



Full wwPDB EM Validation Report ⓘ

Mar 8, 2026 – 04:36 PM UTC

PDB ID : 8URI / pdb_00008uri
EMDB ID : EMD-42493
Title : Escherichia coli transcription-translation coupled complex class B (TTC-B) containing RfaH bound to ops signal, NusA, mRNA with a 27 nt long spacer, and fMet-tRNAs in E-site and P-site of the ribosome
Authors : Molodtsov, V.; Wang, C.; Ebright, R.H.
Deposited on : 2023-10-26
Resolution : 5.30 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

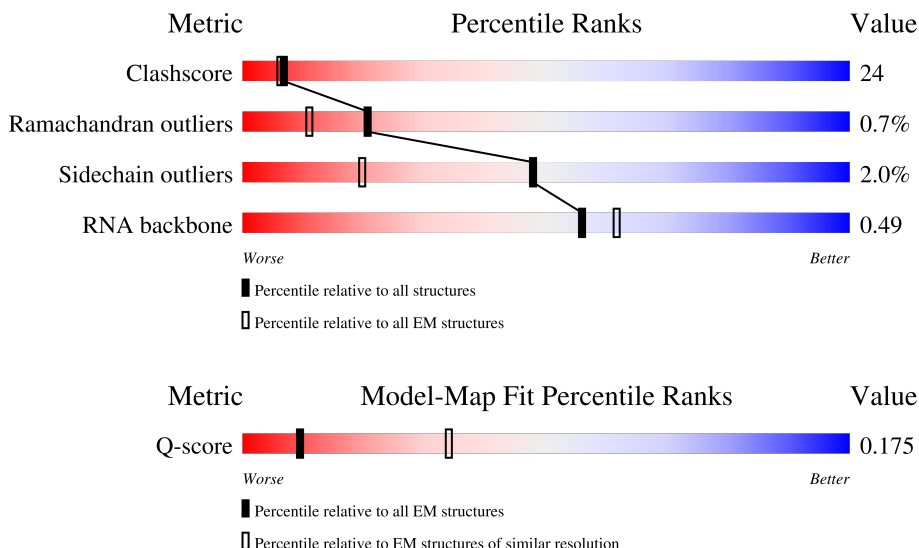
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 5.30 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.



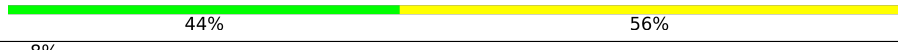
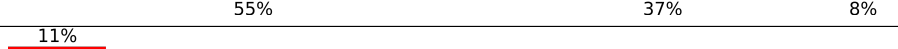
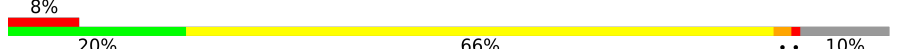
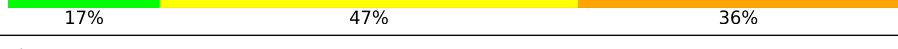
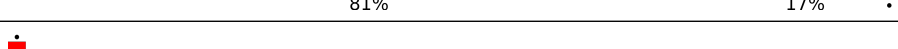
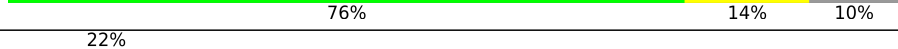
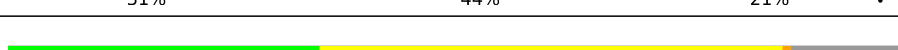
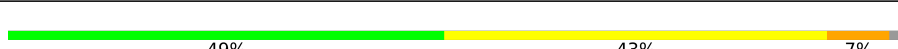
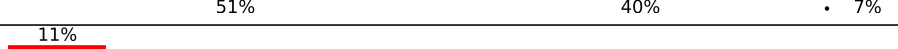
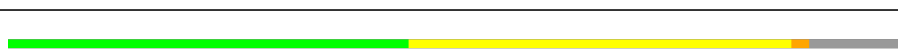
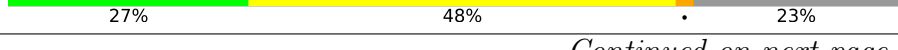
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	625 (4.80 - 5.80)

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	0	103	
2	1	110	
3	2	100	

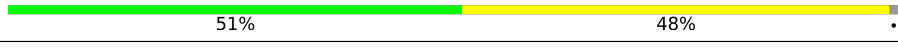
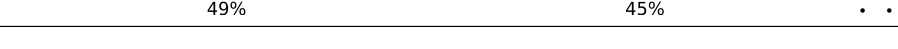
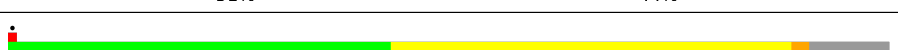
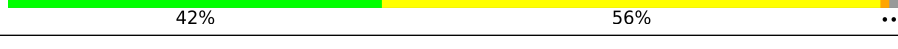
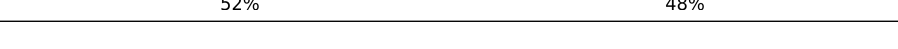
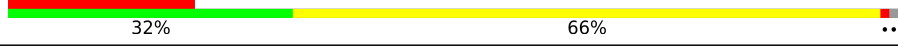
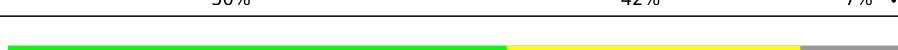
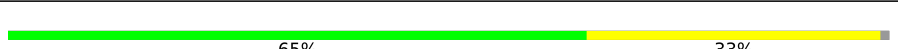
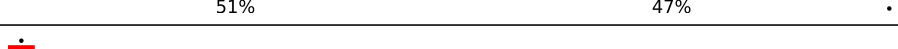
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Mol	Chain	Length	Quality of chain
4	3	104	
5	4	94	
6	5	38	
7	6	38	
8	7	44	
9	9	165	
10	A	76	
10	B	76	
11	AA	1342	
12	AB	162	
13	AC	329	
13	AD	329	
14	AE	1407	
15	AF	91	
16	AG	495	
17	C	75	
18	D	1542	
19	E	87	
20	F	71	
21	G	241	
22	H	557	
23	I	233	
24	J	206	
25	K	167	
26	L	135	

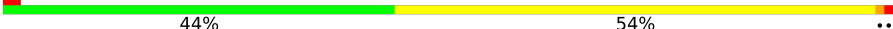
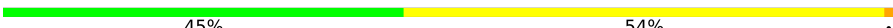
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Mol	Chain	Length	Quality of chain
27	M	179	
28	N	130	
29	O	130	
30	P	103	
31	Q	129	
32	R	124	
33	S	101	
34	T	89	
35	U	82	
36	V	84	
37	W	92	
38	X	118	
39	Y	142	
40	Z	121	
41	a	2904	
42	b	85	
43	c	78	
44	d	120	
45	e	63	
46	f	59	
47	g	70	
48	h	273	
49	i	57	
50	j	209	
51	k	55	

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Mol	Chain	Length	Quality of chain
52	l	201	
53	m	46	
54	n	179	
55	o	65	
56	p	177	
57	q	38	
58	r	149	
59	s	142	
60	t	123	
61	u	144	
62	v	136	
63	w	127	
64	x	117	
65	y	115	
66	z	118	

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
68	ZN	AE	1502	-	-	X	-

2 Entry composition

There are 68 unique types of molecules in this entry. The entry contains 280292 atoms, of which 98639 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 Ribosomal protein L21.

Mol	Chain	Residues	Atoms						AltConf	Trace
1	0	103	Total	C	H	N	O	S	0	0
			1655	516	839	153	145	2		

- Molecule 2 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms						AltConf	Trace
2	1	110	Total	C	H	N	O	S	0	0
			1779	532	922	166	156	3		

- Molecule 3 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms						AltConf	Trace
3	2	94	Total	C	H	N	O	S	0	0
			1557	470	811	140	134	2		

- Molecule 4 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms						AltConf	Trace
4	3	103	Total	C	H	N	O		0	0
			1632	498	844	148	142			

- Molecule 5 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms						AltConf	Trace
5	4	94	Total	C	H	N	O	S	0	0
			1533	479	780	137	134	3		

- Molecule 6 is a DNA chain called NT DNA ops.

Mol	Chain	Residues	Atoms						AltConf	Trace
6	5	35	Total	C	N	O	P		0	0
			726	342	141	208	35			

- Molecule 7 is a DNA chain called T DNA ops.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	6	35	Total	C	N	O	P	0	0
			703	336	117	215	35		

- Molecule 8 is a RNA chain called mRNA with 27 nt long spacer.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	7	37	Total	C	N	O	P	0	0
			772	345	110	280	37		

- Molecule 9 is a protein called 50S ribosomal protein L10.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	9	148	Total	C	N	O	S	0	0
			1117	705	196	209	7		

- Molecule 10 is a RNA chain called E-site and P-site fMet-tRNA.

Mol	Chain	Residues	Atoms						AltConf	Trace
10	A	76	Total 2446	C 723	H 826	N 295	O 527	P 75	0	0
10	B	76	Total 2434	C 723	H 814	N 295	O 527	P 75	0	0

- Molecule 11 is a protein called DNA-directed RNA polymerase subunit beta.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	AA	1316	Total	C	N	O	S	0	0
			10381	6514	1810	2014	43		

- Molecule 12 is a protein called Transcription antitermination protein RfaH.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	AB	161	Total	C	N	O	S	0	0
			1286	828	222	232	4		

- Molecule 13 is a protein called DNA-directed RNA polymerase subunit alpha.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	AC	221	Total	C	N	O	S	0	0
			1698	1060	299	333	6		

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Mol	Chain	Residues	Atoms					AltConf	Trace
13	AD	299	Total	C	N	O	S	0	0
			2078	1287	378	407	6		

- Molecule 14 is a protein called DNA-directed RNA polymerase subunit beta'.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	AE	1337	Total	C	N	O	S	0	0
			10404	6535	1856	1963	50		

- Molecule 15 is a protein called DNA-directed RNA polymerase subunit omega.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	AF	82	Total	C	N	O	S	0	0
			650	396	122	131	1		

- Molecule 16 is a protein called Transcription termination/antitermination protein NusA.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	AG	495	Total	C	N	O	S	0	0
			3852	2396	669	774	13		

- Molecule 17 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	C	66	Total	C	H	N	O	S	0
			1103	344	559	102	97	1	0

- Molecule 18 is a RNA chain called 16S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	D	1524	Total	C	H	N	O	P	0
			49126	14585	16423	6003	10591	1524	0

- Molecule 19 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	E	86	Total	C	H	N	O	S	0
			1388	414	719	138	114	3	0

- Molecule 20 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms						AltConf	Trace
20	F	70	Total	C	H	N	O	S	0	0
			1218	366	629	125	97	1		

- Molecule 21 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms						AltConf	Trace
21	G	225	Total	C	H	N	O	S	0	0
			3545	1113	1785	316	323	8		

- Molecule 22 is a protein called 30S ribosomal protein S1.

Mol	Chain	Residues	Atoms						AltConf	Trace
22	H	259	Total	C	H	N	O	S	0	0
			3184	1073	1454	305	349	3		

- Molecule 23 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms						AltConf	Trace
23	I	208	Total	C	H	N	O	S	0	0
			3346	1036	1710	307	290	3		

- Molecule 24 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms						AltConf	Trace
24	J	205	Total	C	H	N	O	S	0	0
			3350	1026	1707	315	298	4		

- Molecule 25 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms						AltConf	Trace
25	K	156	Total	C	H	N	O	S	0	0
			2348	717	1196	217	212	6		

- Molecule 26 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms						AltConf	Trace
26	L	104	Total	C	H	N	O	S	0	0
			1694	536	846	153	152	7		

- Molecule 27 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms						AltConf	Trace
27	M	151	Total	C	H	N	O	S	0	0
			2416	735	1235	227	215	4		

- Molecule 28 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms						AltConf	Trace
28	N	129	Total	C	H	N	O	S	0	0
			2010	616	1031	173	184	6		

- Molecule 29 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms						AltConf	Trace
29	O	127	Total	C	H	N	O	S	0	0
			2092	634	1070	206	179	3		

- Molecule 30 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms						AltConf	Trace
30	P	99	Total	C	H	N	O	S	0	0
			1621	495	831	151	143	1		

- Molecule 31 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms						AltConf	Trace
31	Q	117	Total	C	H	N	O	S	0	0
			1764	540	887	174	160	3		

- Molecule 32 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms						AltConf	Trace
32	R	121	Total	C	H	N	O	S	0	0
			1940	580	1001	194	161	4		

- Molecule 33 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms						AltConf	Trace
33	S	100	Total	C	H	N	O	S	0	0
			1649	499	844	164	139	3		

- Molecule 34 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms						AltConf	Trace
34	T	88	Total	C	H	N	O	S	0	0
			1448	439	734	144	130	1		

- Molecule 35 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms						AltConf	Trace
35	U	82	Total	C	H	N	O	S	0	0
			1315	406	666	128	114	1		

- Molecule 36 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms						AltConf	Trace
36	V	80	Total	C	H	N	O	S	0	0
			1339	411	691	121	113	3		

- Molecule 37 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms						AltConf	Trace
37	W	83	Total	C	H	N	O	S	0	0
			1351	424	688	126	111	2		

- Molecule 38 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms						AltConf	Trace
38	X	116	Total	C	H	N	O	S	0	0
			1864	558	964	181	158	3		

- Molecule 39 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	Y	141	Total	C	N	O	S	0	0
			1032	651	179	196	6		

- Molecule 40 is a protein called 50S ribosomal protein L7/L12.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	Z	30	Total	C	N	O	S	0	0
			227	144	33	47	3		

- Molecule 41 is a RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms						AltConf	Trace
41	a	2880	Total	C	H	N	O	P	0	0
			92918	27587	31077	11398	19976	2880		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
a	887	A	U	conflict	GB 937521852

- Molecule 42 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms						AltConf	Trace
42	b	76	Total	C	H	N	O	S	0	0
			1181	360	599	117	104	1		

- Molecule 43 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms						AltConf	Trace
43	c	77	Total	C	H	N	O	S	0	0
			1277	388	652	129	106	2		

- Molecule 44 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms						AltConf	Trace
44	d	120	Total	C	H	N	O	P	0	0
			3870	1144	1301	468	837	120		

- Molecule 45 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms						AltConf	Trace
45	e	62	Total	C	H	N	O	S	0	0
			1032	308	531	98	94	1		

- Molecule 46 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms						AltConf	Trace
46	f	58	Total	C	H	N	O	S	0	0
			936	281	488	87	78	2		

- Molecule 47 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms						AltConf	Trace
47	g	66	Total	C	H	N	O	S	0	0
			1042	323	520	99	94	6		

- Molecule 48 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms						AltConf	Trace
48	h	271	Total	C	H	N	O	S	0	0
			4236	1288	2154	423	364	7		

- Molecule 49 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms						AltConf	Trace
49	i	56	Total	C	H	N	O	S	0	0
			903	269	459	94	80	1		

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

Mol	Chain	Residues	Atoms						AltConf	Trace
50	j	209	Total	C	H	N	O	S	0	0
			3182	979	1617	288	294	4		

- Molecule 51 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms						AltConf	Trace
51	k	52	Total	C	H	N	O		0	0
			890	275	464	78	73			

- Molecule 52 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms						AltConf	Trace
52	l	201	Total	C	H	N	O	S	0	0
			3171	974	1619	283	290	5		

- Molecule 53 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms						AltConf	Trace
53	m	46	Total	C	H	N	O	S	0	0
			795	228	418	90	57	2		

- Molecule 54 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms						AltConf	Trace
54	n	177	Total	C	H	N	O	S	0	0
			2853	899	1443	249	256	6		

- Molecule 55 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms						AltConf	Trace
55	o	64	Total	C	H	N	O	S	0	0
			1076	323	572	105	74	2		

- Molecule 56 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms						AltConf	Trace
56	p	175	Total	C	H	N	O	S	0	0
			2671	826	1358	241	244	2		

- Molecule 57 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms						AltConf	Trace
57	q	38	Total	C	H	N	O	S	0	0
			645	185	343	65	48	4		

- Molecule 58 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms						AltConf	Trace
58	r	149	Total	C	H	N	O	S	0	0
			2259	699	1148	197	214	1		

- Molecule 59 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms						AltConf	Trace
59	s	142	Total	C	H	N	O	S	0	0
			2291	714	1162	212	199	4		

- Molecule 60 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms						AltConf	Trace
60	t	123	Total	C	H	N	O	S	0	0
			1969	593	1023	181	166	6		

- Molecule 61 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms						AltConf	Trace
61	u	144	Total	C	H	N	O	S	0	0
			2182	654	1129	207	190	2		

- Molecule 62 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms						AltConf	Trace
62	v	136	Total	C	H	N	O	S	0	0
			2231	686	1157	205	177	6		

- Molecule 63 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms						AltConf	Trace
63	w	119	Total	C	H	N	O	S	0	0
			1945	588	994	195	163	5		

- Molecule 64 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	x	116	Total	C	H	N	O	0	0
			1815	552	923	178	162		

- Molecule 65 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms						AltConf	Trace
65	y	114	Total	C	H	N	O	S	0	0
			1879	574	962	179	163	1		

- Molecule 66 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	z	117	Total	C	H	N	O	0	0
			1967	604	1020	192	151		

- Molecule 67 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
67	AE	1	Total	Mg	0
			1	1	

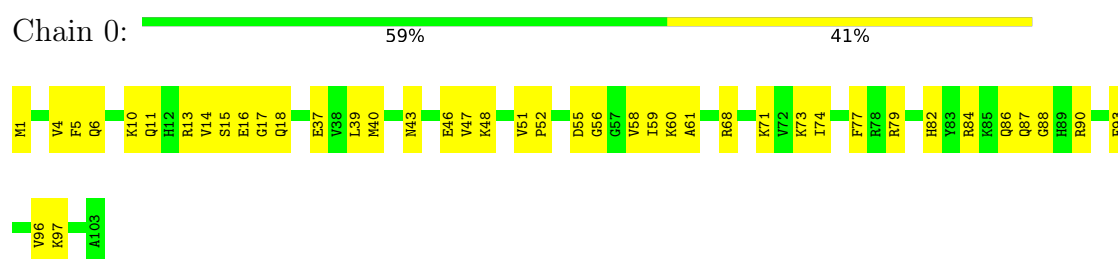
- Molecule 68 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
68	AE	2	Total	Zn	0
			2	2	

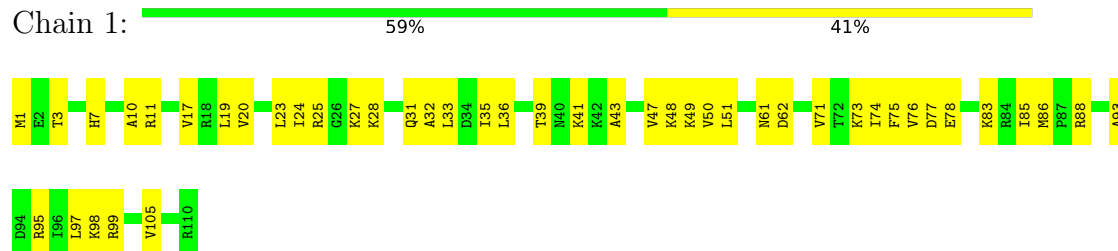
3 Residue-property plots [i](#)

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.

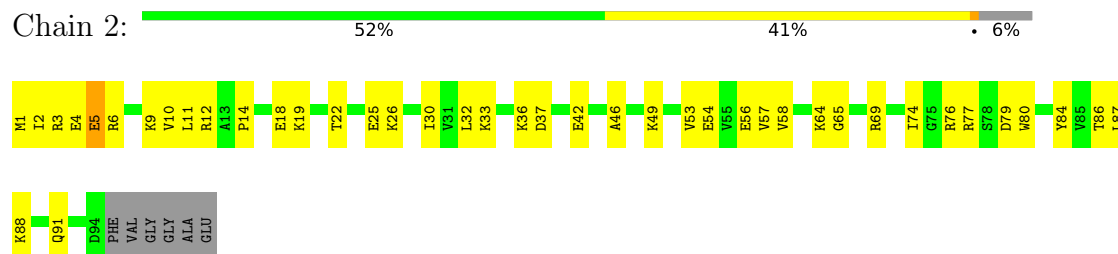
- Molecule 1: Ribosomal protein L21



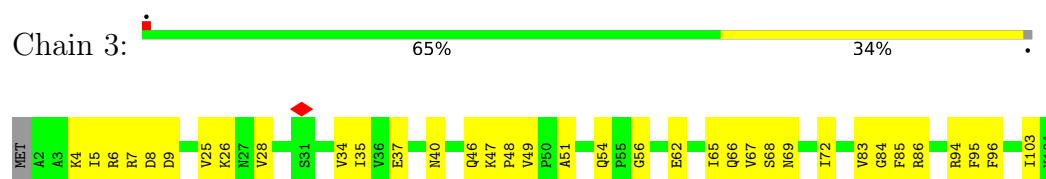
- Molecule 2: 50S ribosomal protein L22



- Molecule 3: 50S ribosomal protein L23



- Molecule 4: 50S ribosomal protein L24



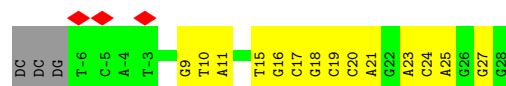
- Molecule 5: 50S ribosomal protein L25

Chain 4: 



- Molecule 6: NT DNA ops

Chain 5: 



- Molecule 7: T DNA ops

Chain 6: 

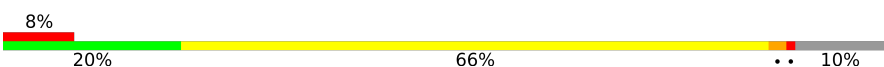


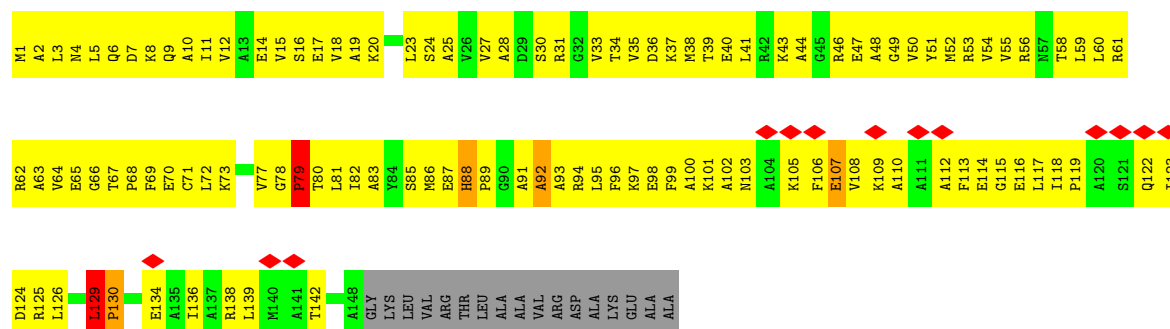
- Molecule 8: mRNA with 27 nt long spacer

Chain 7: 



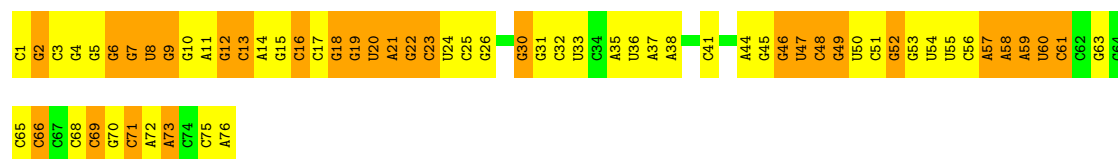
- Molecule 9: 50S ribosomal protein L10

Chain 9: 

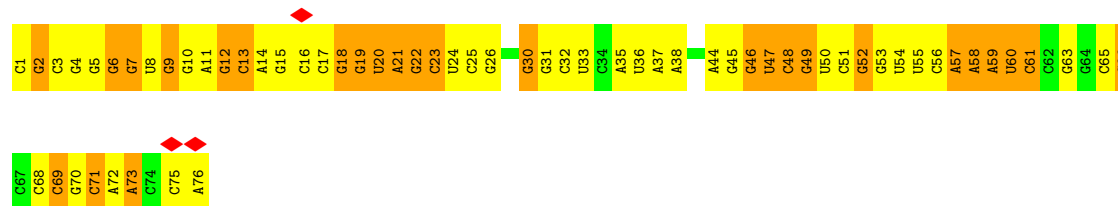
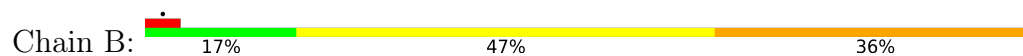


- Molecule 10: E-site and P-site fMet-tRNA

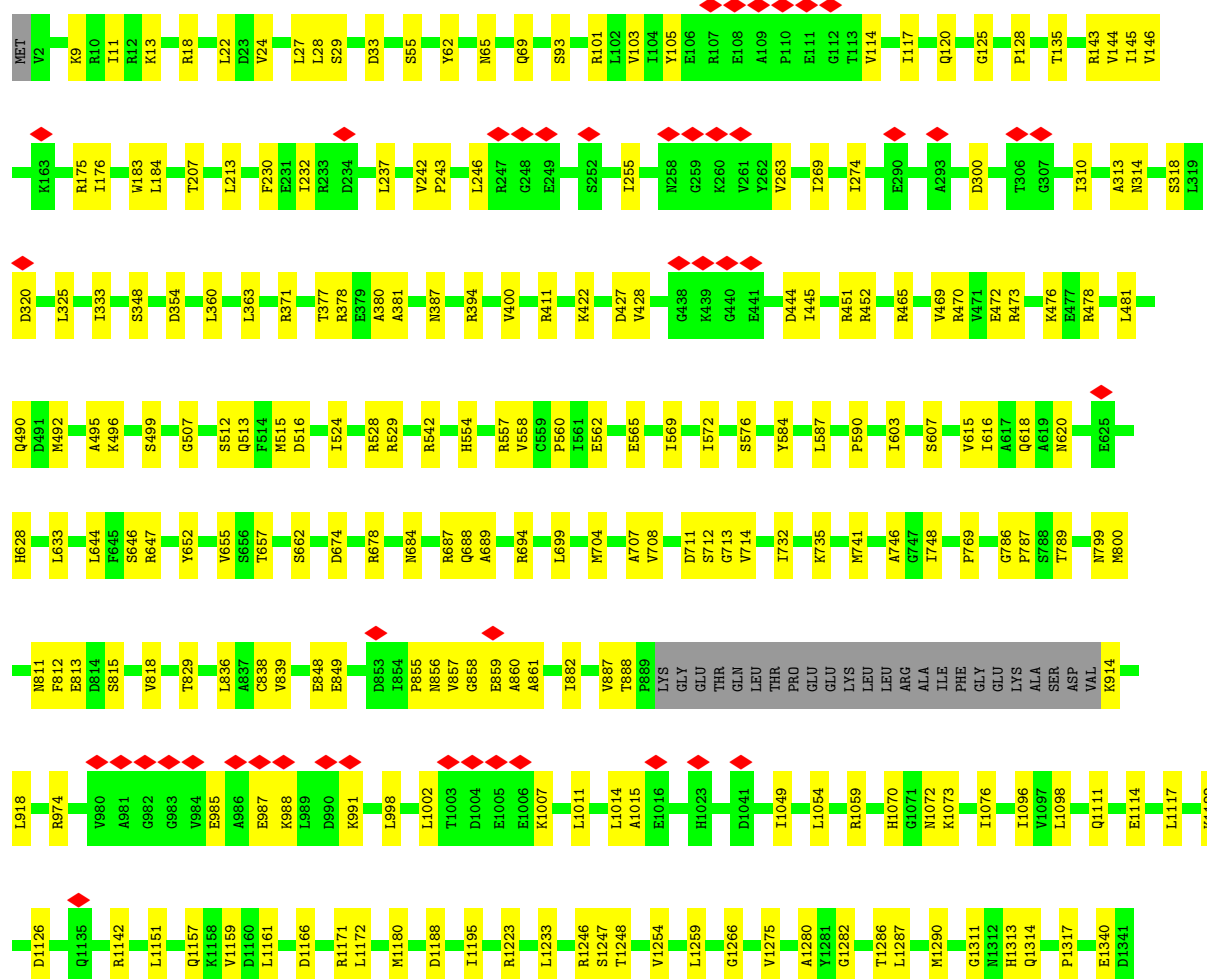
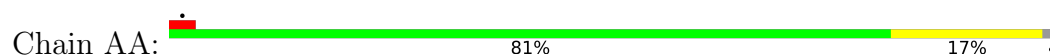
Chain A: 



• Molecule 10: E-site and P-site fMet-tRNA



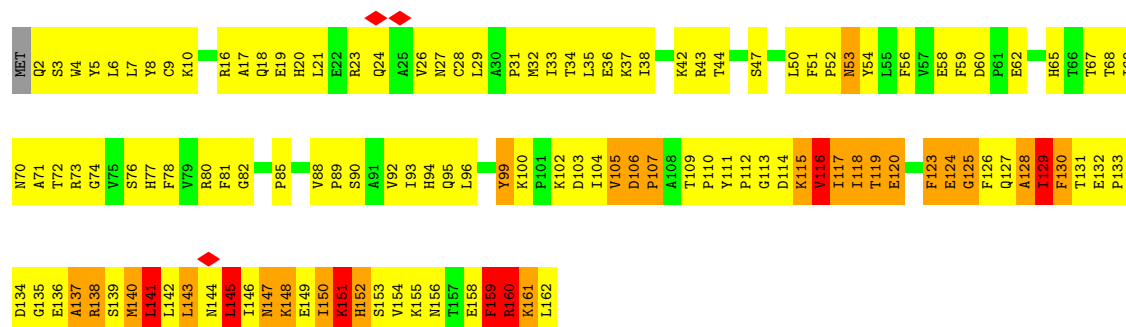
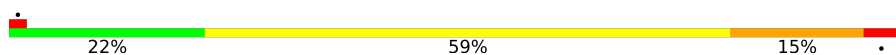
• Molecule 11: DNA-directed RNA polymerase subunit beta



GLU

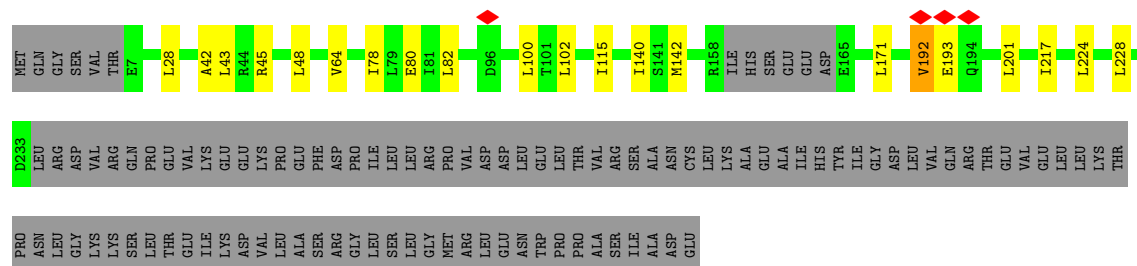
- Molecule 12: Transcription antitermination protein RfaH

Chain AB:



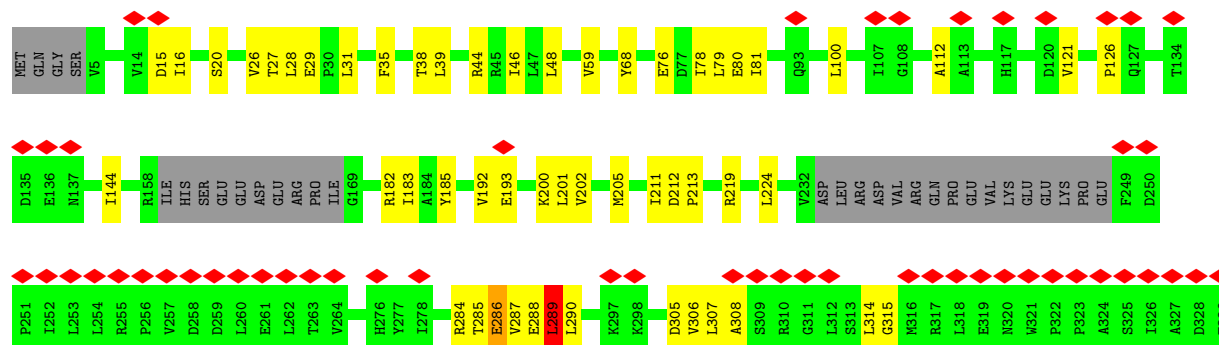
- Molecule 13: DNA-directed RNA polymerase subunit alpha

Chain AC:



- Molecule 13: DNA-directed RNA polymerase subunit alpha

Chain AD:

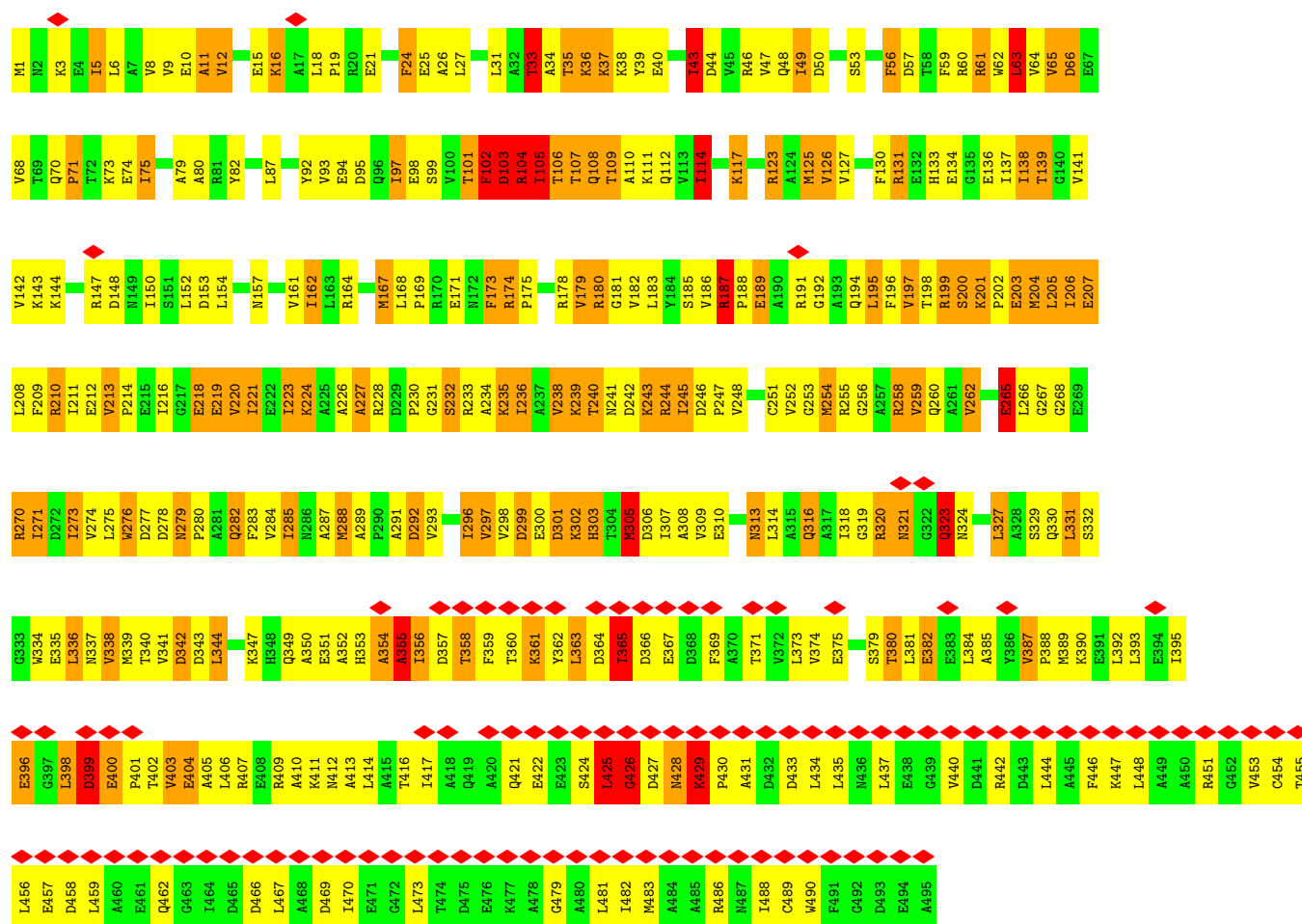


- Molecule 14: DNA-directed RNA polymerase subunit beta'

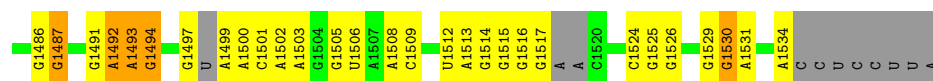
Chain AE:







C1378	C1379	U1380	U1381	C1382	C1383	C1389	U1390	U1391	C1396	C1397	A1398	C1399	C1400	G1401	C	C1403	C1404	G1405	U1406	C	A1408	C1409	A1410	C1411	C1412	A1413	G1419	A1428	A1429	A1434	G1435	A1436	A1437	G1438	G1439	U1440	A1441	A1446	A1447	C1448	C1452	G1453	G1458	U1464	A1465	G1475	A1476	U1477	U1478																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
C1302	G1305	A1306	U1307	U1308	G1309	G1312	U1313	C1314	U1315	G1316	C1317	G1318	U1319	C1320	G1323	A1324	C1325	U1326	C1327	C	A1328	A1329	A1333	G1334	G1338	A1339	A1340	C1344	U1345	A1346	G1347	G1353	G1356	U1357	C1358	C1359	A1360	A1363	U1364	C1365	C1366	C1367	A1368	C1369	G1370	U1371	U1372	G1373	U1376	A1377	U1378																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
C	C1208	C1209	C1210	U1211	U1212	A1213	C1214	G1215	C1216	C1217	C1218	A1219	C1223	U1224	A1225	C1226	A1227	C1228	G1231	A1238	C1239	U1240	G1241	C1242	C1243	G1244	A1250	A1251	A1252	A1257	G1260	A1261	C1262	A1275	U1276	C1277	G1278	G1279	A1280	A1285	U1286	A1287	A1288	A1289	G1290	G1294	A1299	G1300	U1301																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
C1132	G1133	U1134	U1135	C1136	C1137	G1138	G1139	C1140	C1141	G1142	G1143	G1144	A1145	A1146	C1147	U1148	C1149	A1150	A1151	A1152	A1157	C1158	U1159	G1160	C1161	A1167	U1168	A1169	A1170	A1171	C1172	U1173	G1174	G1175	A1176	G1177	G1181	G1184	G1185	G1186	U1189	G1190	C1193	U1194	C1195	A1196	A1197	U1202	C1203	G1206																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
G1043	A1044	G1045	A1046	A1055	U1060	G1061	U1062	C1063	G1064	U1065	C1071	G1072	U1073	G1074	U1075	U1076	G1077	U1078	C985	U1079	A1080	A1081	A1082	U1085	U1086	G1087	G1094	U1095	C1100	A1101	A1102	C1103	G1104	A1105	G1106	C1107	G1108	C1109	A1110	C1113	C1114	C1119	C1120	U1121	G1124	U1125	U1126	G1127	A1036	C1037																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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C876	G877	A878	C882	C883	U884	G887	G887	G890	U891	A892	C893	G894	G902	A906	U907	A908	A909	C910	U911	C912	A913	A914	A915	U916	A925	C926	A918	A919	U920	U921	G922	A923	C924	G925	U926	U927	G928	G929	C932	A935	C936	A937	G945	U946	C947	U948	U949	U950	U951	U952	U953	U954	U955	U956	U957	U958	U959	U960	U961	U962	U963	U964	U965	U966	U967	U968	U969	U970	U971	U972	U973	U974	U975	U976	U977	U978	U979	U980	U981	U982	U983	U984	U985	U986	U987	U988	U989	U990	U991	U992	U993	U994	U995	U996	U997	U998	U999	U1000	U1001	U1002	U1003	U1004	U1005	U1006	U1007	U1008	U1009	U1010	U1011	U1012	U1013	U1014	U1015	U1016	U1017	U1018	U1019	U1020	U1021	U1022	U1023	U1024	U1025	U1026	U1027	U1028	U1029	U1030	U1031	U1032	U1033	U1034	U1035	U1036	U1037	U1038	U1039	U1040	U1041	U1042	U1043	U1044	U1045	U1046	U1047	U1048	U1049	U1050	U1051	U1052	U1053	U1054	U1055	U1056	U1057	U1058	U1059	U1060	U1061	U1062	U1063	U1064	U1065	U1066	U1067	U1068	U1069	U1070	U1071	U1072	U1073	U1074	U1075	U1076	U1077	U1078	U1079	U1080	U1081	U1082	U1083	U1084	U1085	U1086	U1087	U1088	U1089	U1090	U1091	U1092	U1093	U1094	U1095	U1096	U1097	U1098	U1099	U1100	U1101	U1102	U1103	U1104	U1105	U1106	U1107	U1108	U1109	U1110	U1111	U1112	U1113	U1114	U1115	U1116	U1117	U1118	U1119	U1120	U1121	U1122	U1123	U1124	U1125	U1126	U1127	U1128	U1129	U1130	U1131	U1132	U1133	U1134	U1135	U1136	U1137	U1138	U1139	U1140	U1141	U1142	U1143	U1144	U1145	U1146	U1147	U1148	U1149	U1150	U1151	U1152	U1153	U1154	U1155	U1156	U1157	U1158	U1159	U1160	U1161	U1162	U1163	U1164	U1165	U1166	U1167	U1168	U1169	U1170	U1171	U1172	U1173	U1174	U1175	U1176	U1177	U1178	U1179	U1180	U1181	U1182	U1183	U1184	U1185	U1186	U1187	U1188	U1189	U1190	U1191	U1192	U1193	U1194	U1195	U1196	U1197	U1198	U1199	U1200	U1201	U1202	U1203	U1204	U1205	U1206	U1207	U1208	U1209	U1210	U1211	U1212	U1213	U1214	U1215	U1216	U1217	U1218	U1219	U1220	U1221	U1222	U1223	U1224	U1225	U1226	U1227	U1228	U1229	U1230	U1231	U1232	U1233	U1234	U1235	U1236	U1237	U1238	U1239	U1240	U1241	U1242	U1243	U1244	U1245	U1246	U1247	U1248	U1249	U1250	U1251	U1252	U1253	U1254	U1255	U1256	U1257	U1258	U1259	U1260	U1261	U1262	U1263	U1264	U1265	U1266	U1267	U1268	U1269	U1270	U1271	U1272	U1273	U1274	U1275	U1276	U1277	U1278	U1279	U1280	U1281	U1282	U1283	U1284	U1285	U1286	U1287	U1288	U1289	U1290	U1291	U1292	U1293	U1294	U1295	U1296	U1297	U1298	U1299	U1300	U1301	U1302	U1303	U1304	U1305	U1306	U1307	U1308	U1309	U1310	U1311	U1312	U1313	U1314	U1315	U1316	U1317	U1318	U1319	U1320	U1321	U1322	U1323	U1324	U1325	U1326	U1327	U1328	U1329	U1330	U1331	U1332	U1333	U1334	U1335	U1336	U1337	U1338	U1339	U1340	U1341	U1342	U1343	U1344	U1345	U1346	U1347	U1348	U1349	U1350	U1351	U1352	U1353	U1354	U1355	U1356	U1357	U1358	U1359	U1360	U1361	U1362	U1363	U1364	U1365	U1366	U1367	U1368	U1369	U1370	U1371	U1372	U1373	U1374	U1375	U1376	U1377	U1378	U1379	U1380	U1381	U1382	U1383	U1384	U1385	U1386	U1387	U1388	U1389	U1390	U1391	U1392	U1393	U1394	U1395	U1396	U1397	U1398	U1399	U1400	U1401	U1402	U1403	U1404	U1405	U1406	U1407	U1408	U1409	U1410	U1411	U1412	U1413	U1414	U1415	U1416	U1417	U1418	U1419	U1420	U1421	U1422	U1423	U1424	U1425	U1426	U1427	U1428	U1429	U1430	U1431	U1432	U1433	U1434	U1435	U1436	U1437	U1438	U1439	U1440	U1441	U1442	U1443	U1444	U1445	U1446	U1447	U1448	U1449	U1450	U1451	U1452	U1453	U1454	U1455	U1456	U1457	U1458	U1459	U1460	U1461	U1462	U1463	U1464	U1465	U1466	U1467	U1468	U1469	U1470	U1471	U1472	U1473	U1474	U1475	U1476	U1477	U1478	U1479	U1480	U1481	U1482	U1483	U1484	U1485	U1486	U1487	U1488	U1489	U1490	U1491	U1492	U1493	U1494	U1495	U1496	U1497	U1498	U1499	U1500	U1501	U1502	U1503	U1504	U1505	U1506	U1507	U1508	U1509	U1510	U1511	U1512	U1513	U1514	U1515	U1516	U1517	U1518	U1519	U1520	U1521	U1522	U1523	U1524	U1525	U1526	U1527	U1528	U1529	U1530	U1531	U1532	U1533	U1534	U1535	U1536	U1537	U1538	U1539	U1540	U1541	U1542	U1543	U1544	U1545	U1546	U1547	U1548	U1549	U1550	U1551	U1552	U1553	U1554	U1555	U1556	U1557	U1558	U1559	U1560	U1561	U1562	U1563	U1564	U1565	U1566	U1567	U1568	U1569	U1570	U1571	U1572	U1573	U1574	U1575	U1576	U1577	U1578	U1579	U1580	U1581	U1582	U1583	U1584	U1585	U1586	U1587	U1588	U1589	U1590	U1591	U1592	U1593	U1594	U1595	U1596	U1597	U1598	U1599	U1600	U1601	U1602	U1603	U1604	U1605	U1606	U1607	U1608	U1609	U1610	U1611	U1612	U1613	U1614	U1615	U1616	U1617	U1618	U1619	U1620	U1621	U1622	U1623	U1624	U1625	U1626	U1627	U1628	U1629	U1630	U1631	U1632	U1633	U1634	U1635	U1636	U1637	U1638	U1639	U1640	U1641	U1642	U1643	U1644	U1645	U1646	U1647	U1648	U1649	U1650	U1651	U1652	U1653	U1654	U1655	U1656	U1657	U1658	U1659	U1660	U1661	U1662	U1663	U1664	U1665	U1666	U1667	U1668	U1669	U1670	U1671	U1672	U1673	U1674	U1675	U1676	U1677	U1678	U1679	U1680	U1681	U1682	U1683	U1684	U1685	U1686	U1687	U1688	U1689	U1690	U1691	U1692	U1693	U1694	U1695	U1696	U1697	U1698	U1699	U1700	U1701	U1702	U1703	U1704	U1705	U1706	U1707	U1708	U1709	U1710	U1711	U1712	U1713	U1714	U1715	U1716	U1717	U1718	U1719	U1720	U1721	U1722	U1723	U1724	U1725	U1726	U1727	U1728	U1729	U1730	U1731	U1732	U1733	U1734	U1735	U1736	U1737	U1738	U1739	U1740	U1741	U1742	U1743	U1744	U1745	U1746	U1747	U1748	U1749	U1750	U175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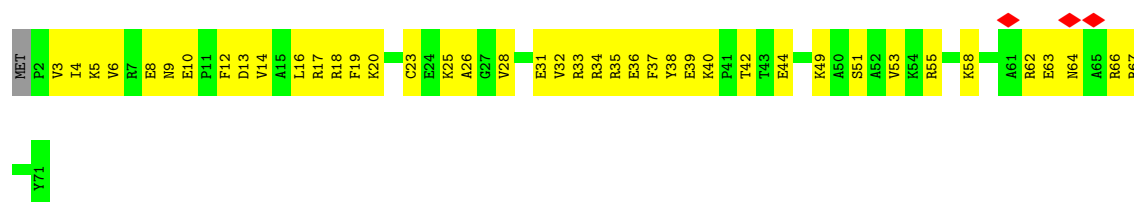
• Molecule 19: 30S ribosomal protein S20

Chain E: 47% 52%



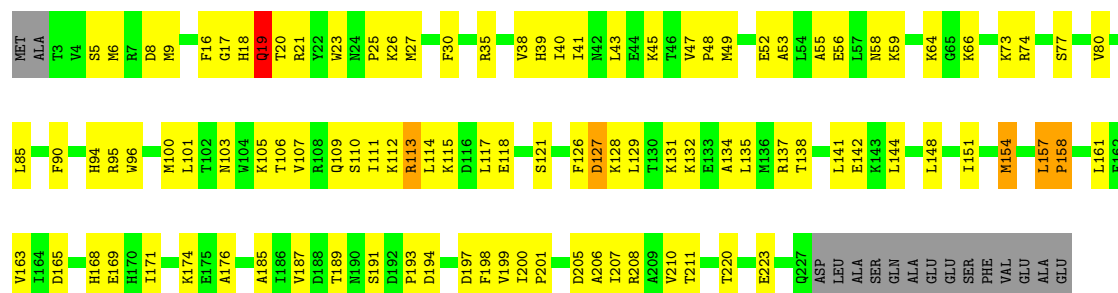
• Molecule 20: 30S ribosomal protein S21

Chain F: 41% 58%



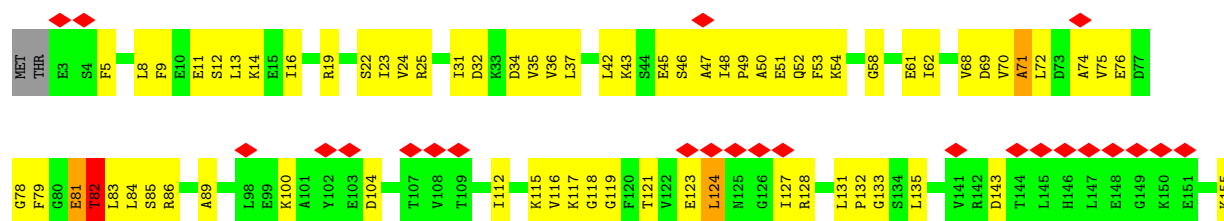
• Molecule 21: 30S ribosomal protein S2

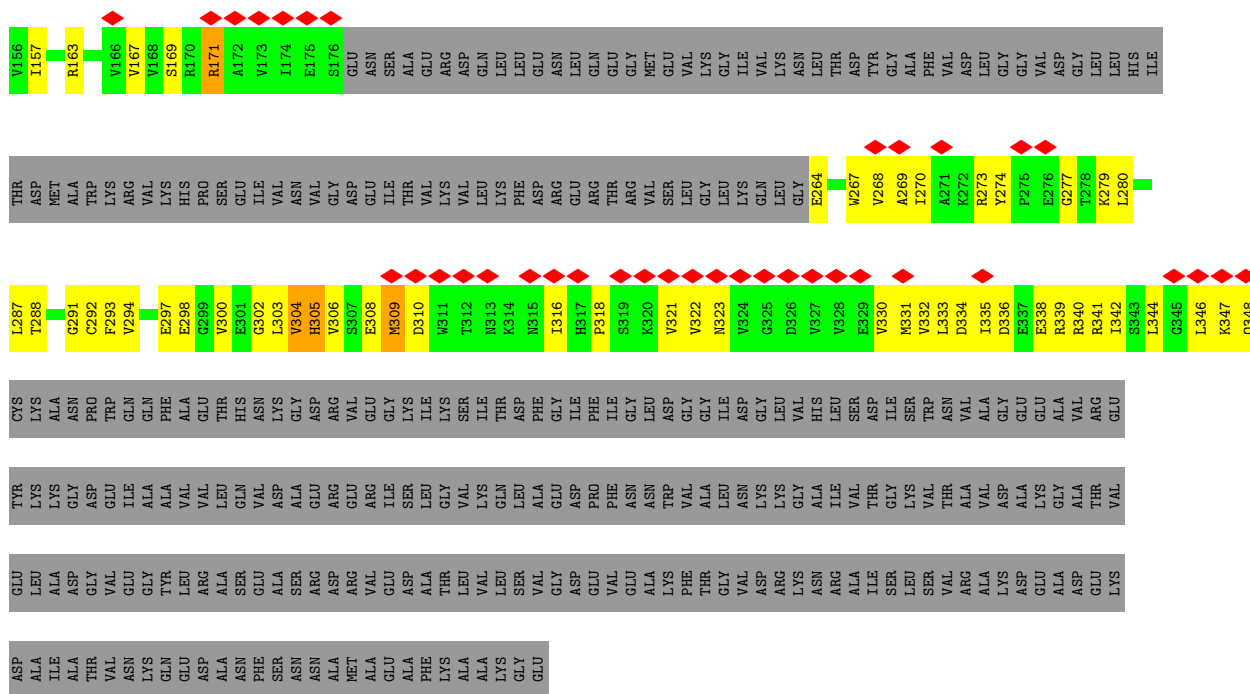
Chain G: 51% 40% 7%



• Molecule 22: 30S ribosomal protein S1

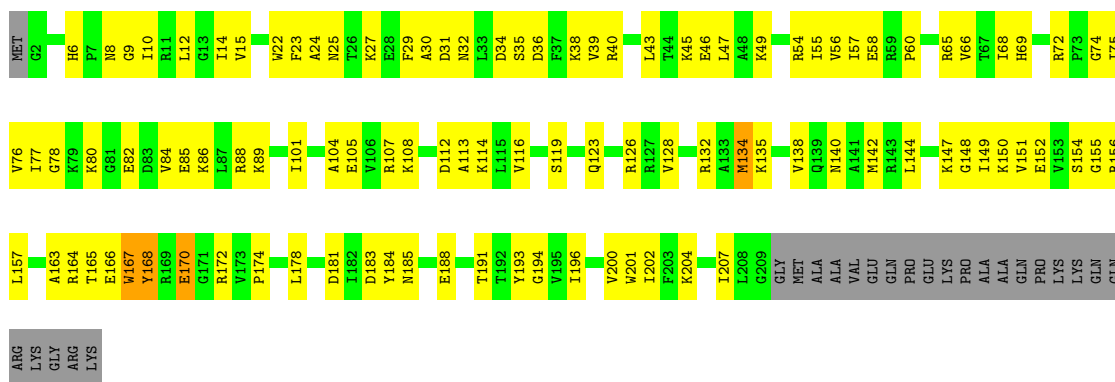
Chain H: 11% 24% 21% 54%





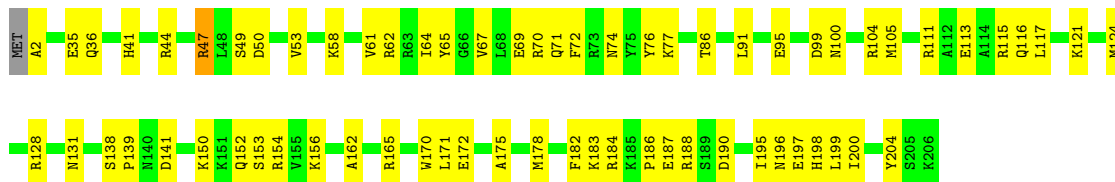
• Molecule 23: 30S ribosomal protein S3

Chain I: 45% 43% 11%



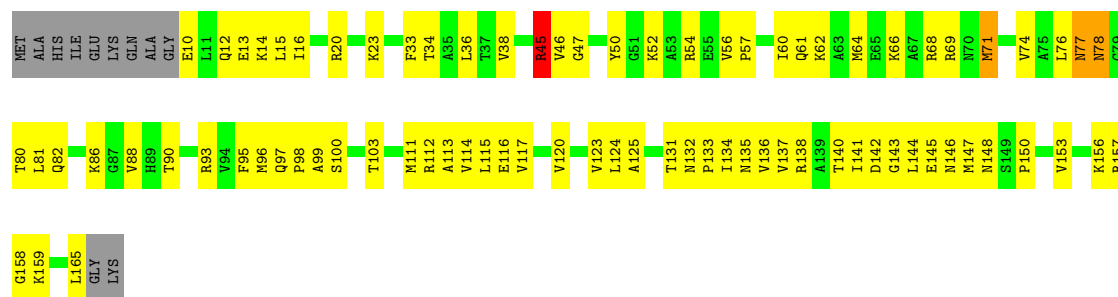
• Molecule 24: 30S ribosomal protein S4

Chain J: 67% 32%

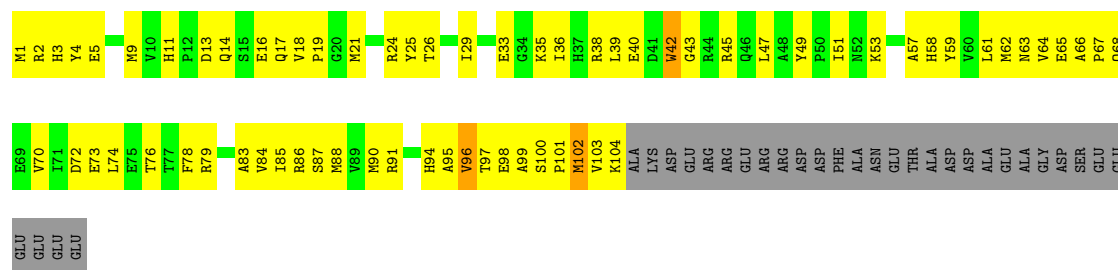


• Molecule 25: 30S ribosomal protein S5

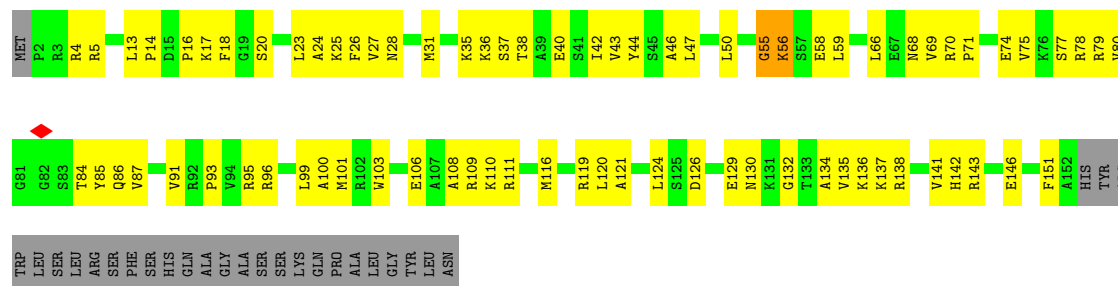
Chain K: 45% 46% 7%



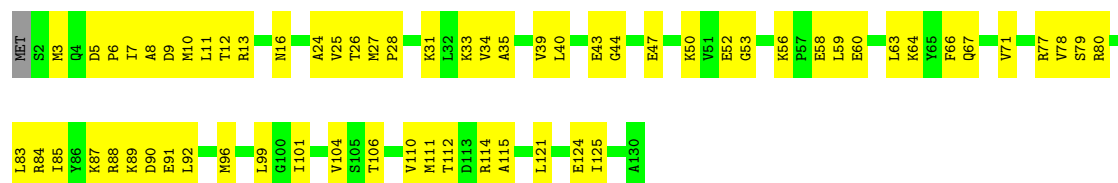
- Molecule 26: 30S ribosomal protein S6



- Molecule 27: 30S ribosomal protein S7

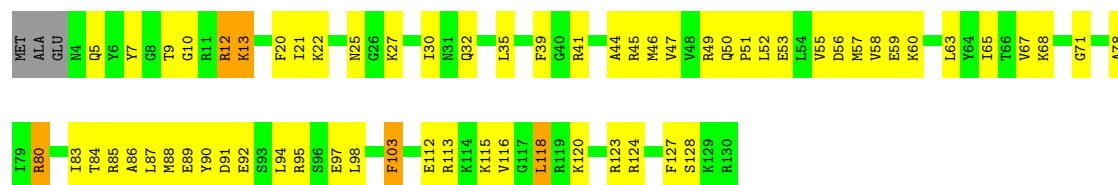


- Molecule 28: 30S ribosomal protein S8

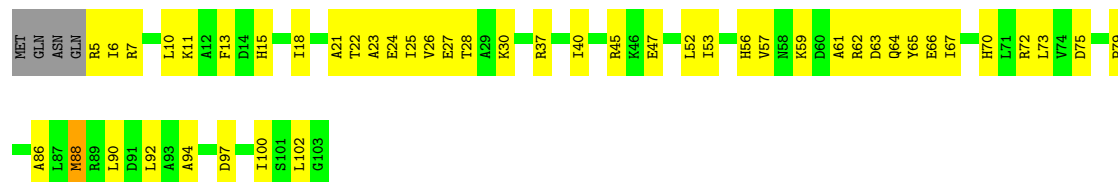


- Molecule 29: 30S ribosomal protein S9

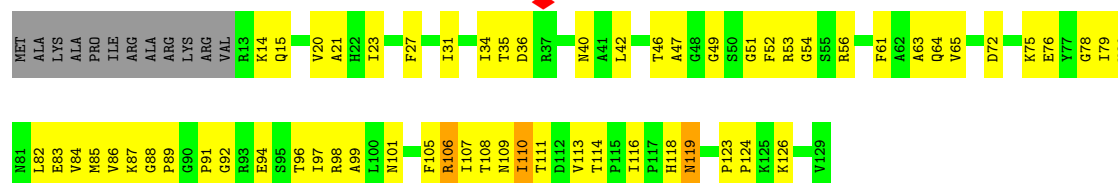




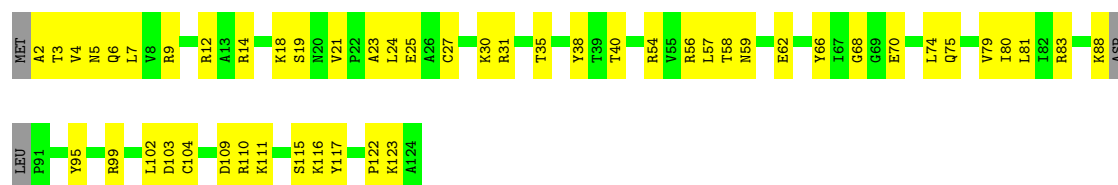
• Molecule 30: 30S ribosomal protein S10



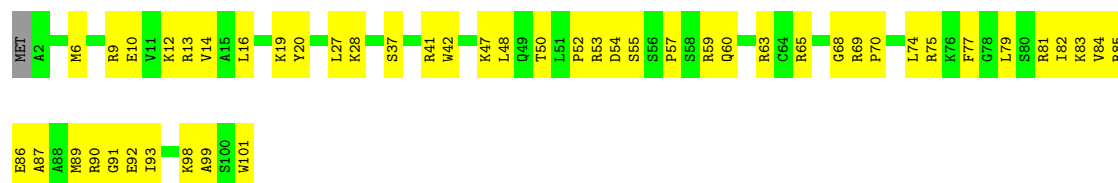
• Molecule 31: 30S ribosomal protein S11



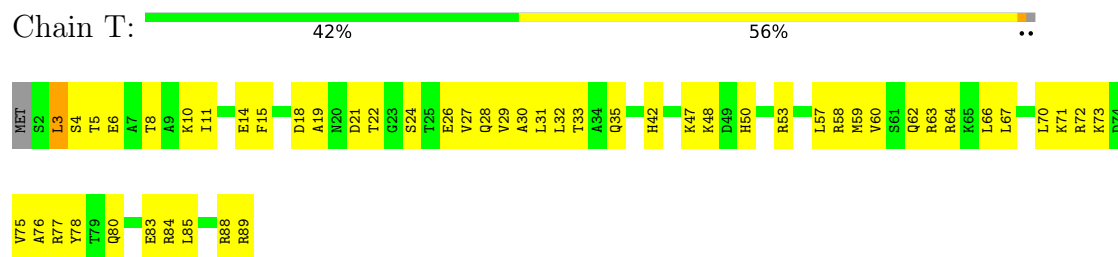
• Molecule 32: 30S ribosomal protein S12



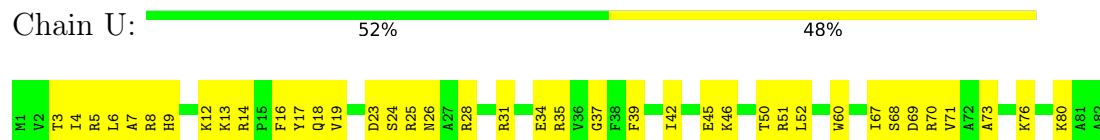
• Molecule 33: 30S ribosomal protein S14



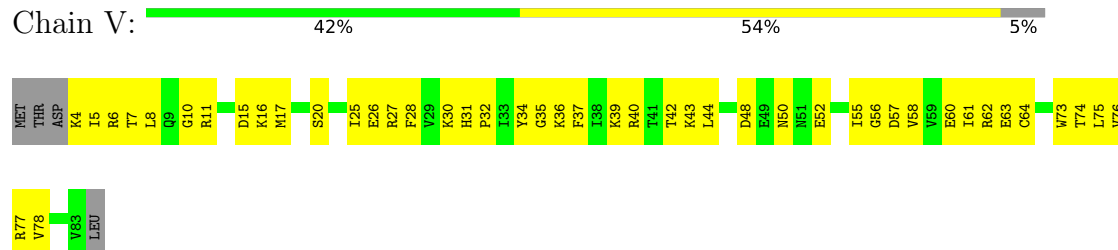
• Molecule 34: 30S ribosomal protein S15



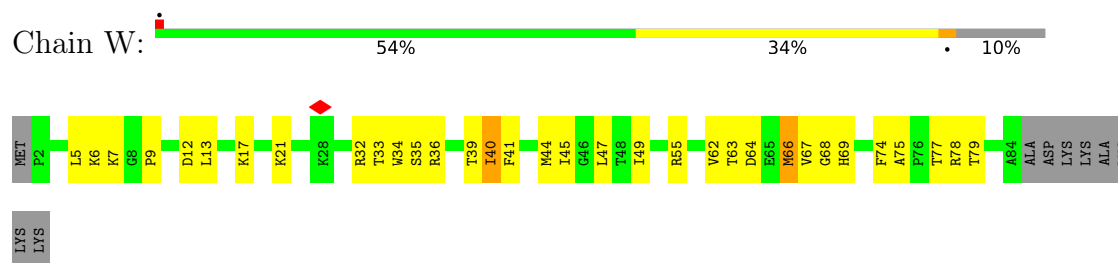
- Molecule 35: 30S ribosomal protein S16



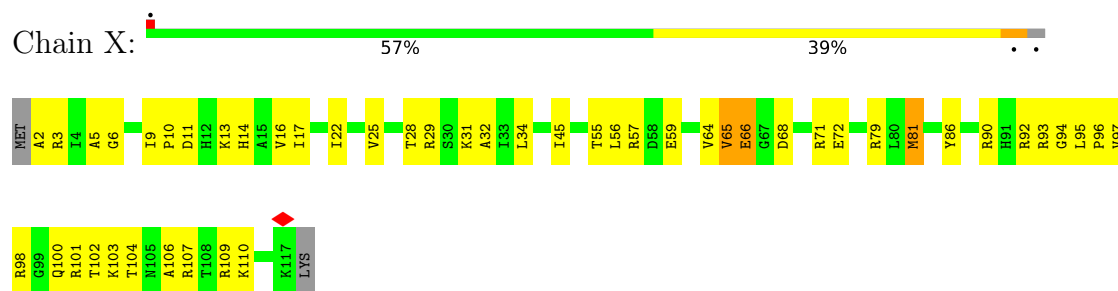
- Molecule 36: 30S ribosomal protein S17



- Molecule 37: 30S ribosomal protein S19



- Molecule 38: 30S ribosomal protein S13

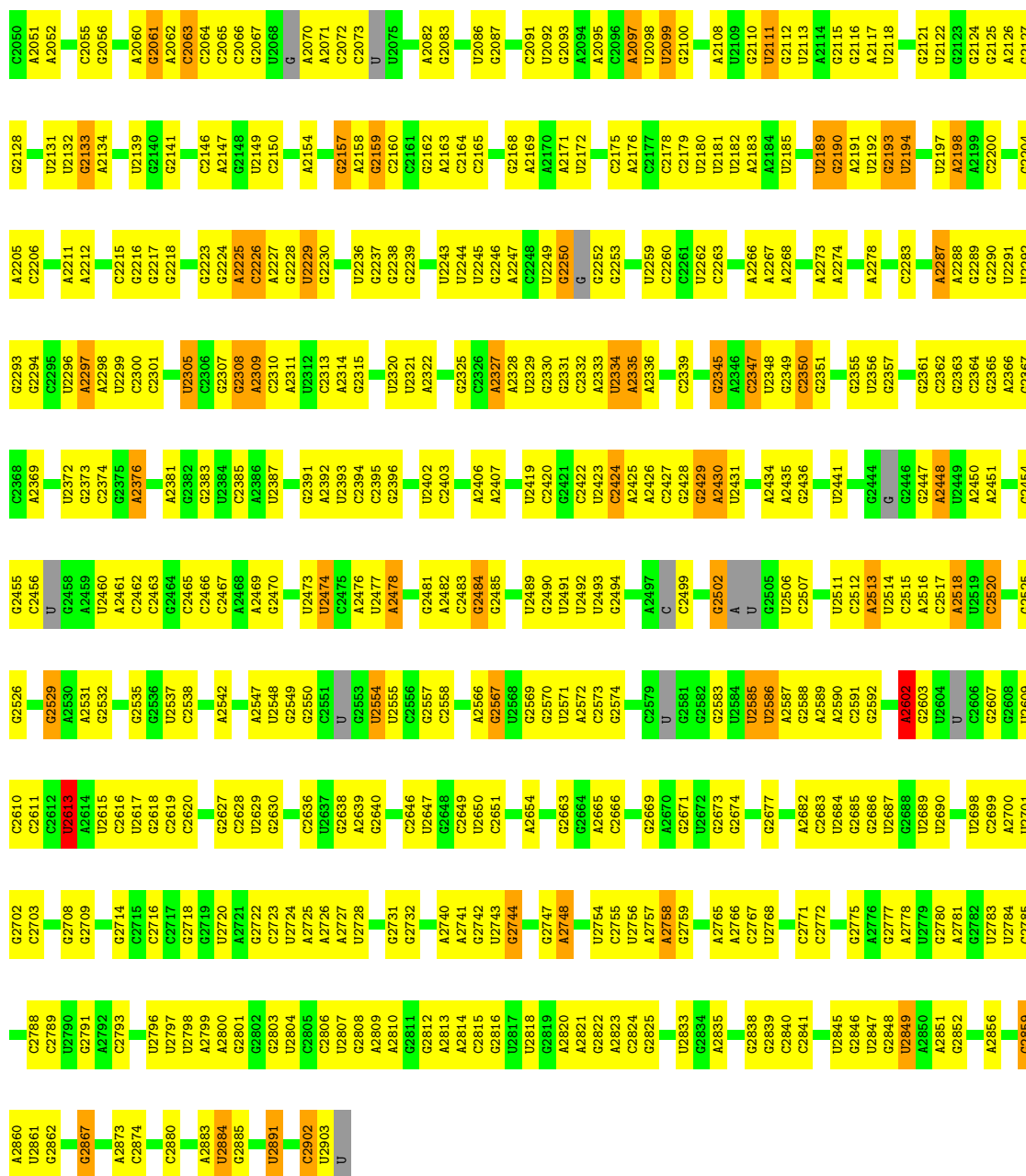


- Molecule 39: 50S ribosomal protein L11



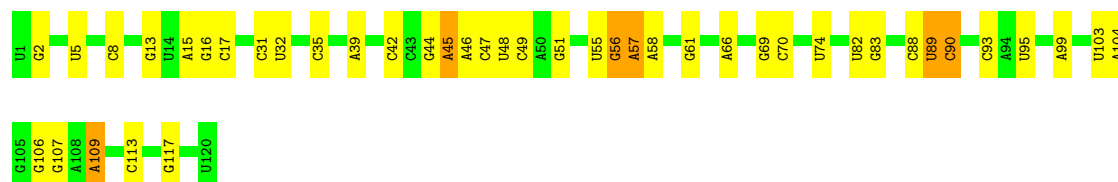


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U1982	G1906	G1823	U1729	A1608	A1514	U1412	G1334	G1238	U1140	A1069	A996	G916	U839	U
G1983	G1907	G1824	G1730	A1609	A1515	U1413	U1340	U1243	U1141	A1070	G997	A920	C840	U
	G1910	U1825	G1731	A1610	G1529	U1414	U1341		A1143	A1071	C998	A921	U842	A748
A1987	U	G1826	C1732			U1415	G1342		A1144	C1072	A1000	C922		A750
	A1912	U1827	G1738	G1613	U1534	U1416	A1343	A1246	A1145	C1073	C1005	A927	A845	A751
U1991	A1913	G1828		A1614	A1535	G1417	G1344	A1247	C1146	A1074	C1006	A928	U846	A752
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	A1916	G1831	U1747	G1619	U1542	G1421	A1347	C1250	G1154	A1077	A1009	U931	A756	A756
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C2024	U1944	U1859	A1789	G1674	A1572	U1468	A1383		U1189	G1111	G1041	C965	C890	G805
C2025	G1945	G1862	C1790	C1675	U1578	U1469	A1384	C1289	A1189	A1111	G1042	G966	G891	C806
U2026	U1946	U1863	A1791	A1676	A1579	A1470	A1385	C1290	G1190	G1112	C1043	U967	C892	C807
G2027	C1947	U1864	G1792	A1677	U1580		C1386	G1296	C1196	U1113	C1044	G968	U894	U807
U2028			C1793		G1581	A1477	A1387		C1197	G1114	C1045	G969	U895	U811
G2029	A1953	G1869	A1794	G1681	C1582	G1482	A1392	G1296	U1198	G1115	G1046	U970	U896	C812
A	G1954	C1870	C1795	U1682	U1583		A1393		U1199	U1119	A1047	A973	A896	C813
A2031	U1955	A1871	U1796	U1683	A1584	A1490	U1394	G1300	U1200	G1120	G1048	G974	C897	U813
G2032	U1956	A1872	G1797	U1684	C1585	U1497	U1395	A1301	U1201	G1121	C1049	A975	C898	C814
A2033	C1957	G1873	U1798		G1587	G1498	U1396	G1301	A1204	G1122	C1053	A880	A899	C815
U2034	C1958	C1874	G1799	G1694	G1588	G1500	C1398	G1310	A1205	G1125	A1054	A900	A900	G818
G2035	G1959	G1875	G1800	G1695	U1589		U1400	G1311	G1206	G1128	G1055	A904	C901	A819
C2036	A1960		A1801	G1703	A1590	A1503		U1313	U1209		G1056	A984	G904	U826
A2037	C1961	C1879	A1802		A1591	U1506	A1403	C1314	G1212	G1131	U1058	C985	G907	U827
G2038	C	U1880	A1803	G1707	A1596	U1507	A1404	C1315	G1212	U1132	U1059	C986	U828	
U2039	U1963	C1881	A1808	C1708	A1597	U1508	U1405	U1318	G1223	A1133	U1060	C987	A909	U832
G2040	G1964	G1882	U1709	U1709	A1598	A1508	U1406	C1319	U1224	A1134	U1061		A910	A833
U2041	C1965	G1883	G1710	G1710	U1599	A1509	U1407	C1320	G1225	C1135	C1064	A990	A911	G834
A2042	U1966	A1884			C1600	G1510	G1408	A1321	A1226	G1137			C912	
C2043	C1967	A1885	U1714	U1715	U1602		U1409	A1322					U913	
C2044			G1715											
G2049	U1971	A1889	C1816											



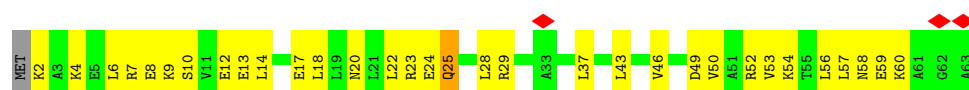
- Molecule 44: 5S rRNA

Chain d: 



- Molecule 45: 50S ribosomal protein L29

Chain e: 

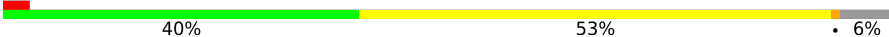


- Molecule 46: 50S ribosomal protein L30

Chain f: 



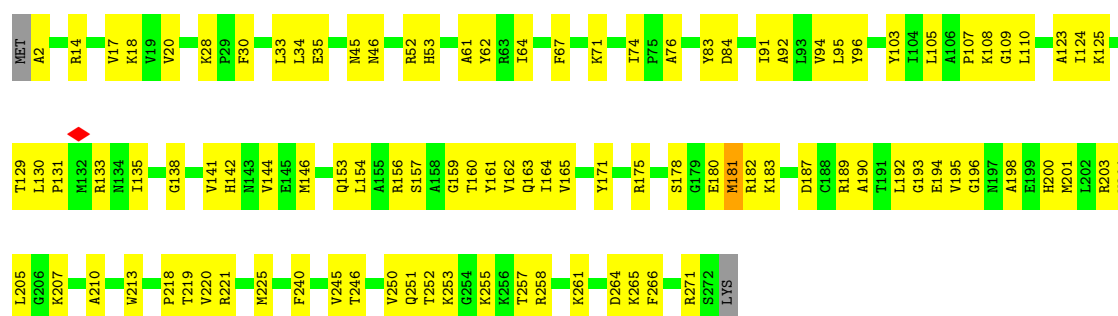
- Molecule 47: 50S ribosomal protein L31

Chain g: 



- Molecule 48: 50S ribosomal protein L2

Chain h: 



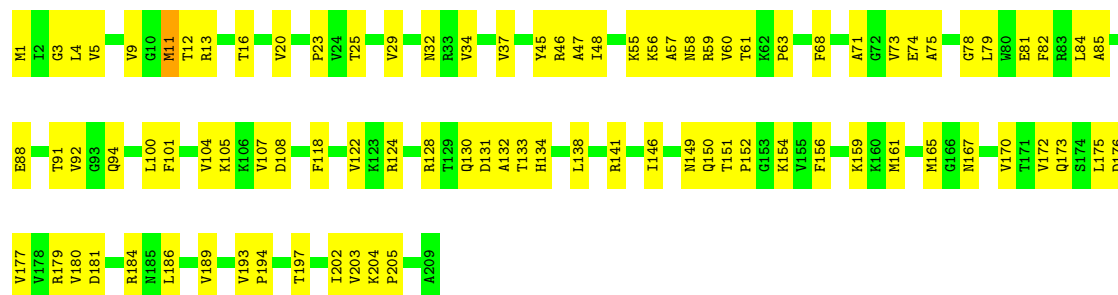
- Molecule 49: 50S ribosomal protein L32

Chain i: 



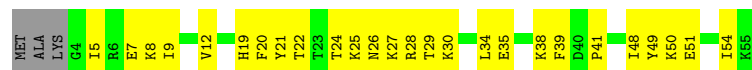
- Molecule 50: 50S ribosomal protein L3

Chain j: 57% 43%



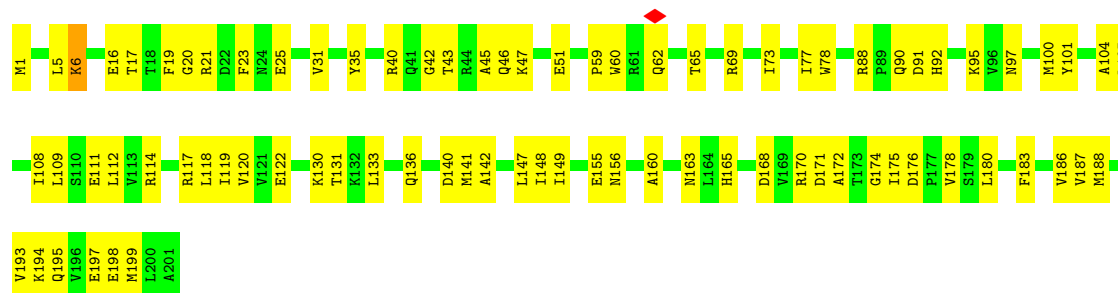
- Molecule 51: 50S ribosomal protein L33

Chain k: 47% 47% 5%



- Molecule 52: 50S ribosomal protein L4

Chain l: 60% 40%



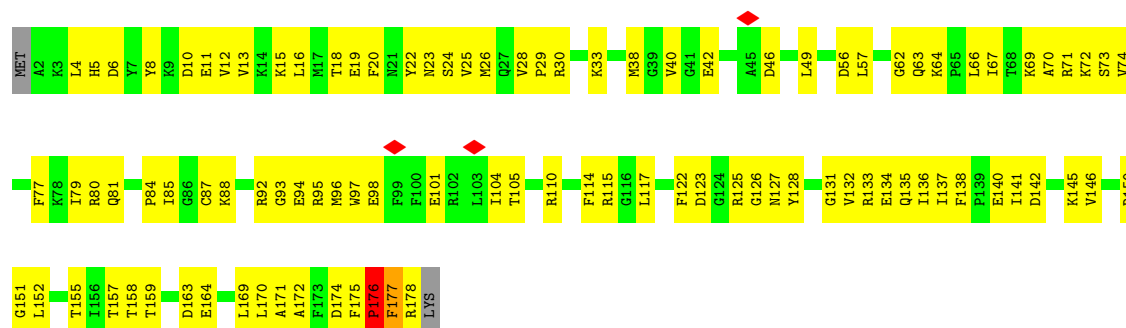
- Molecule 53: 50S ribosomal protein L34

Chain m: 57% 43%

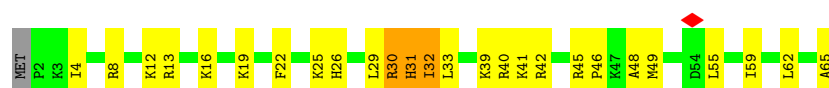


- Molecule 54: 50S ribosomal protein L5

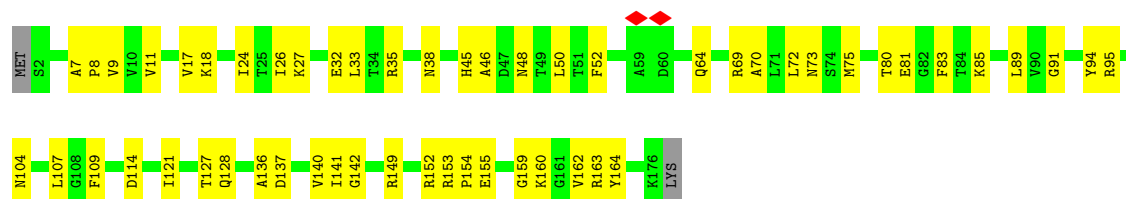
Chain n: 44% 54%



- Molecule 55: 50S ribosomal protein L35



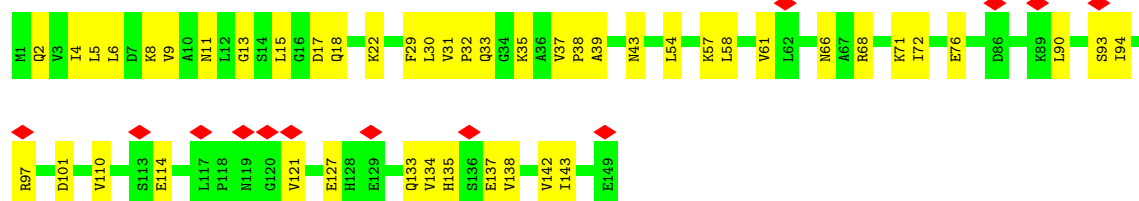
- Molecule 56: 50S ribosomal protein L6



- Molecule 57: 50S ribosomal protein L36

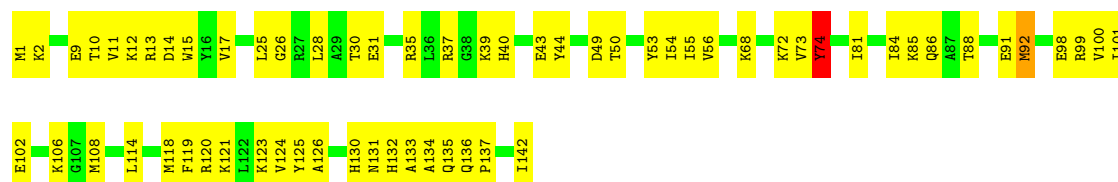


- Molecule 58: 50S ribosomal protein L9



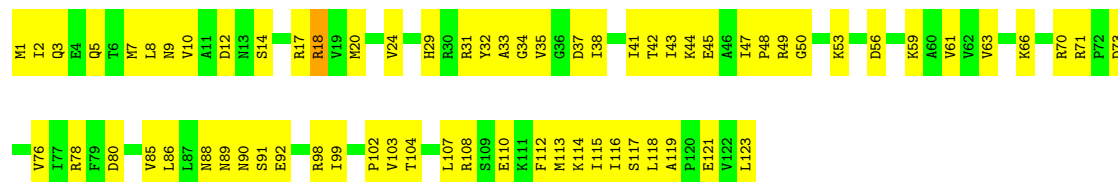
- Molecule 59: 50S ribosomal protein L13





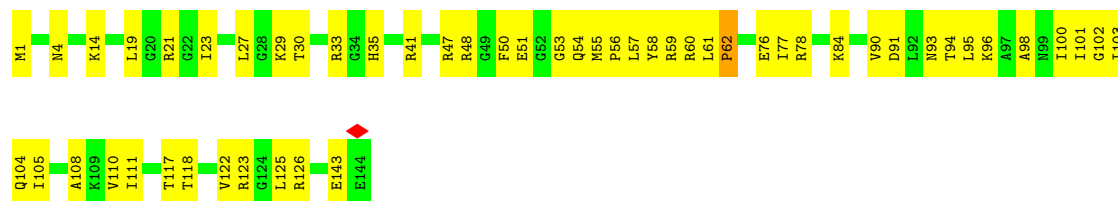
- Molecule 60: 50S ribosomal protein L14

Chain t: 45% 54%



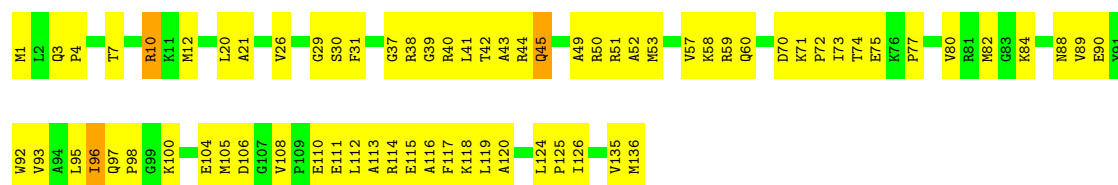
- Molecule 61: 50S ribosomal protein L15

Chain u: 63% 36%



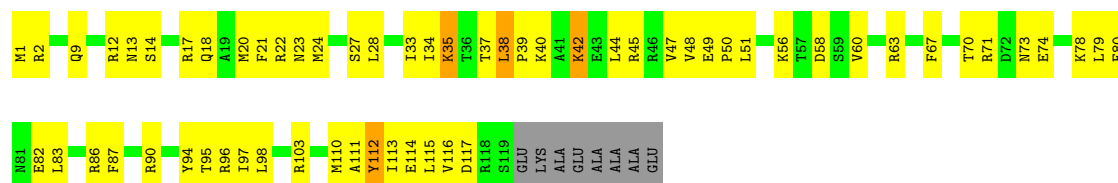
- Molecule 62: 50S ribosomal protein L16

Chain v: 49% 49%

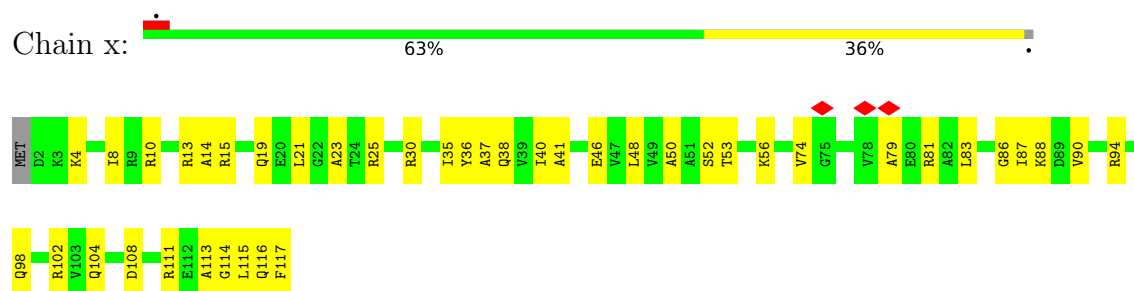


- Molecule 63: 50S ribosomal protein L17

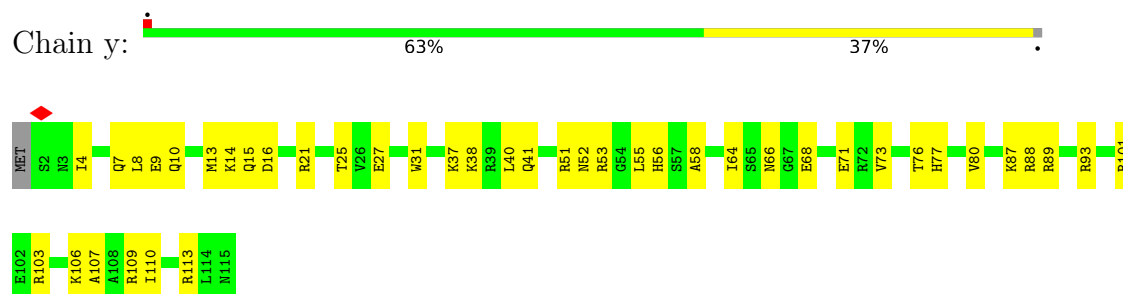
Chain w: 46% 45% 6%



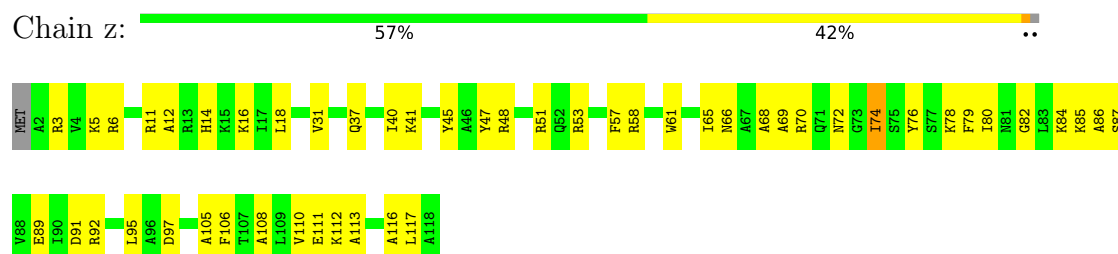
- Molecule 64: 50S ribosomal protein L18



- Molecule 65: 50S ribosomal protein L19



- Molecule 66: 50S ribosomal protein L20



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	18996	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TALOS ARCTICA	Depositor
Voltage (kV)	200	Depositor
Electron dose ($e^-/\text{\AA}^2$)	28	Depositor
Minimum defocus (nm)	1250	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.035	Depositor
Minimum map value	-0.007	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.002	Depositor
Recommended contour level	0.0055	Depositor
Map size (Å)	531.968, 531.968, 531.968	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.039, 1.039, 1.039	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

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	0	0.43	0/829	0.51	0/1107
2	1	0.60	0/864	0.63	0/1156
3	2	0.55	1/752 (0.1%)	0.67	0/1005
4	3	0.35	0/796	0.49	0/1062
5	4	0.57	0/766	0.63	0/1025
6	5	0.56	0/816	0.78	0/1259
7	6	0.57	0/783	0.78	0/1203
8	7	0.56	2/856 (0.2%)	0.88	4/1326 (0.3%)
9	9	0.37	0/1131	0.74	2/1524 (0.1%)
10	A	0.27	0/1810	0.58	0/2821
10	B	0.27	0/1810	0.58	0/2821
11	AA	0.38	0/10547	0.62	0/14232
12	AB	0.61	0/1317	1.22	18/1786 (1.0%)
13	AC	0.38	0/1718	0.62	0/2328
13	AD	0.36	0/2096	0.69	3/2854 (0.1%)
14	AE	0.39	0/10561	0.64	5/14258 (0.0%)
15	AF	0.30	0/652	0.61	0/879
16	AG	0.97	5/3897 (0.1%)	1.40	47/5273 (0.9%)
17	C	0.67	0/553	0.81	1/743 (0.1%)
18	D	0.29	0/36610	0.41	9/57091 (0.0%)
19	E	0.61	0/675	0.72	0/895
20	F	0.53	0/597	0.60	0/792
21	G	0.68	5/1791 (0.3%)	0.79	8/2413 (0.3%)
22	H	0.37	0/1746	0.81	0/2382
23	I	0.57	1/1663 (0.1%)	0.68	4/2241 (0.2%)
24	J	0.46	0/1665	0.58	0/2227
25	K	0.72	2/1165 (0.2%)	0.86	6/1568 (0.4%)
26	L	0.68	1/867 (0.1%)	0.79	1/1171 (0.1%)
27	M	0.56	0/1195	0.69	2/1602 (0.1%)
28	N	0.50	0/989	0.58	0/1326
29	O	0.65	3/1034 (0.3%)	0.79	3/1375 (0.2%)
30	P	0.48	0/800	0.66	0/1082

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
31	Q	0.72	2/893 (0.2%)	0.76	2/1205 (0.2%)
32	R	0.49	0/952	0.59	0/1274
33	S	0.52	0/817	0.61	0/1088
34	T	0.57	1/722 (0.1%)	0.68	0/964
35	U	0.41	0/659	0.53	0/884
36	V	0.48	0/657	0.63	0/881
37	W	0.56	1/680 (0.1%)	0.62	1/915 (0.1%)
38	X	0.45	0/909	0.72	1/1215 (0.1%)
39	Y	0.38	2/1046 (0.2%)	0.66	2/1410 (0.1%)
40	Z	0.13	0/227	0.40	0/304
41	a	0.30	0/69247	0.43	10/107985 (0.0%)
42	b	0.42	0/589	0.55	0/779
43	c	0.51	0/635	0.61	0/848
44	d	0.25	0/2872	0.37	0/4478
45	e	0.68	2/502 (0.4%)	0.65	1/667 (0.1%)
46	f	0.52	0/452	0.57	0/605
47	g	0.45	1/531 (0.2%)	0.64	0/709
48	h	0.50	1/2121 (0.0%)	0.58	0/2852
49	i	0.41	0/450	0.55	0/599
50	j	0.51	0/1586	0.57	1/2134 (0.0%)
51	k	0.45	0/433	0.63	0/576
52	l	0.51	1/1571 (0.1%)	0.62	0/2113
53	m	0.45	0/380	0.56	0/498
54	n	0.46	0/1434	0.66	1/1926 (0.1%)
55	o	0.51	0/513	0.71	1/676 (0.1%)
56	p	0.41	0/1333	0.62	2/1805 (0.1%)
57	q	0.46	0/303	0.64	0/397
58	r	0.28	0/1122	0.48	0/1515
59	s	0.70	2/1152 (0.2%)	0.74	2/1551 (0.1%)
60	t	0.52	0/955	0.75	3/1279 (0.2%)
61	u	0.43	0/1062	0.59	0/1413
62	v	0.60	1/1093 (0.1%)	0.77	3/1460 (0.2%)
63	w	0.83	3/964 (0.3%)	0.80	3/1289 (0.2%)
64	x	0.34	0/902	0.50	0/1209
65	y	0.41	0/929	0.54	0/1242
66	z	0.62	2/960 (0.2%)	0.62	0/1278
All	All	0.41	39/195004 (0.0%)	0.56	146/286850 (0.1%)

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
9	9	0	3
12	AB	0	2
13	AC	0	1
13	AD	0	2
14	AE	0	4
16	AG	0	6
21	G	0	1
22	H	0	5
23	I	0	1
25	K	0	2
29	O	0	1
38	X	0	1
39	Y	0	1
54	n	0	1
55	o	0	1
59	s	0	1
61	u	0	2
All	All	0	35

All (39) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
16	AG	429	LYS	C-N	13.86	1.51	1.33
63	w	35	LYS	CE-NZ	-12.79	1.10	1.49
29	O	80	ARG	CD-NE	-10.47	1.31	1.46
63	w	42	LYS	CD-CE	-9.41	1.24	1.52
25	K	45	ARG	CG-CD	7.76	1.75	1.52
66	z	74	ILE	CG1-CD1	7.61	1.81	1.51
8	7	42	G	C1'-N9	-7.57	1.36	1.48
21	G	19	GLN	CB-CG	-7.54	1.29	1.52
29	O	118	LEU	CG-CD2	-7.33	1.28	1.52
37	W	66	MET	CG-SD	-7.19	1.62	1.80
26	L	42	TRP	CB-CG	-7.18	1.27	1.50
59	s	74	TYR	CZ-OH	-7.10	1.23	1.38
45	e	46	VAL	CB-CG1	-7.10	1.29	1.52
8	7	2	U	C1'-N1	7.06	1.59	1.48
16	AG	246	ASP	C-N	7.04	1.50	1.33
3	2	5	GLU	CG-CD	-6.98	1.34	1.52
31	Q	106	ARG	CD-NE	-6.44	1.37	1.46
16	AG	355	ALA	N-CA	6.25	1.54	1.46
29	O	80	ARG	CZ-NH2	6.25	1.41	1.33
21	G	158	PRO	CA-C	-6.24	1.44	1.52
21	G	158	PRO	CG-CD	6.04	1.71	1.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	h	181	MET	CG-SD	-6.03	1.65	1.80
66	z	74	ILE	CB-CG2	-6.01	1.32	1.52
39	Y	5	GLN	CB-CG	-6.01	1.34	1.52
59	s	92	MET	CG-SD	-5.96	1.65	1.80
16	AG	355	ALA	CA-C	5.93	1.60	1.52
25	K	45	ARG	CD-NE	5.92	1.54	1.46
52	l	6	LYS	CE-NZ	-5.83	1.31	1.49
21	G	157	LEU	C-O	-5.77	1.15	1.24
34	T	3	LEU	CG-CD2	-5.62	1.33	1.52
47	g	62	LYS	CE-NZ	-5.53	1.32	1.49
39	Y	5	GLN	CA-C	-5.50	1.45	1.52
45	e	25	GLN	CB-CG	-5.32	1.36	1.52
23	I	134	MET	CB-CG	-5.31	1.36	1.52
16	AG	99	SER	N-CA	5.26	1.49	1.46
31	Q	119	ASN	CG-ND2	5.17	1.44	1.33
63	w	38	LEU	N-CA	-5.15	1.42	1.46
21	G	19	GLN	CD-NE2	-5.14	1.22	1.33
62	v	45	GLN	CB-CG	-5.08	1.37	1.52

All (146) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
16	AG	104	ARG	CA-C-N	17.90	154.20	121.97
16	AG	104	ARG	C-N-CA	17.90	154.20	121.97
16	AG	246	ASP	CA-C-N	14.51	137.98	119.84
16	AG	246	ASP	C-N-CA	14.51	137.98	119.84
16	AG	354	ALA	O-C-N	-13.66	107.34	122.09
16	AG	429	LYS	CA-C-N	11.47	132.19	119.92
16	AG	429	LYS	C-N-CA	11.47	132.19	119.92
25	K	71	MET	CG-SD-CE	-11.33	75.97	100.90
21	G	158	PRO	N-CD-CG	-10.99	86.72	103.20
16	AG	24	PHE	CA-CB-CG	-10.56	103.24	113.80
12	AB	141	LEU	CA-C-N	-10.53	106.36	122.16
12	AB	141	LEU	C-N-CA	-10.53	106.36	122.16
16	AG	105	ILE	CA-C-N	10.23	136.98	120.60
16	AG	105	ILE	C-N-CA	10.23	136.98	120.60
26	L	102	MET	CA-CB-CG	-9.61	94.88	114.10
59	s	92	MET	CG-SD-CE	-9.37	80.28	100.90
21	G	113	ARG	NE-CZ-NH2	9.13	127.42	119.20
16	AG	103	ASP	CA-CB-CG	9.11	121.71	112.60
8	7	1	A	O3'-P-O5'	-8.65	91.02	104.00
25	K	78	ASN	N-CA-CB	-8.49	96.14	110.49

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	AB	129	ILE	N-CA-C	8.40	120.20	107.77
8	7	4	U	C2'-C3'-O3'	8.27	121.90	109.50
16	AG	292	ASP	O-C-N	-8.26	107.40	122.44
16	AG	35	THR	CA-CB-OG1	-8.25	97.23	109.60
16	AG	109	THR	CB-CA-C	8.21	124.80	110.85
60	t	18	ARG	NE-CZ-NH2	8.07	126.46	119.20
16	AG	108	GLN	N-CA-CB	8.02	123.47	110.40
12	AB	128	ALA	CA-C-N	-7.86	111.82	122.98
12	AB	128	ALA	C-N-CA	-7.86	111.82	122.98
55	o	30	ARG	NE-CZ-NH1	-7.59	113.91	121.50
17	C	73	ARG	NE-CZ-NH2	7.55	126.00	119.20
12	AB	159	PHE	CA-C-N	7.47	135.80	121.54
12	AB	159	PHE	C-N-CA	7.47	135.80	121.54
16	AG	33	THR	CA-C-N	7.46	135.78	121.54
16	AG	33	THR	C-N-CA	7.46	135.78	121.54
16	AG	102	PHE	CA-C-N	7.45	135.77	121.54
16	AG	102	PHE	C-N-CA	7.45	135.77	121.54
29	O	80	ARG	CG-CD-NE	7.41	128.30	112.00
63	w	112	TYR	CZ-CE2-CD2	-7.37	106.34	119.60
16	AG	108	GLN	N-CA-C	-7.31	103.82	112.89
16	AG	426	GLY	O-C-N	-7.24	113.29	122.70
23	I	134	MET	CB-CG-SD	-7.19	91.12	112.70
21	G	158	PRO	CA-N-CD	-7.06	102.12	112.00
62	v	96	ILE	CA-C-N	7.05	132.31	121.03
62	v	96	ILE	C-N-CA	7.05	132.31	121.03
60	t	18	ARG	NE-CZ-NH1	-7.04	114.46	121.50
21	G	19	GLN	CA-CB-CG	7.02	128.15	114.10
41	a	2334	U	OP2-P-O3'	-6.95	87.16	108.00
29	O	80	ARG	CB-CG-CD	-6.92	95.37	111.30
12	AB	159	PHE	CB-CA-C	6.84	124.04	110.42
16	AG	102	PHE	N-CA-C	6.78	125.24	110.80
18	D	37	U	N3-C4-O4	-6.64	99.49	119.40
16	AG	104	ARG	O-C-N	6.62	131.40	122.59
63	w	112	TYR	OH-CZ-CE2	-6.57	100.20	119.90
18	D	718	A	P-O5'-C5'	-6.52	111.12	120.90
31	Q	110	ILE	N-CA-C	-6.50	99.00	108.11
16	AG	106	THR	OG1-CB-CG2	-6.49	96.33	109.30
13	AD	289	LEU	CA-C-N	-6.45	109.00	121.58
13	AD	289	LEU	C-N-CA	-6.45	109.00	121.58
18	D	827	U	N3-C4-O4	-6.42	100.15	119.40
16	AG	355	ALA	CB-CA-C	6.40	123.16	110.42
41	a	1019	U	N3-C4-O4	-6.38	100.26	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
16	AG	103	ASP	CA-C-N	6.36	133.69	121.54
16	AG	103	ASP	C-N-CA	6.36	133.69	121.54
18	D	1358	U	N3-C4-O4	-6.34	100.37	119.40
37	W	40	ILE	CA-CB-CG1	-6.33	99.63	110.40
12	AB	99	TYR	CA-C-N	6.32	137.21	121.80
12	AB	99	TYR	C-N-CA	6.32	137.21	121.80
16	AG	109	THR	N-CA-C	-6.32	104.48	111.36
59	s	92	MET	CB-CG-SD	-6.31	93.76	112.70
16	AG	403	VAL	N-CA-C	-6.22	104.22	111.00
41	a	1019	U	C5-C4-O4	6.15	144.34	125.90
16	AG	108	GLN	CB-CA-C	-6.09	97.25	109.99
12	AB	106	ASP	CA-C-N	6.05	127.40	119.84
12	AB	106	ASP	C-N-CA	6.05	127.40	119.84
16	AG	71	PRO	N-CA-C	6.03	122.55	113.81
16	AG	404	GLU	N-CA-C	-6.02	105.03	112.38
16	AG	33	THR	CA-CB-CG2	6.00	120.71	110.50
29	O	103	PHE	CD1-CE1-CZ	-6.00	109.20	120.00
41	a	1082	U	N3-C4-O4	-5.94	101.59	119.40
41	a	2613	U	N3-C4-O4	-5.92	101.66	119.40
41	a	1141	U	C5-C4-O4	5.91	143.64	125.90
18	D	37	U	C5-C4-O4	5.88	143.55	125.90
21	G	157	LEU	C-N-CD	-5.88	100.91	125.00
54	n	176	PRO	N-CA-C	5.86	121.23	114.20
18	D	1358	U	C5-C4-O4	5.85	143.45	125.90
23	I	168	TYR	N-CA-CB	5.82	120.19	110.59
38	X	81	MET	CG-SD-CE	-5.80	88.13	100.90
8	7	30	G	C2'-C3'-O3'	5.80	122.40	113.70
18	D	884	U	N3-C4-O4	-5.77	102.08	119.40
14	AE	853	THR	CA-C-N	5.77	131.04	122.74
14	AE	853	THR	C-N-CA	5.77	131.04	122.74
27	M	55	GLY	CA-C-N	5.75	132.53	121.54
27	M	55	GLY	C-N-CA	5.75	132.53	121.54
21	G	154	MET	CA-CB-CG	-5.74	102.62	114.10
18	D	827	U	C5-C4-O4	5.74	143.12	125.90
16	AG	66	ASP	N-CA-C	-5.74	104.02	111.71
16	AG	220	VAL	N-CA-C	-5.70	108.30	113.71
9	9	130	PRO	CA-N-CD	-5.67	104.06	112.00
23	I	134	MET	CG-SD-CE	-5.67	88.44	100.90
25	K	45	ARG	CB-CG-CD	-5.64	98.33	111.30
16	AG	101	THR	CA-CB-OG1	5.64	118.06	109.60
21	G	154	MET	CG-SD-CE	-5.62	88.53	100.90
25	K	45	ARG	CA-C-N	5.61	130.31	122.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	K	45	ARG	C-N-CA	5.61	130.31	122.23
12	AB	107	PRO	O-C-N	5.56	130.15	122.64
12	AB	151	LYS	CA-C-N	5.55	132.14	121.54
12	AB	151	LYS	C-N-CA	5.55	132.14	121.54
60	t	18	ARG	CG-CD-NE	-5.55	99.79	112.00
41	a	1141	U	N3-C4-O4	-5.54	102.77	119.40
50	j	11	MET	CB-CG-SD	-5.52	96.13	112.70
16	AG	74	GLU	CB-CA-C	-5.47	101.72	110.14
16	AG	354	ALA	CA-C-N	-5.46	111.12	121.54
16	AG	354	ALA	C-N-CA	-5.46	111.12	121.54
14	AE	1184	ASP	N-CA-C	5.45	121.85	109.81
9	9	129	LEU	C-N-CD	-5.40	102.87	125.00
62	v	10	ARG	NE-CZ-NH1	-5.38	116.12	121.50
16	AG	355	ALA	N-CA-CB	5.37	119.57	110.49
31	Q	106	ARG	NE-CZ-NH1	-5.37	116.13	121.50
63	w	38	LEU	N-CA-C	-5.33	105.21	112.35
39	Y	5	GLN	CB-CA-C	-5.28	99.90	110.42
16	AG	105	ILE	N-CA-CB	-5.28	102.52	111.23
8	7	10	U	C2'-C3'-O3'	5.26	117.40	109.50
25	K	45	ARG	O-C-N	-5.25	116.81	123.01
56	p	46	ALA	CA-C-N	5.25	131.56	121.54
56	p	46	ALA	C-N-CA	5.25	131.56	121.54
16	AG	107	THR	CA-C-N	-5.22	112.00	121.14
16	AG	107	THR	C-N-CA	-5.22	112.00	121.14
41	a	2613	U	C5-C4-O4	5.22	141.57	125.90
16	AG	114	ILE	N-CA-C	-5.18	105.44	110.42
21	G	158	PRO	N-CA-CB	-5.17	97.95	103.38
23	I	170	GLU	CB-CG-CD	5.16	121.37	112.60
12	AB	145	LEU	O-C-N	5.16	124.64	120.83
39	Y	5	GLN	CA-CB-CG	5.14	124.38	114.10
41	a	2602	A	C4'-C3'-O3'	5.14	117.11	109.40
16	AG	65	VAL	CA-C-N	5.11	131.71	121.81
16	AG	65	VAL	C-N-CA	5.11	131.71	121.81
41	a	2334	U	C2'-C3'-O3'	-5.09	101.86	109.50
12	AB	138	ARG	CA-C-N	5.09	131.25	121.54
12	AB	138	ARG	C-N-CA	5.09	131.25	121.54
45	e	25	GLN	CG-CD-NE2	-5.09	108.77	116.40
16	AG	105	ILE	O-C-N	5.08	128.93	122.57
18	D	884	U	C5-C4-O4	5.08	141.13	125.90
14	AE	709	ARG	CA-C-N	5.03	135.35	126.45
14	AE	709	ARG	C-N-CA	5.03	135.35	126.45
13	AD	289	LEU	CA-C-O	-5.01	113.34	120.51

There are no chirality outliers.

