG:CD	2.32	0.60
17:Y:77:VAL:O	17:Y:78:THR:CG2	2.44	0.60
18:Z:108:VAL:O	18:Z:109:GLN:CG	2.50	0.60
8:I:133:LEU:H	8:I:138:THR:CG2	2.15	0.60
8:I:98:ILE:HG21	8:I:115:ILE:CD1	2.32	0.60
16:X:30:ASP:C	16:X:31:ARG:O	2.39	0.60
31:K:125:MET:N	31:K:125:MET:SD	2.74	0.60
2:A:1080:C:C2	31:K:127:ILE:HG12	2.34	0.60
2:A:1524:G:H2'	2:A:1525:G:O4'	2.02	0.60
8:I:47:LEU:O	8:I:51:LYS:HG3	2.02	0.60
2:A:2857:G:H2'	2:A:2858:C:C5'	2.31	0.60
2:A:1904:G:H21	2:A:1928:A:H2	1.50	0.60
2:A:2331:G:C3'	24:O:70:ILE:HB	2.31	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:3:8:LEU:O	23:3:9:VAL:CG1	2.50	0.59
27:6:54:LYS:NZ	27:6:54:LYS:HA	2.17	0.59
30:9:10:MET:HE3	30:9:10:MET:HA	1.83	0.59
2:A:2257:U:C2'	2:A:2258:C:OP2	2.50	0.59
2:A:911:A:C8	2:A:2264:C:H1'	2.37	0.59
2:A:2278:A:P	12:Q:15:THR:OG1	2.60	0.59
2:A:2295:C:H2'	2:A:2295:C:O2	2.02	0.59
2:A:2297:C:O2	2:A:2322:A:C8	2.55	0.59
2:A:2553:G:N7	2:A:2554:U:C2	2.70	0.59
2:A:2553:G:O6	2:A:2554:U:O2	2.19	0.59
2:A:2558:C:H2'	2:A:2558:C:O2	2.01	0.59
2:A:2569:G:C2	2:A:2570:G:C8	2.90	0.59
2:A:2573:C:O5'	2:A:2573:C:C6	2.54	0.59
2:A:2625:G:N7	2:A:2626:C:C4	2.70	0.59
2:A:2686:G:C5	2:A:2687:U:C5	2.89	0.59
2:A:586:A:N6	2:A:809:G:O2'	2.35	0.59
1:B:104:A:HO2'	18:Z:24:TYR:HE2	1.50	0.59
4:E:211:GLN:N	4:E:216:ARG:NH2	2.48	0.59
5:F:102:LEU:HD23	5:F:103:ASN:N	2.16	0.59
5:F:7:ASP:OD2	5:F:13:ASP:OD2	2.19	0.59
5:F:81:PRO:HB3	5:F:87:ARG:HB3	0.63	0.59
5:F:94:THR:C	5:F:96:LYS:N	2.34	0.59
7:H:120:LEU:O	7:H:121:GLU:OE1	2.16	0.59
7:H:96:SER:O	7:H:97:LYS:C	2.40	0.59
9:N:23:ALA:O	9:N:24:SER:C	2.40	0.59
12:Q:18:GLU:CG	12:Q:23:ILE:HD11	2.31	0.59
12:Q:63:ALA:O	12:Q:64:ALA:C	2.40	0.59
12:Q:35:ASN:HB2	12:Q:75:SER:HA	1.84	0.59
19:R:37:THR:CA	19:R:111:LEU:HA	2.22	0.59
19:R:20:LEU:C	19:R:22:ARG:N	2.52	0.59
19:R:20:LEU:HD21	19:R:24:GLN:OE1	2.02	0.59
19:R:60:LEU:HD23	19:R:61:HIS:H	1.65	0.59
1:B:47:C:O3'	13:S:107:ASN:OD1	2.18	0.59
13:S:83:LEU:HA	13:S:86:LEU:HD12	1.83	0.59
20:U:8:ILE:O	20:U:11:ARG:HG2	2.02	0.59
17:Y:31:LEU:CA	17:Y:113:GLU:OE2	2.39	0.59
31:K:18:ALA:HB1	31:K:39:CYS:O	2.02	0.59
2:A:223:A:OP2	2:A:223:A:H4'	2.01	0.59
2:A:364:C:H2'	2:A:365:C:C6	2.37	0.59
2:A:303:U:H2'	2:A:304:G:H8	1.67	0.59
2:A:1726:G:H2'	2:A:1727:U:H5'	1.84	0.59
23:3:19:GLN:CD	23:3:19:GLN:H	2.06	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:3:50:VAL:O	23:3:53:LEU:CB	2.49	0.59
2:A:1364:G:C1'	25:4:3:LYS:HZ3	2.14	0.59
25:4:58:LYS:CG	25:4:62:ARG:HH21	2.14	0.59
26:5:30:LEU:CD2	26:5:41:LEU:HD23	2.32	0.59
28:7:34:ARG:NE	28:7:42:LEU:HD23	2.13	0.59
2:A:1024:G:C2	2:A:1139:G:N2	2.71	0.59
2:A:2230:G:O2'	2:A:2231:C:C4'	2.50	0.59
2:A:2259:G:C2	2:A:2282:G:O6	2.52	0.59
2:A:2634:G:H2'	2:A:2635:C:C5'	2.32	0.59
2:A:2776:A:N3	2:A:2778:A:C8	2.70	0.59
2:A:2810:A:C8	2:A:2811:G:C4'	2.82	0.59
2:A:324:A:C8	2:A:340:A:H1'	2.37	0.59
2:A:526:A:H2	2:A:2626:C:O4'	1.57	0.59
2:A:802:A:H2'	2:A:803:U:C6	2.38	0.59
2:A:989:G:OP2	23:3:11:SER:CB	2.49	0.59
3:D:68:ARG:HH21	3:D:190:THR:HG22	1.66	0.59
5:F:165:ASP:O	5:F:168:ARG:HB3	2.02	0.59
6:G:145:ASP:O	13:S:15:GLU:HA	2.02	0.59
6:G:38:GLU:CG	6:G:41:LEU:CD1	2.60	0.59
7:H:71:LEU:C	7:H:73:ASN:N	2.55	0.59
9:N:54:VAL:HG12	9:N:139:LEU:HD12	1.84	0.59
9:N:57:TYR:O	9:N:60:ARG:HB2	2.03	0.59
2:A:1131:G:C2	9:N:69:TYR:CZ	2.89	0.59
9:N:83:ILE:HD11	9:N:84:ARG:CG	2.31	0.59
11:P:62:ALA:O	11:P:107:LYS:CG	2.48	0.59
11:P:73:VAL:O	11:P:76:LEU:N	2.35	0.59
12:Q:45:GLN:CD	12:Q:153:PRO:CB	2.69	0.59
19:R:41:ALA:O	19:R:43:GLU:N	2.35	0.59
19:R:52:ILE:HD12	19:R:94:TYR:HB2	1.83	0.59
13:S:114:LYS:O	13:S:117:ALA:HB3	2.02	0.59
1:B:50:G:OP1	13:S:75:THR:HG23	2.02	0.59
13:S:85:GLY:O	13:S:88:ALA:HB3	2.02	0.59
13:S:92:ALA:O	13:S:94:GLU:N	2.34	0.59
20:U:4:ALA:C	20:U:6:THR:N	2.52	0.59
21:V:39:PHE:HE2	21:V:41:GLY:CA	2.15	0.59
17:Y:51:LEU:C	17:Y:52:ARG:HG3	2.22	0.59
8:I:95:SER:C	8:I:98:ILE:CG1	2.68	0.59
2:A:142:G:OP1	2:A:1595:G:O2'	2.15	0.59
6:G:57:THR:CG2	6:G:58:VAL:H	1.92	0.59
31:K:56:VAL:CG1	31:K:58:ILE:HG13	2.31	0.59
2:A:1936:A:H2	2:A:1943:U:H3	1.49	0.59
2:A:1071:G:O2'	2:A:1090:U:OP1	2.14	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:273(A):G:H2'	2:A:273(B):C:C6	2.37	0.59
2:A:215:G:H4'	2:A:216:A:H4'	1.84	0.59
2:A:666:G:H2'	2:A:667:U:C6	2.36	0.59
25:4:44:THR:O	25:4:46:GLU:OE2	2.19	0.59
28:7:24:THR:HG23	28:7:28:ARG:H	1.67	0.59
2:A:2279:G:C4	2:A:2280:G:C8	2.90	0.59
2:A:2287:A:N1	2:A:2289:G:C1'	2.33	0.59
2:A:830:G:N7	2:A:2448:A:H8	2.00	0.59
2:A:1028:A:H2	2:A:2486:G:HO2'	1.46	0.59
2:A:2031:A:N6	2:A:2498:C:C6	2.70	0.59
2:A:2633:G:N1	2:A:2634:G:C5	2.70	0.59
2:A:2648:C:C2	2:A:2673:G:N2	2.71	0.59
2:A:2725:A:C4	2:A:2727:G:N7	2.70	0.59
2:A:2793:G:C2	2:A:2794:C:C4	2.91	0.59
2:A:2885:C:N4	2:A:2886:G:N7	2.50	0.59
2:A:34:C:O4'	17:Y:8:ARG:NH1	2.35	0.59
2:A:517:C:C2'	15:W:18:ARG:HH22	2.15	0.59
5:F:115:LEU:O	5:F:116:ALA:C	2.40	0.59
7:H:55:SER:C	7:H:57:GLU:N	2.56	0.59
12:Q:68:ALA:HB1	12:Q:136:TRP:HZ3	1.66	0.59
12:Q:136:TRP:O	12:Q:137:ARG:C	2.39	0.59
20:U:13:ARG:O	20:U:16:LYS:CA	2.50	0.59
15:W:98:LYS:O	15:W:100:THR:N	2.34	0.59
8:I:98:ILE:HG21	8:I:115:ILE:HD12	1.83	0.59
31:K:15:ALA:C	31:K:17:LYS:H	2.05	0.59
2:A:545(A):A:O3'	2:A:1546:C:P	2.60	0.59
2:A:711:G:H1	2:A:720:C:H42	1.50	0.59
24:O:73:GLY:O	24:O:74:LYS:O	2.20	0.59
23:3:16:PRO:O	23:3:17:LYS:O	2.20	0.59
29:8:12:ARG:O	29:8:13:ARG:C	2.40	0.59
30:9:10:MET:CE	30:9:10:MET:HA	2.31	0.59
30:9:24:LEU:HD22	30:9:35:ARG:CA	2.31	0.59
2:A:1430:C:H2'	2:A:1431:U:C6	2.36	0.59
2:A:1500:G:H21	3:D:97:ASP:CG	2.04	0.59
2:A:2300:G:O2'	2:A:2301:C:C5'	2.45	0.59
2:A:2419:U:OP2	29:8:41:ILE:CD1	2.50	0.59
2:A:2474:C:H5	2:A:2475:C:C4	2.21	0.59
2:A:2593:U:C2	2:A:2600:A:N1	2.70	0.59
2:A:2620:C:H4'	4:E:252:GLN:CB	2.32	0.59
2:A:2834:G:C8	2:A:2834:G:H3'	2.37	0.59
2:A:2862:G:C4	2:A:2863:C:C5	2.90	0.59
2:A:593:G:C5'	29:8:62:LEU:CD2	2.47	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:742:G:H4'	2:A:1675:C:O2'	2.02	0.59
3:D:103:ILE:CB	3:D:104:ILE:HD12	2.29	0.59
4:E:237:ASN:C	4:E:238:LEU:HD22	2.23	0.59
5:F:6:TYR:CE2	5:F:140:VAL:HG23	2.37	0.59
7:H:103:VAL:O	7:H:103:VAL:HG12	2.02	0.59
7:H:104:LEU:C	7:H:151:ARG:NH1	2.56	0.59
10:O:79:PHE:HA	14:T:22:VAL:HG23	1.80	0.59
11:P:114:VAL:HG11	11:P:133:VAL:CA	2.31	0.59
12:Q:49:VAL:CA	12:Q:121:ASP:HB2	2.29	0.59
12:Q:72:VAL:HG22	12:Q:135:ALA:HB2	1.82	0.59
13:S:111:PRO:O	13:S:116:PHE:HB2	2.03	0.59
20:U:111:ASP:HA	20:U:114:ARG:CD	2.28	0.59
21:V:42:GLY:N	21:V:54:TYR:OH	2.29	0.59
21:V:67:LYS:CD	21:V:70:TYR:HE1	2.15	0.59
18:Z:29:ASN:C	18:Z:30:VAL:HG23	2.23	0.59
8:I:82:LYS:O	8:I:83:ALA:HB2	2.02	0.59
16:X:8:PRO:HD3	22:2:33:VAL:HG22	1.83	0.59
22:2:60:GLN:NE2	22:2:65:ASP:HA	2.17	0.59
2:A:1913:A:N1	2:A:1917:U:C5	2.71	0.59
2:A:1227:A:H3'	2:A:1227:A:C8	2.37	0.59
23:3:36:VAL:O	23:3:37:LEU:CD2	2.50	0.59
28:7:26:SER:O	28:7:29:ASN:N	2.35	0.59
29:8:30:ARG:NH2	29:8:41:ILE:CG2	2.65	0.59
29:8:9:MET:O	29:8:13:ARG:O	2.19	0.59
30:9:20:HIS:C	30:9:22:ARG:N	2.48	0.59
2:A:1366:A:C8	2:A:1366:A:OP2	2.55	0.59
2:A:1818:U:P	3:D:155:ARG:CB	2.91	0.59
2:A:2343:C:H5'	2:A:2374:C:P	2.42	0.59
2:A:2246:G:C1'	2:A:2426:A:C2	2.84	0.59
2:A:2471:C:N3	2:A:2479:G:N1	2.50	0.59
2:A:2531:A:C2	2:A:2658:C:O2	2.56	0.59
2:A:2567:G:HO2'	2:A:2568:C:H5'	1.63	0.59
2:A:2648:C:C2'	2:A:2649:U:C5'	2.79	0.59
2:A:2668:G:N2	2:A:2669:G:H1'	2.18	0.59
2:A:2785:C:C4	2:A:2786:U:O4	2.56	0.59
2:A:2807:G:O6	2:A:2892:A:C8	2.56	0.59
2:A:2817:G:H2'	2:A:2818:G:O4'	2.02	0.59
2:A:2875:C:N4	2:A:2876:G:O6	2.34	0.59
2:A:2841:C:O2	2:A:2877:G:C2	2.55	0.59
2:A:2880:C:N4	2:A:2881:C:C4	2.67	0.59
2:A:450:G:N2	2:A:454:A:H2	1.99	0.59
2:A:496:G:P	15:W:62:HIS:HE2	2.25	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:529:A:O2'	2:A:530:G:H8	1.83	0.59
2:A:827:U:C6	2:A:2430:A:C2	2.91	0.59
2:A:830:G:N1	2:A:2446:G:O4'	2.36	0.59
2:A:929:G:H21	23:3:42:ALA:C	2.06	0.59
4:E:315:VAL:C	4:E:317:PRO:HD3	2.21	0.59
4:E:70:VAL:O	4:E:71:THR:HG23	2.02	0.59
2:A:2313:C:H5'	6:G:72:LYS:HG3	0.61	0.59
7:H:13:GLY:O	7:H:15:THR:N	2.35	0.59
7:H:50:THR:OG1	7:H:51:VAL:N	2.36	0.59
7:H:58:LYS:C	7:H:61:ARG:HB3	2.23	0.59
10:O:14:SER:N	10:O:95:GLY:HA2	2.18	0.59
10:O:28:SER:O	10:O:29:GLY:C	2.40	0.59
10:O:88:ARG:NE	10:O:94:ARG:HG2	2.17	0.59
11:P:76:LEU:HG	11:P:81:VAL:CG2	2.31	0.59
2:A:2841:C:OP1	19:R:53:HIS:HE1	1.85	0.59
18:Z:147:ILE:HG13	18:Z:168:VAL:CG1	2.33	0.59
22:2:51:LYS:O	22:2:52:ALA:O	2.20	0.59
16:X:35:GLY:O	16:X:36:GLU:C	2.40	0.59
16:X:24:LEU:CD1	16:X:66:VAL:O	2.51	0.59
2:A:1078:U:O2	2:A:1088:A:C1'	2.44	0.59
31:K:121:LEU:HD23	31:K:125:MET:HE2	1.85	0.59
31:K:24:VAL:HG12	31:K:35:ILE:HG23	1.85	0.59
2:A:1928:A:H8	2:A:1928:A:H5''	1.67	0.59
2:A:1454:U:O2	2:A:1454:U:H2'	2.02	0.59
24:0:41:ARG:HB2	24:0:74:LYS:NZ	2.17	0.59
25:4:56:VAL:CG1	25:4:57:ASP:N	2.66	0.59
26:5:44:HIS:CA	26:5:52:TYR:CZ	2.68	0.59
27:6:42:PRO:HD3	27:6:50:PHE:HZ	1.68	0.59
2:A:1799:G:N1	3:D:177:SER:OG	2.35	0.59
2:A:2217:G:H2'	2:A:2218:G:O5'	2.02	0.59
2:A:2392:A:N7	2:A:2393:A:C4	2.70	0.59
2:A:2469:A:C8	2:A:2469:A:C5'	2.80	0.59
2:A:960:A:H2	2:A:2496:C:H1'	1.67	0.59
2:A:2571:C:O2'	4:E:243:PRO:HG3	2.02	0.59
2:A:2584:U:H5	2:A:2585:U:C2'	2.15	0.59
2:A:2051:A:C6	2:A:2614:A:N7	2.68	0.59
2:A:2617:C:C2	2:A:2618:G:C8	2.77	0.59
2:A:1033:U:C5	2:A:2750:A:C2	2.90	0.59
2:A:2797:U:H1'	2:A:2799:A:C8	2.38	0.59
2:A:2846:G:H22	2:A:2869:G:H1	1.49	0.59
2:A:325:G:H2'	2:A:326:G:C8	2.37	0.59
2:A:54:G:H1'	28:7:35:ARG:NH2	2.16	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:86:ARG:CD	3:D:86:ARG:N	2.61	0.59
4:E:193:PHE:HE2	4:E:311:PHE:HD1	1.46	0.59
5:F:6:TYR:CD1	5:F:139:VAL:CB	2.85	0.59
5:F:193:LEU:N	5:F:233:THR:HG22	1.91	0.59
5:F:58:ALA:CB	5:F:79:ARG:HB2	2.33	0.59
7:H:87:GLU:CD	7:H:162:ARG:HB2	2.23	0.59
7:H:25:VAL:HG12	7:H:78:VAL:HG11	1.84	0.59
9:N:24:SER:C	9:N:28:GLU:HG2	2.23	0.59
9:N:80:LYS:O	9:N:83:ILE:CG1	2.42	0.59
19:R:51:LEU:HD11	19:R:70:LEU:HD21	1.85	0.59
20:U:33:ARG:HB3	20:U:33:ARG:HH11	1.62	0.59
21:V:6:GLN:NE2	21:V:10:LYS:HB3	2.17	0.59
18:Z:107:GLU:C	18:Z:109:GLN:H	2.05	0.59
18:Z:173:PRO:C	18:Z:175:ARG:H	2.04	0.59
2:A:1482:U:H6	2:A:1482:U:C3'	2.13	0.59
2:A:269:U:H3	2:A:270:A:H62	1.48	0.59
24:O:30:VAL:HG22	24:O:63:SER:CB	2.32	0.59
24:O:61:ALA:HB2	24:O:80:SER:C	2.23	0.59
27:6:7:ARG:C	27:6:29:ARG:NH2	2.54	0.59
2:A:123:G:H1	2:A:128:C:H42	1.51	0.59
2:A:1254:A:C8	2:A:1256:G:C8	2.90	0.59
2:A:1661:G:H1	2:A:1999:C:H42	1.50	0.59
2:A:1665:A:O3'	10:O:66:LYS:NZ	2.13	0.59
2:A:2188:C:C6	2:A:2189:U:H5	2.18	0.59
2:A:2197:U:C5	2:A:2224:G:C4	2.63	0.59
2:A:2290:G:C5	2:A:2291:U:N3	2.70	0.59
2:A:2372:G:C6	2:A:2373:G:O6	2.56	0.59
2:A:2373:G:N1	2:A:2374:C:C4	2.70	0.59
2:A:2435:A:C2	2:A:2436:G:N9	2.71	0.59
2:A:2440:C:H5''	2:A:2587:A:H4'	1.84	0.59
2:A:2544:G:N3	2:A:2545:G:C8	2.71	0.59
2:A:2595:G:H2'	2:A:2597:G:C8	2.37	0.59
2:A:2653:U:OP2	2:A:2654:A:C3'	2.48	0.59
2:A:629:G:H5''	2:A:649:G:O2'	2.03	0.59
2:A:746:A:O2'	26:5:2:ALA:HB2	2.03	0.59
2:A:801:G:OP1	5:F:79:ARG:NH2	2.36	0.59
1:B:24:G:C6	1:B:56:G:C2	2.90	0.59
3:D:213:LYS:HB3	3:D:215:LYS:C	2.23	0.59
4:E:269:ILE:HD13	4:E:295:LEU:C	2.22	0.59
4:E:267:ARG:CD	4:E:297:LYS:CD	2.77	0.59
5:F:22:PHE:CE2	5:F:115:LEU:CB	2.75	0.59
5:F:22:PHE:CE2	5:F:118:THR:OG1	2.50	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:38:A:N3	5:F:46:TYR:CE2	2.70	0.59
2:A:675:A:H5'	5:F:69:HIS:C	2.22	0.59
7:H:123:GLU:OE2	7:H:131:ILE:O	2.20	0.59
8:I:13:GLY:HA2	8:I:15:LYS:CD	2.29	0.59
9:N:58:GLU:CA	9:N:61:VAL:CB	2.73	0.59
11:P:113:GLN:O	11:P:115:ARG:HG3	2.01	0.59
13:S:81:ALA:CB	13:S:117:ALA:CB	2.80	0.59
20:U:102:GLU:HB2	21:V:43:GLU:OE2	2.02	0.59
21:V:40:VAL:CA	21:V:51:ALA:CB	2.80	0.59
21:V:41:GLY:N	21:V:54:TYR:CE1	2.71	0.59
21:V:35:LEU:H	21:V:60:VAL:HG12	1.66	0.59
15:W:42:ARG:HG2	15:W:43:GLY:H	1.67	0.59
15:W:81:ALA:O	15:W:82:LEU:CD1	2.46	0.59
18:Z:146:HIS:HD2	18:Z:170:SER:HB2	1.66	0.59
18:Z:85:MET:O	18:Z:86:VAL:HG22	2.03	0.59
22:2:2:VAL:N	22:2:4:HIS:CE1	2.62	0.59
2:A:76:C:C5'	22:2:55:ARG:HE	2.15	0.59
2:A:1082:U:C4'	31:K:118:ALA:HB1	2.33	0.59
2:A:2896:C:H6	2:A:2896:C:C4'	2.16	0.59
2:A:728:G:H8	2:A:728:G:OP2	1.86	0.59
2:A:2751:G:H2'	2:A:2751:G:N3	2.16	0.59
26:5:13:LYS:CD	26:5:14:SER:H	2.15	0.59
2:A:1818:U:P	3:D:155:ARG:HB3	2.42	0.59
2:A:1996:C:OP2	10:O:31:ARG:CZ	2.46	0.59
2:A:2418:A:H2'	2:A:2419:U:O4'	2.03	0.59
2:A:199:A:C2	2:A:2433:A:C6	2.91	0.59
2:A:2507:C:C6	2:A:2508:G:N7	2.70	0.59
2:A:245:G:N2	2:A:254:G:H1'	2.18	0.59
2:A:2709:G:O2'	2:A:2710:C:H5''	1.97	0.59
2:A:2882:A:H2'	2:A:2883:A:O5'	2.03	0.59
3:D:209:ASN:O	3:D:213:LYS:N	2.36	0.59
3:D:74:PRO:CG	3:D:96:ALA:N	2.63	0.59
4:E:175:ASP:O	4:E:178:LEU:N	2.36	0.59
5:F:1:MET:SD	5:F:18:LEU:HB2	2.43	0.59
5:F:197:SER:CB	5:F:239:ALA:N	2.60	0.59
2:A:2313:C:P	6:G:51:ARG:HD3	2.43	0.59
7:H:120:LEU:HB3	7:H:143:LEU:HD11	1.83	0.59
8:I:5:PHE:CD2	8:I:5:PHE:N	2.70	0.59
9:N:65:ASN:N	9:N:69:TYR:HB2	2.11	0.59
2:A:2684:U:C1'	10:O:70:ARG:HH22	1.91	0.59
12:Q:36:ASN:O	12:Q:41:THR:HB	2.02	0.59
12:Q:33:MET:CG	12:Q:83:PHE:HB2	2.33	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:R:36:THR:HG22	19:R:37:THR:N	2.17	0.59
13:S:12:ARG:HB3	13:S:20:TYR:CE1	2.38	0.59
13:S:47:LEU:CD1	13:S:58:LEU:CD2	2.67	0.59
2:A:1754:C:H5'	14:T:39:ASN:HD21	1.68	0.59
20:U:70:ARG:O	20:U:73:GLY:N	2.36	0.59
15:W:83:LYS:CA	15:W:97:LYS:HG2	2.29	0.59
18:Z:103:ARG:CB	18:Z:139:THR:HG22	2.33	0.59
18:Z:150:GLY:N	18:Z:165:GLU:H	2.01	0.59
8:I:110:LEU:HD11	8:I:133:LEU:CD2	2.33	0.59
16:X:33:SER:HA	16:X:37:VAL:HG21	1.85	0.59
2:A:144:C:H4'	16:X:36:GLU:OE1	2.03	0.59
2:A:1078:U:N1	2:A:1088:A:N3	2.50	0.59
2:A:1063:G:OP2	31:K:77:PHE:CE1	2.55	0.59
31:K:11:LEU:CD1	31:K:58:ILE:HD12	2.32	0.59
2:A:1936:A:N6	2:A:1945:G:C2	2.71	0.59
2:A:481:G:O2'	2:A:482:A:H8	1.86	0.59
2:A:270(Z):U:H2'	2:A:270(Z):U:O2	2.02	0.59
2:A:1222:C:H42	2:A:1227:A:N6	2.01	0.59
24:O:37:LEU:CD1	24:O:71:ASN:ND2	2.66	0.59
23:3:9:VAL:CG2	23:3:54:VAL:CA	2.62	0.59
25:4:17:GLN:HB3	25:4:33:VAL:HB	1.85	0.59
25:4:59:PHE:HA	25:4:62:ARG:CD	2.32	0.59
2:A:2022:U:N3	26:5:9:LYS:NZ	2.51	0.59
2:A:2419:U:H5''	27:6:24:THR:HG22	1.82	0.59
27:6:31:THR:O	27:6:32:GLN:C	2.40	0.59
30:9:19:ARG:CG	30:9:19:ARG:O	2.51	0.59
2:A:2021:C:C5	20:U:25:TRP:HZ2	2.12	0.59
2:A:2070:G:H2'	2:A:2071:A:C8	2.38	0.59
2:A:2194:G:C5	2:A:2195:C:N4	2.70	0.59
2:A:2208:U:O2'	2:A:2209:C:O4'	2.20	0.59
2:A:2292:C:N3	2:A:2293:C:C4	2.69	0.59
2:A:2298:A:H1'	2:A:2322:A:H1'	1.83	0.59
2:A:2344:U:C2'	2:A:2345:G:OP2	2.46	0.59
2:A:2423:U:C6	2:A:2423:U:H5''	2.35	0.59
2:A:2462:U:C2	2:A:2463:C:C5	2.91	0.59
2:A:2493:U:H2'	2:A:2494:G:O5'	2.03	0.59
2:A:1669:A:C4'	2:A:2550:G:OP1	2.51	0.59
2:A:2622:C:N3	2:A:2623:G:N7	2.50	0.59
2:A:2639:A:OP2	2:A:2640:G:N7	2.35	0.59
2:A:2675:A:C3'	2:A:2676:C:H5'	2.31	0.59
2:A:2681:C:O2	2:A:2681:C:H2'	2.01	0.59
2:A:2689:U:C5	2:A:2713:A:C6	2.90	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:26:G:H1	2:A:27:G:H21	1.47	0.59
2:A:2717:G:C4	2:A:2718:G:H8	2.14	0.59
2:A:2692:C:N3	2:A:2718:G:C6	2.70	0.59
2:A:2821:A:C2	2:A:2822:G:N9	2.71	0.59
2:A:2821:A:O2'	2:A:2822:G:C1'	2.51	0.59
2:A:2892:A:H3'	2:A:2893:G:C8	2.38	0.59
2:A:585:G:N2	2:A:1256:G:C6	2.71	0.59
2:A:830:G:N7	2:A:2448:A:C8	2.71	0.59
2:A:957:A:C2	2:A:2459:A:C5'	2.84	0.59
3:D:149:ARG:CA	3:D:152:GLN:HE22	2.11	0.59
3:D:128:ALA:HB1	3:D:190:THR:N	2.18	0.59
3:D:68:ARG:HH21	3:D:190:THR:CG2	2.15	0.59
4:E:269:ILE:N	4:E:297:LYS:HE2	2.17	0.59
6:G:128:LEU:O	6:G:129:ASP:HB3	2.00	0.59
7:H:105:SER:C	7:H:106:VAL:HG23	2.22	0.59
7:H:138:GLN:O	7:H:140:VAL:N	2.36	0.59
8:I:23:ASP:N	8:I:23:ASP:OD1	2.35	0.59
8:I:29:PHE:O	8:I:33:GLN:CG	2.50	0.59
9:N:68:GLY:O	9:N:69:TYR:HD1	1.86	0.59
9:N:60:ARG:HD2	9:N:71:TYR:CE2	2.38	0.59
11:P:66:VAL:HB	11:P:111:ALA:O	2.03	0.59
19:R:71:GLN:O	19:R:72:ASP:CB	2.49	0.59
20:U:117:ARG:HG3	20:U:118:GLN:H	1.65	0.59
17:Y:18:GLU:CB	17:Y:21:LYS:HZ1	2.15	0.59
18:Z:115:ILE:O	18:Z:169:VAL:HA	2.03	0.59
18:Z:69:VAL:HG22	18:Z:82:ASP:N	2.11	0.59
16:X:23:LYS:CA	16:X:66:VAL:O	2.50	0.59
6:G:28:GLY:O	6:G:29:HIS:C	2.39	0.59
31:K:18:ALA:HB1	31:K:39:CYS:C	2.24	0.59
18:Z:95:SER:OG	18:Z:122:ILE:CB	2.51	0.59
2:A:1332:G:C5	2:A:1609:A:N6	2.70	0.59
2:A:1050:A:O3'	2:A:1051:G:P	2.60	0.59
2:A:255:A:OP1	2:A:255:A:H4'	2.02	0.59
2:A:2262:U:OP2	24:0:14:ARG:NH2	2.36	0.59
23:3:53:LEU:CD2	23:3:54:VAL:CG1	2.65	0.59
2:A:2056:G:H21	26:5:8:LYS:HZ1	1.49	0.59
28:7:21:ARG:HH22	28:7:43:THR:N	2.00	0.59
29:8:14:ILE:O	29:8:15:LYS:HB2	2.02	0.59
2:A:1133:U:O2'	2:A:1134:G:H5''	2.02	0.59
2:A:1275:A:H61	19:R:19:ALA:HB1	1.68	0.59
2:A:1566:A:N1	3:D:212:HIS:CE1	2.69	0.59
2:A:1313:U:H2'	2:A:1610:A:C2	2.38	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1769:G:H2'	2:A:1770:G:H8	1.67	0.59
2:A:1937:A:N1	2:A:1940:U:C5	2.71	0.59
2:A:1996:C:C6	2:A:1996:C:H5''	2.36	0.59
2:A:2093:G:C5	2:A:2225:A:N6	2.70	0.59
2:A:2574:G:C2	2:A:2575:C:C4	2.91	0.59
2:A:2781:A:O4'	2:A:2781:A:P	2.61	0.59
2:A:2813:A:N9	2:A:2814:C:C5	2.71	0.59
2:A:342:G:H2'	2:A:343:C:C5	2.38	0.59
2:A:830:G:C5	2:A:2448:A:C8	2.91	0.59
2:A:988:A:OP1	23:3:11:SER:CB	2.51	0.59
8:I:25:TYR:CD2	8:I:25:TYR:N	2.44	0.59
8:I:43:ASN:O	8:I:45:LYS:CA	2.50	0.59
9:N:12:VAL:C	9:N:38:VAL:CG2	2.71	0.59
9:N:23:ALA:O	9:N:26:VAL:HB	2.02	0.59
10:O:26:GLY:HA3	10:O:30:ARG:CZ	2.33	0.59
10:O:37:ASP:HB2	10:O:62:VAL:CG2	2.28	0.59
12:Q:26:LYS:CE	12:Q:28:ILE:HD12	2.32	0.59
12:Q:85:ILE:HG23	12:Q:136:TRP:HZ2	1.68	0.59
13:S:32:PRO:CG	13:S:100:ALA:CA	2.80	0.59
21:V:96:LEU:HD23	21:V:96:LEU:H	1.67	0.59
18:Z:110:GLY:O	18:Z:112:LEU:N	2.34	0.59
18:Z:150:GLY:H	18:Z:165:GLU:N	2.00	0.59
16:X:17:ASP:CA	16:X:20:PHE:HE1	2.00	0.59
31:K:8:GLN:N	31:K:59:THR:CB	2.65	0.59
7:H:168:VAL:CG1	7:H:169:ARG:N	2.44	0.59
2:A:2874:C:O5'	2:A:2874:C:H6	1.86	0.59
8:I:65:ALA:CB	8:I:134:HIS:CB	2.80	0.59
17:Y:81:LYS:HB3	17:Y:81:LYS:HZ3	1.65	0.59
26:5:33:CYS:SG	26:5:36:CYS:CA	2.90	0.58
2:A:969:U:C5'	23:3:14:GLY:O	2.51	0.58
23:3:48:GLU:O	23:3:49:LYS:C	2.41	0.58
2:A:1265:A:OP2	2:A:2615:U:OP1	2.21	0.58
2:A:2189:U:H2'	2:A:2190:G:H8	1.67	0.58
2:A:2230:G:H2'	2:A:2231:C:C6	2.38	0.58
2:A:2259:G:N2	2:A:2282:G:N1	2.49	0.58
2:A:2377:A:H2'	2:A:2378:A:C8	2.38	0.58
2:A:2414:G:H2'	2:A:2415:G:H8	1.68	0.58
2:A:2462:U:C2'	2:A:2463:C:O5'	2.51	0.58
2:A:2485:G:N3	2:A:2486:G:H1'	2.17	0.58
2:A:2586:C:H2'	2:A:2587:A:C5'	2.32	0.58
2:A:2596:U:C5	2:A:2597:G:C5	2.91	0.58
2:A:2758:A:N9	2:A:2758:A:OP2	2.36	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2782:G:C2'	2:A:2783:G:H5'	2.30	0.58
2:A:2807:G:C6	2:A:2892:A:N7	2.71	0.58
2:A:2892:A:H4'	2:A:2892:A:OP1	2.03	0.58
2:A:673:C:O4'	5:F:82:GLN:CD	2.41	0.58
1:B:18:G:P	6:G:149:ARG:HA	2.43	0.58
3:D:87:SER:O	3:D:156:ALA:CB	2.51	0.58
6:G:151:ILE:HG21	6:G:156:ARG:CZ	2.33	0.58
2:A:2745:C:C1'	7:H:142:GLU:CG	2.51	0.58
7:H:15:THR:HG23	7:H:26:LYS:CB	2.28	0.58
9:N:13:ASP:O	9:N:38:VAL:HG11	2.02	0.58
9:N:53:ILE:HG23	9:N:54:VAL:N	2.17	0.58
10:O:14:SER:OG	10:O:94:ARG:HB2	2.03	0.58
11:P:94:ARG:HD3	11:P:120:LEU:CA	2.32	0.58
12:Q:116:HIS:O	12:Q:118:ALA:O	2.21	0.58
14:T:5:GLU:O	14:T:8:TYR:N	2.36	0.58
15:W:17:VAL:O	15:W:20:VAL:N	2.36	0.58
17:Y:32:ARG:CA	17:Y:33:GLU:OE2	2.51	0.58
17:Y:73:HIS:CD2	17:Y:89:ARG:O	2.56	0.58
22:2:49:LEU:O	22:2:50:ARG:O	2.21	0.58
22:2:51:LYS:C	22:2:54:ALA:HB3	2.23	0.58
16:X:28:VAL:HG23	16:X:62:LYS:HG2	1.84	0.58
2:A:1059:G:C2	31:K:127:ILE:CG2	2.64	0.58
2:A:479:A:O2'	2:A:480:A:H3'	2.02	0.58
25:4:10:VAL:CG1	25:4:10:VAL:O	2.51	0.58
25:4:63:PHE:CD2	25:4:69:ARG:NH2	2.71	0.58
2:A:1326:U:HO2'	2:A:2010:G:HO2'	1.50	0.58
2:A:2100:G:C6	2:A:2190:G:C5	2.91	0.58
2:A:2266:A:H4'	2:A:2267:A:N3	2.17	0.58
2:A:859:G:O2'	2:A:2268:A:C4	2.54	0.58
2:A:2276:G:N1	2:A:2277:G:N7	2.51	0.58
2:A:2298:A:H1'	2:A:2321:G:H21	1.64	0.58
2:A:835:A:O4'	2:A:2358:G:H1'	2.04	0.58
2:A:199:A:N3	2:A:2433:A:C6	2.71	0.58
2:A:2443:C:C5	2:A:2444:G:C8	2.91	0.58
2:A:2447:G:C6	2:A:2501:C:O2	2.55	0.58
2:A:2482:G:C4	2:A:2483:C:C6	2.91	0.58
2:A:2515:C:N4	2:A:2570:G:O6	2.37	0.58
2:A:2526:G:O2'	2:A:2527:C:C5'	2.49	0.58
2:A:2671:A:O2'	2:A:2672:G:O5'	2.21	0.58
2:A:2704:C:H2'	2:A:2705:A:C8	2.38	0.58
2:A:2844:G:N2	2:A:2845:G:O4'	2.36	0.58
2:A:2875:C:C4	2:A:2876:G:C5	2.91	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:328:U:O2'	17:Y:94:SER:HB2	2.02	0.58
2:A:339:U:H2'	2:A:340:A:C8	2.38	0.58
2:A:971:C:P	2:A:974(A):C:O2	2.61	0.58
3:D:200:THR:OG1	3:D:201:ASP:CG	2.42	0.58
3:D:213:LYS:CB	3:D:215:LYS:CB	2.72	0.58
2:A:2785:C:N1	4:E:100:TRP:CD1	2.70	0.58
4:E:102:ASP:HA	4:E:104:PHE:CZ	2.37	0.58
4:E:172:ASP:O	4:E:175:ASP:N	2.36	0.58
5:F:102:LEU:CB	5:F:107:ARG:HE	1.97	0.58
5:F:6:TYR:HE1	5:F:138:VAL:C	2.07	0.58
10:O:79:PHE:CD2	14:T:22:VAL:HG21	2.39	0.58
11:P:145:LEU:CD1	11:P:145:LEU:N	2.64	0.58
13:S:32:PRO:HD2	13:S:100:ALA:CA	2.32	0.58
13:S:53:ASN:OD1	13:S:53:ASN:O	2.20	0.58
14:T:5:GLU:HB3	14:T:53:ASP:OD2	2.02	0.58
20:U:21:ALA:C	20:U:24:PHE:CZ	2.76	0.58
20:U:57:PHE:CA	20:U:60:LEU:HG	2.29	0.58
21:V:40:VAL:HA	21:V:54:TYR:HD1	1.67	0.58
15:W:24:ILE:HG22	15:W:32:ALA:HB1	1.85	0.58
18:Z:151:ASP:CB	18:Z:153:LYS:HZ3	2.12	0.58
18:Z:46:GLN:CB	18:Z:49:THR:OG1	2.46	0.58
8:I:95:SER:CB	8:I:117:LEU:HD12	2.33	0.58
16:X:55:GLN:C	16:X:56:ASN:ND2	2.51	0.58
16:X:5:ILE:HG22	16:X:6:LYS:H	0.43	0.58
31:K:104:GLN:O	31:K:107:GLU:OE2	2.21	0.58
31:K:75:ALA:O	31:K:78:LEU:N	2.36	0.58
31:K:27:ALA:O	31:K:28:LEU:C	2.40	0.58
2:A:2354:G:C4'	24:0:31:VAL:HG21	2.32	0.58
23:3:39:ASP:CG	23:3:40:THR:N	2.57	0.58
23:3:48:GLU:CG	23:3:49:LYS:N	2.66	0.58
26:5:40:LYS:HE2	26:5:46:CYS:CB	2.21	0.58
29:8:50:LEU:CD2	29:8:50:LEU:C	2.62	0.58
2:A:1364:G:N9	25:4:3:LYS:NZ	2.41	0.58
2:A:1492:G:H21	2:A:1493:C:N4	2.01	0.58
2:A:2090:G:N3	2:A:2230:G:C6	2.71	0.58
2:A:2234:G:C4	2:A:2235:G:C8	2.91	0.58
2:A:2565:A:O5'	2:A:2566:A:OP2	2.21	0.58
2:A:2570:G:C5'	2:A:2571:C:OP2	2.50	0.58
2:A:2696:U:C4	2:A:2714:G:N2	2.71	0.58
2:A:295:G:H2'	2:A:295:G:N3	2.18	0.58
2:A:29:U:C5'	20:U:11:ARG:NH1	2.56	0.58
2:A:387:U:H3'	25:4:29:PRO:HG3	1.85	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:526:A:H4'	2:A:527:C:OP1	2.03	0.58
2:A:2786:U:O5'	4:E:100:TRP:HB2	2.03	0.58
4:E:315:VAL:HG12	4:E:316:ARG:N	2.17	0.58
4:E:39:GLN:OE1	4:E:174:LEU:CG	2.51	0.58
6:G:42:GLY:HA2	6:G:48:MET:SD	2.43	0.58
8:I:24:GLY:CA	8:I:27:ASN:HB3	2.31	0.58
9:N:51:GLU:O	9:N:52:GLN:C	2.41	0.58
9:N:58:GLU:HG2	9:N:61:VAL:CG2	2.29	0.58
10:O:43:VAL:HB	10:O:55:GLY:H	1.69	0.58
12:Q:50:VAL:HG12	12:Q:51:GLU:OE1	2.02	0.58
13:S:116:PHE:C	13:S:120:GLU:OE2	2.42	0.58
14:T:6:CYS:C	14:T:7:ASP:CG	2.62	0.58
17:Y:51:LEU:HD21	17:Y:95:ASN:CG	2.24	0.58
22:2:13:PRO:O	22:2:16:ARG:HB2	2.03	0.58
25:4:48:ARG:CG	25:4:49:PHE:CD1	2.85	0.58
2:A:1936:A:C6	2:A:1945:G:C4	2.91	0.58
17:Y:81:LYS:CB	17:Y:81:LYS:NZ	2.66	0.58
2:A:270(C):C:OP2	2:A:365:C:O2'	2.21	0.58
2:A:551:G:C4'	2:A:1220:A:H2	2.15	0.58
26:5:40:LYS:HE3	26:5:48:ASN:HB2	1.85	0.58
26:5:44:HIS:CA	26:5:52:TYR:HH	1.88	0.58
28:7:25:LYS:O	28:7:28:ARG:HB2	2.04	0.58
29:8:26:LYS:N	29:8:46:LYS:HA	2.18	0.58
2:A:1275:A:H2'	2:A:1276:A:O4'	2.03	0.58
2:A:2067:G:N3	2:A:2444:G:C2	2.71	0.58
2:A:2435:A:C2	2:A:2436:G:C1'	2.86	0.58
2:A:2668:G:C2	2:A:2669:G:C8	2.92	0.58
2:A:2679:A:H2'	4:E:300:VAL:CG1	2.34	0.58
2:A:2801:A:C2	2:A:2895:U:C2'	2.79	0.58
3:D:167:GLU:C	3:D:168:GLY:O	2.41	0.58
3:D:208:GLY:HA3	3:D:210:LYS:HE2	1.85	0.58
4:E:99:VAL:C	4:E:100:TRP:CG	2.75	0.58
4:E:212:GLY:C	4:E:214:VAL:N	2.54	0.58
5:F:115:LEU:HD21	5:F:246:ARG:HH22	1.67	0.58
8:I:9:VAL:O	8:I:10:LYS:CB	2.51	0.58
9:N:50:GLU:O	9:N:51:GLU:C	2.36	0.58
9:N:84:ARG:HA	9:N:87:LEU:HD13	1.86	0.58
2:A:2250:G:H5''	12:Q:102:ARG:CB	2.33	0.58
12:Q:35:ASN:HB2	12:Q:75:SER:CB	2.33	0.58
12:Q:59:ASN:HD22	12:Q:59:ASN:C	2.05	0.58
2:A:2840:C:H4'	19:R:53:HIS:NE2	2.19	0.58
20:U:115:ASN:HD22	20:U:115:ASN:N	1.96	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:W:78:GLU:CD	15:W:99:ARG:HB3	2.23	0.58
18:Z:90:GLU:C	18:Z:127:PRO:HG3	2.23	0.58
18:Z:149:ALA:HA	18:Z:152:ILE:CD1	2.26	0.58
18:Z:30:VAL:O	18:Z:31:SER:C	2.40	0.58
22:2:19:GLU:HG2	22:2:23:LEU:HD21	1.84	0.58
16:X:7:HIS:O	16:X:26:PHE:HB3	2.03	0.58
16:X:2:TRP:O	16:X:3:ASP:C	2.42	0.58
2:A:1081:U:H5'	31:K:126:LYS:CD	2.31	0.58
31:K:123:ALA:N	31:K:126:LYS:CE	2.63	0.58
2:A:1613:G:H2'	2:A:1617:C:H42	1.68	0.58
2:A:1840:G:H1	2:A:1902:C:N4	1.99	0.58
2:A:319:C:N4	2:A:320:A:N6	2.52	0.58
2:A:1743:G:H3'	2:A:1746:G:H5'	1.85	0.58
7:H:117:GLU:O	7:H:118:GLU:C	2.42	0.58
25:4:5:LEU:HD12	25:4:60:ASN:HD21	1.64	0.58
29:8:57:ARG:O	29:8:58:MET:C	2.40	0.58
30:9:13:ASN:O	30:9:14:CYS:O	2.22	0.58
30:9:19:ARG:O	30:9:20:HIS:HB2	2.04	0.58
2:A:125:G:OP2	28:7:19:ARG:HD3	2.03	0.58
2:A:1819:A:C8	3:D:177:SER:OG	2.53	0.58
2:A:2189:U:H2'	2:A:2190:G:C8	2.39	0.58
2:A:2197:U:O2'	2:A:2198:A:C5'	2.35	0.58
2:A:2262:U:C2'	2:A:2263:C:H5''	2.21	0.58
2:A:2398:U:H4'	2:A:2399:G:OP1	2.03	0.58
2:A:2417:C:O2'	2:A:2418:A:H5'	2.03	0.58
2:A:2691:C:C2'	2:A:2692:C:C5'	2.79	0.58
2:A:270(P):C:H2'	2:A:270(Q):C:C6	2.39	0.58
2:A:26:G:C6	2:A:27:G:N2	2.71	0.58
2:A:2826:A:N6	2:A:2827:C:C6	2.38	0.58
2:A:606:U:H5'	5:F:103:ASN:OD1	2.03	0.58
2:A:873:G:H5'	12:Q:32:LYS:HG3	1.84	0.58
4:E:199:ALA:HA	4:E:314:ALA:CA	2.33	0.58
7:H:102:LEU:N	7:H:102:LEU:HD23	2.05	0.58
7:H:101:LYS:HE2	7:H:115:GLU:CG	2.33	0.58
9:N:71:TYR:O	9:N:72:PRO:O	2.21	0.58
10:O:13:ASN:C	10:O:15:GLY:H	2.04	0.58
10:O:85:VAL:O	10:O:87:ILE:HD11	2.03	0.58
11:P:67:ARG:NH1	11:P:109:LEU:CD1	2.66	0.58
19:R:22:ARG:HG2	19:R:26:LYS:HE3	1.81	0.58
13:S:72:GLU:O	13:S:74:PRO:C	2.37	0.58
13:S:82:TYR:C	13:S:83:LEU:HD12	2.24	0.58
20:U:117:ARG:HD3	20:U:118:GLN:H	1.67	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:U:28:ARG:HG2	20:U:29:SER:N	2.16	0.58
2:A:1152:C:C5'	20:U:80:ILE:CG2	2.78	0.58
21:V:39:PHE:HB3	21:V:54:TYR:HB3	1.86	0.58
21:V:77:GLY:C	21:V:78:VAL:HG13	2.24	0.58
15:W:11:ARG:HH21	15:W:98:LYS:HB3	1.61	0.58
22:2:51:LYS:HA	22:2:54:ALA:CB	2.33	0.58
2:A:63:U:H6	2:A:63:U:H3'	1.68	0.58
16:X:33:SER:HA	16:X:37:VAL:CG2	2.30	0.58
16:X:3:ASP:C	22:2:24:LYS:NZ	2.57	0.58
2:A:2310:A:N3	6:G:55:LYS:HD3	2.19	0.58
6:G:54:ALA:O	6:G:55:LYS:CB	2.50	0.58
31:K:135:MET:HE1	31:K:137:ILE:HG13	1.85	0.58
2:A:1062:G:H4'	31:K:76:SER:CB	2.33	0.58
31:K:99:LYS:HD2	31:K:99:LYS:N	2.18	0.58
2:A:1447:G:N3	2:A:1545:A:H2	2.02	0.58
17:Y:81:LYS:CG	17:Y:82:THR:N	2.66	0.58
7:H:19:ASN:HD22	7:H:19:ASN:C	2.06	0.58
2:A:1809:A:H61	25:4:3:LYS:HB3	1.67	0.58
25:4:55:ARG:C	25:4:56:VAL:O	2.41	0.58
2:A:1309:G:OP1	28:7:8:ASN:HA	2.04	0.58
2:A:2186:G:C2	2:A:2187:G:N7	2.72	0.58
2:A:2188:C:C5	2:A:2189:U:H5	2.21	0.58
2:A:2217:G:C2'	2:A:2218:G:O5'	2.52	0.58
2:A:2071:A:C2	2:A:2441:C:N3	2.71	0.58
2:A:2458:G:C4	2:A:2490:G:N2	2.71	0.58
2:A:2479:G:OP1	2:A:2537:U:C4'	2.51	0.58
2:A:2485:G:N3	2:A:2486:G:O4'	2.36	0.58
2:A:2610:C:H4'	2:A:2611:U:O5'	2.03	0.58
2:A:2652:C:N1	2:A:2653:U:C6	2.72	0.58
2:A:2666:C:C3'	2:A:2667:C:C5'	2.76	0.58
2:A:2715:C:C2	2:A:2716:U:C5	2.92	0.58
2:A:2836:U:H2'	2:A:2837:G:H8	1.68	0.58
2:A:2888:C:O2	2:A:2889:C:N1	2.36	0.58
2:A:763:G:O2'	2:A:764:A:H5'	2.04	0.58
2:A:586:A:N1	2:A:809:G:C2'	2.65	0.58
2:A:919:G:H2'	2:A:920:G:C8	2.38	0.58
3:D:173:VAL:O	3:D:180:VAL:HG13	2.03	0.58
3:D:130:PRO:HA	3:D:188:ARG:CG	2.33	0.58
3:D:198:GLY:O	3:D:200:THR:CA	2.52	0.58
3:D:83:ASP:OD2	3:D:83:ASP:N	2.35	0.58
4:E:264:LEU:O	4:E:265:ASN:ND2	2.36	0.58
9:N:63:ILE:CB	9:N:71:TYR:CZ	2.87	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:P:113:GLN:O	11:P:115:ARG:HD2	2.03	0.58
11:P:83:GLU:O	11:P:92:ASP:HA	2.04	0.58
12:Q:85:ILE:H	12:Q:85:ILE:HD12	1.68	0.58
12:Q:85:ILE:CD1	12:Q:85:ILE:O	2.51	0.58
19:R:24:GLN:HB3	19:R:44:LEU:CD2	2.33	0.58
13:S:32:PRO:HD3	13:S:100:ALA:HA	1.81	0.58
13:S:19:ASP:O	13:S:20:TYR:C	2.41	0.58
20:U:9:VAL:HG12	20:U:13:ARG:HH21	1.68	0.58
20:U:46:GLU:O	20:U:47:TYR:C	2.40	0.58
20:U:95:LEU:O	20:U:98:ILE:CB	2.44	0.58
15:W:12:ILE:HD11	15:W:42:ARG:CD	2.33	0.58
15:W:19:LEU:HD22	26:5:25:LEU:CD1	2.26	0.58
18:Z:91:PRO:CB	18:Z:127:PRO:CA	2.62	0.58
18:Z:9:THR:O	18:Z:13:LYS:CB	2.52	0.58
8:I:103:GLN:NE2	8:I:109:LYS:C	2.32	0.58
22:2:11:MET:O	22:2:16:ARG:HG3	2.02	0.58
16:X:4:VAL:CG1	22:2:24:LYS:HZ1	2.15	0.58
16:X:57:THR:C	16:X:59:ASP:OD2	2.41	0.58
2:A:1063:G:H5'	31:K:135:MET:CG	2.32	0.58
2:A:95:G:P	22:2:41:GLU:OE1	2.61	0.58
2:A:271(B):G:H4'	2:A:271(C):U:OP2	2.03	0.58
2:A:2080:G:H5'	25:4:32:HIS:HB3	1.85	0.58
25:4:33:VAL:HG12	25:4:34:ASP:N	2.19	0.58
26:5:15:LYS:HA	26:5:18:MET:HG3	1.86	0.58
29:8:38:GLY:O	29:8:39:ASP:C	2.41	0.58
29:8:36:LYS:CG	29:8:40:GLU:OE1	2.50	0.58
2:A:247:G:N1	29:8:8:LYS:HE3	2.13	0.58
2:A:1655:A:C5'	4:E:211:GLN:HA	2.34	0.58
2:A:199:A:N1	2:A:2433:A:C4	2.68	0.58
2:A:2276:G:C6	2:A:2277:G:N7	2.72	0.58
2:A:2279:G:C5	2:A:2280:G:N7	2.72	0.58
2:A:2428:G:O5'	2:A:2429:G:OP1	2.21	0.58
2:A:2481:G:C2'	2:A:2482:G:OP2	2.51	0.58
2:A:2546:U:O2'	2:A:2547:U:OP2	2.16	0.58
2:A:2555:U:H5	2:A:2556:C:C5	2.21	0.58
2:A:2593:U:H3	2:A:2600:A:N6	2.00	0.58
2:A:2627:G:H1'	2:A:2781:A:C2	2.38	0.58
2:A:2631:G:C4	2:A:2632:A:C8	2.91	0.58
2:A:2666:C:C6	2:A:2667:C:C6	2.92	0.58
2:A:2744:G:C6	2:A:2745:C:N4	2.72	0.58
2:A:2815:C:H2'	2:A:2816:C:C6	2.38	0.58
2:A:2841:C:P	19:R:53:HIS:CE1	2.96	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:834:C:O2'	2:A:2358:G:H2'	2.03	0.58
2:A:1819:A:OP2	3:D:154:VAL:N	2.30	0.58
3:D:179:GLU:C	3:D:180:VAL:CG2	2.72	0.58
3:D:197:GLY:H	3:D:199:ARG:NH1	2.01	0.58
5:F:91:PRO:CG	5:F:92:PRO:CD	2.41	0.58
7:H:52:THR:C	7:H:54:PRO:HD3	2.23	0.58
2:A:1131:G:C6	9:N:69:TYR:HE1	2.22	0.58
10:O:101:PRO:C	10:O:102:VAL:CG2	2.71	0.58
10:O:106:LEU:N	10:O:106:LEU:HD23	2.15	0.58
10:O:3:GLN:HA	10:O:21:VAL:HG12	1.84	0.58
11:P:52:LYS:NZ	11:P:53:ARG:HH12	2.01	0.58
11:P:56:LYS:HG3	11:P:57:VAL:H	1.68	0.58
12:Q:50:VAL:HG12	12:Q:52:LYS:N	2.12	0.58
19:R:22:ARG:HG2	19:R:26:LYS:CE	2.34	0.58
13:S:13:ARG:O	13:S:13:ARG:CG	2.51	0.58
14:T:50:GLU:HG3	14:T:55:ALA:CB	2.34	0.58
20:U:72:HIS:HE1	20:U:110:VAL:HG21	1.67	0.58
20:U:28:ARG:CG	20:U:29:SER:N	2.66	0.58
20:U:47:TYR:O	20:U:48:ARG:C	2.41	0.58
21:V:91:THR:C	21:V:92:ALA:HB2	1.85	0.58
18:Z:141:MET:CB	18:Z:171:VAL:CG1	2.79	0.58
18:Z:6:LYS:N	18:Z:7:PRO:HD3	2.13	0.58
2:A:138:G:O4'	16:X:43:GLU:HG3	2.03	0.58
24:0:50:GLY:C	24:0:52:GLY:N	2.57	0.58
2:A:1528:A:N3	2:A:1529:A:H1'	2.19	0.58
2:A:1538:G:H2'	2:A:1539:G:C1'	2.33	0.58
2:A:352:G:O5'	2:A:352:G:C8	2.54	0.58
2:A:273(A):G:H2'	2:A:273(B):C:H6	1.69	0.58
2:A:1813:G:H2'	2:A:1814:G:O4'	2.03	0.58
24:0:67:VAL:CG1	24:0:74:LYS:CG	2.47	0.58
23:3:23:LEU:C	23:3:28:LEU:CD1	2.57	0.58
25:4:23:GLU:O	25:4:26:SER:N	2.37	0.58
25:4:6:HIS:CE1	25:4:55:ARG:HG3	2.37	0.58
26:5:12:SER:O	26:5:14:SER:OG	2.22	0.58
2:A:2286:A:N6	27:6:31:THR:O	2.36	0.58
27:6:39:LYS:CA	27:6:50:PHE:CD1	2.86	0.58
27:6:16:ALA:C	27:6:48:VAL:CG1	2.71	0.58
2:A:1241:A:C8	2:A:1241:A:OP2	2.57	0.58
2:A:1252:G:H22	20:U:37:GLN:HB2	1.69	0.58
2:A:1255:U:C4	5:F:67:GLN:O	2.57	0.58
2:A:2090:G:C2	2:A:2230:G:C5	2.92	0.58
2:A:2290:G:N2	2:A:2343:C:C1'	2.63	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2292:C:N4	2:A:2293:C:N4	2.51	0.58
2:A:2297:C:C5	2:A:2333:A:N1	2.71	0.58
2:A:2345:G:C8	2:A:2371:G:N2	2.72	0.58
2:A:2431:U:C4	2:A:2434:A:OP2	2.57	0.58
2:A:2470:G:H1	2:A:2471:C:N4	2.02	0.58
2:A:2447:G:N2	2:A:2500:U:O4	2.34	0.58
2:A:2555:U:C6	2:A:2556:C:C6	2.91	0.58
2:A:747:U:C5	2:A:2613:U:C5	2.91	0.58
2:A:2718:G:H21	2:A:2719:G:H1'	1.68	0.58
2:A:2679:A:C6	2:A:2729:G:C6	2.92	0.58
2:A:2819:G:O5'	2:A:2819:G:H8	1.87	0.58
2:A:2838:G:N3	2:A:2839:G:C8	2.71	0.58
2:A:959:A:H2'	2:A:960:A:H8	1.67	0.58
2:A:976:C:OP1	20:U:48:ARG:CZ	2.52	0.58
2:A:995:C:H2'	2:A:995:C:O2	2.03	0.58
2:A:99:U:C2	17:Y:107:LYS:HD3	2.38	0.58
5:F:6:TYR:CE1	5:F:139:VAL:N	2.63	0.58
5:F:236:THR:O	5:F:239:ALA:HB2	2.02	0.58
5:F:244:ALA:C	5:F:246:ARG:N	2.54	0.58
7:H:15:THR:HG22	7:H:26:LYS:C	2.24	0.58
9:N:25:GLN:N	9:N:28:GLU:HG2	2.18	0.58
11:P:104:ASP:C	11:P:105:TYR:CG	2.73	0.58
12:Q:116:HIS:CG	12:Q:116:HIS:O	2.56	0.58
2:A:911:A:N3	12:Q:16:ARG:HG2	2.08	0.58
12:Q:72:VAL:HG21	12:Q:83:PHE:CZ	2.32	0.58
14:T:23:HIS:ND1	14:T:24:LYS:O	2.36	0.58
2:A:1251:C:C5'	20:U:10:ARG:HG3	2.33	0.58
20:U:76:TYR:O	20:U:80:ILE:HG13	2.01	0.58
21:V:34:GLU:C	21:V:35:LEU:HD23	2.17	0.58
15:W:80:PRO:CB	15:W:100:THR:HG21	2.27	0.58
15:W:25:ARG:HG2	15:W:26:GLY:N	2.18	0.58
15:W:8:ARG:CD	15:W:9:TYR:CD1	2.82	0.58
18:Z:72:ASP:OD2	18:Z:72:ASP:N	2.37	0.58
8:I:133:LEU:HD12	8:I:138:THR:C	2.23	0.58
2:A:60:G:H1'	2:A:74:A:C2	2.38	0.58
31:K:69:ILE:CG2	31:K:70:ILE:N	2.67	0.58
8:I:47:LEU:CD1	8:I:48:GLU:N	2.59	0.58
2:A:2409:G:C8	2:A:2409:G:O5'	2.55	0.58
2:A:1351:C:O2'	2:A:1571:A:H1'	2.03	0.58
2:A:1352:U:O2	2:A:1352:U:H2'	2.03	0.58
23:3:53:LEU:CD2	23:3:53:LEU:C	2.72	0.58
27:6:48:VAL:O	27:6:50:PHE:HD1	1.73	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:7:30:ILE:HD13	28:7:33:ARG:NE	2.18	0.58
2:A:1005:C:H2'	2:A:1006:C:C6	2.38	0.58
2:A:2001:A:H4'	2:A:2689:U:H2'	1.86	0.58
2:A:825:C:H5'	2:A:2428:G:O6	2.04	0.58
2:A:2031:A:H2'	2:A:2455:G:O2'	2.04	0.58
2:A:2569:G:N3	2:A:2570:G:C8	2.72	0.58
2:A:2510:C:N3	2:A:2578:G:O6	2.37	0.58
2:A:2626:C:OP2	2:A:2626:C:C5	2.51	0.58
2:A:2647:U:O2	2:A:2673:G:N2	2.36	0.58
2:A:2679:A:H2'	2:A:2680:C:O5'	2.04	0.58
2:A:2731:G:N1	2:A:2732:G:N2	2.52	0.58
2:A:2881:C:C4	2:A:2882:A:N7	2.71	0.58
2:A:325:G:H2'	2:A:326:G:H8	1.68	0.58
2:A:447:A:N6	2:A:454:A:N7	2.51	0.58
2:A:911:A:C6	12:Q:16:ARG:CB	2.86	0.58
3:D:183:ILE:HG22	3:D:184:LEU:H	0.48	0.58
4:E:206:LYS:C	4:E:257:GLY:HA2	2.24	0.58
4:E:308:VAL:CG1	4:E:310:PHE:HE1	2.12	0.58
4:E:44:TYR:CA	4:E:307:LEU:O	2.52	0.58
5:F:103:ASN:O	5:F:107:ARG:CG	2.50	0.58
5:F:35:VAL:O	5:F:38:ALA:N	2.36	0.58
5:F:96:LYS:C	5:F:98:ARG:NH1	2.53	0.58
7:H:9:GLU:CD	7:H:11:PRO:HD3	2.23	0.58
7:H:41:THR:CB	7:H:52:THR:OG1	2.52	0.58
9:N:83:ILE:CG1	9:N:84:ARG:CG	2.81	0.58
10:O:63:VAL:HG12	10:O:63:VAL:O	2.04	0.58
10:O:93:PRO:HD2	10:O:113:LYS:HD3	1.86	0.58
13:S:31:LYS:NZ	13:S:99:GLU:HB3	2.19	0.58
2:A:974:G:H3'	21:V:82:ARG:CZ	2.34	0.58
18:Z:15:ASP:OD1	18:Z:15:ASP:C	2.42	0.58
18:Z:53:ASP:O	18:Z:54:ILE:HD12	2.03	0.58
8:I:111:ASP:HB3	8:I:114:LYS:HG2	1.85	0.58
2:A:2309:A:C3'	2:A:2310:A:C5'	2.72	0.58
31:K:129:GLU:OE2	31:K:130:GLY:N	2.37	0.58
16:X:46:ASP:O	16:X:47:VAL:O	2.21	0.58
2:A:176:G:H2'	2:A:177:G:C8	2.39	0.58
2:A:1482:U:H1'	2:A:1512:G:N2	2.18	0.58
2:A:1372:U:H2'	2:A:1373:A:C8	2.39	0.58
2:A:136:G:C3'	2:A:137:C:H4'	2.33	0.58
25:4:4:ASP:HB3	25:4:5:LEU:CD2	2.34	0.58
2:A:594:U:C5'	29:8:58:MET:CE	2.79	0.58
30:9:29:ASN:HB2	30:9:32:HIS:CE1	2.39	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1890:A:H2	2:A:2235:G:C4'	2.17	0.58
2:A:2052:G:N1	2:A:2618:G:C8	2.72	0.58
2:A:2263:C:H5'	2:A:2263:C:H6	1.68	0.58
2:A:2268:A:C8	2:A:2268:A:C3'	2.87	0.58
2:A:2333:A:H5'	2:A:2335:A:O4'	2.03	0.58
2:A:2418:A:OP2	29:8:30:ARG:NH1	2.37	0.58
2:A:2458:G:O6	2:A:2490:G:O2'	2.21	0.58
2:A:2561:A:C2'	2:A:2562:U:O5'	2.44	0.58
2:A:2640:G:N1	2:A:2774:C:N4	2.33	0.58
2:A:2710:C:HO2'	2:A:2711:A:H5'	1.65	0.58
2:A:2826:A:C2	2:A:2827:C:H6	2.21	0.58
2:A:809:G:C5	2:A:810:U:C4	2.92	0.58
3:D:76:ARG:O	3:D:113:MET:HG2	2.02	0.58
4:E:221:LYS:CE	4:E:233:ARG:CG	2.81	0.58
5:F:153:VAL:C	5:F:155:SER:H	2.06	0.58
5:F:21:VAL:O	5:F:22:PHE:C	2.40	0.58
5:F:223:LEU:HD23	5:F:233:THR:OG1	2.04	0.58
5:F:58:ALA:O	5:F:59:GLU:OE2	2.22	0.58
7:H:147:ILE:CD1	7:H:150:VAL:CG1	2.82	0.58
9:N:66:ASP:O	9:N:67:ASN:C	2.39	0.58
10:O:114:ILE:O	10:O:116:SER:N	2.37	0.58
13:S:114:LYS:O	13:S:117:ALA:CB	2.52	0.58
13:S:120:GLU:O	13:S:121:GLY:C	2.42	0.58
13:S:61:ALA:HB1	13:S:84:THR:CG2	2.34	0.58
20:U:115:ASN:O	20:U:117:ARG:CA	2.51	0.58
20:U:47:TYR:HD2	20:U:50:ARG:HD2	1.69	0.58
21:V:50:ASP:OD1	21:V:53:LYS:HE2	2.01	0.58
2:A:1398:C:H4'	16:X:23:LYS:HZ2	1.68	0.58
2:A:2304:G:O4'	6:G:105:SER:CB	2.48	0.58
31:K:99:LYS:HG3	31:K:140:VAL:CG2	2.30	0.58
25:4:48:ARG:CG	25:4:49:PHE:N	2.59	0.58
2:A:1742:C:H2'	2:A:1743:G:C1'	2.33	0.58
25:4:14:ILE:HG21	25:4:37:SER:C	2.25	0.57
27:6:12:MET:HE3	27:6:54:LYS:C	2.23	0.57
2:A:2466:C:H5''	30:9:6:SER:HB3	1.86	0.57
2:A:2344:U:C2'	2:A:2344:U:O2	2.51	0.57
2:A:2435:A:H2'	2:A:2436:G:H5''	1.84	0.57
2:A:2464:C:C2	2:A:2465:C:C6	2.91	0.57
2:A:245:G:H22	2:A:254:G:H1'	1.69	0.57
2:A:2573:C:H3'	2:A:2573:C:C6	2.39	0.57
2:A:2617:C:O2'	2:A:2618:G:H5'	2.02	0.57
2:A:270(O):U:H5''	2:A:270(P):C:C5	2.39	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2792:G:N3	2:A:2805:G:N2	2.38	0.57
2:A:325:G:H21	17:Y:7:GLN:HE22	1.45	0.57
3:D:77:VAL:HB	3:D:113:MET:N	2.16	0.57
4:E:47:GLY:HA2	4:E:305:LYS:HE2	1.86	0.57
5:F:103:ASN:HB2	5:F:106:GLU:HG3	1.86	0.57
5:F:138:VAL:HG12	5:F:138:VAL:O	2.04	0.57
7:H:148:ARG:NH1	7:H:164:GLU:H	1.98	0.57
8:I:38:GLU:O	8:I:39:ALA:C	2.42	0.57
9:N:19:MET:CB	9:N:46:ILE:HD13	2.15	0.57
9:N:58:GLU:C	9:N:61:VAL:H	2.07	0.57
2:A:2040:C:H4'	9:N:69:TYR:CE2	2.38	0.57
11:P:132:LYS:O	11:P:133:VAL:C	2.42	0.57
12:Q:71:PHE:HB3	12:Q:138:ARG:HH11	1.69	0.57
19:R:48:VAL:O	19:R:51:LEU:HB2	2.03	0.57
19:R:52:ILE:CD1	19:R:94:TYR:CB	2.81	0.57
19:R:62:ALA:CB	19:R:80:PHE:CZ	2.86	0.57
20:U:105:ALA:O	20:U:106:PHE:C	2.42	0.57
2:A:1162:G:O3'	21:V:23:GLU:OE1	2.21	0.57
21:V:30:GLY:O	21:V:33:VAL:HG21	1.94	0.57
21:V:43:GLU:O	21:V:44:GLN:CD	2.42	0.57
21:V:4:ILE:O	21:V:4:ILE:HG22	2.04	0.57
21:V:66:GLY:HA2	21:V:93:ILE:HA	1.86	0.57
15:W:66:GLU:O	15:W:69:LEU:HD21	2.03	0.57
18:Z:103:ARG:CD	18:Z:103:ARG:H	2.14	0.57
8:I:80:PRO:CA	8:I:146:THR:O	2.51	0.57
16:X:3:ASP:C	22:2:24:LYS:HZ2	2.07	0.57
16:X:23:LYS:CA	16:X:67:ARG:HA	2.34	0.57
2:A:7:G:OP1	9:N:6:PHE:CZ	2.51	0.57
2:A:1525:G:HO3'	2:A:1526:G:P	2.25	0.57
2:A:439:G:C5'	17:Y:6:LYS:HZ3	2.08	0.57
3:D:234:HIS:O	3:D:235:PRO:O	2.22	0.57
2:A:668:G:H2'	2:A:670:A:N7	2.19	0.57
2:A:1372:U:H2'	2:A:1373:A:H8	1.68	0.57
2:A:856:C:C1'	24:0:24:LYS:HB2	2.34	0.57
23:3:40:THR:O	23:3:40:THR:HG23	2.04	0.57
25:4:14:ILE:CG2	25:4:37:SER:H	2.13	0.57
15:W:19:LEU:HD22	26:5:25:LEU:HG	0.59	0.57
27:6:8:ILE:H	27:6:29:ARG:NH2	1.93	0.57
27:6:9:ILE:O	27:6:9:ILE:HG22	2.02	0.57
28:7:21:ARG:NH2	28:7:43:THR:HG23	2.14	0.57
2:A:1184:G:O2'	2:A:1185:C:H5'	2.03	0.57
2:A:2347:C:H2'	2:A:2348:U:C6	2.38	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2394:C:C6	2:A:2395:C:N4	2.69	0.57
2:A:2404:C:N4	2:A:2405:G:C2	2.72	0.57
2:A:2423:U:O2'	2:A:2424:C:P	2.62	0.57
2:A:2542:A:H5'	2:A:2543:G:OP1	2.04	0.57
2:A:2679:A:C2	2:A:2680:C:C6	2.92	0.57
2:A:2716:U:O2	2:A:2717:G:C8	2.57	0.57
2:A:2783:G:C2	2:A:2784:C:C4	2.93	0.57
2:A:2827:C:O2'	2:A:2828:C:C5'	2.52	0.57
2:A:2828:C:C2	2:A:2829:C:C5	2.92	0.57
2:A:2862:G:N3	2:A:2863:C:C5	2.71	0.57
2:A:2880:C:H1'	19:R:92:GLY:O	2.03	0.57
2:A:627:A:H61	2:A:638:G:H1'	1.69	0.57
2:A:648:G:H2'	2:A:649:G:C8	2.39	0.57
3:D:73:ILE:CG2	3:D:74:PRO:HD2	2.33	0.57
4:E:211:GLN:O	4:E:216:ARG:CZ	2.52	0.57
4:E:311:PHE:CD2	4:E:311:PHE:N	2.72	0.57
4:E:75:THR:HG21	4:E:189:MET:SD	2.43	0.57
5:F:166:ILE:O	5:F:167:ASP:O	2.22	0.57
5:F:243:VAL:CB	5:F:246:ARG:HD2	2.33	0.57
5:F:55:ARG:HG3	5:F:56:THR:H	1.66	0.57
2:A:801:G:P	5:F:79:ARG:HD3	2.34	0.57
2:A:2313:C:H4'	6:G:72:LYS:HB3	1.86	0.57
7:H:66:THR:CG2	7:H:67:THR:H	2.16	0.57
9:N:16:ASP:H	9:N:45:VAL:HG23	1.65	0.57
2:A:2685:G:OP1	10:O:78:ARG:NH1	2.36	0.57
12:Q:136:TRP:C	12:Q:139:ALA:H	2.05	0.57
12:Q:88:PHE:CA	12:Q:90:PHE:HE1	2.17	0.57
19:R:36:THR:CG2	19:R:40:LYS:CG	2.82	0.57
13:S:109:PRO:HB2	13:S:116:PHE:CE2	2.39	0.57
20:U:36:PHE:CD1	20:U:36:PHE:N	2.72	0.57
20:U:8:ILE:H	20:U:11:ARG:CD	2.15	0.57
17:Y:101:LEU:CD2	17:Y:112:LEU:CD1	2.53	0.57
18:Z:58:GLY:O	18:Z:59:GLY:C	2.42	0.57
17:Y:3:GLN:HB3	17:Y:4:PRO:HD2	1.86	0.57
2:A:2856:C:H2'	2:A:2857:G:H5'	1.86	0.57
2:A:498:G:H8	2:A:498:G:O5'	1.87	0.57
2:A:311:A:H2'	2:A:311:A:N3	2.17	0.57
2:A:270(W):G:H3'	2:A:270(X):G:H8	1.68	0.57
2:A:101:G:OP2	17:Y:107:LYS:NZ	2.33	0.57
2:A:1268:A:OP2	2:A:2006:C:OP2	2.21	0.57
2:A:489:G:H1'	2:A:1284:A:C5	2.38	0.57
2:A:570:G:H2'	2:A:2030:A:N6	2.19	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2268:A:H8	2:A:2268:A:H3'	1.69	0.57
2:A:2468:G:C6	2:A:2481:G:C4	2.91	0.57
2:A:2468:G:O2'	2:A:2469:A:H5''	2.01	0.57
2:A:2461:C:H1'	2:A:2492:U:N3	2.18	0.57
2:A:2547:U:C6	2:A:2566:A:N1	2.73	0.57
2:A:2605:U:C6	2:A:2605:U:O5'	2.57	0.57
2:A:2694:G:C6	2:A:2695:C:C5	2.92	0.57
2:A:374:A:H2'	2:A:375:C:O4'	2.04	0.57
2:A:830:G:C6	2:A:2446:G:O4'	2.57	0.57
2:A:1799:G:H22	3:D:153:LEU:CD2	2.11	0.57
3:D:175:LEU:HD21	3:D:181:ARG:N	2.20	0.57
4:E:222:ARG:CG	4:E:222:ARG:NH1	2.58	0.57
7:H:147:ILE:CD1	7:H:150:VAL:HG11	2.34	0.57
7:H:96:SER:HA	7:H:124:VAL:CG2	2.30	0.57
10:O:98:ILE:CG2	10:O:118:ALA:HA	2.34	0.57
10:O:46:ALA:C	10:O:47:THR:O	2.39	0.57
2:A:2406:U:C1'	11:P:57:VAL:CG2	2.80	0.57
11:P:73:VAL:HA	11:P:76:LEU:HB2	1.86	0.57
12:Q:9:SER:O	12:Q:10:ILE:C	2.43	0.57
14:T:8:TYR:HE1	14:T:54:THR:HB	1.66	0.57
20:U:8:ILE:C	20:U:11:ARG:HD3	2.20	0.57
20:U:88:ILE:HG22	20:U:88:ILE:O	2.04	0.57
20:U:95:LEU:N	20:U:98:ILE:HD13	2.18	0.57
18:Z:113:VAL:HG23	18:Z:174:PRO:CG	2.32	0.57
18:Z:112:LEU:HD22	18:Z:113:VAL:O	2.04	0.57
18:Z:40:ASP:O	18:Z:44:ARG:HG2	2.04	0.57
2:A:1341:U:OP2	2:A:1397:U:C2	2.58	0.57
16:X:57:THR:CB	16:X:59:ASP:OD2	2.52	0.57
2:A:1059:G:O2'	31:K:112:LYS:CE	2.49	0.57
31:K:93:LYS:N	31:K:96:ILE:CG1	2.67	0.57
7:H:53:ARG:NH1	7:H:56:ASP:C	2.57	0.57
16:X:45:TYR:O	16:X:46:ASP:C	2.41	0.57
2:A:481:G:H1	2:A:509:C:H42	1.52	0.57
2:A:204:A:OP1	2:A:206:U:H1'	2.04	0.57
23:3:31:LEU:HD22	23:3:32:GLN:CG	2.33	0.57
25:4:4:ASP:HB3	25:4:5:LEU:HD23	1.86	0.57
2:A:1255:U:OP1	2:A:1256:G:H5''	2.04	0.57
2:A:14:A:N7	2:A:15:G:C4	2.73	0.57
2:A:1664:A:H2'	2:A:1665:A:H8	1.68	0.57
2:A:1991:U:C6	2:A:1991:U:H3'	2.39	0.57
2:A:2047:U:H2'	2:A:2048:G:C8	2.39	0.57
2:A:2069:G:N3	2:A:2443:C:O2	2.36	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2078:C:H2'	2:A:2079:U:O4'	2.04	0.57
2:A:2360:A:C5	2:A:2361:A:C8	2.80	0.57
2:A:244:A:O2'	11:P:56:LYS:HB3	2.04	0.57
2:A:2461:C:O2'	2:A:2462:U:H5'	2.03	0.57
2:A:2476:A:N3	2:A:2481:G:N2	2.51	0.57
2:A:1999:C:C2'	2:A:2687:U:HO2'	2.15	0.57
2:A:2525:G:O2'	2:A:2742:C:O2'	1.95	0.57
2:A:2766:G:C2	2:A:2767:C:C6	2.91	0.57
2:A:2844:G:H2'	2:A:2844:G:N3	2.19	0.57
2:A:635:C:H2'	2:A:636:G:O4'	2.05	0.57
2:A:929:G:H21	23:3:43:ILE:CA	2.18	0.57
1:B:75:G:H1'	18:Z:22:VAL:HG21	1.83	0.57
2:A:1799:G:N1	3:D:177:SER:CB	2.67	0.57
2:A:1566:A:N3	3:D:212:HIS:CA	2.67	0.57
2:A:1567:A:N1	3:D:82:TYR:O	2.37	0.57
2:A:2770:G:H1'	4:E:316:ARG:HH12	1.66	0.57
5:F:3:ALA:CA	5:F:16:VAL:O	2.50	0.57
5:F:193:LEU:O	5:F:233:THR:HB	2.04	0.57
6:G:129:ASP:C	6:G:130:VAL:HG13	2.24	0.57
7:H:15:THR:CG2	7:H:26:LYS:O	2.45	0.57
8:I:7:LYS:CG	8:I:12:LYS:HZ2	2.11	0.57
9:N:45:VAL:N	9:N:132:LEU:CD2	2.66	0.57
10:O:43:VAL:CG2	10:O:56:GLN:H	2.16	0.57
11:P:70:ASP:OD1	11:P:115:ARG:HB2	2.04	0.57
11:P:77:ALA:CB	11:P:81:VAL:HG12	2.33	0.57
19:R:55:ALA:CB	19:R:79:LEU:CD2	2.82	0.57
13:S:102:LEU:N	13:S:102:LEU:HD12	2.19	0.57
13:S:56:ASP:CG	13:S:57:THR:N	2.58	0.57
14:T:13:ILE:HD12	14:T:33:SER:OG	2.03	0.57
20:U:59:ARG:CA	20:U:62:ILE:HG13	1.94	0.57
20:U:69:ALA:CA	20:U:79:PHE:CZ	2.84	0.57
21:V:5:ILE:HD12	21:V:12:TYR:OH	2.03	0.57
21:V:69:ILE:HG22	21:V:88:GLN:HB2	1.87	0.57
21:V:83:ARG:C	21:V:84:THR:OG1	2.41	0.57
15:W:42:ARG:HG2	15:W:43:GLY:N	2.19	0.57
18:Z:37:LYS:HD2	18:Z:41:ARG:HH12	1.68	0.57
18:Z:5:ALA:O	18:Z:6:LYS:HB3	2.04	0.57
8:I:115:ILE:CG2	8:I:129:VAL:CG1	2.83	0.57
22:2:20:LEU:HD22	22:2:23:LEU:CB	2.34	0.57
22:2:9:ARG:HA	22:2:59:ILE:HD11	1.86	0.57
2:A:60:G:N7	2:A:63:U:H5	2.02	0.57
16:X:50:GLU:N	16:X:50:GLU:CD	2.57	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1317:A:H2'	2:A:1318:C:C6	2.39	0.57
2:A:1802:A:H3'	2:A:1803:A:C8	2.40	0.57
2:A:270(S):G:H2'	2:A:270(T):G:C8	2.40	0.57
9:N:131:THR:OG1	9:N:131:THR:O	2.22	0.57
24:0:41:ARG:O	24:0:67:VAL:HG13	2.03	0.57
23:3:20:LYS:HA	23:3:23:LEU:HD12	1.66	0.57
29:8:55:TRP:HZ3	29:8:59:LYS:NZ	1.86	0.57
2:A:1819:A:P	3:D:154:VAL:H	2.26	0.57
2:A:198:C:C4'	2:A:2243:U:O2'	2.50	0.57
2:A:2299:G:H2'	2:A:2300:G:C8	2.39	0.57
2:A:2551:C:C2	2:A:2552:U:C6	2.93	0.57
2:A:2577:A:H2	2:A:2614:A:C2	2.18	0.57
3:D:107:LYS:O	3:D:108:ASN:HB3	2.05	0.57
3:D:128:ALA:CB	3:D:190:THR:N	2.68	0.57
3:D:143:ILE:HB	3:D:152:GLN:CA	2.34	0.57
3:D:198:GLY:O	3:D:200:THR:CB	2.52	0.57
3:D:85:ASN:N	3:D:85:ASN:ND2	2.49	0.57
4:E:222:ARG:NE	4:E:232:ARG:C	2.56	0.57
4:E:70:VAL:HB	4:E:295:LEU:CD2	2.34	0.57
5:F:150:THR:HG22	5:F:203:ALA:O	2.05	0.57
5:F:214:THR:O	5:F:216:SER:C	2.43	0.57
5:F:237:GLU:O	5:F:239:ALA:CA	2.52	0.57
5:F:91:PRO:O	5:F:96:LYS:NZ	2.36	0.57
2:A:2745:C:C2'	7:H:142:GLU:CD	2.73	0.57
7:H:96:SER:O	7:H:98:GLN:HG3	2.04	0.57
9:N:87:LEU:HB3	9:N:88:PRO:HD3	1.85	0.57
12:Q:55:GLN:O	12:Q:56:ILE:C	2.42	0.57
12:Q:58:HIS:N	12:Q:61:LEU:HG	2.18	0.57
19:R:44:LEU:O	19:R:48:VAL:CB	2.51	0.57
2:A:2840:C:C5'	19:R:53:HIS:CD2	2.87	0.57
21:V:57:GLN:HE22	21:V:100:GLY:C	2.07	0.57
21:V:65:ARG:O	21:V:93:ILE:HG13	2.04	0.57
20:U:20:ARG:NH1	21:V:75:LYS:HD2	2.20	0.57
15:W:23:LEU:HD21	26:5:27:ALA:HB2	1.86	0.57
15:W:8:ARG:CD	15:W:9:TYR:HD1	2.13	0.57
17:Y:20:HIS:N	17:Y:67:LEU:HD22	2.19	0.57
17:Y:74:VAL:HB	17:Y:77:VAL:HG21	1.87	0.57
2:A:76:C:P	22:2:51:LYS:HD3	2.45	0.57
2:A:138:G:O6	2:A:142:G:O2'	2.23	0.57
2:A:1062:G:C4'	31:K:76:SER:OG	2.52	0.57
2:A:1913:A:H61	2:A:1917:U:P	2.27	0.57
2:A:1924:C:C4	2:A:1925:C:C4	2.93	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:120:U:N3	2:A:150:C:C4	2.73	0.57
2:A:1418:G:H1	2:A:1577:C:H3'	1.69	0.57
2:A:659:C:H2'	2:A:660:G:C8	2.37	0.57
2:A:988:A:C6	23:3:13:ILE:HG21	2.40	0.57
27:6:26:LYS:C	27:6:27:ASN:OD1	2.43	0.57
28:7:32:ALA:HA	28:7:35:ARG:HD2	1.85	0.57
2:A:2213:U:O3'	2:A:2215:G:P	2.62	0.57
2:A:2277:G:O3'	12:Q:20:ILE:CG2	2.51	0.57
2:A:2441:C:C2'	2:A:2442:C:O5'	2.51	0.57
2:A:2661:G:C2	2:A:2662:A:N7	2.73	0.57
2:A:2717:G:HO2'	2:A:2718:G:C4'	2.18	0.57
2:A:2717:G:O2'	2:A:2718:G:O4'	2.17	0.57
2:A:2735:G:N1	2:A:2770:G:N3	2.53	0.57
2:A:2852:G:O2'	2:A:2853:C:H5'	2.05	0.57
2:A:2866:U:O2	2:A:2868:A:H4'	2.05	0.57
2:A:297:C:H2'	2:A:298:G:O4'	2.04	0.57
3:D:116:MET:O	3:D:117:SER:OG	2.17	0.57
3:D:167:GLU:O	3:D:170:TYR:N	2.38	0.57
3:D:128:ALA:HB1	3:D:190:THR:CA	2.28	0.57
3:D:80:ILE:O	3:D:80:ILE:CG1	2.40	0.57
4:E:222:ARG:O	4:E:227:ALA:CB	2.53	0.57
2:A:1673:U:C5	4:E:225:LYS:HD3	2.32	0.57
4:E:203:GLY:CA	4:E:303:PRO:HD3	2.33	0.57
9:N:54:VAL:CG1	9:N:138:THR:CB	2.83	0.57
9:N:90:LYS:O	9:N:90:LYS:CD	2.47	0.57
10:O:101:PRO:C	10:O:102:VAL:HG23	2.25	0.57
10:O:25:LEU:HD21	10:O:40:VAL:CB	2.32	0.57
13:S:117:ALA:O	13:S:120:GLU:N	2.38	0.57
13:S:41:LYS:HZ3	13:S:68:GLU:CD	2.04	0.57
15:W:10:VAL:CG1	15:W:46:PHE:CE2	2.80	0.57
15:W:8:ARG:HH11	15:W:8:ARG:HB3	1.68	0.57
18:Z:147:ILE:HG13	18:Z:168:VAL:HG11	1.85	0.57
18:Z:66:VAL:HG22	18:Z:68:ALA:H	1.69	0.57
2:A:76:C:O2'	22:2:55:ARG:CB	2.53	0.57
16:X:22:ASN:HA	16:X:68:LEU:CG	2.34	0.57
4:E:107:GLU:O	4:E:109:ASP:N	2.38	0.57
24:0:59:LEU:O	24:0:60:PHE:CD1	2.58	0.57
24:0:77:ARG:C	24:0:78:PHE:O	2.41	0.57
23:3:3:ARG:HD3	23:3:60:GLU:CA	2.35	0.57
23:3:54:VAL:CG2	23:3:55:ARG:N	2.59	0.57
2:A:1251:C:H5''	20:U:10:ARG:CD	2.34	0.57
2:A:1675:C:C4	4:E:225:LYS:CG	2.86	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2187:G:O2'	2:A:2188:C:C5'	2.45	0.57
2:A:2093:G:N9	2:A:2225:A:N6	2.53	0.57
2:A:2292:C:C4	2:A:2293:C:C4	2.92	0.57
2:A:2320:A:N7	13:S:9:PRO:CD	2.67	0.57
2:A:2295:C:H42	2:A:2337:G:H1	1.37	0.57
2:A:2378:A:N3	13:S:26:LEU:HD21	2.02	0.57
2:A:2431:U:O2	2:A:2432:A:H3'	2.05	0.57
2:A:2472:G:C2	2:A:2475:C:C2	2.93	0.57
2:A:2481:G:O2'	2:A:2482:G:H8	1.88	0.57
2:A:2533:A:C8	2:A:2534:A:C8	2.93	0.57
2:A:2572:A:C5'	2:A:2574:G:H4'	2.34	0.57
2:A:2681:C:H4'	2:A:2682:U:H5'	1.87	0.57
2:A:2684:U:H3	2:A:2725:A:N6	2.02	0.57
2:A:2693:A:N6	2:A:2694:G:O6	2.37	0.57
2:A:2678:C:H42	2:A:2729:G:H1	1.52	0.57
2:A:2744:G:N1	2:A:2745:C:C4	2.72	0.57
2:A:2808:U:C4	2:A:2892:A:N7	2.73	0.57
2:A:446:G:OP2	20:U:3:ARG:NH1	2.38	0.57
2:A:687:C:H4'	28:7:4:THR:CG2	2.29	0.57
2:A:783:A:H2'	2:A:784:A:H4'	1.86	0.57
2:A:993:G:N2	20:U:54:LYS:HZ1	2.01	0.57
3:D:144:GLU:CD	3:D:188:ARG:H	2.08	0.57
3:D:158:GLY:O	3:D:194:VAL:HG13	2.04	0.57
3:D:76:ARG:HG2	3:D:76:ARG:HH11	1.69	0.57
4:E:205:THR:HG23	4:E:259:HIS:CA	1.99	0.57
5:F:211:ASP:C	5:F:211:ASP:OD2	2.37	0.57
5:F:225:PRO:C	5:F:230:GLY:N	2.43	0.57
6:G:20:LYS:N	6:G:76:ARG:HB3	2.19	0.57
10:O:24:VAL:HG13	10:O:32:TYR:O	2.02	0.57
11:P:66:VAL:CB	11:P:67:ARG:NE	2.52	0.57
19:R:87:TYR:CD1	19:R:94:TYR:CB	2.84	0.57
13:S:76:GLY:C	13:S:83:LEU:HD13	2.25	0.57
2:A:1011:G:OP2	20:U:75:ASN:CB	2.52	0.57
20:U:79:PHE:O	20:U:80:ILE:C	2.43	0.57
2:A:1215:G:O3'	20:U:8:ILE:CG2	2.53	0.57
15:W:24:ILE:HB	15:W:32:ALA:CB	2.34	0.57
15:W:35:ILE:O	15:W:39:THR:N	2.37	0.57
17:Y:34:GLU:C	17:Y:35:TYR:CG	2.77	0.57
18:Z:66:VAL:CG2	18:Z:69:VAL:HG23	2.34	0.57
18:Z:24:TYR:CA	18:Z:83:PHE:O	2.51	0.57
8:I:91:GLY:O	8:I:92:SER:C	2.42	0.57
2:A:121:G:N2	2:A:131:G:C4	2.72	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2311:A:C2'	2:A:2312:U:O5'	2.53	0.57
14:T:42:LEU:C	14:T:44:ARG:CA	2.73	0.57
2:A:1841:U:H2'	2:A:1842:G:H8	1.70	0.57
2:A:922:U:O2'	24:0:26:PHE:CE2	2.51	0.57
24:0:37:LEU:HB3	24:0:69:PHE:HD2	0.78	0.57
2:A:125:G:C3'	28:7:19:ARG:HH11	2.06	0.57
2:A:1791:A:C8	2:A:1792:G:C8	2.93	0.57
2:A:1791:A:O3'	3:D:204:PHE:CD2	2.58	0.57
2:A:199:A:N6	2:A:2433:A:C8	2.72	0.57
2:A:2255:G:N1	2:A:2256:G:H1'	2.19	0.57
2:A:2264:C:C5	2:A:2265:U:C5	2.93	0.57
2:A:2385:C:O2	2:A:2385:C:C2'	2.52	0.57
2:A:2556:C:H2'	2:A:2557:G:H5'	0.57	0.57
2:A:2583:G:C4	2:A:2584:U:O2	2.58	0.57
2:A:2589:A:C6	2:A:2590:A:C5	2.92	0.57
2:A:2051:A:C5	2:A:2614:A:C6	2.90	0.57
2:A:2627:G:C8	2:A:2627:G:H5'	2.33	0.57
2:A:2697:G:C5	2:A:2698:U:C5	2.93	0.57
2:A:2814:C:H2'	2:A:2815:C:H6	1.64	0.57
2:A:2836:U:C2	2:A:2883:A:C5	2.90	0.57
2:A:452:G:N2	2:A:458:G:N3	2.53	0.57
2:A:807:U:H1'	2:A:2445:G:OP1	2.04	0.57
1:B:43:C:H1'	6:G:47:GLN:HE21	1.69	0.57
3:D:68:ARG:HD3	3:D:68:ARG:N	2.20	0.57
3:D:73:ILE:CB	3:D:95:TYR:HE2	2.15	0.57
5:F:194:PHE:HZ	5:F:207:LEU:HD12	1.68	0.57
5:F:49:ASP:HB3	5:F:52:ALA:HB3	1.87	0.57
9:N:27:ALA:C	9:N:29:GLN:N	2.58	0.57
11:P:65:ASP:N	11:P:65:ASP:OD1	2.38	0.57
13:S:47:LEU:HD12	13:S:58:LEU:HD23	1.79	0.57
20:U:72:HIS:ND1	20:U:110:VAL:HG11	2.18	0.57
20:U:55:ARG:O	20:U:56:ASP:C	2.43	0.57
20:U:9:VAL:O	20:U:12:ARG:HB2	2.04	0.57
15:W:50:VAL:HG21	15:W:103:ILE:CG2	2.34	0.57
15:W:13:SER:OG	15:W:16:LYS:HG3	2.04	0.57
15:W:36:LEU:CA	15:W:39:THR:HG22	2.33	0.57
15:W:11:ARG:CZ	15:W:98:LYS:HB3	2.33	0.57
17:Y:30:ASP:OD1	17:Y:31:LEU:HG	2.05	0.57
18:Z:29:ASN:O	18:Z:30:VAL:HG23	2.05	0.57
18:Z:37:LYS:CA	18:Z:40:ASP:OD2	2.44	0.57
8:I:125:GLY:O	8:I:144:HIS:HA	2.05	0.57
16:X:19:ASP:O	16:X:20:PHE:C	2.43	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:X:18:MET:HE3	16:X:25:GLN:CA	2.35	0.57
2:A:2310:A:C2	6:G:55:LYS:HD3	2.39	0.57
2:A:414:C:H2'	2:A:415:A:C8	2.39	0.57
2:A:1521:G:H5'	2:A:1522:G:C8	2.40	0.57
2:A:607:U:H3'	2:A:608:A:H8	1.69	0.57
24:0:67:VAL:HG12	24:0:74:LYS:HA	1.87	0.57
23:3:27:GLY:O	23:3:28:LEU:HD23	2.05	0.57
2:A:1240:U:C3'	2:A:1241:A:H8	2.14	0.57
2:A:630(A):C:C3'	2:A:1631:A:P	2.93	0.57
2:A:1638:C:C4'	2:A:2710:C:O2	2.52	0.57
2:A:2019:A:H2'	2:A:2020:A:O4'	2.05	0.57
2:A:2195:C:C2	2:A:2196:C:C6	2.93	0.57
2:A:2252:G:C3'	2:A:2253:G:H5'	2.34	0.57
2:A:2285:C:H4'	2:A:2288:A:H61	1.38	0.57
2:A:2299:G:O6	2:A:2300:G:O6	2.22	0.57
2:A:2333:A:H3'	13:S:13:ARG:CD	2.27	0.57
2:A:2341:G:H2'	2:A:2342:C:C6	2.40	0.57
2:A:2350:C:C2'	2:A:2351:G:O5'	2.52	0.57
2:A:2385:C:C4	2:A:2386:C:C5	2.90	0.57
2:A:2396:G:O2'	25:4:27:THR:N	2.37	0.57
2:A:2515:C:N3	2:A:2569:G:N2	2.53	0.57
2:A:2523:G:O2'	2:A:2524:G:H5'	2.05	0.57
2:A:2546:U:H5'	2:A:2565:A:H2	1.39	0.57
2:A:2574:G:N3	2:A:2575:C:C5	2.65	0.57
2:A:2701:C:H5	2:A:2703:C:OP2	1.87	0.57
2:A:2821:A:N3	2:A:2822:G:C4	2.71	0.57
2:A:2868:A:H2'	2:A:2869:G:H5'	1.87	0.57
2:A:380:U:O2'	25:4:15:ILE:CA	2.53	0.57
2:A:780:G:C6	3:D:233:ASP:OD2	2.55	0.57
4:E:44:TYR:CG	4:E:307:LEU:C	2.78	0.57
2:A:674:G:H5'	5:F:69:HIS:HA	1.83	0.57
6:G:21:VAL:HG13	6:G:132:VAL:HA	1.85	0.57
6:G:149:ARG:C	6:G:151:ILE:H	2.05	0.57
2:A:2745:C:O2'	7:H:142:GLU:CD	2.43	0.57
7:H:27:GLY:HA3	7:H:78:VAL:HG12	1.86	0.57
8:I:3:VAL:CB	8:I:21:VAL:HG23	2.34	0.57
9:N:77:GLY:O	9:N:79:PHE:CA	2.50	0.57
10:O:91:LYS:HB3	10:O:111:PHE:CE2	2.40	0.57
10:O:80:ASP:HB2	14:T:23:HIS:HA	1.87	0.57
11:P:116:HIS:CG	11:P:118:LEU:HD11	2.39	0.57
11:P:124:ASP:HB3	11:P:130:ARG:HH21	1.67	0.57
11:P:142:LEU:O	11:P:143:THR:C	2.42	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:Q:51:GLU:HA	12:Q:118:ALA:CA	2.34	0.57
19:R:94:TYR:C	19:R:117:VAL:HG12	2.25	0.57
14:T:9:CYS:O	14:T:9:CYS:SG	2.63	0.57
2:A:447:A:P	20:U:5:LYS:NZ	2.77	0.57
20:U:88:ILE:CG2	21:V:52:GLY:HA2	2.35	0.57
15:W:12:ILE:HG23	15:W:13:SER:H	1.69	0.57
17:Y:20:HIS:O	17:Y:22:GLN:N	2.38	0.57
18:Z:105:GLN:HB2	18:Z:141:MET:HG2	1.85	0.57
18:Z:116:VAL:O	18:Z:116:VAL:HG13	2.04	0.57
8:I:132:LYS:HA	8:I:138:THR:CB	2.35	0.57
9:N:4:ALA:O	9:N:5:GLU:C	2.43	0.57
2:A:1545:A:C3'	2:A:545(A):A:O4'	2.53	0.57
2:A:2896:C:H6	2:A:2896:C:H3'	1.62	0.57
2:A:1743:G:H3'	2:A:1746:G:P	2.45	0.57
2:A:1168:G:H2'	2:A:1169:G:O4'	2.04	0.57
31:K:57:VAL:O	31:K:57:VAL:HG12	2.04	0.57
23:3:5:LYS:HA	23:3:36:VAL:HG12	1.87	0.57
23:3:59:VAL:CG1	23:3:60:GLU:N	2.49	0.57
29:8:14:ILE:HG23	29:8:15:LYS:N	2.19	0.57
2:A:2192:G:OP2	2:A:2192:G:C8	2.54	0.57
2:A:198:C:O2'	2:A:2243:U:O2'	2.16	0.57
2:A:2320:A:C5	13:S:9:PRO:CB	2.81	0.57
2:A:2344:U:H2'	2:A:2345:G:OP2	2.05	0.57
2:A:835:A:H4'	2:A:2358:G:O2'	2.04	0.57
2:A:2378:A:H1'	13:S:26:LEU:HD22	1.87	0.57
2:A:2453:A:H2	2:A:2504:U:O2	1.88	0.57
2:A:2509:G:HO2'	2:A:2510:C:H5'	1.61	0.57
2:A:2617:C:O2'	2:A:2618:G:C5'	2.52	0.57
2:A:2637:U:C2	2:A:2782:G:C2	2.93	0.57
2:A:2729:G:N1	2:A:2730:C:N3	2.53	0.57
2:A:2729:G:O2'	2:A:2730:C:C5'	2.52	0.57
2:A:2811:G:H22	2:A:2891:G:H1'	1.68	0.57
2:A:775:G:H2'	2:A:794:G:C5	2.38	0.57
3:D:142:ASN:N	3:D:142:ASN:ND2	2.52	0.57
4:E:271:ILE:HD11	4:E:294:THR:HG22	1.85	0.57
4:E:73:ILE:HB	4:E:294:THR:OG1	2.04	0.57
5:F:100:LEU:O	5:F:101:ASP:C	2.43	0.57
2:A:449:A:P	5:F:85:LYS:HA	2.45	0.57
8:I:9:VAL:O	8:I:9:VAL:CG1	2.50	0.57
9:N:136:SER:OG	9:N:141:ALA:HA	2.05	0.57
9:N:13:ASP:CA	9:N:38:VAL:HG12	1.84	0.57
10:O:8:LEU:CB	10:O:83:ALA:HA	2.12	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:Q:58:HIS:H	12:Q:112:ALA:HB2	1.69	0.57
19:R:88:ARG:O	19:R:89:ASP:HB3	2.03	0.57
6:G:146:LYS:HE3	13:S:15:GLU:CD	2.25	0.57
14:T:13:ILE:HG13	14:T:33:SER:HB2	1.87	0.57
15:W:11:ARG:NH2	15:W:98:LYS:CB	2.54	0.57
17:Y:26:THR:C	17:Y:27:LEU:CG	2.68	0.57
17:Y:44:ALA:HB1	17:Y:65:VAL:HG22	1.87	0.57
17:Y:19:ARG:NH1	17:Y:67:LEU:C	2.58	0.57
18:Z:107:GLU:OE2	18:Z:141:MET:CG	2.51	0.57
2:A:875:G:H5''	18:Z:146:HIS:CG	2.40	0.57
16:X:16:ASN:N	16:X:16:ASN:OD1	2.33	0.57
2:A:1063:G:P	31:K:77:PHE:CE1	2.98	0.57
31:K:85:ILE:O	31:K:85:ILE:HG23	2.04	0.57
2:A:95:G:H1'	22:2:42:ASN:CB	2.35	0.57
2:A:265:A:N7	2:A:428:A:C6	2.73	0.57
2:A:2722:G:N1	2:A:2723:C:N4	2.48	0.57
2:A:706:A:C8	2:A:706:A:O5'	2.53	0.57
23:3:6:VAL:HG22	23:3:54:VAL:CG2	2.32	0.56
29:8:4:MET:HG2	29:8:5:LYS:N	2.19	0.56
2:A:2284:C:O2	2:A:2284:C:H2'	2.04	0.56
2:A:2343:C:C2'	2:A:2344:U:H5'	2.35	0.56
2:A:2423:U:C1'	2:A:2425:A:C5	2.88	0.56
2:A:2644:G:P	2:A:2644:G:C8	2.97	0.56
2:A:712(A):A:C5'	2:A:2714:G:OP2	2.49	0.56
2:A:2691:C:O2'	2:A:2871:C:O2'	2.23	0.56
2:A:2884:U:C6	2:A:2885:C:C6	2.93	0.56
2:A:2808:U:N3	2:A:2892:A:N7	2.52	0.56
2:A:989:G:OP2	23:3:11:SER:OG	2.23	0.56
1:B:59:A:C6	1:B:60:C:C2	2.93	0.56
4:E:269:ILE:HD11	4:E:296:VAL:HA	1.85	0.56
6:G:18:ILE:C	6:G:135:VAL:HG21	2.25	0.56
11:P:67:ARG:HG2	11:P:68:GLU:H	1.69	0.56
12:Q:49:VAL:CG2	12:Q:120:HIS:C	2.71	0.56
12:Q:59:ASN:O	12:Q:61:LEU:N	2.38	0.56
13:S:110:THR:HG1	13:S:111:PRO:HD2	1.64	0.56
13:S:46:GLN:CD	13:S:57:THR:HG21	2.25	0.56
20:U:108:ALA:O	20:U:110:VAL:CA	2.52	0.56
21:V:3:ALA:HB3	21:V:12:TYR:HH	1.68	0.56
21:V:63:HIS:HA	21:V:95:ILE:CG1	2.33	0.56
21:V:61:VAL:HG11	21:V:95:ILE:C	2.24	0.56
15:W:83:LYS:HG2	15:W:97:LYS:CD	2.24	0.56
2:A:84:A:OP1	17:Y:20:HIS:NE2	2.37	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:148:C:C4	2:A:149:A:N6	2.73	0.56
2:A:76:C:H4'	22:2:55:ARG:CG	2.34	0.56
16:X:25:GLN:NE2	16:X:65:VAL:HG22	2.19	0.56
2:A:1080:C:O2	31:K:127:ILE:HD11	2.04	0.56
2:A:1857:G:H1	2:A:1884:A:N6	2.03	0.56
29:8:5:LYS:HB3	29:8:59:LYS:O	2.05	0.56
30:9:24:LEU:HD22	30:9:35:ARG:HG3	1.87	0.56
2:A:1031:G:C2'	30:9:8:LYS:HZ1	2.17	0.56
2:A:2064:C:N1	2:A:2450:A:N6	2.54	0.56
2:A:2299:G:C2'	2:A:2300:G:H5'	2.34	0.56
2:A:197:A:H61	2:A:248:G:H22	1.53	0.56
2:A:2655:G:N3	2:A:2655:G:H2'	2.19	0.56
2:A:2657:A:C6	2:A:2664:G:N2	2.53	0.56
2:A:270(I):G:N2	2:A:270(R):G:H1'	2.20	0.56
2:A:2740:A:C2'	2:A:2741:A:N7	2.64	0.56
2:A:2880:C:N3	2:A:2881:C:C4	2.73	0.56
2:A:515:A:H2'	2:A:516:C:H6	1.69	0.56
2:A:605:C:H2'	2:A:606:U:C6	2.40	0.56
2:A:664:C:H2'	2:A:665:C:C6	2.39	0.56
2:A:685:A:O4'	2:A:688:U:O4	2.22	0.56
2:A:945:A:N3	2:A:945:A:H2'	2.20	0.56
2:A:2681:C:H4'	4:E:48:MET:SD	2.44	0.56
5:F:196:THR:HG22	5:F:197:SER:N	2.20	0.56
2:A:2316:C:C4'	6:G:151:ILE:HD11	1.93	0.56
6:G:18:ILE:CG2	6:G:19:GLU:N	2.47	0.56
7:H:121:GLU:OE2	7:H:133:LYS:O	2.23	0.56
9:N:65:ASN:HB2	9:N:68:GLY:O	2.05	0.56
10:O:35:ILE:CG1	10:O:65:THR:HG22	2.35	0.56
2:A:1665:A:C3'	10:O:66:LYS:HE2	2.11	0.56
10:O:9:LYS:H	10:O:83:ALA:HB2	1.70	0.56
11:P:65:ASP:HB3	11:P:109:LEU:CA	2.31	0.56
13:S:17:ARG:HD3	13:S:17:ARG:O	2.04	0.56
13:S:32:PRO:HA	13:S:49:THR:OG1	2.04	0.56
20:U:111:ASP:CA	20:U:114:ARG:HD2	2.29	0.56
20:U:63:GLN:C	20:U:65:ILE:H	2.09	0.56
21:V:69:ILE:N	21:V:69:ILE:HD12	2.20	0.56
17:Y:23:VAL:HG12	17:Y:23:VAL:O	2.04	0.56
17:Y:43:ASN:O	17:Y:44:ALA:CB	2.52	0.56
31:K:32:GLY:O	31:K:60:VAL:HG21	2.05	0.56
9:N:4:ALA:O	9:N:5:GLU:O	2.23	0.56
14:T:45:GLU:HG3	14:T:47:ARG:O	2.06	0.56
2:A:678:C:H42	2:A:799:G:H1	1.53	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:5:33:CYS:HB2	26:5:37:HIS:CA	2.36	0.56
24:0:36:ILE:O	24:0:36:ILE:CG2	2.52	0.56
23:3:30:ARG:HE	23:3:33:GLN:CG	2.16	0.56
2:A:1249:U:H3'	2:A:1249:U:C6	2.41	0.56
2:A:124:G:OP1	2:A:1376:C:H1'	2.05	0.56
2:A:2261:C:N3	2:A:2262:U:C5	2.73	0.56
2:A:2472:G:N2	2:A:2477:C:OP1	2.24	0.56
2:A:24:G:O3'	15:W:102:HIS:NE2	2.37	0.56
2:A:2564:A:OP1	2:A:2648:C:H4'	2.06	0.56
2:A:2605:U:C2'	2:A:2606:C:O5'	2.53	0.56
2:A:2695:C:O2'	2:A:2696:U:H6	1.76	0.56
2:A:2734:A:C8	2:A:2734:A:C4'	2.88	0.56
2:A:2862:G:H2'	2:A:2863:C:H5	1.70	0.56
2:A:664:C:H2'	2:A:665:C:H6	1.69	0.56
2:A:684:G:C4	2:A:775:G:O6	2.58	0.56
2:A:830:G:O6	2:A:2446:G:H1'	2.05	0.56
2:A:994:C:H4'	2:A:994:C:OP2	2.05	0.56
3:D:111:VAL:C	3:D:113:MET:N	2.57	0.56
3:D:163:VAL:HA	3:D:172:ILE:O	2.06	0.56
4:E:186:GLU:O	4:E:187:HIS:CD2	2.58	0.56
4:E:270:ASP:O	4:E:271:ILE:HG13	2.05	0.56
4:E:45:LYS:CE	4:E:303:PRO:HD2	2.32	0.56
5:F:193:LEU:HD13	5:F:223:LEU:HB3	1.86	0.56
6:G:103:ASN:CG	6:G:133:ASN:HA	2.25	0.56
7:H:104:LEU:HB2	7:H:151:ARG:NH2	2.15	0.56
8:I:24:GLY:O	8:I:29:PHE:CE1	2.58	0.56
10:O:10:VAL:HG12	10:O:11:ALA:N	2.20	0.56
11:P:110:GLY:H	11:P:126:SER:HG	1.54	0.56
12:Q:35:ASN:H	12:Q:76:GLY:H	1.53	0.56
12:Q:66:ASN:O	12:Q:67:ALA:C	2.42	0.56
19:R:65:LEU:O	19:R:67:LEU:N	2.38	0.56
19:R:78:LYS:O	19:R:82:GLU:CG	2.53	0.56
14:T:10:GLY:HA2	14:T:53:ASP:OD2	2.06	0.56
14:T:53:ASP:O	14:T:56:ARG:CZ	2.53	0.56
15:W:23:LEU:O	15:W:24:ILE:C	2.44	0.56
15:W:37:ARG:HH22	26:5:48:ASN:ND2	2.02	0.56
15:W:46:PHE:O	15:W:47:VAL:C	2.43	0.56
15:W:84:ARG:O	15:W:96:ILE:HD12	2.05	0.56
2:A:338:G:H8	17:Y:21:LYS:HB2	1.70	0.56
12:Q:42:TYR:CZ	18:Z:116:VAL:HG21	2.41	0.56
18:Z:79:ILE:HG22	18:Z:80:HIS:ND1	2.20	0.56
24:0:33:ALA:HB3	24:0:66:LYS:N	2.13	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:3:6:VAL:HG23	23:3:54:VAL:HG23	1.88	0.56
2:A:1263:U:C1'	26:5:16:ARG:NH2	2.68	0.56
27:6:8:ILE:HG22	27:6:28:ARG:HB2	1.85	0.56
29:8:60:LEU:HD23	29:8:61:MET:O	2.04	0.56
30:9:17:VAL:CG1	30:9:18:ARG:N	2.67	0.56
2:A:1254:A:H3'	2:A:1256:G:H5''	1.86	0.56
2:A:1611:C:H2'	2:A:1612:C:C6	2.40	0.56
2:A:961:C:C4	2:A:2031:A:N3	2.74	0.56
2:A:2225:A:H5''	2:A:2226:C:C4'	2.34	0.56
2:A:2443:C:C6	2:A:2444:G:C8	2.93	0.56
2:A:2447:G:C6	2:A:2500:U:C4	2.93	0.56
2:A:2581:G:C6	2:A:2610:C:H2'	2.40	0.56
2:A:2592:G:C5	2:A:2593:U:C4	2.91	0.56
2:A:2606:C:O2'	2:A:2607:G:O5'	2.23	0.56
2:A:2045:C:N4	2:A:2624:G:N1	2.53	0.56
2:A:2707:G:O2'	2:A:2708:G:O5'	2.22	0.56
2:A:2712:U:O3'	2:A:2714:G:OP2	2.22	0.56
3:D:131:LEU:CA	3:D:134:ILE:HD12	2.35	0.56
3:D:138:THR:O	3:D:162:GLN:CA	2.50	0.56
3:D:146:LYS:CB	3:D:147:PRO:HD2	2.33	0.56
4:E:221:LYS:CE	4:E:233:ARG:CA	2.64	0.56
4:E:205:THR:HG22	4:E:259:HIS:C	2.18	0.56
4:E:71:THR:CG2	4:E:299:SER:HA	2.36	0.56
4:E:45:LYS:NZ	4:E:303:PRO:HD2	2.17	0.56
7:H:55:SER:OG	7:H:60:HIS:HB2	2.05	0.56
11:P:64:ILE:HD12	11:P:106:VAL:CG1	2.34	0.56
12:Q:47:GLU:HB3	12:Q:123:ILE:HG12	1.87	0.56
12:Q:70:ARG:HD2	12:Q:71:PHE:HE1	1.69	0.56
19:R:20:LEU:HD21	19:R:24:GLN:CD	2.26	0.56
19:R:59:ASP:O	19:R:60:LEU:C	2.44	0.56
19:R:71:GLN:O	19:R:72:ASP:HB2	2.04	0.56
13:S:12:ARG:HB2	13:S:20:TYR:OH	2.05	0.56
13:S:80:SER:O	13:S:83:LEU:HD13	2.05	0.56
20:U:13:ARG:NH1	20:U:13:ARG:CG	2.46	0.56
20:U:4:ALA:C	20:U:6:THR:H	1.95	0.56
20:U:88:ILE:CB	21:V:52:GLY:HA2	2.34	0.56
21:V:50:ASP:HB2	21:V:53:LYS:H	1.71	0.56
17:Y:67:LEU:O	17:Y:70:ALA:N	2.36	0.56
18:Z:141:MET:HB2	18:Z:171:VAL:HG11	1.84	0.56
18:Z:51:LEU:CD1	18:Z:64:ALA:H	2.17	0.56
8:I:122:ARG:O	8:I:124:LEU:N	2.38	0.56
8:I:133:LEU:CD1	8:I:139:ALA:HB3	2.25	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:96:LYS:C	8:I:98:ILE:N	2.58	0.56
16:X:13:LYS:HA	16:X:16:ASN:CG	2.25	0.56
22:2:12:THR:C	22:2:16:ARG:HD2	2.25	0.56
22:2:7:GLU:CG	22:2:8:ILE:H	2.18	0.56
2:A:59:U:O4'	2:A:73:A:C6	2.58	0.56
16:X:33:SER:CA	16:X:37:VAL:HG21	2.36	0.56
16:X:3:ASP:CG	16:X:4:VAL:N	2.58	0.56
16:X:23:LYS:HA	16:X:67:ARG:CA	2.35	0.56
2:A:1059:G:H1'	31:K:117:ASN:OD1	2.05	0.56
31:K:92:PRO:HB3	31:K:134:SER:O	2.03	0.56
31:K:67:THR:O	31:K:68:PHE:CG	2.58	0.56
16:X:76:GLU:OE1	16:X:77:VAL:CA	2.53	0.56
2:A:414:C:H5''	2:A:1879:C:O2'	2.05	0.56
2:A:404:C:O5'	2:A:404:C:H6	1.87	0.56
2:A:136:G:O3'	2:A:137:C:H4'	2.04	0.56
8:I:54:GLU:OE1	8:I:54:GLU:HA	2.05	0.56
24:0:42:GLY:HA3	24:0:66:LYS:HA	1.78	0.56
24:0:80:SER:OG	24:0:84:ALA:HB2	2.05	0.56
23:3:5:LYS:HG3	23:3:36:VAL:CG1	2.36	0.56
23:3:7:LYS:HG2	23:3:8:LEU:N	2.21	0.56
2:A:1657:C:H3'	2:A:1657:C:C6	2.41	0.56
2:A:1783:A:C6	2:A:2587:A:C2	2.93	0.56
2:A:2022:U:C3'	2:A:2617:C:H4'	2.35	0.56
2:A:2080:G:C2	2:A:2241:A:C2	2.93	0.56
2:A:2278:A:H4'	12:Q:19:TYR:CB	2.22	0.56
2:A:2364:C:H5'	24:0:38:VAL:HG11	1.88	0.56
2:A:2509:G:N2	2:A:2510:C:H1'	2.20	0.56
2:A:2562:U:N3	2:A:2563:U:N3	2.44	0.56
2:A:2603:G:C2'	2:A:2604:U:O5'	2.53	0.56
2:A:2607:G:O6	2:A:2608:G:N2	2.38	0.56
2:A:2636:U:C3'	4:E:84:ARG:HH12	2.19	0.56
2:A:373:U:H4'	2:A:374:A:C8	2.40	0.56
2:A:38:A:H1'	5:F:46:TYR:CE2	2.40	0.56
2:A:671:C:N4	2:A:809:G:N1	2.53	0.56
2:A:963:U:H2'	2:A:964:C:H6	1.70	0.56
3:D:125:ILE:CG2	3:D:126:GLY:N	2.68	0.56
3:D:73:ILE:HB	3:D:95:TYR:CE2	2.37	0.56
4:E:186:GLU:C	4:E:187:HIS:CG	2.79	0.56
5:F:98:ARG:HD3	5:F:98:ARG:N	2.21	0.56
7:H:83:GLU:CA	7:H:83:GLU:OE2	2.52	0.56
2:A:270(O):U:C4	8:I:53:LYS:NZ	2.73	0.56
9:N:60:ARG:HB3	9:N:71:TYR:HD2	1.69	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:P:101:ASP:C	11:P:102:ASP:OD1	2.43	0.56
11:P:73:VAL:HG13	11:P:76:LEU:HB3	1.87	0.56
12:Q:142:LYS:C	12:Q:142:LYS:HE2	2.20	0.56
12:Q:47:GLU:CA	12:Q:47:GLU:OE1	2.54	0.56
12:Q:71:PHE:CD1	12:Q:71:PHE:N	2.73	0.56
19:R:107:ASP:OD1	19:R:108:GLY:C	2.44	0.56
19:R:79:LEU:HD22	19:R:80:PHE:HA	1.87	0.56
2:A:2334:G:OP1	13:S:12:ARG:O	2.22	0.56
13:S:34:LEU:HD21	13:S:102:LEU:CB	2.35	0.56
20:U:13:ARG:N	20:U:13:ARG:CZ	2.62	0.56
20:U:7:GLY:C	20:U:8:ILE:HD13	2.23	0.56
17:Y:101:LEU:CD2	17:Y:112:LEU:CG	2.78	0.56
18:Z:67:LYS:CB	18:Z:67:LYS:NZ	2.68	0.56
18:Z:6:LYS:CA	18:Z:31:SER:CB	2.78	0.56
2:A:145:G:H4'	16:X:1:SER:CB	2.27	0.56
31:K:112:LYS:O	31:K:113:MET:C	2.44	0.56
31:K:66:PHE:O	31:K:67:THR:CB	2.52	0.56
9:N:106:GLY:CA	9:N:107:ASN:ND2	2.68	0.56
24:O:64:ASP:C	24:O:66:LYS:HZ1	2.08	0.56
2:A:2021:C:OP2	26:5:12:SER:HB3	2.06	0.56
2:A:1186:G:H2'	2:A:1187:G:H8	1.70	0.56
2:A:1364:G:N2	2:A:1366:A:H3'	2.18	0.56
2:A:2255:G:C4	2:A:2256:G:C8	2.93	0.56
2:A:2410:G:C2'	2:A:2411:A:N7	2.63	0.56
2:A:2431:U:C2'	2:A:2432:A:H3'	2.31	0.56
2:A:2468:G:H8	2:A:2476:A:N1	1.97	0.56
2:A:2657:A:N7	2:A:2658:C:C4	2.64	0.56
2:A:2809:A:H5'	2:A:2809:A:N3	2.21	0.56
2:A:2839:G:N1	2:A:2840:C:N3	2.52	0.56
2:A:338:G:C4'	17:Y:24:ARG:NH1	2.68	0.56
4:E:192:ILE:O	4:E:194:ARG:CG	2.54	0.56
4:E:211:GLN:O	4:E:216:ARG:NE	2.36	0.56
5:F:138:VAL:C	5:F:139:VAL:HG23	2.25	0.56
6:G:19:GLU:CA	6:G:135:VAL:HG21	2.27	0.56
6:G:24:HIS:HB2	6:G:72:LYS:HD3	1.88	0.56
8:I:8:ASP:O	8:I:9:VAL:CB	2.53	0.56
12:Q:67:ALA:CB	12:Q:71:PHE:HE1	2.18	0.56
19:R:51:LEU:CD1	19:R:70:LEU:HD21	2.35	0.56
19:R:67:LEU:CD1	19:R:68:ARG:N	2.64	0.56
14:T:21:PHE:HB2	14:T:31:PHE:HD1	1.69	0.56
20:U:105:ALA:O	20:U:106:PHE:O	2.24	0.56
20:U:108:ALA:O	20:U:111:ASP:N	2.36	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:U:13:ARG:O	20:U:14:HIS:C	2.44	0.56
17:Y:41:ARG:C	17:Y:112:LEU:HB3	2.26	0.56
18:Z:37:LYS:CA	18:Z:40:ASP:CG	2.73	0.56
22:2:27:LEU:HD23	22:2:49:LEU:HD13	1.88	0.56
24:0:68:VAL:HG12	24:0:71:ASN:HD22	1.70	0.56
1:B:83:G:C5'	23:3:52:HIS:HD2	2.17	0.56
26:5:46:CYS:C	26:5:48:ASN:N	2.57	0.56
29:8:26:LYS:CG	29:8:44:LYS:C	2.62	0.56
29:8:25:PHE:HA	29:8:46:LYS:HG2	1.87	0.56
2:A:2250:G:H5''	12:Q:102:ARG:CG	2.35	0.56
2:A:2287:A:N1	2:A:2289:G:N9	2.48	0.56
2:A:2464:C:N3	2:A:2486:G:N2	2.53	0.56
2:A:2493:U:O2	2:A:2493:U:C2'	2.46	0.56
2:A:2530:A:C3'	2:A:2531:A:C5'	2.83	0.56
2:A:2687:U:C2'	2:A:2687:U:O2	2.40	0.56
2:A:2783:G:C5	2:A:2784:C:H5	2.23	0.56
2:A:851:U:O2'	23:3:45:GLY:HA3	2.06	0.56
1:B:76:G:OP1	18:Z:10:PRO:CB	2.45	0.56
3:D:134:ILE:HG21	3:D:163:VAL:HG21	1.88	0.56
3:D:66:PHE:O	3:D:67:LYS:CG	2.54	0.56
4:E:200:ASP:HA	4:E:266:LYS:CG	2.36	0.56
5:F:33:LYS:O	5:F:36:ARG:HG2	2.06	0.56
7:H:148:ARG:HH11	7:H:163:TYR:CA	2.00	0.56
10:O:112:MET:O	10:O:115:ILE:CG1	2.49	0.56
10:O:88:ARG:C	10:O:90:ASP:N	2.48	0.56
11:P:73:VAL:C	11:P:76:LEU:H	2.08	0.56
12:Q:136:TRP:CE3	12:Q:139:ALA:HB2	2.40	0.56
12:Q:45:GLN:OE1	12:Q:152:SER:HB3	2.05	0.56
2:A:910:A:C3'	12:Q:17:ARG:NH2	2.68	0.56
12:Q:46:VAL:O	12:Q:124:ALA:CA	2.53	0.56
12:Q:93:ILE:O	12:Q:94:ARG:CB	2.52	0.56
13:S:31:LYS:C	13:S:101:VAL:HG12	2.26	0.56
20:U:85:ARG:O	20:U:86:ALA:O	2.23	0.56
17:Y:102:ASP:C	17:Y:103:LEU:HG	2.26	0.56
18:Z:163:ASP:CB	18:Z:164:PRO:CD	2.79	0.56
8:I:115:ILE:CG2	8:I:129:VAL:HG11	2.35	0.56
2:A:280:C:O2'	2:A:281:G:H3'	2.05	0.56
2:A:2721:A:C4	2:A:2722:G:C8	2.93	0.56
2:A:286:C:H2'	2:A:287:C:H5'	1.88	0.56
24:0:38:VAL:C	24:0:40:GLN:CG	2.64	0.56
25:4:20:VAL:HG12	25:4:20:VAL:O	2.05	0.56
26:5:12:SER:HB3	26:5:15:LYS:HZ1	0.75	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:6:17:GLY:O	27:6:18:THR:CB	2.54	0.56
28:7:30:ILE:O	28:7:31:LEU:C	2.44	0.56
29:8:55:TRP:O	29:8:56:ALA:C	2.44	0.56
2:A:1021:A:O3'	9:N:52:GLN:NE2	2.33	0.56
2:A:818:G:C5	2:A:1187:G:C2	2.93	0.56
2:A:1790:C:O3'	3:D:210:LYS:HD2	2.05	0.56
2:A:2019:A:N1	2:A:2035:G:O6	2.39	0.56
2:A:2060:A:H1'	2:A:2502:G:N3	2.20	0.56
2:A:2092:U:OP1	2:A:2199:A:H1'	2.06	0.56
2:A:2471:C:H2'	2:A:2472:G:C5'	2.36	0.56
2:A:2447:G:H3'	2:A:2500:U:OP2	2.06	0.56
2:A:2501:C:HO2'	2:A:2502:G:P	2.27	0.56
2:A:2535:G:H21	2:A:2536:G:H1'	1.66	0.56
2:A:2595:G:C3'	2:A:2595:G:C8	2.88	0.56
2:A:2626:C:H5	2:A:2626:C:P	2.28	0.56
2:A:2637:U:C5	2:A:2638:G:C6	2.94	0.56
2:A:2677:G:C5	2:A:2678:C:H5	2.23	0.56
2:A:1662:C:O2'	2:A:2687:U:OP1	2.23	0.56
2:A:2695:C:C2'	2:A:2696:U:H6	2.12	0.56
2:A:2837:G:C6	2:A:2882:A:N6	2.74	0.56
2:A:2885:C:O2	2:A:2885:C:H2'	2.03	0.56
2:A:397:G:OP1	25:4:40:HIS:CA	2.54	0.56
2:A:605:C:O5'	5:F:105:LYS:HE2	2.05	0.56
2:A:918:A:H5'	2:A:918:A:N3	2.21	0.56
4:E:186:GLU:C	4:E:187:HIS:CD2	2.78	0.56
4:E:205:THR:CG2	4:E:258:TYR:C	2.73	0.56
4:E:271:ILE:CG2	4:E:272:GLY:N	2.69	0.56
5:F:163:HIS:CA	5:F:166:ILE:HD12	2.33	0.56
5:F:165:ASP:O	5:F:168:ARG:CG	2.54	0.56
11:P:114:VAL:HG12	11:P:115:ARG:H	1.70	0.56
12:Q:31:PHE:CA	12:Q:85:ILE:CD1	2.79	0.56
12:Q:36:ASN:CB	12:Q:41:THR:N	2.66	0.56
20:U:44:THR:CG2	21:V:78:VAL:CG1	2.81	0.56
21:V:96:LEU:H	21:V:96:LEU:CD2	2.19	0.56
17:Y:93:THR:O	17:Y:94:SER:O	2.23	0.56
2:A:1151:G:C1'	20:U:81:ASN:HD21	2.18	0.56
2:A:1340:U:H4'	2:A:1394:U:H1'	1.88	0.56
16:X:6:LYS:HB2	16:X:27:ALA:O	2.02	0.56
2:A:2311:A:HO2'	2:A:2312:U:C5'	2.17	0.56
9:N:105:LEU:HD23	9:N:105:LEU:H	1.71	0.56
2:A:440:G:OP2	17:Y:3:GLN:CD	2.41	0.56
13:S:70:GLY:O	13:S:71:TRP:HE3	1.87	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1684:C:H2'	2:A:1685:C:C6	2.41	0.56
24:0:46:LYS:HB2	24:0:79:ILE:HD12	1.87	0.56
23:3:33:GLN:NE2	23:3:34:GLU:C	2.59	0.56
23:3:1:MET:CE	23:3:3:ARG:CG	2.83	0.56
25:4:2:GLN:C	25:4:3:LYS:HG3	2.25	0.56
25:4:14:ILE:HD11	25:4:39:VAL:HG21	1.88	0.56
27:6:26:LYS:O	27:6:27:ASN:OD1	2.23	0.56
28:7:26:SER:CA	28:7:29:ASN:HD22	2.18	0.56
2:A:142(A):A:OP2	2:A:1143:A:C8	2.59	0.56
2:A:2313:C:C5	2:A:2314:C:C5	2.94	0.56
2:A:2380:C:C2'	2:A:2381:C:H5'	2.27	0.56
2:A:2625:G:C5	2:A:2626:C:N3	2.74	0.56
2:A:2653:U:C4	2:A:2654:A:C6	2.91	0.56
2:A:2668:G:N2	2:A:2669:G:C1'	2.69	0.56
2:A:2704:C:C2'	2:A:2705:A:O4'	2.53	0.56
2:A:2819:G:C4'	2:A:2821:A:H62	2.17	0.56
2:A:776:G:N7	2:A:793:A:H2'	2.20	0.56
2:A:971:C:O2	2:A:972:G:O2'	2.18	0.56
4:E:199:ALA:HB1	4:E:312:ARG:H	1.70	0.56
4:E:205:THR:HG22	4:E:261:ARG:HG3	1.88	0.56
5:F:168:ARG:NH2	5:F:209:GLY:CA	2.44	0.56
5:F:61:PHE:O	5:F:62:GLY:C	2.43	0.56
6:G:145:ASP:HB2	13:S:15:GLU:HG2	1.88	0.56
7:H:51:VAL:HG22	7:H:68:ARG:CG	2.35	0.56
7:H:51:VAL:HG22	7:H:68:ARG:HG2	1.86	0.56
8:I:7:LYS:HB2	8:I:12:LYS:CE	2.35	0.56
9:N:74:ARG:C	9:N:76:ASP:OD2	2.44	0.56
1:B:28:C:OP2	13:S:41:LYS:CG	2.54	0.56
14:T:28:THR:O	14:T:29:THR:HG22	1.99	0.56
21:V:15:SER:O	21:V:99:GLN:HG3	2.06	0.56
15:W:103:ILE:O	15:W:103:ILE:HG23	2.05	0.56
18:Z:113:VAL:CG1	18:Z:114:ASP:N	2.56	0.56
8:I:81:ALA:O	8:I:147:GLU:CA	2.53	0.56
2:A:72:U:C4'	22:2:57:LYS:HZ2	2.17	0.56
16:X:7:HIS:CG	16:X:8:PRO:HD2	2.41	0.56
2:A:1080:C:C2'	31:K:126:LYS:HB2	2.26	0.56
2:A:1062:G:H22	31:K:92:PRO:HG3	0.76	0.56
2:A:932:G:OP1	23:3:29:ARG:NH2	2.39	0.56
25:4:32:HIS:O	25:4:33:VAL:C	2.40	0.56
28:7:15:THR:HG1	28:7:16:HIS:H	1.48	0.56
28:7:25:LYS:O	28:7:26:SER:C	2.45	0.56
2:A:1142:U:C3'	2:A:142(A):A:P	2.94	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1937:A:H3'	2:A:1938:A:C5'	2.33	0.56
2:A:2060:A:O2'	2:A:2502:G:C4'	2.54	0.56
2:A:2196:C:C5'	2:A:2197:U:OP2	2.42	0.56
2:A:2197:U:C2'	2:A:2198:A:H5''	2.34	0.56
2:A:2215:G:O2'	2:A:2216:G:O4'	2.21	0.56
2:A:2231:C:H5''	25:4:39:VAL:CG2	2.18	0.56
2:A:2246:G:C8	2:A:2426:A:N1	2.74	0.56
2:A:2351:G:N2	2:A:2365:G:C4	2.73	0.56
2:A:2398:U:H2'	2:A:2399:G:H8	1.71	0.56
2:A:2450:A:OP1	2:A:2497:A:C5	2.51	0.56
2:A:957:A:H2	2:A:2459:A:H5'	1.64	0.56
2:A:2486:G:N1	2:A:2487:G:N7	2.53	0.56
2:A:2517:C:C5	2:A:2542:A:C6	2.94	0.56
2:A:2543:G:O2'	2:A:2544:G:C5'	2.46	0.56
2:A:2729:G:C6	2:A:2730:C:N3	2.73	0.56
2:A:2785:C:O3'	4:E:99:VAL:HG13	2.05	0.56
2:A:2792:G:H1	2:A:2803:C:H42	1.53	0.56
2:A:2852:G:N2	2:A:2853:C:C2	2.72	0.56
2:A:598:G:H2'	2:A:599:G:O4'	2.04	0.56
2:A:989:G:C8	23:3:13:ILE:HD12	2.40	0.56
3:D:115:ILE:C	3:D:115:ILE:HD12	2.26	0.56
3:D:196:ASN:HB2	3:D:199:ARG:HB2	1.88	0.56
4:E:189:MET:O	4:E:190:ASN:HB3	2.05	0.56
2:A:2770:G:H1'	4:E:316:ARG:NH1	2.18	0.56
5:F:168:ARG:C	5:F:193:LEU:CG	2.67	0.56
5:F:38:ALA:HB1	5:F:221:GLU:HG2	1.88	0.56
6:G:13:MET:O	6:G:14:ARG:C	2.44	0.56
7:H:94:ARG:CB	7:H:127:GLN:HE22	2.18	0.56
9:N:27:ALA:CB	9:N:30:ALA:CB	2.65	0.56
9:N:12:VAL:HB	9:N:38:VAL:HG22	1.87	0.56
9:N:52:GLN:CA	9:N:55:GLU:CG	2.75	0.56
10:O:31:ARG:CB	10:O:32:TYR:CD1	2.87	0.56
11:P:71:GLU:O	11:P:72:ASN:C	2.44	0.56
13:S:81:ALA:HB1	13:S:118:ILE:H	1.69	0.56
13:S:76:GLY:CA	13:S:82:TYR:HB2	2.36	0.56
20:U:14:HIS:CD2	20:U:36:PHE:CE2	2.93	0.56
20:U:69:ALA:O	20:U:79:PHE:HE1	1.86	0.56
20:U:79:PHE:O	20:U:82:GLY:N	2.39	0.56
17:Y:11:GLN:C	17:Y:21:LYS:HZ1	2.10	0.56
17:Y:34:GLU:O	17:Y:35:TYR:CB	2.54	0.56
17:Y:51:LEU:O	17:Y:52:ARG:CG	2.50	0.56
18:Z:176:LEU:HD23	18:Z:177:THR:CA	2.36	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:Z:64:ALA:HB2	18:Z:85:MET:C	2.25	0.56
8:I:102:LEU:O	8:I:103:GLN:O	2.24	0.56
8:I:114:LYS:HB3	8:I:132:LYS:O	2.06	0.56
31:K:33:VAL:CG2	31:K:60:VAL:HG13	2.35	0.56
4:E:107:GLU:HB3	4:E:110:ARG:HE	1.57	0.56
2:A:1620:G:H1'	28:7:1:MET:H2	1.59	0.56
18:Z:156:GLU:O	18:Z:157:GLY:C	2.43	0.56
8:I:60:GLU:O	8:I:62:LEU:N	2.39	0.56
2:A:176:G:N3	2:A:177:G:H1'	2.20	0.56
2:A:1416:G:H2'	2:A:1417:C:C6	2.41	0.56
2:A:1177:A:H2'	2:A:1178:C:C6	2.41	0.56
2:A:1829:A:H5''	2:A:1830:C:C5	2.41	0.56
24:0:67:VAL:C	24:0:68:VAL:HG23	2.25	0.56
2:A:125:G:H5''	28:7:19:ARG:CD	2.35	0.56
29:8:23:MET:SD	29:8:48:PHE:HA	2.46	0.56
29:8:62:LEU:HB3	29:8:63:PRO:HD3	1.83	0.56
30:9:24:LEU:CD2	30:9:35:ARG:CG	2.82	0.56
30:9:7:VAL:CG2	30:9:36:GLN:CG	2.85	0.56
2:A:1031:G:O2'	30:9:8:LYS:CE	2.54	0.56
2:A:1666:G:H22	2:A:1669:A:N6	2.04	0.56
2:A:2053:G:H1'	4:E:245:ARG:CG	2.35	0.56
2:A:2079:U:O3'	25:4:32:HIS:HD2	1.88	0.56
2:A:2410:G:C4	2:A:2411:A:C8	2.70	0.56
2:A:2422:A:N9	2:A:2424:C:H5	2.03	0.56
2:A:2432:A:C2	2:A:2433:A:N6	2.68	0.56
2:A:2531:A:C6	2:A:2532:G:C5	2.94	0.56
2:A:2525:G:C6	2:A:2539:C:N4	2.74	0.56
2:A:2540:C:H2'	2:A:2541:A:C8	2.41	0.56
2:A:2620:C:O4'	4:E:252:GLN:HG3	2.05	0.56
2:A:2734:A:N7	2:A:2735:G:N9	2.54	0.56
2:A:2753:A:C8	2:A:2754:U:H5	2.18	0.56
2:A:2869:G:N1	2:A:2870:C:C5	2.44	0.56
2:A:2831:G:C1'	2:A:2883:A:C2	2.88	0.56
2:A:593:G:O2'	29:8:58:MET:HE3	2.06	0.56
2:A:83:G:H5''	17:Y:20:HIS:CE1	2.41	0.56
3:D:116:MET:CG	3:D:117:SER:H	2.16	0.56
3:D:135:PRO:HG2	3:D:138:THR:CB	2.34	0.56
3:D:166:LYS:C	3:D:167:GLU:CD	2.65	0.56
3:D:167:GLU:CA	3:D:170:TYR:CE1	2.88	0.56
3:D:216:ALA:HB1	3:D:223:ASN:H	1.70	0.56
5:F:163:HIS:CG	5:F:166:ILE:HD11	2.41	0.56
5:F:215:ALA:CA	5:F:242:GLU:CG	2.83	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:H:10:ILE:CG1	7:H:49:ILE:CG1	2.84	0.56
9:N:83:ILE:C	9:N:85:GLY:N	2.59	0.56
10:O:63:VAL:O	10:O:102:VAL:HG13	2.06	0.56
10:O:87:ILE:HG22	10:O:88:ARG:N	2.21	0.56
11:P:96:VAL:CG2	11:P:101:ASP:H	2.18	0.56
11:P:58:GLN:HG3	11:P:59:GLU:N	2.21	0.56
12:Q:130:PRO:HA	12:Q:133:GLU:HB3	1.88	0.56
19:R:51:LEU:O	19:R:52:ILE:C	2.44	0.56
19:R:93:GLY:C	19:R:95:THR:N	2.48	0.56
20:U:35:ALA:O	20:U:36:PHE:C	2.43	0.56
17:Y:22:GLN:C	17:Y:24:ARG:H	2.07	0.56
22:2:27:LEU:HD11	22:2:53:ILE:HD11	1.87	0.56
22:2:34:GLN:CA	22:2:34:GLN:OE1	2.54	0.56
16:X:24:LEU:C	16:X:26:PHE:CZ	2.73	0.56
16:X:35:GLY:C	16:X:37:VAL:N	2.58	0.56
16:X:52:VAL:HG12	16:X:53:ASN:N	2.21	0.56
2:A:1077:A:N3	31:K:134:SER:OG	2.39	0.56
31:K:36:MET:SD	31:K:40:LYS:HG3	2.46	0.56
31:K:18:ALA:CB	31:K:39:CYS:O	2.54	0.56
31:K:37:GLU:HA	31:K:41:ARG:HH12	1.63	0.56
2:A:269:U:H5	2:A:270(Y):G:O3'	1.88	0.56
2:A:270(X):G:H2'	2:A:270(Y):G:C5'	2.36	0.56
2:A:1841:U:H2'	2:A:1842:G:C8	2.40	0.56
2:A:840:C:H42	2:A:938:G:H1	1.54	0.56
2:A:154:G:H5''	2:A:155:C:H5	1.70	0.56
24:0:43:THR:OG1	24:0:44:LYS:N	2.32	0.55
23:3:8:LEU:HD23	23:3:32:GLN:H	1.69	0.55
23:3:9:VAL:HG22	23:3:54:VAL:HG12	1.87	0.55
25:4:17:GLN:CD	25:4:34:ASP:HA	2.26	0.55
2:A:2400:G:C3'	27:6:20:PHE:HE1	2.19	0.55
2:A:592:G:C4	29:8:3:LYS:HE3	2.37	0.55
2:A:2303:G:C2	2:A:2314:C:N3	2.75	0.55
2:A:2351:G:C2	2:A:2365:G:C5	2.95	0.55
2:A:2381:C:H6	2:A:2381:C:H5'	1.70	0.55
2:A:2395:C:O5'	2:A:2395:C:C6	2.59	0.55
2:A:2544:G:C5'	2:A:2645:G:C8	2.82	0.55
2:A:2515:C:C4	2:A:2570:G:O6	2.60	0.55
2:A:2633:G:C8	2:A:2633:G:OP2	2.59	0.55
2:A:2725:A:C5	2:A:2727:G:C5	2.94	0.55
2:A:1033:U:C5	2:A:2750:A:N3	2.74	0.55
2:A:2744:G:C4	2:A:2761:G:C2	2.94	0.55
2:A:27:G:H3'	2:A:27:G:C8	2.42	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2865:U:C6	2:A:2866:U:C6	2.94	0.55
2:A:2887:U:C6	2:A:2887:U:O5'	2.59	0.55
2:A:446:G:H8	20:U:3:ARG:HH12	1.53	0.55
3:D:143:ILE:CB	3:D:153:LEU:N	2.68	0.55
3:D:158:GLY:HA2	3:D:194:VAL:HG22	1.84	0.55
3:D:63:ILE:O	3:D:64:ILE:CB	2.54	0.55
4:E:199:ALA:HB1	4:E:312:ARG:N	2.20	0.55
4:E:271:ILE:HG22	4:E:272:GLY:N	2.21	0.55
5:F:149:LYS:HB2	5:F:152:GLU:CG	2.35	0.55
5:F:215:ALA:O	5:F:242:GLU:CA	2.54	0.55
6:G:104:PHE:N	6:G:104:PHE:CD1	2.74	0.55
7:H:32:LEU:CD2	7:H:32:LEU:C	2.75	0.55
7:H:86:LEU:CD2	7:H:87:GLU:N	2.68	0.55
10:O:103:ALA:O	10:O:106:LEU:HG	2.06	0.55
12:Q:116:HIS:CD2	12:Q:119:ASN:HB3	2.41	0.55
12:Q:33:MET:CG	12:Q:83:PHE:CB	2.84	0.55
13:S:90:LEU:HA	13:S:93:GLN:HE21	1.71	0.55
15:W:97:LYS:CE	15:W:99:ARG:HH12	2.15	0.55
17:Y:105:ASP:O	17:Y:107:LYS:N	2.39	0.55
18:Z:123:VAL:HA	18:Z:161:ALA:CB	2.36	0.55
18:Z:18:MET:C	18:Z:36:ARG:HE	2.07	0.55
18:Z:40:ASP:C	18:Z:44:ARG:HG2	2.26	0.55
8:I:121:ILE:O	8:I:122:ARG:CB	2.49	0.55
8:I:86:GLY:C	8:I:88:ARG:N	2.59	0.55
22:2:20:LEU:O	22:2:23:LEU:CA	2.22	0.55
16:X:5:ILE:HG23	16:X:6:LYS:N	2.12	0.55
2:A:2899:G:HO2'	2:A:2900:A:H8	1.53	0.55
2:A:107:C:H2'	2:A:108:U:C6	2.41	0.55
2:A:1690:A:H2'	2:A:1690:A:N3	2.21	0.55
23:3:54:VAL:CG2	23:3:55:ARG:H	2.01	0.55
29:8:21:LYS:HB3	29:8:48:PHE:CZ	2.41	0.55
2:A:1152:C:H1'	20:U:77:SER:HB3	1.88	0.55
2:A:1183:G:C5'	23:3:29:ARG:HG3	2.36	0.55
2:A:1826:G:P	3:D:227:VAL:HG22	2.26	0.55
2:A:2077:A:H2	2:A:2244:U:C2	2.24	0.55
2:A:2185:C:C2	2:A:2186:G:N7	2.73	0.55
2:A:2093:G:N2	2:A:2197:U:O2	2.40	0.55
2:A:2213:U:C6	2:A:2213:U:H5''	2.41	0.55
2:A:2224:G:O2'	2:A:2225:A:C5'	2.54	0.55
2:A:2422:A:C2'	2:A:2424:C:H5	2.15	0.55
2:A:2476:A:H2'	2:A:2477:C:O4'	2.06	0.55
2:A:2508:G:C2	2:A:2509:G:C8	2.94	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2513:G:C5	2:A:2514:U:C4	2.94	0.55
2:A:2570:G:C3'	2:A:2571:C:C6	2.89	0.55
2:A:2596:U:C5	2:A:2597:G:N7	2.74	0.55
2:A:2653:U:C2	2:A:2654:A:N7	2.74	0.55
2:A:2715:C:C4	2:A:2716:U:C5	2.94	0.55
2:A:2756:U:N3	2:A:2759:G:C6	2.73	0.55
2:A:2844:G:N2	2:A:2845:G:C1'	2.69	0.55
2:A:559:G:H2'	2:A:560:C:C6	2.42	0.55
2:A:775:G:H4'	2:A:777:A:C4	2.42	0.55
2:A:690:G:O2'	2:A:780:G:OP1	2.22	0.55
2:A:993:G:C2	20:U:54:LYS:NZ	2.73	0.55
4:E:44:TYR:CD2	4:E:307:LEU:O	2.59	0.55
5:F:101:ASP:C	5:F:102:LEU:O	2.45	0.55
5:F:108:GLN:O	5:F:109:LEU:C	2.44	0.55
6:G:141:VAL:CA	6:G:144:ARG:HH11	2.19	0.55
7:H:101:LYS:NZ	7:H:115:GLU:HB3	2.13	0.55
7:H:88:LEU:HD13	7:H:127:GLN:O	2.04	0.55
9:N:136:SER:HA	9:N:139:LEU:HD22	1.88	0.55
9:N:26:VAL:O	9:N:30:ALA:N	2.39	0.55
10:O:99:PHE:HE2	14:T:24:LYS:CD	2.11	0.55
12:Q:47:GLU:CD	12:Q:47:GLU:N	2.60	0.55
12:Q:84:ARG:HH21	12:Q:123:ILE:HD12	1.71	0.55
13:S:110:THR:CG2	13:S:115:VAL:HG23	2.32	0.55
2:A:1251:C:C5'	20:U:10:ARG:NE	2.67	0.55
21:V:5:ILE:CD1	21:V:5:ILE:H	2.16	0.55
2:A:973:A:N1	21:V:81:ARG:HB2	2.20	0.55
15:W:44:ALA:O	15:W:47:VAL:N	2.39	0.55
18:Z:34:LEU:O	18:Z:35:ASP:HB3	2.05	0.55
22:2:52:ALA:HA	22:2:55:ARG:NH1	2.21	0.55
2:A:138:G:H8	16:X:42:GLU:CD	2.09	0.55
2:A:58:G:C2'	2:A:73:A:N6	2.66	0.55
16:X:25:GLN:NE2	16:X:65:VAL:CG1	2.65	0.55
31:K:122:GLU:HB3	31:K:126:LYS:HE2	1.84	0.55
16:X:75:GLN:O	16:X:77:VAL:C	2.45	0.55
2:A:1751:C:C1'	2:A:2860:A:C2	2.89	0.55
2:A:1418:G:N2	2:A:1578:U:OP2	2.30	0.55
2:A:80:G:H1	2:A:106:C:H42	1.55	0.55
2:A:551:G:H4'	2:A:1220:A:C2	2.41	0.55
24:0:28:GLY:N	24:0:60:PHE:CG	2.69	0.55
2:A:2395:C:O3'	25:4:28:ARG:NH1	2.36	0.55
26:5:19:ARG:C	26:5:21:SER:N	2.34	0.55
29:8:26:LYS:CE	29:8:44:LYS:C	2.65	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1634:A:O2'	2:A:1635:G:OP1	2.23	0.55
2:A:2218:G:C5	2:A:2219:G:N7	2.74	0.55
2:A:2291:U:H2'	2:A:2292:C:H6	1.72	0.55
2:A:2299:G:C6	2:A:2300:G:C6	2.94	0.55
2:A:2376:A:OP1	2:A:2376:A:C8	2.60	0.55
2:A:2528:U:OP1	30:9:30:VAL:HG12	2.02	0.55
2:A:2638:G:C8	2:A:2775:A:N1	2.75	0.55
2:A:2693:A:C6	2:A:2694:G:C6	2.95	0.55
2:A:2727:G:H2'	2:A:2728:U:C5	2.40	0.55
2:A:2759:G:C8	2:A:2759:G:H3'	2.41	0.55
2:A:322:A:C2	2:A:341:G:C6	2.94	0.55
2:A:628:G:H1	2:A:635:C:H42	1.54	0.55
2:A:687:C:O2	2:A:787:U:C5'	2.53	0.55
3:D:197:GLY:C	3:D:199:ARG:N	2.59	0.55
4:E:175:ASP:C	4:E:177:ALA:N	2.56	0.55
2:A:2621:A:O2'	4:E:255:GLN:CD	2.45	0.55
1:B:59:A:H4'	6:G:144:ARG:HG2	1.88	0.55
11:P:131:GLU:O	11:P:133:VAL:N	2.39	0.55
12:Q:127:ASN:HB2	12:Q:128:PRO:CD	2.29	0.55
12:Q:46:VAL:HG22	12:Q:156:ASN:HD22	1.72	0.55
12:Q:50:VAL:C	12:Q:51:GLU:CD	2.65	0.55
13:S:122:ALA:O	13:S:123:ILE:C	2.45	0.55
13:S:27:LEU:N	13:S:33:ARG:NH1	2.54	0.55
21:V:6:GLN:CD	21:V:10:LYS:HG2	2.27	0.55
21:V:43:GLU:C	21:V:44:GLN:HE22	2.04	0.55
17:Y:79:LEU:CD1	17:Y:80:GLU:N	2.52	0.55
2:A:76:C:O3'	22:2:55:ARG:CG	2.53	0.55
16:X:7:HIS:HB2	16:X:8:PRO:HD2	1.89	0.55
31:K:9:ILE:HD13	31:K:31:HIS:CG	2.40	0.55
31:K:36:MET:CA	31:K:39:CYS:SG	2.94	0.55
2:A:2408:U:H2'	2:A:2409:G:O5'	2.06	0.55
2:A:1907:G:C6	2:A:1908:C:N4	2.74	0.55
1:B:110:G:H2'	1:B:111:U:O4'	2.07	0.55
2:A:2354:G:N3	24:0:32:LYS:HG2	2.20	0.55
2:A:2364:C:H1'	24:0:32:LYS:HZ2	1.37	0.55
23:3:41:PRO:O	23:3:45:GLY:N	2.33	0.55
28:7:21:ARG:C	28:7:24:THR:CG2	2.69	0.55
29:8:61:MET:O	29:8:62:LEU:HB2	2.07	0.55
2:A:126:A:OP2	28:7:17:GLY:C	2.45	0.55
2:A:1783:A:C2	2:A:2607:G:N2	2.74	0.55
2:A:1826:G:H8	2:A:1826:G:OP2	1.89	0.55
2:A:2047:U:H2'	2:A:2048:G:H8	1.72	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2086:U:N3	2:A:2233:U:C4	2.57	0.55
2:A:2355:C:O2	2:A:2355:C:H2'	2.05	0.55
2:A:2372:G:H5''	2:A:2372:G:C8	2.40	0.55
2:A:576:U:H5''	2:A:2502:G:H2'	1.87	0.55
2:A:2508:G:C2'	2:A:2509:G:O5'	2.54	0.55
2:A:2508:G:H2'	2:A:2509:G:O5'	2.05	0.55
2:A:2514:U:C6	2:A:2514:U:H3'	2.41	0.55
2:A:2556:C:HO2'	2:A:2557:G:C5'	2.16	0.55
2:A:2564:A:C6	2:A:2565:A:N6	2.74	0.55
2:A:2733:A:H61	4:E:316:ARG:HD3	1.71	0.55
2:A:447:A:C6	2:A:454:A:N7	2.75	0.55
2:A:849:A:N3	23:3:21:ALA:HB2	2.18	0.55
1:B:12:C:C2	13:S:10:MET:SD	2.98	0.55
4:E:44:TYR:CZ	4:E:308:VAL:CA	2.89	0.55
7:H:101:LYS:HZ3	7:H:115:GLU:HB3	1.71	0.55
7:H:136:ASP:O	7:H:137:LYS:C	2.43	0.55
9:N:102:ARG:HB3	9:N:104:TYR:OH	2.06	0.55
9:N:103:VAL:CG1	9:N:104:TYR:H	2.15	0.55
9:N:15:ARG:HB3	9:N:43:ARG:HG2	0.56	0.55
9:N:41:ALA:O	9:N:42:GLU:C	2.44	0.55
2:A:1138:G:OP1	9:N:82:THR:CG2	2.54	0.55
10:O:8:LEU:HD23	10:O:19:VAL:O	2.06	0.55
11:P:113:GLN:O	11:P:114:VAL:C	2.35	0.55
19:R:52:ILE:C	19:R:54:LEU:N	2.51	0.55
19:R:85:PRO:C	19:R:87:TYR:N	2.40	0.55
13:S:38:LYS:CG	13:S:106:LEU:HD12	2.37	0.55
13:S:24:LEU:HA	13:S:27:LEU:HB2	1.89	0.55
13:S:64:SER:O	13:S:66:LEU:N	2.39	0.55
13:S:72:GLU:CB	13:S:74:PRO:CD	2.84	0.55
2:A:29:U:C4'	20:U:11:ARG:NH1	2.17	0.55
20:U:33:ARG:HA	20:U:36:PHE:CD1	2.41	0.55
21:V:68:LYS:O	21:V:69:ILE:C	2.44	0.55
18:Z:173:PRO:C	18:Z:175:ARG:N	2.58	0.55
18:Z:18:MET:N	18:Z:36:ARG:HG3	2.21	0.55
18:Z:37:LYS:HA	18:Z:40:ASP:CG	2.26	0.55
22:2:22:ASP:O	22:2:25:THR:N	2.40	0.55
16:X:17:ASP:CA	16:X:20:PHE:CZ	2.89	0.55
8:I:60:GLU:C	8:I:62:LEU:N	2.59	0.55
8:I:62:LEU:O	8:I:66:LYS:CE	2.48	0.55
21:V:38:LEU:HD23	21:V:38:LEU:H	1.70	0.55
24:0:38:VAL:CA	24:0:40:GLN:CD	2.64	0.55
23:3:50:VAL:HB	23:3:53:LEU:HB2	1.89	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:4:68:ARG:HB2	25:4:72:LYS:CG	2.36	0.55
29:8:36:LYS:HG2	29:8:40:GLU:OE2	2.06	0.55
29:8:56:ALA:O	29:8:58:MET:N	2.40	0.55
2:A:142(A):A:P	2:A:1143:A:C8	2.96	0.55
2:A:2067:G:O5'	2:A:2067:G:H8	1.90	0.55
2:A:2100:G:C2	2:A:2190:G:C4	2.95	0.55
2:A:2093:G:N7	2:A:2225:A:C8	2.75	0.55
2:A:2380:C:H3'	2:A:2380:C:C6	2.41	0.55
2:A:2416:C:O2	2:A:2416:C:H2'	2.06	0.55
2:A:2466:C:C4	2:A:2467:C:C4	2.94	0.55
2:A:2615:U:H3	26:5:8:LYS:CG	2.04	0.55
2:A:2678:C:N3	2:A:2679:A:C5	2.75	0.55
2:A:2698:U:C2'	2:A:2698:U:O2	2.54	0.55
2:A:1033:U:H6	2:A:2750:A:C2	2.21	0.55
2:A:2783:G:C8	2:A:2783:G:C5'	2.86	0.55
2:A:2839:G:N2	2:A:2840:C:H1'	2.21	0.55
2:A:2881:C:C6	2:A:2882:A:N7	2.75	0.55
3:D:164:LEU:O	3:D:172:ILE:HG21	2.07	0.55
3:D:172:ILE:HG13	3:D:182:MET:HE2	1.87	0.55
4:E:193:PHE:HD1	4:E:193:PHE:H	1.54	0.55
4:E:319:ASP:O	4:E:320:GLN:C	2.44	0.55
9:N:23:ALA:O	9:N:26:VAL:N	2.39	0.55
11:P:110:GLY:CA	11:P:129:ALA:HB2	2.35	0.55
11:P:94:ARG:NE	11:P:120:LEU:HB2	2.22	0.55
2:A:637:A:OP2	11:P:126:SER:CB	2.54	0.55
2:A:2415:G:H4'	11:P:51:PHE:HA	1.87	0.55
12:Q:147:VAL:CG1	12:Q:148:ASN:N	2.69	0.55
20:U:55:ARG:O	20:U:58:ARG:N	2.40	0.55
21:V:74:TYR:HE2	21:V:88:GLN:NE2	2.05	0.55
17:Y:102:ASP:O	17:Y:108:ARG:HD3	2.05	0.55
17:Y:55:PHE:CB	17:Y:58:GLU:OE2	2.50	0.55
17:Y:51:LEU:CD1	17:Y:97:ARG:CG	2.80	0.55
18:Z:73:LYS:HG3	18:Z:75:LYS:HE3	1.87	0.55
8:I:104:ALA:O	8:I:105:GLN:O	2.25	0.55
8:I:95:SER:CA	8:I:98:ILE:CB	2.83	0.55
2:A:72:U:O5'	22:2:57:LYS:NZ	2.39	0.55
16:X:7:HIS:HB2	16:X:8:PRO:HD3	1.87	0.55
31:K:22:PRO:HG2	31:K:23:PRO:HD2	1.83	0.55
15:W:89:ALA:HB3	15:W:92:ARG:H	1.72	0.55
17:Y:9:LYS:NZ	17:Y:13:ARG:HH22	1.95	0.55
2:A:2856:C:H6	2:A:2856:C:O5'	1.89	0.55
2:A:1918:A:C8	2:A:1918:A:OP2	2.60	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2720:U:C4	2:A:2873:A:N6	2.53	0.55
7:H:20:GLY:O	7:H:21:ASN:CB	2.51	0.55
2:A:284:U:H2'	2:A:285:C:C6	2.40	0.55
24:0:39:ARG:HG2	24:0:69:PHE:HZ	1.61	0.55
25:4:58:LYS:HD3	25:4:62:ARG:NH2	2.20	0.55
29:8:62:LEU:HB2	29:8:63:PRO:HD2	1.83	0.55
2:A:2093:G:N3	2:A:2225:A:N6	2.55	0.55
2:A:2349:G:O6	2:A:2350:C:C4	2.60	0.55
2:A:2354:G:N3	2:A:2355:C:C6	2.75	0.55
2:A:2353:G:C2	2:A:2364:C:C4	2.88	0.55
2:A:2460:U:H2'	2:A:2461:C:H6	1.71	0.55
2:A:2521:C:C2	2:A:2522:U:H6	2.14	0.55
2:A:2533:A:C2'	2:A:2534:A:H8	2.19	0.55
2:A:2567:G:C2	2:A:2568:C:N4	2.74	0.55
2:A:2693:A:C6	2:A:2694:G:O6	2.59	0.55
3:D:131:LEU:CG	3:D:171:VAL:HG21	2.35	0.55
3:D:172:ILE:HG12	3:D:182:MET:HG3	1.88	0.55
3:D:144:GLU:HG3	3:D:188:ARG:HB2	1.88	0.55
3:D:208:GLY:HA3	3:D:211:HIS:CD2	2.42	0.55
2:A:2682:U:C1'	4:E:49:THR:HA	2.37	0.55
5:F:114:ALA:O	5:F:115:LEU:C	2.43	0.55
5:F:27:ARG:O	5:F:28:SER:C	2.43	0.55
2:A:451:C:OP1	5:F:48:SER:HA	2.07	0.55
2:A:452:G:OP1	5:F:52:ALA:HB1	2.06	0.55
5:F:60:SER:HB3	5:F:69:HIS:CB	2.30	0.55
5:F:79:ARG:CG	5:F:79:ARG:O	2.54	0.55
6:G:140:ARG:O	6:G:141:VAL:C	2.45	0.55
8:I:5:PHE:CB	8:I:17:GLU:O	2.49	0.55
10:O:102:VAL:HG12	10:O:103:ALA:H	1.71	0.55
19:R:87:TYR:CD1	19:R:94:TYR:CG	2.93	0.55
20:U:25:TRP:CB	20:U:28:ARG:NH1	2.67	0.55
20:U:61:TRP:O	20:U:65:ILE:CB	2.53	0.55
21:V:35:LEU:HG	21:V:63:HIS:CE1	2.42	0.55
17:Y:15:PRO:HD2	17:Y:18:GLU:OE2	2.07	0.55
17:Y:78:THR:HG22	17:Y:89:ARG:N	2.21	0.55
18:Z:172:LEU:O	18:Z:174:PRO:CD	2.55	0.55
18:Z:45:GLN:CA	18:Z:45:GLN:NE2	2.69	0.55
22:2:28:LEU:HG	22:2:31:ARG:HH21	1.72	0.55
22:2:34:GLN:O	22:2:35:ALA:C	2.44	0.55
6:G:28:GLY:O	6:G:69:ILE:HD11	2.05	0.55
31:K:114:PRO:O	31:K:116:LEU:N	2.39	0.55
4:E:107:GLU:CG	4:E:110:ARG:CZ	2.85	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:282:A:C5	2:A:360:G:N2	2.75	0.55
2:A:666:G:H2'	2:A:667:U:H6	1.72	0.55
2:A:2356:C:O2'	24:0:17:ASN:ND2	2.39	0.55
24:0:31:VAL:HG12	24:0:32:LYS:N	2.21	0.55
23:3:7:LYS:O	23:3:54:VAL:CG1	2.54	0.55
27:6:46:LYS:CA	27:6:46:LYS:CE	2.84	0.55
2:A:2256:G:N1	2:A:2257:U:N3	2.55	0.55
2:A:2371:G:HO2'	27:6:47:HIS:CE1	2.23	0.55
2:A:2385:C:O2	2:A:2385:C:H2'	2.05	0.55
2:A:2412:A:C3'	2:A:2413:G:H5'	2.36	0.55
2:A:2462:U:C4	2:A:2463:C:C4	2.95	0.55
2:A:2469:A:H2'	2:A:2470:G:H5'	1.89	0.55
2:A:1129:A:N6	2:A:2491:U:OP1	2.40	0.55
2:A:2059:A:C5	2:A:2503:A:N7	2.72	0.55
2:A:2607:G:C2'	2:A:2608:G:C5'	2.73	0.55
2:A:2693:A:N3	2:A:2694:G:C8	2.75	0.55
2:A:2807:G:C8	2:A:2808:U:H5	2.25	0.55
2:A:2825:C:C6	2:A:2825:C:C5'	2.73	0.55
2:A:449:A:OP1	5:F:85:LYS:CA	2.55	0.55
2:A:645:C:OP2	2:A:2369:A:O4'	2.25	0.55
3:D:143:ILE:CD1	3:D:153:LEU:N	2.68	0.55
5:F:111:VAL:O	5:F:115:LEU:N	2.33	0.55
7:H:67:THR:HA	7:H:70:LEU:CB	2.36	0.55
9:N:57:TYR:HB2	9:N:135:ILE:HG21	1.89	0.55
9:N:136:SER:CA	9:N:139:LEU:HD21	2.37	0.55
9:N:39:VAL:HG12	9:N:104:TYR:H	1.71	0.55
11:P:62:ALA:CB	11:P:104:ASP:O	2.53	0.55
2:A:2880:C:O2	19:R:93:GLY:HA3	2.07	0.55
20:U:98:ILE:HB	20:U:106:PHE:CE1	2.42	0.55
15:W:11:ARG:O	15:W:12:ILE:CB	2.55	0.55
17:Y:46:ASP:N	17:Y:62:VAL:HB	2.13	0.55
17:Y:71:VAL:HA	17:Y:93:THR:HG22	1.88	0.55
18:Z:111:GLY:O	18:Z:174:PRO:HG3	2.06	0.55
18:Z:4:THR:O	18:Z:34:LEU:N	2.40	0.55
8:I:132:LYS:CA	8:I:138:THR:HG21	2.29	0.55
8:I:77:VAL:CG1	8:I:143:VAL:HA	2.37	0.55
2:A:147:U:H2'	2:A:148:C:O4'	2.07	0.55
14:T:42:LEU:O	14:T:44:ARG:CA	2.55	0.55
2:A:153:C:H1'	2:A:175:G:N2	2.21	0.55
2:A:363(A):A:H2'	2:A:363(A):A:N3	2.20	0.55
24:0:22:GLY:O	24:0:23:VAL:C	2.45	0.55
23:3:19:GLN:N	23:3:19:GLN:OE1	2.39	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:4:63:PHE:O	25:4:64:GLY:C	2.44	0.55
28:7:17:GLY:O	28:7:19:ARG:N	2.39	0.55
28:7:43:THR:O	28:7:46:ASP:OD2	2.16	0.55
2:A:1255:U:H5''	2:A:1256:G:H5''	1.89	0.55
2:A:1263:U:H4'	26:5:16:ARG:NH2	2.17	0.55
2:A:2189:U:O2'	2:A:2190:G:O4'	2.25	0.55
2:A:2196:C:H2'	2:A:2196:C:O2	2.05	0.55
2:A:2603:G:N1	2:A:2604:U:C4	2.74	0.55
2:A:2657:A:N1	2:A:2665:A:C8	2.74	0.55
2:A:2703:C:H2'	2:A:2704:C:O5'	2.03	0.55
2:A:2725:A:H2'	2:A:2726:U:H5''	1.87	0.55
2:A:2767:C:C4	2:A:2768:C:C4	2.94	0.55
2:A:527:C:H6	2:A:2779:U:H2'	1.71	0.55
2:A:2785:C:O2'	4:E:100:TRP:CG	2.58	0.55
2:A:2804:C:C5	2:A:2805:G:O6	2.44	0.55
2:A:495:G:H4'	15:W:57:ASN:HD21	0.74	0.55
2:A:931:G:H2'	2:A:932:G:N9	2.20	0.55
3:D:143:ILE:CG1	3:D:153:LEU:CB	2.78	0.55
3:D:63:ILE:O	3:D:64:ILE:HG23	2.05	0.55
2:A:2617:C:H1'	4:E:245:ARG:CZ	2.37	0.55
5:F:223:LEU:C	5:F:225:PRO:N	2.59	0.55
6:G:19:GLU:HB2	6:G:135:VAL:HG11	1.88	0.55
7:H:40:MET:CB	7:H:54:PRO:HG3	2.37	0.55
7:H:41:THR:H	7:H:54:PRO:HG3	1.72	0.55
9:N:38:VAL:HG12	9:N:39:VAL:H	1.69	0.55
9:N:58:GLU:CB	9:N:61:VAL:HG21	2.37	0.55
10:O:110:ASP:C	10:O:111:PHE:CG	2.71	0.55
11:P:92:ASP:HB3	11:P:118:LEU:CB	2.37	0.55
12:Q:49:VAL:HG21	12:Q:119:ASN:C	2.27	0.55
12:Q:84:ARG:O	12:Q:85:ILE:HG23	2.07	0.55
12:Q:85:ILE:HA	12:Q:122:PHE:CA	2.37	0.55
19:R:58:GLY:CA	19:R:80:PHE:CZ	2.76	0.55
13:S:83:LEU:CD1	13:S:83:LEU:H	2.18	0.55
20:U:24:PHE:CD1	20:U:28:ARG:HG3	2.42	0.55
17:Y:67:LEU:O	17:Y:68:ASP:C	2.45	0.55
17:Y:78:THR:N	17:Y:89:ARG:NE	2.55	0.55
18:Z:172:LEU:HD21	18:Z:173:PRO:CG	2.29	0.55
18:Z:37:LYS:O	18:Z:41:ARG:HD2	2.06	0.55
2:A:59:U:O4'	2:A:73:A:C5	2.60	0.55
16:X:30:ASP:HB3	16:X:62:LYS:HB2	1.89	0.55
2:A:2306:C:H3'	2:A:2306:C:C6	2.41	0.55
2:A:5:A:C6	2:A:2899:G:N1	2.75	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1248:G:H2'	20:U:2:PRO:O	2.07	0.55
2:A:265:A:C5	2:A:428:A:C6	2.94	0.55
2:A:184:C:H2'	2:A:185:U:C6	2.42	0.55
1:B:15:A:H5'	1:B:16:G:C8	2.42	0.55
1:B:95:U:H2'	1:B:96:G:C8	2.42	0.55
24:O:68:VAL:O	24:O:69:PHE:CB	2.54	0.55
28:7:38:GLY:O	28:7:39:ARG:CG	2.55	0.55
2:A:250:G:OP2	29:8:12:ARG:NH2	2.39	0.55
2:A:1303:G:C5'	2:A:1642:G:H21	2.20	0.55
2:A:1303:G:H5'	2:A:1642:G:H21	1.72	0.55
2:A:16:G:O6	2:A:525:U:C4	2.59	0.55
2:A:1952:A:N3	10:O:22:ILE:CD1	2.68	0.55
2:A:2320:A:C6	13:S:9:PRO:CG	2.79	0.55
2:A:2354:G:C1'	24:O:32:LYS:HG2	2.37	0.55
2:A:2355:C:C4	2:A:2356:C:C4	2.95	0.55
2:A:2392:A:N7	2:A:2393:A:N7	2.54	0.55
2:A:2472:G:H2'	2:A:2475:C:C4	2.39	0.55
2:A:2481:G:O2'	2:A:2482:G:OP2	2.22	0.55
2:A:2494:G:C2	2:A:2495:G:C4	2.93	0.55
2:A:2031:A:N6	2:A:2498:C:C5	2.75	0.55
2:A:2791:C:O2'	2:A:2792:G:O4'	2.20	0.55
2:A:2810:A:O2'	2:A:2811:G:C5'	2.51	0.55
2:A:2820:A:O2'	4:E:207:GLY:O	2.25	0.55
2:A:857:C:H42	2:A:920:G:H1	1.55	0.55
1:B:50:G:OP2	13:S:74:PRO:HG3	1.95	0.55
4:E:190:ASN:C	4:E:192:ILE:N	2.60	0.55
4:E:210:THR:HA	4:E:216:ARG:HH21	1.57	0.55
5:F:57:PRO:O	5:F:79:ARG:CB	2.48	0.55
7:H:115:GLU:OE1	7:H:115:GLU:O	2.24	0.55
8:I:7:LYS:HB2	8:I:12:LYS:HZ2	1.72	0.55
9:N:25:GLN:O	9:N:27:ALA:C	2.45	0.55
10:O:104:ARG:HH12	10:O:122:ILE:HA	1.71	0.55
10:O:66:LYS:H	10:O:82:ASN:ND2	2.04	0.55
11:P:120:LEU:C	11:P:120:LEU:CD1	2.76	0.55
19:R:18:LEU:O	19:R:20:LEU:N	2.39	0.55
15:W:66:GLU:O	15:W:68:ARG:N	2.39	0.55
18:Z:38:ALA:O	18:Z:40:ASP:N	2.39	0.55
18:Z:75:LYS:O	18:Z:76:ARG:CB	2.55	0.55
22:2:2:VAL:N	22:2:4:HIS:HE1	1.82	0.55
2:A:72:U:O4'	22:2:57:LYS:NZ	2.37	0.55
6:G:29:HIS:CD2	6:G:29:HIS:O	2.60	0.55
2:A:1060:U:OP1	31:K:74:PRO:CA	2.30	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:K:93:LYS:CA	31:K:96:ILE:CG1	2.78	0.55
2:A:545(A):A:OP2	2:A:1546:C:C4	2.55	0.55
4:E:107:GLU:HG2	4:E:110:ARG:CZ	2.37	0.55
2:A:221:A:N7	2:A:266:G:N7	2.55	0.55
2:A:120:U:C6	2:A:150:C:C2	2.94	0.55
2:A:815:C:H5'	2:A:1224:G:N2	2.22	0.55
27:6:13:GLU:O	27:6:52:GLU:HA	2.06	0.55
2:A:1653:G:H8	2:A:1653:G:H5''	1.72	0.55
2:A:2080:G:C6	2:A:2241:A:N6	2.75	0.55
2:A:2331:G:H2'	2:A:2332:U:C1'	2.37	0.55
2:A:2392:A:N6	2:A:2393:A:N6	2.54	0.55
2:A:2414:G:H2'	2:A:2415:G:C8	2.42	0.55
2:A:2447:G:N9	2:A:2500:U:H5	1.95	0.55
2:A:2051:A:C5	2:A:2614:A:C5	2.94	0.55
2:A:2678:C:N4	2:A:2729:G:H1	2.05	0.55
2:A:2737:G:C2	2:A:2738:A:C8	2.95	0.55
2:A:2748:A:H1'	7:H:66:THR:HB	1.88	0.55
2:A:294:A:H4'	17:Y:15:PRO:CG	2.37	0.55
2:A:322:A:N3	2:A:341:G:N7	2.55	0.55
2:A:780:G:C6	3:D:233:ASP:CG	2.80	0.55
3:D:213:LYS:CB	3:D:215:LYS:CA	2.80	0.55
4:E:269:ILE:HA	4:E:297:LYS:CE	2.37	0.55
5:F:11:ASN:ND2	5:F:160:LEU:HD11	2.21	0.55
2:A:801:G:OP2	5:F:79:ARG:NH1	2.40	0.55
6:G:142:ALA:HB2	6:G:151:ILE:HG13	1.83	0.55
7:H:100:LYS:O	7:H:100:LYS:HG3	2.07	0.55
7:H:82:TYR:CZ	7:H:137:LYS:HG2	2.41	0.55
7:H:32:LEU:HD21	7:H:34:ARG:HB2	1.89	0.55
9:N:24:SER:OG	9:N:25:GLN:N	2.40	0.55
10:O:60:ALA:HB1	10:O:85:VAL:O	2.07	0.55
19:R:72:ASP:C	19:R:76:VAL:HG21	2.27	0.55
13:S:116:PHE:O	13:S:120:GLU:OE2	2.25	0.55
13:S:116:PHE:C	13:S:120:GLU:OE1	2.41	0.55
13:S:39:SER:O	13:S:41:LYS:N	2.40	0.55
14:T:37:GLU:O	14:T:38:ASN:C	2.44	0.55
21:V:78:VAL:CB	21:V:80:TYR:CD1	2.88	0.55
18:Z:106:GLY:N	18:Z:142:ASN:ND2	2.42	0.55
18:Z:3:LEU:O	18:Z:56:VAL:HG22	2.07	0.55
18:Z:66:VAL:HG23	18:Z:68:ALA:O	2.07	0.55
8:I:122:ARG:C	8:I:124:LEU:H	2.11	0.55
8:I:76:THR:CB	8:I:144:HIS:HE1	2.19	0.55
16:X:50:GLU:OE1	16:X:50:GLU:CA	2.55	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:W:88:ARG:C	15:W:91:GLY:H	2.10	0.55
2:A:1710:C:H4'	2:A:2858:C:N3	2.21	0.55
2:A:1609:A:C5	2:A:1616:A:C2	2.95	0.55
2:A:1899:G:H22	2:A:1902:C:H41	1.55	0.55
2:A:1179:C:H2'	2:A:1180:C:C6	2.42	0.55
25:4:41:PRO:CB	25:4:57:ASP:CG	2.73	0.54
26:5:42:SER:O	26:5:43:HIS:ND1	2.40	0.54
27:6:11:LYS:HZ3	29:8:35:GLY:H	1.56	0.54
2:A:2075:U:O2'	2:A:2596:U:N3	2.39	0.54
2:A:2209:C:N4	2:A:2215:G:C6	2.73	0.54
2:A:2281:C:O2'	2:A:2282:G:P	2.64	0.54
2:A:2289:G:N2	2:A:2290:G:C4	2.76	0.54
2:A:2384:G:C3'	2:A:2386:C:OP2	2.55	0.54
2:A:2400:G:N2	2:A:2401:U:O2	2.40	0.54
2:A:2471:C:C2	2:A:2479:G:N2	2.65	0.54
2:A:2496:C:N4	2:A:2497:A:N1	2.55	0.54
2:A:2517:C:C5	2:A:2542:A:N7	2.76	0.54
2:A:2570:G:C3'	2:A:2571:C:H6	2.17	0.54
2:A:781:A:H5'	2:A:782:A:H8	1.73	0.54
3:D:156:ALA:HB1	3:D:196:ASN:HB3	1.88	0.54
5:F:81:PRO:O	5:F:82:GLN:CG	2.55	0.54
7:H:122:ILE:C	7:H:123:GLU:OE2	2.46	0.54
7:H:130:ILE:N	7:H:130:ILE:CD1	2.59	0.54
7:H:34:ARG:HD2	7:H:36:PHE:HZ	1.69	0.54
7:H:85:ALA:CA	7:H:131:ILE:HG22	2.34	0.54
13:S:114:LYS:O	13:S:115:VAL:O	2.24	0.54
1:B:8:U:H5'	13:S:37:ARG:NE	2.22	0.54
20:U:43:ALA:HA	20:U:46:GLU:CD	2.28	0.54
20:U:69:ALA:HA	20:U:79:PHE:CE2	2.41	0.54
2:A:974:G:C5	21:V:80:TYR:CE2	2.95	0.54
15:W:68:ARG:NE	15:W:110:LYS:HB3	2.22	0.54
17:Y:103:LEU:HD11	17:Y:113:GLU:CB	2.36	0.54
12:Q:36:ASN:CG	18:Z:116:VAL:HG12	2.26	0.54
16:X:40:ALA:N	16:X:43:GLU:OE1	2.40	0.54
6:G:29:HIS:HE1	6:G:64:ARG:NH1	1.81	0.54
31:K:104:GLN:O	31:K:107:GLU:CD	2.46	0.54
31:K:132:ALA:CB	31:K:137:ILE:O	2.53	0.54
8:I:48:GLU:HG3	8:I:52:GLN:NE2	2.10	0.54
2:A:1482:U:C1'	2:A:1512:G:H22	2.20	0.54
2:A:215:G:H4'	2:A:216:A:O5'	2.07	0.54
24:0:86:THR:O	24:0:87:GLU:C	2.45	0.54
23:3:1:MET:O	23:3:3:ARG:HG3	2.07	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:6:42:PRO:HD3	27:6:50:PHE:CZ	2.42	0.54
2:A:1612:C:N1	28:7:3:ARG:NH1	2.55	0.54
30:9:10:MET:C	30:9:10:MET:HE3	2.28	0.54
2:A:2468:G:O6	2:A:2481:G:O6	2.19	0.54
2:A:2610:C:O4'	2:A:2610:C:OP2	2.25	0.54
2:A:2676:C:H2'	2:A:2677:G:O5'	2.07	0.54
2:A:2740:A:C2	2:A:2764:A:N3	2.75	0.54
2:A:2799:A:O5'	2:A:2801:A:OP2	2.25	0.54
2:A:2821:A:C2	2:A:2822:G:C6	2.89	0.54
2:A:2853:C:O2'	2:A:2854:G:H5'	2.08	0.54
2:A:2864:G:O2'	2:A:2865:U:C1'	2.54	0.54
2:A:322:A:N3	2:A:341:G:C4	2.75	0.54
2:A:963:U:H1'	2:A:2250:G:C2	2.29	0.54
2:A:974:G:C6	21:V:80:TYR:CZ	2.94	0.54
2:A:1818:U:C4'	3:D:155:ARG:HG2	2.33	0.54
2:A:1792:G:OP1	3:D:204:PHE:CE1	2.59	0.54
3:D:209:ASN:O	3:D:210:LYS:C	2.45	0.54
3:D:208:GLY:HA3	3:D:210:LYS:HZ1	1.48	0.54
4:E:242:ASN:HD22	4:E:242:ASN:N	2.03	0.54
4:E:205:THR:N	4:E:259:HIS:O	2.39	0.54
2:A:2679:A:H5"	4:E:261:ARG:HD3	1.88	0.54
4:E:296:VAL:HG12	4:E:297:LYS:N	2.22	0.54
4:E:44:TYR:HA	4:E:307:LEU:O	2.08	0.54
5:F:140:VAL:HB	5:F:235:PHE:C	2.27	0.54
5:F:238:SER:HA	5:F:241:ALA:HB2	1.89	0.54
6:G:25:MET:SD	6:G:129:ASP:CB	2.91	0.54
7:H:15:THR:O	7:H:25:VAL:HA	2.08	0.54
2:A:2749:A:H5'	7:H:62:ALA:HA	1.89	0.54
9:N:136:SER:CA	9:N:139:LEU:HD22	2.38	0.54
19:R:104:ARG:CA	19:R:105:ARG:NH2	2.43	0.54
19:R:81:ASP:O	19:R:85:PRO:CD	2.54	0.54
21:V:19:VAL:CG1	21:V:21:ARG:HH22	2.14	0.54
2:A:814:C:OP1	21:V:84:THR:HG22	2.07	0.54
15:W:25:ARG:CG	15:W:26:GLY:N	2.71	0.54
17:Y:31:LEU:HB3	17:Y:113:GLU:CD	2.27	0.54
17:Y:51:LEU:N	17:Y:51:LEU:CD1	2.61	0.54
12:Q:32:LYS:NZ	18:Z:172:LEU:HD13	2.07	0.54
22:2:52:ALA:O	22:2:56:ILE:HD11	1.85	0.54
2:A:1078:U:OP1	31:K:93:LYS:HG3	2.07	0.54
31:K:129:GLU:CG	31:K:133:LYS:CE	2.50	0.54
2:A:264:C:C3'	2:A:265:A:H5"	2.38	0.54
2:A:1912:A:C8	2:A:1913:A:H1'	2.41	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1449:A:C5'	2:A:1528:A:C2	2.86	0.54
2:A:1805:U:C5'	3:D:235:PRO:CB	2.85	0.54
7:H:80:LYS:O	7:H:81:GLY:C	2.42	0.54
2:A:715:G:H5'	2:A:715:G:H8	1.72	0.54
2:A:1802:A:H61	2:A:1822:G:H1'	1.72	0.54
26:5:34:PRO:HG3	26:5:36:CYS:SG	2.41	0.54
24:0:30:VAL:HG23	24:0:62:LEU:HB3	1.90	0.54
29:8:54:GLU:O	29:8:55:TRP:C	2.43	0.54
29:8:54:GLU:O	29:8:55:TRP:O	2.25	0.54
29:8:9:MET:HA	29:8:12:ARG:HG2	1.89	0.54
2:A:1129:A:C2	2:A:2570:G:N9	2.74	0.54
2:A:1252:G:N2	20:U:37:GLN:HB2	2.22	0.54
2:A:1264:G:P	26:5:19:ARG:NH1	2.71	0.54
2:A:1287:A:N7	19:R:105:ARG:O	2.40	0.54
2:A:1612:C:C6	28:7:3:ARG:NH2	2.76	0.54
2:A:2246:G:N3	2:A:2247:A:N7	2.56	0.54
2:A:2292:C:N4	2:A:2340:G:H1	2.04	0.54
2:A:2321:G:C2'	2:A:2321:G:N3	2.70	0.54
2:A:2510:C:N4	2:A:2511:U:O4	2.41	0.54
2:A:2544:G:H2'	2:A:2545:G:H5'	1.85	0.54
2:A:2558:C:C2'	2:A:2559:C:H5'	2.38	0.54
2:A:2575:C:C5'	2:A:2576:G:OP2	2.52	0.54
2:A:2693:A:C2	2:A:2694:G:C8	2.95	0.54
2:A:2716:U:C2	2:A:2717:G:C8	2.96	0.54
2:A:2759:G:H2'	2:A:2760:C:C5'	2.38	0.54
2:A:294:A:H4'	17:Y:15:PRO:HG2	1.88	0.54
2:A:295:G:OP1	2:A:338:G:C2	2.61	0.54
2:A:683:C:N4	2:A:684:G:O6	2.39	0.54
6:G:13:MET:CE	6:G:13:MET:HA	2.38	0.54
7:H:126:SER:O	7:H:127:GLN:C	2.45	0.54
7:H:90:GLY:CA	7:H:159:LYS:CE	2.85	0.54
8:I:40:THR:O	8:I:41:PRO:C	2.45	0.54
9:N:15:ARG:CG	9:N:43:ARG:CB	2.85	0.54
10:O:66:LYS:H	10:O:82:ASN:HD22	1.54	0.54
11:P:115:ARG:O	11:P:117:GLU:N	2.40	0.54
11:P:65:ASP:OD1	11:P:68:GLU:OE1	2.26	0.54
11:P:96:VAL:HG23	11:P:101:ASP:N	2.21	0.54
2:A:910:A:H62	12:Q:11:LYS:C	2.11	0.54
12:Q:66:ASN:O	12:Q:69:ASN:N	2.40	0.54
19:R:84:ALA:O	19:R:87:TYR:HB2	2.07	0.54
13:S:63:SER:O	13:S:68:GLU:HA	2.08	0.54
13:S:76:GLY:C	13:S:80:SER:O	2.45	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:T:6:CYS:O	14:T:7:ASP:OD2	2.25	0.54
20:U:28:ARG:CA	20:U:31:GLN:CB	2.69	0.54
20:U:78:THR:OG1	20:U:79:PHE:N	2.39	0.54
15:W:50:VAL:CG1	15:W:50:VAL:O	2.54	0.54
17:Y:47:THR:O	17:Y:98:VAL:HA	2.06	0.54
17:Y:74:VAL:HG12	17:Y:77:VAL:CG2	2.19	0.54
17:Y:51:LEU:CD2	17:Y:95:ASN:CB	2.86	0.54
18:Z:124:ALA:H	18:Z:159:THR:CG2	2.18	0.54
8:I:68:LEU:CD2	8:I:72:LEU:HD21	2.37	0.54
2:A:1598:C:H5'	16:X:34:LYS:CB	2.37	0.54
17:Y:83:ASP:N	17:Y:83:ASP:OD1	2.40	0.54
2:A:1511:A:H2'	2:A:1512:G:O4'	2.07	0.54
2:A:582:G:H1	2:A:1258:C:H42	1.55	0.54
25:4:23:GLU:O	25:4:26:SER:O	2.25	0.54
27:6:28:ARG:HH11	27:6:28:ARG:HB2	1.66	0.54
28:7:30:ILE:N	28:7:33:ARG:HG3	2.23	0.54
30:9:18:ARG:HA	30:9:22:ARG:O	2.07	0.54
2:A:1264:G:O6	2:A:1265:A:N6	2.41	0.54
2:A:2067:G:C2	2:A:2444:G:C4	2.96	0.54
2:A:2281:C:H6	2:A:2281:C:OP2	1.90	0.54
2:A:2299:G:C6	2:A:2300:G:O6	2.61	0.54
2:A:2414:G:C4	2:A:2415:G:H8	2.18	0.54
2:A:2436:G:C6	2:A:2437:U:N3	2.76	0.54
2:A:2479:G:C6	2:A:2480:C:N3	2.75	0.54
2:A:2623:G:C2	2:A:2624:G:C4	2.94	0.54
2:A:2644:G:N1	2:A:2645:G:C2	2.76	0.54
2:A:2690:C:C2'	2:A:2691:C:OP2	2.56	0.54
2:A:2698:U:N3	2:A:2699:C:H5	1.88	0.54
2:A:2725:A:N1	2:A:2727:G:H1'	2.22	0.54
2:A:2734:A:C5'	2:A:2735:G:OP2	2.55	0.54
2:A:2839:G:H21	2:A:2840:C:H1'	1.73	0.54
2:A:2862:G:HO2'	2:A:2863:C:C1'	2.21	0.54
2:A:400:G:H1	25:4:63:PHE:HE1	1.55	0.54
3:D:140:VAL:HA	3:D:191:VAL:HA	1.89	0.54
5:F:144:PHE:C	5:F:146:ASP:N	2.46	0.54
5:F:163:HIS:CD2	5:F:166:ILE:HD11	2.41	0.54
7:H:143:LEU:CG	7:H:144:ALA:N	2.70	0.54
8:I:7:LYS:HB2	8:I:12:LYS:HD3	1.77	0.54
9:N:21:ARG:CA	9:N:24:SER:CB	2.84	0.54
9:N:15:ARG:CG	9:N:43:ARG:HB3	2.30	0.54
11:P:92:ASP:HB3	11:P:118:LEU:CG	2.34	0.54
12:Q:58:HIS:C	12:Q:59:ASN:HD22	2.10	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:R:64:ARG:HG2	19:R:65:LEU:N	2.22	0.54
13:S:106:LEU:O	13:S:107:ASN:C	2.45	0.54
13:S:40:ASN:CA	13:S:114:LYS:NZ	2.46	0.54
13:S:110:THR:O	13:S:116:PHE:CD1	2.61	0.54
2:A:2334:G:H5'	13:S:12:ARG:O	2.07	0.54
14:T:5:GLU:O	14:T:8:TYR:C	2.45	0.54
20:U:70:ARG:HA	20:U:74:MET:O	2.08	0.54
20:U:74:MET:HE2	20:U:78:THR:CB	2.35	0.54
20:U:7:GLY:CA	20:U:8:ILE:CD1	2.80	0.54
20:U:88:ILE:HG22	21:V:52:GLY:HA2	1.90	0.54
21:V:40:VAL:CA	21:V:51:ALA:CA	2.84	0.54
21:V:74:TYR:CE1	21:V:86:HIS:C	2.80	0.54
15:W:8:ARG:HG3	15:W:102:HIS:HE1	1.56	0.54
17:Y:47:THR:HG22	17:Y:100:ASP:O	2.07	0.54
18:Z:140:LYS:N	18:Z:141:MET:SD	2.80	0.54
22:2:27:LEU:O	22:2:28:LEU:C	2.45	0.54
16:X:22:ASN:C	16:X:68:LEU:HD11	2.27	0.54
16:X:23:LYS:O	16:X:68:LEU:HD22	2.05	0.54
6:G:56:ARG:C	6:G:63:ILE:HG13	2.28	0.54
31:K:132:ALA:O	31:K:137:ILE:N	2.40	0.54
2:A:1472:A:C2'	2:A:1473:G:C8	2.86	0.54
2:A:286:C:H2'	2:A:287:C:C5'	2.37	0.54
2:A:1632:A:O5'	2:A:1632:A:H8	1.90	0.54
25:4:39:VAL:O	25:4:39:VAL:CG1	2.55	0.54
29:8:16:ILE:N	29:8:16:ILE:CD1	2.64	0.54
30:9:7:VAL:HG13	30:9:34:GLN:HG3	1.76	0.54
2:A:1022:G:N2	2:A:1140:C:C2	2.76	0.54
2:A:1140:C:C5	9:N:49:ARG:HD2	2.37	0.54
2:A:1610:A:OP1	2:A:1611:C:H5	1.90	0.54
2:A:2094:G:N1	2:A:2196:C:C4	2.66	0.54
2:A:2218:G:N3	2:A:2219:G:C8	2.75	0.54
2:A:2466:C:C4	2:A:2467:C:N4	2.75	0.54
2:A:2484:G:N3	2:A:2485:G:O4'	2.41	0.54
2:A:2529:G:H5''	2:A:2530:A:H5''	1.88	0.54
2:A:2589:A:C5	2:A:2590:A:C8	2.93	0.54
2:A:2641:G:N1	2:A:2774:C:C4	2.76	0.54
2:A:2544:G:C4'	2:A:2645:G:C8	2.91	0.54
2:A:2694:G:C6	2:A:2695:C:C4	2.96	0.54
2:A:2736:G:N1	2:A:2769:C:C4	2.75	0.54
2:A:2821:A:H2'	2:A:2822:G:N9	2.22	0.54
2:A:2854:G:N1	2:A:2864:G:C5	2.72	0.54
2:A:2871:C:O2	2:A:2871:C:H2'	2.08	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:650:C:P	29:8:19:THR:CG2	2.95	0.54
3:D:174:ARG:HD3	3:D:180:VAL:HG22	1.88	0.54
2:A:1819:A:C4	3:D:177:SER:HB3	2.43	0.54
4:E:71:THR:CG2	4:E:299:SER:OG	2.31	0.54
4:E:311:PHE:C	4:E:312:ARG:HG3	2.27	0.54
4:E:44:TYR:HE1	4:E:308:VAL:CG1	2.18	0.54
5:F:37:ALA:CB	5:F:102:LEU:CG	2.86	0.54
5:F:150:THR:CG2	5:F:207:LEU:HD21	2.38	0.54
5:F:200:PRO:CB	5:F:205:ARG:HD3	2.37	0.54
7:H:40:MET:HA	7:H:54:PRO:CB	2.37	0.54
8:I:2:LYS:CD	8:I:39:ALA:CB	2.82	0.54
10:O:66:LYS:HZ1	10:O:67:ARG:NE	2.03	0.54
11:P:132:LYS:O	11:P:135:GLY:CA	2.55	0.54
19:R:59:ASP:N	19:R:80:PHE:HE2	2.04	0.54
13:S:92:ALA:C	13:S:94:GLU:H	2.10	0.54
20:U:14:HIS:CG	20:U:36:PHE:CZ	2.94	0.54
20:U:41:ASN:CG	20:U:42:ALA:H	2.07	0.54
20:U:92:ARG:O	20:U:95:LEU:CD1	2.52	0.54
20:U:94:VAL:HG13	21:V:13:ARG:HG2	1.89	0.54
21:V:50:ASP:CB	21:V:53:LYS:H	2.21	0.54
15:W:78:GLU:OE1	15:W:99:ARG:NE	2.40	0.54
17:Y:70:ALA:O	17:Y:71:VAL:CG2	2.54	0.54
18:Z:52:PHE:O	18:Z:53:ASP:CB	2.53	0.54
2:A:1497:U:H3	2:A:1577:C:H4'	1.73	0.54
14:T:20:MET:CB	14:T:30:HIS:HA	2.37	0.54
23:3:38:GLU:O	23:3:39:ASP:C	2.45	0.54
29:8:36:LYS:HE2	29:8:40:GLU:CD	2.27	0.54
2:A:1024:G:N7	2:A:1025:G:N7	2.55	0.54
2:A:1254:A:N7	2:A:1256:G:N9	2.56	0.54
2:A:1665:A:H1'	10:O:67:ARG:HD2	1.89	0.54
2:A:1677:A:H2'	2:A:1678:G:C8	2.43	0.54
2:A:2100:G:C5	2:A:2190:G:C2	2.95	0.54
2:A:2299:G:C4	2:A:2300:G:N7	2.76	0.54
2:A:2330:G:C3'	2:A:2331:G:H5'	2.38	0.54
2:A:2386:C:O2'	2:A:2387:U:O5'	2.26	0.54
2:A:2415:G:C4	2:A:2416:C:C5	2.92	0.54
2:A:2533:A:C2'	2:A:2534:A:C8	2.90	0.54
4:E:39:GLN:OE1	4:E:174:LEU:HD11	1.96	0.54
4:E:181:VAL:CG1	4:E:181:VAL:O	2.55	0.54
4:E:42:ALA:N	4:E:189:MET:HE1	2.02	0.54
4:E:211:GLN:N	4:E:216:ARG:NE	2.40	0.54
5:F:201:SER:CB	5:F:204:ALA:HB3	2.38	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:243:VAL:CA	5:F:246:ARG:CG	2.83	0.54
6:G:97:GLN:CB	6:G:106:PHE:CZ	2.88	0.54
7:H:85:ALA:C	7:H:131:ILE:HG22	2.26	0.54
9:N:12:VAL:HB	9:N:38:VAL:HG21	1.87	0.54
2:A:2041:U:C5'	9:N:70:PHE:HE1	2.19	0.54
9:N:93:ARG:O	9:N:94:GLY:O	2.25	0.54
1:B:89(A):A:H2	12:Q:52:LYS:NZ	2.00	0.54
19:R:55:ALA:HB1	19:R:79:LEU:HD21	1.86	0.54
19:R:77:ARG:C	19:R:81:ASP:OD1	2.45	0.54
13:S:121:GLY:O	13:S:122:ALA:C	2.43	0.54
21:V:72:ARG:O	21:V:88:GLN:N	2.40	0.54
2:A:86:C:OP1	17:Y:68:ASP:CG	2.45	0.54
18:Z:40:ASP:CB	18:Z:41:ARG:NH2	2.70	0.54
22:2:3:LEU:HD22	22:2:8:ILE:CD1	2.38	0.54
2:A:1395:A:P	2:A:1603:A:H5''	2.48	0.54
16:X:19:ASP:OD1	16:X:20:PHE:CG	2.57	0.54
6:G:81:GLU:C	6:G:85:GLN:HG2	2.15	0.54
2:A:265:A:C5	2:A:428:A:N6	2.75	0.54
7:H:108:TYR:O	7:H:109:SER:CB	2.47	0.54
24:0:30:VAL:O	24:0:31:VAL:CG2	2.55	0.54
23:3:8:LEU:HD23	23:3:31:LEU:CG	2.38	0.54
25:4:23:GLU:HA	25:4:27:THR:O	2.07	0.54
2:A:1031:G:O2'	30:9:8:LYS:HE2	2.07	0.54
2:A:630(A):C:H3'	2:A:1631:A:OP2	2.08	0.54
2:A:180:G:OP1	28:7:32:ALA:HB1	2.07	0.54
2:A:2054:A:C2	2:A:2616:C:N3	2.76	0.54
2:A:2208:U:C2	2:A:2217:G:C2	2.95	0.54
2:A:2285:C:H5'	2:A:2288:A:H61	1.73	0.54
2:A:2297:C:C4	2:A:2333:A:N6	2.67	0.54
2:A:2458:G:C5	2:A:2490:G:N3	2.74	0.54
2:A:2654:A:H8	2:A:2654:A:O5'	1.90	0.54
2:A:2679:A:H5''	4:E:261:ARG:CD	2.37	0.54
2:A:2697:G:C4	2:A:2698:U:C6	2.96	0.54
2:A:2705:A:N6	2:A:2706:G:N1	2.55	0.54
2:A:2793:G:C2	2:A:2794:C:N3	2.75	0.54
2:A:2889:C:H2'	2:A:2891:G:O4'	2.06	0.54
2:A:792:G:C5	2:A:2440:C:N1	2.76	0.54
3:D:154:VAL:HA	3:D:157:ALA:HB3	1.89	0.54
4:E:79:ARG:HA	4:E:186:GLU:N	2.23	0.54
5:F:157:LEU:HB2	5:F:158:GLU:OE1	2.06	0.54
7:H:101:LYS:NZ	7:H:115:GLU:CG	2.60	0.54
7:H:121:GLU:CG	7:H:133:LYS:O	2.54	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2748:A:O2'	7:H:62:ALA:O	2.25	0.54
8:I:6:LEU:HB2	8:I:36:ALA:CA	2.36	0.54
9:N:65:ASN:HB2	9:N:69:TYR:HD1	0.53	0.54
2:A:2780:G:N2	9:N:80:LYS:HZ1	2.04	0.54
10:O:90:ASP:O	10:O:92:SER:HB3	2.08	0.54
12:Q:129:ASP:CG	12:Q:132:VAL:CG2	2.76	0.54
19:R:74:LYS:N	19:R:77:ARG:NH2	2.55	0.54
20:U:23:GLY:O	20:U:24:PHE:O	2.25	0.54
20:U:41:ASN:O	20:U:43:ALA:N	2.40	0.54
21:V:5:ILE:CD1	21:V:12:TYR:OH	2.56	0.54
15:W:68:ARG:O	15:W:110:LYS:CB	2.54	0.54
17:Y:55:PHE:CZ	17:Y:89:ARG:NE	2.63	0.54
17:Y:46:ASP:OD1	17:Y:98:VAL:HG13	2.07	0.54
2:A:67:U:H2'	2:A:68:G:H8	1.73	0.54
2:A:2308:G:C5'	2:A:2309:A:OP1	2.55	0.54
7:H:168:VAL:O	7:H:169:ARG:CD	2.54	0.54
2:A:299:A:O2'	2:A:319:C:H4'	2.08	0.54
23:3:21:ALA:C	23:3:23:LEU:N	2.61	0.54
25:4:6:HIS:CE1	25:4:55:ARG:CB	2.91	0.54
25:4:68:ARG:NH1	25:4:72:LYS:HD3	2.22	0.54
28:7:21:ARG:CZ	28:7:43:THR:HG21	2.30	0.54
2:A:1799:G:N2	3:D:153:LEU:CD1	2.67	0.54
2:A:2252:G:C5	2:A:2253:G:N7	2.76	0.54
2:A:2322:A:N3	2:A:2323:G:C5'	2.67	0.54
2:A:2349:G:N3	2:A:2369:A:C2	2.75	0.54
2:A:2373:G:C4	2:A:2374:C:C4	2.96	0.54
2:A:2376:A:C2	2:A:2377:A:C4	2.96	0.54
2:A:2412:A:H2'	2:A:2413:G:C5'	2.31	0.54
2:A:2543:G:C1'	2:A:2544:G:C8	2.91	0.54
2:A:388:G:OP2	25:4:29:PRO:HD3	2.08	0.54
2:A:514:A:H4'	20:U:32:TYR:OH	2.08	0.54
2:A:617:G:H2'	2:A:618:G:C8	2.43	0.54
2:A:771:G:OP1	28:7:14:LYS:CD	2.53	0.54
4:E:205:THR:OG1	4:E:258:TYR:CA	2.56	0.54
2:A:2679:A:H5''	4:E:261:ARG:NE	2.22	0.54
4:E:300:VAL:N	4:E:301:PRO:CD	2.70	0.54
4:E:44:TYR:CE1	4:E:308:VAL:HG13	2.36	0.54
5:F:106:GLU:O	5:F:107:ARG:C	2.44	0.54
9:N:25:GLN:HG2	9:N:28:GLU:HG3	1.90	0.54
9:N:25:GLN:O	9:N:27:ALA:N	2.40	0.54
9:N:52:GLN:HA	9:N:55:GLU:OE2	1.97	0.54
9:N:69:TYR:O	9:N:71:TYR:HD1	1.90	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:Q:64:ALA:HB2	12:Q:142:LYS:HD3	1.90	0.54
12:Q:36:ASN:HD21	18:Z:116:VAL:HB	1.73	0.54
2:A:2296:U:H3	13:S:16:ALA:HB2	1.69	0.54
13:S:18:THR:OG1	13:S:19:ASP:N	2.40	0.54
14:T:10:GLY:HA3	14:T:53:ASP:CG	2.28	0.54
18:Z:92:VAL:HG13	18:Z:124:ALA:HB3	1.79	0.54
2:A:148:C:C2	2:A:149:A:C5	2.96	0.54
31:K:97:VAL:CA	31:K:99:LYS:NZ	2.64	0.54
2:A:285:C:H42	2:A:354:G:N2	2.05	0.54
24:O:39:ARG:O	24:O:40:GLN:C	2.45	0.54
24:O:64:ASP:C	24:O:66:LYS:NZ	2.61	0.54
23:3:8:LEU:HD23	23:3:31:LEU:CB	2.34	0.54
25:4:59:PHE:HA	25:4:62:ARG:HD2	1.90	0.54
27:6:45:LYS:C	27:6:46:LYS:CE	2.65	0.54
29:8:7:HIS:C	29:8:10:ALA:HB3	2.21	0.54
2:A:1034:G:H5'	30:9:18:ARG:HE	1.70	0.54
2:A:1255:U:H5''	2:A:1256:G:C5'	2.38	0.54
2:A:747:U:C2	2:A:2015:A:C2	2.96	0.54
2:A:2270:G:O6	2:A:2271:G:N2	2.39	0.54
2:A:2322:A:N6	2:A:2323:G:C4	2.75	0.54
2:A:2411:A:H2'	2:A:2412:A:C8	2.43	0.54
2:A:2421:G:OP1	27:6:4:ASP:OD1	2.25	0.54
2:A:197:A:C6	2:A:2430:A:N7	2.75	0.54
2:A:2557:G:C4	2:A:2558:C:H5	2.26	0.54
2:A:2515:C:H41	2:A:2569:G:H1	1.38	0.54
2:A:2741:A:N3	2:A:2742:C:C1'	2.71	0.54
2:A:2881:C:H3'	2:A:2881:C:H6	1.72	0.54
2:A:27:G:N2	2:A:512:G:H2'	2.23	0.54
2:A:780:G:H2'	2:A:782:A:N7	2.22	0.54
3:D:77:VAL:CG2	3:D:113:MET:HA	2.26	0.54
3:D:148:GLY:C	3:D:150:GLY:N	2.49	0.54
2:A:1819:A:C2'	3:D:177:SER:CB	2.73	0.54
3:D:68:ARG:NH2	3:D:190:THR:CG2	2.71	0.54
5:F:58:ALA:CB	5:F:79:ARG:CB	2.86	0.54
2:A:801:G:O4'	5:F:80:VAL:CG2	2.55	0.54
7:H:86:LEU:HD23	7:H:148:ARG:NE	2.23	0.54
9:N:45:VAL:CA	9:N:132:LEU:HB2	2.28	0.54
9:N:80:LYS:C	9:N:84:ARG:HG3	2.25	0.54
9:N:94:GLY:O	9:N:97:ALA:CA	2.54	0.54
20:U:14:HIS:CD2	20:U:36:PHE:HE2	2.25	0.54
21:V:75:LYS:CE	21:V:75:LYS:HA	2.38	0.54
15:W:36:LEU:CD1	15:W:47:VAL:CB	2.85	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:294:A:H4'	17:Y:15:PRO:CD	2.37	0.54
17:Y:80:GLU:HG2	17:Y:86:GLU:HA	1.89	0.54
16:X:6:LYS:HZ2	16:X:28:VAL:C	2.11	0.54
16:X:28:VAL:C	16:X:30:ASP:N	2.60	0.54
2:A:221:A:O2'	2:A:271(A):C:O2	2.25	0.54
1:B:40:U:C3'	1:B:41:U:H5'	2.34	0.54
23:3:8:LEU:CB	23:3:32:GLN:HA	2.35	0.54
2:A:464:U:O4'	28:7:12:ARG:NH2	2.41	0.54
28:7:21:ARG:NH1	28:7:43:THR:H	1.98	0.54
2:A:1024:G:C5'	2:A:1025:G:H5''	2.36	0.54
2:A:2185:C:N3	2:A:2186:G:N7	2.56	0.54
2:A:2225:A:H5'	2:A:2226:C:H5'	1.79	0.54
2:A:2320:A:C2	13:S:13:ARG:HG3	2.43	0.54
2:A:2344:U:O2'	2:A:2345:G:C5'	2.56	0.54
2:A:830:G:N9	2:A:2448:A:N7	2.55	0.54
2:A:2452:C:C4	2:A:2453:A:C6	2.96	0.54
2:A:2454:G:N3	2:A:2455:G:C1'	2.70	0.54
2:A:2589:A:C3'	2:A:2590:A:H5''	2.35	0.54
2:A:2023:G:C5'	2:A:2618:G:OP1	2.53	0.54
2:A:2623:G:C2	2:A:2624:G:N9	2.75	0.54
2:A:2666:C:H2'	2:A:2667:C:C5'	2.38	0.54
2:A:2687:U:H5''	2:A:2688:U:OP2	2.07	0.54
2:A:2758:A:O2'	2:A:2759:G:O5'	2.26	0.54
2:A:2744:G:H1'	2:A:2761:G:N2	2.23	0.54
2:A:624:C:H2'	2:A:657:U:OP1	2.07	0.54
3:D:141:HIS:N	3:D:141:HIS:ND1	2.56	0.54
3:D:131:LEU:CB	3:D:171:VAL:HG21	2.37	0.54
3:D:90:ILE:CG2	3:D:103:ILE:N	2.68	0.54
4:E:203:GLY:HA3	4:E:303:PRO:HD2	1.86	0.54
4:E:47:GLY:HA3	4:E:305:LYS:HE2	1.89	0.54
4:E:71:THR:HG23	4:E:299:SER:CA	2.33	0.54
5:F:33:LYS:O	5:F:36:ARG:CG	2.56	0.54
8:I:7:LYS:CB	8:I:12:LYS:HZ2	2.21	0.54
2:A:1140:C:N4	9:N:49:ARG:NH1	2.56	0.54
10:O:34:ASN:C	10:O:35:ILE:O	2.41	0.54
19:R:116:LEU:O	19:R:117:VAL:C	2.45	0.54
13:S:34:LEU:HD12	13:S:103:ASP:HB3	1.88	0.54
14:T:50:GLU:HG3	14:T:55:ALA:HB1	1.89	0.54
20:U:115:ASN:N	20:U:115:ASN:ND2	2.52	0.54
21:V:12:TYR:CD2	21:V:13:ARG:N	2.70	0.54
21:V:93:ILE:C	21:V:95:ILE:CD1	2.77	0.54
15:W:25:ARG:O	15:W:26:GLY:C	2.46	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:W:29:LEU:C	15:W:31:GLU:N	2.57	0.54
17:Y:18:GLU:HB3	17:Y:21:LYS:HZ1	1.67	0.54
17:Y:11:GLN:CB	17:Y:21:LYS:HE3	2.38	0.54
18:Z:112:LEU:CD1	18:Z:177:THR:HG21	2.38	0.54
18:Z:37:LYS:O	18:Z:41:ARG:NE	2.40	0.54
18:Z:48:THR:O	18:Z:48:THR:CG2	2.49	0.54
8:I:102:LEU:HD11	8:I:103:GLN:HG3	1.88	0.54
2:A:1340:U:H6	16:X:55:GLN:HE22	1.42	0.54
2:A:2899:G:O2'	2:A:2900:A:H8	1.91	0.54
14:T:49:LEU:CD2	14:T:49:LEU:C	2.63	0.54
2:A:1906:G:C1'	2:A:1929:G:N7	2.71	0.54
2:A:2183:C:H2'	2:A:2184:G:C8	2.40	0.54
24:0:20:TYR:O	24:0:21:LEU:C	2.46	0.53
24:0:45:PHE:HD1	24:0:78:PHE:HA	1.53	0.53
23:3:29:ARG:O	23:3:30:ARG:O	2.25	0.53
25:4:28:ARG:HB3	25:4:29:PRO:HD2	1.90	0.53
26:5:13:LYS:O	26:5:16:ARG:HB2	2.07	0.53
29:8:50:LEU:CG	29:8:51:ALA:H	2.06	0.53
2:A:1034:G:C5'	30:9:18:ARG:CZ	2.85	0.53
2:A:2043:C:N4	2:A:2777:G:C2	2.76	0.53
2:A:2205:C:H6	2:A:2205:C:O5'	1.90	0.53
2:A:2561:A:C4	2:A:2562:U:H6	2.25	0.53
2:A:2589:A:N6	2:A:2590:A:N6	2.56	0.53
2:A:2681:C:H5	2:A:2727:G:C2	2.20	0.53
2:A:1629:U:O2	2:A:2698:U:H4'	2.08	0.53
2:A:2781:A:H5'	2:A:2782:G:O4'	2.08	0.53
2:A:2842:G:H2'	2:A:2843:G:O4'	2.07	0.53
2:A:85:G:H1	2:A:97:C:H42	1.54	0.53
2:A:947:G:H2'	2:A:948:G:H8	1.73	0.53
3:D:61:TYR:OH	3:D:214:MET:SD	2.47	0.53
3:D:60:GLN:N	3:D:62:ARG:NH1	2.56	0.53
2:A:321:G:OP2	5:F:150:THR:OG1	2.26	0.53
6:G:21:VAL:HG12	6:G:132:VAL:HB	1.87	0.53
7:H:147:ILE:HA	7:H:150:VAL:HG21	1.86	0.53
2:A:1140:C:P	9:N:18:ILE:HD11	2.48	0.53
9:N:47:THR:O	9:N:53:ILE:CD1	2.56	0.53
10:O:101:PRO:HD3	14:T:26:GLY:CA	2.38	0.53
10:O:68:GLY:CA	10:O:78:ARG:HG2	2.31	0.53
12:Q:136:TRP:HE3	12:Q:139:ALA:HB2	1.73	0.53
19:R:67:LEU:O	19:R:68:ARG:C	2.46	0.53
13:S:20:TYR:O	13:S:23:ARG:CB	2.55	0.53
13:S:80:SER:O	13:S:81:ALA:O	2.26	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:V:42:GLY:CA	21:V:54:TYR:HH	2.18	0.53
15:W:12:ILE:HG22	15:W:13:SER:N	2.22	0.53
15:W:35:ILE:O	15:W:39:THR:HG22	2.09	0.53
15:W:49:LYS:O	15:W:51:LEU:N	2.40	0.53
17:Y:66:ASP:CG	17:Y:72:ILE:HA	2.28	0.53
1:B:75:G:C2'	18:Z:32:PHE:HD2	2.11	0.53
18:Z:40:ASP:CG	18:Z:41:ARG:NH1	2.61	0.53
18:Z:63:PRO:O	18:Z:64:ALA:HB2	2.08	0.53
2:A:1076:C:C5'	31:K:94:ARG:NH2	2.71	0.53
2:A:2898:U:N3	2:A:2899:G:C8	2.76	0.53
2:A:94:G:O3'	22:2:41:GLU:CD	2.46	0.53
2:A:391:G:H2'	2:A:392:C:C6	2.43	0.53
2:A:1743:G:C3'	2:A:1746:G:H5'	2.37	0.53
2:A:868:U:H3	2:A:909:A:H61	1.55	0.53
24:0:24:LYS:O	24:0:25:LYS:CB	2.56	0.53
24:0:30:VAL:O	24:0:31:VAL:HG23	2.08	0.53
23:3:11:SER:C	23:3:13:ILE:H	2.09	0.53
28:7:41:GLN:O	28:7:42:LEU:CB	2.56	0.53
29:8:36:LYS:HG2	29:8:40:GLU:CD	2.27	0.53
30:9:24:LEU:CD2	30:9:35:ARG:HG2	2.38	0.53
2:A:1648:C:H2'	2:A:1649:G:H8	1.72	0.53
2:A:2248:C:C3'	2:A:2249:U:H5'	2.38	0.53
2:A:2252:G:O5'	2:A:2252:G:C8	2.60	0.53
2:A:2276:G:OP2	12:Q:103:ALA:CA	2.50	0.53
2:A:2350:C:C2	2:A:2351:G:C8	2.97	0.53
2:A:792:G:C5	2:A:2440:C:H1'	2.42	0.53
2:A:2608:G:C8	2:A:2608:G:C3'	2.91	0.53
2:A:2836:U:H2'	2:A:2837:G:C8	2.42	0.53
2:A:2868:A:C4	2:A:2869:G:C8	2.96	0.53
2:A:746:A:H2'	2:A:2611:U:O2'	2.09	0.53
2:A:786:C:H2'	2:A:787:U:O4'	2.08	0.53
2:A:669:G:N3	2:A:801:G:N1	2.56	0.53
1:B:59:A:H3'	1:B:60:C:O5'	2.08	0.53
3:D:82:TYR:C	3:D:83:ASP:OD2	2.46	0.53
3:D:89:ASN:H	3:D:105:ALA:CB	2.20	0.53
4:E:180:ILE:CB	4:E:183:ASP:OD2	2.54	0.53
4:E:222:ARG:C	4:E:227:ALA:HA	2.28	0.53
2:A:590:A:H4'	5:F:97:ASP:OD2	2.08	0.53
2:A:2296:U:O4	6:G:145:ASP:OD1	2.27	0.53
6:G:93:LEU:O	6:G:94:ALA:HB3	2.08	0.53
10:O:104:ARG:O	10:O:105:GLU:O	2.26	0.53
12:Q:156:ASN:CG	12:Q:156:ASN:O	2.46	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:Q:33:MET:HE2	12:Q:74:ASN:O	2.07	0.53
13:S:61:ALA:HB2	13:S:84:THR:O	2.09	0.53
13:S:63:SER:O	13:S:67:ALA:C	2.47	0.53
20:U:39:LEU:C	20:U:41:ASN:ND2	2.61	0.53
20:U:66:ASN:O	20:U:67:ALA:C	2.47	0.53
20:U:71:LEU:C	20:U:71:LEU:CD2	2.77	0.53
21:V:72:ARG:HG3	21:V:88:GLN:HG3	1.90	0.53
21:V:88:GLN:OE1	21:V:90:PHE:HE1	1.91	0.53
15:W:12:ILE:HG23	15:W:13:SER:N	2.23	0.53
15:W:20:VAL:CG1	15:W:47:VAL:CG2	2.29	0.53
8:I:68:LEU:HD11	8:I:108:LEU:HD11	1.89	0.53
31:K:73:PRO:HG2	31:K:78:LEU:CG	2.38	0.53
2:A:271(C):U:O4	2:A:421:U:H2'	2.08	0.53
2:A:1473:G:H2'	2:A:1474:C:O4'	2.08	0.53
2:A:1173:G:N2	2:A:1175:U:H3'	2.22	0.53
24:O:70:ILE:CG1	24:O:71:ASN:H	2.17	0.53
26:5:50:GLY:CA	26:5:57:VAL:HB	2.35	0.53
28:7:43:THR:OG1	28:7:44:VAL:HG23	2.08	0.53
2:A:1790:C:N4	2:A:1828:G:H2'	2.23	0.53
2:A:2052:G:C5'	4:E:239:GLY:O	2.57	0.53
2:A:2286:A:H8	2:A:2286:A:C3'	2.09	0.53
2:A:2414:G:N1	2:A:2415:G:N7	2.56	0.53
2:A:2527:C:O2'	2:A:2528:U:H5'	2.08	0.53
2:A:2661:G:H2'	2:A:2662:A:C8	2.43	0.53
2:A:2737:G:N2	2:A:2767:C:N3	2.43	0.53
2:A:2767:C:C4	2:A:2768:C:C5	2.96	0.53
2:A:2785:C:N1	2:A:2786:U:C5	2.76	0.53
2:A:2842:G:C6	2:A:2876:G:N1	2.76	0.53
2:A:564:C:P	21:V:79:GLN:CD	2.87	0.53
2:A:684:G:N2	2:A:794:G:N3	2.57	0.53
1:B:83:G:H5''	23:3:52:HIS:CD2	2.43	0.53
3:D:77:VAL:HG12	3:D:111:VAL:O	2.08	0.53
5:F:237:GLU:C	5:F:239:ALA:H	2.11	0.53
6:G:141:VAL:HA	6:G:144:ARG:HD3	1.90	0.53
7:H:119:GLY:C	7:H:121:GLU:OE1	2.46	0.53
2:A:1020:A:H1'	9:N:49:ARG:NH2	2.23	0.53
9:N:82:THR:O	9:N:85:GLY:CA	2.56	0.53
11:P:126:SER:O	11:P:130:ARG:HG3	2.08	0.53
12:Q:35:ASN:HB2	12:Q:75:SER:CA	2.38	0.53
12:Q:92:VAL:HG12	12:Q:110:GLY:C	2.27	0.53
19:R:67:LEU:HD22	19:R:67:LEU:C	2.29	0.53
13:S:116:PHE:CD2	13:S:119:GLN:OE1	2.60	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:U:12:ARG:O	20:U:15:LYS:N	2.42	0.53
20:U:104:GLU:OE2	21:V:46:VAL:HG13	2.03	0.53
21:V:67:LYS:CE	21:V:94:LYS:HD2	2.34	0.53
15:W:8:ARG:C	15:W:10:VAL:N	2.57	0.53
2:A:487:C:C1'	15:W:53:SER:OG	2.52	0.53
17:Y:101:LEU:CB	17:Y:113:GLU:OE1	2.51	0.53
17:Y:78:THR:N	17:Y:89:ARG:CD	2.71	0.53
18:Z:113:VAL:O	18:Z:171:VAL:CA	2.57	0.53
18:Z:90:GLU:HG3	18:Z:90:GLU:O	2.09	0.53
22:2:20:LEU:HD22	22:2:23:LEU:HB3	1.90	0.53
2:A:148:C:C2'	2:A:149:A:C8	2.78	0.53
31:K:95:LYS:O	31:K:95:LYS:HG2	2.08	0.53
2:A:1614:A:C6	15:W:88:ARG:CG	2.92	0.53
17:Y:9:LYS:HZ1	17:Y:13:ARG:NH2	2.00	0.53
24:0:70:ILE:CG1	24:0:71:ASN:N	2.71	0.53
23:3:22:ALA:O	23:3:26:LEU:HD12	2.08	0.53
23:3:9:VAL:O	23:3:53:LEU:O	2.27	0.53
2:A:1251:C:C5'	20:U:10:ARG:HD3	2.35	0.53
2:A:14:A:N1	2:A:526:A:C6	2.77	0.53
2:A:1500:G:O2'	3:D:98:GLY:O	2.27	0.53
2:A:1638:C:H4'	2:A:2709:G:N2	2.23	0.53
2:A:2044:C:C5	2:A:2625:G:N2	2.76	0.53
2:A:2187:G:H2'	2:A:2188:C:C5'	2.35	0.53
2:A:2195:C:P	2:A:2195:C:H6	2.25	0.53
2:A:2421:G:OP1	27:6:4:ASP:CG	2.46	0.53
2:A:830:G:O6	2:A:2446:G:O4'	2.26	0.53
2:A:2488:A:C6	2:A:2489:G:N7	2.76	0.53
2:A:2495:G:H2'	2:A:2496:C:O4'	2.08	0.53
2:A:2539:C:N3	2:A:2540:C:H5	2.06	0.53
2:A:2736:G:O2'	2:A:2737:G:H5'	2.08	0.53
2:A:2641:G:N1	2:A:2774:C:C5	2.76	0.53
2:A:612:G:H1'	2:A:617:G:H22	1.74	0.53
4:E:208:LYS:H	4:E:257:GLY:CA	2.11	0.53
5:F:197:SER:HA	5:F:215:ALA:HB2	1.90	0.53
6:G:24:HIS:CD2	6:G:72:LYS:HB3	2.44	0.53
7:H:55:SER:HB2	7:H:60:HIS:HB2	1.82	0.53
8:I:28:ASN:C	8:I:28:ASN:OD1	2.46	0.53
8:I:41:PRO:O	8:I:42:ALA:C	2.47	0.53
9:N:23:ALA:O	9:N:26:VAL:CB	2.57	0.53
9:N:37:ALA:HA	9:N:102:ARG:O	2.08	0.53
10:O:10:VAL:CG1	10:O:11:ALA:N	2.71	0.53
12:Q:49:VAL:CG1	12:Q:119:ASN:H	2.21	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:Q:66:ASN:C	12:Q:68:ALA:N	2.57	0.53
12:Q:31:PHE:CE1	12:Q:88:PHE:HD2	2.26	0.53
19:R:100:LEU:HB2	19:R:112:ALA:HA	1.91	0.53
13:S:108:SER:C	13:S:110:THR:N	2.59	0.53
20:U:34:ASN:O	20:U:38:THR:CB	2.55	0.53
20:U:72:HIS:CE1	20:U:110:VAL:CG2	2.84	0.53
20:U:83:LEU:O	20:U:86:ALA:N	2.36	0.53
21:V:10:LYS:O	21:V:12:TYR:N	2.41	0.53
15:W:69:LEU:HD22	15:W:109:GLU:CA	2.38	0.53
18:Z:126:GLY:O	18:Z:127:PRO:O	2.26	0.53
8:I:108:LEU:C	8:I:108:LEU:CD2	2.77	0.53
8:I:109:LYS:N	8:I:109:LYS:HE2	2.20	0.53
2:A:1151:G:C4'	20:U:81:ASN:CG	2.57	0.53
22:2:27:LEU:O	22:2:30:ALA:CB	2.57	0.53
22:2:34:GLN:H	22:2:34:GLN:CD	2.11	0.53
2:A:76:C:H5''	22:2:55:ARG:HE	1.73	0.53
6:G:105:SER:HB3	6:G:131:THR:CG2	2.30	0.53
6:G:27:ILE:C	6:G:29:HIS:H	2.04	0.53
31:K:15:ALA:HB1	31:K:46:THR:O	2.08	0.53
2:A:1534:G:H2'	2:A:1534:G:N3	2.23	0.53
2:A:1882:C:H2'	2:A:1883:G:H5'	1.89	0.53
23:3:2:PRO:HB2	23:3:39:ASP:HB3	1.91	0.53
25:4:1:MET:C	25:4:2:GLN:HG3	2.29	0.53
2:A:2081:C:C4'	25:4:35:VAL:HG21	2.38	0.53
25:4:58:LYS:CG	25:4:59:PHE:H	2.04	0.53
2:A:1462:C:H4'	2:A:2703:C:C5'	2.33	0.53
2:A:1273:U:C2	2:A:2003:G:H5'	2.42	0.53
2:A:2084:C:N3	2:A:2235:G:N1	2.51	0.53
2:A:2325:G:C2	2:A:2326:C:C5	2.97	0.53
2:A:389:G:H1'	2:A:2413:G:O4'	2.08	0.53
2:A:2415:G:N3	2:A:2415:G:H2'	2.22	0.53
2:A:2435:A:C2	2:A:2436:G:H1'	2.43	0.53
2:A:2469:A:C5'	2:A:2469:A:H8	2.04	0.53
2:A:2447:G:N7	2:A:2500:U:C6	2.76	0.53
2:A:2526:G:N3	2:A:2527:C:C6	2.76	0.53
2:A:2553:G:N7	2:A:2554:U:C1'	2.71	0.53
2:A:2558:C:H2'	2:A:2559:C:H5'	1.89	0.53
2:A:2633:G:N1	2:A:2634:G:N7	2.56	0.53
2:A:295:G:O5'	2:A:296:C:OP2	2.27	0.53
2:A:638:G:H2'	2:A:639:U:O4'	2.09	0.53
3:D:79:THR:H	3:D:91:ALA:HB1	1.73	0.53
2:A:605:C:C3'	5:F:105:LYS:HE2	2.28	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:150:THR:HB	5:F:207:LEU:HD22	1.89	0.53
5:F:92:PRO:O	5:F:94:THR:N	2.41	0.53
6:G:36:ASN:O	6:G:38:GLU:N	2.42	0.53
10:O:64:ARG:HD2	10:O:81:GLU:OE1	2.09	0.53
20:U:41:ASN:HD22	20:U:41:ASN:C	2.09	0.53
20:U:94:VAL:HG12	20:U:98:ILE:HD11	1.91	0.53
15:W:43:GLY:O	15:W:46:PHE:HB2	2.07	0.53
15:W:48:ALA:O	15:W:49:LYS:C	2.46	0.53
17:Y:19:ARG:O	17:Y:22:GLN:HB2	2.09	0.53
17:Y:66:ASP:O	17:Y:68:ASP:CA	2.55	0.53
18:Z:149:ALA:CB	18:Z:164:PRO:C	2.77	0.53
18:Z:79:ILE:O	18:Z:80:HIS:HB2	2.07	0.53
2:A:1151:G:C4'	20:U:81:ASN:OD1	2.56	0.53
2:A:1078:U:C2	2:A:1088:A:N3	2.77	0.53
31:K:121:LEU:CD2	31:K:125:MET:HE3	2.35	0.53
1:B:100:G:H21	2:A:863:A:H4'	1.70	0.53
24:O:23:VAL:HG12	24:O:26:PHE:CE1	2.43	0.53
23:3:30:ARG:CZ	23:3:33:GLN:HB2	2.38	0.53
28:7:8:ASN:O	28:7:11:LYS:CA	2.56	0.53
29:8:55:TRP:HE3	29:8:59:LYS:CE	2.12	0.53
30:9:20:HIS:HB2	30:9:22:ARG:HG3	1.90	0.53
2:A:1364:G:C5'	2:A:1809:A:N7	2.72	0.53
2:A:1440:G:H2'	2:A:1441:G:O4'	2.08	0.53
2:A:2051:A:N1	2:A:2618:G:C6	2.68	0.53
2:A:2052:G:H2'	2:A:2053:G:H8	1.74	0.53
2:A:2331:G:C6	2:A:2332:U:C4	2.94	0.53
2:A:2484:G:C2	2:A:2485:G:N9	2.74	0.53
2:A:2486:G:C2	2:A:2487:G:C8	2.97	0.53
2:A:2497:A:O2'	2:A:2498:C:C6	2.62	0.53
2:A:2516:G:N1	2:A:2569:G:C2	2.77	0.53
2:A:2537:U:C6	2:A:2538:C:C5	2.96	0.53
2:A:2543:G:N9	2:A:2544:G:C8	2.76	0.53
2:A:2567:G:C2'	2:A:2568:C:C5	2.85	0.53
2:A:2658:C:H2'	2:A:2659:G:H5'	1.88	0.53
2:A:2710:C:O2'	2:A:2711:A:C4'	2.56	0.53
2:A:2838:G:H2'	2:A:2839:G:C5'	2.19	0.53
2:A:2691:C:C2	2:A:2872:G:O6	2.61	0.53
3:D:141:HIS:CD2	3:D:142:ASN:HD21	2.27	0.53
2:A:780:G:C2	3:D:233:ASP:OD2	2.59	0.53
8:I:2:LYS:CG	8:I:39:ALA:HB2	2.38	0.53
9:N:136:SER:C	9:N:141:ALA:H	2.11	0.53
9:N:54:VAL:CG1	9:N:138:THR:HB	2.38	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:N:15:ARG:HE	9:N:40:ASN:HD21	1.55	0.53
9:N:47:THR:OG1	9:N:53:ILE:HD12	2.09	0.53
10:O:40:VAL:CG1	10:O:40:VAL:O	2.47	0.53
12:Q:86:ARG:NH2	12:Q:123:ILE:CD1	2.71	0.53
12:Q:35:ASN:O	12:Q:36:ASN:C	2.46	0.53
19:R:20:LEU:O	19:R:22:ARG:CA	2.57	0.53
19:R:36:THR:CG2	19:R:37:THR:N	2.71	0.53
13:S:116:PHE:HD2	13:S:119:GLN:OE1	1.92	0.53
13:S:41:LYS:CE	13:S:68:GLU:OE2	2.57	0.53
13:S:76:GLY:N	13:S:82:TYR:HD1	2.06	0.53
15:W:85:VAL:HA	15:W:95:ILE:HG12	0.72	0.53
18:Z:117:VAL:HG12	18:Z:117:VAL:O	2.08	0.53
8:I:99:ALA:O	8:I:101:SER:N	2.41	0.53
8:I:133:LEU:N	8:I:138:THR:CG2	2.68	0.53
2:A:60:G:N7	2:A:63:U:C5	2.77	0.53
16:X:34:LYS:O	16:X:38:ALA:N	2.40	0.53
16:X:32:ALA:C	16:X:37:VAL:HG23	2.29	0.53
2:A:2857:G:C8	2:A:2857:G:C3'	2.91	0.53
2:A:1906:G:N9	2:A:1929:G:C5	2.76	0.53
2:A:1530:G:H22	2:A:1532:C:N4	2.06	0.53
7:H:19:ASN:C	7:H:21:ASN:H	2.11	0.53
2:A:1575:C:H6	2:A:1575:C:H3'	1.74	0.53
2:A:988:A:C5	23:3:13:ILE:HG21	2.44	0.53
23:3:25:ALA:O	23:3:26:LEU:C	2.48	0.53
23:3:39:ASP:CB	23:3:44:ARG:NH2	2.72	0.53
25:4:58:LYS:HG2	25:4:62:ARG:NH2	2.24	0.53
30:9:3:VAL:CG1	30:9:3:VAL:O	2.55	0.53
2:A:1328:G:H2'	2:A:1330:C:H5	1.71	0.53
2:A:570:G:H2'	2:A:2030:A:C6	2.43	0.53
2:A:2217:G:N3	2:A:2218:G:C8	2.77	0.53
2:A:2207:C:O2	2:A:2218:G:N2	2.42	0.53
2:A:2259:G:H2'	2:A:2260:C:C6	2.44	0.53
2:A:2453:A:O2'	2:A:2454:G:O5'	2.26	0.53
2:A:2454:G:C2'	2:A:2455:G:C5'	2.73	0.53
2:A:575:A:C4'	2:A:2500:U:H5'	2.39	0.53
2:A:2626:C:C3'	2:A:2627:G:C5'	2.87	0.53
2:A:2634:G:O2'	2:A:2635:C:H5'	2.08	0.53
2:A:2679:A:C1'	4:E:300:VAL:CG1	2.86	0.53
2:A:2715:C:H2'	2:A:2716:U:H6	1.73	0.53
2:A:2791:C:C5	2:A:2807:G:N1	2.77	0.53
2:A:2868:A:C5	2:A:2869:G:N7	2.77	0.53
3:D:141:HIS:C	3:D:143:ILE:N	2.61	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:267:ARG:CG	4:E:297:LYS:HB2	2.34	0.53
4:E:41:PHE:O	4:E:42:ALA:HB2	2.09	0.53
5:F:6:TYR:HE1	5:F:138:VAL:O	1.92	0.53
2:A:38:A:C4	5:F:46:TYR:HE2	2.26	0.53
7:H:67:THR:HG23	7:H:70:LEU:CD1	2.39	0.53
9:N:134:GLU:C	9:N:138:THR:CG2	2.62	0.53
10:O:44:LYS:O	10:O:45:ASP:HB3	2.09	0.53
11:P:67:ARG:NH1	11:P:111:ALA:HB3	2.22	0.53
12:Q:136:TRP:HA	12:Q:139:ALA:CB	2.39	0.53
2:A:873:G:C5'	12:Q:32:LYS:HG3	2.39	0.53
13:S:59:ALA:O	13:S:91:ARG:CZ	2.56	0.53
13:S:87:LEU:HD13	13:S:90:LEU:HD12	1.89	0.53
20:U:5:LYS:C	20:U:7:GLY:N	2.62	0.53
2:A:974:G:N7	21:V:80:TYR:CD2	2.75	0.53
15:W:11:ARG:HA	15:W:11:ARG:NE	2.19	0.53
15:W:29:LEU:HG	15:W:33:ARG:CD	2.23	0.53
17:Y:30:ASP:CG	17:Y:31:LEU:N	2.62	0.53
17:Y:50:VAL:HA	17:Y:97:ARG:HG3	1.91	0.53
17:Y:71:VAL:HG21	17:Y:93:THR:N	2.15	0.53
18:Z:105:GLN:CB	18:Z:141:MET:HG2	2.39	0.53
18:Z:118:HIS:CE1	18:Z:167:THR:OG1	2.62	0.53
18:Z:35:ASP:C	18:Z:35:ASP:OD1	2.47	0.53
8:I:123:ALA:O	8:I:124:LEU:O	2.25	0.53
22:2:29:ASN:C	22:2:34:GLN:CG	2.74	0.53
16:X:23:LYS:HG2	16:X:67:ARG:HA	1.90	0.53
2:A:2306:C:N4	6:G:53:LYS:HZ2	1.96	0.53
31:K:75:ALA:HB3	31:K:131:THR:HG21	1.89	0.53
31:K:19:THR:HG22	31:K:39:CYS:CB	2.38	0.53
2:A:1433:U:O5'	2:A:1433:U:H6	1.92	0.53
24:0:68:VAL:HG21	24:0:72:LYS:CE	2.38	0.53
25:4:24:THR:C	25:4:26:SER:H	2.12	0.53
27:6:42:PRO:O	27:6:43:VAL:C	2.45	0.53
29:8:14:ILE:O	29:8:15:LYS:CB	2.57	0.53
30:9:4:ARG:O	30:9:36:GLN:HA	2.09	0.53
2:A:1826:G:C6	2:A:1827:C:C5	2.96	0.53
2:A:2011:U:H2'	2:A:2012:G:O4'	2.08	0.53
2:A:2094:G:N2	2:A:2196:C:C2	2.76	0.53
2:A:2191:G:N3	2:A:2192:G:H1'	2.24	0.53
2:A:2272:U:H6	2:A:2273:A:H2	1.56	0.53
2:A:2369:A:O2'	2:A:2370:G:C5'	2.57	0.53
2:A:2415:G:N2	2:A:2416:C:O4'	2.37	0.53
2:A:2434:A:HO2'	2:A:2435:A:C5'	2.16	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2067:G:C2	2:A:2444:G:N3	2.77	0.53
2:A:2472:G:O5'	2:A:2472:G:H8	1.92	0.53
2:A:2488:A:N6	2:A:2489:G:C6	2.77	0.53
2:A:2490:G:H4'	2:A:2491:U:OP1	2.09	0.53
2:A:2489:G:C5	2:A:2490:G:N7	2.77	0.53
2:A:2507:C:N3	2:A:2583:G:C4	2.72	0.53
2:A:2547:U:C5	2:A:2566:A:C5	2.96	0.53
2:A:2549:G:N3	2:A:2550:G:C8	2.76	0.53
2:A:2439:A:C8	2:A:2586:C:O3'	2.62	0.53
2:A:2592:G:H2'	2:A:2593:U:C5'	2.38	0.53
2:A:2616:C:O5'	2:A:2616:C:H6	1.92	0.53
2:A:2846:G:H22	2:A:2869:G:H22	1.56	0.53
2:A:38:A:C4	5:F:46:TYR:CE2	2.97	0.53
2:A:591:C:C4	2:A:592:G:N7	2.77	0.53
2:A:774:A:C1'	2:A:775:G:C8	2.87	0.53
2:A:85:G:OP2	17:Y:65:VAL:HG21	2.07	0.53
3:D:77:VAL:HB	3:D:113:MET:HA	0.58	0.53
3:D:127:ASN:O	3:D:190:THR:CB	2.51	0.53
3:D:68:ARG:NH2	3:D:190:THR:HG21	2.23	0.53
4:E:44:TYR:CE1	4:E:308:VAL:CG1	2.92	0.53
5:F:151:GLN:HA	5:F:151:GLN:OE1	2.09	0.53
5:F:223:LEU:C	5:F:223:LEU:HD13	2.26	0.53
5:F:57:PRO:HG2	5:F:58:ALA:N	2.21	0.53
6:G:38:GLU:OE2	6:G:71:ALA:CA	2.56	0.53
7:H:100:LYS:O	7:H:100:LYS:CG	2.57	0.53
8:I:38:GLU:O	8:I:40:THR:N	2.41	0.53
12:Q:10:ILE:CG1	12:Q:10:ILE:O	2.55	0.53
2:A:873:G:C4'	12:Q:32:LYS:HB3	2.32	0.53
19:R:38:VAL:CG1	19:R:39:PRO:HD2	1.89	0.53
19:R:49:ASP:O	19:R:50:HIS:C	2.47	0.53
19:R:55:ALA:HB1	19:R:79:LEU:HD22	1.90	0.53
19:R:59:ASP:CG	19:R:60:LEU:HD23	2.29	0.53
20:U:76:TYR:N	20:U:76:TYR:CD1	2.75	0.53
21:V:39:PHE:CE2	21:V:42:GLY:N	2.77	0.53
15:W:19:LEU:CG	26:5:25:LEU:CG	2.77	0.53
15:W:84:ARG:HA	15:W:84:ARG:HE	1.74	0.53
15:W:84:ARG:CB	15:W:96:ILE:HD13	2.15	0.53
17:Y:14:ALA:HB3	17:Y:18:GLU:OE1	2.09	0.53
17:Y:73:HIS:CA	17:Y:91:LEU:HG	2.07	0.53
18:Z:139:THR:C	18:Z:141:MET:HE1	2.30	0.53
18:Z:142:ASN:CA	18:Z:171:VAL:HG21	2.36	0.53
18:Z:68:ALA:O	18:Z:69:VAL:CB	2.46	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:Z:69:VAL:O	18:Z:70:GLN:HB3	2.07	0.53
18:Z:74:ARG:HD3	18:Z:75:LYS:H	1.72	0.53
16:X:18:MET:CE	16:X:25:GLN:CA	2.87	0.53
4:E:107:GLU:C	4:E:110:ARG:HG3	2.29	0.53
2:A:1582:C:H3'	2:A:1583:A:H4'	1.91	0.53
2:A:2037:G:H2'	2:A:2038:G:C8	2.44	0.53
2:A:355:G:H2'	2:A:356:G:C8	2.44	0.53
2:A:929:G:C1'	23:3:43:ILE:CG1	2.83	0.53
26:5:4:HIS:CB	26:5:5:PRO:CD	2.80	0.53
27:6:49:VAL:HG12	27:6:50:PHE:N	2.24	0.53
28:7:30:ILE:HD13	28:7:33:ARG:CZ	2.31	0.53
2:A:1648:C:H2'	2:A:1649:G:C8	2.43	0.53
2:A:2277:G:N3	2:A:2277:G:C2'	2.72	0.53
2:A:2282:G:H5''	2:A:2283:C:O5'	2.09	0.53
2:A:2333:A:N9	2:A:2335:A:N1	2.54	0.53
2:A:2489:G:C5	2:A:2490:G:C5	2.97	0.53
2:A:2570:G:N2	2:A:2571:C:C2	2.77	0.53
2:A:2799:A:C3'	2:A:2801:A:OP2	2.54	0.53
2:A:380:U:HO2'	25:4:15:ILE:C	2.13	0.53
2:A:38:A:H2'	2:A:39:C:H6	1.71	0.53
2:A:972:G:OP1	2:A:975:G:OP1	2.26	0.53
3:D:119:PRO:HA	3:D:129:LEU:HD21	1.91	0.53
3:D:107:LYS:HG2	3:D:193:GLU:OE1	2.08	0.53
4:E:201:VAL:CG1	4:E:310:PHE:O	2.57	0.53
5:F:238:SER:C	5:F:241:ALA:CB	2.68	0.53
5:F:39:GLN:O	5:F:42:ARG:CB	2.57	0.53
8:I:3:VAL:HB	8:I:19:LYS:O	2.09	0.53
8:I:21:VAL:HG21	8:I:30:LEU:CD1	2.39	0.53
9:N:19:MET:CG	9:N:46:ILE:HD13	2.35	0.53
10:O:86:ILE:CG2	10:O:87:ILE:N	2.66	0.53
10:O:88:ARG:HG3	10:O:92:SER:OG	2.09	0.53
11:P:132:LYS:N	11:P:132:LYS:CD	2.48	0.53
11:P:66:VAL:CB	11:P:110:GLY:O	2.48	0.53
12:Q:134:PHE:O	12:Q:135:ALA:O	2.27	0.53
13:S:87:LEU:CD2	13:S:87:LEU:N	2.66	0.53
20:U:88:ILE:HG22	21:V:55:THR:CB	2.31	0.53
21:V:33:VAL:C	21:V:63:HIS:CE1	2.82	0.53
21:V:64:GLY:N	21:V:95:ILE:HG13	2.21	0.53
17:Y:19:ARG:NH1	17:Y:67:LEU:HB3	2.24	0.53
17:Y:78:THR:H	17:Y:89:ARG:NE	2.07	0.53
17:Y:80:GLU:HA	17:Y:86:GLU:HA	1.90	0.53
18:Z:146:HIS:CD2	18:Z:170:SER:HB2	2.44	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:81:ALA:O	8:I:148:GLN:HG3	2.08	0.53
22:2:31:ARG:O	22:2:34:GLN:N	2.39	0.53
2:A:121:G:N1	2:A:131:G:C5	2.77	0.53
2:A:138:G:N3	2:A:138:G:C3'	2.63	0.53
2:A:131:G:N2	2:A:149:A:C2	2.77	0.53
16:X:6:LYS:HD2	16:X:27:ALA:C	2.29	0.53
31:K:19:THR:CG2	31:K:39:CYS:HB3	2.39	0.53
2:A:1529:A:N7	2:A:1543:A:H8	2.06	0.53
2:A:1778:U:C6	2:A:1784:A:H2	2.27	0.53
24:0:77:ARG:O	24:0:79:ILE:CG1	2.54	0.53
25:4:30:GLU:O	25:4:31:ILE:CD1	2.52	0.53
29:8:4:MET:CB	29:8:5:LYS:HZ2	2.22	0.53
2:A:1697:G:O6	2:A:1698:A:C6	2.62	0.53
2:A:2041:U:H2'	2:A:2042:A:C5'	2.34	0.53
2:A:2059:A:C2	2:A:2503:A:N7	2.51	0.53
2:A:2295:C:N4	2:A:2337:G:C6	2.77	0.53
2:A:2355:C:H5'	24:0:21:LEU:CD1	2.32	0.53
2:A:2355:C:H5'	24:0:21:LEU:CD2	2.38	0.53
2:A:2400:G:H4'	27:6:20:PHE:CZ	2.44	0.53
2:A:2418:A:O2'	2:A:2419:U:H5'	2.09	0.53
2:A:248:G:N3	2:A:2431:U:H4'	2.23	0.53
2:A:2605:U:C4'	2:A:2605:U:C6	2.92	0.53
2:A:2745:C:O2'	2:A:2746:U:O5'	2.23	0.53
2:A:2880:C:C4	2:A:2881:C:C5	2.97	0.53
2:A:325:G:H21	17:Y:7:GLN:HE21	1.52	0.53
2:A:530:G:HO2'	2:A:531:C:C5'	2.22	0.53
2:A:604:G:H21	2:A:657:U:C4'	2.20	0.53
2:A:684:G:C2	2:A:794:G:C2	2.97	0.53
2:A:965:C:H1'	2:A:2273:A:N1	2.24	0.53
3:D:157:ALA:O	3:D:158:GLY:C	2.46	0.53
4:E:304:ASP:OD1	4:E:304:ASP:N	2.40	0.53
5:F:105:LYS:N	5:F:105:LYS:HD2	2.24	0.53
5:F:142:ASP:O	5:F:144:PHE:N	2.42	0.53
5:F:52:ALA:O	5:F:55:ARG:CG	2.54	0.53
6:G:21:VAL:HG11	6:G:132:VAL:HG21	1.87	0.53
9:N:49:ARG:O	9:N:50:GLU:C	2.47	0.53
11:P:125:PHE:O	11:P:130:ARG:NE	2.42	0.53
20:U:14:HIS:O	20:U:15:LYS:O	2.27	0.53
15:W:12:ILE:HD11	15:W:42:ARG:HD3	1.90	0.53
15:W:36:LEU:HD13	15:W:47:VAL:CB	2.39	0.53
17:Y:78:THR:HA	17:Y:89:ARG:N	2.22	0.53
18:Z:149:ALA:C	18:Z:152:ILE:HG13	2.22	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:Z:5:ALA:O	18:Z:6:LYS:CB	2.57	0.53
18:Z:62:PHE:CD1	18:Z:87:THR:HG21	2.44	0.53
8:I:117:LEU:HD22	8:I:121:ILE:CD1	2.39	0.53
2:A:148:C:C2	2:A:149:A:C6	2.97	0.53
16:X:40:ALA:O	16:X:41:VAL:C	2.47	0.53
4:E:107:GLU:CG	4:E:110:ARG:NH2	2.63	0.53
2:A:2858:C:O2	2:A:2858:C:C2'	2.57	0.53
2:A:265:A:N7	2:A:428:A:N1	2.56	0.53
2:A:2795:G:OP2	2:A:2795:G:N9	2.42	0.53
2:A:1417:C:H3'	2:A:1418:G:C8	2.43	0.53
2:A:2182:G:H2'	2:A:2183:C:C5	2.43	0.53
2:A:304:G:H1	2:A:313:C:N4	2.03	0.53
1:B:106:G:C6	1:B:107:U:C4	2.97	0.53
24:O:44:LYS:C	24:O:45:PHE:CG	2.82	0.52
2:A:988:A:P	23:3:11:SER:N	2.74	0.52
23:3:11:SER:OG	23:3:13:ILE:CG1	2.50	0.52
23:3:39:ASP:CA	23:3:44:ARG:NH2	2.72	0.52
2:A:125:G:C2	28:7:10:ARG:HA	2.44	0.52
29:8:8:LYS:C	29:8:10:ALA:H	2.06	0.52
30:9:2:LYS:O	30:9:4:ARG:N	2.42	0.52
2:A:1274:A:N1	2:A:1302:A:H2	2.07	0.52
2:A:1364:G:H3'	25:4:3:LYS:NZ	2.23	0.52
2:A:2052:G:H4'	4:E:239:GLY:C	2.25	0.52
2:A:2094:G:C2	2:A:2196:C:N3	2.68	0.52
2:A:2224:G:O2'	2:A:2225:A:O4'	2.26	0.52
2:A:2077:A:C2	2:A:2244:U:C2	2.96	0.52
2:A:2289:G:O3'	2:A:2383:G:O2'	2.27	0.52
2:A:2324:C:C2'	2:A:2325:G:OP1	2.57	0.52
2:A:2455:G:C6	2:A:2456:C:C4	2.97	0.52
2:A:2642:G:H2'	2:A:2643:G:C5'	2.39	0.52
2:A:2733:A:H2'	2:A:2734:A:O4'	2.09	0.52
2:A:2810:A:N9	2:A:2811:G:O4'	2.33	0.52
2:A:919:G:H2'	2:A:920:G:H8	1.75	0.52
4:E:268:LEU:HD11	4:E:271:ILE:HD11	1.90	0.52
4:E:61:PRO:CB	4:E:69:PRO:HA	2.38	0.52
5:F:168:ARG:CA	5:F:232:LEU:O	2.57	0.52
5:F:58:ALA:HB2	5:F:79:ARG:CA	2.39	0.52
6:G:145:ASP:C	13:S:15:GLU:HA	2.29	0.52
7:H:10:ILE:CG2	7:H:14:VAL:CB	2.49	0.52
9:N:25:GLN:O	9:N:28:GLU:N	2.42	0.52
9:N:88:PRO:C	9:N:90:LYS:N	2.62	0.52
10:O:63:VAL:CG1	10:O:63:VAL:O	2.57	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:O:88:ARG:CG	10:O:92:SER:OG	2.57	0.52
11:P:124:ASP:O	11:P:125:PHE:CE2	2.56	0.52
11:P:66:VAL:C	11:P:68:GLU:N	2.62	0.52
12:Q:65:ARG:NH1	12:Q:87:LYS:HB2	2.24	0.52
12:Q:69:ASN:ND2	12:Q:70:ARG:H	2.00	0.52
19:R:107:ASP:CG	19:R:109:ALA:N	2.41	0.52
19:R:80:PHE:O	19:R:84:ALA:HB2	2.07	0.52
20:U:46:GLU:O	20:U:49:ASP:N	2.42	0.52
2:A:1156:A:P	20:U:55:ARG:NH1	2.82	0.52
21:V:50:ASP:CB	21:V:53:LYS:HE3	2.39	0.52
20:U:20:ARG:NH1	21:V:75:LYS:CD	2.73	0.52
15:W:95:ILE:HG22	15:W:96:ILE:O	2.09	0.52
17:Y:26:THR:O	17:Y:27:LEU:CB	2.56	0.52
17:Y:47:THR:OG1	17:Y:60:GLY:O	2.27	0.52
18:Z:113:VAL:H	18:Z:174:PRO:HD3	1.74	0.52
18:Z:25:ASN:C	18:Z:84:TYR:HE1	2.12	0.52
2:A:135:G:C2	2:A:145:G:C6	2.96	0.52
2:A:1598:C:C5'	16:X:34:LYS:HB2	2.40	0.52
2:A:1524:G:C4	2:A:1525:G:C8	2.97	0.52
2:A:440:G:OP1	17:Y:6:LYS:HD3	2.07	0.52
2:A:1056:G:N2	2:A:1104:C:H42	2.08	0.52
6:G:86:THR:HG22	6:G:86:THR:O	2.09	0.52
24:O:58:THR:OG1	24:O:58:THR:O	2.24	0.52
25:4:28:ARG:HB3	25:4:29:PRO:CD	2.39	0.52
25:4:39:VAL:H	25:4:40:HIS:CE1	2.26	0.52
29:8:60:LEU:CD2	29:8:60:LEU:O	2.35	0.52
2:A:1028:A:H2	2:A:2486:G:O2'	1.89	0.52
2:A:2103:C:C2	2:A:2187:G:N1	2.46	0.52
2:A:2100:G:C4	2:A:2190:G:N2	2.77	0.52
2:A:2212:A:H1'	2:A:2213:U:O4	2.08	0.52
2:A:2299:G:C5	2:A:2300:G:N7	2.77	0.52
2:A:2488:A:C2	2:A:2489:G:C4	2.97	0.52
2:A:2061:G:C4	2:A:2503:A:H2	2.21	0.52
2:A:2586:C:O5'	2:A:2586:C:H6	1.91	0.52
2:A:2589:A:N3	2:A:2590:A:C8	2.77	0.52
2:A:2600:A:H2'	2:A:2601:C:C5	2.44	0.52
2:A:2748:A:H2	2:A:2758:A:H62	1.58	0.52
2:A:2787:C:H5''	2:A:2788:C:OP2	2.08	0.52
2:A:2828:C:H42	2:A:2829:C:N4	2.07	0.52
2:A:2893:G:O2'	2:A:2894:G:N9	2.29	0.52
2:A:563:G:C5	2:A:2018:G:C6	2.97	0.52
2:A:602:G:H2'	2:A:655:A:N1	2.24	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:687:C:H2'	2:A:688:U:C6	2.44	0.52
2:A:792:G:H21	2:A:2072:G:C1'	2.22	0.52
2:A:848:G:H3'	2:A:848:G:C8	2.43	0.52
3:D:183:ILE:HG23	3:D:184:LEU:N	2.16	0.52
4:E:296:VAL:CG1	4:E:297:LYS:N	2.72	0.52
4:E:303:PRO:HB2	4:E:307:LEU:CB	2.38	0.52
2:A:606:U:P	5:F:104:ASP:HB2	2.49	0.52
5:F:97:ASP:C	5:F:98:ARG:HD3	2.29	0.52
2:A:2315:G:P	6:G:20:LYS:HD3	2.49	0.52
10:O:102:VAL:O	10:O:122:ILE:O	2.26	0.52
10:O:22:ILE:CG1	10:O:40:VAL:O	2.58	0.52
11:P:115:ARG:C	11:P:117:GLU:N	2.60	0.52
12:Q:126:VAL:HG12	12:Q:127:ASN:N	2.24	0.52
19:R:104:ARG:O	19:R:107:ASP:OD2	2.27	0.52
2:A:2009:G:C2'	19:R:106:GLY:O	2.57	0.52
19:R:77:ARG:NH1	19:R:77:ARG:CG	2.38	0.52
19:R:96:ARG:O	19:R:98:LEU:HG	2.10	0.52
13:S:23:ARG:HH21	13:S:35:VAL:CG1	2.21	0.52
14:T:13:ILE:HD12	14:T:33:SER:CB	2.38	0.52
20:U:62:ILE:HD13	20:U:62:ILE:N	2.24	0.52
17:Y:87:VAL:CG1	17:Y:88:PRO:N	2.73	0.52
18:Z:50:GLY:O	18:Z:51:LEU:HB2	2.08	0.52
18:Z:71:MET:SD	18:Z:78:PRO:HD3	2.39	0.52
8:I:130:PRO:HA	8:I:140:THR:HA	1.90	0.52
22:2:26:GLU:HG2	22:2:27:LEU:HG	1.91	0.52
2:A:1598:C:C5'	16:X:34:LYS:CB	2.88	0.52
16:X:7:HIS:ND1	16:X:8:PRO:N	2.56	0.52
2:A:280:C:HO3'	2:A:281:G:P	2.28	0.52
2:A:1609:A:C5	2:A:1616:A:N3	2.77	0.52
2:A:1174:A:N1	2:A:1176:G:H8	2.07	0.52
24:0:45:PHE:HE1	24:0:78:PHE:CE2	2.22	0.52
23:3:7:LYS:CG	23:3:8:LEU:H	2.22	0.52
25:4:11:PRO:CA	25:4:40:HIS:CD2	2.82	0.52
28:7:22:MET:HA	28:7:28:ARG:HG2	1.91	0.52
29:8:4:MET:HE3	29:8:4:MET:N	2.24	0.52
30:9:4:ARG:C	30:9:36:GLN:HG2	2.26	0.52
30:9:5:SER:O	30:9:6:SER:CB	2.57	0.52
2:A:1005:C:H1'	9:N:21:ARG:CG	2.39	0.52
2:A:1028:A:H2'	2:A:1029:A:H8	1.74	0.52
2:A:10:G:C2	2:A:2629:A:N1	2.77	0.52
2:A:2355:C:H5''	2:A:2356:C:OP2	2.08	0.52
2:A:2474:C:H5	2:A:2475:C:N3	2.06	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:247:G:H4'	2:A:386:G:C4	2.44	0.52
2:A:2479:G:C2	2:A:2480:C:O2	2.62	0.52
2:A:2544:G:H2'	2:A:2545:G:C8	2.37	0.52
2:A:2578:G:N7	4:E:237:ASN:OD1	2.41	0.52
2:A:2662:A:C2	2:A:2663:G:H4'	2.44	0.52
2:A:2657:A:C6	2:A:2665:A:C8	2.97	0.52
2:A:2682:U:H2'	2:A:2683:C:O5'	2.09	0.52
2:A:2728:U:C6	2:A:2728:U:O5'	2.62	0.52
2:A:2742:C:N3	2:A:2743:C:C5	2.77	0.52
2:A:2771:C:N3	2:A:2772:C:C4	2.77	0.52
2:A:2887:U:O2'	2:A:2888:C:H5'	2.08	0.52
2:A:911:A:H5''	2:A:912:C:H5''	1.91	0.52
3:D:107:LYS:HB3	3:D:193:GLU:HB2	1.92	0.52
3:D:144:GLU:HB3	3:D:188:ARG:O	2.09	0.52
2:A:2622:C:C5'	4:E:255:GLN:OE1	2.58	0.52
2:A:2822:G:OP1	4:E:258:TYR:HE2	1.93	0.52
5:F:167:ASP:CB	5:F:232:LEU:H	2.20	0.52
5:F:239:ALA:O	5:F:242:GLU:CG	2.54	0.52
6:G:103:ASN:CA	6:G:104:PHE:CD1	2.93	0.52
7:H:124:VAL:HG22	7:H:124:VAL:O	2.09	0.52
7:H:140:VAL:O	7:H:141:GLY:C	2.47	0.52
9:N:39:VAL:CA	9:N:103:VAL:HG13	2.37	0.52
9:N:60:ARG:HD2	9:N:71:TYR:HE2	1.74	0.52
10:O:25:LEU:HD12	10:O:38:VAL:HB	1.91	0.52
2:A:1665:A:H1'	10:O:67:ARG:HD3	1.90	0.52
11:P:114:VAL:HG21	11:P:132:LYS:HB2	1.81	0.52
12:Q:18:GLU:CB	12:Q:23:ILE:HD11	2.40	0.52
19:R:67:LEU:HD13	19:R:68:ARG:CA	2.39	0.52
13:S:22:GLN:OE1	13:S:23:ARG:N	2.42	0.52
20:U:46:GLU:O	20:U:49:ASP:CA	2.58	0.52
21:V:69:ILE:CG2	21:V:88:GLN:HB2	2.38	0.52
15:W:69:LEU:HD22	15:W:109:GLU:HA	1.92	0.52
15:W:5:ALA:CB	15:W:50:VAL:O	2.57	0.52
17:Y:11:GLN:CG	17:Y:21:LYS:CE	2.87	0.52
8:I:94:THR:HG23	8:I:96:LYS:CB	2.34	0.52
2:A:110:G:H2'	2:A:111:A:C8	2.44	0.52
2:A:72:U:O5'	16:X:2:TRP:CZ2	2.63	0.52
2:A:1598:C:H5'	16:X:34:LYS:CG	2.37	0.52
2:A:1545:A:H3'	2:A:545(A):A:O5'	2.09	0.52
2:A:282:A:N6	2:A:360:G:H21	2.07	0.52
2:A:1943:U:H4'	2:A:1944:U:H5'	1.91	0.52
14:T:46:ALA:O	14:T:48:ASN:OD1	2.27	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:118:A:C8	2:A:119:A:C8	2.97	0.52
2:A:484:C:O5'	2:A:484:C:H6	1.92	0.52
2:A:270(X):G:H2'	2:A:270(Y):G:H5'	1.89	0.52
2:A:1554:A:O5'	2:A:1555:G:OP2	2.27	0.52
2:A:549:G:H2'	2:A:550:G:O4'	2.09	0.52
21:V:7:THR:O	21:V:9:GLY:O	2.27	0.52
24:0:48:GLY:HA2	24:0:56:ASP:N	2.24	0.52
24:0:37:LEU:O	24:0:68:VAL:HA	2.09	0.52
2:A:929:G:O2'	23:3:37:LEU:HD13	2.09	0.52
27:6:12:MET:CE	27:6:54:LYS:C	2.78	0.52
29:8:31:HIS:C	29:8:32:GLN:CG	2.78	0.52
2:A:1007:C:N3	2:A:1008:C:N4	2.57	0.52
2:A:1005:C:C5	2:A:1143:A:H5''	2.38	0.52
2:A:1697:G:O6	2:A:1698:A:N6	2.41	0.52
2:A:1827:C:H1'	2:A:1970:A:H2	1.75	0.52
2:A:2185:C:C2'	2:A:2186:G:H8	2.17	0.52
2:A:2259:G:N7	2:A:2260:C:N4	2.56	0.52
2:A:2283:C:H1'	2:A:2389:G:N2	2.25	0.52
2:A:2296:U:OP2	2:A:2296:U:O4'	2.27	0.52
2:A:2297:C:N3	2:A:2333:A:N6	2.54	0.52
2:A:2429:G:C5'	2:A:2430:A:P	2.97	0.52
2:A:199:A:C5	2:A:2434:A:N1	2.77	0.52
2:A:2565:A:C3'	2:A:2566:A:O4'	2.57	0.52
2:A:2578:G:C8	4:E:237:ASN:CG	2.81	0.52
2:A:2762:G:H2'	2:A:2763:G:H8	1.74	0.52
2:A:2842:G:H1	2:A:2875:C:N4	2.07	0.52
2:A:581:C:P	20:U:33:ARG:NH1	2.75	0.52
2:A:729:G:C6	3:D:207:ALA:CA	2.82	0.52
3:D:94:ASN:OD1	3:D:100:LYS:HE2	2.09	0.52
3:D:143:ILE:CG1	3:D:153:LEU:N	2.73	0.52
4:E:200:ASP:H	4:E:312:ARG:N	2.06	0.52
2:A:2682:U:C5	4:E:48:MET:SD	3.02	0.52
4:E:70:VAL:C	4:E:71:THR:CG2	2.78	0.52
2:A:2313:C:O5'	6:G:72:LYS:HG3	1.98	0.52
9:N:21:ARG:H	9:N:21:ARG:CD	2.22	0.52
9:N:74:ARG:CB	9:N:76:ASP:OD2	2.53	0.52
10:O:35:ILE:HA	10:O:62:VAL:CA	1.87	0.52
11:P:73:VAL:CG1	11:P:76:LEU:HB3	2.40	0.52
19:R:38:VAL:CG1	19:R:39:PRO:N	2.46	0.52
19:R:50:HIS:O	19:R:51:LEU:C	2.48	0.52
13:S:27:LEU:CB	13:S:33:ARG:HH21	1.89	0.52
13:S:46:GLN:C	13:S:47:LEU:CG	2.78	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:S:90:LEU:HA	13:S:93:GLN:NE2	2.24	0.52
14:T:22:VAL:N	14:T:29:THR:OG1	2.43	0.52
20:U:39:LEU:O	20:U:41:ASN:C	2.48	0.52
15:W:48:ALA:O	15:W:51:LEU:HB2	2.09	0.52
18:Z:34:LEU:HD13	18:Z:39:PHE:CE1	2.38	0.52
8:I:94:THR:CG2	8:I:97:GLN:H	2.16	0.52
22:2:2:VAL:C	22:2:4:HIS:ND1	2.50	0.52
2:A:2312:U:C5'	6:G:53:LYS:HB2	2.31	0.52
6:G:63:ILE:HG23	6:G:64:ARG:N	2.24	0.52
31:K:108:ILE:O	31:K:111:THR:OG1	2.19	0.52
2:A:359:A:C2	2:A:361:G:N2	2.77	0.52
13:S:70:GLY:C	13:S:71:TRP:CE3	2.82	0.52
2:A:152:G:H2'	2:A:153:C:H5'	1.91	0.52
29:8:10:ALA:HA	29:8:14:ILE:HG21	1.92	0.52
2:A:2279:G:C6	2:A:2280:G:C5	2.97	0.52
2:A:2297:C:N4	2:A:2320:A:C8	2.77	0.52
2:A:2404:C:C4	2:A:2405:G:C4	2.98	0.52
2:A:2423:U:HO2'	2:A:2424:C:P	2.23	0.52
2:A:2526:G:N3	2:A:2527:C:H6	2.06	0.52
2:A:2524:G:N1	2:A:2540:C:C4	2.77	0.52
2:A:2597:G:O6	2:A:2598:A:N6	2.41	0.52
2:A:2654:A:O3'	2:A:2655:G:H4'	2.10	0.52
2:A:2642:G:C2	2:A:2773:C:C2	2.97	0.52
2:A:2826:A:N1	2:A:2827:C:H6	1.94	0.52
2:A:389:G:C8	2:A:2413:G:H4'	2.44	0.52
2:A:688:U:H5'	2:A:1780:A:C2	2.45	0.52
3:D:145:LEU:HD13	3:D:146:LYS:N	2.24	0.52
2:A:1799:G:H22	3:D:153:LEU:HG	1.71	0.52
3:D:158:GLY:HA3	3:D:194:VAL:HG21	1.89	0.52
3:D:67:LYS:O	3:D:67:LYS:HG2	2.10	0.52
4:E:271:ILE:HD11	4:E:294:THR:CG2	2.40	0.52
5:F:153:VAL:O	5:F:155:SER:N	2.42	0.52
5:F:22:PHE:CZ	5:F:115:LEU:CG	2.93	0.52
9:N:39:VAL:O	9:N:40:ASN:CG	2.48	0.52
9:N:76:ASP:O	9:N:80:LYS:HG2	2.09	0.52
11:P:66:VAL:CA	11:P:67:ARG:NE	2.70	0.52
19:R:92:GLY:HA2	19:R:94:TYR:CE1	2.44	0.52
20:U:98:ILE:HB	20:U:106:PHE:CD1	2.44	0.52
20:U:17:VAL:HG11	20:U:36:PHE:HA	1.90	0.52
21:V:42:GLY:HA3	21:V:54:TYR:HH	1.72	0.52
15:W:4:LYS:CG	15:W:106:ILE:HA	2.39	0.52
8:I:117:LEU:HD22	8:I:121:ILE:HD11	1.91	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:56:ARG:HA	6:G:63:ILE:HA	1.90	0.52
31:K:121:LEU:HD22	31:K:125:MET:HE3	1.85	0.52
16:X:45:TYR:CE2	16:X:73:ASP:HA	2.44	0.52
2:A:479:A:O2'	2:A:481:G:H5''	2.10	0.52
2:A:2795:G:P	2:A:2795:G:H3'	2.50	0.52
14:T:47:ARG:O	14:T:48:ASN:CG	2.47	0.52
2:A:869:G:H2'	2:A:870:A:O4'	2.10	0.52
2:A:381:G:H1	2:A:393:C:H42	1.56	0.52
26:5:45:ILE:CB	26:5:52:TYR:HE1	2.19	0.52
26:5:6:VAL:N	26:5:8:LYS:CE	2.73	0.52
2:A:1655:A:H4'	4:E:211:GLN:CA	2.39	0.52
2:A:1890:A:C2	2:A:1891:G:H1'	2.44	0.52
2:A:2093:G:N9	2:A:2198:A:N1	2.56	0.52
2:A:2228:G:C5'	2:A:2228:G:C8	2.89	0.52
2:A:2251:G:H3'	12:Q:102:ARG:HH22	1.75	0.52
2:A:2285:C:C4'	2:A:2288:A:C6	2.79	0.52
2:A:2330:G:N3	2:A:2331:G:C1'	2.71	0.52
2:A:2376:A:H2'	2:A:2377:A:H8	1.74	0.52
