



Full wwPDB EM Validation Report ⓘ

Mar 9, 2026 – 01:02 PM UTC

PDB ID : 6OIG / pdb_00006oig
EMDB ID : EMD-20077
Title : Subunit joining exposes nascent pre-40S rRNA for processing and quality control
Authors : Rai, J.; Parker, M.D.; Ghalei, H.; Johnson, M.C.; Karbstein, K.; Stroupe, M.E.
Deposited on : 2019-04-09
Resolution : 3.80 Å(reported)

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

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

A user guide is available at

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

The types of validation reports are described at

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

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

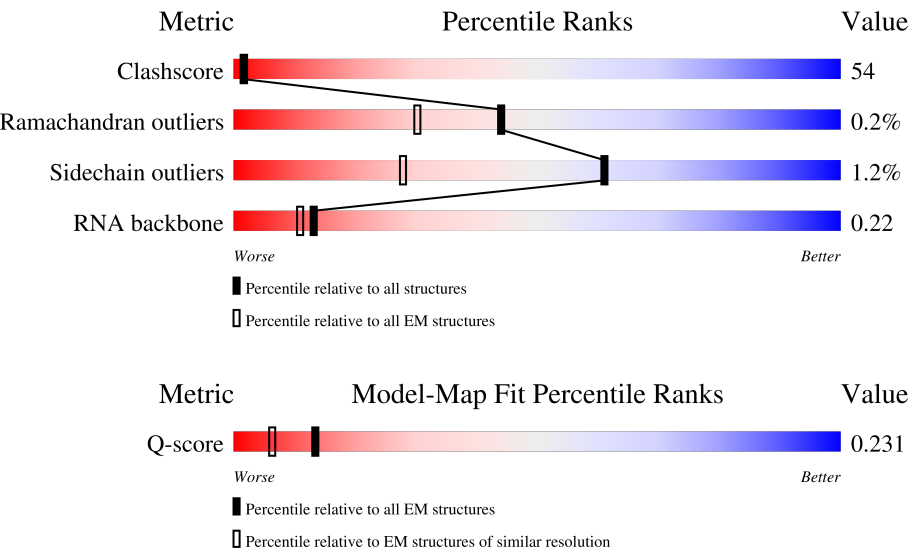
EMDB validation analysis : 0.0.1.dev132
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh &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

1 Overall quality at a glance i

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

The reported resolution of this entry is 3.80 Å.

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



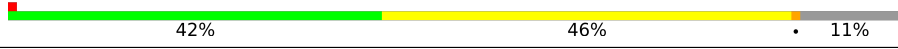
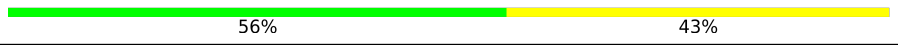
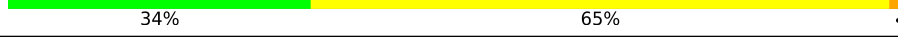
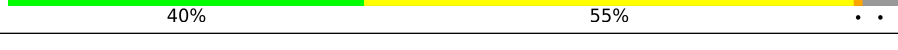
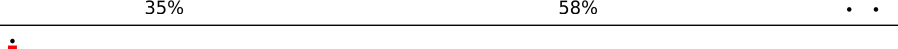
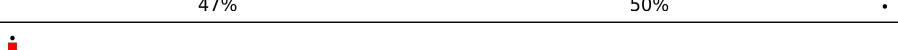
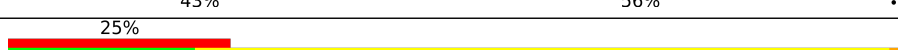
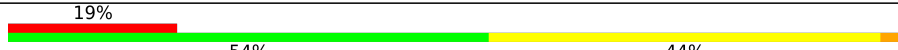
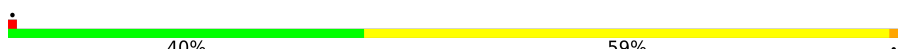
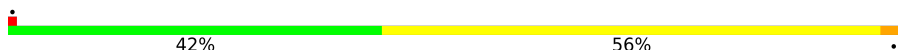
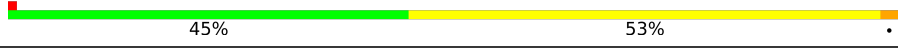
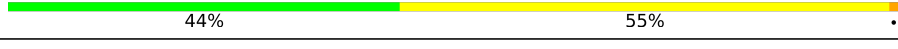
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	10198 (3.30 - 4.30)

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

Mol	Chain	Length	Quality of chain
1	z	204	28% 37% 56% 6%
2	A	252	47% 52% .
3	B	386	50% 49% .

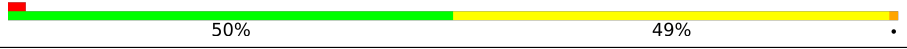
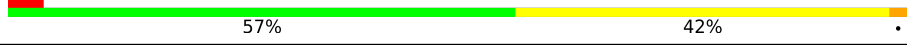
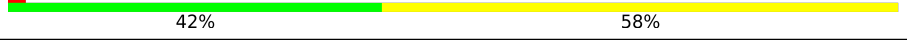
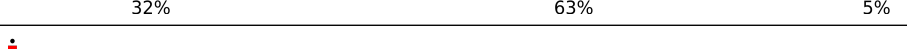
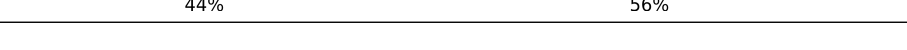
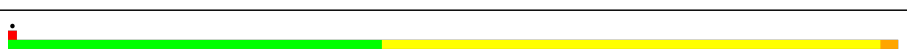
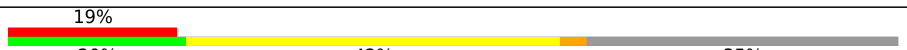
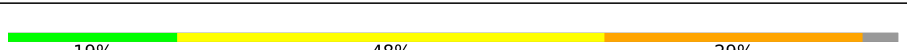
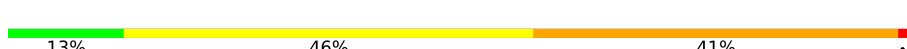
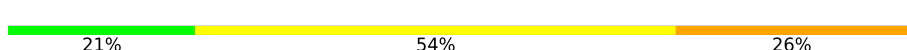
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Mol	Chain	Length	Quality of chain
4	C	361	
5	D	296	
6	E	175	
7	F	222	
8	G	233	
9	H	191	
10	I	220	
11	J	169	
12	s	155	
13	L	193	
14	M	136	
15	N	203	
16	O	197	
17	P	183	
18	Q	185	
19	R	188	
20	S	172	
21	T	159	
22	U	100	
23	V	136	
24	W	135	
25	X	121	
26	Y	126	
27	Z	135	
28	a	148	

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Mol	Chain	Length	Quality of chain
29	b	58	
30	c	97	
31	d	109	
32	e	127	
33	f	106	
34	g	112	
35	h	119	
36	i	99	
37	j	87	
38	k	77	
39	l	50	
40	m	52	
41	o	105	
42	p	91	
43	q	219	
44	5	3394	
45	8	158	
46	7	121	
47	x	47	
48	y	46	

2 Entry composition

There are 48 unique types of molecules in this entry. The entry contains 129140 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called 60S ribosomal protein L1-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	z	204	Total	C	N	O	S	0	0
			1602	1026	277	290	9		

- Molecule 2 is a protein called 60S ribosomal protein L2-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	A	252	Total	C	N	O	S	0	0
			1918	1193	389	335	1		

- Molecule 3 is a protein called 60S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	B	386	Total	C	N	O	S	0	0
			3082	1956	584	534	8		

- Molecule 4 is a protein called 60S ribosomal protein L4-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	C	361	Total	C	N	O	S	0	0
			2750	1730	522	495	3		

- Molecule 5 is a protein called 60S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	D	296	Total	C	N	O	S	0	0
			2376	1501	414	459	2		

- Molecule 6 is a protein called 60S ribosomal protein L6-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	E	156	Total	C	N	O	S	0	0
			1240	800	222	217	1		

- Molecule 7 is a protein called 60S ribosomal protein L7-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	F	222	Total	C	N	O	S	0	0
			1785	1151	324	309	1		

- Molecule 8 is a protein called 60S ribosomal protein L8-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	G	233	Total	C	N	O	S	0	0
			1818	1159	326	330	3		

- Molecule 9 is a protein called 60S ribosomal protein L9-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	H	191	Total	C	N	O	S	0	0
			1519	963	274	278	4		

- Molecule 10 is a protein called 60S ribosomal protein L10.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	I	211	Total	C	N	O	S	0	0
			1718	1089	325	298	6		

- Molecule 11 is a protein called 60S ribosomal protein L11-B.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	J	169	Total	C	N	O	S	0	0
			1354	847	253	250	4		

- Molecule 12 is a protein called 60S ribosomal protein L12-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
12	s	150	Total	C	N	O	0	0
			737	437	150	150		

- Molecule 13 is a protein called 60S ribosomal protein L13-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
13	L	193	Total	C	N	O	0	0
			1543	962	315	266		

- Molecule 14 is a protein called 60S ribosomal protein L14-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	M	136	Total	C	N	O	S	0	0
			1054	675	199	178	2		

- Molecule 15 is a protein called 60S ribosomal protein L15-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	N	203	Total	C	N	O	S	0	0
			1721	1077	361	282	1		

- Molecule 16 is a protein called 60S ribosomal protein L16-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	O	197	Total	C	N	O	S	0	0
			1556	1003	289	263	1		

- Molecule 17 is a protein called 60S ribosomal protein L17-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	P	183	Total	C	N	O	S	0	0
			1443	896	287	260			

- Molecule 18 is a protein called 60S ribosomal protein L18-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	Q	185	Total	C	N	O	S	0	0
			1442	908	290	242	2		

- Molecule 19 is a protein called 60S ribosomal protein L19-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	R	188	Total	C	N	O	S	0	0
			1522	935	326	261			

- Molecule 20 is a protein called 60S ribosomal protein L20-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	S	172	Total	C	N	O	S	0	0
			1446	930	267	245	4		

- Molecule 21 is a protein called 60S ribosomal protein L21-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	T	159	Total	C	N	O	S	0	0
			1277	805	246	222	4		

- Molecule 22 is a protein called 60S ribosomal protein L22-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	U	100	Total	C	N	O		0	0
			796	516	131	149			

- Molecule 23 is a protein called 60S ribosomal protein L23-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	V	136	Total	C	N	O	S	0	0
			1004	628	189	180	7		

- Molecule 24 is a protein called 60S ribosomal protein L24-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	W	135	Total	C	N	O	S	0	0
			1089	682	219	187	1		

- Molecule 25 is a protein called 60S ribosomal protein L25.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	X	121	Total	C	N	O	S	0	0
			969	623	170	174	2		

- Molecule 26 is a protein called 60S ribosomal protein L26-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	Y	126	Total	C	N	O		0	0
			994	625	192	177			

- Molecule 27 is a protein called 60S ribosomal protein L27-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	Z	135	Total	C	N	O		0	0
			1093	710	202	181			

- Molecule 28 is a protein called 60S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	a	148	Total	C	N	O	S	0	0
			1174	749	231	191	3		

- Molecule 29 is a protein called 60S ribosomal protein L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	b	58	Total	C	N	O		0	0
			463	289	100	74			

- Molecule 30 is a protein called 60S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	c	97	Total	C	N	O	S	0	0
			743	479	124	139	1		

- Molecule 31 is a protein called 60S ribosomal protein L31-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	d	109	Total	C	N	O	S	0	0
			890	565	168	156	1		

- Molecule 32 is a protein called 60S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	e	127	Total	C	N	O	S	0	0
			1020	647	205	167	1		

- Molecule 33 is a protein called 60S ribosomal protein L33-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	f	106	Total	C	N	O	S	0	0
			851	540	165	145	1		

- Molecule 34 is a protein called 60S ribosomal protein L34-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	g	112	Total	C	N	O	S	0	0
			881	546	179	152	4		

- Molecule 35 is a protein called 60S ribosomal protein L35-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	h	119	Total	C	N	O	S	0	0
			970	615	186	168	1		

- Molecule 36 is a protein called 60S ribosomal protein L36-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	i	99	Total	C	N	O	S	0	0
			772	481	156	133	2		

- Molecule 37 is a protein called 60S ribosomal protein L37-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	j	87	Total	C	N	O	S	0	0
			682	414	148	115	5		

- Molecule 38 is a protein called 60S ribosomal protein L38.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	k	77	Total	C	N	O		0	0
			613	391	115	107			

- Molecule 39 is a protein called 60S ribosomal protein L39.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	l	50	Total	C	N	O	S	0	0
			437	272	97	66	2		

- Molecule 40 is a protein called Ubiquitin-60S ribosomal protein L40.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	m	52	Total	C	N	O	S	0	0
			418	259	86	68	5		

- Molecule 41 is a protein called 60S ribosomal protein L42-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	o	105	Total	C	N	O	S	0	0
			848	534	170	139	5		

- Molecule 42 is a protein called 60S ribosomal protein L43-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	p	91	Total	C	N	O	S	0	0
			695	429	138	122	6		

- Molecule 43 is a protein called 60S acidic ribosomal protein P0,60S acidic ribosomal protein P0,AO, L1OE.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	q	143	Total	C	N	O	S	0	0
			1077	687	192	195	3		

- Molecule 44 is a RNA chain called 25S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	5	3243	Total	C	N	O	P	0	0
			69359	30981	12493	22643	3242		

- Molecule 45 is a RNA chain called 5.8S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	8	158	Total	C	N	O	P	0	0
			3354	1500	586	1110	158		

- Molecule 46 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	7	121	Total	C	N	O	P	0	0
			2580	1152	461	846	121		

- Molecule 47 is a protein called P1.

Mol	Chain	Residues	Atoms				AltConf	Trace
47	x	47	Total	C	N	O	0	0
			235	141	47	47		

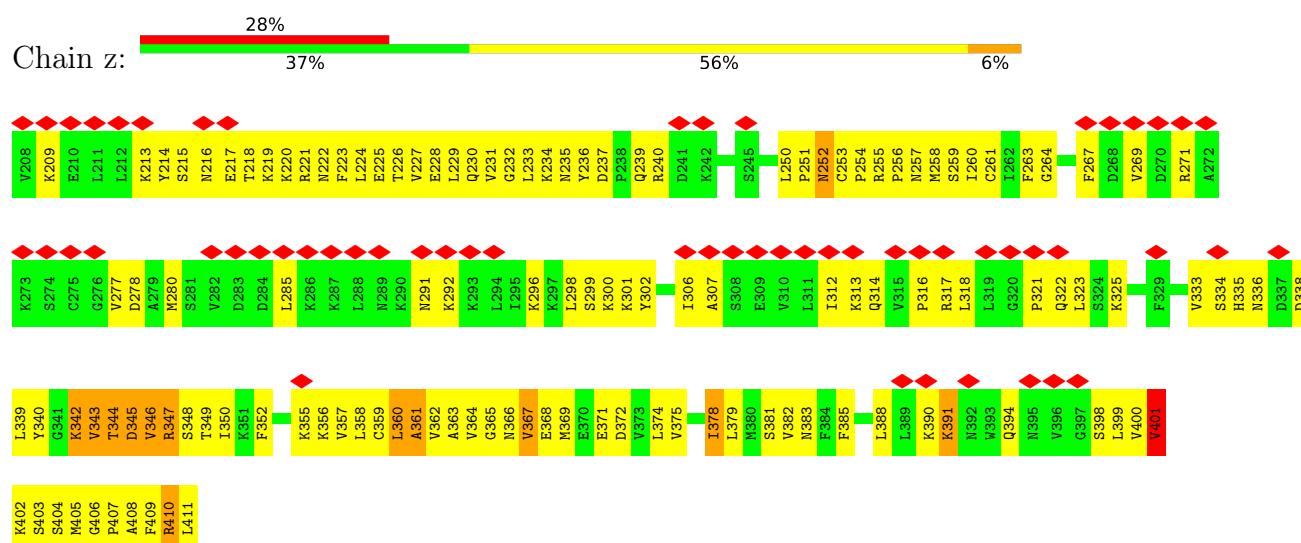
- Molecule 48 is a protein called P2.

Mol	Chain	Residues	Atoms				AltConf	Trace
48	y	46	Total	C	N	O	0	0
			230	138	46	46		

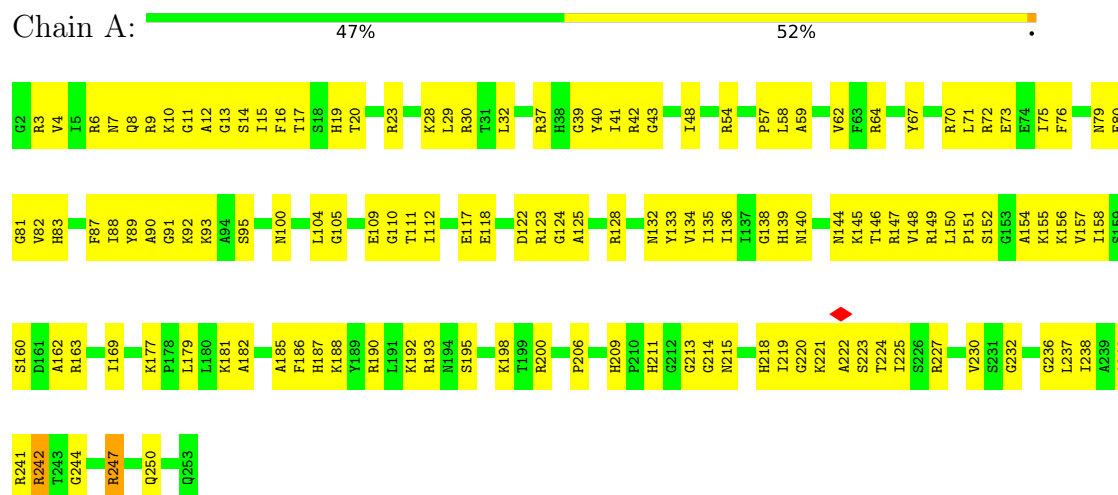
3 Residue-property plots

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

• Molecule 1: 60S ribosomal protein L1-A

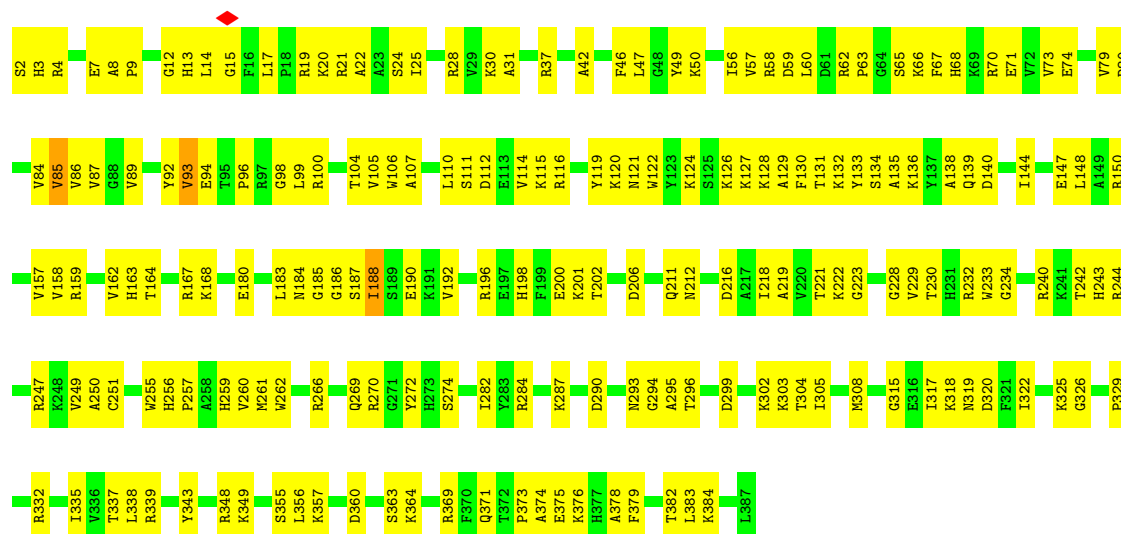


• Molecule 2: 60S ribosomal protein L2-A

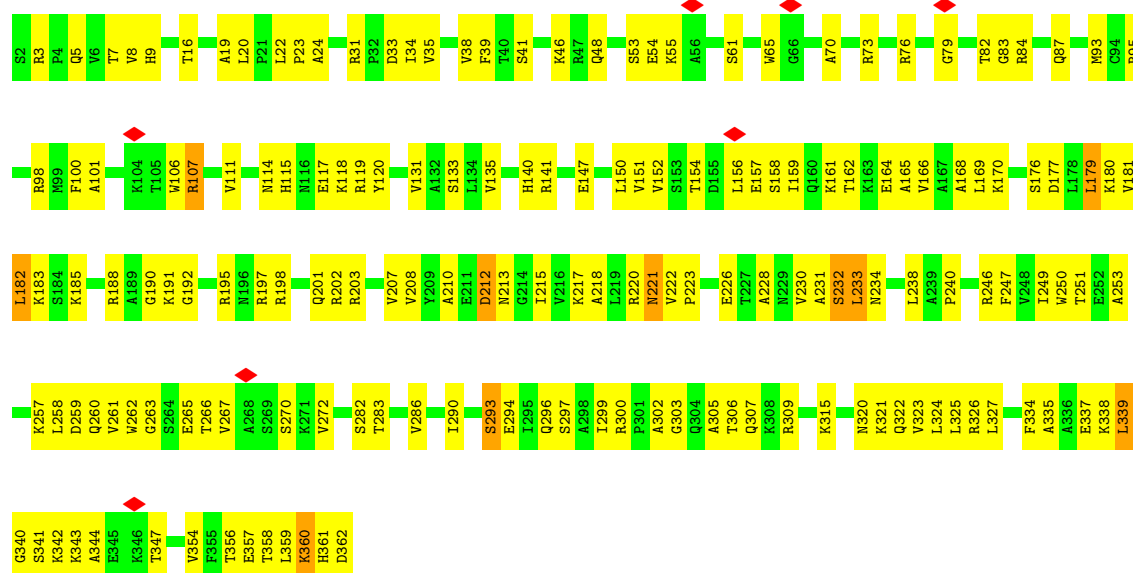


• Molecule 3: 60S ribosomal protein L3

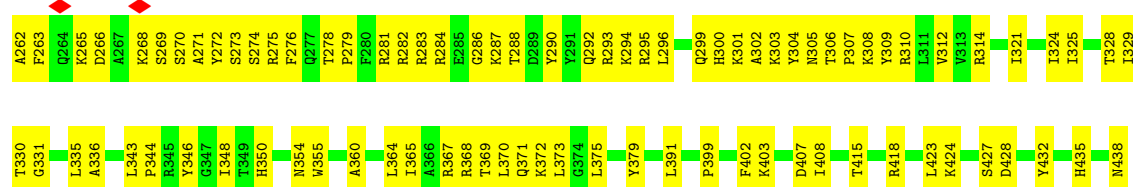


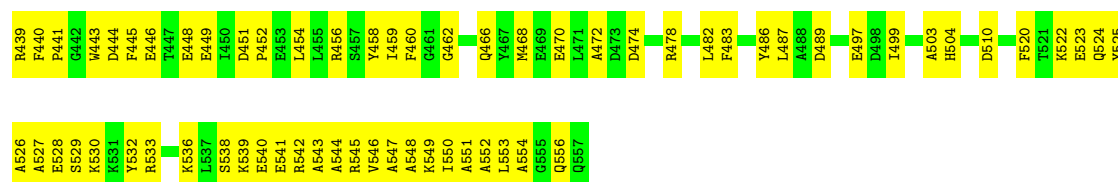


• Molecule 4: 60S ribosomal protein L4-A

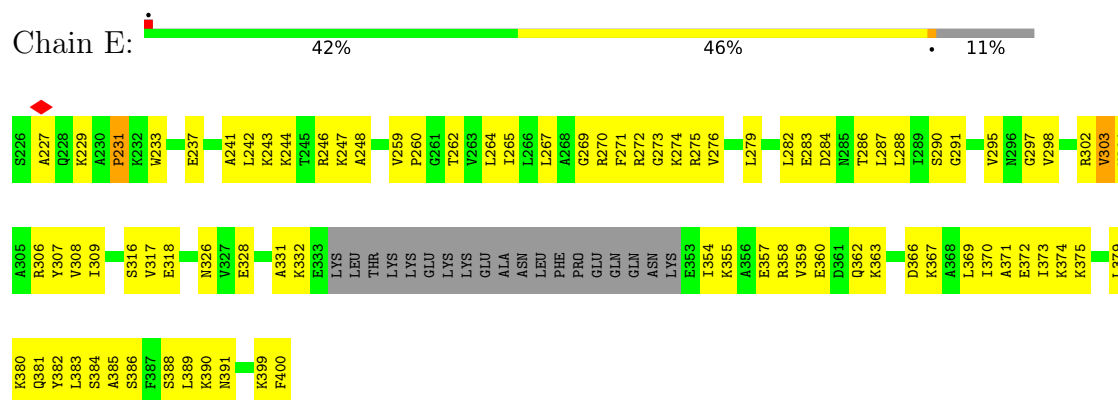


• Molecule 5: 60S ribosomal protein L5

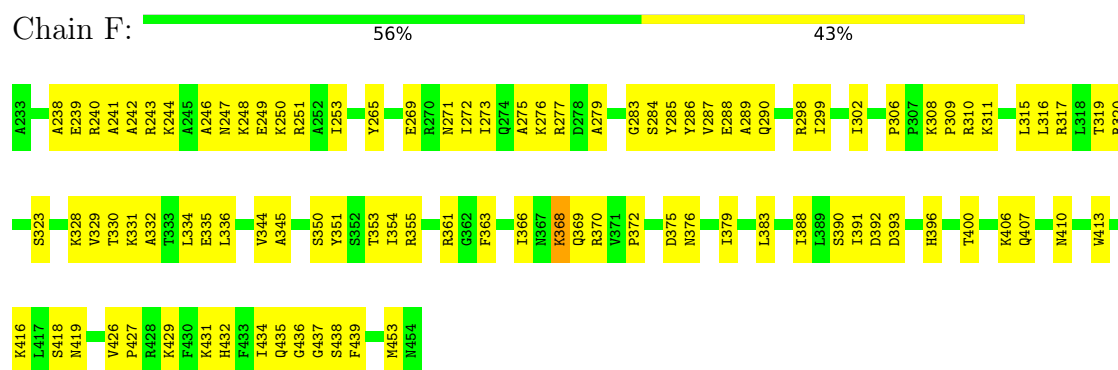




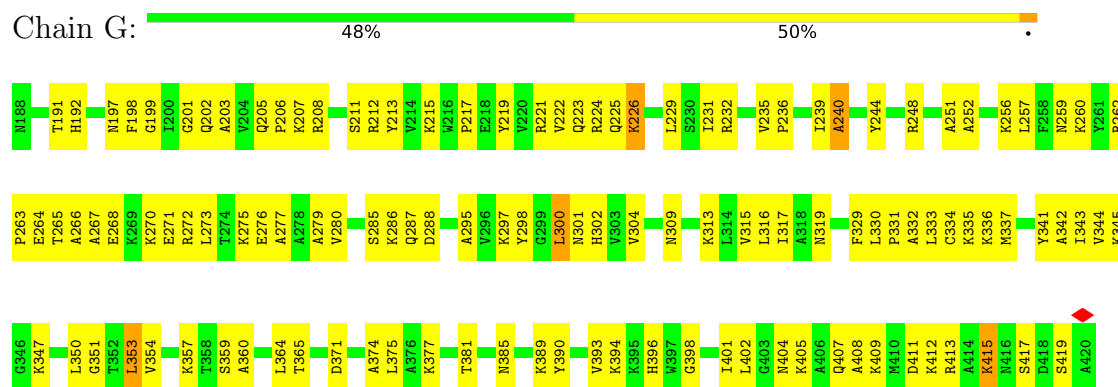
• Molecule 6: 60S ribosomal protein L6-A



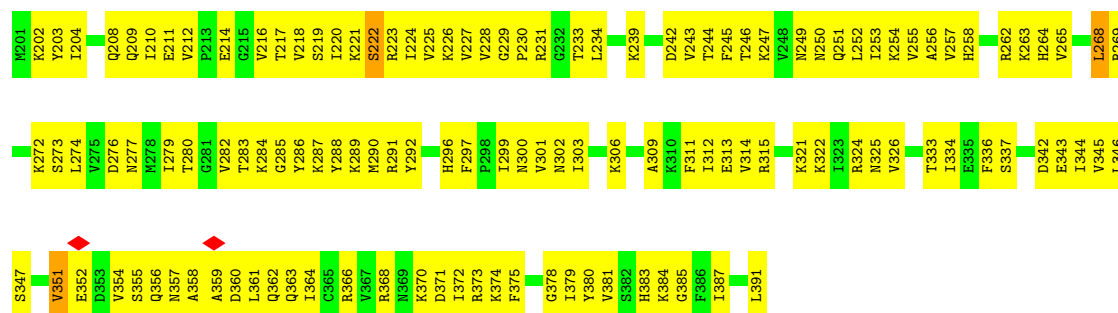
• Molecule 7: 60S ribosomal protein L7-A



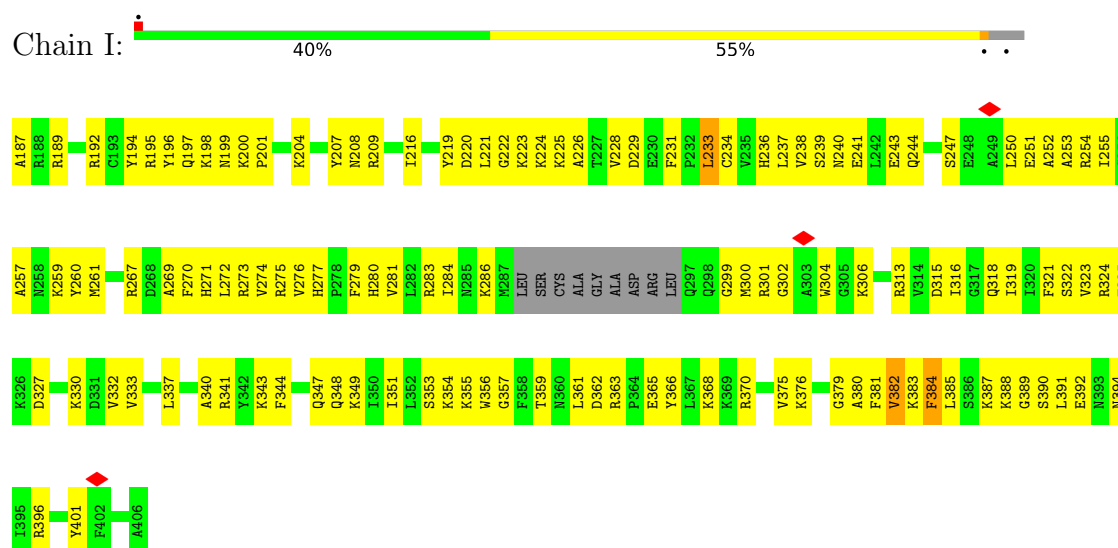
• Molecule 8: 60S ribosomal protein L8-A



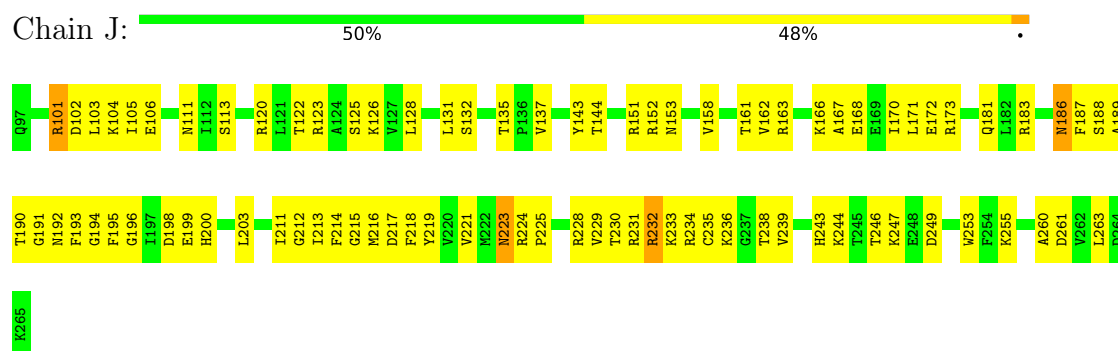
• Molecule 9: 60S ribosomal protein L9-A



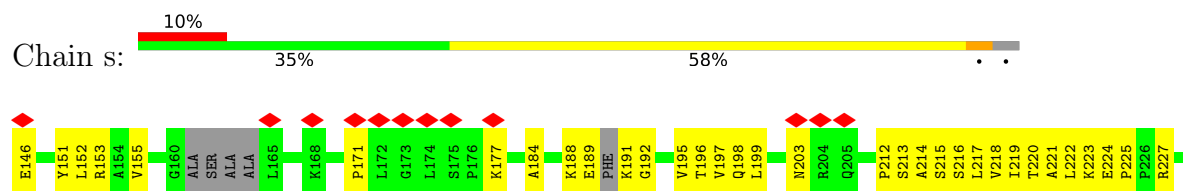
• Molecule 10: 60S ribosomal protein L10

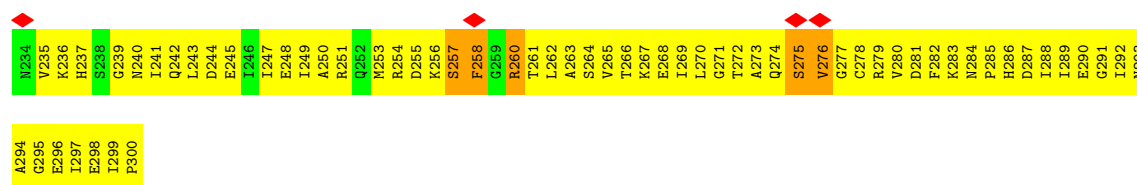


• Molecule 11: 60S ribosomal protein L11-B



• Molecule 12: 60S ribosomal protein L12-A





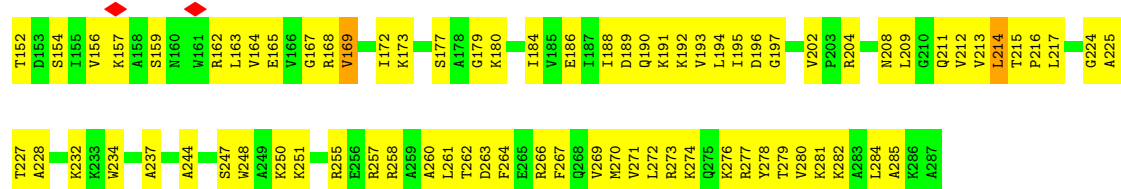
• Molecule 13: 60S ribosomal protein L13-A

Chain L: 47% 50%



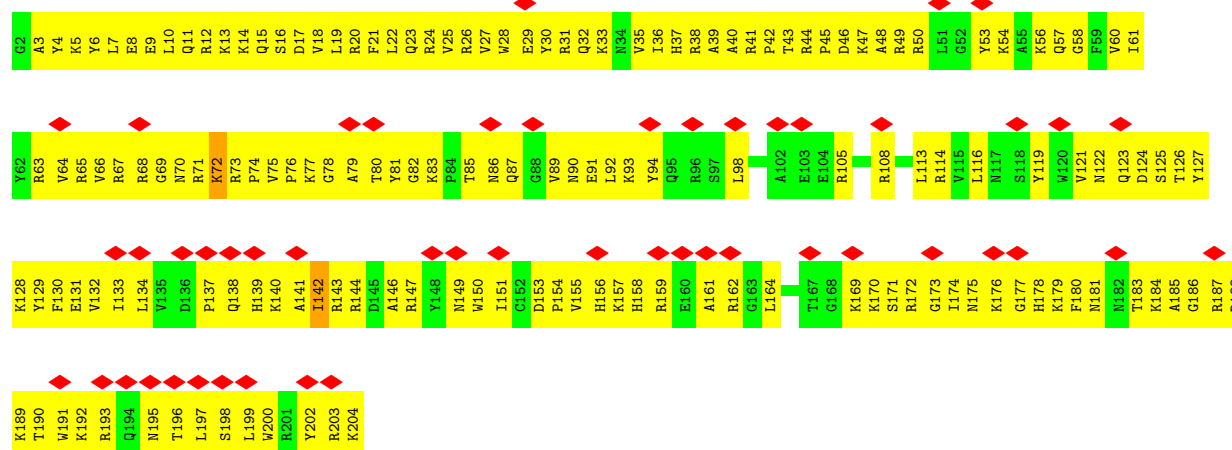
• Molecule 14: 60S ribosomal protein L14-A

Chain M: 43% 56%



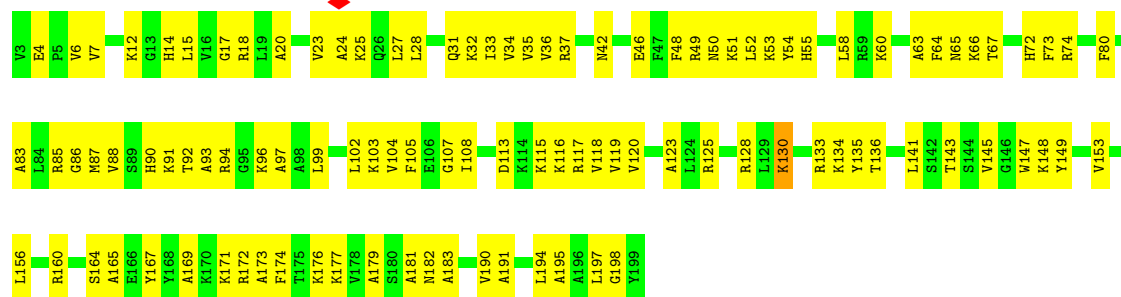
• Molecule 15: 60S ribosomal protein L15-A

Chain N: 25% 21% 78%



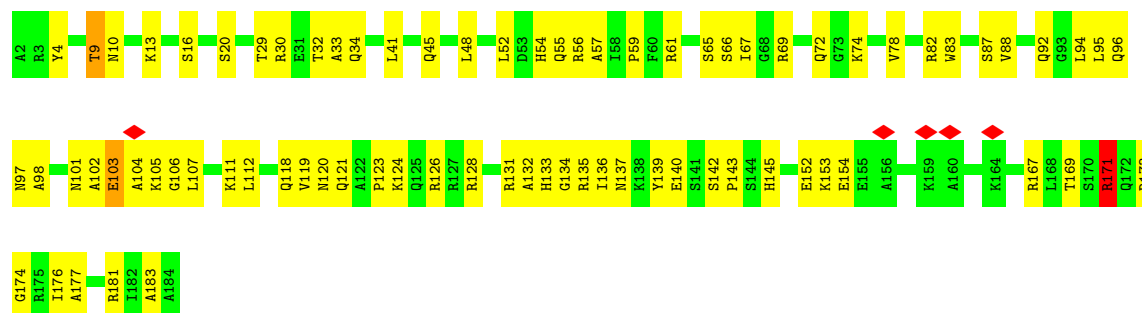
• Molecule 16: 60S ribosomal protein L16-A

Chain O: 



• Molecule 17: 60S ribosomal protein L17-A

Chain P: 



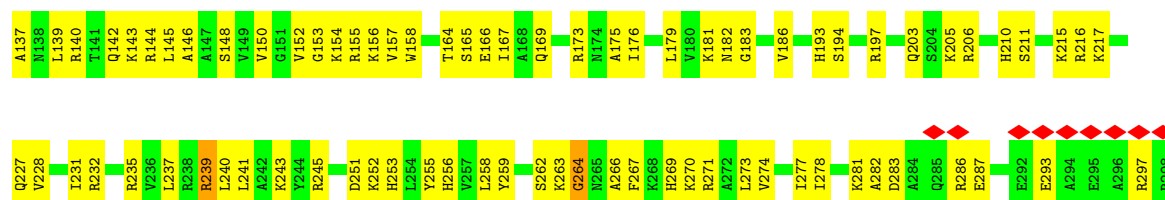
• Molecule 18: 60S ribosomal protein L18-A

Chain Q: 



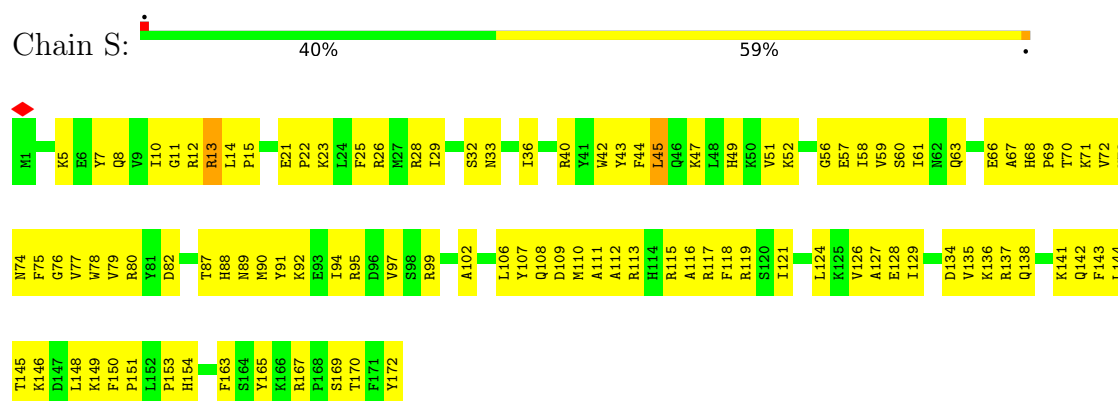
• Molecule 19: 60S ribosomal protein L19-A

Chain R: 

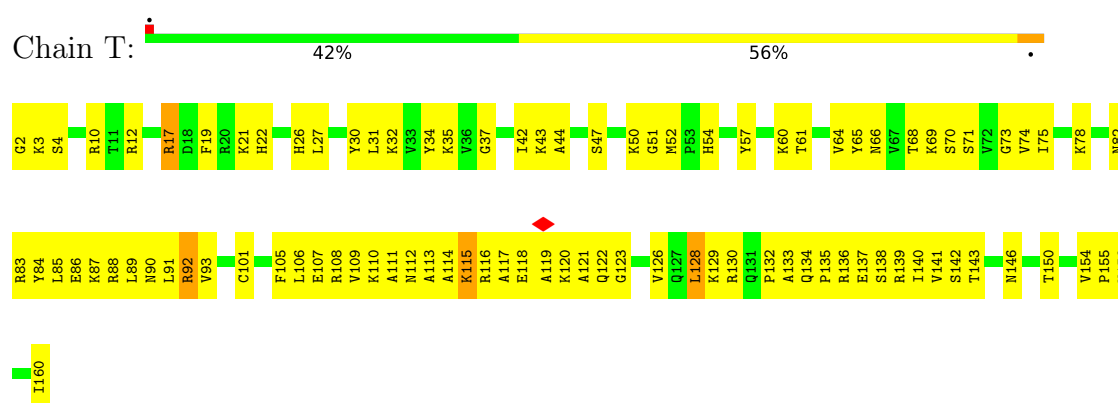




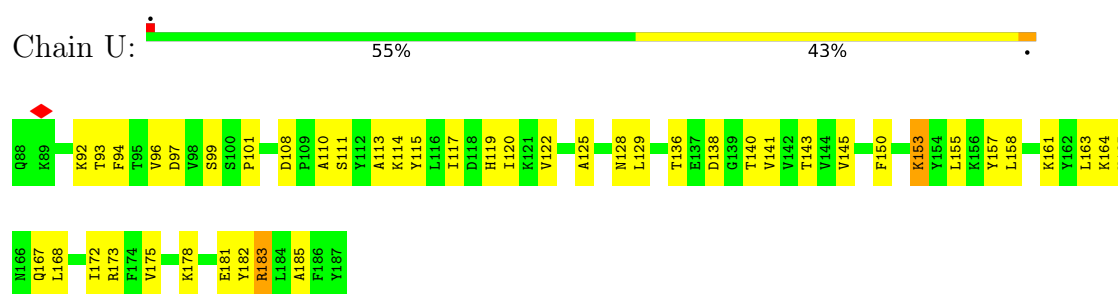
• Molecule 20: 60S ribosomal protein L20-A



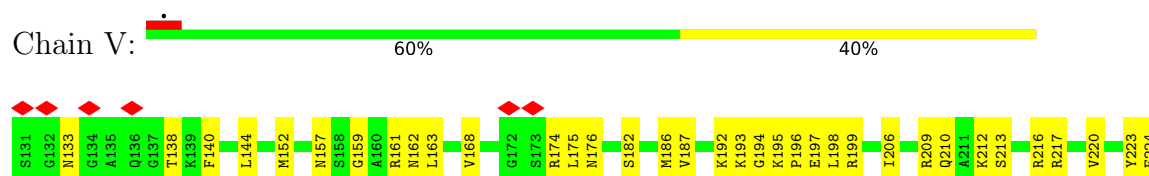
• Molecule 21: 60S ribosomal protein L21-A



• Molecule 22: 60S ribosomal protein L22-A

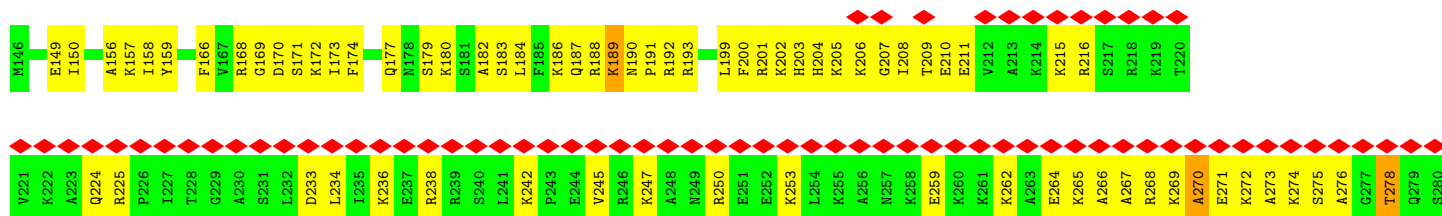


• Molecule 23: 60S ribosomal protein L23-A

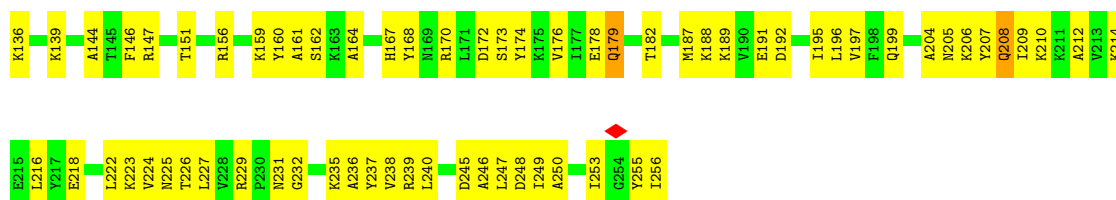




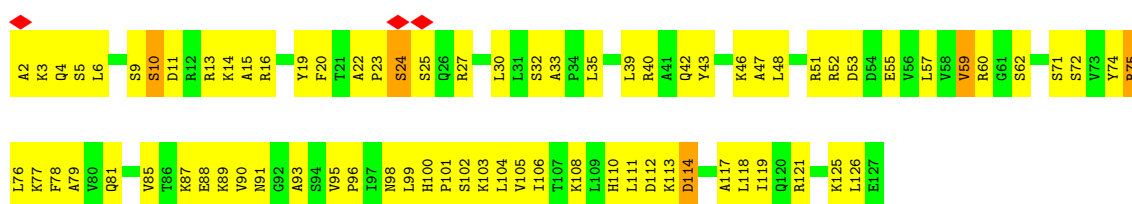
• Molecule 24: 60S ribosomal protein L24-A



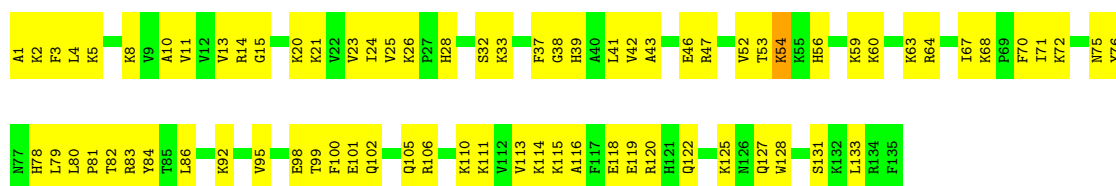
• Molecule 25: 60S ribosomal protein L25



• Molecule 26: 60S ribosomal protein L26-A

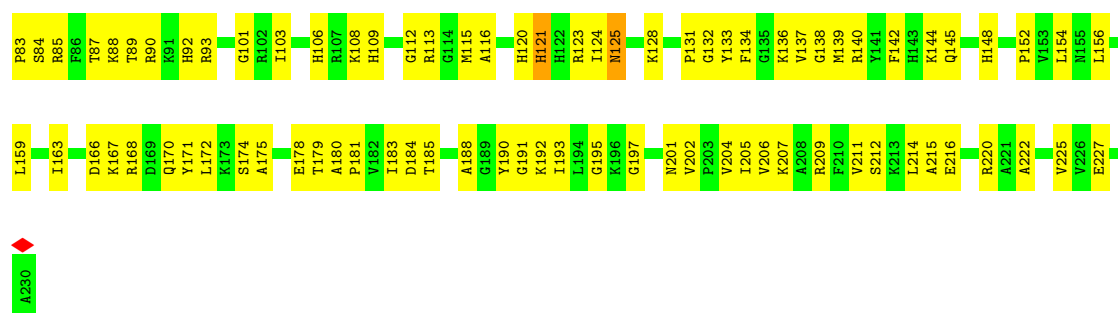


• Molecule 27: 60S ribosomal protein L27-A



• Molecule 28: 60S ribosomal protein L28





- Molecule 29: 60S ribosomal protein L29



- Molecule 30: 60S ribosomal protein L30



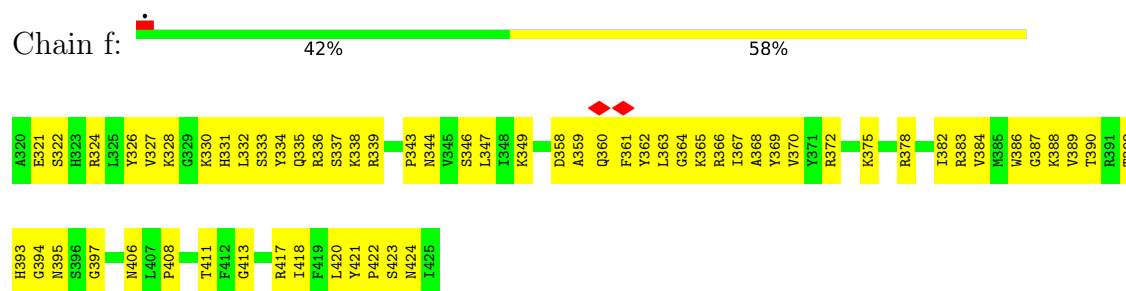
- Molecule 31: 60S ribosomal protein L31-A



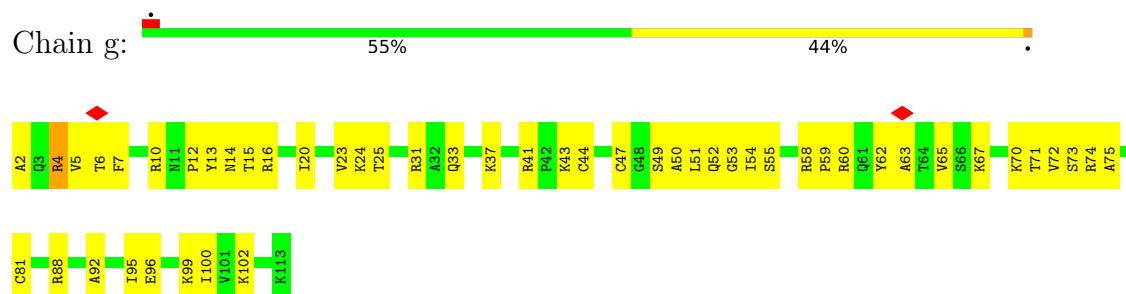
- Molecule 32: 60S ribosomal protein L32



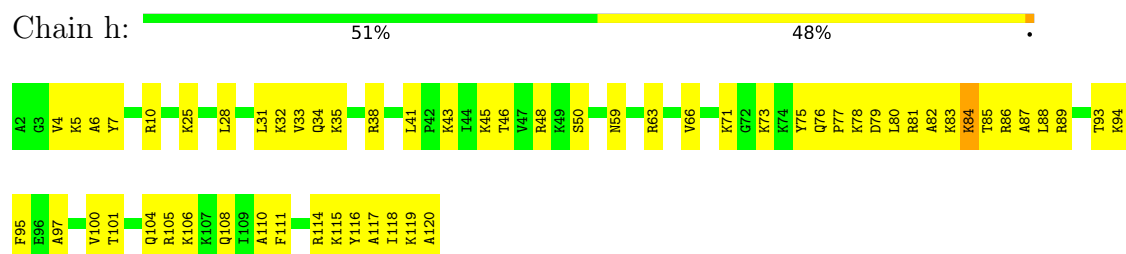
- Molecule 33: 60S ribosomal protein L33-A



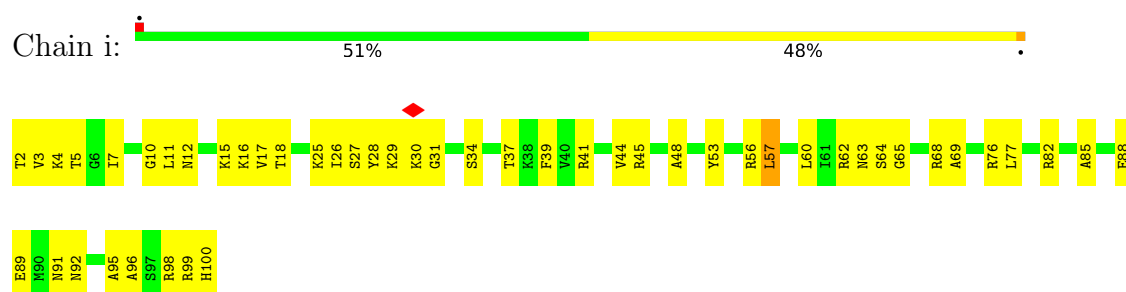
- Molecule 34: 60S ribosomal protein L34-A



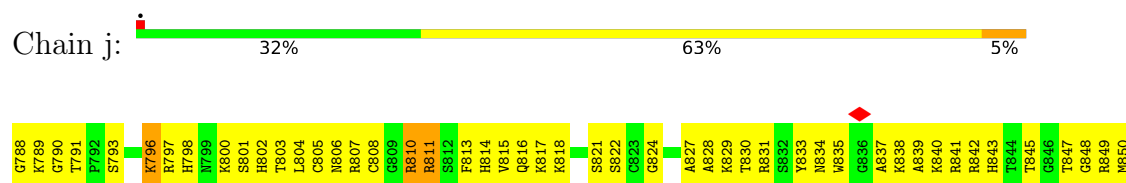
- Molecule 35: 60S ribosomal protein L35-A



- Molecule 36: 60S ribosomal protein L36-A

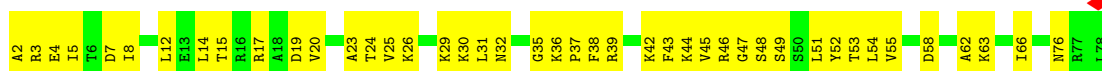


- Molecule 37: 60S ribosomal protein L37-A

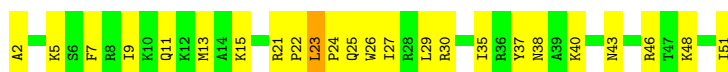




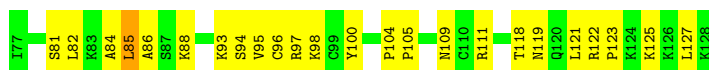
- Molecule 38: 60S ribosomal protein L38



- Molecule 39: 60S ribosomal protein L39



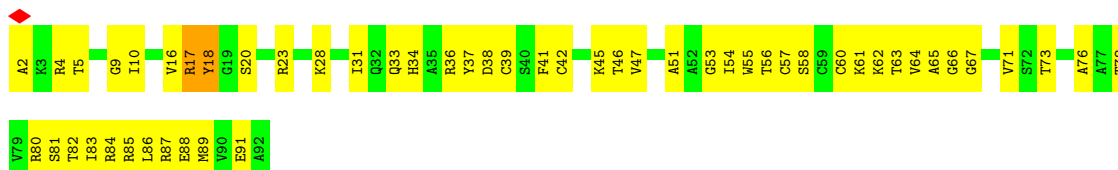
- Molecule 40: Ubiquitin-60S ribosomal protein L40



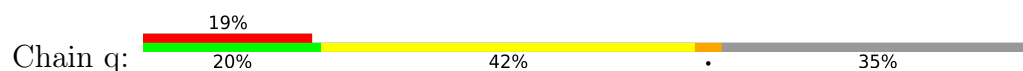
- Molecule 41: 60S ribosomal protein L42-A

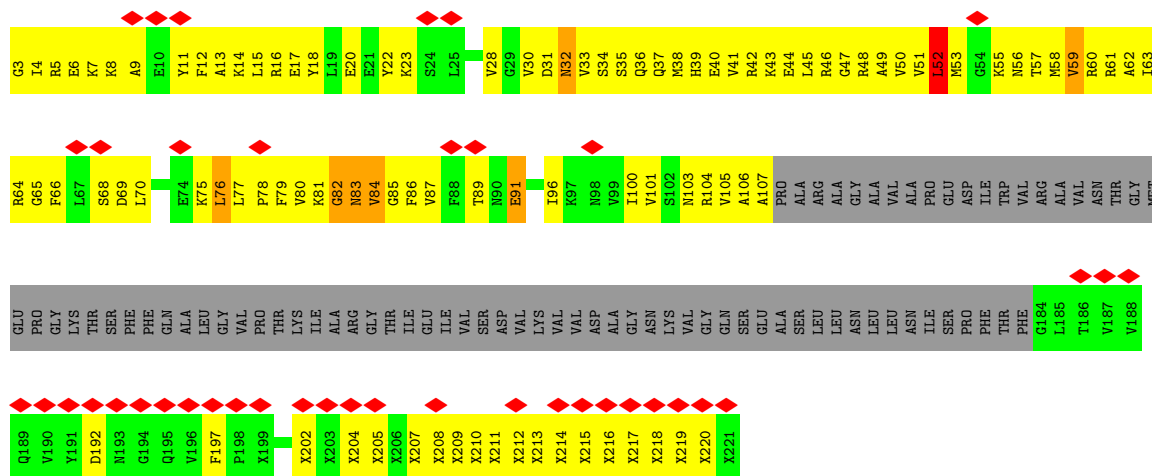


- Molecule 42: 60S ribosomal protein L43-A



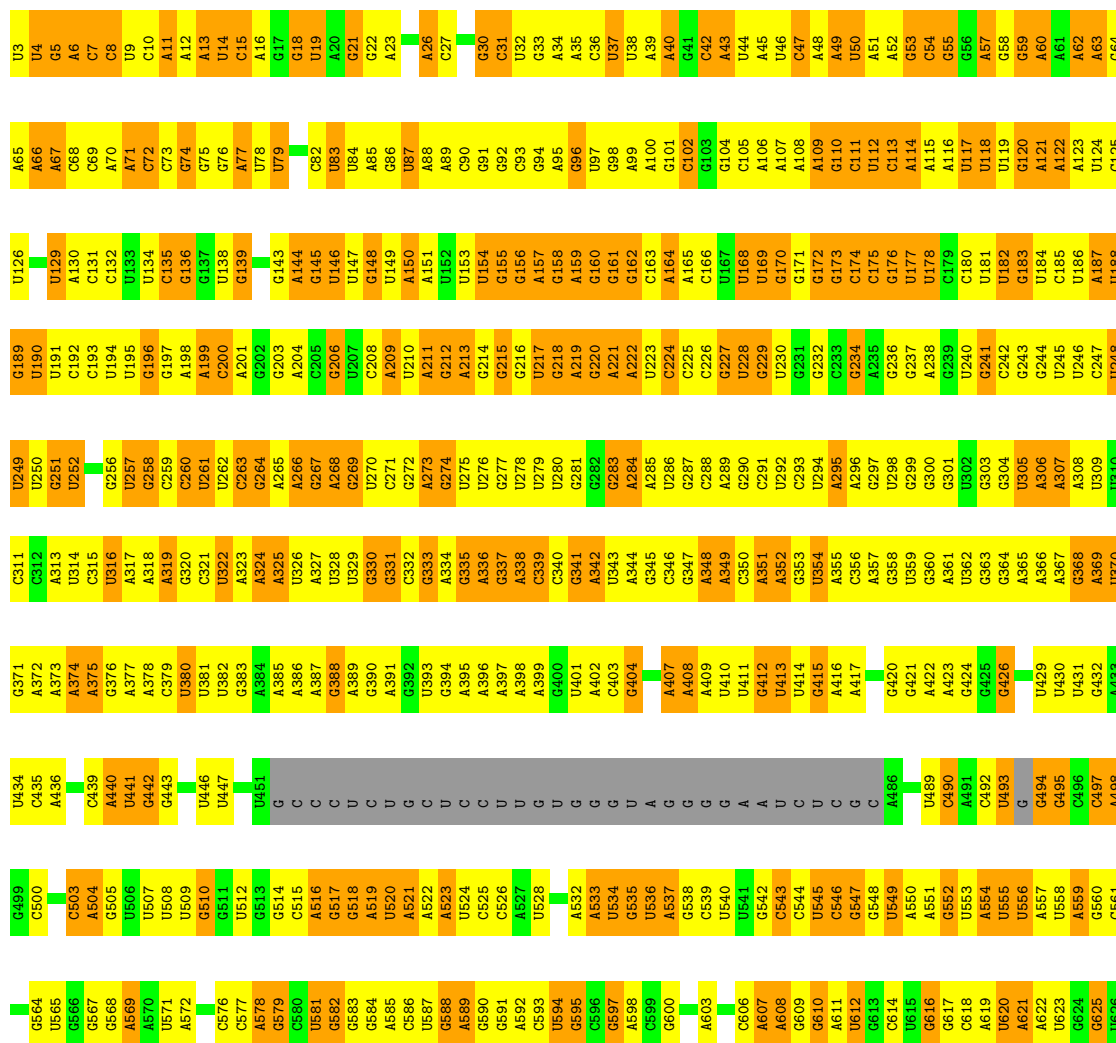
- Molecule 43: 60S acidic ribosomal protein P0,60S acidic ribosomal protein P0,AO, L1OE





• Molecule 44: 25S ribosomal RNA

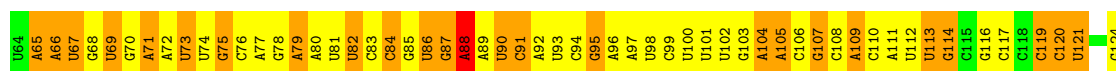
Chain 5: 19% 48% 29% .



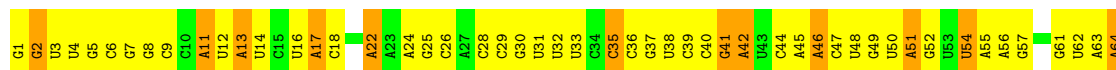
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A1534	A1406	A1406	C1339	A1273	G1213	U1151	U1081	G1019	C959	U893	G826	G763	G632
A1535	U1472	A1407	C1340	A1274	U1214	U1152	U1082	G1020	U960	A895	A827	U764	A699
G1536	C1473	G1408	U1341	C1275	G1215	G1153	G1083	A962	C961	A896	U829	C765	C633
A1537	A1474	C1411	U1342	U1276	C1216	A1154	A1084	G1021	G962	U897	U829	U766	C634
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A1539	G1476	G1413	U1346	A1278	U1218	G1156	C1086	G1024	G964	U899	G831	C636	C637
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G1542	A1482	G1416	G1349	C1281	A1221	G1159	G1089	U1028	U967	G902	U834	U772	U707
G1543	A1483	A1350	A1350	G1282	G1222	A1159	U1090	U1029	G968	U903	G835	G773	G708
G1544	G1417	G1417	U1351	C1283	A1223	C1160	C1092	A1030	C969	A904	A836	G774	A709
A1545	U1484	A1418	A1352	C1284	C1224	G1161	A1093	U1030	A970	U905	A837	A775	A710
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G1547	G1486	C1354	G1354	A1286	G1226	A1163	U1095	U1033	A972	G907	U839	U777	G644
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U2559	U2560	U2471	G2333	U2205	U2205	A2142	C	U1949	A1883	A1696	A1757	C1633
U2561	U2562	U2472	U2334	G2206	G2206	A2143	C	U1950	U1884	A1697	G1758	G1634
U2563	U2564	U2473	U2335	A2207	A2207	U2144	C	U1951	U1885	C1698	C1759	G1635
U2565	U2566	U2474	U2336	A2208	A2208	A2145	C	U1952	U1886	A1699	U1760	U1636
U2567	U2568	U2475	U2337	U2209	U2209	G2146	G	U1953	U1887	G1700	C1761	A1637
U2569	U2570	U2476	C2338	U2210	G2210	G2147	C	U1954	U1890	U1702	C1762	A1638
U2571	U2572	U2477	U2339	C2211	C2211	U2148	U	U1955	U1891	U1703	U1763	C1639
U2573	U2574	U2478	C2340	C2212	C2212	A2149	A	U1956	U1892	A1704	U1764	G1640
U2575	U2576	U2479	U2341	C2213	C2213	G2150	G	U1957	U1893	U1705	U1765	U1641
U2577	U2578	U2480	U2342	A2214	A2214	C2151	A	U1958	U1894	C1708	U1766	C1642
U2579	U2580	U2481	U2343	C2215	C2215	U2152	G	U1959	U1895	C1709	G1770	U1643
U2581	U2582	U2482	U2344	A2216	A2216	U2153	C	U1960	G1896	C1710	C1771	U1644
U2583	U2584	U2483	U2345	U2217	U2217	U2154	G	U1961	U1897	C1711	U1772	A1647
U2585	U2586	U2484	U2346	C2218	C2218	G2155	A	U1962	U1898	C1712	C1773	A1648
U2587	U2588	U2485	C2347	G2219	G2219	A2156	C	U1963	U1899	U1713	U1774	U1649
U2589	U2590	U2486	U2348	C2220	C2220	C2157	C	U1964	U1900	A1714	G1775	G1650
U2591	U2592	U2487	U2349	A2221	A2221	G2158	U	U1965	A1901	G1715	U1776	U1651
U2593	U2594	U2488	U2350	A2222	A2222	U2159	A	U1966	U1902	U1716	U1777	G1652
U2595	U2596	U2489	U2351	A2223	A2223	G2160	C	U1967	U1903	A1841	G1778	G1653
U2597	U2598	U2490	U2352	A2224	A2224	U2162	U	U1968	U1904	C1842	U1779	A1654
U2599	U2600	U2491	U2353	C2225	C2225	C2163	C	U1969	U1905	C1843	G1780	G1655
U2601	U2602	U2492	U2354	U2226	U2226	G2165	G	U1970	U1906	U1789	U1780	A1656
U2603	U2604	U2493	U2355	U2227	U2227	C2185	C	U1971	U1907	G1845	G1845	
U2605	U2606	U2494	U2356	U2228	U2228	G2186	C	U1972	U1908			
U2607	U2608	U2495	U2357	U2229	U2229	C2187	C	U1973	U1909			
U2609	U2610	U2496	U2358	U2230	U2230	U2188	C	U1974	U1910			
U2611	U2612	U2497	U2359	U2231	U2231	C2189	C	U1975	U1911			
U2613	U2614	U2498	U2360	U2232	U2232	U2189	C	U1976	U1912			
U2615	U2616	U2499	U2361	U2233	U2233	G2190	C	U1977	U1913			
U2617	U2618	U2500	U2362	U2234	U2234	U2191	C	U1978	U1914			
U2619	U2620	U2501	U2363	U2235	U2235	U2192	C	U1979	U1915			
U2621	U2622	U2502	U2364	U2236	U2236	U2193	C	U1980	U1916			
U2623	U2624	U2503	U2365	U2237	U2237	U2194	C	U1981	U1917			
U2625	U2626	U2504	U2366	U2238	U2238	U2195	C	U1982	U1918			
U2627	U2628	U2505	U2367	U2239	U2239	U2196	C	U1983	U1919			
U2629	U2630	U2506	U2368	U2240	U2240	U2197	C	U1984	U1920			
U2631	U2632	U2507	U2369	U2241	U2241	U2198	C	U1985	U1921			
U2633	U2634	U2508	U2370	U2242	U2242	U2199	C	U1986	U1922			
U2635	U2636	U2509	U2371	U2243	U2243	U2200	C	U1987	U1923			
U2637	U2638	U2510	U2372	U2244	U2244	U2201	C	U1988	U1924			
U2639	U2640	U2511	U2373	U2245	U2245	U2202	C	U1989	U1925			
U2641	U2642	U2512	U2374	U2246	U2246	U2203	C	U1990	U1926			
U2643	U2644	U2513	U2375	U2247	U2247	U2204	C	U1991	U1927			
U2645	U2646	U2514	U2376	U2248	U2248	U2205	C	U1992	U1928			
U2647	U2648	U2515	U2377	U2249	U2249	U2206	C	U1993	U1929			
U2649	U2650	U2516	U2378	U2250	U2250	U2207	C	U1994	U1930			
U2651	U2652	U2517	U2379	U2251	U2251	U2208	C	U1995	U1931			
U2653	U2654	U2518	U2380	U2252	U2252	U2209	C	U1996	U1932			
U2655	U2656	U2519	U2381	U2253	U2253	U2210	C	U1997	U1933			
U2657	U2658	U2520	U2382	U2254	U2254	U2211	C	U1998	U1934			
U2659	U2660	U2521	U2383	U2255	U2255	U2212	C	U1999	U1935			
U2661	U2662	U2522	U2384	U2256	U2256	U2213	C	U2000	U1936			
U2663	U2664	U2523	U2385	U2257	U2257	U2214	C	U2001	U1937			
U2665	U2666	U2524	U2386	U2258	U2258	U2215	C	U2002	U1938			
U2667	U2668	U2525	U2387	U2259	U2259	U2216	C	U2003	U1939			
U2669	U2670	U2526	U2388	U2260	U2260	U2217	C	U2004	U1940			
U2671	U2672	U2527	U2389	U2261	U2261	U2218	C	U2005	U1941			
U2673	U2674	U2528	U2390	U2262	U2262	U2219	C	U2006	U1942			
U2675	U2676	U2529	U2391	U2263	U2263	U2220	C	U2007	U1943			
U2677	U2678	U2530	U2392	U2264	U2264	U2221	C	U2008	U1944			
U2679	U2680	U2531	U2393	U2265	U2265	U2222	C	U2009	U1945			
U2681	U2682	U2532	U2394	U2266	U2266	U2223	C	U2010	U1946			
U2683	U2684	U2533	U2395	U2267	U2267	U2224	C	U2011	U1947			
U2685	U2686	U2534	U2396	U2268	U2268	U2225	C	U2012	U1948			
U2687	U2688	U2535	U2397	U2269	U2269	U2226	C	U2013	U1949			
U2689	U2690	U2536	U2398	U2270	U2270	U2227	C	U2014	U1950			
U2691	U2692	U2537	U2399	U2271	U2271	U2228	C	U2015	U1951			
U2693	U2694	U2538	U2400	U2272	U2272	U2229	C	U2016	U1952			
U2695	U2696	U2539	U2401	U2273	U2273	U2230	C	U2017	U			

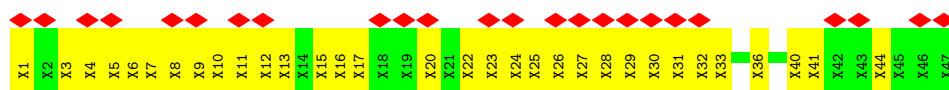




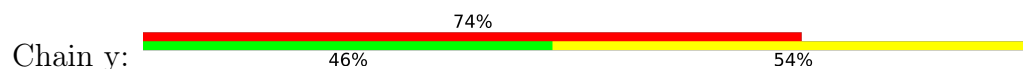
• Molecule 46: 5S ribosomal RNA



• Molecule 47: P1



• Molecule 48: P2



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	83558	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	25	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	DIRECT ELECTRON DE-64 (8k x 8k)	Depositor
Maximum map value	0.232	Depositor
Minimum map value	-0.078	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.010	Depositor
Recommended contour level	0.03	Depositor
Map size ($\text{\AA}$)	476.16, 476.16, 476.16	wwPDB
Map dimensions	384, 384, 384	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	1.24, 1.24, 1.24	Depositor

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	z	0.46	0/1620	1.05	5/2164 (0.2%)
2	A	0.40	0/1952	0.78	0/2622
3	B	0.39	0/3153	0.77	2/4239 (0.0%)
4	C	0.41	0/2802	0.83	2/3792 (0.1%)
5	D	0.42	0/2426	0.74	0/3271
6	E	0.44	0/1261	0.83	2/1694 (0.1%)
7	F	0.49	0/1822	0.84	0/2451
8	G	0.42	0/1850	0.79	0/2495
9	H	0.48	0/1540	0.82	1/2073 (0.0%)
10	I	0.47	0/1754	0.82	1/2350 (0.0%)
11	J	0.45	0/1375	0.88	1/1842 (0.1%)
12	s	0.41	0/734	0.97	2/1015 (0.2%)
13	L	0.44	0/1568	0.87	0/2106
14	M	0.47	0/1069	0.80	0/1438
15	N	0.38	0/1758	0.80	0/2354
16	O	0.41	0/1586	0.72	0/2128
17	P	0.44	0/1466	0.81	2/1968 (0.1%)
18	Q	0.42	0/1466	0.84	0/1965
19	R	1.85	3/1539 (0.2%)	1.22	10/2050 (0.5%)
20	S	0.43	0/1482	0.80	0/1990
21	T	0.41	0/1301	0.79	0/1743
22	U	0.44	0/812	0.81	0/1099
23	V	0.39	0/1019	0.74	0/1369
24	W	0.47	0/1099	0.91	2/1446 (0.1%)
25	X	0.41	0/984	0.78	1/1325 (0.1%)
26	Y	0.44	0/1005	0.89	0/1341
27	Z	0.46	0/1119	0.84	0/1497
28	a	0.38	0/1205	0.82	1/1612 (0.1%)
29	b	0.50	0/474	1.08	4/629 (0.6%)
30	c	0.48	0/751	0.82	0/1008
31	d	0.43	0/904	0.75	0/1213
32	e	0.43	0/1041	0.88	0/1394
33	f	0.39	0/869	0.74	0/1168
34	g	0.40	0/891	0.79	0/1191

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
35	h	0.46	0/979	0.81	2/1301 (0.2%)
36	i	0.47	0/779	0.83	0/1034
37	j	0.45	0/697	0.86	1/923 (0.1%)
38	k	0.41	0/619	0.81	0/826
39	l	0.43	0/444	0.86	0/588
40	m	0.40	0/424	0.79	0/562
41	o	0.59	1/861 (0.1%)	0.86	0/1136
42	p	0.47	0/702	0.81	0/934
43	q	0.50	0/977	1.01	3/1313 (0.2%)
44	5	0.60	3/77625 (0.0%)	0.70	16/121004 (0.0%)
45	8	0.58	0/3747	0.69	1/5832 (0.0%)
46	7	0.59	0/2884	0.67	0/4491
All	All	0.57	7/138435 (0.0%)	0.75	59/203986 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	z	0	8
2	A	0	2
4	C	0	11
5	D	0	2
6	E	0	4
7	F	0	4
8	G	0	1
9	H	0	2
10	I	0	1
11	J	0	2
12	s	0	4
13	L	0	3
14	M	0	1
15	N	0	1
17	P	0	2
18	Q	0	2
19	R	0	3
20	S	0	3
21	T	0	4
24	W	0	3
25	X	0	2
26	Y	0	6

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Mol	Chain	#Chirality outliers	#Planarity outliers
27	Z	0	1
28	a	0	1
29	b	0	2
32	e	0	2
33	f	0	1
34	g	0	1
37	j	0	2
42	p	0	1
43	q	0	3
All	All	0	85

All (7) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
19	R	312	VAL	CA-C	68.87	2.35	1.52
44	5	2263	C	O3'-P	-66.41	0.61	1.61
44	5	2279	A	O3'-P	23.70	1.96	1.61
41	o	12	CYS	CA-CB	-12.40	1.36	1.52
19	R	312	VAL	C-N	12.15	1.50	1.33
19	R	312	VAL	CA-CB	6.78	1.62	1.54
44	5	2253	G	O3'-P	5.08	1.68	1.61

All (59) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
44	5	2279	A	O3'-P-O5'	-39.18	45.23	104.00
44	5	2279	A	P-O3'-C3'	28.41	162.82	120.20
19	R	312	VAL	CB-CA-C	25.93	138.62	110.62
44	5	2263	C	P-O3'-C3'	25.66	158.69	120.20
44	5	2263	C	OP2-P-O3'	-17.15	56.55	108.00
44	5	2263	C	OP1-P-O3'	17.04	159.12	108.00
19	R	312	VAL	CA-C-O	15.18	132.64	118.98
19	R	312	VAL	N-CA-CB	-14.44	95.15	112.33
44	5	2279	A	OP2-P-O3'	14.36	151.07	108.00
19	R	312	VAL	O-C-N	-13.41	104.86	122.03
44	5	3304	U	OP1-P-O3'	-9.22	80.35	108.00
12	s	260	ARG	CA-C-N	8.63	138.03	121.54
12	s	260	ARG	C-N-CA	8.63	138.03	121.54
19	R	312	VAL	CA-CB-CG1	8.58	124.99	110.40
43	q	59	VAL	N-CA-C	-8.43	104.17	112.17
44	5	2263	C	O3'-P-O5'	-8.42	91.37	104.00
44	5	2279	A	OP1-P-O3'	-8.09	83.74	108.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
44	5	3304	U	OP2-P-O3'	-7.84	84.48	108.00
1	z	342	LYS	CA-C-N	-7.81	114.57	122.77
1	z	342	LYS	C-N-CA	-7.81	114.57	122.77
1	z	378	ILE	CB-CA-C	7.61	120.64	111.20
4	C	221	ASN	CA-C-N	-7.56	116.08	123.04
4	C	221	ASN	C-N-CA	-7.56	116.08	123.04
11	J	186	ASN	CB-CA-C	-7.48	102.42	109.83
28	a	197	GLY	N-CA-C	7.44	130.81	113.18
43	q	82	GLY	N-CA-C	-6.58	103.08	112.81
19	R	311	ARG	CA-C-N	-6.55	114.87	122.14
19	R	311	ARG	C-N-CA	-6.55	114.87	122.14
24	W	224	GLN	CA-C-N	6.40	130.40	120.60
24	W	224	GLN	C-N-CA	6.40	130.40	120.60
1	z	346	VAL	N-CA-C	6.12	118.26	109.51
17	P	183	ALA	N-CA-C	-6.06	105.12	113.18
45	8	88	A	N9-C1'-C2'	5.77	120.66	112.00
44	5	2541	U	P-O3'-C3'	5.69	128.73	120.20
44	5	1958	U	P-O3'-C3'	5.69	128.73	120.20
9	H	378	GLY	N-CA-C	5.65	117.78	112.08
43	q	52	LEU	CA-CB-CG	5.53	135.64	116.30
44	5	1307	G	P-O3'-C3'	5.51	128.47	120.20
1	z	378	ILE	N-CA-CB	-5.45	105.23	112.26
44	5	3288	G	O4'-C1'-N9	5.45	116.37	108.20
25	X	144	ALA	N-CA-C	-5.41	106.61	113.43
29	b	88	LYS	CA-C-N	5.39	134.51	121.68
29	b	88	LYS	C-N-CA	5.39	134.51	121.68
37	j	811	ARG	CA-CB-CG	-5.38	103.33	114.10
29	b	108	ASN	CA-C-N	5.36	129.17	120.60
29	b	108	ASN	C-N-CA	5.36	129.17	120.60
17	P	9	THR	N-CA-C	5.35	115.34	108.34
3	B	315	GLY	CA-C-N	-5.30	115.23	121.90
3	B	315	GLY	C-N-CA	-5.30	115.23	121.90
19	R	314	GLU	N-CA-C	-5.25	106.64	113.16
10	I	384	PHE	N-CA-C	5.22	115.27	108.07
19	R	299	LEU	CA-C-N	5.20	131.47	121.54
19	R	299	LEU	C-N-CA	5.20	131.47	121.54
6	E	297	GLY	CA-C-N	-5.12	119.12	122.60
6	E	297	GLY	C-N-CA	-5.12	119.12	122.60
44	5	1245	A	O5'-C5'-C4'	-5.07	104.09	111.70
35	h	84	LYS	CA-C-N	5.03	131.14	121.54
35	h	84	LYS	C-N-CA	5.03	131.14	121.54
44	5	3288	G	C4-N9-C1'	-5.00	111.49	126.50

There are no chirality outliers.

All (85) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	A	241	ARG	Peptide
2	A	247	ARG	Peptide
4	C	106	TRP	Peptide
4	C	107	ARG	Peptide
4	C	179	LEU	Peptide
4	C	182	LEU	Peptide
4	C	231	ALA	Peptide
4	C	233	LEU	Peptide
4	C	250	TRP	Peptide
4	C	270	SER	Peptide
4	C	293	SER	Peptide
4	C	299	ILE	Peptide
4	C	360	LYS	Peptide
5	D	325	ILE	Peptide
5	D	446	GLU	Peptide
6	E	227	ALA	Peptide
6	E	231	PRO	Peptide
6	E	283	GLU	Peptide
6	E	384	SER	Peptide
7	F	302	ILE	Peptide
7	F	366	ILE	Peptide
7	F	368	LYS	Peptide
7	F	427	PRO	Peptide
8	G	240	ALA	Peptide
9	H	203	TYR	Peptide
9	H	222	SER	Peptide
10	I	375	VAL	Peptide
11	J	101	ARG	Peptide
11	J	192	ASN	Peptide
13	L	152	THR	Peptide
13	L	47	ALA	Peptide
13	L	62	THR	Peptide
14	M	214	LEU	Peptide
15	N	72	LYS	Peptide
17	P	103	GLU	Peptide
17	P	171	ARG	Peptide
18	Q	134	GLN	Peptide
18	Q	231	PHE	Peptide
19	R	264	GLY	Peptide
19	R	314	GLU	Peptide

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Mol	Chain	Res	Type	Group
19	R	319	LEU	Peptide
20	S	13	ARG	Peptide
20	S	163	PHE	Peptide
20	S	22	PRO	Peptide
21	T	115	LYS	Peptide
21	T	126	VAL	Peptide
21	T	17	ARG	Peptide
21	T	92	ARG	Peptide
24	W	171	SER	Peptide
24	W	189	LYS	Peptide
24	W	270	ALA	Peptide
25	X	179	GLN	Peptide
25	X	208	GLN	Peptide
26	Y	10	SER	Peptide
26	Y	125	LYS	Peptide
26	Y	20	PHE	Peptide
26	Y	24	SER	Peptide
26	Y	75	ARG	Peptide
26	Y	81	GLN	Peptide
27	Z	32	SER	Peptide
28	a	120	HIS	Peptide
29	b	83	HIS	Peptide
29	b	85	ASN	Peptide
32	e	208	TYR	Peptide
32	e	272	ASN	Peptide
33	f	358	ASP	Peptide
34	g	4	ARG	Peptide
37	j	796	LYS	Peptide
37	j	810	ARG	Peptide
42	p	17	ARG	Peptide
43	q	32	ASN	Peptide
43	q	83	ASN	Peptide
43	q	91	GLU	Peptide
12	s	257	SER	Peptide
12	s	258	PHE	Peptide
12	s	275	SER	Peptide
12	s	276	VAL	Peptide
1	z	345	ASP	Peptide
1	z	347	ARG	Peptide
1	z	355	LYS	Peptide
1	z	361	ALA	Peptide
1	z	367	VAL	Peptide

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Mol	Chain	Res	Type	Group
1	z	378	ILE	Peptide
1	z	391	LYS	Peptide
1	z	401	VAL	Peptide

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	z	1602	0	1622	801	0
2	A	1918	0	1987	170	0
3	B	3082	0	3164	344	0
4	C	2750	0	2863	216	0
5	D	2376	0	2324	252	0
6	E	1240	0	1325	217	0
7	F	1785	0	1860	229	0
8	G	1818	0	1908	146	0
9	H	1519	0	1584	211	0
10	I	1718	0	1753	255	0
11	J	1354	0	1383	119	0
12	s	737	0	293	736	0
13	L	1543	0	1608	237	0
14	M	1054	0	1149	176	0
15	N	1721	0	1679	1806	0
16	O	1556	0	1659	167	0
17	P	1443	0	1485	101	0
18	Q	1442	0	1543	108	0
19	R	1522	0	1617	125	0
20	S	1446	0	1487	146	0
21	T	1277	0	1321	319	0
22	U	796	0	812	40	0
23	V	1004	0	1048	75	0
24	W	1089	0	1176	65	0
25	X	969	0	1036	82	0
26	Y	994	0	1081	150	0
27	Z	1093	0	1158	76	0
28	a	1174	0	1215	97	0
29	b	463	0	491	112	0
30	c	743	0	797	66	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
31	d	890	0	938	69	0
32	e	1020	0	1090	88	0
33	f	851	0	880	105	0
34	g	881	0	949	160	0
35	h	970	0	1078	150	0
36	i	772	0	847	110	0
37	j	682	0	680	192	0
38	k	613	0	682	31	0
39	l	437	0	474	88	0
40	m	418	0	459	33	0
41	o	848	0	918	87	0
42	p	695	0	738	95	0
43	q	1077	0	954	789	0
44	5	69359	0	34686	7895	0
45	8	3354	0	1689	368	0
46	7	2580	0	1302	208	0
47	x	235	0	41	135	0
48	y	230	0	42	140	0
All	All	129140	0	92875	11329	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 54.

All (11329) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:z:363:ALA:CB	44:5:2466:G:C6	1.75	1.70
15:N:81:TYR:HA	44:5:2427:U:C6	1.25	1.66
15:N:81:TYR:CE1	44:5:2428:U:H6	0.99	1.65
43:q:28:VAL:CG2	44:5:1281:G:H4'	1.23	1.65
15:N:7:LEU:HD21	44:5:111:C:C4	1.24	1.64
43:q:8:LYS:HD2	44:5:1219:C:C5'	1.24	1.64
15:N:23:GLN:HG2	44:5:67:A:C8	1.15	1.64
15:N:190:THR:CG2	44:5:1548:C:C6	1.78	1.63
12:s:240:ASN:CB	43:q:44:GLU:HG2	1.21	1.63
15:N:91:GLU:CG	44:5:277:G:H8	1.12	1.62
1:z:258:MET:HE3	44:5:2468:A:C8	1.30	1.62
15:N:22:LEU:HD23	44:5:316:U:C6	1.33	1.60
15:N:94:TYR:HB2	44:5:290:G:C4'	1.18	1.60
15:N:193:ARG:HB2	44:5:1549:U:C5'	1.22	1.60
12:s:219:ILE:CB	44:5:1232:C:C4	1.80	1.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:z:226:THR:HB	44:5:2458:A:P	1.41	1.59
45:8:39:G:N2	45:8:104:A:C8	1.70	1.59
15:N:91:GLU:CB	44:5:277:G:C4'	1.76	1.58
12:s:220:THR:CB	44:5:1234:G:C2	1.76	1.58
15:N:5:LYS:HB3	44:5:109:A:C6	1.09	1.58
43:q:28:VAL:HG23	44:5:1281:G:C4'	1.18	1.58
15:N:91:GLU:HB3	44:5:277:G:C4'	1.31	1.58
43:q:57:THR:CA	44:5:1285:G:H1	1.16	1.57
15:N:91:GLU:HB3	44:5:277:G:C1'	1.20	1.57
15:N:81:TYR:CE1	44:5:2428:U:C6	1.88	1.56
15:N:190:THR:CG2	44:5:1548:C:C5	1.77	1.56
15:N:192:LYS:HD2	44:5:1550:C:C5	1.34	1.56
15:N:5:LYS:CG	44:5:323:A:C8	1.74	1.56
15:N:190:THR:HG21	44:5:1548:C:C5	1.35	1.56
15:N:191:TRP:CE2	44:5:2166:A:N7	1.72	1.56
43:q:36:GLN:HA	44:5:1262:G:C6	1.09	1.56
15:N:98:LEU:CD2	44:5:289:A:H5''	1.09	1.56
12:s:260:ARG:HA	44:5:1266:G:C3'	1.17	1.55
12:s:282:PHE:HA	44:5:1258:U:C2'	1.33	1.55
15:N:190:THR:HG21	44:5:1548:C:C6	1.32	1.55
43:q:57:THR:HG21	44:5:1284:C:C2	1.08	1.55
15:N:94:TYR:CB	44:5:290:G:C5'	1.74	1.55
15:N:92:LEU:HD13	44:5:2600:C:P	1.44	1.55
15:N:67:ARG:NH1	44:5:293:C:C5	1.74	1.54
15:N:30:TYR:CZ	44:5:267:G:H2'	1.37	1.53
15:N:155:VAL:H	45:8:141:C:C5'	1.14	1.53
1:z:363:ALA:HB3	44:5:2466:G:C6	1.31	1.53
15:N:22:LEU:HA	44:5:316:U:C6	1.10	1.53
44:5:761:A:C8	44:5:770:G:N2	1.74	1.53
15:N:26:ARG:HD2	44:5:317:A:C5'	1.08	1.53
15:N:94:TYR:CB	44:5:290:G:H5'	1.05	1.53
15:N:7:LEU:CD2	44:5:111:C:C4	1.89	1.53
15:N:185:ALA:C	44:5:1548:C:H5'	1.30	1.53
15:N:150:TRP:HA	45:8:142:C:C1'	1.37	1.52
43:q:57:THR:HG22	44:5:1284:C:C5	1.40	1.52
43:q:57:THR:CB	44:5:1284:C:N3	1.70	1.52
12:s:267:LYS:CB	44:5:1277:C:C4	1.90	1.52
43:q:100:ILE:CG2	44:5:1260:A:C6	1.85	1.52
12:s:253:MET:C	44:5:1246:G:H3'	1.09	1.52
1:z:230:GLN:CB	44:5:2486:A:H2'	1.40	1.51
15:N:156:HIS:CE1	45:8:141:C:O2'	1.63	1.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:z:363:ALA:HB2	44:5:2466:G:C5	1.36	1.50
15:N:170:LYS:HZ3	44:5:31:C:C4'	1.21	1.50
1:z:230:GLN:CB	44:5:2486:A:C2'	1.87	1.50
15:N:9:GLU:HB3	44:5:77:A:C2	1.41	1.50
15:N:75:VAL:HG23	44:5:2430:A:C6	1.40	1.50
15:N:5:LYS:CA	44:5:109:A:N6	1.72	1.50
15:N:18:VAL:CA	44:5:315:C:H4'	1.04	1.50
15:N:75:VAL:CG2	44:5:2430:A:N1	1.73	1.50
15:N:129:TYR:HE2	44:5:271:C:C4'	0.98	1.49
15:N:78:GLY:HA2	44:5:2600:C:N3	1.18	1.49
43:q:100:ILE:CA	44:5:1260:A:H61	1.25	1.49
1:z:367:VAL:HG23	44:5:2478:C:C1'	1.01	1.48
1:z:223:PHE:O	44:5:2476:C:C5	1.64	1.48
1:z:258:MET:CE	44:5:2468:A:C8	1.93	1.48
44:5:2196:C:C2	44:5:2247:G:N2	1.81	1.48
1:z:232:GLY:O	44:5:2464:U:C6	1.66	1.48
12:s:219:ILE:CB	44:5:1232:C:C5	1.95	1.48
6:E:400:PHE:C	14:M:262:THR:HA	1.39	1.48
43:q:100:ILE:HG23	44:5:1260:A:C6	0.95	1.48
1:z:371:GLU:OE1	44:5:2468:A:C8	1.64	1.47
15:N:25:VAL:HA	44:5:299:G:N1	1.27	1.47
15:N:126:THR:HB	44:5:272:G:C8	1.17	1.47
1:z:230:GLN:HB2	44:5:2486:A:C2'	1.02	1.47
43:q:100:ILE:HG23	44:5:1260:A:N6	1.26	1.47
43:q:213:UNK:HA	48:y:11:UNK:N	1.19	1.47
43:q:83:ASN:HB3	44:5:1281:G:C2	1.45	1.47
43:q:64:ARG:NH2	44:5:1285:G:C2'	1.76	1.47
47:x:24:UNK:CB	48:y:25:UNK:CB	1.93	1.47
15:N:91:GLU:HG2	44:5:277:G:C8	0.95	1.46
43:q:83:ASN:CG	44:5:1281:G:C6	1.93	1.46
1:z:226:THR:CG2	44:5:2481:G:N2	1.74	1.46
12:s:220:THR:N	44:5:1234:G:C6	1.81	1.46
12:s:224:GLU:H	43:q:44:GLU:CA	1.24	1.46
12:s:289:ILE:CA	44:5:1277:C:N3	1.71	1.46
1:z:257:ASN:HA	44:5:2467:G:N7	1.19	1.46
15:N:82:GLY:N	44:5:2427:U:H5	1.06	1.46
15:N:7:LEU:CD2	44:5:111:C:N4	1.74	1.45
15:N:173:GLY:CA	44:5:1546:A:C2	1.91	1.45
1:z:365:GLY:HA2	44:5:2488:A:N7	1.28	1.45
6:E:382:TYR:CD1	14:M:264:PHE:CD1	2.04	1.45
1:z:221:ARG:NH2	44:5:2471:U:C4'	1.77	1.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:s:239:GLY:HA3	44:5:1257:C:C6	1.34	1.45
43:q:50:VAL:HG22	44:5:1258:U:C5	1.50	1.45
1:z:214:TYR:CZ	44:5:2465:G:N2	1.84	1.45
15:N:191:TRP:CZ2	44:5:2166:A:N7	1.83	1.45
46:7:75:G:N3	46:7:104:A:N6	1.62	1.45
1:z:226:THR:CG2	44:5:2481:G:H22	1.29	1.44
15:N:7:LEU:HD11	44:5:111:C:C5	1.51	1.44
43:q:57:THR:CG2	44:5:1284:C:C5	1.94	1.44
15:N:81:TYR:CA	44:5:2427:U:C5	1.98	1.44
44:5:371:G:N3	44:5:375:A:N6	1.64	1.44
15:N:22:LEU:CA	44:5:316:U:C6	2.00	1.44
15:N:76:PRO:HD3	44:5:2432:A:N6	1.19	1.44
15:N:193:ARG:CB	44:5:1549:U:C5'	1.83	1.44
1:z:223:PHE:CZ	44:5:2477:G:H1'	1.53	1.44
1:z:359:CYS:CB	44:5:2464:U:H4'	1.45	1.44
15:N:98:LEU:CD2	44:5:289:A:C5'	1.96	1.44
43:q:83:ASN:ND2	44:5:1281:G:C6	1.83	1.43
43:q:40:GLU:OE2	44:5:1264:G:C6	1.70	1.43
43:q:100:ILE:CG2	44:5:1260:A:N1	1.71	1.43
6:E:382:TYR:CD1	14:M:264:PHE:HD1	1.37	1.43
15:N:5:LYS:HG2	44:5:323:A:C8	0.91	1.43
15:N:91:GLU:CG	44:5:277:G:C8	1.90	1.43
15:N:129:TYR:CE2	44:5:271:C:C5'	2.02	1.43
15:N:170:LYS:NZ	44:5:31:C:C4'	1.81	1.43
47:x:8:UNK:N	48:y:8:UNK:CB	1.81	1.43
44:5:2277:C:H4'	44:5:2317:A:C4'	1.47	1.43
15:N:129:TYR:CE2	44:5:271:C:H5'	1.54	1.42
15:N:179:LYS:HG2	44:5:52:A:C5	1.54	1.42
15:N:188:ARG:HE	44:5:1545:A:C3'	0.88	1.42
12:s:297:ILE:N	44:5:1275:C:H1'	1.35	1.42
15:N:129:TYR:CE1	44:5:318:A:N3	1.86	1.42
43:q:50:VAL:HA	44:5:1258:U:C3'	1.47	1.42
15:N:81:TYR:CD1	44:5:2427:U:C3'	2.02	1.42
12:s:262:LEU:C	44:5:1266:G:C2	1.90	1.41
15:N:26:ARG:CB	44:5:317:A:C8	1.89	1.41
1:z:231:VAL:CG2	44:5:2488:A:OP1	1.64	1.41
43:q:38:MET:CG	44:5:1230:G:N2	1.81	1.41
12:s:219:ILE:CB	44:5:1232:C:N4	1.78	1.41
15:N:25:VAL:CA	44:5:299:G:H1	1.34	1.41
15:N:18:VAL:HA	44:5:315:C:C4'	0.95	1.41
43:q:100:ILE:CG2	44:5:1260:A:N6	1.81	1.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:2667:A:C8	44:5:2687:G:N2	1.84	1.41
15:N:78:GLY:CA	44:5:2600:C:N3	1.81	1.40
15:N:187:ARG:CD	44:5:1545:A:O2'	1.66	1.40
1:z:362:VAL:CG1	44:5:2466:G:C5	1.79	1.40
43:q:57:THR:HA	44:5:1285:G:N1	1.24	1.40
15:N:5:LYS:CG	44:5:109:A:N6	1.81	1.40
43:q:50:VAL:CA	44:5:1258:U:H3'	1.22	1.40
47:x:33:UNK:CB	48:y:12:UNK:O	1.67	1.40
15:N:172:ARG:CB	44:5:1546:A:O2'	1.67	1.40
44:5:2277:C:C4'	44:5:2317:A:H4'	1.51	1.40
1:z:367:VAL:CG2	44:5:2478:C:H1'	0.94	1.40
1:z:402:LYS:HG3	44:5:2463:G:C4'	1.48	1.40
15:N:174:ILE:CG2	44:5:55:G:H5''	1.47	1.40
44:5:213:A:N6	44:5:227:G:N3	1.68	1.40
12:s:288:ILE:O	44:5:1231:A:C2'	1.70	1.39
15:N:41:ARG:NH1	44:5:113:C:H5''	1.30	1.39
43:q:53:MET:N	44:5:1280:C:H5''	1.30	1.39
44:5:761:A:N7	44:5:770:G:C2	1.90	1.39
6:E:382:TYR:CB	14:M:264:PHE:HE1	1.33	1.39
7:F:286:TYR:HA	21:T:140:ILE:CA	1.52	1.39
15:N:172:ARG:HA	44:5:1546:A:C1'	1.52	1.39
1:z:217:GLU:N	44:5:2489:C:H42	1.16	1.39
12:s:239:GLY:CA	44:5:1257:C:C6	1.87	1.39
15:N:21:PHE:CZ	36:i:28:TYR:CE1	2.10	1.39
37:j:788:GLY:N	44:5:2138:A:HO2'	1.17	1.39
3:B:251:CYS:SG	44:5:2943:G:N2	1.94	1.39
12:s:295:GLY:CA	44:5:1275:C:H3'	1.28	1.39
15:N:192:LYS:HB2	44:5:1550:C:C6	1.55	1.39
15:N:193:ARG:CB	44:5:1549:U:H5'	0.91	1.39
15:N:204:LYS:OXT	37:j:814:HIS:CD2	1.77	1.38
12:s:240:ASN:CB	43:q:44:GLU:CG	1.99	1.38
13:L:183:ARG:CD	44:5:765:C:C4	2.06	1.38
15:N:24:ARG:C	44:5:300:G:H21	1.29	1.38
47:x:26:UNK:CB	48:y:13:UNK:N	1.86	1.38
1:z:213:LYS:HD3	44:5:2489:C:C6	1.38	1.38
15:N:170:LYS:CD	44:5:30:G:O2'	1.69	1.38
1:z:362:VAL:HG12	44:5:2466:G:C6	1.59	1.38
1:z:410:ARG:O	44:5:2448:G:C3'	1.70	1.38
6:E:400:PHE:O	14:M:262:THR:CA	1.71	1.37
1:z:221:ARG:HH21	44:5:2471:U:C4'	1.33	1.37
15:N:204:LYS:NZ	37:j:803:THR:HB	1.30	1.37

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:s:294:ALA:CB	44:5:1276:U:OP1	1.69	1.37
15:N:26:ARG:HB2	44:5:317:A:C8	1.30	1.37
45:8:121:U:O2	45:8:132:G:N1	1.56	1.37
15:N:42:PRO:CB	44:5:320:G:H1'	1.53	1.37
43:q:7:LYS:CB	44:5:1218:U:H4'	1.37	1.37
43:q:33:VAL:HG11	44:5:1280:C:N3	1.37	1.37
15:N:72:LYS:NZ	44:5:292:U:O4'	1.58	1.36
15:N:180:PHE:CE1	44:5:54:C:O2	1.79	1.36
15:N:200:TRP:CD1	37:j:815:VAL:O	1.76	1.36
43:q:100:ILE:CB	44:5:1260:A:H61	1.36	1.36
14:M:226:ARG:HD2	44:5:525:C:OP1	1.21	1.36
15:N:126:THR:CB	44:5:272:G:C8	1.99	1.36
3:B:66:LYS:NZ	23:V:140:PHE:H	1.23	1.36
6:E:382:TYR:CG	14:M:264:PHE:CE1	2.14	1.36
12:s:269:ILE:CB	44:5:1246:G:N3	1.88	1.35
15:N:57:GLN:NE2	44:5:149:U:C2	1.94	1.35
15:N:63:ARG:HG3	44:5:319:A:OP1	1.22	1.35
34:g:4:ARG:NH1	44:5:1481:A:N3	1.71	1.35
15:N:23:GLN:CG	44:5:67:A:C8	2.08	1.35
15:N:91:GLU:CA	44:5:277:G:O4'	1.73	1.35
15:N:3:ALA:CB	44:5:110:G:H2'	1.53	1.35
1:z:257:ASN:ND2	44:5:2486:A:H5'	1.38	1.35
1:z:398:SER:HA	44:5:2496:C:N4	1.41	1.35
12:s:290:GLU:CB	44:5:1278:A:O5'	1.75	1.35
12:s:282:PHE:CB	44:5:1260:A:C5	2.10	1.35
44:5:1863:G:N3	44:5:1867:A:N6	1.75	1.35
7:F:286:TYR:CB	21:T:140:ILE:HG12	1.54	1.34
13:L:183:ARG:HD3	44:5:765:C:C4	1.62	1.34
1:z:372:ASP:CA	44:5:2467:G:O4'	1.67	1.34
12:s:297:ILE:N	44:5:1275:C:C1'	1.90	1.34
37:j:811:ARG:NH1	39:l:51:ILE:CD1	1.88	1.34
15:N:90:ASN:CA	44:5:2600:C:H5''	1.22	1.34
43:q:33:VAL:HG21	44:5:1280:C:N3	1.40	1.34
5:D:295:ARG:NH1	44:5:2749:G:O2'	1.58	1.34
6:E:354:ILE:HD13	44:5:3268:A:C8	1.61	1.34
7:F:284:SER:HA	21:T:143:THR:N	1.37	1.34
15:N:30:TYR:CZ	44:5:267:G:C2'	2.10	1.34
15:N:30:TYR:CE1	44:5:267:G:OP2	1.79	1.34
15:N:81:TYR:HB3	44:5:2427:U:P	1.68	1.34
7:F:285:TYR:HB2	21:T:141:VAL:CG2	1.55	1.34
12:s:274:GLN:CA	44:5:1263:A:OP1	1.69	1.34

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:s:289:ILE:HA	44:5:1277:C:C4	1.63	1.34
44:5:195:U:C2	44:5:199:A:N6	1.94	1.34
1:z:220:LYS:O	44:5:2476:C:N4	1.61	1.33
10:I:225:LYS:NZ	44:5:1010:G:O5'	1.59	1.33
43:q:28:VAL:CG1	44:5:1259:A:C6	2.09	1.33
43:q:38:MET:HG3	44:5:1230:G:C2	1.62	1.33
1:z:258:MET:HE3	44:5:2468:A:N7	1.43	1.33
12:s:253:MET:C	44:5:1246:G:C3'	1.98	1.33
13:L:127:PRO:HA	35:h:114:ARG:NH2	1.43	1.33
43:q:7:LYS:HB3	44:5:1218:U:C4'	1.43	1.33
12:s:271:GLY:HA2	43:q:40:GLU:CG	1.59	1.33
15:N:139:HIS:C	44:5:144:A:O2'	1.68	1.33
43:q:104:ARG:CZ	44:5:1232:C:H4'	1.33	1.33
44:5:1237:G:N1	44:5:1251:A:H2	1.23	1.33
1:z:229:LEU:CD1	44:5:2476:C:H1'	1.58	1.33
43:q:28:VAL:HG11	44:5:1259:A:C5	1.62	1.33
43:q:38:MET:CA	44:5:1261:G:C8	2.02	1.33
43:q:64:ARG:N	44:5:1221:A:OP2	1.60	1.33
12:s:263:ALA:O	44:5:1276:U:C2	1.80	1.32
13:L:49:ARG:HD2	35:h:116:TYR:CE1	1.63	1.32
43:q:46:ARG:NH1	44:5:1257:C:OP2	1.58	1.32
15:N:129:TYR:CD1	44:5:318:A:N3	1.96	1.32
12:s:267:LYS:O	43:q:36:GLN:CB	1.76	1.32
34:g:7:PHE:CE2	44:5:1856:C:H1'	1.63	1.32
43:q:64:ARG:NH2	44:5:1285:G:H2'	1.34	1.32
44:5:1018:G:N1	44:5:1034:U:C2	1.97	1.32
12:s:224:GLU:N	43:q:44:GLU:HA	1.01	1.32
15:N:13:LYS:NZ	44:5:78:U:C3'	1.92	1.32
15:N:98:LEU:HD23	44:5:289:A:C5'	1.53	1.32
15:N:140:LYS:N	44:5:144:A:O2'	1.63	1.32
15:N:173:GLY:CA	44:5:1546:A:H2	1.33	1.32
1:z:345:ASP:C	44:5:2466:G:H5''	1.43	1.32
37:j:811:ARG:NH1	39:l:51:ILE:HD11	1.45	1.32
1:z:362:VAL:HG12	44:5:2466:G:C5	0.85	1.31
12:s:254:ARG:N	44:5:1246:G:H2'	1.41	1.31
15:N:5:LYS:HG2	44:5:323:A:N7	1.01	1.31
44:5:2198:A:C4	44:5:2270:A:C4	2.07	1.31
47:x:8:UNK:C	48:y:4:UNK:O	1.77	1.31
13:L:183:ARG:HD3	44:5:765:C:N3	1.43	1.31
15:N:183:THR:HG23	44:5:54:C:O2'	1.18	1.31
43:q:50:VAL:HG22	44:5:1258:U:C6	1.63	1.31

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:q:80:VAL:CG2	44:5:1284:C:H5	1.42	1.31
15:N:176:LYS:O	44:5:54:C:C5	1.83	1.31
7:F:283:GLY:C	21:T:143:THR:HB	1.53	1.31
15:N:19:LEU:HD13	44:5:66:A:C4	1.52	1.31
15:N:82:GLY:N	44:5:2427:U:C5	1.97	1.31
7:F:285:TYR:CB	21:T:141:VAL:HG23	1.61	1.31
15:N:7:LEU:CD2	44:5:321:C:H42	1.41	1.31
15:N:30:TYR:O	44:5:268:A:N7	1.64	1.31
15:N:90:ASN:CA	44:5:2600:C:C5'	2.08	1.31
36:i:62:ARG:NH2	44:5:2504:U:O2	1.63	1.31
39:l:40:LYS:NZ	44:5:355:A:O3'	1.59	1.31
43:q:83:ASN:CB	44:5:1281:G:C2	2.13	1.31
44:5:1071:U:C2	44:5:1087:G:N1	1.98	1.31
1:z:345:ASP:C	44:5:2466:G:C5'	2.03	1.30
7:F:289:ALA:HA	21:T:137:GLU:C	1.54	1.30
15:N:94:TYR:HB2	44:5:290:G:C5'	1.46	1.30
43:q:202:UNK:O	47:x:36:UNK:CB	1.77	1.30
47:x:20:UNK:CB	48:y:29:UNK:CB	2.10	1.30
1:z:226:THR:CB	44:5:2458:A:P	2.18	1.30
12:s:220:THR:CB	44:5:1234:G:C4	2.12	1.30
34:g:13:TYR:CE1	44:5:1855:U:H5'	1.64	1.30
37:j:789:LYS:HB3	44:5:2138:A:C2	1.65	1.30
1:z:411:LEU:HD12	44:5:2448:G:C5'	1.62	1.30
15:N:75:VAL:HG23	44:5:2430:A:N1	0.99	1.30
26:Y:62:SER:OG	44:5:198:A:H5''	1.24	1.30
1:z:213:LYS:HA	44:5:2489:C:C6	1.66	1.29
15:N:13:LYS:HZ2	44:5:78:U:C3'	1.43	1.29
15:N:21:PHE:CZ	36:i:28:TYR:HE1	1.48	1.29
1:z:226:THR:HB	44:5:2458:A:OP2	1.15	1.29
15:N:128:LYS:NZ	44:5:289:A:OP2	1.64	1.29
1:z:221:ARG:NH2	44:5:2471:U:H4'	0.99	1.29
12:s:220:THR:CB	44:5:1234:G:N3	1.93	1.29
15:N:30:TYR:OH	44:5:267:G:H2'	1.18	1.29
15:N:121:VAL:HG11	44:5:318:A:OP1	1.28	1.29
15:N:200:TRP:CG	37:j:818:LYS:HG2	1.04	1.29
43:q:53:MET:H	44:5:1280:C:C5'	1.46	1.29
43:q:66:PHE:CE1	44:5:1221:A:N3	2.00	1.29
15:N:126:THR:C	44:5:272:G:N7	1.88	1.29
1:z:223:PHE:CA	44:5:2475:G:H2'	1.57	1.29
1:z:227:VAL:HG13	44:5:2478:C:OP2	1.18	1.29
1:z:239:GLN:NE2	44:5:2493:U:OP2	1.63	1.29

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:q:57:THR:HG23	44:5:1284:C:N4	0.97	1.29
43:q:100:ILE:CA	44:5:1260:A:N6	1.93	1.29
1:z:232:GLY:HA2	44:5:2465:G:C8	1.65	1.28
7:F:286:TYR:CA	21:T:140:ILE:HA	1.61	1.28
12:s:260:ARG:O	44:5:1267:U:C6	1.86	1.28
15:N:91:GLU:O	44:5:277:G:C1'	1.79	1.28
44:5:1071:U:C4	44:5:1087:G:O6	1.83	1.28
1:z:409:PHE:CE1	44:5:2450:G:OP2	1.85	1.28
1:z:411:LEU:CD1	44:5:2448:G:H5'	1.61	1.28
7:F:284:SER:CB	21:T:142:SER:HA	1.62	1.28
12:s:271:GLY:C	43:q:36:GLN:O	1.74	1.28
43:q:33:VAL:CG1	44:5:1280:C:N3	1.95	1.28
12:s:269:ILE:CB	44:5:1246:G:H1'	1.63	1.28
15:N:19:LEU:HD13	44:5:66:A:N3	1.45	1.28
15:N:183:THR:CG2	44:5:54:C:O2'	1.82	1.28
43:q:36:GLN:N	44:5:1277:C:H42	1.32	1.28
47:x:7:UNK:O	48:y:5:UNK:HA	1.20	1.28
1:z:383:ASN:CB	44:5:2492:C:O2'	1.79	1.28
6:E:382:TYR:CE1	14:M:264:PHE:HD1	1.51	1.28
43:q:83:ASN:CG	44:5:1281:G:N1	1.90	1.28
44:5:2196:C:C1'	44:5:2271:A:H1'	1.62	1.28
1:z:236:TYR:HA	44:5:2493:U:C2'	1.31	1.28
1:z:371:GLU:OE1	44:5:2468:A:N9	1.65	1.28
12:s:284:ASN:O	44:5:1261:G:H5'	1.19	1.28
15:N:81:TYR:CD1	44:5:2428:U:C5	2.21	1.28
15:N:150:TRP:C	45:8:142:C:O4'	1.75	1.28
33:f:335:GLN:NE2	44:5:1329:U:OP1	1.64	1.28
1:z:359:CYS:SG	44:5:2464:U:H4'	1.74	1.27
12:s:288:ILE:CB	44:5:1278:A:N6	1.94	1.27
15:N:30:TYR:HE1	44:5:267:G:P	1.57	1.27
15:N:175:ASN:O	44:5:54:C:C3'	1.83	1.27
1:z:230:GLN:NE2	44:5:2479:C:OP1	1.64	1.27
1:z:233:LEU:HD11	44:5:2492:C:N3	1.48	1.27
12:s:198:GLN:O	44:5:1238:C:H2'	1.13	1.27
42:p:2:ALA:N	44:5:854:G:N7	1.79	1.27
1:z:228:GLU:OE2	44:5:2478:C:H3'	1.15	1.27
1:z:230:GLN:HB2	44:5:2486:A:O2'	1.26	1.27
1:z:362:VAL:HG12	44:5:2466:G:C4	1.69	1.27
6:E:246:ARG:HB2	44:5:607:A:OP2	1.29	1.27
12:s:260:ARG:C	44:5:1267:U:C6	2.12	1.27
45:8:39:G:N2	45:8:104:A:N7	1.83	1.27

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:155:VAL:CG2	45:8:141:C:H5'	1.62	1.27
15:N:188:ARG:NE	44:5:1545:A:C3'	1.68	1.27
15:N:192:LYS:CD	44:5:1550:C:C5	2.16	1.27
43:q:211:UNK:O	47:x:8:UNK:N	1.66	1.27
15:N:42:PRO:HB3	44:5:320:G:C1'	1.63	1.27
43:q:33:VAL:HB	44:5:1280:C:N4	1.50	1.27
44:5:19:U:O2	45:8:140:G:N1	1.66	1.27
44:5:2275:A:C8	44:5:2312:A:N6	1.79	1.27
1:z:230:GLN:OE1	44:5:2486:A:H5''	1.31	1.26
1:z:401:VAL:N	44:5:2452:G:N7	1.82	1.26
15:N:81:TYR:HB3	44:5:2427:U:O5'	1.31	1.26
43:q:33:VAL:CG2	44:5:1280:C:N3	1.98	1.26
43:q:59:VAL:O	44:5:1221:A:H5''	1.20	1.26
44:5:2565:U:O2	44:5:2576:G:N1	1.65	1.26
12:s:220:THR:CB	44:5:1234:G:N1	1.97	1.26
15:N:26:ARG:HA	36:i:30:LYS:NZ	1.46	1.26
43:q:57:THR:CG2	44:5:1284:C:C2	1.76	1.26
43:q:64:ARG:N	44:5:1221:A:P	2.01	1.26
1:z:257:ASN:CA	44:5:2467:G:N7	1.96	1.26
12:s:222:LEU:HA	44:5:1233:G:O5'	1.36	1.26
12:s:254:ARG:O	44:5:1247:U:H3'	1.30	1.26
13:L:127:PRO:CA	35:h:114:ARG:HH21	1.48	1.26
15:N:7:LEU:HD23	44:5:321:C:N4	1.48	1.26
3:B:262:TRP:NE1	16:O:66:LYS:HG2	1.48	1.26
12:s:274:GLN:CB	44:5:1232:C:N4	1.97	1.26
12:s:294:ALA:N	44:5:1231:A:N6	1.82	1.26
15:N:81:TYR:CD1	44:5:2428:U:C6	2.22	1.26
15:N:185:ALA:O	44:5:1548:C:H5'	1.34	1.26
15:N:189:LYS:HB3	44:5:1548:C:O5'	1.32	1.26
15:N:21:PHE:HD2	44:5:315:C:C3'	1.43	1.25
1:z:375:VAL:CG2	44:5:2466:G:N3	1.99	1.25
12:s:279:ARG:H	43:q:43:LYS:N	1.33	1.25
37:j:797:ARG:NH1	44:5:817:A:O2'	1.67	1.25
43:q:38:MET:CG	44:5:1230:G:H21	1.44	1.25
47:x:9:UNK:N	48:y:8:UNK:CB	1.99	1.25
15:N:3:ALA:HA	44:5:110:G:C1'	1.66	1.25
15:N:74:PRO:CD	44:5:291:C:H4'	1.37	1.25
15:N:76:PRO:O	44:5:2430:A:C5	1.80	1.25
15:N:81:TYR:CA	44:5:2427:U:C6	2.11	1.25
15:N:183:THR:C	44:5:54:C:O2'	1.77	1.25
12:s:290:GLU:HA	44:5:1278:A:OP2	1.30	1.25

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:5:LYS:HZ2	44:5:323:A:C4'	1.48	1.25
15:N:5:LYS:NZ	44:5:323:A:N9	1.85	1.25
15:N:173:GLY:HA3	44:5:1546:A:C2	1.55	1.25
1:z:229:LEU:HG	44:5:2476:C:O2'	1.11	1.25
15:N:9:GLU:O	44:5:78:U:H4'	1.28	1.25
15:N:22:LEU:CD2	44:5:316:U:C6	2.18	1.25
15:N:46:ASP:CB	44:5:322:U:C5	2.19	1.25
15:N:67:ARG:NH1	44:5:293:C:C4	1.78	1.25
15:N:90:ASN:HA	44:5:2600:C:C5'	1.64	1.25
44:5:1922:A:N6	44:5:1929:G:N3	1.85	1.25
1:z:361:ALA:CB	44:5:2465:G:H5''	1.61	1.24
7:F:285:TYR:CD2	21:T:142:SER:O	1.90	1.24
12:s:267:LYS:CB	44:5:1277:C:N3	2.00	1.24
25:X:178:GLU:O	35:h:32:LYS:NZ	1.65	1.24
43:q:3:GLY:O	44:5:1217:A:C2'	1.85	1.24
43:q:31:ASP:CB	44:5:1281:G:H22	1.50	1.24
43:q:64:ARG:NH2	44:5:1285:G:O2'	1.67	1.24
43:q:107:ALA:HA	44:5:1229:G:C2'	1.67	1.24
1:z:410:ARG:O	44:5:2448:G:H3'	1.09	1.24
12:s:195:VAL:O	44:5:1263:A:C5	1.91	1.24
12:s:197:VAL:CB	44:5:1250:G:H1	1.49	1.24
43:q:36:GLN:N	44:5:1277:C:N4	1.84	1.24
1:z:402:LYS:HG3	44:5:2463:G:O4'	1.35	1.24
15:N:7:LEU:CD2	44:5:321:C:N4	1.99	1.24
15:N:28:TRP:CE3	44:5:299:G:N3	1.99	1.24
15:N:144:ARG:NH2	44:5:143:G:N2	1.85	1.24
15:N:190:THR:C	44:5:1549:U:H4'	1.33	1.24
15:N:204:LYS:OXT	37:j:814:HIS:HD2	0.92	1.24
43:q:34:SER:OG	44:5:1230:G:H2'	1.11	1.24
6:E:382:TYR:CG	14:M:264:PHE:CD1	2.22	1.24
15:N:29:GLU:C	44:5:296:A:N1	1.92	1.24
15:N:46:ASP:OD2	44:5:322:U:C5	1.90	1.24
15:N:72:LYS:HG3	44:5:291:C:O2	1.16	1.24
43:q:36:GLN:CB	44:5:1277:C:H42	1.50	1.24
43:q:64:ARG:HH22	44:5:1285:G:C2'	1.36	1.24
1:z:398:SER:HA	44:5:2496:C:C4	1.26	1.24
10:I:275:ARG:NE	44:5:1044:U:OP1	1.67	1.24
12:s:256:LYS:N	44:5:1268:G:O6	1.70	1.24
15:N:200:TRP:HD1	37:j:815:VAL:O	1.04	1.24
43:q:30:VAL:H	44:5:1281:G:C2'	1.50	1.24
43:q:38:MET:HA	44:5:1261:G:C8	1.65	1.24

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:x:27:UNK:HA	48:y:14:UNK:C	1.55	1.24
1:z:220:LYS:NZ	44:5:2470:C:C6	2.04	1.23
15:N:7:LEU:HD22	44:5:111:C:N3	1.52	1.23
15:N:170:LYS:CE	44:5:30:G:O2'	1.84	1.23
43:q:33:VAL:HG11	44:5:1280:C:C2	1.72	1.23
1:z:220:LYS:C	44:5:2476:C:H42	1.44	1.23
7:F:284:SER:OG	21:T:142:SER:OG	1.53	1.23
15:N:172:ARG:CG	44:5:1546:A:O2'	1.86	1.23
15:N:189:LYS:HB2	44:5:1548:C:OP1	1.10	1.23
15:N:189:LYS:HG2	44:5:1549:U:OP2	1.33	1.23
15:N:192:LYS:H	44:5:1549:U:C2'	1.47	1.23
15:N:200:TRP:CB	37:j:818:LYS:HG2	1.43	1.23
43:q:57:THR:HG22	44:5:1284:C:C6	1.73	1.23
44:5:509:U:O2	44:5:582:G:N1	1.71	1.23
1:z:226:THR:O	44:5:2476:C:C3'	1.85	1.23
15:N:81:TYR:HA	44:5:2427:U:C5	1.62	1.23
15:N:126:THR:OG1	44:5:273:A:C8	1.81	1.23
15:N:139:HIS:CE1	44:5:149:U:O2'	1.90	1.23
43:q:33:VAL:CB	44:5:1280:C:N3	2.02	1.23
15:N:155:VAL:CB	45:8:141:C:H5'	1.51	1.23
44:5:2275:A:N6	44:5:2312:A:C8	2.07	1.23
12:s:290:GLU:HA	44:5:1278:A:P	1.78	1.23
15:N:9:GLU:HB3	44:5:77:A:N3	1.54	1.23
15:N:10:LEU:HB3	44:5:65:A:C8	1.58	1.23
15:N:80:THR:HB	44:5:2427:U:O4	1.38	1.23
15:N:170:LYS:NZ	44:5:31:C:C5'	2.01	1.23
15:N:189:LYS:CB	44:5:1548:C:P	2.27	1.23
39:l:15:LYS:CE	45:8:45:C:OP1	1.85	1.23
44:5:1071:U:N3	44:5:1087:G:C6	2.07	1.23
12:s:267:LYS:O	44:5:1262:G:C6	1.92	1.22
15:N:10:LEU:CB	44:5:65:A:C8	2.21	1.22
15:N:155:VAL:N	45:8:141:C:H5''	0.91	1.22
15:N:200:TRP:CG	37:j:818:LYS:CG	1.80	1.22
44:5:3234:A:C2	44:5:3253:G:N1	2.06	1.22
47:x:27:UNK:HA	48:y:14:UNK:O	1.05	1.22
1:z:409:PHE:CD1	44:5:2450:G:OP2	1.93	1.22
37:j:835:TRP:NE1	44:5:812:G:O2'	1.69	1.22
43:q:36:GLN:CA	44:5:1277:C:H42	1.51	1.22
43:q:57:THR:O	44:5:1222:G:H1'	1.40	1.22
43:q:104:ARG:HD3	44:5:1232:C:O2'	1.36	1.22
44:5:394:G:N3	44:5:399:A:N6	1.88	1.22

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:z:363:ALA:HB2	44:5:2466:G:C4	1.73	1.22
12:s:198:GLN:O	44:5:1238:C:C2'	1.85	1.22
12:s:271:GLY:CA	43:q:40:GLU:HG3	1.68	1.22
12:s:277:GLY:HA3	44:5:1256:G:C5	1.74	1.22
15:N:5:LYS:NZ	44:5:323:A:C1'	2.03	1.22
15:N:10:LEU:CA	44:5:77:A:O2'	1.87	1.22
15:N:18:VAL:O	44:5:315:C:O3'	1.53	1.22
15:N:21:PHE:CD2	44:5:315:C:H3'	1.70	1.22
12:s:279:ARG:N	43:q:43:LYS:H	1.36	1.22
15:N:22:LEU:HD23	44:5:316:U:C5	1.74	1.22
21:T:66:ASN:ND2	29:b:100:GLY:O	1.69	1.22
43:q:8:LYS:CD	44:5:1219:C:C5'	2.13	1.22
1:z:226:THR:CG2	44:5:2458:A:OP1	1.86	1.22
11:J:152:ARG:CB	41:o:104:LEU:HB2	1.69	1.22
15:N:46:ASP:HB2	44:5:322:U:C6	1.75	1.22
44:5:2279:A:OP2	44:5:2305:G:O6	1.55	1.22
15:N:10:LEU:O	44:5:65:A:H5'	1.36	1.21
15:N:50:ARG:CB	44:5:322:U:OP1	1.87	1.21
15:N:153:ASP:OD1	45:8:141:C:C6	1.91	1.21
15:N:174:ILE:CG2	44:5:55:G:C5'	2.18	1.21
41:o:45:ARG:NH2	44:5:285:A:N3	1.85	1.21
42:p:2:ALA:HB2	44:5:853:G:N7	1.53	1.21
12:s:240:ASN:C	43:q:44:GLU:HB3	1.57	1.21
15:N:25:VAL:N	44:5:300:G:N2	1.88	1.21
15:N:192:LYS:CB	44:5:1550:C:H6	1.52	1.21
43:q:36:GLN:CB	44:5:1277:C:N4	2.03	1.21
15:N:94:TYR:CG	44:5:290:G:C5'	2.24	1.21
15:N:125:SER:CB	44:5:273:A:OP1	1.87	1.21
25:X:136:LYS:CE	44:5:3:U:H3	1.51	1.21
44:5:182:U:O2	44:5:234:G:N1	1.72	1.21
12:s:240:ASN:C	43:q:44:GLU:CB	2.14	1.21
15:N:41:ARG:HH12	44:5:113:C:C5'	1.52	1.21
43:q:33:VAL:CB	44:5:1280:C:H42	1.54	1.21
1:z:218:THR:HG22	44:5:2488:A:O3'	1.39	1.20
12:s:295:GLY:HA2	44:5:1275:C:C3'	1.50	1.20
15:N:10:LEU:CD2	44:5:77:A:O2'	1.87	1.20
15:N:16:SER:CB	44:5:66:A:N1	2.03	1.20
15:N:22:LEU:CD2	44:5:316:U:H6	1.50	1.20
44:5:26:A:N6	44:5:59:G:O6	1.71	1.20
44:5:538:G:N1	44:5:553:U:O2	1.73	1.20
1:z:406:GLY:O	44:5:2452:G:OP2	1.57	1.20

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:G:202:GLN:NE2	44:5:2549:G:O2'	1.74	1.20
9:H:250:ASN:ND2	14:M:152:THR:O	1.75	1.20
43:q:107:ALA:CA	44:5:1229:G:H2'	1.70	1.20
12:s:290:GLU:CA	44:5:1278:A:OP2	1.90	1.20
15:N:9:GLU:CB	44:5:77:A:C2	2.24	1.20
15:N:44:ARG:C	44:5:321:C:C6	2.19	1.20
15:N:72:LYS:CE	44:5:292:U:O4'	1.88	1.20
15:N:76:PRO:CD	44:5:2432:A:H62	1.51	1.20
15:N:94:TYR:CG	44:5:290:G:H5'	1.75	1.20
44:5:3023:U:N3	44:5:3032:A:N7	1.90	1.20
1:z:223:PHE:CA	44:5:2475:G:C2'	2.03	1.20
1:z:366:ASN:HA	44:5:2469:G:C2	1.76	1.20
12:s:262:LEU:C	44:5:1266:G:N1	1.96	1.20
15:N:187:ARG:HD3	44:5:1545:A:O2'	1.21	1.20
1:z:223:PHE:HA	44:5:2475:G:C2'	1.29	1.20
12:s:267:LYS:O	43:q:36:GLN:CA	1.89	1.20
15:N:9:GLU:O	44:5:78:U:C4'	1.90	1.20
15:N:77:LYS:HG3	44:5:2430:A:C3'	1.57	1.20
43:q:213:UNK:CA	48:y:11:UNK:N	2.04	1.20
1:z:363:ALA:HB3	44:5:2466:G:O6	1.42	1.19
6:E:400:PHE:O	14:M:262:THR:HA	1.04	1.19
15:N:77:LYS:CG	44:5:2430:A:C3'	2.21	1.19
15:N:81:TYR:CD1	44:5:2427:U:H3'	1.22	1.19
15:N:189:LYS:CB	44:5:1548:C:OP1	1.90	1.19
44:5:2196:C:N3	44:5:2247:G:C2	2.09	1.19
15:N:6:TYR:HB2	44:5:110:G:N9	1.57	1.19
15:N:143:ARG:O	45:8:143:U:H4'	1.41	1.19
44:5:1959:G:N2	44:5:2078:C:C2	2.10	1.19
44:5:2194:G:C2'	44:5:2274:U:H1'	1.62	1.19
1:z:219:LYS:HB3	44:5:2488:A:C2	1.03	1.19
1:z:360:LEU:O	44:5:2464:U:O2'	1.57	1.19
15:N:5:LYS:NZ	44:5:323:A:C8	2.09	1.19
15:N:24:ARG:C	44:5:300:G:N2	1.99	1.19
15:N:150:TRP:CA	45:8:142:C:H1'	1.71	1.19
15:N:188:ARG:HE	44:5:1545:A:C4'	1.35	1.19
34:g:6:THR:HG22	44:5:1486:G:N3	1.57	1.19
43:q:43:LYS:HB3	44:5:1233:G:C6	1.77	1.19
43:q:80:VAL:HG22	44:5:1284:C:C5	1.76	1.19
43:q:83:ASN:ND2	44:5:1281:G:N1	1.89	1.19
6:E:382:TYR:HB2	14:M:264:PHE:CE1	1.77	1.19
15:N:129:TYR:CE2	44:5:271:C:C4'	1.87	1.19

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:179:LYS:HG2	44:5:52:A:N7	1.56	1.19
26:Y:87:LYS:HZ2	44:5:375:A:H4'	1.07	1.19
43:q:36:GLN:N	44:5:1262:G:O6	1.73	1.19
3:B:66:LYS:HZ2	23:V:140:PHE:N	1.37	1.19
12:s:195:VAL:O	44:5:1263:A:C4	1.96	1.19
13:L:49:ARG:HD2	35:h:116:TYR:CZ	1.77	1.19
15:N:16:SER:CB	44:5:66:A:C6	2.26	1.19
15:N:119:TYR:OH	44:5:320:G:H8	1.23	1.19
15:N:10:LEU:HA	44:5:77:A:O2'	1.07	1.18
15:N:21:PHE:CE2	44:5:316:U:H5	1.61	1.18
15:N:46:ASP:HB2	44:5:322:U:C5	1.77	1.18
15:N:91:GLU:CB	44:5:277:G:C1'	1.91	1.18
15:N:173:GLY:C	44:5:1546:A:H2	1.50	1.18
15:N:180:PHE:CE2	44:5:30:G:N1	2.10	1.18
12:s:217:LEU:CB	44:5:1237:G:O4'	1.90	1.18
12:s:294:ALA:HB1	44:5:1276:U:OP1	1.03	1.18
13:L:183:ARG:HD2	44:5:765:C:C4	1.73	1.18
15:N:91:GLU:O	44:5:277:G:H1'	1.02	1.18
15:N:156:HIS:HE1	45:8:141:C:O2'	0.95	1.18
44:5:2194:G:O2'	44:5:2274:U:C1'	1.92	1.18
1:z:257:ASN:ND2	44:5:2486:A:C5'	2.07	1.18
7:F:283:GLY:O	21:T:143:THR:HB	1.01	1.18
12:s:254:ARG:N	44:5:1246:G:C2'	2.07	1.18
15:N:5:LYS:CG	44:5:323:A:N7	1.83	1.18
15:N:30:TYR:H	44:5:317:A:N6	1.39	1.18
43:q:35:SER:CA	44:5:1278:A:N6	2.01	1.18
43:q:38:MET:HG3	44:5:1230:G:N2	0.86	1.18
43:q:100:ILE:CB	44:5:1260:A:N6	2.00	1.18
1:z:225:GLU:HG2	44:5:2458:A:C8	1.78	1.18
15:N:5:LYS:HB2	44:5:322:U:O2'	1.37	1.18
43:q:40:GLU:OE2	44:5:1264:G:O6	1.61	1.18
43:q:210:UNK:O	47:x:7:UNK:CA	1.90	1.18
1:z:372:ASP:OD2	44:5:2469:G:O2'	1.61	1.18
4:C:220:ARG:NH1	26:Y:4:GLN:OE1	1.77	1.18
6:E:382:TYR:CB	14:M:264:PHE:CE1	2.24	1.18
8:G:287:GLN:O	44:5:120:G:N2	1.77	1.18
12:s:287:ASP:HA	44:5:1279:C:C6	1.67	1.18
15:N:24:ARG:CA	44:5:300:G:H21	1.56	1.18
18:Q:134:GLN:NE2	44:5:1364:C:O2'	1.75	1.18
43:q:61:ARG:N	44:5:1222:G:C4	2.01	1.18
43:q:80:VAL:CG2	44:5:1284:C:C5	2.27	1.18

