



Full wwPDB EM Validation Report ⓘ

Mar 5, 2026 – 08:24 PM UTC

PDB ID : 8UQM / pdb_00008uqm
EMDB ID : EMD-42474
Title : Escherichia coli transcription-translation coupled complex class B (TTC-B) containing RfaH in loaded state, NusA, mRNA with a 24 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 : 2023-10-24
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

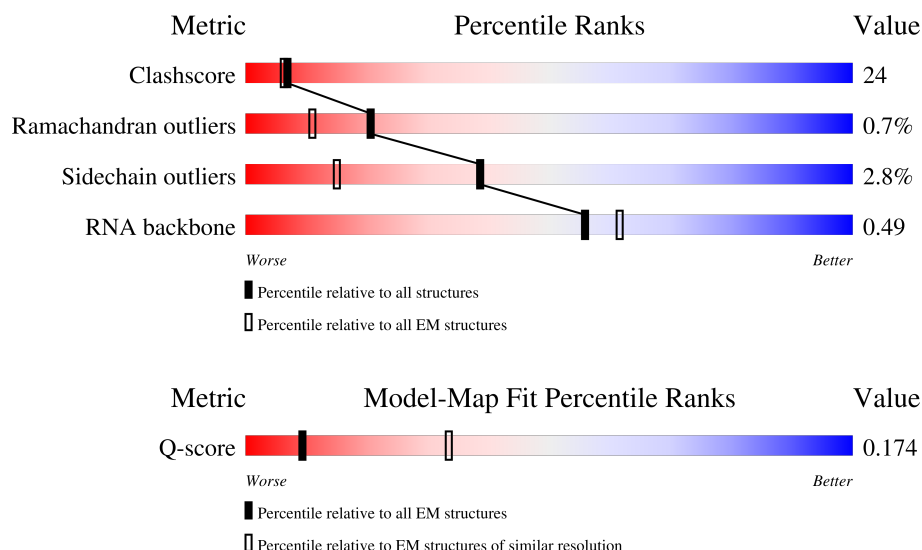
1 Overall quality at a glance i

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.



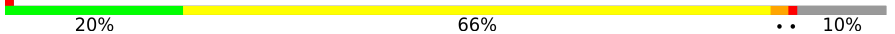
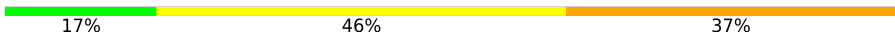
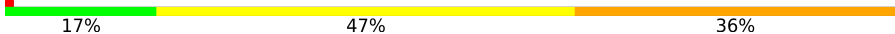
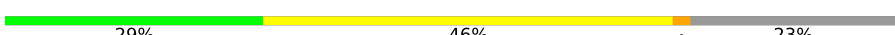
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	625 (4.80 - 5.80)

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	60% 40%
2	1	110	58% 42%
3	2	100	51% 42% 6%

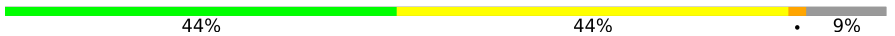
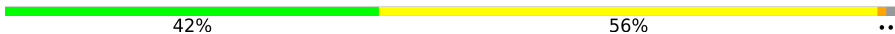
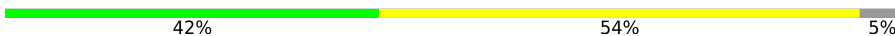
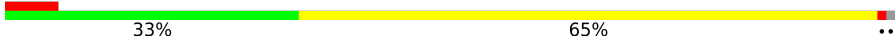
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Mol	Chain	Length	Quality of chain
4	3	104	
5	4	94	
6	5	36	
7	6	36	
8	7	41	
9	9	165	
10	A	76	
10	B	76	
11	AA	1342	
12	AB	162	
13	AC	329	
13	AD	329	
14	AE	1407	
15	AF	91	
16	AG	495	
17	C	75	
18	D	1542	
19	E	87	
20	F	71	
21	G	241	
22	H	557	
23	I	233	
24	J	206	
25	K	167	
26	L	135	

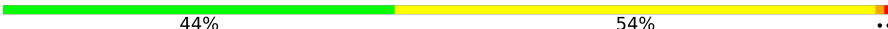
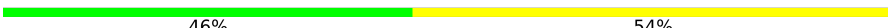
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Mol	Chain	Length	Quality of chain
27	M	179	
28	N	130	
29	O	130	
30	P	103	
31	Q	129	
32	R	124	
33	S	101	
34	T	89	
35	U	82	
36	V	84	
37	W	92	
38	X	118	
39	Y	142	
40	Z	121	
41	a	2904	
42	b	85	
43	c	78	
44	d	120	
45	e	63	
46	f	59	
47	g	70	
48	h	273	
49	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 280205 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.

Mol	Chain	Residues	Atoms						AltConf	Trace
6	5	31	Total	C	N	O	P		0	0
			636	303	117	185	31			

- Molecule 7 is a DNA chain called T DNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	6	36	Total	C	N	O	P	0	0
			706	337	119	215	35		

- Molecule 8 is a RNA chain called mRNA with 24 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	

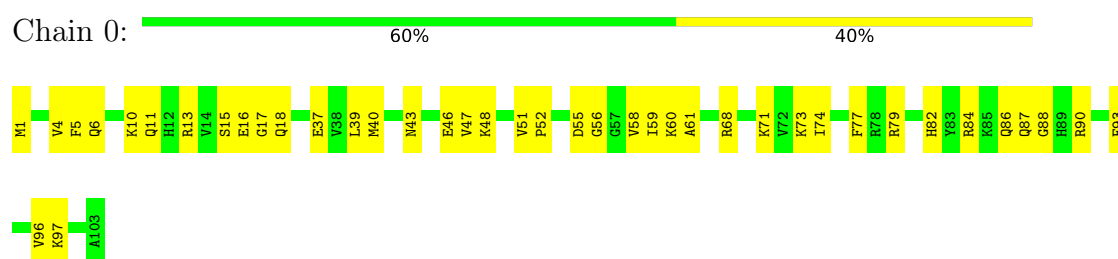
- Molecule 68 is ZINC ION (CCD ID: ZN) (formula: Zn).

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

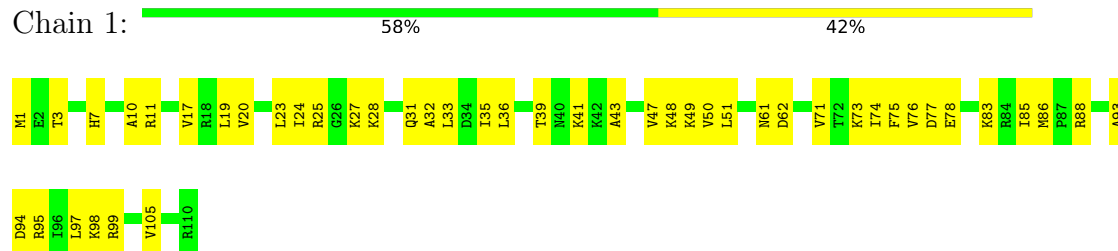
3 Residue-property plots

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.

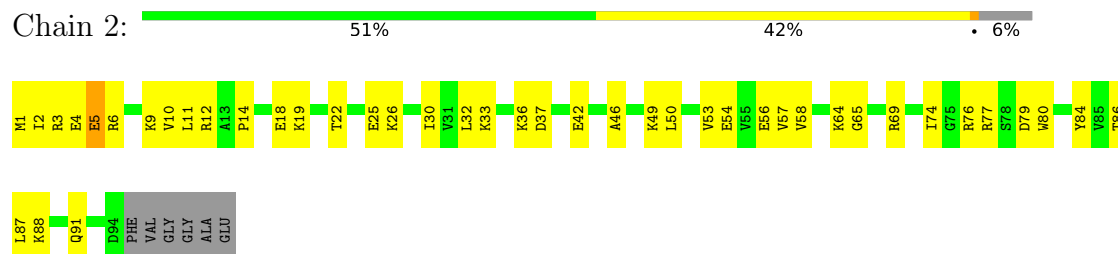
• Molecule 1: Ribosomal protein L21



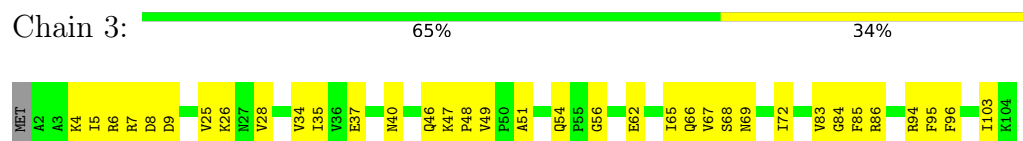
• Molecule 2: 50S ribosomal protein L22



• Molecule 3: 50S ribosomal protein L23

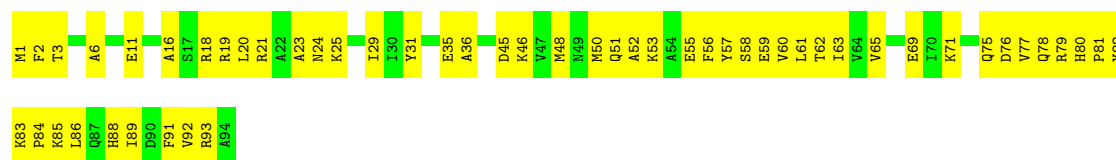


• Molecule 4: 50S ribosomal protein L24



- Molecule 5: 50S ribosomal protein L25

Chain 4: 



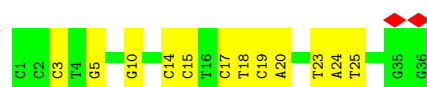
- Molecule 6: NT DNA

Chain 5: 



- Molecule 7: T DNA

Chain 6: 

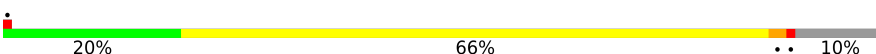


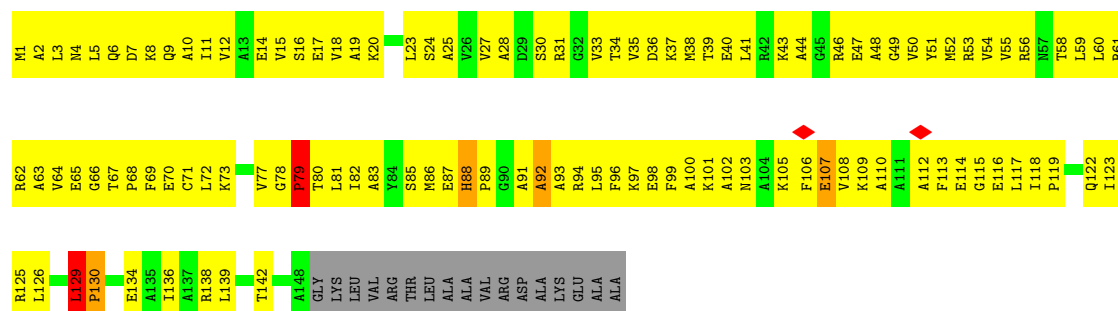
- Molecule 8: mRNA with 24 nt long spacer