2:A:2380:C:C3'	2:A:2381:C:C5'	2.87	0.52
2:A:2553:G:H8	2:A:2554:U:O4'	1.87	0.52
2:A:2605:U:H2'	2:A:2606:C:H5'	1.92	0.52
2:A:2623:G:C2	2:A:2624:G:C8	2.97	0.52
2:A:2657:A:C3'	2:A:2658:C:C5'	2.87	0.52
2:A:530:G:C6	2:A:2021:C:O2	2.62	0.52
2:A:637:A:C8	11:P:111:ALA:HB3	2.39	0.52
3:D:166:LYS:HA	3:D:182:MET:HE2	1.91	0.52
3:D:64:ILE:HD13	3:D:102:TYR:O	2.08	0.52
3:D:75:GLY:N	3:D:116:MET:HB2	2.25	0.52
4:E:102:ASP:OD1	4:E:104:PHE:CZ	2.62	0.52
4:E:77:PRO:HB2	4:E:186:GLU:HB2	1.90	0.52
4:E:189:MET:C	4:E:190:ASN:CG	2.68	0.52
4:E:229:GLN:HB2	4:E:231:TRP:HB2	1.91	0.52
4:E:70:VAL:CB	4:E:295:LEU:CD2	2.87	0.52
5:F:153:VAL:HG11	5:F:207:LEU:CD1	2.39	0.52
5:F:26:VAL:CG1	5:F:27:ARG:N	2.72	0.52
6:G:18:ILE:O	6:G:135:VAL:HG21	2.10	0.52
6:G:25:MET:O	6:G:71:ALA:O	2.28	0.52
7:H:23:VAL:HG12	7:H:74:MET:SD	2.49	0.52
8:I:39:ALA:O	8:I:40:THR:C	2.48	0.52
9:N:21:ARG:O	9:N:24:SER:CB	2.57	0.52
10:O:104:ARG:NH1	10:O:122:ILE:HA	2.24	0.52
12:Q:54:VAL:C	12:Q:56:ILE:N	2.62	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:R:22:ARG:NH2	19:R:69:ASP:HB3	2.25	0.52
19:R:81:ASP:CG	19:R:82:GLU:H	2.13	0.52
13:S:11:ARG:HA	13:S:14:ARG:CZ	2.40	0.52
13:S:27:LEU:HA	13:S:33:ARG:NH2	2.20	0.52
20:U:102:GLU:HB3	20:U:105:ALA:HB3	1.91	0.52
21:V:50:ASP:N	21:V:53:LYS:CG	2.72	0.52
15:W:84:ARG:HA	15:W:84:ARG:NE	2.25	0.52
17:Y:41:ARG:O	17:Y:112:LEU:HA	2.10	0.52
17:Y:44:ALA:HB1	17:Y:65:VAL:CG2	2.40	0.52
18:Z:134:LEU:HD23	18:Z:135:VAL:N	2.25	0.52
2:A:131:G:C2	2:A:149:A:N1	2.78	0.52
2:A:2306:C:C5	2:A:2311:A:N1	2.77	0.52
2:A:2311:A:H2'	2:A:2312:U:H6	1.73	0.52
6:G:55:LYS:O	6:G:65:GLU:CB	2.58	0.52
31:K:100:VAL:CG2	31:K:137:ILE:HG23	2.40	0.52
25:4:48:ARG:O	25:4:49:PHE:O	2.27	0.52
2:A:95:G:C2'	22:2:42:ASN:HB3	2.39	0.52
4:E:65:MET:C	4:E:65:MET:SD	2.85	0.52
2:A:734:A:H2'	2:A:735:A:C8	2.45	0.52
23:3:7:LYS:HA	23:3:33:GLN:O	2.10	0.52
25:4:7:PRO:HD2	25:4:56:VAL:CG1	2.39	0.52
29:8:14:ILE:HG22	29:8:15:LYS:N	2.23	0.52
2:A:993:G:H1'	2:A:1162:G:N2	2.24	0.52
2:A:125:G:H21	28:7:10:ARG:CA	2.19	0.52
2:A:1890:A:H2	2:A:2235:G:O4'	1.92	0.52
2:A:2048:G:N1	2:A:2621:A:N3	2.58	0.52
2:A:2300:G:H2'	2:A:2301:C:C6	2.44	0.52
2:A:2633:G:P	2:A:2633:G:H8	2.31	0.52
2:A:2673:G:C2	2:A:2674:G:C5	2.98	0.52
2:A:2734:A:C6	2:A:2735:G:C4	2.98	0.52
2:A:2628:C:C2'	2:A:2781:A:H2'	2.39	0.52
2:A:2792:G:C6	2:A:2793:G:C6	2.98	0.52
2:A:2827:C:O2	2:A:2827:C:C2'	2.52	0.52
2:A:2832:U:C2	2:A:2832:U:H3'	2.41	0.52
2:A:327:G:C2	2:A:328:U:H6	2.27	0.52
2:A:389:G:O4'	2:A:2413:G:H4'	2.09	0.52
2:A:452:G:H21	2:A:457:A:H2	1.56	0.52
2:A:35:G:H1'	2:A:454:A:N3	2.24	0.52
2:A:684:G:C6	2:A:775:G:C5	2.98	0.52
3:D:167:GLU:O	3:D:170:TYR:C	2.47	0.52
4:E:101:THR:O	4:E:102:ASP:C	2.47	0.52
5:F:153:VAL:CB	5:F:157:LEU:HD21	2.18	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:H:58:LYS:HG3	7:H:59:HIS:ND1	2.24	0.52
12:Q:140:TYR:O	12:Q:142:LYS:C	2.48	0.52
12:Q:50:VAL:CG1	12:Q:52:LYS:H	2.16	0.52
19:R:75:LEU:O	19:R:77:ARG:CA	2.58	0.52
14:T:53:ASP:C	14:T:56:ARG:NE	2.52	0.52
20:U:113:SER:O	20:U:115:ASN:C	2.48	0.52
20:U:115:ASN:HA	20:U:118:GLN:O	2.09	0.52
2:A:995:C:O2'	20:U:57:PHE:CG	2.58	0.52
20:U:98:ILE:N	20:U:98:ILE:CD1	2.72	0.52
16:X:33:SER:N	16:X:37:VAL:CG2	2.64	0.52
2:A:264:C:C2'	2:A:265:A:H5''	2.40	0.52
2:A:1530:G:H2'	2:A:1530:G:N3	2.25	0.52
2:A:1805:U:C5'	3:D:235:PRO:HB3	2.39	0.52
2:A:758:C:H2'	2:A:759:G:C8	2.45	0.52
2:A:301:G:H2'	2:A:302:C:C6	2.44	0.52
2:A:1460:A:N1	2:A:1732:A:C2	2.78	0.52
24:0:36:ILE:C	24:0:37:LEU:HG	2.30	0.52
23:3:12:PRO:O	23:3:20:LYS:HE2	2.10	0.52
25:4:14:ILE:HG13	25:4:38:GLY:C	2.29	0.52
26:5:10:LYS:O	26:5:11:THR:C	2.48	0.52
27:6:41:ASP:HB2	27:6:46:LYS:HZ3	1.65	0.52
2:A:2330:G:N3	2:A:2331:G:O4'	2.42	0.52
2:A:2475:C:O2'	2:A:2477:C:OP2	2.28	0.52
2:A:2531:A:N3	2:A:2532:G:H5'	2.25	0.52
2:A:2704:C:O2'	2:A:2705:A:O4'	2.27	0.52
2:A:2710:C:O2'	2:A:2711:A:O4'	2.28	0.52
2:A:2817:G:N3	2:A:2818:G:H1'	2.25	0.52
2:A:2839:G:C6	2:A:2840:C:C5	2.85	0.52
2:A:2865:U:C2	2:A:2866:U:C5	2.97	0.52
2:A:2848:G:C6	2:A:2867:G:N2	2.77	0.52
2:A:848:G:H2'	2:A:849:A:C8	2.42	0.52
2:A:945:A:H2'	2:A:946:G:O5'	2.10	0.52
1:B:80:U:H2'	1:B:81:G:C8	2.44	0.52
3:D:154:VAL:HG21	3:D:160:SER:CA	2.35	0.52
3:D:216:ALA:CB	3:D:223:ASN:HB2	2.30	0.52
4:E:81:VAL:HG11	4:E:100:TRP:HZ3	1.75	0.52
5:F:105:LYS:O	5:F:106:GLU:O	2.28	0.52
5:F:165:ASP:O	5:F:168:ARG:CB	2.58	0.52
5:F:88:SER:O	5:F:89:ALA:HB3	2.09	0.52
6:G:21:VAL:O	6:G:75:LEU:O	2.28	0.52
7:H:121:GLU:O	7:H:123:GLU:OE1	2.28	0.52
7:H:166:GLU:OE2	7:H:166:GLU:CA	2.57	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:H:30:GLY:HA3	7:H:78:VAL:C	2.28	0.52
7:H:57:GLU:O	7:H:59:HIS:N	2.42	0.52
7:H:7:PRO:CD	7:H:68:ARG:CD	2.64	0.52
8:I:1:MET:CB	8:I:22:ALA:H	2.22	0.52
8:I:43:ASN:HA	8:I:46:ALA:HB3	1.91	0.52
12:Q:27:GLY:C	12:Q:28:ILE:CG1	2.78	0.52
13:S:34:LEU:HD21	13:S:102:LEU:CG	2.39	0.52
14:T:8:TYR:CD1	14:T:54:THR:HB	2.44	0.52
21:V:74:TYR:CE1	21:V:87:ARG:CA	2.93	0.52
15:W:17:VAL:CA	15:W:20:VAL:HG23	2.40	0.52
15:W:29:LEU:HG	15:W:30:GLU:N	2.21	0.52
17:Y:103:LEU:CD2	17:Y:108:ARG:C	2.76	0.52
2:A:294:A:O2'	17:Y:15:PRO:HG3	2.09	0.52
17:Y:34:GLU:C	17:Y:35:TYR:CD2	2.83	0.52
18:Z:152:ILE:HG22	18:Z:153:LYS:N	2.23	0.52
18:Z:114:ASP:HA	18:Z:170:SER:O	2.07	0.52
2:A:2307:G:C5'	2:A:2307:G:H8	2.22	0.52
6:G:55:LYS:O	6:G:56:ARG:HG2	2.09	0.52
31:K:130:GLY:O	31:K:133:LYS:HB2	2.10	0.52
2:A:1530:G:H1'	2:A:1542:G:C6	2.45	0.52
2:A:185:U:H4'	2:A:218:A:H4'	1.91	0.52
24:0:65:GLY:CA	24:0:66:LYS:NZ	2.68	0.52
24:0:37:LEU:CG	24:0:68:VAL:CG1	2.78	0.52
2:A:2046:G:H1'	26:5:22:HIS:CE1	2.44	0.52
26:5:45:ILE:CG1	26:5:52:TYR:CE1	2.61	0.52
28:7:43:THR:O	28:7:45:SER:OG	2.26	0.52
29:8:55:TRP:CE3	29:8:59:LYS:NZ	2.75	0.52
29:8:60:LEU:C	29:8:61:MET:O	2.47	0.52
2:A:1790:C:O3'	3:D:210:LYS:CD	2.57	0.52
2:A:2231:C:OP1	25:4:39:VAL:HA	2.10	0.52
2:A:2283:C:C2	2:A:2284:C:C1'	2.90	0.52
2:A:2284:C:C2'	2:A:2284:C:O2	2.58	0.52
2:A:2373:G:N3	2:A:2374:C:C4	2.78	0.52
2:A:2410:G:C5	2:A:2411:A:C5	2.98	0.52
2:A:2471:C:N3	2:A:2479:G:N2	2.58	0.52
2:A:2474:C:C5	2:A:2475:C:C2	2.98	0.52
2:A:2549:G:H8	2:A:2549:G:H5''	1.74	0.52
2:A:2546:U:O2	2:A:2567:G:H8	1.93	0.52
2:A:2584:U:C5	2:A:2585:U:H2'	2.45	0.52
2:A:2049:G:N1	2:A:2620:C:N4	2.58	0.52
2:A:2668:G:C2	2:A:2669:G:N9	2.77	0.52
2:A:2680:C:C5'	4:E:206:LYS:NZ	2.73	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2807:G:C8	2:A:2808:U:C5	2.98	0.52
3:D:76:ARG:HG2	3:D:113:MET:HB2	1.92	0.52
4:E:104:PHE:HB3	4:E:108:LEU:CD1	2.40	0.52
4:E:199:ALA:HB1	4:E:312:ARG:C	2.29	0.52
5:F:237:GLU:O	5:F:239:ALA:C	2.48	0.52
6:G:97:GLN:CG	6:G:106:PHE:CE2	2.93	0.52
6:G:140:ARG:O	6:G:143:LYS:N	2.43	0.52
7:H:120:LEU:CD1	7:H:143:LEU:CD1	2.69	0.52
7:H:60:HIS:O	7:H:63:LEU:CB	2.58	0.52
7:H:7:PRO:HD3	7:H:68:ARG:NE	2.24	0.52
10:O:8:LEU:CB	10:O:82:ASN:O	2.58	0.52
10:O:97:ARG:HG2	10:O:98:ILE:N	2.25	0.52
11:P:127:GLU:O	11:P:128:GLY:C	2.47	0.52
11:P:67:ARG:HG2	11:P:68:GLU:N	2.25	0.52
12:Q:85:ILE:CA	12:Q:122:PHE:HB3	2.39	0.52
19:R:52:ILE:O	19:R:53:HIS:C	2.48	0.52
19:R:82:GLU:OE1	19:R:82:GLU:HA	2.09	0.52
13:S:127:LEU:O	13:S:128:ASP:C	2.47	0.52
20:U:8:ILE:C	20:U:11:ARG:CG	2.79	0.52
21:V:4:ILE:CG1	21:V:13:ARG:HD3	2.39	0.52
17:Y:11:GLN:CB	17:Y:21:LYS:CE	2.88	0.52
17:Y:46:ASP:CG	17:Y:98:VAL:HG13	2.30	0.52
18:Z:125:PRO:HG3	18:Z:130:ILE:CG2	2.38	0.52
18:Z:145:ASP:O	18:Z:146:HIS:CG	2.59	0.52
18:Z:151:ASP:CB	18:Z:153:LYS:HZ2	2.16	0.52
2:A:876:C:H5'	18:Z:165:GLU:OE2	2.10	0.52
8:I:77:VAL:CB	8:I:143:VAL:HA	2.38	0.52
22:2:33:VAL:O	22:2:34:GLN:C	2.48	0.52
2:A:360:G:H2'	2:A:361:G:O4'	2.10	0.52
2:A:983:A:H3'	2:A:984:A:O4'	2.09	0.52
2:A:1422:G:H2'	2:A:1423:G:C8	2.43	0.52
24:0:80:SER:OG	24:0:84:ALA:HB3	2.06	0.52
27:6:16:ALA:CB	27:6:42:PRO:HG3	2.40	0.52
2:A:1263:U:H3'	2:A:1264:G:C8	2.45	0.52
2:A:2361:A:C4	2:A:2362:G:C8	2.98	0.52
2:A:2363:C:O2'	24:0:38:VAL:CG1	2.53	0.52
2:A:2422:A:H2'	2:A:2424:C:H5	1.72	0.52
2:A:2072:G:N1	2:A:2438:U:N3	2.58	0.52
2:A:2465:C:HO2'	2:A:2466:C:P	2.27	0.52
2:A:2485:G:O2'	2:A:2486:G:C4'	2.54	0.52
2:A:2584:U:C5	2:A:2585:U:C2'	2.93	0.52
2:A:2616:C:H2'	2:A:2617:C:H6	1.74	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2632:A:H2'	2:A:2632:A:N3	2.24	0.52
2:A:2663:G:C2'	2:A:2664:G:C8	2.70	0.52
2:A:2762:G:H2'	2:A:2763:G:C8	2.45	0.52
2:A:573:G:C3'	2:A:574:C:H5''	2.36	0.52
2:A:686:G:N3	2:A:686:G:H5''	2.25	0.52
4:E:238:LEU:CD2	4:E:238:LEU:N	2.74	0.52
5:F:196:THR:CB	5:F:236:THR:HG21	2.39	0.52
5:F:197:SER:HB3	5:F:236:THR:O	2.10	0.52
7:H:163:TYR:O	7:H:166:GLU:HG2	2.10	0.52
9:N:14:ALA:HB3	9:N:40:ASN:CB	2.36	0.52
10:O:101:PRO:O	10:O:102:VAL:HG23	2.10	0.52
12:Q:133:GLU:HG3	12:Q:134:PHE:H	1.74	0.52
12:Q:46:VAL:CG2	12:Q:156:ASN:ND2	2.70	0.52
19:R:60:LEU:HD23	19:R:61:HIS:N	2.24	0.52
19:R:67:LEU:HD23	19:R:72:ASP:H	1.75	0.52
13:S:52:PRO:O	13:S:53:ASN:C	2.48	0.52
20:U:20:ARG:NH1	21:V:75:LYS:HE3	2.22	0.52
21:V:33:VAL:CB	21:V:63:HIS:ND1	2.63	0.52
21:V:93:ILE:O	21:V:95:ILE:HD11	2.09	0.52
21:V:67:LYS:HG3	21:V:94:LYS:HG3	1.91	0.52
15:W:105:VAL:O	15:W:105:VAL:HG23	2.10	0.52
17:Y:31:LEU:O	17:Y:32:ARG:C	2.49	0.52
17:Y:46:ASP:N	17:Y:62:VAL:CG1	2.70	0.52
22:2:47:LYS:O	22:2:50:ARG:N	2.43	0.52
31:K:32:GLY:O	31:K:33:VAL:CG2	2.58	0.52
9:N:107:ASN:ND2	9:N:107:ASN:N	2.51	0.52
2:A:693:C:H1'	2:A:1353:A:H2	1.74	0.52
2:A:1689:A:H2'	2:A:1690:A:C8	2.43	0.52
2:A:1358:G:C8	2:A:1371:G:C6	2.97	0.52
2:A:632:A:H2'	2:A:633:A:C8	2.45	0.52
2:A:1141:U:O2	2:A:1141:U:H2'	2.10	0.52
25:4:7:PRO:CD	25:4:56:VAL:HG11	2.39	0.51
2:A:1328:G:H4'	2:A:1329:U:H5	1.74	0.51
2:A:1567:A:H4'	2:A:1568:G:N1	2.25	0.51
2:A:2054:A:OP1	2:A:2055:C:H1'	2.10	0.51
2:A:2075:U:O4	2:A:2238:G:O6	2.28	0.51
2:A:2244:U:O2	2:A:2434:A:H1'	2.10	0.51
2:A:2399:G:N2	2:A:2400:G:C1'	2.71	0.51
2:A:2422:A:O2'	2:A:2424:C:H6	1.84	0.51
2:A:2246:G:C5	2:A:2426:A:C2	2.93	0.51
2:A:2515:C:N4	2:A:2569:G:C6	2.74	0.51
2:A:2592:G:H2'	2:A:2593:U:H5'	1.92	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2715:C:C2	2:A:2716:U:C6	2.98	0.51
2:A:2753:A:N7	2:A:2754:U:C4	2.78	0.51
2:A:2822:G:OP1	4:E:258:TYR:CE2	2.63	0.51
2:A:2689:U:OP2	2:A:2872:G:N2	2.43	0.51
2:A:387:U:H3'	25:4:29:PRO:CG	2.40	0.51
2:A:592:G:O2'	29:8:3:LYS:CG	2.54	0.51
2:A:650:C:OP1	29:8:19:THR:HG21	2.10	0.51
2:A:987:G:P	23:3:15:TYR:OH	2.69	0.51
1:B:51:G:OP1	13:S:72:GLU:OE1	2.28	0.51
1:B:76:G:H4'	18:Z:80:HIS:CB	2.37	0.51
3:D:133:ASN:O	3:D:134:ILE:CG1	2.51	0.51
3:D:142:ASN:H	3:D:142:ASN:ND2	2.09	0.51
4:E:208:LYS:N	4:E:257:GLY:HA3	2.11	0.51
4:E:263:GLU:C	4:E:266:LYS:HE3	2.30	0.51
4:E:271:ILE:HG12	4:E:294:THR:CA	2.31	0.51
9:N:139:LEU:H	9:N:139:LEU:CD1	1.95	0.51
9:N:15:ARG:NH1	9:N:40:ASN:CA	2.70	0.51
11:P:52:LYS:CE	11:P:53:ARG:NH1	2.70	0.51
12:Q:41:THR:HG21	12:Q:125:TRP:CE3	2.44	0.51
12:Q:147:VAL:HG13	12:Q:148:ASN:N	2.25	0.51
12:Q:29:ALA:HB3	12:Q:66:ASN:HD21	1.75	0.51
12:Q:82:LYS:CG	12:Q:84:ARG:HG3	2.37	0.51
19:R:67:LEU:HB2	19:R:76:VAL:CG1	2.35	0.51
20:U:104:GLU:O	20:U:105:ALA:O	2.28	0.51
21:V:57:GLN:CG	21:V:58:ALA:N	2.52	0.51
15:W:9:TYR:H	15:W:9:TYR:HD1	1.58	0.51
17:Y:22:GLN:C	17:Y:24:ARG:N	2.64	0.51
2:A:328:U:C2'	17:Y:94:SER:HG	2.11	0.51
18:Z:112:LEU:HD22	18:Z:171:VAL:HB	1.92	0.51
18:Z:91:PRO:CG	18:Z:128:ARG:H	2.22	0.51
18:Z:25:ASN:CA	18:Z:84:TYR:CD1	2.90	0.51
22:2:50:ARG:O	22:2:53:ILE:CB	2.57	0.51
16:X:51:GLN:O	16:X:52:VAL:CB	2.57	0.51
2:A:2305:A:H8	2:A:2306:C:H5''	1.75	0.51
31:K:11:LEU:HD13	31:K:28:LEU:HD11	1.85	0.51
6:G:60:GLU:O	6:G:61:PHE:HD1	1.93	0.51
2:A:619:G:N7	2:A:620:G:C2	2.78	0.51
23:3:2:PRO:O	23:3:39:ASP:N	2.43	0.51
2:A:388:G:H5'	25:4:24:THR:CG2	2.41	0.51
25:4:56:VAL:HG12	25:4:61:LYS:NZ	2.23	0.51
25:4:63:PHE:C	25:4:65:ASP:OD2	2.47	0.51
2:A:2286:A:N6	27:6:32:GLN:O	2.43	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1364:G:H5''	2:A:1809:A:N7	2.25	0.51
2:A:2056:G:N1	26:5:4:HIS:C	2.48	0.51
2:A:2217:G:HO2'	2:A:2218:G:H5'	1.71	0.51
2:A:2082:A:C5	2:A:2239:G:C6	2.97	0.51
2:A:2269:A:H8	2:A:2269:A:O5'	1.93	0.51
2:A:2339:G:C4	2:A:2340:G:N7	2.78	0.51
2:A:2355:C:H4'	24:0:21:LEU:HD13	0.52	0.51
2:A:2399:G:O6	2:A:2418:A:C6	2.63	0.51
2:A:2511:U:C2'	2:A:2512:C:C5'	2.86	0.51
2:A:2520:C:H2'	2:A:2520:C:O2	2.11	0.51
2:A:2551:C:O2	2:A:2552:U:C6	2.63	0.51
2:A:2555:U:C2'	2:A:2556:C:O5'	2.57	0.51
2:A:2589:A:C2	2:A:2590:A:C8	2.99	0.51
2:A:2729:G:O4'	4:E:298:GLY:HA3	2.09	0.51
2:A:2797:U:H1'	2:A:2799:A:H8	1.74	0.51
2:A:2814:C:C2	2:A:2815:C:H5	2.27	0.51
2:A:2827:C:C2'	2:A:2828:C:O5'	2.58	0.51
2:A:2838:G:N1	2:A:2839:G:C8	2.78	0.51
2:A:450:G:N2	2:A:454:A:C2	2.77	0.51
2:A:586:A:H2	2:A:809:G:N3	2.08	0.51
2:A:910:A:C5	12:Q:12:PRO:O	2.62	0.51
4:E:172:ASP:O	4:E:173:ARG:C	2.46	0.51
5:F:28:SER:O	5:F:29:ASP:C	2.47	0.51
5:F:61:PHE:HB2	5:F:67:GLN:OE1	2.10	0.51
7:H:37:HIS:CG	7:H:40:MET:HG3	2.45	0.51
9:N:25:GLN:HA	9:N:28:GLU:HB2	1.90	0.51
10:O:14:SER:H	10:O:95:GLY:HA2	1.75	0.51
19:R:105:ARG:C	19:R:107:ASP:N	2.62	0.51
13:S:33:ARG:HB2	13:S:48:VAL:HB	1.92	0.51
20:U:34:ASN:CA	20:U:37:GLN:HB3	2.27	0.51
2:A:338:G:P	17:Y:21:LYS:HD2	2.50	0.51
17:Y:33:GLU:O	17:Y:35:TYR:N	2.43	0.51
17:Y:87:VAL:HG12	17:Y:88:PRO:N	2.26	0.51
18:Z:12:GLN:O	18:Z:36:ARG:NH2	2.43	0.51
18:Z:51:LEU:HD21	18:Z:63:PRO:CA	2.40	0.51
8:I:103:GLN:HG2	8:I:109:LYS:HA	1.92	0.51
22:2:6:GLN:C	22:2:9:ARG:HB3	2.29	0.51
2:A:60:G:H1'	2:A:74:A:N1	2.25	0.51
16:X:52:VAL:O	16:X:53:ASN:ND2	2.43	0.51
2:A:1077:A:O3'	31:K:93:LYS:HG3	2.10	0.51
31:K:20:PRO:CG	31:K:23:PRO:CG	2.84	0.51
31:K:24:VAL:CG1	31:K:24:VAL:O	2.58	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1709:U:C1'	2:A:2860:A:H1'	2.39	0.51
2:A:2407:G:H2'	2:A:2407:G:N3	2.25	0.51
2:A:759:G:H2'	2:A:760:G:H8	1.75	0.51
2:A:2181:G:C3'	2:A:2182:G:H5''	2.41	0.51
2:A:1215:G:O3'	20:U:8:ILE:HG23	2.11	0.51
2:A:1300:U:H1'	2:A:1626:G:H22	1.73	0.51
2:A:1362:C:H2'	2:A:1363:C:H6	1.75	0.51
2:A:1655:A:H4'	4:E:211:GLN:C	2.29	0.51
2:A:1983:C:H4'	2:A:2606:C:O2'	2.10	0.51
2:A:1676:A:C2	2:A:1993:U:H5'	2.45	0.51
2:A:2213:U:HO3'	2:A:2215:G:H8	1.40	0.51
2:A:2090:G:C4	2:A:2230:G:N1	2.78	0.51
2:A:2252:G:N1	2:A:2253:G:C6	2.79	0.51
2:A:2268:A:C8	2:A:2268:A:H5''	2.45	0.51
2:A:2394:C:C4	2:A:2395:C:N4	2.71	0.51
2:A:2411:A:N3	2:A:2412:A:C8	2.78	0.51
2:A:2411:A:C2'	2:A:2412:A:H8	2.23	0.51
2:A:2403:C:C4	2:A:2415:G:N1	2.73	0.51
2:A:2078:C:H5'	2:A:2434:A:H4'	1.90	0.51
2:A:2461:C:C4	2:A:2462:U:H5	2.28	0.51
2:A:2475:C:O2	2:A:2529:G:C2	2.64	0.51
2:A:2476:A:N7	2:A:2477:C:H5	2.00	0.51
2:A:2484:G:C2'	2:A:2485:G:H5'	2.36	0.51
2:A:2495:G:N3	2:A:2496:C:H1'	2.26	0.51
2:A:2544:G:C4	2:A:2545:G:N7	2.78	0.51
2:A:2657:A:C5	2:A:2665:A:C6	2.98	0.51
2:A:2753:A:C8	2:A:2754:U:C6	2.98	0.51
2:A:2792:G:N2	2:A:2804:C:O2	2.34	0.51
2:A:465:G:C6	2:A:466:A:C6	2.98	0.51
2:A:746:A:C8	2:A:2611:U:O3'	2.63	0.51
2:A:747:U:N3	2:A:2015:A:C2	2.77	0.51
2:A:918:A:H5'	2:A:919:G:C8	2.45	0.51
2:A:946:G:H2'	2:A:947:G:C8	2.45	0.51
2:A:965:C:H2'	2:A:966:G:O4'	2.10	0.51
2:A:1819:A:P	3:D:154:VAL:HA	2.49	0.51
3:D:60:GLN:OE1	3:D:60:GLN:O	2.27	0.51
4:E:180:ILE:C	4:E:183:ASP:OD2	2.46	0.51
5:F:201:SER:HB2	5:F:204:ALA:CB	2.40	0.51
5:F:223:LEU:O	5:F:225:PRO:CA	2.57	0.51
2:A:600:G:H5'	5:F:30:LEU:HD11	0.76	0.51
7:H:34:ARG:HG2	7:H:35:THR:H	1.75	0.51
7:H:51:VAL:HG21	7:H:68:ARG:CG	2.39	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:H:75:VAL:C	7:H:77:GLY:H	2.09	0.51
9:N:54:VAL:N	9:N:135:ILE:HD12	2.24	0.51
9:N:82:THR:O	9:N:83:ILE:O	2.29	0.51
11:P:67:ARG:HD3	11:P:111:ALA:O	2.10	0.51
11:P:57:VAL:O	11:P:58:GLN:CB	2.59	0.51
11:P:69:ILE:C	11:P:71:GLU:N	2.63	0.51
2:A:2250:G:H5''	12:Q:102:ARG:CD	2.40	0.51
19:R:28:LEU:HD13	19:R:32:GLY:CA	2.40	0.51
13:S:104:ILE:HG21	13:S:109:PRO:HD3	1.92	0.51
13:S:127:LEU:O	13:S:127:LEU:HD23	2.03	0.51
13:S:24:LEU:HA	13:S:27:LEU:CB	2.39	0.51
2:A:1223:C:N4	21:V:87:ARG:HE	2.09	0.51
21:V:59:GLU:OE1	21:V:99:GLN:HA	2.07	0.51
15:W:66:GLU:O	15:W:67:ASP:C	2.49	0.51
15:W:70:TYR:CE2	15:W:72:LYS:CA	2.89	0.51
17:Y:49:GLU:O	17:Y:49:GLU:OE2	2.28	0.51
17:Y:51:LEU:HD22	17:Y:51:LEU:C	2.31	0.51
17:Y:51:LEU:CD2	17:Y:95:ASN:HB3	2.41	0.51
8:I:68:LEU:CD1	8:I:108:LEU:HD13	2.40	0.51
16:X:14:ALA:C	16:X:17:ASP:CG	2.68	0.51
2:A:1524:G:C5	2:A:1525:G:C8	2.98	0.51
2:A:1917:U:H5''	2:A:1918:A:N7	2.24	0.51
2:A:1924:C:C4	2:A:1925:C:H5	2.25	0.51
2:A:176:G:N2	2:A:177:G:H1'	2.25	0.51
2:A:270(C):C:P	2:A:365:C:HO2'	2.33	0.51
2:A:949:C:H2'	2:A:950:G:C8	2.44	0.51
2:A:383:U:HO2'	2:A:384:U:H5	1.58	0.51
2:A:2356:C:P	24:O:21:LEU:HD21	2.51	0.51
24:O:73:GLY:O	24:O:74:LYS:C	2.48	0.51
25:4:68:ARG:CG	25:4:72:LYS:HA	2.36	0.51
25:4:68:ARG:HB2	25:4:72:LYS:HG2	1.93	0.51
27:6:53:LYS:O	27:6:54:LYS:NZ	2.44	0.51
2:A:1792:G:P	3:D:204:PHE:CE2	3.03	0.51
2:A:2023:G:OP2	2:A:2023:G:H8	1.92	0.51
2:A:2196:C:C2	2:A:2197:U:O2	2.64	0.51
2:A:2218:G:C2	2:A:2219:G:C8	2.98	0.51
2:A:2236:C:C2'	2:A:2236:C:O2	2.55	0.51
2:A:2246:G:C5	2:A:2426:A:C4	2.98	0.51
2:A:645:C:OP2	2:A:2369:A:C4'	2.58	0.51
2:A:2327:A:N7	2:A:2388:A:C6	2.79	0.51
2:A:2416:C:H2'	2:A:2417:C:H5''	1.74	0.51
2:A:2454:G:H2'	2:A:2455:G:O4'	2.11	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2503:A:C8	2:A:2503:A:C3'	2.94	0.51
2:A:2519:U:C3'	2:A:2519:U:P	2.98	0.51
2:A:2552:U:H2'	2:A:2552:U:O2	2.10	0.51
2:A:2550:G:N1	2:A:2559:C:C2	2.79	0.51
2:A:2656:U:H3'	2:A:2656:U:C6	2.45	0.51
2:A:2700:C:C2'	2:A:2701:C:H5''	2.40	0.51
2:A:2716:U:H2'	2:A:2717:G:O5'	2.10	0.51
2:A:2761:G:C2'	2:A:2762:G:C5'	2.78	0.51
2:A:2762:G:N7	2:A:2763:G:O6	2.43	0.51
2:A:2840:C:N4	2:A:2841:C:N4	2.59	0.51
2:A:573:G:H3'	2:A:574:C:C5'	2.36	0.51
2:A:644:A:O2'	2:A:646:A:N7	2.42	0.51
2:A:995:C:H1'	20:U:57:PHE:CD2	2.46	0.51
3:D:140:VAL:CG1	3:D:141:HIS:N	2.47	0.51
2:A:1566:A:N3	3:D:212:HIS:HA	2.18	0.51
3:D:65:ASP:O	3:D:66:PHE:CB	2.59	0.51
4:E:39:GLN:HE22	4:E:174:LEU:HD11	1.54	0.51
4:E:204:VAL:N	4:E:303:PRO:HG3	2.23	0.51
5:F:243:VAL:CA	5:F:246:ARG:CD	2.50	0.51
6:G:141:VAL:C	6:G:143:LYS:H	2.13	0.51
2:A:1666:G:H4'	10:O:67:ARG:NH2	2.24	0.51
11:P:64:ILE:CD1	11:P:106:VAL:CA	2.58	0.51
12:Q:152:SER:CB	12:Q:153:PRO:CD	2.88	0.51
19:R:67:LEU:HD13	19:R:67:LEU:C	2.30	0.51
20:U:28:ARG:CA	20:U:31:GLN:CD	2.77	0.51
20:U:86:ALA:CB	20:U:90:LEU:HD21	2.22	0.51
21:V:23:GLU:O	21:V:24:SER:CB	2.58	0.51
15:W:4:LYS:HD2	15:W:106:ILE:HG12	1.91	0.51
18:Z:116:VAL:C	18:Z:118:HIS:N	2.63	0.51
18:Z:42:ALA:O	18:Z:45:GLN:HB2	2.10	0.51
18:Z:90:GLU:H	18:Z:91:PRO:HD3	1.70	0.51
18:Z:92:VAL:CA	18:Z:124:ALA:HB2	2.40	0.51
22:2:29:ASN:O	22:2:34:GLN:OE1	2.26	0.51
22:2:30:ALA:HB1	22:2:46:ILE:HD12	1.93	0.51
22:2:45:ARG:O	22:2:46:ILE:O	2.28	0.51
16:X:30:ASP:O	16:X:62:LYS:NZ	2.43	0.51
16:X:41:VAL:HG11	16:X:66:VAL:HG21	1.92	0.51
31:K:103:LYS:O	31:K:107:GLU:HG3	2.10	0.51
31:K:22:PRO:CG	31:K:23:PRO:HD2	2.38	0.51
31:K:8:GLN:N	31:K:60:VAL:H	2.09	0.51
2:A:2857:G:N2	2:A:2859:G:C8	2.78	0.51
8:I:136:GLU:OE1	8:I:136:GLU:N	2.41	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:49:A:N6	2:A:176:G:C2	2.79	0.51
2:A:272:G:H1	2:A:365:C:N4	2.08	0.51
2:A:1575:C:H3'	2:A:1575:C:C6	2.46	0.51
24:0:43:THR:CB	24:0:75:GLY:CA	2.88	0.51
23:3:8:LEU:HD22	23:3:30:ARG:O	2.10	0.51
26:5:10:LYS:C	26:5:11:THR:O	2.49	0.51
28:7:11:LYS:CA	28:7:11:LYS:CE	2.86	0.51
28:7:11:LYS:CG	28:7:12:ARG:H	2.23	0.51
28:7:22:MET:C	28:7:24:THR:N	2.61	0.51
28:7:5:TYR:O	28:7:7:PRO:N	2.43	0.51
29:8:3:LYS:C	29:8:4:MET:CE	2.77	0.51
30:9:11:CYS:C	30:9:13:ASN:H	2.13	0.51
2:A:1265:A:OP2	2:A:2615:U:P	2.68	0.51
2:A:1567:A:C8	3:D:84:PRO:HB3	2.45	0.51
2:A:1773:A:H2'	2:A:1774:C:O4'	2.10	0.51
2:A:1790:C:O2'	3:D:210:LYS:HE3	2.10	0.51
2:A:2056:G:H21	26:5:8:LYS:NZ	2.08	0.51
2:A:2233:U:C2	2:A:2234:G:C8	2.98	0.51
2:A:2498:C:C2'	2:A:2499:C:C5'	2.73	0.51
2:A:2562:U:C4	2:A:2563:U:C4	2.98	0.51
2:A:2662:A:N3	2:A:2662:A:H2'	2.25	0.51
2:A:2684:U:O2	2:A:2725:A:C2	2.63	0.51
2:A:2758:A:OP1	2:A:2758:A:H3'	2.10	0.51
2:A:2815:C:C2	2:A:2816:C:C6	2.95	0.51
2:A:2864:G:HO2'	2:A:2865:U:C1'	2.13	0.51
2:A:532:A:H2'	2:A:533:G:O4'	2.11	0.51
2:A:809:G:C5	2:A:810:U:C5	2.98	0.51
2:A:818:G:H21	2:A:1189:A:H62	0.85	0.51
3:D:118:GLY:O	3:D:129:LEU:HG	2.00	0.51
4:E:267:ARG:HD3	4:E:297:LYS:CB	2.40	0.51
5:F:94:THR:HG23	5:F:95:GLU:H	1.75	0.51
7:H:64:HIS:HA	7:H:67:THR:OG1	2.10	0.51
7:H:67:THR:O	7:H:70:LEU:N	2.43	0.51
8:I:21:VAL:C	8:I:26:ALA:HB2	2.24	0.51
9:N:45:VAL:HG12	9:N:46:ILE:N	2.26	0.51
2:A:1020:A:H4'	9:N:49:ARG:HH22	1.75	0.51
12:Q:139:ALA:O	12:Q:143:VAL:HG13	2.11	0.51
12:Q:35:ASN:CB	12:Q:75:SER:HA	2.41	0.51
20:U:22:LYS:N	20:U:24:PHE:CZ	2.79	0.51
20:U:30:LYS:O	20:U:32:TYR:N	2.43	0.51
17:Y:30:ASP:CG	17:Y:31:LEU:H	2.12	0.51
17:Y:50:VAL:C	17:Y:51:LEU:CD1	2.77	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:Z:62:PHE:CZ	18:Z:87:THR:HG21	2.46	0.51
6:G:81:GLU:O	6:G:85:GLN:HG3	2.03	0.51
6:G:78:GLU:O	6:G:82:GLU:OE2	2.28	0.51
2:A:1528:A:N6	2:A:1543:A:H62	2.06	0.51
2:A:1350:C:C2	2:A:1381:G:N2	2.76	0.51
2:A:760:G:C2	2:A:761:A:H1'	2.46	0.51
23:3:12:PRO:HB2	23:3:20:LYS:CE	2.41	0.51
25:4:5:LEU:CB	25:4:56:VAL:CG1	2.61	0.51
29:8:6:THR:C	29:8:8:LYS:H	2.13	0.51
2:A:1210:A:N3	2:A:1212:G:N2	2.57	0.51
2:A:123:G:H1	2:A:128:C:N4	2.09	0.51
2:A:1363:C:H2'	2:A:1364:G:H5''	1.91	0.51
2:A:532:A:OP2	2:A:2021:C:N4	2.43	0.51
2:A:2219:G:H2'	2:A:2224:G:H8	1.76	0.51
2:A:2077:A:H2	2:A:2244:U:O2	1.94	0.51
2:A:2274:A:H2'	2:A:2276:G:H5''	1.93	0.51
2:A:2392:A:C3'	2:A:2393:A:H5'	2.40	0.51
2:A:2461:C:H1'	2:A:2492:U:C2	2.46	0.51
2:A:2531:A:C2	2:A:2532:G:O4'	2.64	0.51
2:A:2576:G:OP1	2:A:2577:A:OP1	2.29	0.51
2:A:2625:G:H3'	2:A:2626:C:H5	0.84	0.51
2:A:2647:U:H2'	2:A:2648:C:C6	2.46	0.51
2:A:2681:C:O2	2:A:2681:C:C2'	2.57	0.51
2:A:2686:G:C4	2:A:2687:U:C6	2.98	0.51
2:A:2688:U:O2'	2:A:2689:U:P	2.67	0.51
2:A:2691:C:N4	2:A:2719:G:N2	2.59	0.51
2:A:2805:G:H3'	2:A:2807:G:H5''	1.93	0.51
2:A:321:G:C8	2:A:341:G:O2'	2.61	0.51
2:A:742:G:O2'	2:A:1676:A:H4'	2.11	0.51
4:E:43:GLY:N	4:E:309:PRO:O	2.42	0.51
4:E:47:GLY:N	4:E:72:VAL:HG22	2.25	0.51
4:E:75:THR:CG2	4:E:189:MET:SD	2.99	0.51
5:F:240:LEU:HD23	5:F:243:VAL:HG23	1.91	0.51
6:G:98:PHE:HB3	6:G:104:PHE:CE2	2.45	0.51
7:H:120:LEU:CB	7:H:143:LEU:CD1	2.89	0.51
7:H:122:ILE:C	7:H:123:GLU:CD	2.69	0.51
7:H:86:LEU:HB3	7:H:130:ILE:O	2.10	0.51
9:N:135:ILE:HG22	9:N:139:LEU:HD11	1.92	0.51
9:N:53:ILE:HG22	9:N:54:VAL:H	1.76	0.51
10:O:73:ASP:O	10:O:75:SER:OG	2.21	0.51
11:P:114:VAL:CG1	11:P:133:VAL:HA	2.35	0.51
19:R:28:LEU:HD11	19:R:32:GLY:HA2	1.90	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1278:A:C5'	19:R:34:ILE:HG21	2.40	0.51
14:T:54:THR:HG23	14:T:55:ALA:N	2.21	0.51
20:U:88:ILE:CG2	21:V:55:THR:HG1	2.17	0.51
21:V:21:ARG:NE	21:V:21:ARG:CA	2.72	0.51
15:W:4:LYS:CG	15:W:106:ILE:HG12	2.41	0.51
2:A:99:U:O2	17:Y:107:LYS:HD3	2.11	0.51
17:Y:63:ILE:CD1	17:Y:75:GLU:HA	2.37	0.51
17:Y:78:THR:HG22	17:Y:88:PRO:HA	0.55	0.51
18:Z:51:LEU:CD2	18:Z:63:PRO:CB	2.88	0.51
8:I:103:GLN:CG	8:I:109:LYS:HA	2.40	0.51
8:I:68:LEU:HD21	8:I:108:LEU:HD13	0.57	0.51
2:A:2304:G:H4'	6:G:105:SER:C	2.30	0.51
31:K:107:GLU:OE2	31:K:108:ILE:HG13	2.11	0.51
31:K:114:PRO:C	31:K:116:LEU:N	2.64	0.51
31:K:125:MET:O	31:K:128:ILE:HB	2.11	0.51
2:A:1906:G:C8	2:A:1929:G:C5	2.99	0.51
2:A:300:A:HO2'	2:A:318:C:H1'	1.75	0.51
2:A:2386:C:C4'	24:0:39:ARG:HE	2.14	0.51
2:A:2615:U:C4	26:5:8:LYS:HG2	2.46	0.51
27:6:35:LEU:C	27:6:36:GLU:CG	2.70	0.51
27:6:46:LYS:HZ3	27:6:46:LYS:CB	2.17	0.51
28:7:33:ARG:O	28:7:37:LYS:HB2	2.11	0.51
29:8:16:ILE:CG2	29:8:22:VAL:CG2	2.88	0.51
30:9:5:SER:O	30:9:6:SER:OG	2.21	0.51
2:A:1657:C:H6	2:A:1657:C:O5'	1.93	0.51
2:A:1772:G:H2'	2:A:1773:A:H4'	1.92	0.51
2:A:1819:A:OP1	3:D:154:VAL:N	2.43	0.51
2:A:1827:C:OP1	2:A:1971:A:O2'	2.17	0.51
2:A:2029:G:H2'	2:A:2030:A:H3'	1.93	0.51
2:A:2189:U:O2'	2:A:2190:G:C5'	2.57	0.51
2:A:2264:C:C5	2:A:2277:G:O6	2.63	0.51
2:A:965:C:O2'	2:A:2273:A:C2	2.61	0.51
2:A:2313:C:C6	2:A:2314:C:C5	2.99	0.51
2:A:2322:A:N3	2:A:2323:G:H5'	2.24	0.51
2:A:2330:G:H21	2:A:2331:G:C1'	2.01	0.51
2:A:2625:G:C8	2:A:2626:C:N4	2.77	0.51
2:A:2640:G:C6	2:A:2774:C:N4	2.68	0.51
2:A:2657:A:C8	2:A:2665:A:N6	2.79	0.51
2:A:2678:C:C2'	2:A:2679:A:C5'	2.88	0.51
2:A:2725:A:C6	2:A:2727:G:C4	2.98	0.51
2:A:2734:A:C8	2:A:2734:A:C3'	2.93	0.51
2:A:2749:A:H62	2:A:2753:A:N6	2.08	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2781:A:C4'	2:A:2782:G:O5'	2.55	0.51
2:A:2887:U:O5'	2:A:2887:U:H6	1.93	0.51
1:B:19:G:OP1	6:G:152:PRO:HB3	2.09	0.51
1:B:59:A:H2'	1:B:60:C:O4'	2.11	0.51
3:D:115:ILE:O	3:D:116:MET:HB2	2.11	0.51
3:D:74:PRO:C	3:D:116:MET:HE2	2.31	0.51
6:G:14:ARG:CA	6:G:137:PRO:HD3	2.31	0.51
6:G:140:ARG:HB3	6:G:144:ARG:HH12	1.76	0.51
7:H:49:ILE:O	7:H:50:THR:HB	2.10	0.51
9:N:15:ARG:NH1	9:N:40:ASN:CG	2.42	0.51
11:P:114:VAL:HG21	11:P:132:LYS:CA	2.39	0.51
19:R:56:LYS:HD3	19:R:94:TYR:CZ	2.46	0.51
13:S:92:ALA:C	13:S:94:GLU:N	2.63	0.51
2:A:1161:C:O4'	21:V:8:GLY:O	2.28	0.51
15:W:34:ASN:HA	15:W:37:ARG:HB3	1.91	0.51
2:A:1261:C:OP1	15:W:83:LYS:HE2	2.10	0.51
18:Z:145:ASP:C	18:Z:146:HIS:CG	2.84	0.51
18:Z:112:LEU:HA	18:Z:174:PRO:CG	2.40	0.51
8:I:115:ILE:HG23	8:I:129:VAL:HG12	1.93	0.51
9:N:109:TYR:O	9:N:110:ASP:C	2.49	0.51
2:A:1525:G:O3'	2:A:1526:G:OP1	2.26	0.51
2:A:444:C:O3'	20:U:2:PRO:HD2	2.11	0.51
16:X:75:GLN:O	16:X:78:ALA:N	2.44	0.51
2:A:408:G:H2'	2:A:409:C:O4'	2.11	0.51
2:A:1418:G:OP1	2:A:1588:C:H4'	2.11	0.51
2:A:2182:G:N3	2:A:2183:C:N3	2.58	0.51
2:A:1358:G:N1	2:A:1371:G:H2'	2.26	0.51
24:O:68:VAL:CG1	24:O:68:VAL:O	2.56	0.51
24:O:60:PHE:N	24:O:81:ILE:HG12	2.26	0.51
25:4:41:PRO:CG	25:4:57:ASP:HB2	2.34	0.51
2:A:2021:C:OP2	26:5:12:SER:CB	2.59	0.51
26:5:17:ASP:O	26:5:18:MET:C	2.48	0.51
29:8:38:GLY:C	29:8:40:GLU:N	2.64	0.51
29:8:50:LEU:O	29:8:51:ALA:HB3	2.10	0.51
30:9:19:ARG:HD2	30:9:24:LEU:HD12	1.92	0.51
2:A:2212:A:N3	2:A:2213:U:H5''	2.26	0.51
2:A:2411:A:C2'	2:A:2412:A:C8	2.94	0.51
2:A:2419:U:OP2	29:8:41:ILE:HD11	2.10	0.51
2:A:2437:U:H5'	2:A:2598:A:N1	2.15	0.51
2:A:575:A:H4'	2:A:2500:U:H5'	1.92	0.51
2:A:2689:U:C1'	2:A:2713:A:N1	2.72	0.51
2:A:2741:A:C3'	2:A:2742:C:H5'	2.31	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2783:G:O6	2:A:2784:C:N4	2.40	0.51
2:A:2825:C:H5	2:A:2825:C:P	2.31	0.51
2:A:293:U:H2'	2:A:294:A:C8	2.46	0.51
2:A:324:A:N6	2:A:339:U:H1'	2.25	0.51
2:A:468:G:H2'	2:A:469:G:O4'	2.11	0.51
2:A:558:G:OP2	9:N:91:LYS:CB	2.36	0.51
2:A:929:G:H2'	23:3:37:LEU:HD13	1.93	0.51
2:A:997:G:P	20:U:93:LYS:CE	2.93	0.51
1:B:49:C:OP1	13:S:111:PRO:CD	2.58	0.51
3:D:197:GLY:C	3:D:199:ARG:H	2.14	0.51
6:G:38:GLU:OE2	6:G:71:ALA:HB1	2.10	0.51
10:O:1:MET:CB	10:O:2:ILE:HD11	2.41	0.51
2:A:2333:A:C3'	13:S:13:ARG:HD3	2.32	0.51
13:S:48:VAL:HG12	13:S:55:ASP:OD2	2.10	0.51
15:W:10:VAL:CB	15:W:101:SER:O	2.50	0.51
17:Y:79:LEU:CG	17:Y:80:GLU:N	2.73	0.51
2:A:1406:U:H2'	2:A:1407:C:C6	2.46	0.51
2:A:60:G:N2	2:A:88:G:N7	2.58	0.51
16:X:5:ILE:HG13	16:X:40:ALA:CB	2.39	0.51
31:K:21:ALA:HB3	31:K:22:PRO:CD	2.41	0.51
25:4:49:PHE:CE1	25:4:70:GLY:O	2.54	0.51
2:A:1518:C:C2	2:A:1519:G:H1'	2.46	0.51
2:A:1520:U:H6	2:A:1520:U:O5'	1.93	0.51
2:A:299:A:H1'	2:A:319:C:O2'	2.10	0.51
2:A:609(A):G:H22	2:A:618(A):C:H2'	1.76	0.51
26:5:33:CYS:SG	26:5:37:HIS:N	2.84	0.51
24:0:76:ALA:O	24:0:78:PHE:CD1	2.64	0.51
2:A:1034:G:O4'	30:9:18:ARG:CZ	2.59	0.51
2:A:2015:A:C8	2:A:2016:U:C5	2.99	0.51
2:A:2212:A:H2	2:A:2213:U:H3'	1.75	0.51
2:A:2323:G:H2'	2:A:2324:C:C6	2.46	0.51
2:A:2363:C:H2'	2:A:2364:C:H5'	1.92	0.51
2:A:2352:A:N7	2:A:2366:A:N1	2.53	0.51
2:A:2458:G:N7	2:A:2490:G:C5	2.78	0.51
2:A:2528:U:C6	2:A:2528:U:C3'	2.94	0.51
2:A:2567:G:N3	2:A:2568:C:C6	2.69	0.51
2:A:2584:U:H5	2:A:2585:U:C3'	2.24	0.51
2:A:2589:A:C3'	2:A:2590:A:C5'	2.89	0.51
2:A:2592:G:C2	2:A:2603:G:O6	2.64	0.51
2:A:2733:A:H1'	4:E:318:ASN:HD22	1.68	0.51
2:A:2767:C:H2'	2:A:2768:C:H5'	1.92	0.51
2:A:2768:C:H42	2:A:2769:C:N4	2.02	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:802:A:H2'	2:A:803:U:H6	1.75	0.51
4:E:210:THR:C	4:E:216:ARG:CZ	2.77	0.51
4:E:45:LYS:CD	4:E:301:PRO:HB2	2.41	0.51
2:A:674:G:H4'	5:F:69:HIS:CA	2.41	0.51
6:G:99:ASP:N	6:G:104:PHE:CE2	2.79	0.51
10:O:38:VAL:HG22	10:O:61:VAL:HG22	1.92	0.51
11:P:61:ALA:CB	11:P:107:LYS:NZ	2.74	0.51
11:P:66:VAL:O	11:P:68:GLU:CA	2.59	0.51
12:Q:133:GLU:HG3	12:Q:134:PHE:CD1	2.46	0.51
12:Q:16:ARG:NH1	12:Q:19:TYR:CD1	2.74	0.51
12:Q:91:HIS:O	12:Q:111:THR:CA	2.58	0.51
13:S:34:LEU:HG	13:S:101:VAL:O	2.11	0.51
2:A:535:C:H5'	20:U:53:LYS:CE	2.36	0.51
21:V:39:PHE:C	21:V:40:VAL:CG2	2.47	0.51
21:V:94:LYS:O	21:V:95:ILE:HG13	2.07	0.51
18:Z:4:THR:C	18:Z:33:ALA:CB	2.68	0.51
22:2:60:GLN:O	22:2:63:GLU:HB2	2.11	0.51
2:A:76:C:H4'	22:2:55:ARG:NE	2.25	0.51
15:W:88:ARG:HD3	15:W:91:GLY:O	2.11	0.51
2:A:1614:A:H61	15:W:88:ARG:N	2.08	0.51
2:A:498:G:H3'	2:A:498:G:C8	2.45	0.51
2:A:177:G:H2'	2:A:177:G:N3	2.26	0.51
2:A:1495:A:H2'	2:A:1496:A:C8	2.46	0.51
2:A:1389:G:H2'	2:A:1390:U:C6	2.46	0.51
23:3:31:LEU:O	23:3:33:GLN:N	2.43	0.51
23:3:9:VAL:HG22	23:3:54:VAL:CG1	2.40	0.51
23:3:3:ARG:CD	23:3:60:GLU:HA	2.40	0.51
29:8:16:ILE:H	29:8:16:ILE:CD1	2.19	0.51
2:A:1365:A:H5''	25:4:3:LYS:CE	2.41	0.51
2:A:1758:G:N7	2:A:2695:C:H4'	2.26	0.51
2:A:2265:U:O2'	2:A:2266:A:P	2.69	0.51
2:A:2276:G:N3	2:A:2277:G:H8	2.06	0.51
2:A:2357:U:C2'	2:A:2358:G:C5'	2.89	0.51
2:A:2357:U:C2'	2:A:2358:G:O5'	2.55	0.51
2:A:2400:G:N1	2:A:2417:C:C4	2.79	0.51
2:A:2415:G:O3'	11:P:51:PHE:CD2	2.64	0.51
2:A:2482:G:C4	2:A:2483:C:H6	2.28	0.51
2:A:2519:U:O2	2:A:2542:A:C2	2.63	0.51
2:A:2526:G:C6	2:A:2527:C:C6	2.98	0.51
2:A:2550:G:O2'	2:A:2551:C:H5'	2.11	0.51
2:A:2604:U:O2'	2:A:2605:U:C5'	2.55	0.51
2:A:2618:G:N1	2:A:2619:C:C4	2.51	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2734:A:C5	2:A:2735:G:C4	2.98	0.51
2:A:2740:A:C3'	2:A:2741:A:H5'	2.32	0.51
2:A:2768:C:O2	2:A:2769:C:H6	1.81	0.51
2:A:606:U:P	5:F:103:ASN:ND2	2.83	0.51
2:A:631:A:C2	2:A:2415:G:C2	2.86	0.51
2:A:787:U:C4	2:A:791:C:C5	2.99	0.51
2:A:196:A:C2	2:A:805:G:C2	2.99	0.51
2:A:875:G:H5''	18:Z:146:HIS:ND1	2.26	0.51
3:D:89:ASN:N	3:D:105:ALA:CB	2.74	0.51
3:D:104:ILE:C	3:D:106:PRO:HD2	2.31	0.51
3:D:215:LYS:C	3:D:216:ALA:O	2.48	0.51
3:D:73:ILE:HD13	3:D:95:TYR:CE2	2.46	0.51
4:E:214:VAL:CG2	4:E:221:LYS:CE	2.79	0.51
4:E:295:LEU:HD22	4:E:296:VAL:N	2.26	0.51
4:E:47:GLY:CA	4:E:305:LYS:HG2	2.41	0.51
4:E:70:VAL:O	4:E:71:THR:HG22	2.11	0.51
5:F:2:GLU:C	5:F:18:LEU:HD21	2.32	0.51
7:H:147:ILE:O	7:H:147:ILE:HD12	2.11	0.51
7:H:62:ALA:O	7:H:65:GLY:N	2.44	0.51
9:N:70:PHE:O	9:N:71:TYR:CB	2.53	0.51
10:O:35:ILE:CA	10:O:62:VAL:C	2.70	0.51
2:A:389:G:O6	11:P:54:PRO:CB	2.59	0.51
11:P:59:GLU:O	11:P:60:GLU:HG3	2.10	0.51
11:P:65:ASP:OD1	11:P:68:GLU:CD	2.49	0.51
19:R:105:ARG:NH2	19:R:105:ARG:N	2.59	0.51
19:R:28:LEU:CD1	19:R:32:GLY:CA	2.87	0.51
20:U:66:ASN:HA	20:U:76:TYR:CE1	1.97	0.51
21:V:42:GLY:O	21:V:48:GLY:HA2	2.10	0.51
15:W:97:LYS:HE3	15:W:99:ARG:HH11	1.68	0.51
17:Y:11:GLN:CG	17:Y:21:LYS:HE2	2.35	0.51
17:Y:46:ASP:OD2	17:Y:98:VAL:CG1	2.59	0.51
18:Z:149:ALA:CB	18:Z:164:PRO:HA	2.41	0.51
22:2:24:LYS:HE3	22:2:28:LEU:HD12	1.93	0.51
16:X:28:VAL:O	16:X:28:VAL:HG23	2.11	0.51
6:G:55:LYS:O	6:G:65:GLU:HB2	2.10	0.51
31:K:21:ALA:HB3	31:K:22:PRO:HD3	1.92	0.51
31:K:33:VAL:HG22	31:K:60:VAL:HG13	1.88	0.51
31:K:42:PHE:O	31:K:45:GLU:N	2.38	0.51
6:G:84:LEU:O	6:G:88:LEU:CB	2.54	0.51
2:A:2182:G:H2'	2:A:2183:C:N1	2.25	0.51
2:A:311:A:H1'	2:A:332:A:C4	2.46	0.51
26:5:23:HIS:O	26:5:24:ALA:CB	2.56	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:0:37:LEU:CB	24:0:69:PHE:CG	2.83	0.50
2:A:2256:G:OP1	24:0:5:LYS:HD3	2.11	0.50
23:3:37:LEU:CB	23:3:38:GLU:OE1	2.55	0.50
23:3:5:LYS:CA	23:3:36:VAL:HG12	2.41	0.50
26:5:45:ILE:N	26:5:45:ILE:HD12	2.26	0.50
26:5:6:VAL:H	26:5:8:LYS:CE	2.21	0.50
2:A:1626:G:H4'	2:A:1627:G:OP1	2.11	0.50
2:A:2280:G:C2	2:A:2281:C:C5	2.99	0.50
2:A:2361:A:O2'	2:A:2362:G:H5'	2.11	0.50
2:A:2466:C:C2'	2:A:2467:C:H5'	2.40	0.50
2:A:2574:G:O2'	4:E:240:PRO:HA	2.10	0.50
2:A:783:A:C4'	2:A:2589:A:P	2.93	0.50
2:A:2595:G:C8	2:A:2595:G:O5'	2.52	0.50
2:A:2635:C:N3	2:A:2783:G:C2	2.79	0.50
2:A:2644:G:H1	2:A:2645:G:N2	2.07	0.50
2:A:1456:G:N1	2:A:2704:C:C4	2.79	0.50
2:A:2745:C:H2'	2:A:2746:U:O5'	2.11	0.50
2:A:2772:C:C2'	2:A:2773:C:O5'	2.59	0.50
2:A:2785:C:C5'	4:E:99:VAL:CB	2.89	0.50
2:A:2839:G:H2'	2:A:2840:C:C6	2.32	0.50
2:A:29:U:O2	2:A:511:U:O2	2.29	0.50
2:A:527:C:OP1	2:A:527:C:H4'	2.11	0.50
2:A:599:G:H1	2:A:658:C:N4	2.05	0.50
2:A:636:G:H3'	11:P:126:SER:CB	2.41	0.50
2:A:826:U:N3	2:A:828:U:H1'	2.26	0.50
2:A:972:G:C8	2:A:974:G:OP1	2.64	0.50
2:A:988:A:N6	23:3:13:ILE:CG2	2.74	0.50
2:A:993:G:H2'	2:A:993:G:N3	2.26	0.50
3:D:113:MET:SD	3:D:113:MET:N	2.84	0.50
3:D:74:PRO:HG3	3:D:96:ALA:CA	2.32	0.50
4:E:193:PHE:CZ	4:E:199:ALA:CB	2.92	0.50
4:E:228:ARG:HD2	4:E:228:ARG:N	2.27	0.50
2:A:2051:A:O4'	4:E:238:LEU:HD21	2.10	0.50
2:A:2620:C:O4'	4:E:252:GLN:CG	2.59	0.50
4:E:267:ARG:C	4:E:297:LYS:HD2	2.32	0.50
5:F:220:THR:C	5:F:222:ASP:N	2.60	0.50
5:F:52:ALA:N	5:F:55:ARG:CB	2.67	0.50
2:A:801:G:N7	5:F:54:LEU:HD22	2.26	0.50
6:G:140:ARG:HA	6:G:143:LYS:HZ2	1.71	0.50
7:H:51:VAL:HG13	7:H:64:HIS:HB3	1.93	0.50
11:P:65:ASP:CB	11:P:109:LEU:CA	2.86	0.50
12:Q:94:ARG:HG2	12:Q:107:LYS:O	2.11	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:Q:156:ASN:O	12:Q:157:ALA:CB	2.59	0.50
19:R:45:ARG:C	19:R:49:ASP:HB2	2.31	0.50
19:R:96:ARG:HE	19:R:117:VAL:HA	1.75	0.50
13:S:116:PHE:C	13:S:120:GLU:CD	2.68	0.50
2:A:563:G:N2	20:U:37:GLN:NE2	2.31	0.50
20:U:47:TYR:C	20:U:49:ASP:N	2.62	0.50
20:U:88:ILE:HG21	21:V:55:THR:HG1	1.63	0.50
21:V:3:ALA:CA	21:V:12:TYR:OH	2.59	0.50
17:Y:46:ASP:CG	17:Y:98:VAL:HG11	2.31	0.50
18:Z:85:MET:C	18:Z:86:VAL:CG2	2.77	0.50
8:I:105:GLN:O	8:I:106:HIS:C	2.49	0.50
22:2:45:ARG:HE	22:2:49:LEU:HD21	1.76	0.50
16:X:13:LYS:H	16:X:13:LYS:CD	2.22	0.50
31:K:33:VAL:HG23	31:K:60:VAL:CG1	2.32	0.50
2:A:693:C:O2'	2:A:1353:A:H2	1.91	0.50
2:A:1416:G:N2	2:A:1582:C:N4	2.58	0.50
2:A:270(B):A:O5'	2:A:366:C:H4'	2.10	0.50
2:A:1763:G:C8	2:A:1763:G:H5'	2.46	0.50
24:0:14:ARG:HH11	24:0:14:ARG:H	1.58	0.50
28:7:22:MET:O	28:7:24:THR:O	2.30	0.50
28:7:28:ARG:O	28:7:31:LEU:HB2	2.11	0.50
28:7:38:GLY:O	28:7:39:ARG:HG3	2.12	0.50
28:7:9:ASN:O	28:7:11:LYS:N	2.44	0.50
2:A:1935:G:O2'	2:A:1937:A:H2	1.94	0.50
2:A:2093:G:N9	2:A:2225:A:C6	2.79	0.50
2:A:2254:C:H2'	2:A:2255:G:O5'	2.09	0.50
2:A:2302:G:C2	2:A:2315:G:C6	2.99	0.50
2:A:2325:G:C4	2:A:2326:C:C5	3.00	0.50
2:A:2395:C:C4'	25:4:28:ARG:HH11	2.23	0.50
2:A:2431:U:O2	2:A:2431:U:C2'	2.56	0.50
2:A:2462:U:C4	2:A:2463:C:C5	2.99	0.50
2:A:2549:G:C4	2:A:2550:G:C8	2.99	0.50
2:A:2556:C:H2'	2:A:2557:G:O4'	2.11	0.50
2:A:2562:U:N3	2:A:2563:U:C2	2.69	0.50
2:A:2612:C:C2'	2:A:2613:U:C5'	2.89	0.50
2:A:747:U:H5	2:A:2613:U:C5	2.29	0.50
2:A:2045:C:N4	2:A:2624:G:C2	2.79	0.50
2:A:2652:C:C4	2:A:2653:U:N3	2.78	0.50
2:A:2734:A:H3'	2:A:2734:A:C8	2.47	0.50
2:A:2740:A:C5'	2:A:2740:A:C8	2.89	0.50
2:A:2746:U:H5'	7:H:137:LYS:O	2.10	0.50
2:A:2822:G:P	4:E:258:TYR:CE2	3.01	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:535:C:O2'	20:U:53:LYS:CD	2.54	0.50
2:A:809:G:C6	2:A:810:U:C4	2.99	0.50
2:A:875:G:OP1	18:Z:146:HIS:NE2	2.39	0.50
3:D:208:GLY:CA	3:D:210:LYS:CE	2.73	0.50
3:D:74:PRO:HD3	3:D:96:ALA:HB2	1.87	0.50
4:E:190:ASN:C	4:E:192:ILE:CA	2.79	0.50
4:E:199:ALA:HA	4:E:314:ALA:N	2.27	0.50
5:F:52:ALA:CA	5:F:55:ARG:CG	2.86	0.50
6:G:22:VAL:CB	6:G:24:HIS:CE1	2.88	0.50
2:A:2745:C:O2'	7:H:142:GLU:N	2.43	0.50
7:H:18:VAL:HG22	7:H:23:VAL:HG22	0.76	0.50
7:H:86:LEU:CD1	7:H:87:GLU:C	2.80	0.50
9:N:137:GLU:O	9:N:138:THR:C	2.50	0.50
10:O:1:MET:SD	10:O:67:ARG:HD2	2.51	0.50
11:P:122:ALA:O	11:P:141:GLU:HA	2.10	0.50
12:Q:142:LYS:CE	12:Q:143:VAL:O	2.58	0.50
12:Q:65:ARG:NH2	12:Q:85:ILE:O	2.44	0.50
12:Q:85:ILE:CG2	12:Q:136:TRP:HZ2	2.24	0.50
19:R:28:LEU:HD13	19:R:32:GLY:HA2	1.92	0.50
19:R:22:ARG:NH2	19:R:69:ASP:CB	2.75	0.50
20:U:8:ILE:H	20:U:11:ARG:HD3	1.65	0.50
15:W:24:ILE:C	15:W:25:ARG:O	2.46	0.50
17:Y:11:GLN:CA	17:Y:21:LYS:CE	2.88	0.50
17:Y:15:PRO:O	17:Y:18:GLU:CB	2.56	0.50
18:Z:116:VAL:HG22	18:Z:116:VAL:O	2.09	0.50
18:Z:91:PRO:CG	18:Z:128:ARG:N	2.73	0.50
8:I:124:LEU:CG	8:I:125:GLY:N	2.74	0.50
16:X:18:MET:CE	16:X:25:GLN:N	2.70	0.50
16:X:22:ASN:CA	16:X:68:LEU:CG	2.88	0.50
2:A:2306:C:C3'	2:A:2306:C:C6	2.95	0.50
31:K:38:PHE:CE2	31:K:67:THR:N	2.79	0.50
17:Y:81:LYS:HD2	17:Y:83:ASP:N	2.11	0.50
2:A:192:C:H3'	2:A:193:U:C6	2.46	0.50
2:A:863:A:H2'	2:A:864:G:C8	2.45	0.50
2:A:1555:G:O5'	2:A:1555:G:H8	1.93	0.50
2:A:1797:C:C2	2:A:1823:G:N2	2.79	0.50
2:A:2364:C:C6	24:0:32:LYS:NZ	2.54	0.50
24:0:67:VAL:HG23	24:0:68:VAL:N	2.26	0.50
27:6:16:ALA:HB1	27:6:42:PRO:CD	2.40	0.50
2:A:125:G:H22	28:7:10:ARG:H	1.60	0.50
28:7:11:LYS:HE2	28:7:11:LYS:HA	1.94	0.50
2:A:1786:A:H2	2:A:2590:A:C1'	2.17	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1935:G:HO2'	2:A:1937:A:H2	1.58	0.50
2:A:2186:G:N1	2:A:2187:G:O6	2.37	0.50
2:A:2195:C:N3	2:A:2196:C:C6	2.80	0.50
2:A:2218:G:C6	2:A:2219:G:N7	2.79	0.50
2:A:2246:G:H1	2:A:2258:C:H42	1.59	0.50
2:A:2325:G:C2	2:A:2326:C:C6	2.99	0.50
2:A:2349:G:H3'	2:A:2350:C:H5''	1.92	0.50
2:A:2352:A:O2'	2:A:2353:G:H5'	2.11	0.50
2:A:2381:C:H6	2:A:2381:C:C5'	2.24	0.50
2:A:2397:G:H2'	2:A:2398:U:C6	2.47	0.50
2:A:2398:U:O2'	2:A:2399:G:OP1	2.29	0.50
2:A:1127:A:C2	2:A:2518:A:H1'	2.45	0.50
2:A:2022:U:C2'	2:A:2617:C:H4'	2.41	0.50
2:A:2636:U:C2'	2:A:2637:U:O5'	2.60	0.50
2:A:2698:U:C2'	2:A:2699:C:H6	2.15	0.50
2:A:2776:A:N3	2:A:2778:A:C6	2.74	0.50
2:A:2827:C:N3	2:A:2828:C:C5	2.79	0.50
2:A:298:G:H8	2:A:298:G:O5'	1.94	0.50
2:A:605:C:O2'	2:A:658:C:H4'	2.12	0.50
2:A:684:G:N1	2:A:775:G:C5	2.79	0.50
5:F:98:ARG:C	5:F:99:SER:O	2.44	0.50
8:I:19:LYS:O	8:I:21:VAL:HG23	2.12	0.50
11:P:73:VAL:HA	11:P:76:LEU:CB	2.40	0.50
20:U:115:ASN:O	20:U:117:ARG:HG3	2.12	0.50
21:V:96:LEU:HD23	21:V:96:LEU:N	2.26	0.50
15:W:17:VAL:O	15:W:20:VAL:HB	2.10	0.50
2:A:338:G:C8	17:Y:21:LYS:HB2	2.44	0.50
22:2:59:ILE:CG1	22:2:60:GLN:N	2.56	0.50
31:K:100:VAL:CG2	31:K:137:ILE:CG2	2.90	0.50
31:K:93:LYS:HA	31:K:96:ILE:HD12	1.86	0.50
31:K:21:ALA:N	31:K:22:PRO:HD2	2.25	0.50
31:K:26:PRO:O	31:K:27:ALA:C	2.50	0.50
2:A:1899:G:N2	2:A:1902:C:N4	2.58	0.50
2:A:270:A:H2'	2:A:270(A):A:C4'	2.41	0.50
24:0:62:LEU:O	24:0:63:SER:C	2.48	0.50
24:0:40:GLN:N	24:0:69:PHE:CE1	2.79	0.50
2:A:932:G:OP1	23:3:29:ARG:CZ	2.58	0.50
23:3:43:ILE:N	23:3:43:ILE:CD1	2.57	0.50
28:7:30:ILE:CD1	28:7:33:ARG:NE	2.75	0.50
2:A:996:A:H61	2:A:1159:U:H3	1.59	0.50
2:A:1203:G:H1'	2:A:1241:A:N1	2.25	0.50
2:A:1819:A:H4'	2:A:1820:U:H5'	1.93	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1900:A:C2	2:A:1970:A:C6	2.99	0.50
2:A:2210:G:H4'	2:A:2211:G:O5'	2.11	0.50
2:A:2377:A:O2'	2:A:2378:A:O5'	2.20	0.50
2:A:2450:A:C2	2:A:2451:A:N9	2.80	0.50
2:A:2544:G:C2	2:A:2545:G:C5	3.00	0.50
2:A:2549:G:C6	2:A:2550:G:N7	2.79	0.50
2:A:1954:G:C2	2:A:2551:C:H5''	2.46	0.50
2:A:2588:G:O6	2:A:2589:A:C6	2.64	0.50
2:A:2690:C:O5'	2:A:2690:C:C6	2.65	0.50
2:A:2705:A:N6	2:A:2706:G:C2	2.79	0.50
2:A:2717:G:O2'	2:A:2718:G:C4'	2.59	0.50
2:A:2852:G:O6	2:A:2866:U:O4	2.29	0.50
2:A:2892:A:C4'	2:A:2892:A:OP1	2.58	0.50
2:A:792:G:H21	2:A:2072:G:C2'	2.24	0.50
3:D:104:ILE:CD1	3:D:104:ILE:H	2.02	0.50
4:E:198:TYR:HE2	4:E:265:ASN:C	2.12	0.50
2:A:590:A:H5''	5:F:97:ASP:HB2	1.93	0.50
6:G:103:ASN:O	6:G:104:PHE:CD2	2.65	0.50
8:I:6:LEU:HB3	8:I:36:ALA:HB2	1.85	0.50
12:Q:142:LYS:CE	12:Q:142:LYS:CA	2.88	0.50
12:Q:82:LYS:HB2	12:Q:125:TRP:HB2	1.90	0.50
19:R:45:ARG:HG2	19:R:46:GLY:H	1.77	0.50
19:R:91:GLN:C	19:R:92:GLY:O	2.50	0.50
21:V:14:VAL:CG2	21:V:19:VAL:CG2	2.54	0.50
15:W:58:ALA:O	15:W:61:ASN:N	2.44	0.50
18:Z:91:PRO:CB	18:Z:127:PRO:CB	2.88	0.50
8:I:93:ILE:HG12	8:I:121:ILE:HB	1.94	0.50
8:I:94:THR:HG23	8:I:97:GLN:N	2.19	0.50
2:A:1151:G:O3'	20:U:81:ASN:CG	2.50	0.50
2:A:134:C:H2'	2:A:135:G:O4'	2.11	0.50
31:K:22:PRO:CB	31:K:23:PRO:CD	2.89	0.50
2:A:738:G:N3	2:A:739:G:H1'	2.26	0.50
2:A:1000:A:C8	2:A:1154:G:N2	2.80	0.50
24:O:37:LEU:CA	24:O:69:PHE:CD2	2.92	0.50
23:3:6:VAL:CG2	23:3:7:LYS:N	2.75	0.50
28:7:30:ILE:HG12	28:7:33:ARG:CD	2.29	0.50
2:A:1140:C:H5'	2:A:142(A):A:C4	2.46	0.50
2:A:1160:G:H2'	2:A:1161:C:C6	2.46	0.50
2:A:1668:A:H61	2:A:1676:A:H61	1.57	0.50
2:A:2095:C:N3	2:A:2194:G:O6	2.44	0.50
2:A:2212:A:C2'	2:A:2213:U:C6	2.80	0.50
2:A:2325:G:C5	2:A:2326:C:C5	2.96	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2354:G:C2	2:A:2355:C:C6	3.00	0.50
2:A:2370:G:H2'	2:A:2371:G:O5'	2.09	0.50
2:A:2385:C:O2	2:A:2386:C:C1'	2.59	0.50
2:A:2384:G:H3'	2:A:2386:C:P	2.52	0.50
2:A:2462:U:H2'	2:A:2463:C:O5'	2.10	0.50
2:A:2514:U:C6	2:A:2514:U:C3'	2.94	0.50
2:A:2652:C:C2'	2:A:2653:U:C5'	2.88	0.50
2:A:458:G:O2'	2:A:469:G:N1	2.43	0.50
2:A:532:A:C8	2:A:561:G:N2	2.80	0.50
1:B:74:U:H2'	1:B:75:G:C8	2.40	0.50
2:A:1655:A:O3'	4:E:212:GLY:HA3	2.12	0.50
2:A:2572:A:OP2	4:E:241:TRP:HB2	2.11	0.50
5:F:165:ASP:O	5:F:168:ARG:HG3	2.10	0.50
7:H:25:VAL:HG21	7:H:74:MET:HB3	1.92	0.50
8:I:3:VAL:HG21	8:I:21:VAL:H	1.76	0.50
9:N:83:ILE:HG13	9:N:84:ARG:CG	2.41	0.50
10:O:24:VAL:HG21	10:O:32:TYR:CA	2.41	0.50
10:O:3:GLN:CG	10:O:4:GLN:H	2.23	0.50
10:O:15:GLY:O	10:O:46:ALA:HB1	2.12	0.50
10:O:87:ILE:HG23	10:O:92:SER:H	1.74	0.50
10:O:88:ARG:CZ	10:O:94:ARG:HG2	2.42	0.50
10:O:87:ILE:CG2	10:O:88:ARG:N	2.75	0.50
12:Q:135:ALA:O	12:Q:137:ARG:N	2.45	0.50
2:A:911:A:C6	12:Q:16:ARG:HG3	2.16	0.50
19:R:33:ARG:HB2	19:R:113:LEU:HD11	1.94	0.50
2:A:2334:G:N2	13:S:12:ARG:CG	2.44	0.50
13:S:41:LYS:C	13:S:42:HIS:CG	2.83	0.50
21:V:35:LEU:C	21:V:60:VAL:CG1	2.64	0.50
15:W:23:LEU:CD1	15:W:35:ILE:HG21	2.39	0.50
2:A:519:U:H4'	15:W:75:TYR:HB3	1.94	0.50
17:Y:33:GLU:CD	17:Y:34:GLU:N	2.51	0.50
18:Z:116:VAL:O	18:Z:118:HIS:N	2.43	0.50
8:I:68:LEU:HD11	8:I:108:LEU:HD22	1.87	0.50
8:I:89:LEU:HD13	8:I:92:SER:O	2.12	0.50
2:A:2311:A:H2	6:G:53:LYS:NZ	2.05	0.50
31:K:19:THR:N	31:K:20:PRO:CD	2.70	0.50
2:A:1071:G:H2'	2:A:1072:C:H5'	1.93	0.50
2:A:1470:G:N1	2:A:1520:U:N3	2.54	0.50
2:A:1518:C:H2'	2:A:1519:G:O2'	2.11	0.50
2:A:204:A:OP1	2:A:204:A:H8	1.94	0.50
2:A:206:U:H2'	2:A:207:A:H8	1.76	0.50
26:5:18:MET:C	26:5:21:SER:HB3	2.32	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:6:16:ALA:HB1	27:6:42:PRO:HG3	1.94	0.50
29:8:16:ILE:HG22	29:8:17:THR:H	1.76	0.50
29:8:23:MET:HE3	29:8:48:PHE:CG	2.41	0.50
2:A:1993:U:H4'	4:E:228:ARG:CZ	2.41	0.50
2:A:961:C:N4	2:A:2031:A:N3	2.60	0.50
2:A:2195:C:H5''	2:A:2195:C:H6	1.65	0.50
2:A:2234:G:N3	2:A:2235:G:C8	2.78	0.50
2:A:2298:A:C1'	2:A:2322:A:O2'	2.60	0.50
2:A:2352:A:C8	2:A:2366:A:N6	2.80	0.50
2:A:2327:A:C5	2:A:2388:A:C6	2.99	0.50
2:A:2410:G:C2	2:A:2411:A:C4	2.99	0.50
2:A:2431:U:O2	2:A:2433:A:P	2.69	0.50
2:A:2508:G:H2'	2:A:2509:G:H5'	1.92	0.50
2:A:2531:A:C2	2:A:2658:C:C1'	2.90	0.50
2:A:2569:G:C4	2:A:2570:G:C8	2.99	0.50
2:A:2516:G:N1	2:A:2569:G:N3	2.59	0.50
2:A:2569:G:C6	2:A:2570:G:N7	2.80	0.50
2:A:2771:C:C2	2:A:2772:C:C6	2.99	0.50
2:A:2850:A:C2	2:A:2869:G:H4'	2.47	0.50
2:A:2863:C:C2	2:A:2864:G:C8	2.99	0.50
2:A:2869:G:HO2'	2:A:2870:C:H5'	1.71	0.50
2:A:2886:G:N2	2:A:2887:U:H1'	2.22	0.50
2:A:489:G:N2	2:A:1321:A:OP1	2.43	0.50
2:A:764:A:H5''	2:A:764:A:C8	2.46	0.50
3:D:142:ASN:CB	3:D:190:THR:HG23	2.41	0.50
3:D:166:LYS:HA	3:D:182:MET:CE	2.42	0.50
3:D:167:GLU:OE1	3:D:167:GLU:HA	2.10	0.50
3:D:170:TYR:O	3:D:182:MET:HE1	2.11	0.50
3:D:68:ARG:HD3	3:D:68:ARG:H	1.76	0.50
3:D:70:LYS:CG	3:D:73:ILE:CD1	2.65	0.50
4:E:78:MET:O	4:E:79:ARG:O	2.29	0.50
5:F:200:PRO:CB	5:F:212:VAL:CG1	2.67	0.50
5:F:19:PRO:O	5:F:21:VAL:N	2.44	0.50
5:F:39:GLN:CA	5:F:39:GLN:OE1	2.60	0.50
6:G:98:PHE:C	6:G:104:PHE:HD2	2.10	0.50
9:N:53:ILE:CG2	9:N:54:VAL:HG23	2.41	0.50
9:N:92:GLN:O	9:N:95:ARG:HB2	2.11	0.50
10:O:9:LYS:C	10:O:83:ALA:HB1	2.26	0.50
11:P:128:GLY:C	11:P:132:LYS:CD	2.73	0.50
2:A:2416:C:P	11:P:51:PHE:CD2	3.05	0.50
12:Q:36:ASN:OD1	18:Z:116:VAL:N	2.45	0.50
12:Q:33:MET:HG3	12:Q:83:PHE:CD1	2.47	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:R:77:ARG:O	19:R:78:LYS:C	2.50	0.50
20:U:39:LEU:C	20:U:41:ASN:N	2.61	0.50
18:Z:67:LYS:CG	18:Z:67:LYS:O	2.58	0.50
18:Z:92:VAL:O	18:Z:94:VAL:HG23	2.12	0.50
22:2:15:GLU:C	22:2:17:GLU:N	2.64	0.50
6:G:27:ILE:C	6:G:69:ILE:HD13	2.31	0.50
16:X:45:TYR:HE2	16:X:73:ASP:HA	1.77	0.50
2:A:192:C:H3'	2:A:193:U:H6	1.77	0.50
6:G:90:LEU:C	6:G:92:GLU:OE2	2.49	0.50
2:A:1118:C:H2'	2:A:1119:C:O4'	2.12	0.50
28:7:11:LYS:HG3	28:7:12:ARG:H	1.77	0.50
28:7:12:ARG:O	28:7:13:ALA:C	2.50	0.50
2:A:1012:U:O2	9:N:21:ARG:NE	2.40	0.50
2:A:1034:G:H5'	30:9:18:ARG:NH2	2.27	0.50
2:A:1027:A:C5	2:A:1126:A:N3	2.79	0.50
2:A:1155:A:H2'	2:A:1157:G:N7	2.25	0.50
2:A:2327:A:C6	2:A:2328:A:N1	2.80	0.50
2:A:2359:C:C4	2:A:2360:A:H2	2.17	0.50
2:A:2370:G:C4	2:A:2371:G:C8	3.00	0.50
2:A:2436:G:N2	2:A:2437:U:C1'	2.75	0.50
2:A:1127:A:C6	2:A:2518:A:N3	2.80	0.50
2:A:2531:A:C3'	2:A:2532:G:C5'	2.88	0.50
2:A:2592:G:C8	2:A:2593:U:C6	2.97	0.50
2:A:2712:U:H5''	2:A:2714:G:H4'	1.94	0.50
2:A:2767:C:C2'	2:A:2768:C:O5'	2.52	0.50
2:A:2868:A:C5	2:A:2869:G:C8	2.99	0.50
2:A:617:G:P	5:F:221:GLU:OE2	2.69	0.50
2:A:974(A):C:H6	2:A:1186:G:N1	2.10	0.50
4:E:193:PHE:CE2	4:E:199:ALA:HB1	2.38	0.50
4:E:217:TRP:O	4:E:218:GLY:C	2.47	0.50
4:E:229:GLN:O	4:E:231:TRP:CA	2.57	0.50
4:E:216:ARG:HD3	4:E:253:GLN:HA	1.92	0.50
5:F:214:THR:O	5:F:215:ALA:C	2.45	0.50
5:F:57:PRO:CG	5:F:58:ALA:N	2.74	0.50
7:H:124:VAL:O	7:H:125:PRO:C	2.49	0.50
7:H:87:GLU:HG3	7:H:162:ARG:C	2.27	0.50
9:N:58:GLU:O	9:N:61:VAL:CB	2.48	0.50
11:P:60:GLU:O	11:P:61:ALA:HB2	2.10	0.50
11:P:92:ASP:C	11:P:92:ASP:OD1	2.50	0.50
12:Q:120:HIS:CE1	18:Z:76:ARG:NH1	2.78	0.50
12:Q:85:ILE:HD13	12:Q:85:ILE:O	2.11	0.50
19:R:20:LEU:O	19:R:22:ARG:C	2.50	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2334:G:H1'	13:S:21:HIS:ND1	2.26	0.50
13:S:27:LEU:N	13:S:33:ARG:CZ	2.75	0.50
15:W:12:ILE:CD1	15:W:42:ARG:HD2	2.41	0.50
15:W:45:TYR:O	15:W:46:PHE:C	2.49	0.50
18:Z:106:GLY:N	18:Z:141:MET:HG2	2.25	0.50
18:Z:51:LEU:HD21	18:Z:52:PHE:O	2.10	0.50
1:B:103:U:HO2'	18:Z:67:LYS:HG2	1.69	0.50
8:I:115:ILE:HG12	8:I:131:VAL:HG11	1.86	0.50
6:G:64:ARG:HB3	6:G:67:ASP:OD2	2.08	0.50
6:G:60:GLU:C	6:G:61:PHE:HD1	2.15	0.50
2:A:283:A:C2	2:A:360:G:N2	2.80	0.50
2:A:978:G:C6	2:A:979:G:C6	3.00	0.50
2:A:858:U:C5'	24:O:20:TYR:OH	2.56	0.50
27:6:2:ALA:CB	27:6:11:LYS:HZ1	2.15	0.50
2:A:1935:G:H2'	2:A:1962:C:H42	1.77	0.50
2:A:2314:C:HO2'	2:A:2315:G:C5'	2.25	0.50
2:A:2325:G:C6	2:A:2326:C:C5	2.94	0.50
2:A:2562:U:O2	2:A:2562:U:C2'	2.59	0.50
2:A:2725:A:H2'	2:A:2727:G:N7	2.27	0.50
2:A:2729:G:C4'	4:E:298:GLY:HA3	2.42	0.50
2:A:2862:G:C2	2:A:2863:C:C4	2.99	0.50
2:A:669:G:N3	2:A:669:G:H2'	2.25	0.50
2:A:851:U:H2'	2:A:852:G:H8	1.77	0.50
3:D:140:VAL:C	3:D:141:HIS:HD1	2.14	0.50
3:D:73:ILE:CD1	3:D:95:TYR:CE2	2.95	0.50
4:E:74:GLU:O	4:E:75:THR:CB	2.60	0.50
5:F:89:ALA:HB1	5:F:90:HIS:CD2	2.47	0.50
7:H:47:ASN:O	7:H:48:VAL:CG1	2.60	0.50
2:A:270(O):U:H5	8:I:53:LYS:HZ1	1.40	0.50
9:N:136:SER:C	9:N:138:THR:N	2.63	0.50
10:O:10:VAL:CG1	10:O:12:ASP:OD1	2.52	0.50
10:O:13:ASN:ND2	10:O:97:ARG:HB3	2.27	0.50
11:P:130:ARG:CA	11:P:133:VAL:HG23	2.42	0.50
11:P:66:VAL:HG21	11:P:110:GLY:O	2.11	0.50
12:Q:141:MET:O	12:Q:142:LYS:O	2.30	0.50
2:A:1287:A:H5"	19:R:104:ARG:HD3	1.91	0.50
20:U:98:ILE:O	20:U:100:ALA:C	2.50	0.50
2:A:974:G:H8	21:V:80:TYR:CD1	2.17	0.50
15:W:7:ALA:O	15:W:10:VAL:CG2	2.59	0.50
15:W:36:LEU:CD1	15:W:47:VAL:HB	2.42	0.50
17:Y:30:ASP:CG	17:Y:31:LEU:CG	2.80	0.50
17:Y:40:VAL:O	17:Y:41:ARG:CB	2.59	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:Y:89:ARG:O	17:Y:91:LEU:HD21	2.12	0.50
18:Z:141:MET:HA	18:Z:171:VAL:CG1	2.36	0.50
18:Z:159:THR:CG2	18:Z:160:LEU:N	2.45	0.50
18:Z:113:VAL:N	18:Z:174:PRO:HD3	2.27	0.50
18:Z:1:MET:HE1	18:Z:52:PHE:CD2	2.45	0.50
18:Z:67:LYS:HZ2	18:Z:67:LYS:HB2	1.77	0.50
18:Z:6:LYS:O	18:Z:31:SER:OG	2.18	0.50
8:I:111:ASP:C	8:I:112:LYS:HD3	2.31	0.50
16:X:17:ASP:O	16:X:20:PHE:CE1	2.65	0.50
31:K:97:VAL:HA	31:K:99:LYS:HZ2	1.74	0.50
31:K:20:PRO:O	31:K:21:ALA:C	2.50	0.50
31:K:8:GLN:N	31:K:59:THR:HG22	2.27	0.50
11:P:75:LEU:C	11:P:75:LEU:CD2	2.74	0.50
16:X:76:GLU:OE1	16:X:76:GLU:C	2.50	0.50
2:A:264:C:O2'	2:A:265:A:H2'	2.12	0.50
2:A:1936:A:C5	2:A:1945:G:C6	3.00	0.50
2:A:483:A:H1'	17:Y:83:ASP:HA	1.94	0.50
17:Y:81:LYS:NZ	17:Y:83:ASP:HB2	2.26	0.50
24:0:55:ARG:HB3	24:0:55:ARG:CZ	2.42	0.50
24:0:36:ILE:N	24:0:68:VAL:CG1	2.75	0.50
23:3:13:ILE:O	23:3:15:TYR:CD1	2.65	0.50
23:3:8:LEU:HB2	23:3:33:GLN:H	1.77	0.50
2:A:2396:G:O2'	25:4:27:THR:HA	2.12	0.50
25:4:26:SER:O	25:4:27:THR:O	2.30	0.50
25:4:58:LYS:HG2	25:4:62:ARG:HH21	1.75	0.50
28:7:21:ARG:HH22	28:7:43:THR:CA	2.24	0.50
2:A:1450:C:H2'	2:A:1451:C:H4'	1.94	0.50
2:A:1657:C:C6	2:A:1657:C:O5'	2.65	0.50
2:A:1993:U:H2'	2:A:1994:C:O4'	2.12	0.50
2:A:2277:G:H3'	2:A:2278:A:H5''	1.94	0.50
2:A:2325:G:C5'	2:A:2325:G:H8	2.25	0.50
2:A:2349:G:C4	2:A:2369:A:C2	3.00	0.50
2:A:2511:U:C5	2:A:2512:C:H5	2.26	0.50
2:A:2571:C:C2'	2:A:2571:C:O2	2.54	0.50
2:A:2615:U:O2'	2:A:2616:C:O5'	2.30	0.50
2:A:2633:G:C2'	2:A:2634:G:O5'	2.59	0.50
2:A:2633:G:H5'	2:A:2812:G:H5'	1.94	0.50
2:A:2671:A:H2'	2:A:2672:G:O5'	2.11	0.50
2:A:2678:C:H2'	2:A:2679:A:C5'	2.41	0.50
2:A:270(G):C:H2'	2:A:270(H):C:H6	1.76	0.50
2:A:2696:U:O4	2:A:2714:G:N2	2.44	0.50
2:A:673:C:N4	2:A:808:G:C6	2.79	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:966:G:H1'	2:A:2267:A:H62	1.76	0.50
3:D:125:ILE:CG2	3:D:126:GLY:H	2.24	0.50
3:D:175:LEU:CD1	3:D:179:GLU:CA	2.89	0.50
4:E:185:GLY:O	4:E:187:HIS:HD2	1.91	0.50
4:E:233:ARG:O	4:E:234:ARG:CB	2.48	0.50
4:E:268:LEU:HD22	4:E:268:LEU:C	2.27	0.50
4:E:83:LEU:HD12	4:E:178:LEU:HD23	1.94	0.50
2:A:606:U:OP1	5:F:104:ASP:CB	2.60	0.50
5:F:140:VAL:HB	5:F:235:PHE:O	2.12	0.50
6:G:141:VAL:CA	6:G:144:ARG:NH1	2.75	0.50
9:N:80:LYS:O	9:N:81:ARG:C	2.49	0.50
10:O:17:ARG:HE	10:O:47:THR:N	2.09	0.50
11:P:59:GLU:OE1	11:P:60:GLU:CB	2.58	0.50
19:R:105:ARG:HA	19:R:105:ARG:NE	2.25	0.50
13:S:10:MET:H	13:S:13:ARG:HE	1.60	0.50
20:U:20:ARG:HH12	21:V:75:LYS:HZ1	1.59	0.50
20:U:84:LYS:C	20:U:86:ALA:N	2.60	0.50
15:W:106:ILE:HG23	15:W:107:LEU:N	2.26	0.50
15:W:49:LYS:C	15:W:51:LEU:H	2.16	0.50
15:W:86:LEU:CB	15:W:87:PRO:HD2	2.28	0.50
2:A:905:U:HO2'	18:Z:117:VAL:HG13	1.76	0.50
8:I:119:ASP:OD1	8:I:119:ASP:C	2.50	0.50
8:I:86:GLY:O	8:I:88:ARG:HA	2.11	0.50
2:A:1097:U:O4	31:K:31:HIS:HE1	1.91	0.50
7:H:155:PRO:HB2	7:H:169:ARG:CG	2.37	0.50
2:A:2182:G:C5	2:A:2183:C:N4	2.80	0.50
2:A:721:C:H2'	2:A:722:A:C8	2.47	0.50
2:A:2076:U:C6	2:A:2076:U:H3'	2.47	0.50
24:O:14:ARG:C	24:O:14:ARG:CD	2.75	0.49
25:4:6:HIS:HE2	25:4:55:ARG:HG3	1.77	0.49
29:8:58:MET:O	29:8:60:LEU:CA	2.57	0.49
2:A:1162:G:HO2'	21:V:23:GLU:CD	2.13	0.49
2:A:1668:A:C5	2:A:1993:U:C4	3.00	0.49
2:A:2230:G:H2'	2:A:2231:C:H6	1.76	0.49
2:A:2485:G:H2'	2:A:2486:G:C4'	2.42	0.49
2:A:2487:G:C2'	2:A:2488:A:C5'	2.90	0.49
2:A:2586:C:C2'	2:A:2587:A:H5'	2.41	0.49
2:A:512:G:H5'	2:A:513:A:OP1	2.12	0.49
2:A:648:G:H2'	2:A:649:G:H8	1.77	0.49
3:D:173:VAL:O	3:D:175:LEU:HD23	2.12	0.49
5:F:157:LEU:O	5:F:158:GLU:C	2.47	0.49
5:F:29:ASP:O	5:F:30:LEU:C	2.50	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:97:GLN:CB	6:G:106:PHE:CD2	2.90	0.49
12:Q:143:VAL:C	12:Q:144:THR:HG23	2.21	0.49
12:Q:27:GLY:C	12:Q:28:ILE:HG13	2.32	0.49
12:Q:45:GLN:OE1	12:Q:153:PRO:CB	2.60	0.49
19:R:23:ASN:OD1	19:R:24:GLN:N	2.45	0.49
19:R:59:ASP:N	19:R:80:PHE:CE2	2.79	0.49
19:R:83:ILE:O	19:R:86:ARG:N	2.45	0.49
20:U:66:ASN:CG	20:U:76:TYR:CZ	2.85	0.49
21:V:67:LYS:HG3	21:V:94:LYS:HD2	1.94	0.49
21:V:72:ARG:CG	21:V:88:GLN:HG3	2.27	0.49
21:V:78:VAL:CG2	21:V:80:TYR:CD1	2.95	0.49
8:I:119:ASP:OD1	8:I:120:ALA:N	2.45	0.49
22:2:7:GLU:HG2	22:2:8:ILE:N	2.26	0.49
31:K:37:GLU:HG2	31:K:41:ARG:NH1	2.06	0.49
18:Z:95:SER:OG	18:Z:122:ILE:HG23	2.12	0.49
6:G:60:GLU:O	6:G:61:PHE:CD1	2.65	0.49
24:0:39:ARG:C	24:0:40:GLN:O	2.47	0.49
2:A:969:U:O3'	23:3:14:GLY:HA2	2.12	0.49
28:7:26:SER:O	28:7:27:GLY:O	2.30	0.49
2:A:594:U:C4'	29:8:58:MET:HE2	2.42	0.49
2:A:2528:U:OP1	30:9:30:VAL:HG11	2.01	0.49
2:A:1012:U:O2	9:N:21:ARG:HG2	2.12	0.49
2:A:124:G:H5'	2:A:1376:C:O2'	2.12	0.49
2:A:2218:G:N1	2:A:2219:G:C5	2.80	0.49
2:A:2087:G:N1	2:A:2233:U:C6	2.80	0.49
2:A:2345:G:H21	2:A:2381:C:C3'	2.24	0.49
2:A:2378:A:H1'	13:S:101:VAL:CG2	2.42	0.49
2:A:2458:G:C6	2:A:2490:G:N3	2.80	0.49
2:A:2459:A:H8	2:A:2460:U:H5	1.58	0.49
2:A:2605:U:C4'	2:A:2605:U:H6	2.26	0.49
2:A:2625:G:C5	2:A:2626:C:C2	3.00	0.49
2:A:2631:G:C4	2:A:2632:A:H8	2.27	0.49
2:A:2641:G:O6	2:A:2774:C:C5	2.65	0.49
2:A:2776:A:C4	2:A:2778:A:C6	2.99	0.49
2:A:2854:G:N2	2:A:2864:G:C8	2.80	0.49
2:A:2830:G:N3	2:A:2883:A:H2	2.10	0.49
2:A:292:C:H2'	2:A:293:U:N3	2.20	0.49
2:A:452:G:C3'	2:A:453:C:H5''	2.36	0.49
2:A:778:G:C6	2:A:779:U:N3	2.81	0.49
2:A:993:G:C8	2:A:1162:G:N1	2.80	0.49
1:B:8:U:P	13:S:37:ARG:HD2	2.52	0.49
3:D:105:ALA:N	3:D:106:PRO:HD2	2.24	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:193:PHE:HA	4:E:197:GLU:OE1	2.12	0.49
5:F:112:ARG:O	5:F:115:LEU:N	2.45	0.49
5:F:155:SER:OG	5:F:156:LEU:N	2.45	0.49
5:F:238:SER:O	5:F:241:ALA:CA	2.54	0.49
2:A:1255:U:C5	5:F:67:GLN:O	2.65	0.49
5:F:93:LYS:O	5:F:96:LYS:CB	2.57	0.49
7:H:87:GLU:CG	7:H:162:ARG:HB2	2.42	0.49
9:N:12:VAL:O	9:N:38:VAL:HA	2.11	0.49
9:N:52:GLN:HB3	9:N:55:GLU:OE1	2.11	0.49
9:N:77:GLY:HA2	9:N:80:LYS:CB	2.39	0.49
11:P:69:ILE:CA	11:P:73:VAL:HG21	2.40	0.49
13:S:9:PRO:CG	13:S:14:ARG:CB	2.89	0.49
13:S:31:LYS:HZ2	13:S:99:GLU:HB3	1.77	0.49
20:U:69:ALA:HB3	20:U:76:TYR:CE1	2.47	0.49
20:U:69:ALA:O	20:U:74:MET:O	2.30	0.49
17:Y:20:HIS:C	17:Y:22:GLN:N	2.62	0.49
17:Y:24:ARG:O	17:Y:25:ALA:CB	2.61	0.49
18:Z:94:VAL:HG11	18:Z:130:ILE:HG21	1.94	0.49
18:Z:141:MET:O	18:Z:142:ASN:HB2	2.09	0.49
18:Z:154:LEU:C	18:Z:154:LEU:CD2	2.80	0.49
18:Z:164:PRO:O	18:Z:165:GLU:O	2.29	0.49
8:I:98:ILE:O	8:I:99:ALA:O	2.30	0.49
2:A:72:U:C4'	22:2:57:LYS:HZ1	2.24	0.49
2:A:70:G:H5'	2:A:75:G:N2	2.26	0.49
31:K:74:PRO:O	31:K:75:ALA:C	2.51	0.49
2:A:1924:C:N4	2:A:1925:C:H41	2.08	0.49
2:A:1539:G:H2'	2:A:1540:G:C8	2.48	0.49
5:F:120:ASP:N	5:F:120:ASP:OD1	2.45	0.49
23:3:42:ALA:C	23:3:44:ARG:N	2.65	0.49
23:3:7:LYS:O	23:3:54:VAL:HG11	2.12	0.49
30:9:2:LYS:C	30:9:4:ARG:H	2.14	0.49
2:A:10:G:N2	2:A:2629:A:N1	2.48	0.49
2:A:2185:C:C4	2:A:2186:G:N7	2.80	0.49
2:A:2327:A:H2'	2:A:2328:A:C8	2.48	0.49
2:A:2337:G:C2	2:A:2338:G:N7	2.80	0.49
2:A:2364:C:C2	24:0:32:LYS:CE	2.93	0.49
2:A:2395:C:OP2	2:A:2396:G:OP2	2.31	0.49
2:A:2399:G:C2'	2:A:2400:G:O5'	2.60	0.49
2:A:2523:G:C4	2:A:2765:A:N6	2.80	0.49
2:A:2616:C:C4	2:A:2617:C:H5	2.30	0.49
2:A:2044:C:C5	2:A:2625:G:C2	3.00	0.49
2:A:2625:G:C2'	2:A:2626:C:C5	2.88	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2627:G:N3	2:A:2781:A:H2	2.10	0.49
2:A:2686:G:C4	2:A:2687:U:H6	2.30	0.49
2:A:2843:G:C6	2:A:2844:G:N7	2.80	0.49
2:A:617:G:H4'	5:F:219:ASN:CG	2.25	0.49
1:B:60:C:H2'	1:B:61:G:H8	1.77	0.49
3:D:80:ILE:HB	3:D:82:TYR:CZ	2.42	0.49
4:E:301:PRO:C	4:E:303:PRO:HD2	2.21	0.49
5:F:102:LEU:CD2	5:F:106:GLU:CG	2.90	0.49
5:F:104:ASP:O	5:F:107:ARG:N	2.45	0.49
5:F:167:ASP:O	5:F:168:ARG:HD2	2.12	0.49
2:A:449:A:OP2	5:F:85:LYS:CB	2.59	0.49
7:H:140:VAL:HA	7:H:143:LEU:CD2	2.43	0.49
7:H:147:ILE:HA	7:H:150:VAL:HG23	1.85	0.49
9:N:52:GLN:CA	9:N:55:GLU:HG3	2.41	0.49
10:O:98:ILE:CG2	10:O:99:PHE:N	2.53	0.49
2:A:636:G:OP1	11:P:127:GLU:N	2.45	0.49
11:P:58:GLN:HG3	11:P:59:GLU:H	1.77	0.49
12:Q:16:ARG:NH1	12:Q:17:ARG:N	2.60	0.49
12:Q:31:PHE:CZ	12:Q:88:PHE:CE2	2.98	0.49
12:Q:50:VAL:C	12:Q:51:GLU:OE1	2.50	0.49
13:S:102:LEU:CD1	13:S:129:ILE:CD1	2.81	0.49
13:S:35:VAL:CG1	13:S:37:ARG:CZ	2.89	0.49
20:U:72:HIS:NE2	20:U:110:VAL:HG11	2.21	0.49
2:A:998:C:C5'	20:U:84:LYS:HZ3	2.20	0.49
21:V:29:ALA:O	21:V:31:ASP:N	2.45	0.49
15:W:24:ILE:HA	15:W:35:ILE:CD1	2.42	0.49
18:Z:108:VAL:CG1	18:Z:108:VAL:O	2.54	0.49
18:Z:74:ARG:O	18:Z:76:ARG:HG2	2.12	0.49
22:2:8:ILE:CA	22:2:11:MET:CG	2.75	0.49
2:A:121:G:C2	2:A:131:G:C5	3.00	0.49
2:A:138:G:C8	16:X:43:GLU:OE2	2.65	0.49
31:K:19:THR:HG23	31:K:39:CYS:HB3	1.94	0.49
2:A:1316:U:H2'	2:A:1317:A:C8	2.48	0.49
15:W:52:GLU:HA	15:W:52:GLU:OE2	2.13	0.49
24:0:35:ASN:C	24:0:36:ILE:HG12	2.30	0.49
24:0:48:GLY:HA2	24:0:55:ARG:CA	2.40	0.49
23:3:31:LEU:CG	23:3:32:GLN:H	2.14	0.49
25:4:43:TRP:HA	25:4:56:VAL:O	2.13	0.49
2:A:1265:A:OP2	2:A:2615:U:O5'	2.30	0.49
2:A:1697:G:C5'	2:A:1698:A:H5'	2.40	0.49
2:A:1697:G:O2'	2:A:1978:A:OP1	2.26	0.49
2:A:2081:C:H5'	25:4:35:VAL:CG2	2.42	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2093:G:C1'	2:A:2198:A:C6	2.82	0.49
2:A:2242:G:N3	2:A:2243:U:C6	2.81	0.49
2:A:2341:G:O6	2:A:2342:C:N4	2.44	0.49
2:A:2356:C:O2'	2:A:2357:U:C5'	2.59	0.49
2:A:2423:U:C6	2:A:2423:U:C4'	2.95	0.49
2:A:2459:A:H2'	2:A:2460:U:H5'	1.94	0.49
2:A:2533:A:C3'	2:A:2534:A:H8	2.25	0.49
2:A:2023:G:H5'	2:A:2617:C:O2'	2.03	0.49
2:A:2665:A:N3	2:A:2665:A:H2'	2.27	0.49
2:A:2677:G:C4	2:A:2678:C:H5	2.29	0.49
2:A:2682:U:H1'	4:E:49:THR:HA	1.92	0.49
2:A:2714:G:H2'	2:A:2715:C:H5'	1.94	0.49
2:A:2732:G:H5''	2:A:2733:A:O5'	2.12	0.49
2:A:2747:G:C2	2:A:2754:U:N3	2.80	0.49
2:A:2865:U:C4	2:A:2866:U:C4	2.95	0.49
2:A:2894:G:C2'	2:A:2894:G:N3	2.75	0.49
2:A:291:C:N4	2:A:349:G:C6	2.81	0.49
2:A:39:C:H2'	2:A:40:C:C6	2.48	0.49
2:A:641:C:H1'	2:A:2350:C:OP1	2.12	0.49
2:A:988:A:H62	23:3:13:ILE:HG21	1.75	0.49
3:D:107:LYS:O	3:D:108:ASN:CB	2.59	0.49
4:E:198:TYR:HD2	4:E:265:ASN:C	2.13	0.49
4:E:250:VAL:C	4:E:251:PRO:O	2.49	0.49
4:E:46:ALA:HB2	4:E:72:VAL:C	2.29	0.49
6:G:20:LYS:HA	6:G:76:ARG:HG2	1.93	0.49
7:H:145:ALA:C	7:H:147:ILE:N	2.51	0.49
7:H:86:LEU:HB2	7:H:148:ARG:HE	1.78	0.49
9:N:134:GLU:O	9:N:138:THR:OG1	2.31	0.49
9:N:23:ALA:CA	9:N:26:VAL:HG23	2.41	0.49
9:N:58:GLU:CB	9:N:61:VAL:CG2	2.89	0.49
9:N:63:ILE:O	9:N:71:TYR:CE1	2.66	0.49
10:O:106:LEU:O	10:O:107:ARG:C	2.50	0.49
12:Q:68:ALA:CB	12:Q:136:TRP:CZ3	2.89	0.49
12:Q:82:LYS:HG2	12:Q:84:ARG:CG	2.33	0.49
19:R:65:LEU:O	19:R:68:ARG:HB2	2.12	0.49
19:R:72:ASP:OD2	19:R:72:ASP:O	2.30	0.49
20:U:115:ASN:O	20:U:117:ARG:C	2.50	0.49
20:U:21:ALA:O	20:U:22:LYS:O	2.30	0.49
20:U:73:GLY:O	20:U:74:MET:CB	2.61	0.49
21:V:22:VAL:O	21:V:23:GLU:O	2.30	0.49
21:V:40:VAL:HG13	21:V:55:THR:HG22	1.93	0.49
15:W:86:LEU:N	15:W:86:LEU:HD23	2.10	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:Z:91:PRO:CB	18:Z:127:PRO:HB3	2.36	0.49
18:Z:14:LEU:O	18:Z:14:LEU:CD2	2.56	0.49
18:Z:69:VAL:CG1	18:Z:81:VAL:HG13	2.43	0.49
18:Z:98:VAL:HA	18:Z:134:LEU:O	2.11	0.49
8:I:115:ILE:HG12	8:I:131:VAL:HG22	1.95	0.49
2:A:110:G:C2	2:A:111:A:C4	2.99	0.49
2:A:1394:U:H5''	2:A:1603:A:O3'	2.11	0.49
2:A:72:U:C5'	22:2:57:LYS:NZ	2.75	0.49
16:X:32:ALA:C	16:X:37:VAL:CG2	2.81	0.49
2:A:2181:G:H2'	2:A:2182:G:H5''	1.93	0.49
2:A:303:U:H2'	2:A:304:G:C8	2.45	0.49
2:A:444(A):A:P	2:A:444(A):A:H8	2.35	0.49
2:A:1602:U:OP2	2:A:1602:U:C4	2.64	0.49
2:A:704:G:C4	2:A:726:G:N2	2.80	0.49
24:0:45:PHE:CD1	24:0:78:PHE:CB	2.96	0.49
23:3:13:ILE:O	23:3:15:TYR:CE1	2.65	0.49
23:3:50:VAL:CG1	23:3:53:LEU:HD12	2.42	0.49
25:4:58:LYS:CG	25:4:59:PHE:N	2.66	0.49
2:A:10:G:N1	2:A:2629:A:C4	2.80	0.49
2:A:1213:A:N1	2:A:1237:A:H1'	2.27	0.49
2:A:1657:C:H3'	2:A:1657:C:H6	1.77	0.49
2:A:1952:A:C2	10:O:22:ILE:CG1	2.95	0.49
2:A:574:C:C2	2:A:2055:C:C6	3.00	0.49
2:A:2259:G:H2'	2:A:2260:C:O4'	2.12	0.49
2:A:2300:G:H1	2:A:2316:C:H42	1.59	0.49
2:A:2322:A:P	2:A:2322:A:O4'	2.71	0.49
2:A:2398:U:O2'	2:A:2399:G:P	2.69	0.49
2:A:2474:C:H2'	2:A:2475:C:C5'	2.23	0.49
2:A:2555:U:H2'	2:A:2556:C:O5'	2.10	0.49
2:A:2607:G:H2'	2:A:2608:G:O5'	2.12	0.49
2:A:2642:G:H2'	2:A:2643:G:H5'	1.91	0.49
2:A:2531:A:N3	2:A:2658:C:H1'	2.26	0.49
2:A:2834:G:C8	2:A:2834:G:C3'	2.95	0.49
2:A:290:G:OP2	2:A:290:G:C8	2.66	0.49
2:A:611:C:H2'	2:A:611:C:O2	2.11	0.49
2:A:617:G:C8	2:A:618:G:N7	2.80	0.49
2:A:602:G:HO2'	2:A:655:A:H2	1.59	0.49
2:A:792:G:C6	2:A:2440:C:C6	3.00	0.49
2:A:994:C:O3'	20:U:54:LYS:CE	2.41	0.49
2:A:1817:G:OP2	3:D:155:ARG:NH2	2.45	0.49
3:D:213:LYS:HB3	3:D:215:LYS:O	2.11	0.49
4:E:305:LYS:O	4:E:306:ARG:HB2	2.12	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:H:10:ILE:HD11	7:H:48:VAL:O	1.99	0.49
7:H:140:VAL:HA	7:H:143:LEU:HD22	1.95	0.49
7:H:55:SER:HB2	7:H:60:HIS:CB	2.39	0.49
9:N:15:ARG:CB	9:N:43:ARG:HD2	2.22	0.49
9:N:46:ILE:O	9:N:47:THR:C	2.49	0.49
11:P:113:GLN:O	11:P:115:ARG:CG	2.61	0.49
11:P:130:ARG:O	11:P:133:VAL:CB	2.53	0.49
11:P:71:GLU:HG3	11:P:72:ASN:H	1.78	0.49
19:R:105:ARG:O	19:R:107:ASP:HB3	2.12	0.49
19:R:110:PRO:O	19:R:111:LEU:C	2.50	0.49
13:S:86:LEU:N	13:S:121:GLY:CA	2.75	0.49
13:S:81:ALA:C	13:S:83:LEU:H	2.13	0.49
20:U:87:ASN:HD22	20:U:87:ASN:C	2.16	0.49
20:U:91:ASN:O	20:U:95:LEU:HD13	2.10	0.49
21:V:10:LYS:O	21:V:11:GLN:C	2.50	0.49
17:Y:89:ARG:O	17:Y:91:LEU:CD2	2.61	0.49
18:Z:26:LYS:O	18:Z:27:GLU:HB2	2.10	0.49
18:Z:21:ALA:H	18:Z:32:PHE:HB2	1.76	0.49
18:Z:19:ILE:CG2	18:Z:39:PHE:HE1	2.25	0.49
18:Z:51:LEU:CD2	18:Z:52:PHE:O	2.60	0.49
8:I:82:LYS:O	8:I:89:LEU:HD23	2.12	0.49
8:I:94:THR:HG22	8:I:97:GLN:CG	2.37	0.49
22:2:22:ASP:O	22:2:26:GLU:CD	2.47	0.49
22:2:25:THR:O	22:2:26:GLU:C	2.48	0.49
16:X:25:GLN:C	16:X:26:PHE:CG	2.84	0.49
16:X:28:VAL:HG22	16:X:62:LYS:C	2.32	0.49
2:A:1324:G:O3'	2:A:1325:G:H4'	2.12	0.49
2:A:1422:G:N2	2:A:1576:U:C2	2.80	0.49
2:A:1627:G:H1	2:A:1639:U:H3	1.60	0.49
2:A:1789:A:H5''	2:A:1790:C:OP2	2.13	0.49
2:A:2294:C:N3	2:A:2339:G:O6	2.45	0.49
2:A:2300:G:HO2'	2:A:2301:C:H5'	1.73	0.49
2:A:2340:G:HO2'	2:A:2341:G:C5'	2.19	0.49
2:A:2347:C:N3	2:A:2348:U:C5	2.80	0.49
2:A:2359:C:N3	2:A:2360:A:H2	2.09	0.49
2:A:2366:A:N7	2:A:2367:G:C8	2.78	0.49
2:A:243:U:H5''	2:A:244:A:OP2	2.11	0.49
2:A:2536:G:C3'	2:A:2537:U:H5'	2.42	0.49
2:A:2519:U:C6	2:A:2541:A:N6	2.80	0.49
2:A:1129:A:C6	2:A:2570:G:H4'	2.48	0.49
2:A:2657:A:H8	2:A:2658:C:H5	1.41	0.49
2:A:2729:G:N3	2:A:2730:C:C2	2.80	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2839:G:N1	2:A:2840:C:C2	2.79	0.49
2:A:2870:C:O2	2:A:2871:C:N1	2.45	0.49
2:A:527:C:H6	2:A:2779:U:N1	2.11	0.49
2:A:578:A:H2'	2:A:579:G:H5''	1.94	0.49
2:A:650:C:OP1	29:8:19:THR:CB	2.59	0.49
2:A:807:U:C4'	2:A:2445:G:H4'	2.43	0.49
2:A:969:U:O3'	23:3:14:GLY:CA	2.61	0.49
1:B:24:G:C5	1:B:56:G:N3	2.79	0.49
1:B:59:A:O3'	1:B:60:C:H5'	2.13	0.49
3:D:146:LYS:HB3	3:D:149:ARG:CG	2.42	0.49
4:E:177:ALA:C	4:E:179:ASP:H	2.13	0.49
4:E:215:LYS:HB3	4:E:215:LYS:HZ3	1.77	0.49
2:A:2051:A:C1'	4:E:238:LEU:HD21	2.42	0.49
4:E:193:PHE:CD2	4:E:311:PHE:CD1	3.00	0.49
5:F:99:SER:O	5:F:100:LEU:HG	2.13	0.49
5:F:36:ARG:C	5:F:39:GLN:NE2	2.45	0.49
6:G:98:PHE:CB	6:G:104:PHE:CE2	2.96	0.49
7:H:69:SER:O	7:H:72:ALA:N	2.46	0.49
7:H:8:ILE:CG2	7:H:9:GLU:H	2.13	0.49
9:N:52:GLN:HA	9:N:55:GLU:HG3	1.88	0.49
10:O:104:ARG:N	10:O:104:ARG:HD2	2.19	0.49
10:O:43:VAL:CG1	10:O:54:LYS:HA	2.42	0.49
2:A:2485:G:H5'	12:Q:144:THR:CG2	2.34	0.49
12:Q:16:ARG:C	12:Q:17:ARG:HD3	2.32	0.49
12:Q:61:LEU:O	12:Q:63:ALA:C	2.50	0.49
2:A:1294:U:O2'	19:R:26:LYS:HD3	2.12	0.49
19:R:34:ILE:HG23	19:R:35:THR:N	2.03	0.49
2:A:2021:C:H6	20:U:25:TRP:CH2	2.29	0.49
2:A:564:C:C1'	20:U:37:GLN:OE1	2.59	0.49
21:V:34:GLU:O	21:V:35:LEU:CG	2.58	0.49
15:W:60:ASN:C	15:W:61:ASN:OD1	2.51	0.49
17:Y:71:VAL:CG1	17:Y:93:THR:N	2.76	0.49
18:Z:151:ASP:OD1	18:Z:151:ASP:N	2.46	0.49
18:Z:166:LEU:O	18:Z:167:THR:C	2.50	0.49
18:Z:2:GLU:O	18:Z:54:ILE:HG22	1.99	0.49
18:Z:50:GLY:O	18:Z:51:LEU:HB3	2.11	0.49
18:Z:69:VAL:HG13	18:Z:81:VAL:HA	1.95	0.49
2:A:1398:C:OP1	16:X:53:ASN:OD1	2.30	0.49
16:X:6:LYS:HZ2	16:X:29:ASP:N	2.09	0.49
9:N:7:ASP:O	9:N:8:ALA:CB	2.59	0.49
2:A:662:G:H2'	2:A:663:G:C8	2.48	0.49
2:A:855:G:N2	24:0:24:LYS:O	2.32	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2354:G:C4	24:0:32:LYS:HE2	2.46	0.49
2:A:2365:G:OP1	24:0:40:GLN:O	2.30	0.49
26:5:16:ARG:O	26:5:17:ASP:C	2.49	0.49
27:6:8:ILE:HD13	27:6:29:ARG:CZ	2.43	0.49
27:6:31:THR:O	27:6:32:GLN:O	2.31	0.49
27:6:37:LEU:CD2	27:6:51:ARG:CG	2.52	0.49
30:9:4:ARG:C	30:9:36:GLN:HA	2.33	0.49
2:A:2215:G:O2'	2:A:2216:G:C4'	2.58	0.49
2:A:2322:A:N7	2:A:2323:G:N7	2.60	0.49
2:A:2492:U:O2'	2:A:2493:U:P	2.68	0.49
2:A:2523:G:N2	2:A:2541:A:H1'	2.28	0.49
2:A:2540:C:H2'	2:A:2541:A:O5'	2.12	0.49
2:A:2604:U:O2	2:A:2604:U:C2'	2.52	0.49
2:A:2606:C:O2	2:A:2607:G:N9	2.46	0.49
2:A:2703:C:O2	2:A:2703:C:O4'	2.29	0.49
2:A:527:C:O4'	2:A:2779:U:C2	2.66	0.49
2:A:2819:G:C5'	2:A:2821:A:H62	2.17	0.49
2:A:452:G:C2	2:A:458:G:C2	3.01	0.49
2:A:974(A):C:OP2	2:A:1186:G:N2	2.45	0.49
3:D:107:LYS:HG2	3:D:108:ASN:N	2.27	0.49
4:E:176:HIS:HA	4:E:179:ASP:OD1	2.13	0.49
4:E:222:ARG:HG2	4:E:232:ARG:H	1.75	0.49
5:F:145:GLU:HG3	5:F:196:THR:CG2	2.43	0.49
7:H:66:THR:HG22	7:H:67:THR:H	1.77	0.49
9:N:12:VAL:C	9:N:38:VAL:CB	2.79	0.49
11:P:116:HIS:CD2	11:P:118:LEU:HD21	2.48	0.49
11:P:129:ALA:C	11:P:131:GLU:N	2.65	0.49
12:Q:122:PHE:CB	12:Q:136:TRP:HZ2	2.25	0.49
19:R:22:ARG:HH21	19:R:69:ASP:HB3	1.77	0.49
20:U:36:PHE:O	20:U:39:LEU:HB3	2.07	0.49
20:U:68:GLY:C	20:U:70:ARG:N	2.64	0.49
21:V:40:VAL:HG13	21:V:55:THR:CG2	2.41	0.49
21:V:93:ILE:O	21:V:95:ILE:HD13	2.12	0.49
21:V:61:VAL:CG1	21:V:96:LEU:N	2.75	0.49
15:W:5:ALA:HB2	15:W:54:ALA:CB	2.34	0.49
15:W:85:VAL:HG12	15:W:95:ILE:CG1	2.43	0.49
17:Y:16:LEU:O	17:Y:19:ARG:N	2.40	0.49
8:I:108:LEU:HD23	8:I:109:LYS:C	2.33	0.49
2:A:1547:C:H2'	2:A:1548:C:C6	2.47	0.49
2:A:1912:A:C5	2:A:1918:A:H2	2.30	0.49
24:0:11:LYS:O	24:0:12:ASN:C	2.51	0.49
2:A:1497:U:O5'	2:A:1497:U:H6	1.96	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1332:G:C5	2:A:1609:A:C6	3.00	0.49
2:A:80:G:H8	2:A:80:G:O5'	1.95	0.49
2:A:218:A:N6	2:A:235:U:O2'	2.45	0.49
2:A:1644:C:H2'	2:A:1645:G:H8	1.76	0.49
23:3:12:PRO:HG2	23:3:20:LYS:HZ3	1.74	0.49
28:7:35:ARG:O	28:7:36:ALA:C	2.50	0.49
2:A:126:A:OP2	28:7:44:VAL:HG21	2.13	0.49
2:A:2242:G:C2	2:A:2243:U:C6	2.99	0.49
2:A:2287:A:N1	2:A:2289:G:C4	2.81	0.49
2:A:2297:C:O2'	2:A:2298:A:C5'	2.61	0.49
2:A:2322:A:N3	2:A:2322:A:C2'	2.76	0.49
2:A:2358:G:C6	2:A:2359:C:C2	3.00	0.49
2:A:2349:G:N1	2:A:2369:A:N1	2.60	0.49
2:A:2373:G:H2'	2:A:2374:C:C6	2.47	0.49
2:A:2402:C:C6	2:A:2402:C:O5'	2.65	0.49
2:A:2410:G:C2	2:A:2411:A:C5	3.01	0.49
2:A:2416:C:C2'	2:A:2417:C:H5'	2.31	0.49
2:A:2431:U:N3	2:A:2433:A:OP2	2.43	0.49
2:A:2523:G:H2'	2:A:2524:G:C5'	2.37	0.49
2:A:2556:C:C3'	2:A:2557:G:C5'	2.78	0.49
2:A:1952:A:C2'	2:A:2560:C:O2'	2.60	0.49
2:A:2564:A:N6	2:A:2565:A:N6	2.60	0.49
2:A:2509:G:C4	2:A:2580:U:O2	2.65	0.49
2:A:2625:G:H2'	2:A:2626:C:H6	1.71	0.49
2:A:2543:G:O2'	2:A:2645:G:C5	2.62	0.49
2:A:2653:U:N3	2:A:2654:A:C5	2.79	0.49
2:A:2731:G:H4'	4:E:264:LEU:HD12	1.94	0.49
2:A:2854:G:C2	2:A:2864:G:C4	3.00	0.49
2:A:1819:A:C5'	3:D:157:ALA:HB2	2.34	0.49
4:E:176:HIS:HA	4:E:179:ASP:CG	2.33	0.49
5:F:197:SER:O	5:F:238:SER:HB3	2.13	0.49
6:G:35:ALA:O	6:G:36:ASN:HB2	2.12	0.49
6:G:47:GLN:CD	6:G:75:LEU:HD23	2.33	0.49
6:G:98:PHE:HB3	6:G:104:PHE:HE2	1.78	0.49
7:H:36:PHE:C	7:H:37:HIS:HD1	2.16	0.49
8:I:43:ASN:CA	8:I:46:ALA:H	2.26	0.49
11:P:116:HIS:CD2	11:P:118:LEU:CD1	2.71	0.49
11:P:60:GLU:O	11:P:61:ALA:HB3	2.12	0.49
12:Q:85:ILE:HA	12:Q:122:PHE:CD2	2.47	0.49
19:R:105:ARG:CZ	19:R:105:ARG:H	2.26	0.49
19:R:28:LEU:CD1	19:R:28:LEU:C	2.81	0.49
19:R:28:LEU:C	19:R:30:THR:N	2.66	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:R:38:VAL:CG2	19:R:99:LYS:HE3	2.40	0.49
19:R:63:ARG:NH2	19:R:77:ARG:HA	2.28	0.49
13:S:115:VAL:HG12	13:S:116:PHE:N	2.28	0.49
13:S:76:GLY:HA2	13:S:82:TYR:HB2	1.94	0.49
13:S:86:LEU:O	13:S:87:LEU:C	2.50	0.49
20:U:44:THR:O	20:U:47:TYR:CB	2.38	0.49
15:W:45:TYR:O	15:W:48:ALA:HB3	2.13	0.49
18:Z:110:GLY:C	18:Z:112:LEU:N	2.65	0.49
18:Z:6:LYS:CB	18:Z:31:SER:HB3	2.43	0.49
22:2:50:ARG:O	22:2:53:ILE:HD12	2.13	0.49
22:2:51:LYS:O	22:2:53:ILE:N	2.45	0.49
2:A:110:G:C6	2:A:111:A:C6	3.00	0.49
2:A:129:C:H5'	2:A:1599:C:O2'	2.12	0.49
16:X:14:ALA:O	16:X:15:MET:C	2.51	0.49
6:G:29:HIS:HE2	6:G:64:ARG:HH22	1.61	0.49
2:A:1085:A:H1'	2:A:1086:A:C4'	2.43	0.49
2:A:1:G:C6	2:A:2902:C:N4	2.71	0.49
17:Y:9:LYS:NZ	17:Y:13:ARG:CZ	2.76	0.49
2:A:2722:G:C5	2:A:2723:C:C5	3.01	0.49
2:A:1944:U:H4'	2:A:1955:U:O2'	2.13	0.49
2:A:1496:A:O5'	2:A:1496:A:H8	1.93	0.49
2:A:270(A):A:H62	2:A:270(Z):U:H5''	1.78	0.49
2:A:678:C:N4	2:A:799:G:H1	2.11	0.49
2:A:1796:U:H2'	2:A:1797:C:C5	2.47	0.49
2:A:464:U:O2'	28:7:12:ARG:NH2	2.46	0.49
2:A:650:C:H5'	29:8:17:THR:HB	1.93	0.49
2:A:564:C:O2'	2:A:1252:G:O6	2.29	0.49
2:A:1264:G:H3'	2:A:1265:A:C5'	2.43	0.49
2:A:1968:G:H3'	2:A:1968:G:C8	2.47	0.49
2:A:2022:U:H2'	2:A:2617:C:C4'	2.43	0.49
2:A:2023:G:H2'	2:A:2024:G:C8	2.48	0.49
2:A:2205:C:N4	2:A:2206:C:H41	2.11	0.49
2:A:2239:G:C5	2:A:2240:C:C5	3.00	0.49
2:A:2254:C:C2'	2:A:2255:G:O5'	2.61	0.49
2:A:2329:G:N3	2:A:2330:G:C8	2.80	0.49
2:A:2340:G:C2'	2:A:2341:G:O5'	2.61	0.49
2:A:2392:A:C5	2:A:2393:A:C5	3.01	0.49
2:A:2571:C:H2'	2:A:2572:A:OP1	2.12	0.49
2:A:2544:G:C4'	2:A:2645:G:N7	2.74	0.49
2:A:2821:A:H2'	2:A:2822:G:H1'	1.92	0.49
2:A:297:C:H3'	2:A:298:G:C8	2.48	0.49
2:A:529:A:O2'	2:A:530:G:P	2.71	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:124:LYS:O	3:D:127:ASN:ND2	2.46	0.49
3:D:134:ILE:CG2	3:D:163:VAL:HG21	2.43	0.49
3:D:76:ARG:HG2	3:D:76:ARG:NH1	2.28	0.49
4:E:207:GLY:N	4:E:257:GLY:O	2.46	0.49
2:A:1654:A:O2'	4:E:210:THR:O	2.26	0.49
5:F:113:SER:O	5:F:114:ALA:C	2.51	0.49
5:F:223:LEU:O	5:F:231:ARG:CG	2.61	0.49
2:A:38:A:N3	5:F:46:TYR:CZ	2.81	0.49
6:G:99:ASP:N	6:G:104:PHE:HD2	1.96	0.49
7:H:10:ILE:CG1	7:H:49:ILE:HG13	2.43	0.49
7:H:62:ALA:O	7:H:63:LEU:C	2.51	0.49
2:A:1139:G:P	9:N:46:ILE:CG2	3.00	0.49
10:O:77:ILE:O	10:O:78:ARG:HG2	2.12	0.49
19:R:20:LEU:HD12	19:R:21:TYR:CE2	2.43	0.49
21:V:39:PHE:HE2	21:V:41:GLY:C	2.11	0.49
2:A:974:G:C6	21:V:80:TYR:CE2	3.00	0.49
2:A:145:G:H2'	2:A:146:G:H8	1.78	0.49
2:A:67:U:C2	2:A:68:G:N7	2.81	0.49
16:X:9:HIS:ND1	16:X:27:ALA:HA	2.10	0.49
16:X:52:VAL:HA	16:X:65:VAL:O	2.13	0.49
2:A:1062:G:N3	2:A:1062:G:H2'	2.28	0.49
31:K:131:THR:C	31:K:133:LYS:H	2.15	0.49
18:Z:95:SER:CA	18:Z:122:ILE:HA	2.40	0.49
18:Z:95:SER:HB3	18:Z:122:ILE:HG12	1.89	0.49
2:A:225:A:HO2'	2:A:257:A:H4'	1.75	0.49
2:A:1359:A:N7	2:A:1372:U:O4	2.46	0.49
2:A:1764:G:N2	2:A:1989:G:H1'	2.27	0.49
23:3:31:LEU:HD21	23:3:32:GLN:HB3	1.90	0.49
26:5:25:LEU:C	26:5:26:THR:HG23	2.25	0.49
29:8:61:MET:O	29:8:63:PRO:CD	2.46	0.49
2:A:1031:G:C2'	30:9:8:LYS:NZ	2.76	0.49
2:A:530:G:N1	2:A:2021:C:C2	2.81	0.49
2:A:963:U:C2'	2:A:2250:G:N2	2.55	0.49
2:A:2399:G:C2	2:A:2400:G:N9	2.81	0.49
2:A:2419:U:P	29:8:41:ILE:CD1	2.98	0.49
2:A:2434:A:O2'	2:A:2435:A:C5'	2.60	0.49
2:A:2493:U:O2'	2:A:2494:G:O5'	2.31	0.49
2:A:2543:G:C3'	2:A:2544:G:H5'	2.43	0.49
2:A:2553:G:C8	2:A:2554:U:C1'	2.95	0.49
2:A:2565:A:O3'	2:A:2566:A:H4'	2.09	0.49
2:A:2645:G:OP2	2:A:2645:G:C8	2.66	0.49
2:A:2655:G:O2'	2:A:2656:U:C5	2.66	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2712:U:H5''	2:A:2714:G:C4'	2.43	0.49
2:A:2769:C:O2	2:A:2770:G:C1'	2.59	0.49
2:A:2885:C:N3	2:A:2886:G:N9	2.61	0.49
2:A:446:G:OP1	20:U:3:ARG:HB2	2.13	0.49
2:A:489:G:C8	2:A:1284:A:N3	2.81	0.49
2:A:641:C:H2'	2:A:642:G:O4'	2.13	0.49
3:D:170:TYR:C	3:D:182:MET:SD	2.92	0.49
3:D:62:ARG:HH22	3:D:83:ASP:HB3	1.78	0.49
4:E:252:GLN:C	4:E:254:GLY:N	2.67	0.49
5:F:167:ASP:HB2	5:F:232:LEU:HB2	1.95	0.49
5:F:55:ARG:CG	5:F:56:THR:N	2.68	0.49
2:A:2315:G:O4'	6:G:133:ASN:ND2	2.46	0.49
7:H:43:THR:HG21	7:H:51:VAL:C	2.33	0.49
8:I:6:LEU:O	8:I:6:LEU:HD22	2.13	0.49
9:N:74:ARG:HD2	9:N:141:ALA:C	2.32	0.49
14:T:37:GLU:CG	14:T:38:ASN:N	2.38	0.49
14:T:5:GLU:O	14:T:6:CYS:C	2.49	0.49
2:A:29:U:O3'	20:U:8:ILE:HG13	2.13	0.49
17:Y:33:GLU:C	17:Y:35:TYR:N	2.66	0.49
17:Y:51:LEU:CD2	17:Y:52:ARG:HG3	2.41	0.49
17:Y:51:LEU:HD22	17:Y:95:ASN:CB	2.43	0.49
2:A:1059:G:C4	31:K:127:ILE:CD1	2.85	0.49
31:K:19:THR:CG2	31:K:39:CYS:CB	2.91	0.49
2:A:280:C:O2	2:A:283:A:N1	2.46	0.49
2:A:880:G:H1	2:A:897:C:H42	1.61	0.49
26:5:34:PRO:HG2	26:5:35:GLN:H	1.77	0.48
2:A:929:G:HO2'	23:3:43:ILE:HG12	1.78	0.48
29:8:4:MET:CE	29:8:4:MET:N	2.76	0.48
2:A:1851:U:H3	2:A:1891:G:H1	1.60	0.48
2:A:2207:C:C4	2:A:2218:G:C6	3.00	0.48
2:A:2251:G:C5'	12:Q:102:ARG:HH22	2.22	0.48
2:A:2326:C:C2'	2:A:2326:C:O2	2.41	0.48
2:A:2331:G:C5	2:A:2332:U:C2	2.99	0.48
2:A:2438:U:OP1	2:A:2600:A:H5'	2.13	0.48
2:A:2439:A:O2'	2:A:2439:A:N3	2.45	0.48
2:A:2478:A:H2'	2:A:2479:G:C5'	2.42	0.48
2:A:2519:U:O2	2:A:2542:A:N1	2.46	0.48
2:A:2549:G:C2	2:A:2550:G:N7	2.81	0.48
2:A:2622:C:O2	2:A:2623:G:H8	1.79	0.48
2:A:2647:U:O2	2:A:2648:C:C5	2.66	0.48
2:A:2739:U:HO2'	2:A:2740:A:H5''	1.75	0.48
2:A:2808:U:H5''	2:A:2809:A:OP2	2.13	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:458:G:H5'	28:7:39:ARG:HD3	1.94	0.48
2:A:511:U:C5	2:A:512:G:H1'	2.48	0.48
2:A:584:C:OP2	20:U:10:ARG:NH2	2.38	0.48
2:A:729:G:H8	2:A:764:A:OP1	1.95	0.48
2:A:961:C:C4	2:A:2031:A:C2	3.01	0.48
2:A:974:G:C3'	21:V:82:ARG:CZ	2.91	0.48
1:B:60:C:H2'	1:B:61:G:C8	2.48	0.48
3:D:128:ALA:CA	3:D:190:THR:HA	2.43	0.48
5:F:200:PRO:HD3	5:F:214:THR:HG22	1.94	0.48
7:H:147:ILE:CD1	7:H:150:VAL:HB	2.28	0.48
7:H:159:LYS:N	7:H:162:ARG:NH1	2.61	0.48
2:A:2093:G:O2'	8:I:29:PHE:CD2	2.66	0.48
10:O:114:ILE:O	10:O:115:ILE:C	2.51	0.48
11:P:71:GLU:C	11:P:73:VAL:H	2.16	0.48
12:Q:56:ILE:HD11	12:Q:113:ALA:O	2.09	0.48
19:R:100:LEU:HD21	19:R:113:LEU:HB3	1.94	0.48
19:R:58:GLY:O	19:R:59:ASP:CB	2.59	0.48
20:U:39:LEU:HB3	20:U:40:LEU:CD2	2.41	0.48
21:V:18:ASP:OD2	21:V:94:LYS:HE2	2.13	0.48
17:Y:34:GLU:O	17:Y:35:TYR:CG	2.65	0.48
18:Z:142:ASN:O	18:Z:171:VAL:HG21	2.13	0.48
18:Z:20:ALA:O	18:Z:21:ALA:HB2	2.13	0.48
16:X:50:GLU:H	16:X:50:GLU:CD	2.15	0.48
31:K:117:ASN:N	31:K:117:ASN:OD1	2.45	0.48
31:K:22:PRO:CB	31:K:23:PRO:HD3	2.43	0.48
2:A:439:G:C3'	17:Y:6:LYS:NZ	2.75	0.48
16:X:77:VAL:O	16:X:78:ALA:C	2.51	0.48
2:A:2182:G:C2	2:A:2183:C:N3	2.81	0.48
2:A:1804:C:N4	2:A:1813:G:H1	2.11	0.48
2:A:366:C:O2	2:A:366:C:H2'	2.12	0.48
2:A:1513:C:H3'	2:A:1513:C:H6	1.77	0.48
25:4:14:ILE:HD11	25:4:39:VAL:CG2	2.43	0.48
2:A:1239:G:C2'	2:A:1240:U:H6	2.26	0.48
2:A:1321:A:N3	2:A:1321:A:H2'	2.28	0.48
2:A:1626:G:N7	2:A:1634:A:C2	2.78	0.48
2:A:199:A:N6	2:A:2434:A:C6	2.81	0.48
2:A:2089:U:H3	2:A:2231:C:N4	2.05	0.48
2:A:2206:C:H2'	2:A:2207:C:C6	2.48	0.48
2:A:2237:G:O2'	2:A:2239:G:N7	2.47	0.48
2:A:2239:G:C2	2:A:2240:C:C6	3.01	0.48
2:A:2259:G:C8	2:A:2260:C:C6	3.00	0.48
2:A:2261:C:OP2	24:0:14:ARG:CB	2.57	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:911:A:H1'	2:A:2264:C:O4'	2.13	0.48
2:A:2271:G:O2'	2:A:2272:U:C5'	2.57	0.48
2:A:2298:A:C4	2:A:2321:G:N1	2.79	0.48
2:A:2354:G:C4	2:A:2355:C:C6	3.01	0.48
2:A:2423:U:O4'	2:A:2425:A:N7	2.46	0.48
2:A:2513:G:C6	2:A:2514:U:N3	2.81	0.48
2:A:2045:C:C2	2:A:2624:G:C2	2.95	0.48
2:A:2628:C:H1'	2:A:2781:A:N3	2.29	0.48
2:A:2633:G:H2'	2:A:2634:G:O5'	2.13	0.48
2:A:2805:G:H3'	2:A:2807:G:C5'	2.43	0.48
2:A:2832:U:O2'	2:A:2834:G:C4	2.61	0.48
2:A:2865:U:N3	2:A:2866:U:C4	2.80	0.48
2:A:530:G:H1'	2:A:532:A:P	2.54	0.48
3:D:65:ASP:OD2	3:D:101:ARG:HD3	2.13	0.48
3:D:103:ILE:HG13	3:D:104:ILE:CD1	2.21	0.48
3:D:167:GLU:CB	3:D:170:TYR:HD1	1.99	0.48
3:D:206:LYS:HD3	3:D:206:LYS:H	1.77	0.48
5:F:37:ALA:HB2	5:F:102:LEU:CG	2.43	0.48
5:F:221:GLU:O	5:F:222:ASP:C	2.50	0.48
7:H:104:LEU:N	7:H:104:LEU:HD12	2.27	0.48
8:I:1:MET:HB3	8:I:22:ALA:H	1.77	0.48
9:N:12:VAL:O	9:N:38:VAL:CB	2.60	0.48
9:N:41:ALA:O	9:N:132:LEU:O	2.31	0.48
11:P:115:ARG:C	11:P:117:GLU:H	2.16	0.48
12:Q:111:THR:HG22	12:Q:112:ALA:N	2.27	0.48
20:U:109:LEU:C	20:U:111:ASP:N	2.64	0.48
20:U:8:ILE:N	20:U:11:ARG:HH11	1.90	0.48
20:U:39:LEU:O	20:U:41:ASN:CA	2.62	0.48
20:U:66:ASN:N	20:U:66:ASN:OD1	2.29	0.48
20:U:72:HIS:ND1	20:U:110:VAL:CG2	2.77	0.48
18:Z:128:ARG:O	18:Z:129:ARG:HG2	2.13	0.48
18:Z:126:GLY:C	18:Z:129:ARG:HB2	2.17	0.48
18:Z:139:THR:O	18:Z:140:LYS:CB	2.60	0.48
18:Z:1:MET:O	18:Z:2:GLU:CB	2.61	0.48
18:Z:29:ASN:O	18:Z:30:VAL:HG22	2.13	0.48
18:Z:54:ILE:HG23	18:Z:55:THR:H	1.78	0.48
18:Z:52:PHE:H	18:Z:65:LEU:CD1	2.26	0.48
8:I:114:LYS:O	8:I:115:ILE:C	2.51	0.48
16:X:46:ASP:O	16:X:47:VAL:C	2.50	0.48
2:A:2857:G:N2	2:A:2860:A:OP2	2.40	0.48
2:A:222:A:O5'	2:A:271(B):G:N2	2.46	0.48
2:A:391:G:H2'	2:A:392:C:H6	1.76	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:823:G:H2'	2:A:824:A:C8	2.48	0.48
2:A:1065:U:H3'	2:A:1066:U:H5''	1.95	0.48
23:3:30:ARG:NE	23:3:33:GLN:CB	2.77	0.48
27:6:37:LEU:CD2	27:6:51:ARG:N	2.75	0.48
28:7:10:ARG:O	28:7:13:ALA:HB3	2.13	0.48
28:7:9:ASN:O	28:7:10:ARG:O	2.28	0.48
2:A:687:C:H5''	28:7:4:THR:CG2	2.42	0.48
30:9:29:ASN:HB3	30:9:32:HIS:ND1	2.28	0.48
2:A:1022:G:C2	2:A:1140:C:C4	3.01	0.48
2:A:142(A):A:OP1	2:A:1143:A:H8	1.95	0.48
2:A:818:G:C4	2:A:1187:G:N2	2.81	0.48
2:A:489:G:C8	2:A:1284:A:C2	3.01	0.48
2:A:1655:A:C4'	4:E:211:GLN:HA	2.40	0.48
2:A:2092:U:H5	2:A:2227:A:N6	2.12	0.48
2:A:2354:G:C5	2:A:2355:C:C5	3.01	0.48
2:A:2463:C:C2	2:A:2464:C:C6	2.93	0.48
2:A:197:A:H61	2:A:248:G:N2	2.11	0.48
2:A:2517:C:O2'	2:A:2518:A:P	2.71	0.48
2:A:2586:C:C6	2:A:2586:C:H3'	2.49	0.48
2:A:2633:G:OP2	2:A:2633:G:H8	1.95	0.48
2:A:2644:G:C8	2:A:2644:G:H3'	2.47	0.48
2:A:2817:G:N2	2:A:2818:G:H1'	2.28	0.48
2:A:2842:G:N2	2:A:2876:G:C4	2.81	0.48
2:A:307:G:N2	2:A:310:A:O4'	2.45	0.48
2:A:585:G:H2'	2:A:586:A:C8	2.47	0.48
2:A:585:G:N1	2:A:1251:C:C5	2.81	0.48
2:A:647:G:H2'	2:A:648:G:C8	2.46	0.48
2:A:997:G:OP1	20:U:92:ARG:HB2	2.12	0.48
3:D:108:ASN:CG	3:D:109:LEU:N	2.64	0.48
3:D:141:HIS:NE2	3:D:191:VAL:O	2.44	0.48
4:E:225:LYS:O	4:E:226:HIS:CG	2.66	0.48
5:F:6:TYR:CD1	5:F:139:VAL:CG1	2.96	0.48
5:F:197:SER:O	5:F:238:SER:CB	2.61	0.48
5:F:32:GLY:O	5:F:35:VAL:CA	2.61	0.48
7:H:102:LEU:N	7:H:102:LEU:CD2	2.70	0.48
7:H:101:LYS:CB	7:H:113:GLU:CD	2.81	0.48
7:H:101:LYS:CE	7:H:115:GLU:CG	2.90	0.48
7:H:93:TYR:CD2	7:H:159:LYS:HE2	2.48	0.48
9:N:21:ARG:CA	9:N:24:SER:OG	2.61	0.48
10:O:91:LYS:HB3	10:O:111:PHE:HE2	1.77	0.48
11:P:76:LEU:CB	11:P:81:VAL:CG2	2.91	0.48
13:S:106:LEU:C	13:S:107:ASN:O	2.44	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1251:C:C5'	20:U:10:ARG:CG	2.92	0.48
20:U:8:ILE:C	20:U:11:ARG:CD	2.81	0.48
21:V:22:VAL:CG1	21:V:23:GLU:N	2.76	0.48
17:Y:20:HIS:O	17:Y:23:VAL:N	2.46	0.48
17:Y:28:SER:HB3	17:Y:99:THR:CA	2.34	0.48
17:Y:49:GLU:C	17:Y:49:GLU:OE2	2.51	0.48
18:Z:148:THR:HB	18:Z:166:LEU:O	2.13	0.48
18:Z:66:VAL:CG2	18:Z:69:VAL:CG2	2.91	0.48
8:I:68:LEU:HB3	8:I:72:LEU:HD21	1.94	0.48
22:2:34:GLN:O	22:2:35:ALA:O	2.31	0.48
31:K:38:PHE:HZ	31:K:65:SER:C	2.16	0.48
2:A:221:A:H4'	2:A:222:A:O5'	2.12	0.48
23:3:3:ARG:HH11	23:3:3:ARG:HG2	1.79	0.48
25:4:46:GLU:CD	25:4:54:GLY:HA3	2.29	0.48
27:6:49:VAL:C	27:6:50:PHE:CD1	2.87	0.48
2:A:125:G:C5'	28:7:19:ARG:HD2	2.44	0.48
2:A:1140:C:H4'	2:A:142(A):A:N1	2.27	0.48
2:A:1278:A:H5''	19:R:34:ILE:CG2	2.44	0.48
2:A:1651:G:H2'	2:A:1652:A:H8	1.76	0.48
2:A:2234:G:C6	2:A:2235:G:C6	3.01	0.48
2:A:2256:G:N1	2:A:2257:U:O2	2.47	0.48
2:A:2261:C:OP2	24:0:14:ARG:CD	2.58	0.48
2:A:2264:C:H2'	2:A:2265:U:H5'	1.94	0.48
2:A:2393:A:O2'	2:A:2394:C:P	2.71	0.48
2:A:2488:A:O5'	2:A:2488:A:H8	1.95	0.48
2:A:2548:G:C5	2:A:2549:G:N7	2.82	0.48
2:A:2595:G:H2'	2:A:2597:G:OP2	2.12	0.48
2:A:2622:C:C2'	2:A:2623:G:O5'	2.62	0.48
2:A:2652:C:C2'	2:A:2653:U:C6	2.92	0.48
2:A:2658:C:C2'	2:A:2659:G:C5'	2.86	0.48
2:A:2700:C:C2'	2:A:2701:C:C5'	2.90	0.48
2:A:561:G:H21	20:U:45:TYR:HE2	1.60	0.48
3:D:104:ILE:CB	3:D:106:PRO:HD3	2.39	0.48
3:D:106:PRO:O	3:D:107:LYS:C	2.51	0.48
3:D:175:LEU:N	3:D:179:GLU:O	2.44	0.48
3:D:216:ALA:CA	3:D:222:PRO:N	2.69	0.48
5:F:194:PHE:N	5:F:211:ASP:OD2	2.46	0.48
5:F:238:SER:C	5:F:241:ALA:HB2	2.33	0.48
5:F:89:ALA:CB	5:F:90:HIS:NE2	2.73	0.48
7:H:101:LYS:HB2	7:H:113:GLU:OE2	2.13	0.48
7:H:52:THR:O	7:H:64:HIS:HD2	1.97	0.48
8:I:23:ASP:O	8:I:24:GLY:C	2.51	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:N:39:VAL:HA	9:N:103:VAL:HG12	1.92	0.48
10:O:24:VAL:HG11	10:O:32:TYR:C	2.34	0.48
2:A:2566:A:N6	10:O:28:SER:HA	2.21	0.48
2:A:2251:G:P	12:Q:102:ARG:NH2	2.85	0.48
12:Q:18:GLU:HB3	12:Q:23:ILE:HD11	1.95	0.48
12:Q:43:PRO:O	12:Q:44:ALA:C	2.52	0.48
19:R:20:LEU:CD1	19:R:21:TYR:CE2	2.89	0.48
13:S:15:GLU:HG2	13:S:16:ALA:N	2.29	0.48
2:A:532:A:N7	20:U:45:TYR:CE2	2.81	0.48
20:U:47:TYR:HA	20:U:50:ARG:CG	2.43	0.48
17:Y:51:LEU:HD21	17:Y:95:ASN:CB	2.43	0.48
17:Y:80:GLU:HG2	17:Y:86:GLU:CG	2.43	0.48
17:Y:93:THR:O	17:Y:94:SER:C	2.51	0.48
18:Z:126:GLY:O	18:Z:127:PRO:C	2.51	0.48
18:Z:25:ASN:OD1	18:Z:25:ASN:C	2.52	0.48
8:I:116:GLU:CG	8:I:130:PRO:O	2.61	0.48
2:A:73:A:H5'	22:2:50:ARG:NH2	2.28	0.48
16:X:18:MET:SD	16:X:24:LEU:CA	2.99	0.48
31:K:13:LEU:HD22	31:K:24:VAL:HG23	1.95	0.48
31:K:60:VAL:O	31:K:60:VAL:HG23	2.13	0.48
9:N:107:ASN:HD22	9:N:107:ASN:N	2.09	0.48
2:A:1906:G:C1'	2:A:1929:G:C8	2.96	0.48
2:A:119:A:O2'	2:A:120:U:P	2.72	0.48
2:A:1474:C:H2'	2:A:1475:G:N7	2.29	0.48
2:A:1197:G:N3	2:A:1250:G:C2	2.81	0.48
26:5:33:CYS:HB2	26:5:37:HIS:N	2.28	0.48
24:0:30:VAL:C	24:0:31:VAL:HG23	2.33	0.48
24:0:37:LEU:HD11	24:0:71:ASN:HD21	1.76	0.48
23:3:53:LEU:HD22	23:3:54:VAL:HG22	1.95	0.48
27:6:13:GLU:O	27:6:52:GLU:CA	2.61	0.48
28:7:22:MET:O	28:7:28:ARG:CG	2.58	0.48
29:8:3:LYS:HA	29:8:4:MET:HE1	1.96	0.48
2:A:1125:G:H5'	30:9:4:ARG:HD3	1.95	0.48
2:A:1326:U:O2'	2:A:2010:G:O2'	2.24	0.48
2:A:1655:A:H2'	2:A:1656:C:O4'	2.14	0.48
2:A:1967:C:N4	2:A:1968:G:C2	2.81	0.48
2:A:2052:G:N2	4:E:245:ARG:CD	2.76	0.48
2:A:2189:U:C2'	2:A:2190:G:C8	2.94	0.48
2:A:2212:A:H2'	2:A:2213:U:H5''	1.94	0.48
2:A:2315:G:C2'	2:A:2316:C:O5'	2.61	0.48
2:A:2372:G:N1	2:A:2373:G:C5	2.82	0.48
2:A:2454:G:H2'	2:A:2455:G:C5'	2.19	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2468:G:C2'	2:A:2469:A:C8	2.97	0.48
2:A:249:C:O2'	29:8:8:LYS:HG3	2.13	0.48
2:A:2567:G:N2	2:A:2568:C:C5	2.81	0.48
2:A:2049:G:H1	2:A:2619:C:N4	2.11	0.48
2:A:2633:G:N1	2:A:2634:G:C6	2.81	0.48
2:A:270(Q):C:H2'	2:A:270(R):G:H8	1.79	0.48
2:A:2696:U:N3	2:A:2714:G:N2	2.61	0.48
2:A:2815:C:HO2'	2:A:2816:C:H5''	1.70	0.48
2:A:2830:G:N2	2:A:2883:A:C2	2.80	0.48
2:A:2840:C:O2'	2:A:2841:C:C5'	2.61	0.48
2:A:386:G:HO2'	2:A:387:U:P	2.36	0.48
2:A:519:U:C4'	15:W:75:TYR:HB3	2.44	0.48
2:A:807:U:O4'	2:A:2445:G:C5'	2.59	0.48
2:A:827:U:N3	2:A:2430:A:C6	2.82	0.48
2:A:904:C:O2'	18:Z:166:LEU:CD1	2.58	0.48
2:A:993:G:H21	20:U:54:LYS:HZ1	1.60	0.48
3:D:167:GLU:O	3:D:170:TYR:CA	2.61	0.48
3:D:175:LEU:CD1	3:D:179:GLU:HB3	2.40	0.48
3:D:62:ARG:N	3:D:62:ARG:HD3	2.27	0.48
4:E:214:VAL:HG21	4:E:221:LYS:HZ2	1.61	0.48
4:E:317:PRO:HG2	4:E:320:GLN:HG2	1.94	0.48
5:F:93:LYS:C	5:F:96:LYS:HG3	2.13	0.48
7:H:120:LEU:HD12	7:H:143:LEU:HD12	1.91	0.48
8:I:7:LYS:HA	8:I:12:LYS:CD	2.29	0.48
12:Q:85:ILE:CG2	12:Q:136:TRP:CZ2	2.95	0.48
2:A:873:G:C4'	12:Q:32:LYS:CG	2.87	0.48
19:R:62:ALA:HB3	19:R:80:PHE:HZ	1.73	0.48
20:U:43:ALA:HB2	21:V:75:LYS:CB	2.32	0.48
21:V:67:LYS:HG2	21:V:70:TYR:CE1	2.47	0.48
21:V:69:ILE:HG21	21:V:88:GLN:CB	2.42	0.48
17:Y:58:GLU:HG2	17:Y:76:ASP:OD2	2.13	0.48
22:2:34:GLN:O	22:2:37:GLY:N	2.46	0.48
2:A:75:G:O3'	22:2:51:LYS:CE	2.59	0.48
2:A:2308:G:H5'	2:A:2309:A:P	2.52	0.48
9:N:5:GLU:CA	9:N:109:TYR:HE2	2.27	0.48
17:Y:9:LYS:CE	17:Y:13:ARG:NH2	2.75	0.48
2:A:1998:G:O3'	2:A:2724:C:H4'	2.14	0.48
8:I:63:ALA:HA	8:I:66:LYS:HE3	1.96	0.48
2:A:106:C:C2'	2:A:107:C:H5''	2.35	0.48
2:A:1171:G:H2'	2:A:1173:G:H4'	1.94	0.48
2:A:259:G:H2'	2:A:260:G:C8	2.47	0.48
1:B:70:C:H42	1:B:106:G:H1	1.61	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:0:16:SER:O	24:0:17:ASN:CB	2.62	0.48
30:9:3:VAL:C	30:9:5:SER:N	2.65	0.48
2:A:1028:A:H2'	2:A:1029:A:C8	2.48	0.48
2:A:1889:A:H2'	2:A:1890:A:H8	1.77	0.48
2:A:1953:A:H1'	2:A:2560:C:O4'	2.14	0.48
2:A:1969:A:C4'	2:A:1970:A:H5'	2.41	0.48
2:A:2034:U:O2	2:A:2034:U:H2'	2.14	0.48
2:A:2226:C:C4	2:A:2227:A:N3	2.82	0.48
2:A:2242:G:N3	2:A:2243:U:C5	2.80	0.48
2:A:2302:G:C2'	2:A:2303:G:O5'	2.60	0.48
2:A:2297:C:C2	2:A:2333:A:N6	2.81	0.48
2:A:2401:U:H2'	2:A:2402:C:O4'	2.12	0.48
2:A:2417:C:H2'	2:A:2418:A:H8	1.78	0.48
2:A:2528:U:H5	2:A:2530:A:C5	2.28	0.48
2:A:2561:A:C8	2:A:2561:A:C3'	2.96	0.48
2:A:2785:C:H4'	4:E:99:VAL:CG1	2.44	0.48
2:A:2848:G:C2	2:A:2867:G:N3	2.81	0.48
2:A:472:A:H2'	2:A:473:G:C5'	2.43	0.48
2:A:687:C:C5'	28:7:4:THR:CG2	2.78	0.48
2:A:830:G:C8	2:A:2448:A:N7	2.81	0.48
2:A:873:G:H2'	2:A:874:G:O4'	2.13	0.48
2:A:994:C:HO2'	20:U:54:LYS:HA	1.76	0.48
5:F:203:ALA:C	5:F:205:ARG:N	2.64	0.48
5:F:22:PHE:CD2	5:F:116:ALA:HA	2.49	0.48
5:F:6:TYR:OH	5:F:234:VAL:HG12	2.13	0.48
5:F:236:THR:O	5:F:237:GLU:O	2.31	0.48
5:F:32:GLY:O	5:F:36:ARG:HG2	2.14	0.48
6:G:136:ARG:HB3	6:G:137:PRO:CD	2.39	0.48
6:G:77:ASP:O	6:G:79:MET:N	2.47	0.48
7:H:10:ILE:HD11	7:H:49:ILE:CG2	2.42	0.48
9:N:61:VAL:HG11	9:N:62:ASP:OD1	2.03	0.48
2:A:2495:G:C4'	12:Q:101:MET:CB	2.79	0.48
12:Q:152:SER:OG	12:Q:153:PRO:CD	2.60	0.48
12:Q:17:ARG:HA	12:Q:22:GLY:HA3	1.95	0.48
12:Q:62:GLU:O	12:Q:63:ALA:C	2.42	0.48
19:R:59:ASP:CG	19:R:60:LEU:CD2	2.82	0.48
19:R:67:LEU:HD22	19:R:67:LEU:O	2.14	0.48
13:S:31:LYS:HB3	13:S:100:ALA:HA	1.95	0.48
13:S:66:LEU:O	13:S:67:ALA:O	2.31	0.48
2:A:533:G:OP1	20:U:24:PHE:HB2	2.13	0.48
20:U:42:ALA:O	20:U:46:GLU:HG3	2.13	0.48
21:V:88:GLN:O	21:V:89:ASN:OD1	2.30	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:Z:26:LYS:HZ2	18:Z:26:LYS:CB	2.27	0.48
18:Z:29:ASN:C	18:Z:30:VAL:CG2	2.82	0.48
18:Z:6:LYS:HB2	18:Z:31:SER:HB3	1.96	0.48
8:I:68:LEU:CD1	8:I:108:LEU:CD2	2.81	0.48
8:I:83:ALA:CB	8:I:89:LEU:HA	2.44	0.48
22:2:27:LEU:CD1	22:2:53:ILE:HD11	2.41	0.48
2:A:2310:A:N9	6:G:55:LYS:NZ	2.40	0.48
31:K:28:LEU:O	31:K:33:VAL:HB	2.14	0.48
2:A:1523:U:C4	2:A:1524:G:N7	2.82	0.48
2:A:1544:C:H2'	2:A:1545:A:C4'	2.33	0.48
2:A:1248:G:P	20:U:2:PRO:HB3	2.50	0.48
16:X:76:GLU:CD	16:X:77:VAL:CG2	2.81	0.48
2:A:1528:A:H61	2:A:1543:A:N6	2.09	0.48
24:0:65:GLY:O	24:0:66:LYS:HE3	2.12	0.48
25:4:68:ARG:HH11	25:4:72:LYS:HE2	1.78	0.48
29:8:31:HIS:C	29:8:32:GLN:HG3	2.34	0.48
2:A:1300:U:O4	2:A:1626:G:H3'	2.13	0.48
2:A:1978:A:H2'	2:A:1979:C:O4'	2.13	0.48
2:A:2051:A:C2'	4:E:238:LEU:HD21	2.41	0.48
2:A:828:U:OP2	2:A:2068:U:C6	2.67	0.48
2:A:2185:C:H2'	2:A:2186:G:O4'	2.14	0.48
2:A:2286:A:H1'	2:A:2346:A:N6	2.27	0.48
2:A:2423:U:H5'	2:A:2423:U:C5	2.40	0.48
2:A:2246:G:C5	2:A:2426:A:N3	2.82	0.48
2:A:2461:C:H2'	2:A:2462:U:C5'	2.44	0.48
2:A:2461:C:C2	2:A:2462:U:H6	2.27	0.48
2:A:2524:G:N2	2:A:2540:C:C6	2.82	0.48
2:A:2617:C:H2'	2:A:2617:C:O2	2.13	0.48
2:A:2634:G:N1	2:A:2635:C:C5	2.82	0.48
2:A:2644:G:C2	2:A:2645:G:N2	2.82	0.48
2:A:2685:G:N2	2:A:2725:A:C5	2.82	0.48
2:A:2729:G:C2'	2:A:2730:C:O4'	2.58	0.48
2:A:294:A:H2'	2:A:295:G:H5''	1.96	0.48
2:A:338:G:H8	17:Y:21:LYS:CB	2.21	0.48
2:A:1799:G:N3	3:D:153:LEU:HD21	2.06	0.48
3:D:210:LYS:HG3	3:D:211:HIS:H	1.79	0.48
3:D:216:ALA:HB1	3:D:223:ASN:N	2.28	0.48
2:A:2575:C:C5'	4:E:241:TRP:HE1	2.16	0.48
4:E:205:THR:CB	4:E:259:HIS:N	2.71	0.48
4:E:42:ALA:HB2	4:E:310:PHE:HA	1.91	0.48
4:E:71:THR:HG21	4:E:299:SER:HA	1.88	0.48
5:F:1:MET:SD	5:F:23:GLU:HG2	2.53	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:36:ASN:O	6:G:37:ALA:C	2.52	0.48
7:H:123:GLU:C	7:H:125:PRO:CD	2.81	0.48
7:H:136:ASP:O	7:H:138:GLN:N	2.47	0.48
7:H:59:HIS:O	7:H:60:HIS:C	2.50	0.48
7:H:68:ARG:O	7:H:71:LEU:HB2	2.13	0.48
7:H:75:VAL:O	7:H:77:GLY:CA	2.58	0.48
9:N:63:ILE:CB	9:N:71:TYR:CE1	2.95	0.48
10:O:1:MET:HB2	10:O:2:ILE:HD11	1.93	0.48
12:Q:52:LYS:HA	12:Q:52:LYS:HD3	1.57	0.48
12:Q:87:LYS:HZ2	12:Q:115:SER:HA	1.79	0.48
19:R:36:THR:HG21	19:R:40:LYS:CD	2.29	0.48
19:R:45:ARG:O	19:R:49:ASP:N	2.41	0.48
13:S:87:LEU:O	13:S:90:LEU:CA	2.62	0.48
20:U:8:ILE:N	20:U:11:ARG:HD2	2.28	0.48
15:W:83:LYS:HA	15:W:97:LYS:CG	2.36	0.48
15:W:96:ILE:CD1	15:W:96:ILE:C	2.82	0.48
18:Z:139:THR:C	18:Z:141:MET:CE	2.82	0.48
18:Z:114:ASP:HA	18:Z:171:VAL:HA	1.96	0.48
18:Z:24:TYR:HD2	18:Z:25:ASN:N	2.11	0.48
18:Z:3:LEU:CD2	18:Z:35:ASP:HB3	2.44	0.48
16:X:14:ALA:CB	16:X:18:MET:HE1	2.42	0.48
2:A:2304:G:H2'	2:A:2305:A:O5'	2.14	0.48
2:A:1082:U:H4'	31:K:118:ALA:HB1	1.96	0.48
31:K:88:GLY:O	31:K:89:SER:C	2.52	0.48
24:O:9:SER:O	24:O:11:LYS:HG3	2.13	0.48
12:Q:149:ILE:CD1	12:Q:149:ILE:H	2.17	0.48
2:A:332:A:C2'	2:A:334:C:OP2	2.58	0.48
2:A:984:A:H3'	2:A:985:C:C5	2.48	0.48
30:9:2:LYS:N	30:9:2:LYS:HZ3	2.12	0.48
2:A:1264:G:H3'	2:A:1265:A:H5''	1.95	0.48
2:A:1800:C:C4	2:A:1817:G:N1	2.81	0.48
2:A:2043:C:N4	2:A:2777:G:N9	2.52	0.48
2:A:2213:U:H4'	2:A:2215:G:N7	2.29	0.48
2:A:2217:G:C2	2:A:2218:G:C8	3.02	0.48
2:A:2206:C:H5'	2:A:2228:G:H21	1.79	0.48
2:A:2348:U:O2'	2:A:2349:G:H5'	2.14	0.48
2:A:2352:A:H2'	2:A:2353:G:O4'	2.14	0.48
2:A:2415:G:H22	2:A:2416:C:C1'	2.16	0.48
2:A:2450:A:C2	2:A:2451:A:N3	2.82	0.48
2:A:2454:G:C6	2:A:2455:G:C4	3.01	0.48
2:A:2487:G:H2'	2:A:2488:A:C5'	2.43	0.48
2:A:2549:G:N1	2:A:2550:G:N7	2.62	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2051:A:H5'	2:A:2578:G:O4'	2.14	0.48
2:A:2645:G:P	2:A:2645:G:O4'	2.70	0.48
2:A:2674:G:C2'	2:A:2675:A:C8	2.67	0.48
2:A:2679:A:C2'	2:A:2680:C:O5'	2.61	0.48
2:A:270(H):C:C2	2:A:270(R):G:N2	2.82	0.48
2:A:2793:G:C5	2:A:2794:C:C5	3.01	0.48
2:A:2819:G:C4	2:A:2821:A:C5	3.02	0.48
2:A:380:U:HO2'	25:4:15:ILE:CA	2.27	0.48
2:A:775:G:C2'	2:A:794:G:C8	2.95	0.48
3:D:168:GLY:N	3:D:170:TYR:CE1	2.82	0.48
4:E:102:ASP:O	4:E:103:GLU:CG	2.62	0.48
4:E:221:LYS:HZ1	4:E:233:ARG:CG	2.06	0.48
2:A:2317:C:P	6:G:150:SER:HA	2.53	0.48
7:H:22:THR:HG23	7:H:34:ARG:O	2.14	0.48
7:H:34:ARG:NH1	7:H:73:ASN:HB2	2.10	0.48
7:H:85:ALA:HB1	7:H:164:GLU:HG2	1.94	0.48
10:O:73:ASP:HB3	10:O:75:SER:OG	2.14	0.48
12:Q:16:ARG:HA	12:Q:17:ARG:HD3	1.95	0.48
19:R:65:LEU:HD23	19:R:68:ARG:HD2	1.95	0.48
13:S:12:ARG:CD	13:S:20:TYR:CE2	2.91	0.48
13:S:52:PRO:O	13:S:53:ASN:O	2.31	0.48
20:U:107:LYS:O	20:U:111:ASP:OD1	2.32	0.48
20:U:66:ASN:OD1	20:U:76:TYR:CZ	2.66	0.48
15:W:68:ARG:HE	15:W:110:LYS:HB3	1.79	0.48
8:I:68:LEU:CD1	8:I:108:LEU:HD22	2.43	0.48
22:2:23:LEU:H	22:2:23:LEU:HD23	1.79	0.48
22:2:7:GLU:OE2	22:2:8:ILE:CD1	2.62	0.48
2:A:1063:G:O5'	31:K:135:MET:HG2	2.14	0.48
2:A:1062:G:C2'	31:K:76:SER:HG	2.23	0.48
31:K:93:LYS:H	31:K:96:ILE:HG12	1.77	0.48
8:I:60:GLU:C	8:I:62:LEU:H	2.17	0.48
2:A:1777:U:H2'	2:A:1778:U:H6	1.78	0.48
2:A:1718:G:N1	2:A:1741:C:N4	2.58	0.48
2:A:286:C:H2'	2:A:287:C:O5'	2.14	0.48
2:A:896:A:H3'	2:A:896:A:N3	2.28	0.48
2:A:1044:G:O3'	2:A:1045:A:H4'	2.14	0.48
25:4:56:VAL:CG1	25:4:61:LYS:NZ	2.77	0.48
2:A:2033:A:O2'	2:A:2034:U:P	2.71	0.48
2:A:2103:C:H42	2:A:2186:G:H1	1.60	0.48
2:A:2241:A:O2'	2:A:2242:G:O5'	2.32	0.48
2:A:2271:G:HO2'	2:A:2272:U:P	2.28	0.48
2:A:2281:C:C6	2:A:2281:C:OP2	2.67	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2364:C:C2'	2:A:2365:G:O5'	2.62	0.48
2:A:2368:C:H42	2:A:2369:A:N6	2.12	0.48
2:A:2285:C:C2	2:A:2384:G:N2	2.82	0.48
2:A:2262:U:H5'	2:A:2387:U:O2	2.13	0.48
2:A:2475:C:H2'	2:A:2477:C:P	2.54	0.48
2:A:1669:A:O2'	2:A:2549:G:H4'	2.14	0.48
2:A:1953:A:C5	2:A:2550:G:H1'	2.48	0.48
2:A:2690:C:O2'	2:A:2691:C:H5'	2.14	0.48
2:A:631:A:C2	2:A:2416:C:C1'	2.96	0.48
2:A:673:C:H5'	5:F:80:VAL:CG1	2.43	0.48
2:A:806:C:O2'	2:A:2445:G:C1'	2.60	0.48
3:D:130:PRO:O	3:D:134:ILE:CD1	2.62	0.48
3:D:145:LEU:CD1	3:D:146:LYS:N	2.77	0.48
4:E:215:LYS:O	4:E:216:ARG:C	2.52	0.48
5:F:164:ALA:O	5:F:167:ASP:HB2	2.14	0.48
7:H:40:MET:CA	7:H:54:PRO:HG3	2.44	0.48
7:H:34:ARG:HH11	7:H:70:LEU:HD23	1.78	0.48
7:H:75:VAL:CG1	7:H:76:GLU:H	2.22	0.48
7:H:86:LEU:CG	7:H:87:GLU:N	2.77	0.48
8:I:30:LEU:HA	8:I:33:GLN:NE2	2.29	0.48
9:N:15:ARG:NH1	9:N:40:ASN:CB	2.77	0.48
9:N:92:GLN:O	9:N:93:ARG:C	2.51	0.48
2:A:2727:G:H4'	10:O:70:ARG:NE	2.28	0.48
10:O:71:ARG:O	10:O:72:PRO:C	2.51	0.48
10:O:90:ASP:C	10:O:92:SER:N	2.65	0.48
12:Q:94:ARG:HG3	12:Q:107:LYS:N	2.29	0.48
12:Q:45:GLN:CD	12:Q:153:PRO:N	2.67	0.48
2:A:873:G:C4'	12:Q:32:LYS:HG2	2.41	0.48
12:Q:28:ILE:CG1	12:Q:62:GLU:HG2	2.44	0.48
12:Q:87:LYS:O	12:Q:88:PHE:HB3	2.14	0.48
19:R:81:ASP:O	19:R:82:GLU:C	2.52	0.48
21:V:33:VAL:C	21:V:63:HIS:ND1	2.67	0.48
21:V:72:ARG:O	21:V:88:GLN:CG	2.59	0.48
21:V:88:GLN:OE1	21:V:90:PHE:CE1	2.67	0.48
18:Z:127:PRO:O	18:Z:128:ARG:C	2.53	0.48
18:Z:37:LYS:CA	18:Z:41:ARG:HH12	2.25	0.48
18:Z:66:VAL:HG23	18:Z:69:VAL:HG23	1.96	0.48
8:I:103:GLN:NE2	8:I:109:LYS:CB	2.76	0.48
22:2:8:ILE:O	22:2:11:MET:CB	2.61	0.48
2:A:110:G:N1	2:A:111:A:C6	2.82	0.48
16:X:38:ALA:O	16:X:41:VAL:HG23	2.13	0.48
2:A:2311:A:N3	6:G:53:LYS:HE2	2.29	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:29:HIS:CE1	6:G:64:ARG:NH2	2.81	0.48
2:A:1076:C:O2	31:K:92:PRO:CG	2.62	0.48
2:A:1:G:N2	2:A:2902:C:N3	2.61	0.48
2:A:1907:G:N2	2:A:1924:C:C2	2.82	0.48
2:A:710:G:H1	2:A:721:C:H42	1.62	0.48
23:3:5:LYS:HG3	23:3:36:VAL:HG12	1.95	0.48
2:A:388:G:O5'	25:4:23:GLU:HB3	2.12	0.48
25:4:41:PRO:CG	25:4:57:ASP:CG	2.80	0.48
2:A:2021:C:O5'	26:5:15:LYS:HE2	2.12	0.48
2:A:747:U:P	26:5:2:ALA:CB	3.01	0.48
27:6:54:LYS:CA	27:6:54:LYS:NZ	2.76	0.48
29:8:14:ILE:HG23	29:8:15:LYS:H	1.78	0.48
29:8:9:MET:O	29:8:14:ILE:HG12	2.13	0.48
2:A:1362:C:HO2'	2:A:1810:A:HO2'	1.61	0.48
2:A:2079:U:O3'	25:4:32:HIS:CD2	2.66	0.48
2:A:2208:U:O4	2:A:2216:G:O6	2.31	0.48
2:A:2257:U:H2'	2:A:2258:C:OP2	2.13	0.48
2:A:2276:G:H2'	2:A:2277:G:O5'	2.13	0.48
2:A:2259:G:O6	2:A:2281:C:N3	2.47	0.48
2:A:2354:G:N3	24:0:32:LYS:CD	2.74	0.48
2:A:2519:U:OP2	2:A:2519:U:C6	2.67	0.48
2:A:2560:C:O2	2:A:2560:C:H2'	2.14	0.48
2:A:2562:U:O2	2:A:2563:U:N1	2.47	0.48
2:A:2625:G:C8	2:A:2626:C:C5	3.02	0.48
2:A:2695:C:H2'	2:A:2696:U:H6	1.67	0.48
2:A:2766:G:N3	2:A:2766:G:C2'	2.75	0.48
2:A:2639:A:H1'	2:A:2778:A:H2	1.78	0.48
2:A:2844:G:C6	2:A:2845:G:C5	3.01	0.48
2:A:293:U:O2'	2:A:294:A:O4'	2.17	0.48
2:A:447:A:N7	2:A:473:G:C6	2.82	0.48
2:A:603:A:H2'	2:A:604:G:H8	1.77	0.48
2:A:85:G:O5'	17:Y:65:VAL:HG12	1.95	0.48
3:D:70:LYS:NZ	3:D:70:LYS:CB	2.76	0.48
3:D:80:ILE:O	3:D:82:TYR:CD1	2.67	0.48
3:D:85:ASN:HD21	3:D:86:ARG:CZ	2.24	0.48
4:E:102:ASP:C	4:E:103:GLU:CG	2.82	0.48
5:F:197:SER:OG	5:F:236:THR:OG1	2.25	0.48
8:I:9:VAL:C	8:I:10:LYS:HG2	2.35	0.48
10:O:2:ILE:HG21	10:O:8:LEU:HD13	1.96	0.48
10:O:5:GLU:HB2	10:O:20:LEU:HD22	1.95	0.48
10:O:37:ASP:CB	10:O:62:VAL:HG21	2.30	0.48
10:O:63:VAL:HG11	10:O:102:VAL:HG21	1.93	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:O:11:ALA:CA	10:O:99:PHE:HB2	2.44	0.48
12:Q:116:HIS:CD2	12:Q:118:ALA:O	2.67	0.48
12:Q:84:ARG:HH21	12:Q:123:ILE:CD1	2.27	0.48
12:Q:16:ARG:HB2	12:Q:16:ARG:HH11	1.54	0.48
12:Q:36:ASN:ND2	12:Q:41:THR:N	2.62	0.48
12:Q:34:GLY:C	12:Q:74:ASN:O	2.53	0.48
19:R:24:GLN:C	19:R:44:LEU:HD21	2.35	0.48
13:S:22:GLN:OE1	13:S:22:GLN:C	2.53	0.48
20:U:95:LEU:H	20:U:95:LEU:CD2	2.19	0.48
15:W:12:ILE:HD11	15:W:42:ARG:HD2	1.96	0.48
2:A:519:U:O3'	15:W:25:ARG:NH2	2.47	0.48
17:Y:19:ARG:O	17:Y:22:GLN:N	2.42	0.48
17:Y:75:GLU:O	17:Y:76:ASP:O	2.32	0.48
18:Z:135:VAL:O	18:Z:136:VAL:CG2	2.61	0.48
18:Z:151:ASP:O	18:Z:153:LYS:HD2	2.13	0.48
1:B:75:G:N9	18:Z:22:VAL:HG21	2.28	0.48
8:I:124:LEU:HD12	8:I:125:GLY:H	1.79	0.48
8:I:83:ALA:N	8:I:147:GLU:HB3	2.29	0.48
8:I:84:GLY:O	8:I:85:GLU:HG3	2.14	0.48
2:A:1599:C:OP1	16:X:33:SER:CB	2.56	0.48
2:A:60:G:N3	2:A:74:A:N6	2.62	0.48
2:A:71:A:C2	2:A:73:A:N7	2.82	0.48
16:X:12:GLU:OE1	16:X:13:LYS:NZ	2.47	0.48
16:X:31:ARG:O	16:X:32:ALA:C	2.46	0.48
31:K:18:ALA:HB1	31:K:39:CYS:CA	2.44	0.48
2:A:1520:U:H6	2:A:1520:U:H3'	1.79	0.48
2:A:120:U:O2	2:A:120:U:H2'	2.14	0.48
2:A:270(A):A:N3	2:A:270(A):A:H3'	2.29	0.48
9:N:8:ALA:O	9:N:11:ILE:HG13	2.14	0.48
2:A:1369:G:H2'	2:A:1370:C:O4'	2.14	0.48
4:E:111:THR:O	4:E:111:THR:HG22	2.13	0.48
24:O:78:PHE:N	24:O:78:PHE:CD1	2.81	0.47
25:4:20:VAL:O	25:4:30:GLU:CD	2.51	0.47
26:5:11:THR:HG22	26:5:19:ARG:NH2	2.28	0.47
15:W:19:LEU:HD11	26:5:25:LEU:CD2	2.32	0.47
29:8:30:ARG:HG2	29:8:31:HIS:H	1.78	0.47
2:A:1367:A:H2'	28:7:25:LYS:CD	2.44	0.47
2:A:1820:U:H3	3:D:198:GLY:HA2	1.78	0.47
2:A:2269:A:H2'	2:A:2270:G:O4'	2.14	0.47
2:A:2324:C:O2'	2:A:2325:G:P	2.71	0.47
2:A:2341:G:C8	2:A:2342:C:C5	3.02	0.47
2:A:2354:G:C4	2:A:2355:C:C5	3.02	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2367:G:C2	2:A:2368:C:C6	3.01	0.47
2:A:2378:A:C1'	13:S:101:VAL:CG2	2.91	0.47
2:A:2390:U:C6	2:A:2390:U:H3'	2.48	0.47
2:A:2069:G:C2	2:A:2443:C:O2	2.67	0.47
2:A:2538:C:C2'	2:A:2539:C:O5'	2.61	0.47
2:A:2520:C:H6	2:A:2567:G:H1'	1.75	0.47
2:A:2049:G:H1	2:A:2619:C:H42	1.62	0.47
2:A:2673:G:N1	2:A:2674:G:C5	2.81	0.47
2:A:2711:A:P	2:A:2714:G:OP1	2.67	0.47
2:A:2717:G:C5	2:A:2718:G:N7	2.82	0.47
2:A:2773:C:C2'	2:A:2774:C:H6	2.24	0.47
2:A:27:G:H2'	2:A:28:A:H8	1.79	0.47
2:A:2881:C:O2'	19:R:96:ARG:HA	2.14	0.47
2:A:324:A:H62	2:A:339:U:C1'	2.26	0.47
2:A:474:G:C6	2:A:510:C:N4	2.82	0.47
2:A:685:A:C2	2:A:689:A:C6	3.02	0.47
2:A:687:C:O2'	2:A:1780:A:N6	2.44	0.47
2:A:729:G:N3	2:A:729:G:C3'	2.75	0.47
2:A:775:G:N2	2:A:787:U:C3'	2.77	0.47
2:A:954:G:H2'	2:A:955:C:O4'	2.14	0.47
1:B:77:U:H5'	18:Z:80:HIS:HD1	1.76	0.47
3:D:89:ASN:O	3:D:105:ALA:HB2	1.88	0.47
4:E:203:GLY:CA	4:E:303:PRO:CD	2.81	0.47
5:F:230:GLY:C	5:F:231:ARG:HG3	2.20	0.47
2:A:451:C:O5'	5:F:49:ASP:HB2	2.13	0.47
2:A:2313:C:C5'	6:G:72:LYS:CB	2.78	0.47
7:H:161:ILE:HG13	7:H:161:ILE:O	2.13	0.47
9:N:63:ILE:HB	9:N:71:TYR:CD1	2.49	0.47
12:Q:88:PHE:O	12:Q:113:ALA:HB2	2.14	0.47
19:R:61:HIS:O	19:R:63:ARG:N	2.47	0.47
14:T:38:ASN:O	14:T:39:ASN:C	2.52	0.47
21:V:61:VAL:HG13	21:V:96:LEU:N	2.29	0.47
21:V:69:ILE:N	21:V:91:THR:HG22	2.11	0.47
21:V:61:VAL:CG1	21:V:95:ILE:C	2.82	0.47
15:W:20:VAL:HG12	15:W:47:VAL:HG11	1.96	0.47
17:Y:17:HIS:O	17:Y:20:HIS:N	2.47	0.47
17:Y:19:ARG:HA	17:Y:22:GLN:HG3	1.96	0.47
17:Y:76:ASP:O	17:Y:77:VAL:C	2.51	0.47
8:I:102:LEU:HA	8:I:106:HIS:HB2	1.96	0.47
2:A:72:U:C1'	22:2:57:LYS:HD2	2.43	0.47
22:2:59:ILE:HG12	22:2:60:GLN:H	1.76	0.47
2:A:1063:G:O5'	31:K:135:MET:CG	2.62	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:K:138:GLU:CB	31:K:140:VAL:HG23	2.44	0.47
2:A:2857:G:N2	2:A:2859:G:H3'	2.29	0.47
2:A:226:G:O6	2:A:410:G:H1'	2.13	0.47
2:A:1470:G:N2	2:A:1522:G:N1	2.61	0.47
2:A:978:G:N2	2:A:986:C:N3	2.62	0.47
2:A:382:G:H1	2:A:392:C:N4	2.09	0.47
3:D:122:ASP:O	3:D:122:ASP:CG	2.51	0.47
2:A:1855:G:H1	2:A:1887:C:H42	1.62	0.47
2:A:1312:U:H1'	2:A:1313:U:C5	2.49	0.47
2:A:1667:G:C2'	2:A:1991:U:O4	2.63	0.47
2:A:1669:A:C6	2:A:1994:C:O2	2.67	0.47
2:A:2033:A:O2'	2:A:2034:U:O5'	2.29	0.47
2:A:2234:G:N2	2:A:2235:G:C4	2.82	0.47
2:A:2251:G:P	12:Q:102:ARG:CZ	3.02	0.47
2:A:2256:G:N2	2:A:2257:U:C1'	2.77	0.47
2:A:2294:C:C2	2:A:2339:G:C6	3.02	0.47
2:A:2313:C:C5	2:A:2314:C:N4	2.79	0.47
2:A:2346:A:O2'	2:A:2347:C:P	2.70	0.47
2:A:2380:C:C3'	2:A:2380:C:C6	2.97	0.47
2:A:2392:A:N6	2:A:2393:A:C6	2.82	0.47
2:A:2436:G:O6	2:A:2437:U:O4	2.31	0.47
2:A:2593:U:O2	2:A:2600:A:C2	2.66	0.47
2:A:2633:G:C2	2:A:2634:G:C4	2.94	0.47
2:A:2683:C:C5	2:A:2684:U:H5	2.25	0.47
2:A:2711:A:H3'	2:A:2712:U:H5'	1.96	0.47
2:A:2733:A:C3'	2:A:2733:A:C8	2.96	0.47
2:A:469:G:H1	28:7:40:HIS:HE2	1.61	0.47
2:A:764:A:H8	2:A:764:A:H5''	1.79	0.47
3:D:144:GLU:CG	3:D:188:ARG:H	2.27	0.47
3:D:89:ASN:ND2	3:D:199:ARG:HE	1.88	0.47
2:A:1789:A:P	3:D:226:GLY:HA2	2.54	0.47
4:E:270:ASP:N	4:E:270:ASP:OD2	2.46	0.47
4:E:44:TYR:N	4:E:309:PRO:HG2	1.92	0.47
4:E:45:LYS:HD2	4:E:303:PRO:C	2.33	0.47
5:F:6:TYR:CE1	5:F:138:VAL:C	2.88	0.47
5:F:151:GLN:HA	5:F:154:VAL:CG2	2.39	0.47
5:F:93:LYS:O	5:F:94:THR:C	2.53	0.47
1:B:45:A:C1'	6:G:76:ARG:HH12	2.26	0.47
7:H:138:GLN:C	7:H:140:VAL:H	2.17	0.47
7:H:147:ILE:O	7:H:150:VAL:HB	2.14	0.47
2:A:557:U:C5'	9:N:92:GLN:HB2	2.44	0.47
10:O:64:ARG:HG2	10:O:81:GLU:O	2.14	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:S:100:ALA:HB3	13:S:127:LEU:CD2	2.40	0.47
13:S:86:LEU:HD21	13:S:124:ASP:HB2	1.95	0.47
14:T:24:LYS:O	14:T:25:ASP:CB	2.60	0.47
20:U:103:PRO:CB	20:U:107:LYS:HE2	2.44	0.47
20:U:55:ARG:HA	20:U:58:ARG:HD2	1.96	0.47
15:W:82:LEU:CD2	15:W:82:LEU:N	2.74	0.47
17:Y:19:ARG:HA	17:Y:22:GLN:NE2	2.29	0.47
18:Z:12:GLN:O	18:Z:15:ASP:CB	2.58	0.47
18:Z:40:ASP:O	18:Z:41:ARG:O	2.32	0.47
18:Z:71:MET:O	18:Z:72:ASP:C	2.52	0.47
18:Z:79:ILE:C	18:Z:80:HIS:CG	2.85	0.47
8:I:119:ASP:CG	8:I:120:ALA:H	2.15	0.47
22:2:25:THR:O	22:2:26:GLU:O	2.33	0.47
22:2:43:PRO:O	22:2:46:ILE:HB	2.14	0.47
16:X:6:LYS:CD	16:X:27:ALA:HB1	2.43	0.47
2:A:1059:G:N3	31:K:127:ILE:CD1	2.72	0.47
9:N:108:PRO:HD2	9:N:109:TYR:H	1.78	0.47
2:A:1466:G:H2'	2:A:1547:C:C5	2.49	0.47
4:E:109:ASP:OD2	4:E:112:LEU:CD2	2.57	0.47
2:A:410:G:C2	2:A:2407:G:N7	2.82	0.47
2:A:949:C:H2'	2:A:950:G:H8	1.79	0.47
24:0:37:LEU:CA	24:0:68:VAL:HG13	2.36	0.47
2:A:1368:G:H5'	28:7:25:LYS:HD2	1.96	0.47
2:A:1993:U:H5''	4:E:228:ARG:HE	1.79	0.47
2:A:2045:C:C4	2:A:2624:G:N1	2.81	0.47
2:A:2195:C:C6	2:A:2195:C:C4'	2.97	0.47
2:A:2247:A:C2'	2:A:2248:C:O5'	2.62	0.47
2:A:2251:G:C3'	12:Q:102:ARG:HH22	2.27	0.47
2:A:2263:C:H42	2:A:2278:A:N6	2.12	0.47
2:A:2278:A:OP1	12:Q:20:ILE:CG2	2.57	0.47
2:A:2296:U:H3'	2:A:2296:U:C6	2.48	0.47
2:A:2322:A:C2	2:A:2323:G:C8	2.92	0.47
2:A:2478:A:C2'	2:A:2479:G:H5'	2.41	0.47
2:A:2032:G:C6	2:A:2572:A:C2	3.02	0.47
2:A:2627:G:H1'	2:A:2781:A:H2	1.78	0.47
2:A:2817:G:C4	2:A:2830:G:N2	2.81	0.47
2:A:2885:C:N4	2:A:2886:G:C5	2.83	0.47
2:A:443:A:H62	5:F:39:GLN:HB2	1.79	0.47
2:A:468:G:C2'	2:A:469:G:H5'	2.44	0.47
2:A:989:G:H5'	2:A:1157:G:H4'	1.96	0.47
3:D:194:VAL:HG21	3:D:196:ASN:OD1	2.14	0.47
3:D:196:ASN:HB2	3:D:199:ARG:HD3	1.96	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:81:GLU:C	3:D:82:TYR:O	2.51	0.47
4:E:211:GLN:HB3	4:E:216:ARG:HG2	1.94	0.47
4:E:214:VAL:HG12	4:E:215:LYS:N	2.28	0.47
5:F:35:VAL:O	5:F:38:ALA:CB	2.62	0.47
5:F:50:GLU:HG3	5:F:51:TYR:H	1.79	0.47
8:I:5:PHE:CD2	8:I:17:GLU:C	2.87	0.47
9:N:45:VAL:N	9:N:132:LEU:CG	2.76	0.47
19:R:90:ARG:NH2	19:R:117:VAL:HG22	2.18	0.47
19:R:20:LEU:CD1	19:R:21:TYR:CA	2.48	0.47
13:S:104:ILE:C	13:S:106:LEU:N	2.62	0.47
13:S:85:GLY:O	13:S:86:LEU:O	2.32	0.47
13:S:98:GLU:CG	13:S:99:GLU:N	2.60	0.47
20:U:66:ASN:C	20:U:68:GLY:N	2.67	0.47
20:U:98:ILE:CG2	20:U:106:PHE:HD1	2.25	0.47
17:Y:101:LEU:CD2	17:Y:112:LEU:CD2	2.54	0.47
17:Y:17:HIS:O	17:Y:20:HIS:CB	2.52	0.47
18:Z:3:LEU:HD22	18:Z:35:ASP:HB3	1.96	0.47
2:A:1076:C:O2	31:K:92:PRO:HD2	2.15	0.47
31:K:103:LYS:CA	31:K:106:GLU:OE1	2.62	0.47
31:K:93:LYS:H	31:K:96:ILE:HG13	1.71	0.47
18:Z:143:ILE:CG2	18:Z:144:GLY:N	2.38	0.47
2:A:47:C:C4	2:A:179:G:C6	3.02	0.47
2:A:914:C:H2'	2:A:915:C:H5'	1.97	0.47
2:A:1040:C:O2	2:A:1040:C:H2'	2.15	0.47
23:3:40:THR:HG21	23:3:43:ILE:HD11	1.80	0.47
23:3:5:LYS:HA	23:3:35:ARG:O	2.14	0.47
25:4:5:LEU:HD22	25:4:9:ALA:HA	1.95	0.47
2:A:2045:C:C2	26:5:22:HIS:CE1	3.01	0.47
26:5:31:THR:HG23	26:5:32:GLU:N	2.29	0.47
2:A:1264:G:N7	2:A:1265:A:C5	2.81	0.47
2:A:1429:G:N3	2:A:1568:G:C2	2.82	0.47
2:A:1630:G:O4'	2:A:2698:U:OP1	2.33	0.47
2:A:1754:C:O4'	14:T:39:ASN:OD1	2.33	0.47
2:A:1771:C:H2'	2:A:1772:G:C8	2.49	0.47
2:A:2020:A:H5'	26:5:12:SER:HB2	1.96	0.47
2:A:2082:A:H61	2:A:2237:G:H1'	1.79	0.47
2:A:2251:G:P	2:A:2496:C:OP2	2.71	0.47
2:A:2252:G:C3'	2:A:2253:G:C5'	2.93	0.47
2:A:2313:C:C5'	6:G:51:ARG:NH1	2.66	0.47
2:A:2316:C:C4	2:A:2317:C:C4	3.03	0.47
2:A:2402:C:H6	2:A:2402:C:O5'	1.97	0.47
2:A:2462:U:N3	2:A:2463:C:C4	2.83	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2468:G:C5	2:A:2481:G:C2	3.02	0.47
2:A:2479:G:H2'	2:A:2480:C:O4'	2.14	0.47
2:A:2447:G:C8	2:A:2500:U:C5	3.02	0.47
2:A:2537:U:C5	2:A:2538:C:H5	2.32	0.47
2:A:2550:G:C2'	2:A:2551:C:H6	2.25	0.47
2:A:2567:G:N2	2:A:2568:C:C4	2.80	0.47
2:A:2051:A:C2	2:A:2618:G:N1	2.76	0.47
2:A:2656:U:C6	2:A:2656:U:C3'	2.98	0.47
2:A:2679:A:C5	2:A:2680:C:C6	3.02	0.47
2:A:673:C:C5'	5:F:80:VAL:HG11	2.45	0.47
2:A:826:U:C6	2:A:828:U:H6	2.32	0.47
2:A:989:G:HO2'	2:A:990:A:P	2.37	0.47
3:D:107:LYS:CG	3:D:193:GLU:OE1	2.62	0.47
4:E:264:LEU:O	4:E:265:ASN:C	2.52	0.47
5:F:22:PHE:HE2	5:F:115:LEU:C	2.18	0.47
5:F:195:VAL:HG13	5:F:213:ALA:C	2.35	0.47
5:F:39:GLN:O	5:F:42:ARG:CA	2.62	0.47
2:A:449:A:OP1	5:F:85:LYS:HA	2.14	0.47
5:F:93:LYS:C	5:F:96:LYS:CE	2.80	0.47
7:H:51:VAL:HG23	7:H:68:ARG:HG2	1.95	0.47
10:O:21:VAL:HG22	10:O:39:VAL:HG11	1.95	0.47
10:O:60:ALA:CB	10:O:85:VAL:O	2.63	0.47
11:P:92:ASP:N	11:P:118:LEU:HD22	2.30	0.47
2:A:2251:G:OP1	12:Q:102:ARG:NH2	2.47	0.47
12:Q:91:HIS:N	12:Q:111:THR:HG21	2.26	0.47
19:R:39:PRO:HA	19:R:42:LYS:HB2	1.96	0.47
1:B:7:G:HO2'	13:S:37:ARG:HG3	1.74	0.47
13:S:83:LEU:C	13:S:87:LEU:HD23	2.35	0.47
14:T:36:CYS:O	14:T:37:GLU:C	2.46	0.47
20:U:10:ARG:CA	20:U:13:ARG:HH12	2.26	0.47
15:W:8:ARG:CD	15:W:102:HIS:HE1	2.26	0.47
15:W:24:ILE:HD13	15:W:36:LEU:CD1	2.45	0.47
15:W:36:LEU:HD22	15:W:44:ALA:CA	2.32	0.47
15:W:40:ASN:O	15:W:41:LYS:C	2.51	0.47
18:Z:52:PHE:N	18:Z:65:LEU:HD11	2.28	0.47
8:I:68:LEU:CD1	8:I:108:LEU:HD11	2.45	0.47
22:2:27:LEU:HD22	22:2:49:LEU:HB3	1.96	0.47
2:A:131:G:N2	2:A:132:G:C5	2.83	0.47
2:A:1343:G:H5'	2:A:1598:C:OP2	2.14	0.47
2:A:2305:A:N7	2:A:2306:C:C6	2.82	0.47
31:K:112:LYS:HE2	31:K:116:LEU:HB2	1.94	0.47
2:A:5:A:C4	2:A:2899:G:N2	2.83	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1545:A:C5'	2:A:545(A):A:OP2	2.40	0.47
6:G:88:LEU:C	6:G:88:LEU:CD2	2.79	0.47
2:A:1924:C:C5	2:A:1925:C:H5	2.32	0.47
2:A:1805:U:C5'	3:D:235:PRO:CG	2.93	0.47
15:W:2:GLU:CA	15:W:108:GLY:HA2	2.38	0.47
2:A:1174:A:N6	2:A:1177:A:C2	2.83	0.47
2:A:152:G:C8	2:A:152:G:H3'	2.49	0.47
2:A:619:G:C8	2:A:619:G:H3'	2.50	0.47
2:A:651:G:H3'	2:A:652:C:C6	2.49	0.47
24:O:48:GLY:C	24:O:55:ARG:HA	2.35	0.47
27:6:42:PRO:C	27:6:44:ALA:H	2.17	0.47
2:A:125:G:C5'	28:7:19:ARG:CD	2.92	0.47
29:8:16:ILE:HG23	29:8:22:VAL:HG23	1.95	0.47
2:A:1304:C:H42	2:A:1624:G:H1	1.60	0.47
2:A:1647:G:OP2	2:A:1647:G:H3'	2.14	0.47
2:A:196:A:N3	2:A:2068:U:H5	2.12	0.47
2:A:1993:U:C5'	4:E:228:ARG:HE	2.28	0.47
2:A:2212:A:O2'	2:A:2213:U:C6	2.51	0.47
2:A:2282:G:C4'	2:A:2283:C:O5'	2.62	0.47
2:A:2284:C:OP2	27:6:9:ILE:CG1	2.62	0.47
2:A:2421:G:C5'	2:A:2422:A:OP2	2.57	0.47
2:A:199:A:N3	2:A:2433:A:C5	2.81	0.47
2:A:2478:A:C8	2:A:2479:G:C8	3.02	0.47
2:A:2488:A:N1	2:A:2489:G:C4	2.83	0.47
2:A:2478:A:C1'	2:A:2529:G:N7	2.77	0.47
2:A:2652:C:HO2'	2:A:2653:U:H5'	1.76	0.47
2:A:2657:A:C5	2:A:2665:A:C5	3.02	0.47
2:A:388:G:P	25:4:29:PRO:HD3	2.54	0.47
2:A:496:G:H1'	15:W:61:ASN:ND2	2.28	0.47
3:D:146:LYS:C	3:D:149:ARG:HG2	2.34	0.47
3:D:152:GLN:OE1	3:D:152:GLN:CA	2.62	0.47
3:D:84:PRO:O	3:D:85:ASN:HB3	2.13	0.47
4:E:263:GLU:O	4:E:266:LYS:HE3	2.15	0.47
6:G:95:THR:CG2	6:G:96:SER:H	2.25	0.47
7:H:123:GLU:C	7:H:125:PRO:HD2	2.35	0.47
7:H:129:LYS:O	7:H:130:ILE:CG1	2.61	0.47
9:N:136:SER:C	9:N:139:LEU:HD22	2.35	0.47
9:N:74:ARG:HB3	9:N:76:ASP:CG	2.34	0.47
11:P:120:LEU:O	11:P:140:VAL:O	2.31	0.47
12:Q:93:ILE:HG22	12:Q:94:ARG:H	1.79	0.47
13:S:121:GLY:O	13:S:125:ALA:HB2	2.15	0.47
13:S:34:LEU:HD11	13:S:103:ASP:N	2.08	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:S:49:THR:N	13:S:55:ASP:OD2	2.47	0.47
13:S:62:HIS:HB2	13:S:65:ASP:OD2	2.14	0.47
18:Z:134:LEU:HD11	18:Z:155:PRO:HG2	1.95	0.47
18:Z:154:LEU:CD1	18:Z:160:LEU:HD12	2.45	0.47
18:Z:4:THR:O	18:Z:33:ALA:CA	2.62	0.47
18:Z:8:ARG:O	18:Z:9:THR:HG23	2.15	0.47
2:A:144:C:H5''	16:X:36:GLU:OE1	1.99	0.47
16:X:67:ARG:C	16:X:68:LEU:HD23	2.34	0.47
15:W:89:ALA:O	15:W:90:ARG:HB2	2.13	0.47
2:A:2755:C:O5'	2:A:2755:C:C5	2.64	0.47
8:I:65:ALA:CB	8:I:134:HIS:CG	2.97	0.47
24:0:28:GLY:N	24:0:60:PHE:HB3	2.29	0.47
24:0:77:ARG:O	24:0:78:PHE:C	2.42	0.47
23:3:33:GLN:CG	23:3:34:GLU:N	2.77	0.47
25:4:9:ALA:O	25:4:10:VAL:CG2	2.62	0.47
2:A:1128:A:N6	2:A:2518:A:N1	2.63	0.47
2:A:1665:A:C1'	10:O:67:ARG:HD3	2.43	0.47
2:A:2255:G:C6	2:A:2256:G:C4	3.02	0.47
2:A:2325:G:N3	2:A:2326:C:H6	2.12	0.47
2:A:2333:A:H4'	2:A:2335:A:O4'	2.14	0.47
2:A:2411:A:HO2'	2:A:2412:A:C5'	2.24	0.47
2:A:2428:G:C5'	2:A:2429:G:P	2.97	0.47
2:A:2475:C:HO2'	2:A:2477:C:P	2.35	0.47
2:A:2465:C:C2	2:A:2485:G:N1	2.70	0.47
2:A:2447:G:C8	2:A:2500:U:H5	2.31	0.47
2:A:2615:U:H2'	2:A:2616:C:C5'	2.44	0.47
2:A:2649:U:H2'	2:A:2650:U:O5'	2.12	0.47
2:A:2679:A:N6	2:A:2729:G:O6	2.47	0.47
2:A:2740:A:O2'	2:A:2741:A:H5''	2.13	0.47
2:A:2637:U:N3	2:A:2782:G:C2	2.83	0.47
2:A:2836:U:C3'	2:A:2836:U:C6	2.98	0.47
2:A:2841:C:C2	2:A:2877:G:N1	2.83	0.47
2:A:2875:C:C4	2:A:2876:G:N7	2.83	0.47
2:A:380:U:O2'	25:4:15:ILE:N	2.48	0.47
2:A:464:U:C1'	28:7:12:ARG:NH2	2.78	0.47
2:A:729:G:H1'	2:A:763:G:H4'	1.96	0.47
3:D:131:LEU:HG	3:D:187:CYS:C	2.34	0.47
3:D:213:LYS:HG3	3:D:215:LYS:CG	2.34	0.47
2:A:2051:A:C2'	4:E:238:LEU:HD23	2.37	0.47
4:E:45:LYS:CE	4:E:303:PRO:CA	2.93	0.47
7:H:124:VAL:O	7:H:126:SER:N	2.47	0.47
7:H:48:VAL:CG2	7:H:49:ILE:H	2.18	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:N:88:PRO:CB	9:N:90:LYS:N	2.68	0.47
11:P:62:ALA:C	11:P:107:LYS:CD	2.69	0.47
11:P:65:ASP:CA	11:P:109:LEU:N	2.56	0.47
11:P:94:ARG:HD3	11:P:120:LEU:HD22	1.59	0.47
12:Q:45:GLN:HA	12:Q:125:TRP:CD1	2.49	0.47
19:R:100:LEU:CA	26:5:44:HIS:CD2	2.97	0.47
19:R:46:GLY:O	19:R:47:PHE:C	2.53	0.47
13:S:121:GLY:O	13:S:125:ALA:CB	2.63	0.47
20:U:93:LYS:C	20:U:94:VAL:HG23	2.35	0.47
21:V:12:TYR:O	21:V:13:ARG:CB	2.58	0.47
21:V:40:VAL:CA	21:V:54:TYR:HD1	2.28	0.47
21:V:78:VAL:HG21	21:V:80:TYR:HD1	1.80	0.47
21:V:61:VAL:C	21:V:98:ILE:HD12	2.18	0.47
15:W:6:ILE:HG23	15:W:7:ALA:N	2.30	0.47
17:Y:11:GLN:CA	17:Y:21:LYS:HZ1	2.28	0.47
17:Y:30:ASP:HB2	17:Y:31:LEU:HD23	1.97	0.47
18:Z:118:HIS:O	18:Z:119:ASN:HB3	2.13	0.47
2:A:135:G:H1'	2:A:145:G:H22	1.79	0.47
16:X:13:LYS:O	16:X:16:ASN:CG	2.48	0.47
16:X:12:GLU:C	16:X:16:ASN:OD1	2.45	0.47
31:K:129:GLU:O	31:K:133:LYS:CD	2.62	0.47
31:K:139:VAL:O	31:K:139:VAL:HG23	2.14	0.47
4:E:109:ASP:CA	4:E:112:LEU:CB	2.80	0.47
2:A:929:G:C2'	23:3:43:ILE:HG12	2.45	0.47
23:3:50:VAL:HB	23:3:53:LEU:CB	2.44	0.47
25:4:39:VAL:C	25:4:40:HIS:CG	2.88	0.47
2:A:1612:C:N3	28:7:3:ARG:NH1	2.61	0.47
29:8:30:ARG:HD2	29:8:44:LYS:HZ2	1.79	0.47
2:A:1278:A:H5''	19:R:34:ILE:HG21	1.96	0.47
2:A:1790:C:H5'	2:A:1791:A:OP2	2.14	0.47
2:A:1809:A:H3'	2:A:1810:A:N3	2.30	0.47
2:A:2044:C:C4	2:A:2625:G:C2	3.02	0.47
2:A:2086:U:O4	2:A:2233:U:O4	2.32	0.47
2:A:2254:C:O2'	2:A:2255:G:H5''	2.09	0.47
2:A:2273:A:H8	2:A:2274:A:C8	2.20	0.47
2:A:2283:C:OP1	27:6:3:LYS:NZ	2.47	0.47
2:A:2447:G:N3	2:A:2500:U:O4	2.42	0.47
2:A:2508:G:C2	2:A:2509:G:N9	2.83	0.47
2:A:2045:C:N4	2:A:2624:G:C6	2.82	0.47
2:A:2657:A:C4	2:A:2665:A:C6	3.01	0.47
2:A:2692:C:C2'	2:A:2693:A:O5'	2.62	0.47
2:A:2785:C:C2'	2:A:2786:U:H6	2.10	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2785:C:C2'	2:A:2786:U:O5'	2.58	0.47
2:A:2834:G:C6	2:A:2879:C:C2	3.02	0.47
1:B:24:G:C5	1:B:56:G:C5	3.03	0.47
4:E:193:PHE:CD2	4:E:311:PHE:HD1	2.28	0.47
4:E:44:TYR:HA	4:E:309:PRO:HG3	1.43	0.47
5:F:112:ARG:O	5:F:114:ALA:C	2.53	0.47
5:F:223:LEU:HD13	5:F:224:ALA:N	2.14	0.47
5:F:58:ALA:C	5:F:59:GLU:OE2	2.53	0.47
2:A:2313:C:H4'	6:G:72:LYS:CG	2.43	0.47
7:H:158:GLY:O	7:H:159:LYS:CB	2.60	0.47
8:I:30:LEU:O	8:I:35:LEU:HG	2.15	0.47
10:O:33:ALA:HB1	10:O:39:VAL:CG2	2.44	0.47
12:Q:85:ILE:HG23	12:Q:136:TRP:CZ2	2.48	0.47
19:R:107:ASP:C	19:R:107:ASP:OD1	2.53	0.47
13:S:41:LYS:HZ2	13:S:42:HIS:CG	2.24	0.47
14:T:50:GLU:O	14:T:51:TRP:C	2.46	0.47
20:U:94:VAL:HG11	21:V:4:ILE:CG2	2.40	0.47
21:V:19:VAL:CG1	21:V:21:ARG:CZ	2.47	0.47
21:V:43:GLU:H	21:V:44:GLN:HE22	1.62	0.47
21:V:68:LYS:C	21:V:69:ILE:HD12	2.35	0.47
15:W:19:LEU:O	15:W:20:VAL:O	2.32	0.47
15:W:23:LEU:HD13	15:W:35:ILE:HG22	1.96	0.47
17:Y:32:ARG:C	17:Y:33:GLU:CD	2.72	0.47
17:Y:45:GLY:C	17:Y:62:VAL:HG12	2.16	0.47
17:Y:52:ARG:CD	17:Y:95:ASN:OD1	2.48	0.47
23:3:1:MET:SD	23:3:3:ARG:CD	2.96	0.47
23:3:51:ALA:O	23:3:53:LEU:CA	2.58	0.47
25:4:11:PRO:CA	25:4:40:HIS:HD2	2.22	0.47
27:6:16:ALA:HB1	27:6:42:PRO:CG	2.45	0.47
28:7:33:ARG:CA	28:7:37:LYS:HD2	2.45	0.47
28:7:33:ARG:CB	28:7:37:LYS:HD2	2.45	0.47
28:7:43:THR:O	28:7:45:SER:CA	2.62	0.47
2:A:2261:C:C2'	2:A:2261:C:O2	2.63	0.47
2:A:2266:A:N1	2:A:2272:U:H3'	2.29	0.47
2:A:2367:G:N3	2:A:2368:C:C6	2.83	0.47
2:A:2391:G:N2	2:A:2429:G:H21	2.13	0.47
2:A:2402:C:C3'	2:A:2402:C:C6	2.97	0.47
2:A:197:A:N6	2:A:2430:A:C8	2.83	0.47
2:A:2484:G:C2'	2:A:2485:G:C5'	2.83	0.47
2:A:2494:G:N1	2:A:2495:G:C6	2.82	0.47
2:A:2533:A:N7	2:A:2534:A:N7	2.62	0.47
2:A:2565:A:C4'	2:A:2566:A:OP2	2.59	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2579:C:H2'	2:A:2580:U:H5'	0.62	0.47
2:A:2657:A:N7	2:A:2665:A:N6	2.63	0.47
2:A:2748:A:H8	2:A:2749:A:C5	2.21	0.47
2:A:2810:A:C3'	2:A:2811:G:C5'	2.80	0.47
2:A:518:G:H4'	15:W:18:ARG:NH2	2.30	0.47
3:D:208:GLY:CA	3:D:211:HIS:CD2	2.94	0.47
4:E:269:ILE:N	4:E:269:ILE:CD1	2.51	0.47
7:H:94:ARG:CA	7:H:127:GLN:HE22	2.27	0.47
8:I:3:VAL:HG21	8:I:21:VAL:HB	1.95	0.47
8:I:6:LEU:O	8:I:6:LEU:CD1	2.58	0.47
2:A:1137:G:N2	9:N:86:MET:HE1	2.18	0.47
10:O:99:PHE:HE2	14:T:24:LYS:NZ	1.96	0.47
11:P:102:ASP:CG	11:P:102:ASP:O	2.53	0.47
12:Q:122:PHE:HB2	12:Q:136:TRP:HZ2	1.76	0.47
13:S:46:GLN:C	13:S:47:LEU:HG	2.35	0.47
13:S:46:GLN:CB	13:S:57:THR:HG21	2.38	0.47
13:S:80:SER:OG	13:S:81:ALA:N	2.48	0.47
14:T:13:ILE:CG1	14:T:33:SER:HB2	2.45	0.47
2:A:446:G:OP2	20:U:3:ARG:CB	2.63	0.47
20:U:8:ILE:O	20:U:11:ARG:HG3	2.14	0.47
20:U:9:VAL:HG12	20:U:13:ARG:NH2	2.28	0.47
15:W:57:ASN:O	15:W:58:ALA:O	2.32	0.47
18:Z:114:ASP:OD1	18:Z:114:ASP:N	2.47	0.47
18:Z:62:PHE:CD1	18:Z:87:THR:CG2	2.97	0.47
2:A:88:G:N3	2:A:88:G:H2'	2.30	0.47
16:X:25:GLN:HA	16:X:64:ALA:O	2.14	0.47
16:X:43:GLU:CD	16:X:43:GLU:H	2.16	0.47
22:2:11:MET:O	22:2:12:THR:C	2.52	0.47
16:X:13:LYS:O	16:X:15:MET:N	2.47	0.47
16:X:48:THR:O	16:X:50:GLU:CD	2.52	0.47
2:A:2305:A:N7	2:A:2306:C:C5	2.83	0.47
6:G:53:LYS:O	6:G:54:ALA:CB	2.63	0.47
31:K:73:PRO:HB2	31:K:78:LEU:HG	1.97	0.47
31:K:18:ALA:O	31:K:39:CYS:HB3	2.15	0.47
31:K:22:PRO:CD	31:K:23:PRO:HD2	2.45	0.47
2:A:1617:C:H5''	2:A:1618:A:OP2	2.15	0.47
2:A:94:G:O2'	22:2:41:GLU:CD	2.53	0.47
2:A:359:A:C2'	2:A:360:G:C8	2.98	0.47
2:A:479:A:H1'	2:A:480:A:C8	2.50	0.47
2:A:1401:G:C6	2:A:1402:C:C4	3.02	0.47
2:A:1832:C:N4	2:A:1833:U:C4	2.82	0.47
2:A:2505:G:O2'	2:A:2506:U:H5''	2.15	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:0:31:VAL:CG1	24:0:32:LYS:N	2.77	0.47
24:0:36:ILE:N	24:0:68:VAL:HG21	2.28	0.47
25:4:20:VAL:O	25:4:30:GLU:CG	2.63	0.47
27:6:36:GLU:HA	27:6:52:GLU:OE2	2.14	0.47
28:7:21:ARG:NH2	28:7:43:THR:CA	2.77	0.47
29:8:26:LYS:H	29:8:45:GLY:C	2.18	0.47
2:A:125:G:C3'	28:7:19:ARG:HH12	2.24	0.47
2:A:2013:A:H4'	15:W:96:ILE:HG23	1.91	0.47
2:A:2053:G:N1	2:A:2617:C:C4	2.82	0.47
2:A:2074:U:O2'	2:A:2598:A:O4'	2.32	0.47
2:A:2092:U:C2	2:A:2226:C:OP2	2.68	0.47
2:A:2243:U:O2	2:A:2244:U:N1	2.48	0.47
2:A:2255:G:C6	2:A:2256:G:C5	3.02	0.47
2:A:2299:G:O2'	2:A:2300:G:H5'	2.15	0.47
2:A:2336:A:HO2'	2:A:2337:G:C5'	1.92	0.47
2:A:2343:C:HO2'	2:A:2344:U:H5'	1.70	0.47
2:A:2493:U:N3	2:A:2494:G:N7	2.45	0.47
2:A:2515:C:N4	2:A:2570:G:C6	2.83	0.47
2:A:2531:A:O5'	2:A:2531:A:C8	2.67	0.47
2:A:2509:G:H1	2:A:2579:C:H42	1.62	0.47
2:A:2611:U:C6	2:A:2611:U:C5'	2.98	0.47
2:A:2673:G:N1	2:A:2674:G:C6	2.82	0.47
2:A:2742:C:C2'	2:A:2742:C:O2	2.59	0.47
2:A:2875:C:N3	2:A:2876:G:C5	2.83	0.47
2:A:396:G:H4'	25:4:39:VAL:CG1	2.27	0.47
2:A:396:G:O4'	25:4:39:VAL:CG1	2.59	0.47
2:A:34:C:C2'	2:A:455:C:N4	2.69	0.47
2:A:605:C:H2'	2:A:606:U:H6	1.79	0.47
2:A:642:G:H21	2:A:646:A:H61	1.63	0.47
2:A:729:G:N1	3:D:206:LYS:O	2.47	0.47
2:A:792:G:C5	2:A:2440:C:C1'	2.98	0.47
2:A:792:G:O2'	2:A:793:A:P	2.73	0.47
3:D:110:LYS:O	3:D:111:VAL:O	2.32	0.47
3:D:119:PRO:HA	3:D:129:LEU:CD2	2.44	0.47
3:D:173:VAL:O	3:D:175:LEU:CD2	2.63	0.47
3:D:97:ASP:HB3	3:D:99:GLU:OE2	2.15	0.47
4:E:199:ALA:CA	4:E:312:ARG:C	2.82	0.47
4:E:246:VAL:HG13	4:E:247:ARG:H	1.79	0.47
4:E:247:ARG:CB	4:E:249:THR:OG1	2.62	0.47
4:E:202:ALA:CA	4:E:262:THR:HB	2.44	0.47
5:F:244:ALA:C	5:F:246:ARG:H	2.15	0.47
6:G:97:GLN:HB2	6:G:106:PHE:CZ	2.38	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:H:148:ARG:HH12	7:H:163:TYR:HA	1.63	0.47
7:H:60:HIS:O	7:H:61:ARG:C	2.53	0.47
8:I:7:LYS:CD	8:I:12:LYS:CE	2.84	0.47
9:N:77:GLY:O	9:N:79:PHE:C	2.52	0.47
10:O:31:ARG:HB3	10:O:32:TYR:CE1	2.49	0.47
11:P:127:GLU:O	11:P:131:GLU:HG3	2.15	0.47
11:P:65:ASP:CB	11:P:109:LEU:N	2.77	0.47
12:Q:18:GLU:HG2	12:Q:23:ILE:CD1	2.41	0.47
12:Q:61:LEU:O	12:Q:63:ALA:N	2.47	0.47
13:S:24:LEU:HA	13:S:33:ARG:NH2	2.21	0.47
2:A:494:G:C4'	15:W:6:ILE:HG22	2.32	0.47
18:Z:149:ALA:HB1	18:Z:163:ASP:O	2.15	0.47
18:Z:118:HIS:CE1	18:Z:166:LEU:O	2.67	0.47
18:Z:63:PRO:O	18:Z:64:ALA:HB3	2.12	0.47
18:Z:73:LYS:HG3	18:Z:75:LYS:CE	2.45	0.47
2:A:1059:G:C1'	31:K:117:ASN:OD1	2.63	0.47
2:A:1076:C:H4'	31:K:94:ARG:NE	2.29	0.47
2:A:1082:U:OP1	31:K:123:ALA:HB2	2.14	0.47
31:K:11:LEU:HD11	31:K:28:LEU:HG	1.96	0.47
2:A:2900:A:H2'	2:A:2901:C:O4'	2.15	0.47
2:A:359:A:H2'	2:A:360:G:C8	2.50	0.47
1:B:41:U:C5	6:G:50:VAL:HB	2.49	0.47
2:A:1823:G:C2	2:A:1824:G:C8	3.03	0.47
24:0:41:ARG:O	24:0:67:VAL:CG1	2.62	0.47
23:3:43:ILE:H	23:3:43:ILE:CD1	2.08	0.47
2:A:1365:A:P	25:4:3:LYS:HD2	2.55	0.47
27:6:12:MET:HA	27:6:13:GLU:OE1	2.13	0.47
29:8:58:MET:HB3	29:8:59:LYS:H	1.53	0.47
30:9:24:LEU:CD2	30:9:35:ARG:HG3	2.45	0.47
2:A:1184:G:H2'	2:A:1185:C:H5'	1.97	0.47
2:A:1639:U:O2'	2:A:2699:C:H4'	2.14	0.47
2:A:1781:C:H3'	2:A:1781:C:H6	1.80	0.47
2:A:2071:A:C2	2:A:2441:C:C4	3.03	0.47
2:A:2544:G:H5''	2:A:2645:G:C8	2.31	0.47
2:A:242:G:O2'	2:A:254:G:N1	2.46	0.47
2:A:2596:U:C6	2:A:2597:G:C8	3.03	0.47
2:A:2718:G:C4	2:A:2719:G:C8	3.03	0.47
2:A:2772:C:N3	2:A:2773:C:C4	2.83	0.47
2:A:2816:C:C5'	2:A:2816:C:H6	2.27	0.47
2:A:2881:C:C6	2:A:2881:C:C3'	2.98	0.47
2:A:527:C:H6	2:A:2779:U:C2'	2.27	0.47
2:A:929:G:H1'	23:3:43:ILE:HG12	1.91	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:131:LEU:HD11	3:D:187:CYS:HB2	1.95	0.47
3:D:162:GLN:OE1	3:D:162:GLN:N	2.48	0.47
3:D:164:LEU:HD23	3:D:164:LEU:HA	1.66	0.47
3:D:75:GLY:H	3:D:116:MET:HB2	1.79	0.47
4:E:225:LYS:O	4:E:226:HIS:CE1	2.68	0.47
4:E:315:VAL:C	4:E:317:PRO:CD	2.80	0.47
5:F:102:LEU:HD22	5:F:106:GLU:CB	2.25	0.47
5:F:113:SER:O	5:F:114:ALA:O	2.32	0.47
5:F:55:ARG:HG3	5:F:56:THR:OG1	2.15	0.47
6:G:23:VAL:CG2	6:G:23:VAL:O	2.62	0.47
6:G:49:PRO:HG3	6:G:72:LYS:C	2.32	0.47
7:H:36:PHE:C	7:H:37:HIS:ND1	2.68	0.47
8:I:40:THR:O	8:I:43:ASN:N	2.48	0.47
2:A:1140:C:H42	9:N:49:ARG:CZ	2.25	0.47
10:O:107:ARG:HG3	10:O:115:ILE:HG21	1.96	0.47
10:O:9:LYS:N	10:O:83:ALA:CB	2.78	0.47
11:P:94:ARG:HH21	11:P:118:LEU:HB2	1.80	0.47
12:Q:65:ARG:HG2	12:Q:85:ILE:HG21	1.96	0.47
14:T:11:THR:CG2	14:T:12:ASP:H	1.94	0.47
14:T:6:CYS:C	14:T:8:TYR:N	2.65	0.47
20:U:99:ALA:HB3	20:U:106:PHE:CE1	2.42	0.47
20:U:47:TYR:HE2	21:V:74:TYR:C	2.08	0.47
21:V:87:ARG:O	21:V:88:GLN:O	2.33	0.47
21:V:61:VAL:HG13	21:V:96:LEU:HD23	1.97	0.47
15:W:36:LEU:HD13	15:W:47:VAL:CG1	2.38	0.47
17:Y:102:ASP:O	17:Y:103:LEU:HG	2.15	0.47
17:Y:33:GLU:C	17:Y:35:TYR:H	2.18	0.47
18:Z:71:MET:CA	18:Z:78:PRO:HA	2.32	0.47
8:I:116:GLU:HG3	8:I:130:PRO:O	2.14	0.47
22:2:19:GLU:CD	22:2:20:LEU:N	2.68	0.47
2:A:143:C:OP2	2:A:143:C:O4'	2.33	0.47
2:A:63:U:H3'	2:A:63:U:C6	2.49	0.47
2:A:72:U:C6	22:2:57:LYS:CD	2.98	0.47
16:X:11:THR:O	16:X:15:MET:SD	2.68	0.47
16:X:32:ALA:CB	16:X:36:GLU:HB2	2.44	0.47
31:K:132:ALA:O	31:K:137:ILE:CA	2.63	0.47
2:A:460:A:C4	2:A:461:C:C6	3.02	0.47
2:A:1257:C:O2'	5:F:83:ALA:HB1	2.14	0.47
23:3:26:LEU:HD22	23:3:47:VAL:HG23	1.95	0.47
25:4:14:ILE:CG1	25:4:39:VAL:HB	2.45	0.47
26:5:18:MET:O	26:5:21:SER:N	2.48	0.47
27:6:12:MET:HE3	27:6:54:LYS:CA	2.45	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:7:31:LEU:C	28:7:33:ARG:N	2.64	0.47
30:9:25:VAL:HG23	30:9:34:GLN:HB3	1.84	0.47
2:A:1664:A:C3'	2:A:1664:A:C8	2.96	0.47
2:A:2051:A:C3'	4:E:238:LEU:CD2	2.93	0.47
2:A:2217:G:C2	2:A:2218:G:C5	3.02	0.47
2:A:2248:C:C3'	2:A:2249:U:C5'	2.93	0.47
2:A:2331:G:C4	2:A:2332:U:N3	2.81	0.47
2:A:2283:C:C6	2:A:2389:G:C2	3.03	0.47
2:A:2077:A:C5	2:A:2435:A:N7	2.83	0.47
2:A:2067:G:N2	2:A:2444:G:N3	2.62	0.47
2:A:2460:U:C2	2:A:2493:U:C5	3.00	0.47
2:A:2495:G:C2	2:A:2496:C:H1'	2.50	0.47
2:A:2503:A:O2'	2:A:2504:U:OP1	2.20	0.47
2:A:2511:U:C4	2:A:2512:C:C5	3.03	0.47
2:A:2554:U:C6	2:A:2554:U:C4'	2.98	0.47
2:A:2623:G:H4'	2:A:2826:A:O4'	2.15	0.47
2:A:2836:U:H3'	2:A:2836:U:C6	2.48	0.47
2:A:2881:C:C6	2:A:2881:C:H3'	2.50	0.47
2:A:780:G:N3	2:A:785:G:O6	2.48	0.47
2:A:814:C:OP1	21:V:84:THR:HA	2.14	0.47
2:A:856:C:H1'	24:0:24:LYS:HB2	1.97	0.47
4:E:262:THR:OG1	4:E:266:LYS:NZ	2.47	0.47
4:E:74:GLU:CA	4:E:293:TYR:HD2	2.06	0.47
5:F:202:THR:CG2	5:F:203:ALA:H	2.27	0.47
6:G:136:ARG:H	6:G:136:ARG:HD2	1.80	0.47
7:H:33:THR:OG1	7:H:33:THR:O	2.32	0.47
9:N:15:ARG:HA	9:N:44:ALA:N	2.29	0.47
10:O:102:VAL:HG12	10:O:103:ALA:N	2.30	0.47
11:P:114:VAL:O	11:P:115:ARG:CB	2.53	0.47
11:P:66:VAL:HG23	11:P:109:LEU:C	2.21	0.47
12:Q:101:MET:SD	12:Q:101:MET:O	2.73	0.47
12:Q:54:VAL:O	12:Q:54:VAL:HG13	2.15	0.47
13:S:34:LEU:HB3	13:S:101:VAL:O	2.15	0.47
13:S:66:LEU:N	13:S:66:LEU:CD1	2.77	0.47
13:S:76:GLY:C	13:S:83:LEU:CD1	2.83	0.47
21:V:43:GLU:N	21:V:44:GLN:HE22	2.13	0.47
18:Z:117:VAL:HB	18:Z:167:THR:HB	1.96	0.47
18:Z:51:LEU:HD21	18:Z:63:PRO:HB3	1.97	0.47
18:Z:63:PRO:O	18:Z:85:MET:HA	2.15	0.47
8:I:95:SER:HB2	8:I:117:LEU:HD11	1.97	0.47
8:I:145:VAL:C	8:I:146:THR:CG2	2.72	0.47
2:A:2309:A:H5'	2:A:2310:A:P	2.48	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:Y:6:LYS:HA	17:Y:9:LYS:HB2	1.96	0.47
8:I:59:ALA:HA	8:I:62:LEU:CG	2.44	0.47
14:T:44:ARG:HG3	14:T:45:GLU:N	2.17	0.47
2:A:1434:A:H61	2:A:1558:A:N6	2.13	0.47
2:A:721:C:H2'	2:A:722:A:H8	1.80	0.47
23:3:20:LYS:HD2	23:3:23:LEU:HD12	1.90	0.46
28:7:17:GLY:C	28:7:44:VAL:CG2	2.49	0.46
30:9:10:MET:HB3	30:9:32:HIS:HE2	1.78	0.46
2:A:1773:A:H2	2:A:1977:A:N1	2.14	0.46
2:A:2024:G:H2'	2:A:2025:C:O4'	2.15	0.46
2:A:2061:G:C4	2:A:2503:A:N3	2.83	0.46
2:A:2246:G:N9	2:A:2426:A:N1	2.61	0.46
2:A:2314:C:H2'	2:A:2315:G:H8	1.80	0.46
2:A:2341:G:C6	2:A:2342:C:N3	2.84	0.46
2:A:2385:C:C2	2:A:2386:C:H6	2.18	0.46
2:A:2442:C:O2'	2:A:2443:C:H5'	2.15	0.46
2:A:2489:G:O6	2:A:2490:G:C6	2.68	0.46
2:A:2527:C:C2'	2:A:2528:U:O5'	2.62	0.46
2:A:1669:A:C3'	2:A:2550:G:OP1	2.62	0.46
2:A:2682:U:C2'	2:A:2683:C:O5'	2.62	0.46
2:A:527:C:C6	2:A:2779:U:H3'	2.49	0.46
2:A:2817:G:C2	2:A:2818:G:C1'	2.98	0.46
2:A:321:G:O2'	2:A:341:G:H4'	2.15	0.46
2:A:447:A:C5	2:A:473:G:C5	3.02	0.46
2:A:566:U:O5'	21:V:81:ARG:NH2	2.48	0.46
2:A:1819:A:P	3:D:154:VAL:CA	3.02	0.46
3:D:188:ARG:HB3	3:D:189:ALA:H	1.57	0.46
2:A:1566:A:N3	3:D:212:HIS:CB	2.79	0.46
4:E:176:HIS:O	4:E:179:ASP:CA	2.64	0.46
4:E:268:LEU:CD2	4:E:270:ASP:N	2.79	0.46
7:H:115:GLU:CD	7:H:115:GLU:O	2.54	0.46
7:H:147:ILE:HD12	7:H:150:VAL:CG1	2.44	0.46
7:H:70:LEU:O	7:H:73:ASN:CB	2.62	0.46
8:I:8:ASP:N	8:I:12:LYS:HA	2.18	0.46
12:Q:45:GLN:HA	12:Q:125:TRP:NE1	2.30	0.46
19:R:20:LEU:C	19:R:20:LEU:HD22	2.35	0.46
2:A:1279:G:H4'	19:R:31:HIS:NE2	2.30	0.46
13:S:102:LEU:HD21	13:S:129:ILE:HG22	1.34	0.46
13:S:18:THR:O	13:S:19:ASP:CG	2.54	0.46
13:S:97:VAL:HG12	13:S:98:GLU:H	1.78	0.46
20:U:110:VAL:C	20:U:113:SER:HG	2.12	0.46
2:A:533:G:OP1	20:U:25:TRP:HB2	2.15	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:U:46:GLU:C	20:U:49:ASP:HB2	2.30	0.46
21:V:18:ASP:HA	21:V:96:LEU:HA	1.97	0.46
15:W:45:TYR:O	15:W:46:PHE:O	2.33	0.46
17:Y:102:ASP:O	17:Y:108:ARG:HB3	2.15	0.46
17:Y:103:LEU:HD23	17:Y:108:ARG:CB	2.26	0.46
18:Z:71:MET:HA	18:Z:78:PRO:HB3	1.95	0.46
2:A:1394:U:C5'	2:A:1603:A:H4'	2.45	0.46
2:A:139:G:C8	2:A:142:G:H1'	2.51	0.46
4:E:109:ASP:HA	4:E:112:LEU:N	2.29	0.46
2:A:264:C:H2'	2:A:265:A:H5''	1.97	0.46
2:A:1862:G:H1	2:A:1880:C:N4	2.13	0.46
2:A:414:C:OP1	2:A:1879:C:O2'	2.30	0.46
2:A:176:G:C2'	2:A:177:G:H8	2.27	0.46
1:B:41:U:O4	6:G:50:VAL:O	2.33	0.46
3:D:230:ASN:O	3:D:231:ALA:CB	2.53	0.46
2:A:269:U:H5'	2:A:270(Y):G:N3	2.30	0.46
15:W:52:GLU:CA	15:W:52:GLU:OE2	2.63	0.46
2:A:1872:A:C5	2:A:1878:G:H1'	2.50	0.46
25:4:33:VAL:O	25:4:34:ASP:CG	2.51	0.46
25:4:68:ARG:HB2	25:4:72:LYS:HG3	1.97	0.46
29:8:30:ARG:HH21	29:8:41:ILE:CG2	2.22	0.46
2:A:1629:U:O2	2:A:2698:U:C5'	2.63	0.46
2:A:1775:U:H2'	2:A:1776:G:O4'	2.15	0.46
2:A:198:C:HO2'	2:A:2243:U:HO2'	1.54	0.46
2:A:2000:G:H2'	2:A:2001:A:H8	1.81	0.46
2:A:2218:G:H2'	2:A:2219:G:H8	1.79	0.46
2:A:2412:A:H2'	2:A:2413:G:O4'	2.16	0.46
2:A:631:A:N1	2:A:2416:C:C1'	2.78	0.46
2:A:2431:U:C2	2:A:2433:A:C8	3.03	0.46
2:A:2467:C:O3'	12:Q:141:MET:HE3	2.16	0.46
2:A:2485:G:C2'	2:A:2486:G:O4'	2.63	0.46
2:A:2511:U:H2'	2:A:2512:C:O5'	2.15	0.46
2:A:2576:G:N3	2:A:2576:G:C2'	2.77	0.46
2:A:2662:A:H2	2:A:2663:G:H4'	1.80	0.46
2:A:2681:C:O2'	2:A:2682:U:H5'	2.12	0.46
2:A:2705:A:C5	2:A:2706:G:C5	3.03	0.46
2:A:2817:G:C2	2:A:2818:G:N9	2.84	0.46
2:A:729:G:O5'	3:D:207:ALA:HB2	2.15	0.46
2:A:828:U:H4'	2:A:831:G:C2	2.50	0.46
2:A:872:A:H2'	2:A:873:G:H8	1.80	0.46
3:D:141:HIS:CE1	3:D:193:GLU:O	2.69	0.46
3:D:74:PRO:HD2	3:D:96:ALA:H	1.80	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:200:ASP:O	4:E:312:ARG:N	2.48	0.46
4:E:212:GLY:O	4:E:216:ARG:CG	2.45	0.46
2:A:2051:A:C3'	4:E:238:LEU:HD23	2.45	0.46
5:F:148:VAL:O	5:F:149:LYS:HG3	2.15	0.46
5:F:167:ASP:N	5:F:167:ASP:OD1	2.43	0.46
6:G:71:ALA:C	6:G:72:LYS:HD3	2.24	0.46
2:A:2748:A:O2'	7:H:62:ALA:CA	2.64	0.46
7:H:83:GLU:CD	7:H:84:LYS:C	2.74	0.46
8:I:23:ASP:O	8:I:25:TYR:N	2.48	0.46
9:N:103:VAL:CG1	9:N:104:TYR:N	2.71	0.46
2:A:1007:C:C4'	9:N:86:MET:O	2.63	0.46
12:Q:52:LYS:HD2	12:Q:53:PRO:HD2	1.96	0.46
12:Q:93:ILE:HG22	12:Q:94:ARG:N	2.30	0.46
20:U:95:LEU:O	20:U:98:ILE:CD1	2.62	0.46
21:V:35:LEU:N	21:V:60:VAL:HG11	2.28	0.46
17:Y:49:GLU:CG	17:Y:59:GLU:CA	2.66	0.46
18:Z:112:LEU:HD21	18:Z:171:VAL:C	2.35	0.46
18:Z:62:PHE:CZ	18:Z:87:THR:CG2	2.99	0.46
8:I:141:LEU:CD2	8:I:142:LYS:H	2.25	0.46
2:A:142:G:OP1	2:A:1596:A:H5'	2.16	0.46
16:X:3:ASP:O	22:2:24:LYS:NZ	2.48	0.46
16:X:52:VAL:HG22	16:X:66:VAL:HA	1.97	0.46
16:X:25:GLN:NE2	16:X:65:VAL:CG2	2.78	0.46
2:A:1057:A:H61	2:A:1081:U:H3	1.64	0.46
2:A:7:G:C5'	9:N:6:PHE:CD2	2.93	0.46
2:A:2720:U:C2	2:A:2721:A:C8	3.03	0.46
16:X:71:ASP:HB3	16:X:72:ASP:H	1.57	0.46
2:A:855:G:C2'	24:0:25:LYS:HZ3	2.29	0.46
24:0:29:GLU:OE1	24:0:29:GLU:CA	2.62	0.46
24:0:67:VAL:HG11	24:0:74:LYS:CD	2.38	0.46
25:4:38:GLY:O	25:4:39:VAL:CB	2.63	0.46
25:4:68:ARG:NE	25:4:72:LYS:HG2	2.25	0.46
27:6:39:LYS:O	27:6:40:TYR:CD1	2.64	0.46
2:A:1023:U:H2'	2:A:1024:G:O4'	2.15	0.46
2:A:1670:C:OP2	2:A:1671:U:H5	1.97	0.46
2:A:2195:C:C6	2:A:2195:C:H5''	2.46	0.46
2:A:2075:U:C4	2:A:2238:G:O6	2.69	0.46
2:A:2367:G:N3	2:A:2368:C:C5	2.83	0.46
2:A:2380:C:H3'	2:A:2380:C:H6	1.81	0.46
2:A:2478:A:N7	2:A:2479:G:C5	2.83	0.46
2:A:2491:U:O2'	2:A:2492:U:O5'	2.31	0.46
2:A:2491:U:C2'	2:A:2492:U:H5'	2.26	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2516:G:H22	2:A:2569:G:H1'	1.81	0.46
2:A:2564:A:C4	2:A:2565:A:N7	2.84	0.46
2:A:2584:U:N1	2:A:2585:U:C4	2.82	0.46
2:A:2649:U:H2'	2:A:2650:U:C5	2.49	0.46
2:A:2652:C:H2'	2:A:2653:U:C5'	2.45	0.46
2:A:2679:A:N6	2:A:2728:U:H3	2.00	0.46
2:A:2808:U:P	2:A:2809:A:OP2	2.73	0.46
2:A:557:U:H5''	9:N:92:GLN:HB2	1.97	0.46
2:A:827:U:C5	2:A:2430:A:C2	3.03	0.46
3:D:175:LEU:HB2	3:D:179:GLU:N	2.28	0.46
4:E:256:THR:HG22	4:E:259:HIS:CE1	2.50	0.46
5:F:157:LEU:O	5:F:160:LEU:N	2.48	0.46
6:G:19:GLU:HB2	6:G:135:VAL:CB	2.42	0.46
7:H:95:ALA:N	7:H:127:GLN:NE2	2.54	0.46
7:H:159:LYS:N	7:H:162:ARG:HH12	2.14	0.46
7:H:40:MET:HA	7:H:54:PRO:CG	2.46	0.46
7:H:85:ALA:CB	7:H:164:GLU:HG2	2.45	0.46
8:I:26:ALA:HB1	8:I:30:LEU:HD12	1.96	0.46
10:O:21:VAL:HG13	10:O:39:VAL:CG1	2.45	0.46
11:P:67:ARG:CZ	11:P:109:LEU:HD12	2.45	0.46
12:Q:126:VAL:CG1	12:Q:127:ASN:N	2.77	0.46
12:Q:136:TRP:HA	12:Q:139:ALA:HB3	1.96	0.46
12:Q:143:VAL:CG2	12:Q:144:THR:N	2.64	0.46
19:R:18:LEU:HD21	19:R:22:ARG:NH2	2.30	0.46
13:S:32:PRO:CG	13:S:100:ALA:HA	2.38	0.46
13:S:21:HIS:CD2	13:S:24:LEU:CD1	2.96	0.46
20:U:7:GLY:HA3	20:U:8:ILE:CD1	2.44	0.46
21:V:55:THR:O	21:V:56:VAL:HG23	2.15	0.46
15:W:25:ARG:O	15:W:27:LYS:N	2.48	0.46
2:A:2010:G:O2'	15:W:42:ARG:NH2	2.48	0.46
17:Y:49:GLU:CB	17:Y:97:ARG:HH11	2.29	0.46
18:Z:159:THR:O	18:Z:160:LEU:CG	2.63	0.46
1:B:75:G:C1'	18:Z:22:VAL:HG21	2.44	0.46
22:2:4:HIS:O	22:2:8:ILE:HG13	2.13	0.46
2:A:2307:G:C8	2:A:2307:G:H5''	2.47	0.46
17:Y:2:LYS:C	17:Y:3:GLN:HG3	2.35	0.46
8:I:56:ARG:O	8:I:60:GLU:CB	2.64	0.46
2:A:2795:G:OP2	2:A:2795:G:H3'	2.15	0.46
2:A:51:G:O2'	2:A:119:A:N1	2.37	0.46
2:A:1358:G:N7	2:A:1371:G:C6	2.84	0.46
2:A:743:G:O2'	2:A:1659:U:OP1	2.24	0.46
2:A:89:G:H3'	2:A:90:U:H5''	1.96	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:0:22:GLY:C	24:0:23:VAL:O	2.52	0.46
24:0:45:PHE:C	24:0:46:LYS:HD2	2.35	0.46
25:4:14:ILE:HD11	25:4:39:VAL:CB	2.45	0.46
27:6:16:ALA:CB	27:6:42:PRO:CG	2.93	0.46
30:9:10:MET:HB3	30:9:11:CYS:H	1.48	0.46
30:9:31:LYS:O	30:9:32:HIS:CG	2.68	0.46
2:A:2742:C:OP1	30:9:35:ARG:CD	2.63	0.46
2:A:1638:C:OP1	2:A:2711:A:C5'	2.63	0.46
2:A:1781:C:H3'	2:A:1781:C:C6	2.51	0.46
2:A:2246:G:C6	2:A:2426:A:C4	3.03	0.46
2:A:2256:G:C6	2:A:2257:U:N3	2.83	0.46
2:A:2278:A:P	12:Q:15:THR:HG1	2.39	0.46
2:A:2395:C:H5''	25:4:28:ARG:HH11	1.79	0.46
2:A:2078:C:H1'	2:A:2434:A:C2	2.50	0.46
2:A:2469:A:C5	2:A:2470:G:C8	3.03	0.46
2:A:2474:C:C5	2:A:2475:C:C4	3.03	0.46
2:A:2620:C:C5	2:A:2621:A:C8	3.03	0.46
2:A:2633:G:C8	2:A:2633:G:O5'	2.64	0.46
2:A:2773:C:H2'	2:A:2774:C:O5'	2.16	0.46
2:A:2793:G:C5	2:A:2794:C:C4	3.03	0.46
2:A:2839:G:N2	2:A:2840:C:N1	2.64	0.46
2:A:2842:G:C2	2:A:2876:G:N2	2.83	0.46
2:A:349:G:H2'	2:A:349:G:N3	2.31	0.46
2:A:455:C:OP1	2:A:472:A:N1	2.48	0.46
2:A:684:G:N3	2:A:775:G:C6	2.84	0.46
2:A:873:G:C5'	12:Q:32:LYS:CG	2.93	0.46
2:A:2024:G:OP1	4:E:245:ARG:NH1	2.48	0.46
5:F:159:ALA:O	5:F:160:LEU:CD2	2.49	0.46
7:H:15:THR:CG2	7:H:26:LYS:C	2.83	0.46
7:H:52:THR:O	7:H:64:HIS:CD2	2.68	0.46
7:H:86:LEU:HD11	7:H:87:GLU:C	2.35	0.46
9:N:12:VAL:CG1	9:N:38:VAL:CG2	2.82	0.46
10:O:19:VAL:HA	10:O:42:THR:O	2.15	0.46
11:P:53:ARG:CB	11:P:54:PRO:CD	2.93	0.46
13:S:19:ASP:HB3	13:S:22:GLN:HG3	1.51	0.46
20:U:47:TYR:OH	21:V:74:TYR:O	2.33	0.46
15:W:38:TYR:HB3	26:5:30:LEU:HD21	1.98	0.46
15:W:8:ARG:HB3	15:W:8:ARG:NH1	2.28	0.46
17:Y:50:VAL:CA	17:Y:51:LEU:HD13	2.44	0.46
2:A:1340:U:C4	16:X:57:THR:CG2	2.98	0.46
16:X:52:VAL:HG13	16:X:65:VAL:O	2.15	0.46
6:G:29:HIS:N	6:G:69:ILE:CG1	2.76	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:63:ILE:O	6:G:64:ARG:C	2.53	0.46
31:K:99:LYS:HD2	31:K:99:LYS:H	1.80	0.46
9:N:5:GLU:HA	9:N:109:TYR:HE2	1.77	0.46
2:A:194:G:C6	2:A:195:A:C5	3.04	0.46
2:A:885:C:H41	2:A:889:C:C1'	2.23	0.46
23:3:41:PRO:HA	23:3:44:ARG:HB3	1.97	0.46
28:7:34:ARG:HH12	28:7:42:LEU:CA	2.14	0.46
28:7:38:GLY:C	28:7:40:HIS:CE1	2.89	0.46
2:A:687:C:H4'	28:7:4:THR:HG23	1.95	0.46
29:8:26:LYS:HD3	29:8:43:GLY:O	2.16	0.46
29:8:30:ARG:CG	29:8:31:HIS:H	2.27	0.46
2:A:1300:U:C6	2:A:1301:A:C2	3.03	0.46
2:A:2052:G:H21	4:E:245:ARG:CD	2.22	0.46
2:A:2198:A:N6	2:A:2225:A:N6	2.61	0.46
2:A:2317:C:H4'	6:G:150:SER:HB3	1.98	0.46
2:A:2297:C:N4	2:A:2320:A:N9	2.64	0.46
2:A:2334:G:H5'	13:S:20:TYR:CE1	2.50	0.46
2:A:2358:G:C2	2:A:2359:C:H5'	2.49	0.46
2:A:2395:C:C4'	2:A:2395:C:C6	2.98	0.46
2:A:2402:C:C6	2:A:2402:C:H3'	2.50	0.46
2:A:2246:G:C8	2:A:2426:A:C2	3.03	0.46
2:A:792:G:C8	2:A:2440:C:O2	2.69	0.46
2:A:2461:C:C1'	2:A:2492:U:N3	2.78	0.46
2:A:2514:U:H2'	2:A:2515:C:C6	2.50	0.46
2:A:2515:C:C2'	2:A:2515:C:O2	2.64	0.46
2:A:2474:C:N4	2:A:2529:G:H21	2.05	0.46
2:A:2546:U:C2'	2:A:2547:U:OP2	2.63	0.46
2:A:2555:U:HO2'	2:A:2556:C:P	2.39	0.46
2:A:2616:C:C5'	2:A:2616:C:H6	2.28	0.46
2:A:2617:C:O2	2:A:2618:G:H5'	2.14	0.46
2:A:2631:G:C2	2:A:2632:A:H1'	2.51	0.46
2:A:2636:U:H3	2:A:2782:G:H1	1.64	0.46
2:A:2713:A:C3'	2:A:2714:G:H5''	2.45	0.46
2:A:2813:A:C4	2:A:2814:C:C5	3.03	0.46
2:A:2842:G:C2	2:A:2876:G:N3	2.78	0.46
2:A:487:C:H42	2:A:493:G:H1	1.62	0.46
2:A:531:C:H41	20:U:38:THR:HA	0.78	0.46
2:A:585:G:C4	2:A:1251:C:N4	2.83	0.46
2:A:586:A:N6	2:A:809:G:HO2'	2.12	0.46
3:D:167:GLU:C	3:D:170:TYR:O	2.53	0.46
3:D:131:LEU:CG	3:D:187:CYS:O	2.59	0.46
2:A:1789:A:C3'	3:D:224:VAL:HG13	2.44	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:76:ARG:HA	3:D:114:GLU:N	2.30	0.46
4:E:232:ARG:O	4:E:233:ARG:C	2.53	0.46
2:A:2512:C:C4'	4:E:235:ILE:HD12	2.43	0.46
2:A:321:G:H5'	5:F:150:THR:HG21	1.97	0.46
5:F:199:GLU:O	5:F:200:PRO:O	2.34	0.46
6:G:97:GLN:HB3	6:G:106:PHE:CZ	2.49	0.46
7:H:58:LYS:O	7:H:59:HIS:C	2.54	0.46
8:I:21:VAL:HG21	8:I:30:LEU:HD12	1.97	0.46
9:N:56:LYS:CD	9:N:56:LYS:H	2.23	0.46
9:N:63:ILE:CG2	9:N:71:TYR:OH	2.55	0.46
2:A:636:G:H3'	11:P:126:SER:HB3	1.97	0.46
12:Q:130:PRO:HB2	12:Q:134:PHE:CE1	2.51	0.46
19:R:41:ALA:O	19:R:42:LYS:C	2.54	0.46
19:R:56:LYS:O	19:R:57:ARG:C	2.54	0.46
2:A:2334:G:H5'	13:S:20:TYR:HE1	1.80	0.46
13:S:34:LEU:HG	13:S:103:ASP:N	2.31	0.46
20:U:113:SER:C	20:U:115:ASN:H	2.11	0.46
21:V:14:VAL:HG13	21:V:15:SER:H	1.74	0.46
21:V:69:ILE:HG23	21:V:89:ASN:O	2.15	0.46
18:Z:174:PRO:C	18:Z:175:ARG:HG2	2.36	0.46
18:Z:8:ARG:C	18:Z:9:THR:HG23	2.36	0.46
6:G:27:ILE:O	6:G:69:ILE:HG21	1.68	0.46
2:A:1332:G:C4	2:A:1609:A:N1	2.83	0.46
2:A:1956:U:H2'	2:A:1956:U:O2	2.15	0.46
23:3:1:MET:N	23:3:2:PRO:CD	2.78	0.46
23:3:4:LEU:HD11	23:3:39:ASP:HA	1.98	0.46
2:A:2348:U:C4'	29:8:42:ARG:HH22	2.24	0.46
2:A:1127:A:N1	2:A:2518:A:C2	2.84	0.46
2:A:1664:A:N3	2:A:2726:U:N3	2.63	0.46
2:A:1676:A:H2'	2:A:1677:A:O4'	2.16	0.46
2:A:2187:G:C2'	2:A:2188:C:C5'	2.72	0.46
2:A:2194:G:N3	2:A:2194:G:H2'	2.30	0.46
2:A:2094:G:C5	2:A:2196:C:N3	2.80	0.46
2:A:2199:A:C4	2:A:2225:A:C2	3.03	0.46
2:A:2251:G:C4'	12:Q:102:ARG:HH22	2.29	0.46
2:A:2435:A:C2	2:A:2436:G:C8	3.04	0.46
2:A:2450:A:N3	2:A:2451:A:N9	2.63	0.46
2:A:2453:A:HO2'	2:A:2454:G:C5'	2.19	0.46
2:A:2032:G:C6	2:A:2572:A:H2	2.33	0.46
2:A:2625:G:H2'	2:A:2626:C:H5'	1.97	0.46
2:A:2832:U:C3'	2:A:2832:U:C6	2.94	0.46
2:A:2790:A:H2	2:A:2894:G:C8	2.33	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:510:C:P	2:A:512:G:H22	2.38	0.46
2:A:13:A:N7	2:A:525:U:C4	2.84	0.46
2:A:783:A:C6	2:A:785:G:H1'	2.49	0.46
2:A:853:G:H2'	2:A:854:G:C8	2.50	0.46
1:B:24:G:C8	1:B:56:G:N7	2.83	0.46
3:D:109:LEU:HD11	3:D:126:GLY:HA3	1.97	0.46
3:D:172:ILE:HG13	3:D:182:MET:HE3	1.97	0.46
3:D:191:VAL:HG23	3:D:192:GLY:N	2.29	0.46
4:E:251:PRO:O	4:E:252:GLN:HG2	2.15	0.46
4:E:44:TYR:CD2	4:E:306:ARG:O	2.69	0.46
5:F:11:ASN:HD21	5:F:160:LEU:CG	2.27	0.46
6:G:134:LEU:C	6:G:135:VAL:HG23	2.36	0.46
8:I:42:ALA:HB3	8:I:43:ASN:ND2	2.30	0.46
9:N:68:GLY:O	9:N:69:TYR:CG	2.69	0.46
9:N:84:ARG:CA	9:N:87:LEU:HD13	2.45	0.46
10:O:77:ILE:CD1	10:O:78:ARG:HA	2.42	0.46
11:P:108:VAL:O	11:P:125:PHE:HB3	2.15	0.46
11:P:73:VAL:HG13	11:P:76:LEU:CB	2.46	0.46
12:Q:32:LYS:O	12:Q:32:LYS:HD2	2.15	0.46
12:Q:91:HIS:O	12:Q:111:THR:CB	2.62	0.46
19:R:63:ARG:HH22	19:R:77:ARG:HA	1.81	0.46
19:R:89:ASP:C	19:R:89:ASP:OD1	2.49	0.46
20:U:108:ALA:O	20:U:110:VAL:HB	2.15	0.46
20:U:117:ARG:HG3	20:U:118:GLN:N	2.28	0.46
20:U:14:HIS:NE2	20:U:36:PHE:HE2	2.10	0.46
21:V:67:LYS:HG3	21:V:94:LYS:CG	2.45	0.46
17:Y:101:LEU:HD13	17:Y:103:LEU:CD1	2.39	0.46
18:Z:112:LEU:HD12	18:Z:177:THR:HG21	1.96	0.46
18:Z:71:MET:HA	18:Z:78:PRO:N	2.31	0.46
2:A:1344:G:O2'	2:A:1384:A:H2'	2.15	0.46
16:X:7:HIS:CB	16:X:8:PRO:HD2	2.41	0.46
6:G:67:ASP:N	6:G:67:ASP:OD1	2.46	0.46
31:K:112:LYS:HG2	31:K:112:LYS:O	2.16	0.46
2:A:440:G:H3'	17:Y:3:GLN:HE21	1.79	0.46
2:A:1522:G:H8	2:A:1522:G:O5'	1.99	0.46
14:T:44:ARG:CG	14:T:45:GLU:N	2.78	0.46
2:A:476:G:H22	2:A:478:A:H2'	1.79	0.46
14:T:18:GLY:O	14:T:19:THR:HB	2.15	0.46
23:3:47:VAL:C	23:3:48:GLU:OE1	2.49	0.46
2:A:2080:G:C5'	25:4:32:HIS:HB3	2.46	0.46
27:6:37:LEU:CG	27:6:51:ARG:HG2	2.40	0.46
28:7:26:SER:OG	28:7:27:GLY:N	2.47	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:7:30:ILE:CB	28:7:33:ARG:CD	2.71	0.46
2:A:2100:G:H1'	2:A:2190:G:H21	1.78	0.46
2:A:2097:C:N4	2:A:2192:G:H1	2.14	0.46
2:A:2273:A:C8	2:A:2274:A:N9	2.84	0.46
2:A:2292:C:OP2	13:S:25:ARG:NH1	2.49	0.46
2:A:2343:C:H2'	2:A:2343:C:O2	2.15	0.46
2:A:2461:C:C2'	2:A:2462:U:H5'	2.46	0.46
2:A:2648:C:C5	2:A:2649:U:C5	3.03	0.46
2:A:2691:C:C4	2:A:2719:G:N2	2.84	0.46
2:A:2689:U:N1	2:A:2713:A:C6	2.81	0.46
2:A:2762:G:C4	2:A:2763:G:C8	3.02	0.46
2:A:2772:C:C2	2:A:2773:C:C5	3.03	0.46
2:A:2824:C:C4	2:A:2825:C:C2	3.04	0.46
2:A:2885:C:N3	2:A:2886:G:H1'	2.31	0.46
2:A:2887:U:C2'	2:A:2888:C:H5'	2.46	0.46
2:A:323:G:OP2	2:A:340:A:C2	2.68	0.46
2:A:791:C:O2'	2:A:792:G:H5''	2.15	0.46
3:D:158:GLY:O	3:D:160:SER:N	2.49	0.46
3:D:159:THR:O	3:D:176:ALA:HB1	2.16	0.46
3:D:63:ILE:O	3:D:64:ILE:CG2	2.64	0.46
4:E:77:PRO:CG	4:E:186:GLU:HB2	2.46	0.46
4:E:246:VAL:HG12	4:E:247:ARG:O	2.16	0.46
4:E:262:THR:OG1	4:E:263:GLU:N	2.46	0.46
4:E:77:PRO:HB3	4:E:187:HIS:CA	2.43	0.46
5:F:11:ASN:HD21	5:F:160:LEU:HG	1.81	0.46
5:F:16:VAL:CG1	5:F:17:ASP:H	2.29	0.46
7:H:86:LEU:CA	7:H:148:ARG:HH22	2.05	0.46
9:N:27:ALA:O	9:N:31:LEU:N	2.48	0.46
9:N:44:ALA:C	9:N:45:VAL:HG23	2.36	0.46
9:N:47:THR:O	9:N:48:GLY:O	2.34	0.46
12:Q:29:ALA:O	12:Q:30:GLN:O	2.34	0.46
12:Q:43:PRO:O	12:Q:45:GLN:HG2	2.15	0.46
19:R:97:VAL:CG1	19:R:114:VAL:HG22	2.36	0.46
19:R:94:TYR:O	19:R:116:LEU:HA	2.15	0.46
19:R:18:LEU:HD12	19:R:19:ALA:H	1.80	0.46
19:R:65:LEU:HA	19:R:68:ARG:HB2	1.98	0.46
19:R:72:ASP:O	19:R:73:VAL:O	2.34	0.46
13:S:41:LYS:O	13:S:42:HIS:CB	2.64	0.46
13:S:84:THR:O	13:S:88:ALA:HB2	2.15	0.46
13:S:94:GLU:CG	13:S:95:ALA:N	2.78	0.46
2:A:1152:C:H4'	20:U:77:SER:HA	1.97	0.46
21:V:37:ALA:O	21:V:58:ALA:HB1	2.15	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:W:69:LEU:HD22	15:W:109:GLU:HB3	1.91	0.46
15:W:61:ASN:N	15:W:61:ASN:OD1	2.49	0.46
15:W:69:LEU:O	15:W:70:TYR:HB3	2.15	0.46
17:Y:51:LEU:HD22	17:Y:95:ASN:ND2	2.31	0.46
17:Y:92:ASP:OD1	17:Y:94:SER:HB3	2.13	0.46
16:X:54:THR:O	16:X:55:GLN:HB2	2.15	0.46
31:K:116:LEU:CD1	31:K:116:LEU:C	2.82	0.46
2:A:1614:A:N6	15:W:88:ARG:CG	2.74	0.46
2:A:2857:G:H22	2:A:2859:G:H3'	1.81	0.46
2:A:1520:U:C6	2:A:1520:U:C3'	2.98	0.46
2:A:385:C:H42	2:A:391:G:H1	1.64	0.46
2:A:588:U:O4	2:A:670:A:H2'	2.14	0.46
23:3:31:LEU:O	23:3:32:GLN:C	2.53	0.46
25:4:58:LYS:CG	25:4:62:ARG:HE	2.04	0.46
27:6:12:MET:CE	27:6:54:LYS:H	2.18	0.46
29:8:16:ILE:HD13	29:8:64:ARG:OXT	2.16	0.46
2:A:1152:C:C4'	20:U:77:SER:HA	2.45	0.46
2:A:1364:G:N7	25:4:2:GLN:OE1	2.48	0.46
2:A:2015:A:C8	2:A:2016:U:C6	3.01	0.46
2:A:2216:G:C2	2:A:2217:G:C8	3.04	0.46
2:A:2234:G:O6	2:A:2235:G:C6	2.69	0.46
2:A:919:G:C2	2:A:2268:A:H5''	2.49	0.46
2:A:2292:C:N3	2:A:2293:C:C6	2.59	0.46
2:A:2361:A:N3	2:A:2362:G:O4'	2.48	0.46
2:A:2390:U:C6	2:A:2390:U:C3'	2.99	0.46
2:A:2414:G:C5	2:A:2415:G:N7	2.84	0.46
2:A:631:A:N1	2:A:2416:C:O4'	2.44	0.46
2:A:197:A:C4	2:A:2430:A:C5	3.04	0.46
2:A:1953:A:N6	2:A:2550:G:O4'	2.48	0.46
2:A:2584:U:H5	2:A:2585:U:H3'	1.80	0.46
2:A:2638:G:N2	2:A:2776:A:C8	2.83	0.46
2:A:2830:G:C2	2:A:2883:A:H2	2.34	0.46
2:A:447:A:C8	2:A:473:G:C6	3.04	0.46
2:A:527:C:C6	2:A:2779:U:C2'	2.99	0.46
2:A:640:C:O2	2:A:648:G:C2	2.69	0.46
2:A:989:G:O2'	2:A:990:A:P	2.74	0.46
1:B:8:U:O2	1:B:112:G:O6	2.34	0.46
3:D:80:ILE:CG1	3:D:82:TYR:CE1	2.85	0.46
3:D:86:ARG:HG2	3:D:88:ALA:CB	2.45	0.46
4:E:217:TRP:CD2	4:E:251:PRO:CG	2.97	0.46
4:E:72:VAL:CA	4:E:73:ILE:HD13	2.30	0.46
4:E:82:ALA:O	4:E:83:LEU:CB	2.63	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:215:ALA:CA	5:F:239:ALA:HA	2.42	0.46
6:G:98:PHE:C	6:G:104:PHE:CE2	2.90	0.46
6:G:11:HIS:CG	6:G:15:GLU:OE2	2.58	0.46
6:G:22:VAL:CG2	6:G:24:HIS:CE1	2.98	0.46
1:B:43:C:O4'	6:G:47:GLN:HG2	2.15	0.46
6:G:48:MET:HA	6:G:49:PRO:HD3	1.75	0.46
7:H:147:ILE:CD1	7:H:150:VAL:CB	2.91	0.46
7:H:166:GLU:HA	7:H:167:LEU:HD23	1.88	0.46
12:Q:145:PRO:O	12:Q:146:THR:CB	2.58	0.46
12:Q:152:SER:O	12:Q:153:PRO:C	2.54	0.46
12:Q:56:ILE:CD1	12:Q:56:ILE:N	2.24	0.46
19:R:96:ARG:HH21	19:R:117:VAL:HG23	1.80	0.46
19:R:44:LEU:C	19:R:44:LEU:HD13	2.34	0.46
2:A:994:C:H1'	20:U:53:LYS:HB2	1.98	0.46
20:U:57:PHE:O	20:U:60:LEU:N	2.48	0.46
15:W:36:LEU:HD23	15:W:39:THR:HG21	1.98	0.46
17:Y:11:GLN:HA	17:Y:21:LYS:HZ1	1.80	0.46
17:Y:51:LEU:CA	17:Y:97:ARG:NH2	2.44	0.46
1:B:74:U:C2	18:Z:29:ASN:ND2	2.83	0.46
8:I:75:LEU:HD12	8:I:76:THR:N	2.20	0.46
2:A:74:A:H4'	2:A:75:G:O4'	2.16	0.46
16:X:1:SER:C	16:X:2:TRP:HD1	2.19	0.46
25:4:48:ARG:CG	25:4:49:PHE:CE1	2.99	0.46
2:A:2857:G:C5'	2:A:2857:G:H8	2.26	0.46
2:A:120:U:C2	2:A:150:C:C5	3.04	0.46
2:A:49:A:C2	2:A:118:A:N7	2.83	0.46
2:A:1582:C:C3'	2:A:1583:A:H4'	2.46	0.46
31:K:63:ASP:O	31:K:64:LYS:HB2	2.15	0.46
18:Z:131:PRO:C	18:Z:133:GLU:N	2.69	0.46
2:A:1195:G:C2'	2:A:1226:G:H22	2.29	0.46
24:0:30:VAL:HG13	24:0:63:SER:OG	2.16	0.46
25:4:5:LEU:HD11	25:4:8:LYS:CB	2.32	0.46
28:7:31:LEU:CD2	28:7:31:LEU:H	2.05	0.46
29:8:57:ARG:O	29:8:60:LEU:HB3	2.16	0.46
2:A:1223:C:C4	21:V:87:ARG:NH2	2.63	0.46
2:A:1670:C:OP2	2:A:2550:G:OP2	2.33	0.46
2:A:1809:A:N1	25:4:43:TRP:CH2	2.83	0.46
2:A:2013:A:H5''	2:A:2013:A:H8	1.81	0.46
2:A:2064:C:H1'	2:A:2450:A:C5	2.46	0.46
2:A:2271:G:O2'	2:A:2272:U:P	2.72	0.46
2:A:2271:G:C2'	2:A:2272:U:O5'	2.62	0.46
2:A:2349:G:O6	2:A:2350:C:C6	2.69	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2377:A:H2'	2:A:2378:A:N7	2.30	0.46
2:A:2384:G:H3'	2:A:2386:C:OP2	2.16	0.46
2:A:2454:G:N3	2:A:2455:G:O4'	2.49	0.46
2:A:2519:U:C2	2:A:2542:A:C5	3.04	0.46
2:A:2567:G:C2'	2:A:2568:C:C6	2.99	0.46
2:A:2580:U:H2'	2:A:2581:G:O4'	2.15	0.46
2:A:2649:U:HO2'	2:A:2650:U:P	2.38	0.46
2:A:2676:C:C3'	2:A:2676:C:H6	2.23	0.46
2:A:2729:G:C2	2:A:2730:C:N3	2.84	0.46
2:A:593:G:C2	2:A:665:C:C2	3.04	0.46
2:A:631:A:N1	2:A:2416:C:H1'	2.31	0.46
2:A:910:A:N6	12:Q:12:PRO:O	2.47	0.46
1:B:18:G:H3'	6:G:149:ARG:NH1	2.31	0.46
5:F:200:PRO:HB2	5:F:205:ARG:HD3	1.97	0.46
5:F:193:LEU:HA	5:F:211:ASP:OD1	2.15	0.46
5:F:239:ALA:O	5:F:242:GLU:HG3	2.16	0.46
7:H:101:LYS:NZ	7:H:115:GLU:HG3	2.20	0.46
7:H:66:THR:O	7:H:67:THR:C	2.54	0.46
8:I:4:ILE:HG23	8:I:4:ILE:O	2.11	0.46
8:I:6:LEU:CB	8:I:36:ALA:CB	2.75	0.46
2:A:637:A:P	11:P:126:SER:OG	2.73	0.46
12:Q:16:ARG:HA	12:Q:17:ARG:NH1	2.26	0.46
19:R:99:LYS:HA	19:R:112:ALA:CB	2.44	0.46
6:G:145:ASP:CG	13:S:15:GLU:C	2.56	0.46
13:S:82:TYR:CB	13:S:83:LEU:HD12	2.46	0.46
13:S:87:LEU:HA	13:S:90:LEU:HB2	1.98	0.46
14:T:50:GLU:C	14:T:52:THR:N	2.66	0.46
20:U:10:ARG:HA	20:U:13:ARG:NH1	2.31	0.46
20:U:8:ILE:C	20:U:11:ARG:HG2	2.37	0.46
21:V:49:GLU:HB3	21:V:53:LYS:HD3	1.94	0.46
2:A:1187:G:O4'	21:V:82:ARG:NH2	2.49	0.46
17:Y:34:GLU:O	17:Y:35:TYR:HB3	2.16	0.46
17:Y:50:VAL:CA	17:Y:97:ARG:HG3	2.46	0.46
17:Y:92:ASP:CG	17:Y:94:SER:HB3	2.36	0.46
18:Z:12:GLN:O	18:Z:15:ASP:O	2.34	0.46
18:Z:124:ALA:O	18:Z:159:THR:HB	2.16	0.46
8:I:115:ILE:CG2	8:I:129:VAL:HG12	2.45	0.46
22:2:45:ARG:HE	22:2:49:LEU:CD2	2.29	0.46
2:A:1076:C:O2	31:K:92:PRO:HG2	2.16	0.46
2:A:1707:G:H1	2:A:1751:C:H42	1.63	0.46
2:A:1899:G:H22	2:A:1902:C:N4	2.11	0.46
2:A:270(X):G:O2'	2:A:272:G:H4'	2.16	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1358:G:H2'	2:A:1371:G:N2	2.31	0.46
24:0:41:ARG:HB2	24:0:74:LYS:CE	2.46	0.46
24:0:44:LYS:O	24:0:45:PHE:CB	2.63	0.46
23:3:22:ALA:CB	23:3:46:ASN:ND2	2.79	0.46
2:A:1008:C:O2'	2:A:1009:A:H8	1.99	0.46
2:A:1365:A:H5''	25:4:3:LYS:NZ	2.30	0.46
2:A:2096:U:H2'	2:A:2097:C:H6	1.81	0.46
2:A:2224:G:O5'	2:A:2224:G:H8	1.99	0.46
2:A:2319:G:P	13:S:9:PRO:HD3	2.55	0.46
2:A:2446:G:N1	2:A:2501:C:C6	2.82	0.46
2:A:2479:G:C6	2:A:2480:C:C2	3.03	0.46