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:1010:G:N1	44:5:1040:A:C2	2.12	1.18
1:z:218:THR:N	44:5:2489:C:C4	2.12	1.17
12:s:273:ALA:CB	44:5:1264:G:H1'	1.73	1.17
36:i:63:ASN:ND2	44:5:2444:C:O3'	1.75	1.17
43:q:33:VAL:HG21	44:5:1280:C:C4	1.78	1.17
43:q:80:VAL:CG1	44:5:1283:C:H5''	1.72	1.17
5:D:265:LYS:NZ	44:5:2669:G:H21	1.41	1.17
15:N:81:TYR:CG	44:5:2427:U:H3'	1.76	1.17
15:N:189:LYS:HB3	44:5:1548:C:P	1.81	1.17
43:q:100:ILE:HA	44:5:1260:A:N6	1.51	1.17
44:5:528:U:O2	44:5:564:G:N1	1.76	1.17
44:5:2198:A:C4	44:5:2270:A:C5	2.31	1.17
44:5:2482:U:C2	44:5:2486:A:N6	2.12	1.17
1:z:402:LYS:HG2	44:5:2462:A:C8	1.78	1.17
6:E:248:ALA:HB3	44:5:607:A:C5	1.78	1.17
15:N:11:GLN:HB3	44:5:64:G:O5'	1.42	1.17
15:N:30:TYR:CE1	44:5:267:G:P	2.36	1.17
15:N:74:PRO:C	44:5:2431:C:O2	1.88	1.17
15:N:119:TYR:OH	44:5:320:G:C8	1.96	1.17
15:N:185:ALA:C	44:5:1548:C:C5'	2.17	1.17
32:e:188:GLY:HA3	44:5:639:G:P	1.84	1.17
15:N:87:GLN:NE2	44:5:2604:U:O4	1.77	1.17
15:N:91:GLU:HG3	44:5:276:U:C3'	1.74	1.17
15:N:143:ARG:HA	45:8:143:U:H5'	1.27	1.17
42:p:4:ARG:NH1	44:5:838:G:N7	1.93	1.17
44:5:172:G:N1	44:5:246:U:C2	2.11	1.17
3:B:9:PRO:HG3	44:5:2914:G:H5'	1.21	1.16
15:N:15:GLN:O	44:5:69:C:C5'	1.92	1.16
43:q:217:UNK:CB	48:y:7:UNK:CB	2.23	1.16
44:5:600:G:N2	44:5:603:A:N7	1.89	1.16
47:x:23:UNK:HA	48:y:9:UNK:O	1.42	1.16
12:s:218:VAL:C	44:5:1234:G:N7	2.01	1.16
15:N:150:TRP:CA	45:8:142:C:C1'	2.21	1.16
15:N:200:TRP:CZ2	37:j:813:PHE:CZ	2.33	1.16
37:j:789:LYS:HD2	44:5:2138:A:C5	1.78	1.16
7:F:331:LYS:NZ	44:5:988:U:OP1	1.78	1.16
15:N:10:LEU:CA	44:5:77:A:HO2'	1.59	1.16
15:N:17:ASP:OD2	44:5:75:G:C6	1.98	1.16
43:q:104:ARG:NE	44:5:1232:C:H4'	1.60	1.16
44:5:2196:C:H4'	44:5:2271:A:C4'	1.76	1.16
12:s:220:THR:N	44:5:1234:G:C5	2.14	1.16

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:41:ARG:NH1	44:5:113:C:C5'	2.08	1.16
15:N:44:ARG:HA	44:5:321:C:C5	1.80	1.16
15:N:91:GLU:C	44:5:277:G:H1'	1.71	1.16
43:q:60:ARG:HH11	44:5:1285:G:C1'	1.42	1.16
47:x:17:UNK:CA	48:y:5:UNK:CB	2.23	1.16
1:z:360:LEU:N	44:5:2464:U:O3'	1.72	1.16
1:z:410:ARG:NH2	44:5:2447:A:C6	2.12	1.16
13:L:15:ARG:NH2	44:5:96:G:O2'	1.78	1.16
43:q:57:THR:C	44:5:1222:G:H1'	1.70	1.16
43:q:57:THR:HB	44:5:1285:G:N2	1.61	1.16
1:z:223:PHE:O	44:5:2476:C:H5	0.84	1.15
6:E:246:ARG:NH1	44:5:608:A:H2'	1.61	1.15
11:J:152:ARG:HD3	41:o:104:LEU:HD22	1.18	1.15
12:s:240:ASN:O	43:q:41:VAL:O	1.64	1.15
12:s:253:MET:N	44:5:1246:G:C8	2.13	1.15
15:N:5:LYS:CD	44:5:323:A:C8	2.28	1.15
15:N:180:PHE:CD1	44:5:54:C:O2	0.81	1.15
16:O:18:ARG:NH2	44:5:1314:C:O2'	1.78	1.15
43:q:85:GLY:HA3	44:5:1281:G:P	1.85	1.15
46:7:75:G:C2	46:7:104:A:N6	2.14	1.15
3:B:262:TRP:N	16:O:64:PHE:O	1.80	1.15
6:E:270:ARG:NH1	44:5:3268:A:H5''	1.58	1.15
7:F:283:GLY:HA3	21:T:143:THR:HG21	1.16	1.15
15:N:31:ARG:HH11	36:i:82:ARG:CZ	1.59	1.15
15:N:77:LYS:CG	44:5:2430:A:H3'	1.77	1.15
15:N:119:TYR:CZ	44:5:320:G:H8	1.64	1.15
25:X:136:LYS:HD2	44:5:3:U:O4	1.44	1.15
26:Y:90:VAL:O	44:5:378:A:H1'	1.42	1.15
7:F:286:TYR:HB2	21:T:140:ILE:CG1	1.76	1.15
15:N:199:LEU:HD13	44:5:903:U:C5'	1.76	1.15
15:N:204:LYS:OXT	37:j:801:SER:O	1.63	1.15
1:z:232:GLY:HA2	44:5:2465:G:N7	1.61	1.15
13:L:134:GLU:OE2	35:h:117:ALA:HB1	1.47	1.15
15:N:129:TYR:HE2	44:5:271:C:H4'	0.99	1.15
15:N:172:ARG:CA	44:5:1546:A:H1'	1.75	1.15
43:q:40:GLU:HG3	44:5:1261:G:O2'	1.44	1.15
1:z:259:SER:CB	44:5:2486:A:P	2.33	1.15
1:z:363:ALA:CB	44:5:2466:G:C5	1.93	1.15
15:N:144:ARG:NH1	44:5:125:C:O2	1.78	1.15
15:N:170:LYS:NZ	44:5:31:C:H4'	1.52	1.15
43:q:100:ILE:HG22	44:5:1260:A:N1	1.50	1.15

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:1672:U:O2	44:5:1775:G:N1	1.78	1.15
1:z:223:PHE:CB	44:5:2475:G:H2'	1.77	1.14
1:z:226:THR:HG22	44:5:2458:A:OP1	1.44	1.14
15:N:30:TYR:OH	44:5:267:G:H8	1.28	1.14
15:N:30:TYR:HE1	44:5:267:G:O5'	1.30	1.14
15:N:81:TYR:C	44:5:2427:U:C5	2.24	1.14
15:N:155:VAL:HG22	45:8:141:C:C4'	1.75	1.14
44:5:3189:G:N1	44:5:3203:U:O2	1.80	1.14
1:z:223:PHE:HB2	44:5:2476:C:O4'	1.42	1.14
12:s:256:LYS:C	44:5:1269:U:N3	1.94	1.14
12:s:282:PHE:CA	44:5:1258:U:H2'	1.76	1.14
15:N:17:ASP:OD2	44:5:75:G:N1	1.80	1.14
34:g:4:ARG:CZ	44:5:1481:A:N3	2.11	1.14
1:z:228:GLU:OE1	44:5:2480:A:N7	1.80	1.14
1:z:409:PHE:HD2	44:5:2490:C:C1'	1.45	1.14
6:E:270:ARG:NH2	44:5:3268:A:OP1	1.81	1.14
15:N:92:LEU:HD13	44:5:2600:C:OP2	1.48	1.14
15:N:129:TYR:C	44:5:318:A:H4'	1.72	1.14
15:N:140:LYS:NZ	44:5:143:G:C2'	2.11	1.14
43:q:34:SER:OG	44:5:1230:G:C2'	1.94	1.14
44:5:3234:A:H2	44:5:3253:G:N1	1.41	1.14
2:A:11:GLY:O	44:5:2171:G:N2	1.77	1.14
3:B:375:GLU:OE2	24:W:159:TYR:OH	1.65	1.14
5:D:265:LYS:O	44:5:2686:A:O2'	1.60	1.14
15:N:5:LYS:HZ2	44:5:323:A:C1'	1.59	1.14
15:N:14:LYS:O	44:5:68:C:H4'	1.47	1.14
43:q:46:ARG:CZ	44:5:1257:C:C5	2.30	1.14
3:B:243:HIS:H	44:5:2948:C:H4'	1.03	1.14
12:s:274:GLN:C	44:5:1263:A:OP1	1.91	1.14
15:N:57:GLN:CG	44:5:150:A:O5'	1.73	1.14
21:T:116:ARG:HD3	44:5:1093:A:H5'	1.16	1.14
1:z:257:ASN:CG	44:5:2486:A:H5'	1.72	1.13
15:N:4:TYR:CB	44:5:322:U:O4'	1.96	1.13
15:N:72:LYS:CG	44:5:291:C:O2	1.95	1.13
43:q:66:PHE:CD1	44:5:1221:A:N3	2.16	1.13
7:F:283:GLY:C	21:T:143:THR:CB	2.22	1.13
15:N:130:PHE:N	44:5:318:A:O3'	1.71	1.13
39:l:15:LYS:HE3	45:8:45:C:OP1	0.97	1.13
1:z:359:CYS:SG	44:5:2464:U:C4'	2.36	1.13
12:s:219:ILE:CB	43:q:43:LYS:CD	2.19	1.13
15:N:87:GLN:NE2	44:5:2604:U:C4	2.17	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:l:21:ARG:NH1	45:8:52:A:O4'	1.82	1.13
15:N:5:LYS:CD	44:5:323:A:H8	1.61	1.13
15:N:7:LEU:CD1	44:5:111:C:C5	2.31	1.13
15:N:30:TYR:CE1	44:5:267:G:H2'	1.81	1.13
15:N:30:TYR:CE1	44:5:267:G:H3'	1.84	1.13
15:N:72:LYS:NZ	44:5:292:U:C4'	2.11	1.13
15:N:183:THR:OG1	44:5:1547:G:H1'	1.43	1.13
6:E:354:ILE:HG21	44:5:3268:A:C5	1.83	1.13
7:F:285:TYR:HD2	21:T:142:SER:O	1.23	1.12
11:J:152:ARG:HE	41:o:104:LEU:HD13	1.09	1.12
12:s:152:LEU:CB	44:5:1238:C:O2	1.97	1.12
12:s:267:LYS:O	44:5:1262:G:O6	1.62	1.12
15:N:21:PHE:HZ	36:i:28:TYR:CE1	1.58	1.13
15:N:139:HIS:CE1	44:5:149:U:HO2'	1.67	1.13
15:N:140:LYS:NZ	44:5:143:G:H2'	1.61	1.13
43:q:55:LYS:HG3	44:5:1224:C:H5	1.10	1.13
44:5:2194:G:O2'	44:5:2274:U:H1'	0.97	1.13
13:L:126:PHE:CD2	35:h:115:LYS:O	2.01	1.12
15:N:91:GLU:HB2	44:5:277:G:C5'	1.77	1.12
15:N:92:LEU:CD1	44:5:2600:C:P	2.37	1.12
39:l:24:PRO:HG2	45:8:52:A:N7	1.64	1.12
44:5:2196:C:C2	44:5:2247:G:C2	2.35	1.12
12:s:269:ILE:CB	44:5:1246:G:C1'	2.26	1.12
12:s:296:GLU:CB	44:5:1276:U:O4'	1.96	1.12
34:g:12:PRO:HG3	44:5:1488:G:H21	1.08	1.12
1:z:259:SER:HB2	44:5:2486:A:P	1.88	1.12
13:L:183:ARG:HD3	44:5:765:C:C2	1.82	1.12
15:N:3:ALA:CB	44:5:110:G:C2'	2.28	1.12
15:N:78:GLY:HA2	44:5:2600:C:C4	1.84	1.12
43:q:12:PHE:CE2	44:5:1222:G:OP2	2.03	1.12
1:z:345:ASP:O	44:5:2466:G:C5'	1.98	1.12
10:I:200:LYS:NZ	44:5:2634:U:O3'	1.81	1.12
12:s:282:PHE:CA	44:5:1258:U:C2'	2.27	1.12
15:N:44:ARG:CA	44:5:321:C:C5	2.33	1.12
15:N:155:VAL:HG22	45:8:141:C:C5'	1.79	1.12
15:N:192:LYS:N	44:5:1549:U:O2'	1.64	1.12
44:5:2196:C:N3	44:5:2247:G:N1	1.95	1.12
1:z:220:LYS:NZ	44:5:2470:C:H6	1.40	1.12
1:z:223:PHE:C	44:5:2476:C:C5	2.20	1.12
12:s:251:ARG:CB	44:5:1246:G:C6	2.33	1.12
13:L:50:PRO:HD2	35:h:116:TYR:HE2	1.01	1.12