Chain 7: 



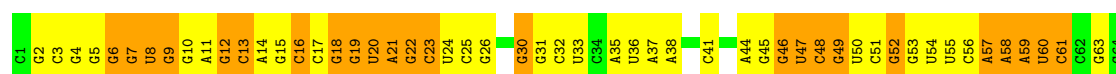
- Molecule 9: 50S ribosomal protein L10

Chain 9: 



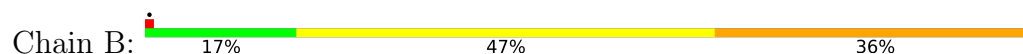
- Molecule 10: E-site and P-site fMet-tRNA

Chain A: 

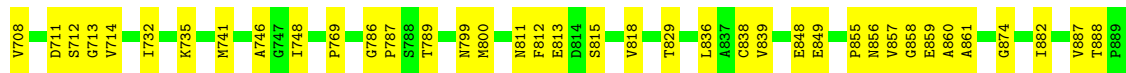
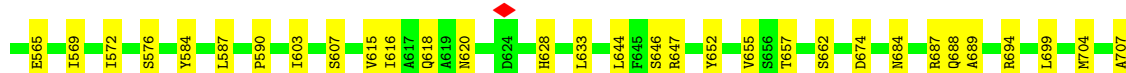
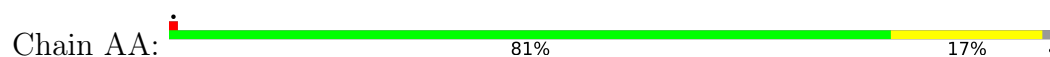




• Molecule 10: E-site and P-site fMet-tRNA



• Molecule 11: DNA-directed RNA polymerase subunit beta



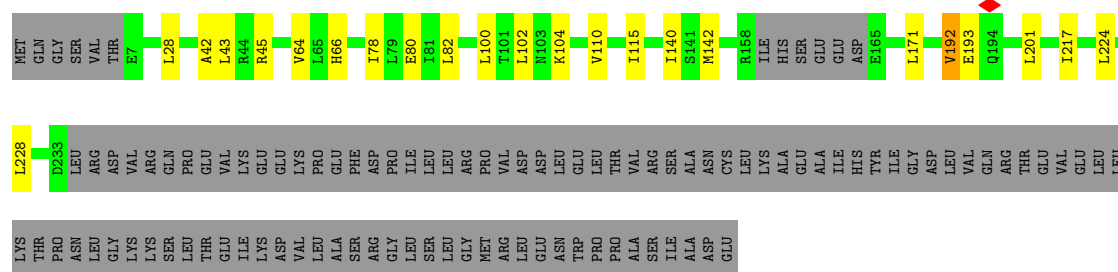
• Molecule 12: Transcription antitermination protein RfaH





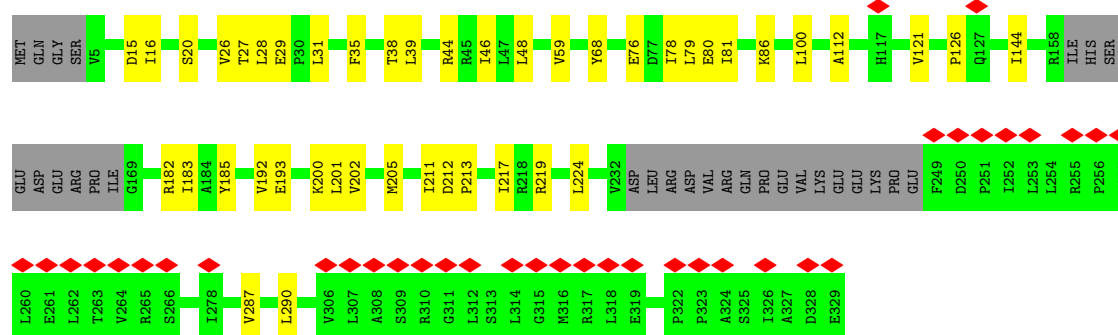
• Molecule 13: DNA-directed RNA polymerase subunit alpha

Chain AC: 60% 7% 33%



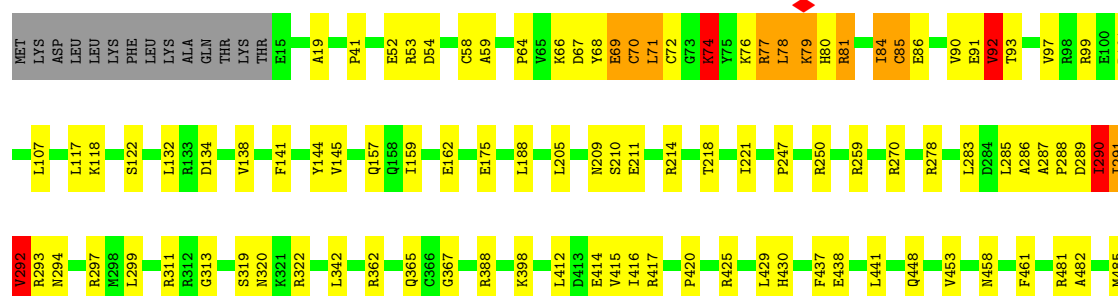
• Molecule 13: DNA-directed RNA polymerase subunit alpha

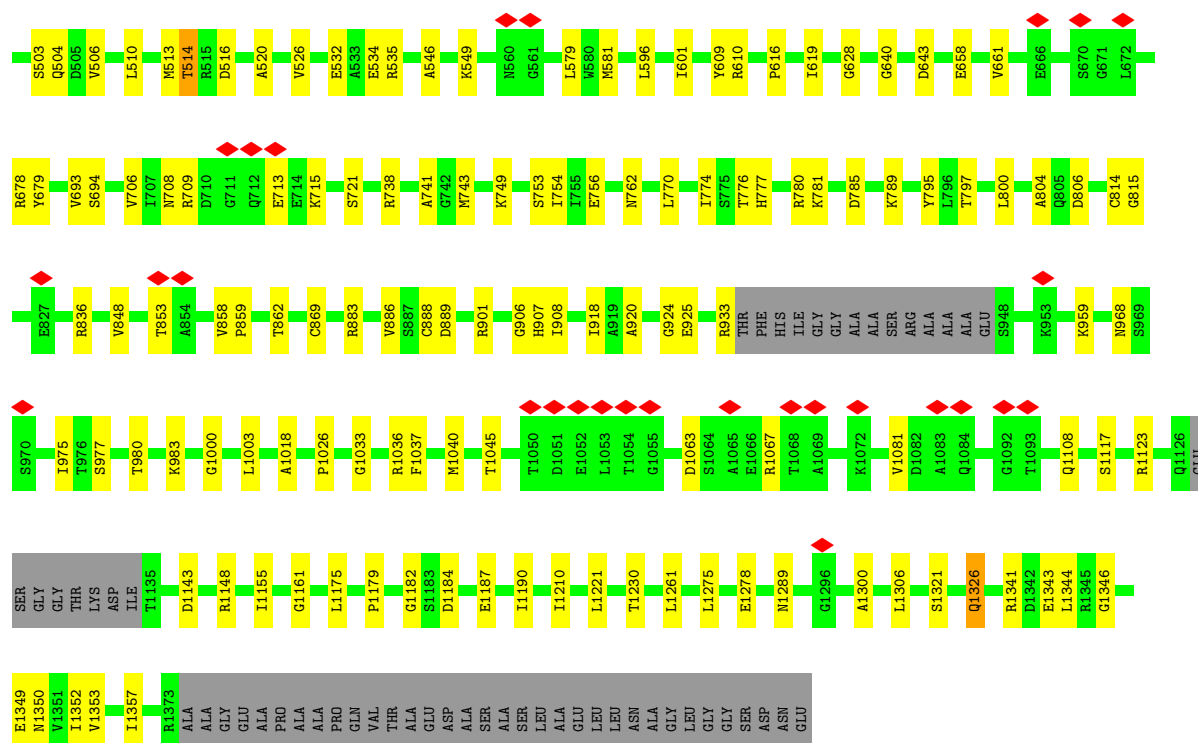
Chain AD: 12% 78% 13% 9%



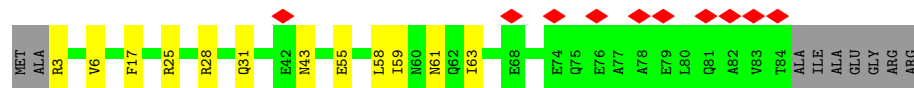
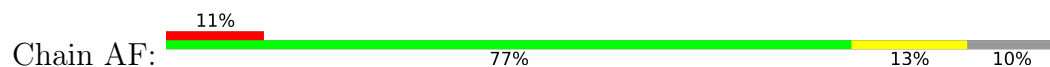
• Molecule 14: DNA-directed RNA polymerase subunit beta'