2:A:570:G:O6	2:A:2499:C:OP1	2.33	0.46
2:A:576:U:H4'	2:A:2502:G:C8	2.51	0.46
2:A:2534:A:C2	2:A:2535:G:C8	3.04	0.46
2:A:2543:G:H2'	2:A:2544:G:C5'	2.41	0.46
2:A:2548:G:C6	2:A:2549:G:N7	2.84	0.46
2:A:2516:G:C2	2:A:2569:G:C2	3.04	0.46
2:A:2653:U:OP2	2:A:2654:A:H2'	2.15	0.46
2:A:2657:A:N6	2:A:2664:G:C2	2.66	0.46
2:A:2658:C:C4	2:A:2664:G:N2	2.84	0.46
2:A:2809:A:H4'	2:A:2811:G:N7	2.27	0.46
2:A:387:U:O2	2:A:387:U:H2'	2.15	0.46
2:A:789:A:HO2'	2:A:1781:C:H42	1.64	0.46
2:A:794:G:C2	2:A:795:C:C2	3.04	0.46
1:B:115:G:H5'	13:S:59:ALA:CB	2.41	0.46
1:B:24:G:N7	1:B:56:G:C5	2.84	0.46
1:B:8:U:H2'	1:B:9:G:H8	1.81	0.46
2:A:780:G:O6	3:D:233:ASP:OD1	2.34	0.46
4:E:226:HIS:CD2	4:E:229:GLN:OE1	2.68	0.46
4:E:221:LYS:CE	4:E:233:ARG:CB	2.94	0.46
5:F:31:ILE:HG22	5:F:32:GLY:N	2.31	0.46
7:H:41:THR:N	7:H:54:PRO:HG3	2.31	0.46
9:N:14:ALA:N	9:N:40:ASN:ND2	2.56	0.46
12:Q:134:PHE:O	12:Q:138:ARG:HG3	2.16	0.46
12:Q:35:ASN:O	12:Q:126:VAL:HG22	2.15	0.46
12:Q:92:VAL:HG12	12:Q:111:THR:HA	0.92	0.46
19:R:103:ARG:O	19:R:105:ARG:NH2	2.49	0.46
2:A:2840:C:H4'	19:R:53:HIS:CD2	2.50	0.46
19:R:73:VAL:O	19:R:75:LEU:C	2.54	0.46
20:U:46:GLU:O	20:U:50:ARG:N	2.48	0.46
21:V:14:VAL:CG1	21:V:15:SER:N	2.39	0.46
21:V:33:VAL:CG1	21:V:34:GLU:N	2.79	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:W:68:ARG:HE	15:W:110:LYS:CB	2.29	0.46
15:W:73:ALA:O	15:W:106:ILE:HB	2.16	0.46
17:Y:102:ASP:O	17:Y:103:LEU:CG	2.64	0.46
17:Y:78:THR:N	17:Y:89:ARG:HD2	2.31	0.46
18:Z:154:LEU:HD23	18:Z:154:LEU:O	2.15	0.46
18:Z:154:LEU:HA	18:Z:155:PRO:HD3	1.81	0.46
8:I:77:VAL:HG12	8:I:79:ILE:HD11	1.98	0.46
2:A:2310:A:C2'	6:G:55:LYS:CE	2.57	0.46
2:A:1056:G:N2	2:A:1104:C:N4	2.64	0.46
2:A:282:A:H62	2:A:360:G:N2	2.14	0.46
2:A:221:A:O2'	2:A:271(B):G:N1	2.49	0.46
2:A:1315:C:H42	2:A:1337:G:H1	1.63	0.46
25:4:41:PRO:CD	25:4:57:ASP:OD2	2.63	0.45
19:R:100:LEU:CA	26:5:44:HIS:HD2	2.29	0.45
2:A:1239:G:O2'	2:A:1240:U:H6	1.98	0.45
2:A:1938:A:HO2'	2:A:1939:U:C5'	2.30	0.45
2:A:530:G:C2	2:A:2021:C:C6	3.04	0.45
2:A:2066:C:N3	2:A:2445:G:N1	2.64	0.45
2:A:2067:G:H3'	2:A:2068:U:C5'	2.46	0.45
2:A:2100:G:C4	2:A:2190:G:N1	2.79	0.45
2:A:2331:G:C2'	2:A:2332:U:O4'	2.63	0.45
2:A:834:C:O2'	2:A:2358:G:C2'	2.64	0.45
2:A:2361:A:H2	2:A:2362:G:H1'	1.75	0.45
2:A:2380:C:C4	2:A:2381:C:C5	3.03	0.45
2:A:249:C:O2'	29:8:8:LYS:CG	2.64	0.45
2:A:2547:U:C6	2:A:2566:A:C6	3.05	0.45
2:A:2586:C:C3'	2:A:2586:C:C6	2.99	0.45
2:A:2051:A:C6	2:A:2614:A:C5	3.04	0.45
2:A:2641:G:O6	2:A:2774:C:N4	2.48	0.45
2:A:2677:G:C2'	2:A:2678:C:C5'	2.93	0.45
2:A:2708:G:H5'	19:R:68:ARG:O	2.15	0.45
2:A:2728:U:O2'	2:A:2729:G:H5'	2.17	0.45
2:A:2759:G:C8	2:A:2759:G:C3'	2.99	0.45
2:A:2783:G:C6	2:A:2784:C:C5	3.04	0.45
2:A:27:G:H3'	2:A:27:G:H8	1.80	0.45
2:A:2803:C:O2	2:A:2803:C:C2'	2.64	0.45
2:A:2826:A:OP2	2:A:2826:A:H8	1.99	0.45
2:A:673:C:OP1	5:F:80:VAL:HG11	2.17	0.45
2:A:747:U:C5	2:A:2613:U:C4	3.04	0.45
2:A:797:C:P	5:F:59:GLU:OE1	2.74	0.45
2:A:872:A:H2'	2:A:873:G:C8	2.51	0.45
3:D:144:GLU:OE2	3:D:187:CYS:HA	2.16	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:67:THR:C	4:E:68:VAL:HG23	2.35	0.45
4:E:61:PRO:CB	4:E:69:PRO:CA	2.95	0.45
5:F:102:LEU:HD21	5:F:106:GLU:CD	2.26	0.45
5:F:3:ALA:HB2	5:F:17:ASP:C	2.36	0.45
7:H:119:GLY:O	7:H:121:GLU:OE2	2.34	0.45
7:H:88:LEU:CD2	7:H:88:LEU:O	2.62	0.45
10:O:5:GLU:CB	10:O:20:LEU:HD22	2.46	0.45
11:P:109:LEU:HD13	11:P:110:GLY:C	2.37	0.45
2:A:636:G:P	11:P:126:SER:HA	2.56	0.45
11:P:76:LEU:CB	11:P:81:VAL:HG21	2.46	0.45
12:Q:137:ARG:O	12:Q:141:MET:HG2	2.16	0.45
12:Q:70:ARG:H	12:Q:70:ARG:HG3	1.58	0.45
19:R:95:THR:HG23	19:R:115:GLU:O	2.17	0.45
19:R:29:LEU:CD2	19:R:29:LEU:H	2.23	0.45
13:S:49:THR:HG23	13:S:52:PRO:HD2	1.98	0.45
20:U:91:ASN:CG	20:U:95:LEU:HD21	2.26	0.45
21:V:59:GLU:HB3	21:V:60:VAL:H	1.51	0.45
21:V:67:LYS:HG3	21:V:94:LYS:CD	2.46	0.45
2:A:308:G:O2'	17:Y:54:ASP:OD2	2.34	0.45
17:Y:31:LEU:CD1	17:Y:99:THR:O	2.64	0.45
18:Z:114:ASP:HB3	18:Z:171:VAL:HG12	1.97	0.45
8:I:77:VAL:HG12	8:I:143:VAL:HG13	1.97	0.45
22:2:7:GLU:CD	22:2:8:ILE:N	2.64	0.45
2:A:2308:G:OP2	2:A:2310:A:N6	2.49	0.45
2:A:1081:U:H5'	31:K:126:LYS:NZ	2.31	0.45
31:K:42:PHE:CZ	31:K:56:VAL:HG11	2.51	0.45
2:A:2898:U:C2'	2:A:2898:U:O2	2.63	0.45
6:G:60:GLU:C	6:G:61:PHE:CD1	2.89	0.45
2:A:2722:G:N3	2:A:2723:C:N1	2.60	0.45
8:I:62:LEU:O	8:I:66:LYS:CG	2.64	0.45
8:I:63:ALA:CA	8:I:66:LYS:HE2	2.45	0.45
2:A:1906:G:O5'	2:A:1929:G:O2'	2.24	0.45
2:A:49:A:H61	2:A:176:G:H1	1.61	0.45
24:0:37:LEU:CB	24:0:68:VAL:CG1	2.93	0.45
23:3:8:LEU:C	23:3:9:VAL:HG13	2.36	0.45
25:4:23:GLU:C	25:4:25:MET:N	2.70	0.45
27:6:33:ALA:C	27:6:35:LEU:N	2.63	0.45
29:8:60:LEU:CG	29:8:64:ARG:HB2	2.42	0.45
2:A:1166:C:H2'	2:A:1167:U:C6	2.51	0.45
2:A:2430:A:H2'	2:A:2431:U:H5'	1.96	0.45
2:A:2454:G:C6	2:A:2455:G:C5	3.03	0.45
2:A:2447:G:C2	2:A:2500:U:C5	3.03	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2536:G:N1	2:A:2537:U:C2	2.85	0.45
2:A:2570:G:C2'	2:A:2571:C:C5	2.80	0.45
2:A:2570:G:H5'	2:A:2571:C:OP2	2.16	0.45
2:A:2637:U:C2	2:A:2782:G:N2	2.84	0.45
2:A:2644:G:C8	2:A:2644:G:C3'	2.99	0.45
2:A:2666:C:O5'	2:A:2666:C:H6	1.98	0.45
2:A:2677:G:C4	2:A:2678:C:C5	3.04	0.45
2:A:2688:U:C2'	2:A:2688:U:O2	2.55	0.45
2:A:2782:G:C8	2:A:2782:G:O5'	2.69	0.45
2:A:2826:A:C2	2:A:2827:C:C6	2.99	0.45
2:A:2841:C:P	19:R:53:HIS:HE1	2.39	0.45
2:A:251:A:N6	2:A:386:G:O6	2.41	0.45
2:A:944:G:O2'	2:A:945:A:OP2	2.22	0.45
3:D:114:GLU:O	3:D:115:ILE:HG23	2.17	0.45
3:D:143:ILE:CG2	3:D:153:LEU:HB2	2.43	0.45
3:D:194:VAL:CG2	3:D:195:GLY:N	2.69	0.45
2:A:782:A:O2'	3:D:229:MET:HA	2.17	0.45
4:E:222:ARG:O	4:E:227:ALA:CA	2.63	0.45
4:E:68:VAL:HG13	4:E:69:PRO:HD2	1.97	0.45
4:E:81:VAL:O	4:E:81:VAL:HG23	2.17	0.45
5:F:150:THR:CG2	5:F:203:ALA:HB1	2.43	0.45
5:F:220:THR:O	5:F:222:ASP:N	2.50	0.45
7:H:25:VAL:HG12	7:H:78:VAL:CG2	2.38	0.45
8:I:31:PHE:O	8:I:34:GLY:N	2.50	0.45
9:N:60:ARG:CD	9:N:71:TYR:HE2	2.29	0.45
10:O:105:GLU:CD	10:O:105:GLU:H	2.20	0.45
11:P:67:ARG:CD	11:P:111:ALA:O	2.64	0.45
2:A:2251:G:C4'	12:Q:102:ARG:NH2	2.78	0.45
12:Q:97:ASP:OD1	12:Q:107:LYS:HD2	2.16	0.45
13:S:86:LEU:HD21	13:S:124:ASP:CB	2.46	0.45
13:S:48:VAL:HG13	13:S:55:ASP:OD2	2.16	0.45
20:U:24:PHE:CD1	20:U:24:PHE:N	2.81	0.45
2:A:581:C:OP2	20:U:33:ARG:NH1	2.50	0.45
21:V:33:VAL:CG1	21:V:34:GLU:H	2.21	0.45
21:V:49:GLU:O	21:V:54:TYR:OH	2.32	0.45
15:W:85:VAL:HG13	15:W:95:ILE:CD1	2.43	0.45
18:Z:166:LEU:HD13	18:Z:167:THR:N	2.31	0.45
22:2:19:GLU:HG2	22:2:23:LEU:CD2	2.45	0.45
2:A:1341:U:O2'	2:A:1342:A:P	2.74	0.45
2:A:140:A:H8	16:X:48:THR:HG21	1.81	0.45
2:A:1618:A:OP1	2:A:1618:A:H8	1.99	0.45
6:G:88:LEU:H	6:G:89:PRO:HD3	1.80	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:283:A:C2	2:A:360:G:N1	2.85	0.45
2:A:227:A:N1	2:A:2407:G:C8	2.84	0.45
2:A:980:A:N3	2:A:2037:G:O2'	2.45	0.45
2:A:1174:A:N1	2:A:1176:G:C8	2.83	0.45
2:A:1778:U:C6	2:A:1784:A:C2	3.04	0.45
2:A:1741:C:H2'	2:A:1742:C:O4'	2.17	0.45
2:A:1106:G:H2'	2:A:1107:G:C8	2.51	0.45
25:4:47:GLU:O	25:4:72:LYS:O	2.34	0.45
30:9:17:VAL:CG2	30:9:26:ILE:HD12	2.46	0.45
2:A:1697:G:C3'	2:A:1698:A:C5'	2.77	0.45
2:A:1782:C:H5''	2:A:1783:A:P	2.56	0.45
2:A:2212:A:H1'	2:A:2213:U:C4	2.52	0.45
2:A:2219:G:HO2'	2:A:2224:G:P	2.15	0.45
2:A:2262:U:H3	2:A:2278:A:H61	1.65	0.45
2:A:2325:G:N3	2:A:2326:C:C6	2.84	0.45
2:A:2370:G:O2'	2:A:2371:G:O5'	2.34	0.45
2:A:2380:C:C5	2:A:2381:C:C5	3.05	0.45
2:A:825:C:C5'	2:A:2428:G:O6	2.65	0.45
2:A:2464:C:C2'	2:A:2465:C:H6	2.21	0.45
2:A:248:G:H21	2:A:2431:U:C1'	2.29	0.45
2:A:2589:A:N6	2:A:2590:A:H62	2.14	0.45
2:A:2643:G:C6	2:A:2644:G:C2	3.04	0.45
2:A:2684:U:C1'	10:O:70:ARG:NH1	2.79	0.45
2:A:2766:G:C5'	2:A:2767:C:P	3.02	0.45
2:A:2776:A:N3	2:A:2778:A:C4	2.77	0.45
2:A:2792:G:N2	2:A:2804:C:C4	2.83	0.45
2:A:2828:C:O2	2:A:2829:C:C6	2.70	0.45
2:A:491:G:H2'	2:A:492:A:C8	2.52	0.45
2:A:946:G:H2'	2:A:947:G:O4'	2.15	0.45
3:D:146:LYS:CB	3:D:149:ARG:HG2	2.47	0.45
3:D:141:HIS:CB	3:D:154:VAL:HG11	2.41	0.45
3:D:80:ILE:CB	3:D:82:TYR:HE1	2.15	0.45
4:E:102:ASP:OD1	4:E:104:PHE:HZ	2.00	0.45
6:G:74:THR:C	6:G:75:LEU:HG	2.36	0.45
7:H:41:THR:C	7:H:52:THR:HG21	2.36	0.45
7:H:55:SER:OG	7:H:57:GLU:CG	2.64	0.45
8:I:4:ILE:O	8:I:5:PHE:C	2.51	0.45
9:N:15:ARG:HA	9:N:43:ARG:HG2	1.83	0.45
9:N:65:ASN:CB	9:N:68:GLY:O	2.64	0.45
10:O:39:VAL:HG12	10:O:40:VAL:N	2.30	0.45
10:O:7:ARG:HH21	10:O:44:LYS:HD2	1.75	0.45
12:Q:47:GLU:C	12:Q:47:GLU:OE1	2.54	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:Q:64:ALA:HA	12:Q:142:LYS:HG2	1.98	0.45
19:R:38:VAL:O	19:R:39:PRO:O	2.33	0.45
13:S:86:LEU:HB2	13:S:87:LEU:HD22	1.98	0.45
20:U:32:TYR:N	20:U:32:TYR:HD2	2.08	0.45
20:U:17:VAL:HG13	20:U:39:LEU:HD12	1.98	0.45
20:U:55:ARG:HA	20:U:58:ARG:CD	2.46	0.45
21:V:74:TYR:CG	21:V:86:HIS:O	2.56	0.45
15:W:55:ALA:CA	15:W:107:LEU:HD11	2.35	0.45
15:W:81:ALA:CA	15:W:82:LEU:HD22	2.46	0.45
17:Y:55:PHE:HE2	17:Y:89:ARG:NH2	2.00	0.45
22:2:29:ASN:O	22:2:30:ALA:C	2.53	0.45
2:A:140:A:C8	16:X:48:THR:CG2	3.00	0.45
16:X:28:VAL:CG2	16:X:62:LYS:HG2	2.46	0.45
2:A:72:U:O5'	16:X:2:TRP:CE2	2.70	0.45
16:X:32:ALA:HA	16:X:36:GLU:CG	2.42	0.45
2:A:1598:C:OP1	16:X:34:LYS:HG3	2.15	0.45
31:K:132:ALA:HB1	31:K:137:ILE:CG2	2.46	0.45
2:A:2857:G:C2	2:A:2859:G:OP2	2.69	0.45
2:A:358:U:C3'	2:A:359:A:H5'	2.40	0.45
31:K:52:MET:SD	31:K:81:LYS:HB2	2.55	0.45
2:A:1530:G:O6	2:A:1540:G:C6	2.70	0.45
2:A:184:C:C4	2:A:213:A:N6	2.85	0.45
2:A:698:C:O2'	2:A:734:A:N6	2.49	0.45
2:A:861:A:H62	2:A:916:G:H21	1.64	0.45
24:0:37:LEU:HG	24:0:71:ASN:ND2	2.32	0.45
25:4:42:PHE:CG	25:4:43:TRP:N	2.84	0.45
27:6:8:ILE:HG21	27:6:30:ASN:HB2	1.97	0.45
30:9:11:CYS:N	30:9:14:CYS:SG	2.89	0.45
2:A:1263:U:O2'	26:5:16:ARG:NH2	2.50	0.45
2:A:1267:U:C5	2:A:2012:G:N2	2.85	0.45
2:A:126:A:N7	2:A:127:A:C6	2.84	0.45
2:A:1628:G:H1	2:A:1638:C:H42	1.63	0.45
2:A:2292:C:C2	2:A:2293:C:H6	2.18	0.45
2:A:2331:G:N7	2:A:2332:U:O4	2.48	0.45
2:A:2056:G:OP2	2:A:2504:U:H5''	2.17	0.45
2:A:2512:C:O2	2:A:2513:G:H1'	2.16	0.45
2:A:2570:G:N2	2:A:2571:C:N1	2.65	0.45
2:A:2603:G:O2'	2:A:2604:U:H5'	2.16	0.45
2:A:2617:C:C2'	2:A:2618:G:O5'	2.45	0.45
2:A:2640:G:HO2'	9:N:70:PHE:HD2	1.63	0.45
2:A:2657:A:H2'	2:A:2658:C:C5'	2.42	0.45
2:A:2718:G:C2	2:A:2719:G:C4	3.04	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:671:C:N3	2:A:809:G:N2	2.65	0.45
2:A:685:A:H5''	2:A:686:G:H21	1.81	0.45
2:A:692:C:H42	2:A:770:G:H1	1.64	0.45
2:A:566:U:O2'	2:A:808:G:H5''	2.16	0.45
4:E:101:THR:O	4:E:102:ASP:O	2.33	0.45
4:E:224:GLY:O	4:E:225:LYS:HG3	2.15	0.45
2:A:2620:C:C5'	4:E:252:GLN:HG2	2.45	0.45
5:F:214:THR:O	5:F:216:SER:CA	2.61	0.45
7:H:113:GLU:OE1	7:H:114:ILE:C	2.55	0.45
7:H:40:MET:HE1	7:H:42:ILE:N	2.31	0.45
8:I:37:ILE:HG23	8:I:38:GLU:N	2.02	0.45
9:N:42:GLU:O	9:N:43:ARG:C	2.53	0.45
9:N:46:ILE:HD11	9:N:132:LEU:HD13	1.86	0.45
9:N:77:GLY:C	9:N:79:PHE:N	2.55	0.45
2:A:245:G:H4'	11:P:55:GLN:HA	1.98	0.45
12:Q:124:ALA:HB2	12:Q:136:TRP:CD1	2.51	0.45
12:Q:140:TYR:CB	12:Q:147:VAL:HG11	2.47	0.45
12:Q:52:LYS:HA	12:Q:53:PRO:HD3	1.82	0.45
2:A:446:G:P	20:U:3:ARG:HB2	2.57	0.45
2:A:535:C:H5'	20:U:53:LYS:HE3	1.96	0.45
21:V:65:ARG:O	21:V:93:ILE:CG1	2.65	0.45
15:W:106:ILE:HG22	15:W:107:LEU:N	2.32	0.45
15:W:13:SER:O	15:W:14:PRO:O	2.35	0.45
15:W:15:ARG:O	15:W:18:ARG:CB	2.62	0.45
17:Y:47:THR:HG23	17:Y:100:ASP:HB2	1.93	0.45
17:Y:30:ASP:CG	17:Y:31:LEU:HG	2.37	0.45
17:Y:71:VAL:CG1	17:Y:72:ILE:N	2.39	0.45
18:Z:129:ARG:NE	18:Z:129:ARG:CA	2.62	0.45
18:Z:8:ARG:O	18:Z:9:THR:CG2	2.64	0.45
8:I:117:LEU:CD2	8:I:121:ILE:HD11	2.47	0.45
8:I:115:ILE:CA	8:I:131:VAL:HG13	2.47	0.45
22:2:59:ILE:O	22:2:60:GLN:O	2.34	0.45
2:A:139:G:C3'	2:A:141(A):C:H1'	2.47	0.45
2:A:70:G:H1'	2:A:73:A:H1'	1.98	0.45
16:X:23:LYS:O	16:X:68:LEU:HD21	2.07	0.45
16:X:37:VAL:O	16:X:38:ALA:O	2.33	0.45
31:K:93:LYS:CA	31:K:96:ILE:CD1	2.73	0.45
2:A:1525:G:H2'	2:A:1526:G:H5'	1.98	0.45
2:A:1614:A:C6	15:W:88:ARG:HG3	2.51	0.45
2:A:1619:G:H21	28:7:1:MET:HB3	1.81	0.45
2:A:733:G:O6	2:A:761:A:H2'	2.16	0.45
2:A:1779:U:H3	2:A:1785:A:N6	2.14	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1853:A:H2'	2:A:1854:A:H8	1.78	0.45
2:A:725:G:N1	2:A:726:G:N2	2.65	0.45
2:A:1149:G:H2'	2:A:1150:C:O4'	2.16	0.45
24:0:49:GLN:O	24:0:72:LYS:O	2.34	0.45
24:0:46:LYS:HE2	24:0:58:THR:C	2.37	0.45
23:3:40:THR:HG23	23:3:43:ILE:CG1	2.37	0.45
23:3:46:ASN:O	23:3:47:VAL:C	2.54	0.45
25:4:31:ILE:HG22	25:4:32:HIS:H	1.80	0.45
28:7:20:ALA:O	28:7:23:LYS:N	2.49	0.45
2:A:124:G:OP1	2:A:1376:C:C1'	2.63	0.45
2:A:1275:A:H61	19:R:19:ALA:HB2	1.77	0.45
2:A:1429:G:C2	2:A:1568:G:N1	2.84	0.45
2:A:1790:C:C5'	2:A:1828:G:H1	2.29	0.45
2:A:1827:C:C5'	2:A:1971:A:H4'	2.24	0.45
2:A:2215:G:C2'	2:A:2216:G:C5'	2.94	0.45
2:A:2218:G:C6	2:A:2219:G:C5	3.04	0.45
2:A:2292:C:C4	2:A:2293:C:H5	2.23	0.45
2:A:197:A:C4	2:A:2430:A:N7	2.84	0.45
2:A:2458:G:O2'	2:A:2459:A:N7	2.45	0.45
2:A:2463:C:C2'	2:A:2464:C:O5'	2.65	0.45
2:A:2627:G:C5'	2:A:2627:G:H8	2.20	0.45
2:A:2692:C:H1'	2:A:2847:U:O2'	2.17	0.45
2:A:2734:A:C5	2:A:2735:G:N9	2.84	0.45
2:A:2864:G:O2'	2:A:2865:U:C6	2.70	0.45
2:A:389:G:O4'	2:A:2413:G:C4'	2.65	0.45
2:A:775:G:H22	2:A:787:U:C3'	2.30	0.45
2:A:974:G:O6	21:V:80:TYR:CE2	2.69	0.45
1:B:51:G:OP2	13:S:72:GLU:CD	2.54	0.45
3:D:106:PRO:CB	3:D:141:HIS:NE2	2.74	0.45
3:D:146:LYS:HD2	3:D:147:PRO:CG	2.45	0.45
2:A:1799:G:N2	3:D:153:LEU:HD11	2.29	0.45
5:F:163:HIS:HA	5:F:166:ILE:HD11	1.98	0.45
5:F:194:PHE:CZ	5:F:204:ALA:O	2.70	0.45
6:G:101:THR:O	6:G:103:ASN:CG	2.54	0.45
6:G:25:MET:CE	6:G:128:LEU:HB3	2.47	0.45
2:A:2745:C:O2'	7:H:142:GLU:OE2	2.33	0.45
7:H:35:THR:C	7:H:36:PHE:CD1	2.89	0.45
8:I:21:VAL:HG13	8:I:30:LEU:HD11	1.93	0.45
9:N:79:PHE:O	9:N:83:ILE:HG12	2.16	0.45
9:N:90:LYS:HZ2	9:N:95:ARG:NH2	2.15	0.45
13:S:35:VAL:O	13:S:45:ALA:CB	2.64	0.45
20:U:72:HIS:CE1	20:U:107:LYS:HA	2.50	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:995:C:N1	20:U:57:PHE:CE2	2.85	0.45
20:U:96:ALA:O	20:U:106:PHE:HE1	2.00	0.45
21:V:61:VAL:CG1	21:V:95:ILE:CG2	2.41	0.45
15:W:75:TYR:CZ	15:W:104:THR:HG21	2.52	0.45
17:Y:71:VAL:CG1	17:Y:91:LEU:HB2	2.44	0.45
17:Y:28:SER:N	17:Y:99:THR:OG1	2.49	0.45
18:Z:19:ILE:N	18:Z:19:ILE:HD12	2.27	0.45
18:Z:69:VAL:CG2	18:Z:82:ASP:H	2.15	0.45
8:I:110:LEU:HD11	8:I:133:LEU:HD22	1.99	0.45
8:I:81:ALA:N	8:I:146:THR:O	2.49	0.45
2:A:139:G:H3'	2:A:141(A):C:H1'	1.97	0.45
2:A:1406:U:H2'	2:A:1407:C:H6	1.80	0.45
31:K:104:GLN:O	31:K:107:GLU:HG3	2.16	0.45
31:K:89:SER:HB2	31:K:95:LYS:CG	2.44	0.45
2:A:1779:U:C6	2:A:1779:U:C3'	2.99	0.45
2:A:32:C:H2'	2:A:33:U:C6	2.51	0.45
23:3:21:ALA:O	23:3:25:ALA:N	2.43	0.45
2:A:388:G:P	25:4:29:PRO:CD	3.05	0.45
27:6:49:VAL:CG1	27:6:50:PHE:N	2.80	0.45
2:A:54:G:C2'	28:7:35:ARG:HH22	2.30	0.45
30:9:24:LEU:CG	30:9:35:ARG:HG3	2.47	0.45
2:A:1252:G:H8	2:A:1253:A:C8	2.35	0.45
2:A:965:C:C2'	2:A:2273:A:C2	3.00	0.45
2:A:2317:C:N4	2:A:2318:G:C6	2.85	0.45
2:A:2333:A:H1'	2:A:2335:A:N1	2.29	0.45
2:A:2416:C:N3	2:A:2417:C:H5	2.10	0.45
2:A:2494:G:C6	2:A:2495:G:N7	2.84	0.45
2:A:2714:G:C2'	2:A:2715:C:H5'	2.46	0.45
2:A:2717:G:C2	2:A:2718:G:N9	2.77	0.45
2:A:2757:A:H2'	2:A:2758:A:O4'	2.17	0.45
2:A:2735:G:O6	2:A:2770:G:C2	2.68	0.45
2:A:27:G:C3'	2:A:27:G:C8	3.00	0.45
2:A:2793:G:N2	2:A:2803:C:C2	2.83	0.45
2:A:2821:A:H2	2:A:2822:G:C6	2.28	0.45
2:A:2828:C:N4	2:A:2829:C:N4	2.65	0.45
2:A:511:U:OP2	2:A:512:G:C6	2.70	0.45
2:A:923:C:C6	24:0:26:PHE:HE2	2.28	0.45
3:D:126:GLY:C	3:D:127:ASN:O	2.53	0.45
3:D:152:GLN:O	3:D:153:LEU:HD13	2.17	0.45
3:D:161:ALA:O	3:D:162:GLN:NE2	2.50	0.45
3:D:170:TYR:O	3:D:182:MET:SD	2.75	0.45
3:D:131:LEU:CB	3:D:171:VAL:HG11	2.46	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:210:THR:C	4:E:216:ARG:NH2	2.70	0.45
5:F:115:LEU:HG	5:F:246:ARG:HH12	1.80	0.45
2:A:321:G:C4'	5:F:206:ASN:CB	2.90	0.45
5:F:238:SER:CA	5:F:241:ALA:HB2	2.45	0.45
6:G:102:GLY:C	6:G:134:LEU:HG	2.37	0.45
6:G:95:THR:CG2	6:G:96:SER:N	2.76	0.45
10:O:1:MET:HB3	10:O:67:ARG:HG3	1.99	0.45
10:O:86:ILE:HG21	10:O:94:ARG:NE	2.32	0.45
12:Q:50:VAL:HG23	12:Q:121:ASP:OD1	2.17	0.45
19:R:24:GLN:CB	19:R:44:LEU:HD21	2.46	0.45
19:R:39:PRO:O	19:R:41:ALA:C	2.54	0.45
19:R:73:VAL:HG12	19:R:77:ARG:NE	2.27	0.45
19:R:55:ALA:CA	19:R:80:PHE:CE1	2.92	0.45
13:S:81:ALA:CB	13:S:118:ILE:H	2.28	0.45
13:S:30:GLY:O	13:S:31:LYS:CG	2.65	0.45
13:S:83:LEU:O	13:S:87:LEU:HD23	2.16	0.45
20:U:109:LEU:O	20:U:113:SER:OG	2.33	0.45
20:U:114:ARG:HA	20:U:117:ARG:HD2	1.99	0.45
20:U:25:TRP:HB3	20:U:28:ARG:CZ	2.45	0.45
20:U:60:LEU:HD23	20:U:60:LEU:H	1.82	0.45
20:U:63:GLN:O	20:U:65:ILE:C	2.54	0.45
21:V:46:VAL:O	21:V:46:VAL:CG1	2.58	0.45
21:V:71:ILE:O	21:V:88:GLN:HG3	2.16	0.45
2:A:494:G:C4'	15:W:6:ILE:CG2	2.69	0.45
17:Y:42:VAL:O	17:Y:112:LEU:HB3	2.17	0.45
17:Y:75:GLU:O	17:Y:76:ASP:C	2.54	0.45
17:Y:74:VAL:O	17:Y:77:VAL:HG23	2.16	0.45
18:Z:64:ALA:HB3	18:Z:84:TYR:O	2.14	0.45
22:2:58:THR:O	22:2:60:GLN:N	2.49	0.45
2:A:146:G:H2'	2:A:147:U:O4'	2.16	0.45
16:X:52:VAL:C	16:X:53:ASN:ND2	2.70	0.45
6:G:52:THR:HB	6:G:67:ASP:O	2.16	0.45
2:A:1081:U:OP1	31:K:126:LYS:HD3	2.17	0.45
31:K:131:THR:C	31:K:133:LYS:N	2.70	0.45
31:K:138:GLU:HB3	31:K:140:VAL:HG23	1.97	0.45
31:K:32:GLY:O	31:K:60:VAL:CG2	2.64	0.45
2:A:2898:U:C4	2:A:2899:G:N7	2.85	0.45
9:N:5:GLU:CA	9:N:109:TYR:CE2	2.97	0.45
6:G:83:PHE:O	6:G:87:ALA:HB3	2.16	0.45
2:A:1992:G:N2	2:A:1995:U:H5	2.15	0.45
17:Y:2:LYS:O	17:Y:3:GLN:HG3	2.16	0.45
24:O:51:VAL:O	24:O:51:VAL:CG1	2.63	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:136:G:H3'	2:A:137:C:H4'	1.98	0.45
23:3:6:VAL:CA	23:3:55:ARG:O	2.64	0.45
29:8:16:ILE:HG23	29:8:22:VAL:HG22	1.93	0.45
2:A:1163:G:C6	2:A:1164:G:N7	2.85	0.45
2:A:125:G:H3'	28:7:19:ARG:HH12	1.68	0.45
2:A:2095:C:N3	2:A:2194:G:C6	2.84	0.45
2:A:2228:G:C5	2:A:2229:C:C2	3.04	0.45
2:A:2228:G:C5	2:A:2229:C:N1	2.82	0.45
2:A:2280:G:N1	2:A:2281:C:C4	2.85	0.45
2:A:2283:C:C4	2:A:2284:C:C1'	2.99	0.45
2:A:2364:C:C5'	24:0:38:VAL:HG11	2.38	0.45
2:A:2494:G:N2	2:A:2495:G:C1'	2.77	0.45
2:A:2250:G:C8	2:A:2496:C:OP1	2.69	0.45
2:A:2531:A:C6	2:A:2532:G:C4	3.04	0.45
2:A:2679:A:H1'	4:E:300:VAL:CG1	2.47	0.45
2:A:2708:G:H2'	2:A:2709:G:H8	1.82	0.45
2:A:270(O):U:O4	8:I:53:LYS:NZ	2.49	0.45
2:A:2731:G:H1	2:A:2732:G:N2	2.15	0.45
2:A:2740:A:N9	2:A:2741:A:C8	2.82	0.45
2:A:2741:A:C2'	2:A:2742:C:C4'	2.93	0.45
2:A:2787:C:O2	2:A:2787:C:C2'	2.62	0.45
2:A:2844:G:N1	2:A:2845:G:C4	2.85	0.45
2:A:2852:G:C4	2:A:2853:C:N3	2.84	0.45
2:A:337:C:OP1	17:Y:21:LYS:O	2.34	0.45
3:D:161:ALA:HA	3:D:162:GLN:HE22	1.78	0.45
3:D:202:LYS:HA	3:D:203:PRO:HD3	1.87	0.45
3:D:204:PHE:O	3:D:205:VAL:O	2.35	0.45
3:D:211:HIS:O	3:D:214:MET:N	2.43	0.45
3:D:70:LYS:CB	3:D:73:ILE:HD11	2.38	0.45
4:E:201:VAL:HA	4:E:311:PHE:HA	1.98	0.45
4:E:311:PHE:O	4:E:312:ARG:HG3	2.16	0.45
4:E:42:ALA:HA	4:E:311:PHE:CD2	2.51	0.45
4:E:83:LEU:CD1	4:E:178:LEU:HD23	2.47	0.45
5:F:118:THR:O	5:F:119:ALA:C	2.55	0.45
5:F:200:PRO:HD3	5:F:214:THR:CG2	2.47	0.45
5:F:213:ALA:HB2	5:F:218:VAL:HG13	1.33	0.45
6:G:49:PRO:CD	6:G:73:VAL:CG2	2.91	0.45
7:H:36:PHE:O	7:H:37:HIS:C	2.54	0.45
7:H:84:LYS:CG	7:H:140:VAL:CG1	2.86	0.45
7:H:85:ALA:O	7:H:148:ARG:CZ	2.56	0.45
7:H:97:LYS:C	7:H:98:GLN:HG3	2.20	0.45
11:P:92:ASP:O	11:P:119:THR:O	2.34	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:Q:45:GLN:CD	12:Q:153:PRO:CA	2.85	0.45
13:S:118:ILE:CG2	13:S:119:GLN:H	2.23	0.45
20:U:95:LEU:N	20:U:95:LEU:CD2	2.73	0.45
21:V:39:PHE:CZ	21:V:42:GLY:CA	2.97	0.45
15:W:3:ALA:C	15:W:4:LYS:HG3	2.36	0.45
15:W:5:ALA:HB1	15:W:50:VAL:HG13	1.99	0.45
15:W:81:ALA:C	15:W:82:LEU:CD2	2.66	0.45
17:Y:19:ARG:O	17:Y:22:GLN:CB	2.64	0.45
17:Y:31:LEU:CD2	17:Y:31:LEU:N	2.40	0.45
17:Y:54:ASP:C	17:Y:56:ALA:N	2.69	0.45
18:Z:168:VAL:O	18:Z:169:VAL:CB	2.59	0.45
18:Z:62:PHE:CB	18:Z:85:MET:SD	3.01	0.45
8:I:141:LEU:HD22	8:I:142:LYS:HG2	1.98	0.45
22:2:55:ARG:HD2	22:2:55:ARG:N	2.32	0.45
16:X:29:ASP:CG	16:X:30:ASP:OD1	2.55	0.45
16:X:33:SER:C	16:X:37:VAL:HG21	2.35	0.45
16:X:50:GLU:CG	16:X:67:ARG:O	2.63	0.45
16:X:58:MET:C	16:X:59:ASP:CG	2.76	0.45
31:K:112:LYS:O	31:K:114:PRO:HD2	2.09	0.45
2:A:1609:A:N3	2:A:1609:A:H2'	2.31	0.45
9:N:8:ALA:CB	9:N:11:ILE:HD11	2.46	0.45
1:B:16:G:OP2	1:B:16:G:H3'	2.17	0.45
2:A:839:U:H2'	2:A:840:C:C6	2.52	0.45
2:A:220:G:H22	2:A:427:U:H2'	1.82	0.45
24:0:46:LYS:CE	24:0:60:PHE:H	2.30	0.45
2:A:397:G:P	25:4:10:VAL:HG11	2.57	0.45
26:5:42:SER:O	26:5:43:HIS:CG	2.69	0.45
28:7:21:ARG:HB3	28:7:31:LEU:HD12	1.78	0.45
30:9:17:VAL:HG21	30:9:26:ILE:HD12	1.98	0.45
30:9:14:CYS:HA	30:9:26:ILE:O	2.17	0.45
30:9:29:ASN:CB	30:9:32:HIS:CE1	3.00	0.45
2:A:1826:G:C5	2:A:1827:C:C5	3.05	0.45
2:A:2100:G:N3	2:A:2190:G:C2	2.85	0.45
2:A:2234:G:C3'	2:A:2235:G:H5'	2.44	0.45
2:A:2279:G:C4	2:A:2280:G:N7	2.85	0.45
2:A:2290:G:C2	2:A:2291:U:O2	2.70	0.45
2:A:2296:U:C3'	2:A:2296:U:C6	2.99	0.45
2:A:641:C:O2	2:A:2350:C:OP1	2.33	0.45
2:A:2353:G:C6	2:A:2364:C:N4	2.71	0.45
2:A:2392:A:C3'	2:A:2393:A:C5'	2.94	0.45
2:A:2489:G:C6	2:A:2490:G:C6	3.04	0.45
2:A:2618:G:O2'	2:A:2619:C:P	2.66	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2645:G:C1'	2:A:2645:G:OP2	2.63	0.45
2:A:2737:G:C2'	2:A:2738:A:H8	2.18	0.45
2:A:2762:G:C4	2:A:2763:G:N7	2.85	0.45
2:A:2771:C:H42	2:A:2772:C:N4	2.15	0.45
2:A:2630:G:O6	2:A:2788:C:N3	2.50	0.45
2:A:2844:G:C2	2:A:2845:G:N9	2.85	0.45
2:A:528:A:C8	2:A:528:A:H3'	2.51	0.45
2:A:611:C:O2	2:A:617:G:C2	2.70	0.45
2:A:797:C:H5''	5:F:57:PRO:CB	2.34	0.45
2:A:827:U:H4'	2:A:828:U:O2	2.17	0.45
2:A:992:C:H2'	2:A:993:G:H5''	1.99	0.45
1:B:29:A:OP2	13:S:41:LYS:HB2	2.17	0.45
3:D:77:VAL:O	3:D:111:VAL:O	2.35	0.45
3:D:158:GLY:C	3:D:194:VAL:HG13	2.36	0.45
3:D:211:HIS:O	3:D:212:HIS:C	2.53	0.45
3:D:213:LYS:CG	3:D:215:LYS:CA	2.94	0.45
2:A:2514:U:O4'	4:E:247:ARG:NH1	2.49	0.45
4:E:206:LYS:CA	4:E:257:GLY:O	2.64	0.45
5:F:144:PHE:HD2	5:F:156:LEU:CD1	2.25	0.45
2:A:2316:C:C3'	6:G:151:ILE:CD1	2.84	0.45
7:H:10:ILE:HG22	7:H:14:VAL:CG2	2.42	0.45
7:H:120:LEU:HA	7:H:121:GLU:OE1	2.12	0.45
7:H:34:ARG:HG2	7:H:35:THR:N	2.32	0.45
8:I:1:MET:HE3	8:I:23:ASP:CA	2.47	0.45
9:N:21:ARG:O	9:N:22:VAL:C	2.55	0.45
13:S:76:GLY:O	13:S:83:LEU:HD12	2.17	0.45
20:U:15:LYS:HG2	20:U:19:LYS:CE	2.47	0.45
20:U:33:ARG:HG2	20:U:34:ASN:N	2.24	0.45
20:U:76:TYR:O	20:U:80:ILE:HD11	1.95	0.45
21:V:11:GLN:OE1	21:V:22:VAL:HG23	2.15	0.45
21:V:54:TYR:O	21:V:56:VAL:HB	2.17	0.45
21:V:34:GLU:N	21:V:63:HIS:CE1	2.85	0.45
17:Y:51:LEU:CD2	17:Y:51:LEU:C	2.85	0.45
18:Z:152:ILE:HG22	18:Z:153:LYS:H	1.82	0.45
8:I:133:LEU:H	8:I:138:THR:HB	1.80	0.45
22:2:52:ALA:HA	22:2:55:ARG:HD3	1.98	0.45
2:A:2310:A:C2	6:G:57:THR:OG1	2.69	0.45
6:G:44:ILE:O	6:G:83:PHE:HE2	1.86	0.45
2:A:2723:C:O2'	2:A:2724:C:H5'	2.16	0.45
2:A:270(L):U:H4'	2:A:270(M):U:OP1	2.16	0.45
2:A:270:A:C6	2:A:370:G:H1'	2.51	0.45
2:A:171:G:H2'	2:A:172:C:C5	2.51	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:Y:109:GLU:O	17:Y:109:GLU:CG	2.65	0.45
2:A:1227:A:C3'	2:A:1227:A:C8	3.00	0.45
2:A:551:G:C4'	2:A:1220:A:C2	2.97	0.45
1:B:105:G:H2'	1:B:106:G:C8	2.47	0.45
2:A:1602:U:C2	2:A:1602:U:O5'	2.70	0.45
2:A:182:A:H2'	2:A:183:C:C6	2.52	0.45
2:A:929:G:C2'	23:3:37:LEU:HD13	2.46	0.45
25:4:14:ILE:HD11	25:4:39:VAL:HB	1.97	0.45
2:A:1155:A:O2'	2:A:1156:A:H2'	2.17	0.45
2:A:1668:A:HO2'	2:A:1669:A:P	2.40	0.45
2:A:1362:C:O2'	2:A:1810:A:O2'	2.30	0.45
2:A:1991:U:C6	2:A:1991:U:C3'	2.99	0.45
2:A:2022:U:O4	26:5:9:LYS:HD3	2.17	0.45
2:A:2264:C:N4	2:A:2277:G:C6	2.83	0.45
2:A:2314:C:H2'	2:A:2315:G:O5'	2.14	0.45
2:A:2065:C:O2	2:A:2449:U:N3	2.50	0.45
2:A:2468:G:N7	2:A:2476:A:N1	2.63	0.45
2:A:2482:G:N7	2:A:2483:C:C5	2.61	0.45
2:A:2691:C:O4'	2:A:2872:G:C5	2.70	0.45
2:A:2808:U:O2	2:A:2892:A:N6	2.25	0.45
2:A:2840:C:C2	2:A:2841:C:C4	3.04	0.45
2:A:2866:U:O2	2:A:2868:A:C4'	2.64	0.45
2:A:450:G:C2	2:A:454:A:H2	2.34	0.45
2:A:592:G:H2'	29:8:3:LYS:CD	2.46	0.45
3:D:106:PRO:CG	3:D:141:HIS:CD2	2.98	0.45
3:D:175:LEU:HD21	3:D:181:ARG:H	1.80	0.45
3:D:209:ASN:O	3:D:210:LYS:O	2.34	0.45
4:E:270:ASP:OD2	4:E:295:LEU:HB3	2.16	0.45
2:A:617:G:OP2	5:F:42:ARG:CZ	2.65	0.45
7:H:14:VAL:CG1	7:H:16:VAL:CG2	2.95	0.45
8:I:49:ALA:C	8:I:53:LYS:HG2	2.36	0.45
10:O:33:ALA:CB	10:O:39:VAL:HG22	2.47	0.45
20:U:114:ARG:CA	20:U:117:ARG:HD2	2.46	0.45
21:V:31:ASP:O	21:V:63:HIS:C	2.50	0.45
2:A:487:C:C2	15:W:53:SER:OG	2.70	0.45
15:W:85:VAL:HG13	15:W:95:ILE:HD13	1.99	0.45
17:Y:103:LEU:CG	17:Y:112:LEU:HD21	2.24	0.45
18:Z:148:THR:O	18:Z:149:ALA:C	2.55	0.45
22:2:29:ASN:C	22:2:34:GLN:CD	2.71	0.45
2:A:138:G:O4'	16:X:43:GLU:OE2	2.34	0.45
16:X:23:LYS:HD3	16:X:65:VAL:HG11	1.98	0.45
31:K:79:LEU:C	31:K:79:LEU:CD2	2.84	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:K:35:ILE:HG22	31:K:39:CYS:SG	2.57	0.45
6:G:83:PHE:O	6:G:84:LEU:C	2.56	0.45
27:6:22:TYR:O	27:6:23:THR:CB	2.65	0.45
2:A:51:G:O2'	2:A:119:A:C6	2.66	0.45
2:A:1680:U:O2	2:A:1764:G:O5'	2.35	0.45
2:A:422:A:H2'	2:A:422:A:N3	2.31	0.45
23:3:20:LYS:O	23:3:23:LEU:HB2	2.09	0.45
26:5:18:MET:O	26:5:19:ARG:C	2.55	0.45
2:A:2419:U:OP1	27:6:24:THR:HG21	2.18	0.45
2:A:126:A:OP2	28:7:17:GLY:HA3	2.17	0.45
2:A:2393:A:C4'	29:8:13:ARG:HH21	2.13	0.45
2:A:1263:U:O4'	26:5:16:ARG:NH2	2.49	0.45
2:A:1651:G:H2'	2:A:1652:A:C8	2.52	0.45
2:A:1772:G:N2	2:A:1774:C:H5'	2.32	0.45
2:A:2073:C:H42	2:A:2437:U:H3	1.64	0.45
2:A:2219:G:N3	2:A:2224:G:O4'	2.49	0.45
2:A:2292:C:N3	2:A:2340:G:N2	2.61	0.45
2:A:2371:G:O3'	27:6:47:HIS:CE1	2.70	0.45
2:A:2474:C:C5	2:A:2475:C:N3	2.85	0.45
2:A:2476:A:C8	2:A:2477:C:H6	2.28	0.45
2:A:2562:U:C2'	2:A:2563:U:H5'	2.47	0.45
2:A:2620:C:C4'	4:E:252:GLN:CB	2.94	0.45
2:A:2643:G:O5'	2:A:2643:G:H8	1.99	0.45
2:A:2766:G:N2	2:A:2767:C:C6	2.85	0.45
2:A:54:G:H1	2:A:116:C:H42	1.64	0.45
2:A:566:U:H3'	2:A:567:A:H8	1.81	0.45
2:A:631:A:C2	2:A:2416:C:C4'	2.99	0.45
2:A:675:A:N3	2:A:2443:C:C2'	2.77	0.45
2:A:781:A:H5'	2:A:782:A:C8	2.51	0.45
3:D:165:GLY:O	3:D:172:ILE:CA	2.61	0.45
3:D:75:GLY:O	3:D:115:ILE:C	2.55	0.45
4:E:268:LEU:HD11	4:E:271:ILE:CD1	2.46	0.45
4:E:44:TYR:CB	4:E:309:PRO:HD3	2.43	0.45
5:F:1:MET:O	5:F:18:LEU:CG	2.53	0.45
5:F:56:THR:O	5:F:79:ARG:HD2	2.17	0.45
6:G:19:GLU:OE1	6:G:134:LEU:O	2.35	0.45
6:G:146:LYS:C	6:G:148:SER:N	2.70	0.45
7:H:124:VAL:O	7:H:124:VAL:CG1	2.54	0.45
9:N:39:VAL:HG12	9:N:104:TYR:CA	2.46	0.45
9:N:78:ILE:CG2	9:N:79:PHE:CD1	2.99	0.45
9:N:96:GLU:C	9:N:98:PHE:H	2.21	0.45
10:O:97:ARG:HG2	10:O:98:ILE:H	1.82	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:P:94:ARG:HD2	11:P:119:THR:O	2.17	0.45
12:Q:26:LYS:NZ	12:Q:88:PHE:HB3	2.32	0.45
19:R:77:ARG:CZ	19:R:77:ARG:CB	2.58	0.45
20:U:91:ASN:C	20:U:95:LEU:CD1	2.75	0.45
21:V:50:ASP:HB2	21:V:53:LYS:HG3	0.54	0.45
15:W:29:LEU:C	15:W:33:ARG:HG3	2.37	0.45
15:W:30:GLU:CA	15:W:33:ARG:CG	2.93	0.45
15:W:26:GLY:CA	15:W:71:VAL:HG23	2.47	0.45
8:I:75:LEU:O	8:I:141:LEU:HD21	2.17	0.45
22:2:26:GLU:CG	22:2:27:LEU:N	2.54	0.45
2:A:2305:A:H8	2:A:2306:C:C5'	2.29	0.45
31:K:113:MET:N	31:K:114:PRO:CD	2.80	0.45
31:K:135:MET:HE1	31:K:137:ILE:CG1	2.47	0.45
31:K:36:MET:SD	31:K:40:LYS:CE	3.01	0.45
2:A:1545:A:OP1	2:A:545(A):A:P	2.75	0.45
2:A:1908:C:H42	2:A:1922:G:H1	1.65	0.45
1:B:40:U:H3'	1:B:41:U:C5'	2.35	0.45
2:A:2080:G:P	25:4:32:HIS:HD2	2.40	0.44
2:A:2080:G:H5'	25:4:33:VAL:N	2.32	0.44
26:5:50:GLY:HA2	26:5:57:VAL:CG2	2.47	0.44
29:8:16:ILE:HA	29:8:22:VAL:HA	1.99	0.44
2:A:142(A):A:H5''	2:A:1143:A:P	2.57	0.44
2:A:1283:G:H2'	2:A:1285:G:N7	2.32	0.44
2:A:1653:G:OP1	2:A:2822:G:N1	2.48	0.44
2:A:1698:A:H1'	2:A:1700:A:O5'	2.17	0.44
2:A:1791:A:OP1	3:D:210:LYS:CB	2.65	0.44
2:A:530:G:C6	2:A:2021:C:H3'	2.52	0.44
2:A:2263:C:N4	2:A:2278:A:N6	2.65	0.44
2:A:2298:A:C6	2:A:2321:G:N1	2.85	0.44
2:A:2341:G:N7	2:A:2342:C:C4	2.85	0.44
2:A:2350:C:N4	2:A:2382:G:H1	2.15	0.44
2:A:2397:G:C5	2:A:2398:U:C4	3.04	0.44
2:A:2455:G:C3'	2:A:2456:C:H5'	2.47	0.44
2:A:2464:C:C5	2:A:2487:G:N1	2.85	0.44
2:A:2611:U:H5'	2:A:2611:U:C6	2.51	0.44
2:A:2692:C:N3	2:A:2717:G:N2	2.53	0.44
2:A:2774:C:C2'	2:A:2774:C:O2	2.63	0.44
2:A:322:A:H1'	2:A:341:G:H8	1.81	0.44
2:A:330:A:H4'	2:A:1210:A:N6	2.32	0.44
2:A:492:A:H2'	2:A:493:G:O4'	2.16	0.44
2:A:532:A:C2'	2:A:533:G:O4'	2.65	0.44
3:D:124:LYS:HB2	3:D:127:ASN:ND2	2.31	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:143:ILE:CB	3:D:152:GLN:C	2.66	0.44
4:E:269:ILE:CD1	4:E:296:VAL:N	2.75	0.44
5:F:93:LYS:C	5:F:96:LYS:CD	2.85	0.44
1:B:42:C:H4'	6:G:48:MET:H	1.82	0.44
7:H:122:ILE:HG22	7:H:123:GLU:H	1.82	0.44
8:I:7:LYS:CG	8:I:12:LYS:CE	2.93	0.44
10:O:112:MET:O	10:O:114:ILE:C	2.55	0.44
10:O:3:GLN:CA	10:O:21:VAL:CG1	2.93	0.44
12:Q:66:ASN:O	12:Q:70:ARG:HG3	2.16	0.44
13:S:117:ALA:HA	13:S:120:GLU:OE2	2.16	0.44
13:S:23:ARG:NH2	13:S:35:VAL:HG11	2.28	0.44
13:S:33:ARG:CG	13:S:48:VAL:O	2.65	0.44
20:U:103:PRO:O	20:U:107:LYS:N	2.50	0.44
2:A:1163:G:C5'	21:V:23:GLU:OE1	2.53	0.44
21:V:33:VAL:CG2	21:V:63:HIS:CG	3.00	0.44
21:V:54:TYR:O	21:V:56:VAL:CB	2.65	0.44
17:Y:40:VAL:CG1	17:Y:41:ARG:HG2	2.46	0.44
8:I:86:GLY:HA3	8:I:88:ARG:N	2.30	0.44
2:A:1344:G:N2	2:A:1404:C:H1'	2.32	0.44
2:A:59:U:C2	2:A:73:A:C2	3.05	0.44
6:G:55:LYS:O	6:G:56:ARG:CG	2.64	0.44
31:K:13:LEU:HB3	31:K:14:PRO:HD2	1.99	0.44
2:A:2857:G:H2'	2:A:2858:C:H5''	1.97	0.44
2:A:1528:A:C2	2:A:1529:A:H1'	2.52	0.44
2:A:1910:G:N2	2:A:1921:G:H1'	2.32	0.44
24:O:62:LEU:O	24:O:63:SER:O	2.35	0.44
25:4:20:VAL:HB	25:4:30:GLU:CD	2.38	0.44
19:R:100:LEU:HA	26:5:44:HIS:HD2	1.82	0.44
28:7:11:LYS:O	28:7:13:ALA:CA	2.62	0.44
28:7:32:ALA:HA	28:7:35:ARG:HD3	1.93	0.44
2:A:242:G:C3'	29:8:5:LYS:NZ	2.66	0.44
2:A:142(A):A:O3'	9:N:21:ARG:NE	2.50	0.44
2:A:2043:C:C4	2:A:2777:G:C2	3.02	0.44
2:A:2092:U:H5	2:A:2227:A:H62	1.64	0.44
2:A:2385:C:C2'	2:A:2386:C:C5'	2.93	0.44
2:A:2392:A:C2	2:A:2429:G:C4	3.06	0.44
2:A:2438:U:C4'	2:A:2440:C:OP1	2.63	0.44
2:A:2508:G:C2	2:A:2509:G:C1'	3.00	0.44
2:A:1130:U:C5'	2:A:2515:C:O2'	2.41	0.44
2:A:2533:A:H2'	2:A:2534:A:O4'	2.17	0.44
2:A:2553:G:N7	2:A:2554:U:N1	2.64	0.44
2:A:2596:U:H5	2:A:2597:G:N7	2.15	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2634:G:N1	2:A:2635:C:C6	2.86	0.44
2:A:2777:G:N9	2:A:2777:G:C5'	2.80	0.44
2:A:2822:G:O2'	2:A:2825:C:N4	2.47	0.44
2:A:2816:C:C2	2:A:2831:G:C2	3.05	0.44
4:E:204:VAL:N	4:E:303:PRO:HD3	2.32	0.44
5:F:6:TYR:OH	5:F:139:VAL:N	2.51	0.44
5:F:142:ASP:O	5:F:145:GLU:N	2.47	0.44
6:G:24:HIS:HB3	6:G:72:LYS:HD3	1.99	0.44
7:H:151:ARG:HA	7:H:152:PRO:HD2	1.76	0.44
7:H:51:VAL:CG2	7:H:68:ARG:HG3	2.43	0.44
10:O:35:ILE:HG22	10:O:63:VAL:HA	1.68	0.44
12:Q:88:PHE:O	12:Q:88:PHE:HD1	2.00	0.44
19:R:36:THR:O	19:R:112:ALA:O	2.34	0.44
19:R:73:VAL:O	19:R:74:LYS:O	2.35	0.44
14:T:13:ILE:CD1	14:T:33:SER:HB2	2.47	0.44
20:U:89:ASP:O	20:U:90:LEU:CD2	2.48	0.44
21:V:60:VAL:C	21:V:98:ILE:CD1	2.83	0.44
15:W:45:TYR:CD2	15:W:45:TYR:C	2.91	0.44
17:Y:71:VAL:HG13	17:Y:72:ILE:H	1.73	0.44
17:Y:93:THR:O	17:Y:96:VAL:HG23	2.17	0.44
8:I:96:LYS:C	8:I:98:ILE:H	2.18	0.44
22:2:59:ILE:CG1	22:2:60:GLN:H	2.29	0.44
16:X:38:ALA:O	16:X:41:VAL:HB	2.18	0.44
31:K:22:PRO:N	31:K:23:PRO:HD2	2.32	0.44
2:A:1102:C:H2'	2:A:1103:A:H8	1.82	0.44
2:A:1914:C:OP2	2:A:1916:A:N6	2.50	0.44
2:A:1916:A:C8	2:A:1916:A:OP2	2.68	0.44
2:A:2720:U:O4	2:A:2873:A:C6	2.65	0.44
2:A:2755:C:C3'	2:A:2755:C:C6	3.00	0.44
2:A:504:U:H5''	2:A:506:G:OP2	2.16	0.44
2:A:52:A:C5	2:A:118:A:C2	3.06	0.44
2:A:1559:G:C4	2:A:1559:G:C3'	2.92	0.44
2:A:476:G:H2'	2:A:478:A:OP2	2.17	0.44
24:0:61:ALA:CB	24:0:80:SER:C	2.84	0.44
25:4:35:VAL:C	25:4:36:TRP:HD1	2.17	0.44
26:5:12:SER:O	26:5:14:SER:N	2.50	0.44
28:7:44:VAL:O	28:7:45:SER:C	2.55	0.44
28:7:43:THR:N	28:7:46:ASP:OD1	2.49	0.44
2:A:1129:A:N6	2:A:2570:G:H4'	2.32	0.44
2:A:1265:A:N6	2:A:2013:A:H5'	2.33	0.44
2:A:1300:U:C6	2:A:1301:A:H2	2.35	0.44
2:A:2040:C:H2'	2:A:2041:U:C6	2.51	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2185:C:N3	2:A:2186:G:C5	2.85	0.44
2:A:2191:G:H21	2:A:2192:G:H1'	1.78	0.44
2:A:2226:C:N4	2:A:2227:A:C2	2.86	0.44
2:A:2234:G:O6	2:A:2235:G:O6	2.35	0.44
2:A:2251:G:C2	2:A:2252:G:C4	3.03	0.44
2:A:2295:C:C6	2:A:2338:G:N1	2.85	0.44
2:A:2333:A:H4'	2:A:2334:G:H2'	1.99	0.44
2:A:2394:C:H2'	2:A:2394:C:O2	2.17	0.44
2:A:2514:U:H2'	2:A:2515:C:H6	1.81	0.44
2:A:2705:A:O5'	2:A:2705:A:H8	2.00	0.44
2:A:2734:A:H62	2:A:2735:G:N3	1.47	0.44
2:A:2756:U:O2'	2:A:2757:A:O5'	2.33	0.44
2:A:2852:G:C6	2:A:2866:U:O4	2.71	0.44
2:A:35:G:H5'	2:A:455:C:H42	1.83	0.44
3:D:175:LEU:O	3:D:178:GLY:N	2.50	0.44
3:D:194:VAL:CG2	3:D:195:GLY:H	2.04	0.44
3:D:213:LYS:HG3	3:D:215:LYS:HB2	0.49	0.44
3:D:61:TYR:HH	3:D:214:MET:HE1	1.54	0.44
4:E:180:ILE:CG2	4:E:186:GLU:C	2.80	0.44
4:E:45:LYS:NZ	4:E:301:PRO:C	2.62	0.44
4:E:80:ALA:HB3	4:E:181:VAL:HA	1.50	0.44
5:F:243:VAL:O	5:F:246:ARG:C	2.54	0.44
5:F:62:GLY:N	5:F:65:ARG:CZ	2.78	0.44
6:G:102:GLY:HA2	6:G:134:LEU:HD11	1.95	0.44
7:H:9:GLU:C	7:H:10:ILE:HG13	2.37	0.44
9:N:42:GLU:HG2	9:N:43:ARG:H	1.82	0.44
10:O:25:LEU:CB	10:O:38:VAL:O	2.64	0.44
10:O:62:VAL:O	10:O:63:VAL:HG23	2.17	0.44
2:A:637:A:P	11:P:126:SER:HG	2.31	0.44
11:P:56:LYS:O	11:P:57:VAL:HB	2.18	0.44
12:Q:16:ARG:O	12:Q:20:ILE:HG12	2.17	0.44
20:U:63:GLN:O	20:U:65:ILE:CA	2.65	0.44
20:U:66:ASN:CB	20:U:76:TYR:CZ	2.75	0.44
20:U:63:GLN:HA	20:U:66:ASN:CG	2.38	0.44
21:V:19:VAL:O	21:V:20:ILE:C	2.55	0.44
15:W:14:PRO:O	15:W:17:VAL:CB	2.61	0.44
15:W:97:LYS:HZ1	15:W:99:ARG:HH12	1.61	0.44
17:Y:43:ASN:CG	17:Y:112:LEU:CD2	2.81	0.44
17:Y:63:ILE:HG13	17:Y:74:VAL:HA	1.98	0.44
17:Y:79:LEU:O	17:Y:87:VAL:N	2.50	0.44
18:Z:146:HIS:HB3	18:Z:170:SER:HB3	1.98	0.44
18:Z:69:VAL:HG21	18:Z:81:VAL:HG11	1.87	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:Z:6:LYS:H	18:Z:7:PRO:HD2	1.73	0.44
16:X:31:ARG:CZ	16:X:31:ARG:HA	2.47	0.44
6:G:56:ARG:HG3	6:G:65:GLU:CG	2.47	0.44
2:A:5:A:H2'	2:A:6:A:O4'	2.16	0.44
2:A:1352:U:O2	2:A:1353:A:N7	2.51	0.44
2:A:2670:A:H8	2:A:2670:A:C5'	2.16	0.44
2:A:1529:A:H2'	2:A:1530:G:H5'	1.99	0.44
2:A:1444:G:O3'	2:A:444(A):A:H8	2.00	0.44
2:A:1763:G:H8	2:A:1763:G:H5'	1.82	0.44
2:A:1437:C:HO2'	2:A:1516:U:HO2'	1.66	0.44
23:3:42:ALA:CB	23:3:43:ILE:HD12	2.42	0.44
25:4:58:LYS:CG	25:4:62:ARG:NH2	2.76	0.44
2:A:650:C:P	29:8:17:THR:HG21	2.56	0.44
2:A:1491:G:O2'	2:A:1492:G:O4'	2.35	0.44
2:A:1651:G:H1	2:A:2006:C:N4	2.10	0.44
2:A:1790:C:O3'	3:D:210:LYS:HE3	2.18	0.44
2:A:2023:G:OP2	2:A:2023:G:C8	2.70	0.44
2:A:2234:G:N1	2:A:2235:G:C6	2.84	0.44
2:A:2258:C:N4	2:A:2426:A:N9	2.58	0.44
2:A:2266:A:H2	2:A:2272:U:C2	2.35	0.44
2:A:2331:G:C3'	24:0:70:ILE:CB	2.95	0.44
2:A:2337:G:N1	2:A:2338:G:O6	2.49	0.44
2:A:2061:G:O6	2:A:2501:C:O2	2.36	0.44
2:A:2531:A:C5	2:A:2532:G:N7	2.85	0.44
2:A:1672:C:H4'	2:A:2553:G:O3'	2.16	0.44
2:A:2592:G:H2'	2:A:2593:U:O5'	2.18	0.44
2:A:1638:C:C4'	2:A:2709:G:H22	2.30	0.44
2:A:2804:C:H2'	2:A:2804:C:H6	1.67	0.44
2:A:2814:C:N1	2:A:2815:C:H5	2.16	0.44
2:A:2842:G:N1	2:A:2876:G:C6	2.85	0.44
2:A:2876:G:H2'	2:A:2877:G:H8	1.82	0.44
2:A:322:A:N3	2:A:341:G:N9	2.65	0.44
2:A:342:G:H1	2:A:344:G:H22	1.62	0.44
2:A:37:C:H42	2:A:442:G:H1	1.63	0.44
2:A:452:G:N2	2:A:457:A:H2	2.13	0.44
2:A:575:A:H4'	2:A:2500:U:C5'	2.48	0.44
2:A:583:G:O5'	20:U:10:ARG:NH1	2.50	0.44
2:A:611:C:O2'	2:A:616:A:C2	2.68	0.44
2:A:769:G:H4'	2:A:1379:A:N6	2.33	0.44
2:A:772:C:O5'	2:A:772:C:H6	2.01	0.44
1:B:17:C:H2'	1:B:18:G:O4'	2.17	0.44
1:B:48:A:P	13:S:107:ASN:CG	2.95	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:66:PHE:HD2	3:D:67:LYS:CD	2.22	0.44
4:E:105:HIS:ND1	4:E:108:LEU:CD1	2.74	0.44
4:E:68:VAL:HA	4:E:69:PRO:HD3	1.72	0.44
5:F:168:ARG:HA	5:F:232:LEU:O	2.18	0.44
2:A:673:C:H5'	5:F:80:VAL:HG11	1.99	0.44
6:G:103:ASN:N	6:G:104:PHE:CE1	2.86	0.44
7:H:55:SER:O	7:H:57:GLU:CG	2.54	0.44
9:N:41:ALA:HB1	9:N:75:PRO:HB2	1.95	0.44
9:N:52:GLN:CA	9:N:55:GLU:OE2	2.61	0.44
10:O:107:ARG:HG3	10:O:115:ILE:CG2	2.48	0.44
10:O:1:MET:HB3	10:O:67:ARG:NE	2.32	0.44
12:Q:85:ILE:HD12	12:Q:85:ILE:O	2.16	0.44
12:Q:95:GLU:N	12:Q:95:GLU:CD	2.70	0.44
13:S:52:PRO:O	13:S:55:ASP:HB3	2.14	0.44
14:T:15:PRO:C	14:T:17:THR:N	2.63	0.44
14:T:5:GLU:O	14:T:8:TYR:CA	2.66	0.44
20:U:34:ASN:O	20:U:35:ALA:C	2.55	0.44
21:V:18:ASP:CB	21:V:96:LEU:HA	2.47	0.44
17:Y:105:ASP:O	17:Y:106:GLU:C	2.55	0.44
17:Y:46:ASP:OD1	17:Y:47:THR:O	2.36	0.44
18:Z:125:PRO:O	18:Z:127:PRO:CD	2.61	0.44
8:I:132:LYS:HA	8:I:138:THR:HB	1.98	0.44
2:A:2309:A:N3	2:A:2309:A:H2'	2.32	0.44
2:A:265:A:H62	2:A:281:G:H5'	1.82	0.44
2:A:1619:G:N3	28:7:1:MET:HB3	2.31	0.44
31:K:52:MET:SD	31:K:81:LYS:CG	3.06	0.44
2:A:154:G:H3'	2:A:155:C:H6	1.82	0.44
2:A:1602:U:C3'	2:A:1602:U:C6	3.01	0.44
2:A:850:C:C5'	23:3:18:ASP:CG	2.86	0.44
26:5:10:LYS:HB2	26:5:10:LYS:NZ	2.33	0.44
28:7:28:ARG:O	28:7:31:LEU:HG	2.18	0.44
29:8:8:LYS:HA	29:8:11:LYS:HG3	1.99	0.44
2:A:1010:A:O2'	2:A:1152:C:O2	2.36	0.44
2:A:1294:U:O2'	19:R:26:LYS:NZ	2.44	0.44
2:A:1933:G:O6	2:A:1968:G:N2	2.50	0.44
2:A:2232:U:C2'	2:A:2233:U:H5''	2.45	0.44
2:A:2240:C:H2'	2:A:2241:A:C8	2.53	0.44
2:A:2256:G:C2	2:A:2257:U:N1	2.85	0.44
2:A:2259:G:C6	2:A:2281:C:N3	2.85	0.44
2:A:2417:C:C4	2:A:2418:A:N7	2.85	0.44
2:A:2464:C:C4	2:A:2487:G:C2	3.06	0.44
2:A:2531:A:O2'	2:A:2532:G:H5''	2.18	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2550:G:N3	2:A:2551:C:C5	2.85	0.44
2:A:2748:A:O2'	7:H:62:ALA:HA	2.17	0.44
2:A:297:C:C2	2:A:342:G:N2	2.84	0.44
2:A:674:G:C2	2:A:804:A:C2	3.05	0.44
2:A:829:A:C6	2:A:2247:A:O2'	2.70	0.44
2:A:920:G:C8	2:A:920:G:O5'	2.71	0.44
4:E:96:LEU:C	4:E:97:THR:HG23	2.38	0.44
5:F:140:VAL:HG12	5:F:236:THR:HA	2.00	0.44
5:F:153:VAL:HG12	5:F:157:LEU:HD11	2.00	0.44
5:F:160:LEU:O	5:F:165:ASP:OD2	2.36	0.44
5:F:220:THR:CB	5:F:224:ALA:CB	2.84	0.44
5:F:164:ALA:C	5:F:232:LEU:HD12	2.31	0.44
5:F:36:ARG:HA	5:F:39:GLN:HE21	1.64	0.44
2:A:672:C:O2'	5:F:82:GLN:NE2	2.50	0.44
6:G:129:ASP:O	6:G:130:VAL:HG12	2.17	0.44
6:G:13:MET:C	6:G:15:GLU:N	2.71	0.44
2:A:2315:G:P	6:G:20:LYS:CD	2.91	0.44
7:H:101:LYS:HG2	7:H:115:GLU:N	2.32	0.44
8:I:22:ALA:O	8:I:23:ASP:C	2.47	0.44
8:I:50:GLN:O	8:I:50:GLN:CG	2.66	0.44
8:I:5:PHE:CD2	8:I:17:GLU:O	2.70	0.44
9:N:54:VAL:CG1	9:N:139:LEU:CD1	2.96	0.44
9:N:21:ARG:HA	9:N:24:SER:OG	2.17	0.44
9:N:74:ARG:O	9:N:75:PRO:O	2.35	0.44
12:Q:42:TYR:N	12:Q:43:PRO:CD	2.81	0.44
13:S:87:LEU:O	13:S:88:ALA:O	2.36	0.44
14:T:27:ALA:C	14:T:28:THR:HG23	2.38	0.44
20:U:7:GLY:C	20:U:9:VAL:N	2.51	0.44
21:V:5:ILE:N	21:V:12:TYR:CZ	2.65	0.44
8:I:140:THR:HG22	8:I:140:THR:O	2.17	0.44
8:I:141:LEU:HD13	8:I:142:LYS:H	1.73	0.44
22:2:18:ALA:O	22:2:21:ASP:HB2	2.18	0.44
16:X:6:LYS:HE2	16:X:29:ASP:HA	1.91	0.44
2:A:2310:A:H2	6:G:57:THR:OG1	2.00	0.44
31:K:52:MET:SD	31:K:81:LYS:HG2	2.57	0.44
2:A:1520:U:C2'	2:A:1521:G:H5''	2.44	0.44
1:B:99:A:H2'	1:B:100:G:H8	1.73	0.44
2:A:651:G:H3'	2:A:652:C:H6	1.82	0.44
2:A:2386:C:O4'	24:0:39:ARG:HH21	1.39	0.44
24:0:49:GLN:NE2	24:0:49:GLN:N	2.65	0.44
24:0:37:LEU:HG	24:0:71:ASN:HD22	1.82	0.44
23:3:24:LYS:O	23:3:24:LYS:HG3	2.17	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:7:20:ALA:O	28:7:22:MET:C	2.56	0.44
28:7:31:LEU:O	28:7:35:ARG:HG3	2.17	0.44
30:9:24:LEU:HD22	30:9:36:GLN:N	2.28	0.44
2:A:19:C:OP1	20:U:23:GLY:HA2	2.18	0.44
2:A:2022:U:H2'	2:A:2617:C:H4'	2.00	0.44
2:A:2044:C:N4	2:A:2624:G:N1	2.32	0.44
2:A:2056:G:N2	26:5:5:PRO:CA	2.80	0.44
2:A:2272:U:C6	2:A:2273:A:H2	2.36	0.44
2:A:2302:G:C6	2:A:2315:G:N1	2.81	0.44
2:A:2349:G:C5	2:A:2350:C:C6	3.06	0.44
2:A:2418:A:HO2'	2:A:2419:U:C4'	2.30	0.44
2:A:2514:U:O5'	2:A:2514:U:H6	2.01	0.44
2:A:2516:G:N7	2:A:2517:C:C4	2.86	0.44
2:A:2548:G:C5	2:A:2549:G:C8	3.06	0.44
2:A:2625:G:N7	2:A:2626:C:N3	2.65	0.44
2:A:2644:G:H8	2:A:2644:G:C5'	2.16	0.44
2:A:2676:C:C2'	2:A:2677:G:O5'	2.66	0.44
2:A:2679:A:C6	2:A:2729:G:N1	2.86	0.44
2:A:2701:C:H42	2:A:2705:A:H62	1.64	0.44
2:A:825:C:O4'	2:A:2428:G:O6	2.35	0.44
1:B:24:G:H2'	1:B:56:G:C6	2.51	0.44
3:D:197:GLY:N	3:D:199:ARG:HD2	2.33	0.44
5:F:99:SER:O	5:F:100:LEU:CG	2.65	0.44
5:F:168:ARG:HD3	5:F:168:ARG:O	2.06	0.44
5:F:22:PHE:HZ	5:F:115:LEU:CG	2.30	0.44
6:G:24:HIS:O	6:G:129:ASP:HB3	2.17	0.44
7:H:87:GLU:HB3	7:H:164:GLU:CD	2.38	0.44
9:N:21:ARG:C	9:N:24:SER:OG	2.42	0.44
10:O:53:LYS:O	10:O:54:LYS:O	2.35	0.44
10:O:73:ASP:O	10:O:74:GLY:C	2.49	0.44
11:P:144:ASP:CA	11:P:145:LEU:HD12	2.32	0.44
13:S:21:HIS:HA	13:S:24:LEU:HG	1.99	0.44
2:A:1266:G:O6	15:W:13:SER:CB	2.66	0.44
2:A:517:C:H2'	15:W:18:ARG:HH22	1.80	0.44
17:Y:55:PHE:O	17:Y:56:ALA:C	2.55	0.44
17:Y:51:LEU:HD22	17:Y:95:ASN:CG	2.37	0.44
18:Z:164:PRO:O	18:Z:165:GLU:C	2.55	0.44
18:Z:40:ASP:C	18:Z:44:ARG:CG	2.86	0.44
18:Z:69:VAL:CG1	18:Z:70:GLN:N	2.58	0.44
18:Z:74:ARG:O	18:Z:75:LYS:C	2.56	0.44
8:I:92:SER:O	8:I:93:ILE:HG22	2.18	0.44
31:K:36:MET:C	31:K:36:MET:SD	2.96	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1472:A:C1'	2:A:1473:G:C8	3.00	0.44
24:0:39:ARG:CG	24:0:69:PHE:HE1	2.17	0.44
2:A:387:U:C3'	25:4:29:PRO:HG3	2.48	0.44
15:W:37:ARG:NH2	26:5:48:ASN:HD21	2.11	0.44
29:8:22:VAL:N	29:8:48:PHE:HE2	1.90	0.44
2:A:1330:C:H2'	2:A:1330:C:O2	2.17	0.44
2:A:1657:C:OP1	4:E:233:ARG:N	2.50	0.44
2:A:1657:C:C5	2:A:1658:C:H5	2.36	0.44
2:A:1935:G:H2'	2:A:1962:C:C4	2.53	0.44
2:A:2400:G:N1	2:A:2401:U:C2	2.85	0.44
2:A:2461:C:H2'	2:A:2462:U:O5'	2.18	0.44
2:A:2511:U:C4	2:A:2512:C:C4	3.06	0.44
2:A:2611:U:C6	2:A:2611:U:C4'	3.01	0.44
2:A:746:A:H8	2:A:2611:U:O3'	2.00	0.44
2:A:2657:A:C5	2:A:2665:A:N6	2.86	0.44
2:A:2742:C:O5'	30:9:35:ARG:NH1	2.50	0.44
2:A:2746:U:C2	2:A:2759:G:C2	2.98	0.44
2:A:533:G:OP1	20:U:24:PHE:CB	2.66	0.44
2:A:775:G:H2'	2:A:794:G:C8	2.51	0.44
2:A:817:C:H2'	2:A:818:G:O4'	2.18	0.44
1:B:18:G:H2'	1:B:19:G:H8	1.82	0.44
2:A:1566:A:N3	3:D:212:HIS:HB3	2.32	0.44
3:D:229:MET:SD	3:D:233:ASP:HB2	2.58	0.44
2:A:2785:C:O2'	4:E:100:TRP:HD1	1.81	0.44
4:E:176:HIS:O	4:E:177:ALA:C	2.55	0.44
5:F:113:SER:O	5:F:116:ALA:CB	2.51	0.44
5:F:11:ASN:HD21	5:F:160:LEU:HD11	1.82	0.44
5:F:33:LYS:O	5:F:34:ALA:O	2.34	0.44
6:G:98:PHE:HD2	6:G:98:PHE:N	2.16	0.44
9:N:22:VAL:O	9:N:23:ALA:C	2.55	0.44
9:N:78:ILE:O	9:N:82:THR:HG21	2.12	0.44
10:O:17:ARG:CZ	10:O:47:THR:N	2.79	0.44
10:O:8:LEU:CD2	10:O:19:VAL:O	2.65	0.44
10:O:24:VAL:CG1	10:O:32:TYR:C	2.86	0.44
10:O:13:ASN:HD21	10:O:97:ARG:HB3	1.83	0.44
2:A:2378:A:H1'	13:S:101:VAL:HG21	1.98	0.44
13:S:37:ARG:HB2	13:S:44:ARG:O	2.18	0.44
14:T:52:THR:HB	14:T:53:ASP:H	1.61	0.44
20:U:85:ARG:C	20:U:86:ALA:O	2.56	0.44
15:W:53:SER:O	15:W:57:ASN:HB2	2.18	0.44
2:A:496:G:C1'	15:W:61:ASN:HD22	2.30	0.44
2:A:1260:G:H5'	15:W:83:LYS:NZ	2.21	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:Z:148:THR:HB	18:Z:166:LEU:H	1.81	0.44
2:A:1151:G:C3'	20:U:81:ASN:CG	2.86	0.44
22:2:52:ALA:HA	22:2:55:ARG:HH11	1.82	0.44
22:2:55:ARG:HB2	22:2:56:ILE:H	1.68	0.44
2:A:1080:C:H2'	2:A:1081:U:O4'	2.17	0.44
31:K:80:LYS:CD	31:K:86:GLU:O	2.59	0.44
2:A:1942:C:H2'	2:A:1943:U:C5	2.53	0.44
2:A:1936:A:C5	2:A:1945:G:C5	3.06	0.44
2:A:176:G:C2'	2:A:177:G:C8	3.00	0.44
2:A:1418:G:C2'	2:A:1579:A:H61	2.31	0.44
2:A:1476:C:N4	2:A:1517:G:H1'	2.33	0.44
2:A:204:A:O2'	2:A:205:G:P	2.75	0.44
7:H:19:ASN:O	7:H:21:ASN:N	2.46	0.44
2:A:1778:U:H3	2:A:1785:A:H62	1.65	0.44
9:N:11:ILE:O	9:N:11:ILE:HG22	2.18	0.44
24:0:49:GLN:NE2	24:0:49:GLN:CA	2.76	0.44
23:3:3:ARG:HD3	23:3:60:GLU:HA	2.00	0.44
2:A:1005:C:H6	2:A:1143:A:OP1	2.01	0.44
2:A:1266:G:O6	15:W:13:SER:HB2	2.18	0.44
2:A:1364:G:O6	25:4:2:GLN:CD	2.55	0.44
2:A:1379:A:H3'	2:A:1379:A:N3	2.32	0.44
2:A:2029:G:C5	2:A:2031:A:OP1	2.70	0.44
2:A:2228:G:C4'	2:A:2228:G:C8	3.01	0.44
2:A:2246:G:O2'	2:A:2247:A:H5''	2.11	0.44
2:A:2261:C:O4'	2:A:2388:A:C1'	2.59	0.44
2:A:2271:G:O2'	2:A:2272:U:O2	2.35	0.44
2:A:2279:G:C6	2:A:2280:G:C6	3.05	0.44
2:A:2330:G:N2	2:A:2331:G:C4	2.79	0.44
2:A:2334:G:P	13:S:12:ARG:C	2.90	0.44
2:A:2333:A:C5	2:A:2335:A:C2	3.05	0.44
2:A:2376:A:N3	2:A:2377:A:C8	2.86	0.44
2:A:2397:G:C6	2:A:2398:U:C4	3.06	0.44
2:A:2400:G:N1	2:A:2401:U:O2	2.50	0.44
2:A:2251:G:H8	2:A:2450:A:H4'	1.72	0.44
2:A:2484:G:C2'	12:Q:142:LYS:NZ	2.81	0.44
2:A:2497:A:O2'	2:A:2498:C:C5	2.67	0.44
2:A:2520:C:C6	2:A:2567:G:C8	3.06	0.44
2:A:2048:G:C5	2:A:2621:A:C2	3.03	0.44
2:A:2620:C:C6	2:A:2621:A:C8	3.06	0.44
2:A:2645:G:H4'	2:A:2732:G:C2'	2.36	0.44
2:A:2689:U:C4'	2:A:2690:C:C5'	2.78	0.44
2:A:2785:C:H5''	4:E:99:VAL:CB	2.45	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2793:G:N2	2:A:2803:C:O2	2.50	0.44
2:A:2839:G:C2	2:A:2840:C:C5	3.06	0.44
2:A:2845:G:HO2'	2:A:2846:G:C5'	1.91	0.44
2:A:530:G:N2	2:A:2021:C:C6	2.85	0.44
2:A:569:U:C4	2:A:570:G:C6	3.06	0.44
2:A:601:C:O2	2:A:604:G:H4'	2.17	0.44
2:A:853:G:H2'	2:A:854:G:H8	1.82	0.44
2:A:918:A:H4'	2:A:918:A:OP1	2.18	0.44
2:A:995:C:C2	20:U:57:PHE:CE2	3.05	0.44
3:D:107:LYS:H	3:D:194:VAL:C	2.06	0.44
3:D:142:ASN:CG	3:D:190:THR:HG23	2.39	0.44
3:D:197:GLY:N	3:D:199:ARG:HH11	2.15	0.44
4:E:267:ARG:HD3	4:E:297:LYS:HB3	1.99	0.44
5:F:195:VAL:HG13	5:F:213:ALA:CA	2.47	0.44
6:G:128:LEU:O	6:G:129:ASP:HB2	2.15	0.44
7:H:159:LYS:N	7:H:162:ARG:CZ	2.74	0.44
7:H:34:ARG:HD2	7:H:36:PHE:CE1	2.52	0.44
7:H:37:HIS:HA	7:H:38:PRO:HD3	1.90	0.44
7:H:55:SER:OG	7:H:57:GLU:HG2	2.18	0.44
9:N:21:ARG:O	9:N:22:VAL:O	2.35	0.44
13:S:123:ILE:O	13:S:124:ASP:C	2.55	0.44
2:A:2378:A:C2	13:S:26:LEU:HD21	2.46	0.44
13:S:37:ARG:N	13:S:44:ARG:O	2.51	0.44
21:V:64:GLY:N	21:V:94:LYS:O	2.50	0.44
15:W:24:ILE:HD13	15:W:36:LEU:HG	2.00	0.44
15:W:3:ALA:HB2	15:W:62:HIS:CB	2.48	0.44
18:Z:150:GLY:H	18:Z:164:PRO:HA	1.83	0.44
18:Z:21:ALA:HA	18:Z:81:VAL:O	2.18	0.44
8:I:116:GLU:OE1	8:I:130:PRO:HB2	2.17	0.44
16:X:14:ALA:O	16:X:17:ASP:OD1	2.35	0.44
6:G:55:LYS:C	6:G:56:ARG:CG	2.86	0.44
31:K:92:PRO:HB3	31:K:134:SER:C	2.38	0.44
2:A:482:A:N6	2:A:506:G:C4	2.86	0.44
2:A:176:G:C3'	2:A:177:G:C8	2.84	0.44
2:A:2751:G:C2'	2:A:2751:G:N3	2.81	0.44
2:A:270(S):G:H2'	2:A:270(T):G:H8	1.81	0.44
2:A:856:C:C3'	24:0:56:ASP:OD2	2.60	0.44
2:A:2331:G:C1'	24:0:70:ILE:HG13	2.47	0.44
25:4:5:LEU:HD21	25:4:9:ALA:CA	2.40	0.44
25:4:58:LYS:O	25:4:61:LYS:CB	2.65	0.44
25:4:62:ARG:H	25:4:62:ARG:HG3	1.42	0.44
25:4:68:ARG:NH1	25:4:72:LYS:HE2	2.33	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:5:30:LEU:HD21	26:5:41:LEU:HD23	1.99	0.44
2:A:1004:C:H1'	2:A:1010:A:C4	2.53	0.44
2:A:1022:G:O2'	2:A:1023:U:OP2	2.35	0.44
2:A:578:A:OP1	2:A:1255:U:H4'	2.18	0.44
2:A:126:A:C4	28:7:18:PHE:CD2	3.04	0.44
2:A:1355:G:H1	2:A:1376:C:H42	1.66	0.44
2:A:2052:G:H21	4:E:245:ARG:HB3	1.81	0.44
2:A:954:G:H1'	2:A:2274:A:N1	2.32	0.44
2:A:2422:A:C2	2:A:2424:C:C4	3.06	0.44
2:A:2528:U:OP1	30:9:30:VAL:HB	2.18	0.44
2:A:2535:G:N2	2:A:2536:G:C1'	2.72	0.44
2:A:2519:U:O2	2:A:2542:A:C6	2.70	0.44
2:A:2548:G:C6	2:A:2549:G:C5	3.05	0.44
2:A:2657:A:H3'	2:A:2658:C:H5'	1.97	0.44
2:A:1759:A:C5'	2:A:2715:C:C1'	2.96	0.44
2:A:2732:G:C5'	2:A:2733:A:O5'	2.65	0.44
2:A:2805:G:H8	2:A:2807:G:O4'	2.01	0.44
2:A:2888:C:N3	2:A:2889:C:C4	2.85	0.44
2:A:324:A:HO3'	2:A:325:G:P	2.31	0.44
2:A:680:G:C6	2:A:681:G:C6	3.06	0.44
2:A:687:C:N3	2:A:788:A:O5'	2.51	0.44
3:D:215:LYS:O	3:D:216:ALA:C	2.56	0.44
4:E:180:ILE:CG2	4:E:183:ASP:OD2	2.66	0.44
5:F:37:ALA:HB2	5:F:102:LEU:HG	2.00	0.44
5:F:164:ALA:O	5:F:232:LEU:HB2	2.18	0.44
6:G:134:LEU:O	6:G:135:VAL:CG2	2.65	0.44
6:G:14:ARG:HG3	6:G:137:PRO:HG3	2.00	0.44
7:H:44:VAL:CB	7:H:49:ILE:HG22	2.46	0.44
7:H:8:ILE:HD13	7:H:72:ALA:HB2	1.99	0.44
8:I:2:LYS:HD3	8:I:39:ALA:CB	2.47	0.44
9:N:54:VAL:HG13	9:N:138:THR:OG1	2.18	0.44
11:P:55:GLN:CG	11:P:56:LYS:N	2.80	0.44
11:P:71:GLU:O	11:P:74:THR:OG1	2.33	0.44
12:Q:102:ARG:O	12:Q:104:PRO:N	2.51	0.44
12:Q:42:TYR:CE2	18:Z:116:VAL:CG2	2.84	0.44
12:Q:59:ASN:CG	12:Q:60:ALA:N	2.47	0.44
2:A:1287:A:H62	19:R:106:GLY:HA3	1.83	0.44
19:R:51:LEU:HD23	19:R:51:LEU:HA	1.83	0.44
13:S:103:ASP:C	13:S:105:GLY:N	2.68	0.44
13:S:81:ALA:CB	13:S:118:ILE:N	2.69	0.44
13:S:120:GLU:OE1	13:S:120:GLU:N	2.51	0.44
13:S:31:LYS:HD3	13:S:99:GLU:CB	2.43	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:U:61:TRP:CE3	20:U:93:LYS:HA	2.53	0.44
22:2:24:LYS:O	22:2:27:LEU:N	2.51	0.44
2:A:1081:U:P	31:K:126:LYS:CD	3.02	0.44
31:K:103:LYS:O	31:K:104:GLN:C	2.56	0.44
31:K:95:LYS:O	31:K:96:ILE:C	2.55	0.44
31:K:15:ALA:C	31:K:17:LYS:N	2.71	0.44
16:X:46:ASP:HB2	16:X:47:VAL:H	1.64	0.44
8:I:59:ALA:C	8:I:62:LEU:HB2	2.34	0.44
2:A:1805:U:H2'	2:A:1806:C:H6	1.83	0.44
2:A:273(A):G:C6	2:A:363(D):G:O6	2.71	0.44
4:E:274:GLY:H	4:E:291:GLY:C	2.21	0.44
23:3:8:LEU:HD23	23:3:31:LEU:HD23	1.98	0.43
25:4:35:VAL:CG1	25:4:36:TRP:N	2.58	0.43
27:6:28:ARG:O	27:6:29:ARG:C	2.57	0.43
27:6:8:ILE:HD12	27:6:29:ARG:NE	2.33	0.43
27:6:14:SER:CA	27:6:51:ARG:O	2.65	0.43
28:7:43:THR:C	28:7:45:SER:N	2.68	0.43
2:A:2359:C:H4'	29:8:52:LYS:HZ1	1.83	0.43
2:A:489:G:C5	2:A:1284:A:C2	3.06	0.43
2:A:1657:C:C3'	2:A:1657:C:C6	3.01	0.43
2:A:2259:G:H2'	2:A:2260:C:H6	1.81	0.43
2:A:2264:C:N3	2:A:2265:U:C6	2.86	0.43
2:A:2352:A:C2'	2:A:2353:G:O5'	2.66	0.43
2:A:2394:C:N3	2:A:2395:C:N3	2.64	0.43
2:A:2416:C:HO2'	2:A:2417:C:H5''	1.79	0.43
2:A:2517:C:C6	2:A:2542:A:N7	2.86	0.43
2:A:2520:C:N4	2:A:2567:G:N7	2.65	0.43
2:A:2638:G:C6	2:A:2776:A:OP2	2.70	0.43
2:A:2828:C:C2	2:A:2829:C:C6	3.05	0.43
2:A:2875:C:N4	2:A:2876:G:C5	2.86	0.43
2:A:292:C:H5''	2:A:293:U:OP1	2.17	0.43
2:A:685:A:H4'	2:A:686:G:O5'	2.18	0.43
2:A:729:G:H8	2:A:764:A:P	2.41	0.43
1:B:104:A:OP1	18:Z:93:GLU:OE1	2.36	0.43
1:B:6:C:H2'	1:B:7:G:C8	2.53	0.43
3:D:141:HIS:HE1	3:D:192:GLY:CA	2.30	0.43
4:E:44:TYR:HD2	4:E:306:ARG:O	2.00	0.43
5:F:111:VAL:CA	5:F:114:ALA:HB3	2.49	0.43
5:F:38:ALA:O	5:F:39:GLN:O	2.35	0.43
7:H:90:GLY:HA2	7:H:159:LYS:CE	2.48	0.43
7:H:85:ALA:C	7:H:164:GLU:HG2	2.38	0.43
7:H:34:ARG:HB3	7:H:36:PHE:HE1	1.83	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:5:PHE:CG	8:I:17:GLU:O	2.71	0.43
9:N:44:ALA:O	9:N:45:VAL:CG2	2.65	0.43
9:N:65:ASN:C	9:N:68:GLY:O	2.56	0.43
9:N:96:GLU:O	9:N:98:PHE:N	2.51	0.43
10:O:11:ALA:CA	10:O:99:PHE:CB	2.97	0.43
12:Q:35:ASN:HB2	18:Z:113:VAL:HG21	1.77	0.43
13:S:104:ILE:O	13:S:104:ILE:CG2	2.65	0.43
13:S:109:PRO:O	13:S:116:PHE:CG	2.66	0.43
20:U:55:ARG:O	20:U:57:PHE:C	2.57	0.43
20:U:64:ARG:O	20:U:67:ALA:HB3	2.18	0.43
20:U:65:ILE:O	20:U:66:ASN:C	2.56	0.43
20:U:68:GLY:HA2	20:U:71:LEU:CB	2.47	0.43
20:U:7:GLY:O	20:U:8:ILE:CD1	2.63	0.43
21:V:89:ASN:O	21:V:90:PHE:C	2.56	0.43
17:Y:22:GLN:O	17:Y:24:ARG:N	2.51	0.43
17:Y:73:HIS:CE1	17:Y:90:PRO:CA	2.91	0.43
18:Z:141:MET:HB2	18:Z:171:VAL:CG1	2.47	0.43
8:I:95:SER:HG	8:I:98:ILE:CD1	2.03	0.43
22:2:9:ARG:HB2	22:2:59:ILE:CD1	2.48	0.43
16:X:11:THR:O	16:X:12:GLU:C	2.56	0.43
16:X:55:GLN:N	16:X:63:LYS:O	2.51	0.43
6:G:56:ARG:CG	6:G:65:GLU:CG	2.96	0.43
31:K:107:GLU:HA	31:K:110:LYS:CD	2.39	0.43
31:K:129:GLU:C	31:K:129:GLU:OE2	2.56	0.43
31:K:131:THR:O	31:K:133:LYS:N	2.51	0.43
31:K:27:ALA:C	31:K:29:GLY:N	2.70	0.43
2:A:444:C:OP2	20:U:2:PRO:CD	2.65	0.43
7:H:53:ARG:HD2	7:H:56:ASP:CA	2.45	0.43
2:A:1906:G:H2'	2:A:1907:G:C8	2.52	0.43
2:A:269:U:C5	2:A:270(Y):G:O3'	2.70	0.43
2:A:1173:G:N2	2:A:1174:A:C2	2.84	0.43
2:A:161:U:H5'	2:A:162:U:C6	2.53	0.43
2:A:347:A:C8	2:A:347:A:H3'	2.53	0.43
26:5:33:CYS:HB2	26:5:38:GLY:N	2.33	0.43
24:0:35:ASN:CA	24:0:68:VAL:CG2	2.95	0.43
24:0:45:PHE:CE1	24:0:78:PHE:CA	2.95	0.43
23:3:7:LYS:CG	23:3:8:LEU:N	2.81	0.43
25:4:7:PRO:CD	25:4:56:VAL:CB	2.89	0.43
27:6:49:VAL:O	27:6:50:PHE:CD1	2.71	0.43
28:7:11:LYS:HG3	28:7:12:ARG:N	2.33	0.43
2:A:1166:C:H42	2:A:1183:G:H1	1.66	0.43
2:A:1249:U:H5''	20:U:4:ALA:HB2	2.00	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1375:C:H2'	2:A:1376:C:H6	1.83	0.43
2:A:2264:C:C2'	2:A:2265:U:C5'	2.91	0.43
2:A:2302:G:C2	2:A:2315:G:C5	3.06	0.43
2:A:2322:A:OP1	2:A:2322:A:C4'	2.67	0.43
2:A:2325:G:C4	2:A:2326:C:H5	2.36	0.43
2:A:2328:A:C6	2:A:2329:G:N7	2.83	0.43
2:A:2331:G:C4'	24:0:70:ILE:CB	2.81	0.43
2:A:2295:C:C5	2:A:2338:G:N1	2.86	0.43
2:A:2532:G:O2'	2:A:2533:A:H5'	2.18	0.43
2:A:2561:A:H3'	2:A:2561:A:H8	1.79	0.43
2:A:1783:A:C6	2:A:2587:A:H2	2.25	0.43
2:A:2605:U:C3'	2:A:2605:U:C6	3.01	0.43
2:A:2611:U:H6	2:A:2611:U:H5'	1.83	0.43
2:A:2620:C:HO2'	2:A:2621:A:P	2.35	0.43
2:A:2680:C:H5'	4:E:302:GLY:CA	2.48	0.43
2:A:2747:G:O2'	2:A:2748:A:H5''	2.18	0.43
2:A:2792:G:C2	2:A:2804:C:C4	3.06	0.43
2:A:2885:C:O2	2:A:2885:C:C2'	2.64	0.43
2:A:563:G:H2'	2:A:563:G:N3	2.33	0.43
2:A:658:C:O2'	5:F:103:ASN:ND2	2.51	0.43
2:A:948:G:H1	2:A:969:U:H3	1.65	0.43
2:A:996:A:O3'	20:U:93:LYS:CG	2.64	0.43
1:B:55:U:H2'	1:B:56:G:C8	2.53	0.43
3:D:104:ILE:C	3:D:106:PRO:CD	2.87	0.43
3:D:142:ASN:O	3:D:189:ALA:HA	2.18	0.43
3:D:73:ILE:HG13	3:D:73:ILE:H	1.59	0.43
4:E:41:PHE:HE1	4:E:173:ARG:HH11	1.64	0.43
6:G:14:ARG:H	6:G:14:ARG:CD	2.29	0.43
6:G:98:PHE:HA	6:G:104:PHE:CE2	2.27	0.43
6:G:98:PHE:CD2	6:G:98:PHE:N	2.85	0.43
8:I:12:LYS:O	8:I:13:GLY:C	2.57	0.43
8:I:39:ALA:O	8:I:40:THR:O	2.36	0.43
9:N:25:GLN:CA	9:N:28:GLU:HG3	2.29	0.43
9:N:31:LEU:C	9:N:33:GLY:N	2.67	0.43
10:O:107:ARG:CG	10:O:115:ILE:HG21	2.48	0.43
10:O:53:LYS:O	10:O:54:LYS:C	2.56	0.43
11:P:69:ILE:CG1	11:P:70:ASP:N	2.30	0.43
12:Q:59:ASN:C	12:Q:61:LEU:N	2.68	0.43
13:S:53:ASN:O	13:S:53:ASN:CG	2.55	0.43
20:U:99:ALA:HB3	20:U:106:PHE:CZ	2.41	0.43
21:V:5:ILE:C	21:V:6:GLN:HG2	2.19	0.43
15:W:13:SER:HB3	15:W:16:LYS:HB2	2.01	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:W:17:VAL:CA	15:W:20:VAL:CG2	2.95	0.43
15:W:26:GLY:C	15:W:27:LYS:HG3	2.38	0.43
15:W:58:ALA:C	15:W:60:ASN:N	2.71	0.43
17:Y:19:ARG:NH1	17:Y:68:ASP:N	2.66	0.43
17:Y:20:HIS:C	17:Y:22:GLN:H	2.20	0.43
18:Z:166:LEU:HD13	18:Z:167:THR:OG1	2.17	0.43
18:Z:26:LYS:CA	18:Z:84:TYR:OH	2.66	0.43
8:I:93:ILE:HG23	8:I:122:ARG:HA	1.99	0.43
22:2:3:LEU:HB3	22:2:4:HIS:H	1.42	0.43
16:X:28:VAL:HG21	16:X:64:ALA:HB2	2.01	0.43
16:X:22:ASN:CA	16:X:68:LEU:HG	2.48	0.43
2:A:1081:U:OP1	31:K:126:LYS:NZ	2.44	0.43
16:X:45:TYR:O	16:X:47:VAL:O	2.35	0.43
2:A:1707:G:H2'	2:A:1708:C:C6	2.53	0.43
2:A:707:G:H1	2:A:724:U:H3	1.66	0.43
2:A:1857:G:C2	2:A:1858:G:O6	2.71	0.43
2:A:668:G:C2'	2:A:670:A:H62	2.29	0.43
2:A:162:U:H4'	2:A:171:G:N3	2.33	0.43
2:A:521:G:H2'	2:A:522:G:H8	1.81	0.43
26:5:34:PRO:HD2	26:5:36:CYS:CB	2.48	0.43
25:4:68:ARG:HB3	25:4:72:LYS:HA	2.00	0.43
27:6:16:ALA:HA	27:6:50:PHE:CE2	2.54	0.43
2:A:1780:A:H3'	2:A:1781:C:H5'	1.95	0.43
2:A:1788:C:C2	2:A:1789:A:C8	3.07	0.43
2:A:2297:C:O2'	2:A:2298:A:O4'	2.28	0.43
2:A:2352:A:N3	2:A:2353:G:O4'	2.51	0.43
2:A:2404:C:N4	2:A:2405:G:C4	2.86	0.43
2:A:2458:G:C6	2:A:2490:G:O2'	2.63	0.43
2:A:2475:C:C2'	2:A:2477:C:P	3.07	0.43
2:A:2482:G:C3'	2:A:2483:C:H5'	2.41	0.43
2:A:2561:A:C4	2:A:2562:U:C6	3.04	0.43
2:A:2578:G:H2'	2:A:2579:C:H5''	1.98	0.43
2:A:2588:G:H5''	2:A:2589:A:OP2	2.19	0.43
2:A:2634:G:C2'	2:A:2635:C:C5'	2.93	0.43
2:A:2666:C:OP2	2:A:2667:C:C5	2.66	0.43
2:A:2726:U:H2'	2:A:2726:U:H6	1.62	0.43
2:A:2736:G:C2'	2:A:2737:G:H5'	2.48	0.43
2:A:2743:C:C2	2:A:2762:G:N2	2.86	0.43
2:A:2869:G:N1	2:A:2870:C:C4	2.86	0.43
2:A:2210:G:N7	3:D:148:GLY:C	2.72	0.43
3:D:166:LYS:CB	3:D:171:VAL:HA	2.45	0.43
3:D:216:ALA:CB	3:D:223:ASN:H	2.31	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:180:ILE:CD1	4:E:187:HIS:CB	2.97	0.43
4:E:267:ARG:CG	4:E:297:LYS:HD2	2.48	0.43
5:F:25:PRO:HG2	5:F:26:VAL:H	1.83	0.43
8:I:6:LEU:CD2	8:I:14:LYS:HD3	2.28	0.43
9:N:103:VAL:O	9:N:104:TYR:CE2	2.68	0.43
9:N:55:GLU:O	9:N:56:LYS:C	2.56	0.43
2:A:1006:C:HO2'	9:N:86:MET:HB3	1.83	0.43
12:Q:32:LYS:HD2	12:Q:33:MET:N	2.32	0.43
2:A:1287:A:N6	19:R:106:GLY:HA3	2.33	0.43
19:R:90:ARG:HB3	19:R:91:GLN:H	1.57	0.43
13:S:103:ASP:OD2	13:S:105:GLY:CA	2.66	0.43
13:S:54:GLY:O	13:S:55:ASP:O	2.36	0.43
20:U:21:ALA:CB	20:U:24:PHE:HZ	2.27	0.43
15:W:6:ILE:HG13	15:W:104:THR:HG22	1.99	0.43
15:W:14:PRO:O	15:W:15:ARG:C	2.57	0.43
15:W:66:GLU:CD	15:W:67:ASP:N	2.68	0.43
18:Z:38:ALA:C	18:Z:40:ASP:N	2.71	0.43
18:Z:51:LEU:HD21	18:Z:63:PRO:HA	2.00	0.43
9:N:10:VAL:CG1	9:N:36:VAL:CA	2.94	0.43
22:2:19:GLU:OE1	22:2:20:LEU:N	2.50	0.43
22:2:56:ILE:O	22:2:57:LYS:C	2.55	0.43
22:2:56:ILE:HB	22:2:57:LYS:H	1.48	0.43
2:A:72:U:H4'	22:2:57:LYS:HZ1	1.84	0.43
2:A:72:U:OP2	16:X:2:TRP:NE1	2.51	0.43
2:A:2304:G:C2'	2:A:2305:A:O5'	2.66	0.43
2:A:1057:A:N7	2:A:1087:G:OP2	2.52	0.43
2:A:1547:C:H2'	2:A:1548:C:H6	1.83	0.43
2:A:1545:A:H2'	2:A:545(A):A:O4'	2.19	0.43
2:A:282:A:H62	2:A:360:G:H21	1.65	0.43
8:I:134:HIS:N	8:I:137:VAL:O	2.48	0.43
2:A:1812:A:H2'	2:A:1813:G:O4'	2.19	0.43
2:A:705:A:C8	2:A:705:A:OP2	2.71	0.43
24:0:24:LYS:HG3	24:0:56:ASP:CG	2.25	0.43
23:3:4:LEU:HD23	23:3:4:LEU:N	2.32	0.43
25:4:63:PHE:C	25:4:65:ASP:N	2.71	0.43
26:5:44:HIS:CG	26:5:52:TYR:OH	2.71	0.43
26:5:45:ILE:N	26:5:52:TYR:OH	2.51	0.43
2:A:1638:C:O2	2:A:2698:U:O2'	2.26	0.43
2:A:2000:G:H2'	2:A:2001:A:C8	2.53	0.43
2:A:2217:G:C2	2:A:2218:G:N7	2.86	0.43
2:A:2226:C:C3'	2:A:2227:A:O4'	2.64	0.43
2:A:2249:U:N3	2:A:2253:G:OP1	2.43	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2255:G:C6	2:A:2256:G:N9	2.86	0.43
2:A:2267:A:C6	2:A:2272:U:O4	2.72	0.43
2:A:2328:A:C6	2:A:2329:G:C5	3.07	0.43
2:A:2392:A:C8	2:A:2393:A:N9	2.86	0.43
2:A:807:U:C4'	2:A:2445:G:H5'	2.48	0.43
2:A:2458:G:C5	2:A:2490:G:C4	3.07	0.43
2:A:2596:U:H3'	2:A:2597:G:C8	2.53	0.43
2:A:2048:G:N2	2:A:2620:C:N3	2.64	0.43
2:A:2626:C:H6	2:A:2626:C:H5'	1.72	0.43
2:A:2638:G:H2'	2:A:2775:A:C2	2.53	0.43
2:A:2648:C:C2	2:A:2673:G:C2	3.05	0.43
2:A:2748:A:H2'	7:H:62:ALA:CB	2.37	0.43
2:A:2756:U:O2	2:A:2756:U:O2'	2.31	0.43
2:A:2772:C:C4	2:A:2773:C:C4	3.05	0.43
2:A:2641:G:O6	2:A:2774:C:C4	2.71	0.43
2:A:2834:G:O6	2:A:2835:A:C2	2.71	0.43
2:A:2892:A:C2'	2:A:2893:G:C1'	2.94	0.43
2:A:307:G:N2	2:A:309:G:H3'	2.33	0.43
2:A:558:G:H2'	2:A:559:G:H8	1.82	0.43
2:A:592:G:H1'	29:8:2:PRO:N	2.33	0.43
2:A:911:A:H2'	12:Q:16:ARG:CD	2.47	0.43
2:A:968:G:H2'	2:A:969:U:O4'	2.18	0.43
2:A:997:G:H5''	20:U:92:ARG:HD2	2.00	0.43
1:B:28:C:H2'	1:B:29:A:O4'	2.18	0.43
3:D:77:VAL:O	3:D:78:ALA:C	2.57	0.43
4:E:42:ALA:CB	4:E:310:PHE:CD2	3.01	0.43
5:F:34:ALA:HB1	5:F:110:ALA:CB	2.39	0.43
5:F:167:ASP:OD2	5:F:231:ARG:C	2.56	0.43
5:F:87:ARG:O	5:F:88:SER:HB2	2.17	0.43
6:G:140:ARG:O	6:G:143:LYS:HG3	2.17	0.43
7:H:10:ILE:CG1	7:H:49:ILE:HG12	2.48	0.43
9:N:83:ILE:HD11	9:N:84:ARG:HE	1.84	0.43
10:O:60:ALA:HA	10:O:85:VAL:O	2.18	0.43
10:O:84:CYS:HB3	10:O:85:VAL:H	1.57	0.43
12:Q:26:LYS:NZ	12:Q:88:PHE:CB	2.82	0.43
2:A:1287:A:OP1	19:R:105:ARG:NH2	2.51	0.43
19:R:28:LEU:C	19:R:28:LEU:HD13	2.37	0.43
2:A:446:G:C5'	20:U:5:LYS:CE	2.91	0.43
2:A:446:G:C5'	20:U:5:LYS:HZ1	2.31	0.43
2:A:1152:C:H4'	20:U:80:ILE:HD12	1.99	0.43
21:V:22:VAL:HG12	21:V:23:GLU:N	2.33	0.43
15:W:23:LEU:HD23	15:W:23:LEU:C	2.37	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:Y:11:GLN:HG3	17:Y:21:LYS:NZ	2.34	0.43
18:Z:37:LYS:HA	18:Z:41:ARG:NH1	2.30	0.43
2:A:133:C:H2'	2:A:134:C:H6	1.84	0.43
16:X:22:ASN:CB	16:X:68:LEU:HG	2.48	0.43
16:X:1:SER:C	16:X:2:TRP:CD1	2.92	0.43
6:G:27:ILE:C	6:G:29:HIS:N	2.64	0.43
2:A:1081:U:H4'	31:K:123:ALA:CA	2.47	0.43
9:N:5:GLU:HA	9:N:109:TYR:CD2	2.52	0.43
2:A:1056:G:O6	2:A:1101:U:C5'	2.67	0.43
2:A:881:G:H3'	2:A:882:G:H8	1.82	0.43
2:A:218:A:N6	2:A:235:U:HO2'	2.15	0.43
2:A:1834:U:O3'	2:A:1835:G:H8	2.01	0.43
2:A:1934:C:H4'	2:A:1974:C:H4'	2.00	0.43
2:A:2365:G:OP1	24:0:39:ARG:O	2.35	0.43
24:0:67:VAL:HG11	24:0:74:LYS:CE	2.49	0.43
23:3:4:LEU:O	23:3:37:LEU:N	2.50	0.43
25:4:14:ILE:HG21	25:4:37:SER:CB	2.44	0.43
25:4:14:ILE:O	25:4:36:TRP:HA	2.18	0.43
26:5:44:HIS:C	26:5:52:TYR:CZ	2.92	0.43
2:A:2286:A:OP2	27:6:28:ARG:HD2	2.18	0.43
27:6:16:ALA:HB3	27:6:42:PRO:HB3	2.00	0.43
27:6:48:VAL:C	27:6:50:PHE:CE1	2.78	0.43
2:A:489:G:N7	2:A:1284:A:C2	2.87	0.43
2:A:1361:G:H2'	2:A:1362:C:C6	2.53	0.43
2:A:1367:A:H2'	28:7:25:LYS:HD2	2.01	0.43
2:A:1935:G:N2	2:A:1962:C:H2'	2.34	0.43
2:A:1996:C:C5'	2:A:1996:C:C6	2.95	0.43
2:A:2199:A:C2'	2:A:2205:C:C5'	2.95	0.43
2:A:2302:G:C5	2:A:2315:G:N1	2.86	0.43
2:A:2298:A:H1'	2:A:2322:A:O2'	2.18	0.43
2:A:2478:A:C8	2:A:2478:A:H3'	2.53	0.43
2:A:2509:G:HO2'	2:A:2510:C:C5'	2.23	0.43
2:A:2540:C:P	2:A:2540:C:H3'	2.58	0.43
2:A:2647:U:O2	2:A:2648:C:C6	2.71	0.43
2:A:2648:C:N3	2:A:2672:G:N2	2.59	0.43
2:A:2757:A:H2'	2:A:2758:A:C8	2.46	0.43
2:A:2639:A:N3	2:A:2778:A:C2	2.86	0.43
2:A:2785:C:H5'	4:E:98:GLU:O	2.19	0.43
2:A:27:G:O2'	2:A:513:A:N6	2.52	0.43
2:A:295:G:C8	2:A:345:A:H2	2.36	0.43
2:A:35:G:N3	2:A:454:A:C2	2.86	0.43
2:A:764:A:H2'	2:A:781:A:N6	2.32	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:24:G:N1	1:B:56:G:C2	2.87	0.43
2:A:729:G:C2	3:D:206:LYS:O	2.72	0.43
3:D:90:ILE:HG23	3:D:91:ALA:H	1.82	0.43
5:F:1:MET:O	5:F:18:LEU:HD21	2.15	0.43
5:F:213:ALA:HB3	5:F:218:VAL:HG11	1.50	0.43
5:F:220:THR:O	5:F:225:PRO:HD2	2.19	0.43
1:B:42:C:C4'	6:G:48:MET:N	2.81	0.43
7:H:105:SER:C	7:H:106:VAL:CG2	2.86	0.43
9:N:12:VAL:N	9:N:38:VAL:HG22	2.33	0.43
12:Q:23:ILE:O	12:Q:23:ILE:CG2	2.62	0.43
12:Q:49:VAL:HG23	12:Q:121:ASP:N	1.96	0.43
19:R:43:GLU:OE2	19:R:43:GLU:CA	2.63	0.43
19:R:79:LEU:O	19:R:80:PHE:C	2.57	0.43
13:S:34:LEU:C	13:S:103:ASP:CB	2.83	0.43
13:S:115:VAL:C	13:S:117:ALA:N	2.72	0.43
20:U:10:ARG:HA	20:U:13:ARG:HH12	1.83	0.43
20:U:108:ALA:C	20:U:110:VAL:N	2.59	0.43
20:U:18:LEU:HA	20:U:18:LEU:HD22	1.79	0.43
20:U:94:VAL:CG1	20:U:98:ILE:HD11	2.49	0.43
21:V:54:TYR:O	21:V:56:VAL:CA	2.63	0.43
15:W:8:ARG:C	15:W:10:VAL:HG23	2.28	0.43
15:W:55:ALA:N	15:W:107:LEU:CD1	2.72	0.43
17:Y:27:LEU:O	17:Y:28:SER:O	2.37	0.43
2:A:309:G:O5'	17:Y:54:ASP:OD1	2.36	0.43
18:Z:39:PHE:HB3	18:Z:43:PHE:CE1	2.54	0.43
8:I:102:LEU:O	8:I:107:GLY:N	2.48	0.43
22:2:17:GLU:O	22:2:19:GLU:OE1	2.37	0.43
31:K:80:LYS:HE2	31:K:80:LYS:HB3	1.88	0.43
2:A:265:A:N1	2:A:281:G:OP1	2.51	0.43
2:A:404:C:O4'	2:A:406:G:C8	2.72	0.43
2:A:1559:G:C2'	2:A:1559:G:N3	2.81	0.43
2:A:1859:A:N6	2:A:1883:G:O2'	2.51	0.43
2:A:1930:G:O2'	2:A:1931:U:P	2.77	0.43
23:3:5:LYS:CG	23:3:36:VAL:HG12	2.48	0.43
27:6:19:GLY:O	27:6:44:ALA:HB2	2.19	0.43
2:A:1034:G:C4'	30:9:18:ARG:CZ	2.97	0.43
2:A:2033:A:N6	2:A:2036:C:C2	2.87	0.43
2:A:2058:A:H8	2:A:2058:A:O5'	2.01	0.43
2:A:2103:C:C2	2:A:2187:G:C6	3.07	0.43
2:A:2212:A:C2'	2:A:2212:A:N3	2.78	0.43
2:A:2264:C:C2	2:A:2265:U:C6	3.07	0.43
2:A:2290:G:C6	2:A:2291:U:C2	3.06	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2337:G:O6	2:A:2338:G:O6	2.36	0.43
2:A:2416:C:C3'	2:A:2417:C:C5'	2.96	0.43
2:A:2535:G:N3	2:A:2535:G:C2'	2.79	0.43
2:A:2525:G:H1	2:A:2539:C:N4	2.13	0.43
2:A:2545:G:C2	2:A:2546:U:C2	3.06	0.43
2:A:2549:G:HO2'	2:A:2550:G:H5'	1.78	0.43
2:A:2562:U:O2	2:A:2563:U:C1'	2.66	0.43
2:A:2520:C:N4	2:A:2567:G:C6	2.87	0.43
2:A:2664:G:N2	2:A:2665:A:H62	2.16	0.43
2:A:2666:C:C2'	2:A:2667:C:C5'	2.93	0.43
2:A:2803:C:N3	2:A:2804:C:N3	2.66	0.43
2:A:2819:G:C2'	2:A:2821:A:H62	2.30	0.43
2:A:2849:U:O4'	2:A:2868:A:N3	2.50	0.43
2:A:2854:G:C6	2:A:2855:C:C4	3.06	0.43
2:A:2808:U:N1	2:A:2892:A:N6	2.63	0.43
2:A:775:G:N2	2:A:787:U:H2'	2.33	0.43
2:A:688:U:N3	2:A:787:U:O2'	2.52	0.43
2:A:964:C:O2'	2:A:2273:A:N9	2.51	0.43
2:A:995:C:O2	20:U:61:TRP:CZ2	2.72	0.43
3:D:85:ASN:CG	3:D:86:ARG:HE	2.10	0.43
4:E:242:ASN:ND2	4:E:242:ASN:N	2.67	0.43
4:E:263:GLU:O	4:E:264:LEU:HD23	2.18	0.43
4:E:63:GLU:HB2	4:E:64:GLY:H	1.59	0.43
4:E:96:LEU:O	4:E:97:THR:HG23	2.19	0.43
2:A:2749:A:C1'	7:H:62:ALA:CB	2.81	0.43
7:H:60:HIS:O	7:H:63:LEU:N	2.52	0.43
9:N:38:VAL:CG1	9:N:39:VAL:H	2.29	0.43
2:A:1131:G:N1	9:N:69:TYR:OH	2.28	0.43
10:O:20:LEU:CD2	10:O:44:LYS:HD3	2.49	0.43
10:O:27:GLY:O	10:O:28:SER:C	2.54	0.43
10:O:25:LEU:HD12	10:O:38:VAL:O	2.13	0.43
12:Q:151:SER:HB3	12:Q:155:GLY:CA	2.48	0.43
13:S:19:ASP:C	13:S:21:HIS:N	2.63	0.43
13:S:66:LEU:C	13:S:67:ALA:O	2.57	0.43
13:S:74:PRO:C	13:S:75:THR:O	2.52	0.43
20:U:34:ASN:O	20:U:38:THR:CG2	2.66	0.43
20:U:60:LEU:O	20:U:61:TRP:C	2.57	0.43
21:V:78:VAL:CG2	21:V:82:ARG:HB2	2.49	0.43
21:V:93:ILE:N	21:V:93:ILE:HD12	2.32	0.43
15:W:7:ALA:O	15:W:10:VAL:HG21	2.18	0.43
17:Y:45:GLY:HA2	17:Y:62:VAL:HG13	1.68	0.43
2:A:63:U:H2'	2:A:64:A:N7	2.34	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:K:112:LYS:HG2	31:K:116:LEU:HB2	1.99	0.43
2:A:545(A):A:N7	2:A:1546:C:N3	2.65	0.43
2:A:1917:U:H6	2:A:1918:A:C8	2.37	0.43
2:A:120:U:C2'	2:A:120:U:O2	2.67	0.43
2:A:1510:A:H3'	2:A:1511:A:C8	2.52	0.43
3:D:234:HIS:HB3	3:D:235:PRO:HD2	2.00	0.43
2:A:1515:C:H1'	2:A:1557:C:H4'	2.01	0.43
7:H:117:GLU:HG2	7:H:118:GLU:N	2.34	0.43
2:A:860:U:H2'	2:A:861:A:H5'	1.99	0.43
24:O:45:PHE:HE1	24:O:78:PHE:CG	2.10	0.43
24:O:70:ILE:N	24:O:70:ILE:CD1	2.81	0.43
28:7:30:ILE:C	28:7:33:ARG:CB	2.48	0.43
29:8:29:LYS:C	29:8:30:ARG:O	2.54	0.43
29:8:8:LYS:HB3	29:8:9:MET:H	1.57	0.43
2:A:1249:U:C6	2:A:1249:U:C3'	3.02	0.43
2:A:1286:A:N3	2:A:1329:U:C4	2.87	0.43
2:A:1952:A:C2	10:O:22:ILE:CD1	3.02	0.43
2:A:2208:U:H2'	2:A:2209:C:O4'	2.18	0.43
2:A:2243:U:O2	2:A:2243:U:H2'	2.18	0.43
2:A:2246:G:C2	2:A:2247:A:C8	3.06	0.43
2:A:2359:C:C2	2:A:2360:A:C2	3.06	0.43
2:A:2586:C:H42	2:A:2608:G:H1'	1.84	0.43
2:A:2648:C:N3	2:A:2673:G:C2	2.87	0.43
2:A:1759:A:N7	2:A:2696:U:O2	2.47	0.43
2:A:2737:G:N1	2:A:2738:A:C5	2.87	0.43
2:A:2773:C:C2'	2:A:2774:C:O5'	2.66	0.43
2:A:2861:G:H2'	2:A:2862:G:H8	1.84	0.43
2:A:2850:A:N3	2:A:2869:G:H4'	2.32	0.43
2:A:2880:C:C4	2:A:2881:C:C4	3.06	0.43
2:A:292:C:C2'	2:A:293:U:H3	2.22	0.43
2:A:295:G:OP1	2:A:338:G:N1	2.52	0.43
2:A:611:C:O2	2:A:617:G:N2	2.52	0.43
2:A:629:G:H21	2:A:640:C:P	2.41	0.43
2:A:684:G:N1	2:A:794:G:C2	2.87	0.43
2:A:687:C:C2	2:A:788:A:O4'	2.71	0.43
1:B:28:C:OP2	13:S:41:LYS:CE	2.64	0.43
1:B:42:C:C2	6:G:74:THR:OG1	2.72	0.43
1:B:59:A:H4'	6:G:144:ARG:NE	2.34	0.43
3:D:143:ILE:CD1	3:D:143:ILE:N	2.54	0.43
3:D:65:ASP:O	3:D:66:PHE:HB3	2.19	0.43
3:D:86:ARG:HD2	3:D:86:ARG:H	1.76	0.43
4:E:39:GLN:OE1	4:E:174:LEU:CD1	2.57	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:180:ILE:CD1	4:E:187:HIS:HB3	2.49	0.43
4:E:247:ARG:C	4:E:249:THR:H	2.21	0.43
5:F:103:ASN:CB	5:F:106:GLU:CG	2.88	0.43
5:F:6:TYR:C	5:F:11:ASN:N	2.72	0.43
5:F:238:SER:O	5:F:241:ALA:N	2.51	0.43
5:F:35:VAL:HB	5:F:36:ARG:H	1.39	0.43
5:F:59:GLU:OE2	5:F:59:GLU:CA	2.67	0.43
2:A:449:A:OP2	5:F:85:LYS:HA	2.18	0.43
6:G:97:GLN:CG	6:G:106:PHE:CD2	3.01	0.43
1:B:59:A:C4'	6:G:144:ARG:NE	2.81	0.43
7:H:143:LEU:O	7:H:144:ALA:C	2.57	0.43
8:I:43:ASN:HA	8:I:46:ALA:H	1.84	0.43
8:I:7:LYS:HB2	8:I:12:LYS:CD	2.38	0.43
9:N:135:ILE:CG2	9:N:139:LEU:HD11	2.48	0.43
10:O:103:ALA:CB	10:O:105:GLU:CG	2.91	0.43
10:O:102:VAL:CG1	10:O:106:LEU:HD11	2.49	0.43
10:O:2:ILE:HB	10:O:33:ALA:HB3	2.01	0.43
10:O:25:LEU:HD11	10:O:39:VAL:C	2.39	0.43
10:O:42:THR:CG2	10:O:57:VAL:HA	2.45	0.43
12:Q:133:GLU:HG3	12:Q:134:PHE:N	2.29	0.43
12:Q:140:TYR:O	12:Q:142:LYS:O	2.35	0.43
14:T:23:HIS:CE1	14:T:24:LYS:O	2.71	0.43
21:V:39:PHE:CZ	21:V:42:GLY:N	2.87	0.43
21:V:40:VAL:C	21:V:51:ALA:HB2	2.32	0.43
21:V:68:LYS:CG	21:V:69:ILE:HD12	2.49	0.43
17:Y:51:LEU:CD2	17:Y:95:ASN:ND2	2.82	0.43
17:Y:27:LEU:HB3	17:Y:98:VAL:H	1.83	0.43
22:2:54:ALA:O	22:2:56:ILE:CA	2.57	0.43
16:X:11:THR:O	16:X:15:MET:N	2.50	0.43
6:G:56:ARG:HA	6:G:63:ILE:CA	2.47	0.43
31:K:38:PHE:CE2	31:K:67:THR:CA	3.02	0.43
31:K:18:ALA:HB2	31:K:43:ASN:OD1	2.18	0.43
8:I:52:GLN:HA	8:I:55:GLN:HG3	2.00	0.43
18:Z:95:SER:OG	18:Z:122:ILE:CG2	2.66	0.43
2:A:441:U:OP2	17:Y:3:GLN:CG	2.62	0.43
7:H:108:TYR:N	7:H:108:TYR:HD2	2.10	0.43
1:B:100:G:H4'	2:A:915:C:O2'	2.19	0.43
1:B:100:G:H2'	1:B:101:A:O4'	2.18	0.43
2:A:1317:A:H2'	2:A:1318:C:H6	1.80	0.43
2:A:799:G:OP1	2:A:800:A:H3'	2.18	0.43
2:A:1411:C:H2'	2:A:1412:A:H8	1.83	0.43
23:3:42:ALA:O	23:3:45:GLY:N	2.52	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:4:7:PRO:HD2	25:4:56:VAL:HG11	2.01	0.43
2:A:1129:A:C6	2:A:2570:G:C4'	3.01	0.43
2:A:818:G:C8	2:A:1187:G:N1	2.87	0.43
2:A:1651:G:H5''	19:R:39:PRO:HG2	2.01	0.43
2:A:2373:G:N3	2:A:2374:C:C5	2.87	0.43
2:A:2396:G:C2	2:A:2397:G:C8	3.07	0.43
2:A:2398:U:H2'	2:A:2399:G:C8	2.52	0.43
2:A:2414:G:C6	2:A:2415:G:N7	2.86	0.43
2:A:2476:A:H8	2:A:2476:A:H3'	1.83	0.43
2:A:2489:G:C8	2:A:2490:G:C8	3.06	0.43
2:A:2589:A:C6	2:A:2606:C:N4	2.86	0.43
2:A:2698:U:H2'	2:A:2699:C:C5	2.47	0.43
2:A:2768:C:H3'	2:A:2768:C:C6	2.53	0.43
2:A:388:G:H5'	25:4:24:THR:HG23	2.01	0.43
2:A:28:A:N6	2:A:512:G:O2'	2.52	0.43
2:A:875:G:OP1	18:Z:146:HIS:CG	2.61	0.43
2:A:920:G:H8	2:A:920:G:O5'	2.01	0.43
1:B:24:G:N7	1:B:56:G:C8	2.86	0.43
3:D:89:ASN:N	3:D:105:ALA:HB2	2.34	0.43
3:D:140:VAL:HG13	3:D:191:VAL:N	2.31	0.43
4:E:102:ASP:CG	4:E:104:PHE:CZ	2.90	0.43
5:F:215:ALA:C	5:F:242:GLU:HG2	2.37	0.43
6:G:51:ARG:NH1	6:G:72:LYS:CB	2.82	0.43
7:H:83:GLU:OE2	7:H:132:VAL:O	2.36	0.43
7:H:153:PRO:O	7:H:154:GLU:O	2.37	0.43
8:I:3:VAL:CG1	8:I:21:VAL:CG2	2.91	0.43
2:A:2674:G:O3'	10:O:30:ARG:HA	2.19	0.43
2:A:2251:G:P	12:Q:102:ARG:HH21	2.41	0.43
12:Q:92:VAL:HG11	12:Q:111:THR:N	2.31	0.43
12:Q:137:ARG:C	12:Q:137:ARG:HD3	2.36	0.43
19:R:105:ARG:N	19:R:105:ARG:HE	2.13	0.43
19:R:63:ARG:HH22	19:R:77:ARG:CG	2.21	0.43
19:R:61:HIS:HB3	19:R:64:ARG:CZ	2.49	0.43
2:A:2320:A:H62	13:S:14:ARG:CB	2.30	0.43
14:T:23:HIS:CD2	14:T:28:THR:N	2.87	0.43
15:W:48:ALA:O	15:W:51:LEU:N	2.41	0.43
15:W:51:LEU:O	15:W:54:ALA:HB3	2.19	0.43
17:Y:51:LEU:CB	17:Y:97:ARG:HE	2.29	0.43
18:Z:18:MET:HG3	18:Z:35:ASP:CA	2.46	0.43
2:A:133:C:H2'	2:A:134:C:C6	2.54	0.43
2:A:134:C:C2	2:A:135:G:C8	3.06	0.43
2:A:1341:U:OP2	2:A:1397:U:O2	2.36	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:K:13:LEU:CD1	31:K:24:VAL:HG21	2.49	0.43
2:A:1332:G:N7	2:A:1609:A:N6	2.66	0.43
2:A:80:G:C8	2:A:80:G:O5'	2.72	0.43
2:A:212:G:H2'	2:A:213:A:H8	1.83	0.43
2:A:812:C:H42	2:A:1195:G:H1	1.66	0.43
2:A:1904:G:O2'	2:A:1927:A:N6	2.45	0.43
2:A:346:A:H2'	2:A:347:A:N7	2.34	0.43
2:A:521:G:H2'	2:A:522:G:C8	2.54	0.43
1:B:87:G:H3'	1:B:88:C:C5'	2.49	0.43
24:0:75:GLY:O	24:0:76:ALA:CB	2.66	0.43
23:3:22:ALA:O	23:3:26:LEU:HD11	2.14	0.43
23:3:33:GLN:CG	23:3:34:GLU:H	2.32	0.43
23:3:3:ARG:C	23:3:4:LEU:HD23	2.39	0.43
27:6:5:GLY:C	27:6:7:ARG:N	2.42	0.43
30:9:10:MET:HE2	30:9:11:CYS:N	2.33	0.43
2:A:1363:C:O2	2:A:1363:C:H2'	2.18	0.43
2:A:1566:A:N3	3:D:212:HIS:O	2.52	0.43
2:A:197:A:N6	2:A:248:G:N2	2.63	0.43
2:A:1650:G:H1	2:A:2007:C:H42	1.67	0.43
2:A:2086:U:H2'	2:A:2087:G:C8	2.54	0.43
2:A:2210:G:H4'	2:A:2211:G:C5'	2.49	0.43
2:A:2233:U:H2'	2:A:2234:G:O4'	2.18	0.43
2:A:2275:C:O2'	2:A:2276:G:OP2	2.37	0.43
2:A:2292:C:OP2	13:S:25:ARG:CZ	2.67	0.43
2:A:2410:G:C6	2:A:2411:A:C6	3.07	0.43
2:A:389:G:O4'	2:A:2413:G:C5'	2.67	0.43
2:A:2450:A:N3	2:A:2451:A:C8	2.87	0.43
2:A:2481:G:O2'	2:A:2482:G:C8	2.71	0.43
2:A:2522:U:C2	2:A:2543:G:N1	2.79	0.43
2:A:2587:A:O2'	2:A:2588:G:O5'	2.37	0.43
2:A:2678:C:O2	2:A:2679:A:H1'	2.07	0.43
2:A:2690:C:C6	2:A:2690:C:C4'	3.02	0.43
2:A:2731:G:C6	2:A:2732:G:N1	2.86	0.43
2:A:2739:U:H5	2:A:2763:G:N1	2.17	0.43
2:A:2739:U:C3'	2:A:2740:A:C5'	2.97	0.43
2:A:2752:C:H42	2:A:2753:A:H2	1.43	0.43
2:A:2886:G:N2	2:A:2887:U:C6	2.82	0.43
2:A:37:C:H5'	2:A:451:C:O4'	2.18	0.43
2:A:628:G:H8	2:A:628:G:O5'	2.02	0.43
2:A:729:G:C2	2:A:1775:U:C6	3.07	0.43
3:D:149:ARG:CG	3:D:152:GLN:NE2	2.77	0.43
4:E:87:GLU:OE1	4:E:96:LEU:HD12	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:6:TYR:CZ	5:F:139:VAL:N	2.86	0.43
5:F:81:PRO:HA	5:F:87:ARG:HG2	0.53	0.43
6:G:135:VAL:C	6:G:136:ARG:O	2.57	0.43
2:A:2303:G:H5'	6:G:99:ASP:CG	2.37	0.43
7:H:120:LEU:CD2	7:H:120:LEU:H	2.15	0.43
7:H:82:TYR:OH	7:H:137:LYS:HG2	2.19	0.43
7:H:45:GLU:OE1	7:H:49:ILE:HA	2.19	0.43
9:N:49:ARG:O	9:N:53:ILE:N	2.51	0.43
10:O:63:VAL:HG22	10:O:106:LEU:CD2	2.49	0.43
11:P:117:GLU:CA	11:P:136:ALA:O	2.45	0.43
11:P:68:GLU:HA	11:P:71:GLU:OE2	2.18	0.43
12:Q:16:ARG:CA	12:Q:17:ARG:HD3	2.48	0.43
13:S:102:LEU:N	13:S:102:LEU:CD1	2.81	0.43
20:U:15:LYS:O	20:U:18:LEU:HB2	2.19	0.43
20:U:7:GLY:O	20:U:8:ILE:HD13	2.18	0.43
20:U:88:ILE:CG2	21:V:55:THR:CG2	2.78	0.43
17:Y:11:GLN:HG3	17:Y:22:GLN:HE21	1.83	0.43
17:Y:19:ARG:HH12	17:Y:68:ASP:N	2.17	0.43
18:Z:20:ALA:HB3	18:Z:80:HIS:HA	2.00	0.43
22:2:55:ARG:C	22:2:58:THR:CB	2.77	0.43
22:2:7:GLU:O	22:2:10:ASP:N	2.43	0.43
2:A:66:C:H2'	2:A:67:U:O4'	2.19	0.43
2:A:2309:A:H3'	2:A:2310:A:O4'	2.19	0.43
31:K:20:PRO:HB2	31:K:23:PRO:CG	2.48	0.43
2:A:2:G:H2'	2:A:3:U:C6	2.53	0.43
2:A:227:A:C2	2:A:2407:G:H1'	2.48	0.43
2:A:409:C:H2'	2:A:410:G:C8	2.54	0.43
2:A:1805:U:H5'	3:D:235:PRO:HG2	2.01	0.43
2:A:311:A:H1'	2:A:332:A:C6	2.53	0.43
2:A:1829:A:N3	2:A:1829:A:H2'	2.33	0.43
2:A:1202:C:H2'	2:A:1202:C:O2	2.18	0.43
2:A:1802:A:N3	2:A:1802:A:H2'	2.33	0.43
2:A:1158:C:H5'	23:3:31:LEU:HB3	2.00	0.43
1:B:83:G:C4'	23:3:52:HIS:HD2	2.31	0.43
2:A:388:G:OP1	25:4:29:PRO:HG3	2.14	0.43
2:A:372:G:O2'	25:4:63:PHE:CE2	2.61	0.43
26:5:12:SER:O	26:5:14:SER:C	2.57	0.43
27:6:37:LEU:O	27:6:38:LYS:HG2	2.12	0.43
29:8:58:MET:HE1	29:8:61:MET:HE3	1.76	0.43
30:9:2:LYS:HA	30:9:2:LYS:NZ	2.34	0.43
2:A:1367:A:C2'	28:7:25:LYS:CD	2.97	0.43
2:A:2251:G:H2'	2:A:2251:G:N3	2.34	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:389:G:C1'	2:A:2413:G:C4'	2.97	0.43
2:A:2438:U:O3'	2:A:2439:A:H3'	2.19	0.43
2:A:2472:G:N2	2:A:2475:C:C2	2.87	0.43
2:A:2498:C:O2'	2:A:2499:C:C4'	2.64	0.43
2:A:2595:G:O2'	2:A:2597:G:N7	2.52	0.43
2:A:2623:G:N3	2:A:2623:G:H2'	2.34	0.43
2:A:1456:G:H22	2:A:2703:C:H5	1.67	0.43
2:A:2725:A:C5	2:A:2727:G:C4	3.07	0.43
2:A:371:A:O2'	2:A:372:G:P	2.77	0.43
2:A:396:G:P	25:4:10:VAL:HG13	2.59	0.43
2:A:602:G:C2'	2:A:655:A:C2	3.01	0.43
2:A:669:G:O2'	2:A:801:G:N2	2.52	0.43
2:A:918:A:C5'	2:A:918:A:N3	2.82	0.43
3:D:176:ALA:O	3:D:177:SER:C	2.57	0.43
2:A:2572:A:OP1	4:E:240:PRO:HB3	2.19	0.43
2:A:2680:C:H4'	4:E:301:PRO:HD2	2.01	0.43
4:E:203:GLY:CA	4:E:303:PRO:HG3	2.48	0.43
5:F:33:LYS:CA	5:F:36:ARG:HG2	2.48	0.43
6:G:102:GLY:O	6:G:134:LEU:HB2	2.19	0.43
6:G:36:ASN:C	6:G:38:GLU:N	2.72	0.43
6:G:93:LEU:HD21	6:G:106:PHE:CG	2.53	0.43
8:I:5:PHE:O	8:I:6:LEU:HB2	2.19	0.43
9:N:19:MET:HE2	9:N:22:VAL:CB	2.48	0.43
2:A:1952:A:C2	10:O:22:ILE:HG12	2.54	0.43
10:O:65:THR:O	10:O:65:THR:HG23	2.18	0.43
11:P:125:PHE:O	11:P:130:ARG:CZ	2.67	0.43
19:R:106:GLY:O	19:R:107:ASP:O	2.36	0.43
19:R:54:LEU:N	19:R:54:LEU:CD1	2.82	0.43
13:S:34:LEU:HD23	13:S:102:LEU:HA	1.79	0.43
13:S:103:ASP:C	13:S:103:ASP:OD2	2.57	0.43
13:S:109:PRO:CB	13:S:116:PHE:CE2	3.02	0.43
13:S:28:LYS:HZ2	13:S:28:LYS:CB	2.31	0.43
13:S:33:ARG:HG2	13:S:48:VAL:O	2.19	0.43
17:Y:27:LEU:HD23	17:Y:98:VAL:CB	2.49	0.43
18:Z:16:GLU:OE1	18:Z:16:GLU:CA	2.49	0.43
18:Z:18:MET:HA	18:Z:36:ARG:N	2.28	0.43
18:Z:26:LYS:N	18:Z:84:TYR:OH	2.52	0.43
8:I:122:ARG:C	8:I:124:LEU:N	2.71	0.43
8:I:148:GLN:O	8:I:149:LYS:HB3	2.18	0.43
22:2:26:GLU:OE2	22:2:26:GLU:N	2.52	0.43
22:2:36:ALA:O	22:2:37:GLY:C	2.57	0.43
16:X:11:THR:O	16:X:15:MET:HE2	2.16	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:138:G:N9	16:X:43:GLU:OE2	2.52	0.43
16:X:52:VAL:HG13	16:X:53:ASN:N	2.34	0.43
31:K:32:GLY:C	31:K:33:VAL:HG23	2.40	0.43
2:A:1545:A:O3'	2:A:545(A):A:OP1	2.34	0.43
2:A:2408:U:C2	2:A:2409:G:N7	2.87	0.43
2:A:1448:G:H5''	2:A:1543:A:N6	2.29	0.43
2:A:1805:U:H5'	3:D:235:PRO:HB3	1.92	0.43
2:A:978:G:C2	2:A:986:C:N3	2.86	0.43
2:A:273:G:H1	2:A:364:C:H42	1.66	0.43
2:A:216:A:N6	2:A:432:A:C8	2.87	0.43
2:A:1359:A:N6	2:A:1372:U:H3	2.17	0.43
2:A:1359:A:OP2	2:A:1371:G:N2	2.52	0.43
2:A:1196:C:H2'	2:A:1197:G:C8	2.54	0.43
2:A:727:A:C2'	2:A:728:G:O5'	2.67	0.43
24:O:17:ASN:H	24:O:18:PRO:HD3	1.82	0.42
23:3:52:HIS:O	23:3:53:LEU:C	2.57	0.42
28:7:21:ARG:HH12	28:7:43:THR:N	2.07	0.42
2:A:1031:G:O3'	30:9:8:LYS:CE	2.67	0.42
2:A:1033:U:H2'	2:A:2750:A:C2	2.53	0.42
2:A:1183:G:H5'	23:3:29:ARG:NE	2.34	0.42
2:A:974:G:OP2	2:A:1188:U:C6	2.72	0.42
2:A:2093:G:C4	2:A:2198:A:N1	2.87	0.42
2:A:2299:G:N1	2:A:2300:G:C6	2.87	0.42
2:A:2313:C:N4	2:A:2314:C:H42	2.09	0.42
2:A:2283:C:C1'	2:A:2389:G:H21	2.27	0.42
2:A:2422:A:C1'	2:A:2424:C:H5	2.31	0.42
2:A:2528:U:OP1	30:9:30:VAL:CB	2.67	0.42
2:A:2550:G:C5	2:A:2551:C:C5	3.06	0.42
2:A:2550:G:C5	2:A:2551:C:H5	2.34	0.42
2:A:2626:C:C5	2:A:2626:C:O5'	2.69	0.42
2:A:2638:G:N9	2:A:2775:A:N1	2.67	0.42
2:A:2769:C:N3	2:A:2770:G:C4	2.87	0.42
2:A:2774:C:O2	2:A:2775:A:C8	2.71	0.42
2:A:2827:C:H2'	2:A:2828:C:O5'	2.17	0.42
2:A:586:A:N1	2:A:809:G:H2'	2.33	0.42
3:D:115:ILE:C	3:D:115:ILE:CD1	2.87	0.42
3:D:213:LYS:O	3:D:214:MET:HB2	2.19	0.42
3:D:71:ASP:O	3:D:73:ILE:HG13	2.19	0.42
3:D:74:PRO:HA	3:D:116:MET:HE3	1.95	0.42
3:D:75:GLY:O	3:D:115:ILE:CA	2.64	0.42
3:D:78:ALA:HA	3:D:94:ASN:ND2	2.33	0.42
2:A:2786:U:O5'	4:E:100:TRP:O	2.29	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:11:ASN:HD21	5:F:160:LEU:CD1	2.33	0.42
6:G:103:ASN:CB	6:G:133:ASN:HA	2.49	0.42
6:G:23:VAL:HB	6:G:130:VAL:HG12	2.00	0.42
7:H:122:ILE:CG2	7:H:123:GLU:N	2.81	0.42
9:N:39:VAL:N	9:N:103:VAL:HG13	2.34	0.42
10:O:106:LEU:O	10:O:109:LYS:N	2.49	0.42
19:R:101:ALA:HB1	26:5:41:LEU:HD12	2.00	0.42
19:R:48:VAL:O	19:R:49:ASP:C	2.57	0.42
19:R:65:LEU:O	19:R:68:ARG:CB	2.67	0.42
13:S:17:ARG:HH11	13:S:18:THR:CB	2.32	0.42
13:S:76:GLY:O	13:S:81:ALA:C	2.57	0.42
14:T:54:THR:C	14:T:56:ARG:H	2.22	0.42
21:V:35:LEU:H	21:V:60:VAL:HG13	1.72	0.42
20:U:94:VAL:HG11	21:V:4:ILE:HD13	1.98	0.42
21:V:61:VAL:HG22	21:V:96:LEU:C	2.15	0.42
15:W:8:ARG:HB2	15:W:102:HIS:ND1	2.33	0.42
15:W:79:GLY:O	15:W:81:ALA:N	2.45	0.42
17:Y:73:HIS:CG	17:Y:91:LEU:HD21	2.54	0.42
17:Y:48:VAL:HG21	17:Y:98:VAL:HG23	1.32	0.42
18:Z:135:VAL:C	18:Z:136:VAL:HG23	2.39	0.42
8:I:89:LEU:HD12	8:I:122:ARG:HA	2.01	0.42
2:A:1080:C:O2	31:K:127:ILE:HG13	2.07	0.42
31:K:25:GLY:CA	31:K:35:ILE:CD1	2.86	0.42
2:A:1525:G:N2	2:A:545(A):A:H61	2.16	0.42
2:A:1071:G:C2	2:A:1091:G:N7	2.87	0.42
2:A:1924:C:C5	2:A:1925:C:C5	3.07	0.42
2:A:1476:C:C5	2:A:1477:A:N3	2.87	0.42
2:A:1513:C:H2'	2:A:1514:U:C5	2.54	0.42
2:A:1420:U:O2	2:A:1421:G:N7	2.52	0.42
23:3:49:LYS:C	23:3:51:ALA:N	2.72	0.42
25:4:17:GLN:NE2	25:4:34:ASP:HA	2.34	0.42
2:A:1364:G:C6	25:4:2:GLN:OE1	2.72	0.42
29:8:36:LYS:HG2	29:8:40:GLU:OE1	2.19	0.42
2:A:1137:G:C5	2:A:1138:G:H1'	2.54	0.42
2:A:991:C:N3	2:A:1164:G:C6	2.87	0.42
2:A:123:G:H2'	2:A:124:G:O4'	2.19	0.42
2:A:2267:A:C5'	2:A:2268:A:P	3.02	0.42
2:A:2328:A:C8	2:A:2329:G:N7	2.88	0.42
2:A:2392:A:C6	2:A:2393:A:N6	2.87	0.42
2:A:2403:C:C2'	2:A:2404:C:H5'	2.48	0.42
2:A:2410:G:C2	2:A:2411:A:N9	2.88	0.42
2:A:2461:C:O5'	2:A:2461:C:C6	2.72	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2447:G:N3	2:A:2500:U:C5	2.80	0.42
2:A:2528:U:O2'	2:A:2529:G:C8	2.61	0.42
2:A:2571:C:C2'	2:A:2572:A:OP1	2.66	0.42
2:A:2615:U:H2'	2:A:2616:C:C5	2.53	0.42
2:A:2634:G:O6	2:A:2785:C:N4	2.53	0.42
2:A:2710:C:C2'	2:A:2711:A:C5'	2.94	0.42
2:A:2717:G:N1	2:A:2718:G:C6	2.86	0.42
2:A:2725:A:C2'	2:A:2726:U:H5''	2.48	0.42
2:A:2819:G:C8	2:A:2819:G:O5'	2.69	0.42
2:A:2839:G:N2	2:A:2840:C:C1'	2.82	0.42
2:A:2840:C:O2	2:A:2841:C:C6	2.72	0.42
2:A:449:A:P	5:F:85:LYS:CA	3.07	0.42
2:A:581:C:H5''	20:U:32:TYR:CB	2.43	0.42
2:A:831:G:C6	2:A:832:G:C5	3.07	0.42
2:A:856:C:O4'	24:O:25:LYS:NZ	2.31	0.42
1:B:29:A:OP1	13:S:39:SER:C	2.58	0.42
3:D:93:ILE:CG2	3:D:93:ILE:O	2.64	0.42
2:A:2729:G:H4'	4:E:298:GLY:HA3	2.00	0.42
2:A:2785:C:H5'	4:E:99:VAL:HA	1.87	0.42
5:F:147:LEU:CD1	5:F:156:LEU:CG	2.93	0.42
5:F:163:HIS:O	5:F:166:ILE:CD1	2.66	0.42
6:G:13:MET:HB3	6:G:14:ARG:HD2	2.01	0.42
6:G:140:ARG:C	6:G:142:ALA:N	2.68	0.42
7:H:148:ARG:NH1	7:H:164:GLU:N	2.63	0.42
7:H:30:GLY:HA3	7:H:78:VAL:HA	2.01	0.42
7:H:86:LEU:HD13	7:H:87:GLU:C	2.39	0.42
7:H:96:SER:C	7:H:97:LYS:O	2.45	0.42
8:I:3:VAL:HG11	8:I:21:VAL:HG23	1.98	0.42
2:A:1137:G:H5''	9:N:60:ARG:NH2	2.33	0.42
10:O:10:VAL:HG11	10:O:12:ASP:O	2.17	0.42
19:R:19:ALA:O	19:R:20:LEU:C	2.57	0.42
13:S:46:GLN:OE1	13:S:57:THR:HG21	2.19	0.42
10:O:79:PHE:CB	14:T:22:VAL:CG2	2.97	0.42
15:W:50:VAL:HG11	15:W:103:ILE:CG2	2.49	0.42
17:Y:31:LEU:HA	17:Y:113:GLU:OE2	2.19	0.42
17:Y:44:ALA:O	17:Y:62:VAL:HG11	2.19	0.42
17:Y:78:THR:HG22	17:Y:89:ARG:H	1.84	0.42
18:Z:112:LEU:HD21	18:Z:172:LEU:O	2.15	0.42
8:I:120:ALA:C	8:I:121:ILE:O	2.54	0.42
2:A:63:U:H2'	2:A:64:A:C8	2.54	0.42
2:A:60:G:C2	2:A:74:A:N6	2.87	0.42
16:X:2:TRP:N	16:X:2:TRP:CD1	2.86	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1340:U:C4	16:X:57:THR:HG22	2.40	0.42
2:A:1080:C:H1'	31:K:127:ILE:HA	2.01	0.42
31:K:73:PRO:HG2	31:K:78:LEU:HD21	2.01	0.42
2:A:359:A:O2'	2:A:360:G:N9	2.51	0.42
2:A:1777:U:H2'	2:A:1778:U:C6	2.53	0.42
3:D:169:LYS:HE2	3:D:169:LYS:HB2	1.88	0.42
2:A:1718:G:N2	2:A:1742:C:C2	2.87	0.42
2:A:285:C:C4	2:A:286:C:N4	2.87	0.42
2:A:536:A:H8	2:A:536:A:O5'	2.02	0.42
26:5:33:CYS:SG	26:5:34:PRO:HD2	2.60	0.42
2:A:396:G:H5''	25:4:10:VAL:HG13	2.02	0.42
25:4:38:GLY:O	25:4:39:VAL:HB	2.19	0.42
25:4:38:GLY:O	25:4:39:VAL:HG23	2.18	0.42
25:4:46:GLU:HB2	25:4:47:GLU:H	1.44	0.42
25:4:6:HIS:HB2	25:4:56:VAL:HG23	1.88	0.42
26:5:12:SER:CB	26:5:15:LYS:HZ2	2.13	0.42
26:5:43:HIS:O	26:5:52:TYR:HE2	2.02	0.42
27:6:53:LYS:HB3	27:6:53:LYS:HE3	1.90	0.42
2:A:2358:G:H22	29:8:52:LYS:HZ3	1.66	0.42
29:8:58:MET:O	29:8:60:LEU:C	2.57	0.42
30:9:19:ARG:HG3	30:9:19:ARG:O	2.19	0.42
2:A:1032:A:P	30:9:8:LYS:HG3	2.59	0.42
2:A:1328:G:H4'	2:A:1329:U:C5	2.53	0.42
2:A:769:G:H4'	2:A:1379:A:H61	1.84	0.42
2:A:1647:G:H4'	2:A:1648:C:C5'	2.49	0.42
2:A:2078:C:C4'	2:A:2434:A:C5'	2.93	0.42
2:A:2196:C:C2'	2:A:2196:C:O2	2.67	0.42
2:A:2249:U:C4	2:A:2253:G:OP1	2.72	0.42
2:A:2255:G:N1	2:A:2256:G:N9	2.67	0.42
2:A:2389:G:H3'	2:A:2389:G:OP2	2.20	0.42
2:A:2065:C:O2	2:A:2449:U:O4	2.37	0.42
2:A:2461:C:H2'	2:A:2462:U:H5'	2.01	0.42
2:A:2512:C:O2	2:A:2513:G:C1'	2.67	0.42
2:A:2576:G:H4'	2:A:2577:A:C5'	2.49	0.42
2:A:2652:C:N4	2:A:2653:U:C4	2.86	0.42
2:A:2697:G:H2'	2:A:2698:U:O4'	2.18	0.42
2:A:2707:G:O2'	2:A:2708:G:P	2.76	0.42
2:A:2727:G:H2'	2:A:2727:G:N3	2.34	0.42
2:A:2741:A:H5'	2:A:2741:A:H8	1.82	0.42
2:A:2844:G:C2	2:A:2845:G:C8	3.07	0.42
2:A:585:G:C2	2:A:1256:G:C6	3.08	0.42
2:A:604:G:C2	2:A:657:U:H4'	2.55	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:680:G:H2'	2:A:681:G:C8	2.54	0.42
2:A:465:G:H21	2:A:683:C:H2'	1.84	0.42
2:A:792:G:C8	2:A:2440:C:C2	3.07	0.42
2:A:827:U:OP1	2:A:2430:A:P	2.77	0.42
1:B:42:C:O2'	6:G:47:GLN:CG	2.63	0.42
3:D:140:VAL:HG22	3:D:191:VAL:HA	2.01	0.42
4:E:214:VAL:HG21	4:E:233:ARG:HG2	1.97	0.42
4:E:222:ARG:HB3	4:E:226:HIS:O	2.20	0.42
4:E:311:PHE:HD2	4:E:311:PHE:N	2.15	0.42
5:F:222:ASP:O	5:F:231:ARG:NH1	2.53	0.42
2:A:2313:C:H4'	6:G:72:LYS:CB	2.49	0.42
7:H:88:LEU:HD13	7:H:128:THR:HA	2.00	0.42
8:I:7:LYS:HB2	8:I:12:LYS:NZ	2.34	0.42
9:N:78:ILE:HG22	9:N:79:PHE:HD1	1.81	0.42
9:N:95:ARG:C	9:N:97:ALA:N	2.71	0.42
10:O:109:LYS:O	10:O:110:ASP:HB2	2.20	0.42
10:O:17:ARG:HG3	10:O:47:THR:H	1.85	0.42
11:P:102:ASP:O	11:P:103:ALA:HB3	2.17	0.42
2:A:245:G:H4'	11:P:55:GLN:OE1	2.18	0.42
12:Q:122:PHE:CB	12:Q:136:TRP:CZ2	3.00	0.42
12:Q:31:PHE:CG	12:Q:85:ILE:CD1	3.03	0.42
19:R:104:ARG:HB3	19:R:107:ASP:OD2	2.19	0.42
19:R:36:THR:CG2	19:R:37:THR:H	2.31	0.42
13:S:110:THR:C	13:S:116:PHE:CD1	2.93	0.42
13:S:90:LEU:HD23	13:S:93:GLN:HE21	1.84	0.42
13:S:93:GLN:OE1	13:S:94:GLU:N	2.51	0.42
20:U:32:TYR:CD2	20:U:32:TYR:N	2.79	0.42
20:U:33:ARG:CA	20:U:36:PHE:CD1	3.02	0.42
20:U:47:TYR:HA	20:U:50:ARG:HG3	2.00	0.42
15:W:110:LYS:HA	15:W:110:LYS:HD2	1.80	0.42
18:Z:100:THR:CG2	18:Z:137:ASP:CG	2.79	0.42
18:Z:41:ARG:N	18:Z:41:ARG:CD	2.83	0.42
18:Z:90:GLU:O	18:Z:91:PRO:C	2.56	0.42
8:I:94:THR:C	8:I:96:LYS:N	2.73	0.42
22:2:30:ALA:N	22:2:34:GLN:HG2	2.32	0.42
22:2:49:LEU:HA	22:2:49:LEU:HD23	1.87	0.42
22:2:51:LYS:O	22:2:53:ILE:C	2.43	0.42
22:2:57:LYS:O	22:2:60:GLN:CB	2.50	0.42
2:A:1081:U:C5'	31:K:126:LYS:NZ	2.82	0.42
9:N:106:GLY:O	9:N:107:ASN:OD1	2.28	0.42
2:A:1942:C:H3'	2:A:1942:C:P	2.59	0.42
2:A:1857:G:H21	2:A:1886:C:H42	1.67	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1315:C:O2'	2:A:1392:A:O2'	2.26	0.42
2:A:587:C:H4'	2:A:588:U:OP2	2.19	0.42
2:A:1509:C:O2	2:A:1509:C:H2'	2.19	0.42
10:O:89:ASP:N	10:O:89:ASP:OD1	2.52	0.42
23:3:53:LEU:O	23:3:54:VAL:CG1	2.67	0.42
27:6:37:LEU:HD23	27:6:37:LEU:HA	1.79	0.42
2:A:1162:G:H2'	2:A:1163:G:C8	2.55	0.42
2:A:961:C:C5	2:A:2031:A:C2	3.07	0.42
2:A:2256:G:N2	2:A:2257:U:H1'	2.33	0.42
2:A:2267:A:O5'	2:A:2268:A:OP1	2.35	0.42
2:A:2533:A:N7	2:A:2534:A:C5	2.88	0.42
2:A:2547:U:C4	2:A:2566:A:C5	3.08	0.42
2:A:2554:U:O4	2:A:2555:U:O4	2.37	0.42
2:A:2554:U:C4	2:A:2555:U:O4	2.73	0.42
2:A:1672:C:C2	2:A:2582:G:O4'	2.68	0.42
2:A:2692:C:O2	2:A:2847:U:H4'	2.20	0.42
2:A:322:A:C4	2:A:341:G:N9	2.88	0.42
2:A:412:A:H2'	2:A:413:C:O4'	2.19	0.42
2:A:465:G:C6	2:A:466:A:N6	2.87	0.42
2:A:492:A:H61	15:W:49:LYS:CE	2.32	0.42
2:A:751:A:C2	2:A:789:A:C5	3.07	0.42
2:A:826:U:C6	2:A:828:U:C6	3.07	0.42
3:D:183:ILE:C	3:D:184:LEU:CD2	2.75	0.42
4:E:42:ALA:HB1	4:E:310:PHE:CA	2.43	0.42
4:E:77:PRO:CB	4:E:187:HIS:CA	2.98	0.42
4:E:87:GLU:CD	4:E:87:GLU:H	2.22	0.42
4:E:96:LEU:O	4:E:97:THR:CG2	2.67	0.42
5:F:37:ALA:HB2	5:F:102:LEU:HB2	1.93	0.42
7:H:88:LEU:HD22	7:H:128:THR:HA	2.00	0.42
7:H:162:ARG:HB3	7:H:166:GLU:CG	2.43	0.42
7:H:73:ASN:CG	7:H:137:LYS:HZ2	2.20	0.42
7:H:7:PRO:C	7:H:8:ILE:HG13	2.38	0.42
8:I:31:PHE:O	8:I:32:LYS:C	2.56	0.42
9:N:90:LYS:HD3	9:N:95:ARG:NE	2.34	0.42
10:O:3:GLN:O	10:O:21:VAL:HB	2.19	0.42
10:O:64:ARG:CD	10:O:81:GLU:OE1	2.67	0.42
12:Q:54:VAL:O	12:Q:54:VAL:CG1	2.67	0.42
12:Q:65:ARG:HE	12:Q:85:ILE:HG21	1.83	0.42
14:T:31:PHE:HD2	14:T:32:CYS:SG	2.42	0.42
20:U:106:PHE:C	20:U:108:ALA:N	2.73	0.42
20:U:29:SER:HG	20:U:30:LYS:H	1.66	0.42
20:U:87:ASN:O	20:U:88:ILE:HD13	2.20	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:V:30:GLY:O	21:V:31:ASP:C	2.53	0.42
21:V:93:ILE:CD1	21:V:93:ILE:N	2.82	0.42
21:V:66:GLY:HA2	21:V:93:ILE:HG13	2.01	0.42
21:V:59:GLU:HG2	21:V:99:GLN:HA	2.00	0.42
15:W:30:GLU:O	15:W:33:ARG:CB	2.65	0.42
17:Y:46:ASP:N	17:Y:62:VAL:HG21	2.34	0.42
22:2:55:ARG:O	22:2:57:LYS:N	2.53	0.42
22:2:60:GLN:HE22	22:2:65:ASP:HA	1.83	0.42
16:X:50:GLU:N	16:X:50:GLU:OE1	2.52	0.42
31:K:89:SER:O	31:K:95:LYS:NZ	2.48	0.42
9:N:108:PRO:CD	9:N:109:TYR:H	2.32	0.42
15:W:90:ARG:HB3	15:W:90:ARG:CZ	2.41	0.42
6:G:78:GLU:O	6:G:81:GLU:HB2	2.19	0.42
2:A:281:G:C8	2:A:281:G:O5'	2.72	0.42
2:A:480:A:H3'	2:A:481:G:H5''	2.00	0.42
1:B:41:U:C4	6:G:50:VAL:HB	2.54	0.42
2:A:1196:C:H4'	2:A:1226:G:C6	2.54	0.42
2:A:162:U:H4'	2:A:171:G:N2	2.31	0.42
2:A:285:C:H2'	2:A:286:C:N1	2.35	0.42
2:A:1974:C:O5'	2:A:1974:C:H6	2.02	0.42
24:0:30:VAL:CG1	24:0:63:SER:OG	2.67	0.42
23:3:48:GLU:O	23:3:51:ALA:HB2	2.19	0.42
23:3:8:LEU:CA	23:3:54:VAL:CG1	2.85	0.42
25:4:14:ILE:HG21	25:4:37:SER:CA	2.49	0.42
28:7:24:THR:OG1	28:7:26:SER:OG	2.33	0.42
29:8:16:ILE:CG2	29:8:17:THR:N	2.82	0.42
2:A:125:G:H5'	28:7:19:ARG:HD2	2.01	0.42
2:A:1637:A:O3'	2:A:2711:A:C4'	2.65	0.42
2:A:1968:G:H3'	2:A:1968:G:H8	1.85	0.42
2:A:1971:A:H3'	2:A:1971:A:H8	1.84	0.42
2:A:2217:G:C2'	2:A:2218:G:C5'	2.97	0.42
2:A:2251:G:C2	2:A:2252:G:C2	3.07	0.42
2:A:2314:C:H5'	6:G:22:VAL:HG21	2.02	0.42
2:A:2348:U:C2'	2:A:2349:G:H5'	2.49	0.42
2:A:2403:C:C5	2:A:2415:G:C2	3.07	0.42
2:A:2444:G:C6	2:A:2445:G:N1	2.87	0.42
2:A:2484:G:O2'	12:Q:60:ALA:HB1	2.19	0.42
2:A:2509:G:N2	2:A:2510:C:C1'	2.82	0.42
2:A:2511:U:H5'	4:E:223:LYS:HE2	2.00	0.42
2:A:1129:A:H4'	2:A:2516:G:H5'	2.02	0.42
2:A:2606:C:C4'	2:A:2606:C:C6	3.02	0.42
2:A:2848:G:C2	2:A:2849:U:N3	2.67	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2886:G:C2	2:A:2887:U:C5	3.07	0.42
2:A:371:A:H5''	2:A:423:A:C8	2.54	0.42
2:A:451:C:H2'	2:A:452:G:N7	2.34	0.42
2:A:729:G:C5	3:D:207:ALA:CA	3.00	0.42
2:A:803:U:H2'	2:A:804:A:C5'	2.33	0.42
4:E:222:ARG:NH2	4:E:234:ARG:CB	2.71	0.42
4:E:242:ASN:N	4:E:243:PRO:CD	2.81	0.42
4:E:202:ALA:CB	4:E:262:THR:HB	2.49	0.42
4:E:270:ASP:O	4:E:271:ILE:CG1	2.66	0.42
7:H:104:LEU:HD23	7:H:151:ARG:HD2	2.02	0.42
7:H:10:ILE:HD11	7:H:49:ILE:HG21	2.01	0.42
8:I:3:VAL:CG2	8:I:19:LYS:O	2.68	0.42
19:R:74:LYS:O	19:R:75:LEU:C	2.58	0.42
13:S:27:LEU:HD13	13:S:28:LYS:CA	2.49	0.42
13:S:83:LEU:C	13:S:85:GLY:N	2.71	0.42
20:U:7:GLY:O	20:U:9:VAL:CG2	2.52	0.42
21:V:35:LEU:O	21:V:60:VAL:HA	2.19	0.42
21:V:94:LYS:N	21:V:95:ILE:CD1	2.81	0.42
15:W:105:VAL:CG2	15:W:105:VAL:O	2.68	0.42
15:W:23:LEU:HD11	15:W:35:ILE:CG2	2.49	0.42
15:W:41:LYS:O	15:W:42:ARG:C	2.55	0.42
17:Y:34:GLU:O	17:Y:35:TYR:HD2	1.94	0.42
18:Z:101:THR:HB	18:Z:103:ARG:HD3	2.01	0.42
18:Z:118:HIS:CD2	18:Z:168:VAL:HA	2.54	0.42
18:Z:151:ASP:CA	18:Z:153:LYS:HZ2	2.32	0.42
18:Z:71:MET:HG2	18:Z:78:PRO:HD3	0.44	0.42
8:I:82:LYS:O	8:I:83:ALA:CB	2.68	0.42
16:X:7:HIS:CG	16:X:8:PRO:CD	3.01	0.42
6:G:55:LYS:O	6:G:65:GLU:CA	2.67	0.42
6:G:57:THR:CG2	6:G:58:VAL:N	2.62	0.42
6:G:55:LYS:H	6:G:65:GLU:HG2	1.85	0.42
31:K:87:LYS:HB3	31:K:88:GLY:H	1.68	0.42
2:A:359:A:C2	2:A:361:G:C2	3.08	0.42
2:A:1358:G:C5	2:A:1371:G:C5	3.08	0.42
2:A:500:G:C8	2:A:500:G:H3'	2.55	0.42
2:A:1755:A:OP2	2:A:1755:A:H8	2.02	0.42
8:I:70:GLU:CG	8:I:71:GLN:N	2.78	0.42
25:4:14:ILE:CG2	25:4:37:SER:C	2.87	0.42
25:4:5:LEU:HG	25:4:8:LYS:N	2.35	0.42
27:6:46:LYS:C	27:6:47:HIS:HD1	2.23	0.42
2:A:1367:A:O2'	28:7:25:LYS:HD3	2.19	0.42
2:A:1131:G:H4'	2:A:1132:A:OP1	2.19	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1259:G:C4	2:A:1260:G:C8	3.08	0.42
2:A:1300:U:H2'	2:A:1634:A:O2'	2.19	0.42
2:A:1638:C:C3'	2:A:2709:G:N2	2.68	0.42
2:A:2075:U:O4	2:A:2238:G:C6	2.72	0.42
2:A:2321:G:H21	2:A:2322:A:H1'	1.83	0.42
2:A:2353:G:H8	2:A:2353:G:O5'	2.03	0.42
2:A:2361:A:C2	2:A:2362:G:N9	2.87	0.42
2:A:2370:G:C6	2:A:2371:G:C5	3.08	0.42
2:A:2400:G:C2	2:A:2401:U:C2	3.07	0.42
2:A:2064:C:C1'	2:A:2450:A:C6	2.77	0.42
2:A:2494:G:H21	2:A:2495:G:C1'	2.32	0.42
2:A:2512:C:OP1	4:E:219:VAL:CG1	2.61	0.42
2:A:2634:G:O2'	2:A:2635:C:C5'	2.68	0.42
2:A:1033:U:H6	2:A:2750:A:H2	1.49	0.42
2:A:2816:C:C2	2:A:2831:G:N2	2.87	0.42
2:A:2892:A:H3'	2:A:2893:G:H8	1.84	0.42
2:A:515:A:H3'	2:A:516:C:C6	2.54	0.42
2:A:533:G:P	20:U:25:TRP:HB2	2.59	0.42
2:A:681:G:H1	2:A:796:C:H42	1.65	0.42
3:D:131:LEU:HG	3:D:187:CYS:CB	2.43	0.42
3:D:144:GLU:OE1	3:D:144:GLU:C	2.57	0.42
3:D:171:VAL:C	3:D:182:MET:HG2	2.40	0.42
2:A:1566:A:N1	3:D:212:HIS:CG	2.82	0.42
3:D:80:ILE:CD1	3:D:82:TYR:CD1	2.95	0.42
4:E:211:GLN:HG2	4:E:212:GLY:N	2.21	0.42
2:A:2578:G:C6	4:E:237:ASN:ND2	2.85	0.42
2:A:2784:C:H5'	4:E:95:PRO:O	2.20	0.42
5:F:34:ALA:HB1	5:F:110:ALA:HB1	1.84	0.42
5:F:33:LYS:C	5:F:36:ARG:HG2	2.40	0.42
5:F:63:SER:O	5:F:64:GLY:C	2.57	0.42
6:G:19:GLU:N	6:G:135:VAL:HG21	2.34	0.42
6:G:149:ARG:C	6:G:151:ILE:N	2.66	0.42
6:G:51:ARG:HH11	6:G:72:LYS:HB2	1.82	0.42
6:G:49:PRO:CG	6:G:72:LYS:H	2.31	0.42
7:H:101:LYS:HG3	7:H:116:PRO:CD	2.49	0.42
8:I:1:MET:HG3	8:I:3:VAL:HG22	1.96	0.42
12:Q:72:VAL:HB	12:Q:83:PHE:CZ	2.55	0.42
19:R:20:LEU:HD22	19:R:24:GLN:CG	2.41	0.42
13:S:58:LEU:HD11	13:S:92:ALA:HA	2.00	0.42
13:S:97:VAL:O	13:S:98:GLU:CG	2.68	0.42
14:T:21:PHE:HB2	14:T:31:PHE:CD1	2.52	0.42
2:A:514:A:C3'	20:U:32:TYR:OH	2.67	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:V:58:ALA:O	21:V:100:GLY:O	2.38	0.42
17:Y:32:ARG:HG2	17:Y:33:GLU:H	1.84	0.42
18:Z:94:VAL:O	18:Z:123:VAL:N	2.37	0.42
8:I:92:SER:H	8:I:122:ARG:NH2	2.18	0.42
2:A:138:G:C2'	2:A:139:G:H4'	2.37	0.42
2:A:76:C:O2'	22:2:55:ARG:N	2.53	0.42
2:A:5:A:C2	2:A:2899:G:C2	3.08	0.42
2:A:2408:U:C2'	2:A:2409:G:O5'	2.68	0.42
2:A:1071:G:C2'	2:A:1090:U:OP1	2.66	0.42
2:A:1858:G:C2	2:A:1885:A:C5	3.07	0.42
2:A:1315:C:H2'	2:A:1316:U:C6	2.54	0.42
24:0:18:PRO:O	24:0:19:LYS:CB	2.68	0.42
23:3:39:ASP:O	23:3:40:THR:O	2.38	0.42
23:3:6:VAL:CG2	23:3:55:ARG:O	2.63	0.42
26:5:3:LYS:O	26:5:4:HIS:C	2.58	0.42
27:6:44:ALA:O	27:6:45:LYS:O	2.38	0.42
27:6:39:LYS:C	27:6:50:PHE:CD1	2.93	0.42
29:8:15:LYS:HE3	29:8:15:LYS:HB2	1.73	0.42
2:A:1024:G:H3'	2:A:1025:G:C5'	2.50	0.42
2:A:142(A):A:H1'	9:N:18:ILE:HD11	2.02	0.42
2:A:1500:G:N2	3:D:97:ASP:CG	2.60	0.42
2:A:1612:C:H2'	28:7:3:ARG:CD	2.26	0.42
2:A:1771:C:H2'	2:A:1772:G:H8	1.85	0.42
2:A:563:G:O6	2:A:2018:G:N7	2.52	0.42
2:A:2249:U:O4	2:A:2253:G:OP1	2.38	0.42
2:A:2257:U:HO2'	2:A:2258:C:C4'	2.32	0.42
2:A:2277:G:OP1	12:Q:94:ARG:NH2	2.53	0.42
2:A:2436:G:N2	2:A:2437:U:C2	2.87	0.42
2:A:2465:C:O2'	2:A:2466:C:P	2.76	0.42
2:A:2488:A:C6	2:A:2489:G:C6	3.08	0.42
2:A:2447:G:O2'	2:A:2499:C:OP2	2.23	0.42
2:A:2510:C:O2'	4:E:223:LYS:HE3	2.19	0.42
2:A:2525:G:O2'	2:A:2742:C:C1'	2.67	0.42
2:A:2581:G:C2'	2:A:2581:G:N3	2.76	0.42
2:A:2617:C:O2'	4:E:245:ARG:NH1	2.52	0.42
2:A:2622:C:H2'	2:A:2623:G:O5'	2.20	0.42
2:A:2729:G:O5'	2:A:2729:G:H8	2.02	0.42
2:A:337:C:P	17:Y:24:ARG:HB3	2.60	0.42
2:A:492:A:N1	15:W:49:LYS:NZ	2.62	0.42
2:A:774:A:O2'	2:A:775:G:H8	2.02	0.42
3:D:82:TYR:HA	3:D:89:ASN:HB3	2.01	0.42
3:D:89:ASN:ND2	3:D:199:ARG:CZ	2.83	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:211:GLN:CG	4:E:212:GLY:H	2.18	0.42
2:A:2680:C:C5'	4:E:302:GLY:CA	2.98	0.42
5:F:6:TYR:O	5:F:11:ASN:N	2.52	0.42
5:F:215:ALA:HB2	5:F:239:ALA:N	2.32	0.42
5:F:39:GLN:O	5:F:42:ARG:HB3	2.19	0.42
5:F:52:ALA:C	5:F:54:LEU:N	2.73	0.42
5:F:52:ALA:O	5:F:55:ARG:CB	2.68	0.42
2:A:673:C:C2'	5:F:82:GLN:OE1	2.68	0.42
6:G:71:ALA:O	6:G:72:LYS:HE3	2.17	0.42
9:N:80:LYS:O	9:N:84:ARG:CG	2.44	0.42
2:A:558:G:O5'	9:N:91:LYS:HB2	2.20	0.42
10:O:105:GLU:HB2	10:O:106:LEU:H	1.57	0.42
10:O:45:ASP:O	10:O:45:ASP:OD1	2.37	0.42
12:Q:117:GLY:O	12:Q:118:ALA:CB	2.66	0.42
19:R:41:ALA:C	19:R:43:GLU:N	2.73	0.42
14:T:11:THR:CG2	14:T:12:ASP:N	2.58	0.42
20:U:47:TYR:HE2	20:U:50:ARG:NH1	2.16	0.42
2:A:995:C:P	20:U:54:LYS:NZ	2.93	0.42
21:V:43:GLU:N	21:V:44:GLN:NE2	2.68	0.42
15:W:46:PHE:O	15:W:48:ALA:N	2.53	0.42
15:W:68:ARG:HH21	15:W:110:LYS:CG	2.29	0.42
17:Y:105:ASP:N	17:Y:105:ASP:OD1	2.53	0.42
8:I:103:GLN:O	8:I:104:ALA:O	2.38	0.42
9:N:10:VAL:CG1	9:N:36:VAL:CB	2.88	0.42
22:2:43:PRO:C	22:2:45:ARG:N	2.71	0.42
16:X:14:ALA:HA	16:X:17:ASP:CB	2.48	0.42
2:A:1059:G:N2	31:K:127:ILE:O	2.52	0.42
31:K:89:SER:C	31:K:95:LYS:HD3	2.40	0.42
6:G:40:ILE:O	6:G:44:ILE:HG13	2.19	0.42
2:A:1559:G:H2'	2:A:1559:G:N3	2.35	0.42
24:0:33:ALA:CB	24:0:66:LYS:N	2.77	0.42
23:3:47:VAL:N	23:3:48:GLU:OE1	2.52	0.42
25:4:5:LEU:CD1	25:4:60:ASN:ND2	2.67	0.42
27:6:40:TYR:CA	27:6:50:PHE:CE1	3.03	0.42
2:A:686:G:C8	28:7:6:GLN:O	2.73	0.42
2:A:1022:G:N1	2:A:1140:C:C6	2.88	0.42
2:A:1278:A:OP1	19:R:36:THR:CB	2.61	0.42
2:A:489:G:H1'	2:A:1284:A:N7	2.35	0.42
2:A:1629:U:O2	2:A:2698:U:C4'	2.68	0.42
2:A:2385:C:O2	2:A:2386:C:N1	2.49	0.42
2:A:2522:U:C2	2:A:2543:G:O6	2.73	0.42
2:A:2531:A:C2	2:A:2532:G:C1'	3.02	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2571:C:O2	2:A:2574:G:H1'	2.20	0.42
2:A:2649:U:C2	2:A:2650:U:C5	3.07	0.42
2:A:2652:C:C4	2:A:2653:U:C5	2.90	0.42
2:A:2737:G:O6	2:A:2738:A:N6	2.52	0.42
2:A:2744:G:O2'	2:A:2745:C:H5'	2.20	0.42
2:A:2774:C:C2'	2:A:2775:A:H8	2.30	0.42
2:A:2817:G:C4	2:A:2818:G:C8	3.08	0.42
2:A:295:G:C8	2:A:345:A:C2	3.08	0.42
2:A:530:G:C5'	2:A:561:G:O6	2.59	0.42
2:A:752:A:C8	2:A:752:A:O5'	2.72	0.42
2:A:777:A:N7	2:A:793:A:H2	2.17	0.42
3:D:134:ILE:CG2	3:D:135:PRO:CD	2.93	0.42
3:D:156:ALA:C	3:D:158:GLY:H	2.23	0.42
5:F:100:LEU:HA	5:F:100:LEU:HD23	1.66	0.42
5:F:111:VAL:O	5:F:115:LEU:HD23	2.19	0.42
5:F:22:PHE:O	5:F:24:THR:OG1	2.38	0.42
5:F:45:ASP:HB3	5:F:98:ARG:HG3	2.01	0.42
6:G:150:SER:O	6:G:151:ILE:O	2.37	0.42
7:H:43:THR:HG21	7:H:51:VAL:O	2.20	0.42
7:H:90:GLY:HA2	7:H:159:LYS:CD	2.47	0.42
9:N:137:GLU:O	9:N:140:GLY:N	2.42	0.42
2:A:1137:G:P	9:N:60:ARG:NH2	2.90	0.42
9:N:82:THR:O	9:N:85:GLY:HA3	2.20	0.42
11:P:128:GLY:O	11:P:132:LYS:CD	2.65	0.42
11:P:65:ASP:HB3	11:P:109:LEU:N	2.35	0.42
12:Q:57:ARG:O	12:Q:60:ALA:HB3	2.20	0.42
13:S:10:MET:O	13:S:11:ARG:C	2.55	0.42
13:S:22:GLN:OE1	13:S:22:GLN:CA	2.67	0.42
14:T:29:THR:HB	14:T:31:PHE:HE1	1.83	0.42
20:U:16:LYS:HB3	20:U:17:VAL:H	1.39	0.42
20:U:72:HIS:ND1	20:U:110:VAL:CG1	2.81	0.42
20:U:94:VAL:CA	20:U:98:ILE:HD11	2.45	0.42
21:V:41:GLY:CA	21:V:54:TYR:CE1	3.03	0.42
17:Y:92:ASP:C	17:Y:94:SER:N	2.73	0.42
18:Z:171:VAL:CG2	18:Z:171:VAL:O	2.68	0.42
8:I:110:LEU:HD23	8:I:111:ASP:N	2.35	0.42
22:2:59:ILE:CG2	22:2:60:GLN:N	2.71	0.42
31:K:97:VAL:CA	31:K:99:LYS:HZ2	2.32	0.42
31:K:13:LEU:O	31:K:54:LEU:O	2.38	0.42
31:K:36:MET:SD	31:K:40:LYS:CD	3.08	0.42
2:A:221:A:H3'	2:A:221:A:H8	1.85	0.42
2:A:1924:C:C4	2:A:1925:C:N4	2.88	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2181:G:C2'	2:A:2182:G:H5''	2.49	0.42
2:A:270(C):C:H2'	2:A:270(D):C:C6	2.54	0.42
2:A:205:G:O2'	2:A:206:U:P	2.78	0.42
2:A:734:A:H2'	2:A:735:A:H8	1.83	0.42
2:A:618(A):C:N4	2:A:619:G:H21	2.18	0.42
2:A:1586:A:O2'	2:A:1587:A:C8	2.72	0.42
23:3:44:ARG:O	23:3:48:GLU:CD	2.55	0.42
28:7:28:ARG:O	28:7:31:LEU:CB	2.68	0.42
29:8:26:LYS:NZ	29:8:44:LYS:H	1.93	0.42
30:9:3:VAL:O	30:9:4:ARG:C	2.48	0.42
2:A:1129:A:H2	2:A:2570:G:H8	1.62	0.42
2:A:1203:G:N3	2:A:1203:G:H3'	2.34	0.42
2:A:1212:G:N7	2:A:1235:G:O6	2.53	0.42
2:A:197:A:H2'	2:A:198:C:O4'	2.20	0.42
2:A:2009:G:C6	2:A:2010:G:N7	2.88	0.42
2:A:2263:C:C6	2:A:2263:C:H5'	2.53	0.42
2:A:2395:C:H4'	25:4:28:ARG:HD2	2.01	0.42
2:A:2418:A:C2	2:A:2419:U:O2	2.73	0.42
2:A:2417:C:N4	2:A:2418:A:N6	2.68	0.42
2:A:2428:G:H1'	2:A:2429:G:C6	2.55	0.42
2:A:2458:G:H2'	2:A:2490:G:H1	1.85	0.42
2:A:2513:G:H2'	2:A:2514:U:C6	2.55	0.42
2:A:2537:U:C5	2:A:2538:C:C5	3.08	0.42
2:A:2635:C:N4	2:A:2784:C:N4	2.65	0.42
2:A:2648:C:C5	2:A:2649:U:C4	3.08	0.42
2:A:2684:U:C2'	2:A:2685:G:O5'	2.67	0.42
2:A:2691:C:O4'	2:A:2872:G:C8	2.73	0.42
2:A:2703:C:H2'	2:A:2704:C:C6	2.54	0.42
2:A:2744:G:N1	2:A:2745:C:N3	2.68	0.42
2:A:2788:C:C3'	2:A:2789:C:P	3.08	0.42
2:A:328:U:O3'	17:Y:92:ASP:OD2	2.38	0.42
2:A:342:G:C2	2:A:343:C:C2	3.08	0.42
2:A:624:C:O2	2:A:657:U:H5''	2.20	0.42
2:A:684:G:C4	2:A:775:G:C6	3.08	0.42
2:A:85:G:OP1	17:Y:65:VAL:CG2	2.60	0.42
2:A:965:C:C4'	2:A:2273:A:C4	2.95	0.42
4:E:242:ASN:O	4:E:243:PRO:C	2.58	0.42
4:E:193:PHE:HZ	4:E:312:ARG:O	2.00	0.42
5:F:52:ALA:O	5:F:55:ARG:N	2.53	0.42
5:F:84:VAL:N	5:F:87:ARG:HE	2.17	0.42
5:F:46:TYR:O	5:F:92:PRO:HB2	2.19	0.42
6:G:141:VAL:N	6:G:144:ARG:HH11	2.15	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:H:138:GLN:C	7:H:140:VAL:N	2.72	0.42
7:H:71:LEU:O	7:H:74:MET:N	2.52	0.42
9:N:63:ILE:CG2	9:N:71:TYR:CE1	3.03	0.42
9:N:82:THR:HG1	9:N:83:ILE:HG23	1.84	0.42
10:O:63:VAL:HG22	10:O:106:LEU:HD22	2.02	0.42
10:O:21:VAL:HG13	10:O:39:VAL:HG13	2.02	0.42
11:P:73:VAL:O	11:P:76:LEU:CB	2.65	0.42
11:P:80:ASP:O	11:P:92:ASP:HA	2.20	0.42
12:Q:70:ARG:HD2	12:Q:71:PHE:CE1	2.52	0.42
19:R:70:LEU:N	19:R:70:LEU:HD23	2.34	0.42
19:R:99:LYS:HB3	26:5:44:HIS:CE1	2.55	0.42
20:U:28:ARG:C	20:U:30:LYS:N	2.73	0.42
20:U:9:VAL:O	20:U:10:ARG:C	2.56	0.42
21:V:18:ASP:HB3	21:V:96:LEU:HA	2.00	0.42
15:W:32:ALA:HB2	15:W:35:ILE:HD11	1.94	0.42
15:W:60:ASN:HB3	15:W:61:ASN:OD1	2.19	0.42
17:Y:92:ASP:OD1	17:Y:94:SER:HB2	2.16	0.42
18:Z:40:ASP:HB2	18:Z:41:ARG:H	1.39	0.42
8:I:80:PRO:C	8:I:146:THR:O	2.58	0.42
2:A:76:C:HO2'	22:2:55:ARG:CA	2.23	0.42
2:A:70:G:H5'	2:A:75:G:H22	1.85	0.42
4:E:112:LEU:CD1	4:E:112:LEU:C	2.88	0.42
2:A:1056:G:O6	2:A:1102:C:OP2	2.37	0.42
2:A:279:C:H2'	2:A:360:G:O6	2.19	0.42
2:A:227:A:H8	2:A:227:A:O5'	2.02	0.42
2:A:1906:G:C2	2:A:1929:G:O6	2.73	0.42
2:A:863:A:H61	2:A:913:U:H3	1.67	0.42
2:A:2182:G:H2'	2:A:2183:C:C2	2.55	0.42
2:A:1050:A:N1	2:A:2751:G:C8	2.88	0.42
2:A:1636:C:O2'	2:A:1760:A:O2'	2.34	0.42
2:A:2352:A:N1	24:0:30:VAL:HG11	1.96	0.42
24:0:30:VAL:HG13	24:0:63:SER:HG	1.84	0.42
24:0:29:GLU:OE1	24:0:62:LEU:CD2	2.68	0.42
23:3:20:LYS:CA	23:3:23:LEU:HD12	2.36	0.42
25:4:59:PHE:H	25:4:62:ARG:NE	2.12	0.42
25:4:5:LEU:HB2	25:4:56:VAL:HG11	1.85	0.42
27:6:8:ILE:C	27:6:29:ARG:HH21	2.18	0.42
2:A:1661:G:H1	2:A:1999:C:N4	2.15	0.42
2:A:1799:G:H1	3:D:177:SER:CB	2.32	0.42
2:A:961:C:N4	2:A:2031:A:H1'	2.35	0.42
2:A:2092:U:C5	2:A:2227:A:N6	2.88	0.42
2:A:2218:G:C4	2:A:2219:G:N7	2.88	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2431:U:P	2:A:2432:A:OP2	2.78	0.42
2:A:2479:G:O2'	2:A:2480:C:O5'	2.38	0.42
2:A:2487:G:H2'	2:A:2488:A:C8	2.54	0.42
2:A:2546:U:N3	2:A:2567:G:N7	2.44	0.42
2:A:2572:A:OP1	2:A:2574:G:H4'	2.20	0.42
2:A:2693:A:C4	2:A:2694:G:N7	2.88	0.42
2:A:2749:A:N7	2:A:2750:A:C8	2.88	0.42
2:A:2785:C:C1'	4:E:100:TRP:NE1	2.48	0.42
2:A:2812:G:C2'	2:A:2813:A:O5'	2.68	0.42
2:A:571:A:O4'	2:A:2030:A:N6	2.52	0.42
2:A:957:A:OP2	12:Q:94:ARG:O	2.38	0.42
4:E:200:ASP:O	4:E:311:PHE:C	2.58	0.42
4:E:94:ARG:CB	4:E:95:PRO:HD3	2.40	0.42
5:F:115:LEU:O	5:F:117:ALA:N	2.53	0.42
7:H:142:GLU:O	7:H:143:LEU:C	2.58	0.42
9:N:17:CYS:O	9:N:45:VAL:CG1	2.58	0.42
9:N:38:VAL:C	9:N:39:VAL:CG2	2.84	0.42
9:N:50:GLU:HB2	9:N:51:GLU:H	1.64	0.42
10:O:7:ARG:C	10:O:8:LEU:CD2	2.87	0.42
12:Q:93:ILE:CG2	12:Q:94:ARG:H	2.30	0.42
19:R:22:ARG:NH2	19:R:69:ASP:HA	2.35	0.42
19:R:75:LEU:O	19:R:77:ARG:C	2.58	0.42
2:A:2292:C:OP2	13:S:25:ARG:NH2	2.53	0.42
15:W:46:PHE:O	15:W:49:LYS:N	2.52	0.42
15:W:68:ARG:O	15:W:110:LYS:CA	2.66	0.42
15:W:8:ARG:CB	15:W:102:HIS:ND1	2.83	0.42
17:Y:57:GLY:CA	17:Y:97:ARG:NH2	2.50	0.42
18:Z:6:LYS:HA	18:Z:31:SER:CB	2.48	0.42
2:A:110:G:C2	2:A:111:A:C5	3.07	0.42
2:A:1603:A:C2'	2:A:1604:C:H6	2.17	0.42
16:X:9:HIS:CB	16:X:26:PHE:HA	2.42	0.42
31:K:122:GLU:HB3	31:K:126:LYS:NZ	2.31	0.42
31:K:52:MET:CE	31:K:53:ILE:N	2.78	0.42
14:T:46:ALA:O	14:T:49:LEU:N	2.38	0.42
2:A:120:U:C5	2:A:150:C:N3	2.88	0.42
2:A:1857:G:H2'	2:A:1858:G:N7	2.31	0.42
2:A:738:G:H2'	2:A:739:G:O4'	2.20	0.42
2:A:1602:U:H3'	2:A:1602:U:C6	2.55	0.42
2:A:931:G:OP2	23:3:27:GLY:HA3	2.19	0.41
2:A:1365:A:H5''	25:4:3:LYS:HE3	2.01	0.41
26:5:41:LEU:O	26:5:42:SER:O	2.38	0.41
2:A:2611:U:H5	26:5:4:HIS:HE2	1.60	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:6:8:ILE:H	27:6:8:ILE:CD1	2.14	0.41
2:A:594:U:C4'	29:8:58:MET:CE	2.98	0.41
29:8:6:THR:O	29:8:8:LYS:C	2.59	0.41
2:A:1299:G:H5'	2:A:1301:A:H1'	2.00	0.41
2:A:2077:A:N3	2:A:2435:A:H8	2.16	0.41
2:A:2317:C:C2'	2:A:2318:G:C8	3.03	0.41
2:A:2333:A:C4'	2:A:2335:A:O4'	2.68	0.41
2:A:2539:C:O2	2:A:2539:C:H2'	2.20	0.41
2:A:2567:G:N1	2:A:2568:C:N4	2.68	0.41
2:A:2576:G:H4'	2:A:2577:A:H5'	2.01	0.41
2:A:746:A:H2'	2:A:2611:U:HO2'	1.83	0.41
2:A:2616:C:O2	2:A:2617:C:C6	2.73	0.41
2:A:2694:G:O5'	2:A:2694:G:H8	2.02	0.41
2:A:2783:G:C4	2:A:2784:C:C6	3.08	0.41
2:A:2832:U:C1'	2:A:2834:G:N2	2.62	0.41
2:A:2837:G:C6	2:A:2882:A:N1	2.88	0.41
2:A:566:U:P	21:V:81:ARG:NH2	2.93	0.41
2:A:586:A:C6	2:A:809:G:O2'	2.60	0.41
3:D:125:ILE:HG22	3:D:126:GLY:H	1.80	0.41
2:A:2786:U:H5'	4:E:100:TRP:HB2	2.01	0.41
4:E:87:GLU:CA	4:E:93:GLN:N	2.75	0.41
5:F:200:PRO:HB3	5:F:205:ARG:HD3	2.02	0.41
5:F:168:ARG:CA	5:F:233:THR:HG22	2.48	0.41
5:F:44:GLN:HB3	5:F:45:ASP:H	1.76	0.41
6:G:140:ARG:CB	6:G:144:ARG:HH12	2.33	0.41
6:G:25:MET:SD	6:G:128:LEU:CB	3.08	0.41
7:H:91:VAL:C	7:H:159:LYS:HZ2	2.23	0.41
9:N:23:ALA:O	9:N:26:VAL:HG23	2.20	0.41
9:N:41:ALA:O	9:N:44:ALA:N	2.53	0.41
10:O:116:SER:O	10:O:117:LEU:C	2.58	0.41
10:O:17:ARG:CZ	10:O:46:ALA:C	2.89	0.41
11:P:55:GLN:HG3	11:P:56:LYS:N	2.35	0.41
12:Q:72:VAL:CB	12:Q:83:PHE:HZ	2.33	0.41
19:R:86:ARG:O	19:R:87:TYR:HD2	2.03	0.41
17:Y:47:THR:C	17:Y:48:VAL:HG23	2.33	0.41
22:2:23:LEU:O	22:2:24:LYS:C	2.56	0.41
31:K:135:MET:HE3	31:K:137:ILE:HG13	2.02	0.41
31:K:96:ILE:HG23	31:K:138:GLU:HG3	1.71	0.41
31:K:18:ALA:HB3	31:K:43:ASN:ND2	2.35	0.41
2:A:481:G:O2'	2:A:482:A:C8	2.71	0.41
2:A:1521:G:H3'	2:A:1522:G:O4'	2.19	0.41
2:A:1906:G:H1'	2:A:1929:G:N7	2.34	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:815:C:H5'	2:A:1224:G:H22	1.83	0.41
2:A:618(A):C:C5	2:A:619:G:N2	2.88	0.41
24:0:67:VAL:HG11	24:0:74:LYS:HE2	2.02	0.41
2:A:988:A:H62	23:3:13:ILE:CG2	2.33	0.41
25:4:16:TYR:CE1	25:4:37:SER:OG	2.73	0.41
2:A:126:A:N7	2:A:127:A:C5	2.88	0.41
2:A:1638:C:H4'	2:A:2709:G:H22	1.83	0.41
2:A:2012:G:OP1	15:W:98:LYS:CG	2.65	0.41
2:A:2187:G:H2'	2:A:2188:C:C4'	2.50	0.41
2:A:2208:U:C2'	2:A:2209:C:O4'	2.68	0.41
2:A:2090:G:N1	2:A:2230:G:C6	2.71	0.41
2:A:2082:A:N6	2:A:2237:G:H1'	2.35	0.41
2:A:2352:A:H2'	2:A:2353:G:C5'	2.50	0.41
2:A:2537:U:O2'	2:A:2538:C:H5'	2.20	0.41
2:A:1952:A:C1'	2:A:2560:C:HO2'	2.22	0.41
2:A:2568:C:O2	2:A:2568:C:H2'	2.19	0.41
2:A:25:U:H5''	15:W:80:PRO:N	2.19	0.41
2:A:2682:U:H1'	4:E:49:THR:CA	2.50	0.41
2:A:1456:G:C2	2:A:2704:C:C2	2.87	0.41
2:A:1638:C:H5'	2:A:2710:C:H1'	1.98	0.41
2:A:2785:C:H4'	4:E:100:TRP:N	2.35	0.41
2:A:2801:A:OP1	2:A:2802:G:O4'	2.38	0.41
2:A:327:G:C2	2:A:328:U:C6	3.08	0.41
2:A:654:A:C2	2:A:655:A:C8	3.09	0.41
2:A:796:C:H2'	2:A:797:C:C6	2.56	0.41
2:A:2682:U:C5	4:E:48:MET:HE2	2.21	0.41
5:F:7:ASP:HB3	5:F:13:ASP:HB2	2.01	0.41
5:F:166:ILE:O	5:F:167:ASP:C	2.59	0.41
5:F:203:ALA:C	5:F:205:ARG:H	2.22	0.41
5:F:140:VAL:CG1	5:F:236:THR:HA	2.50	0.41
2:A:675:A:C5'	5:F:69:HIS:C	2.87	0.41
6:G:102:GLY:C	6:G:134:LEU:HD12	2.27	0.41
12:Q:49:VAL:HG13	12:Q:50:VAL:N	2.02	0.41
12:Q:64:ALA:O	12:Q:66:ASN:N	2.53	0.41
2:A:564:C:C4'	20:U:37:GLN:OE1	2.63	0.41
20:U:39:LEU:O	20:U:42:ALA:N	2.52	0.41
17:Y:54:ASP:C	17:Y:56:ALA:H	2.24	0.41
18:Z:125:PRO:HB2	18:Z:126:GLY:H	1.71	0.41
18:Z:148:THR:CB	18:Z:166:LEU:H	2.33	0.41
8:I:102:LEU:O	8:I:106:HIS:HB2	2.19	0.41
22:2:28:LEU:O	22:2:29:ASN:C	2.59	0.41
22:2:34:GLN:HB2	22:2:35:ALA:H	1.73	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:X:17:ASP:C	16:X:20:PHE:CE1	2.93	0.41
31:K:122:GLU:CB	31:K:126:LYS:CE	2.74	0.41
8:I:52:GLN:HA	8:I:55:GLN:NE2	2.34	0.41
2:A:1936:A:C6	2:A:1945:G:N3	2.88	0.41
2:A:706:A:H2'	2:A:707:G:O4'	2.21	0.41
2:A:329:G:H8	2:A:329:G:OP2	2.03	0.41
2:A:272:G:H1	2:A:365:C:H42	1.68	0.41
2:A:1202:C:N3	2:A:1243:G:N2	2.56	0.41
2:A:1443:G:C2	2:A:1444:G:H1'	2.54	0.41
7:H:139:ARG:HG3	7:H:139:ARG:H	1.62	0.41
2:A:1377:G:O5'	2:A:1377:G:H8	2.02	0.41
2:A:981:A:C8	2:A:982:C:C5	3.08	0.41
25:4:63:PHE:HB3	25:4:64:GLY:H	1.47	0.41
2:A:16:G:C5'	26:5:18:MET:SD	3.04	0.41
29:8:58:MET:HA	29:8:61:MET:CG	2.49	0.41
2:A:1274:A:C4	2:A:1302:A:C2	3.09	0.41
2:A:1328:G:N2	2:A:1330:C:C2	2.88	0.41
2:A:142(A):A:OP2	2:A:1143:A:N7	2.53	0.41
2:A:1783:A:C2	2:A:2588:G:H1'	2.56	0.41
2:A:1788:C:O2'	2:A:1789:A:H5'	2.20	0.41
2:A:1996:C:O2	2:A:1997:G:H4'	2.21	0.41
2:A:2246:G:H1	2:A:2258:C:N4	2.18	0.41
2:A:2250:G:H8	2:A:2250:G:C3'	2.22	0.41
2:A:2331:G:H4'	24:0:70:ILE:HB	1.96	0.41
2:A:2341:G:N7	2:A:2342:C:N4	2.68	0.41
2:A:2436:G:C2	2:A:2437:U:C1'	3.02	0.41
2:A:2462:U:O2	2:A:2463:C:C6	2.73	0.41
2:A:2476:A:H3'	2:A:2476:A:C8	2.55	0.41
2:A:2486:G:C6	2:A:2487:G:N7	2.89	0.41
2:A:2519:U:H6	2:A:2519:U:H2'	1.59	0.41
2:A:2661:G:N3	2:A:2662:A:C8	2.86	0.41
2:A:1457:A:H2	2:A:2703:C:C4	2.32	0.41
2:A:270(P):C:H4'	8:I:42:ALA:HB1	2.02	0.41
2:A:2830:G:C6	2:A:2831:G:N7	2.89	0.41
2:A:2886:G:N3	2:A:2887:U:C6	2.89	0.41
2:A:322:A:H2	2:A:341:G:C6	2.37	0.41
2:A:556:G:H2'	2:A:557:U:O4'	2.20	0.41
2:A:626:U:H3'	2:A:627:A:C5'	2.49	0.41
2:A:775:G:H5'	2:A:777:A:C1'	2.25	0.41
2:A:944:G:H2'	2:A:944:G:N3	2.35	0.41
3:D:205:VAL:HB	3:D:206:LYS:HD3	2.01	0.41
3:D:77:VAL:CG1	3:D:111:VAL:O	2.67	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:251:PRO:O	4:E:252:GLN:CG	2.68	0.41
4:E:268:LEU:HD11	4:E:271:ILE:HG13	2.02	0.41
2:A:605:C:P	5:F:105:LYS:HG2	2.60	0.41
5:F:242:GLU:O	5:F:245:GLU:CD	2.56	0.41
6:G:136:ARG:N	6:G:136:ARG:HD2	2.36	0.41
6:G:20:LYS:H	6:G:76:ARG:HB3	1.85	0.41
10:O:14:SER:H	10:O:95:GLY:CA	2.34	0.41
10:O:88:ARG:HB2	10:O:92:SER:OG	2.19	0.41
12:Q:151:SER:HB3	12:Q:155:GLY:HA2	2.03	0.41
12:Q:70:ARG:HB2	12:Q:71:PHE:CD1	2.55	0.41
20:U:60:LEU:N	20:U:60:LEU:HD23	2.34	0.41
21:V:49:GLU:HA	21:V:53:LYS:HZ2	1.75	0.41
15:W:18:ARG:O	15:W:19:LEU:C	2.59	0.41
17:Y:20:HIS:O	17:Y:21:LYS:C	2.58	0.41
18:Z:104:SER:O	18:Z:105:GLN:CD	2.59	0.41
18:Z:136:VAL:O	18:Z:137:ASP:OD1	2.38	0.41
18:Z:149:ALA:HB1	18:Z:164:PRO:CA	2.47	0.41
8:I:124:LEU:HA	8:I:145:VAL:HB	2.02	0.41
22:2:2:VAL:CG1	22:2:3:LEU:H	2.25	0.41
22:2:46:ILE:HG22	22:2:47:LYS:N	2.35	0.41
2:A:1339:G:O5'	2:A:1339:G:C8	2.73	0.41
6:G:56:ARG:CA	6:G:63:ILE:HG13	2.51	0.41
2:A:2721:A:C2'	2:A:2722:G:H8	2.20	0.41
8:I:134:HIS:O	8:I:136:GLU:N	2.54	0.41
2:A:1530:G:P	2:A:1539:G:H1	2.43	0.41
24:O:16:SER:O	24:O:17:ASN:HB2	2.20	0.41
23:3:26:LEU:HG	23:3:26:LEU:H	1.46	0.41
26:5:42:SER:C	26:5:43:HIS:HD1	2.22	0.41
29:8:26:LYS:CG	29:8:44:LYS:CA	2.69	0.41
2:A:1031:G:O4'	30:9:8:LYS:NZ	2.43	0.41
2:A:1818:U:O2	3:D:153:LEU:N	2.52	0.41
2:A:2276:G:HO2'	2:A:2277:G:C5'	2.24	0.41
2:A:2303:G:C2	2:A:2314:C:C2	3.08	0.41
2:A:2343:C:C4'	2:A:2373:G:O3'	2.57	0.41
2:A:2418:A:O2'	2:A:2419:U:C5'	2.68	0.41
2:A:2423:U:H5'	2:A:2423:U:N1	2.26	0.41
2:A:2436:G:N2	2:A:2437:U:H1'	2.34	0.41
2:A:2441:C:HO2'	2:A:2442:C:C5'	2.27	0.41
2:A:2453:A:HO2'	2:A:2454:G:H5'	1.65	0.41
2:A:2491:U:H5'	2:A:2570:G:C5'	2.44	0.41
2:A:2547:U:C5	2:A:2566:A:N3	2.88	0.41
2:A:2694:G:C5	2:A:2695:C:C5	3.07	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2747:G:N2	2:A:2754:U:H3	2.16	0.41
2:A:2771:C:N4	2:A:2772:C:N4	2.69	0.41
2:A:2820:A:O2'	4:E:207:GLY:C	2.59	0.41
2:A:2818:G:H1	2:A:2828:C:H42	1.67	0.41
2:A:2836:U:N3	2:A:2883:A:N6	2.68	0.41
2:A:389:G:C1'	2:A:2413:G:H4'	2.50	0.41
2:A:468:G:H2'	2:A:469:G:H5'	2.02	0.41
2:A:606:U:OP1	5:F:105:LYS:CD	2.61	0.41
2:A:988:A:OP1	23:3:11:SER:CA	2.64	0.41
1:B:5:C:H2'	1:B:6:C:H6	1.85	0.41
3:D:144:GLU:HA	3:D:150:GLY:O	2.20	0.41
3:D:152:GLN:OE1	3:D:152:GLN:N	2.51	0.41
3:D:81:GLU:C	3:D:83:ASP:OD2	2.48	0.41
4:E:44:TYR:CD1	4:E:307:LEU:O	2.71	0.41
5:F:149:LYS:CB	5:F:152:GLU:HG3	2.39	0.41
5:F:1:MET:HB2	5:F:2:GLU:H	1.59	0.41
7:H:140:VAL:CA	7:H:143:LEU:HD22	2.50	0.41
7:H:37:HIS:CE1	7:H:67:THR:HG21	2.55	0.41
7:H:51:VAL:HG22	7:H:68:ARG:HG3	2.02	0.41
7:H:82:TYR:CD1	7:H:137:LYS:N	2.78	0.41
2:A:2674:G:C4'	10:O:30:ARG:HG3	2.40	0.41
10:O:63:VAL:HG22	10:O:102:VAL:HG11	2.02	0.41
10:O:65:THR:HG1	10:O:67:ARG:CG	2.26	0.41
12:Q:25:GLY:O	12:Q:26:LYS:HG3	2.06	0.41
19:R:28:LEU:HD13	19:R:32:GLY:H	1.85	0.41
1:B:49:C:P	13:S:110:THR:HG1	2.38	0.41
13:S:123:ILE:O	13:S:126:GLY:N	2.40	0.41
13:S:82:TYR:O	13:S:86:LEU:HD12	2.19	0.41
21:V:14:VAL:HG11	21:V:19:VAL:HG23	2.02	0.41
21:V:71:ILE:HG22	21:V:72:ARG:N	2.35	0.41
17:Y:11:GLN:HA	17:Y:21:LYS:NZ	2.35	0.41
17:Y:30:ASP:OD2	17:Y:31:LEU:CG	2.61	0.41
17:Y:32:ARG:HB3	17:Y:33:GLU:OE2	2.21	0.41
18:Z:118:HIS:O	18:Z:119:ASN:CB	2.67	0.41
18:Z:18:MET:O	18:Z:36:ARG:NE	2.29	0.41
22:2:51:LYS:C	22:2:54:ALA:CB	2.88	0.41
2:A:143:C:O2'	2:A:144:C:O4'	2.34	0.41
2:A:2304:G:H5'	6:G:105:SER:O	2.20	0.41
31:K:135:MET:CE	31:K:137:ILE:CG1	2.98	0.41
31:K:100:VAL:HG21	31:K:137:ILE:HG23	1.99	0.41
2:A:1070:A:H8	2:A:1097:U:O5'	2.03	0.41
31:K:66:PHE:HB3	31:K:67:THR:H	1.55	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:227:A:N1	2:A:2407:G:N9	2.68	0.41
8:I:63:ALA:O	8:I:67:LYS:CG	2.54	0.41
8:I:134:HIS:CE1	8:I:135:PRO:HD2	2.54	0.41
2:A:1324:G:N2	2:A:1331:A:C4	2.89	0.41
18:Z:131:PRO:C	18:Z:133:GLU:H	2.23	0.41
2:A:364:C:H2'	2:A:365:C:C5	2.55	0.41
2:A:211:A:H2'	2:A:212:G:O4'	2.20	0.41
2:A:2395:C:C5'	25:4:28:ARG:HH11	2.34	0.41
25:4:6:HIS:CE1	25:4:55:ARG:CG	3.02	0.41
27:6:8:ILE:CA	27:6:29:ARG:CZ	2.88	0.41
2:A:124:G:H2'	28:7:19:ARG:NH2	2.35	0.41
29:8:16:ILE:CG1	29:8:22:VAL:HG21	2.23	0.41
2:A:1130:U:O2'	2:A:1131:G:H8	2.03	0.41
2:A:1239:G:N3	2:A:1240:U:C5	2.88	0.41
2:A:1239:G:H2'	2:A:1240:U:H6	1.85	0.41
2:A:1273:U:H5''	2:A:1646:C:N4	2.36	0.41
2:A:2096:U:H2'	2:A:2097:C:C6	2.55	0.41
2:A:2289:G:C2	2:A:2290:G:C4	3.09	0.41
2:A:2419:U:OP1	27:6:24:THR:CG2	2.69	0.41
2:A:2431:U:H2'	2:A:2433:A:OP2	2.20	0.41
2:A:2485:G:C2'	2:A:2486:G:C4'	2.97	0.41
2:A:2459:A:N1	2:A:2494:G:C5	2.89	0.41
2:A:2522:U:O2	2:A:2543:G:C6	2.74	0.41
2:A:2524:G:C6	2:A:2525:G:C5	3.09	0.41
2:A:2546:U:C3'	2:A:2546:U:C6	3.03	0.41
2:A:2574:G:C5'	2:A:2575:C:P	2.99	0.41
2:A:2074:U:H1'	2:A:2598:A:H1'	2.02	0.41
2:A:2023:G:H4'	2:A:2618:G:H5''	2.02	0.41
2:A:2531:A:N1	2:A:2658:C:O2	2.53	0.41
2:A:2683:C:C4	2:A:2684:U:C5	3.09	0.41
2:A:26:G:H1	2:A:27:G:N2	2.05	0.41
2:A:2729:G:C6	2:A:2730:C:C4	3.07	0.41
2:A:2756:U:H2'	2:A:2756:U:O2	2.18	0.41
2:A:2842:G:O5'	2:A:2842:G:H8	2.04	0.41
1:B:5:C:H2'	1:B:6:C:C6	2.55	0.41
3:D:108:ASN:O	3:D:109:LEU:C	2.59	0.41
3:D:175:LEU:HD12	3:D:179:GLU:C	2.17	0.41
3:D:93:ILE:HD11	3:D:115:ILE:HD11	2.02	0.41
4:E:180:ILE:HG23	4:E:183:ASP:OD2	2.20	0.41
4:E:80:ALA:N	4:E:185:GLY:O	2.53	0.41
4:E:71:THR:HG22	4:E:299:SER:CB	2.03	0.41
5:F:40:ALA:HB1	5:F:100:LEU:HB2	2.02	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:163:HIS:O	5:F:166:ILE:CA	2.62	0.41
5:F:1:MET:C	5:F:18:LEU:HD21	2.38	0.41
5:F:38:ALA:O	5:F:40:ALA:N	2.53	0.41
5:F:56:THR:O	5:F:79:ARG:CD	2.68	0.41
6:G:106:PHE:O	6:G:107:GLY:C	2.58	0.41
7:H:10:ILE:O	7:H:11:PRO:O	2.39	0.41
7:H:102:LEU:O	7:H:113:GLU:HA	2.21	0.41
7:H:123:GLU:CD	7:H:123:GLU:N	2.73	0.41
7:H:124:VAL:HA	7:H:130:ILE:HG13	2.03	0.41
7:H:91:VAL:H	7:H:159:LYS:HD2	1.86	0.41
9:N:44:ALA:O	9:N:45:VAL:HG23	2.21	0.41
9:N:55:GLU:O	9:N:58:GLU:N	2.53	0.41
2:A:2640:G:C4'	9:N:70:PHE:HD2	2.29	0.41
9:N:96:GLU:C	9:N:98:PHE:N	2.73	0.41
11:P:110:GLY:C	11:P:111:ALA:O	2.51	0.41
12:Q:46:VAL:CG1	12:Q:124:ALA:CB	2.90	0.41
12:Q:140:TYR:C	12:Q:142:LYS:N	2.72	0.41
12:Q:91:HIS:C	12:Q:92:VAL:CG1	2.81	0.41
19:R:21:TYR:O	19:R:25:ALA:CB	2.69	0.41
19:R:67:LEU:C	19:R:69:ASP:N	2.72	0.41
13:S:9:PRO:HG3	13:S:14:ARG:CB	2.51	0.41
13:S:22:GLN:H	13:S:22:GLN:CD	2.20	0.41
13:S:23:ARG:HH21	13:S:35:VAL:CB	2.34	0.41
14:T:54:THR:O	14:T:56:ARG:N	2.47	0.41
20:U:117:ARG:NH1	20:U:118:GLN:CD	2.74	0.41
20:U:17:VAL:O	20:U:20:ARG:CB	2.66	0.41
20:U:25:TRP:O	20:U:26:GLY:C	2.58	0.41
21:V:19:VAL:CG1	21:V:21:ARG:NH2	2.58	0.41
21:V:50:ASP:O	21:V:54:TYR:CE1	2.73	0.41
2:A:565:C:OP1	21:V:79:GLN:O	2.38	0.41
18:Z:107:GLU:C	18:Z:109:GLN:N	2.70	0.41
18:Z:70:GLN:HG3	18:Z:72:ASP:HB3	2.02	0.41
18:Z:78:PRO:O	18:Z:79:ILE:HG12	2.12	0.41
8:I:144:HIS:CG	8:I:144:HIS:O	2.73	0.41
16:X:35:GLY:C	16:X:37:VAL:H	2.24	0.41
31:K:43:ASN:O	31:K:47:ALA:HB2	2.20	0.41
16:X:44:GLN:CD	16:X:45:TYR:CA	2.86	0.41
2:A:1936:A:C6	2:A:1945:G:C2	3.09	0.41
2:A:1906:G:C6	2:A:1929:G:N1	2.89	0.41
2:A:2182:G:C4	2:A:2183:C:C4	3.07	0.41
2:A:191:A:H62	2:A:204:A:H62	1.66	0.41
2:A:1811:G:H2'	2:A:1812:A:C8	2.55	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:0:28:GLY:O	24:0:62:LEU:HD22	2.20	0.41
23:3:1:MET:CG	23:3:1:MET:O	2.65	0.41
23:3:27:GLY:C	23:3:28:LEU:HD23	2.41	0.41
2:A:2884:U:O4	26:5:43:HIS:HA	2.20	0.41
30:9:2:LYS:C	30:9:4:ARG:N	2.74	0.41
2:A:1021:A:C2	2:A:1023:U:H1'	2.55	0.41
2:A:1451:C:H6	2:A:1453:A:H4'	1.85	0.41
2:A:1647:G:H4'	2:A:1648:C:O5'	2.20	0.41
2:A:1935:G:H2'	2:A:1962:C:N4	2.35	0.41
2:A:563:G:C6	2:A:2018:G:C6	3.08	0.41
2:A:2351:G:H5'	2:A:2352:A:OP1	2.19	0.41
2:A:2491:U:C2'	2:A:2492:U:C5'	2.88	0.41
2:A:2530:A:C2'	2:A:2531:A:C5'	2.71	0.41
2:A:2533:A:H3'	2:A:2534:A:H8	1.85	0.41
2:A:2540:C:O2	2:A:2541:A:C1'	2.69	0.41
2:A:2656:U:H2'	2:A:2657:A:H5'	2.01	0.41
2:A:2648:C:N4	2:A:2672:G:N1	2.52	0.41
2:A:2692:C:C4	2:A:2718:G:N1	2.87	0.41
2:A:2831:G:O2'	2:A:2883:A:H2'	2.20	0.41
2:A:29:U:H6	2:A:29:U:O5'	2.03	0.41
2:A:612:G:C4'	2:A:616:A:N6	2.67	0.41
2:A:669:G:N3	2:A:669:G:C2'	2.83	0.41
2:A:673:C:N4	2:A:808:G:N1	2.68	0.41
2:A:676:A:H8	2:A:2069:G:H21	1.69	0.41
2:A:974(A):C:H6	2:A:1186:G:C2	2.39	0.41
3:D:104:ILE:HB	3:D:106:PRO:CG	2.49	0.41
4:E:77:PRO:O	4:E:79:ARG:N	2.49	0.41
5:F:167:ASP:OD2	5:F:232:LEU:CD2	2.63	0.41
5:F:167:ASP:HB2	5:F:232:LEU:CB	2.51	0.41
5:F:89:ALA:CB	5:F:90:HIS:CD2	3.04	0.41
6:G:24:HIS:HB2	6:G:72:LYS:CD	2.51	0.41
7:H:98:GLN:HB2	7:H:103:VAL:HG23	1.97	0.41
9:N:70:PHE:HB2	9:N:71:TYR:H	1.65	0.41
11:P:109:LEU:HD13	11:P:110:GLY:CA	2.49	0.41
11:P:133:VAL:C	11:P:135:GLY:N	2.72	0.41
12:Q:136:TRP:C	12:Q:139:ALA:HB3	2.37	0.41
12:Q:20:ILE:HG13	12:Q:21:SER:OG	2.20	0.41
2:A:1287:A:H5'	19:R:104:ARG:HD2	1.97	0.41
19:R:37:THR:HA	19:R:111:LEU:C	2.40	0.41
13:S:60:SER:O	13:S:88:ALA:CA	2.43	0.41
20:U:98:ILE:CB	20:U:106:PHE:CD1	3.04	0.41
20:U:18:LEU:HD11	20:U:30:LYS:HA	2.03	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:U:20:ARG:NH1	21:V:75:LYS:HZ2	2.17	0.41
20:U:24:PHE:HB2	20:U:28:ARG:HD2	2.02	0.41
20:U:44:THR:OG1	21:V:77:GLY:CA	2.66	0.41
20:U:93:LYS:N	21:V:10:LYS:NZ	2.68	0.41
21:V:31:ASP:O	21:V:33:VAL:N	2.53	0.41
18:Z:92:VAL:C	18:Z:124:ALA:HB2	2.41	0.41
8:I:78:THR:O	8:I:79:ILE:HG13	2.21	0.41
22:2:35:ALA:C	22:2:37:GLY:N	2.73	0.41
2:A:2857:G:C4	2:A:2859:G:OP2	2.73	0.41
2:A:176:G:C2	2:A:177:G:H1'	2.55	0.41
2:A:1539:G:H2'	2:A:1540:G:C5	2.55	0.41
2:A:1832:C:C4	2:A:1833:U:C4	3.08	0.41
2:A:319:C:H2'	2:A:320:A:C8	2.54	0.41
2:A:1216:G:N2	2:A:1234:U:C1'	2.82	0.41
2:A:1764:G:C2	2:A:1989:G:N3	2.88	0.41
2:A:1424:G:N1	2:A:1574:C:O2	2.53	0.41
2:A:1396:U:H3'	2:A:1396:U:H6	1.86	0.41
23:3:42:ALA:HB3	23:3:43:ILE:CD1	2.41	0.41
25:4:20:VAL:O	25:4:30:GLU:HG2	2.20	0.41
2:A:2081:C:H5''	25:4:35:VAL:HG21	1.99	0.41
29:8:51:ALA:O	29:8:54:GLU:HG3	2.20	0.41
2:A:1238:G:C5	2:A:1239:G:C8	3.08	0.41
2:A:1667:G:C8	2:A:1667:G:OP2	2.64	0.41
2:A:2235:G:C6	2:A:2236:C:C4	3.08	0.41
2:A:2263:C:H2'	2:A:2264:C:H6	1.85	0.41
2:A:2313:C:OP1	6:G:51:ARG:HB3	2.14	0.41
2:A:2339:G:C2	2:A:2340:G:C4	3.08	0.41
2:A:2353:G:H2'	2:A:2354:G:O5'	2.20	0.41
2:A:247:G:O3'	2:A:386:G:N2	2.54	0.41
2:A:2555:U:O2'	2:A:2556:C:P	2.78	0.41
2:A:2606:C:C2	2:A:2607:G:C8	3.08	0.41
2:A:2711:A:C3'	2:A:2712:U:H5'	2.50	0.41
2:A:2809:A:N3	2:A:2811:G:O6	2.54	0.41
2:A:792:G:C4	2:A:2440:C:C2	3.09	0.41
2:A:784:A:N7	2:A:792:G:C4	2.89	0.41
2:A:997:G:H5''	20:U:92:ARG:CD	2.44	0.41
4:E:105:HIS:HB3	4:E:106:SER:H	1.56	0.41
4:E:267:ARG:CD	4:E:297:LYS:CB	2.98	0.41
5:F:196:THR:CG2	5:F:197:SER:H	2.24	0.41
5:F:164:ALA:HB1	5:F:232:LEU:HD12	1.71	0.41
5:F:61:PHE:HB3	5:F:65:ARG:NH1	2.35	0.41
2:A:673:C:C5'	5:F:82:GLN:NE2	2.83	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:24:HIS:CB	6:G:72:LYS:CD	2.98	0.41
6:G:97:GLN:HB3	6:G:106:PHE:CD2	2.52	0.41
7:H:82:TYR:CE1	7:H:137:LYS:CB	3.02	0.41
7:H:145:ALA:HA	7:H:148:ARG:HG3	2.01	0.41
7:H:25:VAL:CB	7:H:78:VAL:HG21	2.44	0.41
8:I:28:ASN:O	8:I:32:LYS:CG	2.69	0.41
9:N:132:LEU:HA	9:N:132:LEU:HD12	1.92	0.41
12:Q:134:PHE:O	12:Q:137:ARG:HD2	2.20	0.41
12:Q:140:TYR:CE1	12:Q:147:VAL:CG1	2.80	0.41
12:Q:50:VAL:CA	12:Q:51:GLU:OE1	2.69	0.41
19:R:91:GLN:O	19:R:92:GLY:C	2.54	0.41
21:V:65:ARG:O	21:V:93:ILE:CA	2.69	0.41
21:V:78:VAL:HG22	21:V:82:ARG:HB2	2.03	0.41
15:W:69:LEU:CD2	15:W:109:GLU:HB2	2.50	0.41
17:Y:55:PHE:O	17:Y:56:ALA:O	2.39	0.41
18:Z:172:LEU:C	18:Z:172:LEU:CD2	2.81	0.41
18:Z:2:GLU:HA	18:Z:54:ILE:CG2	2.24	0.41
18:Z:77:ALA:HA	18:Z:78:PRO:HD2	1.77	0.41
8:I:68:LEU:HD22	8:I:72:LEU:CD2	2.49	0.41
2:A:65:C:H2'	2:A:66:C:H6	1.85	0.41
16:X:28:VAL:C	16:X:30:ASP:H	2.23	0.41
16:X:33:SER:C	16:X:37:VAL:CB	2.87	0.41
2:A:2307:G:O2'	2:A:2311:A:C6	2.62	0.41
2:A:1061:U:OP1	2:A:1062:G:H8	2.03	0.41
31:K:117:ASN:O	31:K:118:ALA:O	2.39	0.41
31:K:42:PHE:CE2	31:K:56:VAL:HG11	2.55	0.41
2:A:1544:C:C2	2:A:1545:A:H1'	2.55	0.41
2:A:1526:G:C2	2:A:545(A):A:N7	2.77	0.41
2:A:754:C:O2'	2:A:1618:A:H2	2.03	0.41
6:G:83:PHE:C	6:G:85:GLN:N	2.72	0.41
25:4:51:ASP:N	25:4:51:ASP:OD1	2.54	0.41
2:A:359:A:C2	2:A:361:G:N1	2.89	0.41
2:A:1470:G:N2	2:A:1522:G:N2	2.67	0.41
2:A:261:G:H2'	2:A:262:A:H8	1.86	0.41
24:0:14:ARG:CD	24:0:15:ASP:N	2.83	0.41
25:4:14:ILE:HG23	25:4:16:TYR:HD1	1.71	0.41
27:6:29:ARG:C	27:6:31:THR:N	2.71	0.41
27:6:46:LYS:C	27:6:47:HIS:ND1	2.74	0.41
2:A:1031:G:C1'	30:9:8:LYS:HZ1	2.33	0.41
2:A:1027:A:N6	2:A:1126:A:N3	2.68	0.41
2:A:15:G:C2	2:A:16:G:H1'	2.55	0.41
2:A:2022:U:H1'	2:A:2034:U:C2	2.56	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2049:G:N1	2:A:2619:C:N4	2.66	0.41
2:A:2207:C:N4	2:A:2218:G:C6	2.89	0.41
2:A:2228:G:C3'	2:A:2228:G:C8	3.03	0.41
2:A:2316:C:O3'	6:G:151:ILE:CG1	2.62	0.41
2:A:2454:G:C2	2:A:2455:G:N9	2.89	0.41
2:A:2488:A:C5	2:A:2489:G:N7	2.89	0.41
2:A:2458:G:N7	2:A:2490:G:N1	2.68	0.41
2:A:1953:A:N7	2:A:2550:G:H1'	2.35	0.41
2:A:2604:U:C2'	2:A:2605:U:H5'	2.49	0.41
2:A:2625:G:O2'	2:A:2626:C:H5'	2.20	0.41
2:A:2634:G:C6	2:A:2785:C:N4	2.88	0.41
2:A:628:G:H2'	2:A:629:G:H8	1.86	0.41
2:A:769:G:H2'	2:A:770:G:H8	1.85	0.41
2:A:775:G:C2	2:A:787:U:H2'	2.56	0.41
2:A:817:C:H42	2:A:1190:G:H1	1.67	0.41
2:A:904:C:C1'	18:Z:166:LEU:CD2	2.98	0.41
1:B:8:U:H2'	1:B:9:G:C8	2.55	0.41
3:D:166:LYS:HA	3:D:172:ILE:N	2.30	0.41
3:D:167:GLU:N	3:D:182:MET:CE	2.51	0.41
3:D:77:VAL:HG11	3:D:109:LEU:O	2.20	0.41
3:D:89:ASN:O	3:D:105:ALA:CA	2.66	0.41
4:E:41:PHE:CD1	4:E:193:PHE:CE1	3.09	0.41
4:E:216:ARG:NH2	4:E:255:GLN:CA	2.77	0.41
2:A:2679:A:O3'	4:E:302:GLY:HA2	2.06	0.41
5:F:144:PHE:HE2	5:F:156:LEU:HD22	1.86	0.41
5:F:3:ALA:HB2	5:F:18:LEU:HD23	2.03	0.41
5:F:210:ALA:O	5:F:211:ASP:CG	2.59	0.41
7:H:129:LYS:CA	7:H:130:ILE:HD12	2.31	0.41
7:H:140:VAL:C	7:H:143:LEU:CD2	2.84	0.41
7:H:59:HIS:C	7:H:61:ARG:N	2.72	0.41
7:H:99:GLY:C	7:H:101:LYS:H	2.22	0.41
9:N:136:SER:O	9:N:138:THR:CA	2.66	0.41
10:O:27:GLY:C	10:O:28:SER:O	2.56	0.41
10:O:60:ALA:CA	10:O:85:VAL:O	2.69	0.41
11:P:64:ILE:HD11	11:P:106:VAL:HA	1.86	0.41
11:P:132:LYS:O	11:P:135:GLY:HA3	2.19	0.41
11:P:51:PHE:N	11:P:51:PHE:CD1	2.88	0.41
12:Q:31:PHE:CZ	12:Q:87:LYS:O	2.73	0.41
12:Q:61:LEU:O	12:Q:62:GLU:O	2.38	0.41
19:R:47:PHE:C	19:R:49:ASP:N	2.74	0.41
20:U:11:ARG:O	20:U:12:ARG:C	2.59	0.41
21:V:61:VAL:HG22	21:V:97:GLY:N	2.35	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:W:96:ILE:HD13	15:W:96:ILE:C	2.41	0.41
17:Y:20:HIS:CA	17:Y:67:LEU:CD2	2.98	0.41
18:Z:18:MET:C	18:Z:19:ILE:HD12	2.38	0.41
18:Z:40:ASP:CB	18:Z:41:ARG:NE	2.56	0.41
22:2:50:ARG:O	22:2:51:LYS:C	2.57	0.41
16:X:37:VAL:HG12	16:X:38:ALA:N	2.36	0.41
2:A:2304:G:C1'	6:G:105:SER:CB	2.98	0.41
2:A:2304:G:H4'	6:G:105:SER:HB2	1.97	0.41
6:G:63:ILE:CG2	6:G:64:ARG:N	2.83	0.41
31:K:99:LYS:CD	31:K:99:LYS:N	2.84	0.41
2:A:1102:C:H2'	2:A:1103:A:C8	2.56	0.41
8:I:63:ALA:N	8:I:66:LYS:HE2	2.35	0.41
2:A:2181:G:H3'	2:A:2182:G:H5''	2.02	0.41
2:A:815:C:H2'	2:A:816:C:H6	1.85	0.41
2:A:711:G:H1	2:A:720:C:N4	2.17	0.41
2:A:619:G:C8	2:A:619:G:C3'	3.03	0.41
23:3:40:THR:O	23:3:41:PRO:C	2.59	0.41
23:3:47:VAL:HA	23:3:50:VAL:HG21	1.81	0.41
26:5:31:THR:HG22	26:5:42:SER:HA	2.02	0.41
26:5:6:VAL:H	26:5:8:LYS:HZ3	1.67	0.41
28:7:30:ILE:O	28:7:31:LEU:O	2.38	0.41
30:9:17:VAL:HG13	30:9:18:ARG:N	2.36	0.41
2:A:1034:G:O4'	30:9:18:ARG:NH2	2.54	0.41
2:A:1166:C:O2	2:A:1184:G:N2	2.54	0.41
2:A:1303:G:H1	2:A:1625:C:N4	2.19	0.41
2:A:1647:G:H4'	2:A:1648:C:H5'	2.03	0.41
2:A:2206:C:C2	2:A:2207:C:C6	3.09	0.41
2:A:2272:U:O2	2:A:2272:U:O4'	2.38	0.41
2:A:2334:G:OP1	2:A:2334:G:O4'	2.39	0.41
2:A:2447:G:H4'	2:A:2448:A:O5'	2.20	0.41
2:A:247:G:C6	29:8:11:LYS:NZ	2.80	0.41
2:A:2516:G:C2'	2:A:2517:C:O5'	2.68	0.41
2:A:1128:A:N6	2:A:2518:A:N6	2.51	0.41
2:A:2548:G:O5'	2:A:2548:G:H8	2.04	0.41
2:A:2056:G:N7	2:A:2577:A:C5	2.88	0.41
2:A:2053:G:N2	2:A:2617:C:C6	2.89	0.41
2:A:2679:A:C5	2:A:2680:C:H5	2.32	0.41
2:A:2693:A:N3	2:A:2694:G:N7	2.68	0.41
2:A:26:G:H8	2:A:26:G:O5'	2.03	0.41
2:A:2710:C:H2'	2:A:2711:A:H8	1.86	0.41
2:A:2748:A:C5	2:A:2749:A:C2	2.95	0.41
2:A:2763:G:H8	2:A:2763:G:O5'	2.04	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2774:C:H2'	2:A:2775:A:C8	2.47	0.41
2:A:606:U:H5'	5:F:103:ASN:ND2	2.35	0.41
2:A:628:G:H2'	2:A:629:G:C8	2.55	0.41
1:B:24:G:N7	1:B:56:G:N9	2.68	0.41
3:D:157:ALA:C	3:D:194:VAL:HG11	2.29	0.41
2:A:1567:A:C4	3:D:84:PRO:HG3	2.55	0.41
2:A:1655:A:O3'	4:E:212:GLY:CA	2.68	0.41
4:E:86:TYR:N	4:E:86:TYR:CD1	2.88	0.41
5:F:25:PRO:CG	5:F:26:VAL:H	2.34	0.41
7:H:75:VAL:CG1	7:H:76:GLU:N	2.71	0.41
9:N:101:VAL:O	9:N:102:ARG:HG2	2.21	0.41
9:N:135:ILE:CA	9:N:139:LEU:HD11	2.51	0.41
9:N:75:PRO:HD3	9:N:136:SER:CB	2.44	0.41
10:O:77:ILE:C	10:O:78:ARG:CG	2.89	0.41
2:A:2275:C:C2	12:Q:103:ALA:HB2	2.46	0.41
12:Q:133:GLU:OE1	12:Q:134:PHE:CA	2.69	0.41
12:Q:42:TYR:H	12:Q:43:PRO:CD	2.34	0.41
12:Q:66:ASN:CB	12:Q:70:ARG:HH21	2.24	0.41
12:Q:72:VAL:CG2	12:Q:135:ALA:HB2	2.42	0.41
13:S:86:LEU:HA	13:S:125:ALA:HB2	2.03	0.41
14:T:14:GLU:O	14:T:15:PRO:O	2.38	0.41
17:Y:71:VAL:CB	17:Y:93:THR:H	2.26	0.41
18:Z:41:ARG:H	18:Z:41:ARG:CD	2.33	0.41
18:Z:70:GLN:C	18:Z:72:ASP:H	2.24	0.41
24:O:41:ARG:C	24:O:67:VAL:HG22	2.41	0.41
23:3:12:PRO:C	23:3:15:TYR:HD1	2.25	0.41
15:W:19:LEU:HD21	26:5:25:LEU:N	2.36	0.41
28:7:13:ALA:O	28:7:16:HIS:C	2.54	0.41
28:7:21:ARG:HH21	28:7:44:VAL:HG23	1.85	0.41
29:8:23:MET:SD	29:8:48:PHE:CA	3.08	0.41
2:A:1012:U:H3'	2:A:1012:U:C6	2.56	0.41
2:A:1163:G:N1	2:A:1164:G:C8	2.89	0.41
2:A:1252:G:C8	2:A:1253:A:C1'	3.03	0.41
2:A:126:A:C5	28:7:18:PHE:CG	3.09	0.41
2:A:1781:C:C3'	2:A:1781:C:C6	3.04	0.41
2:A:2077:A:OP2	2:A:2238:G:N1	2.49	0.41
2:A:2239:G:H5''	2:A:2240:C:OP2	2.21	0.41
2:A:2572:A:C3'	2:A:2572:A:C8	3.04	0.41
2:A:2588:G:H2'	2:A:2589:A:O4'	2.21	0.41
2:A:2648:C:C6	2:A:2649:U:C5	3.09	0.41
2:A:2686:G:C6	2:A:2687:U:C6	3.09	0.41
2:A:2691:C:C2'	2:A:2692:C:O5'	2.69	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2743:C:N1	2:A:2762:G:N2	2.69	0.41
2:A:2830:G:H2'	2:A:2883:A:N1	2.36	0.41
2:A:517:C:O2'	15:W:18:ARG:NH2	2.49	0.41
2:A:530:G:O2'	2:A:531:C:O5'	2.36	0.41
2:A:556:G:H2'	2:A:557:U:C6	2.56	0.41
2:A:780:G:O6	3:D:233:ASP:CG	2.59	0.41
3:D:78:ALA:HA	3:D:94:ASN:HD22	1.86	0.41
5:F:151:GLN:OE1	5:F:154:VAL:HG23	2.07	0.41
5:F:220:THR:O	5:F:225:PRO:CD	2.68	0.41
7:H:124:VAL:N	7:H:125:PRO:CD	2.83	0.41
7:H:7:PRO:HA	7:H:50:THR:OG1	2.21	0.41
7:H:71:LEU:C	7:H:73:ASN:H	2.22	0.41
9:N:48:GLY:C	9:N:50:GLU:N	2.74	0.41
10:O:81:GLU:CG	10:O:82:ASN:N	2.66	0.41
12:Q:16:ARG:N	12:Q:20:ILE:HG12	2.34	0.41
19:R:51:LEU:O	19:R:54:LEU:N	2.44	0.41
1:B:49:C:P	13:S:110:THR:OG1	2.79	0.41
20:U:11:ARG:CG	20:U:12:ARG:H	2.34	0.41
20:U:49:ASP:HA	20:U:52:ASN:CB	2.50	0.41
20:U:68:GLY:O	20:U:70:ARG:C	2.58	0.41
21:V:73:LYS:C	21:V:74:TYR:CD2	2.94	0.41
15:W:4:LYS:HG2	15:W:106:ILE:HG12	2.03	0.41
17:Y:41:ARG:HD3	17:Y:111:ARG:HG2	2.02	0.41
17:Y:51:LEU:N	17:Y:97:ARG:HH21	2.16	0.41
18:Z:112:LEU:HD12	18:Z:177:THR:CG2	2.51	0.41
18:Z:34:LEU:HD13	18:Z:35:ASP:N	2.16	0.41
8:I:129:VAL:HA	8:I:130:PRO:HD2	1.96	0.41
22:2:48:GLU:HB3	22:2:49:LEU:H	1.54	0.41
2:A:1341:U:N3	2:A:1398:C:H5'	2.35	0.41
22:2:61:GLY:O	22:2:65:ASP:N	2.47	0.41
22:2:9:ARG:HB2	22:2:59:ILE:HD11	2.03	0.41
2:A:1394:U:H5''	2:A:1604:C:P	2.61	0.41
2:A:131:G:H1	2:A:148:C:H42	1.69	0.41
2:A:2306:C:C4	2:A:2311:A:N1	2.88	0.41
6:G:29:HIS:ND1	6:G:69:ILE:CG1	2.84	0.41
31:K:129:GLU:O	31:K:133:LYS:HE3	2.20	0.41
31:K:37:GLU:CA	31:K:41:ARG:HH12	1.95	0.41
2:A:1545:A:OP1	2:A:545(A):A:OP1	2.39	0.41
2:A:1614:A:H61	15:W:88:ARG:CA	2.33	0.41
2:A:94:G:O3'	22:2:41:GLU:OE1	2.39	0.41
2:A:1709:U:C2'	2:A:2859:G:N3	2.81	0.41
2:A:1998:G:O2'	2:A:2724:C:H1'	2.21	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:0:6:GLY:O	24:0:7:VAL:C	2.58	0.41
2:A:120:U:C6	2:A:150:C:N3	2.89	0.41
2:A:1529:A:H3'	2:A:1530:G:O4'	2.21	0.41
2:A:1315:C:N4	2:A:1337:G:H1	2.19	0.41
2:A:1174:A:N6	2:A:1177:A:N3	2.69	0.41
2:A:1498:C:H6	2:A:1576:U:O2'	2.00	0.41
2:A:1842:G:H2'	2:A:1843:C:O4'	2.21	0.41
2:A:816:C:N4	2:A:1192:G:O6	2.54	0.41
2:A:798:G:N1	2:A:799:G:C6	2.88	0.41
2:A:697:C:H2'	2:A:698:C:H6	1.85	0.41
2:A:1513:C:H2'	2:A:1514:U:C6	2.56	0.41
2:A:705:A:H8	2:A:705:A:OP2	2.04	0.41
2:A:1382:G:H2'	2:A:1383:C:C6	2.56	0.41
1:B:66:A:C2	1:B:108:C:C4	3.09	0.41
19:R:118:GLU:HA	19:R:118:GLU:OE2	2.19	0.41
24:0:26:PHE:N	24:0:26:PHE:CD1	2.89	0.41
24:0:35:ASN:C	24:0:68:VAL:HG21	2.41	0.41
23:3:39:ASP:O	23:3:44:ARG:HB2	2.21	0.41
27:6:19:GLY:C	27:6:44:ALA:HB2	2.42	0.41
28:7:31:LEU:O	28:7:33:ARG:N	2.54	0.41
29:8:26:LYS:HE3	29:8:44:LYS:C	2.30	0.41
29:8:29:LYS:HB2	29:8:30:ARG:H	1.71	0.41
2:A:1023:U:H2'	2:A:1024:G:C4'	2.51	0.41
2:A:974(A):C:P	2:A:1186:G:H21	2.44	0.41
2:A:1265:A:HO2'	2:A:1266:G:P	2.44	0.41
2:A:1298:C:H4'	2:A:1302:A:N6	2.36	0.41
2:A:1364:G:C8	2:A:1364:G:C5'	3.00	0.41
2:A:1789:A:H2'	2:A:1790:C:H1'	2.03	0.41
2:A:2058:A:C8	2:A:2058:A:O5'	2.74	0.41
2:A:2279:G:N1	2:A:2280:G:C5	2.89	0.41
2:A:2327:A:N1	2:A:2328:A:H2	2.03	0.41
2:A:2330:G:H2'	2:A:2331:G:C4'	2.51	0.41
2:A:2355:C:C5'	2:A:2356:C:OP2	2.69	0.41
2:A:2396:G:O2'	25:4:27:THR:CA	2.69	0.41
2:A:826:U:P	2:A:2428:G:H3'	2.61	0.41
2:A:2468:G:H2'	2:A:2469:A:C8	2.56	0.41
2:A:2468:G:C2'	2:A:2469:A:C5'	2.96	0.41
2:A:2531:A:O5'	2:A:2531:A:H8	2.03	0.41
2:A:2533:A:C4'	2:A:2664:G:O2'	2.68	0.41
2:A:2543:G:C6	2:A:2544:G:O6	2.71	0.41
2:A:2689:U:O4'	2:A:2713:A:H2	2.00	0.41
2:A:2783:G:H2'	2:A:2784:C:O4'	2.21	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:532:A:OP1	20:U:25:TRP:CD1	2.74	0.41
2:A:2712:U:H6	2:A:712(A):A:H8	1.23	0.41
2:A:775:G:N2	2:A:788:A:OP2	2.52	0.41
1:B:59:A:O4'	6:G:144:ARG:NH2	2.53	0.41
3:D:143:ILE:HG21	3:D:153:LEU:CB	2.46	0.41
4:E:199:ALA:CA	4:E:314:ALA:HA	2.50	0.41
2:A:2733:A:N1	4:E:316:ARG:O	2.54	0.41
4:E:45:LYS:HD3	4:E:301:PRO:CG	2.51	0.41
5:F:56:THR:CG2	5:F:57:PRO:HD3	2.46	0.41
6:G:100:ASP:HB2	6:G:101:THR:H	1.66	0.41
6:G:141:VAL:C	6:G:143:LYS:N	2.74	0.41
6:G:144:ARG:N	6:G:144:ARG:HD2	2.36	0.41
6:G:145:ASP:HB2	13:S:15:GLU:HG3	2.01	0.41
7:H:10:ILE:HG13	7:H:49:ILE:CG1	2.51	0.41
2:A:1012:U:C2	9:N:21:ARG:NH1	2.80	0.41
12:Q:47:GLU:CB	12:Q:123:ILE:HG12	2.48	0.41
12:Q:137:ARG:C	12:Q:139:ALA:N	2.74	0.41
12:Q:25:GLY:C	12:Q:27:GLY:H	2.24	0.41
12:Q:85:ILE:HB	12:Q:122:PHE:CE2	2.53	0.41
19:R:37:THR:HG22	19:R:111:LEU:HD23	2.02	0.41
19:R:20:LEU:HD13	19:R:21:TYR:CB	2.40	0.41
1:B:12:C:C2	13:S:10:MET:CE	3.03	0.41
13:S:36:ALA:CB	13:S:118:ILE:HD13	2.51	0.41
13:S:65:ASP:C	13:S:66:LEU:HD12	2.41	0.41
20:U:80:ILE:O	20:U:83:LEU:HB2	2.21	0.41
20:U:84:LYS:C	20:U:86:ALA:H	2.23	0.41
17:Y:101:LEU:O	17:Y:103:LEU:CD1	2.68	0.41
17:Y:47:THR:HA	17:Y:61:GLU:HA	2.03	0.41
17:Y:73:HIS:C	17:Y:91:LEU:HD12	2.26	0.41
18:Z:102:GLY:O	18:Z:103:ARG:O	2.39	0.41
18:Z:66:VAL:HG23	18:Z:69:VAL:CG2	2.51	0.41
8:I:92:SER:C	8:I:93:ILE:CG2	2.90	0.41
2:A:2305:A:C8	2:A:2306:C:C6	3.09	0.41
31:K:68:PHE:HB3	31:K:69:ILE:H	1.73	0.41
2:A:414:C:C4	2:A:2409:G:N1	2.81	0.41
2:A:1906:G:H1	2:A:1924:C:H42	1.69	0.41
2:A:256:A:H2'	2:A:257:A:H8	1.78	0.41
2:A:477:A:C6	2:A:478:A:N6	2.88	0.41
24:0:39:ARG:CB	24:0:69:PHE:HZ	2.35	0.40
24:0:37:LEU:CG	24:0:71:ASN:ND2	2.84	0.40
23:3:26:LEU:HD22	23:3:47:VAL:CG2	2.52	0.40
25:4:23:GLU:CG	25:4:29:PRO:CB	2.96	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:8:16:ILE:CA	29:8:22:VAL:HG22	2.50	0.40
29:8:23:MET:HE3	29:8:48:PHE:CB	2.51	0.40
2:A:2246:G:HO2'	2:A:2247:A:C5'	2.07	0.40
2:A:2257:U:O2'	2:A:2258:C:P	2.79	0.40
2:A:2347:C:C2	2:A:2348:U:H5	2.32	0.40
2:A:2381:C:C3'	2:A:2381:C:C6	3.04	0.40
2:A:2061:G:N9	2:A:2503:A:C2	2.89	0.40
2:A:2574:G:N3	2:A:2575:C:C6	2.88	0.40
2:A:2589:A:N1	2:A:2606:C:C4	2.89	0.40
2:A:2048:G:O6	2:A:2621:A:N1	2.54	0.40
2:A:2695:C:C2'	2:A:2696:U:C5	2.93	0.40
2:A:2717:G:C2'	2:A:2718:G:H5''	2.51	0.40
2:A:2768:C:C6	2:A:2768:C:C3'	3.04	0.40
2:A:2816:C:O2'	2:A:2817:G:O5'	2.39	0.40
2:A:2861:G:C4	2:A:2862:G:N7	2.89	0.40
2:A:297:C:C4	2:A:298:G:N3	2.90	0.40
2:A:388:G:H5'	2:A:389:G:OP2	2.20	0.40
2:A:669:G:C4	2:A:801:G:C6	3.09	0.40
2:A:922:U:O2	24:0:26:PHE:HZ	2.04	0.40
3:D:145:LEU:HD13	3:D:145:LEU:C	2.41	0.40
2:A:1819:A:C2'	3:D:177:SER:CA	2.64	0.40
5:F:6:TYR:H	5:F:139:VAL:HG12	1.86	0.40
6:G:71:ALA:C	6:G:72:LYS:CD	2.84	0.40
7:H:128:THR:CG2	7:H:129:LYS:H	2.27	0.40
7:H:57:GLU:HG2	7:H:57:GLU:H	1.68	0.40
8:I:3:VAL:CG1	8:I:21:VAL:HG21	2.47	0.40
10:O:115:ILE:O	10:O:121:VAL:HG21	2.21	0.40
10:O:34:ASN:C	10:O:62:VAL:HG21	2.40	0.40
2:A:1665:A:C4	10:O:67:ARG:NH1	2.89	0.40
12:Q:137:ARG:HD3	12:Q:138:ARG:CA	2.47	0.40
12:Q:74:ASN:N	12:Q:74:ASN:OD1	2.54	0.40
19:R:17:ARG:O	19:R:20:LEU:HB3	2.21	0.40
2:A:2839:G:H5''	19:R:46:GLY:HA2	2.02	0.40
14:T:10:GLY:N	14:T:52:THR:HB	2.33	0.40
14:T:10:GLY:CA	14:T:53:ASP:CG	2.89	0.40
20:U:34:ASN:O	20:U:38:THR:HG23	2.20	0.40
21:V:49:GLU:O	21:V:50:ASP:C	2.60	0.40
18:Z:35:ASP:OD1	18:Z:38:ALA:N	2.48	0.40
18:Z:92:VAL:HB	18:Z:93:GLU:H	1.72	0.40
8:I:84:GLY:O	8:I:85:GLU:CG	2.70	0.40
8:I:84:GLY:C	8:I:85:GLU:HG3	2.42	0.40
22:2:21:ASP:O	22:2:22:ASP:O	2.37	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:2:33:VAL:O	22:2:34:GLN:O	2.39	0.40
2:A:545(A):A:N7	2:A:1546:C:O2	2.53	0.40
2:A:264:C:O2'	2:A:265:A:H3'	2.22	0.40
2:A:1913:A:N6	2:A:1917:U:O5'	2.54	0.40
8:I:56:ARG:O	8:I:60:GLU:HB2	2.21	0.40
17:Y:81:LYS:HZ2	17:Y:81:LYS:CB	2.34	0.40
2:A:52:A:N1	2:A:178:G:O2'	2.46	0.40
2:A:1422:G:H2'	2:A:1423:G:H8	1.86	0.40
2:A:1802:A:OP2	2:A:1815:A:N6	2.51	0.40
2:A:1153:C:C4	2:A:1154:G:C6	3.09	0.40
2:A:2261:C:H3'	24:0:14:ARG:HE	1.85	0.40
24:0:71:ASN:O	24:0:73:GLY:N	2.54	0.40
23:3:37:LEU:HA	23:3:37:LEU:HD23	1.85	0.40
2:A:15:G:H21	26:5:18:MET:CE	2.34	0.40
28:7:21:ARG:O	28:7:22:MET:O	2.40	0.40
2:A:1612:C:O2	28:7:3:ARG:NH1	2.47	0.40
2:A:1008:C:HO2'	2:A:1009:A:H8	1.66	0.40
2:A:1163:G:O2'	2:A:1164:G:H5'	2.21	0.40
2:A:1363:C:O2	2:A:1364:G:H5'	2.21	0.40
2:A:1624:G:H2'	2:A:1625:C:C6	2.56	0.40
2:A:1638:C:C4'	2:A:2709:G:N2	2.84	0.40
2:A:2215:G:C2'	2:A:2216:G:O5'	2.70	0.40
2:A:2243:U:O2	2:A:2244:U:O4'	2.38	0.40
2:A:2251:G:OP2	2:A:2496:C:P	2.79	0.40
2:A:2320:A:C4	2:A:2333:A:C6	2.99	0.40
2:A:2376:A:N3	2:A:2376:A:H2'	2.35	0.40
2:A:2465:C:HO2'	2:A:2466:C:C5'	2.19	0.40
2:A:2491:U:O2	2:A:2491:U:C2'	2.69	0.40
2:A:2525:G:N2	2:A:2539:C:C6	2.90	0.40
2:A:2557:G:N9	2:A:2558:C:H5	2.19	0.40
2:A:2549:G:N2	2:A:2559:C:O2	2.44	0.40
2:A:2588:G:C6	2:A:2589:A:C5	3.09	0.40
2:A:2540:C:H5'	2:A:2741:A:H4'	2.02	0.40
2:A:2779:U:C5'	2:A:2781:A:C8	3.04	0.40
2:A:2870:C:H2'	2:A:2871:C:O5'	2.21	0.40
2:A:388:G:C2'	2:A:390:A:N7	2.77	0.40
2:A:495:G:O3'	15:W:62:HIS:NE2	2.52	0.40
2:A:611:C:O2'	2:A:616:A:H2	2.02	0.40
2:A:994:C:N3	20:U:53:LYS:CE	2.84	0.40
3:D:144:GLU:HB3	3:D:188:ARG:C	2.42	0.40
3:D:86:ARG:C	3:D:87:SER:HG	2.07	0.40
4:E:211:GLN:CD	4:E:211:GLN:C	2.79	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:196:THR:OG1	5:F:201:SER:CA	2.69	0.40
5:F:52:ALA:N	5:F:55:ARG:HE	2.13	0.40
6:G:140:ARG:HD2	6:G:144:ARG:CZ	2.51	0.40
9:N:135:ILE:O	9:N:139:LEU:HD22	2.20	0.40
9:N:57:TYR:HB2	9:N:135:ILE:CG2	2.52	0.40
9:N:96:GLU:O	9:N:99:GLU:N	2.54	0.40
10:O:102:VAL:HG11	10:O:106:LEU:HD11	2.03	0.40
11:P:106:VAL:HG21	11:P:122:ALA:CA	2.51	0.40
11:P:110:GLY:O	11:P:111:ALA:C	2.48	0.40
11:P:66:VAL:O	11:P:69:ILE:N	2.53	0.40
12:Q:28:ILE:CB	12:Q:62:GLU:HG2	2.48	0.40
13:S:81:ALA:O	13:S:83:LEU:CA	2.59	0.40
14:T:13:ILE:HD12	14:T:33:SER:HB2	2.03	0.40
20:U:52:ASN:HB2	20:U:53:LYS:H	1.65	0.40
20:U:8:ILE:N	20:U:8:ILE:CD1	2.36	0.40
21:V:3:ALA:O	21:V:14:VAL:N	2.52	0.40
17:Y:89:ARG:CB	17:Y:90:PRO:HD2	2.42	0.40
18:Z:111:GLY:O	18:Z:112:LEU:O	2.40	0.40
18:Z:172:LEU:HD21	18:Z:173:PRO:CD	2.29	0.40
18:Z:19:ILE:H	18:Z:36:ARG:N	2.18	0.40
22:2:22:ASP:HB2	22:2:23:LEU:H	1.78	0.40
2:A:1397:U:O2	2:A:1397:U:C2'	2.69	0.40
31:K:129:GLU:HB2	31:K:139:VAL:HG11	2.02	0.40
31:K:15:ALA:O	31:K:17:LYS:N	2.53	0.40
2:A:223:A:N1	2:A:407:G:O2'	2.46	0.40
2:A:1518:C:N1	2:A:1519:G:H1'	2.37	0.40
2:A:194:G:C6	2:A:195:A:C6	3.09	0.40
2:A:273:G:H2'	2:A:273(A):G:C8	2.56	0.40
24:0:38:VAL:C	24:0:69:PHE:CZ	2.95	0.40
24:0:65:GLY:C	24:0:66:LYS:CE	2.77	0.40
25:4:24:THR:C	25:4:26:SER:N	2.75	0.40
2:A:388:G:OP1	25:4:29:PRO:CG	2.68	0.40
26:5:6:VAL:CG1	26:5:7:PRO:N	2.83	0.40
27:6:45:LYS:C	27:6:46:LYS:NZ	2.73	0.40
28:7:21:ARG:O	28:7:22:MET:C	2.58	0.40
28:7:27:GLY:O	28:7:28:ARG:O	2.39	0.40
2:A:1027:A:N1	2:A:1126:A:C4	2.90	0.40
2:A:1249:U:H5''	20:U:4:ALA:CB	2.52	0.40
2:A:1668:A:C6	2:A:1674:G:C4	3.09	0.40
2:A:1953:A:N6	2:A:2550:G:C5'	2.85	0.40
2:A:1996:C:H2'	2:A:1997:G:O5'	2.22	0.40
2:A:1999:C:H1'	2:A:2687:U:O2'	2.21	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2049:G:C6	2:A:2619:C:N4	2.81	0.40
2:A:2190:G:H2'	2:A:2191:G:H8	1.87	0.40
2:A:2358:G:H22	29:8:52:LYS:NZ	2.18	0.40
2:A:2372:G:O6	2:A:2373:G:O6	2.39	0.40
2:A:2562:U:H2'	2:A:2563:U:H5'	2.02	0.40
2:A:2637:U:H5	2:A:2638:G:C6	2.37	0.40
2:A:2644:G:C8	2:A:2644:G:C5'	3.00	0.40
2:A:2646:C:C2'	2:A:2647:U:C5'	2.89	0.40
2:A:2710:C:H2'	2:A:2711:A:O4'	2.20	0.40
2:A:2779:U:O4'	2:A:2781:A:N7	2.55	0.40
2:A:308:G:HO2'	17:Y:54:ASP:CG	2.24	0.40
2:A:296:C:C2	2:A:344:G:N2	2.89	0.40
2:A:774:A:O2'	2:A:775:G:C8	2.73	0.40
3:D:128:ALA:HB1	3:D:189:ALA:C	2.41	0.40
3:D:146:LYS:O	3:D:149:ARG:HG2	2.21	0.40
3:D:69:ASP:HA	3:D:188:ARG:HH12	1.87	0.40
5:F:240:LEU:HA	5:F:243:VAL:CG2	2.41	0.40
5:F:32:GLY:C	5:F:36:ARG:HG2	2.41	0.40
5:F:36:ARG:HB2	5:F:37:ALA:H	1.53	0.40
5:F:84:VAL:HG23	5:F:85:LYS:HD3	1.30	0.40
5:F:93:LYS:CA	5:F:96:LYS:CE	2.57	0.40
7:H:9:GLU:CA	7:H:49:ILE:HD11	2.52	0.40
8:I:30:LEU:HA	8:I:33:GLN:HE21	1.87	0.40
10:O:63:VAL:CG2	10:O:102:VAL:HG11	2.51	0.40
12:Q:35:ASN:CB	12:Q:75:SER:CA	2.98	0.40
12:Q:65:ARG:NH2	12:Q:86:ARG:N	2.69	0.40
19:R:16:HIS:O	19:R:17:ARG:C	2.59	0.40
13:S:61:ALA:CB	13:S:88:ALA:CB	2.69	0.40
14:T:9:CYS:HB2	14:T:36:CYS:HB3	1.68	0.40
21:V:41:GLY:C	21:V:54:TYR:CE1	2.87	0.40
21:V:71:ILE:O	21:V:72:ARG:CB	2.60	0.40
15:W:100:THR:C	15:W:101:SER:OG	2.60	0.40
15:W:28:SER:O	15:W:31:GLU:HB3	2.22	0.40
15:W:27:LYS:H	15:W:71:VAL:HG23	1.87	0.40
2:A:25:U:H5'	15:W:80:PRO:HD2	2.01	0.40
17:Y:49:GLU:HB3	17:Y:97:ARG:HH11	1.85	0.40
18:Z:107:GLU:OE1	18:Z:107:GLU:N	2.35	0.40
18:Z:39:PHE:CA	18:Z:43:PHE:CZ	2.80	0.40
2:A:1342:A:O5'	2:A:1342:A:H8	2.05	0.40
2:A:72:U:HO2'	2:A:73:A:P	2.44	0.40
2:A:2305:A:N6	6:G:53:LYS:NZ	2.69	0.40
31:K:38:PHE:CG	31:K:67:THR:CG2	2.97	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:134:HIS:CD2	8:I:136:GLU:OE1	2.74	0.40
2:A:977:G:H2'	2:A:978:G:O4'	2.21	0.40
2:A:1857:G:H1	2:A:1884:A:H61	1.68	0.40
2:A:271:G:H2'	2:A:272:G:H8	1.85	0.40
2:A:1575:C:C3'	2:A:1575:C:C6	3.05	0.40
7:H:28:PRO:HB2	7:H:29:LYS:H	1.58	0.40
2:A:1484:G:C2	2:A:1506:C:C4	3.09	0.40
2:A:1206:G:H1'	2:A:1242:A:N6	2.36	0.40
2:A:1795:C:H6	2:A:1795:C:O5'	2.04	0.40
2:A:1895:C:H2'	2:A:1896:G:O4'	2.20	0.40
24:0:61:ALA:CB	24:0:81:ILE:CD1	2.50	0.40
2:A:930:U:OP1	23:3:37:LEU:HD21	2.22	0.40
23:3:48:GLU:O	23:3:51:ALA:CB	2.69	0.40
25:4:5:LEU:CD1	25:4:8:LYS:CB	2.99	0.40
26:5:58:LEU:HB3	26:5:59:ALA:H	1.48	0.40
2:A:1274:A:C2	2:A:1302:A:H2	2.40	0.40
2:A:1378:A:HO2'	2:A:1379:A:P	2.44	0.40
2:A:2014:A:C4	2:A:2015:A:N1	2.89	0.40
2:A:2045:C:H2'	2:A:2046:G:O4'	2.21	0.40
2:A:2070:G:H2'	2:A:2071:A:H8	1.81	0.40
2:A:2197:U:O2'	2:A:2224:G:N2	2.46	0.40
2:A:2270:G:C6	2:A:2271:G:C2	3.07	0.40
2:A:965:C:HO2'	2:A:2272:U:H6	1.03	0.40
2:A:2411:A:O2'	2:A:2412:A:C8	2.48	0.40
2:A:2416:C:O2	2:A:2416:C:C2'	2.69	0.40
2:A:2417:C:H2'	2:A:2418:A:C8	2.55	0.40
2:A:957:A:N1	2:A:2458:G:O3'	2.55	0.40
2:A:2475:C:OP1	2:A:2476:A:OP2	2.39	0.40
2:A:2533:A:C5'	2:A:2664:G:O2'	2.69	0.40
2:A:2805:G:O3'	2:A:2807:G:P	2.79	0.40
2:A:2813:A:C2	2:A:2888:C:C2	3.10	0.40
2:A:294:A:C3'	2:A:294:A:C8	3.05	0.40
2:A:296:C:N3	2:A:297:C:C4	2.90	0.40
2:A:30:G:H2'	2:A:31:C:O4'	2.21	0.40
2:A:636:G:O5'	11:P:126:SER:HB2	2.21	0.40
2:A:81:G:H2'	2:A:82:G:O4'	2.21	0.40
1:B:42:C:H2'	1:B:43:C:C6	2.56	0.40
3:D:103:ILE:CG1	3:D:104:ILE:N	2.78	0.40
4:E:179:ASP:N	4:E:179:ASP:OD1	2.55	0.40
5:F:154:VAL:O	5:F:157:LEU:HB2	2.20	0.40
5:F:158:GLU:HA	5:F:161:ASP:OD2	2.22	0.40
5:F:94:THR:HG23	5:F:95:GLU:N	2.37	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:57:A:O2'	6:G:13:MET:CG	2.62	0.40
7:H:73:ASN:ND2	7:H:137:LYS:HZ1	2.13	0.40
7:H:137:LYS:O	7:H:138:GLN:O	2.38	0.40
9:N:16:ASP:HA	9:N:45:VAL:HG22	1.47	0.40
9:N:54:VAL:HG11	9:N:138:THR:CG2	2.52	0.40
10:O:39:VAL:CG1	10:O:40:VAL:N	2.84	0.40
11:P:110:GLY:N	11:P:126:SER:HG	2.17	0.40
12:Q:131:ALA:N	12:Q:134:PHE:CE2	2.89	0.40
12:Q:61:LEU:HB2	12:Q:62:GLU:H	1.60	0.40
12:Q:62:GLU:C	12:Q:63:ALA:O	2.44	0.40
14:T:13:ILE:HG22	14:T:14:GLU:CD	2.42	0.40
14:T:53:ASP:CA	14:T:56:ARG:HG2	2.42	0.40
2:A:581:C:C5'	20:U:32:TYR:HB2	2.46	0.40
21:V:61:VAL:HG23	21:V:98:ILE:N	2.28	0.40
15:W:27:LYS:H	15:W:71:VAL:CG2	2.33	0.40
2:A:496:G:OP1	15:W:62:HIS:CE1	2.74	0.40
17:Y:80:GLU:CG	17:Y:86:GLU:HG2	2.46	0.40
16:X:58:MET:O	16:X:59:ASP:OD2	2.39	0.40
2:A:1080:C:C4'	31:K:126:LYS:CB	2.70	0.40
31:K:104:GLN:CA	31:K:107:GLU:HG3	2.52	0.40
31:K:73:PRO:CG	31:K:78:LEU:HD21	2.52	0.40
31:K:21:ALA:O	31:K:26:PRO:HD3	2.20	0.40
31:K:27:ALA:O	31:K:30:GLN:N	2.40	0.40
4:E:107:GLU:HG3	4:E:107:GLU:H	1.73	0.40
17:Y:3:GLN:HB2	17:Y:6:LYS:CD	2.49	0.40
2:A:357:A:H2'	2:A:358:U:O4'	2.22	0.40
2:A:812:C:H2'	2:A:813:U:H6	1.86	0.40
2:A:1882:C:C2'	2:A:1883:G:H5'	2.52	0.40
2:A:1153:C:H3'	2:A:1154:G:C8	2.56	0.40
2:A:1729:A:OP2	2:A:1730:U:C4	2.75	0.40
23:3:8:LEU:CB	23:3:32:GLN:N	2.73	0.40
25:4:14:ILE:CG2	25:4:37:SER:N	2.79	0.40
27:6:8:ILE:CG2	27:6:30:ASN:HB2	2.51	0.40
27:6:36:GLU:HB3	27:6:52:GLU:CB	2.29	0.40
28:7:30:ILE:HD13	28:7:33:ARG:NH1	1.84	0.40
28:7:34:ARG:HH11	28:7:42:LEU:CB	2.35	0.40
28:7:41:GLN:HB2	28:7:42:LEU:H	1.60	0.40
29:8:52:LYS:HE3	29:8:52:LYS:HB2	1.75	0.40
30:9:10:MET:CE	30:9:10:MET:C	2.89	0.40
2:A:996:A:N6	2:A:1159:U:H3	2.19	0.40
2:A:1208:C:C4	2:A:1240:U:O4	2.74	0.40
2:A:1355:G:H2'	2:A:1356:G:H8	1.87	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1328:G:H1	2:A:1647:G:H22	1.70	0.40
2:A:2069:G:C2	2:A:2443:C:N3	2.89	0.40
2:A:954:G:O2'	2:A:2274:A:C2	2.65	0.40
2:A:2319:G:OP2	13:S:9:PRO:HD3	2.21	0.40
2:A:2320:A:H8	2:A:2320:A:P	2.42	0.40
2:A:2322:A:N3	2:A:2323:G:C8	2.84	0.40
2:A:2421:G:C5'	27:6:4:ASP:CG	2.84	0.40
2:A:2553:G:H8	2:A:2553:G:H3'	1.86	0.40
2:A:2563:U:H3	2:A:2566:A:H8	1.69	0.40
2:A:2516:G:C6	2:A:2569:G:N2	2.88	0.40
2:A:2704:C:H2'	2:A:2705:A:C1'	2.51	0.40
2:A:2768:C:N4	2:A:2769:C:N4	2.57	0.40
2:A:27:G:H2'	2:A:28:A:C8	2.56	0.40
2:A:2808:U:C5'	2:A:2809:A:OP2	2.69	0.40
2:A:2850:A:C6	2:A:2851:A:C5	3.10	0.40
2:A:30:G:N2	2:A:511:U:H1'	2.37	0.40
2:A:2712:U:H5	2:A:712(A):A:H8	1.40	0.40
2:A:990:A:OP2	2:A:1185:C:OP1	2.39	0.40
1:B:10:C:H2'	1:B:11:C:H6	1.86	0.40
1:B:80:U:H2'	1:B:81:G:H8	1.85	0.40
3:D:140:VAL:CG1	3:D:190:THR:O	2.65	0.40
3:D:105:ALA:C	3:D:194:VAL:O	2.60	0.40
3:D:74:PRO:HG2	3:D:96:ALA:H	1.78	0.40
4:E:215:LYS:HG3	4:E:216:ARG:N	2.37	0.40
2:A:2052:G:C4'	4:E:239:GLY:H	2.35	0.40
2:A:2574:G:H1'	4:E:240:PRO:HG3	2.02	0.40
5:F:51:TYR:O	5:F:54:LEU:O	2.39	0.40
5:F:67:GLN:HB3	5:F:68:ALA:H	1.67	0.40
7:H:141:GLY:O	7:H:144:ALA:HB3	2.22	0.40
7:H:8:ILE:CD1	7:H:72:ALA:HB2	2.52	0.40
9:N:24:SER:HG	9:N:25:GLN:H	1.70	0.40
10:O:111:PHE:O	10:O:113:LYS:HB2	2.21	0.40
10:O:22:ILE:H	10:O:41:ALA:HB2	1.87	0.40
10:O:33:ALA:HB2	10:O:39:VAL:HG22	2.04	0.40
10:O:43:VAL:HG21	10:O:53:LYS:O	2.21	0.40
10:O:20:LEU:CG	10:O:44:LYS:HD3	2.47	0.40
10:O:9:LYS:HG3	10:O:18:GLU:HG2	2.03	0.40
11:P:129:ALA:N	11:P:132:LYS:HD3	2.35	0.40
12:Q:17:ARG:O	12:Q:22:GLY:O	2.38	0.40
12:Q:58:HIS:O	12:Q:61:LEU:CB	2.68	0.40
19:R:100:LEU:HA	19:R:100:LEU:HD13	1.91	0.40
19:R:62:ALA:HB3	19:R:80:PHE:CZ	2.52	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:S:34:LEU:CG	13:S:103:ASP:N	2.84	0.40
2:A:19:C:P	20:U:23:GLY:HA3	2.61	0.40
20:U:22:LYS:HB2	20:U:23:GLY:H	1.55	0.40
20:U:24:PHE:HB2	20:U:25:TRP:H	1.47	0.40
20:U:60:LEU:C	20:U:62:ILE:N	2.73	0.40
21:V:67:LYS:HE3	21:V:94:LYS:CD	2.39	0.40
15:W:24:ILE:HG22	15:W:35:ILE:CG1	2.52	0.40
18:Z:18:MET:C	18:Z:36:ARG:NE	2.75	0.40
18:Z:79:ILE:CG2	18:Z:80:HIS:CE1	2.92	0.40
2:A:72:U:H1'	22:2:57:LYS:HD2	2.03	0.40
2:A:145:G:H2'	2:A:146:G:C8	2.56	0.40
16:X:39:ASP:O	16:X:41:VAL:CA	2.70	0.40
31:K:113:MET:O	31:K:114:PRO:C	2.59	0.40
2:A:227:A:C6	2:A:2407:G:C8	3.10	0.40
2:A:1906:G:C5	2:A:1929:G:N1	2.90	0.40
1:B:15:A:H1'	1:B:109:G:C8	2.57	0.40
14:T:20:MET:HB3	14:T:30:HIS:HA	2.03	0.40
2:A:619:G:H8	2:A:619:G:H3'	1.86	0.40