All (35) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
9	9	107	GLU	Peptide
9	9	79	PRO	Peptide
9	9	92	ALA	Peptide
12	AB	140	MET	Peptide
12	AB	151	LYS	Peptide
13	AC	192	VAL	Peptide
13	AD	20	SER	Peptide
13	AD	284	ARG	Mainchain
14	AE	1326	GLN	Peptide
14	AE	1344	LEU	Peptide
14	AE	313	GLY	Peptide
14	AE	416	ILE	Peptide
16	AG	102	PHE	Peptide
16	AG	104	ARG	Peptide,Mainchain
16	AG	11	ALA	Peptide
16	AG	292	ASP	Mainchain
16	AG	426	GLY	Mainchain
21	G	19	GLN	Sidechain
22	H	124	LEU	Peptide
22	H	171	ARG	Peptide
22	H	274	TYR	Peptide
22	H	81	GLU	Peptide
22	H	82	THR	Peptide
23	I	167	TRP	Mainchain
25	K	45	ARG	Mainchain
25	K	77	ASN	Peptide
29	O	12	ARG	Peptide
38	X	65	VAL	Peptide
39	Y	5	GLN	Peptide
54	n	176	PRO	Peptide
55	o	31	HIS	Peptide
59	s	74	TYR	Sidechain
61	u	35	HIS	Peptide
61	u	62	PRO	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	0	816	839	839	54	0
2	1	857	922	922	69	0
3	2	746	811	811	59	0
4	3	788	844	844	46	0
5	4	753	780	780	85	0
6	5	726	0	392	110	0
7	6	703	0	396	34	0
8	7	772	0	384	124	0
9	9	1117	0	1155	260	0
10	A	1620	826	827	109	0
10	B	1620	814	827	110	0
11	AA	10381	0	10389	266	0
12	AB	1286	0	1302	442	0
13	AC	1698	0	1718	12	0
13	AD	2078	0	1891	41	0
14	AE	10404	0	10626	263	0
15	AF	650	0	658	14	0
16	AG	3852	0	3827	775	0
17	C	544	559	560	106	0
18	D	32703	16423	16453	734	0
19	E	669	719	719	81	0
20	F	589	629	629	59	0
21	G	1760	1785	1787	154	0
22	H	1730	1454	1455	163	0
23	I	1636	1710	1710	154	0
24	J	1643	1707	1707	86	0
25	K	1152	1196	1195	127	0
26	L	848	846	846	105	0
27	M	1181	1235	1238	122	0
28	N	979	1031	1031	93	0
29	O	1022	1070	1070	92	0
30	P	790	831	831	111	0
31	Q	877	887	887	97	0
32	R	939	1001	1001	93	0
33	S	805	844	844	76	0
34	T	714	734	734	94	0
35	U	649	666	666	62	0
36	V	648	691	691	69	0
37	W	663	688	688	46	0
38	X	900	964	965	109	0
39	Y	1032	0	1088	214	0
40	Z	227	0	237	31	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
41	a	61841	31077	31120	1312	0
42	b	582	599	599	47	0
43	c	625	652	652	36	0
44	d	2569	1301	1301	41	0
45	e	501	531	531	43	0
46	f	448	488	488	38	0
47	g	522	520	520	68	0
48	h	2082	2154	2154	137	0
49	i	444	459	458	49	0
50	j	1565	1617	1616	120	0
51	k	426	464	464	43	0
52	l	1552	1619	1619	125	0
53	m	377	418	418	32	0
54	n	1410	1443	1444	155	0
55	o	504	572	572	51	0
56	p	1313	1358	1358	72	0
57	q	302	343	343	25	0
58	r	1111	1148	1148	53	0
59	s	1129	1162	1162	124	0
60	t	946	1023	1023	105	0
61	u	1053	1129	1129	77	0
62	v	1074	1157	1157	121	0
63	w	951	994	994	100	0
64	x	892	923	923	47	0
65	y	917	962	962	51	0
66	z	947	1020	1019	80	0
67	AE	1	0	0	0	0
68	AE	2	0	0	3	0
All	All	181653	98639	132794	7661	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 24.

All (7661) 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)
16:AG:425:LEU:CD2	16:AG:429:LYS:HE2	1.21	1.64
12:AB:145:LEU:HD23	30:P:88:MET:CA	1.24	1.59
6:5:11:DA:C5'	12:AB:67:THR:HG22	1.20	1.59
16:AG:287:ALA:CA	16:AG:331:LEU:HD12	1.18	1.58
12:AB:145:LEU:HG	30:P:88:MET:CG	1.28	1.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AE:79:LYS:HA	14:AE:81:ARG:CZ	1.26	1.58
6:5:9:DG:H5'	11:AA:473:ARG:CB	1.29	1.58
25:K:45:ARG:CD	25:K:45:ARG:CG	1.75	1.57
12:AB:145:LEU:CD2	30:P:88:MET:CB	1.79	1.57
6:5:9:DG:C5'	11:AA:473:ARG:HB3	1.34	1.56
12:AB:141:LEU:CB	12:AB:143:LEU:HD12	1.32	1.55
16:AG:393:LEU:CB	16:AG:398:LEU:CD2	1.83	1.54
16:AG:168:LEU:CD2	16:AG:231:GLY:HA3	1.34	1.54
6:5:10:DT:C7	11:AA:62:TYR:CD2	1.84	1.53
12:AB:118:ILE:CG2	12:AB:141:LEU:HD11	1.09	1.53
66:z:74:ILE:CG1	66:z:74:ILE:CD1	1.81	1.52
6:5:10:DT:C5	11:AA:62:TYR:CD2	1.95	1.52
12:AB:145:LEU:HD23	30:P:88:MET:CB	1.07	1.51
16:AG:363:LEU:CD2	16:AG:410:ALA:H	1.24	1.50
7:6:23:DC:C5'	14:AE:259:ARG:HH12	1.21	1.49
16:AG:287:ALA:HA	16:AG:331:LEU:CD1	1.39	1.49
16:AG:425:LEU:CA	16:AG:429:LYS:HE3	1.40	1.49
14:AE:79:LYS:HA	14:AE:81:ARG:NH1	1.20	1.48
12:AB:145:LEU:CG	30:P:88:MET:CG	1.91	1.47
14:AE:72:CYS:SG	68:AE:1502:ZN:ZN	1.03	1.47
16:AG:287:ALA:CB	16:AG:331:LEU:HD12	1.41	1.46
6:5:10:DT:C6	11:AA:62:TYR:CE2	2.00	1.46
12:AB:141:LEU:HB3	12:AB:143:LEU:CD1	1.42	1.45
12:AB:145:LEU:CG	30:P:88:MET:HG3	1.46	1.45
6:5:10:DT:C5	11:AA:62:TYR:CE2	2.04	1.45
6:5:11:DA:P	12:AB:68:THR:HA	1.58	1.42
16:AG:363:LEU:CD2	16:AG:410:ALA:N	1.82	1.42
16:AG:425:LEU:HD23	16:AG:429:LYS:CE	1.45	1.42
12:AB:81:PHE:CD2	14:AE:293:ARG:NH1	1.77	1.41
16:AG:393:LEU:CD2	16:AG:398:LEU:CD2	1.99	1.41
12:AB:115:LYS:NZ	12:AB:129:ILE:CG2	1.82	1.39
16:AG:187:ARG:HB3	16:AG:188:PRO:CD	1.44	1.39
16:AG:168:LEU:HD22	16:AG:231:GLY:CA	1.49	1.38
12:AB:81:PHE:CE1	14:AE:293:ARG:CB	1.92	1.38
16:AG:168:LEU:CD2	16:AG:231:GLY:CA	1.98	1.38
12:AB:118:ILE:CG2	12:AB:141:LEU:CD1	2.02	1.37
6:5:9:DG:OP2	11:AA:473:ARG:CB	1.73	1.36
11:AA:380:ALA:N	12:AB:65:HIS:CE1	1.84	1.36
12:AB:115:LYS:NZ	12:AB:129:ILE:HG21	1.05	1.36
16:AG:437:LEU:HD21	16:AG:456:LEU:CD1	1.54	1.36
12:AB:138:ARG:HG3	12:AB:154:VAL:C	1.51	1.35

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AE:79:LYS:CA	14:AE:81:ARG:CZ	2.06	1.34
16:AG:393:LEU:CA	16:AG:398:LEU:CD2	2.05	1.34
12:AB:147:ASN:CG	30:P:100:ILE:HG23	1.52	1.33
16:AG:385:ALA:CB	16:AG:411:LYS:HE3	1.56	1.33
16:AG:434:LEU:CD2	16:AG:456:LEU:HA	1.58	1.33
12:AB:118:ILE:HG23	12:AB:141:LEU:CD1	1.59	1.32
12:AB:147:ASN:OD1	30:P:100:ILE:CG2	1.75	1.32
14:AE:79:LYS:CA	14:AE:81:ARG:NH1	1.90	1.32
12:AB:152:HIS:CE1	12:AB:159:PHE:HD2	1.47	1.32
16:AG:393:LEU:CD2	16:AG:398:LEU:HD21	1.57	1.32
16:AG:387:VAL:HG12	16:AG:388:PRO:CD	1.57	1.31
12:AB:147:ASN:OD1	30:P:100:ILE:HG22	1.26	1.31
11:AA:859:GLU:OE2	16:AG:38:LYS:CB	1.77	1.30
16:AG:434:LEU:HD22	16:AG:459:LEU:CD1	1.58	1.30
16:AG:448:LEU:HD21	16:AG:473:LEU:CD1	1.61	1.30
11:AA:377:THR:OG1	12:AB:62:GLU:CB	1.80	1.30
14:AE:287:ALA:CB	14:AE:292:VAL:HG13	1.61	1.30
11:AA:481:LEU:CD2	12:AB:16:ARG:CD	2.02	1.29
12:AB:82:GLY:CA	14:AE:142:GLU:HB2	1.62	1.29
16:AG:363:LEU:HD23	16:AG:410:ALA:N	1.38	1.29
16:AG:393:LEU:HB3	16:AG:398:LEU:CD2	1.51	1.29
12:AB:115:LYS:CE	12:AB:129:ILE:HG21	1.61	1.29
16:AG:393:LEU:CA	16:AG:398:LEU:HD22	1.59	1.29
12:AB:81:PHE:HA	14:AE:141:PHE:O	1.27	1.29
11:AA:859:GLU:OE2	16:AG:38:LYS:HB2	1.20	1.29
12:AB:145:LEU:CD2	30:P:88:MET:HB2	1.46	1.28
12:AB:51:PHE:HE2	14:AE:288:PRO:CG	1.44	1.28
16:AG:393:LEU:CG	16:AG:398:LEU:HD21	1.63	1.28
6:5:10:DT:H1'	12:AB:71:ALA:N	1.21	1.28
6:5:11:DA:C5'	12:AB:67:THR:CG2	2.12	1.28
11:AA:377:THR:OG1	12:AB:62:GLU:HB3	1.20	1.27
11:AA:387:ASN:CG	11:AA:394:ARG:NH1	1.92	1.27
12:AB:147:ASN:CG	30:P:100:ILE:CG2	2.06	1.27
8:7:22:U:C5'	23:I:80:LYS:HG3	1.63	1.27
6:5:11:DA:OP2	12:AB:68:THR:CA	1.81	1.26
12:AB:115:LYS:CD	12:AB:129:ILE:HG13	1.66	1.26
16:AG:387:VAL:CG1	16:AG:388:PRO:HD2	1.67	1.25
16:AG:434:LEU:HA	16:AG:456:LEU:CD2	1.64	1.25
6:5:11:DA:C3'	12:AB:67:THR:HG21	1.63	1.25
12:AB:138:ARG:HG3	12:AB:154:VAL:O	1.20	1.25
16:AG:362:TYR:O	16:AG:413:ALA:HB2	1.35	1.25

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:5:10:DT:C1'	12:AB:71:ALA:H	1.46	1.25
12:AB:152:HIS:CD2	12:AB:159:PHE:CE2	2.23	1.25
16:AG:353:HIS:O	16:AG:356:ILE:HG23	1.13	1.25
8:7:11:U:H4'	25:K:20:ARG:NH2	1.50	1.24
16:AG:355:ALA:HA	16:AG:382:GLU:OE2	1.37	1.24
16:AG:425:LEU:HA	16:AG:429:LYS:CE	1.64	1.24
14:AE:288:PRO:HD2	14:AE:291:ILE:CG2	1.66	1.24
16:AG:287:ALA:CA	16:AG:331:LEU:CD1	2.02	1.24
16:AG:355:ALA:CB	16:AG:382:GLU:CD	2.10	1.24
16:AG:363:LEU:HD23	16:AG:409:ARG:C	1.63	1.23
6:5:9:DG:C5'	11:AA:473:ARG:CB	2.02	1.23
8:7:21:U:H5	23:I:80:LYS:O	1.17	1.23
16:AG:287:ALA:CB	16:AG:331:LEU:CD1	2.16	1.23
12:AB:81:PHE:CE1	14:AE:293:ARG:HB3	1.32	1.22
16:AG:353:HIS:C	16:AG:356:ILE:HG23	1.62	1.22
16:AG:425:LEU:CG	16:AG:429:LYS:HE2	1.69	1.22
12:AB:51:PHE:CE2	14:AE:288:PRO:CG	2.22	1.22
12:AB:138:ARG:CG	12:AB:154:VAL:O	1.87	1.22
16:AG:123:ARG:HH12	16:AG:191:ARG:CA	1.36	1.21
6:5:10:DT:H71	11:AA:62:TYR:CG	1.75	1.21
12:AB:145:LEU:CD2	30:P:88:MET:CG	2.14	1.21
16:AG:433:ASP:O	16:AG:456:LEU:HD11	1.35	1.21
6:5:11:DA:OP2	12:AB:68:THR:N	1.73	1.20
16:AG:123:ARG:NH1	16:AG:191:ARG:C	1.98	1.20
16:AG:355:ALA:HB2	16:AG:382:GLU:OE1	1.40	1.20
16:AG:187:ARG:HB3	16:AG:188:PRO:HD2	1.21	1.19
6:5:11:DA:OP2	12:AB:68:THR:HA	1.36	1.18
16:AG:393:LEU:HA	16:AG:398:LEU:CD2	1.69	1.18
7:6:25:DT:OP1	11:AA:496:LYS:CA	1.80	1.18
16:AG:442:ARG:O	16:AG:446:PHE:CD2	1.95	1.18
6:5:9:DG:C5'	11:AA:473:ARG:CG	2.22	1.18
56:p:159:GLY:O	56:p:163:ARG:NH1	1.77	1.18
8:7:22:U:H5''	23:I:80:LYS:CG	1.71	1.17
16:AG:434:LEU:HD21	16:AG:456:LEU:HA	1.26	1.17
12:AB:152:HIS:CE1	12:AB:159:PHE:CD2	2.32	1.17
16:AG:381:LEU:HA	16:AG:384:LEU:HD12	1.21	1.17
12:AB:152:HIS:NE2	12:AB:159:PHE:CE2	2.12	1.17
12:AB:115:LYS:HD3	12:AB:129:ILE:CD1	1.72	1.17
7:6:23:DC:C5'	14:AE:259:ARG:NH1	2.05	1.16
16:AG:393:LEU:HD22	16:AG:398:LEU:CD1	1.73	1.16
16:AG:437:LEU:CD2	16:AG:456:LEU:HD13	1.74	1.16