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:26:ARG:HH11	44:5:317:A:H5'	1.00	1.12
39:l:40:LYS:HD2	44:5:355:A:H4'	1.27	1.12
43:q:3:GLY:C	44:5:1217:A:H2'	1.75	1.12
43:q:38:MET:N	44:5:1231:A:O2'	1.81	1.12
47:x:20:UNK:O	48:y:25:UNK:O	1.65	1.12
1:z:259:SER:HB2	44:5:2486:A:O5'	1.47	1.11
12:s:270:LEU:O	44:5:1232:C:C5	2.02	1.11
15:N:131:GLU:OE2	44:5:267:G:O2'	1.68	1.11
15:N:170:LYS:HE2	44:5:30:G:O2'	1.43	1.11
15:N:180:PHE:CZ	44:5:30:G:C2	2.39	1.11
15:N:189:LYS:CG	44:5:1549:U:OP2	1.96	1.11
43:q:36:GLN:O	44:5:1261:G:O2'	1.68	1.11
1:z:363:ALA:HB2	44:5:2466:G:C6	1.55	1.11
31:d:84:LYS:NZ	44:5:1456:A:N7	1.99	1.11
43:q:50:VAL:CG2	44:5:1258:U:C5	2.33	1.11
43:q:52:LEU:HA	44:5:1280:C:C5'	1.80	1.11
47:x:26:UNK:HA	48:y:11:UNK:CA	1.52	1.11
1:z:255:ARG:HB3	44:5:2467:G:H5'	1.24	1.11
6:E:246:ARG:NE	44:5:608:A:C4	2.17	1.11
12:s:197:VAL:CB	44:5:1250:G:N1	2.10	1.11
12:s:244:ASP:O	43:q:37:GLN:OE1	1.67	1.11
13:L:136:GLU:CG	35:h:119:LYS:HD3	1.80	1.11
15:N:7:LEU:HD21	44:5:111:C:N4	0.79	1.11
15:N:170:LYS:HD3	44:5:30:G:O2'	1.47	1.11
43:q:28:VAL:HG11	44:5:1259:A:C6	1.73	1.11
1:z:218:THR:N	44:5:2489:C:N3	1.96	1.11
5:D:292:GLN:NE2	44:5:2747:A:H61	1.46	1.11
7:F:317:ARG:NH2	44:5:1101:G:OP1	1.83	1.11
15:N:24:ARG:CB	44:5:301:G:C4	2.29	1.11
15:N:81:TYR:N	44:5:2427:U:C5	2.19	1.11
15:N:172:ARG:HH21	44:5:1547:G:H5''	1.06	1.11
44:5:2437:G:N1	44:5:2510:U:O2	1.82	1.11
1:z:217:GLU:N	44:5:2489:C:N4	1.95	1.11
1:z:383:ASN:HB2	44:5:2492:C:O2'	1.41	1.11
12:s:284:ASN:O	44:5:1261:G:C5'	1.98	1.11
15:N:76:PRO:CD	44:5:2432:A:N6	2.10	1.11
15:N:190:THR:CB	44:5:1548:C:H6	1.64	1.11
32:e:198:ARG:NH2	44:5:634:C:O3'	1.83	1.11
1:z:236:TYR:N	44:5:2493:U:H3'	1.37	1.10
1:z:368:GLU:HB3	44:5:2470:C:OP2	1.50	1.10
3:B:262:TRP:CB	16:O:65:ASN:HA	1.80	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:s:217:LEU:CB	44:5:1235:U:N3	1.91	1.10
12:s:257:SER:H	44:5:1247:U:H2'	1.16	1.10
12:s:276:VAL:CB	44:5:1255:C:P	2.38	1.10
15:N:70:ASN:N	44:5:289:A:C6	2.11	1.10
15:N:129:TYR:CD2	44:5:271:C:H5'	1.85	1.10
47:x:28:UNK:CB	48:y:16:UNK:O	1.99	1.10
11:J:153:ASN:HB2	41:o:103:ALA:HA	1.10	1.10
15:N:4:TYR:CD1	44:5:321:C:O2	2.04	1.10
15:N:91:GLU:HG3	44:5:276:U:H3'	1.33	1.10
15:N:94:TYR:CB	44:5:290:G:C4'	2.10	1.10
15:N:188:ARG:NE	44:5:1545:A:H3'	1.49	1.10
1:z:404:SER:HA	44:5:2461:A:N9	1.56	1.10
11:J:152:ARG:HD3	41:o:104:LEU:CD2	1.82	1.10
12:s:240:ASN:O	43:q:44:GLU:HB3	1.50	1.10
15:N:76:PRO:O	44:5:2430:A:N7	1.83	1.10
15:N:144:ARG:NH2	44:5:143:G:C2	2.17	1.10
15:N:155:VAL:N	45:8:141:C:C5'	1.86	1.10
39:l:40:LYS:NZ	44:5:355:A:C3'	2.13	1.10
3:B:3:HIS:HB3	44:5:2938:G:C6	1.85	1.10
12:s:223:LYS:HA	43:q:44:GLU:HB2	1.22	1.10
12:s:269:ILE:CB	44:5:1246:G:O2'	2.00	1.10
15:N:16:SER:HB2	44:5:66:A:C6	1.61	1.10
15:N:23:GLN:HG3	44:5:317:A:O4'	1.50	1.10
15:N:31:ARG:NH1	36:i:82:ARG:NH2	1.71	1.10
15:N:170:LYS:NZ	44:5:31:C:H5'	1.60	1.10
15:N:178:HIS:CG	44:5:52:A:H3'	1.84	1.10
39:l:40:LYS:CD	44:5:355:A:H4'	1.81	1.10
43:q:104:ARG:CZ	44:5:1232:C:C4'	2.24	1.10
47:x:23:UNK:C	48:y:10:UNK:HA	1.80	1.10
1:z:226:THR:HG21	44:5:2481:G:N2	1.50	1.10
1:z:399:LEU:N	44:5:2496:C:C4	2.20	1.10
7:F:283:GLY:O	21:T:143:THR:CB	1.97	1.10
15:N:18:VAL:CB	44:5:315:C:H5'	1.81	1.10
15:N:50:ARG:HB3	44:5:322:U:OP1	1.41	1.10
15:N:174:ILE:HG23	44:5:55:G:C5'	1.81	1.10
15:N:187:ARG:NE	44:5:1545:A:O2'	1.84	1.10
26:Y:87:LYS:NZ	44:5:375:A:O2'	1.82	1.10
34:g:10:ARG:NH1	44:5:1488:G:O3'	1.85	1.10
3:B:261:MET:HA	16:O:64:PHE:HB2	1.25	1.09
12:s:241:ILE:N	43:q:44:GLU:CD	2.02	1.09
12:s:294:ALA:N	44:5:1231:A:H61	1.05	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:j:789:LYS:HD2	44:5:2138:A:C4	1.86	1.09
43:q:42:ARG:HD2	44:5:1258:U:O2	1.43	1.09
44:5:532:A:C2	44:5:560:G:N1	2.20	1.09
3:B:3:HIS:CD2	44:5:2938:G:C8	2.39	1.09
12:s:195:VAL:O	44:5:1263:A:C6	2.04	1.09
15:N:172:ARG:HB3	44:5:1546:A:O2'	1.47	1.09
15:N:180:PHE:CA	44:5:53:G:C2	2.32	1.09
25:X:136:LYS:HE2	44:5:3:U:H3	1.12	1.09
34:g:7:PHE:CE2	44:5:1856:C:C1'	2.34	1.09
43:q:52:LEU:CA	44:5:1280:C:H5'	1.82	1.09
43:q:100:ILE:HG23	44:5:1260:A:N1	1.41	1.09
44:5:2841:G:N3	44:5:2847:A:N6	1.99	1.09
1:z:232:GLY:O	44:5:2464:U:H6	0.76	1.09
1:z:234:LYS:HG2	44:5:2464:U:O4'	1.52	1.09
1:z:359:CYS:HB3	44:5:2465:G:P	1.91	1.09
6:E:246:ARG:HG3	44:5:607:A:H5'	1.32	1.09
15:N:7:LEU:CD2	44:5:111:C:N3	2.08	1.09
15:N:21:PHE:CE2	36:i:28:TYR:CE1	2.40	1.09
15:N:29:GLU:OE2	44:5:266:A:H3'	1.31	1.09
15:N:91:GLU:CA	44:5:277:G:C1'	2.29	1.09
25:X:178:GLU:C	35:h:32:LYS:HZ1	1.60	1.09
34:g:12:PRO:HB2	44:5:1855:U:H1'	1.31	1.09
44:5:341:G:N2	44:5:349:A:N1	1.98	1.09
1:z:230:GLN:OE1	44:5:2486:A:C5'	1.99	1.09
1:z:300:LYS:HB3	44:5:2485:A:H4'	1.26	1.09
12:s:288:ILE:CB	43:q:38:MET:N	2.15	1.09
12:s:288:ILE:C	44:5:1278:A:N6	2.11	1.09
15:N:3:ALA:HB2	44:5:110:G:H2'	1.21	1.09
15:N:81:TYR:C	44:5:2427:U:H5	1.59	1.09
15:N:91:GLU:CG	44:5:277:G:O4'	1.99	1.09
15:N:92:LEU:CD1	44:5:2600:C:OP2	2.00	1.09
15:N:193:ARG:HG3	44:5:1549:U:OP1	1.51	1.09
34:g:13:TYR:CD1	44:5:1855:U:C4'	2.36	1.09
44:5:1018:G:O6	44:5:1034:U:C4	2.05	1.09
47:x:17:UNK:CB	48:y:5:UNK:CB	2.31	1.09
6:E:246:ARG:CG	44:5:607:A:H5'	1.83	1.09
12:s:263:ALA:O	44:5:1276:U:N3	1.86	1.09
15:N:5:LYS:HE3	44:5:323:A:H5''	1.32	1.09
15:N:121:VAL:C	44:5:317:A:O2'	1.96	1.09
15:N:200:TRP:CH2	37:j:813:PHE:CZ	2.41	1.09
41:o:86:LYS:NZ	44:5:2753:G:O6	1.84	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:q:207:UNK:C	47:x:3:UNK:C	2.31	1.09
1:z:359:CYS:HB3	44:5:2464:U:C4'	1.81	1.08
1:z:371:GLU:OE1	44:5:2468:A:C1'	2.01	1.08
11:J:151:ARG:HD3	41:o:105:GLN:CA	1.81	1.08
12:s:300:PRO:HA	44:5:1267:U:H2'	1.34	1.08
15:N:31:ARG:NE	44:5:300:G:H4'	1.47	1.08
43:q:5:ARG:NH1	44:5:1287:A:N1	1.99	1.08
43:q:28:VAL:HG11	44:5:1259:A:C4	1.87	1.08
43:q:36:GLN:CA	44:5:1262:G:O6	0.79	1.08
43:q:39:HIS:O	44:5:1261:G:N3	1.85	1.08
1:z:226:THR:HG23	44:5:2481:G:H22	0.99	1.08
12:s:260:ARG:C	44:5:1267:U:H6	1.51	1.08
12:s:263:ALA:C	44:5:1276:U:C2	2.18	1.08
15:N:3:ALA:HB1	44:5:111:C:O4'	1.52	1.08
15:N:21:PHE:HZ	36:i:28:TYR:CD1	1.70	1.08
15:N:31:ARG:HH11	36:i:82:ARG:NH2	1.12	1.08
15:N:179:LYS:HG2	44:5:52:A:C6	1.88	1.08
43:q:43:LYS:HB3	44:5:1233:G:O6	1.52	1.08
44:5:2277:C:H4'	44:5:2317:A:C5'	1.82	1.08
3:B:243:HIS:HB3	44:5:2948:C:H5''	1.08	1.08
12:s:282:PHE:HA	44:5:1258:U:O2'	1.49	1.08
15:N:18:VAL:HA	44:5:315:C:C5'	1.84	1.08
26:Y:85:VAL:O	26:Y:96:PRO:HA	1.53	1.08
34:g:13:TYR:CD1	44:5:1855:U:H4'	1.89	1.08
39:l:15:LYS:HE3	45:8:45:C:P	1.92	1.08
47:x:23:UNK:HA	48:y:13:UNK:CB	1.81	1.08
1:z:213:LYS:HA	44:5:2489:C:N1	1.68	1.08
10:I:383:LYS:HZ3	44:5:1040:A:H1'	1.07	1.08
12:s:300:PRO:HA	44:5:1267:U:C2'	1.84	1.08
13:L:183:ARG:CD	44:5:765:C:N3	2.06	1.08
15:N:3:ALA:HA	44:5:110:G:H1'	1.08	1.08
15:N:98:LEU:HD22	44:5:289:A:H5''	1.29	1.08
15:N:155:VAL:CB	45:8:141:C:C5'	2.31	1.08
15:N:189:LYS:N	44:5:1548:C:OP2	1.86	1.08
43:q:36:GLN:C	44:5:1262:G:O6	1.95	1.08
44:5:60:A:N7	44:5:326:U:C2	2.22	1.08
1:z:220:LYS:HA	44:5:2469:G:N1	1.56	1.08
1:z:226:THR:CB	44:5:2481:G:H21	1.66	1.08
1:z:228:GLU:CD	44:5:2480:A:N7	2.11	1.08
1:z:383:ASN:HB3	44:5:2493:U:OP1	1.53	1.08
1:z:406:GLY:O	44:5:2452:G:P	2.12	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:332:LYS:CD	44:5:3271:G:H2'	1.83	1.08
12:s:220:THR:CA	44:5:1234:G:C5	2.34	1.08
15:N:30:TYR:OH	44:5:267:G:C2'	1.97	1.08
15:N:203:ARG:HH22	44:5:903:U:H5'	1.03	1.08
43:q:33:VAL:CB	44:5:1280:C:N4	2.14	1.08
43:q:36:GLN:HB2	44:5:1277:C:N4	1.64	1.08
44:5:87:U:N3	44:5:99:A:N7	2.02	1.08
1:z:359:CYS:HB3	44:5:2464:U:H4'	1.14	1.07
3:B:3:HIS:NE2	44:5:2938:G:OP2	1.86	1.07
12:s:217:LEU:CB	44:5:1235:U:O2	1.83	1.07
12:s:267:LYS:O	43:q:36:GLN:HA	1.50	1.07
15:N:46:ASP:CG	44:5:322:U:H5	1.59	1.07
15:N:70:ASN:N	44:5:290:G:O6	1.81	1.07
15:N:71:ARG:HA	44:5:291:C:C6	1.88	1.07
43:q:36:GLN:CB	44:5:1262:G:O6	2.02	1.07
1:z:236:TYR:CD1	44:5:2494:A:OP1	2.05	1.07
1:z:259:SER:OG	44:5:2486:A:OP2	1.71	1.07
15:N:121:VAL:CG1	44:5:318:A:OP1	2.03	1.07
15:N:180:PHE:CZ	44:5:30:G:N2	2.21	1.07
33:f:337:SER:HB2	44:5:1329:U:H4'	1.36	1.07
43:q:28:VAL:HG12	44:5:1259:A:C6	1.84	1.07
43:q:45:LEU:O	44:5:1258:U:OP2	1.71	1.07
44:5:1222:G:N2	44:5:1286:A:C8	2.21	1.07
1:z:232:GLY:C	44:5:2464:U:H6	1.61	1.07
6:E:332:LYS:HD2	44:5:3271:G:H2'	1.08	1.07
8:G:408:ALA:O	8:G:412:LYS:HB2	1.52	1.07
12:s:196:THR:O	44:5:1238:C:C6	1.93	1.07
15:N:5:LYS:NZ	44:5:323:A:C3'	2.17	1.07
15:N:79:ALA:H	44:5:2430:A:N6	1.51	1.07
15:N:193:ARG:HB2	44:5:1549:U:H5''	1.23	1.07
44:5:1071:U:O2	44:5:1087:G:N1	1.85	1.07
44:5:2196:C:H1'	44:5:2271:A:H1'	1.28	1.07
46:7:79:A:N6	46:7:101:G:N3	2.01	1.07
7:F:284:SER:HA	21:T:142:SER:C	1.78	1.07
11:J:152:ARG:HB2	41:o:104:LEU:CB	1.82	1.07
15:N:129:TYR:HE2	44:5:271:C:C5'	1.51	1.07
15:N:143:ARG:O	45:8:143:U:C4'	2.01	1.07
15:N:178:HIS:CD2	44:5:52:A:H3'	1.89	1.07
43:q:46:ARG:CZ	44:5:1257:C:H5	1.64	1.07
47:x:27:UNK:CA	48:y:14:UNK:C	2.32	1.07
1:z:361:ALA:HB3	44:5:2465:G:H5''	1.36	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:204:LYS:HZ1	37:j:803:THR:CB	1.68	1.07
34:g:13:TYR:CE1	44:5:1855:U:C5'	2.36	1.07
42:p:2:ALA:HA	44:5:853:G:O6	1.55	1.07
43:q:33:VAL:CG2	44:5:1280:C:N4	2.18	1.07
43:q:57:THR:HB	44:5:1285:G:C2	1.90	1.07
44:5:1939:G:N1	44:5:2109:U:O2	1.86	1.07
44:5:2277:C:C5'	44:5:2317:A:H4'	1.85	1.07
47:x:27:UNK:CA	48:y:14:UNK:O	2.01	1.07
1:z:226:THR:O	44:5:2476:C:O3'	1.61	1.06
1:z:232:GLY:CA	44:5:2465:G:N7	2.13	1.06
15:N:5:LYS:HB2	44:5:109:A:N6	1.68	1.06
15:N:6:TYR:HB2	44:5:110:G:C4	1.90	1.06
15:N:31:ARG:CZ	44:5:300:G:H5''	1.85	1.06
15:N:71:ARG:HA	44:5:291:C:C5	1.90	1.06
15:N:180:PHE:HA	44:5:53:G:C2	1.70	1.06
43:q:31:ASP:HB2	44:5:1281:G:N2	1.35	1.06
43:q:48:ARG:N	44:5:1258:U:OP1	1.86	1.06
43:q:81:LYS:HA	44:5:1283:C:C6	1.73	1.06
46:7:78:U:N3	46:7:102:A:N7	2.03	1.06
1:z:227:VAL:CG1	44:5:2478:C:OP2	2.03	1.06
1:z:236:TYR:CA	44:5:2493:U:C2'	2.21	1.06
1:z:365:GLY:CA	44:5:2488:A:N7	2.18	1.06
1:z:402:LYS:HD2	44:5:2463:G:O5'	1.44	1.06
12:s:220:THR:CB	44:5:1234:G:C6	2.38	1.06
15:N:188:ARG:HB3	44:5:1549:U:N3	1.70	1.06
26:Y:60:ARG:NH1	44:5:200:C:OP2	1.89	1.06
35:h:95:PHE:HB2	44:5:135:C:O2'	1.54	1.06
43:q:83:ASN:ND2	44:5:1281:G:O6	1.87	1.06
44:5:1237:G:N1	44:5:1251:A:C2	2.06	1.06
44:5:3229:G:O6	44:5:3258:U:C4	2.08	1.06
47:x:20:UNK:CB	48:y:29:UNK:HA	1.85	1.06
47:x:33:UNK:N	48:y:12:UNK:O	1.87	1.06
1:z:367:VAL:HG22	44:5:2478:C:O2	1.55	1.06
1:z:402:LYS:HG2	44:5:2462:A:H8	1.07	1.06
15:N:17:ASP:OD2	44:5:69:C:C4	1.91	1.06
15:N:155:VAL:CA	45:8:141:C:H5''	1.86	1.06
15:N:173:GLY:HA3	44:5:1546:A:N1	1.70	1.06
15:N:180:PHE:CE1	44:5:30:G:N2	2.24	1.06
15:N:190:THR:HA	44:5:1549:U:O5'	1.52	1.06
43:q:3:GLY:O	44:5:1217:A:H2'	0.89	1.06
43:q:100:ILE:CG2	44:5:1260:A:H61	1.55	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:556:U:N3	44:5:559:A:N7	2.01	1.06
12:s:260:ARG:O	44:5:1267:U:C5	2.07	1.06
15:N:32:GLN:CD	44:5:297:G:O4'	1.95	1.06
15:N:172:ARG:HE	44:5:1547:G:H5'	1.19	1.06
15:N:172:ARG:HG2	44:5:1546:A:O2'	1.48	1.06
15:N:200:TRP:CD2	37:j:818:LYS:HG2	1.89	1.06
34:g:10:ARG:HH11	44:5:1489:A:P	1.76	1.06
43:q:101:VAL:HG23	44:5:1259:A:H61	1.10	1.06
44:5:1071:U:N3	44:5:1087:G:O6	1.81	1.06
1:z:255:ARG:CB	44:5:2467:G:H5'	1.84	1.06
3:B:244:ARG:HH21	44:5:2947:G:H5'	0.97	1.06
15:N:46:ASP:CB	44:5:322:U:C6	2.37	1.06
15:N:185:ALA:CB	44:5:1548:C:H4'	1.86	1.06
47:x:26:UNK:HA	48:y:11:UNK:HA	1.32	1.06
6:E:399:LYS:O	14:M:266:ARG:NH2	1.87	1.05
12:s:275:SER:N	44:5:1263:A:OP1	1.89	1.05
15:N:3:ALA:HB2	44:5:110:G:C2'	1.85	1.05
15:N:8:GLU:HB2	44:5:322:U:C5	1.91	1.05
15:N:27:VAL:N	44:5:67:A:C2	2.24	1.05
15:N:127:TYR:CD2	44:5:272:G:N7	2.23	1.05
43:q:107:ALA:HA	44:5:1229:G:H2'	1.18	1.05
4:C:202:ARG:NH2	44:5:1384:U:OP2	1.90	1.05
6:E:246:ARG:CZ	44:5:608:A:H2'	1.85	1.05
7:F:335:GLU:HG3	44:5:987:U:H5''	1.32	1.05
10:I:277:HIS:CD2	44:5:1007:U:H4'	1.90	1.05
15:N:199:LEU:CD1	44:5:903:U:H5''	1.86	1.05
43:q:46:ARG:NH2	44:5:1257:C:H5	1.52	1.05
44:5:34:A:C8	44:5:50:U:N3	2.24	1.05
44:5:2425:G:N1	44:5:2604:U:O2	1.88	1.05
47:x:20:UNK:CB	48:y:29:UNK:CA	2.32	1.05
1:z:215:SER:HB2	44:5:2466:G:H22	0.91	1.05
1:z:259:SER:OG	44:5:2486:A:P	2.14	1.05
10:I:273:ARG:CZ	44:5:1043:C:H5'	1.86	1.05
11:J:186:ASN:CA	44:5:2673:A:H5'	1.85	1.05
13:L:50:PRO:HD2	35:h:116:TYR:CE2	1.90	1.05
15:N:25:VAL:HB	44:5:316:U:C1'	1.58	1.05
15:N:30:TYR:CE1	44:5:267:G:O5'	2.08	1.05
15:N:45:PRO:N	44:5:321:C:C6	2.25	1.05
43:q:33:VAL:CG2	44:5:1280:C:C4	2.37	1.05
43:q:51:VAL:CG2	44:5:1280:C:O2'	2.04	1.05
43:q:58:MET:N	44:5:1222:G:O3'	1.88	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:400:PHE:OXT	14:M:262:THR:HA	1.57	1.05
7:F:283:GLY:C	21:T:143:THR:CG2	2.29	1.05
12:s:284:ASN:O	44:5:1278:A:C2	2.08	1.05
13:L:134:GLU:OE1	35:h:117:ALA:HB2	1.57	1.05
15:N:31:ARG:HE	44:5:300:G:H4'	0.90	1.05
15:N:46:ASP:CG	44:5:322:U:C5	2.34	1.05
15:N:92:LEU:HD13	44:5:2600:C:OP1	1.56	1.05
15:N:140:LYS:N	44:5:144:A:C2'	2.19	1.05
15:N:144:ARG:CZ	44:5:143:G:N2	2.19	1.05
36:i:26:ILE:HG12	44:5:264:G:C6	1.90	1.05
1:z:362:VAL:CG1	44:5:2466:G:C4	2.32	1.05
1:z:367:VAL:HG22	44:5:2478:C:H1'	1.38	1.05
3:B:244:ARG:NE	44:5:2947:G:OP2	1.89	1.05
6:E:332:LYS:HD2	44:5:3271:G:C2'	1.86	1.05
6:E:332:LYS:NZ	44:5:3271:G:OP2	1.89	1.05
7:F:287:VAL:N	21:T:139:ARG:O	1.89	1.05
12:s:220:THR:CB	44:5:1234:G:C5	2.40	1.05
12:s:255:ASP:O	44:5:1244:A:H2	1.40	1.05
12:s:271:GLY:N	44:5:1262:G:N7	1.89	1.05
13:L:136:GLU:OE2	35:h:119:LYS:HE2	1.57	1.05
13:L:183:ARG:NH1	44:5:765:C:C5	2.23	1.05
15:N:13:LYS:CG	44:5:78:U:H5'	1.65	1.05
15:N:72:LYS:HG3	44:5:291:C:C2	1.78	1.05
15:N:78:GLY:O	44:5:2601:A:C6	2.09	1.05
15:N:185:ALA:HB3	44:5:1548:C:C4'	1.86	1.05
43:q:33:VAL:CG2	44:5:1280:C:H42	1.70	1.05
47:x:33:UNK:CA	48:y:12:UNK:O	2.02	1.05
1:z:226:THR:CB	44:5:2458:A:OP2	2.01	1.04
12:s:279:ARG:N	43:q:43:LYS:CG	2.19	1.04
13:L:183:ARG:HD2	44:5:765:C:N4	1.72	1.04
17:P:120:ASN:ND2	45:8:12:A:H2'	1.70	1.04
32:e:188:GLY:HA3	44:5:639:G:OP1	1.55	1.04
43:q:60:ARG:NH2	44:5:1284:C:C2	2.19	1.04
47:x:25:UNK:CB	48:y:6:UNK:O	2.00	1.04
1:z:228:GLU:OE2	44:5:2478:C:C3'	2.05	1.04
1:z:260:ILE:HB	44:5:2480:A:C8	1.92	1.04
1:z:367:VAL:HG21	44:5:2478:C:O2'	1.54	1.04
1:z:409:PHE:CD2	44:5:2490:C:C1'	2.31	1.04
11:J:152:ARG:HB2	41:o:104:LEU:HB2	1.04	1.04
12:s:277:GLY:HA2	44:5:1257:C:C5	1.88	1.04
15:N:31:ARG:N	44:5:295:A:C6	2.24	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:75:VAL:CG2	44:5:2430:A:N6	2.19	1.04
15:N:187:ARG:HD3	44:5:1545:A:C2'	1.86	1.04
15:N:192:LYS:N	44:5:1549:U:C2'	2.01	1.04
15:N:203:ARG:NH2	44:5:903:U:H5'	1.69	1.04
39:l:21:ARG:HD3	45:8:52:A:C4'	1.85	1.04
42:p:4:ARG:NH2	44:5:838:G:OP2	1.89	1.04
5:D:283:ARG:CZ	44:5:2703:A:C6	2.40	1.04
7:F:286:TYR:CG	21:T:140:ILE:HG12	1.90	1.04
12:s:188:LYS:HA	44:5:1237:G:C5'	1.79	1.04
12:s:253:MET:O	44:5:1246:G:C3'	1.98	1.04
12:s:264:SER:N	44:5:1276:U:H1'	1.55	1.04
12:s:277:GLY:CA	44:5:1257:C:C5	2.40	1.04
25:X:255:TYR:CE1	35:h:33:VAL:HG13	1.91	1.04
43:q:57:THR:O	44:5:1285:G:N2	1.90	1.04
44:5:172:G:N1	44:5:246:U:O2	1.90	1.04
10:I:343:LYS:HD2	44:5:2853:A:H1'	1.38	1.04
15:N:5:LYS:HZ1	44:5:323:A:H3'	1.13	1.04
15:N:50:ARG:HB3	44:5:322:U:P	1.98	1.04
15:N:175:ASN:O	44:5:54:C:H3'	0.88	1.04
26:Y:90:VAL:C	44:5:378:A:H1'	1.82	1.04
44:5:2828:G:O6	44:5:2862:U:C4	2.10	1.04
1:z:226:THR:OG1	44:5:2481:G:N2	1.89	1.04
1:z:257:ASN:HA	44:5:2467:G:C5	1.91	1.04
5:D:439:ARG:NH2	44:5:2746:A:OP1	1.90	1.04
12:s:239:GLY:CA	44:5:1257:C:H6	1.43	1.04
15:N:44:ARG:HB2	44:5:320:G:H3'	1.37	1.04
15:N:139:HIS:NE2	44:5:149:U:O2'	1.83	1.04
15:N:150:TRP:CA	45:8:142:C:O4'	2.06	1.04
15:N:204:LYS:C	37:j:814:HIS:HD2	1.64	1.04
17:P:65:SER:OG	44:5:1447:G:OP1	1.72	1.04
43:q:30:VAL:H	44:5:1281:G:C1'	1.64	1.04
43:q:55:LYS:HG2	44:5:1223:A:H3'	1.37	1.04
43:q:83:ASN:OD1	44:5:1281:G:C5	2.11	1.04
44:5:87:U:O2	44:5:99:A:N6	1.89	1.04
1:z:223:PHE:CB	44:5:2476:C:O4'	2.02	1.03
3:B:256:HIS:HB3	44:5:1305:U:H5	1.17	1.03
12:s:294:ALA:HB1	44:5:1276:U:P	1.98	1.03
15:N:75:VAL:CG2	44:5:2430:A:H61	1.70	1.03
15:N:192:LYS:NZ	44:5:1552:G:O6	1.90	1.03
25:X:174:TYR:CB	35:h:25:LYS:HD3	1.88	1.03
43:q:52:LEU:HA	44:5:1280:C:H5'	1.08	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:z:229:LEU:HD12	44:5:2476:C:H1'	1.09	1.03
1:z:359:CYS:CB	44:5:2464:U:C4'	2.37	1.03
10:I:209:ARG:NH1	44:5:2647:A:O3'	1.91	1.03
11:J:152:ARG:CD	41:o:104:LEU:HD22	1.88	1.03
15:N:31:ARG:HA	44:5:295:A:C5	1.87	1.03
15:N:190:THR:HG22	44:5:1548:C:C5	1.60	1.03
42:p:47:VAL:HA	42:p:56:THR:O	1.55	1.03
43:q:210:UNK:O	47:x:7:UNK:HA	1.25	1.03
44:5:371:G:C2	44:5:375:A:N6	2.27	1.03
44:5:726:G:H21	44:5:744:A:N6	1.57	1.03
15:N:21:PHE:CD2	44:5:315:C:C3'	2.21	1.03
15:N:30:TYR:CE1	44:5:267:G:C3'	2.41	1.03
15:N:70:ASN:HA	44:5:289:A:C4	1.92	1.03
43:q:105:VAL:N	44:5:1230:G:O2'	1.91	1.03
44:5:2196:C:O4'	44:5:2271:A:O2'	1.74	1.03
5:D:265:LYS:HE2	44:5:2686:A:H1'	1.39	1.03
7:F:336:LEU:HD11	44:5:986:U:H1'	1.39	1.03
11:J:186:ASN:HA	44:5:2673:A:H5'	1.03	1.03
13:L:126:PHE:HD2	35:h:115:LYS:C	1.66	1.03
15:N:19:LEU:CD1	44:5:66:A:C4	2.38	1.03
15:N:81:TYR:CB	44:5:2427:U:O5'	2.07	1.03
15:N:91:GLU:CB	44:5:277:G:C5'	2.32	1.03
15:N:183:THR:O	44:5:54:C:O2'	1.75	1.03
42:p:4:ARG:CZ	44:5:838:G:N7	2.21	1.03
44:5:726:G:N2	44:5:744:A:H62	1.56	1.03
44:5:761:A:N7	44:5:770:G:N2	1.91	1.03
44:5:835:G:N2	44:5:858:A:C8	2.26	1.03
44:5:3099:C:N4	44:5:3135:U:H3	1.57	1.03
15:N:75:VAL:HB	44:5:2431:C:H42	1.23	1.03
15:N:81:TYR:CD1	44:5:2428:U:H5	1.75	1.03
15:N:155:VAL:HG22	45:8:141:C:H5'	1.36	1.03
29:b:105:PHE:O	29:b:109:HIS:HB2	1.59	1.03
33:f:338:LYS:NZ	44:5:1148:G:OP1	1.91	1.03
43:q:66:PHE:HE1	44:5:1221:A:N3	1.45	1.03
1:z:213:LYS:CD	44:5:2489:C:H6	1.69	1.02
1:z:229:LEU:CG	44:5:2476:C:O2'	2.07	1.02
1:z:230:GLN:CB	44:5:2486:A:O2'	1.95	1.02
10:I:383:LYS:HD3	44:5:1040:A:O2'	1.59	1.02
12:s:216:SER:CB	44:5:1263:A:OP2	2.07	1.02
12:s:218:VAL:HA	44:5:1234:G:C5	1.94	1.02
12:s:256:LYS:C	44:5:1269:U:H3	1.58	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:18:VAL:HB	44:5:315:C:H5'	1.38	1.02
15:N:23:GLN:O	44:5:317:A:C8	2.12	1.02
15:N:140:LYS:HB3	44:5:143:G:N2	1.74	1.02
15:N:190:THR:C	44:5:1549:U:C4'	2.16	1.02
43:q:46:ARG:NH2	44:5:1257:C:C5	2.26	1.02
7:F:286:TYR:CD1	21:T:139:ARG:O	2.12	1.02
7:F:289:ALA:CA	21:T:137:GLU:C	2.33	1.02
10:I:343:LYS:NZ	44:5:2852:C:N3	2.07	1.02
12:s:224:GLU:N	43:q:44:GLU:CA	1.94	1.02
12:s:240:ASN:CA	43:q:44:GLU:HG2	1.88	1.02
15:N:10:LEU:C	44:5:65:A:H5'	1.82	1.02
15:N:30:TYR:OH	44:5:267:G:C8	2.07	1.02
15:N:119:TYR:C	44:5:320:G:OP1	2.01	1.02
15:N:190:THR:HA	44:5:1549:U:C5'	1.54	1.02
15:N:197:LEU:O	44:5:1538:G:OP1	1.77	1.02
47:x:7:UNK:C	48:y:8:UNK:CB	2.36	1.02
1:z:346:VAL:HG21	44:5:2486:A:O5'	1.57	1.02
1:z:410:ARG:O	44:5:2448:G:C2'	2.08	1.02
5:D:265:LYS:CE	44:5:2669:G:H21	1.72	1.02
11:J:153:ASN:HB2	41:o:103:ALA:CA	1.88	1.02
12:s:197:VAL:CB	44:5:1250:G:C6	2.41	1.02
12:s:268:GLU:O	44:5:1264:G:O3'	1.78	1.02
12:s:270:LEU:O	44:5:1262:G:C8	2.11	1.02
15:N:26:ARG:CB	44:5:317:A:H8	1.43	1.02
15:N:57:GLN:CD	44:5:149:U:C2	2.24	1.02
39:l:37:TYR:O	44:5:351:A:N6	1.90	1.02
41:o:9:LYS:HA	41:o:21:THR:O	1.60	1.02
1:z:215:SER:HB2	44:5:2466:G:N2	1.72	1.02
1:z:223:PHE:HA	44:5:2475:G:H2'	1.14	1.02
7:F:286:TYR:HB2	21:T:140:ILE:HG12	1.02	1.02
9:H:373:ARG:NH1	44:5:2897:A:OP2	1.91	1.02
12:s:289:ILE:O	44:5:1277:C:N1	1.92	1.02
15:N:20:ARG:CD	44:5:69:C:OP2	2.07	1.02
15:N:24:ARG:CB	44:5:300:G:N2	2.21	1.02
15:N:26:ARG:CA	36:i:30:LYS:HZ2	1.71	1.02
15:N:183:THR:CA	44:5:54:C:O2'	2.07	1.02
44:5:2198:A:C5	44:5:2270:A:C4	2.33	1.02
44:5:2275:A:C6	44:5:2312:A:C8	2.42	1.02
1:z:231:VAL:HG22	44:5:2488:A:OP1	0.85	1.02
12:s:241:ILE:N	43:q:44:GLU:CG	2.23	1.02
12:s:282:PHE:CB	44:5:1260:A:C6	2.43	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:s:282:PHE:CA	44:5:1258:U:O2'	2.06	1.02
13:L:134:GLU:OE2	35:h:117:ALA:CB	2.08	1.02
15:N:8:GLU:OE1	44:5:322:U:H3'	1.60	1.02
15:N:78:GLY:O	44:5:2601:A:N1	1.92	1.02
15:N:204:LYS:HB3	37:j:813:PHE:O	1.60	1.02
34:g:4:ARG:HG2	44:5:1858:A:H1'	1.42	1.02
43:q:107:ALA:O	44:5:1230:G:C8	2.12	1.02
44:5:195:U:O2	44:5:199:A:N6	1.90	1.02
44:5:510:G:N1	44:5:581:U:O2	1.93	1.02
44:5:1190:A:N6	44:5:1315:U:O2	1.90	1.02
44:5:2196:C:H4'	44:5:2271:A:H4'	1.38	1.02
1:z:218:THR:HB	44:5:2489:C:C6	1.96	1.01
1:z:223:PHE:CZ	44:5:2477:G:C1'	2.43	1.01
1:z:228:GLU:OE1	44:5:2480:A:C8	2.12	1.01
1:z:345:ASP:O	44:5:2466:G:H5'	1.59	1.01
1:z:402:LYS:HG3	44:5:2463:G:H4'	1.34	1.01
6:E:382:TYR:HB2	14:M:264:PHE:HE1	0.90	1.01
7:F:284:SER:HA	21:T:143:THR:H	1.23	1.01
12:s:263:ALA:HB2	44:5:1274:A:C6	1.94	1.01
15:N:25:VAL:N	44:5:300:G:H21	1.50	1.01
43:q:12:PHE:HE2	44:5:1222:G:OP2	1.34	1.01
43:q:60:ARG:NH1	44:5:1285:G:C1'	2.22	1.01
44:5:528:U:O2	44:5:564:G:C6	2.12	1.01
47:x:28:UNK:C	48:y:16:UNK:O	2.07	1.01
1:z:258:MET:HE1	44:5:2468:A:C8	1.95	1.01
1:z:400:VAL:N	44:5:2494:A:C2	2.15	1.01
10:I:300:MET:HB3	44:5:2618:G:C5	1.95	1.01
11:J:151:ARG:HD3	41:o:105:GLN:HA	1.04	1.01
12:s:213:SER:O	44:5:1246:G:H5'	1.60	1.01
13:L:128:ARG:NH1	44:5:168:U:O2'	1.93	1.01
15:N:174:ILE:HG22	44:5:55:G:C4'	1.88	1.01
37:j:834:ASN:N	44:5:53:G:OP1	1.92	1.01
43:q:80:VAL:CG1	44:5:1283:C:C5'	2.36	1.01
45:8:39:G:C2	45:8:104:A:N7	2.27	1.01
1:z:234:LYS:HG3	44:5:2464:U:C6	1.94	1.01
6:E:390:LYS:NZ	44:5:3214:U:C6	2.29	1.01
7:F:284:SER:HB3	21:T:142:SER:CA	1.89	1.01
11:J:186:ASN:HA	44:5:2673:A:C5'	1.90	1.01
15:N:5:LYS:NZ	44:5:323:A:O4'	1.89	1.01
15:N:30:TYR:CZ	44:5:267:G:OP2	2.12	1.01
15:N:74:PRO:HD3	44:5:2599:U:O4'	1.54	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:94:TYR:HB2	44:5:290:G:H4'	1.05	1.01
15:N:192:LYS:HD2	44:5:1550:C:C6	1.95	1.01
32:e:198:ARG:NE	44:5:634:C:O2'	1.92	1.01
43:q:57:THR:C	44:5:1285:G:H22	1.68	1.01
47:x:30:UNK:N	48:y:15:UNK:CA	2.24	1.01
47:x:32:UNK:CB	48:y:14:UNK:CB	2.39	1.01
1:z:233:LEU:CD1	44:5:2492:C:N3	2.23	1.01
12:s:197:VAL:CB	44:5:1250:G:O6	2.08	1.01
12:s:222:LEU:O	44:5:1232:C:C2'	2.08	1.01
15:N:74:PRO:HD3	44:5:291:C:H4'	1.01	1.01
15:N:75:VAL:HG23	44:5:2430:A:N6	1.74	1.01
15:N:127:TYR:CE2	44:5:272:G:C5	2.47	1.01
15:N:139:HIS:HA	44:5:145:G:H5'	1.41	1.01
43:q:33:VAL:CB	44:5:1280:C:C4	2.43	1.01
44:5:184:U:O2	44:5:232:G:N1	1.94	1.01
44:5:834:U:O2	44:5:859:G:N1	1.93	1.01
44:5:2565:U:N3	44:5:2576:G:O6	1.93	1.01
44:5:2838:A:N6	44:5:2850:G:N3	2.07	1.01
1:z:375:VAL:HG23	44:5:2466:G:N3	1.70	1.01
1:z:402:LYS:CG	44:5:2463:G:O4'	2.09	1.01
3:B:2:SER:HA	44:5:2939:G:OP2	1.60	1.01
6:E:270:ARG:CZ	44:5:3268:A:H5''	1.90	1.01
6:E:382:TYR:CG	14:M:264:PHE:HE1	1.65	1.01
7:F:284:SER:HB3	21:T:142:SER:HA	1.03	1.01
12:s:267:LYS:CB	44:5:1277:C:C5	2.42	1.01
12:s:290:GLU:C	44:5:1278:A:OP2	2.03	1.01
15:N:74:PRO:CD	44:5:291:C:C4'	2.32	1.01
15:N:75:VAL:HG21	44:5:2430:A:H61	1.22	1.01
15:N:98:LEU:HD21	44:5:289:A:H5''	1.43	1.01
28:a:140:ARG:HD2	44:5:89:A:H5''	1.41	1.01
43:q:80:VAL:HG12	44:5:1283:C:H5''	1.37	1.01
43:q:83:ASN:HB3	44:5:1281:G:N2	1.74	1.01
12:s:267:LYS:O	43:q:36:GLN:HB2	1.57	1.00
12:s:290:GLU:O	44:5:1278:A:OP2	1.76	1.00
15:N:30:TYR:CE1	44:5:267:G:C2'	2.42	1.00
15:N:143:ARG:CA	45:8:143:U:H5'	1.89	1.00
15:N:155:VAL:HG21	45:8:140:G:O2'	1.61	1.00
17:P:120:ASN:HD21	45:8:12:A:H2'	1.25	1.00
21:T:84:TYR:HE2	29:b:89:LYS:HA	1.24	1.00
23:V:176:ASN:HA	44:5:2917:G:H5''	1.42	1.00
43:q:80:VAL:HG22	44:5:1284:C:H5	0.84	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:2194:G:C5	44:5:2274:U:C4	2.39	1.00
44:5:3023:U:C2	44:5:3032:A:N7	2.29	1.00
1:z:255:ARG:HB3	44:5:2467:G:C5'	1.90	1.00
1:z:300:LYS:HB3	44:5:2485:A:C4'	1.91	1.00
1:z:300:LYS:HD3	44:5:2486:A:OP1	1.60	1.00
3:B:244:ARG:NH2	44:5:2947:G:H5'	1.76	1.00
12:s:198:GLN:C	44:5:1238:C:H3'	1.87	1.00
12:s:288:ILE:HA	43:q:38:MET:HB2	1.38	1.00
15:N:10:LEU:HA	44:5:77:A:C2'	1.91	1.00
15:N:200:TRP:CD2	37:j:818:LYS:CG	2.35	1.00
44:5:172:G:C2	44:5:246:U:O2	2.13	1.00
1:z:402:LYS:NZ	44:5:2463:G:H4'	1.74	1.00
7:F:289:ALA:HB1	21:T:137:GLU:HA	1.40	1.00
10:I:273:ARG:NH1	44:5:1043:C:H5'	1.75	1.00
12:s:239:GLY:HA2	44:5:1257:C:C6	1.75	1.00
12:s:297:ILE:H	44:5:1275:C:C1'	1.60	1.00
15:N:3:ALA:CB	44:5:111:C:O4'	2.08	1.00
15:N:21:PHE:CE2	44:5:316:U:C5	2.48	1.00
15:N:91:GLU:HB2	44:5:277:G:C4'	1.62	1.00
39:l:40:LYS:CE	44:5:355:A:H4'	1.91	1.00
43:q:42:ARG:CD	44:5:1258:U:O2	2.07	1.00
43:q:81:LYS:O	44:5:1282:G:O2'	1.62	1.00
43:q:213:UNK:HA	48:y:10:UNK:C	1.81	1.00
44:5:995:U:N3	44:5:1054:A:N7	2.08	1.00
44:5:1010:G:N1	44:5:1040:A:H2	1.51	1.00
13:L:136:GLU:HG3	35:h:119:LYS:HD3	1.01	1.00
15:N:78:GLY:HA3	44:5:2600:C:N3	1.74	1.00
15:N:122:ASN:CA	44:5:317:A:O2'	2.04	1.00
43:q:107:ALA:C	44:5:1230:G:OP2	2.05	1.00
44:5:838:G:N1	44:5:855:U:O2	1.95	1.00
44:5:1666:G:H1	44:5:1783:U:H3	1.06	1.00
15:N:44:ARG:CA	44:5:321:C:H5	1.68	1.00
19:R:312:VAL:C	19:R:312:VAL:CA	2.35	1.00
43:q:55:LYS:HE3	44:5:1226:G:O6	1.62	1.00
9:H:250:ASN:CG	14:M:152:THR:O	2.04	1.00
10:I:273:ARG:NH2	44:5:1042:U:O2'	1.95	1.00
12:s:290:GLU:C	43:q:33:VAL:O	2.04	1.00
15:N:10:LEU:HD22	44:5:77:A:O2'	1.58	1.00
15:N:70:ASN:CB	44:5:276:U:O2	2.10	1.00
43:q:57:THR:CB	44:5:1284:C:C4	2.29	1.00
43:q:207:UNK:O	47:x:4:UNK:HA	1.62	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:33:G:N3	44:5:51:A:N6	2.09	1.00
1:z:399:LEU:CA	44:5:2495:C:H5	1.72	1.00
15:N:33:LYS:O	44:5:268:A:C5	2.14	1.00
15:N:119:TYR:O	44:5:320:G:OP1	1.80	1.00
31:d:69:GLU:HA	31:d:131:LEU:O	1.61	1.00
1:z:300:LYS:HB3	44:5:2485:A:C5'	1.91	0.99
1:z:400:VAL:HB	44:5:2494:A:C2'	1.92	0.99
3:B:262:TRP:HB3	16:O:65:ASN:HA	1.01	0.99
9:H:312:ILE:O	9:H:325:ASN:HA	1.62	0.99
10:I:225:LYS:HZ3	44:5:1010:G:H4'	1.24	0.99
15:N:170:LYS:HZ3	44:5:31:C:C5'	1.68	0.99
33:f:394:GLY:C	44:5:1327:C:H4'	1.87	0.99
43:q:32:ASN:O	44:5:1230:G:N7	1.95	0.99
44:5:2196:C:N3	44:5:2247:G:N2	2.09	0.99
3:B:379:PHE:CE1	24:W:157:LYS:HE2	1.97	0.99
4:C:188:ARG:NH2	44:5:1382:G:OP1	1.94	0.99
23:V:175:LEU:HD13	44:5:2916:U:H5'	1.44	0.99
1:z:368:GLU:OE1	44:5:2471:U:O4	1.80	0.99
3:B:244:ARG:HH21	44:5:2947:G:C5'	1.75	0.99
12:s:248:GLU:O	44:5:1275:C:N4	1.95	0.99
12:s:277:GLY:HA3	44:5:1256:G:N7	1.76	0.99
15:N:13:LYS:NZ	44:5:78:U:H4'	1.39	0.99
15:N:44:ARG:C	44:5:321:C:C5	2.39	0.99
15:N:121:VAL:HB	44:5:317:A:O3'	1.30	0.99
15:N:126:THR:CA	44:5:272:G:C8	2.44	0.99
43:q:35:SER:HA	44:5:1278:A:N6	1.39	0.99
44:5:2565:U:O2	44:5:2576:G:C6	2.15	0.99
47:x:5:UNK:O	48:y:11:UNK:CB	2.10	0.99
6:E:332:LYS:CE	44:5:3271:G:H5''	1.93	0.99
6:E:354:ILE:CD1	44:5:3268:A:C8	2.45	0.99
12:s:240:ASN:C	43:q:44:GLU:CG	2.34	0.99
15:N:15:GLN:HB3	44:5:69:C:H5'	1.40	0.99
10:I:304:TRP:CZ2	44:5:2646:C:H4'	1.96	0.99
12:s:282:PHE:HA	44:5:1258:U:H2'	1.00	0.99
33:f:378:ARG:NH1	44:5:618:C:O2'	1.95	0.99
13:L:49:ARG:HB3	35:h:116:TYR:CE2	1.97	0.99
15:N:23:GLN:OE1	44:5:67:A:H5''	1.27	0.99
26:Y:87:LYS:HZ2	44:5:375:A:C4'	1.76	0.99
43:q:60:ARG:HB2	44:5:1285:G:N1	1.60	0.99
1:z:226:THR:CB	44:5:2481:G:N2	2.24	0.99
12:s:300:PRO:C	44:5:1268:G:O5'	2.06	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:26:ARG:HH11	44:5:317:A:C5'	1.75	0.99
15:N:85:THR:OG1	44:5:2423:U:C2'	2.09	0.99
33:f:360:GLN:NE2	44:5:583:G:N3	2.10	0.99
36:i:26:ILE:HG21	44:5:264:G:C5	1.97	0.99
44:5:26:A:N1	44:5:59:G:N1	2.08	0.99
44:5:213:A:H62	44:5:227:G:N2	1.59	0.99
44:5:2278:C:C2	44:5:2307:G:N1	2.31	0.99
44:5:3222:U:O2	44:5:3263:G:N1	1.94	0.99
1:z:218:THR:HG21	44:5:2489:C:O5'	1.62	0.99
3:B:66:LYS:NZ	23:V:140:PHE:N	2.00	0.99
15:N:127:TYR:CD1	44:5:271:C:OP2	1.99	0.99
32:e:189:ILE:HG23	44:5:640:U:OP2	1.63	0.99
39:l:40:LYS:NZ	44:5:355:A:H4'	1.77	0.99
44:5:2667:A:N7	44:5:2687:G:N2	1.96	0.99
1:z:394:GLN:OE1	44:5:2446:U:C5'	2.09	0.99
12:s:152:LEU:HA	44:5:1239:C:O2'	1.62	0.99
15:N:5:LYS:CE	44:5:323:A:C8	2.45	0.99
39:l:40:LYS:HD2	44:5:355:A:C4'	1.91	0.99
15:N:16:SER:HB2	44:5:68:C:O2	1.62	0.99
15:N:71:ARG:HD2	44:5:290:G:C4'	1.92	0.99
15:N:124:ASP:HB2	44:5:272:G:H5'	1.45	0.99
15:N:183:THR:CB	44:5:54:C:O2'	2.09	0.99
30:c:50:VAL:CG1	44:5:2552:C:C5	2.46	0.99
44:5:2720:G:H1	44:5:2736:A:H61	1.10	0.99
1:z:403:SER:O	44:5:2461:A:N3	1.70	0.98
12:s:197:VAL:CB	44:5:1251:A:C2	2.45	0.98
12:s:225:PRO:CB	44:5:1234:G:H1'	1.93	0.98
15:N:18:VAL:HA	44:5:315:C:C3'	1.93	0.98
15:N:179:LYS:CG	44:5:52:A:C5	2.45	0.98
43:q:49:ALA:HB1	44:5:1259:A:OP1	1.63	0.98
13:L:36:ARG:NH2	44:5:687:U:OP2	1.95	0.98
15:N:41:ARG:NE	44:5:114:A:N7	2.11	0.98
30:c:50:VAL:HG13	44:5:2552:C:C5	1.98	0.98
44:5:556:U:N3	44:5:559:A:C8	2.31	0.98
12:s:274:GLN:HA	44:5:1263:A:OP1	1.17	0.98
15:N:8:GLU:OE2	44:5:63:A:N6	1.95	0.98
15:N:83:LYS:HA	44:5:2425:G:C4	1.54	0.98
43:q:55:LYS:HG3	44:5:1224:C:C5	1.99	0.98
1:z:405:MET:HB3	44:5:2489:C:OP1	1.63	0.98
15:N:5:LYS:NZ	44:5:323:A:C4'	2.24	0.98
31:d:67:THR:HA	31:d:133:ILE:O	1.62	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:f:393:HIS:NE2	44:5:1328:C:H5''	1.79	0.98
44:5:3158:G:N1	44:5:3292:A:C2	2.31	0.98
11:J:188:SER:N	44:5:2672:G:O2'	1.96	0.98
13:L:13:HIS:NE2	44:5:98:G:N7	2.11	0.98
15:N:13:LYS:HG3	44:5:77:A:O3'	1.58	0.98
15:N:30:TYR:N	44:5:296:A:N1	2.11	0.98
15:N:91:GLU:HB2	44:5:277:G:O4'	1.27	0.98
17:P:134:GLY:O	44:5:1846:C:N4	1.96	0.98
27:Z:60:LYS:O	27:Z:64:ARG:HB2	1.64	0.98
1:z:361:ALA:CB	44:5:2465:G:C5'	2.38	0.98
1:z:402:LYS:CG	44:5:2463:G:C4'	2.41	0.98
3:B:262:TRP:CE2	16:O:66:LYS:HG2	1.98	0.98
5:D:306:THR:OG1	44:5:1078:U:H4'	1.60	0.98
18:Q:266:ARG:NH1	44:5:743:C:O2	1.94	0.98
21:T:78:LYS:O	21:T:85:LEU:HB2	1.62	0.98
21:T:116:ARG:NH1	44:5:1093:A:H4'	1.79	0.98
44:5:1392:G:N2	44:5:1418:A:N7	2.12	0.98
44:5:2423:U:H3	44:5:2607:G:H1	1.11	0.98
15:N:44:ARG:HB3	44:5:321:C:OP2	1.63	0.98
15:N:187:ARG:HA	44:5:1548:C:C5	1.98	0.98
42:p:5:THR:OG1	44:5:837:A:OP1	1.81	0.98
3:B:262:TRP:HB3	16:O:65:ASN:CA	1.92	0.98
7:F:283:GLY:CA	21:T:143:THR:HG21	1.92	0.98
12:s:195:VAL:CA	44:5:1237:G:O2'	2.11	0.98
12:s:290:GLU:O	43:q:33:VAL:O	1.81	0.98
15:N:5:LYS:CB	44:5:109:A:N6	0.83	0.98
15:N:74:PRO:HD3	44:5:291:C:C4'	1.91	0.98
15:N:170:LYS:HE2	44:5:30:G:C2'	1.94	0.98
15:N:172:ARG:CA	44:5:1546:A:O2'	2.10	0.98
1:z:226:THR:CG2	44:5:2458:A:P	2.51	0.98
5:D:295:ARG:HB3	44:5:2748:A:H2'	1.44	0.98
11:J:152:ARG:NE	41:o:104:LEU:HD13	1.79	0.98
12:s:271:GLY:HA2	43:q:40:GLU:CD	1.88	0.98
15:N:26:ARG:HD2	44:5:317:A:H5'	1.46	0.98
15:N:73:ARG:HD2	44:5:2600:C:H5	1.27	0.98
47:x:26:UNK:CB	48:y:13:UNK:CA	2.42	0.98
1:z:405:MET:HE1	44:5:2460:U:O2	1.64	0.98
7:F:286:TYR:N	21:T:140:ILE:HG23	1.77	0.98
15:N:81:TYR:CB	44:5:2427:U:P	2.51	0.98
15:N:170:LYS:HZ1	44:5:31:C:C5'	1.69	0.98
26:Y:10:SER:OG	44:5:213:A:O2'	1.82	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:g:10:ARG:HD2	44:5:1489:A:C5'	1.94	0.98
43:q:83:ASN:CG	44:5:1281:G:C5	2.41	0.98
47:x:28:UNK:O	48:y:16:UNK:CB	1.95	0.98
1:z:359:CYS:CB	44:5:2465:G:P	2.48	0.97
7:F:289:ALA:HA	21:T:137:GLU:O	1.61	0.97
12:s:271:GLY:CA	43:q:36:GLN:O	1.86	0.97
12:s:296:GLU:CA	44:5:1276:U:O4'	2.12	0.97
41:o:68:VAL:O	41:o:85:LEU:HB2	1.63	0.97
10:I:304:TRP:CE3	44:5:2646:C:H5'	1.99	0.97
10:I:383:LYS:NZ	44:5:1040:A:H1'	1.78	0.97
12:s:293:ASN:CB	44:5:1277:C:O5'	1.95	0.97
15:N:8:GLU:HB3	44:5:322:U:C2	1.96	0.97
15:N:28:TRP:HE3	44:5:299:G:N3	1.14	0.97
15:N:29:GLU:C	44:5:296:A:C6	2.39	0.97
35:h:93:THR:HB	44:5:135:C:O2	1.61	0.97
1:z:236:TYR:HA	44:5:2493:U:H2'	1.00	0.97
12:s:195:VAL:HA	44:5:1237:G:O2'	1.19	0.97
12:s:219:ILE:N	44:5:1234:G:O6	1.97	0.97
12:s:220:THR:CB	44:5:1255:C:N3	2.27	0.97
12:s:270:LEU:C	44:5:1262:G:C8	2.42	0.97
15:N:71:ARG:NH2	44:5:291:C:H5'	1.80	0.97
15:N:74:PRO:CD	44:5:2599:U:O4'	2.09	0.97
15:N:125:SER:O	44:5:273:A:OP2	1.82	0.97
15:N:144:ARG:NH2	44:5:126:U:C4	2.08	0.97
44:5:177:U:O2	44:5:241:G:N1	1.96	0.97
44:5:1662:G:N1	44:5:1787:A:C2	2.31	0.97
7:F:284:SER:CA	21:T:143:THR:N	2.27	0.97
15:N:4:TYR:HB3	44:5:322:U:O4'	1.59	0.97
16:O:18:ARG:HH21	44:5:1314:C:HO2'	0.99	0.97
44:5:341:G:H21	44:5:349:A:N6	1.61	0.97
1:z:223:PHE:HZ	44:5:2477:G:C1'	1.77	0.97
1:z:230:GLN:HB3	44:5:2486:A:H3'	1.46	0.97
13:L:63:VAL:HG22	44:5:72:C:C5'	1.95	0.97
21:T:35:LYS:NZ	44:5:1085:A:OP1	1.98	0.97
44:5:835:G:N2	44:5:858:A:N7	2.12	0.97
6:E:246:ARG:O	44:5:607:A:O5'	1.83	0.97
12:s:269:ILE:CB	44:5:1246:G:C2'	2.43	0.97
15:N:72:LYS:N	44:5:291:C:O4'	1.82	0.97
15:N:90:ASN:HA	44:5:2600:C:H5''	1.23	0.97
15:N:185:ALA:HB3	44:5:1548:C:H4'	0.98	0.97
27:Z:47:ARG:NH2	44:5:1631:C:OP2	1.96	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:173:G:C6	44:5:245:U:N3	2.25	0.97
1:z:216:ASN:C	44:5:2489:C:H42	1.73	0.97
1:z:227:VAL:O	44:5:2487:U:O4	1.82	0.97
1:z:228:GLU:CD	44:5:2478:C:H3'	1.65	0.97
12:s:277:GLY:N	44:5:1256:G:N7	2.12	0.97
12:s:288:ILE:CA	44:5:1278:A:N6	0.83	0.97
15:N:91:GLU:HB3	44:5:277:G:C3'	1.95	0.97
35:h:94:LYS:N	44:5:135:C:O2	1.97	0.97
43:q:46:ARG:NE	44:5:1256:G:H5''	1.63	0.97
9:H:245:PHE:O	14:M:156:VAL:HG11	1.65	0.97
12:s:219:ILE:CB	44:5:1232:C:H41	1.71	0.97
12:s:267:LYS:HA	44:5:1276:U:H3	1.27	0.97
43:q:66:PHE:CD1	44:5:1221:A:C2	2.53	0.97
44:5:177:U:O2	44:5:241:G:C6	2.17	0.97
44:5:341:G:N2	44:5:349:A:C6	2.32	0.97
44:5:2198:A:C5	44:5:2270:A:C2	2.42	0.97
44:5:2883:U:H3	44:5:2939:G:H1	1.08	0.97
1:z:398:SER:C	44:5:2496:C:C4	2.32	0.97
3:B:120:LYS:HD3	44:5:3000:A:H5''	1.45	0.97
12:s:254:ARG:N	44:5:1246:G:C3'	2.24	0.97
12:s:277:GLY:CA	44:5:1256:G:N7	2.28	0.97
1:z:229:LEU:CD1	44:5:2475:G:N2	2.27	0.97
12:s:288:ILE:HA	44:5:1278:A:N6	1.32	0.97
43:q:51:VAL:HG21	44:5:1280:C:O2'	1.65	0.97
1:z:234:LYS:CG	44:5:2464:U:O4'	2.12	0.96
3:B:242:THR:HA	44:5:2948:C:O2'	1.64	0.96
12:s:254:ARG:N	44:5:1246:G:H3'	1.80	0.96
12:s:278:CYS:CB	44:5:1261:G:O5'	2.12	0.96
12:s:300:PRO:O	44:5:1267:U:H3'	1.63	0.96
15:N:122:ASN:CB	44:5:317:A:N3	2.28	0.96
43:q:83:ASN:ND2	44:5:1282:G:C6	2.23	0.96
1:z:368:GLU:HB3	44:5:2470:C:P	2.03	0.96
7:F:311:LYS:HG2	44:5:985:U:H5'	1.47	0.96
15:N:13:LYS:NZ	44:5:78:U:C4'	0.82	0.96
15:N:31:ARG:NE	44:5:300:G:C4'	2.24	0.96
15:N:71:ARG:HD2	44:5:290:G:H4'	1.47	0.96
15:N:184:LYS:N	44:5:54:C:H4'	1.79	0.96
39:l:21:ARG:HD3	45:8:52:A:O4'	1.65	0.96
43:q:49:ALA:CB	44:5:1259:A:OP1	2.12	0.96
10:I:391:LEU:N	46:7:64:A:OP1	1.97	0.96
15:N:5:LYS:CG	44:5:323:A:H8	1.37	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:25:VAL:HG22	44:5:299:G:O6	1.65	0.96
15:N:90:ASN:ND2	44:5:2600:C:O3'	1.97	0.96
15:N:183:THR:O	44:5:55:G:H5'	1.64	0.96
42:p:4:ARG:NH2	44:5:838:G:N7	2.13	0.96
43:q:59:VAL:O	44:5:1221:A:C5'	2.12	0.96
43:q:83:ASN:CG	44:5:1281:G:C2	2.40	0.96
1:z:408:ALA:HA	44:5:2451:G:H8	1.31	0.96
3:B:255:TRP:HB3	44:5:2941:A:OP2	1.65	0.96
15:N:18:VAL:O	44:5:315:C:O2'	1.83	0.96
15:N:25:VAL:HB	44:5:316:U:H1'	1.47	0.96
15:N:192:LYS:HZ3	44:5:1551:C:H5	1.12	0.96
21:T:26:HIS:ND1	46:7:9:C:OP1	1.98	0.96
34:g:4:ARG:NH2	44:5:1483:G:O6	1.97	0.96
1:z:214:TYR:OH	44:5:2465:G:N2	1.97	0.96
1:z:263:PHE:CZ	44:5:2480:A:OP1	2.19	0.96
3:B:251:CYS:HB3	44:5:2881:C:O2	1.63	0.96
12:s:222:LEU:CB	44:5:1233:G:OP2	2.12	0.96
15:N:70:ASN:O	44:5:291:C:C4	2.18	0.96
15:N:80:THR:CB	44:5:2427:U:O4	2.12	0.96
15:N:204:LYS:NZ	37:j:803:THR:CB	2.24	0.96
18:Q:273:GLU:HB2	44:5:787:G:OP1	1.65	0.96
15:N:174:ILE:CG2	44:5:55:G:C4'	2.35	0.96
34:g:10:ARG:NH1	44:5:1489:A:P	2.38	0.96
46:7:89:G:N2	46:7:92:A:N7	2.12	0.96
6:E:246:ARG:HB2	44:5:607:A:P	2.04	0.96
7:F:317:ARG:NE	44:5:1101:G:H5''	1.79	0.96
10:I:300:MET:H	44:5:2618:G:H2'	1.30	0.96
12:s:254:ARG:HA	44:5:1247:U:P	2.05	0.96
33:f:335:GLN:HE22	44:5:1329:U:P	1.88	0.96
43:q:33:VAL:HB	44:5:1280:C:C4	1.99	0.96
44:5:3158:G:N1	44:5:3292:A:N1	2.13	0.96
15:N:25:VAL:HA	44:5:299:G:C2	1.97	0.96
15:N:91:GLU:C	44:5:277:G:C1'	2.31	0.96
15:N:172:ARG:HA	44:5:1546:A:C2'	1.95	0.96
26:Y:88:GLU:HA	26:Y:93:ALA:O	1.65	0.96
33:f:360:GLN:O	44:5:583:G:O2'	1.83	0.96
44:5:381:U:H3	44:5:388:G:H1	1.14	0.96
1:z:410:ARG:HG3	44:5:2448:G:C4	2.00	0.96
6:E:354:ILE:HD13	44:5:3268:A:N7	1.78	0.96
12:s:290:GLU:CA	44:5:1278:A:P	2.49	0.96
15:N:17:ASP:OD2	44:5:69:C:N3	1.99	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:T:10:ARG:NH1	44:5:2640:A:OP2	1.99	0.96
26:Y:4:GLN:HG2	44:5:229:G:C5'	1.96	0.96
42:p:4:ARG:NH1	44:5:838:G:C5	2.34	0.96
1:z:217:GLU:H	44:5:2489:C:N4	1.63	0.96
13:L:63:VAL:HG22	44:5:72:C:H5'	1.43	0.96
15:N:5:LYS:HZ1	44:5:323:A:C3'	1.77	0.96
15:N:5:LYS:C	44:5:109:A:N6	2.23	0.96
15:N:83:LYS:CA	44:5:2425:G:C4	2.30	0.96
15:N:188:ARG:HB3	44:5:1549:U:H3	1.26	0.96
34:g:5:VAL:O	44:5:1857:C:H1'	1.66	0.96
34:g:13:TYR:HE1	44:5:1855:U:H5'	0.97	0.96
43:q:57:THR:CB	44:5:1285:G:H22	1.78	0.96
44:5:270:U:N3	44:5:295:A:N7	2.13	0.96
44:5:845:G:N2	44:5:848:A:N7	2.11	0.96
1:z:226:THR:N	44:5:2476:C:H5''	1.48	0.95
44:5:2275:A:N6	44:5:2312:A:N7	2.12	0.95
1:z:409:PHE:HD2	44:5:2490:C:O4'	1.47	0.95
15:N:20:ARG:HD2	44:5:69:C:OP2	1.63	0.95
15:N:91:GLU:CB	44:5:277:G:O4'	0.66	0.95
15:N:129:TYR:CE2	44:5:317:A:H2	1.84	0.95
43:q:57:THR:CB	44:5:1285:G:N2	2.29	0.95
44:5:60:A:N7	44:5:326:U:N3	2.14	0.95
44:5:825:U:H3	44:5:900:G:H1	1.02	0.95
15:N:77:LYS:NZ	44:5:2431:C:OP2	1.99	0.95
44:5:2263:C:H2'	44:5:2264:U:H6	1.31	0.95
44:5:3113:A:C8	44:5:3119:U:N3	2.33	0.95
15:N:94:TYR:HB3	44:5:290:G:C5'	1.63	0.95
23:V:246:PRO:HG3	24:W:169:GLY:HA2	1.48	0.95
43:q:8:LYS:HD2	44:5:1219:C:H5''	0.97	0.95
1:z:221:ARG:N	44:5:2475:G:O6	1.98	0.95
5:D:283:ARG:NE	44:5:2703:A:N6	2.12	0.95
6:E:331:ALA:O	44:5:3271:G:N2	1.98	0.95
15:N:24:ARG:O	44:5:300:G:N3	1.97	0.95
15:N:72:LYS:HE3	44:5:292:U:C1'	1.97	0.95
15:N:179:LYS:HB3	44:5:52:A:N6	1.82	0.95
43:q:61:ARG:N	44:5:1222:G:C5	2.28	0.95
44:5:173:G:O6	44:5:245:U:N3	1.99	0.95
44:5:1055:A:H1'	46:7:81:U:H1'	1.49	0.95
7:F:289:ALA:HB2	21:T:138:SER:N	1.81	0.95
7:F:392:ASP:O	7:F:396:HIS:HB2	1.67	0.95
15:N:7:LEU:CB	44:5:321:C:H42	1.80	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:199:LEU:HD13	44:5:903:U:H5'	0.96	0.95
19:R:239:ARG:NH2	44:5:1949:G:OP1	2.00	0.95
43:q:64:ARG:HH22	44:5:1285:G:C1'	1.79	0.95
43:q:85:GLY:HA3	44:5:1281:G:OP1	1.66	0.95
44:5:3066:U:H3	44:5:3075:G:H1	0.96	0.95
44:5:3158:G:C6	44:5:3292:A:N1	2.33	0.95
12:s:189:GLU:C	44:5:1235:U:O5'	2.05	0.95
12:s:279:ARG:N	43:q:43:LYS:HG3	1.45	0.95
6:E:354:ILE:CG2	44:5:3268:A:C5	2.49	0.95
28:a:101:GLY:HA3	44:5:1113:G:H5'	1.46	0.95
44:5:1919:G:N2	44:5:1933:A:N7	2.14	0.95
1:z:236:TYR:CA	44:5:2493:U:H2'	1.91	0.95
1:z:369:MET:HA	44:5:2469:G:O2'	1.66	0.95
10:I:221:LEU:O	10:I:271:HIS:HA	1.66	0.95
11:J:151:ARG:CD	41:o:105:GLN:HA	1.97	0.95
15:N:3:ALA:HB1	44:5:110:G:H2'	1.45	0.95
44:5:354:U:N3	44:5:365:A:C8	2.34	0.95
1:z:218:THR:CG2	44:5:2488:A:O3'	2.15	0.95
7:F:290:GLN:CD	21:T:136:ARG:HB2	1.91	0.95
39:l:24:PRO:CG	45:8:52:A:N7	2.30	0.95
43:q:44:GLU:N	44:5:1257:C:H1'	1.68	0.95
12:s:289:ILE:C	44:5:1277:C:C2	2.39	0.94
21:T:4:SER:OG	44:5:2631:U:OP2	1.85	0.94
44:5:2563:G:H1	44:5:2578:U:H3	1.02	0.94
1:z:367:VAL:CG2	44:5:2478:C:C2'	2.44	0.94
6:E:382:TYR:CD1	14:M:264:PHE:CE1	2.48	0.94
7:F:284:SER:CB	21:T:142:SER:CA	2.43	0.94
10:I:247:SER:O	10:I:251:GLU:HB2	1.65	0.94
12:s:271:GLY:HA2	43:q:40:GLU:HG3	0.96	0.94
12:s:287:ASP:CA	44:5:1279:C:C6	2.48	0.94
15:N:10:LEU:HD23	44:5:77:A:O2'	1.64	0.94
43:q:33:VAL:O	44:5:1279:C:N4	1.99	0.94
47:x:11:UNK:N	48:y:5:UNK:CB	2.06	0.94
9:H:208:GLN:O	9:H:254:LYS:HA	1.66	0.94
13:L:50:PRO:HG3	35:h:118:ILE:HD12	1.48	0.94
15:N:76:PRO:O	44:5:2430:A:C6	2.19	0.94
15:N:155:VAL:CA	45:8:141:C:C5'	2.45	0.94
15:N:190:THR:HB	44:5:1548:C:H6	1.32	0.94
39:l:40:LYS:CE	44:5:355:A:C4'	2.45	0.94
43:q:38:MET:CG	44:5:1230:G:C2	2.37	0.94
43:q:107:ALA:C	44:5:1230:G:C8	2.19	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:z:228:GLU:CD	44:5:2479:C:OP2	2.10	0.94
1:z:300:LYS:HB3	44:5:2485:A:H5'	1.47	0.94
15:N:35:VAL:N	44:5:268:A:N3	2.14	0.94
15:N:123:GLN:HA	44:5:271:C:H5''	1.49	0.94
34:g:13:TYR:HE1	44:5:1855:U:C5'	1.75	0.94
39:l:40:LYS:NZ	44:5:355:A:C4'	2.29	0.94
1:z:214:TYR:CE2	44:5:2465:G:N2	2.35	0.94
6:E:382:TYR:CE1	14:M:264:PHE:CD1	2.40	0.94
12:s:256:LYS:O	44:5:1269:U:N3	2.00	0.94
12:s:294:ALA:CB	44:5:1276:U:P	2.50	0.94
34:g:74:ARG:HB2	44:5:1639:C:H5	1.32	0.94
42:p:2:ALA:N	44:5:853:G:C6	2.36	0.94
43:q:81:LYS:NZ	44:5:1282:G:H21	1.64	0.94
12:s:270:LEU:O	44:5:1262:G:H8	1.50	0.94
15:N:4:TYR:HB2	44:5:322:U:O4'	1.67	0.94
15:N:29:GLU:O	44:5:297:G:N7	2.00	0.94
15:N:71:ARG:CD	44:5:290:G:C4'	2.41	0.94
44:5:2482:U:O2	44:5:2486:A:N6	1.99	0.94
44:5:3113:A:N7	44:5:3119:U:N3	2.15	0.94
1:z:404:SER:HA	44:5:2461:A:C8	2.01	0.94
4:C:79:GLY:N	44:5:363:G:O2'	2.01	0.94
8:G:267:ALA:O	8:G:271:GLU:HB3	1.65	0.94
12:s:290:GLU:CA	44:5:1278:A:O5'	2.15	0.94
1:z:223:PHE:HB3	44:5:2475:G:N3	1.82	0.94
12:s:220:THR:CA	44:5:1234:G:C6	2.49	0.94
12:s:295:GLY:C	44:5:1276:U:O4'	2.06	0.94
14:M:273:ARG:O	14:M:277:ARG:HB3	1.67	0.94
15:N:98:LEU:HD21	44:5:289:A:C5'	1.92	0.94
17:P:121:GLN:O	45:8:13:A:O2'	1.84	0.94
21:T:84:TYR:CE2	29:b:89:LYS:HA	2.03	0.94
37:j:788:GLY:N	44:5:2138:A:O2'	2.00	0.94
43:q:85:GLY:HA3	44:5:1281:G:O5'	1.68	0.94
44:5:733:G:N2	44:5:736:A:N7	2.15	0.94
44:5:909:G:H1	44:5:919:U:H3	0.96	0.94
44:5:2762:A:H62	44:5:2795:U:H3	1.02	0.94
3:B:9:PRO:CG	44:5:2914:G:H5'	1.98	0.94
12:s:273:ALA:HB2	44:5:1264:G:H1'	1.46	0.94
15:N:15:GLN:O	44:5:69:C:H5'	1.67	0.94
15:N:44:ARG:HA	44:5:321:C:H5	1.25	0.94
15:N:127:TYR:N	44:5:272:G:N7	2.15	0.94
15:N:180:PHE:CE2	44:5:30:G:C2	2.53	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:j:789:LYS:HB3	44:5:2138:A:N3	1.83	0.94
43:q:13:ALA:O	43:q:17:GLU:HB2	1.65	0.94
6:E:246:ARG:HD3	44:5:608:A:N7	1.82	0.94
15:N:126:THR:HG21	44:5:272:G:C2	1.88	0.94
26:Y:62:SER:CB	44:5:198:A:H5''	1.98	0.94
37:j:835:TRP:NE1	44:5:812:G:HO2'	1.52	0.94
42:p:2:ALA:CA	44:5:853:G:O6	2.15	0.94
47:x:9:UNK:N	48:y:4:UNK:O	1.70	0.94
12:s:216:SER:N	44:5:1264:G:H8	1.64	0.93
12:s:294:ALA:O	44:5:1276:U:C6	2.20	0.93
15:N:18:VAL:N	44:5:66:A:C8	2.34	0.93
15:N:81:TYR:CE1	44:5:2427:U:H2'	2.03	0.93
15:N:91:GLU:HB3	44:5:277:G:C2'	1.98	0.93
21:T:82:ASN:HB2	29:b:86:GLY:O	1.69	0.93
22:U:163:LEU:O	22:U:167:GLN:HA	1.68	0.93
47:x:17:UNK:HA	48:y:5:UNK:CB	1.98	0.93
1:z:231:VAL:HG23	44:5:2487:U:H3'	1.47	0.93
7:F:335:GLU:HG3	44:5:987:U:C5'	1.98	0.93
26:Y:113:LYS:NZ	45:8:84:C:H1'	1.83	0.93
46:7:78:U:N3	46:7:102:A:C8	2.36	0.93
5:D:265:LYS:NZ	44:5:2669:G:N2	2.16	0.93
15:N:70:ASN:OD1	44:5:277:G:C6	2.21	0.93
39:l:21:ARG:HH11	45:8:52:A:C1'	1.81	0.93
43:q:38:MET:H	44:5:1231:A:C2'	1.79	0.93
43:q:57:THR:CA	44:5:1285:G:N1	1.96	0.93
44:5:1863:G:N2	44:5:1867:A:H62	1.65	0.93
3:B:3:HIS:CD2	44:5:2938:G:N7	2.36	0.93
10:I:199:ASN:ND2	44:5:1126:G:OP2	2.02	0.93
14:M:226:ARG:CD	44:5:525:C:OP1	2.14	0.93
20:S:146:LYS:HD3	44:5:534:U:C2	2.03	0.93
37:j:811:ARG:HH11	39:l:51:ILE:CD1	1.79	0.93
44:5:1662:G:H1	44:5:1787:A:H2	1.11	0.93
45:8:121:U:O2	45:8:132:G:C2	2.20	0.93
1:z:223:PHE:HZ	44:5:2477:G:H1'	0.81	0.93
13:L:104:ARG:NH2	44:5:75:G:OP2	2.01	0.93
21:T:35:LYS:HZ2	44:5:1084:A:H5''	1.33	0.93
43:q:57:THR:CB	44:5:1285:G:H1	1.80	0.93
15:N:46:ASP:OD2	44:5:322:U:C4	2.21	0.93
15:N:122:ASN:HB3	44:5:317:A:N3	1.82	0.93
15:N:174:ILE:HG22	44:5:55:G:C5'	1.95	0.93
15:N:178:HIS:HD2	44:5:52:A:C8	1.86	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:183:THR:HG23	44:5:54:C:C2'	1.98	0.93
15:N:190:THR:CB	44:5:1548:C:C6	2.44	0.93
37:j:811:ARG:HH12	39:l:51:ILE:HD11	1.31	0.93
15:N:57:GLN:NE2	44:5:149:U:O2	1.93	0.93
44:5:34:A:H8	44:5:50:U:H3	1.13	0.93
1:z:230:GLN:HB3	44:5:2486:A:C3'	1.98	0.93
1:z:363:ALA:HB1	44:5:2467:G:C1'	1.90	0.93
1:z:383:ASN:HB3	44:5:2492:C:O2'	1.69	0.93
12:s:282:PHE:CA	44:5:1260:A:C5	2.26	0.93
12:s:297:ILE:O	44:5:1268:G:H1'	1.68	0.93
15:N:80:THR:OG1	44:5:2601:A:N6	2.02	0.93
15:N:177:GLY:C	44:5:54:C:H5	1.77	0.93
26:Y:2:ALA:O	44:5:228:U:O2'	1.86	0.93
44:5:213:A:N6	44:5:227:G:C2	2.33	0.93
47:x:7:UNK:O	48:y:5:UNK:CA	2.14	0.93
1:z:404:SER:N	44:5:2463:G:C6	2.32	0.93
5:D:303:LYS:HE3	44:5:1077:U:O3'	1.68	0.93
5:D:529:SER:OG	46:7:1:G:N2	2.02	0.93
11:J:193:PHE:O	11:J:219:TYR:HA	1.69	0.93
12:s:289:ILE:CA	44:5:1262:G:H1	1.65	0.93
12:s:296:GLU:N	44:5:1276:U:O4'	2.02	0.93
13:L:29:ALA:O	13:L:33:VAL:HB	1.68	0.93
44:5:1664:G:H1	44:5:1785:U:H3	1.12	0.93
45:8:42:G:N1	45:8:102:U:O2	2.00	0.93
12:s:213:SER:O	44:5:1246:G:C5'	2.17	0.93
15:N:70:ASN:HB3	44:5:276:U:O2	1.66	0.93
15:N:193:ARG:CA	44:5:1549:U:H5'	1.99	0.93
43:q:57:THR:CG2	44:5:1284:C:C4	0.93	0.93
44:5:832:G:H1	44:5:862:U:H3	1.01	0.93
3:B:129:ALA:HB1	44:5:3149:G:O2'	1.68	0.92
3:B:243:HIS:CB	44:5:2948:C:H5''	1.99	0.92
12:s:264:SER:N	44:5:1276:U:C1'	2.29	0.92
12:s:297:ILE:CB	44:5:1275:C:H1'	1.99	0.92
15:N:81:TYR:CE1	44:5:2427:U:C2'	2.52	0.92
15:N:175:ASN:OD1	44:5:55:G:C1'	2.02	0.92
37:j:807:ARG:NE	45:8:103:G:O3'	2.02	0.92
43:q:51:VAL:HG11	44:5:1260:A:C4	2.04	0.92
44:5:413:U:N3	45:8:10:A:N1	2.15	0.92
44:5:1487:G:H1	44:5:1855:U:H3	1.12	0.92
44:5:1659:U:H3	44:5:1790:G:H1	1.04	0.92
12:s:254:ARG:O	44:5:1272:C:OP1	1.87	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:140:LYS:NZ	44:5:143:G:C1'	2.25	0.92
15:N:143:ARG:C	45:8:143:U:H4'	1.94	0.92
15:N:193:ARG:HB3	44:5:1549:U:H5'	0.94	0.92
43:q:55:LYS:CG	44:5:1223:A:H3'	1.97	0.92
44:5:2720:G:H1	44:5:2736:A:N6	1.68	0.92
10:I:379:GLY:HA3	44:5:1011:A:O4'	1.69	0.92
15:N:32:GLN:OE1	44:5:297:G:O5'	1.86	0.92
15:N:49:ARG:HB2	44:5:321:C:O2'	1.68	0.92
15:N:153:ASP:HB2	45:8:142:C:C6	2.04	0.92
44:5:26:A:N6	44:5:59:G:C6	2.29	0.92
1:z:363:ALA:CB	44:5:2466:G:N1	2.31	0.92
9:H:352:GLU:OE2	44:5:3124:G:N2	2.01	0.92
12:s:270:LEU:O	44:5:1232:C:H5	1.43	0.92
43:q:57:THR:HG23	44:5:1284:C:C4	0.59	0.92
47:x:10:UNK:HA	48:y:4:UNK:H	1.33	0.92
3:B:126:LYS:NZ	44:5:3294:A:OP1	2.02	0.92
10:I:379:GLY:H	44:5:1011:A:H1'	1.34	0.92
12:s:188:LYS:HA	44:5:1237:G:H5''	1.51	0.92
12:s:277:GLY:HA2	43:q:46:ARG:NH2	1.84	0.92
15:N:7:LEU:C	44:5:64:G:H2'	1.94	0.92
15:N:42:PRO:HB3	44:5:320:G:H1'	0.94	0.92
15:N:125:SER:HB2	44:5:273:A:OP1	0.94	0.92
15:N:192:LYS:H	44:5:1549:U:H2'	1.34	0.92
25:X:206:LYS:O	25:X:210:LYS:HB2	1.67	0.92
44:5:995:U:N3	44:5:1054:A:C8	2.35	0.92
44:5:1055:A:N3	46:7:81:U:O2'	2.01	0.92
44:5:2762:A:N6	44:5:2795:U:O2	2.02	0.92
1:z:231:VAL:CG2	44:5:2488:A:P	2.57	0.92
12:s:224:GLU:O	44:5:1233:G:C2	2.23	0.92
1:z:226:THR:O	44:5:2476:C:H3'	1.67	0.92
1:z:253:CYS:O	44:5:2466:G:H4'	1.69	0.92
1:z:404:SER:HA	44:5:2461:A:C4	2.05	0.92
8:G:266:ALA:O	8:G:270:LYS:HB3	1.67	0.92
12:s:267:LYS:CB	44:5:1277:C:C2	2.52	0.92
15:N:176:LYS:O	44:5:54:C:C6	2.22	0.92
15:N:203:ARG:HH22	44:5:903:U:C5'	1.83	0.92
44:5:434:U:H3	44:5:625:G:H1	0.98	0.92
3:B:2:SER:N	44:5:2939:G:C8	2.38	0.92
9:H:302:ASN:O	9:H:312:ILE:HA	1.70	0.92
10:I:225:LYS:HZ2	44:5:1010:G:C5'	1.82	0.92
12:s:289:ILE:HA	44:5:1277:C:N3	0.90	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:29:GLU:H	44:5:299:G:H21	0.98	0.92
15:N:40:ALA:O	44:5:114:A:H5'	1.66	0.92
15:N:64:VAL:HG23	44:5:269:G:OP1	1.69	0.92
15:N:140:LYS:CA	44:5:144:A:O2'	2.18	0.92
15:N:125:SER:C	44:5:273:A:OP2	2.13	0.92
15:N:172:ARG:HA	44:5:1546:A:H1'	0.92	0.92
15:N:177:GLY:O	44:5:54:C:C6	2.23	0.92
21:T:83:ARG:HA	29:b:88:LYS:HB2	1.50	0.92
33:f:360:GLN:HG3	44:5:582:G:H21	1.35	0.92
43:q:215:UNK:CB	47:x:5:UNK:O	2.18	0.92
44:5:3326:G:H1	44:5:3380:U:H3	1.08	0.92
1:z:230:GLN:CB	44:5:2486:A:C3'	2.47	0.92
1:z:359:CYS:HB3	44:5:2464:U:O3'	1.69	0.92
2:A:59:ALA:O	2:A:75:ILE:HA	1.70	0.92
9:H:264:HIS:O	9:H:268:LEU:HB2	1.70	0.92
12:s:297:ILE:CA	44:5:1275:C:H1'	1.98	0.92
15:N:8:GLU:N	44:5:64:G:H2'	1.84	0.92
15:N:26:ARG:NH1	44:5:317:A:H5'	1.81	0.92
15:N:200:TRP:CZ3	37:j:813:PHE:HZ	1.88	0.92
37:j:789:LYS:NZ	44:5:2138:A:N6	2.18	0.92
43:q:46:ARG:CZ	44:5:1257:C:OP2	2.05	0.92
1:z:394:GLN:HB2	44:5:2446:U:O5'	1.69	0.91
1:z:399:LEU:C	44:5:2451:G:N3	2.29	0.91
10:I:381:PHE:CE1	44:5:1042:U:H5'	2.04	0.91
11:J:249:ASP:O	11:J:253:TRP:HB3	1.70	0.91
12:s:263:ALA:HB2	44:5:1274:A:N1	1.85	0.91
15:N:4:TYR:HD1	44:5:321:C:O2	1.47	0.91
15:N:29:GLU:HA	44:5:297:G:C8	2.05	0.91
43:q:57:THR:CB	44:5:1285:G:N1	2.32	0.91
44:5:270:U:N3	44:5:295:A:C8	2.38	0.91
3:B:46:PHE:O	3:B:338:LEU:HB2	1.69	0.91
12:s:235:VAL:O	44:5:1254:C:O3'	1.78	0.91
15:N:43:THR:N	44:5:320:G:C8	2.29	0.91
20:S:8:GLN:O	20:S:61:ILE:HA	1.70	0.91
43:q:8:LYS:CD	44:5:1219:C:H5''	1.85	0.91
1:z:220:LYS:NZ	44:5:2470:C:O4'	2.03	0.91
6:E:246:ARG:NE	44:5:608:A:C5	2.38	0.91
14:M:272:LEU:O	14:M:276:LYS:HB3	1.70	0.91
15:N:141:ALA:HB2	44:5:125:C:O2'	1.70	0.91
26:Y:25:SER:HB2	45:8:88:A:H61	1.34	0.91
34:g:13:TYR:CE1	44:5:1855:U:C4'	2.54	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:q:12:PHE:CE2	44:5:1222:G:P	2.63	0.91
43:q:31:ASP:CB	44:5:1281:G:N2	2.05	0.91
43:q:57:THR:C	44:5:1285:G:N2	2.27	0.91
1:z:361:ALA:HB3	44:5:2465:G:C5'	1.94	0.91
3:B:240:ARG:NH2	44:5:1907:C:O2	2.02	0.91
15:N:155:VAL:HG22	45:8:141:C:H4'	1.52	0.91
7:F:286:TYR:CD1	21:T:140:ILE:HG12	2.05	0.91
12:s:253:MET:O	44:5:1246:G:H3'	1.13	0.91
12:s:289:ILE:O	44:5:1277:C:C6	2.24	0.91
15:N:23:GLN:CG	44:5:67:A:H8	1.63	0.91
15:N:65:ARG:O	44:5:269:G:H4'	1.69	0.91
15:N:81:TYR:HE1	44:5:2428:U:H6	0.96	0.91
28:a:154:LEU:O	28:a:193:ILE:HA	1.71	0.91
29:b:72:ASN:ND2	44:5:2642:A:O2'	2.04	0.91
1:z:361:ALA:HB2	44:5:2465:G:H5''	1.50	0.91
12:s:223:LYS:C	43:q:44:GLU:HA	1.93	0.91
13:L:15:ARG:HE	44:5:97:U:H5'	1.34	0.91
15:N:40:ALA:C	44:5:113:C:H2'	1.96	0.91
34:g:6:THR:HG22	44:5:1486:G:C2	2.05	0.91
36:i:27:SER:HA	44:5:266:A:H61	1.35	0.91
37:j:838:LYS:NZ	44:5:363:G:OP1	2.03	0.91
44:5:2194:G:N3	44:5:2274:U:C5	2.38	0.91
12:s:296:GLU:CB	44:5:1276:U:C4'	2.49	0.91
15:N:83:LYS:HD2	44:5:2426:U:P	2.01	0.91
15:N:150:TRP:O	45:8:142:C:O4'	1.89	0.91
43:q:34:SER:OG	44:5:1231:A:O4'	1.80	0.91
1:z:349:THR:O	1:z:358:LEU:C	2.14	0.91
3:B:256:HIS:HB3	44:5:1305:U:C5	2.05	0.91
8:G:207:LYS:HZ3	44:5:2524:A:H62	0.91	0.91
13:L:134:GLU:CD	35:h:117:ALA:HB2	1.96	0.91
15:N:21:PHE:HD2	44:5:315:C:H3'	0.77	0.91
15:N:24:ARG:C	44:5:300:G:C2	2.48	0.91
15:N:85:THR:HG23	44:5:2423:U:O3'	1.70	0.91
15:N:119:TYR:CZ	44:5:320:G:C8	2.53	0.91
15:N:179:LYS:CG	44:5:52:A:C6	2.53	0.91
15:N:179:LYS:CB	44:5:52:A:C6	2.54	0.91
37:j:789:LYS:CE	44:5:2138:A:C6	2.54	0.91
10:I:220:ASP:HA	10:I:272:LEU:O	1.71	0.91
10:I:225:LYS:NZ	44:5:1010:G:H4'	1.85	0.91
12:s:277:GLY:HA2	44:5:1257:C:H5	1.33	0.91
15:N:21:PHE:N	44:5:315:C:O2'	1.85	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:R:293:GLU:HG3	19:R:297:ARG:HH21	1.36	0.91
30:c:44:ILE:O	30:c:70:PHE:HB3	1.70	0.91
43:q:80:VAL:HG13	44:5:1283:C:C5'	2.01	0.91
1:z:400:VAL:C	44:5:2452:G:C6	2.48	0.91
7:F:283:GLY:HA3	21:T:143:THR:CG2	2.01	0.91
15:N:189:LYS:H	44:5:1548:C:P	1.93	0.91
1:z:230:GLN:CG	44:5:2486:A:H2'	1.99	0.90
1:z:231:VAL:HG22	44:5:2488:A:P	2.11	0.90
1:z:258:MET:SD	44:5:2478:C:O3'	2.21	0.90
12:s:261:THR:N	44:5:1267:U:H6	1.68	0.90
12:s:289:ILE:O	44:5:1277:C:C2	2.24	0.90
15:N:13:LYS:HZ1	44:5:78:U:C4'	0.77	0.90
15:N:24:ARG:C	44:5:300:G:N3	2.29	0.90
18:Q:261:ASN:H	44:5:730:C:H5''	1.35	0.90
43:q:4:ILE:C	44:5:1218:U:H5''	1.92	0.90
43:q:39:HIS:C	44:5:1261:G:N3	2.20	0.90
43:q:57:THR:CG2	44:5:1284:C:C6	2.41	0.90
47:x:26:UNK:CB	48:y:13:UNK:C	2.49	0.90
1:z:217:GLU:O	44:5:2470:C:N3	1.80	0.90
1:z:401:VAL:N	44:5:2452:G:C5	2.38	0.90
9:H:246:THR:O	9:H:253:ILE:HA	1.71	0.90
13:L:49:ARG:HB3	35:h:116:TYR:CZ	2.06	0.90
15:N:11:GLN:CB	44:5:64:G:O5'	2.16	0.90
15:N:178:HIS:CD2	44:5:52:A:C8	2.58	0.90
15:N:190:THR:HG22	44:5:1548:C:C6	1.75	0.90
44:5:71:A:N6	44:5:303:G:N3	2.19	0.90
44:5:172:G:C6	44:5:246:U:N3	2.38	0.90
1:z:215:SER:CB	44:5:2466:G:H22	1.81	0.90
1:z:230:GLN:CA	44:5:2486:A:O2'	2.18	0.90
5:D:283:ARG:NH2	44:5:2703:A:C6	2.40	0.90
15:N:29:GLU:HA	44:5:297:G:N7	1.86	0.90
15:N:75:VAL:HG22	44:5:2430:A:N1	1.86	0.90
15:N:77:LYS:HG2	44:5:2430:A:O4'	1.39	0.90
15:N:127:TYR:CD2	44:5:272:G:C5	2.59	0.90
44:5:122:A:N6	44:5:148:G:C4	2.39	0.90
44:5:1168:U:N3	44:5:1330:A:N7	2.20	0.90
44:5:2292:U:O2	44:5:2300:G:N1	2.04	0.90
1:z:227:VAL:CG2	44:5:2477:G:H3'	1.98	0.90
3:B:3:HIS:N	44:5:2939:G:N7	2.19	0.90
15:N:25:VAL:O	36:i:30:LYS:HD2	1.71	0.90
15:N:63:ARG:CG	44:5:319:A:OP1	2.15	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:126:THR:OG1	44:5:273:A:H8	1.11	0.90
21:T:129:LYS:HG3	44:5:1095:U:O2	1.71	0.90
26:Y:62:SER:OG	44:5:198:A:C5'	2.16	0.90
32:e:212:LYS:HG3	44:5:1339:C:H5''	1.53	0.90
43:q:41:VAL:O	44:5:1257:C:H1'	1.72	0.90
43:q:52:LEU:CA	44:5:1280:C:C5'	2.45	0.90
44:5:754:G:N1	44:5:778:U:O2	2.03	0.90
3:B:66:LYS:HZ2	23:V:140:PHE:CB	1.84	0.90
15:N:7:LEU:HB3	44:5:321:C:N4	1.87	0.90
15:N:42:PRO:HB2	44:5:320:G:H1'	1.53	0.90
15:N:87:GLN:NE2	44:5:2603:G:O6	2.03	0.90
15:N:150:TRP:HA	45:8:142:C:H1'	0.92	0.90
15:N:186:GLY:N	44:5:1548:C:H5'	1.86	0.90
43:q:36:GLN:N	44:5:1231:A:H2'	1.15	0.90
44:5:1448:U:O2	44:5:2356:A:C6	2.23	0.90
44:5:2667:A:H8	44:5:2687:G:N2	1.41	0.90
44:5:3010:U:O2	44:5:3136:G:N1	2.03	0.90
15:N:3:ALA:HA	44:5:110:G:C2'	2.02	0.90
15:N:26:ARG:HA	36:i:30:LYS:HZ2	1.15	0.90
15:N:44:ARG:C	44:5:321:C:H6	1.80	0.90
15:N:57:GLN:N	44:5:150:A:P	2.36	0.90
15:N:179:LYS:HD3	44:5:52:A:H62	1.34	0.90
43:q:31:ASP:HB2	44:5:1228:C:O2	1.72	0.90
44:5:1463:U:N3	44:5:1467:A:C8	2.39	0.90
1:z:258:MET:CG	44:5:2479:C:H6	1.85	0.90
1:z:258:MET:HG2	44:5:2479:C:H6	1.35	0.90
1:z:409:PHE:O	44:5:2451:G:O6	1.90	0.90
4:C:202:ARG:HH21	44:5:1384:U:P	1.93	0.90
7:F:331:LYS:NZ	44:5:988:U:P	2.45	0.90
15:N:50:ARG:CD	44:5:322:U:OP1	2.06	0.90
15:N:94:TYR:CG	44:5:290:G:H5''	2.04	0.90
37:j:807:ARG:HG2	45:8:103:G:H4'	1.54	0.90
43:q:40:GLU:CD	44:5:1232:C:OP2	2.15	0.90
44:5:1922:A:H62	44:5:1929:G:N2	1.68	0.90
47:x:17:UNK:N	48:y:5:UNK:CB	2.34	0.90
15:N:170:LYS:HE2	44:5:30:G:O3'	1.70	0.90
20:S:75:PHE:HB2	20:S:94:ILE:O	1.70	0.90
20:S:111:ALA:O	44:5:1321:G:O2'	1.89	0.90
37:j:789:LYS:CB	44:5:2138:A:C2	2.53	0.90
39:l:21:ARG:HD3	45:8:52:A:C5'	2.02	0.90
43:q:83:ASN:ND2	44:5:1282:G:O6	2.04	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:3052:G:N1	44:5:3090:U:O2	2.03	0.90
1:z:226:THR:H	44:5:2476:C:H5''	1.28	0.90
12:s:197:VAL:N	44:5:1237:G:C6	2.24	0.90
13:L:161:ASP:CG	28:a:225:VAL:HG12	1.96	0.90
15:N:30:TYR:CD1	44:5:267:G:H3'	2.06	0.90
15:N:90:ASN:O	44:5:276:U:O2	1.88	0.90
31:d:72:ILE:O	31:d:128:ARG:HA	1.71	0.90
34:g:12:PRO:CG	44:5:1488:G:H21	1.83	0.90
37:j:811:ARG:HH11	39:l:51:ILE:HD12	1.35	0.90
39:l:40:LYS:HD2	44:5:355:A:C5'	2.01	0.90
12:s:266:THR:C	44:5:1266:G:O6	2.14	0.90
14:M:225:ALA:HA	44:5:561:C:H5'	1.53	0.90
15:N:87:GLN:CD	44:5:2604:U:O4	2.14	0.90
25:X:162:SER:O	35:h:77:PRO:HB3	1.72	0.90
1:z:363:ALA:HB1	44:5:2467:G:H1'	1.52	0.89
6:E:242:LEU:HD12	44:5:612:U:OP1	1.71	0.89
14:M:191:LYS:HD2	44:5:1186:G:OP1	1.70	0.89
29:b:69:LYS:NZ	44:5:2618:G:O5'	2.05	0.89
34:g:12:PRO:CB	44:5:1855:U:H1'	2.00	0.89
1:z:368:GLU:O	44:5:2467:G:O2'	1.87	0.89
1:z:398:SER:HA	44:5:2496:C:H41	1.30	0.89
12:s:270:LEU:C	44:5:1262:G:N7	2.31	0.89
15:N:57:GLN:H	44:5:150:A:P	1.89	0.89
15:N:127:TYR:CD2	44:5:272:G:C8	2.60	0.89
15:N:144:ARG:HH22	44:5:143:G:N2	1.58	0.89
34:g:13:TYR:OH	44:5:1854:C:C2'	2.19	0.89
39:l:40:LYS:CD	44:5:355:A:H5''	2.00	0.89
12:s:271:GLY:O	43:q:36:GLN:O	1.89	0.89
13:L:126:PHE:HD2	35:h:115:LYS:O	1.42	0.89
44:5:1463:U:N3	44:5:1467:A:N7	2.19	0.89
44:5:2246:G:C6	44:5:2247:G:C6	2.60	0.89
44:5:2255:A:H62	44:5:2260:U:H3	1.20	0.89
1:z:220:LYS:CA	44:5:2469:G:N1	2.28	0.89
2:A:81:GLY:N	42:p:65:ALA:O	2.05	0.89
9:H:244:THR:OG1	14:M:159:SER:O	1.90	0.89
15:N:129:TYR:O	44:5:318:A:H4'	1.70	0.89
1:z:367:VAL:HG23	44:5:2478:C:C2'	2.00	0.89
15:N:8:GLU:HB2	44:5:322:U:C6	2.07	0.89
15:N:81:TYR:CD1	44:5:2427:U:C2'	2.55	0.89
15:N:140:LYS:CA	44:5:144:A:C2'	2.48	0.89
15:N:193:ARG:HB3	44:5:1549:U:C5'	1.74	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:l:40:LYS:CE	44:5:355:A:O3'	2.20	0.89
44:5:556:U:C4	44:5:559:A:N7	2.41	0.89
1:z:229:LEU:HD13	44:5:2475:G:N2	1.88	0.89
11:J:196:GLY:HA2	11:J:216:MET:O	1.71	0.89
15:N:6:TYR:HB2	44:5:110:G:C1'	2.02	0.89
25:X:223:LYS:O	25:X:238:VAL:HA	1.73	0.89
29:b:110:LYS:O	29:b:114:HIS:HB3	1.72	0.89
44:5:87:U:C2	44:5:99:A:N7	2.41	0.89
44:5:1949:G:H1	44:5:2097:U:H3	1.14	0.89
1:z:348:SER:HB2	44:5:2465:G:OP1	1.71	0.89
1:z:368:GLU:CD	44:5:2471:U:O4	2.15	0.89
1:z:409:PHE:HB3	44:5:2449:A:OP2	1.73	0.89
6:E:332:LYS:NZ	44:5:3271:G:H5''	1.88	0.89
15:N:19:LEU:N	44:5:66:A:C8	2.29	0.89
15:N:42:PRO:CB	44:5:320:G:C1'	2.35	0.89
15:N:121:VAL:O	44:5:317:A:O2'	1.91	0.89
18:Q:132:SER:OG	44:5:1103:A:N6	2.05	0.89
43:q:30:VAL:N	44:5:1281:G:C2'	2.34	0.89
7:F:287:VAL:HG22	21:T:139:ARG:HB2	1.54	0.89
10:I:383:LYS:NZ	44:5:1040:A:N3	2.21	0.89
12:s:195:VAL:CB	44:5:1263:A:N1	2.36	0.89
15:N:41:ARG:HH12	44:5:113:C:H5''	0.73	0.89
44:5:394:G:N2	44:5:399:A:H62	1.69	0.89
44:5:2196:C:H4'	44:5:2271:A:O4'	1.73	0.89
1:z:367:VAL:CG2	44:5:2478:C:O2'	2.18	0.89
7:F:306:PRO:O	7:F:310:ARG:HB2	1.73	0.89
7:F:332:ALA:O	44:5:986:U:O2'	1.90	0.89
15:N:26:ARG:CG	36:i:30:LYS:HZ2	1.86	0.89
15:N:149:ASN:O	45:8:142:C:C4'	2.15	0.89
16:O:171:LYS:NZ	44:5:3181:C:OP2	2.06	0.89
34:g:53:GLY:HA2	44:5:1739:U:H5'	1.54	0.89
1:z:225:GLU:C	44:5:2476:C:H3'	1.97	0.89
3:B:89:VAL:O	3:B:105:VAL:HB	1.73	0.89
6:E:247:LYS:NZ	44:5:503:C:O2	2.06	0.89
12:s:282:PHE:CA	44:5:1260:A:C4	2.55	0.89
15:N:30:TYR:N	44:5:317:A:N6	2.21	0.89
42:p:4:ARG:NH1	44:5:838:G:O6	2.06	0.89
43:q:57:THR:CB	44:5:1284:C:C2	2.37	0.89
43:q:83:ASN:O	44:5:1281:G:H2'	1.73	0.89
1:z:234:LYS:HB2	44:5:2462:A:N6	1.87	0.88
12:s:260:ARG:CB	44:5:1247:U:O2'	2.21	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:15:GLN:O	44:5:69:C:O5'	1.91	0.88
15:N:15:GLN:CB	44:5:69:C:H5'	2.03	0.88
15:N:72:LYS:HE3	44:5:292:U:O4'	1.69	0.88
17:P:120:ASN:HD21	45:8:12:A:C2'	1.85	0.88
18:Q:295:ARG:HH12	44:5:88:A:H5''	1.38	0.88
12:s:195:VAL:C	44:5:1263:A:C6	2.51	0.88
12:s:212:PRO:O	44:5:1236:G:C5'	2.13	0.88
15:N:26:ARG:CA	36:i:30:LYS:NZ	2.28	0.88
15:N:33:LYS:O	44:5:268:A:C6	2.26	0.88
15:N:79:ALA:H	44:5:2430:A:H62	1.18	0.88
26:Y:112:ASP:HA	45:8:84:C:C2	2.07	0.88
43:q:100:ILE:HA	44:5:1260:A:H62	1.36	0.88
44:5:413:U:O4	45:8:10:A:N6	2.06	0.88
1:z:220:LYS:HZ3	44:5:2470:C:H5''	1.38	0.88
5:D:265:LYS:HG3	44:5:2686:A:C1'	2.04	0.88
8:G:317:ILE:O	8:G:343:ILE:HA	1.73	0.88
15:N:3:ALA:CA	44:5:110:G:C2'	2.51	0.88
15:N:46:ASP:HB2	44:5:322:U:H6	1.36	0.88
15:N:122:ASN:ND2	44:5:318:A:C8	2.40	0.88
15:N:192:LYS:CD	44:5:1550:C:H5	1.70	0.88
44:5:60:A:C8	44:5:326:U:N3	2.42	0.88
1:z:410:ARG:C	44:5:2448:G:H3'	1.98	0.88
7:F:288:GLU:C	21:T:138:SER:HA	1.99	0.88
25:X:136:LYS:CE	44:5:3:U:N3	2.35	0.88
43:q:12:PHE:O	43:q:16:ARG:HB3	1.73	0.88
43:q:84:VAL:HG22	44:5:1282:G:H3'	1.53	0.88
3:B:261:MET:HA	16:O:64:PHE:CB	2.02	0.88
9:H:218:VAL:HA	9:H:226:LYS:O	1.74	0.88
12:s:263:ALA:N	44:5:1266:G:C2	2.33	0.88
15:N:7:LEU:CD1	44:5:111:C:C4	2.55	0.88
15:N:129:TYR:CE1	44:5:318:A:C2	2.60	0.88
15:N:188:ARG:HB3	44:5:1544:G:N1	1.88	0.88
15:N:200:TRP:CZ2	37:j:813:PHE:CE1	2.61	0.88
15:N:200:TRP:CH2	37:j:813:PHE:HZ	1.84	0.88
43:q:38:MET:C	44:5:1261:G:C8	2.37	0.88
43:q:55:LYS:CG	44:5:1224:C:H5	1.87	0.88
44:5:129:U:O2	44:5:139:G:N1	2.07	0.88
12:s:282:PHE:CB	44:5:1260:A:C4	2.55	0.88
15:N:7:LEU:HD21	44:5:111:C:H42	1.05	0.88
15:N:31:ARG:CA	44:5:295:A:C5	2.43	0.88
21:T:54:HIS:CE1	44:5:2724:U:H4'	2.09	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Y:114:ASP:O	26:Y:118:LEU:HB2	1.72	0.88
39:l:7:PHE:O	39:l:11:GLN:HB2	1.74	0.88
43:q:8:LYS:HE2	44:5:1220:U:H5''	1.53	0.88
43:q:43:LYS:NZ	44:5:1232:C:C5	2.28	0.88
43:q:53:MET:N	44:5:1280:C:C5'	2.16	0.88
44:5:2891:U:O2	44:5:2912:G:N1	2.05	0.88
1:z:229:LEU:HG	44:5:2476:C:HO2'	1.38	0.88
10:I:275:ARG:NH2	44:5:1044:U:OP2	2.06	0.88
15:N:26:ARG:HB3	44:5:317:A:C8	2.09	0.88
15:N:150:TRP:HA	45:8:142:C:O4'	1.68	0.88
34:g:12:PRO:HG3	44:5:1488:G:N2	1.88	0.88
43:q:38:MET:HA	44:5:1261:G:N7	1.86	0.88
44:5:368:G:N1	45:8:21:C:N3	2.22	0.88
7:F:284:SER:CA	21:T:142:SER:HA	2.03	0.88
8:G:333:LEU:O	8:G:337:MET:HB2	1.74	0.88
12:s:222:LEU:CB	44:5:1233:G:P	2.62	0.88
13:L:66:ASN:HB2	44:5:73:C:H2'	1.55	0.88
44:5:342:A:N6	45:8:22:U:O2	2.06	0.88
47:x:30:UNK:N	48:y:15:UNK:C	2.18	0.88
1:z:402:LYS:CD	44:5:2463:G:O5'	2.05	0.88
13:L:49:ARG:CD	35:h:116:TYR:CE1	2.53	0.88
15:N:8:GLU:HB3	44:5:64:G:C2	2.07	0.88
15:N:128:LYS:O	44:5:270:U:O3'	1.92	0.88
39:l:40:LYS:CD	44:5:355:A:C5'	2.52	0.88
3:B:243:HIS:N	44:5:2948:C:H4'	1.87	0.88
3:B:262:TRP:HE1	16:O:66:LYS:HG2	1.33	0.88
5:D:305:ASN:ND2	44:5:1083:G:O2'	2.08	0.88
15:N:13:LYS:HG2	44:5:78:U:H5'	1.55	0.88
15:N:129:TYR:CD1	44:5:318:A:C4	2.60	0.88
44:5:2278:C:H1'	44:5:2307:G:N2	1.88	0.88
1:z:223:PHE:HB2	44:5:2475:G:H2'	1.54	0.87
1:z:229:LEU:HD12	44:5:2476:C:C1'	2.01	0.87
1:z:257:ASN:HD21	44:5:2486:A:C4'	1.87	0.87
12:s:254:ARG:H	44:5:1246:G:H2'	1.11	0.87
15:N:172:ARG:NH2	44:5:1547:G:H5''	1.87	0.87
26:Y:87:LYS:NZ	44:5:375:A:H4'	1.89	0.87
34:g:2:ALA:N	44:5:1859:A:O5'	2.07	0.87
43:q:55:LYS:CG	44:5:1223:A:C3'	2.51	0.87
43:q:104:ARG:NH1	44:5:1232:C:H4'	1.88	0.87
44:5:206:G:N1	44:5:223:U:O2	2.07	0.87
15:N:170:LYS:CE	44:5:31:C:H5'	2.04	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:170:LYS:HD3	44:5:30:G:HO2'	1.37	0.87
26:Y:89:LYS:HD3	44:5:375:A:OP2	1.74	0.87
31:d:123:LYS:HZ1	44:5:3075:G:H5''	1.37	0.87
44:5:1717:U:H3	44:5:1727:G:H1	1.22	0.87
1:z:230:GLN:HB3	44:5:2486:A:C2'	2.05	0.87
3:B:7:GLU:CD	44:5:2915:U:C4	2.52	0.87
5:D:533:ARG:CZ	46:7:1:G:H4'	2.05	0.87
7:F:284:SER:CA	21:T:143:THR:H	1.86	0.87
10:I:224:LYS:HD3	44:5:1009:A:O3'	1.73	0.87
29:b:111:HIS:O	29:b:115:GLY:HA3	1.74	0.87
34:g:5:VAL:O	44:5:1857:C:O2	1.93	0.87
42:p:4:ARG:NH1	44:5:838:G:C6	2.42	0.87
43:q:45:LEU:HD23	44:5:1257:C:O2'	1.73	0.87
44:5:1071:U:C2	44:5:1087:G:C6	2.56	0.87
44:5:3332:U:H3	44:5:3371:G:H1	1.18	0.87
7:F:286:TYR:CA	21:T:140:ILE:HG23	2.05	0.87
10:I:209:ARG:HH12	44:5:2648:G:P	1.96	0.87
10:I:276:VAL:HA	44:5:1044:U:O2'	1.73	0.87
11:J:152:ARG:CG	41:o:104:LEU:HB2	2.04	0.87
15:N:200:TRP:CE2	37:j:813:PHE:CZ	2.63	0.87
43:q:43:LYS:HD2	44:5:1233:G:O6	1.72	0.87
44:5:532:A:H2	44:5:560:G:H1	1.15	0.87
46:7:78:U:C2	46:7:102:A:N7	2.43	0.87
47:x:23:UNK:CA	48:y:9:UNK:O	2.08	0.87
1:z:363:ALA:HB2	44:5:2466:G:N1	1.88	0.87
9:H:253:ILE:HD11	14:M:154:SER:HB3	1.56	0.87
43:q:83:ASN:HB3	44:5:1281:G:N3	1.89	0.87
1:z:221:ARG:N	44:5:2470:C:C4	2.16	0.87
1:z:368:GLU:CD	44:5:2469:G:H5'	1.69	0.87
7:F:284:SER:N	21:T:143:THR:HG22	1.89	0.87
12:s:195:VAL:O	44:5:1263:A:C2	2.28	0.87
44:5:22:G:N1	45:8:35:C:N3	2.22	0.87
44:5:2278:C:C2	44:5:2307:G:C2	2.63	0.87
1:z:345:ASP:O	44:5:2466:G:H5''	1.64	0.87
5:D:265:LYS:HG3	44:5:2686:A:C4'	2.03	0.87
12:s:283:LYS:N	44:5:1258:U:O2	2.08	0.87
15:N:7:LEU:CG	44:5:321:C:H42	1.88	0.87
15:N:41:ARG:HG2	44:5:114:A:N7	1.87	0.87
18:Q:140:HIS:NE2	44:5:976:U:O4	2.07	0.87
34:g:6:THR:HA	44:5:1486:G:H21	1.37	0.87
43:q:80:VAL:HG21	44:5:1284:C:C5	2.07	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:19:U:O2	45:8:140:G:C6	2.28	0.87
44:5:301:G:H1	44:5:314:U:H3	0.90	0.87
1:z:258:MET:HB2	44:5:2468:A:N7	1.90	0.87
4:C:322:GLN:OE1	44:5:598:A:H1'	1.74	0.87
10:I:225:LYS:NZ	44:5:1010:G:C5'	2.37	0.87
10:I:275:ARG:NH2	44:5:1043:C:OP1	2.07	0.87
12:s:189:GLU:O	44:5:1234:G:H2'	1.75	0.87
13:L:173:ALA:HB1	36:i:10:GLY:HA2	1.56	0.87
15:N:29:GLU:N	44:5:299:G:H21	1.72	0.87
15:N:126:THR:CB	44:5:272:G:N9	2.10	0.87
23:V:175:LEU:HD12	44:5:2916:U:O3'	1.74	0.87
44:5:2211:U:H3	44:5:2234:G:H1	1.21	0.87
1:z:366:ASN:N	44:5:2477:G:H2'	1.72	0.87
9:H:356:GLN:OE1	44:5:3109:G:N2	2.06	0.87
12:s:222:LEU:O	44:5:1232:C:O2'	1.91	0.87
12:s:262:LEU:O	44:5:1266:G:C6	2.27	0.87
34:g:7:PHE:CZ	44:5:1856:C:O4'	2.28	0.87
44:5:760:G:N2	44:5:771:A:C8	2.41	0.87
1:z:231:VAL:CG2	44:5:2487:U:H3'	2.03	0.86
6:E:237:GLU:OE2	32:e:242:THR:OG1	1.92	0.86
6:E:246:ARG:CB	44:5:607:A:OP2	2.21	0.86
12:s:254:ARG:C	44:5:1272:C:OP1	2.18	0.86
15:N:8:GLU:CB	44:5:322:U:C2	2.57	0.86
15:N:191:TRP:CE2	44:5:2166:A:C5	2.55	0.86
29:b:116:THR:O	29:b:120:LEU:HB2	1.74	0.86
42:p:2:ALA:N	44:5:853:G:O6	2.07	0.86
42:p:82:THR:O	42:p:86:LEU:HB2	1.75	0.86
43:q:41:VAL:O	44:5:1257:C:C1'	2.23	0.86
43:q:210:UNK:O	48:y:9:UNK:CA	2.23	0.86
44:5:2196:C:O4'	44:5:2271:A:H1'	1.74	0.86
1:z:217:GLU:H	44:5:2489:C:H42	1.14	0.86
1:z:300:LYS:HD2	44:5:2485:A:O3'	1.75	0.86
12:s:284:ASN:O	44:5:1278:A:H2	1.57	0.86
15:N:42:PRO:CD	44:5:113:C:H1'	2.05	0.86
15:N:144:ARG:NH2	44:5:143:G:H22	1.68	0.86
44:5:1210:U:O2	44:5:1295:G:N1	2.08	0.86
1:z:260:ILE:CB	44:5:2480:A:C8	2.58	0.86
3:B:66:LYS:NZ	23:V:140:PHE:HB3	1.90	0.86
7:F:286:TYR:CD1	21:T:140:ILE:CG1	2.58	0.86
12:s:272:THR:CB	44:5:1262:G:C4	2.44	0.86
13:L:134:GLU:CD	35:h:117:ALA:CB	2.49	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:19:LEU:CD1	44:5:66:A:N3	2.37	0.86
33:f:360:GLN:HE21	44:5:582:G:N2	1.73	0.86
33:f:393:HIS:ND1	44:5:1328:C:OP1	2.08	0.86
8:G:207:LYS:NZ	44:5:2524:A:H62	1.72	0.86
4:C:188:ARG:NH1	44:5:1382:G:OP2	2.07	0.86
15:N:18:VAL:C	44:5:315:C:H4'	2.00	0.86
15:N:31:ARG:CZ	44:5:300:G:C5'	2.39	0.86
15:N:71:ARG:NE	44:5:290:G:O3'	2.09	0.86
15:N:129:TYR:C	44:5:318:A:C4'	2.47	0.86
15:N:203:ARG:NH2	44:5:903:U:C5'	2.38	0.86
19:R:282:ALA:O	19:R:286:ARG:HB2	1.74	0.86
38:k:5:ILE:HB	38:k:53:THR:O	1.75	0.86
43:q:57:THR:N	44:5:1284:C:N4	2.23	0.86
43:q:107:ALA:O	44:5:1231:A:C6	2.28	0.86
44:5:3231:U:C2	44:5:3256:G:N1	2.43	0.86
1:z:232:GLY:C	44:5:2464:U:C6	2.38	0.86
7:F:336:LEU:HD21	44:5:986:U:O4'	1.76	0.86
12:s:223:LYS:HA	43:q:44:GLU:CB	2.02	0.86
15:N:4:TYR:HA	44:5:321:C:O2	1.76	0.86
15:N:24:ARG:HB2	44:5:300:G:N2	1.91	0.86
15:N:41:ARG:N	44:5:267:G:H22	1.73	0.86
1:z:372:ASP:CA	44:5:2467:G:C1'	2.53	0.86
4:C:5:GLN:HA	4:C:20:LEU:O	1.75	0.86
4:C:300:ARG:HD3	18:Q:166:ASP:HB2	1.56	0.86
10:I:380:ALA:HB2	44:5:1010:G:H1'	1.56	0.86
12:s:295:GLY:HA3	44:5:1276:U:C5	2.07	0.86
15:N:122:ASN:ND2	44:5:317:A:C4	2.16	0.86
24:W:270:ALA:O	24:W:274:LYS:HB2	1.75	0.86
25:X:174:TYR:HB2	35:h:25:LYS:HD3	1.57	0.86
43:q:36:GLN:HB2	44:5:1265:U:O4	1.75	0.86
1:z:402:LYS:CG	44:5:2462:A:C8	2.59	0.86
3:B:348:ARG:HH12	44:5:3037:U:H5''	1.40	0.86
4:C:114:ASN:ND2	44:5:680:G:H5''	1.90	0.86
11:J:152:ARG:HD3	41:o:104:LEU:CG	2.06	0.86
11:J:153:ASN:ND2	41:o:102:GLN:O	2.07	0.86
15:N:26:ARG:HG2	36:i:30:LYS:HZ2	1.41	0.86
47:x:29:UNK:CB	48:y:15:UNK:O	2.19	0.86
1:z:213:LYS:HA	44:5:2489:C:C5	2.11	0.86
1:z:402:LYS:CG	44:5:2462:A:H8	1.87	0.86
12:s:215:SER:C	44:5:1264:G:C8	2.53	0.86
12:s:269:ILE:N	44:5:1264:G:N3	2.23	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:7:LEU:O	44:5:64:G:H3'	1.74	0.86
34:g:13:TYR:HD1	44:5:1855:U:H4'	1.40	0.86
35:h:86:ARG:HD2	45:8:36:G:H3'	1.55	0.86
43:q:33:VAL:N	44:5:1229:G:C6	2.42	0.86
44:5:597:G:N2	44:5:606:C:O2	2.08	0.86
1:z:409:PHE:CD2	44:5:2490:C:O4'	2.28	0.86
12:s:260:ARG:CB	44:5:1266:G:H3'	2.03	0.86
15:N:72:LYS:N	44:5:290:G:H2'	1.90	0.86
15:N:92:LEU:CD1	44:5:2600:C:OP1	2.23	0.86
26:Y:113:LYS:HZ3	45:8:84:C:H1'	1.41	0.86
28:a:168:ARG:O	28:a:172:LEU:HB2	1.76	0.86
31:d:115:GLN:NE2	44:5:1474:A:O3'	2.09	0.86
43:q:35:SER:C	44:5:1278:A:N6	2.32	0.86
12:s:242:GLN:CB	43:q:41:VAL:HG23	2.06	0.85
12:s:276:VAL:CB	44:5:1255:C:OP1	2.24	0.85
15:N:10:LEU:HB2	44:5:65:A:C8	2.07	0.85
1:z:228:GLU:CD	44:5:2480:A:C8	2.52	0.85
1:z:258:MET:CE	44:5:2468:A:H8	1.81	0.85
6:E:354:ILE:HG21	44:5:3268:A:N7	1.91	0.85
15:N:26:ARG:CB	36:i:30:LYS:HZ2	1.88	0.85
43:q:207:UNK:O	47:x:4:UNK:CA	2.24	0.85
6:E:400:PHE:O	14:M:262:THR:C	2.19	0.85
10:I:201:PRO:HB2	44:5:1047:A:OP1	1.76	0.85
11:J:153:ASN:O	41:o:103:ALA:HB1	1.76	0.85
12:s:195:VAL:HA	44:5:1237:G:HO2'	1.08	0.85
15:N:77:LYS:CG	44:5:2430:A:O4'	2.16	0.85
21:T:129:LYS:HG2	44:5:1097:G:H4'	1.59	0.85
35:h:59:ASN:ND2	45:8:97:A:O2'	2.10	0.85
43:q:45:LEU:O	44:5:1258:U:P	2.34	0.85
1:z:300:LYS:CB	44:5:2485:A:H5'	2.05	0.85
1:z:361:ALA:HB2	44:5:2485:A:O2'	1.76	0.85
12:s:218:VAL:CA	44:5:1234:G:N7	2.39	0.85
12:s:279:ARG:CA	43:q:43:LYS:H	1.89	0.85
15:N:10:LEU:HB3	44:5:65:A:H8	1.31	0.85
15:N:28:TRP:N	44:5:67:A:N1	2.23	0.85
15:N:186:GLY:C	44:5:1548:C:OP2	2.19	0.85
15:N:190:THR:HB	44:5:1548:C:H3'	1.58	0.85
43:q:57:THR:CG2	44:5:1284:C:N1	2.39	0.85
43:q:58:MET:O	44:5:1286:A:N6	2.08	0.85
43:q:83:ASN:OD1	44:5:1281:G:C6	2.27	0.85
44:5:521:A:N7	44:5:571:U:C2	2.44	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:3231:U:N3	44:5:3256:G:C6	2.43	0.85
1:z:258:MET:HG2	44:5:2479:C:C6	2.11	0.85
8:G:413:ARG:O	8:G:417:SER:HB2	1.76	0.85
12:s:254:ARG:O	44:5:1247:U:C3'	2.22	0.85
15:N:18:VAL:CG2	44:5:315:C:O3'	2.24	0.85
15:N:50:ARG:H	44:5:321:C:H4'	1.41	0.85
15:N:75:VAL:N	44:5:2431:C:O2	2.09	0.85
15:N:174:ILE:HG23	44:5:55:G:H5''	0.88	0.85
15:N:190:THR:CA	44:5:1549:U:O5'	2.22	0.85
21:T:130:ARG:NH2	44:5:1062:A:O2'	2.10	0.85
43:q:57:THR:CB	44:5:1285:G:C2	2.59	0.85
1:z:213:LYS:CA	44:5:2489:C:C6	2.57	0.85
1:z:367:VAL:CG2	44:5:2478:C:C1'	1.85	0.85
1:z:404:SER:N	44:5:2463:G:O6	2.09	0.85
12:s:198:GLN:HA	44:5:1239:C:C6	2.11	0.85
12:s:218:VAL:O	44:5:1234:G:N7	2.08	0.85
12:s:260:ARG:HA	44:5:1266:G:H3'	0.87	0.85
43:q:46:ARG:HE	44:5:1256:G:H5''	1.38	0.85
47:x:23:UNK:CA	48:y:13:UNK:CB	2.55	0.85
7:F:283:GLY:CA	21:T:143:THR:CG2	2.54	0.85
12:s:242:GLN:O	44:5:1232:C:O2'	1.94	0.85
15:N:7:LEU:HD22	44:5:321:C:N4	1.90	0.85
15:N:81:TYR:HA	44:5:2427:U:H6	1.40	0.85
15:N:199:LEU:HA	37:j:816:GLN:O	1.76	0.85
6:E:400:PHE:O	14:M:263:ASP:N	2.10	0.85
12:s:214:ALA:O	44:5:1235:U:H1'	1.77	0.85
15:N:18:VAL:CG2	44:5:315:C:H5'	2.05	0.85
42:p:83:ILE:O	42:p:87:ARG:HB2	1.76	0.85
44:5:838:G:O6	44:5:855:U:N3	2.10	0.85
44:5:1544:G:H1	44:5:1549:U:H3	0.88	0.85
1:z:214:TYR:CZ	44:5:2465:G:C2	2.64	0.85
1:z:383:ASN:CB	44:5:2493:U:OP1	2.24	0.85
8:G:221:ARG:O	8:G:225:GLN:HB2	1.77	0.85
15:N:7:LEU:HD11	44:5:111:C:C4	2.12	0.85
15:N:23:GLN:OE1	44:5:67:A:C5'	2.20	0.85
15:N:75:VAL:CG2	44:5:2430:A:C6	2.28	0.85
15:N:75:VAL:O	44:5:2430:A:C2	2.29	0.85
15:N:76:PRO:HB3	44:5:2431:C:OP2	1.76	0.85
35:h:63:ARG:NH2	45:8:97:A:OP1	2.09	0.85
43:q:36:GLN:N	44:5:1231:A:C2'	2.08	0.85
43:q:64:ARG:HH21	44:5:1285:G:H2'	0.98	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:997:A:N3	46:7:102:A:H2	1.73	0.85
12:s:184:ALA:CB	44:5:1239:C:OP2	2.24	0.85
12:s:237:HIS:HA	44:5:1256:G:H8	1.40	0.85
15:N:57:GLN:HE21	44:5:150:A:C5'	1.90	0.85
15:N:126:THR:HG1	44:5:273:A:H8	0.85	0.85
15:N:177:GLY:C	44:5:54:C:C5	2.54	0.85
15:N:189:LYS:HD2	44:5:1548:C:H5''	1.59	0.85
20:S:66:GLU:C	44:5:522:A:HO2'	1.83	0.85
25:X:136:LYS:NZ	44:5:3:U:H3	1.74	0.85
1:z:233:LEU:HD11	44:5:2492:C:C4	2.12	0.84
3:B:7:GLU:HG2	44:5:2915:U:O4	1.77	0.84
7:F:336:LEU:HG	44:5:986:U:O2'	1.76	0.84
12:s:184:ALA:HA	44:5:1239:C:OP2	1.77	0.84
15:N:204:LYS:C	37:j:801:SER:O	2.19	0.84
42:p:57:CYS:HB3	42:p:62:LYS:O	1.77	0.84
43:q:42:ARG:CD	44:5:1260:A:H3'	2.00	0.84
44:5:278:U:O2	44:5:287:G:N1	2.10	0.84
44:5:1698:C:O2	44:5:1747:G:N2	2.10	0.84
44:5:3099:C:H42	44:5:3135:U:H3	0.87	0.84
1:z:234:LYS:HG3	44:5:2464:U:N1	1.92	0.84
9:H:356:GLN:CD	44:5:3109:G:H21	1.84	0.84
12:s:222:LEU:CA	44:5:1233:G:O5'	2.24	0.84
13:L:49:ARG:CB	35:h:116:TYR:CE2	2.60	0.84
15:N:5:LYS:CE	44:5:323:A:H5''	2.07	0.84
15:N:18:VAL:N	44:5:315:C:H4'	1.91	0.84
15:N:26:ARG:HA	36:i:30:LYS:HZ3	1.39	0.84
15:N:32:GLN:HG2	44:5:296:A:N3	1.92	0.84
24:W:166:PHE:O	24:W:173:ILE:HA	1.77	0.84
43:q:81:LYS:HZ2	44:5:1282:G:H21	1.19	0.84
44:5:834:U:O2	44:5:859:G:C6	2.29	0.84
44:5:2841:G:N2	44:5:2847:A:H62	1.75	0.84
1:z:367:VAL:HG21	44:5:2478:C:C2'	2.07	0.84
12:s:286:HIS:CB	44:5:1278:A:C2'	2.54	0.84
15:N:121:VAL:HG13	44:5:320:G:OP2	1.76	0.84
34:g:7:PHE:CZ	44:5:1856:C:C1'	2.60	0.84
37:j:789:LYS:HE3	44:5:2138:A:C6	2.11	0.84
43:q:100:ILE:HD13	44:5:1259:A:C4	1.71	0.84
12:s:282:PHE:CB	44:5:1258:U:O2'	2.25	0.84
12:s:294:ALA:HB3	44:5:1276:U:OP1	1.74	0.84
15:N:25:VAL:CB	44:5:299:G:H1	1.89	0.84
15:N:185:ALA:O	44:5:1548:C:C5'	2.21	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Y:75:ARG:HB2	45:8:72:A:H5'	1.58	0.84
29:b:108:ASN:HB2	44:5:1076:C:H5'	1.57	0.84
43:q:35:SER:O	44:5:1278:A:N6	2.11	0.84
47:x:23:UNK:C	48:y:10:UNK:CA	2.56	0.84
3:B:66:LYS:HZ2	23:V:140:PHE:CA	1.90	0.84
11:J:153:ASN:CB	41:o:103:ALA:HA	2.01	0.84
12:s:212:PRO:O	44:5:1236:G:H5''	1.77	0.84
13:L:11:LYS:HE2	44:5:86:G:O2'	1.76	0.84
15:N:3:ALA:CA	44:5:110:G:C1'	2.55	0.84
15:N:141:ALA:CB	44:5:125:C:O2'	2.26	0.84
15:N:186:GLY:O	44:5:1548:C:C6	2.30	0.84
25:X:225:ASN:O	25:X:236:ALA:HA	1.77	0.84
43:q:28:VAL:HG22	44:5:1281:G:H4'	1.55	0.84
44:5:1618:G:O2'	45:8:126:A:N1	2.11	0.84
2:A:80:GLU:HG3	42:p:66:GLY:HA2	1.60	0.84
7:F:289:ALA:CB	21:T:137:GLU:HA	2.06	0.84
15:N:18:VAL:CA	44:5:315:C:C5'	2.48	0.84
15:N:98:LEU:HD23	44:5:289:A:H5''	0.86	0.84
15:N:172:ARG:HH21	44:5:1547:G:C5'	1.89	0.84
15:N:179:LYS:CG	44:5:52:A:N6	2.40	0.84
34:g:13:TYR:CD1	44:5:1855:U:H5'	2.12	0.84
44:5:160:G:N1	44:5:261:U:C2	2.43	0.84
44:5:2762:A:N6	44:5:2795:U:C2	2.45	0.84
47:x:22:UNK:CB	48:y:5:UNK:O	2.26	0.84
3:B:243:HIS:H	44:5:2948:C:C4'	1.90	0.84
4:C:356:THR:O	4:C:360:LYS:HB2	1.77	0.84
5:D:548:ALA:O	5:D:552:ALA:HB3	1.77	0.84
6:E:246:ARG:HD3	44:5:608:A:C5	2.12	0.84
12:s:257:SER:H	44:5:1247:U:C2'	1.90	0.84
12:s:277:GLY:CA	44:5:1256:G:C5	2.58	0.84
44:5:4:U:O2	45:8:155:A:N6	2.11	0.84
44:5:1018:G:C6	44:5:1034:U:N3	2.45	0.84
1:z:214:TYR:O	44:5:2466:G:N1	2.09	0.84
6:E:332:LYS:HA	44:5:3271:G:C2	2.12	0.84
10:I:383:LYS:HZ3	44:5:1040:A:C1'	1.91	0.84
42:p:16:VAL:HG22	44:5:1927:G:C8	2.13	0.84
1:z:263:PHE:HZ	44:5:2480:A:OP1	1.59	0.84
1:z:359:CYS:HB3	44:5:2464:U:C3'	2.08	0.84
11:J:187:PHE:C	44:5:2672:G:O2'	2.20	0.84
12:s:223:LYS:O	44:5:1233:G:H1'	1.77	0.84
15:N:13:LYS:HZ1	44:5:78:U:C3'	1.75	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:21:PHE:CZ	36:i:28:TYR:CD1	2.54	0.84
15:N:57:GLN:CD	44:5:150:A:O5'	2.19	0.84
15:N:64:VAL:CG2	44:5:269:G:OP1	2.25	0.84
15:N:176:LYS:O	44:5:54:C:C4	2.30	0.84
23:V:175:LEU:HD13	44:5:2916:U:C5'	2.08	0.84
37:j:838:LYS:HD2	44:5:363:G:OP2	1.77	0.84
43:q:211:UNK:C	47:x:8:UNK:N	2.36	0.84
44:5:2277:C:C4'	44:5:2317:A:C4'	2.30	0.84
1:z:233:LEU:HD11	44:5:2492:C:C2	2.13	0.84
1:z:258:MET:SD	44:5:2479:C:C6	2.71	0.84
5:D:292:GLN:HG2	44:5:2748:A:C2	2.12	0.84
10:I:301:ARG:NH1	44:5:2623:G:N1	2.26	0.84
12:s:223:LYS:CA	43:q:44:GLU:HB2	2.06	0.84
15:N:90:ASN:HA	44:5:2600:C:H5'	1.57	0.84
15:N:177:GLY:O	44:5:54:C:H6	1.59	0.84
21:T:110:LYS:NZ	44:5:1068:C:H5'	1.92	0.84
37:j:811:ARG:NH1	39:l:51:ILE:HD12	1.87	0.84
42:p:53:GLY:O	42:p:65:ALA:HA	1.77	0.84
44:5:394:G:H21	44:5:399:A:H62	1.25	0.84
44:5:2762:A:N6	44:5:2795:U:H3	1.74	0.84
44:5:3023:U:N3	44:5:3032:A:C8	2.38	0.84
12:s:278:CYS:CB	44:5:1261:G:P	2.65	0.83
15:N:30:TYR:N	44:5:318:A:N6	2.09	0.83
15:N:89:VAL:HG13	44:5:2600:C:C6	2.12	0.83
24:W:179:SER:O	24:W:183:SER:HB3	1.78	0.83
43:q:107:ALA:HA	44:5:1229:G:C3'	2.07	0.83
44:5:3109:G:N1	44:5:3125:U:O2	2.10	0.83
2:A:146:THR:O	2:A:157:VAL:HA	1.77	0.83
12:s:188:LYS:N	44:5:1238:C:P	2.50	0.83
15:N:3:ALA:CB	44:5:111:C:C1'	2.56	0.83
15:N:79:ALA:N	44:5:2430:A:N6	2.26	0.83
15:N:93:LYS:HD3	44:5:289:A:N3	1.92	0.83
15:N:190:THR:CG2	44:5:1548:C:H5	1.51	0.83
26:Y:90:VAL:O	44:5:378:A:C1'	2.26	0.83
34:g:14:ASN:O	44:5:827:A:H4'	1.78	0.83
44:5:1018:G:O6	44:5:1034:U:N3	2.10	0.83
44:5:2263:C:H2'	44:5:2264:U:C6	2.12	0.83
15:N:204:LYS:HZ2	37:j:803:THR:HB	1.42	0.83
25:X:136:LYS:HE2	44:5:3:U:N3	1.92	0.83
43:q:30:VAL:N	44:5:1281:G:C1'	2.31	0.83
43:q:58:MET:O	44:5:1222:G:O5'	1.84	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:390:LYS:NZ	44:5:3214:U:H6	1.72	0.83
12:s:286:HIS:CB	44:5:1278:A:O2'	2.26	0.83
12:s:296:GLU:C	44:5:1275:C:H1'	2.04	0.83
15:N:10:LEU:HB2	44:5:77:A:H1'	1.59	0.83
15:N:12:ARG:HD2	44:5:64:G:O5'	1.75	0.83
15:N:35:VAL:N	44:5:268:A:C4	2.42	0.83
37:j:789:LYS:CD	44:5:2138:A:C5	2.61	0.83
43:q:52:LEU:C	44:5:1280:C:H5''	2.03	0.83
43:q:57:THR:HG23	44:5:1284:C:H42	1.39	0.83
1:z:218:THR:CG2	44:5:2489:C:O5'	2.26	0.83
1:z:400:VAL:C	44:5:2452:G:O6	2.21	0.83
7:F:332:ALA:HA	44:5:987:U:H5'	1.58	0.83
12:s:284:ASN:O	44:5:1278:A:N1	2.11	0.83
14:M:274:LYS:NZ	44:5:3215:A:N7	2.26	0.83
15:N:39:ALA:HB1	44:5:267:G:N3	1.94	0.83
15:N:77:LYS:HB3	44:5:2429:G:H2'	1.59	0.83
37:j:788:GLY:N	44:5:2138:A:O3'	2.11	0.83
1:z:225:GLU:HG2	44:5:2458:A:N9	1.88	0.83
1:z:226:THR:HG23	44:5:2481:G:N2	1.64	0.83
1:z:258:MET:C	44:5:2480:A:P	2.44	0.83
9:H:239:LYS:NZ	44:5:3184:A:O3'	2.11	0.83
12:s:189:GLU:O	44:5:1234:G:C3'	2.27	0.83
15:N:70:ASN:O	44:5:291:C:N4	2.11	0.83
17:P:121:GLN:NE2	45:8:13:A:C2	2.47	0.83
19:R:155:ARG:HH21	44:5:1873:U:H3'	1.44	0.83
22:U:164:LYS:NZ	44:5:1682:U:C5	2.46	0.83
44:5:275:U:H3	44:5:290:G:H1	1.20	0.83
44:5:2482:U:N3	44:5:2486:A:N6	2.26	0.83
6:E:291:GLY:HA3	6:E:298:VAL:O	1.77	0.83
13:L:62:THR:HG22	44:5:72:C:O2	1.79	0.83
15:N:72:LYS:CE	44:5:292:U:C1'	2.56	0.83
15:N:170:LYS:HE2	44:5:30:G:C3'	2.08	0.83
44:5:509:U:O2	44:5:582:G:C6	2.30	0.83
2:A:186:PHE:O	2:A:190:ARG:HB2	1.79	0.83
4:C:55:LYS:NZ	45:8:26:U:OP1	2.10	0.83
10:I:383:LYS:CD	44:5:1040:A:O2'	2.27	0.83
15:N:3:ALA:HB1	44:5:111:C:C1'	2.08	0.83
15:N:7:LEU:HB3	44:5:321:C:H42	1.37	0.83
15:N:72:LYS:NZ	44:5:292:U:C1'	2.41	0.83
15:N:129:TYR:CE2	44:5:271:C:H4'	1.80	0.83
16:O:67:THR:HG23	44:5:3008:A:H4'	1.60	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:j:802:HIS:NE2	44:5:815:G:OP1	2.12	0.83
44:5:172:G:O6	44:5:246:U:N3	2.12	0.83
44:5:679:U:H3	44:5:701:G:H1	1.26	0.83
1:z:225:GLU:CG	44:5:2458:A:C8	2.62	0.83
10:I:304:TRP:CE2	44:5:2646:C:H5''	2.13	0.83
12:s:242:GLN:CB	44:5:1261:G:N7	2.42	0.83
12:s:256:LYS:N	44:5:1268:G:C6	2.35	0.83
12:s:281:ASP:O	44:5:1258:U:H1'	1.79	0.83
15:N:25:VAL:HA	44:5:299:G:H1	0.66	0.83
44:5:184:U:O2	44:5:232:G:C2	2.31	0.83
44:5:532:A:H2	44:5:560:G:N1	1.71	0.83
44:5:1071:U:O2	44:5:1087:G:C2	2.32	0.83
10:I:189:ARG:NH2	44:5:1128:U:O5'	2.11	0.83
11:J:152:ARG:HD3	41:o:104:LEU:CB	2.09	0.83
12:s:298:GLU:O	44:5:1273:A:N7	2.12	0.83
12:s:300:PRO:N	44:5:1267:U:C2	2.47	0.83
15:N:5:LYS:HB2	44:5:322:U:C2'	2.09	0.83
28:a:83:PRO:HB3	44:5:1427:U:OP1	1.79	0.83
34:g:10:ARG:NH1	44:5:1489:A:OP1	2.12	0.83
43:q:81:LYS:HZ2	44:5:1282:G:N2	1.77	0.83
43:q:107:ALA:N	44:5:1229:G:H2'	1.80	0.83
44:5:412:G:N2	45:8:11:C:O2	2.12	0.83
44:5:538:G:C2	44:5:553:U:O2	2.32	0.83
44:5:2198:A:C4	44:5:2270:A:C8	2.67	0.83
1:z:400:VAL:HB	44:5:2494:A:O2'	1.79	0.82
5:D:533:ARG:NH2	46:7:1:G:H4'	1.94	0.82
9:H:219:SER:O	44:5:3198:U:N3	2.11	0.82
10:I:219:TYR:HB2	44:5:1008:U:O2'	1.78	0.82
13:L:61:PRO:HA	44:5:74:G:O2'	1.79	0.82
15:N:79:ALA:HA	44:5:2429:G:N7	1.94	0.82
44:5:523:A:N7	44:5:569:A:N1	2.27	0.82
44:5:2275:A:C6	44:5:2312:A:N7	2.08	0.82
1:z:220:LYS:HE3	44:5:2488:A:N1	1.94	0.82
1:z:398:SER:C	44:5:2496:C:C5	1.98	0.82
10:I:225:LYS:HZ3	44:5:1010:G:C4'	1.91	0.82
12:s:189:GLU:O	44:5:1234:G:C2'	2.27	0.82
12:s:262:LEU:O	44:5:1266:G:C2	2.31	0.82
15:N:150:TRP:C	45:8:142:C:C4'	2.51	0.82
44:5:838:G:C6	44:5:855:U:N3	2.47	0.82
44:5:2196:C:O4'	44:5:2271:A:C1'	2.27	0.82
8:G:357:LYS:HD2	44:5:6:A:O3'	1.79	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:s:192:GLY:N	44:5:1234:G:O2'	2.12	0.82
15:N:16:SER:CB	44:5:68:C:O2	1.98	0.82
15:N:22:LEU:CG	44:5:316:U:H6	1.92	0.82
15:N:26:ARG:NH1	44:5:317:A:C5'	2.37	0.82
15:N:189:LYS:CD	44:5:1549:U:OP2	2.26	0.82
36:i:62:ARG:CZ	44:5:2503:G:H21	1.91	0.82
44:5:186:U:H2'	44:5:229:G:H1	1.44	0.82
5:D:525:TYR:OH	46:7:121:U:OP2	1.96	0.82
7:F:285:TYR:CE2	21:T:143:THR:HA	2.14	0.82
15:N:5:LYS:O	44:5:64:G:N3	2.13	0.82
15:N:19:LEU:C	44:5:66:A:O3'	2.19	0.82
15:N:28:TRP:CH2	44:5:297:G:O4'	2.32	0.82
15:N:122:ASN:N	44:5:317:A:O2'	2.11	0.82
43:q:51:VAL:HG22	44:5:1280:C:O2'	1.78	0.82
3:B:14:LEU:HB2	44:5:3010:U:C5'	2.09	0.82
3:B:65:SER:HA	44:5:3038:U:H4'	1.61	0.82
8:G:268:GLU:O	8:G:272:ARG:HB2	1.78	0.82
15:N:71:ARG:CD	44:5:290:G:H4'	2.07	0.82
15:N:188:ARG:HE	44:5:1545:A:H3'	1.09	0.82
39:l:35:ILE:HG23	44:5:351:A:H62	1.42	0.82
43:q:83:ASN:CB	44:5:1281:G:N1	2.34	0.82
1:z:368:GLU:OE1	44:5:2470:C:OP2	1.98	0.82
15:N:192:LYS:CB	44:5:1550:C:C6	2.39	0.82
16:O:172:ARG:NH1	44:5:3190:C:OP1	2.12	0.82
25:X:136:LYS:NZ	44:5:3:U:N3	2.27	0.82
36:i:82:ARG:NH1	44:5:295:A:H1'	1.95	0.82
43:q:42:ARG:HD2	44:5:1261:G:C2	2.12	0.82
1:z:227:VAL:HG22	44:5:2477:G:H3'	1.61	0.82
4:C:188:ARG:HH12	44:5:1382:G:P	2.03	0.82
8:G:201:GLY:HA3	44:5:2550:U:C6	2.15	0.82
12:s:212:PRO:C	44:5:1236:G:N9	1.76	0.82
15:N:81:TYR:N	44:5:2427:U:C4	2.48	0.82
15:N:192:LYS:CB	44:5:1549:U:C2'	2.47	0.82
21:T:70:SER:OG	44:5:2736:A:O3'	1.98	0.82
43:q:46:ARG:NH1	44:5:1257:C:C6	2.48	0.82
44:5:1922:A:N6	44:5:1929:G:C2	2.48	0.82
45:8:39:G:N3	45:8:104:A:N7	2.28	0.82
1:z:209:LYS:NZ	44:5:2466:G:N2	2.27	0.82
1:z:220:LYS:C	44:5:2476:C:N4	2.23	0.82
7:F:244:LYS:NZ	44:5:597:G:OP2	2.12	0.82
8:G:287:GLN:CD	44:5:120:G:H1'	2.04	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:s:218:VAL:CA	44:5:1234:G:C5	2.62	0.82
12:s:282:PHE:O	43:q:42:ARG:NH2	2.06	0.82
15:N:73:ARG:HD2	44:5:2600:C:C5	2.15	0.82
15:N:127:TYR:HD1	44:5:271:C:OP2	1.61	0.82
28:a:85:ARG:HH22	44:5:1426:C:P	2.02	0.82
37:j:811:ARG:CZ	39:l:51:ILE:CD1	2.57	0.82
43:q:43:LYS:CD	44:5:1233:G:O6	2.27	0.82
44:5:1018:G:N1	44:5:1034:U:O2	2.10	0.82
47:x:23:UNK:O	48:y:10:UNK:HA	1.80	0.82
6:E:248:ALA:HB3	44:5:607:A:C6	2.14	0.82
9:H:370:LYS:NZ	44:5:2901:G:O3'	2.12	0.82
17:P:101:ASN:OD1	44:5:388:G:N2	2.13	0.82
43:q:49:ALA:N	44:5:1258:U:O5'	2.13	0.82
1:z:226:THR:N	44:5:2476:C:C5'	2.28	0.82
1:z:399:LEU:N	44:5:2496:C:C5	2.42	0.82
15:N:5:LYS:CB	44:5:322:U:C2'	2.56	0.82
15:N:30:TYR:N	44:5:318:A:H61	1.74	0.82
15:N:126:THR:CA	44:5:272:G:N7	2.20	0.82
21:T:12:ARG:HE	44:5:2698:G:H4'	1.45	0.82
21:T:50:LYS:HG2	44:5:2735:U:H5''	1.62	0.82
34:g:6:THR:CA	44:5:1486:G:H21	1.92	0.82
39:l:40:LYS:CD	44:5:355:A:C4'	2.54	0.82
44:5:414:U:O4	45:8:9:A:N6	2.11	0.82
44:5:2198:A:C5	44:5:2270:A:C5	2.62	0.82
44:5:2667:A:N7	44:5:2687:G:C2	2.47	0.82
44:5:2999:U:H3	44:5:3149:G:H1	1.21	0.82
1:z:409:PHE:HA	44:5:2449:A:H3'	1.59	0.81
12:s:269:ILE:C	44:5:1246:G:H1'	2.05	0.81
19:R:235:ARG:NH1	44:5:1722:U:OP1	2.12	0.81
20:S:108:GLN:OE1	44:5:1322:U:O2'	1.98	0.81
34:g:13:TYR:CD1	44:5:1855:U:C5'	2.62	0.81
37:j:829:LYS:HD3	44:5:22:G:H5''	1.62	0.81
43:q:57:THR:C	44:5:1222:G:C1'	2.51	0.81
44:5:213:A:H62	44:5:227:G:H21	1.27	0.81
44:5:3222:U:O2	44:5:3263:G:C6	2.32	0.81
1:z:255:ARG:HB2	44:5:2466:G:H2'	1.62	0.81
6:E:400:PHE:C	14:M:262:THR:CA	2.36	0.81
15:N:15:GLN:CA	44:5:69:C:H5'	2.10	0.81
15:N:18:VAL:O	44:5:315:C:C3'	2.27	0.81
15:N:18:VAL:CB	44:5:315:C:C5'	2.56	0.81
15:N:30:TYR:H	44:5:317:A:H62	1.22	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:179:LYS:CB	44:5:52:A:N6	2.43	0.81
28:a:93:ARG:HH12	44:5:1431:G:P	2.03	0.81
34:g:5:VAL:O	44:5:1857:C:C2	2.33	0.81
34:g:10:ARG:HD2	44:5:1489:A:O5'	1.78	0.81
43:q:40:GLU:OE2	44:5:1264:G:N1	2.13	0.81
43:q:40:GLU:HG3	44:5:1232:C:OP2	1.77	0.81
1:z:220:LYS:HA	44:5:2469:G:C2	2.15	0.81
1:z:226:THR:H	44:5:2476:C:C5'	1.84	0.81
1:z:257:ASN:HD21	44:5:2486:A:C5'	1.90	0.81
1:z:411:LEU:HA	44:5:2448:G:C3'	2.08	0.81
4:C:73:ARG:HD3	44:5:805:G:O4'	1.80	0.81
6:E:241:ALA:O	44:5:591:G:O2'	1.97	0.81
7:F:286:TYR:HA	21:T:140:ILE:CB	2.11	0.81
8:G:407:GLN:O	8:G:411:ASP:HB2	1.80	0.81
11:J:151:ARG:HB3	41:o:104:LEU:O	1.79	0.81
12:s:152:LEU:HA	44:5:1239:C:HO2'	1.41	0.81
12:s:212:PRO:HA	44:5:1236:G:C4	2.13	0.81
12:s:267:LYS:CA	44:5:1276:U:H3	1.93	0.81
12:s:293:ASN:C	44:5:1231:A:H61	1.87	0.81
13:L:15:ARG:NE	44:5:97:U:H5'	1.95	0.81
15:N:75:VAL:HA	44:5:2432:A:N6	1.96	0.81
15:N:131:GLU:OE1	44:5:267:G:H1'	1.80	0.81
15:N:139:HIS:HA	44:5:145:G:C5'	2.10	0.81
15:N:187:ARG:CD	44:5:1545:A:C2'	2.50	0.81
15:N:187:ARG:O	44:5:1549:U:H1'	1.80	0.81
15:N:193:ARG:CG	44:5:1549:U:OP1	2.26	0.81
19:R:252:LYS:O	19:R:256:HIS:HB2	1.79	0.81
43:q:42:ARG:NE	44:5:1258:U:C2	2.33	0.81
43:q:43:LYS:CB	44:5:1233:G:C6	2.63	0.81
44:5:1922:A:H62	44:5:1929:G:H21	1.25	0.81
44:5:2278:C:N3	44:5:2307:G:C6	2.47	0.81
44:5:3113:A:N7	44:5:3119:U:C2	2.49	0.81
2:A:7:ASN:O	44:5:2163:C:O2'	1.98	0.81
7:F:285:TYR:CE2	21:T:142:SER:O	2.32	0.81
8:G:207:LYS:HZ3	44:5:2524:A:N6	1.74	0.81
12:s:255:ASP:O	44:5:1244:A:C2	2.31	0.81
13:L:50:PRO:CG	35:h:118:ILE:HD12	2.10	0.81
15:N:7:LEU:HD11	44:5:111:C:C6	2.14	0.81
15:N:7:LEU:O	44:5:64:G:C3'	2.29	0.81
15:N:9:GLU:OE1	44:5:63:A:N3	2.12	0.81
33:f:360:GLN:HB3	44:5:583:G:H1'	1.61	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:g:13:TYR:CE1	44:5:1855:U:O4'	2.32	0.81
43:q:55:LYS:NZ	44:5:1225:A:OP2	2.13	0.81
44:5:412:G:N1	45:8:11:C:N3	2.28	0.81
44:5:760:G:H21	44:5:771:A:H8	1.23	0.81
3:B:9:PRO:HG3	44:5:2914:G:C5'	2.07	0.81
11:J:151:ARG:HE	41:o:106:PHE:H	1.27	0.81
15:N:126:THR:HB	44:5:272:G:N9	1.33	0.81
15:N:179:LYS:CD	44:5:52:A:H62	1.94	0.81
27:Z:15:GLY:HA3	44:5:1637:A:H5''	1.63	0.81
27:Z:54:LYS:NZ	44:5:2563:G:OP2	2.13	0.81
44:5:1010:G:C6	44:5:1040:A:N1	2.49	0.81
26:Y:87:LYS:HE3	44:5:375:A:C1'	2.09	0.81
44:5:1940:G:N2	44:5:2108:C:O2	2.13	0.81
5:D:283:ARG:CZ	44:5:2703:A:C5	2.63	0.81
9:H:368:ARG:NH2	44:5:2894:C:OP2	2.14	0.81
10:I:381:PHE:CG	44:5:1041:U:O2'	2.33	0.81
15:N:16:SER:HB3	44:5:66:A:N1	1.66	0.81
15:N:177:GLY:CA	44:5:54:C:H5	1.93	0.81
34:g:10:ARG:HD2	44:5:1489:A:H5'	1.61	0.81
37:j:797:ARG:HH11	44:5:817:A:HO2'	1.25	0.81
43:q:43:LYS:HB2	44:5:1232:C:O2	1.78	0.81
44:5:3348:G:H1	44:5:3357:U:H3	1.28	0.81
1:z:229:LEU:HG	44:5:2476:C:C2'	2.10	0.81
3:B:3:HIS:CG	44:5:2938:G:N7	2.48	0.81
3:B:384:LYS:HE2	44:5:3370:A:H5'	1.62	0.81
13:L:126:PHE:CD2	35:h:115:LYS:C	2.55	0.81
15:N:22:LEU:HG	44:5:315:C:C3'	1.96	0.81
15:N:143:ARG:HB3	45:8:143:U:C5'	2.11	0.81
21:T:105:PHE:CZ	44:5:1063:G:C8	2.69	0.81
25:X:174:TYR:HB3	35:h:25:LYS:HD3	1.62	0.81
34:g:7:PHE:CZ	44:5:1856:C:H1'	2.15	0.81
43:q:57:THR:HA	44:5:1285:G:C6	2.15	0.81
1:z:367:VAL:HG21	44:5:2478:C:H1'	1.52	0.81
3:B:3:HIS:HB3	44:5:2938:G:C5	2.15	0.81
13:L:126:PHE:HE2	35:h:116:TYR:C	1.89	0.81
14:M:191:LYS:HE2	44:5:1185:C:H5''	1.63	0.81
15:N:155:VAL:CG2	45:8:141:C:C5'	2.39	0.81
16:O:25:LYS:HE2	44:5:1176:C:P	2.21	0.81
39:l:40:LYS:HE2	44:5:355:A:H5''	1.61	0.81
43:q:84:VAL:CG2	44:5:1282:G:H3'	2.10	0.81
11:J:188:SER:HB3	44:5:2672:G:H1'	1.63	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:121:VAL:CG1	44:5:318:A:P	2.66	0.81
15:N:200:TRP:CH2	37:j:813:PHE:CE1	2.68	0.81
44:5:182:U:N3	44:5:234:G:O6	2.12	0.81
1:z:258:MET:SD	44:5:2479:C:H6	2.03	0.80
6:E:381:GLN:O	6:E:385:ALA:HB2	1.80	0.80
15:N:46:ASP:OD2	44:5:322:U:H5	1.40	0.80
15:N:121:VAL:HG11	44:5:318:A:P	2.20	0.80
43:q:8:LYS:HD3	44:5:1219:C:H3'	1.63	0.80
44:5:333:G:N2	45:8:30:C:O2	2.12	0.80
46:7:79:A:H62	46:7:101:G:N2	1.77	0.80
1:z:375:VAL:HG13	44:5:2466:G:O4'	1.79	0.80
12:s:196:THR:O	44:5:1238:C:N1	2.12	0.80
15:N:5:LYS:CB	44:5:322:U:O2'	2.27	0.80
15:N:75:VAL:CB	44:5:2431:C:H42	1.92	0.80
15:N:179:LYS:CG	44:5:52:A:N7	2.41	0.80
26:Y:4:GLN:HG2	44:5:229:G:H5''	1.62	0.80
38:k:45:VAL:O	38:k:51:LEU:HA	1.80	0.80
42:p:20:SER:HB2	44:5:1926:C:OP1	1.81	0.80
44:5:22:G:N2	45:8:35:C:O2	2.14	0.80
44:5:2744:U:H3	44:5:2749:G:H1	1.25	0.80
47:x:8:UNK:C	48:y:8:UNK:CB	2.59	0.80
6:E:248:ALA:CB	44:5:607:A:C5	2.61	0.80
15:N:18:VAL:C	44:5:315:C:O3'	2.24	0.80
15:N:77:LYS:HG3	44:5:2430:A:H3'	0.85	0.80
15:N:92:LEU:HD11	44:5:2600:C:OP2	1.81	0.80
37:j:789:LYS:HZ2	44:5:2138:A:N6	1.78	0.80
43:q:214:UNK:CB	48:y:4:UNK:HA	1.91	0.80
44:5:2203:U:O2	44:5:2239:G:N1	2.13	0.80
1:z:365:GLY:HA2	44:5:2488:A:C5	2.16	0.80
1:z:398:SER:CA	44:5:2496:C:C4	1.80	0.80
3:B:62:ARG:HD3	44:5:3038:U:OP1	1.81	0.80
6:E:382:TYR:CD2	14:M:264:PHE:CD1	2.69	0.80
8:G:207:LYS:HD3	44:5:2524:A:N6	1.96	0.80
43:q:33:VAL:HB	44:5:1280:C:H42	1.12	0.80
43:q:66:PHE:HD1	44:5:1221:A:C2	1.95	0.80
44:5:196:G:N3	44:5:219:A:N1	2.29	0.80
15:N:32:GLN:NE2	44:5:296:A:C4	2.48	0.80
15:N:46:ASP:CB	44:5:322:U:H5	1.74	0.80
15:N:70:ASN:ND2	44:5:277:G:C5	2.49	0.80
15:N:183:THR:HG23	44:5:54:C:HO2'	1.46	0.80
16:O:87:MET:HG3	44:5:1312:C:O2'	1.80	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:g:4:ARG:HH12	44:5:1481:A:C1'	1.94	0.80
43:q:57:THR:CA	44:5:1285:G:C2	2.63	0.80
43:q:64:ARG:CZ	44:5:1285:G:O2'	2.30	0.80
44:5:3192:U:N3	44:5:3200:G:O6	2.11	0.80
5:D:283:ARG:NH2	44:5:2703:A:N1	2.29	0.80
10:I:304:TRP:CH2	44:5:2646:C:H4'	2.15	0.80
15:N:5:LYS:HE3	44:5:323:A:C5'	2.10	0.80
15:N:8:GLU:OE2	44:5:63:A:C6	2.34	0.80
15:N:204:LYS:OXT	37:j:814:HIS:HA	1.82	0.80
17:P:4:TYR:O	45:8:11:C:O2'	1.99	0.80
43:q:34:SER:HB3	44:5:1230:G:C8	2.15	0.80
44:5:761:A:C5	44:5:770:G:C2	2.69	0.80
44:5:838:G:N1	44:5:855:U:C2	2.45	0.80
44:5:1379:G:H1	44:5:1427:U:H3	1.30	0.80
44:5:2198:A:H62	44:5:2246:G:H21	1.30	0.80
12:s:267:LYS:C	43:q:36:GLN:HB2	2.06	0.80
15:N:18:VAL:HG22	44:5:315:C:O3'	1.82	0.80
19:R:215:LYS:NZ	44:5:1939:G:O3'	2.14	0.80
43:q:30:VAL:HG11	44:5:1260:A:H2	1.45	0.80
43:q:100:ILE:C	44:5:1260:A:H61	1.88	0.80
44:5:1379:G:N1	44:5:1427:U:O2	2.14	0.80
44:5:2194:G:C2'	44:5:2274:U:C1'	2.41	0.80
44:5:3019:U:O2	44:5:3036:G:C2	2.35	0.80
1:z:401:VAL:O	44:5:2462:A:OP2	1.92	0.80
34:g:6:THR:HA	44:5:1486:G:N2	1.96	0.80
38:k:23:ALA:O	38:k:76:ASN:HB3	1.80	0.80
43:q:30:VAL:H	44:5:1281:G:H2'	1.44	0.80
44:5:508:U:O2	44:5:583:G:N1	2.14	0.80
1:z:345:ASP:CA	44:5:2466:G:H5''	2.12	0.80
3:B:229:VAL:O	3:B:233:TRP:HB2	1.81	0.80
3:B:348:ARG:NH1	44:5:3037:U:H5''	1.97	0.80
9:H:299:ILE:HA	9:H:315:ARG:O	1.82	0.80
12:s:282:PHE:C	44:5:1260:A:N9	2.40	0.80
15:N:22:LEU:CB	44:5:316:U:H6	1.95	0.80
15:N:35:VAL:CG2	44:5:268:A:N3	2.45	0.80
15:N:173:GLY:C	44:5:1546:A:C2	2.41	0.80
26:Y:9:SER:HB2	44:5:336:A:OP1	1.82	0.80
30:c:50:VAL:HG11	44:5:2552:C:C6	2.17	0.80
31:d:118:TRP:HB2	44:5:1475:A:O2'	1.82	0.80
33:f:363:LEU:HB3	44:5:584:G:H4'	1.61	0.80
42:p:16:VAL:HG22	44:5:1927:G:N9	1.95	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:q:7:LYS:O	43:q:11:TYR:HB3	1.82	0.80
43:q:36:GLN:NE2	44:5:1246:G:N1	2.29	0.80
44:5:1448:U:O2	44:5:2356:A:C5	2.34	0.80
1:z:236:TYR:N	44:5:2493:U:C3'	2.23	0.80
1:z:399:LEU:N	44:5:2495:C:H5	1.79	0.80
12:s:224:GLU:O	44:5:1233:G:N2	2.07	0.80
12:s:290:GLU:CB	44:5:1278:A:P	2.68	0.80
13:L:126:PHE:HE2	35:h:116:TYR:O	1.63	0.80
15:N:67:ARG:HH11	44:5:293:C:H5	1.20	0.80
15:N:124:ASP:CB	44:5:272:G:H5'	2.12	0.80
15:N:183:THR:OG1	44:5:1547:G:C1'	2.29	0.80
1:z:259:SER:CB	44:5:2486:A:OP1	2.28	0.79
1:z:348:SER:HB2	44:5:2465:G:P	2.21	0.79
1:z:367:VAL:HG23	44:5:2478:C:O4'	1.82	0.79
2:A:224:THR:HG21	44:5:2201:G:H21	1.44	0.79
6:E:246:ARG:NH2	44:5:608:A:N3	2.29	0.79
6:E:399:LYS:HD3	14:M:261:LEU:N	1.96	0.79
15:N:20:ARG:HD2	44:5:68:C:H3'	1.64	0.79
15:N:67:ARG:HG3	44:5:272:G:O6	1.82	0.79
15:N:72:LYS:NZ	44:5:292:U:H4'	1.98	0.79
15:N:83:LYS:HD2	44:5:2426:U:OP2	1.82	0.79
44:5:1398:U:O2	44:5:1412:G:N1	2.10	0.79
44:5:2196:C:C1'	44:5:2271:A:C1'	2.53	0.79
1:z:408:ALA:HA	44:5:2451:G:C8	2.16	0.79
3:B:7:GLU:HB2	44:5:2915:U:C5	2.17	0.79
4:C:357:GLU:O	4:C:361:HIS:HB2	1.82	0.79
10:I:277:HIS:CE1	44:5:1007:U:O2'	2.34	0.79
43:q:30:VAL:HG11	44:5:1260:A:C2	2.18	0.79
43:q:38:MET:H	44:5:1231:A:C1'	1.94	0.79
1:z:371:GLU:OE1	44:5:2468:A:O4'	1.99	0.79
2:A:16:PHE:O	44:5:2172:A:O2'	2.00	0.79
3:B:67:PHE:CE2	23:V:217:ARG:NE	2.51	0.79
5:D:290:TYR:O	5:D:294:LYS:HB2	1.81	0.79
6:E:248:ALA:CB	44:5:607:A:C6	2.65	0.79
10:I:271:HIS:O	10:I:323:VAL:HA	1.82	0.79
12:s:215:SER:CB	44:5:1264:G:C8	2.66	0.79
15:N:30:TYR:CZ	44:5:267:G:O2'	2.35	0.79
15:N:190:THR:CG2	44:5:1548:C:H6	1.46	0.79
19:R:227:GLN:NE2	44:5:856:G:OP1	2.15	0.79
34:g:74:ARG:HB2	44:5:1639:C:C5	2.17	0.79
37:j:829:LYS:CD	44:5:22:G:H5''	2.12	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:539:C:O2	44:5:552:G:N2	2.13	0.79
44:5:2194:G:C5	44:5:2274:U:O4	2.35	0.79
44:5:2658:G:N1	44:5:2712:U:O2	2.14	0.79
1:z:236:TYR:OH	44:5:2495:C:H6	1.65	0.79
6:E:248:ALA:HB3	44:5:607:A:N7	1.98	0.79
6:E:332:LYS:HE2	44:5:3271:G:H5''	1.64	0.79
12:s:262:LEU:O	44:5:1266:G:C5	2.34	0.79
12:s:281:ASP:O	44:5:1258:U:O2'	1.98	0.79
13:L:183:ARG:HD3	44:5:765:C:C5	2.17	0.79
14:M:224:GLY:O	44:5:561:C:H5'	1.82	0.79
17:P:69:ARG:HH21	44:5:2388:U:H2'	1.47	0.79
44:5:2277:C:H4'	44:5:2317:A:H4'	0.80	0.79
44:5:2437:G:C2	44:5:2510:U:O2	2.34	0.79
1:z:362:VAL:HG13	44:5:2466:G:C4	2.18	0.79
1:z:363:ALA:HB2	44:5:2466:G:C2	2.17	0.79
9:H:291:ARG:HH11	9:H:342:ASP:HB2	1.45	0.79
12:s:240:ASN:C	43:q:44:GLU:HG2	2.04	0.79
12:s:269:ILE:CB	44:5:1246:G:C4	2.65	0.79
15:N:188:ARG:HG2	44:5:1544:G:C2	2.18	0.79
29:b:77:ASN:ND2	44:5:953:G:OP2	2.14	0.79
34:g:4:ARG:HG2	44:5:1858:A:C1'	2.11	0.79
35:h:95:PHE:HB2	44:5:135:C:HO2'	1.44	0.79
47:x:33:UNK:N	48:y:12:UNK:C	2.45	0.79
3:B:66:LYS:NZ	23:V:140:PHE:CB	2.45	0.79
12:s:198:GLN:O	44:5:1238:C:C3'	2.31	0.79
12:s:282:PHE:C	44:5:1260:A:O4'	2.23	0.79
15:N:12:ARG:HD2	44:5:64:G:C5'	2.11	0.79
36:i:26:ILE:HG12	44:5:264:G:O6	1.83	0.79
39:l:21:ARG:NH1	45:8:52:A:C8	2.51	0.79
43:q:36:GLN:O	44:5:1261:G:H1'	1.82	0.79
44:5:2196:C:O2	44:5:2270:A:H2	1.65	0.79
1:z:214:TYR:CE1	44:5:2465:G:N2	2.50	0.79
1:z:259:SER:HB2	44:5:2486:A:C5'	2.12	0.79
1:z:404:SER:CA	44:5:2461:A:N9	2.43	0.79
3:B:218:ILE:O	3:B:337:THR:HB	1.82	0.79
15:N:144:ARG:NH1	44:5:143:G:H22	1.81	0.79
15:N:189:LYS:HB2	44:5:1548:C:P	2.03	0.79
15:N:192:LYS:CB	44:5:1549:U:H2'	2.12	0.79
20:S:146:LYS:NZ	44:5:534:U:H1'	1.97	0.79
32:e:189:ILE:HG23	44:5:640:U:P	2.22	0.79
39:l:21:ARG:NH1	45:8:52:A:C1'	2.41	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:q:40:GLU:C	44:5:1232:C:H1'	1.94	0.79
44:5:995:U:C2	44:5:1054:A:N7	2.50	0.79
5:D:287:LYS:NZ	46:7:6:C:OP2	2.11	0.79
7:F:331:LYS:HZ2	44:5:988:U:P	2.05	0.79
15:N:5:LYS:HZ2	44:5:323:A:C3'	1.85	0.79
15:N:94:TYR:CB	44:5:290:G:H4'	1.92	0.79
15:N:186:GLY:N	44:5:1548:C:O4'	2.16	0.79
44:5:3234:A:N1	44:5:3253:G:C6	2.50	0.79
1:z:223:PHE:CB	44:5:2475:G:N3	2.40	0.79
1:z:229:LEU:CD1	44:5:2475:G:H21	1.93	0.79
10:I:304:TRP:CZ3	44:5:2646:C:H5'	2.16	0.79
12:s:273:ALA:CB	44:5:1264:G:C1'	2.58	0.79
15:N:91:GLU:HB2	44:5:277:G:H5'	1.65	0.79
15:N:200:TRP:HD1	37:j:815:VAL:C	1.91	0.79
37:j:838:LYS:HD2	44:5:363:G:P	2.23	0.79
43:q:6:GLU:N	44:5:1218:U:H5''	1.98	0.79
43:q:46:ARG:CZ	44:5:1257:C:C6	2.66	0.79
44:5:195:U:C2	44:5:199:A:C6	2.70	0.79
1:z:366:ASN:CA	44:5:2469:G:C2	2.54	0.79
7:F:286:TYR:CB	21:T:140:ILE:CG1	2.46	0.79
12:s:289:ILE:N	44:5:1262:G:H1	1.81	0.79
15:N:7:LEU:CD1	44:5:111:C:C6	2.65	0.79
15:N:41:ARG:O	44:5:267:G:N2	2.16	0.79
17:P:66:SER:HB2	44:5:1448:U:H5''	1.65	0.79
44:5:170:G:N1	44:5:249:U:N3	2.31	0.79
44:5:2841:G:H21	44:5:2847:A:H62	1.30	0.79
1:z:405:MET:SD	44:5:2460:U:O2'	2.40	0.78
3:B:128:LYS:NZ	44:5:3151:U:OP1	2.15	0.78
5:D:272:TYR:OH	44:5:2688:U:OP1	2.01	0.78
12:s:198:GLN:C	44:5:1238:C:C3'	2.55	0.78
13:L:158:ALA:HA	28:a:178:GLU:HA	1.65	0.78
15:N:81:TYR:HE1	44:5:2427:U:H2'	1.47	0.78
15:N:91:GLU:CD	44:5:277:G:H3'	2.07	0.78
15:N:144:ARG:CZ	44:5:143:G:H22	1.93	0.78
22:U:164:LYS:NZ	44:5:1682:U:C6	2.51	0.78
40:m:100:TYR:CD1	44:5:2896:A:H1'	2.18	0.78
43:q:35:SER:O	44:5:1278:A:C6	2.28	0.78
43:q:85:GLY:CA	44:5:1281:G:O5'	2.29	0.78
44:5:3229:G:N1	44:5:3258:U:C2	2.49	0.78
1:z:213:LYS:HA	44:5:2489:C:C2	2.17	0.78
1:z:360:LEU:C	44:5:2464:U:O3'	2.26	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:F:331:LYS:HD2	44:5:987:U:O3'	1.83	0.78
12:s:296:GLU:C	44:5:1275:C:C1'	2.49	0.78
15:N:7:LEU:CD2	44:5:111:C:H42	1.67	0.78
15:N:11:GLN:HG3	44:5:64:G:OP1	1.82	0.78
15:N:15:GLN:HB3	44:5:69:C:C5'	2.12	0.78
15:N:42:PRO:HD2	44:5:113:C:H1'	1.64	0.78
17:P:41:LEU:O	17:P:45:GLN:HB2	1.83	0.78
41:o:50:PHE:CE2	44:5:277:G:H4'	2.18	0.78
44:5:1000:C:O2	44:5:1046:A:N6	2.16	0.78
44:5:3023:U:O2	44:5:3032:A:N6	2.15	0.78
1:z:260:ILE:HB	44:5:2480:A:H8	1.47	0.78
6:E:385:ALA:CB	14:M:267:PHE:CE1	2.66	0.78
12:s:249:ILE:CB	44:5:1274:A:O5'	2.31	0.78
14:M:191:LYS:CE	44:5:1185:C:H5''	2.13	0.78
15:N:23:GLN:HA	44:5:317:A:H5'	1.63	0.78
15:N:31:ARG:N	44:5:295:A:N6	2.30	0.78
15:N:129:TYR:HE1	44:5:318:A:N3	1.78	0.78
21:T:84:TYR:CE2	29:b:89:LYS:CA	2.66	0.78
31:d:109:LEU:H	44:5:1460:A:H5'	1.49	0.78
43:q:36:GLN:CA	44:5:1262:G:C6	1.99	0.78
43:q:57:THR:O	44:5:1285:G:C2	2.36	0.78
44:5:532:A:N1	44:5:560:G:C6	2.51	0.78
1:z:362:VAL:CG1	44:5:2466:G:C6	2.39	0.78
4:C:73:ARG:HB2	44:5:804:C:O2'	1.83	0.78
12:s:220:THR:CA	44:5:1234:G:C4	2.62	0.78
14:M:272:LEU:HD13	16:O:190:VAL:HG23	1.64	0.78
15:N:144:ARG:NH1	44:5:143:G:N2	2.31	0.78
19:R:210:HIS:CE1	44:5:1941:C:P	2.77	0.78
44:5:354:U:H3	44:5:365:A:H8	1.25	0.78
1:z:226:THR:HG21	44:5:2481:G:H22	1.20	0.78
1:z:368:GLU:OE2	44:5:2471:U:O4	2.02	0.78
11:J:152:ARG:O	41:o:104:LEU:N	2.17	0.78
15:N:21:PHE:CD2	44:5:316:U:C5	2.72	0.78
15:N:75:VAL:HB	44:5:2431:C:N4	1.95	0.78
43:q:207:UNK:C	47:x:3:UNK:O	2.30	0.78
43:q:210:UNK:CB	47:x:41:UNK:C	2.33	0.78
5:D:265:LYS:HG3	44:5:2686:A:O4'	1.82	0.78
12:s:300:PRO:CA	44:5:1267:U:H2'	2.11	0.78
15:N:10:LEU:CB	44:5:77:A:O2'	2.31	0.78
15:N:21:PHE:CD2	44:5:316:U:H5	1.99	0.78
30:c:54:SER:OG	44:5:2552:C:N4	2.16	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:q:9:ALA:O	43:q:13:ALA:HB2	1.84	0.78
44:5:270:U:C2	44:5:295:A:N7	2.52	0.78
44:5:2427:U:H3	44:5:2602:G:H1	1.26	0.78
4:C:282:SER:HB3	18:Q:248:THR:OG1	1.83	0.78
15:N:85:THR:OG1	44:5:2423:U:H2'	1.83	0.78
43:q:36:GLN:OE1	44:5:1262:G:N7	2.16	0.78
45:8:39:G:N2	45:8:104:A:H8	1.32	0.78
1:z:233:LEU:HB3	1:z:360:LEU:O	1.83	0.78
6:E:246:ARG:C	44:5:607:A:O5'	2.27	0.78
12:s:216:SER:N	44:5:1264:G:C8	2.50	0.78
12:s:219:ILE:CB	44:5:1232:C:H5	1.95	0.78
15:N:65:ARG:NH1	44:5:295:A:N7	2.31	0.78
17:P:120:ASN:ND2	45:8:12:A:C2'	2.47	0.78
18:Q:269:ARG:HD2	44:5:744:A:O2'	1.83	0.78
34:g:13:TYR:OH	44:5:1854:C:H2'	1.82	0.78
1:z:410:ARG:O	44:5:2448:G:H2'	1.82	0.78
4:C:315:LYS:NZ	44:5:608:A:OP2	2.15	0.78
5:D:528:GLU:HG3	46:7:121:U:C6	2.18	0.78
10:I:381:PHE:HE1	44:5:1042:U:H5'	1.48	0.78
12:s:255:ASP:CA	44:5:1268:G:O6	2.32	0.78
14:M:274:LYS:O	14:M:278:TYR:HB2	1.84	0.78
15:N:27:VAL:HG13	44:5:300:G:HO2'	1.47	0.78
15:N:57:GLN:NE2	44:5:150:A:O5'	2.15	0.78
15:N:185:ALA:N	44:5:1548:C:O4'	2.15	0.78
33:f:360:GLN:HG3	44:5:582:G:N2	1.97	0.78
44:5:1448:U:C2	44:5:2356:A:N7	2.52	0.78
1:z:258:MET:CG	44:5:2479:C:C6	2.66	0.78
1:z:399:LEU:O	44:5:2451:G:N3	2.17	0.78
10:I:388:LYS:HA	46:7:64:A:H2'	1.63	0.78
12:s:254:ARG:HA	44:5:1247:U:O5'	1.83	0.78
13:L:17:HIS:CD2	44:5:48:A:P	2.77	0.78
26:Y:4:GLN:HG2	44:5:229:G:H5'	1.66	0.78
43:q:50:VAL:CA	44:5:1258:U:C3'	2.16	0.78
44:5:726:G:H21	44:5:744:A:H62	0.81	0.78
6:E:382:TYR:CZ	14:M:264:PHE:HD1	2.01	0.77
10:I:381:PHE:CD2	44:5:1041:U:O2'	2.36	0.77
12:s:267:LYS:CA	43:q:36:GLN:HB2	2.12	0.77
15:N:98:LEU:HD23	44:5:289:A:OP1	1.83	0.77
15:N:203:ARG:CZ	44:5:903:U:C5'	2.55	0.77
15:N:204:LYS:C	37:j:814:HIS:CD2	2.48	0.77
18:Q:237:ALA:O	18:Q:241:LYS:HB2	1.83	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:g:7:PHE:HE2	44:5:1856:C:C1'	1.96	0.77
43:q:43:LYS:CB	44:5:1233:G:O6	2.30	0.77
44:5:1168:U:O2	44:5:1330:A:N7	2.16	0.77
1:z:228:GLU:OE2	44:5:2479:C:OP2	2.03	0.77
1:z:411:LEU:HD12	44:5:2448:G:H5'	0.82	0.77
5:D:367:ARG:O	5:D:371:GLN:HB2	1.85	0.77
12:s:290:GLU:HA	44:5:1278:A:O5'	1.81	0.77
15:N:7:LEU:CG	44:5:111:C:C4	2.66	0.77
15:N:41:ARG:N	44:5:267:G:N2	2.32	0.77
19:R:210:HIS:CE1	44:5:1941:C:OP1	2.36	0.77
21:T:82:ASN:O	29:b:88:LYS:N	2.17	0.77
36:i:82:ARG:HH11	44:5:295:A:H1'	1.50	0.77
39:l:40:LYS:CE	44:5:355:A:H5''	2.12	0.77
43:q:28:VAL:CG2	44:5:1281:G:C4'	2.08	0.77
43:q:41:VAL:O	44:5:1257:C:C2'	2.32	0.77
43:q:51:VAL:HG12	44:5:1258:U:H2'	1.63	0.77
44:5:879:U:H3	44:5:2357:A:HO2'	1.32	0.77
44:5:990:U:O2	44:5:1059:G:N1	2.17	0.77
5:D:402:PHE:HD1	44:5:1079:A:C1'	1.98	0.77
13:L:11:LYS:HG3	44:5:86:G:H2'	1.65	0.77
15:N:24:ARG:HB2	44:5:301:G:C4	2.19	0.77
15:N:29:GLU:H	44:5:299:G:N2	1.81	0.77
15:N:69:GLY:C	44:5:289:A:C6	2.62	0.77
17:P:123:PRO:HD3	45:8:14:C:OP1	1.84	0.77
33:f:369:TYR:O	33:f:384:VAL:HA	1.84	0.77
1:z:344:THR:CG2	44:5:2479:C:H4'	2.15	0.77
9:H:291:ARG:CZ	40:m:82:LEU:HD11	2.15	0.77
12:s:274:GLN:CB	43:q:43:LYS:HG2	1.99	0.77
12:s:298:GLU:HA	44:5:1273:A:C5	2.18	0.77
15:N:19:LEU:O	44:5:66:A:O3'	2.02	0.77
15:N:23:GLN:HG2	44:5:67:A:H8	1.00	0.77
15:N:24:ARG:CB	44:5:300:G:H21	1.88	0.77
15:N:90:ASN:CA	44:5:2600:C:OP1	2.30	0.77
15:N:172:ARG:HA	44:5:1546:A:O2'	1.80	0.77
21:T:35:LYS:NZ	44:5:1084:A:H5''	1.98	0.77
29:b:114:HIS:O	29:b:118:LYS:HB2	1.84	0.77
34:g:6:THR:CG2	44:5:1486:G:N3	2.43	0.77
44:5:990:U:H3	44:5:1059:G:H1	1.26	0.77
1:z:236:TYR:OH	44:5:2495:C:C6	2.37	0.77
4:C:183:LYS:HG2	44:5:1386:A:C2	2.20	0.77
9:H:314:VAL:HB	9:H:324:ARG:HB2	1.65	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:L:35:ARG:NH1	44:5:106:A:O2'	2.18	0.77
15:N:92:LEU:HD22	44:5:2599:U:H5''	1.66	0.77
15:N:121:VAL:CG1	44:5:320:G:OP2	2.32	0.77
44:5:2158:A:N6	44:5:2176:U:O2	2.17	0.77
44:5:2248:C:H2'	44:5:2273:G:C8	2.20	0.77
44:5:2361:A:H61	44:5:2377:G:H1	1.33	0.77
1:z:344:THR:HG21	44:5:2479:C:H4'	1.65	0.77
10:I:275:ARG:HB3	44:5:1043:C:O3'	1.85	0.77
12:s:273:ALA:HB3	44:5:1264:G:H1'	1.67	0.77
13:L:15:ARG:NH2	44:5:96:G:HO2'	1.82	0.77
15:N:80:THR:N	44:5:2601:A:H61	1.83	0.77
15:N:91:GLU:HG2	44:5:277:G:N9	1.91	0.77
21:T:75:ILE:HG12	21:T:86:GLU:HG2	1.67	0.77
21:T:87:LYS:HD3	44:5:2723:U:OP1	1.85	0.77
24:W:150:ILE:HA	24:W:156:ALA:O	1.84	0.77
35:h:101:THR:O	35:h:105:ARG:HB2	1.84	0.77
44:5:368:G:N2	45:8:21:C:O2	2.17	0.77
44:5:1863:G:H21	44:5:1867:A:H62	1.32	0.77
44:5:3019:U:C2	44:5:3036:G:N1	2.52	0.77
1:z:383:ASN:HB3	44:5:2493:U:P	2.24	0.77
3:B:21:ARG:NH1	44:5:2992:U:OP1	2.17	0.77
6:E:399:LYS:HD2	14:M:260:ALA:HA	1.65	0.77
15:N:170:LYS:HD2	44:5:30:G:O2'	1.82	0.77
15:N:188:ARG:CB	44:5:1549:U:N3	2.40	0.77
21:T:110:LYS:NZ	44:5:1067:U:O3'	2.17	0.77
44:5:728:G:N1	44:5:741:U:O2	2.15	0.77
44:5:1054:A:H2	46:7:80:G:N3	1.81	0.77
1:z:214:TYR:CE1	44:5:2465:G:C2	2.73	0.77
2:A:11:GLY:HA3	44:5:2163:C:H1'	1.65	0.77
3:B:112:ASP:O	3:B:116:ARG:HB2	1.85	0.77
15:N:31:ARG:HB3	44:5:296:A:N9	1.96	0.77
30:c:28:LYS:HD3	44:5:1730:G:N7	2.00	0.77
42:p:76:ALA:O	42:p:80:ARG:HB2	1.85	0.77
45:8:121:U:C2	45:8:132:G:N1	2.50	0.77
46:7:79:A:H62	46:7:101:G:H21	1.29	0.77
1:z:230:GLN:HB2	44:5:2486:A:H2'	0.77	0.77
1:z:405:MET:CB	44:5:2489:C:OP1	2.32	0.77
3:B:66:LYS:HZ3	23:V:140:PHE:HB3	1.49	0.77
3:B:262:TRP:CE2	16:O:66:LYS:CG	2.68	0.77
10:I:383:LYS:NZ	44:5:1040:A:C1'	2.47	0.77
14:M:281:LYS:O	14:M:285:ALA:HB2	1.84	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:25:VAL:N	44:5:300:G:C2	2.53	0.77
41:o:73:GLU:HA	41:o:79:THR:O	1.85	0.77
43:q:56:ASN:HA	43:q:59:VAL:HB	1.66	0.77
44:5:22:G:O6	45:8:35:C:N4	2.17	0.77
44:5:2198:A:O2'	44:5:2270:A:C5'	2.33	0.77
44:5:2834:G:H1	44:5:2854:U:H3	1.28	0.77
44:5:3104:U:O2	44:5:3129:A:N7	2.18	0.77
47:x:8:UNK:CA	48:y:8:UNK:CB	2.63	0.77
6:E:246:ARG:CD	44:5:608:A:C5	2.67	0.77
9:H:247:LYS:HG3	14:M:154:SER:HB2	1.67	0.77
16:O:118:VAL:HG12	20:S:165:TYR:HA	1.66	0.77
19:R:253:HIS:CD2	44:5:1716:U:C2	2.74	0.77
29:b:99:LYS:NZ	44:5:2721:A:O3'	2.17	0.77
34:g:4:ARG:CZ	44:5:1481:A:C2	2.68	0.77
44:5:34:A:N7	44:5:50:U:C2	2.53	0.77
44:5:835:G:C2	44:5:858:A:N7	2.53	0.77
3:B:28:ARG:NH1	44:5:3140:G:N7	2.32	0.76
4:C:183:LYS:HB2	44:5:1386:A:N3	2.00	0.76
15:N:5:LYS:NZ	44:5:323:A:H3'	1.85	0.76
15:N:23:GLN:CG	44:5:317:A:O4'	2.31	0.76
43:q:50:VAL:CG2	44:5:1258:U:C6	2.59	0.76
43:q:57:THR:CA	44:5:1285:G:H22	1.99	0.76
44:5:2263:C:O2'	44:5:2264:U:H5'	1.83	0.76
44:5:2773:C:O2	44:5:2787:G:N2	2.18	0.76
46:7:2:G:N1	46:7:119:U:O2	2.17	0.76
1:z:259:SER:OG	44:5:2486:A:OP1	2.03	0.76
4:C:322:GLN:O	44:5:597:G:O2'	2.02	0.76
9:H:363:GLN:NE2	44:5:3108:G:N3	2.33	0.76
10:I:304:TRP:CD2	44:5:2646:C:C5'	2.69	0.76
12:s:218:VAL:HA	44:5:1234:G:N7	1.98	0.76
15:N:63:ARG:C	44:5:268:A:H5'	2.09	0.76
34:g:10:ARG:HD2	44:5:1489:A:P	2.25	0.76
44:5:1010:G:H1	44:5:1040:A:H2	0.80	0.76
44:5:2278:C:N3	44:5:2307:G:N1	2.33	0.76
3:B:251:CYS:HB3	44:5:2881:C:C2	2.19	0.76
12:s:218:VAL:HA	44:5:1235:U:C6	2.18	0.76
12:s:225:PRO:CB	44:5:1234:G:C1'	2.63	0.76
15:N:5:LYS:HG3	44:5:323:A:N7	1.98	0.76
26:Y:2:ALA:N	44:5:212:G:OP2	2.18	0.76
26:Y:76:LEU:HD23	45:8:74:U:P	2.24	0.76
33:f:330:LYS:O	33:f:349:LYS:HB3	1.84	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:381:U:O2	44:5:388:G:N2	2.18	0.76
44:5:1018:G:N1	44:5:1034:U:N3	2.32	0.76
1:z:220:LYS:O	44:5:2469:G:O6	2.03	0.76
1:z:229:LEU:HD12	44:5:2475:G:N2	1.99	0.76
1:z:345:ASP:C	44:5:2466:G:H5'	1.98	0.76
12:s:217:LEU:CB	44:5:1237:G:C8	2.69	0.76
12:s:253:MET:CB	44:5:1245:A:C3'	2.40	0.76
21:T:108:ARG:NH1	44:5:1098:A:OP2	2.17	0.76
36:i:60:LEU:O	36:i:64:SER:HB3	1.86	0.76
43:q:7:LYS:HB2	44:5:1218:U:H4'	1.63	0.76
43:q:28:VAL:CG2	44:5:1281:G:C5'	2.63	0.76
1:z:230:GLN:C	44:5:2486:A:O2'	2.27	0.76
15:N:25:VAL:N	44:5:316:U:C2	2.23	0.76
15:N:33:LYS:HD3	44:5:267:G:H5''	1.66	0.76
21:T:84:TYR:OH	29:b:88:LYS:O	2.04	0.76
22:U:96:VAL:HA	22:U:182:TYR:O	1.85	0.76
43:q:210:UNK:O	48:y:9:UNK:HA	1.84	0.76
44:5:1463:U:C2	44:5:1467:A:N7	2.53	0.76
44:5:2426:U:O2	44:5:2603:G:N2	2.18	0.76
9:H:352:GLU:O	9:H:356:GLN:HB3	1.85	0.76
12:s:277:GLY:HA2	43:q:46:ARG:HH21	1.51	0.76
29:b:69:LYS:HE2	44:5:2617:U:H5''	1.68	0.76
2:A:48:ILE:HD11	42:p:63:THR:HG22	1.68	0.76
6:E:246:ARG:C	44:5:607:A:P	2.68	0.76
6:E:362:GLN:O	6:E:366:ASP:HB2	1.86	0.76
11:J:152:ARG:CD	41:o:104:LEU:HB2	2.16	0.76
15:N:25:VAL:CA	44:5:299:G:N1	2.13	0.76
15:N:191:TRP:NE1	44:5:2166:A:N7	2.34	0.76
21:T:12:ARG:CZ	44:5:2632:G:H4'	2.15	0.76
43:q:35:SER:O	44:5:1262:G:C6	2.39	0.76
44:5:371:G:N2	44:5:375:A:N6	2.32	0.76
44:5:1539:A:N7	44:5:1553:U:C2	2.54	0.76
44:5:2565:U:C2	44:5:2576:G:O6	2.38	0.76
3:B:66:LYS:HZ1	23:V:140:PHE:H	1.33	0.76
3:B:262:TRP:H	16:O:64:PHE:C	1.93	0.76
7:F:331:LYS:HB2	21:T:133:ALA:HB3	1.68	0.76
11:J:187:PHE:O	44:5:2672:G:H4'	1.86	0.76
12:s:219:ILE:CB	43:q:43:LYS:HZ3	1.71	0.76
15:N:46:ASP:CG	44:5:321:C:N3	2.39	0.76
15:N:144:ARG:HH22	44:5:143:G:H22	1.25	0.76
43:q:12:PHE:CE2	44:5:1221:A:O3'	2.38	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:262:TRP:CD1	16:O:63:ALA:O	2.38	0.76
15:N:93:LYS:HD3	44:5:289:A:C2	2.21	0.76
43:q:4:ILE:C	44:5:1218:U:C5'	2.48	0.76
1:z:410:ARG:HG3	44:5:2448:G:N3	1.99	0.76
2:A:218:HIS:HE1	44:5:2966:G:H5''	1.51	0.76
5:D:529:SER:O	5:D:533:ARG:HB2	1.86	0.76
15:N:183:THR:CB	44:5:54:C:HO2'	1.96	0.76
17:P:69:ARG:NH2	44:5:2388:U:O2	2.18	0.76
43:q:36:GLN:N	44:5:1277:C:C4	2.54	0.76
44:5:1156:C:H4'	46:7:86:U:H5	1.50	0.76
13:L:49:ARG:CD	35:h:116:TYR:CZ	2.64	0.75
15:N:26:ARG:HG2	36:i:30:LYS:NZ	1.99	0.75
26:Y:87:LYS:NZ	44:5:375:A:C4'	2.48	0.75
34:g:59:PRO:HG3	44:5:1654:A:O2'	1.86	0.75
44:5:1448:U:C2	44:5:2356:A:C5	2.75	0.75
44:5:1448:U:N3	44:5:2356:A:C8	2.54	0.75
44:5:3232:G:N1	44:5:3255:U:C2	2.52	0.75
1:z:300:LYS:N	44:5:2485:A:H5'	2.01	0.75
12:s:262:LEU:O	44:5:1266:G:N1	2.20	0.75
15:N:29:GLU:OE2	44:5:266:A:C3'	2.24	0.75
15:N:30:TYR:HH	44:5:267:G:H2'	1.46	0.75
15:N:50:ARG:CG	44:5:322:U:OP1	2.34	0.75
15:N:94:TYR:HB2	44:5:290:G:O4'	1.87	0.75
21:T:129:LYS:H	44:5:1095:U:H3	1.32	0.75
32:e:190:ASP:CB	44:5:638:C:H5''	2.16	0.75
44:5:3189:G:C2	44:5:3203:U:O2	2.38	0.75
1:z:402:LYS:CG	44:5:2463:G:H4'	2.11	0.75
4:C:309:ARG:HG2	44:5:1361:U:P	2.26	0.75
12:s:300:PRO:HA	44:5:1267:U:C3'	2.17	0.75
15:N:71:ARG:C	44:5:290:G:H2'	1.85	0.75
24:W:180:LYS:O	24:W:184:LEU:HB2	1.86	0.75
32:e:190:ASP:O	44:5:638:C:OP2	2.04	0.75
44:5:2201:G:N1	44:5:2241:U:O2	2.19	0.75
1:z:219:LYS:CB	44:5:2488:A:C2	1.76	0.75
5:D:539:LYS:O	5:D:543:ALA:HB3	1.85	0.75
12:s:220:THR:N	44:5:1234:G:O6	1.95	0.75
13:L:63:VAL:CG2	44:5:72:C:H5'	2.16	0.75
13:L:113:VAL:O	13:L:117:LYS:HB2	1.86	0.75
15:N:7:LEU:N	44:5:110:G:C5	2.51	0.75
15:N:176:LYS:O	44:5:55:G:N7	2.19	0.75
44:5:1662:G:C6	44:5:1787:A:N1	2.55	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:z:220:LYS:NZ	44:5:2470:C:H5''	2.02	0.75
5:D:295:ARG:C	44:5:2748:A:O2'	2.30	0.75
6:E:246:ARG:CD	44:5:607:A:H5'	2.15	0.75
7:F:283:GLY:C	21:T:143:THR:HG22	2.11	0.75
15:N:12:ARG:HB2	44:5:78:U:H4'	1.67	0.75
15:N:15:GLN:C	44:5:69:C:H5'	2.11	0.75
15:N:63:ARG:O	44:5:268:A:H5'	1.86	0.75
15:N:82:GLY:HA2	44:5:2426:U:O5'	1.86	0.75
15:N:129:TYR:CE2	44:5:317:A:C2	2.72	0.75
15:N:143:ARG:CB	45:8:143:U:H5'	2.17	0.75
15:N:192:LYS:HD3	44:5:1550:C:H5	1.49	0.75
17:P:135:ARG:NH2	44:5:879:U:O2'	2.20	0.75
26:Y:4:GLN:HB3	44:5:229:G:P	2.27	0.75
26:Y:25:SER:HB2	45:8:88:A:N6	2.01	0.75
36:i:26:ILE:HG21	44:5:264:G:C6	2.20	0.75
44:5:1055:A:O2'	46:7:81:U:O2	2.02	0.75
44:5:1280:C:H2'	44:5:1281:G:H8	1.52	0.75
46:7:78:U:O2	46:7:102:A:N7	2.19	0.75
1:z:214:TYR:CE1	44:5:2465:G:N1	2.55	0.75
3:B:379:PHE:CD1	24:W:157:LYS:HE2	2.21	0.75
5:D:295:ARG:CZ	44:5:2749:G:O2'	2.34	0.75
12:s:262:LEU:O	44:5:1266:G:C4	2.39	0.75
12:s:269:ILE:CA	44:5:1246:G:H1'	2.15	0.75
15:N:122:ASN:HA	44:5:317:A:O2'	1.84	0.75
37:j:789:LYS:NZ	44:5:2138:A:C6	2.55	0.75
43:q:210:UNK:C	48:y:9:UNK:HA	2.17	0.75
44:5:172:G:N1	44:5:246:U:N3	2.32	0.75
44:5:1168:U:C2	44:5:1330:A:N7	2.54	0.75
1:z:263:PHE:CE2	44:5:2480:A:OP1	2.40	0.75
10:I:234:CYS:HA	10:I:323:VAL:O	1.86	0.75
11:J:152:ARG:N	41:o:104:LEU:O	2.20	0.75
12:s:198:GLN:HA	44:5:1239:C:H6	1.49	0.75
12:s:254:ARG:C	44:5:1247:U:H3'	2.09	0.75
15:N:26:ARG:O	44:5:317:A:N6	2.20	0.75
15:N:143:ARG:HD3	44:5:144:A:H4'	1.67	0.75
15:N:183:THR:O	44:5:54:C:C2'	2.33	0.75
15:N:188:ARG:CG	44:5:1544:G:C2	2.70	0.75
21:T:10:ARG:NH1	44:5:2640:A:P	2.60	0.75
29:b:69:LYS:N	44:5:2617:U:OP1	2.19	0.75
43:q:55:LYS:HG2	44:5:1223:A:C3'	2.08	0.75
44:5:838:G:C2	44:5:855:U:O2	2.40	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:1702:U:O2	44:5:1743:G:N1	2.19	0.75
1:z:220:LYS:HZ2	44:5:2470:C:H6	0.75	0.75
7:F:284:SER:OG	21:T:142:SER:CB	2.34	0.75
12:s:184:ALA:CA	44:5:1239:C:OP2	2.34	0.75
12:s:260:ARG:C	44:5:1267:U:C5	2.60	0.75
12:s:282:PHE:O	44:5:1260:A:O5'	1.76	0.75
15:N:81:TYR:CG	44:5:2428:U:H5	2.04	0.75
17:P:48:LEU:O	17:P:52:LEU:HB2	1.85	0.75
19:R:253:HIS:CE1	44:5:1716:U:C4	2.74	0.75
21:T:109:VAL:HG13	44:5:1063:G:C2	2.22	0.75
44:5:195:U:N3	44:5:199:A:N6	2.34	0.75
44:5:337:G:C6	45:8:27:U:N3	2.55	0.75
44:5:354:U:C2	44:5:365:A:N7	2.55	0.75
3:B:13:HIS:NE2	44:5:3011:A:H2'	2.01	0.75
6:E:400:PHE:O	14:M:262:THR:CG2	2.34	0.75
8:G:273:LEU:O	8:G:277:ALA:HB2	1.87	0.75
12:s:247:ILE:HA	44:5:1232:C:O5'	1.16	0.75
12:s:254:ARG:CA	44:5:1246:G:H2'	2.16	0.75
13:L:100:ARG:HH12	15:N:10:LEU:HD21	1.51	0.75
29:b:80:ARG:NH2	44:5:952:A:OP2	2.20	0.75
43:q:60:ARG:NH1	44:5:1285:G:O4'	2.19	0.75
44:5:2665:U:N3	44:5:2704:A:C8	2.53	0.75
44:5:2767:U:H3	44:5:2791:G:H1	1.35	0.75
13:L:171:ARG:O	13:L:175:SER:HB2	1.87	0.74
15:N:22:LEU:CA	44:5:316:U:H6	1.68	0.74
15:N:24:ARG:HB2	44:5:301:G:N3	2.02	0.74
15:N:80:THR:CG2	44:5:2427:U:O4	2.34	0.74
19:R:137:ALA:N	44:5:1471:U:H1'	2.01	0.74
20:S:79:VAL:O	20:S:89:ASN:HA	1.87	0.74
21:T:120:LYS:NZ	44:5:1092:C:O3'	2.20	0.74
25:X:178:GLU:C	35:h:32:LYS:NZ	2.29	0.74
25:X:255:TYR:CD1	35:h:33:VAL:HG13	2.21	0.74
34:g:7:PHE:HZ	44:5:1856:C:O4'	1.67	0.74
5:D:540:GLU:O	5:D:544:ALA:HB2	1.85	0.74
15:N:44:ARG:CB	44:5:321:C:H5	2.00	0.74
15:N:175:ASN:OD1	44:5:55:G:H1'	1.51	0.74
16:O:60:LYS:NZ	44:5:1307:G:OP1	2.18	0.74
29:b:116:THR:HB	44:5:1073:U:H1'	1.69	0.74
37:j:816:GLN:HG2	44:5:903:U:OP1	1.87	0.74
44:5:2877:G:H1	44:5:2949:U:H3	1.34	0.74
1:z:218:THR:HG22	44:5:2489:C:P	2.27	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:z:230:GLN:NE2	44:5:2479:C:P	2.59	0.74
4:C:101:ALA:HB2	44:5:662:U:H1'	1.70	0.74
6:E:237:GLU:HB3	32:e:155:LEU:HD13	1.68	0.74
12:s:215:SER:N	44:5:1246:G:H5'	2.02	0.74
12:s:289:ILE:N	44:5:1262:G:N1	2.36	0.74
13:L:183:ARG:CG	44:5:765:C:N3	2.50	0.74
15:N:17:ASP:OD2	44:5:75:G:O6	2.04	0.74
15:N:18:VAL:C	44:5:66:A:C8	2.54	0.74
15:N:139:HIS:HE1	44:5:149:U:O2'	1.65	0.74
44:5:760:G:HO2'	44:5:770:G:H1	1.32	0.74
44:5:1010:G:O6	44:5:1040:A:N1	2.20	0.74
44:5:2994:A:O2'	45:8:1:A:N1	2.19	0.74
1:z:368:GLU:HG2	44:5:2469:G:OP2	1.83	0.74
1:z:402:LYS:CB	44:5:2463:G:O4'	2.35	0.74
1:z:402:LYS:CE	44:5:2463:G:H4'	2.18	0.74
4:C:195:ARG:NH1	44:5:340:C:OP2	2.20	0.74
12:s:276:VAL:CB	44:5:1255:C:OP2	2.34	0.74
12:s:283:LYS:N	44:5:1260:A:C8	2.56	0.74
12:s:288:ILE:CA	43:q:38:MET:HB2	2.16	0.74
43:q:215:UNK:CB	48:y:11:UNK:CB	2.65	0.74
44:5:707:U:H3	44:5:712:G:H1	1.32	0.74
1:z:230:GLN:CD	44:5:2486:A:H2'	2.12	0.74
1:z:409:PHE:HD1	44:5:2449:A:H3'	1.51	0.74
12:s:284:ASN:C	44:5:1261:G:C5'	2.59	0.74
15:N:5:LYS:HB3	44:5:109:A:N1	1.95	0.74
15:N:8:GLU:OE1	44:5:322:U:C3'	2.34	0.74
15:N:188:ARG:HB3	44:5:1544:G:C2	2.22	0.74
16:O:18:ARG:HH22	44:5:1318:A:H2'	1.53	0.74
25:X:208:GLN:O	25:X:212:ALA:HB2	1.87	0.74
26:Y:87:LYS:HE3	44:5:375:A:H1'	1.69	0.74
30:c:28:LYS:NZ	44:5:1713:G:O6	2.16	0.74
43:q:81:LYS:NZ	44:5:1282:G:N2	2.34	0.74
43:q:107:ALA:O	44:5:1230:G:N7	2.20	0.74
44:5:87:U:O2	44:5:99:A:N7	2.19	0.74
44:5:87:U:O2	44:5:99:A:C6	2.40	0.74
44:5:2196:C:O2	44:5:2270:A:C2	2.40	0.74
7:F:285:TYR:CB	21:T:141:VAL:CG2	2.39	0.74
8:G:409:LYS:O	8:G:413:ARG:HB2	1.87	0.74
8:G:415:LYS:O	8:G:419:SER:HB2	1.87	0.74
12:s:272:THR:CB	44:5:1262:G:C2	2.69	0.74
12:s:288:ILE:O	44:5:1231:A:H2'	0.88	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:8:GLU:O	44:5:64:G:C3'	2.30	0.74
17:P:121:GLN:C	45:8:13:A:HO2'	1.93	0.74
20:S:67:ALA:N	44:5:519:A:N6	2.36	0.74
27:Z:14:ARG:NE	44:5:1637:A:O2'	2.21	0.74
30:c:23:TYR:HA	30:c:91:SER:O	1.88	0.74
33:f:378:ARG:HH12	44:5:618:C:C2'	2.00	0.74
43:q:66:PHE:HD1	44:5:1221:A:N3	1.80	0.74
44:5:3325:G:O6	44:5:3381:U:C2	2.41	0.74
1:z:300:LYS:CB	44:5:2485:A:H4'	2.14	0.74
3:B:22:ALA:HB1	44:5:3139:A:OP1	1.87	0.74
13:L:13:HIS:ND1	44:5:86:G:C5	2.56	0.74
15:N:64:VAL:HG22	44:5:270:U:OP1	1.88	0.74
20:S:67:ALA:HA	44:5:522:A:O3'	1.87	0.74
39:l:29:LEU:HD23	45:8:75:G:H1'	1.68	0.74
44:5:2394:G:H1	44:5:2986:U:H3	1.35	0.74
2:A:240:ALA:O	44:5:2202:C:O2'	2.06	0.74
11:J:152:ARG:HB2	41:o:104:LEU:CA	2.17	0.74
15:N:5:LYS:HG3	44:5:109:A:N6	2.01	0.74
15:N:15:GLN:O	44:5:69:C:O4'	2.06	0.74
15:N:140:LYS:HA	44:5:144:A:O2'	1.86	0.74
16:O:12:LYS:O	20:S:167:ARG:NH1	2.21	0.74
17:P:171:ARG:NH1	44:5:616:G:O2'	2.20	0.74
23:V:175:LEU:HA	44:5:2916:U:O3'	1.86	0.74
41:o:45:ARG:NH2	44:5:285:A:C2	2.42	0.74
43:q:44:GLU:N	44:5:1257:C:C1'	2.39	0.74
43:q:45:LEU:CD2	44:5:1257:C:O3'	2.36	0.74
43:q:64:ARG:NH2	44:5:1285:G:C8	2.55	0.74
44:5:2278:C:O2	44:5:2307:G:C2	2.40	0.74
44:5:3234:A:H2	44:5:3253:G:C2	2.06	0.74
6:E:270:ARG:NH1	44:5:3268:A:C5'	2.46	0.74
6:E:399:LYS:CD	14:M:260:ALA:HA	2.18	0.74
12:s:224:GLU:CB	44:5:1256:G:HO2'	2.01	0.74
12:s:239:GLY:HA3	44:5:1257:C:H6	0.76	0.74
12:s:260:ARG:CA	44:5:1266:G:H3'	1.57	0.74
12:s:271:GLY:C	43:q:40:GLU:HG3	2.06	0.74
15:N:18:VAL:HG23	44:5:315:C:H5'	1.68	0.74
15:N:41:ARG:CG	44:5:114:A:N7	2.50	0.74
21:T:4:SER:OG	44:5:2630:C:H3'	1.86	0.74
22:U:173:ARG:HH21	22:U:175:VAL:HG13	1.51	0.74
30:c:62:LEU:O	30:c:64:LYS:NZ	2.20	0.74
43:q:42:ARG:NE	44:5:1258:U:O2	2.18	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:q:104:ARG:NH1	44:5:1232:C:O3'	2.21	0.74
44:5:2196:C:O2'	44:5:2271:A:O4'	2.05	0.74
44:5:2196:C:C4	44:5:2247:G:N1	2.49	0.74
4:C:82:THR:OG1	44:5:364:G:O2'	1.62	0.74
12:s:279:ARG:H	43:q:43:LYS:H	0.87	0.74
15:N:29:GLU:C	44:5:318:A:H61	1.96	0.74
15:N:50:ARG:HB2	44:5:322:U:OP1	1.86	0.74
15:N:183:THR:C	44:5:54:C:C2'	2.60	0.74
15:N:191:TRP:CZ2	44:5:2166:A:C8	2.74	0.74
20:S:76:GLY:O	20:S:126:VAL:HA	1.88	0.74
21:T:4:SER:HA	44:5:2630:C:OP2	1.87	0.74
32:e:189:ILE:HD11	44:5:640:U:C4	2.22	0.74
37:j:807:ARG:NH2	45:8:104:A:H5''	2.02	0.74
43:q:210:UNK:O	47:x:22:UNK:CB	2.36	0.74
44:5:3019:U:N3	44:5:3036:G:N1	2.36	0.74
3:B:12:GLY:O	44:5:3011:A:N6	2.21	0.73
3:B:66:LYS:HZ2	23:V:140:PHE:H	0.77	0.73
5:D:292:GLN:NE2	44:5:2747:A:N6	2.31	0.73
6:E:246:ARG:NH1	44:5:608:A:C2'	2.48	0.73
10:I:394:ASN:OD1	46:7:64:A:N6	2.19	0.73
15:N:40:ALA:O	44:5:113:C:H2'	1.88	0.73
15:N:190:THR:HB	44:5:1548:C:C6	2.20	0.73
32:e:226:LEU:HA	32:e:246:GLU:O	1.88	0.73
38:k:43:PHE:HB2	38:k:54:LEU:HB3	1.69	0.73
43:q:57:THR:OG1	44:5:1284:C:N3	2.19	0.73
44:5:838:G:N1	44:5:855:U:N3	2.36	0.73
3:B:28:ARG:HH22	44:5:3139:A:H8	1.36	0.73
12:s:274:GLN:CB	43:q:43:LYS:CD	2.64	0.73
15:N:6:TYR:CB	44:5:110:G:N9	2.47	0.73
15:N:86:ASN:CG	44:5:2425:G:OP2	2.30	0.73
15:N:127:TYR:N	44:5:272:G:C8	2.55	0.73
16:O:92:THR:O	16:O:96:LYS:HB2	1.87	0.73
20:S:124:LEU:HD13	21:T:155:PRO:HG3	1.68	0.73
33:f:408:PRO:HA	44:5:429:U:H1'	1.68	0.73
42:p:2:ALA:CB	44:5:853:G:N7	2.45	0.73
44:5:3158:G:O6	44:5:3292:A:N1	2.21	0.73
46:7:7:G:N2	46:7:114:U:O2	2.20	0.73
2:A:220:GLY:O	44:5:2245:C:O2'	2.06	0.73
3:B:3:HIS:CE1	44:5:2938:G:OP2	2.42	0.73
4:C:197:ARG:HD2	44:5:1381:A:H5''	1.70	0.73
7:F:289:ALA:CB	21:T:137:GLU:CA	2.65	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:s:257:SER:N	44:5:1247:U:H2'	1.98	0.73
13:L:136:GLU:OE2	35:h:119:LYS:CE	2.35	0.73
15:N:13:LYS:HZ3	44:5:78:U:H4'	1.14	0.73
15:N:126:THR:N	44:5:272:G:O5'	2.07	0.73
15:N:179:LYS:HB3	44:5:52:A:C6	2.20	0.73
21:T:22:HIS:ND1	44:5:2701:U:OP2	2.22	0.73
26:Y:23:PRO:HB2	45:8:91:C:O2'	1.87	0.73
43:q:57:THR:HG22	44:5:1284:C:N1	2.02	0.73
44:5:129:U:O2	44:5:139:G:C2	2.40	0.73
44:5:2201:G:N1	44:5:2241:U:C2	2.54	0.73
3:B:17:LEU:O	44:5:3138:U:O2'	2.05	0.73
5:D:265:LYS:HZ1	44:5:2669:G:H21	1.33	0.73
7:F:289:ALA:CB	21:T:138:SER:N	2.50	0.73
12:s:189:GLU:O	44:5:1234:G:H3'	1.89	0.73
13:L:49:ARG:HD2	35:h:116:TYR:CD1	2.23	0.73
15:N:70:ASN:OD1	44:5:277:G:N1	2.20	0.73
19:R:228:VAL:O	19:R:232:ARG:HB2	1.88	0.73
26:Y:75:ARG:CB	45:8:72:A:H5'	2.17	0.73
44:5:1483:G:H1	44:5:1873:U:H3	1.37	0.73
2:A:225:ILE:H	2:A:240:ALA:HB3	1.51	0.73
7:F:289:ALA:CB	21:T:137:GLU:C	2.61	0.73
15:N:12:ARG:NH2	44:5:63:A:O5'	2.22	0.73
15:N:75:VAL:N	44:5:2599:U:C2	2.55	0.73
22:U:92:LYS:O	22:U:145:VAL:HA	1.88	0.73
26:Y:87:LYS:HD3	44:5:375:A:C4'	2.19	0.73
31:d:68:ARG:HG2	31:d:166:VAL:HA	1.71	0.73
32:e:260:LEU:O	32:e:264:LYS:HB2	1.88	0.73
43:q:57:THR:N	44:5:1222:G:O3'	2.05	0.73
43:q:57:THR:N	44:5:1223:A:OP2	2.09	0.73
44:5:2196:C:O2	44:5:2247:G:C2	2.41	0.73
44:5:3326:G:N2	44:5:3380:U:O2	2.20	0.73
3:B:3:HIS:CB	44:5:2938:G:C6	2.68	0.73
3:B:261:MET:HG2	16:O:64:PHE:HA	1.69	0.73
10:I:275:ARG:HB3	44:5:1044:U:P	2.28	0.73
10:I:389:GLY:C	46:7:65:G:H4'	2.13	0.73
15:N:21:PHE:CZ	44:5:316:U:O4	2.42	0.73
31:d:121:GLY:HA2	44:5:1476:G:H4'	1.71	0.73
43:q:57:THR:HB	44:5:1284:C:C2	2.21	0.73
44:5:3023:U:O2	44:5:3032:A:C5	2.41	0.73
44:5:3234:A:N1	44:5:3253:G:O6	2.22	0.73
1:z:225:GLU:C	44:5:2476:C:C3'	2.60	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:z:255:ARG:CB	44:5:2466:G:C2'	2.65	0.73
1:z:399:LEU:N	44:5:2495:C:C5	2.55	0.73
6:E:391:ASN:OD1	44:5:3177:G:N7	2.22	0.73
12:s:274:GLN:CB	43:q:43:LYS:CG	2.66	0.73
12:s:297:ILE:N	44:5:1275:C:N1	1.87	0.73
13:L:128:ARG:HD2	44:5:169:U:O5'	1.89	0.73
14:M:165:GLU:HA	20:S:149:LYS:HG2	1.71	0.73
15:N:20:ARG:CD	44:5:68:C:H3'	2.18	0.73
15:N:91:GLU:CG	44:5:276:U:C3'	2.62	0.73
21:T:117:ALA:O	21:T:121:ALA:HB3	1.88	0.73
43:q:36:GLN:HB3	44:5:1277:C:N4	2.02	0.73
43:q:55:LYS:CG	44:5:1224:C:C5	2.67	0.73
44:5:1052:U:O2	46:7:103:A:O2'	2.06	0.73
44:5:2843:U:OP2	44:5:2844:C:N4	2.21	0.73
44:5:3231:U:O2	44:5:3256:G:C2	2.41	0.73
1:z:368:GLU:OE2	44:5:2474:G:N2	2.21	0.73
13:L:126:PHE:CE2	35:h:116:TYR:C	2.67	0.73
15:N:25:VAL:H	44:5:300:G:N2	1.84	0.73
15:N:33:LYS:CD	44:5:267:G:H5''	2.18	0.73
15:N:44:ARG:CB	44:5:321:C:OP2	2.37	0.73
18:Q:217:ARG:NH1	44:5:784:A:O3'	2.21	0.73
28:a:84:SER:OG	44:5:1428:A:OP2	2.07	0.73
39:l:21:ARG:CD	45:8:52:A:C5'	2.66	0.73
43:q:36:GLN:NE2	44:5:1246:G:C2	2.57	0.73
43:q:65:GLY:O	44:5:1221:A:C6	2.41	0.73
15:N:32:GLN:HG2	44:5:296:A:C2	2.24	0.73
15:N:94:TYR:HB3	44:5:290:G:H5'	0.74	0.73
15:N:187:ARG:HD3	44:5:1545:A:H2'	1.71	0.73
21:T:84:TYR:CE2	29:b:90:PRO:HD3	2.24	0.73
33:f:363:LEU:O	44:5:584:G:H5'	1.89	0.73
43:q:30:VAL:C	44:5:1229:G:C2	2.67	0.73
43:q:34:SER:HG	44:5:1230:G:H2'	1.52	0.73
44:5:26:A:C6	44:5:59:G:N1	2.56	0.73
44:5:799:G:H2'	44:5:801:A:H62	1.53	0.73
44:5:1210:U:C2	44:5:1295:G:N1	2.51	0.73
44:5:1664:G:N2	44:5:1785:U:O2	2.22	0.73
4:C:76:ARG:HH22	44:5:1438:U:H5''	1.54	0.73
9:H:250:ASN:OD1	14:M:152:THR:O	2.05	0.73
10:I:304:TRP:CD2	44:5:2646:C:H5'	2.24	0.73
21:T:26:HIS:CG	46:7:9:C:OP1	2.42	0.73
35:h:86:ARG:HD3	45:8:36:G:C8	2.23	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:532:A:N1	44:5:560:G:O6	2.22	0.73
44:5:2196:C:N4	44:5:2247:G:H1	1.86	0.73
47:x:23:UNK:CA	48:y:10:UNK:HA	2.19	0.73
2:A:82:VAL:O	42:p:64:VAL:HA	1.89	0.72
9:H:226:LYS:HB2	44:5:3198:U:C4	2.24	0.72
1:z:213:LYS:CA	44:5:2489:C:N1	2.51	0.72
3:B:7:GLU:CG	44:5:2915:U:C4	2.71	0.72
3:B:374:ALA:O	3:B:378:ALA:HB3	1.90	0.72
15:N:5:LYS:CB	44:5:323:A:C8	2.72	0.72
15:N:15:GLN:O	44:5:69:C:C4'	2.37	0.72
15:N:71:ARG:NH2	44:5:2598:G:O2'	2.19	0.72
21:T:118:GLU:O	21:T:122:GLN:HB3	1.89	0.72
43:q:51:VAL:HG22	44:5:1280:C:H4'	1.70	0.72
44:5:760:G:N3	44:5:771:A:N7	2.37	0.72
1:z:255:ARG:CB	44:5:2466:G:H2'	2.16	0.72
1:z:366:ASN:HA	44:5:2469:G:N1	2.03	0.72
6:E:332:LYS:CG	44:5:3271:G:H2'	2.20	0.72
10:I:302:GLY:HA2	44:5:2645:G:P	2.29	0.72
12:s:224:GLU:CB	44:5:1256:G:O2'	2.37	0.72
15:N:5:LYS:NZ	44:5:323:A:C2'	2.52	0.72
15:N:5:LYS:CE	44:5:323:A:C5'	2.66	0.72
15:N:82:GLY:HA2	44:5:2426:U:H3'	1.71	0.72
15:N:91:GLU:CB	44:5:277:G:N9	2.51	0.72
43:q:8:LYS:O	43:q:12:PHE:HB2	1.89	0.72
43:q:62:ALA:HB1	44:5:1221:A:C1'	1.82	0.72
44:5:1222:G:N3	44:5:1286:A:N7	2.37	0.72
1:z:229:LEU:HD11	44:5:2476:C:H1'	1.67	0.72
1:z:365:GLY:C	44:5:2477:G:O2'	2.32	0.72
3:B:2:SER:C	44:5:2939:G:N7	2.47	0.72
8:G:331:PRO:O	8:G:335:LYS:HB2	1.89	0.72
12:s:279:ARG:N	43:q:43:LYS:N	2.07	0.72
12:s:298:GLU:HA	44:5:1273:A:C6	2.23	0.72
15:N:127:TYR:CE2	44:5:272:G:C6	2.77	0.72
15:N:177:GLY:O	44:5:54:C:C5	2.41	0.72
19:R:215:LYS:NZ	44:5:1940:G:P	2.62	0.72
26:Y:113:LYS:O	26:Y:117:ALA:HB3	1.89	0.72
32:e:188:GLY:CA	44:5:639:G:OP1	2.36	0.72
44:5:2198:A:C6	44:5:2270:A:C6	2.78	0.72
1:z:383:ASN:HB2	44:5:2492:C:HO2'	1.54	0.72
5:D:276:PHE:CE1	44:5:2688:U:C4	2.78	0.72
8:G:288:ASP:OD1	44:5:120:G:C6	2.43	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:s:282:PHE:O	44:5:1260:A:P	2.48	0.72
15:N:50:ARG:HB3	44:5:321:C:O3'	1.88	0.72
15:N:200:TRP:CG	37:j:815:VAL:O	2.41	0.72
21:T:83:ARG:HA	29:b:88:LYS:CB	2.18	0.72
43:q:42:ARG:CD	44:5:1261:G:C2	2.71	0.72
44:5:998:A:O2'	46:7:103:A:N3	2.21	0.72
5:D:282:ARG:NH2	46:7:7:G:OP2	2.22	0.72
6:E:233:TRP:CZ2	44:5:1354:G:C4	2.77	0.72
6:E:399:LYS:HD3	14:M:260:ALA:C	2.15	0.72
12:s:218:VAL:C	44:5:1234:G:C5	2.67	0.72
12:s:260:ARG:CB	44:5:1267:U:H5	2.03	0.72
12:s:272:THR:CB	43:q:35:SER:O	2.37	0.72
12:s:294:ALA:CA	44:5:1276:U:H3'	2.18	0.72
13:L:137:GLN:HA	35:h:118:ILE:O	1.90	0.72
15:N:46:ASP:HB3	44:5:322:U:C6	2.20	0.72
15:N:87:GLN:NE2	44:5:2603:G:C6	2.55	0.72
15:N:140:LYS:N	44:5:144:A:H2'	2.04	0.72
15:N:179:LYS:HA	44:5:52:A:C6	2.23	0.72
22:U:164:LYS:HZ2	44:5:1682:U:H6	1.36	0.72
27:Z:1:ALA:HB3	30:c:64:LYS:NZ	2.05	0.72
44:5:354:U:O2	44:5:365:A:N7	2.22	0.72
1:z:229:LEU:CD1	44:5:2476:C:C1'	2.53	0.72
1:z:366:ASN:HA	44:5:2469:G:N3	2.03	0.72
3:B:384:LYS:HZ3	44:5:3370:A:H4'	1.55	0.72
4:C:188:ARG:HH22	44:5:1382:G:P	2.12	0.72
7:F:331:LYS:CE	44:5:988:U:OP1	2.37	0.72
10:I:209:ARG:CZ	44:5:2647:A:O3'	2.38	0.72
20:S:66:GLU:C	44:5:522:A:O2'	2.31	0.72
21:T:105:PHE:HZ	44:5:1063:G:O4'	1.73	0.72
32:e:190:ASP:HB3	44:5:638:C:H5''	1.70	0.72
44:5:34:A:N7	44:5:50:U:O2	2.23	0.72
44:5:722:G:N2	44:5:748:U:O2	2.22	0.72
44:5:1384:U:O2	44:5:1422:G:N2	2.23	0.72
44:5:1619:A:N3	45:8:125:U:N3	2.38	0.72
45:8:42:G:C2	45:8:102:U:O2	2.42	0.72
6:E:382:TYR:CE1	14:M:264:PHE:HA	2.24	0.72
15:N:26:ARG:HA	36:i:30:LYS:CE	2.19	0.72
15:N:140:LYS:HZ3	44:5:143:G:C2'	2.03	0.72
31:d:109:LEU:HD12	44:5:1459:C:O3'	1.89	0.72
43:q:101:VAL:HG23	44:5:1259:A:N6	1.96	0.72
44:5:270:U:O2	44:5:295:A:N7	2.23	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:521:A:N7	44:5:571:U:O2	2.22	0.72
44:5:2196:C:O2	44:5:2247:G:N2	2.19	0.72
44:5:3160:U:O2	44:5:3290:G:N2	2.22	0.72
2:A:134:VAL:HA	2:A:149:ARG:O	1.89	0.72
3:B:192:VAL:O	3:B:196:ARG:HB2	1.90	0.72
6:E:246:ARG:CZ	44:5:608:A:C4	2.73	0.72
10:I:224:LYS:CD	44:5:1009:A:O3'	2.37	0.72
10:I:343:LYS:CD	44:5:2853:A:H1'	2.16	0.72
21:T:70:SER:HG	44:5:2737:C:P	2.12	0.72
44:5:722:G:H1	44:5:748:U:H3	1.36	0.72
44:5:2844:C:O2	44:5:2898:G:C6	2.43	0.72
2:A:83:HIS:HA	42:p:63:THR:O	1.88	0.72
5:D:283:ARG:NE	44:5:2703:A:C6	2.56	0.72
13:L:49:ARG:CG	35:h:116:TYR:CE2	2.73	0.72
15:N:127:TYR:HD2	44:5:272:G:C8	2.05	0.72
15:N:154:PRO:CD	45:8:142:C:OP2	2.27	0.72
15:N:192:LYS:HB2	44:5:1550:C:H6	0.62	0.72
19:R:155:ARG:NH2	44:5:1873:U:OP2	2.23	0.72
44:5:524:U:H3	44:5:568:G:H22	1.38	0.72
44:5:996:A:H2	46:7:79:A:C2	2.08	0.72
3:B:262:TRP:CG	16:O:65:ASN:HA	2.24	0.71
10:I:233:LEU:O	10:I:324:ARG:HA	1.89	0.71
12:s:250:ALA:C	44:5:1264:G:O6	2.33	0.71
15:N:24:ARG:CA	44:5:300:G:N2	2.36	0.71
15:N:57:GLN:HE21	44:5:150:A:H5''	1.55	0.71
15:N:58:GLY:N	44:5:149:U:C5'	2.52	0.71
15:N:74:PRO:C	44:5:2431:C:C2	2.68	0.71
15:N:126:THR:OG1	44:5:272:G:H3'	1.90	0.71
20:S:23:LYS:HG2	21:T:146:ASN:ND2	2.05	0.71
20:S:67:ALA:O	44:5:523:A:O5'	2.08	0.71
43:q:57:THR:HG22	44:5:1284:C:C4	1.27	0.71
44:5:213:A:N6	44:5:227:G:N2	2.37	0.71
7:F:286:TYR:HD1	21:T:140:ILE:CG1	2.02	0.71
8:G:288:ASP:OD1	44:5:120:G:N1	2.24	0.71
10:I:187:ALA:N	44:5:2829:U:H5''	2.04	0.71
10:I:275:ARG:NE	44:5:1044:U:P	2.63	0.71
15:N:18:VAL:CA	44:5:315:C:C4'	1.92	0.71
15:N:30:TYR:HH	44:5:267:G:H8	0.71	0.71
15:N:32:GLN:OE1	44:5:297:G:O4'	2.08	0.71
16:O:73:PHE:CD1	44:5:3007:U:H5'	2.25	0.71
16:O:179:ALA:O	16:O:183:ALA:HB2	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:f:393:HIS:CG	44:5:1328:C:OP1	2.43	0.71
44:5:1571:A:H3'	44:5:1572:U:H4'	1.72	0.71
44:5:3160:U:H3	44:5:3290:G:H1	1.35	0.71
44:5:3231:U:N3	44:5:3256:G:N1	2.37	0.71
44:5:3348:G:N2	44:5:3357:U:O2	2.22	0.71
1:z:255:ARG:HB2	44:5:2466:G:C2'	2.19	0.71
3:B:13:HIS:NE2	44:5:3011:A:O2'	2.23	0.71
9:H:244:THR:OG1	14:M:159:SER:HB3	1.91	0.71
11:J:152:ARG:HD3	41:o:104:LEU:HB2	1.73	0.71
12:s:298:GLU:HA	44:5:1273:A:N6	2.05	0.71
23:V:174:ARG:O	44:5:2916:U:O2'	2.08	0.71
39:l:40:LYS:CE	44:5:355:A:C5'	2.69	0.71
7:F:332:ALA:HB2	44:5:987:U:O4'	1.90	0.71
10:I:225:LYS:NZ	44:5:1010:G:C4'	2.51	0.71
10:I:275:ARG:O	44:5:1044:U:O4'	2.08	0.71
15:N:119:TYR:CA	44:5:320:G:OP1	2.31	0.71
44:5:1002:A:H2'	44:5:1003:A:H8	1.55	0.71
44:5:1659:U:O2	44:5:1790:G:N2	2.23	0.71
44:5:1662:G:O6	44:5:1787:A:N1	2.22	0.71
1:z:221:ARG:HH21	44:5:2471:U:C3'	2.02	0.71
5:D:295:ARG:O	44:5:2748:A:O2'	2.07	0.71
12:s:221:ALA:HB2	44:5:1234:G:C3'	2.18	0.71
12:s:255:ASP:C	44:5:1268:G:O6	2.33	0.71
15:N:35:VAL:HG23	44:5:268:A:N3	2.06	0.71
15:N:126:THR:C	44:5:272:G:C8	2.64	0.71
15:N:172:ARG:NE	44:5:1547:G:H5'	2.01	0.71
17:P:174:GLY:HA2	44:5:3270:U:OP2	1.90	0.71
26:Y:76:LEU:HB2	45:8:74:U:OP2	1.89	0.71
32:e:188:GLY:CA	44:5:639:G:P	2.74	0.71
39:l:29:LEU:HB3	45:8:75:G:H1'	1.71	0.71
44:5:301:G:N2	44:5:314:U:O2	2.23	0.71
15:N:24:ARG:CB	44:5:301:G:N3	2.46	0.71
15:N:91:GLU:C	44:5:277:G:O4'	2.29	0.71
18:Q:163:ARG:HD2	44:5:1347:U:OP2	1.89	0.71
28:a:139:MET:SD	44:5:2775:U:H1'	2.30	0.71
43:q:6:GLU:N	44:5:1219:C:C5	2.25	0.71
44:5:668:G:N2	44:5:794:U:O2	2.24	0.71
44:5:1210:U:N3	44:5:1295:G:N1	2.38	0.71
44:5:1434:G:OP1	44:5:1437:C:N4	2.23	0.71
1:z:230:GLN:OE1	44:5:2486:A:H2'	1.89	0.71
1:z:372:ASP:CG	44:5:2488:A:H61	1.99	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:542:ARG:NH2	46:7:62:U:OP1	2.23	0.71
7:F:286:TYR:HD1	21:T:140:ILE:HG13	1.55	0.71
10:I:304:TRP:CE2	44:5:2646:C:C5'	2.73	0.71
12:s:286:HIS:HA	44:5:1262:G:N2	2.06	0.71
26:Y:90:VAL:HG21	44:5:377:A:H4'	1.73	0.71
44:5:3023:U:O2	44:5:3032:A:C6	2.43	0.71
4:C:343:LYS:HE3	44:5:516:A:OP1	1.90	0.71
12:s:279:ARG:N	44:5:1257:C:N3	2.36	0.71
15:N:28:TRP:HB3	44:5:299:G:N3	2.06	0.71
15:N:153:ASP:OD1	45:8:141:C:N1	2.11	0.71
19:R:217:LYS:HZ3	44:5:2115:G:H1'	1.56	0.71
20:S:102:ALA:O	20:S:106:LEU:HB2	1.90	0.71
21:T:110:LYS:HZ2	44:5:1068:C:H5'	1.55	0.71
33:f:365:LYS:O	33:f:388:LYS:HA	1.90	0.71
44:5:2107:A:HO2'	44:5:3344:A:HO2'	1.34	0.71
44:5:3023:U:O2	44:5:3032:A:N7	2.22	0.71
46:7:77:G:HO2'	46:7:101:G:H1	1.38	0.71
1:z:402:LYS:N	44:5:2463:G:N3	2.39	0.71
6:E:246:ARG:HD3	44:5:608:A:C8	2.26	0.71
7:F:286:TYR:OH	21:T:138:SER:HB2	1.90	0.71
8:G:300:LEU:HD21	44:5:147:U:H5'	1.72	0.71
10:I:199:ASN:CG	44:5:1126:G:P	2.73	0.71
12:s:239:GLY:N	44:5:1257:C:H5'	1.98	0.71
13:L:11:LYS:HE2	44:5:86:G:C2'	2.20	0.71
15:N:5:LYS:HE2	44:5:324:A:H62	1.54	0.71
15:N:32:GLN:NE2	44:5:299:G:O2'	2.24	0.71
15:N:203:ARG:HG3	44:5:903:U:OP1	1.91	0.71
20:S:89:ASN:ND2	21:T:156:TYR:O	2.24	0.71
20:S:115:ARG:NH1	44:5:1321:G:H1'	2.06	0.71
25:X:188:LYS:O	25:X:192:ASP:HB2	1.91	0.71
44:5:1939:G:C2	44:5:2109:U:O2	2.43	0.71
1:z:226:THR:O	44:5:2476:C:C2'	2.39	0.71
1:z:229:LEU:HD13	44:5:2475:G:H21	1.52	0.71
1:z:300:LYS:CB	44:5:2485:A:C5'	2.67	0.71
5:D:538:SER:H	5:D:541:GLU:HB2	1.55	0.71
12:s:217:LEU:CB	44:5:1235:U:H3	1.53	0.71
12:s:217:LEU:CB	44:5:1237:G:H8	2.04	0.71
13:L:15:ARG:HH21	44:5:96:G:C2'	2.04	0.71
13:L:61:PRO:HG3	44:5:75:G:O4'	1.89	0.71
15:N:70:ASN:O	44:5:291:C:C5	2.44	0.71
15:N:188:ARG:CD	44:5:1547:G:OP2	2.38	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:T:116:ARG:HH11	44:5:1093:A:H4'	1.52	0.71
44:5:1544:G:N2	44:5:1549:U:O2	2.24	0.71
1:z:218:THR:CG2	44:5:2489:C:P	2.79	0.70
3:B:130:PHE:O	3:B:134:SER:HB2	1.90	0.70
9:H:355:SER:OG	44:5:3110:C:O2'	2.06	0.70
10:I:199:ASN:CG	44:5:1126:G:OP1	2.34	0.70
10:I:304:TRP:CD2	44:5:2646:C:H5''	2.26	0.70
12:s:258:PHE:CB	44:5:1266:G:H5'	2.20	0.70
15:N:9:GLU:C	44:5:78:U:O4'	2.34	0.70
15:N:49:ARG:HB2	44:5:321:C:HO2'	1.54	0.70
15:N:71:ARG:CA	44:5:291:C:C6	2.70	0.70
15:N:183:THR:O	44:5:54:C:O3'	1.84	0.70
15:N:191:TRP:CH2	44:5:2166:A:N7	2.57	0.70
15:N:203:ARG:CD	44:5:903:U:OP1	2.39	0.70
25:X:205:ASN:O	25:X:209:ILE:HB	1.91	0.70
43:q:8:LYS:HD3	44:5:1219:C:C3'	2.20	0.70
43:q:37:GLN:C	44:5:1261:G:H1'	2.16	0.70
44:5:1832:C:H5'	45:8:113:U:H5	1.54	0.70
45:8:42:G:H1	45:8:102:U:H3	1.36	0.70
45:8:70:G:O2'	45:8:87:G:N2	2.24	0.70
7:F:286:TYR:CD1	21:T:139:ARG:C	2.69	0.70
12:s:188:LYS:C	44:5:1237:G:H4'	1.89	0.70
15:N:50:ARG:HG2	44:5:321:C:H5'	1.73	0.70
15:N:185:ALA:C	44:5:1548:C:C4'	2.63	0.70
17:P:94:LEU:O	17:P:98:ALA:HB2	1.92	0.70
33:f:378:ARG:HH12	44:5:618:C:HO2'	1.33	0.70
36:i:26:ILE:HD13	44:5:264:G:N1	2.05	0.70
39:l:40:LYS:HZ2	44:5:355:A:C3'	1.86	0.70
43:q:49:ALA:HB3	44:5:1259:A:OP1	1.91	0.70
44:5:507:U:O2	44:5:584:G:N2	2.23	0.70
44:5:510:G:C2	44:5:581:U:O2	2.44	0.70
44:5:664:U:H3	44:5:798:G:H1	0.81	0.70
44:5:1055:A:O2'	46:7:99:G:N2	2.24	0.70
44:5:2277:C:C5'	44:5:2317:A:C4'	2.62	0.70
46:7:7:G:H1	46:7:114:U:H3	1.40	0.70
1:z:410:ARG:NH2	44:5:2447:A:C5	2.59	0.70
3:B:104:THR:OG1	44:5:3147:G:O2'	2.07	0.70
7:F:285:TYR:CD2	21:T:142:SER:C	2.69	0.70
12:s:294:ALA:CA	44:5:1276:U:C3'	2.69	0.70
15:N:90:ASN:ND2	44:5:2600:C:C3'	2.45	0.70
34:g:12:PRO:HB2	44:5:1855:U:C1'	2.14	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:q:214:UNK:CB	48:y:4:UNK:CA	2.37	0.70
44:5:544:C:O2'	44:5:547:G:N2	2.21	0.70
44:5:822:G:N2	44:5:903:U:O2	2.24	0.70
44:5:2862:U:H2'	44:5:2863:G:H8	1.56	0.70
44:5:3019:U:N3	44:5:3036:G:C6	2.58	0.70
1:z:300:LYS:CD	44:5:2486:A:OP1	2.38	0.70
2:A:193:ARG:NH1	44:5:2174:G:OP2	2.23	0.70
3:B:30:LYS:HB2	44:5:3137:C:P	2.32	0.70
3:B:384:LYS:NZ	44:5:3370:A:H4'	2.05	0.70
4:C:140:HIS:H	4:C:180:LYS:HD3	1.56	0.70
12:s:224:GLU:N	43:q:43:LYS:O	2.23	0.70
12:s:267:LYS:CB	44:5:1277:C:N4	2.50	0.70
15:N:22:LEU:HB3	44:5:316:U:C2'	2.17	0.70
15:N:82:GLY:H	44:5:2427:U:H5	0.72	0.70
15:N:121:VAL:CB	44:5:317:A:O3'	2.23	0.70
15:N:178:HIS:HA	44:5:53:G:H3'	1.73	0.70
19:R:283:ASP:O	19:R:287:GLU:HB2	1.91	0.70
36:i:56:ARG:NH2	44:5:2505:U:H5''	2.05	0.70
43:q:41:VAL:N	44:5:1261:G:C8	2.41	0.70
44:5:1677:G:N2	44:5:1691:U:O2	2.24	0.70
1:z:383:ASN:O	44:5:2493:U:OP2	2.08	0.70
3:B:3:HIS:HE2	44:5:2938:G:H5''	1.54	0.70
7:F:287:VAL:CG2	21:T:139:ARG:HB2	2.21	0.70
15:N:18:VAL:O	44:5:316:U:P	2.48	0.70
15:N:22:LEU:CB	44:5:316:U:C6	2.74	0.70
15:N:36:ILE:CD1	44:5:269:G:O5'	2.24	0.70
19:R:278:ILE:HG23	19:R:281:LYS:HZ1	1.57	0.70
43:q:43:LYS:CE	44:5:1232:C:C6	2.62	0.70
46:7:26:C:O2	46:7:57:G:N2	2.25	0.70
2:A:177:LYS:HB3	44:5:1793:C:H5	1.55	0.70
5:D:296:LEU:HA	44:5:2748:A:O2'	1.91	0.70
12:s:294:ALA:HA	44:5:1276:U:C3'	2.22	0.70
13:L:47:ALA:HB3	35:h:115:LYS:HZ1	1.56	0.70
15:N:91:GLU:CG	44:5:277:G:N9	2.52	0.70
21:T:70:SER:OG	44:5:2737:C:P	2.49	0.70
33:f:360:GLN:NE2	44:5:582:G:N2	2.39	0.70
44:5:1666:G:N2	44:5:1783:U:O2	2.25	0.70
44:5:1863:G:C2	44:5:1867:A:N6	2.40	0.70
1:z:209:LYS:HZ3	44:5:2466:G:N2	1.88	0.70
1:z:233:LEU:CD1	44:5:2492:C:C4	2.71	0.70
8:G:287:GLN:OE1	44:5:120:G:H1'	1.89	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:s:195:VAL:O	44:5:1263:A:N3	2.24	0.70
14:M:186:GLU:HB3	14:M:194:LEU:HB3	1.73	0.70
15:N:149:ASN:O	45:8:142:C:H4'	1.91	0.70
15:N:177:GLY:CA	44:5:54:C:C5	2.75	0.70
21:T:82:ASN:HB2	29:b:87:ILE:HA	1.73	0.70
44:5:432:G:N1	44:5:627:U:N3	2.37	0.70
44:5:867:G:H1	44:5:892:U:H3	1.38	0.70
44:5:1539:A:N7	44:5:1553:U:O2	2.24	0.70
44:5:2203:U:H3	44:5:2239:G:H1	1.37	0.70
44:5:2425:G:C2	44:5:2604:U:O2	2.44	0.70
47:x:20:UNK:O	48:y:25:UNK:C	2.39	0.70
1:z:232:GLY:CA	44:5:2465:G:C8	2.55	0.70
3:B:14:LEU:HB2	44:5:3010:U:H5''	1.74	0.70
15:N:9:GLU:HA	44:5:78:U:O2'	1.92	0.70
15:N:139:HIS:CA	44:5:145:G:H5'	2.21	0.70
15:N:170:LYS:HZ2	44:5:31:C:H4'	1.55	0.70
24:W:191:PRO:HB2	24:W:199:LEU:HB3	1.74	0.70
43:q:33:VAL:HG11	44:5:1280:C:O2	1.91	0.70
43:q:57:THR:CG2	44:5:1284:C:N3	0.79	0.70
44:5:129:U:N3	44:5:139:G:N1	2.35	0.70
44:5:2194:G:N3	44:5:2274:U:C6	2.60	0.70
44:5:2631:U:H1'	44:5:2697:A:H1'	1.74	0.70
47:x:31:UNK:O	48:y:11:UNK:O	2.10	0.70
1:z:223:PHE:CZ	44:5:2469:G:N1	2.56	0.70
2:A:215:ASN:ND2	44:5:2968:G:C8	2.60	0.70
7:F:289:ALA:N	21:T:138:SER:HA	2.06	0.70
9:H:374:LYS:N	40:m:127:LEU:HD13	2.06	0.70
12:s:268:GLU:HA	43:q:36:GLN:OE1	1.91	0.70
15:N:143:ARG:HB3	45:8:143:U:C4'	2.21	0.70
18:Q:295:ARG:NH1	44:5:88:A:H5''	2.06	0.70
26:Y:47:ALA:HB2	44:5:225:C:OP1	1.92	0.70
26:Y:53:ASP:HB2	26:Y:110:HIS:HB2	1.73	0.70
29:b:120:LEU:HD21	44:5:1072:G:H1'	1.72	0.70
43:q:211:UNK:C	47:x:4:UNK:O	2.40	0.70
44:5:355:A:H62	44:5:364:G:H21	1.39	0.70
44:5:1863:G:N2	44:5:1867:A:N6	2.39	0.70
44:5:2198:A:C5	44:5:2270:A:C6	2.80	0.70
44:5:2563:G:N2	44:5:2578:U:O2	2.25	0.70
44:5:2999:U:O2	44:5:3149:G:N2	2.24	0.70
1:z:226:THR:CB	44:5:2458:A:OP1	2.24	0.70
5:D:525:TYR:HE1	46:7:121:U:H5''	1.57	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:s:299:ILE:N	44:5:1267:U:H3	1.89	0.70
15:N:3:ALA:CB	44:5:111:C:H1'	2.22	0.70
15:N:25:VAL:HG13	44:5:299:G:N1	2.06	0.70
15:N:28:TRP:CZ3	44:5:297:G:H1'	2.27	0.70
15:N:128:LYS:NZ	44:5:289:A:P	2.65	0.70
15:N:188:ARG:HB3	44:5:1544:G:H1	1.57	0.70
22:U:164:LYS:NZ	44:5:1682:U:H5	1.90	0.70
43:q:66:PHE:CE1	44:5:1221:A:C2	2.74	0.70
44:5:2198:A:C4	44:5:2270:A:N9	2.33	0.70
46:7:81:U:N3	46:7:99:G:N1	2.37	0.70
1:z:219:LYS:N	44:5:2470:C:N3	2.35	0.69
1:z:228:GLU:OE2	44:5:2480:A:C8	2.45	0.69
4:C:347:THR:OG1	44:5:520:U:O4	2.10	0.69
13:L:49:ARG:HG2	35:h:116:TYR:CD2	2.25	0.69
15:N:27:VAL:C	44:5:67:A:N1	2.39	0.69
43:q:57:THR:CA	44:5:1285:G:N2	2.54	0.69
44:5:129:U:C2	44:5:139:G:N1	2.48	0.69
44:5:1156:C:C4'	46:7:86:U:H5	2.05	0.69
44:5:1463:U:O2	44:5:1467:A:N7	2.25	0.69
44:5:2263:C:O2'	44:5:2264:U:C5'	2.40	0.69
44:5:2275:A:N7	44:5:2312:A:N6	2.10	0.69
44:5:2838:A:H62	44:5:2850:G:N2	1.90	0.69
44:5:3231:U:C4	44:5:3256:G:O6	2.45	0.69
6:E:270:ARG:CZ	44:5:3268:A:C5'	2.69	0.69
7:F:290:GLN:OE1	21:T:136:ARG:N	2.19	0.69
8:G:357:LYS:HZ2	44:5:7:C:P	2.15	0.69
10:I:277:HIS:N	44:5:1044:U:O2'	2.24	0.69
10:I:391:LEU:HB3	46:7:64:A:OP2	1.92	0.69
12:s:296:GLU:HA	44:5:1266:G:H22	1.57	0.69
23:V:176:ASN:CG	44:5:2917:G:OP1	2.35	0.69
29:b:111:HIS:CD2	44:5:1075:A:C4	2.80	0.69
44:5:40:A:OP1	44:5:42:C:N4	2.25	0.69
44:5:1712:G:N2	44:5:1731:A:OP2	2.23	0.69
44:5:2198:A:O2'	44:5:2270:A:OP1	2.09	0.69
47:x:31:UNK:N	48:y:14:UNK:CA	2.55	0.69
1:z:234:LYS:CG	44:5:2464:U:N1	2.53	0.69
2:A:8:GLN:HG2	44:5:2164:A:P	2.32	0.69
3:B:257:PRO:HA	44:5:1305:U:O4	1.92	0.69
5:D:295:ARG:HD2	44:5:2749:G:O2'	1.91	0.69
7:F:289:ALA:HA	21:T:137:GLU:CA	2.22	0.69
12:s:253:MET:C	44:5:1246:G:C2'	2.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:s:268:GLU:O	44:5:1265:U:P	2.50	0.69
21:T:82:ASN:CB	29:b:86:GLY:O	2.40	0.69
21:T:129:LYS:HB2	44:5:1095:U:H3	1.57	0.69
31:d:114:ASN:ND2	44:5:1474:A:H2	1.89	0.69
43:q:42:ARG:CZ	44:5:1258:U:O2	2.40	0.69
43:q:107:ALA:CA	44:5:1229:G:C2'	2.46	0.69
44:5:2658:G:H5'	44:5:2753:G:H21	1.57	0.69
3:B:2:SER:N	44:5:2939:G:H3'	2.06	0.69
3:B:257:PRO:HG3	44:5:1305:U:C2	2.28	0.69
9:H:321:LYS:HB2	44:5:3035:A:H1'	1.74	0.69
12:s:152:LEU:O	44:5:1238:C:O2'	2.10	0.69
12:s:277:GLY:HA3	44:5:1257:C:C5	2.23	0.69
15:N:3:ALA:HB3	44:5:111:C:H1'	1.74	0.69
15:N:143:ARG:CB	45:8:143:U:C5'	2.69	0.69
17:P:74:LYS:HE2	44:5:3297:U:H4'	1.74	0.69
34:g:6:THR:HG22	44:5:1486:G:N2	2.07	0.69
44:5:995:U:O2	44:5:1054:A:N7	2.25	0.69
44:5:1156:C:H4'	46:7:86:U:C5	2.28	0.69
5:D:542:ARG:HH21	46:7:62:U:P	2.16	0.69
7:F:286:TYR:OH	21:T:138:SER:CB	2.41	0.69
8:G:215:LYS:HD2	44:5:2523:A:C4	2.28	0.69
15:N:41:ARG:HH11	44:5:113:C:H6	1.38	0.69
15:N:129:TYR:HE1	44:5:318:A:C2	2.08	0.69
27:Z:54:LYS:HE3	44:5:2564:G:OP2	1.91	0.69
39:l:40:LYS:HE2	44:5:355:A:C5'	2.22	0.69
42:p:2:ALA:N	44:5:854:G:C5	2.59	0.69
43:q:5:ARG:NH1	44:5:1287:A:C6	2.61	0.69
43:q:81:LYS:C	44:5:1282:G:O3'	2.35	0.69
44:5:1210:U:O2	44:5:1295:G:C2	2.45	0.69
47:x:25:UNK:N	48:y:6:UNK:O	2.25	0.69
1:z:236:TYR:HD2	44:5:2494:A:N9	1.76	0.69
9:H:250:ASN:ND2	14:M:152:THR:C	2.50	0.69
20:S:66:GLU:O	44:5:522:A:O2'	2.09	0.69
25:X:147:ARG:NH2	44:5:1560:G:O6	2.26	0.69
41:o:3:ASN:O	44:5:2655:U:H2'	1.92	0.69
43:q:104:ARG:NE	44:5:1232:C:C4'	2.47	0.69
44:5:1638:A:H2'	44:5:1737:U:H1'	1.73	0.69
44:5:1863:G:H21	44:5:1867:A:N6	1.89	0.69
5:D:272:TYR:OH	44:5:2688:U:H2'	1.92	0.69
6:E:247:LYS:N	44:5:607:A:OP1	2.25	0.69
12:s:285:PRO:C	44:5:1278:A:C2	2.70	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:L:136:GLU:HG3	35:h:119:LYS:CD	1.98	0.69
13:L:159:VAL:CG2	28:a:180:ALA:HB2	2.23	0.69
15:N:70:ASN:HA	44:5:289:A:C5	2.16	0.69
34:g:12:PRO:HB2	44:5:1855:U:O2	1.93	0.69
44:5:160:G:N2	44:5:261:U:O2	2.25	0.69
44:5:2427:U:O2	44:5:2602:G:N2	2.26	0.69
1:z:217:GLU:N	44:5:2489:C:C4	2.59	0.69
1:z:296:LYS:HG3	1:z:321:PRO:HB3	1.75	0.69
1:z:394:GLN:HA	44:5:2447:A:OP2	1.92	0.69
1:z:411:LEU:HA	44:5:2448:G:H3'	1.73	0.69
2:A:3:ARG:NH1	44:5:911:C:N3	2.41	0.69
2:A:80:GLU:HG3	42:p:66:GLY:CA	2.22	0.69
3:B:130:PHE:HA	3:B:133:TYR:HB3	1.75	0.69
4:C:46:LYS:HD2	44:5:692:A:C4'	2.23	0.69
4:C:73:ARG:NH2	44:5:939:U:O2	2.26	0.69
7:F:328:LYS:HE3	21:T:134:GLN:OE1	1.93	0.69
10:I:300:MET:HB3	44:5:2618:G:N7	2.06	0.69
12:s:279:ARG:HA	43:q:43:LYS:CB	2.22	0.69
12:s:290:GLU:O	44:5:1230:G:O6	2.11	0.69
15:N:23:GLN:HG3	44:5:317:A:C1'	2.23	0.69
15:N:156:HIS:ND1	45:8:141:C:O2'	2.22	0.69
16:O:51:LYS:HE2	16:O:145:VAL:HG12	1.75	0.69
21:T:119:ALA:O	21:T:123:GLY:HA2	1.92	0.69
22:U:163:LEU:O	22:U:167:GLN:CA	2.40	0.69
24:W:234:LEU:O	24:W:238:ARG:HB3	1.92	0.69
34:g:25:THR:O	44:5:1694:U:O2'	2.10	0.69
43:q:51:VAL:C	44:5:1280:C:H4'	2.17	0.69
44:5:87:U:O2	44:5:99:A:C5	2.45	0.69
44:5:945:C:H1'	44:5:1407:A:H1'	1.73	0.69
44:5:1959:G:C2	44:5:2078:C:C2	2.80	0.69
44:5:2469:G:H5''	44:5:2477:G:H1	1.56	0.69
12:s:195:VAL:O	44:5:1263:A:N1	2.26	0.69
12:s:260:ARG:CB	44:5:1247:U:C2'	2.71	0.69
14:M:189:ASP:HA	20:S:143:PHE:CZ	2.27	0.69
15:N:3:ALA:HB2	44:5:110:G:O2'	1.93	0.69
15:N:27:VAL:HG13	44:5:300:G:O2'	1.92	0.69
15:N:170:LYS:HZ1	44:5:31:C:H5'	1.38	0.69
15:N:179:LYS:HD3	44:5:52:A:N6	2.06	0.69
22:U:175:VAL:O	22:U:182:TYR:HA	1.93	0.69
34:g:10:ARG:CD	44:5:1489:A:P	2.81	0.69
43:q:37:GLN:HG3	44:5:1231:A:H8	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:2196:C:C4'	44:5:2271:A:O4'	2.40	0.69
3:B:261:MET:CG	16:O:64:PHE:HA	2.23	0.69
10:I:283:ARG:NH2	44:5:1126:G:O5'	2.26	0.69
15:N:10:LEU:HD23	44:5:77:A:C1'	2.23	0.69
15:N:26:ARG:NH1	44:5:67:A:OP2	2.26	0.69
15:N:67:ARG:CG	44:5:273:A:N6	2.56	0.69
16:O:176:LYS:HZ2	44:5:3191:G:H5'	1.56	0.69
26:Y:100:HIS:ND1	44:5:218:G:OP2	2.24	0.69
26:Y:113:LYS:NZ	45:8:84:C:O2'	2.26	0.69
37:j:797:ARG:HD3	44:5:818:C:H5'	1.75	0.69
44:5:16:A:N6	45:8:144:G:C6	2.61	0.69
44:5:1347:U:N3	44:5:1357:G:N1	2.36	0.69
44:5:3019:U:C2	44:5:3036:G:C2	2.81	0.69
44:5:3184:A:N3	44:5:3187:A:O2'	2.26	0.69
47:x:10:UNK:HA	48:y:4:UNK:N	2.00	0.69
7:F:286:TYR:CD1	21:T:140:ILE:HG13	2.25	0.68
13:L:122:LYS:O	35:h:118:ILE:HG23	1.93	0.68
15:N:41:ARG:O	44:5:319:A:N3	2.26	0.68
15:N:70:ASN:N	44:5:289:A:N6	2.40	0.68
26:Y:46:LYS:CE	44:5:224:C:H5''	2.23	0.68
44:5:44:U:O4	44:5:94:G:N2	2.26	0.68
44:5:371:G:H21	44:5:375:A:N6	1.89	0.68
44:5:835:G:H21	44:5:858:A:H8	1.29	0.68
44:5:1055:A:H4'	46:7:100:C:O2	1.93	0.68
44:5:1949:G:N2	44:5:2097:U:O2	2.26	0.68
6:E:400:PHE:OXT	14:M:262:THR:CA	2.36	0.68
12:s:184:ALA:HB2	44:5:1239:C:OP2	1.93	0.68
13:L:47:ALA:HB3	35:h:115:LYS:NZ	2.09	0.68
18:Q:304:ARG:NE	44:5:2789:U:OP1	2.26	0.68
36:i:63:ASN:HD21	44:5:2445:A:P	2.15	0.68
44:5:5:G:C4	45:8:155:A:N6	2.60	0.68
44:5:119:U:H4'	44:5:120:G:H3'	1.73	0.68
44:5:1010:G:C2	44:5:1040:A:H2	2.11	0.68
44:5:1717:U:O4	44:5:1727:G:O6	2.11	0.68
44:5:2150:G:N2	44:5:2186:U:O2	2.27	0.68
44:5:3189:G:N2	44:5:3203:U:O2	2.27	0.68
45:8:39:G:H22	45:8:104:A:H8	1.33	0.68
1:z:218:THR:OG1	44:5:2489:C:C2	2.43	0.68
1:z:229:LEU:HD11	44:5:2459:A:C4	1.95	0.68
3:B:14:LEU:C	44:5:3010:U:H4'	2.17	0.68
5:D:265:LYS:CE	44:5:2669:G:N2	2.53	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:I:199:ASN:ND2	44:5:1126:G:P	2.66	0.68
12:s:224:GLU:C	44:5:1233:G:C2	2.67	0.68
12:s:263:ALA:O	44:5:1276:U:O2	1.98	0.68
12:s:277:GLY:HA3	44:5:1256:G:C8	2.29	0.68
12:s:296:GLU:CB	44:5:1276:U:C1'	2.72	0.68
15:N:183:THR:CG2	44:5:54:C:HO2'	1.99	0.68
31:d:78:LEU:O	31:d:86:ARG:NH2	2.26	0.68
32:e:189:ILE:HD11	44:5:640:U:C5	2.29	0.68
36:i:31:GLY:HA3	44:5:298:U:H5'	1.74	0.68
44:5:2198:A:O2'	44:5:2270:A:H5'	1.93	0.68
44:5:3232:G:N1	44:5:3255:U:N3	2.42	0.68
15:N:57:GLN:N	44:5:150:A:OP2	2.26	0.68
16:O:169:ALA:O	16:O:173:ALA:HB3	1.93	0.68
17:P:171:ARG:CZ	44:5:617:G:H4'	2.24	0.68
39:l:2:ALA:O	44:5:1490:A:OP1	2.11	0.68
44:5:195:U:O2	44:5:199:A:C6	2.46	0.68
44:5:641:C:H42	44:5:645:A:H8	1.42	0.68
44:5:707:U:O2	44:5:712:G:N2	2.27	0.68
44:5:2196:C:O2'	44:5:2271:A:C1'	2.42	0.68
44:5:2767:U:O2	44:5:2791:G:N2	2.25	0.68
1:z:410:ARG:CG	44:5:2448:G:N3	2.50	0.68
3:B:308:MET:HB2	3:B:363:SER:HB2	1.75	0.68
4:C:100:PHE:HZ	44:5:662:U:C6	2.12	0.68
6:E:382:TYR:HD1	14:M:267:PHE:CD2	2.11	0.68
7:F:284:SER:CA	21:T:142:SER:CA	2.70	0.68
7:F:290:GLN:NE2	21:T:136:ARG:HH11	1.91	0.68
8:G:404:ASN:ND2	44:5:2584:G:O2'	2.26	0.68
10:I:275:ARG:NH1	44:5:1043:C:H5''	2.07	0.68
12:s:288:ILE:O	44:5:1277:C:N4	2.26	0.68
12:s:296:GLU:CB	44:5:1276:U:H4'	2.22	0.68
13:L:17:HIS:CD2	44:5:48:A:OP2	2.47	0.68
15:N:68:ARG:HG2	15:N:128:LYS:HE3	1.76	0.68
22:U:165:LYS:NZ	44:5:1684:U:OP1	2.25	0.68
39:l:24:PRO:HG2	45:8:52:A:C5	2.29	0.68
43:q:11:TYR:O	43:q:15:LEU:HB2	1.92	0.68
1:z:368:GLU:CB	44:5:2470:C:OP2	2.37	0.68
7:F:308:LYS:HE2	44:5:985:U:H5''	1.75	0.68
10:I:198:LYS:NZ	44:5:1127:G:N7	2.39	0.68
12:s:251:ARG:CB	44:5:1246:G:O6	2.41	0.68
17:P:126:ARG:HA	17:P:140:GLU:HG2	1.75	0.68
26:Y:24:SER:O	45:8:88:A:C2	2.46	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:q:33:VAL:N	44:5:1229:G:C5	2.54	0.68
43:q:87:VAL:HA	44:5:1259:A:H5'	1.76	0.68
44:5:436:A:OP2	44:5:621:A:N6	2.27	0.68
44:5:3048:A:N6	44:5:3091:A:OP2	2.26	0.68
1:z:411:LEU:HG	44:5:2447:A:O2'	1.93	0.68
3:B:12:GLY:H	44:5:3044:G:H5''	1.58	0.68
7:F:336:LEU:CD1	44:5:986:U:H1'	2.21	0.68
9:H:358:ALA:O	9:H:362:GLN:HB2	1.93	0.68
21:T:105:PHE:HZ	44:5:1063:G:C8	2.10	0.68
43:q:38:MET:HG3	44:5:1230:G:H21	0.85	0.68
43:q:83:ASN:CB	44:5:1281:G:N2	2.45	0.68
44:5:594:U:H3'	44:5:595:G:H8	1.58	0.68
11:J:135:THR:OG1	46:7:39:C:O4'	2.10	0.68
12:s:247:ILE:O	44:5:1231:A:H3'	1.55	0.68
15:N:67:ARG:NE	44:5:272:G:O6	2.26	0.68
37:j:798:HIS:CE1	44:5:1490:A:O2'	2.47	0.68
43:q:57:THR:HA	44:5:1285:G:H1	0.51	0.68
44:5:16:A:C6	45:8:144:G:C6	2.82	0.68
44:5:999:G:N3	44:5:1002:A:N6	2.41	0.68
44:5:1054:A:C2	46:7:80:G:N3	2.61	0.68
44:5:3309:G:H3'	44:5:3310:A:H8	1.59	0.68
44:5:3344:A:N6	44:5:3361:G:O2'	2.27	0.68
5:D:287:LYS:HE2	11:J:234:ARG:HH22	1.59	0.68
7:F:355:ARG:CZ	44:5:578:A:C6	2.76	0.68
12:s:298:GLU:HA	44:5:1273:A:N7	2.09	0.68
15:N:122:ASN:HB2	44:5:318:A:O4'	1.93	0.68
15:N:171:SER:O	44:5:1546:A:C4	2.47	0.68
16:O:18:ARG:NE	44:5:1314:C:H4'	2.09	0.68
21:T:84:TYR:CZ	29:b:88:LYS:O	2.45	0.68
27:Z:15:GLY:HA3	44:5:1637:A:C5'	2.24	0.68
43:q:53:MET:H	44:5:1280:C:H5''	0.61	0.68
43:q:57:THR:HA	43:q:60:ARG:HB2	1.74	0.68
43:q:58:MET:C	44:5:1286:A:N6	2.52	0.68
44:5:278:U:O2	44:5:287:G:C2	2.47	0.68
44:5:1018:G:C6	44:5:1034:U:C2	2.82	0.68
44:5:1813:A:O2'	44:5:1816:A:N3	2.27	0.68
44:5:2197:C:O2	44:5:2244:A:N6	2.27	0.68
1:z:226:THR:CG2	44:5:2481:G:H21	1.73	0.68
5:D:292:GLN:HE22	44:5:2747:A:H61	1.42	0.68
6:E:246:ARG:C	44:5:607:A:OP1	2.37	0.68
8:G:390:TYR:O	8:G:394:LYS:HB2	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:J:219:TYR:CE1	44:5:2683:U:H1'	2.28	0.68
12:s:215:SER:C	44:5:1264:G:H8	2.00	0.68
12:s:289:ILE:O	44:5:1277:C:C2'	2.42	0.68
15:N:3:ALA:HB3	44:5:111:C:C1'	2.23	0.68
15:N:64:VAL:HA	44:5:269:G:OP1	1.93	0.68
15:N:126:THR:N	44:5:272:G:C8	2.61	0.68
15:N:144:ARG:HH12	44:5:143:G:H22	1.41	0.68
20:S:67:ALA:HB2	44:5:519:A:H62	1.59	0.68
20:S:146:LYS:HE3	44:5:534:U:O2	1.93	0.68
34:g:10:ARG:CZ	44:5:1489:A:OP1	2.41	0.68
34:g:41:ARG:HD3	44:5:1739:U:O2'	1.94	0.68
44:5:122:A:N7	44:5:148:G:C2	2.62	0.68
44:5:355:A:H62	44:5:364:G:N2	1.92	0.68
44:5:2284:C:N4	44:5:2308:C:OP2	2.27	0.68
44:5:3232:G:O6	44:5:3255:U:C4	2.47	0.68
4:C:70:ALA:HB1	44:5:1436:U:C2	2.29	0.67
5:D:314:ARG:O	5:D:321:ILE:HB	1.93	0.67
8:G:287:GLN:NE2	44:5:121:A:C8	2.61	0.67
15:N:129:TYR:C	44:5:318:A:C3'	2.66	0.67
19:R:155:ARG:NH2	44:5:1873:U:H5''	2.08	0.67
35:h:86:ARG:H	45:8:36:G:P	2.16	0.67
39:l:2:ALA:N	44:5:1493:G:O6	2.27	0.67
39:l:21:ARG:NH1	45:8:52:A:N9	2.43	0.67
44:5:2211:U:O2	44:5:2234:G:N2	2.26	0.67
44:5:2255:A:N6	44:5:2260:U:H3	1.90	0.67
3:B:251:CYS:CB	44:5:2881:C:O2	2.41	0.67
5:D:483:PHE:HB3	5:D:486:TYR:HB2	1.75	0.67
12:s:270:LEU:C	44:5:1232:C:C5	2.72	0.67
13:L:63:VAL:HA	44:5:72:C:H4'	1.75	0.67
15:N:204:LYS:OXT	37:j:814:HIS:CA	2.41	0.67
32:e:176:TYR:HD1	44:5:655:C:OP1	1.77	0.67
33:f:393:HIS:CE1	44:5:1328:C:OP1	2.47	0.67
43:q:51:VAL:HG21	44:5:1280:C:HO2'	1.57	0.67
44:5:195:U:N3	44:5:199:A:C6	2.61	0.67
46:7:81:U:H3	46:7:99:G:H1	1.37	0.67
1:z:228:GLU:CD	44:5:2478:C:C3'	2.53	0.67
6:E:390:LYS:HD2	44:5:3213:A:H2	1.58	0.67
8:G:224:ARG:HG2	45:8:152:G:H5'	1.75	0.67
9:H:222:SER:OG	44:5:3187:A:OP2	2.11	0.67
9:H:322:LYS:N	44:5:3034:C:O2	2.25	0.67
10:I:383:LYS:CE	44:5:1040:A:O2'	2.41	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:s:151:TYR:O	44:5:1240:A:H5'	1.94	0.67
12:s:256:LYS:O	44:5:1269:U:C4	2.46	0.67
13:L:13:HIS:ND1	44:5:86:G:C6	2.62	0.67
15:N:40:ALA:O	44:5:114:A:C5'	2.27	0.67
33:f:360:GLN:CG	44:5:582:G:H21	2.06	0.67
1:z:234:LYS:HG2	44:5:2464:U:P	2.34	0.67
3:B:259:HIS:CD2	16:O:64:PHE:CE1	2.83	0.67
6:E:295:VAL:HG13	6:E:380:LYS:HG3	1.77	0.67
7:F:392:ASP:O	7:F:396:HIS:CB	2.43	0.67
10:I:209:ARG:HH22	44:5:2648:G:P	2.17	0.67
11:J:153:ASN:HB2	41:o:103:ALA:CB	2.23	0.67
11:J:153:ASN:O	41:o:103:ALA:CB	2.43	0.67
12:s:217:LEU:CB	44:5:1237:G:C1'	2.73	0.67
12:s:281:ASP:O	43:q:45:LEU:HD21	1.94	0.67
15:N:130:PHE:N	44:5:318:A:C3'	2.57	0.67
28:a:103:ILE:HD12	44:5:1114:U:H5''	1.74	0.67
28:a:185:THR:O	28:a:190:TYR:N	2.28	0.67
33:f:367:ILE:O	33:f:386:TRP:HA	1.94	0.67
44:5:160:G:N1	44:5:261:U:N3	2.43	0.67
44:5:2426:U:O2	44:5:2603:G:C2	2.47	0.67
1:z:225:GLU:CG	44:5:2458:A:N9	2.35	0.67
2:A:8:GLN:HG2	44:5:2164:A:OP1	1.94	0.67
2:A:80:GLU:CD	42:p:66:GLY:C	2.63	0.67
3:B:261:MET:HG2	16:O:64:PHE:CA	2.25	0.67
5:D:265:LYS:HE2	44:5:2669:G:H21	1.58	0.67
5:D:283:ARG:NH2	44:5:2703:A:C2	2.63	0.67
12:s:245:GLU:HA	44:5:1230:G:O3'	1.94	0.67
13:L:128:ARG:CZ	44:5:168:U:O2'	2.42	0.67
15:N:7:LEU:C	44:5:64:G:C2'	2.68	0.67
15:N:46:ASP:HB3	44:5:322:U:C5	2.25	0.67
15:N:94:TYR:CD2	44:5:290:G:H5'	2.28	0.67
15:N:175:ASN:O	44:5:55:G:OP2	2.12	0.67
17:P:61:ARG:HD3	45:8:4:C:OP1	1.94	0.67
21:T:105:PHE:CZ	44:5:1063:G:O4'	2.47	0.67
25:X:156:ARG:NH1	44:5:14:U:O2	2.28	0.67
37:j:797:ARG:HD2	44:5:817:A:N3	2.10	0.67
44:5:173:G:O6	44:5:245:U:C4	2.48	0.67
44:5:668:G:N1	44:5:794:U:N3	2.36	0.67
1:z:383:ASN:CG	44:5:2492:C:O2'	2.36	0.67
1:z:400:VAL:O	44:5:2452:G:O6	2.11	0.67
3:B:228:GLY:O	3:B:232:ARG:HB2	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:379:PHE:CD1	24:W:157:LYS:CE	2.78	0.67
8:G:219:TYR:OH	45:8:149:A:O2'	2.06	0.67
8:G:265:THR:H	8:G:268:GLU:HB2	1.59	0.67
9:H:208:GLN:HE21	9:H:268:LEU:HD13	1.60	0.67
9:H:321:LYS:N	44:5:3034:C:O2	2.28	0.67
10:I:301:ARG:HA	44:5:2618:G:N2	2.09	0.67
11:J:123:ARG:HD2	11:J:211:ILE:HA	1.76	0.67
12:s:250:ALA:O	44:5:1264:G:O6	2.13	0.67
15:N:20:ARG:HD2	44:5:68:C:C3'	2.24	0.67
15:N:23:GLN:CD	44:5:67:A:H8	2.02	0.67
15:N:28:TRP:CH2	44:5:297:G:C4'	2.77	0.67
15:N:61:ILE:HA	15:N:132:VAL:O	1.94	0.67
15:N:78:GLY:CA	44:5:2600:C:C2	2.75	0.67
25:X:178:GLU:O	35:h:32:LYS:CE	2.42	0.67
32:e:188:GLY:C	44:5:639:G:OP2	2.38	0.67
32:e:224:THR:HA	32:e:244:ALA:O	1.93	0.67
34:g:4:ARG:HH12	44:5:1481:A:C2'	2.07	0.67
43:q:89:THR:HG21	43:q:96:ILE:HG13	1.76	0.67
43:q:210:UNK:O	47:x:7:UNK:N	2.11	0.67
44:5:348:A:N3	44:5:352:A:O2'	2.27	0.67
44:5:761:A:C5	44:5:770:G:N3	2.62	0.67
44:5:3099:C:N3	44:5:3135:U:O2	2.27	0.67
47:x:6:UNK:CB	48:y:9:UNK:CA	2.72	0.67
1:z:400:VAL:HB	44:5:2494:A:C1'	2.24	0.67
4:C:141:ARG:NH1	44:5:1385:C:OP1	2.28	0.67
5:D:274:SER:O	46:7:11:A:N6	2.27	0.67
9:H:373:ARG:NH1	44:5:2897:A:P	2.68	0.67
12:s:268:GLU:HA	44:5:1264:G:N3	2.10	0.67
14:M:224:GLY:O	44:5:561:C:H4'	1.94	0.67
15:N:191:TRP:O	15:N:195:ASN:HB2	1.94	0.67
15:N:196:THR:OG1	44:5:1550:C:OP1	2.12	0.67
17:P:171:ARG:NE	44:5:617:G:H4'	2.09	0.67
21:T:82:ASN:O	29:b:88:LYS:CB	2.43	0.67
27:Z:72:LYS:HZ3	44:5:1636:U:H5''	1.59	0.67
43:q:43:LYS:NZ	44:5:1232:C:C6	2.60	0.67
44:5:3158:G:O6	44:5:3292:A:C6	2.47	0.67
1:z:410:ARG:CG	44:5:2448:G:C4	2.78	0.67
2:A:13:GLY:HA2	2:A:16:PHE:HB2	1.77	0.67
2:A:92:LYS:HE3	2:A:93:LYS:HE2	1.77	0.67
3:B:261:MET:CB	16:O:64:PHE:HA	2.24	0.67
4:C:76:ARG:NH2	44:5:1438:U:H5''	2.10	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:265:LYS:HG3	44:5:2686:A:H4'	1.75	0.67
12:s:221:ALA:HB2	44:5:1234:G:O4'	1.94	0.67
12:s:254:ARG:CA	44:5:1246:G:C2'	2.73	0.67
15:N:29:GLU:CA	44:5:297:G:N7	2.58	0.67
15:N:37:HIS:CD2	44:5:268:A:H5''	2.30	0.67
15:N:77:LYS:CG	44:5:2430:A:C1'	2.72	0.67
19:R:181:LYS:HE3	44:5:1765:U:H5''	1.77	0.67
21:T:82:ASN:O	29:b:88:LYS:HB2	1.95	0.67
28:a:93:ARG:NH1	44:5:1431:G:P	2.68	0.67
30:c:50:VAL:CG1	44:5:2552:C:C6	2.77	0.67
44:5:600:G:N2	44:5:603:A:C8	2.58	0.67
44:5:996:A:C2	46:7:79:A:H2	2.11	0.67
44:5:2565:U:C2	44:5:2576:G:C6	2.83	0.67
47:x:31:UNK:N	48:y:14:UNK:C	2.58	0.67
2:A:223:SER:OG	44:5:2244:A:O2'	2.12	0.67
15:N:183:THR:C	44:5:54:C:C3'	2.54	0.67
15:N:185:ALA:H	44:5:1548:C:C1'	2.08	0.67
15:N:199:LEU:HD21	44:5:904:A:OP2	1.94	0.67
25:X:164:ALA:HB1	35:h:66:VAL:HG11	1.77	0.67
43:q:31:ASP:HB2	44:5:1281:G:H22	0.60	0.67
43:q:49:ALA:H	44:5:1258:U:P	2.16	0.67
44:5:213:A:N6	44:5:227:G:H21	1.92	0.67
44:5:2191:U:H3	44:5:2316:G:H1	1.40	0.67
1:z:366:ASN:N	44:5:2477:G:C2'	2.52	0.67
5:D:402:PHE:HD1	44:5:1079:A:H1'	1.59	0.67
5:D:462:GLY:O	5:D:466:GLN:HB3	1.95	0.67
10:I:237:LEU:H	10:I:321:PHE:HB2	1.58	0.67
12:s:255:ASP:HA	44:5:1268:G:C6	2.30	0.67
15:N:7:LEU:HD22	44:5:321:C:C4	2.30	0.67
15:N:10:LEU:C	44:5:65:A:C5'	2.65	0.67
15:N:85:THR:CG2	44:5:2423:U:O3'	2.12	0.67
15:N:127:TYR:CZ	44:5:272:G:C6	2.82	0.67
36:i:26:ILE:CD1	44:5:264:G:N1	2.58	0.67
39:l:24:PRO:CD	45:8:52:A:C5	2.77	0.67
43:q:208:UNK:O	47:x:1:UNK:C	2.31	0.67
44:5:1237:G:C2	44:5:1251:A:H2	2.11	0.67
44:5:1959:G:N1	44:5:2078:C:N3	2.43	0.67
44:5:2246:G:O6	44:5:2247:G:O6	2.13	0.67
44:5:2719:U:H2'	44:5:2720:G:H8	1.58	0.67
1:z:261:CYS:N	44:5:2482:U:O4	2.28	0.66
1:z:307:ALA:HB1	1:z:314:GLN:HE22	1.59	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:7:GLU:CB	44:5:2915:U:C5	2.77	0.66
9:H:243:VAL:HB	9:H:256:ALA:H	1.59	0.66
10:I:391:LEU:H	46:7:64:A:P	2.17	0.66
15:N:5:LYS:O	44:5:77:A:H2	1.78	0.66
15:N:79:ALA:CA	44:5:2429:G:N7	2.57	0.66
19:R:215:LYS:HZ3	44:5:1940:G:P	2.18	0.66
29:b:116:THR:CB	44:5:1073:U:H1'	2.24	0.66
43:q:33:VAL:HG23	44:5:1280:C:H42	1.57	0.66
44:5:64:G:O2'	44:5:77:A:N3	2.27	0.66
44:5:867:G:N2	44:5:892:U:O2	2.28	0.66
44:5:952:A:H1'	44:5:1114:U:H1'	1.76	0.66
2:A:140:ASN:HB3	2:A:145:LYS:HB2	1.76	0.66
3:B:104:THR:HG1	44:5:3147:G:HO2'	1.34	0.66
12:s:195:VAL:CB	44:5:1263:A:C6	2.68	0.66
12:s:271:GLY:CA	43:q:40:GLU:CG	2.48	0.66
15:N:44:ARG:O	44:5:321:C:H6	1.78	0.66
15:N:64:VAL:C	44:5:268:A:H4'	2.19	0.66
15:N:78:GLY:HA2	44:5:2600:C:N4	2.10	0.66
15:N:126:THR:H	44:5:272:G:P	2.18	0.66
32:e:182:ASN:ND2	44:5:1407:A:OP1	2.28	0.66
37:j:807:ARG:CG	45:8:103:G:H4'	2.25	0.66
44:5:997:A:N3	46:7:102:A:C2	2.60	0.66
44:5:3160:U:H5''	44:5:3396:U:H3'	1.77	0.66
1:z:221:ARG:HH22	44:5:2471:U:H4'	0.85	0.66
6:E:400:PHE:O	14:M:262:THR:CB	2.41	0.66
10:I:198:LYS:NZ	44:5:1127:G:C8	2.58	0.66
14:M:188:ILE:HB	14:M:192:LYS:O	1.95	0.66
15:N:150:TRP:N	45:8:142:C:H1'	2.10	0.66
15:N:170:LYS:HZ1	44:5:31:C:H4'	1.46	0.66
24:W:200:PHE:O	24:W:204:HIS:HB2	1.95	0.66
34:g:4:ARG:HH12	44:5:1481:A:H1'	1.59	0.66
35:h:85:THR:HB	35:h:88:LEU:H	1.61	0.66
43:q:101:VAL:CG2	44:5:1259:A:H61	1.99	0.66
44:5:2457:G:H2'	44:5:2459:A:H62	1.59	0.66
44:5:2667:A:N7	44:5:2687:G:N3	2.43	0.66
1:z:226:THR:HG21	44:5:2458:A:P	2.34	0.66
2:A:40:TYR:N	44:5:2550:U:O4	2.27	0.66
3:B:106:TRP:CD1	3:B:133:TYR:HH	2.13	0.66
6:E:385:ALA:HB2	14:M:267:PHE:CE1	2.30	0.66
15:N:10:LEU:HD23	44:5:77:A:C2'	2.25	0.66
15:N:28:TRP:HB3	44:5:299:G:C2	2.29	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:P:169:THR:HG22	44:5:618:C:H5'	1.76	0.66
19:R:210:HIS:NE2	44:5:1941:C:OP1	2.28	0.66
33:f:363:LEU:CB	44:5:584:G:H4'	2.26	0.66
44:5:3026:G:N2	44:5:3029:A:OP2	2.29	0.66
6:E:332:LYS:HZ3	44:5:3271:G:H5''	1.61	0.66
8:G:402:LEU:HB2	8:G:407:GLN:HE21	1.60	0.66
9:H:247:LYS:HB2	14:M:154:SER:O	1.95	0.66