Chain AE: 78% 15% 5%

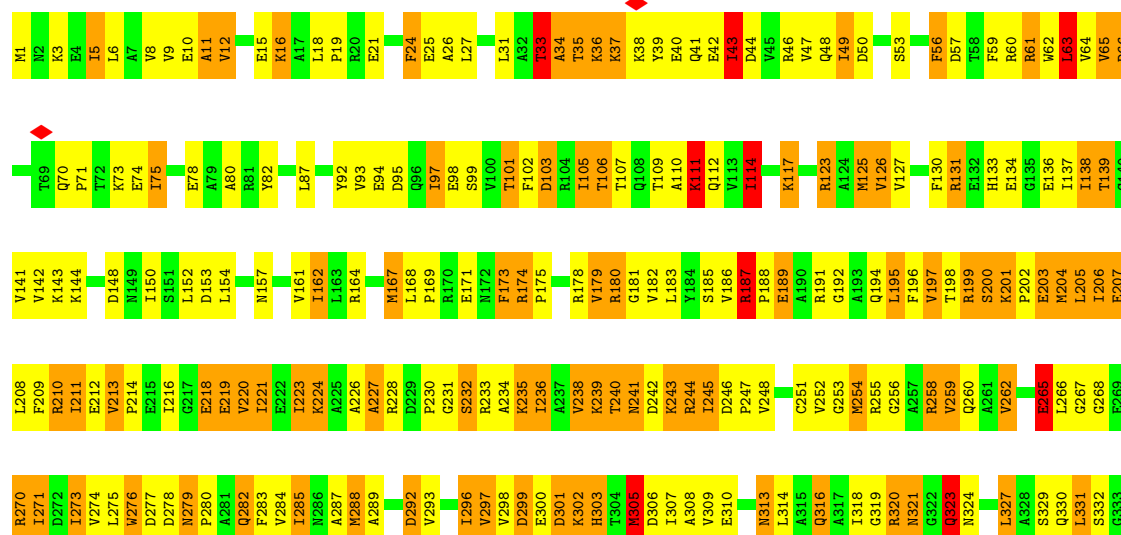


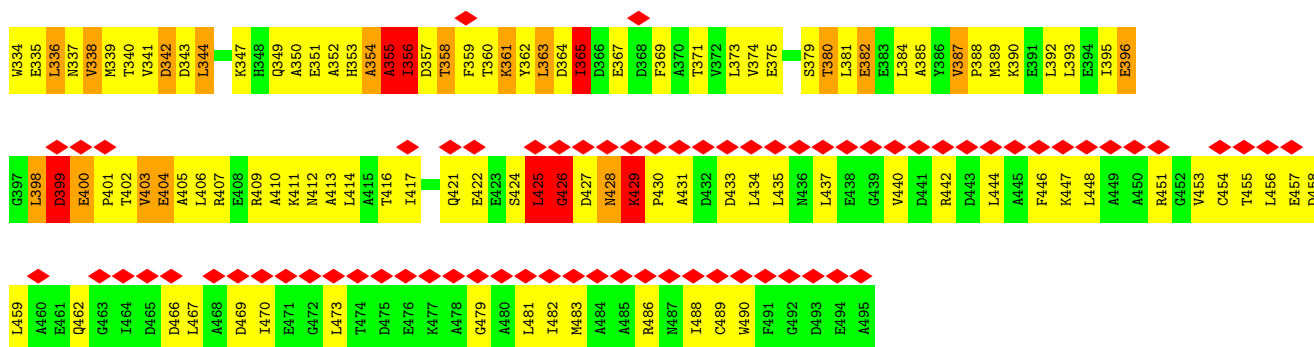


• Molecule 15: DNA-directed RNA polymerase subunit omega



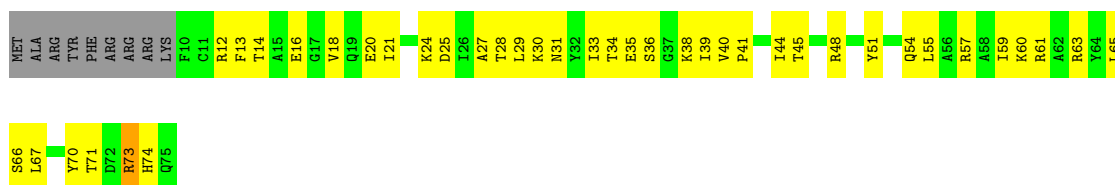
• Molecule 16: Transcription termination/antitermination protein NusA





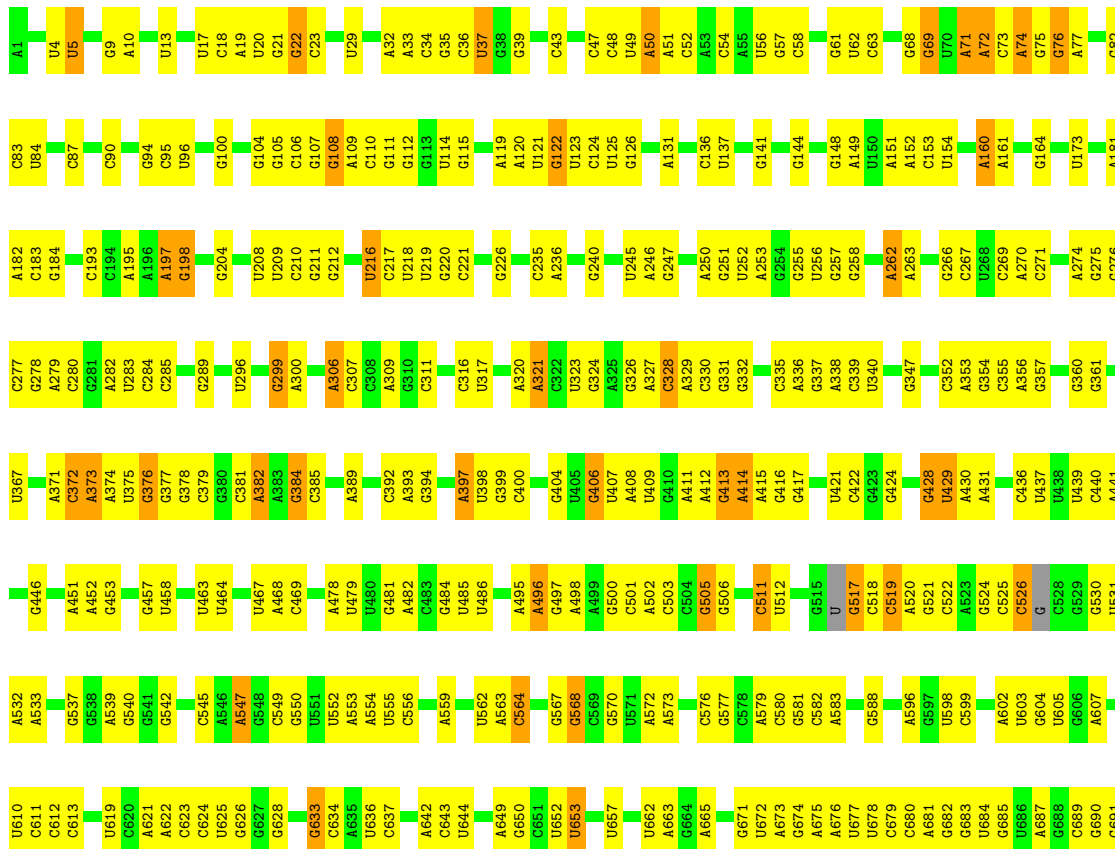
• Molecule 17: 30S ribosomal protein S18

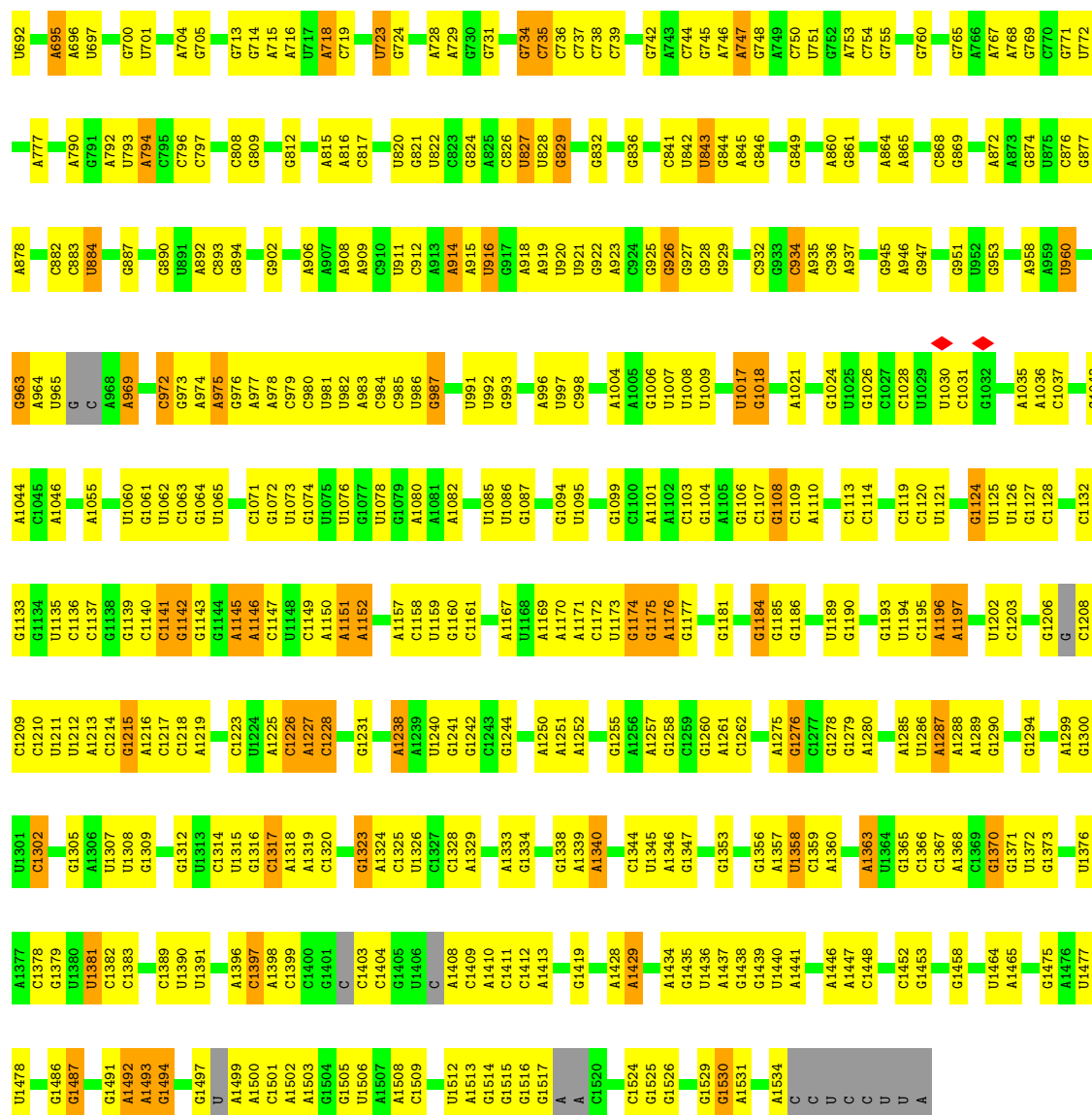
Chain C: 35% 52% 12%



• Molecule 18: 16S rRNA

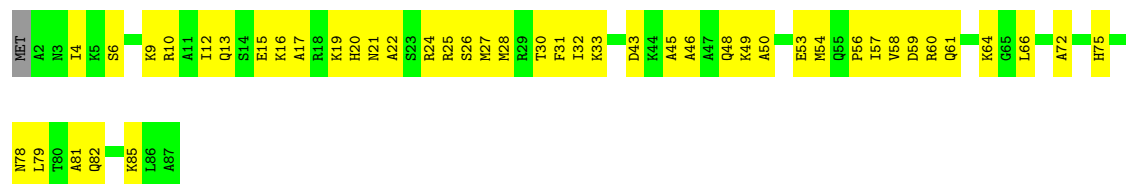
Chain D: 49% 43% 7%





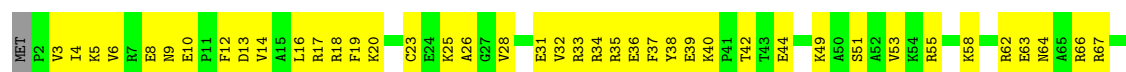
• Molecule 19: 30S ribosomal protein S20