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AB:145:LEU:CD2	30:P:88:MET:CA	2.16	1.15
16:AG:353:HIS:O	16:AG:357:ASP:N	1.77	1.15
8:7:21:U:C5	23:I:80:LYS:O	1.99	1.15
12:AB:138:ARG:HA	12:AB:154:VAL:O	1.44	1.15
12:AB:145:LEU:HD21	30:P:88:MET:HB2	1.21	1.15
58:r:135:HIS:ND1	58:r:137:GLU:OE1	1.77	1.15
6:5:10:DT:H73	11:AA:62:TYR:CD2	1.77	1.15
12:AB:152:HIS:CD2	12:AB:159:PHE:CD2	2.34	1.14
16:AG:355:ALA:HA	16:AG:382:GLU:CD	1.71	1.14
16:AG:425:LEU:CD2	16:AG:429:LYS:CE	2.13	1.14
12:AB:145:LEU:CG	30:P:88:MET:HG2	1.76	1.14
12:AB:35:LEU:HA	12:AB:106:ASP:OD1	1.47	1.14
26:L:9:MET:HE1	26:L:85:ILE:HB	1.17	1.14
10:A:76:A:O2'	41:a:2394:C:N3	1.81	1.14
6:5:9:DG:OP2	11:AA:473:ARG:HB2	0.97	1.13
6:5:10:DT:O3'	12:AB:67:THR:O	1.67	1.13
13:AD:307:LEU:CB	16:AG:71:PRO:HB3	1.79	1.13
16:AG:123:ARG:NH1	16:AG:191:ARG:O	1.80	1.13
16:AG:422:GLU:HA	16:AG:426:GLY:CA	1.79	1.13
6:5:9:DG:H5'	11:AA:473:ARG:CG	1.76	1.13
16:AG:285:ILE:CG1	16:AG:293:VAL:HG11	1.79	1.12
16:AG:393:LEU:HD22	16:AG:398:LEU:CD2	1.71	1.12
16:AG:424:SER:O	16:AG:429:LYS:HG2	1.47	1.13
41:a:2335:A:OP2	64:x:13:ARG:NE	1.81	1.12
16:AG:355:ALA:HB1	16:AG:382:GLU:CG	1.77	1.12
37:W:40:ILE:HD13	37:W:66:MET:SD	1.89	1.12
38:X:81:MET:HE1	38:X:92:ARG:HB3	1.20	1.12
11:AA:858:GLY:HA3	16:AG:37:LYS:HG2	1.23	1.12
14:AE:287:ALA:HB2	14:AE:292:VAL:CG1	1.78	1.12
10:B:75:C:OP2	41:a:2602:A:O2'	1.68	1.12
12:AB:54:TYR:CE2	14:AE:291:ILE:HG23	1.84	1.12
12:AB:102:LYS:CE	14:AE:285:LEU:HG	1.79	1.12
16:AG:425:LEU:HA	16:AG:429:LYS:CG	1.80	1.11
16:AG:353:HIS:O	16:AG:356:ILE:CG2	1.98	1.11
16:AG:393:LEU:CD2	16:AG:398:LEU:CD1	2.26	1.11
7:6:25:DT:C3'	11:AA:496:LYS:HG3	1.74	1.11
12:AB:152:HIS:NE2	12:AB:159:PHE:CD2	2.19	1.11
16:AG:285:ILE:HG23	16:AG:293:VAL:HG12	1.25	1.11
16:AG:393:LEU:HB3	16:AG:398:LEU:HD23	1.26	1.11
58:r:135:HIS:HD1	58:r:137:GLU:CD	1.59	1.11
12:AB:82:GLY:HA2	14:AE:142:GLU:HB2	1.13	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:V:7:THR:OG1	36:V:60:GLU:OE2	1.66	1.11
6:5:10:DT:C7	11:AA:62:TYR:CG	2.31	1.10
12:AB:118:ILE:HG21	12:AB:141:LEU:HD11	1.18	1.10
39:Y:96:LYS:HE3	39:Y:136:GLY:HA3	1.29	1.10
46:f:4:THR:OG1	46:f:37:GLU:OE2	1.68	1.10
7:6:23:DC:H5''	14:AE:259:ARG:HH12	1.14	1.10
12:AB:115:LYS:HA	12:AB:129:ILE:HD12	1.28	1.10
16:AG:243:LYS:NZ	25:K:69:ARG:HD3	1.65	1.10
16:AG:393:LEU:HD22	16:AG:398:LEU:HD11	1.28	1.10
16:AG:434:LEU:CD2	16:AG:459:LEU:HD12	1.81	1.10
14:AE:79:LYS:HA	14:AE:81:ARG:NH2	1.66	1.10
16:AG:434:LEU:HD23	16:AG:456:LEU:HD23	1.10	1.10
12:AB:51:PHE:CZ	14:AE:288:PRO:HD3	1.87	1.09
8:7:11:U:C4'	25:K:20:ARG:NH2	2.16	1.09
11:AA:387:ASN:CG	11:AA:394:ARG:HH11	1.55	1.09
16:AG:279:ASN:OD1	16:AG:280:PRO:HD3	1.50	1.09
11:AA:469:VAL:O	11:AA:473:ARG:HG2	1.53	1.09
16:AG:123:ARG:HH12	16:AG:191:ARG:C	1.57	1.09
16:AG:451:ARG:NH1	16:AG:467:LEU:HA	1.68	1.09
12:AB:28:CYS:HA	12:AB:56:PHE:O	1.52	1.09
39:Y:5:GLN:HG2	39:Y:61:TYR:CE1	1.87	1.09
16:AG:363:LEU:HD21	16:AG:410:ALA:H	0.94	1.08
16:AG:385:ALA:HB1	16:AG:411:LYS:HE3	1.35	1.08
61:u:122:VAL:HG12	61:u:125:LEU:HD21	1.35	1.08
11:AA:859:GLU:OE2	16:AG:38:LYS:CA	2.02	1.08
16:AG:187:ARG:HB3	16:AG:188:PRO:HD3	1.32	1.08
16:AG:430:PRO:HG2	16:AG:435:LEU:HD21	1.29	1.08
16:AG:451:ARG:HH12	16:AG:467:LEU:C	1.62	1.08
6:5:9:DG:H5'	11:AA:473:ARG:HG3	1.09	1.08
16:AG:181:GLY:HA2	16:AG:204:MET:SD	1.92	1.08
16:AG:434:LEU:HA	16:AG:456:LEU:HD21	1.25	1.08
53:m:22:MET:O	53:m:28:ARG:NH1	1.87	1.08
6:5:9:DG:C5'	11:AA:473:ARG:HG3	1.82	1.07
12:AB:115:LYS:HD2	12:AB:129:ILE:HG13	1.13	1.07
14:AE:287:ALA:HB2	14:AE:292:VAL:HG13	1.08	1.07
16:AG:302:LYS:H	16:AG:302:LYS:HE3	1.16	1.07
12:AB:115:LYS:CD	12:AB:129:ILE:CG1	2.33	1.06
18:D:1309:G:OP2	38:X:98:ARG:NE	1.88	1.06
6:5:11:DA:H5'	12:AB:67:THR:HG22	1.13	1.06
16:AG:434:LEU:CD2	16:AG:456:LEU:CA	2.33	1.06
9:9:50:VAL:HG22	39:Y:119:ALA:HB3	1.33	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AB:141:LEU:CB	12:AB:143:LEU:CD1	2.14	1.06
14:AE:387:LEU:HD21	16:AG:147:ARG:HG3	1.31	1.06
16:AG:365:ILE:HD13	16:AG:406:LEU:CD2	1.85	1.06
16:AG:365:ILE:HD13	16:AG:406:LEU:HD22	1.37	1.06
16:AG:393:LEU:CB	16:AG:398:LEU:HD21	1.58	1.06
16:AG:422:GLU:HA	16:AG:426:GLY:HA3	1.33	1.06
7:6:23:DC:O5'	14:AE:259:ARG:NH1	1.87	1.06
9:9:46:ARG:HG3	9:9:94:ARG:HH21	1.12	1.06
11:AA:859:GLU:OE2	16:AG:38:LYS:N	1.86	1.06
14:AE:288:PRO:HD2	14:AE:291:ILE:HG21	1.10	1.06
16:AG:385:ALA:CB	16:AG:411:LYS:CE	2.33	1.06
12:AB:81:PHE:CE2	14:AE:293:ARG:NH1	1.88	1.05
12:AB:82:GLY:HA2	14:AE:142:GLU:CB	1.85	1.05
16:AG:393:LEU:HD22	16:AG:398:LEU:HD21	1.26	1.05
12:AB:115:LYS:HD3	12:AB:129:ILE:CG1	1.87	1.05
16:AG:285:ILE:HG13	16:AG:293:VAL:CG1	1.86	1.05
12:AB:115:LYS:HZ2	12:AB:129:ILE:CG2	1.53	1.05
16:AG:425:LEU:HA	16:AG:429:LYS:HG3	1.33	1.05
12:AB:115:LYS:CE	12:AB:129:ILE:CG2	2.25	1.05
16:AG:285:ILE:HG23	16:AG:293:VAL:CG1	1.87	1.05
16:AG:361:LYS:HE2	16:AG:417:ILE:HG12	1.39	1.05
16:AG:425:LEU:CG	16:AG:429:LYS:CE	2.34	1.05
27:M:4:ARG:HG3	27:M:5:ARG:HG3	1.33	1.05
39:Y:14:ALA:HB1	39:Y:50:LYS:HD2	1.37	1.04
7:6:18:DT:H3	8:7:39:A:N6	1.55	1.04
8:7:11:U:O2'	25:K:33:PHE:CE1	2.10	1.04
11:AA:481:LEU:HD23	12:AB:16:ARG:CD	1.87	1.04
39:Y:56:VAL:HA	39:Y:71:LYS:HZ1	1.21	1.04
47:g:58:ASP:OD1	47:g:62:LYS:NZ	1.90	1.04
12:AB:102:LYS:HE2	14:AE:285:LEU:HG	1.07	1.04
26:L:9:MET:HE1	26:L:85:ILE:CB	1.86	1.04
9:9:136:ILE:HD12	9:9:139:LEU:HD12	1.38	1.04
11:AA:859:GLU:CD	16:AG:38:LYS:CA	2.31	1.04
16:AG:448:LEU:CD2	16:AG:473:LEU:CD1	2.36	1.04
20:F:25:LYS:NZ	22:H:336:ASP:OD1	1.90	1.04
20:F:37:PHE:HB2	31:Q:126:LYS:HE2	1.35	1.04
11:AA:481:LEU:HD21	12:AB:16:ARG:CD	1.60	1.03
56:p:149:ARG:NH2	56:p:152:ARG:O	1.91	1.03
12:AB:115:LYS:HD3	12:AB:129:ILE:HD12	1.31	1.03
8:7:4:U:O2'	18:D:1403:C:O2	1.75	1.03
9:9:103:ASN:ND2	9:9:107:GLU:OE2	1.91	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:j:179:ARG:NH1	50:j:180:VAL:O	1.92	1.03
65:y:51:ARG:NH1	65:y:56:HIS:O	1.91	1.03
18:D:564:C:OP2	32:R:12:ARG:NH2	1.91	1.03
50:j:184:ARG:NH2	65:y:7:GLN:OE1	1.90	1.03
52:l:1:MET:HE2	52:l:16:GLU:HA	1.39	1.03
7:6:25:DT:H3'	11:AA:496:LYS:HG3	1.41	1.03
9:9:31:ARG:NH1	41:a:1054:A:O4'	1.91	1.03
11:AA:380:ALA:N	12:AB:65:HIS:HE1	1.29	1.03
16:AG:168:LEU:HD21	16:AG:231:GLY:CA	1.83	1.03
23:I:123:GLN:OE1	23:I:126:ARG:NH2	1.91	1.03
16:AG:363:LEU:HD23	16:AG:409:ARG:CA	1.89	1.02
16:AG:434:LEU:HD23	16:AG:456:LEU:HA	1.34	1.02
26:L:42:TRP:CH2	26:L:102:MET:HG3	1.94	1.02
10:B:30:G:HO2'	18:D:1339:A:H2	1.03	1.02
59:s:72:LYS:HD3	59:s:74:TYR:OH	1.59	1.02
16:AG:363:LEU:HG	16:AG:410:ALA:HB2	1.37	1.02
39:Y:93:ASN:HA	39:Y:135:MET:CE	1.89	1.02
6:5:11:DA:P	12:AB:68:THR:CA	2.44	1.02
9:9:3:LEU:HD12	9:9:4:ASN:H	1.25	1.02
9:9:48:ALA:HB3	9:9:51:TYR:HE1	1.20	1.02
16:AG:168:LEU:HD22	16:AG:231:GLY:HA2	1.40	1.02
23:I:152:GLU:OE2	23:I:154:SER:OG	1.77	1.02
6:5:11:DA:H3'	12:AB:67:THR:HG21	1.05	1.01
12:AB:141:LEU:HD23	12:AB:143:LEU:HG	1.41	1.01
6:5:11:DA:H3'	12:AB:67:THR:CG2	1.91	1.01
16:AG:365:ILE:CG2	16:AG:409:ARG:NH1	2.23	1.01
16:AG:387:VAL:HG12	16:AG:388:PRO:HD2	1.06	1.01
16:AG:434:LEU:HD21	16:AG:456:LEU:CA	1.89	1.01
9:9:43:LYS:HG3	9:9:46:ARG:HH12	1.22	1.01
12:AB:81:PHE:CA	14:AE:141:PHE:O	2.06	1.01
16:AG:425:LEU:C	16:AG:429:LYS:HE3	1.84	1.01
12:AB:124:GLU:O	12:AB:126:PHE:N	1.92	1.01
16:AG:355:ALA:HB1	16:AG:382:GLU:HG3	1.41	1.01
8:7:3:G:H5''	18:D:1500:A:N6	1.75	1.01
16:AG:363:LEU:CD2	16:AG:409:ARG:HB2	1.91	1.01
11:AA:855:PRO:HB2	16:AG:105:ILE:C	1.80	1.00
16:AG:131:ARG:O	16:AG:134:GLU:HG3	1.61	1.00
16:AG:422:GLU:HA	16:AG:426:GLY:N	1.74	1.00
12:AB:51:PHE:HE2	14:AE:288:PRO:HG2	1.20	1.00
12:AB:145:LEU:HD23	30:P:88:MET:HA	1.39	1.00
16:AG:361:LYS:CE	16:AG:417:ILE:HG12	1.90	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:Y:60:VAL:HG22	39:Y:66:PHE:HB3	1.44	1.00
11:AA:855:PRO:HG3	16:AG:105:ILE:CD1	1.90	1.00
12:AB:102:LYS:HE2	14:AE:285:LEU:CG	1.90	1.00
16:AG:168:LEU:HD21	16:AG:231:GLY:N	1.76	1.00
16:AG:425:LEU:CA	16:AG:429:LYS:CE	2.30	1.00
52:l:1:MET:HE1	52:l:20:GLY:HA3	1.43	1.00
16:AG:393:LEU:HD23	16:AG:398:LEU:HD22	1.43	1.00
9:9:30:SER:O	9:9:31:ARG:NE	1.95	1.00
16:AG:434:LEU:HD23	16:AG:456:LEU:CD2	1.91	1.00
18:D:377:G:OP1	35:U:5:ARG:NH1	1.94	1.00
39:Y:93:ASN:HA	39:Y:135:MET:HE1	1.00	0.99
16:AG:187:ARG:CB	16:AG:188:PRO:CD	2.37	0.99
16:AG:434:LEU:CD2	16:AG:456:LEU:HD23	1.92	0.99
9:9:88:HIS:HB3	9:9:89:PRO:HD3	1.44	0.99
16:AG:393:LEU:CG	16:AG:398:LEU:CD2	2.30	0.99
6:5:11:DA:H5'	12:AB:67:THR:CG2	1.86	0.99
14:AE:288:PRO:CD	14:AE:291:ILE:HG21	1.92	0.99
21:G:49:MET:HE1	21:G:201:PRO:HD3	1.42	0.99
12:AB:82:GLY:CA	14:AE:142:GLU:CB	2.39	0.99
6:5:10:DT:O5'	11:AA:62:TYR:OH	1.80	0.99
14:AE:70:CYS:SG	14:AE:85:CYS:SG	2.60	0.99
16:AG:393:LEU:HD22	16:AG:398:LEU:CG	1.93	0.98
12:AB:140:MET:N	12:AB:152:HIS:O	1.96	0.98
13:AD:287:VAL:CB	16:AG:79:ALA:HB2	1.92	0.98
16:AG:287:ALA:HA	16:AG:331:LEU:HD11	1.41	0.98
16:AG:287:ALA:HB2	16:AG:331:LEU:CD1	1.92	0.98
58:r:38:PRO:O	58:r:43:ASN:ND2	1.96	0.98
7:6:18:DT:H3	8:7:39:A:H61	1.05	0.98
14:AE:287:ALA:CB	14:AE:292:VAL:CG1	2.38	0.98
26:L:42:TRP:HH2	26:L:102:MET:HG3	1.25	0.98
33:S:86:GLU:OE1	33:S:90:ARG:NH1	1.96	0.98
6:5:11:DA:C3'	12:AB:67:THR:CG2	2.42	0.98
16:AG:362:TYR:O	16:AG:413:ALA:CB	2.10	0.98
21:G:154:MET:HE2	21:G:158:PRO:HD3	1.44	0.98
8:7:11:U:H4'	25:K:20:ARG:HH22	1.18	0.98
12:AB:142:LEU:HA	12:AB:150:ILE:O	1.62	0.98
7:6:25:DT:OP1	11:AA:496:LYS:HA	1.12	0.97
16:AG:393:LEU:CA	16:AG:398:LEU:HD23	1.87	0.97
12:AB:138:ARG:CA	12:AB:154:VAL:O	2.13	0.97
12:AB:115:LYS:HZ3	12:AB:129:ILE:CG2	1.74	0.97
14:AE:70:CYS:SG	14:AE:72:CYS:SG	2.61	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:168:LEU:HD21	16:AG:230:PRO:C	1.89	0.97
39:Y:93:ASN:CA	39:Y:135:MET:HE1	1.94	0.97
41:a:2093:G:OP1	58:r:22:LYS:NZ	1.98	0.97
6:5:10:DT:H71	11:AA:62:TYR:CD2	1.77	0.97
9:9:95:LEU:HD13	9:9:98:GLU:OE2	1.65	0.97
12:AB:145:LEU:CB	30:P:88:MET:HG2	1.94	0.97
16:AG:336:LEU:HD12	16:AG:336:LEU:H	1.26	0.97
16:AG:424:SER:O	16:AG:429:LYS:CG	2.13	0.97
33:S:92:GLU:OE1	33:S:92:GLU:N	1.97	0.97
59:s:12:LYS:NZ	59:s:14:ASP:OD1	1.96	0.97
16:AG:228:ARG:HA	16:AG:327:LEU:HD11	1.46	0.96
16:AG:279:ASN:CG	16:AG:280:PRO:CD	2.38	0.96
16:AG:393:LEU:HD23	16:AG:398:LEU:CD2	1.93	0.96
9:9:58:THR:HG21	9:9:81:LEU:HD23	1.47	0.96
8:7:2:U:P	18:D:1505:G:H8	1.88	0.96
11:AA:387:ASN:ND2	11:AA:394:ARG:HH12	1.61	0.96
12:AB:154:VAL:HG11	12:AB:159:PHE:HB3	1.47	0.96
18:D:562:U:O2'	32:R:14:ARG:NH1	1.98	0.96
18:D:1344:C:OP1	29:O:124:ARG:NH1	1.98	0.96
12:AB:152:HIS:ND1	12:AB:159:PHE:HD2	1.64	0.96
16:AG:442:ARG:O	16:AG:446:PHE:HD2	1.34	0.96
64:x:111:ARG:NH2	64:x:117:PHE:OXT	1.99	0.96
16:AG:214:PRO:O	16:AG:218:GLU:OE2	1.83	0.95
16:AG:355:ALA:HB2	16:AG:382:GLU:CD	1.83	0.95
39:Y:75:ALA:HB2	39:Y:112:LYS:HE3	1.48	0.95
40:Z:14:MET:HB3	40:Z:17:MET:HG2	1.46	0.95
16:AG:258:ARG:HH11	16:AG:258:ARG:HG2	1.31	0.95
16:AG:380:THR:O	16:AG:384:LEU:CD1	2.13	0.95
16:AG:433:ASP:O	16:AG:456:LEU:CD1	2.13	0.95
6:5:11:DA:H5''	12:AB:67:THR:HG22	0.98	0.95
9:9:3:LEU:HD12	9:9:4:ASN:N	1.82	0.95
12:AB:51:PHE:CE2	14:AE:288:PRO:CD	2.48	0.95
12:AB:118:ILE:HG21	12:AB:141:LEU:CD1	1.84	0.95
16:AG:393:LEU:HA	16:AG:398:LEU:HD22	0.95	0.95
16:AG:437:LEU:CD2	16:AG:456:LEU:CD1	2.34	0.95
39:Y:5:GLN:HG2	39:Y:61:TYR:HE1	1.31	0.95
16:AG:440:VAL:CG2	16:AG:481:LEU:HD22	1.97	0.95
23:I:164:ARG:NH2	23:I:166:GLU:OE2	1.99	0.95
8:7:22:U:H4'	23:I:80:LYS:CD	1.96	0.95
6:5:11:DA:H5'	12:AB:67:THR:CG2	1.81	0.95
36:V:7:THR:OG1	36:V:61:ILE:O	1.85	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:30:G:OP2	66:z:5:LYS:NZ	2.00	0.95
12:AB:6:LEU:HD13	14:AE:291:ILE:HD11	1.46	0.95
12:AB:147:ASN:ND2	30:P:100:ILE:HG23	1.81	0.95
16:AG:363:LEU:HG	16:AG:410:ALA:CB	1.97	0.94
16:AG:387:VAL:HG12	16:AG:388:PRO:HD3	1.47	0.94
16:AG:448:LEU:HD21	16:AG:473:LEU:HD13	1.48	0.94
39:Y:33:ASN:HB3	39:Y:36:GLU:HG2	1.48	0.94
11:AA:387:ASN:ND2	11:AA:394:ARG:NH1	2.15	0.94
12:AB:82:GLY:N	14:AE:142:GLU:CB	2.30	0.94
12:AB:152:HIS:CG	12:AB:159:PHE:CD2	2.55	0.94
9:9:23:LEU:HD13	9:9:92:ALA:CB	1.98	0.94
9:9:61:ARG:NH1	41:a:1047:G:N7	2.15	0.94
16:AG:123:ARG:HH12	16:AG:191:ARG:HA	1.32	0.94
8:7:22:U:H5''	23:I:80:LYS:HG3	0.95	0.94
16:AG:168:LEU:HD22	16:AG:231:GLY:HA3	1.00	0.94
56:p:38:ASN:ND2	56:p:64:GLN:OE1	2.01	0.94
8:7:22:U:H4'	23:I:80:LYS:HD2	1.48	0.94
12:AB:118:ILE:HG22	12:AB:141:LEU:HD11	1.48	0.94
16:AG:365:ILE:CD1	16:AG:406:LEU:HD22	1.97	0.94
12:AB:103:ASP:HB3	12:AB:105:VAL:HG23	1.48	0.94
16:AG:451:ARG:NH1	16:AG:467:LEU:CA	2.30	0.94
9:9:88:HIS:HB3	9:9:89:PRO:CD	1.97	0.93
14:AE:79:LYS:HA	14:AE:81:ARG:HH12	1.32	0.93
16:AG:279:ASN:CG	16:AG:280:PRO:HD3	1.93	0.93
6:5:9:DG:OP2	11:AA:473:ARG:CG	2.16	0.93
16:AG:123:ARG:CZ	16:AG:191:ARG:O	2.17	0.93
26:L:9:MET:CE	26:L:85:ILE:HB	1.97	0.93
12:AB:154:VAL:HG11	12:AB:159:PHE:CB	1.98	0.93
9:9:31:ARG:HD2	41:a:1053:C:O2'	1.66	0.93
16:AG:240:THR:OG1	16:AG:247:PRO:HG3	1.69	0.93
18:D:526:C:OP2	32:R:88:LYS:NZ	2.01	0.93
12:AB:51:PHE:CE2	14:AE:288:PRO:HG3	1.99	0.93
10:B:76:A:N3	41:a:2493:U:H4'	1.84	0.93
41:a:1042:G:HO2'	41:a:1043:C:H6	1.10	0.93
9:9:23:LEU:HD13	9:9:92:ALA:HB1	1.49	0.93
16:AG:243:LYS:HZ2	25:K:69:ARG:HD3	1.31	0.93
16:AG:448:LEU:HD21	16:AG:473:LEU:HD11	1.48	0.93
60:t:90:ASN:OD1	60:t:91:SER:N	2.02	0.93
1:0:18:GLN:N	1:0:18:GLN:OE1	2.01	0.93
11:AA:481:LEU:CD2	12:AB:16:ARG:HD3	1.99	0.93
16:AG:171:GLU:OE2	16:AG:267:GLY:HA3	1.68	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:Y:14:ALA:O	39:Y:50:LYS:HE3	1.67	0.93
12:AB:154:VAL:CG1	12:AB:159:PHE:HB3	1.98	0.92
8:7:21:U:H5''	23:I:80:LYS:H	1.34	0.92
12:AB:81:PHE:CE1	14:AE:293:ARG:HB2	1.91	0.92
9:9:50:VAL:HG22	39:Y:119:ALA:CB	1.98	0.92
6:5:10:DT:C7	11:AA:62:TYR:HD2	1.69	0.92
16:AG:363:LEU:CG	16:AG:410:ALA:HB2	1.99	0.92
12:AB:110:PRO:HA	12:AB:114:ASP:OD2	1.69	0.92
16:AG:393:LEU:CD2	16:AG:398:LEU:HD11	1.90	0.92
12:AB:141:LEU:HD23	12:AB:143:LEU:CG	1.99	0.91
39:Y:79:LEU:HD21	39:Y:105:LEU:HD21	1.52	0.91
11:AA:481:LEU:HD21	12:AB:16:ARG:HD3	1.48	0.91
41:a:2293:G:OP1	64:x:94:ARG:NH1	2.04	0.91
12:AB:118:ILE:HG23	12:AB:141:LEU:HD11	0.92	0.91
14:AE:59:ALA:CB	14:AE:71:LEU:HD21	1.99	0.91
16:AG:174:ARG:HB3	16:AG:175:PRO:HD2	1.51	0.91
41:a:2682:A:O4'	50:j:11:MET:SD	2.29	0.91
8:7:2:U:P	18:D:1505:G:C8	2.64	0.91
12:AB:3:SER:O	12:AB:58:GLU:HA	1.71	0.91
12:AB:115:LYS:CD	12:AB:129:ILE:HG21	2.01	0.91
12:AB:115:LYS:HA	12:AB:129:ILE:CD1	1.99	0.91
16:AG:425:LEU:HA	16:AG:429:LYS:CD	2.01	0.91
16:AG:451:ARG:NH1	16:AG:466:ASP:O	2.02	0.91
16:AG:453:VAL:HG13	16:AG:458:ASP:CB	2.00	0.91
11:AA:858:GLY:CA	16:AG:37:LYS:HG2	1.98	0.91
12:AB:152:HIS:NE2	12:AB:159:PHE:HE2	1.63	0.91
18:D:1526:G:N7	20:F:40:LYS:NZ	2.18	0.91
25:K:45:ARG:CD	25:K:45:ARG:CB	2.49	0.91
27:M:50:LEU:HD21	27:M:121:ALA:HA	1.52	0.91
7:6:25:DT:H2'	11:AA:496:LYS:HE3	1.51	0.91
12:AB:81:PHE:HE1	14:AE:293:ARG:CB	1.55	0.91
6:5:10:DT:C1'	12:AB:71:ALA:N	2.10	0.91
12:AB:140:MET:C	12:AB:152:HIS:O	2.13	0.91
16:AG:183:LEU:HG	16:AG:197:VAL:HG13	1.51	0.91
16:AG:385:ALA:HB3	16:AG:411:LYS:CE	2.00	0.91
12:AB:145:LEU:HG	30:P:88:MET:HG2	1.35	0.91
10:B:38:A:H4'	18:D:790:A:O4'	1.71	0.91
17:C:60:LYS:HZ2	18:D:734:G:C2'	1.84	0.91
6:5:11:DA:OP2	12:AB:67:THR:C	2.11	0.91
16:AG:363:LEU:HD23	16:AG:409:ARG:CB	2.00	0.90
16:AG:434:LEU:HD22	16:AG:459:LEU:HD12	0.93	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:5:9:DG:P	11:AA:473:ARG:HB2	2.10	0.90
64:x:36:TYR:OH	64:x:38:GLN:NE2	2.05	0.90
65:y:89:ARG:NE	65:y:113:ARG:O	2.05	0.90
9:9:92:ALA:O	9:9:129:LEU:HD13	1.71	0.90
12:AB:145:LEU:HD23	30:P:88:MET:CG	1.88	0.90
41:a:1818:U:OP2	48:h:156:ARG:NH1	2.04	0.90
16:AG:200:SER:O	16:AG:230:PRO:HG2	1.71	0.90
17:C:38:LYS:NZ	18:D:718:A:N1	2.19	0.90
16:AG:422:GLU:CA	16:AG:426:GLY:HA3	2.02	0.90
16:AG:434:LEU:HD21	16:AG:455:THR:O	1.69	0.90
16:AG:453:VAL:HG23	16:AG:462:GLN:NE2	1.87	0.90
31:Q:51:GLY:O	31:Q:56:ARG:NH2	2.03	0.90
16:AG:425:LEU:CA	16:AG:429:LYS:HG3	2.02	0.90
62:v:111:GLU:O	62:v:114:ARG:HG2	1.71	0.90
12:AB:81:PHE:HD2	14:AE:293:ARG:NH1	1.35	0.89
16:AG:434:LEU:HD21	16:AG:455:THR:C	1.97	0.89
41:a:2393:U:OP1	55:o:30:ARG:NE	2.05	0.89
8:7:34:U:H5'	11:AA:1259:LEU:HD21	1.52	0.89
13:AD:286:GLU:H	13:AD:315:GLY:HA2	1.36	0.89
16:AG:365:ILE:HG21	16:AG:409:ARG:NH1	1.87	0.89
31:Q:15:GLN:NE2	31:Q:76:GLU:O	2.06	0.89
45:e:23:ARG:NH1	45:e:24:GLU:OE2	2.06	0.89
12:AB:115:LYS:HD2	12:AB:129:ILE:CG1	1.96	0.89
16:AG:422:GLU:HA	16:AG:426:GLY:H	1.34	0.89
36:V:27:ARG:NH1	36:V:42:THR:OG1	2.03	0.89
12:AB:51:PHE:HE2	14:AE:288:PRO:CD	1.85	0.89
16:AG:434:LEU:HD23	16:AG:456:LEU:CA	2.00	0.89
47:g:27:THR:OG1	54:n:140:GLU:OE1	1.88	0.89
6:5:10:DT:C6	11:AA:62:TYR:HE2	1.85	0.89
61:u:93:ASN:OD1	61:u:94:THR:N	2.05	0.89
3:2:54:GLU:OE1	3:2:91:GLN:NE2	2.06	0.89
6:5:11:DA:P	12:AB:67:THR:O	2.30	0.89
6:5:10:DT:H2''	12:AB:70:ASN:N	1.87	0.89
20:F:31:GLU:OE2	20:F:35:ARG:NE	2.06	0.89
11:AA:855:PRO:CB	16:AG:105:ILE:C	2.34	0.89
18:D:1439:G:OP1	19:E:33:LYS:NZ	2.05	0.89
27:M:66:LEU:HD13	27:M:101:MET:CE	2.02	0.89
39:Y:129:GLU:HB3	39:Y:133:ARG:NH1	1.87	0.89
41:a:585:G:N7	66:z:6:ARG:NH1	2.21	0.89
16:AG:123:ARG:NH1	16:AG:191:ARG:CA	2.11	0.89
17:C:60:LYS:NZ	18:D:735:C:O4'	2.06	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:g:16:CYS:HB2	47:g:37:CYS:HB3	1.54	0.89
16:AG:363:LEU:HD22	16:AG:409:ARG:HB2	1.53	0.88
9:9:8:LYS:O	9:9:12:VAL:HG23	1.73	0.88
16:AG:285:ILE:HG13	16:AG:293:VAL:HG11	1.45	0.88
33:S:90:ARG:HG3	33:S:92:GLU:OE1	1.73	0.88
27:M:4:ARG:HG2	27:M:5:ARG:CZ	2.03	0.88
27:M:13:LEU:HD12	27:M:14:PRO:HD2	1.54	0.88
52:l:170:ARG:NH1	52:l:174:GLY:O	2.05	0.88
12:AB:143:LEU:HD23	30:P:88:MET:HE2	1.54	0.88
16:AG:248:VAL:HG13	16:AG:273:ILE:HB	1.56	0.88
39:Y:45:THR:CG2	39:Y:50:LYS:HD3	2.02	0.88
10:A:76:A:N6	41:a:2422:C:O4'	2.06	0.88
12:AB:117:ILE:HG23	12:AB:160:ARG:O	1.73	0.88
18:D:280:C:O2	36:V:40:ARG:CZ	2.21	0.88
41:a:78:U:OP1	45:e:4:LYS:NZ	2.06	0.88
63:w:24:MET:HA	63:w:24:MET:HE3	1.54	0.88
12:AB:82:GLY:N	14:AE:142:GLU:HB3	1.86	0.88
14:AE:59:ALA:CB	14:AE:71:LEU:CD2	2.51	0.88
16:AG:302:LYS:HE3	16:AG:302:LYS:N	1.87	0.88
16:AG:362:TYR:C	16:AG:413:ALA:HB2	1.99	0.88
16:AG:171:GLU:CD	16:AG:267:GLY:HA3	1.99	0.88
16:AG:240:THR:OG1	16:AG:247:PRO:CG	2.20	0.88
41:a:404:A:O2'	41:a:405:U:OP2	1.90	0.88
16:AG:363:LEU:HG	16:AG:410:ALA:CA	2.04	0.87
28:N:5:ASP:OD2	28:N:77:ARG:NH1	2.07	0.87
39:Y:100:ILE:HD12	39:Y:105:LEU:HD11	1.54	0.87
12:AB:6:LEU:CD1	14:AE:291:ILE:HD11	2.05	0.87
14:AE:79:LYS:N	14:AE:81:ARG:NH1	2.22	0.87
39:Y:129:GLU:HB3	39:Y:133:ARG:HH12	1.38	0.87
41:a:2756:U:OP2	57:q:19:ARG:NE	2.06	0.87
44:d:55:U:H1'	54:n:26:MET:HE2	1.57	0.87
12:AB:152:HIS:CD2	12:AB:159:PHE:HE2	1.91	0.87
16:AG:254:MET:HA	16:AG:254:MET:HE3	1.55	0.87
59:s:13:ARG:NH1	59:s:49:ASP:O	2.07	0.87
16:AG:486:ARG:O	16:AG:490:TRP:HD1	1.57	0.87
17:C:27:ALA:O	17:C:30:LYS:HG2	1.74	0.87
24:J:67:VAL:HB	24:J:72:PHE:CZ	2.09	0.87
59:s:98:GLU:OE2	59:s:126:ALA:N	2.07	0.87
6:5:9:DG:H5''	11:AA:473:ARG:CG	1.95	0.87
12:AB:51:PHE:HZ	14:AE:288:PRO:HD3	1.39	0.87
16:AG:362:TYR:C	16:AG:413:ALA:CB	2.48	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:I:58:GLU:OE1	23:I:65:ARG:NH1	2.08	0.87
38:X:81:MET:HE2	41:a:888:C:C5	2.09	0.87
16:AG:430:PRO:HG2	16:AG:435:LEU:CD2	2.05	0.87
8:7:22:U:C4'	23:I:80:LYS:HG3	2.02	0.86
52:l:170:ARG:NH1	52:l:176:ASP:OD1	2.07	0.86
18:D:545:C:H5'	24:J:69:GLU:HG3	1.55	0.86
16:AG:453:VAL:HG13	16:AG:458:ASP:HB2	1.55	0.86
16:AG:141:VAL:HG22	16:AG:178:ARG:HG2	1.57	0.86
16:AG:434:LEU:HD12	16:AG:454:CYS:O	1.76	0.86
39:Y:48:ILE:HG13	39:Y:49:GLU:H	1.41	0.86
41:a:2780:G:OP2	59:s:120:ARG:NH1	2.07	0.86
11:AA:380:ALA:H	12:AB:65:HIS:CE1	1.61	0.86
16:AG:187:ARG:CB	16:AG:188:PRO:HD2	2.03	0.86
36:V:77:ARG:NH2	36:V:78:VAL:O	2.08	0.86
39:Y:99:LYS:HD2	39:Y:140:GLU:OE1	1.75	0.86
7:6:25:DT:C2'	11:AA:496:LYS:HG3	2.05	0.86
16:AG:244:ARG:O	25:K:69:ARG:CZ	2.25	0.85
16:AG:385:ALA:HB1	16:AG:411:LYS:CE	2.04	0.85
6:5:10:DT:O4'	11:AA:62:TYR:OH	1.93	0.85
12:AB:141:LEU:HA	12:AB:153:SER:N	1.92	0.85
16:AG:61:ARG:HD3	16:AG:63:LEU:HD21	1.57	0.85
16:AG:434:LEU:HA	16:AG:456:LEU:HD23	1.53	0.85
39:Y:15:GLY:HA2	39:Y:50:LYS:HG3	1.57	0.85
39:Y:100:ILE:HD12	39:Y:105:LEU:CD1	2.05	0.85
59:s:37:ARG:HA	59:s:118:MET:HE3	1.54	0.85
11:AA:855:PRO:CG	16:AG:105:ILE:HA	2.01	0.85
36:V:25:ILE:O	36:V:27:ARG:NH2	2.10	0.85
1:0:87:GLN:NE2	1:0:88:GLY:O	2.09	0.85
9:9:58:THR:CG2	9:9:81:LEU:HD23	2.06	0.85
14:AE:78:LEU:C	14:AE:81:ARG:NH1	2.24	0.85
16:AG:302:LYS:O	16:AG:302:LYS:NZ	2.08	0.85
12:AB:51:PHE:CE2	14:AE:288:PRO:HD3	2.08	0.85
16:AG:425:LEU:HG	16:AG:429:LYS:CE	2.07	0.85
61:u:90:VAL:HG13	61:u:95:LEU:HD21	1.57	0.85
12:AB:115:LYS:CD	12:AB:129:ILE:CG2	2.55	0.85
26:L:102:MET:SD	26:L:102:MET:N	2.46	0.85
42:b:36:ILE:HG21	42:b:39:ARG:HD3	1.59	0.85
16:AG:365:ILE:HG21	16:AG:409:ARG:HH12	1.42	0.84
63:w:38:LEU:HD13	63:w:111:ALA:HB2	1.59	0.84
62:v:77:PRO:HG2	62:v:80:VAL:HG21	1.57	0.84
12:AB:110:PRO:CA	12:AB:114:ASP:OD2	2.25	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:Y:75:ALA:CB	39:Y:112:LYS:HE3	2.07	0.84
16:AG:387:VAL:CB	16:AG:388:PRO:HD2	2.06	0.84
12:AB:141:LEU:HD23	12:AB:143:LEU:CD1	2.07	0.84
29:O:84:THR:HG21	29:O:103:PHE:HB3	1.59	0.84
62:v:95:LEU:O	62:v:100:LYS:NZ	2.08	0.84
11:AA:377:THR:CB	12:AB:62:GLU:HB3	2.08	0.84
16:AG:285:ILE:CG2	16:AG:293:VAL:HG12	2.06	0.84
6:5:9:DG:P	11:AA:473:ARG:CB	2.66	0.84
10:A:33:U:OP1	27:M:77:SER:OG	1.94	0.84
47:g:26:SER:OG	54:n:140:GLU:OE2	1.94	0.84
19:E:9:LYS:O	19:E:13:GLN:NE2	2.10	0.84
1:0:68:ARG:NH1	41:a:1223:G:OP1	2.10	0.84
6:5:11:DA:C2'	12:AB:67:THR:HG21	2.08	0.84
14:AE:78:LEU:C	14:AE:81:ARG:HH11	1.79	0.84
16:AG:287:ALA:HB2	16:AG:331:LEU:HD13	1.58	0.84
38:X:81:MET:CE	38:X:92:ARG:HB3	2.06	0.84
54:n:23:ASN:OD1	54:n:24:SER:N	2.09	0.84
16:AG:203:GLU:HA	16:AG:206:ILE:HG12	1.60	0.84
16:AG:355:ALA:CA	16:AG:382:GLU:CD	2.49	0.84
39:Y:96:LYS:CE	39:Y:136:GLY:HA3	2.08	0.84
18:D:742:G:OP1	34:T:58:ARG:NH2	2.12	0.83
5:4:58:SER:OG	5:4:59:GLU:OE1	1.95	0.83
12:AB:124:GLU:C	12:AB:126:PHE:H	1.86	0.83
16:AG:168:LEU:HD23	16:AG:231:GLY:HA3	1.56	0.83
16:AG:210:ARG:HG3	16:AG:216:ILE:HB	1.59	0.83
6:5:10:DT:C2	12:AB:72:THR:OG1	2.30	0.83
16:AG:213:VAL:HG11	16:AG:251:CYS:HA	1.59	0.83
41:a:2682:A:O2'	50:j:13:ARG:NE	2.12	0.83
66:z:74:ILE:HD11	66:z:79:PHE:HA	1.60	0.83
16:AG:127:VAL:CG2	16:AG:192:GLY:HA2	2.09	0.83
16:AG:362:TYR:HA	16:AG:413:ALA:CB	2.09	0.83
56:p:121:ILE:HD12	56:p:141:ILE:HG22	1.60	0.83
16:AG:285:ILE:CG2	16:AG:293:VAL:CG1	2.57	0.83
14:AE:287:ALA:HB1	14:AE:292:VAL:HG13	1.60	0.83
48:h:175:ARG:HG3	48:h:181:MET:HE1	1.58	0.83
8:7:3:G:C5'	18:D:1500:A:H62	1.92	0.83
9:9:43:LYS:O	9:9:46:ARG:HG2	1.78	0.83
12:AB:148:LYS:HZ1	30:P:102:LEU:HB3	1.43	0.83
16:AG:393:LEU:CB	16:AG:398:LEU:HD23	1.80	0.83
39:Y:74:PRO:HG2	39:Y:77:VAL:HB	1.60	0.83
41:a:1257:C:H4'	52:l:78:TRP:CE2	2.14	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:n:73:SER:OG	54:n:79:ILE:O	1.96	0.83
58:r:137:GLU:HG2	58:r:138:VAL:HG23	1.61	0.83
66:z:78:LYS:HD3	66:z:117:LEU:CD2	2.09	0.83
9:9:43:LYS:HG3	9:9:46:ARG:NH1	1.94	0.83
12:AB:54:TYR:HE2	14:AE:291:ILE:HG23	1.44	0.83
16:AG:252:VAL:HA	16:AG:259:VAL:HG23	1.61	0.83
23:I:22:TRP:CZ3	23:I:24:ALA:HB2	2.14	0.83
39:Y:45:THR:HG22	39:Y:50:LYS:HD3	1.59	0.83
8:7:2:U:OP2	18:D:1505:G:C8	2.30	0.82
16:AG:365:ILE:CG2	16:AG:409:ARG:HH12	1.91	0.82
38:X:81:MET:HE1	38:X:92:ARG:CB	2.08	0.82
62:v:7:THR:OG1	62:v:10:ARG:NH1	2.11	0.82
6:5:10:DT:C4	11:AA:62:TYR:CD2	2.68	0.82
9:9:1:MET:HE1	9:9:7:ASP:HB3	1.61	0.82
16:AG:353:HIS:CA	16:AG:356:ILE:HG23	2.09	0.82
16:AG:448:LEU:CD2	16:AG:473:LEU:HD11	2.05	0.82
41:a:2356:U:H5''	42:b:20:ARG:HD2	1.61	0.82
59:s:102:GLU:OE1	59:s:102:GLU:N	2.10	0.82
6:5:10:DT:C6	11:AA:62:TYR:CZ	2.65	0.82
9:9:48:ALA:HB3	9:9:51:TYR:CE1	2.09	0.82
50:j:152:PRO:HG3	50:j:156:PHE:CZ	2.14	0.82
61:u:122:VAL:CG1	61:u:125:LEU:HD21	2.08	0.82
16:AG:226:ALA:HA	16:AG:236:ILE:HG13	1.61	0.82
16:AG:433:ASP:C	16:AG:456:LEU:HG	2.03	0.82
60:t:7:MET:HG3	60:t:18:ARG:CZ	2.10	0.82
12:AB:148:LYS:NZ	30:P:102:LEU:HB3	1.94	0.82
16:AG:385:ALA:HB3	16:AG:411:LYS:HE3	1.57	0.82
10:B:6:G:O2'	10:B:7:G:O5'	1.96	0.82
60:t:20:MET:HB3	60:t:44:LYS:HZ3	1.42	0.82
10:A:6:G:O2'	10:A:7:G:O5'	1.96	0.82
11:AA:387:ASN:CB	11:AA:394:ARG:HH11	1.93	0.82
16:AG:354:ALA:HA	16:AG:357:ASP:HB3	1.60	0.82
39:Y:116:MET:HG2	39:Y:124:MET:HG2	1.60	0.82
41:a:2298:A:OP1	54:n:72:LYS:NZ	2.11	0.82
12:AB:38:ILE:HG12	12:AB:43:ARG:HG2	1.61	0.82
41:a:2393:U:H5''	55:o:30:ARG:CZ	2.09	0.82
56:p:7:ALA:O	56:p:69:ARG:NE	2.12	0.82
60:t:12:ASP:OD2	60:t:85:VAL:HG13	1.80	0.82
7:6:23:DC:H5'	14:AE:259:ARG:HH12	1.42	0.82
9:9:3:LEU:HD11	9:9:5:LEU:HD23	1.62	0.82
16:AG:243:LYS:HB3	16:AG:245:ILE:HD11	1.60	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:361:LYS:CD	16:AG:417:ILE:HG12	2.10	0.82
6:5:10:DT:C5	11:AA:62:TYR:HD2	1.81	0.81
12:AB:152:HIS:HB3	12:AB:154:VAL:HG12	1.62	0.81
8:7:31:A:H4'	8:7:31:A:OP1	1.80	0.81
9:9:52:MET:HG2	9:9:95:LEU:HD11	1.62	0.81
21:G:105:LYS:O	21:G:109:GLN:NE2	2.12	0.81
39:Y:14:ALA:HB3	39:Y:51:GLY:H	1.45	0.81
41:a:2356:U:O3'	42:b:20:ARG:NH1	2.14	0.81
52:l:112:LEU:HD12	52:l:117:ARG:HB2	1.62	0.81
9:9:25:ALA:HB3	9:9:99:PHE:CD2	2.16	0.81
9:9:129:LEU:H	9:9:130:PRO:HD2	1.45	0.81
56:p:104:ASN:ND2	56:p:114:ASP:OD1	2.12	0.81
6:5:10:DT:C2	12:AB:71:ALA:HB3	1.84	0.81
12:AB:145:LEU:CD2	30:P:88:MET:HG3	1.97	0.81
14:AE:81:ARG:H	14:AE:81:ARG:HD2	1.46	0.81
11:AA:855:PRO:HG3	16:AG:105:ILE:HD12	1.62	0.81
12:AB:140:MET:CA	12:AB:152:HIS:O	2.29	0.81
16:AG:12:VAL:HB	16:AG:16:LYS:HG3	1.61	0.81
16:AG:244:ARG:O	25:K:69:ARG:NH2	2.14	0.81
16:AG:279:ASN:CG	16:AG:280:PRO:HD2	2.04	0.81
41:a:1613:G:O2'	53:m:3:ARG:NH2	2.12	0.81
9:9:46:ARG:HG3	9:9:94:ARG:NH2	1.94	0.81
18:D:311:C:OP1	35:U:31:ARG:NH2	2.13	0.81
12:AB:145:LEU:HB3	30:P:88:MET:HA	1.63	0.81
16:AG:425:LEU:HG	16:AG:429:LYS:CD	2.10	0.81
16:AG:434:LEU:CG	16:AG:455:THR:C	2.54	0.81
18:D:107:G:O6	19:E:10:ARG:NE	2.13	0.81
66:z:69:ALA:HB1	66:z:74:ILE:HG23	1.63	0.81
8:7:2:U:OP1	18:D:1505:G:C8	2.33	0.81
16:AG:425:LEU:HD23	16:AG:429:LYS:HE2	0.81	0.81
41:a:1655:A:H1'	50:j:118:PHE:HE2	1.46	0.81
66:z:74:ILE:HD13	66:z:79:PHE:HD1	1.46	0.81
8:7:22:U:H4'	23:I:80:LYS:CG	2.10	0.81
12:AB:141:LEU:HA	12:AB:152:HIS:C	2.06	0.81
16:AG:285:ILE:CB	16:AG:293:VAL:HG11	2.09	0.80
16:AG:440:VAL:CG2	16:AG:481:LEU:CD2	2.59	0.80
16:AG:451:ARG:NE	16:AG:470:ILE:HG13	1.95	0.80
41:a:1818:U:O5'	48:h:156:ARG:NH2	2.14	0.80
14:AE:85:CYS:HG	68:AE:1502:ZN:ZN	0.94	0.80
16:AG:353:HIS:C	16:AG:356:ILE:CG2	2.50	0.80
61:u:122:VAL:HG13	61:u:125:LEU:HD11	1.61	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:7:21:U:H5	23:I:80:LYS:C	1.88	0.80
16:AG:362:TYR:HA	16:AG:413:ALA:HB1	1.62	0.80
19:E:28:MET:HE1	19:E:58:VAL:HA	1.63	0.80
41:a:2682:A:C8	50:j:11:MET:CE	2.65	0.80
52:l:1:MET:HE1	52:l:20:GLY:CA	2.11	0.80
16:AG:133:HIS:ND1	16:AG:136:GLU:OE1	2.13	0.80
16:AG:287:ALA:HB1	16:AG:331:LEU:HD12	1.62	0.80
39:Y:58:ILE:HG22	39:Y:60:VAL:HG23	1.62	0.80
11:AA:481:LEU:HD23	12:AB:16:ARG:HD2	1.61	0.80
39:Y:40:ALA:HB1	39:Y:68:PHE:CE1	2.16	0.80
1:0:86:GLN:OE1	41:a:1225:G:H4'	1.81	0.80
6:5:11:DA:C4'	12:AB:67:THR:HG22	2.10	0.80
9:9:77:VAL:HG13	9:9:114:GLU:OE1	1.81	0.80
16:AG:133:HIS:HD1	16:AG:136:GLU:CD	1.90	0.80
17:C:60:LYS:HZ3	18:D:735:C:P	2.05	0.80
42:b:28:GLY:O	42:b:66:LYS:NZ	2.13	0.80
16:AG:380:THR:O	16:AG:384:LEU:HD11	1.80	0.80
41:a:2636:C:H4'	50:j:81:GLU:OE1	1.82	0.80
12:AB:54:TYR:CE2	14:AE:291:ILE:CG2	2.65	0.79
16:AG:451:ARG:HH11	16:AG:467:LEU:HA	1.42	0.79
26:L:70:VAL:O	26:L:74:LEU:HD23	1.81	0.79
4:3:46:GLN:OE1	4:3:56:GLY:HA2	1.82	0.79
48:h:130:LEU:HA	48:h:189:ARG:HH11	1.45	0.79
9:9:112:ALA:O	9:9:123:ILE:HD11	1.83	0.79
20:F:37:PHE:HB2	31:Q:126:LYS:CE	2.10	0.79
11:AA:377:THR:OG1	12:AB:62:GLU:CA	2.29	0.79
16:AG:363:LEU:CG	16:AG:410:ALA:N	2.46	0.79
39:Y:9:LYS:HE2	39:Y:55:PRO:HB3	1.63	0.79
41:a:2393:U:H5''	55:o:30:ARG:NH1	1.97	0.79
41:a:2393:U:P	55:o:30:ARG:HE	2.04	0.79
7:6:25:DT:H3'	11:AA:496:LYS:CG	2.13	0.79
9:9:3:LEU:CD1	9:9:4:ASN:H	1.96	0.79
11:AA:855:PRO:CD	16:AG:105:ILE:HD12	2.13	0.79
12:AB:51:PHE:CE2	14:AE:288:PRO:HG2	2.06	0.79
16:AG:365:ILE:CD1	16:AG:406:LEU:CD2	2.57	0.79
16:AG:425:LEU:CA	16:AG:429:LYS:CG	2.60	0.79
48:h:53:HIS:HE2	48:h:219:THR:HA	1.45	0.79
16:AG:235:LYS:HD3	16:AG:327:LEU:HG	1.64	0.79
54:n:117:LEU:HD13	54:n:176:PRO:HG2	1.64	0.79
60:t:98:ARG:NH2	60:t:118:LEU:O	2.14	0.79
9:9:5:LEU:O	9:9:9:GLN:NE2	2.15	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:481:LEU:CD2	12:AB:16:ARG:HD2	2.12	0.79
12:AB:120:GLU:HB2	12:AB:162:LEU:HG	1.63	0.79
16:AG:379:SER:OG	16:AG:384:LEU:HD21	1.81	0.79
18:D:275:G:H4'	36:V:16:LYS:HD2	1.64	0.79
6:5:10:DT:C2'	12:AB:71:ALA:H	1.95	0.79
16:AG:451:ARG:NH2	16:AG:470:ILE:HG13	1.97	0.79
24:J:58:LYS:NZ	24:J:69:GLU:OE2	2.15	0.79
28:N:27:MET:N	28:N:58:GLU:OE2	2.16	0.79
49:i:46:ASP:OD2	49:i:53:LYS:NZ	2.15	0.79
54:n:142:ASP:HB3	54:n:145:LYS:HE2	1.65	0.79
2:1:98:LYS:HD2	41:a:2012:G:OP1	1.83	0.79
24:J:62:ARG:NH1	24:J:69:GLU:OE2	2.16	0.79
28:N:9:ASP:OD2	28:N:13:ARG:NH1	2.15	0.79
47:g:18:CYS:HB3	47:g:40:CYS:CB	2.13	0.79
48:h:258:ARG:NH1	48:h:264:ASP:OD1	2.14	0.79
33:S:12:LYS:O	33:S:16:LEU:HD23	1.83	0.79
39:Y:102:ARG:HD2	39:Y:141:ASP:CA	2.13	0.79
52:l:111:GLU:OE2	52:l:114:ARG:NH1	2.14	0.79
64:x:104:GLN:NE2	64:x:108:ASP:OD2	2.16	0.79
8:7:32:U:OP2	14:AE:398:LYS:NZ	2.16	0.78
41:a:1276:A:O2'	63:w:20:MET:CE	2.30	0.78
6:5:10:DT:H73	11:AA:62:TYR:HD2	1.29	0.78
12:AB:136:GLU:CD	12:AB:160:ARG:NH1	2.42	0.78
16:AG:437:LEU:HD21	16:AG:456:LEU:HD13	0.81	0.78
16:AG:451:ARG:HH12	16:AG:467:LEU:CA	1.92	0.78
8:7:3:G:C5'	18:D:1500:A:N6	2.46	0.78
9:9:34:THR:O	9:9:38:MET:HG2	1.83	0.78
9:9:118:ILE:HB	9:9:119:PRO:HD3	1.64	0.78
16:AG:393:LEU:HB3	16:AG:398:LEU:HD21	1.25	0.78
16:AG:412:ASN:O	16:AG:416:THR:HG23	1.84	0.78
17:C:38:LYS:HE2	17:C:38:LYS:HA	1.64	0.78
18:D:673:A:H2'	18:D:674:G:C8	2.18	0.78
27:M:40:GLU:OE2	29:O:41:ARG:NH2	2.17	0.78
9:9:81:LEU:HD21	41:a:1107:G:H4'	1.64	0.78
12:AB:138:ARG:CB	12:AB:154:VAL:O	2.30	0.78
27:M:20:SER:HB3	27:M:23:LEU:HD13	1.63	0.78
56:p:107:LEU:HB3	56:p:152:ARG:HE	1.47	0.78
16:AG:447:LYS:O	16:AG:470:ILE:CD1	2.31	0.78
22:H:306:VAL:HA	22:H:309:MET:SD	2.23	0.78
27:M:18:PHE:HE2	27:M:47:LEU:HD21	1.48	0.78
37:W:40:ILE:HG23	37:W:44:MET:SD	2.24	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1453:A:N1	63:w:74:GLU:OE1	2.16	0.78
43:c:30:LEU:HD12	43:c:31:PRO:HD2	1.63	0.78
12:AB:110:PRO:HB3	12:AB:114:ASP:OD2	1.83	0.78
16:AG:189:GLU:HB3	16:AG:194:GLN:HG3	1.63	0.78
16:AG:363:LEU:HD23	16:AG:409:ARG:HB2	1.62	0.78
6:5:10:DT:C2	12:AB:71:ALA:CB	2.61	0.78
8:7:2:U:OP1	18:D:1505:G:H8	1.64	0.78
16:AG:381:LEU:HA	16:AG:384:LEU:CD1	2.09	0.78
39:Y:9:LYS:HE2	39:Y:55:PRO:CG	2.14	0.78
16:AG:233:ARG:HB2	16:AG:327:LEU:HD23	1.66	0.78
29:O:56:ASP:O	29:O:60:LYS:NZ	2.16	0.78
57:q:2:LYS:NZ	57:q:32:LYS:O	2.17	0.78
9:9:60:LEU:HD23	9:9:64:VAL:HG21	1.65	0.78
9:9:94:ARG:HB2	9:9:97:LYS:HE2	1.66	0.78
16:AG:430:PRO:CG	16:AG:435:LEU:HD21	2.11	0.78
16:AG:451:ARG:NH1	16:AG:467:LEU:C	2.40	0.78
60:t:8:LEU:C	60:t:18:ARG:HH12	1.92	0.78
16:AG:307:ILE:HB	16:AG:338:VAL:HA	1.66	0.77
16:AG:355:ALA:HB1	16:AG:382:GLU:CD	1.94	0.77
16:AG:402:THR:O	16:AG:405:ALA:HB3	1.84	0.77
18:D:652:U:O3'	28:N:56:LYS:NZ	2.13	0.77
35:U:3:THR:HG21	35:U:5:ARG:CZ	2.14	0.77
12:AB:120:GLU:HB2	12:AB:162:LEU:CG	2.14	0.77
12:AB:125:GLY:O	14:AE:87:LYS:C	2.27	0.77
59:s:37:ARG:HA	59:s:118:MET:CE	2.14	0.77
11:AA:858:GLY:HA3	16:AG:37:LYS:CG	2.11	0.77
16:AG:434:LEU:CD2	16:AG:456:LEU:N	2.46	0.77
39:Y:93:ASN:C	39:Y:94:LYS:HD2	2.10	0.77
60:t:20:MET:HB3	60:t:44:LYS:NZ	1.98	0.77
31:Q:84:VAL:HG23	31:Q:107:ILE:HD11	1.67	0.77
35:U:3:THR:HG21	35:U:5:ARG:NH1	1.99	0.77
39:Y:81:LYS:HZ2	39:Y:86:LYS:HE2	1.49	0.77
12:AB:139:SER:O	12:AB:153:SER:HA	1.85	0.77
16:AG:354:ALA:HA	16:AG:357:ASP:CB	2.14	0.77
9:9:19:ALA:HA	9:9:70:GLU:HG2	1.66	0.77
12:AB:117:ILE:HD13	12:AB:161:LYS:HZ1	1.50	0.77
16:AG:434:LEU:CA	16:AG:456:LEU:HD21	2.12	0.77
18:D:375:U:OP2	35:U:70:ARG:NH2	2.17	0.77
37:W:44:MET:SD	37:W:62:VAL:HG11	2.25	0.77
41:a:1405:U:H2'	41:a:1406:U:C6	2.20	0.77
41:a:1406:U:O2'	41:a:1407:G:O5'	2.02	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1801:A:P	48:h:146:MET:HE1	2.25	0.77
62:v:1:MET:HA	62:v:1:MET:HE3	1.67	0.77
16:AG:354:ALA:O	16:AG:355:ALA:C	2.26	0.76
18:D:1227:A:OP1	38:X:93:ARG:NH2	2.18	0.76
40:Z:2:ILE:HG22	40:Z:4:LYS:H	1.50	0.76
2:1:11:ARG:CZ	2:1:98:LYS:HE3	2.15	0.76
12:AB:9:CYS:H	12:AB:53:ASN:HB3	1.48	0.76
31:Q:87:LYS:CG	31:Q:113:VAL:HG23	2.15	0.76
16:AG:284:VAL:HG12	16:AG:296:ILE:HD13	1.66	0.76
16:AG:451:ARG:CZ	16:AG:470:ILE:HG13	2.16	0.76
10:B:18:G:N2	10:B:55:U:O2	2.17	0.76
41:a:2511:U:C4'	50:j:130:GLN:OE1	2.33	0.76
6:5:10:DT:H2''	12:AB:69:ILE:C	2.10	0.76
14:AE:387:LEU:HD21	16:AG:147:ARG:CG	2.11	0.76
16:AG:387:VAL:CG1	16:AG:388:PRO:CD	2.41	0.76
41:a:196:A:OP2	61:u:47:ARG:NH1	2.18	0.76
63:w:12:ARG:O	63:w:17:ARG:NH2	2.19	0.76
10:A:18:G:N2	10:A:55:U:O2	2.17	0.76
12:AB:133:PRO:HA	12:AB:159:PHE:HZ	1.51	0.76
16:AG:131:ARG:HA	16:AG:186:VAL:HG11	1.68	0.76
9:9:77:VAL:HG12	9:9:82:ILE:HG21	1.68	0.76
14:AE:59:ALA:HB1	14:AE:71:LEU:CD2	2.16	0.76
5:4:50:MET:O	5:4:56:PHE:CE2	2.38	0.76
12:AB:115:LYS:CE	12:AB:129:ILE:HG23	2.14	0.76
12:AB:141:LEU:CD2	12:AB:143:LEU:CD1	2.64	0.76
12:AB:152:HIS:HB3	12:AB:154:VAL:CG1	2.15	0.76
16:AG:258:ARG:HG2	16:AG:258:ARG:NH1	1.99	0.76
18:D:375:U:P	35:U:70:ARG:HE	2.07	0.76
21:G:30:PHE:CD1	21:G:201:PRO:HG3	2.21	0.76
41:a:1828:G:O6	48:h:221:ARG:NH1	2.19	0.76
16:AG:313:ASN:N	16:AG:313:ASN:OD1	2.19	0.76
16:AG:354:ALA:C	16:AG:356:ILE:H	1.93	0.76
16:AG:381:LEU:CA	16:AG:384:LEU:HD12	2.08	0.76
16:AG:425:LEU:CB	16:AG:429:LYS:HE3	2.16	0.76
16:AG:451:ARG:HE	16:AG:470:ILE:HG13	1.50	0.76
21:G:49:MET:CE	21:G:201:PRO:HD3	2.16	0.76
41:a:686:U:O4	53:m:12:ARG:HD3	1.86	0.76
41:a:2335:A:OP2	64:x:13:ARG:CZ	2.33	0.76
59:s:15:TRP:CZ3	59:s:135:GLN:HA	2.21	0.76
6:5:11:DA:C4'	12:AB:67:THR:CG2	2.64	0.76
9:9:27:VAL:HG13	9:9:83:ALA:HB3	1.66	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:228:ARG:HD2	16:AG:236:ILE:HB	1.68	0.76
16:AG:434:LEU:HD11	16:AG:455:THR:O	1.85	0.76
12:AB:141:LEU:O	12:AB:151:LYS:CA	2.34	0.76
16:AG:248:VAL:HG22	16:AG:273:ILE:HG22	1.68	0.76
8:7:23:U:H2'	14:AE:68:TYR:OH	1.85	0.75
16:AG:425:LEU:HG	16:AG:429:LYS:HE2	1.65	0.75
21:G:154:MET:CE	21:G:158:PRO:HD3	2.16	0.75
40:Z:14:MET:HG3	40:Z:15:SER:H	1.48	0.75
9:9:5:LEU:C	9:9:9:GLN:HE22	1.94	0.75
12:AB:145:LEU:HD23	30:P:88:MET:N	2.00	0.75
16:AG:283:PHE:CZ	16:AG:331:LEU:O	2.39	0.75
16:AG:363:LEU:CD2	16:AG:409:ARG:CB	2.62	0.75
16:AG:425:LEU:HD23	16:AG:429:LYS:NZ	1.99	0.75
21:G:20:THR:HA	21:G:39:HIS:CE1	2.21	0.75
42:b:68:LYS:NZ	42:b:70:GLU:OE1	2.19	0.75
2:1:24:ILE:HG21	2:1:36:LEU:HD11	1.68	0.75
8:7:22:U:H4'	23:I:80:LYS:HG3	1.64	0.75
16:AG:240:THR:CG2	16:AG:247:PRO:HG3	2.16	0.75
16:AG:354:ALA:O	16:AG:356:ILE:N	2.19	0.75
41:a:2297:A:N1	41:a:2321:U:C4	2.53	0.75
6:5:10:DT:C4	11:AA:62:TYR:CE2	2.74	0.75
17:C:38:LYS:HD3	18:D:719:C:H1'	1.67	0.75
12:AB:145:LEU:CD2	30:P:88:MET:HA	2.03	0.75
16:AG:365:ILE:HG23	16:AG:409:ARG:HH11	1.51	0.75
16:AG:434:LEU:CD2	16:AG:455:THR:C	2.58	0.75
22:H:52:GLN:OE1	22:H:86:ARG:CB	2.34	0.75
25:K:142:ASP:O	25:K:145:GLU:HG3	1.86	0.75
41:a:742:A:H2'	41:a:743:A:C8	2.22	0.75
54:n:4:LEU:HD11	54:n:101:GLU:CA	2.16	0.75
17:C:60:LYS:HZ2	18:D:734:G:H2'	1.50	0.75
20:F:63:GLU:OE1	20:F:67:ARG:NH1	2.20	0.75
9:9:37:LYS:O	9:9:41:LEU:HG	1.86	0.75
16:AG:201:LYS:HD2	16:AG:201:LYS:N	2.01	0.75
16:AG:371:THR:O	16:AG:375:GLU:HG3	1.86	0.75
18:D:550:G:O2'	32:R:116:LYS:NZ	2.19	0.75
27:M:18:PHE:CE2	27:M:47:LEU:HD21	2.21	0.75
41:a:2314:A:OP1	54:n:88:LYS:NZ	2.18	0.75
65:y:71:GLU:OE1	65:y:101:ARG:NE	2.19	0.75
11:AA:859:GLU:CD	16:AG:38:LYS:HA	2.11	0.75
18:D:404:G:OP1	24:J:115:ARG:NH1	2.19	0.75
38:X:28:THR:HG23	38:X:31:LYS:HE3	1.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:X:57:ARG:NH2	47:g:35:ASP:OD1	2.19	0.75
39:Y:126:ARG:NH2	41:a:1083:U:OP1	2.19	0.75
41:a:537:G:OP2	59:s:2:LYS:NZ	2.20	0.75
54:n:56:ASP:OD2	54:n:150:ARG:NH1	2.20	0.75
59:s:15:TRP:HZ3	59:s:135:GLN:HA	1.50	0.75
9:9:59:LEU:HD22	9:9:62:ARG:NE	2.02	0.74
9:9:134:GLU:OE2	9:9:136:ILE:HG22	1.85	0.74
16:AG:62:TRP:HB3	16:AG:75:ILE:HD11	1.69	0.74
12:AB:125:GLY:O	14:AE:87:LYS:O	2.04	0.74
26:L:42:TRP:HZ3	26:L:45:ARG:HH22	1.32	0.74
52:l:90:GLN:NE2	52:l:91:ASP:O	2.20	0.74
2:1:25:ARG:HH22	41:a:520:G:P	2.10	0.74
5:4:57:TYR:HB3	62:v:136:MET:CE	2.16	0.74
12:AB:89:PRO:HD2	14:AE:290:ILE:HG21	1.68	0.74
12:AB:137:ALA:O	12:AB:155:LYS:C	2.30	0.74
16:AG:393:LEU:C	16:AG:398:LEU:HD23	2.12	0.74
41:a:1276:A:O2'	63:w:20:MET:HE2	1.87	0.74
9:9:59:LEU:HD13	9:9:62:ARG:HD2	1.70	0.74
50:j:46:ARG:NH2	50:j:88:GLU:O	2.19	0.74
60:t:42:THR:O	60:t:44:LYS:NZ	2.19	0.74
11:AA:855:PRO:CG	16:AG:105:ILE:HD12	2.18	0.74
18:D:739:C:O2'	34:T:42:HIS:ND1	2.18	0.74
58:r:6:LEU:HD11	58:r:37:VAL:HG23	1.69	0.74
5:4:45:ASP:OD1	5:4:46:LYS:N	2.21	0.74
17:C:60:LYS:NZ	18:D:734:G:O3'	2.20	0.74
18:D:1217:C:OP2	33:S:9:ARG:NH2	2.20	0.74
34:T:64:ARG:CZ	34:T:89:ARG:HH22	2.00	0.74
9:9:23:LEU:HD11	9:9:96:PHE:CD2	2.23	0.74
9:9:36:ASP:O	9:9:39:THR:HG22	1.87	0.74
11:AA:377:THR:CG2	12:AB:62:GLU:HB3	2.18	0.74
12:AB:18:GLN:HG3	12:AB:21:LEU:HD12	1.69	0.74
16:AG:385:ALA:HB3	16:AG:411:LYS:HE2	1.68	0.74
24:J:105:MET:CE	24:J:171:LEU:HD13	2.18	0.74
42:b:21:LEU:HD21	42:b:41:ARG:HE	1.51	0.74
63:w:60:VAL:HG22	63:w:63:ARG:NH1	2.03	0.74
63:w:33:ILE:HD11	63:w:112:TYR:CD1	2.23	0.74
5:4:75:GLN:HG3	5:4:92:VAL:HG23	1.70	0.74
14:AE:81:ARG:HD2	14:AE:81:ARG:N	2.03	0.74
16:AG:254:MET:HA	16:AG:254:MET:CE	2.17	0.74
16:AG:363:LEU:CD1	16:AG:410:ALA:HB2	2.17	0.74
16:AG:365:ILE:HG23	16:AG:409:ARG:NH1	2.02	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:Y:56:VAL:CA	39:Y:71:LYS:HZ1	2.00	0.74
12:AB:21:LEU:HB3	12:AB:26:VAL:HG11	1.70	0.74
12:AB:89:PRO:CD	14:AE:290:ILE:HG21	2.18	0.74
16:AG:244:ARG:CG	25:K:69:ARG:HE	1.83	0.74
16:AG:429:LYS:H	16:AG:429:LYS:HD2	1.53	0.74
18:D:376:G:H5''	35:U:5:ARG:HD2	1.67	0.74
22:H:36:VAL:O	22:H:37:LEU:HD12	1.87	0.74
40:Z:6:GLN:OE1	40:Z:10:ALA:HB2	1.88	0.74
6:5:10:DT:N3	12:AB:72:THR:OG1	2.20	0.73
16:AG:279:ASN:CB	16:AG:280:PRO:CD	2.66	0.73
62:v:97:GLN:N	62:v:100:LYS:HE3	2.03	0.73
8:7:22:U:H5''	23:I:80:LYS:CB	2.18	0.73
12:AB:145:LEU:HG	30:P:88:MET:HG3	0.74	0.73
18:D:1158:C:O2'	21:G:132:LYS:NZ	2.21	0.73
16:AG:243:LYS:HZ1	25:K:69:ARG:HD3	1.53	0.73
39:Y:9:LYS:HE2	39:Y:55:PRO:CB	2.17	0.73
41:a:465:G:OP1	53:m:12:ARG:NH2	2.22	0.73
47:g:18:CYS:CB	47:g:40:CYS:HB3	2.17	0.73
2:1:25:ARG:NH2	41:a:520:G:H5'	2.03	0.73
9:9:43:LYS:NZ	9:9:98:GLU:HB2	2.04	0.73
12:AB:51:PHE:CZ	14:AE:288:PRO:CD	2.66	0.73
18:D:375:U:OP1	35:U:70:ARG:HG2	1.88	0.73
31:Q:87:LYS:HG2	31:Q:113:VAL:HG23	1.67	0.73
39:Y:100:ILE:HD11	39:Y:139:VAL:HB	1.69	0.73
56:p:69:ARG:NH1	56:p:73:ASN:OD1	2.21	0.73
2:1:23:LEU:HD11	49:i:24:ALA:HB2	1.70	0.73
16:AG:393:LEU:CD2	16:AG:398:LEU:CG	2.58	0.73
17:C:73:ARG:NH1	31:Q:113:VAL:HG12	2.02	0.73
22:H:303:LEU:O	22:H:305:HIS:N	2.20	0.73
24:J:100:ASN:OD1	24:J:111:ARG:NH1	2.21	0.73
39:Y:102:ARG:CD	39:Y:141:ASP:HA	2.18	0.73
9:9:56:ARG:O	9:9:56:ARG:HG2	1.88	0.73
16:AG:434:LEU:HD21	16:AG:456:LEU:N	2.03	0.73
19:E:21:ASN:C	19:E:25:ARG:HE	1.96	0.73
41:a:1278:C:H4'	63:w:24:MET:HE1	1.70	0.73
54:n:127:ASN:OD1	54:n:158:THR:N	2.18	0.73
12:AB:138:ARG:HD2	12:AB:155:LYS:HB2	1.70	0.73
14:AE:387:LEU:CD2	16:AG:147:ARG:HG3	2.14	0.73
8:7:3:G:H5''	18:D:1500:A:H62	1.49	0.73
8:7:13:U:H3	24:J:47:ARG:HH11	1.37	0.73
9:9:94:ARG:HB3	9:9:97:LYS:HZ3	1.54	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:219:GLU:HA	16:AG:219:GLU:OE2	1.87	0.73
39:Y:100:ILE:HG13	39:Y:139:VAL:CG2	2.18	0.73
60:t:17:ARG:HB2	60:t:45:GLU:OE1	1.88	0.73
9:9:129:LEU:HD12	9:9:130:PRO:HD3	1.70	0.73
16:AG:442:ARG:HB3	16:AG:446:PHE:HE2	1.53	0.73
34:T:21:ASP:O	34:T:22:THR:OG1	2.07	0.73
39:Y:102:ARG:CZ	39:Y:139:VAL:HG11	2.19	0.73
16:AG:425:LEU:O	16:AG:429:LYS:HE3	1.87	0.73
17:C:38:LYS:NZ	18:D:718:A:C2	2.57	0.73
18:D:13:U:C4	18:D:915:A:N6	2.57	0.73
23:I:147:LYS:NZ	23:I:204:LYS:O	2.22	0.73
34:T:76:ALA:O	34:T:80:GLN:NE2	2.22	0.73
11:AA:387:ASN:OD1	11:AA:394:ARG:NH1	2.21	0.72
16:AG:365:ILE:CG2	16:AG:409:ARG:HH11	2.01	0.72
10:B:76:A:C2	41:a:2493:U:H4'	2.24	0.72
55:o:25:LYS:HB3	61:u:62:PRO:HG2	1.71	0.72
56:p:85:LYS:HE3	56:p:164:TYR:CD1	2.24	0.72
62:v:50:ARG:HA	62:v:53:MET:SD	2.29	0.72
12:AB:145:LEU:N	12:AB:145:LEU:HD12	2.03	0.72
16:AG:393:LEU:CD2	16:AG:398:LEU:HD13	2.19	0.72
32:R:56:ARG:HG2	32:R:62:GLU:OE2	1.89	0.72
48:h:130:LEU:HA	48:h:189:ARG:NH1	2.03	0.72
49:i:55:ILE:HD13	63:w:112:TYR:CZ	2.24	0.72
11:AA:859:GLU:CD	16:AG:38:LYS:CB	2.58	0.72
8:7:18:U:C6	8:7:18:U:H5''	2.24	0.72
16:AG:434:LEU:HG	16:AG:455:THR:C	2.14	0.72
10:B:53:G:C2	10:B:54:U:C5	2.77	0.72
18:D:311:C:P	35:U:31:ARG:HH22	2.13	0.72
24:J:184:ARG:NH1	24:J:187:GLU:OE1	2.22	0.72
43:c:71:LEU:HB3	43:c:76:GLU:OE2	1.89	0.72
66:z:92:ARG:HG3	66:z:95:LEU:HD12	1.71	0.72
5:4:77:VAL:CG2	5:4:79:ARG:HE	2.03	0.72
9:9:31:ARG:HD2	41:a:1053:C:HO2'	1.53	0.72
9:9:47:GLU:HB3	9:9:51:TYR:CZ	2.24	0.72
14:AE:64:PRO:HG3	14:AE:90:VAL:CG1	2.20	0.72
20:F:32:VAL:HG12	20:F:36:GLU:OE1	1.90	0.72
23:I:142:MET:HE3	23:I:170:GLU:OE1	1.89	0.72
26:L:36:ILE:CD1	26:L:64:VAL:HG22	2.18	0.72
47:g:18:CYS:CB	47:g:40:CYS:CB	2.67	0.72
8:7:11:U:O2'	25:K:33:PHE:HE1	1.70	0.72
14:AE:77:ARG:NE	14:AE:77:ARG:HA	2.04	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:O:47:VAL:HA	29:O:50:GLN:HG2	1.71	0.72
41:a:2884:U:OP2	49:i:40:ARG:NH2	2.23	0.72
56:p:17:VAL:O	56:p:18:LYS:HE2	1.89	0.72
12:AB:36:GLU:H	12:AB:106:ASP:CG	1.96	0.72
16:AG:198:THR:HB	16:AG:201:LYS:HD3	1.70	0.72
16:AG:352:ALA:O	16:AG:356:ILE:HG22	1.90	0.72
38:X:81:MET:HE2	41:a:888:C:C6	2.24	0.72
39:Y:14:ALA:CB	39:Y:50:LYS:HD2	2.16	0.72
10:B:13:C:OP2	41:a:1907:G:N2	2.23	0.72
19:E:75:HIS:CE1	19:E:79:LEU:HD11	2.25	0.72
21:G:19:GLN:NE2	22:H:75:VAL:O	2.23	0.72
30:P:47:GLU:N	30:P:47:GLU:OE1	2.23	0.72
47:g:5:ILE:HD12	54:n:64:LYS:HE3	1.72	0.72
18:D:973:G:O4'	30:P:57:VAL:HG22	1.90	0.72
31:Q:72:ASP:O	31:Q:75:LYS:NZ	2.21	0.72
62:v:73:ILE:HD11	62:v:93:VAL:HG22	1.70	0.72
14:AE:85:CYS:SG	68:AE:1502:ZN:ZN	1.79	0.72
16:AG:282:GLN:NE2	16:AG:282:GLN:HA	2.05	0.72
18:D:636:U:H4'	36:V:6:ARG:CZ	2.19	0.72
23:I:142:MET:HE1	23:I:148:GLY:HA2	1.72	0.72
34:T:63:ARG:O	34:T:67:LEU:HD23	1.90	0.72
34:T:64:ARG:NH1	34:T:64:ARG:HA	2.05	0.72
9:9:78:GLY:N	9:9:79:PRO:HD2	2.04	0.71
16:AG:127:VAL:HG22	16:AG:192:GLY:C	2.15	0.71
16:AG:413:ALA:O	16:AG:416:THR:OG1	2.05	0.71
16:AG:434:LEU:CD2	16:AG:459:LEU:CD1	2.54	0.71
20:F:13:ASP:OD1	20:F:14:VAL:N	2.22	0.71
59:s:15:TRP:CZ3	59:s:135:GLN:HG3	2.25	0.71
8:7:30:G:P	16:AG:112:GLN:CG	2.78	0.71
9:9:56:ARG:NH2	41:a:1084:A:O4'	2.23	0.71
16:AG:354:ALA:C	16:AG:356:ILE:N	2.43	0.71
17:C:18:VAL:O	17:C:51:TYR:OH	2.06	0.71
18:D:653:U:C6	28:N:56:LYS:HE3	2.25	0.71
23:I:166:GLU:OE1	23:I:166:GLU:N	2.23	0.71
25:K:69:ARG:CZ	25:K:69:ARG:HA	2.20	0.71
41:a:1824:G:OP1	48:h:52:ARG:NH2	2.23	0.71
6:5:9:DG:OP2	11:AA:470:ARG:HA	1.90	0.71
10:A:53:G:C2	10:A:54:U:C5	2.77	0.71
14:AE:59:ALA:HB1	14:AE:71:LEU:HD22	1.71	0.71
15:AF:35:LYS:NZ	16:AG:174:ARG:NH2	2.37	0.71
18:D:1208:C:H2'	18:D:1209:C:H6	1.55	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:h:123:ALA:HB1	48:h:125:LYS:NZ	2.04	0.71
12:AB:24:GLN:HB2	12:AB:26:VAL:HG23	1.70	0.71
18:D:13:U:O4	18:D:21:G:C2	2.43	0.71
18:D:1328:C:O2'	38:X:29:ARG:NH2	2.23	0.71
23:I:74:GLY:O	23:I:78:GLY:N	2.24	0.71
24:J:76:TYR:CE2	24:J:204:TYR:HB2	2.24	0.71
30:P:18:ILE:O	30:P:22:THR:HG23	1.90	0.71
39:Y:81:LYS:HD2	39:Y:81:LYS:N	2.05	0.71
52:l:6:LYS:NZ	52:l:120:VAL:O	2.24	0.71
60:t:8:LEU:C	60:t:18:ARG:NH1	2.48	0.71
11:AA:377:THR:OG1	12:AB:62:GLU:CG	2.38	0.71
16:AG:220:VAL:O	16:AG:240:THR:HG22	1.90	0.71
16:AG:486:ARG:O	16:AG:490:TRP:CD1	2.41	0.71
12:AB:120:GLU:HA	12:AB:124:GLU:HB3	1.72	0.71
16:AG:287:ALA:HA	16:AG:331:LEU:HD12	0.87	0.71
27:M:55:GLY:O	27:M:56:LYS:O	2.07	0.71
41:a:2328:A:H2'	41:a:2329:U:C6	2.25	0.71
16:AG:297:VAL:HG23	16:AG:306:ASP:HB2	1.71	0.71
41:a:2780:G:P	59:s:120:ARG:HH11	2.12	0.71
54:n:134:GLU:HG2	54:n:137:ILE:HG23	1.72	0.71
11:AA:855:PRO:HD3	16:AG:105:ILE:HD12	1.71	0.71
12:AB:137:ALA:O	12:AB:155:LYS:HA	1.90	0.71
23:I:39:VAL:O	23:I:43:LEU:HD23	1.90	0.71
25:K:93:ARG:HB3	25:K:93:ARG:CZ	2.21	0.71
39:Y:57:VAL:O	39:Y:69:VAL:HG22	1.91	0.71
41:a:871:U:H2'	41:a:872:U:C6	2.26	0.71
41:a:987:C:O3'	46:f:11:ARG:NH1	2.23	0.71
52:l:6:LYS:NZ	52:l:120:VAL:N	2.39	0.71
3:2:56:GLU:OE2	3:2:88:LYS:HA	1.90	0.71
9:9:27:VAL:CG1	9:9:83:ALA:HB3	2.20	0.71
12:AB:141:LEU:N	12:AB:153:SER:HB3	2.05	0.71
14:AE:68:TYR:HA	14:AE:92:VAL:HG23	1.72	0.71
16:AG:262:VAL:HA	16:AG:265:GLU:HB2	1.72	0.71
16:AG:362:TYR:CA	16:AG:413:ALA:CB	2.69	0.71
16:AG:422:GLU:CB	16:AG:426:GLY:HA3	2.21	0.71
29:O:7:TYR:N	29:O:89:GLU:OE2	2.24	0.71
9:9:122:GLN:HG2	9:9:123:ILE:N	2.06	0.71
12:AB:154:VAL:CG2	12:AB:159:PHE:HB3	2.20	0.71
18:D:736:C:C5'	26:L:90:MET:HE2	2.21	0.71
27:M:16:PRO:HB3	29:O:46:MET:HG3	1.73	0.71
41:a:2469:A:N6	41:a:2481:G:O2'	2.23	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:10:LYS:HE2	41:a:994:C:O2'	1.90	0.70
4:3:46:GLN:NE2	4:3:47:LYS:O	2.24	0.70
11:AA:855:PRO:CG	16:AG:105:ILE:CD1	2.69	0.70
12:AB:110:PRO:CB	12:AB:114:ASP:OD2	2.38	0.70
16:AG:223:ILE:O	16:AG:223:ILE:HD13	1.90	0.70
23:I:22:TRP:HZ3	23:I:24:ALA:HB2	1.54	0.70
41:a:1825:U:OP2	48:h:52:ARG:NH1	2.23	0.70
63:w:42:LYS:N	63:w:42:LYS:HD3	2.05	0.70
16:AG:167:MET:HE1	16:AG:199:ARG:HG3	1.72	0.70
16:AG:353:HIS:HA	16:AG:356:ILE:CG2	2.21	0.70
16:AG:389:MET:O	16:AG:404:GLU:OE2	2.09	0.70
32:R:5:ASN:OD1	36:V:36:LYS:NZ	2.24	0.70
47:g:16:CYS:CB	47:g:37:CYS:HB3	2.21	0.70
62:v:39:GLY:N	62:v:96:ILE:O	2.22	0.70
12:AB:141:LEU:CD2	12:AB:143:LEU:HD11	2.21	0.70
18:D:375:U:OP1	35:U:70:ARG:NE	2.24	0.70
18:D:564:C:P	32:R:12:ARG:NH2	2.64	0.70
18:D:1376:U:OP2	27:M:25:LYS:NZ	2.24	0.70
44:d:42:C:O5'	54:n:64:LYS:NZ	2.20	0.70
12:AB:138:ARG:CG	12:AB:154:VAL:C	2.47	0.70
16:AG:403:VAL:HG22	16:AG:406:LEU:HD12	1.71	0.70
33:S:90:ARG:HG3	33:S:92:GLU:CD	2.15	0.70
39:Y:19:PRO:HG2	39:Y:23:VAL:HG23	1.73	0.70
9:9:6:GLN:HA	9:9:9:GLN:NE2	2.06	0.70
38:X:66:GLU:OE1	38:X:66:GLU:N	2.23	0.70
2:1:86:MET:HE1	2:1:88:ARG:HD3	1.70	0.70
10:A:6:G:HO2'	10:A:7:G:C5'	2.04	0.70
12:AB:38:ILE:CD1	12:AB:160:ARG:NH1	2.54	0.70
17:C:57:ARG:HE	17:C:61:ARG:HH12	1.37	0.70
2:1:83:LYS:HB2	2:1:95:ARG:HD3	1.72	0.70
12:AB:18:GLN:HA	12:AB:21:LEU:HB2	1.74	0.70
39:Y:19:PRO:O	39:Y:24:GLY:HA2	1.92	0.70
48:h:133:ARG:NE	48:h:187:ASP:OD2	2.25	0.70
12:AB:152:HIS:ND1	12:AB:159:PHE:CD2	2.49	0.70
16:AG:302:LYS:H	16:AG:302:LYS:CE	2.00	0.70
16:AG:433:ASP:C	16:AG:456:LEU:CG	2.64	0.70
16:AG:434:LEU:HD11	16:AG:455:THR:C	2.17	0.70
22:H:332:VAL:HG22	22:H:342:ILE:HD11	1.73	0.70
23:I:24:ALA:HB3	23:I:29:PHE:CE2	2.27	0.70
16:AG:285:ILE:CG1	16:AG:293:VAL:CG1	2.54	0.70
28:N:87:LYS:HD2	28:N:91:GLU:HB3	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:p:107:LEU:O	56:p:152:ARG:NH1	2.25	0.70
12:AB:136:GLU:HA	12:AB:159:PHE:HE1	1.57	0.70
12:AB:141:LEU:H	12:AB:153:SER:HB3	1.56	0.70
41:a:1190:G:OP1	61:u:30:THR:OG1	2.10	0.70
48:h:180:GLU:C	48:h:181:MET:HE2	2.17	0.70
59:s:73:VAL:C	59:s:74:TYR:CD2	2.70	0.70
62:v:105:MET:SD	62:v:117:PHE:CZ	2.85	0.70
29:O:112:GLU:OE2	29:O:115:LYS:NZ	2.23	0.69
31:Q:52:PHE:HD2	31:Q:56:ARG:HG2	1.56	0.69
52:l:17:THR:HA	52:l:21:ARG:HH21	1.57	0.69
57:q:25:VAL:HB	57:q:35:GLN:OE1	1.92	0.69
59:s:15:TRP:NE1	59:s:53:TYR:HD2	1.90	0.69
12:AB:102:LYS:HE2	14:AE:285:LEU:HA	1.74	0.69
21:G:126:PHE:O	21:G:127:ASP:O	2.10	0.69
24:J:76:TYR:HE2	24:J:204:TYR:HB2	1.57	0.69
26:L:42:TRP:CH2	26:L:102:MET:CG	2.74	0.69
41:a:1012:U:O4	59:s:30:THR:HG21	1.92	0.69
62:v:53:MET:HE3	62:v:120:ALA:HB2	1.74	0.69
16:AG:171:GLU:OE1	16:AG:267:GLY:HA3	1.92	0.69
16:AG:285:ILE:CD1	16:AG:293:VAL:HG11	2.22	0.69
18:D:274:A:H4'	36:V:16:LYS:CE	2.22	0.69
51:k:21:TYR:OH	51:k:39:PHE:O	2.10	0.69
58:r:33:GLN:OE1	58:r:35:LYS:NZ	2.24	0.69
2:l:25:ARG:HH22	41:a:520:G:C5'	2.04	0.69
9:9:142:THR:OG1	40:Z:7:ILE:HG21	1.90	0.69
12:AB:141:LEU:HB2	12:AB:143:LEU:CD1	2.18	0.69
16:AG:279:ASN:CB	16:AG:280:PRO:HD2	2.22	0.69
21:G:26:LYS:HD2	21:G:193:PRO:HG2	1.74	0.69
25:K:111:MET:O	25:K:115:LEU:HD23	1.91	0.69
10:A:37:A:O2'	10:A:38:A:H5'	1.93	0.69
16:AG:171:GLU:OE2	16:AG:267:GLY:CA	2.41	0.69
16:AG:336:LEU:HD12	16:AG:336:LEU:N	2.01	0.69
27:M:4:ARG:HG2	27:M:5:ARG:NH1	2.08	0.69
30:P:86:ALA:O	30:P:90:LEU:HD13	1.93	0.69
61:u:123:ARG:NH2	61:u:143:GLU:OE2	2.25	0.69
63:w:45:ARG:O	63:w:49:GLU:OE1	2.11	0.69
7:6:25:DT:H2'	11:AA:496:LYS:HG3	1.73	0.69
11:AA:65:ASN:HB3	11:AA:105:TYR:HB2	1.73	0.69
12:AB:128:ALA:HB1	12:AB:142:LEU:O	1.92	0.69
12:AB:133:PRO:HA	12:AB:159:PHE:CZ	2.26	0.69
16:AG:285:ILE:HG13	16:AG:293:VAL:HG13	1.71	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:636:U:H4'	36:V:6:ARG:NH2	2.06	0.69
19:E:12:ILE:O	19:E:15:GLU:HG3	1.92	0.69
19:E:45:ALA:O	19:E:48:GLN:HG3	1.93	0.69
21:G:27:MET:SD	21:G:30:PHE:HB2	2.33	0.69
32:R:7:LEU:HD21	32:R:12:ARG:NH2	2.07	0.69
34:T:28:GLN:O	34:T:32:LEU:HG	1.93	0.69
38:X:28:THR:HG23	38:X:31:LYS:CE	2.22	0.69
38:X:71:ARG:CZ	38:X:72:GLU:HG3	2.22	0.69
39:Y:91:LYS:NZ	39:Y:97:VAL:HG21	2.07	0.69
39:Y:100:ILE:CG1	39:Y:139:VAL:HB	2.22	0.69
40:Z:14:MET:HB3	40:Z:17:MET:CG	2.21	0.69
41:a:2350:C:OP1	55:o:45:ARG:NH2	2.25	0.69
41:a:2682:A:C8	50:j:11:MET:HE2	2.25	0.69
8:7:30:G:OP1	16:AG:112:GLN:HG3	1.93	0.69
12:AB:145:LEU:HB3	30:P:88:MET:HG2	1.73	0.69
10:B:38:A:O2'	18:D:790:A:OP1	2.09	0.69
27:M:66:LEU:HG	27:M:70:ARG:HE	1.57	0.69
52:l:101:TYR:CE2	52:l:105:LEU:HD11	2.28	0.69
2:1:25:ARG:HH22	41:a:520:G:H5'	1.58	0.69
9:9:43:LYS:HZ2	9:9:101:LYS:HE2	1.57	0.69
11:AA:380:ALA:H	12:AB:65:HIS:HE1	1.00	0.69
16:AG:433:ASP:O	16:AG:437:LEU:HG	1.92	0.69
10:B:58:A:O2'	10:B:59:A:H3'	1.93	0.69
18:D:1308:U:OP1	38:X:100:GLN:NE2	2.26	0.69
37:W:40:ILE:CD1	37:W:66:MET:SD	2.77	0.69
39:Y:99:LYS:NZ	39:Y:140:GLU:OE2	2.26	0.69
39:Y:100:ILE:HG13	39:Y:139:VAL:HG23	1.74	0.69
39:Y:102:ARG:HD2	39:Y:141:ASP:HA	1.75	0.69
40:Z:2:ILE:HG22	40:Z:5:ASP:H	1.58	0.69
41:a:2356:U:H5''	42:b:20:ARG:CD	2.21	0.69
48:h:205:LEU:HD12	48:h:210:ALA:HB1	1.75	0.69
8:7:8:U:OP2	18:D:1397:C:N3	2.26	0.69
8:7:30:G:P	16:AG:112:GLN:HG3	2.33	0.69
14:AE:1033:GLY:HA3	14:AE:1081:VAL:O	1.93	0.69
16:AG:266:LEU:H	16:AG:266:LEU:CD2	2.06	0.69
16:AG:393:LEU:HD23	16:AG:398:LEU:CD1	2.19	0.69
61:u:55:MET:HE1	61:u:60:ARG:HG2	1.75	0.69
62:v:1:MET:HE1	62:v:43:ALA:C	2.18	0.69
2:1:19:LEU:HD21	49:i:22:LEU:HB2	1.75	0.69
12:AB:113:GLY:H	12:AB:133:PRO:HD2	1.58	0.69
12:AB:130:PHE:HA	12:AB:152:HIS:NE2	2.08	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:462:GLN:OE1	16:AG:467:LEU:HD21	1.93	0.69
25:K:111:MET:CE	25:K:125:ALA:HB1	2.23	0.69
25:K:115:LEU:HD12	25:K:120:VAL:HG11	1.75	0.69
41:a:2314:A:H1'	54:n:155:THR:HG21	1.74	0.69
41:a:2742:G:OP1	57:q:36:ARG:NH1	2.25	0.69
46:f:16:ARG:NE	46:f:54:MET:SD	2.66	0.69
54:n:69:LYS:HD3	54:n:84:PRO:HA	1.74	0.69
5:4:53:LYS:HD2	5:4:56:PHE:CE2	2.29	0.68
9:9:92:ALA:HB1	9:9:129:LEU:HD22	1.74	0.68
12:AB:104:ILE:O	12:AB:111:TYR:OH	2.10	0.68
16:AG:355:ALA:CB	16:AG:382:GLU:OE1	2.18	0.68
16:AG:365:ILE:HD13	16:AG:406:LEU:HD21	1.70	0.68
26:L:35:LYS:NZ	26:L:36:ILE:O	2.26	0.68
33:S:20:TYR:HE2	33:S:52:PRO:HG2	1.58	0.68
39:Y:116:MET:CG	39:Y:124:MET:HG2	2.21	0.68
41:a:1655:A:H1'	50:j:118:PHE:CE2	2.28	0.68
47:g:5:ILE:HB	54:n:64:LYS:HD3	1.75	0.68
2:1:7:HIS:CD2	2:1:10:ALA:HB2	2.27	0.68
5:4:63:ILE:HD11	5:4:91:PHE:CD2	2.28	0.68
18:D:1344:C:P	29:O:124:ARG:HH11	2.16	0.68
19:E:9:LYS:C	19:E:13:GLN:HE22	2.00	0.68
19:E:25:ARG:CD	19:E:66:LEU:HD11	2.22	0.68
22:H:22:SER:N	22:H:69:ASP:OD2	2.26	0.68
39:Y:118:GLY:O	39:Y:124:MET:HE3	1.93	0.68
9:9:52:MET:HE1	9:9:85:SER:C	2.17	0.68
34:T:27:VAL:O	34:T:31:LEU:HD23	1.93	0.68
54:n:94:GLU:HA	54:n:97:TRP:HE3	1.59	0.68
5:4:77:VAL:HG23	5:4:89:ILE:HG12	1.76	0.68
12:AB:119:THR:HB	12:AB:123:PHE:O	1.93	0.68
15:AF:35:LYS:HZ2	16:AG:174:ARG:NH2	1.90	0.68
16:AG:355:ALA:C	16:AG:380:THR:HG21	2.18	0.68
16:AG:429:LYS:CD	16:AG:429:LYS:H	2.05	0.68
16:AG:453:VAL:CG2	16:AG:462:GLN:NE2	2.56	0.68
10:B:6:G:HO2'	10:B:7:G:C5'	2.05	0.68
34:T:76:ALA:C	34:T:80:GLN:HE22	2.00	0.68
41:a:2511:U:H4'	50:j:130:GLN:OE1	1.91	0.68
54:n:56:ASP:HB3	54:n:150:ARG:NH2	2.07	0.68
60:t:103:VAL:HG22	60:t:104:THR:H	1.58	0.68
63:w:38:LEU:HD13	63:w:111:ALA:CB	2.24	0.68
5:4:50:MET:HA	5:4:56:PHE:CZ	2.29	0.68
9:9:43:LYS:HA	9:9:46:ARG:CZ	2.24	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:A:58:A:O2'	10:A:59:A:H3'	1.93	0.68
16:AG:102:PHE:HB2	16:AG:106:THR:HG21	1.75	0.68
19:E:78:ASN:O	19:E:82:GLN:OE1	2.11	0.68
27:M:111:ARG:O	27:M:119:ARG:NH2	2.27	0.68
32:R:27:CYS:HB2	32:R:30:LYS:HE2	1.75	0.68
41:a:1816:C:N4	48:h:35:GLU:OE2	2.20	0.68
1:0:52:PRO:HB3	66:z:89:GLU:OE2	1.94	0.68
12:AB:154:VAL:HG21	12:AB:159:PHE:CB	2.23	0.68
23:I:134:MET:HE3	23:I:151:VAL:HG23	1.75	0.68
41:a:1056:G:O2'	41:a:1103:A:N6	2.27	0.68
4:3:72:ILE:HD12	4:3:83:VAL:HG21	1.76	0.68
12:AB:6:LEU:HD13	14:AE:291:ILE:CD1	2.21	0.68
12:AB:137:ALA:O	12:AB:155:LYS:CA	2.41	0.68
12:AB:154:VAL:HG21	12:AB:159:PHE:CA	2.24	0.68
14:AE:59:ALA:HB2	14:AE:71:LEU:HD21	1.74	0.68
18:D:673:A:H5''	26:L:86:ARG:NH1	2.09	0.68
20:F:8:GLU:OE2	20:F:9:ASN:ND2	2.26	0.68
26:L:9:MET:HE1	26:L:85:ILE:CG2	2.22	0.68
36:V:16:LYS:HD3	36:V:16:LYS:C	2.17	0.68
62:v:111:GLU:O	62:v:115:GLU:OE1	2.11	0.68
9:9:44:ALA:HB1	9:9:52:MET:HB3	1.74	0.68
16:AG:363:LEU:HD21	16:AG:410:ALA:N	1.79	0.68
16:AG:440:VAL:HG23	16:AG:481:LEU:HD22	1.76	0.68
18:D:1151:A:HO2'	18:D:1152:A:P	2.17	0.68
22:H:304:VAL:O	22:H:304:VAL:HG12	1.94	0.68
9:9:44:ALA:HA	9:9:47:GLU:OE1	1.94	0.68
12:AB:89:PRO:CG	14:AE:290:ILE:HG21	2.24	0.68
10:B:37:A:O2'	10:B:38:A:H5'	1.93	0.68
19:E:79:LEU:HA	19:E:82:GLN:OE1	1.94	0.68
27:M:20:SER:CB	27:M:23:LEU:HD13	2.24	0.68
39:Y:85:ILE:H	39:Y:85:ILE:HD12	1.59	0.68
41:a:1653:G:H3'	63:w:2:ARG:HD2	1.74	0.68
60:t:5:GLN:HA	60:t:20:MET:HE2	1.74	0.68
9:9:43:LYS:NZ	9:9:101:LYS:HE2	2.09	0.68
11:AA:387:ASN:CG	11:AA:394:ARG:HH12	1.81	0.68
16:AG:168:LEU:HB2	16:AG:171:GLU:HB2	1.75	0.68
16:AG:235:LYS:HZ2	16:AG:331:LEU:HG	1.58	0.68
10:B:24:U:O2'	41:a:1922:G:O3'	2.12	0.68
18:D:588:G:H4'	28:N:3:MET:HE1	1.76	0.68
35:U:45:GLU:HG3	35:U:46:LYS:HD3	1.76	0.68
48:h:76:ALA:HB1	48:h:94:VAL:HG12	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:s:72:LYS:HD3	59:s:74:TYR:HH	1.59	0.68
5:4:75:GLN:HG3	5:4:92:VAL:CG2	2.24	0.67
6:5:10:DT:C5	11:AA:62:TYR:HE2	1.97	0.67
9:9:73:LYS:HG2	9:9:117:LEU:HD12	1.76	0.67
23:I:134:MET:HE1	23:I:167:TRP:HA	1.76	0.67
8:7:43:G:OP1	11:AA:1073:LYS:NZ	2.24	0.67
9:9:47:GLU:HG3	9:9:94:ARG:CZ	2.24	0.67
12:AB:35:LEU:CA	12:AB:106:ASP:OD1	2.36	0.67
16:AG:207:GLU:HA	16:AG:210:ARG:HB2	1.76	0.67
16:AG:298:VAL:HA	16:AG:303:HIS:HD1	1.58	0.67
16:AG:363:LEU:CD2	16:AG:409:ARG:CA	2.71	0.67
16:AG:385:ALA:HB2	16:AG:411:LYS:HE3	1.69	0.67
16:AG:447:LYS:O	16:AG:470:ILE:HD13	1.94	0.67
18:D:564:C:OP1	32:R:12:ARG:NH1	2.27	0.67
21:G:100:MET:HE1	21:G:101:LEU:HD21	1.75	0.67
27:M:109:ARG:HD2	27:M:116:MET:HE1	1.76	0.67
33:S:42:TRP:CZ3	47:g:66:ILE:HG23	2.29	0.67
41:a:1800:C:OP2	48:h:182:ARG:NH1	2.27	0.67
56:p:85:LYS:CE	56:p:164:TYR:HD1	2.07	0.67
63:w:24:MET:HE2	63:w:34:ILE:CD1	2.24	0.67
7:6:20:DA:N6	8:7:38:G:N1	2.42	0.67
9:9:139:LEU:HD21	40:Z:11:VAL:HG22	1.76	0.67
16:AG:60:ARG:HG3	16:AG:98:GLU:HG3	1.74	0.67
16:AG:107:THR:HA	16:AG:110:ALA:HB3	1.75	0.67
20:F:12:PHE:CE1	31:Q:107:ILE:HG22	2.29	0.67
25:K:156:LYS:HE3	28:N:71:VAL:HG13	1.76	0.67
38:X:90:ARG:CD	38:X:97:VAL:HA	2.23	0.67
40:Z:20:VAL:O	40:Z:20:VAL:HG12	1.94	0.67
41:a:2420:C:H5'	51:k:8:LYS:CE	2.25	0.67
58:r:37:VAL:HG12	58:r:43:ASN:ND2	2.09	0.67
12:AB:115:LYS:NZ	12:AB:129:ILE:HG22	2.04	0.67
16:AG:434:LEU:CA	16:AG:456:LEU:CD2	2.58	0.67
18:D:274:A:H4'	36:V:16:LYS:HE3	1.76	0.67
22:H:23:ILE:N	22:H:69:ASP:OD2	2.27	0.67
24:J:121:LYS:HG2	24:J:131:ASN:HD21	1.59	0.67
26:L:18:VAL:HA	26:L:21:MET:HE2	1.75	0.67
26:L:42:TRP:HZ2	26:L:102:MET:SD	2.17	0.67
31:Q:80:LYS:HB3	31:Q:106:ARG:NH1	2.09	0.67
48:h:129:THR:HG22	48:h:189:ARG:HD2	1.77	0.67
52:l:118:LEU:HD11	52:l:188:MET:SD	2.35	0.67
60:t:9:ASN:OD1	60:t:10:VAL:N	2.27	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:z:68:ALA:HB1	66:z:106:PHE:CE2	2.29	0.67
14:AE:79:LYS:CA	14:AE:81:ARG:NH2	2.41	0.67
16:AG:228:ARG:HA	16:AG:327:LEU:CD1	2.22	0.67
16:AG:353:HIS:C	16:AG:357:ASP:H	2.01	0.67
16:AG:393:LEU:CD2	16:AG:398:LEU:HD22	1.89	0.67
52:l:6:LYS:HE3	52:l:119:ILE:HG23	1.75	0.67
62:v:1:MET:HE1	62:v:44:ARG:N	2.09	0.67
8:7:11:U:H4'	25:K:20:ARG:HH21	1.53	0.67
12:AB:145:LEU:HD12	12:AB:145:LEU:H	1.60	0.67
16:AG:425:LEU:CB	16:AG:429:LYS:CE	2.71	0.67
18:D:876:C:H1'	28:N:12:THR:HG21	1.76	0.67
18:D:1308:U:P	38:X:100:GLN:HE22	2.16	0.67
22:H:308:GLU:O	22:H:310:ASP:N	2.26	0.67
37:W:36:ARG:NH2	37:W:75:ALA:O	2.26	0.67
39:Y:23:VAL:HG23	39:Y:24:GLY:H	1.58	0.67
39:Y:116:MET:HG2	39:Y:124:MET:CG	2.24	0.67
41:a:666:A:H1'	55:o:4:ILE:HD12	1.76	0.67
41:a:2682:A:C8	50:j:11:MET:HE1	2.30	0.67
8:7:8:U:H5'	18:D:1397:C:N3	2.10	0.67
9:9:24:SER:CB	9:9:116:GLU:HG3	2.24	0.67
12:AB:119:THR:O	12:AB:124:GLU:HB3	1.95	0.67
19:E:25:ARG:HD2	19:E:66:LEU:HD11	1.75	0.67
39:Y:32:VAL:HG22	39:Y:60:VAL:HG21	1.76	0.67
41:a:111:A:O3'	45:e:58:ASN:ND2	2.28	0.67
41:a:1665:A:O5'	60:t:66:LYS:NZ	2.28	0.67
46:f:41:THR:O	46:f:44:ILE:HG22	1.95	0.67
62:v:1:MET:HE1	62:v:44:ARG:HA	1.77	0.67
66:z:79:PHE:HE1	66:z:110:VAL:HA	1.60	0.67
6:5:10:DT:H73	11:AA:62:TYR:CB	2.25	0.67
17:C:70:TYR:CE2	18:D:674:G:H4'	2.30	0.67
18:D:945:G:C2	18:D:946:A:C8	2.83	0.67
33:S:19:LYS:HG3	33:S:20:TYR:CD1	2.29	0.67
5:4:89:ILE:HG21	5:4:91:PHE:CE1	2.29	0.67
13:AD:48:LEU:HB2	13:AD:183:ILE:HD11	1.76	0.67
16:AG:380:THR:O	16:AG:384:LEU:HD12	1.95	0.67
17:C:13:PHE:HB3	17:C:51:TYR:CE1	2.30	0.67
37:W:62:VAL:HG13	37:W:66:MET:HE3	1.77	0.67
41:a:927:A:H2'	41:a:928:A:C8	2.30	0.67
16:AG:239:LYS:HG3	16:AG:276:TRP:HB3	1.75	0.67
16:AG:284:VAL:CG1	16:AG:296:ILE:HD13	2.25	0.67
18:D:43:C:OP1	35:U:12:LYS:NZ	2.28	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:2682:A:O4'	50:j:11:MET:HE1	1.95	0.67
43:c:71:LEU:HB3	43:c:76:GLU:CD	2.20	0.67
59:s:13:ARG:HH22	59:s:50:THR:HA	1.60	0.67
10:A:32:C:H4'	27:M:86:GLN:NE2	2.10	0.66
20:F:31:GLU:OE1	20:F:34:ARG:NH2	2.28	0.66
27:M:103:TRP:CG	27:M:137:LYS:HZ2	2.13	0.66
38:X:81:MET:CE	41:a:888:C:C5	2.78	0.66
41:a:1802:A:H2'	41:a:1803:A:C8	2.30	0.66
12:AB:120:GLU:HB2	12:AB:162:LEU:HB2	1.77	0.66
16:AG:422:GLU:CA	16:AG:426:GLY:H	2.08	0.66
38:X:90:ARG:HD2	38:X:97:VAL:HA	1.77	0.66
41:a:2420:C:H5''	51:k:8:LYS:NZ	2.09	0.66
50:j:3:GLY:O	50:j:4:LEU:HD12	1.96	0.66
5:4:56:PHE:O	5:4:61:LEU:HD11	1.95	0.66
7:6:23:DC:H5''	14:AE:259:ARG:NH1	1.91	0.66
16:AG:393:LEU:O	16:AG:398:LEU:HD23	1.95	0.66
10:B:75:C:OP2	41:a:2602:A:C2'	2.43	0.66
26:L:38:ARG:NH1	26:L:99:ALA:HB2	2.09	0.66
27:M:23:LEU:HD21	27:M:59:LEU:HD21	1.76	0.66
34:T:80:GLN:O	34:T:83:GLU:HG3	1.95	0.66
5:4:84:PRO:O	5:4:85:LYS:HE2	1.96	0.66
16:AG:308:ALA:HB2	16:AG:344:LEU:HD11	1.77	0.66
17:C:51:TYR:CD1	17:C:54:GLN:NE2	2.63	0.66
22:H:163:ARG:N	22:H:298:GLU:OE2	2.28	0.66
33:S:42:TRP:HH2	47:g:66:ILE:HA	1.61	0.66
39:Y:37:PHE:CZ	39:Y:56:VAL:HG11	2.30	0.66
12:AB:27:ASN:CG	12:AB:58:GLU:HB2	2.20	0.66
12:AB:34:THR:HA	12:AB:47:SER:HA	1.76	0.66
16:AG:323:GLN:HA	16:AG:323:GLN:HE21	1.59	0.66
16:AG:448:LEU:CD2	16:AG:473:LEU:HD12	2.24	0.66
18:D:1228:C:OP2	38:X:110:LYS:NZ	2.28	0.66
21:G:101:LEU:HD22	21:G:157:LEU:CD1	2.26	0.66
28:N:67:GLN:OE1	28:N:67:GLN:N	2.28	0.66
39:Y:102:ARG:NE	39:Y:102:ARG:HA	2.11	0.66
46:f:40:ASP:C	46:f:45:ARG:HH22	2.03	0.66
9:9:28:ALA:H	9:9:110:ALA:HA	1.61	0.66
9:9:139:LEU:CD2	40:Z:11:VAL:HG22	2.26	0.66
12:AB:115:LYS:HE2	12:AB:129:ILE:HG23	1.76	0.66
12:AB:147:ASN:OD1	30:P:100:ILE:HG23	1.59	0.66
21:G:53:ALA:HA	21:G:56:GLU:OE1	1.96	0.66
27:M:46:ALA:CB	27:M:120:LEU:HD22	2.25	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:g:58:ASP:C	47:g:62:LYS:HZ3	2.04	0.66
60:t:99:ILE:HD13	60:t:118:LEU:HB2	1.77	0.66
63:w:49:GLU:OE1	63:w:49:GLU:N	2.26	0.66
6:5:16:DG:H1	11:AA:451:ARG:NH2	1.94	0.66
9:9:14:GLU:O	9:9:18:VAL:HG23	1.96	0.66
39:Y:102:ARG:HG3	39:Y:140:GLU:O	1.96	0.66
41:a:752:A:OP1	53:m:1:MET:HE1	1.95	0.66
52:l:40:ARG:HD2	52:l:92:HIS:ND1	2.11	0.66
54:n:93:GLY:O	54:n:96:MET:N	2.29	0.66
6:5:10:DT:C7	11:AA:62:TYR:CB	2.74	0.66
8:7:21:U:OP1	23:I:80:LYS:HG2	1.96	0.66
11:AA:855:PRO:HG3	16:AG:105:ILE:HA	1.76	0.66
18:D:280:C:H1'	36:V:40:ARG:NH2	2.11	0.66
19:E:21:ASN:C	19:E:25:ARG:NE	2.54	0.66
19:E:54:MET:HE1	19:E:75:HIS:CE1	2.30	0.66
38:X:28:THR:HA	38:X:31:LYS:HE3	1.78	0.66
41:a:2355:G:C2'	41:a:2356:U:H5'	2.26	0.66
60:t:112:PHE:HD2	60:t:115:ILE:HD12	1.59	0.66
24:J:196:ASN:OD1	24:J:198:HIS:CE1	2.49	0.66
27:M:26:PHE:HD1	27:M:101:MET:SD	2.19	0.66
44:d:55:U:H1'	54:n:26:MET:CE	2.26	0.66
59:s:43:GLU:OE1	59:s:43:GLU:N	2.29	0.66
60:t:38:ILE:HD11	60:t:112:PHE:HZ	1.60	0.66
9:9:25:ALA:HB3	9:9:99:PHE:HD2	1.61	0.65
16:AG:123:ARG:HG2	16:AG:191:ARG:O	1.96	0.65
16:AG:235:LYS:NZ	16:AG:331:LEU:HG	2.10	0.65
16:AG:425:LEU:HG	16:AG:429:LYS:HD3	1.78	0.65
18:D:375:U:P	35:U:70:ARG:NE	2.69	0.65
20:F:58:LYS:O	20:F:62:ARG:HG2	1.96	0.65
21:G:90:PHE:CE2	21:G:154:MET:HE3	2.31	0.65
21:G:134:ALA:O	21:G:137:ARG:HG2	1.96	0.65
41:a:1454:C:O4'	63:w:63:ARG:NE	2.28	0.65
48:h:52:ARG:HE	48:h:53:HIS:HE1	1.43	0.65
8:7:11:U:C4'	25:K:20:ARG:HH22	1.93	0.65
10:A:71:C:H3'	10:A:72:A:C8	2.31	0.65
12:AB:154:VAL:HG21	12:AB:159:PHE:HB3	1.77	0.65
16:AG:183:LEU:HA	16:AG:197:VAL:HA	1.78	0.65
16:AG:453:VAL:HG13	16:AG:458:ASP:HB3	1.77	0.65
22:H:308:GLU:HG2	22:H:309:MET:H	1.61	0.65
57:q:1:MET:HE1	57:q:35:GLN:CA	2.25	0.65
60:t:1:MET:HE1	60:t:32:TYR:CG	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:t:1:MET:HE1	60:t:32:TYR:CD1	2.31	0.65
9:9:47:GLU:HG2	9:9:95:LEU:HD21	1.78	0.65
10:A:76:A:N6	41:a:2422:C:O5'	2.29	0.65
17:C:73:ARG:HH12	31:Q:113:VAL:CB	2.09	0.65
55:o:30:ARG:HH12	61:u:62:PRO:CB	2.09	0.65
62:v:45:GLN:NE2	62:v:125:PRO:HD3	2.10	0.65
66:z:41:LYS:HG3	66:z:45:TYR:CE2	2.32	0.65
9:9:24:SER:OG	9:9:86:MET:HE2	1.96	0.65
16:AG:213:VAL:HG22	16:AG:216:ILE:HG13	1.78	0.65
10:B:71:C:H3'	10:B:72:A:C8	2.30	0.65
18:D:246:A:C2	18:D:282:A:C5	2.84	0.65
41:a:998:C:OP2	66:z:92:ARG:NH2	2.29	0.65
41:a:1596:A:H2'	41:a:1597:A:C8	2.32	0.65
41:a:1839:G:H1'	41:a:1927:A:C8	2.32	0.65
41:a:2334:U:H4'	41:a:2335:A:OP2	1.95	0.65
47:g:58:ASP:C	47:g:62:LYS:NZ	2.55	0.65
50:j:55:LYS:HZ1	50:j:59:ARG:C	2.04	0.65
56:p:52:PHE:CD1	56:p:69:ARG:HD3	2.32	0.65
9:9:25:ALA:HB2	9:9:96:PHE:CE1	2.31	0.65
12:AB:155:LYS:HG3	12:AB:156:ASN:H	1.62	0.65
21:G:90:PHE:CD2	21:G:154:MET:HE3	2.31	0.65
29:O:5:GLN:NE2	29:O:20:PHE:HB3	2.11	0.65
32:R:30:LYS:HB3	32:R:57:LEU:HD11	1.78	0.65
39:Y:5:GLN:HG2	39:Y:61:TYR:CD1	2.32	0.65
39:Y:20:SER:HB2	39:Y:21:PRO:HD3	1.79	0.65
39:Y:81:LYS:NZ	39:Y:86:LYS:HE2	2.12	0.65
52:l:45:ALA:HB1	52:l:88:ARG:NH2	2.12	0.65
9:9:23:LEU:HD13	9:9:92:ALA:HB2	1.77	0.65
16:AG:425:LEU:O	16:AG:429:LYS:CE	2.45	0.65
18:D:1308:U:P	38:X:100:GLN:NE2	2.70	0.65
23:I:151:VAL:HG12	23:I:200:VAL:HG23	1.77	0.65
29:O:86:ALA:O	29:O:89:GLU:HG2	1.95	0.65
39:Y:24:GLY:O	39:Y:27:LEU:HG	1.96	0.65
39:Y:79:LEU:HD21	39:Y:105:LEU:CD2	2.24	0.65
40:Z:22:LEU:O	40:Z:26:MET:HE1	1.97	0.65
52:l:62:GLN:O	52:l:69:ARG:NE	2.30	0.65
52:l:149:ILE:HD11	52:l:188:MET:HG2	1.78	0.65
52:l:194:LYS:O	52:l:198:GLU:OE1	2.15	0.65
4:3:26:LYS:HB2	4:3:35:ILE:HG23	1.78	0.65
6:5:10:DT:H1'	12:AB:71:ALA:H	0.83	0.65
24:J:150:LYS:HE2	24:J:178:MET:HE2	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:S:87:ALA:CA	33:S:90:ARG:NH1	2.60	0.65
41:a:1824:G:OP1	48:h:52:ARG:CZ	2.44	0.65
41:a:2572:A:N7	50:j:150:GLN:NE2	2.45	0.65
62:v:45:GLN:NE2	62:v:125:PRO:CD	2.59	0.65
6:5:11:DA:H5'	12:AB:67:THR:CB	2.27	0.65
8:7:21:U:O4	23:I:82:GLU:HB2	1.97	0.65
12:AB:139:SER:C	12:AB:152:HIS:O	2.40	0.65
14:AE:84:ILE:HG22	14:AE:91:GLU:HG3	1.78	0.65
18:D:1158:C:O2'	21:G:132:LYS:CE	2.45	0.65
21:G:26:LYS:NZ	21:G:193:PRO:HG2	2.12	0.65
24:J:74:ASN:HA	24:J:77:LYS:HZ3	1.61	0.65
27:M:4:ARG:CG	27:M:5:ARG:CZ	2.75	0.65
41:a:617:G:H4'	52:l:199:MET:HE1	1.78	0.65
41:a:2175:C:H2'	41:a:2176:A:C8	2.31	0.65
41:a:2356:U:O3'	42:b:20:ARG:CZ	2.45	0.65
62:v:111:GLU:HG2	62:v:112:LEU:HD12	1.78	0.65
9:9:129:LEU:N	9:9:130:PRO:HD2	2.12	0.65
16:AG:64:VAL:HG22	16:AG:75:ILE:HD12	1.78	0.65
20:F:58:LYS:O	20:F:62:ARG:CG	2.45	0.65
60:t:42:THR:HG23	60:t:44:LYS:NZ	2.12	0.65
61:u:122:VAL:CG1	61:u:125:LEU:HD11	2.27	0.65
62:v:31:PHE:N	62:v:104:GLU:OE2	2.30	0.65
17:C:34:THR:N	17:C:38:LYS:O	2.30	0.65
21:G:49:MET:HE1	21:G:201:PRO:CD	2.23	0.65
34:T:53:ARG:O	34:T:57:LEU:HD23	1.96	0.65
39:Y:45:THR:HG21	39:Y:50:LYS:HD3	1.76	0.65
41:a:1278:C:C4'	63:w:24:MET:HE1	2.27	0.65
41:a:2682:A:H2'	41:a:2683:C:O4'	1.96	0.65
48:h:53:HIS:NE2	48:h:219:THR:HA	2.11	0.65
1:0:55:ASP:OD1	1:0:56:GLY:N	2.27	0.64
3:2:9:LYS:O	3:2:12:ARG:NH1	2.29	0.64
8:7:9:U:N3	18:D:1196:A:N7	2.45	0.64
12:AB:9:CYS:HB3	12:AB:74:GLY:HA2	1.79	0.64
12:AB:38:ILE:HD13	12:AB:160:ARG:NH1	2.12	0.64
12:AB:136:GLU:O	12:AB:156:ASN:HA	1.97	0.64
10:B:22:G:H2'	10:B:23:C:C6	2.32	0.64
19:E:28:MET:SD	19:E:61:GLN:HG3	2.36	0.64
22:H:277:GLY:HA2	22:H:331:MET:CE	2.27	0.64
24:J:138:SER:O	24:J:141:ASP:CG	2.40	0.64
32:R:80:ILE:HD12	32:R:104:CYS:HB2	1.79	0.64
33:S:10:GLU:O	33:S:14:VAL:HG23	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:S:53:ARG:HB3	33:S:59:ARG:NH1	2.11	0.64
56:p:107:LEU:O	56:p:152:ARG:CZ	2.45	0.64
58:r:137:GLU:HG2	58:r:138:VAL:N	2.11	0.64
59:s:53:TYR:CE1	59:s:121:LYS:HD2	2.32	0.64
62:v:105:MET:CE	62:v:108:VAL:HG21	2.27	0.64
5:4:50:MET:HB3	5:4:56:PHE:CE1	2.31	0.64
10:A:19:G:C2	41:a:2112:G:O4'	2.50	0.64
14:AE:58:CYS:SG	14:AE:59:ALA:N	2.69	0.64
16:AG:227:ALA:HB3	16:AG:331:LEU:HA	1.78	0.64
16:AG:321:ASN:OD1	16:AG:321:ASN:N	2.25	0.64
21:G:27:MET:HG2	21:G:189:THR:HA	1.78	0.64
21:G:114:LEU:HD13	21:G:144:LEU:CB	2.28	0.64
29:O:83:ILE:O	29:O:87:LEU:HD23	1.96	0.64
34:T:64:ARG:NH1	34:T:89:ARG:HH22	1.94	0.64
36:V:31:HIS:CD2	36:V:34:TYR:H	2.15	0.64
36:V:60:GLU:OE1	36:V:76:VAL:CG2	2.45	0.64
39:Y:102:ARG:HD2	39:Y:141:ASP:CB	2.27	0.64
41:a:2308:G:C5	54:n:77:PHE:CZ	2.85	0.64
46:f:10:THR:HB	46:f:56:LYS:HZ2	1.63	0.64
56:p:149:ARG:CZ	56:p:162:VAL:O	2.45	0.64
59:s:15:TRP:NE1	59:s:53:TYR:CD2	2.63	0.64
2:1:71:VAL:HB	2:1:74:ILE:HD11	1.79	0.64
11:AA:314:ASN:HD21	11:AA:348:SER:HA	1.62	0.64
12:AB:136:GLU:OE1	12:AB:160:ARG:NH1	2.31	0.64
16:AG:133:HIS:ND1	16:AG:136:GLU:CD	2.55	0.64
16:AG:226:ALA:O	16:AG:228:ARG:HD3	1.97	0.64
18:D:1323:G:H2'	18:D:1324:A:C8	2.33	0.64
20:F:10:GLU:OE2	20:F:18:ARG:NE	2.30	0.64
22:H:119:GLY:HA2	22:H:133:GLY:HA2	1.80	0.64
22:H:303:LEU:O	22:H:303:LEU:HG	1.96	0.64
25:K:61:GLN:HA	25:K:64:MET:CE	2.27	0.64
27:M:23:LEU:HD21	27:M:59:LEU:CD2	2.27	0.64
54:n:117:LEU:HD13	54:n:176:PRO:CG	2.26	0.64
5:4:57:TYR:OH	5:4:79:ARG:NH2	2.24	0.64
10:A:22:G:H2'	10:A:23:C:C6	2.32	0.64
11:AA:387:ASN:HB3	11:AA:394:ARG:HH11	1.63	0.64
12:AB:81:PHE:HE1	14:AE:293:ARG:HB3	0.85	0.64
16:AG:232:SER:HB2	16:AG:323:GLN:OE1	1.96	0.64
16:AG:393:LEU:HD23	16:AG:398:LEU:HD13	1.78	0.64
18:D:675:A:H1'	31:Q:118:HIS:CD2	2.33	0.64
25:K:148:ASN:OD1	28:N:96:MET:CE	2.45	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:M:23:LEU:HD12	27:M:23:LEU:N	2.13	0.64
33:S:87:ALA:HA	33:S:90:ARG:CZ	2.28	0.64
38:X:16:VAL:HG23	38:X:17:ILE:HD12	1.79	0.64
39:Y:5:GLN:HE22	39:Y:60:VAL:N	1.96	0.64
39:Y:14:ALA:C	39:Y:50:LYS:HE3	2.22	0.64
3:2:3:ARG:NH1	3:2:5:GLU:OE2	2.30	0.64
10:A:32:C:H4'	27:M:86:GLN:HE21	1.62	0.64
12:AB:154:VAL:HG21	12:AB:159:PHE:N	2.13	0.64
21:G:23:TRP:CD1	21:G:39:HIS:HE1	2.14	0.64
22:H:70:VAL:HG12	22:H:83:LEU:O	1.98	0.64
24:J:62:ARG:HG2	24:J:72:PHE:CZ	2.33	0.64
35:U:5:ARG:HG2	35:U:68:SER:HB2	1.80	0.64
39:Y:21:PRO:HB2	39:Y:22:PRO:HD3	1.80	0.64
39:Y:99:LYS:HD2	39:Y:140:GLU:CD	2.22	0.64
39:Y:126:ARG:NH2	41:a:1083:U:P	2.70	0.64
43:c:66:THR:HG22	43:c:70:GLU:OE2	1.97	0.64
64:x:114:GLY:O	64:x:116:GLN:NE2	2.31	0.64
66:z:85:LYS:HD2	66:z:116:ALA:HB1	1.78	0.64
8:7:34:U:C5'	11:AA:1259:LEU:HD21	2.27	0.64
12:AB:115:LYS:HZ3	12:AB:129:ILE:HG22	1.62	0.64
14:AE:79:LYS:C	14:AE:81:ARG:CZ	2.70	0.64
33:S:77:PHE:HE1	33:S:93:ILE:HG21	1.63	0.64
39:Y:86:LYS:HD3	39:Y:86:LYS:C	2.23	0.64
41:a:614:A:O2'	41:a:615:U:OP2	2.12	0.64
52:l:147:LEU:HB2	52:l:183:PHE:HD2	1.62	0.64
3:2:36:LYS:HE3	3:2:79:ASP:OD2	1.98	0.64
9:9:43:LYS:HD3	9:9:98:GLU:HG3	1.78	0.64
9:9:56:ARG:H	9:9:56:ARG:HD3	1.63	0.64
9:9:100:ALA:HB2	9:9:125:ARG:NE	2.13	0.64
16:AG:131:ARG:HG2	16:AG:186:VAL:HG12	1.80	0.64
16:AG:361:LYS:CD	16:AG:417:ILE:CG1	2.75	0.64
16:AG:433:ASP:O	16:AG:456:LEU:CG	2.45	0.64
19:E:16:LYS:O	19:E:19:LYS:HG2	1.97	0.64
23:I:132:ARG:O	23:I:135:LYS:HG2	1.97	0.64
26:L:2:ARG:CZ	26:L:68:GLN:NE2	2.60	0.64
28:N:10:MET:HG3	28:N:27:MET:HE1	1.78	0.64
39:Y:102:ARG:NE	39:Y:139:VAL:HG21	2.13	0.64
9:9:24:SER:OG	9:9:116:GLU:HG3	1.98	0.64
10:A:54:U:H3	10:A:58:A:N6	1.96	0.64
10:B:54:U:H3	10:B:58:A:N6	1.96	0.64
18:D:714:G:H2'	18:D:715:A:C8	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:Y:14:ALA:HB3	39:Y:51:GLY:N	2.12	0.64
41:a:196:A:C2	61:u:50:PHE:HZ	2.15	0.64
41:a:1067:A:O2'	41:a:1068:G:O4'	2.16	0.64
41:a:2723:C:H5''	63:w:1:MET:HE3	1.79	0.64
16:AG:162:ILE:HD11	16:AG:199:ARG:HD2	1.80	0.64
41:a:2419:U:H4'	51:k:22:THR:HG21	1.78	0.64
41:a:2682:A:O5'	50:j:11:MET:HE1	1.98	0.64
9:9:117:LEU:O	9:9:117:LEU:HD23	1.98	0.64
16:AG:233:ARG:CB	16:AG:327:LEU:HD23	2.28	0.64
16:AG:422:GLU:HG2	16:AG:426:GLY:HA3	1.80	0.64
16:AG:434:LEU:HD12	16:AG:454:CYS:C	2.22	0.64
17:C:73:ARG:HH12	31:Q:113:VAL:HA	1.62	0.64
18:D:738:C:H5''	26:L:68:GLN:NE2	2.12	0.64
39:Y:79:LEU:CD2	39:Y:105:LEU:HD21	2.27	0.64
44:d:5:U:OP1	44:d:61:G:O2'	2.16	0.64
65:y:31:TRP:CZ3	65:y:38:LYS:HD3	2.33	0.64
1:0:51:VAL:HG23	66:z:86:ALA:O	1.98	0.63
6:5:10:DT:H73	11:AA:62:TYR:CG	2.18	0.63
12:AB:38:ILE:HD12	12:AB:160:ARG:HH11	1.63	0.63
10:B:76:A:H1'	41:a:2494:G:OP1	1.98	0.63
17:C:13:PHE:CE2	17:C:21:ILE:HD11	2.34	0.63
23:I:156:ARG:HH11	23:I:193:TYR:HB3	1.63	0.63
25:K:111:MET:HE1	25:K:125:ALA:HB1	1.80	0.63
39:Y:60:VAL:HG22	39:Y:66:PHE:CB	2.23	0.63
41:a:2335:A:P	64:x:13:ARG:CZ	2.87	0.63
41:a:2393:U:P	55:o:30:ARG:NE	2.70	0.63
9:9:7:ASP:O	9:9:11:ILE:HD12	1.98	0.63
9:9:73:LYS:NZ	9:9:115:GLY:O	2.31	0.63
14:AE:79:LYS:C	14:AE:81:ARG:NH2	2.56	0.63
32:R:25:GLU:CD	32:R:59:ASN:HD22	2.05	0.63
39:Y:102:ARG:HG3	39:Y:141:ASP:HA	1.80	0.63
41:a:2013:A:N1	41:a:2613:U:O4	2.32	0.63
41:a:2311:A:N3	54:n:85:ILE:HD11	2.13	0.63
61:u:84:LYS:HZ2	61:u:98:ALA:C	2.03	0.63
5:4:80:HIS:CE1	5:4:82:TYR:H	2.17	0.63
10:A:33:U:O3'	27:M:84:THR:OG1	2.16	0.63
16:AG:349:GLN:C	16:AG:351:GLU:H	2.05	0.63
26:L:25:TYR:O	26:L:29:ILE:HD12	1.97	0.63
41:a:537:G:OP1	59:s:2:LYS:HE2	1.98	0.63
45:e:13:GLU:O	45:e:17:GLU:OE1	2.16	0.63
60:t:8:LEU:N	60:t:18:ARG:NH1	2.46	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:1226:C:H2'	38:X:102:THR:OG1	1.98	0.63
24:J:99:ASP:OD1	24:J:100:ASN:N	2.31	0.63
34:T:3:LEU:HD22	34:T:8:THR:CG2	2.28	0.63
39:Y:9:LYS:HG2	39:Y:55:PRO:HB3	1.80	0.63
39:Y:37:PHE:CE1	39:Y:56:VAL:HG11	2.33	0.63
48:h:251:GLN:HE22	48:h:253:LYS:C	2.07	0.63
49:i:17:ARG:HA	49:i:20:ASP:OD1	1.99	0.63
52:l:69:ARG:NH1	52:l:69:ARG:HA	2.13	0.63
54:n:135:GLN:HG3	54:n:150:ARG:NH2	2.12	0.63
1:0:84:ARG:NH1	41:a:813:U:OP1	2.31	0.63
4:3:68:SER:OG	41:a:335:C:O2	2.15	0.63
6:5:9:DG:O5'	11:AA:473:ARG:HB3	1.95	0.63
11:AA:1282:GLY:HA3	15:AF:17:PHE:HE1	1.63	0.63
12:AB:145:LEU:CD2	30:P:88:MET:N	2.57	0.63
16:AG:205:LEU:HA	16:AG:208:LEU:HB2	1.80	0.63
16:AG:223:ILE:HA	16:AG:238:VAL:HG12	1.81	0.63
18:D:718:A:H5'	31:Q:119:ASN:ND2	2.13	0.63
22:H:19:ARG:O	22:H:72:LEU:HB2	1.98	0.63
29:O:123:ARG:HG2	29:O:123:ARG:O	1.99	0.63
39:Y:31:GLY:C	39:Y:60:VAL:HG11	2.23	0.63
39:Y:48:ILE:HG13	39:Y:49:GLU:N	2.10	0.63
39:Y:100:ILE:CD1	39:Y:139:VAL:HB	2.29	0.63
41:a:2002:G:OP1	63:w:17:ARG:NH2	2.26	0.63
52:l:112:LEU:HG	52:l:118:LEU:HB2	1.79	0.63
4:3:34:VAL:HG13	4:3:67:VAL:HG22	1.78	0.63
9:9:47:GLU:HB3	9:9:51:TYR:OH	1.97	0.63
16:AG:354:ALA:HA	16:AG:357:ASP:CA	2.29	0.63
33:S:13:ARG:HB3	33:S:60:GLN:HG3	1.81	0.63
52:l:6:LYS:HE3	52:l:119:ILE:CG2	2.28	0.63
54:n:33:LYS:HA	54:n:96:MET:SD	2.39	0.63
62:v:88:ASN:OD1	62:v:89:VAL:N	2.32	0.63
2:1:25:ARG:NH2	41:a:520:G:C5'	2.60	0.63
6:5:11:DA:P	12:AB:67:THR:C	2.79	0.63
7:6:18:DT:N3	8:7:39:A:N6	2.36	0.63
8:7:21:U:O4	23:I:82:GLU:OE1	2.17	0.63
9:9:77:VAL:HG12	9:9:77:VAL:O	1.99	0.63
11:AA:120:GLN:NE2	11:AA:490:GLN:OE1	2.32	0.63
12:AB:31:PRO:HB2	12:AB:50:LEU:HB3	1.80	0.63
12:AB:118:ILE:HD12	12:AB:141:LEU:HD12	1.80	0.63
16:AG:63:LEU:HD22	16:AG:92:TYR:HD1	1.63	0.63
17:C:33:ILE:O	22:H:338:GLU:CD	2.42	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:1228:C:OP1	38:X:107:ARG:NH1	2.32	0.63
25:K:61:GLN:HA	25:K:64:MET:HE3	1.81	0.63
34:T:88:ARG:NH2	41:a:714:U:OP2	2.31	0.63
64:x:90:VAL:HG21	64:x:115:LEU:HD21	1.81	0.63
8:7:21:U:H5'	8:7:22:U:H5''	1.81	0.63
8:7:31:A:H2'	8:7:31:A:N3	2.13	0.63
12:AB:31:PRO:O	12:AB:50:LEU:N	2.31	0.63
12:AB:80:ARG:HB3	12:AB:82:GLY:O	1.98	0.63
16:AG:287:ALA:HB1	16:AG:331:LEU:HB3	1.81	0.63
16:AG:353:HIS:CA	16:AG:356:ILE:CG2	2.76	0.63
16:AG:440:VAL:HG23	16:AG:481:LEU:CD2	2.29	0.63
10:B:31:G:O3'	18:D:1340:A:O2'	2.17	0.63
21:G:118:GLU:O	21:G:121:SER:OG	2.15	0.63
25:K:137:VAL:O	25:K:140:THR:OG1	2.15	0.63
39:Y:55:PRO:HB2	39:Y:71:LYS:HE2	1.80	0.63
52:l:23:PHE:HB2	52:l:111:GLU:OE2	1.99	0.63
9:9:50:VAL:HG23	39:Y:120:ASP:OD2	1.98	0.63
12:AB:38:ILE:HD12	12:AB:160:ARG:NH1	2.14	0.63
18:D:932:C:H5'	27:M:4:ARG:HH11	1.62	0.63
37:W:66:MET:SD	37:W:66:MET:O	2.57	0.63
5:4:50:MET:O	5:4:52:ALA:N	2.31	0.62
16:AG:354:ALA:CA	16:AG:357:ASP:H	2.10	0.62
18:D:522:C:OP2	32:R:66:TYR:OH	2.17	0.62
19:E:81:ALA:C	19:E:85:LYS:HZ3	2.06	0.62
21:G:19:GLN:HG3	22:H:76:GLU:HB3	1.79	0.62
25:K:140:THR:O	25:K:144:LEU:HD23	1.99	0.62
1:0:82:HIS:CG	1:0:82:HIS:O	2.52	0.62
9:9:113:PHE:O	9:9:123:ILE:HG13	1.99	0.62
30:P:24:GLU:HA	30:P:27:GLU:OE1	1.98	0.62
39:Y:80:LYS:HG3	39:Y:86:LYS:O	2.00	0.62
5:4:76:ASP:OD1	5:4:77:VAL:N	2.33	0.62
11:AA:855:PRO:CB	16:AG:106:THR:N	2.61	0.62
18:D:13:U:O2	18:D:914:A:C8	2.52	0.62
21:G:49:MET:HE3	21:G:199:VAL:O	1.99	0.62
21:G:126:PHE:O	21:G:126:PHE:CD1	2.53	0.62
32:R:75:GLN:OE1	32:R:75:GLN:N	2.32	0.62
54:n:38:MET:SD	54:n:150:ARG:HD2	2.40	0.62
59:s:37:ARG:NH2	59:s:44:TYR:OH	2.32	0.62
63:w:33:ILE:CG1	63:w:112:TYR:HD1	2.11	0.62
63:w:37:THR:OG1	63:w:40:LYS:HD2	2.00	0.62
65:y:64:ILE:HG13	65:y:64:ILE:O	1.97	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:7:9:U:N3	18:D:1196:A:C8	2.66	0.62
12:AB:102:LYS:HE2	14:AE:285:LEU:CB	2.29	0.62
16:AG:428:ASN:O	16:AG:428:ASN:ND2	2.32	0.62
35:U:18:GLN:OE1	35:U:37:GLY:O	2.17	0.62
39:Y:91:LYS:HZ1	39:Y:97:VAL:HG21	1.64	0.62
51:k:21:TYR:CE2	51:k:38:LYS:HG2	2.34	0.62
58:r:5:LEU:HD12	58:r:17:ASP:O	2.00	0.62
3:2:56:GLU:OE2	3:2:87:LEU:C	2.42	0.62
5:4:77:VAL:HG11	5:4:79:ARG:HH21	1.64	0.62
8:7:11:U:O2'	25:K:33:PHE:CZ	2.52	0.62
7:6:25:DT:H2'	11:AA:496:LYS:CE	2.28	0.62
12:AB:141:LEU:O	12:AB:151:LYS:C	2.42	0.62
12:AB:154:VAL:CG2	12:AB:159:PHE:N	2.62	0.62
16:AG:389:MET:HE3	16:AG:407:ARG:HD2	1.81	0.62
18:D:337:G:H2'	18:D:338:A:C8	2.34	0.62
18:D:562:U:C2'	32:R:14:ARG:HH11	2.13	0.62
22:H:135:LEU:O	22:H:169:SER:HA	2.00	0.62
41:a:2725:A:C4	41:a:2727:A:C8	2.87	0.62
63:w:42:LYS:HE2	63:w:97:ILE:HG21	1.82	0.62
9:9:23:LEU:HD11	9:9:96:PHE:CE2	2.34	0.62
16:AG:174:ARG:HB3	16:AG:175:PRO:CD	2.25	0.62
16:AG:402:THR:O	16:AG:406:LEU:N	2.33	0.62
18:D:1157:A:C2	18:D:1181:G:C4	2.88	0.62
27:M:17:LYS:HG3	27:M:18:PHE:CD1	2.35	0.62
27:M:66:LEU:HD13	27:M:101:MET:HE1	1.82	0.62
41:a:754:U:H2'	41:a:755:U:C6	2.34	0.62
41:a:1824:G:C3'	48:h:52:ARG:HH12	2.13	0.62
41:a:2682:A:O4'	50:j:11:MET:CE	2.47	0.62
8:7:9:U:O4	18:D:1196:A:N9	2.32	0.62
11:AA:855:PRO:HG3	16:AG:105:ILE:CA	2.29	0.62
16:AG:285:ILE:HD13	16:AG:285:ILE:N	2.15	0.62
16:AG:323:GLN:HE21	16:AG:323:GLN:CA	2.12	0.62
16:AG:424:SER:C	16:AG:429:LYS:CG	2.72	0.62
16:AG:433:ASP:C	16:AG:456:LEU:CD1	2.72	0.62
22:H:61:GLU:HG2	22:H:62:ILE:HG23	1.81	0.62
38:X:16:VAL:HG12	38:X:34:LEU:HD12	1.80	0.62
41:a:1839:G:C8	41:a:1927:A:H1'	2.35	0.62
59:s:98:GLU:O	59:s:102:GLU:OE1	2.18	0.62
11:AA:55:SER:OG	11:AA:465:ARG:NH1	2.33	0.62
13:AD:289:LEU:O	16:AG:82:TYR:OH	2.17	0.62
18:D:406:G:H21	24:J:116:GLN:HE22	1.46	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:H:135:LEU:CB	22:H:167:VAL:CB	2.78	0.62
23:I:58:GLU:OE2	30:P:94:ALA:CB	2.48	0.62
25:K:69:ARG:HA	25:K:69:ARG:NE	2.15	0.62
30:P:23:ALA:O	30:P:27:GLU:OE1	2.18	0.62
33:S:19:LYS:HG3	33:S:20:TYR:CE1	2.35	0.62
41:a:2307:G:O4'	41:a:2308:G:C5	2.52	0.62
12:AB:123:PHE:H	12:AB:123:PHE:HD2	1.45	0.62
16:AG:434:LEU:CD1	16:AG:454:CYS:C	2.72	0.62
16:AG:437:LEU:CD2	16:AG:456:LEU:HD11	2.27	0.62
18:D:1309:G:P	38:X:98:ARG:HE	2.20	0.62
21:G:19:GLN:OE1	21:G:21:ARG:HG2	2.00	0.62
22:H:16:ILE:HG22	22:H:25:ARG:NH2	2.14	0.62
38:X:28:THR:CG2	38:X:31:LYS:HE3	2.30	0.62
55:o:32:ILE:HG13	55:o:32:ILE:O	2.00	0.62
6:5:9:DG:P	11:AA:473:ARG:CG	2.88	0.61
9:9:50:VAL:CG2	39:Y:119:ALA:HB3	2.20	0.61
10:A:5:G:H2'	10:A:6:G:H5'	1.82	0.61
37:W:67:VAL:HG21	47:g:57:VAL:HG22	1.82	0.61
38:X:22:ILE:HB	38:X:25:VAL:HG12	1.80	0.61
41:a:985:C:C2	41:a:986:C:C5	2.88	0.61
41:a:2315:G:H4'	54:n:127:ASN:ND2	2.14	0.61
16:AG:266:LEU:H	16:AG:266:LEU:HD23	1.64	0.61
27:M:18:PHE:HD2	27:M:59:LEU:HD21	1.65	0.61
39:Y:99:LYS:NZ	39:Y:138:VAL:HG13	2.14	0.61
50:j:1:MET:HE2	50:j:100:LEU:HD11	1.82	0.61
12:AB:141:LEU:HD23	12:AB:143:LEU:HD11	1.81	0.61
14:AE:79:LYS:CA	14:AE:81:ARG:HH12	1.96	0.61
16:AG:288:MET:SD	16:AG:293:VAL:N	2.72	0.61
21:G:30:PHE:CD1	21:G:201:PRO:CG	2.83	0.61
39:Y:9:LYS:HE2	39:Y:55:PRO:HG3	1.82	0.61
60:t:8:LEU:N	60:t:18:ARG:HH12	1.98	0.61
62:v:1:MET:HE1	62:v:44:ARG:CA	2.30	0.61
6:5:10:DT:N1	11:AA:62:TYR:CE2	2.65	0.61
12:AB:119:THR:HG23	12:AB:141:LEU:HD13	1.81	0.61
16:AG:425:LEU:O	16:AG:429:LYS:NZ	2.33	0.61
10:B:5:G:H2'	10:B:6:G:H5'	1.82	0.61
23:I:14:ILE:HG22	23:I:15:VAL:HG13	1.82	0.61
23:I:45:LYS:NZ	23:I:46:GLU:OE1	2.29	0.61
39:Y:102:ARG:HA	39:Y:102:ARG:HE	1.64	0.61
40:Z:8:ILE:HG13	40:Z:9:GLU:N	2.15	0.61
41:a:1138:G:N3	59:s:108:MET:HE2	2.14	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:h:141:VAL:HG23	48:h:162:VAL:CG1	2.30	0.61
59:s:11:VAL:HG11	59:s:13:ARG:NH1	2.15	0.61
8:7:11:U:O4'	25:K:20:ARG:NH2	2.32	0.61
12:AB:102:LYS:CD	14:AE:285:LEU:HA	2.31	0.61
16:AG:127:VAL:CG2	16:AG:192:GLY:CA	2.78	0.61
58:r:114:GLU:OE2	58:r:134:VAL:N	2.33	0.61
63:w:47:VAL:O	63:w:51:LEU:HD23	2.00	0.61
2:1:31:GLN:OE1	2:1:31:GLN:N	2.29	0.61
2:1:98:LYS:NZ	41:a:2011:U:O3'	2.34	0.61
6:5:10:DT:C5'	11:AA:62:TYR:OH	2.48	0.61
8:7:7:U:H6	8:7:7:U:H5''	1.64	0.61
9:9:47:GLU:HA	9:9:94:ARG:HH22	1.65	0.61
9:9:136:ILE:CD1	9:9:139:LEU:HD12	2.25	0.61
16:AG:451:ARG:CZ	16:AG:469:ASP:HB2	2.31	0.61
16:AG:453:VAL:HG21	16:AG:462:GLN:CD	2.25	0.61
18:D:1152:A:OP1	30:P:70:HIS:ND1	2.29	0.61
28:N:88:ARG:HB2	28:N:91:GLU:OE1	2.00	0.61
34:T:67:LEU:HD12	34:T:78:TYR:CE1	2.35	0.61
39:Y:79:LEU:CD1	39:Y:132:ALA:HA	2.29	0.61
6:5:11:DA:H2'	12:AB:67:THR:HG21	1.82	0.61
9:9:52:MET:C	9:9:52:MET:HE3	2.25	0.61
9:9:61:ARG:NE	41:a:1046:A:O5'	2.34	0.61
11:AA:472:GLU:HG3	11:AA:473:ARG:HD3	1.82	0.61
12:AB:152:HIS:HE2	12:AB:159:PHE:HE2	1.44	0.61
16:AG:244:ARG:HG2	25:K:69:ARG:HE	1.61	0.61
28:N:43:GLU:CD	28:N:101:ILE:HG21	2.25	0.61
29:O:55:VAL:O	29:O:57:MET:N	2.34	0.61
31:Q:84:VAL:HG23	31:Q:107:ILE:CD1	2.30	0.61
41:a:1406:U:C2	41:a:1407:G:C8	2.88	0.61
47:g:1:MET:HE2	47:g:6:HIS:CD2	2.35	0.61
62:v:111:GLU:HA	62:v:114:ARG:HE	1.66	0.61
5:4:77:VAL:HG22	5:4:79:ARG:HE	1.64	0.61
6:5:9:DG:O5'	11:AA:473:ARG:CB	2.49	0.61
11:AA:528:ARG:NH2	11:AA:576:SER:O	2.30	0.61
12:AB:82:GLY:HA2	14:AE:142:GLU:OE1	2.01	0.61
15:AF:35:LYS:NZ	16:AG:174:ARG:HH22	1.98	0.61
16:AG:27:LEU:HD22	16:AG:114:ILE:HG23	1.82	0.61
16:AG:380:THR:C	16:AG:384:LEU:HD11	2.24	0.61
16:AG:422:GLU:CA	16:AG:426:GLY:CA	2.65	0.61
17:C:45:THR:HA	22:H:340:ARG:NH2	2.15	0.61
18:D:1006:G:H2'	18:D:1007:U:C6	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:1124:G:O2'	18:D:1145:A:N6	2.33	0.61
29:O:94:LEU:HB3	29:O:97:GLU:OE2	2.01	0.61
39:Y:19:PRO:O	39:Y:24:GLY:CA	2.49	0.61
41:a:2682:A:H8	50:j:11:MET:HE1	1.65	0.61
51:k:34:LEU:HB3	51:k:51:GLU:CG	2.31	0.61
55:o:13:ARG:HD3	61:u:58:TYR:O	2.00	0.61
9:9:25:ALA:HB2	9:9:96:PHE:CD1	2.36	0.61
14:AE:785:ASP:O	14:AE:789:LYS:HB2	2.01	0.61
14:AE:1275:LEU:HB3	14:AE:1278:GLU:HB2	1.83	0.61
10:B:36:U:H2'	10:B:37:A:C8	2.35	0.61
18:D:563:A:C2	18:D:567:G:C5	2.89	0.61
21:G:110:SER:HA	21:G:113:ARG:HE	1.65	0.61
27:M:103:TRP:O	27:M:106:GLU:HG3	2.01	0.61
28:N:24:ALA:HB1	28:N:60:GLU:OE2	2.00	0.61
30:P:26:VAL:HG12	30:P:30:LYS:NZ	2.16	0.61
36:V:60:GLU:OE1	36:V:76:VAL:HG23	2.01	0.61
41:a:548:G:H3'	41:a:549:G:O4'	2.01	0.61
1:0:73:LYS:NZ	41:a:1225:G:OP1	2.34	0.61
9:9:14:GLU:OE1	9:9:62:ARG:O	2.19	0.61
10:A:65:C:H2'	10:A:66:C:H5'	1.83	0.61
12:AB:35:LEU:HB3	12:AB:37:LYS:HD3	1.82	0.61
16:AG:424:SER:C	16:AG:429:LYS:HG3	2.26	0.61
18:D:687:A:C2	18:D:704:A:C5	2.88	0.61
21:G:73:LYS:O	21:G:74:ARG:HG2	2.00	0.61
25:K:45:ARG:HB3	25:K:71:MET:HE2	1.82	0.61
33:S:87:ALA:HA	33:S:90:ARG:NH1	2.15	0.61
35:U:5:ARG:HH22	35:U:24:SER:HA	1.66	0.61
36:V:61:ILE:HG13	36:V:73:TRP:CZ3	2.36	0.61
37:W:12:ASP:OD2	37:W:35:SER:OG	2.14	0.61
41:a:1277:G:N3	63:w:23:ASN:ND2	2.47	0.61
47:g:65:ASN:OD1	47:g:66:ILE:N	2.30	0.61
59:s:74:TYR:CD2	59:s:74:TYR:N	2.69	0.61
66:z:74:ILE:HD11	66:z:79:PHE:CA	2.30	0.61
16:AG:434:LEU:CD1	16:AG:455:THR:C	2.74	0.60
21:G:114:LEU:HD13	21:G:144:LEU:HB2	1.83	0.60
25:K:81:LEU:HG	25:K:96:MET:HE1	1.83	0.60
41:a:271:G:C4	41:a:272:A:C8	2.89	0.60
48:h:164:ILE:HG23	48:h:164:ILE:O	2.01	0.60
51:k:34:LEU:HB3	51:k:51:GLU:HG3	1.82	0.60
3:2:56:GLU:OE2	3:2:87:LEU:O	2.18	0.60
6:5:11:DA:C2'	12:AB:67:THR:CG2	2.77	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1072:ASN:ND2	11:AA:1111:GLN:OE1	2.34	0.60
16:AG:197:VAL:HG11	16:AG:199:ARG:HH21	1.66	0.60
16:AG:421:GLN:O	16:AG:425:LEU:N	2.34	0.60
10:B:65:C:H2'	10:B:66:C:H5'	1.83	0.60
18:D:1169:A:H2'	18:D:1170:A:C8	2.36	0.60
25:K:112:ARG:O	25:K:116:GLU:OE1	2.19	0.60
27:M:111:ARG:O	27:M:119:ARG:NH1	2.34	0.60
27:M:137:LYS:O	27:M:141:VAL:HG23	2.01	0.60
37:W:45:ILE:HA	37:W:62:VAL:CG1	2.31	0.60
59:s:13:ARG:HH22	59:s:50:THR:CA	2.14	0.60
66:z:74:ILE:HD13	66:z:79:PHE:CD1	2.33	0.60
9:9:23:LEU:HA	9:9:118:ILE:CG1	2.31	0.60
10:A:36:U:H2'	10:A:37:A:C8	2.35	0.60
16:AG:63:LEU:HG	16:AG:73:LYS:HB3	1.82	0.60
16:AG:285:ILE:CG2	16:AG:293:VAL:HG11	2.28	0.60
16:AG:303:HIS:HB3	16:AG:334:TRP:HZ3	1.66	0.60
16:AG:353:HIS:O	16:AG:356:ILE:C	2.43	0.60
21:G:38:VAL:CG2	22:H:75:VAL:HG21	2.30	0.60
26:L:42:TRP:CZ2	26:L:102:MET:HG3	2.36	0.60
27:M:50:LEU:HD21	27:M:121:ALA:CA	2.28	0.60
29:O:57:MET:HA	29:O:60:LYS:HE2	1.83	0.60
38:X:55:THR:O	38:X:59:GLU:OE1	2.18	0.60
41:a:413:C:H2'	41:a:414:C:H6	1.66	0.60
54:n:122:PHE:CZ	54:n:170:LEU:HD12	2.36	0.60
9:9:98:GLU:HA	9:9:101:LYS:HG2	1.83	0.60
12:AB:142:LEU:HA	12:AB:151:LYS:HA	1.83	0.60
13:AD:211:ILE:HG12	13:AD:219:ARG:HH12	1.65	0.60
14:AE:814:CYS:SG	14:AE:883:ARG:NH2	2.74	0.60
16:AG:10:GLU:HA	16:AG:12:VAL:HG22	1.83	0.60
16:AG:168:LEU:HD21	16:AG:230:PRO:O	2.00	0.60
20:F:49:LYS:O	20:F:53:VAL:HG23	2.02	0.60
39:Y:36:GLU:HG3	39:Y:66:PHE:CE1	2.36	0.60
41:a:1257:C:H4'	52:l:78:TRP:CD2	2.37	0.60
41:a:2191:A:H2'	41:a:2192:U:C6	2.36	0.60
48:h:67:PHE:CE1	48:h:156:ARG:HD2	2.37	0.60
48:h:84:ASP:HB2	48:h:91:ILE:HD12	1.84	0.60
49:i:22:LEU:HG	49:i:23:THR:N	2.17	0.60
61:u:51:GLU:OE1	61:u:51:GLU:N	2.34	0.60
62:v:77:PRO:HG2	62:v:80:VAL:CG2	2.31	0.60
16:AG:320:ARG:CG	16:AG:320:ARG:HH11	2.14	0.60
16:AG:433:ASP:C	16:AG:456:LEU:HD11	2.23	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:1160:G:C2	18:D:1161:C:C6	2.89	0.60
28:N:104:VAL:HG23	28:N:125:ILE:HD13	1.84	0.60
29:O:56:ASP:O	29:O:57:MET:HE2	2.02	0.60
39:Y:72:THR:OG1	39:Y:73:PRO:HD2	2.01	0.60
46:f:40:ASP:C	46:f:45:ARG:NH2	2.60	0.60
62:v:38:ARG:HA	62:v:96:ILE:O	2.00	0.60
7:6:25:DT:OP1	11:AA:496:LYS:C	2.43	0.60
9:9:23:LEU:HD21	9:9:96:PHE:CG	2.36	0.60
12:AB:140:MET:HA	12:AB:153:SER:HA	1.83	0.60
14:AE:888:CYS:SG	14:AE:889:ASP:N	2.74	0.60
16:AG:202:PRO:O	16:AG:205:LEU:HD12	2.02	0.60
18:D:1290:G:H4'	27:M:35:LYS:HZ3	1.66	0.60
19:E:28:MET:SD	19:E:57:ILE:HG22	2.42	0.60
25:K:113:ALA:HA	25:K:116:GLU:OE1	2.00	0.60
50:j:25:THR:HG21	50:j:193:VAL:HG22	1.84	0.60
59:s:102:GLU:HB3	59:s:119:PHE:HZ	1.66	0.60
62:v:75:GLU:HG3	62:v:90:GLU:OE1	2.01	0.60
66:z:74:ILE:CD1	66:z:74:ILE:CB	2.76	0.60
9:9:123:ILE:O	9:9:123:ILE:HG23	2.02	0.60
11:AA:855:PRO:HG3	16:AG:105:ILE:HD13	1.77	0.60
16:AG:240:THR:OG1	16:AG:247:PRO:HG2	2.01	0.60
16:AG:301:ASP:OD1	16:AG:301:ASP:N	2.32	0.60
25:K:159:LYS:NZ	28:N:44:GLY:HA3	2.16	0.60
59:s:73:VAL:HG13	59:s:86:GLN:HG2	1.84	0.60
63:w:60:VAL:HA	63:w:63:ARG:NH1	2.17	0.60
1:0:51:VAL:O	1:0:51:VAL:HG13	2.02	0.60
12:AB:89:PRO:CG	14:AE:290:ILE:CG2	2.79	0.60
14:AE:64:PRO:HG3	14:AE:90:VAL:HG12	1.83	0.60
16:AG:233:ARG:HG2	16:AG:270:ARG:HB2	1.83	0.60
16:AG:253:GLY:HA3	16:AG:258:ARG:HD2	1.82	0.60
18:D:652:U:H4'	28:N:56:LYS:NZ	2.17	0.60
30:P:86:ALA:C	30:P:90:LEU:HD13	2.27	0.60
41:a:753:A:C2	41:a:754:U:C6	2.89	0.60
52:l:1:MET:CE	52:l:16:GLU:HA	2.25	0.60
2:1:1:MET:SD	2:1:3:THR:OG1	2.59	0.60
12:AB:129:ILE:O	12:AB:131:THR:N	2.35	0.60
30:P:25:ILE:O	30:P:28:THR:OG1	2.19	0.60
41:a:575:A:C2	41:a:576:U:C5	2.90	0.60
41:a:639:U:H2'	41:a:640:C:C6	2.36	0.60
54:n:25:VAL:O	54:n:28:VAL:HG12	2.02	0.60
60:t:8:LEU:CA	60:t:18:ARG:HH12	2.15	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:u:76:GLU:HG3	61:u:111:ILE:CD1	2.31	0.60
2:1:86:MET:CE	2:1:88:ARG:HD3	2.32	0.60
9:9:7:ASP:OD1	9:9:8:LYS:N	2.35	0.60
9:9:47:GLU:HG3	9:9:94:ARG:NH1	2.16	0.60
12:AB:120:GLU:HB2	12:AB:162:LEU:CB	2.32	0.60
18:D:890:G:O2'	18:D:906:A:N6	2.35	0.60
18:D:1290:G:H4'	27:M:35:LYS:NZ	2.17	0.60
35:U:76:LYS:C	35:U:80:LYS:HZ3	2.09	0.60
41:a:563:A:OP1	66:z:41:LYS:NZ	2.35	0.60
41:a:1432:G:H2'	41:a:1433:A:C8	2.37	0.60
41:a:2298:A:C4	41:a:2321:U:C5	2.90	0.60
41:a:2780:G:P	59:s:120:ARG:NH1	2.74	0.60
47:g:5:ILE:HD12	54:n:64:LYS:CE	2.31	0.60
60:t:5:GLN:HA	60:t:20:MET:CE	2.32	0.60
12:AB:115:LYS:HD2	12:AB:129:ILE:HG21	1.82	0.59
13:AD:112:ALA:HB3	13:AD:126:PRO:HA	1.83	0.59
10:B:69:C:H2'	10:B:70:G:O4'	2.02	0.59
18:D:718:A:O2'	20:F:34:ARG:NH2	2.34	0.59
18:D:1125:U:C2	18:D:1127:G:C8	2.89	0.59
22:H:81:GLU:O	22:H:82:THR:HG23	2.02	0.59
24:J:62:ARG:HG2	24:J:72:PHE:CE1	2.37	0.59
28:N:47:GLU:OE2	28:N:64:LYS:HA	2.02	0.59
28:N:106:THR:HB	28:N:121:LEU:HD13	1.82	0.59
36:V:10:GLY:HA3	36:V:25:ILE:HD13	1.83	0.59
41:a:323:C:H2'	52:l:163:ASN:OD1	2.02	0.59
41:a:2189:U:P	41:a:2189:U:O4'	2.60	0.59
12:AB:92:VAL:HA	12:AB:96:LEU:HB2	1.84	0.59
14:AE:86:GLU:OE1	14:AE:86:GLU:N	2.34	0.59
14:AE:1221:LEU:HD22	14:AE:1306:LEU:HB2	1.85	0.59
16:AG:279:ASN:HB3	16:AG:280:PRO:HD2	1.83	0.59
21:G:26:LYS:CD	21:G:193:PRO:HG2	2.32	0.59
32:R:7:LEU:CD2	32:R:12:ARG:NH2	2.65	0.59
41:a:1277:G:H5'	63:w:20:MET:HE2	1.83	0.59
41:a:2363:G:OP2	55:o:40:ARG:HD2	2.01	0.59
46:f:41:THR:O	46:f:44:ILE:N	2.30	0.59
51:k:8:LYS:HZ1	51:k:54:ILE:HG12	1.66	0.59
55:o:30:ARG:HH12	61:u:62:PRO:CA	2.14	0.59
59:s:55:ILE:HG13	59:s:123:LYS:NZ	2.17	0.59
9:9:54:VAL:HG13	9:9:54:VAL:O	2.03	0.59
9:9:97:LYS:NZ	9:9:130:PRO:HA	2.17	0.59
12:AB:146:ILE:HG22	12:AB:146:ILE:O	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AE:288:PRO:HD2	14:AE:291:ILE:HG22	1.74	0.59
14:AE:506:VAL:HG23	14:AE:628:GLY:HA3	1.83	0.59
14:AE:1161:GLY:HA3	14:AE:1179:PRO:HA	1.83	0.59
16:AG:137:ILE:O	16:AG:137:ILE:HG22	2.03	0.59
18:D:13:U:N3	18:D:915:A:N6	2.51	0.59
22:H:333:LEU:O	22:H:334:ASP:OD1	2.19	0.59
26:L:9:MET:HE2	26:L:51:ILE:HD11	1.83	0.59
39:Y:5:GLN:HE22	39:Y:60:VAL:C	2.10	0.59
39:Y:126:ARG:HH22	41:a:1083:U:P	2.25	0.59
41:a:1070:A:N7	41:a:1096:A:O2'	2.35	0.59
41:a:1322:A:C5	41:a:1323:C:C5	2.90	0.59
41:a:1817:G:H3'	48:h:156:ARG:HH22	1.67	0.59
51:k:19:HIS:ND1	51:k:41:PRO:CD	2.65	0.59
59:s:13:ARG:NH2	59:s:49:ASP:O	2.34	0.59
61:u:76:GLU:HG3	61:u:111:ILE:HD13	1.84	0.59
7:6:20:DA:C6	8:7:38:G:C2	2.91	0.59
14:AE:92:VAL:HG22	14:AE:92:VAL:O	2.01	0.59
16:AG:127:VAL:HG21	16:AG:192:GLY:HA2	1.84	0.59
16:AG:434:LEU:HG	16:AG:456:LEU:N	2.16	0.59
10:B:75:C:P	41:a:2602:A:O2'	2.61	0.59
17:C:51:TYR:HD1	17:C:54:GLN:NE2	2.00	0.59
17:C:73:ARG:CZ	31:Q:113:VAL:HG12	2.31	0.59
18:D:657:U:C4'	34:T:28:GLN:HE22	2.15	0.59
18:D:736:C:O2'	26:L:88:MET:HE1	2.02	0.59
41:a:468:G:N7	53:m:39:ARG:NH2	2.42	0.59
41:a:1065:U:O2'	41:a:1066:U:O5'	2.16	0.59
41:a:1798:U:OP2	48:h:271:ARG:NH2	2.36	0.59
54:n:38:MET:HG3	54:n:57:LEU:HD21	1.84	0.59
63:w:33:ILE:CG1	63:w:112:TYR:CD1	2.85	0.59
9:9:17:GLU:HG2	9:9:88:HIS:NE2	2.18	0.59
10:A:69:C:H2'	10:A:70:G:O4'	2.02	0.59
13:AD:308:ALA:O	16:AG:71:PRO:HG2	2.03	0.59
18:D:718:A:C4	31:Q:118:HIS:ND1	2.71	0.59
18:D:921:U:H4'	25:K:23:LYS:NZ	2.18	0.59
18:D:978:A:C5	18:D:1319:A:C2	2.90	0.59
23:I:54:ARG:NH2	23:I:56:VAL:HG21	2.18	0.59
39:Y:56:VAL:HA	39:Y:71:LYS:NZ	2.08	0.59
3:2:56:GLU:OE1	3:2:86:THR:O	2.19	0.59
6:5:10:DT:O3'	12:AB:68:THR:CA	2.50	0.59
6:5:11:DA:H2'	12:AB:67:THR:CG2	2.32	0.59
16:AG:433:ASP:HB3	16:AG:456:LEU:HD12	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:437:LEU:HD22	16:AG:488:ILE:CD1	2.33	0.59
17:C:29:LEU:HD23	17:C:59:ILE:HD13	1.83	0.59
18:D:1145:A:O2'	18:D:1146:A:O5'	2.18	0.59
19:E:32:ILE:HG12	19:E:75:HIS:CE1	2.38	0.59
21:G:35:ARG:HD2	22:H:14:LYS:HE3	1.84	0.59
41:a:15:G:O2'	49:i:15:MET:CE	2.51	0.59
41:a:993:G:OP2	66:z:51:ARG:NH2	2.36	0.59
41:a:2225:A:H4'	41:a:2226:C:O5'	2.03	0.59
41:a:2815:C:C2	41:a:2816:G:C8	2.91	0.59
48:h:30:PHE:O	48:h:34:LEU:HD23	2.02	0.59
65:y:7:GLN:CD	65:y:7:GLN:C	2.71	0.59
12:AB:158:GLU:HB3	12:AB:162:LEU:HD22	1.85	0.59
13:AD:286:GLU:H	13:AD:315:GLY:CA	2.11	0.59
17:C:73:ARG:NH1	31:Q:113:VAL:HA	2.18	0.59
18:D:878:A:OP2	28:N:80:ARG:NH1	2.35	0.59
18:D:1055:A:C2'	23:I:156:ARG:HH21	2.15	0.59
21:G:23:TRP:HZ3	21:G:25:PRO:HA	1.67	0.59
22:H:131:LEU:CB	22:H:167:VAL:HA	2.32	0.59
23:I:142:MET:HE2	23:I:149:ILE:HG22	1.83	0.59
27:M:18:PHE:HB3	27:M:59:LEU:HD11	1.84	0.59
34:T:64:ARG:CZ	34:T:64:ARG:HB3	2.32	0.59
35:U:19:VAL:HG12	35:U:37:GLY:C	2.28	0.59
41:a:856:G:H2'	41:a:857:G:C8	2.37	0.59
41:a:1172:C:H2'	41:a:1173:U:O4'	2.02	0.59
41:a:2460:U:C2	41:a:2461:A:C8	2.91	0.59
3:2:56:GLU:OE1	3:2:87:LEU:C	2.46	0.59
8:7:18:U:C6	8:7:18:U:C5'	2.85	0.59
9:9:33:VAL:HG22	9:9:36:ASP:CG	2.27	0.59
11:AA:69:GLN:HE21	11:AA:101:ARG:HD2	1.67	0.59
12:AB:141:LEU:O	12:AB:150:ILE:C	2.46	0.59
16:AG:31:LEU:HD23	16:AG:110:ALA:HB1	1.85	0.59
16:AG:240:THR:CB	16:AG:247:PRO:HG3	2.32	0.59
18:D:496:A:N3	18:D:496:A:H2'	2.17	0.59
22:H:291:GLY:HA2	22:H:305:HIS:HA	1.85	0.59
31:Q:51:GLY:O	31:Q:56:ARG:CZ	2.51	0.59
34:T:60:VAL:O	34:T:64:ARG:HG2	2.03	0.59
38:X:25:VAL:HG23	38:X:29:ARG:HB2	1.85	0.59
51:k:35:GLU:OE2	51:k:48:ILE:HG23	2.03	0.59
1:0:61:ALA:HB1	1:0:96:VAL:HG22	1.84	0.59
1:0:68:ARG:HH12	41:a:1223:G:P	2.25	0.59
9:9:43:LYS:HZ3	9:9:98:GLU:HB2	1.64	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:855:PRO:CG	16:AG:105:ILE:CA	2.57	0.59
12:AB:77:HIS:NE2	14:AE:297:ARG:NH2	2.51	0.59
12:AB:90:SER:HB3	12:AB:93:ILE:HB	1.84	0.59
16:AG:354:ALA:HA	16:AG:357:ASP:N	2.18	0.59
21:G:106:THR:HA	21:G:109:GLN:NE2	2.18	0.59
22:H:155:LYS:O	22:H:169:SER:N	2.35	0.59
38:X:81:MET:HE1	38:X:92:ARG:HD3	1.83	0.59
39:Y:23:VAL:HG23	39:Y:24:GLY:N	2.17	0.59
41:a:567:U:OP2	61:u:29:LYS:NZ	2.35	0.59
41:a:2547:A:H2'	41:a:2548:U:C6	2.38	0.59
46:f:10:THR:HG22	46:f:54:MET:C	2.27	0.59
48:h:62:TYR:CE2	48:h:64:ILE:HD13	2.38	0.59
54:n:122:PHE:O	54:n:123:ASP:OD1	2.19	0.59
56:p:85:LYS:NZ	56:p:164:TYR:HD1	2.01	0.59
8:7:9:U:O4	18:D:1196:A:O4'	2.21	0.59
8:7:15:U:OP1	23:I:132:ARG:NH2	2.35	0.59
10:A:70:G:H2'	10:A:71:C:H5''	1.85	0.59
11:AA:1142:ARG:NH1	11:AA:1161:LEU:O	2.36	0.59
24:J:74:ASN:HA	24:J:77:LYS:NZ	2.17	0.59
34:T:11:ILE:HG21	34:T:31:LEU:HD13	1.85	0.59
37:W:17:LYS:HB3	37:W:21:LYS:HZ3	1.68	0.59
38:X:22:ILE:HG23	38:X:66:GLU:OE2	2.03	0.59
38:X:25:VAL:HG23	38:X:29:ARG:CB	2.32	0.59
40:Z:8:ILE:HG13	40:Z:9:GLU:H	1.68	0.59
48:h:181:MET:HE2	48:h:181:MET:N	2.18	0.59
60:t:88:ASN:ND2	60:t:90:ASN:OD1	2.36	0.59
8:7:9:U:O4	18:D:1196:A:C8	2.55	0.58
9:9:103:ASN:HA	9:9:107:GLU:OE2	2.02	0.58
16:AG:33:THR:HG23	16:AG:43:ILE:HD11	1.85	0.58
16:AG:453:VAL:CG2	16:AG:462:GLN:CD	2.76	0.58
17:C:73:ARG:HH12	31:Q:113:VAL:CA	2.16	0.58
21:G:128:LYS:HD2	21:G:128:LYS:O	2.03	0.58
25:K:16:ILE:HD11	25:K:38:VAL:HG12	1.83	0.58
26:L:102:MET:HG2	26:L:103:VAL:N	2.06	0.58
27:M:50:LEU:HD11	27:M:124:LEU:HB2	1.85	0.58
39:Y:70:THR:O	39:Y:71:LYS:HG3	2.03	0.58
41:a:1406:U:O2'	41:a:1407:G:O4'	2.20	0.58
52:l:119:ILE:O	52:l:187:VAL:HA	2.03	0.58
52:l:170:ARG:CZ	52:l:175:ILE:HA	2.33	0.58
9:9:51:TYR:HB2	9:9:88:HIS:CB	2.32	0.58
14:AE:741:ALA:O	14:AE:762:ASN:ND2	2.32	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:139:THR:HG22	16:AG:180:ARG:HB3	1.83	0.58
16:AG:287:ALA:CB	16:AG:331:LEU:HB3	2.33	0.58
16:AG:387:VAL:HB	16:AG:388:PRO:HD2	1.85	0.58
10:B:30:G:O2'	18:D:1339:A:C2	2.52	0.58
17:C:14:THR:HG21	17:C:48:ARG:NE	2.17	0.58
18:D:736:C:H5''	26:L:90:MET:HE2	1.85	0.58
22:H:273:ARG:CZ	22:H:297:GLU:HG3	2.33	0.58
25:K:10:GLU:OE1	25:K:10:GLU:N	2.35	0.58
33:S:42:TRP:CH2	47:g:66:ILE:HA	2.38	0.58
36:V:11:ARG:HE	36:V:58:VAL:CG2	2.16	0.58
39:Y:99:LYS:HD3	39:Y:138:VAL:O	2.02	0.58
39:Y:116:MET:HG2	39:Y:124:MET:CB	2.33	0.58
41:a:947:A:H2'	41:a:948:C:C6	2.37	0.58
53:m:1:MET:HE3	53:m:3:ARG:HH11	1.67	0.58
58:r:68:ARG:O	58:r:72:ILE:HD12	2.03	0.58
61:u:91:ASP:O	61:u:95:LEU:HD23	2.03	0.58
9:9:73:LYS:CG	9:9:117:LEU:HD12	2.32	0.58
12:AB:99:TYR:O	12:AB:100:LYS:HG2	2.03	0.58
12:AB:123:PHE:HD2	12:AB:123:PHE:N	2.02	0.58
16:AG:212:GLU:HB3	16:AG:258:ARG:HB3	1.84	0.58
19:E:61:GLN:NE2	19:E:66:LEU:HD22	2.18	0.58
21:G:96:TRP:CH2	21:G:100:MET:HE3	2.38	0.58
39:Y:109:ALA:HB2	39:Y:128:ILE:HG13	1.85	0.58
41:a:2243:U:H2'	41:a:2244:U:C6	2.38	0.58
54:n:4:LEU:HD11	54:n:101:GLU:HA	1.84	0.58
56:p:85:LYS:CE	56:p:164:TYR:CD1	2.86	0.58
58:r:97:ARG:NH1	58:r:101:ASP:OD2	2.37	0.58
3:2:1:MET:N	41:a:142:A:O2'	2.33	0.58
4:3:7:ARG:HH22	41:a:98:G:N2	2.00	0.58
6:5:9:DG:P	11:AA:470:ARG:HA	2.43	0.58
9:9:94:ARG:CB	9:9:97:LYS:HE2	2.32	0.58
12:AB:125:GLY:O	14:AE:87:LYS:CA	2.51	0.58
17:C:12:ARG:CG	22:H:264:GLU:CB	2.80	0.58
23:I:85:GLU:OE2	23:I:88:ARG:NH1	2.26	0.58
24:J:91:LEU:HD21	24:J:195:ILE:HD12	1.84	0.58
25:K:12:GLN:HB3	25:K:14:LYS:NZ	2.18	0.58
25:K:93:ARG:HB3	25:K:93:ARG:NH2	2.18	0.58
33:S:20:TYR:HD2	33:S:55:SER:OG	1.85	0.58
39:Y:102:ARG:CG	39:Y:141:ASP:HA	2.33	0.58
41:a:654:A:H61	55:o:19:LYS:HD2	1.68	0.58
41:a:2189:U:O4'	41:a:2189:U:OP1	2.21	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:2259:U:N3	41:a:2260:C:C5	2.71	0.58
50:j:46:ARG:NH1	50:j:85:ALA:O	2.32	0.58
51:k:7:GLU:CD	51:k:7:GLU:H	2.11	0.58
52:l:62:GLN:O	52:l:69:ARG:HD3	2.03	0.58
52:l:148:ILE:HD13	52:l:187:VAL:HB	1.85	0.58
62:v:49:ALA:O	62:v:52:ALA:N	2.37	0.58
6:5:10:DT:C4	11:AA:62:TYR:HD2	2.12	0.58
6:5:25:DA:C2	7:6:5:DG:C2	2.92	0.58
9:9:23:LEU:N	9:9:118:ILE:HD11	2.19	0.58
9:9:46:ARG:CG	9:9:94:ARG:HH21	2.02	0.58
9:9:78:GLY:N	9:9:79:PRO:CD	2.66	0.58
10:A:15:G:N1	10:A:20:U:O2	2.37	0.58
10:A:60:U:H4'	10:A:61:C:OP2	2.04	0.58
12:AB:19:GLU:O	12:AB:23:ARG:HB2	2.03	0.58
16:AG:130:PHE:C	16:AG:186:VAL:HG11	2.28	0.58
16:AG:434:LEU:N	16:AG:456:LEU:HG	2.17	0.58
16:AG:453:VAL:HG11	16:AG:459:LEU:HG	1.84	0.58
17:C:60:LYS:NZ	18:D:734:G:C2'	2.64	0.58
18:D:829:G:O3'	21:G:23:TRP:CZ2	2.56	0.58
18:D:1107:C:P	23:I:172:ARG:HG3	2.43	0.58
25:K:148:ASN:OD1	28:N:96:MET:HE1	2.03	0.58
31:Q:20:VAL:CG1	31:Q:85:MET:HE1	2.33	0.58
41:a:70:G:H4'	41:a:71:A:OP1	2.03	0.58
54:n:4:LEU:HD11	54:n:101:GLU:N	2.18	0.58
59:s:102:GLU:CD	59:s:124:VAL:HG11	2.28	0.58
61:u:55:MET:CE	61:u:60:ARG:HG2	2.33	0.58
5:4:63:ILE:HD11	5:4:91:PHE:CE2	2.37	0.58
9:9:60:LEU:HA	9:9:64:VAL:HB	1.84	0.58
11:AA:707:ALA:O	11:AA:711:ASP:HB2	2.03	0.58
12:AB:135:GLY:O	12:AB:137:ALA:N	2.37	0.58
16:AG:413:ALA:HA	16:AG:416:THR:OG1	2.03	0.58
17:C:13:PHE:HB3	17:C:51:TYR:CD1	2.39	0.58
18:D:972:C:O2'	30:P:57:VAL:HG13	2.03	0.58
28:N:7:ILE:HB	28:N:77:ARG:NH1	2.18	0.58
41:a:372:G:O2'	41:a:400:G:O6	2.16	0.58
41:a:832:U:H2'	41:a:833:A:H8	1.69	0.58
41:a:1021:A:N1	41:a:1141:U:O4	2.37	0.58
41:a:2682:A:H8	50:j:11:MET:CE	2.15	0.58
45:e:2:LYS:CE	45:e:52:ARG:HE	2.15	0.58
54:n:46:ASP:OD1	54:n:49:LEU:HD13	2.03	0.58
58:r:30:LEU:HD23	58:r:35:LYS:HE2	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:s:39:LYS:HA	59:s:44:TYR:CD1	2.39	0.58
59:s:132:HIS:O	59:s:135:GLN:HB2	2.03	0.58
8:7:7:U:H5''	8:7:7:U:C6	2.39	0.58
12:AB:89:PRO:HG2	14:AE:290:ILE:CG2	2.33	0.58
16:AG:25:GLU:HG3	16:AG:49:ILE:HD11	1.86	0.58
10:B:15:G:N1	10:B:20:U:O2	2.36	0.58
18:D:439:U:O2	18:D:440:C:C5	2.56	0.58
27:M:24:ALA:O	27:M:27:VAL:HG22	2.04	0.58
28:N:43:GLU:HG2	28:N:101:ILE:HD13	1.84	0.58
36:V:4:LYS:HD2	36:V:5:ILE:HG23	1.85	0.58
41:a:1028:A:H2'	41:a:1029:A:C8	2.37	0.58
41:a:1197:G:H2'	41:a:1198:U:H6	1.68	0.58
45:e:18:LEU:HD11	45:e:54:LYS:HE3	1.86	0.58
46:f:40:ASP:OD1	46:f:45:ARG:NH2	2.37	0.58
56:p:149:ARG:NH2	56:p:162:VAL:N	2.52	0.58
59:s:53:TYR:CD1	59:s:121:LYS:HD2	2.39	0.58
59:s:133:ALA:C	59:s:135:GLN:N	2.60	0.58
66:z:82:GLY:CA	66:z:117:LEU:CD1	2.81	0.58
2:1:11:ARG:NH1	2:1:98:LYS:HE3	2.19	0.58
6:5:10:DT:O3'	12:AB:68:THR:HA	2.03	0.58
8:7:11:U:HO2'	25:K:33:PHE:HE1	1.44	0.58
16:AG:367:GLU:O	16:AG:371:THR:HG23	2.04	0.58
17:C:16:GLU:OE1	17:C:18:VAL:N	2.36	0.58
18:D:588:G:H4'	28:N:3:MET:CE	2.33	0.58
18:D:695:A:H8	18:D:695:A:H5''	1.68	0.58
23:I:24:ALA:C	23:I:29:PHE:HE2	2.11	0.58
25:K:156:LYS:HA	28:N:66:PHE:CD2	2.39	0.58
30:P:22:THR:O	30:P:26:VAL:HG23	2.03	0.58
41:a:685:A:O2'	41:a:773:U:O4	2.17	0.58
41:a:2189:U:O2'	41:a:2190:G:O4'	2.22	0.58
41:a:2335:A:OP2	64:x:13:ARG:CD	2.51	0.58
41:a:2349:G:C6	41:a:2369:A:C6	2.92	0.58
58:r:37:VAL:HG12	58:r:43:ASN:HD21	1.68	0.58
61:u:61:LEU:HB3	61:u:62:PRO:HD2	1.85	0.58
8:7:10:U:H5''	8:7:10:U:O2	2.03	0.58
9:9:24:SER:HB2	9:9:86:MET:HA	1.86	0.58
11:AA:13:LYS:HB2	11:AA:1180:MET:HE2	1.86	0.58
12:AB:115:LYS:CA	12:AB:129:ILE:CD1	2.79	0.58
18:D:915:A:N6	18:D:916:U:C4	2.72	0.58
18:D:1308:U:P	38:X:98:ARG:HG3	2.43	0.58
22:H:75:VAL:HG23	22:H:81:GLU:OE2	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:I:25:ASN:N	23:I:29:PHE:HE2	2.01	0.58
25:K:136:VAL:O	25:K:140:THR:HG23	2.04	0.58
44:d:42:C:P	54:n:64:LYS:HZ1	2.26	0.58
44:d:106:G:H2'	44:d:107:G:O4'	2.04	0.58
4:3:94:ARG:HB3	4:3:103:ILE:HD12	1.86	0.58
8:7:31:A:H5'	8:7:32:U:H5''	1.84	0.58
11:AA:857:VAL:O	16:AG:35:THR:HB	2.04	0.58
14:AE:1143:ASP:OD1	14:AE:1148:ARG:NH1	2.37	0.58
20:F:16:LEU:C	20:F:20:LYS:HZ3	2.10	0.58
21:G:66:LYS:HB3	21:G:154:MET:CE	2.34	0.58
25:K:146:ASN:OD1	25:K:147:MET:N	2.37	0.58
27:M:66:LEU:HD11	27:M:100:ALA:HB3	1.85	0.58
28:N:52:GLU:OE1	28:N:53:GLY:N	2.37	0.58
29:O:49:ARG:HB3	29:O:53:GLU:OE2	2.02	0.58
29:O:94:LEU:O	29:O:98:LEU:HD13	2.04	0.58
31:Q:52:PHE:CD2	31:Q:56:ARG:HG2	2.39	0.58
34:T:28:GLN:HB2	34:T:66:LEU:HD21	1.86	0.58
34:T:32:LEU:HD11	34:T:62:GLN:OE1	2.04	0.58
39:Y:32:VAL:HG22	39:Y:60:VAL:CG2	2.34	0.58
41:a:607:U:C5	41:a:620:G:C4	2.91	0.58
62:v:26:VAL:HG13	62:v:104:GLU:CD	2.29	0.58
2:1:73:LYS:C	2:1:74:ILE:HD12	2.29	0.57
4:3:6:ARG:NH1	41:a:84:A:O2'	2.36	0.57
5:4:46:LYS:O	5:4:50:MET:HG2	2.04	0.57
9:9:4:ASN:HB3	9:9:8:LYS:NZ	2.19	0.57
12:AB:102:LYS:CE	14:AE:285:LEU:HA	2.34	0.57
12:AB:102:LYS:HE2	14:AE:285:LEU:CA	2.34	0.57
16:AG:352:ALA:O	16:AG:356:ILE:CG2	2.51	0.57
22:H:273:ARG:HD3	22:H:280:LEU:HD11	1.85	0.57
29:O:5:GLN:NE2	29:O:20:PHE:CB	2.67	0.57
41:a:1869:G:N2	41:a:1871:A:O2'	2.37	0.57
41:a:2683:C:H4'	50:j:13:ARG:CZ	2.34	0.57
42:b:55:ARG:NE	42:b:55:ARG:HA	2.19	0.57
51:k:34:LEU:H	51:k:51:GLU:CD	2.12	0.57
59:s:120:ARG:CZ	59:s:120:ARG:HB2	2.34	0.57
5:4:48:MET:HE3	5:4:84:PRO:O	2.04	0.57
11:AA:838:CYS:HB2	11:AA:918:LEU:HD22	1.85	0.57
12:AB:154:VAL:HG11	12:AB:159:PHE:HB2	1.82	0.57
16:AG:162:ILE:HD13	16:AG:167:MET:HE2	1.86	0.57
16:AG:362:TYR:CA	16:AG:413:ALA:HB1	2.31	0.57
16:AG:387:VAL:CB	16:AG:388:PRO:CD	2.76	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:392:LEU:CD2	16:AG:395:ILE:HD11	2.34	0.57
10:B:60:U:H4'	10:B:61:C:OP2	2.04	0.57
26:L:95:ALA:O	26:L:96:VAL:C	2.47	0.57
27:M:26:PHE:CD1	27:M:101:MET:SD	2.97	0.57
39:Y:5:GLN:CG	39:Y:61:TYR:CE1	2.76	0.57
39:Y:33:ASN:HB3	39:Y:36:GLU:CG	2.30	0.57
41:a:782:A:C2	48:h:225:MET:HE2	2.39	0.57
41:a:1198:U:H2'	41:a:1199:U:C6	2.39	0.57
41:a:2816:G:O4'	49:i:41:HIS:CE1	2.57	0.57
53:m:12:ARG:NE	53:m:44:VAL:HG21	2.19	0.57
59:s:31:GLU:OE2	59:s:35:ARG:NH1	2.37	0.57
3:2:56:GLU:OE1	3:2:56:GLU:N	2.33	0.57
11:AA:371:ARG:NH1	12:AB:67:THR:OG1	2.34	0.57
11:AA:1223:ARG:NH2	14:AE:721:SER:OG	2.38	0.57
12:AB:141:LEU:O	12:AB:151:LYS:HA	2.04	0.57
14:AE:144:TYR:OH	14:AE:293:ARG:NH2	2.37	0.57
16:AG:434:LEU:HD11	16:AG:455:THR:N	2.19	0.57
21:G:35:ARG:HD2	22:H:14:LYS:CE	2.34	0.57
23:I:82:GLU:O	23:I:86:LYS:HD3	2.04	0.57
24:J:196:ASN:ND2	24:J:199:LEU:HG	2.20	0.57
27:M:103:TRP:CD1	27:M:137:LYS:HZ2	2.23	0.57
32:R:110:ARG:NE	32:R:117:TYR:HD2	2.02	0.57
33:S:90:ARG:C	33:S:92:GLU:OE1	2.47	0.57
36:V:42:THR:HG22	36:V:44:LEU:CD1	2.34	0.57
38:X:93:ARG:HG2	38:X:95:LEU:HD23	1.85	0.57
41:a:84:A:N1	41:a:98:G:O2'	2.37	0.57
41:a:1568:G:N7	48:h:28:LYS:NZ	2.52	0.57
41:a:1682:G:H2'	41:a:1683:U:C6	2.39	0.57
60:t:121:GLU:OE2	65:y:41:GLN:NE2	2.37	0.57
62:v:49:ALA:C	62:v:53:MET:HE1	2.30	0.57
66:z:53:ARG:CG	66:z:57:PHE:HE2	2.18	0.57
1:0:15:SER:HB2	1:0:18:GLN:NE2	2.18	0.57
3:2:56:GLU:CD	3:2:87:LEU:C	2.73	0.57
5:4:2:PHE:HE2	5:4:55:GLU:HG2	1.69	0.57
8:7:21:U:C4	23:I:82:GLU:HB2	2.40	0.57
12:AB:6:LEU:H	12:AB:88:VAL:HG21	1.69	0.57
16:AG:233:ARG:HH12	16:AG:324:ASN:N	2.02	0.57
10:B:70:G:H2'	10:B:71:C:H5''	1.85	0.57
18:D:280:C:O2	36:V:40:ARG:NH2	2.37	0.57
35:U:14:ARG:HD3	35:U:42:ILE:HG21	1.86	0.57
41:a:5:A:H2'	41:a:6:A:C8	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:m:24:THR:HG23	53:m:27:GLY:H	1.69	0.57
58:r:6:LEU:HD11	58:r:37:VAL:CG2	2.33	0.57
1:0:16:GLU:C	1:0:18:GLN:OE1	2.46	0.57
5:4:60:VAL:HG12	5:4:71:LYS:HE2	1.85	0.57
9:9:38:MET:SD	39:Y:117:THR:HG22	2.45	0.57
12:AB:54:TYR:HE2	14:AE:291:ILE:CG2	2.13	0.57
18:D:1356:G:H2'	18:D:1357:A:C8	2.40	0.57
19:E:61:GLN:HE21	19:E:66:LEU:HD22	1.69	0.57
26:L:14:GLN:OE1	26:L:83:ALA:HA	2.04	0.57
27:M:23:LEU:HD12	27:M:23:LEU:H	1.70	0.57
28:N:8:ALA:O	28:N:12:THR:HG23	2.03	0.57
28:N:66:PHE:CG	28:N:67:GLN:OE1	2.57	0.57
30:P:63:ASP:OD2	30:P:64:GLN:N	2.38	0.57
30:P:86:ALA:O	30:P:90:LEU:CD1	2.53	0.57
39:Y:116:MET:HB3	39:Y:124:MET:HE2	1.87	0.57
41:a:580:U:H2'	41:a:581:C:H6	1.69	0.57
41:a:2395:C:H2'	41:a:2396:G:O4'	2.03	0.57
45:e:2:LYS:HD2	45:e:6:LEU:HD11	1.85	0.57
52:l:17:THR:HA	52:l:21:ARG:NH2	2.19	0.57
52:l:136:GLN:NE2	52:l:140:ASP:OD2	2.37	0.57
55:o:55:LEU:HD21	55:o:59:ILE:HD11	1.87	0.57
62:v:97:GLN:H	62:v:100:LYS:HZ1	1.51	0.57
63:w:9:GLN:O	63:w:17:ARG:HD3	2.04	0.57
10:A:75:C:O2'	10:A:76:A:C8	2.58	0.57
11:AA:1122:LYS:NZ	11:AA:1126:ASP:OD1	2.38	0.57
16:AG:173:PHE:N	16:AG:173:PHE:CD2	2.73	0.57
16:AG:353:HIS:HA	16:AG:356:ILE:HG23	1.78	0.57
21:G:52:GLU:O	21:G:56:GLU:OE1	2.23	0.57
35:U:12:LYS:CD	35:U:13:LYS:HG2	2.33	0.57
41:a:500:G:N1	41:a:503:A:OP2	2.37	0.57
41:a:628:G:C6	41:a:636:G:C2	2.92	0.57
41:a:2822:G:O2'	41:a:2824:C:OP2	2.20	0.57
44:d:48:U:H2'	44:d:49:C:C6	2.40	0.57
62:v:1:MET:HE3	62:v:1:MET:CA	2.34	0.57
62:v:41:LEU:CD2	62:v:45:GLN:HE22	2.18	0.57
62:v:105:MET:HE2	62:v:108:VAL:HG21	1.87	0.57
11:AA:1254:VAL:O	14:AE:99:ARG:NH2	2.37	0.57
18:D:974:A:OP1	33:S:69:ARG:NH1	2.37	0.57
36:V:11:ARG:HE	36:V:58:VAL:HG22	1.69	0.57
41:a:1360:G:N7	41:a:1361:G:C8	2.73	0.57
11:AA:1070:HIS:NE2	11:AA:1114:GLU:OE1	2.36	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AC:82:LEU:HD11	13:AC:171:LEU:HD23	1.86	0.57
16:AG:210:ARG:HE	16:AG:216:ILE:HG22	1.69	0.57
16:AG:362:TYR:CZ	16:AG:382:GLU:HG2	2.40	0.57
16:AG:434:LEU:HD23	16:AG:456:LEU:CG	2.35	0.57
18:D:692:U:N3	18:D:695:A:OP2	2.34	0.57
18:D:1082:A:OP1	25:K:23:LYS:NZ	2.34	0.57
22:H:51:GLU:OE1	22:H:51:GLU:N	2.37	0.57
22:H:280:LEU:N	22:H:330:VAL:O	2.31	0.57
27:M:68:ASN:ND2	27:M:130:ASN:OD1	2.38	0.57
39:Y:58:ILE:HG23	39:Y:66:PHE:CE2	2.40	0.57
41:a:64:A:H2'	41:a:65:U:C6	2.40	0.57
41:a:811:U:H2'	61:u:21:ARG:HA	1.86	0.57
66:z:74:ILE:HG12	66:z:79:PHE:HB2	1.86	0.57
11:AA:839:VAL:HG12	11:AA:1049:ILE:HG12	1.87	0.57
16:AG:9:VAL:HA	16:AG:24:PHE:CZ	2.40	0.57
16:AG:61:ARG:HD2	16:AG:73:LYS:HD3	1.86	0.57
16:AG:363:LEU:HG	16:AG:410:ALA:N	2.16	0.57
16:AG:392:LEU:HD22	16:AG:395:ILE:HD11	1.87	0.57
10:B:30:G:O2'	18:D:1339:A:H2	1.80	0.57
18:D:193:C:O2'	19:E:59:ASP:OD2	2.23	0.57
18:D:911:U:H2'	18:D:912:C:C6	2.40	0.57
21:G:107:VAL:O	21:G:111:ILE:HG12	2.04	0.57
21:G:131:LYS:HG3	21:G:132:LYS:HD2	1.87	0.57
30:P:21:ALA:O	30:P:24:GLU:HG3	2.04	0.57
41:a:593:U:H2'	41:a:594:U:C6	2.39	0.57
41:a:1141:U:H5	59:s:68:LYS:NZ	2.02	0.57
41:a:1442:U:H2'	41:a:1443:U:C6	2.40	0.57
41:a:1818:U:OP2	48:h:156:ARG:CZ	2.53	0.57
41:a:2514:U:H2'	41:a:2515:C:C6	2.40	0.57
47:g:18:CYS:HB3	47:g:40:CYS:HB2	1.85	0.57
8:7:12:U:H3'	8:7:12:U:H6	1.70	0.57
16:AG:233:ARG:O	16:AG:327:LEU:HD21	2.04	0.57
16:AG:425:LEU:N	16:AG:429:LYS:HG3	2.20	0.57
18:D:439:U:O2	18:D:440:C:C6	2.58	0.57
27:M:28:ASN:HA	27:M:31:MET:HE3	1.85	0.57
34:T:32:LEU:CD1	34:T:62:GLN:OE1	2.53	0.57
37:W:40:ILE:HG21	37:W:66:MET:SD	2.45	0.57
41:a:228:C:N4	41:a:2407:A:N3	2.52	0.57
41:a:659:G:H1'	52:l:100:MET:HE1	1.87	0.57
41:a:839:U:H2'	41:a:840:C:C6	2.40	0.57
41:a:2483:C:O2	62:v:51:ARG:NH2	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:49:ILE:HG22	16:AG:49:ILE:O	2.04	0.56
16:AG:221:ILE:HD13	16:AG:247:PRO:HA	1.85	0.56
16:AG:361:LYS:CE	16:AG:417:ILE:CG1	2.74	0.56
18:D:512:U:OP1	24:J:44:ARG:NH1	2.38	0.56
35:U:39:PHE:HD1	35:U:50:THR:HG22	1.70	0.56
41:a:1824:G:H5'	48:h:52:ARG:HH22	1.69	0.56
42:b:51:VAL:C	42:b:62:LYS:NZ	2.63	0.56
43:c:66:THR:O	43:c:70:GLU:OE1	2.23	0.56
62:v:70:ASP:C	62:v:92:TRP:HZ3	2.13	0.56
5:4:57:TYR:CD2	62:v:136:MET:HE2	2.40	0.56
9:9:98:GLU:HA	9:9:101:LYS:HZ3	1.70	0.56
10:A:5:G:H2'	10:A:6:G:C5'	2.35	0.56
12:AB:117:ILE:HD13	12:AB:161:LYS:NZ	2.17	0.56
16:AG:63:LEU:HD23	16:AG:63:LEU:H	1.69	0.56
16:AG:318:ILE:HG12	16:AG:338:VAL:HG11	1.85	0.56
10:B:5:G:H2'	10:B:6:G:C5'	2.35	0.56
18:D:562:U:C3'	32:R:14:ARG:HH11	2.17	0.56
38:X:28:THR:HG22	38:X:29:ARG:NH1	2.20	0.56
41:a:1278:C:O2'	63:w:27:SER:OG	2.16	0.56
44:d:42:C:C5'	54:n:64:LYS:HZ1	2.18	0.56
48:h:52:ARG:HE	48:h:53:HIS:CE1	2.23	0.56
60:t:20:MET:CB	60:t:44:LYS:HZ3	2.15	0.56
5:4:53:LYS:HB2	5:4:56:PHE:CE2	2.40	0.56
9:9:124:ASP:OD2	9:9:126:LEU:HD21	2.05	0.56
12:AB:26:VAL:HA	12:AB:58:GLU:OE1	2.05	0.56
16:AG:130:PHE:HB3	16:AG:186:VAL:HG22	1.86	0.56
16:AG:187:ARG:CB	16:AG:188:PRO:HD3	2.20	0.56
16:AG:283:PHE:CE2	16:AG:331:LEU:O	2.58	0.56
16:AG:307:ILE:HD11	16:AG:336:LEU:HB2	1.87	0.56
16:AG:354:ALA:CA	16:AG:357:ASP:HB3	2.32	0.56
17:C:55:LEU:O	17:C:59:ILE:HG12	2.04	0.56
18:D:1515:G:H2'	18:D:1516:G:H8	1.70	0.56
22:H:116:VAL:CA	22:H:279:LYS:HD2	2.35	0.56
23:I:6:HIS:HB3	33:S:89:MET:SD	2.45	0.56
25:K:148:ASN:ND2	25:K:153:VAL:HG12	2.20	0.56
26:L:42:TRP:CZ2	26:L:102:MET:CG	2.88	0.56
29:O:118:LEU:CD2	29:O:124:ARG:HA	2.35	0.56
30:P:15:HIS:HA	30:P:18:ILE:HG22	1.88	0.56
31:Q:15:GLN:OE1	31:Q:78:GLY:HA3	2.05	0.56
31:Q:87:LYS:HG3	31:Q:113:VAL:CG2	2.36	0.56
32:R:109:ASP:C	32:R:111:LYS:HZ3	2.13	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:T:10:LYS:O	34:T:14:GLU:OE1	2.23	0.56
41:a:3:U:H2'	41:a:4:U:H6	1.69	0.56
41:a:78:U:H5''	45:e:4:LYS:NZ	2.20	0.56
41:a:839:U:C2	41:a:840:C:C5	2.93	0.56
41:a:1693:U:O2'	48:h:14:ARG:NH2	2.38	0.56
41:a:2849:U:P	65:y:93:ARG:NH2	2.78	0.56
42:b:21:LEU:HD21	42:b:41:ARG:NE	2.20	0.56
42:b:51:VAL:C	42:b:62:LYS:HZ3	2.12	0.56
47:g:47:LYS:HG2	54:n:115:ARG:NH2	2.20	0.56
50:j:180:VAL:O	50:j:180:VAL:HG13	2.05	0.56
52:l:42:GLY:CA	52:l:92:HIS:HE1	2.18	0.56
54:n:62:GLY:C	54:n:95:ARG:NH2	2.63	0.56
55:o:30:ARG:HH12	61:u:62:PRO:HB3	1.70	0.56
56:p:109:PHE:CE1	56:p:152:ARG:NH1	2.74	0.56
59:s:37:ARG:HD3	59:s:39:LYS:HD2	1.88	0.56
60:t:20:MET:HB3	60:t:44:LYS:CE	2.35	0.56
65:y:51:ARG:HD3	65:y:58:ALA:HB3	1.86	0.56
8:7:6:U:C2	18:D:1493:A:H2	2.24	0.56
9:9:122:GLN:HG2	9:9:123:ILE:H	1.70	0.56
11:AA:516:ASP:OD1	11:AA:516:ASP:O	2.22	0.56
16:AG:131:ARG:CA	16:AG:186:VAL:HG11	2.35	0.56
16:AG:422:GLU:CG	16:AG:426:GLY:HA3	2.35	0.56
16:AG:440:VAL:HG22	16:AG:481:LEU:CD2	2.34	0.56
18:D:1381:U:C2	18:D:1382:C:C6	2.93	0.56
21:G:19:GLN:HG3	22:H:76:GLU:CB	2.35	0.56
22:H:117:LYS:CB	22:H:279:LYS:O	2.54	0.56
23:I:151:VAL:HG12	23:I:200:VAL:CG2	2.35	0.56
28:N:7:ILE:O	28:N:10:MET:HB3	2.05	0.56
37:W:64:ASP:OD2	47:g:57:VAL:HG23	2.06	0.56
38:X:16:VAL:CG2	38:X:17:ILE:HD12	2.35	0.56
41:a:1857:G:O2'	41:a:1884:G:N2	2.38	0.56
54:n:163:ASP:OD1	54:n:164:GLU:N	2.39	0.56
60:t:112:PHE:CD2	60:t:115:ILE:HD12	2.39	0.56
63:w:35:LYS:NZ	63:w:112:TYR:HE2	2.04	0.56
9:9:27:VAL:HG13	9:9:27:VAL:O	2.05	0.56
12:AB:130:PHE:CD2	12:AB:152:HIS:HE1	2.23	0.56
16:AG:285:ILE:O	16:AG:288:MET:CE	2.54	0.56
16:AG:302:LYS:NZ	16:AG:302:LYS:HB2	2.20	0.56
18:D:1145:A:HO2'	18:D:1146:A:P	2.28	0.56
20:F:26:ALA:HB3	20:F:28:VAL:HG23	1.88	0.56
21:G:19:GLN:CG	22:H:76:GLU:HB3	2.34	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:H:100:LYS:O	22:H:104:ASP:N	2.38	0.56
23:I:66:VAL:HB	23:I:101:ILE:HD12	1.88	0.56
24:J:121:LYS:HG2	24:J:131:ASN:ND2	2.20	0.56
34:T:35:GLN:CB	34:T:59:MET:HE1	2.36	0.56
41:a:16:C:C4'	49:i:15:MET:HE3	2.35	0.56
41:a:17:G:H2'	41:a:18:U:C6	2.41	0.56
41:a:589:U:H2'	41:a:590:A:H8	1.71	0.56
41:a:1565:C:OP1	48:h:18:LYS:NZ	2.26	0.56
41:a:2192:U:H2'	41:a:2193:G:C8	2.40	0.56
45:e:2:LYS:HE2	45:e:52:ARG:HE	1.71	0.56
50:j:3:GLY:N	50:j:204:LYS:HE2	2.20	0.56
50:j:91:THR:HB	50:j:94:GLN:HG2	1.88	0.56
62:v:37:GLY:C	62:v:126:ILE:HD11	2.30	0.56
63:w:67:PHE:O	63:w:71:ARG:N	2.39	0.56
4:3:6:ARG:CZ	41:a:84:A:H2'	2.35	0.56
5:4:55:GLU:O	5:4:59:GLU:OE1	2.24	0.56
5:4:77:VAL:HG11	5:4:79:ARG:NH2	2.21	0.56
11:AA:818:VAL:HG22	11:AA:1096:ILE:HG12	1.87	0.56
12:AB:115:LYS:HZ2	12:AB:129:ILE:HG21	0.73	0.56
16:AG:63:LEU:HD23	16:AG:63:LEU:N	2.21	0.56
22:H:163:ARG:CB	22:H:298:GLU:HG3	2.35	0.56
24:J:62:ARG:HA	24:J:72:PHE:CE1	2.41	0.56
25:K:74:VAL:HG11	25:K:144:LEU:HD12	1.88	0.56
27:M:66:LEU:HD23	27:M:70:ARG:HH21	1.69	0.56
42:b:45:PHE:CD2	42:b:80:ILE:HD11	2.40	0.56
51:k:19:HIS:ND1	51:k:41:PRO:HD2	2.21	0.56
12:AB:145:LEU:CB	30:P:88:MET:HA	2.34	0.56
16:AG:457:GLU:HG2	16:AG:489:CYS:SG	2.45	0.56
18:D:110:C:O2'	35:U:25:ARG:O	2.21	0.56
18:D:521:G:O5'	32:R:70:GLU:OE1	2.23	0.56
21:G:35:ARG:HG2	21:G:40:ILE:HG13	1.86	0.56
22:H:297:GLU:HG2	22:H:300:VAL:HG21	1.86	0.56
27:M:134:ALA:O	27:M:137:LYS:HG2	2.06	0.56
32:R:27:CYS:SG	32:R:30:LYS:NZ	2.68	0.56
34:T:3:LEU:HB2	34:T:35:GLN:CD	2.31	0.56
41:a:5:A:H2'	41:a:6:A:H8	1.70	0.56
41:a:2093:G:P	58:r:22:LYS:HZ2	2.20	0.56
41:a:2291:U:H2'	41:a:2292:U:C6	2.40	0.56
41:a:2299:U:H2'	41:a:2300:C:H6	1.71	0.56
56:p:85:LYS:HE3	56:p:164:TYR:CE1	2.41	0.56
63:w:24:MET:HE2	63:w:34:ILE:HD13	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:H:116:VAL:HA	22:H:279:LYS:HD2	1.88	0.56
23:I:150:LYS:HE3	23:I:201:TRP:CZ3	2.41	0.56
39:Y:77:VAL:HG13	39:Y:81:LYS:HZ3	1.71	0.56
40:Z:2:ILE:HB	40:Z:5:ASP:HB3	1.88	0.56
40:Z:14:MET:HG3	40:Z:15:SER:N	2.17	0.56
56:p:94:TYR:CE1	56:p:107:LEU:O	2.59	0.56
64:x:21:LEU:HD22	64:x:23:ALA:HB2	1.87	0.56
9:9:56:ARG:NH2	41:a:1084:A:C1'	2.69	0.56
12:AB:130:PHE:CZ	12:AB:160:ARG:HG3	2.41	0.56
16:AG:266:LEU:HD23	16:AG:266:LEU:N	2.19	0.56
16:AG:354:ALA:HA	16:AG:357:ASP:H	1.70	0.56
16:AG:379:SER:HG	16:AG:384:LEU:HD21	1.68	0.56
10:B:18:G:H1'	10:B:58:A:C2	2.41	0.56
10:B:75:C:O2'	10:B:76:A:C8	2.58	0.56
18:D:280:C:H1'	36:V:40:ARG:NH1	2.21	0.56
18:D:440:C:C4	18:D:441:A:N7	2.73	0.56
24:J:138:SER:O	24:J:141:ASP:OD1	2.24	0.56
38:X:95:LEU:O	38:X:109:ARG:NH2	2.39	0.56
41:a:1365:A:O2'	43:c:11:ARG:NH1	2.39	0.56
41:a:2071:A:H2'	41:a:2072:C:C6	2.40	0.56
9:9:47:GLU:O	9:9:51:TYR:CE1	2.59	0.56
12:AB:34:THR:O	12:AB:106:ASP:OD1	2.24	0.56
16:AG:220:VAL:HG12	16:AG:245:ILE:HG21	1.88	0.56
19:E:61:GLN:HE21	19:E:66:LEU:CD2	2.18	0.56
33:S:63:ARG:NH2	33:S:68:GLY:O	2.32	0.56
41:a:1289:C:C2	41:a:1290:C:C5	2.94	0.56
41:a:2189:U:O2'	41:a:2190:G:C5'	2.54	0.56
42:b:68:LYS:HZ2	42:b:70:GLU:CD	2.12	0.56
46:f:7:ILE:CG2	46:f:55:VAL:HG21	2.35	0.56
49:i:40:ARG:HG3	49:i:41:HIS:ND1	2.21	0.56
59:s:73:VAL:C	59:s:74:TYR:HD2	2.14	0.56
60:t:59:LYS:CD	60:t:89:ASN:HA	2.36	0.56
65:y:106:LYS:HA	65:y:109:ARG:NH2	2.20	0.56
8:7:8:U:H5'	18:D:1397:C:C2	2.41	0.55