12:s:256:LYS:HA	44:5:1268:G:N7	2.10	0.66
13:L:183:ARG:HG2	44:5:765:C:N3	2.11	0.66
15:N:5:LYS:O	44:5:77:A:C2	2.49	0.66
15:N:122:ASN:HB2	44:5:317:A:N3	2.10	0.66
17:P:121:GLN:NE2	45:8:13:A:H2	1.91	0.66
28:a:103:ILE:CD1	44:5:1114:U:H5''	2.26	0.66
33:f:324:ARG:HD2	33:f:326:TYR:H	1.59	0.66
43:q:6:GLU:N	44:5:1219:C:H41	1.93	0.66
44:5:371:G:O2'	44:5:396:A:N6	2.23	0.66
46:7:81:U:O2	46:7:99:G:N2	2.28	0.66
47:x:9:UNK:C	48:y:7:UNK:N	2.49	0.66
3:B:120:LYS:CD	44:5:3000:A:H5''	2.23	0.66
3:B:383:LEU:HA	44:5:3369:G:N2	2.10	0.66
4:C:183:LYS:HB2	44:5:1386:A:C4	2.30	0.66
15:N:144:ARG:NH2	44:5:143:G:N1	2.40	0.66
15:N:192:LYS:HB2	44:5:1549:U:H2'	1.76	0.66
42:p:85:ARG:NH1	42:p:89:MET:SD	2.69	0.66
43:q:33:VAL:CG1	44:5:1280:C:C2	2.62	0.66
43:q:65:GLY:O	44:5:1221:A:C5	2.48	0.66
44:5:2246:G:C6	44:5:2247:G:O6	2.48	0.66
47:x:24:UNK:CB	48:y:25:UNK:CA	2.73	0.66
4:C:306:THR:CA	44:5:1346:G:H1'	2.25	0.66
6:E:355:LYS:HD3	6:E:358:ARG:HG3	1.77	0.66
7:F:284:SER:HA	21:T:142:SER:CA	2.25	0.66
12:s:216:SER:CB	44:5:1263:A:P	2.84	0.66
12:s:268:GLU:O	44:5:1265:U:O5'	2.14	0.66
12:s:294:ALA:H	44:5:1231:A:N6	1.92	0.66
13:L:11:LYS:CG	44:5:86:G:H2'	2.25	0.66
15:N:33:LYS:CD	44:5:267:G:C5'	2.73	0.66
15:N:129:TYR:CD2	44:5:271:C:C5'	2.62	0.66
36:i:26:ILE:CD1	44:5:264:G:H1	2.09	0.66
41:o:74:CYS:SG	41:o:75:VAL:N	2.69	0.66
43:q:28:VAL:HG23	44:5:1281:G:O4'	1.93	0.66
43:q:56:ASN:HD22	43:q:84:VAL:HG23	1.61	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:q:77:LEU:HD21	44:5:1222:G:C8	2.30	0.66
44:5:394:G:C2	44:5:399:A:N6	2.53	0.66
44:5:2196:C:O4'	44:5:2271:A:C2'	2.43	0.66
44:5:3005:A:O2'	44:5:3140:G:N2	2.28	0.66
47:x:16:UNK:C	48:y:5:UNK:CB	2.74	0.66
5:D:528:GLU:OE2	46:7:121:U:C2	2.48	0.66
15:N:18:VAL:HB	44:5:315:C:C5'	2.19	0.66
15:N:57:GLN:HB2	44:5:149:U:O2'	1.72	0.66
37:j:851:ARG:NH2	45:8:40:A:OP1	2.27	0.66
43:q:32:ASN:O	44:5:1229:G:C8	2.41	0.66
43:q:202:UNK:C	47:x:36:UNK:CB	2.69	0.66
44:5:1628:C:OP2	44:5:1814:A:N6	2.28	0.66
1:z:366:ASN:CA	44:5:2469:G:N3	2.59	0.66
2:A:42:ARG:HD2	2:A:87:PHE:HB3	1.78	0.66
2:A:67:TYR:CE1	44:5:2524:A:H8	2.14	0.66
4:C:302:ALA:HA	18:Q:164:ARG:HD3	1.78	0.66
7:F:320:ARG:HB3	18:Q:129:ASP:H	1.59	0.66
20:S:68:HIS:ND1	44:5:524:U:OP1	2.28	0.66
33:f:378:ARG:NH1	44:5:618:C:HO2'	1.90	0.66
43:q:12:PHE:CZ	44:5:1222:G:OP2	2.49	0.66
43:q:35:SER:C	44:5:1262:G:C6	2.74	0.66
43:q:37:GLN:HG3	44:5:1231:A:C8	2.31	0.66
44:5:1463:U:H3	44:5:1467:A:H8	1.35	0.66
44:5:1502:C:O2	44:5:1504:A:N6	2.28	0.66
44:5:2426:U:N3	44:5:2603:G:N1	2.43	0.66
47:x:6:UNK:CB	48:y:9:UNK:C	2.73	0.66
2:A:67:TYR:CE1	44:5:2524:A:C8	2.84	0.66
5:D:265:LYS:CG	44:5:2686:A:C4'	2.74	0.66
12:s:241:ILE:N	43:q:44:GLU:HG2	1.98	0.66
13:L:13:HIS:CD2	44:5:98:G:N7	2.63	0.66
15:N:8:GLU:O	44:5:64:G:C4'	2.42	0.66
15:N:20:ARG:HD2	44:5:69:C:P	2.35	0.66
15:N:94:TYR:CD2	44:5:290:G:C5'	2.77	0.66
24:W:266:ALA:O	24:W:271:GLU:N	2.29	0.66
27:Z:82:THR:HG23	27:Z:84:TYR:H	1.61	0.66
29:b:111:HIS:CE1	44:5:1075:A:C6	2.84	0.66
44:5:1662:G:N1	44:5:1787:A:H2	1.78	0.66
44:5:3112:G:H1	44:5:3119:U:H2'	1.61	0.66
46:7:85:G:H1	46:7:95:A:H2	1.39	0.66
3:B:7:GLU:HG2	44:5:2915:U:C4	2.30	0.65
3:B:243:HIS:HB3	44:5:2948:C:C5'	2.04	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:180:LYS:HE3	4:C:202:ARG:HB3	1.78	0.65
5:D:343:LEU:HB3	5:D:348:ILE:HB	1.78	0.65
6:E:359:VAL:HG22	44:5:3268:A:H61	1.61	0.65
7:F:317:ARG:CZ	44:5:1101:G:H5''	2.26	0.65
7:F:332:ALA:HA	44:5:987:U:C5'	2.26	0.65
12:s:269:ILE:CA	44:5:1246:G:N3	2.59	0.65
12:s:295:GLY:C	44:5:1275:C:C2	2.67	0.65
13:L:49:ARG:CD	35:h:116:TYR:CD1	2.79	0.65
16:O:6:VAL:HA	16:O:32:LYS:O	1.96	0.65
21:T:2:GLY:O	44:5:2630:C:N4	2.29	0.65
23:V:176:ASN:CA	44:5:2917:G:H5''	2.23	0.65
33:f:337:SER:HB2	44:5:1329:U:C4'	2.20	0.65
44:5:2193:U:H5'	44:5:2194:G:H5'	1.78	0.65
44:5:2744:U:O2	44:5:2749:G:N2	2.29	0.65
1:z:346:VAL:CG2	44:5:2486:A:O5'	2.41	0.65
1:z:402:LYS:H	44:5:2463:G:H1'	1.61	0.65
12:s:296:GLU:CA	44:5:1266:G:H22	2.08	0.65
12:s:300:PRO:C	44:5:1267:U:H3'	2.20	0.65
15:N:80:THR:HB	44:5:2427:U:C4	2.26	0.65
15:N:98:LEU:HD23	44:5:289:A:P	2.36	0.65
25:X:136:LYS:NZ	44:5:4:U:O4	2.28	0.65
26:Y:87:LYS:CE	44:5:375:A:O4'	2.44	0.65
33:f:335:GLN:CD	44:5:1329:U:OP1	2.38	0.65
37:j:811:ARG:CZ	39:l:51:ILE:HD13	2.25	0.65
39:l:15:LYS:HD2	45:8:45:C:H5''	1.78	0.65
42:p:87:ARG:O	42:p:91:GLU:HB2	1.96	0.65
44:5:1003:A:N1	44:5:1049:C:O2'	2.28	0.65
46:7:75:G:N2	46:7:104:A:N6	2.43	0.65
3:B:13:HIS:NE2	44:5:3011:A:C2'	2.60	0.65
12:s:221:ALA:HB2	44:5:1234:G:H3'	1.77	0.65
12:s:221:ALA:CB	44:5:1234:G:O4'	2.44	0.65
12:s:244:ASP:O	44:5:1230:G:O3'	2.10	0.65
13:L:66:ASN:HB2	44:5:73:C:C2'	2.23	0.65
15:N:172:ARG:HG2	44:5:1546:A:C2'	2.26	0.65
15:N:190:THR:HB	44:5:1548:C:C3'	2.25	0.65
43:q:46:ARG:NE	44:5:1256:G:C5'	2.45	0.65
43:q:81:LYS:O	44:5:1282:G:O3'	2.13	0.65
44:5:1018:G:C2	44:5:1034:U:O2	2.50	0.65
44:5:2426:U:C2	44:5:2603:G:N1	2.61	0.65
47:x:11:UNK:CA	48:y:5:UNK:CB	2.75	0.65
1:z:400:VAL:C	44:5:2452:G:C5	2.73	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:15:GLY:CA	44:5:3010:U:H1'	2.26	0.65
5:D:470:GLU:O	5:D:474:ASP:HB3	1.96	0.65
7:F:311:LYS:HE2	44:5:985:U:OP2	1.96	0.65
9:H:374:LYS:HB2	40:m:127:LEU:CD1	2.26	0.65
12:s:223:LYS:O	44:5:1233:G:C1'	2.44	0.65
15:N:17:ASP:OD1	44:5:68:C:C2	2.49	0.65
15:N:26:ARG:NH2	44:5:316:U:H3'	1.98	0.65
15:N:81:TYR:CZ	44:5:2428:U:C6	2.79	0.65
15:N:86:ASN:ND2	44:5:2425:G:P	2.69	0.65
15:N:143:ARG:CD	44:5:144:A:H4'	2.25	0.65
26:Y:27:ARG:HD3	26:Y:78:PHE:HA	1.77	0.65
32:e:155:LEU:HA	32:e:241:LYS:HE3	1.79	0.65
32:e:249:HIS:O	32:e:276:ARG:NH2	2.30	0.65
43:q:32:ASN:HD22	44:5:1229:G:P	2.18	0.65
44:5:118:U:N3	44:5:122:A:OP2	2.30	0.65
44:5:170:G:N1	44:5:249:U:C2	2.63	0.65
44:5:170:G:C2	44:5:249:U:O2	2.49	0.65
44:5:1489:A:OP2	44:5:1838:G:N1	2.29	0.65
44:5:2157:G:H4'	44:5:2158:A:H8	1.60	0.65
15:N:5:LYS:CB	44:5:322:U:H2'	2.19	0.65
15:N:41:ARG:HG2	44:5:114:A:C5	2.31	0.65
15:N:67:ARG:NH1	44:5:294:U:O4	1.99	0.65
16:O:18:ARG:NH2	44:5:1314:C:HO2'	1.78	0.65
23:V:210:GLN:H	23:V:224:PHE:HB2	1.59	0.65
41:o:10:THR:O	41:o:20:HIS:HA	1.96	0.65
43:q:8:LYS:HE2	44:5:1220:U:C5'	2.27	0.65
43:q:53:MET:N	44:5:1280:C:C3'	2.47	0.65
44:5:404:G:N1	45:8:19:C:N3	2.40	0.65
44:5:822:G:H1	44:5:903:U:H3	1.43	0.65
44:5:838:G:O6	44:5:855:U:C4	2.50	0.65
44:5:2216:G:H1	44:5:2229:A:N6	1.94	0.65
10:I:300:MET:HB3	44:5:2618:G:C4	2.30	0.65
10:I:300:MET:O	44:5:2618:G:C2	2.49	0.65
10:I:301:ARG:NH1	44:5:2644:C:N3	2.43	0.65
12:s:270:LEU:O	43:q:39:HIS:HD2	1.78	0.65
12:s:270:LEU:C	44:5:1232:C:H5	2.05	0.65
15:N:75:VAL:HG21	44:5:2430:A:N6	1.96	0.65
15:N:185:ALA:CA	44:5:1548:C:C4'	2.75	0.65
15:N:200:TRP:CD1	37:j:815:VAL:C	2.71	0.65
43:q:7:LYS:HB3	44:5:1218:U:C3'	2.24	0.65
44:5:1533:U:C2	44:5:1587:A:N7	2.64	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:2361:A:N6	44:5:2377:G:H1	1.93	0.65
45:8:63:G:O6	45:8:97:A:N1	2.29	0.65
1:z:227:VAL:HG22	1:z:228:GLU:HG3	1.79	0.65
2:A:148:VAL:O	2:A:155:LYS:HA	1.97	0.65
4:C:70:ALA:HA	44:5:1436:U:C4	2.31	0.65
5:D:529:SER:HB2	46:7:1:G:N3	2.11	0.65
6:E:390:LYS:HZ1	44:5:3214:U:H6	1.43	0.65
9:H:258:HIS:NE2	20:S:151:PRO:HD2	2.12	0.65
15:N:9:GLU:O	44:5:78:U:O4'	2.15	0.65
15:N:64:VAL:CG2	44:5:270:U:OP1	2.44	0.65
19:R:256:HIS:CD2	44:5:1718:G:P	2.90	0.65
25:X:136:LYS:HD2	44:5:3:U:C4	2.31	0.65
29:b:111:HIS:CG	44:5:1075:A:C8	2.85	0.65
29:b:119:ALA:O	29:b:123:ALA:HB2	1.97	0.65
37:j:802:HIS:CE1	44:5:815:G:OP1	2.50	0.65
42:p:20:SER:CB	44:5:1926:C:OP1	2.44	0.65
43:q:34:SER:CB	44:5:1230:G:C8	2.79	0.65
44:5:1394:A:N6	44:5:1416:C:O2	2.29	0.65
44:5:1395:G:H1	44:5:1415:U:H3	1.44	0.65
44:5:2483:G:H2'	44:5:2484:A:H2'	1.78	0.65
44:5:2665:U:C2	44:5:2704:A:N7	2.64	0.65
44:5:2840:C:N4	44:5:2845:A:O2'	2.30	0.65
1:z:360:LEU:CA	44:5:2464:U:O3'	2.44	0.65
1:z:371:GLU:CD	44:5:2468:A:C1'	2.70	0.65
1:z:394:GLN:OE1	44:5:2446:U:H5''	1.93	0.65
1:z:400:VAL:CA	44:5:2495:C:C4	2.57	0.65
15:N:58:GLY:N	44:5:149:U:H5'	2.09	0.65
24:W:272:LYS:O	24:W:276:ALA:HB2	1.96	0.65
44:5:170:G:N1	44:5:248:U:C2	2.64	0.65
44:5:1210:U:N3	44:5:1295:G:O6	2.29	0.65
44:5:1646:G:O2'	44:5:1808:G:N2	2.30	0.65
44:5:2477:G:OP1	44:5:2481:G:N2	2.30	0.65
44:5:2845:A:O2'	44:5:2849:C:N4	2.30	0.65
1:z:405:MET:N	44:5:2461:A:H5'	2.12	0.65
5:D:265:LYS:CE	44:5:2686:A:H1'	2.22	0.65
7:F:289:ALA:HB1	21:T:137:GLU:CA	2.21	0.65
12:s:241:ILE:H	43:q:44:GLU:CD	2.02	0.65
12:s:294:ALA:N	44:5:1231:A:C6	2.50	0.65
15:N:57:GLN:CD	44:5:149:U:O2	2.33	0.65
15:N:81:TYR:HE1	44:5:2428:U:C6	1.79	0.65
15:N:186:GLY:O	44:5:1548:C:P	2.51	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:O:14:HIS:CE1	20:S:167:ARG:HH12	2.15	0.65
22:U:96:VAL:HG22	22:U:182:TYR:HB2	1.78	0.65
36:i:27:SER:HA	44:5:266:A:N6	2.09	0.65
44:5:760:G:O2'	44:5:770:G:N1	2.26	0.65
44:5:2414:G:N2	44:5:2806:U:O2	2.29	0.65
44:5:2950:G:OP2	44:5:2950:G:N2	2.30	0.65
45:8:37:A:OP1	45:8:38:U:O2'	2.15	0.65
1:z:338:ASP:OD2	1:z:347:ARG:NH1	2.28	0.65
3:B:244:ARG:NH2	44:5:2947:G:O3'	2.30	0.65
4:C:73:ARG:HD3	44:5:805:G:C1'	2.26	0.65
8:G:268:GLU:O	8:G:272:ARG:CB	2.45	0.65
13:L:183:ARG:CD	44:5:765:C:C5	2.76	0.65
15:N:131:GLU:CD	44:5:267:G:H1'	2.22	0.65
15:N:156:HIS:CE1	45:8:141:C:C2'	2.78	0.65
17:P:121:GLN:HG3	45:8:13:A:H2'	1.78	0.65
20:S:112:ALA:HB2	44:5:1321:G:H21	1.62	0.65
35:h:86:ARG:HD3	45:8:36:G:N7	2.12	0.65
43:q:42:ARG:HD2	44:5:1260:A:H3'	1.77	0.65
43:q:207:UNK:O	47:x:3:UNK:C	2.44	0.65
44:5:206:G:C2	44:5:223:U:O2	2.50	0.65
44:5:206:G:H1	44:5:223:U:H3	1.42	0.65
44:5:412:G:O6	45:8:11:C:N4	2.23	0.65
44:5:1119:C:H2'	44:5:1120:A:H8	1.62	0.65
46:7:114:U:H2'	46:7:115:G:H8	1.62	0.65
1:z:209:LYS:NZ	1:z:372:ASP:O	2.29	0.64
1:z:218:THR:HB	44:5:2489:C:N1	2.10	0.64
1:z:227:VAL:O	44:5:2481:G:N1	2.30	0.64
1:z:229:LEU:CG	44:5:2476:C:H1'	2.27	0.64
1:z:257:ASN:HD21	44:5:2486:A:C3'	2.10	0.64
3:B:8:ALA:HA	44:5:2915:U:P	2.37	0.64
12:s:272:THR:CB	44:5:1262:G:N3	2.59	0.64
12:s:295:GLY:C	44:5:1275:C:N1	2.47	0.64
15:N:10:LEU:HD23	44:5:77:A:C4'	2.27	0.64
15:N:22:LEU:HG	44:5:315:C:H3'	1.76	0.64
15:N:47:LYS:N	44:5:321:C:C6	2.61	0.64
15:N:87:GLN:OE1	44:5:2604:U:O4	2.15	0.64
15:N:177:GLY:HA3	44:5:54:C:H5	1.62	0.64
15:N:178:HIS:CD2	44:5:52:A:C3'	2.76	0.64
15:N:202:TYR:O	37:j:815:VAL:HG13	1.97	0.64
15:N:204:LYS:CB	37:j:813:PHE:O	2.36	0.64
18:Q:270:ASN:N	44:5:745:C:OP1	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:S:137:ARG:NH2	44:5:1214:U:OP1	2.30	0.64
28:a:108:LYS:NZ	44:5:801:A:OP1	2.28	0.64
43:q:6:GLU:H	44:5:1218:U:P	2.19	0.64
44:5:85:A:N6	44:5:100:A:OP2	2.30	0.64
44:5:378:A:N6	44:5:391:A:O2'	2.30	0.64
44:5:996:A:C2	46:7:80:G:H1'	2.32	0.64
45:8:63:G:H1	45:8:97:A:H2	1.39	0.64
47:x:20:UNK:C	48:y:29:UNK:CB	2.75	0.64
1:z:394:GLN:OE1	44:5:2446:U:H5'	1.92	0.64
2:A:7:ASN:C	44:5:2163:C:H4'	2.22	0.64
6:E:246:ARG:CZ	44:5:608:A:N3	2.61	0.64
10:I:276:VAL:HG22	44:5:1044:U:H4'	1.79	0.64
13:L:174:ARG:O	13:L:178:LYS:HB2	1.97	0.64
15:N:11:GLN:HB3	44:5:64:G:P	2.36	0.64
15:N:18:VAL:HG23	44:5:315:C:C5'	2.27	0.64
15:N:28:TRP:CG	44:5:300:G:C8	2.81	0.64
15:N:185:ALA:CB	44:5:1548:C:C4'	2.61	0.64
20:S:10:ILE:O	20:S:59:VAL:N	2.30	0.64
21:T:110:LYS:HZ1	44:5:1068:C:H5'	1.61	0.64
42:p:78:THR:O	42:p:82:THR:HB	1.97	0.64
44:5:1959:G:N2	44:5:2078:C:N3	2.43	0.64
44:5:2515:A:N1	44:5:2592:G:O2'	2.30	0.64
44:5:3109:G:C2	44:5:3125:U:O2	2.50	0.64
1:z:253:CYS:SG	44:5:2465:G:O2'	2.55	0.64
1:z:277:VAL:O	44:5:2479:C:O2'	2.14	0.64
1:z:409:PHE:CD2	44:5:2490:C:C2	2.54	0.64
2:A:177:LYS:O	44:5:1793:C:N4	2.26	0.64
7:F:361:ARG:NH1	7:F:416:LYS:O	2.30	0.64
8:G:192:HIS:CE1	27:Z:127:GLN:HE22	2.16	0.64
8:G:212:ARG:NH2	44:5:2526:C:O2	2.31	0.64
9:H:373:ARG:NH2	44:5:2898:G:OP2	2.29	0.64
11:J:152:ARG:O	41:o:103:ALA:C	2.39	0.64
15:N:6:TYR:O	15:N:10:LEU:HB2	1.96	0.64
15:N:78:GLY:O	44:5:2601:A:C2	2.50	0.64
15:N:90:ASN:HA	44:5:2600:C:OP1	1.95	0.64
15:N:153:ASP:CA	45:8:142:C:H6	2.11	0.64
15:N:179:LYS:CA	44:5:52:A:C6	2.80	0.64
18:Q:136:LYS:HD2	44:5:1103:A:C8	2.33	0.64
39:l:35:ILE:HG23	44:5:351:A:N6	2.11	0.64
43:q:35:SER:C	44:5:1262:G:O6	2.41	0.64
44:5:528:U:C2	44:5:564:G:O6	2.50	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:535:G:N2	44:5:555:U:OP2	2.28	0.64
44:5:733:G:N2	44:5:736:A:OP2	2.30	0.64
44:5:1232:C:N4	44:5:1262:G:OP2	2.29	0.64
46:7:67:G:N1	46:7:111:U:N3	2.42	0.64
1:z:394:GLN:CD	44:5:2446:U:OP1	2.40	0.64
5:D:543:ALA:O	5:D:547:ALA:HB2	1.96	0.64
7:F:239:GLU:O	7:F:243:ARG:HB3	1.98	0.64
12:s:220:THR:C	44:5:1234:G:C4	2.52	0.64
12:s:282:PHE:CB	44:5:1259:A:C8	2.81	0.64
15:N:81:TYR:C	44:5:2427:U:C6	2.61	0.64
15:N:158:HIS:HB3	15:N:161:ALA:HB3	1.80	0.64
18:Q:261:ASN:H	44:5:730:C:C5'	2.09	0.64
25:X:225:ASN:HB2	25:X:237:TYR:HB2	1.80	0.64
27:Z:114:LYS:NZ	44:5:1629:U:O5'	2.24	0.64
34:g:5:VAL:O	44:5:1857:C:C1'	2.43	0.64
42:p:16:VAL:HG13	44:5:1927:G:N7	2.12	0.64
43:q:215:UNK:N	48:y:7:UNK:O	2.21	0.64
44:5:394:G:H21	44:5:399:A:N6	1.93	0.64
44:5:1260:A:O2'	44:5:1278:A:N6	2.31	0.64
44:5:1533:U:O2	44:5:1587:A:N7	2.30	0.64
47:x:6:UNK:CB	48:y:9:UNK:HA	2.28	0.64
1:z:223:PHE:CE2	44:5:2477:G:H1'	2.25	0.64
4:C:191:LYS:H	44:5:1380:G:H5''	1.61	0.64
5:D:265:LYS:HZ3	44:5:2669:G:N2	1.93	0.64
13:L:55:ARG:H	13:L:115:ARG:HH21	1.45	0.64
15:N:41:ARG:HA	44:5:113:C:O2'	1.80	0.64
15:N:46:ASP:OD2	44:5:322:U:O4	2.15	0.64
31:d:123:LYS:NZ	44:5:3075:G:H5''	2.13	0.64
36:i:25:LYS:HD2	44:5:156:G:H5'	1.80	0.64
42:p:81:SER:O	42:p:85:ARG:HB3	1.98	0.64
43:q:30:VAL:N	44:5:1281:G:H1'	1.92	0.64
1:z:409:PHE:HB3	44:5:2449:A:P	2.37	0.64
5:D:265:LYS:CG	44:5:2686:A:H4'	2.28	0.64
15:N:5:LYS:NZ	44:5:324:A:N7	2.46	0.64
15:N:188:ARG:HD3	44:5:1547:G:OP2	1.98	0.64
16:O:86:GLY:O	44:5:1312:C:H1'	1.97	0.64
21:T:108:ARG:HA	21:T:111:ALA:HB3	1.79	0.64
25:X:182:THR:HA	25:X:187:MET:HE3	1.79	0.64
43:q:4:ILE:HG13	44:5:1288:U:O2	1.96	0.64
43:q:80:VAL:HG21	44:5:1285:G:O6	1.98	0.64
44:5:760:G:C2	44:5:771:A:N7	2.65	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:920:A:OP1	44:5:923:C:N4	2.29	0.64
44:5:2194:G:C2	44:5:2274:U:C5	2.85	0.64
1:z:234:LYS:CD	44:5:2464:U:P	2.74	0.64
4:C:82:THR:O	44:5:365:A:H1'	1.98	0.64
5:D:292:GLN:HG2	44:5:2748:A:H2	1.58	0.64
12:s:269:ILE:H	43:q:36:GLN:HE22	1.44	0.64
12:s:293:ASN:C	44:5:1231:A:N6	2.51	0.64
12:s:296:GLU:CA	44:5:1276:U:C1'	2.76	0.64
15:N:9:GLU:O	15:N:13:LYS:NZ	2.27	0.64
15:N:28:TRP:HH2	44:5:297:G:H4'	1.60	0.64
15:N:72:LYS:N	44:5:291:C:N1	2.27	0.64
15:N:75:VAL:CB	44:5:2431:C:N4	2.53	0.64
15:N:180:PHE:HA	44:5:53:G:N2	2.10	0.64
20:S:87:THR:O	21:T:156:TYR:CE2	2.51	0.64
23:V:209:ARG:HD3	23:V:246:PRO:HG2	1.78	0.64
28:a:193:ILE:H	28:a:211:VAL:HA	1.62	0.64
31:d:118:TRP:NE1	44:5:1475:A:N3	2.46	0.64
32:e:198:ARG:HH21	44:5:634:C:C3'	2.10	0.64
34:g:4:ARG:NH1	44:5:1481:A:C2'	2.61	0.64
40:m:109:ASN:HA	40:m:119:ASN:HA	1.80	0.64
43:q:60:ARG:CB	44:5:1285:G:N1	2.44	0.64
43:q:210:UNK:HA	48:y:9:UNK:HA	1.77	0.64
44:5:174:C:N4	44:5:245:U:H3	1.96	0.64
44:5:333:G:N1	45:8:30:C:N3	2.44	0.64
44:5:1600:U:O2	44:5:1605:A:N7	2.31	0.64
44:5:1647:A:N6	44:5:1807:G:O2'	2.31	0.64
45:8:40:A:OP2	45:8:105:A:N6	2.26	0.64
1:z:348:SER:C	1:z:359:CYS:O	2.41	0.64
9:H:357:ASN:O	9:H:361:LEU:HB3	1.98	0.64
10:I:271:HIS:HB3	10:I:324:ARG:HG3	1.80	0.64
12:s:219:ILE:CB	43:q:43:LYS:HD2	2.21	0.64
12:s:219:ILE:O	43:q:43:LYS:CB	2.44	0.64
12:s:242:GLN:CB	44:5:1261:G:C8	2.80	0.64
13:L:13:HIS:HB2	44:5:86:G:O6	1.98	0.64
13:L:47:ALA:CB	35:h:115:LYS:HZ1	2.10	0.64
15:N:5:LYS:HE2	44:5:324:A:N7	2.13	0.64
15:N:29:GLU:C	44:5:297:G:N7	2.56	0.64
15:N:90:ASN:O	44:5:276:U:C2	2.49	0.64
20:S:146:LYS:HZ1	44:5:534:U:H1'	1.61	0.64
23:V:152:MET:HB2	23:V:163:LEU:O	1.96	0.64
26:Y:4:GLN:HB3	44:5:229:G:OP1	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:q:60:ARG:HH11	44:5:1285:G:H1'	1.53	0.64
44:5:645:A:OP2	44:5:2372:A:N6	2.31	0.64
44:5:1447:G:N2	44:5:1448:U:O4	2.31	0.64
44:5:3238:G:N2	44:5:3249:C:O2	2.19	0.64
1:z:365:GLY:O	44:5:2477:G:O2'	2.16	0.64
2:A:218:HIS:CE1	44:5:2966:G:H5''	2.32	0.64
3:B:223:GLY:HA2	3:B:272:TYR:HB2	1.80	0.64
4:C:158:SER:OG	4:C:213:ASN:ND2	2.29	0.64
5:D:528:GLU:HG3	46:7:121:U:N1	2.13	0.64
5:D:528:GLU:HG2	46:7:121:U:C4	2.32	0.64
6:E:354:ILE:HG23	44:5:3268:A:C4	2.33	0.64
10:I:300:MET:H	44:5:2618:G:C2'	2.06	0.64
10:I:388:LYS:HB2	46:7:65:G:OP1	1.98	0.64
12:s:289:ILE:O	44:5:1277:C:H2'	1.98	0.64
12:s:300:PRO:N	44:5:1267:U:N3	2.46	0.64
14:M:261:LEU:O	14:M:266:ARG:NH2	2.30	0.64
15:N:21:PHE:CZ	44:5:316:U:C5	2.86	0.64
15:N:35:VAL:CA	44:5:268:A:N3	2.61	0.64
19:R:197:ARG:NH2	44:5:3069:G:O3'	2.30	0.64
20:S:14:LEU:H	20:S:56:GLY:HA2	1.62	0.64
20:S:15:PRO:HB3	20:S:21:GLU:H	1.61	0.64
20:S:136:LYS:HE2	20:S:137:ARG:HH12	1.63	0.64
32:e:211:ASN:CG	44:5:1338:C:H4'	2.22	0.64
44:5:1047:A:N3	44:5:2633:U:O2'	2.31	0.64
44:5:1560:G:N3	44:5:1581:C:N4	2.45	0.64
44:5:2191:U:O2	44:5:2316:G:N2	2.30	0.64
44:5:3309:G:N2	44:5:3309:G:OP2	2.31	0.64
1:z:260:ILE:HG12	44:5:2481:G:P	2.23	0.64
1:z:346:VAL:O	44:5:2465:G:O2'	2.16	0.64
9:H:366:ARG:NH1	44:5:3108:G:H1'	2.13	0.64
11:J:200:HIS:NE2	11:J:212:GLY:O	2.28	0.64
12:s:254:ARG:HA	44:5:1247:U:C5'	2.28	0.64
12:s:260:ARG:O	44:5:1268:G:N7	2.31	0.64
15:N:5:LYS:HB3	44:5:109:A:N6	0.50	0.64
15:N:6:TYR:HB2	44:5:110:G:C8	2.33	0.64
15:N:21:PHE:CD2	44:5:315:C:C4'	2.81	0.64
15:N:71:ARG:CZ	44:5:291:C:H5'	2.27	0.64
15:N:126:THR:OG1	44:5:272:G:C2'	2.46	0.64
43:q:85:GLY:CA	44:5:1281:G:OP1	2.43	0.64
44:5:727:G:OP2	44:5:742:G:N2	2.30	0.64
44:5:2196:C:C4'	44:5:2271:A:C1'	2.76	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:x:8:UNK:CA	48:y:4:UNK:O	2.44	0.64
6:E:246:ARG:CB	44:5:607:A:P	2.83	0.63
6:E:269:GLY:O	6:E:272:ARG:NH2	2.31	0.63
6:E:291:GLY:CA	6:E:298:VAL:O	2.46	0.63
8:G:198:PHE:HB3	8:G:205:GLN:HG3	1.80	0.63
10:I:277:HIS:NE2	44:5:1007:U:H4'	2.12	0.63
13:L:176:GLU:HG3	36:i:11:LEU:CD2	2.27	0.63
15:N:38:ARG:NH1	15:N:61:ILE:O	2.31	0.63
28:a:156:LEU:HD11	28:a:215:ALA:HA	1.79	0.63
30:c:41:LEU:HA	30:c:66:LYS:O	1.99	0.63
31:d:137:ARG:HA	31:d:147:LEU:HA	1.79	0.63
36:i:26:ILE:HG12	44:5:264:G:N1	2.12	0.63
43:q:51:VAL:N	44:5:1258:U:C3'	2.51	0.63
43:q:57:THR:C	44:5:1222:G:O3'	2.41	0.63
44:5:508:U:O2	44:5:583:G:C2	2.51	0.63
44:5:620:U:O2'	44:5:622:A:N7	2.30	0.63
44:5:998:A:H4'	46:7:103:A:C2	2.34	0.63
44:5:3234:A:H2	44:5:3253:G:H1	0.70	0.63
1:z:366:ASN:HA	44:5:2469:G:C4	2.33	0.63
3:B:2:SER:HA	44:5:2939:G:P	2.38	0.63
5:D:265:LYS:CG	44:5:2686:A:O4'	2.46	0.63
5:D:282:ARG:HH22	46:7:6:C:P	2.21	0.63
5:D:364:LEU:O	5:D:368:ARG:HB2	1.98	0.63
10:I:224:LYS:HG3	10:I:225:LYS:HD2	1.81	0.63
11:J:122:THR:O	11:J:126:LYS:HB2	1.98	0.63
15:N:24:ARG:NH2	44:5:301:G:C5	2.66	0.63
15:N:143:ARG:CA	45:8:143:U:C5'	2.73	0.63
21:T:82:ASN:ND2	29:b:85:ASN:O	2.31	0.63
21:T:110:LYS:NZ	44:5:1067:U:O2'	2.30	0.63
37:j:789:LYS:HZ2	44:5:2138:A:H62	1.45	0.63
44:5:1268:G:N2	44:5:1273:A:OP2	2.31	0.63
44:5:2157:G:N2	44:5:2177:G:O2'	2.31	0.63
44:5:2677:G:N2	44:5:2680:A:OP2	2.31	0.63
44:5:3020:U:O2'	44:5:3034:C:N4	2.32	0.63
44:5:3222:U:O2	44:5:3263:G:O6	2.15	0.63
1:z:348:SER:O	1:z:359:CYS:O	2.17	0.63
1:z:359:CYS:SG	44:5:2464:U:O4'	2.46	0.63
2:A:8:GLN:HG2	44:5:2163:C:O3'	1.98	0.63
2:A:67:TYR:HE1	44:5:2524:A:C8	2.16	0.63
3:B:8:ALA:HA	44:5:2915:U:OP1	1.98	0.63
5:D:312:VAL:HA	5:D:407:ASP:HB3	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:s:294:ALA:C	44:5:1276:U:H3'	2.23	0.63
16:O:46:GLU:O	16:O:50:ASN:ND2	2.31	0.63
21:T:105:PHE:CZ	44:5:1063:G:H8	2.17	0.63
28:a:85:ARG:NH2	44:5:1426:C:O5'	2.31	0.63
36:i:53:TYR:O	36:i:57:LEU:HB2	1.98	0.63
44:5:174:C:N3	44:5:245:U:C2	2.66	0.63
44:5:341:G:N2	44:5:349:A:N6	2.39	0.63
44:5:352:A:H61	44:5:365:A:H3'	1.64	0.63
44:5:543:C:O2	44:5:549:U:N3	2.26	0.63
44:5:3113:A:H8	44:5:3119:U:H3	1.33	0.63
3:B:144:ILE:O	3:B:148:LEU:HB2	1.98	0.63
3:B:244:ARG:CZ	44:5:2947:G:O3'	2.47	0.63
10:I:275:ARG:HB3	44:5:1044:U:OP1	1.99	0.63
10:I:389:GLY:HA2	46:7:65:G:O3'	1.97	0.63
19:R:217:LYS:NZ	44:5:2115:G:H1'	2.13	0.63
43:q:12:PHE:O	43:q:16:ARG:CB	2.46	0.63
43:q:33:VAL:HG23	44:5:1280:C:N4	2.11	0.63
44:5:825:U:O2	44:5:900:G:N2	2.29	0.63
44:5:1696:A:OP2	44:5:1749:A:N6	2.32	0.63
44:5:2418:G:H3'	44:5:2606:G:H22	1.63	0.63
44:5:2768:U:H2'	44:5:2769:A:H8	1.64	0.63
44:5:3113:A:N7	44:5:3119:U:O2	2.30	0.63
1:z:300:LYS:CA	44:5:2485:A:H5'	2.29	0.63
2:A:3:ARG:HD3	44:5:911:C:H42	1.64	0.63
3:B:274:SER:O	44:5:3138:U:H5''	1.98	0.63
6:E:381:GLN:O	14:M:267:PHE:CZ	2.52	0.63
7:F:287:VAL:HG22	21:T:139:ARG:CB	2.26	0.63
8:G:191:THR:HG22	44:5:2563:G:H5'	1.81	0.63
9:H:257:VAL:HA	44:5:3186:A:C6	2.34	0.63
10:I:275:ARG:CZ	44:5:1043:C:H5''	2.29	0.63
10:I:301:ARG:HD3	44:5:2644:C:O2	1.98	0.63
12:s:213:SER:O	44:5:1246:G:H5''	1.96	0.63
15:N:5:LYS:CE	44:5:324:A:N7	2.62	0.63
15:N:21:PHE:HA	44:5:301:G:N2	2.13	0.63
15:N:24:ARG:CG	44:5:67:A:H2'	2.28	0.63
15:N:67:ARG:HD3	44:5:273:A:N6	2.14	0.63
15:N:183:THR:CB	44:5:1547:G:H1'	2.17	0.63
35:h:76:GLN:O	35:h:81:ARG:NH2	2.31	0.63
42:p:73:THR:HG23	42:p:76:ALA:H	1.62	0.63
43:q:100:ILE:C	44:5:1260:A:N6	2.53	0.63
44:5:33:G:N2	44:5:51:A:H62	1.95	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:33:G:H21	44:5:51:A:H62	1.47	0.63
44:5:546:C:OP1	44:5:547:G:N2	2.32	0.63
44:5:2689:A:O2'	44:5:2691:A:N7	2.31	0.63
47:x:25:UNK:O	48:y:15:UNK:O	2.17	0.63
4:C:46:LYS:HD2	44:5:692:A:H4'	1.81	0.63
5:D:549:LYS:HZ1	46:7:63:A:H5''	1.63	0.63
7:F:271:ASN:O	7:F:275:ALA:HB2	1.98	0.63
9:H:223:ARG:HH22	44:5:3185:U:C5'	2.11	0.63
13:L:15:ARG:CD	44:5:97:U:H5'	2.29	0.63
15:N:21:PHE:O	44:5:300:G:N2	2.32	0.63
15:N:42:PRO:HB3	44:5:320:G:O4'	1.98	0.63
20:S:67:ALA:HB1	44:5:523:A:OP1	1.98	0.63
44:5:195:U:N3	44:5:199:A:C5	2.65	0.63
44:5:2201:G:C2	44:5:2241:U:O2	2.52	0.63
44:5:2482:U:N3	44:5:2486:A:C6	2.66	0.63
1:z:410:ARG:NE	44:5:2499:U:O2	2.31	0.63
15:N:25:VAL:HG13	44:5:299:G:C6	2.33	0.63
15:N:78:GLY:HA3	44:5:2600:C:C2	2.32	0.63
29:b:117:ALA:O	29:b:121:ALA:HB3	1.99	0.63
33:f:378:ARG:NH1	44:5:618:C:O3'	2.31	0.63
33:f:390:THR:O	44:5:584:G:O2'	2.17	0.63
43:q:41:VAL:HG12	44:5:1258:U:H1'	1.80	0.63
43:q:45:LEU:HB3	44:5:1258:U:OP2	1.99	0.63
43:q:52:LEU:O	43:q:86:PHE:HB2	1.99	0.63
44:5:346:C:C2	45:8:25:G:H4'	2.33	0.63
44:5:1493:G:OP2	44:5:1493:G:N2	2.26	0.63
44:5:1695:U:O2'	44:5:1749:A:N1	2.27	0.63
44:5:2277:C:C4'	44:5:2317:A:C5'	2.68	0.63
44:5:2514:U:O2'	44:5:2515:A:N7	2.31	0.63
44:5:2838:A:H62	44:5:2850:G:H21	1.47	0.63
44:5:3325:G:C6	44:5:3381:U:O2	2.52	0.63
46:7:75:G:C4	46:7:104:A:N6	2.61	0.63
1:z:226:THR:HG21	44:5:2457:G:O3'	1.98	0.63
3:B:262:TRP:CG	16:O:66:LYS:H	2.17	0.63
10:I:220:ASP:HB2	44:5:1009:A:H4'	1.81	0.63
11:J:188:SER:CB	44:5:2672:G:H1'	2.27	0.63
15:N:19:LEU:CD1	44:5:66:A:OP2	2.47	0.63
15:N:24:ARG:HG3	44:5:67:A:H2'	1.80	0.63
15:N:83:LYS:CD	44:5:2426:U:OP2	2.45	0.63
20:S:108:GLN:O	20:S:112:ALA:HB3	1.98	0.63
43:q:8:LYS:HD3	44:5:1220:U:OP1	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:q:40:GLU:CG	44:5:1232:C:OP2	2.32	0.63
43:q:213:UNK:C	48:y:11:UNK:N	2.62	0.63
44:5:528:U:O2	44:5:564:G:O6	2.15	0.63
44:5:996:A:H2	46:7:79:A:H2	1.45	0.63
44:5:1129:A:N3	44:5:2826:U:O2'	2.31	0.63
44:5:2842:U:OP1	44:5:2898:G:N2	2.32	0.63
3:B:244:ARG:NH2	44:5:2946:A:O3'	2.32	0.63
5:D:528:GLU:CD	46:7:121:U:C2	2.77	0.63
5:D:545:ARG:HH12	46:7:62:U:H4'	1.64	0.63
9:H:218:VAL:HG12	9:H:227:VAL:HA	1.81	0.63
9:H:262:ARG:HH11	44:5:1211:U:P	2.22	0.63
15:N:203:ARG:CZ	44:5:903:U:H5'	2.17	0.63
16:O:50:ASN:HA	16:O:53:LYS:HD2	1.80	0.63
30:c:42:ILE:HG22	30:c:91:SER:HA	1.80	0.63
33:f:395:ASN:OD1	44:5:1326:A:C2'	2.47	0.63
44:5:209:A:O2'	44:5:211:A:OP2	2.16	0.63
44:5:353:G:N2	44:5:354:U:O4	2.30	0.63
44:5:2462:A:N7	44:5:2463:G:O2'	2.31	0.63
44:5:3325:G:O6	44:5:3381:U:O2	2.16	0.63
3:B:57:VAL:HG22	3:B:73:VAL:HG12	1.81	0.62
4:C:3:ARG:HD3	4:C:22:LEU:HB2	1.81	0.62
7:F:240:ARG:HH21	7:F:243:ARG:HH22	1.46	0.62
9:H:360:ASP:OD2	44:5:3126:C:O2'	2.16	0.62
10:I:273:ARG:NH1	44:5:1043:C:C5'	2.57	0.62
10:I:394:ASN:CG	46:7:64:A:H62	2.07	0.62
15:N:5:LYS:HD3	44:5:323:A:H8	1.60	0.62
15:N:12:ARG:NH2	44:5:62:A:H2'	2.13	0.62
15:N:20:ARG:HD3	44:5:69:C:OP2	1.97	0.62
15:N:154:PRO:HD3	45:8:142:C:OP2	1.99	0.62
15:N:184:LYS:H	44:5:54:C:H4'	1.64	0.62
15:N:192:LYS:CG	44:5:1550:C:C6	2.81	0.62
16:O:165:ALA:HA	44:5:3181:C:H1'	1.81	0.62
17:P:74:LYS:NZ	44:5:3297:U:O3'	2.32	0.62
34:g:14:ASN:HD22	44:5:828:A:P	2.22	0.62
37:j:838:LYS:NZ	44:5:363:G:P	2.71	0.62
40:m:122:ARG:HH12	40:m:125:LYS:H	1.46	0.62
44:5:269:G:N2	44:5:270:U:O4	2.25	0.62
44:5:990:U:O2	44:5:1059:G:C2	2.52	0.62
44:5:2469:G:N7	44:5:2474:G:N2	2.47	0.62
44:5:2899:C:H1'	44:5:2904:U:H3	1.63	0.62
47:x:23:UNK:CB	48:y:13:UNK:CB	2.76	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:z:226:THR:HG21	44:5:2458:A:OP1	1.96	0.62
1:z:409:PHE:CD2	44:5:2490:C:C2'	2.81	0.62
3:B:261:MET:HG2	16:O:64:PHE:CB	2.29	0.62
6:E:246:ARG:CD	44:5:608:A:C8	2.82	0.62
9:H:321:LYS:HG2	44:5:3034:C:N3	2.13	0.62
12:s:152:LEU:C	44:5:1238:C:O2'	2.42	0.62
12:s:267:LYS:C	44:5:1262:G:C6	2.76	0.62
15:N:22:LEU:N	44:5:316:U:C6	2.67	0.62
15:N:30:TYR:O	15:N:65:ARG:NH1	2.32	0.62
15:N:139:HIS:CA	44:5:144:A:O2'	2.46	0.62
15:N:170:LYS:NZ	44:5:31:C:O4'	2.11	0.62
24:W:190:ASN:HB3	24:W:193:ARG:HG3	1.81	0.62
27:Z:119:GLU:O	27:Z:125:LYS:NZ	2.32	0.62
40:m:84:ALA:O	40:m:88:LYS:HB2	1.99	0.62
44:5:68:C:OP2	44:5:301:G:N2	2.31	0.62
44:5:174:C:C4	44:5:245:U:N3	2.67	0.62
44:5:1304:A:O2'	44:5:2884:C:O2	2.16	0.62
44:5:1564:U:O2	44:5:1575:A:N6	2.32	0.62
44:5:2513:U:O2'	44:5:2515:A:N6	2.31	0.62
45:8:70:G:N2	45:8:88:A:OP2	2.31	0.62
46:7:13:A:OP2	46:7:67:G:N2	2.32	0.62
46:7:67:G:O6	46:7:111:U:C4	2.52	0.62
3:B:3:HIS:CG	44:5:2938:G:C5	2.87	0.62
3:B:129:ALA:CB	44:5:3149:G:O2'	2.45	0.62
5:D:266:ASP:CG	44:5:2687:G:OP1	2.43	0.62
8:G:350:LEU:HB3	8:G:359:SER:HB3	1.82	0.62
10:I:277:HIS:H	44:5:1044:U:HO2'	1.46	0.62
12:s:243:LEU:H	43:q:103:ASN:ND2	1.97	0.62
12:s:257:SER:N	44:5:1269:U:H3	1.96	0.62
12:s:269:ILE:N	44:5:1246:G:N3	2.47	0.62
12:s:285:PRO:HA	43:q:39:HIS:HD1	1.64	0.62
15:N:69:GLY:C	44:5:289:A:C5	2.76	0.62
18:Q:284:LYS:HE2	18:Q:286:LYS:HZ3	1.64	0.62
26:Y:111:LEU:O	45:8:84:C:C4	2.52	0.62
44:5:172:G:O6	44:5:246:U:C4	2.51	0.62
44:5:1899:G:N1	44:5:2335:G:OP2	2.30	0.62
44:5:2196:C:C4'	44:5:2271:A:C4'	2.66	0.62
44:5:3225:C:H2'	44:5:3226:A:H8	1.64	0.62
44:5:3343:G:N2	44:5:3362:A:OP2	2.32	0.62
3:B:290:ASP:O	3:B:293:ASN:ND2	2.31	0.62
5:D:287:LYS:HG2	11:J:234:ARG:CZ	2.29	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:F:368:LYS:NZ	44:5:1103:A:H5''	2.15	0.62
12:s:290:GLU:CB	44:5:1278:A:H3'	2.29	0.62
15:N:5:LYS:HA	44:5:64:G:C2	2.34	0.62
15:N:28:TRP:H	44:5:67:A:H2	1.45	0.62
15:N:31:ARG:NE	44:5:300:G:C5'	2.60	0.62
15:N:127:TYR:H	44:5:271:C:H3'	1.64	0.62
24:W:149:GLU:O	24:W:157:LYS:HA	1.99	0.62
25:X:214:LYS:O	25:X:218:GLU:HA	2.00	0.62
29:b:94:LYS:O	44:5:747:A:O2'	2.14	0.62
42:p:51:ALA:HB3	42:p:54:ILE:HD12	1.81	0.62
44:5:296:A:N3	44:5:299:G:O2'	2.33	0.62
44:5:556:U:O4	44:5:559:A:N7	2.33	0.62
44:5:2891:U:O2	44:5:2912:G:C2	2.52	0.62
44:5:2910:A:O2'	44:5:3130:A:N1	2.31	0.62
44:5:3190:C:H2'	44:5:3191:G:H8	1.64	0.62
46:7:89:G:N2	46:7:92:A:OP2	2.28	0.62
1:z:371:GLU:OE1	44:5:2468:A:H8	1.70	0.62
1:z:407:PRO:HA	44:5:2451:G:OP1	1.92	0.62
7:F:286:TYR:CA	21:T:140:ILE:CG2	2.77	0.62
9:H:374:LYS:HB2	40:m:127:LEU:HD13	1.81	0.62
10:I:231:PHE:HB2	10:I:324:ARG:HD2	1.81	0.62
13:L:56:PRO:O	13:L:71:ALA:HA	1.99	0.62
13:L:63:VAL:HG22	44:5:72:C:O5'	1.99	0.62
15:N:31:ARG:HH11	36:i:82:ARG:NE	1.97	0.62
27:Z:59:LYS:O	27:Z:63:LYS:HB3	2.00	0.62
37:j:797:ARG:HH22	44:5:920:A:H1'	1.63	0.62
41:o:89:LYS:HD2	44:5:2653:C:OP1	2.00	0.62
42:p:4:ARG:NH2	44:5:838:G:C8	2.65	0.62
44:5:2117:A:OP2	44:5:2119:A:N6	2.33	0.62
44:5:2394:G:N2	44:5:2986:U:O2	2.29	0.62
44:5:3054:U:O2	44:5:3088:G:N2	2.31	0.62
2:A:135:ILE:O	2:A:148:VAL:HA	1.99	0.62
4:C:114:ASN:HB2	4:C:117:GLU:H	1.64	0.62
10:I:197:GLN:NE2	10:I:243:GLU:O	2.32	0.62
15:N:153:ASP:HB2	45:8:142:C:C5	2.34	0.62
16:O:34:VAL:HG12	16:O:103:LYS:HB2	1.81	0.62
16:O:119:VAL:HG21	20:S:167:ARG:HG2	1.82	0.62
19:R:155:ARG:HG3	19:R:156:LYS:HZ2	1.64	0.62
28:a:90:ARG:NH2	44:5:1430:U:C2	2.66	0.62
29:b:76:HIS:O	29:b:78:GLN:NE2	2.32	0.62
38:k:46:ARG:NH1	38:k:49:SER:O	2.31	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:2196:C:H3'	44:5:2242:A:H61	1.63	0.62
44:5:2260:U:H2'	44:5:2261:G:H5'	1.80	0.62
46:7:37:G:N2	46:7:41:G:O5'	2.33	0.62
1:z:217:GLU:N	44:5:2489:C:N3	2.48	0.62
7:F:287:VAL:O	21:T:139:ARG:O	2.17	0.62
12:s:257:SER:N	44:5:1247:U:C2'	2.58	0.62
12:s:283:LYS:N	44:5:1260:A:N9	2.48	0.62
13:L:127:PRO:HA	35:h:114:ARG:HH21	0.59	0.62
15:N:18:VAL:O	44:5:315:C:C2'	2.47	0.62
15:N:71:ARG:NH2	44:5:291:C:C5'	2.60	0.62
15:N:131:GLU:OE2	44:5:318:A:H3'	1.99	0.62
15:N:179:LYS:HA	44:5:52:A:C2	2.35	0.62
17:P:139:TYR:CD1	44:5:2355:G:H4'	2.34	0.62
21:T:137:GLU:O	21:T:139:ARG:NH2	2.32	0.62
27:Z:98:GLU:HB2	27:Z:101:GLU:HB2	1.82	0.62
33:f:333:SER:HB3	33:f:347:LEU:HD12	1.81	0.62
33:f:360:GLN:NE2	44:5:582:G:H22	1.96	0.62
37:j:814:HIS:HB3	37:j:817:LYS:HB2	1.80	0.62
43:q:218:UNK:HA	48:y:41:UNK:O	1.99	0.62
44:5:184:U:C2	44:5:232:G:N1	2.56	0.62
44:5:307:A:O2'	44:5:2223:A:N3	2.31	0.62
44:5:330:G:H22	45:8:33:A:H2	1.47	0.62
44:5:761:A:H8	44:5:770:G:N2	1.81	0.62
44:5:1071:U:O2	44:5:1087:G:N2	2.31	0.62
44:5:1958:U:H5''	44:5:2084:C:H3'	1.80	0.62
44:5:2194:G:C6	44:5:2274:U:O4	2.52	0.62
44:5:3114:A:H3'	44:5:3115:C:H2'	1.80	0.62
1:z:256:PRO:HA	1:z:345:ASP:HA	1.82	0.62
4:C:95:ARG:NH2	44:5:343:U:H4'	2.15	0.62
5:D:324:ILE:HD12	5:D:336:ALA:HB3	1.80	0.62
11:J:187:PHE:HB2	11:J:247:LYS:HE3	1.82	0.62
12:s:280:VAL:N	43:q:42:ARG:N	1.91	0.62
15:N:10:LEU:HA	44:5:77:A:HO2'	0.67	0.62
15:N:26:ARG:O	44:5:317:A:C6	2.37	0.62
15:N:81:TYR:C	44:5:2426:U:H3'	2.13	0.62
19:R:256:HIS:ND1	44:5:1719:G:OP2	2.28	0.62
20:S:89:ASN:OD1	21:T:156:TYR:N	2.27	0.62
35:h:78:LYS:HA	35:h:81:ARG:HB2	1.80	0.62
43:q:4:ILE:CG1	44:5:1288:U:O2	2.47	0.62
44:5:170:G:C2	44:5:248:U:C2	2.88	0.62
44:5:645:A:O2'	44:5:649:A:N6	2.33	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:688:G:H3'	44:5:690:A:H62	1.64	0.62
44:5:834:U:O2	44:5:859:G:O6	2.17	0.62
44:5:1637:A:N3	44:5:1709:C:O2'	2.24	0.62
44:5:2335:G:N2	44:5:2339:C:O2'	2.32	0.62
44:5:2516:U:O2	44:5:2594:C:N4	2.32	0.62
44:5:2901:G:OP1	44:5:2903:A:N6	2.33	0.62
1:z:221:ARG:HH21	44:5:2471:U:C2'	2.12	0.62
1:z:369:MET:SD	44:5:2470:C:H4'	2.40	0.62
3:B:383:LEU:HA	44:5:3369:G:H21	1.64	0.62
4:C:208:VAL:HA	4:C:228:ALA:O	2.00	0.62
5:D:283:ARG:HE	44:5:2703:A:N6	1.95	0.62
5:D:303:LYS:HG2	44:5:1077:U:O2'	2.00	0.62
11:J:228:ARG:HB3	46:7:28:C:H5''	1.82	0.62
15:N:10:LEU:CA	44:5:77:A:C2'	2.64	0.62
15:N:70:ASN:HB2	44:5:290:G:N1	1.91	0.62
15:N:186:GLY:N	44:5:1548:C:C5'	2.56	0.62
16:O:115:LYS:O	16:O:117:ARG:NH1	2.33	0.62
17:P:16:SER:O	44:5:389:A:H4'	1.99	0.62
17:P:56:ARG:HH22	44:5:3392:U:C4'	2.12	0.62
17:P:131:ARG:NH1	17:P:137:ASN:OD1	2.33	0.62
18:Q:237:ALA:O	18:Q:241:LYS:CB	2.47	0.62
21:T:109:VAL:HA	44:5:1063:G:C6	2.35	0.62
36:i:4:LYS:HB2	36:i:16:LYS:HG2	1.80	0.62
38:k:24:THR:HG22	38:k:44:LYS:H	1.64	0.62
43:q:41:VAL:CG1	44:5:1258:U:H1'	2.30	0.62
43:q:83:ASN:CG	44:5:1281:G:C4	2.78	0.62
43:q:83:ASN:O	44:5:1282:G:O5'	2.07	0.62
44:5:434:U:O4	44:5:625:G:O6	2.18	0.62
44:5:902:G:N2	44:5:1535:A:O2'	2.33	0.62
44:5:1830:G:H22	45:8:114:G:P	2.22	0.62
44:5:2458:A:H2'	44:5:2476:C:H5'	1.81	0.62
1:z:339:LEU:O	1:z:342:LYS:C	2.42	0.62
6:E:307:TYR:CE1	33:f:421:TYR:CD2	2.88	0.62
7:F:290:GLN:HB2	21:T:136:ARG:O	1.99	0.62
10:I:200:LYS:NZ	44:5:2634:U:H4'	2.14	0.62
11:J:106:GLU:HB3	11:J:221:VAL:HG13	1.82	0.62
13:L:45:LYS:NZ	44:5:241:G:O2'	2.17	0.62
15:N:79:ALA:N	44:5:2430:A:H62	1.89	0.62
15:N:179:LYS:CD	44:5:52:A:N6	2.62	0.62
15:N:192:LYS:CD	44:5:1550:C:C6	2.65	0.62
17:P:177:ALA:O	17:P:181:ARG:HB2	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:S:68:HIS:CE1	44:5:524:U:OP2	2.53	0.62
26:Y:75:ARG:HD2	45:8:72:A:H4'	1.82	0.62
26:Y:87:LYS:H	26:Y:95:VAL:H	1.44	0.62
43:q:8:LYS:CA	44:5:1219:C:OP2	2.21	0.62
43:q:51:VAL:HG21	44:5:1259:A:N3	2.07	0.62
44:5:2198:A:N3	44:5:2270:A:C5	2.67	0.62
45:8:55:U:O4	45:8:62:C:N3	2.32	0.62
1:z:218:THR:CB	44:5:2489:C:C6	2.80	0.61
1:z:223:PHE:C	44:5:2475:G:C8	2.73	0.61
1:z:234:LYS:HB2	44:5:2462:A:H62	1.65	0.61
3:B:15:GLY:HA2	44:5:3010:U:H1'	1.80	0.61
5:D:499:ILE:O	5:D:503:ALA:HB2	2.00	0.61
6:E:385:ALA:HA	44:5:3215:A:H1'	1.81	0.61
12:s:267:LYS:CB	44:5:1276:U:C2	2.83	0.61
13:L:15:ARG:HH21	44:5:96:G:C3'	2.13	0.61
13:L:15:ARG:CZ	44:5:96:G:O2'	2.48	0.61
13:L:183:ARG:HH11	44:5:765:C:H5	1.33	0.61
15:N:6:TYR:O	44:5:64:G:O2'	2.17	0.61
15:N:179:LYS:HA	44:5:52:A:C5	2.35	0.61
15:N:180:PHE:N	44:5:54:C:C5	2.48	0.61
19:R:264:GLY:HA3	44:5:841:A:O4'	2.00	0.61
20:S:52:LYS:NZ	46:7:101:G:OP2	2.31	0.61
25:X:229:ARG:HE	25:X:235:LYS:HE3	1.65	0.61
36:i:92:ASN:O	36:i:96:ALA:HB3	1.99	0.61
39:l:24:PRO:CG	45:8:52:A:C8	2.83	0.61
44:5:1112:A:N3	44:5:1370:G:O2'	2.30	0.61
44:5:1367:G:N2	44:5:1368:U:O4	2.30	0.61
44:5:1393:A:OP2	44:5:1417:G:N2	2.32	0.61
44:5:1533:U:H2'	44:5:1534:A:H8	1.64	0.61
44:5:1868:G:HO2'	44:5:2118:C:HO2'	1.43	0.61
44:5:2482:U:O2	44:5:2486:A:C6	2.53	0.61
44:5:2883:U:O2	44:5:2939:G:N2	2.32	0.61
46:7:77:G:N2	46:7:78:U:O4	2.24	0.61
1:z:223:PHE:HD1	44:5:2475:G:C2	2.18	0.61
1:z:257:ASN:CB	44:5:2467:G:N7	2.63	0.61
2:A:195:SER:O	2:A:198:LYS:NZ	2.33	0.61
3:B:128:LYS:O	44:5:3150:A:OP1	2.19	0.61
5:D:296:LEU:CA	44:5:2748:A:O2'	2.48	0.61
6:E:270:ARG:NH1	44:5:3268:A:H3'	2.15	0.61
6:E:287:LEU:HB2	6:E:303:VAL:HG23	1.82	0.61
6:E:295:VAL:HA	6:E:380:LYS:HE2	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:306:ARG:O	33:f:421:TYR:HB2	2.00	0.61
10:I:376:LYS:O	10:I:382:VAL:HA	1.99	0.61
13:L:50:PRO:CD	35:h:116:TYR:HE2	1.94	0.61
15:N:138:GLN:HA	15:N:143:ARG:HH11	1.66	0.61
15:N:193:ARG:HA	44:5:1550:C:OP1	2.00	0.61
19:R:227:GLN:NE2	44:5:856:G:P	2.74	0.61
20:S:91:TYR:O	20:S:137:ARG:NH2	2.33	0.61
20:S:108:GLN:NE2	44:5:1322:U:O2	2.32	0.61
24:W:179:SER:O	24:W:183:SER:CB	2.48	0.61
29:b:108:ASN:ND2	44:5:1076:C:O4'	2.33	0.61
34:g:4:ARG:NH1	44:5:1481:A:C4	2.64	0.61
37:j:808:CYS:HG	37:j:822:SER:HG	1.47	0.61
42:p:4:ARG:NH2	44:5:837:A:H3'	2.15	0.61
44:5:60:A:C8	44:5:326:U:C4	2.88	0.61
44:5:1384:U:N3	44:5:1422:G:N1	2.47	0.61
44:5:2427:U:N3	44:5:2602:G:N1	2.33	0.61
1:z:258:MET:C	44:5:2479:C:C3'	2.72	0.61
1:z:388:LEU:H	1:z:391:LYS:HZ2	1.48	0.61
9:H:289:LYS:HA	9:H:344:ILE:O	2.00	0.61
12:s:286:HIS:CB	44:5:1278:A:H1'	2.30	0.61
13:L:126:PHE:CG	35:h:115:LYS:O	2.51	0.61
14:M:284:LEU:HD11	16:O:182:ASN:HD21	1.65	0.61
18:Q:132:SER:OG	44:5:1103:A:C6	2.49	0.61
44:5:174:C:N4	44:5:245:U:N3	2.49	0.61
44:5:177:U:O2	44:5:241:G:O6	2.17	0.61
44:5:1862:U:O2	44:5:1868:G:C6	2.53	0.61
47:x:28:UNK:CA	48:y:16:UNK:O	2.48	0.61
12:s:239:GLY:N	44:5:1257:C:C6	2.66	0.61
14:M:273:ARG:NH2	44:5:3213:A:N7	2.49	0.61
15:N:28:TRP:HH2	44:5:297:G:C4'	2.14	0.61
15:N:65:ARG:O	44:5:269:G:C4'	2.46	0.61
18:Q:136:LYS:HD2	44:5:1103:A:H8	1.64	0.61
21:T:10:ARG:HD2	44:5:2640:A:OP1	2.00	0.61
21:T:129:LYS:HG3	44:5:1095:U:C2	2.34	0.61
21:T:129:LYS:N	44:5:1095:U:H3	1.97	0.61
26:Y:87:LYS:HE3	44:5:375:A:O4'	2.00	0.61
36:i:26:ILE:HD13	44:5:264:G:C2	2.35	0.61
43:q:100:ILE:CG1	44:5:1260:A:N6	2.61	0.61
44:5:74:G:H2'	44:5:75:G:H8	1.63	0.61
44:5:283:G:H21	44:5:285:A:H5''	1.65	0.61
44:5:884:A:OP2	44:5:2139:A:N6	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:1507:G:OP1	44:5:1509:A:N6	2.33	0.61
44:5:2161:G:N2	44:5:2173:U:O2	2.34	0.61
44:5:2198:A:N3	44:5:2270:A:C8	2.68	0.61
44:5:2292:U:O2	44:5:2300:G:N2	2.34	0.61
44:5:2470:C:N4	44:5:2475:G:O6	2.33	0.61
44:5:2828:G:O6	44:5:2862:U:O4	2.18	0.61
44:5:2982:A:H1'	44:5:2984:C:H41	1.65	0.61
1:z:231:VAL:HG23	44:5:2487:U:C3'	2.25	0.61
1:z:404:SER:CA	44:5:2461:A:C4	2.81	0.61
3:B:348:ARG:HH12	44:5:3037:U:C5'	2.13	0.61
4:C:41:SER:HB3	4:C:111:VAL:HG11	1.80	0.61
7:F:319:THR:HB	18:Q:129:ASP:HB3	1.81	0.61
7:F:330:THR:HB	21:T:133:ALA:O	1.99	0.61
8:G:201:GLY:HA3	44:5:2550:U:H6	1.61	0.61
8:G:264:GLU:OE2	8:G:272:ARG:NH1	2.34	0.61
9:H:287:LYS:HA	9:H:346:LEU:O	2.01	0.61
11:J:143:TYR:HA	11:J:152:ARG:HG2	1.81	0.61
12:s:267:LYS:CB	44:5:1276:U:N3	2.63	0.61
12:s:281:ASP:O	44:5:1258:U:C1'	2.48	0.61
12:s:295:GLY:HA3	44:5:1276:U:H5	1.65	0.61
15:N:98:LEU:CD2	44:5:289:A:O5'	2.47	0.61
21:T:12:ARG:NH2	44:5:2632:G:H4'	2.15	0.61
43:q:7:LYS:CB	44:5:1218:U:C4'	2.21	0.61
44:5:352:A:N6	44:5:366:A:OP2	2.34	0.61
44:5:1210:U:N3	44:5:1295:G:C6	2.64	0.61
44:5:2427:U:C2	44:5:2602:G:N1	2.59	0.61
44:5:2783:U:H3'	44:5:2784:G:H8	1.65	0.61
1:z:232:GLY:HA2	44:5:2465:G:H8	1.56	0.61
15:N:17:ASP:HB3	44:5:314:U:O2'	2.00	0.61
15:N:57:GLN:C	44:5:149:U:C5'	2.46	0.61
15:N:98:LEU:HD21	44:5:289:A:C3'	2.29	0.61
28:a:85:ARG:HH12	44:5:1426:C:P	2.23	0.61
34:g:59:PRO:HG3	44:5:1654:A:H1'	1.82	0.61
43:q:6:GLU:N	44:5:1219:C:H5	1.47	0.61
43:q:59:VAL:C	44:5:1221:A:H5''	2.16	0.61
43:q:107:ALA:O	44:5:1231:A:N6	2.33	0.61
44:5:170:G:N2	44:5:249:U:O2	2.34	0.61
44:5:2762:A:N7	44:5:2795:U:O4	2.33	0.61
1:z:400:VAL:CB	44:5:2494:A:O2'	2.49	0.61
1:z:411:LEU:CD2	44:5:2447:A:O2'	2.48	0.61
3:B:262:TRP:CZ2	16:O:66:LYS:CG	2.84	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:35:VAL:O	4:C:39:PHE:HB2	2.01	0.61
4:C:98:ARG:NH2	44:5:933:A:C2	2.69	0.61
5:D:525:TYR:CE1	46:7:121:U:H5''	2.35	0.61
6:E:246:ARG:NH2	44:5:608:A:C2	2.66	0.61
6:E:359:VAL:HG12	6:E:363:LYS:HE3	1.83	0.61
12:s:217:LEU:O	44:5:1235:U:C4	2.41	0.61
14:M:225:ALA:HA	44:5:561:C:C5'	2.27	0.61
15:N:5:LYS:O	44:5:64:G:C2	2.54	0.61
15:N:41:ARG:CD	44:5:114:A:N7	2.64	0.61
15:N:143:ARG:HB3	45:8:143:U:H4'	1.82	0.61
19:R:251:ASP:O	19:R:255:TYR:HB2	2.01	0.61
23:V:247:VAL:HB	23:V:265:VAL:HA	1.83	0.61
36:i:4:LYS:HA	36:i:12:ASN:HB3	1.82	0.61
37:j:797:ARG:NH1	44:5:818:C:H6	1.99	0.61
37:j:807:ARG:HE	45:8:103:G:C3'	2.13	0.61
37:j:835:TRP:CE2	44:5:812:G:O2'	2.28	0.61
44:5:160:G:C2	44:5:261:U:O2	2.53	0.61
44:5:1222:G:N2	44:5:1286:A:N9	2.41	0.61
44:5:2667:A:H8	44:5:2687:G:H22	1.43	0.61
1:z:258:MET:C	44:5:2479:C:H3'	2.25	0.61
3:B:133:TYR:HD1	3:B:136:LYS:HD2	1.66	0.61
7:F:286:TYR:HD1	21:T:139:ARG:C	2.09	0.61
7:F:287:VAL:H	21:T:139:ARG:C	2.09	0.61
10:I:220:ASP:HB3	10:I:271:HIS:HE2	1.66	0.61
12:s:282:PHE:C	44:5:1258:U:H2'	2.25	0.61
13:L:62:THR:HA	44:5:72:C:C1'	2.30	0.61
15:N:7:LEU:HD13	44:5:111:C:C6	2.34	0.61
15:N:50:ARG:HD3	44:5:322:U:OP1	2.00	0.61
17:P:69:ARG:HH21	44:5:2388:U:C2'	2.12	0.61
25:X:189:LYS:HB3	25:X:195:ILE:HB	1.82	0.61
42:p:16:VAL:HG22	44:5:1927:G:C4	2.34	0.61
44:5:1534:A:OP2	44:5:1586:G:N1	2.30	0.61
44:5:2292:U:O2	44:5:2300:G:C2	2.54	0.61
45:8:63:G:C6	45:8:97:A:N1	2.69	0.61
46:7:78:U:OP2	46:7:101:G:N2	2.30	0.61
1:z:236:TYR:HD2	44:5:2494:A:C8	2.18	0.61
3:B:13:HIS:CD2	44:5:3011:A:C8	2.89	0.61
5:D:444:ASP:HB3	5:D:449:GLU:HB3	1.82	0.61
9:H:291:ARG:HA	9:H:342:ASP:O	2.01	0.61
10:I:315:ASP:HB2	10:I:318:GLN:HB2	1.82	0.61
13:L:173:ALA:HB1	36:i:10:GLY:CA	2.31	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:L:183:ARG:CD	44:5:765:C:C2	2.70	0.61
15:N:7:LEU:CB	44:5:321:C:N4	2.51	0.61
17:P:41:LEU:O	17:P:45:GLN:CB	2.48	0.61
23:V:162:ASN:HD21	23:V:192:LYS:H	1.46	0.61
34:g:10:ARG:CD	44:5:1489:A:O5'	2.47	0.61
37:j:849:ARG:NH2	45:8:58:G:N7	2.43	0.61
43:q:40:GLU:OE2	44:5:1232:C:OP2	2.19	0.61
43:q:52:LEU:C	44:5:1280:C:C5'	2.69	0.61
43:q:58:MET:HE2	44:5:1219:C:C5'	2.31	0.61
43:q:65:GLY:N	44:5:1221:A:OP1	2.31	0.61
44:5:370:U:H3	44:5:374:A:H62	1.47	0.61
44:5:832:G:N2	44:5:862:U:O2	2.30	0.61
44:5:1619:A:H1'	45:8:125:U:N3	2.15	0.61
45:8:42:G:O6	45:8:102:U:N3	2.32	0.61
1:z:407:PRO:CB	44:5:2451:G:P	2.72	0.61
9:H:334:ILE:HA	9:H:345:VAL:O	2.00	0.61
10:I:300:MET:HB3	44:5:2618:G:C8	2.35	0.61
12:s:272:THR:CB	44:5:1262:G:C6	2.83	0.61
12:s:277:GLY:N	44:5:1256:G:C8	2.69	0.61
14:M:224:GLY:O	44:5:561:C:C4'	2.49	0.61
14:M:270:MET:HE2	44:5:3214:U:C6	2.36	0.61
15:N:10:LEU:O	44:5:65:A:C5'	2.31	0.61
15:N:40:ALA:O	44:5:113:C:C2'	2.47	0.61
15:N:73:ARG:HB3	44:5:2600:C:C6	2.35	0.61
15:N:81:TYR:HE1	44:5:2428:U:O4'	1.83	0.61
15:N:157:LYS:O	15:N:162:ARG:NH2	2.34	0.61
15:N:174:ILE:HG22	44:5:55:G:C3'	2.30	0.61
15:N:188:ARG:CZ	44:5:1545:A:H3'	2.27	0.61
19:R:281:LYS:HZ3	44:5:2093:A:P	2.24	0.61
26:Y:52:ARG:HA	26:Y:72:SER:HA	1.82	0.61
27:Z:5:LYS:HB2	27:Z:8:LYS:HB2	1.83	0.61
34:g:7:PHE:CE2	44:5:1856:C:O4'	2.51	0.61
34:g:14:ASN:O	44:5:827:A:C4'	2.48	0.61
44:5:1395:G:N2	44:5:1415:U:O2	2.33	0.61
47:x:31:UNK:N	48:y:15:UNK:N	2.49	0.61
1:z:221:ARG:HH21	44:5:2471:U:C1'	2.14	0.60
1:z:229:LEU:O	44:5:2488:A:C8	2.54	0.60
1:z:336:ASN:HA	1:z:339:LEU:HB2	1.83	0.60
6:E:382:TYR:CG	14:M:264:PHE:HD1	1.81	0.60
9:H:244:THR:HG23	14:M:159:SER:HB2	1.83	0.60
12:s:284:ASN:C	44:5:1261:G:H5'	2.15	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:14:LYS:O	44:5:68:C:C4'	2.38	0.60
15:N:41:ARG:O	44:5:319:A:H1'	2.00	0.60
15:N:65:ARG:N	44:5:268:A:H4'	2.15	0.60
15:N:127:TYR:CE2	44:5:272:G:C4	2.89	0.60
21:T:110:LYS:HA	21:T:113:ALA:HB3	1.83	0.60
29:b:108:ASN:HB2	44:5:1076:C:C5'	2.29	0.60
40:m:100:TYR:HD1	44:5:2896:A:H1'	1.66	0.60
43:q:104:ARG:HE	44:5:1231:A:H5''	1.64	0.60
44:5:337:G:N1	45:8:27:U:C2	2.69	0.60
44:5:1550:C:O2'	44:5:2167:A:N6	2.33	0.60
44:5:2197:C:N4	44:5:2242:A:O4'	2.34	0.60
44:5:2203:U:N3	44:5:2239:G:O6	2.34	0.60
45:8:49:G:O6	45:8:77:A:N6	2.34	0.60
46:7:85:G:N1	46:7:95:A:C2	2.56	0.60
1:z:234:LYS:HG2	44:5:2464:U:O5'	2.01	0.60
1:z:411:LEU:CD1	44:5:2448:G:C5'	2.38	0.60
2:A:236:GLY:N	44:5:2183:A:O2'	2.32	0.60
4:C:321:LYS:HG2	4:C:324:LEU:HB3	1.83	0.60
7:F:335:GLU:CD	44:5:987:U:OP1	2.44	0.60
9:H:289:LYS:HB2	9:H:383:HIS:HB3	1.84	0.60
10:I:301:ARG:NH1	44:5:2623:G:C2	2.68	0.60
12:s:249:ILE:CB	44:5:1274:A:P	2.89	0.60
12:s:254:ARG:CA	44:5:1247:U:OP2	2.49	0.60
14:M:224:GLY:O	44:5:561:C:C5'	2.49	0.60
15:N:126:THR:OG1	44:5:272:G:C3'	2.49	0.60
19:R:145:LEU:HB3	19:R:176:ILE:HG13	1.84	0.60
43:q:107:ALA:O	44:5:1231:A:C5	2.54	0.60
43:q:207:UNK:H	47:x:3:UNK:CB	2.14	0.60
44:5:349:A:O2'	45:8:23:U:O2	2.16	0.60
46:7:81:U:N3	46:7:99:G:C6	2.64	0.60
15:N:7:LEU:HD23	44:5:321:C:H41	1.59	0.60
15:N:175:ASN:OD1	44:5:55:G:C2'	2.50	0.60
37:j:839:ALA:O	37:j:843:HIS:ND1	2.29	0.60
38:k:31:LEU:HD12	38:k:35:GLY:HA2	1.83	0.60
44:5:129:U:H3	44:5:139:G:H1	1.34	0.60
44:5:206:G:N1	44:5:223:U:C2	2.55	0.60
44:5:275:U:O2	44:5:290:G:N2	2.32	0.60
44:5:383:G:N2	44:5:386:A:OP2	2.29	0.60
44:5:3066:U:O2	44:5:3075:G:N2	2.29	0.60
1:z:218:THR:CB	44:5:2489:C:N1	2.64	0.60
1:z:280:MET:HE2	44:5:2481:G:OP1	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:105:GLY:N	2:A:160:SER:O	2.35	0.60
3:B:3:HIS:CB	44:5:2938:G:C5	2.84	0.60
10:I:362:ASP:H	10:I:365:GLU:HB3	1.67	0.60
12:s:254:ARG:CA	44:5:1247:U:P	2.85	0.60
12:s:293:ASN:HA	44:5:1277:C:H3'	1.83	0.60
15:N:6:TYR:HA	44:5:77:A:C2	2.36	0.60
21:T:35:LYS:NZ	44:5:1085:A:P	2.74	0.60
25:X:159:LYS:HB2	25:X:160:TYR:HD1	1.66	0.60
37:j:805:CYS:SG	37:j:806:ASN:N	2.74	0.60
39:l:7:PHE:O	39:l:11:GLN:CB	2.49	0.60
43:q:4:ILE:HG12	44:5:1217:A:C2	2.37	0.60
43:q:107:ALA:C	44:5:1230:G:P	2.82	0.60
44:5:1252:A:N1	44:5:1263:A:O2'	2.33	0.60
1:z:223:PHE:HB3	44:5:2475:G:C2	2.35	0.60
2:A:57:PRO:HB3	42:p:54:ILE:HD11	1.83	0.60
3:B:364:LYS:HD2	44:5:3049:A:H4'	1.83	0.60
4:C:212:ASP:OD1	4:C:215:ILE:N	2.33	0.60
4:C:260:GLN:HA	4:C:267:VAL:HG21	1.83	0.60
12:s:279:ARG:CB	44:5:1261:G:C2'	2.70	0.60
15:N:5:LYS:CD	44:5:322:U:H2'	2.32	0.60
20:S:146:LYS:CE	44:5:534:U:O2	2.49	0.60
21:T:129:LYS:HE2	44:5:1097:G:O5'	2.01	0.60
34:g:44:CYS:HB3	34:g:49:SER:H	1.66	0.60
44:5:340:C:C2	45:8:25:G:C2	2.90	0.60
44:5:808:A:H61	44:5:932:U:H3	1.49	0.60
46:7:85:G:C6	46:7:95:A:N1	2.69	0.60
3:B:96:PRO:HB3	16:O:153:VAL:HG23	1.84	0.60
10:I:187:ALA:N	44:5:2829:U:OP1	2.35	0.60
10:I:275:ARG:CZ	44:5:1044:U:P	2.90	0.60
12:s:282:PHE:C	44:5:1260:A:C8	2.53	0.60
13:L:28:GLN:O	13:L:32:LYS:CB	2.49	0.60
14:M:272:LEU:O	14:M:276:LYS:CB	2.47	0.60
15:N:4:TYR:CG	44:5:321:C:O2	2.53	0.60
15:N:27:VAL:O	44:5:295:A:N6	2.31	0.60
15:N:129:TYR:OH	44:5:270:U:O2	2.20	0.60
20:S:170:THR:OG1	44:5:3186:A:OP2	2.19	0.60
27:Z:38:GLY:O	27:Z:76:TYR:N	2.30	0.60
32:e:178:ARG:CG	44:5:655:C:OP1	2.50	0.60
34:g:15:THR:C	44:5:827:A:OP1	2.45	0.60
41:o:67:LYS:NZ	44:5:2792:A:OP1	2.35	0.60
43:q:37:GLN:CG	44:5:1231:A:H8	2.13	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:305:U:O2'	44:5:306:A:N7	2.33	0.60
44:5:668:G:N1	44:5:794:U:C2	2.65	0.60
44:5:705:A:O2'	44:5:714:G:N2	2.28	0.60
44:5:806:A:OP2	44:5:936:A:N6	2.35	0.60
44:5:1648:A:H2	44:5:2558:U:H3	1.48	0.60
44:5:2457:G:H21	44:5:2483:G:H21	1.49	0.60
2:A:40:TYR:HA	2:A:91:GLY:HA3	1.82	0.60
2:A:250:GLN:HE21	44:5:2241:U:H5''	1.65	0.60
5:D:379:TYR:OH	5:D:399:PRO:O	2.17	0.60
6:E:302:ARG:HH21	44:5:3272:C:P	2.25	0.60
10:I:379:GLY:N	44:5:1011:A:H1'	2.11	0.60
14:M:164:VAL:HG22	20:S:150:PHE:H	1.65	0.60
15:N:65:ARG:HB3	44:5:268:A:H1'	1.84	0.60
15:N:79:ALA:N	44:5:2600:C:H42	2.00	0.60
15:N:144:ARG:CZ	44:5:125:C:O2	2.46	0.60
15:N:204:LYS:CE	37:j:803:THR:HB	2.25	0.60
17:P:34:GLN:HE22	44:5:414:U:P	2.25	0.60
20:S:129:ILE:HG23	20:S:134:ASP:HB2	1.82	0.60
21:T:129:LYS:HB2	44:5:1095:U:N3	2.17	0.60
22:U:163:LEU:O	22:U:168:LEU:N	2.35	0.60
28:a:142:PHE:HB3	44:5:304:G:O2'	2.01	0.60
32:e:189:ILE:CD1	44:5:640:U:C5	2.85	0.60
33:f:372:ARG:HG2	33:f:382:ILE:HG12	1.83	0.60
37:j:853:LEU:HD21	45:8:35:C:H4'	1.83	0.60
39:l:26:TRP:HA	39:l:29:LEU:HD13	1.82	0.60
39:l:40:LYS:HE2	44:5:355:A:O3'	1.99	0.60
43:q:32:ASN:N	44:5:1229:G:O6	2.21	0.60
44:5:60:A:N7	44:5:326:U:O2	2.33	0.60
44:5:124:U:H1'	44:5:149:U:H2'	1.83	0.60
44:5:335:G:H3'	44:5:336:A:H8	1.67	0.60
44:5:1237:G:C6	44:5:1251:A:C2	2.89	0.60
44:5:1481:A:N6	44:5:1872:C:O2	2.35	0.60
44:5:1619:A:H1'	45:8:125:U:C4	2.37	0.60
44:5:2834:G:N2	44:5:2854:U:O2	2.31	0.60
44:5:3152:U:OP2	44:5:3158:G:N2	2.34	0.60
44:5:3158:G:N1	44:5:3292:A:H2	1.96	0.60
1:z:223:PHE:CE2	44:5:2477:G:C1'	2.82	0.60
3:B:7:GLU:C	44:5:2915:U:OP2	2.45	0.60
3:B:93:VAL:HG13	3:B:100:ARG:HB3	1.84	0.60
4:C:3:ARG:HB3	4:C:22:LEU:H	1.66	0.60
4:C:195:ARG:HH11	44:5:339:C:P	2.23	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:G:215:LYS:HE3	44:5:2523:A:C2	2.36	0.60
10:I:219:TYR:O	10:I:273:ARG:HA	2.02	0.60
12:s:300:PRO:HA	44:5:1267:U:H3'	1.84	0.60
16:O:73:PHE:CE1	44:5:3007:U:H5'	2.37	0.60
21:T:74:VAL:HB	21:T:91:LEU:HD12	1.82	0.60
37:j:858:ARG:HH12	45:8:94:C:H3'	1.66	0.60
43:q:58:MET:HA	44:5:1286:A:N6	2.15	0.60
44:5:182:U:O2	44:5:234:G:C6	2.53	0.60
44:5:368:G:N2	45:8:22:U:O2	2.35	0.60
1:z:406:GLY:C	44:5:2452:G:OP2	2.42	0.60
2:A:6:ARG:NH2	44:5:2183:A:H5''	2.17	0.60
2:A:144:ASN:HB3	2:A:160:SER:HB2	1.83	0.60
2:A:227:ARG:NH1	44:5:2155:G:O2'	2.30	0.60
3:B:66:LYS:CE	23:V:140:PHE:H	2.14	0.60
4:C:98:ARG:CZ	44:5:933:A:N1	2.65	0.60
6:E:233:TRP:HH2	44:5:1353:U:C5	2.20	0.60
7:F:239:GLU:O	7:F:243:ARG:CB	2.50	0.60
7:F:289:ALA:CA	21:T:138:SER:N	2.65	0.60
9:H:336:PHE:HA	9:H:344:ILE:HG13	1.84	0.60
9:H:347:SER:HB2	9:H:387:ILE:HG12	1.84	0.60
12:s:242:GLN:CB	43:q:41:VAL:N	2.65	0.60
12:s:285:PRO:HA	44:5:1261:G:H5''	1.84	0.60
12:s:299:ILE:N	44:5:1267:U:N3	2.49	0.60
15:N:21:PHE:CE1	44:5:316:U:O4	2.54	0.60
15:N:24:ARG:HB3	44:5:300:G:N2	2.17	0.60
15:N:26:ARG:HB2	44:5:317:A:H8	0.55	0.60
15:N:153:ASP:CB	45:8:142:C:C6	2.82	0.60
15:N:191:TRP:CZ2	44:5:2166:A:C5	2.85	0.60
23:V:174:ARG:NH2	44:5:3043:C:OP1	2.35	0.60
31:d:111:PRO:HB3	44:5:1474:A:H1'	1.84	0.60
42:p:67:GLY:N	42:p:71:VAL:O	2.35	0.60
43:q:216:UNK:O	48:y:17:UNK:C	2.45	0.60
43:q:217:UNK:C	48:y:17:UNK:O	2.45	0.60
44:5:1538:G:N2	44:5:1583:A:H62	2.00	0.60
44:5:1886:A:H61	44:5:2348:A:H2'	1.67	0.60
44:5:2198:A:C5	44:5:2270:A:N1	2.70	0.60
46:7:94:C:H2'	46:7:95:A:H8	1.67	0.60
5:D:369:THR:O	5:D:373:LEU:HB2	2.01	0.60
6:E:332:LYS:HD2	44:5:3271:G:C3'	2.31	0.60
7:F:284:SER:CA	21:T:142:SER:C	2.66	0.60
9:H:220:ILE:HD12	14:M:156:VAL:HG22	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:H:247:LYS:HD2	14:M:154:SER:C	2.27	0.60
12:s:267:LYS:CB	44:5:1276:U:O2	2.49	0.60
15:N:19:LEU:HB2	44:5:68:C:O4'	2.00	0.60
15:N:71:ARG:NE	44:5:290:G:H4'	2.16	0.60
15:N:83:LYS:CD	44:5:2426:U:P	2.70	0.60
15:N:199:LEU:CD1	44:5:903:U:C5'	2.60	0.60
34:g:7:PHE:HD2	44:5:1487:G:H21	1.50	0.60
34:g:12:PRO:CG	44:5:1855:U:H1'	2.31	0.60
36:i:26:ILE:CG1	44:5:264:G:C6	2.78	0.60
44:5:16:A:N6	45:8:144:G:O6	2.35	0.60
44:5:807:A:N6	44:5:935:U:O2	2.34	0.60
44:5:1198:C:H3'	44:5:1199:C:H2'	1.82	0.60
44:5:2579:G:H3'	44:5:2580:A:H8	1.67	0.60
44:5:3344:A:OP2	44:5:3361:G:N2	2.35	0.60
1:z:225:GLU:CG	44:5:2458:A:C5	2.76	0.59
1:z:375:VAL:HG11	44:5:2466:G:N9	2.17	0.59
4:C:215:ILE:HA	4:C:218:ALA:HB3	1.83	0.59
5:D:295:ARG:O	5:D:308:LYS:NZ	2.35	0.59
5:D:301:LYS:HZ2	21:T:93:VAL:HG11	1.65	0.59
7:F:284:SER:CB	21:T:142:SER:CB	2.80	0.59
10:I:354:LYS:HD3	21:T:160:ILE:C	2.27	0.59
12:s:268:GLU:CA	44:5:1264:G:N3	2.65	0.59
12:s:286:HIS:N	44:5:1278:A:C2	2.68	0.59
15:N:9:GLU:HB2	44:5:77:A:C2	2.34	0.59
15:N:29:GLU:O	44:5:297:G:C5	2.55	0.59
15:N:186:GLY:O	44:5:1548:C:O5'	2.19	0.59
16:O:191:ALA:O	16:O:195:ALA:HB2	2.02	0.59
26:Y:90:VAL:HB	44:5:378:A:C1'	2.32	0.59
36:i:60:LEU:O	36:i:65:GLY:N	2.32	0.59
43:q:210:UNK:O	47:x:6:UNK:C	2.50	0.59
44:5:26:A:N6	44:5:59:G:N1	2.50	0.59
44:5:937:G:H21	44:5:963:G:H1'	1.67	0.59
44:5:2198:A:N3	44:5:2270:A:N7	2.50	0.59
44:5:2651:G:O3'	44:5:2760:C:N4	2.35	0.59
1:z:411:LEU:CA	44:5:2448:G:C3'	2.80	0.59
5:D:290:TYR:O	5:D:294:LYS:CB	2.50	0.59
5:D:402:PHE:HD1	44:5:1079:A:O4'	1.85	0.59
10:I:389:GLY:O	46:7:64:A:H3'	2.02	0.59
12:s:212:PRO:HA	44:5:1236:G:N3	2.17	0.59
12:s:215:SER:C	44:5:1264:G:N7	2.60	0.59
12:s:254:ARG:C	44:5:1247:U:C3'	2.73	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:49:ARG:NH1	15:N:53:TYR:O	2.35	0.59
21:T:115:LYS:O	21:T:119:ALA:HB2	2.01	0.59
29:b:69:LYS:HE2	44:5:2617:U:H3'	1.84	0.59
30:c:53:LYS:O	30:c:57:GLU:HB2	2.01	0.59
38:k:58:ASP:O	38:k:62:ALA:HB2	2.02	0.59
44:5:5:G:C5	45:8:155:A:N6	2.70	0.59
44:5:679:U:O2	44:5:701:G:N2	2.29	0.59
44:5:2216:G:H1	44:5:2229:A:H61	1.49	0.59
44:5:2482:U:C2	44:5:2486:A:C6	2.87	0.59
1:z:367:VAL:O	44:5:2468:A:N3	2.35	0.59
3:B:19:ARG:O	3:B:232:ARG:NH2	2.35	0.59
3:B:126:LYS:HB2	44:5:3295:A:OP1	2.02	0.59
10:I:301:ARG:HB2	44:5:2644:C:O2'	2.01	0.59
15:N:140:LYS:HB3	44:5:143:G:H22	1.65	0.59
15:N:188:ARG:CB	44:5:1544:G:C2	2.85	0.59
17:P:121:GLN:HG3	45:8:13:A:C2'	2.32	0.59
20:S:71:LYS:O	20:S:73:LYS:NZ	2.33	0.59
22:U:92:LYS:NZ	22:U:150:PHE:O	2.32	0.59
23:V:175:LEU:HD12	44:5:2917:G:P	2.42	0.59
24:W:204:HIS:HB3	24:W:206:LYS:HG2	1.83	0.59
28:a:108:LYS:NZ	44:5:801:A:P	2.75	0.59
33:f:393:HIS:CE1	44:5:1328:C:H5''	2.36	0.59
34:g:6:THR:HG22	44:5:1486:G:H21	1.67	0.59
43:q:58:MET:HB2	44:5:1224:C:C6	2.37	0.59
44:5:855:U:H3'	44:5:856:G:H8	1.67	0.59
44:5:2196:C:C4'	44:5:2271:A:H4'	2.24	0.59
44:5:2423:U:O2	44:5:2607:G:N2	2.30	0.59
44:5:2932:U:N3	44:5:2935:U:OP2	2.35	0.59
44:5:3342:A:H3'	44:5:3343:G:H8	1.65	0.59
1:z:349:THR:O	1:z:358:LEU:CA	2.50	0.59
1:z:399:LEU:HG	44:5:2496:C:N4	2.17	0.59
4:C:7:THR:HA	4:C:19:ALA:HA	1.84	0.59
4:C:309:ARG:HG2	44:5:1360:C:O3'	2.02	0.59
5:D:528:GLU:CG	46:7:121:U:C2	2.85	0.59
8:G:295:ALA:O	8:G:297:LYS:NZ	2.36	0.59
13:L:66:ASN:ND2	44:5:73:C:OP1	2.35	0.59
15:N:203:ARG:HD2	44:5:903:U:OP1	2.03	0.59
17:P:139:TYR:HH	44:5:2354:C:HO2'	0.64	0.59
21:T:92:ARG:HD2	44:5:2736:A:OP1	2.02	0.59
21:T:129:LYS:CB	44:5:1095:U:H3	2.16	0.59
26:Y:87:LYS:NZ	44:5:375:A:C2'	2.64	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Z:1:ALA:HB3	30:c:64:LYS:HZ3	1.66	0.59
34:g:4:ARG:NH1	44:5:1481:A:O2'	2.35	0.59
34:g:67:LYS:HE3	44:5:1804:A:H5''	1.83	0.59
34:g:96:GLU:HA	34:g:99:LYS:HE2	1.85	0.59
37:j:797:ARG:NH1	44:5:818:C:C6	2.71	0.59
44:5:712:G:H22	44:5:754:G:HO2'	1.49	0.59
44:5:950:G:N1	44:5:1368:U:OP2	2.31	0.59
44:5:1147:G:H21	44:5:1170:A:H1'	1.66	0.59
44:5:1156:C:O2	44:5:1170:A:O2'	2.21	0.59
44:5:1378:U:H2'	44:5:1379:G:H8	1.67	0.59
44:5:1956:A:N3	44:5:2083:G:N1	2.51	0.59
44:5:2724:U:H3	44:5:2732:G:H1	0.73	0.59
46:7:7:G:C2	46:7:114:U:O2	2.54	0.59
47:x:33:UNK:N	48:y:13:UNK:HA	2.18	0.59
1:z:360:LEU:C	44:5:2464:U:O2'	2.42	0.59
1:z:408:ALA:HB3	44:5:2450:G:O5'	2.02	0.59
4:C:114:ASN:O	4:C:118:LYS:HB2	2.02	0.59
4:C:165:ALA:HB2	4:C:218:ALA:HB1	1.85	0.59
6:E:390:LYS:HE2	33:f:321:GLU:OE2	2.02	0.59
7:F:298:ARG:NH1	7:F:319:THR:O	2.35	0.59
9:H:357:ASN:O	9:H:361:LEU:CB	2.51	0.59
10:I:207:TYR:CE1	44:5:2647:A:H1'	2.36	0.59
10:I:387:LYS:NZ	10:I:401:TYR:OH	2.35	0.59
11:J:168:GLU:O	11:J:172:GLU:HB2	2.01	0.59
12:s:189:GLU:C	44:5:1234:G:H3'	2.28	0.59
12:s:257:SER:CB	44:5:1248:C:C5'	2.66	0.59
14:M:273:ARG:O	14:M:277:ARG:CB	2.47	0.59
15:N:23:GLN:CB	44:5:67:A:C8	2.81	0.59
15:N:74:PRO:HB3	44:5:292:U:OP1	2.01	0.59
19:R:155:ARG:NH2	44:5:1873:U:C6	2.71	0.59
25:X:162:SER:C	35:h:77:PRO:HB3	2.27	0.59
29:b:84:ARG:NH2	44:5:970:A:H5''	2.17	0.59
43:q:41:VAL:O	44:5:1257:C:O2'	2.20	0.59
44:5:219:A:N6	44:5:1391:C:OP2	2.35	0.59
44:5:2149:A:N6	44:5:2187:G:O3'	2.35	0.59
44:5:2216:G:N2	44:5:2229:A:N1	2.45	0.59
2:A:3:ARG:HD3	44:5:911:C:N4	2.18	0.59
2:A:242:ARG:NH2	44:5:2242:A:OP1	2.35	0.59
3:B:3:HIS:CD2	44:5:2938:G:C5	2.90	0.59
5:D:266:ASP:OD1	44:5:2687:G:OP1	2.20	0.59
5:D:533:ARG:HD2	46:7:1:G:O2'	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:539:LYS:O	5:D:543:ALA:CB	2.51	0.59
7:F:286:TYR:HA	21:T:140:ILE:HA	0.69	0.59
8:G:231:ILE:HG22	8:G:401:ILE:HB	1.83	0.59
18:Q:273:GLU:OE1	44:5:787:G:P	2.60	0.59
27:Z:21:LYS:NZ	27:Z:128:TRP:O	2.31	0.59
29:b:114:HIS:HA	29:b:117:ALA:HB3	1.85	0.59
36:i:26:ILE:HD13	44:5:264:G:H1	1.67	0.59
41:o:41:ARG:NH1	44:5:284:A:O4'	2.35	0.59
44:5:370:U:O4	44:5:374:A:N7	2.35	0.59
44:5:997:A:H4'	46:7:79:A:O2'	2.02	0.59
44:5:1151:U:O2	44:5:2369:G:O2'	2.20	0.59
44:5:1268:G:H22	44:5:1272:C:H3'	1.68	0.59
44:5:2198:A:C6	44:5:2270:A:N1	2.71	0.59
7:F:290:GLN:HE22	21:T:136:ARG:HH11	1.48	0.59
13:L:79:GLU:OE2	13:L:112:ASN:ND2	2.35	0.59
15:N:13:LYS:NZ	44:5:78:U:O4'	1.96	0.59
15:N:21:PHE:CZ	44:5:316:U:C4	2.89	0.59
15:N:41:ARG:HG2	44:5:114:A:C8	2.38	0.59
26:Y:112:ASP:C	45:8:84:C:O2	2.46	0.59
32:e:190:ASP:HB2	44:5:638:C:H5''	1.83	0.59
33:f:344:ASN:OD1	33:f:406:ASN:ND2	2.36	0.59
34:g:4:ARG:CG	44:5:1858:A:H1'	2.27	0.59
36:i:53:TYR:OH	44:5:295:A:OP1	2.21	0.59
43:q:36:GLN:O	44:5:1261:G:C1'	2.50	0.59
43:q:212:UNK:O	47:x:5:UNK:O	1.80	0.59
44:5:677:A:O5'	44:5:786:A:N6	2.35	0.59
44:5:994:G:N2	44:5:995:U:O4	2.35	0.59
44:5:1308:A:N6	44:5:2367:A:N3	2.48	0.59
44:5:1310:G:O2'	44:5:2380:U:O2'	2.19	0.59
44:5:2117:A:H5'	44:5:3080:G:H21	1.67	0.59
1:z:264:GLY:HA3	1:z:301:LYS:HG2	1.84	0.59
1:z:291:ASN:HB3	1:z:318:LEU:HD21	1.85	0.59
3:B:128:LYS:CB	44:5:3150:A:H4'	2.33	0.59
7:F:286:TYR:CB	21:T:140:ILE:HG23	2.32	0.59
8:G:273:LEU:O	8:G:277:ALA:CB	2.51	0.59
8:G:357:LYS:NZ	44:5:7:C:OP1	2.32	0.59
10:I:379:GLY:HA3	44:5:1011:A:C4'	2.32	0.59
12:s:250:ALA:C	44:5:1246:G:N7	2.60	0.59
12:s:267:LYS:CB	44:5:1276:U:H3	2.15	0.59
12:s:292:ILE:CB	44:5:1277:C:H41	2.16	0.59
15:N:18:VAL:HG22	44:5:316:U:P	2.43	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:28:TRP:N	44:5:67:A:C2	2.61	0.59
15:N:122:ASN:ND2	44:5:318:A:H8	1.99	0.59
28:a:185:THR:HA	28:a:188:ALA:HB3	1.85	0.59
29:b:120:LEU:HD11	44:5:1072:G:N3	2.18	0.59
32:e:170:ARG:HH11	32:e:179:VAL:HG13	1.68	0.59
37:j:789:LYS:NZ	44:5:2138:A:H62	1.96	0.59
38:k:4:GLU:HA	38:k:53:THR:HG22	1.85	0.59
43:q:107:ALA:CA	44:5:1230:G:O4'	2.34	0.59
44:5:950:G:H3'	44:5:1367:G:H1	1.68	0.59
44:5:1480:G:H1'	44:5:1872:C:H41	1.67	0.59
44:5:1655:G:O2'	44:5:1800:A:N1	2.30	0.59
44:5:3010:U:O2	44:5:3136:G:C2	2.55	0.59
9:H:291:ARG:NH1	40:m:82:LEU:HD11	2.18	0.59
9:H:311:PHE:HA	9:H:326:VAL:O	2.03	0.59
12:s:195:VAL:C	44:5:1263:A:C5	2.72	0.59
12:s:263:ALA:HB2	44:5:1274:A:C2	2.38	0.59
15:N:140:LYS:HZ3	44:5:143:G:H2'	1.63	0.59
15:N:189:LYS:N	44:5:1548:C:P	2.64	0.59
17:P:20:SER:HA	17:P:145:HIS:HA	1.84	0.59
22:U:164:LYS:NZ	44:5:1682:U:H6	1.97	0.59
28:a:87:THR:HB	28:a:90:ARG:HG2	1.85	0.59
31:d:118:TRP:CD1	44:5:1475:A:HO2'	2.19	0.59
44:5:523:A:C5	44:5:569:A:N1	2.70	0.59
44:5:577:C:H2'	44:5:579:G:H5''	1.85	0.59
44:5:2661:G:H5''	44:5:2748:A:H61	1.67	0.59
46:7:85:G:O6	46:7:95:A:N1	2.36	0.59
47:x:23:UNK:C	48:y:10:UNK:CB	2.81	0.59
1:z:234:LYS:CG	44:5:2464:U:C1'	2.80	0.59
1:z:234:LYS:CG	44:5:2464:U:P	2.91	0.59
1:z:409:PHE:N	44:5:2451:G:N7	2.51	0.59
2:A:4:VAL:O	2:A:9:ARG:NH2	2.36	0.59
3:B:244:ARG:HE	44:5:2947:G:P	2.23	0.59
12:s:242:GLN:CB	43:q:37:GLN:O	2.50	0.59
17:P:121:GLN:NE2	45:8:13:A:N3	2.41	0.59
28:a:115:MET:HB2	44:5:96:G:OP2	2.02	0.59
44:5:10:C:H1'	44:5:1558:A:H62	1.68	0.59
44:5:1203:A:N3	44:5:2855:U:O2'	2.32	0.59
44:5:1222:G:N2	44:5:1286:A:C5	2.71	0.59
46:7:73:C:O2'	46:7:75:G:OP2	2.20	0.59
1:z:250:LEU:HD22	1:z:339:LEU:HD21	1.84	0.58
4:C:131:VAL:HG12	4:C:133:SER:H	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:306:THR:HA	44:5:1346:G:H1'	1.83	0.58
13:L:127:PRO:C	35:h:114:ARG:HE	2.11	0.58
15:N:98:LEU:HD23	44:5:289:A:O5'	2.00	0.58
15:N:127:TYR:CG	44:5:272:G:N7	2.70	0.58
21:T:112:ASN:HB2	44:5:1063:G:O6	2.03	0.58
24:W:272:LYS:O	24:W:276:ALA:CB	2.51	0.58
32:e:274:LYS:HA	32:e:277:LEU:HG	1.86	0.58
34:g:41:ARG:NH2	44:5:1739:U:O2	2.36	0.58
40:m:98:LYS:HD3	40:m:118:THR:HG21	1.85	0.58
44:5:337:G:C2	45:8:27:U:C2	2.91	0.58
44:5:591:G:N2	44:5:612:U:OP1	2.36	0.58
44:5:1805:C:H2'	44:5:1806:A:H8	1.67	0.58
44:5:2370:G:N2	44:5:2378:C:O2	2.35	0.58
44:5:2465:G:OP2	44:5:2485:A:O2'	2.20	0.58
44:5:2660:G:N3	44:5:2744:U:O2'	2.36	0.58
44:5:3160:U:O2	44:5:3290:G:C2	2.56	0.58
1:z:223:PHE:CD2	44:5:2476:C:H3'	2.38	0.58
1:z:402:LYS:NZ	44:5:2463:G:C4'	2.22	0.58
2:A:67:TYR:HE1	44:5:2524:A:H8	1.50	0.58
3:B:66:LYS:O	3:B:70:ARG:NH2	2.35	0.58
3:B:168:LYS:O	3:B:319:ASN:ND2	2.36	0.58
7:F:331:LYS:CD	44:5:987:U:O3'	2.51	0.58
13:L:62:THR:HA	44:5:72:C:H1'	1.84	0.58
15:N:12:ARG:HD2	44:5:64:G:H5'	1.84	0.58
15:N:43:THR:CG2	44:5:267:G:C6	2.86	0.58
15:N:57:GLN:OE1	44:5:149:U:O2	2.19	0.58
15:N:71:ARG:NE	44:5:290:G:C4'	2.62	0.58
15:N:203:ARG:CG	44:5:903:U:OP1	2.51	0.58
16:O:128:ARG:HH11	44:5:1317:A:H4'	1.67	0.58
27:Z:72:LYS:NZ	44:5:1636:U:H5''	2.17	0.58
29:b:114:HIS:O	29:b:118:LYS:CB	2.51	0.58
33:f:332:LEU:HB2	33:f:347:LEU:O	2.03	0.58
37:j:797:ARG:CD	44:5:817:A:O2'	2.51	0.58
40:m:82:LEU:O	40:m:86:ALA:HB2	2.03	0.58
42:p:78:THR:O	42:p:82:THR:CB	2.51	0.58
44:5:101:G:OP2	44:5:101:G:N2	2.36	0.58
44:5:189:G:O2'	44:5:224:C:OP2	2.20	0.58
44:5:1145:G:N2	44:5:1159:A:O2'	2.36	0.58
44:5:1157:G:O2'	44:5:1169:A:N3	2.35	0.58
44:5:2198:A:C4	44:5:2270:A:N7	2.72	0.58
44:5:3021:A:N6	44:5:3033:A:OP2	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:3188:G:H2'	44:5:3189:G:H8	1.67	0.58
1:z:314:GLN:HG2	1:z:318:LEU:HD12	1.85	0.58
6:E:242:LEU:O	6:E:244:LYS:NZ	2.36	0.58
7:F:329:VAL:HB	21:T:135:PRO:HG3	1.84	0.58
7:F:431:LYS:HB3	7:F:437:GLY:HA3	1.85	0.58
8:G:213:TYR:OH	44:5:2526:C:C6	2.56	0.58
9:H:257:VAL:HA	44:5:3186:A:N6	2.19	0.58
12:s:282:PHE:CB	44:5:1259:A:N9	2.59	0.58
13:L:57:VAL:HG12	13:L:108:ILE:HG23	1.85	0.58
15:N:31:ARG:HA	44:5:268:A:H62	1.69	0.58
15:N:70:ASN:ND2	44:5:277:G:N7	2.50	0.58
15:N:91:GLU:CD	44:5:277:G:C8	2.79	0.58
15:N:126:THR:OG1	44:5:272:G:H2'	2.04	0.58
15:N:159:ARG:HB2	15:N:164:LEU:HB2	1.85	0.58
18:Q:266:ARG:NH1	44:5:743:C:C2	2.72	0.58
21:T:129:LYS:CG	44:5:1097:G:H4'	2.33	0.58
43:q:76:LEU:HD22	43:q:79:PHE:HB2	1.83	0.58
44:5:86:G:N2	44:5:87:U:O4	2.36	0.58
44:5:408:A:N6	45:8:15:G:O2'	2.36	0.58
44:5:442:G:C5	44:5:493:U:H2'	2.38	0.58
44:5:1203:A:H61	44:5:1300:G:H2'	1.68	0.58
44:5:2516:U:O2'	44:5:2595:A:N7	2.36	0.58
47:x:25:UNK:CA	48:y:6:UNK:O	2.50	0.58
7:F:290:GLN:CD	21:T:136:ARG:CB	2.72	0.58
14:M:172:ILE:HA	14:M:212:VAL:HG23	1.84	0.58
15:N:4:TYR:CA	44:5:321:C:O2	2.49	0.58
15:N:29:GLU:O	44:5:297:G:O6	2.21	0.58
15:N:45:PRO:N	44:5:321:C:C5	2.65	0.58
15:N:94:TYR:CD2	44:5:290:G:H5''	2.39	0.58
25:X:179:GLN:HB2	25:X:199:GLN:HB3	1.85	0.58
31:d:118:TRP:HD1	44:5:1475:A:HO2'	1.49	0.58
34:g:54:ILE:O	44:5:1739:U:H4'	2.03	0.58
37:j:796:LYS:HE2	44:5:819:U:P	2.43	0.58
44:5:678:G:O2'	44:5:787:G:N2	2.36	0.58
44:5:1071:U:O2'	44:5:1072:G:N7	2.34	0.58
44:5:1197:A:N6	46:7:86:U:C4	2.72	0.58
47:x:22:UNK:CA	48:y:5:UNK:O	2.51	0.58
1:z:399:LEU:N	44:5:2496:C:N3	2.46	0.58
4:C:202:ARG:HE	44:5:1384:U:P	2.26	0.58
7:F:317:ARG:NE	44:5:1101:G:C5'	2.61	0.58
7:F:431:LYS:O	7:F:438:SER:N	2.34	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:H:223:ARG:HH12	44:5:3185:U:C3'	2.17	0.58
11:J:228:ARG:O	11:J:232:ARG:NH1	2.36	0.58
15:N:64:VAL:HG22	44:5:270:U:P	2.43	0.58
15:N:70:ASN:HA	44:5:289:A:N3	1.77	0.58
32:e:168:PHE:HE2	44:5:1405:U:H4'	1.69	0.58
36:i:26:ILE:CG1	44:5:264:G:N1	2.66	0.58
36:i:30:LYS:NZ	44:5:267:G:OP2	2.36	0.58
44:5:353:G:N2	44:5:365:A:O5'	2.36	0.58
44:5:1379:G:C2	44:5:1427:U:O2	2.57	0.58
44:5:1702:U:O2	44:5:1743:G:C2	2.57	0.58
5:D:265:LYS:HE2	44:5:2669:G:N2	2.16	0.58
9:H:250:ASN:HB3	14:M:152:THR:CG2	2.34	0.58
9:H:291:ARG:HG3	40:m:82:LEU:HD21	1.85	0.58
11:J:232:ARG:HE	11:J:236:LYS:HA	1.67	0.58
12:s:188:LYS:N	44:5:1238:C:OP1	2.33	0.58
12:s:242:GLN:CB	43:q:41:VAL:CG2	2.81	0.58
13:L:47:ALA:CB	35:h:115:LYS:NZ	2.65	0.58
15:N:13:LYS:HG3	44:5:78:U:H5'	1.75	0.58
15:N:28:TRP:N	44:5:300:G:O2'	2.35	0.58
15:N:65:ARG:HB3	44:5:268:A:C1'	2.34	0.58
15:N:183:THR:O	44:5:54:C:C3'	2.49	0.58
18:Q:266:ARG:CZ	44:5:743:C:O2	2.52	0.58
19:R:305:ARG:HG3	19:R:308:ARG:HD2	1.85	0.58
24:W:189:LYS:HB3	24:W:193:ARG:HB2	1.85	0.58
25:X:206:LYS:O	25:X:210:LYS:CB	2.47	0.58
26:Y:16:ARG:NE	45:8:23:U:OP1	2.36	0.58
26:Y:113:LYS:HZ2	45:8:84:C:H1'	1.65	0.58
29:b:111:HIS:CD2	44:5:1075:A:C5	2.92	0.58
34:g:14:ASN:O	44:5:827:A:C5'	2.51	0.58
42:p:37:TYR:HB2	42:p:47:VAL:HB	1.84	0.58
43:q:32:ASN:ND2	44:5:1229:G:OP2	2.31	0.58
44:5:1933:A:OP1	44:5:2121:G:N2	2.36	0.58
44:5:2499:U:H2'	44:5:2500:A:H8	1.68	0.58
44:5:2901:G:OP2	44:5:2902:A:N6	2.34	0.58
1:z:218:THR:CB	44:5:2488:A:O3'	2.50	0.58
1:z:258:MET:HE3	44:5:2468:A:C5	2.33	0.58
1:z:394:GLN:O	44:5:2446:U:OP2	2.22	0.58
3:B:15:GLY:HA2	44:5:3010:U:C1'	2.33	0.58
7:F:355:ARG:NH2	44:5:578:A:N1	2.52	0.58
12:s:223:LYS:C	43:q:44:GLU:CA	2.55	0.58
12:s:286:HIS:CA	44:5:1278:A:C1'	2.82	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:s:298:GLU:CA	44:5:1273:A:N7	2.67	0.58
13:L:50:PRO:CD	35:h:118:ILE:HD12	2.33	0.58
15:N:24:ARG:HB3	44:5:301:G:C4	1.94	0.58
15:N:41:ARG:NH1	44:5:113:C:C4'	2.67	0.58
15:N:66:VAL:HA	44:5:269:G:O3'	2.02	0.58
15:N:94:TYR:HB3	44:5:289:A:O2'	2.04	0.58
15:N:127:TYR:N	44:5:272:G:OP2	2.37	0.58
15:N:192:LYS:NZ	44:5:1552:G:C6	2.71	0.58
17:P:97:ASN:ND2	44:5:382:U:O2	2.37	0.58
29:b:81:LYS:NZ	44:5:954:U:O2	2.35	0.58
34:g:54:ILE:C	44:5:1739:U:H4'	2.29	0.58
42:p:81:SER:O	42:p:85:ARG:CB	2.51	0.58
43:q:28:VAL:HG12	44:5:1259:A:N6	2.17	0.58
43:q:84:VAL:CG2	44:5:1282:G:C3'	2.78	0.58
44:5:607:A:OP2	44:5:608:A:N6	2.35	0.58
44:5:1596:C:O2'	44:5:1696:A:N3	2.36	0.58
5:D:328:THR:HG22	5:D:330:THR:H	1.68	0.58
5:D:549:LYS:O	5:D:554:ALA:N	2.31	0.58
6:E:265:ILE:HG23	6:E:273:GLY:HA2	1.86	0.58
6:E:332:LYS:HE2	44:5:3271:G:C5'	2.32	0.58
10:I:283:ARG:HH22	44:5:1126:G:P	2.27	0.58
15:N:33:LYS:HD3	44:5:267:G:C5'	2.32	0.58
15:N:43:THR:OG1	44:5:320:G:N7	2.33	0.58
20:S:59:VAL:HG13	21:T:141:VAL:HG21	1.85	0.58
26:Y:33:ALA:HB3	26:Y:106:ILE:HD11	1.84	0.58
26:Y:76:LEU:H	45:8:74:U:H5	1.52	0.58
26:Y:117:ALA:O	26:Y:121:ARG:HB2	2.04	0.58
27:Z:1:ALA:H2	30:c:63:SER:HB2	1.68	0.58
30:c:43:ILE:HG12	30:c:68:TYR:HB3	1.85	0.58
31:d:118:TRP:HB3	44:5:1476:G:O5'	2.03	0.58
32:e:178:ARG:HG3	44:5:655:C:OP1	2.03	0.58
41:o:45:ARG:CZ	44:5:285:A:N3	2.65	0.58
44:5:84:U:O2'	44:5:101:G:O6	2.22	0.58
44:5:404:G:N2	45:8:19:C:O2	2.19	0.58
44:5:689:U:OP2	44:5:690:A:N6	2.37	0.58
44:5:1677:G:C2	44:5:1691:U:O2	2.57	0.58
44:5:1714:A:N6	44:5:1728:G:O4'	2.37	0.58
44:5:2389:C:O2'	44:5:3307:A:N1	2.28	0.58
45:8:50:C:OP2	45:8:51:G:N2	2.36	0.58
1:z:405:MET:SD	44:5:2460:U:H1'	2.43	0.58
2:A:139:HIS:HA	2:A:146:THR:HA	1.83	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:250:ALA:CB	44:5:2880:U:H1'	2.34	0.58
9:H:337:SER:H	9:H:344:ILE:HA	1.69	0.58
12:s:277:GLY:CA	44:5:1256:G:C8	2.87	0.58
15:N:37:HIS:CE1	44:5:267:G:H4'	2.38	0.58
15:N:37:HIS:HE1	44:5:267:G:H4'	1.69	0.58
17:P:48:LEU:HD22	17:P:88:VAL:HG13	1.86	0.58
17:P:133:HIS:HB2	17:P:135:ARG:HE	1.69	0.58
20:S:10:ILE:HA	20:S:26:ARG:HA	1.85	0.58
21:T:132:PRO:O	21:T:134:GLN:NE2	2.33	0.58
28:a:93:ARG:NH1	44:5:1431:G:O5'	2.37	0.58
29:b:105:PHE:O	29:b:109:HIS:CB	2.46	0.58
32:e:176:TYR:CD1	44:5:655:C:OP1	2.55	0.58
44:5:214:G:O6	44:5:227:G:N2	2.36	0.58
44:5:1456:A:N1	44:5:1476:G:O2'	2.32	0.58
1:z:408:ALA:O	44:5:2449:A:H3'	2.03	0.58
1:z:409:PHE:HE1	44:5:2450:G:OP2	1.78	0.58
7:F:285:TYR:HB2	21:T:141:VAL:HG23	0.71	0.58
7:F:363:PHE:HA	7:F:372:PRO:HA	1.85	0.58
9:H:351:VAL:HB	44:5:3111:U:H4'	1.84	0.58
10:I:209:ARG:NH2	44:5:2647:A:O3'	2.36	0.58
12:s:274:GLN:CA	44:5:1232:C:N4	2.67	0.58
12:s:284:ASN:C	44:5:1278:A:H2	2.12	0.58
12:s:286:HIS:CB	44:5:1278:A:C1'	2.81	0.58
13:L:171:ARG:O	13:L:175:SER:CB	2.51	0.58
15:N:31:ARG:NE	44:5:300:G:H5''	2.17	0.58
19:R:256:HIS:ND1	44:5:1718:G:H3'	2.18	0.58
20:S:80:ARG:HD2	21:T:154:VAL:O	2.04	0.58
25:X:151:THR:OG1	45:8:147:U:H1'	2.04	0.58
39:l:24:PRO:CG	45:8:52:A:C5	2.85	0.58
44:5:644:G:N2	44:5:2372:A:O4'	2.37	0.58
44:5:1646:G:O3'	44:5:1809:A:N6	2.36	0.58
44:5:1820:U:O2'	44:5:1822:C:N4	2.37	0.58
44:5:3229:G:C6	44:5:3258:U:N3	2.72	0.58
1:z:371:GLU:CD	44:5:2468:A:C2'	2.78	0.57
3:B:14:LEU:C	44:5:3010:U:C4'	2.77	0.57
3:B:249:VAL:CG1	44:5:2881:C:H4'	2.34	0.57
5:D:292:GLN:CD	44:5:2747:A:H61	2.09	0.57
8:G:199:GLY:HA2	44:5:2549:G:C2	2.39	0.57
9:H:222:SER:HB2	14:M:157:LYS:HD3	1.86	0.57
10:I:299:GLY:HA3	44:5:2618:G:O2'	2.03	0.57
15:N:91:GLU:HG3	44:5:276:U:O3'	1.80	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:144:ARG:HH22	44:5:143:G:H1	1.52	0.57
15:N:179:LYS:HG2	44:5:52:A:N6	2.10	0.57
16:O:42:ASN:HB3	16:O:135:TYR:HB2	1.83	0.57
20:S:11:GLY:O	20:S:25:PHE:N	2.37	0.57
20:S:67:ALA:N	44:5:519:A:H62	2.01	0.57
21:T:12:ARG:HB2	44:5:2632:G:H5''	1.86	0.57
25:X:136:LYS:NZ	44:5:4:U:C4	2.72	0.57
26:Y:85:VAL:HG21	26:Y:99:LEU:HD11	1.85	0.57
35:h:45:LYS:HD3	45:8:49:G:OP2	2.04	0.57
38:k:26:LYS:HB3	38:k:42:LYS:H	1.69	0.57
44:5:15:C:N4	45:8:144:G:O6	2.37	0.57
44:5:835:G:N3	44:5:858:A:N7	2.53	0.57
44:5:1594:A:H1'	44:5:1615:C:H1'	1.86	0.57
44:5:2203:U:O2	44:5:2239:G:C2	2.56	0.57
44:5:2279:A:C6	44:5:2283:G:O6	2.56	0.57
44:5:2467:G:N2	44:5:2487:U:O2'	2.37	0.57
1:z:214:TYR:OH	44:5:2465:G:C2	2.57	0.57
1:z:260:ILE:CG2	44:5:2480:A:C8	2.86	0.57
2:A:17:THR:HA	44:5:2173:U:H5'	1.86	0.57
2:A:79:ASN:HA	2:A:169:ILE:HA	1.86	0.57
3:B:13:HIS:HE1	44:5:3010:U:O2'	1.87	0.57
5:D:262:ALA:C	46:7:16:U:H4'	2.29	0.57
5:D:423:LEU:O	5:D:427:SER:HB3	2.03	0.57
6:E:354:ILE:HD13	44:5:3268:A:H8	1.55	0.57
9:H:221:LYS:N	9:H:224:ILE:O	2.32	0.57
9:H:368:ARG:NH2	44:5:2894:C:H5''	2.19	0.57
11:J:102:ASP:O	11:J:224:ARG:NH1	2.37	0.57
12:s:220:THR:CB	44:5:1255:C:C4	2.87	0.57
12:s:296:GLU:HA	44:5:1276:U:C1'	2.33	0.57
13:L:183:ARG:NH1	44:5:765:C:H5	1.96	0.57
15:N:70:ASN:CG	44:5:277:G:C5	2.82	0.57
16:O:194:LEU:HD23	16:O:197:LEU:HD12	1.85	0.57
18:Q:272:ARG:HH11	18:Q:275:VAL:HG13	1.68	0.57
20:S:146:LYS:HZ2	44:5:534:U:H1'	1.67	0.57
29:b:111:HIS:CE1	44:5:1075:A:C5	2.92	0.57
38:k:58:ASP:O	38:k:62:ALA:CB	2.52	0.57
43:q:38:MET:CG	44:5:1230:G:N3	2.65	0.57
43:q:207:UNK:O	47:x:4:UNK:N	2.37	0.57
43:q:210:UNK:CA	48:y:9:UNK:HA	2.33	0.57
44:5:86:G:O2'	44:5:98:G:O6	2.21	0.57
44:5:2427:U:O4	44:5:2602:G:O6	2.22	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:2427:U:O2	44:5:2602:G:C2	2.57	0.57
44:5:3115:C:O2'	44:5:3117:C:N4	2.37	0.57
44:5:3351:U:H3	44:5:3356:G:H1'	1.69	0.57
1:z:231:VAL:HG21	44:5:2488:A:OP1	1.92	0.57
1:z:307:ALA:HB3	1:z:325:LYS:HB2	1.85	0.57
1:z:371:GLU:OE1	44:5:2468:A:C2'	2.52	0.57
3:B:67:PHE:CD2	23:V:217:ARG:NE	2.57	0.57
8:G:267:ALA:O	8:G:271:GLU:CB	2.47	0.57
10:I:261:MET:HE3	10:I:333:VAL:HG22	1.86	0.57
12:s:260:ARG:CB	44:5:1267:U:C5	2.87	0.57
13:L:127:PRO:C	35:h:114:ARG:NH2	2.62	0.57
15:N:4:TYR:HB3	44:5:321:C:H2'	1.85	0.57
15:N:174:ILE:HG22	44:5:55:G:O3'	2.04	0.57
20:S:99:ARG:HH21	20:S:126:VAL:HB	1.69	0.57
21:T:84:TYR:CE2	29:b:89:LYS:N	2.72	0.57
30:c:95:ALA:HB2	30:c:101:LEU:HD23	1.86	0.57
31:d:120:ARG:NH1	44:5:3074:G:O3'	2.37	0.57
34:g:74:ARG:HD3	44:5:1638:A:OP1	2.05	0.57
37:j:810:ARG:NH1	37:j:821:SER:O	2.37	0.57
43:q:38:MET:HG2	44:5:1230:G:N3	2.19	0.57
44:5:67:A:N1	44:5:300:G:O2'	2.31	0.57
44:5:394:G:N2	44:5:399:A:N6	2.47	0.57
44:5:761:A:N6	44:5:770:G:C4	2.72	0.57
44:5:1347:U:O4	44:5:1357:G:O6	2.23	0.57
45:8:57:C:O2	45:8:61:A:O2'	2.22	0.57
1:z:221:ARG:HH22	44:5:2471:U:C4'	1.81	0.57
3:B:326:GLY:HA2	44:5:3096:C:O2'	2.04	0.57
5:D:296:LEU:HG	44:5:2748:A:H1'	1.86	0.57
5:D:523:GLU:HA	5:D:526:ALA:HB3	1.85	0.57
7:F:265:TYR:O	7:F:269:GLU:HB2	2.04	0.57
8:G:215:LYS:HB2	44:5:2523:A:C8	2.40	0.57
9:H:289:LYS:HG2	9:H:345:VAL:HG22	1.85	0.57
10:I:301:ARG:HB3	44:5:2618:G:H5''	1.86	0.57
15:N:8:GLU:O	44:5:64:G:H3'	2.03	0.57
15:N:70:ASN:OD1	44:5:277:G:C5	2.58	0.57
18:Q:179:LEU:HB3	18:Q:183:ASN:HB2	1.87	0.57
31:d:114:ASN:ND2	44:5:1474:A:C2	2.70	0.57
37:j:804:LEU:HA	37:j:811:ARG:H	1.68	0.57
44:5:35:A:O2'	44:5:809:G:N3	2.36	0.57
44:5:945:C:HO2'	44:5:1406:A:HO2'	1.52	0.57
44:5:1019:G:N2	44:5:1033:U:O2	2.35	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:2664:C:N4	44:5:2704:A:OP2	2.37	0.57
44:5:3066:U:O4	44:5:3075:G:O6	2.22	0.57
45:8:65:A:H3'	45:8:66:A:H8	1.68	0.57
4:C:221:ASN:OD1	44:5:209:A:H1'	2.03	0.57
6:E:316:SER:OG	6:E:318:GLU:OE1	2.23	0.57
9:H:223:ARG:NE	44:5:3186:A:O2'	2.38	0.57
9:H:247:LYS:H	14:M:156:VAL:HG21	1.69	0.57
10:I:304:TRP:CH2	44:5:2646:C:C4'	2.88	0.57
12:s:221:ALA:HA	44:5:1234:G:O4'	2.04	0.57
12:s:266:THR:O	44:5:1266:G:O6	2.21	0.57
15:N:25:VAL:HG22	44:5:299:G:C6	2.38	0.57
15:N:91:GLU:HG3	44:5:276:U:C2'	2.34	0.57
20:S:10:ILE:HD12	20:S:60:SER:HB3	1.87	0.57
20:S:88:HIS:HA	21:T:156:TYR:CD2	2.39	0.57
23:V:176:ASN:H	44:5:2917:G:C5'	2.17	0.57
43:q:36:GLN:N	44:5:1262:G:C6	2.50	0.57
44:5:432:G:O6	44:5:627:U:O4	2.23	0.57
44:5:442:G:N2	44:5:494:G:OP1	2.37	0.57
44:5:714:G:O2'	44:5:753:C:O2'	2.22	0.57
44:5:1222:G:N2	44:5:1286:A:N7	2.45	0.57
44:5:1959:G:N2	44:5:2078:C:O2	2.34	0.57
44:5:2446:U:O2	44:5:2501:U:N3	2.37	0.57
44:5:3114:A:N7	44:5:3117:C:N4	2.52	0.57
44:5:3232:G:C6	44:5:3255:U:N3	2.72	0.57
1:z:234:LYS:HD2	44:5:2462:A:C5	2.39	0.57
3:B:249:VAL:HG13	44:5:2881:C:H4'	1.86	0.57
6:E:237:GLU:OE1	32:e:241:LYS:HB2	2.05	0.57
10:I:221:LEU:HB2	10:I:272:LEU:HB3	1.86	0.57
12:s:291:GLY:N	43:q:35:SER:N	2.53	0.57
15:N:9:GLU:C	44:5:78:U:C4'	2.76	0.57
15:N:184:LYS:H	44:5:1548:C:H1'	1.69	0.57
16:O:128:ARG:HH11	44:5:1317:A:C5'	2.17	0.57
17:P:48:LEU:O	17:P:52:LEU:CB	2.50	0.57
26:Y:35:LEU:H	26:Y:40:ARG:HH21	1.50	0.57
31:d:123:LYS:NZ	44:5:3076:C:OP1	2.37	0.57
43:q:64:ARG:HH22	44:5:1285:G:HO2'	1.50	0.57
44:5:117:U:O2'	44:5:119:U:OP2	2.19	0.57
44:5:434:U:O2	44:5:625:G:N2	2.31	0.57
44:5:2338:C:H3'	44:5:2339:C:H2'	1.86	0.57
2:A:8:GLN:HA	44:5:2163:C:O3'	2.05	0.57
2:A:40:TYR:OH	44:5:2551:U:O2	2.12	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:265:LYS:CB	44:5:2686:A:H4'	2.34	0.57
6:E:385:ALA:HB2	14:M:267:PHE:CZ	2.40	0.57
10:I:275:ARG:NH2	44:5:1044:U:P	2.78	0.57
11:J:151:ARG:HE	41:o:106:PHE:N	1.98	0.57
12:s:212:PRO:C	44:5:1236:G:C8	2.69	0.57
15:N:67:ARG:NH1	44:5:293:C:H5	1.77	0.57
15:N:128:LYS:C	44:5:270:U:O3'	2.46	0.57
15:N:140:LYS:NZ	44:5:143:G:H1'	2.19	0.57
15:N:140:LYS:H	44:5:144:A:H2'	1.69	0.57
24:W:192:ARG:HA	24:W:200:PHE:HA	1.87	0.57
29:b:108:ASN:HA	44:5:1075:A:O2'	2.04	0.57
33:f:395:ASN:OD1	44:5:1326:A:H2'	2.05	0.57
40:m:82:LEU:HD23	40:m:85:LEU:HD12	1.85	0.57
41:o:20:HIS:ND1	44:5:2741:C:O2'	2.25	0.57
43:q:11:TYR:HA	43:q:14:LYS:HE2	1.86	0.57
44:5:823:C:O2	44:5:1535:A:O2'	2.22	0.57
44:5:991:G:N2	44:5:1058:U:O2	2.37	0.57
1:z:260:ILE:HD13	44:5:2481:G:C8	2.40	0.57
1:z:407:PRO:HD2	44:5:2490:C:OP2	2.04	0.57
3:B:49:TYR:HB2	3:B:80:ASP:HB3	1.87	0.57
5:D:440:PHE:HB2	5:D:443:TRP:HB2	1.87	0.57
6:E:354:ILE:CG2	44:5:3268:A:C4	2.88	0.57
6:E:372:GLU:O	6:E:375:LYS:NZ	2.37	0.57
8:G:211:SER:OG	44:5:2585:G:O6	2.23	0.57
8:G:215:LYS:HG3	44:5:2523:A:C6	2.39	0.57
9:H:262:ARG:NH1	44:5:1211:U:P	2.77	0.57
9:H:274:LEU:HD23	9:H:277:ASN:HD22	1.70	0.57
12:s:192:GLY:N	44:5:1234:G:HO2'	2.01	0.57
12:s:222:LEU:O	44:5:1232:C:C1'	2.52	0.57
13:L:128:ARG:NH2	44:5:168:U:H1'	2.20	0.57
14:M:184:ILE:HA	14:M:195:ILE:HG22	1.87	0.57
14:M:262:THR:O	14:M:266:ARG:HB2	2.04	0.57
15:N:26:ARG:NH2	44:5:316:U:C5'	2.67	0.57
19:R:281:LYS:NZ	44:5:2093:A:P	2.78	0.57
20:S:113:ARG:HH21	44:5:1186:G:H4'	1.70	0.57
20:S:146:LYS:CD	44:5:534:U:C2	2.82	0.57
35:h:101:THR:O	35:h:105:ARG:CB	2.52	0.57
44:5:275:U:O4	44:5:290:G:O6	2.23	0.57
44:5:1538:G:H21	44:5:1583:A:H62	1.53	0.57
44:5:2196:C:N1	44:5:2247:G:N2	2.47	0.57
1:z:225:GLU:HG3	44:5:2458:A:C5	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:z:237:ASP:OD2	44:5:2492:C:H5''	2.05	0.57
1:z:255:ARG:CA	44:5:2467:G:H5'	2.13	0.57
4:C:344:ALA:H	44:5:516:A:H5''	1.70	0.57
5:D:462:GLY:O	5:D:466:GLN:CB	2.53	0.57
6:E:242:LEU:CD1	44:5:591:G:C2	2.88	0.57
10:I:279:PHE:CZ	44:5:1045:C:H1'	2.39	0.57
12:s:216:SER:CA	44:5:1263:A:OP2	2.52	0.57
12:s:224:GLU:O	43:q:43:LYS:O	2.23	0.57
12:s:263:ALA:N	44:5:1266:G:N2	2.48	0.57
12:s:286:HIS:HA	44:5:1262:G:H21	1.67	0.57
15:N:189:LYS:HG3	44:5:1549:U:C5	2.39	0.57
18:Q:204:LYS:HA	18:Q:261:ASN:HB3	1.86	0.57
20:S:23:LYS:HG2	21:T:146:ASN:HD22	1.70	0.57
27:Z:11:VAL:HA	27:Z:20:LYS:O	2.05	0.57
29:b:69:LYS:HG3	44:5:2617:U:H5''	1.85	0.57
34:g:7:PHE:HZ	44:5:1856:C:C4'	2.17	0.57
43:q:210:UNK:N	47:x:3:UNK:O	2.38	0.57
44:5:13:A:N6	44:5:15:C:N3	2.52	0.57
44:5:196:G:N1	44:5:199:A:OP2	2.27	0.57
44:5:1265:U:H2'	44:5:1266:G:C8	2.40	0.57
45:8:91:C:H2'	45:8:92:A:H8	1.69	0.57
1:z:410:ARG:NH2	44:5:2447:A:N6	2.52	0.57
2:A:144:ASN:O	2:A:160:SER:N	2.33	0.57
2:A:152:SER:OG	44:5:2157:G:N7	2.32	0.57
4:C:9:HIS:NE2	4:C:147:GLU:OE2	2.38	0.57
4:C:306:THR:OG1	4:C:307:GLN:N	2.37	0.57
5:D:296:LEU:O	5:D:310:ARG:NH1	2.38	0.57
8:G:329:PHE:O	8:G:333:LEU:N	2.37	0.57
8:G:390:TYR:O	8:G:394:LYS:CB	2.53	0.57
10:I:387:LYS:HA	46:7:64:A:C6	2.40	0.57
13:L:126:PHE:CE2	35:h:116:TYR:O	2.51	0.57
15:N:30:TYR:OH	44:5:318:A:OP2	2.22	0.57
15:N:49:ARG:HA	15:N:53:TYR:H	1.69	0.57
15:N:200:TRP:HB2	15:N:203:ARG:HA	1.85	0.57
20:S:77:VAL:O	20:S:91:TYR:HA	2.04	0.57
32:e:247:ILE:H	32:e:272:ASN:HD21	1.52	0.57
35:h:71:LYS:H	35:h:73:LYS:HE3	1.70	0.57
43:q:34:SER:OG	44:5:1230:G:N9	2.38	0.57
43:q:210:UNK:O	48:y:9:UNK:CB	2.49	0.57
44:5:1222:G:C2	44:5:1286:A:N7	2.72	0.57
44:5:1501:U:H3	44:5:1515:A:H61	1.53	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:2649:A:O2'	44:5:2758:A:N1	2.38	0.57
44:5:2828:G:C6	44:5:2862:U:C4	2.93	0.57
44:5:2830:G:H1	44:5:2858:U:H3	1.53	0.57
44:5:3351:U:O2'	44:5:3353:G:N2	2.38	0.57
44:5:3371:G:H2'	44:5:3372:A:H8	1.69	0.57
1:z:258:MET:HE1	44:5:2468:A:C2'	2.35	0.56
3:B:12:GLY:N	44:5:3044:G:H5''	2.20	0.56
4:C:98:ARG:NH2	44:5:804:C:OP1	2.38	0.56
4:C:343:LYS:HE3	44:5:516:A:P	2.45	0.56
5:D:276:PHE:CZ	44:5:2688:U:C4	2.93	0.56
6:E:358:ARG:NH1	44:5:3268:A:H1'	2.20	0.56
7:F:287:VAL:O	21:T:139:ARG:N	2.34	0.56
8:G:223:GLN:HE22	45:8:150:G:H1'	1.68	0.56
12:s:269:ILE:N	43:q:36:GLN:HE22	2.01	0.56
13:L:127:PRO:C	35:h:114:ARG:NE	2.63	0.56
15:N:114:ARG:NH1	15:N:151:ILE:O	2.37	0.56
16:O:51:LYS:HB2	16:O:141:LEU:HD11	1.87	0.56
17:P:101:ASN:HA	17:P:104:ALA:HB3	1.87	0.56
18:Q:285:GLY:O	44:5:780:A:H5'	2.04	0.56
19:R:282:ALA:HA	19:R:286:ARG:HH11	1.69	0.56
23:V:174:ARG:NH1	44:5:3042:U:H4'	2.20	0.56
24:W:266:ALA:HA	24:W:270:ALA:HB3	1.86	0.56
37:j:805:CYS:H	37:j:810:ARG:H	1.51	0.56
42:p:2:ALA:CA	44:5:853:G:C6	2.83	0.56
43:q:210:UNK:O	48:y:9:UNK:N	2.37	0.56
44:5:34:A:N3	44:5:810:A:O2'	2.38	0.56
44:5:182:U:H2'	44:5:183:G:H8	1.70	0.56
44:5:1762:C:H3'	44:5:1763:U:H4'	1.87	0.56
44:5:2423:U:O4	44:5:2607:G:O6	2.23	0.56
44:5:2448:G:N2	44:5:2500:A:O4'	2.38	0.56
44:5:2620:G:H2'	44:5:2621:G:C4	2.40	0.56
44:5:3060:C:H1'	44:5:3332:U:H1'	1.87	0.56
1:z:217:GLU:CA	44:5:2470:C:H1'	2.25	0.56
2:A:215:ASN:ND2	44:5:2968:G:C5	2.74	0.56
3:B:262:TRP:CD1	16:O:66:LYS:H	2.24	0.56
3:B:262:TRP:HD1	16:O:63:ALA:O	1.88	0.56
7:F:285:TYR:HE2	21:T:143:THR:HA	1.69	0.56
15:N:28:TRP:CH2	44:5:297:G:H4'	2.39	0.56
15:N:75:VAL:N	44:5:2599:U:N3	2.53	0.56
16:O:174:PHE:HA	16:O:177:LYS:HE2	1.86	0.56
23:V:257:ARG:NH1	23:V:261:ASN:OD1	2.37	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:h:95:PHE:CE1	44:5:136:G:O5'	2.57	0.56
36:i:62:ARG:NH1	44:5:2503:G:H21	2.02	0.56
39:l:27:ILE:HG23	39:l:30:ARG:HE	1.69	0.56
44:5:91:G:N2	44:5:95:A:OP2	2.37	0.56
44:5:845:G:N2	44:5:848:A:OP2	2.31	0.56
44:5:1760:A:O2'	44:5:1763:U:N3	2.38	0.56
44:5:2196:C:C4'	44:5:2271:A:O2'	2.53	0.56
44:5:2417:U:O3'	44:5:2418:G:N2	2.38	0.56
44:5:2482:U:O4	44:5:2486:A:N7	2.38	0.56
46:7:81:U:C4	46:7:99:G:O6	2.58	0.56
1:z:219:LYS:O	44:5:2469:G:N2	2.37	0.56
1:z:220:LYS:HA	44:5:2469:G:H1	1.63	0.56
3:B:63:PRO:O	3:B:348:ARG:NH2	2.38	0.56
3:B:85:VAL:HA	3:B:202:THR:HA	1.87	0.56
3:B:261:MET:HA	16:O:64:PHE:CA	2.36	0.56
5:D:265:LYS:HB3	44:5:2686:A:H4'	1.87	0.56
5:D:486:TYR:HA	5:D:489:ASP:HB2	1.88	0.56
6:E:272:ARG:H	6:E:274:LYS:HE2	1.71	0.56
7:F:289:ALA:HB2	21:T:138:SER:H	1.68	0.56
7:F:289:ALA:N	21:T:138:SER:CA	2.68	0.56
7:F:311:LYS:HG2	44:5:985:U:C5'	2.30	0.56
9:H:256:ALA:O	44:5:3186:A:C2	2.58	0.56
10:I:199:ASN:HB3	44:5:1126:G:OP1	2.06	0.56
12:s:191:LYS:CA	44:5:1234:G:O2'	2.53	0.56
12:s:263:ALA:O	44:5:1275:C:N4	2.37	0.56
12:s:268:GLU:C	44:5:1264:G:N3	2.63	0.56
12:s:269:ILE:N	44:5:1246:G:C2	2.68	0.56
13:L:13:HIS:CE1	44:5:86:G:C5	2.93	0.56
13:L:126:PHE:CB	35:h:115:LYS:O	2.53	0.56
14:M:226:ARG:NH2	44:5:526:C:OP2	2.38	0.56
15:N:18:VAL:CA	44:5:315:C:O3'	2.53	0.56
15:N:18:VAL:HG23	44:5:315:C:O3'	2.04	0.56
15:N:41:ARG:HA	44:5:113:C:HO2'	1.68	0.56
15:N:72:LYS:HA	44:5:290:G:H21	1.70	0.56
15:N:78:GLY:C	44:5:2600:C:H42	2.13	0.56
15:N:91:GLU:CG	44:5:276:U:C2'	2.81	0.56
15:N:93:LYS:HA	44:5:289:A:N3	2.20	0.56
15:N:193:ARG:CA	44:5:1550:C:OP1	2.49	0.56
15:N:204:LYS:OXT	37:j:801:SER:C	2.46	0.56
17:P:171:ARG:CZ	44:5:617:G:C4'	2.84	0.56
21:T:10:ARG:CZ	44:5:2640:A:OP1	2.53	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:T:107:GLU:O	21:T:111:ALA:CB	2.54	0.56
21:T:119:ALA:O	21:T:123:GLY:CA	2.52	0.56
23:V:175:LEU:CD1	44:5:2916:U:C5'	2.82	0.56
25:X:255:TYR:HE1	35:h:33:VAL:HG13	1.64	0.56
26:Y:25:SER:CB	45:8:88:A:N6	2.68	0.56
27:Z:3:PHE:CG	30:c:62:LEU:HB3	2.41	0.56
30:c:43:ILE:HA	30:c:68:TYR:O	2.04	0.56
34:g:6:THR:CB	44:5:1486:G:H21	2.17	0.56
34:g:13:TYR:OH	44:5:1854:C:C1'	2.52	0.56
35:h:83:LYS:HA	35:h:89:ARG:HH21	1.70	0.56
43:q:53:MET:N	44:5:1280:C:C4'	2.66	0.56
43:q:55:LYS:O	44:5:1223:A:O4'	2.23	0.56
44:5:34:A:H8	44:5:50:U:N3	1.81	0.56
44:5:195:U:C4	44:5:199:A:N7	2.73	0.56
44:5:200:C:N4	44:5:218:G:OP1	2.37	0.56
44:5:655:C:H2'	44:5:656:A:C8	2.40	0.56
44:5:931:C:H3'	44:5:932:U:H2'	1.87	0.56
44:5:1487:G:O6	44:5:1855:U:O4	2.22	0.56
44:5:2150:G:C2	44:5:2186:U:O2	2.58	0.56
44:5:2631:U:OP1	44:5:2757:U:O2'	2.21	0.56
44:5:2999:U:O2	44:5:3149:G:C2	2.58	0.56
44:5:3052:G:C2	44:5:3090:U:O2	2.59	0.56
44:5:3232:G:O6	44:5:3255:U:O4	2.23	0.56
46:7:12:U:O4'	46:7:110:G:N2	2.32	0.56
1:z:346:VAL:HG21	44:5:2486:A:P	2.45	0.56
3:B:233:TRP:NE1	3:B:266:ARG:O	2.36	0.56
5:D:265:LYS:HZ3	44:5:2669:G:H21	1.42	0.56
7:F:432:HIS:O	7:F:437:GLY:N	2.38	0.56
10:I:200:LYS:NZ	44:5:2634:U:C3'	2.68	0.56
10:I:276:VAL:CA	44:5:1044:U:O2'	2.52	0.56
12:s:240:ASN:CB	43:q:44:GLU:HG3	2.22	0.56
14:M:226:ARG:NH1	44:5:525:C:P	2.78	0.56
15:N:41:ARG:C	44:5:319:A:N3	2.62	0.56
16:O:7:VAL:HB	16:O:33:ILE:HG12	1.87	0.56
20:S:138:GLN:HA	20:S:141:LYS:HD2	1.88	0.56
22:U:115:TYR:O	22:U:119:HIS:ND1	2.38	0.56
30:c:25:LEU:O	30:c:29:SER:OG	2.23	0.56
40:m:81:SER:O	40:m:85:LEU:CB	2.52	0.56
43:q:83:ASN:OD1	44:5:1281:G:C4	2.55	0.56
44:5:938:C:OP1	44:5:962:A:O2'	2.24	0.56
44:5:2335:G:N2	44:5:2339:C:O2	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:8:63:G:N1	45:8:97:A:C2	2.62	0.56
46:7:2:G:C6	46:7:119:U:O2	2.58	0.56
1:z:237:ASP:HB3	44:5:2493:U:O5'	2.03	0.56
2:A:89:TYR:O	2:A:100:ASN:ND2	2.36	0.56
2:A:238:ILE:HB	44:5:2155:G:O4'	2.04	0.56
4:C:162:THR:HG21	4:C:221:ASN:HB3	1.88	0.56
5:D:367:ARG:O	5:D:371:GLN:CB	2.54	0.56
7:F:286:TYR:C	21:T:139:ARG:O	2.46	0.56
7:F:299:ILE:HG12	7:F:344:VAL:HG12	1.87	0.56
7:F:355:ARG:NH2	44:5:578:A:C6	2.74	0.56
9:H:219:SER:HB3	44:5:3198:U:C2	2.41	0.56
13:L:13:HIS:CE1	44:5:86:G:C4	2.94	0.56
14:M:257:ARG:O	14:M:257:ARG:NH2	2.36	0.56
15:N:13:LYS:HZ2	44:5:78:U:C4'	1.01	0.56
15:N:26:ARG:CD	44:5:317:A:C5'	2.01	0.56
15:N:90:ASN:CG	44:5:2600:C:O3'	2.49	0.56
15:N:126:THR:N	44:5:272:G:P	2.73	0.56
15:N:127:TYR:CD1	44:5:270:U:H3'	2.41	0.56
15:N:153:ASP:CG	45:8:141:C:C6	2.72	0.56
19:R:203:GLN:HE22	19:R:206:ARG:HD2	1.70	0.56
37:j:798:HIS:CE1	44:5:1490:A:HO2'	2.23	0.56
39:l:21:ARG:CD	45:8:52:A:O5'	2.54	0.56
43:q:38:MET:HG2	44:5:1230:G:C2	2.34	0.56
43:q:211:UNK:N	47:x:3:UNK:O	2.39	0.56
44:5:84:U:H3'	44:5:85:A:H2'	1.86	0.56
44:5:197:G:N2	44:5:218:G:O2'	2.38	0.56
44:5:251:G:H4'	44:5:252:U:H5'	1.86	0.56
44:5:996:A:N6	44:5:1053:A:O2'	2.39	0.56
44:5:2538:U:O2'	44:5:2541:U:O4	2.13	0.56
44:5:2660:G:O2'	44:5:2749:G:N2	2.37	0.56
44:5:2816:G:H1	44:5:2820:A:H62	1.51	0.56
44:5:3265:C:H3'	44:5:3266:G:H8	1.70	0.56
45:8:57:C:H4'	45:8:63:G:C8	2.41	0.56
2:A:215:ASN:ND2	44:5:2968:G:N7	2.54	0.56
3:B:15:GLY:HA3	44:5:3010:U:O2'	2.05	0.56
5:D:364:LEU:O	5:D:368:ARG:CB	2.54	0.56
7:F:238:ALA:HA	7:F:241:ALA:HB3	1.88	0.56
9:H:227:VAL:HB	9:H:234:LEU:O	2.06	0.56
10:I:200:LYS:HZ1	44:5:2634:U:C3'	2.09	0.56
11:J:198:ASP:HA	11:J:215:GLY:HA2	1.87	0.56
14:M:172:ILE:O	14:M:179:GLY:N	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:24:ARG:HB3	44:5:300:G:C2	2.41	0.56
15:N:65:ARG:NH1	44:5:270:U:O2	2.24	0.56
15:N:76:PRO:HD3	44:5:2432:A:H61	1.52	0.56
15:N:126:THR:N	44:5:272:G:OP2	2.38	0.56
20:S:67:ALA:HB1	44:5:523:A:P	2.46	0.56
21:T:12:ARG:NE	44:5:2632:G:H4'	2.20	0.56
22:U:125:ALA:HB3	22:U:128:ASN:HB2	1.88	0.56
24:W:192:ARG:HE	24:W:203:HIS:CG	2.24	0.56
31:d:109:LEU:H	44:5:1460:A:C5'	2.16	0.56
32:e:190:ASP:O	44:5:638:C:H5'	2.04	0.56
42:p:4:ARG:HD3	44:5:855:U:O4	2.05	0.56
44:5:86:G:N2	44:5:99:A:OP2	2.39	0.56
44:5:170:G:OP2	44:5:250:U:N3	2.38	0.56
44:5:2667:A:N6	44:5:2687:G:O2'	2.39	0.56
1:z:230:GLN:HE22	44:5:2479:C:P	2.27	0.56
2:A:11:GLY:HA3	44:5:2163:C:O2	2.04	0.56
3:B:14:LEU:CB	44:5:3010:U:C5'	2.83	0.56
4:C:358:THR:HA	4:C:361:HIS:HB3	1.86	0.56
12:s:267:LYS:CB	44:5:1277:C:C6	2.87	0.56
15:N:25:VAL:CG1	44:5:299:G:N1	2.68	0.56
19:R:155:ARG:NE	44:5:1874:A:OP2	2.37	0.56
19:R:173:ARG:NH2	44:5:1601:U:OP2	2.39	0.56
20:S:42:TRP:HA	20:S:45:LEU:HB2	1.87	0.56
21:T:130:ARG:HB2	44:5:1098:A:H4'	1.88	0.56
26:Y:87:LYS:HB3	26:Y:95:VAL:HB	1.86	0.56
31:d:63:LYS:HD2	31:d:137:ARG:HB2	1.88	0.56
34:g:47:CYS:HG	34:g:49:SER:HG	1.54	0.56
43:q:208:UNK:CB	47:x:1:UNK:CB	2.84	0.56
44:5:206:G:N1	44:5:223:U:N3	2.45	0.56
44:5:825:U:O4	44:5:900:G:O6	2.23	0.56
44:5:1507:G:OP1	44:5:1510:G:N1	2.39	0.56
1:z:223:PHE:HZ	44:5:2469:G:N1	2.02	0.56
1:z:269:VAL:HG12	1:z:271:ARG:H	1.71	0.56
5:D:300:HIS:CE1	21:T:69:LYS:HB2	2.41	0.56
6:E:382:TYR:CD2	14:M:264:PHE:CE1	2.90	0.56
7:F:332:ALA:HA	44:5:987:U:C4'	2.35	0.56
8:G:199:GLY:HA3	8:G:202:GLN:HE21	1.71	0.56
11:J:183:ARG:HA	11:J:263:LEU:HB2	1.88	0.56
12:s:255:ASP:N	44:5:1268:G:O6	2.38	0.56
14:M:188:ILE:H	14:M:193:VAL:HA	1.69	0.56
15:N:18:VAL:CA	44:5:315:C:C3'	2.68	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:83:LYS:CG	44:5:2425:G:O5'	2.49	0.56
18:Q:211:THR:HG23	18:Q:230:ARG:HE	1.69	0.56
18:Q:270:ASN:CG	44:5:745:C:OP1	2.48	0.56
19:R:211:SER:O	19:R:216:ARG:NH1	2.38	0.56
21:T:107:GLU:O	21:T:111:ALA:HB2	2.05	0.56
28:a:152:PRO:O	28:a:191:GLY:N	2.39	0.56
33:f:338:LYS:HG3	44:5:1178:G:C6	2.41	0.56
34:g:41:ARG:CZ	44:5:1739:U:O2	2.54	0.56
39:l:40:LYS:NZ	44:5:355:A:O2'	2.39	0.56
43:q:46:ARG:HE	44:5:1256:G:C5'	2.13	0.56
43:q:59:VAL:HG12	43:q:63:ILE:HG13	1.87	0.56
44:5:36:C:H4'	44:5:808:A:H2	1.71	0.56
44:5:826:G:C6	44:5:899:U:O2	2.59	0.56
44:5:1499:C:H2'	44:5:1500:G:H8	1.70	0.56
44:5:1592:G:OP1	44:5:1655:G:O2'	2.23	0.56
44:5:2246:G:H3'	44:5:2247:G:C8	2.40	0.56
1:z:365:GLY:C	44:5:2477:G:C2'	2.79	0.56
3:B:15:GLY:CA	44:5:3010:U:C1'	2.84	0.56
3:B:260:VAL:O	16:O:64:PHE:HB2	2.05	0.56
4:C:180:LYS:HE3	4:C:203:ARG:H	1.71	0.56
5:D:523:GLU:O	5:D:527:ALA:HB2	2.04	0.56
5:D:538:SER:OG	5:D:541:GLU:N	2.39	0.56
13:L:10:LEU:HD12	13:L:12:ASN:HD21	1.71	0.56
20:S:108:GLN:O	20:S:112:ALA:CB	2.53	0.56
21:T:27:LEU:HD13	21:T:30:TYR:HD2	1.70	0.56
21:T:35:LYS:HZ1	44:5:1085:A:P	2.27	0.56
24:W:168:ARG:NE	24:W:170:ASP:OD1	2.35	0.56
26:Y:32:SER:HB3	26:Y:47:ALA:HB1	1.88	0.56
34:g:37:LYS:NZ	44:5:1656:A:OP2	2.36	0.56
43:q:36:GLN:OE1	44:5:1262:G:C5	2.58	0.56
43:q:100:ILE:CA	44:5:1259:A:N6	2.62	0.56
44:5:676:G:H4'	44:5:678:G:H4'	1.88	0.56
44:5:2844:C:O2	44:5:2898:G:O6	2.23	0.56
2:A:177:LYS:HB3	44:5:1793:C:C5	2.38	0.56
2:A:218:HIS:HE1	44:5:2966:G:C5'	2.19	0.56
3:B:84:VAL:O	3:B:202:THR:HA	2.06	0.56
5:D:402:PHE:CD1	44:5:1079:A:C1'	2.86	0.56
9:H:334:ILE:HG13	9:H:346:LEU:HA	1.88	0.56
9:H:362:GLN:NE2	9:H:379:ILE:O	2.39	0.56
10:I:273:ARG:HD3	44:5:1043:C:H4'	1.87	0.56
11:J:152:ARG:HB2	41:o:104:LEU:N	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:s:271:GLY:HA3	43:q:36:GLN:CG	2.25	0.56
15:N:27:VAL:HG22	44:5:271:C:O2'	2.05	0.56
15:N:35:VAL:HG22	44:5:268:A:N3	2.19	0.56
15:N:170:LYS:CE	44:5:30:G:O3'	2.49	0.56
23:V:212:LYS:NZ	44:5:1896:A:N3	2.52	0.56
26:Y:87:LYS:CE	44:5:375:A:C4'	2.84	0.56
33:f:331:HIS:ND1	33:f:411:THR:OG1	2.36	0.56
43:q:85:GLY:N	44:5:1281:G:O5'	2.39	0.56
44:5:533:A:N7	44:5:555:U:C4	2.73	0.56
44:5:816:A:O2'	44:5:820:A:N6	2.36	0.56
44:5:1376:C:H1'	44:5:1407:A:H2'	1.87	0.56
44:5:2305:G:OP2	44:5:2305:G:N2	2.39	0.56
44:5:2424:A:C8	44:5:2605:G:N2	2.71	0.56
44:5:2469:G:N2	44:5:2477:G:O2'	2.37	0.56
44:5:2877:G:O2'	44:5:2923:U:O2'	2.22	0.56
1:z:236:TYR:HD1	44:5:2494:A:OP1	1.60	0.55
4:C:158:SER:HA	4:C:213:ASN:HB2	1.88	0.55
5:D:269:SER:O	5:D:273:SER:CB	2.54	0.55
5:D:324:ILE:HG22	5:D:335:LEU:HD12	1.88	0.55
15:N:86:ASN:OD1	44:5:2425:G:OP2	2.24	0.55
15:N:105:ARG:HG2	15:N:108:ARG:HH22	1.71	0.55
16:O:93:ALA:O	16:O:97:ALA:HB2	2.06	0.55
16:O:164:SER:HA	16:O:167:TYR:HB3	1.88	0.55
18:Q:303:ARG:CZ	44:5:780:A:N6	2.68	0.55
24:W:190:ASN:HD21	24:W:192:ARG:HD2	1.71	0.55
24:W:193:ARG:HH12	44:5:2112:U:H5	1.54	0.55
31:d:110:ALA:HB1	31:d:112:GLU:HG2	1.87	0.55
40:m:81:SER:O	40:m:85:LEU:HB2	2.06	0.55
44:5:270:U:H3	44:5:295:A:H8	1.40	0.55
44:5:2908:G:N3	44:5:3106:A:O2'	2.39	0.55
44:5:3369:G:H4'	44:5:3370:A:H8	1.72	0.55
44:5:3371:G:H2'	44:5:3372:A:C8	2.41	0.55
3:B:3:HIS:NE2	44:5:2938:G:H5''	2.20	0.55
3:B:9:PRO:CD	44:5:2914:G:H5'	2.36	0.55
3:B:86:VAL:O	3:B:200:GLU:N	2.39	0.55
3:B:122:TRP:O	3:B:127:LYS:NZ	2.38	0.55
9:H:352:GLU:O	9:H:356:GLN:CB	2.54	0.55
12:s:253:MET:N	44:5:1246:G:N9	2.48	0.55
15:N:9:GLU:CB	44:5:77:A:H2	2.08	0.55
15:N:21:PHE:HE2	36:i:28:TYR:CE1	2.18	0.55
15:N:57:GLN:CD	44:5:124:U:H1'	2.32	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:67:ARG:HD3	44:5:273:A:H61	1.69	0.55
15:N:122:ASN:CB	44:5:317:A:C4	2.89	0.55
15:N:172:ARG:CA	44:5:1546:A:C2'	2.73	0.55
15:N:188:ARG:HD2	44:5:1547:G:OP2	2.05	0.55
16:O:128:ARG:HH11	44:5:1317:A:C4'	2.19	0.55
27:Z:76:TYR:HA	27:Z:79:LEU:HB2	1.88	0.55
33:f:333:SER:O	33:f:347:LEU:N	2.39	0.55
38:k:5:ILE:HG22	38:k:54:LEU:HD13	1.89	0.55
43:q:39:HIS:HA	44:5:1261:G:P	2.37	0.55
43:q:60:ARG:HB2	44:5:1285:G:C2	2.39	0.55
44:5:707:U:N3	44:5:712:G:N1	2.39	0.55
44:5:2278:C:C1'	44:5:2307:G:N2	2.66	0.55
44:5:2623:G:H3'	44:5:2624:G:H8	1.71	0.55
44:5:3112:G:N2	44:5:3121:U:OP1	2.34	0.55
44:5:3231:U:C2	44:5:3256:G:C2	2.92	0.55
1:z:220:LYS:CA	44:5:2469:G:C2	2.78	0.55
1:z:372:ASP:CA	44:5:2466:G:C2	2.88	0.55
3:B:296:THR:HB	3:B:299:ASP:H	1.69	0.55
4:C:253:ALA:O	4:C:257:LYS:HB2	2.07	0.55
9:H:247:LYS:HZ2	14:M:154:SER:H	1.51	0.55
9:H:277:ASN:O	9:H:286:TYR:OH	2.24	0.55
10:I:279:PHE:CE2	44:5:1045:C:H1'	2.41	0.55
13:L:176:GLU:HG3	36:i:11:LEU:HD21	1.88	0.55
15:N:6:TYR:OH	44:5:109:A:OP1	2.23	0.55
15:N:129:TYR:C	44:5:318:A:O3'	2.48	0.55
15:N:189:LYS:CA	44:5:1548:C:P	2.94	0.55
26:Y:87:LYS:CE	44:5:375:A:C1'	2.83	0.55
43:q:45:LEU:CD2	44:5:1257:C:O2'	2.35	0.55
43:q:53:MET:H	44:5:1280:C:C4'	2.13	0.55
43:q:83:ASN:ND2	44:5:1228:C:H42	2.04	0.55
44:5:345:G:O2'	45:8:25:G:N3	2.39	0.55
44:5:521:A:C8	44:5:571:U:N3	2.65	0.55
44:5:600:G:N2	44:5:603:A:OP2	2.34	0.55
44:5:1189:C:N4	44:5:1315:U:O3'	2.38	0.55
44:5:1239:C:H2'	44:5:1240:A:H8	1.70	0.55
44:5:1713:G:O2'	44:5:1730:G:N2	2.39	0.55
44:5:2405:C:N4	44:5:2870:C:O2	2.39	0.55
1:z:234:LYS:HD2	44:5:2462:A:N7	2.22	0.55
1:z:258:MET:N	1:z:344:THR:O	2.40	0.55
2:A:48:ILE:HD11	42:p:63:THR:CG2	2.35	0.55
3:B:167:ARG:O	3:B:318:LYS:NZ	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:295:ARG:HD2	44:5:2749:G:H4'	1.88	0.55
5:D:329:ILE:CG2	21:T:31:LEU:HD12	2.37	0.55
6:E:358:ARG:O	6:E:362:GLN:HB2	2.07	0.55
10:I:239:SER:O	10:I:349:LYS:NZ	2.38	0.55
12:s:253:MET:CA	44:5:1247:U:C5	2.78	0.55
15:N:192:LYS:O	15:N:196:THR:OG1	2.24	0.55
21:T:116:ARG:NH1	44:5:1093:A:C4'	2.61	0.55
26:Y:33:ALA:H	26:Y:48:LEU:H	1.54	0.55
35:h:35:LYS:HA	35:h:38:ARG:HB3	1.88	0.55
42:p:16:VAL:CG2	44:5:1927:G:H2'	2.37	0.55
44:5:1101:G:H2'	44:5:1102:A:H8	1.72	0.55
44:5:1222:G:C2	44:5:1286:A:C8	2.94	0.55
44:5:1347:U:C4	44:5:1357:G:O6	2.59	0.55
44:5:1459:C:H2'	44:5:1460:A:H8	1.71	0.55
44:5:1862:U:O2	44:5:1868:G:O6	2.25	0.55
44:5:2427:U:C4	44:5:2602:G:O6	2.59	0.55
1:z:218:THR:N	44:5:2489:C:C2	2.62	0.55
1:z:230:GLN:HE21	44:5:2478:C:H5''	1.71	0.55
3:B:86:VAL:HA	3:B:162:VAL:HG12	1.87	0.55
3:B:303:LYS:NZ	3:B:371:GLN:OE1	2.39	0.55
7:F:317:ARG:NH1	7:F:410:ASN:OD1	2.40	0.55
9:H:223:ARG:HG3	44:5:3187:A:OP1	2.06	0.55
11:J:225:PRO:O	11:J:243:HIS:NE2	2.33	0.55
15:N:143:ARG:O	45:8:143:U:O4'	2.25	0.55
15:N:184:LYS:N	44:5:1548:C:H1'	2.21	0.55
16:O:91:LYS:HA	16:O:96:LYS:HE2	1.88	0.55
21:T:71:SER:HA	21:T:92:ARG:HA	1.88	0.55
27:Z:21:LYS:NZ	27:Z:131:SER:OG	2.38	0.55
30:c:51:LEU:O	30:c:55:GLU:HB2	2.06	0.55
33:f:378:ARG:CD	44:5:622:A:H5'	2.36	0.55
36:i:91:ASN:O	36:i:95:ALA:HB3	2.06	0.55
39:l:29:LEU:HD22	45:8:75:G:N3	2.21	0.55
43:q:55:LYS:CB	44:5:1223:A:O3'	2.47	0.55
44:5:655:C:H2'	44:5:656:A:H8	1.71	0.55
44:5:909:G:N2	44:5:919:U:O2	2.32	0.55
44:5:1682:U:O2	44:5:1686:U:N3	2.34	0.55
44:5:1807:G:H2'	44:5:1808:G:C4	2.42	0.55
44:5:2294:U:N3	44:5:2297:U:OP2	2.36	0.55
1:z:257:ASN:ND2	44:5:2486:A:C4'	2.55	0.55
1:z:264:GLY:N	1:z:300:LYS:O	2.34	0.55
1:z:408:ALA:O	44:5:2449:A:C3'	2.54	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:14:LEU:CB	44:5:3010:U:H5'	2.37	0.55
4:C:119:ARG:NH1	4:C:272:VAL:O	2.38	0.55
9:H:368:ARG:CZ	44:5:2894:C:H5''	2.37	0.55
10:I:273:ARG:HB3	10:I:322:SER:HB2	1.88	0.55
12:s:247:ILE:CA	44:5:1232:C:O5'	1.78	0.55
12:s:268:GLU:CB	44:5:1265:U:C6	2.89	0.55
14:M:244:ALA:O	14:M:250:LYS:NZ	2.40	0.55
15:N:5:LYS:NZ	44:5:323:A:C5'	2.69	0.55
15:N:69:GLY:O	44:5:290:G:N7	2.40	0.55
15:N:82:GLY:CA	44:5:2426:U:H3'	2.37	0.55
15:N:203:ARG:CZ	44:5:903:U:H5''	2.34	0.55
16:O:52:LEU:HA	16:O:55:HIS:HD2	1.72	0.55
20:S:49:HIS:HB2	20:S:51:VAL:HG13	1.86	0.55
28:a:101:GLY:HA2	44:5:1369:A:O3'	2.05	0.55
29:b:118:LYS:O	29:b:122:ALA:CB	2.54	0.55
31:d:115:GLN:HG2	44:5:1475:A:H4'	1.87	0.55
35:h:31:LEU:O	35:h:35:LYS:HB3	2.07	0.55
43:q:57:THR:O	44:5:1286:A:N7	2.40	0.55
44:5:3105:U:OP2	44:5:3128:G:N1	2.25	0.55
44:5:3189:G:N1	44:5:3203:U:C2	2.52	0.55
5:D:530:LYS:HG3	46:7:1:G:H1'	1.88	0.55
7:F:287:VAL:CG1	21:T:141:VAL:HG22	2.37	0.55
7:F:351:TYR:HA	7:F:354:ILE:HD12	1.88	0.55
12:s:219:ILE:N	44:5:1234:G:C6	2.74	0.55
12:s:289:ILE:HA	44:5:1262:G:H1	1.62	0.55
15:N:10:LEU:CB	44:5:77:A:H1'	2.35	0.55
15:N:17:ASP:CG	44:5:75:G:H1	2.15	0.55
15:N:30:TYR:HB2	44:5:317:A:C6	2.41	0.55
15:N:153:ASP:N	45:8:142:C:H6	2.04	0.55
15:N:204:LYS:HZ1	37:j:803:THR:HB	0.76	0.55
18:Q:266:ARG:HD3	44:5:743:C:O2	2.06	0.55
20:S:67:ALA:CB	44:5:519:A:H62	2.19	0.55
32:e:167:LYS:NZ	32:e:168:PHE:O	2.40	0.55
32:e:189:ILE:HG12	44:5:640:U:C5	2.42	0.55
37:j:824:GLY:O	37:j:827:ALA:N	2.39	0.55
43:q:8:LYS:NZ	43:q:58:MET:O	2.40	0.55
43:q:104:ARG:CD	44:5:1232:C:O2'	2.31	0.55
44:5:532:A:H2	44:5:560:G:C2	2.24	0.55
44:5:3308:C:H3'	44:5:3309:G:H21	1.72	0.55
2:A:200:ARG:HB3	44:5:2185:G:OP1	2.07	0.55
3:B:355:SER:O	3:B:357:LYS:NZ	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:528:GLU:OE2	46:7:121:U:O2	2.25	0.55
8:G:205:GLN:HB3	8:G:208:ARG:HH12	1.72	0.55
13:L:15:ARG:HB2	44:5:97:U:OP1	2.07	0.55
15:N:17:ASP:OD2	44:5:69:C:N4	2.37	0.55
15:N:41:ARG:N	44:5:114:A:C8	2.75	0.55
15:N:127:TYR:HB2	44:5:271:C:O4'	2.04	0.55
15:N:187:ARG:C	44:5:1548:C:OP2	2.50	0.55
17:P:97:ASN:OD1	44:5:382:U:H1'	2.07	0.55
18:Q:168:PRO:HB2	44:5:729:C:OP1	2.06	0.55
21:T:84:TYR:CD2	29:b:90:PRO:HD3	2.41	0.55
24:W:149:GLU:HB2	24:W:158:ILE:HB	1.88	0.55
36:i:62:ARG:CZ	44:5:2503:G:N2	2.68	0.55
43:q:83:ASN:HB2	44:5:1228:C:O2	2.06	0.55
44:5:371:G:N1	44:5:374:A:OP2	2.27	0.55
44:5:528:U:C2	44:5:564:G:C6	2.95	0.55
44:5:1370:G:H2'	44:5:1371:G:H8	1.72	0.55
44:5:2150:G:H1	44:5:2186:U:H3	1.55	0.55
44:5:2993:G:H2'	44:5:3142:A:H61	1.70	0.55
1:z:217:GLU:HA	44:5:2470:C:C1'	2.33	0.55
1:z:410:ARG:N	44:5:2450:G:N7	2.54	0.55
2:A:23:ARG:HB2	44:5:2175:U:H3	1.72	0.55
5:D:305:ASN:ND2	44:5:1083:G:H1'	2.22	0.55
5:D:540:GLU:O	5:D:544:ALA:CB	2.53	0.55
11:J:223:ASN:OD1	11:J:223:ASN:N	2.39	0.55
13:L:159:VAL:HA	28:a:205:ILE:HD11	1.88	0.55
13:L:171:ARG:HA	13:L:174:ARG:HB3	1.88	0.55
15:N:179:LYS:HA	44:5:52:A:N1	2.22	0.55
16:O:20:ALA:O	16:O:24:ALA:HB2	2.07	0.55
18:Q:303:ARG:CZ	44:5:780:A:H62	2.20	0.55
27:Z:102:GLN:OE1	27:Z:105:GLN:NE2	2.40	0.55
27:Z:133:LEU:HD23	34:g:96:GLU:OE1	2.07	0.55
28:a:145:GLN:NE2	44:5:70:A:OP1	2.40	0.55
29:b:99:LYS:HE3	44:5:2721:A:H4'	1.89	0.55
31:d:69:GLU:HG3	31:d:167:VAL:HG21	1.88	0.55
34:g:23:VAL:HB	34:g:31:ARG:HB3	1.89	0.55
38:k:20:VAL:HG22	38:k:47:GLY:HA2	1.87	0.55
44:5:39:A:N6	44:5:42:C:OP2	2.40	0.55
44:5:124:U:O2'	44:5:150:A:OP1	2.24	0.55
44:5:507:U:O2	44:5:584:G:C2	2.60	0.55
44:5:538:G:N1	44:5:553:U:C2	2.54	0.55
44:5:1628:C:N4	44:5:1815:U:O4	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:2964:G:N2	44:5:2967:A:OP2	2.37	0.55
2:A:32:LEU:HD21	2:A:37:ARG:HB3	1.89	0.55
5:D:274:SER:HA	46:7:11:A:H61	1.72	0.55
7:F:370:ARG:HG3	7:F:413:TRP:CE2	2.42	0.55
7:F:406:LYS:NZ	44:5:1100:U:P	2.79	0.55
9:H:269:ARG:NH1	9:H:273:SER:OG	2.40	0.55
12:s:219:ILE:CA	44:5:1234:G:O6	2.55	0.55
13:L:66:ASN:CG	44:5:73:C:C5	2.85	0.55
15:N:30:TYR:OH	44:5:267:G:OP2	2.25	0.55
15:N:190:THR:O	44:5:1549:U:H4'	1.96	0.55
15:N:203:ARG:HB3	37:j:816:GLN:HG3	1.89	0.55
16:O:42:ASN:ND2	16:O:136:THR:O	2.35	0.55
16:O:177:LYS:O	16:O:181:ALA:HB2	2.07	0.55
21:T:82:ASN:ND2	29:b:86:GLY:O	2.40	0.55
21:T:116:ARG:NH2	44:5:1096:U:H6	2.05	0.55
25:X:225:ASN:ND2	44:5:1608:C:OP1	2.39	0.55
33:f:395:ASN:HD21	44:5:1326:A:H2	1.54	0.55
37:j:810:ARG:HH11	37:j:822:SER:HA	1.71	0.55
43:q:45:LEU:HD23	44:5:1257:C:O3'	2.07	0.55
43:q:46:ARG:NH1	44:5:1257:C:C5	2.68	0.55
44:5:1378:U:H2'	44:5:1379:G:C8	2.42	0.55
44:5:2160:G:H2'	44:5:2161:G:H8	1.72	0.55
44:5:3226:A:H3'	44:5:3227:A:H8	1.72	0.55
1:z:394:GLN:OE1	44:5:2446:U:O5'	2.25	0.54
7:F:290:GLN:NE2	21:T:136:ARG:HB2	2.21	0.54
12:s:289:ILE:C	44:5:1277:C:H2'	2.32	0.54
12:s:290:GLU:CB	44:5:1278:A:C5'	2.81	0.54
15:N:137:PRO:O	15:N:143:ARG:NH1	2.40	0.54
15:N:185:ALA:C	44:5:1548:C:O4'	2.50	0.54
19:R:155:ARG:HH21	44:5:1873:U:H5''	1.71	0.54
24:W:186:LYS:HG2	24:W:188:ARG:HH21	1.72	0.54
26:Y:11:ASP:HB3	26:Y:14:LYS:HB2	1.89	0.54
26:Y:89:LYS:HD3	44:5:375:A:P	2.46	0.54
33:f:360:GLN:O	44:5:583:G:H4'	2.06	0.54
33:f:363:LEU:O	44:5:584:G:C5'	2.55	0.54
43:q:46:ARG:NH1	44:5:1257:C:H6	2.02	0.54
43:q:81:LYS:CA	44:5:1283:C:C6	2.56	0.54
44:5:503:C:H3'	44:5:504:A:H8	1.72	0.54
44:5:951:A:OP2	44:5:1367:G:N1	2.40	0.54
44:5:1310:G:H1'	44:5:2380:U:H4'	1.88	0.54
44:5:2248:C:H4'	44:5:2272:G:C8	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:2423:U:H2'	44:5:2424:A:H8	1.72	0.54
1:z:403:SER:C	44:5:2461:A:N3	2.61	0.54
3:B:383:LEU:HD23	44:5:3369:G:N2	2.22	0.54
4:C:327:LEU:HG	7:F:375:ASP:HA	1.88	0.54
7:F:286:TYR:CA	21:T:140:ILE:CB	2.84	0.54
11:J:151:ARG:NE	41:o:106:PHE:H	2.01	0.54
14:M:173:LYS:HD3	14:M:213:VAL:HB	1.89	0.54
15:N:45:PRO:HG2	44:5:112:U:C2	2.42	0.54
15:N:131:GLU:CD	44:5:267:G:HO2'	2.00	0.54
16:O:18:ARG:NH2	44:5:1318:A:H2'	2.22	0.54
16:O:117:ARG:NH1	44:5:3180:A:O2'	2.39	0.54
19:R:256:HIS:CG	44:5:1718:G:H5''	2.42	0.54
20:S:74:ASN:HA	20:S:95:ARG:HA	1.88	0.54
32:e:163:LYS:HD3	44:5:1162:U:O2'	2.08	0.54
32:e:176:TYR:HB3	32:e:178:ARG:H	1.71	0.54
33:f:360:GLN:CG	44:5:582:G:N2	2.67	0.54
37:j:850:MET:HB3	37:j:853:LEU:HB2	1.89	0.54
43:q:69:ASP:OD1	43:q:69:ASP:N	2.34	0.54
44:5:34:A:H8	44:5:50:U:C4	2.24	0.54
44:5:1169:A:OP2	44:5:1329:U:N3	2.38	0.54
44:5:1197:A:N7	46:7:86:U:C2	2.75	0.54
44:5:1532:C:O2'	44:5:1799:A:N3	2.35	0.54
44:5:1717:U:C4	44:5:1727:G:O6	2.61	0.54
1:z:223:PHE:CD2	44:5:2476:C:C3'	2.90	0.54
1:z:344:THR:C	44:5:2466:G:OP1	2.50	0.54
4:C:73:ARG:HD2	44:5:804:C:O2	2.07	0.54
5:D:522:LYS:HA	5:D:525:TYR:HB2	1.89	0.54
7:F:289:ALA:CA	21:T:137:GLU:CA	2.83	0.54
8:G:331:PRO:O	8:G:335:LYS:CB	2.55	0.54
11:J:189:ALA:CB	44:5:2671:A:O2'	2.56	0.54
12:s:273:ALA:HB3	44:5:1264:G:C1'	2.34	0.54
13:L:127:PRO:HD2	13:L:131:LYS:H	1.72	0.54
15:N:6:TYR:N	44:5:109:A:C6	2.75	0.54
15:N:49:ARG:N	44:5:321:C:H4'	2.23	0.54
15:N:138:GLN:HG3	44:5:145:G:H5''	1.90	0.54
19:R:137:ALA:N	44:5:1471:U:C1'	2.70	0.54
20:S:12:ARG:HE	20:S:57:GLU:HB3	1.72	0.54
23:V:195:LYS:HB2	23:V:198:LEU:HD13	1.89	0.54
33:f:334:TYR:HA	33:f:346:SER:HA	1.88	0.54
38:k:42:LYS:HA	38:k:54:LEU:O	2.07	0.54
42:p:4:ARG:NH1	44:5:839:C:N4	2.55	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:q:38:MET:CA	44:5:1231:A:O2'	2.38	0.54
43:q:40:GLU:CG	44:5:1261:G:O2'	2.38	0.54
43:q:48:ARG:NH1	43:q:91:GLU:OE2	2.40	0.54
43:q:100:ILE:CG2	44:5:1259:A:C2	2.80	0.54
44:5:160:G:C6	44:5:261:U:N3	2.76	0.54
44:5:822:G:C2	44:5:903:U:O2	2.61	0.54
44:5:1594:A:O2'	44:5:1614:C:O2	2.25	0.54
44:5:1721:U:N3	44:5:1724:U:OP2	2.29	0.54
44:5:2446:U:H1'	44:5:2501:U:H3	1.71	0.54
46:7:64:A:H5'	46:7:65:G:H5''	1.89	0.54
1:z:217:GLU:HA	44:5:2470:C:H1'	1.86	0.54
1:z:404:SER:HB3	44:5:2488:A:H5''	1.89	0.54
4:C:3:ARG:O	4:C:5:GLN:NE2	2.39	0.54
6:E:332:LYS:HE2	44:5:616:G:H5''	1.89	0.54
7:F:317:ARG:CD	44:5:1101:G:H5''	2.37	0.54
9:H:362:GLN:HE22	9:H:380:TYR:HA	1.72	0.54
10:I:207:TYR:CD1	44:5:2647:A:H1'	2.43	0.54
10:I:394:ASN:OD1	46:7:64:A:N7	2.40	0.54
11:J:153:ASN:C	41:o:103:ALA:HB1	2.32	0.54
12:s:277:GLY:HA3	44:5:1256:G:C4	2.36	0.54
15:N:58:GLY:N	44:5:149:U:O5'	2.40	0.54
15:N:85:THR:OG1	44:5:2424:A:H8	1.91	0.54
15:N:172:ARG:N	44:5:1546:A:H1'	2.23	0.54
16:O:14:HIS:CE1	20:S:167:ARG:NH1	2.75	0.54
16:O:128:ARG:NH1	44:5:1317:A:H4'	2.23	0.54
20:S:145:THR:O	44:5:534:U:O4	2.24	0.54
26:Y:46:LYS:HE3	44:5:224:C:H5''	1.89	0.54
43:q:36:GLN:NE2	44:5:1246:G:C6	2.75	0.54
43:q:212:UNK:CB	48:y:12:UNK:CB	2.84	0.54
44:5:1223:A:N6	44:5:1287:A:O2'	2.41	0.54
44:5:2197:C:C2	44:5:2244:A:N6	2.68	0.54
44:5:2744:U:O4	44:5:2749:G:O6	2.25	0.54
44:5:3153:U:O2'	44:5:3157:U:N3	2.32	0.54
44:5:3322:A:H2'	44:5:3323:A:C8	2.43	0.54
9:H:216:VAL:HG12	9:H:229:GLY:HA2	1.90	0.54
15:N:35:VAL:HG22	44:5:270:U:C5	2.43	0.54
17:P:119:VAL:O	44:5:412:G:O2'	2.25	0.54
18:Q:165:THR:OG1	18:Q:171:LYS:NZ	2.35	0.54
18:Q:183:ASN:O	18:Q:269:ARG:NH2	2.40	0.54
21:T:116:ARG:HH22	44:5:1096:U:P	2.29	0.54
26:Y:57:LEU:O	26:Y:105:VAL:N	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Y:112:ASP:CA	45:8:84:C:C2	2.84	0.54
32:e:254:LYS:NZ	32:e:255:ASN:OD1	2.40	0.54
34:g:92:ALA:O	34:g:96:GLU:HB2	2.08	0.54
44:5:378:A:H5''	44:5:379:C:H5	1.73	0.54
44:5:1178:G:N3	44:5:1328:C:O2'	2.39	0.54
44:5:1596:C:OP2	44:5:1606:U:N3	2.37	0.54
44:5:1820:U:O2	44:5:1822:C:N4	2.40	0.54
44:5:2457:G:O2'	44:5:2486:A:N6	2.39	0.54
44:5:2901:G:O2'	44:5:3024:A:N1	2.40	0.54
46:7:67:G:O6	46:7:111:U:O4	2.25	0.54
1:z:228:GLU:CD	44:5:2479:C:P	2.90	0.54
1:z:257:ASN:HA	44:5:2467:G:C8	2.18	0.54
1:z:258:MET:O	44:5:2479:C:H3'	2.08	0.54
2:A:110:GLY:N	2:A:136:ILE:O	2.40	0.54
3:B:216:ASP:HB2	3:B:339:ARG:HB3	1.88	0.54
5:D:269:SER:H	5:D:272:TYR:HB3	1.73	0.54
9:H:264:HIS:O	9:H:268:LEU:CB	2.50	0.54
10:I:199:ASN:CB	44:5:1126:G:OP1	2.56	0.54
10:I:229:ASP:HA	10:I:356:TRP:HE1	1.73	0.54
10:I:247:SER:O	10:I:251:GLU:CB	2.49	0.54
12:s:250:ALA:O	44:5:1246:G:C8	2.61	0.54
14:M:204:ARG:HH21	14:M:227:THR:H	1.55	0.54
15:N:72:LYS:N	44:5:291:C:C6	2.74	0.54
19:R:314:GLU:HA	19:R:317:ASP:H	1.72	0.54
21:T:117:ALA:O	21:T:121:ALA:CB	2.53	0.54
25:X:147:ARG:NH1	44:5:1560:G:O6	2.40	0.54
28:a:166:ASP:O	28:a:170:GLN:CB	2.56	0.54
35:h:95:PHE:HB2	44:5:135:C:C2'	2.37	0.54
36:i:76:ARG:O	44:5:294:U:C4'	2.55	0.54
40:m:93:LYS:HA	40:m:105:PRO:HD3	1.90	0.54
41:o:8:ARG:NH1	44:5:2713:U:O2'	2.40	0.54
43:q:47:GLY:N	44:5:1258:U:OP1	2.40	0.54
44:5:2296:A:O2'	44:5:2928:C:O2	2.20	0.54
44:5:2841:G:H21	44:5:2847:A:N6	2.02	0.54
1:z:214:TYR:N	44:5:2489:C:C5	2.75	0.54
1:z:368:GLU:CD	44:5:2469:G:H8	2.16	0.54
2:A:179:LEU:HD21	2:A:185:ALA:HB2	1.89	0.54
4:C:188:ARG:HG3	4:C:190:GLY:H	1.73	0.54
5:D:543:ALA:O	5:D:547:ALA:CB	2.55	0.54
7:F:329:VAL:O	21:T:135:PRO:HD3	2.08	0.54
8:G:259:ASN:OD1	8:G:262:ARG:NH2	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:H:242:ASP:HB3	44:5:3186:A:C8	2.42	0.54
12:s:254:ARG:HA	44:5:1246:G:O3'	2.06	0.54
14:M:162:ARG:NH2	44:5:3206:C:N3	2.55	0.54
15:N:129:TYR:CD2	44:5:317:A:C2	2.94	0.54
15:N:139:HIS:CD2	44:5:145:G:H4'	2.43	0.54
16:O:17:GLY:HA2	16:O:87:MET:HE1	1.89	0.54
16:O:32:LYS:NZ	44:5:3173:G:OP2	2.37	0.54
19:R:251:ASP:O	19:R:255:TYR:CB	2.56	0.54
26:Y:76:LEU:HB2	45:8:74:U:C5	2.42	0.54
28:a:148:HIS:CE1	44:5:71:A:H5''	2.43	0.54
36:i:56:ARG:CZ	44:5:2505:U:H5''	2.38	0.54
37:j:834:ASN:CB	44:5:53:G:OP1	2.56	0.54
44:5:39:A:O2'	44:5:94:G:N2	2.39	0.54
44:5:288:C:H2'	44:5:289:A:C8	2.42	0.54
44:5:937:G:N3	44:5:963:G:O2'	2.40	0.54
44:5:1156:C:H1'	46:7:86:U:O4	2.08	0.54
44:5:2768:U:H2'	44:5:2769:A:C8	2.42	0.54
1:z:285:LEU:HD21	1:z:306:ILE:HG12	1.89	0.54
1:z:401:VAL:CG1	44:5:2461:A:H4'	2.38	0.54
5:D:550:ILE:HA	5:D:554:ALA:HB3	1.90	0.54
6:E:246:ARG:NE	44:5:608:A:N3	2.55	0.54
6:E:246:ARG:CG	44:5:607:A:C5'	2.72	0.54
12:s:266:THR:CA	44:5:1266:G:O6	2.56	0.54
14:M:189:ASP:HA	20:S:143:PHE:CE1	2.43	0.54
15:N:47:LYS:H	44:5:321:C:H6	1.54	0.54
15:N:49:ARG:HH12	15:N:54:LYS:HE2	1.72	0.54
15:N:128:LYS:O	44:5:270:U:H4'	2.08	0.54
25:X:231:ASN:OD1	25:X:232:GLY:N	2.40	0.54
28:a:216:GLU:O	28:a:220:ARG:HB2	2.08	0.54
31:d:71:THR:HG23	31:d:159:ALA:HB1	1.90	0.54
34:g:10:ARG:CD	44:5:1489:A:H5'	2.35	0.54
34:g:13:TYR:HB3	44:5:1589:A:C2	2.43	0.54
35:h:83:LYS:NZ	37:j:852:TYR:HE1	2.05	0.54
36:i:44:VAL:O	36:i:48:ALA:HB2	2.08	0.54
43:q:41:VAL:HG12	44:5:1258:U:O2	2.07	0.54
43:q:60:ARG:NH2	44:5:1284:C:O2	2.39	0.54
44:5:753:C:H2'	44:5:754:G:H8	1.73	0.54
44:5:832:G:O6	44:5:862:U:O4	2.26	0.54
44:5:1244:A:O2'	44:5:1248:C:N4	2.34	0.54
47:x:6:UNK:CA	48:y:12:UNK:N	2.07	0.54
1:z:371:GLU:OE2	44:5:2468:A:H2'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:12:ALA:HB2	44:5:2164:A:O2'	2.08	0.54
2:A:242:ARG:HE	44:5:2241:U:H4'	1.73	0.54
3:B:3:HIS:NE2	44:5:2938:G:C8	2.76	0.54
3:B:158:VAL:HG12	3:B:183:LEU:HD13	1.89	0.54
3:B:228:GLY:O	3:B:232:ARG:CB	2.56	0.54
3:B:261:MET:CA	16:O:64:PHE:HB2	2.17	0.54
4:C:53:SER:HB2	45:8:26:U:O3'	2.08	0.54
4:C:188:ARG:NH1	44:5:1382:G:P	2.78	0.54
4:C:195:ARG:NH1	44:5:339:C:P	2.81	0.54
6:E:304:ASN:HD21	44:5:500:C:H4'	1.72	0.54
8:G:215:LYS:HG3	44:5:2523:A:C5	2.43	0.54
11:J:255:LYS:HA	11:J:260:ALA:HB3	1.90	0.54
12:s:191:LYS:CB	44:5:1234:G:O2'	2.56	0.54
12:s:279:ARG:H	43:q:43:LYS:CG	2.07	0.54
13:L:27:ASP:OD1	13:L:27:ASP:N	2.36	0.54
13:L:49:ARG:HG2	35:h:116:TYR:CE2	2.41	0.54
16:O:25:LYS:HE2	44:5:1176:C:OP1	2.07	0.54
23:V:174:ARG:HD3	44:5:3042:U:H5''	1.90	0.54
23:V:256:PRO:O	23:V:260:SER:N	2.41	0.54
24:W:202:LYS:O	24:W:205:LYS:NZ	2.29	0.54
25:X:161:ALA:C	35:h:77:PRO:HG3	2.33	0.54
25:X:224:VAL:HG22	25:X:238:VAL:HG22	1.89	0.54
25:X:255:TYR:CE1	35:h:33:VAL:CG1	2.80	0.54
30:c:23:TYR:HA	30:c:93:LEU:H	1.73	0.54
40:m:122:ARG:NH1	40:m:123:PRO:O	2.40	0.54
41:o:17:CYS:HB3	41:o:21:THR:HG21	1.88	0.54
41:o:41:ARG:NH1	44:5:284:A:N9	2.56	0.54
43:q:37:GLN:CD	44:5:1231:A:H8	2.15	0.54
43:q:40:GLU:HG3	44:5:1261:G:C2'	2.16	0.54
44:5:806:A:N7	44:5:935:U:O2	2.40	0.54
44:5:993:G:N1	44:5:1056:U:O4	2.39	0.54
44:5:1024:G:H21	44:5:1027:A:H8	1.55	0.54
44:5:1379:G:O6	44:5:1427:U:N3	2.38	0.54
44:5:2724:U:O2	44:5:2732:G:N2	2.30	0.54
47:x:9:UNK:O	48:y:4:UNK:N	2.41	0.54
1:z:213:LYS:CD	44:5:2489:C:C6	2.34	0.54
3:B:66:LYS:HZ1	23:V:140:PHE:N	1.96	0.54
4:C:192:GLY:HA2	4:C:195:ARG:HB2	1.90	0.54
6:E:246:ARG:CA	44:5:607:A:P	2.96	0.54
10:I:277:HIS:ND1	44:5:1044:U:H1'	2.23	0.54
12:s:153:ARG:N	44:5:1238:C:O2'	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:19:LEU:CB	44:5:66:A:O3'	2.42	0.54
16:O:130:LYS:HB3	44:5:1316:C:OP2	2.08	0.54
19:R:253:HIS:CD2	44:5:1716:U:N3	2.76	0.54
25:X:164:ALA:CB	35:h:66:VAL:HG11	2.38	0.54
26:Y:89:LYS:CD	44:5:375:A:OP2	2.51	0.54
26:Y:113:LYS:NZ	45:8:84:C:C1'	2.64	0.54
32:e:190:ASP:HB2	44:5:638:C:C5'	2.38	0.54
33:f:395:ASN:OD1	44:5:1326:A:N3	2.42	0.54
34:g:4:ARG:NH2	44:5:1481:A:N3	2.53	0.54
35:h:93:THR:O	35:h:97:ALA:CB	2.56	0.54
43:q:30:VAL:C	44:5:1229:G:N1	2.65	0.54
44:5:161:G:H2'	44:5:162:G:C8	2.43	0.54
44:5:1591:G:H3'	44:5:1592:G:H8	1.72	0.54
44:5:1620:U:H3	44:5:1825:G:H1	1.55	0.54
44:5:1903:U:N3	44:5:1906:G:OP2	2.29	0.54
44:5:2112:U:O2	44:5:2113:A:N6	2.41	0.54
1:z:233:LEU:HD21	44:5:2492:C:O2	2.06	0.53
1:z:398:SER:CA	44:5:2496:C:N4	2.31	0.53
4:C:120:TYR:CZ	44:5:674:G:H5''	2.42	0.53
4:C:300:ARG:HG2	18:Q:164:ARG:C	2.34	0.53
5:D:270:SER:HB3	46:7:67:G:H5'	1.89	0.53
5:D:522:LYS:O	5:D:526:ALA:HB2	2.08	0.53
8:G:222:VAL:O	8:G:226:LYS:HB3	2.07	0.53
10:I:304:TRP:CZ2	44:5:2646:C:C4'	2.82	0.53
11:J:249:ASP:O	11:J:253:TRP:CB	2.51	0.53
12:s:262:LEU:C	44:5:1266:G:N3	2.58	0.53
12:s:270:LEU:O	43:q:39:HIS:CD2	2.60	0.53
13:L:30:GLY:O	13:L:34:SER:CB	2.55	0.53
13:L:127:PRO:CA	35:h:114:ARG:NH2	2.29	0.53
15:N:41:ARG:HB3	44:5:114:A:C8	2.44	0.53
15:N:70:ASN:OD1	44:5:277:G:C2	2.61	0.53
15:N:140:LYS:HB3	44:5:143:G:H21	1.71	0.53
18:Q:134:GLN:HE22	44:5:1364:C:HO2'	1.37	0.53
19:R:269:HIS:CE1	19:R:271:ARG:HB3	2.43	0.53
19:R:281:LYS:NZ	44:5:2093:A:O5'	2.40	0.53
29:b:111:HIS:CG	44:5:1075:A:N7	2.75	0.53
29:b:111:HIS:NE2	44:5:1075:A:C5	2.76	0.53
34:g:102:LYS:NZ	44:5:2552:C:OP2	2.36	0.53
39:l:23:LEU:HB3	39:l:25:GLN:HE21	1.73	0.53
43:q:6:GLU:HG2	44:5:1219:C:H41	1.73	0.53
43:q:30:VAL:N	44:5:1281:G:H2'	2.15	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:q:50:VAL:HA	44:5:1258:U:H3'	0.56	0.53
43:q:51:VAL:HG22	44:5:1280:C:C4'	2.37	0.53
44:5:1101:G:H2'	44:5:1102:A:C8	2.43	0.53
44:5:1408:G:OP1	44:5:1431:G:N2	2.42	0.53
44:5:1544:G:O6	44:5:1549:U:O4	2.26	0.53
44:5:1958:U:O2'	44:5:2079:G:N2	2.32	0.53
44:5:3109:G:N1	44:5:3125:U:C2	2.64	0.53
46:7:4:U:H2'	46:7:5:G:H8	1.72	0.53
48:y:25:UNK:O	48:y:29:UNK:CB	2.56	0.53
1:z:223:PHE:CE2	44:5:2477:G:O4'	2.61	0.53
3:B:382:THR:OG1	3:B:383:LEU:N	2.42	0.53
4:C:114:ASN:CG	44:5:680:G:OP1	2.51	0.53
6:E:267:LEU:HD21	6:E:309:ILE:HD12	1.89	0.53
6:E:354:ILE:CD1	44:5:3268:A:H8	2.17	0.53
6:E:382:TYR:CZ	14:M:264:PHE:CD1	2.84	0.53
7:F:286:TYR:CZ	21:T:138:SER:HB2	2.44	0.53
8:G:224:ARG:NE	45:8:152:G:OP2	2.41	0.53
9:H:244:THR:OG1	14:M:159:SER:CB	2.56	0.53
10:I:380:ALA:CB	44:5:1010:G:H1'	2.35	0.53
12:s:271:GLY:N	43:q:40:GLU:OE2	2.41	0.53
13:L:28:GLN:O	13:L:32:LYS:HB2	2.08	0.53
13:L:49:ARG:HB3	35:h:116:TYR:OH	2.08	0.53
13:L:138:VAL:N	35:h:118:ILE:O	2.35	0.53
15:N:74:PRO:O	44:5:2432:A:C5	2.61	0.53
15:N:172:ARG:HE	44:5:1547:G:C5'	2.07	0.53
15:N:187:ARG:N	44:5:1548:C:OP2	2.40	0.53
15:N:200:TRP:CE3	37:j:813:PHE:HZ	2.25	0.53
21:T:37:GLY:H	21:T:64:VAL:HB	1.72	0.53
27:Z:3:PHE:CD1	30:c:62:LEU:HB3	2.43	0.53
27:Z:72:LYS:HA	27:Z:100:PHE:HZ	1.73	0.53
33:f:394:GLY:N	44:5:1327:C:O3'	2.40	0.53
36:i:31:GLY:HA2	44:5:297:G:O2'	2.08	0.53
43:q:34:SER:OG	44:5:1230:G:C4	2.59	0.53
44:5:160:G:H2'	44:5:161:G:C8	2.44	0.53
44:5:440:A:H5'	44:5:490:C:H41	1.73	0.53
44:5:664:U:O4	44:5:798:G:O6	2.27	0.53
44:5:881:C:H1'	44:5:1850:A:H2'	1.90	0.53
44:5:3162:C:H2'	44:5:3163:A:H8	1.73	0.53
44:5:3169:U:O2	44:5:3282:U:N3	2.41	0.53
45:8:48:A:O2'	45:8:51:G:N2	2.41	0.53
45:8:73:U:H2'	45:8:74:U:C2	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:7:29:C:O2'	46:7:51:A:N1	2.31	0.53
2:A:230:VAL:HG12	2:A:232:GLY:H	1.73	0.53
3:B:31:ALA:HB2	44:5:3136:G:OP1	2.08	0.53
3:B:262:TRP:CZ2	16:O:66:LYS:HG3	2.43	0.53
4:C:188:ARG:HD2	44:5:1381:A:OP2	2.07	0.53
9:H:210:ILE:O	9:H:252:LEU:HA	2.07	0.53
10:I:240:ASN:HD22	10:I:347:GLN:HB3	1.73	0.53
11:J:239:VAL:HG13	11:J:243:HIS:HB3	1.90	0.53
12:s:189:GLU:C	44:5:1234:G:C3'	2.80	0.53
12:s:253:MET:CA	44:5:1246:G:H3'	2.23	0.53
13:L:176:GLU:HG3	36:i:11:LEU:HD23	1.90	0.53
15:N:138:GLN:O	44:5:144:A:O2'	2.25	0.53
15:N:180:PHE:CE2	44:5:30:G:N2	2.67	0.53
15:N:190:THR:HG22	44:5:1548:C:H5	1.23	0.53
21:T:71:SER:OG	44:5:2736:A:H4'	2.08	0.53
26:Y:87:LYS:HD3	44:5:375:A:O4'	2.09	0.53
30:c:16:LEU:O	30:c:20:SER:OG	2.26	0.53
31:d:135:ARG:HG2	31:d:147:LEU:HD22	1.89	0.53
33:f:336:ARG:HD3	44:5:1177:G:H5''	1.90	0.53
33:f:420:LEU:O	33:f:423:SER:OG	2.25	0.53
34:g:52:GLN:OE1	44:5:1639:C:O5'	2.25	0.53
43:q:81:LYS:CA	44:5:1283:C:H6	1.99	0.53
44:5:87:U:H2'	44:5:88:A:C8	2.44	0.53
44:5:154:U:OP1	44:5:158:G:O2'	2.25	0.53
44:5:342:A:O2'	44:5:368:G:N7	2.33	0.53
44:5:510:G:H1	44:5:581:U:H3	1.55	0.53
44:5:838:G:O6	44:5:855:U:O4	2.26	0.53
44:5:1751:G:O2'	44:5:1752:A:O4'	2.26	0.53
44:5:2260:U:H3'	44:5:2261:G:C8	2.43	0.53
44:5:2423:U:H2'	44:5:2424:A:C8	2.43	0.53
44:5:2424:A:OP2	44:5:2605:G:N2	2.40	0.53
44:5:2444:C:H2'	44:5:2503:G:H22	1.72	0.53
2:A:118:GLU:HG3	2:A:125:ALA:HB3	1.91	0.53
2:A:215:ASN:HD21	44:5:2968:G:H3'	1.74	0.53
4:C:183:LYS:CB	44:5:1386:A:N3	2.70	0.53
5:D:499:ILE:O	5:D:503:ALA:CB	2.56	0.53
9:H:204:ILE:HD11	14:M:190:GLN:HE22	1.73	0.53
10:I:391:LEU:HB2	46:7:64:A:O4'	2.08	0.53
12:s:222:LEU:O	44:5:1232:C:O2	2.26	0.53
13:L:61:PRO:HD3	44:5:75:G:H4'	1.89	0.53
13:L:124:ILE:O	35:h:116:TYR:HA	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:45:PRO:CG	44:5:112:U:C2	2.92	0.53
15:N:86:ASN:CG	44:5:2425:G:P	2.92	0.53
15:N:86:ASN:HD21	44:5:2425:G:P	2.31	0.53
17:P:121:GLN:HG3	45:8:13:A:O2'	2.07	0.53
19:R:263:LYS:NZ	44:5:840:C:O4'	2.42	0.53
21:T:116:ARG:CD	44:5:1093:A:H5'	2.10	0.53
23:V:144:LEU:HD23	23:V:182:SER:HB3	1.91	0.53
30:c:33:SER:HA	30:c:36:GLN:HB2	1.90	0.53
33:f:361:PHE:O	33:f:365:LYS:NZ	2.41	0.53
34:g:41:ARG:NH1	44:5:1739:U:O2	2.41	0.53
44:5:300:G:H2'	44:5:301:G:H8	1.74	0.53
44:5:490:C:N4	44:5:493:U:O4	2.40	0.53
44:5:512:U:O2	44:5:579:G:O6	2.26	0.53
44:5:533:A:N7	44:5:555:U:O4	2.42	0.53
44:5:1054:A:H5''	44:5:2637:A:H61	1.73	0.53
44:5:1133:A:O2'	44:5:2618:G:O6	2.25	0.53
44:5:1696:A:H2'	44:5:1697:A:C8	2.44	0.53
46:7:81:U:O4	46:7:99:G:O6	2.26	0.53
1:z:399:LEU:C	44:5:2451:G:C2	2.44	0.53
3:B:250:ALA:HB3	44:5:2880:U:O2	2.08	0.53
3:B:255:TRP:CE2	44:5:2941:A:N7	2.77	0.53
5:D:271:ALA:O	5:D:275:ARG:HB3	2.07	0.53
5:D:354:ASN:HA	5:D:418:ARG:HD2	1.90	0.53
6:E:246:ARG:CD	44:5:608:A:C4	2.91	0.53
6:E:358:ARG:HH12	44:5:3268:A:H1'	1.73	0.53
6:E:389:LEU:HD12	33:f:324:ARG:HE	1.73	0.53
10:I:240:ASN:ND2	10:I:347:GLN:OE1	2.42	0.53
10:I:279:PHE:HZ	44:5:1006:A:C2	2.26	0.53
11:J:111:ASN:ND2	11:J:113:SER:OG	2.41	0.53
11:J:199:GLU:HA	11:J:213:ILE:HD12	1.91	0.53
12:s:236:LYS:HA	44:5:1255:C:O2'	2.08	0.53
12:s:271:GLY:HA2	43:q:40:GLU:OE2	2.09	0.53
12:s:294:ALA:CB	44:5:1276:U:H5''	2.09	0.53
15:N:68:ARG:NH2	44:5:288:C:OP2	2.30	0.53
15:N:185:ALA:HB3	44:5:1548:C:C5'	2.38	0.53
15:N:188:ARG:CZ	44:5:1545:A:O4'	2.28	0.53
18:Q:307:LYS:HE2	28:a:136:LYS:H	1.73	0.53
19:R:193:HIS:HE1	44:5:1860:G:H1'	1.74	0.53
31:d:68:ARG:NH2	31:d:101:HIS:O	2.39	0.53
32:e:175:ARG:HH22	44:5:2362:C:C4'	2.22	0.53
44:5:909:G:O6	44:5:919:U:O4	2.26	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:971:G:HO2'	44:5:1371:G:HO2'	1.56	0.53
44:5:1939:G:N1	44:5:2109:U:C2	2.59	0.53
44:5:2108:C:H1'	44:5:3344:A:C8	2.44	0.53
44:5:2837:A:O2'	44:5:2850:G:N2	2.34	0.53
44:5:3229:G:N1	44:5:3258:U:N3	2.56	0.53
45:8:40:A:H61	45:8:104:A:H5'	1.72	0.53
1:z:223:PHE:CE1	44:5:2469:G:N1	2.71	0.53
1:z:228:GLU:HG3	44:5:2478:C:H6	1.73	0.53
3:B:68:HIS:O	3:B:70:ARG:NE	2.29	0.53
4:C:343:LYS:CE	44:5:516:A:OP1	2.56	0.53
5:D:272:TYR:O	5:D:275:ARG:C	2.52	0.53
8:G:206:PRO:O	8:G:208:ARG:NH1	2.42	0.53
8:G:236:PRO:HD2	8:G:239:ILE:HD12	1.91	0.53
10:I:273:ARG:NE	44:5:1043:C:H5'	2.20	0.53
10:I:277:HIS:NE2	44:5:1007:U:O2'	2.41	0.53
12:s:213:SER:H	44:5:1245:A:P	2.31	0.53
13:L:154:VAL:HG22	13:L:157:ARG:HH21	1.74	0.53
15:N:29:GLU:O	44:5:296:A:C6	2.60	0.53
15:N:43:THR:HG22	44:5:267:G:C6	2.44	0.53
15:N:74:PRO:O	44:5:2431:C:O2	2.24	0.53
15:N:200:TRP:CE2	37:j:813:PHE:CE2	2.96	0.53
16:O:35:VAL:O	16:O:105:PHE:N	2.41	0.53
16:O:191:ALA:O	16:O:195:ALA:CB	2.56	0.53
19:R:144:ARG:O	19:R:148:SER:HB2	2.09	0.53
29:b:108:ASN:O	29:b:111:HIS:N	2.26	0.53
32:e:189:ILE:HG12	44:5:640:U:H5	1.74	0.53
43:q:55:LYS:CE	44:5:1226:G:O6	2.47	0.53
44:5:518:G:O2'	44:5:521:A:O2'	2.24	0.53
44:5:668:G:C2	44:5:794:U:O2	2.62	0.53
44:5:996:A:H3'	44:5:997:A:H8	1.74	0.53
44:5:1959:G:C2	44:5:2078:C:N3	2.77	0.53
44:5:2103:U:H2'	44:5:2104:A:H8	1.73	0.53
44:5:3192:U:N3	44:5:3200:G:C6	2.57	0.53
44:5:3308:C:OP2	44:5:3309:G:N2	2.42	0.53
45:8:128:U:OP1	45:8:129:C:N4	2.42	0.53
2:A:42:ARG:HA	2:A:89:TYR:HA	1.90	0.53
4:C:202:ARG:NH2	44:5:1384:U:P	2.73	0.53
5:D:423:LEU:O	5:D:427:SER:CB	2.57	0.53
5:D:470:GLU:O	5:D:474:ASP:CB	2.56	0.53
7:F:332:ALA:CB	44:5:987:U:O4'	2.56	0.53
9:H:223:ARG:HH12	44:5:3185:U:H3'	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:I:273:ARG:HD3	44:5:1043:C:C5'	2.39	0.53
12:s:152:LEU:C	44:5:1238:C:C2'	2.82	0.53
12:s:223:LYS:O	44:5:1233:G:C4	2.61	0.53
12:s:254:ARG:CA	44:5:1246:G:C3'	2.86	0.53
12:s:285:PRO:C	44:5:1278:A:H2	2.14	0.53
15:N:30:TYR:CD1	44:5:267:G:O5'	2.60	0.53
15:N:65:ARG:HB2	44:5:268:A:O4'	2.09	0.53
16:O:128:ARG:NH1	44:5:1317:A:O5'	2.40	0.53
19:R:154:LYS:HD3	44:5:1875:G:H5''	1.90	0.53
24:W:179:SER:HA	24:W:182:ALA:HB3	1.90	0.53
29:b:82:ALA:O	29:b:85:ASN:C	2.50	0.53
30:c:9:SER:O	30:c:13:LYS:NZ	2.42	0.53
30:c:10:ILE:HD12	30:c:13:LYS:HE2	1.90	0.53
33:f:367:ILE:HG12	33:f:418:ILE:HG13	1.91	0.53
43:q:212:UNK:N	47:x:4:UNK:C	2.72	0.53
44:5:346:C:N1	45:8:25:G:H4'	2.23	0.53
44:5:707:U:O2	44:5:754:G:O2'	2.27	0.53
44:5:826:G:O6	44:5:899:U:O2	2.27	0.53
44:5:1146:C:H2'	44:5:1147:G:H8	1.74	0.53
44:5:1202:A:N6	44:5:1301:A:O4'	2.41	0.53
44:5:1481:A:N6	44:5:1872:C:C2	2.76	0.53
44:5:1677:G:H1	44:5:1691:U:H3	1.55	0.53
44:5:2185:G:O2'	44:5:2314:U:OP2	2.22	0.53
44:5:2665:U:O2	44:5:2704:A:N7	2.42	0.53
44:5:3207:U:O2'	44:5:3209:A:OP1	2.27	0.53
4:C:98:ARG:NH1	44:5:933:A:N1	2.57	0.53
5:D:444:ASP:N	5:D:449:GLU:O	2.42	0.53
7:F:306:PRO:O	7:F:310:ARG:CB	2.51	0.53
7:F:363:PHE:HB2	7:F:413:TRP:HB3	1.91	0.53
9:H:351:VAL:O	9:H:355:SER:OG	2.20	0.53
10:I:194:TYR:OH	44:5:1128:U:P	2.67	0.53
11:J:238:THR:OG1	46:7:57:G:H5''	2.09	0.53
12:s:254:ARG:CB	44:5:1246:G:H2'	2.38	0.53
15:N:5:LYS:HE2	44:5:324:A:N6	2.21	0.53
17:P:74:LYS:NZ	44:5:3297:U:H5''	2.23	0.53
19:R:164:THR:HA	19:R:167:ILE:HB	1.90	0.53
21:T:88:ARG:NH2	29:b:99:LYS:HG2	2.24	0.53
21:T:109:VAL:HG22	44:5:1063:G:C5	2.43	0.53
26:Y:23:PRO:CB	45:8:91:C:O2'	2.54	0.53
30:c:28:LYS:O	30:c:32:LYS:HB2	2.09	0.53
36:i:60:LEU:HD12	36:i:69:ALA:HB2	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:j:858:ARG:NH1	45:8:94:C:O5'	2.42	0.53
43:q:215:UNK:N	48:y:11:UNK:CB	2.72	0.53
44:5:86:G:H1'	44:5:87:U:H5	1.74	0.53
44:5:408:A:N3	44:5:655:C:O2'	2.33	0.53
44:5:644:G:O4'	44:5:1153:A:N6	2.41	0.53
44:5:1305:U:OP2	44:5:2939:G:N2	2.40	0.53
44:5:1480:G:N1	44:5:1872:C:OP2	2.42	0.53
44:5:1540:U:H3	44:5:1555:U:H3	1.57	0.53
44:5:1564:U:H2'	44:5:1565:G:H8	1.74	0.53
44:5:1696:A:H2'	44:5:1697:A:H8	1.74	0.53
44:5:2376:G:H2'	44:5:2377:G:C8	2.44	0.53
44:5:2660:G:H1'	44:5:2744:U:H1'	1.89	0.53
44:5:2999:U:HO2'	44:5:3295:A:HO2'	1.57	0.53
45:8:42:G:N1	45:8:102:U:C2	2.56	0.53
46:7:81:U:O2	46:7:99:G:C2	2.62	0.53
1:z:301:LYS:NZ	1:z:322:GLN:O	2.37	0.53
1:z:359:CYS:HB2	44:5:2465:G:P	2.46	0.53
2:A:43:GLY:N	2:A:88:ILE:O	2.41	0.53
3:B:132:LYS:HB2	44:5:3150:A:OP2	2.09	0.53
3:B:192:VAL:O	3:B:196:ARG:CB	2.55	0.53
5:D:299:GLN:NE2	5:D:306:THR:O	2.41	0.53
10:I:283:ARG:NH2	44:5:1126:G:P	2.81	0.53
13:L:176:GLU:CG	36:i:11:LEU:HD23	2.39	0.53
15:N:139:HIS:HB3	15:N:142:ILE:HD13	1.91	0.53
15:N:169:LYS:HA	15:N:172:ARG:HB2	1.91	0.53
15:N:185:ALA:CB	44:5:1548:C:C5'	2.87	0.53
16:O:31:GLN:HE21	16:O:33:ILE:HG13	1.74	0.53
17:P:112:LEU:HA	17:P:152:GLU:HA	1.90	0.53
19:R:142:GLN:O	19:R:146:ALA:CB	2.57	0.53
21:T:110:LYS:HZ1	44:5:1068:C:P	2.31	0.53
26:Y:75:ARG:HH12	45:8:71:A:H5''	1.73	0.53
30:c:46:ALA:N	30:c:72:GLY:O	2.35	0.53
32:e:212:LYS:HB2	44:5:1339:C:OP1	2.09	0.53
36:i:4:LYS:O	36:i:16:LYS:NZ	2.42	0.53
37:j:873:SER:H	45:8:68:G:H5''	1.74	0.53
43:q:60:ARG:HD2	44:5:1222:G:C2	2.44	0.53
44:5:9:U:H2'	44:5:10:C:C2	2.44	0.53
44:5:42:C:O2'	44:5:2803:A:N6	2.41	0.53
44:5:91:G:OP2	44:5:93:C:N4	2.35	0.53
44:5:170:G:C6	44:5:248:U:N3	2.76	0.53
44:5:440:A:H3'	44:5:441:U:H4'	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:535:G:O2'	44:5:554:A:N6	2.39	0.53
44:5:664:U:H2'	44:5:665:A:H8	1.74	0.53
44:5:728:G:C2	44:5:741:U:O2	2.61	0.53
44:5:995:U:H3	44:5:1054:A:H8	1.41	0.53
44:5:1389:G:N2	44:5:1390:A:N1	2.57	0.53
44:5:1459:C:H2'	44:5:1460:A:C8	2.43	0.53
44:5:1959:G:OP1	44:5:2080:C:N4	2.37	0.53
44:5:2279:A:C8	44:5:2288:G:C6	2.96	0.53
1:z:233:LEU:HD12	44:5:2464:U:N3	2.24	0.53
2:A:17:THR:HG22	44:5:2172:A:O3'	2.09	0.53
5:D:271:ALA:O	5:D:275:ARG:CB	2.57	0.53
5:D:478:ARG:O	5:D:482:LEU:HB2	2.09	0.53
5:D:549:LYS:NZ	46:7:63:A:H5''	2.23	0.53
9:H:258:HIS:CE1	20:S:151:PRO:HG2	2.44	0.53
9:H:372:ILE:HA	9:H:375:PHE:HB2	1.90	0.53
10:I:273:ARG:HH22	44:5:1042:U:C2'	2.16	0.53
11:J:162:VAL:HG13	11:J:166:LYS:HZ3	1.72	0.53
11:J:188:SER:HA	44:5:2672:G:O4'	2.09	0.53
12:s:221:ALA:HB1	44:5:1233:G:C3'	2.39	0.53
13:L:116:LEU:O	13:L:120:GLN:NE2	2.41	0.53
13:L:126:PHE:HB2	35:h:115:LYS:O	2.08	0.53
15:N:5:LYS:CA	44:5:64:G:N2	2.72	0.53
15:N:98:LEU:HD21	44:5:289:A:H3'	1.89	0.53
15:N:125:SER:C	44:5:272:G:H3'	2.33	0.53
21:T:105:PHE:CE1	44:5:1063:G:C8	2.96	0.53
36:i:77:LEU:HD23	44:5:294:U:H4'	1.91	0.53
44:5:21:G:H3'	44:5:22:G:C8	2.44	0.53
44:5:182:U:H2'	44:5:183:G:C8	2.44	0.53
44:5:268:A:H61	44:5:295:A:H3'	1.73	0.53
44:5:435:C:H3'	44:5:621:A:H61	1.73	0.53
44:5:712:G:N2	44:5:754:G:O2'	2.40	0.53
44:5:1728:G:OP1	44:5:1729:A:O2'	2.24	0.53
3:B:7:GLU:O	44:5:2915:U:P	2.66	0.52
3:B:50:LYS:HB3	3:B:332:ARG:HA	1.90	0.52
3:B:56:ILE:O	3:B:74:GLU:N	2.42	0.52
5:D:265:LYS:HZ1	44:5:2669:G:N2	1.95	0.52
9:H:360:ASP:HA	9:H:363:GLN:HB2	1.91	0.52
10:I:207:TYR:HA	44:5:2647:A:H4'	1.91	0.52
12:s:242:GLN:H	43:q:41:VAL:HG22	1.74	0.52
12:s:271:GLY:C	43:q:39:HIS:CD2	2.79	0.52
12:s:294:ALA:C	44:5:1276:U:C6	2.85	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:93:LYS:HE3	44:5:277:G:H2'	1.91	0.52
15:N:177:GLY:HA3	44:5:54:C:C5	2.40	0.52
17:P:101:ASN:OD1	44:5:389:A:H1'	2.09	0.52
20:S:75:PHE:HA	20:S:128:GLU:HA	1.90	0.52
21:T:108:ARG:NH1	44:5:1062:A:O2'	2.41	0.52
21:T:109:VAL:HG13	44:5:1063:G:N1	2.23	0.52
24:W:201:ARG:HH12	24:W:210:GLU:HG3	1.74	0.52
26:Y:60:ARG:HB3	26:Y:103:LYS:HB3	1.91	0.52
27:Z:70:PHE:HA	27:Z:110:LYS:HE2	1.92	0.52
36:i:34:SER:O	36:i:37:THR:N	2.39	0.52
44:5:88:A:H3'	44:5:89:A:H8	1.74	0.52
44:5:720:A:C5	44:5:783:A:H4'	2.44	0.52
44:5:1168:U:O2	44:5:1330:A:C5	2.62	0.52
44:5:1306:G:O6	44:5:2366:C:O2'	2.21	0.52
44:5:1749:A:H5'	44:5:1751:G:H1	1.74	0.52
44:5:3153:U:H5''	44:5:3154:C:H5'	1.90	0.52
44:5:3334:U:N3	44:5:3369:G:O5'	2.35	0.52
1:z:410:ARG:HH22	44:5:2447:A:N6	1.96	0.52
2:A:40:TYR:HD1	2:A:93:LYS:HB2	1.75	0.52
5:D:350:HIS:HB2	5:D:486:TYR:CZ	2.44	0.52
7:F:396:HIS:O	7:F:400:THR:OG1	2.21	0.52
8:G:248:ARG:O	8:G:252:ALA:HB2	2.09	0.52
9:H:355:SER:O	9:H:359:ALA:HB2	2.09	0.52
12:s:239:GLY:HA2	43:q:43:LYS:C	2.35	0.52
12:s:255:ASP:HA	44:5:1268:G:O6	2.08	0.52
12:s:282:PHE:CB	43:q:100:ILE:HG23	2.39	0.52
13:L:66:ASN:HB2	44:5:73:C:C6	2.45	0.52
14:M:169:VAL:O	14:M:215:THR:OG1	2.23	0.52
15:N:91:GLU:CG	44:5:276:U:H2'	2.26	0.52
21:T:82:ASN:O	29:b:88:LYS:HG2	2.09	0.52
25:X:191:GLU:HA	25:X:247:LEU:HB2	1.91	0.52
25:X:226:THR:O	44:5:1523:U:H4'	2.08	0.52
32:e:190:ASP:CB	44:5:638:C:C5'	2.87	0.52
36:i:31:GLY:HA3	44:5:298:U:C5'	2.39	0.52
38:k:29:LYS:HA	38:k:39:ARG:HA	1.90	0.52
39:l:9:ILE:HG22	39:l:13:MET:HE2	1.90	0.52
44:5:700:C:H2'	44:5:701:G:H8	1.74	0.52
44:5:952:A:O2'	44:5:968:G:N2	2.38	0.52
44:5:978:G:O2'	44:5:979:U:O4'	2.27	0.52
44:5:1362:G:H2'	44:5:1363:A:C8	2.44	0.52
44:5:1369:A:H3'	44:5:1370:G:H8	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:1712:G:H2'	44:5:1713:G:C4	2.45	0.52
44:5:1922:A:N6	44:5:1929:G:H21	2.01	0.52
1:z:230:GLN:N	44:5:2486:A:O2'	2.42	0.52
1:z:342:LYS:HA	1:z:345:ASP:HB3	1.90	0.52
1:z:400:VAL:HB	44:5:2494:A:H1'	1.91	0.52
2:A:80:GLU:HG3	42:p:66:GLY:C	2.35	0.52
2:A:242:ARG:HD2	2:A:250:GLN:HG2	1.92	0.52
3:B:360:ASP:OD1	3:B:371:GLN:NE2	2.39	0.52
5:D:402:PHE:CD1	44:5:1079:A:O4'	2.62	0.52
6:E:381:GLN:O	14:M:267:PHE:HZ	1.92	0.52
10:I:379:GLY:H	44:5:1011:A:C1'	2.14	0.52
12:s:218:VAL:CA	44:5:1234:G:C6	2.92	0.52
12:s:274:GLN:N	44:5:1232:C:N4	2.57	0.52
13:L:136:GLU:O	35:h:119:LYS:HB2	2.09	0.52
14:M:271:VAL:HA	14:M:274:LYS:HD3	1.91	0.52
15:N:5:LYS:CA	44:5:109:A:C6	2.70	0.52
15:N:81:TYR:CG	44:5:2427:U:O5'	2.62	0.52
15:N:171:SER:O	44:5:1546:A:N9	2.42	0.52
20:S:44:PHE:HA	20:S:47:LYS:HD2	1.92	0.52
27:Z:26:LYS:HB3	27:Z:41:LEU:HB2	1.91	0.52
32:e:190:ASP:HB2	44:5:638:C:H3'	1.91	0.52
37:j:847:THR:OG1	45:8:42:G:H5''	2.10	0.52
43:q:34:SER:CB	44:5:1230:G:N9	2.73	0.52
44:5:370:U:H4'	44:5:404:G:H5'	1.91	0.52
44:5:1404:G:H1	44:5:1407:A:P	2.32	0.52
44:5:2744:U:C2	44:5:2749:G:N1	2.68	0.52
44:5:2830:G:N2	44:5:2858:U:O2	2.39	0.52
45:8:151:C:O2'	45:8:153:U:OP2	2.26	0.52
3:B:293:ASN:HB2	3:B:304:THR:HG22	1.92	0.52
3:B:374:ALA:O	3:B:378:ALA:CB	2.56	0.52
4:C:164:GLU:O	4:C:168:ALA:CB	2.57	0.52
5:D:483:PHE:O	5:D:487:LEU:N	2.30	0.52
6:E:237:GLU:CD	32:e:241:LYS:HB2	2.33	0.52
7:F:269:GLU:HA	7:F:272:ILE:HD12	1.91	0.52
10:I:237:LEU:HD21	10:I:348:GLN:HB3	1.89	0.52
12:s:198:GLN:CA	44:5:1239:C:C6	2.90	0.52
12:s:222:LEU:CA	44:5:1233:G:P	2.96	0.52
12:s:279:ARG:HA	43:q:43:LYS:H	1.68	0.52
12:s:295:GLY:C	44:5:1275:C:C6	2.87	0.52
15:N:13:LYS:HZ2	44:5:78:U:H4'	1.33	0.52
15:N:127:TYR:O	44:5:272:G:OP2	2.27	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:191:TRP:N	44:5:1549:U:C4'	2.70	0.52
17:P:94:LEU:O	17:P:98:ALA:CB	2.57	0.52
20:S:119:ARG:O	46:7:96:U:H5'	2.09	0.52
28:a:85:ARG:NH2	44:5:1426:C:P	2.80	0.52
29:b:106:ARG:HH22	44:5:776:U:H4'	1.73	0.52
30:c:42:ILE:HA	30:c:90:VAL:O	2.10	0.52
34:g:13:TYR:CD1	44:5:1855:U:O4'	2.58	0.52
34:g:44:CYS:N	34:g:49:SER:O	2.42	0.52
35:h:93:THR:CB	44:5:135:C:O2	2.48	0.52
38:k:14:LEU:HA	38:k:17:ARG:HB2	1.90	0.52
41:o:41:ARG:NH1	44:5:284:A:C4	2.78	0.52
43:q:58:MET:HE2	44:5:1219:C:H5'	1.90	0.52
44:5:870:G:N2	44:5:871:U:O4	2.37	0.52
44:5:1632:A:N1	44:5:1641:U:C4	2.77	0.52
44:5:2295:A:N3	44:5:2929:C:O2'	2.36	0.52
44:5:2342:U:HO2'	44:5:3054:U:HO2'	1.57	0.52
44:5:2660:G:OP1	44:5:2750:U:O2'	2.27	0.52
45:8:154:C:H2'	45:8:155:A:H8	1.74	0.52
46:7:67:G:C6	46:7:111:U:N3	2.76	0.52
3:B:67:PHE:CZ	23:V:217:ARG:NH2	2.77	0.52
9:H:300:ASN:HB3	9:H:315:ARG:HB3	1.90	0.52
13:L:69:VAL:O	13:L:149:GLN:NE2	2.36	0.52
13:L:174:ARG:O	13:L:178:LYS:CB	2.58	0.52
14:M:270:MET:HE2	44:5:3214:U:H2'	1.89	0.52
18:Q:209:VAL:HG13	18:Q:229:LEU:HD13	1.91	0.52
20:S:68:HIS:ND1	44:5:524:U:P	2.82	0.52
20:S:108:GLN:CD	44:5:1322:U:O2'	2.53	0.52
28:a:138:GLY:HA3	44:5:709:A:O2'	2.09	0.52
35:h:76:GLN:HE21	35:h:81:ARG:HG3	1.75	0.52
36:i:63:ASN:ND2	44:5:2444:C:C3'	2.71	0.52
42:p:36:ARG:HD2	42:p:45:LYS:HZ3	1.75	0.52
43:q:6:GLU:H	44:5:1219:C:H41	1.55	0.52
43:q:100:ILE:HD13	44:5:1259:A:N9	1.04	0.52
44:5:707:U:O4	44:5:712:G:O6	2.27	0.52
44:5:970:A:H2'	44:5:971:G:C8	2.45	0.52
44:5:1280:C:H2'	44:5:1281:G:C8	2.40	0.52
46:7:4:U:H2'	46:7:5:G:C8	2.45	0.52
3:B:47:LEU:HD13	3:B:337:THR:HA	1.92	0.52
4:C:93:MET:N	4:C:93:MET:SD	2.82	0.52
4:C:203:ARG:HH12	4:C:240:PRO:HB2	1.74	0.52
9:H:374:LYS:CB	40:m:127:LEU:HD13	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:I:199:ASN:CG	44:5:1126:G:OP2	2.52	0.52
10:I:238:VAL:HG21	10:I:351:ILE:HD12	1.92	0.52
14:M:247:SER:O	14:M:251:LYS:N	2.43	0.52
15:N:3:ALA:CA	44:5:110:G:O2'	2.57	0.52
15:N:26:ARG:CB	36:i:30:LYS:NZ	2.62	0.52
15:N:32:GLN:HG2	44:5:296:A:C4	2.43	0.52
18:Q:233:ALA:HA	18:Q:236:ARG:HB3	1.92	0.52
19:R:144:ARG:O	19:R:148:SER:CB	2.57	0.52
20:S:67:ALA:O	44:5:523:A:H4'	2.10	0.52
21:T:68:THR:HG23	21:T:71:SER:H	1.74	0.52
26:Y:71:SER:OG	26:Y:72:SER:N	2.43	0.52
26:Y:74:TYR:HB3	26:Y:77:LYS:HE3	1.92	0.52
26:Y:87:LYS:CD	44:5:375:A:O4'	2.58	0.52
36:i:2:THR:OG1	36:i:3:VAL:N	2.42	0.52
37:j:824:GLY:H	37:j:831:ARG:HB2	1.75	0.52
43:q:3:GLY:C	44:5:1217:A:C2'	2.63	0.52
44:5:1132:C:H2'	44:5:1133:A:H8	1.75	0.52
44:5:1704:A:O4'	44:5:1741:A:N6	2.41	0.52
44:5:1741:A:H3'	44:5:1742:U:H6	1.73	0.52
44:5:1949:G:O6	44:5:2097:U:O4	2.26	0.52
44:5:2331:C:H2'	44:5:2332:A:H8	1.74	0.52
44:5:2361:A:N6	44:5:2377:G:C6	2.74	0.52
44:5:2827:U:O2'	44:5:2829:U:O4	2.21	0.52
1:z:228:GLU:OE1	44:5:2479:C:OP2	2.25	0.52
2:A:109:GLU:HA	2:A:136:ILE:HG22	1.91	0.52
3:B:206:ASP:OD1	3:B:206:ASP:N	2.41	0.52
3:B:343:TYR:CE2	44:5:3100:U:H5'	2.45	0.52
6:E:241:ALA:HB3	44:5:592:A:H4'	1.91	0.52
6:E:264:LEU:H	6:E:276:VAL:HG12	1.75	0.52
7:F:383:LEU:HB3	7:F:388:ILE:HB	1.92	0.52
9:H:214:GLU:OE1	14:M:152:THR:HG21	2.10	0.52
11:J:125:SER:HB2	11:J:158:VAL:HG11	1.92	0.52
12:s:282:PHE:C	44:5:1260:A:C1'	2.82	0.52
12:s:283:LYS:CB	44:5:1279:C:O2	2.57	0.52
13:L:49:ARG:CB	35:h:116:TYR:CZ	2.86	0.52
15:N:18:VAL:HG23	44:5:315:C:C3'	2.40	0.52
15:N:26:ARG:HH22	44:5:316:U:C5'	2.23	0.52
15:N:151:ILE:N	45:8:142:C:H4'	2.25	0.52
15:N:179:LYS:CG	44:5:52:A:H62	2.11	0.52
15:N:180:PHE:HE2	44:5:30:G:N1	1.98	0.52
15:N:190:THR:HB	44:5:1548:C:C2'	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:Q:261:ASN:N	44:5:730:C:H5'	2.15	0.52
26:Y:74:TYR:N	26:Y:79:ALA:O	2.43	0.52
29:b:117:ALA:O	29:b:121:ALA:CB	2.57	0.52
35:h:95:PHE:CE2	44:5:136:G:OP1	2.63	0.52
37:j:842:ARG:NH1	44:5:364:G:O6	2.43	0.52
39:l:29:LEU:CD2	45:8:75:G:H1'	2.39	0.52
43:q:65:GLY:HA3	44:5:1221:A:C8	2.44	0.52
44:5:170:G:N1	44:5:248:U:N3	2.57	0.52
44:5:2611:U:O2'	44:5:2803:A:N1	2.38	0.52
44:5:2893:C:H4'	44:5:3129:A:H4'	1.92	0.52
44:5:3230:G:N2	44:5:3257:C:O2	2.41	0.52
1:z:411:LEU:CG	44:5:2447:A:O2'	2.57	0.52
2:A:41:ILE:N	2:A:90:ALA:O	2.37	0.52
9:H:223:ARG:NH1	9:H:242:ASP:OD1	2.42	0.52
9:H:247:LYS:HA	9:H:253:ILE:HG12	1.92	0.52
10:I:383:LYS:NZ	44:5:1040:A:C2'	2.73	0.52
11:J:228:ARG:HA	11:J:231:ARG:HB2	1.90	0.52
12:s:294:ALA:C	44:5:1276:U:C3'	2.81	0.52
12:s:297:ILE:CB	44:5:1275:C:C1'	2.81	0.52
14:M:191:LYS:NZ	44:5:1185:C:OP1	2.36	0.52
16:O:169:ALA:O	16:O:173:ALA:CB	2.56	0.52
36:i:25:LYS:CD	44:5:156:G:H5'	2.40	0.52
37:j:807:ARG:CD	45:8:103:G:H4'	2.39	0.52
37:j:850:MET:O	37:j:853:LEU:N	2.40	0.52
37:j:865:GLN:HB3	45:8:95:G:C2	2.44	0.52
43:q:57:THR:HG22	44:5:1284:C:C2	1.99	0.52
44:5:26:A:N3	44:5:328:U:O2'	2.40	0.52
44:5:509:U:O2	44:5:582:G:O6	2.27	0.52
44:5:1034:U:H2'	44:5:1035:G:C8	2.45	0.52
44:5:1566:A:HO2'	44:5:1573:G:H1	1.56	0.52
44:5:2290:C:H2'	44:5:2291:A:C8	2.45	0.52
44:5:3110:C:N4	44:5:3120:C:O2'	2.42	0.52
44:5:3188:G:H2'	44:5:3189:G:C8	2.44	0.52
1:z:229:LEU:O	44:5:2488:A:H8	1.93	0.52
3:B:2:SER:N	44:5:2939:G:O5'	2.42	0.52
3:B:15:GLY:HA3	44:5:3010:U:H1'	1.90	0.52
4:C:207:VAL:HG22	4:C:249:ILE:HD12	1.91	0.52
5:D:306:THR:HG1	44:5:1078:U:H4'	1.67	0.52
12:s:272:THR:CB	44:5:1261:G:C5'	2.73	0.52
13:L:66:ASN:CG	44:5:73:C:C6	2.88	0.52
15:N:64:VAL:CA	44:5:268:A:H4'	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:71:ARG:HE	44:5:290:G:H4'	1.75	0.52
15:N:122:ASN:ND2	44:5:317:A:C8	2.46	0.52
15:N:143:ARG:CA	45:8:143:U:H4'	2.40	0.52
16:O:25:LYS:NZ	44:5:1175:C:O5'	2.43	0.52
16:O:93:ALA:O	16:O:97:ALA:CB	2.58	0.52
18:Q:264:ILE:HD12	44:5:728:G:O2'	2.10	0.52
19:R:155:ARG:CZ	44:5:1873:U:OP2	2.58	0.52
27:Z:5:LYS:HG3	27:Z:8:LYS:HE3	1.91	0.52
29:b:107:ARG:NH2	44:5:775:A:H5''	2.25	0.52
37:j:789:LYS:CD	44:5:2138:A:C6	2.91	0.52
44:5:118:U:N3	44:5:123:A:N7	2.58	0.52
44:5:519:A:C5	44:5:522:A:H4'	2.45	0.52
44:5:710:A:O2'	44:5:2774:C:O2'	2.23	0.52
44:5:2591:A:H2'	44:5:2592:G:C4	2.45	0.52
44:5:3196:U:H4'	44:5:3197:G:H5'	1.92	0.52
1:z:406:GLY:O	44:5:2451:G:H3'	2.10	0.52
3:B:60:LEU:N	3:B:70:ARG:O	2.43	0.52
4:C:166:VAL:O	4:C:170:LYS:HB2	2.10	0.52
5:D:295:ARG:NH2	44:5:2750:U:H5'	2.25	0.52
5:D:543:ALA:HA	5:D:546:VAL:HB	1.92	0.52
7:F:290:GLN:HE22	21:T:136:ARG:NH1	2.07	0.52
11:J:229:VAL:HG23	46:7:28:C:H4'	1.92	0.52
13:L:5:LYS:HD3	28:a:125:ASN:HD21	1.74	0.52
13:L:183:ARG:HD3	44:5:765:C:C6	2.43	0.52
15:N:70:ASN:CG	44:5:277:G:C6	2.88	0.52
18:Q:262:THR:OG1	44:5:729:C:H4'	2.10	0.52
26:Y:15:ALA:O	26:Y:19:TYR:HB2	2.10	0.52
26:Y:76:LEU:HG	45:8:74:U:O5'	2.10	0.52
29:b:72:ASN:HB3	44:5:2642:A:H4'	1.92	0.52
29:b:111:HIS:O	44:5:1074:U:H5'	2.10	0.52
31:d:118:TRP:CE2	44:5:1475:A:C2	2.98	0.52
32:e:190:ASP:N	44:5:639:G:OP2	2.42	0.52
43:q:47:GLY:C	44:5:1258:U:OP1	2.50	0.52
43:q:205:UNK:O	47:x:40:UNK:O	2.28	0.52
44:5:1277:C:H2'	44:5:1278:A:H8	1.75	0.52
44:5:1792:C:O2'	44:5:1794:G:O5'	2.27	0.52
44:5:3187:A:H2'	44:5:3188:G:O4'	2.10	0.52
2:A:177:LYS:HE2	44:5:1793:C:C6	2.45	0.51
3:B:244:ARG:NH1	44:5:2948:C:OP1	2.43	0.51
3:B:262:TRP:HD1	16:O:64:PHE:C	2.17	0.51
6:E:385:ALA:HB1	14:M:267:PHE:CE1	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:G:248:ARG:O	8:G:252:ALA:CB	2.58	0.51
8:G:409:LYS:O	8:G:413:ARG:CB	2.55	0.51
9:H:247:LYS:CG	14:M:154:SER:HB2	2.38	0.51
12:s:295:GLY:HA2	44:5:1275:C:H3'	0.55	0.51
12:s:296:GLU:HA	44:5:1276:U:H1'	1.92	0.51
13:L:106:GLN:NE2	13:L:110:ASP:OD1	2.43	0.51
15:N:33:LYS:NZ	44:5:266:A:H5''	2.24	0.51
15:N:79:ALA:HB2	44:5:2429:G:N7	2.25	0.51
15:N:98:LEU:CD2	44:5:289:A:C4'	2.84	0.51
16:O:86:GLY:C	44:5:1312:C:H1'	2.35	0.51
20:S:112:ALA:O	20:S:115:ARG:NH1	2.43	0.51
25:X:245:ASP:HB2	25:X:248:ASP:HB2	1.92	0.51
26:Y:3:LYS:HB2	44:5:213:A:H1'	1.92	0.51
30:c:16:LEU:O	30:c:20:SER:CB	2.58	0.51
30:c:28:LYS:CD	44:5:1730:G:N7	2.73	0.51
37:j:789:LYS:CE	44:5:2138:A:N6	2.71	0.51
43:q:55:LYS:HG3	44:5:1223:A:OP2	2.10	0.51
44:5:645:A:H5'	44:5:2372:A:H62	1.74	0.51
44:5:1271:A:C5	44:5:1272:C:H1'	2.45	0.51
44:5:1347:U:N3	44:5:1357:G:C6	2.77	0.51
46:7:76:A:N6	46:7:103:A:OP2	2.31	0.51
1:z:259:SER:CB	44:5:2486:A:OP2	2.49	0.51
2:A:80:GLU:OE2	42:p:67:GLY:N	2.42	0.51
3:B:87:VAL:O	3:B:107:ALA:CB	2.59	0.51
3:B:256:HIS:HA	44:5:1305:U:O4	2.10	0.51
8:G:224:ARG:CZ	44:5:2585:G:N2	2.73	0.51
9:H:204:ILE:CD1	20:S:148:LEU:HD22	2.40	0.51
10:I:209:ARG:NH1	44:5:2648:G:P	2.74	0.51
10:I:276:VAL:HA	44:5:1044:U:H4'	1.92	0.51
12:s:237:HIS:CA	44:5:1256:G:H8	2.17	0.51
12:s:266:THR:CB	44:5:1246:G:N3	2.53	0.51
14:M:258:ARG:NH1	44:5:3210:A:OP1	2.42	0.51
15:N:79:ALA:CB	44:5:2429:G:N7	2.72	0.51
19:R:193:HIS:CE1	44:5:1860:G:H1'	2.45	0.51
20:S:87:THR:OG1	21:T:156:TYR:CZ	2.60	0.51
21:T:54:HIS:HB3	21:T:57:TYR:CE2	2.45	0.51
32:e:205:LYS:HG3	32:e:208:TYR:H	1.75	0.51
37:j:789:LYS:CE	44:5:2138:A:C5	2.91	0.51
38:k:42:LYS:HG2	38:k:55:VAL:HG22	1.92	0.51
39:l:24:PRO:HG3	45:8:52:A:C8	2.44	0.51
43:q:18:TYR:HB3	43:q:22:TYR:HD2	1.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:q:101:VAL:N	44:5:1259:A:N6	2.58	0.51
44:5:69:C:H41	44:5:314:U:H4'	1.76	0.51
44:5:996:A:C2	46:7:79:A:C2	2.89	0.51
44:5:2783:U:H3'	44:5:2784:G:C8	2.44	0.51
44:5:3370:A:H3'	44:5:3371:G:H8	1.73	0.51
1:z:217:GLU:CA	44:5:2489:C:N3	2.74	0.51
4:C:73:ARG:HB3	44:5:805:G:H4'	1.91	0.51
4:C:183:LYS:C	44:5:1386:A:O2'	2.54	0.51
5:D:295:ARG:NH1	44:5:2749:G:C2'	2.68	0.51
5:D:403:LYS:HG3	5:D:432:TYR:HD2	1.75	0.51
6:E:388:SER:C	33:f:322:SER:OG	2.53	0.51
8:G:347:LYS:HA	8:G:350:LEU:HD12	1.92	0.51
10:I:189:ARG:HD3	44:5:1128:U:O4'	2.11	0.51
12:s:263:ALA:CB	44:5:1274:A:C6	2.83	0.51
15:N:33:LYS:NZ	44:5:266:A:C5'	2.74	0.51
15:N:90:ASN:C	44:5:2600:C:OP1	2.54	0.51
15:N:176:LYS:C	44:5:54:C:C5	2.79	0.51
23:V:152:MET:O	23:V:162:ASN:HA	2.10	0.51
27:Z:83:ARG:NH1	27:Z:84:TYR:OH	2.43	0.51
34:g:73:SER:OG	44:5:1641:U:O4	2.18	0.51
36:i:92:ASN:O	36:i:96:ALA:CB	2.59	0.51
39:l:40:LYS:HD3	44:5:355:A:H5''	1.88	0.51
43:q:34:SER:OG	44:5:1230:G:C1'	2.57	0.51
43:q:63:ILE:C	44:5:1221:A:OP2	2.46	0.51
44:5:49:A:N6	44:5:279:U:O2'	2.42	0.51
44:5:63:A:N3	44:5:78:U:O2'	2.43	0.51
44:5:162:G:N1	44:5:260:C:N3	2.57	0.51
44:5:284:A:N6	44:5:2784:G:H21	2.08	0.51
44:5:342:A:H8	45:8:21:C:N4	2.08	0.51
44:5:588:G:O2'	44:5:590:G:O6	2.28	0.51
44:5:668:G:C6	44:5:794:U:N3	2.72	0.51
44:5:1220:U:N3	44:5:1286:A:O2'	2.39	0.51
44:5:1378:U:N3	44:5:1430:U:O2	2.43	0.51
44:5:2227:C:H2'	44:5:2228:A:H8	1.75	0.51
44:5:3299:A:H61	44:5:3315:G:H1	1.58	0.51
1:z:231:VAL:HG23	44:5:2488:A:P	2.47	0.51
1:z:369:MET:CA	44:5:2469:G:O2'	2.36	0.51
1:z:400:VAL:HB	44:5:2494:A:H2'	1.85	0.51
3:B:261:MET:HG2	16:O:64:PHE:HB3	1.92	0.51
4:C:157:GLU:HB2	4:C:212:ASP:HA	1.92	0.51
5:D:269:SER:O	5:D:273:SER:HB2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:326:ASN:OD1	6:E:326:ASN:N	2.40	0.51
8:G:300:LEU:HD21	44:5:147:U:C5'	2.41	0.51
10:I:204:LYS:HA	10:I:208:ASN:HD22	1.76	0.51
10:I:327:ASP:OD2	10:I:363:ARG:NH2	2.41	0.51
10:I:391:LEU:HB3	46:7:64:A:P	2.51	0.51
12:s:224:GLU:CA	43:q:44:GLU:HA	2.21	0.51
12:s:255:ASP:HA	44:5:1268:G:N1	2.25	0.51
14:M:226:ARG:HH11	44:5:525:C:P	2.33	0.51
15:N:29:GLU:O	44:5:297:G:C6	2.64	0.51
15:N:36:ILE:HD11	44:5:269:G:O5'	2.07	0.51
15:N:179:LYS:HA	44:5:52:A:C4	2.45	0.51
24:W:242:LYS:HB2	24:W:245:VAL:HG23	1.92	0.51
34:g:6:THR:CG2	44:5:1486:G:H21	2.23	0.51
37:j:834:ASN:CG	44:5:53:G:P	2.94	0.51
42:p:5:THR:HG21	44:5:836:A:O3'	2.10	0.51
44:5:787:G:H2'	44:5:788:C:C6	2.46	0.51
44:5:1128:U:H3'	44:5:1129:A:H8	1.75	0.51
44:5:1354:G:H2'	44:5:1357:G:H4'	1.91	0.51
44:5:1751:G:HO2'	44:5:1752:A:H8	1.57	0.51
44:5:1904:C:H3'	44:5:1905:G:H8	1.76	0.51
44:5:3060:C:H2'	44:5:3061:G:H8	1.75	0.51
45:8:76:C:H2'	45:8:77:A:H8	1.75	0.51
1:z:209:LYS:HD3	1:z:214:TYR:HD2	1.75	0.51
1:z:228:GLU:HB3	1:z:230:GLN:HE21	1.74	0.51
1:z:229:LEU:HB2	44:5:2476:C:O2	2.10	0.51
1:z:345:ASP:OD1	44:5:2466:G:O3'	2.28	0.51
1:z:365:GLY:CA	44:5:2487:U:O2'	2.58	0.51
3:B:20:LYS:NZ	3:B:21:ARG:O	2.43	0.51
4:C:53:SER:OG	4:C:54:GLU:N	2.43	0.51
4:C:101:ALA:CB	44:5:662:U:H1'	2.41	0.51
5:D:402:PHE:CD1	44:5:1079:A:H1'	2.43	0.51
6:E:260:PRO:HB2	6:E:317:VAL:HG11	1.91	0.51
6:E:400:PHE:O	14:M:262:THR:HG23	2.11	0.51
9:H:209:GLN:HG2	9:H:254:LYS:HG2	1.93	0.51
9:H:243:VAL:O	44:5:3186:A:H1'	2.10	0.51
10:I:207:TYR:CE1	44:5:2632:G:N2	2.79	0.51
10:I:275:ARG:CZ	44:5:1044:U:OP1	2.53	0.51
11:J:131:LEU:HD11	11:J:170:ILE:HG21	1.93	0.51
12:s:220:THR:N	44:5:1234:G:N7	2.57	0.51
13:L:13:HIS:CG	44:5:86:G:C6	2.98	0.51
15:N:30:TYR:OH	44:5:267:G:O2'	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:30:TYR:HD1	15:N:33:LYS:HD2	1.74	0.51
15:N:180:PHE:CE2	44:5:30:G:C6	2.96	0.51
15:N:188:ARG:CG	44:5:1544:G:N2	2.72	0.51
16:O:35:VAL:HB	16:O:104:VAL:HA	1.93	0.51
21:T:3:LYS:O	44:5:2630:C:OP2	2.29	0.51
24:W:262:LYS:HA	24:W:265:LYS:HB2	1.91	0.51
33:f:394:GLY:HA2	44:5:1327:C:O2'	2.10	0.51
43:q:6:GLU:N	44:5:1219:C:N4	2.57	0.51
43:q:104:ARG:CD	44:5:1232:C:H4'	2.38	0.51
44:5:331:G:N2	45:8:32:C:O2	2.43	0.51
44:5:972:A:H2'	44:5:973:A:C8	2.45	0.51
44:5:2342:U:H2'	44:5:2343:C:H6	1.74	0.51
44:5:2660:G:HO2'	44:5:2749:G:H22	1.56	0.51
44:5:2945:G:H5''	44:5:2947:G:N7	2.25	0.51
44:5:3229:G:O6	44:5:3258:U:O4	2.25	0.51
46:7:2:G:O6	46:7:119:U:O2	2.29	0.51
1:z:213:LYS:HD3	44:5:2489:C:H6	0.77	0.51
1:z:260:ILE:HG21	44:5:2480:A:C8	2.46	0.51
2:A:17:THR:HA	44:5:2172:A:O3'	2.11	0.51
3:B:14:LEU:O	44:5:3010:U:O4'	2.29	0.51
3:B:262:TRP:CD1	16:O:66:LYS:N	2.78	0.51
3:B:294:GLY:N	3:B:303:LYS:O	2.38	0.51
5:D:547:ALA:O	5:D:551:ALA:CB	2.59	0.51
6:E:246:ARG:HB2	44:5:607:A:C5'	2.41	0.51
7:F:317:ARG:HH12	7:F:410:ASN:HA	1.75	0.51
7:F:368:LYS:HZ3	44:5:1103:A:H5''	1.75	0.51
9:H:258:HIS:CD2	20:S:150:PHE:HB2	2.46	0.51
12:s:249:ILE:CB	44:5:1274:A:OP2	2.58	0.51
13:L:11:LYS:HE2	44:5:86:G:H2'	1.91	0.51
15:N:26:ARG:N	44:5:316:U:H1'	2.25	0.51
15:N:67:ARG:CD	44:5:273:A:N6	2.73	0.51
15:N:81:TYR:N	44:5:2428:U:C5	2.78	0.51
15:N:153:ASP:CB	45:8:142:C:H6	2.23	0.51
20:S:11:GLY:HA2	20:S:58:ILE:HA	1.92	0.51
30:c:28:LYS:N	44:5:1730:G:O6	2.43	0.51
32:e:247:ILE:O	32:e:256:ARG:NH2	2.43	0.51
33:f:394:GLY:O	44:5:1327:C:H4'	2.09	0.51
41:o:49:GLY:HA2	44:5:277:G:O5'	2.10	0.51
43:q:44:GLU:N	44:5:1257:C:C2	2.77	0.51
43:q:57:THR:HG21	44:5:1284:C:N3	0.41	0.51
44:5:606:C:O2'	44:5:607:A:N3	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:1111:U:O2'	44:5:1112:A:O4'	2.27	0.51
44:5:1347:U:O2	44:5:1357:G:N2	2.39	0.51
44:5:2212:C:O2'	44:5:2233:A:N6	2.43	0.51
44:5:3348:G:C2	44:5:3357:U:O2	2.63	0.51
1:z:221:ARG:NH2	44:5:2471:U:O4'	2.32	0.51
4:C:82:THR:CB	44:5:364:G:HO2'	2.11	0.51
10:I:252:ALA:HA	10:I:255:ILE:HD12	1.93	0.51
12:s:281:ASP:C	44:5:1258:U:HO2'	2.11	0.51
15:N:8:GLU:OE1	44:5:322:U:C2'	2.59	0.51
16:O:27:LEU:HD11	16:O:102:LEU:HD22	1.92	0.51
17:P:82:ARG:HG3	44:5:2352:A:OP1	2.09	0.51
17:P:124:LYS:HA	17:P:143:PRO:HD2	1.93	0.51
24:W:268:ARG:O	24:W:272:LYS:CB	2.59	0.51
30:c:43:ILE:O	30:c:89:VAL:HA	2.11	0.51
34:g:51:LEU:HG	34:g:54:ILE:HG13	1.93	0.51
43:q:212:UNK:CB	48:y:12:UNK:CA	2.89	0.51
44:5:834:U:H2'	44:5:858:A:H61	1.76	0.51
44:5:835:G:N2	44:5:858:A:H8	1.91	0.51
44:5:1195:A:C2	44:5:1313:G:N1	2.67	0.51
44:5:2148:U:H3'	44:5:2187:G:H22	1.74	0.51
44:5:2188:A:N6	44:5:2320:A:N7	2.59	0.51
44:5:3306:U:O2'	44:5:3308:C:OP2	2.17	0.51
3:B:257:PRO:HG3	44:5:1305:U:N3	2.25	0.51
4:C:140:HIS:ND1	4:C:177:ASP:OD1	2.34	0.51
4:C:357:GLU:O	4:C:361:HIS:CB	2.54	0.51
5:D:369:THR:HA	5:D:372:LYS:HG2	1.92	0.51
5:D:373:LEU:HG	5:D:375:LEU:HD23	1.92	0.51
8:G:262:ARG:HD3	8:G:263:PRO:HD2	1.93	0.51
10:I:270:PHE:HA	10:I:325:THR:HA	1.92	0.51
10:I:286:LYS:O	10:I:306:LYS:NZ	2.37	0.51
15:N:5:LYS:C	44:5:109:A:C6	2.89	0.51
15:N:26:ARG:H	44:5:316:U:H1'	1.76	0.51
15:N:30:TYR:CE2	44:5:267:G:O2'	2.63	0.51
15:N:186:GLY:O	44:5:1548:C:OP2	2.29	0.51
18:Q:293:THR:HB	18:Q:299:ARG:HE	1.75	0.51
19:R:143:LYS:HE3	19:R:157:VAL:HG11	1.93	0.51
20:S:80:ARG:HG3	21:T:156:TYR:HB2	1.93	0.51
22:U:101:PRO:HG3	22:U:172:ILE:HD11	1.92	0.51
26:Y:87:LYS:CD	44:5:375:A:C4'	2.88	0.51
30:c:76:GLU:O	30:c:80:ALA:HB2	2.10	0.51
32:e:260:LEU:O	32:e:264:LYS:CB	2.57	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:q:50:VAL:HG13	44:5:1258:U:C2	2.46	0.51
43:q:81:LYS:HZ1	44:5:1282:G:H21	1.56	0.51
44:5:11:A:O2'	45:8:148:G:N2	2.44	0.51
44:5:44:U:O4	44:5:94:G:C2	2.63	0.51
44:5:498:A:H2	44:5:3273:A:H61	1.59	0.51
44:5:912:G:N2	44:5:917:A:N7	2.59	0.51
44:5:1136:A:H4'	44:5:2640:A:H2	1.75	0.51
44:5:1644:C:OP1	44:5:1819:U:N3	2.42	0.51
44:5:1924:U:O2'	44:5:2320:A:O2'	2.28	0.51
44:5:2196:C:C2'	44:5:2271:A:H1'	2.33	0.51
44:5:2660:G:O2'	44:5:2744:U:O2	2.27	0.51
44:5:2762:A:N6	44:5:2795:U:N3	2.32	0.51
44:5:2900:A:N6	44:5:3028:G:O6	2.44	0.51
47:x:26:UNK:O	48:y:15:UNK:C	2.29	0.51
1:z:400:VAL:N	44:5:2495:C:C5	2.54	0.51
4:C:114:ASN:O	4:C:118:LYS:CB	2.58	0.51
5:D:265:LYS:HG3	44:5:2686:A:H1'	1.92	0.51
8:G:374:ALA:HA	8:G:377:LYS:HD3	1.92	0.51
12:s:221:ALA:CA	44:5:1234:G:O4'	2.58	0.51
13:L:50:PRO:HG3	35:h:118:ILE:CD1	2.31	0.51
15:N:44:ARG:CB	44:5:320:G:H3'	2.25	0.51
15:N:64:VAL:HA	44:5:268:A:H4'	1.92	0.51
15:N:67:ARG:CG	44:5:272:G:O6	2.57	0.51
15:N:93:LYS:HE2	44:5:277:G:C2'	2.30	0.51
16:O:120:VAL:HG12	16:O:123:ALA:H	1.74	0.51
25:X:250:ALA:HB1	25:X:256:ILE:HA	1.93	0.51
30:c:42:ILE:HG13	30:c:67:VAL:HG13	1.93	0.51
33:f:330:LYS:O	33:f:349:LYS:CB	2.58	0.51
43:q:57:THR:O	44:5:1223:A:N7	2.41	0.51
44:5:122:A:O2'	44:5:145:G:N2	2.44	0.51
44:5:664:U:H2'	44:5:665:A:C8	2.46	0.51
44:5:1203:A:OP2	44:5:1301:A:N6	2.35	0.51
44:5:1547:G:O2'	44:5:1548:C:O4'	2.27	0.51
44:5:1664:G:C2	44:5:1785:U:O2	2.64	0.51
44:5:2160:G:H2'	44:5:2161:G:C8	2.46	0.51
44:5:3014:U:H2'	44:5:3015:G:H8	1.75	0.51
44:5:3177:G:O2'	44:5:3179:U:OP1	2.24	0.51
45:8:130:C:H2'	45:8:131:A:C8	2.46	0.51
1:z:399:LEU:N	44:5:2496:C:C6	2.75	0.51
2:A:30:ARG:HG3	2:A:76:PHE:HZ	1.75	0.51
2:A:206:PRO:HG3	2:A:213:GLY:HA3	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:163:HIS:ND1	3:B:164:THR:O	2.43	0.51
4:C:119:ARG:HG2	4:C:262:TRP:HZ3	1.76	0.51
6:E:246:ARG:HD3	44:5:607:A:C5'	2.41	0.51
6:E:362:GLN:O	6:E:366:ASP:CB	2.58	0.51
8:G:301:ASN:HA	8:G:304:VAL:HB	1.93	0.51
8:G:332:ALA:O	8:G:336:LYS:CB	2.59	0.51
9:H:239:LYS:HE3	44:5:3185:U:H5'	1.92	0.51
9:H:366:ARG:NH2	44:5:3108:G:O4'	2.44	0.51
10:I:381:PHE:CE2	44:5:1041:U:O2'	2.64	0.51
12:s:248:GLU:HA	43:q:36:GLN:HG2	1.92	0.51
15:N:31:ARG:NH1	36:i:82:ARG:CZ	2.41	0.51
15:N:41:ARG:CG	44:5:114:A:C8	2.94	0.51
15:N:43:THR:HG22	44:5:267:G:O6	2.11	0.51
15:N:65:ARG:CB	44:5:268:A:O4'	2.59	0.51
15:N:126:THR:OG1	44:5:272:G:N9	2.42	0.51
15:N:204:LYS:HB3	37:j:813:PHE:C	2.33	0.51
16:O:73:PHE:CZ	44:5:3007:U:H4'	2.45	0.51
20:S:69:PRO:CD	44:5:523:A:O2'	2.59	0.51
25:X:178:GLU:OE1	25:X:199:GLN:NE2	2.44	0.51
26:Y:51:ARG:HH21	26:Y:52:ARG:HH21	1.58	0.51
29:b:103:PRO:HA	29:b:106:ARG:HB2	1.93	0.51
29:b:118:LYS:O	29:b:122:ALA:HB3	2.11	0.51
33:f:327:VAL:HB	33:f:418:ILE:HB	1.91	0.51
33:f:364:GLY:N	33:f:389:VAL:O	2.42	0.51
37:j:789:LYS:HD2	44:5:2138:A:C6	2.40	0.51
39:l:26:TRP:HZ2	45:8:51:G:C4	2.29	0.51
42:p:10:ILE:HB	44:5:837:A:H4'	1.92	0.51
43:q:60:ARG:HA	43:q:77:LEU:HD21	1.93	0.51
44:5:535:G:N2	44:5:536:U:O4	2.39	0.51
44:5:938:C:O2'	44:5:2814:G:O2'	2.25	0.51
44:5:1921:A:OP2	44:5:1930:A:N6	2.25	0.51
44:5:2601:A:H2'	44:5:2602:G:H8	1.76	0.51
44:5:2714:G:N2	44:5:2752:U:OP2	2.43	0.51
45:8:60:U:O2	45:8:63:G:N2	2.44	0.51
2:A:215:ASN:CG	44:5:2968:G:N7	2.68	0.50
3:B:92:TYR:HB2	3:B:157:VAL:HG23	1.92	0.50
3:B:360:ASP:OD2	3:B:364:LYS:NZ	2.44	0.50
4:C:347:THR:O	44:5:520:U:C4	2.64	0.50
5:D:265:LYS:HG3	44:5:2686:A:C2'	2.40	0.50
5:D:365:ILE:HD13	5:D:368:ARG:HD2	1.92	0.50
5:D:408:ILE:HD11	44:5:2746:A:C2	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:399:LYS:HZ3	14:M:260:ALA:C	2.19	0.50
7:F:286:TYR:HA	21:T:140:ILE:CG2	2.41	0.50
11:J:152:ARG:CD	41:o:104:LEU:HD13	2.41	0.50
12:s:248:GLU:H	44:5:1231:A:P	2.34	0.50
12:s:279:ARG:HA	43:q:43:LYS:HB2	1.86	0.50
12:s:282:PHE:HA	44:5:1258:U:C1'	2.27	0.50
13:L:64:LYS:O	13:L:67:ARG:NH1	2.42	0.50
14:M:255:ARG:HH22	44:5:3207:U:H3'	1.76	0.50
15:N:5:LYS:N	44:5:109:A:N6	2.53	0.50
15:N:71:ARG:C	44:5:290:G:C2'	2.55	0.50
18:Q:127:GLY:N	44:5:1159:A:OP1	2.45	0.50
19:R:144:ARG:HH22	44:5:1602:A:H4'	1.76	0.50
19:R:154:LYS:HB2	44:5:1875:G:P	2.51	0.50
21:T:66:ASN:ND2	29:b:100:GLY:C	2.61	0.50
25:X:167:HIS:ND1	25:X:168:TYR:O	2.44	0.50
25:X:173:SER:HB2	25:X:216:LEU:HD21	1.93	0.50
27:Z:122:GLN:O	27:Z:125:LYS:NZ	2.29	0.50
28:a:167:LYS:HA	28:a:170:GLN:HB3	1.91	0.50
31:d:87:ALA:HB1	31:d:117:ILE:HG23	1.93	0.50
34:g:13:TYR:CE1	44:5:1854:C:H2'	2.46	0.50
36:i:63:ASN:ND2	44:5:2445:A:P	2.82	0.50
43:q:33:VAL:HB	44:5:1279:C:N4	2.25	0.50
43:q:35:SER:C	44:5:1262:G:N1	2.68	0.50
43:q:51:VAL:O	44:5:1280:C:H5'	2.11	0.50
43:q:57:THR:C	44:5:1285:G:C2	2.81	0.50
43:q:209:UNK:CB	47:x:3:UNK:HA	2.01	0.50
44:5:381:U:O2	44:5:388:G:C2	2.64	0.50
44:5:1029:G:H2'	44:5:1030:A:H8	1.75	0.50
44:5:1237:G:O6	44:5:1251:A:N1	2.44	0.50
44:5:1448:U:C4	44:5:2356:A:C8	2.98	0.50
44:5:2595:A:H5''	44:5:2596:U:H5	1.75	0.50
44:5:2600:C:H2'	44:5:2601:A:H8	1.77	0.50
44:5:3014:U:H2'	44:5:3015:G:C8	2.46	0.50
1:z:401:VAL:N	44:5:2452:G:C6	2.73	0.50
4:C:114:ASN:HD22	44:5:680:G:H5''	1.73	0.50
4:C:232:SER:OG	4:C:233:LEU:N	2.44	0.50
6:E:306:ARG:HD3	33:f:423:SER:O	2.11	0.50
6:E:382:TYR:CE2	14:M:264:PHE:CD1	2.98	0.50
7:F:330:THR:CA	21:T:133:ALA:O	2.59	0.50
9:H:291:ARG:HD2	9:H:343:GLU:HG2	1.94	0.50
10:I:304:TRP:CZ2	44:5:2646:C:C5'	2.95	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:I:381:PHE:HE1	44:5:1042:U:C5'	2.23	0.50
12:s:264:SER:N	44:5:1276:U:N1	2.39	0.50
12:s:282:PHE:O	44:5:1259:A:O3'	2.16	0.50
14:M:193:VAL:HG13	14:M:209:LEU:HD11	1.93	0.50
15:N:11:GLN:C	44:5:64:G:OP1	2.54	0.50
15:N:29:GLU:C	44:5:318:A:N6	2.62	0.50
15:N:72:LYS:CE	44:5:292:U:H1'	2.40	0.50
17:P:123:PRO:CD	45:8:14:C:OP1	2.57	0.50
18:Q:273:GLU:OE1	44:5:787:G:O5'	2.28	0.50
19:R:155:ARG:HH21	44:5:1873:U:C3'	2.20	0.50
20:S:110:MET:HB3	20:S:116:ALA:HB3	1.93	0.50
21:T:19:PHE:O	21:T:21:LYS:NZ	2.43	0.50
28:a:137:VAL:O	44:5:709:A:H1'	2.11	0.50
36:i:68:ARG:NH2	44:5:2218:G:OP1	2.44	0.50
44:5:280:U:N3	44:5:283:G:OP1	2.30	0.50
44:5:1081:U:H1'	44:5:1082:U:H5''	1.93	0.50
44:5:1554:U:C2	44:5:1559:A:N6	2.79	0.50
44:5:2719:U:H2'	44:5:2720:G:C8	2.44	0.50
44:5:3111:U:H3'	44:5:3112:G:H8	1.75	0.50
44:5:3231:U:O4	44:5:3256:G:O6	2.28	0.50
48:y:7:UNK:O	48:y:11:UNK:CB	2.60	0.50
1:z:407:PRO:CA	44:5:2451:G:OP1	2.54	0.50
1:z:410:ARG:CZ	44:5:2499:U:O2	2.59	0.50
2:A:28:LYS:NZ	2:A:122:ASP:O	2.43	0.50
3:B:15:GLY:C	44:5:3009:G:H21	2.18	0.50
3:B:126:LYS:HB2	44:5:3295:A:P	2.51	0.50
4:C:306:THR:N	44:5:1346:G:O2'	2.44	0.50
5:D:283:ARG:NH1	44:5:2703:A:C5	2.79	0.50
7:F:331:LYS:HZ1	44:5:988:U:P	2.15	0.50
8:G:288:ASP:OD1	44:5:120:G:C2	2.64	0.50
9:H:220:ILE:HG12	9:H:225:VAL:HG22	1.94	0.50
9:H:223:ARG:HH21	9:H:239:LYS:HG2	1.77	0.50
9:H:291:ARG:NH2	40:m:82:LEU:HD11	2.26	0.50
11:J:101:ARG:HH12	11:J:243:HIS:HA	1.76	0.50
12:s:152:LEU:C	44:5:1238:C:H2'	2.36	0.50
12:s:224:GLU:H	43:q:44:GLU:N	2.00	0.50
12:s:260:ARG:CB	44:5:1247:U:H1'	2.41	0.50
12:s:285:PRO:HA	43:q:39:HIS:ND1	2.25	0.50
12:s:294:ALA:O	44:5:1276:U:H3'	2.11	0.50
13:L:15:ARG:NH2	44:5:96:G:H4'	2.26	0.50
14:M:261:LEU:HD21	16:O:197:LEU:HB3	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:28:TRP:CH2	44:5:297:G:C1'	2.94	0.50
15:N:35:VAL:HG12	44:5:268:A:O3'	1.74	0.50
15:N:143:ARG:CB	45:8:143:U:H4'	2.41	0.50
18:Q:158:TYR:HA	18:Q:161:LEU:HB2	1.92	0.50
19:R:154:LYS:HD3	44:5:1875:G:C5'	2.42	0.50
24:W:158:ILE:HG12	24:W:177:GLN:HB2	1.94	0.50
28:a:193:ILE:HB	28:a:211:VAL:HG12	1.93	0.50
29:b:77:ASN:HA	29:b:80:ARG:HB3	1.93	0.50
32:e:274:LYS:HG2	32:e:277:LEU:HD12	1.92	0.50
34:g:12:PRO:HG2	44:5:1855:U:H1'	1.93	0.50
37:j:866:THR:O	45:8:95:G:N2	2.41	0.50
39:l:48:LYS:HE3	44:5:1844:C:OP1	2.11	0.50
43:q:57:THR:CA	44:5:1284:C:C4	2.93	0.50
43:q:68:SER:OG	44:5:1221:A:N6	2.45	0.50
44:5:275:U:C4	44:5:290:G:O6	2.65	0.50
44:5:991:G:N1	44:5:1058:U:N3	2.59	0.50
44:5:1632:A:OP2	44:5:1644:C:O2'	2.28	0.50
44:5:2196:C:O2'	44:5:2270:A:N3	2.37	0.50
44:5:2724:U:O4	44:5:2732:G:O6	2.29	0.50
44:5:2908:G:H21	44:5:3106:A:H1'	1.74	0.50
45:8:91:C:H2'	45:8:92:A:C8	2.46	0.50
1:z:225:GLU:O	44:5:2476:C:H3'	2.10	0.50
2:A:193:ARG:HH12	44:5:2174:G:P	2.34	0.50
4:C:73:ARG:HB3	44:5:805:G:C4'	2.41	0.50
5:D:331:GLY:HA3	46:7:115:G:N3	2.26	0.50
5:D:526:ALA:O	5:D:530:LYS:HB2	2.11	0.50
6:E:246:ARG:HG3	44:5:607:A:C5'	2.23	0.50
7:F:286:TYR:HB2	21:T:140:ILE:CD1	2.37	0.50
8:G:298:TYR:O	8:G:302:HIS:ND1	2.39	0.50
10:I:257:ALA:HB2	10:I:340:ALA:HB2	1.93	0.50
10:I:300:MET:O	44:5:2618:G:N1	2.45	0.50
12:s:222:LEU:HA	44:5:1233:G:P	2.47	0.50
12:s:223:LYS:C	44:5:1233:G:C4	2.89	0.50
12:s:251:ARG:N	44:5:1264:G:O6	2.40	0.50
12:s:281:ASP:CB	44:5:1260:A:C5	2.94	0.50
12:s:288:ILE:CB	43:q:36:GLN:C	2.84	0.50
15:N:18:VAL:C	44:5:315:C:C3'	2.82	0.50
15:N:93:LYS:CE	44:5:277:G:H2'	2.42	0.50
15:N:151:ILE:N	45:8:142:C:C4'	2.73	0.50
15:N:204:LYS:O	37:j:814:HIS:CD2	2.63	0.50
20:S:7:TYR:HA	20:S:63:GLN:HA	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Z:11:VAL:N	27:Z:80:LEU:O	2.40	0.50
29:b:113:LEU:HA	29:b:116:THR:HG22	1.94	0.50
30:c:78:GLY:O	30:c:83:LYS:N	2.37	0.50
33:f:338:LYS:HG3	44:5:1178:G:O6	2.11	0.50
33:f:378:ARG:HD2	44:5:622:A:H5'	1.94	0.50
42:p:47:VAL:HG22	42:p:57:CYS:HB2	1.93	0.50
44:5:676:G:N2	44:5:786:A:O2'	2.43	0.50
44:5:1660:C:H2'	44:5:1661:G:H8	1.76	0.50
44:5:2312:A:O2'	44:5:2315:G:N3	2.43	0.50
44:5:2446:U:H3	44:5:2447:A:H62	1.59	0.50
1:z:390:LYS:O	36:i:100:HIS:CE1	2.64	0.50
1:z:400:VAL:N	44:5:2494:A:H2	1.98	0.50
3:B:30:LYS:CB	44:5:3137:C:OP2	2.59	0.50
3:B:58:ARG:HA	3:B:357:LYS:HG2	1.93	0.50
4:C:73:ARG:O	44:5:805:G:H5'	2.11	0.50
4:C:98:ARG:CZ	44:5:933:A:C2	2.95	0.50
4:C:337:GLU:OE1	4:C:342:LYS:NZ	2.42	0.50
6:E:354:ILE:HG21	44:5:3268:A:C6	2.43	0.50
7:F:390:SER:OG	7:F:393:ASP:N	2.38	0.50
9:H:262:ARG:NH1	44:5:1211:U:OP1	2.27	0.50
9:H:361:LEU:HA	9:H:364:ILE:HG12	1.94	0.50
10:I:221:LEU:HD13	10:I:272:LEU:HD22	1.92	0.50
11:J:191:GLY:HA2	11:J:247:LYS:HA	1.92	0.50
11:J:234:ARG:NH1	11:J:235:CYS:SG	2.84	0.50
13:L:170:LEU:O	13:L:174:ARG:CB	2.60	0.50
13:L:170:LEU:O	13:L:174:ARG:HB3	2.12	0.50
15:N:22:LEU:HB3	44:5:316:U:H2'	1.92	0.50
15:N:189:LYS:HG3	44:5:1549:U:H5	1.77	0.50
15:N:198:SER:OG	15:N:199:LEU:N	2.44	0.50
26:Y:57:LEU:N	26:Y:105:VAL:O	2.45	0.50
28:a:84:SER:CB	44:5:1428:A:OP2	2.60	0.50
28:a:93:ARG:NH2	44:5:1431:G:OP1	2.39	0.50
32:e:170:ARG:HH21	32:e:184:ARG:HG3	1.76	0.50
34:g:52:GLN:HG3	44:5:1639:C:H5''	1.93	0.50
37:j:838:LYS:CE	44:5:363:G:OP1	2.59	0.50
37:j:838:LYS:HA	37:j:841:ARG:HE	1.77	0.50
40:m:94:SER:HB2	40:m:121:LEU:HD13	1.94	0.50
43:q:62:ALA:HB1	44:5:1221:A:H1'	1.87	0.50
44:5:21:G:H2'	45:8:36:G:N2	2.26	0.50
44:5:407:A:H8	45:8:16:G:H21	1.57	0.50
44:5:644:G:N2	44:5:2867:C:O2'	2.36	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:940:G:H2'	44:5:941:G:C8	2.46	0.50
44:5:1534:A:N6	44:5:1587:A:O5'	2.44	0.50
44:5:1922:A:N6	44:5:1929:G:N2	2.49	0.50
44:5:3325:G:H1'	44:5:3383:G:N2	2.26	0.50
1:z:223:PHE:HE1	44:5:2469:G:H22	1.59	0.50
1:z:344:THR:HG23	44:5:2479:C:H4'	1.90	0.50
3:B:230:THR:O	3:B:234:GLY:N	2.38	0.50
4:C:183:LYS:CG	44:5:1386:A:C2	2.92	0.50
7:F:286:TYR:HB2	21:T:140:ILE:CG2	2.41	0.50
8:G:330:LEU:O	8:G:334:CYS:HB2	2.12	0.50
9:H:204:ILE:HD11	14:M:190:GLN:NE2	2.27	0.50
13:L:16:LYS:HA	44:5:47:C:H5''	1.94	0.50
13:L:28:GLN:O	13:L:32:LYS:HB3	2.12	0.50
14:M:197:GLY:O	14:M:202:VAL:N	2.45	0.50
15:N:21:PHE:HZ	36:i:28:TYR:HD1	1.47	0.50
15:N:23:GLN:N	44:5:67:A:O2'	2.45	0.50
15:N:28:TRP:CZ3	44:5:297:G:C1'	2.95	0.50
15:N:49:ARG:H	44:5:321:C:H4'	1.76	0.50
15:N:188:ARG:N	44:5:1548:C:OP2	2.45	0.50
18:Q:140:HIS:CE1	44:5:976:U:O4	2.65	0.50
27:Z:1:ALA:N	30:c:63:SER:HB2	2.26	0.50
29:b:69:LYS:NZ	44:5:2618:G:P	2.85	0.50
39:l:40:LYS:CE	44:5:355:A:C3'	2.76	0.50
43:q:3:GLY:CA	44:5:1217:A:C2'	2.89	0.50
44:5:26:A:N1	44:5:59:G:C2	2.80	0.50
44:5:85:A:H61	44:5:99:A:H5''	1.76	0.50
44:5:159:A:H2'	44:5:160:G:C8	2.47	0.50
44:5:1565:G:H3'	44:5:1566:A:C8	2.46	0.50
44:5:2149:A:C8	44:5:2187:G:N2	2.78	0.50
44:5:2279:A:C5	44:5:2283:G:C6	3.00	0.50
44:5:3231:U:C4	44:5:3256:G:C6	2.99	0.50
6:E:237:GLU:HG2	32:e:155:LEU:HD22	1.93	0.50
6:E:354:ILE:CG2	44:5:3268:A:C6	2.94	0.50
7:F:376:ASN:OD1	7:F:391:ILE:N	2.45	0.50
10:I:284:ILE:N	10:I:306:LYS:O	2.45	0.50
14:M:191:LYS:NZ	44:5:1185:C:H5''	2.26	0.50
15:N:30:TYR:HB2	44:5:317:A:N1	2.27	0.50
15:N:31:ARG:O	44:5:268:A:N6	2.44	0.50
15:N:74:PRO:CB	44:5:292:U:OP1	2.58	0.50
19:R:142:GLN:O	19:R:146:ALA:HB2	2.12	0.50
23:V:176:ASN:H	44:5:2917:G:H5'	1.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Y:100:HIS:CE1	44:5:217:U:HO2'	2.26	0.50
28:a:201:ASN:HD22	28:a:222:ALA:HA	1.77	0.50
32:e:155:LEU:N	32:e:241:LYS:O	2.41	0.50
32:e:234:GLU:HG2	32:e:262:ARG:HH21	1.77	0.50
33:f:367:ILE:HA	33:f:417:ARG:O	2.11	0.50
34:g:58:ARG:HH22	44:5:1655:G:C4'	2.25	0.50
35:h:93:THR:O	35:h:97:ALA:HB2	2.12	0.50
36:i:2:THR:N	36:i:12:ASN:OD1	2.45	0.50
44:5:208:C:H2'	44:5:209:A:C8	2.46	0.50
44:5:289:A:H2'	44:5:290:G:H8	1.76	0.50
44:5:308:A:H5'	44:5:2223:A:H1'	1.92	0.50
44:5:1144:U:OP1	44:5:1367:G:O2'	2.28	0.50
44:5:2232:A:N3	44:5:2428:U:O2'	2.40	0.50
44:5:2246:G:O3'	44:5:2247:G:P	2.70	0.50
44:5:2744:U:N3	44:5:2749:G:N1	2.35	0.50
44:5:2890:A:O2'	44:5:2933:A:N3	2.33	0.50
1:z:372:ASP:OD2	44:5:2488:A:N6	2.33	0.50
1:z:400:VAL:HA	44:5:2495:C:C4	2.34	0.50
2:A:247:ARG:NH1	44:5:2243:A:OP2	2.45	0.50
4:C:46:LYS:HD2	44:5:692:A:O2'	2.12	0.50
4:C:338:LYS:NZ	44:5:579:G:OP2	2.42	0.50
5:D:520:PHE:HB3	5:D:524:GLN:HB2	1.93	0.50
5:D:536:LYS:NZ	46:7:61:G:OP1	2.36	0.50
8:G:235:VAL:N	8:G:398:GLY:O	2.38	0.50
9:H:228:VAL:HG22	9:H:233:THR:HG22	1.94	0.50
9:H:303:ILE:HA	9:H:311:PHE:O	2.11	0.50
9:H:326:VAL:HG11	9:H:361:LEU:HD13	1.93	0.50
9:H:374:LYS:HB2	40:m:127:LEU:CD2	2.42	0.50
12:s:237:HIS:HA	44:5:1256:G:C8	2.32	0.50
12:s:239:GLY:N	44:5:1257:C:H6	2.02	0.50
13:L:30:GLY:O	13:L:34:SER:HB2	2.11	0.50
15:N:91:GLU:CD	41:o:49:GLY:HA2	2.37	0.50
15:N:128:LYS:HZ3	44:5:289:A:P	2.33	0.50
15:N:159:ARG:N	15:N:162:ARG:HH21	2.10	0.50
19:R:137:ALA:CA	44:5:1471:U:H1'	2.42	0.50
21:T:90:ASN:HB3	44:5:2736:A:H1'	1.93	0.50
24:W:172:LYS:NZ	24:W:173:ILE:O	2.32	0.50
25:X:222:LEU:HB3	25:X:239:ARG:HB3	1.94	0.50
34:g:24:LYS:NZ	44:5:1694:U:H4'	2.27	0.50
34:g:55:SER:HA	44:5:1739:U:O3'	2.11	0.50
37:j:789:LYS:HE3	44:5:2138:A:N1	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:j:802:HIS:H	37:j:811:ARG:HH21	1.60	0.50
38:k:32:ASN:OD1	38:k:36:LYS:N	2.44	0.50
39:l:35:ILE:CD1	44:5:351:A:N7	2.75	0.50
39:l:40:LYS:HE2	44:5:355:A:C4'	2.35	0.50
43:q:3:GLY:CA	44:5:1217:A:H2'	2.41	0.50
44:5:101:G:OP2	44:5:102:C:N4	2.45	0.50
44:5:177:U:O2'	44:5:241:G:N2	2.34	0.50
44:5:393:U:H3'	44:5:394:G:H8	1.77	0.50
44:5:646:A:H3'	44:5:647:A:H8	1.76	0.50