All (142) 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	Distance(Å)	Clash(Å)
2:A:6:A:O4'	2:A:2902:C:C2'[8_554]	0.72	1.48
2:A:2899:G:N1	2:A:2901:C:C4[8_554]	0.79	1.41
2:A:6:A:C4'	2:A:2902:C:C2'[8_554]	0.97	1.23
2:A:2900:A:N7	2:A:2900:A:N6[8_554]	1.03	1.17
2:A:3:U:O4	2:A:2899:G:O2'[8_554]	1.09	1.11
2:A:2900:A:C6	2:A:2900:A:C6[8_554]	1.12	1.08
2:A:6:A:O4'	2:A:2902:C:C1'[8_554]	1.13	1.07
2:A:2900:A:C5	2:A:2900:A:C6[8_554]	1.14	1.06
2:A:2899:G:C2	2:A:2901:C:N3[8_554]	1.15	1.05
2:A:6:A:C4'	2:A:2902:C:O2'[8_554]	1.17	1.03
2:A:2899:G:C5	2:A:2901:C:N4[8_554]	1.20	1.00
2:A:5:A:C8	2:A:2901:C:C2'[8_554]	1.21	0.99
2:A:5:A:N7	2:A:2901:C:C1'[8_554]	1.23	0.97
2:A:5:A:N7	2:A:2901:C:N1[8_554]	1.26	0.94
2:A:2900:A:C5	2:A:2900:A:N6[8_554]	1.28	0.92
2:A:1:G:O6	2:A:2898:U:O2[8_554]	1.29	0.91
2:A:2899:G:C6	2:A:2901:C:N4[8_554]	1.32	0.88
2:A:2899:G:N1	2:A:2901:C:N3[8_554]	1.32	0.88
2:A:6:A:O4'	2:A:2902:C:C3'[8_554]	1.33	0.87