9:9:43:LYS:HD3	9:9:98:GLU:CG	2.35	0.55
13:AC:28:LEU:HD22	13:AC:201:LEU:HD23	1.88	0.55
16:AG:287:ALA:HB1	16:AG:331:LEU:CB	2.36	0.55
16:AG:437:LEU:HD22	16:AG:488:ILE:HD12	1.88	0.55
18:D:502:A:O3'	32:R:116:LYS:HE2	2.06	0.55
18:D:827:U:O4	18:D:872:A:N1	2.39	0.55
18:D:946:A:H2'	18:D:947:G:C8	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:1366:C:O2'	30:P:62:ARG:NH2	2.38	0.55
41:a:1059:G:H2'	41:a:1060:U:C5	2.41	0.55
41:a:2720:U:OP1	65:y:53:ARG:NH2	2.39	0.55
45:e:23:ARG:HG3	45:e:24:GLU:N	2.21	0.55
45:e:53:VAL:O	45:e:57:LEU:HD23	2.06	0.55
45:e:56:LEU:O	45:e:59:GLU:HG3	2.06	0.55
59:s:13:ARG:CZ	59:s:49:ASP:O	2.54	0.55
61:u:125:LEU:HD23	61:u:125:LEU:N	2.21	0.55
8:7:18:U:O2	8:7:18:U:H2'	2.06	0.55
13:AC:45:ARG:HD3	13:AD:38:THR:HB	1.87	0.55
16:AG:162:ILE:HG22	16:AG:162:ILE:O	2.06	0.55
18:D:672:U:O2'	18:D:673:A:H5'	2.06	0.55
22:H:268:VAL:HG23	22:H:269:ALA:H	1.72	0.55
31:Q:61:PHE:O	31:Q:64:GLN:HG2	2.06	0.55
33:S:87:ALA:HB1	33:S:93:ILE:HG13	1.87	0.55
41:a:608:A:H2'	41:a:609:A:C8	2.42	0.55
41:a:1570:A:H2'	41:a:1571:A:C8	2.41	0.55
41:a:1720:U:H2'	41:a:1721:G:O4'	2.06	0.55
41:a:2335:A:OP2	64:x:13:ARG:HB3	2.06	0.55
41:a:2803:G:H2'	41:a:2804:U:C6	2.41	0.55
44:d:45:A:H5'	54:n:92:ARG:NH1	2.20	0.55
60:t:12:ASP:CG	60:t:85:VAL:HG13	2.30	0.55
60:t:59:LYS:HD2	60:t:89:ASN:HA	1.87	0.55
61:u:84:LYS:NZ	61:u:98:ALA:O	2.20	0.55
62:v:96:ILE:HA	62:v:100:LYS:NZ	2.21	0.55
4:3:47:LYS:HE3	41:a:483:A:OP1	2.07	0.55
5:4:80:HIS:CE1	5:4:83:LYS:HG3	2.41	0.55
8:7:30:G:P	16:AG:112:GLN:HG2	2.45	0.55
9:9:112:ALA:O	9:9:123:ILE:CD1	2.54	0.55
10:A:22:G:H2'	10:A:23:C:H6	1.70	0.55
12:AB:141:LEU:CB	12:AB:143:LEU:HD11	2.29	0.55
16:AG:320:ARG:NH1	16:AG:320:ARG:HG2	2.22	0.55
23:I:31:ASP:HA	33:S:65:ARG:HH22	1.72	0.55
23:I:164:ARG:CZ	23:I:166:GLU:OE2	2.54	0.55
30:P:26:VAL:O	30:P:30:LYS:HG3	2.07	0.55
38:X:28:THR:O	38:X:31:LYS:HG2	2.07	0.55
41:a:784:G:H5'	41:a:785:G:OP1	2.06	0.55
41:a:960:A:H61	62:v:82:MET:HE1	1.71	0.55
41:a:1266:G:O2'	41:a:2012:G:O6	2.22	0.55
41:a:1349:C:C2	41:a:1350:C:C5	2.95	0.55
41:a:2517:C:C2	41:a:2542:A:N6	2.74	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:h:183:LYS:HE2	48:h:266:PHE:HA	1.88	0.55
50:j:11:MET:SD	50:j:11:MET:C	2.89	0.55
55:o:30:ARG:NH1	61:u:62:PRO:HB3	2.21	0.55
58:r:135:HIS:ND1	58:r:137:GLU:CD	2.44	0.55
59:s:73:VAL:HG12	59:s:74:TYR:N	2.20	0.55
64:x:36:TYR:CD2	64:x:52:SER:HB2	2.41	0.55
5:4:80:HIS:ND1	5:4:83:LYS:N	2.55	0.55
18:D:588:G:C5'	28:N:3:MET:HE1	2.36	0.55
18:D:750:C:N3	18:D:751:U:C5	2.75	0.55
18:D:1329:A:OP1	38:X:28:THR:HB	2.06	0.55
18:D:1370:G:C2	18:D:1371:G:C8	2.95	0.55
19:E:6:SER:O	19:E:10:ARG:HG2	2.07	0.55
21:G:27:MET:CE	21:G:187:VAL:HG12	2.37	0.55
41:a:537:G:OP2	59:s:2:LYS:CE	2.55	0.55
41:a:857:G:H5''	42:b:78:LYS:HZ2	1.71	0.55
41:a:1469:A:H2'	41:a:1470:A:C8	2.42	0.55
41:a:1799:G:C2	48:h:154:LEU:HD23	2.41	0.55
47:g:2:LYS:HB2	47:g:5:ILE:HD11	1.88	0.55
48:h:67:PHE:CE1	48:h:105:LEU:HD11	2.42	0.55
48:h:175:ARG:CG	48:h:181:MET:HE1	2.34	0.55
6:5:15:DT:C2	11:AA:183:TRP:CD1	2.94	0.55
9:9:98:GLU:HA	9:9:101:LYS:NZ	2.22	0.55
12:AB:123:PHE:N	12:AB:123:PHE:CD2	2.73	0.55
13:AD:314:LEU:N	16:AG:68:VAL:HG11	2.20	0.55
16:AG:285:ILE:HD12	16:AG:293:VAL:HG11	1.88	0.55
16:AG:434:LEU:HD22	16:AG:459:LEU:CG	2.31	0.55
18:D:50:A:O2'	18:D:360:G:N2	2.40	0.55
18:D:276:G:H5'	36:V:17:MET:CE	2.35	0.55
18:D:1076:U:OP1	21:G:174:LYS:NZ	2.40	0.55
41:a:1038:G:H2'	41:a:1039:A:C8	2.42	0.55
45:e:20:ASN:O	45:e:23:ARG:HG2	2.06	0.55
50:j:78:GLY:C	50:j:79:LEU:HD22	2.32	0.55
57:q:1:MET:HE1	57:q:35:GLN:C	2.32	0.55
6:5:16:DG:OP1	11:AA:175:ARG:NH2	2.39	0.55
9:9:23:LEU:HD21	9:9:96:PHE:CD1	2.42	0.55
9:9:24:SER:CB	9:9:86:MET:HE2	2.36	0.55
10:A:56:C:H1'	41:a:2112:G:C6	2.41	0.55
14:AE:886:VAL:HG11	14:AE:1230:THR:HG21	1.89	0.55
18:D:404:G:O2'	18:D:498:A:N1	2.37	0.55
18:D:671:G:O3'	26:L:79:ARG:NH2	2.39	0.55
18:D:1071:C:H2'	18:D:1072:G:H8	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:1078:U:O3'	25:K:138:ARG:NH2	2.40	0.55
19:E:9:LYS:C	19:E:13:GLN:NE2	2.62	0.55
21:G:5:SER:OG	21:G:8:ASP:OD2	2.24	0.55
21:G:187:VAL:HG21	21:G:199:VAL:HG23	1.89	0.55
23:I:140:ASN:O	23:I:144:LEU:HD23	2.06	0.55
23:I:156:ARG:NH1	23:I:193:TYR:O	2.39	0.55
28:N:7:ILE:O	28:N:11:LEU:CD1	2.55	0.55
38:X:93:ARG:CG	38:X:95:LEU:HD23	2.35	0.55
38:X:95:LEU:HB3	38:X:96:PRO:CD	2.37	0.55
39:Y:45:THR:HG21	39:Y:50:LYS:HZ2	1.72	0.55
39:Y:123:ALA:O	39:Y:126:ARG:HG3	2.07	0.55
41:a:851:C:H2'	41:a:852:U:H6	1.72	0.55
41:a:1266:G:OP1	49:i:16:ARG:NE	2.35	0.55
45:e:2:LYS:HE2	45:e:49:ASP:HA	1.88	0.55
1:0:10:LYS:HE2	41:a:996:A:OP1	2.07	0.55
2:1:43:ALA:O	2:1:47:VAL:HG12	2.07	0.55
4:3:48:PRO:HG3	4:3:56:GLY:HA3	1.89	0.55
8:7:1:A:H2'	8:7:2:U:H6	1.70	0.55
8:7:11:U:O2	8:7:11:U:H2'	2.06	0.55
10:A:16:C:O2	41:a:2181:U:H5'	2.06	0.55
10:A:18:G:H1'	10:A:58:A:C2	2.41	0.55
12:AB:38:ILE:HD13	12:AB:160:ARG:HH12	1.70	0.55
16:AG:130:PHE:O	16:AG:186:VAL:HG11	2.07	0.55
10:B:22:G:H2'	10:B:23:C:H6	1.70	0.55
26:L:99:ALA:HB3	26:L:104:LYS:NZ	2.22	0.55
27:M:71:PRO:HG3	27:M:103:TRP:CH2	2.42	0.55
39:Y:45:THR:HG21	39:Y:50:LYS:CD	2.36	0.55
41:a:64:A:H2'	41:a:65:U:H6	1.70	0.55
41:a:930:G:H1'	46:f:25:LEU:HD21	1.87	0.55
41:a:1433:A:H2'	41:a:1434:A:O4'	2.07	0.55
41:a:1665:A:O3'	60:t:66:LYS:HD3	2.07	0.55
41:a:2741:A:O3'	57:q:36:ARG:NH1	2.40	0.55
41:a:2742:G:P	57:q:36:ARG:NH1	2.80	0.55
52:l:62:GLN:HA	52:l:69:ARG:NH2	2.20	0.55
55:o:16:LYS:HD2	55:o:65:ALA:HB1	1.88	0.55
60:t:35:VAL:HG23	60:t:63:VAL:HA	1.89	0.55
65:y:15:GLN:NE2	65:y:16:ASP:OD1	2.40	0.55
2:1:62:ASP:OD1	2:1:62:ASP:O	2.24	0.55
3:2:2:ILE:HG21	3:2:42:GLU:OE1	2.06	0.55
4:3:69:ASN:ND2	41:a:329:G:OP2	2.37	0.55
10:A:22:G:O2'	10:A:23:C:P	2.65	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:A:37:A:H2'	10:A:38:A:O4'	2.07	0.55
10:A:60:U:P	10:A:61:C:H41	2.30	0.55
11:AA:143:ARG:NH2	11:AA:512:SER:O	2.40	0.55
16:AG:448:LEU:HD11	16:AG:481:LEU:HD13	1.89	0.55
10:B:32:C:H5'	18:D:1340:A:O3'	2.06	0.55
18:D:662:U:O2'	18:D:836:G:OP1	2.21	0.55
22:H:268:VAL:HG23	22:H:269:ALA:N	2.22	0.55
30:P:47:GLU:OE1	30:P:67:ILE:O	2.24	0.55
31:Q:46:THR:OG1	31:Q:49:GLY:N	2.34	0.55
32:R:4:VAL:HG13	32:R:5:ASN:N	2.20	0.55
34:T:80:GLN:O	34:T:84:ARG:HG2	2.05	0.55
41:a:589:U:H2'	41:a:590:A:C8	2.42	0.55
41:a:1708:C:C2	41:a:1709:U:C5	2.95	0.55
41:a:2557:G:H2'	41:a:2558:C:C6	2.42	0.55
52:l:147:LEU:HD11	52:l:170:ARG:HD2	1.89	0.55
58:r:4:ILE:HD12	58:r:17:ASP:O	2.05	0.55
3:2:56:GLU:CD	3:2:88:LYS:HA	2.31	0.55
12:AB:134:ASP:OD1	12:AB:135:GLY:N	2.37	0.55
16:AG:46:ARG:HH11	16:AG:61:ARG:HB3	1.71	0.55
16:AG:235:LYS:HG2	16:AG:235:LYS:O	2.07	0.55
10:B:22:G:O2'	10:B:23:C:P	2.65	0.55
18:D:713:G:H2'	18:D:714:G:C8	2.42	0.55
22:H:5:PHE:O	22:H:9:PHE:HD1	1.90	0.55
28:N:7:ILE:O	28:N:11:LEU:HD13	2.06	0.55
38:X:71:ARG:NE	47:g:50:ASP:O	2.39	0.55
41:a:1082:U:O4	41:a:1086:A:N1	2.39	0.55
41:a:2591:C:H2'	41:a:2592:G:C8	2.42	0.55
41:a:2638:G:O2'	41:a:2775:G:N2	2.37	0.55
47:g:5:ILE:CD1	54:n:64:LYS:HE3	2.36	0.55
48:h:157:SER:O	48:h:195:VAL:HG11	2.07	0.55
58:r:54:LEU:HA	58:r:57:LYS:NZ	2.21	0.55
2:1:7:HIS:HD2	2:1:10:ALA:HB2	1.69	0.55
11:AA:985:GLU:HB3	11:AA:988:LYS:HB2	1.89	0.55
12:AB:78:PHE:CD1	12:AB:85:PRO:HB3	2.42	0.55
16:AG:168:LEU:CD2	16:AG:230:PRO:O	2.55	0.55
19:E:32:ILE:HG23	19:E:75:HIS:NE2	2.21	0.55
20:F:19:PHE:CE1	20:F:23:CYS:SG	3.00	0.55
20:F:19:PHE:CE2	31:Q:110:ILE:HG22	2.42	0.55
24:J:162:ALA:HA	24:J:165:ARG:CZ	2.36	0.55
25:K:112:ARG:HG3	25:K:116:GLU:OE2	2.07	0.55
27:M:95:ARG:O	27:M:99:LEU:HG	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:S:27:LEU:HD21	33:S:48:LEU:N	2.21	0.55
41:a:923:G:O4'	42:b:29:GLU:OE2	2.24	0.55
41:a:1019:U:O4	41:a:1142:A:N1	2.40	0.55
41:a:1353:A:H2'	41:a:1354:A:C8	2.42	0.55
41:a:1774:C:O2	41:a:1774:C:H2'	2.07	0.55
41:a:2315:G:H4'	54:n:127:ASN:HD22	1.71	0.55
41:a:2376:A:N3	64:x:111:ARG:NH1	2.54	0.55
41:a:2683:C:H4'	50:j:13:ARG:NH2	2.22	0.55
59:s:15:TRP:HE3	59:s:135:GLN:O	1.90	0.55
2:1:33:LEU:HD23	2:1:51:LEU:HD23	1.88	0.54
4:3:26:LYS:HE2	4:3:26:LYS:HA	1.88	0.54
9:9:3:LEU:HD12	9:9:4:ASN:CA	2.37	0.54
10:A:76:A:N1	41:a:2422:C:C6	2.75	0.54
16:AG:131:ARG:O	16:AG:134:GLU:CG	2.47	0.54
16:AG:133:HIS:CE1	16:AG:136:GLU:OE1	2.59	0.54
16:AG:288:MET:HE2	16:AG:293:VAL:HB	1.89	0.54
16:AG:448:LEU:HD22	16:AG:467:LEU:HD22	1.89	0.54
10:B:37:A:H2'	10:B:38:A:O4'	2.07	0.54
17:C:39:ILE:HD12	18:D:719:C:O2	2.07	0.54
24:J:175:ALA:O	24:J:178:MET:SD	2.65	0.54
25:K:157:ARG:NE	28:N:43:GLU:O	2.40	0.54
29:O:88:MET:HE1	29:O:95:ARG:HA	1.89	0.54
33:S:42:TRP:CH2	47:g:66:ILE:HG23	2.42	0.54
35:U:23:ASP:HB3	35:U:26:ASN:OD1	2.07	0.54
39:Y:15:GLY:HA2	39:Y:50:LYS:CG	2.33	0.54
41:a:150:U:H2'	41:a:151:C:H6	1.71	0.54
41:a:728:G:C4	41:a:730:A:C8	2.95	0.54
41:a:743:A:O2'	41:a:1659:G:OP1	2.25	0.54
41:a:1321:A:C4	41:a:1322:A:C8	2.95	0.54
52:l:1:MET:HE1	52:l:20:GLY:N	2.21	0.54
54:n:5:HIS:HD2	54:n:97:TRP:CE2	2.24	0.54
5:4:80:HIS:CD2	5:4:81:PRO:HD2	2.41	0.54
11:AA:29:SER:O	11:AA:33:ASP:HB2	2.07	0.54
11:AA:377:THR:HB	12:AB:65:HIS:NE2	2.22	0.54
11:AA:633:LEU:HD13	11:AA:644:LEU:HD23	1.89	0.54
16:AG:179:VAL:HB	16:AG:199:ARG:HH11	1.73	0.54
16:AG:243:LYS:CE	25:K:69:ARG:HD3	2.37	0.54
10:B:60:U:P	10:B:61:C:H41	2.30	0.54
17:C:13:PHE:CZ	17:C:21:ILE:HG12	2.42	0.54
18:D:552:U:O2'	32:R:83:ARG:O	2.18	0.54
18:D:695:A:OP1	31:Q:53:ARG:HD3	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:E:25:ARG:HD3	19:E:66:LEU:HD11	1.90	0.54
26:L:39:LEU:O	26:L:39:LEU:HD12	2.07	0.54
34:T:3:LEU:HD22	34:T:8:THR:HG22	1.88	0.54
41:a:888:C:N4	41:a:889:C:N4	2.55	0.54
41:a:1817:G:C6	41:a:1818:U:C5	2.95	0.54
47:g:61:ASN:OD1	47:g:65:ASN:ND2	2.40	0.54
48:h:62:TYR:CD2	48:h:64:ILE:HD13	2.41	0.54
50:j:55:LYS:NZ	50:j:60:VAL:N	2.55	0.54
50:j:156:PHE:CD2	59:s:81:ILE:HD13	2.42	0.54
52:l:60:TRP:CD1	52:l:65:THR:HG21	2.42	0.54
54:n:134:GLU:N	54:n:134:GLU:OE1	2.40	0.54
66:z:92:ARG:HA	66:z:95:LEU:HD12	1.88	0.54
4:3:7:ARG:HB3	41:a:85:G:OP2	2.07	0.54
8:7:3:G:C3'	18:D:1500:A:N6	2.71	0.54
9:9:36:ASP:N	9:9:36:ASP:OD1	2.40	0.54
9:9:94:ARG:CB	9:9:97:LYS:HZ3	2.19	0.54
11:AA:855:PRO:HB3	16:AG:106:THR:N	2.14	0.54
18:D:280:C:H1'	36:V:40:ARG:CZ	2.37	0.54
18:D:324:G:N1	18:D:327:A:OP2	2.39	0.54
19:E:78:ASN:C	19:E:82:GLN:OE1	2.50	0.54
22:H:9:PHE:O	22:H:13:LEU:HD23	2.06	0.54
22:H:118:GLY:O	22:H:133:GLY:HA2	2.06	0.54
25:K:99:ALA:HB2	25:K:124:LEU:HG	1.88	0.54
27:M:79:ARG:O	27:M:79:ARG:HD2	2.06	0.54
28:N:78:VAL:HG12	28:N:85:ILE:HG21	1.89	0.54
39:Y:44:LYS:O	39:Y:44:LYS:HD2	2.07	0.54
41:a:1563:U:H2'	41:a:1564:C:C6	2.43	0.54
41:a:2356:U:H4'	42:b:20:ARG:HH11	1.73	0.54
56:p:149:ARG:NE	56:p:162:VAL:O	2.40	0.54
58:r:143:ILE:O	58:r:143:ILE:HG13	2.08	0.54
61:u:76:GLU:CG	61:u:111:ILE:HD13	2.37	0.54
5:4:35:GLU:OE1	5:4:93:ARG:CZ	2.56	0.54
7:6:20:DA:N6	8:7:38:G:C2	2.76	0.54
8:7:6:U:C2	18:D:1493:A:C2	2.95	0.54
9:9:61:ARG:NH2	41:a:1045:C:O3'	2.40	0.54
14:AE:679:TYR:OH	14:AE:754:ILE:O	2.23	0.54
17:C:34:THR:HG22	17:C:36:SER:H	1.72	0.54
18:D:106:C:N4	19:E:10:ARG:NH2	2.56	0.54
18:D:321:A:N7	18:D:328:C:O2'	2.38	0.54
18:D:547:A:OP1	24:J:70:ARG:NH2	2.41	0.54
20:F:31:GLU:O	20:F:34:ARG:HG2	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:G:19:GLN:CD	22:H:76:GLU:HB3	2.33	0.54
41:a:2020:A:C2	41:a:2022:U:O4'	2.61	0.54
41:a:2191:A:H2'	41:a:2192:U:H6	1.71	0.54
41:a:2297:A:C2	41:a:2320:U:O4'	2.61	0.54
41:a:2838:G:C4	41:a:2839:G:C8	2.95	0.54
51:k:5:ILE:HG23	51:k:28:ARG:NH1	2.21	0.54
54:n:16:LEU:HD11	54:n:169:LEU:CD1	2.38	0.54
58:r:33:GLN:HB3	58:r:35:LYS:HZ3	1.72	0.54
59:s:74:TYR:CE2	59:s:92:MET:HE1	2.42	0.54
60:t:41:ILE:HD11	60:t:86:LEU:HD22	1.89	0.54
61:u:57:LEU:HA	61:u:60:ARG:HD2	1.89	0.54
62:v:45:GLN:HE21	62:v:124:LEU:HD23	1.72	0.54
65:y:31:TRP:CZ3	65:y:40:LEU:HD11	2.43	0.54
1:0:10:LYS:CE	41:a:996:A:OP1	2.56	0.54
8:7:1:A:C4	8:7:2:U:C5	2.95	0.54
9:9:73:LYS:HD2	9:9:73:LYS:O	2.06	0.54
16:AG:320:ARG:HB2	16:AG:323:GLN:HB2	1.88	0.54
10:B:31:G:O2'	18:D:1340:A:H4'	2.08	0.54
18:D:564:C:P	32:R:12:ARG:HH22	2.30	0.54
19:E:24:ARG:O	19:E:28:MET:HG2	2.08	0.54
21:G:30:PHE:CD1	21:G:45:LYS:NZ	2.74	0.54
22:H:279:LYS:HA	22:H:331:MET:HB3	1.90	0.54
24:J:61:VAL:HG21	24:J:200:ILE:HD11	1.90	0.54
25:K:45:ARG:C	25:K:71:MET:HE2	2.32	0.54
25:K:77:ASN:HB2	25:K:82:GLN:HG3	1.89	0.54
25:K:86:LYS:N	25:K:86:LYS:HD2	2.23	0.54
25:K:131:THR:O	25:K:131:THR:HG22	2.08	0.54
26:L:39:LEU:HB3	26:L:62:MET:HE1	1.89	0.54
30:P:6:ILE:HG21	30:P:100:ILE:HD11	1.89	0.54
41:a:588:U:H2'	41:a:589:U:C6	2.43	0.54
41:a:1386:C:H2'	41:a:1387:A:C8	2.42	0.54
41:a:2328:A:H2'	41:a:2329:U:H6	1.68	0.54
41:a:2351:G:O6	55:o:39:LYS:CE	2.55	0.54
41:a:2649:C:H2'	41:a:2650:U:H6	1.73	0.54
41:a:2833:U:O2	50:j:58:ASN:ND2	2.41	0.54
60:t:42:THR:CG2	60:t:44:LYS:HZ1	2.20	0.54
66:z:78:LYS:CD	66:z:117:LEU:CD2	2.84	0.54
3:2:19:LYS:NZ	41:a:1340:U:OP1	2.34	0.54
19:E:19:LYS:HG3	19:E:20:HIS:N	2.22	0.54
20:F:63:GLU:HG2	20:F:67:ARG:NH2	2.23	0.54
25:K:14:LYS:HD3	25:K:117:VAL:CG1	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:P:5:ARG:HG3	30:P:7:ARG:NH1	2.22	0.54
32:R:74:LEU:HD11	32:R:80:ILE:HD11	1.90	0.54
38:X:81:MET:CE	38:X:92:ARG:HD3	2.38	0.54
41:a:1656:C:OP1	50:j:141:ARG:CD	2.55	0.54
41:a:1980:G:O2'	41:a:1982:U:OP2	2.23	0.54
48:h:17:VAL:HB	48:h:204:VAL:HG12	1.89	0.54
48:h:107:PRO:HD2	48:h:110:LEU:HD22	1.89	0.54
50:j:4:LEU:HG	50:j:32:ASN:OD1	2.08	0.54
60:t:2:ILE:CG2	60:t:8:LEU:HD11	2.38	0.54
60:t:18:ARG:HB3	60:t:45:GLU:HB3	1.89	0.54
60:t:73:ASP:OD2	65:y:80:VAL:HG11	2.08	0.54
63:w:35:LYS:NZ	63:w:112:TYR:CE2	2.76	0.54
65:y:27:GLU:HB3	65:y:87:LYS:NZ	2.22	0.54
1:0:13:ARG:NH2	66:z:97:ASP:OD1	2.40	0.54
5:4:57:TYR:CB	62:v:136:MET:CE	2.84	0.54
12:AB:4:TRP:CD2	12:AB:27:ASN:ND2	2.75	0.54
12:AB:112:PRO:HB3	12:AB:132:GLU:OE1	2.07	0.54
12:AB:120:GLU:CB	12:AB:162:LEU:HD12	2.36	0.54
16:AG:305:MET:HG3	16:AG:336:LEU:HB3	1.89	0.54
16:AG:362:TYR:CE1	16:AG:414:LEU:HD21	2.43	0.54
18:D:375:U:OP1	35:U:70:ARG:CG	2.54	0.54
18:D:679:C:C2	18:D:680:C:C5	2.95	0.54
22:H:71:ALA:C	22:H:72:LEU:HD12	2.32	0.54
23:I:85:GLU:HG3	23:I:89:LYS:NZ	2.23	0.54
27:M:103:TRP:HB3	27:M:137:LYS:HD3	1.89	0.54
32:R:110:ARG:NE	32:R:117:TYR:CD2	2.76	0.54
41:a:1000:A:H2'	41:a:1001:A:C8	2.43	0.54
41:a:1047:G:HO2'	41:a:1110:G:H1	1.55	0.54
41:a:2064:C:H2'	41:a:2065:C:C6	2.42	0.54
41:a:2766:A:C2	41:a:2767:C:C6	2.95	0.54
45:e:28:LEU:HD23	45:e:43:LEU:HD22	1.88	0.54
59:s:133:ALA:C	59:s:135:GLN:H	2.16	0.54
65:y:9:GLU:OE2	65:y:55:LEU:N	2.37	0.54
5:4:6:ALA:HB3	5:4:65:VAL:CG2	2.37	0.54
9:9:3:LEU:CG	9:9:4:ASN:H	2.21	0.54
9:9:31:ARG:CD	41:a:1053:C:O2'	2.47	0.54
10:A:41:C:O4'	27:M:143:ARG:NH1	2.41	0.54
13:AD:314:LEU:CB	16:AG:68:VAL:CG1	2.63	0.54
18:D:17:U:H2'	18:D:18:C:C6	2.42	0.54
19:E:25:ARG:HD3	19:E:66:LEU:HD21	1.90	0.54
23:I:132:ARG:HA	23:I:135:LYS:HE3	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:N:50:LYS:HE2	28:N:50:LYS:HA	1.89	0.54
31:Q:20:VAL:HB	31:Q:35:THR:HG23	1.89	0.54
32:R:56:ARG:HA	32:R:62:GLU:OE2	2.08	0.54
41:a:151:C:C2	41:a:152:A:C8	2.95	0.54
41:a:839:U:H2'	41:a:840:C:H6	1.73	0.54
41:a:1084:A:N7	41:a:1085:A:C6	2.76	0.54
45:e:4:LYS:HZ2	45:e:7:ARG:HH12	1.55	0.54
63:w:94:TYR:C	63:w:116:VAL:HG23	2.32	0.54
3:2:30:ILE:HG22	3:2:32:LEU:CD2	2.38	0.54
3:2:56:GLU:OE1	3:2:87:LEU:CA	2.56	0.54
6:5:9:DG:H2'	12:AB:71:ALA:HA	1.90	0.54
11:AA:1142:ARG:NH2	11:AA:1166:ASP:OD1	2.39	0.54
14:AE:287:ALA:CB	14:AE:292:VAL:HG22	2.37	0.54
17:C:54:GLN:HG3	17:C:55:LEU:N	2.22	0.54
18:D:1208:C:H2'	18:D:1209:C:C6	2.40	0.54
18:D:1399:C:O2	18:D:1502:A:N6	2.40	0.54
22:H:332:VAL:HG12	22:H:334:ASP:H	1.73	0.54
28:N:31:LYS:HE3	28:N:31:LYS:HA	1.90	0.54
29:O:67:VAL:C	29:O:68:LYS:HD2	2.33	0.54
36:V:31:HIS:ND1	36:V:32:PRO:HD2	2.23	0.54
41:a:1348:C:C5	41:a:1349:C:C5	2.95	0.54
41:a:1779:U:H5	41:a:1784:A:N7	2.06	0.54
41:a:2454:G:C4	41:a:2455:G:C8	2.96	0.54
46:f:10:THR:HB	46:f:56:LYS:NZ	2.22	0.54
50:j:124:ARG:NH1	50:j:161:MET:O	2.41	0.54
52:l:175:ILE:CG2	52:l:180:LEU:HD11	2.38	0.54
64:x:38:GLN:HG2	64:x:50:ALA:CB	2.38	0.54
3:2:6:ARG:NH2	3:2:10:VAL:HG22	2.23	0.54
7:6:20:DA:C6	8:7:38:G:N2	2.76	0.54
9:9:97:LYS:HD3	9:9:130:PRO:HG3	1.89	0.54
11:AA:684:ASN:OD1	11:AA:687:ARG:NH2	2.41	0.54
12:AB:5:TYR:HA	12:AB:88:VAL:HG22	1.90	0.54
12:AB:8:TYR:OH	14:AE:278:ARG:NH2	2.40	0.54
16:AG:358:THR:O	16:AG:358:THR:OG1	2.25	0.54
16:AG:425:LEU:HA	16:AG:429:LYS:HE3	0.95	0.54
17:C:40:VAL:HG13	22:H:339:ARG:HD3	1.89	0.54
18:D:73:C:O2	18:D:73:C:H2'	2.07	0.54
18:D:76:G:C4	18:D:77:A:C8	2.95	0.54
27:M:23:LEU:O	27:M:27:VAL:HG13	2.07	0.54
28:N:87:LYS:HG2	28:N:92:LEU:HA	1.90	0.54
31:Q:79:ILE:O	31:Q:105:PHE:HE1	1.91	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:Q:84:VAL:CG2	31:Q:107:ILE:HD11	2.37	0.54
39:Y:32:VAL:HA	39:Y:60:VAL:HG21	1.90	0.54
39:Y:116:MET:HG2	39:Y:124:MET:HB3	1.91	0.54
41:a:16:C:O4'	49:i:15:MET:CE	2.55	0.54
41:a:581:C:H2'	41:a:582:A:H8	1.73	0.54
41:a:2038:G:H2'	41:a:2039:U:O4'	2.08	0.54
57:q:9:LYS:HZ3	57:q:11:CYS:C	2.16	0.54
2:1:25:ARG:NH2	41:a:519:U:O3'	2.40	0.53
5:4:80:HIS:ND1	5:4:83:LYS:HB2	2.23	0.53
11:AA:1117:LEU:HD12	11:AA:1195:ILE:HG12	1.90	0.53
18:D:197:A:H1'	18:D:198:G:OP2	2.08	0.53
19:E:32:ILE:CG2	19:E:75:HIS:NE2	2.71	0.53
21:G:148:LEU:HD22	21:G:151:ILE:HD11	1.89	0.53
26:L:3:HIS:CG	26:L:65:GLU:OE1	2.61	0.53
31:Q:87:LYS:HG3	31:Q:113:VAL:HG23	1.86	0.53
41:a:134:G:H2'	41:a:135:U:C6	2.42	0.53
41:a:1830:C:C2	41:a:1831:G:C8	2.96	0.53
50:j:4:LEU:HD23	50:j:29:VAL:HG11	1.89	0.53
52:l:62:GLN:O	52:l:69:ARG:CD	2.56	0.53
54:n:46:ASP:CG	54:n:49:LEU:HD13	2.33	0.53
62:v:111:GLU:OE1	62:v:111:GLU:N	2.32	0.53
2:1:31:GLN:O	2:1:35:ILE:HG12	2.07	0.53
7:6:14:DC:H2'	7:6:15:DC:C6	2.43	0.53
9:9:52:MET:HE1	9:9:85:SER:CA	2.38	0.53
14:AE:66:LYS:HB2	14:AE:69:GLU:CB	2.38	0.53
15:AF:3:ARG:NH1	15:AF:55:GLU:OE2	2.40	0.53
16:AG:299:ASP:HB2	16:AG:303:HIS:HA	1.89	0.53
17:C:60:LYS:HD2	18:D:734:G:O2'	2.07	0.53
18:D:37:U:O4	18:D:397:A:N1	2.40	0.53
18:D:399:G:H2'	18:D:400:C:C6	2.43	0.53
18:D:1151:A:O2'	18:D:1152:A:O5'	2.13	0.53
19:E:22:ALA:CA	19:E:25:ARG:HH21	2.21	0.53
26:L:36:ILE:O	26:L:36:ILE:HG23	2.09	0.53
26:L:62:MET:HA	26:L:62:MET:HE3	1.90	0.53
29:O:10:GLY:HA3	29:O:78:ALA:O	2.08	0.53
39:Y:33:ASN:HB2	39:Y:36:GLU:OE2	2.08	0.53
39:Y:80:LYS:CG	39:Y:86:LYS:O	2.56	0.53
41:a:3:U:H2'	41:a:4:U:C6	2.42	0.53
41:a:2259:U:C2	41:a:2260:C:C6	2.96	0.53
50:j:48:ILE:HG12	50:j:84:LEU:HD21	1.90	0.53
50:j:55:LYS:NZ	50:j:59:ARG:HB3	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:l:69:ARG:HA	52:l:69:ARG:CZ	2.38	0.53
52:l:188:MET:HE2	52:l:193:VAL:HA	1.89	0.53
62:v:96:ILE:HA	62:v:100:LYS:CE	2.38	0.53
62:v:97:GLN:H	62:v:100:LYS:CE	2.21	0.53
5:4:57:TYR:HB3	62:v:136:MET:HE3	1.87	0.53
9:9:129:LEU:HD12	9:9:129:LEU:C	2.32	0.53
12:AB:21:LEU:HB3	12:AB:26:VAL:CG1	2.38	0.53
13:AD:100:LEU:HD21	13:AD:121:VAL:HG11	1.90	0.53
13:AD:314:LEU:CB	16:AG:68:VAL:HG11	2.37	0.53
14:AE:77:ARG:HD3	14:AE:78:LEU:H	1.73	0.53
16:AG:223:ILE:HD13	16:AG:223:ILE:C	2.32	0.53
18:D:750:C:C2	18:D:751:U:C5	2.96	0.53
18:D:1358:U:O4	18:D:1363:A:N1	2.41	0.53
27:M:79:ARG:HB2	27:M:84:THR:HG23	1.90	0.53
39:Y:78:LEU:HD13	39:Y:108:ILE:HG12	1.90	0.53
41:a:858:G:OP2	42:b:78:LYS:NZ	2.35	0.53
41:a:2849:U:O5'	65:y:93:ARG:NH2	2.42	0.53
48:h:74:ILE:CG2	48:h:96:TYR:HD1	2.21	0.53
56:p:33:LEU:HD11	56:p:136:ALA:HB1	1.89	0.53
60:t:14:SER:OG	60:t:86:LEU:HD12	2.08	0.53
61:u:111:ILE:HD12	61:u:111:ILE:N	2.24	0.53
62:v:97:GLN:N	62:v:100:LYS:CE	2.72	0.53
63:w:44:LEU:HD22	63:w:113:ILE:HD13	1.90	0.53
64:x:48:LEU:CD2	64:x:87:ILE:HD11	2.38	0.53
1:0:10:LYS:CE	41:a:994:C:O2'	2.56	0.53
3:2:53:VAL:HG21	3:2:87:LEU:HD23	1.90	0.53
8:7:3:G:H3'	18:D:1500:A:N6	2.24	0.53
11:AA:103:VAL:HB	11:AA:114:VAL:HG11	1.89	0.53
14:AE:1346:GLY:O	14:AE:1350:ASN:ND2	2.41	0.53
18:D:274:A:H4'	36:V:16:LYS:NZ	2.24	0.53
18:D:1329:A:P	38:X:28:THR:HB	2.48	0.53
25:K:137:VAL:O	25:K:141:ILE:HG12	2.09	0.53
27:M:27:VAL:HG12	27:M:43:VAL:HG21	1.90	0.53
27:M:85:TYR:CD2	27:M:151:PHE:CZ	2.97	0.53
28:N:87:LYS:HD2	28:N:91:GLU:CB	2.37	0.53
32:R:25:GLU:OE1	32:R:59:ASN:ND2	2.42	0.53
34:T:11:ILE:HA	34:T:14:GLU:OE1	2.09	0.53
38:X:28:THR:CA	38:X:31:LYS:HE3	2.37	0.53
39:Y:102:ARG:HG3	39:Y:140:GLU:C	2.33	0.53
41:a:1412:U:C4	41:a:1413:A:N7	2.77	0.53
47:g:47:LYS:HD3	54:n:178:ARG:HH22	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:k:8:LYS:NZ	51:k:54:ILE:HG12	2.23	0.53
52:l:60:TRP:NE1	52:l:69:ARG:NH1	2.56	0.53
54:n:132:VAL:CG2	54:n:152:LEU:HD23	2.39	0.53
56:p:89:LEU:HD22	56:p:162:VAL:HG22	1.91	0.53
60:t:1:MET:CE	60:t:32:TYR:CB	2.87	0.53
14:AE:1000:GLY:HA3	14:AE:1026:PRO:HG2	1.90	0.53
16:AG:327:LEU:HD12	16:AG:327:LEU:O	2.07	0.53
18:D:736:C:H2'	18:D:737:C:C6	2.43	0.53
21:G:53:ALA:CA	21:G:56:GLU:OE1	2.57	0.53
23:I:142:MET:SD	23:I:170:GLU:OE1	2.67	0.53
23:I:155:GLY:O	23:I:196:ILE:HG12	2.07	0.53
24:J:105:MET:HE1	24:J:171:LEU:HB3	1.89	0.53
29:O:5:GLN:NE2	29:O:22:LYS:NZ	2.56	0.53
30:P:27:GLU:HA	30:P:30:LYS:NZ	2.23	0.53
41:a:78:U:H2'	41:a:79:C:C6	2.44	0.53
41:a:372:G:O2'	43:c:54:LYS:HE3	2.09	0.53
41:a:1278:C:H5'	63:w:24:MET:SD	2.49	0.53
41:a:2387:U:O4'	42:b:41:ARG:NH1	2.41	0.53
41:a:2747:G:O6	41:a:2755:C:H5''	2.08	0.53
41:a:2847:U:H2'	41:a:2848:G:O4'	2.08	0.53
52:l:60:TRP:NE1	52:l:69:ARG:HH12	2.07	0.53
54:n:72:LYS:HA	54:n:81:GLN:HE22	1.74	0.53
59:s:9:GLU:HG2	59:s:10:THR:HG23	1.90	0.53
63:w:14:SER:HA	63:w:17:ARG:CZ	2.39	0.53
12:AB:129:ILE:O	12:AB:142:LEU:CB	2.57	0.53
13:AD:28:LEU:HD12	13:AD:201:LEU:HD23	1.91	0.53
14:AE:122:SER:HB2	14:AE:132:LEU:HD12	1.91	0.53
14:AE:968:ASN:HA	14:AE:1117:SER:HB2	1.90	0.53
16:AG:213:VAL:HG22	16:AG:213:VAL:O	2.08	0.53
16:AG:334:TRP:N	16:AG:334:TRP:CD1	2.73	0.53
16:AG:447:LYS:O	16:AG:470:ILE:HD11	2.05	0.53
23:I:85:GLU:O	23:I:89:LYS:HE2	2.09	0.53
29:O:112:GLU:HG3	29:O:115:LYS:HZ3	1.73	0.53
41:a:414:C:H2'	41:a:415:A:C8	2.44	0.53
41:a:590:A:H2'	41:a:591:U:C6	2.44	0.53
41:a:1348:C:C4	41:a:1349:C:C6	2.97	0.53
41:a:1665:A:C3'	60:t:66:LYS:HZ2	2.21	0.53
54:n:42:GLU:HG3	54:n:49:LEU:HD23	1.91	0.53
60:t:1:MET:CE	60:t:32:TYR:HB3	2.38	0.53
61:u:54:GLN:NE2	61:u:60:ARG:HH12	2.07	0.53
8:7:9:U:C4	18:D:1196:A:C8	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:7:13:U:H6	8:7:13:U:H5''	1.73	0.53
11:AA:243:PRO:HB2	11:AA:274:ILE:HG23	1.90	0.53
14:AE:901:ARG:HH21	14:AE:906:GLY:HA2	1.73	0.53
10:B:38:A:O2'	18:D:790:A:O5'	2.27	0.53
17:C:12:ARG:NH2	17:C:13:PHE:CE1	2.77	0.53
19:E:56:PRO:HG2	19:E:57:ILE:HD12	1.90	0.53
21:G:58:ASN:OD1	21:G:223:GLU:OE1	2.26	0.53
23:I:58:GLU:OE2	23:I:60:PRO:HD3	2.08	0.53
27:M:4:ARG:CG	27:M:5:ARG:NH1	2.72	0.53
27:M:31:MET:SD	27:M:36:LYS:HA	2.47	0.53
27:M:38:THR:O	27:M:42:ILE:HG12	2.08	0.53
28:N:83:LEU:HD21	32:R:4:VAL:HG11	1.89	0.53
32:R:35:THR:OG1	32:R:56:ARG:HG3	2.08	0.53
39:Y:77:VAL:O	39:Y:77:VAL:HG12	2.08	0.53
41:a:151:C:H2'	41:a:152:A:H8	1.72	0.53
41:a:537:G:P	59:s:2:LYS:HE2	2.49	0.53
41:a:1167:C:C2	41:a:1168:G:C8	2.97	0.53
41:a:1820:U:C4	48:h:159:GLY:HA3	2.44	0.53
41:a:2356:U:C5'	42:b:20:ARG:HD2	2.36	0.53
46:f:10:THR:HG23	46:f:11:ARG:HG2	1.90	0.53
51:k:29:THR:HG23	51:k:30:LYS:HG2	1.90	0.53
62:v:21:ALA:HB2	62:v:100:LYS:HG3	1.90	0.53
2:1:41:LYS:HE3	41:a:2010:G:P	2.48	0.53
5:4:19:ARG:NH1	44:d:95:U:OP2	2.41	0.53
11:AA:143:ARG:NH1	11:AA:507:GLY:O	2.32	0.53
13:AC:100:LEU:HD23	13:AC:115:ILE:HG21	1.90	0.53
14:AE:342:LEU:HD23	14:AE:1352:ILE:HG23	1.90	0.53
16:AG:168:LEU:CD2	16:AG:231:GLY:HA2	2.09	0.53
30:P:47:GLU:OE1	30:P:67:ILE:HG23	2.09	0.53
31:Q:86:VAL:O	31:Q:113:VAL:HG22	2.08	0.53
39:Y:77:VAL:HA	39:Y:80:LYS:HD3	1.91	0.53
41:a:15:G:H2'	49:i:15:MET:HE1	1.90	0.53
41:a:67:U:N3	41:a:74:A:C6	2.77	0.53
41:a:1567:G:OP2	48:h:83:TYR:OH	2.19	0.53
53:m:25:LYS:HG3	53:m:29:GLN:HE22	1.73	0.53
54:n:94:GLU:HA	54:n:97:TRP:CE3	2.43	0.53
5:4:35:GLU:OE1	5:4:36:ALA:O	2.27	0.53
6:5:10:DT:C7	11:AA:62:TYR:HB3	2.37	0.53
11:AA:628:HIS:HB3	11:AA:647:ARG:HH21	1.74	0.53
11:AA:811:ASN:HA	11:AA:815:SER:HB2	1.90	0.53
16:AG:398:LEU:HG	16:AG:398:LEU:O	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:38:A:O2'	18:D:790:A:P	2.66	0.53
18:D:1308:U:H3'	38:X:98:ARG:CZ	2.39	0.53
21:G:23:TRP:HB3	21:G:39:HIS:CE1	2.44	0.53
31:Q:84:VAL:HG21	31:Q:97:ILE:CD1	2.39	0.53
38:X:96:PRO:HG3	38:X:102:THR:HG22	1.89	0.53
41:a:1790:C:H2'	41:a:1791:A:C5	2.43	0.53
41:a:2308:G:C6	54:n:77:PHE:CZ	2.97	0.53
41:a:2867:G:C6	65:y:21:ARG:NH1	2.76	0.53
50:j:131:ASP:OD2	50:j:132:ALA:N	2.42	0.53
1:0:4:VAL:HG22	1:0:40:MET:HB3	1.91	0.53
2:1:61:ASN:OD1	41:a:496:G:H1'	2.08	0.53
10:A:48:C:O2'	10:A:49:G:OP2	2.27	0.53
11:AA:246:LEU:HB3	11:AA:269:ILE:HD13	1.91	0.53
11:AA:360:LEU:HD13	11:AA:378:ARG:HH11	1.72	0.53
16:AG:374:VAL:O	16:AG:374:VAL:HG12	2.08	0.53
18:D:769:G:H4'	18:D:1513:A:H4'	1.90	0.53
18:D:1439:G:P	19:E:33:LYS:NZ	2.82	0.53
21:G:23:TRP:HZ3	21:G:25:PRO:CA	2.22	0.53
37:W:66:MET:HG2	37:W:74:PHE:CZ	2.44	0.53
40:Z:18:ASP:HB3	40:Z:22:LEU:CD1	2.39	0.53
41:a:125:A:OP2	53:m:19:ARG:NH2	2.39	0.53
41:a:1295:C:C2	41:a:1296:G:C8	2.97	0.53
41:a:2308:G:C5	54:n:77:PHE:HZ	2.26	0.53
41:a:2315:G:O2'	54:n:125:ARG:HD3	2.09	0.53
52:l:62:GLN:HA	52:l:69:ARG:HH21	1.74	0.53
54:n:29:PRO:HB2	54:n:169:LEU:HD22	1.91	0.53
54:n:71:ARG:O	54:n:81:GLN:NE2	2.40	0.53
59:s:25:LEU:CD1	59:s:101:ILE:HD13	2.39	0.53
60:t:2:ILE:HG23	60:t:8:LEU:HD11	1.91	0.53
60:t:38:ILE:HD11	60:t:112:PHE:CZ	2.43	0.53
62:v:45:GLN:NE2	62:v:125:PRO:HD2	2.22	0.53
4:3:26:LYS:HE3	4:3:37:GLU:HB2	1.90	0.52
12:AB:27:ASN:ND2	12:AB:58:GLU:HB2	2.24	0.52
16:AG:233:ARG:C	16:AG:327:LEU:HD21	2.34	0.52
21:G:18:HIS:HA	22:H:43:LYS:HD2	1.90	0.52
21:G:127:ASP:O	21:G:128:LYS:HB3	2.09	0.52
29:O:47:VAL:O	29:O:80:ARG:HD2	2.09	0.52
32:R:102:LEU:O	32:R:103:ASP:OD1	2.26	0.52
41:a:632:A:H2'	41:a:633:A:C8	2.44	0.52
41:a:995:C:N4	59:s:2:LYS:HG3	2.24	0.52
41:a:2063:C:O2	41:a:2063:C:H2'	2.07	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:2287:A:C8	41:a:2289:G:C8	2.96	0.52
41:a:2355:G:H2'	41:a:2356:U:H5'	1.90	0.52
4:3:6:ARG:HG3	41:a:84:A:H3'	1.91	0.52
8:7:3:G:C4'	18:D:1500:A:H62	2.22	0.52
9:9:87:GLU:OE2	9:9:95:LEU:HG	2.09	0.52
12:AB:38:ILE:CD1	12:AB:160:ARG:HH11	2.21	0.52
12:AB:141:LEU:HA	12:AB:152:HIS:CA	2.39	0.52
16:AG:21:GLU:HB3	16:AG:49:ILE:HD12	1.91	0.52
16:AG:402:THR:HA	16:AG:405:ALA:HB3	1.91	0.52
18:D:1175:G:N3	18:D:1176:A:C8	2.77	0.52
21:G:168:HIS:HB3	21:G:169:GLU:OE1	2.10	0.52
23:I:49:LYS:NZ	23:I:75:ILE:HD11	2.24	0.52
39:Y:9:LYS:CG	39:Y:55:PRO:HB3	2.39	0.52
39:Y:16:MET:HG2	39:Y:16:MET:O	2.09	0.52
41:a:645:C:H2'	41:a:647:G:C8	2.45	0.52
41:a:813:U:H2'	41:a:814:C:H6	1.73	0.52
41:a:2473:U:O2	41:a:2473:U:H2'	2.09	0.52
48:h:34:LEU:HD12	48:h:61:ALA:HB1	1.92	0.52
48:h:52:ARG:NE	48:h:53:HIS:HE1	2.07	0.52
62:v:1:MET:CE	62:v:44:ARG:HA	2.38	0.52
2:1:41:LYS:HZ2	41:a:2009:A:P	2.31	0.52
3:2:33:LYS:HG3	3:2:80:TRP:CE3	2.44	0.52
20:F:17:ARG:HA	20:F:20:LYS:NZ	2.24	0.52
22:H:45:GLU:OE1	22:H:45:GLU:N	2.41	0.52
24:J:74:ASN:O	24:J:77:LYS:HG2	2.09	0.52
34:T:3:LEU:HD22	34:T:8:THR:HG23	1.92	0.52
39:Y:126:ARG:NH1	41:a:1082:U:C5'	2.72	0.52
39:Y:139:VAL:HG22	39:Y:140:GLU:N	2.25	0.52
41:a:271:G:C4	41:a:272:A:N7	2.77	0.52
41:a:1340:U:C5	41:a:1603:A:C8	2.97	0.52
41:a:1666:G:OP1	60:t:66:LYS:HD3	2.10	0.52
41:a:1818:U:C6	48:h:156:ARG:NH2	2.77	0.52
41:a:2537:U:H2'	41:a:2538:C:C6	2.43	0.52
48:h:108:LYS:HD3	48:h:194:GLU:HB2	1.92	0.52
53:m:26:ASN:O	53:m:30:VAL:HG23	2.08	0.52
54:n:71:ARG:C	54:n:81:GLN:HE22	2.17	0.52
56:p:9:VAL:HG22	56:p:69:ARG:NH1	2.24	0.52
62:v:115:GLU:O	62:v:119:LEU:HD23	2.09	0.52
2:1:27:LYS:O	2:1:71:VAL:HG22	2.10	0.52
3:2:54:GLU:OE1	3:2:54:GLU:N	2.38	0.52
9:9:61:ARG:NE	41:a:1046:A:P	2.83	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:A:16:C:O2	41:a:2181:U:C5'	2.57	0.52
18:D:73:C:O2	18:D:73:C:C2'	2.58	0.52
18:D:842:U:H3'	18:D:843:U:C5'	2.39	0.52
21:G:35:ARG:HB3	22:H:14:LYS:HZ3	1.74	0.52
23:I:24:ALA:C	23:I:29:PHE:CE2	2.87	0.52
39:Y:99:LYS:HZ3	39:Y:138:VAL:HG13	1.74	0.52
41:a:617:G:C4'	52:l:199:MET:HE1	2.39	0.52
50:j:131:ASP:OD1	50:j:134:HIS:HB2	2.10	0.52
55:o:25:LYS:HB3	61:u:62:PRO:CG	2.40	0.52
56:p:32:GLU:C	56:p:33:LEU:HD12	2.34	0.52
66:z:108:ALA:O	66:z:111:GLU:HG3	2.09	0.52
7:6:17:DC:H42	8:7:40:G:H1	1.58	0.52
9:9:93:ALA:O	9:9:129:LEU:O	2.27	0.52
12:AB:89:PRO:HG2	14:AE:290:ILE:HG22	1.91	0.52
13:AC:43:LEU:HD13	13:AC:217:ILE:HD11	1.90	0.52
16:AG:285:ILE:CD1	16:AG:285:ILE:N	2.73	0.52
16:AG:434:LEU:CG	16:AG:456:LEU:N	2.71	0.52
18:D:339:C:H2'	18:D:340:U:H6	1.73	0.52
18:D:1371:G:O3'	29:O:71:GLY:HA3	2.10	0.52
25:K:158:GLY:C	25:K:159:LYS:HD2	2.34	0.52
38:X:68:ASP:O	38:X:71:ARG:HG3	2.09	0.52
39:Y:41:PHE:O	39:Y:45:THR:OG1	2.22	0.52
41:a:1657:U:O2'	50:j:138:LEU:HD22	2.08	0.52
41:a:2636:C:O2'	50:j:45:TYR:OH	1.99	0.52
48:h:76:ALA:HB1	48:h:94:VAL:CG1	2.39	0.52
54:n:93:GLY:HA2	54:n:97:TRP:CZ3	2.44	0.52
57:q:25:VAL:CB	57:q:35:GLN:OE1	2.56	0.52
62:v:20:LEU:H	62:v:20:LEU:HD23	1.73	0.52
62:v:114:ARG:C	62:v:118:LYS:HZ3	2.17	0.52
1:0:5:PHE:HB3	1:0:59:ILE:HD12	1.91	0.52
9:9:43:LYS:O	9:9:47:GLU:OE1	2.28	0.52
9:9:51:TYR:HB2	9:9:88:HIS:HB2	1.90	0.52
11:AA:524:ILE:HG21	11:AA:708:VAL:HG13	1.92	0.52
12:AB:81:PHE:CB	14:AE:141:PHE:O	2.58	0.52
12:AB:120:GLU:N	12:AB:162:LEU:HG	2.24	0.52
12:AB:135:GLY:C	12:AB:137:ALA:H	2.17	0.52
12:AB:143:LEU:CD2	30:P:88:MET:HE2	2.34	0.52
14:AE:1175:LEU:O	14:AE:1187:GLU:HA	2.08	0.52
16:AG:9:VAL:HG22	16:AG:24:PHE:CE2	2.45	0.52
19:E:75:HIS:CE1	19:E:79:LEU:CD1	2.93	0.52
22:H:321:VAL:HG13	22:H:322:VAL:HG23	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:K:111:MET:HE2	25:K:125:ALA:HB1	1.90	0.52
27:M:111:ARG:N	27:M:119:ARG:NH2	2.58	0.52
33:S:54:ASP:HA	33:S:59:ARG:HD2	1.90	0.52
39:Y:78:LEU:HD12	39:Y:112:LYS:NZ	2.25	0.52
41:a:1145:C:N3	41:a:1146:C:C5	2.77	0.52
41:a:2093:G:OP2	58:r:22:LYS:HE3	2.09	0.52
41:a:2649:C:C2	41:a:2650:U:C5	2.97	0.52
41:a:2727:A:O2'	60:t:70:ARG:NH2	2.43	0.52
52:l:6:LYS:HZ2	52:l:119:ILE:HA	1.75	0.52
60:t:99:ILE:HD13	60:t:118:LEU:CB	2.39	0.52
61:u:56:PRO:O	61:u:60:ARG:HG3	2.09	0.52
61:u:90:VAL:CG1	61:u:95:LEU:HD21	2.33	0.52
62:v:112:LEU:HA	62:v:115:GLU:OE1	2.10	0.52
12:AB:10:LYS:HB2	12:AB:73:ARG:HB3	1.90	0.52
13:AD:16:ILE:HG23	13:AD:26:VAL:HG22	1.91	0.52
13:AD:205:MET:HE3	13:AD:213:PRO:HB3	1.91	0.52
16:AG:355:ALA:CB	16:AG:382:GLU:CG	2.54	0.52
18:D:58:C:O2	18:D:58:C:H2'	2.09	0.52
18:D:62:U:H2'	18:D:63:C:C6	2.44	0.52
21:G:23:TRP:CD1	21:G:39:HIS:CE1	2.97	0.52
23:I:142:MET:CE	23:I:170:GLU:OE1	2.58	0.52
24:J:50:ASP:O	24:J:53:VAL:HG22	2.09	0.52
29:O:88:MET:HE1	29:O:95:ARG:HG3	1.91	0.52
34:T:63:ARG:HD2	34:T:67:LEU:CD2	2.40	0.52
41:a:2298:A:P	54:n:72:LYS:HZ3	2.33	0.52
50:j:55:LYS:HZ2	50:j:60:VAL:HB	1.73	0.52
54:n:114:PHE:O	54:n:115:ARG:NE	2.34	0.52
62:v:1:MET:HA	62:v:1:MET:CE	2.38	0.52
7:6:19:DC:H2'	7:6:20:DA:H8	1.74	0.52
9:9:55:VAL:HG12	9:9:56:ARG:N	2.25	0.52
11:AA:714:VAL:HB	11:AA:787:PRO:HD2	1.92	0.52
15:AF:35:LYS:HZ1	16:AG:174:ARG:HH22	1.57	0.52
16:AG:380:THR:C	16:AG:384:LEU:CD1	2.79	0.52
10:B:76:A:H1'	41:a:2494:G:P	2.50	0.52
17:C:60:LYS:CE	18:D:735:C:C4'	2.88	0.52
18:D:925:G:C2	18:D:927:G:C8	2.98	0.52
18:D:936:C:C2	18:D:937:A:C8	2.98	0.52
29:O:9:THR:HB	29:O:85:ARG:NH1	2.25	0.52
29:O:21:ILE:HD11	29:O:87:LEU:HD22	1.90	0.52
31:Q:61:PHE:CD1	31:Q:64:GLN:NE2	2.78	0.52
39:Y:78:LEU:HD12	39:Y:112:LYS:HZ1	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:833:A:H2'	41:a:834:G:C8	2.44	0.52
41:a:1145:C:C2	41:a:1146:C:C5	2.97	0.52
41:a:1801:A:OP2	48:h:146:MET:HE1	2.09	0.52
41:a:1818:U:O2'	48:h:153:GLN:O	2.23	0.52
41:a:1996:C:H4'	50:j:128:ARG:HH12	1.75	0.52
47:g:11:GLU:HA	47:g:25:ARG:HA	1.90	0.52
52:l:170:ARG:CZ	52:l:176:ASP:OD1	2.58	0.52
59:s:15:TRP:CE3	59:s:135:GLN:O	2.63	0.52
61:u:58:TYR:CE2	61:u:59:ARG:HG2	2.44	0.52
3:2:19:LYS:O	3:2:22:THR:OG1	2.22	0.52
5:4:2:PHE:CE2	5:4:55:GLU:HG2	2.45	0.52
8:7:8:U:OP2	18:D:1397:C:C2	2.62	0.52
9:9:59:LEU:HB2	9:9:62:ARG:HG3	1.92	0.52
12:AB:141:LEU:HA	12:AB:152:HIS:HA	1.92	0.52
14:AE:795:TYR:OH	14:AE:1326:GLN:NE2	2.42	0.52
14:AE:1179:PRO:HB2	14:AE:1182:GLY:H	1.75	0.52
16:AG:11:ALA:HB3	16:AG:12:VAL:HA	1.92	0.52
16:AG:63:LEU:HA	16:AG:92:TYR:HA	1.92	0.52
16:AG:285:ILE:HD12	16:AG:293:VAL:HG21	1.92	0.52
16:AG:329:SER:HA	16:AG:336:LEU:HG	1.92	0.52
16:AG:444:LEU:HD22	16:AG:473:LEU:HD21	1.92	0.52
10:B:48:C:C5	10:B:59:A:C8	2.98	0.52
18:D:122:G:C5	18:D:123:U:C5	2.98	0.52
18:D:932:C:C5'	27:M:4:ARG:HH11	2.21	0.52
18:D:1240:U:C5	27:M:116:MET:HE2	2.44	0.52
20:F:37:PHE:HB3	31:Q:124:PRO:O	2.10	0.52
21:G:17:GLY:HA3	21:G:41:ILE:HD11	1.92	0.52
22:H:36:VAL:O	22:H:48:ILE:HB	2.10	0.52
23:I:23:PHE:HD2	30:P:97:ASP:HB2	1.74	0.52
23:I:105:GLU:OE1	23:I:107:ARG:NE	2.42	0.52
23:I:183:ASP:HB3	23:I:204:LYS:NZ	2.25	0.52
24:J:67:VAL:HB	24:J:72:PHE:CE1	2.43	0.52
28:N:79:SER:HB2	28:N:85:ILE:HG22	1.92	0.52
31:Q:20:VAL:HG13	31:Q:85:MET:HE1	1.90	0.52
33:S:79:LEU:HB2	33:S:84:VAL:HG22	1.91	0.52
36:V:62:ARG:CA	36:V:73:TRP:CZ3	2.93	0.52
38:X:96:PRO:CG	38:X:102:THR:HG22	2.39	0.52
39:Y:129:GLU:CB	39:Y:133:ARG:HH12	2.16	0.52
41:a:658:U:O2'	52:l:97:ASN:OD1	2.28	0.52
41:a:963:U:C2	41:a:964:C:C5	2.97	0.52
41:a:998:C:OP1	66:z:84:LYS:NZ	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1198:U:C2	41:a:1199:U:C5	2.98	0.52
41:a:1314:C:C2	41:a:1315:C:C5	2.98	0.52
41:a:2848:G:O2'	41:a:2867:G:N2	2.37	0.52
48:h:123:ALA:HB1	48:h:125:LYS:HZ1	1.75	0.52
51:k:19:HIS:CE1	51:k:41:PRO:HD3	2.45	0.52
52:l:6:LYS:CE	52:l:119:ILE:HG23	2.40	0.52
54:n:136:ILE:HD12	54:n:141:ILE:HG23	1.92	0.52
55:o:19:LYS:HE2	55:o:19:LYS:HA	1.91	0.52
58:r:29:PHE:CE2	58:r:35:LYS:HE3	2.45	0.52
59:s:31:GLU:HG2	59:s:142:ILE:HG12	1.92	0.52
5:4:63:ILE:CD1	5:4:91:PHE:CD2	2.93	0.52
9:9:58:THR:HG21	9:9:81:LEU:CD2	2.31	0.52
13:AC:140:ILE:HD12	13:AC:142:MET:HE3	1.91	0.52
14:AE:510:LEU:HD22	14:AE:601:ILE:HD12	1.91	0.52
14:AE:514:THR:HG21	14:AE:596:LEU:HD12	1.90	0.52
16:AG:282:GLN:NE2	16:AG:282:GLN:CA	2.73	0.52
18:D:500:G:H2'	18:D:501:C:C6	2.45	0.52
18:D:512:U:P	24:J:44:ARG:NH1	2.83	0.52
18:D:739:C:HO2'	34:T:42:HIS:CE1	2.25	0.52
18:D:868:C:H2'	18:D:869:G:O4'	2.10	0.52
18:D:978:A:C4	18:D:1319:A:C2	2.98	0.52
18:D:1086:U:C2	18:D:1087:G:C8	2.97	0.52
21:G:26:LYS:HE3	21:G:194:ASP:OD1	2.10	0.52
25:K:134:ILE:HG23	25:K:135:ASN:N	2.24	0.52
26:L:33:GLU:HG3	26:L:33:GLU:O	2.10	0.52
29:O:123:ARG:O	29:O:123:ARG:CG	2.57	0.52
33:S:87:ALA:N	33:S:90:ARG:NH1	2.58	0.52
41:a:65:U:H2'	41:a:66:C:H6	1.75	0.52
41:a:150:U:H2'	41:a:151:C:C6	2.44	0.52
41:a:1204:A:O4'	41:a:1206:G:C8	2.63	0.52
41:a:1243:C:H1'	61:u:4:ASN:O	2.09	0.52
41:a:1707:G:C8	41:a:1756:G:C5	2.98	0.52
41:a:2049:G:N2	50:j:161:MET:HE1	2.24	0.52
44:d:15:A:O4'	44:d:109:A:C8	2.63	0.52
58:r:2:GLN:HG3	58:r:39:ALA:CB	2.40	0.52
60:t:71:ARG:NH2	60:t:123:LEU:O	2.42	0.52
62:v:45:GLN:HE21	62:v:124:LEU:HA	1.75	0.52
66:z:74:ILE:HG13	66:z:78:LYS:CE	2.40	0.52
7:6:23:DC:H5'	14:AE:259:ARG:NH1	2.11	0.51
10:A:6:G:C4	10:A:7:G:C8	2.98	0.51
12:AB:141:LEU:CA	12:AB:152:HIS:C	2.80	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:12:VAL:HG23	16:AG:16:LYS:HE2	1.92	0.51
16:AG:353:HIS:O	16:AG:356:ILE:CB	2.58	0.51
18:D:934:C:C4	18:D:1345:U:C5	2.99	0.51
21:G:165:ASP:O	21:G:169:GLU:OE1	2.28	0.51
30:P:7:ARG:HD3	30:P:75:ASP:OD1	2.10	0.51
31:Q:23:ILE:N	31:Q:87:LYS:HZ1	2.08	0.51
31:Q:52:PHE:CZ	31:Q:65:VAL:HG21	2.45	0.51
32:R:62:GLU:OE2	32:R:62:GLU:HA	2.11	0.51
37:W:47:LEU:O	37:W:62:VAL:HG23	2.09	0.51
38:X:22:ILE:HB	38:X:25:VAL:CG1	2.39	0.51
39:Y:126:ARG:NH1	41:a:1083:U:P	2.83	0.51
40:Z:26:MET:HA	40:Z:30:PHE:CD1	2.45	0.51
41:a:628:G:C5	41:a:636:G:N2	2.79	0.51
41:a:888:C:C4	41:a:889:C:C4	2.97	0.51
41:a:2086:U:H2'	41:a:2087:G:C8	2.45	0.51
51:k:21:TYR:CE2	51:k:49:TYR:CD2	2.98	0.51
61:u:122:VAL:HG13	61:u:125:LEU:CD1	2.34	0.51
1:0:17:GLY:HA2	1:0:97:LYS:HE2	1.92	0.51
4:3:66:GLN:OE1	4:3:69:ASN:ND2	2.44	0.51
6:5:9:DG:OP2	11:AA:473:ARG:HG2	2.05	0.51
6:5:10:DT:O3'	12:AB:68:THR:C	2.47	0.51
9:9:136:ILE:HG13	9:9:136:ILE:O	2.09	0.51
11:AA:1287:LEU:HD13	14:AE:1357:ILE:HD11	1.91	0.51
14:AE:959:LYS:HB3	14:AE:983:LYS:HB2	1.92	0.51
17:C:71:THR:H	17:C:74:HIS:HE1	1.59	0.51
23:I:178:LEU:HD23	23:I:178:LEU:C	2.35	0.51
28:N:66:PHE:CD2	28:N:67:GLN:OE1	2.62	0.51
29:O:57:MET:HA	29:O:60:LYS:CE	2.40	0.51
29:O:118:LEU:HD23	29:O:124:ARG:HA	1.91	0.51
30:P:73:LEU:HD21	30:P:75:ASP:OD2	2.10	0.51
34:T:21:ASP:OD1	34:T:22:THR:N	2.34	0.51
38:X:31:LYS:HG3	38:X:32:ALA:N	2.25	0.51
41:a:265:A:N1	41:a:427:U:O2'	2.40	0.51
41:a:414:C:H2'	41:a:415:A:H8	1.75	0.51
41:a:1024:G:OP2	41:a:1025:G:O2'	2.25	0.51
41:a:1379:U:H4'	41:a:1380:G:OP1	2.09	0.51
41:a:2311:A:C5	54:n:77:PHE:CD2	2.98	0.51
62:v:115:GLU:HA	62:v:118:LYS:NZ	2.25	0.51
63:w:24:MET:HA	63:w:24:MET:CE	2.33	0.51
63:w:37:THR:OG1	63:w:40:LYS:CD	2.57	0.51
64:x:53:THR:HG23	64:x:74:VAL:HG21	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1:24:ILE:O	2:1:71:VAL:HG21	2.08	0.51
3:2:3:ARG:NH2	3:2:4:GLU:HB2	2.26	0.51
8:7:2:U:H2'	8:7:3:G:C8	2.45	0.51
10:A:48:C:C5	10:A:59:A:C8	2.98	0.51
11:AA:786:GLY:N	11:AA:789:THR:OG1	2.41	0.51
16:AG:233:ARG:NH1	16:AG:324:ASN:HB2	2.25	0.51
16:AG:399:ASP:OD2	16:AG:399:ASP:N	2.40	0.51
16:AG:442:ARG:C	16:AG:446:PHE:CD2	2.85	0.51
17:C:38:LYS:HE2	17:C:38:LYS:CA	2.37	0.51
17:C:70:TYR:CE2	26:L:49:TYR:CZ	2.98	0.51
18:D:452:A:H2'	18:D:453:G:O4'	2.10	0.51
21:G:9:MET:HE1	21:G:47:VAL:CG2	2.40	0.51
22:H:279:LYS:HA	22:H:331:MET:CB	2.41	0.51
23:I:108:LYS:N	23:I:108:LYS:HD2	2.26	0.51
26:L:45:ARG:HA	26:L:45:ARG:NE	2.26	0.51
34:T:15:PHE:CD2	34:T:30:ALA:CB	2.92	0.51
34:T:64:ARG:NH2	34:T:89:ARG:HH22	2.07	0.51
38:X:13:LYS:HE3	38:X:17:ILE:HG21	1.91	0.51
39:Y:55:PRO:C	39:Y:71:LYS:HE2	2.36	0.51
39:Y:58:ILE:HG23	39:Y:66:PHE:CD2	2.44	0.51
41:a:1095:A:H2'	41:a:1096:A:C8	2.45	0.51
41:a:1138:G:C2	59:s:108:MET:HE2	2.45	0.51
41:a:1394:U:H4'	41:a:1603:A:H4'	1.92	0.51
41:a:1681:G:H2'	41:a:1757:A:N1	2.25	0.51
41:a:2473:U:C4	41:a:2474:U:C5	2.97	0.51
41:a:2723:C:H4'	63:w:1:MET:HE3	1.92	0.51
48:h:18:LYS:HE3	48:h:20:VAL:CG2	2.41	0.51
51:k:9:ILE:CG2	51:k:27:LYS:HZ1	2.23	0.51
51:k:21:TYR:CE2	51:k:49:TYR:CE2	2.99	0.51
54:n:30:ARG:HB2	54:n:30:ARG:NH2	2.26	0.51
59:s:98:GLU:O	59:s:99:ARG:C	2.53	0.51
63:w:24:MET:HE3	63:w:24:MET:CA	2.34	0.51
63:w:82:GLU:OE1	63:w:82:GLU:N	2.44	0.51
66:z:65:ILE:HB	66:z:76:TYR:CE1	2.45	0.51
66:z:78:LYS:HD3	66:z:117:LEU:HD23	1.88	0.51
1:0:71:LYS:HG3	1:0:73:LYS:HE3	1.91	0.51
5:4:48:MET:CE	5:4:86:LEU:HG	2.40	0.51
12:AB:141:LEU:CG	12:AB:143:LEU:CD1	2.88	0.51
14:AE:71:LEU:HD22	14:AE:90:VAL:HG21	1.93	0.51
14:AE:430:HIS:HB3	14:AE:925:GLU:HG3	1.93	0.51
14:AE:526:VAL:HG12	14:AE:549:LYS:HB2	1.90	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:679:C:H2'	18:D:680:C:H6	1.74	0.51
18:D:1158:C:O2'	21:G:132:LYS:HE2	2.09	0.51
18:D:1176:A:H2'	18:D:1177:G:C8	2.45	0.51
22:H:335:ILE:HG12	22:H:342:ILE:HD12	1.92	0.51
25:K:36:LEU:HD13	25:K:134:ILE:CD1	2.40	0.51
32:R:110:ARG:HE	32:R:117:TYR:HD2	1.57	0.51
34:T:24:SER:O	34:T:28:GLN:HG2	2.09	0.51
38:X:71:ARG:HH12	47:g:52:ALA:HB3	1.75	0.51
41:a:139:U:OP2	41:a:140:C:N4	2.43	0.51
41:a:607:U:C5	41:a:620:G:C5	2.98	0.51
41:a:872:U:H2'	41:a:873:C:H6	1.75	0.51
41:a:1154:G:OP2	66:z:58:ARG:CZ	2.58	0.51
41:a:1453:A:C8	63:w:73:ASN:OD1	2.64	0.51
41:a:1791:A:C2	41:a:1829:A:C4'	2.94	0.51
41:a:2133:G:O2'	41:a:2157:G:N2	2.44	0.51
50:j:122:VAL:HG21	50:j:141:ARG:HG3	1.92	0.51
50:j:152:PRO:CG	50:j:156:PHE:CZ	2.91	0.51
52:l:168:ASP:HB3	52:l:183:PHE:HE2	1.75	0.51
56:p:149:ARG:CZ	56:p:154:PRO:HD3	2.40	0.51
60:t:103:VAL:HG21	60:t:107:LEU:CD2	2.41	0.51
62:v:105:MET:HE2	62:v:108:VAL:CG2	2.40	0.51
1:0:37:GLU:O	1:0:37:GLU:HG3	2.11	0.51
9:9:94:ARG:HB2	9:9:97:LYS:CE	2.36	0.51
16:AG:139:THR:HA	16:AG:180:ARG:HA	1.92	0.51
16:AG:453:VAL:HG11	16:AG:459:LEU:CD2	2.41	0.51
10:B:6:G:C4	10:B:7:G:C8	2.98	0.51
10:B:31:G:H2'	10:B:32:C:O4'	2.10	0.51
18:D:107:G:C5	19:E:10:ARG:NH2	2.79	0.51
21:G:16:PHE:HB3	22:H:43:LYS:HA	1.93	0.51
25:K:156:LYS:NZ	28:N:71:VAL:O	2.42	0.51
26:L:88:MET:HE2	26:L:90:MET:HE3	1.91	0.51
29:O:7:TYR:H	29:O:89:GLU:CD	2.19	0.51
36:V:7:THR:CB	36:V:60:GLU:OE2	2.56	0.51
41:a:626:A:N3	61:u:78:ARG:CZ	2.74	0.51
41:a:2391:G:P	55:o:32:ILE:HD12	2.50	0.51
41:a:2428:G:H21	61:u:60:ARG:CZ	2.23	0.51
41:a:2758:A:H1'	56:p:38:ASN:HD21	1.74	0.51
45:e:20:ASN:HA	45:e:23:ARG:HE	1.76	0.51
58:r:71:LYS:HZ2	58:r:72:ILE:HA	1.74	0.51
63:w:33:ILE:CD1	63:w:112:TYR:CD1	2.91	0.51
8:7:22:U:C5'	23:I:80:LYS:CG	2.51	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:56:C:H2'	10:B:57:A:H5''	1.93	0.51
18:D:21:G:C2	18:D:22:G:C5	2.99	0.51
18:D:280:C:H1'	36:V:40:ARG:HH22	1.75	0.51
18:D:512:U:P	24:J:44:ARG:HH12	2.33	0.51
18:D:718:A:H5'	31:Q:119:ASN:HD22	1.76	0.51
18:D:754:C:OP1	34:T:72:ARG:NH1	2.44	0.51
22:H:32:ASP:OD1	22:H:35:VAL:CG2	2.58	0.51
30:P:22:THR:O	30:P:25:ILE:HG22	2.10	0.51
32:R:24:LEU:C	32:R:25:GLU:OE1	2.52	0.51
33:S:10:GLU:OE2	33:S:63:ARG:HD2	2.11	0.51
35:U:39:PHE:CD1	35:U:50:THR:HG22	2.45	0.51
41:a:993:G:C6	41:a:1162:G:C6	2.98	0.51
41:a:1666:G:P	60:t:66:LYS:HD3	2.50	0.51
41:a:2252:G:H2'	41:a:2253:G:H8	1.76	0.51
50:j:68:PHE:CD2	50:j:75:ALA:HA	2.46	0.51
54:n:15:LYS:O	54:n:18:THR:N	2.43	0.51
56:p:162:VAL:O	56:p:162:VAL:HG12	2.11	0.51
58:r:6:LEU:CD1	58:r:37:VAL:HG23	2.39	0.51
59:s:15:TRP:CZ3	59:s:135:GLN:CA	2.93	0.51
61:u:14:LYS:HE2	61:u:14:LYS:HA	1.91	0.51
2:1:25:ARG:NH1	41:a:519:U:O3'	2.43	0.51
3:2:11:LEU:HD12	3:2:11:LEU:N	2.26	0.51
9:9:55:VAL:CG1	9:9:56:ARG:N	2.74	0.51
16:AG:5:ILE:HA	16:AG:8:VAL:HB	1.93	0.51
16:AG:362:TYR:CE2	16:AG:382:GLU:HG2	2.45	0.51
10:B:48:C:O2'	10:B:49:G:OP2	2.27	0.51
18:D:49:U:C2	18:D:361:G:N2	2.79	0.51
18:D:107:G:C6	19:E:10:ARG:NH2	2.79	0.51
26:L:67:PRO:O	26:L:70:VAL:HG22	2.11	0.51
29:O:51:PRO:HA	29:O:103:PHE:HE2	1.76	0.51
30:P:15:HIS:HB3	30:P:70:HIS:CE1	2.46	0.51
30:P:24:GLU:O	30:P:28:THR:HG23	2.10	0.51
41:a:1656:C:OP1	50:j:141:ARG:HD3	2.10	0.51
41:a:2466:C:N3	41:a:2467:C:C5	2.79	0.51
41:a:2698:U:H2'	41:a:2699:C:C6	2.46	0.51
41:a:2813:A:C4	41:a:2814:A:C8	2.99	0.51
66:z:53:ARG:HG3	66:z:57:PHE:HE2	1.75	0.51
5:4:51:GLN:OE1	5:4:57:TYR:OH	2.27	0.51
9:9:88:HIS:O	9:9:89:PRO:C	2.51	0.51
10:A:19:G:N2	41:a:2112:G:O4'	2.44	0.51
10:A:56:C:C5	41:a:2168:G:C6	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:855:PRO:HD2	11:AA:887:VAL:HG11	1.91	0.51
14:AE:67:ASP:C	14:AE:69:GLU:H	2.18	0.51
17:C:51:TYR:HD1	17:C:54:GLN:HE22	1.58	0.51
23:I:68:ILE:HG13	23:I:101:ILE:HD11	1.93	0.51
41:a:413:C:C2	41:a:414:C:C5	2.99	0.51
41:a:532:A:H4'	41:a:533:G:C8	2.46	0.51
41:a:910:A:C8	62:v:12:MET:CE	2.94	0.51
41:a:1318:U:C2	41:a:1319:C:C5	2.99	0.51
41:a:1999:C:O3'	41:a:2722:G:N2	2.44	0.51
41:a:2006:C:C2	41:a:2007:U:C5	2.99	0.51
41:a:2812:G:H2'	41:a:2813:A:C8	2.45	0.51
47:g:47:LYS:HE2	54:n:115:ARG:NE	2.25	0.51
48:h:130:LEU:HD21	48:h:192:LEU:HD21	1.93	0.51
49:i:26:THR:HG23	49:i:27:SER:N	2.25	0.51
50:j:154:LYS:HE3	50:j:156:PHE:CE1	2.46	0.51
51:k:7:GLU:CG	51:k:27:LYS:HZ3	2.23	0.51
59:s:35:ARG:HA	59:s:40:HIS:CE1	2.46	0.51
65:y:106:LYS:HD3	65:y:109:ARG:NH2	2.26	0.51
66:z:82:GLY:HA3	66:z:117:LEU:CD1	2.41	0.51
5:4:2:PHE:CE1	5:4:56:PHE:CE1	2.99	0.51
5:4:50:MET:CA	5:4:56:PHE:CZ	2.94	0.51
8:7:13:U:H5''	8:7:13:U:C6	2.45	0.51
10:A:31:G:H2'	10:A:32:C:O4'	2.10	0.51
10:A:33:U:H5''	27:M:84:THR:HG21	1.93	0.51
11:AA:93:SER:HA	11:AA:128:PRO:HA	1.92	0.51
12:AB:130:PHE:CD2	12:AB:152:HIS:CE1	2.99	0.51
14:AE:287:ALA:HB2	14:AE:292:VAL:HG11	1.85	0.51
16:AG:355:ALA:HB1	16:AG:382:GLU:CB	2.36	0.51
16:AG:440:VAL:HG21	16:AG:481:LEU:HD22	1.88	0.51
18:D:61:G:N7	19:E:6:SER:OG	2.33	0.51
18:D:564:C:H5'	36:V:34:TYR:HE1	1.76	0.51
18:D:612:C:C2	18:D:613:C:C5	2.99	0.51
21:G:35:ARG:HB3	22:H:14:LYS:NZ	2.26	0.51
29:O:30:ILE:HD13	29:O:39:PHE:HE2	1.75	0.51
32:R:3:THR:O	32:R:6:GLN:N	2.44	0.51
34:T:3:LEU:HD23	34:T:3:LEU:C	2.36	0.51
41:a:580:U:H2'	41:a:581:C:C6	2.46	0.51
41:a:1790:C:C3'	41:a:1791:A:C8	2.94	0.51
41:a:1853:A:H2'	41:a:1854:A:C8	2.46	0.51
41:a:2266:A:H4'	41:a:2267:A:N3	2.26	0.51
41:a:2387:U:H4'	42:b:41:ARG:HH12	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:2420:C:H5''	51:k:8:LYS:HE2	1.93	0.51
41:a:2682:A:C2	50:j:23:PRO:HB3	2.46	0.51
42:b:55:ARG:HA	42:b:55:ARG:CZ	2.41	0.51
54:n:8:TYR:HE2	54:n:30:ARG:HE	1.59	0.51
62:v:31:PHE:O	62:v:104:GLU:CD	2.54	0.51
6:5:9:DG:OP2	11:AA:470:ARG:O	2.28	0.51
9:9:47:GLU:O	9:9:49:GLY:N	2.43	0.51
11:AA:255:ILE:HB	11:AA:263:VAL:HB	1.92	0.51
14:AE:77:ARG:HB3	14:AE:80:HIS:HB2	1.93	0.51
14:AE:157:GLN:HE22	14:AE:188:LEU:HD22	1.76	0.51
16:AG:360:THR:HG22	16:AG:360:THR:O	2.10	0.51
16:AG:363:LEU:HD11	16:AG:410:ALA:HB2	1.92	0.51
16:AG:442:ARG:C	16:AG:446:PHE:HD2	2.15	0.51
18:D:276:G:C5'	36:V:17:MET:CE	2.89	0.51
18:D:1439:G:P	19:E:33:LYS:HZ1	2.31	0.51
20:F:36:GLU:OE2	20:F:36:GLU:HA	2.11	0.51
21:G:169:GLU:OE1	21:G:169:GLU:N	2.44	0.51
26:L:4:TYR:OH	26:L:68:GLN:HG2	2.11	0.51
32:R:54:ARG:HH11	32:R:62:GLU:HG3	1.76	0.51
39:Y:126:ARG:HD2	39:Y:127:SER:N	2.26	0.51
40:Z:15:SER:O	40:Z:19:VAL:HG23	2.11	0.51
41:a:69:C:O2	41:a:73:A:O2'	2.26	0.51
41:a:271:G:H4'	41:a:272:A:OP1	2.10	0.51
41:a:413:C:H2'	41:a:414:C:C6	2.46	0.51
41:a:1589:U:O2'	41:a:1590:A:O5'	2.29	0.51
41:a:1956:U:C4	41:a:1957:C:C5	2.99	0.51
41:a:2093:G:OP2	58:r:22:LYS:HG2	2.11	0.51
41:a:2259:U:C6	41:a:2427:C:C4	2.99	0.51
41:a:2588:G:O6	41:a:2607:G:C6	2.64	0.51
41:a:2814:A:H2'	41:a:2815:C:H6	1.75	0.51
43:c:71:LEU:HB3	43:c:76:GLU:CG	2.41	0.51
48:h:124:ILE:O	48:h:125:LYS:HD3	2.10	0.51
56:p:127:THR:HG22	56:p:128:GLN:N	2.26	0.51
62:v:53:MET:HE3	62:v:120:ALA:CB	2.40	0.51
62:v:105:MET:SD	62:v:113:ALA:HB1	2.52	0.51
4:3:85:PHE:CE1	4:3:94:ARG:HG2	2.46	0.50
6:5:17:DC:H5''	6:5:17:DC:H6	1.75	0.50
8:7:3:G:C4'	18:D:1500:A:N6	2.74	0.50
14:AE:387:LEU:HD11	16:AG:147:ARG:H	1.77	0.50
14:AE:1045:THR:O	14:AE:1067:ARG:NH2	2.41	0.50
18:D:501:C:H2'	18:D:502:A:C8	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:580:C:H2'	18:D:581:G:O4'	2.11	0.50
18:D:678:U:H2'	18:D:679:C:H6	1.76	0.50
18:D:728:A:H2'	18:D:729:A:C8	2.46	0.50
21:G:26:LYS:HD2	21:G:193:PRO:CG	2.40	0.50
22:H:48:ILE:HG22	22:H:49:PRO:O	2.10	0.50
22:H:273:ARG:NH1	22:H:297:GLU:HB2	2.25	0.50
25:K:62:LYS:HA	25:K:62:LYS:HE3	1.92	0.50
29:O:88:MET:SD	29:O:95:ARG:CZ	2.99	0.50
31:Q:63:ALA:HB1	31:Q:96:THR:CG2	2.41	0.50
41:a:251:A:OP1	61:u:58:TYR:OH	2.23	0.50
41:a:372:G:C8	43:c:61:LYS:HD2	2.46	0.50
41:a:703:U:H2'	41:a:704:G:O4'	2.10	0.50
41:a:1996:C:H5''	50:j:128:ARG:NH1	2.25	0.50
41:a:2230:G:C5'	43:c:30:LEU:HD23	2.41	0.50
41:a:2329:U:H2'	41:a:2330:G:C8	2.45	0.50
44:d:42:C:P	54:n:64:LYS:NZ	2.83	0.50
46:f:41:THR:N	46:f:45:ARG:HH22	2.09	0.50
49:i:30:VAL:HG22	49:i:37:LYS:CD	2.41	0.50
52:l:170:ARG:HH12	52:l:176:ASP:N	2.09	0.50
53:m:25:LYS:C	53:m:29:GLN:HE22	2.20	0.50
61:u:58:TYR:CD2	61:u:59:ARG:HG2	2.46	0.50
65:y:9:GLU:CG	65:y:55:LEU:HB2	2.40	0.50
5:4:6:ALA:HB3	5:4:65:VAL:HG22	1.93	0.50
8:7:12:U:H5''	25:K:56:VAL:HG21	1.93	0.50
10:A:23:C:H2'	10:A:24:U:C6	2.46	0.50
10:A:68:C:C3'	10:A:69:C:H5''	2.42	0.50
14:AE:209:ASN:HB3	14:AE:214:ARG:HH21	1.76	0.50
14:AE:693:VAL:HG21	14:AE:743:MET:HE3	1.94	0.50
16:AG:285:ILE:HD13	16:AG:285:ILE:H	1.76	0.50
17:C:51:TYR:O	17:C:54:GLN:HG3	2.11	0.50
18:D:501:C:H2'	18:D:502:A:H8	1.75	0.50
21:G:90:PHE:CD2	21:G:154:MET:CE	2.94	0.50
23:I:132:ARG:HG3	23:I:135:LYS:HE3	1.92	0.50
28:N:106:THR:HB	28:N:121:LEU:CD1	2.41	0.50
34:T:3:LEU:HD12	34:T:35:GLN:OE1	2.10	0.50
41:a:960:A:H61	62:v:82:MET:CE	2.24	0.50
41:a:1346:G:C6	41:a:1601:G:C6	2.98	0.50
41:a:2063:C:O2	41:a:2450:A:N1	2.45	0.50
41:a:2230:G:H5'	43:c:30:LEU:HD23	1.93	0.50
41:a:2305:U:H4'	54:n:133:ARG:NH2	2.26	0.50
59:s:72:LYS:HD3	59:s:74:TYR:CZ	2.43	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:w:12:ARG:NE	63:w:20:MET:HE1	2.26	0.50
9:9:106:PHE:CG	9:9:106:PHE:O	2.63	0.50
12:AB:155:LYS:HG3	12:AB:156:ASN:N	2.25	0.50
16:AG:365:ILE:HD11	16:AG:406:LEU:HD22	1.87	0.50
16:AG:448:LEU:CG	16:AG:473:LEU:HD11	2.42	0.50
17:C:66:SER:HA	26:L:49:TYR:CE1	2.47	0.50
21:G:109:GLN:C	21:G:113:ARG:HE	2.19	0.50
23:I:142:MET:HE3	23:I:170:GLU:C	2.36	0.50
27:M:111:ARG:NH2	27:M:126:ASP:OD2	2.43	0.50
31:Q:27:PHE:CE2	31:Q:89:PRO:HG2	2.46	0.50
31:Q:87:LYS:CG	31:Q:113:VAL:CG2	2.89	0.50
34:T:5:THR:HG23	34:T:6:GLU:N	2.25	0.50
34:T:11:ILE:HD11	34:T:30:ALA:C	2.35	0.50
35:U:73:ALA:HA	35:U:76:LYS:CE	2.41	0.50
36:V:64:CYS:HG	36:V:74:THR:HG1	1.58	0.50
39:Y:57:VAL:HG23	39:Y:71:LYS:HD3	1.94	0.50
41:a:672:C:O2'	52:l:77:ILE:HD11	2.11	0.50
41:a:780:G:C2	41:a:782:A:C2	3.00	0.50
41:a:1824:G:O2'	48:h:252:THR:HG21	2.11	0.50
41:a:1945:G:C4	41:a:1946:U:C5	2.99	0.50
41:a:2063:C:C4	41:a:2064:C:C5	3.00	0.50
47:g:7:PRO:HD2	54:n:62:GLY:O	2.11	0.50
61:u:55:MET:HE1	61:u:60:ARG:HA	1.94	0.50
64:x:4:LYS:N	64:x:4:LYS:HD3	2.26	0.50
66:z:65:ILE:HB	66:z:76:TYR:HE1	1.75	0.50
5:4:80:HIS:CD2	5:4:83:LYS:HZ3	2.29	0.50
6:5:16:DG:O6	11:AA:451:ARG:NH1	2.45	0.50
10:A:23:C:H2'	10:A:24:U:H6	1.77	0.50
12:AB:6:LEU:CD1	14:AE:291:ILE:CD1	2.84	0.50
13:AD:182:ARG:NH1	14:AE:534:GLU:OE1	2.44	0.50
14:AE:412:LEU:HD22	14:AE:441:LEU:HD21	1.94	0.50
17:C:60:LYS:HE3	18:D:735:C:C4'	2.42	0.50
18:D:339:C:C2	18:D:340:U:C5	2.99	0.50
18:D:564:C:H5'	36:V:34:TYR:CE1	2.46	0.50
18:D:653:U:O5'	28:N:56:LYS:HE2	2.12	0.50
21:G:187:VAL:HG13	21:G:191:SER:HB2	1.93	0.50
37:W:45:ILE:HA	37:W:62:VAL:HG11	1.93	0.50
38:X:65:VAL:HG23	38:X:66:GLU:OE1	2.12	0.50
41:a:65:U:C2	41:a:66:C:C6	3.00	0.50
41:a:2298:A:O3'	54:n:72:LYS:HE2	2.11	0.50
41:a:2387:U:C4'	42:b:41:ARG:HH12	2.24	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:l:155:GLU:HG2	52:l:156:ASN:N	2.26	0.50
52:l:194:LYS:O	52:l:197:GLU:N	2.45	0.50
54:n:5:HIS:HD2	54:n:97:TRP:CZ2	2.29	0.50
56:p:137:ASP:OD2	56:p:140:VAL:HG23	2.12	0.50
59:s:15:TRP:CD1	59:s:53:TYR:HB2	2.45	0.50
59:s:15:TRP:CH2	59:s:135:GLN:HG3	2.46	0.50
59:s:74:TYR:N	59:s:74:TYR:HD2	2.10	0.50
63:w:58:ASP:OD1	63:w:63:ARG:NH2	2.44	0.50
5:4:48:MET:HE2	5:4:86:LEU:HG	1.94	0.50
9:9:3:LEU:CD1	9:9:4:ASN:N	2.63	0.50
11:AA:125:GLY:HA2	11:AA:499:SER:HB2	1.92	0.50
11:AA:860:ALA:H	16:AG:37:LYS:HG3	1.77	0.50
12:AB:78:PHE:CG	12:AB:85:PRO:HB3	2.46	0.50
16:AG:384:LEU:O	16:AG:387:VAL:HG23	2.12	0.50
18:D:767:A:H2'	18:D:768:A:O4'	2.11	0.50
20:F:25:LYS:HE3	22:H:336:ASP:OD2	2.11	0.50
22:H:163:ARG:CA	22:H:298:GLU:HG3	2.41	0.50
27:M:4:ARG:HG3	27:M:5:ARG:CG	2.22	0.50
27:M:35:LYS:HE3	27:M:38:THR:OG1	2.11	0.50
27:M:66:LEU:CD1	27:M:101:MET:CE	2.84	0.50
30:P:24:GLU:CA	30:P:27:GLU:OE1	2.59	0.50
30:P:66:GLU:CG	33:S:99:ALA:HB2	2.41	0.50
39:Y:37:PHE:HE1	39:Y:58:ILE:HD11	1.77	0.50
41:a:4:U:C2	41:a:5:A:C8	3.00	0.50
41:a:813:U:H2'	41:a:814:C:C6	2.46	0.50
41:a:2082:A:H2'	41:a:2083:G:O4'	2.12	0.50
41:a:2193:G:O2'	41:a:2194:U:OP1	2.28	0.50
46:f:4:THR:CB	46:f:37:GLU:OE2	2.58	0.50
52:l:97:ASN:ND2	52:l:100:MET:HE2	2.27	0.50
59:s:84:ILE:HG23	59:s:84:ILE:O	2.11	0.50
60:t:114:LYS:O	60:t:118:LEU:HD23	2.11	0.50
62:v:50:ARG:CA	62:v:53:MET:SD	3.00	0.50
63:w:103:ARG:HA	63:w:110:MET:HE2	1.93	0.50
65:y:25:THR:OG1	65:y:88:ARG:HB3	2.12	0.50
4:3:6:ARG:HG2	4:3:7:ARG:H	1.77	0.50
9:9:10:ALA:O	9:9:14:GLU:HG3	2.11	0.50
16:AG:131:ARG:HA	16:AG:186:VAL:CG1	2.38	0.50
16:AG:171:GLU:OE2	16:AG:267:GLY:C	2.54	0.50
17:C:60:LYS:NZ	18:D:735:C:C5'	2.75	0.50
17:C:60:LYS:NZ	18:D:735:C:C4'	2.74	0.50
18:D:10:A:OP2	25:K:131:THR:HG21	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:160:A:H2'	18:D:161:A:O4'	2.12	0.50
18:D:335:C:C2	18:D:336:A:C8	2.99	0.50
18:D:657:U:C1'	34:T:28:GLN:HE22	2.24	0.50
18:D:1226:C:C2'	38:X:102:THR:OG1	2.58	0.50
21:G:38:VAL:HG22	22:H:75:VAL:HG21	1.92	0.50
23:I:82:GLU:O	23:I:86:LYS:CD	2.60	0.50
34:T:33:THR:OG1	34:T:63:ARG:NH1	2.45	0.50
37:W:49:ILE:HG23	37:W:49:ILE:O	2.12	0.50
39:Y:126:ARG:CZ	41:a:1083:U:P	3.00	0.50
40:Z:18:ASP:HB3	40:Z:22:LEU:HD12	1.92	0.50
41:a:851:C:C2	41:a:852:U:C5	3.00	0.50
41:a:1801:A:OP1	48:h:146:MET:HE1	2.11	0.50
43:c:65:ASP:CG	43:c:66:THR:N	2.70	0.50
47:g:36:VAL:HG21	47:g:41:HIS:ND1	2.27	0.50
51:k:34:LEU:CB	51:k:51:GLU:OE2	2.60	0.50
59:s:13:ARG:HH22	59:s:49:ASP:C	2.19	0.50
60:t:17:ARG:NH2	60:t:47:ILE:HG23	2.25	0.50
62:v:73:ILE:HD12	62:v:73:ILE:N	2.26	0.50
63:w:87:PHE:HZ	63:w:115:LEU:HG	1.77	0.50
3:2:12:ARG:HH21	45:e:29:ARG:CZ	2.25	0.50
6:5:9:DG:P	11:AA:473:ARG:HG3	2.51	0.50
11:AA:974:ARG:HD2	11:AA:1014:LEU:HD21	1.92	0.50
16:AG:422:GLU:O	16:AG:427:ASP:N	2.45	0.50
10:B:23:C:H2'	10:B:24:U:C6	2.46	0.50
10:B:68:C:C3'	10:B:69:C:H5''	2.42	0.50
18:D:136:C:C2	18:D:137:U:C6	3.00	0.50
18:D:744:C:H2'	18:D:745:G:C8	2.47	0.50
18:D:816:A:OP1	18:D:1526:G:O2'	2.27	0.50
18:D:864:A:H2'	18:D:865:A:C8	2.47	0.50
18:D:1106:G:O3'	23:I:172:ARG:HG3	2.11	0.50
21:G:109:GLN:O	21:G:113:ARG:NE	2.45	0.50
22:H:304:VAL:HG11	22:H:346:LEU:HB2	1.93	0.50
24:J:104:ARG:NE	24:J:104:ARG:HA	2.27	0.50
27:M:71:PRO:HG3	27:M:103:TRP:HH2	1.76	0.50
28:N:35:ALA:O	28:N:39:VAL:HG23	2.12	0.50
36:V:15:ASP:OD1	36:V:55:ILE:HD11	2.11	0.50
37:W:41:PHE:O	37:W:44:MET:HG3	2.11	0.50
41:a:125:A:C5	53:m:10:LEU:HD13	2.46	0.50
41:a:594:U:H2'	41:a:595:C:C6	2.47	0.50
41:a:1598:A:C5	41:a:1599:U:C5	2.99	0.50
41:a:2646:C:OP2	41:a:2732:G:O2'	2.25	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:i:40:ARG:NH1	49:i:41:HIS:CD2	2.80	0.50
56:p:24:ILE:HG22	56:p:35:ARG:O	2.11	0.50
59:s:55:ILE:CG1	59:s:123:LYS:HE2	2.42	0.50
60:t:59:LYS:HZ3	60:t:92:GLU:HG2	1.76	0.50
2:1:36:LEU:HD23	2:1:48:LYS:HB2	1.93	0.50
3:2:49:LYS:HE2	3:2:49:LYS:HA	1.93	0.50
5:4:31:TYR:OH	44:d:103:U:O2'	2.20	0.50
9:9:52:MET:CE	9:9:85:SER:HB2	2.42	0.50
9:9:78:GLY:H	9:9:79:PRO:HD2	1.75	0.50
10:A:15:G:H2'	10:A:15:G:N3	2.27	0.50
11:AA:18:ARG:HE	11:AA:620:ASN:HA	1.77	0.50
12:AB:129:ILE:O	12:AB:142:LEU:HB2	2.12	0.50
14:AE:814:CYS:SG	14:AE:815:GLY:N	2.85	0.50
16:AG:296:ILE:HD11	16:AG:307:ILE:HD13	1.93	0.50
18:D:555:U:H2'	18:D:556:C:C6	2.46	0.50
18:D:958:A:O4'	37:W:55:ARG:NH1	2.45	0.50
18:D:1073:U:O2'	21:G:105:LYS:HE3	2.11	0.50
18:D:1492:A:O2'	18:D:1493:A:H5''	2.11	0.50
22:H:303:LEU:O	22:H:303:LEU:CG	2.59	0.50
23:I:183:ASP:HB3	23:I:204:LYS:HZ2	1.77	0.50
26:L:66:ALA:HB1	26:L:67:PRO:HD2	1.94	0.50
34:T:33:THR:HG21	34:T:85:LEU:HD12	1.94	0.50
41:a:234:U:C2	41:a:235:U:C6	3.00	0.50
41:a:1823:G:O2'	41:a:1824:G:H5'	2.12	0.50
48:h:131:PRO:HD3	48:h:189:ARG:NH1	2.27	0.50
50:j:55:LYS:NZ	50:j:59:ARG:C	2.70	0.50
52:l:119:ILE:O	52:l:188:MET:N	2.35	0.50
63:w:58:ASP:CG	63:w:80:PHE:CZ	2.89	0.50
9:9:30:SER:O	9:9:31:ARG:CZ	2.59	0.50
9:9:43:LYS:HA	9:9:46:ARG:NH1	2.27	0.50
14:AE:425:ARG:NH1	14:AE:458:ASN:O	2.45	0.50
16:AG:283:PHE:CE2	16:AG:332:SER:HA	2.47	0.50
10:B:15:G:H2'	10:B:15:G:N3	2.27	0.50
17:C:12:ARG:HG3	22:H:264:GLU:CB	2.41	0.50
18:D:626:G:O3'	35:U:51:ARG:NH1	2.45	0.50
18:D:1017:U:O2'	18:D:1018:G:O4'	2.30	0.50
25:K:111:MET:O	25:K:114:VAL:HG12	2.11	0.50
25:K:113:ALA:CA	25:K:116:GLU:OE1	2.60	0.50
26:L:11:HIS:HB3	26:L:14:GLN:OE1	2.11	0.50
33:S:87:ALA:HA	33:S:90:ARG:HG2	1.94	0.50
38:X:3:ARG:HH22	47:g:36:VAL:HG12	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:Y:60:VAL:CG2	39:Y:66:PHE:HB3	2.29	0.50
41:a:16:C:O4'	49:i:15:MET:HE3	2.12	0.50
41:a:560:C:O2	66:z:48:ARG:NH1	2.37	0.50
41:a:756:A:H2'	41:a:757:G:O4'	2.11	0.50
41:a:1799:G:N2	48:h:154:LEU:HD23	2.26	0.50
50:j:184:ARG:HH12	65:y:7:GLN:NE2	2.09	0.50
60:t:42:THR:HG23	60:t:44:LYS:HZ1	1.77	0.50
60:t:121:GLU:HG3	60:t:123:LEU:HD12	1.94	0.50
3:2:10:VAL:HG12	3:2:11:LEU:HD12	1.93	0.49
9:9:6:GLN:HA	9:9:9:GLN:HE22	1.75	0.49
9:9:97:LYS:HZ1	9:9:130:PRO:HA	1.76	0.49
11:AA:400:VAL:HG21	11:AA:452:ARG:HE	1.76	0.49
13:AD:288:GLU:C	13:AD:290:LEU:N	2.69	0.49
16:AG:353:HIS:HA	16:AG:356:ILE:HG21	1.94	0.49
10:B:32:C:H2'	10:B:33:U:H5'	1.94	0.49
18:D:736:C:H2'	18:D:737:C:H6	1.77	0.49
22:H:267:TRP:CE3	22:H:340:ARG:HG3	2.47	0.49
23:I:77:ILE:HA	23:I:84:VAL:HG13	1.94	0.49
25:K:134:ILE:O	25:K:137:VAL:HG12	2.12	0.49
25:K:157:ARG:HH12	28:N:43:GLU:CD	2.20	0.49
41:a:44:A:H2'	41:a:45:G:O4'	2.12	0.49
41:a:235:U:C2	41:a:236:C:C5	3.00	0.49
41:a:1199:U:H2'	41:a:1200:C:H6	1.77	0.49
41:a:1800:C:HO2'	41:a:1818:U:H3	1.60	0.49
41:a:2179:C:C2	41:a:2180:U:C5	3.00	0.49
41:a:2290:G:H2'	41:a:2291:U:C6	2.47	0.49
41:a:2849:U:OP2	65:y:93:ARG:CZ	2.60	0.49
41:a:2884:U:H3	49:i:40:ARG:NH1	2.09	0.49
48:h:124:ILE:C	48:h:125:LYS:HD3	2.36	0.49
62:v:29:GLY:HA3	62:v:104:GLU:HG3	1.94	0.49
2:1:23:LEU:HD21	2:1:35:ILE:HG22	1.94	0.49
9:9:67:THR:N	9:9:68:PRO:CD	2.75	0.49
11:AA:529:ARG:HH11	11:AA:572:ILE:HG22	1.77	0.49
16:AG:369:PHE:O	16:AG:373:LEU:HG	2.12	0.49
17:C:25:ASP:O	17:C:29:LEU:HD13	2.11	0.49
18:D:35:G:H2'	18:D:36:C:C6	2.47	0.49
18:D:36:C:C4	18:D:37:U:C5	3.00	0.49
18:D:109:A:H2'	18:D:326:G:N2	2.27	0.49
18:D:373:A:C2	18:D:482:A:C6	3.00	0.49
18:D:1071:C:H2'	18:D:1072:G:C8	2.47	0.49
19:E:54:MET:CE	19:E:75:HIS:HE1	2.24	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:F:6:VAL:HG12	31:Q:108:THR:O	2.11	0.49
20:F:63:GLU:O	20:F:67:ARG:HD2	2.12	0.49
24:J:170:TRP:CD2	24:J:186:PRO:HB3	2.47	0.49
27:M:74:GLU:OE1	27:M:75:VAL:O	2.30	0.49
28:N:110:VAL:C	28:N:111:MET:SD	2.95	0.49
36:V:62:ARG:HA	36:V:73:TRP:CZ3	2.47	0.49
38:X:71:ARG:HD2	38:X:72:GLU:N	2.27	0.49
38:X:92:ARG:HD2	41:a:888:C:OP1	2.12	0.49
39:Y:21:PRO:CB	39:Y:22:PRO:HD3	2.41	0.49
41:a:272:A:N3	41:a:273:G:C8	2.80	0.49
41:a:840:C:C2	41:a:841:G:C8	3.01	0.49
41:a:851:C:H2'	41:a:852:U:C6	2.46	0.49
41:a:1009:A:OP2	59:s:39:LYS:NZ	2.37	0.49
41:a:1036:G:C6	41:a:1120:G:C5	3.01	0.49
41:a:1205:A:C2	52:l:165:HIS:CE1	3.00	0.49
41:a:1348:C:O2	41:a:1348:C:H2'	2.11	0.49
41:a:2489:U:H2'	41:a:2490:G:O4'	2.12	0.49
41:a:2547:A:H2'	41:a:2548:U:H6	1.77	0.49
47:g:47:LYS:NZ	54:n:115:ARG:HA	2.27	0.49
54:n:122:PHE:CE2	54:n:128:TYR:CD1	3.00	0.49
55:o:31:HIS:O	55:o:32:ILE:C	2.54	0.49
58:r:90:LEU:HD21	58:r:94:ILE:CD1	2.42	0.49
59:s:98:GLU:HB3	59:s:102:GLU:OE2	2.12	0.49
3:2:14:PRO:HA	3:2:32:LEU:HD13	1.94	0.49
5:4:2:PHE:HB2	5:4:61:LEU:HG	1.95	0.49
14:AE:749:LYS:HD3	14:AE:753:SER:HB2	1.94	0.49
16:AG:244:ARG:CD	16:AG:244:ARG:N	2.73	0.49
17:C:24:LYS:HB3	26:L:102:MET:HE1	1.93	0.49
17:C:41:PRO:HD2	22:H:339:ARG:NE	2.26	0.49
18:D:376:G:OP2	35:U:70:ARG:HD3	2.13	0.49
18:D:406:G:C5	18:D:495:A:C5	3.01	0.49
18:D:653:U:O4'	28:N:56:LYS:CE	2.60	0.49
18:D:877:G:H5''	28:N:80:ARG:HD2	1.93	0.49
25:K:34:THR:HG22	25:K:52:LYS:HD3	1.95	0.49
26:L:35:LYS:HG3	26:L:36:ILE:N	2.27	0.49
30:P:7:ARG:HD3	30:P:75:ASP:CG	2.36	0.49
30:P:37:ARG:HB3	30:P:75:ASP:HB2	1.93	0.49
35:U:18:GLN:NE2	35:U:35:ARG:HE	2.10	0.49
39:Y:86:LYS:HD3	39:Y:86:LYS:O	2.11	0.49
39:Y:126:ARG:HD2	39:Y:126:ARG:C	2.36	0.49
41:a:57:C:H2'	41:a:58:G:O4'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:537:G:P	59:s:2:LYS:CE	3.00	0.49
41:a:1590:A:H2'	41:a:1591:A:C8	2.48	0.49
41:a:2014:A:H2'	41:a:2015:A:C8	2.47	0.49
41:a:2063:C:C2	41:a:2064:C:C6	2.99	0.49
41:a:2065:C:H2'	41:a:2066:C:H6	1.77	0.49
41:a:2362:C:O5'	55:o:40:ARG:NH2	2.45	0.49
47:g:58:ASP:CG	47:g:62:LYS:NZ	2.68	0.49
48:h:261:LYS:HA	48:h:264:ASP:OD2	2.12	0.49
52:l:195:GLN:HA	52:l:198:GLU:OE1	2.13	0.49
56:p:26:ILE:HG22	56:p:75:MET:HE2	1.93	0.49
56:p:94:TYR:CE1	56:p:152:ARG:HD2	2.48	0.49
59:s:30:THR:HG23	59:s:31:GLU:N	2.26	0.49
59:s:131:ASN:OD1	59:s:131:ASN:O	2.30	0.49
60:t:34:GLY:N	60:t:37:ASP:OD2	2.40	0.49
62:v:41:LEU:HD22	62:v:45:GLN:NE2	2.27	0.49
2:1:71:VAL:O	2:1:71:VAL:HG23	2.13	0.49
11:AA:1340:GLU:HB2	14:AE:19:ALA:HB3	1.94	0.49
12:AB:9:CYS:N	12:AB:53:ASN:HB3	2.24	0.49
14:AE:417:ARG:NH1	15:AF:43:ASN:O	2.45	0.49
16:AG:65:VAL:HG12	16:AG:66:ASP:H	1.76	0.49
16:AG:305:MET:HG2	16:AG:336:LEU:HA	1.94	0.49
18:D:311:C:O5'	18:D:311:C:H6	1.94	0.49
18:D:718:A:C8	31:Q:118:HIS:HB3	2.48	0.49
18:D:953:G:O6	38:X:103:LYS:CE	2.60	0.49
19:E:54:MET:HE1	19:E:75:HIS:HE1	1.77	0.49
21:G:111:ILE:HD13	21:G:148:LEU:HD13	1.95	0.49
22:H:342:ILE:HG12	22:H:344:LEU:HD12	1.93	0.49
26:L:70:VAL:O	26:L:74:LEU:CD2	2.56	0.49
38:X:81:MET:HG2	41:a:888:C:C4	2.48	0.49
41:a:3:U:C2	41:a:4:U:C5	3.00	0.49
41:a:1142:A:C4	41:a:1144:A:N7	2.80	0.49
41:a:1199:U:H2'	41:a:1200:C:C6	2.47	0.49
41:a:1790:C:H2'	41:a:1791:A:C8	2.48	0.49
41:a:2349:G:O6	41:a:2369:A:N6	2.46	0.49
59:s:125:TYR:HE2	59:s:130:HIS:HB2	1.78	0.49
64:x:90:VAL:HG22	64:x:115:LEU:HD11	1.94	0.49
6:5:9:DG:H5''	11:AA:473:ARG:HB3	0.54	0.49
9:9:24:SER:HB3	9:9:116:GLU:HG3	1.95	0.49
9:9:52:MET:HG2	9:9:95:LEU:CD1	2.39	0.49
12:AB:19:GLU:HG2	12:AB:23:ARG:CZ	2.42	0.49
16:AG:123:ARG:NH1	16:AG:123:ARG:HG2	2.26	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:433:ASP:O	16:AG:456:LEU:HD21	2.12	0.49
18:D:739:C:O2	34:T:42:HIS:HE1	1.94	0.49
18:D:1218:C:H2'	18:D:1219:A:C8	2.48	0.49
18:D:1458:G:OP1	19:E:30:THR:OG1	2.30	0.49
26:L:9:MET:O	26:L:84:VAL:HA	2.12	0.49
29:O:52:LEU:O	29:O:55:VAL:O	2.31	0.49
31:Q:31:ILE:HD12	31:Q:46:THR:HG22	1.94	0.49
36:V:42:THR:HG22	36:V:44:LEU:HD12	1.95	0.49
39:Y:20:SER:CB	39:Y:21:PRO:HD3	2.43	0.49
39:Y:77:VAL:HG13	39:Y:81:LYS:NZ	2.27	0.49
41:a:1571:A:H2'	41:a:1572:A:C8	2.47	0.49
41:a:1792:G:H5''	48:h:204:VAL:HG23	1.95	0.49
41:a:2392:A:C8	41:a:2429:G:C2	3.00	0.49
52:l:5:LEU:HD23	52:l:122:GLU:HG3	1.95	0.49
60:t:88:ASN:OD1	60:t:89:ASN:N	2.46	0.49
62:v:70:ASP:C	62:v:92:TRP:CZ3	2.90	0.49
2:1:35:ILE:O	2:1:39:THR:HG23	2.12	0.49
5:4:1:MET:SD	5:4:3:THR:OG1	2.71	0.49
5:4:62:THR:OG1	5:4:71:LYS:HE3	2.11	0.49
6:5:10:DT:N1	11:AA:62:TYR:HE2	2.07	0.49
8:7:33:U:O2	8:7:33:U:H2'	2.11	0.49
9:9:67:THR:O	9:9:72:LEU:HG	2.12	0.49
11:AA:146:VAL:HG21	11:AA:513:GLN:HE21	1.77	0.49
12:AB:141:LEU:O	12:AB:151:LYS:N	2.46	0.49
12:AB:158:GLU:HB3	12:AB:162:LEU:CD2	2.41	0.49
13:AD:100:LEU:HB2	13:AD:144:ILE:HG23	1.94	0.49
16:AG:216:ILE:HG12	16:AG:221:ILE:HB	1.93	0.49
16:AG:323:GLN:CA	16:AG:323:GLN:NE2	2.76	0.49
16:AG:363:LEU:CG	16:AG:410:ALA:CB	2.71	0.49
16:AG:365:ILE:CD1	16:AG:406:LEU:HD21	2.38	0.49
18:D:821:G:H2'	18:D:822:U:C6	2.47	0.49
18:D:922:G:H2'	18:D:923:A:C8	2.47	0.49
18:D:1215:G:C2	18:D:1216:A:C8	3.01	0.49
21:G:110:SER:CA	21:G:113:ARG:HE	2.25	0.49
21:G:126:PHE:C	21:G:127:ASP:O	2.55	0.49
27:M:108:ALA:O	27:M:119:ARG:NH2	2.45	0.49
39:Y:99:LYS:NZ	39:Y:138:VAL:O	2.44	0.49
39:Y:126:ARG:HH12	41:a:1082:U:C3'	2.26	0.49
41:a:15:G:C2'	49:i:15:MET:HE1	2.42	0.49
41:a:583:G:OP1	66:z:11:ARG:NH2	2.46	0.49
41:a:2740:A:H2'	41:a:2741:A:C8	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:h:52:ARG:HG3	48:h:53:HIS:ND1	2.27	0.49
51:k:21:TYR:CE2	51:k:38:LYS:CG	2.96	0.49
57:q:2:LYS:CE	57:q:35:GLN:HE21	2.25	0.49
59:s:1:MET:HE2	66:z:97:ASP:OD2	2.13	0.49
61:u:77:ILE:HD11	61:u:108:ALA:HB1	1.95	0.49
63:w:73:ASN:C	63:w:73:ASN:HD22	2.17	0.49
65:y:9:GLU:HG3	65:y:55:LEU:CB	2.43	0.49
66:z:74:ILE:HG13	66:z:78:LYS:HE3	1.94	0.49
66:z:79:PHE:CE1	66:z:110:VAL:HG22	2.48	0.49
9:9:31:ARG:HH22	41:a:1106:G:N2	2.10	0.49
9:9:87:GLU:OE2	9:9:95:LEU:HB2	2.12	0.49
10:A:47:U:O2'	10:A:50:U:P	2.71	0.49
10:A:56:C:H2'	10:A:57:A:H5''	1.93	0.49
11:AA:400:VAL:HG11	11:AA:452:ARG:HD2	1.94	0.49
12:AB:29:LEU:HB3	12:AB:56:PHE:HD2	1.77	0.49
12:AB:142:LEU:HD12	12:AB:150:ILE:O	2.12	0.49
13:AD:285:THR:HA	13:AD:315:GLY:HA2	1.94	0.49
14:AE:1289:ASN:ND2	14:AE:1300:ALA:O	2.46	0.49
10:B:72:A:H2'	10:B:73:A:H5''	1.95	0.49
18:D:925:G:C6	18:D:927:G:N7	2.80	0.49
18:D:1227:A:H5'	38:X:110:LYS:NZ	2.28	0.49
22:H:112:ILE:HA	22:H:121:THR:O	2.12	0.49
24:J:113:GLU:O	24:J:117:LEU:HG	2.13	0.49
32:R:38:TYR:HE2	32:R:40:THR:CG2	2.25	0.49
35:U:12:LYS:HD3	35:U:13:LYS:HG2	1.93	0.49
41:a:1791:A:C2	41:a:1829:A:O4'	2.65	0.49
41:a:2189:U:O2'	41:a:2190:G:O5'	2.31	0.49
41:a:2193:G:HO2'	41:a:2194:U:P	2.35	0.49
41:a:2902:C:N4	41:a:2903:U:O4	2.45	0.49
46:f:41:THR:CA	46:f:45:ARG:HH22	2.26	0.49
47:g:63:ARG:HG3	47:g:64:PHE:CD1	2.48	0.49
48:h:160:THR:O	48:h:195:VAL:HG12	2.13	0.49
54:n:70:ALA:O	54:n:81:GLN:OE1	2.31	0.49
54:n:134:GLU:CG	54:n:137:ILE:HG23	2.40	0.49
59:s:73:VAL:CG1	59:s:74:TYR:N	2.75	0.49
60:t:1:MET:HE3	60:t:32:TYR:HB3	1.95	0.49
62:v:57:VAL:HG22	62:v:60:GLN:O	2.13	0.49
66:z:51:ARG:N	66:z:51:ARG:HD2	2.28	0.49
2:1:17:VAL:HG12	2:1:76:VAL:HG21	1.94	0.49
5:4:35:GLU:OE1	5:4:93:ARG:NH2	2.46	0.49
11:AA:9:LYS:HG2	11:AA:1171:ARG:HH12	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:232:ILE:HG12	11:AA:237:LEU:HG	1.93	0.49
17:C:60:LYS:NZ	18:D:734:G:C3'	2.76	0.49
18:D:56:U:H2'	18:D:57:G:C8	2.48	0.49
18:D:373:A:C2	18:D:374:A:C8	3.01	0.49
18:D:1314:C:H2'	18:D:1315:U:H6	1.78	0.49
21:G:49:MET:CE	21:G:201:PRO:CD	2.87	0.49
21:G:114:LEU:HD13	21:G:144:LEU:HB3	1.94	0.49
23:I:188:GLU:OE1	23:I:188:GLU:N	2.45	0.49
25:K:12:GLN:HB3	25:K:14:LYS:HZ2	1.76	0.49
27:M:109:ARG:O	27:M:119:ARG:NH2	2.46	0.49
28:N:83:LEU:HD11	32:R:4:VAL:HB	1.94	0.49
34:T:35:GLN:HB3	34:T:59:MET:HE1	1.95	0.49
36:V:17:MET:HG3	36:V:20:SER:HB2	1.95	0.49
41:a:1454:C:H4'	63:w:63:ARG:NH1	2.27	0.49
41:a:2159:G:H2'	41:a:2160:C:C6	2.47	0.49
41:a:2485:G:O3'	62:v:125:PRO:HB3	2.12	0.49
43:c:6:GLN:CD	43:c:49:LEU:HD22	2.38	0.49
46:f:3:LYS:HE2	46:f:3:LYS:HA	1.95	0.49
47:g:47:LYS:HE2	54:n:115:ARG:HA	1.95	0.49
52:l:112:LEU:CD1	52:l:117:ARG:HB2	2.39	0.49
56:p:94:TYR:C	56:p:95:ARG:HD2	2.38	0.49
59:s:123:LYS:CE	59:s:132:HIS:HD2	2.25	0.49
60:t:7:MET:SD	60:t:18:ARG:NE	2.85	0.49
1:0:73:LYS:HE2	1:0:73:LYS:HA	1.95	0.49
4:3:6:ARG:NH1	41:a:84:A:H2'	2.28	0.49
14:AE:79:LYS:CB	14:AE:81:ARG:NH1	2.73	0.49
16:AG:130:PHE:C	16:AG:186:VAL:CG1	2.85	0.49
16:AG:183:LEU:HD23	16:AG:197:VAL:HG22	1.94	0.49
16:AG:453:VAL:HG11	16:AG:459:LEU:CG	2.42	0.49
16:AG:453:VAL:HG11	16:AG:459:LEU:HD23	1.95	0.49
18:D:1439:G:OP1	19:E:33:LYS:CE	2.61	0.49
25:K:88:VAL:HG12	25:K:93:ARG:HA	1.93	0.49
26:L:99:ALA:HB3	26:L:104:LYS:HZ1	1.78	0.49
29:O:32:GLN:HG3	29:O:32:GLN:O	2.13	0.49
30:P:64:GLN:OE1	30:P:65:TYR:O	2.31	0.49
31:Q:98:ARG:HG2	31:Q:98:ARG:HH11	1.78	0.49
41:a:636:G:N2	61:u:76:GLU:OE2	2.45	0.49
41:a:1808:A:O2'	43:c:3:ARG:NH1	2.46	0.49
41:a:2093:G:O2'	41:a:2198:A:N1	2.41	0.49
41:a:2351:G:O6	55:o:39:LYS:HE3	2.13	0.49
41:a:2591:C:H2'	41:a:2592:G:H8	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:2682:A:C5'	50:j:11:MET:HE1	2.42	0.49
52:l:141:MET:O	52:l:142:ALA:HB3	2.13	0.49
54:n:8:TYR:HA	54:n:12:VAL:HB	1.95	0.49
57:q:10:LEU:HD23	57:q:33:HIS:CD2	2.47	0.49
5:4:1:MET:O	5:4:1:MET:HE3	2.13	0.49
9:9:25:ALA:CB	9:9:99:PHE:HD2	2.26	0.49
12:AB:27:ASN:OD1	12:AB:58:GLU:HB2	2.11	0.49
16:AG:467:LEU:HD12	16:AG:482:ILE:HD11	1.95	0.49
17:C:73:ARG:HH12	31:Q:113:VAL:HB	1.76	0.49
18:D:718:A:C5	31:Q:118:HIS:ND1	2.81	0.49
21:G:23:TRP:CZ3	21:G:25:PRO:HA	2.47	0.49
23:I:119:SER:O	23:I:123:GLN:HG2	2.13	0.49
25:K:46:VAL:N	25:K:71:MET:HE2	2.27	0.49
27:M:132:GLY:O	27:M:136:LYS:NZ	2.45	0.49
29:O:12:ARG:HD3	29:O:13:LYS:H	1.78	0.49
32:R:80:ILE:HG22	32:R:81:LEU:N	2.27	0.49
34:T:64:ARG:CZ	34:T:64:ARG:CB	2.91	0.49
34:T:71:LYS:HE2	34:T:78:TYR:CE2	2.48	0.49
41:a:132:G:H2'	41:a:133:U:C6	2.47	0.49
41:a:1385:A:O2'	41:a:1396:U:O2	2.31	0.49
41:a:1932:A:H2'	41:a:1933:G:O4'	2.13	0.49
41:a:2093:G:N7	41:a:2225:A:H2'	2.28	0.49
41:a:2313:C:H5''	54:n:88:LYS:HD2	1.95	0.49
41:a:2754:U:O3'	57:q:19:ARG:NH2	2.46	0.49
41:a:2771:C:C2	41:a:2772:C:C5	3.01	0.49
8:7:3:G:H5''	18:D:1501:C:N4	2.27	0.48
11:AA:318:SER:OG	11:AA:320:ASP:OD1	2.31	0.48
14:AE:287:ALA:HB3	14:AE:292:VAL:HG22	1.94	0.48
14:AE:291:ILE:O	14:AE:293:ARG:N	2.46	0.48
14:AE:429:LEU:HB3	14:AE:925:GLU:HG2	1.95	0.48
16:AG:248:VAL:HG21	16:AG:275:LEU:HG	1.94	0.48
10:B:21:A:H4'	10:B:21:A:OP1	2.13	0.48
18:D:71:A:N1	18:D:100:G:C8	2.81	0.48
18:D:123:U:H5''	18:D:311:C:O2'	2.13	0.48
18:D:500:G:H2'	18:D:501:C:H6	1.77	0.48
18:D:562:U:O3'	32:R:14:ARG:NH1	2.46	0.48
18:D:908:A:H2'	18:D:909:A:C8	2.48	0.48
27:M:138:ARG:HG2	27:M:142:HIS:CE1	2.48	0.48
36:V:42:THR:HG22	36:V:44:LEU:HD11	1.95	0.48
39:Y:126:ARG:NH1	41:a:1082:U:O5'	2.46	0.48
41:a:26:G:H2'	41:a:27:G:O4'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:145:C:H2'	41:a:146:A:H8	1.78	0.48
41:a:1843:C:C2	41:a:1844:C:C5	3.00	0.48
41:a:2684:U:C4	41:a:2685:G:N7	2.81	0.48
41:a:2809:A:H2'	41:a:2810:A:C8	2.48	0.48
42:b:45:PHE:HD2	42:b:80:ILE:HD11	1.78	0.48
54:n:67:ILE:HD13	54:n:87:CYS:HB3	1.95	0.48
62:v:58:LYS:O	62:v:59:ARG:HG3	2.13	0.48
63:w:33:ILE:HD11	63:w:112:TYR:CE1	2.48	0.48
3:2:2:ILE:HG12	3:2:42:GLU:CD	2.37	0.48
3:2:11:LEU:HD11	3:2:46:ALA:HB3	1.95	0.48
5:4:77:VAL:HG13	5:4:77:VAL:O	2.14	0.48
10:A:70:G:C3'	10:A:71:C:H5''	2.43	0.48
12:AB:50:LEU:HD21	14:AE:285:LEU:HB3	1.94	0.48
14:AE:640:GLY:N	14:AE:643:ASP:OD2	2.42	0.48
16:AG:59:PHE:CD1	16:AG:97:ILE:HG23	2.48	0.48
16:AG:148:ASP:HA	16:AG:164:ARG:CD	2.44	0.48
10:B:23:C:H2'	10:B:24:U:H6	1.77	0.48
17:C:13:PHE:CB	17:C:51:TYR:CD1	2.95	0.48
18:D:123:U:C2	18:D:124:C:C5	3.01	0.48
18:D:563:A:N1	18:D:884:U:O4	2.46	0.48
23:I:142:MET:HG3	23:I:170:GLU:OE1	2.13	0.48
25:K:13:GLU:C	25:K:14:LYS:HD2	2.37	0.48
25:K:112:ARG:C	25:K:116:GLU:OE1	2.56	0.48
29:O:86:ALA:HA	29:O:89:GLU:HG2	1.95	0.48
41:a:1607:C:N4	41:a:1622:G:OP2	2.34	0.48
41:a:1830:C:N3	41:a:1831:G:N7	2.61	0.48
41:a:1921:G:C2'	41:a:1922:G:H5'	2.43	0.48
41:a:2515:C:H2'	41:a:2516:A:H8	1.78	0.48
41:a:2677:G:C6	41:a:2731:G:C6	3.01	0.48
42:b:47:ALA:HB2	42:b:59:LEU:HD11	1.94	0.48
56:p:69:ARG:NH1	56:p:73:ASN:HD21	2.11	0.48
58:r:137:GLU:CG	58:r:138:VAL:HG23	2.39	0.48
63:w:114:GLU:N	63:w:114:GLU:OE1	2.46	0.48
65:y:7:GLN:NE2	65:y:10:GLN:HE21	2.11	0.48
2:1:95:ARG:NH1	2:1:97:LEU:HG	2.28	0.48
4:3:84:GLY:HA3	4:3:95:PHE:CZ	2.48	0.48
4:3:94:ARG:CB	4:3:103:ILE:HD12	2.43	0.48
9:9:108:VAL:O	9:9:109:LYS:HB3	2.12	0.48
10:A:22:G:O2'	10:A:23:C:O5'	2.31	0.48
11:AA:565:GLU:HA	11:AA:569:ILE:HG12	1.95	0.48
12:AB:6:LEU:O	12:AB:7:LEU:HD23	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AB:112:PRO:HA	12:AB:133:PRO:HG2	1.95	0.48
14:AE:678:ARG:NH1	14:AE:756:GLU:OE1	2.46	0.48
10:B:47:U:O2'	10:B:50:U:P	2.70	0.48
18:D:43:C:P	35:U:12:LYS:NZ	2.86	0.48
18:D:537:G:OP1	32:R:110:ARG:NH2	2.38	0.48
18:D:610:U:O2	18:D:610:U:H2'	2.12	0.48
18:D:652:U:C3'	28:N:56:LYS:HZ1	2.19	0.48
18:D:674:G:P	26:L:86:ARG:HH22	2.35	0.48
20:F:4:ILE:CD1	20:F:19:PHE:HA	2.43	0.48
23:I:134:MET:HE2	23:I:168:TYR:CG	2.49	0.48
24:J:62:ARG:NE	24:J:72:PHE:CE2	2.81	0.48
25:K:157:ARG:CZ	28:N:43:GLU:HG3	2.42	0.48
28:N:96:MET:HG2	28:N:96:MET:O	2.13	0.48
32:R:7:LEU:HD23	36:V:34:TYR:OH	2.12	0.48
32:R:74:LEU:HD11	32:R:80:ILE:CD1	2.43	0.48
34:T:5:THR:O	34:T:8:THR:OG1	2.27	0.48
36:V:50:ASN:HB2	36:V:52:GLU:OE2	2.13	0.48
41:a:379:G:N1	41:a:396:G:C6	2.82	0.48
41:a:1664:A:C2'	41:a:1665:A:H5'	2.43	0.48
46:f:41:THR:N	46:f:45:ARG:NH2	2.61	0.48
52:l:149:ILE:CG2	52:l:175:ILE:HD11	2.43	0.48
59:s:54:ILE:O	59:s:123:LYS:HG2	2.12	0.48
62:v:29:GLY:H	62:v:104:GLU:HG2	1.78	0.48
63:w:82:GLU:O	63:w:86:ARG:HG2	2.13	0.48
65:y:40:LEU:HD12	65:y:40:LEU:N	2.28	0.48
1:0:61:ALA:HB1	1:0:96:VAL:CG2	2.43	0.48
7:6:19:DC:H2'	7:6:20:DA:C8	2.48	0.48
8:7:21:U:H5'	23:I:80:LYS:CG	2.43	0.48
8:7:32:U:O2	8:7:32:U:H3'	2.14	0.48
10:A:21:A:H4'	10:A:21:A:OP1	2.13	0.48
10:A:72:A:H2'	10:A:73:A:H5''	1.95	0.48
10:B:22:G:O2'	10:B:23:C:O5'	2.32	0.48
17:C:60:LYS:NZ	18:D:734:G:H2'	2.25	0.48
18:D:1314:C:H2'	18:D:1315:U:C6	2.48	0.48
18:D:1319:A:C8	18:D:1323:G:C6	3.01	0.48
18:D:1324:A:H2'	18:D:1325:C:H6	1.78	0.48
21:G:131:LYS:HE3	21:G:132:LYS:HZ3	1.78	0.48
23:I:164:ARG:HD2	23:I:166:GLU:OE2	2.12	0.48
29:O:52:LEU:HB3	29:O:58:VAL:HG12	1.94	0.48
30:P:63:ASP:OD1	30:P:65:TYR:CZ	2.66	0.48
41:a:1042:G:C4	41:a:1043:C:C6	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1668:A:O2'	41:a:1674:G:N7	2.32	0.48
41:a:2420:C:C5'	51:k:8:LYS:NZ	2.76	0.48
41:a:2455:G:H2'	41:a:2456:C:C6	2.48	0.48
45:e:10:SER:OG	45:e:13:GLU:HG2	2.13	0.48
50:j:101:PHE:CZ	50:j:203:VAL:HG12	2.48	0.48
54:n:22:TYR:HE2	54:n:29:PRO:HD3	1.79	0.48
59:s:15:TRP:HD1	59:s:53:TYR:HB2	1.78	0.48
59:s:88:THR:O	59:s:92:MET:HE2	2.13	0.48
65:y:9:GLU:HG3	65:y:55:LEU:HB2	1.95	0.48
66:z:58:ARG:HA	66:z:61:TRP:CE3	2.48	0.48
6:5:17:DC:C5	11:AA:542:ARG:HD3	2.48	0.48
9:9:77:VAL:CG1	9:9:82:ILE:HG21	2.41	0.48
13:AD:182:ARG:O	13:AD:205:MET:HA	2.14	0.48
16:AG:349:GLN:C	16:AG:351:GLU:N	2.71	0.48
16:AG:389:MET:HA	16:AG:407:ARG:NH1	2.29	0.48
17:C:21:ILE:HG13	17:C:54:GLN:NE2	2.29	0.48
17:C:60:LYS:CD	18:D:734:G:O2'	2.62	0.48
17:C:65:LEU:HD23	17:C:67:LEU:HD11	1.96	0.48
18:D:1428:A:H2'	18:D:1429:A:O4'	2.13	0.48
19:E:22:ALA:HA	19:E:25:ARG:HE	1.78	0.48
24:J:62:ARG:CZ	24:J:69:GLU:HG2	2.44	0.48
26:L:38:ARG:HD2	26:L:40:GLU:OE2	2.13	0.48
26:L:42:TRP:CZ2	26:L:102:MET:SD	3.01	0.48
40:Z:29:LYS:HG3	40:Z:30:PHE:CE2	2.49	0.48
41:a:1021:A:H3'	41:a:1021:A:N3	2.27	0.48
41:a:2012:G:H8	41:a:2012:G:O5'	1.96	0.48
48:h:141:VAL:HG23	48:h:162:VAL:HG12	1.94	0.48
49:i:40:ARG:NH1	49:i:41:HIS:CG	2.81	0.48
50:j:124:ARG:HA	50:j:165:MET:CE	2.44	0.48
52:l:6:LYS:HZ1	52:l:120:VAL:N	2.11	0.48
59:s:123:LYS:HD2	59:s:132:HIS:HD2	1.78	0.48
66:z:72:ASN:ND2	66:z:106:PHE:CE2	2.81	0.48
5:4:69:GLU:H	5:4:69:GLU:CD	2.22	0.48
5:4:89:ILE:CG2	5:4:91:PHE:CE1	2.95	0.48
11:AA:363:LEU:HB3	11:AA:381:ALA:HB1	1.96	0.48
11:AA:554:HIS:HD2	11:AA:558:VAL:HB	1.77	0.48
11:AA:562:GLU:OE1	11:AA:662:SER:OG	2.28	0.48
11:AA:618:GLN:HG3	14:AE:770:LEU:HD13	1.95	0.48
12:AB:50:LEU:HD21	14:AE:285:LEU:CB	2.44	0.48
12:AB:92:VAL:HG13	12:AB:96:LEU:O	2.13	0.48
16:AG:18:LEU:HB3	16:AG:19:PRO:HD2	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:243:LYS:O	16:AG:243:LYS:HD3	2.14	0.48
18:D:331:G:H2'	19:E:4:ILE:HD11	1.95	0.48
18:D:429:U:O2	18:D:430:A:C8	2.66	0.48
18:D:429:U:N3	18:D:431:A:N6	2.61	0.48
18:D:893:C:C2	18:D:894:G:C8	3.01	0.48
18:D:1127:G:C2	18:D:1128:C:C6	3.01	0.48
31:Q:94:GLU:O	31:Q:97:ILE:HG22	2.13	0.48
38:X:16:VAL:HG23	38:X:17:ILE:N	2.29	0.48
41:a:272:A:C2	41:a:273:G:C5	3.02	0.48
41:a:760:G:H2'	41:a:761:A:O4'	2.14	0.48
41:a:807:U:OP2	61:u:41:ARG:NH1	2.42	0.48
41:a:1321:A:C5	41:a:1322:A:C8	3.02	0.48
45:e:14:LEU:HD13	45:e:57:LEU:HD22	1.95	0.48
52:l:40:ARG:HD2	52:l:92:HIS:CE1	2.48	0.48
52:l:147:LEU:HD11	52:l:170:ARG:CD	2.43	0.48
62:v:42:THR:HA	62:v:93:VAL:HG12	1.95	0.48
63:w:60:VAL:HG22	63:w:63:ARG:HH12	1.78	0.48
2:1:20:VAL:O	2:1:23:LEU:HB3	2.13	0.48
9:9:99:PHE:O	9:9:103:ASN:OD1	2.32	0.48
10:A:32:C:H2'	10:A:33:U:H5'	1.95	0.48
11:AA:1314:GLN:HB2	15:AF:28:ARG:HH12	1.79	0.48
12:AB:32:MET:HE2	12:AB:32:MET:HA	1.95	0.48
16:AG:200:SER:C	16:AG:230:PRO:HG2	2.38	0.48
16:AG:362:TYR:HA	16:AG:413:ALA:HB3	1.94	0.48
16:AG:440:VAL:HG22	16:AG:481:LEU:HD21	1.95	0.48
16:AG:444:LEU:HD22	16:AG:473:LEU:CD2	2.43	0.48
18:D:377:G:OP1	35:U:5:ARG:CZ	2.60	0.48
18:D:1530:G:H2'	18:D:1531:A:C8	2.49	0.48
20:F:62:ARG:HD2	20:F:63:GLU:N	2.29	0.48
21:G:131:LYS:HE3	21:G:132:LYS:NZ	2.29	0.48
23:I:49:LYS:HZ3	23:I:75:ILE:HD11	1.79	0.48
23:I:134:MET:HG3	23:I:151:VAL:CG2	2.44	0.48
24:J:76:TYR:HE2	24:J:204:TYR:CB	2.26	0.48
24:J:170:TRP:CZ3	24:J:190:ASP:HB3	2.48	0.48
24:J:195:ILE:HG13	24:J:195:ILE:O	2.14	0.48
25:K:16:ILE:H	25:K:16:ILE:HD12	1.79	0.48
26:L:36:ILE:HD12	26:L:63:ASN:O	2.14	0.48
26:L:62:MET:HE3	26:L:62:MET:CA	2.43	0.48
34:T:77:ARG:HH21	34:T:80:GLN:NE2	2.11	0.48
39:Y:99:LYS:CD	39:Y:138:VAL:O	2.61	0.48
41:a:6:A:O3'	59:s:132:HIS:CE1	2.67	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:208:C:H2'	41:a:209:C:H6	1.78	0.48
41:a:984:A:N3	41:a:984:A:H2'	2.29	0.48
41:a:2061:G:C2	41:a:2063:C:C5	3.01	0.48
41:a:2884:U:N3	49:i:40:ARG:NH1	2.62	0.48
54:n:16:LEU:HD12	54:n:28:VAL:CG2	2.43	0.48
56:p:94:TYR:HD1	56:p:107:LEU:HD23	1.79	0.48
59:s:39:LYS:HA	59:s:44:TYR:HD1	1.78	0.48
63:w:38:LEU:N	63:w:39:PRO:CD	2.76	0.48
2:1:1:MET:CG	2:1:62:ASP:OD2	2.61	0.48
2:1:25:ARG:HH12	41:a:520:G:P	2.37	0.48
9:9:52:MET:HE2	9:9:85:SER:HB2	1.95	0.48
12:AB:136:GLU:OE1	12:AB:160:ARG:CZ	2.61	0.48
14:AE:67:ASP:C	14:AE:69:GLU:N	2.71	0.48
14:AE:107:LEU:HD22	14:AE:299:LEU:HD21	1.95	0.48
14:AE:516:ASP:OD1	14:AE:516:ASP:N	2.47	0.48
16:AG:209:PHE:CE1	16:AG:262:VAL:HG21	2.49	0.48
16:AG:422:GLU:CA	16:AG:426:GLY:N	2.62	0.48
16:AG:448:LEU:HD23	16:AG:473:LEU:HD12	1.95	0.48
18:D:110:C:H2'	18:D:111:G:O4'	2.14	0.48
24:J:61:VAL:HA	24:J:64:ILE:HD12	1.96	0.48
24:J:124:MET:HE2	24:J:128:ARG:CA	2.43	0.48
28:N:40:LEU:O	28:N:44:GLY:N	2.47	0.48
29:O:118:LEU:HD22	29:O:123:ARG:C	2.39	0.48
37:W:44:MET:SD	37:W:62:VAL:CG1	2.99	0.48
38:X:9:ILE:HG13	38:X:10:PRO:HD2	1.95	0.48
41:a:39:G:H1'	52:l:43:THR:HG21	1.96	0.48
41:a:67:U:N3	41:a:74:A:N6	2.62	0.48
41:a:208:C:C2	41:a:209:C:C5	3.01	0.48
41:a:576:U:H2'	41:a:577:G:C8	2.48	0.48
41:a:920:A:C5	41:a:921:C:C5	3.01	0.48
41:a:1666:G:H1'	60:t:3:GLN:NE2	2.29	0.48
43:c:67:VAL:HA	43:c:70:GLU:OE1	2.14	0.48
44:d:117:G:OP1	64:x:56:LYS:HD3	2.14	0.48
49:i:28:LEU:O	49:i:37:LYS:NZ	2.46	0.48
61:u:117:THR:HG23	61:u:118:THR:N	2.28	0.48
1:0:68:ARG:NH2	1:0:90:ARG:HD3	2.29	0.48
9:9:103:ASN:HA	9:9:107:GLU:HG3	1.96	0.48
11:AA:560:PRO:O	14:AE:780:ARG:NH2	2.47	0.48
11:AA:732:ILE:HD11	11:AA:769:PRO:HB3	1.95	0.48
11:AA:836:LEU:HD13	11:AA:1054:LEU:HD13	1.95	0.48
12:AB:35:LEU:HA	12:AB:106:ASP:CG	2.33	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AB:118:ILE:HG12	12:AB:130:PHE:CD2	2.49	0.48
16:AG:62:TRP:CD1	16:AG:95:ASP:HB2	2.49	0.48
16:AG:342:ASP:N	16:AG:342:ASP:OD1	2.45	0.48
18:D:109:A:C6	18:D:326:G:C6	3.02	0.48
23:I:156:ARG:HG2	23:I:193:TYR:HB2	1.95	0.48
25:K:157:ARG:NH1	28:N:43:GLU:HA	2.29	0.48
26:L:65:GLU:OE1	26:L:65:GLU:HA	2.12	0.48
27:M:18:PHE:CD2	27:M:59:LEU:HD21	2.47	0.48
32:R:99:ARG:NE	32:R:104:CYS:SG	2.87	0.48
33:S:74:LEU:HD23	33:S:77:PHE:CD2	2.49	0.48
36:V:11:ARG:HD2	36:V:56:GLY:C	2.39	0.48
38:X:94:GLY:C	38:X:95:LEU:HD22	2.38	0.48
41:a:2070:A:H2'	41:a:2071:A:O4'	2.14	0.48
41:a:2259:U:C2	41:a:2260:C:C5	3.01	0.48
48:h:130:LEU:HG	48:h:135:ILE:HG13	1.96	0.48
59:s:13:ARG:NH2	59:s:50:THR:HA	2.27	0.48
59:s:98:GLU:OE1	59:s:124:VAL:HG13	2.13	0.48
62:v:95:LEU:HD23	62:v:95:LEU:H	1.78	0.48
64:x:115:LEU:HD23	64:x:117:PHE:CE1	2.49	0.48
2:1:28:LYS:HB2	2:1:31:GLN:OE1	2.14	0.48
3:2:69:ARG:HG3	3:2:74:ILE:HD13	1.96	0.48
7:6:10:DG:OP1	14:AE:311:ARG:NH2	2.47	0.48
9:9:95:LEU:HD12	9:9:99:PHE:CZ	2.48	0.48
11:AA:1280:ALA:HB1	14:AE:918:ILE:HG22	1.96	0.48
11:AA:1311:GLY:O	15:AF:31:GLN:NE2	2.47	0.48
13:AC:102:LEU:HD12	13:AC:115:ILE:HG12	1.96	0.48
16:AG:61:ARG:HD2	16:AG:73:LYS:CD	2.44	0.48
16:AG:240:THR:HG21	16:AG:247:PRO:HG3	1.92	0.48
16:AG:288:MET:O	16:AG:288:MET:HG2	2.13	0.48
16:AG:361:LYS:HD2	16:AG:417:ILE:HG12	1.92	0.48
10:B:12:G:C2'	10:B:13:C:OP1	2.61	0.48
17:C:73:ARG:NH1	31:Q:113:VAL:CG1	2.76	0.48
18:D:72:A:C5	18:D:73:C:C5	3.02	0.48
18:D:106:C:N4	19:E:10:ARG:HH22	2.12	0.48
18:D:744:C:H2'	18:D:745:G:H8	1.77	0.48
18:D:1176:A:H2'	18:D:1177:G:O4'	2.14	0.48
20:F:25:LYS:NZ	22:H:336:ASP:CG	2.68	0.48
21:G:110:SER:CA	21:G:113:ARG:HH21	2.27	0.48
29:O:49:ARG:C	29:O:53:GLU:OE1	2.57	0.48
30:P:5:ARG:HG3	30:P:7:ARG:HH12	1.78	0.48
30:P:15:HIS:O	30:P:18:ILE:HG22	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:S:12:LYS:HD2	33:S:16:LEU:CD2	2.44	0.48
37:W:9:PRO:HD3	47:g:64:PHE:CD2	2.49	0.48
41:a:2043:C:C2	41:a:2044:C:C5	3.02	0.48
41:a:2091:C:O2	43:c:34:HIS:CE1	2.67	0.48
41:a:2246:G:H2'	41:a:2247:A:C8	2.49	0.48
41:a:2299:U:P	54:n:72:LYS:HE2	2.54	0.48
41:a:2685:G:OP1	60:t:78:ARG:NH2	2.47	0.48
45:e:2:LYS:HZ1	45:e:49:ASP:C	2.22	0.48
51:k:7:GLU:HG2	51:k:27:LYS:NZ	2.29	0.48
51:k:19:HIS:CD2	51:k:20:PHE:N	2.82	0.48
57:q:1:MET:HE1	57:q:35:GLN:HA	1.95	0.48
57:q:1:MET:CA	57:q:1:MET:HE3	2.43	0.48
61:u:59:ARG:HH11	61:u:59:ARG:HG3	1.77	0.48
65:y:13:MET:HG3	65:y:77:HIS:CE1	2.49	0.48
2:1:23:LEU:HD21	2:1:35:ILE:CG2	2.44	0.47
8:7:22:U:H5''	23:I:80:LYS:HB2	1.95	0.47
16:AG:437:LEU:CG	16:AG:456:LEU:CD1	2.92	0.47
10:B:65:C:C2'	10:B:66:C:H5'	2.44	0.47
18:D:306:A:C5	18:D:307:C:C5	3.02	0.47
18:D:1172:C:H2'	18:D:1173:U:C6	2.49	0.47
18:D:1307:U:H2'	18:D:1308:U:C6	2.49	0.47
18:D:1412:C:H2'	18:D:1413:A:C8	2.49	0.47
21:G:26:LYS:O	21:G:26:LYS:HD3	2.14	0.47
21:G:112:LYS:HE2	21:G:112:LYS:HA	1.95	0.47
24:J:139:PRO:N	24:J:182:PHE:HE2	2.12	0.47
25:K:156:LYS:HE3	28:N:71:VAL:CG1	2.41	0.47
26:L:9:MET:HE2	26:L:51:ILE:CD1	2.44	0.47
27:M:129:GLU:O	27:M:130:ASN:HB2	2.13	0.47
28:N:34:VAL:HG22	28:N:59:LEU:HD21	1.96	0.47
29:O:21:ILE:HD12	29:O:86:ALA:HB1	1.96	0.47
34:T:64:ARG:HA	34:T:64:ARG:HH11	1.75	0.47
38:X:5:ALA:HB3	38:X:66:GLU:OE2	2.14	0.47
38:X:86:TYR:HE2	38:X:90:ARG:NH2	2.11	0.47
39:Y:52:LEU:O	39:Y:54:ILE:HG12	2.14	0.47
41:a:247:G:H4'	41:a:386:G:C5	2.49	0.47
41:a:600:G:H2'	41:a:601:C:C6	2.49	0.47
41:a:880:G:C2	41:a:881:G:C8	3.02	0.47
41:a:962:G:C5	41:a:963:U:C5	3.01	0.47
41:a:1841:U:C2	41:a:1842:G:C8	3.02	0.47
41:a:2373:G:H2'	41:a:2374:C:C6	2.49	0.47
41:a:2537:U:H2'	41:a:2538:C:H6	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:2814:A:C4	41:a:2815:C:C5	3.03	0.47
47:g:45:THR:O	47:g:49:ARG:CZ	2.62	0.47
66:z:78:LYS:CD	66:z:117:LEU:HD21	2.43	0.47
1:0:6:GLN:OE1	1:0:11:GLN:HG2	2.14	0.47
4:3:28:VAL:HG23	4:3:34:VAL:HG12	1.96	0.47
5:4:11:GLU:OE2	5:4:19:ARG:NH2	2.48	0.47
5:4:21:ARG:HA	5:4:25:LYS:O	2.14	0.47
5:4:59:GLU:OE1	5:4:59:GLU:N	2.47	0.47
9:9:24:SER:O	9:9:116:GLU:HB2	2.14	0.47
9:9:31:ARG:NE	9:9:31:ARG:HA	2.28	0.47
10:A:12:G:C2'	10:A:13:C:OP1	2.61	0.47
11:AA:848:GLU:HG2	11:AA:888:THR:HG22	1.96	0.47
11:AA:856:ASN:H	16:AG:35:THR:HG21	1.79	0.47
14:AE:977:SER:OG	14:AE:980:THR:OG1	2.31	0.47
16:AG:64:VAL:HA	16:AG:75:ILE:HB	1.94	0.47
10:B:35:A:H2'	10:B:36:U:C6	2.49	0.47
18:D:378:G:H2'	18:D:379:C:C6	2.49	0.47
18:D:636:U:H5'	36:V:6:ARG:NE	2.29	0.47
18:D:975:A:H8	18:D:1357:A:HO2'	1.60	0.47
18:D:1149:C:H2'	18:D:1150:A:H8	1.79	0.47
20:F:33:ARG:O	20:F:36:GLU:HG2	2.14	0.47
24:J:138:SER:O	24:J:139:PRO:C	2.57	0.47
25:K:57:PRO:HA	25:K:60:ILE:HG12	1.96	0.47
27:M:71:PRO:O	27:M:96:ARG:NH1	2.47	0.47
30:P:26:VAL:HG12	30:P:30:LYS:HZ2	1.79	0.47
35:U:26:ASN:ND2	35:U:31:ARG:HE	2.11	0.47
36:V:31:HIS:HD2	36:V:34:TYR:H	1.62	0.47
37:W:33:THR:HG21	37:W:49:ILE:HD11	1.94	0.47
38:X:86:TYR:CE2	38:X:90:ARG:NE	2.82	0.47
39:Y:19:PRO:HG2	39:Y:24:GLY:H	1.79	0.47
39:Y:126:ARG:NH1	41:a:1083:U:OP2	2.47	0.47
41:a:1141:U:H4'	41:a:1142:A:O5'	2.13	0.47
41:a:1825:U:P	48:h:52:ARG:NH1	2.86	0.47
41:a:1844:C:C2	41:a:1845:G:C8	3.02	0.47
41:a:1858:A:N6	41:a:1884:G:H1'	2.29	0.47
41:a:2296:U:H4'	41:a:2297:A:OP1	2.14	0.47
41:a:2298:A:C4	41:a:2321:U:H5	2.31	0.47
41:a:2298:A:H5''	54:n:72:LYS:CE	2.44	0.47
41:a:2419:U:O2'	41:a:2420:C:H5'	2.14	0.47
45:e:24:GLU:O	45:e:25:GLN:C	2.57	0.47
51:k:25:LYS:HD3	51:k:51:GLU:OE2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:2:56:GLU:OE2	3:2:88:LYS:CA	2.61	0.47
10:A:33:U:H4'	27:M:84:THR:HB	1.97	0.47
10:A:35:A:H2'	10:A:36:U:C6	2.49	0.47
10:A:65:C:C2'	10:A:66:C:H5'	2.44	0.47
11:AA:411:ARG:NH2	11:AA:427:ASP:OD2	2.44	0.47
12:AB:2:GLN:HB2	12:AB:60:ASP:HB2	1.95	0.47
12:AB:120:GLU:H	12:AB:162:LEU:HG	1.79	0.47
14:AE:77:ARG:HA	14:AE:77:ARG:CZ	2.44	0.47
14:AE:520:ALA:HB3	14:AE:546:ALA:HB2	1.95	0.47
16:AG:233:ARG:O	16:AG:327:LEU:CD2	2.62	0.47
16:AG:299:ASP:CB	16:AG:303:HIS:HA	2.44	0.47
10:B:70:G:C3'	10:B:71:C:H5''	2.44	0.47
18:D:61:G:O6	19:E:10:ARG:NH2	2.47	0.47
19:E:9:LYS:O	19:E:12:ILE:HG12	2.14	0.47
19:E:19:LYS:CG	19:E:20:HIS:N	2.76	0.47
21:G:117:LEU:HD21	21:G:141:LEU:HB2	1.96	0.47
31:Q:85:MET:HB3	31:Q:113:VAL:HG11	1.95	0.47
33:S:57:PRO:HA	33:S:60:GLN:OE1	2.13	0.47
33:S:63:ARG:HD3	33:S:68:GLY:O	2.15	0.47
40:Z:26:MET:O	40:Z:30:PHE:HB2	2.14	0.47
41:a:624:C:O2'	41:a:657:U:OP1	2.29	0.47
41:a:689:A:H2'	41:a:690:G:C8	2.49	0.47
41:a:1794:A:H2'	41:a:1795:C:H6	1.80	0.47
41:a:2040:G:OP1	59:s:106:LYS:NZ	2.38	0.47
41:a:2193:G:O2'	41:a:2194:U:P	2.72	0.47
41:a:2327:A:H2'	41:a:2328:A:C8	2.49	0.47
42:b:26:PHE:H	42:b:29:GLU:HG3	1.79	0.47
52:l:42:GLY:HA3	52:l:92:HIS:CE1	2.49	0.47
54:n:12:VAL:O	54:n:16:LEU:HG	2.14	0.47
62:v:57:VAL:HG22	62:v:57:VAL:O	2.14	0.47
2:1:95:ARG:NH1	2:1:97:LEU:CD2	2.77	0.47
9:9:16:SER:HB2	9:9:20:LYS:NZ	2.29	0.47
10:A:26:G:H1	10:A:44:A:N6	2.12	0.47
10:A:75:C:O2'	10:A:76:A:N7	2.47	0.47
18:D:977:A:O2'	18:D:979:C:OP2	2.25	0.47
18:D:1308:U:P	38:X:98:ARG:CG	3.03	0.47
22:H:5:PHE:CE1	22:H:9:PHE:HE1	2.32	0.47
27:M:135:VAL:HG23	27:M:136:LYS:HD2	1.96	0.47
27:M:142:HIS:O	27:M:146:GLU:HG2	2.13	0.47
28:N:3:MET:O	28:N:3:MET:HE3	2.14	0.47
29:O:49:ARG:O	29:O:53:GLU:OE1	2.32	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:871:U:H2'	41:a:872:U:H6	1.78	0.47
41:a:1333:G:C2	41:a:1334:G:C8	3.03	0.47
41:a:1442:U:H2'	41:a:1443:U:H6	1.79	0.47
47:g:47:LYS:HE2	54:n:115:ARG:CZ	2.44	0.47
48:h:205:LEU:HD12	48:h:210:ALA:CB	2.44	0.47
54:n:93:GLY:C	54:n:97:TRP:CZ3	2.93	0.47
56:p:9:VAL:HG23	56:p:69:ARG:HD2	1.95	0.47
60:t:42:THR:CG2	60:t:44:LYS:NZ	2.78	0.47
62:v:53:MET:HB2	62:v:116:ALA:HB1	1.96	0.47
64:x:115:LEU:HD23	64:x:117:PHE:HE1	1.79	0.47
66:z:53:ARG:HG2	66:z:57:PHE:CE2	2.49	0.47
6:5:10:DT:C4'	11:AA:62:TYR:OH	2.61	0.47
9:9:3:LEU:O	9:9:4:ASN:OD1	2.33	0.47
9:9:51:TYR:CD2	9:9:88:HIS:HB2	2.50	0.47
11:AA:380:ALA:HA	12:AB:65:HIS:ND1	2.28	0.47
16:AG:207:GLU:HG3	16:AG:210:ARG:HB3	1.96	0.47
16:AG:285:ILE:O	16:AG:288:MET:HE3	2.14	0.47
17:C:16:GLU:OE1	17:C:18:VAL:HB	2.14	0.47
18:D:126:G:OP1	18:D:605:U:O2'	2.19	0.47
18:D:307:C:O2	18:D:307:C:H2'	2.15	0.47
18:D:311:C:P	35:U:31:ARG:NH2	2.86	0.47
18:D:864:A:H5'	25:K:90:THR:O	2.14	0.47
18:D:1325:C:C2	18:D:1326:U:C5	3.02	0.47
25:K:148:ASN:ND2	25:K:153:VAL:CG1	2.77	0.47
27:M:109:ARG:C	27:M:119:ARG:HH21	2.23	0.47
34:T:29:VAL:HG22	34:T:66:LEU:HD23	1.96	0.47
39:Y:74:PRO:O	39:Y:78:LEU:HG	2.13	0.47
41:a:581:C:C2	41:a:582:A:C8	3.02	0.47
41:a:591:U:C2	41:a:592:A:C8	3.03	0.47
41:a:872:U:H2'	41:a:873:C:C6	2.50	0.47
41:a:1048:A:C4	41:a:1049:C:C5	3.02	0.47
41:a:1385:A:C4	41:a:1386:C:C5	3.02	0.47
41:a:1790:C:H2'	41:a:1791:A:N7	2.29	0.47
41:a:1818:U:H6	48:h:156:ARG:NH2	2.12	0.47
41:a:2297:A:N1	41:a:2321:U:O4	2.47	0.47
41:a:2513:A:H2'	41:a:2514:U:C6	2.50	0.47
46:f:41:THR:O	46:f:42:PRO:C	2.58	0.47
54:n:38:MET:HE3	54:n:57:LEU:HG	1.96	0.47
56:p:18:LYS:HE2	56:p:18:LYS:HA	1.96	0.47
62:v:41:LEU:HG	62:v:96:ILE:HG13	1.95	0.47
62:v:59:ARG:CZ	62:v:59:ARG:O	2.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:3:40:ASN:OD1	4:3:65:ILE:HB	2.14	0.47
8:7:7:U:C6	8:7:7:U:C3'	2.97	0.47
10:A:48:C:C2'	10:A:49:G:OP2	2.62	0.47
11:AA:207:THR:OG1	11:AA:354:ASP:OD2	2.32	0.47
11:AA:689:ALA:HB2	11:AA:1233:LEU:HD23	1.97	0.47
12:AB:116:VAL:N	12:AB:129:ILE:CD1	2.78	0.47
14:AE:1350:ASN:HA	14:AE:1353:VAL:HG12	1.96	0.47
16:AG:27:LEU:HD22	16:AG:114:ILE:HG12	1.96	0.47
16:AG:220:VAL:CG1	16:AG:245:ILE:HG21	2.44	0.47
16:AG:314:LEU:HB3	16:AG:318:ILE:HD12	1.97	0.47
10:B:52:G:C6	10:B:63:G:O6	2.68	0.47
10:B:68:C:H3'	10:B:69:C:H5''	1.97	0.47
17:C:45:THR:HA	22:H:340:ARG:HH21	1.77	0.47
18:D:35:G:H2'	18:D:36:C:H6	1.79	0.47
18:D:330:C:O2	18:D:330:C:H2'	2.14	0.47
18:D:977:A:H1'	18:D:982:U:O4	2.15	0.47
18:D:1308:U:H3'	38:X:98:ARG:NH2	2.29	0.47
18:D:1397:C:OP1	18:D:1397:C:H2'	2.13	0.47
21:G:19:GLN:OE1	21:G:21:ARG:CG	2.63	0.47
22:H:70:VAL:HA	22:H:85:SER:HA	1.95	0.47
24:J:74:ASN:CA	24:J:77:LYS:HZ3	2.27	0.47
25:K:157:ARG:NH1	28:N:43:GLU:CD	2.72	0.47
30:P:27:GLU:HA	30:P:30:LYS:HZ1	1.77	0.47
32:R:74:LEU:HD11	32:R:80:ILE:HG13	1.96	0.47
41:a:783:A:N3	41:a:783:A:H2'	2.29	0.47
41:a:1141:U:H5	59:s:68:LYS:HZ1	1.60	0.47
41:a:1708:C:H2'	41:a:1709:U:H6	1.79	0.47
41:a:1770:G:C6	41:a:1983:G:C5	3.03	0.47
41:a:1799:G:N7	48:h:178:SER:OG	2.45	0.47
41:a:2243:U:H2'	41:a:2244:U:H6	1.80	0.47
42:b:51:VAL:N	42:b:62:LYS:HZ3	2.13	0.47
57:q:14:CYS:SG	57:q:33:HIS:HB3	2.53	0.47
58:r:18:GLN:HE22	58:r:39:ALA:HB2	1.78	0.47
60:t:20:MET:HB3	60:t:44:LYS:HE2	1.95	0.47
64:x:41:ALA:HB2	64:x:48:LEU:HD11	1.95	0.47
2:1:105:VAL:HG13	2:1:105:VAL:O	2.14	0.47
5:4:2:PHE:CE1	5:4:56:PHE:CZ	3.03	0.47
8:7:8:U:OP2	18:D:1397:C:O2	2.33	0.47
13:AD:59:VAL:HG22	13:AD:144:ILE:HA	1.97	0.47
14:AE:66:LYS:HB2	14:AE:69:GLU:HB3	1.97	0.47
14:AE:79:LYS:CB	14:AE:81:ARG:HH12	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AE:288:PRO:HD2	14:AE:291:ILE:CB	2.42	0.47
16:AG:33:THR:CG2	16:AG:43:ILE:HD11	2.44	0.47
16:AG:35:THR:HG21	16:AG:106:THR:HG22	1.95	0.47
16:AG:36:LYS:HE3	16:AG:43:ILE:HG12	1.95	0.47
16:AG:233:ARG:HG2	16:AG:270:ARG:CB	2.45	0.47
16:AG:400:GLU:H	16:AG:400:GLU:HG2	1.40	0.47
16:AG:434:LEU:HD11	16:AG:454:CYS:C	2.39	0.47
10:B:70:G:C2'	10:B:71:C:H5''	2.45	0.47
17:C:12:ARG:CZ	17:C:13:PHE:CE1	2.97	0.47
17:C:60:LYS:HE3	18:D:735:C:H4'	1.97	0.47
18:D:375:U:H1'	35:U:28:ARG:HH22	1.79	0.47
18:D:611:C:C2	18:D:612:C:C5	3.02	0.47
18:D:808:C:OP1	34:T:48:LYS:HE3	2.14	0.47
18:D:1149:C:C2	18:D:1150:A:C8	3.03	0.47
18:D:1227:A:C2	18:D:1228:C:C6	3.02	0.47
18:D:1382:C:N3	18:D:1383:C:C5	2.83	0.47
20:F:19:PHE:HE2	31:Q:110:ILE:C	2.23	0.47
22:H:277:GLY:CA	22:H:331:MET:CE	2.93	0.47
24:J:41:HIS:ND1	24:J:44:ARG:NH1	2.63	0.47
24:J:62:ARG:HA	24:J:72:PHE:CZ	2.50	0.47
25:K:96:MET:HG2	25:K:125:ALA:HB2	1.97	0.47
29:O:7:TYR:O	29:O:89:GLU:CD	2.58	0.47
30:P:13:PHE:CZ	30:P:67:ILE:HD11	2.50	0.47
32:R:2:ALA:N	32:R:7:LEU:HD11	2.29	0.47
33:S:47:LYS:O	33:S:50:THR:OG1	2.25	0.47
33:S:63:ARG:NH2	33:S:70:PRO:HD3	2.30	0.47
34:T:77:ARG:NH2	34:T:80:GLN:NE2	2.62	0.47
36:V:30:LYS:HD3	36:V:35:GLY:HA2	1.97	0.47
36:V:62:ARG:C	36:V:73:TRP:CE3	2.92	0.47
39:Y:102:ARG:HH11	39:Y:141:ASP:CG	2.23	0.47
41:a:6:A:N3	59:s:135:GLN:NE2	2.58	0.47
41:a:104:A:C5	41:a:105:C:C5	3.02	0.47
41:a:1349:C:N3	41:a:1350:C:C5	2.83	0.47
41:a:1429:G:H2'	41:a:1430:G:H8	1.79	0.47
41:a:1467:U:C4	41:a:1546:G:C2	3.03	0.47
41:a:1790:C:O3'	41:a:1791:A:C8	2.68	0.47
41:a:1791:A:C2	41:a:1829:A:H4'	2.49	0.47
41:a:2294:G:OP1	64:x:10:ARG:HD3	2.15	0.47
41:a:2297:A:C6	41:a:2321:U:O4	2.68	0.47
41:a:2314:A:C1'	54:n:155:THR:HG21	2.42	0.47
41:a:2345:G:C5	41:a:2347:C:C5	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:2517:C:O2	41:a:2542:A:N6	2.48	0.47
41:a:2520:C:C6	41:a:2567:G:H1'	2.50	0.47
41:a:2702:G:C5	41:a:2703:C:C5	3.03	0.47
41:a:2748:A:C2	41:a:2757:A:C5	3.03	0.47
41:a:2788:C:H2'	41:a:2789:C:C6	2.50	0.47
42:b:53:CYS:SG	42:b:57:HIS:HA	2.55	0.47
45:e:20:ASN:HA	45:e:23:ARG:NE	2.30	0.47
48:h:181:MET:HE2	48:h:181:MET:CA	2.45	0.47
52:l:23:PHE:CE2	52:l:25:GLU:HA	2.50	0.47
52:l:59:PRO:HB2	52:l:60:TRP:CE3	2.50	0.47
61:u:19:LEU:CD2	61:u:27:LEU:HD12	2.45	0.47
62:v:41:LEU:HD22	62:v:45:GLN:HE22	1.78	0.47
62:v:97:GLN:H	62:v:100:LYS:NZ	2.13	0.47
64:x:83:LEU:HD23	64:x:88:LYS:HE3	1.97	0.47
2:1:11:ARG:CZ	2:1:11:ARG:HB3	2.45	0.47
4:3:96:PHE:CE1	4:3:103:ILE:HG12	2.50	0.47
8:7:11:U:C4'	25:K:20:ARG:HH21	2.16	0.47
9:9:38:MET:HA	9:9:41:LEU:HD12	1.96	0.47
9:9:40:GLU:CD	9:9:54:VAL:HG11	2.39	0.47
10:A:19:G:C6	41:a:2112:G:O5'	2.67	0.47
10:A:30:G:O2'	10:A:31:G:H5'	2.15	0.47
10:A:70:G:C2'	10:A:71:C:H5''	2.45	0.47
14:AE:287:ALA:CB	14:AE:292:VAL:CG2	2.93	0.47
14:AE:616:PRO:HA	14:AE:619:ILE:HG22	1.96	0.47
16:AG:61:ARG:HA	16:AG:94:GLU:HA	1.97	0.47
16:AG:87:LEU:HD22	16:AG:93:VAL:HG21	1.96	0.47
16:AG:353:HIS:O	16:AG:356:ILE:CA	2.63	0.47
18:D:13:U:C4	18:D:21:G:C2	3.03	0.47
18:D:821:G:H2'	18:D:822:U:H6	1.79	0.47
18:D:829:G:O3'	21:G:23:TRP:HZ2	1.95	0.47
23:I:107:ARG:HB3	23:I:108:LYS:HD2	1.97	0.47
25:K:165:LEU:HD12	28:N:114:ARG:NH1	2.30	0.47
30:P:13:PHE:CE1	30:P:67:ILE:HD11	2.50	0.47
37:W:77:THR:OG1	37:W:78:ARG:HD2	2.15	0.47
41:a:247:G:O6	55:o:12:LYS:NZ	2.39	0.47
41:a:257:C:O2	61:u:104:GLN:NE2	2.48	0.47
41:a:879:G:H2'	41:a:880:G:O4'	2.14	0.47
41:a:921:C:C2	41:a:922:C:C5	3.03	0.47
41:a:2013:A:C2	41:a:2613:U:O4	2.68	0.47
41:a:2064:C:H2'	41:a:2065:C:H6	1.79	0.47
41:a:2700:A:H2'	41:a:2701:U:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:2803:G:H2'	41:a:2804:U:C5	2.50	0.47
50:j:9:VAL:O	50:j:197:THR:HG23	2.15	0.47
52:l:112:LEU:HD21	52:l:186:VAL:HB	1.97	0.47
52:l:168:ASP:HB3	52:l:183:PHE:CE2	2.49	0.47
59:s:56:VAL:O	59:s:124:VAL:HA	2.14	0.47
62:v:31:PHE:O	62:v:104:GLU:OE1	2.33	0.47
66:z:69:ALA:HA	66:z:106:PHE:HZ	1.80	0.47
1:0:82:HIS:CD2	61:u:23:ILE:HG12	2.50	0.47
4:3:47:LYS:NZ	41:a:482:A:O5'	2.48	0.47
5:4:53:LYS:O	5:4:56:PHE:HD2	1.97	0.47
9:9:38:MET:SD	39:Y:117:THR:CG2	3.02	0.47
12:AB:7:LEU:HD22	12:AB:78:PHE:HA	1.96	0.47
12:AB:51:PHE:CZ	14:AE:288:PRO:CG	2.89	0.47
12:AB:160:ARG:HE	12:AB:160:ARG:HB2	1.47	0.47
14:AE:86:GLU:N	14:AE:86:GLU:CD	2.73	0.47
14:AE:1037:PHE:HB3	14:AE:1040:MET:HB2	1.97	0.47
16:AG:1:MET:SD	16:AG:53:SER:HA	2.55	0.47
10:B:47:U:H2'	10:B:48:C:H4'	1.97	0.47
10:B:75:C:O2'	10:B:76:A:N7	2.48	0.47
18:D:520:A:O2'	32:R:70:GLU:CD	2.58	0.47
18:D:1189:U:OP1	33:S:98:LYS:NZ	2.48	0.47
18:D:1359:C:OP2	33:S:75:ARG:NE	2.42	0.47
20:F:37:PHE:HA	31:Q:123:PRO:HB2	1.97	0.47
21:G:207:ILE:HG23	21:G:208:ARG:N	2.30	0.47
22:H:277:GLY:HA2	22:H:331:MET:HE3	1.97	0.47
23:I:132:ARG:CA	23:I:135:LYS:HE3	2.44	0.47
27:M:69:VAL:HA	27:M:138:ARG:HD3	1.97	0.47
33:S:79:LEU:HB2	33:S:84:VAL:CG2	2.45	0.47
34:T:15:PHE:CD2	34:T:30:ALA:HB2	2.49	0.47
37:W:63:THR:HG22	37:W:64:ASP:N	2.30	0.47
41:a:626:A:C2	61:u:78:ARG:CZ	2.98	0.47
41:a:1405:U:H2'	41:a:1406:U:C5	2.49	0.47
41:a:1441:G:H2'	41:a:1442:U:C6	2.50	0.47
41:a:1936:A:N7	41:a:1945:G:C8	2.83	0.47
41:a:2200:C:OP2	43:c:37:ARG:NH2	2.48	0.47
41:a:2351:G:O6	55:o:39:LYS:NZ	2.48	0.47
41:a:2725:A:C4	41:a:2727:A:N7	2.83	0.47
50:j:1:MET:O	50:j:204:LYS:HD2	2.15	0.47
53:m:25:LYS:HE2	53:m:28:ARG:HH21	1.78	0.47
62:v:111:GLU:O	62:v:112:LEU:C	2.57	0.47
64:x:90:VAL:HG13	64:x:115:LEU:HD11	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:4:VAL:HG23	1:0:39:LEU:HB2	1.97	0.47
3:2:1:MET:HE1	41:a:139:U:C4	2.50	0.47
3:2:18:GLU:O	3:2:22:THR:HG23	2.15	0.47
5:4:48:MET:HE3	5:4:85:LYS:HA	1.97	0.47
11:AA:103:VAL:HG12	11:AA:117:ILE:HG22	1.97	0.47
11:AA:230:PHE:HB2	11:AA:333:ILE:HB	1.97	0.47
11:AA:1286:THR:O	11:AA:1290:MET:HB2	2.14	0.47
12:AB:104:ILE:C	12:AB:106:ASP:N	2.72	0.47
13:AD:35:PHE:HA	13:AD:38:THR:HG22	1.97	0.47
14:AE:513:MET:HE2	14:AE:513:MET:HB3	1.79	0.47
14:AE:1321:SER:OG	14:AE:1349:GLU:OE2	2.32	0.47
10:B:26:G:H1	10:B:44:A:N6	2.12	0.47
18:D:22:G:C5	18:D:23:C:C5	3.03	0.47
18:D:687:A:C2	18:D:704:A:C4	3.02	0.47
18:D:745:G:H2'	18:D:746:A:C8	2.50	0.47
18:D:1225:A:H2'	18:D:1226:C:C5	2.49	0.47
18:D:1238:A:H2	18:D:1241:G:N3	2.13	0.47
20:F:58:LYS:O	20:F:62:ARG:NE	2.45	0.47
21:G:197:ASP:OD2	21:G:198:PHE:CE2	2.68	0.47
23:I:181:ASP:HB2	23:I:207:ILE:HD11	1.97	0.47
29:O:89:GLU:O	29:O:92:GLU:OE1	2.32	0.47
34:T:11:ILE:HG21	34:T:31:LEU:CD1	2.45	0.47
34:T:71:LYS:HZ3	34:T:78:TYR:HD2	1.62	0.47
39:Y:96:LYS:HD2	39:Y:136:GLY:O	2.15	0.47
41:a:6:A:H5'	59:s:131:ASN:OD1	2.15	0.47
41:a:1006:C:C2	41:a:1138:G:N2	2.83	0.47
41:a:1065:U:HO2'	41:a:1066:U:C5'	2.26	0.47
41:a:1197:G:C4	41:a:1198:U:C5	3.02	0.47
41:a:1200:C:C2	41:a:1201:U:C5	3.03	0.47
41:a:2314:A:P	54:n:88:LYS:NZ	2.87	0.47
41:a:2784:U:H2'	41:a:2785:C:H6	1.80	0.47
42:b:51:VAL:HG12	42:b:59:LEU:HD12	1.96	0.47
47:g:37:CYS:N	47:g:40:CYS:SG	2.71	0.47
49:i:4:GLN:OE1	49:i:8:PRO:CD	2.63	0.47
54:n:142:ASP:CB	54:n:145:LYS:HE2	2.40	0.47
66:z:69:ALA:O	66:z:74:ILE:HG22	2.15	0.47
5:4:53:LYS:HB3	5:4:55:GLU:OE1	2.16	0.46
10:A:47:U:H2'	10:A:48:C:H4'	1.97	0.46
11:AA:28:LEU:HD21	11:AA:524:ILE:HG13	1.97	0.46
12:AB:155:LYS:CG	12:AB:156:ASN:H	2.26	0.46
14:AE:438:GLU:OE2	14:AE:481:ARG:NH1	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:36:LYS:HB2	16:AG:101:THR:HG21	1.97	0.46
16:AG:277:ASP:HB2	16:AG:282:GLN:HG3	1.95	0.46
10:B:30:G:O2'	10:B:31:G:H5'	2.15	0.46
18:D:1109:C:C2	18:D:1110:A:C8	3.04	0.46
18:D:1363:A:C5	18:D:1365:G:C6	3.03	0.46
21:G:110:SER:HA	21:G:113:ARG:HH21	1.79	0.46
22:H:304:VAL:O	22:H:304:VAL:CG1	2.63	0.46
23:I:25:ASN:O	23:I:27:LYS:N	2.47	0.46
27:M:74:GLU:CG	27:M:91:VAL:CG1	2.94	0.46
27:M:111:ARG:O	27:M:119:ARG:CZ	2.63	0.46
41:a:396:G:C6	41:a:397:U:C4	3.04	0.46
41:a:592:A:C2	55:o:4:ILE:HD11	2.49	0.46
41:a:909:A:H2'	41:a:912:C:H5	1.80	0.46
41:a:963:U:H2'	41:a:964:C:H6	1.79	0.46
41:a:1278:C:H2'	41:a:1279:G:H8	1.80	0.46
41:a:1786:A:H1'	41:a:1938:A:N6	2.31	0.46
41:a:2294:G:OP1	64:x:98:GLN:OE1	2.33	0.46
41:a:2766:A:C5	41:a:2767:C:C5	3.03	0.46
54:n:171:ALA:O	54:n:174:ASP:N	2.47	0.46
1:0:4:VAL:CG2	1:0:40:MET:HB3	2.45	0.46
1:0:71:LYS:HE2	1:0:90:ARG:HD2	1.97	0.46
3:2:57:VAL:HG12	3:2:86:THR:OG1	2.15	0.46
9:9:18:VAL:CG1	9:9:71:CYS:HB2	2.45	0.46
9:9:59:LEU:HB2	9:9:62:ARG:CG	2.45	0.46
9:9:60:LEU:O	9:9:64:VAL:HB	2.15	0.46
9:9:69:PHE:C	9:9:72:LEU:HD11	2.40	0.46
12:AB:141:LEU:O	12:AB:150:ILE:O	2.33	0.46
14:AE:804:ALA:O	14:AE:806:ASP:N	2.47	0.46
16:AG:434:LEU:CD2	16:AG:455:THR:O	2.50	0.46
18:D:35:G:N3	32:R:115:SER:OG	2.47	0.46
18:D:737:C:C2	18:D:738:C:C5	3.03	0.46
20:F:12:PHE:CE1	31:Q:107:ILE:CG2	2.98	0.46
20:F:64:ASN:HA	20:F:67:ARG:HD3	1.97	0.46
21:G:110:SER:HA	21:G:113:ARG:NE	2.29	0.46
22:H:287:LEU:HG	22:H:292:CYS:HA	1.98	0.46
26:L:17:GLN:C	26:L:21:MET:HE1	2.40	0.46
26:L:43:GLY:HA2	26:L:58:HIS:CE1	2.51	0.46
27:M:17:LYS:HZ2	27:M:18:PHE:HE1	1.57	0.46
27:M:69:VAL:HG23	27:M:100:ALA:HB1	1.97	0.46
30:P:10:LEU:C	30:P:11:LYS:HD3	2.40	0.46
36:V:27:ARG:HH12	36:V:42:THR:CB	2.26	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:W:32:ARG:NH2	37:W:34:TRP:CZ3	2.84	0.46
41:a:15:G:O2'	49:i:15:MET:HE2	2.15	0.46
41:a:1794:A:H2'	41:a:1795:C:C6	2.50	0.46
41:a:2250:G:OP1	62:v:84:LYS:NZ	2.48	0.46
41:a:2299:U:H2'	41:a:2300:C:C6	2.49	0.46
41:a:2300:C:H2'	41:a:2301:C:H6	1.79	0.46
41:a:2362:C:OP2	55:o:40:ARG:CZ	2.63	0.46
41:a:2646:C:O5'	41:a:2646:C:H6	1.98	0.46
45:e:12:GLU:CG	45:e:13:GLU:N	2.78	0.46
48:h:108:LYS:HZ3	48:h:194:GLU:N	2.13	0.46
49:i:4:GLN:OE1	49:i:7:LYS:HA	2.16	0.46
55:o:62:LEU:HG	55:o:65:ALA:HA	1.96	0.46
56:p:52:PHE:CZ	56:p:72:LEU:HD22	2.50	0.46
60:t:1:MET:CE	60:t:32:TYR:CG	2.99	0.46
60:t:42:THR:C	60:t:44:LYS:HZ2	2.16	0.46
10:A:24:U:H2'	10:A:25:C:C6	2.51	0.46
11:AA:856:ASN:N	16:AG:35:THR:HG21	2.30	0.46
12:AB:111:TYR:HB3	12:AB:112:PRO:HD2	1.96	0.46
14:AE:218:THR:HA	14:AE:221:ILE:HG22	1.96	0.46
14:AE:290:ILE:O	14:AE:290:ILE:HG12	2.14	0.46
16:AG:201:LYS:HB3	16:AG:201:LYS:HZ3	1.80	0.46
10:B:24:U:H2'	10:B:25:C:C6	2.51	0.46
17:C:21:ILE:CD1	17:C:54:GLN:NE2	2.79	0.46
17:C:31:ASN:OD1	22:H:268:VAL:HG12	2.15	0.46
18:D:309:A:O2'	18:D:607:A:N1	2.44	0.46
18:D:436:C:C2	18:D:437:U:C5	3.02	0.46
18:D:520:A:O3'	32:R:70:GLU:OE2	2.32	0.46
18:D:983:A:H5'	18:D:984:C:OP2	2.15	0.46
18:D:1055:A:H1'	23:I:156:ARG:NH2	2.31	0.46
18:D:1227:A:H5'	38:X:110:LYS:HZ1	1.81	0.46
18:D:1368:A:OP1	29:O:113:ARG:NH2	2.48	0.46
21:G:18:HIS:CE1	21:G:205:ASP:OD1	2.68	0.46
23:I:134:MET:HE1	23:I:167:TRP:CA	2.43	0.46
24:J:76:TYR:CE2	24:J:204:TYR:CB	2.95	0.46
27:M:17:LYS:HZ2	27:M:18:PHE:HD1	1.58	0.46
27:M:116:MET:HA	27:M:119:ARG:HD3	1.97	0.46
29:O:127:PHE:CD1	29:O:128:SER:N	2.83	0.46
34:T:48:LYS:O	34:T:50:HIS:N	2.48	0.46
39:Y:106:GLN:OE1	39:Y:125:THR:HG21	2.15	0.46
41:a:78:U:OP1	45:e:4:LYS:CE	2.63	0.46
41:a:753:A:C6	41:a:754:U:C5	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1656:C:P	50:j:141:ARG:HD2	2.55	0.46
41:a:1796:U:H2'	41:a:1797:G:C8	2.50	0.46
41:a:2313:C:O3'	54:n:88:LYS:NZ	2.48	0.46
41:a:2743:U:O2'	56:p:153:ARG:NH1	2.49	0.46
41:a:2840:C:C2	41:a:2841:C:C5	3.03	0.46
48:h:138:GLY:H	48:h:164:ILE:HG23	1.79	0.46
49:i:55:ILE:HD13	63:w:112:TYR:CE1	2.50	0.46
52:l:1:MET:CE	52:l:20:GLY:N	2.79	0.46
52:l:148:ILE:CD1	52:l:187:VAL:HB	2.44	0.46
59:s:25:LEU:HD11	59:s:101:ILE:HD13	1.97	0.46
62:v:30:SER:N	62:v:104:GLU:OE2	2.48	0.46
66:z:113:ALA:O	66:z:117:LEU:HD13	2.15	0.46
11:AA:176:ILE:HD11	11:AA:428:VAL:HG21	1.98	0.46
11:AA:400:VAL:HG22	11:AA:584:TYR:HB3	1.96	0.46
12:AB:102:LYS:NZ	14:AE:285:LEU:HG	2.27	0.46
13:AD:182:ARG:HD2	14:AE:581:MET:HE1	1.97	0.46
13:AD:286:GLU:N	13:AD:315:GLY:HA2	2.18	0.46
14:AE:210:SER:O	14:AE:214:ARG:N	2.43	0.46
14:AE:437:PHE:HZ	14:AE:453:VAL:HG11	1.79	0.46
16:AG:197:VAL:HG11	16:AG:199:ARG:NH2	2.30	0.46
17:C:12:ARG:NH1	17:C:13:PHE:CE1	2.84	0.46
18:D:110:C:O4'	35:U:25:ARG:NH2	2.49	0.46
18:D:339:C:H2'	18:D:340:U:C6	2.50	0.46
18:D:653:U:N1	28:N:56:LYS:HE3	2.30	0.46
19:E:54:MET:CE	19:E:75:HIS:CE1	2.99	0.46
23:I:22:TRP:CZ2	23:I:32:ASN:HB2	2.50	0.46
23:I:134:MET:HE2	23:I:168:TYR:CB	2.46	0.46
27:M:95:ARG:CZ	27:M:99:LEU:HD21	2.45	0.46
36:V:61:ILE:C	36:V:73:TRP:HZ3	2.23	0.46
37:W:9:PRO:HB3	47:g:64:PHE:CZ	2.51	0.46
41:a:404:A:H4'	41:a:405:U:O5'	2.15	0.46
41:a:581:C:H2'	41:a:582:A:C8	2.50	0.46
41:a:1477:A:N6	41:a:1514:G:O2'	2.45	0.46
41:a:1598:A:C4	41:a:1599:U:C6	3.03	0.46
43:c:71:LEU:O	43:c:76:GLU:HG3	2.16	0.46
50:j:5:VAL:HG22	50:j:202:ILE:CD1	2.45	0.46
50:j:91:THR:HB	50:j:94:GLN:CG	2.44	0.46
52:l:6:LYS:HE2	52:l:6:LYS:HB2	1.75	0.46
52:l:42:GLY:HA3	52:l:92:HIS:HE1	1.80	0.46
52:l:175:ILE:HG21	52:l:180:LEU:HD11	1.97	0.46
55:o:33:LEU:O	55:o:41:LYS:NZ	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:w:24:MET:HG3	63:w:44:LEU:HD12	1.97	0.46
63:w:44:LEU:C	63:w:44:LEU:HD23	2.39	0.46
63:w:115:LEU:HD23	63:w:117:ASP:N	2.30	0.46
66:z:108:ALA:O	66:z:112:LYS:HG2	2.15	0.46
5:4:23:ALA:O	5:4:24:ASN:OD1	2.33	0.46
10:A:19:G:O6	41:a:2112:G:O5'	2.34	0.46
11:AA:800:MET:HE3	11:AA:800:MET:HB2	1.69	0.46
11:AA:812:PHE:HZ	14:AE:503:SER:HB2	1.81	0.46
11:AA:855:PRO:HD3	16:AG:105:ILE:CD1	2.41	0.46
12:AB:115:LYS:CD	12:AB:129:ILE:CB	2.92	0.46
14:AE:482:ALA:HA	15:AF:6:VAL:HG21	1.98	0.46
16:AG:233:ARG:HB2	16:AG:327:LEU:CD2	2.42	0.46
16:AG:288:MET:HE2	16:AG:288:MET:HB3	1.75	0.46
16:AG:434:LEU:HD11	16:AG:455:THR:CA	2.46	0.46
17:C:34:THR:HB	17:C:38:LYS:H	1.81	0.46
17:C:63:ARG:HB3	17:C:70:TYR:CE1	2.51	0.46
18:D:216:U:H2'	18:D:217:C:C6	2.50	0.46
18:D:371:A:H2'	18:D:372:C:O4'	2.15	0.46
18:D:440:C:C2	18:D:441:A:C8	3.04	0.46
18:D:611:C:C2	18:D:612:C:C6	3.04	0.46
18:D:928:G:H2'	18:D:929:G:H8	1.81	0.46
18:D:1328:C:O3'	38:X:28:THR:HB	2.16	0.46
18:D:1513:A:H2'	18:D:1514:G:C8	2.51	0.46
21:G:49:MET:HB3	21:G:49:MET:HE2	1.79	0.46
22:H:37:LEU:HD11	22:H:47:ALA:HA	1.96	0.46
22:H:115:LYS:HA	22:H:119:GLY:C	2.40	0.46
25:K:143:GLY:O	25:K:146:ASN:OD1	2.34	0.46
26:L:9:MET:HE3	26:L:9:MET:HB3	1.85	0.46
28:N:112:THR:HG23	28:N:115:ALA:H	1.80	0.46
41:a:136:G:C6	41:a:144:A:C6	3.04	0.46
41:a:644:A:H2'	41:a:645:C:O4'	2.15	0.46
41:a:1499:C:C2	41:a:1500:G:C8	3.03	0.46
41:a:2236:U:H2'	41:a:2237:G:O4'	2.15	0.46
56:p:8:PRO:C	56:p:69:ARG:HH21	2.22	0.46
57:q:2:LYS:HE2	57:q:35:GLN:HG3	1.97	0.46
58:r:58:LEU:O	58:r:61:VAL:HG22	2.14	0.46
58:r:72:ILE:O	58:r:72:ILE:HG22	2.16	0.46
58:r:135:HIS:CE1	58:r:137:GLU:OE1	2.62	0.46
60:t:50:GLY:O	60:t:53:LYS:NZ	2.47	0.46
61:u:110:VAL:HG23	61:u:125:LEU:HD12	1.97	0.46
62:v:41:LEU:HG	62:v:96:ILE:CG1	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:A:52:G:C6	10:A:63:G:O6	2.68	0.46
12:AB:120:GLU:CB	12:AB:162:LEU:HB2	2.46	0.46
14:AE:287:ALA:HB3	14:AE:292:VAL:CG2	2.46	0.46
14:AE:1341:ARG:NH1	14:AE:1343:GLU:OE2	2.49	0.46
16:AG:26:ALA:HB1	16:AG:117:LYS:HG2	1.95	0.46
16:AG:442:ARG:O	16:AG:446:PHE:CE2	2.63	0.46
10:B:48:C:C2'	10:B:49:G:OP2	2.62	0.46
18:D:413:G:N2	18:D:428:G:H1'	2.31	0.46
18:D:771:G:C6	18:D:809:G:C6	3.03	0.46
18:D:915:A:C5	18:D:916:U:C6	3.04	0.46
18:D:1132:C:O2	18:D:1132:C:H2'	2.16	0.46
18:D:1226:C:H4'	18:D:1227:A:OP1	2.16	0.46
22:H:303:LEU:C	22:H:305:HIS:N	2.73	0.46
30:P:59:LYS:HE2	30:P:62:ARG:NH2	2.31	0.46
31:Q:20:VAL:HB	31:Q:35:THR:CG2	2.45	0.46
32:R:5:ASN:HB3	32:R:9:ARG:HH22	1.80	0.46
32:R:68:GLY:O	32:R:99:ARG:NH1	2.48	0.46
37:W:32:ARG:NH2	37:W:34:TRP:HZ3	2.14	0.46
38:X:3:ARG:HB3	47:g:35:ASP:OD2	2.15	0.46
39:Y:126:ARG:HH12	41:a:1082:U:C5'	2.29	0.46
41:a:182:A:H2'	41:a:183:C:H6	1.81	0.46
41:a:1064:C:O2'	41:a:1065:U:C6	2.63	0.46
41:a:2454:G:C6	41:a:2499:C:N4	2.83	0.46
41:a:2683:C:H4'	50:j:13:ARG:NH1	2.31	0.46
41:a:2700:A:H2'	41:a:2701:U:H6	1.81	0.46
46:f:12:SER:C	46:f:54:MET:HE1	2.40	0.46
47:g:8:LYS:NZ	47:g:10:GLU:HB2	2.30	0.46
47:g:56:ARG:HH21	47:g:59:ARG:HH21	1.62	0.46
48:h:2:ALA:N	48:h:20:VAL:O	2.48	0.46
52:l:35:TYR:CD2	52:l:178:VAL:HG11	2.51	0.46
58:r:18:GLN:OE1	58:r:39:ALA:HB1	2.15	0.46
59:s:123:LYS:HD2	59:s:132:HIS:CD2	2.50	0.46
63:w:48:VAL:CG1	63:w:49:GLU:OE1	2.64	0.46
63:w:56:LYS:NZ	63:w:90:ARG:O	2.47	0.46
3:2:3:ARG:HH22	3:2:4:GLU:HB2	1.81	0.46
5:4:53:LYS:HD2	5:4:56:PHE:HE2	1.77	0.46
9:9:43:LYS:HE3	9:9:102:ALA:HB2	1.97	0.46
10:A:46:G:H1'	10:A:47:U:C5	2.51	0.46
11:AA:735:LYS:HA	11:AA:748:ILE:HG22	1.98	0.46
14:AE:388:ARG:NH2	14:AE:414:GLU:OE1	2.49	0.46
16:AG:363:LEU:HG	16:AG:410:ALA:HA	1.94	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:440:VAL:CG2	16:AG:481:LEU:HD21	2.42	0.46
16:AG:479:GLY:O	16:AG:483:MET:HG2	2.15	0.46
10:B:50:U:H2'	10:B:51:C:C6	2.51	0.46
10:B:75:C:P	41:a:2602:A:H2'	2.55	0.46
18:D:197:A:C6	18:D:221:C:H4'	2.50	0.46
18:D:642:A:H2'	18:D:643:C:H6	1.80	0.46
18:D:739:C:O2'	34:T:42:HIS:CE1	2.68	0.46
18:D:826:C:O2	28:N:16:ASN:ND2	2.49	0.46
18:D:915:A:C6	18:D:916:U:C5	3.04	0.46
20:F:16:LEU:HD12	31:Q:98:ARG:HH21	1.81	0.46
25:K:16:ILE:HD11	25:K:38:VAL:CG1	2.46	0.46
25:K:86:LYS:HE3	25:K:95:PHE:CD1	2.51	0.46
27:M:16:PRO:CB	29:O:46:MET:HG3	2.42	0.46
28:N:6:PRO:O	28:N:33:LYS:NZ	2.48	0.46
29:O:63:LEU:HD13	29:O:65:ILE:HD11	1.97	0.46
39:Y:59:THR:C	39:Y:66:PHE:HB2	2.41	0.46
39:Y:59:THR:O	39:Y:66:PHE:HB2	2.16	0.46
39:Y:79:LEU:O	39:Y:83:ALA:HB3	2.16	0.46
39:Y:126:ARG:NH2	41:a:1082:U:O3'	2.47	0.46
41:a:57:C:C2	41:a:58:G:C8	3.04	0.46
41:a:67:U:N3	41:a:68:G:C5	2.84	0.46
41:a:584:C:N4	41:a:585:G:C6	2.83	0.46
41:a:1068:G:O6	41:a:1069:A:N6	2.48	0.46
41:a:2190:G:H2'	41:a:2191:A:C8	2.50	0.46
41:a:2357:G:P	42:b:20:ARG:CZ	3.04	0.46
41:a:2756:U:N3	41:a:2758:A:N6	2.64	0.46
43:c:76:GLU:OE1	43:c:77:LYS:O	2.34	0.46
45:e:10:SER:OG	45:e:12:GLU:HG2	2.15	0.46
51:k:34:LEU:HB2	51:k:51:GLU:OE2	2.16	0.46
2:1:50:VAL:HG12	2:1:105:VAL:CG1	2.45	0.46
9:9:25:ALA:HB3	9:9:99:PHE:CE2	2.51	0.46
10:A:50:U:H2'	10:A:51:C:C6	2.51	0.46
11:AA:712:SER:OG	11:AA:713:GLY:N	2.49	0.46
15:AF:25:ARG:NH1	15:AF:61:ASN:OD1	2.49	0.46
16:AG:80:ALA:HB1	16:AG:87:LEU:HB2	1.98	0.46
16:AG:362:TYR:HE1	16:AG:414:LEU:HD21	1.80	0.46
16:AG:429:LYS:HD2	16:AG:429:LYS:N	2.24	0.46
17:C:33:ILE:O	22:H:338:GLU:CG	2.64	0.46
18:D:610:U:N3	18:D:611:C:C5	2.83	0.46
18:D:736:C:H5'	26:L:90:MET:HE2	1.97	0.46
18:D:1458:G:H5''	19:E:26:SER:OG	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:F:12:PHE:CD1	31:Q:101:ASN:ND2	2.84	0.46
22:H:302:GLY:HA3	22:H:344:LEU:HD13	1.96	0.46
26:L:94:HIS:CG	26:L:95:ALA:H	2.34	0.46
28:N:114:ARG:HD2	28:N:114:ARG:C	2.41	0.46
29:O:58:VAL:HG23	29:O:59:GLU:N	2.31	0.46
34:T:47:LYS:HD3	34:T:47:LYS:N	2.30	0.46
41:a:666:A:H4'	61:u:48:ARG:HD2	1.97	0.46
41:a:1209:U:O2'	41:a:1237:A:N1	2.46	0.46
41:a:1408:G:N3	41:a:1408:G:H2'	2.31	0.46
41:a:1421:G:C2	41:a:1422:G:C8	3.03	0.46
41:a:1433:A:H2'	41:a:1434:A:C1'	2.46	0.46
41:a:2197:U:C5	41:a:2224:G:C6	3.03	0.46
41:a:2245:U:O2'	41:a:2436:G:OP2	2.27	0.46
41:a:2529:G:N7	57:q:32:LYS:NZ	2.63	0.46
41:a:2683:C:OP1	65:y:51:ARG:NH2	2.46	0.46
44:d:44:G:H3'	54:n:92:ARG:HH22	1.81	0.46
47:g:1:MET:SD	47:g:3:LYS:HE2	2.56	0.46
47:g:47:LYS:CD	54:n:178:ARG:HH22	2.29	0.46
50:j:74:GLU:HG2	50:j:75:ALA:N	2.31	0.46
52:l:195:GLN:CA	52:l:198:GLU:OE1	2.64	0.46
56:p:155:GLU:O	56:p:159:GLY:HA2	2.14	0.46
59:s:17:VAL:HG23	59:s:137:PRO:HB2	1.98	0.46
59:s:55:ILE:HG13	59:s:123:LYS:CE	2.46	0.46
59:s:136:GLN:N	59:s:137:PRO:CD	2.78	0.46
60:t:59:LYS:HZ3	60:t:92:GLU:CG	2.29	0.46
2:1:24:ILE:HG21	2:1:36:LEU:CD1	2.42	0.46
4:3:46:GLN:NE2	4:3:54:GLN:HG2	2.31	0.46
9:9:6:GLN:CA	9:9:9:GLN:NE2	2.78	0.46
10:A:32:C:C2'	10:A:33:U:H5'	2.46	0.46
10:A:68:C:H3'	10:A:69:C:H5''	1.97	0.46
12:AB:6:LEU:N	12:AB:88:VAL:HG21	2.31	0.46
12:AB:51:PHE:CZ	14:AE:288:PRO:HG3	2.47	0.46
12:AB:130:PHE:HA	12:AB:152:HIS:HE2	1.77	0.46
13:AC:64:VAL:HG11	13:AC:78:ILE:HG21	1.97	0.46
14:AE:848:VAL:HB	14:AE:858:VAL:HG22	1.98	0.46
10:B:32:C:C2'	10:B:33:U:H5'	2.46	0.46
20:F:63:GLU:HG2	20:F:67:ARG:CZ	2.46	0.46
21:G:19:GLN:NE2	22:H:75:VAL:HG13	2.30	0.46
23:I:58:GLU:OE2	30:P:94:ALA:HB1	2.16	0.46
25:K:150:PRO:O	25:K:153:VAL:HG22	2.16	0.46
32:R:2:ALA:CA	32:R:7:LEU:HD11	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:S:82:ILE:HG23	33:S:83:LYS:N	2.31	0.46
36:V:7:THR:CG2	36:V:60:GLU:OE2	2.63	0.46
38:X:56:LEU:HA	38:X:59:GLU:OE1	2.16	0.46
41:a:374:A:C2	41:a:375:G:H1'	2.51	0.46
41:a:391:A:C5	41:a:392:U:C5	3.04	0.46
41:a:493:G:H2'	41:a:494:G:O4'	2.16	0.46
41:a:644:A:C2	41:a:2369:A:H1'	2.51	0.46
41:a:1406:U:O2	41:a:1407:G:C8	2.69	0.46
41:a:1707:G:C4	41:a:1708:C:C5	3.04	0.46
41:a:2373:G:H2'	41:a:2374:C:H6	1.81	0.46
41:a:2755:C:H3'	57:q:19:ARG:NH2	2.31	0.46
44:d:42:C:C5	54:n:66:LEU:HD12	2.49	0.46
45:e:12:GLU:HG2	45:e:13:GLU:H	1.81	0.46
47:g:18:CYS:HB2	47:g:40:CYS:HB3	1.96	0.46
52:l:6:LYS:HZ1	52:l:119:ILE:C	2.24	0.46
52:l:60:TRP:CD1	52:l:69:ARG:HH12	2.33	0.46
55:o:26:HIS:CE1	55:o:48:ALA:HB2	2.51	0.46
55:o:49:MET:H	55:o:49:MET:HE2	1.81	0.46
60:t:76:VAL:HG12	65:y:73:VAL:HB	1.97	0.46
65:y:106:LYS:CD	65:y:109:ARG:HH22	2.29	0.46
9:9:11:ILE:HG12	9:9:65:GLU:HG2	1.98	0.46
10:A:6:G:O2'	10:A:7:G:H8	1.98	0.46
12:AB:129:ILE:H	12:AB:142:LEU:HB3	1.81	0.46
12:AB:131:THR:HG23	12:AB:142:LEU:HD22	1.97	0.46
14:AE:1108:GLN:HE21	14:AE:1123:ARG:HH12	1.62	0.46
16:AG:127:VAL:HG22	16:AG:192:GLY:CA	2.46	0.46
16:AG:183:LEU:CD2	16:AG:197:VAL:HG22	2.45	0.46
18:D:765:G:C6	18:D:812:G:C4	3.04	0.46
18:D:878:A:P	28:N:80:ARG:HH11	2.39	0.46
18:D:915:A:C5	18:D:916:U:C5	3.04	0.46
18:D:1435:G:H2'	18:D:1436:U:C6	2.51	0.46
24:J:95:GLU:HG3	24:J:186:PRO:HG3	1.98	0.46
26:L:29:ILE:HG21	26:L:64:VAL:HG13	1.97	0.46
26:L:35:LYS:HD2	26:L:36:ILE:H	1.82	0.46
27:M:78:ARG:CG	27:M:80:VAL:HG13	2.46	0.46
30:P:10:LEU:HD22	30:P:22:THR:HG22	1.98	0.46
31:Q:116:ILE:HG13	31:Q:116:ILE:O	2.15	0.46
34:T:15:PHE:CE2	34:T:30:ALA:HB1	2.51	0.46
39:Y:19:PRO:HG2	39:Y:23:VAL:CG2	2.42	0.46
39:Y:37:PHE:HZ	39:Y:56:VAL:HG11	1.79	0.46
41:a:306:U:H2'	41:a:307:G:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:609:A:H3'	41:a:610:C:H6	1.80	0.46
41:a:669:G:H2'	41:a:670:A:N7	2.31	0.46
41:a:1656:C:H2'	41:a:1657:U:H6	1.81	0.46
41:a:2309:A:H2'	41:a:2310:C:O4'	2.16	0.46
41:a:2314:A:O2'	54:n:155:THR:HG21	2.15	0.46
48:h:33:LEU:O	48:h:64:ILE:HG12	2.16	0.46
49:i:28:LEU:HB2	49:i:37:LYS:HE3	1.97	0.46
50:j:48:ILE:CD1	50:j:84:LEU:HD11	2.46	0.46
51:k:19:HIS:CE1	51:k:41:PRO:CD	2.99	0.46
52:l:108:ILE:HD11	52:l:180:LEU:HD13	1.98	0.46
52:l:130:LYS:HB2	52:l:133:LEU:HD12	1.97	0.46
56:p:69:ARG:NH1	56:p:73:ASN:CG	2.74	0.46
1:0:58:VAL:HG13	1:0:60:LYS:HZ3	1.81	0.45
2:1:11:ARG:NH1	2:1:11:ARG:HB3	2.30	0.45
2:1:86:MET:SD	2:1:88:ARG:HD2	2.56	0.45
3:2:3:ARG:CZ	3:2:5:GLU:OE1	2.64	0.45
5:4:53:LYS:HD2	5:4:56:PHE:CZ	2.50	0.45
6:5:10:DT:OP1	11:AA:476:LYS:HD2	2.16	0.45
7:6:25:DT:OP1	11:AA:496:LYS:O	2.34	0.45
9:9:94:ARG:CB	9:9:97:LYS:CE	2.94	0.45
14:AE:797:THR:HG22	14:AE:924:GLY:HA3	1.97	0.45
16:AG:288:MET:HE3	16:AG:289:ALA:N	2.31	0.45
16:AG:339:MET:HE2	16:AG:343:ASP:HB3	1.98	0.45
17:C:14:THR:HG21	17:C:48:ARG:CD	2.46	0.45
18:D:13:U:O2	18:D:915:A:N7	2.49	0.45
18:D:1173:U:H2'	18:D:1174:G:O4'	2.16	0.45
19:E:82:GLN:HA	19:E:85:LYS:NZ	2.31	0.45
22:H:24:VAL:HG23	22:H:24:VAL:O	2.16	0.45
22:H:32:ASP:OD1	22:H:35:VAL:HG23	2.17	0.45
25:K:13:GLU:OE1	25:K:13:GLU:N	2.49	0.45
26:L:47:LEU:HD13	26:L:51:ILE:HG12	1.98	0.45
27:M:132:GLY:O	27:M:136:LYS:HD3	2.17	0.45
27:M:134:ALA:HA	27:M:137:LYS:CD	2.46	0.45
28:N:8:ALA:N	28:N:77:ARG:HH11	2.14	0.45
33:S:12:LYS:NZ	33:S:16:LEU:HD21	2.31	0.45
34:T:75:VAL:HG13	34:T:76:ALA:N	2.31	0.45
37:W:44:MET:HE1	37:W:62:VAL:CG2	2.46	0.45
41:a:1107:G:C5	41:a:1108:U:C5	3.04	0.45
41:a:1406:U:O2'	41:a:1407:G:P	2.74	0.45
41:a:2289:G:C2	41:a:2290:G:C8	3.04	0.45
42:b:26:PHE:O	42:b:29:GLU:HG2	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:g:5:ILE:CD1	54:n:64:LYS:CE	2.92	0.45
49:i:40:ARG:HH12	49:i:41:HIS:CD2	2.34	0.45
50:j:5:VAL:HB	50:j:32:ASN:ND2	2.31	0.45
51:k:7:GLU:OE2	51:k:27:LYS:HG3	2.16	0.45
52:l:149:ILE:CD1	52:l:188:MET:HG2	2.46	0.45
55:o:55:LEU:CD2	55:o:59:ILE:HD11	2.45	0.45
57:q:1:MET:HE3	57:q:1:MET:HA	1.97	0.45
60:t:8:LEU:N	60:t:8:LEU:HD12	2.30	0.45
62:v:41:LEU:HD22	62:v:124:LEU:HD22	1.97	0.45
64:x:15:ARG:C	64:x:19:GLN:HE22	2.23	0.45
65:y:106:LYS:CD	65:y:109:ARG:NH2	2.79	0.45
3:2:5:GLU:HA	45:e:22:LEU:CD2	2.45	0.45
5:4:50:MET:CB	5:4:56:PHE:CE1	2.99	0.45
9:9:3:LEU:HD12	9:9:5:LEU:H	1.82	0.45
9:9:23:LEU:HA	9:9:118:ILE:HD11	1.98	0.45
9:9:34:THR:HA	9:9:37:LYS:NZ	2.32	0.45
9:9:61:ARG:CD	41:a:1046:A:O5'	2.64	0.45
9:9:87:GLU:OE2	9:9:95:LEU:CG	2.64	0.45
12:AB:6:LEU:HD13	14:AE:291:ILE:CG1	2.46	0.45
12:AB:6:LEU:CD2	14:AE:291:ILE:HD11	2.46	0.45
16:AG:138:ILE:HD12	16:AG:183:LEU:CD1	2.45	0.45
16:AG:226:ALA:HB1	16:AG:228:ARG:HH11	1.81	0.45
10:B:6:G:O2'	10:B:7:G:H8	1.98	0.45
17:C:12:ARG:NH2	17:C:28:THR:CG2	2.79	0.45
18:D:511:C:C2	18:D:512:U:C5	3.05	0.45
18:D:983:A:H2	18:D:984:C:C6	2.34	0.45
18:D:1202:U:C5	18:D:1203:C:C5	3.04	0.45
18:D:1209:C:C2	18:D:1210:C:C5	3.04	0.45
18:D:1512:U:H2'	18:D:1513:A:C8	2.51	0.45
19:E:54:MET:C	19:E:54:MET:SD	3.00	0.45
23:I:84:VAL:HG23	23:I:85:GLU:N	2.31	0.45
25:K:145:GLU:CD	25:K:146:ASN:N	2.74	0.45
26:L:96:VAL:O	26:L:96:VAL:HG23	2.16	0.45
28:N:25:VAL:HG23	28:N:63:LEU:CD1	2.46	0.45
29:O:113:ARG:HD2	33:S:101:TRP:CD1	2.52	0.45
30:P:26:VAL:C	30:P:30:LYS:HZ3	2.25	0.45