44:5:1018:G:O6	44:5:1034:U:O4	2.25	0.50
44:5:1423:C:H2'	44:5:1424:C:H6	1.77	0.50
44:5:1523:U:H2'	44:5:1607:U:H1'	1.94	0.50
44:5:1567:U:O2'	44:5:1573:G:O6	2.28	0.50
44:5:2372:A:H5''	44:5:2373:A:H8	1.76	0.50
44:5:3321:C:H2'	44:5:3322:A:C8	2.47	0.50
45:8:9:A:H2'	45:8:10:A:C8	2.46	0.50
45:8:130:C:H2'	45:8:131:A:H8	1.76	0.50
48:y:21:UNK:O	48:y:25:UNK:CB	2.60	0.50
2:A:117:GLU:HG2	2:A:124:GLY:H	1.77	0.50
2:A:188:LYS:NZ	44:5:1793:C:O2	2.45	0.50
2:A:224:THR:HB	44:5:2202:C:H1'	1.93	0.50
3:B:128:LYS:O	3:B:131:THR:OG1	2.24	0.50
4:C:320:ASN:O	4:C:324:LEU:HB2	2.12	0.50
5:D:545:ARG:HH12	46:7:62:U:C4'	2.25	0.50
7:F:279:ALA:HB2	7:F:286:TYR:HB3	1.93	0.50
12:s:236:LYS:C	44:5:1255:C:O5'	2.25	0.50
15:N:6:TYR:HB2	44:5:110:G:H1'	1.93	0.50
15:N:23:GLN:HG3	44:5:317:A:C4'	2.41	0.50
15:N:38:ARG:HH12	15:N:60:VAL:HG13	1.76	0.50
15:N:91:GLU:CB	44:5:277:G:C8	2.66	0.50
23:V:175:LEU:CD1	44:5:2916:U:H5'	2.28	0.50
23:V:231:ILE:HG13	23:V:239:LYS:HG3	1.94	0.50
26:Y:76:LEU:HD23	45:8:74:U:OP1	2.09	0.50
27:Z:47:ARG:HB2	27:Z:67:ILE:HA	1.94	0.50
34:g:74:ARG:NH1	34:g:75:ALA:O	2.44	0.50
35:h:106:LYS:O	35:h:110:ALA:CB	2.60	0.50
41:o:4:VAL:HG23	41:o:93:LEU:HA	1.94	0.50
43:q:217:UNK:O	48:y:17:UNK:O	2.29	0.50
44:5:170:G:H2'	44:5:171:G:C8	2.47	0.50
44:5:273:A:H2'	44:5:274:G:C8	2.47	0.50
44:5:709:A:H3'	44:5:710:A:H8	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:1060:U:H2'	44:5:1061:A:C8	2.47	0.50
44:5:1490:A:H3'	44:5:1491:A:H8	1.75	0.50
44:5:1497:C:H2'	44:5:1498:A:C8	2.47	0.50
44:5:1602:A:H2'	44:5:1603:A:C4	2.47	0.50
44:5:2154:U:H2'	44:5:2155:G:C8	2.46	0.50
44:5:2862:U:H2'	44:5:2863:G:C8	2.41	0.50
1:z:278:ASP:HB3	1:z:343:VAL:HG23	1.94	0.49
2:A:181:LYS:HD2	44:5:860:G:C8	2.47	0.49
3:B:232:ARG:NE	3:B:269:GLN:O	2.45	0.49
4:C:84:ARG:HB2	44:5:365:A:H4'	1.93	0.49
5:D:274:SER:C	46:7:11:A:H61	2.20	0.49
6:E:246:ARG:HD3	44:5:607:A:H5'	1.92	0.49
9:H:226:LYS:HB2	44:5:3198:U:O4	2.12	0.49
9:H:231:ARG:HH21	9:H:284:LYS:HA	1.76	0.49
9:H:324:ARG:NH1	9:H:364:ILE:O	2.45	0.49
10:I:238:VAL:HA	10:I:319:ILE:HA	1.93	0.49
13:L:58:VAL:HG23	13:L:101:ARG:HH21	1.77	0.49
13:L:183:ARG:HG3	13:L:186:ARG:HD2	1.93	0.49
14:M:257:ARG:HD2	14:M:260:ALA:HB3	1.94	0.49
15:N:10:LEU:HD23	44:5:77:A:H4'	1.94	0.49
15:N:93:LYS:HB3	44:5:289:A:H1'	1.94	0.49
15:N:147:ARG:O	15:N:150:TRP:NE1	2.41	0.49
19:R:154:LYS:HB2	44:5:1875:G:OP1	2.12	0.49
20:S:87:THR:OG1	21:T:156:TYR:CE1	2.60	0.49
23:V:157:ASN:ND2	23:V:241:SER:OG	2.37	0.49
26:Y:39:LEU:HA	26:Y:42:GLN:HG2	1.94	0.49
31:d:83:PHE:HA	31:d:86:ARG:HD2	1.94	0.49
31:d:109:LEU:N	44:5:1460:A:H5'	2.24	0.49
34:g:99:LYS:NZ	44:5:2555:G:H1	2.09	0.49
35:h:83:LYS:HZ3	37:j:852:TYR:HE1	1.60	0.49
37:j:838:LYS:HZ3	44:5:363:G:P	2.35	0.49
40:m:122:ARG:NH2	44:5:2897:A:H5'	2.27	0.49
42:p:42:CYS:HB3	42:p:60:CYS:HB2	1.93	0.49
44:5:718:G:C4	44:5:721:G:H1'	2.47	0.49
44:5:727:G:H3'	44:5:728:G:H8	1.77	0.49
44:5:978:G:N2	44:5:979:U:O4	2.31	0.49
44:5:996:A:H2	46:7:80:G:H1'	1.77	0.49
44:5:1248:C:OP2	44:5:1269:U:N3	2.37	0.49
44:5:2340:U:H2'	44:5:2341:A:C8	2.47	0.49
44:5:2744:U:C4	44:5:2749:G:O6	2.65	0.49
46:7:76:A:H4'	46:7:77:G:H4'	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:z:224:LEU:N	44:5:2475:G:O5'	2.42	0.49
4:C:165:ALA:O	4:C:169:LEU:HB2	2.12	0.49
5:D:276:PHE:CE1	44:5:2688:U:C5	2.99	0.49
8:G:192:HIS:NE2	27:Z:127:GLN:NE2	2.58	0.49
11:J:246:THR:OG1	11:J:249:ASP:N	2.41	0.49
13:L:63:VAL:HG13	44:5:72:C:H5'	1.93	0.49
14:M:163:LEU:O	14:M:168:ARG:NH2	2.43	0.49
15:N:10:LEU:CA	44:5:64:G:H4'	2.11	0.49
15:N:44:ARG:HB3	44:5:321:C:H5	1.76	0.49
15:N:129:TYR:OH	44:5:270:U:H2'	1.75	0.49
16:O:17:GLY:HA3	44:5:1313:G:O3'	2.12	0.49
16:O:171:LYS:HZ3	44:5:3181:C:P	2.25	0.49
17:P:82:ARG:HD2	44:5:2352:A:P	2.52	0.49
23:V:133:ASN:OD1	44:5:3017:A:H5'	2.12	0.49
29:b:115:GLY:O	29:b:119:ALA:HB3	2.12	0.49
31:d:114:ASN:HA	31:d:117:ILE:HD12	1.94	0.49
32:e:199:GLY:O	44:5:426:G:O4'	2.30	0.49
34:g:13:TYR:CZ	44:5:1854:C:H2'	2.48	0.49
34:g:92:ALA:O	34:g:96:GLU:CB	2.60	0.49
43:q:7:LYS:HB3	44:5:1218:U:H4'	0.57	0.49
43:q:36:GLN:HB3	44:5:1276:U:O4	2.12	0.49
44:5:778:U:H2'	44:5:779:G:C8	2.47	0.49
44:5:840:C:H2'	44:5:841:A:H8	1.77	0.49
44:5:1000:C:O2'	44:5:1003:A:OP2	2.30	0.49
44:5:1230:G:H2'	44:5:1231:A:O4'	2.12	0.49
44:5:2818:U:O2'	44:5:2870:C:N4	2.45	0.49
44:5:3229:G:C6	44:5:3258:U:C4	2.95	0.49
44:5:3382:U:H3'	44:5:3383:G:H8	1.77	0.49
47:x:15:UNK:CB	48:y:31:UNK:CB	2.90	0.49
48:y:9:UNK:O	48:y:13:UNK:CB	2.60	0.49
3:B:144:ILE:O	3:B:148:LEU:CB	2.60	0.49
4:C:9:HIS:HB2	4:C:152:VAL:HG22	1.94	0.49
4:C:23:PRO:HG2	4:C:258:LEU:HD23	1.95	0.49
4:C:253:ALA:O	4:C:257:LYS:CB	2.60	0.49
5:D:288:THR:OG1	46:7:7:G:OP2	2.21	0.49
8:G:333:LEU:HA	8:G:336:LYS:HB3	1.93	0.49
12:s:225:PRO:N	44:5:1233:G:N3	2.55	0.49
12:s:237:HIS:N	44:5:1255:C:O5'	2.42	0.49
15:N:91:GLU:CG	44:5:276:U:O3'	2.56	0.49
17:P:9:THR:OG1	17:P:10:ASN:N	2.43	0.49
17:P:29:THR:O	17:P:33:ALA:CB	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:P:67:ILE:HD11	44:5:1447:G:H3'	1.94	0.49
17:P:96:GLN:NE2	44:5:383:G:H5'	2.27	0.49
21:T:66:ASN:O	21:T:73:GLY:N	2.45	0.49
34:g:41:ARG:NH2	44:5:1705:U:O4	2.45	0.49
34:g:99:LYS:NZ	44:5:2555:G:O6	2.38	0.49
41:o:36:PHE:HD1	41:o:41:ARG:HD3	1.76	0.49
44:5:442:G:N1	44:5:494:G:O5'	2.45	0.49
44:5:707:U:C2	44:5:712:G:N1	2.72	0.49
44:5:1886:A:H2'	44:5:1887:A:C8	2.47	0.49
44:5:2613:U:H1'	44:5:2804:A:H5''	1.94	0.49
44:5:3113:A:H3'	44:5:3118:C:H41	1.77	0.49
1:z:223:PHE:N	44:5:2476:C:C5	2.73	0.49
3:B:120:LYS:HE3	44:5:3000:A:O3'	2.11	0.49
4:C:265:GLU:HG2	4:C:266:THR:HG23	1.94	0.49
6:E:248:ALA:HB1	44:5:607:A:C6	2.47	0.49
6:E:267:LEU:HD11	6:E:309:ILE:HG13	1.93	0.49
10:I:225:LYS:HZ2	44:5:1010:G:P	2.18	0.49
15:N:4:TYR:CB	44:5:321:C:O2	2.61	0.49
15:N:5:LYS:HD3	44:5:323:A:O5'	2.12	0.49
15:N:180:PHE:CD2	44:5:53:G:N1	2.81	0.49
16:O:20:ALA:HA	16:O:23:VAL:HB	1.94	0.49
23:V:213:SER:HA	23:V:223:TYR:HB3	1.95	0.49
26:Y:119:ILE:HG21	26:Y:126:LEU:HB3	1.94	0.49
34:g:67:LYS:HE3	44:5:1804:A:C5'	2.42	0.49
35:h:43:LYS:O	35:h:46:THR:OG1	2.24	0.49
37:j:798:HIS:O	37:j:800:LYS:NZ	2.39	0.49
37:j:807:ARG:HH21	45:8:104:A:H5''	1.77	0.49
43:q:40:GLU:CG	44:5:1261:G:C2'	2.79	0.49
44:5:1592:G:H5'	44:5:1800:A:H2	1.77	0.49
44:5:1660:C:H2'	44:5:1661:G:C8	2.47	0.49
44:5:1726:C:H2'	44:5:1727:G:C8	2.47	0.49
44:5:1959:G:O4'	44:5:2079:G:N2	2.44	0.49
44:5:2486:A:O2'	44:5:2487:U:O5'	2.26	0.49
44:5:2958:A:N1	44:5:2975:U:C4	2.80	0.49
45:8:77:A:H3'	45:8:78:G:C8	2.47	0.49
5:D:269:SER:OG	5:D:272:TYR:N	2.42	0.49
6:E:233:TRP:CH2	44:5:1354:G:C4	3.01	0.49
8:G:224:ARG:NH1	44:5:2585:G:N2	2.60	0.49
10:I:274:VAL:HG22	10:I:321:PHE:HE1	1.76	0.49
12:s:215:SER:CB	44:5:1246:G:O5'	2.53	0.49
15:N:25:VAL:CG1	44:5:299:G:H1	2.25	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:30:TYR:C	44:5:295:A:N6	2.70	0.49
17:P:32:THR:HG21	17:P:87:SER:HB3	1.93	0.49
19:R:239:ARG:HH22	44:5:1949:G:H5''	1.77	0.49
21:T:54:HIS:HB3	21:T:57:TYR:HE2	1.78	0.49
39:l:21:ARG:HD2	45:8:52:A:H5'	1.95	0.49
42:p:2:ALA:N	44:5:853:G:C5	2.81	0.49
44:5:761:A:H8	44:5:770:G:H22	1.43	0.49
44:5:1018:G:OP1	44:5:1035:G:N2	2.44	0.49
44:5:1168:U:O4	44:5:1329:U:O2'	2.31	0.49
44:5:1269:U:H2'	44:5:1271:A:H5''	1.94	0.49
44:5:1503:A:N6	44:5:1516:C:O4'	2.45	0.49
44:5:2248:C:H4'	44:5:2272:G:H8	1.78	0.49
44:5:2282:U:OP1	44:5:2973:G:O2'	2.30	0.49
47:x:40:UNK:O	47:x:44:UNK:CB	2.60	0.49
1:z:260:ILE:CG2	44:5:2480:A:H3'	2.04	0.49
2:A:6:ARG:HG2	2:A:10:LYS:HE2	1.94	0.49
3:B:187:SER:O	3:B:190:GLU:N	2.37	0.49
4:C:73:ARG:HD3	44:5:805:G:H1'	1.95	0.49
4:C:305:ALA:HA	44:5:1347:U:C4'	2.42	0.49
5:D:296:LEU:N	44:5:2748:A:O2'	2.44	0.49
7:F:286:TYR:HB2	21:T:140:ILE:HG23	1.95	0.49
9:H:217:THR:O	9:H:228:VAL:HB	2.12	0.49
9:H:321:LYS:NZ	44:5:3020:U:O2'	2.27	0.49
12:s:288:ILE:CA	44:5:1260:A:O2'	2.61	0.49
13:L:124:ILE:HD11	35:h:120:ALA:OXT	2.12	0.49
15:N:7:LEU:HD23	44:5:321:C:H42	1.18	0.49
15:N:9:GLU:OE1	44:5:63:A:C2	2.65	0.49
15:N:32:GLN:OE1	44:5:297:G:P	2.70	0.49
15:N:42:PRO:C	44:5:320:G:C4	2.91	0.49
15:N:76:PRO:C	44:5:2430:A:C6	2.52	0.49
18:Q:301:ARG:O	28:a:132:GLY:N	2.45	0.49
18:Q:305:ARG:NH1	18:Q:310:LYS:O	2.46	0.49
20:S:108:GLN:HE22	44:5:1322:U:C2'	2.26	0.49
21:T:115:LYS:O	21:T:119:ALA:CB	2.61	0.49
22:U:113:ALA:O	22:U:117:ILE:HB	2.13	0.49
29:b:115:GLY:O	44:5:1073:U:H4'	2.11	0.49
29:b:120:LEU:HA	29:b:123:ALA:HB3	1.95	0.49
31:d:63:LYS:HD3	31:d:146:PRO:HB2	1.94	0.49
35:h:31:LEU:O	35:h:35:LYS:CB	2.61	0.49
44:5:347:G:N2	44:5:353:G:O4'	2.45	0.49
44:5:1578:C:H2'	44:5:1579:C:C2	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:1666:G:O6	44:5:1783:U:O4	2.31	0.49
44:5:1894:U:O2'	44:5:3054:U:O5'	2.30	0.49
44:5:2186:U:O2'	44:5:2313:A:N3	2.37	0.49
44:5:2837:A:H2'	44:5:2845:A:N1	2.27	0.49
44:5:2999:U:O4	44:5:3149:G:O6	2.30	0.49
44:5:3353:G:H4'	44:5:3354:U:C5	2.48	0.49
46:7:48:U:N3	46:7:49:G:N7	2.60	0.49
1:z:223:PHE:HD1	44:5:2475:G:N1	2.10	0.49
3:B:13:HIS:HD2	44:5:3011:A:C8	2.31	0.49
3:B:59:ASP:HA	3:B:71:GLU:HG2	1.94	0.49
3:B:128:LYS:O	44:5:3150:A:H5'	2.13	0.49
3:B:147:GLU:HA	3:B:150:ARG:HB3	1.93	0.49
3:B:230:THR:HB	3:B:247:ARG:HH21	1.77	0.49
4:C:323:VAL:HG23	4:C:326:ARG:HD2	1.94	0.49
7:F:273:ILE:O	7:F:277:ARG:HB2	2.11	0.49
7:F:306:PRO:HB2	7:F:309:PRO:HD2	1.94	0.49
8:G:212:ARG:CZ	44:5:2526:C:C2	2.96	0.49
10:I:341:ARG:HA	10:I:344:PHE:HD2	1.77	0.49
12:s:219:ILE:O	43:q:43:LYS:HB2	2.12	0.49
12:s:268:GLU:O	44:5:1264:G:C3'	2.38	0.49
13:L:30:GLY:O	13:L:34:SER:OG	2.28	0.49
13:L:50:PRO:HD3	35:h:118:ILE:HB	1.95	0.49
15:N:8:GLU:O	44:5:64:G:O5'	2.31	0.49
15:N:72:LYS:HE3	44:5:292:U:H1'	1.89	0.49
15:N:81:TYR:HD1	44:5:2427:U:N1	2.10	0.49
17:P:121:GLN:CG	45:8:13:A:O2'	2.60	0.49
18:Q:163:ARG:HD2	44:5:1347:U:P	2.53	0.49
21:T:22:HIS:HB3	44:5:2701:U:OP1	2.12	0.49
22:U:178:LYS:H	22:U:181:GLU:HB2	1.77	0.49
30:c:50:VAL:HA	30:c:53:LYS:HE2	1.94	0.49
32:e:164:HIS:HE2	32:e:202:SER:HB2	1.76	0.49
36:i:26:ILE:HD13	44:5:264:G:N2	2.27	0.49
43:q:6:GLU:N	44:5:1219:C:C4	2.79	0.49
43:q:45:LEU:HB2	44:5:1257:C:C6	2.45	0.49
43:q:217:UNK:O	48:y:42:UNK:CA	2.61	0.49
44:5:340:C:C2	45:8:25:G:N2	2.81	0.49
44:5:342:A:H8	45:8:21:C:H42	1.61	0.49
44:5:353:G:N1	44:5:365:A:OP2	2.32	0.49
44:5:1132:C:H2'	44:5:1133:A:C8	2.47	0.49
44:5:1655:G:C2	44:5:1800:A:N6	2.81	0.49
44:5:2149:A:H62	44:5:2187:G:H1'	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:2352:A:H2'	44:5:2353:G:C8	2.48	0.49
1:z:229:LEU:N	44:5:2477:G:O2'	2.46	0.49
1:z:259:SER:HB2	44:5:2486:A:H5''	1.95	0.49
1:z:366:ASN:CA	44:5:2469:G:C4	2.96	0.49
2:A:200:ARG:NH2	44:5:2186:U:OP2	2.45	0.49
3:B:22:ALA:CB	44:5:3139:A:OP1	2.59	0.49
3:B:243:HIS:HB2	44:5:2949:U:P	2.52	0.49
3:B:257:PRO:HA	44:5:1305:U:C4	2.48	0.49
3:B:287:LYS:HA	3:B:320:ASP:HA	1.94	0.49
5:D:522:LYS:O	5:D:526:ALA:CB	2.61	0.49
10:I:200:LYS:NZ	44:5:2634:U:C4'	2.75	0.49
10:I:359:THR:HG22	10:I:361:LEU:H	1.78	0.49
11:J:123:ARG:HB3	11:J:211:ILE:HG23	1.94	0.49
12:s:274:GLN:CB	43:q:43:LYS:HD2	2.42	0.49
15:N:41:ARG:CB	44:5:114:A:C8	2.96	0.49
15:N:43:THR:OG1	44:5:320:G:C8	2.66	0.49
15:N:153:ASP:CA	45:8:142:C:C6	2.94	0.49
17:P:55:GLN:O	44:5:3298:C:O2'	2.30	0.49
18:Q:270:ASN:ND2	44:5:745:C:P	2.86	0.49
18:Q:299:ARG:HA	18:Q:303:ARG:HG3	1.93	0.49
19:R:258:LEU:O	19:R:262:SER:OG	2.29	0.49
23:V:226:ASP:N	23:V:226:ASP:OD1	2.45	0.49
26:Y:87:LYS:HZ2	44:5:375:A:C3'	2.26	0.49
26:Y:113:LYS:O	26:Y:117:ALA:CB	2.60	0.49
41:o:86:LYS:NZ	44:5:2654:C:H42	2.10	0.49
42:p:83:ILE:O	42:p:87:ARG:CB	2.54	0.49
43:q:63:ILE:HB	43:q:77:LEU:HG	1.95	0.49
44:5:442:G:H2'	44:5:443:G:C2	2.48	0.49
44:5:668:G:O6	44:5:794:U:O4	2.30	0.49
44:5:1487:G:N2	44:5:1855:U:O2	2.35	0.49
44:5:1646:G:N2	44:5:1808:G:H1'	2.28	0.49
44:5:1878:G:H21	44:5:1879:A:H5''	1.77	0.49
44:5:1910:A:N3	44:5:2333:C:O2'	2.38	0.49
47:x:9:UNK:O	48:y:4:UNK:CA	2.38	0.49
47:x:26:UNK:CB	48:y:14:UNK:N	2.75	0.49
1:z:318:LEU:HD22	1:z:323:LEU:HB2	1.94	0.49
1:z:350:ILE:HD12	1:z:382:VAL:HG12	1.93	0.49
6:E:242:LEU:HD12	44:5:591:G:C2	2.48	0.49
6:E:370:ILE:HA	6:E:373:ILE:HB	1.95	0.49
14:M:204:ARG:NH2	14:M:227:THR:OG1	2.46	0.49
15:N:18:VAL:HG23	36:i:25:LYS:NZ	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:77:LYS:NZ	44:5:2431:C:P	2.86	0.49
15:N:91:GLU:OE1	41:O:49:GLY:HA2	2.13	0.49
19:R:245:ARG:HD3	19:R:252:LYS:HA	1.95	0.49
25:X:208:GLN:O	25:X:212:ALA:CB	2.59	0.49
27:Z:37:PHE:CE2	27:Z:39:HIS:HB3	2.48	0.49
28:a:90:ARG:NH2	44:5:1430:U:N3	2.60	0.49
31:d:109:LEU:HB2	44:5:1460:A:O5'	2.13	0.49
33:f:359:ALA:HA	33:f:362:TYR:HD2	1.78	0.49
43:q:12:PHE:HE2	44:5:1222:G:P	2.16	0.49
43:q:60:ARG:CB	44:5:1285:G:C2	2.96	0.49
44:5:412:G:C6	45:8:12:A:C6	3.00	0.49
44:5:3241:G:H2'	44:5:3245:A:H2'	1.94	0.49
45:8:40:A:N6	45:8:104:A:O4'	2.45	0.49
1:z:383:ASN:ND2	44:5:2493:U:OP1	2.46	0.49
3:B:14:LEU:HB2	44:5:3010:U:H5'	1.92	0.49
5:D:274:SER:CA	46:7:11:A:H61	2.25	0.49
12:s:199:LEU:O	44:5:1239:C:O5'	2.17	0.49
15:N:81:TYR:CD1	44:5:2427:U:H2'	2.36	0.49
15:N:139:HIS:HA	44:5:145:G:C4'	2.42	0.49
16:O:54:TYR:O	16:O:58:LEU:HB2	2.13	0.49
17:P:74:LYS:HZ3	44:5:3297:U:C3'	2.25	0.49
19:R:145:LEU:HA	19:R:148:SER:HB3	1.94	0.49
20:S:78:TRP:HA	20:S:90:MET:O	2.13	0.49
20:S:107:TYR:O	20:S:111:ALA:HB3	2.13	0.49
20:S:115:ARG:CZ	44:5:1321:G:O4'	2.61	0.49
22:U:120:ILE:HG22	22:U:122:VAL:HG23	1.95	0.49
22:U:136:THR:OG1	22:U:143:THR:O	2.24	0.49
24:W:259:GLU:O	24:W:264:GLU:N	2.45	0.49
25:X:172:ASP:OD1	25:X:172:ASP:N	2.41	0.49
27:Z:43:ALA:HA	27:Z:70:PHE:O	2.13	0.49
27:Z:63:LYS:NZ	44:5:1630:U:H5	2.11	0.49
31:d:118:TRP:CZ2	44:5:1475:A:H2	2.30	0.49
32:e:177:HIS:CD2	44:5:409:A:H5''	2.48	0.49
43:q:8:LYS:HA	44:5:1219:C:OP2	2.08	0.49
44:5:161:G:H2'	44:5:162:G:H8	1.77	0.49
44:5:195:U:O4	44:5:199:A:N7	2.45	0.49
44:5:1034:U:H2'	44:5:1035:G:H8	1.78	0.49
44:5:1239:C:H2'	44:5:1240:A:C8	2.48	0.49
44:5:1932:A:H3'	44:5:1933:A:C8	2.48	0.49
44:5:2467:G:O2'	44:5:2469:G:O2'	2.30	0.49
44:5:2600:C:H2'	44:5:2601:A:C8	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:2689:A:N6	44:5:2702:A:O2'	2.46	0.49
44:5:2834:G:O6	44:5:2854:U:O4	2.31	0.49
45:8:98:U:OP2	45:8:99:C:N4	2.46	0.49
1:z:216:ASN:C	44:5:2489:C:N4	2.54	0.48
1:z:368:GLU:O	44:5:2469:G:O2'	2.29	0.48
2:A:111:THR:HB	2:A:136:ILE:HD13	1.94	0.48
3:B:130:PHE:CE1	44:5:3148:U:O2'	2.65	0.48
4:C:79:GLY:HA2	44:5:364:G:O4'	2.13	0.48
4:C:197:ARG:CD	44:5:1381:A:H5''	2.41	0.48
5:D:468:MET:O	5:D:472:ALA:HB2	2.13	0.48
5:D:523:GLU:O	5:D:527:ALA:CB	2.61	0.48
6:E:233:TRP:CH2	44:5:1353:U:C4	3.01	0.48
11:J:128:LEU:O	11:J:132:SER:OG	2.29	0.48
13:L:74:GLY:O	13:L:101:ARG:NH1	2.46	0.48
29:b:110:LYS:O	29:b:114:HIS:CB	2.53	0.48
32:e:167:LYS:HE2	44:5:1404:G:O6	2.13	0.48
34:g:6:THR:CB	44:5:1486:G:N2	2.76	0.48
43:q:20:GLU:HG2	43:q:23:LYS:HE2	1.94	0.48
44:5:124:U:H5'	44:5:150:A:H1'	1.95	0.48
44:5:223:U:OP1	44:5:225:C:N4	2.42	0.48
44:5:346:C:O2	44:5:348:A:N6	2.46	0.48
44:5:538:G:O6	44:5:553:U:N3	2.38	0.48
44:5:571:U:H2'	44:5:572:A:H8	1.77	0.48
44:5:1261:G:H5'	44:5:1278:A:N1	2.28	0.48
44:5:1603:A:O2'	44:5:1835:A:O2'	2.27	0.48
44:5:2275:A:C5	44:5:2312:A:N7	2.47	0.48
44:5:2277:C:H5''	44:5:2317:A:H4'	1.87	0.48
44:5:2744:U:N3	44:5:2749:G:C6	2.68	0.48
44:5:2941:A:OP1	44:5:2943:G:O2'	2.20	0.48
44:5:3016:A:H2'	44:5:3017:A:H8	1.77	0.48
44:5:3092:C:OP2	44:5:3094:A:N6	2.45	0.48
44:5:3231:U:H2'	44:5:3256:G:H22	1.78	0.48
1:z:213:LYS:HA	44:5:2489:C:C4	2.47	0.48
1:z:318:LEU:O	1:z:323:LEU:N	2.46	0.48
1:z:339:LEU:O	1:z:342:LYS:N	2.45	0.48
1:z:381:SER:C	1:z:385:PHE:N	2.71	0.48
1:z:401:VAL:HG21	1:z:406:GLY:HA3	1.95	0.48
2:A:13:GLY:HA3	44:5:2172:A:O4'	2.13	0.48
2:A:29:LEU:H	2:A:123:ARG:HB3	1.77	0.48
4:C:188:ARG:N	4:C:198:ARG:O	2.46	0.48
4:C:300:ARG:NH2	18:Q:163:ARG:O	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:F:285:TYR:O	21:T:141:VAL:HG22	2.13	0.48
7:F:350:SER:O	7:F:353:THR:OG1	2.31	0.48
8:G:197:ASN:OD1	44:5:2549:G:N7	2.46	0.48
8:G:212:ARG:NE	44:5:2526:C:C2	2.81	0.48
9:H:262:ARG:NH2	44:5:1210:U:OP1	2.46	0.48
9:H:292:TYR:CD2	9:H:342:ASP:HA	2.49	0.48
15:N:32:GLN:NE2	44:5:296:A:N3	2.54	0.48
15:N:76:PRO:O	44:5:2430:A:N6	2.46	0.48
19:R:237:LEU:HD21	19:R:270:LYS:HA	1.94	0.48
19:R:255:TYR:O	19:R:259:TYR:HB2	2.13	0.48
22:U:155:LEU:HA	22:U:158:LEU:HD12	1.94	0.48
33:f:360:GLN:HE22	44:5:583:G:N2	2.11	0.48
38:k:44:LYS:HG2	38:k:53:THR:HA	1.95	0.48
41:o:98:LYS:HG3	44:5:2656:A:OP1	2.13	0.48
43:q:36:GLN:HB2	44:5:1277:C:H42	1.34	0.48
43:q:86:PHE:N	44:5:1281:G:OP1	2.46	0.48
44:5:634:C:H2'	44:5:635:G:H8	1.77	0.48
44:5:722:G:C2	44:5:748:U:O2	2.66	0.48
44:5:819:U:O2'	44:5:918:C:O2'	2.25	0.48
44:5:1595:U:O2'	44:5:1606:U:O2	2.28	0.48
44:5:1693:C:H1'	44:5:1772:U:H4'	1.94	0.48
44:5:1753:G:H3'	44:5:1754:G:H8	1.76	0.48
44:5:2098:C:H2'	44:5:2099:A:H8	1.78	0.48
44:5:3005:A:N1	44:5:3140:G:O2'	2.33	0.48
44:5:3218:A:H4'	44:5:3219:G:C8	2.48	0.48
1:z:231:VAL:CG2	44:5:2487:U:C3'	2.83	0.48
3:B:37:ARG:HE	3:B:188:ILE:HG23	1.79	0.48
5:D:415:THR:OG1	5:D:440:PHE:O	2.30	0.48
8:G:224:ARG:NH2	45:8:150:G:O3'	2.38	0.48
15:N:200:TRP:CD2	37:j:813:PHE:CZ	3.00	0.48
18:Q:268:PRO:HB2	18:Q:271:SER:HB2	1.94	0.48
22:U:108:ASP:OD2	22:U:111:SER:N	2.46	0.48
24:W:206:LYS:HB2	24:W:208:ILE:HG23	1.94	0.48
27:Z:46:GLU:HB3	27:Z:68:LYS:HB3	1.95	0.48
28:a:184:ASP:HA	28:a:207:LYS:HB2	1.96	0.48
32:e:211:ASN:HA	44:5:1339:C:H5'	1.96	0.48
33:f:392:THR:HB	33:f:397:GLY:HA2	1.95	0.48
34:g:14:ASN:O	44:5:827:A:H5'	2.13	0.48
34:g:72:VAL:HG12	44:5:1640:G:OP1	2.12	0.48
34:g:95:ILE:O	34:g:99:LYS:HB2	2.14	0.48
36:i:91:ASN:O	36:i:95:ALA:CB	2.62	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:j:848:GLY:H	45:8:42:G:H5''	1.78	0.48
43:q:62:ALA:HB3	44:5:1222:G:H5''	1.94	0.48
44:5:338:A:H2	44:5:1380:G:H21	1.61	0.48
44:5:348:A:O2'	44:5:367:A:N6	2.45	0.48
44:5:504:A:H2'	44:5:505:G:C8	2.48	0.48
44:5:508:U:H3	44:5:583:G:H1	1.59	0.48
44:5:637:C:H2'	44:5:638:C:H6	1.78	0.48
44:5:829:U:H3	44:5:895:A:H62	1.60	0.48
44:5:831:G:O2'	44:5:1864:A:N3	2.42	0.48
44:5:2103:U:H2'	44:5:2104:A:C8	2.48	0.48
44:5:2223:A:N6	44:5:2783:U:O2'	2.39	0.48
44:5:2975:U:H2'	44:5:2976:A:C8	2.48	0.48
44:5:3196:U:O2	44:5:3197:G:N2	2.46	0.48
44:5:3217:C:P	44:5:3266:G:H22	2.36	0.48
47:x:23:UNK:HA	48:y:10:UNK:HA	1.94	0.48
1:z:230:GLN:OE1	44:5:2486:A:C2'	2.59	0.48
1:z:365:GLY:N	44:5:2478:C:H5'	2.27	0.48
1:z:366:ASN:C	44:5:2469:G:C4	2.92	0.48
1:z:383:ASN:HB3	44:5:2492:C:C2'	2.42	0.48
2:A:37:ARG:HH12	44:5:2525:G:H3'	1.78	0.48
2:A:80:GLU:CD	42:p:66:GLY:O	2.56	0.48
3:B:13:HIS:CD2	44:5:3011:A:HO2'	2.27	0.48
3:B:384:LYS:NZ	44:5:3368:U:O4'	2.46	0.48
4:C:154:THR:HG22	4:C:251:THR:HB	1.95	0.48
4:C:309:ARG:HG2	44:5:1361:U:OP1	2.13	0.48
8:G:288:ASP:CG	44:5:120:G:C6	2.91	0.48
9:H:257:VAL:HG13	44:5:3186:A:N6	2.28	0.48
12:s:236:LYS:CA	44:5:1255:C:C2'	2.58	0.48
12:s:268:GLU:CA	44:5:1262:G:C6	2.87	0.48
12:s:286:HIS:CB	44:5:1278:A:H2'	2.36	0.48
12:s:286:HIS:CA	44:5:1278:A:H1'	2.43	0.48
13:L:124:ILE:O	35:h:117:ALA:N	2.46	0.48
15:N:25:VAL:CB	44:5:299:G:N1	2.67	0.48
15:N:98:LEU:CD2	44:5:289:A:OP1	2.60	0.48
15:N:122:ASN:HB2	44:5:318:A:C1'	2.43	0.48
17:P:102:ALA:O	17:P:107:LEU:N	2.41	0.48
21:T:84:TYR:CD2	29:b:90:PRO:CD	2.96	0.48
23:V:157:ASN:OD1	23:V:157:ASN:N	2.46	0.48
24:W:150:ILE:CA	24:W:156:ALA:O	2.57	0.48
27:Z:14:ARG:HB3	44:5:1637:A:H4'	1.96	0.48
28:a:166:ASP:O	28:a:170:GLN:HB3	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:f:331:HIS:O	33:f:413:GLY:N	2.36	0.48
34:g:53:GLY:HA2	44:5:1738:C:O2'	2.14	0.48
39:l:40:LYS:NZ	44:5:355:A:C2'	2.74	0.48
43:q:8:LYS:N	44:5:1218:U:O3'	2.45	0.48
44:5:125:C:H2'	44:5:126:U:H6	1.79	0.48
44:5:283:G:H5''	44:5:285:A:H4'	1.94	0.48
44:5:1054:A:N1	46:7:80:G:O2'	2.42	0.48
44:5:1268:G:N2	44:5:1273:A:C8	2.82	0.48
44:5:1670:C:O2'	44:5:1860:G:OP1	2.27	0.48
44:5:2198:A:O2'	44:5:2270:A:P	2.72	0.48
44:5:2658:G:O2'	44:5:2715:A:OP2	2.29	0.48
44:5:2941:A:H4'	44:5:2942:C:H5''	1.95	0.48
44:5:3252:G:H2'	44:5:3253:G:C8	2.48	0.48
45:8:47:C:H1'	45:8:61:A:H2'	1.95	0.48
3:B:37:ARG:HA	3:B:186:GLY:HA2	1.95	0.48
3:B:128:LYS:HB2	44:5:3150:A:H4'	1.94	0.48
4:C:31:ARG:HH22	44:5:673:U:H5''	1.79	0.48
5:D:270:SER:O	5:D:274:SER:HB2	2.14	0.48
10:I:301:ARG:CB	44:5:2618:G:OP1	2.62	0.48
13:L:126:PHE:CD2	35:h:115:LYS:HG2	2.49	0.48
17:P:111:LYS:HG2	17:P:153:LYS:HB3	1.95	0.48
19:R:144:ARG:HH12	44:5:1602:A:H4'	1.79	0.48
19:R:240:LEU:HA	19:R:243:LYS:HE3	1.95	0.48
21:T:43:LYS:HZ3	44:5:992:A:H4'	1.78	0.48
26:Y:90:VAL:HG21	44:5:377:A:C4'	2.40	0.48
29:b:84:ARG:HH22	44:5:970:A:H5''	1.79	0.48
31:d:118:TRP:CD1	44:5:1475:A:C2'	2.96	0.48
34:g:65:VAL:HB	34:g:70:LYS:HE2	1.96	0.48
37:j:793:SER:HA	37:j:796:LYS:HG3	1.94	0.48
38:k:12:LEU:O	38:k:15:THR:OG1	2.23	0.48
41:o:34:SER:OG	41:o:35:LEU:N	2.46	0.48
43:q:5:ARG:NH1	44:5:1287:A:C2	2.67	0.48
43:q:6:GLU:N	44:5:1218:U:P	2.84	0.48
43:q:6:GLU:N	44:5:1218:U:C5'	2.73	0.48
43:q:45:LEU:HD22	44:5:1257:C:O3'	2.13	0.48
43:q:219:UNK:O	48:y:46:UNK:CB	2.62	0.48
44:5:344:A:O3'	44:5:1429:G:N1	2.45	0.48
44:5:818:C:O2'	44:5:2138:A:N1	2.43	0.48
44:5:1054:A:H3'	44:5:1055:A:H8	1.78	0.48
44:5:1144:U:O4	44:5:1159:A:N6	2.35	0.48
44:5:1195:A:N1	44:5:1313:G:O6	2.45	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:2210:G:H2'	44:5:2211:U:C6	2.49	0.48
44:5:2434:U:H5'	44:5:2593:A:H2	1.77	0.48
44:5:3369:G:H4'	44:5:3370:A:C8	2.48	0.48
1:z:338:ASP:OD2	1:z:342:LYS:NZ	2.43	0.48
4:C:185:LYS:HA	4:C:201:GLN:HB3	1.95	0.48
6:E:307:TYR:HE1	33:f:421:TYR:CE2	2.31	0.48
7:F:242:ALA:O	7:F:246:ALA:HB2	2.13	0.48
7:F:289:ALA:CA	21:T:137:GLU:HA	2.43	0.48
9:H:223:ARG:HD2	9:H:239:LYS:HG2	1.94	0.48
9:H:285:GLY:O	9:H:387:ILE:N	2.32	0.48
12:s:254:ARG:C	44:5:1247:U:C2'	2.87	0.48
12:s:263:ALA:HA	44:5:1267:U:C4	2.48	0.48
13:L:62:THR:HA	44:5:72:C:O4'	2.13	0.48
13:L:128:ARG:N	35:h:114:ARG:CZ	2.77	0.48
15:N:119:TYR:CE2	44:5:320:G:H8	2.23	0.48
15:N:138:GLN:O	44:5:145:G:H5'	2.13	0.48
15:N:185:ALA:CA	44:5:1548:C:O4'	2.61	0.48
16:O:36:VAL:HB	16:O:108:ILE:HG12	1.95	0.48
17:P:118:GLN:OE1	45:8:12:A:H1'	2.14	0.48
18:Q:136:LYS:HE3	44:5:1103:A:N7	2.27	0.48
23:V:161:ARG:HH21	23:V:194:GLY:HA2	1.79	0.48
23:V:256:PRO:HA	23:V:259:ALA:HB3	1.95	0.48
25:X:224:VAL:HG13	25:X:236:ALA:HB1	1.95	0.48
31:d:81:VAL:O	31:d:86:ARG:NH1	2.45	0.48
33:f:378:ARG:NH1	44:5:620:U:O2	2.47	0.48
37:j:788:GLY:N	44:5:2138:A:C2'	2.77	0.48
37:j:852:TYR:OH	45:8:36:G:OP1	2.27	0.48
44:5:190:U:H3	44:5:221:A:H2	1.62	0.48
44:5:536:U:H1'	44:5:559:A:C8	2.48	0.48
44:5:556:U:C2	44:5:559:A:C8	3.01	0.48
44:5:1222:G:N1	44:5:1285:G:O2'	2.38	0.48
44:5:1539:A:C8	44:5:1553:U:N3	2.81	0.48
44:5:2222:A:H2'	44:5:2223:A:C8	2.49	0.48
44:5:3309:G:H3'	44:5:3310:A:C8	2.45	0.48
46:7:11:A:N1	46:7:67:G:O2'	2.43	0.48
47:x:12:UNK:C	48:y:1:UNK:CB	2.92	0.48
1:z:220:LYS:HE3	44:5:2488:A:C2	2.48	0.48
1:z:277:VAL:HG13	44:5:2479:C:H1'	1.95	0.48
1:z:367:VAL:CG2	44:5:2478:C:C2	2.97	0.48
2:A:19:HIS:N	2:A:192:LYS:O	2.46	0.48
3:B:140:ASP:OD1	3:B:140:ASP:N	2.41	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:243:HIS:N	44:5:2948:C:O3'	2.46	0.48
6:E:241:ALA:HB3	44:5:592:A:C4'	2.43	0.48
6:E:367:LYS:O	6:E:371:ALA:HB2	2.14	0.48
9:H:242:ASP:O	44:5:3186:A:N7	2.47	0.48
10:I:192:ARG:HA	10:I:195:ARG:HD2	1.95	0.48
10:I:355:LYS:HA	10:I:362:ASP:HA	1.96	0.48
15:N:26:ARG:O	44:5:318:A:N6	2.47	0.48
15:N:67:ARG:HG2	44:5:273:A:N6	2.27	0.48
21:T:116:ARG:NH2	44:5:1096:U:C6	2.81	0.48
25:X:179:GLN:HA	35:h:32:LYS:NZ	2.29	0.48
31:d:74:LEU:HB3	31:d:127:TYR:HA	1.94	0.48
32:e:176:TYR:HB3	32:e:178:ARG:HG3	1.96	0.48
37:j:837:ALA:HA	37:j:840:LYS:HE2	1.96	0.48
38:k:25:VAL:HG12	38:k:39:ARG:HH22	1.79	0.48
39:l:21:ARG:HD3	45:8:52:A:O5'	2.13	0.48
44:5:31:C:O2	44:5:1546:A:N6	2.40	0.48
44:5:1593:A:N3	44:5:1615:C:O2'	2.41	0.48
44:5:2293:C:N3	44:5:2299:A:N6	2.50	0.48
44:5:3061:G:H4'	44:5:3333:G:H4'	1.96	0.48
47:x:9:UNK:HA	48:y:4:UNK:HA	1.92	0.48
1:z:220:LYS:NZ	44:5:2470:C:C1'	2.76	0.48
2:A:122:ASP:OD1	2:A:122:ASP:N	2.46	0.48
3:B:67:PHE:CE1	23:V:217:ARG:NH2	2.81	0.48
5:D:295:ARG:CZ	44:5:2750:U:H5'	2.44	0.48
5:D:418:ARG:NH1	46:7:46:A:OP2	2.47	0.48
5:D:452:PRO:O	5:D:456:ARG:HB2	2.14	0.48
6:E:246:ARG:O	44:5:607:A:C5'	2.62	0.48
6:E:359:VAL:HG22	44:5:3268:A:N6	2.28	0.48
9:H:226:LYS:NZ	44:5:3198:U:OP1	2.45	0.48
9:H:355:SER:OG	44:5:3111:U:H5'	2.13	0.48
12:s:293:ASN:HA	44:5:1277:C:C6	2.49	0.48
15:N:27:VAL:O	44:5:295:A:N1	2.46	0.48
15:N:86:ASN:ND2	44:5:2425:G:O5'	2.46	0.48
15:N:129:TYR:CD2	44:5:317:A:H2	2.26	0.48
17:P:167:ARG:HD3	44:5:619:A:OP1	2.14	0.48
18:Q:302:GLY:HA2	18:Q:311:VAL:H	1.78	0.48
24:W:247:LYS:HA	24:W:250:ARG:HE	1.79	0.48
26:Y:74:TYR:HB3	26:Y:77:LYS:HB2	1.95	0.48
27:Z:53:THR:OG1	27:Z:54:LYS:N	2.47	0.48
30:c:16:LEU:HD22	30:c:19:LYS:HE3	1.96	0.48
37:j:789:LYS:HZ1	44:5:2138:A:N6	2.04	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:l:21:ARG:HH12	39:l:24:PRO:HD3	1.78	0.48
41:o:27:GLN:HA	41:o:70:LEU:HA	1.94	0.48
42:p:5:THR:HG21	44:5:837:A:P	2.53	0.48
44:5:75:G:H3'	44:5:76:G:H8	1.78	0.48
44:5:114:A:N1	44:5:266:A:O2'	2.43	0.48
44:5:512:U:O2	44:5:579:G:C6	2.67	0.48
44:5:1235:U:H4'	44:5:1236:G:H5'	1.96	0.48
44:5:1527:C:H2'	44:5:1528:G:C8	2.49	0.48
44:5:2661:G:H2'	44:5:2662:G:C8	2.49	0.48
1:z:363:ALA:CB	44:5:2467:G:C1'	2.70	0.48
2:A:145:LYS:HA	2:A:158:ILE:O	2.14	0.48
2:A:225:ILE:O	2:A:240:ALA:N	2.46	0.48
3:B:47:LEU:HB3	3:B:335:ILE:HD11	1.95	0.48
6:E:231:PRO:HD3	32:e:225:PHE:CD1	2.49	0.48
7:F:271:ASN:O	7:F:275:ALA:CB	2.62	0.48
8:G:280:VAL:HG22	8:G:285:SER:HB2	1.96	0.48
10:I:247:SER:HA	10:I:250:LEU:HB2	1.96	0.48
12:s:224:GLU:N	43:q:43:LYS:C	2.69	0.48
12:s:243:LEU:C	43:q:104:ARG:HD2	2.38	0.48
13:L:18:TRP:HH2	44:5:798:G:H21	1.61	0.48
15:N:18:VAL:C	44:5:315:C:O2'	2.56	0.48
15:N:74:PRO:HG2	44:5:291:C:C5'	2.40	0.48
16:O:15:LEU:N	16:O:123:ALA:O	2.37	0.48
18:Q:167:ALA:H	18:Q:171:LYS:HZ3	1.61	0.48
18:Q:303:ARG:CZ	28:a:131:PRO:HG2	2.43	0.48
19:R:166:GLU:HG2	19:R:179:LEU:HD11	1.96	0.48
19:R:258:LEU:O	19:R:262:SER:CB	2.62	0.48
25:X:156:ARG:CZ	44:5:14:U:O2	2.62	0.48
26:Y:10:SER:HG	44:5:213:A:HO2'	1.28	0.48
35:h:63:ARG:CZ	45:8:97:A:O5'	2.62	0.48
43:q:38:MET:HB2	44:5:1278:A:N6	2.29	0.48
44:5:88:A:OP2	44:5:98:G:N2	2.47	0.48
44:5:307:A:O3'	44:5:2223:A:O2'	2.25	0.48
44:5:440:A:O3'	44:5:490:C:N4	2.47	0.48
44:5:571:U:H2'	44:5:572:A:C8	2.49	0.48
44:5:1370:G:H2'	44:5:1371:G:C8	2.49	0.48
44:5:1797:A:H2'	44:5:1798:A:H8	1.79	0.48
44:5:1943:C:H4'	44:5:3346:U:H4'	1.96	0.48
44:5:2194:G:C4	44:5:2274:U:C5	2.69	0.48
44:5:2423:U:C4	44:5:2607:G:O6	2.67	0.48
44:5:2428:U:H2'	44:5:2429:G:C8	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:2482:U:C4	44:5:2486:A:N7	2.82	0.48
44:5:2631:U:H2'	44:5:2632:G:H8	1.78	0.48
44:5:2767:U:O2	44:5:2791:G:C2	2.66	0.48
1:z:236:TYR:H	44:5:2493:U:H3'	1.60	0.48
1:z:240:ARG:H	1:z:391:LYS:HE2	1.78	0.48
1:z:346:VAL:O	44:5:2466:G:H5'	2.12	0.48
2:A:136:ILE:HA	2:A:148:VAL:HG12	1.95	0.48
3:B:62:ARG:HH21	3:B:349:LYS:HB2	1.77	0.48
4:C:107:ARG:HA	44:5:664:U:OP1	2.14	0.48
5:D:283:ARG:HE	5:D:286:GLY:HA2	1.79	0.48
6:E:382:TYR:HE1	14:M:264:PHE:HA	1.74	0.48
9:H:247:LYS:HD2	14:M:154:SER:O	2.14	0.48
9:H:374:LYS:HB2	40:m:127:LEU:HD22	1.96	0.48
10:I:239:SER:OG	10:I:240:ASN:N	2.47	0.48
10:I:260:TYR:HE2	10:I:332:VAL:HA	1.79	0.48
11:J:152:ARG:HB2	41:o:104:LEU:H	1.77	0.48
12:s:266:THR:C	44:5:1266:G:C6	2.73	0.48
15:N:31:ARG:NH1	36:i:82:ARG:NE	2.59	0.48
15:N:204:LYS:HE3	37:j:803:THR:H	1.78	0.48
16:O:83:ALA:O	44:5:1312:C:O2'	2.31	0.48
20:S:72:VAL:HA	20:S:97:VAL:HG23	1.95	0.48
20:S:135:VAL:HG21	20:S:144:LEU:HD11	1.96	0.48
25:X:139:LYS:HE3	45:8:150:G:OP1	2.14	0.48
25:X:255:TYR:CD1	35:h:33:VAL:CG1	2.95	0.48
27:Z:25:VAL:HG22	27:Z:41:LEU:HB3	1.96	0.48
28:a:192:LYS:NZ	44:5:714:G:OP2	2.45	0.48
28:a:193:ILE:O	28:a:212:SER:N	2.34	0.48
34:g:53:GLY:CA	44:5:1739:U:H5'	2.34	0.48
37:j:871:LYS:HA	45:8:67:U:O3'	2.13	0.48
39:l:21:ARG:CD	45:8:52:A:H5'	2.42	0.48
41:o:49:GLY:HA2	44:5:277:G:P	2.53	0.48
42:p:18:TYR:O	42:p:23:ARG:NH2	2.38	0.48
43:q:36:GLN:HB3	44:5:1277:C:H41	1.78	0.48
44:5:70:A:O2'	44:5:72:C:N3	2.42	0.48
44:5:164:A:N6	44:5:258:G:N7	2.62	0.48
44:5:435:C:H2'	44:5:436:A:C8	2.49	0.48
44:5:546:C:H4'	44:5:547:G:C4	2.49	0.48
44:5:835:G:O2'	44:5:857:G:N2	2.45	0.48
44:5:1105:A:H2'	44:5:1106:G:C8	2.49	0.48
44:5:1467:A:O2'	44:5:1469:C:OP1	2.23	0.48
44:5:2207:A:H2'	44:5:2208:A:C4	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:2697:A:H2'	44:5:2698:G:C8	2.49	0.48
44:5:2909:U:O2'	44:5:3105:U:O2	2.20	0.48
44:5:3022:G:N2	44:5:3023:U:O4	2.36	0.48
44:5:3306:U:O2'	44:5:3309:G:N1	2.47	0.48
45:8:72:A:N6	45:8:82:U:O4	2.47	0.48
45:8:143:U:H2'	45:8:144:G:H8	1.79	0.48
1:z:228:GLU:OE2	44:5:2480:A:N7	2.46	0.47
1:z:228:GLU:HG3	44:5:2478:C:C6	2.48	0.47
1:z:411:LEU:CA	44:5:2448:G:H3'	2.41	0.47
4:C:46:LYS:HD2	44:5:692:A:O4'	2.14	0.47
5:D:532:TYR:CZ	46:7:22:A:H1'	2.49	0.47
7:F:330:THR:HA	21:T:133:ALA:O	2.14	0.47
9:H:210:ILE:HG12	9:H:272:LYS:HE2	1.96	0.47
9:H:352:GLU:HB3	9:H:356:GLN:HB2	1.95	0.47
11:J:111:ASN:O	11:J:217:ASP:N	2.46	0.47
12:s:294:ALA:HB1	44:5:1276:U:C5'	2.39	0.47
13:L:78:ALA:O	13:L:82:ALA:HB2	2.13	0.47
13:L:99:HIS:HB2	44:5:157:A:OP2	2.14	0.47
19:R:228:VAL:O	19:R:232:ARG:CB	2.59	0.47
19:R:231:ILE:O	19:R:235:ARG:HB2	2.13	0.47
21:T:82:ASN:O	29:b:88:LYS:CG	2.62	0.47
21:T:116:ARG:NE	44:5:1096:U:H5	2.11	0.47
28:a:85:ARG:NH2	44:5:1426:C:OP2	2.45	0.47
29:b:108:ASN:ND2	44:5:1076:C:C6	2.82	0.47
31:d:114:ASN:HB2	44:5:1459:C:H1'	1.96	0.47
34:g:2:ALA:N	44:5:1859:A:C5'	2.77	0.47
41:o:69:VAL:HA	41:o:84:THR:HA	1.95	0.47
43:q:100:ILE:HG12	44:5:1260:A:N6	2.27	0.47
44:5:8:C:H2'	44:5:9:U:C2	2.49	0.47
44:5:1062:A:O2'	44:5:1098:A:OP2	2.30	0.47
44:5:1216:C:H2'	44:5:1217:A:C8	2.49	0.47
44:5:1499:C:H2'	44:5:1500:G:C8	2.48	0.47
44:5:1596:C:H2'	44:5:1597:C:C6	2.49	0.47
44:5:1647:A:C4	44:5:1809:A:H1'	2.49	0.47
44:5:1955:U:H6	44:5:1956:A:H5'	1.79	0.47
44:5:2424:A:N6	44:5:2605:G:O2'	2.47	0.47
44:5:2586:G:O2'	44:5:2588:U:OP2	2.30	0.47
44:5:3326:G:C2	44:5:3380:U:O2	2.66	0.47
44:5:3333:G:H1	44:5:3369:G:H1'	1.78	0.47
45:8:62:C:O2'	45:8:90:U:N3	2.44	0.47
46:7:107:C:H2'	46:7:108:A:H8	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:z:234:LYS:HA	44:5:2464:U:O4'	2.15	0.47
1:z:360:LEU:CA	44:5:2465:G:O5'	2.63	0.47
1:z:411:LEU:HD13	44:5:2448:G:C5'	2.40	0.47
2:A:70:ARG:HE	2:A:72:ARG:HE	1.63	0.47
3:B:111:SER:HB3	3:B:114:VAL:HG23	1.95	0.47
4:C:226:GLU:OE1	4:C:246:ARG:NH2	2.48	0.47
5:D:375:LEU:HD11	5:D:399:PRO:HG2	1.96	0.47
7:F:331:LYS:HE3	44:5:988:U:OP1	2.14	0.47
9:H:296:HIS:CE1	44:5:3024:A:H4'	2.50	0.47
14:M:269:VAL:HA	16:O:194:LEU:HD21	1.96	0.47
15:N:11:GLN:CB	44:5:64:G:P	3.01	0.47
15:N:93:LYS:CE	44:5:277:G:C2'	2.92	0.47
19:R:256:HIS:CE1	44:5:1718:G:H3'	2.49	0.47
32:e:222:HIS:HA	32:e:242:THR:O	2.13	0.47
44:5:1222:G:N2	44:5:1286:A:C4	2.76	0.47
44:5:1349:G:H21	44:5:1350:A:H5''	1.78	0.47
44:5:1783:U:H2'	44:5:1784:G:C8	2.49	0.47
44:5:1870:C:O2	44:5:3066:U:O2'	2.30	0.47
44:5:2342:U:O2'	44:5:3054:U:O2'	2.26	0.47
44:5:2498:U:H4'	44:5:2499:U:H5	1.79	0.47
44:5:2704:A:O2'	44:5:2706:G:N7	2.37	0.47
44:5:2999:U:O2'	44:5:3295:A:O2'	2.27	0.47
44:5:3229:G:O6	44:5:3258:U:N3	2.41	0.47
46:7:75:G:H2'	46:7:76:A:C8	2.49	0.47
46:7:96:U:H2'	46:7:97:A:C8	2.49	0.47
1:z:409:PHE:CD1	44:5:2449:A:O5'	2.67	0.47
10:I:233:LEU:HD22	10:I:353:SER:HB3	1.96	0.47
12:s:279:ARG:O	43:q:37:GLN:O	2.32	0.47
14:M:278:TYR:CE2	44:5:3260:G:H1'	2.50	0.47
16:O:12:LYS:O	20:S:167:ARG:CZ	2.62	0.47
18:Q:194:ARG:HD3	44:5:784:A:N7	2.29	0.47
23:V:186:MET:HB2	23:V:206:ILE:HG12	1.95	0.47
27:Z:63:LYS:NZ	44:5:1630:U:C5	2.82	0.47
30:c:53:LYS:O	30:c:57:GLU:CB	2.61	0.47
33:f:378:ARG:HH12	44:5:618:C:C3'	2.27	0.47
37:j:866:THR:H	45:8:95:G:N2	2.12	0.47
43:q:35:SER:O	44:5:1262:G:N1	2.47	0.47
43:q:64:ARG:NH2	44:5:1285:G:N9	2.58	0.47
44:5:805:G:H3'	44:5:936:A:H61	1.79	0.47
44:5:990:U:N3	44:5:1059:G:O6	2.41	0.47
44:5:1236:G:N2	44:5:1244:A:H5'	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:1757:A:H2'	44:5:1758:G:C8	2.49	0.47
44:5:1832:C:H5'	45:8:113:U:C5	2.43	0.47
44:5:1941:C:H42	44:5:2107:A:H61	1.62	0.47
44:5:2194:G:C2	44:5:2274:U:C4	2.99	0.47
44:5:2883:U:O4	44:5:2939:G:O6	2.32	0.47
4:C:114:ASN:ND2	44:5:789:A:O2'	2.44	0.47
4:C:335:ALA:HA	4:C:338:LYS:HA	1.96	0.47
7:F:288:GLU:O	21:T:137:GLU:O	2.33	0.47
7:F:315:LEU:HD22	44:5:1101:G:H1'	1.97	0.47
8:G:276:GLU:HA	8:G:279:ALA:HB3	1.95	0.47
9:H:373:ARG:NH1	44:5:2899:C:N3	2.62	0.47
10:I:189:ARG:NH2	44:5:1128:U:P	2.88	0.47
11:J:104:LYS:HG3	11:J:225:PRO:HD3	1.96	0.47
12:s:241:ILE:CB	43:q:44:GLU:CD	2.77	0.47
12:s:255:ASP:C	44:5:1269:U:H1'	2.38	0.47
12:s:266:THR:C	43:q:36:GLN:NE2	2.71	0.47
13:L:54:LEU:HD22	13:L:54:LEU:HA	1.80	0.47
13:L:136:GLU:CG	35:h:119:LYS:CD	2.71	0.47
13:L:168:ARG:HA	13:L:171:ARG:HG2	1.96	0.47
14:M:257:ARG:CZ	16:O:197:LEU:HA	2.45	0.47
15:N:10:LEU:HA	44:5:77:A:H2'	1.89	0.47
15:N:23:GLN:N	44:5:316:U:C4'	2.50	0.47
15:N:91:GLU:CA	44:5:277:G:N9	2.77	0.47
17:P:139:TYR:CE2	44:5:2355:G:H5'	2.50	0.47
20:S:78:TRP:HZ3	20:S:127:ALA:H	1.61	0.47
35:h:34:GLN:HB3	35:h:38:ARG:HH22	1.79	0.47
38:k:63:LYS:HA	38:k:66:ILE:HD12	1.97	0.47
41:o:75:VAL:HG23	41:o:76:LYS:HG3	1.96	0.47
43:q:33:VAL:N	44:5:1229:G:O6	2.38	0.47
43:q:50:VAL:HA	44:5:1258:U:C2'	2.34	0.47
44:5:143:G:O2'	45:8:144:G:OP1	2.33	0.47
44:5:521:A:C5	44:5:571:U:O2	2.67	0.47
44:5:567:G:H2'	44:5:568:G:C8	2.48	0.47
44:5:616:G:H2'	44:5:617:G:C8	2.49	0.47
44:5:637:C:H2'	44:5:638:C:C6	2.49	0.47
44:5:643:U:OP1	44:5:1117:G:O2'	2.33	0.47
44:5:761:A:C5	44:5:770:G:N2	2.77	0.47
44:5:1109:U:H2'	44:5:1110:U:C6	2.50	0.47
44:5:2902:A:OP1	44:5:3032:A:O2'	2.33	0.47
44:5:3029:A:C4	44:5:3030:G:H1'	2.49	0.47
44:5:3241:G:N2	44:5:3246:G:O5'	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:3258:U:O2'	44:5:3260:G:OP1	2.24	0.47
1:z:257:ASN:HD21	44:5:2486:A:H3'	1.79	0.47
1:z:371:GLU:OE2	44:5:2468:A:C2'	2.63	0.47
3:B:96:PRO:HB3	16:O:153:VAL:CG2	2.43	0.47
3:B:369:ARG:O	24:W:159:TYR:HE2	1.96	0.47
5:D:532:TYR:CG	46:7:22:A:C8	3.03	0.47
8:G:347:LYS:HA	8:G:350:LEU:HB2	1.96	0.47
9:H:257:VAL:HA	44:5:3186:A:N1	2.29	0.47
9:H:297:PHE:HE2	44:5:3024:A:HO2'	1.61	0.47
12:s:250:ALA:HB3	44:5:1232:C:H5'	1.96	0.47
12:s:254:ARG:O	44:5:1247:U:O5'	2.33	0.47
12:s:274:GLN:N	44:5:1232:C:H41	2.12	0.47
13:L:49:ARG:HD3	35:h:116:TYR:CD1	2.50	0.47
15:N:5:LYS:HD3	44:5:322:U:H2'	1.96	0.47
17:P:56:ARG:HH12	44:5:3392:U:C1'	2.27	0.47
18:Q:193:ALA:HB3	18:Q:218:ILE:HG21	1.97	0.47
21:T:10:ARG:NE	44:5:2640:A:OP1	2.48	0.47
21:T:109:VAL:HG22	44:5:1063:G:C4	2.49	0.47
34:g:52:GLN:CG	44:5:1639:C:H5''	2.45	0.47
43:q:53:MET:HE1	44:5:1281:G:H3'	1.59	0.47
43:q:100:ILE:HG22	44:5:1259:A:C2	2.48	0.47
44:5:937:G:H22	44:5:960:U:H4'	1.80	0.47
44:5:975:C:H2'	44:5:976:U:C6	2.49	0.47
44:5:1038:C:H2'	44:5:1039:U:H6	1.79	0.47
44:5:2427:U:N3	44:5:2602:G:C6	2.62	0.47
44:5:3335:A:N7	44:5:3370:A:O2'	2.40	0.47
45:8:60:U:H1'	45:8:63:G:H21	1.80	0.47
46:7:24:A:H2'	46:7:25:G:C8	2.49	0.47
46:7:30:G:H5'	46:7:51:A:C2	2.50	0.47
47:x:22:UNK:HA	48:y:5:UNK:O	2.14	0.47
1:z:220:LYS:O	44:5:2469:G:C6	2.68	0.47
2:A:64:ARG:HA	2:A:71:LEU:HG	1.96	0.47
4:C:169:LEU:HD11	4:C:215:ILE:HD11	1.96	0.47
10:I:222:GLY:HA2	10:I:267:ARG:HB2	1.95	0.47
10:I:356:TRP:HE3	10:I:363:ARG:HA	1.78	0.47
11:J:188:SER:CA	44:5:2672:G:H1'	2.43	0.47
11:J:190:THR:HG21	44:5:2684:C:H1'	1.96	0.47
12:s:244:ASP:O	43:q:105:VAL:N	2.23	0.47
12:s:289:ILE:O	44:5:1277:C:C1'	2.62	0.47
13:L:45:LYS:NZ	44:5:241:G:H1'	2.29	0.47
13:L:126:PHE:N	35:h:115:LYS:O	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:L:179:PHE:CD1	13:L:183:ARG:HB2	2.49	0.47
15:N:41:ARG:N	44:5:113:C:H2'	1.90	0.47
19:R:278:ILE:O	19:R:282:ALA:CB	2.63	0.47
19:R:281:LYS:NZ	44:5:2093:A:OP2	2.47	0.47
20:S:7:TYR:N	20:S:29:ILE:O	2.45	0.47
21:T:82:ASN:HB2	29:b:86:GLY:C	2.38	0.47
24:W:266:ALA:O	24:W:270:ALA:C	2.57	0.47
26:Y:90:VAL:HG21	44:5:377:A:H5''	1.97	0.47
29:b:81:LYS:NZ	44:5:968:G:N3	2.61	0.47
30:c:38:LYS:O	30:c:40:LYS:NZ	2.40	0.47
31:d:88:PRO:HG3	44:5:1458:U:H5''	1.96	0.47
31:d:118:TRP:CE2	44:5:1475:A:N3	2.83	0.47
42:p:57:CYS:CB	42:p:62:LYS:O	2.57	0.47
43:q:44:GLU:N	44:5:1257:C:O2	2.48	0.47
43:q:104:ARG:NH1	44:5:1232:C:C4'	2.62	0.47
44:5:409:A:H3'	44:5:410:U:H6	1.80	0.47
44:5:971:G:N2	44:5:1110:U:O2	2.45	0.47
44:5:1033:U:H2'	44:5:1034:U:C2	2.50	0.47
44:5:1540:U:OP2	44:5:1552:G:N2	2.41	0.47
44:5:2118:C:H3'	44:5:2119:A:H8	1.79	0.47
44:5:2277:C:H5'	44:5:2317:A:C4'	2.45	0.47
44:5:2994:A:OP2	44:5:3142:A:N6	2.48	0.47
44:5:3057:U:OP1	44:5:3085:G:N2	2.34	0.47
48:y:26:UNK:O	48:y:31:UNK:N	2.47	0.47
1:z:223:PHE:CD1	44:5:2475:G:C2	3.01	0.47
1:z:252:ASN:HD22	1:z:254:PRO:HD3	1.80	0.47
1:z:390:LYS:O	36:i:100:HIS:HE1	1.97	0.47
1:z:400:VAL:CG2	44:5:2494:A:O2'	2.62	0.47
2:A:67:TYR:HA	8:G:207:LYS:NZ	2.30	0.47
3:B:128:LYS:HB3	44:5:3150:A:H4'	1.96	0.47
3:B:198:HIS:HA	3:B:201:LYS:HD3	1.96	0.47
5:D:424:LYS:O	5:D:428:ASP:HB2	2.15	0.47
7:F:286:TYR:N	21:T:140:ILE:CG2	2.64	0.47
8:G:315:VAL:HB	8:G:341:TYR:HA	1.96	0.47
9:H:244:THR:HB	9:H:256:ALA:HB3	1.96	0.47
9:H:276:ASP:HA	9:H:279:ILE:HD12	1.96	0.47
10:I:269:ALA:O	10:I:325:THR:HA	2.15	0.47
10:I:354:LYS:HD3	21:T:160:ILE:OXT	2.15	0.47
11:J:111:ASN:ND2	44:5:2681:U:O2'	2.48	0.47
11:J:186:ASN:HD22	44:5:2673:A:H5''	1.79	0.47
11:J:186:ASN:HB3	11:J:194:GLY:O	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:s:248:GLU:HA	43:q:36:GLN:CB	2.45	0.47
14:M:228:ALA:O	14:M:232:LYS:HB2	2.15	0.47
15:N:10:LEU:HB3	44:5:65:A:P	2.51	0.47
15:N:10:LEU:HD23	44:5:77:A:O4'	2.15	0.47
15:N:12:ARG:CD	44:5:64:G:H5'	2.45	0.47
15:N:25:VAL:HG12	36:i:30:LYS:HB2	1.97	0.47
15:N:178:HIS:HD2	44:5:52:A:N9	2.11	0.47
15:N:190:THR:OG1	15:N:193:ARG:NH2	2.46	0.47
20:S:43:TYR:O	20:S:47:LYS:NZ	2.39	0.47
20:S:135:VAL:HG12	20:S:141:LYS:HE3	1.97	0.47
21:T:10:ARG:CD	44:5:2640:A:OP1	2.63	0.47
25:X:222:LEU:HD22	25:X:239:ARG:HG2	1.96	0.47
25:X:246:ALA:HA	25:X:249:ILE:HG22	1.95	0.47
26:Y:23:PRO:CG	45:8:91:C:O2'	2.63	0.47
27:Z:1:ALA:H2	30:c:63:SER:CB	2.27	0.47
28:a:88:LYS:HG2	44:5:794:U:OP1	2.14	0.47
29:b:111:HIS:CD2	44:5:1075:A:C8	3.02	0.47
33:f:394:GLY:H	44:5:1328:C:P	2.37	0.47
36:i:15:LYS:HG3	36:i:17:VAL:HG23	1.96	0.47
37:j:796:LYS:HE2	44:5:819:U:OP1	2.15	0.47
37:j:797:ARG:HD3	44:5:818:C:C5'	2.43	0.47
37:j:830:THR:OG1	44:5:23:A:H5''	2.14	0.47
37:j:858:ARG:NH1	45:8:95:G:OP2	2.48	0.47
43:q:7:LYS:O	43:q:11:TYR:CB	2.59	0.47
44:5:177:U:H2'	44:5:178:U:C6	2.50	0.47
44:5:348:A:H4'	44:5:367:A:H62	1.80	0.47
44:5:381:U:H2'	44:5:382:U:C6	2.50	0.47
44:5:707:U:O2	44:5:712:G:C2	2.68	0.47
44:5:718:G:N1	44:5:721:G:N3	2.62	0.47
44:5:735:A:H2'	44:5:736:A:C4	2.50	0.47
44:5:909:G:H2'	44:5:910:G:C8	2.50	0.47
44:5:915:A:H4'	44:5:2957:G:H4'	1.96	0.47
44:5:957:C:H2'	44:5:958:C:C6	2.49	0.47
44:5:959:C:H5	44:5:2801:A:H5''	1.79	0.47
44:5:1195:A:N1	44:5:1313:G:C6	2.83	0.47
44:5:1218:U:H5''	44:5:1219:C:H5	1.79	0.47
44:5:1464:G:H21	44:5:1511:U:H3	1.61	0.47
44:5:3112:G:H1'	44:5:3122:A:H61	1.78	0.47
44:5:3217:C:O5'	44:5:3266:G:N2	2.47	0.47
45:8:9:A:H2'	45:8:10:A:H8	1.80	0.47
45:8:86:U:H5''	45:8:87:G:H8	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:x:9:UNK:N	48:y:8:UNK:CA	2.61	0.47
1:z:234:LYS:HG2	44:5:2464:U:OP1	2.14	0.47
2:A:17:THR:HA	44:5:2173:U:P	2.55	0.47
2:A:136:ILE:HG13	2:A:148:VAL:HG12	1.97	0.47
4:C:8:VAL:HB	4:C:16:THR:HB	1.95	0.47
4:C:83:GLY:O	4:C:87:GLN:NE2	2.48	0.47
9:H:362:GLN:HE22	9:H:380:TYR:HD1	1.63	0.47
12:s:212:PRO:O	44:5:1236:G:C8	2.63	0.47
12:s:271:GLY:CA	43:q:40:GLU:OE2	2.62	0.47
12:s:292:ILE:HA	43:q:107:ALA:O	2.15	0.47
13:L:15:ARG:HD2	44:5:97:U:H5'	1.96	0.47
13:L:82:ALA:HB1	13:L:113:VAL:HG22	1.96	0.47
13:L:85:LEU:HD11	13:L:90:ALA:HB2	1.97	0.47
15:N:105:ARG:NH1	44:5:269:G:O2'	2.41	0.47
15:N:123:GLN:HA	44:5:271:C:C5'	2.34	0.47
15:N:149:ASN:HB2	45:8:142:C:O2'	2.15	0.47
15:N:180:PHE:CD1	44:5:53:G:N2	2.82	0.47
16:O:49:ARG:NH1	44:5:1191:U:O5'	2.48	0.47
26:Y:87:LYS:HD3	44:5:375:A:H4'	1.95	0.47
33:f:393:HIS:HE2	44:5:1328:C:H5''	1.70	0.47
35:h:94:LYS:HE3	44:5:135:C:H42	1.79	0.47
42:p:4:ARG:HD2	44:5:856:G:H22	1.80	0.47
44:5:19:U:C2	45:8:140:G:O6	2.68	0.47
44:5:517:G:H2'	44:5:518:G:C2	2.49	0.47
44:5:682:U:H4'	44:5:684:G:N7	2.30	0.47
44:5:816:A:O2'	44:5:905:U:O4	2.25	0.47
44:5:845:G:N2	44:5:848:A:C8	2.74	0.47
44:5:1045:C:H2'	44:5:1046:A:C8	2.50	0.47
44:5:1245:A:O2'	44:5:1272:C:O3'	2.22	0.47
44:5:1350:A:C8	44:5:1352:A:H5'	2.50	0.47
44:5:1492:G:H1'	44:5:1843:C:H5''	1.96	0.47
44:5:1740:U:H1'	44:5:1741:A:H2	1.79	0.47
1:z:229:LEU:HB3	44:5:2487:U:H1'	1.55	0.47
3:B:379:PHE:CD1	24:W:157:LYS:HE3	2.50	0.47
4:C:100:PHE:CZ	44:5:662:U:C6	2.99	0.47
5:D:301:LYS:NZ	21:T:93:VAL:HG11	2.28	0.47
6:E:275:ARG:HB3	6:E:383:LEU:HD22	1.97	0.47
7:F:250:LYS:HA	7:F:253:ILE:HD12	1.95	0.47
7:F:290:GLN:CG	21:T:136:ARG:HB2	2.44	0.47
9:H:230:PRO:HD2	9:H:283:THR:HG22	1.97	0.47
10:I:270:PHE:HA	10:I:324:ARG:O	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:s:223:LYS:O	44:5:1233:G:N9	2.48	0.47
12:s:268:GLU:CB	44:5:1265:U:H6	2.28	0.47
12:s:271:GLY:HA3	43:q:36:GLN:O	1.60	0.47
14:M:162:ARG:O	20:S:151:PRO:HA	2.15	0.47
15:N:18:VAL:HG22	44:5:316:U:OP1	2.14	0.47
15:N:91:GLU:HA	44:5:277:G:C8	2.50	0.47
15:N:180:PHE:CG	44:5:53:G:C2	3.03	0.47
20:S:67:ALA:O	44:5:523:A:C5'	2.63	0.47
20:S:77:VAL:HG22	20:S:126:VAL:HG22	1.97	0.47
34:g:20:ILE:HA	34:g:33:GLN:O	2.15	0.47
41:o:3:ASN:HA	41:o:92:GLU:HG3	1.97	0.47
42:p:46:THR:OG1	42:p:57:CYS:SG	2.62	0.47
43:q:216:UNK:O	48:y:17:UNK:O	2.32	0.47
44:5:66:A:H3'	44:5:316:U:H5'	1.97	0.47
44:5:353:G:H22	44:5:364:G:H2'	1.79	0.47
44:5:996:A:N3	46:7:80:G:H1'	2.30	0.47
44:5:2465:G:H2'	44:5:2466:G:H8	1.63	0.47
44:5:3060:C:O2	44:5:3332:U:O2'	2.27	0.47
1:z:405:MET:N	44:5:2461:A:C5'	2.67	0.47
3:B:42:ALA:O	3:B:184:ASN:N	2.48	0.47
3:B:222:LYS:O	3:B:272:TYR:N	2.47	0.47
3:B:259:HIS:CG	16:O:64:PHE:CD1	3.03	0.47
5:D:270:SER:O	5:D:274:SER:CB	2.63	0.47
5:D:344:PRO:HA	5:D:348:ILE:H	1.80	0.47
5:D:451:ASP:HB3	5:D:454:LEU:HB3	1.97	0.47
5:D:542:ARG:CZ	46:7:62:U:OP1	2.63	0.47
5:D:549:LYS:HA	5:D:553:LEU:HB3	1.96	0.47
6:E:229:LYS:NZ	44:5:1423:C:H1'	2.30	0.47
8:G:411:ASP:O	8:G:415:LYS:NZ	2.48	0.47
9:H:208:GLN:H	9:H:255:VAL:HG22	1.79	0.47
9:H:286:TYR:O	9:H:347:SER:HA	2.15	0.47
12:s:171:PRO:HA	12:s:177:LYS:HA	1.96	0.47
12:s:223:LYS:CA	43:q:44:GLU:CB	2.73	0.47
12:s:224:GLU:C	44:5:1233:G:N3	2.73	0.47
12:s:300:PRO:CA	44:5:1267:U:C2	2.98	0.47
15:N:40:ALA:C	44:5:114:A:C8	2.93	0.47
18:Q:134:GLN:HB3	18:Q:135:HIS:CG	2.50	0.47
18:Q:193:ALA:HA	18:Q:196:LEU:HB2	1.96	0.47
24:W:269:LYS:HA	24:W:272:LYS:HB3	1.97	0.47
29:b:109:HIS:NE2	29:b:113:LEU:HD22	2.30	0.47
35:h:104:GLN:HE22	35:h:108:GLN:HE21	1.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:m:81:SER:O	40:m:85:LEU:HB3	2.14	0.47
42:p:86:LEU:HA	42:p:89:MET:HB2	1.97	0.47
43:q:55:LYS:HE2	44:5:1224:C:C5	2.50	0.47
44:5:43:A:N6	44:5:2802:A:O2'	2.40	0.47
44:5:359:U:H3	44:5:815:G:H4'	1.79	0.47
44:5:919:U:H3'	44:5:923:C:N4	2.30	0.47
44:5:1052:U:C2'	46:7:103:A:H4'	2.45	0.47
44:5:1480:G:O2'	44:5:1871:U:O4	2.31	0.47
44:5:1657:C:N4	44:5:1798:A:OP2	2.35	0.47
44:5:1804:A:H2'	44:5:1805:C:C6	2.50	0.47
44:5:2221:G:C2	44:5:2223:A:H5''	2.50	0.47
44:5:2279:A:H2'	44:5:2288:G:O6	2.15	0.47
44:5:2290:C:H2'	44:5:2291:A:H8	1.80	0.47
44:5:2452:G:H1	44:5:2494:A:H1'	1.79	0.47
45:8:78:G:H2'	45:8:79:A:C4	2.50	0.47
1:z:298:LEU:HD12	1:z:323:LEU:HD22	1.95	0.46
1:z:366:ASN:OD1	44:5:2469:G:C6	2.68	0.46
3:B:30:LYS:HB2	44:5:3137:C:OP2	2.15	0.46
5:D:528:GLU:HG3	46:7:121:U:C2	2.50	0.46
11:J:101:ARG:NH1	11:J:243:HIS:HA	2.30	0.46
11:J:167:ALA:O	11:J:171:LEU:CB	2.63	0.46
12:s:271:GLY:N	44:5:1264:G:C6	2.49	0.46
12:s:279:ARG:CB	44:5:1261:G:C3'	2.93	0.46
12:s:300:PRO:CA	44:5:1267:U:H3'	2.44	0.46
15:N:60:VAL:HB	15:N:134:LEU:HB2	1.97	0.46
18:Q:273:GLU:CD	44:5:787:G:O5'	2.58	0.46
25:X:207:TYR:OH	44:5:1829:G:H4'	2.14	0.46
26:Y:51:ARG:HD3	26:Y:110:HIS:HB3	1.96	0.46
31:d:73:ASN:HA	31:d:128:ARG:HD3	1.97	0.46
33:f:370:VAL:HA	33:f:384:VAL:HG22	1.97	0.46
42:p:5:THR:CG2	44:5:837:A:P	3.03	0.46
42:p:16:VAL:HG23	44:5:1927:G:H2'	1.97	0.46
43:q:58:MET:C	44:5:1286:A:H62	2.20	0.46
43:q:100:ILE:H	44:5:1259:A:H62	1.63	0.46
44:5:883:A:H5''	44:5:884:A:H5'	1.97	0.46
44:5:1021:G:N1	44:5:1032:C:N3	2.63	0.46
44:5:2198:A:C6	44:5:2270:A:C2	3.00	0.46
44:5:2212:C:H2'	44:5:2231:C:H2'	1.96	0.46
44:5:2568:C:O2'	44:5:2569:A:O5'	2.32	0.46
44:5:3351:U:O2'	44:5:3352:U:O4'	2.27	0.46
46:7:35:C:O2	46:7:45:A:O2'	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:261:MET:HB3	16:O:64:PHE:HA	1.94	0.46
4:C:321:LYS:HE2	4:C:324:LEU:HD23	1.97	0.46
5:D:265:LYS:CG	44:5:2686:A:C1'	2.84	0.46
6:E:270:ARG:HH12	44:5:3268:A:H5''	1.66	0.46
7:F:315:LEU:HD12	44:5:985:U:N1	2.31	0.46
7:F:406:LYS:HE2	44:5:1100:U:OP2	2.15	0.46
8:G:371:ASP:O	8:G:375:LEU:HB2	2.15	0.46
12:s:268:GLU:HA	43:q:36:GLN:CD	2.37	0.46
12:s:278:CYS:N	44:5:1256:G:C6	2.83	0.46
15:N:73:ARG:HB3	44:5:2600:C:C5	2.49	0.46
17:P:132:ALA:HB3	44:5:879:U:O2'	2.14	0.46
23:V:233:ASN:ND2	23:V:237:GLU:OE1	2.48	0.46
33:f:370:VAL:HG13	33:f:382:ILE:HG23	1.98	0.46
35:h:82:ALA:HB3	35:h:84:LYS:HD2	1.98	0.46
41:o:24:LYS:HE3	41:o:75:VAL:HG12	1.97	0.46
41:o:86:LYS:HZ2	44:5:2654:C:H42	1.63	0.46
43:q:38:MET:HB2	44:5:1231:A:O2'	2.14	0.46
43:q:39:HIS:HA	44:5:1260:A:O3'	2.14	0.46
44:5:360:G:N3	44:5:814:U:O2'	2.48	0.46
44:5:1544:G:H2'	44:5:1545:A:H8	1.80	0.46
44:5:2312:A:H2'	44:5:2315:G:H21	1.80	0.46
6:E:246:ARG:CB	44:5:607:A:C5'	2.93	0.46
8:G:316:LEU:HA	8:G:342:ALA:O	2.15	0.46
10:I:343:LYS:CE	44:5:2852:C:O2	2.63	0.46
11:J:144:THR:HG21	41:o:106:PHE:O	2.15	0.46
11:J:230:THR:HA	11:J:236:LYS:HG3	1.96	0.46
12:s:196:THR:CB	44:5:1237:G:OP2	2.64	0.46
12:s:222:LEU:C	44:5:1232:C:O2	2.58	0.46
13:L:126:PHE:HD1	13:L:132:ALA:HB3	1.80	0.46
15:N:30:TYR:HB2	44:5:317:A:N6	2.31	0.46
15:N:91:GLU:CD	44:5:277:G:C3'	2.64	0.46
19:R:194:SER:HA	44:5:1690:C:P	2.55	0.46
19:R:258:LEU:HD22	19:R:267:PHE:HZ	1.80	0.46
20:S:66:GLU:O	44:5:522:A:C2'	2.63	0.46
24:W:199:LEU:HA	24:W:202:LYS:HD3	1.97	0.46
27:Z:25:VAL:HG11	27:Z:95:VAL:HG21	1.97	0.46
31:d:68:ARG:HD3	31:d:166:VAL:HG22	1.97	0.46
34:g:67:LYS:HD2	34:g:70:LYS:HE3	1.97	0.46
37:j:791:THR:HG22	44:5:1845:G:O2'	2.15	0.46
41:o:12:CYS:O	41:o:18:ARG:N	2.38	0.46
41:o:60:LYS:HD2	41:o:62:ALA:HB2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:p:4:ARG:HH21	44:5:837:A:H3'	1.78	0.46
43:q:9:ALA:O	43:q:13:ALA:CB	2.60	0.46
44:5:44:U:H3'	44:5:45:A:H8	1.80	0.46
44:5:60:A:C5	44:5:326:U:O2	2.69	0.46
44:5:916:G:N1	44:5:924:G:O4'	2.49	0.46
44:5:1268:G:N2	44:5:1272:C:H3'	2.30	0.46
44:5:2276:G:O6	44:5:2311:G:C2	2.68	0.46
47:x:12:UNK:O	48:y:1:UNK:CB	2.64	0.46
1:z:233:LEU:HD23	1:z:379:LEU:HD11	1.96	0.46
1:z:234:LYS:CA	44:5:2464:U:O4'	2.55	0.46
1:z:369:MET:SD	44:5:2470:C:C4'	3.02	0.46
3:B:87:VAL:O	3:B:107:ALA:HB2	2.16	0.46
4:C:34:ILE:O	4:C:38:VAL:HB	2.15	0.46
4:C:79:GLY:HA2	44:5:363:G:H2'	1.98	0.46
7:F:355:ARG:NH2	44:5:578:A:C2	2.83	0.46
10:I:208:ASN:HD21	10:I:281:VAL:HG11	1.80	0.46
14:M:248:TRP:CH2	44:5:3206:C:H2'	2.50	0.46
15:N:6:TYR:CB	44:5:110:G:C1'	2.63	0.46
15:N:11:GLN:CD	44:5:65:A:OP1	2.57	0.46
15:N:23:GLN:HA	44:5:317:A:O4'	2.15	0.46
15:N:56:LYS:C	44:5:150:A:OP2	2.58	0.46
15:N:203:ARG:CA	37:j:815:VAL:C	2.88	0.46
19:R:140:ARG:HH11	44:5:1471:U:H5'	1.80	0.46
27:Z:3:PHE:O	27:Z:8:LYS:NZ	2.43	0.46
27:Z:133:LEU:CD2	34:g:96:GLU:OE1	2.64	0.46
30:c:24:THR:HG22	30:c:91:SER:HB3	1.98	0.46
31:d:138:ASN:N	31:d:146:PRO:O	2.49	0.46
32:e:257:VAL:HA	32:e:260:LEU:HD12	1.98	0.46
37:j:805:CYS:SG	37:j:808:CYS:N	2.75	0.46
43:q:43:LYS:CG	44:5:1233:G:O6	2.64	0.46
44:5:341:G:H4'	44:5:344:A:H1'	1.97	0.46
44:5:807:A:O2'	44:5:2811:A:N3	2.46	0.46
44:5:1393:A:H62	44:5:1417:G:H1'	1.79	0.46
44:5:2207:A:H8	44:5:2236:G:H22	1.63	0.46
44:5:2704:A:O2'	44:5:2705:A:O5'	2.34	0.46
1:z:218:THR:CB	44:5:2489:C:C2	2.98	0.46
2:A:187:HIS:O	2:A:190:ARG:NH1	2.48	0.46
5:D:284:ARG:NH1	46:7:13:A:O2'	2.48	0.46
5:D:355:TRP:HD1	5:D:418:ARG:HA	1.80	0.46
7:F:330:THR:HG22	21:T:134:GLN:NE2	2.31	0.46
8:G:217:PRO:HD3	25:X:146:PHE:HD2	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:I:200:LYS:HZ1	44:5:2635:A:P	2.27	0.46
12:s:196:THR:O	44:5:1238:C:C2	2.69	0.46
12:s:267:LYS:CB	43:q:36:GLN:HB2	2.45	0.46
13:L:59:ARG:NH1	13:L:66:ASN:O	2.44	0.46
14:M:248:TRP:HZ2	44:5:3207:U:OP1	1.98	0.46
15:N:27:VAL:CG2	44:5:271:C:O2'	2.63	0.46
15:N:31:ARG:CA	44:5:268:A:H62	2.28	0.46
15:N:69:GLY:HA2	44:5:289:A:N6	2.30	0.46
15:N:81:TYR:CE1	44:5:2428:U:O4'	2.67	0.46
16:O:74:ARG:HB3	16:O:147:TRP:HB2	1.98	0.46
17:P:120:ASN:HD22	45:8:12:A:H2'	1.70	0.46
19:R:256:HIS:HD1	44:5:1718:G:H3'	1.81	0.46
23:V:196:PRO:HA	23:V:199:ARG:HD3	1.97	0.46
29:b:102:ASP:OD1	44:5:2738:A:H5'	2.16	0.46
30:c:44:ILE:O	30:c:70:PHE:CB	2.52	0.46
32:e:168:PHE:CE2	44:5:1405:U:H4'	2.49	0.46
33:f:327:VAL:O	33:f:418:ILE:N	2.49	0.46
36:i:5:THR:OG1	36:i:7:ILE:O	2.31	0.46
37:j:845:THR:HA	45:8:42:G:H5'	1.96	0.46
44:5:206:G:O6	44:5:222:A:N6	2.49	0.46
44:5:679:U:O2'	44:5:789:A:O4'	2.32	0.46
44:5:1168:U:H2'	44:5:1169:A:H8	1.80	0.46
44:5:1959:G:C2	44:5:2078:C:O2	2.68	0.46
44:5:2201:G:O6	44:5:2241:U:N3	2.49	0.46
44:5:2258:U:H2'	44:5:2259:A:O4'	2.16	0.46
44:5:2271:A:H2'	44:5:2272:G:H5''	1.96	0.46
44:5:2424:A:H3'	44:5:2425:G:H8	1.81	0.46
44:5:2999:U:C4	44:5:3149:G:O6	2.68	0.46
45:8:48:A:O2'	45:8:50:C:OP2	2.32	0.46
45:8:58:G:OP1	45:8:98:U:N3	2.44	0.46
3:B:17:LEU:C	44:5:3138:U:O2'	2.59	0.46
3:B:244:ARG:NE	44:5:2947:G:P	2.86	0.46
4:C:82:THR:CB	44:5:364:G:O2'	2.58	0.46
4:C:293:SER:O	4:C:297:SER:OG	2.30	0.46
5:D:290:TYR:HA	5:D:293:ARG:HB3	1.97	0.46
6:E:246:ARG:CB	44:5:607:A:H5'	2.43	0.46
7:F:286:TYR:CA	21:T:140:ILE:HG12	2.34	0.46
9:H:223:ARG:NH2	44:5:3187:A:OP1	2.48	0.46
12:s:218:VAL:C	44:5:1234:G:C6	2.94	0.46
12:s:257:SER:CB	44:5:1248:C:H5'	2.44	0.46
13:L:128:ARG:NH2	35:h:111:PHE:CE1	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:91:GLU:O	44:5:277:G:C2'	2.60	0.46
15:N:193:ARG:N	44:5:1549:U:C5'	2.78	0.46
16:O:18:ARG:NH1	44:5:1318:A:N7	2.64	0.46
17:P:74:LYS:HZ3	44:5:3297:U:C4'	2.27	0.46
19:R:137:ALA:O	44:5:1471:U:O4'	2.34	0.46
19:R:240:LEU:HD21	19:R:277:ILE:HD11	1.97	0.46
26:Y:24:SER:O	45:8:88:A:H2	1.96	0.46
27:Z:10:ALA:HA	27:Z:81:PRO:HA	1.97	0.46
28:a:181:PRO:HD2	28:a:204:VAL:HG22	1.97	0.46
36:i:76:ARG:O	44:5:294:U:H4'	2.14	0.46
37:j:797:ARG:HD3	44:5:817:A:O2'	2.15	0.46
38:k:24:THR:HG21	38:k:44:LYS:HZ3	1.80	0.46
43:q:58:MET:CA	44:5:1286:A:N6	2.78	0.46
44:5:75:G:H3'	44:5:76:G:C8	2.51	0.46
44:5:306:A:C2	44:5:2784:G:H1'	2.51	0.46
44:5:373:A:H2'	44:5:375:A:C8	2.51	0.46
44:5:631:U:H2'	44:5:632:G:C8	2.51	0.46
44:5:664:U:O2	44:5:798:G:N2	2.33	0.46
44:5:717:C:H3'	44:5:718:G:H8	1.81	0.46
44:5:1015:U:O4	44:5:1036:A:N6	2.49	0.46
44:5:1060:U:H2'	44:5:1061:A:H8	1.81	0.46
44:5:1805:C:H2'	44:5:1806:A:C8	2.48	0.46
44:5:2201:G:N1	44:5:2241:U:N3	2.62	0.46
44:5:2414:G:H1	44:5:2806:U:H3	1.64	0.46
44:5:3162:C:H2'	44:5:3163:A:C8	2.51	0.46
44:5:3321:C:H2'	44:5:3322:A:H8	1.81	0.46
1:z:253:CYS:HB3	44:5:2465:G:O2'	2.15	0.46
1:z:261:CYS:SG	44:5:2485:A:H5''	2.56	0.46
1:z:364:VAL:HG23	44:5:2467:G:H3'	1.97	0.46
2:A:11:GLY:C	44:5:2171:G:N2	2.68	0.46
2:A:67:TYR:CD1	44:5:2524:A:C8	3.04	0.46
2:A:95:SER:HB2	44:5:2551:U:H5	1.81	0.46
2:A:133:TYR:H	2:A:151:PRO:HG3	1.80	0.46
3:B:13:HIS:CE1	44:5:3010:U:O2'	2.68	0.46
3:B:110:LEU:HB2	3:B:115:LYS:HZ2	1.80	0.46
4:C:305:ALA:HA	44:5:1347:U:O4'	2.15	0.46
5:D:269:SER:O	5:D:273:SER:OG	2.32	0.46
5:D:283:ARG:NH2	44:5:2703:A:C5	2.81	0.46
6:E:382:TYR:CD2	14:M:264:PHE:HD1	2.24	0.46
10:I:381:PHE:CD1	44:5:1041:U:O2'	2.57	0.46
11:J:101:ARG:HA	11:J:225:PRO:HG2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:L:52:ASP:OD1	13:L:52:ASP:N	2.48	0.46
15:N:5:LYS:HA	44:5:64:G:N2	2.31	0.46
15:N:35:VAL:CG1	44:5:268:A:O3'	2.43	0.46
15:N:113:LEU:HD12	15:N:134:LEU:HB3	1.97	0.46
18:Q:296:LYS:HD3	44:5:88:A:OP1	2.16	0.46
28:a:140:ARG:CD	44:5:89:A:H5''	2.30	0.46
34:g:6:THR:CG2	44:5:1486:G:N2	2.78	0.46
37:j:797:ARG:CD	44:5:818:C:H5'	2.45	0.46
37:j:802:HIS:O	37:j:811:ARG:NE	2.45	0.46
37:j:861:LYS:NZ	45:8:94:C:OP1	2.32	0.46
42:p:38:ASP:HA	42:p:45:LYS:HA	1.96	0.46
43:q:52:LEU:N	44:5:1280:C:H5'	2.30	0.46
44:5:74:G:H2'	44:5:75:G:C8	2.49	0.46
44:5:331:G:N1	45:8:32:C:N3	2.63	0.46
44:5:344:A:H3'	44:5:345:G:H8	1.79	0.46
44:5:1115:G:H5''	44:5:1116:G:H5'	1.96	0.46
44:5:1907:C:N4	44:5:2336:U:O4'	2.49	0.46
44:5:1941:C:H2'	44:5:1942:U:C6	2.50	0.46
44:5:2281:A:O2'	44:5:2973:G:N2	2.34	0.46
44:5:3104:U:O2	44:5:3129:A:C5	2.68	0.46
44:5:3285:C:H2'	44:5:3286:G:C8	2.51	0.46
47:x:26:UNK:CB	48:y:13:UNK:CB	2.94	0.46
1:z:366:ASN:HA	44:5:2469:G:C6	2.51	0.46
2:A:14:SER:OG	2:A:15:ILE:N	2.46	0.46
3:B:66:LYS:NZ	23:V:140:PHE:CA	2.65	0.46
3:B:262:TRP:NE1	16:O:63:ALA:O	2.49	0.46
4:C:156:LEU:HA	4:C:159:ILE:HD12	1.96	0.46
5:D:306:THR:HG23	44:5:1078:U:O3'	2.16	0.46
6:E:243:LYS:HA	44:5:593:C:OP1	2.14	0.46
7:F:319:THR:CB	18:Q:129:ASP:HB3	2.46	0.46
7:F:320:ARG:O	7:F:323:SER:OG	2.31	0.46
9:H:219:SER:HB2	9:H:226:LYS:HB3	1.96	0.46
10:I:189:ARG:HH22	44:5:1128:U:P	2.38	0.46
10:I:228:VAL:HG11	10:I:359:THR:H	1.81	0.46
11:J:128:LEU:O	11:J:132:SER:CB	2.63	0.46
12:s:213:SER:C	44:5:1246:G:H5'	2.35	0.46
13:L:57:VAL:HG11	13:L:111:ALA:HB3	1.98	0.46
15:N:17:ASP:C	44:5:315:C:H4'	2.41	0.46
15:N:40:ALA:O	44:5:113:C:O2'	2.33	0.46
15:N:48:ALA:N	44:5:321:C:O4'	2.47	0.46
15:N:122:ASN:H	44:5:318:A:C4'	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:144:ARG:NH2	44:5:126:U:N3	2.33	0.46
15:N:189:LYS:HB3	44:5:1548:C:C5'	2.38	0.46
15:N:199:LEU:HD23	37:j:816:GLN:O	2.16	0.46
15:N:204:LYS:HG2	37:j:815:VAL:HG22	1.64	0.46
18:Q:204:LYS:HG2	18:Q:263:LEU:HB2	1.98	0.46
20:S:67:ALA:H	44:5:519:A:N6	2.13	0.46
20:S:67:ALA:CA	44:5:522:A:O3'	2.62	0.46
26:Y:101:PRO:HA	26:Y:104:LEU:HD12	1.97	0.46
29:b:109:HIS:HA	29:b:112:ALA:HB3	1.96	0.46
33:f:378:ARG:HD3	44:5:622:A:H5'	1.97	0.46
40:m:94:SER:OG	40:m:104:PRO:O	2.32	0.46
42:p:33:GLN:HG3	42:p:34:HIS:CD2	2.51	0.46
43:q:36:GLN:CA	44:5:1277:C:N4	2.34	0.46
43:q:47:GLY:CA	44:5:1258:U:OP1	2.64	0.46
44:5:69:C:N4	44:5:314:U:H4'	2.31	0.46
44:5:90:C:H1'	44:5:281:G:H4'	1.96	0.46
44:5:213:A:N1	44:5:227:G:O2'	2.34	0.46
44:5:701:G:H2'	44:5:702:C:C6	2.50	0.46
44:5:940:G:H2'	44:5:941:G:H8	1.80	0.46
44:5:1078:U:H1'	44:5:1082:U:C2	2.50	0.46
44:5:1393:A:C8	44:5:1417:G:N2	2.83	0.46
44:5:1598:G:H2'	44:5:1599:G:C8	2.51	0.46
44:5:1655:G:H2'	44:5:1656:A:C8	2.51	0.46
44:5:1797:A:H2'	44:5:1798:A:C8	2.51	0.46
44:5:2203:U:H2'	44:5:2204:C:C6	2.50	0.46
44:5:2255:A:N6	44:5:2260:U:N3	2.62	0.46
44:5:2260:U:C2'	44:5:2261:G:H5'	2.45	0.46
44:5:2583:C:H2'	44:5:2584:G:C8	2.50	0.46
3:B:31:ALA:HB2	44:5:3136:G:H5''	1.98	0.46
3:B:31:ALA:CB	44:5:3136:G:H5''	2.45	0.46
3:B:42:ALA:H	3:B:185:GLY:HA2	1.79	0.46
4:C:294:GLU:OE1	18:Q:254:VAL:O	2.32	0.46
5:D:268:LYS:HA	5:D:272:TYR:HD2	1.81	0.46
7:F:286:TYR:OH	21:T:138:SER:OG	2.33	0.46
7:F:432:HIS:O	7:F:436:GLY:N	2.48	0.46
9:H:258:HIS:HD1	20:S:153:PRO:HG2	1.80	0.46
9:H:301:VAL:HA	9:H:313:GLU:O	2.16	0.46
10:I:304:TRP:CG	44:5:2646:C:OP1	2.69	0.46
17:P:126:ARG:NH2	17:P:140:GLU:OE2	2.48	0.46
19:R:156:LYS:NZ	44:5:1873:U:H5'	2.31	0.46
24:W:270:ALA:HA	24:W:273:ALA:HB3	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:e:198:ARG:CZ	44:5:634:C:O2'	2.60	0.46
37:j:797:ARG:NH1	44:5:817:A:HO2'	1.91	0.46
37:j:798:HIS:HE1	44:5:1490:A:O2'	1.99	0.46
39:l:15:LYS:NZ	45:8:45:C:OP1	2.47	0.46
42:p:28:LYS:HA	42:p:31:ILE:HD12	1.98	0.46
43:q:59:VAL:HG23	44:5:1223:A:O4'	2.15	0.46
44:5:105:C:H2'	44:5:106:A:H8	1.81	0.46
44:5:668:G:O6	44:5:794:U:C4	2.69	0.46
44:5:1317:A:O2'	44:5:1319:G:OP2	2.34	0.46
44:5:1664:G:O6	44:5:1785:U:O4	2.33	0.46
44:5:2213:A:N1	44:5:2429:G:H1'	2.30	0.46
44:5:2243:A:C4	44:5:2313:A:H2'	2.51	0.46
44:5:3016:A:H2'	44:5:3017:A:C8	2.50	0.46
44:5:3326:G:O6	44:5:3380:U:O4	2.34	0.46
45:8:70:G:O2'	45:8:71:A:N7	2.41	0.46
1:z:222:ASN:HB2	44:5:2475:G:N1	2.31	0.46
1:z:365:GLY:HA3	44:5:2487:U:O2'	2.16	0.46
1:z:409:PHE:O	44:5:2451:G:C6	2.66	0.46
2:A:147:ARG:HA	2:A:156:LYS:O	2.15	0.46
5:D:262:ALA:HA	46:7:16:U:H5'	1.98	0.46
5:D:296:LEU:HA	44:5:2748:A:HO2'	1.81	0.46
6:E:399:LYS:CD	14:M:260:ALA:CA	2.92	0.46
8:G:215:LYS:HD3	44:5:2523:A:H5''	1.98	0.46
9:H:290:MET:HE3	9:H:381:VAL:HG22	1.97	0.46
10:I:237:LEU:HD12	10:I:337:LEU:HD22	1.98	0.46
10:I:344:PHE:C	44:5:2854:U:H4'	2.40	0.46
13:L:5:LYS:HE3	28:a:128:LYS:NZ	2.31	0.46
14:M:196:ASP:HB2	14:M:204:ARG:HA	1.97	0.46
15:N:21:PHE:CE2	36:i:28:TYR:HE1	2.01	0.46
15:N:32:GLN:OE1	44:5:297:G:C5'	2.64	0.46
15:N:41:ARG:N	44:5:114:A:N9	2.59	0.46
15:N:44:ARG:HB2	44:5:320:G:C3'	2.27	0.46
15:N:60:VAL:HG21	15:N:113:LEU:HD11	1.98	0.46
15:N:70:ASN:CA	44:5:289:A:C5	2.84	0.46
15:N:156:HIS:HE1	45:8:141:C:C2'	2.10	0.46
26:Y:46:LYS:HZ1	44:5:224:C:H5''	1.81	0.46
31:d:118:TRP:CD1	44:5:1475:A:N3	2.84	0.46
35:h:86:ARG:CD	45:8:36:G:C8	2.97	0.46
41:o:8:ARG:NE	41:o:10:THR:HB	2.31	0.46
43:q:77:LEU:HD11	44:5:1222:G:N7	2.31	0.46
44:5:785:G:N2	44:5:786:A:H62	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:1467:A:O2'	44:5:1470:U:O4	2.34	0.46
44:5:1598:G:H2'	44:5:1599:G:H8	1.81	0.46
44:5:1714:A:H2'	44:5:1714:A:OP2	2.16	0.46
44:5:2480:A:H3'	44:5:2481:G:H8	1.80	0.46
1:z:255:ARG:CA	44:5:2467:G:C5'	2.85	0.45
1:z:340:TYR:HA	1:z:343:VAL:HG22	1.99	0.45
2:A:238:ILE:O	44:5:2155:G:H5'	2.15	0.45
4:C:162:THR:OG1	4:C:217:LYS:O	2.34	0.45
6:E:382:TYR:HA	14:M:267:PHE:CE2	2.51	0.45
7:F:432:HIS:HB3	7:F:435:GLN:HB3	1.98	0.45
8:G:205:GLN:HB3	8:G:208:ARG:HH22	1.80	0.45
9:H:226:LYS:HD3	44:5:3198:U:C5	2.51	0.45
10:I:207:TYR:CE2	44:5:1048:A:H2'	2.51	0.45
10:I:302:GLY:HA2	44:5:2645:G:OP2	2.16	0.45
11:J:238:THR:H	46:7:57:G:H4'	1.82	0.45
12:s:298:GLU:C	44:5:1273:A:N7	2.73	0.45
13:L:159:VAL:CG2	28:a:180:ALA:CB	2.93	0.45
15:N:200:TRP:HB2	37:j:815:VAL:O	2.16	0.45
19:R:139:LEU:HB2	44:5:1472:U:H5'	1.97	0.45
19:R:256:HIS:CD2	44:5:1718:G:OP2	2.69	0.45
21:T:109:VAL:O	21:T:113:ALA:CB	2.64	0.45
24:W:225:ARG:HD3	24:W:225:ARG:H	1.81	0.45
27:Z:3:PHE:CD2	30:c:62:LEU:HD13	2.50	0.45
28:a:85:ARG:HD2	28:a:85:ARG:H	1.82	0.45
28:a:103:ILE:HD12	44:5:1114:U:C5'	2.45	0.45
28:a:191:GLY:HA2	28:a:209:ARG:HB2	1.99	0.45
28:a:206:VAL:O	28:a:227:GLU:N	2.44	0.45
29:b:69:LYS:NZ	44:5:2618:G:OP2	2.48	0.45
32:e:192:VAL:C	32:e:195:ARG:H	2.23	0.45
42:p:39:CYS:HB2	42:p:57:CYS:SG	2.56	0.45
42:p:55:TRP:O	42:p:63:THR:HA	2.16	0.45
43:q:220:UNK:CB	48:y:18:UNK:CA	2.94	0.45
44:5:345:G:H5'	44:5:1429:G:H1	1.82	0.45
44:5:589:A:N7	44:5:610:G:O2'	2.41	0.45
44:5:859:G:O2'	44:5:861:C:O4'	2.34	0.45
44:5:1151:U:OP2	44:5:1152:G:N1	2.49	0.45
44:5:1247:U:N3	44:5:1267:U:O4	2.49	0.45
44:5:1907:C:H3'	44:5:1908:A:H8	1.81	0.45
44:5:2653:C:O2'	44:5:2657:A:N1	2.45	0.45
44:5:2830:G:N1	44:5:2858:U:N3	2.52	0.45
46:7:40:C:H2'	46:7:42:A:N7	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:7:54:U:O2	46:7:56:A:N6	2.49	0.45
1:z:352:PHE:HA	1:z:356:LYS:HA	1.98	0.45
2:A:58:LEU:HA	2:A:76:PHE:O	2.16	0.45
2:A:80:GLU:OE2	42:p:66:GLY:C	2.59	0.45
2:A:156:LYS:NZ	2:A:157:VAL:O	2.50	0.45
5:D:262:ALA:HA	46:7:16:U:O4'	2.16	0.45
7:F:290:GLN:NE2	21:T:136:ARG:HD2	2.31	0.45
7:F:330:THR:HG22	21:T:134:GLN:HE22	1.80	0.45
7:F:330:THR:O	7:F:334:LEU:HB2	2.16	0.45
8:G:336:LYS:HE2	36:i:39:PHE:CZ	2.51	0.45
9:H:219:SER:HB2	9:H:226:LYS:HE2	1.97	0.45
9:H:250:ASN:HB3	14:M:152:THR:HG21	1.98	0.45
10:I:220:ASP:HB2	44:5:1009:A:C4'	2.46	0.45
11:J:188:SER:HA	44:5:2672:G:C1'	2.46	0.45
13:L:36:ARG:NH2	44:5:686:G:H3'	2.32	0.45
15:N:7:LEU:C	44:5:64:G:C3'	2.89	0.45
15:N:8:GLU:CB	44:5:64:G:C2	2.74	0.45
15:N:18:VAL:CG2	36:i:25:LYS:NZ	2.80	0.45
15:N:71:ARG:HD2	15:N:94:TYR:HB2	1.98	0.45
15:N:149:ASN:C	45:8:142:C:H1'	2.40	0.45
15:N:188:ARG:CB	44:5:1544:G:N2	2.79	0.45
18:Q:231:PHE:HD2	18:Q:236:ARG:HH21	1.65	0.45
18:Q:305:ARG:HB2	44:5:2790:A:OP1	2.16	0.45
19:R:155:ARG:NH2	44:5:1874:A:N7	2.64	0.45
24:W:201:ARG:HB3	24:W:208:ILE:HD13	1.97	0.45
26:Y:91:ASN:HA	44:5:378:A:O2'	2.16	0.45
27:Z:14:ARG:NH2	44:5:1637:A:O2'	2.49	0.45
29:b:119:ALA:O	29:b:123:ALA:CB	2.63	0.45
35:h:106:LYS:O	35:h:110:ALA:HB3	2.16	0.45
42:p:2:ALA:HA	44:5:853:G:C6	2.43	0.45
43:q:11:TYR:O	43:q:15:LEU:CB	2.61	0.45
43:q:28:VAL:HG23	44:5:1281:G:H4'	0.47	0.45
43:q:58:MET:CA	44:5:1222:G:O3'	2.61	0.45
44:5:284:A:N7	44:5:305:U:H1'	2.32	0.45
44:5:340:C:O2	44:5:345:G:O2'	2.33	0.45
44:5:495:G:N2	44:5:619:A:H1'	2.31	0.45
44:5:717:C:H5	44:5:751:A:H4'	1.81	0.45
44:5:720:A:OP1	44:5:784:A:N6	2.50	0.45
44:5:1210:U:C4	44:5:1295:G:O6	2.69	0.45
44:5:1454:A:H2'	44:5:1879:A:H62	1.81	0.45
44:5:2246:G:N1	44:5:2247:G:C6	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:2841:G:H1'	44:5:2848:G:N2	2.31	0.45
44:5:2940:A:H5''	44:5:2941:A:H5''	1.99	0.45
1:z:230:GLN:HA	44:5:2467:G:H1	1.82	0.45
2:A:150:LEU:HD12	2:A:154:ALA:HB3	1.97	0.45
2:A:209:HIS:CD2	2:A:211:HIS:H	2.33	0.45
3:B:7:GLU:CG	44:5:2915:U:C5	2.99	0.45
3:B:58:ARG:HD3	3:B:356:LEU:HD23	1.97	0.45
4:C:3:ARG:HH21	4:C:22:LEU:HB2	1.81	0.45
5:D:263:PHE:CE2	46:7:17:A:OP1	2.69	0.45
5:D:360:ALA:HA	5:D:504:HIS:HE1	1.82	0.45
8:G:197:ASN:OD1	44:5:2549:G:C5	2.69	0.45
8:G:309:ASN:ND2	44:5:117:U:O4	2.49	0.45
8:G:390:TYR:CZ	8:G:394:LYS:HD3	2.52	0.45
9:H:351:VAL:O	9:H:355:SER:CB	2.64	0.45
11:J:189:ALA:HB3	44:5:2671:A:O2'	2.17	0.45
12:s:241:ILE:H	43:q:44:GLU:CG	2.25	0.45
12:s:289:ILE:CA	44:5:1277:C:C4	2.57	0.45
13:L:13:HIS:HB3	44:5:98:G:OP2	2.16	0.45
13:L:128:ARG:CZ	44:5:168:U:H1'	2.46	0.45
14:M:162:ARG:NH1	20:S:172:TYR:O	2.49	0.45
15:N:122:ASN:CB	44:5:318:A:O4'	2.64	0.45
15:N:174:ILE:HA	44:5:55:G:H5'	1.82	0.45
15:N:191:TRP:CH2	44:5:2166:A:C5	3.05	0.45
16:O:27:LEU:HA	16:O:31:GLN:HB3	1.98	0.45
16:O:143:THR:HG23	16:O:148:LYS:HA	1.97	0.45
19:R:150:VAL:HG12	19:R:152:VAL:HG13	1.97	0.45
20:S:67:ALA:CB	44:5:523:A:P	3.04	0.45
21:T:110:LYS:O	21:T:114:ALA:HB2	2.17	0.45
37:j:828:ALA:HB2	45:8:104:A:O3'	2.15	0.45
44:5:107:A:H2'	44:5:108:A:C8	2.50	0.45
44:5:107:A:H1'	44:5:325:A:N3	2.31	0.45
44:5:705:A:H61	44:5:715:A:H5''	1.81	0.45
44:5:909:G:H2'	44:5:910:G:H8	1.81	0.45
44:5:1153:A:H2'	44:5:1154:A:C4	2.51	0.45
44:5:1174:G:H1'	44:5:1181:U:N3	2.31	0.45
44:5:1900:A:H1'	44:5:1902:G:C6	2.51	0.45
44:5:1954:G:H1'	44:5:2082:U:H2'	1.97	0.45
44:5:2198:A:H4'	44:5:2270:A:H4'	1.47	0.45
44:5:2433:U:H2'	44:5:2434:U:C4	2.51	0.45
45:8:55:U:N3	45:8:62:C:O2	2.31	0.45
46:7:50:U:H2'	46:7:51:A:H8	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:z:312:ILE:HG23	1:z:313:LYS:HG2	1.99	0.45
3:B:219:ALA:HB3	3:B:329:PRO:HG2	1.98	0.45
3:B:375:GLU:O	3:B:379:PHE:HB3	2.16	0.45
5:D:265:LYS:HG3	44:5:2686:A:O2'	2.16	0.45
5:D:295:ARG:CB	44:5:2748:A:H2'	2.31	0.45
7:F:376:ASN:HA	7:F:379:ILE:HD12	1.97	0.45
8:G:224:ARG:CZ	44:5:2585:G:H22	2.29	0.45
10:I:216:ILE:HD12	10:I:254:ARG:HG2	1.99	0.45
12:s:151:TYR:O	44:5:1240:A:C5'	2.64	0.45
12:s:198:GLN:CB	44:5:1238:C:H3'	2.46	0.45
12:s:260:ARG:CB	44:5:1247:U:C1'	2.95	0.45
13:L:17:HIS:CG	44:5:48:A:OP2	2.69	0.45
14:M:255:ARG:HH22	44:5:3207:U:C3'	2.28	0.45
14:M:272:LEU:HB3	16:O:190:VAL:CG2	2.46	0.45
15:N:49:ARG:H	44:5:321:C:C4'	2.29	0.45
15:N:81:TYR:CG	44:5:2428:U:C5	2.85	0.45
15:N:200:TRP:O	15:N:203:ARG:NE	2.49	0.45
16:O:115:LYS:HE3	44:5:3178:A:C2	2.51	0.45
20:S:60:SER:OG	20:S:61:ILE:N	2.50	0.45
22:U:172:ILE:HA	22:U:185:ALA:HB3	1.98	0.45
28:a:144:LYS:HE2	28:a:144:LYS:HB3	1.85	0.45
30:c:32:LYS:HA	30:c:35:ARG:HH21	1.82	0.45
30:c:50:VAL:HG13	44:5:2552:C:H5	1.72	0.45
31:d:107:VAL:HG13	31:d:151:VAL:H	1.82	0.45
32:e:262:ARG:HH12	32:e:266:LEU:HG	1.81	0.45
34:g:12:PRO:CB	44:5:1855:U:O2	2.63	0.45
37:j:789:LYS:NZ	44:5:2138:A:C5	2.84	0.45
37:j:805:CYS:HB3	37:j:810:ARG:H	1.80	0.45
41:o:99:GLN:NE2	41:o:101:GLY:O	2.50	0.45
43:q:207:UNK:C	47:x:4:UNK:N	2.77	0.45
44:5:90:C:H5'	44:5:283:G:H8	1.81	0.45
44:5:219:A:N7	44:5:1390:A:O2'	2.39	0.45
44:5:341:G:O2'	45:8:22:U:O4	2.34	0.45
44:5:1302:A:H2'	44:5:2887:A:C2	2.52	0.45
44:5:1932:A:H3'	44:5:1933:A:H8	1.81	0.45
44:5:2449:A:H2'	44:5:2450:G:H8	1.81	0.45
44:5:2458:A:O2'	44:5:2459:A:O4'	2.35	0.45
44:5:2756:C:H2'	44:5:2757:U:C6	2.51	0.45
44:5:3107:U:H2'	44:5:3108:G:C8	2.51	0.45
44:5:3379:C:H2'	44:5:3380:U:C6	2.52	0.45
46:7:77:G:N1	46:7:102:A:OP2	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:z:216:ASN:C	44:5:2470:C:C2	2.87	0.45
1:z:258:MET:HB2	44:5:2468:A:C5	2.49	0.45
1:z:388:LEU:N	1:z:391:LYS:HZ2	2.14	0.45
1:z:399:LEU:CA	44:5:2495:C:C5	2.53	0.45
1:z:402:LYS:HG2	44:5:2462:A:O4'	2.16	0.45
1:z:409:PHE:CD2	44:5:2490:C:H2'	2.51	0.45
4:C:35:VAL:O	4:C:39:PHE:CB	2.65	0.45
8:G:402:LEU:HB2	8:G:407:GLN:HG2	1.98	0.45
11:J:161:THR:OG1	46:7:39:C:N3	2.48	0.45
12:s:225:PRO:CB	44:5:1233:G:N3	2.74	0.45
13:L:80:VAL:HG11	13:L:87:ALA:HB2	1.99	0.45
14:M:280:VAL:O	14:M:284:LEU:HB2	2.17	0.45
16:O:176:LYS:HD3	44:5:3191:G:H4'	1.98	0.45
21:T:82:ASN:HB2	29:b:87:ILE:CA	2.43	0.45
28:a:174:SER:HB2	28:a:179:THR:HG21	1.98	0.45
29:b:69:LYS:CE	44:5:2617:U:H5''	2.44	0.45
30:c:51:LEU:O	30:c:55:GLU:CB	2.64	0.45
31:d:130:ARG:NH2	31:d:163:GLN:O	2.45	0.45
32:e:218:SER:OG	32:e:222:HIS:N	2.41	0.45
35:h:83:LYS:HD3	35:h:89:ARG:NH2	2.30	0.45
35:h:85:THR:HG22	35:h:87:ALA:H	1.80	0.45
43:q:57:THR:C	44:5:1222:G:C2'	2.90	0.45
44:5:7:C:N3	45:8:153:U:O2	2.49	0.45
44:5:982:C:H2'	44:5:983:A:C8	2.51	0.45
44:5:1052:U:O2'	46:7:103:A:H4'	2.16	0.45
44:5:1119:C:H2'	44:5:1120:A:C8	2.48	0.45
44:5:1635:G:H21	44:5:1638:A:H8	1.61	0.45
44:5:1676:A:N6	44:5:1677:G:O6	2.49	0.45
44:5:2118:C:H3'	44:5:2119:A:C8	2.51	0.45
44:5:2176:U:H2'	44:5:2177:G:C8	2.52	0.45
44:5:2194:G:C4	44:5:2274:U:C6	3.02	0.45
44:5:2283:G:H1'	44:5:2285:C:N4	2.31	0.45
44:5:2661:G:H2'	44:5:2662:G:H8	1.80	0.45
44:5:3241:G:O6	44:5:3246:G:N2	2.49	0.45
45:8:143:U:H2'	45:8:144:G:C8	2.51	0.45
1:z:227:VAL:O	44:5:2481:G:C2	2.70	0.45
4:C:340:GLY:HA3	44:5:576:C:O2'	2.17	0.45
7:F:284:SER:HB3	21:T:142:SER:CB	2.43	0.45
8:G:407:GLN:O	8:G:411:ASP:CB	2.59	0.45
9:H:258:HIS:N	44:5:3186:A:H61	2.13	0.45
9:H:288:TYR:HA	9:H:384:LYS:HA	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:H:373:ARG:NH2	44:5:2897:A:H3'	2.31	0.45
14:M:282:LYS:HA	14:M:285:ALA:HB2	1.99	0.45
15:N:192:LYS:HB3	44:5:1549:U:H3'	0.87	0.45
17:P:102:ALA:HA	17:P:107:LEU:HD13	1.98	0.45
18:Q:247:ILE:HG23	18:Q:251:GLN:HB2	1.97	0.45
18:Q:304:ARG:HH12	28:a:137:VAL:HA	1.82	0.45
19:R:144:ARG:HH22	44:5:1602:A:C4'	2.30	0.45
20:S:117:ARG:HH22	46:7:88:G:H4'	1.81	0.45
22:U:120:ILE:HB	22:U:129:LEU:HD21	1.99	0.45
23:V:230:VAL:HB	23:V:238:MET:HE1	1.97	0.45
25:X:188:LYS:O	25:X:192:ASP:CB	2.61	0.45
27:Z:1:ALA:CB	30:c:64:LYS:NZ	2.79	0.45
30:c:59:TYR:O	30:c:63:SER:OG	2.30	0.45
43:q:100:ILE:N	44:5:1259:A:H62	2.14	0.45
44:5:87:U:N3	44:5:99:A:C8	2.66	0.45
44:5:200:C:N4	44:5:217:U:H3'	2.31	0.45
44:5:906:A:H1'	44:5:907:G:C8	2.52	0.45
44:5:1422:G:H2'	44:5:1423:C:C6	2.52	0.45
44:5:1543:G:H2'	44:5:1544:G:H8	1.82	0.45
44:5:1727:G:O2'	44:5:1731:A:O4'	2.35	0.45
44:5:2277:C:C4'	44:5:2317:A:H5'	2.46	0.45
44:5:2352:A:H2'	44:5:2353:G:H8	1.80	0.45
44:5:2393:G:O2'	44:5:2982:A:N6	2.46	0.45
44:5:2601:A:H2'	44:5:2602:G:C8	2.52	0.45
44:5:3174:A:N6	44:5:3279:A:O5'	2.49	0.45
1:z:217:GLU:C	44:5:2489:C:N3	2.70	0.45
1:z:217:GLU:HB3	44:5:2489:C:N3	2.32	0.45
1:z:218:THR:C	44:5:2489:C:C5	2.95	0.45
2:A:227:ARG:NH2	44:5:2161:G:H5''	2.32	0.45
4:C:115:HIS:CE1	44:5:696:C:OP1	2.70	0.45
4:C:282:SER:OG	4:C:283:THR:N	2.49	0.45
9:H:283:THR:OG1	9:H:284:LYS:NZ	2.35	0.45
15:N:70:ASN:OD1	15:N:93:LYS:NZ	2.50	0.45
15:N:140:LYS:CB	44:5:143:G:N2	2.64	0.45
15:N:179:LYS:CE	44:5:51:A:OP2	2.65	0.45
16:O:18:ARG:HE	44:5:1314:C:C3'	2.29	0.45
19:R:137:ALA:HB3	44:5:1471:U:H1'	1.99	0.45
19:R:215:LYS:HZ1	44:5:1940:G:P	2.37	0.45
25:X:250:ALA:HA	25:X:253:ILE:HG22	1.99	0.45
26:Y:112:ASP:HB3	26:Y:114:ASP:H	1.81	0.45
26:Y:113:LYS:HZ3	45:8:84:C:C1'	2.19	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:a:171:TYR:O	28:a:174:SER:C	2.59	0.45
29:b:95:TYR:CD2	44:5:748:U:H1'	2.52	0.45
37:j:833:TYR:CD1	44:5:53:G:H5''	2.51	0.45
37:j:835:TRP:NE1	44:5:812:G:C2'	2.75	0.45
44:5:85:A:H61	44:5:99:A:H3'	1.82	0.45
44:5:731:U:H2'	44:5:732:C:H6	1.82	0.45
44:5:1016:C:H2'	44:5:1017:C:H2'	1.98	0.45
44:5:2203:U:H2'	44:5:2204:C:H6	1.82	0.45
44:5:2310:U:H2'	44:5:2311:G:C8	2.52	0.45
44:5:2446:U:O2'	44:5:2502:A:OP2	2.26	0.45
44:5:3308:C:H2'	44:5:3309:G:O4'	2.17	0.45
45:8:89:A:O2'	45:8:91:C:O5'	2.33	0.45
45:8:149:A:H2'	45:8:150:G:C4	2.52	0.45
46:7:92:A:C5	46:7:93:C:H1'	2.52	0.45
1:z:258:MET:HE1	44:5:2468:A:H2'	1.97	0.45
1:z:401:VAL:HG12	44:5:2461:A:H4'	1.99	0.45
3:B:211:GLN:HE22	3:B:284:ARG:HA	1.82	0.45
6:E:399:LYS:CD	14:M:260:ALA:C	2.89	0.45
7:F:335:GLU:OE1	44:5:987:U:OP1	2.33	0.45
7:F:407:GLN:N	7:F:407:GLN:OE1	2.50	0.45
8:G:257:LEU:HA	8:G:260:LYS:HE2	1.99	0.45
9:H:247:LYS:NZ	14:M:154:SER:H	2.14	0.45
11:J:188:SER:OG	11:J:190:THR:OG1	2.32	0.45
12:s:290:GLU:C	44:5:1231:A:H2	2.24	0.45
14:M:255:ARG:NH2	44:5:3207:U:H3'	2.32	0.45
15:N:31:ARG:N	44:5:295:A:N1	2.59	0.45
15:N:159:ARG:NH2	15:N:164:LEU:O	2.41	0.45
15:N:192:LYS:HB2	44:5:1550:C:O4'	2.16	0.45
22:U:110:ALA:O	22:U:114:LYS:CB	2.64	0.45
27:Z:100:PHE:O	27:Z:106:ARG:NE	2.34	0.45
31:d:118:TRP:CG	44:5:1475:A:H2'	2.52	0.45
32:e:247:ILE:HB	32:e:256:ARG:HH21	1.82	0.45
33:f:375:LYS:O	33:f:383:ARG:NH2	2.49	0.45
34:g:95:ILE:O	34:g:99:LYS:CB	2.64	0.45
42:p:5:THR:CG2	44:5:837:A:OP1	2.65	0.45
44:5:32:U:O4'	44:5:1546:A:N6	2.49	0.45
44:5:165:A:C2	44:5:257:U:C2	3.05	0.45
44:5:187:A:N3	44:5:208:C:O2'	2.38	0.45
44:5:1921:A:N6	44:5:1930:A:OP1	2.50	0.45
44:5:2775:U:H2'	44:5:2776:C:C6	2.52	0.45
44:5:3344:A:H2	44:5:3361:G:H21	1.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:x:31:UNK:O	48:y:11:UNK:C	2.65	0.45
1:z:394:GLN:HB2	44:5:2446:U:C5'	2.47	0.45
2:A:62:VAL:HG23	2:A:73:GLU:HB2	1.98	0.45
2:A:152:SER:N	44:5:2157:G:O6	2.49	0.45
3:B:250:ALA:HB3	44:5:2880:U:O2'	2.17	0.45
4:C:300:ARG:O	18:Q:164:ARG:HD2	2.17	0.45
4:C:309:ARG:HG3	44:5:1360:C:H5''	1.99	0.45
5:D:529:SER:CB	46:7:1:G:H21	2.19	0.45
6:E:282:LEU:HD23	6:E:282:LEU:HA	1.86	0.45
13:L:63:VAL:CB	44:5:72:C:H5'	2.47	0.45
13:L:179:PHE:HD1	13:L:183:ARG:HB2	1.82	0.45
15:N:26:ARG:NH1	44:5:317:A:H5''	2.27	0.45
15:N:129:TYR:CZ	44:5:317:A:C2	3.04	0.45
15:N:181:ASN:HA	44:5:54:C:O5'	1.76	0.45
18:Q:206:VAL:HG12	18:Q:263:LEU:HB3	1.98	0.45
20:S:80:ARG:HB2	20:S:124:LEU:HD21	1.99	0.45
20:S:154:HIS:HA	20:S:170:THR:HB	1.99	0.45
21:T:128:LEU:HD13	44:5:1097:G:C8	2.52	0.45
24:W:201:ARG:C	24:W:211:GLU:HG3	2.42	0.45
29:b:81:LYS:NZ	44:5:954:U:C2	2.85	0.45
43:q:37:GLN:HB3	43:q:104:ARG:HE	1.81	0.45
44:5:87:U:H2'	44:5:88:A:H8	1.81	0.45
44:5:971:G:H2'	44:5:972:A:C8	2.52	0.45
44:5:1158:A:H2'	44:5:1159:A:H4'	1.99	0.45
44:5:1310:G:H2'	44:5:1311:G:C8	2.52	0.45
44:5:1472:U:H2'	44:5:1473:G:C8	2.52	0.45
44:5:1523:U:OP1	44:5:1607:U:N3	2.50	0.45
44:5:2340:U:H2'	44:5:2341:A:H8	1.81	0.45
44:5:2487:U:O2'	44:5:2488:A:N7	2.50	0.45
44:5:2720:G:N2	44:5:2736:A:N1	2.60	0.45
44:5:2960:C:H2'	44:5:2961:G:H8	1.80	0.45
44:5:3189:G:H2'	44:5:3190:C:C6	2.52	0.45
1:z:362:VAL:HA	44:5:2465:G:H2'	1.34	0.45
1:z:375:VAL:CG1	44:5:2466:G:O4'	2.48	0.45
1:z:409:PHE:HB3	44:5:2490:C:H2'	1.97	0.45
1:z:409:PHE:HD1	44:5:2449:A:C3'	2.25	0.45
2:A:223:SER:HG	44:5:2244:A:HO2'	1.53	0.45
4:C:9:HIS:N	4:C:151:VAL:O	2.50	0.45
7:F:336:LEU:HD11	44:5:986:U:C1'	2.29	0.45
7:F:368:LYS:HZ1	44:5:1103:A:H5''	1.82	0.45
12:s:269:ILE:H	44:5:1246:G:N2	2.14	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:s:291:GLY:CA	43:q:35:SER:N	2.76	0.45
12:s:295:GLY:O	44:5:1275:C:C2	2.70	0.45
13:L:49:ARG:CG	35:h:116:TYR:CZ	2.99	0.45
13:L:128:ARG:N	35:h:114:ARG:NH2	2.65	0.45
15:N:179:LYS:HE2	44:5:51:A:OP2	2.17	0.45
19:R:274:VAL:HA	19:R:277:ILE:HD12	1.99	0.45
26:Y:89:LYS:NZ	44:5:375:A:OP2	2.39	0.45
28:a:168:ARG:O	28:a:172:LEU:CB	2.56	0.45
31:d:132:ARG:HB2	31:d:154:VAL:HG12	1.98	0.45
32:e:228:ALA:HA	32:e:251:ILE:HD11	1.98	0.45
34:g:7:PHE:CZ	44:5:1856:C:C4'	2.97	0.45
34:g:10:ARG:CD	44:5:1489:A:C5'	2.82	0.45
34:g:62:TYR:O	34:g:70:LYS:NZ	2.37	0.45
44:5:337:G:O6	45:8:27:U:C4	2.69	0.45
44:5:441:U:P	44:5:490:C:H42	2.40	0.45
44:5:510:G:O6	44:5:581:U:N3	2.39	0.45
44:5:544:C:O2'	44:5:545:U:H5''	2.17	0.45
44:5:956:U:H2'	44:5:957:C:C6	2.52	0.45
44:5:1083:G:H2'	44:5:1084:A:C8	2.52	0.45
44:5:1203:A:H2'	44:5:1204:A:C8	2.51	0.45
44:5:1393:A:N6	44:5:1417:G:H1'	2.31	0.45
44:5:1423:C:H2'	44:5:1424:C:C6	2.51	0.45
44:5:1446:A:N6	44:5:2357:A:OP2	2.34	0.45
44:5:2191:U:O2	44:5:2316:G:C2	2.70	0.45
44:5:2194:G:C6	44:5:2274:U:C4	3.01	0.45
44:5:2828:G:N1	44:5:2862:U:C2	2.85	0.45
44:5:2960:C:H2'	44:5:2961:G:C8	2.52	0.45
44:5:3229:G:H3'	44:5:3230:G:H8	1.81	0.45
46:7:12:U:O2	46:7:110:G:O2'	2.33	0.45
47:x:26:UNK:O	48:y:15:UNK:O	2.34	0.45
3:B:98:GLY:HA2	16:O:149:TYR:HE1	1.83	0.44
3:B:250:ALA:HB3	44:5:2880:U:H1'	1.99	0.44
4:C:135:VAL:HG11	4:C:247:PHE:HD1	1.81	0.44
4:C:263:GLY:HA2	4:C:267:VAL:HG23	1.98	0.44
4:C:303:GLY:HA3	44:5:1346:G:H4'	1.99	0.44
5:D:295:ARG:NH2	44:5:2750:U:C4'	2.79	0.44
5:D:438:ASN:HD21	44:5:2746:A:H5'	1.82	0.44
6:E:355:LYS:HE2	6:E:357:GLU:HB3	1.99	0.44
10:I:236:HIS:ND1	10:I:321:PHE:O	2.42	0.44
10:I:366:TYR:O	10:I:370:ARG:HB2	2.16	0.44
11:J:167:ALA:O	11:J:171:LEU:HB3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:s:198:GLN:C	44:5:1238:C:C2'	2.75	0.44
12:s:260:ARG:CA	44:5:1266:G:C3'	2.13	0.44
12:s:263:ALA:N	44:5:1275:C:O2	2.44	0.44
12:s:272:THR:CB	44:5:1262:G:N1	2.79	0.44
12:s:294:ALA:CB	44:5:1276:U:C5'	2.63	0.44
15:N:5:LYS:CB	44:5:323:A:H8	2.16	0.44
15:N:13:LYS:HD3	44:5:78:U:H5''	1.38	0.44
15:N:20:ARG:HA	44:5:67:A:C5'	2.45	0.44
15:N:41:ARG:NH1	44:5:112:U:O2'	2.49	0.44
15:N:46:ASP:HB3	44:5:321:C:O2	1.72	0.44
16:O:49:ARG:HB3	16:O:53:LYS:HE3	2.00	0.44
16:O:179:ALA:O	16:O:183:ALA:CB	2.62	0.44
18:Q:205:THR:O	18:Q:263:LEU:N	2.50	0.44
18:Q:280:MET:HE2	18:Q:280:MET:HB2	1.89	0.44
18:Q:289:ARG:NH1	44:5:668:G:O2'	2.49	0.44
19:R:165:SER:O	19:R:169:GLN:NE2	2.50	0.44
21:T:90:ASN:ND2	44:5:2721:A:H2	2.16	0.44
26:Y:62:SER:CB	44:5:198:A:C5'	2.85	0.44
29:b:111:HIS:HA	29:b:115:GLY:N	2.33	0.44
31:d:136:LYS:O	31:d:148:PHE:N	2.37	0.44
33:f:394:GLY:CA	44:5:1327:C:H4'	2.44	0.44
34:g:13:TYR:OH	44:5:1854:C:O2'	2.35	0.44
37:j:853:LEU:HA	37:j:853:LEU:HD23	1.79	0.44
38:k:3:ARG:O	38:k:52:TYR:HA	2.17	0.44
40:m:96:CYS:O	40:m:100:TYR:N	2.49	0.44
44:5:370:U:O2'	44:5:399:A:O2'	2.26	0.44
44:5:371:G:N2	44:5:373:A:H3'	2.32	0.44
44:5:545:U:H5'	44:5:546:C:C4	2.52	0.44
44:5:1502:C:H1'	44:5:1504:A:H62	1.80	0.44
44:5:1585:C:H4'	45:8:110:C:OP1	2.17	0.44
44:5:1620:U:O2	44:5:1825:G:N2	2.42	0.44
44:5:1944:U:H2'	44:5:1945:A:H8	1.82	0.44
44:5:2214:A:H3'	44:5:2215:A:H8	1.82	0.44
44:5:2414:G:C2	44:5:2806:U:O2	2.70	0.44
44:5:2666:C:C4	44:5:2689:A:H8	2.35	0.44
44:5:3333:G:H1'	44:5:3370:A:N6	2.32	0.44
45:8:156:U:H2'	45:8:157:U:C6	2.52	0.44
46:7:94:C:H2'	46:7:95:A:C8	2.50	0.44
1:z:237:ASP:OD2	44:5:2492:C:C5'	2.65	0.44
1:z:342:LYS:HD2	1:z:347:ARG:HH11	1.81	0.44
2:A:238:ILE:O	44:5:2154:U:O2'	2.34	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:212:ASN:H	3:B:282:ILE:HB	1.82	0.44
4:C:98:ARG:HD3	44:5:933:A:N6	2.32	0.44
5:D:539:LYS:HE2	46:7:110:G:OP1	2.18	0.44
7:F:355:ARG:CZ	44:5:578:A:N6	2.80	0.44
10:I:279:PHE:CE2	44:5:1045:C:C1'	3.00	0.44
10:I:392:GLU:HG3	10:I:396:ARG:HE	1.82	0.44
12:s:223:LYS:C	43:q:44:GLU:CB	2.89	0.44
13:L:11:LYS:CE	44:5:86:G:O2'	2.56	0.44
14:M:167:GLY:N	14:M:184:ILE:O	2.50	0.44
15:N:29:GLU:HG3	36:i:30:LYS:HG2	1.49	0.44
15:N:38:ARG:HH22	15:N:60:VAL:HA	1.83	0.44
15:N:45:PRO:HA	15:N:48:ALA:HB3	2.00	0.44
15:N:94:TYR:CA	44:5:289:A:O2'	2.63	0.44
15:N:105:ARG:HH12	44:5:269:G:C2'	2.30	0.44
16:O:37:ARG:HA	16:O:107:GLY:H	1.82	0.44
18:Q:134:GLN:NE2	44:5:1364:C:HO2'	2.03	0.44
18:Q:194:ARG:NH2	44:5:720:A:H3'	2.31	0.44
21:T:61:THR:HG21	44:5:1060:U:O2'	2.17	0.44
21:T:64:VAL:HG22	21:T:74:VAL:HG22	1.99	0.44
21:T:128:LEU:CD1	44:5:1096:U:H5'	2.48	0.44
22:U:161:LYS:O	22:U:165:LYS:HB2	2.17	0.44
23:V:212:LYS:HD3	44:5:1897:G:O4'	2.18	0.44
24:W:270:ALA:O	24:W:274:LYS:CB	2.58	0.44
26:Y:76:LEU:HB2	45:8:74:U:C6	2.53	0.44
26:Y:113:LYS:N	45:8:84:C:O2	2.50	0.44
27:Z:110:LYS:HA	27:Z:113:VAL:HB	1.98	0.44
31:d:86:ARG:O	31:d:90:ALA:N	2.48	0.44
34:g:10:ARG:HD2	44:5:1489:A:OP1	2.17	0.44
35:h:84:LYS:O	37:j:864:PHE:CE1	2.70	0.44
36:i:26:ILE:CG2	44:5:264:G:C6	2.96	0.44
37:j:858:ARG:HH11	45:8:94:C:P	2.40	0.44
38:k:31:LEU:HA	38:k:37:PRO:HA	1.98	0.44
39:l:40:LYS:HE2	44:5:356:C:P	2.58	0.44
42:p:41:PHE:O	44:5:1729:A:N6	2.46	0.44
44:5:170:G:O6	44:5:249:U:O4	2.35	0.44
44:5:342:A:C8	45:8:21:C:N4	2.85	0.44
44:5:417:A:N1	45:8:7:U:C4	2.85	0.44
44:5:863:C:H3'	44:5:864:G:H8	1.82	0.44
44:5:868:C:H2'	44:5:869:G:C8	2.53	0.44
44:5:985:U:H2'	44:5:986:U:H6	1.82	0.44
44:5:1007:U:O2'	44:5:1043:C:O2	2.30	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:1389:G:O2'	44:5:1418:A:N1	2.50	0.44
44:5:1757:A:H2'	44:5:1758:G:H8	1.82	0.44
44:5:1919:G:N2	44:5:1933:A:H62	2.15	0.44
44:5:2196:C:N4	44:5:2247:G:N1	2.59	0.44
44:5:2197:C:N3	44:5:2244:A:N7	2.65	0.44
44:5:2563:G:O6	44:5:2578:U:O4	2.35	0.44
44:5:2839:G:N2	44:5:2850:G:H1'	2.33	0.44
44:5:3121:U:C2	44:5:3123:A:N7	2.86	0.44
44:5:3375:A:C2	44:5:3378:C:H5''	2.52	0.44
46:7:85:G:H22	46:7:95:A:H2	1.64	0.44
1:z:388:LEU:HB3	1:z:391:LYS:HE3	1.98	0.44
3:B:121:ASN:HB3	3:B:124:LYS:HD3	2.00	0.44
3:B:130:PHE:O	3:B:134:SER:CB	2.63	0.44
3:B:130:PHE:HE1	44:5:3148:U:O2'	2.00	0.44
3:B:266:ARG:HG2	44:5:2989:U:O2'	2.17	0.44
3:B:294:GLY:HA3	3:B:303:LYS:HG3	1.99	0.44
4:C:33:ASP:N	4:C:33:ASP:OD1	2.49	0.44
4:C:294:GLU:CD	18:Q:254:VAL:O	2.60	0.44
4:C:347:THR:O	44:5:520:U:C5	2.71	0.44
5:D:365:ILE:HD13	5:D:365:ILE:HA	1.87	0.44
5:D:539:LYS:HZ3	46:7:110:G:P	2.41	0.44
8:G:229:LEU:HA	8:G:232:ARG:HB3	1.99	0.44
10:I:275:ARG:CB	44:5:1043:C:O3'	2.60	0.44
12:s:215:SER:CB	44:5:1264:G:N7	2.79	0.44
13:L:35:ARG:HA	13:L:38:ALA:HB3	1.98	0.44
15:N:9:GLU:CB	44:5:77:A:N3	2.49	0.44
15:N:11:GLN:HG3	44:5:64:G:P	2.57	0.44
15:N:183:THR:HG23	44:5:54:C:C1'	2.44	0.44
15:N:192:LYS:NZ	44:5:1551:C:C5	2.77	0.44
16:O:48:PHE:HD2	16:O:49:ARG:HG3	1.82	0.44
17:P:121:GLN:N	45:8:13:A:O2'	2.50	0.44
21:T:108:ARG:NH2	44:5:1098:A:OP2	2.50	0.44
23:V:168:VAL:HA	23:V:187:VAL:HB	1.98	0.44
27:Z:14:ARG:CZ	44:5:1637:A:O2'	2.64	0.44
28:a:145:GLN:NE2	44:5:101:G:H1'	2.32	0.44
31:d:118:TRP:CD1	44:5:1475:A:H2'	2.52	0.44
32:e:225:PHE:O	32:e:245:ALA:HA	2.18	0.44
32:e:262:ARG:O	32:e:262:ARG:NH1	2.49	0.44
33:f:322:SER:O	33:f:324:ARG:N	2.45	0.44
44:5:633:C:H2'	44:5:634:C:C6	2.52	0.44
44:5:916:G:O6	44:5:2414:G:O2'	2.26	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:1018:G:H2'	44:5:1019:G:C8	2.52	0.44
44:5:1698:C:H2'	44:5:1699:A:C8	2.53	0.44
44:5:2106:A:H2'	44:5:2107:A:C8	2.52	0.44
44:5:2349:U:H5''	44:5:2390:A:H5''	1.98	0.44
44:5:2762:A:N7	44:5:2795:U:C4	2.85	0.44
44:5:2841:G:H3'	44:5:2844:C:N4	2.33	0.44
44:5:3146:G:H2'	44:5:3147:G:H8	1.82	0.44
45:8:41:A:N1	45:8:103:G:O2'	2.36	0.44
48:y:42:UNK:O	48:y:46:UNK:CB	2.65	0.44
1:z:221:ARG:O	44:5:2473:C:N3	2.42	0.44
1:z:225:GLU:CG	44:5:2458:A:H2'	2.32	0.44
1:z:228:GLU:OE2	44:5:2479:C:P	2.76	0.44
1:z:292:LYS:HA	1:z:317:ARG:HB2	1.99	0.44
1:z:334:SER:OG	1:z:335:HIS:N	2.49	0.44
2:A:214:GLY:HA3	44:5:2967:A:OP1	2.16	0.44
6:E:242:LEU:HD13	44:5:591:G:C2	2.51	0.44
7:F:418:SER:OG	7:F:419:ASN:N	2.50	0.44
8:G:381:THR:HG22	8:G:385:ASN:HD21	1.81	0.44
12:s:292:ILE:HA	44:5:1230:G:N7	2.31	0.44
13:L:159:VAL:HG22	28:a:180:ALA:CB	2.47	0.44
15:N:23:GLN:H	44:5:67:A:H4'	0.98	0.44
19:R:253:HIS:CG	44:5:1716:U:N3	2.86	0.44
23:V:197:GLU:HB2	23:V:198:LEU:HD12	1.98	0.44
33:f:394:GLY:CA	44:5:1327:C:O3'	2.66	0.44
34:g:58:ARG:NE	34:g:59:PRO:HD2	2.32	0.44
38:k:30:LYS:N	38:k:38:PHE:O	2.44	0.44
43:q:57:THR:HB	44:5:1285:G:N1	2.11	0.44
44:5:65:A:C4	44:5:77:A:H1'	2.52	0.44
44:5:373:A:N6	44:5:394:G:O2'	2.34	0.44
44:5:523:A:N7	44:5:569:A:C6	2.83	0.44
44:5:533:A:O2'	44:5:535:G:OP2	2.24	0.44
44:5:675:C:H3'	44:5:676:G:H8	1.82	0.44
44:5:761:A:C6	44:5:770:G:N3	2.85	0.44
44:5:1001:G:H21	44:5:1041:U:P	2.40	0.44
44:5:1048:A:O2'	44:5:2632:G:O2'	2.32	0.44
44:5:1353:U:H3'	44:5:1354:G:H8	1.83	0.44
44:5:1740:U:O2'	44:5:1742:U:O4	2.34	0.44
44:5:2227:C:H2'	44:5:2228:A:C8	2.51	0.44
44:5:2854:U:H2'	44:5:2855:U:H6	1.82	0.44
44:5:3020:U:H2'	44:5:3033:A:N6	2.33	0.44
47:x:26:UNK:CB	48:y:11:UNK:C	2.95	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:z:251:PRO:HG3	1:z:350:ILE:HG13	1.98	0.44
3:B:37:ARG:HG2	3:B:186:GLY:HA2	2.00	0.44
4:C:286:VAL:HG13	18:Q:157:LEU:HD12	2.00	0.44
5:D:295:ARG:HB2	44:5:2748:A:N3	2.33	0.44
6:E:279:LEU:HD11	6:E:290:SER:HB3	1.99	0.44
6:E:360:GLU:HA	6:E:363:LYS:HD2	2.00	0.44
9:H:214:GLU:OE2	9:H:251:GLN:NE2	2.42	0.44
9:H:220:ILE:HA	9:H:225:VAL:HA	1.99	0.44
9:H:242:ASP:C	44:5:3186:A:C8	2.96	0.44
10:I:343:LYS:HE3	44:5:2852:C:O2	2.17	0.44
13:L:36:ARG:HH21	44:5:686:G:H5'	1.81	0.44
15:N:92:LEU:CD2	44:5:2599:U:OP1	2.66	0.44
17:P:59:PRO:HB3	17:P:78:VAL:HB	2.00	0.44
17:P:74:LYS:CE	44:5:3297:U:H4'	2.45	0.44
19:R:305:ARG:HA	19:R:308:ARG:HB3	1.99	0.44
20:S:23:LYS:CA	21:T:146:ASN:HB3	2.47	0.44
21:T:17:ARG:HD3	21:T:47:SER:N	2.32	0.44
41:o:15:LYS:HA	41:o:18:ARG:HH11	1.83	0.44
43:q:56:ASN:ND2	43:q:84:VAL:O	2.50	0.44
43:q:80:VAL:HG13	44:5:1283:C:H3'	1.30	0.44
44:5:201:A:H4'	44:5:220:G:C5	2.52	0.44
44:5:289:A:H2'	44:5:290:G:C8	2.52	0.44
44:5:577:C:O2'	44:5:579:G:OP1	2.22	0.44
44:5:802:C:H2'	44:5:803:C:H6	1.83	0.44
44:5:996:A:O2'	46:7:80:G:H4'	2.18	0.44
44:5:1006:A:H3'	44:5:1007:U:C6	2.52	0.44
44:5:1494:U:H1'	44:5:1496:C:C5	2.52	0.44
44:5:1525:G:H8	44:5:1829:G:H2'	1.81	0.44
44:5:1600:U:C2	44:5:1605:A:N7	2.86	0.44
44:5:1635:G:N2	44:5:1637:A:H3'	2.32	0.44
44:5:1809:A:O2'	44:5:2559:U:O2	2.36	0.44
44:5:1899:G:H1	44:5:2334:U:H3'	1.82	0.44
44:5:3111:U:H3'	44:5:3112:G:C8	2.52	0.44
44:5:3227:A:H2'	44:5:3228:C:C2	2.53	0.44
1:z:240:ARG:HG3	1:z:390:LYS:HB3	1.99	0.44
2:A:13:GLY:HA3	44:5:2172:A:C4'	2.48	0.44
3:B:60:LEU:HD23	3:B:67:PHE:HB2	2.00	0.44
3:B:133:TYR:HB2	44:5:3149:G:H5'	2.00	0.44
5:D:272:TYR:O	5:D:275:ARG:O	2.35	0.44
5:D:295:ARG:CD	44:5:2749:G:O2'	2.61	0.44
7:F:419:ASN:HD21	44:5:1333:C:H1'	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:G:332:ALA:O	8:G:336:LYS:HB2	2.17	0.44
13:L:127:PRO:C	35:h:114:ARG:CZ	2.91	0.44
15:N:138:GLN:HB2	44:5:145:G:OP1	2.18	0.44
15:N:187:ARG:HD2	44:5:1545:A:C2'	2.43	0.44
19:R:154:LYS:HD3	44:5:1875:G:O5'	2.16	0.44
21:T:92:ARG:NH1	44:5:2736:A:OP1	2.51	0.44
24:W:264:GLU:HB3	24:W:267:ALA:HB3	1.98	0.44
25:X:197:VAL:HG11	25:X:235:LYS:HG3	1.99	0.44
26:Y:57:LEU:HB3	26:Y:105:VAL:HB	2.00	0.44
27:Z:8:LYS:HB3	27:Z:24:ILE:HD12	2.00	0.44
27:Z:56:HIS:HB3	27:Z:60:LYS:HD3	2.00	0.44
28:a:103:ILE:HB	44:5:1114:U:OP1	2.18	0.44
29:b:77:ASN:ND2	44:5:953:G:P	2.90	0.44
31:d:75:HIS:HB2	31:d:127:TYR:CG	2.52	0.44
36:i:26:ILE:HG21	44:5:264:G:C4	2.49	0.44
38:k:26:LYS:O	38:k:39:ARG:NH2	2.44	0.44
39:l:29:LEU:HD23	45:8:75:G:O2'	2.18	0.44
43:q:30:VAL:N	44:5:1281:G:O2'	2.51	0.44
44:5:36:C:H5'	44:5:809:G:H1'	1.99	0.44
44:5:753:C:H2'	44:5:754:G:C8	2.51	0.44
44:5:1392:G:N1	44:5:1417:G:O2'	2.49	0.44
44:5:1587:A:O2'	44:5:1590:G:O6	2.34	0.44
44:5:2149:A:C2	44:5:2188:A:H4'	2.53	0.44
44:5:2590:A:N6	44:5:2591:A:N3	2.66	0.44
44:5:2885:C:H2'	44:5:2886:U:C6	2.53	0.44
44:5:3082:C:H2'	44:5:3083:G:H8	1.83	0.44
44:5:3231:U:O2	44:5:3256:G:N2	2.50	0.44
47:x:10:UNK:CA	48:y:4:UNK:N	2.60	0.44
1:z:234:LYS:CB	44:5:2464:U:O4'	2.64	0.44
2:A:87:PHE:CE2	44:5:2553:U:H5'	2.53	0.44
3:B:3:HIS:HE2	44:5:2938:G:P	2.34	0.44
3:B:67:PHE:CE2	23:V:217:ARG:CZ	3.01	0.44
3:B:139:GLN:HE21	3:B:144:ILE:HG13	1.83	0.44
4:C:114:ASN:OD1	44:5:680:G:OP1	2.35	0.44
4:C:164:GLU:O	4:C:168:ALA:HB2	2.17	0.44
5:D:536:LYS:CG	46:7:61:G:H5''	2.48	0.44
6:E:282:LEU:HD12	6:E:302:ARG:HG2	2.00	0.44
10:I:301:ARG:NH1	44:5:2623:G:H1	2.12	0.44
10:I:381:PHE:CE1	44:5:1042:U:C5'	2.91	0.44
12:s:215:SER:CA	44:5:1246:G:H5'	2.47	0.44
12:s:244:ASP:O	44:5:1231:A:H5'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:L:10:LEU:HD22	44:5:666:A:O2'	2.18	0.44
15:N:12:ARG:HG3	44:5:63:A:H4'	1.62	0.44
15:N:18:VAL:CB	44:5:315:C:C4'	2.79	0.44
15:N:28:TRP:N	44:5:300:G:HO2'	2.15	0.44
15:N:28:TRP:CD2	44:5:299:G:N3	2.77	0.44
15:N:126:THR:N	44:5:272:G:H3'	2.32	0.44
15:N:127:TYR:HB3	44:5:270:U:C2'	2.37	0.44
19:R:203:GLN:NE2	19:R:206:ARG:HD2	2.32	0.44
22:U:94:PHE:O	22:U:143:THR:HA	2.17	0.44
26:Y:22:ALA:HB3	26:Y:30:LEU:HD11	1.99	0.44
26:Y:95:VAL:HG21	44:5:375:A:OP1	2.17	0.44
26:Y:110:HIS:ND1	26:Y:112:ASP:OD2	2.45	0.44
29:b:103:PRO:HA	29:b:106:ARG:HD3	2.00	0.44
29:b:111:HIS:CD2	44:5:1075:A:N9	2.85	0.44
44:5:705:A:N3	44:5:714:G:N2	2.54	0.44
44:5:828:A:H2'	44:5:829:U:C6	2.51	0.44
44:5:837:A:N1	44:5:856:G:O2'	2.50	0.44
44:5:1047:A:H2'	44:5:1048:A:C4	2.53	0.44
44:5:1487:G:O6	44:5:1855:U:C4	2.70	0.44
44:5:2246:G:N2	44:5:2270:A:H2	2.15	0.44
44:5:2568:C:H2'	44:5:2569:A:C5	2.52	0.44
44:5:2805:G:H21	44:5:2967:A:H1'	1.82	0.44
45:8:42:G:N1	45:8:102:U:N3	2.41	0.44
46:7:116:C:H2'	46:7:117:A:C8	2.52	0.44
1:z:218:THR:OG1	44:5:2489:C:N1	2.50	0.44
1:z:258:MET:C	44:5:2479:C:O3'	2.61	0.44
2:A:8:GLN:HA	44:5:2163:C:O2'	2.18	0.44
3:B:232:ARG:HA	3:B:270:ARG:HG3	1.99	0.44
4:C:176:SER:C	4:C:179:LEU:H	2.26	0.44
8:G:224:ARG:NH2	44:5:2585:G:H22	2.15	0.44
9:H:239:LYS:HZ1	44:5:3184:A:C3'	2.22	0.44
12:s:227:ARG:CB	44:5:1255:C:H1'	2.48	0.44
12:s:237:HIS:O	44:5:1255:C:O3'	2.23	0.44
15:N:11:GLN:O	44:5:64:G:OP1	2.36	0.44
15:N:41:ARG:NE	44:5:114:A:C8	2.81	0.44
15:N:58:GLY:H	44:5:149:U:C5'	2.27	0.44
15:N:144:ARG:NH1	44:5:125:C:H2'	2.33	0.44
15:N:183:THR:C	44:5:54:C:HO2'	1.83	0.44
15:N:199:LEU:CD2	44:5:904:A:OP2	2.56	0.44
15:N:203:ARG:HB3	37:j:816:GLN:N	2.33	0.44
16:O:128:ARG:HD3	44:5:1317:A:H5''	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:T:12:ARG:NE	44:5:2698:G:H4'	2.24	0.44
24:W:250:ARG:HA	24:W:253:LYS:HB2	1.98	0.44
27:Z:2:LYS:O	27:Z:4:LEU:N	2.51	0.44
29:b:111:HIS:O	29:b:115:GLY:CA	2.55	0.44
31:d:84:LYS:HD2	31:d:122:VAL:HG21	2.00	0.44
34:g:12:PRO:HB2	44:5:1855:U:C2	2.52	0.44
34:g:73:SER:HB2	44:5:1640:G:N7	2.33	0.44
36:i:44:VAL:O	36:i:48:ALA:CB	2.66	0.44
42:p:42:CYS:HA	44:5:1729:A:C6	2.53	0.44
43:q:45:LEU:HB3	44:5:1258:U:H6	1.49	0.44
43:q:83:ASN:O	44:5:1281:G:C2'	2.56	0.44
43:q:104:ARG:NH1	44:5:1232:C:C3'	2.81	0.44
44:5:587:U:H2'	44:5:588:G:C8	2.52	0.44
44:5:1379:G:N1	44:5:1427:U:N3	2.41	0.44
44:5:1653:G:H2'	44:5:1654:A:C8	2.53	0.44
44:5:1876:U:H3'	44:5:1877:U:H6	1.82	0.44
44:5:2283:G:C6	44:5:2307:G:H5''	2.53	0.44
44:5:2482:U:N3	44:5:2486:A:C5	2.71	0.44
44:5:2659:G:N1	44:5:2712:U:O2	2.51	0.44
44:5:2711:C:H2'	44:5:2744:U:H5''	2.00	0.44
46:7:3:U:H2'	46:7:4:U:C6	2.53	0.44
46:7:92:A:N6	46:7:93:C:O2	2.51	0.44
1:z:235:ASN:HB2	1:z:357:VAL:HG23	2.00	0.44
3:B:14:LEU:HB3	44:5:3010:U:H5'	2.00	0.44
3:B:261:MET:C	16:O:64:PHE:O	2.52	0.44
8:G:207:LYS:CD	44:5:2524:A:N6	2.74	0.44
8:G:313:LYS:NZ	8:G:365:THR:O	2.47	0.44
8:G:316:LEU:HD22	8:G:344:VAL:HB	2.00	0.44
8:G:415:LYS:O	8:G:419:SER:CB	2.64	0.44
10:I:255:ILE:O	10:I:259:LYS:CB	2.66	0.44
11:J:181:GLN:HA	11:J:261:ASP:HB2	1.99	0.44
12:s:221:ALA:HA	44:5:1233:G:N3	2.28	0.44
12:s:257:SER:CA	44:5:1269:U:H3	2.31	0.44
13:L:134:GLU:OE1	35:h:117:ALA:CB	2.43	0.44
15:N:44:ARG:HB3	44:5:321:C:C5	2.51	0.44
15:N:87:GLN:NE2	44:5:2603:G:C5	2.86	0.44
15:N:98:LEU:HD21	44:5:289:A:C4'	2.47	0.44
16:O:25:LYS:HD3	16:O:28:LEU:HD12	2.00	0.44
20:S:89:ASN:ND2	21:T:155:PRO:HB3	2.33	0.44
21:T:12:ARG:NH2	44:5:2632:G:C4'	2.80	0.44
21:T:65:TYR:N	21:T:73:GLY:O	2.49	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:U:175:VAL:HB	22:U:183:ARG:HG2	1.99	0.44
23:V:159:GLY:O	23:V:161:ARG:NH2	2.51	0.44
28:a:166:ASP:OD1	28:a:166:ASP:N	2.48	0.44
39:l:27:ILE:HA	39:l:30:ARG:HG3	2.00	0.44
42:p:80:ARG:O	42:p:84:ARG:HB2	2.18	0.44
44:5:160:G:O6	44:5:261:U:C4	2.71	0.44
44:5:263:C:H2'	44:5:264:G:C8	2.53	0.44
44:5:507:U:H3	44:5:584:G:H1	1.65	0.44
44:5:651:G:H2'	44:5:652:G:C8	2.53	0.44
44:5:824:C:H2'	44:5:825:U:C6	2.53	0.44
44:5:1009:A:H2'	44:5:1010:G:O4'	2.18	0.44
44:5:1017:C:H4'	44:5:1018:G:H5''	2.00	0.44
44:5:1242:G:OP1	44:5:1242:G:N2	2.36	0.44
44:5:1643:A:H5''	44:5:1644:C:C4	2.53	0.44
44:5:1743:G:H2'	44:5:1744:G:C8	2.53	0.44
44:5:2364:G:H22	44:5:2395:G:N2	2.15	0.44
44:5:3379:C:H2'	44:5:3380:U:H6	1.83	0.44
45:8:7:U:H2'	45:8:8:C:C6	2.53	0.44
46:7:109:G:H2'	46:7:110:G:C8	2.53	0.44
1:z:236:TYR:HE1	44:5:2495:C:H5'	1.60	0.43
1:z:339:LEU:C	1:z:342:LYS:H	2.26	0.43
2:A:16:PHE:O	44:5:2173:U:H5'	2.18	0.43
2:A:40:TYR:CZ	44:5:2551:U:O2	2.71	0.43
2:A:117:GLU:HB2	2:A:162:ALA:HB1	1.99	0.43
3:B:262:TRP:CD1	16:O:65:ASN:CA	3.01	0.43
5:D:460:PHE:CD1	5:D:497:GLU:HG3	2.53	0.43
6:E:233:TRP:CH2	44:5:1353:U:C5	3.04	0.43
10:I:280:HIS:CE1	10:I:313:ARG:HH21	2.36	0.43
10:I:383:LYS:HZ1	44:5:1040:A:C1'	2.29	0.43
14:M:189:ASP:OD1	14:M:192:LYS:N	2.48	0.43
15:N:25:VAL:CA	44:5:299:G:C2	2.72	0.43
15:N:26:ARG:NH2	44:5:316:U:H5''	2.33	0.43
15:N:74:PRO:HG2	44:5:291:C:H5''	2.00	0.43
15:N:76:PRO:CD	44:5:2432:A:H61	2.17	0.43
15:N:83:LYS:HB2	44:5:2425:G:O5'	2.18	0.43
15:N:94:TYR:O	44:5:289:A:O2'	2.36	0.43
16:O:115:LYS:NZ	44:5:3178:A:H2'	2.33	0.43
20:S:92:LYS:HZ2	44:5:1213:G:H5'	1.82	0.43
21:T:105:PHE:CE1	44:5:1063:G:H8	2.36	0.43
26:Y:27:ARG:HH11	26:Y:78:PHE:H	1.65	0.43
26:Y:87:LYS:CE	44:5:375:A:H4'	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:f:334:TYR:CG	33:f:343:PRO:HA	2.53	0.43
33:f:360:GLN:HB3	44:5:583:G:C1'	2.41	0.43
35:h:5:LYS:HB3	35:h:7:TYR:CE1	2.53	0.43
35:h:83:LYS:HD3	35:h:89:ARG:HH21	1.83	0.43
35:h:84:LYS:O	35:h:85:THR:OG1	2.34	0.43
37:j:816:GLN:NE2	44:5:903:U:OP2	2.51	0.43
39:l:43:ASN:HB3	39:l:46:ARG:HB2	2.00	0.43
42:p:58:SER:HA	42:p:61:LYS:HD3	2.00	0.43
43:q:51:VAL:N	44:5:1260:A:OP2	2.50	0.43
43:q:81:LYS:HD2	43:q:82:GLY:H	1.82	0.43
43:q:204:UNK:C	47:x:40:UNK:CB	2.96	0.43
44:5:761:A:H1'	44:5:771:A:H1'	1.99	0.43
44:5:1234:G:N7	44:5:1235:U:H2'	2.32	0.43
44:5:1658:G:H5'	44:5:1796:G:H2'	2.00	0.43
44:5:1896:A:H3'	44:5:1897:G:H8	1.82	0.43
44:5:2144:A:N3	44:5:2281:A:N6	2.66	0.43
44:5:2233:A:H3'	44:5:2234:G:H8	1.82	0.43
44:5:2579:G:H3'	44:5:2580:A:C8	2.49	0.43
44:5:2718:U:H2'	44:5:2719:U:C2	2.53	0.43
44:5:2966:G:H2'	44:5:2967:A:C8	2.52	0.43
1:z:218:THR:CA	44:5:2489:C:C4	2.98	0.43
1:z:226:THR:OG1	44:5:2481:G:C2	2.66	0.43
4:C:181:VAL:HG12	4:C:182:LEU:HB2	2.00	0.43
8:G:287:GLN:NE2	44:5:121:A:N7	2.63	0.43
9:H:227:VAL:HG12	9:H:282:VAL:HG21	2.00	0.43
10:I:253:ALA:HB1	10:I:340:ALA:HB1	2.00	0.43
12:s:282:PHE:C	44:5:1260:A:C4	2.93	0.43
15:N:26:ARG:C	44:5:317:A:H62	2.26	0.43
15:N:193:ARG:N	44:5:1549:U:H5'	2.33	0.43
16:O:194:LEU:HA	16:O:197:LEU:HB2	1.99	0.43
19:R:173:ARG:HD3	44:5:1601:U:H5''	2.00	0.43
21:T:84:TYR:HE2	29:b:90:PRO:HD3	1.74	0.43
21:T:89:LEU:HB3	21:T:91:LEU:HG	1.99	0.43
26:Y:100:HIS:CE1	26:Y:103:LYS:HG2	2.54	0.43
28:a:90:ARG:NH2	44:5:1377:G:O6	2.48	0.43
28:a:134:PHE:CD1	44:5:94:G:OP2	2.71	0.43
29:b:120:LEU:CD2	44:5:1072:G:H1'	2.43	0.43
32:e:175:ARG:HH22	44:5:2362:C:H4'	1.83	0.43
43:q:33:VAL:CA	44:5:1229:G:C5	2.96	0.43
44:5:71:A:C2	44:5:313:A:H1'	2.53	0.43
44:5:118:U:O4	44:5:123:A:N6	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:890:C:H2'	44:5:891:G:C8	2.53	0.43
44:5:990:U:C2	44:5:1059:G:N1	2.63	0.43
44:5:1239:C:H3'	44:5:1241:U:H5	1.83	0.43
44:5:1427:U:O4	44:5:1428:A:N6	2.51	0.43
44:5:1659:U:O4	44:5:1790:G:O6	2.36	0.43
44:5:1721:U:O2'	44:5:1723:A:N7	2.42	0.43
44:5:2561:A:N6	44:5:2579:G:H2'	2.33	0.43
44:5:2951:G:H2'	44:5:2952:G:H8	1.82	0.43
45:8:16:G:O2'	45:8:17:A:N7	2.46	0.43
47:x:26:UNK:O	47:x:31:UNK:N	2.50	0.43
2:A:20:THR:OG1	44:5:2175:U:N3	2.51	0.43
2:A:80:GLU:CG	42:p:66:GLY:C	2.91	0.43
8:G:353:LEU:H	8:G:353:LEU:HG	1.57	0.43
9:H:262:ARG:HD3	9:H:263:LYS:HG2	2.00	0.43
9:H:284:LYS:HB3	9:H:391:LEU:OXT	2.18	0.43
10:I:226:ALA:O	10:I:324:ARG:NH2	2.52	0.43
12:s:155:VAL:CB	44:5:1238:C:H5''	2.48	0.43
12:s:292:ILE:HA	44:5:1230:G:C8	2.54	0.43
13:L:55:ARG:N	13:L:115:ARG:HH21	2.14	0.43
13:L:101:ARG:NH2	13:L:103:ASN:HD21	2.16	0.43
14:M:251:LYS:HZ1	44:5:3208:G:P	2.39	0.43
15:N:189:LYS:HD2	44:5:1549:U:OP2	2.15	0.43
16:O:12:LYS:O	20:S:167:ARG:NH2	2.51	0.43
17:P:118:GLN:CD	44:5:412:G:H21	2.26	0.43
19:R:256:HIS:CD2	44:5:1718:G:O5'	2.71	0.43
20:S:146:LYS:CD	44:5:534:U:O2	2.67	0.43
21:T:44:ALA:HB1	21:T:52:MET:HG3	2.00	0.43
21:T:65:TYR:CD1	21:T:75:ILE:HB	2.53	0.43
22:U:111:SER:O	22:U:115:TYR:HB2	2.19	0.43
24:W:268:ARG:O	24:W:272:LYS:HB3	2.18	0.43
24:W:275:SER:HA	24:W:278:THR:HB	2.00	0.43
27:Z:120:ARG:HA	27:Z:125:LYS:HD2	2.01	0.43
43:q:212:UNK:CA	48:y:8:UNK:CA	2.83	0.43
44:5:100:A:H3'	44:5:101:G:H21	1.82	0.43
44:5:1194:G:H2'	44:5:1195:A:C8	2.52	0.43
44:5:1273:A:H3'	44:5:1274:A:C8	2.53	0.43
44:5:1447:G:H22	44:5:2356:A:P	2.42	0.43
44:5:1642:A:H2	44:5:1823:A:H1'	1.82	0.43
44:5:3241:G:H21	44:5:3245:A:H3'	1.83	0.43
44:5:3252:G:H2'	44:5:3253:G:H8	1.82	0.43
1:z:236:TYR:CD2	44:5:2494:A:N9	2.56	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:z:405:MET:CA	44:5:2461:A:H5'	2.48	0.43
1:z:410:ARG:HG3	44:5:2448:G:H2'	2.00	0.43
3:B:7:GLU:CD	44:5:2915:U:N3	2.74	0.43
7:F:317:ARG:CZ	44:5:1101:G:OP1	2.62	0.43
9:H:306:LYS:O	9:H:309:ALA:HB3	2.19	0.43
10:I:379:GLY:HA3	44:5:1011:A:C1'	2.47	0.43
12:s:270:LEU:O	44:5:1262:G:N7	2.39	0.43
12:s:285:PRO:CB	44:5:1262:G:H5'	2.48	0.43
12:s:289:ILE:CB	44:5:1278:A:N9	2.73	0.43
13:L:61:PRO:HG3	44:5:75:G:C4'	2.48	0.43
13:L:161:ASP:OD1	28:a:225:VAL:HG12	2.15	0.43
16:O:128:ARG:NH1	44:5:1318:A:OP1	2.43	0.43
22:U:138:ASP:HB3	22:U:140:THR:H	1.83	0.43
22:U:157:TYR:CE2	44:5:1687:U:H5'	2.53	0.43
25:X:139:LYS:NZ	45:8:150:G:P	2.92	0.43
27:Z:23:VAL:HG11	27:Z:86:LEU:HB3	2.00	0.43
30:c:36:GLN:HB3	30:c:38:LYS:NZ	2.33	0.43
31:d:110:ALA:HB3	31:d:113:LEU:HB2	2.00	0.43
35:h:4:VAL:HG13	35:h:50:SER:HB3	2.01	0.43
36:i:62:ARG:HD2	44:5:2445:A:H4'	1.99	0.43
43:q:5:ARG:N	44:5:1218:U:H5''	2.29	0.43
43:q:6:GLU:HG2	44:5:1219:C:N4	2.32	0.43
44:5:298:U:H5''	44:5:299:G:O4'	2.18	0.43
44:5:711:A:C5	44:5:712:G:H1'	2.53	0.43
44:5:1481:A:O2'	44:5:1858:A:N3	2.52	0.43
44:5:2149:A:N6	44:5:2187:G:H1'	2.33	0.43
44:5:2277:C:H4'	44:5:2317:A:H5'	1.88	0.43
44:5:2283:G:N1	44:5:2307:G:OP1	2.51	0.43
44:5:2297:U:H4'	44:5:2920:U:H1'	2.00	0.43
44:5:2561:A:H61	44:5:2579:G:H2'	1.83	0.43
44:5:2715:A:H5''	44:5:2752:U:H4'	2.00	0.43
44:5:3341:U:O2'	44:5:3342:A:H5'	2.18	0.43
45:8:45:C:H2'	45:8:46:G:C8	2.54	0.43
46:7:79:A:N6	46:7:101:G:H21	2.07	0.43
1:z:383:ASN:CB	44:5:2492:C:C2'	2.90	0.43
2:A:117:GLU:HB2	2:A:163:ARG:H	1.83	0.43
3:B:325:LYS:NZ	44:5:3097:C:OP1	2.41	0.43
4:C:156:LEU:HD23	4:C:159:ILE:HD12	1.99	0.43
9:H:359:ALA:HB2	44:5:3110:C:C4'	2.49	0.43
10:I:207:TYR:HE1	44:5:2632:G:N2	2.17	0.43
12:s:290:GLU:C	44:5:1231:A:C2	2.94	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:L:183:ARG:HD3	44:5:765:C:N1	2.29	0.43
15:N:6:TYR:CB	44:5:110:G:C8	2.99	0.43
15:N:35:VAL:HG23	44:5:268:A:C2	2.53	0.43
15:N:77:LYS:CB	44:5:2430:A:O4'	2.61	0.43
15:N:204:LYS:CE	37:j:803:THR:CB	2.93	0.43
16:O:20:ALA:HB2	16:O:80:PHE:CZ	2.54	0.43
16:O:42:ASN:HB2	16:O:125:ARG:HG3	2.01	0.43
17:P:139:TYR:CZ	44:5:2354:C:O2'	2.60	0.43
20:S:23:LYS:HA	21:T:146:ASN:HB3	1.99	0.43
20:S:109:ASP:O	20:S:113:ARG:HB2	2.18	0.43
21:T:84:TYR:CD2	29:b:90:PRO:HG3	2.54	0.43
23:V:175:LEU:HD12	44:5:2916:U:C3'	2.48	0.43
27:Z:59:LYS:O	27:Z:63:LYS:CB	2.65	0.43
28:a:184:ASP:HB2	28:a:207:LYS:HE3	2.01	0.43
33:f:324:ARG:HH11	33:f:328:LYS:HE3	1.83	0.43
35:h:45:LYS:HA	35:h:48:ARG:HG2	2.00	0.43
37:j:838:LYS:O	37:j:841:ARG:N	2.51	0.43
43:q:61:ARG:HA	43:q:64:ARG:HB2	1.95	0.43
44:5:3:U:O2	45:8:157:U:C2	2.71	0.43
44:5:634:C:H2'	44:5:635:G:C8	2.52	0.43
44:5:924:G:H21	44:5:2414:G:H1'	1.82	0.43
44:5:931:C:OP2	44:5:932:U:O2'	2.35	0.43
44:5:1054:A:H3'	44:5:1055:A:C8	2.53	0.43
44:5:2079:G:O2'	44:5:2080:C:O4'	2.37	0.43
44:5:2278:C:C1'	44:5:2307:G:H22	2.29	0.43
44:5:2744:U:H2'	44:5:2745:G:C8	2.53	0.43
45:8:148:G:H2'	45:8:149:A:C8	2.52	0.43
47:x:20:UNK:O	48:y:25:UNK:CA	2.66	0.43
1:z:239:GLN:NE2	1:z:383:ASN:O	2.50	0.43
1:z:401:VAL:C	44:5:2452:G:C6	2.91	0.43
1:z:403:SER:HB2	44:5:2487:U:H5''	2.01	0.43
1:z:410:ARG:C	44:5:2448:G:C2'	2.88	0.43
4:C:290:ILE:O	4:C:296:GLN:NE2	2.35	0.43
5:D:262:ALA:HB2	5:D:268:LYS:HB2	2.00	0.43
6:E:259:VAL:O	6:E:262:THR:OG1	2.34	0.43
7:F:286:TYR:C	21:T:140:ILE:HA	2.38	0.43
7:F:319:THR:HB	18:Q:129:ASP:CB	2.48	0.43
9:H:219:SER:HB3	44:5:3198:U:O2	2.18	0.43
9:H:280:THR:O	9:H:285:GLY:N	2.32	0.43
14:M:165:GLU:HG2	14:M:168:ARG:HB2	2.00	0.43
15:N:42:PRO:C	44:5:320:G:N9	2.77	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:64:VAL:HG12	15:N:130:PHE:HB2	1.99	0.43
15:N:86:ASN:OD1	44:5:2425:G:P	2.76	0.43
25:X:136:LYS:CD	44:5:3:U:O4	2.37	0.43
28:a:123:ARG:HG3	28:a:124:ILE:HD12	2.01	0.43
31:d:130:ARG:HB3	31:d:154:VAL:HG21	2.00	0.43
32:e:178:ARG:HG2	44:5:655:C:OP1	2.18	0.43
32:e:189:ILE:CG1	44:5:640:U:C5	3.01	0.43
34:g:99:LYS:NZ	44:5:2555:G:C6	2.85	0.43
40:m:97:ARG:HB2	40:m:122:ARG:HB3	2.01	0.43
41:o:9:LYS:HE2	41:o:9:LYS:HB3	1.80	0.43
43:q:12:PHE:CG	44:5:1221:A:H1'	2.53	0.43
44:5:86:G:H22	44:5:98:G:H3'	1.83	0.43
44:5:145:G:N2	44:5:146:U:O4	2.52	0.43
44:5:175:C:H3'	44:5:176:G:H8	1.82	0.43
44:5:393:U:H3'	44:5:394:G:C8	2.53	0.43
44:5:996:A:H3'	44:5:997:A:C8	2.54	0.43
44:5:1544:G:O2'	44:5:2167:A:N3	2.38	0.43
44:5:1702:U:H3	44:5:1743:G:H1	1.66	0.43
44:5:1802:C:H2'	44:5:1803:C:C6	2.53	0.43
44:5:2371:G:H3'	44:5:2373:A:H5'	2.01	0.43
44:5:2406:C:H1'	44:5:2819:A:C4	2.53	0.43
44:5:2458:A:O2'	44:5:2459:A:O5'	2.36	0.43
44:5:2997:G:O2'	44:5:3396:U:OP1	2.28	0.43
44:5:3166:C:H2'	44:5:3167:A:C8	2.53	0.43
46:7:16:U:H2'	46:7:17:A:H8	1.83	0.43
46:7:78:U:H3	46:7:102:A:H8	1.43	0.43
47:x:26:UNK:CB	48:y:12:UNK:N	2.81	0.43
1:z:260:ILE:C	44:5:2482:U:O4	2.62	0.43
1:z:402:LYS:HG3	44:5:2463:G:C1'	2.39	0.43
3:B:262:TRP:CD1	16:O:65:ASN:HA	2.54	0.43
4:C:3:ARG:HD2	4:C:24:ALA:HB2	2.00	0.43
7:F:247:ASN:HB2	7:F:248:LYS:HD2	2.01	0.43
9:H:265:VAL:HA	9:H:268:LEU:HB3	1.99	0.43
9:H:291:ARG:HB2	9:H:380:TYR:HB2	2.01	0.43
9:H:333:THR:OG1	9:H:347:SER:OG	2.31	0.43
11:J:120:ARG:HG3	11:J:214:PHE:HE1	1.83	0.43
15:N:12:ARG:NH2	44:5:63:A:C5'	2.75	0.43
15:N:57:GLN:NE2	44:5:124:U:H1'	2.33	0.43
22:U:97:ASP:HA	22:U:141:VAL:HG22	2.01	0.43
24:W:215:LYS:NZ	24:W:216:ARG:O	2.44	0.43
26:Y:15:ALA:HB1	44:5:215:G:O2'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Y:114:ASP:OD1	26:Y:114:ASP:N	2.50	0.43
28:a:138:GLY:HA2	44:5:2787:G:O2'	2.19	0.43
29:b:99:LYS:HZ1	44:5:2721:A:C3'	2.31	0.43
33:f:366:ARG:HA	33:f:387:GLY:O	2.18	0.43
33:f:378:ARG:CZ	44:5:618:C:O2'	2.64	0.43
43:q:6:GLU:H	44:5:1219:C:N4	2.17	0.43
43:q:59:VAL:O	43:q:63:ILE:N	2.47	0.43
44:5:32:U:H1'	44:5:53:G:N2	2.34	0.43
44:5:806:A:N3	44:5:2812:C:O2'	2.44	0.43
44:5:1151:U:H2'	44:5:1152:G:C8	2.53	0.43
44:5:1218:U:OP2	44:5:1219:C:N4	2.51	0.43
44:5:1740:U:H1'	44:5:1741:A:C2	2.54	0.43
44:5:1920:U:N3	44:5:1932:A:O5'	2.48	0.43
44:5:2228:A:H2'	44:5:2229:A:C8	2.54	0.43
44:5:2275:A:C1'	44:5:2312:A:H61	2.07	0.43
44:5:2285:C:OP2	44:5:2286:U:O2'	2.33	0.43
44:5:3054:U:H3	44:5:3088:G:H1	1.65	0.43
1:z:258:MET:HE3	1:z:258:MET:HB2	1.88	0.43
1:z:362:VAL:N	44:5:2465:G:C5	2.61	0.43
3:B:303:LYS:HZ3	3:B:371:GLN:HB3	1.84	0.43
4:C:176:SER:HA	4:C:179:LEU:HG	2.01	0.43
4:C:302:ALA:CA	18:Q:164:ARG:HD3	2.48	0.43
4:C:359:LEU:HA	20:S:8:GLN:HE22	1.83	0.43
6:E:302:ARG:NH2	44:5:3272:C:O5'	2.43	0.43
6:E:326:ASN:ND2	6:E:328:GLU:OE1	2.40	0.43
6:E:399:LYS:HD3	14:M:260:ALA:CA	2.48	0.43
8:G:393:VAL:HA	8:G:396:HIS:HB3	2.00	0.43
9:H:250:ASN:HB3	14:M:152:THR:HG22	2.00	0.43
10:I:275:ARG:O	44:5:1044:U:C1'	2.67	0.43
12:s:215:SER:CA	44:5:1246:G:C5'	2.86	0.43
15:N:5:LYS:CB	44:5:109:A:C6	2.03	0.43
15:N:203:ARG:NH2	44:5:903:U:H5''	2.28	0.43
18:Q:304:ARG:HH12	28:a:137:VAL:HG12	1.84	0.43
21:T:65:TYR:HD1	21:T:75:ILE:HB	1.83	0.43
24:W:207:GLY:O	24:W:209:THR:OG1	2.35	0.43
30:c:20:SER:HB2	30:c:97:ASP:H	1.84	0.43
31:d:78:LEU:HD22	31:d:81:VAL:HG21	1.99	0.43
33:f:393:HIS:HE1	44:5:1329:U:P	2.41	0.43
39:l:27:ILE:HD12	45:8:52:A:N6	2.33	0.43
42:p:4:ARG:CD	44:5:856:G:N2	2.82	0.43
43:q:33:VAL:HB	44:5:1279:C:C4	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:262:U:H2'	44:5:263:C:H1'	2.01	0.43
44:5:305:U:N3	44:5:2776:C:O2	2.52	0.43
44:5:431:U:H2'	44:5:432:G:C8	2.54	0.43
44:5:707:U:C4	44:5:712:G:O6	2.72	0.43
44:5:713:U:O2	44:5:754:G:H4'	2.18	0.43
44:5:1483:G:N2	44:5:1873:U:O4	2.40	0.43
44:5:1899:G:H22	44:5:2334:U:H2'	1.84	0.43
44:5:2246:G:N2	44:5:2270:A:C2	2.87	0.43
44:5:2351:U:H2'	44:5:2352:A:C8	2.53	0.43
44:5:2423:U:H3'	44:5:2605:G:H22	1.84	0.43
44:5:2744:U:O2	44:5:2749:G:C2	2.72	0.43
44:5:2840:C:H3'	44:5:2841:G:H8	1.83	0.43
44:5:3051:U:H2'	44:5:3052:G:H8	1.84	0.43
44:5:3190:C:H2'	44:5:3191:G:C8	2.49	0.43
45:8:30:C:H2'	45:8:31:G:H8	1.83	0.43
1:z:229:LEU:HG	44:5:2476:C:C1'	2.49	0.43
1:z:300:LYS:CD	44:5:2485:A:O3'	2.57	0.43
1:z:371:GLU:CD	44:5:2468:A:H2'	2.44	0.43
1:z:372:ASP:OD2	44:5:2469:G:C2'	2.62	0.43
2:A:112:ILE:HG12	2:A:135:ILE:HG12	1.99	0.43
3:B:243:HIS:N	44:5:2948:C:C4'	2.66	0.43
3:B:256:HIS:HB2	44:5:2940:A:O2'	2.19	0.43
4:C:362:ASP:HB3	20:S:28:ARG:NH2	2.34	0.43
6:E:233:TRP:CH2	44:5:1354:G:N9	2.87	0.43
6:E:271:PHE:HB3	6:E:274:LYS:HG3	2.01	0.43
7:F:432:HIS:CE1	46:7:97:A:O2'	2.72	0.43
8:G:351:GLY:HA2	8:G:354:VAL:HG12	2.00	0.43
9:H:287:LYS:H	9:H:385:GLY:C	2.27	0.43
10:I:207:TYR:HD1	44:5:2647:A:O4'	2.01	0.43
12:s:221:ALA:CB	44:5:1233:G:H2'	2.16	0.43
15:N:10:LEU:HB2	44:5:65:A:C4	2.31	0.43
15:N:129:TYR:OH	44:5:271:C:C6	2.69	0.43
15:N:172:ARG:HG2	44:5:1546:A:C3'	2.49	0.43
16:O:172:ARG:HH11	44:5:3190:C:P	2.41	0.43
20:S:13:ARG:CZ	20:S:51:VAL:HG12	2.48	0.43
23:V:159:GLY:HA3	23:V:195:LYS:HE3	2.00	0.43
25:X:227:LEU:HG	25:X:235:LYS:HB3	2.01	0.43
26:Y:100:HIS:NE2	44:5:217:U:O2'	2.35	0.43
28:a:183:ILE:O	28:a:207:LYS:N	2.51	0.43
33:f:395:ASN:OD1	44:5:1326:A:O2'	2.36	0.43
39:l:27:ILE:HD12	45:8:52:A:H62	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:o:86:LYS:HZ2	44:5:2654:C:N4	2.16	0.43
42:p:87:ARG:NE	42:p:88:GLU:OE2	2.51	0.43
43:q:38:MET:CB	44:5:1231:A:O2'	2.67	0.43
43:q:58:MET:N	44:5:1224:C:C4	2.87	0.43
44:5:4:U:H2'	44:5:5:G:C8	2.54	0.43
44:5:129:U:N3	44:5:139:G:O6	2.42	0.43
44:5:158:G:H2'	44:5:159:A:C8	2.54	0.43
44:5:370:U:H2'	44:5:371:G:O4'	2.18	0.43
44:5:1077:U:H2'	44:5:1078:U:H6	1.84	0.43
44:5:1268:G:O2'	44:5:1273:A:N6	2.52	0.43
44:5:3220:G:H2'	44:5:3221:C:C6	2.54	0.43
44:5:3230:G:H2'	44:5:3231:U:C6	2.54	0.43
47:x:16:UNK:CA	48:y:1:UNK:O	2.67	0.43
2:A:215:ASN:CB	44:5:2968:G:N7	2.82	0.43
3:B:3:HIS:CB	44:5:2938:G:O6	2.67	0.43
3:B:159:ARG:HH11	3:B:180:GLU:HG3	1.84	0.43
3:B:373:PRO:HA	3:B:376:LYS:HB3	2.00	0.43
4:C:95:ARG:CZ	44:5:343:U:H4'	2.49	0.43
4:C:215:ILE:HD12	4:C:218:ALA:HB3	2.01	0.43
5:D:282:ARG:HD3	46:7:7:G:OP2	2.19	0.43
5:D:290:TYR:HE1	46:7:7:G:OP1	2.02	0.43
5:D:528:GLU:CG	46:7:121:U:C4	3.01	0.43
6:E:246:ARG:CD	44:5:607:A:C5'	2.92	0.43
8:G:207:LYS:HD3	8:G:207:LYS:HA	1.85	0.43
8:G:215:LYS:CD	44:5:2523:A:H5''	2.49	0.43
9:H:211:GLU:HA	9:H:251:GLN:O	2.18	0.43
9:H:250:ASN:ND2	14:M:152:THR:HG22	2.34	0.43
9:H:287:LYS:HA	9:H:347:SER:HA	2.00	0.43
10:I:301:ARG:HD3	44:5:2644:C:C2	2.54	0.43
12:s:197:VAL:CA	44:5:1251:A:C2	3.01	0.43
12:s:220:THR:HA	43:q:43:LYS:HB3	1.75	0.43
12:s:221:ALA:HA	44:5:1233:G:H2'	1.13	0.43
12:s:253:MET:HA	44:5:1245:A:H3'	1.53	0.43
12:s:262:LEU:O	44:5:1266:G:N3	2.49	0.43
12:s:265:VAL:O	44:5:1266:G:C5'	2.67	0.43
12:s:271:GLY:CA	43:q:40:GLU:CD	2.75	0.43
14:M:215:THR:HB	14:M:217:LEU:HG	2.00	0.43
14:M:257:ARG:HB3	16:O:198:GLY:HA2	2.00	0.43
14:M:276:LYS:O	14:M:279:THR:OG1	2.29	0.43
15:N:58:GLY:H	44:5:149:U:H5'	1.79	0.43
15:N:78:GLY:C	44:5:2601:A:C6	2.91	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:91:GLU:HA	44:5:277:G:C1'	2.39	0.43
15:N:178:HIS:HB3	37:j:834:ASN:CG	2.29	0.43
16:O:86:GLY:O	44:5:1311:G:N2	2.52	0.43
19:R:156:LYS:NZ	44:5:1873:U:C5'	2.82	0.43
19:R:205:LYS:NZ	19:R:210:HIS:O	2.51	0.43
19:R:235:ARG:NH2	44:5:1722:U:O5'	2.51	0.43
19:R:278:ILE:O	19:R:282:ALA:HB2	2.19	0.43
20:S:169:SER:HA	44:5:3185:U:H3	1.82	0.43
25:X:167:HIS:HB3	25:X:170:ARG:HH21	1.84	0.43
27:Z:46:GLU:N	27:Z:68:LYS:O	2.33	0.43
28:a:166:ASP:O	28:a:170:GLN:HB2	2.18	0.43
33:f:363:LEU:HB2	44:5:584:G:H5'	2.00	0.43
34:g:88:ARG:O	34:g:92:ALA:HB2	2.19	0.43
36:i:82:ARG:HD3	44:5:295:A:O2'	2.19	0.43
43:q:192:ASP:HB2	43:q:197:PHE:HE2	1.84	0.43
43:q:220:UNK:CB	48:y:18:UNK:CB	2.97	0.43
44:5:273:A:H2'	44:5:274:G:H8	1.84	0.43
44:5:300:G:H2'	44:5:301:G:C8	2.52	0.43
44:5:848:A:C5	44:5:849:C:H1'	2.54	0.43
44:5:1100:U:H2'	44:5:1101:G:C8	2.53	0.43
44:5:1237:G:C6	44:5:1251:A:N1	2.87	0.43
44:5:1307:G:H1'	44:5:1308:A:C8	2.54	0.43
44:5:1959:G:H21	44:5:2078:C:H2'	1.83	0.43
44:5:2180:G:H2'	44:5:2181:C:C6	2.53	0.43
44:5:2221:G:N2	44:5:2224:A:OP2	2.35	0.43
1:z:225:GLU:CB	44:5:2458:A:H2'	2.49	0.42
1:z:230:GLN:CA	44:5:2467:G:H1	2.31	0.42
1:z:259:SER:HB3	44:5:2486:A:OP1	2.13	0.42
1:z:361:ALA:CB	44:5:2485:A:O2'	2.59	0.42
2:A:54:ARG:NH2	44:5:2176:U:OP1	2.29	0.42
2:A:182:ALA:HB2	44:5:2148:U:H4'	2.01	0.42
3:B:92:TYR:HA	3:B:100:ARG:O	2.19	0.42
4:C:161:LYS:HB2	4:C:164:GLU:HB2	2.01	0.42
6:E:237:GLU:HA	32:e:155:LEU:HD22	2.01	0.42
7:F:330:THR:CB	21:T:133:ALA:O	2.66	0.42
8:G:408:ALA:HA	8:G:412:LYS:HD3	2.00	0.42
9:H:373:ARG:HH22	44:5:2897:A:H3'	1.84	0.42
10:I:223:LYS:HB3	10:I:231:PHE:CE2	2.53	0.42
12:s:221:ALA:HB1	44:5:1233:G:C2'	2.49	0.42
12:s:265:VAL:O	44:5:1266:G:H5''	2.19	0.42
12:s:295:GLY:CA	44:5:1276:U:C5	2.75	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:L:48:PRO:O	35:h:117:ALA:HA	2.18	0.42
13:L:63:VAL:CG1	44:5:72:C:H5'	2.49	0.42
14:M:257:ARG:HD2	14:M:257:ARG:HA	1.81	0.42
14:M:272:LEU:CD1	16:O:190:VAL:HG23	2.44	0.42
15:N:8:GLU:HB2	44:5:322:U:N1	2.32	0.42
15:N:92:LEU:HD12	44:5:2600:C:OP1	2.16	0.42
15:N:190:THR:HA	15:N:193:ARG:HB3	2.00	0.42
16:O:37:ARG:HG3	16:O:108:ILE:HG13	2.01	0.42
18:Q:223:LYS:HG3	18:Q:243:GLY:HA3	2.01	0.42
20:S:108:GLN:HE22	44:5:1322:U:C1'	2.32	0.42
21:T:71:SER:HB2	44:5:2736:A:O2'	2.19	0.42
21:T:108:ARG:O	21:T:112:ASN:HB2	2.18	0.42
22:U:138:ASP:HB3	22:U:141:VAL:H	1.83	0.42
22:U:164:LYS:NZ	44:5:1682:U:OP2	2.52	0.42
31:d:137:ARG:HA	31:d:147:LEU:HD23	2.00	0.42
33:f:336:ARG:HH21	33:f:339:ARG:HA	1.84	0.42
34:g:43:LYS:HA	34:g:50:ALA:HA	2.00	0.42
36:i:99:ARG:HA	36:i:99:ARG:HD3	1.88	0.42
43:q:45:LEU:HG	44:5:1261:G:N1	2.33	0.42
43:q:106:ALA:HB2	44:5:1230:G:C2	2.54	0.42
43:q:107:ALA:CB	44:5:1230:G:C1'	2.78	0.42
44:5:19:U:C2	45:8:140:G:C6	3.05	0.42
44:5:27:C:H42	44:5:57:A:H61	1.67	0.42
44:5:89:A:H2'	44:5:90:C:C6	2.54	0.42
44:5:548:G:H2'	44:5:549:U:C6	2.54	0.42
44:5:840:C:H2'	44:5:841:A:C8	2.54	0.42
44:5:1361:U:H2'	44:5:1362:G:C8	2.54	0.42
44:5:1665:C:H2'	44:5:1666:G:H8	1.83	0.42
44:5:2196:C:C2'	44:5:2270:A:N3	2.81	0.42
44:5:2923:U:H2'	44:5:2924:U:H6	1.83	0.42
44:5:3022:G:N2	44:5:3032:A:O5'	2.49	0.42
44:5:3342:A:H3'	44:5:3343:G:C8	2.52	0.42
45:8:8:C:H2'	45:8:9:A:C8	2.54	0.42
1:z:372:ASP:OD2	44:5:2469:G:H1'	2.18	0.42
1:z:375:VAL:HG11	44:5:2466:G:C8	2.54	0.42
3:B:65:SER:CA	44:5:3038:U:H4'	2.42	0.42
4:C:84:ARG:NH1	4:C:87:GLN:OE1	2.52	0.42
4:C:341:SER:HA	44:5:514:G:H21	1.84	0.42
5:D:456:ARG:HA	5:D:459:ILE:HD12	2.01	0.42
8:G:336:LYS:HE2	36:i:39:PHE:CE1	2.54	0.42
9:H:333:THR:O	9:H:347:SER:OG	2.30	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:H:363:GLN:HE22	44:5:3108:G:N2	2.17	0.42
9:H:374:LYS:CA	40:m:127:LEU:HD13	2.49	0.42
10:I:389:GLY:O	46:7:64:A:H5''	2.18	0.42
12:s:240:ASN:HA	43:q:45:LEU:HA	1.75	0.42
15:N:12:ARG:HD3	44:5:64:G:O4'	2.18	0.42
15:N:60:VAL:O	15:N:133:ILE:HA	2.19	0.42
15:N:98:LEU:CD2	44:5:289:A:P	3.05	0.42
15:N:140:LYS:HA	44:5:144:A:H1'	1.06	0.42
20:S:115:ARG:NH2	44:5:1320:C:O2'	2.48	0.42
21:T:51:GLY:HA3	21:T:92:ARG:HB2	2.01	0.42
21:T:78:LYS:HB2	21:T:87:LYS:HG2	2.01	0.42
25:X:204:ALA:HB3	25:X:209:ILE:HG13	2.02	0.42
27:Z:28:HIS:HB2	27:Z:39:HIS:C	2.44	0.42
30:c:14:LEU:HD23	30:c:100:ILE:HG21	2.01	0.42
38:k:24:THR:HA	38:k:76:ASN:HB3	2.00	0.42
42:p:17:ARG:HH22	44:5:860:G:P	2.42	0.42
43:q:12:PHE:CD2	44:5:1221:A:O3'	2.72	0.42
43:q:20:GLU:OE2	43:q:70:LEU:N	2.52	0.42
43:q:75:LYS:HA	43:q:78:PRO:HD2	2.01	0.42
44:5:66:A:H61	44:5:76:G:H1'	1.83	0.42
44:5:337:G:C2	45:8:27:U:O2	2.72	0.42
44:5:494:G:O2'	44:5:495:G:N7	2.44	0.42
44:5:890:C:O2'	44:5:2324:A:N3	2.48	0.42
44:5:1010:G:N2	44:5:1040:A:H2	2.17	0.42
44:5:1055:A:O4'	46:7:80:G:N2	2.52	0.42
44:5:2151:C:O2'	44:5:2243:A:N1	2.41	0.42
44:5:2275:A:N6	44:5:2312:A:N9	2.54	0.42
45:8:57:C:H2'	45:8:58:G:C8	2.53	0.42
46:7:41:G:H1'	46:7:44:C:H42	1.84	0.42
3:B:250:ALA:CB	44:5:2880:U:O2	2.66	0.42
3:B:250:ALA:HB3	44:5:2880:U:C2'	2.49	0.42
3:B:257:PRO:HG3	44:5:1305:U:C4	2.54	0.42
4:C:234:ASN:HD22	44:5:693:A:H5''	1.84	0.42
5:D:438:ASN:ND2	44:5:2746:A:H5'	2.35	0.42
8:G:266:ALA:O	8:G:270:LYS:CB	2.54	0.42
8:G:319:ASN:HD21	8:G:345:LYS:HG3	1.84	0.42
9:H:204:ILE:HG12	20:S:148:LEU:CD2	2.49	0.42
13:L:36:ARG:NH2	44:5:686:G:H5''	2.34	0.42
14:M:281:LYS:O	14:M:285:ALA:CB	2.64	0.42
15:N:72:LYS:CD	44:5:292:U:O4'	2.61	0.42
15:N:190:THR:HB	44:5:1548:C:H2'	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:200:TRP:CB	37:j:815:VAL:O	2.67	0.42
18:Q:296:LYS:HE3	44:5:89:A:OP2	2.19	0.42
23:V:236:GLY:HA3	23:V:255:TRP:CG	2.54	0.42
26:Y:59:VAL:HG12	26:Y:103:LYS:C	2.43	0.42
28:a:121:HIS:O	44:5:965:A:H1'	2.19	0.42
29:b:80:ARG:NE	44:5:952:A:OP1	2.52	0.42
30:c:36:GLN:HB3	30:c:38:LYS:HZ2	1.83	0.42
33:f:393:HIS:CD2	44:5:1328:C:H5''	2.51	0.42
34:g:6:THR:CA	44:5:1486:G:N2	2.66	0.42
36:i:41:ARG:O	36:i:45:ARG:CB	2.67	0.42
37:j:850:MET:HB2	37:j:850:MET:HE3	1.79	0.42
39:l:21:ARG:HD2	45:8:52:A:C5'	2.47	0.42
41:o:13:LYS:HA	41:o:18:ARG:HA	2.01	0.42
43:q:57:THR:HG21	44:5:1284:C:C4	1.40	0.42
44:5:88:A:H3'	44:5:89:A:C8	2.53	0.42
44:5:225:C:H2'	44:5:226:C:C6	2.54	0.42
44:5:399:A:P	44:5:399:A:H8	2.42	0.42
44:5:788:C:H2'	44:5:789:A:H8	1.84	0.42
44:5:1347:U:H2'	44:5:1355:A:N1	2.35	0.42
44:5:2154:U:H2'	44:5:2155:G:H8	1.84	0.42
44:5:2418:G:H3'	44:5:2606:G:N2	2.31	0.42
44:5:2631:U:H2'	44:5:2632:G:C8	2.53	0.42
44:5:3064:U:H2'	44:5:3065:G:C8	2.54	0.42
44:5:3158:G:C2	44:5:3292:A:H2	2.36	0.42
1:z:233:LEU:HD12	44:5:2464:U:C4	2.55	0.42
1:z:257:ASN:HD21	44:5:2486:A:H4'	1.77	0.42
1:z:299:SER:OG	44:5:2484:A:H3'	2.19	0.42
2:A:237:LEU:HD22	44:5:2154:U:C1'	2.49	0.42
4:C:233:LEU:HB3	4:C:238:LEU:HD21	2.00	0.42
6:E:286:THR:HB	6:E:302:ARG:HB3	2.02	0.42
6:E:366:ASP:HA	6:E:369:LEU:HD12	2.01	0.42
7:F:248:LYS:HG3	7:F:251:ARG:HG3	2.00	0.42
8:G:350:LEU:HD13	8:G:360:ALA:HA	2.01	0.42
8:G:405:LYS:HE2	44:5:2526:C:O2	2.20	0.42
9:H:306:LYS:O	9:H:309:ALA:CB	2.67	0.42
12:s:255:ASP:CA	44:5:1268:G:C6	2.94	0.42
12:s:288:ILE:CB	43:q:38:MET:HB2	2.49	0.42
15:N:173:GLY:O	44:5:1546:A:C2	2.68	0.42
15:N:199:LEU:CD2	37:j:816:GLN:HB3	2.50	0.42
17:P:34:GLN:NE2	44:5:414:U:OP1	2.52	0.42
19:R:237:LEU:HD22	19:R:273:LEU:HD13	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:T:35:LYS:CE	44:5:1085:A:OP1	2.67	0.42
21:T:90:ASN:CG	44:5:2736:A:H1'	2.44	0.42
22:U:93:THR:HG23	22:U:145:VAL:HG22	2.01	0.42
24:W:271:GLU:O	24:W:275:SER:OG	2.26	0.42
25:X:240:LEU:HD12	25:X:246:ALA:HB2	2.00	0.42
26:Y:74:TYR:HD1	26:Y:74:TYR:HA	1.68	0.42
26:Y:100:HIS:CE1	44:5:218:G:P	3.12	0.42
27:Z:28:HIS:HB2	27:Z:39:HIS:O	2.20	0.42
27:Z:111:LYS:O	27:Z:115:LYS:HB2	2.19	0.42
33:f:335:GLN:NE2	44:5:1329:U:P	2.65	0.42
37:j:803:THR:N	37:j:813:PHE:O	2.52	0.42
37:j:828:ALA:HB1	45:8:104:A:H4'	2.00	0.42
37:j:841:ARG:HD2	37:j:842:ARG:HH21	1.84	0.42
44:5:155:G:H1'	44:5:157:A:C6	2.54	0.42
44:5:372:A:N6	44:5:395:A:OP1	2.51	0.42
44:5:434:U:C4	44:5:625:G:O6	2.72	0.42
44:5:497:C:H2'	44:5:498:A:C8	2.54	0.42
44:5:638:C:N4	44:5:639:G:O6	2.52	0.42
44:5:903:U:O3'	44:5:1536:G:O2'	2.37	0.42
44:5:999:G:H5''	46:7:104:A:O2'	2.20	0.42
44:5:1110:U:H2'	44:5:1111:U:C2	2.54	0.42
44:5:1565:G:H3'	44:5:1566:A:H8	1.85	0.42
44:5:1728:G:N3	44:5:1728:G:H5'	2.35	0.42
44:5:2278:C:C2	44:5:2307:G:N2	2.86	0.42
44:5:2343:C:O2'	44:5:3056:U:OP1	2.30	0.42
44:5:2883:U:H2'	44:5:2884:C:C6	2.54	0.42
44:5:2922:G:C4	44:5:2952:G:H1'	2.55	0.42
44:5:3113:A:H5''	44:5:3118:C:H41	1.84	0.42
45:8:148:G:C6	45:8:149:A:C6	3.07	0.42
46:7:114:U:H2'	46:7:115:G:C8	2.49	0.42
1:z:267:PHE:HB3	1:z:269:VAL:HG23	2.02	0.42
1:z:342:LYS:HZ2	1:z:347:ARG:NH1	2.18	0.42
2:A:54:ARG:NH2	44:5:2176:U:H5''	2.35	0.42
3:B:17:LEU:HD13	3:B:17:LEU:HA	1.92	0.42
3:B:244:ARG:CZ	44:5:2946:A:O3'	2.66	0.42
3:B:296:THR:H	3:B:299:ASP:HB2	1.83	0.42
5:D:295:ARG:NH2	44:5:2750:U:H4'	2.34	0.42
7:F:265:TYR:O	7:F:269:GLU:CB	2.67	0.42
9:H:274:LEU:HD13	44:5:3123:A:C2	2.55	0.42
9:H:290:MET:HA	9:H:381:VAL:HA	2.01	0.42
14:M:177:SER:HB3	14:M:180:LYS:HB2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:M:269:VAL:HG13	16:O:194:LEU:HD22	2.00	0.42
15:N:7:LEU:HD22	44:5:321:C:N3	2.35	0.42
15:N:7:LEU:O	15:N:11:GLN:HB2	2.18	0.42
15:N:12:ARG:CD	44:5:64:G:C5'	2.92	0.42
15:N:37:HIS:HD2	44:5:268:A:H2'	1.85	0.42
15:N:124:ASP:CB	44:5:272:G:C5'	2.89	0.42
15:N:188:ARG:N	44:5:1545:A:C2	2.77	0.42
16:O:20:ALA:O	16:O:24:ALA:CB	2.67	0.42
18:Q:228:ALA:HB3	18:Q:231:PHE:CZ	2.54	0.42
19:R:175:ALA:O	19:R:179:LEU:HB2	2.19	0.42
20:S:26:ARG:NH1	21:T:150:THR:OG1	2.51	0.42
21:T:84:TYR:CE2	29:b:88:LYS:C	2.97	0.42
24:W:170:ASP:OD1	24:W:170:ASP:N	2.51	0.42
25:X:179:GLN:HA	35:h:32:LYS:HZ3	1.83	0.42
26:Y:25:SER:HB3	45:8:88:A:C6	2.55	0.42
28:a:205:ILE:HG12	28:a:225:VAL:HG22	2.01	0.42
34:g:99:LYS:NZ	44:5:2555:G:N1	2.67	0.42
37:j:821:SER:O	37:j:831:ARG:NH1	2.52	0.42
37:j:829:LYS:HD2	44:5:22:G:H5''	1.98	0.42
44:5:8:C:N3	45:8:152:G:N1	2.67	0.42
44:5:16:A:C5	45:8:144:G:N1	2.88	0.42
44:5:283:G:OP2	44:5:285:A:O2'	2.33	0.42
44:5:590:G:C2	44:5:610:G:H2'	2.54	0.42
44:5:1225:A:H1'	44:5:3116:G:C8	2.55	0.42
44:5:1245:A:H2'	44:5:1272:C:H4'	2.02	0.42
44:5:1741:A:H3'	44:5:1742:U:C6	2.52	0.42
44:5:1751:G:O2'	44:5:1752:A:H8	2.03	0.42
44:5:2407:C:H1'	44:5:2818:U:C2	2.54	0.42
44:5:2630:C:H1'	44:5:2758:A:N3	2.34	0.42
44:5:2767:U:H2'	44:5:2768:U:C6	2.55	0.42
44:5:2774:C:H2'	44:5:2775:U:C6	2.55	0.42
44:5:2948:C:H2'	44:5:2949:U:H6	1.85	0.42
44:5:3059:G:N1	44:5:3085:G:H1'	2.34	0.42
44:5:3257:C:H2'	44:5:3258:U:C2	2.55	0.42
44:5:3382:U:H3'	44:5:3383:G:C8	2.54	0.42
48:y:1:UNK:O	48:y:5:UNK:CB	2.63	0.42
1:z:362:VAL:HA	1:z:375:VAL:HG11	2.02	0.42
1:z:362:VAL:O	44:5:2467:G:N7	2.53	0.42
2:A:155:LYS:HE2	2:A:155:LYS:HB2	1.82	0.42
4:C:210:ALA:N	4:C:251:THR:OG1	2.52	0.42
4:C:230:VAL:O	4:C:232:SER:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:287:LEU:HD12	6:E:308:VAL:HG11	2.00	0.42
7:F:434:ILE:HG23	20:S:36:ILE:HG23	2.00	0.42
9:H:212:VAL:H	9:H:251:GLN:C	2.28	0.42
9:H:244:THR:N	44:5:3186:A:N3	2.68	0.42
10:I:275:ARG:HA	44:5:1043:C:O2'	2.20	0.42
12:s:198:GLN:CB	44:5:1239:C:O5'	2.68	0.42
12:s:225:PRO:CB	44:5:1234:G:O4'	2.68	0.42
12:s:257:SER:CB	44:5:1247:U:C3'	2.62	0.42
13:L:45:LYS:HZ3	44:5:241:G:H1'	1.85	0.42
14:M:164:VAL:HG23	20:S:149:LYS:HA	2.01	0.42
15:N:28:TRP:HA	44:5:300:G:H4'	1.66	0.42
15:N:73:ARG:HG3	44:5:2599:U:O5'	2.19	0.42
15:N:76:PRO:CB	44:5:2431:C:OP2	2.58	0.42
18:Q:257:PRO:HB2	18:Q:258:LYS:HG3	2.01	0.42
18:Q:301:ARG:HE	28:a:134:PHE:H	1.68	0.42
20:S:40:ARG:HA	20:S:40:ARG:HD3	1.74	0.42
21:T:35:LYS:HZ2	44:5:1085:A:P	2.42	0.42
21:T:42:ILE:HD12	21:T:60:LYS:HB2	2.01	0.42
22:U:114:LYS:HA	22:U:114:LYS:HD2	1.80	0.42
23:V:209:ARG:HG2	23:V:224:PHE:CG	2.55	0.42
24:W:184:LEU:HA	24:W:187:GLN:HB2	2.01	0.42
25:X:160:TYR:CZ	35:h:75:TYR:HB3	2.55	0.42
26:Y:4:GLN:CB	44:5:229:G:P	3.03	0.42
26:Y:87:LYS:CD	44:5:375:A:H4'	2.49	0.42
27:Z:71:ILE:HD12	27:Z:99:THR:HG22	2.01	0.42
32:e:253:ALA:HA	32:e:276:ARG:HD2	2.01	0.42
33:f:361:PHE:HE1	33:f:424:ASN:H	1.67	0.42
44:5:198:A:N3	44:5:218:G:O2'	2.43	0.42
44:5:354:U:N3	44:5:365:A:H8	1.96	0.42
44:5:523:A:H3'	44:5:524:U:C6	2.54	0.42
44:5:944:C:O2	44:5:1407:A:O2'	2.24	0.42
44:5:1203:A:N6	44:5:1300:G:H2'	2.32	0.42
44:5:1543:G:H2'	44:5:1544:G:C8	2.55	0.42
44:5:1593:A:H2'	44:5:1594:A:C8	2.54	0.42
44:5:2098:C:H2'	44:5:2099:A:C8	2.54	0.42
44:5:3141:A:O2'	44:5:3144:G:OP1	2.29	0.42
45:8:72:A:O2'	45:8:89:A:O4'	2.35	0.42
47:x:13:UNK:CB	48:y:4:UNK:HA	2.50	0.42
4:C:305:ALA:HA	44:5:1347:U:H4'	2.02	0.42
5:D:283:ARG:CD	44:5:2703:A:N6	2.82	0.42
8:G:385:ASN:O	8:G:389:LYS:NZ	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:H:239:LYS:HZ1	44:5:3185:U:P	2.37	0.42
9:H:312:ILE:H	9:H:326:VAL:H	1.67	0.42
9:H:355:SER:C	44:5:3110:C:O2'	2.62	0.42
10:I:390:SER:HA	46:7:64:A:OP1	2.19	0.42
12:s:268:GLU:CA	44:5:1265:U:C6	2.66	0.42
14:M:284:LEU:HD11	16:O:182:ASN:ND2	2.33	0.42
15:N:5:LYS:HA	44:5:322:U:H2'	1.26	0.42
15:N:6:TYR:N	44:5:322:U:C2	2.46	0.42
15:N:31:ARG:HD3	44:5:271:C:O2	2.20	0.42
15:N:74:PRO:HG3	44:5:291:C:O2'	2.02	0.42
15:N:128:LYS:O	44:5:270:U:C3'	2.67	0.42
15:N:140:LYS:CE	44:5:143:G:H2'	2.44	0.42
17:P:121:GLN:C	45:8:13:A:O2'	2.53	0.42
17:P:128:ARG:HD3	17:P:136:ILE:HD12	2.02	0.42
17:P:169:THR:HG22	44:5:618:C:C5'	2.46	0.42
19:R:158:TRP:HE3	19:R:186:VAL:H	1.67	0.42
21:T:2:GLY:N	44:5:2629:U:C5	2.87	0.42
23:V:138:THR:O	23:V:138:THR:OG1	2.38	0.42
23:V:254:LEU:HG	23:V:255:TRP:CD1	2.54	0.42
27:Z:24:ILE:HA	27:Z:42:VAL:HA	2.01	0.42
31:d:115:GLN:NE2	44:5:1475:A:P	2.92	0.42
32:e:178:ARG:HD2	32:e:179:VAL:HG23	2.02	0.42
44:5:62:A:H2	44:5:79:U:H4'	1.85	0.42
44:5:536:U:H2'	44:5:537:A:C8	2.55	0.42
44:5:688:G:H2'	44:5:690:A:N7	2.35	0.42
44:5:1529:A:H2'	44:5:1530:U:C2	2.55	0.42
44:5:2578:U:H2'	44:5:2579:G:O4'	2.20	0.42
46:7:35:C:H2'	46:7:36:C:O4'	2.20	0.42
1:z:259:SER:OG	1:z:261:CYS:SG	2.73	0.42
2:A:138:GLY:C	2:A:147:ARG:H	2.28	0.42
3:B:79:VAL:HG12	3:B:322:ILE:H	1.83	0.42
3:B:221:THR:HB	3:B:272:TYR:N	2.35	0.42
5:D:292:GLN:OE1	44:5:2747:A:N1	2.52	0.42
10:I:189:ARG:NH2	10:I:194:TYR:OH	2.52	0.42
10:I:200:LYS:HZ2	44:5:2634:U:H4'	1.84	0.42
12:s:242:GLN:N	43:q:41:VAL:HA	2.35	0.42
15:N:6:TYR:O	15:N:10:LEU:CB	2.61	0.42
15:N:10:LEU:CG	44:5:77:A:O2'	2.57	0.42
15:N:31:ARG:HA	44:5:268:A:N6	2.34	0.42
15:N:33:LYS:O	44:5:268:A:N7	2.52	0.42
15:N:41:ARG:NH1	44:5:113:C:C6	2.73	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:O:18:ARG:HE	44:5:1314:C:H4'	1.83	0.42
16:O:113:ASP:OD1	16:O:160:ARG:NH2	2.53	0.42
18:Q:278:PHE:CE1	44:5:1109:U:H5''	2.54	0.42
24:W:233:ASP:HA	24:W:236:LYS:HD2	2.01	0.42
26:Y:46:LYS:NZ	44:5:224:C:H5''	2.34	0.42
27:Z:1:ALA:HB3	30:c:64:LYS:HZ1	1.83	0.42
30:c:28:LYS:NZ	44:5:1712:G:N7	2.68	0.42
34:g:13:TYR:OH	44:5:1854:C:O2	2.14	0.42
34:g:16:ARG:NH2	44:5:826:G:OP1	2.53	0.42
35:h:77:PRO:HB2	35:h:80:LEU:HG	2.00	0.42
37:j:797:ARG:CZ	44:5:818:C:O4'	2.67	0.42
42:p:5:THR:CB	44:5:837:A:OP1	2.68	0.42
43:q:36:GLN:O	44:5:1261:G:C2'	2.53	0.42
43:q:51:VAL:N	44:5:1258:U:C2'	2.83	0.42
44:5:22:G:H2'	44:5:23:A:H8	1.85	0.42
44:5:250:U:H5'	44:5:251:G:H8	1.85	0.42
44:5:279:U:H2'	44:5:280:U:C6	2.54	0.42
44:5:507:U:H2'	44:5:508:U:C6	2.55	0.42
44:5:567:G:H2'	44:5:568:G:H8	1.84	0.42
44:5:721:G:N2	44:5:750:G:H1'	2.35	0.42
44:5:863:C:H3'	44:5:864:G:C8	2.55	0.42
44:5:1156:C:C4'	46:7:86:U:C5	2.93	0.42
44:5:1830:G:N2	45:8:114:G:OP1	2.52	0.42
44:5:2431:C:H2'	44:5:2432:A:C8	2.55	0.42
44:5:2948:C:H2'	44:5:2949:U:C6	2.55	0.42
44:5:3156:U:H2'	44:5:3158:G:H5'	2.00	0.42
46:7:90:U:H3'	46:7:91:G:H8	1.85	0.42
46:7:117:A:H2'	46:7:118:A:C8	2.54	0.42
47:x:9:UNK:N	48:y:8:UNK:N	2.41	0.42
1:z:292:LYS:HE3	1:z:316:PRO:HG2	2.01	0.42
1:z:359:CYS:SG	44:5:2464:U:OP1	2.78	0.42
2:A:215:ASN:HB2	44:5:2968:G:N7	2.34	0.42
3:B:24:SER:OG	3:B:25:ILE:N	2.52	0.42
3:B:94:GLU:HA	3:B:99:LEU:HD23	2.02	0.42
3:B:375:GLU:O	3:B:379:PHE:CB	2.68	0.42
4:C:150:LEU:HD23	4:C:249:ILE:HG23	2.01	0.42
4:C:221:ASN:ND2	44:5:209:A:N3	2.68	0.42
4:C:321:LYS:O	4:C:325:LEU:HB2	2.19	0.42
6:E:332:LYS:HA	44:5:3271:G:N3	2.34	0.42
11:J:224:ARG:NH2	11:J:244:LYS:O	2.47	0.42
14:M:234:TRP:C	14:M:237:ALA:H	2.28	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:67:ARG:CG	44:5:273:A:H62	2.33	0.42
15:N:78:GLY:HA3	44:5:2429:G:H22	1.73	0.42
15:N:126:THR:OG1	44:5:273:A:OP2	2.34	0.42
15:N:155:VAL:H	45:8:141:C:C4'	2.10	0.42
15:N:188:ARG:HG3	44:5:1544:G:N2	2.35	0.42
16:O:156:LEU:HD13	44:5:3243:A:C8	2.54	0.42
20:S:146:LYS:HD3	44:5:534:U:N3	2.31	0.42
28:a:109:HIS:CE1	28:a:113:ARG:HG3	2.55	0.42
28:a:112:GLY:HA3	28:a:116:ALA:HB3	2.00	0.42
32:e:266:LEU:HD23	32:e:266:LEU:HA	1.89	0.42
43:q:209:UNK:C	47:x:3:UNK:O	2.67	0.42
44:5:326:U:H2'	44:5:327:A:C8	2.55	0.42
44:5:368:G:N1	45:8:21:C:C2	2.81	0.42
44:5:524:U:H3	44:5:568:G:N2	2.11	0.42
44:5:1071:U:C2	44:5:1087:G:O6	2.60	0.42
44:5:1686:U:H1'	44:5:3069:G:N2	2.35	0.42
44:5:2196:C:O2'	44:5:2271:A:H1'	2.17	0.42
44:5:2201:G:C6	44:5:2241:U:N3	2.87	0.42
44:5:2608:G:H2'	44:5:2609:A:H8	1.84	0.42
44:5:3251:U:H2'	44:5:3252:G:C8	2.54	0.42
1:z:217:GLU:C	44:5:2489:C:C4	2.94	0.42
1:z:364:VAL:HG11	44:5:2478:C:O2'	2.18	0.42
3:B:119:TYR:HE1	44:5:3295:A:H5''	1.85	0.42
3:B:121:ASN:HB3	3:B:124:LYS:HB2	2.02	0.42
4:C:48:GLN:HG2	44:5:691:A:C2	2.54	0.42
4:C:282:SER:HB2	18:Q:251:GLN:HE21	1.85	0.42
5:D:270:SER:CB	46:7:67:G:H5'	2.50	0.42
5:D:370:LEU:HD12	5:D:370:LEU:HA	1.90	0.42
5:D:445:PHE:HA	5:D:448:GLU:HA	2.02	0.42
5:D:554:ALA:O	5:D:556:GLN:N	2.52	0.42
6:E:332:LYS:CE	44:5:3271:G:C5'	2.81	0.42
6:E:386:SER:OG	44:5:3216:G:OP1	2.37	0.42
7:F:285:TYR:N	21:T:142:SER:HA	2.35	0.42
8:G:215:LYS:HD2	44:5:2523:A:N9	2.35	0.42
8:G:219:TYR:HD2	45:8:150:G:H21	1.68	0.42
8:G:313:LYS:HB2	8:G:364:LEU:HB2	2.02	0.42
9:H:302:ASN:HB3	9:H:313:GLU:HB3	2.01	0.42
12:s:151:TYR:C	44:5:1240:A:H5'	2.45	0.42
12:s:198:GLN:CA	44:5:1238:C:H3'	2.48	0.42
12:s:222:LEU:O	44:5:1232:C:H1'	2.20	0.42
12:s:223:LYS:CB	44:5:1232:C:O2	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:s:272:THR:CB	44:5:1261:G:H5'	2.47	0.42
12:s:291:GLY:HA3	43:q:33:VAL:HG12	0.86	0.42
13:L:76:THR:HG23	13:L:101:ARG:NH1	2.35	0.42
13:L:83:ALA:HB2	13:L:116:LEU:HB3	2.02	0.42
14:M:257:ARG:NH1	16:O:197:LEU:HD23	2.35	0.42
16:O:85:ARG:HH12	44:5:2383:C:P	2.43	0.42
19:R:139:LEU:HD23	19:R:139:LEU:HA	1.86	0.42
19:R:155:ARG:NH2	44:5:1873:U:C5'	2.79	0.42
19:R:231:ILE:HD13	44:5:1722:U:H1'	2.02	0.42
25:X:147:ARG:CZ	44:5:1560:G:O6	2.68	0.42
34:g:44:CYS:HB2	34:g:81:CYS:HB3	2.02	0.42
42:p:51:ALA:H	42:p:54:ILE:HB	1.85	0.42
44:5:189:G:O2'	44:5:190:U:O4'	2.34	0.42
44:5:301:G:O6	44:5:314:U:O4	2.38	0.42
44:5:323:A:H3'	44:5:324:A:C8	2.55	0.42
44:5:673:U:H2'	44:5:674:G:C8	2.54	0.42
44:5:1020:G:H2'	44:5:1021:G:H8	1.85	0.42
44:5:1602:A:H2'	44:5:1603:A:C5	2.55	0.42
44:5:2148:U:H3'	44:5:2187:G:N2	2.35	0.42
44:5:3153:U:H1'	44:5:3157:U:C2	2.54	0.42
46:7:41:G:H5'	46:7:42:A:N7	2.35	0.42
46:7:74:C:H2'	46:7:75:G:C8	2.55	0.42
1:z:299:SER:OG	44:5:2484:A:C3'	2.51	0.41
1:z:300:LYS:HG2	44:5:2485:A:H5''	2.02	0.41
1:z:408:ALA:HB3	44:5:2450:G:C5'	1.93	0.41
2:A:140:ASN:O	2:A:145:LYS:N	2.37	0.41
2:A:177:LYS:HE2	44:5:1793:C:C5	2.55	0.41
3:B:159:ARG:HD3	3:B:180:GLU:HB3	2.01	0.41
3:B:371:GLN:N	3:B:375:GLU:OE1	2.53	0.41
4:C:195:ARG:CZ	44:5:339:C:H3'	2.50	0.41
4:C:197:ARG:CZ	44:5:338:A:H4'	2.49	0.41
4:C:354:VAL:O	4:C:358:THR:OG1	2.29	0.41
5:D:278:THR:HA	5:D:279:PRO:HD3	1.91	0.41
8:G:271:GLU:O	8:G:275:LYS:HG3	2.20	0.41
10:I:384:PHE:HB3	10:I:385:LEU:H	1.73	0.41
12:s:223:LYS:CB	43:q:40:GLU:O	2.68	0.41
12:s:265:VAL:O	44:5:1266:G:O4'	2.29	0.41
12:s:299:ILE:CB	44:5:1247:U:N3	2.83	0.41
13:L:49:ARG:CD	35:h:116:TYR:CE2	3.01	0.41
13:L:153:ASP:OD1	13:L:157:ARG:NH2	2.32	0.41
13:L:164:GLU:O	13:L:169:THR:OG1	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:26:ARG:CG	36:i:30:LYS:NZ	2.65	0.41
15:N:42:PRO:O	44:5:112:U:O2	2.37	0.41
15:N:184:LYS:N	44:5:54:C:C4'	2.44	0.41
17:P:57:ALA:HA	17:P:83:TRP:HE1	1.85	0.41
17:P:92:GLN:HA	17:P:95:LEU:HD12	2.01	0.41
17:P:124:LYS:HG2	17:P:142:SER:HA	2.02	0.41
19:R:256:HIS:CE1	44:5:1718:G:C8	3.08	0.41
20:S:82:ASP:HA	20:S:87:THR:HA	2.02	0.41
21:T:32:LYS:HE2	21:T:34:TYR:HE2	1.84	0.41
21:T:82:ASN:CG	29:b:86:GLY:O	2.63	0.41
22:U:153:LYS:NZ	44:5:1677:G:OP2	2.52	0.41
26:Y:27:ARG:HG3	26:Y:30:LEU:HD12	2.02	0.41
26:Y:55:GLU:HB2	26:Y:108:LYS:HB2	2.02	0.41
33:f:394:GLY:HA2	44:5:1327:C:O3'	2.18	0.41
34:g:52:GLN:CD	44:5:1639:C:O5'	2.62	0.41
34:g:52:GLN:HB2	44:5:1639:C:C5'	2.49	0.41
37:j:789:LYS:HE3	44:5:2138:A:N6	2.35	0.41
37:j:851:ARG:HH21	45:8:103:G:H1	1.67	0.41
37:j:859:ARG:NH2	37:j:865:GLN:O	2.51	0.41
43:q:33:VAL:CG1	44:5:1280:C:O2	2.64	0.41
44:5:157:A:H61	44:5:264:G:H2'	1.84	0.41
44:5:337:G:C6	45:8:27:U:C4	3.08	0.41
44:5:379:C:H2'	44:5:380:U:H6	1.85	0.41
44:5:995:U:C4	44:5:1054:A:C8	3.07	0.41
44:5:1019:G:H2'	44:5:1020:G:C8	2.55	0.41
44:5:1750:A:C2	44:5:1752:A:H1'	2.55	0.41
44:5:1750:A:H4'	44:5:1751:G:C8	2.55	0.41
44:5:1944:U:H2'	44:5:1945:A:C8	2.55	0.41
44:5:2344:U:H2'	44:5:2345:A:C8	2.55	0.41
44:5:2624:G:H1'	44:5:2626:A:H61	1.85	0.41
44:5:2883:U:H2'	44:5:2884:C:H6	1.85	0.41
1:z:234:LYS:HA	1:z:359:CYS:HG	1.85	0.41
1:z:253:CYS:CB	44:5:2465:G:O2'	2.68	0.41
1:z:255:ARG:HG3	1:z:374:LEU:H	1.83	0.41
1:z:258:MET:HA	1:z:344:THR:HG23	2.02	0.41
2:A:215:ASN:CG	44:5:2968:G:C8	2.98	0.41
2:A:219:ILE:HG22	2:A:221:LYS:H	1.85	0.41
3:B:67:PHE:CE2	23:V:217:ARG:NH2	2.88	0.41
5:D:444:ASP:OD1	5:D:445:PHE:N	2.52	0.41
5:D:533:ARG:CD	46:7:1:G:O2'	2.67	0.41
7:F:345:ALA:HB2	7:F:439:PHE:HA	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:H:244:THR:HA	14:M:159:SER:CB	2.49	0.41
12:s:221:ALA:CB	44:5:1233:G:C3'	2.98	0.41
13:L:100:ARG:NH2	44:5:77:A:H4'	2.34	0.41
15:N:45:PRO:HG3	44:5:112:U:C2	2.54	0.41
15:N:150:TRP:CB	44:5:18:G:H21	2.32	0.41
16:O:72:HIS:O	16:O:74:ARG:NH1	2.52	0.41
16:O:116:LYS:HB3	44:5:3180:A:H4'	2.02	0.41
17:P:104:ALA:HB2	44:5:381:U:H1'	2.01	0.41
27:Z:60:LYS:O	27:Z:64:ARG:CB	2.53	0.41
28:a:167:LYS:O	28:a:171:TYR:HB2	2.20	0.41
31:d:88:PRO:CG	44:5:1458:U:H5''	2.50	0.41
34:g:67:LYS:O	34:g:71:THR:N	2.53	0.41
36:i:5:THR:HB	36:i:7:ILE:HG12	2.01	0.41
39:l:27:ILE:CD1	45:8:52:A:H62	2.33	0.41
43:q:52:LEU:N	44:5:1280:C:H4'	2.34	0.41
44:5:37:U:OP1	44:5:934:G:N2	2.40	0.41
44:5:182:U:C2	44:5:234:G:N1	2.73	0.41
44:5:423:A:H2'	44:5:424:G:C8	2.55	0.41
44:5:726:G:H3'	44:5:742:G:H22	1.84	0.41
44:5:731:U:H2'	44:5:732:C:C6	2.56	0.41
44:5:788:C:H2'	44:5:789:A:C8	2.55	0.41
44:5:816:A:P	44:5:920:A:H62	2.43	0.41
44:5:966:U:H2'	44:5:967:A:C8	2.55	0.41
44:5:1094:U:O2'	44:5:1095:U:O3'	2.34	0.41
44:5:1176:C:N3	44:5:1311:G:N1	2.69	0.41
44:5:1718:G:H2'	44:5:1719:G:H8	1.85	0.41
44:5:2443:A:N3	44:5:2505:U:N3	2.68	0.41
45:8:68:G:H2'	45:8:69:U:C6	2.55	0.41
45:8:108:C:H2'	45:8:109:A:H8	1.84	0.41
1:z:368:GLU:HA	44:5:2469:G:C8	2.55	0.41
3:B:135:ALA:HA	3:B:138:ALA:HB3	2.01	0.41
4:C:135:VAL:O	4:C:140:HIS:HB2	2.20	0.41
8:G:197:ASN:O	8:G:203:ALA:HB3	2.20	0.41
8:G:198:PHE:HE2	44:5:2580:A:OP1	2.03	0.41
8:G:207:LYS:CD	44:5:2524:A:H62	2.33	0.41
9:H:244:THR:HA	14:M:159:SER:HB2	2.02	0.41
13:L:15:ARG:HH21	44:5:96:G:C4'	2.32	0.41
14:M:194:LEU:HD22	20:S:72:VAL:HG21	2.01	0.41
15:N:26:ARG:O	44:5:318:A:C6	2.73	0.41
18:Q:210:GLY:H	18:Q:229:LEU:HB3	1.86	0.41
18:Q:234:GLY:O	18:Q:238:LYS:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:R:154:LYS:CB	44:5:1875:G:OP1	2.68	0.41
21:T:12:ARG:HH21	44:5:2698:G:H5'	1.85	0.41
27:Z:67:ILE:HD12	27:Z:118:GLU:HG2	2.01	0.41
30:c:10:ILE:HA	30:c:13:LYS:HE2	2.01	0.41
31:d:114:ASN:HD21	44:5:1474:A:H2	1.62	0.41
32:e:208:TYR:OH	44:5:1162:U:O3'	2.37	0.41
33:f:368:ALA:HB3	33:f:417:ARG:HD2	2.02	0.41
39:l:24:PRO:HD2	45:8:52:A:C5	2.54	0.41
44:5:977:C:H2'	44:5:978:G:H8	1.84	0.41
44:5:1236:G:H21	44:5:1241:U:H3	1.66	0.41
44:5:1258:U:O2'	44:5:1260:A:N7	2.53	0.41
44:5:1576:G:H2'	44:5:1577:G:C8	2.55	0.41
44:5:1791:C:H2'	44:5:1792:C:C6	2.55	0.41
44:5:2161:G:C2	44:5:2173:U:O2	2.74	0.41
44:5:2408:U:H2'	44:5:2409:G:C8	2.56	0.41
44:5:2922:G:N2	44:5:2952:G:N3	2.69	0.41
44:5:3131:U:H2'	44:5:3132:C:C6	2.56	0.41
44:5:3157:U:H1'	44:5:3158:G:C8	2.55	0.41
44:5:3286:G:H2'	44:5:3287:U:C6	2.55	0.41
45:8:71:A:H62	45:8:87:G:N2	2.19	0.41
45:8:119:C:H2'	45:8:120:C:C6	2.55	0.41
47:x:23:UNK:O	48:y:10:UNK:CA	2.61	0.41
3:B:133:TYR:CD1	3:B:136:LYS:HD2	2.51	0.41
3:B:305:ILE:HD11	3:B:317:ILE:HB	2.02	0.41
4:C:222:VAL:HA	4:C:223:PRO:HD3	1.83	0.41
4:C:286:VAL:HG22	18:Q:157:LEU:HD12	2.02	0.41
9:H:202:LYS:HA	9:H:202:LYS:HD3	1.78	0.41
10:I:238:VAL:HG22	10:I:319:ILE:HG12	2.02	0.41
12:s:278:CYS:O	44:5:1261:G:O5'	2.38	0.41
14:M:168:ARG:NH2	14:M:215:THR:O	2.48	0.41
14:M:248:TRP:HZ2	44:5:3207:U:P	2.43	0.41
15:N:30:TYR:HA	15:N:33:LYS:HB2	2.01	0.41
15:N:63:ARG:HG2	44:5:268:A:C5'	2.23	0.41
15:N:72:LYS:H	44:5:290:G:H2'	1.78	0.41
15:N:91:GLU:CG	44:5:277:G:C1'	2.73	0.41
15:N:187:ARG:C	44:5:1549:U:H1'	2.43	0.41
16:O:4:GLU:HB2	16:O:7:VAL:HG22	2.02	0.41
18:Q:301:ARG:HH11	28:a:133:TYR:HB3	1.85	0.41
19:R:312:VAL:C	19:R:312:VAL:HA	2.35	0.41
20:S:118:PHE:HA	20:S:121:ILE:HD12	2.03	0.41
21:T:70:SER:CB	44:5:2737:C:OP1	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:T:136:ARG:HB3	21:T:139:ARG:HH22	1.84	0.41
26:Y:59:VAL:HB	26:Y:105:VAL:HG23	2.03	0.41
26:Y:112:ASP:HA	45:8:84:C:N3	2.33	0.41
27:Z:26:LYS:HB2	27:Z:92:LYS:NZ	2.36	0.41
34:g:63:ALA:HB2	44:5:1803:C:H5'	2.01	0.41
35:h:100:VAL:HG23	35:h:108:GLN:HE22	1.85	0.41
37:j:790:GLY:O	37:j:793:SER:OG	2.26	0.41
37:j:807:ARG:NH1	37:j:827:ALA:O	2.53	0.41
38:k:7:ASP:OD1	38:k:8:ILE:N	2.48	0.41
44:5:176:G:H5''	44:5:177:U:H5	1.86	0.41
44:5:343:U:H3'	44:5:344:A:H8	1.85	0.41
44:5:354:U:C4	44:5:365:A:H8	2.38	0.41
44:5:368:G:C2	45:8:21:C:O2	2.73	0.41
44:5:991:G:C6	44:5:1058:U:N3	2.88	0.41
44:5:1029:G:H2'	44:5:1030:A:C8	2.54	0.41
44:5:1094:U:H1'	44:5:1096:U:H2'	2.02	0.41
44:5:1384:U:O2	44:5:1422:G:C2	2.73	0.41
44:5:1662:G:C2	44:5:1787:A:H2	2.36	0.41
44:5:2149:A:OP2	44:5:2187:G:N2	2.53	0.41
44:5:3033:A:H2'	44:5:3034:C:H6	1.85	0.41
44:5:3146:G:H2'	44:5:3147:G:C8	2.56	0.41
44:5:3299:A:N6	44:5:3315:G:H1	2.18	0.41
45:8:8:C:H2'	45:8:9:A:H8	1.86	0.41
45:8:41:A:H61	45:8:103:G:H2'	1.84	0.41
45:8:53:A:H3'	45:8:54:A:H8	1.84	0.41
46:7:69:C:N3	46:7:110:G:N1	2.68	0.41
46:7:96:U:H2'	46:7:97:A:H8	1.84	0.41
1:z:218:THR:N	44:5:2489:C:N4	2.61	0.41
3:B:99:LEU:HD23	3:B:99:LEU:HA	1.89	0.41
3:B:244:ARG:HH21	44:5:2947:G:C4'	2.32	0.41
4:C:188:ARG:NH2	44:5:1382:G:P	2.85	0.41
4:C:220:ARG:CZ	44:5:211:A:OP1	2.69	0.41
10:I:234:CYS:HB2	10:I:357:GLY:HA2	2.01	0.41
11:J:163:ARG:O	11:J:166:LYS:NZ	2.44	0.41
12:s:146:GLU:HA	12:s:203:ASN:HA	2.01	0.41
14:M:162:ARG:HG2	14:M:216:PRO:HB3	2.01	0.41
15:N:3:ALA:CA	44:5:109:A:C2	2.71	0.41
15:N:43:THR:N	44:5:320:G:N9	2.65	0.41
15:N:44:ARG:CB	44:5:321:C:C5	2.87	0.41
17:P:74:LYS:HZ3	44:5:3297:U:H5''	1.82	0.41
18:Q:272:ARG:HB2	18:Q:275:VAL:HG13	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:Q:274:ALA:HA	18:Q:277:HIS:HD2	1.85	0.41
19:R:231:ILE:CD1	44:5:1722:U:H1'	2.50	0.41
22:U:99:SER:N	22:U:140:THR:O	2.53	0.41
26:Y:43:TYR:HD1	26:Y:126:LEU:HA	1.85	0.41
32:e:204:PRO:HB3	44:5:1405:U:O2'	2.21	0.41
35:h:4:VAL:HG22	35:h:50:SER:HA	2.02	0.41
35:h:79:ASP:OD1	35:h:80:LEU:N	2.53	0.41
42:p:9:GLY:O	44:5:837:A:P	2.79	0.41
42:p:38:ASP:OD1	42:p:45:LYS:HB3	2.21	0.41
43:q:36:GLN:CB	44:5:1265:U:O4	2.57	0.41
43:q:81:LYS:O	44:5:1282:G:C3'	2.56	0.41
43:q:100:ILE:O	44:5:1260:A:N6	2.53	0.41
43:q:216:UNK:O	43:q:220:UNK:CB	2.68	0.41
44:5:83:U:O2'	44:5:700:C:O3'	2.36	0.41
44:5:268:A:N1	44:5:295:A:H5'	2.35	0.41
44:5:383:G:N2	44:5:385:A:H3'	2.35	0.41
44:5:1145:G:N1	44:5:1159:A:H1'	2.36	0.41
44:5:1350:A:N6	44:5:1355:A:H62	2.18	0.41
44:5:1389:G:O2'	44:5:1393:A:O4'	2.29	0.41
44:5:1748:G:H3'	44:5:1749:A:H2'	2.02	0.41
44:5:1836:C:H2'	44:5:1837:U:H6	1.84	0.41
44:5:1949:G:N1	44:5:2097:U:N3	2.37	0.41
44:5:2155:G:H2'	44:5:2156:C:C6	2.56	0.41
44:5:2181:C:H2'	44:5:2182:A:H8	1.86	0.41
44:5:2344:U:H2'	44:5:2345:A:H8	1.85	0.41
44:5:2566:C:H2'	44:5:2567:C:C6	2.55	0.41
44:5:3350:C:H2'	44:5:3351:U:H2'	2.01	0.41
46:7:16:U:H2'	46:7:17:A:C8	2.55	0.41
1:z:255:ARG:CB	44:5:2467:G:C5'	2.67	0.41
1:z:401:VAL:HG11	1:z:406:GLY:H	1.84	0.41
1:z:409:PHE:CD1	44:5:2450:G:P	3.08	0.41
2:A:244:GLY:HA2	44:5:2244:A:H5''	2.01	0.41
5:D:346:TYR:OH	5:D:510:ASP:O	2.34	0.41
5:D:441:PRO:HB2	5:D:458:TYR:CZ	2.55	0.41
7:F:276:LYS:NZ	7:F:288:GLU:HG2	2.35	0.41
7:F:331:LYS:N	21:T:133:ALA:O	2.53	0.41
9:H:363:GLN:CD	44:5:3108:G:H21	2.26	0.41
10:I:196:TYR:O	10:I:244:GLN:NE2	2.49	0.41
11:J:105:ILE:HG12	11:J:253:TRP:HH2	1.85	0.41
11:J:199:GLU:HA	11:J:213:ILE:HG23	2.02	0.41
11:J:228:ARG:CB	46:7:29:C:OP2	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:s:281:ASP:C	44:5:1258:U:O2'	2.61	0.41
14:M:164:VAL:HG22	20:S:150:PHE:N	2.31	0.41
14:M:208:ASN:HB3	14:M:211:GLN:HB2	2.02	0.41
15:N:72:LYS:HA	44:5:290:G:N2	2.35	0.41
15:N:203:ARG:HD2	37:j:816:GLN:HA	2.03	0.41
17:P:45:GLN:HA	17:P:48:LEU:HD12	2.03	0.41
19:R:256:HIS:CG	44:5:1718:G:C5'	3.03	0.41
20:S:70:THR:HG21	44:5:524:U:C5'	2.50	0.41
23:V:216:ARG:HB3	23:V:220:VAL:HG22	2.02	0.41
23:V:231:ILE:HG23	23:V:239:LYS:HB2	2.02	0.41
26:Y:5:SER:OG	26:Y:6:LEU:N	2.54	0.41
28:a:103:ILE:HD13	44:5:1114:U:H5''	2.01	0.41
28:a:163:ILE:O	28:a:168:ARG:NH2	2.34	0.41
29:b:104:LYS:HG2	44:5:1076:C:H4'	2.02	0.41
30:c:16:LEU:O	30:c:20:SER:HB3	2.20	0.41
31:d:114:ASN:ND2	44:5:1458:U:O2	2.43	0.41
36:i:62:ARG:HG3	36:i:98:ARG:HH12	1.86	0.41
37:j:841:ARG:HG2	37:j:842:ARG:HE	1.85	0.41
37:j:845:THR:OG1	45:8:41:A:H4'	2.21	0.41
44:5:19:U:O2	45:8:140:G:O6	2.39	0.41
44:5:268:A:N6	44:5:296:A:OP2	2.49	0.41
44:5:353:G:H1'	44:5:354:U:H5	1.85	0.41
44:5:407:A:N6	45:8:15:G:O2'	2.54	0.41
44:5:807:A:N7	44:5:2411:U:O2'	2.48	0.41
44:5:1157:G:H3'	44:5:1158:A:H8	1.84	0.41
44:5:1655:G:H3'	44:5:1656:A:H2'	2.03	0.41
44:5:1681:U:O2'	44:5:3069:G:O6	2.30	0.41
44:5:1731:A:H2'	44:5:1732:U:O4'	2.20	0.41
44:5:2152:A:H1'	44:5:2243:A:C2	2.56	0.41
44:5:2513:U:H2'	44:5:2593:A:H62	1.85	0.41
44:5:2999:U:N3	44:5:3149:G:N1	2.33	0.41
44:5:3280:U:H1'	44:5:3281:U:H5'	2.01	0.41
47:x:5:UNK:O	48:y:8:UNK:HA	2.12	0.41
47:x:9:UNK:C	48:y:8:UNK:N	2.58	0.41
47:x:13:UNK:HA	48:y:41:UNK:CB	2.51	0.41
47:x:31:UNK:O	48:y:14:UNK:N	2.39	0.41
1:z:218:THR:OG1	44:5:2489:C:O4'	2.39	0.41
1:z:226:THR:O	44:5:2476:C:H2'	2.17	0.41
1:z:372:ASP:OD2	44:5:2469:G:C1'	2.69	0.41
3:B:15:GLY:HA2	44:5:3010:U:O4'	2.20	0.41
3:B:305:ILE:H	3:B:305:ILE:HG13	1.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:158:SER:HG	4:C:213:ASN:HD22	1.64	0.41
4:C:183:LYS:HD2	4:C:183:LYS:HA	1.90	0.41
5:D:279:PRO:HB2	5:D:284:ARG:HG3	2.02	0.41
5:D:307:PRO:HG2	5:D:309:TYR:CZ	2.56	0.41
6:E:270:ARG:HH12	44:5:3268:A:H3'	1.86	0.41
7:F:285:TYR:O	21:T:141:VAL:CG2	2.69	0.41
8:G:207:LYS:CE	44:5:2524:A:H62	2.32	0.41
8:G:212:ARG:NH1	44:5:2584:G:C2	2.89	0.41
8:G:287:GLN:NE2	44:5:120:G:H1'	2.34	0.41
9:H:221:LYS:HB3	9:H:224:ILE:HB	2.02	0.41
9:H:366:ARG:CZ	44:5:3108:G:H1'	2.50	0.41
10:I:275:ARG:HH21	44:5:1044:U:P	2.43	0.41
11:J:151:ARG:NE	41:o:106:PHE:N	2.66	0.41
11:J:189:ALA:H	44:5:2671:A:HO2'	1.64	0.41
15:N:5:LYS:CD	44:5:323:A:O5'	2.69	0.41
15:N:36:ILE:HA	44:5:268:A:C5'	2.50	0.41
15:N:122:ASN:N	44:5:318:A:H5'	2.31	0.41
16:O:134:LYS:HB2	16:O:134:LYS:HE2	1.85	0.41
20:S:136:LYS:HE2	20:S:137:ARG:NH1	2.33	0.41
25:X:160:TYR:CE1	35:h:75:TYR:HB3	2.55	0.41
31:d:64:ASP:O	31:d:135:ARG:NH2	2.38	0.41
34:g:60:ARG:NE	44:5:1593:A:H5'	2.35	0.41
36:i:29:LYS:HE2	36:i:29:LYS:HB2	1.95	0.41
38:k:2:ALA:HA	44:5:1748:G:H4'	2.01	0.41
43:q:55:LYS:HB2	44:5:1223:A:O3'	2.20	0.41
44:5:347:G:N2	44:5:352:A:O2'	2.53	0.41
44:5:357:A:H2'	44:5:358:G:C8	2.56	0.41
44:5:523:A:H3'	44:5:524:U:H6	1.86	0.41
44:5:576:C:H2'	44:5:577:C:H6	1.86	0.41
44:5:707:U:O2'	44:5:754:G:N3	2.44	0.41
44:5:760:G:N2	44:5:771:A:H8	2.02	0.41
44:5:907:G:N2	44:5:926:A:O5'	2.54	0.41
44:5:1244:A:H4'	44:5:1245:A:O5'	2.21	0.41
44:5:1304:A:H2'	44:5:2939:G:H1'	2.02	0.41
44:5:1472:U:H2'	44:5:1473:G:H8	1.86	0.41
44:5:1563:C:H2'	44:5:1564:U:N1	2.36	0.41
44:5:1635:G:H2'	44:5:1637:A:N7	2.36	0.41
44:5:2701:U:O2	44:5:2705:A:O2'	2.36	0.41
44:5:2755:C:H2'	44:5:2756:C:C6	2.55	0.41
44:5:3023:U:C4	44:5:3032:A:C8	3.06	0.41
1:z:367:VAL:CG2	44:5:2478:C:O2	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:49:TYR:H	3:B:79:VAL:HG22	1.85	0.41
3:B:259:HIS:CD2	16:O:64:PHE:CD1	3.08	0.41
4:C:61:SER:CB	44:5:930:U:P	3.09	0.41
4:C:65:TRP:CZ2	4:C:76:ARG:HB2	2.56	0.41
6:E:237:GLU:HA	32:e:155:LEU:CD2	2.50	0.41
6:E:389:LEU:O	33:f:322:SER:HB2	2.20	0.41
7:F:249:GLU:H	7:F:249:GLU:HG3	1.57	0.41
7:F:316:LEU:HD23	7:F:316:LEU:HA	1.90	0.41
8:G:215:LYS:CG	44:5:2523:A:C5	3.04	0.41
10:I:343:LYS:NZ	44:5:2852:C:C2	2.74	0.41
11:J:195:PHE:H	11:J:218:PHE:HB2	1.85	0.41
13:L:125:VAL:HA	35:h:116:TYR:HA	2.02	0.41
15:N:5:LYS:HE2	44:5:324:A:C5	2.56	0.41
15:N:15:GLN:O	44:5:69:C:P	2.79	0.41
15:N:76:PRO:HD3	44:5:2432:A:H62	0.60	0.41
15:N:91:GLU:HA	44:5:277:G:N9	2.34	0.41
15:N:156:HIS:ND1	45:8:141:C:H4'	2.35	0.41
15:N:183:THR:HG23	44:5:54:C:H1'	2.02	0.41
16:O:18:ARG:NH1	44:5:1318:A:C8	2.89	0.41
16:O:49:ARG:NH2	44:5:1193:A:OP2	2.42	0.41
16:O:90:HIS:HB2	16:O:99:LEU:HD11	2.03	0.41
16:O:94:ARG:HB2	44:5:632:G:H5'	2.03	0.41
16:O:119:VAL:HG11	20:S:167:ARG:HH11	1.86	0.41
18:Q:294:GLY:H	18:Q:299:ARG:HE	1.69	0.41
20:S:170:THR:OG1	44:5:3185:U:O2'	2.38	0.41
23:V:176:ASN:OD1	44:5:2917:G:OP1	2.39	0.41
23:V:246:PRO:HD3	24:W:169:GLY:O	2.20	0.41
24:W:268:ARG:O	24:W:272:LYS:HB2	2.21	0.41
26:Y:24:SER:O	26:Y:24:SER:OG	2.39	0.41
27:Z:116:ALA:HA	27:Z:119:GLU:HB3	2.02	0.41
28:a:90:ARG:HH22	44:5:1377:G:H1	1.68	0.41
28:a:115:MET:O	44:5:95:A:H4'	2.21	0.41
30:c:11:ASN:HD22	30:c:14:LEU:HD12	1.85	0.41
35:h:35:LYS:HD2	35:h:41:LEU:HB3	2.03	0.41
35:h:63:ARG:NH2	45:8:97:A:P	2.93	0.41
39:l:38:ASN:HA	44:5:351:A:N1	2.35	0.41
44:5:196:G:N1	44:5:198:A:H3'	2.36	0.41
44:5:353:G:N2	44:5:364:G:H2'	2.36	0.41
44:5:369:A:N6	45:8:21:C:N3	2.68	0.41
44:5:409:A:H3'	44:5:410:U:C6	2.56	0.41
44:5:1261:G:H5'	44:5:1278:A:C2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:1269:U:H4'	44:5:1272:C:C5	2.56	0.41
44:5:1302:A:O2'	44:5:2887:A:OP1	2.34	0.41
44:5:1361:U:H2'	44:5:1362:G:H8	1.85	0.41
44:5:1910:A:H2'	44:5:1911:A:H8	1.85	0.41
44:5:2449:A:H2'	44:5:2450:G:C8	2.56	0.41
44:5:2811:A:H2'	44:5:2812:C:H6	1.86	0.41
44:5:3060:C:H2'	44:5:3061:G:C8	2.55	0.41
44:5:3332:U:H2'	44:5:3333:G:O4'	2.20	0.41
44:5:3365:U:H2'	44:5:3366:G:C8	2.55	0.41
1:z:256:PRO:HD2	44:5:2467:G:H5''	1.04	0.41
1:z:300:LYS:CD	44:5:2486:A:P	3.09	0.41
1:z:302:TYR:OH	1:z:333:VAL:O	2.35	0.41
1:z:344:THR:O	44:5:2466:G:OP1	2.39	0.41
1:z:363:ALA:HB3	44:5:2467:G:C2	2.49	0.41
1:z:366:ASN:HA	44:5:2469:G:C5	2.56	0.41
1:z:372:ASP:CA	44:5:2467:G:H1'	2.48	0.41
2:A:39:GLY:O	2:A:92:LYS:N	2.49	0.41
2:A:132:ASN:HD21	44:5:2179:C:H2'	1.86	0.41
2:A:200:ARG:HG2	44:5:2185:G:OP2	2.20	0.41
3:B:295:ALA:HB2	3:B:302:LYS:HA	2.02	0.41
4:C:23:PRO:HB3	4:C:259:ASP:HA	2.03	0.41
4:C:321:LYS:HA	4:C:324:LEU:HB3	2.03	0.41
5:D:522:LYS:HE2	46:7:120:C:H41	1.85	0.41
5:D:547:ALA:O	5:D:551:ALA:HB2	2.21	0.41
6:E:284:ASP:OD2	6:E:302:ARG:NH1	2.54	0.41
6:E:400:PHE:C	14:M:262:THR:HG23	2.46	0.41
7:F:288:GLU:O	21:T:138:SER:HA	2.21	0.41
7:F:336:LEU:HG	44:5:986:U:HO2'	1.82	0.41
8:G:357:LYS:HD2	44:5:7:C:P	2.60	0.41
8:G:402:LEU:HD12	44:5:2586:G:H1	1.85	0.41
9:H:210:ILE:HG12	9:H:272:LYS:HG3	2.02	0.41
9:H:249:ASN:OD1	9:H:249:ASN:N	2.53	0.41
9:H:371:ASP:OD2	44:5:2899:C:H3'	2.21	0.41
10:I:275:ARG:O	44:5:1043:C:O2'	2.17	0.41
10:I:301:ARG:HA	44:5:2618:G:C2	2.56	0.41
11:J:144:THR:CG2	41:o:106:PHE:O	2.69	0.41
12:s:253:MET:C	44:5:1245:A:H3'	2.33	0.41
12:s:254:ARG:C	44:5:1247:U:OP2	2.63	0.41
12:s:256:LYS:CA	44:5:1268:G:N7	2.83	0.41
12:s:279:ARG:O	44:5:1261:G:C8	2.68	0.41
13:L:32:LYS:O	13:L:36:ARG:HG3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:L:62:THR:HG22	44:5:72:C:C2	2.51	0.41
13:L:71:ALA:HB2	13:L:147:ILE:HG13	2.02	0.41
14:M:214:LEU:HB2	20:S:172:TYR:CE2	2.56	0.41
14:M:234:TRP:O	14:M:237:ALA:C	2.64	0.41
14:M:272:LEU:HD23	14:M:272:LEU:HA	1.86	0.41
15:N:22:LEU:HD22	44:5:316:U:H2'	2.02	0.41
15:N:70:ASN:ND2	44:5:277:G:C6	2.88	0.41
15:N:78:GLY:HA2	44:5:2600:C:H42	1.85	0.41
15:N:116:LEU:HB3	15:N:133:ILE:HG23	2.02	0.41
17:P:101:ASN:O	17:P:105:LYS:HB2	2.21	0.41
17:P:104:ALA:CB	44:5:381:U:H1'	2.51	0.41
18:Q:161:LEU:HD23	18:Q:161:LEU:HA	1.83	0.41
21:T:82:ASN:C	29:b:88:LYS:HG2	2.45	0.41
21:T:83:ARG:HA	29:b:88:LYS:CG	2.50	0.41
23:V:162:ASN:H	23:V:193:LYS:HB2	1.86	0.41
24:W:166:PHE:HD2	24:W:174:PHE:HD2	1.67	0.41
24:W:199:LEU:HA	24:W:202:LYS:HB2	2.02	0.41
26:Y:2:ALA:N	44:5:212:G:P	2.93	0.41
26:Y:13:ARG:NH2	45:8:24:G:N7	2.69	0.41
26:Y:52:ARG:NH2	26:Y:53:ASP:OD2	2.53	0.41
26:Y:75:ARG:HB3	45:8:72:A:H5'	2.01	0.41
28:a:84:SER:OG	44:5:1428:A:C8	2.74	0.41
28:a:89:THR:HA	28:a:92:HIS:CG	2.56	0.41
28:a:175:ALA:HB1	28:a:202:VAL:HG22	2.02	0.41
29:b:72:ASN:ND2	44:5:2642:A:HO2'	2.14	0.41
30:c:11:ASN:HA	30:c:14:LEU:HD12	2.03	0.41
32:e:198:ARG:NH2	44:5:634:C:C3'	2.75	0.41
32:e:261:ALA:HA	32:e:264:LYS:HD2	2.03	0.41
35:h:6:ALA:O	35:h:10:ARG:HD3	2.21	0.41
36:i:62:ARG:HD2	44:5:2445:A:C4'	2.50	0.41
36:i:88:GLU:HA	36:i:91:ASN:HD22	1.86	0.41
40:m:95:VAL:O	40:m:122:ARG:N	2.39	0.41
41:o:8:ARG:HH11	44:5:2713:U:C2'	2.33	0.41
41:o:12:CYS:O	41:o:17:CYS:HB2	2.21	0.41
43:q:36:GLN:N	44:5:1262:G:N1	2.69	0.41
43:q:37:GLN:C	44:5:1261:G:C1'	2.85	0.41
43:q:53:MET:H	44:5:1280:C:C3'	2.24	0.41
43:q:83:ASN:C	44:5:1282:G:O4'	2.60	0.41
44:5:10:C:O2'	44:5:1558:A:N7	2.53	0.41
44:5:146:U:H4'	44:5:147:U:H5''	2.03	0.41
44:5:263:C:H2'	44:5:264:G:H8	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:5:333:G:C2	45:8:30:C:O2	2.73	0.41
44:5:532:A:C6	44:5:560:G:O6	2.74	0.41
44:5:640:U:H2'	44:5:641:C:C6	2.56	0.41
44:5:662:U:H2'	44:5:663:C:C6	2.56	0.41
44:5:911:C:H2'	44:5:912:G:C8	2.56	0.41
44:5:1070:U:H2'	44:5:1071:U:C6	2.56	0.41
44:5:1210:U:O4	44:5:1295:G:O6	2.39	0.41
44:5:1215:U:H2'	44:5:1216:C:H6	1.86	0.41
44:5:1622:U:H2'	44:5:1623:G:C8	2.55	0.41
44:5:1900:A:H62	44:5:2334:U:H3	1.69	0.41
44:5:1949:G:O6	44:5:2097:U:C4	2.74	0.41
44:5:2123:G:N1	44:5:2331:C:N3	2.69	0.41
44:5:2389:C:H2'	44:5:2390:A:H8	1.85	0.41
44:5:2406:C:H2'	44:5:2407:C:H6	1.86	0.41
44:5:2480:A:H3'	44:5:2481:G:C8	2.53	0.41
44:5:2542:U:H1'	44:5:2543:U:C5	2.56	0.41
44:5:2587:U:H2'	44:5:2588:U:C6	2.55	0.41
44:5:2696:A:H3'	44:5:2697:A:C8	2.56	0.41
44:5:2812:C:H2'	44:5:2813:A:C8	2.56	0.41
44:5:2888:U:O5'	44:5:2911:A:N6	2.50	0.41
44:5:2937:G:H2'	44:5:2938:G:H8	1.86	0.41
44:5:2945:G:O2'	44:5:2948:C:OP2	2.26	0.41
44:5:2995:A:H3'	44:5:2996:U:C2	2.56	0.41
44:5:3008:A:H2'	44:5:3009:G:C8	2.56	0.41
44:5:3051:U:H2'	44:5:3052:G:C8	2.56	0.41
44:5:3288:G:O2'	44:5:3289:G:O5'	2.30	0.41
45:8:78:G:H2'	45:8:79:A:N3	2.36	0.41
45:8:103:G:OP2	45:8:105:A:O2'	2.28	0.41
46:7:90:U:H3'	46:7:91:G:C8	2.55	0.41
1:z:401:VAL:HB	44:5:2452:G:OP2	2.22	0.41
2:A:11:GLY:HA2	44:5:2172:A:N3	2.36	0.41
2:A:104:LEU:HD11	2:A:146:THR:HG21	2.04	0.41
3:B:30:LYS:NZ	44:5:3138:U:C5	2.89	0.41
5:D:281:ARG:NH1	46:7:112:G:N7	2.69	0.41
5:D:302:ALA:HA	5:D:304:TYR:CZ	2.56	0.41
8:G:198:PHE:CE2	44:5:2580:A:OP1	2.74	0.41
9:H:223:ARG:HH22	44:5:3185:U:H5'	1.85	0.41
10:I:189:ARG:NH2	44:5:1128:U:OP1	2.54	0.41
10:I:270:PHE:HB2	10:I:323:VAL:HG12	2.02	0.41
10:I:383:LYS:CE	44:5:1040:A:C2'	2.98	0.41
11:J:228:ARG:HB3	46:7:29:C:OP2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:s:249:ILE:HA	44:5:1274:A:N7	2.36	0.41
13:L:49:ARG:CG	35:h:116:TYR:CD2	2.95	0.41
15:N:8:GLU:OE1	44:5:322:U:H2'	2.20	0.41
15:N:22:LEU:CD2	44:5:316:U:C5	2.69	0.41
15:N:22:LEU:HD13	44:5:316:U:H5''	2.00	0.41
17:P:173:ARG:HA	17:P:176:ILE:HD12	2.02	0.41
18:Q:131:THR:OG1	44:5:1103:A:N1	2.54	0.41
21:T:132:PRO:HG2	44:5:1099:A:C4'	2.51	0.41
25:X:196:LEU:O	25:X:238:VAL:HB	2.21	0.41
26:Y:25:SER:HA	45:8:88:A:N1	2.36	0.41
29:b:115:GLY:O	29:b:119:ALA:CB	2.68	0.41
30:c:13:LYS:O	30:c:98:SER:OG	2.29	0.41
40:m:85:LEU:HD23	40:m:88:LYS:NZ	2.36	0.41
43:q:34:SER:CB	44:5:1230:G:C4	3.04	0.41
43:q:51:VAL:HG22	44:5:1280:C:C2'	2.49	0.41
43:q:220:UNK:C	48:y:42:UNK:O	2.56	0.41
44:5:293:C:H2'	44:5:294:U:O4'	2.21	0.41
44:5:435:C:H3'	44:5:621:A:N6	2.36	0.41
44:5:861:C:H2'	44:5:862:U:H6	1.86	0.41
44:5:1195:A:H2	44:5:1313:G:H1	1.57	0.41
44:5:1239:C:O2	44:5:1250:G:N1	2.54	0.41
44:5:1494:U:O2	44:5:1521:G:N2	2.50	0.41
44:5:1624:G:H2'	44:5:1625:A:O4'	2.21	0.41
44:5:1761:C:O2'	44:5:1763:U:OP2	2.27	0.41
44:5:1789:G:H2'	44:5:1790:G:H8	1.85	0.41
44:5:1949:G:C2	44:5:2097:U:O2	2.73	0.41
44:5:2210:G:H2'	44:5:2211:U:H6	1.86	0.41
44:5:2535:A:N6	44:5:2544:U:H3	2.19	0.41
44:5:2837:A:H2'	44:5:2845:A:C2	2.56	0.41
44:5:3334:U:H3	44:5:3369:G:P	2.43	0.41
1:z:213:LYS:CA	44:5:2489:C:C5	2.95	0.40
3:B:3:HIS:HA	44:5:2939:G:O6	2.21	0.40
4:C:230:VAL:HG12	4:C:261:VAL:HG11	2.03	0.40
5:D:282:ARG:HH11	46:7:7:G:H8	1.69	0.40
6:E:382:TYR:HD2	6:E:383:LEU:HD23	1.86	0.40
6:E:390:LYS:HE2	33:f:321:GLU:CD	2.45	0.40
8:G:371:ASP:O	8:G:375:LEU:CB	2.70	0.40
10:I:327:ASP:CG	10:I:363:ARG:HH22	2.29	0.40
10:I:330:LYS:HB2	10:I:330:LYS:HE2	1.88	0.40
10:I:368:LYS:HB2	10:I:368:LYS:HE3	1.77	0.40
11:J:213:ILE:HD13	11:J:213:ILE:HA	1.95	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:s:254:ARG:HA	44:5:1246:G:C3'	2.50	0.40
13:L:117:LYS:HA	13:L:117:LYS:HD3	1.84	0.40
13:L:165:SER:O	13:L:167:PHE:N	2.54	0.40
15:N:81:TYR:HD1	44:5:2427:U:C2'	2.26	0.40
15:N:98:LEU:HD21	44:5:289:A:O5'	2.13	0.40
18:Q:204:LYS:HG3	18:Q:261:ASN:C	2.46	0.40
19:R:315:LYS:HE3	19:R:315:LYS:HB2	1.75	0.40
20:S:142:GLN:O	20:S:145:THR:OG1	2.28	0.40
21:T:69:LYS:HE3	21:T:69:LYS:HB3	1.90	0.40
21:T:82:ASN:CB	29:b:87:ILE:HA	2.45	0.40
21:T:101:CYS:HB2	44:5:1061:A:H1'	2.03	0.40
21:T:116:ARG:NH2	44:5:1096:U:O5'	2.46	0.40
23:V:174:ARG:HA	23:V:174:ARG:HD2	1.81	0.40
37:j:866:THR:N	45:8:95:G:N3	2.69	0.40
44:5:174:C:N3	44:5:245:U:N3	2.70	0.40
44:5:974:G:H2'	44:5:975:C:C6	2.56	0.40
44:5:1397:C:H2'	44:5:1398:U:C6	2.56	0.40
44:5:1506:A:H2'	44:5:1510:G:H22	1.85	0.40
44:5:1525:G:C8	44:5:1829:G:H2'	2.56	0.40
44:5:2654:C:N3	44:5:2754:G:N1	2.69	0.40
44:5:2767:U:N3	44:5:2791:G:N1	2.47	0.40
44:5:3165:A:H61	44:5:3285:C:H42	1.69	0.40
44:5:3196:U:H1'	44:5:3197:G:C2	2.55	0.40
45:8:71:A:N6	45:8:87:G:H21	2.19	0.40
45:8:145:U:H2'	45:8:146:U:C6	2.57	0.40
46:7:5:G:H2'	46:7:6:C:C6	2.57	0.40
46:7:37:G:N2	46:7:41:G:O4'	2.55	0.40
47:x:9:UNK:O	48:y:3:UNK:C	2.68	0.40
47:x:29:UNK:CB	48:y:17:UNK:N	2.84	0.40
1:z:233:LEU:HD13	44:5:2492:C:N3	2.26	0.40
1:z:408:ALA:HB1	44:5:2450:G:C8	2.29	0.40
2:A:147:ARG:HH21	2:A:155:LYS:HB2	1.85	0.40
5:D:391:LEU:HD13	5:D:435:HIS:CE1	2.57	0.40
10:I:187:ALA:CA	44:5:2829:U:H5''	2.51	0.40
10:I:274:VAL:HG22	10:I:321:PHE:CE1	2.56	0.40
11:J:153:ASN:HD22	41:o:103:ALA:HA	1.86	0.40
12:s:192:GLY:H	44:5:1234:G:C2'	2.33	0.40
15:N:17:ASP:OD2	44:5:69:C:C2	2.69	0.40
16:O:88:VAL:HG23	16:O:90:HIS:HB3	2.02	0.40
17:P:103:GLU:HA	17:P:106:GLY:H	1.85	0.40
17:P:121:GLN:O	45:8:13:A:O3'	2.40	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:Q:150:TYR:HA	18:Q:153:LEU:HD12	2.02	0.40
20:S:32:SER:OG	20:S:33:ASN:N	2.53	0.40
21:T:66:ASN:N	21:T:73:GLY:O	2.48	0.40
21:T:116:ARG:HA	21:T:119:ALA:HB3	2.02	0.40
26:Y:79:ALA:HB1	26:Y:98:ASN:CG	2.46	0.40
30:c:23:TYR:N	30:c:93:LEU:HB2	2.37	0.40
30:c:99:ASP:N	30:c:99:ASP:OD1	2.45	0.40
43:q:13:ALA:O	43:q:17:GLU:CB	2.52	0.40
43:q:15:LEU:HD21	43:q:86:PHE:CG	2.55	0.40
43:q:62:ALA:O	43:q:65:GLY:N	2.53	0.40
43:q:80:VAL:HG22	44:5:1283:C:H3'	2.04	0.40
44:5:271:C:H1'	44:5:295:A:C6	2.57	0.40
44:5:415:G:H2'	44:5:416:A:C8	2.56	0.40
44:5:713:U:H2'	44:5:714:G:C8	2.55	0.40
44:5:1168:U:O2	44:5:1330:A:C6	2.74	0.40
44:5:1799:A:H2'	44:5:1800:A:C8	2.56	0.40
44:5:2102:U:H2'	44:5:2103:U:C6	2.55	0.40
44:5:2363:A:H1'	44:5:2376:G:N2	2.36	0.40
44:5:2568:C:O2'	44:5:2569:A:O4'	2.38	0.40
44:5:3193:C:H2'	44:5:3194:C:C6	2.56	0.40
44:5:3307:A:H3'	44:5:3308:C:H6	1.87	0.40
46:7:82:G:C6	46:7:99:G:C5	3.09	0.40
46:7:117:A:H2'	46:7:118:A:H8	1.85	0.40
1:z:219:LYS:HB2	44:5:2488:A:C2	2.21	0.40
1:z:240:ARG:O	1:z:356:LYS:NZ	2.41	0.40
1:z:349:THR:O	1:z:358:LEU:O	2.34	0.40
1:z:363:ALA:HB2	44:5:2466:G:N3	2.22	0.40
2:A:128:ARG:N	44:5:2178:A:OP1	2.52	0.40
2:A:236:GLY:N	44:5:2183:A:HO2'	2.19	0.40
5:D:262:ALA:C	46:7:16:U:C4'	2.92	0.40
7:F:429:LYS:HE2	7:F:429:LYS:HB3	1.88	0.40
11:J:233:LYS:HE3	44:5:2664:C:OP1	2.22	0.40
13:L:11:LYS:CB	44:5:86:G:H2'	2.50	0.40
13:L:35:ARG:HG3	13:L:39:ARG:NH2	2.37	0.40
13:L:61:PRO:HG3	44:5:75:G:C1'	2.50	0.40
15:N:94:TYR:CB	44:5:289:A:O2'	2.69	0.40
15:N:200:TRP:CE3	37:j:813:PHE:CZ	3.07	0.40
16:O:18:ARG:HD2	44:5:1315:U:OP1	2.22	0.40
16:O:171:LYS:HB2	16:O:171:LYS:HE3	1.86	0.40
17:P:54:HIS:O	17:P:72:GLN:NE2	2.40	0.40
18:Q:148:ASN:OD1	18:Q:149:VAL:N	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:R:182:ASN:OD1	19:R:183:GLY:N	2.53	0.40
20:S:5:LYS:HD2	20:S:7:TYR:CZ	2.57	0.40
21:T:90:ASN:ND2	44:5:2722:U:H1'	2.36	0.40
25:X:173:SER:HA	25:X:176:VAL:HB	2.03	0.40
26:Y:76:LEU:HD23	45:8:74:U:OP2	2.20	0.40
26:Y:100:HIS:NE2	26:Y:102:SER:OG	2.35	0.40
27:Z:75:ASN:O	27:Z:78:HIS:C	2.65	0.40
27:Z:82:THR:OG1	27:Z:83:ARG:N	2.54	0.40
28:a:139:MET:SD	44:5:2786:G:N2	2.91	0.40
28:a:195:GLY:HA3	28:a:214:LEU:HD22	2.03	0.40
31:d:74:LEU:HA	31:d:77:ARG:HB2	2.02	0.40
34:g:13:TYR:OH	44:5:1854:C:H1'	2.20	0.40
34:g:72:VAL:HG12	44:5:1640:G:P	2.61	0.40
40:m:97:ARG:NH1	44:5:2846:U:O2	2.54	0.40
41:o:3:ASN:HD22	41:o:97:LYS:HA	1.87	0.40
42:p:4:ARG:HD2	44:5:856:G:N2	2.36	0.40
42:p:78:THR:O	42:p:82:THR:OG1	2.35	0.40
44:5:371:G:H22	44:5:373:A:H3'	1.86	0.40
44:5:706:A:H2'	44:5:707:U:O4'	2.21	0.40
44:5:1453:A:H2'	44:5:1454:A:O4'	2.22	0.40
44:5:1466:G:N2	44:5:1510:G:OP1	2.55	0.40
44:5:1717:U:H2'	44:5:1718:G:C8	2.57	0.40
44:5:1946:A:H2'	44:5:1947:G:H8	1.86	0.40
44:5:2203:U:N3	44:5:2239:G:N1	2.45	0.40
44:5:2292:U:H2'	44:5:2293:C:C2	2.57	0.40
44:5:2658:G:H2'	44:5:2659:G:C8	2.57	0.40
45:8:107:G:H4'	45:8:138:A:H5'	2.03	0.40
1:z:362:VAL:C	44:5:2467:G:N7	2.71	0.40
2:A:62:VAL:HA	2:A:73:GLU:HA	2.03	0.40
2:A:222:ALA:CB	44:5:2201:G:H1'	2.52	0.40
3:B:266:ARG:HD3	44:5:2989:U:H1'	2.03	0.40
4:C:334:PHE:CZ	4:C:339:LEU:HB2	2.56	0.40
5:D:528:GLU:CG	46:7:121:U:N3	2.84	0.40
7:F:453:MET:HE2	7:F:453:MET:HB3	1.91	0.40
8:G:212:ARG:NE	44:5:2526:C:N3	2.69	0.40
8:G:248:ARG:HA	8:G:251:ALA:HB3	2.03	0.40
11:J:173:ARG:HB3	11:J:203:LEU:HB2	2.04	0.40
12:s:214:ALA:O	44:5:1235:U:O2	2.38	0.40
12:s:280:VAL:CB	43:q:42:ARG:HD3	2.51	0.40
13:L:57:VAL:N	13:L:112:ASN:OD1	2.51	0.40
14:M:164:VAL:CG2	20:S:149:LYS:HA	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:7:LEU:N	44:5:322:U:N3	2.70	0.40
15:N:69:GLY:C	44:5:289:A:N6	2.77	0.40
15:N:91:GLU:CA	44:5:277:G:C8	3.04	0.40
15:N:138:GLN:C	44:5:145:G:H5'	2.47	0.40
16:O:133:ARG:NH1	44:5:1189:C:O2'	2.54	0.40
17:P:13:LYS:HD2	17:P:154:GLU:HG2	2.03	0.40
19:R:258:LEU:O	19:R:262:SER:HB2	2.21	0.40
26:Y:25:SER:CB	45:8:88:A:N1	2.84	0.40
28:a:106:HIS:HE1	44:5:802:C:OP2	2.05	0.40
31:d:107:VAL:HA	31:d:149:SER:O	2.22	0.40
34:g:10:ARG:CG	44:5:1489:A:H5'	2.51	0.40
34:g:41:ARG:CZ	44:5:1739:U:H1'	2.52	0.40
37:j:834:ASN:HB2	44:5:53:G:OP1	2.21	0.40
38:k:19:ASP:OD2	38:k:48:SER:OG	2.40	0.40
40:m:111:ARG:NH1	44:5:3121:U:OP2	2.54	0.40
41:o:67:LYS:CD	44:5:2792:A:H5''	2.51	0.40
43:q:4:ILE:HG22	44:5:1219:C:P	2.62	0.40
43:q:57:THR:CG2	44:5:1285:G:N1	2.83	0.40
44:5:63:A:H2'	44:5:64:G:C8	2.56	0.40
44:5:295:A:H2'	44:5:296:A:C8	2.56	0.40
44:5:324:A:H2'	44:5:325:A:C8	2.57	0.40
44:5:340:C:O2	45:8:25:G:C2	2.75	0.40
44:5:355:A:N6	44:5:364:G:H21	2.13	0.40
44:5:355:A:H1'	44:5:365:A:N6	2.37	0.40
44:5:536:U:H2'	44:5:537:A:H8	1.86	0.40
44:5:594:U:H3'	44:5:595:G:C8	2.48	0.40
44:5:846:A:P	44:5:846:A:H8	2.45	0.40
44:5:1008:U:O4	44:5:1009:A:N6	2.54	0.40
44:5:1270:A:N6	44:5:1271:A:N1	2.69	0.40
44:5:2901:G:H3'	44:5:2902:A:H8	1.86	0.40
44:5:3101:G:H2'	44:5:3102:G:C8	2.56	0.40
44:5:3222:U:H2'	44:5:3223:A:C8	2.56	0.40
45:8:84:C:H5''	45:8:84:C:H6	1.87	0.40
3:B:30:LYS:HB3	44:5:3137:C:OP2	2.20	0.40
3:B:119:TYR:HB2	3:B:122:TRP:HE3	1.87	0.40
5:D:272:TYR:O	5:D:276:PHE:HB2	2.22	0.40
6:E:295:VAL:HG11	6:E:383:LEU:HD12	2.04	0.40
6:E:306:ARG:HB3	33:f:422:PRO:HA	2.04	0.40
8:G:240:ALA:O	8:G:244:TYR:OH	2.29	0.40
10:I:241:GLU:HA	10:I:316:ILE:HG12	2.04	0.40
12:s:237:HIS:C	44:5:1255:C:C2'	2.90	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:s:248:GLU:HA	43:q:36:GLN:HB3	2.03	0.40
12:s:288:ILE:CB	44:5:1260:A:O2'	2.68	0.40
14:M:273:ARG:NH2	44:5:3213:A:OP2	2.54	0.40
15:N:9:GLU:CA	44:5:78:U:O2'	2.62	0.40
15:N:144:ARG:NH2	44:5:125:C:O2	2.53	0.40
16:O:52:LEU:HA	16:O:55:HIS:CD2	2.55	0.40
16:O:128:ARG:HH12	44:5:1318:A:P	2.44	0.40
17:P:29:THR:O	17:P:33:ALA:HB2	2.22	0.40
19:R:153:GLY:HA3	44:5:1874:A:OP1	2.22	0.40
19:R:241:LEU:HD21	19:R:258:LEU:HB2	2.03	0.40
21:T:106:LEU:HD13	21:T:106:LEU:HA	1.89	0.40
25:X:196:LEU:HB2	25:X:238:VAL:HB	2.04	0.40
26:Y:60:ARG:HG2	26:Y:103:LYS:HD2	2.04	0.40
26:Y:90:VAL:HG21	44:5:377:A:C5'	2.51	0.40
30:c:58:TYR:HA	30:c:61:MET:HG2	2.03	0.40
34:g:14:ASN:HB3	44:5:827:A:O3'	2.21	0.40
36:i:85:ALA:O	36:i:89:GLU:HB2	2.21	0.40
39:l:35:ILE:HD13	44:5:351:A:N7	2.37	0.40
41:o:20:HIS:HB2	44:5:2742:C:H4'	2.04	0.40
41:o:27:GLN:HG3	41:o:70:LEU:HD23	2.03	0.40
42:p:39:CYS:SG	42:p:60:CYS:HB3	2.62	0.40
44:5:120:G:N2	44:5:121:A:H62	2.19	0.40
44:5:180:C:H2'	44:5:181:U:C6	2.57	0.40
44:5:188:U:H1'	44:5:208:C:H1'	2.03	0.40
44:5:315:C:H2'	44:5:316:U:C6	2.57	0.40
44:5:771:A:H2'	44:5:772:U:O4'	2.21	0.40
44:5:862:U:H2'	44:5:863:C:H6	1.87	0.40
44:5:1215:U:H2'	44:5:1216:C:C6	2.57	0.40
44:5:1454:A:H2'	44:5:1879:A:N6	2.36	0.40
44:5:1635:G:H22	44:5:1638:A:P	2.44	0.40
44:5:1661:G:H2'	44:5:1662:G:C8	2.56	0.40
44:5:1672:U:O2	44:5:1775:G:C2	2.67	0.40
44:5:1760:A:H2'	44:5:1761:C:C2	2.57	0.40
44:5:1863:G:N1	44:5:1866:C:OP1	2.41	0.40
44:5:1909:A:H2'	44:5:1910:A:H8	1.87	0.40
44:5:2745:G:N2	44:5:2748:A:OP2	2.29	0.40
44:5:2828:G:C6	44:5:2862:U:N3	2.90	0.40
44:5:2933:A:H2'	44:5:2934:A:C8	2.56	0.40
44:5:3305:A:H2'	44:5:3306:U:C2	2.57	0.40