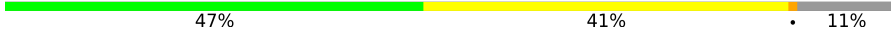
Chain E: 47% 52%

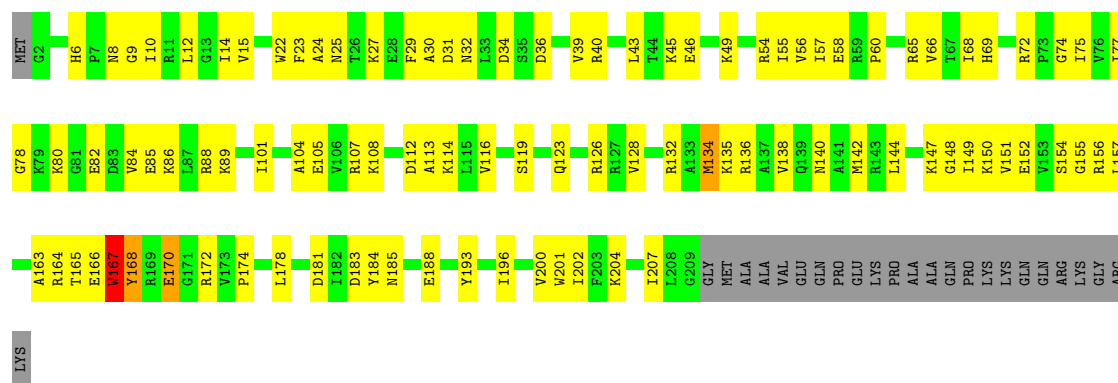


• Molecule 20: 30S ribosomal protein S21

Chain F: 41% 58%

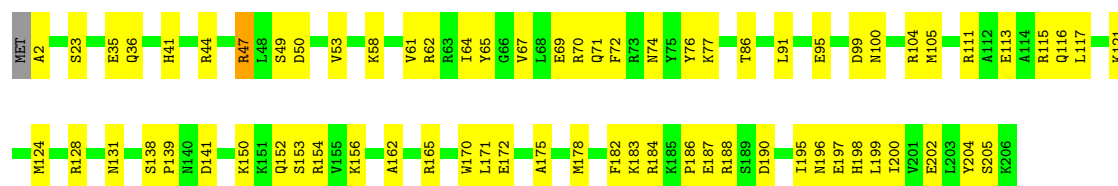


Chain I: 

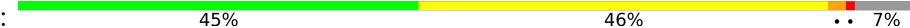


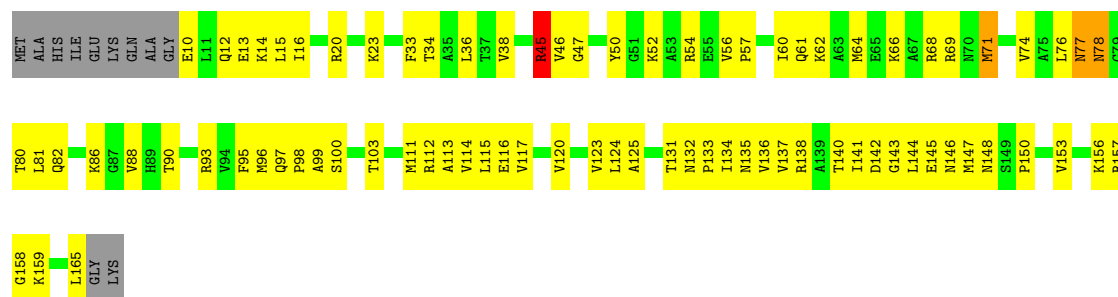
- Molecule 24: 30S ribosomal protein S4

Chain J: 

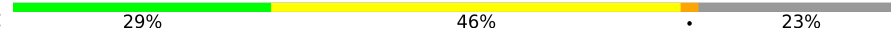


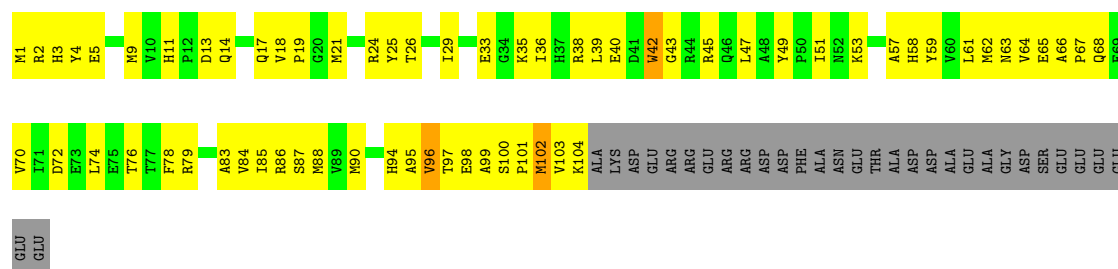
- Molecule 25: 30S ribosomal protein S5

Chain K: 



- Molecule 26: 30S ribosomal protein S6

Chain L: 

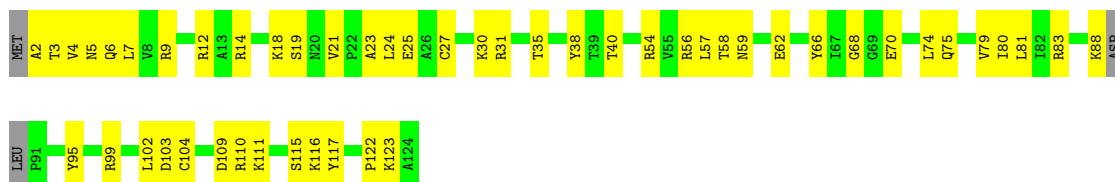


MET	ALA	LYS	ALA	P80	ILE	ARG	ALA	ARG	ALA	ARG	ARG	VAL	R13	K14	Q15		V20	A21	H22	I23		F27		I31		I34	T35	D36		M40	A41	L42		T46	A47	G48	G49	S50	G51	F52	R53	G54	S55	R56		F61	A62	A63	Q64	V65		D72		K75	E76	Y77	G78	I79	K80
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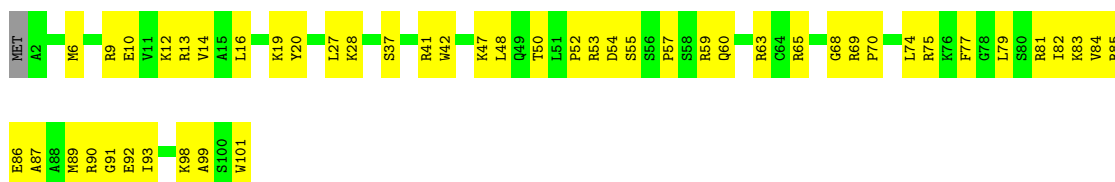
• Molecule 32: 30S ribosomal protein S12

Chain R: 57% 40% .



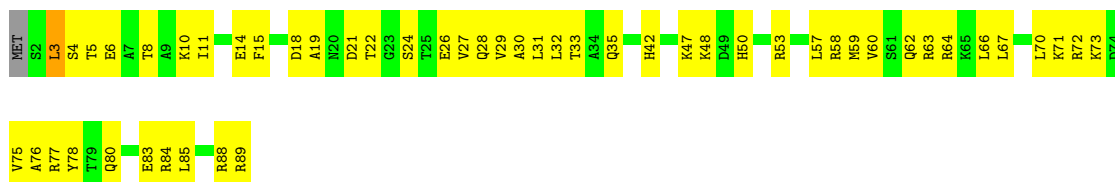
• Molecule 33: 30S ribosomal protein S14

Chain S: 51% 48% .



• Molecule 34: 30S ribosomal protein S15

Chain T: 42% 56% ..