30:P:47:GLU:HB2	30:P:67:ILE:HG22	1.98	0.45
33:S:6:MET:HE3	33:S:63:ARG:NH1	2.30	0.45
33:S:86:GLU:OE2	33:S:90:ARG:HD3	2.16	0.45
34:T:3:LEU:HD23	34:T:4:SER:O	2.15	0.45
38:X:104:THR:O	38:X:104:THR:HG22	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:Y:102:ARG:HD3	39:Y:141:ASP:OD1	2.16	0.45
39:Y:102:ARG:HH21	39:Y:105:LEU:HD12	1.81	0.45
41:a:396:G:C5	41:a:397:U:C5	3.03	0.45
41:a:451:U:C5'	52:l:47:LYS:HZ3	2.29	0.45
41:a:685:A:C8	41:a:773:U:C4	3.04	0.45
41:a:783:A:O2'	41:a:785:G:OP1	2.35	0.45
41:a:893:C:H2'	41:a:894:U:C5	2.51	0.45
41:a:923:G:H4'	42:b:29:GLU:OE1	2.16	0.45
41:a:1069:A:O2'	41:a:1073:A:N6	2.38	0.45
41:a:1585:C:H2'	41:a:1586:A:O4'	2.15	0.45
41:a:1588:G:C6	41:a:1589:U:O4	2.69	0.45
41:a:1613:G:O2'	53:m:3:ARG:CZ	2.64	0.45
44:d:82:U:O2'	46:f:53:PHE:HE2	1.98	0.45
48:h:52:ARG:NE	48:h:53:HIS:CE1	2.83	0.45
49:i:52:ARG:HA	49:i:52:ARG:NE	2.30	0.45
50:j:71:ALA:HB3	50:j:73:VAL:HG22	1.98	0.45
52:l:23:PHE:CD1	52:l:111:GLU:CD	2.94	0.45
52:l:194:LYS:HG3	52:l:198:GLU:OE2	2.16	0.45
56:p:149:ARG:CZ	56:p:162:VAL:C	2.89	0.45
57:q:1:MET:HE3	57:q:2:LYS:N	2.31	0.45
59:s:73:VAL:CG1	59:s:86:GLN:HG2	2.46	0.45
66:z:89:GLU:N	66:z:89:GLU:OE1	2.50	0.45
2:1:20:VAL:CG1	2:1:47:VAL:HG11	2.46	0.45
8:7:1:A:H2'	8:7:2:U:C6	2.50	0.45
9:9:24:SER:HG	9:9:85:SER:C	2.25	0.45
13:AD:185:TYR:HA	13:AD:202:VAL:O	2.16	0.45
14:AE:420:PRO:HA	14:AE:437:PHE:O	2.16	0.45
16:AG:123:ARG:HG2	16:AG:123:ARG:HH11	1.82	0.45
17:C:65:LEU:HG	17:C:65:LEU:O	2.16	0.45
18:D:269:C:H2'	18:D:270:A:C8	2.51	0.45
18:D:696:A:H2'	18:D:697:U:H6	1.81	0.45
21:G:128:LYS:C	21:G:129:LEU:HD12	2.42	0.45
22:H:270:ILE:HG23	22:H:270:ILE:O	2.15	0.45
27:M:138:ARG:HG2	27:M:142:HIS:HE1	1.81	0.45
29:O:46:MET:HB3	29:O:50:GLN:NE2	2.31	0.45
30:P:90:LEU:HD12	30:P:90:LEU:N	2.31	0.45
32:R:18:LYS:HD3	32:R:19:SER:O	2.16	0.45
39:Y:76:ALA:O	39:Y:80:LYS:NZ	2.34	0.45
41:a:1250:G:OP2	61:u:21:ARG:NE	2.47	0.45
41:a:1803:A:O2'	48:h:257:THR:HG21	2.16	0.45
41:a:2049:G:N2	50:j:161:MET:CE	2.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:2616:C:N3	41:a:2617:U:C5	2.83	0.45
41:a:2814:A:C5	41:a:2815:C:C5	3.05	0.45
44:d:45:A:C5'	54:n:92:ARG:NH1	2.79	0.45
44:d:83:G:H1'	46:f:53:PHE:CE1	2.51	0.45
55:o:31:HIS:O	55:o:32:ILE:O	2.33	0.45
56:p:11:VAL:HG13	56:p:11:VAL:O	2.17	0.45
57:q:30:GLU:HB3	57:q:33:HIS:ND1	2.32	0.45
64:x:90:VAL:CG2	64:x:115:LEU:HD21	2.46	0.45
4:3:47:LYS:HZ3	41:a:482:A:P	2.40	0.45
5:4:50:MET:C	5:4:56:PHE:CZ	2.94	0.45
7:6:25:DT:H2'	11:AA:496:LYS:CG	2.44	0.45
11:AA:1314:GLN:HA	15:AF:28:ARG:HH22	1.80	0.45
17:C:12:ARG:HB2	22:H:264:GLU:CB	2.46	0.45
18:D:827:U:O4	18:D:872:A:C2	2.69	0.45
18:D:878:A:P	28:N:80:ARG:NH1	2.89	0.45
18:D:1324:A:H2'	18:D:1325:C:C6	2.51	0.45
21:G:77:SER:O	21:G:80:VAL:HG12	2.17	0.45
21:G:117:LEU:HD23	21:G:141:LEU:HA	1.98	0.45
23:I:72:ARG:NE	23:I:75:ILE:HB	2.32	0.45
23:I:114:LYS:HB2	23:I:185:ASN:ND2	2.32	0.45
26:L:9:MET:C	26:L:9:MET:SD	3.00	0.45
26:L:38:ARG:NE	26:L:97:THR:O	2.49	0.45
27:M:31:MET:HE1	27:M:36:LYS:CD	2.46	0.45
27:M:66:LEU:HD13	27:M:101:MET:HE3	1.93	0.45
27:M:138:ARG:O	27:M:142:HIS:ND1	2.46	0.45
28:N:26:THR:OG1	28:N:58:GLU:CG	2.65	0.45
32:R:31:ARG:O	32:R:57:LEU:HD12	2.17	0.45
39:Y:60:VAL:HG22	39:Y:66:PHE:CD1	2.52	0.45
41:a:78:U:P	45:e:4:LYS:NZ	2.89	0.45
41:a:152:A:H2'	41:a:153:U:C6	2.51	0.45
41:a:582:A:H5''	66:z:11:ARG:HH12	1.82	0.45
41:a:590:A:H2'	41:a:591:U:H6	1.80	0.45
41:a:607:U:C6	41:a:620:G:C5	3.04	0.45
41:a:985:C:N3	41:a:986:C:C5	2.84	0.45
41:a:1342:A:O2'	41:a:1344:U:OP2	2.31	0.45
41:a:1398:C:C2	41:a:1399:C:C5	3.04	0.45
41:a:1790:C:C2'	41:a:1791:A:C8	3.00	0.45
41:a:2723:C:H2'	41:a:2724:U:O4'	2.16	0.45
41:a:2848:G:C2	41:a:2867:G:C4	3.05	0.45
43:c:41:GLU:O	43:c:44:LYS:HD2	2.16	0.45
47:g:16:CYS:SG	47:g:37:CYS:N	2.89	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:j:55:LYS:HZ2	50:j:60:VAL:CA	2.29	0.45
2:1:78:GLU:OE2	41:a:1262:A:OP1	2.35	0.45
2:1:86:MET:HE1	2:1:88:ARG:CD	2.42	0.45
4:3:66:GLN:OE1	41:a:329:G:OP2	2.34	0.45
13:AD:212:ASP:OD1	13:AD:212:ASP:N	2.48	0.45
10:B:46:G:H1'	10:B:47:U:C5	2.51	0.45
18:D:277:C:OP1	36:V:43:LYS:HD2	2.15	0.45
18:D:723:U:O2	20:F:49:LYS:HE3	2.16	0.45
18:D:1315:U:O2	18:D:1360:A:H2	2.00	0.45
19:E:54:MET:O	19:E:58:VAL:HG23	2.16	0.45
20:F:12:PHE:CD1	31:Q:101:ASN:CG	2.95	0.45
22:H:53:PHE:CE1	22:H:68:VAL:HG21	2.52	0.45
26:L:18:VAL:N	26:L:19:PRO:CD	2.80	0.45
28:N:89:LYS:HG3	28:N:90:ASP:N	2.31	0.45
31:Q:88:GLY:H	31:Q:114:THR:HG22	1.81	0.45
32:R:30:LYS:O	32:R:81:LEU:HD12	2.16	0.45
32:R:56:ARG:HG2	32:R:62:GLU:CD	2.41	0.45
33:S:77:PHE:CE1	33:S:93:ILE:HD13	2.51	0.45
39:Y:126:ARG:HH12	41:a:1083:U:P	2.40	0.45
41:a:400:G:OP2	43:c:57:ARG:NH1	2.46	0.45
41:a:575:A:C2	41:a:576:U:C6	3.05	0.45
41:a:1007:C:H5''	59:s:37:ARG:NE	2.31	0.45
41:a:1370:C:H2'	41:a:1371:G:O4'	2.16	0.45
41:a:2149:U:H2'	41:a:2150:C:C6	2.52	0.45
41:a:2650:U:H2'	41:a:2651:C:H6	1.81	0.45
43:c:30:LEU:CD1	43:c:31:PRO:HD2	2.43	0.45
53:m:12:ARG:CG	53:m:44:VAL:HG21	2.47	0.45
54:n:4:LEU:HD21	54:n:101:GLU:HG3	1.98	0.45
54:n:127:ASN:OD1	54:n:157:THR:HA	2.16	0.45
60:t:24:VAL:HG23	60:t:33:ALA:HB2	1.97	0.45
60:t:108:ARG:CG	60:t:116:ILE:HD13	2.46	0.45
2:1:20:VAL:HG11	2:1:47:VAL:HG11	1.99	0.45
3:2:64:LYS:CE	41:a:1312:U:O4	2.64	0.45
3:2:65:GLY:H	3:2:76:ARG:HH12	1.64	0.45
5:4:57:TYR:HD2	62:v:136:MET:HE2	1.82	0.45
9:9:61:ARG:HE	41:a:1046:A:P	2.39	0.45
10:A:8:U:O2'	10:A:47:U:C4	2.67	0.45
12:AB:16:ARG:C	12:AB:19:GLU:H	2.25	0.45
12:AB:76:SER:O	12:AB:77:HIS:HB3	2.16	0.45
14:AE:230:SER:OG	14:AE:231:GLY:N	2.49	0.45
14:AE:781:LYS:HD2	14:AE:933:ARG:HH12	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:151:A:C5	18:D:152:A:C8	3.04	0.45
18:D:377:G:H2'	18:D:378:G:H8	1.81	0.45
18:D:789:U:O2'	18:D:791:G:N7	2.45	0.45
18:D:918:A:H2'	18:D:919:A:C8	2.51	0.45
18:D:1108:G:C5	18:D:1109:C:C5	3.04	0.45
21:G:19:GLN:HE21	22:H:75:VAL:C	2.24	0.45
22:H:288:THR:O	22:H:288:THR:HG22	2.16	0.45
25:K:13:GLU:HG2	25:K:13:GLU:O	2.16	0.45
27:M:44:TYR:C	27:M:44:TYR:CD2	2.94	0.45
29:O:80:ARG:NH2	29:O:103:PHE:CE1	2.85	0.45
32:R:122:PRO:C	32:R:123:LYS:HE2	2.42	0.45
35:U:6:LEU:HD23	35:U:17:TYR:CB	2.47	0.45
35:U:73:ALA:HA	35:U:76:LYS:HE3	1.98	0.45
38:X:13:LYS:HZ2	38:X:17:ILE:HG21	1.81	0.45
38:X:14:HIS:HB2	38:X:17:ILE:HD13	1.99	0.45
38:X:55:THR:C	38:X:59:GLU:OE1	2.60	0.45
38:X:55:THR:HG22	38:X:59:GLU:OE2	2.17	0.45
39:Y:42:ASN:OD1	39:Y:50:LYS:NZ	2.46	0.45
39:Y:102:ARG:NE	39:Y:139:VAL:CG2	2.78	0.45
41:a:15:G:O2'	49:i:15:MET:HE1	2.16	0.45
41:a:152:A:H2'	41:a:153:U:H6	1.82	0.45
41:a:235:U:N3	41:a:236:C:C5	2.84	0.45
41:a:392:U:C2	41:a:393:C:C5	3.03	0.45
41:a:598:U:H2'	41:a:599:A:C8	2.52	0.45
41:a:607:U:C6	41:a:620:G:N7	2.85	0.45
41:a:952:G:C6	41:a:966:G:C6	3.04	0.45
41:a:1223:G:N2	41:a:1226:A:OP2	2.43	0.45
41:a:1432:G:H2'	41:a:1433:A:H8	1.79	0.45
41:a:1665:A:C5'	60:t:66:LYS:NZ	2.79	0.45
41:a:1796:U:H2'	41:a:1797:G:H8	1.81	0.45
41:a:1797:G:O2'	48:h:257:THR:HG22	2.16	0.45
41:a:2262:U:N3	41:a:2263:C:C5	2.85	0.45
41:a:2364:C:H2'	41:a:2365:G:O4'	2.15	0.45
41:a:2727:A:O3'	60:t:70:ARG:NH2	2.50	0.45
41:a:2743:U:H2'	41:a:2744:G:O4'	2.17	0.45
41:a:2783:U:H2'	41:a:2784:U:C6	2.52	0.45
45:e:24:GLU:O	45:e:28:LEU:HD13	2.17	0.45
49:i:30:VAL:HG22	49:i:37:LYS:HD2	1.99	0.45
52:l:21:ARG:HA	52:l:21:ARG:NE	2.31	0.45
52:l:73:ILE:HG13	52:l:73:ILE:O	2.17	0.45
56:p:91:GLY:HA3	56:p:94:TYR:CD2	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:r:31:VAL:HB	58:r:32:PRO:HD3	1.97	0.45
60:t:17:ARG:NH2	60:t:47:ILE:CG2	2.80	0.45
3:2:64:LYS:HD2	41:a:1312:U:C4	2.51	0.45
5:4:31:TYR:O	5:4:92:VAL:HA	2.17	0.45
6:5:10:DT:H73	11:AA:62:TYR:HB3	1.99	0.45
8:7:34:U:H3'	8:7:34:U:H6	1.80	0.45
8:7:37:U:H4'	14:AE:322:ARG:CZ	2.46	0.45
9:9:14:GLU:OE1	9:9:63:ALA:HA	2.17	0.45
14:AE:291:ILE:HD13	14:AE:291:ILE:HA	1.85	0.45
14:AE:708:ASN:N	14:AE:708:ASN:OD1	2.50	0.45
16:AG:429:LYS:HB2	16:AG:430:PRO:HD2	1.99	0.45
10:B:3:C:H2'	10:B:4:G:H8	1.82	0.45
18:D:984:C:C2	18:D:985:C:C5	3.05	0.45
18:D:1287:A:H2'	18:D:1288:A:C8	2.51	0.45
21:G:66:LYS:HB3	21:G:154:MET:HE3	1.99	0.45
21:G:109:GLN:C	21:G:113:ARG:NE	2.75	0.45
22:H:54:LYS:HD3	22:H:58:GLY:C	2.42	0.45
22:H:297:GLU:OE1	22:H:297:GLU:N	2.49	0.45
26:L:73:GLU:O	26:L:76:THR:OG1	2.33	0.45
30:P:28:THR:HG22	30:P:90:LEU:HD23	1.98	0.45
37:W:13:LEU:O	37:W:17:LYS:HG2	2.17	0.45
37:W:44:MET:HE1	37:W:66:MET:HE1	1.98	0.45
41:a:219:A:H2'	41:a:220:G:C8	2.52	0.45
41:a:837:C:N3	41:a:941:A:N6	2.65	0.45
41:a:1019:U:O4	41:a:1142:A:C2	2.69	0.45
41:a:1131:G:OP1	59:s:81:ILE:O	2.34	0.45
44:d:8:C:O3'	64:x:25:ARG:NH1	2.48	0.45
44:d:57:A:C5	54:n:26:MET:CE	2.99	0.45
50:j:55:LYS:NZ	50:j:56:LYS:O	2.49	0.45
52:l:147:LEU:HB2	52:l:183:PHE:CD2	2.48	0.45
54:n:16:LEU:HD11	54:n:169:LEU:HD13	1.98	0.45
54:n:22:TYR:CE2	54:n:28:VAL:HA	2.52	0.45
61:u:101:ILE:C	61:u:105:ILE:HD12	2.42	0.45
63:w:12:ARG:HE	63:w:20:MET:HE1	1.82	0.45
64:x:88:LYS:O	64:x:115:LEU:HD12	2.16	0.45
65:y:103:ARG:HD3	65:y:107:ALA:C	2.41	0.45
1:0:71:LYS:CG	1:0:73:LYS:HE3	2.47	0.45
5:4:16:ALA:O	5:4:20:LEU:HG	2.17	0.45
9:9:23:LEU:O	9:9:87:GLU:CD	2.60	0.45
9:9:58:THR:HG23	41:a:1108:U:OP1	2.17	0.45
10:A:3:C:H2'	10:A:4:G:H8	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:19:PRO:HG2	16:AG:19:PRO:O	2.17	0.45
10:B:53:G:N3	10:B:54:U:C5	2.85	0.45
18:D:829:G:H4'	21:G:23:TRP:CH2	2.51	0.45
18:D:1152:A:OP1	30:P:72:ARG:NH1	2.43	0.45
18:D:1323:G:H2'	18:D:1324:A:H8	1.78	0.45
21:G:64:LYS:HE2	21:G:64:LYS:HA	1.99	0.45
22:H:37:LEU:HG	22:H:46:SER:O	2.16	0.45
22:H:303:LEU:O	22:H:304:VAL:C	2.59	0.45
23:I:72:ARG:HD3	23:I:75:ILE:HG22	1.99	0.45
25:K:76:LEU:HD12	25:K:76:LEU:O	2.17	0.45
27:M:87:VAL:HG12	27:M:151:PHE:HD2	1.81	0.45
27:M:134:ALA:O	27:M:137:LYS:CG	2.65	0.45
29:O:51:PRO:CA	29:O:103:PHE:HE2	2.30	0.45
29:O:86:ALA:O	29:O:89:GLU:CG	2.64	0.45
29:O:88:MET:CE	29:O:95:ARG:HG3	2.46	0.45
33:S:6:MET:HE3	33:S:63:ARG:HH11	1.82	0.45
34:T:15:PHE:CE2	34:T:30:ALA:CB	3.00	0.45
34:T:15:PHE:HE2	34:T:30:ALA:HB1	1.82	0.45
38:X:11:ASP:HA	38:X:45:ILE:HB	1.99	0.45
39:Y:102:ARG:HE	39:Y:139:VAL:HG21	1.79	0.45
41:a:372:G:O2'	43:c:54:LYS:CE	2.64	0.45
41:a:730:A:C2	41:a:731:C:C5	3.05	0.45
41:a:782:A:N1	48:h:225:MET:HE2	2.32	0.45
41:a:1444:G:C4	41:a:1445:G:C8	3.04	0.45
41:a:1565:C:O2'	41:a:1567:G:N7	2.47	0.45
41:a:1856:U:H2'	41:a:1857:G:O4'	2.17	0.45
41:a:1889:A:H2'	41:a:1890:A:C8	2.51	0.45
41:a:2065:C:C2	41:a:2066:C:C5	3.04	0.45
41:a:2331:G:O2'	41:a:2336:A:N1	2.40	0.45
41:a:2572:A:OP2	50:j:149:ASN:O	2.35	0.45
48:h:265:LYS:HG3	48:h:266:PHE:CD2	2.52	0.45
52:l:95:LYS:HE2	52:l:97:ASN:OD1	2.17	0.45
52:l:117:ARG:NH1	61:u:1:MET:HE2	2.31	0.45
56:p:11:VAL:HG12	56:p:48:ASN:O	2.17	0.45
61:u:103:ILE:HG23	61:u:104:GLN:HG2	1.99	0.45
63:w:38:LEU:HD12	63:w:38:LEU:HA	1.72	0.45
65:y:14:LYS:NZ	65:y:76:THR:O	2.49	0.45
9:9:68:PRO:O	9:9:72:LEU:HD21	2.16	0.45
16:AG:102:PHE:HB3	16:AG:103:ASP:CG	2.41	0.45
16:AG:104:ARG:N	16:AG:105:ILE:HG12	2.32	0.45
10:B:18:G:N7	10:B:57:A:N6	2.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:71:C:C3'	10:B:72:A:C8	2.99	0.45
17:C:65:LEU:HD23	17:C:67:LEU:CD1	2.47	0.45
17:C:70:TYR:C	17:C:71:THR:HG23	2.42	0.45
18:D:604:G:H2'	18:D:605:U:O4'	2.17	0.45
18:D:958:A:C4	37:W:55:ARG:HD3	2.52	0.45
18:D:1055:A:O2'	23:I:156:ARG:NH2	2.47	0.45
18:D:1333:A:H2'	18:D:1334:G:O4'	2.17	0.45
19:E:49:LYS:O	19:E:53:GLU:HG2	2.16	0.45
20:F:38:TYR:O	31:Q:126:LYS:HE3	2.17	0.45
21:G:100:MET:SD	21:G:101:LEU:HD23	2.56	0.45
23:I:135:LYS:O	23:I:138:VAL:HG12	2.17	0.45
23:I:142:MET:HE3	23:I:170:GLU:HB3	1.98	0.45
25:K:93:ARG:NH2	25:K:93:ARG:CB	2.80	0.45
26:L:100:SER:HB2	26:L:101:PRO:HD2	1.98	0.45
31:Q:52:PHE:CE1	31:Q:65:VAL:HG21	2.52	0.45
34:T:3:LEU:CD2	34:T:8:THR:HG23	2.47	0.45
34:T:8:THR:O	34:T:11:ILE:HG22	2.16	0.45
34:T:76:ALA:C	34:T:80:GLN:NE2	2.68	0.45
37:W:62:VAL:HG13	37:W:66:MET:CE	2.44	0.45
38:X:2:ALA:HB1	38:X:9:ILE:CG2	2.47	0.45
39:Y:5:GLN:NE2	39:Y:60:VAL:C	2.74	0.45
41:a:654:A:N6	55:o:19:LYS:HD2	2.29	0.45
41:a:1182:G:H2'	41:a:1183:U:O4'	2.17	0.45
41:a:2478:A:C8	41:a:2529:G:C5	3.04	0.45
41:a:2766:A:C6	41:a:2767:C:C5	3.05	0.45
46:f:41:THR:C	46:f:45:ARG:NH2	2.75	0.45
48:h:123:ALA:HB1	48:h:125:LYS:CE	2.47	0.45
51:k:7:GLU:HG3	51:k:27:LYS:HZ3	1.82	0.45
54:n:122:PHE:HZ	54:n:170:LEU:HD12	1.81	0.45
55:o:39:LYS:HG2	55:o:42:ARG:HH12	1.82	0.45
65:y:15:GLN:NE2	65:y:16:ASP:CG	2.75	0.45
66:z:76:TYR:O	66:z:80:ILE:HG12	2.16	0.45
4:3:49:VAL:HG23	4:3:51:ALA:O	2.17	0.45
10:A:18:G:C5	10:A:57:A:N6	2.85	0.45
10:A:71:C:H2'	10:A:72:A:N9	2.32	0.45
11:AA:24:VAL:HG11	11:AA:704:MET:HE1	1.98	0.45
11:AA:694:ARG:HH22	13:AC:80:GLU:HG3	1.82	0.45
11:AA:829:THR:HG23	11:AA:1059:ARG:HG2	1.99	0.45
11:AA:856:ASN:HA	16:AG:109:THR:HG21	1.98	0.45
12:AB:52:PRO:O	12:AB:54:TYR:N	2.50	0.45
12:AB:140:MET:O	12:AB:151:LYS:O	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AE:53:ARG:HA	14:AE:54:ASP:HA	1.59	0.45
16:AG:3:LYS:HB3	16:AG:6:LEU:HD12	1.99	0.45
16:AG:252:VAL:HG13	16:AG:256:GLY:HA2	1.99	0.45
18:D:735:C:C2	18:D:736:C:C5	3.05	0.45
18:D:753:A:OP1	34:T:73:LYS:NZ	2.50	0.45
18:D:824:G:C6	18:D:877:G:C6	3.05	0.45
18:D:980:C:C5	18:D:981:U:C2	3.04	0.45
20:F:58:LYS:HD2	20:F:58:LYS:C	2.42	0.45
21:G:96:TRP:CZ2	21:G:100:MET:HE3	2.52	0.45
21:G:101:LEU:HD22	21:G:157:LEU:HD12	1.98	0.45
22:H:32:ASP:OD1	22:H:35:VAL:HG22	2.17	0.45
22:H:49:PRO:CD	22:H:84:LEU:HD21	2.47	0.45
23:I:39:VAL:HG23	23:I:40:ARG:N	2.32	0.45
24:J:35:GLU:HG2	24:J:36:GLN:N	2.32	0.45
25:K:157:ARG:NH2	28:N:43:GLU:OE2	2.46	0.45
26:L:85:ILE:HG22	26:L:86:ARG:HG2	1.99	0.45
26:L:98:GLU:HA	26:L:98:GLU:OE1	2.16	0.45
29:O:113:ARG:HG3	29:O:115:LYS:HZ2	1.82	0.45
30:P:63:ASP:OD2	30:P:63:ASP:C	2.59	0.45
32:R:18:LYS:NZ	32:R:19:SER:O	2.47	0.45
34:T:11:ILE:HD13	34:T:31:LEU:HA	1.99	0.45
38:X:16:VAL:HG23	38:X:17:ILE:CD1	2.47	0.45
41:a:535:G:H2'	41:a:536:G:O4'	2.17	0.45
41:a:861:A:H2'	41:a:862:G:O4'	2.17	0.45
41:a:1042:G:C5	41:a:1043:C:C5	3.05	0.45
41:a:1753:G:N2	41:a:1755:A:H3'	2.32	0.45
41:a:2175:C:C2'	41:a:2176:A:C8	3.00	0.45
41:a:2646:C:H2'	41:a:2647:U:O4'	2.18	0.45
41:a:2747:G:N2	41:a:2756:U:C6	2.85	0.45
45:e:13:GLU:C	45:e:17:GLU:OE1	2.60	0.45
48:h:164:ILE:O	48:h:164:ILE:CG2	2.65	0.45
50:j:3:GLY:O	50:j:82:PHE:CE2	2.69	0.45
50:j:11:MET:HE3	50:j:11:MET:HB3	1.63	0.45
50:j:172:VAL:HG11	50:j:175:LEU:HD11	1.99	0.45
52:l:23:PHE:CD1	52:l:111:GLU:CG	3.00	0.45
52:l:90:GLN:OE1	52:l:92:HIS:CD2	2.70	0.45
56:p:141:ILE:HG13	56:p:142:GLY:N	2.32	0.45
59:s:35:ARG:HA	59:s:40:HIS:ND1	2.32	0.45
61:u:55:MET:SD	61:u:60:ARG:N	2.90	0.45
65:y:7:GLN:HE21	65:y:10:GLN:HE21	1.65	0.45
1:0:74:ILE:HD12	1:0:74:ILE:N	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:3:5:ILE:HG13	4:3:72:ILE:HD11	1.99	0.44
8:7:2:U:OP2	18:D:926:G:N2	2.50	0.44
9:9:4:ASN:OD1	41:a:1046:A:N7	2.50	0.44
11:AA:560:PRO:HB2	14:AE:776:THR:HG21	2.00	0.44
12:AB:118:ILE:HG21	12:AB:141:LEU:CG	2.44	0.44
13:AD:15:ASP:OD1	13:AD:27:THR:OG1	2.30	0.44
14:AE:41:PRO:HB2	14:AE:270:ARG:HG3	1.99	0.44
16:AG:228:ARG:HB3	16:AG:234:ALA:HA	1.98	0.44
10:B:3:C:H2'	10:B:4:G:C8	2.52	0.44
10:B:18:G:N2	10:B:58:A:N7	2.65	0.44
18:D:110:C:H1'	35:U:25:ARG:NH1	2.31	0.44
18:D:278:G:OP2	36:V:43:LYS:NZ	2.49	0.44
18:D:653:U:O4'	28:N:56:LYS:HE3	2.16	0.44
18:D:1240:U:OP1	27:M:116:MET:HB2	2.17	0.44
18:D:1250:A:H2'	18:D:1251:A:C8	2.52	0.44
18:D:1389:C:H2'	18:D:1390:U:O4'	2.17	0.44
20:F:26:ALA:CB	20:F:28:VAL:HG23	2.47	0.44
21:G:27:MET:HG3	21:G:27:MET:O	2.16	0.44
23:I:24:ALA:HB3	23:I:29:PHE:CD2	2.51	0.44
23:I:165:THR:C	23:I:166:GLU:OE1	2.60	0.44
26:L:5:GLU:CD	26:L:61:LEU:HD11	2.42	0.44
26:L:17:GLN:CB	26:L:21:MET:HE1	2.47	0.44
26:L:72:ASP:O	26:L:76:THR:HG23	2.17	0.44
29:O:86:ALA:C	29:O:89:GLU:HG2	2.42	0.44
31:Q:51:GLY:O	31:Q:56:ARG:NH1	2.50	0.44
33:S:13:ARG:HB3	33:S:60:GLN:HE21	1.81	0.44
37:W:5:LEU:HD12	37:W:6:LYS:N	2.32	0.44
39:Y:45:THR:HG22	39:Y:45:THR:O	2.16	0.44
41:a:1434:A:H2'	41:a:1435:G:C8	2.52	0.44
41:a:1656:C:C2	41:a:1657:U:C5	3.05	0.44
41:a:2061:G:N2	41:a:2063:C:C6	2.84	0.44
41:a:2095:A:O5'	58:r:11:ASN:OD1	2.35	0.44
41:a:2492:U:C2'	41:a:2493:U:H5'	2.48	0.44
46:f:12:SER:CA	46:f:32:ILE:HD11	2.46	0.44
46:f:51:VAL:O	46:f:55:VAL:HG12	2.17	0.44
47:g:30:HIS:CG	47:g:31:ASP:N	2.85	0.44
48:h:146:MET:HE2	48:h:153:GLN:OE1	2.17	0.44
54:n:117:LEU:N	54:n:177:PHE:O	2.51	0.44
56:p:18:LYS:HG3	56:p:27:LYS:NZ	2.32	0.44
59:s:31:GLU:HG2	59:s:142:ILE:HG23	1.98	0.44
60:t:48:PRO:HB2	60:t:49:ARG:HE	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:u:95:LEU:HD12	61:u:100:ILE:HG21	1.99	0.44
63:w:87:PHE:HE2	63:w:115:LEU:HD11	1.83	0.44
1:0:13:ARG:CZ	66:z:97:ASP:CG	2.91	0.44
9:9:19:ALA:CB	9:9:69:PHE:HE2	2.31	0.44
10:A:53:G:N3	10:A:54:U:C5	2.85	0.44
11:AA:813:GLU:HB2	14:AE:461:PHE:HD2	1.83	0.44
12:AB:141:LEU:HB2	12:AB:153:SER:OG	2.15	0.44
10:B:71:C:H2'	10:B:72:A:N9	2.32	0.44
10:B:75:C:P	41:a:2602:A:C2'	3.06	0.44
17:C:41:PRO:HD2	22:H:339:ARG:CZ	2.47	0.44
18:D:414:A:C4	18:D:415:A:C8	3.05	0.44
18:D:704:A:C4	18:D:705:G:C8	3.06	0.44
18:D:1086:U:O2	18:D:1086:U:H2'	2.16	0.44
22:H:332:VAL:O	22:H:344:LEU:HA	2.17	0.44
30:P:5:ARG:HE	30:P:7:ARG:CZ	2.29	0.44
30:P:73:LEU:C	30:P:73:LEU:HD23	2.42	0.44
31:Q:84:VAL:HG21	31:Q:97:ILE:HD11	1.99	0.44
32:R:30:LYS:CB	32:R:57:LEU:HD11	2.47	0.44
35:U:8:ARG:H	35:U:28:ARG:HD3	1.81	0.44
41:a:858:G:P	42:b:78:LYS:HZ1	2.38	0.44
41:a:980:A:N7	41:a:1136:G:H5'	2.32	0.44
41:a:1020:A:C2	41:a:1141:U:C2	3.06	0.44
41:a:1310:G:N2	41:a:1313:U:C4	2.85	0.44
41:a:1349:C:O2	41:a:1349:C:H2'	2.17	0.44
41:a:1665:A:O3'	60:t:66:LYS:NZ	2.44	0.44
41:a:1792:G:C5'	48:h:204:VAL:HG23	2.47	0.44
48:h:251:GLN:OE1	48:h:255:LYS:CB	2.65	0.44
50:j:61:THR:OG1	50:j:63:PRO:HD2	2.18	0.44
52:l:198:GLU:OE1	52:l:198:GLU:N	2.43	0.44
55:o:30:ARG:HH12	61:u:62:PRO:N	2.15	0.44
58:r:127:GLU:OE2	58:r:143:ILE:HB	2.17	0.44
59:s:28:LEU:HD12	59:s:142:ILE:CG2	2.47	0.44
59:s:98:GLU:O	59:s:100:VAL:N	2.51	0.44
60:t:18:ARG:NE	60:t:18:ARG:HA	2.33	0.44
61:u:101:ILE:HG13	61:u:102:GLY:H	1.82	0.44
63:w:79:LEU:HD23	63:w:83:LEU:HD12	1.99	0.44
64:x:35:ILE:HD11	64:x:102:ARG:HH21	1.81	0.44
4:3:4:LYS:O	4:3:94:ARG:NH2	2.40	0.44
5:4:29:ILE:HD13	44:d:74:U:O2	2.17	0.44
8:7:9:U:OP2	8:7:9:U:C6	2.70	0.44
9:9:92:ALA:HB3	9:9:129:LEU:HB2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:A:71:C:H2'	10:A:72:A:C1'	2.47	0.44
11:AA:557:ARG:HB3	11:AA:587:LEU:HD13	2.00	0.44
11:AA:1002:LEU:HD21	11:AA:1007:LYS:HB2	1.98	0.44
12:AB:17:ALA:O	12:AB:20:HIS:HB2	2.17	0.44
12:AB:130:PHE:HZ	12:AB:160:ARG:HG3	1.81	0.44
14:AE:68:TYR:CA	14:AE:92:VAL:HG23	2.45	0.44
16:AG:227:ALA:CB	16:AG:331:LEU:HA	2.46	0.44
16:AG:434:LEU:CD1	16:AG:455:THR:O	2.61	0.44
10:B:18:G:C5	10:B:57:A:N6	2.85	0.44
10:B:71:C:H2'	10:B:72:A:C1'	2.47	0.44
17:C:34:THR:OG1	17:C:38:LYS:HB2	2.18	0.44
18:D:13:U:O4	18:D:20:U:O4	2.34	0.44
18:D:198:G:OP2	18:D:198:G:C8	2.70	0.44
18:D:598:U:C2	18:D:599:C:C5	3.06	0.44
18:D:636:U:H2'	18:D:637:C:C6	2.52	0.44
18:D:715:A:H2'	18:D:716:A:C8	2.52	0.44
18:D:982:U:P	33:S:6:MET:HE2	2.56	0.44
18:D:1060:U:H5''	30:P:53:ILE:HD12	1.99	0.44
18:D:1186:G:O2'	29:O:112:GLU:OE2	2.33	0.44
18:D:1436:U:H2'	18:D:1437:A:C8	2.52	0.44
21:G:171:ILE:H	21:G:171:ILE:HD12	1.82	0.44
23:I:55:ILE:HD12	23:I:68:ILE:HG12	1.98	0.44
23:I:85:GLU:O	23:I:89:LYS:CE	2.64	0.44
24:J:49:SER:O	24:J:53:VAL:HG13	2.18	0.44
24:J:172:GLU:CD	24:J:183:LYS:HD2	2.42	0.44
25:K:50:TYR:C	25:K:66:LYS:HE3	2.43	0.44
25:K:50:TYR:O	25:K:66:LYS:HE3	2.17	0.44
34:T:10:LYS:CD	34:T:14:GLU:OE2	2.65	0.44
34:T:26:GLU:HG3	34:T:27:VAL:N	2.33	0.44
37:W:79:THR:HG23	37:W:79:THR:O	2.18	0.44
41:a:145:C:H2'	41:a:146:A:C8	2.53	0.44
41:a:1441:G:H2'	41:a:1442:U:H6	1.83	0.44
41:a:1824:G:P	48:h:52:ARG:CZ	3.06	0.44
41:a:2262:U:OP1	41:a:2387:U:O2'	2.33	0.44
41:a:2345:G:N3	41:a:2381:A:H2'	2.33	0.44
41:a:2839:G:C5	41:a:2840:C:C5	3.05	0.44
43:c:43:GLU:OE1	43:c:45:ARG:CB	2.65	0.44
46:f:31:ARG:HG2	46:f:34:HIS:HB2	2.00	0.44
48:h:52:ARG:CD	48:h:53:HIS:CE1	3.00	0.44
48:h:74:ILE:HB	48:h:96:TYR:CD1	2.53	0.44
48:h:240:PHE:CD2	48:h:240:PHE:O	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:l:1:MET:HE3	52:l:19:PHE:C	2.42	0.44
52:l:23:PHE:CE2	52:l:25:GLU:HB2	2.52	0.44
53:m:41:ARG:NE	53:m:41:ARG:HA	2.32	0.44
54:n:10:ASP:OD1	54:n:11:GLU:HG3	2.17	0.44
62:v:39:GLY:O	62:v:96:ILE:N	2.33	0.44
8:7:4:U:C5	18:D:1403:C:H1'	2.52	0.44
11:AA:11:ILE:HG22	11:AA:1172:LEU:HD11	1.99	0.44
11:AA:678:ARG:HA	11:AA:678:ARG:HD3	1.84	0.44
11:AA:746:ALA:O	11:AA:974:ARG:NH2	2.45	0.44
14:AE:283:LEU:HD23	14:AE:292:VAL:HG11	1.99	0.44
14:AE:774:ILE:HA	14:AE:777:HIS:HD2	1.82	0.44
16:AG:15:GLU:HA	16:AG:18:LEU:HB2	1.99	0.44
16:AG:38:LYS:HB3	16:AG:39:TYR:H	1.55	0.44
16:AG:403:VAL:C	16:AG:405:ALA:N	2.73	0.44
18:D:33:A:H2'	18:D:34:C:C6	2.53	0.44
18:D:280:C:O2	36:V:40:ARG:NE	2.48	0.44
18:D:360:G:H2'	18:D:361:G:C8	2.53	0.44
18:D:376:G:C2	18:D:389:A:C2	3.06	0.44
18:D:429:U:O2	18:D:430:A:N7	2.50	0.44
18:D:545:C:C5'	24:J:69:GLU:HG3	2.38	0.44
18:D:1408:A:H2'	18:D:1409:C:C6	2.52	0.44
18:D:1437:A:C2	18:D:1438:G:C8	3.04	0.44
18:D:1486:G:H2'	18:D:1487:G:O4'	2.17	0.44
25:K:159:LYS:HZ3	28:N:44:GLY:HA3	1.82	0.44
28:N:35:ALA:HB1	28:N:110:VAL:HG11	1.99	0.44
28:N:110:VAL:O	28:N:111:MET:SD	2.75	0.44
30:P:24:GLU:OE2	30:P:92:LEU:CD2	2.66	0.44
30:P:40:ILE:HD12	30:P:73:LEU:CD2	2.48	0.44
34:T:71:LYS:HE2	34:T:78:TYR:CD2	2.52	0.44
35:U:45:GLU:HG3	35:U:46:LYS:CD	2.45	0.44
36:V:30:LYS:HB2	36:V:37:PHE:CE1	2.52	0.44
38:X:90:ARG:HD3	38:X:96:PRO:O	2.17	0.44
38:X:106:ALA:HB3	38:X:110:LYS:CD	2.48	0.44
41:a:30:G:H2'	41:a:31:C:H6	1.82	0.44
41:a:66:C:N4	41:a:74:A:N6	2.66	0.44
41:a:132:G:H2'	41:a:133:U:H6	1.80	0.44
41:a:966:G:O4'	41:a:2267:A:N6	2.51	0.44
41:a:1013:C:C2	41:a:1014:A:C8	3.04	0.44
41:a:1084:A:N6	41:a:1085:A:N1	2.66	0.44
41:a:1997:C:OP1	50:j:128:ARG:NH1	2.50	0.44
41:a:2347:C:C2	41:a:2348:U:C5	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:2356:U:H4'	42:b:20:ARG:HD2	1.99	0.44
43:c:33:LEU:O	43:c:34:HIS:CG	2.70	0.44
49:i:17:ARG:CA	49:i:20:ASP:OD1	2.66	0.44
50:j:55:LYS:HZ1	50:j:59:ARG:HB3	1.82	0.44
52:l:6:LYS:CE	52:l:119:ILE:CG2	2.94	0.44
54:n:63:GLN:HG3	54:n:95:ARG:HD3	1.99	0.44
55:o:31:HIS:C	55:o:33:LEU:HG	2.42	0.44
61:u:91:ASP:HB2	61:u:93:ASN:OD1	2.17	0.44
4:3:6:ARG:CG	4:3:7:ARG:H	2.31	0.44
10:A:18:G:N7	10:A:57:A:N6	2.65	0.44
11:AA:444:ASP:OD1	11:AA:444:ASP:N	2.51	0.44
12:AB:117:ILE:HG21	12:AB:161:LYS:HE2	1.99	0.44
16:AG:314:LEU:HD22	16:AG:318:ILE:HD11	1.98	0.44
16:AG:433:ASP:HB3	16:AG:456:LEU:CD1	2.47	0.44
18:D:153:C:C2	18:D:154:U:C5	3.06	0.44
18:D:524:G:H2'	18:D:525:C:C6	2.52	0.44
18:D:1120:C:H2'	18:D:1121:U:H6	1.83	0.44
18:D:1308:U:H3'	38:X:98:ARG:NE	2.32	0.44
18:D:1436:U:H2'	18:D:1437:A:H8	1.82	0.44
21:G:52:GLU:C	21:G:56:GLU:OE1	2.60	0.44
22:H:49:PRO:HD3	22:H:84:LEU:HD21	1.99	0.44
22:H:308:GLU:C	22:H:310:ASP:H	2.25	0.44
23:I:14:ILE:HG13	23:I:178:LEU:HD21	1.99	0.44
23:I:34:ASP:HB2	33:S:65:ARG:CZ	2.48	0.44
26:L:16:GLU:H	26:L:16:GLU:CD	2.26	0.44
30:P:66:GLU:HG3	33:S:99:ALA:HB2	2.00	0.44
32:R:38:TYR:CE2	32:R:40:THR:CG2	3.01	0.44
39:Y:93:ASN:O	39:Y:94:LYS:HD2	2.16	0.44
41:a:536:G:H4'	66:z:57:PHE:HZ	1.82	0.44
41:a:580:U:O3'	66:z:31:VAL:HG13	2.17	0.44
41:a:597:G:H2'	41:a:598:U:C6	2.52	0.44
41:a:677:A:O2'	41:a:2071:A:H5'	2.18	0.44
41:a:730:A:C2	41:a:731:C:C6	3.05	0.44
41:a:957:C:H5'	62:v:75:GLU:OE1	2.18	0.44
41:a:1021:A:C2	41:a:1141:U:O4	2.71	0.44
41:a:1936:A:C8	41:a:1945:G:N7	2.86	0.44
41:a:2616:C:C2	41:a:2617:U:C6	3.06	0.44
41:a:2718:G:O2'	41:a:2847:U:H5''	2.18	0.44
46:f:41:THR:O	46:f:43:ALA:N	2.51	0.44
47:g:16:CYS:CB	47:g:37:CYS:CB	2.90	0.44
56:p:27:LYS:HG2	56:p:32:GLU:HG3	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:s:124:VAL:O	59:s:125:TYR:HD1	2.01	0.44
63:w:13:ASN:O	63:w:17:ARG:HG3	2.17	0.44
1:0:93:PHE:CD1	1:0:93:PHE:C	2.96	0.44
9:9:59:LEU:HD22	9:9:62:ARG:HE	1.81	0.44
9:9:122:GLN:OE1	9:9:122:GLN:N	2.49	0.44
11:AA:557:ARG:NH2	11:AA:607:SER:O	2.50	0.44
12:AB:33:ILE:HD11	12:AB:104:ILE:HA	2.00	0.44
13:AD:78:ILE:HA	13:AD:81:ILE:HG22	2.00	0.44
16:AG:318:ILE:CG1	16:AG:338:VAL:HG11	2.48	0.44
16:AG:440:VAL:HG13	16:AG:444:LEU:HB2	2.00	0.44
10:B:38:A:HO2'	18:D:790:A:P	2.35	0.44
18:D:284:C:C2	18:D:285:C:C5	3.06	0.44
18:D:564:C:OP1	32:R:12:ARG:CZ	2.66	0.44
18:D:1146:A:C5	18:D:1147:C:C5	3.06	0.44
21:G:48:PRO:O	21:G:52:GLU:HG2	2.18	0.44
22:H:5:PHE:CZ	22:H:9:PHE:CE1	3.06	0.44
22:H:71:ALA:HB3	22:H:83:LEU:O	2.18	0.44
23:I:58:GLU:OE1	23:I:65:ARG:CZ	2.65	0.44
24:J:69:GLU:HA	24:J:72:PHE:HD2	1.83	0.44
30:P:64:GLN:HG2	33:S:101:TRP:CH2	2.52	0.44
31:Q:83:GLU:OE1	31:Q:83:GLU:N	2.51	0.44
38:X:3:ARG:NH2	54:n:110:ARG:HD2	2.32	0.44
38:X:71:ARG:NH1	38:X:72:GLU:HG3	2.33	0.44
39:Y:14:ALA:O	39:Y:16:MET:N	2.51	0.44
39:Y:19:PRO:CG	39:Y:23:VAL:CG2	2.95	0.44
39:Y:33:ASN:OD1	39:Y:35:MET:HE2	2.18	0.44
39:Y:82:ALA:HB3	39:Y:108:ILE:CD1	2.48	0.44
41:a:832:U:H2'	41:a:833:A:C8	2.50	0.44
41:a:1146:C:C2	41:a:1147:A:C8	3.05	0.44
41:a:2021:C:OP1	49:i:9:THR:HG21	2.18	0.44
41:a:2305:U:H5''	54:n:131:GLY:HA3	2.00	0.44
41:a:2314:A:P	54:n:88:LYS:HZ2	2.40	0.44
41:a:2617:U:C2	41:a:2618:G:C8	3.06	0.44
48:h:220:VAL:HG23	48:h:225:MET:HE3	2.00	0.44
50:j:81:GLU:O	50:j:82:PHE:HD1	2.01	0.44
55:o:8:ARG:HA	55:o:8:ARG:HE	1.82	0.44
60:t:44:LYS:N	60:t:44:LYS:HD2	2.33	0.44
62:v:3:GLN:OE1	62:v:4:PRO:O	2.35	0.44
63:w:60:VAL:HA	63:w:63:ARG:CZ	2.48	0.44
10:A:72:A:C3'	10:A:73:A:H5''	2.47	0.44
11:AA:27:LEU:O	11:AA:528:ARG:NH1	2.43	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AD:68:TYR:HE1	13:AD:79:LEU:HD13	1.82	0.44
14:AE:907:HIS:ND1	14:AE:908:ILE:O	2.48	0.44
16:AG:63:LEU:HD22	16:AG:92:TYR:CD1	2.48	0.44
16:AG:143:LYS:HG3	16:AG:153:ASP:HB2	1.99	0.44
10:B:11:A:H2'	10:B:12:G:O4'	2.17	0.44
17:C:29:LEU:CD2	17:C:59:ILE:HD13	2.48	0.44
17:C:34:THR:HG22	17:C:35:GLU:N	2.33	0.44
17:C:70:TYR:CE2	26:L:49:TYR:CE1	3.05	0.44
18:D:123:U:OP1	18:D:311:C:O2'	2.33	0.44
18:D:610:U:C2	18:D:611:C:C6	3.06	0.44
18:D:675:A:C1'	31:Q:118:HIS:CD2	2.99	0.44
18:D:754:C:O5'	34:T:72:ARG:NH1	2.51	0.44
18:D:1080:A:OP1	25:K:50:TYR:OH	2.29	0.44
18:D:1434:A:H2'	18:D:1435:G:O4'	2.18	0.44
19:E:16:LYS:HG3	19:E:19:LYS:HE3	1.98	0.44
19:E:22:ALA:CA	19:E:25:ARG:HE	2.31	0.44
19:E:78:ASN:O	19:E:82:GLN:CD	2.61	0.44
22:H:12:SER:O	22:H:16:ILE:HG13	2.18	0.44
22:H:294:VAL:HG11	22:H:330:VAL:HG21	2.00	0.44
31:Q:91:PRO:HD2	31:Q:92:GLY:H	1.83	0.44
32:R:18:LYS:HD3	32:R:19:SER:N	2.33	0.44
32:R:25:GLU:OE2	32:R:30:LYS:HE3	2.18	0.44
32:R:74:LEU:HD11	32:R:80:ILE:CG1	2.48	0.44
34:T:63:ARG:HD2	34:T:67:LEU:HD21	2.00	0.44
36:V:64:CYS:SG	36:V:74:THR:OG1	2.69	0.44
41:a:65:U:N3	41:a:66:C:C5	2.86	0.44
41:a:111:A:O2'	45:e:58:ASN:ND2	2.46	0.44
41:a:153:U:H2'	41:a:154:U:C6	2.53	0.44
41:a:564:C:H1'	66:z:37:GLN:NE2	2.32	0.44
41:a:782:A:C6	48:h:225:MET:HE2	2.53	0.44
41:a:841:G:H2'	41:a:842:U:C6	2.52	0.44
41:a:1360:G:C8	41:a:1361:G:C8	3.06	0.44
41:a:1863:G:H2'	41:a:1864:U:H6	1.83	0.44
41:a:2025:C:H2'	41:a:2026:U:C6	2.53	0.44
41:a:2548:U:C2	41:a:2549:G:C8	3.06	0.44
41:a:2806:C:H2'	41:a:2807:U:O4'	2.18	0.44
44:d:45:A:C4	44:d:46:A:C8	3.05	0.44
48:h:108:LYS:HZ3	48:h:194:GLU:H	1.64	0.44
50:j:131:ASP:OD1	50:j:133:THR:O	2.36	0.44
56:p:8:PRO:C	56:p:69:ARG:NH2	2.75	0.44
56:p:69:ARG:NH1	56:p:73:ASN:ND2	2.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:s:132:HIS:HA	59:s:135:GLN:OE1	2.17	0.44
62:v:38:ARG:HB2	62:v:98:PRO:HD3	2.00	0.44
63:w:37:THR:HG21	63:w:40:LYS:HZ2	1.83	0.44
64:x:50:ALA:O	64:x:81:ARG:NH2	2.51	0.44
66:z:66:ASN:CG	66:z:76:TYR:HB2	2.42	0.44
3:2:56:GLU:OE1	3:2:86:THR:C	2.61	0.44
3:2:56:GLU:CD	3:2:88:LYS:N	2.76	0.44
5:4:31:TYR:HE2	44:d:104:A:O4'	2.01	0.44
8:7:12:U:C3'	8:7:12:U:C6	3.00	0.44
8:7:22:U:C4'	23:I:80:LYS:CG	2.75	0.44
10:A:3:C:H2'	10:A:4:G:C8	2.52	0.44
10:A:11:A:H2'	10:A:12:G:O4'	2.17	0.44
11:AA:1246:ARG:HH11	11:AA:1266:GLY:HA2	1.82	0.44
12:AB:38:ILE:HA	12:AB:42:LYS:O	2.18	0.44
12:AB:120:GLU:H	12:AB:162:LEU:CG	2.31	0.44
12:AB:123:PHE:O	12:AB:123:PHE:CD2	2.70	0.44
16:AG:167:MET:HE3	16:AG:173:PHE:CZ	2.53	0.44
16:AG:320:ARG:HB2	16:AG:323:GLN:CB	2.48	0.44
10:B:72:A:C3'	10:B:73:A:H5''	2.47	0.44
18:D:511:C:C2	18:D:512:U:C6	3.06	0.44
18:D:633:G:H2'	18:D:634:C:H6	1.82	0.44
18:D:642:A:C5	18:D:643:C:C5	3.06	0.44
18:D:1062:U:H2'	18:D:1063:C:C6	2.53	0.44
18:D:1160:G:C6	18:D:1161:C:C5	3.06	0.44
19:E:58:VAL:HG12	19:E:72:ALA:HB1	1.99	0.44
20:F:32:VAL:HG11	31:Q:89:PRO:HG3	1.99	0.44
21:G:9:MET:HE1	21:G:47:VAL:HG22	1.99	0.44
21:G:134:ALA:HA	21:G:137:ARG:HE	1.83	0.44
22:H:19:ARG:O	22:H:72:LEU:HD13	2.18	0.44
22:H:76:GLU:OE1	22:H:79:PHE:HA	2.18	0.44
22:H:163:ARG:N	22:H:298:GLU:CG	2.81	0.44
22:H:332:VAL:O	22:H:333:LEU:HB2	2.18	0.44
23:I:147:LYS:HE2	23:I:204:LYS:C	2.43	0.44
23:I:151:VAL:CG1	23:I:200:VAL:HG23	2.47	0.44
27:M:106:GLU:O	27:M:110:LYS:HG2	2.18	0.44
29:O:91:ASP:HB3	29:O:94:LEU:HG	1.99	0.44
29:O:94:LEU:O	29:O:97:GLU:CD	2.60	0.44
32:R:24:LEU:HD23	32:R:95:TYR:HE1	1.83	0.44
36:V:27:ARG:HH22	36:V:42:THR:N	2.16	0.44
37:W:39:THR:HG22	37:W:40:ILE:N	2.33	0.44
41:a:6:A:O2'	59:s:132:HIS:ND1	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:27:G:C4	41:a:512:G:N2	2.86	0.44
41:a:221:A:C4	41:a:266:G:N7	2.85	0.44
41:a:234:U:C4	41:a:235:U:C5	3.06	0.44
41:a:598:U:H2'	41:a:599:A:H8	1.82	0.44
41:a:910:A:H8	62:v:12:MET:CE	2.31	0.44
41:a:2016:U:H2'	41:a:2017:U:C6	2.52	0.44
41:a:2063:C:N3	41:a:2064:C:C5	2.86	0.44
41:a:2175:C:H2'	41:a:2176:A:N7	2.33	0.44
41:a:2297:A:C2	41:a:2320:U:C1'	3.00	0.44
45:e:59:GLU:CD	45:e:60:LYS:N	2.76	0.44
50:j:104:VAL:HG12	50:j:105:LYS:N	2.33	0.44
50:j:204:LYS:HD3	50:j:205:PRO:HD2	2.00	0.44
54:n:175:PHE:CG	54:n:176:PRO:HD2	2.52	0.44
61:u:122:VAL:CG1	61:u:125:LEU:CD2	2.90	0.44
63:w:98:LEU:N	63:w:112:TYR:O	2.51	0.44
3:2:6:ARG:NE	3:2:42:GLU:CD	2.76	0.44
6:5:11:DA:C5'	12:AB:67:THR:O	2.66	0.44
8:7:41:A:O3'	11:AA:688:GLN:NE2	2.51	0.44
9:9:138:ARG:NH1	40:Z:10:ALA:O	2.51	0.44
10:A:18:G:N2	10:A:58:A:N7	2.65	0.44
11:AA:1157:GLN:HG3	11:AA:1159:VAL:HG13	2.00	0.44
12:AB:6:LEU:HD22	14:AE:291:ILE:HD11	1.99	0.44
12:AB:31:PRO:C	12:AB:50:LEU:H	2.22	0.44
12:AB:126:PHE:CD2	12:AB:126:PHE:O	2.71	0.44
12:AB:141:LEU:CA	12:AB:153:SER:N	2.75	0.44
18:D:108:G:H5''	18:D:108:G:N3	2.33	0.44
18:D:219:U:C2	18:D:220:G:C8	3.05	0.44
18:D:262:A:H2'	18:D:263:A:C8	2.53	0.44
18:D:622:A:C8	18:D:623:C:C5	3.06	0.44
18:D:1120:C:C2	18:D:1121:U:C5	3.06	0.44
21:G:117:LEU:HD21	21:G:141:LEU:CA	2.48	0.44
22:H:52:GLN:OE1	22:H:52:GLN:HA	2.18	0.44
23:I:112:ASP:O	23:I:116:VAL:HG23	2.18	0.44
23:I:149:ILE:HG13	23:I:201:TRP:O	2.18	0.44
32:R:30:LYS:C	32:R:81:LEU:HD12	2.42	0.44
33:S:20:TYR:CD2	33:S:55:SER:OG	2.67	0.44
34:T:32:LEU:HD12	34:T:63:ARG:HA	1.98	0.44
36:V:31:HIS:NE2	36:V:34:TYR:HD2	2.15	0.44
39:Y:12:VAL:HG22	39:Y:54:ILE:O	2.17	0.44
41:a:128:C:C2	41:a:129:C:C5	3.06	0.44
41:a:208:C:H2'	41:a:209:C:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:579:G:H2'	41:a:580:U:C6	2.53	0.44
41:a:841:G:C6	41:a:938:G:C6	3.06	0.44
41:a:1144:A:C4	41:a:1145:C:C5	3.05	0.44
41:a:1657:U:C2	41:a:1658:C:C5	3.06	0.44
41:a:1839:G:C4	41:a:1840:G:C8	3.06	0.44
41:a:1956:U:C2	41:a:1957:C:C6	3.06	0.44
41:a:2093:G:P	58:r:22:LYS:HG2	2.58	0.44
41:a:2450:A:C2	41:a:2451:A:C4	3.06	0.44
41:a:2747:G:C2	41:a:2756:U:C5	3.05	0.44
44:d:69:G:C5	44:d:70:C:C6	3.06	0.44
52:l:112:LEU:HD23	52:l:118:LEU:HD13	1.99	0.44
55:o:45:ARG:HD2	55:o:45:ARG:C	2.43	0.44
55:o:55:LEU:C	55:o:55:LEU:HD23	2.43	0.44
57:q:3:VAL:HG12	57:q:36:ARG:HB3	2.00	0.44
65:y:31:TRP:CZ3	65:y:40:LEU:CD1	3.00	0.44
1:0:60:LYS:N	1:0:60:LYS:HD3	2.33	0.43
4:3:7:ARG:NH2	41:a:84:A:O2'	2.51	0.43
8:7:13:U:H3	24:J:47:ARG:NH1	2.10	0.43
9:9:18:VAL:HG13	9:9:71:CYS:HB2	2.00	0.43
12:AB:145:LEU:HB2	12:AB:146:ILE:H	1.67	0.43
14:AE:59:ALA:HB3	14:AE:71:LEU:CD2	2.42	0.43
15:AF:58:LEU:HD12	15:AF:59:ILE:HG12	2.00	0.43
16:AG:343:ASP:HB3	16:AG:347:LYS:HE3	2.00	0.43
17:C:18:VAL:HG13	17:C:51:TYR:HE1	1.83	0.43
18:D:621:A:H2'	18:D:622:A:C8	2.53	0.43
18:D:678:U:H2'	18:D:679:C:C6	2.53	0.43
18:D:736:C:H4'	26:L:88:MET:HE2	1.99	0.43
18:D:953:G:O6	38:X:103:LYS:HE3	2.18	0.43
18:D:1240:U:H5	27:M:116:MET:HE2	1.83	0.43
19:E:21:ASN:HB3	19:E:25:ARG:CZ	2.48	0.43
21:G:9:MET:HE2	21:G:43:LEU:HD22	2.00	0.43
21:G:206:ALA:O	21:G:210:VAL:HG23	2.18	0.43
22:H:8:LEU:HD12	22:H:11:GLU:OE2	2.18	0.43
22:H:74:ALA:HB3	22:H:83:LEU:HD23	1.99	0.43
28:N:84:ARG:HD2	28:N:124:GLU:OE1	2.17	0.43
29:O:89:GLU:HG3	29:O:90:TYR:N	2.33	0.43
31:Q:84:VAL:HG11	31:Q:97:ILE:HD13	2.00	0.43
33:S:13:ARG:HB3	33:S:60:GLN:CG	2.46	0.43
33:S:87:ALA:CA	33:S:90:ARG:CZ	2.96	0.43
36:V:28:PHE:CZ	36:V:37:PHE:HB3	2.53	0.43
39:Y:14:ALA:O	39:Y:15:GLY:C	2.61	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:Y:99:LYS:CE	39:Y:140:GLU:OE2	2.67	0.43
41:a:479:A:H4'	41:a:480:A:OP1	2.18	0.43
41:a:594:U:C2	41:a:595:C:C5	3.05	0.43
41:a:1414:C:H2'	41:a:1415:U:C6	2.52	0.43
41:a:1996:C:OP1	60:t:31:ARG:NH2	2.51	0.43
41:a:2092:U:C2	41:a:2225:A:O2'	2.71	0.43
41:a:2098:U:H2'	41:a:2099:U:O4'	2.18	0.43
46:f:6:LYS:HD3	46:f:6:LYS:N	2.33	0.43
54:n:15:LYS:O	54:n:19:GLU:OE1	2.35	0.43
55:o:45:ARG:HB3	55:o:46:PRO:CD	2.48	0.43
56:p:83:PHE:HB2	56:p:141:ILE:HD13	2.00	0.43
56:p:149:ARG:HD2	56:p:162:VAL:O	2.18	0.43
62:v:111:GLU:HG2	62:v:112:LEU:N	2.33	0.43
1:0:73:LYS:HZ1	1:0:88:GLY:HA3	1.83	0.43
2:1:36:LEU:N	2:1:36:LEU:HD12	2.33	0.43
9:9:129:LEU:CD1	9:9:130:PRO:HD3	2.45	0.43
12:AB:2:GLN:HA	12:AB:59:PHE:C	2.43	0.43
13:AD:29:GLU:HB3	13:AD:200:LYS:HG3	1.99	0.43
13:AD:31:LEU:HD21	13:AD:39:LEU:HD12	2.00	0.43
14:AE:384:LYS:NZ	16:AG:147:ARG:NH1	2.66	0.43
16:AG:126:VAL:HG13	16:AG:130:PHE:CE2	2.53	0.43
16:AG:320:ARG:HH11	16:AG:320:ARG:HG2	1.80	0.43
16:AG:413:ALA:C	16:AG:416:THR:HG1	2.17	0.43
16:AG:429:LYS:CB	16:AG:430:PRO:HD2	2.47	0.43
17:C:40:VAL:HG22	22:H:339:ARG:HE	1.83	0.43
18:D:415:A:C6	18:D:416:G:C5	3.05	0.43
18:D:986:U:H2'	18:D:987:G:C8	2.53	0.43
18:D:1006:G:H2'	18:D:1007:U:H6	1.81	0.43
18:D:1060:U:OP1	33:S:85:ARG:NH1	2.48	0.43
18:D:1317:C:OP2	33:S:28:LYS:CE	2.66	0.43
18:D:1325:C:N3	18:D:1326:U:C5	2.86	0.43
19:E:25:ARG:O	19:E:28:MET:HB2	2.18	0.43
22:H:19:ARG:HD3	22:H:19:ARG:N	2.32	0.43
22:H:53:PHE:HE1	22:H:68:VAL:HG21	1.82	0.43
22:H:76:GLU:OE2	22:H:78:GLY:C	2.61	0.43
24:J:105:MET:HE3	24:J:171:LEU:HD13	1.97	0.43
26:L:78:PHE:HD1	26:L:87:SER:HB3	1.83	0.43
28:N:31:LYS:N	28:N:31:LYS:HD2	2.34	0.43
31:Q:14:LYS:HD3	31:Q:15:GLN:N	2.32	0.43
33:S:86:GLU:O	33:S:90:ARG:HG2	2.17	0.43
34:T:10:LYS:HE2	34:T:10:LYS:HA	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:T:11:ILE:HD11	34:T:30:ALA:HB1	1.98	0.43
38:X:81:MET:HE1	38:X:92:ARG:CD	2.49	0.43
39:Y:81:LYS:N	39:Y:81:LYS:CD	2.79	0.43
41:a:150:U:C2	41:a:151:C:C5	3.06	0.43
41:a:900:A:C5	41:a:901:C:C5	3.06	0.43
41:a:1319:C:O2'	41:a:1320:C:H5'	2.18	0.43
41:a:2484:G:OP1	62:v:44:ARG:HD2	2.18	0.43
41:a:2514:U:H2'	41:a:2515:C:H6	1.80	0.43
41:a:2768:U:OP1	59:s:85:LYS:HE3	2.19	0.43
46:f:4:THR:CG2	46:f:37:GLU:OE2	2.66	0.43
46:f:10:THR:CB	46:f:56:LYS:NZ	2.81	0.43
46:f:27:LEU:O	46:f:38:ARG:NE	2.44	0.43
54:n:6:ASP:O	54:n:10:ASP:OD2	2.36	0.43
54:n:92:ARG:CZ	54:n:92:ARG:HB3	2.47	0.43
56:p:94:TYR:CE1	56:p:152:ARG:CD	3.01	0.43
60:t:1:MET:HE1	60:t:32:TYR:CB	2.49	0.43
63:w:20:MET:HE3	63:w:20:MET:HB2	1.83	0.43
63:w:96:ARG:O	63:w:113:ILE:HA	2.18	0.43
65:y:31:TRP:CH2	65:y:40:LEU:HD11	2.52	0.43
1:0:46:GLU:HG2	1:0:48:LYS:NZ	2.32	0.43
1:0:73:LYS:HD3	1:0:86:GLN:HE21	1.82	0.43
2:1:19:LEU:HD23	2:1:19:LEU:C	2.43	0.43
9:9:70:GLU:HG3	9:9:71:CYS:N	2.33	0.43
9:9:105:LYS:O	9:9:106:PHE:HB3	2.18	0.43
10:A:35:A:H2'	10:A:36:U:O4'	2.18	0.43
10:A:49:G:H8	10:A:49:G:O5'	2.01	0.43
11:AA:998:LEU:HG	11:AA:1011:LEU:HB3	1.99	0.43
12:AB:31:PRO:HG2	12:AB:51:PHE:CE2	2.53	0.43
12:AB:104:ILE:C	12:AB:106:ASP:H	2.26	0.43
14:AE:1036:ARG:HE	14:AE:1081:VAL:HG21	1.84	0.43
16:AG:142:VAL:HB	16:AG:175:PRO:HA	1.99	0.43
10:B:75:C:OP1	41:a:2602:A:C8	2.72	0.43
18:D:43:C:P	35:U:12:LYS:HZ2	2.41	0.43
18:D:76:G:C5	18:D:77:A:C8	3.06	0.43
18:D:404:G:N7	24:J:2:ALA:HB3	2.33	0.43
18:D:877:G:H5''	28:N:80:ARG:CD	2.49	0.43
18:D:882:C:O2'	18:D:883:C:H5'	2.18	0.43
18:D:1208:C:C2	18:D:1209:C:C6	3.07	0.43
18:D:1244:G:C6	18:D:1294:G:C6	3.06	0.43
18:D:1437:A:N3	18:D:1438:G:C8	2.86	0.43
21:G:163:VAL:CG1	21:G:185:ALA:HA	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:H:31:ILE:O	22:H:31:ILE:HG13	2.18	0.43
23:I:54:ARG:NH1	23:I:69:HIS:NE2	2.67	0.43
23:I:134:MET:HG3	23:I:151:VAL:HG21	2.00	0.43
23:I:152:GLU:OE2	23:I:165:THR:HG23	2.18	0.43
23:I:156:ARG:CG	23:I:193:TYR:HB2	2.47	0.43
31:Q:63:ALA:CB	31:Q:92:GLY:HA3	2.48	0.43
32:R:23:ALA:O	32:R:25:GLU:OE1	2.36	0.43
32:R:57:LEU:HD23	32:R:59:ASN:CG	2.43	0.43
34:T:15:PHE:HD2	34:T:30:ALA:CB	2.31	0.43
38:X:79:ARG:NH1	47:g:56:ARG:NH1	2.66	0.43
39:Y:44:LYS:HG2	39:Y:68:PHE:HE2	1.83	0.43
39:Y:64:ARG:O	39:Y:64:ARG:HG3	2.17	0.43
39:Y:82:ALA:HB3	39:Y:108:ILE:HD12	2.01	0.43
41:a:39:G:H2'	41:a:40:U:H6	1.83	0.43
41:a:870:U:N3	41:a:871:U:C5	2.86	0.43
41:a:1363:C:O2'	41:a:1809:A:N3	2.50	0.43
41:a:1406:U:O2'	41:a:1407:G:C5'	2.66	0.43
41:a:1409:U:C2	41:a:1410:G:C8	3.06	0.43
41:a:2273:A:H2'	41:a:2274:A:C8	2.54	0.43
41:a:2391:G:P	55:o:32:ILE:CD1	3.06	0.43
41:a:2466:C:C2	41:a:2467:C:C5	3.06	0.43
41:a:2477:U:O2	57:q:4:ARG:NH2	2.51	0.43
47:g:59:ARG:HH11	47:g:63:ARG:CD	2.31	0.43
48:h:200:HIS:O	48:h:203:ARG:HG2	2.17	0.43
54:n:126:GLY:HA2	54:n:163:ASP:HA	2.00	0.43
54:n:132:VAL:CG2	54:n:152:LEU:CD2	2.97	0.43
55:o:13:ARG:HG2	61:u:62:PRO:O	2.18	0.43
58:r:90:LEU:HD21	58:r:94:ILE:HD11	2.00	0.43
61:u:95:LEU:HD13	61:u:100:ILE:HD12	2.00	0.43
62:v:53:MET:O	62:v:57:VAL:HG12	2.19	0.43
62:v:104:GLU:OE1	62:v:104:GLU:HA	2.17	0.43
66:z:76:TYR:OH	66:z:92:ARG:HG2	2.19	0.43
1:0:1:MET:HE3	1:0:43:ASN:OD1	2.18	0.43
2:1:36:LEU:HD23	2:1:48:LYS:CA	2.48	0.43
2:1:99:ARG:CZ	2:1:99:ARG:HB2	2.49	0.43
6:5:18:DG:C4	6:5:19:DC:C5	3.06	0.43
11:AA:646:SER:OG	11:AA:647:ARG:N	2.52	0.43
12:AB:145:LEU:N	12:AB:145:LEU:CD1	2.74	0.43
14:AE:708:ASN:HA	14:AE:713:GLU:HA	2.00	0.43
16:AG:36:LYS:HB3	16:AG:36:LYS:HE2	1.88	0.43
16:AG:316:GLN:HE21	16:AG:316:GLN:HB2	1.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:393:LEU:CG	16:AG:398:LEU:HD22	2.22	0.43
10:B:19:G:N3	10:B:57:A:C4	2.87	0.43
17:C:27:ALA:CA	17:C:30:LYS:HE3	2.49	0.43
18:D:323:U:H4'	19:E:17:ALA:HB3	1.99	0.43
18:D:682:G:C2	18:D:683:G:C8	3.06	0.43
18:D:746:A:H2'	18:D:747:A:C8	2.53	0.43
18:D:1477:U:H2'	18:D:1478:U:C6	2.53	0.43
23:I:22:TRP:CZ2	23:I:32:ASN:CB	3.01	0.43
23:I:69:HIS:CD2	23:I:104:ALA:HB3	2.54	0.43
23:I:157:LEU:CD1	23:I:166:GLU:OE1	2.66	0.43
25:K:15:LEU:HD23	25:K:15:LEU:H	1.83	0.43
25:K:132:ASN:OD1	25:K:134:ILE:HG22	2.18	0.43
26:L:2:ARG:HB2	26:L:4:TYR:CE1	2.53	0.43
26:L:53:LYS:HD2	26:L:53:LYS:O	2.18	0.43
28:N:35:ALA:HB1	28:N:110:VAL:CG1	2.48	0.43
30:P:45:ARG:HD3	30:P:47:GLU:OE2	2.19	0.43
31:Q:21:ALA:HB3	31:Q:84:VAL:HG22	1.99	0.43
38:X:22:ILE:HG23	38:X:66:GLU:CD	2.43	0.43
38:X:64:VAL:O	38:X:64:VAL:HG13	2.19	0.43
41:a:39:G:H2'	41:a:40:U:C6	2.53	0.43
41:a:74:A:N7	41:a:88:G:C5	2.87	0.43
41:a:197:A:N6	41:a:2430:A:H2'	2.34	0.43
41:a:536:G:H4'	66:z:57:PHE:CZ	2.53	0.43
41:a:685:A:N1	41:a:787:C:H1'	2.33	0.43
41:a:1683:U:H2'	41:a:1684:G:H8	1.83	0.43
41:a:2179:C:H2'	41:a:2180:U:H6	1.84	0.43
41:a:2387:U:C4'	42:b:41:ARG:NH1	2.81	0.43
41:a:2846:G:H2'	41:a:2847:U:O4'	2.19	0.43
44:d:55:U:O2'	54:n:26:MET:CE	2.67	0.43
49:i:55:ILE:CD1	63:w:112:TYR:CD2	3.02	0.43
50:j:107:VAL:HG13	50:j:177:VAL:HG11	2.00	0.43
58:r:54:LEU:HA	58:r:57:LYS:HZ3	1.83	0.43
62:v:72:PRO:C	62:v:73:ILE:HD12	2.43	0.43
66:z:14:HIS:O	66:z:18:LEU:HD23	2.18	0.43
1:0:77:PHE:CD2	66:z:40:ILE:HG21	2.53	0.43
10:A:32:C:O3'	27:M:86:GLN:NE2	2.51	0.43
16:AG:227:ALA:HB2	16:AG:330:GLN:O	2.18	0.43
16:AG:425:LEU:HD23	16:AG:429:LYS:HZ3	1.82	0.43
10:B:31:G:H5'	18:D:1339:A:C2	2.54	0.43
18:D:337:G:H2'	18:D:338:A:H8	1.81	0.43
18:D:562:U:C3'	32:R:14:ARG:NH1	2.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:1125:U:N3	18:D:1127:G:C8	2.86	0.43
18:D:1149:C:N3	18:D:1150:A:N7	2.67	0.43
18:D:1408:A:H2'	18:D:1409:C:H6	1.84	0.43
19:E:16:LYS:HA	19:E:19:LYS:HE3	2.00	0.43
20:F:51:SER:OG	20:F:55:ARG:NH2	2.52	0.43
20:F:66:ARG:NH2	20:F:67:ARG:NH2	2.66	0.43
34:T:3:LEU:HD23	34:T:4:SER:N	2.33	0.43
35:U:9:HIS:O	35:U:16:PHE:HB3	2.18	0.43
40:Z:29:LYS:O	40:Z:30:PHE:HD2	2.02	0.43
41:a:538:A:H2'	41:a:539:G:O4'	2.18	0.43
41:a:838:C:C2	41:a:839:U:C6	3.07	0.43
41:a:963:U:H2'	41:a:964:C:C6	2.53	0.43
41:a:997:G:H5''	66:z:92:ARG:NH1	2.34	0.43
41:a:1074:G:C6	41:a:1075:C:N4	2.87	0.43
41:a:1141:U:H4'	41:a:1142:A:O4'	2.18	0.43
41:a:1141:U:O2	41:a:1142:A:N6	2.52	0.43
41:a:2615:U:C2	49:i:4:GLN:HA	2.53	0.43
41:a:2702:G:C4	41:a:2703:C:C5	3.06	0.43
49:i:23:THR:O	49:i:23:THR:HG23	2.17	0.43
52:l:23:PHE:CE2	52:l:25:GLU:CB	3.01	0.43
54:n:66:LEU:HD23	54:n:67:ILE:N	2.34	0.43
62:v:112:LEU:HD12	62:v:112:LEU:N	2.34	0.43
63:w:12:ARG:NH1	63:w:20:MET:HE1	2.33	0.43
66:z:12:ALA:O	66:z:16:LYS:HG2	2.19	0.43
66:z:78:LYS:HG2	66:z:117:LEU:HD21	2.00	0.43
2:1:1:MET:SD	2:1:62:ASP:OD2	2.76	0.43
3:2:37:ASP:OD2	3:2:37:ASP:C	2.62	0.43
5:4:53:LYS:HB2	5:4:56:PHE:HE2	1.83	0.43
9:9:6:GLN:CA	9:9:9:GLN:HE22	2.30	0.43
9:9:23:LEU:HA	9:9:118:ILE:HG13	2.01	0.43
9:9:88:HIS:CB	9:9:89:PRO:CD	2.81	0.43
10:A:19:G:N3	10:A:57:A:C4	2.87	0.43
11:AA:811:ASN:ND2	11:AA:1098:LEU:O	2.51	0.43
11:AA:812:PHE:O	14:AE:504:GLN:NE2	2.40	0.43
14:AE:79:LYS:HG3	14:AE:81:ARG:HH12	1.83	0.43
16:AG:224:LYS:HB2	16:AG:276:TRP:CH2	2.54	0.43
16:AG:226:ALA:HB1	16:AG:228:ARG:NH1	2.34	0.43
16:AG:227:ALA:CB	16:AG:330:GLN:C	2.91	0.43
17:C:60:LYS:CE	18:D:735:C:O4'	2.64	0.43
18:D:316:C:C2	18:D:317:U:C5	3.06	0.43
18:D:320:A:H2'	18:D:321:A:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:384:G:H2'	18:D:385:C:C6	2.54	0.43
18:D:676:A:H2'	18:D:677:U:H6	1.82	0.43
18:D:892:A:H2'	18:D:893:C:H6	1.83	0.43
18:D:1157:A:C2	18:D:1181:G:C5	3.06	0.43
18:D:1172:C:H2'	18:D:1173:U:H6	1.82	0.43
21:G:131:LYS:O	21:G:135:LEU:HD13	2.18	0.43
22:H:303:LEU:CD2	22:H:305:HIS:HB3	2.48	0.43
25:K:134:ILE:CG2	25:K:135:ASN:N	2.81	0.43
26:L:1:MET:HE2	26:L:67:PRO:N	2.34	0.43
27:M:4:ARG:HG2	27:M:5:ARG:NH2	2.32	0.43
29:O:21:ILE:CD1	29:O:86:ALA:CB	2.97	0.43
29:O:63:LEU:CD1	29:O:65:ILE:HD11	2.48	0.43
31:Q:85:MET:HG3	31:Q:111:THR:HB	2.00	0.43
35:U:7:ALA:HA	35:U:28:ARG:HD3	2.01	0.43
36:V:63:GLU:HB2	36:V:73:TRP:CZ2	2.53	0.43
40:Z:2:ILE:CG2	40:Z:5:ASP:H	2.28	0.43
41:a:61:C:C2	41:a:94:A:C2	3.06	0.43
41:a:271:G:C2	41:a:272:A:C5	3.07	0.43
41:a:639:U:H2'	41:a:640:C:H6	1.82	0.43
41:a:1820:U:C2	48:h:201:MET:HE2	2.53	0.43
41:a:2216:G:H2'	41:a:2217:G:H8	1.82	0.43
41:a:2627:G:O2'	41:a:2781:A:N1	2.43	0.43
44:d:48:U:P	64:x:30:ARG:HH22	2.41	0.43
44:d:89:U:O2'	44:d:90:C:P	2.77	0.43
47:g:62:LYS:HE2	47:g:62:LYS:HB2	1.87	0.43
52:l:47:LYS:HA	52:l:51:GLU:CD	2.44	0.43
53:m:26:ASN:HA	53:m:29:GLN:HE21	1.83	0.43
54:n:93:GLY:O	54:n:94:GLU:C	2.61	0.43
58:r:93:SER:OG	58:r:121:VAL:HG13	2.18	0.43
59:s:1:MET:SD	59:s:2:LYS:C	3.02	0.43
59:s:92:MET:HB2	59:s:92:MET:HE3	1.13	0.43
62:v:96:ILE:HA	62:v:100:LYS:HE3	2.00	0.43
65:y:27:GLU:HB3	65:y:87:LYS:HZ1	1.82	0.43
65:y:106:LYS:CA	65:y:109:ARG:NH2	2.81	0.43
9:9:3:LEU:CD1	9:9:5:LEU:H	2.31	0.43
10:A:19:G:N2	41:a:2112:G:C1'	2.82	0.43
12:AB:136:GLU:HG3	12:AB:160:ARG:HH12	1.84	0.43
14:AE:117:LEU:HG	14:AE:118:LYS:HG3	2.00	0.43
16:AG:183:LEU:HD22	16:AG:195:LEU:HD13	2.00	0.43
16:AG:277:ASP:HB2	16:AG:282:GLN:CB	2.49	0.43
16:AG:402:THR:C	16:AG:405:ALA:HB3	2.41	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:283:U:C2	18:D:284:C:C6	3.06	0.43
18:D:622:A:C8	18:D:623:C:C6	3.06	0.43
22:H:123:GLU:HA	22:H:128:ARG:HA	2.01	0.43
22:H:124:LEU:O	22:H:127:ILE:O	2.36	0.43
25:K:68:ARG:O	25:K:69:ARG:NH1	2.52	0.43
26:L:18:VAL:HA	26:L:21:MET:CE	2.47	0.43
26:L:36:ILE:HD12	26:L:36:ILE:HA	1.82	0.43
32:R:110:ARG:N	32:R:111:LYS:HZ3	2.17	0.43
34:T:10:LYS:HA	34:T:10:LYS:CE	2.49	0.43
37:W:12:ASP:OD2	37:W:35:SER:CB	2.66	0.43
37:W:68:GLY:HA3	47:g:59:ARG:HH22	1.82	0.43
39:Y:14:ALA:C	39:Y:50:LYS:HD2	2.44	0.43
41:a:66:C:H42	41:a:74:A:H62	1.67	0.43
41:a:250:G:H2'	41:a:251:A:C8	2.54	0.43
41:a:607:U:N3	41:a:608:A:N7	2.66	0.43
41:a:1144:A:C5	41:a:1145:C:C5	3.07	0.43
41:a:1169:A:N3	41:a:1169:A:O4'	2.51	0.43
41:a:1365:A:O5'	43:c:28:ARG:NH2	2.51	0.43
41:a:1385:A:C4	41:a:1403:A:C2	3.06	0.43
41:a:1587:G:H2'	41:a:1588:G:C8	2.54	0.43
41:a:1665:A:O3'	60:t:66:LYS:CD	2.67	0.43
41:a:2462:C:C2	41:a:2463:C:C5	3.07	0.43
41:a:2615:U:H2'	41:a:2616:C:H6	1.83	0.43
47:g:47:LYS:CE	54:n:115:ARG:HA	2.49	0.43
49:i:17:ARG:CB	49:i:20:ASP:OD1	2.67	0.43
54:n:79:ILE:O	54:n:79:ILE:HG13	2.18	0.43
58:r:6:LEU:C	58:r:15:LEU:HD13	2.43	0.43
60:t:108:ARG:HG2	60:t:116:ILE:HD13	2.01	0.43
62:v:74:THR:HA	62:v:88:ASN:O	2.19	0.43
4:3:7:ARG:HG3	4:3:8:ASP:N	2.33	0.43
4:3:7:ARG:O	4:3:25:VAL:O	2.36	0.43
5:4:55:GLU:OE1	5:4:55:GLU:N	2.42	0.43
9:9:4:ASN:HB3	9:9:8:LYS:HZ2	1.81	0.43
10:A:19:G:O6	41:a:2111:U:H3'	2.18	0.43
11:AA:22:LEU:HB3	11:AA:655:VAL:HG11	2.01	0.43
11:AA:674:ASP:OD2	11:AA:1070:HIS:ND1	2.50	0.43
12:AB:130:PHE:HB3	12:AB:133:PRO:HD3	2.00	0.43
16:AG:226:ALA:O	16:AG:228:ARG:N	2.52	0.43
16:AG:353:HIS:C	16:AG:357:ASP:HB2	2.43	0.43
16:AG:431:ALA:O	16:AG:435:LEU:HG	2.18	0.43
17:C:54:GLN:HA	17:C:57:ARG:NH1	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:43:C:P	35:U:12:LYS:HE3	2.59	0.43
18:D:235:C:H2'	18:D:236:A:H8	1.83	0.43
18:D:416:G:C4	18:D:417:G:C8	3.07	0.43
18:D:619:U:O4'	24:J:128:ARG:CZ	2.67	0.43
18:D:679:C:N3	18:D:680:C:C5	2.87	0.43
18:D:1103:C:O2	21:G:106:THR:HG21	2.18	0.43
18:D:1513:A:H2'	18:D:1514:G:H8	1.84	0.43
19:E:60:ARG:HG3	19:E:64:LYS:NZ	2.34	0.43
21:G:26:LYS:CE	21:G:193:PRO:HG2	2.49	0.43
23:I:14:ILE:HB	23:I:178:LEU:HD21	2.01	0.43
29:O:39:PHE:CD1	29:O:44:ALA:HB1	2.53	0.43
29:O:56:ASP:OD1	29:O:56:ASP:N	2.51	0.43
30:P:52:LEU:HB2	33:S:81:ARG:NH1	2.33	0.43
32:R:3:THR:O	32:R:4:VAL:C	2.62	0.43
34:T:63:ARG:HD2	34:T:67:LEU:HD23	2.01	0.43
35:U:5:ARG:HA	35:U:71:VAL:HG21	2.01	0.43
38:X:90:ARG:NH1	38:X:96:PRO:O	2.51	0.43
39:Y:139:VAL:HG22	39:Y:140:GLU:H	1.82	0.43
41:a:192:C:C5	41:a:193:U:C6	3.07	0.43
41:a:531:C:C5	41:a:2035:G:C2	3.07	0.43
41:a:532:A:N7	41:a:2021:C:O2'	2.43	0.43
41:a:533:G:H2'	41:a:534:U:C6	2.54	0.43
41:a:577:G:OP1	41:a:2502:G:O2'	2.36	0.43
41:a:858:G:OP1	42:b:78:LYS:HE3	2.18	0.43
41:a:1028:A:N6	41:a:1125:G:H2'	2.34	0.43
41:a:1114:C:H2'	41:a:1115:G:C8	2.54	0.43
41:a:1139:G:O3'	59:s:26:GLY:HA3	2.19	0.43
41:a:1386:C:H2'	41:a:1387:A:H8	1.82	0.43
41:a:1506:U:H2'	41:a:1507:C:C6	2.54	0.43
41:a:1879:C:H2'	41:a:1880:U:O4'	2.18	0.43
41:a:2332:C:OP1	42:b:77:ARG:NH2	2.52	0.43
41:a:2332:C:P	42:b:77:ARG:HH21	2.42	0.43
41:a:2859:G:H2'	41:a:2860:A:C8	2.54	0.43
41:a:2884:U:O2	49:i:40:ARG:NH2	2.51	0.43
45:e:56:LEU:C	45:e:59:GLU:HG3	2.44	0.43
48:h:45:ASN:OD1	48:h:46:ASN:N	2.51	0.43
50:j:16:THR:HG23	50:j:20:VAL:O	2.19	0.43
50:j:156:PHE:CE2	59:s:81:ILE:HD13	2.54	0.43
51:k:21:TYR:CE2	51:k:38:LYS:HB3	2.54	0.43
54:n:15:LYS:C	54:n:19:GLU:OE1	2.61	0.43
54:n:33:LYS:CA	54:n:96:MET:SD	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:n:40:VAL:HG13	54:n:42:GLU:CD	2.43	0.43
60:t:110:GLU:OE1	60:t:110:GLU:HA	2.19	0.43
62:v:1:MET:SD	62:v:44:ARG:HA	2.59	0.43
2:1:36:LEU:CD2	2:1:48:LYS:HA	2.48	0.43
8:7:1:A:C6	10:B:37:A:N1	2.86	0.43
11:AA:1275:VAL:HG13	11:AA:1287:LEU:HD11	2.01	0.43
12:AB:90:SER:HB2	12:AB:94:HIS:CE1	2.54	0.43
12:AB:141:LEU:HB2	12:AB:143:LEU:HD11	1.98	0.43
14:AE:362:ARG:H	14:AE:365:GLN:HE21	1.66	0.43
14:AE:658:GLU:HA	14:AE:661:VAL:HG22	2.00	0.43
18:D:13:U:N3	18:D:915:A:C6	2.87	0.43
18:D:563:A:C2	18:D:567:G:C6	3.07	0.43
18:D:673:A:H2'	18:D:674:G:H8	1.79	0.43
18:D:771:G:H2'	18:D:772:U:C6	2.54	0.43
18:D:796:C:N3	18:D:797:C:C5	2.87	0.43
18:D:1127:G:C6	18:D:1128:C:C5	3.07	0.43
21:G:23:TRP:CZ3	21:G:25:PRO:CA	3.01	0.43
21:G:30:PHE:CG	21:G:45:LYS:NZ	2.87	0.43
22:H:305:HIS:CG	22:H:306:VAL:H	2.36	0.43
26:L:9:MET:HE3	26:L:86:ARG:N	2.33	0.43
28:N:10:MET:HB2	28:N:33:LYS:HZ2	1.83	0.43
28:N:66:PHE:C	28:N:67:GLN:OE1	2.62	0.43
29:O:51:PRO:HB3	29:O:103:PHE:HD2	1.83	0.43
30:P:56:HIS:C	30:P:57:VAL:HG23	2.44	0.43
37:W:44:MET:HE1	37:W:62:VAL:HG22	2.01	0.43
41:a:573:U:O2'	41:a:574:A:H3'	2.19	0.43
41:a:1269:A:H2'	41:a:1270:C:C6	2.54	0.43
41:a:1282:U:H2'	41:a:1283:G:O4'	2.18	0.43
41:a:1443:U:H2'	41:a:1444:G:C8	2.54	0.43
41:a:1770:G:C5	41:a:1983:G:C6	3.07	0.43
41:a:2392:A:N3	61:u:55:MET:HE2	2.34	0.43
41:a:2557:G:H2'	41:a:2558:C:H6	1.84	0.43
41:a:2665:A:C2	41:a:2666:C:C6	3.07	0.43
44:d:82:U:O2	46:f:53:PHE:HZ	2.02	0.43
52:l:6:LYS:NZ	52:l:119:ILE:C	2.77	0.43
54:n:20:PHE:HB3	54:n:22:TYR:CE1	2.54	0.43
59:s:125:TYR:CD2	59:s:130:HIS:HB3	2.54	0.43
65:y:106:LYS:CB	65:y:109:ARG:HH22	2.32	0.43
2:1:75:PHE:HE2	2:1:77:ASP:OD2	2.02	0.43
6:5:10:DT:H2''	12:AB:71:ALA:H	1.79	0.43
6:5:20:DC:H1'	6:5:21:DA:H5'	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:9:118:ILE:HB	9:9:119:PRO:CD	2.42	0.43
12:AB:116:VAL:H	12:AB:129:ILE:CD1	2.31	0.43
10:B:35:A:H2'	10:B:36:U:O4'	2.18	0.43
17:C:27:ALA:HB1	17:C:30:LYS:HE3	2.00	0.43
18:D:553:A:H2'	18:D:554:A:H8	1.84	0.43
18:D:674:G:H2'	18:D:675:A:H8	1.84	0.43
18:D:1194:U:H2'	18:D:1195:C:C6	2.54	0.43
18:D:1318:A:OP1	37:W:7:LYS:NZ	2.52	0.43
22:H:332:VAL:CG1	22:H:335:ILE:HG13	2.48	0.43
22:H:336:ASP:HB2	22:H:341:ARG:H	1.84	0.43
23:I:22:TRP:CH2	23:I:32:ASN:HB2	2.54	0.43
35:U:8:ARG:HD3	35:U:17:TYR:CE1	2.54	0.43
37:W:69:HIS:ND1	37:W:74:PHE:HZ	2.17	0.43
38:X:71:ARG:CZ	47:g:50:ASP:O	2.67	0.43
39:Y:102:ARG:NH1	39:Y:139:VAL:HG11	2.33	0.43
41:a:68:G:N2	41:a:74:A:OP2	2.51	0.43
41:a:310:A:C2	41:a:330:A:C4	3.07	0.43
41:a:553:G:C5	41:a:554:U:C5	3.07	0.43
41:a:1212:G:O2'	41:a:1236:G:N2	2.47	0.43
41:a:1824:G:H3'	48:h:52:ARG:HH12	1.84	0.43
41:a:1839:G:O4'	41:a:1927:A:O4'	2.37	0.43
41:a:1913:A:OP2	41:a:1913:A:H3'	2.18	0.43
41:a:2037:A:H2'	41:a:2038:G:C8	2.54	0.43
41:a:2215:C:H2'	41:a:2216:G:C8	2.54	0.43
41:a:2649:C:H2'	41:a:2650:U:C6	2.51	0.43
41:a:2821:A:C2	41:a:2822:G:C4	3.07	0.43
42:b:21:LEU:HD23	42:b:40:GLN:HA	2.00	0.43
43:c:4:VAL:HG22	43:c:11:ARG:HG2	2.00	0.43
44:d:46:A:C5	44:d:47:C:C5	3.06	0.43
44:d:57:A:N7	54:n:26:MET:CE	2.82	0.43
48:h:71:LYS:HB2	48:h:96:TYR:CZ	2.54	0.43
48:h:130:LEU:CD2	48:h:192:LEU:HD21	2.48	0.43
48:h:144:VAL:HG21	48:h:162:VAL:HG11	2.01	0.43
49:i:55:ILE:HD13	63:w:112:TYR:CE2	2.54	0.43
54:n:73:SER:OG	54:n:80:ARG:HA	2.19	0.43
56:p:85:LYS:HA	56:p:85:LYS:HD2	1.77	0.43
59:s:88:THR:OG1	59:s:91:GLU:HG3	2.18	0.43
60:t:59:LYS:NZ	60:t:92:GLU:CG	2.82	0.43
63:w:58:ASP:HB2	63:w:80:PHE:CE1	2.54	0.43
66:z:47:TYR:CZ	66:z:51:ARG:NH2	2.87	0.43
66:z:76:TYR:CZ	66:z:80:ILE:HD11	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1:95:ARG:C	2:1:95:ARG:HD2	2.44	0.42
10:A:47:U:O2'	10:A:50:U:OP1	2.37	0.42
10:A:57:A:O5'	10:A:58:A:P	2.77	0.42
11:AA:300:ASP:OD1	11:AA:313:ALA:N	2.51	0.42
11:AA:1313:HIS:CD2	15:AF:31:GLN:HE22	2.37	0.42
12:AB:5:TYR:HA	12:AB:88:VAL:CG2	2.49	0.42
12:AB:37:LYS:HE3	12:AB:109:THR:HG21	2.00	0.42
13:AD:192:VAL:HG12	13:AD:193:GLU:H	1.83	0.42
14:AE:66:LYS:HB2	14:AE:69:GLU:HB2	2.01	0.42
14:AE:71:LEU:HD12	14:AE:71:LEU:HA	1.78	0.42
16:AG:398:LEU:C	16:AG:398:LEU:HD12	2.44	0.42
16:AG:402:THR:C	16:AG:405:ALA:H	2.26	0.42
18:D:57:G:H2'	18:D:58:C:C6	2.54	0.42
18:D:323:U:H2'	18:D:324:G:O4'	2.19	0.42
18:D:381:C:H2'	18:D:382:A:O4'	2.19	0.42
18:D:505:G:C2	18:D:506:G:C5	3.07	0.42
18:D:588:G:C4'	28:N:3:MET:HE1	2.48	0.42
18:D:1410:A:H2'	18:D:1411:C:C6	2.54	0.42
18:D:1436:U:C2	18:D:1437:A:C8	3.07	0.42
18:D:1464:U:C2	18:D:1465:A:C8	3.07	0.42
20:F:5:LYS:HD3	31:Q:109:ASN:OD1	2.19	0.42
20:F:31:GLU:CD	20:F:34:ARG:NH2	2.77	0.42
22:H:310:ASP:HB2	22:H:316:ILE:HD11	2.00	0.42
23:I:54:ARG:NH2	23:I:56:VAL:CG2	2.82	0.42
24:J:117:LEU:HD23	24:J:154:ARG:HH21	1.84	0.42
25:K:157:ARG:HG2	25:K:159:LYS:HD3	2.01	0.42
27:M:78:ARG:HG3	27:M:80:VAL:HG13	2.00	0.42
28:N:10:MET:CG	28:N:27:MET:HE1	2.47	0.42
34:T:71:LYS:NZ	34:T:78:TYR:CD2	2.87	0.42
41:a:78:U:C5'	45:e:4:LYS:NZ	2.81	0.42
41:a:125:A:C6	53:m:10:LEU:HD13	2.54	0.42
41:a:196:A:C5	41:a:805:G:C6	3.07	0.42
41:a:471:A:H2'	41:a:472:A:O4'	2.19	0.42
41:a:587:C:O2	61:u:33:ARG:NH2	2.52	0.42
41:a:814:C:C2	41:a:815:C:C5	3.07	0.42
41:a:996:A:N6	41:a:1160:G:C6	2.87	0.42
41:a:1509:A:N3	41:a:1510:G:C8	2.87	0.42
41:a:1657:U:H2'	41:a:1658:C:H6	1.83	0.42
41:a:1695:G:N7	48:h:14:ARG:NH2	2.66	0.42
41:a:1707:G:C5	41:a:1708:C:C5	3.07	0.42
41:a:1709:U:H2'	41:a:1710:G:H8	1.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1792:G:H5'	48:h:204:VAL:CG2	2.49	0.42
41:a:1900:A:N1	41:a:1970:A:C6	2.87	0.42
41:a:2465:C:O2	41:a:2465:C:H2'	2.18	0.42
41:a:2547:A:H5'	60:t:29:HIS:NE2	2.34	0.42
50:j:68:PHE:CE1	50:j:79:LEU:HD21	2.54	0.42
50:j:151:THR:HG23	50:j:151:THR:O	2.19	0.42
50:j:184:ARG:NH2	65:y:7:GLN:CD	2.72	0.42
51:k:34:LEU:HB3	51:k:51:GLU:OE2	2.19	0.42
60:t:20:MET:H	60:t:44:LYS:HZ3	1.67	0.42
62:v:31:PHE:C	62:v:104:GLU:OE1	2.62	0.42
3:2:6:ARG:HE	3:2:42:GLU:CD	2.27	0.42
4:3:35:ILE:HD11	4:3:62:GLU:C	2.44	0.42
5:4:80:HIS:HE1	5:4:82:TYR:CG	2.37	0.42
6:5:10:DT:C4	11:AA:62:TYR:HE2	2.27	0.42
9:9:15:VAL:HG22	9:9:66:GLY:HA3	2.00	0.42
9:9:24:SER:O	9:9:96:PHE:CE1	2.72	0.42
9:9:94:ARG:N	9:9:94:ARG:HD3	2.34	0.42
9:9:129:LEU:HD12	9:9:130:PRO:CD	2.43	0.42
12:AB:146:ILE:HD12	12:AB:146:ILE:N	2.34	0.42
16:AG:21:GLU:HB3	16:AG:49:ILE:CD1	2.49	0.42
16:AG:87:LEU:CD2	16:AG:93:VAL:HG21	2.50	0.42
16:AG:363:LEU:CD2	16:AG:409:ARG:N	2.81	0.42
10:B:22:G:C8	10:B:22:G:OP2	2.71	0.42
18:D:119:A:C2	18:D:240:G:C8	3.07	0.42
18:D:197:A:N6	18:D:221:C:H4'	2.35	0.42
18:D:393:A:C2	18:D:394:G:C8	3.07	0.42
18:D:689:C:H2'	18:D:690:G:O4'	2.18	0.42
18:D:745:G:H2'	18:D:746:A:H8	1.84	0.42
18:D:1184:G:C2	18:D:1185:G:C8	3.07	0.42
18:D:1315:U:H2'	18:D:1316:G:O4'	2.19	0.42
18:D:1381:U:C4	18:D:1382:C:C5	3.07	0.42
19:E:50:ALA:O	19:E:54:MET:HG3	2.20	0.42
21:G:110:SER:OG	21:G:113:ARG:NH2	2.47	0.42
21:G:208:ARG:NH1	21:G:211:THR:CG2	2.82	0.42
22:H:74:ALA:HB3	22:H:83:LEU:CD2	2.50	0.42
23:I:156:ARG:O	23:I:156:ARG:HG3	2.20	0.42
25:K:77:ASN:O	25:K:80:THR:O	2.37	0.42
26:L:29:ILE:HD12	26:L:29:ILE:H	1.83	0.42
29:O:80:ARG:O	29:O:84:THR:HG23	2.19	0.42
38:X:90:ARG:HD3	38:X:97:VAL:HA	2.01	0.42
41:a:126:A:OP1	53:m:45:SER:OG	2.37	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:133:U:H2'	41:a:134:G:C8	2.54	0.42
41:a:136:G:H2'	41:a:137:U:C6	2.54	0.42
41:a:523:C:O2	41:a:554:U:O2'	2.37	0.42
41:a:635:C:OP1	61:u:126:ARG:CZ	2.68	0.42
41:a:973:A:O4'	41:a:1188:U:C6	2.72	0.42
41:a:1511:G:H2'	41:a:1512:C:H6	1.83	0.42
41:a:2061:G:N3	41:a:2063:C:C5	2.87	0.42
41:a:2287:A:N7	41:a:2289:G:C8	2.87	0.42
41:a:2469:A:C6	41:a:2482:A:C8	3.07	0.42
41:a:2516:A:O2'	41:a:2517:C:H5'	2.18	0.42
41:a:2845:U:H5''	65:y:52:ASN:O	2.18	0.42
41:a:2856:A:C6	41:a:2862:G:C6	3.08	0.42
44:d:31:C:C2	44:d:32:U:C5	3.06	0.42
48:h:91:ILE:HG22	48:h:92:ALA:N	2.33	0.42
48:h:94:VAL:HG12	48:h:95:LEU:N	2.34	0.42
50:j:37:VAL:HG13	50:j:48:ILE:CD1	2.49	0.42
50:j:55:LYS:HZ2	50:j:60:VAL:N	2.17	0.42
50:j:181:ASP:HB3	50:j:186:LEU:HB2	1.99	0.42
54:n:12:VAL:HG13	54:n:172:ALA:CB	2.49	0.42
60:t:43:ILE:HD12	60:t:56:ASP:HB2	2.01	0.42
62:v:49:ALA:O	62:v:50:ARG:C	2.62	0.42
63:w:73:ASN:C	63:w:73:ASN:ND2	2.76	0.42
3:2:11:LEU:HD11	3:2:46:ALA:CB	2.49	0.42
3:2:26:LYS:CE	3:2:26:LYS:HA	2.50	0.42
6:5:16:DG:N2	11:AA:445:ILE:HG21	2.35	0.42
8:7:7:U:H6	8:7:7:U:H3'	1.84	0.42
9:9:69:PHE:O	9:9:72:LEU:HD11	2.19	0.42
10:A:22:G:OP2	10:A:22:G:C8	2.72	0.42
11:AA:590:PRO:HB2	11:AA:655:VAL:HG21	2.01	0.42
12:AB:6:LEU:HB2	12:AB:56:PHE:CE1	2.54	0.42
14:AE:412:LEU:HA	14:AE:415:VAL:HG22	2.01	0.42
14:AE:694:SER:OG	14:AE:738:ARG:NE	2.52	0.42
16:AG:56:PHE:CD1	16:AG:56:PHE:N	2.88	0.42
17:C:20:GLU:OE1	17:C:21:ILE:O	2.36	0.42
17:C:38:LYS:NZ	18:D:718:A:C6	2.79	0.42
17:C:44:ILE:CG2	22:H:340:ARG:HB2	2.50	0.42
18:D:585:G:P	36:V:39:LYS:HZ1	2.41	0.42
18:D:619:U:H1'	24:J:128:ARG:NH1	2.34	0.42
18:D:662:U:H2'	18:D:663:A:C8	2.55	0.42
18:D:684:U:H2'	18:D:685:G:O4'	2.19	0.42
18:D:690:G:H2'	18:D:691:G:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:723:U:C2	20:F:49:LYS:HE3	2.54	0.42
18:D:1125:U:O2'	18:D:1126:U:O5'	2.32	0.42
18:D:1499:A:H2'	18:D:1500:A:H8	1.85	0.42
23:I:149:ILE:HG13	23:I:202:ILE:HG12	2.01	0.42
24:J:139:PRO:N	24:J:182:PHE:CE2	2.88	0.42
26:L:25:TYR:O	26:L:26:THR:C	2.61	0.42
27:M:23:LEU:H	27:M:23:LEU:CD1	2.30	0.42
29:O:35:LEU:CD2	29:O:45:ARG:HG2	2.50	0.42
30:P:64:GLN:HG2	33:S:101:TRP:HH2	1.84	0.42
32:R:116:LYS:O	32:R:117:TYR:HD1	2.03	0.42
41:a:751:A:C6	41:a:789:A:C5	3.08	0.42
41:a:969:G:H2'	41:a:970:U:C6	2.54	0.42
41:a:1145:C:H2'	41:a:1146:C:H6	1.84	0.42
41:a:1443:U:H2'	41:a:1444:G:H8	1.82	0.42
41:a:1709:U:H2'	41:a:1710:G:C8	2.55	0.42
41:a:1789:A:OP2	48:h:221:ARG:NH1	2.52	0.42
41:a:2585:U:O2	41:a:2585:U:O4'	2.37	0.42
44:d:83:G:O4'	46:f:53:PHE:CE2	2.72	0.42
45:e:25:GLN:OE1	45:e:50:VAL:HG21	2.19	0.42
52:l:131:THR:HG22	52:l:160:ALA:O	2.18	0.42
54:n:38:MET:HE3	54:n:57:LEU:HD23	2.01	0.42
54:n:104:ILE:HD11	54:n:174:ASP:O	2.19	0.42
60:t:118:LEU:O	60:t:119:ALA:C	2.62	0.42
62:v:115:GLU:O	62:v:116:ALA:C	2.61	0.42
66:z:82:GLY:CA	66:z:117:LEU:HD11	2.48	0.42
9:9:23:LEU:CA	9:9:118:ILE:HD11	2.50	0.42
10:A:18:G:H2'	10:A:57:A:C2	2.55	0.42
11:AA:1072:ASN:OD1	11:AA:1072:ASN:N	2.52	0.42
12:AB:29:LEU:H	12:AB:56:PHE:HB2	1.84	0.42
12:AB:132:GLU:HB3	12:AB:151:LYS:HE3	2.02	0.42
14:AE:74:LYS:HB2	14:AE:74:LYS:HE2	1.60	0.42
10:B:49:G:O5'	10:B:49:G:H8	2.01	0.42
18:D:296:U:O2'	18:D:556:C:O2	2.34	0.42
18:D:539:A:H2'	18:D:540:G:C8	2.54	0.42
18:D:671:G:H4'	26:L:79:ARG:HH12	1.84	0.42
18:D:768:A:C5	18:D:769:G:C8	3.08	0.42
18:D:792:A:H1'	18:D:794:A:N7	2.34	0.42
18:D:946:A:C2	18:D:947:G:C5	3.08	0.42
18:D:1107:C:OP1	23:I:172:ARG:HG3	2.19	0.42
18:D:1499:A:O2'	18:D:1500:A:H5'	2.20	0.42
21:G:134:ALA:HA	21:G:137:ARG:NE	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:I:72:ARG:O	23:I:75:ILE:HG22	2.19	0.42
24:J:41:HIS:ND1	24:J:44:ARG:CZ	2.82	0.42
25:K:111:MET:O	25:K:112:ARG:C	2.63	0.42
26:L:24:ARG:O	26:L:25:TYR:C	2.62	0.42
27:M:99:LEU:O	27:M:103:TRP:CG	2.73	0.42
28:N:47:GLU:OE1	28:N:63:LEU:C	2.62	0.42
31:Q:47:ALA:O	31:Q:52:PHE:HB2	2.19	0.42
31:Q:64:GLN:HB2	31:Q:99:ALA:HB2	2.01	0.42
35:U:14:ARG:CD	35:U:42:ILE:HG21	2.47	0.42
36:V:15:ASP:OD1	36:V:15:ASP:N	2.49	0.42
37:W:17:LYS:O	37:W:21:LYS:HD3	2.19	0.42
38:X:25:VAL:O	38:X:25:VAL:HG13	2.19	0.42
41:a:6:A:O3'	59:s:132:HIS:HE1	2.03	0.42
41:a:320:A:N3	52:l:163:ASN:ND2	2.67	0.42
41:a:780:G:O2'	41:a:783:A:N6	2.53	0.42
41:a:1095:A:O2'	41:a:1096:A:O4'	2.36	0.42
41:a:1361:G:H2'	41:a:1362:C:C6	2.54	0.42
41:a:1565:C:OP1	48:h:18:LYS:HD2	2.19	0.42
41:a:2297:A:C2	41:a:2321:U:C5	3.07	0.42
41:a:2554:U:H2'	41:a:2555:U:C6	2.55	0.42
41:a:2783:U:H2'	41:a:2784:U:H6	1.85	0.42
41:a:2838:G:C6	41:a:2839:G:C5	3.08	0.42
45:e:14:LEU:HA	45:e:17:GLU:OE1	2.20	0.42
45:e:20:ASN:O	45:e:24:GLU:HG2	2.20	0.42
50:j:61:THR:HG23	50:j:63:PRO:HD2	2.00	0.42
52:l:193:VAL:O	52:l:194:LYS:C	2.62	0.42
55:o:29:LEU:O	55:o:29:LEU:HG	2.19	0.42
56:p:94:TYR:HE1	56:p:152:ARG:HD2	1.83	0.42
58:r:8:LYS:NZ	58:r:9:VAL:O	2.53	0.42
63:w:33:ILE:CD1	63:w:112:TYR:HD1	2.32	0.42
1:0:77:PHE:CD1	1:0:77:PHE:C	2.98	0.42
3:2:42:GLU:OE1	3:2:42:GLU:HA	2.19	0.42
5:4:2:PHE:CD1	5:4:56:PHE:CE1	3.08	0.42
9:9:80:THR:O	41:a:1108:U:OP1	2.37	0.42
12:AB:119:THR:HG21	12:AB:123:PHE:CE1	2.54	0.42
14:AE:205:LEU:HD23	14:AE:205:LEU:HA	1.90	0.42
14:AE:1022:PRO:O	14:AE:1126:GLN:NE2	2.45	0.42
16:AG:425:LEU:C	16:AG:429:LYS:CE	2.74	0.42
17:C:33:ILE:O	22:H:338:GLU:HB3	2.20	0.42
17:C:60:LYS:NZ	18:D:735:C:O5'	2.52	0.42
18:D:34:C:H2'	18:D:35:G:H8	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:105:G:C5	18:D:106:C:C4	3.08	0.42
18:D:246:A:C2	18:D:282:A:C4	3.06	0.42
18:D:256:U:H2'	18:D:257:G:C8	2.54	0.42
18:D:1071:C:C5'	25:K:54:ARG:HH21	2.33	0.42
18:D:1104:G:H4'	21:G:113:ARG:HH22	1.83	0.42
18:D:1276:G:O5'	18:D:1276:G:H8	2.02	0.42
19:E:60:ARG:O	19:E:64:LYS:HD3	2.18	0.42
20:F:14:VAL:O	20:F:18:ARG:HG3	2.19	0.42
21:G:55:ALA:O	21:G:59:LYS:HG2	2.19	0.42
26:L:94:HIS:CG	26:L:95:ALA:N	2.88	0.42
31:Q:20:VAL:CG1	31:Q:21:ALA:N	2.82	0.42
35:U:67:ILE:O	35:U:67:ILE:HG13	2.20	0.42
37:W:45:ILE:HA	37:W:62:VAL:HG12	2.01	0.42
39:Y:99:LYS:CE	39:Y:138:VAL:O	2.67	0.42
41:a:580:U:C2	41:a:581:C:C5	3.07	0.42
41:a:874:G:C6	41:a:904:G:C6	3.08	0.42
41:a:1064:C:H2'	41:a:1065:U:C6	2.55	0.42
41:a:1778:U:C4	41:a:1784:A:C4	3.07	0.42
41:a:2002:G:OP1	63:w:13:ASN:HA	2.19	0.42
41:a:2072:C:C2	41:a:2073:C:C5	3.08	0.42
41:a:2723:C:C5'	63:w:1:MET:HE3	2.49	0.42
43:c:66:THR:O	43:c:69:ALA:N	2.52	0.42
48:h:183:LYS:CE	48:h:265:LYS:O	2.67	0.42
51:k:9:ILE:HD12	51:k:51:GLU:HG2	2.01	0.42
60:t:7:MET:C	60:t:18:ARG:NH1	2.77	0.42
62:v:71:LYS:C	62:v:92:TRP:CE3	2.97	0.42
65:y:55:LEU:HA	65:y:77:HIS:CD2	2.54	0.42
66:z:111:GLU:OE2	66:z:112:LYS:HD2	2.19	0.42
3:2:3:ARG:HG3	3:2:5:GLU:OE1	2.19	0.42
3:2:76:ARG:CZ	3:2:77:ARG:O	2.67	0.42
4:3:6:ARG:N	4:3:9:ASP:OD2	2.49	0.42
6:5:10:DT:C2	11:AA:62:TYR:HE2	2.37	0.42
10:A:59:A:C5	10:A:60:U:C5	3.08	0.42
11:AA:144:VAL:HG23	11:AA:515:MET:HB2	2.02	0.42
11:AA:861:ALA:HB1	11:AA:882:ILE:HD13	2.01	0.42
12:AB:26:VAL:HG13	12:AB:58:GLU:H	1.84	0.42
12:AB:112:PRO:HA	12:AB:133:PRO:CG	2.49	0.42
14:AE:97:VAL:HG12	14:AE:101:ARG:HG3	2.01	0.42
14:AE:836:ARG:HG3	14:AE:869:CYS:HB3	2.02	0.42
18:D:36:C:N4	18:D:37:U:C4	2.88	0.42
18:D:414:A:C2	18:D:415:A:H1'	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:687:A:C2	18:D:704:A:C6	3.07	0.42
18:D:1073:U:O2	21:G:103:ASN:ND2	2.52	0.42
18:D:1261:A:C5	18:D:1262:C:C6	3.07	0.42
18:D:1328:C:H5''	38:X:28:THR:HG21	2.01	0.42
18:D:1329:A:OP1	38:X:28:THR:CB	2.66	0.42
18:D:1439:G:H2'	18:D:1440:U:O4'	2.20	0.42
20:F:39:GLU:OE2	20:F:44:GLU:HA	2.18	0.42
22:H:309:MET:HE1	22:H:318:PRO:HG3	2.02	0.42
24:J:67:VAL:C	24:J:72:PHE:CE2	2.98	0.42
25:K:80:THR:OG1	25:K:81:LEU:N	2.53	0.42
25:K:97:GLN:NE2	25:K:98:PRO:O	2.52	0.42
25:K:123:VAL:C	25:K:124:LEU:HD23	2.45	0.42
32:R:4:VAL:CG1	32:R:5:ASN:N	2.83	0.42
32:R:80:ILE:CG2	32:R:81:LEU:N	2.82	0.42
34:T:77:ARG:HA	34:T:77:ARG:NE	2.35	0.42
35:U:12:LYS:HD2	35:U:13:LYS:HG2	2.00	0.42
36:V:48:ASP:HB3	36:V:75:LEU:CD2	2.49	0.42
38:X:3:ARG:CZ	54:n:110:ARG:HD2	2.49	0.42
40:Z:14:MET:CG	40:Z:15:SER:H	2.25	0.42
41:a:299:A:C5	41:a:322:A:C2	3.07	0.42
41:a:367:G:C4	41:a:368:A:C8	3.07	0.42
41:a:407:G:C2	41:a:408:G:C8	3.07	0.42
41:a:729:G:C8	48:h:207:LYS:HD2	2.54	0.42
41:a:1008:A:OP2	59:s:37:ARG:NH1	2.52	0.42
41:a:1080:A:C6	41:a:1081:U:C4	3.08	0.42
41:a:1399:C:C2	41:a:1400:U:C5	3.08	0.42
41:a:1874:C:H2'	41:a:1875:G:O4'	2.20	0.42
41:a:2249:U:H3'	41:a:2250:G:C5'	2.49	0.42
41:a:2547:A:H4'	60:t:29:HIS:NE2	2.34	0.42
41:a:2673:G:C2	41:a:2674:G:C8	3.08	0.42
41:a:2756:U:N3	41:a:2758:A:C6	2.87	0.42
44:d:39:A:C2	44:d:44:G:C2	3.07	0.42
52:l:23:PHE:CD1	52:l:111:GLU:HG3	2.55	0.42
53:m:4:THR:HG23	53:m:5:PHE:N	2.34	0.42
54:n:4:LEU:HD11	54:n:101:GLU:CB	2.50	0.42
63:w:38:LEU:HB3	63:w:39:PRO:HD3	2.02	0.42
64:x:83:LEU:HD23	64:x:88:LYS:HD3	2.02	0.42
1:0:40:MET:HE1	66:z:105:ALA:HB1	2.01	0.42
8:7:36:G:C2'	8:7:37:U:H5'	2.49	0.42
12:AB:4:TRP:CE2	12:AB:27:ASN:ND2	2.87	0.42
13:AC:48:LEU:HD23	13:AC:48:LEU:HA	1.86	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:162:ILE:HD13	16:AG:167:MET:CE	2.49	0.42
16:AG:354:ALA:O	16:AG:358:THR:HG22	2.19	0.42
18:D:76:G:C5	18:D:77:A:N7	2.88	0.42
18:D:407:U:C2	18:D:408:A:C8	3.08	0.42
18:D:611:C:O2	18:D:611:C:H2'	2.18	0.42
18:D:1202:U:N3	33:S:82:ILE:HD13	2.35	0.42
18:D:1381:U:N3	18:D:1382:C:C5	2.88	0.42
18:D:1382:C:O2	18:D:1382:C:H2'	2.19	0.42
18:D:1493:A:O2'	18:D:1494:G:P	2.78	0.42
22:H:331:MET:SD	22:H:348:GLN:HG2	2.60	0.42
24:J:62:ARG:CG	24:J:72:PHE:CZ	3.02	0.42
24:J:76:TYR:HE1	24:J:86:THR:CG2	2.33	0.42
24:J:76:TYR:HE1	24:J:86:THR:HG21	1.84	0.42
24:J:153:SER:OG	24:J:156:LYS:NZ	2.53	0.42
30:P:7:ARG:HA	30:P:75:ASP:OD1	2.20	0.42
30:P:59:LYS:HE2	30:P:62:ARG:CZ	2.50	0.42
32:R:66:TYR:CE2	32:R:68:GLY:HA2	2.55	0.42
33:S:63:ARG:HH22	33:S:70:PRO:HD3	1.85	0.42
34:T:26:GLU:CG	34:T:27:VAL:N	2.83	0.42
34:T:70:LEU:CD2	34:T:78:TYR:HA	2.49	0.42
37:W:66:MET:SD	37:W:66:MET:C	3.03	0.42
39:Y:96:LYS:CD	39:Y:136:GLY:HA3	2.50	0.42
41:a:136:G:H2'	41:a:137:U:H6	1.85	0.42
41:a:301:G:C4	41:a:302:C:C5	3.07	0.42
41:a:938:G:C2	41:a:939:G:C8	3.08	0.42
41:a:1223:G:N1	41:a:1226:A:OP2	2.49	0.42
41:a:1281:G:H2'	41:a:1282:U:C6	2.55	0.42
41:a:1906:G:C8	41:a:1929:G:C4	3.08	0.42
41:a:1906:G:C8	41:a:1929:G:C5	3.08	0.42
41:a:1964:G:H4'	41:a:1965:C:OP2	2.19	0.42
41:a:2040:G:H2'	41:a:2041:U:O4'	2.20	0.42
41:a:2093:G:P	58:r:22:LYS:CG	3.07	0.42
41:a:2228:G:H2'	41:a:2229:U:C6	2.54	0.42
45:e:8:GLU:O	45:e:9:LYS:HD3	2.19	0.42
48:h:18:LYS:HE3	48:h:20:VAL:HG21	2.02	0.42
50:j:91:THR:HG22	50:j:92:VAL:N	2.35	0.42
50:j:100:LEU:O	50:j:100:LEU:HD12	2.20	0.42
56:p:70:ALA:HA	56:p:73:ASN:HD22	1.84	0.42
58:r:8:LYS:HD2	58:r:13:GLY:O	2.20	0.42
63:w:45:ARG:O	63:w:49:GLU:CD	2.62	0.42
63:w:60:VAL:CG2	63:w:63:ARG:NH1	2.78	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:w:70:THR:O	63:w:71:ARG:HB2	2.20	0.42
65:y:106:LYS:HB3	65:y:109:ARG:HH22	1.84	0.42
3:2:5:GLU:HA	45:e:22:LEU:HD21	2.02	0.42
3:2:57:VAL:HG22	3:2:58:VAL:N	2.35	0.42
11:AA:741:MET:SD	11:AA:974:ARG:NH2	2.93	0.42
13:AD:288:GLU:C	13:AD:290:LEU:H	2.27	0.42
14:AE:81:ARG:N	14:AE:81:ARG:CD	2.73	0.42
14:AE:211:GLU:HA	14:AE:214:ARG:HD2	2.01	0.42
14:AE:513:MET:HE1	14:AE:579:LEU:HD13	2.01	0.42
14:AE:859:PRO:HD2	14:AE:862:THR:HG21	2.01	0.42
14:AE:975:ILE:HG22	14:AE:977:SER:H	1.83	0.42
16:AG:10:GLU:C	16:AG:12:VAL:HG22	2.44	0.42
16:AG:185:SER:O	16:AG:185:SER:OG	2.37	0.42
16:AG:288:MET:HE3	16:AG:288:MET:C	2.44	0.42
17:C:30:LYS:HA	17:C:33:ILE:HG12	2.01	0.42
18:D:611:C:N3	18:D:612:C:C5	2.87	0.42
18:D:1073:U:C2	18:D:1074:G:C8	3.07	0.42
18:D:1152:A:P	30:P:72:ARG:HH22	2.43	0.42
20:F:3:VAL:HG22	31:Q:111:THR:HG23	2.01	0.42
21:G:30:PHE:CE1	21:G:201:PRO:HG3	2.53	0.42
23:I:172:ARG:NH1	23:I:174:PRO:HG3	2.35	0.42
23:I:184:TYR:O	23:I:185:ASN:CG	2.63	0.42
26:L:88:MET:SD	26:L:90:MET:HE3	2.60	0.42
29:O:97:GLU:HG2	29:O:98:LEU:N	2.35	0.42
29:O:116:VAL:HG11	30:P:62:ARG:HD3	2.02	0.42
32:R:3:THR:O	32:R:6:GLN:HB2	2.20	0.42
33:S:77:PHE:HE1	33:S:93:ILE:CG2	2.30	0.42
34:T:70:LEU:HG	34:T:78:TYR:HB2	2.02	0.42
36:V:43:LYS:C	36:V:44:LEU:HD12	2.45	0.42
38:X:71:ARG:NH1	47:g:51:VAL:O	2.52	0.42
39:Y:32:VAL:HG13	39:Y:58:ILE:HG21	2.00	0.42
41:a:16:C:O4'	49:i:15:MET:HE1	2.20	0.42
41:a:104:A:C4	41:a:105:C:C6	3.08	0.42
41:a:1065:U:O2'	41:a:1066:U:P	2.77	0.42
41:a:1289:C:H2'	41:a:1290:C:H6	1.84	0.42
41:a:2393:U:C5'	55:o:30:ARG:NH1	2.76	0.42
41:a:2590:A:H2'	41:a:2591:C:H6	1.83	0.42
41:a:2708:G:O4'	63:w:71:ARG:NH1	2.53	0.42
41:a:2722:G:C2'	41:a:2723:C:H5'	2.50	0.42
50:j:34:VAL:HG13	50:j:48:ILE:CG2	2.50	0.42
50:j:170:VAL:HG13	50:j:194:PRO:CG	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:l:105:LEU:O	52:l:109:LEU:HG	2.18	0.42
52:l:149:ILE:HG21	52:l:175:ILE:HD11	2.01	0.42
52:l:170:ARG:NH1	52:l:175:ILE:HA	2.34	0.42
60:t:7:MET:SD	60:t:18:ARG:HG3	2.59	0.42
60:t:116:ILE:HG13	60:t:117:SER:N	2.34	0.42
62:v:105:MET:HG2	62:v:117:PHE:CZ	2.54	0.42
64:x:14:ALA:O	64:x:15:ARG:C	2.61	0.42
64:x:48:LEU:CD2	64:x:87:ILE:CD1	2.98	0.42
64:x:79:ALA:CB	64:x:113:ALA:HB3	2.49	0.42
2:1:23:LEU:CD2	2:1:39:THR:HG21	2.50	0.42
3:2:22:THR:O	3:2:25:GLU:HG2	2.20	0.42
8:7:12:U:H4'	25:K:56:VAL:HG11	2.02	0.42
9:9:33:VAL:H	9:9:36:ASP:CG	2.28	0.42
11:AA:478:ARG:HD2	11:AA:492:MET:HA	2.02	0.42
11:AA:616:ILE:HG13	11:AA:652:TYR:HB2	2.02	0.42
11:AA:699:LEU:HG	11:AA:799:ASN:HD22	1.84	0.42
12:AB:3:SER:HB3	12:AB:5:TYR:CE2	2.55	0.42
12:AB:155:LYS:HB3	12:AB:158:GLU:CD	2.45	0.42
14:AE:319:SER:HA	14:AE:320:ASN:HA	1.73	0.42
16:AG:244:ARG:N	16:AG:244:ARG:HE	2.18	0.42
10:B:11:A:H2'	10:B:12:G:C8	2.54	0.42
10:B:57:A:O5'	10:B:58:A:P	2.77	0.42
18:D:21:G:H2'	18:D:22:G:C8	2.54	0.42
18:D:68:G:H3'	18:D:69:G:H5''	2.01	0.42
18:D:250:A:O4'	18:D:252:U:C6	2.72	0.42
18:D:415:A:C4	18:D:416:G:C8	3.07	0.42
18:D:519:C:H2'	18:D:520:A:O4'	2.20	0.42
18:D:1524:C:H2'	18:D:1525:G:C8	2.55	0.42
19:E:9:LYS:CG	19:E:13:GLN:NE2	2.82	0.42
23:I:36:ASP:OD1	23:I:57:ILE:HG21	2.19	0.42
23:I:72:ARG:HD3	23:I:75:ILE:H	1.84	0.42
23:I:105:GLU:CD	23:I:107:ARG:HH21	2.28	0.42
23:I:132:ARG:CB	23:I:135:LYS:HE3	2.49	0.42
24:J:170:TRP:CD1	24:J:171:LEU:HG	2.54	0.42
25:K:100:SER:O	25:K:103:THR:HG22	2.20	0.42
25:K:123:VAL:O	25:K:124:LEU:HD23	2.20	0.42
26:L:2:ARG:C	26:L:65:GLU:OE1	2.62	0.42
30:P:45:ARG:CD	30:P:47:GLU:OE2	2.67	0.42
36:V:61:ILE:HA	36:V:75:LEU:HA	2.02	0.42
39:Y:79:LEU:HD11	39:Y:132:ALA:HA	2.02	0.42
41:a:307:G:N1	41:a:310:A:OP2	2.47	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:579:G:H2'	41:a:580:U:H6	1.85	0.42
41:a:826:U:O2'	61:u:53:GLY:HA3	2.20	0.42
41:a:1076:C:H2'	41:a:1077:A:C8	2.54	0.42
41:a:1827:U:O2'	41:a:1828:G:H5'	2.19	0.42
41:a:1958:C:O2'	41:a:1959:G:H5'	2.20	0.42
41:a:2218:G:C5'	43:c:45:ARG:HH12	2.33	0.42
41:a:2571:U:O2'	50:j:151:THR:HG23	2.20	0.42
41:a:2636:C:O2'	50:j:45:TYR:CZ	2.70	0.42
41:a:2884:U:C2	49:i:40:ARG:CZ	3.02	0.42
43:c:76:GLU:CD	43:c:76:GLU:C	2.87	0.42
44:d:39:A:C2	44:d:44:G:C4	3.07	0.42
44:d:57:A:C4	44:d:58:A:C8	3.07	0.42
48:h:71:LYS:CB	48:h:96:TYR:CZ	3.03	0.42
48:h:196:GLY:O	48:h:198:ALA:N	2.53	0.42
51:k:9:ILE:HG22	51:k:27:LYS:HZ1	1.84	0.42
53:m:25:LYS:HG3	53:m:29:GLN:NE2	2.34	0.42
53:m:25:LYS:O	53:m:28:ARG:N	2.52	0.42
54:n:132:VAL:HG11	54:n:137:ILE:HD11	2.01	0.42
59:s:15:TRP:CE3	59:s:135:GLN:HB3	2.55	0.42
59:s:28:LEU:HD12	59:s:142:ILE:HG21	2.01	0.42
62:v:45:GLN:HE22	62:v:125:PRO:HD2	1.84	0.42
62:v:104:GLU:CD	62:v:105:MET:H	2.28	0.42
64:x:88:LYS:O	64:x:116:GLN:OE1	2.38	0.42
3:2:9:LYS:C	3:2:12:ARG:HH22	2.28	0.42
9:9:118:ILE:CB	9:9:119:PRO:HD3	2.44	0.42
9:9:129:LEU:H	9:9:129:LEU:HG	1.72	0.42
10:A:11:A:H2'	10:A:12:G:C8	2.54	0.42
16:AG:152:LEU:HD11	16:AG:162:ILE:HD12	2.02	0.42
16:AG:161:VAL:HB	16:AG:196:PHE:CE1	2.54	0.42
16:AG:266:LEU:CD2	16:AG:266:LEU:N	2.73	0.42
10:B:18:G:H2'	10:B:57:A:C2	2.55	0.42
18:D:255:G:H2'	18:D:256:U:C6	2.55	0.42
18:D:374:A:C6	18:D:375:U:C4	3.08	0.42
18:D:545:C:OP2	24:J:62:ARG:NH1	2.53	0.42
18:D:820:U:H4'	18:D:821:G:OP2	2.20	0.42
18:D:964:A:C2	18:D:969:A:N3	2.87	0.42
18:D:1217:C:P	33:S:9:ARG:HE	2.41	0.42
18:D:1241:G:H2'	18:D:1242:G:H8	1.85	0.42
18:D:1437:A:C4	18:D:1438:G:C8	3.08	0.42
19:E:28:MET:HE3	19:E:28:MET:HB3	1.94	0.42
19:E:66:LEU:HD12	19:E:66:LEU:HA	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:H:308:GLU:HB2	22:H:347:LYS:HB3	2.02	0.42
22:H:309:MET:HE2	22:H:309:MET:HB3	1.93	0.42
24:J:67:VAL:CG1	24:J:71:GLN:HB3	2.50	0.42
25:K:88:VAL:HG12	25:K:93:ARG:HG2	2.02	0.42
27:M:16:PRO:HB3	29:O:46:MET:CG	2.47	0.42
27:M:37:SER:HA	29:O:41:ARG:HH22	1.85	0.42
27:M:74:GLU:HG3	27:M:91:VAL:CG1	2.50	0.42
28:N:27:MET:CA	28:N:58:GLU:OE2	2.67	0.42
32:R:7:LEU:HD21	32:R:12:ARG:HH21	1.82	0.42
32:R:57:LEU:HG	32:R:58:THR:N	2.35	0.42
32:R:79:VAL:O	32:R:103:ASP:HB2	2.20	0.42
34:T:18:ASP:O	34:T:19:ALA:HB3	2.20	0.42
34:T:64:ARG:CZ	34:T:89:ARG:HH12	2.33	0.42
35:U:26:ASN:ND2	35:U:31:ARG:CD	2.83	0.42
38:X:16:VAL:HG12	38:X:34:LEU:CD1	2.50	0.42
38:X:101:ARG:C	38:X:103:LYS:H	2.26	0.42
41:a:592:A:N3	55:o:4:ILE:HD11	2.35	0.42
41:a:789:A:N1	53:m:3:ARG:NH2	2.68	0.42
41:a:958:U:C4	62:v:40:ARG:NH1	2.88	0.42
41:a:1246:A:H2'	41:a:1247:A:O4'	2.20	0.42
41:a:1343:G:C8	41:a:1597:A:C6	3.08	0.42
41:a:1597:A:H5''	41:a:1598:A:H5'	2.01	0.42
41:a:2259:U:C5	41:a:2427:C:N4	2.88	0.42
41:a:2507:C:C2	41:a:2583:G:C2	3.07	0.42
41:a:2586:U:H2'	41:a:2587:A:O4'	2.20	0.42
41:a:2756:U:C4	41:a:2759:G:O6	2.73	0.42
45:e:13:GLU:O	45:e:14:LEU:C	2.63	0.42
48:h:108:LYS:CG	48:h:109:GLY:N	2.83	0.42
49:i:14:GLY:HA2	49:i:17:ARG:HG2	2.02	0.42
50:j:152:PRO:HG3	50:j:156:PHE:CE1	2.53	0.42
54:n:30:ARG:C	54:n:158:THR:HG1	2.28	0.42
54:n:38:MET:HE3	54:n:57:LEU:CD2	2.50	0.42
54:n:38:MET:HE3	54:n:57:LEU:CG	2.49	0.42
54:n:67:ILE:CD1	54:n:87:CYS:HB3	2.50	0.42
55:o:22:PHE:CE1	55:o:62:LEU:HD23	2.55	0.42
56:p:121:ILE:HD12	56:p:141:ILE:CG2	2.39	0.42
56:p:137:ASP:OD2	56:p:140:VAL:N	2.45	0.42
58:r:114:GLU:OE2	58:r:133:GLN:N	2.53	0.42
64:x:88:LYS:HB3	64:x:116:GLN:OE1	2.20	0.42
3:2:26:LYS:HA	3:2:26:LYS:HE3	2.02	0.41
4:3:6:ARG:HG2	4:3:7:ARG:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:5:10:DT:C2'	12:AB:69:ILE:C	2.89	0.41
8:7:13:U:C6	8:7:13:U:C3'	3.03	0.41
9:9:35:VAL:HG22	9:9:35:VAL:O	2.19	0.41
11:AA:125:GLY:H	11:AA:495:ALA:HB1	1.84	0.41
11:AA:242:VAL:HA	11:AA:243:PRO:HD3	1.93	0.41
11:AA:859:GLU:OE1	16:AG:38:LYS:HG3	2.20	0.41
11:AA:998:LEU:HD21	11:AA:1015:ALA:HB2	2.02	0.41
12:AB:90:SER:HB2	12:AB:94:HIS:NE2	2.34	0.41
13:AC:228:LEU:HD21	13:AD:224:LEU:HD23	2.01	0.41
13:AD:76:GLU:HB3	13:AD:80:GLU:HB3	2.01	0.41
14:AE:134:ASP:HB3	14:AE:159:ILE:HG21	2.02	0.41
16:AG:434:LEU:HG	16:AG:455:THR:CA	2.50	0.41
16:AG:442:ARG:HB3	16:AG:446:PHE:CE2	2.44	0.41
17:C:40:VAL:HG13	22:H:339:ARG:CD	2.49	0.41
17:C:70:TYR:HE2	26:L:49:TYR:CZ	2.38	0.41
18:D:119:A:C4	18:D:240:G:N7	2.88	0.41
18:D:122:G:C4	18:D:123:U:C6	3.08	0.41
18:D:520:A:C2'	32:R:70:GLU:OE1	2.67	0.41
18:D:678:U:C2	18:D:679:C:C5	3.08	0.41
18:D:1113:C:C2	18:D:1114:C:C5	3.08	0.41
18:D:1202:U:C2	33:S:82:ILE:HD13	2.55	0.41
19:E:48:GLN:CD	19:E:49:LYS:N	2.78	0.41
19:E:53:GLU:O	19:E:57:ILE:CD1	2.68	0.41
20:F:5:LYS:CD	31:Q:109:ASN:OD1	2.68	0.41
21:G:30:PHE:HA	21:G:45:LYS:NZ	2.35	0.41
22:H:54:LYS:HD3	22:H:58:GLY:HA2	2.02	0.41
22:H:135:LEU:CB	22:H:157:ILE:CB	2.97	0.41
22:H:322:VAL:HG12	22:H:323:ASN:HB2	2.02	0.41
22:H:330:VAL:HB	22:H:344:LEU:HD23	2.01	0.41
23:I:66:VAL:HB	23:I:101:ILE:CD1	2.50	0.41
37:W:40:ILE:HG22	37:W:67:VAL:HA	2.01	0.41
41:a:134:G:H2'	41:a:135:U:H6	1.85	0.41
41:a:138:U:C5	41:a:142:A:C6	3.08	0.41
41:a:353:C:C2	41:a:354:A:C8	3.07	0.41
41:a:667:U:H2'	41:a:668:A:O4'	2.20	0.41
41:a:1580:A:C8	41:a:1581:G:C8	3.08	0.41
41:a:1820:U:C2	48:h:201:MET:CE	3.04	0.41
41:a:1829:A:C8	41:a:1830:C:C5	3.08	0.41
41:a:1946:U:H2'	41:a:1947:C:H6	1.83	0.41
41:a:2049:G:H21	50:j:161:MET:HE2	1.84	0.41
41:a:2066:C:O2'	41:a:2067:G:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:2244:U:O2'	41:a:2245:U:H5'	2.20	0.41
41:a:2708:G:C2	41:a:2709:G:C8	3.08	0.41
49:i:4:GLN:OE1	49:i:8:PRO:HD3	2.19	0.41
50:j:175:LEU:HB3	50:j:189:VAL:CG1	2.50	0.41
52:l:194:LYS:C	52:l:198:GLU:OE1	2.63	0.41
54:n:136:ILE:HA	54:n:141:ILE:HG21	2.01	0.41
54:n:138:PHE:O	54:n:141:ILE:HG22	2.20	0.41
61:u:123:ARG:C	61:u:125:LEU:HD22	2.45	0.41
62:v:105:MET:HE1	62:v:113:ALA:HA	2.01	0.41
64:x:36:TYR:CD2	64:x:37:ALA:N	2.88	0.41
65:y:110:ILE:O	65:y:110:ILE:HG13	2.19	0.41
1:0:52:PRO:HB3	66:z:89:GLU:CD	2.44	0.41
2:1:74:ILE:HD12	2:1:74:ILE:N	2.34	0.41
5:4:77:VAL:HG21	5:4:79:ARG:HE	1.84	0.41
10:A:68:C:C4	10:A:69:C:C5	3.08	0.41
12:AB:81:PHE:CD1	14:AE:141:PHE:O	2.72	0.41
16:AG:277:ASP:HB2	16:AG:282:GLN:CG	2.50	0.41
16:AG:296:ILE:HD11	16:AG:307:ILE:CD1	2.50	0.41
16:AG:434:LEU:CD1	16:AG:455:THR:CA	2.98	0.41
10:B:5:G:C2'	10:B:6:G:C5'	2.98	0.41
10:B:12:G:H2'	10:B:13:C:OP1	2.20	0.41
17:C:12:ARG:CB	22:H:264:GLU:CB	2.98	0.41
18:D:112:G:N1	18:D:330:C:C5	2.88	0.41
18:D:124:C:H2'	18:D:125:U:H6	1.84	0.41
18:D:860:A:H2'	18:D:861:G:O4'	2.20	0.41
18:D:980:C:H2'	18:D:981:U:H5'	2.01	0.41
18:D:997:U:O2'	18:D:998:C:H5'	2.21	0.41
18:D:1035:A:C6	18:D:1036:A:N7	2.88	0.41
18:D:1288:A:H2'	18:D:1289:A:O4'	2.21	0.41
18:D:1526:G:P	20:F:42:THR:HG23	2.59	0.41
21:G:115:LYS:C	21:G:115:LYS:HD3	2.45	0.41
22:H:70:VAL:O	22:H:71:ALA:HB2	2.20	0.41
22:H:287:LEU:HD23	22:H:318:PRO:HB2	2.03	0.41
23:I:155:GLY:HA2	23:I:163:ALA:HB1	2.02	0.41
27:M:23:LEU:N	27:M:23:LEU:CD1	2.81	0.41
31:Q:85:MET:HB3	31:Q:113:VAL:HG21	2.00	0.41
39:Y:23:VAL:HG23	39:Y:27:LEU:HD23	2.01	0.41
41:a:859:G:O2'	41:a:916:G:O6	2.37	0.41
41:a:920:A:H2'	41:a:921:C:H6	1.85	0.41
41:a:1083:U:O2'	41:a:1085:A:OP2	2.32	0.41
41:a:1172:C:C2'	41:a:1173:U:O4'	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1252:G:H1	66:z:37:GLN:HE21	1.68	0.41
41:a:1773:A:C8	41:a:1829:A:C8	3.08	0.41
41:a:2226:C:H2'	41:a:2227:A:O4'	2.20	0.41
41:a:2590:A:C2	41:a:2591:C:C5	3.08	0.41
41:a:2759:G:O2'	56:p:35:ARG:NH1	2.52	0.41
41:a:2813:A:H2'	41:a:2814:A:H8	1.84	0.41
48:h:53:HIS:NE2	48:h:219:THR:HG23	2.35	0.41
49:i:22:LEU:CG	49:i:23:THR:N	2.84	0.41
52:l:6:LYS:NZ	52:l:119:ILE:CG2	2.82	0.41
52:l:31:VAL:HG21	52:l:104:ALA:CB	2.50	0.41
52:l:108:ILE:HD11	52:l:180:LEU:CD1	2.50	0.41
55:o:45:ARG:HB3	55:o:46:PRO:HD3	2.02	0.41
56:p:89:LEU:HD22	56:p:162:VAL:HA	2.02	0.41
58:r:5:LEU:CD1	58:r:17:ASP:HB3	2.50	0.41
61:u:98:ALA:O	61:u:100:ILE:HG13	2.20	0.41
63:w:98:LEU:CD1	63:w:114:GLU:OE2	2.68	0.41
64:x:15:ARG:C	64:x:19:GLN:NE2	2.78	0.41
64:x:21:LEU:C	64:x:21:LEU:HD23	2.46	0.41
66:z:111:GLU:OE2	66:z:112:LYS:HG2	2.19	0.41
1:0:47:VAL:C	1:0:48:LYS:HD3	2.45	0.41
5:4:18:ARG:NH1	44:d:93:C:OP2	2.53	0.41
6:5:23:DA:H2''	6:5:24:DC:C6	2.56	0.41
8:7:1:A:H61	10:B:37:A:N6	2.19	0.41
9:9:11:ILE:O	9:9:15:VAL:HG23	2.20	0.41
9:9:87:GLU:OE1	9:9:91:ALA:O	2.38	0.41
9:9:129:LEU:N	9:9:130:PRO:CD	2.81	0.41
11:AA:741:MET:HE3	11:AA:974:ARG:HH12	1.85	0.41
13:AD:46:ILE:HD11	13:AD:224:LEU:HD13	2.02	0.41
14:AE:800:LEU:HB3	14:AE:920:ALA:HB1	2.02	0.41
16:AG:207:GLU:HG3	16:AG:210:ARG:CB	2.51	0.41
16:AG:296:ILE:CD1	16:AG:307:ILE:HA	2.49	0.41
18:D:299:G:H2'	18:D:300:A:C8	2.55	0.41
18:D:603:U:C2	18:D:604:G:C8	3.08	0.41
18:D:671:G:O2'	26:L:79:ARG:NH1	2.54	0.41
18:D:687:A:C8	18:D:701:U:C4	3.08	0.41
18:D:1064:G:O2'	18:D:1190:G:N2	2.53	0.41
18:D:1309:G:C8	38:X:98:ARG:NH2	2.88	0.41
18:D:1368:A:OP1	29:O:116:VAL:HG23	2.20	0.41
25:K:115:LEU:O	25:K:120:VAL:HG12	2.20	0.41
26:L:14:GLN:NE2	26:L:83:ALA:HB2	2.35	0.41
28:N:96:MET:HE2	28:N:99:LEU:HD12	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:O:50:GLN:CA	29:O:53:GLU:OE1	2.69	0.41
29:O:50:GLN:OE1	29:O:50:GLN:HA	2.20	0.41
33:S:10:GLU:CD	33:S:63:ARG:HD2	2.45	0.41
34:T:21:ASP:C	34:T:22:THR:HG1	2.16	0.41
35:U:4:ILE:N	35:U:4:ILE:HD12	2.34	0.41
35:U:4:ILE:HG22	35:U:71:VAL:HG11	2.03	0.41
39:Y:45:THR:HG21	39:Y:50:LYS:NZ	2.33	0.41
39:Y:99:LYS:HD2	39:Y:140:GLU:OE2	2.19	0.41
41:a:209:C:N3	41:a:210:C:C5	2.87	0.41
41:a:340:A:H2'	41:a:341:C:O4'	2.19	0.41
41:a:700:G:H2'	41:a:701:G:O4'	2.20	0.41
41:a:826:U:OP1	41:a:2428:G:H3'	2.20	0.41
41:a:1128:G:C6	41:a:2518:A:C6	3.08	0.41
41:a:1170:C:O2	41:a:1170:C:H2'	2.18	0.41
41:a:1588:G:N1	41:a:1589:U:O4	2.53	0.41
41:a:2072:C:C2	41:a:2073:C:C6	3.08	0.41
41:a:2291:U:H2'	41:a:2292:U:H6	1.85	0.41
41:a:2310:C:O2'	54:n:74:VAL:HG12	2.20	0.41
41:a:2511:U:C5'	50:j:130:GLN:OE1	2.69	0.41
47:g:9:TYR:OH	54:n:98:GLU:OE2	2.32	0.41
48:h:245:VAL:HA	48:h:250:VAL:O	2.20	0.41
50:j:5:VAL:HB	50:j:32:ASN:HD21	1.86	0.41
50:j:55:LYS:HD3	50:j:55:LYS:C	2.45	0.41
52:l:46:GLN:O	52:l:88:ARG:NH2	2.53	0.41
54:n:101:GLU:O	54:n:105:THR:OG1	2.23	0.41
56:p:45:HIS:HA	56:p:50:LEU:HD13	2.01	0.41
56:p:52:PHE:CE1	56:p:69:ARG:HD3	2.55	0.41
56:p:109:PHE:CD1	56:p:152:ARG:NH1	2.88	0.41
58:r:66:ASN:CG	58:r:135:HIS:HB2	2.45	0.41
59:s:125:TYR:HE2	59:s:130:HIS:CB	2.32	0.41
3:2:19:LYS:HE2	3:2:84:TYR:OH	2.21	0.41
9:9:33:VAL:O	9:9:36:ASP:OD1	2.39	0.41
9:9:41:LEU:CD1	39:Y:117:THR:HG22	2.50	0.41
9:9:95:LEU:O	9:9:98:GLU:HG2	2.20	0.41
9:9:117:LEU:O	9:9:117:LEU:CD2	2.67	0.41
11:AA:135:THR:HG22	11:AA:144:VAL:HG22	2.02	0.41
12:AB:72:THR:HG22	12:AB:73:ARG:N	2.36	0.41
12:AB:118:ILE:CG2	12:AB:128:ALA:HB3	2.50	0.41
12:AB:161:LYS:HD3	12:AB:161:LYS:HA	1.55	0.41
13:AD:48:LEU:HG	14:AE:535:ARG:HG3	2.03	0.41
14:AE:1003:LEU:HD23	14:AE:1018:ALA:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AE:1272:SER:HB2	14:AE:1292:LEU:HD11	2.02	0.41
16:AG:148:ASP:HA	16:AG:164:ARG:HD2	2.03	0.41
10:B:1:C:C5	10:B:2:G:N7	2.89	0.41
17:C:44:ILE:HG22	22:H:340:ARG:HB2	2.02	0.41
18:D:21:G:N2	18:D:22:G:C6	2.88	0.41
18:D:501:C:H1'	18:D:549:C:H1'	2.01	0.41
18:D:517:G:O2'	18:D:530:G:H4'	2.21	0.41
18:D:552:U:H2'	18:D:553:A:H8	1.85	0.41
18:D:1061:G:H5'	30:P:61:ALA:HB2	2.03	0.41
18:D:1189:U:H4'	23:I:10:ILE:CD1	2.50	0.41
18:D:1515:G:H2'	18:D:1516:G:C8	2.54	0.41
21:G:56:GLU:HG2	21:G:198:PHE:CZ	2.55	0.41
22:H:86:ARG:O	22:H:89:ALA:HB3	2.20	0.41
22:H:116:VAL:O	22:H:279:LYS:HG2	2.21	0.41
22:H:267:TRP:CD2	22:H:340:ARG:HG3	2.56	0.41
22:H:277:GLY:C	22:H:331:MET:HE3	2.45	0.41
26:L:9:MET:SD	26:L:57:ALA:HB1	2.60	0.41
27:M:18:PHE:CD2	27:M:59:LEU:HG	2.56	0.41
27:M:93:PRO:O	27:M:96:ARG:HG2	2.21	0.41
29:O:118:LEU:HD23	29:O:118:LEU:HA	1.87	0.41
30:P:79:PRO:HG2	30:P:102:LEU:HD11	2.03	0.41
32:R:21:VAL:HG23	32:R:21:VAL:O	2.19	0.41
33:S:10:GLU:OE1	33:S:63:ARG:HG3	2.21	0.41
36:V:11:ARG:HD3	36:V:57:ASP:C	2.46	0.41
39:Y:57:VAL:CG2	39:Y:71:LYS:HD3	2.50	0.41
41:a:67:U:C4	41:a:74:A:N6	2.89	0.41
41:a:152:A:C6	41:a:153:U:C4	3.09	0.41
41:a:235:U:C2	41:a:236:C:C6	3.08	0.41
41:a:967:U:H2'	41:a:968:C:C6	2.56	0.41
41:a:1427:A:H4'	41:a:1428:C:O4'	2.21	0.41
41:a:1560:G:C5	41:a:1561:C:C5	3.08	0.41
41:a:1996:C:OP1	60:t:31:ARG:NE	2.52	0.41
41:a:2686:G:H2'	41:a:2687:U:C6	2.56	0.41
43:c:3:ARG:CD	43:c:30:LEU:HD11	2.50	0.41
50:j:47:ALA:O	50:j:48:ILE:HD13	2.20	0.41
51:k:21:TYR:CZ	51:k:38:LYS:CG	3.04	0.41
54:n:66:LEU:HD23	54:n:67:ILE:C	2.45	0.41
56:p:91:GLY:HA2	56:p:160:LYS:CD	2.50	0.41
62:v:57:VAL:CG2	62:v:60:GLN:O	2.68	0.41
63:w:28:LEU:HD23	63:w:48:VAL:HG21	2.03	0.41
66:z:79:PHE:CE1	66:z:110:VAL:HA	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:2:30:ILE:HG22	3:2:32:LEU:HD22	2.03	0.41
11:AA:22:LEU:HD22	11:AA:603:ILE:HG21	2.02	0.41
12:AB:120:GLU:H	12:AB:162:LEU:CD1	2.33	0.41
12:AB:141:LEU:HD22	12:AB:143:LEU:HD11	2.02	0.41
16:AG:26:ALA:CA	16:AG:117:LYS:HG2	2.51	0.41
16:AG:206:ILE:HD11	16:AG:226:ALA:HB2	2.02	0.41
16:AG:265:GLU:HB3	16:AG:266:LEU:H	1.76	0.41
18:D:13:U:C2	18:D:914:A:C8	3.08	0.41
18:D:18:C:C2	18:D:19:A:C8	3.09	0.41
18:D:124:C:H2'	18:D:125:U:C6	2.56	0.41
18:D:908:A:H2'	18:D:909:A:H8	1.85	0.41
18:D:951:G:C6	18:D:1231:G:C6	3.08	0.41
18:D:1186:G:H4'	29:O:112:GLU:OE2	2.21	0.41
19:E:79:LEU:CA	19:E:82:GLN:OE1	2.67	0.41
21:G:101:LEU:HD22	21:G:157:LEU:HD11	1.99	0.41
21:G:187:VAL:N	21:G:200:ILE:O	2.40	0.41
22:H:293:PHE:HA	22:H:302:GLY:O	2.21	0.41
23:I:6:HIS:CD2	33:S:89:MET:HB3	2.55	0.41
24:J:65:TYR:CE1	24:J:100:ASN:CG	2.98	0.41
26:L:35:LYS:CG	26:L:36:ILE:N	2.84	0.41
28:N:83:LEU:HD11	32:R:4:VAL:CB	2.51	0.41
29:O:50:GLN:HA	29:O:53:GLU:OE1	2.20	0.41
39:Y:63:ASP:C	39:Y:65:SER:H	2.28	0.41
39:Y:100:ILE:HG13	39:Y:139:VAL:CB	2.51	0.41
40:Z:6:GLN:CD	40:Z:10:ALA:HB2	2.45	0.41
41:a:66:C:H42	41:a:74:A:N6	2.19	0.41
41:a:320:A:H2'	52:l:131:THR:HG21	2.03	0.41
41:a:749:A:H2'	41:a:749:A:N3	2.35	0.41
41:a:1069:A:C2	41:a:1073:A:C8	3.08	0.41
41:a:1542:U:H2'	41:a:1543:G:O4'	2.20	0.41
41:a:1651:G:P	63:w:40:LYS:NZ	2.94	0.41
41:a:1676:A:H2'	41:a:1677:A:C8	2.56	0.41
41:a:2357:G:OP1	42:b:20:ARG:CZ	2.68	0.41
41:a:2526:G:O2'	57:q:1:MET:HG2	2.21	0.41
41:a:2649:C:C2	41:a:2650:U:C6	3.09	0.41
41:a:2884:U:P	49:i:40:ARG:NH2	2.93	0.41
42:b:40:GLN:NE2	42:b:59:LEU:HD23	2.35	0.41
45:e:37:LEU:HD21	45:e:43:LEU:CD2	2.49	0.41
47:g:57:VAL:O	47:g:58:ASP:C	2.62	0.41
50:j:57:ALA:O	50:j:60:VAL:HG12	2.19	0.41
56:p:17:VAL:O	56:p:18:LYS:CE	2.65	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:p:149:ARG:HH12	56:p:154:PRO:HB3	1.85	0.41
59:s:123:LYS:CD	59:s:132:HIS:HD2	2.33	0.41
60:t:113:MET:SD	60:t:113:MET:C	3.03	0.41
62:v:112:LEU:CA	62:v:115:GLU:OE1	2.68	0.41
63:w:60:VAL:HG22	63:w:63:ARG:HH11	1.80	0.41
2:1:49:LYS:NZ	41:a:491:G:O6	2.50	0.41
5:4:2:PHE:CZ	5:4:56:PHE:CZ	3.08	0.41
5:4:79:ARG:HA	5:4:79:ARG:HD3	1.82	0.41
8:7:12:U:H3'	8:7:12:U:C6	2.53	0.41
9:9:80:THR:H	9:9:80:THR:HG23	1.59	0.41
10:A:5:G:C2'	10:A:6:G:C5'	2.98	0.41
10:A:9:G:O2'	10:A:45:G:H2'	2.20	0.41
10:A:12:G:H2'	10:A:13:C:OP1	2.20	0.41
11:AA:481:LEU:HD23	12:AB:16:ARG:HD3	1.79	0.41
12:AB:6:LEU:HB2	12:AB:56:PHE:HE1	1.85	0.41
12:AB:147:ASN:CB	30:P:100:ILE:CG2	2.91	0.41
13:AC:42:ALA:HB1	13:AC:224:LEU:HD11	2.03	0.41
16:AG:27:LEU:CD2	16:AG:114:ILE:HG23	2.51	0.41
16:AG:131:ARG:HG2	16:AG:186:VAL:CG1	2.48	0.41
16:AG:168:LEU:CB	16:AG:171:GLU:HB2	2.46	0.41
16:AG:323:GLN:HE21	16:AG:323:GLN:C	2.28	0.41
16:AG:430:PRO:CG	16:AG:435:LEU:CD2	2.85	0.41
10:B:31:G:H2'	10:B:32:C:C6	2.55	0.41
10:B:59:A:C5	10:B:60:U:C5	3.08	0.41
10:B:68:C:C4	10:B:69:C:C5	3.08	0.41
18:D:376:G:O3'	35:U:5:ARG:NE	2.54	0.41
18:D:1172:C:C2	18:D:1173:U:C5	3.08	0.41
18:D:1174:G:H2'	18:D:1175:G:H5'	2.01	0.41
21:G:58:ASN:HB2	21:G:220:THR:OG1	2.21	0.41
22:H:309:MET:HE1	22:H:318:PRO:CA	2.51	0.41
24:J:76:TYR:O	24:J:76:TYR:CD1	2.73	0.41
26:L:1:MET:CE	26:L:67:PRO:HD3	2.50	0.41
29:O:21:ILE:HD12	29:O:86:ALA:CB	2.50	0.41
30:P:22:THR:HG21	30:P:72:ARG:HG3	2.03	0.41
31:Q:20:VAL:HG12	31:Q:21:ALA:N	2.35	0.41
31:Q:35:THR:HA	31:Q:42:LEU:HG	2.01	0.41
31:Q:49:GLY:C	31:Q:51:GLY:H	2.29	0.41
31:Q:75:LYS:HG3	31:Q:76:GLU:N	2.35	0.41
32:R:59:ASN:C	32:R:59:ASN:OD1	2.62	0.41
33:S:86:GLU:CD	33:S:90:ARG:HD3	2.45	0.41
35:U:34:GLU:OE1	35:U:60:TRP:NE1	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:U:69:ASP:OD1	35:U:69:ASP:C	2.63	0.41
39:Y:34:ILE:O	39:Y:34:ILE:HG22	2.20	0.41
41:a:370:G:C6	41:a:424:G:N7	2.89	0.41
41:a:888:C:C4	41:a:889:C:N4	2.89	0.41
41:a:985:C:O2	41:a:986:C:C6	2.73	0.41
41:a:2589:A:H2'	41:a:2590:A:H8	1.86	0.41
41:a:2808:G:N1	41:a:2891:U:C5	2.89	0.41
42:b:30:SER:HA	42:b:66:LYS:HD2	2.03	0.41
44:d:55:U:H2'	44:d:56:G:C8	2.56	0.41
48:h:161:TYR:HB3	48:h:194:GLU:HG2	2.03	0.41
48:h:189:ARG:HG3	48:h:190:ALA:N	2.36	0.41
48:h:246:THR:N	48:h:250:VAL:O	2.49	0.41
51:k:26:ASN:OD1	51:k:28:ARG:CZ	2.69	0.41
54:n:170:LEU:HB2	54:n:177:PHE:HZ	1.86	0.41
56:p:149:ARG:CZ	56:p:154:PRO:CD	2.98	0.41
60:t:20:MET:CB	60:t:44:LYS:HE2	2.51	0.41
62:v:31:PHE:CZ	62:v:110:GLU:HG3	2.56	0.41
62:v:115:GLU:HA	62:v:118:LYS:HE2	2.02	0.41
66:z:91:ASP:O	66:z:95:LEU:HG	2.20	0.41
1:0:4:VAL:HG23	1:0:4:VAL:O	2.20	0.41
1:0:77:PHE:HE1	1:0:79:ARG:HA	1.85	0.41
5:4:48:MET:CE	5:4:85:LYS:HA	2.50	0.41
9:9:60:LEU:HD23	9:9:60:LEU:HA	1.93	0.41
9:9:96:PHE:HB3	9:9:125:ARG:HH11	1.86	0.41
10:A:33:U:H5''	27:M:84:THR:CG2	2.50	0.41
10:A:71:C:C3'	10:A:72:A:C8	2.99	0.41
16:AG:285:ILE:CA	16:AG:293:VAL:HG11	2.51	0.41
16:AG:307:ILE:HG13	16:AG:338:VAL:HG23	2.02	0.41
17:C:13:PHE:CG	17:C:51:TYR:CD1	3.08	0.41
18:D:5:U:O2	18:D:5:U:O4'	2.37	0.41
18:D:338:A:C5	18:D:339:C:C5	3.08	0.41
18:D:718:A:C2	31:Q:118:HIS:CE1	3.09	0.41
18:D:1302:C:OP1	38:X:13:LYS:NZ	2.30	0.41
18:D:1411:C:H2'	18:D:1412:C:H6	1.85	0.41
21:G:20:THR:O	21:G:23:TRP:CD1	2.74	0.41
23:I:191:THR:OG1	23:I:194:GLY:O	2.34	0.41
25:K:159:LYS:HZ1	28:N:44:GLY:HA3	1.85	0.41
29:O:44:ALA:HA	29:O:47:VAL:HG22	2.03	0.41
32:R:25:GLU:O	32:R:25:GLU:HG2	2.20	0.41
32:R:57:LEU:HD23	32:R:59:ASN:OD1	2.20	0.41
39:Y:60:VAL:CG2	39:Y:66:PHE:CD1	3.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:Y:60:VAL:CG2	39:Y:66:PHE:CB	2.96	0.41
41:a:235:U:H2'	41:a:236:C:H6	1.86	0.41
41:a:272:A:C2	41:a:273:G:C8	3.09	0.41
41:a:458:G:N2	41:a:469:G:H2'	2.36	0.41
41:a:485:C:N3	41:a:486:C:C5	2.89	0.41
41:a:690:G:H2'	41:a:691:C:H6	1.85	0.41
41:a:1430:G:H2'	41:a:1431:A:C8	2.56	0.41
41:a:2223:G:OP1	48:h:171:TYR:OH	2.37	0.41
46:f:4:THR:O	46:f:5:ILE:HD13	2.19	0.41
47:g:58:ASP:C	47:g:62:LYS:HZ1	2.29	0.41
48:h:91:ILE:HG21	48:h:103:TYR:HB3	2.03	0.41
48:h:210:ALA:HA	48:h:213:TRP:CE3	2.56	0.41
48:h:220:VAL:CG2	48:h:225:MET:HE3	2.51	0.41
50:j:146:ILE:HA	50:j:159:LYS:HZ1	1.86	0.41
53:m:26:ASN:HA	53:m:29:GLN:NE2	2.36	0.41
55:o:30:ARG:CZ	61:u:62:PRO:HB3	2.50	0.41
59:s:1:MET:SD	59:s:2:LYS:O	2.79	0.41
59:s:118:MET:HE2	59:s:118:MET:HB3	1.81	0.41
59:s:133:ALA:O	59:s:134:ALA:C	2.62	0.41
62:v:95:LEU:C	62:v:96:ILE:HD13	2.45	0.41
62:v:111:GLU:HA	62:v:114:ARG:NE	2.35	0.41
62:v:112:LEU:HD12	62:v:112:LEU:H	1.86	0.41
63:w:18:GLN:HE22	63:w:22:ARG:NE	2.18	0.41
3:2:6:ARG:NH2	3:2:10:VAL:CG2	2.84	0.41
9:9:17:GLU:OE2	9:9:53:ARG:NH2	2.53	0.41
9:9:25:ALA:HB2	9:9:96:PHE:HE1	1.81	0.41
9:9:94:ARG:O	9:9:98:GLU:HG2	2.21	0.41
12:AB:104:ILE:O	12:AB:106:ASP:N	2.53	0.41
12:AB:141:LEU:CG	12:AB:143:LEU:HD12	2.29	0.41
14:AE:247:PRO:HA	14:AE:250:ARG:HE	1.86	0.41
16:AG:43:ILE:HB	16:AG:44:ASP:H	1.54	0.41
16:AG:437:LEU:CD2	16:AG:488:ILE:HD13	2.51	0.41
10:B:9:G:O2'	10:B:45:G:H2'	2.20	0.41
10:B:47:U:O2'	10:B:50:U:OP1	2.37	0.41
17:C:12:ARG:NH1	17:C:13:PHE:CD1	2.88	0.41
18:D:104:G:C2	18:D:105:G:C5	3.09	0.41
18:D:218:U:H2'	18:D:219:U:O4'	2.20	0.41
18:D:306:A:C4	18:D:307:C:C6	3.08	0.41
18:D:375:U:H1'	35:U:28:ARG:NH2	2.36	0.41
18:D:414:A:C2	18:D:415:A:N9	2.89	0.41
18:D:960:U:O2'	18:D:1223:C:H4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:1319:A:C8	18:D:1323:G:C5	3.08	0.41
20:F:66:ARG:NH2	20:F:67:ARG:HH22	2.19	0.41
21:G:96:TRP:CH2	21:G:100:MET:CE	3.03	0.41
21:G:117:LEU:CD2	21:G:141:LEU:HA	2.51	0.41
26:L:3:HIS:CD2	26:L:95:ALA:HA	2.56	0.41
26:L:42:TRP:HB2	26:L:59:TYR:O	2.20	0.41
32:R:24:LEU:CD2	32:R:95:TYR:CE1	3.04	0.41
32:R:25:GLU:CD	32:R:30:LYS:HE3	2.46	0.41
35:U:19:VAL:HG11	35:U:52:LEU:CD2	2.50	0.41
36:V:7:THR:C	36:V:8:LEU:HD12	2.46	0.41
39:Y:82:ALA:CB	39:Y:108:ILE:HD12	2.50	0.41
40:Z:20:VAL:O	40:Z:20:VAL:CG1	2.65	0.41
40:Z:29:LYS:C	40:Z:30:PHE:HD2	2.29	0.41
41:a:30:G:H2'	41:a:31:C:C6	2.56	0.41
41:a:62:U:O2	41:a:62:U:H2'	2.19	0.41
41:a:239:C:O2'	41:a:622:G:O2'	2.32	0.41
41:a:465:G:H2'	41:a:466:A:C8	2.56	0.41
41:a:909:A:C4	41:a:912:C:C5	3.09	0.41
41:a:1416:G:HO2'	41:a:1417:C:H6	1.69	0.41
41:a:1957:C:C2	41:a:1958:C:C5	3.09	0.41
41:a:2366:A:H2'	41:a:2367:G:O4'	2.21	0.41
41:a:2461:A:H2'	41:a:2462:C:C6	2.55	0.41
44:d:113:C:O2'	64:x:46:GLU:CD	2.64	0.41
50:j:68:PHE:CZ	50:j:79:LEU:HD21	2.56	0.41
51:k:7:GLU:CG	51:k:27:LYS:NZ	2.84	0.41
54:n:16:LEU:HD11	54:n:169:LEU:HD12	2.03	0.41
63:w:78:LYS:HA	63:w:82:GLU:OE1	2.21	0.41
65:y:37:LYS:CA	65:y:37:LYS:HE3	2.49	0.41
2:1:31:GLN:H	2:1:31:GLN:CD	2.22	0.41
4:3:84:GLY:C	4:3:95:PHE:CE2	2.99	0.41
5:4:78:GLN:OE1	5:4:88:HIS:HB3	2.21	0.41
6:5:25:DA:N3	7:6:5:DG:N2	2.68	0.41
6:5:27:DG:N2	7:6:3:DC:O2	2.53	0.41
8:7:21:U:C3'	8:7:21:U:C6	3.04	0.41
8:7:34:U:C3'	8:7:34:U:C6	3.04	0.41
9:9:2:ALA:HB3	9:9:6:GLN:HB2	2.01	0.41
9:9:6:GLN:HA	9:9:9:GLN:HE21	1.85	0.41
9:9:38:MET:SD	9:9:41:LEU:HD12	2.61	0.41
9:9:59:LEU:HD22	9:9:62:ARG:CD	2.51	0.41
9:9:94:ARG:HB3	9:9:97:LYS:NZ	2.32	0.41
10:A:25:C:C4	10:A:26:G:C8	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:A:31:G:H2'	10:A:32:C:C6	2.55	0.41
11:AA:469:VAL:HA	11:AA:472:GLU:HG2	2.02	0.41
11:AA:849:GLU:HB2	11:AA:887:VAL:HG23	2.02	0.41
11:AA:855:PRO:HD3	16:AG:105:ILE:CG1	2.51	0.41
11:AA:987:GLU:HG2	11:AA:991:LYS:HE3	2.03	0.41
12:AB:2:GLN:HA	12:AB:59:PHE:O	2.21	0.41
12:AB:31:PRO:HG2	12:AB:51:PHE:CD2	2.55	0.41
12:AB:72:THR:HG22	12:AB:73:ARG:H	1.86	0.41
12:AB:120:GLU:C	12:AB:162:LEU:HD12	2.46	0.41
12:AB:120:GLU:HB3	12:AB:162:LEU:HD12	2.02	0.41
13:AD:305:ASP:C	13:AD:307:LEU:H	2.28	0.41
14:AE:438:GLU:HG3	14:AE:485:MET:HE1	2.03	0.41
14:AE:609:TYR:HD2	14:AE:610:ARG:HD2	1.85	0.41
14:AE:975:ILE:HD11	14:AE:1003:LEU:HG	2.02	0.41
16:AG:125:MET:SD	16:AG:125:MET:O	2.79	0.41
16:AG:202:PRO:C	16:AG:204:MET:N	2.79	0.41
16:AG:284:VAL:HG22	16:AG:305:MET:CE	2.51	0.41
16:AG:302:LYS:HE3	16:AG:302:LYS:CA	2.51	0.41
10:B:38:A:H4'	18:D:790:A:C1'	2.49	0.41
17:C:44:ILE:HG21	22:H:339:ARG:C	2.45	0.41
17:C:60:LYS:HZ1	18:D:735:C:C4'	2.19	0.41
18:D:105:G:H2'	18:D:106:C:C6	2.56	0.41
18:D:107:G:C6	18:D:108:G:C4	3.09	0.41
18:D:124:C:C2	18:D:125:U:C5	3.08	0.41
18:D:195:A:H5''	19:E:64:LYS:HZ1	1.85	0.41
18:D:407:U:O4'	24:J:116:GLN:OE1	2.39	0.41
18:D:502:A:H2'	18:D:503:C:H6	1.86	0.41
18:D:511:C:O3'	24:J:44:ARG:NH1	2.53	0.41
18:D:562:U:O3'	32:R:12:ARG:HD2	2.20	0.41
18:D:570:G:H1'	18:D:820:U:C4	2.56	0.41
18:D:643:C:C2	18:D:644:U:C5	3.08	0.41
18:D:695:A:O5'	31:Q:53:ARG:CZ	2.69	0.41
18:D:958:A:H5'	37:W:55:ARG:HH12	1.86	0.41
18:D:985:C:C2	18:D:986:U:C5	3.08	0.41
18:D:986:U:H2'	18:D:987:G:O4'	2.19	0.41
18:D:1119:C:C2	18:D:1120:C:C5	3.09	0.41
18:D:1141:C:O2'	18:D:1142:G:P	2.79	0.41
18:D:1227:A:OP2	38:X:110:LYS:HE3	2.20	0.41
18:D:1251:A:H2'	18:D:1252:A:O4'	2.20	0.41
18:D:1411:C:H2'	18:D:1412:C:C6	2.56	0.41
19:E:22:ALA:N	19:E:25:ARG:HE	2.17	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:F:39:GLU:OE1	20:F:44:GLU:OE1	2.38	0.41
21:G:137:ARG:HG3	21:G:138:THR:N	2.36	0.41
21:G:187:VAL:HG11	21:G:193:PRO:HB3	2.02	0.41
22:H:303:LEU:O	22:H:305:HIS:HA	2.21	0.41
22:H:308:GLU:N	22:H:308:GLU:OE1	2.53	0.41
23:I:23:PHE:CD2	30:P:97:ASP:HB2	2.53	0.41
23:I:72:ARG:CD	23:I:75:ILE:HB	2.51	0.41
24:J:74:ASN:OD1	24:J:74:ASN:C	2.64	0.41
25:K:45:ARG:CG	25:K:45:ARG:NE	2.72	0.41
25:K:82:GLN:OE1	25:K:147:MET:SD	2.78	0.41
27:M:35:LYS:CE	27:M:38:THR:OG1	2.69	0.41
27:M:59:LEU:HA	27:M:59:LEU:HD23	1.93	0.41
29:O:25:ASN:HB2	29:O:27:LYS:NZ	2.36	0.41
29:O:112:GLU:HG3	29:O:115:LYS:NZ	2.35	0.41
30:P:26:VAL:HG12	30:P:30:LYS:HZ3	1.85	0.41
31:Q:36:ASP:OD1	31:Q:40:ASN:N	2.53	0.41
31:Q:76:GLU:OE1	31:Q:76:GLU:HA	2.21	0.41
31:Q:79:ILE:O	31:Q:105:PHE:CE1	2.72	0.41
35:U:73:ALA:HA	35:U:76:LYS:HE2	2.02	0.41
41:a:209:C:C2	41:a:210:C:C6	3.09	0.41
41:a:271:G:C2	41:a:272:A:C4	3.08	0.41
41:a:299:A:N1	41:a:322:A:O2'	2.42	0.41
41:a:319:G:H2'	41:a:320:A:O4'	2.20	0.41
41:a:397:U:H2'	41:a:398:C:C6	2.56	0.41
41:a:409:G:H2'	41:a:410:G:C8	2.55	0.41
41:a:814:C:N3	41:a:815:C:C5	2.89	0.41
41:a:873:C:C2	41:a:874:G:C8	3.09	0.41
41:a:975:A:H1'	41:a:990:A:C2	2.55	0.41
41:a:1026:G:C8	41:a:1134:A:C4	3.08	0.41
41:a:1057:A:C2	41:a:1082:U:N3	2.89	0.41
41:a:1198:U:H2'	41:a:1199:U:H6	1.83	0.41
41:a:1289:C:H2'	41:a:1290:C:C6	2.56	0.41
41:a:1322:A:C4	41:a:1323:C:C6	3.08	0.41
41:a:1398:C:H2'	41:a:1399:C:H6	1.86	0.41
41:a:1548:A:H2'	41:a:1549:A:C8	2.56	0.41
41:a:1558:C:O4'	41:a:1560:G:C8	2.74	0.41
41:a:1607:C:H4'	41:a:1608:A:O5'	2.21	0.41
41:a:1827:U:H2'	41:a:1828:G:O4'	2.20	0.41
41:a:1944:U:C5	41:a:1955:U:C2	3.09	0.41
41:a:1945:G:H2'	41:a:1946:U:C6	2.56	0.41
41:a:2024:G:C5	41:a:2040:G:C2	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:2097:A:H2'	41:a:2098:U:C6	2.55	0.41
41:a:2531:A:C4	41:a:2532:G:C8	3.08	0.41
41:a:2650:U:C2	41:a:2651:C:C5	3.08	0.41
41:a:2848:G:N2	41:a:2867:G:C4	2.89	0.41
42:b:58:THR:O	42:b:58:THR:HG23	2.21	0.41
43:c:3:ARG:HD2	43:c:30:LEU:CD1	2.51	0.41
44:d:8:C:O2'	64:x:40:ILE:HD13	2.21	0.41
48:h:53:HIS:CD2	48:h:218:PRO:O	2.74	0.41
48:h:84:ASP:OD2	48:h:91:ILE:HD11	2.21	0.41
48:h:165:VAL:HG12	48:h:175:ARG:NH2	2.35	0.41
49:i:28:LEU:CB	49:i:37:LYS:HE3	2.51	0.41
49:i:34:SER:OG	49:i:36:GLU:HG2	2.20	0.41
50:j:11:MET:SD	50:j:12:THR:N	2.94	0.41
50:j:108:ASP:OD1	50:j:173:GLN:HA	2.21	0.41
50:j:146:ILE:HA	50:j:159:LYS:NZ	2.36	0.41
52:l:77:ILE:O	52:l:77:ILE:HG22	2.19	0.41
52:l:171:ASP:OD1	52:l:172:ALA:N	2.53	0.41
52:l:194:LYS:O	52:l:195:GLN:C	2.64	0.41
54:n:8:TYR:O	54:n:13:VAL:HG23	2.20	0.41
56:p:80:THR:HG23	56:p:81:GLU:N	2.36	0.41
58:r:76:GLU:OE2	58:r:142:VAL:HA	2.21	0.41
59:s:37:ARG:HA	59:s:118:MET:HE1	2.00	0.41
59:s:49:ASP:OD1	59:s:121:LYS:NZ	2.54	0.41
59:s:99:ARG:O	59:s:100:VAL:C	2.63	0.41
60:t:1:MET:HE3	60:t:32:TYR:CB	2.50	0.41
61:u:101:ILE:HG13	61:u:102:GLY:N	2.36	0.41
61:u:123:ARG:HG3	61:u:143:GLU:OE2	2.21	0.41
63:w:49:GLU:OE2	63:w:95:THR:CG2	2.69	0.41
65:y:4:ILE:O	65:y:8:LEU:HD13	2.21	0.41
66:z:66:ASN:OD1	66:z:70:ARG:NE	2.54	0.41
1:0:74:ILE:HD13	1:0:87:GLN:OE1	2.20	0.41
4:3:6:ARG:NH1	41:a:84:A:C2'	2.84	0.41
9:9:77:VAL:O	9:9:77:VAL:CG1	2.66	0.41
10:A:1:C:C5	10:A:2:G:N7	2.89	0.41
10:A:19:G:O6	41:a:2112:G:P	2.79	0.41
12:AB:4:TRP:CZ3	12:AB:93:ILE:HG13	2.56	0.41
13:AD:44:ARG:HA	13:AD:183:ILE:HD12	2.03	0.41
14:AE:367:GLY:HA3	14:AE:448:GLN:HB2	2.03	0.41
16:AG:305:MET:HB3	16:AG:305:MET:HE3	1.77	0.41
18:D:575:G:O2'	18:D:821:G:OP2	2.33	0.41
18:D:695:A:OP1	31:Q:54:GLY:HA3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:G:6:MET:HA	21:G:9:MET:SD	2.61	0.41
21:G:26:LYS:HZ2	21:G:193:PRO:HG2	1.84	0.41
21:G:90:PHE:CD2	21:G:154:MET:SD	3.14	0.41
22:H:34:ASP:OD1	22:H:50:ALA:HB3	2.20	0.41
22:H:42:LEU:HD23	22:H:81:GLU:HB3	2.04	0.41
23:I:8:ASN:O	23:I:12:LEU:CD2	2.69	0.41
24:J:188:ARG:NH2	24:J:195:ILE:HG13	2.36	0.41
31:Q:21:ALA:HA	31:Q:34:ILE:HD13	2.02	0.41
32:R:27:CYS:CB	32:R:30:LYS:HE2	2.47	0.41
39:Y:28:GLY:HA3	39:Y:32:VAL:HB	2.03	0.41
39:Y:102:ARG:CZ	39:Y:139:VAL:HG21	2.50	0.41
41:a:16:C:C4'	49:i:15:MET:CE	2.99	0.41
41:a:126:A:O5'	53:m:19:ARG:HG3	2.21	0.41
41:a:205:G:O2'	41:a:206:U:OP2	2.39	0.41
41:a:241:A:N1	41:a:255:A:H5''	2.36	0.41
41:a:638:G:H2'	41:a:639:U:C6	2.56	0.41
41:a:1248:G:O2'	66:z:3:ARG:HA	2.21	0.41
41:a:1365:A:H4'	43:c:11:ARG:HH12	1.85	0.41
41:a:1946:U:H2'	41:a:1947:C:C6	2.56	0.41
41:a:2314:A:O2'	54:n:155:THR:CG2	2.69	0.41
41:a:2728:U:H5'	60:t:70:ARG:HH22	1.85	0.41
52:l:97:ASN:CG	52:l:100:MET:HE2	2.46	0.41
52:l:170:ARG:CZ	52:l:174:GLY:O	2.66	0.41
52:l:170:ARG:HH22	52:l:176:ASP:H	1.68	0.41
53:m:12:ARG:HG3	53:m:44:VAL:HG21	2.03	0.41
60:t:24:VAL:O	60:t:24:VAL:HG13	2.20	0.41
60:t:61:VAL:HG11	60:t:112:PHE:CE2	2.56	0.41
60:t:80:ASP:OD1	65:y:68:GLU:OE2	2.39	0.41
61:u:96:LYS:HG2	61:u:102:GLY:O	2.21	0.41
1:0:51:VAL:CG2	66:z:87:SER:HG	2.34	0.40
2:1:93:ALA:HB2	41:a:1614:A:C2	2.57	0.40
8:7:10:U:O2	8:7:10:U:H3'	2.21	0.40
8:7:37:U:H4'	14:AE:322:ARG:NH1	2.35	0.40
9:9:31:ARG:HH11	41:a:1054:A:C4'	2.31	0.40
9:9:139:LEU:HD22	40:Z:11:VAL:HG22	2.02	0.40
11:AA:310:ILE:HG21	11:AA:325:LEU:HB3	2.03	0.40
12:AB:2:GLN:N	12:AB:60:ASP:OD1	2.54	0.40
12:AB:36:GLU:O	12:AB:37:LYS:HD2	2.21	0.40
12:AB:95:GLN:C	12:AB:96:LEU:HD12	2.46	0.40
16:AG:105:ILE:HD13	16:AG:105:ILE:H	1.85	0.40
16:AG:204:MET:SD	16:AG:204:MET:O	2.79	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:285:ILE:O	16:AG:288:MET:HE2	2.19	0.40
16:AG:363:LEU:HD21	16:AG:407:ARG:C	2.46	0.40
16:AG:374:VAL:O	16:AG:374:VAL:CG1	2.68	0.40
10:B:25:C:C4	10:B:26:G:C8	3.09	0.40
17:C:70:TYR:CD2	18:D:674:G:H4'	2.55	0.40
18:D:356:A:C5	18:D:357:G:C8	3.08	0.40
18:D:429:U:H3	18:D:431:A:N6	2.18	0.40
18:D:920:U:H2'	18:D:921:U:C6	2.56	0.40
19:E:9:LYS:HG2	19:E:13:GLN:NE2	2.36	0.40
21:G:47:VAL:N	21:G:48:PRO:HD2	2.35	0.40
21:G:138:THR:O	21:G:142:GLU:HG2	2.21	0.40
22:H:308:GLU:HG3	22:H:346:LEU:H	1.86	0.40
23:I:35:SER:HA	23:I:38:LYS:CE	2.51	0.40
23:I:47:LEU:HD22	23:I:76:VAL:HG22	2.03	0.40
23:I:113:ALA:HB1	23:I:200:VAL:HG13	2.02	0.40
27:M:47:LEU:HD21	27:M:58:GLU:HB3	2.03	0.40
27:M:108:ALA:O	27:M:119:ARG:NE	2.50	0.40
29:O:91:ASP:C	29:O:92:GLU:OE2	2.64	0.40
29:O:118:LEU:HB3	29:O:120:LYS:O	2.21	0.40
30:P:6:ILE:CG2	30:P:100:ILE:HG13	2.51	0.40
30:P:40:ILE:HD12	30:P:73:LEU:HD22	2.02	0.40
31:Q:20:VAL:HG13	31:Q:85:MET:CE	2.51	0.40
34:T:67:LEU:CD1	34:T:78:TYR:CE1	3.04	0.40
39:Y:99:LYS:HD3	39:Y:99:LYS:HA	1.86	0.40
41:a:151:C:C2	41:a:152:A:N7	2.89	0.40
41:a:1142:A:N3	41:a:1142:A:H2'	2.36	0.40
41:a:1589:U:C2	41:a:1590:A:C8	3.09	0.40
41:a:1746:A:H2'	41:a:1747:U:C6	2.56	0.40
41:a:1858:A:C2	41:a:1885:A:C1'	3.05	0.40
41:a:2216:G:H2'	41:a:2217:G:C8	2.57	0.40
41:a:2619:C:O2'	41:a:2620:C:H5'	2.21	0.40
41:a:2627:G:H2'	41:a:2628:C:C6	2.56	0.40
41:a:2839:G:C4	41:a:2840:C:C6	3.09	0.40
44:d:47:C:C4	44:d:48:U:C5	3.09	0.40
46:f:25:LEU:HD23	46:f:25:LEU:C	2.46	0.40
50:j:37:VAL:HG22	50:j:48:ILE:HD12	2.02	0.40
51:k:26:ASN:OD1	51:k:28:ARG:NH1	2.54	0.40
54:n:136:ILE:HA	54:n:141:ILE:CG2	2.52	0.40
58:r:110:VAL:HG21	58:r:114:GLU:OE1	2.21	0.40
62:v:105:MET:HG2	62:v:117:PHE:HZ	1.86	0.40
62:v:106:ASP:OD1	62:v:106:ASP:C	2.64	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:x:86:GLY:HA2	64:x:88:LYS:HZ3	1.86	0.40
2:1:32:ALA:O	2:1:36:LEU:CD1	2.70	0.40
4:3:86:ARG:CZ	4:3:95:PHE:CD2	3.04	0.40
9:9:47:GLU:C	9:9:49:GLY:H	2.28	0.40
10:A:5:G:C2'	10:A:6:G:H5'	2.50	0.40
10:A:9:G:H5''	10:A:11:A:OP2	2.21	0.40
10:A:16:C:O2	10:A:16:C:H2'	2.21	0.40
14:AE:416:ILE:HD13	14:AE:416:ILE:HA	1.92	0.40
14:AE:1155:ILE:HG13	14:AE:1210:ILE:HB	2.02	0.40
16:AG:216:ILE:HG12	16:AG:221:ILE:CB	2.52	0.40
16:AG:234:ALA:HB3	16:AG:271:ILE:HD13	2.01	0.40
16:AG:320:ARG:HD3	16:AG:320:ARG:HA	1.83	0.40
16:AG:433:ASP:O	16:AG:456:LEU:CD2	2.69	0.40
18:D:276:G:H5''	36:V:17:MET:HE3	2.03	0.40
18:D:520:A:O2'	32:R:70:GLU:OE1	2.39	0.40
18:D:602:A:H2'	18:D:603:U:H6	1.86	0.40
18:D:680:C:H2'	18:D:681:A:H8	1.85	0.40
18:D:1367:C:O3'	29:O:116:VAL:HG22	2.22	0.40
19:E:43:ASP:CG	19:E:46:ALA:HB3	2.46	0.40
21:G:94:HIS:O	21:G:95:ARG:C	2.64	0.40
23:I:6:HIS:CD2	23:I:9:GLY:H	2.39	0.40
23:I:123:GLN:HB3	23:I:128:VAL:HG21	2.02	0.40
23:I:147:LYS:CE	23:I:204:LYS:O	2.68	0.40
24:J:138:SER:C	24:J:182:PHE:CE2	2.99	0.40
24:J:197:GLU:HA	24:J:200:ILE:HD12	2.03	0.40
25:K:46:VAL:HG12	25:K:47:GLY:N	2.36	0.40
26:L:9:MET:CE	26:L:86:ARG:HG2	2.52	0.40
26:L:42:TRP:HB3	26:L:59:TYR:HB2	2.03	0.40
26:L:51:ILE:CG2	26:L:86:ARG:HH21	2.34	0.40
34:T:64:ARG:NH2	34:T:89:ARG:NH2	2.69	0.40
34:T:70:LEU:HD23	34:T:78:TYR:HD1	1.85	0.40
40:Z:6:GLN:O	40:Z:6:GLN:HG3	2.21	0.40
41:a:10:A:C6	41:a:2800:A:C2	3.09	0.40
41:a:223:A:O2'	41:a:420:C:O2	2.36	0.40
41:a:532:A:OP1	66:z:45:TYR:OH	2.32	0.40
41:a:630:G:N2	41:a:633:A:OP2	2.45	0.40
41:a:945:A:C4	41:a:2448:A:C2	3.09	0.40
41:a:1177:G:O2'	41:a:1178:C:O4'	2.39	0.40
41:a:1294:U:C4	41:a:1295:C:C5	3.10	0.40
41:a:1709:U:C2	41:a:1710:G:C8	3.10	0.40
41:a:1824:G:O5'	48:h:52:ARG:NH1	2.53	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1881:C:C4	41:a:1882:U:C5	3.09	0.40
41:a:1996:C:H4'	50:j:128:ARG:NH1	2.35	0.40
41:a:2049:G:H21	50:j:161:MET:CE	2.33	0.40
41:a:2205:A:H2'	41:a:2206:C:C6	2.56	0.40
41:a:2569:G:C2	41:a:2570:G:C8	3.09	0.40
41:a:2639:A:H2'	41:a:2640:G:O4'	2.21	0.40
45:e:14:LEU:CA	45:e:17:GLU:OE1	2.70	0.40
47:g:58:ASP:O	47:g:59:ARG:C	2.64	0.40
51:k:8:LYS:HA	51:k:24:THR:HA	2.02	0.40
58:r:54:LEU:HD12	58:r:57:LYS:HE2	2.03	0.40
60:t:102:PRO:HD3	65:y:66:ASN:HB2	2.02	0.40
60:t:103:VAL:HG21	60:t:107:LEU:HD22	2.02	0.40
63:w:18:GLN:CD	63:w:18:GLN:C	2.88	0.40
63:w:45:ARG:CZ	63:w:45:ARG:HB3	2.50	0.40
4:3:5:ILE:HA	4:3:72:ILE:HD11	2.03	0.40
4:3:47:LYS:NZ	41:a:482:A:H5''	2.37	0.40
8:7:42:G:P	11:AA:688:GLN:HE22	2.45	0.40
9:9:96:PHE:O	9:9:125:ARG:NH1	2.54	0.40
12:AB:32:MET:O	12:AB:50:LEU:HD12	2.22	0.40
12:AB:36:GLU:HA	12:AB:44:THR:O	2.22	0.40
16:AG:291:ALA:HA	16:AG:316:GLN:HE22	1.87	0.40
16:AG:365:ILE:HB	16:AG:366:ASP:H	1.73	0.40
18:D:375:U:OP2	35:U:70:ARG:NE	2.51	0.40
18:D:436:C:N3	18:D:437:U:C5	2.89	0.40
18:D:619:U:C1'	24:J:128:ARG:NH1	2.85	0.40
18:D:680:C:C2	18:D:681:A:C8	3.09	0.40
18:D:1372:U:H2'	18:D:1373:G:O4'	2.22	0.40
19:E:15:GLU:CD	19:E:16:LYS:N	2.80	0.40
21:G:142:GLU:OE2	21:G:142:GLU:HA	2.21	0.40
23:I:30:ALA:O	33:S:65:ARG:NH2	2.54	0.40
28:N:50:LYS:HA	28:N:50:LYS:CE	2.52	0.40
28:N:83:LEU:HD21	32:R:4:VAL:HG21	2.02	0.40
38:X:3:ARG:NH2	47:g:35:ASP:HB2	2.36	0.40
38:X:71:ARG:NH1	38:X:72:GLU:CG	2.84	0.40
39:Y:9:LYS:O	39:Y:10:LEU:HG	2.21	0.40
41:a:48:G:C2	41:a:178:G:C6	3.10	0.40
41:a:184:C:C2	41:a:213:A:N1	2.89	0.40
41:a:244:A:H2'	41:a:245:G:O4'	2.21	0.40
41:a:392:U:N3	41:a:393:C:C5	2.89	0.40
41:a:443:A:N1	52:l:40:ARG:NH2	2.68	0.40
41:a:445:C:O2'	41:a:449:A:N3	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:529:A:C4	41:a:2023:C:C5	3.09	0.40
41:a:708:G:H2'	41:a:709:U:H6	1.86	0.40
41:a:752:A:P	53:m:1:MET:HE1	2.62	0.40
41:a:818:G:N1	41:a:1188:U:OP2	2.36	0.40
41:a:841:G:H2'	41:a:842:U:H6	1.86	0.40
41:a:1144:A:C6	41:a:1145:C:C4	3.09	0.40
41:a:1196:C:H2'	41:a:1197:G:O4'	2.22	0.40
41:a:1589:U:O2'	41:a:1590:A:P	2.79	0.40
41:a:1778:U:H2'	41:a:1784:A:N6	2.36	0.40
41:a:1792:G:C5'	48:h:204:VAL:CG2	2.99	0.40
41:a:1953:A:H2	41:a:2549:G:N3	2.19	0.40
41:a:2065:C:N3	41:a:2066:C:C5	2.89	0.40
41:a:2364:C:O2'	42:b:58:THR:HG21	2.21	0.40
41:a:2393:U:H2'	41:a:2394:C:C6	2.56	0.40
41:a:2454:G:C5	41:a:2455:G:C8	3.08	0.40
41:a:2511:U:O4'	50:j:130:GLN:OE1	2.39	0.40
41:a:2549:G:C2	41:a:2550:G:C5	3.10	0.40
41:a:2851:A:H2'	41:a:2852:G:C8	2.56	0.40
42:b:55:ARG:CZ	42:b:55:ARG:CA	2.99	0.40
42:b:70:GLU:HG3	42:b:72:LYS:HG2	2.03	0.40
43:c:67:VAL:CA	43:c:70:GLU:OE1	2.69	0.40
47:g:7:PRO:CG	54:n:62:GLY:O	2.69	0.40
48:h:74:ILE:HG22	48:h:96:TYR:HD1	1.86	0.40
48:h:163:GLN:HB3	48:h:175:ARG:HB3	2.02	0.40
50:j:176:ASP:OD2	50:j:176:ASP:C	2.65	0.40
53:m:42:LEU:N	53:m:42:LEU:HD12	2.36	0.40
58:r:8:LYS:HD2	58:r:9:VAL:H	1.86	0.40
60:t:59:LYS:NZ	60:t:92:GLU:HG2	2.36	0.40
63:w:17:ARG:O	63:w:21:PHE:HD2	2.04	0.40
63:w:33:ILE:HG13	63:w:112:TYR:HD1	1.83	0.40
66:z:41:LYS:CG	66:z:45:TYR:CE2	3.04	0.40
1:0:13:ARG:NH2	66:z:97:ASP:CG	2.80	0.40
2:1:85:ILE:O	2:1:85:ILE:HG13	2.19	0.40
4:3:86:ARG:NH2	4:3:95:PHE:CB	2.84	0.40
9:9:122:GLN:HG2	9:9:123:ILE:HG22	2.04	0.40
11:AA:176:ILE:HD12	11:AA:184:LEU:HD23	2.03	0.40
11:AA:524:ILE:HD12	11:AA:712:SER:HB2	2.02	0.40
12:AB:103:ASP:CB	12:AB:105:VAL:HG23	2.34	0.40
12:AB:106:ASP:O	12:AB:109:THR:OG1	2.39	0.40
12:AB:138:ARG:HG3	12:AB:155:LYS:N	2.20	0.40
12:AB:142:LEU:CA	12:AB:151:LYS:HA	2.50	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:108:GLN:HA	16:AG:111:LYS:HD2	2.03	0.40
10:B:70:G:H3'	10:B:71:C:H5''	2.04	0.40
17:C:51:TYR:HA	17:C:54:GLN:NE2	2.36	0.40
18:D:71:A:C6	18:D:100:G:N7	2.89	0.40
18:D:567:G:H2'	18:D:568:G:O4'	2.21	0.40
18:D:921:U:H4'	25:K:23:LYS:HZ3	1.84	0.40
18:D:953:G:O6	38:X:103:LYS:HE2	2.22	0.40
18:D:963:G:C2	18:D:964:A:C8	3.09	0.40
18:D:982:U:H4'	18:D:983:A:O4'	2.21	0.40
18:D:983:A:C2	18:D:984:C:C6	3.10	0.40
18:D:1061:G:C6	18:D:1197:A:C6	3.09	0.40
18:D:1508:A:H2'	18:D:1509:C:H6	1.87	0.40
19:E:27:MET:SD	19:E:31:PHE:CE2	3.15	0.40
20:F:4:ILE:HD12	20:F:19:PHE:HA	2.03	0.40
21:G:85:LEU:HD23	21:G:85:LEU:C	2.46	0.40
21:G:161:LEU:HD13	21:G:176:ALA:HB2	2.03	0.40
22:H:119:GLY:HA3	22:H:132:PRO:C	2.47	0.40
23:I:132:ARG:HA	23:I:135:LYS:HG2	2.04	0.40
23:I:135:LYS:HA	23:I:138:VAL:HG12	2.04	0.40
25:K:133:PRO:HA	25:K:136:VAL:HG12	2.02	0.40
26:L:4:TYR:CD2	26:L:91:ARG:HD2	2.57	0.40
26:L:11:HIS:HE1	26:L:13:ASP:OD2	2.05	0.40
27:M:101:MET:HA	27:M:101:MET:HE2	2.04	0.40
30:P:56:HIS:ND1	30:P:57:VAL:HG23	2.36	0.40
31:Q:82:LEU:CD1	31:Q:105:PHE:CG	3.05	0.40
31:Q:94:GLU:O	31:Q:94:GLU:OE2	2.39	0.40
33:S:91:GLY:C	33:S:92:GLU:OE1	2.62	0.40
34:T:3:LEU:HB2	34:T:35:GLN:OE1	2.22	0.40
36:V:26:GLU:OE2	36:V:39:LYS:C	2.65	0.40
39:Y:55:PRO:C	39:Y:71:LYS:CE	2.95	0.40
41:a:181:A:H2'	41:a:182:A:C8	2.56	0.40
41:a:540:C:C2	41:a:541:A:C8	3.09	0.40
41:a:581:C:C2	41:a:582:A:N7	2.90	0.40
41:a:704:G:O2'	41:a:726:G:N2	2.45	0.40
41:a:706:A:C2	41:a:707:G:H1'	2.57	0.40
41:a:1005:C:H1'	41:a:1012:U:N3	2.37	0.40
41:a:1059:G:C6	41:a:1080:A:N1	2.90	0.40
41:a:1177:G:O2'	41:a:1178:C:O5'	2.28	0.40
41:a:1348:C:C4	41:a:1349:C:C5	3.10	0.40
41:a:1406:U:C2	41:a:1407:G:N7	2.89	0.40
41:a:1783:A:C2	41:a:2587:A:C4	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1816:C:H3'	48:h:62:TYR:CE1	2.57	0.40
41:a:2784:U:H2'	41:a:2785:C:C6	2.55	0.40
42:b:17:GLU:OE1	42:b:19:LYS:HD3	2.21	0.40
43:c:66:THR:O	43:c:67:VAL:C	2.65	0.40
46:f:34:HIS:CD2	46:f:36:VAL:CG2	3.05	0.40
47:g:2:LYS:HB2	47:g:5:ILE:CD1	2.52	0.40
48:h:142:HIS:ND1	48:h:193:GLY:O	2.42	0.40
54:n:141:ILE:HD11	54:n:146:VAL:CG1	2.51	0.40
62:v:135:VAL:HG12	62:v:136:MET:CE	2.50	0.40
63:w:24:MET:CG	63:w:44:LEU:HD12	2.51	0.40
63:w:47:VAL:C	63:w:50:PRO:HD2	2.47	0.40
63:w:98:LEU:HD12	63:w:114:GLU:OE2	2.21	0.40
64:x:4:LYS:O	64:x:8:ILE:HG12	2.22	0.40
1:0:13:ARG:C	1:0:14:VAL:HG13	2.46	0.40
8:7:7:U:C6	8:7:7:U:H3'	2.57	0.40
8:7:9:U:O4	18:D:1196:A:C1'	2.70	0.40
8:7:42:G:C5'	11:AA:688:GLN:HE22	2.35	0.40
9:9:27:VAL:HG12	9:9:83:ALA:HB3	2.01	0.40
9:9:43:LYS:HZ2	9:9:98:GLU:HB2	1.83	0.40
11:AA:213:LEU:HD13	11:AA:422:LYS:HG2	2.03	0.40
11:AA:657:THR:HG21	11:AA:1188:ASP:HB2	2.03	0.40
11:AA:856:ASN:N	16:AG:35:THR:CG2	2.85	0.40
11:AA:1247:SER:OG	11:AA:1248:THR:N	2.55	0.40
12:AB:51:PHE:CD2	12:AB:54:TYR:HD2	2.39	0.40
12:AB:119:THR:CB	12:AB:123:PHE:O	2.68	0.40
14:AE:138:VAL:HG21	14:AE:145:VAL:HB	2.03	0.40
14:AE:1063:ASP:O	14:AE:1067:ARG:NH1	2.55	0.40
16:AG:243:LYS:CE	25:K:69:ARG:CD	3.00	0.40
10:B:9:G:H5''	10:B:11:A:OP2	2.21	0.40
17:C:34:THR:HB	17:C:38:LYS:N	2.35	0.40
18:D:114:U:H2'	18:D:115:G:C8	2.56	0.40
18:D:262:A:C4	18:D:263:A:C8	3.10	0.40
18:D:437:U:H5''	24:J:152:GLN:CD	2.46	0.40
18:D:582:C:C2	18:D:583:A:C8	3.10	0.40
18:D:932:C:OP1	27:M:4:ARG:NH1	2.55	0.40
18:D:1228:C:OP1	38:X:107:ARG:CZ	2.69	0.40
23:I:147:LYS:CE	23:I:204:LYS:C	2.94	0.40
24:J:76:TYR:CD1	24:J:76:TYR:C	2.98	0.40
28:N:28:PRO:HD3	28:N:58:GLU:OE1	2.21	0.40
29:O:35:LEU:HD21	29:O:45:ARG:HG2	2.03	0.40
29:O:56:ASP:O	29:O:60:LYS:CE	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:P:21:ALA:HB1	30:P:92:LEU:HD23	2.03	0.40
33:S:37:SER:O	33:S:41:ARG:HG3	2.22	0.40
33:S:63:ARG:HB3	33:S:68:GLY:HA2	2.04	0.40
35:U:6:LEU:N	35:U:6:LEU:HD12	2.36	0.40
35:U:18:GLN:CD	35:U:35:ARG:HE	2.30	0.40
37:W:34:TRP:O	37:W:36:ARG:N	2.54	0.40
39:Y:91:LYS:HZ3	39:Y:97:VAL:HG21	1.83	0.40
39:Y:100:ILE:HG13	39:Y:139:VAL:HB	2.02	0.40
40:Z:19:VAL:O	40:Z:23:ILE:HG12	2.21	0.40
41:a:26:G:H1'	41:a:514:A:N6	2.37	0.40
41:a:372:G:O4'	43:c:61:LYS:NZ	2.44	0.40
41:a:1197:G:H2'	41:a:1198:U:C6	2.54	0.40
41:a:1843:C:H2'	41:a:1844:C:H6	1.85	0.40
41:a:2422:C:C4	41:a:2424:C:C4	3.09	0.40
41:a:2422:C:N4	41:a:2424:C:N4	2.70	0.40
41:a:2654:A:N1	41:a:2665:A:H5''	2.37	0.40
41:a:2759:G:H1'	56:p:35:ARG:HH22	1.86	0.40
41:a:2821:A:H4'	50:j:167:ASN:ND2	2.37	0.40
41:a:2839:G:H2'	41:a:2840:C:H6	1.87	0.40
46:f:5:ILE:HG22	46:f:6:LYS:N	2.36	0.40
50:j:175:LEU:HB3	50:j:189:VAL:HG12	2.02	0.40
51:k:12:VAL:HG12	51:k:50:LYS:O	2.22	0.40
51:k:19:HIS:CD2	51:k:20:PHE:H	2.39	0.40
53:m:25:LYS:O	53:m:26:ASN:C	2.64	0.40
53:m:44:VAL:O	53:m:45:SER:C	2.63	0.40
54:n:30:ARG:O	54:n:159:THR:HG23	2.21	0.40
54:n:150:ARG:HG2	54:n:151:GLY:N	2.36	0.40
59:s:114:LEU:O	59:s:118:MET:HG3	2.22	0.40
60:t:38:ILE:CD1	60:t:112:PHE:HZ	2.30	0.40
62:v:73:ILE:HD13	62:v:93:VAL:HG13	2.04	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	0	101/103 (98%)	97 (96%)	4 (4%)	0	100	100
2	1	108/110 (98%)	107 (99%)	1 (1%)	0	100	100
3	2	92/100 (92%)	87 (95%)	5 (5%)	0	100	100
4	3	101/104 (97%)	98 (97%)	3 (3%)	0	100	100
5	4	92/94 (98%)	89 (97%)	3 (3%)	0	100	100
9	9	146/165 (88%)	100 (68%)	43 (30%)	3 (2%)	5	28
11	AA	1312/1342 (98%)	1197 (91%)	114 (9%)	1 (0%)	48	82
12	AB	159/162 (98%)	106 (67%)	42 (26%)	11 (7%)	1	10
13	AC	217/329 (66%)	203 (94%)	12 (6%)	2 (1%)	14	49
13	AD	293/329 (89%)	263 (90%)	27 (9%)	3 (1%)	12	47
14	AE	1331/1407 (95%)	1212 (91%)	113 (8%)	6 (0%)	24	63
15	AF	80/91 (88%)	77 (96%)	3 (4%)	0	100	100
16	AG	493/495 (100%)	376 (76%)	86 (17%)	31 (6%)	1	12
17	C	64/75 (85%)	63 (98%)	1 (2%)	0	100	100
19	E	84/87 (97%)	83 (99%)	1 (1%)	0	100	100
20	F	68/71 (96%)	68 (100%)	0	0	100	100
21	G	223/241 (92%)	212 (95%)	10 (4%)	1 (0%)	30	67
22	H	255/557 (46%)	182 (71%)	66 (26%)	7 (3%)	4	24
23	I	206/233 (88%)	193 (94%)	13 (6%)	0	100	100
24	J	203/206 (98%)	201 (99%)	2 (1%)	0	100	100
25	K	154/167 (92%)	145 (94%)	8 (5%)	1 (1%)	21	58
26	L	102/135 (76%)	97 (95%)	4 (4%)	1 (1%)	12	47
27	M	149/179 (83%)	140 (94%)	8 (5%)	1 (1%)	18	55
28	N	127/130 (98%)	123 (97%)	4 (3%)	0	100	100
29	O	125/130 (96%)	116 (93%)	8 (6%)	1 (1%)	16	52
30	P	97/103 (94%)	89 (92%)	8 (8%)	0	100	100
31	Q	115/129 (89%)	107 (93%)	8 (7%)	0	100	100
32	R	117/124 (94%)	112 (96%)	5 (4%)	0	100	100
33	S	98/101 (97%)	97 (99%)	1 (1%)	0	100	100
34	T	86/89 (97%)	83 (96%)	3 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
35	U	80/82 (98%)	76 (95%)	4 (5%)	0	100	100
36	V	78/84 (93%)	74 (95%)	4 (5%)	0	100	100
37	W	81/92 (88%)	80 (99%)	1 (1%)	0	100	100
38	X	114/118 (97%)	103 (90%)	9 (8%)	2 (2%)	6	32
39	Y	139/142 (98%)	101 (73%)	38 (27%)	0	100	100
40	Z	28/121 (23%)	22 (79%)	6 (21%)	0	100	100
42	b	74/85 (87%)	73 (99%)	1 (1%)	0	100	100
43	c	75/78 (96%)	72 (96%)	3 (4%)	0	100	100
45	e	60/63 (95%)	57 (95%)	3 (5%)	0	100	100
46	f	56/59 (95%)	52 (93%)	4 (7%)	0	100	100
47	g	64/70 (91%)	62 (97%)	2 (3%)	0	100	100
48	h	269/273 (98%)	255 (95%)	14 (5%)	0	100	100
49	i	54/57 (95%)	49 (91%)	5 (9%)	0	100	100
50	j	207/209 (99%)	198 (96%)	9 (4%)	0	100	100
51	k	50/55 (91%)	50 (100%)	0	0	100	100
52	l	199/201 (99%)	188 (94%)	11 (6%)	0	100	100
53	m	44/46 (96%)	43 (98%)	1 (2%)	0	100	100
54	n	175/179 (98%)	161 (92%)	13 (7%)	1 (1%)	21	58
55	o	62/65 (95%)	57 (92%)	4 (6%)	1 (2%)	7	36
56	p	173/177 (98%)	162 (94%)	11 (6%)	0	100	100
57	q	36/38 (95%)	35 (97%)	1 (3%)	0	100	100
58	r	147/149 (99%)	139 (95%)	8 (5%)	0	100	100
59	s	140/142 (99%)	133 (95%)	7 (5%)	0	100	100
60	t	121/123 (98%)	114 (94%)	7 (6%)	0	100	100
61	u	142/144 (99%)	134 (94%)	8 (6%)	0	100	100
62	v	134/136 (98%)	129 (96%)	5 (4%)	0	100	100
63	w	117/127 (92%)	112 (96%)	5 (4%)	0	100	100
64	x	114/117 (97%)	107 (94%)	7 (6%)	0	100	100
65	y	112/115 (97%)	105 (94%)	7 (6%)	0	100	100
66	z	115/118 (98%)	111 (96%)	4 (4%)	0	100	100
All	All	10058/11053 (91%)	9177 (91%)	808 (8%)	73 (1%)	20	55