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:4:C:C5	2:A:2900:A:C2'[8_554]	1.35	0.85
2:A:3:U:C5	2:A:2900:A:O4'[8_554]	1.36	0.84
2:A:2899:G:N2	2:A:2901:C:N3[8_554]	1.38	0.82
2:A:1:G:O6	2:A:2898:U:C2'[8_554]	1.42	0.78
2:A:2899:G:C6	2:A:2901:C:C4[8_554]	1.42	0.78
2:A:5:A:N7	2:A:2901:C:C2'[8_554]	1.43	0.77
2:A:6:A:O5'	2:A:2902:C:C4'[8_554]	1.43	0.77
2:A:6:A:C4'	2:A:2902:C:C3'[8_554]	1.43	0.77
2:A:4:C:C5	2:A:2900:A:O2'[8_554]	1.46	0.74
2:A:1:G:C5	2:A:2898:U:O2'[8_554]	1.54	0.66
2:A:5:A:C8	2:A:2901:C:C1'[8_554]	1.55	0.65
2:A:5:A:C5	2:A:2901:C:N1[8_554]	1.55	0.65
2:A:99:U:OP2	2:A:101:G:O6[7_555]	1.55	0.65
2:A:2900:A:N1	2:A:2900:A:C4[8_554]	1.56	0.64
2:A:2899:G:C4	2:A:2901:C:N4[8_554]	1.57	0.63
4:E:93:GLN:NE2	4:E:96:LEU:CD1[8_554]	1.57	0.63
2:A:3:U:O4	2:A:2900:A:C8[8_554]	1.59	0.61
2:A:3:U:C6	2:A:2900:A:O4'[8_554]	1.59	0.61
2:A:4:C:C6	2:A:2900:A:O2'[8_554]	1.59	0.61
2:A:3:U:C4	2:A:2900:A:O4'[8_554]	1.60	0.60
2:A:6:A:C3'	2:A:2902:C:O3'[8_554]	1.60	0.60
2:A:5:A:N6	2:A:2901:C:C5[8_554]	1.62	0.58
2:A:2899:G:O6	2:A:2901:C:C5[8_554]	1.62	0.58
2:A:6:A:C1'	2:A:2902:C:C2'[8_554]	1.63	0.57
2:A:2900:A:C5	2:A:2900:A:N1[8_554]	1.63	0.57
2:A:2:G:O6	2:A:2899:G:C1'[8_554]	1.64	0.56
2:A:4:C:O2	2:A:2900:A:N3[8_554]	1.65	0.55
2:A:6:A:N9	2:A:2902:C:C6[8_554]	1.65	0.55
2:A:2899:G:N1	2:A:2901:C:N4[8_554]	1.65	0.55
2:A:5:A:N9	2:A:2901:C:O2[8_554]	1.66	0.54
2:A:4:C:C5	2:A:2901:C:O4'[8_554]	1.68	0.52
2:A:3:U:C4	2:A:2899:G:O2'[8_554]	1.69	0.51
2:A:6:A:O4'	2:A:2902:C:O4'[8_554]	1.69	0.51
2:A:2899:G:C2	2:A:2901:C:C4[8_554]	1.69	0.51
2:A:4:C:C4	2:A:2900:A:C2'[8_554]	1.70	0.50
2:A:1:G:C6	2:A:2898:U:C2'[8_554]	1.71	0.49
2:A:6:A:C3'	2:A:2902:C:C3'[8_554]	1.71	0.49
2:A:2:G:O6	2:A:2899:G:N9[8_554]	1.73	0.47
2:A:5:A:C6	2:A:2901:C:C5[8_554]	1.73	0.47
2:A:6:A:C5'	2:A:2902:C:O3'[8_554]	1.73	0.47
2:A:4:C:C2	2:A:2900:A:N3[8_554]	1.74	0.46
2:A:4:C:O2	2:A:2900:A:C2[8_554]	1.75	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:2899:G:C6	2:A:2901:C:C5[8_554]	1.75	0.45
2:A:2899:G:N1	2:A:2901:C:C5[8_554]	1.75	0.45
2:A:6:A:C4'	2:A:2902:C:O3'[8_554]	1.79	0.41
2:A:6:A:C1'	2:A:2902:C:C6[8_554]	1.81	0.39
2:A:2:G:O6	2:A:2899:G:N3[8_554]	1.82	0.38
2:A:3:U:C5	2:A:2900:A:C4'[8_554]	1.82	0.38
2:A:5:A:C4	2:A:2901:C:C2[8_554]	1.82	0.38
2:A:2899:G:N2	2:A:2901:C:C2[8_554]	1.82	0.38
2:A:2:G:O6	2:A:2899:G:C4[8_554]	1.83	0.37
2:A:5:A:C5	2:A:2901:C:C2[8_554]	1.83	0.37
2:A:5:A:N6	2:A:2901:C:C6[8_554]	1.83	0.37
2:A:6:A:O4'	2:A:2902:C:C4'[8_554]	1.83	0.37
2:A:1:G:C6	2:A:2898:U:O2'[8_554]	1.85	0.35
2:A:3:U:C5	2:A:2900:A:C5'[8_554]	1.86	0.34
2:A:6:A:C5'	2:A:2902:C:O2'[8_554]	1.86	0.34
2:A:6:A:O5'	2:A:2902:C:O3'[8_554]	1.87	0.33
2:A:2900:A:C2	2:A:2900:A:C2[8_554]	1.87	0.33
2:A:1:G:N7	2:A:2898:U:O3'[8_554]	1.89	0.31
2:A:6:A:OP2	2:A:2902:C:C5'[8_554]	1.89	0.31
2:A:1:G:O6	2:A:2898:U:C2[8_554]	1.91	0.29
2:A:5:A:C2'	2:A:2902:C:O4'[8_554]	1.91	0.29
2:A:2900:A:C6	2:A:2900:A:N6[8_554]	1.91	0.29
2:A:5:A:C6	2:A:2901:C:C6[8_554]	1.93	0.27
2:A:5:A:C2	2:A:2902:C:C4[8_554]	1.93	0.27
2:A:3:U:N3	2:A:2900:A:O4'[8_554]	1.94	0.26
2:A:3:U:O4	2:A:2899:G:C2'[8_554]	1.95	0.25
2:A:4:C:N3	2:A:2900:A:N3[8_554]	1.95	0.25
2:A:5:A:C2	2:A:2902:C:C5[8_554]	1.95	0.25
2:A:6:A:C1'	2:A:2902:C:C1'[8_554]	1.95	0.25
2:A:2899:G:N2	2:A:2901:C:O2[8_554]	1.95	0.25
2:A:5:A:C5	2:A:2901:C:C6[8_554]	1.96	0.24
2:A:6:A:O5'	2:A:2902:C:C3'[8_554]	1.96	0.24
2:A:5:A:C8	2:A:2901:C:O2'[8_554]	1.97	0.23
2:A:6:A:C8	2:A:2902:C:O4'[8_554]	1.97	0.23
2:A:3:U:N3	2:A:2900:A:N9[8_554]	1.98	0.22
2:A:4:C:C4	2:A:2901:C:O4'[8_554]	1.98	0.22
2:A:6:A:C3'	2:A:2902:C:C2'[8_554]	1.98	0.22
4:E:93:GLN:NE2	4:E:96:LEU:CD2[8_554]	1.98	0.22
2:A:6:A:O4'	2:A:2902:C:O2'[8_554]	1.99	0.21
2:A:2899:G:C2	2:A:2901:C:N4[8_554]	1.99	0.21
2:A:6:A:C1'	2:A:2902:C:C3'[8_554]	2.00	0.20
2:A:1:G:N7	2:A:2898:U:O2'[8_554]	2.01	0.19