• Molecule 35: 30S ribosomal protein S16

Chain U: 51% 49%



• Molecule 36: 30S ribosomal protein S17

Chain V: 42% 54% 5%

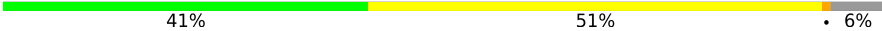


Chain W: 54% 34% 10%



U1344	C1345	G1248	G1154	C1079	A1009	U931	G856	G757	A666	A586	A504	C398	G277	C184	G88
C1346	G1250	U1249	G1160	A1080	U1012	G938	C857	G760	A667	C587	A505	U399	A278	C192	A94
A1347	C1251	U1347	G1161	U1082	C1013	G939	C858	G761	A668	U589	C509	G400	G285	U193	A95
C1348	G1252	A1253	G1162	U1083	C1014	G940	U860	A764	C669	A590	G512	U405	G291	A196	C96
C1349	A1253		U1084	A941	U861	G862	C862	C765	C671	A592	G406	G407	A197	A197	G98
C1350			A1085	A945	U1019			U773	C672	U593	U519	G407		G205	A101
C1351	G1256		A1086	C946	A1020		G869	U774	A675	U594	G520	G408	A299	U206	A102
U1352	C1257		G1087	A947	A1021		U870	G775	A676	C595	U521	G301	A300	A207	A103
A1353			A1088	C948	U1023		U871	G776	A677	A522	A522	G411	C302	C208	A104
A1354			A1089		U1024		U872			C523	C523	A412	U306	C209	A104
			G1172	G952	G1025		C873					C413	G307	C210	C105
G1360	G1266		U1173	G953	G1026		C874	G780	A685	A529	A529	C414			
G1361			U1174	G954	U1027			A781	U686	G600	C530	A415			
C1362	A1269		A1175	U	A1028		A878	A782		C531	G531		A310	A213	G110
	C1270		U1176	G956	A1029		C879	A783	A689	A532	A532	C420	A311	G215	A111
A1365	G1271		G1177	G957	A1030		C880	G784	A690	A603	G533	G424	G319	G215	A118
A1367	U1273		U1103	U958	U1033		G881	G785	C691	A602	U534		A320	A216	A119
G1368				A859				G786		U607	G535	U427	U321	A219	U120
G1369	A1276		U1181	A960	G1036		U884	C787	G700	A608	G536	A433	A322	G220	
C1370	G1277		G1182	C961	G1037		C885	A788	G701	A609	G537		C323	A221	A125
G1371	C1278		U1183	G962	U1038			A789	U702	C610	A538			A222	A126
	G1279			U963	A1039		C888		U703		G539	U451	G329	A223	A127
A1378	G1280		G1186	C964	A1040		C889	A800	G704	A613			A330	U234	C128
U1379	G1281		U1187	C965	G1041		C890		A785	A614	G543	A457	A330	U234	C128
G1380	U1282		U1188	G966	G1042		C891	G805	A706	U615	C544	G458	C335	C225	C130
G1283	G1283		A1189	U967	C1043		A892	C806	G707	A616	U545			C228	A131
G1190			G1190	C968	C1044		C893	U807	G708	G617	U546	G465	A340	U234	G132
			G1115	U894	C1045		U894	U709	G709	G620	G548	A466	C341	U234	U133
C1196	C1289		U1196	U895	A1046		U895	U811	U710	A621	G549	G467		U235	U135
C1197			G1047	A896	G1047		C897	C812	U714	G622	C550	G468	C353	U236	G134
U1198			G1120	C897	A1048		C898	C815		G623	G551	G469	A354	C236	U136
U1199	C1295		C1049	A899	C1049		A899	C815	C717	G624	U552	A470	G361	U239	G136
C1200	G1296		A975	A900	A975		A900	C815		G625	G553	A471	A362	C239	U137
U1201			C1053	A900				G818	G726	A626	U554	A472	A362	U138	U138
G1300			A1054	C901	A830			A819	A727	A627			A362	A244	U139
A1301			G1055	G904				U826	G728	G628	C560	A477	G367	G245	C140
			U1056	A984	A983			U827	G729	A632	A563	A478	A368	G247	G141
G1310			A1057	C985	A984			U828	A730	A633	C564	A479	U369	G248	A142
G1311			U1058	C986	C985			C731	A633	G634		A480	G370	G249	C143
U1312			G1059	C987	C987			U832	C731	C634		G481	A371	G250	A144
U1313			U1060	C987	C987			U833	G738	C635	U567	A482	A372	A251	C145
C1314			U1061		U1061			A833		G636	U568	A483	G373	A251	A146
C1315			A1133	A990	U1061			G834		A637	U569	C484	U373	C257	
			A1134	A911					A742	G637		C485	A374	G261	
			C1135	C912					A743	A638		C486	G375	C264	U150
			G1136	U913					U744	U639		C486	A375	A265	C151
			G1223	G993					G	C640			G379	C267	A152
C1319			U1066	C994					U	A644		G491	C383	A266	U153
C1320			A1067	C995					G748	C645	U576	A492	G386	G266	C163
U1224			G1138	C996					A749	U646	G578	G493		C267	C164
G1225			G1068	A996					A750	G647	U579	G495		A165	A165
G1226			G1069	A997					A751	G496	U580	G496		G271	A272
A1322			A1070	C997					A752		C581			A273	G178
G1323			A1071	C998					U		U581			G273	
			A1142	C999					G748		A582	G500		C274	A181
			A1143	U999					A750		G583	A501		C275	A182
G1333			C1072	A1000					A751		U584			U276	C183
G1334			A1073	C992					A752		G584				
			G1074	G923					A753		U585				
G1238			C1075	A1001					U754		G585				
			G1076						A756						
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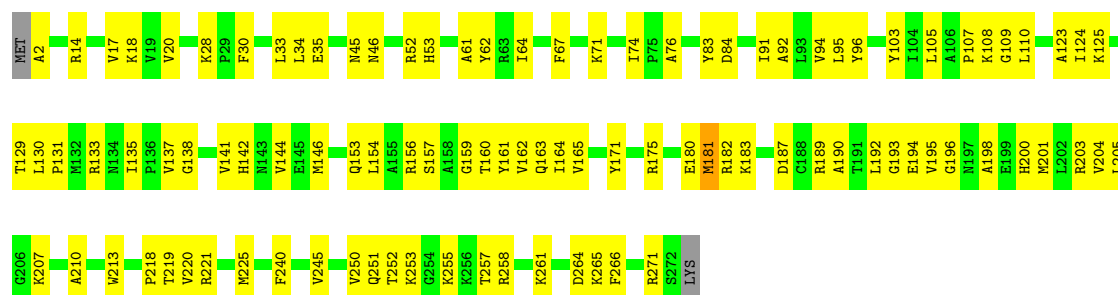
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A2468	A2469	G2470	U2473	U2474	U2475	U2476	A2478	G2481	G2482	C2483	C2484	C2485	U2489	U2490	U2491	U2492	U2493	G2494	C2497	C2499	C2502	U2505	U2506	U2507	U2511	C2512	A2513	U2514	C2515	C2516	C2517	U2518	U2519	C2520	G2525	U2526	C2529	A2530	U2531	U2532	U2533	U2534	U2535	U2536	U2537	U2538	U2539	U2542																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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A2386	U2387	G2391	U2392	U2393	C2394	C2395	C2396	U2402	U2403	A2406	A2407	U2419	U2420	U2421	C2422	U2423	A2424	A2425	A2426	C2427	G2428	U2429	U2430	U2431	A2434	A2435	U2436	U2441	C2442	C2443	C2444	G2445	U2446	U2447	U2448	U2449	A2450	A2451	G2454	U2455	U2456	U2457	U2458	U2459	U2460	A2461	U2462	U2463	U2464	U2465	U2466	C2467																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
A2468	A2469	G2470	U2473	U2474	U2475	U2476	A2478	G2481	G2482	C2483	C2484	C2485	U2489	U2490	U2491	U2492	U2493	G2494	C2497	C2499	C2502	U2505	U2506	U2507	U2511	C2512	A2513	U2514	C2515	C2516	C2517	U2518	U2519	C2520	G2525	U2526	C2529	A2530	U2531	U2532	U2533	U2534	U2535	U2536	U2537	U2538	U2539	U2542																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
A2547	U2548	G2549	U2550	U2551	U2552	U2553	U2554	U2555	U2556	U2557	U2558	A2566	U2567	U2568	U2569	U2570	U2571	A2572	C2573	G2574	C2579	U2581	U2582	U2583	U2584	U2585	U2586	A2587	U2588	U2589	A2590	C2591	C2592	A2602	G2603	U2604	U2605	U2606	U2607	U2608	U2609	C2610	C2611	C2612	U2613	U2614	U2615	U2616	U2617	U2618	U2619	C2620	U2627																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
C1617	A1618	C1619	G1622	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	U1751	U1752	U1753	U1754	U1755	U1756	U1757	U1758	U1759	U1760	U1761	U1762	U1763	U1764	U1765	U1766	U1767	U1768	U1769	U1770	U1771	U1772	U1773	U1774	U1775	U1776	U1777	U1778	U1779	U1780	U1781	U1782	U1783	U1784	U1785	U1786	U1787	U1788	U1789	U1790	U1791	U1792	U1793	U1794	U1795	U1796	U1797	U1798	U1799	U1800	U1801	U1802	U1803	U1804	U1805	U1806	U1807	U1808	U1809	U1810	U1811	U1812	U1813	U1814	U1815	U1816	U1817	U1818	U1819	U1820	U1821	U1822	U1823	U1824	U1825	U1826	U1827	U1828	U1829	U1830	U1831	U1832	U1833	U1834	U1835	U1836	U1837	U1838	U1839	U1840	U1841	U1842	U1843	U1844	U1845	U1846	U1847	U1848	U1849	U1850	U1851	U1852	U1853	U1854	U1855	U1856	U1857	U1858	U1859	U1860	U1861	U1862	U1863	U1864	U1865	U1866	U1867	U1868	U1869	U1870	U1871	U1872	U1873	U1874	U1875	U1876	U1877	U1878	U1879	U1880	U1881	U1882	U1883	U1884	U1885	U1886	U1887	U1888	U1889	U1890	U1891	U1892	U1893	U1894	U1895	U1896	U1897	U1898	U1899	U1900	U1901	U1902	U1903	U1904	U1905	U1906	U1907	U1908	U1909	U1910	U1911	U1912	U1913	U1914	U1915	U1916	U1917	U1918	U1919	U1920	U1921	U1922	U1923	U1924	U1925	U1926	U1927	U1928	U1929	U1930	U1931	U1932	U1933	U1934	U1935	U1936	U1937	U1938	U1939	U1940	U1941	U1942	U1943	U1944	U1945	U1946	U1947	U1948	U1949	U1950	U1951	U1952	U1953	U1954	U1955	U1956	U1957	U1958	U1959	U1960	U1961	U1962	U1963	U1964	U1965	U1966	U1967	U1968	U1969	U1970	U1971	U1972	U1973	U1974	U1975	U1976	U1977	U1978	U1979	U1980	U1981	U1982	U1983	U1984	U1985	U1986	U1987	U1988	U1989	U1990	U1991	U1992	U1993	U1994	U1995	U1996	U1997	U1998	U1999	U2000	U2001	U2002	U2003	U2004	U2005	U2006	U2007	U2008	U2009	U2010	U2011	U2012	U2013	U2014	U2015	U2016	U2017	U2018	U2019	U2020	U2021	U2022	U2023	U2024	U2025	U2026	U2027	U2028	U2029	U2030	U2031	U2032	U2033	U2034	U2035	U2036	U2037	U2038	U2039	U2040	U2041	U2042	U2043	U2044	U2045	U2046	U2047	U2048	U2049	U2050	U2051	U2052	U2053	U2054	U2055	U2056	U2057	U2058	U2059	U2060	U2061	U2062	U2063	U2064	U2065	U2066	U2067	U2068	U2069	U2070	U2071	U2072	U2073	U2074	U2075	U2076	U2077	U2078	U2079	U2080	U2081	U2082	U2083	U2084	U2085	U2086	U2087	U2088	U2089	U2090	U2091	U2092	U2093	U2094	U2095	U2096	U2097	U2098	U2099	U2100	U2101	U2102	U2103	U2104	U2105	U2106	U2107	U2108	U2109	U2110	U2111	U2112	U2113	U2114	U2115	U2116	U2117	U2118	U2119	U2120	U2121	U2122	U2123	U2124	U2125	U2126	U2127	U2128	U2129	U2130	U2131	U2132	U2133	U2134	U2135	U2136	U2137	U2138	U2139	U2140	U2141	U2142	U2143	U2144	U2145	U2146	U2147	U2148	U2149	U2150	U2151	U2152	U2153	U2154	U2155	U2156	U2157	U2158	U2159	U2160	U2161	U2162	U2163	U2164	U2165	U2166	U2167	U2168	U2169	U2170	U2171	U2172	U2173	U2174	U2175	U2176	U2177	U2178	U2179	U2180	U2181	U2182	U2183	U2184	U2185	U2186	U2187	U2188	U2189	U2190	U2191	U2192	U2193	U2194	U2195	U2196	U2197	U2198	U2199	U2200	U2201	U2202	U2203	U2204	U2205	U2206	U2207	U2208	U2209	U2210	U2211	U2212	U2213	U2214	U2215	U2216	U2217	U2218	U2219	U2220	U2221	U2222	U2223	U2224	U2225	U2226	U2227	U2228	U2229	U2230	U2231	U2232	U2233	U2234	U2235	U2236	U2237	U2238	U2239	U2240	U2241	U2242	U2243	U2244	U2245	U2246	U2247	U2248	U2249	U2250	U2251	U2252	U2253	U2254	U2255	U2256	U2257	U2258	U2259	U2260	U2261	U2262	U2263	U2264	U2265	U2266	U2267	U2268	U2269	U2270	U2271	U2272	U2273	U2274	U2275	U2276	U2277	U2278	U2279	U2280	U2281	U2282	U2283	U2284	U2285	U2286	U2287	U2288	U2289	U2290	U2291	U2292	U2293	U2294	U2295	U2296	U2297	U2298	U2299	U2300	U2301	U2302	U2303	U2304	U2305	U2306	U2307	U2308	U2309	U2310	U2311	U2312	U2313	U2314	U2315	U2316	U2317	U2318	U2319	U2320	U2321	U2322	U2323	U2324	U2325	U2326	U2327	U2328	U2329	U2330	U2331	U2332	U2333	U2334	U2335	U2336	U2337	U2338	U2339	U2340	U2341	U2342	U2343	U2344	U2345	U2346	U2347	U2348	U2349	U2350	U2351	U2352	U2353	U2354	U2355	U2356	U2357	U2358	U2359	U2360	U2361	U2362	U2363	U2364	U2365	U2366	U2367	U2368	U2369	U2370	U2371	U2372	U2373	U2374	U2375	U2376	U2377	U2378	U2379	U2380	U2381	U2382	U2383	U2384	U2385	U2386	U2387	U2388	U2389	U2390	U2391	U2392	U2393	U2394	U2395	U2396	U2397	U2398	U2399	U2400	U2401	U2402	U2403	U2404	U2405	U2406	U2407	U2408	U2409	U2410	U2411	U2412	U2413	U2414	U2415	U2416	U2417	U2418	U2419	U2420	U2421	U2422	U2423	U2424	U2425	U2426	U2427	U2428	U2429	U2430	U2431	U2432	U2433	U2434	U2435	U2436	U2437	U2438	U2439	U2440	U2441	U2442	U2443	U2444	U2445	U2446	U2447	U2448	U2449	U2450	U2451	U2452	U2453	U2454	U2455	U2456	U2457	U2458	U2459	U2460	U2461	U2462	U2463	U2464	U2465	U2466	U2467	U2468	U2469	U2470	U2471	U2472	U2473	U2474	U2475	U2476	U2477	U2478	U2479	U2480	U2481	U2482	U2483	U2484	U2485	U2486	U2487	U2488	U2489	U2490	U2491	U2492	U2493	U2494	U2495	U2496	U2497	U2498	U2499	U2500	U2501	U2502	U2503	U2504	U2505	U2506	U2507	U2508	U2509	U2510	U2511	U2512	U2513	U2514	U2515	U2516	U2517	U2518	U2519	U2520	U2521	U2522	U2523	U2524	U2525	U2526	U2527	U2528	U2529	U2530	U2531	U2532	U2533	U2534	U2535	U2536	U2537	U2538	U2539	U2540	U2541	U2542	U2543	U2544	U2545	U2546	U2547	U2548	U2549	U2550	U2551	U2552	U2553	U2554	U2555	U2556