All (73) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
12	AB	107	PRO
12	AB	125	GLY
12	AB	130	PHE
12	AB	137	ALA
12	AB	141	LEU
12	AB	152	HIS
12	AB	160	ARG
13	AD	286	GLU
16	AG	34	ALA
16	AG	105	ILE
16	AG	187	ARG
16	AG	227	ALA
21	G	127	ASP
22	H	304	VAL
27	M	56	LYS
55	o	32	ILE
12	AB	105	VAL
14	AE	92	VAL
14	AE	175	GLU
16	AG	63	LEU
16	AG	104	ARG
16	AG	242	ASP
16	AG	268	GLY
16	AG	279	ASN
16	AG	350	ALA
16	AG	365	ILE
22	H	171	ARG
22	H	305	HIS
22	H	309	MET
12	AB	127	GLN
16	AG	33	THR
16	AG	102	PHE
16	AG	200	SER
16	AG	305	MET
16	AG	319	GLY
16	AG	355	ALA
16	AG	396	GLU
16	AG	425	LEU
25	K	78	ASN
26	L	96	VAL
29	O	13	LYS
54	n	177	PHE

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Mol	Chain	Res	Type
13	AC	193	GLU
16	AG	48	GLN
16	AG	265	GLU
16	AG	363	LEU
16	AG	401	PRO
22	H	82	THR
12	AB	53	ASN
13	AD	289	LEU
14	AE	74	LYS
14	AE	286	ALA
16	AG	224	LYS
16	AG	399	ASP
22	H	143	ASP
38	X	6	GLY
38	X	66	GLU
9	9	79	PRO
9	9	88	HIS
13	AC	192	VAL
13	AD	306	VAL
14	AE	290	ILE
16	AG	43	ILE
16	AG	70	GLN
16	AG	169	PRO
16	AG	323	GLN
16	AG	364	ASP
16	AG	382	GLU
22	H	71	ALA
14	AE	292	VAL
9	9	129	LEU
11	AA	1317	PRO
12	AB	116	VAL