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:1:G:C6	2:A:2898:U:O2[8_554]	2.01	0.19
2:A:6:A:C1'	2:A:2902:C:N1[8_554]	2.01	0.19
2:A:3:U:C4	2:A:2900:A:C8[8_554]	2.02	0.18
2:A:5:A:C8	2:A:2901:C:N1[8_554]	2.02	0.18
2:A:6:A:C5'	2:A:2902:C:C3'[8_554]	2.02	0.18
2:A:2900:A:N1	2:A:2900:A:N3[8_554]	2.02	0.18
2:A:2902:C:O2'	9:N:4:ALA:O[8_554]	2.03	0.17
2:A:3:U:N1	2:A:2900:A:O4'[8_554]	2.04	0.16
2:A:4:C:N4	2:A:2901:C:C6[8_554]	2.04	0.16
2:A:4:C:C6	2:A:2901:C:O4'[8_554]	2.04	0.16
2:A:6:A:O5'	2:A:2902:C:C5'[8_554]	2.04	0.16
2:A:2900:A:C2	2:A:2900:A:N3[8_554]	2.04	0.16
2:A:2900:A:N7	2:A:2900:A:C6[8_554]	2.05	0.15
2:A:5:A:N7	2:A:2901:C:C6[8_554]	2.06	0.14
2:A:2899:G:N3	2:A:2901:C:N4[8_554]	2.06	0.14
2:A:2902:C:O2'	9:N:4:ALA:N[8_554]	2.06	0.14
2:A:3:U:C6	2:A:2900:A:C4'[8_554]	2.07	0.13
2:A:6:A:C4	2:A:2902:C:C6[8_554]	2.08	0.12
2:A:2900:A:C6	2:A:2900:A:N1[8_554]	2.08	0.12
2:A:4:C:N3	2:A:2901:C:N1[8_554]	2.09	0.11
2:A:5:A:C4	2:A:2901:C:O2[8_554]	2.09	0.11
4:E:93:GLN:NE2	4:E:96:LEU:CG[8_554]	2.09	0.11
2:A:3:U:N3	2:A:2900:A:C1'[8_554]	2.10	0.10
2:A:5:A:C8	2:A:2901:C:O2[8_554]	2.10	0.10
2:A:5:A:C6	2:A:2901:C:C4[8_554]	2.10	0.10
1:B:0:A:O5'	1:B:120:U:O5'[7_554]	2.11	0.09
2:A:1:G:O6	2:A:2898:U:C1'[8_554]	2.12	0.08
2:A:1:G:C5	2:A:2898:U:C2'[8_554]	2.13	0.07
2:A:5:A:N9	2:A:2901:C:C2[8_554]	2.13	0.07
2:A:5:A:N1	2:A:2901:C:C4[8_554]	2.13	0.07
2:A:5:A:N7	2:A:2901:C:C3'[8_554]	2.14	0.06
2:A:2900:A:C6	2:A:2900:A:C4[8_554]	2.14	0.06
2:A:2898:U:O2	2:A:2902:C:N4[8_554]	2.16	0.04
2:A:4:C:N3	2:A:2900:A:C4[8_554]	2.18	0.02
2:A:5:A:N7	2:A:2901:C:O4'[8_554]	2.18	0.02
2:A:6:A:C2'	2:A:2902:C:C2'[8_554]	2.18	0.02
2:A:2:G:C6	2:A:2899:G:N3[8_554]	2.19	0.01
2:A:2:G:N1	2:A:2899:G:N3[8_554]	2.19	0.01
2:A:5:A:N7	2:A:2901:C:C2[8_554]	2.19	0.01