Chain g: 



• Molecule 48: 50S ribosomal protein L2

Chain h: 



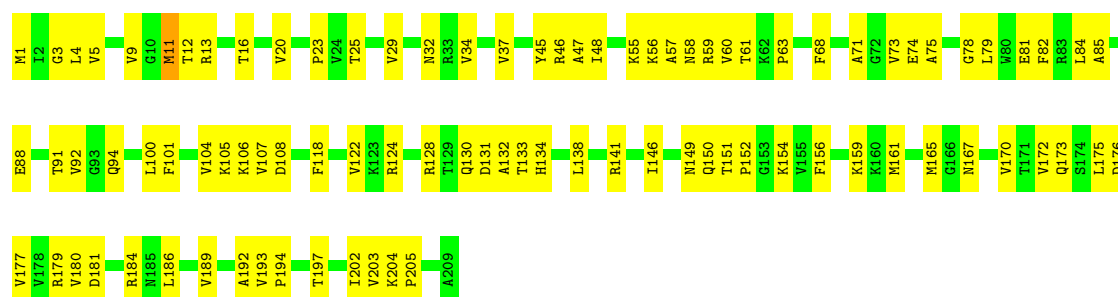
• Molecule 49: 50S ribosomal protein L32

Chain i: 



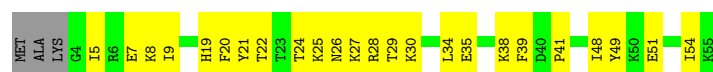
• Molecule 50: 50S ribosomal protein L3

Chain j: 



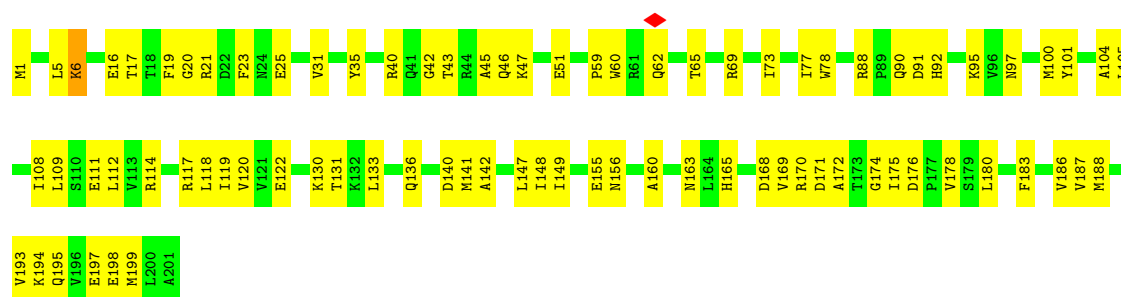
• Molecule 51: 50S ribosomal protein L33

Chain k: 



• Molecule 52: 50S ribosomal protein L4

Chain l: 



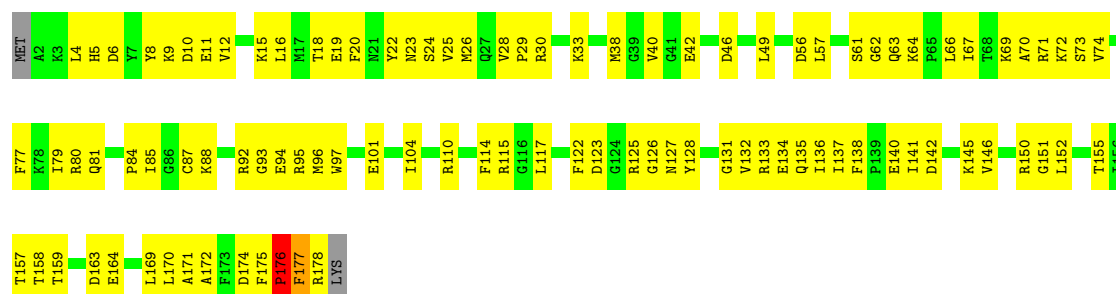
- Molecule 53: 50S ribosomal protein L34

Chain m: 57% 43%



- Molecule 54: 50S ribosomal protein L5

Chain n: 44% 54% ...



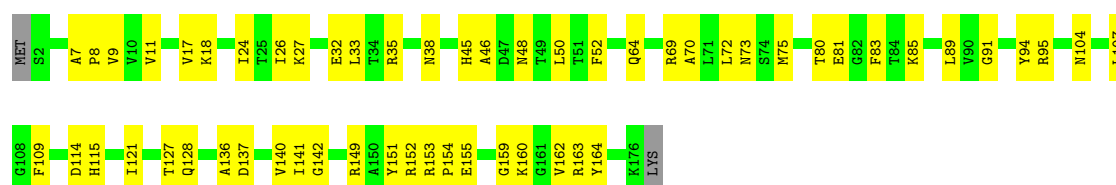
- Molecule 55: 50S ribosomal protein L35

Chain o: 58% 35% 5% •



- Molecule 56: 50S ribosomal protein L6

Chain p: 67% 32% •

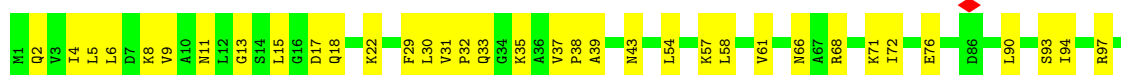


- Molecule 57: 50S ribosomal protein L36

Chain q: 61% 39%



- Molecule 58: 50S ribosomal protein L9



- Molecule 59: 50S ribosomal protein L13



- Molecule 60: 50S ribosomal protein L14

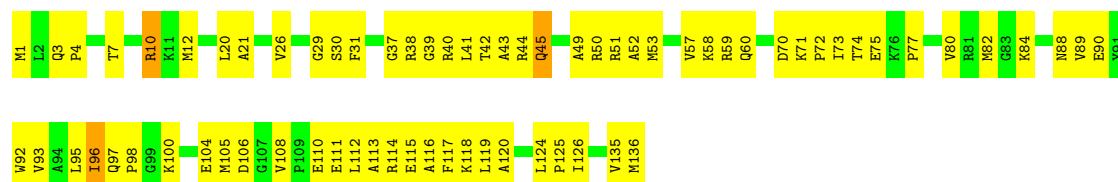


- Molecule 61: 50S ribosomal protein L15

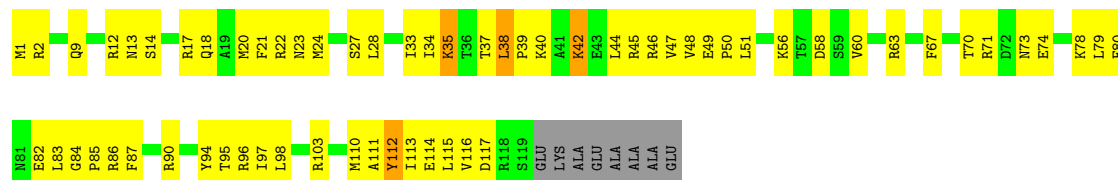


- Molecule 62: 50S ribosomal protein L16

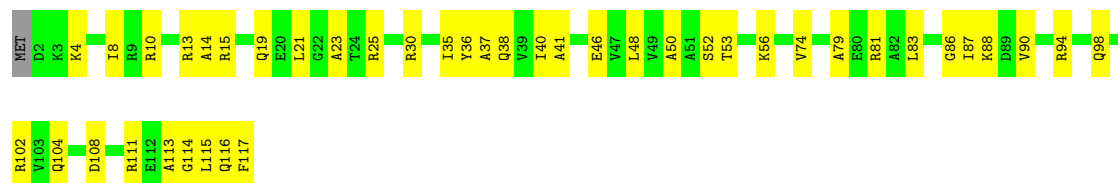




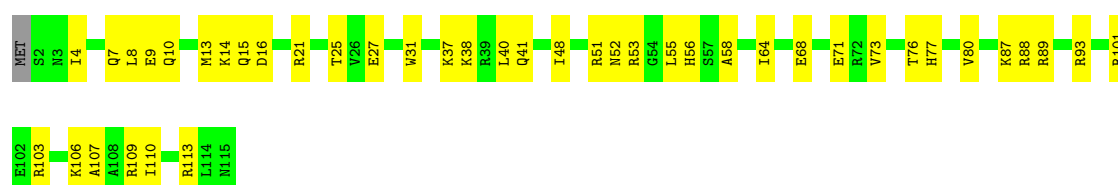
• Molecule 63: 50S ribosomal protein L17



• 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	19976	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	0.030	Depositor
Minimum map value	-0.008	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.002	Depositor
Recommended contour level	0.0019	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	0.58	0/712	0.80	0/1094
7	6	0.57	0/786	0.80	0/1206
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	0.63	2/14232 (0.0%)
12	AB	0.98	0/1317	1.05	0/1786
13	AC	0.38	0/1718	0.62	0/2328
13	AD	0.30	0/2096	0.60	0/2854
14	AE	0.39	0/10561	0.64	5/14258 (0.0%)
15	AF	0.30	0/652	0.61	0/879
16	AG	0.94	5/3897 (0.1%)	1.26	28/5273 (0.5%)
17	C	0.68	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	0.38	0/1746	0.81	0/2382
23	I	0.57	1/1663 (0.1%)	0.68	5/2241 (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	0.66	3/1034 (0.3%)	0.79	3/1375 (0.2%)
30	P	0.50	0/800	0.69	0/1082