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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.

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	0	84/84 (100%)	84 (100%)	0	100	100
2	1	93/93 (100%)	93 (100%)	0	100	100
3	2	81/84 (96%)	81 (100%)	0	100	100
4	3	84/85 (99%)	84 (100%)	0	100	100
5	4	78/78 (100%)	78 (100%)	0	100	100
9	9	112/123 (91%)	112 (100%)	0	100	100
11	AA	1135/1157 (98%)	1130 (100%)	5 (0%)	84	83
12	AB	141/142 (99%)	122 (86%)	19 (14%)	4	15
13	AC	186/286 (65%)	186 (100%)	0	100	100
13	AD	185/286 (65%)	185 (100%)	0	100	100
14	AE	1122/1168 (96%)	1104 (98%)	18 (2%)	55	69
15	AF	70/75 (93%)	69 (99%)	1 (1%)	59	71
16	AG	409/409 (100%)	288 (70%)	121 (30%)	0	2
17	C	57/65 (88%)	57 (100%)	0	100	100
19	E	65/66 (98%)	65 (100%)	0	100	100
20	F	60/61 (98%)	60 (100%)	0	100	100
21	G	187/199 (94%)	187 (100%)	0	100	100
22	H	137/461 (30%)	137 (100%)	0	100	100
23	I	171/190 (90%)	171 (100%)	0	100	100
24	J	172/173 (99%)	171 (99%)	1 (1%)	78	81
25	K	119/126 (94%)	119 (100%)	0	100	100
26	L	91/116 (78%)	91 (100%)	0	100	100
27	M	124/147 (84%)	124 (100%)	0	100	100
28	N	104/105 (99%)	104 (100%)	0	100	100
29	O	105/107 (98%)	105 (100%)	0	100	100
30	P	86/90 (96%)	85 (99%)	1 (1%)	63	74
31	Q	90/99 (91%)	90 (100%)	0	100	100
32	R	101/104 (97%)	101 (100%)	0	100	100
33	S	83/84 (99%)	83 (100%)	0	100	100
34	T	76/77 (99%)	76 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
35	U	65/65 (100%)	65 (100%)	0	100	100
36	V	74/78 (95%)	74 (100%)	0	100	100
37	W	72/79 (91%)	72 (100%)	0	100	100
38	X	94/96 (98%)	94 (100%)	0	100	100
39	Y	109/110 (99%)	109 (100%)	0	100	100
40	Z	26/85 (31%)	26 (100%)	0	100	100
42	b	58/63 (92%)	58 (100%)	0	100	100
43	c	67/68 (98%)	67 (100%)	0	100	100
45	e	54/55 (98%)	54 (100%)	0	100	100
46	f	48/49 (98%)	48 (100%)	0	100	100
47	g	59/62 (95%)	59 (100%)	0	100	100
48	h	216/218 (99%)	216 (100%)	0	100	100
49	i	47/48 (98%)	47 (100%)	0	100	100
50	j	164/164 (100%)	164 (100%)	0	100	100
51	k	47/49 (96%)	47 (100%)	0	100	100
52	l	165/165 (100%)	165 (100%)	0	100	100
53	m	38/38 (100%)	38 (100%)	0	100	100
54	n	148/150 (99%)	148 (100%)	0	100	100
55	o	51/52 (98%)	51 (100%)	0	100	100
56	p	136/138 (99%)	136 (100%)	0	100	100
57	q	34/34 (100%)	34 (100%)	0	100	100
58	r	114/114 (100%)	114 (100%)	0	100	100
59	s	116/116 (100%)	116 (100%)	0	100	100
60	t	104/104 (100%)	104 (100%)	0	100	100
61	u	103/103 (100%)	103 (100%)	0	100	100
62	v	109/109 (100%)	109 (100%)	0	100	100
63	w	99/103 (96%)	99 (100%)	0	100	100
64	x	86/87 (99%)	86 (100%)	0	100	100
65	y	99/100 (99%)	99 (100%)	0	100	100
66	z	89/90 (99%)	89 (100%)	0	100	100
All	All	8299/9132 (91%)	8133 (98%)	166 (2%)	48	65