5.3 Torsion angles

5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution. The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	D	169/173 (98%)	60 (36%)	34 (20%)	75 (44%)	0	0
4	E	183/338 (54%)	89 (49%)	34 (19%)	60 (33%)	0	0
5	F	179/246 (73%)	51 (28%)	47 (26%)	81 (45%)	0	0
6	G	116/176 (66%)	46 (40%)	31 (27%)	39 (34%)	0	0
7	H	162/177 (92%)	74 (46%)	39 (24%)	49 (30%)	0	1
8	I	144/149 (97%)	71 (49%)	29 (20%)	44 (31%)	0	1
9	N	111/145 (77%)	34 (31%)	21 (19%)	56 (50%)	0	0
10	O	120/122 (98%)	61 (51%)	27 (22%)	32 (27%)	0	2
11	P	82/164 (50%)	28 (34%)	21 (26%)	33 (40%)	0	0
12	Q	130/138 (94%)	38 (29%)	35 (27%)	57 (44%)	0	0
13	S	105/186 (56%)	36 (34%)	20 (19%)	49 (47%)	0	0
14	T	48/66 (73%)	17 (35%)	13 (27%)	18 (38%)	0	0
15	W	104/113 (92%)	41 (39%)	16 (15%)	47 (45%)	0	0
16	X	72/84 (86%)	26 (36%)	18 (25%)	28 (39%)	0	0
17	Y	108/119 (91%)	49 (45%)	20 (18%)	39 (36%)	0	0
18	Z	175/253 (69%)	52 (30%)	53 (30%)	70 (40%)	0	0
19	R	103/118 (87%)	35 (34%)	20 (19%)	48 (47%)	0	0
20	U	115/118 (98%)	22 (19%)	23 (20%)	70 (61%)	0	0
21	V	96/100 (96%)	39 (41%)	25 (26%)	32 (33%)	0	0
22	2	62/70 (89%)	8 (13%)	9 (14%)	45 (73%)	0	0
23	3	58/60 (97%)	24 (41%)	13 (22%)	21 (36%)	0	0
24	0	84/91 (92%)	32 (38%)	17 (20%)	35 (42%)	0	0
25	4	71/73 (97%)	21 (30%)	16 (22%)	34 (48%)	0	0
26	5	56/60 (93%)	16 (29%)	18 (32%)	22 (39%)	0	0
27	6	51/82 (62%)	21 (41%)	9 (18%)	21 (41%)	0	0
28	7	44/47 (94%)	4 (9%)	7 (16%)	33 (75%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
29	8	61/64 (95%)	22 (36%)	10 (16%)	29 (48%)	0	0
30	9	33/36 (92%)	14 (42%)	9 (27%)	10 (30%)	0	1
31	K	129/141 (92%)	73 (57%)	18 (14%)	38 (30%)	0	1
All	All	2971/3709 (80%)	1104 (37%)	652 (22%)	1215 (41%)	0	0

All (1215) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	D	64	ILE
3	D	66	PHE
3	D	67	LYS
3	D	82	TYR
3	D	85	ASN
3	D	104	ILE
3	D	106	PRO
3	D	107	LYS
3	D	108	ASN
3	D	111	VAL
3	D	112	GLY
3	D	113	MET
3	D	114	GLU
3	D	116	MET
3	D	120	ASP
3	D	122	ASP
3	D	124	LYS
3	D	125	ILE
3	D	127	ASN
3	D	142	ASN
3	D	143	ILE
3	D	145	LEU
3	D	149	ARG
3	D	153	LEU
3	D	156	ALA
3	D	158	GLY
3	D	163	VAL
3	D	164	LEU
3	D	168	GLY
3	D	169	LYS
3	D	187	CYS
3	D	189	ALA
3	D	191	VAL

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Mol	Chain	Res	Type
3	D	199	ARG
3	D	205	VAL
3	D	210	LYS
3	D	223	ASN
3	D	224	VAL
3	D	227	VAL
3	D	229	MET
3	D	231	ALA
3	D	232	VAL
4	E	41	PHE
4	E	61	PRO
4	E	79	ARG
4	E	93	GLN
4	E	94	ARG
4	E	105	HIS
4	E	108	LEU
4	E	178	LEU
4	E	205	THR
4	E	207	GLY
4	E	214	VAL
4	E	229	GLN
4	E	230	GLY
4	E	232	ARG
4	E	233	ARG
4	E	234	ARG
4	E	244	SER
4	E	251	PRO
4	E	253	GLN
4	E	255	GLN
4	E	315	VAL
4	E	316	ARG
5	F	2	GLU
5	F	6	TYR
5	F	21	VAL
5	F	23	GLU
5	F	24	THR
5	F	25	PRO
5	F	31	ILE
5	F	35	VAL
5	F	36	ARG
5	F	37	ALA
5	F	40	ALA

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Mol	Chain	Res	Type
5	F	41	ASN
5	F	53	GLY
5	F	54	LEU
5	F	57	PRO
5	F	58	ALA
5	F	62	GLY
5	F	63	SER
5	F	82	GLN
5	F	84	VAL
5	F	85	LYS
5	F	87	ARG
5	F	88	SER
5	F	89	ALA
5	F	90	HIS
5	F	91	PRO
5	F	93	LYS
5	F	95	GLU
5	F	99	SER
5	F	100	LEU
5	F	102	LEU
5	F	104	ASP
5	F	105	LYS
5	F	106	GLU
5	F	107	ARG
5	F	108	GLN
5	F	110	ALA
5	F	111	VAL
5	F	112	ARG
5	F	113	SER
5	F	114	ALA
5	F	139	VAL
5	F	145	GLU
5	F	156	LEU
5	F	158	GLU
5	F	162	VAL
5	F	166	ILE
5	F	167	ASP
5	F	193	LEU
5	F	195	VAL
5	F	198	ASP
5	F	200	PRO
5	F	202	THR

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Mol	Chain	Res	Type
5	F	203	ALA
5	F	207	LEU
5	F	210	ALA
5	F	211	ASP
5	F	215	ALA
5	F	218	VAL
5	F	222	ASP
5	F	224	ALA
5	F	237	GLU
5	F	238	SER
5	F	240	LEU
6	G	11	HIS
6	G	14	ARG
6	G	18	ILE
6	G	19	GLU
6	G	21	VAL
6	G	23	VAL
6	G	36	ASN
6	G	54	ALA
6	G	55	LYS
6	G	60	GLU
6	G	77	ASP
6	G	78	GLU
6	G	96	SER
6	G	97	GLN
6	G	100	ASP
6	G	101	THR
6	G	129	ASP
6	G	141	VAL
6	G	147	ALA
6	G	150	SER
7	H	11	PRO
7	H	14	VAL
7	H	21	ASN
7	H	28	PRO
7	H	37	HIS
7	H	48	VAL
7	H	49	ILE
7	H	56	ASP
7	H	58	LYS
7	H	59	HIS
7	H	72	ALA

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Mol	Chain	Res	Type
7	H	75	VAL
7	H	76	GLU
7	H	81	GLY
7	H	97	LYS
7	H	106	VAL
7	H	111	PRO
7	H	127	GLN
7	H	138	GLN
7	H	142	GLU
7	H	146	ASN
7	H	150	VAL
7	H	167	LEU
7	H	169	ARG
8	I	5	PHE
8	I	6	LEU
8	I	7	LYS
8	I	9	VAL
8	I	13	GLY
8	I	20	ASN
8	I	23	ASP
8	I	25	TYR
8	I	36	ALA
8	I	39	ALA
8	I	44	LEU
8	I	92	SER
8	I	98	ILE
8	I	99	ALA
8	I	100	GLU
8	I	101	SER
8	I	102	LEU
8	I	103	GLN
8	I	104	ALA
8	I	105	GLN
8	I	111	ASP
8	I	114	LYS
8	I	115	ILE
8	I	121	ILE
8	I	146	THR
8	I	148	GLN
9	N	5	GLU
9	N	8	ALA
9	N	15	ARG

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Mol	Chain	Res	Type
9	N	17	CYS
9	N	21	ARG
9	N	22	VAL
9	N	24	SER
9	N	26	VAL
9	N	28	GLU
9	N	32	ASP
9	N	39	VAL
9	N	44	ALA
9	N	47	THR
9	N	49	ARG
9	N	50	GLU
9	N	51	GLU
9	N	52	GLN
9	N	61	VAL
9	N	63	ILE
9	N	67	ASN
9	N	69	TYR
9	N	70	PHE
9	N	72	PRO
9	N	76	ASP
9	N	78	ILE
9	N	80	LYS
9	N	81	ARG
9	N	83	ILE
9	N	84	ARG
9	N	95	ARG
9	N	105	LEU
9	N	136	SER
9	N	137	GLU
10	O	4	GLN
10	O	14	SER
10	O	28	SER
10	O	30	ARG
10	O	35	ILE
10	O	47	THR
10	O	74	GLY
10	O	89	ASP
10	O	91	LYS
10	O	96	THR
10	O	101	PRO
10	O	102	VAL

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Mol	Chain	Res	Type
10	O	105	GLU
10	O	106	LEU
10	O	111	PHE
10	O	112	MET
10	O	113	LYS
10	O	115	ILE
11	P	55	GLN
11	P	61	ALA
11	P	66	VAL
11	P	67	ARG
11	P	69	ILE
11	P	70	ASP
11	P	72	ASN
11	P	95	ASP
11	P	96	VAL
11	P	100	ALA
11	P	102	ASP
11	P	103	ALA
11	P	105	TYR
11	P	111	ALA
11	P	114	VAL
11	P	115	ARG
11	P	117	GLU
11	P	127	GLU
11	P	129	ALA
11	P	131	GLU
11	P	133	VAL
11	P	143	THR
12	Q	10	ILE
12	Q	18	GLU
12	Q	23	ILE
12	Q	28	ILE
12	Q	30	GLN
12	Q	43	PRO
12	Q	55	GLN
12	Q	56	ILE
12	Q	58	HIS
12	Q	59	ASN
12	Q	61	LEU
12	Q	62	GLU
12	Q	63	ALA
12	Q	73	GLN

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Mol	Chain	Res	Type
12	Q	83	PHE
12	Q	88	PHE
12	Q	93	ILE
12	Q	94	ARG
12	Q	102	ARG
12	Q	105	PHE
12	Q	109	VAL
12	Q	119	ASN
12	Q	127	ASN
12	Q	135	ALA
12	Q	141	MET
12	Q	142	LYS
12	Q	144	THR
12	Q	147	VAL
12	Q	154	ALA
13	S	11	ARG
13	S	16	ALA
13	S	17	ARG
13	S	20	TYR
13	S	31	LYS
13	S	34	LEU
13	S	41	LYS
13	S	53	ASN
13	S	54	GLY
13	S	55	ASP
13	S	59	ALA
13	S	72	GLU
13	S	74	PRO
13	S	75	THR
13	S	81	ALA
13	S	82	TYR
13	S	84	THR
13	S	86	LEU
13	S	97	VAL
13	S	98	GLU
13	S	105	GLY
13	S	107	ASN
13	S	109	PRO
13	S	115	VAL
13	S	116	PHE
13	S	117	ALA
13	S	118	ILE

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Mol	Chain	Res	Type
13	S	123	ILE
13	S	128	ASP
14	T	5	GLU
14	T	9	CYS
14	T	11	THR
14	T	12	ASP
14	T	15	PRO
14	T	29	THR
14	T	37	GLU
14	T	38	ASN
14	T	51	TRP
15	W	6	ILE
15	W	7	ALA
15	W	9	TYR
15	W	17	VAL
15	W	20	VAL
15	W	22	ASP
15	W	24	ILE
15	W	25	ARG
15	W	29	LEU
15	W	30	GLU
15	W	33	ARG
15	W	39	THR
15	W	41	LYS
15	W	42	ARG
15	W	43	GLY
15	W	44	ALA
15	W	45	TYR
15	W	46	PHE
15	W	56	ALA
15	W	57	ASN
15	W	58	ALA
15	W	59	VAL
15	W	66	GLU
15	W	67	ASP
15	W	68	ARG
15	W	89	ALA
15	W	100	THR
16	X	2	TRP
16	X	3	ASP
16	X	4	VAL
16	X	5	ILE

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Mol	Chain	Res	Type
16	X	13	LYS
16	X	19	ASP
16	X	29	ASP
16	X	30	ASP
16	X	31	ARG
16	X	32	ALA
16	X	35	GLY
16	X	36	GLU
16	X	37	VAL
16	X	38	ALA
16	X	39	ASP
16	X	40	ALA
16	X	46	ASP
16	X	47	VAL
16	X	52	VAL
16	X	57	THR
16	X	76	GLU
17	Y	14	ALA
17	Y	25	ALA
17	Y	27	LEU
17	Y	28	SER
17	Y	30	ASP
17	Y	31	LEU
17	Y	32	ARG
17	Y	33	GLU
17	Y	35	TYR
17	Y	44	ALA
17	Y	48	VAL
17	Y	50	VAL
17	Y	54	ASP
17	Y	67	LEU
17	Y	75	GLU
17	Y	76	ASP
17	Y	85	GLU
17	Y	93	THR
17	Y	94	SER
18	Z	3	LEU
18	Z	6	LYS
18	Z	14	LEU
18	Z	16	GLU
18	Z	31	SER
18	Z	34	LEU

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Mol	Chain	Res	Type
18	Z	35	ASP
18	Z	40	ASP
18	Z	41	ARG
18	Z	46	GLN
18	Z	47	SER
18	Z	48	THR
18	Z	51	LEU
18	Z	69	VAL
18	Z	72	ASP
18	Z	73	LYS
18	Z	75	LYS
18	Z	79	ILE
18	Z	80	HIS
18	Z	86	VAL
18	Z	93	GLU
18	Z	108	VAL
18	Z	132	GLN
18	Z	142	ASN
18	Z	149	ALA
18	Z	153	LYS
18	Z	160	LEU
18	Z	161	ALA
18	Z	165	GLU
18	Z	169	VAL
19	R	18	LEU
19	R	19	ALA
19	R	20	LEU
19	R	21	TYR
19	R	22	ARG
19	R	26	LYS
19	R	28	LEU
19	R	29	LEU
19	R	33	ARG
19	R	38	VAL
19	R	39	PRO
19	R	40	LYS
19	R	44	LEU
19	R	45	ARG
19	R	47	PHE
19	R	48	VAL
19	R	52	ILE
19	R	53	HIS

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Mol	Chain	Res	Type
19	R	60	LEU
19	R	61	HIS
19	R	62	ALA
19	R	66	VAL
19	R	68	ARG
19	R	72	ASP
19	R	73	VAL
19	R	74	LYS
19	R	75	LEU
19	R	76	VAL
19	R	82	GLU
19	R	84	ALA
19	R	86	ARG
19	R	89	ASP
19	R	94	TYR
19	R	106	GLY
19	R	107	ASP
19	R	111	LEU
19	R	112	ALA
20	U	5	LYS
20	U	6	THR
20	U	7	GLY
20	U	8	ILE
20	U	13	ARG
20	U	16	LYS
20	U	17	VAL
20	U	20	ARG
20	U	22	LYS
20	U	24	PHE
20	U	27	SER
20	U	28	ARG
20	U	29	SER
20	U	32	TYR
20	U	34	ASN
20	U	35	ALA
20	U	37	GLN
20	U	38	THR
20	U	39	LEU
20	U	40	LEU
20	U	41	ASN
20	U	43	ALA
20	U	44	THR

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Mol	Chain	Res	Type
20	U	47	TYR
20	U	48	ARG
20	U	52	ASN
20	U	53	LYS
20	U	54	LYS
20	U	56	ASP
20	U	58	ARG
20	U	64	ARG
20	U	67	ALA
20	U	69	ALA
20	U	71	LEU
20	U	79	PHE
20	U	80	ILE
20	U	86	ALA
20	U	94	VAL
20	U	96	ALA
20	U	97	ASP
20	U	99	ALA
20	U	105	ALA
20	U	106	PHE
20	U	107	LYS
20	U	108	ALA
20	U	109	LEU
20	U	112	ALA
20	U	114	ARG
20	U	116	ALA
21	V	5	ILE
21	V	6	GLN
21	V	8	GLY
21	V	11	GLN
21	V	13	ARG
21	V	23	GLU
21	V	24	SER
21	V	28	GLU
21	V	29	ALA
21	V	31	ASP
21	V	40	VAL
21	V	55	THR
21	V	58	ALA
21	V	69	ILE
21	V	71	ILE
21	V	72	ARG