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	z	199/204 (98%)	138 (69%)	61 (31%)	0	100	100
2	A	250/252 (99%)	204 (82%)	46 (18%)	0	100	100
3	B	384/386 (100%)	315 (82%)	67 (17%)	2 (0%)	24	57
4	C	359/361 (99%)	292 (81%)	65 (18%)	2 (1%)	21	54
5	D	294/296 (99%)	263 (90%)	31 (10%)	0	100	100
6	E	152/175 (87%)	133 (88%)	19 (12%)	0	100	100
7	F	220/222 (99%)	188 (86%)	31 (14%)	1 (0%)	24	57
8	G	231/233 (99%)	199 (86%)	32 (14%)	0	100	100
9	H	189/191 (99%)	159 (84%)	30 (16%)	0	100	100
10	I	207/220 (94%)	173 (84%)	34 (16%)	0	100	100
11	J	167/169 (99%)	140 (84%)	27 (16%)	0	100	100
12	s	144/155 (93%)	93 (65%)	51 (35%)	0	100	100
13	L	191/193 (99%)	161 (84%)	27 (14%)	3 (2%)	7	35
14	M	134/136 (98%)	117 (87%)	17 (13%)	0	100	100
15	N	201/203 (99%)	171 (85%)	29 (14%)	1 (0%)	24	57
16	O	195/197 (99%)	171 (88%)	24 (12%)	0	100	100
17	P	181/183 (99%)	156 (86%)	25 (14%)	0	100	100
18	Q	183/185 (99%)	157 (86%)	26 (14%)	0	100	100
19	R	186/188 (99%)	159 (86%)	26 (14%)	1 (0%)	24	57
20	S	170/172 (99%)	143 (84%)	27 (16%)	0	100	100
21	T	157/159 (99%)	136 (87%)	21 (13%)	0	100	100
22	U	98/100 (98%)	86 (88%)	12 (12%)	0	100	100
23	V	134/136 (98%)	113 (84%)	21 (16%)	0	100	100
24	W	126/135 (93%)	101 (80%)	24 (19%)	1 (1%)	16	48
25	X	119/121 (98%)	102 (86%)	17 (14%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
26	Y	124/126 (98%)	105 (85%)	19 (15%)	0	100	100
27	Z	133/135 (98%)	114 (86%)	18 (14%)	1 (1%)	16	48
28	a	146/148 (99%)	124 (85%)	21 (14%)	1 (1%)	18	51
29	b	56/58 (97%)	47 (84%)	8 (14%)	1 (2%)	6	33
30	c	95/97 (98%)	86 (90%)	9 (10%)	0	100	100
31	d	107/109 (98%)	88 (82%)	19 (18%)	0	100	100
32	e	125/127 (98%)	105 (84%)	20 (16%)	0	100	100
33	f	104/106 (98%)	86 (83%)	18 (17%)	0	100	100
34	g	110/112 (98%)	101 (92%)	9 (8%)	0	100	100
35	h	117/119 (98%)	103 (88%)	14 (12%)	0	100	100
36	i	97/99 (98%)	85 (88%)	12 (12%)	0	100	100
37	j	85/87 (98%)	70 (82%)	15 (18%)	0	100	100
38	k	75/77 (97%)	69 (92%)	6 (8%)	0	100	100
39	l	48/50 (96%)	41 (85%)	6 (12%)	1 (2%)	5	31
40	m	50/52 (96%)	37 (74%)	13 (26%)	0	100	100
41	o	103/105 (98%)	83 (81%)	20 (19%)	0	100	100
42	p	89/91 (98%)	75 (84%)	13 (15%)	1 (1%)	11	41
43	q	117/219 (53%)	91 (78%)	26 (22%)	0	100	100
All	All	6652/6889 (97%)	5580 (84%)	1056 (16%)	16 (0%)	44	73