All (166) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
11	AA	145	ILE
11	AA	615	VAL
11	AA	914	LYS
11	AA	1076	ILE
11	AA	1151	LEU
12	AB	115	LYS
12	AB	116	VAL
12	AB	117	ILE
12	AB	118	ILE
12	AB	119	THR
12	AB	120	GLU
12	AB	123	PHE
12	AB	124	GLU
12	AB	129	ILE
12	AB	143	LEU
12	AB	144	ASN
12	AB	145	LEU
12	AB	147	ASN
12	AB	148	LYS
12	AB	149	GLU
12	AB	150	ILE
12	AB	159	PHE
12	AB	160	ARG
12	AB	161	LYS
14	AE	69	GLU
14	AE	70	CYS
14	AE	71	LEU
14	AE	74	LYS
14	AE	76	LYS
14	AE	77	ARG
14	AE	78	LEU
14	AE	79	LYS
14	AE	81	ARG
14	AE	84	ILE
14	AE	85	CYS
14	AE	92	VAL
14	AE	93	THR
14	AE	290	ILE
14	AE	291	ILE
14	AE	292	VAL
14	AE	514	THR
14	AE	1261	LEU

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Mol	Chain	Res	Type
15	AF	63	ILE
16	AG	5	ILE
16	AG	12	VAL
16	AG	16	LYS
16	AG	36	LYS
16	AG	37	LYS
16	AG	40	GLU
16	AG	43	ILE
16	AG	47	VAL
16	AG	49	ILE
16	AG	50	ASP
16	AG	56	PHE
16	AG	57	ASP
16	AG	61	ARG
16	AG	63	LEU
16	AG	75	ILE
16	AG	97	ILE
16	AG	103	ASP
16	AG	104	ARG
16	AG	114	ILE
16	AG	117	LYS
16	AG	123	ARG
16	AG	125	MET
16	AG	126	VAL
16	AG	131	ARG
16	AG	138	ILE
16	AG	139	THR
16	AG	144	LYS
16	AG	150	ILE
16	AG	154	LEU
16	AG	157	ASN
16	AG	162	ILE
16	AG	167	MET
16	AG	173	PHE
16	AG	174	ARG
16	AG	179	VAL
16	AG	180	ARG
16	AG	182	VAL
16	AG	187	ARG
16	AG	189	GLU
16	AG	195	LEU
16	AG	197	VAL

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Mol	Chain	Res	Type
16	AG	199	ARG
16	AG	201	LYS
16	AG	203	GLU
16	AG	204	MET
16	AG	205	LEU
16	AG	206	ILE
16	AG	207	GLU
16	AG	210	ARG
16	AG	211	ILE
16	AG	213	VAL
16	AG	218	GLU
16	AG	219	GLU
16	AG	221	ILE
16	AG	223	ILE
16	AG	232	SER
16	AG	235	LYS
16	AG	236	ILE
16	AG	238	VAL
16	AG	239	LYS
16	AG	240	THR
16	AG	241	ASN
16	AG	243	LYS
16	AG	244	ARG
16	AG	245	ILE
16	AG	254	MET
16	AG	255	ARG
16	AG	258	ARG
16	AG	259	VAL
16	AG	260	GLN
16	AG	262	VAL
16	AG	265	GLU
16	AG	270	ARG
16	AG	271	ILE
16	AG	273	ILE
16	AG	274	VAL
16	AG	276	TRP
16	AG	278	ASP
16	AG	282	GLN
16	AG	285	ILE
16	AG	288	MET
16	AG	296	ILE
16	AG	297	VAL

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Mol	Chain	Res	Type
16	AG	299	ASP
16	AG	300	GLU
16	AG	301	ASP
16	AG	302	LYS
16	AG	303	HIS
16	AG	305	MET
16	AG	309	VAL
16	AG	310	GLU
16	AG	313	ASN
16	AG	316	GLN
16	AG	320	ARG
16	AG	321	ASN
16	AG	323	GLN
16	AG	327	LEU
16	AG	331	LEU
16	AG	335	GLU
16	AG	336	LEU
16	AG	337	ASN
16	AG	338	VAL
16	AG	340	THR
16	AG	341	VAL
16	AG	342	ASP
16	AG	344	LEU
16	AG	356	ILE
16	AG	358	THR
16	AG	359	PHE
16	AG	361	LYS
16	AG	365	ILE
16	AG	380	THR
16	AG	387	VAL
16	AG	390	LYS
16	AG	396	GLU
16	AG	398	LEU
16	AG	399	ASP
16	AG	400	GLU
16	AG	425	LEU
16	AG	428	ASN
16	AG	429	LYS
24	J	47	ARG
30	P	88	MET

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (114) such sidechains are listed below:

Mol	Chain	Res	Type
1	0	6	GLN
1	0	82	HIS
2	1	7	HIS
2	1	9	HIS
3	2	15	HIS
9	9	9	GLN
11	AA	69	GLN
11	AA	314	ASN
11	AA	330	HIS
11	AA	343	HIS
11	AA	387	ASN
11	AA	513	GLN
11	AA	554	HIS
11	AA	580	GLN
11	AA	688	GLN
11	AA	808	ASN
11	AA	1008	GLN
11	AA	1237	HIS
11	AA	1288	GLN
11	AA	1313	HIS
12	AB	65	HIS
13	AD	37	HIS
13	AD	66	HIS
13	AD	84	ASN
13	AD	117	HIS
13	AD	128	HIS
13	AD	227	GLN
14	AE	80	HIS
14	AE	157	GLN
14	AE	164	GLN
14	AE	232	ASN
14	AE	365	GLN
14	AE	424	ASN
14	AE	450	HIS
14	AE	469	HIS
14	AE	777	HIS
14	AE	910	ASN
14	AE	1108	GLN
14	AE	1197	ASN
14	AE	1235	ASN
14	AE	1238	GLN
14	AE	1326	GLN
15	AF	31	GLN

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Mol	Chain	Res	Type
15	AF	62	GLN
16	AG	194	GLN
16	AG	260	GLN
16	AG	282	GLN
16	AG	316	GLN
16	AG	323	GLN
16	AG	324	ASN
16	AG	337	ASN
16	AG	428	ASN
17	C	54	GLN
19	E	13	GLN
19	E	61	GLN
20	F	9	ASN
21	G	18	HIS
21	G	39	HIS
21	G	94	HIS
23	I	3	GLN
23	I	6	HIS
23	I	8	ASN
23	I	190	HIS
24	J	36	GLN
24	J	131	ASN
24	J	198	HIS
25	K	89	HIS
26	L	3	HIS
26	L	68	GLN
27	M	68	ASN
27	M	86	GLN
29	O	5	GLN
29	O	81	HIS
29	O	126	GLN
32	R	77	HIS
33	S	4	GLN
34	T	80	GLN
35	U	26	ASN
35	U	59	HIS
39	Y	5	GLN
45	e	25	GLN
45	e	31	GLN
46	f	20	HIS
46	f	49	ASN
47	g	33	ASN

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Mol	Chain	Res	Type
48	h	53	HIS
48	h	90	ASN
50	j	173	GLN
51	k	19	HIS
52	l	92	HIS
52	l	156	ASN
52	l	163	ASN
53	m	29	GLN
54	n	5	HIS
54	n	81	GLN
55	o	24	HIS
55	o	28	ASN
57	q	13	ASN
58	r	133	GLN
59	s	86	GLN
59	s	132	HIS
62	v	13	HIS
62	v	45	GLN
62	v	97	GLN
63	w	18	GLN
63	w	73	ASN
64	x	19	GLN
64	x	29	HIS
64	x	38	GLN
65	y	10	GLN
65	y	77	HIS
66	z	37	GLN
66	z	72	ASN
66	z	81	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
10	A	75/76 (98%)	29 (38%)	8 (10%)
10	B	75/76 (98%)	29 (38%)	8 (10%)
18	D	1514/1542 (98%)	290 (19%)	21 (1%)
41	a	2859/2904 (98%)	510 (17%)	0
44	d	119/120 (99%)	15 (12%)	0
8	7	36/44 (81%)	26 (72%)	5 (13%)
All	All	4678/4762 (98%)	899 (19%)	42 (0%)

All (899) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
8	7	3	G
8	7	4	U
8	7	5	U
8	7	7	U
8	7	8	U
8	7	9	U
8	7	10	U
8	7	11	U
8	7	12	U
8	7	13	U
8	7	14	U
8	7	15	U
8	7	16	U
8	7	17	U
8	7	18	U
8	7	19	U
8	7	20	U
8	7	21	U
8	7	22	U
8	7	23	U
8	7	31	A
8	7	32	U
8	7	33	U
8	7	34	U
8	7	37	U
8	7	39	A
10	A	2	G
10	A	6	G
10	A	7	G
10	A	8	U
10	A	10	G
10	A	13	C
10	A	14	A
10	A	16	C
10	A	17	C
10	A	18	G
10	A	19	G
10	A	20	U
10	A	21	A
10	A	22	G
10	A	23	C
10	A	30	G
10	A	46	G

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Mol	Chain	Res	Type
10	A	47	U
10	A	48	C
10	A	49	G
10	A	52	G
10	A	57	A
10	A	58	A
10	A	59	A
10	A	61	C
10	A	66	C
10	A	69	C
10	A	71	C
10	A	73	A
10	B	2	G
10	B	6	G
10	B	7	G
10	B	8	U
10	B	10	G
10	B	13	C
10	B	14	A
10	B	16	C
10	B	17	C
10	B	18	G
10	B	19	G
10	B	20	U
10	B	21	A
10	B	22	G
10	B	23	C
10	B	30	G
10	B	46	G
10	B	47	U
10	B	48	C
10	B	49	G
10	B	52	G
10	B	57	A
10	B	58	A
10	B	59	A
10	B	61	C
10	B	66	C
10	B	69	C
10	B	71	C
10	B	73	A
18	D	4	U

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Mol	Chain	Res	Type
18	D	5	U
18	D	9	G
18	D	22	G
18	D	29	U
18	D	32	A
18	D	39	G
18	D	47	C
18	D	48	C
18	D	50	A
18	D	51	A
18	D	52	C
18	D	54	C
18	D	68	G
18	D	69	G
18	D	71	A
18	D	72	A
18	D	74	A
18	D	76	G
18	D	82	G
18	D	83	C
18	D	84	U
18	D	87	C
18	D	90	C
18	D	94	G
18	D	95	C
18	D	96	U
18	D	108	G
18	D	120	A
18	D	121	U
18	D	122	G
18	D	131	A
18	D	141	G
18	D	144	G
18	D	148	G
18	D	149	A
18	D	160	A
18	D	164	G
18	D	173	U
18	D	181	A
18	D	182	A
18	D	183	C
18	D	184	G

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Mol	Chain	Res	Type
18	D	197	A
18	D	198	G
18	D	204	G
18	D	208	U
18	D	209	U
18	D	210	C
18	D	211	G
18	D	212	G
18	D	216	U
18	D	226	G
18	D	245	U
18	D	247	G
18	D	251	G
18	D	253	A
18	D	258	G
18	D	262	A
18	D	266	G
18	D	267	C
18	D	271	C
18	D	279	A
18	D	289	G
18	D	299	G
18	D	306	A
18	D	321	A
18	D	328	C
18	D	329	A
18	D	332	G
18	D	347	G
18	D	352	C
18	D	353	A
18	D	354	G
18	D	355	C
18	D	367	U
18	D	372	C
18	D	373	A
18	D	376	G
18	D	382	A
18	D	384	G
18	D	392	C
18	D	397	A
18	D	398	U
18	D	406	G

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Mol	Chain	Res	Type
18	D	411	A
18	D	412	A
18	D	413	G
18	D	414	A
18	D	421	U
18	D	422	C
18	D	424	G
18	D	429	U
18	D	446	G
18	D	451	A
18	D	457	G
18	D	458	U
18	D	463	U
18	D	464	U
18	D	467	U
18	D	468	A
18	D	469	C
18	D	478	A
18	D	479	U
18	D	481	G
18	D	484	G
18	D	485	U
18	D	486	U
18	D	496	A
18	D	497	G
18	D	505	G
18	D	511	C
18	D	518	C
18	D	519	C
18	D	526	C
18	D	531	U
18	D	532	A
18	D	533	A
18	D	542	G
18	D	547	A
18	D	559	A
18	D	564	C
18	D	568	G
18	D	572	A
18	D	573	A
18	D	576	C
18	D	577	G

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Mol	Chain	Res	Type
18	D	579	A
18	D	596	A
18	D	628	G
18	D	633	G
18	D	649	A
18	D	650	G
18	D	653	U
18	D	665	A
18	D	695	A
18	D	700	G
18	D	723	U
18	D	724	G
18	D	731	G
18	D	734	G
18	D	735	C
18	D	747	A
18	D	748	G
18	D	755	G
18	D	760	G
18	D	777	A
18	D	793	U
18	D	794	A
18	D	815	A
18	D	817	C
18	D	828	U
18	D	829	G
18	D	832	G
18	D	841	C
18	D	843	U
18	D	844	G
18	D	845	A
18	D	846	G
18	D	849	G
18	D	874	G
18	D	887	G
18	D	902	G
18	D	914	A
18	D	916	U
18	D	926	G
18	D	934	C
18	D	935	A
18	D	960	U

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Mol	Chain	Res	Type
18	D	963	G
18	D	965	U
18	D	969	A
18	D	972	C
18	D	975	A
18	D	976	G
18	D	987	G
18	D	991	U
18	D	992	U
18	D	993	G
18	D	996	A
18	D	1004	A
18	D	1008	U
18	D	1009	U
18	D	1017	U
18	D	1018	G
18	D	1021	A
18	D	1024	G
18	D	1026	G
18	D	1028	C
18	D	1030	U
18	D	1031	C
18	D	1037	C
18	D	1043	G
18	D	1044	A
18	D	1046	A
18	D	1065	U
18	D	1085	U
18	D	1094	G
18	D	1095	U
18	D	1099	G
18	D	1101	A
18	D	1108	G
18	D	1124	G
18	D	1133	G
18	D	1135	U
18	D	1136	C
18	D	1137	C
18	D	1139	G
18	D	1140	C
18	D	1141	C
18	D	1142	G

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Mol	Chain	Res	Type
18	D	1143	G
18	D	1145	A
18	D	1146	A
18	D	1151	A
18	D	1152	A
18	D	1159	U
18	D	1167	A
18	D	1171	A
18	D	1174	G
18	D	1175	G
18	D	1176	A
18	D	1184	G
18	D	1193	G
18	D	1196	A
18	D	1197	A
18	D	1206	G
18	D	1211	U
18	D	1212	U
18	D	1213	A
18	D	1214	C
18	D	1215	G
18	D	1226	C
18	D	1227	A
18	D	1228	C
18	D	1238	A
18	D	1257	A
18	D	1260	G
18	D	1275	A
18	D	1276	G
18	D	1278	G
18	D	1279	G
18	D	1280	A
18	D	1285	A
18	D	1286	U
18	D	1287	A
18	D	1299	A
18	D	1300	G
18	D	1302	C
18	D	1305	G
18	D	1312	G
18	D	1317	C
18	D	1320	C

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Mol	Chain	Res	Type
18	D	1323	G
18	D	1338	G
18	D	1340	A
18	D	1346	A
18	D	1347	G
18	D	1353	G
18	D	1363	A
18	D	1370	G
18	D	1378	C
18	D	1379	G
18	D	1381	U
18	D	1391	U
18	D	1396	A
18	D	1397	C
18	D	1398	A
18	D	1404	C
18	D	1419	G
18	D	1429	A
18	D	1441	A
18	D	1446	A
18	D	1447	A
18	D	1448	C
18	D	1452	C
18	D	1453	G
18	D	1475	G
18	D	1487	G
18	D	1491	G
18	D	1492	A
18	D	1493	A
18	D	1494	G
18	D	1497	G
18	D	1503	A
18	D	1506	U
18	D	1517	G
18	D	1529	G
18	D	1530	G
18	D	1534	A
41	a	4	U
41	a	10	A
41	a	15	G
41	a	23	G
41	a	34	U

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Mol	Chain	Res	Type
41	a	35	G
41	a	46	G
41	a	58	G
41	a	60	G
41	a	62	U
41	a	63	A
41	a	71	A
41	a	74	A
41	a	75	G
41	a	83	A
41	a	84	A
41	a	85	G
41	a	96	C
41	a	101	A
41	a	102	U
41	a	103	A
41	a	110	G
41	a	118	A
41	a	119	A
41	a	120	U
41	a	131	A
41	a	136	G
41	a	139	U
41	a	140	C
41	a	141	G
41	a	163	C
41	a	165	A
41	a	181	A
41	a	196	A
41	a	215	G
41	a	216	A
41	a	222	A
41	a	225	C
41	a	248	G
41	a	249	C
41	a	261	G
41	a	264	C
41	a	265	A
41	a	266	G
41	a	267	C
41	a	271	G
41	a	272	A

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Mol	Chain	Res	Type
41	a	275	C
41	a	276	U
41	a	278	A
41	a	285	G
41	a	291	G
41	a	311	A
41	a	329	G
41	a	330	A
41	a	353	C
41	a	361	G
41	a	362	A
41	a	371	A
41	a	372	G
41	a	373	U
41	a	375	G
41	a	383	C
41	a	386	G
41	a	396	G
41	a	405	U
41	a	411	G
41	a	412	A
41	a	420	C
41	a	424	G
41	a	451	U
41	a	457	A
41	a	477	A
41	a	481	G
41	a	491	G
41	a	501	A
41	a	503	A
41	a	504	A
41	a	505	A
41	a	509	C
41	a	522	A
41	a	529	A
41	a	531	C
41	a	532	A
41	a	537	G
41	a	543	G
41	a	545	U
41	a	546	U
41	a	547	A

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Mol	Chain	Res	Type
41	a	549	G
41	a	551	G
41	a	563	A
41	a	569	U
41	a	573	U
41	a	575	A
41	a	588	U
41	a	603	A
41	a	609	A
41	a	613	A
41	a	614	A
41	a	615	U
41	a	616	A
41	a	627	A
41	a	637	A
41	a	645	C
41	a	647	G
41	a	654	A
41	a	668	A
41	a	686	U
41	a	710	U
41	a	717	C
41	a	730	A
41	a	738	G
41	a	757	G
41	a	764	A
41	a	765	C
41	a	775	G
41	a	776	G
41	a	782	A
41	a	784	G
41	a	785	G
41	a	800	A
41	a	805	G
41	a	812	C
41	a	819	A
41	a	827	U
41	a	828	U
41	a	845	A
41	a	846	U
41	a	858	G
41	a	859	G

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Mol	Chain	Res	Type
41	a	869	G
41	a	878	A
41	a	881	G
41	a	884	U
41	a	885	C
41	a	888	C
41	a	891	G
41	a	895	U
41	a	896	A
41	a	897	C
41	a	899	A
41	a	907	G
41	a	910	A
41	a	914	G
41	a	915	C
41	a	931	U
41	a	941	A
41	a	945	A
41	a	946	C
41	a	953	G
41	a	961	C
41	a	974	G
41	a	983	A
41	a	995	C
41	a	996	A
41	a	999	U
41	a	1005	C
41	a	1012	U
41	a	1013	C
41	a	1022	G
41	a	1023	U
41	a	1026	G
41	a	1033	U
41	a	1041	G
41	a	1045	C
41	a	1046	A
41	a	1047	G
41	a	1060	U
41	a	1061	U
41	a	1064	C
41	a	1066	U
41	a	1067	A

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Mol	Chain	Res	Type
41	a	1068	G
41	a	1070	A
41	a	1071	G
41	a	1073	A
41	a	1074	G
41	a	1079	C
41	a	1080	A
41	a	1081	U
41	a	1082	U
41	a	1083	U
41	a	1084	A
41	a	1087	G
41	a	1088	A
41	a	1090	A
41	a	1095	A
41	a	1101	U
41	a	1107	G
41	a	1110	G
41	a	1111	A
41	a	1112	G
41	a	1119	U
41	a	1122	G
41	a	1128	G
41	a	1132	U
41	a	1134	A
41	a	1135	C
41	a	1142	A
41	a	1169	A
41	a	1170	C
41	a	1173	U
41	a	1174	U
41	a	1175	A
41	a	1176	U
41	a	1177	G
41	a	1178	C
41	a	1179	G
41	a	1180	U
41	a	1186	G
41	a	1238	G
41	a	1248	G
41	a	1253	A
41	a	1256	G

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Mol	Chain	Res	Type
41	a	1266	G
41	a	1271	G
41	a	1272	A
41	a	1273	U
41	a	1300	G
41	a	1301	A
41	a	1321	A
41	a	1345	C
41	a	1352	U
41	a	1365	A
41	a	1368	G
41	a	1378	A
41	a	1379	U
41	a	1380	G
41	a	1383	A
41	a	1392	A
41	a	1395	A
41	a	1406	U
41	a	1408	G
41	a	1409	U
41	a	1414	C
41	a	1416	G
41	a	1417	C
41	a	1419	A
41	a	1420	A
41	a	1428	C
41	a	1452	G
41	a	1453	A
41	a	1460	U
41	a	1482	G
41	a	1490	A
41	a	1497	U
41	a	1503	A
41	a	1508	A
41	a	1509	A
41	a	1510	G
41	a	1515	A
41	a	1529	G
41	a	1534	U
41	a	1535	A
41	a	1536	C
41	a	1537	G

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Mol	Chain	Res	Type
41	a	1554	U
41	a	1559	U
41	a	1566	A
41	a	1569	A
41	a	1578	U
41	a	1580	A
41	a	1581	G
41	a	1582	C
41	a	1583	A
41	a	1584	U
41	a	1585	C
41	a	1589	U
41	a	1590	A
41	a	1608	A
41	a	1610	A
41	a	1613	G
41	a	1647	U
41	a	1648	U
41	a	1649	G
41	a	1651	G
41	a	1665	A
41	a	1674	G
41	a	1677	A
41	a	1703	G
41	a	1714	U
41	a	1715	G
41	a	1729	U
41	a	1730	C
41	a	1732	C
41	a	1738	G
41	a	1750	G
41	a	1758	U
41	a	1764	C
41	a	1773	A
41	a	1791	A
41	a	1800	C
41	a	1808	A
41	a	1811	G
41	a	1816	C
41	a	1829	A
41	a	1833	C
41	a	1847	A

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Mol	Chain	Res	Type
41	a	1848	A
41	a	1858	A
41	a	1859	U
41	a	1862	G
41	a	1864	U
41	a	1869	G
41	a	1870	C
41	a	1872	A
41	a	1873	G
41	a	1906	G
41	a	1907	G
41	a	1913	A
41	a	1914	C
41	a	1919	A
41	a	1920	C
41	a	1922	G
41	a	1923	U
41	a	1924	C
41	a	1925	C
41	a	1926	U
41	a	1929	G
41	a	1930	G
41	a	1936	A
41	a	1938	A
41	a	1955	U
41	a	1965	C
41	a	1967	C
41	a	1970	A
41	a	1971	U
41	a	1972	G
41	a	1987	A
41	a	1991	U
41	a	1992	G
41	a	1993	U
41	a	1997	C
41	a	2002	G
41	a	2020	A
41	a	2022	U
41	a	2023	C
41	a	2027	G
41	a	2033	A
41	a	2043	C

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Mol	Chain	Res	Type
41	a	2051	A
41	a	2052	A
41	a	2055	C
41	a	2056	G
41	a	2060	A
41	a	2061	G
41	a	2062	A
41	a	2063	C
41	a	2097	A
41	a	2099	U
41	a	2100	G
41	a	2108	A
41	a	2110	G
41	a	2111	U
41	a	2113	U
41	a	2115	G
41	a	2116	G
41	a	2117	A
41	a	2118	U
41	a	2121	G
41	a	2122	U
41	a	2124	G
41	a	2125	G
41	a	2126	A
41	a	2127	G
41	a	2128	G
41	a	2131	U
41	a	2132	U
41	a	2133	G
41	a	2134	A
41	a	2139	U
41	a	2141	G
41	a	2146	C
41	a	2147	A
41	a	2154	A
41	a	2157	G
41	a	2158	A
41	a	2159	G
41	a	2162	G
41	a	2163	A
41	a	2164	C
41	a	2165	C

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Mol	Chain	Res	Type
41	a	2169	A
41	a	2171	A
41	a	2172	U
41	a	2178	C
41	a	2182	U
41	a	2183	A
41	a	2185	U
41	a	2189	U
41	a	2190	G
41	a	2193	G
41	a	2194	U
41	a	2198	A
41	a	2204	G
41	a	2211	A
41	a	2212	A
41	a	2225	A
41	a	2226	C
41	a	2229	U
41	a	2238	G
41	a	2239	G
41	a	2250	G
41	a	2268	A
41	a	2278	A
41	a	2283	C
41	a	2287	A
41	a	2288	A
41	a	2297	A
41	a	2305	U
41	a	2308	G
41	a	2309	A
41	a	2322	A
41	a	2325	G
41	a	2327	A
41	a	2333	A
41	a	2335	A
41	a	2339	C
41	a	2345	G
41	a	2347	C
41	a	2350	C
41	a	2361	G
41	a	2372	U
41	a	2376	A

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Mol	Chain	Res	Type
41	a	2383	G
41	a	2385	C
41	a	2402	U
41	a	2403	C
41	a	2406	A
41	a	2423	U
41	a	2424	C
41	a	2425	A
41	a	2426	A
41	a	2429	G
41	a	2430	A
41	a	2431	U
41	a	2434	A
41	a	2435	A
41	a	2441	U
41	a	2447	G
41	a	2448	A
41	a	2470	G
41	a	2474	U
41	a	2476	A
41	a	2478	A
41	a	2484	G
41	a	2491	U
41	a	2502	G
41	a	2506	U
41	a	2512	C
41	a	2513	A
41	a	2518	A
41	a	2520	C
41	a	2525	G
41	a	2529	G
41	a	2535	G
41	a	2554	U
41	a	2566	A
41	a	2567	G
41	a	2573	C
41	a	2574	G
41	a	2585	U
41	a	2586	U
41	a	2602	A
41	a	2603	G
41	a	2609	U

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Mol	Chain	Res	Type
41	a	2610	C
41	a	2611	C
41	a	2613	U
41	a	2629	U
41	a	2630	G
41	a	2663	G
41	a	2669	G
41	a	2671	G
41	a	2689	U
41	a	2690	U
41	a	2714	G
41	a	2716	C
41	a	2726	A
41	a	2744	G
41	a	2748	A
41	a	2758	A
41	a	2765	A
41	a	2777	G
41	a	2778	A
41	a	2791	G
41	a	2793	C
41	a	2796	U
41	a	2797	U
41	a	2798	U
41	a	2799	A
41	a	2801	G
41	a	2818	U
41	a	2820	A
41	a	2823	A
41	a	2825	G
41	a	2835	A
41	a	2849	U
41	a	2859	G
41	a	2861	U
41	a	2867	G
41	a	2873	A
41	a	2874	C
41	a	2880	C
41	a	2883	A
41	a	2884	U
41	a	2885	G
41	a	2891	U

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Mol	Chain	Res	Type
41	a	2902	C
44	d	2	G
44	d	13	G
44	d	16	G
44	d	17	C
44	d	35	C
44	d	45	A
44	d	51	G
44	d	56	G
44	d	57	A
44	d	66	A
44	d	88	C
44	d	89	U
44	d	90	C
44	d	99	A
44	d	109	A

All (42) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
8	7	4	U
8	7	7	U
8	7	10	U
8	7	18	U
8	7	30	G
10	A	6	G
10	A	7	G
10	A	9	G
10	A	12	G
10	A	21	A
10	A	22	G
10	A	57	A
10	A	60	U
10	B	6	G
10	B	7	G
10	B	9	G
10	B	12	G
10	B	21	A
10	B	22	G
10	B	57	A
10	B	60	U
18	D	121	U

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Mol	Chain	Res	Type
18	D	181	A
18	D	183	C
18	D	197	A
18	D	209	U
18	D	428	G
18	D	496	A
18	D	517	G
18	D	793	U
18	D	991	U
18	D	992	U
18	D	1145	A
18	D	1196	A
18	D	1211	U
18	D	1212	U
18	D	1213	A
18	D	1214	C
18	D	1447	A
18	D	1491	G
18	D	1492	A
18	D	1493	A

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 3 ligands modelled in this entry, 3 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

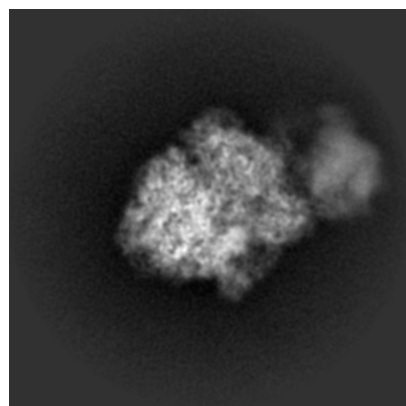
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-42493. These allow visual inspection of the internal detail of the map and identification of artifacts.

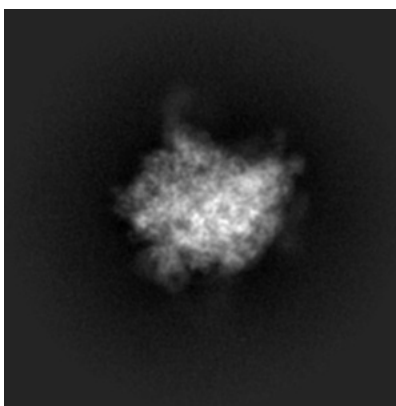
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

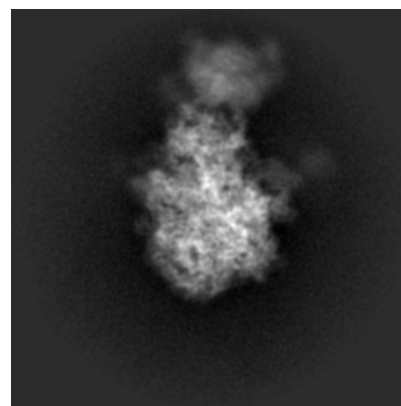
6.1.1 Primary map



X

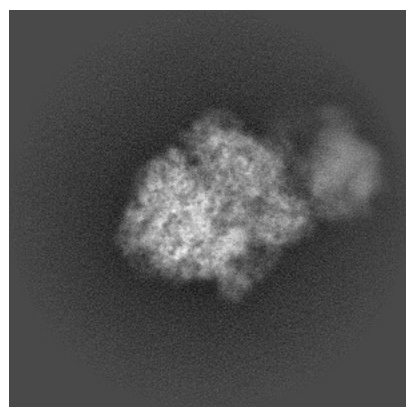


Y

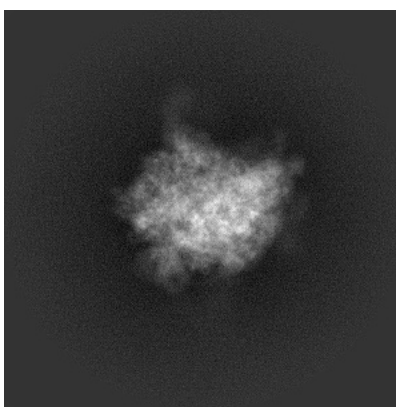


Z

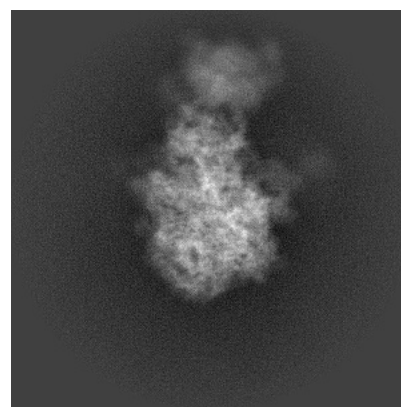
6.1.2 Raw map



X



Y

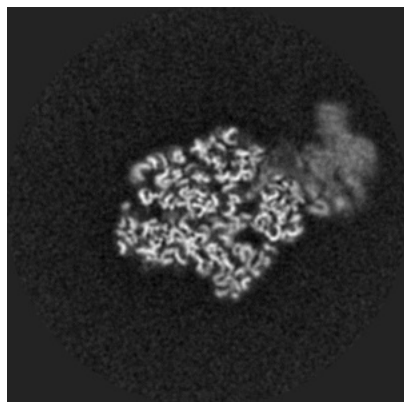


Z

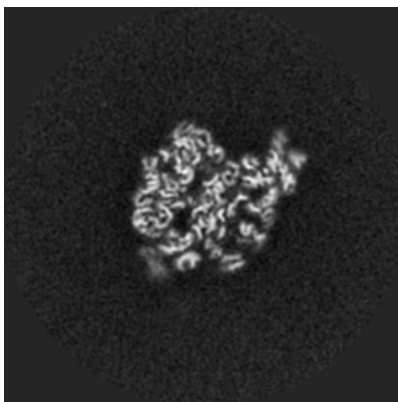
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

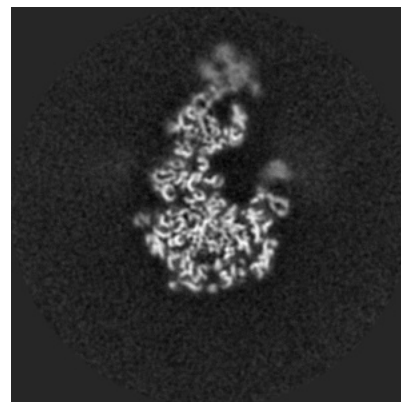
6.2.1 Primary map



X Index: 256

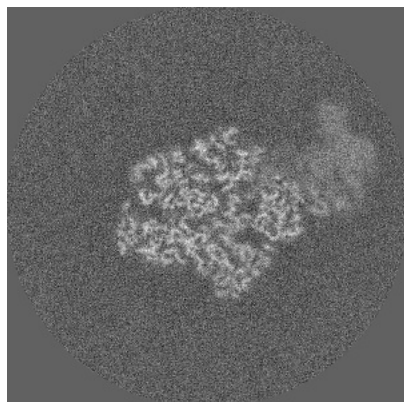


Y Index: 256

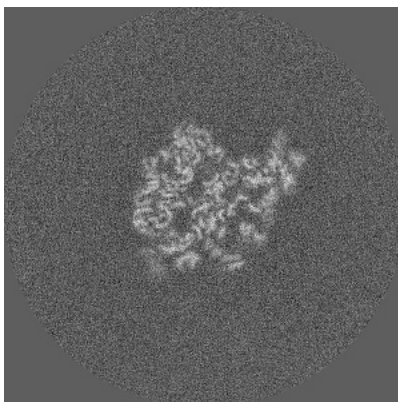


Z Index: 256

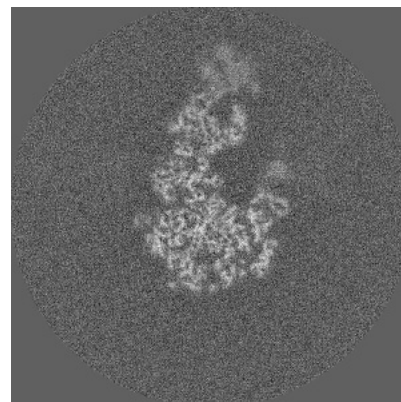
6.2.2 Raw map



X Index: 256



Y Index: 256

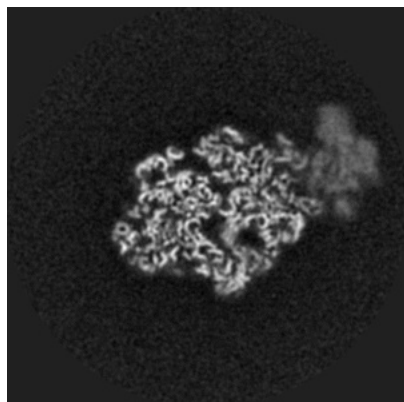


Z Index: 256

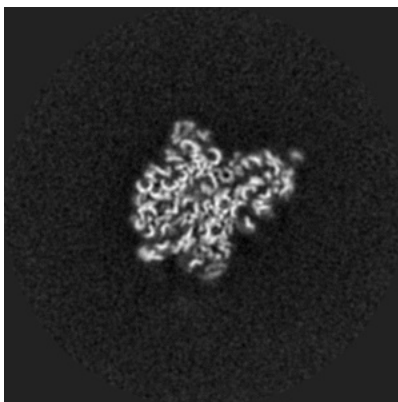
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

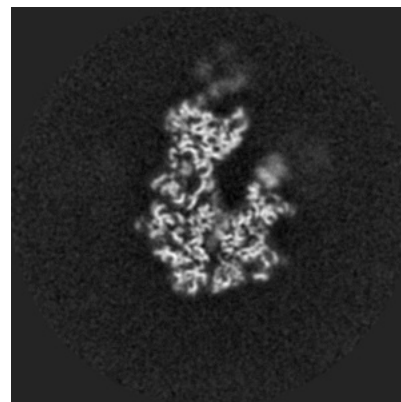
6.3.1 Primary map



X Index: 249

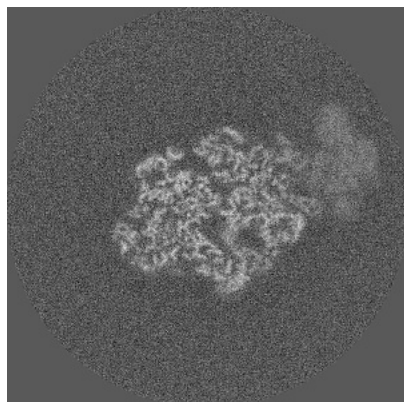


Y Index: 247

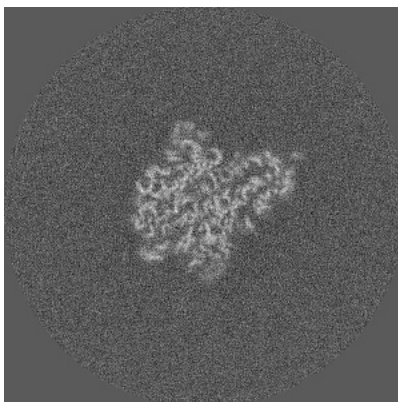


Z Index: 244

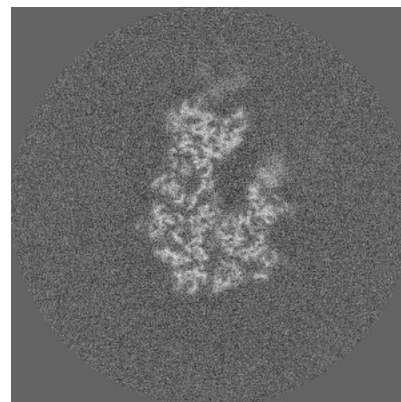
6.3.2 Raw map



X Index: 249



Y Index: 246



Z Index: 244

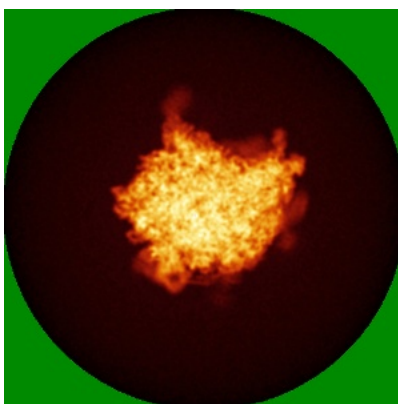
The images above show the largest variance slices of the map in three orthogonal directions.

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

6.4.1 Primary map



X

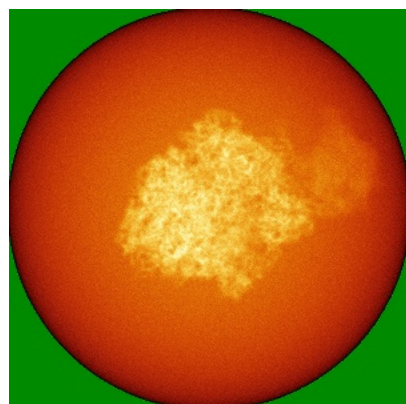


Y

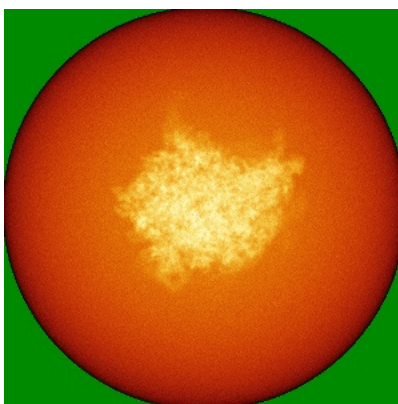


Z

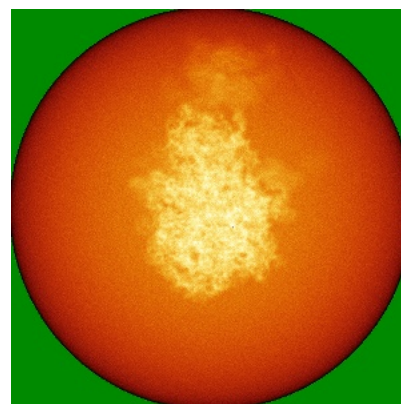
6.4.2 Raw map



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.

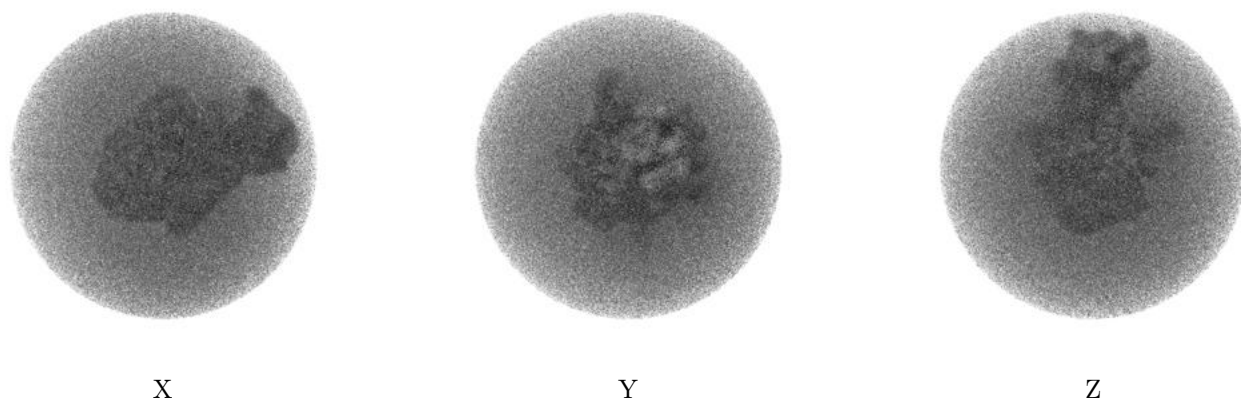
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.0055. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

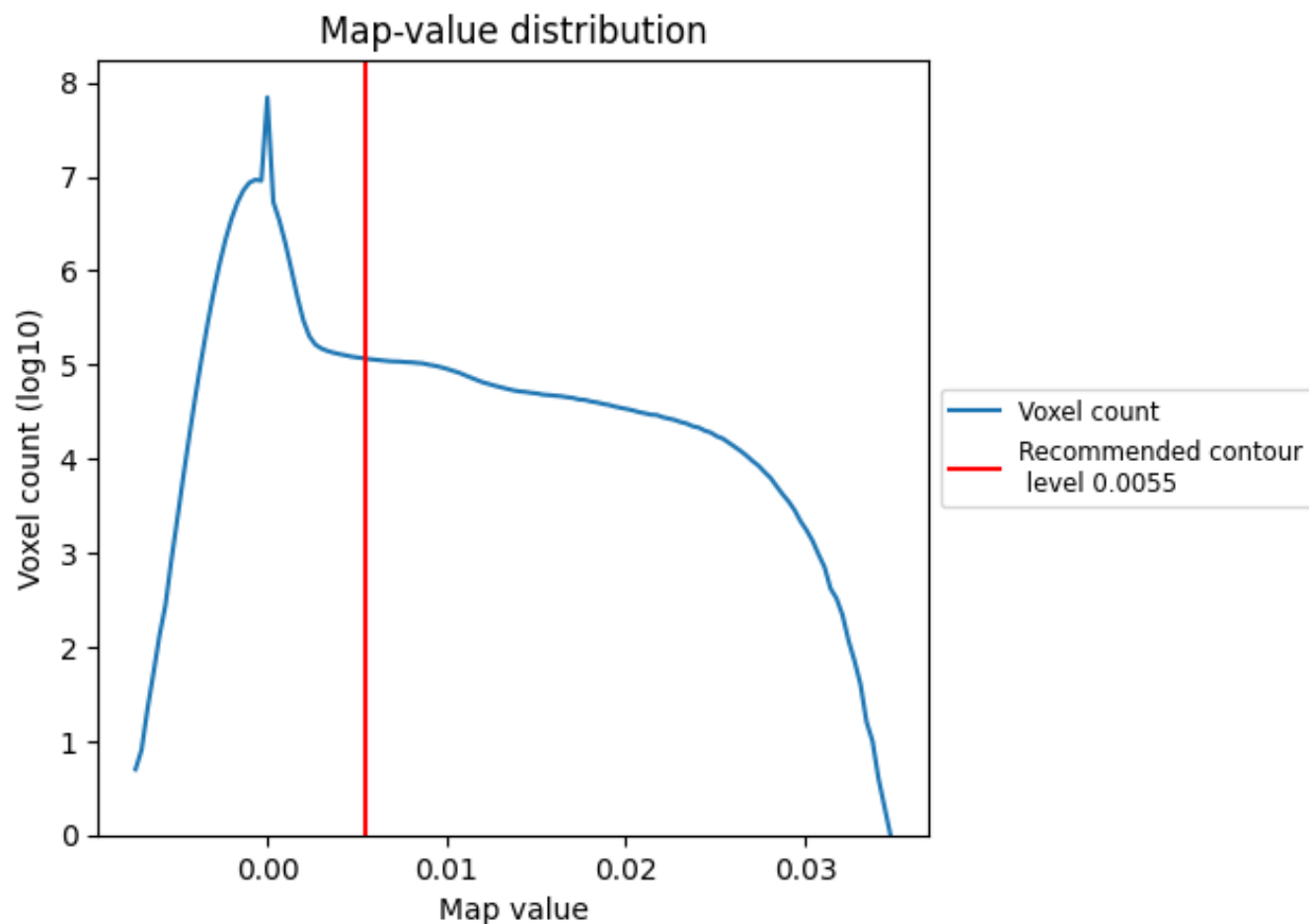
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

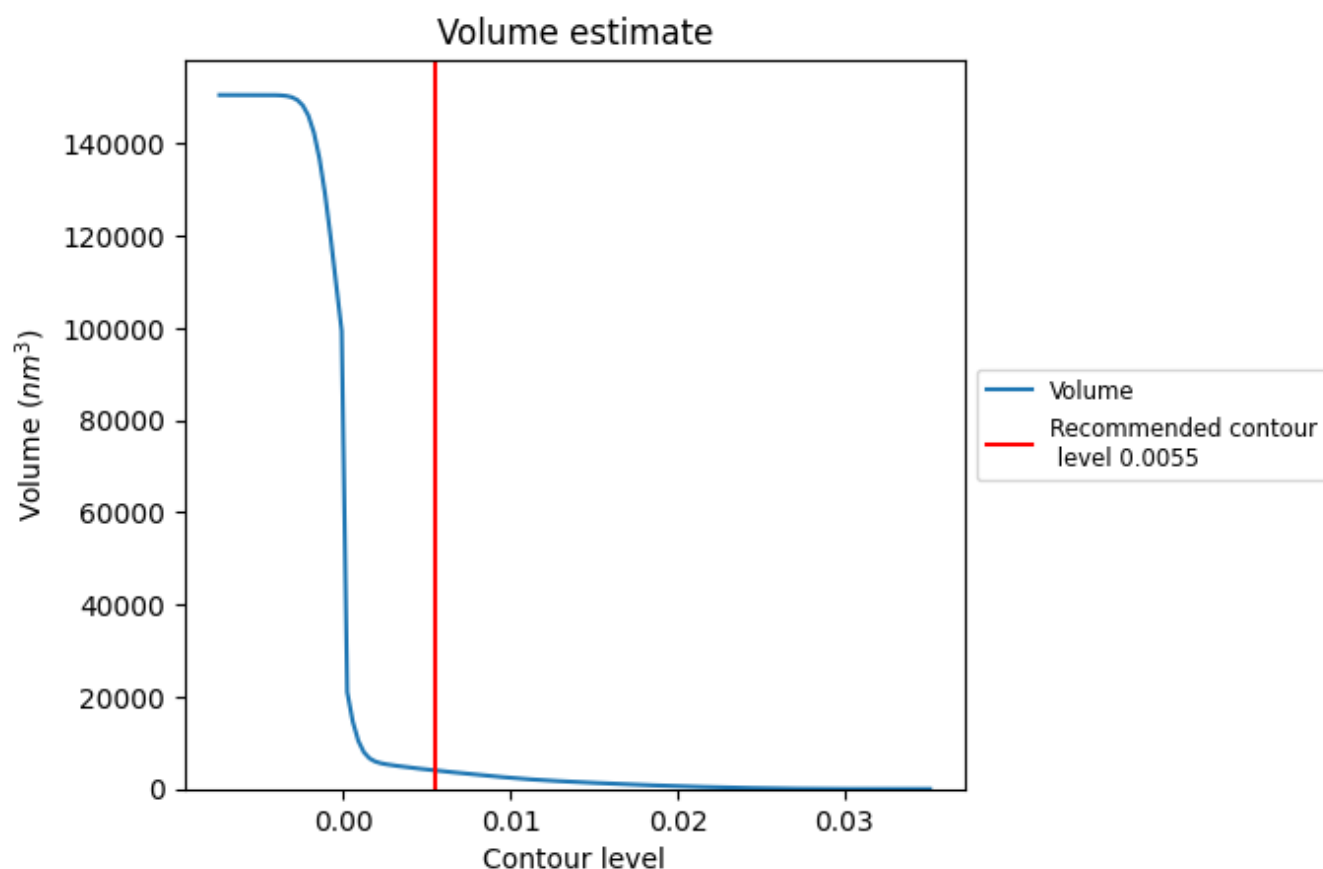
This section contains the results of statistical analysis of the map.

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.

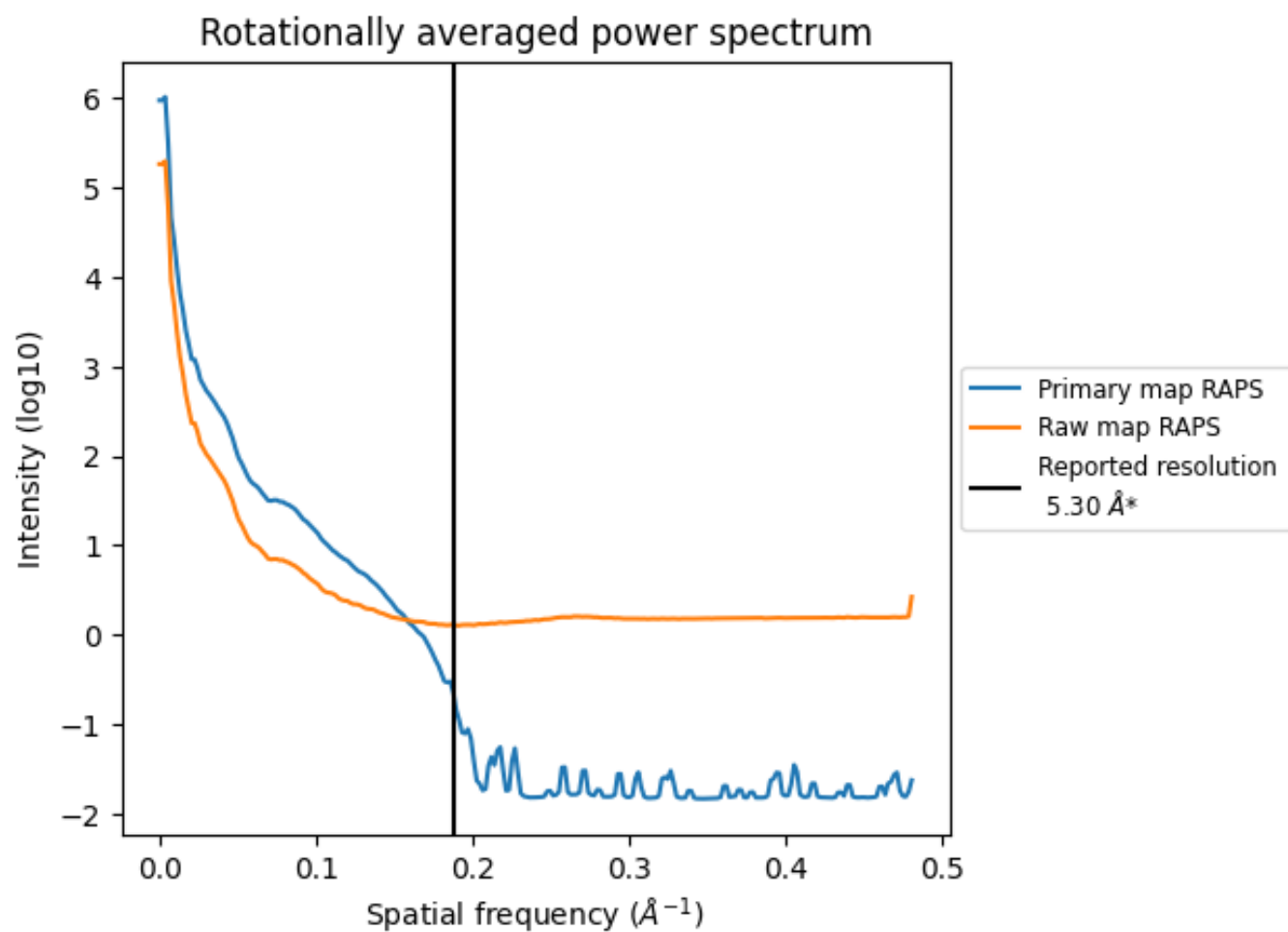
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 4028 nm^3 ; this corresponds to an approximate mass of 3638 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 [i](#)

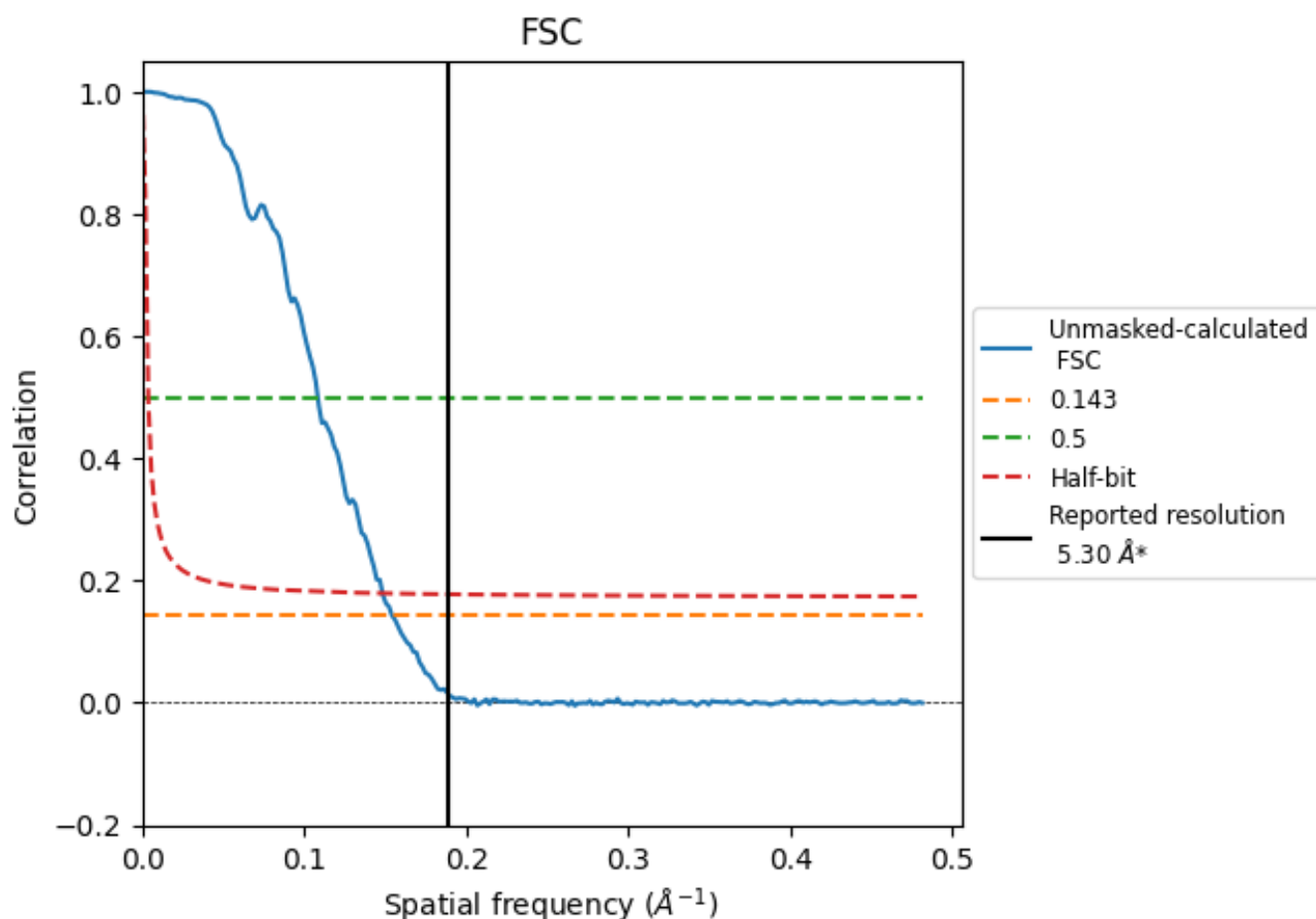


*Reported resolution corresponds to spatial frequency of 0.189 $\text{\AA}^{-1}$

8 Fourier-Shell correlation [i](#)

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.189 Å⁻¹

8.2 Resolution estimates [i](#)

Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	5.30	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	6.49	9.23	6.74

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 6.49 differs from the reported value 5.3 by more than 10 %

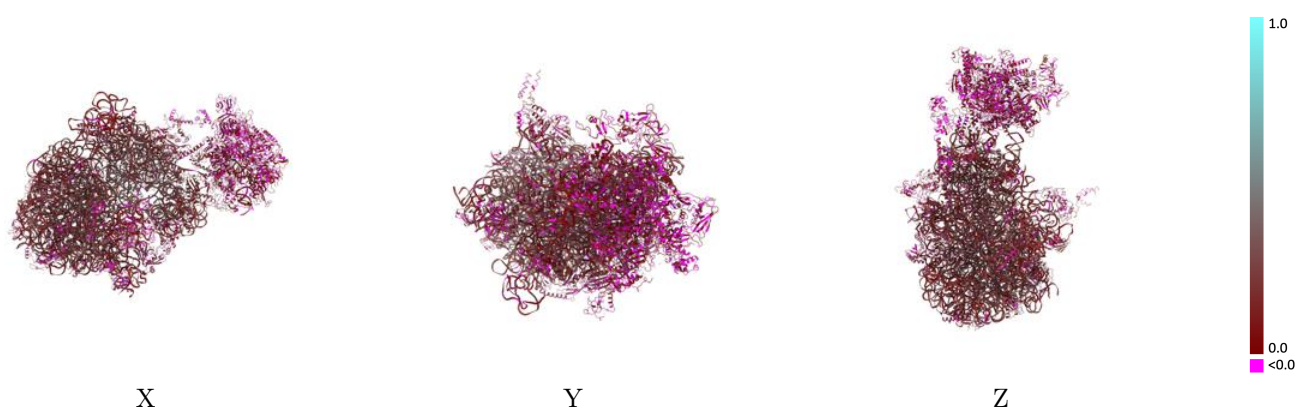
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-42493 and PDB model 8URI. Per-residue inclusion information can be found in section 3 on page 17.

9.1 Map-model overlay [i](#)

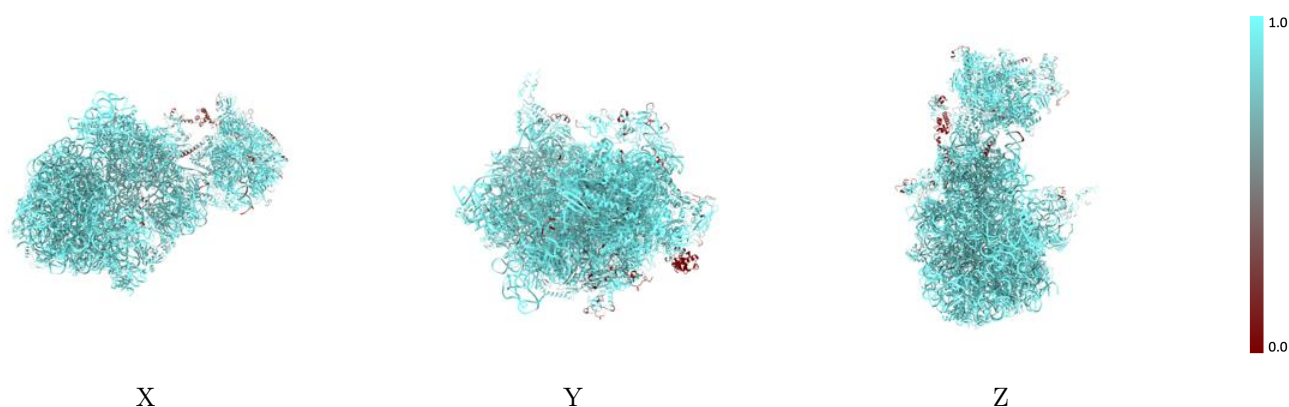
This section was not generated.

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



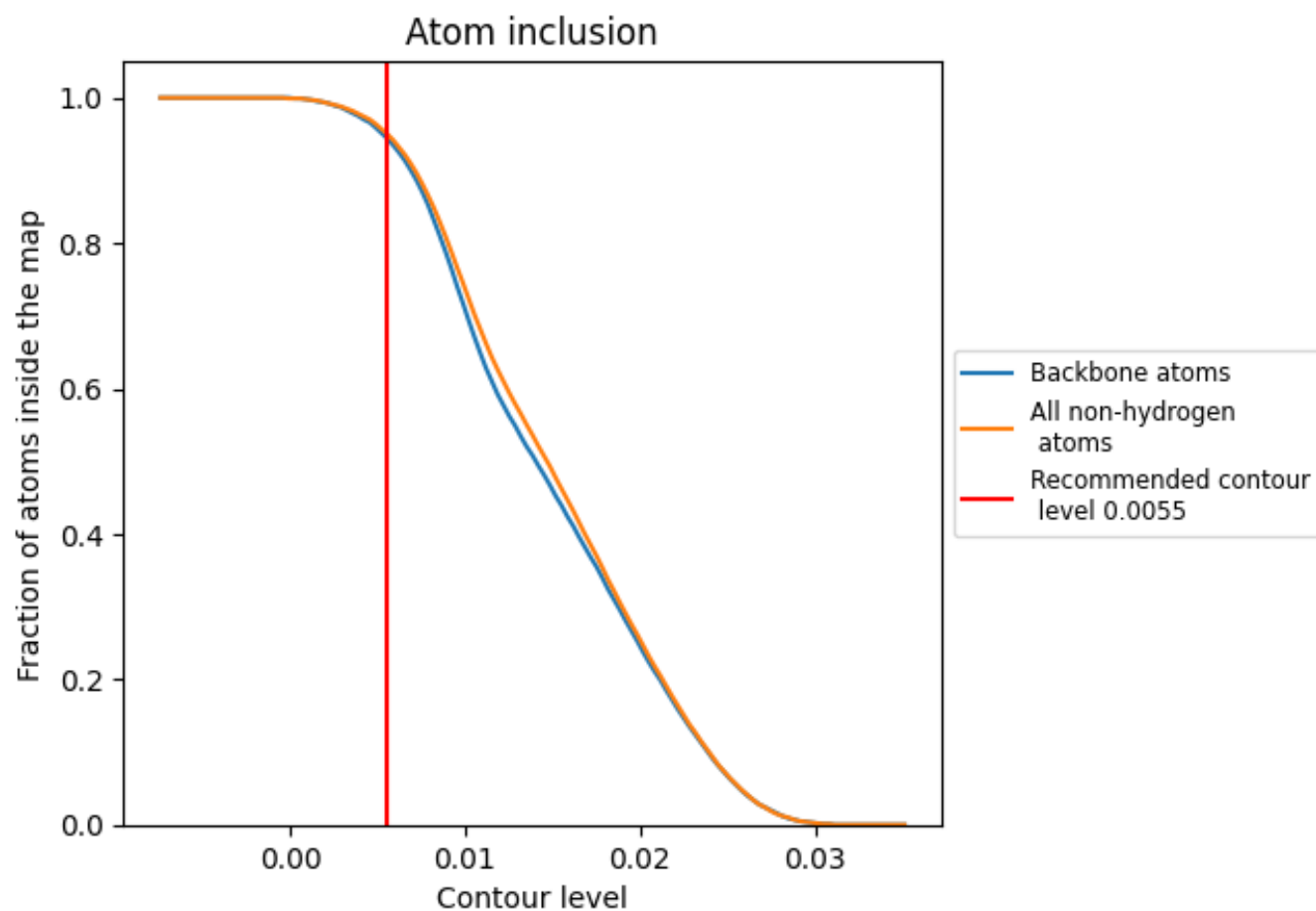
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.0055).

9.4 Atom inclusion [i](#)



At the recommended contour level, 94% of all backbone atoms, 95% 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 (0.0055) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9510	 0.1750
0	 0.9510	 0.1540
1	 0.9380	 0.1820
2	 0.9370	 0.1440
3	 0.9550	 0.1320
4	 0.9650	 0.1620
5	 0.8790	 0.1300
6	 0.8610	 0.1270
7	 0.9300	 0.1380
9	 0.8980	 0.0990
A	 0.9790	 0.1710
AA	 0.9390	 0.0750
AB	 0.9590	 0.1230
AC	 0.9550	 0.0510
AD	 0.8040	 0.0560
AE	 0.9110	 0.0800
AF	 0.7100	 0.0880
AG	 0.7330	 0.0900
B	 0.9090	 0.1040
C	 0.9640	 0.1570
D	 0.9930	 0.2280
E	 0.9760	 0.1560
F	 0.9450	 0.1880
G	 0.9420	 0.1620
H	 0.7220	 0.0720
I	 0.9550	 0.2000
J	 0.9740	 0.1770
K	 0.9650	 0.2180
L	 0.9580	 0.1530
M	 0.9510	 0.1570
N	 0.9510	 0.1820
O	 0.9700	 0.1340
P	 0.9410	 0.1710
Q	 0.9540	 0.1570
R	 0.9830	 0.2250



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Chain	Atom inclusion	Q-score
S	 0.9660	 0.1690
T	 0.9540	 0.1570
U	 0.9590	 0.1560
V	 0.9530	 0.1690
W	 0.8960	 0.1200
X	 0.9290	 0.1440
Y	 0.7490	 0.0590
Z	 0.8720	 0.0610
a	 0.9920	 0.2160
b	 0.9510	 0.1240
c	 0.9500	 0.1670
d	 0.9890	 0.1820
e	 0.9370	 0.1270
f	 0.9680	 0.1740
g	 0.9310	 0.1180
h	 0.9520	 0.1600
i	 0.9420	 0.1980
j	 0.9680	 0.1680
k	 0.9620	 0.1350
l	 0.9260	 0.1330
m	 0.9660	 0.1790
n	 0.9410	 0.1230
o	 0.9350	 0.1260
p	 0.9640	 0.1530
q	 0.9560	 0.1570
r	 0.8380	 0.1190
s	 0.9570	 0.1790
t	 0.9350	 0.1810
u	 0.9580	 0.1390
v	 0.9740	 0.1890
w	 0.9490	 0.1640
x	 0.9500	 0.0930
y	 0.9440	 0.1650
z	 0.9730	 0.1540