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Mol	Chain	Res	Type
21	V	84	THR
21	V	88	GLN
21	V	92	ALA
22	2	2	VAL
22	2	4	HIS
22	2	5	VAL
22	2	6	GLN
22	2	7	GLU
22	2	12	THR
22	2	16	ARG
22	2	17	GLU
22	2	18	ALA
22	2	21	ASP
22	2	23	LEU
22	2	25	THR
22	2	26	GLU
22	2	31	ARG
22	2	33	VAL
22	2	34	GLN
22	2	35	ALA
22	2	36	ALA
22	2	40	PRO
22	2	46	ILE
22	2	47	LYS
22	2	48	GLU
22	2	49	LEU
22	2	50	ARG
22	2	51	LYS
22	2	52	ALA
22	2	53	ILE
22	2	54	ALA
22	2	55	ARG
22	2	56	ILE
22	2	58	THR
22	2	59	ILE
22	2	60	GLN
22	2	63	GLU
23	3	17	LYS
23	3	18	ASP
23	3	19	GLN
23	3	26	LEU
23	3	30	ARG

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Mol	Chain	Res	Type
23	3	32	GLN
23	3	42	ALA
23	3	43	ILE
23	3	46	ASN
23	3	51	ALA
23	3	52	HIS
23	3	54	VAL
24	0	9	SER
24	0	10	SER
24	0	12	ASN
24	0	17	ASN
24	0	21	LEU
24	0	23	VAL
24	0	25	LYS
24	0	30	VAL
24	0	33	ALA
24	0	36	ILE
24	0	38	VAL
24	0	39	ARG
24	0	40	GLN
24	0	51	VAL
24	0	53	MET
24	0	59	LEU
24	0	63	SER
24	0	68	VAL
24	0	70	ILE
24	0	71	ASN
24	0	72	LYS
24	0	74	LYS
24	0	76	ALA
24	0	78	PHE
24	0	79	ILE
24	0	81	ILE
25	4	6	HIS
25	4	10	VAL
25	4	14	ILE
25	4	17	GLN
25	4	21	VAL
25	4	24	THR
25	4	27	THR
25	4	32	HIS
25	4	33	VAL

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Mol	Chain	Res	Type
25	4	39	VAL
25	4	41	PRO
25	4	49	PHE
25	4	50	LEU
25	4	51	ASP
25	4	52	THR
25	4	55	ARG
25	4	56	VAL
25	4	58	LYS
25	4	59	PHE
25	4	60	ASN
25	4	64	GLY
25	4	68	ARG
26	5	7	PRO
26	5	9	LYS
26	5	13	LYS
26	5	14	SER
26	5	16	ARG
26	5	19	ARG
26	5	20	ARG
26	5	30	LEU
26	5	43	HIS
26	5	52	TYR
26	5	57	VAL
27	6	6	PRO
27	6	8	ILE
27	6	19	GLY
27	6	20	PHE
27	6	30	ASN
27	6	32	GLN
27	6	33	ALA
27	6	34	LYS
27	6	36	GLU
27	6	45	LYS
28	7	4	THR
28	7	9	ASN
28	7	10	ARG
28	7	11	LYS
28	7	12	ARG
28	7	13	ALA
28	7	14	LYS
28	7	15	THR

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Mol	Chain	Res	Type
28	7	18	PHE
28	7	19	ARG
28	7	20	ALA
28	7	22	MET
28	7	23	LYS
28	7	26	SER
28	7	29	ASN
28	7	30	ILE
28	7	31	LEU
28	7	33	ARG
28	7	34	ARG
28	7	35	ARG
28	7	36	ALA
28	7	37	LYS
28	7	39	ARG
28	7	43	THR
28	7	44	VAL
28	7	45	SER
29	8	5	LYS
29	8	6	THR
29	8	7	HIS
29	8	8	LYS
29	8	9	MET
29	8	11	LYS
29	8	13	ARG
29	8	14	ILE
29	8	15	LYS
29	8	26	LYS
29	8	27	SER
29	8	30	ARG
29	8	32	GLN
29	8	34	THR
29	8	39	ASP
29	8	42	ARG
29	8	53	ALA
29	8	56	ALA
29	8	57	ARG
29	8	58	MET
29	8	59	LYS
29	8	61	MET
29	8	62	LEU
30	9	4	ARG

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Mol	Chain	Res	Type
30	9	6	SER
30	9	11	CYS
30	9	14	CYS
30	9	28	SER
30	9	33	LYS
31	K	19	THR
31	K	27	ALA
31	K	28	LEU
31	K	46	THR
31	K	63	ASP
31	K	64	LYS
31	K	66	PHE
31	K	67	THR
31	K	68	PHE
31	K	75	ALA
31	K	76	SER
31	K	86	GLU
31	K	87	LYS
31	K	90	SER
31	K	97	VAL
31	K	102	ARG
31	K	103	LYS
31	K	114	PRO
31	K	118	ALA
31	K	121	LEU
31	K	122	GLU
3	D	77	VAL
3	D	86	ARG
3	D	117	SER
3	D	147	PRO
3	D	154	VAL
3	D	159	THR
3	D	160	SER
3	D	176	ALA
3	D	178	GLY
3	D	183	ILE
3	D	198	GLY
3	D	209	ASN
3	D	211	HIS
3	D	212	HIS
3	D	235	PRO
4	E	67	THR

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Mol	Chain	Res	Type
4	E	76	PRO
4	E	87	GLU
4	E	102	ASP
4	E	104	PHE
4	E	176	HIS
4	E	186	GLU
4	E	206	LYS
4	E	225	LYS
4	E	245	ARG
5	F	20	ASP
5	F	26	VAL
5	F	33	LYS
5	F	49	ASP
5	F	101	ASP
5	F	143	ASP
5	F	213	ALA
5	F	217	GLU
5	F	239	ALA
6	G	28	GLY
6	G	37	ALA
6	G	61	PHE
6	G	102	GLY
7	H	8	ILE
7	H	50	THR
7	H	60	HIS
7	H	65	GLY
7	H	70	LEU
7	H	71	LEU
7	H	98	GLN
7	H	109	SER
7	H	131	ILE
7	H	139	ARG
7	H	159	LYS
8	I	8	ASP
8	I	10	LYS
8	I	22	ALA
8	I	61	GLU
8	I	83	ALA
8	I	106	HIS
8	I	122	ARG
8	I	123	ALA
8	I	124	LEU

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Mol	Chain	Res	Type
8	I	145	VAL
9	N	19	MET
9	N	31	LEU
9	N	40	ASN
9	N	42	GLU
9	N	46	ILE
9	N	48	GLY
9	N	66	ASP
9	N	77	GLY
9	N	82	THR
9	N	92	GLN
9	N	94	GLY
9	N	96	GLU
10	O	22	ILE
10	O	29	GLY
10	O	45	ASP
10	O	53	LYS
10	O	54	LYS
10	O	72	PRO
11	P	71	GLU
11	P	110	GLY
11	P	116	HIS
11	P	130	ARG
12	Q	27	GLY
12	Q	57	ARG
12	Q	64	ALA
12	Q	65	ARG
12	Q	67	ALA
12	Q	90	PHE
12	Q	95	GLU
12	Q	116	HIS
12	Q	117	GLY
12	Q	121	ASP
12	Q	131	ALA
12	Q	136	TRP
13	S	18	THR
13	S	40	ASN
13	S	42	HIS
13	S	65	ASP
13	S	67	ALA
13	S	88	ALA
13	S	93	GLN

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Mol	Chain	Res	Type
13	S	121	GLY
13	S	122	ALA
14	T	16	GLY
14	T	25	ASP
14	T	48	ASN
15	W	12	ILE
15	W	13	SER
15	W	15	ARG
15	W	16	LYS
15	W	26	GLY
15	W	31	GLU
15	W	47	VAL
15	W	49	LYS
15	W	50	VAL
15	W	70	TYR
15	W	80	PRO
15	W	91	GLY
15	W	99	ARG
15	W	105	VAL
16	X	14	ALA
16	X	41	VAL
16	X	50	GLU
16	X	59	ASP
16	X	73	ASP
17	Y	5	ASP
17	Y	21	LYS
17	Y	34	GLU
17	Y	56	ALA
17	Y	68	ASP
17	Y	81	LYS
17	Y	92	ASP
17	Y	106	GLU
18	Z	2	GLU
18	Z	5	ALA
18	Z	7	PRO
18	Z	21	ALA
18	Z	27	GLU
18	Z	37	LYS
18	Z	39	PHE
18	Z	42	ALA
18	Z	53	ASP
18	Z	58	GLY

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Mol	Chain	Res	Type
18	Z	59	GLY
18	Z	64	ALA
18	Z	76	ARG
18	Z	112	LEU
18	Z	127	PRO
18	Z	139	THR
18	Z	143	ILE
18	Z	150	GLY
18	Z	157	GLY
18	Z	167	THR
19	R	42	LYS
19	R	46	GLY
19	R	49	ASP
19	R	58	GLY
19	R	88	ARG
19	R	90	ARG
19	R	92	GLY
19	R	117	VAL
20	U	12	ARG
20	U	18	LEU
20	U	31	GLN
20	U	42	ALA
20	U	45	TYR
20	U	73	GLY
20	U	110	VAL
20	U	113	SER
20	U	115	ASN
20	U	117	ARG
21	V	17	GLY
21	V	30	GLY
21	V	42	GLY
21	V	56	VAL
21	V	75	LYS
22	2	22	ASP
22	2	27	LEU
22	2	39	ALA
22	2	61	GLY
23	3	16	PRO
23	3	44	ARG
23	3	45	GLY
24	0	19	LYS
24	0	42	GLY

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Mol	Chain	Res	Type
24	0	54	GLY
24	0	67	VAL
25	4	8	LYS
25	4	12	CYS
25	4	22	MET
25	4	26	SER
25	4	40	HIS
25	4	47	GLU
25	4	63	PHE
26	5	15	LYS
26	5	24	ALA
26	5	37	HIS
26	5	42	SER
26	5	45	ILE
26	5	47	PRO
27	6	3	LYS
27	6	17	GLY
27	6	18	THR
27	6	23	THR
27	6	43	VAL
27	6	48	VAL
28	7	21	ARG
28	7	25	LYS
28	7	27	GLY
28	7	28	ARG
28	7	42	LEU
29	8	28	GLY
29	8	36	LYS
30	9	3	VAL
30	9	9	LYS
31	K	26	PRO
31	K	115	ASP
3	D	69	ASP
3	D	78	ALA
3	D	84	PRO
3	D	101	ARG
3	D	109	LEU
3	D	115	ILE
3	D	132	GLU
3	D	193	GLU
4	E	39	GLN
4	E	63	GLU

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Mol	Chain	Res	Type
4	E	75	THR
4	E	77	PRO
4	E	83	LEU
4	E	103	GLU
4	E	177	ALA
4	E	187	HIS
4	E	193	PHE
4	E	213	PRO
4	E	222	ARG
4	E	223	LYS
4	E	299	SER
5	F	29	ASP
5	F	34	ALA
5	F	52	ALA
6	G	20	LYS
6	G	53	LYS
6	G	64	ARG
6	G	66	GLY
6	G	93	LEU
7	H	55	SER
7	H	68	ARG
7	H	91	VAL
7	H	112	VAL
7	H	137	LYS
7	H	154	GLU
7	H	168	VAL
8	I	24	GLY
9	N	38	VAL
9	N	41	ALA
9	N	108	PRO
10	O	50	GLY
10	O	99	PHE
11	P	57	VAL
11	P	68	GLU
11	P	104	ASP
11	P	132	LYS
11	P	136	ALA
12	Q	21	SER
12	Q	44	ALA
12	Q	51	GLU
12	Q	60	ALA
12	Q	112	ALA

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Mol	Chain	Res	Type
12	Q	126	VAL
12	Q	146	THR
13	S	15	GLU
13	S	56	ASP
13	S	87	LEU
14	T	36	CYS
15	W	83	LYS
15	W	98	LYS
16	X	24	LEU
16	X	34	LYS
17	Y	49	GLU
17	Y	70	ALA
17	Y	71	VAL
17	Y	102	ASP
18	Z	10	PRO
18	Z	11	LYS
18	Z	26	LYS
18	Z	103	ARG
18	Z	125	PRO
20	U	11	ARG
20	U	19	LYS
20	U	26	GLY
20	U	60	LEU
21	V	32	LYS
21	V	50	ASP
21	V	60	VAL
21	V	90	PHE
22	2	24	LYS
22	2	45	ARG
23	3	2	PRO
24	0	32	LYS
24	0	45	PHE
24	0	69	PHE
25	4	67	TYR
26	5	51	TYR
28	7	2	LYS
29	8	12	ARG
29	8	55	TRP
31	K	21	ALA
31	K	113	MET
3	D	197	GLY
3	D	206	LYS

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Mol	Chain	Res	Type
3	D	214	MET
3	D	236	PHE
4	E	173	ARG
4	E	243	PRO
4	E	254	GLY
4	E	262	THR
4	E	263	GLU
5	F	32	GLY
5	F	39	GLN
5	F	119	ALA
5	F	154	VAL
6	G	25	MET
6	G	45	THR
6	G	46	GLY
6	G	85	GLN
6	G	135	VAL
7	H	74	MET
7	H	152	PRO
8	I	37	ILE
8	I	60	GLU
8	I	69	LYS
8	I	135	PRO
9	N	33	GLY
9	N	71	TYR
9	N	75	PRO
10	O	17	ARG
10	O	104	ARG
12	Q	120	HIS
12	Q	137	ARG
12	Q	143	VAL
13	S	19	ASP
13	S	28	LYS
13	S	119	GLN
14	T	14	GLU
14	T	39	ASN
15	W	103	ILE
17	Y	41	ARG
18	Z	70	GLN
18	Z	91	PRO
18	Z	109	GLN
18	Z	117	VAL
18	Z	151	ASP

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Mol	Chain	Res	Type
18	Z	152	ILE
18	Z	156	GLU
18	Z	166	LEU
19	R	27	SER
19	R	59	ASP
20	U	14	HIS
20	U	46	GLU
20	U	87	ASN
20	U	104	GLU
21	V	20	ILE
21	V	54	TYR
22	2	14	ALA
22	2	15	GLU
23	3	25	ALA
23	3	40	THR
24	0	7	VAL
26	5	11	THR
27	6	21	TYR
29	8	19	THR
30	9	12	ASP
30	9	21	GLY
31	K	73	PRO
31	K	85	ILE
31	K	123	ALA
3	D	63	ILE
3	D	202	LYS
4	E	62	ARG
4	E	70	VAL
4	E	265	ASN
6	G	95	THR
6	G	151	ILE
7	H	117	GLU
7	H	118	GLU
9	N	7	ASP
9	N	27	ALA
9	N	87	LEU
9	N	97	ALA
10	O	2	ILE
10	O	63	VAL
10	O	110	ASP
11	P	101	ASP
12	Q	54	VAL

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Mol	Chain	Res	Type
12	Q	100	GLY
12	Q	103	ALA
14	T	6	CYS
14	T	32	CYS
14	T	55	ALA
15	W	48	ALA
17	Y	51	LEU
17	Y	101	LEU
18	Z	50	GLY
18	Z	52	PHE
18	Z	111	GLY
19	R	85	PRO
20	U	74	MET
20	U	111	ASP
22	2	13	PRO
22	2	62	GLU
23	3	59	VAL
25	4	3	LYS
25	4	70	GLY
25	4	71	SER
26	5	5	PRO
26	5	26	THR
27	6	40	TYR
27	6	47	HIS
29	8	52	LYS
31	K	61	TYR
31	K	91	GLU
31	K	100	VAL
31	K	136	GLY
3	D	185	GLY
3	D	196	ASN
4	E	226	HIS
4	E	309	PRO
6	G	68	PRO
6	G	140	ARG
7	H	157	LYS
8	I	40	THR
10	O	95	GLY
12	Q	72	VAL
12	Q	153	PRO
13	S	47	LEU
13	S	96	GLY

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Mol	Chain	Res	Type
13	S	104	ILE
15	W	14	PRO
17	Y	77	VAL
18	Z	78	PRO
18	Z	175	ARG
20	U	15	LYS
23	3	47	VAL
25	4	25	MET
26	5	46	CYS
27	6	49	VAL
31	K	18	ALA
31	K	132	ALA
4	E	218	GLY
4	E	240	PRO
4	E	298	GLY
5	F	209	GLY
7	H	125	PRO
15	W	21	VAL
17	Y	23	VAL
17	Y	42	VAL
22	2	43	PRO
27	6	41	ASP
28	7	6	GLN
31	K	16	GLY
31	K	23	PRO
3	D	105	ALA
3	D	194	VAL
4	E	219	VAL
9	N	133	GLY
11	P	128	GLY
13	S	85	GLY
17	Y	53	GLY
24	0	73	GLY
31	K	139	VAL
4	E	235	ILE
6	G	136	ARG
8	I	130	PRO
17	Y	36	GLY
18	Z	90	GLU
21	V	46	VAL
7	H	130	ILE
8	I	4	ILE

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Mol	Chain	Res	Type
13	S	110	THR
18	Z	113	VAL
23	3	13	ILE
31	K	96	ILE
12	Q	50	VAL
21	V	22	VAL

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution. The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	D	135/135 (100%)	99 (73%)	36 (27%)	1	6
4	E	156/284 (55%)	128 (82%)	28 (18%)	2	19
5	F	152/193 (79%)	124 (82%)	28 (18%)	2	17
6	G	102/147 (69%)	93 (91%)	9 (9%)	14	57
7	H	137/147 (93%)	111 (81%)	26 (19%)	2	16
8	I	119/119 (100%)	98 (82%)	21 (18%)	3	20
9	N	95/121 (78%)	80 (84%)	15 (16%)	4	27
10	O	101/101 (100%)	81 (80%)	20 (20%)	2	14
11	P	67/126 (53%)	56 (84%)	11 (16%)	3	24
12	Q	110/110 (100%)	83 (76%)	27 (24%)	1	8
13	S	89/149 (60%)	73 (82%)	16 (18%)	2	18
14	T	44/52 (85%)	30 (68%)	14 (32%)	0	4
15	W	88/92 (96%)	74 (84%)	14 (16%)	4	26
16	X	67/73 (92%)	44 (66%)	23 (34%)	0	3
17	Y	97/105 (92%)	80 (82%)	17 (18%)	3	20
18	Z	151/203 (74%)	130 (86%)	21 (14%)	5	33
19	R	89/101 (88%)	71 (80%)	18 (20%)	2	14
20	U	96/97 (99%)	68 (71%)	28 (29%)	0	5
21	V	79/79 (100%)	69 (87%)	10 (13%)	6	37
22	2	51/56 (91%)	37 (72%)	14 (28%)	0	6

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
23	3	52/52 (100%)	47 (90%)	5 (10%)	12	52
24	0	64/67 (96%)	57 (89%)	7 (11%)	9	46
25	4	66/66 (100%)	54 (82%)	12 (18%)	2	18
26	5	51/53 (96%)	43 (84%)	8 (16%)	4	27
27	6	46/69 (67%)	39 (85%)	7 (15%)	4	28
28	7	39/40 (98%)	31 (80%)	8 (20%)	2	13
29	8	50/51 (98%)	39 (78%)	11 (22%)	1	11
30	9	34/35 (97%)	30 (88%)	4 (12%)	8	41
31	K	108/113 (96%)	104 (96%)	4 (4%)	45	85
All	All	2535/3036 (84%)	2073 (82%)	462 (18%)	2	18

All (462) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	D	62	ARG
3	D	64	ILE
3	D	65	ASP
3	D	66	PHE
3	D	67	LYS
3	D	68	ARG
3	D	70	LYS
3	D	71	ASP
3	D	76	ARG
3	D	83	ASP
3	D	85	ASN
3	D	86	ARG
3	D	104	ILE
3	D	110	LYS
3	D	114	GLU
3	D	120	ASP
3	D	139	LEU
3	D	141	HIS
3	D	142	ASN
3	D	143	ILE
3	D	144	GLU
3	D	152	GLN
3	D	162	GLN
3	D	174	ARG
3	D	175	LEU

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Mol	Chain	Res	Type
3	D	181	ARG
3	D	190	THR
3	D	199	ARG
3	D	201	ASP
3	D	204	PHE
3	D	205	VAL
3	D	206	LYS
3	D	223	ASN
3	D	232	VAL
3	D	233	ASP
3	D	236	PHE
4	E	38	VAL
4	E	41	PHE
4	E	49	THR
4	E	63	GLU
4	E	65	MET
4	E	73	ILE
4	E	86	TYR
4	E	98	GLU
4	E	104	PHE
4	E	107	GLU
4	E	109	ASP
4	E	174	LEU
4	E	179	ASP
4	E	183	ASP
4	E	187	HIS
4	E	192	ILE
4	E	211	GLN
4	E	215	LYS
4	E	222	ARG
4	E	228	ARG
4	E	235	ILE
4	E	238	LEU
4	E	265	ASN
4	E	268	LEU
4	E	269	ILE
4	E	295	LEU
4	E	304	ASP
4	E	311	PHE
5	F	1	MET
5	F	20	ASP
5	F	35	VAL

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Mol	Chain	Res	Type
5	F	36	ARG
5	F	39	GLN
5	F	45	ASP
5	F	49	ASP
5	F	50	GLU
5	F	54	LEU
5	F	55	ARG
5	F	56	THR
5	F	59	GLU
5	F	82	GLN
5	F	85	LYS
5	F	87	ARG
5	F	94	THR
5	F	100	LEU
5	F	103	ASN
5	F	107	ARG
5	F	120	ASP
5	F	142	ASP
5	F	158	GLU
5	F	167	ASP
5	F	211	ASP
5	F	219	ASN
5	F	223	LEU
5	F	242	GLU
5	F	245	GLU
6	G	13	MET
6	G	24	HIS
6	G	67	ASP
6	G	76	ARG
6	G	77	ASP
6	G	85	GLN
6	G	93	LEU
6	G	100	ASP
6	G	104	PHE
7	H	19	ASN
7	H	32	LEU
7	H	37	HIS
7	H	40	MET
7	H	49	ILE
7	H	70	LEU
7	H	76	GLU
7	H	83	GLU

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Mol	Chain	Res	Type
7	H	86	LEU
7	H	87	GLU
7	H	101	LYS
7	H	102	LEU
7	H	108	TYR
7	H	113	GLU
7	H	115	GLU
7	H	120	LEU
7	H	121	GLU
7	H	127	GLN
7	H	130	ILE
7	H	131	ILE
7	H	137	LYS
7	H	143	LEU
7	H	157	LYS
7	H	164	GLU
7	H	167	LEU
7	H	170	LEU
8	I	5	PHE
8	I	8	ASP
8	I	12	LYS
8	I	15	LYS
8	I	18	ILE
8	I	19	LYS
8	I	23	ASP
8	I	25	TYR
8	I	29	PHE
8	I	43	ASN
8	I	64	ASN
8	I	70	GLU
8	I	75	LEU
8	I	79	ILE
8	I	93	ILE
8	I	102	LEU
8	I	109	LYS
8	I	110	LEU
8	I	112	LYS
8	I	119	ASP
8	I	148	GLN
9	N	7	ASP
9	N	17	CYS
9	N	19	MET

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Mol	Chain	Res	Type
9	N	21	ARG
9	N	62	ASP
9	N	70	PHE
9	N	74	ARG
9	N	76	ASP
9	N	79	PHE
9	N	87	LEU
9	N	90	LYS
9	N	98	PHE
9	N	100	SER
9	N	107	ASN
9	N	139	LEU
10	O	2	ILE
10	O	3	GLN
10	O	5	GLU
10	O	7	ARG
10	O	8	LEU
10	O	23	LYS
10	O	35	ILE
10	O	66	LYS
10	O	73	ASP
10	O	77	ILE
10	O	78	ARG
10	O	79	PHE
10	O	82	ASN
10	O	84	CYS
10	O	87	ILE
10	O	89	ASP
10	O	90	ASP
10	O	104	ARG
10	O	106	LEU
10	O	122	ILE
11	P	53	ARG
11	P	59	GLU
11	P	67	ARG
11	P	92	ASP
11	P	94	ARG
11	P	95	ASP
11	P	109	LEU
11	P	113	GLN
11	P	123	ASP
11	P	141	GLU

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Mol	Chain	Res	Type
11	P	145	LEU
12	Q	10	ILE
12	Q	16	ARG
12	Q	17	ARG
12	Q	32	LYS
12	Q	33	MET
12	Q	47	GLU
12	Q	48	ASN
12	Q	51	GLU
12	Q	56	ILE
12	Q	59	ASN
12	Q	61	LEU
12	Q	69	ASN
12	Q	71	PHE
12	Q	74	ASN
12	Q	85	ILE
12	Q	88	PHE
12	Q	91	HIS
12	Q	95	GLU
12	Q	116	HIS
12	Q	125	TRP
12	Q	133	GLU
12	Q	134	PHE
12	Q	136	TRP
12	Q	142	LYS
12	Q	148	ASN
12	Q	149	ILE
12	Q	152	SER
13	S	12	ARG
13	S	14	ARG
13	S	17	ARG
13	S	19	ASP
13	S	21	HIS
13	S	22	GLN
13	S	27	LEU
13	S	28	LYS
13	S	34	LEU
13	S	41	LYS
13	S	83	LEU
13	S	87	LEU
13	S	93	GLN
13	S	94	GLU

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Mol	Chain	Res	Type
13	S	106	LEU
13	S	127	LEU
14	T	4	ARG
14	T	7	ASP
14	T	8	TYR
14	T	9	CYS
14	T	12	ASP
14	T	14	GLU
14	T	20	MET
14	T	21	PHE
14	T	25	ASP
14	T	36	CYS
14	T	47	ARG
14	T	49	LEU
14	T	51	TRP
14	T	54	THR
15	W	11	ARG
15	W	23	LEU
15	W	52	GLU
15	W	59	VAL
15	W	61	ASN
15	W	67	ASP
15	W	69	LEU
15	W	84	ARG
15	W	86	LEU
15	W	90	ARG
15	W	96	ILE
15	W	103	ILE
15	W	104	THR
15	W	107	LEU
16	X	2	TRP
16	X	16	ASN
16	X	17	ASP
16	X	19	ASP
16	X	20	PHE
16	X	24	LEU
16	X	25	GLN
16	X	26	PHE
16	X	30	ASP
16	X	31	ARG
16	X	36	GLU
16	X	44	GLN

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Mol	Chain	Res	Type
16	X	45	TYR
16	X	46	ASP
16	X	47	VAL
16	X	50	GLU
16	X	56	ASN
16	X	57	THR
16	X	58	MET
16	X	59	ASP
16	X	68	LEU
16	X	71	ASP
16	X	76	GLU
17	Y	27	LEU
17	Y	31	LEU
17	Y	34	GLU
17	Y	51	LEU
17	Y	61	GLU
17	Y	66	ASP
17	Y	68	ASP
17	Y	73	HIS
17	Y	76	ASP
17	Y	77	VAL
17	Y	81	LYS
17	Y	83	ASP
17	Y	91	LEU
17	Y	92	ASP
17	Y	97	ARG
17	Y	105	ASP
17	Y	112	LEU
18	Z	2	GLU
18	Z	24	TYR
18	Z	26	LYS
18	Z	32	PHE
18	Z	35	ASP
18	Z	39	PHE
18	Z	40	ASP
18	Z	41	ARG
18	Z	43	PHE
18	Z	45	GLN
18	Z	49	THR
18	Z	67	LYS
18	Z	70	GLN
18	Z	74	ARG

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Mol	Chain	Res	Type
18	Z	103	ARG
18	Z	118	HIS
18	Z	120	LEU
18	Z	129	ARG
18	Z	141	MET
18	Z	151	ASP
18	Z	154	LEU
19	R	16	HIS
19	R	20	LEU
19	R	23	ASN
19	R	28	LEU
19	R	43	GLU
19	R	52	ILE
19	R	64	ARG
19	R	67	LEU
19	R	72	ASP
19	R	77	ARG
19	R	79	LEU
19	R	80	PHE
19	R	88	ARG
19	R	91	GLN
19	R	98	LEU
19	R	105	ARG
19	R	107	ASP
19	R	116	LEU
20	U	8	ILE
20	U	11	ARG
20	U	13	ARG
20	U	16	LYS
20	U	18	LEU
20	U	24	PHE
20	U	25	TRP
20	U	27	SER
20	U	28	ARG
20	U	32	TYR
20	U	36	PHE
20	U	39	LEU
20	U	40	LEU
20	U	41	ASN
20	U	44	THR
20	U	51	ARG
20	U	59	ARG

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Mol	Chain	Res	Type
20	U	66	ASN
20	U	71	LEU
20	U	76	TYR
20	U	85	ARG
20	U	87	ASN
20	U	95	LEU
20	U	106	PHE
20	U	111	ASP
20	U	114	ARG
20	U	115	ASN
20	U	117	ARG
21	V	13	ARG
21	V	39	PHE
21	V	44	GLN
21	V	63	HIS
21	V	69	ILE
21	V	74	TYR
21	V	80	TYR
21	V	84	THR
21	V	90	PHE
21	V	95	ILE
22	2	7	GLU
22	2	19	GLU
22	2	20	LEU
22	2	22	ASP
22	2	26	GLU
22	2	34	GLN
22	2	45	ARG
22	2	55	ARG
22	2	56	ILE
22	2	58	THR
22	2	59	ILE
22	2	60	GLN
22	2	62	GLU
22	2	63	GLU
23	3	23	LEU
23	3	30	ARG
23	3	32	GLN
23	3	38	GLU
23	3	43	ILE
24	0	10	SER
24	0	14	ARG

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Mol	Chain	Res	Type
24	0	49	GLN
24	0	57	HIS
24	0	58	THR
24	0	70	ILE
24	0	81	ILE
25	4	5	LEU
25	4	15	ILE
25	4	27	THR
25	4	30	GLU
25	4	31	ILE
25	4	43	TRP
25	4	46	GLU
25	4	49	PHE
25	4	57	ASP
25	4	59	PHE
25	4	68	ARG
25	4	73	LYS
26	5	3	LYS
26	5	8	LYS
26	5	10	LYS
26	5	11	THR
26	5	17	ASP
26	5	22	HIS
26	5	33	CYS
26	5	45	ILE
27	6	4	ASP
27	6	10	VAL
27	6	22	TYR
27	6	28	ARG
27	6	40	TYR
27	6	46	LYS
27	6	54	LYS
28	7	3	ARG
28	7	4	THR
28	7	8	ASN
28	7	11	LYS
28	7	24	THR
28	7	31	LEU
28	7	43	THR
28	7	46	ASP
29	8	4	MET
29	8	5	LYS

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Mol	Chain	Res	Type
29	8	12	ARG
29	8	16	ILE
29	8	23	MET
29	8	25	PHE
29	8	31	HIS
29	8	42	ARG
29	8	58	MET
29	8	60	LEU
29	8	61	MET
30	9	2	LYS
30	9	8	LYS
30	9	10	MET
30	9	27	CYS
31	K	52	MET
31	K	107	GLU
31	K	117	ASN
31	K	129	GLU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (80) such sidechains are listed below:

Mol	Chain	Res	Type
3	D	60	GLN
3	D	85	ASN
3	D	89	ASN
3	D	133	ASN
3	D	141	HIS
3	D	142	ASN
3	D	162	GLN
3	D	212	HIS
3	D	223	ASN
4	E	242	ASN
4	E	259	HIS
4	E	260	GLN
5	F	90	HIS
5	F	103	ASN
5	F	163	HIS
5	F	206	ASN
5	F	219	ASN
6	G	47	GLN
6	G	133	ASN
7	H	127	GLN
8	I	33	GLN

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Mol	Chain	Res	Type
8	I	43	ASN
8	I	52	GLN
8	I	64	ASN
8	I	103	GLN
9	N	52	GLN
9	N	92	GLN
9	N	107	ASN
10	O	82	ASN
11	P	113	GLN
12	Q	55	GLN
12	Q	59	ASN
12	Q	66	ASN
12	Q	69	ASN
12	Q	116	HIS
12	Q	120	HIS
12	Q	148	ASN
13	S	21	HIS
13	S	46	GLN
14	T	39	ASN
15	W	61	ASN
16	X	53	ASN
16	X	56	ASN
17	Y	3	GLN
17	Y	7	GLN
17	Y	11	GLN
17	Y	17	HIS
17	Y	22	GLN
17	Y	43	ASN
17	Y	73	HIS
18	Z	45	GLN
18	Z	46	GLN
18	Z	70	GLN
18	Z	146	HIS
19	R	31	HIS
19	R	53	HIS
19	R	61	HIS
20	U	37	GLN
20	U	72	HIS
20	U	81	ASN
20	U	87	ASN
20	U	115	ASN
21	V	44	GLN

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Mol	Chain	Res	Type
21	V	57	GLN
21	V	86	HIS
22	2	29	ASN
22	2	42	ASN
23	3	46	ASN
23	3	52	HIS
24	0	17	ASN
24	0	71	ASN
25	4	2	GLN
26	5	29	ASN
26	5	48	ASN
27	6	27	ASN
28	7	8	ASN
28	7	29	ASN
29	8	31	HIS
30	9	29	ASN
31	K	31	HIS

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	B	122/123 (99%)	45 (36%)	3 (2%)
2	A	2780/2916 (95%)	1487 (53%)	360 (12%)
All	All	2902/3039 (95%)	1532 (52%)	363 (12%)

All (1532) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	B	0	A
1	B	1	U
1	B	2	C
1	B	3	C
1	B	6	C
1	B	8	U
1	B	9	G
1	B	10	C
1	B	12	C
1	B	13	A
1	B	14	U
1	B	15	A
1	B	16	G

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Mol	Chain	Res	Type
1	B	21	G
1	B	25	A
1	B	35	U
1	B	40	U
1	B	41	U
1	B	42	C
1	B	43	C
1	B	45	A
1	B	46	A
1	B	48	A
1	B	57	A
1	B	59	A
1	B	60	C
1	B	62	C
1	B	67	G
1	B	69	G
1	B	73	A
1	B	76	G
1	B	84	C
1	B	87	G
1	B	88	C
1	B	89	G
1	B	90	C
1	B	96	G
1	B	99	A
1	B	103	U
1	B	108	C
1	B	109	G
1	B	111	U
1	B	117	G
1	B	119	A
1	B	120	U
2	A	14	A
2	A	16	G
2	A	26	G
2	A	27	G
2	A	34	C
2	A	40	C
2	A	46	C
2	A	49	A
2	A	50	U
2	A	51	G

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Mol	Chain	Res	Type
2	A	52	A
2	A	54	G
2	A	55	G
2	A	60	G
2	A	61	G
2	A	63	U
2	A	71	A
2	A	72	U
2	A	73	A
2	A	74	A
2	A	75	G
2	A	76	C
2	A	82	G
2	A	83	G
2	A	84	A
2	A	87	C
2	A	88	G
2	A	89	G
2	A	90	U
2	A	91	A
2	A	92	G
2	A	94	G
2	A	95	G
2	A	97	C
2	A	98	G
2	A	102	G
2	A	103	A
2	A	104	U
2	A	107	C
2	A	108	U
2	A	109	G
2	A	110	G
2	A	112	U
2	A	113	G
2	A	117	G
2	A	119	A
2	A	120	U
2	A	121	G
2	A	125	G
2	A	126	A
2	A	129	C
2	A	131	G

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Mol	Chain	Res	Type
2	A	132	G
2	A	133	C
2	A	136	G
2	A	137	C
2	A	137(A)	G
2	A	138	G
2	A	139	G
2	A	140	A
2	A	141	A
2	A	141(A)	C
2	A	142	G
2	A	143	C
2	A	144	C
2	A	152	G
2	A	154	G
2	A	163	U
2	A	164	U
2	A	172	C
2	A	173	G
2	A	175	G
2	A	178	G
2	A	179	G
2	A	181	A
2	A	182	A
2	A	186	G
2	A	191	A
2	A	192	C
2	A	193	U
2	A	195	A
2	A	196	A
2	A	197	A
2	A	198	C
2	A	199	A
2	A	204	A
2	A	205	G
2	A	215	G
2	A	216	A
2	A	218	A
2	A	221	A
2	A	222	A
2	A	223	A
2	A	224	G

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Mol	Chain	Res	Type
2	A	225	A
2	A	226	G
2	A	227	A
2	A	228	A
2	A	229	A
2	A	232	G
2	A	233	A
2	A	241	A
2	A	242	G
2	A	243	U
2	A	245	G
2	A	247	G
2	A	248	G
2	A	249	C
2	A	250	G
2	A	252	G
2	A	255	A
2	A	259	G
2	A	265	A
2	A	266	G
2	A	268	C
2	A	269	U
2	A	270	A
2	A	270(A)	A
2	A	270(B)	A
2	A	270(C)	C
2	A	270(D)	C
2	A	270(G)	C
2	A	270(L)	U
2	A	270(M)	U
2	A	270(N)	G
2	A	270(O)	U
2	A	270(T)	G
2	A	270(U)	C
2	A	270(V)	G
2	A	270(X)	G
2	A	270(Y)	G
2	A	270(Z)	U
2	A	271(A)	C
2	A	271(B)	G
2	A	271(C)	U
2	A	271	G

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Mol	Chain	Res	Type
2	A	273(F)	C
2	A	274	G
2	A	275	G
2	A	276	A
2	A	277	C
2	A	279	C
2	A	280	C
2	A	281	G
2	A	282	A
2	A	283	A
2	A	286	C
2	A	288	C
2	A	289	A
2	A	290	G
2	A	291	C
2	A	293	U
2	A	295	G
2	A	297	C
2	A	302	C
2	A	310	A
2	A	311	A
2	A	312	G
2	A	313	C
2	A	316	C
2	A	317	G
2	A	320	A
2	A	321	G
2	A	322	A
2	A	323	G
2	A	324	A
2	A	325	G
2	A	328	U
2	A	329	G
2	A	330	A
2	A	331	A
2	A	332	A
2	A	333	G
2	A	334	C
2	A	337	C
2	A	338	G
2	A	339	U
2	A	340	A

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Mol	Chain	Res	Type
2	A	341	G
2	A	342	G
2	A	347	A
2	A	348	G
2	A	349	G
2	A	350	U
2	A	351	G
2	A	354	G
2	A	358	U
2	A	359	A
2	A	360	G
2	A	362	U
2	A	363(A)	A
2	A	363(C)	G
2	A	363(F)	A
2	A	364	C
2	A	365	C
2	A	371	A
2	A	372	G
2	A	373	U
2	A	374	A
2	A	380	U
2	A	386	G
2	A	387	U
2	A	388	G
2	A	390	A
2	A	391	G
2	A	397	G
2	A	401	A
2	A	404	C
2	A	405	U
2	A	406	G
2	A	408	G
2	A	411	G
2	A	422	A
2	A	423	A
2	A	428	A
2	A	431	U
2	A	434	U
2	A	435	C
2	A	436	C
2	A	442	G

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Mol	Chain	Res	Type
2	A	444	C
2	A	445	C
2	A	446	G
2	A	447	A
2	A	448	U
2	A	449	A
2	A	451	C
2	A	452	G
2	A	453	C
2	A	455	C
2	A	456	C
2	A	457	A
2	A	470	A
2	A	471	A
2	A	473	G
2	A	474	G
2	A	475	U
2	A	477	A
2	A	478	A
2	A	479	A
2	A	480	A
2	A	481	G
2	A	482	A
2	A	483	A
2	A	489	G
2	A	492	A
2	A	493	G
2	A	497	A
2	A	501	A
2	A	503	A
2	A	504	U
2	A	505	A
2	A	506	G
2	A	507	A
2	A	508	G
2	A	509	C
2	A	512	G
2	A	518	G
2	A	525	U
2	A	526	A
2	A	527	C
2	A	528	A

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Mol	Chain	Res	Type
2	A	529	A
2	A	530	G
2	A	531	C
2	A	532	A
2	A	533	G
2	A	535	C
2	A	541	C
2	A	544	C
2	A	545	G
2	A	546	C
2	A	548	A
2	A	549	G
2	A	551	G
2	A	554	U
2	A	559	G
2	A	560	C
2	A	561	G
2	A	562	U
2	A	563	G
2	A	565	C
2	A	566	U
2	A	567	A
2	A	568	U
2	A	570	G
2	A	571	A
2	A	572	A
2	A	573	G
2	A	574	C
2	A	575	A
2	A	579	G
2	A	586	A
2	A	587	C
2	A	588	U
2	A	593	G
2	A	595	C
2	A	598	G
2	A	599	G
2	A	600	G
2	A	601	C
2	A	602	G
2	A	603	A
2	A	608	A

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Mol	Chain	Res	Type
2	A	609	A
2	A	612	G
2	A	613	U
2	A	614	U
2	A	615	G
2	A	616	A
2	A	617	G
2	A	620	G
2	A	621	A
2	A	622	G
2	A	624	C
2	A	625	G
2	A	627	A
2	A	628	G
2	A	634	C
2	A	637	A
2	A	639	U
2	A	640	C
2	A	641	C
2	A	643	A
2	A	646	A
2	A	647	G
2	A	650	C
2	A	653	A
2	A	654	A
2	A	655	A
2	A	656	G
2	A	662	G
2	A	668	G
2	A	669	G
2	A	670	A
2	A	671	C
2	A	673	C
2	A	675	A
2	A	677	A
2	A	684	G
2	A	686	G
2	A	687	C
2	A	688	U
2	A	690	G
2	A	698	C
2	A	699	A

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Mol	Chain	Res	Type
2	A	704	G
2	A	705	A
2	A	713	G
2	A	715	G
2	A	717	G
2	A	718	A
2	A	721	C
2	A	726	G
2	A	727	A
2	A	728	G
2	A	729	G
2	A	730	C
2	A	736	C
2	A	739	G
2	A	740	U
2	A	741	G
2	A	746	A
2	A	747	U
2	A	748	G
2	A	750	A
2	A	751	A
2	A	752	A
2	A	753	C
2	A	762	U
2	A	764	A
2	A	765	G
2	A	771	G
2	A	775	G
2	A	776	G
2	A	777	A
2	A	779	U
2	A	781	A
2	A	782	A
2	A	783	A
2	A	784	A
2	A	785	G
2	A	786	C
2	A	787	U
2	A	788	A
2	A	789	A
2	A	790	C
2	A	791	C

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Mol	Chain	Res	Type
2	A	793	A
2	A	794	G
2	A	799	G
2	A	800	A
2	A	801	G
2	A	802	A
2	A	805	G
2	A	806	C
2	A	811	U
2	A	812	C
2	A	813	U
2	A	816	C
2	A	819	A
2	A	820	A
2	A	822	U
2	A	826	U
2	A	827	U
2	A	828	U
2	A	829	A
2	A	830	G
2	A	831	G
2	A	833	U
2	A	847	U
2	A	848	G
2	A	859	G
2	A	860	U
2	A	861	A
2	A	863	A
2	A	865	C
2	A	866	A
2	A	867	C
2	A	870	A
2	A	873	G
2	A	875	G
2	A	877	U
2	A	878	A
2	A	881	G
2	A	886	C
2	A	887	A
2	A	888	C
2	A	889	C
2	A	890	A

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Mol	Chain	Res	Type
2	A	896	A
2	A	897	C
2	A	899	A
2	A	902	C
2	A	906	G
2	A	907	U
2	A	910	A
2	A	914	C
2	A	915	C
2	A	918	A
2	A	919	G
2	A	930	U
2	A	931	G
2	A	932	G
2	A	933	A
2	A	935	C
2	A	941	A
2	A	942	G
2	A	943	U
2	A	944	G
2	A	945	A
2	A	946	G
2	A	949	C
2	A	957	A
2	A	958	U
2	A	959	A
2	A	961	C
2	A	962	G
2	A	964	C
2	A	966	G
2	A	968	G
2	A	972	G
2	A	973	A
2	A	974	G
2	A	974(A)	C
2	A	975	G
2	A	976	C
2	A	980	A
2	A	982	C
2	A	983	A
2	A	984	A
2	A	985	C

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Mol	Chain	Res	Type
2	A	986	C
2	A	989	G
2	A	990	A
2	A	991	C
2	A	993	G
2	A	994	C
2	A	995	C
2	A	996	A
2	A	997	G
2	A	999	U
2	A	1003	G
2	A	1008	C
2	A	1009	A
2	A	1012	U
2	A	1013	C
2	A	1017	G
2	A	1019	U
2	A	1021	A
2	A	1022	G
2	A	1023	U
2	A	1024	G
2	A	1025	G
2	A	1026	U
2	A	1033	U
2	A	1041	C
2	A	1044	G
2	A	1045	A
2	A	1046	A
2	A	1049	C
2	A	1056	G
2	A	1058	G
2	A	1060	U
2	A	1061	U
2	A	1062	G
2	A	1063	G
2	A	1066	U
2	A	1067	A
2	A	1068	G
2	A	1069	A
2	A	1070	A
2	A	1071	G
2	A	1072	C

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Mol	Chain	Res	Type
2	A	1073	A
2	A	1081	U
2	A	1084	A
2	A	1085	A
2	A	1086	A
2	A	1088	A
2	A	1089	G
2	A	1090	U
2	A	1093	G
2	A	1096	A
2	A	1097	U
2	A	1098	A
2	A	1099	G
2	A	1101	U
2	A	1102	C
2	A	1103	A
2	A	1105	U
2	A	1106	G
2	A	1109	C
2	A	1110	G
2	A	1111	A
2	A	1112	G
2	A	1114	G
2	A	1116	C
2	A	1120	G
2	A	1123	C
2	A	1124	C
2	A	1126	A
2	A	1127	A
2	A	1128	A
2	A	1129	A
2	A	1130	U
2	A	1131	G
2	A	1132	A
2	A	1133	U
2	A	1134	G
2	A	1135	C
2	A	1138	G
2	A	1140	C
2	A	1141	U
2	A	1142	U
2	A	142(A)	A

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Mol	Chain	Res	Type
2	A	1149	G
2	A	1153	C
2	A	1154	G
2	A	1155	A
2	A	1156	A
2	A	1157	G
2	A	1159	U
2	A	1162	G
2	A	1166	C
2	A	1171	G
2	A	1174	A
2	A	1175	U
2	A	1176	G
2	A	1177	A
2	A	1179	C
2	A	1180	C
2	A	1181	C
2	A	1182	A
2	A	1183	G
2	A	1184	G
2	A	1185	C
2	A	1186	G
2	A	1190	G
2	A	1197	G
2	A	1199	U
2	A	1202	C
2	A	1203	G
2	A	1204	A
2	A	1205	U
2	A	1206	G
2	A	1207	C
2	A	1208	C
2	A	1209	G
2	A	1210	A
2	A	1211	U
2	A	1212	G
2	A	1214	A
2	A	1220	A
2	A	1221	C
2	A	1222	C
2	A	1227	A
2	A	1228	G

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Mol	Chain	Res	Type
2	A	1229	G
2	A	1234	U
2	A	1236	G
2	A	1237	A
2	A	1239	G
2	A	1240	U
2	A	1241	A
2	A	1244	G
2	A	1246	A
2	A	1247	A
2	A	1248	G
2	A	1249	U
2	A	1251	C
2	A	1252	G
2	A	1253	A
2	A	1254	A
2	A	1255	U
2	A	1256	G
2	A	1260	G
2	A	1261	C
2	A	1265	A
2	A	1266	G
2	A	1267	U
2	A	1268	A
2	A	1269	A
2	A	1270	C
2	A	1271	G
2	A	1272	A
2	A	1273	U
2	A	1275	A
2	A	1284	A
2	A	1286	A
2	A	1287	A
2	A	1288	U
2	A	1289	C
2	A	1298	C
2	A	1300	U
2	A	1301	A
2	A	1302	A
2	A	1304	C
2	A	1307	A
2	A	1309	G

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Mol	Chain	Res	Type
2	A	1311	G
2	A	1312	U
2	A	1313	U
2	A	1314	C
2	A	1320	C
2	A	1321	A
2	A	1325	G
2	A	1326	U
2	A	1329	U
2	A	1330	C
2	A	1332	G
2	A	1333	C
2	A	1340	U
2	A	1341	U
2	A	1342	A
2	A	1343	G
2	A	1344	G
2	A	1345	C
2	A	1350	C
2	A	1352	U
2	A	1361	G
2	A	1363	C
2	A	1364	G
2	A	1365	A
2	A	1366	A
2	A	1368	G
2	A	1378	A
2	A	1379	A
2	A	1384	A
2	A	1385	G
2	A	1391	U
2	A	1392	A
2	A	1394	U
2	A	1395	A
2	A	1397	U
2	A	1398	C
2	A	1402	C
2	A	1404	C
2	A	1407	C
2	A	1415	U
2	A	1416	G
2	A	1417	C

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Mol	Chain	Res	Type
2	A	1418	G
2	A	1419	A
2	A	1420	U
2	A	1421	G
2	A	1422	G
2	A	1425	G
2	A	1426	G
2	A	1427	A
2	A	1428	C
2	A	1429	G
2	A	1438	U
2	A	1439	A
2	A	444(A)	A
2	A	449(A)	G
2	A	1451	C
2	A	1454	U
2	A	1455	G
2	A	1460	A
2	A	1461	G
2	A	1462	C
2	A	1467	C
2	A	1475	G
2	A	1478	G
2	A	1480	G
2	A	1483	G
2	A	1484	G
2	A	1485	G
2	A	1489	U
2	A	1490	A
2	A	1491	G
2	A	1494	A
2	A	1495	A
2	A	1496	A
2	A	1497	U
2	A	1498	C
2	A	1499	C
2	A	1502	C
2	A	1506	C
2	A	1507	A
2	A	1508	A
2	A	1509	C
2	A	1510	A

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Mol	Chain	Res	Type
2	A	1512	G
2	A	1513	C
2	A	1514	U
2	A	1515	C
2	A	1516	U
2	A	1517	G
2	A	1519	G
2	A	1521	G
2	A	1522	G
2	A	1525	G
2	A	1527	G
2	A	1528	A
2	A	1530	G
2	A	1531	C
2	A	1533	C
2	A	1534	G
2	A	1536	A
2	A	1537	C
2	A	1538	G
2	A	1539	G
2	A	1540	G
2	A	1543	A
2	A	1544	C
2	A	1545	A
2	A	1547	C
2	A	1553	A
2	A	1554	A
2	A	1555	G
2	A	1558	A
2	A	1559	G
2	A	1560	G
2	A	1561	G
2	A	1566	A
2	A	1567	A
2	A	1568	G
2	A	1569	A
2	A	1571	A
2	A	1572	A
2	A	1573	G
2	A	1574	C
2	A	1575	C
2	A	1577	C

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Mol	Chain	Res	Type
2	A	1578	U
2	A	1579	A
2	A	1583	A
2	A	1586	A
2	A	1587	A
2	A	1588	C
2	A	1602	U
2	A	1603	A
2	A	1606	G
2	A	1607	C
2	A	1608	A
2	A	1609	A
2	A	1610	A
2	A	1611	C
2	A	1612	C
2	A	1613	G
2	A	1614	A
2	A	1615	C
2	A	1616	A
2	A	1617	C
2	A	1618	A
2	A	1619	G
2	A	1625	C
2	A	1626	G
2	A	1627	G
2	A	1634	A
2	A	1635	G
2	A	1639	U
2	A	1640	C
2	A	1645	G
2	A	1646	C
2	A	1647	G
2	A	1648	C
2	A	1649	G
2	A	1652	A
2	A	1653	G
2	A	1654	A
2	A	1655	A
2	A	1658	C
2	A	1664	A
2	A	1665	A
2	A	1667	G

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Mol	Chain	Res	Type
2	A	1668	A
2	A	1669	A
2	A	1670	C
2	A	1674	G
2	A	1675	C
2	A	1679	U
2	A	1681	G
2	A	1682	G
2	A	1686	C
2	A	1688	U
2	A	1689	A
2	A	1695	G
2	A	1696	G
2	A	1698	A
2	A	1699	G
2	A	1700	A
2	A	1701	A
2	A	1703	G
2	A	1705	G
2	A	1706	U
2	A	1707	G
2	A	1718	G
2	A	1726	G
2	A	1728	G
2	A	1729	A
2	A	1730	U
2	A	1731	G
2	A	1732	A
2	A	1733	G
2	A	1735	C
2	A	1743	G
2	A	1747	G
2	A	1755	A
2	A	1756	G
2	A	1757	U
2	A	1758	G
2	A	1759	A
2	A	1760	A
2	A	1762	A
2	A	1763	G
2	A	1764	G
2	A	1767	C

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Mol	Chain	Res	Type
2	A	1772	G
2	A	1773	A
2	A	1774	C
2	A	1775	U
2	A	1776	G
2	A	1780	A
2	A	1781	C
2	A	1782	C
2	A	1783	A
2	A	1784	A
2	A	1786	A
2	A	1787	A
2	A	1788	C
2	A	1790	C
2	A	1791	A
2	A	1800	C
2	A	1801	G
2	A	1802	A
2	A	1805	U
2	A	1808	U
2	A	1809	A
2	A	1810	A
2	A	1811	G
2	A	1815	A
2	A	1816	G
2	A	1817	G
2	A	1818	U
2	A	1820	U
2	A	1821	A
2	A	1823	G
2	A	1824	G
2	A	1825	A
2	A	1826	G
2	A	1828	G
2	A	1829	A
2	A	1834	U
2	A	1837	C
2	A	1838	C
2	A	1839	G
2	A	1840	G
2	A	1843	C
2	A	1847	A

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Mol	Chain	Res	Type
2	A	1852	C
2	A	1858	G
2	A	1860	G
2	A	1870	C
2	A	1880	C
2	A	1881	C
2	A	1883	G
2	A	1884	A
2	A	1891	G
2	A	1895	C
2	A	1899	G
2	A	1901	A
2	A	1903	G
2	A	1906	G
2	A	1913	A
2	A	1914	C
2	A	1915	U
2	A	1916	A
2	A	1917	U
2	A	1918	A
2	A	1919	A
2	A	1923	U
2	A	1925	C
2	A	1928	A
2	A	1929	G
2	A	1930	G
2	A	1931	U
2	A	1934	C
2	A	1936	A
2	A	1937	A
2	A	1938	A
2	A	1939	U
2	A	1940	U
2	A	1941	C
2	A	1942	C
2	A	1943	U
2	A	1944	U
2	A	1945	G
2	A	1947	C
2	A	1953	A
2	A	1954	G
2	A	1955	U

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Mol	Chain	Res	Type
2	A	1956	U
2	A	1957	C
2	A	1958	C
2	A	1960	A
2	A	1962	C
2	A	1963	U
2	A	1964	G
2	A	1965	C
2	A	1966	A
2	A	1967	C
2	A	1968	G
2	A	1969	A
2	A	1970	A
2	A	1971	A
2	A	1972	A
2	A	1981	A
2	A	1982	C
2	A	1991	U
2	A	1993	U
2	A	1995	U
2	A	1996	C
2	A	1997	G
2	A	2003	G
2	A	2015	A
2	A	2016	U
2	A	2018	G
2	A	2020	A
2	A	2021	C
2	A	2022	U
2	A	2023	G
2	A	2027	G
2	A	2030	A
2	A	2031	A
2	A	2032	G
2	A	2033	A
2	A	2034	U
2	A	2036	C
2	A	2039	C
2	A	2041	U
2	A	2043	C
2	A	2044	C
2	A	2045	C

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Mol	Chain	Res	Type
2	A	2047	U
2	A	2048	G
2	A	2050	C
2	A	2051	A
2	A	2052	G
2	A	2055	C
2	A	2056	G
2	A	2059	A
2	A	2060	A
2	A	2061	G
2	A	2062	A
2	A	2063	C
2	A	2064	C
2	A	2065	C
2	A	2066	C
2	A	2068	U
2	A	2069	G
2	A	2076	U
2	A	2077	A
2	A	2080	G
2	A	2083	G
2	A	2087	G
2	A	2091	U
2	A	2092	U
2	A	2093	G
2	A	2094	G
2	A	2098	U
2	A	2099	U
2	A	2182	G
2	A	2188	C
2	A	2190	G
2	A	2191	G
2	A	2192	G
2	A	2193	G
2	A	2194	G
2	A	2195	C
2	A	2196	C
2	A	2198	A
2	A	2205	C
2	A	2206	C
2	A	2207	C
2	A	2208	U

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Mol	Chain	Res	Type
2	A	2209	C
2	A	2210	G
2	A	2211	G
2	A	2212	A
2	A	2213	U
2	A	2217	G
2	A	2224	G
2	A	2225	A
2	A	2226	C
2	A	2227	A
2	A	2228	G
2	A	2232	U
2	A	2233	U
2	A	2234	G
2	A	2235	G
2	A	2236	C
2	A	2237	G
2	A	2238	G
2	A	2239	G
2	A	2240	C
2	A	2241	A
2	A	2242	G
2	A	2243	U
2	A	2245	U
2	A	2247	A
2	A	2250	G
2	A	2251	G
2	A	2253	G
2	A	2254	C
2	A	2255	G
2	A	2257	U
2	A	2258	C
2	A	2259	G
2	A	2262	U
2	A	2263	C
2	A	2264	C
2	A	2265	U
2	A	2266	A
2	A	2267	A
2	A	2268	A
2	A	2269	A
2	A	2270	G

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Mol	Chain	Res	Type
2	A	2272	U
2	A	2275	C
2	A	2276	G
2	A	2277	G
2	A	2278	A
2	A	2279	G
2	A	2281	C
2	A	2282	G
2	A	2283	C
2	A	2284	C
2	A	2286	A
2	A	2287	A
2	A	2288	A
2	A	2289	G
2	A	2291	U
2	A	2294	C
2	A	2296	U
2	A	2297	C
2	A	2300	G
2	A	2303	G
2	A	2304	G
2	A	2306	C
2	A	2307	G
2	A	2308	G
2	A	2309	A
2	A	2310	A
2	A	2311	A
2	A	2312	U
2	A	2313	C
2	A	2314	C
2	A	2315	G
2	A	2317	C
2	A	2318	G
2	A	2319	G
2	A	2320	A
2	A	2321	G
2	A	2322	A
2	A	2323	G
2	A	2325	G
2	A	2327	A
2	A	2334	G
2	A	2335	A

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Mol	Chain	Res	Type
2	A	2336	A
2	A	2337	G
2	A	2339	G
2	A	2341	G
2	A	2342	C
2	A	2343	C
2	A	2345	G
2	A	2346	A
2	A	2347	C
2	A	2348	U
2	A	2350	C
2	A	2351	G
2	A	2352	A
2	A	2353	G
2	A	2355	C
2	A	2357	U
2	A	2358	G
2	A	2359	C
2	A	2360	A
2	A	2361	A
2	A	2362	G
2	A	2366	A
2	A	2371	G
2	A	2372	G
2	A	2373	G
2	A	2374	C
2	A	2378	A
2	A	2379	G
2	A	2381	C
2	A	2382	G
2	A	2383	G
2	A	2384	G
2	A	2385	C
2	A	2386	C
2	A	2387	U
2	A	2389	G
2	A	2390	U
2	A	2392	A
2	A	2393	A
2	A	2394	C
2	A	2395	C
2	A	2396	G

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Mol	Chain	Res	Type
2	A	2397	G
2	A	2399	G
2	A	2400	G
2	A	2401	U
2	A	2402	C
2	A	2403	C
2	A	2405	G
2	A	2406	U
2	A	2407	G
2	A	2408	U
2	A	2409	G
2	A	2411	A
2	A	2412	A
2	A	2413	G
2	A	2417	C
2	A	2422	A
2	A	2423	U
2	A	2424	C
2	A	2425	A
2	A	2426	A
2	A	2427	C
2	A	2428	G
2	A	2430	A
2	A	2431	U
2	A	2432	A
2	A	2434	A
2	A	2435	A
2	A	2436	G
2	A	2437	U
2	A	2438	U
2	A	2439	A
2	A	2441	C
2	A	2442	C
2	A	2444	G
2	A	2446	G
2	A	2448	A
2	A	2449	U
2	A	2451	A
2	A	2453	A
2	A	2455	G
2	A	2456	C
2	A	2458	G

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Mol	Chain	Res	Type
2	A	2463	C
2	A	2464	C
2	A	2465	C
2	A	2466	C
2	A	2468	G
2	A	2469	A
2	A	2470	G
2	A	2472	G
2	A	2473	U
2	A	2475	C
2	A	2476	A
2	A	2478	A
2	A	2479	G
2	A	2480	C
2	A	2482	G
2	A	2483	C
2	A	2484	G
2	A	2485	G
2	A	2488	A
2	A	2490	G
2	A	2491	U
2	A	2493	U
2	A	2494	G
2	A	2495	G
2	A	2496	C
2	A	2497	A
2	A	2498	C
2	A	2499	C
2	A	2500	U
2	A	2502	G
2	A	2503	A
2	A	2504	U
2	A	2505	G
2	A	2506	U
2	A	2507	C
2	A	2512	C
2	A	2513	G
2	A	2517	C
2	A	2518	A
2	A	2519	U
2	A	2520	C
2	A	2521	C

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Mol	Chain	Res	Type
2	A	2522	U
2	A	2526	G
2	A	2529	G
2	A	2532	G
2	A	2533	A
2	A	2535	G
2	A	2536	G
2	A	2537	U
2	A	2539	C
2	A	2540	C
2	A	2541	A
2	A	2542	A
2	A	2543	G
2	A	2544	G
2	A	2545	G
2	A	2546	U
2	A	2547	U
2	A	2549	G
2	A	2551	C
2	A	2552	U
2	A	2553	G
2	A	2554	U
2	A	2555	U
2	A	2556	C
2	A	2557	G
2	A	2558	C
2	A	2561	A
2	A	2562	U
2	A	2565	A
2	A	2566	A
2	A	2567	G
2	A	2568	C
2	A	2569	G
2	A	2570	G
2	A	2572	A
2	A	2573	C
2	A	2574	G
2	A	2575	C
2	A	2576	G
2	A	2577	A
2	A	2578	G
2	A	2579	C

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Mol	Chain	Res	Type
2	A	2580	U
2	A	2581	G
2	A	2582	G
2	A	2583	G
2	A	2584	U
2	A	2585	U
2	A	2586	C
2	A	2587	A
2	A	2588	G
2	A	2590	A
2	A	2591	C
2	A	2596	U
2	A	2597	G
2	A	2598	A
2	A	2599	G
2	A	2600	A
2	A	2601	C
2	A	2602	A
2	A	2603	G
2	A	2604	U
2	A	2605	U
2	A	2606	C
2	A	2607	G
2	A	2609	U
2	A	2610	C
2	A	2611	U
2	A	2612	C
2	A	2613	U
2	A	2614	A
2	A	2615	U
2	A	2616	C
2	A	2617	C
2	A	2618	G
2	A	2619	C
2	A	2620	C
2	A	2621	A
2	A	2625	G
2	A	2626	C
2	A	2627	G
2	A	2629	A
2	A	2630	G
2	A	2631	G

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Mol	Chain	Res	Type
2	A	2633	G
2	A	2635	C
2	A	2637	U
2	A	2638	G
2	A	2640	G
2	A	2641	G
2	A	2645	G
2	A	2646	C
2	A	2648	C
2	A	2650	U
2	A	2654	A
2	A	2655	G
2	A	2658	C
2	A	2659	G
2	A	2661	G
2	A	2662	A
2	A	2663	G
2	A	2665	A
2	A	2666	C
2	A	2667	C
2	A	2672	G
2	A	2676	C
2	A	2677	G
2	A	2678	C
2	A	2679	A
2	A	2680	C
2	A	2681	C
2	A	2682	U
2	A	2683	C
2	A	2685	G
2	A	2686	G
2	A	2687	U
2	A	2689	U
2	A	2690	C
2	A	2691	C
2	A	2693	A
2	A	2698	U
2	A	2699	C
2	A	2701	C
2	A	2702	U
2	A	2703	C
2	A	2704	C

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Mol	Chain	Res	Type
2	A	2705	A
2	A	2707	G
2	A	2708	G
2	A	2709	G
2	A	2710	C
2	A	2712	U
2	A	712(A)	A
2	A	2713	A
2	A	2714	G
2	A	2717	G
2	A	2718	G
2	A	2719	G
2	A	2720	U
2	A	2721	A
2	A	2723	C
2	A	2725	A
2	A	2726	U
2	A	2727	G
2	A	2729	G
2	A	2732	G
2	A	2733	A
2	A	2738	A
2	A	2740	A
2	A	2741	A
2	A	2742	C
2	A	2743	C
2	A	2744	G
2	A	2746	U
2	A	2747	G
2	A	2748	A
2	A	2750	A
2	A	2751	G
2	A	2752	C
2	A	2755	C
2	A	2756	U
2	A	2757	A
2	A	2758	A
2	A	2759	G
2	A	2760	C
2	A	2762	G
2	A	2763	G
2	A	2764	A

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Mol	Chain	Res	Type
2	A	2765	A
2	A	2766	G
2	A	2768	C
2	A	2769	C
2	A	2770	G
2	A	2771	C
2	A	2772	C
2	A	2773	C
2	A	2774	C
2	A	2775	A
2	A	2776	A
2	A	2777	G
2	A	2778	A
2	A	2779	U
2	A	2780	G
2	A	2781	A
2	A	2782	G
2	A	2783	G
2	A	2784	C
2	A	2786	U
2	A	2787	C
2	A	2788	C
2	A	2790	A
2	A	2791	C
2	A	2793	G
2	A	2794	C
2	A	2795	G
2	A	2798	C
2	A	2799	A
2	A	2802	G
2	A	2803	C
2	A	2804	C
2	A	2805	G
2	A	2809	A
2	A	2810	A
2	A	2811	G
2	A	2812	G
2	A	2815	C
2	A	2816	C
2	A	2817	G
2	A	2818	G
2	A	2819	G

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Mol	Chain	Res	Type
2	A	2820	A
2	A	2821	A
2	A	2822	G
2	A	2826	A
2	A	2827	C
2	A	2829	C
2	A	2832	U
2	A	2833	G
2	A	2834	G
2	A	2835	A
2	A	2836	U
2	A	2839	G
2	A	2843	G
2	A	2844	G
2	A	2845	G
2	A	2846	G
2	A	2847	U
2	A	2848	G
2	A	2849	U
2	A	2850	A
2	A	2853	C
2	A	2854	G
2	A	2858	C
2	A	2860	A
2	A	2861	G
2	A	2862	G
2	A	2863	C
2	A	2866	U
2	A	2867	G
2	A	2868	A
2	A	2869	G
2	A	2871	C
2	A	2872	G
2	A	2874	C
2	A	2877	G
2	A	2879	C
2	A	2880	C
2	A	2881	C
2	A	2882	A
2	A	2883	A
2	A	2884	U
2	A	2889	C

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Mol	Chain	Res	Type
2	A	2891	G
2	A	2892	A
2	A	2893	G
2	A	2894	G
2	A	2895	U
2	A	2899	G
2	A	2902	C

All (363) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	B	14	U
1	B	56	G
1	B	119	A
2	A	13	A
2	A	16	G
2	A	36	G
2	A	51	G
2	A	60	G
2	A	71	A
2	A	74	A
2	A	83	G
2	A	90	U
2	A	102	G
2	A	107	C
2	A	119	A
2	A	128	C
2	A	137	C
2	A	139	G
2	A	162	U
2	A	181	A
2	A	197	A
2	A	204	A
2	A	215	G
2	A	221	A
2	A	232	G
2	A	241	A
2	A	247	G
2	A	249	C
2	A	265	A
2	A	270(B)	A
2	A	270(L)	U

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Mol	Chain	Res	Type
2	A	270(M)	U
2	A	270(Y)	G
2	A	271(B)	G
2	A	289	A
2	A	296	C
2	A	312	G
2	A	320	A
2	A	323	G
2	A	331	A
2	A	332	A
2	A	333	G
2	A	338	G
2	A	370	G
2	A	371	A
2	A	386	G
2	A	387	U
2	A	390	A
2	A	404	C
2	A	434	U
2	A	446	G
2	A	448	U
2	A	455	C
2	A	463	G
2	A	474	G
2	A	478	A
2	A	479	A
2	A	482	A
2	A	508	G
2	A	526	A
2	A	529	A
2	A	530	G
2	A	532	A
2	A	548	A
2	A	559	G
2	A	566	U
2	A	574	C
2	A	579	G
2	A	587	C
2	A	615	G
2	A	616	A
2	A	620	G
2	A	646	A

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Mol	Chain	Res	Type
2	A	654	A
2	A	669	G
2	A	670	A
2	A	685	A
2	A	686	G
2	A	687	C
2	A	704	G
2	A	728	G
2	A	729	G
2	A	746	A
2	A	750	A
2	A	751	A
2	A	752	A
2	A	762	U
2	A	764	A
2	A	776	G
2	A	782	A
2	A	787	U
2	A	788	A
2	A	789	A
2	A	790	C
2	A	792	G
2	A	793	A
2	A	800	A
2	A	801	G
2	A	805	G
2	A	811	U
2	A	817	C
2	A	827	U
2	A	829	A
2	A	830	G
2	A	845	G
2	A	846	C
2	A	886	C
2	A	930	U
2	A	940	G
2	A	944	G
2	A	945	A
2	A	957	A
2	A	973	A
2	A	974	G
2	A	974(A)	C

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Mol	Chain	Res	Type
2	A	982	C
2	A	989	G
2	A	994	C
2	A	1011	G
2	A	1022	G
2	A	1025	G
2	A	1033	U
2	A	1045	A
2	A	1061	U
2	A	1069	A
2	A	1085	A
2	A	1100	C
2	A	1102	C
2	A	1110	G
2	A	1126	A
2	A	1128	A
2	A	1130	U
2	A	1131	G
2	A	1140	C
2	A	1141	U
2	A	1154	G
2	A	1163	G
2	A	1169	G
2	A	1173	G
2	A	1179	C
2	A	1180	C
2	A	1181	C
2	A	1183	G
2	A	1190	G
2	A	1202	C
2	A	1206	G
2	A	1210	A
2	A	1220	A
2	A	1248	G
2	A	1250	G
2	A	1252	G
2	A	1253	A
2	A	1254	A
2	A	1255	U
2	A	1265	A
2	A	1287	A
2	A	1288	U

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Mol	Chain	Res	Type
2	A	1300	U
2	A	1302	A
2	A	1311	G
2	A	1312	U
2	A	1320	C
2	A	1324	G
2	A	1325	G
2	A	1329	U
2	A	1341	U
2	A	1342	A
2	A	1364	G
2	A	1378	A
2	A	1420	U
2	A	1427	A
2	A	1428	C
2	A	1437	C
2	A	1444	G
2	A	1454	U
2	A	1460	A
2	A	1476	C
2	A	1489	U
2	A	1490	A
2	A	1496	A
2	A	1498	C
2	A	1507	A
2	A	1521	G
2	A	1535	U
2	A	1544	C
2	A	1552	G
2	A	1554	A
2	A	1557	C
2	A	1567	A
2	A	1568	G
2	A	1571	A
2	A	1585	C
2	A	1602	U
2	A	1608	A
2	A	1609	A
2	A	1610	A
2	A	1614	A
2	A	1616	A
2	A	1618	A

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Mol	Chain	Res	Type
2	A	1634	A
2	A	1647	G
2	A	1653	G
2	A	1667	G
2	A	1668	A
2	A	1681	G
2	A	1693	U
2	A	1699	G
2	A	1702	G
2	A	1742	C
2	A	1758	G
2	A	1763	G
2	A	1772	G
2	A	1784	A
2	A	1800	C
2	A	1809	A
2	A	1815	A
2	A	1816	G
2	A	1819	A
2	A	1820	U
2	A	1828	G
2	A	1838	C
2	A	1848	A
2	A	1914	C
2	A	1915	U
2	A	1924	C
2	A	1929	G
2	A	1930	G
2	A	1936	A
2	A	1938	A
2	A	1939	U
2	A	1943	U
2	A	1954	G
2	A	1964	G
2	A	1966	A
2	A	1968	G
2	A	1970	A
2	A	1980	G
2	A	1988	C
2	A	1992	G
2	A	2019	A
2	A	2022	U

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Mol	Chain	Res	Type
2	A	2030	A
2	A	2032	G
2	A	2033	A
2	A	2042	A
2	A	2047	U
2	A	2049	G
2	A	2059	A
2	A	2062	A
2	A	2064	C
2	A	2067	G
2	A	2076	U
2	A	2195	C
2	A	2199	A
2	A	2210	G
2	A	2219	G
2	A	2225	A
2	A	2237	G
2	A	2238	G
2	A	2241	A
2	A	2244	U
2	A	2249	U
2	A	2253	G
2	A	2265	U
2	A	2266	A
2	A	2267	A
2	A	2268	A
2	A	2274	A
2	A	2282	G
2	A	2287	A
2	A	2288	A
2	A	2311	A
2	A	2318	G
2	A	2320	A
2	A	2334	G
2	A	2344	U
2	A	2345	G
2	A	2359	C
2	A	2386	C
2	A	2391	G
2	A	2393	A
2	A	2398	U
2	A	2401	U

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Mol	Chain	Res	Type
2	A	2411	A
2	A	2423	U
2	A	2425	A
2	A	2426	A
2	A	2432	A
2	A	2434	A
2	A	2436	G
2	A	2437	U
2	A	2439	A
2	A	2447	G
2	A	2449	U
2	A	2451	A
2	A	2454	G
2	A	2469	A
2	A	2472	G
2	A	2481	G
2	A	2484	G
2	A	2492	U
2	A	2493	U
2	A	2497	A
2	A	2498	C
2	A	2502	G
2	A	2503	A
2	A	2517	C
2	A	2519	U
2	A	2532	G
2	A	2545	G
2	A	2555	U
2	A	2565	A
2	A	2576	G
2	A	2578	G
2	A	2581	G
2	A	2582	G
2	A	2587	A
2	A	2589	A
2	A	2598	A
2	A	2606	C
2	A	2609	U
2	A	2610	C
2	A	2612	C
2	A	2613	U
2	A	2620	C

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Mol	Chain	Res	Type
2	A	2627	G
2	A	2654	A
2	A	2665	A
2	A	2681	C
2	A	2688	U
2	A	2689	U
2	A	2690	C
2	A	2703	C
2	A	2707	G
2	A	2712	U
2	A	2717	G
2	A	2720	U
2	A	2722	G
2	A	2726	U
2	A	2740	A
2	A	2741	A
2	A	2756	U
2	A	2757	A
2	A	2763	G
2	A	2769	C
2	A	2774	C
2	A	2777	G
2	A	2781	A
2	A	2783	G
2	A	2790	A
2	A	2809	A
2	A	2819	G
2	A	2820	A
2	A	2835	A
2	A	2849	U
2	A	2858	C
2	A	2862	G
2	A	2866	U
2	A	2867	G
2	A	2879	C
2	A	2881	C
2	A	2882	A
2	A	2891	G

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

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

5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

5.6 Ligand geometry ⓘ

There are no ligands in this entry.

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	B	123/123 (100%)	0.73	18 (14%) 3 9	267, 323, 388, 388	0
2	A	2814/2916 (96%)	0.74	400 (14%) 3 9	65, 238, 393, 400	0
3	D	173/173 (100%)	1.90	67 (38%) 1 3	392, 392, 400, 400	0
4	E	191/338 (56%)	3.53	128 (67%) 0 3	400, 400, 400, 400	0
5	F	189/246 (76%)	0.56	24 (12%) 4 11	393, 396, 396, 396	0
6	G	122/176 (69%)	2.23	53 (43%) 1 3	400, 400, 400, 400	0
7	H	164/177 (92%)	0.70	21 (12%) 4 11	400, 400, 400, 400	0
8	I	148/149 (99%)	1.09	37 (25%) 1 5	400, 400, 400, 400	0
9	N	117/145 (80%)	1.99	49 (41%) 1 3	400, 400, 400, 400	0
10	O	122/122 (100%)	0.59	14 (11%) 5 13	400, 400, 400, 400	0
11	P	84/164 (51%)	0.44	7 (8%) 11 19	395, 395, 400, 400	0
12	Q	138/138 (100%)	1.37	40 (28%) 1 4	393, 393, 393, 393	0
13	S	113/186 (60%)	0.55	14 (12%) 5 12	278, 400, 400, 400	0
14	T	52/66 (78%)	4.04	41 (78%) 0 2	400, 400, 400, 400	0
15	W	108/113 (95%)	1.98	42 (38%) 1 3	278, 395, 400, 400	0
16	X	76/84 (90%)	0.81	14 (18%) 2 6	400, 400, 400, 400	0
17	Y	110/119 (92%)	1.13	26 (23%) 1 5	400, 400, 400, 400	0
18	Z	177/253 (69%)	0.19	8 (4%) 32 33	396, 398, 398, 398	0
19	R	105/118 (88%)	1.05	25 (23%) 1 5	400, 400, 400, 400	0
20	U	117/118 (99%)	0.33	5 (4%) 34 33	391, 391, 400, 400	0
21	V	100/100 (100%)	1.83	36 (36%) 1 4	400, 400, 400, 400	0
22	2	64/70 (91%)	0.50	12 (18%) 2 6	400, 400, 400, 400	0
23	3	60/60 (100%)	0.21	4 (6%) 17 24	398, 398, 398, 398	0
24	0	86/91 (94%)	1.78	32 (37%) 1 4	396, 400, 400, 400	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
25	4	73/73 (100%)	3.52	43 (58%) 0 3	396, 397, 397, 397	0
26	5	58/60 (96%)	0.87	9 (15%) 3 8	400, 400, 400, 400	0
27	6	53/82 (64%)	0.24	4 (7%) 14 21	400, 400, 400, 400	0
28	7	46/47 (97%)	1.63	16 (34%) 1 4	396, 396, 396, 396	0
29	8	63/64 (98%)	2.37	32 (50%) 0 3	400, 400, 400, 400	0
30	9	35/36 (97%)	4.51	25 (71%) 0 3	400, 400, 400, 400	0
31	K	133/141 (94%)	-0.02	1 (0%) 83 72	392, 400, 400, 400	0
All	All	6014/6748 (89%)	1.05	1247 (20%) 1 5	65, 392, 400, 400	0

All (1247) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
30	9	24	LEU	17.0
4	E	174	LEU	13.4
30	9	25	VAL	13.2
25	4	47	GLU	12.8
30	9	34	GLN	12.7
4	E	175	ASP	12.0
4	E	189	MET	11.8
4	E	41	PHE	11.7
1	B	36	C	11.5
6	G	19	GLU	11.5
25	4	46	GLU	11.5
25	4	72	LYS	11.2
25	4	54	GLY	11.0
30	9	17	VAL	10.9
2	A	2356	C	10.9
6	G	18	ILE	10.6
3	D	200	THR	10.4
3	D	198	GLY	10.2
6	G	93	LEU	10.1
4	E	40	GLY	10.0
30	9	23	VAL	10.0
4	E	187	HIS	9.8
25	4	44	THR	9.6
17	Y	5	ASP	9.6
15	W	2	GLU	9.5
2	A	2271	G	9.2
2	A	2272	U	9.2
1	B	37	C	9.1

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Mol	Chain	Res	Type	RSRZ
25	4	56	VAL	9.1
14	T	40	ALA	9.1
2	A	101	G	8.8
17	Y	6	LYS	8.8
9	N	71	TYR	8.8
7	H	156	TYR	8.7
4	E	176	HIS	8.7
7	H	155	PRO	8.7
4	E	77	PRO	8.7
8	I	1	MET	8.7
2	A	1554	A	8.6
4	E	42	ALA	8.6
29	8	23	MET	8.5
7	H	157	LYS	8.5
3	D	199	ARG	8.4
7	H	169	ARG	8.3
4	E	180	ILE	8.3
4	E	177	ALA	8.3
2	A	1555	G	8.3
4	E	178	LEU	8.3
29	8	60	LEU	8.3
15	W	65	LEU	8.2
2	A	2212	A	8.2
24	0	85	GLN	8.1
4	E	179	ASP	8.0
9	N	133	GLY	8.0
7	H	167	LEU	8.0
3	D	201	ASP	8.0
6	G	94	ALA	8.0
15	W	109	GLU	8.0
14	T	41	ASP	7.9
7	H	168	VAL	7.9
4	E	61	PRO	7.8
29	8	22	VAL	7.7
25	4	52	THR	7.7
9	N	72	PRO	7.7
9	N	94	GLY	7.7
25	4	55	ARG	7.7
30	9	16	VAL	7.6
4	E	83	LEU	7.6
4	E	173	ARG	7.6
2	A	835	A	7.5

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Mol	Chain	Res	Type	RSRZ
30	9	26	ILE	7.5
2	A	2615	U	7.5
3	D	204	PHE	7.5
2	A	1820	U	7.5
1	B	38	C	7.4
4	E	68	VAL	7.4
2	A	2355	C	7.4
4	E	79	ARG	7.4
4	E	63	GLU	7.4
4	E	188	ALA	7.4
1	B	35	U	7.4
2	A	1634	A	7.4
2	A	2608	G	7.3
4	E	185	GLY	7.3
25	4	5	LEU	7.3
2	A	2270	G	7.3
25	4	61	LYS	7.1
6	G	95	THR	7.1
14	T	36	CYS	7.1
12	Q	115	SER	7.0
4	E	211	GLN	7.0
7	H	158	GLY	7.0
2	A	1440	G	7.0
8	I	23	ASP	7.0
2	A	1687	G	7.0
4	E	193	PHE	6.9
21	V	70	TYR	6.9
28	7	43	THR	6.9
3	D	212	HIS	6.9
30	9	19	ARG	6.8
9	N	97	ALA	6.8
4	E	311	PHE	6.8
2	A	1566	A	6.8
4	E	172	ASP	6.8
13	S	22	GLN	6.7
12	Q	127	ASN	6.7
4	E	62	ARG	6.7
15	W	3	ALA	6.7
2	A	1626	G	6.7
2	A	1694	C	6.7
14	T	38	ASN	6.7
21	V	67	LYS	6.7

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Mol	Chain	Res	Type	RSRZ
3	D	197	GLY	6.7
6	G	84	LEU	6.7
29	8	53	ALA	6.6
4	E	212	GLY	6.6
17	Y	104	GLU	6.6
2	A	1625	C	6.6
6	G	81	GLU	6.6
4	E	254	GLY	6.6
2	A	1176	G	6.6
4	E	76	PRO	6.6
25	4	57	ASP	6.6
2	A	1691	C	6.6
16	X	7	HIS	6.6
14	T	50	GLU	6.5
4	E	75	THR	6.5
2	A	1631	A	6.5
29	8	61	MET	6.5
2	A	2616	C	6.4
2	A	823	G	6.4
6	G	82	GLU	6.4
2	A	837	C	6.4
14	T	45	GLU	6.4
2	A	546	C	6.4
2	A	1656	C	6.4
24	0	21	LEU	6.3
25	4	71	SER	6.3
6	G	92	GLU	6.3
17	Y	8	ARG	6.3
3	D	209	ASN	6.3
17	Y	9	LYS	6.3
8	I	22	ALA	6.3
2	A	2213	U	6.3
16	X	8	PRO	6.3
3	D	203	PRO	6.2
7	H	154	GLU	6.2
25	4	45	GLY	6.2
25	4	7	PRO	6.1
17	Y	106	GLU	6.1
25	4	42	PHE	6.1
6	G	85	GLN	6.1
14	T	44	ARG	6.1
9	N	98	PHE	6.1

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Mol	Chain	Res	Type	RSRZ
25	4	68	ARG	6.1
5	F	53	GLY	6.1
24	0	18	PRO	6.1
12	Q	128	PRO	6.0
29	8	14	ILE	6.0
2	A	1246	A	6.0
24	0	84	ALA	6.0
4	E	171	SER	6.0
2	A	701	G	6.0
24	0	19	LYS	6.0
2	A	948	G	6.0
2	A	2091	U	6.0
9	N	61	VAL	5.9
4	E	294	THR	5.9
3	D	231	ALA	5.9
25	4	65	ASP	5.9
2	A	1303	G	5.9
14	T	39	ASN	5.9
6	G	135	VAL	5.9
15	W	107	LEU	5.8
4	E	108	LEU	5.8
6	G	66	GLY	5.8
25	4	64	GLY	5.8
4	E	96	LEU	5.8
25	4	53	GLU	5.8
4	E	216	ARG	5.8
14	T	8	TYR	5.8
5	F	96	LYS	5.8
2	A	836	G	5.8
2	A	2358	G	5.8
14	T	52	THR	5.8
3	D	211	HIS	5.8
2	A	141	A	5.8
6	G	91	ALA	5.8
4	E	183	ASP	5.8
2	A	2357	U	5.8
2	A	834	C	5.7
2	A	2042	A	5.7
4	E	80	ALA	5.7
2	A	1532	C	5.7
3	D	65	ASP	5.7
14	T	37	GLU	5.7

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Mol	Chain	Res	Type	RSRZ
5	F	98	ARG	5.7
6	G	58	VAL	5.7
15	W	108	GLY	5.7
8	I	21	VAL	5.7
14	T	49	LEU	5.7
2	A	2387	U	5.6
2	A	1686	C	5.6
2	A	2023	G	5.6
2	A	125	G	5.6
4	E	105	HIS	5.6
2	A	443	A	5.6
4	E	184	GLY	5.6
6	G	78	GLU	5.5
8	I	2	LYS	5.5
14	T	5	GLU	5.5
2	A	2054	A	5.5
4	E	253	GLN	5.5
4	E	69	PRO	5.5
4	E	295	LEU	5.5
17	Y	7	GLN	5.5
5	F	52	ALA	5.5
28	7	17	GLY	5.5
29	8	58	MET	5.5
30	9	15	LYS	5.5
3	D	232	VAL	5.5
14	T	54	THR	5.5
14	T	56	ARG	5.4
9	N	95	ARG	5.4
2	A	1301	A	5.4
21	V	26	GLN	5.4
2	A	1693	U	5.4
14	T	9	CYS	5.4
21	V	19	VAL	5.4
4	E	181	VAL	5.4
4	E	95	PRO	5.4
6	G	77	ASP	5.3
2	A	34	C	5.3
6	G	16	PRO	5.3
14	T	46	ALA	5.3
4	E	186	GLU	5.3
3	D	213	LYS	5.3
25	4	43	TRP	5.3

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Mol	Chain	Res	Type	RSRZ
4	E	110	ARG	5.3
2	A	2211	G	5.3
29	8	24	ALA	5.3
30	9	21	GLY	5.3
24	0	17	ASN	5.3
14	T	4	ARG	5.3
24	0	50	GLY	5.3
19	R	70	LEU	5.2
4	E	78	MET	5.2
5	F	94	THR	5.2
8	I	24	GLY	5.2
14	T	53	ASP	5.2
17	Y	105	ASP	5.2
9	N	63	ILE	5.1
9	N	100	SER	5.1
8	I	26	ALA	5.1
24	0	87	GLU	5.1
24	0	35	ASN	5.1
15	W	73	ALA	5.1
2	A	1439	A	5.1
2	A	1791	A	5.1
3	D	101	ARG	5.1
7	H	91	VAL	5.1
2	A	966	G	5.1
9	N	99	GLU	5.0
4	E	271	ILE	5.0
2	A	1627	G	5.0
2	A	1255	U	5.0
5	F	92	PRO	5.0
15	W	44	ALA	5.0
2	A	1692	U	5.0
1	B	1	U	5.0
2	A	2266	A	5.0
2	A	702	G	5.0
4	E	256	THR	5.0
2	A	1450	C	5.0
2	A	1090	U	4.9
4	E	87	GLU	4.9
27	6	6	PRO	4.9
21	V	18	ASP	4.9
4	E	93	GLN	4.9
14	T	11	THR	4.9

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Mol	Chain	Res	Type	RSRZ
19	R	37	THR	4.9
6	G	97	GLN	4.9
8	I	20	ASN	4.8
25	4	60	ASN	4.8
29	8	49	VAL	4.8
21	V	11	GLN	4.8
2	A	1655	A	4.8
14	T	55	ALA	4.8
2	A	1632	A	4.8
2	A	562	U	4.8
2	A	204	A	4.8
14	T	24	LYS	4.8
10	O	48	PRO	4.8
2	A	700	G	4.8
14	T	25	ASP	4.8
2	A	98	G	4.8
4	E	94	ARG	4.8
9	N	134	GLU	4.8
21	V	7	THR	4.8
29	8	5	LYS	4.8
2	A	1103	A	4.8
2	A	1610	A	4.8
17	Y	2	LYS	4.8
21	V	17	GLY	4.8
25	4	66	SER	4.8
4	E	209	GLY	4.7
2	A	1642	G	4.7
4	E	227	ALA	4.7
29	8	56	ALA	4.7
2	A	2041	U	4.7
4	E	182	GLU	4.7
4	E	222	ARG	4.7
2	A	528	A	4.7
4	E	73	ILE	4.7
17	Y	109	GLU	4.7
4	E	39	GLN	4.7
15	W	20	VAL	4.7
9	N	96	GLU	4.7
4	E	49	THR	4.7
2	A	699	A	4.7
30	9	14	CYS	4.7
2	A	822	U	4.7

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Mol	Chain	Res	Type	RSRZ
21	V	20	ILE	4.7
24	O	86	THR	4.6
17	Y	3	GLN	4.6
15	W	110	LYS	4.6
29	8	16	ILE	4.6
21	V	68	LYS	4.6
2	A	1688	U	4.6
2	A	2795	G	4.6
2	A	1509	C	4.6
4	E	67	THR	4.6
6	G	20	LYS	4.6
4	E	226	HIS	4.6
17	Y	110	ALA	4.6
3	D	205	VAL	4.6
25	4	48	ARG	4.6
2	A	9	U	4.6
4	E	312	ARG	4.6
4	E	74	GLU	4.6
30	9	27	CYS	4.6
3	D	64	ILE	4.5
14	T	6	CYS	4.5
28	7	44	VAL	4.5
30	9	20	HIS	4.5
6	G	88	LEU	4.5
13	S	106	LEU	4.5
12	Q	53	PRO	4.5
13	S	21	HIS	4.5
4	E	70	VAL	4.5
8	I	27	ASN	4.5
8	I	25	TYR	4.5
2	A	2701	C	4.5
15	W	68	ARG	4.5
7	H	159	LYS	4.5
12	Q	156	ASN	4.4
5	F	40	ALA	4.4
2	A	1458	C	4.4
15	W	106	ILE	4.4
4	E	190	ASN	4.4
3	D	108	ASN	4.4
3	D	208	GLY	4.4
29	8	21	LYS	4.4
2	A	965	C	4.4

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Mol	Chain	Res	Type	RSRZ
2	A	2452	C	4.4
2	A	1792	G	4.4
12	Q	113	ALA	4.4
2	A	99	U	4.4
9	N	88	PRO	4.4
24	O	20	TYR	4.4
16	X	61	GLU	4.4
2	A	2502	G	4.4
2	A	2453	A	4.4
2	A	2700	C	4.4
9	N	87	LEU	4.4
9	N	35	THR	4.4
11	P	143	THR	4.3
4	E	293	TYR	4.3
19	R	112	ALA	4.3
24	O	83	ALA	4.3
3	D	202	LYS	4.3
27	6	5	GLY	4.3
4	E	257	GLY	4.3
2	A	1624	G	4.3
19	R	36	THR	4.3
8	I	58	ALA	4.3
6	G	80	ALA	4.3
4	E	255	GLN	4.3
12	Q	44	ALA	4.3
9	N	101	VAL	4.3
21	V	69	ILE	4.3
16	X	9	HIS	4.3
2	A	2601	C	4.3
12	Q	130	PRO	4.3
29	8	57	ARG	4.2
4	E	213	PRO	4.2
2	A	1989	G	4.2
4	E	43	GLY	4.2
30	9	35	ARG	4.2
7	H	170	LEU	4.2
9	N	34	GLU	4.2
17	Y	1	SER	4.2
2	A	1309	G	4.2
18	Z	162	ALA	4.2
6	G	67	ASP	4.2
2	A	824	A	4.2

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Mol	Chain	Res	Type	RSRZ
2	A	1300	U	4.2
2	A	936	C	4.2
15	W	69	LEU	4.2
4	E	270	ASP	4.2
2	A	203	C	4.2
2	A	1533	C	4.2
8	I	85	GLU	4.2
6	G	136	ARG	4.2
9	N	92	GLN	4.2
2	A	8	A	4.2
2	A	983	A	4.2
2	A	1245	G	4.2
2	A	1672	C	4.2
8	I	38	GLU	4.2
19	R	111	LEU	4.1
2	A	1779	U	4.1
2	A	1783	A	4.1
13	S	19	ASP	4.1
6	G	134	LEU	4.1
3	D	102	TYR	4.1
15	W	26	GLY	4.1
2	A	91	A	4.1
9	N	58	GLU	4.1
24	O	82	GLU	4.1
2	A	2035	G	4.1
15	W	70	TYR	4.1
29	8	51	ALA	4.1
29	8	63	PRO	4.1
2	A	2820	A	4.1
3	D	214	MET	4.1
25	4	69	ARG	4.1
14	T	27	ALA	4.1
17	Y	13	ARG	4.1
2	A	947	G	4.1
12	Q	54	VAL	4.0
13	S	105	GLY	4.0
16	X	59	ASP	4.0
21	V	21	ARG	4.0
3	D	193	GLU	4.0
2	A	951	C	4.0
4	E	38	VAL	4.0
12	Q	56	ILE	4.0

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Mol	Chain	Res	Type	RSRZ
6	G	86	THR	4.0
29	8	48	PHE	4.0
8	I	30	LEU	4.0
12	Q	22	GLY	4.0
25	4	67	TYR	4.0
2	A	206	U	4.0
2	A	697	C	4.0
2	A	2273	A	4.0
7	H	92	GLY	4.0
25	4	4	ASP	4.0
12	Q	157	ALA	4.0
4	E	210	THR	4.0
4	E	296	VAL	4.0
15	W	43	GLY	3.9
18	Z	102	GLY	3.9
24	0	52	GLY	3.9
25	4	6	HIS	3.9
8	I	35	LEU	3.9
10	O	49	GLY	3.9
2	A	1513	C	3.9
25	4	63	PHE	3.9
1	B	39	A	3.9
21	V	91	THR	3.9
24	0	36	ILE	3.9
2	A	1467	C	3.9
3	D	100	LYS	3.9
4	E	229	GLN	3.9
2	A	952	G	3.9
17	Y	12	ARG	3.9
21	V	12	TYR	3.9
25	4	70	GLY	3.9
2	A	2617	C	3.8
6	G	98	PHE	3.8
5	F	97	ASP	3.8
6	G	96	SER	3.8
26	5	21	SER	3.8
26	5	19	ARG	3.8
9	N	70	PHE	3.8
2	A	1623	G	3.8
9	N	139	LEU	3.8
2	A	102	G	3.8
8	I	19	LYS	3.8

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Mol	Chain	Res	Type	RSRZ
17	Y	107	LYS	3.8
30	9	33	LYS	3.8
3	D	196	ASN	3.8
2	A	949	C	3.8
11	P	144	ASP	3.8
17	Y	11	GLN	3.8
6	G	138	GLY	3.8
2	A	1657	C	3.8
3	D	207	ALA	3.8
8	I	84	GLY	3.8
4	E	64	GLY	3.8
16	X	6	LYS	3.8
2	A	190	A	3.8
10	O	47	THR	3.8
25	4	51	ASP	3.8
2	A	448	U	3.8
2	A	2092	U	3.8
2	A	1332	G	3.8
19	R	114	VAL	3.7
12	Q	55	GLN	3.7
1	B	46	A	3.7
2	A	189	G	3.7
2	A	1266	G	3.7
2	A	2607	G	3.7
6	G	61	PHE	3.7
4	E	71	THR	3.7
2	A	1641	A	3.7
21	V	14	VAL	3.7
4	E	107	GLU	3.7
2	A	1407	C	3.7
2	A	126	A	3.7
24	0	72	LYS	3.7
1	B	88	C	3.7
2	A	1005	C	3.7
2	A	2535	G	3.7
4	E	272	GLY	3.7
8	I	18	ILE	3.7
9	N	55	GLU	3.7
2	A	1690	A	3.7
29	8	13	ARG	3.7
2	A	698	C	3.7
19	R	29	LEU	3.7

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Mol	Chain	Res	Type	RSRZ
6	G	87	ALA	3.7
9	N	69	TYR	3.7
9	N	90	LYS	3.7
10	O	69	VAL	3.7
6	G	143	LYS	3.7
11	P	57	VAL	3.6
4	E	205	THR	3.6
15	W	23	LEU	3.6
10	O	68	GLY	3.6
13	S	20	TYR	3.6
14	T	26	GLY	3.6
15	W	24	ILE	3.6
19	R	109	ALA	3.6
21	V	27	GLY	3.6
29	8	20	GLY	3.6
21	V	25	LEU	3.6
25	4	73	LYS	3.6
4	E	292	PRO	3.6
2	A	2734	A	3.6
4	E	259	HIS	3.6
6	G	83	PHE	3.6
8	I	3	VAL	3.6
30	9	9	LYS	3.6
12	Q	116	HIS	3.6
2	A	953	A	3.6
14	T	47	ARG	3.6
1	B	2	C	3.6
29	8	47	GLY	3.6
3	D	216	ALA	3.6
4	E	44	TYR	3.6
5	F	34	ALA	3.6
14	T	10	GLY	3.6
2	A	449(A)	G	3.6
9	N	68	GLY	3.6
6	G	153	THR	3.6
12	Q	129	ASP	3.6
29	8	10	ALA	3.6
2	A	935	C	3.6
6	G	139	TYR	3.6
19	R	41	ALA	3.5
2	A	1304	C	3.5
2	A	1033	U	3.5

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Mol	Chain	Res	Type	RSRZ
5	F	45	ASP	3.5
3	D	109	LEU	3.5
14	T	42	LEU	3.5
15	W	66	GLU	3.5
6	G	79	MET	3.5
9	N	36	VAL	3.5
4	E	309	PRO	3.5
2	A	696	G	3.5
2	A	2215	G	3.5
30	9	22	ARG	3.5
30	9	36	GLN	3.5
2	A	97	C	3.5
2	A	552	G	3.5
2	A	950	G	3.5
21	V	88	GLN	3.5
2	A	1251	C	3.5
2	A	2056	G	3.5
30	9	2	LYS	3.5
2	A	2797	U	3.5
4	E	221	LYS	3.5
22	2	30	ALA	3.5
2	A	937	U	3.5
2	A	968	G	3.5
2	A	2024	G	3.5
3	D	222	PRO	3.4
15	W	82	LEU	3.4
3	D	159	THR	3.4
17	Y	4	PRO	3.4
2	A	1673	U	3.4
2	A	2016	U	3.4
6	G	154	LYS	3.4
6	G	89	PRO	3.4
14	T	48	ASN	3.4
2	A	1459	G	3.4
2	A	2069	G	3.4
28	7	34	ARG	3.4
21	V	6	GLN	3.4
1	B	45	A	3.4
2	A	984	A	3.4
17	Y	108	ARG	3.4
14	T	15	PRO	3.4
3	D	82	TYR	3.4

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Mol	Chain	Res	Type	RSRZ
6	G	57	THR	3.4
4	E	273	GLU	3.4
2	A	1628	G	3.4
16	X	27	ALA	3.4
3	D	215	LYS	3.4
15	W	63	ASP	3.4
2	A	734	A	3.4
8	I	90	PHE	3.4
16	X	57	THR	3.4
2	A	545	G	3.4
21	V	66	GLY	3.4
20	U	100	ALA	3.4
9	N	93	ARG	3.4
20	U	97	ASP	3.4
2	A	1764	G	3.4
1	B	0	A	3.3
2	A	2060	A	3.3
14	T	12	ASP	3.3
4	E	214	VAL	3.3
5	F	41	ASN	3.3
9	N	91	LYS	3.3
2	A	1607	C	3.3
2	A	1198	U	3.3
2	A	2262	U	3.3
24	0	53	MET	3.3
11	P	59	GLU	3.3
3	D	107	LYS	3.3
2	A	2070	G	3.3
2	A	1512	G	3.3
6	G	64	ARG	3.3
15	W	21	VAL	3.3
13	S	24	LEU	3.3
22	2	39	ALA	3.3
19	R	102	GLU	3.3
2	A	2329	G	3.3
22	2	34	GLN	3.3
3	D	210	LYS	3.3
22	2	33	VAL	3.2
19	R	71	GLN	3.2
9	N	62	ASP	3.2
2	A	958	U	3.2
2	A	205	G	3.2

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Mol	Chain	Res	Type	RSRZ
2	A	2053	G	3.2
15	W	67	ASP	3.2
2	A	654	A	3.2
17	Y	14	ALA	3.2
20	U	64	ARG	3.2
2	A	1253	A	3.2
2	A	2046	G	3.2
25	4	62	ARG	3.2
19	R	100	LEU	3.2
3	D	89	ASN	3.2
2	A	2359	C	3.2
2	A	1254	A	3.2
6	G	152	PRO	3.2
14	T	28	THR	3.2
12	Q	91	HIS	3.2
12	Q	118	ALA	3.2
2	A	1996	C	3.2
2	A	585	G	3.2
18	Z	104	SER	3.2
13	S	18	THR	3.2
2	A	2726	U	3.2
2	A	440	G	3.2
2	A	1541	U	3.2
2	A	668	G	3.2
28	7	13	ALA	3.2
2	A	791	C	3.2
6	G	59	GLY	3.2
2	A	1247	A	3.2
2	A	2603	G	3.2
19	R	33	ARG	3.2
2	A	794	G	3.1
2	A	1651	G	3.1
2	A	898	C	3.1
15	W	74	ALA	3.1
2	A	685	A	3.1
14	T	23	HIS	3.1
2	A	1252	G	3.1
3	D	87	SER	3.1
21	V	71	ILE	3.1
3	D	80	ILE	3.1
2	A	1784	A	3.1
29	8	12	ARG	3.1

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Mol	Chain	Res	Type	RSRZ
2	A	833	U	3.1
2	A	2576	G	3.1
19	R	113	LEU	3.1
2	A	793	A	3.1
8	I	59	ALA	3.1
23	3	56	VAL	3.1
2	A	547	A	3.1
5	F	91	PRO	3.1
21	V	72	ARG	3.1
15	W	36	LEU	3.1
4	E	261	ARG	3.1
4	E	85	ALA	3.1
10	O	50	GLY	3.1
2	A	1199	U	3.1
12	Q	12	PRO	3.1
8	I	31	PHE	3.1
2	A	820	A	3.1
2	A	1175	U	3.1
5	F	20	ASP	3.0
2	A	838	C	3.0
2	A	1194	A	3.0
2	A	2798	C	3.0
2	A	2228	G	3.0
2	A	2735	G	3.0
25	4	9	ALA	3.0
3	D	68	ARG	3.0
10	O	17	ARG	3.0
2	A	789	A	3.0
29	8	52	LYS	3.0
29	8	9	MET	3.0
2	A	452	G	3.0
11	P	60	GLU	3.0
7	H	166	GLU	3.0
2	A	1780	A	3.0
2	A	686	G	3.0
2	A	1144	G	3.0
17	Y	10	SER	3.0
2	A	2036	C	3.0
2	A	2386	C	3.0
8	I	91	GLY	3.0
2	A	1997	G	3.0
2	A	967	C	3.0

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Mol	Chain	Res	Type	RSRZ
15	W	71	VAL	3.0
2	A	832	G	3.0
2	A	2040	C	3.0
6	G	144	ARG	3.0
16	X	15	MET	3.0
22	2	31	ARG	3.0
2	A	1679	U	3.0
2	A	2012	G	3.0
9	N	30	ALA	3.0
2	A	20	C	3.0
2	A	282	A	3.0
21	V	74	TYR	3.0
2	A	2446	G	3.0
3	D	228	ALA	3.0
4	E	82	ALA	3.0
4	E	202	ALA	3.0
4	E	106	SER	3.0
12	Q	114	ARG	3.0
2	A	1067	A	3.0
21	V	16	GLU	3.0
25	4	20	VAL	2.9
28	7	42	LEU	2.9
2	A	1685	C	2.9
2	A	1778	U	2.9
6	G	140	ARG	2.9
24	0	4	LYS	2.9
29	8	54	GLU	2.9
2	A	751	A	2.9
3	D	71	ASP	2.9
8	I	34	GLY	2.9
2	A	2090	G	2.9
2	A	2577	A	2.9
15	W	81	ALA	2.9
6	G	17	ARG	2.9
29	8	15	LYS	2.9
2	A	1702	G	2.9
3	D	93	ILE	2.9
2	A	516	C	2.9
15	W	17	VAL	2.9
2	A	554	U	2.9
9	N	33	GLY	2.9
25	4	8	LYS	2.9

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Mol	Chain	Res	Type	RSRZ
3	D	119	PRO	2.9
3	D	72	GLY	2.9
2	A	1781	C	2.9
2	A	2621	A	2.9
15	W	19	LEU	2.9
2	A	1264	G	2.9
2	A	2618	G	2.9
28	7	35	ARG	2.9
16	X	10	VAL	2.9
13	S	28	LYS	2.9
4	E	291	GLY	2.9
12	Q	10	ILE	2.9
2	A	689	A	2.9
2	A	1088	A	2.9
2	A	1177	A	2.9
2	A	1609	A	2.9
2	A	405	U	2.9
24	0	37	LEU	2.9
4	E	315	VAL	2.9
14	T	51	TRP	2.9
6	G	155	HIS	2.9
8	I	83	ALA	2.9
10	O	33	ALA	2.9
2	A	92	G	2.8
2	A	1032	A	2.8
2	A	1310	G	2.8
7	H	153	PRO	2.8
14	T	30	HIS	2.8
24	0	54	GLY	2.8
14	T	7	ASP	2.8
8	I	61	GLU	2.8
4	E	310	PHE	2.8
2	A	969	U	2.8
3	D	63	ILE	2.8
2	A	1116	C	2.8
2	A	1816	G	2.8
4	E	86	TYR	2.8
2	A	1650	G	2.8
14	T	34	SER	2.8
17	Y	103	LEU	2.8
12	Q	126	VAL	2.8
24	0	71	ASN	2.8

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Mol	Chain	Res	Type	RSRZ
9	N	138	THR	2.8
4	E	220	GLN	2.8
2	A	202	U	2.8
30	9	13	ASN	2.8
9	N	31	LEU	2.8
19	R	34	ILE	2.8
8	I	39	ALA	2.8
2	A	670	A	2.8
2	A	1785	A	2.8
2	A	2587	A	2.8
12	Q	155	GLY	2.8
19	R	110	PRO	2.8
1	B	89	G	2.8
28	7	10	ARG	2.8
15	W	39	THR	2.8
16	X	11	THR	2.8
6	G	65	GLU	2.8
2	A	2269	A	2.8
9	N	12	VAL	2.8
16	X	60	GLY	2.8
2	A	709	U	2.7
15	W	98	LYS	2.7
9	N	37	ALA	2.7
2	A	2073	C	2.7
2	A	2771	C	2.7
8	I	33	GLN	2.7
2	A	2447	G	2.7
2	A	1629	U	2.7
25	4	21	VAL	2.7
9	N	32	ASP	2.7
2	A	1075	C	2.7
2	A	2229	C	2.7
2	A	2588	G	2.7
3	D	79	THR	2.7
9	N	73	LYS	2.7
21	V	94	LYS	2.7
2	A	703	U	2.7
12	Q	29	ALA	2.7
19	R	101	ALA	2.7
1	B	47	C	2.7
2	A	65	C	2.7
2	A	2774	C	2.7

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Mol	Chain	Res	Type	RSRZ
19	R	69	ASP	2.7
12	Q	153	PRO	2.7
2	A	1511	A	2.7
2	A	964	C	2.7
2	A	1782	C	2.7
12	Q	11	LYS	2.7
19	R	38	VAL	2.7
22	2	40	PRO	2.7
4	E	231	TRP	2.7
5	F	49	ASP	2.7
16	X	62	LYS	2.7
2	A	2363	C	2.7
22	2	36	ALA	2.7
25	4	19	GLN	2.7
2	A	1441	G	2.7
2	A	2833	G	2.7
26	5	17	ASP	2.7
6	G	76	ARG	2.7
2	A	19	C	2.7
9	N	51	GLU	2.7
24	0	10	SER	2.7
26	5	20	ARG	2.7
1	B	87	G	2.7
2	A	788	A	2.7
15	W	72	LYS	2.7
4	E	319	ASP	2.7
4	E	104	PHE	2.7
1	B	98	G	2.7
2	A	1468	C	2.6
2	A	2784	C	2.6
30	9	7	VAL	2.6
5	F	93	LYS	2.6
2	A	669	G	2.6
2	A	1302	A	2.6
3	D	66	PHE	2.6
19	R	40	LYS	2.6
6	G	137	PRO	2.6
4	E	199	ALA	2.6
15	W	105	VAL	2.6
4	E	269	ILE	2.6
12	Q	43	PRO	2.6
21	V	34	GLU	2.6

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Mol	Chain	Res	Type	RSRZ
22	2	35	ALA	2.6
25	4	50	LEU	2.6
2	A	589	C	2.6
6	G	21	VAL	2.6
24	0	11	LYS	2.6
13	S	23	ARG	2.6
21	V	29	ALA	2.6
2	A	1248	G	2.6
2	A	1633	G	2.6
28	7	18	PHE	2.6
2	A	1990	C	2.6
10	O	1	MET	2.6
2	A	2780	G	2.6
2	A	1200	C	2.6
2	A	2619	C	2.6
18	Z	161	ALA	2.6
3	D	88	ALA	2.6
23	3	55	ARG	2.6
17	Y	86	GLU	2.6
2	A	508	G	2.6
2	A	690	G	2.6
9	N	13	ASP	2.6
2	A	1640	C	2.6
14	T	16	GLY	2.6
3	D	95	TYR	2.6
4	E	268	LEU	2.6
2	A	2454	G	2.5
3	D	125	ILE	2.5
4	E	97	THR	2.5
20	U	101	ARG	2.5
2	A	2757	A	2.5
7	H	90	GLY	2.5
22	2	38	GLY	2.5
17	Y	85	GLU	2.5
3	D	164	LEU	2.5
3	D	136	VAL	2.5
18	Z	101	THR	2.5
2	A	830	G	2.5
2	A	1608	A	2.5
2	A	1305	C	2.5
26	5	56	GLN	2.5
2	A	739	G	2.5

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Mol	Chain	Res	Type	RSRZ
16	X	28	VAL	2.5
2	A	946	G	2.5
8	I	36	ALA	2.5
2	A	2227	A	2.5
2	A	1565	C	2.5
9	N	54	VAL	2.5
24	O	16	SER	2.5
11	P	145	LEU	2.5
12	Q	117	GLY	2.5
2	A	590	A	2.5
2	A	1145	C	2.5
9	N	60	ARG	2.5
12	Q	51	GLU	2.5
13	S	11	ARG	2.5
4	E	304	ASP	2.5
29	8	62	LEU	2.5
4	E	308	VAL	2.5
30	9	18	ARG	2.5
12	Q	87	LYS	2.5
9	N	84	ARG	2.5
26	5	23	HIS	2.5
2	A	27	G	2.5
2	A	1379	A	2.5
12	Q	52	LYS	2.5
28	7	32	ALA	2.5
29	8	64	ARG	2.5
2	A	1236	G	2.5
14	T	35	LYS	2.5
27	6	34	LYS	2.5
21	V	28	GLU	2.4
10	O	99	PHE	2.4
17	Y	111	ARG	2.4
24	O	15	ASP	2.4
29	8	7	HIS	2.4
2	A	786	C	2.4
2	A	1643	G	2.4
2	A	2599	G	2.4
2	A	2773	C	2.4
10	O	77	ILE	2.4
5	F	44	GLN	2.4
5	F	17	ASP	2.4
14	T	17	THR	2.4

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Mol	Chain	Res	Type	RSRZ
24	0	81	ILE	2.4
4	E	258	TYR	2.4
7	H	57	GLU	2.4
7	H	59	HIS	2.4
15	W	102	HIS	2.4
28	7	31	LEU	2.4
2	A	1027	A	2.4
2	A	2534	A	2.4
2	A	512	G	2.4
2	A	1078	U	2.4
2	A	1008	C	2.4
25	4	49	PHE	2.4
3	D	195	GLY	2.4
2	A	1457	A	2.4
2	A	1981	A	2.4
2	A	762	U	2.4
2	A	776	G	2.4
30	9	28	SER	2.4
4	E	316	ARG	2.4
15	W	40	ASN	2.4
19	R	75	LEU	2.4
2	A	207	A	2.4
12	Q	21	SER	2.4
2	A	192	C	2.4
2	A	2742	C	2.4
5	F	39	GLN	2.4
4	E	48	MET	2.4
9	N	135	ILE	2.4
8	I	16	GLY	2.4
12	Q	96	GLN	2.4
28	7	8	ASN	2.4
12	Q	30	GLN	2.4
2	A	1658	C	2.4
2	A	1674	G	2.4
8	I	28	ASN	2.4
29	8	50	LEU	2.4
2	A	2506	U	2.4
5	F	43	LYS	2.4
12	Q	110	GLY	2.4
6	G	90	LEU	2.4
2	A	708	C	2.4
2	A	1830	C	2.4

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Mol	Chain	Res	Type	RSRZ
3	D	81	GLU	2.4
4	E	66	GLU	2.4
2	A	1995	U	2.4
2	A	363(F)	A	2.4
2	A	2043	C	2.3
24	0	49	GLN	2.3
26	5	4	HIS	2.3
2	A	513	A	2.3
2	A	677	A	2.3
6	G	132	VAL	2.3
15	W	16	LYS	2.3
2	A	2294	C	2.3
7	H	31	GLU	2.3
19	R	24	GLN	2.3
26	5	18	MET	2.3
19	R	25	ALA	2.3
11	P	79	ASP	2.3
25	4	30	GLU	2.3
2	A	778	G	2.3
4	E	232	ARG	2.3
12	Q	133	GLU	2.3
4	E	317	PRO	2.3
2	A	28	A	2.3
2	A	897	C	2.3
2	A	1605	C	2.3
2	A	2055	C	2.3
2	A	801	G	2.3
2	A	1142	U	2.3
12	Q	150	ASP	2.3
21	V	32	LYS	2.3
4	E	192	ILE	2.3
25	4	41	PRO	2.3
2	A	2772	C	2.3
30	9	10	MET	2.3
24	0	27	GLY	2.3
2	A	441	U	2.3
2	A	974	G	2.3
2	A	1762	A	2.3
2	A	2733	A	2.3
8	I	32	LYS	2.3
15	W	38	TYR	2.3
10	O	96	THR	2.3

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Mol	Chain	Res	Type	RSRZ
2	A	548	A	2.3
8	I	17	GLU	2.3
2	A	90	U	2.3
2	A	763	G	2.3
4	E	111	THR	2.3
12	Q	92	VAL	2.3
19	R	108	GLY	2.3
21	V	65	ARG	2.3
12	Q	131	ALA	2.3
2	A	1265	A	2.3
2	A	2360	A	2.3
9	N	10	VAL	2.3
5	F	19	PRO	2.3
2	A	467	G	2.2
2	A	1689	A	2.2
2	A	2057	A	2.2
2	A	553	U	2.2
2	A	2206	C	2.2
2	A	2443	C	2.2
4	E	307	LEU	2.2
12	Q	154	ALA	2.2
19	R	28	LEU	2.2
2	A	1195	G	2.2
2	A	2581	G	2.2
2	A	2582	G	2.2
4	E	314	ALA	2.2
10	O	74	GLY	2.2
13	S	17	ARG	2.2
3	D	158	GLY	2.2
8	I	37	ILE	2.2
1	B	90	C	2.2
2	A	455	C	2.2
2	A	985	C	2.2
2	A	2390	U	2.2
28	7	30	ILE	2.2
9	N	137	GLU	2.2
24	0	55	ARG	2.2
21	V	77	GLY	2.2
27	6	7	ARG	2.2
2	A	1777	U	2.2
5	F	208	ALA	2.2
9	N	56	LYS	2.2

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Mol	Chain	Res	Type	RSRZ
23	3	57	GLU	2.2
4	E	47	GLY	2.2
24	0	34	GLY	2.2
2	A	43	G	2.2
2	A	1235	G	2.2
2	A	1328	G	2.2
2	A	2583	G	2.2
31	K	119	ASN	2.2
15	W	103	ILE	2.2
4	E	234	ARG	2.2
8	I	62	LEU	2.2
2	A	1134	G	2.2
3	D	103	ILE	2.2
8	I	57	GLN	2.2
2	A	2504	U	2.2
3	D	192	GLY	2.2
4	E	72	VAL	2.2
15	W	8	ARG	2.2
2	A	2205	C	2.2
4	E	81	VAL	2.2
4	E	215	LYS	2.2
2	A	572	A	2.2
2	A	1138	G	2.2
2	A	1321	A	2.2
2	A	1763	G	2.2
4	E	201	VAL	2.2
18	Z	124	ALA	2.2
21	V	84	THR	2.2
2	A	41	C	2.2
2	A	721	C	2.2
2	A	1451	C	2.2
7	H	152	PRO	2.2
18	Z	164	PRO	2.2
21	V	5	ILE	2.2
2	A	466	A	2.2
2	A	784	A	2.2
2	A	2093	G	2.2
18	Z	163	ASP	2.2
3	D	92	LEU	2.2
3	D	120	ASP	2.2
24	0	68	VAL	2.2
3	D	135	PRO	2.2

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Mol	Chain	Res	Type	RSRZ
20	U	67	ALA	2.2
3	D	137	GLY	2.2
4	E	109	ASP	2.2
2	A	504	U	2.2
2	A	748	G	2.2
4	E	200	ASP	2.2
24	O	9	SER	2.1
21	V	92	ALA	2.1
3	D	174	ARG	2.1
2	A	787	U	2.1
6	G	106	PHE	2.1
12	Q	24	PRO	2.1
2	A	2770	G	2.1
29	8	19	THR	2.1
2	A	1406	U	2.1
2	A	489	G	2.1
2	A	1606	G	2.1
2	A	2033	A	2.1
2	A	2660	A	2.1
2	A	2614	A	2.1
2	A	186	G	2.1
2	A	2052	G	2.1
2	A	1135	C	2.1
2	A	2635	C	2.1
13	S	104	ILE	2.1
22	2	37	GLY	2.1
3	D	118	GLY	2.1
21	V	96	LEU	2.1
2	A	1463	C	2.1
9	N	110	ASP	2.1
28	7	38	GLY	2.1
2	A	764	A	2.1
2	A	970	C	2.1
3	D	172	ILE	2.1
30	9	32	HIS	2.1
6	G	63	ILE	2.1
28	7	45	SER	2.1
1	B	119	A	2.1
2	A	775	G	2.1
15	W	104	THR	2.1
4	E	224	GLY	2.1
5	F	37	ALA	2.1

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Mol	Chain	Res	Type	RSRZ
23	3	58	VAL	2.1
2	A	1143	A	2.1
2	A	2448	A	2.1
2	A	382	G	2.1
2	A	458	G	2.1
5	F	95	GLU	2.1
15	W	25	ARG	2.1
2	A	821	A	2.1
10	O	97	ARG	2.1
4	E	297	LYS	2.1
2	A	529	A	2.0
2	A	774	A	2.0
4	E	235	ILE	2.0
26	5	27	ALA	2.0
2	A	212	G	2.0
2	A	2490	G	2.0
4	E	233	ARG	2.0
2	A	732	C	2.0
5	F	99	SER	2.0
3	D	116	MET	2.0
3	D	83	ASP	2.0
29	8	6	THR	2.0
2	A	742	G	2.0
2	A	2017	U	2.0
25	4	58	LYS	2.0
3	D	110	LYS	2.0
17	Y	66	ASP	2.0
1	B	91	C	2.0
2	A	1249	U	2.0
2	A	2644	G	2.0
9	N	136	SER	2.0
15	W	41	LYS	2.0
21	V	30	GLY	2.0
8	I	147	GLU	2.0
22	2	29	ASN	2.0
2	A	2682	U	2.0
22	2	10	ASP	2.0
25	4	10	VAL	2.0
7	H	60	HIS	2.0
28	7	19	ARG	2.0
7	H	56	ASP	2.0
3	D	165	GLY	2.0

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Mol	Chain	Res	Type	RSRZ
13	S	107	ASN	2.0

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

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

6.3 Carbohydrates ⓘ

There are no carbohydrates in this entry.

6.4 Ligands ⓘ

There are no ligands in this entry.

6.5 Other polymers ⓘ

There are no such residues in this entry.