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
31	Q	0.73	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	0.12	0/227	0.40	0/304
41	a	0.30	0/69247	0.43	10/107985 (0.0%)
42	b	0.42	0/589	0.56	0/779
43	c	0.51	0/635	0.61	0/848
44	d	0.25	0/2872	0.37	0/4478
45	e	0.69	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%)	0.59	1/2852 (0.0%)
49	i	0.41	0/450	0.55	0/599
50	j	0.51	0/1586	0.57	1/2134 (0.0%)
51	k	0.46	0/433	0.62	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%)	0.73	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	2/964 (0.2%)	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	38/194903 (0.0%)	0.55	110/286688 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
9	9	0	3
13	AC	0	1
13	AD	0	1
14	AE	0	4
16	AG	0	3
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	29

All (38) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
16	AG	429	LYS	C-N	13.79	1.50	1.33
63	w	35	LYS	CE-NZ	-12.79	1.10	1.49
29	O	80	ARG	CD-NE	-10.53	1.31	1.46
63	w	42	LYS	CD-CE	-9.37	1.24	1.52
25	K	45	ARG	CG-CD	7.74	1.75	1.52
66	z	74	ILE	CG1-CD1	7.60	1.81	1.51
8	7	40	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	-7.30	1.28	1.52
37	W	66	MET	CG-SD	-7.18	1.62	1.80
26	L	42	TRP	CB-CG	-7.16	1.28	1.50
59	s	74	TYR	CZ-OH	-7.13	1.23	1.38
45	e	46	VAL	CB-CG1	-7.12	1.29	1.52
8	7	2	U	C1'-N1	7.07	1.59	1.48
16	AG	246	ASP	C-N	7.03	1.50	1.33
3	2	5	GLU	CG-CD	-6.97	1.34	1.52
31	Q	106	ARG	CD-NE	-6.41	1.37	1.46
29	O	80	ARG	CZ-NH2	6.24	1.41	1.33
21	G	158	PRO	CA-C	-6.24	1.44	1.52
16	AG	355	ALA	N-CA	6.20	1.54	1.46
21	G	158	PRO	CG-CD	6.03	1.71	1.50
39	Y	5	GLN	CB-CG	-6.01	1.34	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	h	181	MET	CG-SD	-6.00	1.65	1.80
66	z	74	ILE	CB-CG2	-6.00	1.32	1.52
16	AG	355	ALA	CA-C	5.97	1.60	1.52
59	s	92	MET	CG-SD	-5.97	1.65	1.80
25	K	45	ARG	CD-NE	5.91	1.54	1.46
21	G	157	LEU	C-O	-5.80	1.15	1.24
52	l	6	LYS	CE-NZ	-5.80	1.31	1.49
34	T	3	LEU	CG-CD2	-5.62	1.34	1.52
39	Y	5	GLN	CA-C	-5.53	1.45	1.52
47	g	62	LYS	CE-NZ	-5.52	1.32	1.49
16	AG	99	SER	N-CA	5.37	1.49	1.46
45	e	25	GLN	CB-CG	-5.34	1.36	1.52
23	I	134	MET	CB-CG	-5.29	1.36	1.52
31	Q	119	ASN	CG-ND2	5.17	1.44	1.33
21	G	19	GLN	CD-NE2	-5.12	1.22	1.33
62	v	45	GLN	CB-CG	-5.07	1.37	1.52

All (110) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
16	AG	246	ASP	CA-C-N	14.54	138.02	119.84
16	AG	246	ASP	C-N-CA	14.54	138.02	119.84
16	AG	354	ALA	O-C-N	-13.68	107.32	122.09
16	AG	429	LYS	CA-C-N	11.45	132.17	119.92
16	AG	429	LYS	C-N-CA	11.45	132.17	119.92
25	K	71	MET	CG-SD-CE	-11.32	76.00	100.90
21	G	158	PRO	N-CD-CG	-10.98	86.72	103.20
16	AG	24	PHE	CA-CB-CG	-10.52	103.28	113.80
26	L	102	MET	CA-CB-CG	-9.61	94.89	114.10
59	s	92	MET	CG-SD-CE	-9.36	80.30	100.90
21	G	113	ARG	NE-CZ-NH2	9.27	127.54	119.20
8	7	1	A	O3'-P-O5'	-8.65	91.03	104.00
11	AA	478	ARG	CA-C-N	-8.60	106.02	122.53
11	AA	478	ARG	C-N-CA	-8.60	106.02	122.53
25	K	78	ASN	N-CA-CB	-8.50	96.12	110.49
16	AG	35	THR	CA-CB-OG1	-8.30	97.16	109.60
16	AG	292	ASP	O-C-N	-8.27	107.39	122.44
8	7	4	U	C2'-C3'-O3'	8.23	121.84	109.50
60	t	18	ARG	NE-CZ-NH2	8.00	126.40	119.20
55	o	30	ARG	NE-CZ-NH1	-7.61	113.89	121.50
17	C	73	ARG	NE-CZ-NH2	7.57	126.01	119.20
16	AG	33	THR	CA-C-N	7.49	135.84	121.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
16	AG	33	THR	C-N-CA	7.49	135.84	121.54
29	O	80	ARG	CG-CD-NE	7.37	128.22	112.00
63	w	112	TYR	CZ-CE2-CD2	-7.34	106.38	119.60
16	AG	426	GLY	O-C-N	-7.24	113.29	122.70
23	I	134	MET	CB-CG-SD	-7.19	91.14	112.70
62	v	96	ILE	CA-C-N	7.06	132.32	121.03
62	v	96	ILE	C-N-CA	7.06	132.32	121.03
21	G	158	PRO	CA-N-CD	-7.03	102.16	112.00
60	t	18	ARG	NE-CZ-NH1	-7.01	114.49	121.50
21	G	19	GLN	CA-CB-CG	6.97	128.04	114.10
41	a	2334	U	OP2-P-O3'	-6.93	87.20	108.00
29	O	80	ARG	CB-CG-CD	-6.92	95.37	111.30
18	D	37	U	N3-C4-O4	-6.62	99.54	119.40
63	w	112	TYR	OH-CZ-CE2	-6.56	100.22	119.90
18	D	718	A	P-O5'-C5'	-6.56	111.07	120.90
31	Q	110	ILE	N-CA-C	-6.54	98.96	108.11
18	D	827	U	N3-C4-O4	-6.41	100.16	119.40
16	AG	355	ALA	CB-CA-C	6.40	123.16	110.42
41	a	1019	U	N3-C4-O4	-6.36	100.32	119.40
18	D	1358	U	N3-C4-O4	-6.33	100.39	119.40
37	W	40	ILE	CA-CB-CG1	-6.32	99.66	110.40
59	s	92	MET	CB-CG-SD	-6.30	93.80	112.70
16	AG	403	VAL	N-CA-C	-6.20	104.24	111.00
41	a	1019	U	C5-C4-O4	6.13	144.29	125.90
16	AG	111	LYS	N-CA-C	-6.08	105.58	112.87
16	AG	404	GLU	N-CA-C	-6.04	105.01	112.38
16	AG	71	PRO	N-CA-C	6.03	122.55	113.81
16	AG	33	THR	CA-CB-CG2	6.01	120.73	110.50
29	O	103	PHE	CD1-CE1-CZ	-6.01	109.19	120.00
41	a	1082	U	N3-C4-O4	-5.95	101.55	119.40
41	a	2613	U	N3-C4-O4	-5.94	101.58	119.40
41	a	1141	U	C5-C4-O4	5.89	143.58	125.90
21	G	157	LEU	C-N-CD	-5.88	100.91	125.00
54	n	176	PRO	N-CA-C	5.87	121.24	114.20
18	D	1358	U	C5-C4-O4	5.86	143.49	125.90
18	D	37	U	C5-C4-O4	5.86	143.49	125.90
8	7	28	G	C2'-C3'-O3'	5.81	122.42	113.70
23	I	168	TYR	N-CA-CB	5.79	120.15	110.59
38	X	81	MET	CG-SD-CE	-5.79	88.17	100.90
27	M	55	GLY	CA-C-N	5.76	132.54	121.54
27	M	55	GLY	C-N-CA	5.76	132.54	121.54
18	D	884	U	N3-C4-O4	-5.76	102.12	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
16	AG	66	ASP	N-CA-C	-5.75	104.00	111.71
21	G	154	MET	CA-CB-CG	-5.75	102.59	114.10
18	D	827	U	C5-C4-O4	5.74	143.12	125.90
14	AE	853	THR	CA-C-N	5.70	130.94	122.74
14	AE	853	THR	C-N-CA	5.70	130.94	122.74
16	AG	220	VAL	N-CA-C	-5.68	108.31	113.71
23	I	134	MET	CG-SD-CE	-5.67	88.43	100.90
16	AG	101	THR	CA-CB-OG1	5.66	118.09	109.60
9	9	130	PRO	CA-N-CD	-5.66	104.08	112.00
25	K	45	ARG	CB-CG-CD	-5.63	98.34	111.30
25	K	45	ARG	CA-C-N	5.63	130.33	122.23
25	K	45	ARG	C-N-CA	5.63	130.33	122.23
21	G	154	MET	CG-SD-CE	-5.62	88.54	100.90
60	t	18	ARG	CG-CD-NE	-5.55	99.79	112.00
41	a	1141	U	N3-C4-O4	-5.54	102.79	119.40
50	j	11	MET	CB-CG-SD	-5.50	96.20	112.70
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
16	AG	74	GLU	CB-CA-C	-5.44	101.77	110.14
14	AE	1184	ASP	N-CA-C	5.43	121.81	109.81
62	v	10	ARG	NE-CZ-NH1	-5.42	116.08	121.50
31	Q	106	ARG	NE-CZ-NH1	-5.42	116.08	121.50
9	9	129	LEU	C-N-CD	-5.40	102.86	125.00
16	AG	355	ALA	N-CA-CB	5.39	119.61	110.49
63	w	38	LEU	N-CA-C	-5.33	105.21	112.35
39	Y	5	GLN	CB-CA-C	-5.26	99.95	110.42
8	7	10	U	C2'-C3'-O3'	5.25	117.38	109.50
16	AG	114	ILE	N-CA-C	-5.25	105.38	110.42
41	a	2613	U	C5-C4-O4	5.24	141.62	125.90
56	p	46	ALA	CA-C-N	5.24	131.55	121.54
56	p	46	ALA	C-N-CA	5.24	131.55	121.54
25	K	45	ARG	O-C-N	-5.22	116.85	123.01
21	G	158	PRO	N-CA-CB	-5.18	97.94	103.38
39	Y	5	GLN	CA-CB-CG	5.18	124.45	114.10
23	I	170	GLU	CB-CG-CD	5.16	121.38	112.60
41	a	2602	A	C4'-C3'-O3'	5.15	117.13	109.40
45	e	25	GLN	CG-CD-NE2	-5.15	108.68	116.40
14	AE	709	ARG	CA-C-N	5.09	135.46	126.45
14	AE	709	ARG	C-N-CA	5.09	135.46	126.45
41	a	2334	U	C2'-C3'-O3'	-5.09	101.87	109.50
16	AG	65	VAL	CA-C-N	5.08	131.66	121.81
16	AG	65	VAL	C-N-CA	5.08	131.66	121.81

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	D	884	U	C5-C4-O4	5.06	141.07	125.90
16	AG	356	ILE	N-CA-C	-5.05	107.81	111.90
48	h	181	MET	CG-SD-CE	-5.01	89.88	100.90
23	I	167	TRP	CA-C-O	-5.00	115.75	121.40

There are no chirality outliers.