All (16) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
7	F	369	GLN
13	L	62	THR
27	Z	33	LYS
13	L	61	PRO
15	N	146	ALA
28	a	121	HIS
42	p	18	TYR
3	B	4	ARG
4	C	339	LEU
19	R	266	ALA
4	C	232	SER
13	L	166	ALA
24	W	278	THR

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Mol	Chain	Res	Type
39	l	22	PRO
3	B	188	ILE
29	b	90	PRO

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	z	179/185 (97%)	173 (97%)	6 (3%)	32	55
2	A	194/194 (100%)	193 (100%)	1 (0%)	81	81
3	B	322/322 (100%)	320 (99%)	2 (1%)	78	79
4	C	288/288 (100%)	287 (100%)	1 (0%)	86	84
5	D	244/244 (100%)	244 (100%)	0	100	100
6	E	134/152 (88%)	130 (97%)	4 (3%)	36	57
7	F	186/186 (100%)	185 (100%)	1 (0%)	81	81
8	G	191/191 (100%)	185 (97%)	6 (3%)	35	57
9	H	171/171 (100%)	168 (98%)	3 (2%)	51	67
10	I	180/186 (97%)	178 (99%)	2 (1%)	65	73
11	J	147/147 (100%)	143 (97%)	4 (3%)	39	59
13	L	154/154 (100%)	151 (98%)	3 (2%)	50	66
14	M	107/107 (100%)	106 (99%)	1 (1%)	70	74
15	N	175/175 (100%)	174 (99%)	1 (1%)	78	79
16	O	160/160 (100%)	159 (99%)	1 (1%)	78	79
17	P	145/145 (100%)	143 (99%)	2 (1%)	59	70
18	Q	150/150 (100%)	148 (99%)	2 (1%)	61	71
19	R	153/153 (100%)	152 (99%)	1 (1%)	76	77
20	S	156/156 (100%)	155 (99%)	1 (1%)	78	79
21	T	136/136 (100%)	135 (99%)	1 (1%)	76	77
22	U	87/87 (100%)	85 (98%)	2 (2%)	44	63

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
23	V	104/104 (100%)	104 (100%)	0	100	100
24	W	114/114 (100%)	114 (100%)	0	100	100
25	X	105/105 (100%)	105 (100%)	0	100	100
26	Y	109/109 (100%)	107 (98%)	2 (2%)	51	67
27	Z	115/115 (100%)	112 (97%)	3 (3%)	40	60
28	a	118/118 (100%)	116 (98%)	2 (2%)	53	67
29	b	46/46 (100%)	45 (98%)	1 (2%)	45	63
30	c	81/81 (100%)	80 (99%)	1 (1%)	63	72
31	d	96/96 (100%)	95 (99%)	1 (1%)	68	74
32	e	109/109 (100%)	109 (100%)	0	100	100
33	f	90/90 (100%)	90 (100%)	0	100	100
34	g	95/95 (100%)	94 (99%)	1 (1%)	65	73
35	h	104/104 (100%)	103 (99%)	1 (1%)	68	74
36	i	81/81 (100%)	79 (98%)	2 (2%)	42	61
37	j	70/70 (100%)	69 (99%)	1 (1%)	59	70
38	k	68/68 (100%)	68 (100%)	0	100	100
39	l	45/45 (100%)	43 (96%)	2 (4%)	25	49
40	m	47/47 (100%)	46 (98%)	1 (2%)	47	64
41	o	90/90 (100%)	90 (100%)	0	100	100
42	p	71/71 (100%)	71 (100%)	0	100	100
43	q	105/165 (64%)	102 (97%)	3 (3%)	37	58
All	All	5522/5612 (98%)	5456 (99%)	66 (1%)	61	72

All (66) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	z	252	ASN
1	z	343	VAL
1	z	344	THR
1	z	360	LEU
1	z	401	VAL
1	z	410	ARG
2	A	242	ARG
3	B	85	VAL
3	B	93	VAL

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Mol	Chain	Res	Type
4	C	212	ASP
6	E	288	LEU
6	E	303	VAL
6	E	374	LYS
6	E	379	LEU
7	F	426	VAL
8	G	226	LYS
8	G	256	LYS
8	G	286	LYS
8	G	300	LEU
8	G	353	LEU
8	G	415	LYS
9	H	268	LEU
9	H	351	VAL
9	H	354	VAL
10	I	233	LEU
10	I	382	VAL
11	J	103	LEU
11	J	137	VAL
11	J	223	ASN
11	J	232	ARG
13	L	54	LEU
13	L	63	VAL
13	L	100	ARG
14	M	169	VAL
15	N	142	ILE
16	O	130	LYS
17	P	30	ARG
17	P	171	ARG
18	Q	133	LYS
18	Q	247	ILE
19	R	239	ARG
20	S	45	LEU
21	T	128	LEU
22	U	153	LYS
22	U	183	ARG
26	Y	59	VAL
26	Y	114	ASP
27	Z	13	VAL
27	Z	52	VAL
27	Z	54	LYS
28	a	125	ASN

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Mol	Chain	Res	Type
28	a	159	LEU
29	b	116	THR
30	c	16	LEU
31	d	113	LEU
34	g	100	ILE
35	h	28	LEU
36	i	18	THR
36	i	57	LEU
37	j	861	LYS
39	l	5	LYS
39	l	23	LEU
40	m	85	LEU
43	q	52	LEU
43	q	76	LEU
43	q	84	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (120) such sidechains are listed below:

Mol	Chain	Res	Type
1	z	252	ASN
1	z	257	ASN
1	z	314	GLN
1	z	322	GLN
2	A	83	HIS
2	A	132	ASN
2	A	215	ASN
3	B	165	GLN
3	B	211	GLN
3	B	243	HIS
3	B	259	HIS
3	B	269	GLN
3	B	293	ASN
3	B	345	ASN
4	C	115	HIS
4	C	213	ASN
4	C	234	ASN
4	C	307	GLN
4	C	320	ASN
4	C	328	ASN
5	D	305	ASN
5	D	557	GLN
7	F	271	ASN

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Mol	Chain	Res	Type
8	G	202	GLN
8	G	223	GLN
8	G	309	ASN
8	G	385	ASN
8	G	404	ASN
8	G	407	GLN
9	H	205	GLN
9	H	208	GLN
9	H	209	GLN
9	H	250	ASN
9	H	264	HIS
9	H	277	ASN
9	H	316	ASN
9	H	362	GLN
10	I	208	ASN
10	I	240	ASN
10	I	308	HIS
11	J	111	ASN
11	J	186	ASN
13	L	12	ASN
13	L	28	GLN
13	L	37	ASN
13	L	102	GLN
13	L	114	GLN
13	L	120	GLN
14	M	190	GLN
15	N	57	GLN
15	N	138	GLN
16	O	14	HIS
16	O	31	GLN
16	O	182	ASN
17	P	34	GLN
17	P	120	ASN
18	Q	134	GLN
18	Q	170	ASN
18	Q	270	ASN
18	Q	277	HIS
19	R	169	GLN
19	R	174	ASN
19	R	203	GLN
19	R	253	HIS
19	R	269	HIS

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Mol	Chain	Res	Type
19	R	301	ASN
20	S	49	HIS
20	S	65	ASN
20	S	114	HIS
20	S	157	GLN
21	T	5	HIS
21	T	45	ASN
21	T	54	HIS
21	T	77	ASN
21	T	90	ASN
21	T	95	HIS
21	T	103	GLN
21	T	122	GLN
21	T	127	GLN
21	T	146	ASN
24	W	249	ASN
25	X	194	ASN
25	X	199	GLN
27	Z	77	ASN
27	Z	121	HIS
28	a	106	HIS
28	a	125	ASN
28	a	143	HIS
28	a	145	GLN
28	a	148	HIS
28	a	201	ASN
29	b	72	ASN
29	b	76	HIS
29	b	111	HIS
31	d	115	GLN
32	e	171	HIS
32	e	182	ASN
32	e	200	ASN
33	f	360	GLN
33	f	405	ASN
33	f	406	ASN
33	f	424	ASN
34	g	14	ASN
34	g	18	ASN
35	h	59	ASN
35	h	108	GLN
36	i	63	ASN

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Mol	Chain	Res	Type
36	i	91	ASN
36	i	100	HIS
37	j	798	HIS
37	j	814	HIS
37	j	865	GLN
39	l	33	ASN
39	l	43	ASN
41	o	22	GLN
41	o	38	GLN
42	p	32	GLN
42	p	34	HIS
43	q	56	ASN
43	q	98	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
44	5	3232/3394 (95%)	1470 (45%)	32 (0%)
45	8	157/158 (99%)	85 (54%)	0
46	7	120/121 (99%)	41 (34%)	0
All	All	3509/3673 (95%)	1596 (45%)	32 (0%)

All (1596) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
44	5	4	U
44	5	5	G
44	5	6	A
44	5	7	C
44	5	8	C
44	5	11	A
44	5	12	A
44	5	13	A
44	5	14	U
44	5	15	C
44	5	18	G
44	5	19	U
44	5	21	G
44	5	26	A
44	5	30	G
44	5	31	C

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Mol	Chain	Res	Type
44	5	37	U
44	5	38	U
44	5	40	A
44	5	42	C
44	5	43	A
44	5	46	U
44	5	47	C
44	5	49	A
44	5	50	U
44	5	53	G
44	5	54	C
44	5	55	G
44	5	57	A
44	5	58	G
44	5	59	G
44	5	60	A
44	5	63	A
44	5	66	A
44	5	67	A
44	5	71	A
44	5	72	C
44	5	74	G
44	5	77	A
44	5	79	U
44	5	82	C
44	5	83	U
44	5	87	U
44	5	92	G
44	5	96	G
44	5	102	C
44	5	104	G
44	5	109	A
44	5	110	G
44	5	111	C
44	5	112	U
44	5	113	C
44	5	114	A
44	5	115	A
44	5	116	A
44	5	117	U
44	5	118	U
44	5	120	G

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Mol	Chain	Res	Type
44	5	121	A
44	5	122	A
44	5	129	U
44	5	130	A
44	5	131	C
44	5	132	C
44	5	134	U
44	5	135	C
44	5	136	G
44	5	138	U
44	5	139	G
44	5	144	A
44	5	145	G
44	5	146	U
44	5	148	G
44	5	150	A
44	5	151	A
44	5	153	U
44	5	154	U
44	5	155	G
44	5	156	G
44	5	157	A
44	5	158	G
44	5	159	A
44	5	160	G
44	5	161	G
44	5	162	G
44	5	163	C
44	5	164	A
44	5	166	C
44	5	168	U
44	5	169	U
44	5	170	G
44	5	172	G
44	5	173	G
44	5	174	C
44	5	175	C
44	5	176	G
44	5	177	U
44	5	178	U
44	5	182	U
44	5	183	G

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Mol	Chain	Res	Type
44	5	185	C
44	5	187	A
44	5	188	U
44	5	189	G
44	5	190	U
44	5	191	U
44	5	192	C
44	5	193	C
44	5	194	U
44	5	196	G
44	5	199	A
44	5	200	C
44	5	203	G
44	5	204	A
44	5	206	G
44	5	209	A
44	5	210	U
44	5	211	A
44	5	212	G
44	5	213	A
44	5	215	G
44	5	216	G
44	5	217	U
44	5	218	G
44	5	219	A
44	5	220	G
44	5	221	A
44	5	222	A
44	5	224	C
44	5	227	G
44	5	228	U
44	5	229	G
44	5	230	U
44	5	234	G
44	5	236	G
44	5	237	G
44	5	238	A
44	5	240	U
44	5	241	G
44	5	242	C
44	5	243	G
44	5	244	G

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Mol	Chain	Res	Type
44	5	247	C
44	5	248	U
44	5	249	U
44	5	251	G
44	5	252	U
44	5	256	G
44	5	257	U
44	5	258	G
44	5	259	C
44	5	260	C
44	5	261	U
44	5	263	C
44	5	264	G
44	5	265	A
44	5	266	A
44	5	267	G
44	5	268	A
44	5	269	G
44	5	273	A
44	5	274	G
44	5	283	G
44	5	284	A
44	5	286	U
44	5	295	A
44	5	305	U
44	5	306	A
44	5	307	A
44	5	309	U
44	5	311	C
44	5	316	U
44	5	319	A
44	5	322	U
44	5	324	A
44	5	325	A
44	5	329	U
44	5	330	G
44	5	331	G
44	5	332	C
44	5	333	G
44	5	334	A
44	5	335	G
44	5	336	A

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Mol	Chain	Res	Type
44	5	337	G
44	5	338	A
44	5	339	C
44	5	341	G
44	5	342	A
44	5	348	A
44	5	349	A
44	5	350	C
44	5	351	A
44	5	352	A
44	5	354	U
44	5	361	A
44	5	362	U
44	5	368	G
44	5	369	A
44	5	370	U
44	5	374	A
44	5	375	A
44	5	376	G
44	5	380	U
44	5	387	A
44	5	388	G
44	5	390	G
44	5	397	A
44	5	398	A
44	5	401	U
44	5	402	A
44	5	403	C
44	5	404	G
44	5	407	A
44	5	408	A
44	5	411	U
44	5	412	G
44	5	413	U
44	5	415	G
44	5	420	G
44	5	421	G
44	5	422	A
44	5	426	G
44	5	430	U
44	5	439	C
44	5	440	A

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Mol	Chain	Res	Type
44	5	441	U
44	5	442	G
44	5	446	U
44	5	447	U
44	5	489	U
44	5	490	C
44	5	492	C
44	5	493	U
44	5	494	G
44	5	495	G
44	5	497	C
44	5	498	A
44	5	503	C
44	5	504	A
44	5	510	G
44	5	515	C
44	5	516	A
44	5	517	G
44	5	518	G
44	5	519	A
44	5	520	U
44	5	521	A
44	5	523	A
44	5	533	A
44	5	534	U
44	5	535	G
44	5	536	U
44	5	537	A
44	5	540	U
44	5	542	G
44	5	543	C
44	5	545	U
44	5	546	C
44	5	547	G
44	5	549	U
44	5	550	A
44	5	551	A
44	5	552	G
44	5	554	A
44	5	555	U
44	5	556	U
44	5	557	A

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Mol	Chain	Res	Type
44	5	558	U
44	5	559	A
44	5	565	U
44	5	569	A
44	5	578	A
44	5	579	G
44	5	581	U
44	5	582	G
44	5	585	A
44	5	586	C
44	5	588	G
44	5	589	A
44	5	594	U
44	5	595	G
44	5	597	G
44	5	607	A
44	5	608	A
44	5	609	G
44	5	610	G
44	5	611	A
44	5	612	U
44	5	614	C
44	5	616	G
44	5	620	U
44	5	621	A
44	5	623	U
44	5	625	G
44	5	632	G
44	5	636	C
44	5	637	C
44	5	638	C
44	5	643	U
44	5	645	A
44	5	646	A
44	5	649	A
44	5	651	G
44	5	653	A
44	5	656	A
44	5	657	A
44	5	661	G
44	5	665	A
44	5	666	A

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Mol	Chain	Res	Type
44	5	674	G
44	5	675	C
44	5	677	A
44	5	679	U
44	5	681	U
44	5	682	U
44	5	690	A
44	5	691	A
44	5	692	A
44	5	696	C
44	5	699	A
44	5	700	C
44	5	705	A
44	5	712	G
44	5	715	A
44	5	716	A
44	5	719	U
44	5	720	A
44	5	721	G
44	5	724	U
44	5	725	G
44	5	726	G
44	5	730	C
44	5	731	U
44	5	737	G
44	5	738	A
44	5	739	G
44	5	740	G
44	5	742	G
44	5	743	C
44	5	747	A
44	5	750	G
44	5	751	A
44	5	752	C
44	5	753	C
44	5	761	A
44	5	762	U
44	5	763	G
44	5	765	C
44	5	766	U
44	5	767	U
44	5	770	G

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Mol	Chain	Res	Type
44	5	771	A
44	5	774	G
44	5	776	U
44	5	777	U
44	5	779	G
44	5	780	A
44	5	781	G
44	5	785	G
44	5	786	A
44	5	790	U
44	5	793	C
44	5	795	G
44	5	799	G
44	5	801	A
44	5	806	A
44	5	811	U
44	5	812	G
44	5	813	G
44	5	816	A
44	5	817	A
44	5	818	C
44	5	826	G
44	5	830	A
44	5	832	G
44	5	835	G
44	5	836	A
44	5	837	A
44	5	838	G
44	5	839	C
44	5	844	G
44	5	849	C
44	5	850	U
44	5	851	C
44	5	852	U
44	5	854	G
44	5	856	G
44	5	857	G
44	5	860	G
44	5	861	C
44	5	866	A
44	5	868	C
44	5	874	U

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Mol	Chain	Res	Type
44	5	875	G
44	5	876	A
44	5	879	U
44	5	880	G
44	5	884	A
44	5	896	A
44	5	897	U
44	5	901	G
44	5	904	A
44	5	907	G
44	5	908	G
44	5	910	G
44	5	913	A
44	5	914	A
44	5	916	G
44	5	917	A
44	5	920	A
44	5	921	A
44	5	923	C
44	5	924	G
44	5	925	A
44	5	926	A
44	5	932	U
44	5	935	U
44	5	937	G
44	5	938	C
44	5	939	U
44	5	943	U
44	5	944	C
44	5	955	U
44	5	956	U
44	5	959	C
44	5	960	U
44	5	962	A
44	5	963	G
44	5	964	G
44	5	969	C
44	5	974	G
44	5	979	U
44	5	981	U
44	5	984	G
44	5	985	U

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Mol	Chain	Res	Type
44	5	990	U
44	5	991	G
44	5	993	G
44	5	995	U
44	5	999	G
44	5	1000	C
44	5	1001	G
44	5	1002	A
44	5	1003	A
44	5	1004	U
44	5	1010	G
44	5	1012	G
44	5	1013	G
44	5	1014	U
44	5	1015	U
44	5	1016	C
44	5	1017	C
44	5	1020	G
44	5	1024	G
44	5	1025	A
44	5	1027	A
44	5	1028	U
44	5	1029	G
44	5	1032	C
44	5	1034	U
44	5	1035	G
44	5	1036	A
44	5	1037	C
44	5	1041	U
44	5	1044	U
44	5	1045	C
44	5	1047	A
44	5	1049	C
44	5	1057	A
44	5	1058	U
44	5	1062	A
44	5	1063	G
44	5	1064	A
44	5	1065	A
44	5	1066	G
44	5	1069	C
44	5	1070	U

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Mol	Chain	Res	Type
44	5	1071	U
44	5	1072	G
44	5	1074	U
44	5	1075	A
44	5	1081	U
44	5	1087	G
44	5	1088	U
44	5	1089	G
44	5	1094	U
44	5	1095	U
44	5	1096	U
44	5	1097	G
44	5	1098	A
44	5	1103	A
44	5	1104	G
44	5	1105	A
44	5	1109	U
44	5	1110	U
44	5	1113	G
44	5	1114	U
44	5	1115	G
44	5	1117	G
44	5	1118	C
44	5	1126	G
44	5	1128	U
44	5	1131	G
44	5	1135	A
44	5	1137	C
44	5	1140	G
44	5	1143	A
44	5	1144	U
44	5	1148	G
44	5	1151	U
44	5	1152	G
44	5	1154	A
44	5	1156	C
44	5	1159	A
44	5	1160	C
44	5	1161	G
44	5	1163	A
44	5	1165	A
44	5	1172	G

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Mol	Chain	Res	Type
44	5	1173	U
44	5	1174	G
44	5	1175	C
44	5	1177	G
44	5	1178	G
44	5	1179	A
44	5	1180	A
44	5	1181	U
44	5	1182	A
44	5	1189	C
44	5	1190	A
44	5	1191	U
44	5	1195	A
44	5	1196	C
44	5	1197	A
44	5	1198	C
44	5	1199	C
44	5	1201	C
44	5	1206	G
44	5	1208	U
44	5	1210	U
44	5	1214	U
44	5	1218	U
44	5	1219	C
44	5	1220	U
44	5	1221	A
44	5	1222	G
44	5	1223	A
44	5	1225	A
44	5	1229	G
44	5	1230	G
44	5	1232	C
44	5	1233	G
44	5	1235	U
44	5	1236	G
44	5	1237	G
44	5	1238	C
44	5	1239	C
44	5	1241	U
44	5	1243	G
44	5	1244	A
44	5	1245	A

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Mol	Chain	Res	Type
44	5	1246	G
44	5	1248	C
44	5	1252	A
44	5	1253	U
44	5	1256	G
44	5	1257	C
44	5	1258	U
44	5	1259	A
44	5	1260	A
44	5	1262	G
44	5	1263	A
44	5	1264	G
44	5	1265	U
44	5	1269	U
44	5	1271	A
44	5	1272	C
44	5	1280	C
44	5	1281	G
44	5	1282	G
44	5	1284	C
44	5	1285	G
44	5	1286	A
44	5	1288	U
44	5	1292	C
44	5	1293	U
44	5	1294	A
44	5	1295	G
44	5	1297	C
44	5	1301	A
44	5	1302	A
44	5	1303	A
44	5	1305	U
44	5	1308	A
44	5	1309	U
44	5	1312	C
44	5	1316	C
44	5	1317	A
44	5	1319	G
44	5	1324	U
44	5	1330	A
44	5	1334	U
44	5	1335	C

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Mol	Chain	Res	Type
44	5	1341	U
44	5	1346	G
44	5	1348	U
44	5	1350	A
44	5	1351	U
44	5	1352	A
44	5	1354	G
44	5	1355	A
44	5	1357	G
44	5	1358	C
44	5	1359	C
44	5	1365	G
44	5	1366	A
44	5	1370	G
44	5	1383	G
44	5	1386	A
44	5	1387	G
44	5	1390	A
44	5	1391	C
44	5	1392	G
44	5	1393	A
44	5	1399	A
44	5	1400	G
44	5	1404	G
44	5	1405	U
44	5	1406	A
44	5	1407	A
44	5	1408	G
44	5	1411	C
44	5	1413	G
44	5	1417	G
44	5	1418	A
44	5	1419	A
44	5	1423	C
44	5	1425	U
44	5	1428	A
44	5	1429	G
44	5	1430	U
44	5	1431	G
44	5	1432	C
44	5	1434	G
44	5	1435	A

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Mol	Chain	Res	Type
44	5	1436	U
44	5	1437	C
44	5	1440	G
44	5	1441	G
44	5	1446	A
44	5	1448	U
44	5	1450	G
44	5	1452	A
44	5	1455	U
44	5	1458	U
44	5	1460	A
44	5	1461	A
44	5	1463	U
44	5	1466	G
44	5	1467	A
44	5	1469	C
44	5	1470	U
44	5	1473	G
44	5	1476	G
44	5	1480	G
44	5	1481	A
44	5	1482	A
44	5	1485	G
44	5	1487	G
44	5	1489	A
44	5	1492	G
44	5	1497	C
44	5	1498	A
44	5	1499	C
44	5	1500	G
44	5	1501	U
44	5	1502	C
44	5	1504	A
44	5	1508	C
44	5	1511	U
44	5	1513	G
44	5	1514	G
44	5	1515	A
44	5	1516	C
44	5	1518	U
44	5	1523	U
44	5	1524	A

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Mol	Chain	Res	Type
44	5	1527	C
44	5	1528	G
44	5	1536	G
44	5	1542	G
44	5	1543	G
44	5	1544	G
44	5	1549	U
44	5	1550	C
44	5	1551	C
44	5	1552	G
44	5	1553	U
44	5	1555	U
44	5	1556	C
44	5	1557	A
44	5	1558	A
44	5	1559	A
44	5	1561	G
44	5	1562	C
44	5	1563	C
44	5	1567	U
44	5	1568	U
44	5	1569	U
44	5	1570	U
44	5	1572	U
44	5	1574	C
44	5	1578	C
44	5	1580	A
44	5	1581	C
44	5	1583	A
44	5	1585	C
44	5	1589	A
44	5	1592	G
44	5	1593	A
44	5	1594	A
44	5	1598	G
44	5	1601	U
44	5	1602	A
44	5	1604	G
44	5	1605	A
44	5	1606	U
44	5	1608	C
44	5	1618	G

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Mol	Chain	Res	Type
44	5	1619	A
44	5	1621	A
44	5	1622	U
44	5	1623	G
44	5	1626	U
44	5	1627	U
44	5	1629	U
44	5	1630	U
44	5	1631	C
44	5	1632	A
44	5	1633	C
44	5	1634	G
44	5	1638	A
44	5	1639	C
44	5	1640	G
44	5	1641	U
44	5	1642	A
44	5	1643	A
44	5	1644	C
44	5	1645	U
44	5	1647	A
44	5	1648	A
44	5	1650	G
44	5	1651	U
44	5	1653	G
44	5	1657	C
44	5	1663	C
44	5	1666	G
44	5	1667	A
44	5	1675	G
44	5	1676	A
44	5	1677	G
44	5	1680	G
44	5	1683	A
44	5	1687	U
44	5	1688	U
44	5	1690	C
44	5	1692	U
44	5	1693	C
44	5	1694	U
44	5	1696	A
44	5	1697	A

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Mol	Chain	Res	Type
44	5	1700	G
44	5	1701	C
44	5	1702	U
44	5	1705	U
44	5	1708	C
44	5	1709	C
44	5	1710	C
44	5	1711	C
44	5	1713	G
44	5	1714	A
44	5	1715	A
44	5	1717	U
44	5	1724	U
44	5	1725	C
44	5	1729	A
44	5	1730	G
44	5	1731	A
44	5	1734	G
44	5	1735	G
44	5	1736	G
44	5	1737	U
44	5	1741	A
44	5	1745	C
44	5	1746	U
44	5	1747	G
44	5	1749	A
44	5	1750	A
44	5	1751	G
44	5	1752	A
44	5	1753	G
44	5	1755	C
44	5	1756	C
44	5	1757	A
44	5	1759	C
44	5	1760	A
44	5	1761	C
44	5	1763	U
44	5	1764	U
44	5	1765	U
44	5	1768	U
44	5	1769	G
44	5	1770	G

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Mol	Chain	Res	Type
44	5	1771	C
44	5	1773	C
44	5	1775	G
44	5	1777	U
44	5	1778	G
44	5	1780	G
44	5	1784	G
44	5	1787	A
44	5	1789	G
44	5	1791	C
44	5	1792	C
44	5	1793	C
44	5	1795	U
44	5	1797	A
44	5	1803	C
44	5	1804	A
44	5	1805	C
44	5	1806	A
44	5	1807	G
44	5	1808	G
44	5	1809	A
44	5	1812	G
44	5	1813	A
44	5	1814	A
44	5	1815	U
44	5	1816	A
44	5	1817	G
44	5	1819	U
44	5	1820	U
44	5	1821	U
44	5	1822	C
44	5	1824	U
44	5	1825	G
44	5	1826	C
44	5	1829	G
44	5	1830	G
44	5	1835	A
44	5	1839	A
44	5	1841	A
44	5	1842	A
44	5	1846	C
44	5	1847	A

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Mol	Chain	Res	Type
44	5	1848	G
44	5	1849	C
44	5	1850	A
44	5	1851	G
44	5	1857	C
44	5	1858	A
44	5	1859	A
44	5	1866	C
44	5	1868	G
44	5	1869	C
44	5	1873	U
44	5	1874	A
44	5	1875	G
44	5	1877	U
44	5	1878	G
44	5	1879	A
44	5	1880	U
44	5	1881	A
44	5	1882	G
44	5	1884	A
44	5	1886	A
44	5	1890	U
44	5	1893	A
44	5	1894	U
44	5	1895	A
44	5	1896	A
44	5	1897	G
44	5	1899	G
44	5	1900	A
44	5	1901	A
44	5	1906	G
44	5	1912	U
44	5	1925	U
44	5	1926	C
44	5	1927	G
44	5	1930	A
44	5	1931	U
44	5	1932	A
44	5	1935	G
44	5	1939	G
44	5	1948	G
44	5	1950	U

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Mol	Chain	Res	Type
44	5	1952	G
44	5	1953	G
44	5	1954	G
44	5	1955	U
44	5	1956	A
44	5	1957	G
44	5	1958	U
44	5	1959	G
44	5	1960	A
44	5	1961	G
44	5	1962	G
44	5	2077	U
44	5	2079	G
44	5	2081	U
44	5	2082	U
44	5	2083	G
44	5	2086	A
44	5	2088	A
44	5	2094	C
44	5	2095	G
44	5	2096	A
44	5	2098	C
44	5	2100	A
44	5	2101	C
44	5	2102	U
44	5	2105	G
44	5	2106	A
44	5	2107	A
44	5	2109	U
44	5	2110	G
44	5	2111	G
44	5	2112	U
44	5	2113	A
44	5	2114	C
44	5	2115	G
44	5	2116	G
44	5	2119	A
44	5	2121	G
44	5	2122	G
44	5	2131	A
44	5	2132	C
44	5	2134	G

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Mol	Chain	Res	Type
44	5	2138	A
44	5	2139	A
44	5	2142	A
44	5	2144	A
44	5	2145	A
44	5	2153	U
44	5	2154	U
44	5	2158	A
44	5	2159	U
44	5	2160	G
44	5	2162	U
44	5	2164	A
44	5	2169	G
44	5	2175	U
44	5	2176	U
44	5	2177	G
44	5	2178	A
44	5	2184	U
44	5	2186	U
44	5	2187	G
44	5	2188	A
44	5	2198	A
44	5	2201	G
44	5	2202	C
44	5	2205	U
44	5	2206	G
44	5	2208	A
44	5	2209	U
44	5	2210	G
44	5	2222	A
44	5	2223	A
44	5	2232	A
44	5	2239	G
44	5	2243	A
44	5	2244	A
44	5	2245	C
44	5	2246	G
44	5	2255	A
44	5	2256	A
44	5	2260	U
44	5	2264	U
44	5	2273	G

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Mol	Chain	Res	Type
44	5	2280	A
44	5	2281	A
44	5	2282	U
44	5	2284	C
44	5	2287	C
44	5	2288	G
44	5	2289	U
44	5	2290	C
44	5	2291	A
44	5	2292	U
44	5	2293	C
44	5	2297	U
44	5	2298	U
44	5	2301	U
44	5	2303	A
44	5	2304	C
44	5	2305	G
44	5	2306	C
44	5	2307	G
44	5	2308	C
44	5	2310	U
44	5	2312	A
44	5	2313	A
44	5	2314	U
44	5	2315	G
44	5	2319	U
44	5	2325	G
44	5	2332	A
44	5	2335	G
44	5	2336	U
44	5	2339	C
44	5	2347	U
44	5	2352	A
44	5	2361	A
44	5	2365	C
44	5	2367	A
44	5	2372	A
44	5	2373	A
44	5	2374	C
44	5	2375	G
44	5	2376	G
44	5	2385	G

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Mol	Chain	Res	Type
44	5	2386	A
44	5	2393	G
44	5	2394	G
44	5	2395	G
44	5	2396	G
44	5	2397	A
44	5	2398	A
44	5	2400	G
44	5	2401	A
44	5	2402	A
44	5	2403	G
44	5	2404	A
44	5	2406	C
44	5	2411	U
44	5	2418	G
44	5	2419	A
44	5	2420	C
44	5	2430	A
44	5	2432	A
44	5	2433	U
44	5	2434	U
44	5	2437	G
44	5	2440	G
44	5	2441	A
44	5	2443	A
44	5	2447	A
44	5	2452	G
44	5	2453	U
44	5	2454	G
44	5	2457	G
44	5	2458	A
44	5	2459	A
44	5	2460	U
44	5	2461	A
44	5	2462	A
44	5	2463	G
44	5	2464	U
44	5	2465	G
44	5	2468	A
44	5	2469	G
44	5	2470	C
44	5	2471	U

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Mol	Chain	Res	Type
44	5	2473	C
44	5	2474	G
44	5	2475	G
44	5	2476	C
44	5	2477	G
44	5	2479	C
44	5	2480	A
44	5	2482	U
44	5	2485	A
44	5	2486	A
44	5	2487	U
44	5	2488	A
44	5	2489	C
44	5	2490	C
44	5	2491	A
44	5	2492	C
44	5	2493	U
44	5	2494	A
44	5	2496	C
44	5	2498	U
44	5	2499	U
44	5	2501	U
44	5	2503	G
44	5	2504	U
44	5	2506	U
44	5	2507	C
44	5	2508	U
44	5	2509	U
44	5	2510	U
44	5	2513	U
44	5	2516	U
44	5	2517	U
44	5	2518	C
44	5	2520	A
44	5	2521	U
44	5	2522	G
44	5	2523	A
44	5	2524	A
44	5	2526	C
44	5	2533	G
44	5	2534	G
44	5	2535	A

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Mol	Chain	Res	Type
44	5	2537	U
44	5	2538	U
44	5	2539	C
44	5	2540	A
44	5	2541	U
44	5	2542	U
44	5	2543	U
44	5	2547	A
44	5	2549	G
44	5	2550	U
44	5	2552	C
44	5	2553	U
44	5	2554	A
44	5	2558	U
44	5	2561	A
44	5	2562	A
44	5	2563	G
44	5	2566	C
44	5	2568	C
44	5	2569	A
44	5	2571	U
44	5	2572	C
44	5	2573	G
44	5	2576	G
44	5	2581	U
44	5	2582	C
44	5	2583	C
44	5	2584	G
44	5	2585	G
44	5	2586	G
44	5	2590	A
44	5	2591	A
44	5	2593	A
44	5	2595	A
44	5	2596	U
44	5	2606	G
44	5	2607	G
44	5	2608	G
44	5	2610	G
44	5	2614	G
44	5	2616	C
44	5	2619	G

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Mol	Chain	Res	Type
44	5	2621	G
44	5	2622	C
44	5	2623	G
44	5	2624	G
44	5	2626	A
44	5	2627	C
44	5	2628	A
44	5	2630	C
44	5	2637	A
44	5	2640	A
44	5	2643	A
44	5	2645	G
44	5	2651	G
44	5	2652	U
44	5	2656	A
44	5	2662	G
44	5	2672	G
44	5	2674	A
44	5	2676	A
44	5	2677	G
44	5	2678	A
44	5	2679	A
44	5	2681	U
44	5	2682	C
44	5	2688	U
44	5	2689	A
44	5	2690	G
44	5	2694	A
44	5	2695	A
44	5	2696	A
44	5	2699	G
44	5	2700	G
44	5	2702	A
44	5	2704	A
44	5	2706	G
44	5	2711	C
44	5	2712	U
44	5	2713	U
44	5	2714	G
44	5	2727	A
44	5	2728	G
44	5	2729	U

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Mol	Chain	Res	Type
44	5	2736	A
44	5	2737	C
44	5	2740	A
44	5	2741	C
44	5	2743	A
44	5	2744	U
44	5	2749	G
44	5	2752	U
44	5	2753	G
44	5	2755	C
44	5	2760	C
44	5	2761	G
44	5	2762	A
44	5	2772	C
44	5	2773	C
44	5	2777	G
44	5	2778	G
44	5	2780	A
44	5	2781	U
44	5	2783	U
44	5	2786	G
44	5	2792	A
44	5	2794	G
44	5	2795	U
44	5	2796	G
44	5	2797	C
44	5	2799	A
44	5	2800	G
44	5	2801	A
44	5	2803	A
44	5	2804	A
44	5	2806	U
44	5	2810	C
44	5	2813	A
44	5	2817	A
44	5	2828	G
44	5	2834	G
44	5	2838	A
44	5	2840	C
44	5	2844	C
44	5	2845	A
44	5	2847	A

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Mol	Chain	Res	Type
44	5	2849	C
44	5	2854	U
44	5	2859	U
44	5	2860	U
44	5	2861	U
44	5	2863	G
44	5	2864	A
44	5	2866	U
44	5	2867	C
44	5	2871	G
44	5	2872	A
44	5	2873	U
44	5	2874	G
44	5	2879	C
44	5	2880	U
44	5	2881	C
44	5	2885	C
44	5	2886	U
44	5	2887	A
44	5	2888	U
44	5	2895	G
44	5	2896	A
44	5	2899	C
44	5	2900	A
44	5	2906	C
44	5	2910	A
44	5	2913	C
44	5	2916	U
44	5	2922	G
44	5	2923	U
44	5	2927	C
44	5	2929	C
44	5	2932	U
44	5	2933	A
44	5	2934	A
44	5	2935	U
44	5	2936	A
44	5	2941	A
44	5	2942	C
44	5	2943	G
44	5	2945	G
44	5	2946	A

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Mol	Chain	Res	Type
44	5	2952	G
44	5	2954	U
44	5	2955	U
44	5	2967	A
44	5	2971	A
44	5	2972	G
44	5	2973	G
44	5	2974	U
44	5	2977	G
44	5	2979	U
44	5	2980	U
44	5	2983	C
44	5	2984	C
44	5	2988	C
44	5	2992	U
44	5	2996	U
44	5	2997	G
44	5	3011	A
44	5	3012	A
44	5	3017	A
44	5	3020	U
44	5	3021	A
44	5	3022	G
44	5	3023	U
44	5	3026	G
44	5	3030	G
44	5	3033	A
44	5	3034	C
44	5	3036	G
44	5	3042	U
44	5	3049	A
44	5	3054	U
44	5	3055	U
44	5	3056	U
44	5	3059	G
44	5	3069	G
44	5	3074	G
44	5	3076	C
44	5	3078	U
44	5	3079	U
44	5	3080	G
44	5	3081	C

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Mol	Chain	Res	Type
44	5	3085	G
44	5	3086	A
44	5	3091	A
44	5	3092	C
44	5	3093	C
44	5	3094	A
44	5	3096	C
44	5	3097	C
44	5	3099	C
44	5	3101	G
44	5	3109	G
44	5	3116	G
44	5	3118	C
44	5	3119	U
44	5	3122	A
44	5	3124	G
44	5	3125	U
44	5	3128	G
44	5	3130	A
44	5	3131	U
44	5	3141	A
44	5	3142	A
44	5	3143	C
44	5	3144	G
44	5	3148	U
44	5	3149	G
44	5	3150	A
44	5	3151	U
44	5	3152	U
44	5	3154	C
44	5	3155	U
44	5	3156	U
44	5	3157	U
44	5	3159	C
44	5	3162	C
44	5	3164	C
44	5	3165	A
44	5	3167	A
44	5	3170	A
44	5	3173	G
44	5	3174	A
44	5	3176	G

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Mol	Chain	Res	Type
44	5	3179	U
44	5	3180	A
44	5	3181	C
44	5	3186	A
44	5	3187	A
44	5	3190	C
44	5	3192	U
44	5	3193	C
44	5	3195	U
44	5	3196	U
44	5	3197	G
44	5	3198	U
44	5	3199	G
44	5	3202	G
44	5	3203	U
44	5	3204	C
44	5	3205	G
44	5	3207	U
44	5	3208	G
44	5	3209	A
44	5	3210	A
44	5	3214	U
44	5	3215	A
44	5	3216	G
44	5	3217	C
44	5	3218	A
44	5	3219	G
44	5	3220	G
44	5	3221	C
44	5	3222	U
44	5	3223	A
44	5	3224	G
44	5	3227	A
44	5	3228	C
44	5	3229	G
44	5	3230	G
44	5	3233	C
44	5	3243	A
44	5	3244	A
44	5	3247	G
44	5	3250	U
44	5	3258	U

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Mol	Chain	Res	Type
44	5	3259	U
44	5	3260	G
44	5	3263	G
44	5	3265	C
44	5	3266	G
44	5	3267	A
44	5	3268	A
44	5	3269	U
44	5	3271	G
44	5	3272	C
44	5	3273	A
44	5	3274	A
44	5	3275	U
44	5	3276	G
44	5	3277	U
44	5	3278	C
44	5	3279	A
44	5	3281	U
44	5	3286	G
44	5	3287	U
44	5	3288	G
44	5	3289	G
44	5	3293	U
44	5	3294	A
44	5	3299	A
44	5	3303	G
44	5	3304	U
44	5	3305	A
44	5	3307	A
44	5	3308	C
44	5	3315	G
44	5	3316	A
44	5	3317	U
44	5	3319	U
44	5	3320	A
44	5	3323	A
44	5	3324	C
44	5	3325	G
44	5	3326	G
44	5	3330	A
44	5	3331	U
44	5	3333	G

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Mol	Chain	Res	Type
44	5	3334	U
44	5	3336	A
44	5	3342	A
44	5	3343	G
44	5	3347	A
44	5	3348	G
44	5	3351	U
44	5	3352	U
44	5	3354	U
44	5	3355	U
44	5	3360	C
44	5	3366	G
44	5	3368	U
44	5	3369	G
44	5	3371	G
44	5	3373	U
44	5	3375	A
44	5	3377	G
44	5	3378	C
44	5	3379	C
44	5	3382	U
44	5	3383	G
44	5	3384	U
44	5	3389	U
44	5	3390	G
44	5	3391	A
45	8	7	U
45	8	9	A
45	8	11	C
45	8	13	A
45	8	14	C
45	8	15	G
45	8	16	G
45	8	17	A
45	8	19	C
45	8	21	C
45	8	22	U
45	8	23	U
45	8	24	G
45	8	29	U
45	8	30	C
45	8	32	C

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Mol	Chain	Res	Type
45	8	34	U
45	8	35	C
45	8	37	A
45	8	38	U
45	8	40	A
45	8	45	C
45	8	49	G
45	8	51	G
45	8	52	A
45	8	53	A
45	8	59	A
45	8	60	U
45	8	61	A
45	8	62	C
45	8	63	G
45	8	65	A
45	8	66	A
45	8	67	U
45	8	69	U
45	8	71	A
45	8	73	U
45	8	75	G
45	8	79	A
45	8	80	A
45	8	81	U
45	8	82	U
45	8	83	C
45	8	84	C
45	8	85	G
45	8	86	U
45	8	87	G
45	8	88	A
45	8	90	U
45	8	91	C
45	8	93	U
45	8	95	G
45	8	96	A
45	8	100	U
45	8	101	U
45	8	104	A
45	8	105	A
45	8	106	C

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Mol	Chain	Res	Type
45	8	107	G
45	8	109	A
45	8	111	A
45	8	112	U
45	8	113	U
45	8	114	G
45	8	116	G
45	8	117	C
45	8	119	C
45	8	120	C
45	8	121	U
45	8	124	G
45	8	125	U
45	8	126	A
45	8	127	U
45	8	136	G
45	8	138	A
45	8	142	C
45	8	143	U
45	8	144	G
45	8	146	U
45	8	148	G
45	8	149	A
45	8	150	G
45	8	151	C
45	8	152	G
45	8	158	U
46	7	2	G
46	7	8	G
46	7	11	A
46	7	13	A
46	7	14	U
46	7	17	A
46	7	18	C
46	7	22	A
46	7	31	U
46	7	32	U
46	7	33	U
46	7	35	C
46	7	38	U
46	7	41	G
46	7	42	A

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Mol	Chain	Res	Type
46	7	46	A
46	7	47	C
46	7	51	A
46	7	52	G
46	7	54	U
46	7	55	A
46	7	64	A
46	7	65	G
46	7	69	C
46	7	74	C
46	7	76	A
46	7	78	U
46	7	79	A
46	7	82	G
46	7	85	G
46	7	86	U
46	7	88	G
46	7	93	C
46	7	96	U
46	7	99	G
46	7	102	A
46	7	112	G
46	7	115	G
46	7	116	C
46	7	120	C
46	7	121	U

All (32) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
44	5	11	A
44	5	12	A
44	5	14	U
44	5	62	A
44	5	117	U
44	5	121	A
44	5	150	A
44	5	187	A
44	5	441	U
44	5	555	U
44	5	588	G
44	5	637	C

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Mol	Chain	Res	Type
44	5	705	A
44	5	909	G
44	5	1154	A
44	5	1263	A
44	5	1307	G
44	5	1527	C
44	5	1625	A
44	5	1816	A
44	5	1958	U
44	5	2101	C
44	5	2209	U
44	5	2263	C
44	5	2279	A
44	5	2305	G
44	5	2392	C
44	5	2525	G
44	5	2541	U
44	5	3121	U
44	5	3228	C
44	5	3334	U

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues

The following chains have linkage breaks:

Mol	Chain	Number of breaks
44	5	9
24	W	4

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	5	2083:G	O3'	2084:C	P	19.95
1	W	217:SER	C	218:ARG	N	12.39
1	W	219:LYS	C	220:THR	N	9.79
1	W	229:GLY	C	230:ALA	N	9.10
1	5	2513:U	O3'	2514:U	P	8.49
1	5	2501:U	O3'	2502:A	P	7.73
1	5	2447:A	O3'	2448:G	P	6.97
1	5	2445:A	O3'	2446:U	P	6.77
1	W	228:THR	C	229:GLY	N	5.68
1	5	2435:G	O3'	2436:U	P	4.30
1	5	2246:G	O3'	2247:G	P	2.70
1	5	2279:A	O3'	2280:A	P	1.96
1	5	2263:C	O3'	2264:U	P	0.61

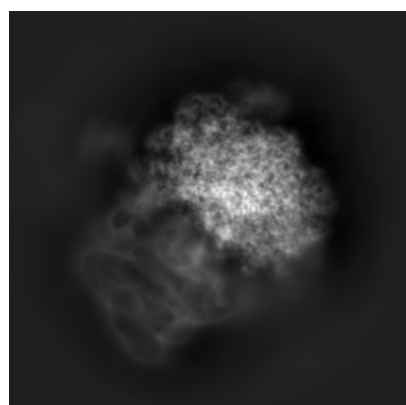
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-20077. These allow visual inspection of the internal detail of the map and identification of artifacts.

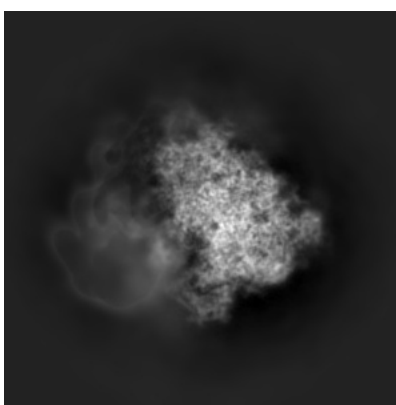
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

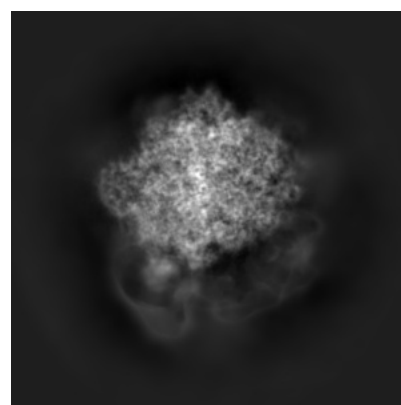
6.1.1 Primary map



X



Y

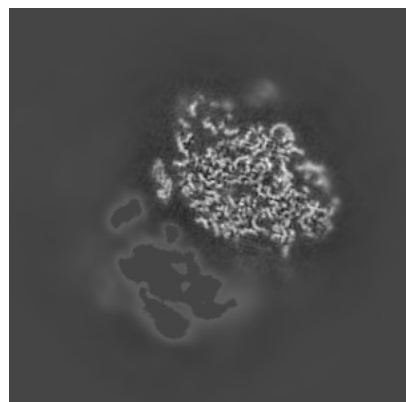


Z

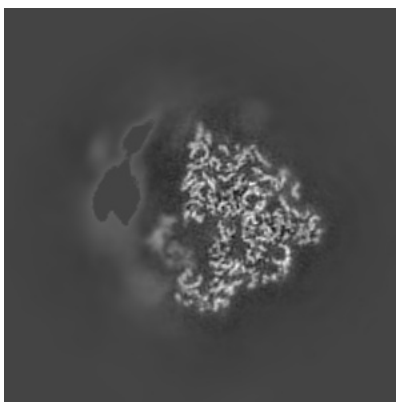
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

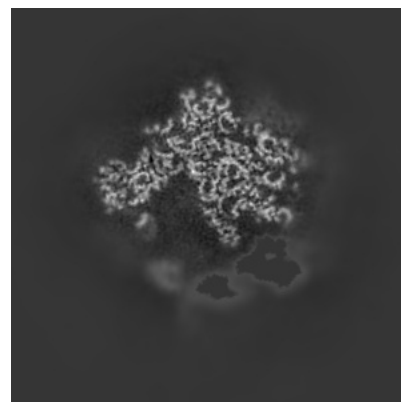
6.2.1 Primary map



X Index: 192



Y Index: 192

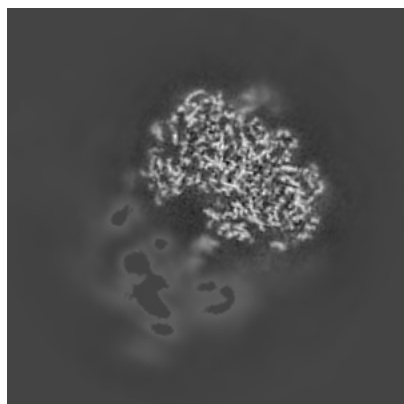


Z Index: 192

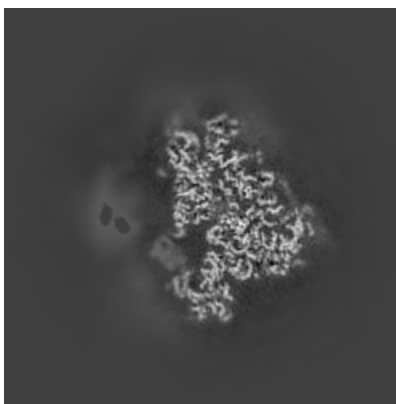
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

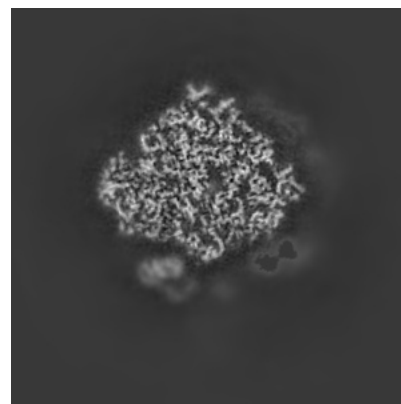
6.3.1 Primary map



X Index: 179



Y Index: 209

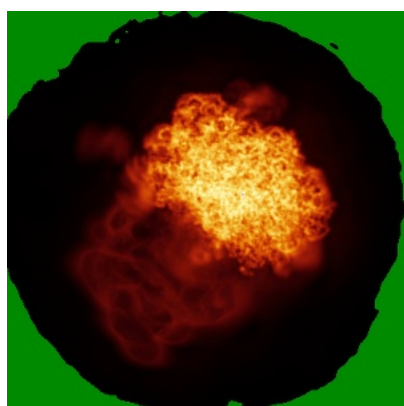


Z Index: 209

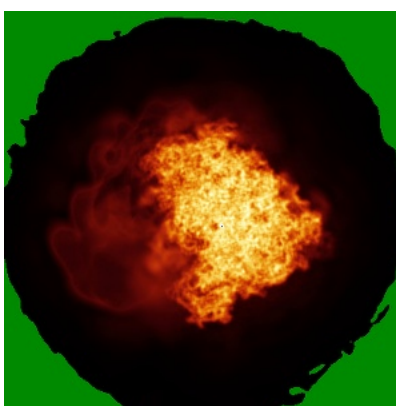
The images above show the largest variance slices of the map in three orthogonal directions.

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

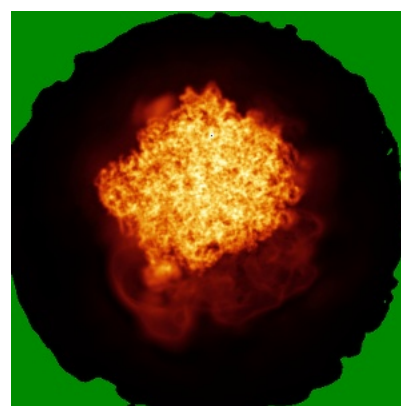
6.4.1 Primary map



X



Y

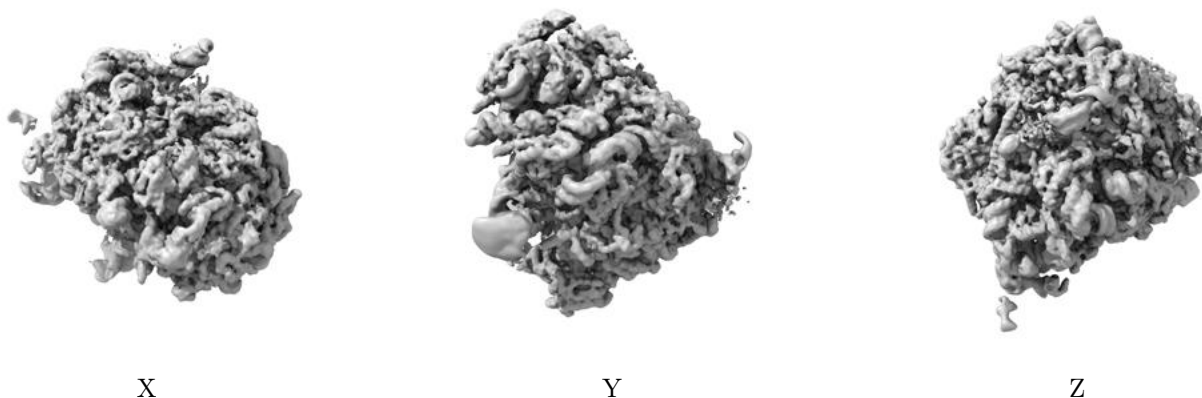


Z

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

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.03. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

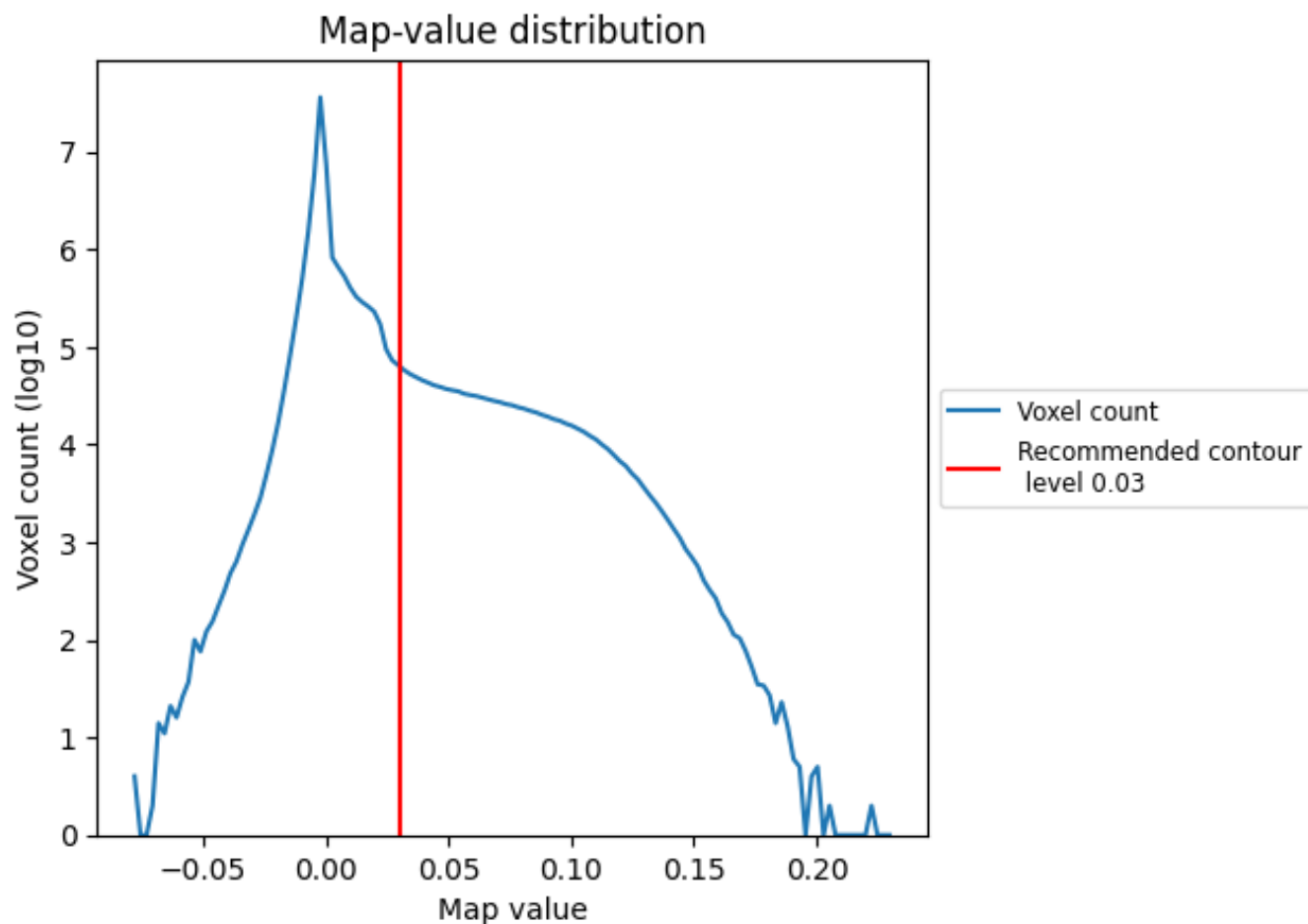
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

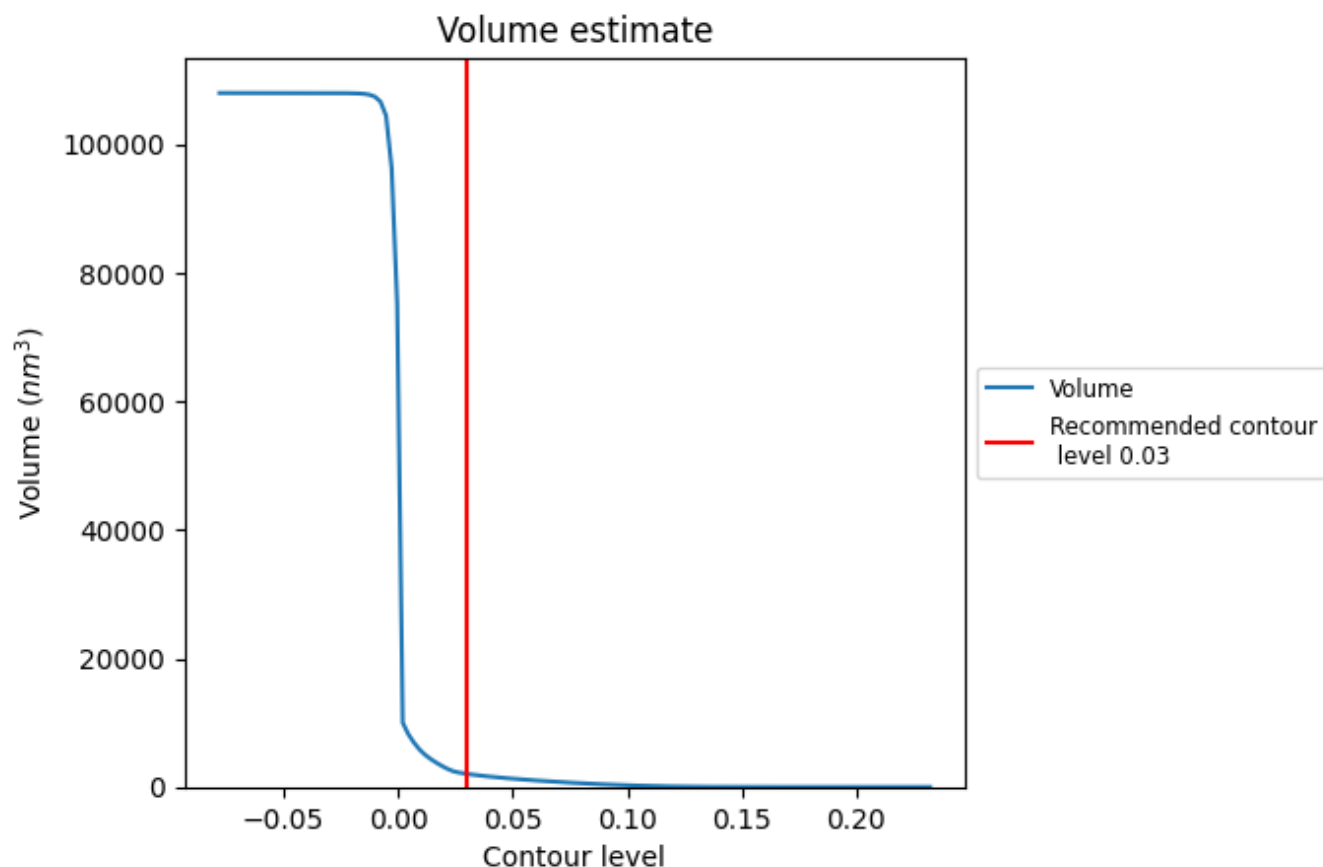
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

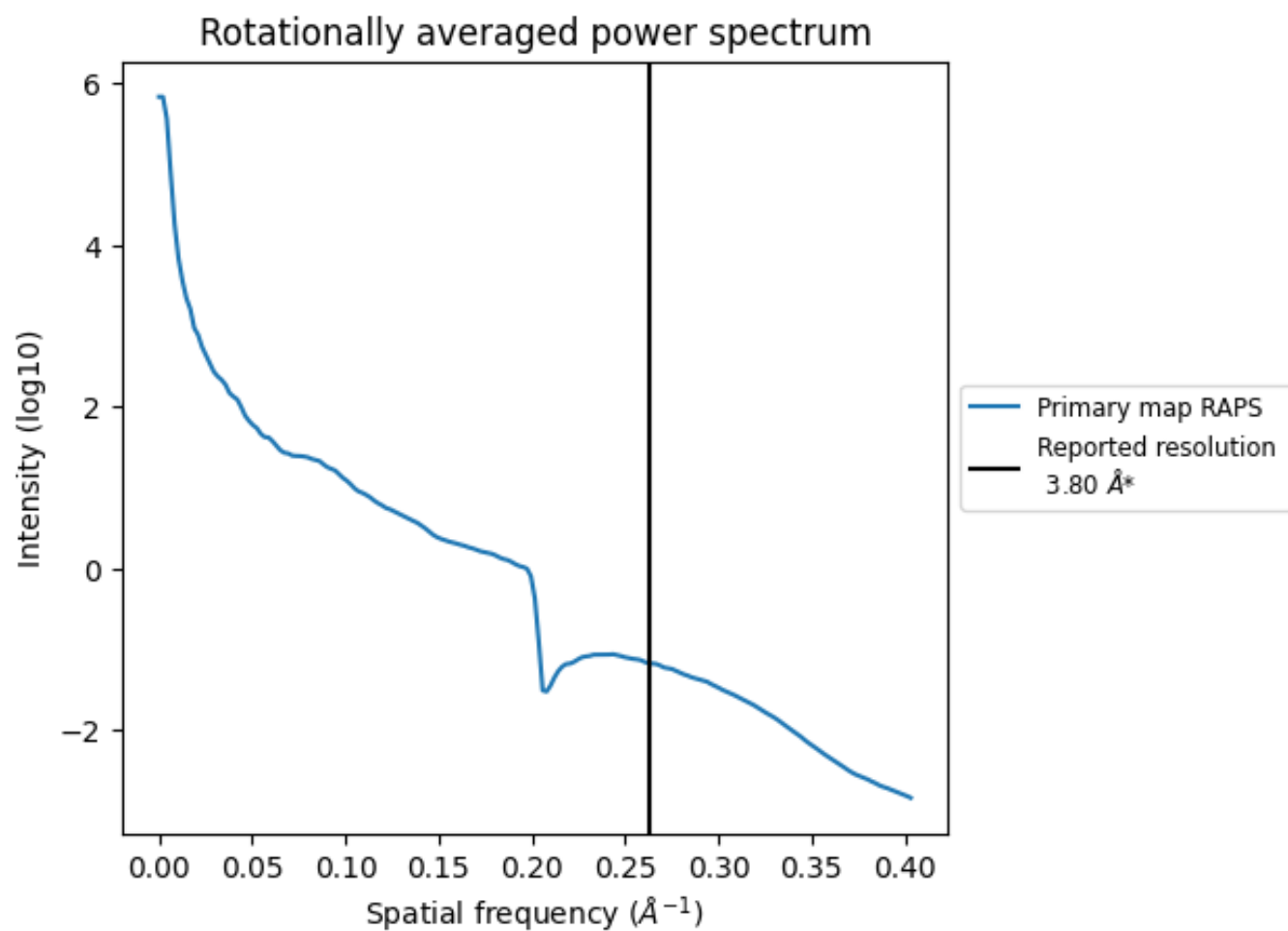
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 2037 nm^3 ; this corresponds to an approximate mass of 1840 kDa.

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

7.3 Rotationally averaged power spectrum ⓘ



*Reported resolution corresponds to spatial frequency of 0.263 Å⁻¹

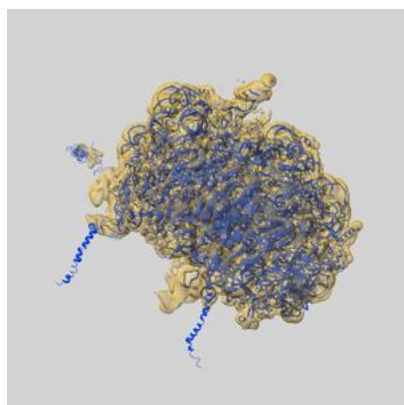
8 Fourier-Shell correlation

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

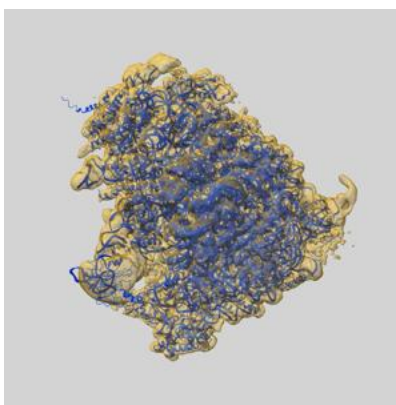
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-20077 and PDB model 6OIG. Per-residue inclusion information can be found in section [3](#) on page [12](#).

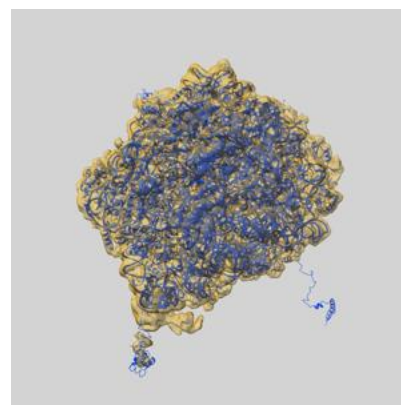
9.1 Map-model overlay [i](#)



X



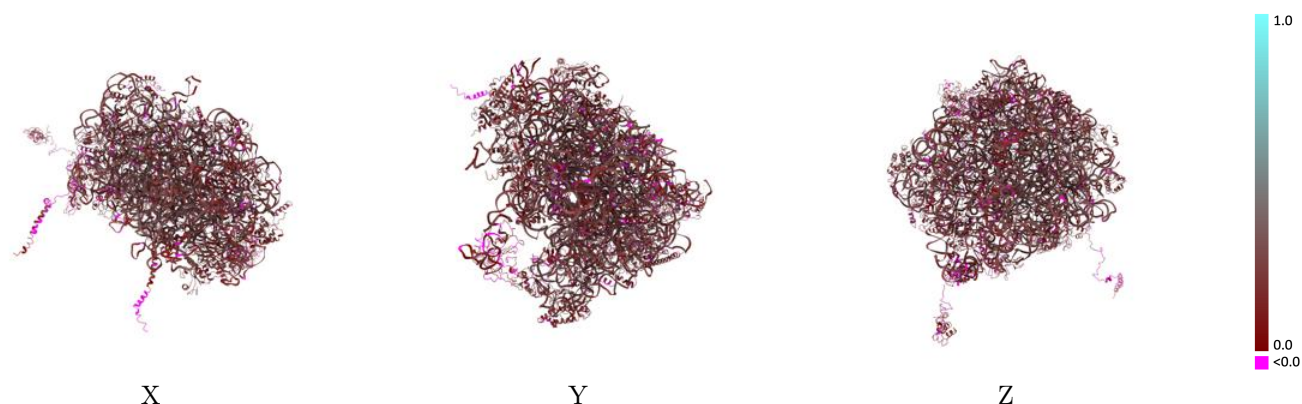
Y



Z

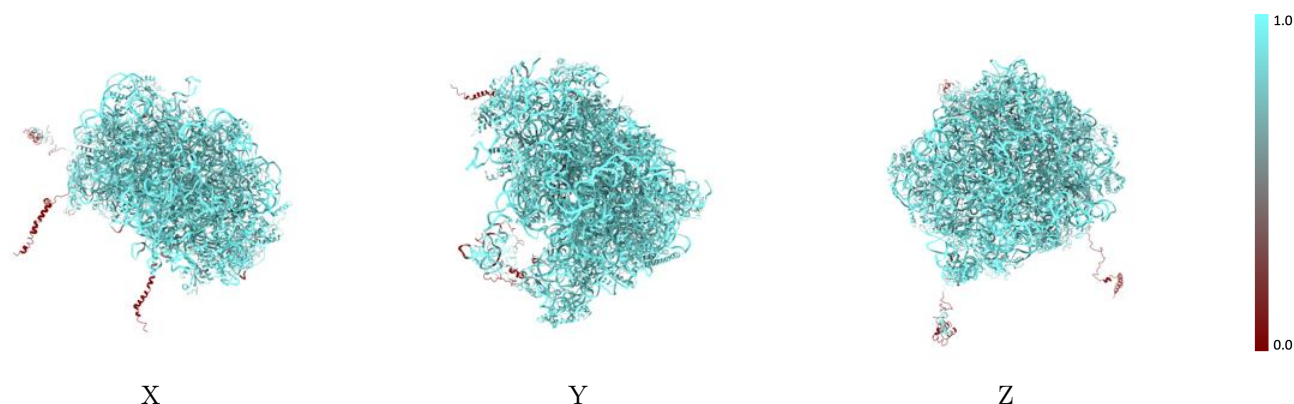
The images above show the 3D surface view of the map at the recommended contour level 0.03 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



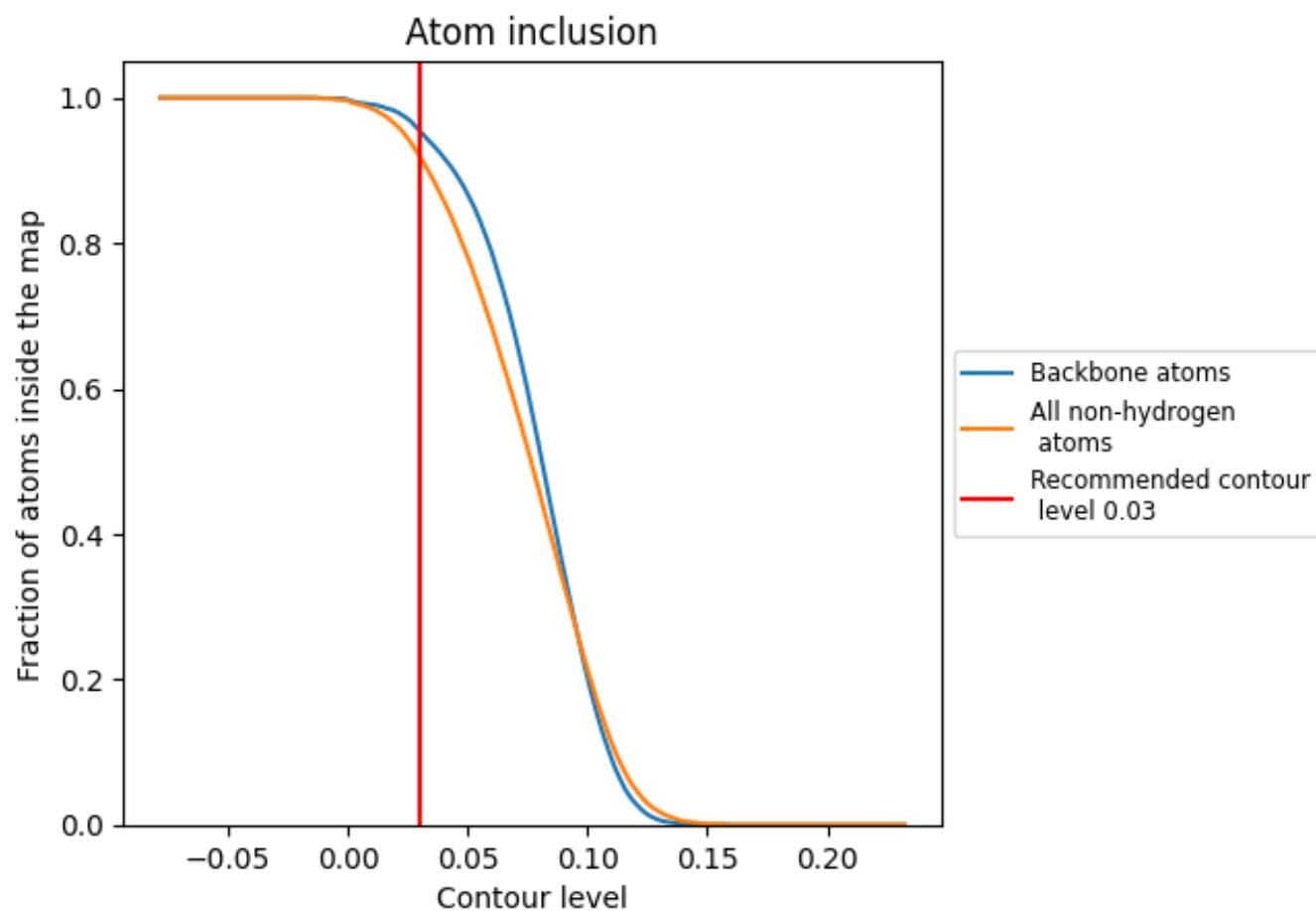
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.03).

9.4 Atom inclusion [i](#)



At the recommended contour level, 96% of all backbone atoms, 92% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.03) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9200	 0.2310
5	 0.9800	 0.2690
7	 0.9960	 0.2860
8	 0.9810	 0.2620
A	 0.8420	 0.2020
B	 0.8840	 0.2050
C	 0.8760	 0.1820
D	 0.8790	 0.1900
E	 0.8750	 0.1800
F	 0.8720	 0.2000
G	 0.8760	 0.2030
H	 0.8720	 0.1790
I	 0.8260	 0.1350
J	 0.8600	 0.1810
L	 0.8950	 0.1870
M	 0.8800	 0.1810
N	 0.6720	 0.0710
O	 0.8790	 0.2020
P	 0.8680	 0.1890
Q	 0.8710	 0.2090
R	 0.7120	 0.1660
S	 0.8790	 0.2100
T	 0.9010	 0.2100
U	 0.8750	 0.2240
V	 0.7970	 0.2140
W	 0.3950	 0.0920
X	 0.8300	 0.1850
Y	 0.8830	 0.1610
Z	 0.8780	 0.2180
a	 0.8790	 0.2060
b	 0.8210	 0.1460
c	 0.8660	 0.2460
d	 0.8480	 0.1830
e	 0.8290	 0.1620
f	 0.8670	 0.1840



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Chain	Atom inclusion	Q-score
g	 0.8580	 0.1910
h	 0.8750	 0.1740
i	 0.8740	 0.2150
j	 0.8810	 0.1430
k	 0.8570	 0.2030
l	 0.8370	 0.1750
m	 0.8740	 0.2340
o	 0.8350	 0.1790
p	 0.8600	 0.2020
q	 0.7010	 0.0560
s	 0.9010	 0.0890
x	 0.4720	 0.1690
y	 0.2520	 0.1190
z	 0.6650	 0.0620