All (29) 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
13	AC	192	VAL	Peptide
13	AD	20	SER	Peptide
14	AE	1326	GLN	Peptide
14	AE	1344	LEU	Peptide
14	AE	313	GLY	Peptide
14	AE	416	ILE	Peptide
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	52	0
2	1	857	922	922	69	0
3	2	746	811	811	60	0
4	3	788	844	844	46	0
5	4	753	780	780	86	0
6	5	636	0	349	50	0
7	6	706	0	395	30	0
8	7	772	0	384	120	0
9	9	1117	0	1155	258	0
10	A	1620	826	827	107	0
10	B	1620	814	827	111	0
11	AA	10381	0	10390	299	0
12	AB	1286	0	1303	352	0
13	AC	1698	0	1718	13	0
13	AD	2078	0	1891	35	0
14	AE	10404	0	10626	230	0
15	AF	650	0	658	10	0
16	AG	3852	0	3828	846	0
17	C	544	559	560	106	0
18	D	32703	16423	16453	723	0
19	E	669	719	719	81	0
20	F	589	629	629	58	0
21	G	1760	1785	1787	192	0
22	H	1730	1454	1455	161	0
23	I	1636	1710	1710	153	0
24	J	1643	1707	1707	87	0
25	K	1152	1196	1196	130	0
26	L	848	846	846	102	0
27	M	1181	1235	1238	123	0
28	N	979	1031	1031	93	0
29	O	1022	1070	1070	90	0
30	P	790	831	831	152	0
31	Q	877	887	887	95	0
32	R	939	1001	1001	90	0
33	S	805	844	844	75	0
34	T	714	734	734	91	0
35	U	649	666	666	61	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
36	V	648	691	691	67	0
37	W	663	688	688	47	0
38	X	900	964	965	107	0
39	Y	1032	0	1088	212	0
40	Z	227	0	237	30	0
41	a	61841	31077	31120	1309	0
42	b	582	599	599	47	0
43	c	625	652	652	34	0
44	d	2569	1301	1301	43	0
45	e	501	531	531	44	0
46	f	448	488	488	38	0
47	g	522	520	520	66	0
48	h	2082	2154	2154	139	0
49	i	444	459	458	50	0
50	j	1565	1617	1616	121	0
51	k	426	464	464	42	0
52	l	1552	1619	1619	125	0
53	m	377	418	418	29	0
54	n	1410	1443	1444	156	0
55	o	504	572	572	52	0
56	p	1313	1358	1358	74	0
57	q	302	343	343	25	0
58	r	1111	1148	1148	53	0
59	s	1129	1162	1162	123	0
60	t	946	1023	1023	101	0
61	u	1053	1129	1129	78	0
62	v	1074	1157	1157	121	0
63	w	951	994	994	102	0
64	x	892	923	923	48	0
65	y	917	962	962	53	0
66	z	947	1020	1019	79	0
67	AE	1	0	0	0	0
68	AE	2	0	0	3	0
All	All	181566	98639	132754	7590	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 (7590) 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)
12:AB:145:LEU:CD2	30:P:88:MET:HB3	1.18	1.62
6:5:9:DA:H5'	11:AA:473:ARG:CB	1.29	1.62
25:K:45:ARG:CD	25:K:45:ARG:CG	1.75	1.61
16:AG:425:LEU:CD2	16:AG:429:LYS:HE2	1.21	1.61
12:AB:145:LEU:HD22	30:P:88:MET:CB	1.30	1.60
14:AE:79:LYS:HA	14:AE:81:ARG:CZ	1.26	1.59
11:AA:481:LEU:CD2	12:AB:23:ARG:HH21	1.10	1.57
12:AB:145:LEU:CB	30:P:88:MET:HB2	1.23	1.57
16:AG:287:ALA:CA	16:AG:331:LEU:HD12	1.18	1.57
11:AA:481:LEU:HG	12:AB:23:ARG:CZ	1.29	1.57
12:AB:145:LEU:HA	30:P:88:MET:CG	1.18	1.57
11:AA:859:GLU:CD	16:AG:38:LYS:HB2	1.22	1.55
16:AG:393:LEU:CB	16:AG:398:LEU:CD2	1.83	1.54
66:z:74:ILE:CG1	66:z:74:ILE:CD1	1.81	1.53
16:AG:168:LEU:CD2	16:AG:231:GLY:HA3	1.34	1.53
11:AA:481:LEU:CG	12:AB:23:ARG:HE	1.17	1.52
11:AA:859:GLU:CG	16:AG:38:LYS:H	1.23	1.51
16:AG:363:LEU:CD2	16:AG:410:ALA:H	1.24	1.50
6:5:9:DA:C5'	11:AA:473:ARG:HB3	1.34	1.50
11:AA:859:GLU:HG3	16:AG:38:LYS:N	1.20	1.49
16:AG:287:ALA:HA	16:AG:331:LEU:CD1	1.38	1.48
16:AG:425:LEU:CA	16:AG:429:LYS:HE3	1.40	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	1.47
11:AA:481:LEU:CG	12:AB:23:ARG:NE	1.71	1.46
12:AB:81:PHE:CE1	14:AE:141:PHE:O	1.66	1.45
12:AB:145:LEU:CA	30:P:88:MET:CG	1.90	1.44
14:AE:79:LYS:HA	14:AE:81:ARG:NH1	1.20	1.44
11:AA:481:LEU:CG	12:AB:23:ARG:NH2	1.82	1.43
16:AG:425:LEU:HD23	16:AG:429:LYS:CE	1.45	1.43
11:AA:481:LEU:HD23	12:AB:23:ARG:NH2	1.21	1.42
16:AG:393:LEU:CD2	16:AG:398:LEU:CD2	1.99	1.40
16:AG:363:LEU:CD2	16:AG:410:ALA:N	1.82	1.40
11:AA:481:LEU:CD2	12:AB:23:ARG:NH2	1.74	1.39
11:AA:857:VAL:C	16:AG:35:THR:HB	1.43	1.39
12:AB:146:ILE:N	30:P:88:MET:HG2	1.14	1.39
16:AG:168:LEU:HD22	16:AG:231:GLY:CA	1.49	1.39
16:AG:168:LEU:CD2	16:AG:231:GLY:CA	1.98	1.39
16:AG:187:ARG:HB3	16:AG:188:PRO:CD	1.44	1.38
12:AB:145:LEU:HD13	30:P:88:MET:N	1.32	1.37
12:AB:145:LEU:CG	30:P:88:MET:CB	2.03	1.36
16:AG:437:LEU:HD21	16:AG:456:LEU:CD1	1.54	1.36

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:5:9:DA:OP2	11:AA:473:ARG:CB	1.73	1.36
12:AB:145:LEU:C	30:P:88:MET:HG2	1.49	1.35
12:AB:146:ILE:H	30:P:88:MET:CG	1.39	1.35
14:AE:79:LYS:CA	14:AE:81:ARG:NH1	1.90	1.35
16:AG:385:ALA:CB	16:AG:411:LYS:HE3	1.56	1.34
16:AG:393:LEU:CA	16:AG:398:LEU:CD2	2.05	1.34
11:AA:481:LEU:CG	12:AB:23:ARG:HH21	1.34	1.33
16:AG:244:ARG:CB	25:K:69:ARG:HE	1.38	1.33
12:AB:145:LEU:CA	30:P:88:MET:CB	2.08	1.32
16:AG:387:VAL:HG12	16:AG:388:PRO:CD	1.57	1.32
14:AE:79:LYS:CA	14:AE:81:ARG:CZ	2.06	1.32
12:AB:145:LEU:CA	30:P:88:MET:HB2	1.59	1.32
16:AG:434:LEU:CD2	16:AG:456:LEU:HA	1.58	1.31
16:AG:448:LEU:HD21	16:AG:473:LEU:CD1	1.61	1.31
16:AG:434:LEU:HD22	16:AG:459:LEU:CD1	1.58	1.30
11:AA:858:GLY:HA2	16:AG:35:THR:O	1.20	1.30
12:AB:117:ILE:CD1	14:AE:53:ARG:HD3	1.60	1.30
12:AB:145:LEU:CG	30:P:88:MET:HB2	1.59	1.30
16:AG:393:LEU:CD2	16:AG:398:LEU:HD21	1.57	1.30
16:AG:393:LEU:HB3	16:AG:398:LEU:CD2	1.51	1.30
16:AG:363:LEU:HD23	16:AG:410:ALA:N	1.38	1.29
11:AA:858:GLY:CA	16:AG:35:THR:O	1.80	1.29
16:AG:393:LEU:CA	16:AG:398:LEU:HD22	1.59	1.28
11:AA:859:GLU:CG	16:AG:38:LYS:N	1.87	1.28
8:7:22:U:C5'	23:I:80:LYS:HG3	1.63	1.28
14:AE:287:ALA:CB	14:AE:292:VAL:HG13	1.61	1.28
16:AG:393:LEU:CG	16:AG:398:LEU:HD21	1.64	1.28
11:AA:855:PRO:HB3	16:AG:105:ILE:CD1	1.64	1.27
16:AG:353:HIS:O	16:AG:356:ILE:HG23	1.13	1.27
11:AA:387:ASN:CG	11:AA:394:ARG:NH1	1.92	1.27
16:AG:434:LEU:HA	16:AG:456:LEU:CD2	1.64	1.26
14:AE:288:PRO:HD2	14:AE:291:ILE:CG2	1.66	1.25
11:AA:859:GLU:OE1	16:AG:38:LYS:HB2	1.20	1.25
16:AG:387:VAL:CG1	16:AG:388:PRO:HD2	1.66	1.25
11:AA:857:VAL:O	16:AG:35:THR:HB	1.11	1.25
7:6:25:DT:OP1	11:AA:496:LYS:CA	1.80	1.25
12:AB:145:LEU:CD2	30:P:88:MET:CB	1.91	1.25
16:AG:425:LEU:HA	16:AG:429:LYS:CE	1.64	1.25
11:AA:859:GLU:CD	16:AG:38:LYS:CB	2.09	1.25
8:7:11:U:H4'	25:K:20:ARG:NH2	1.51	1.24
11:AA:857:VAL:O	16:AG:35:THR:CB	1.85	1.24

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AB:145:LEU:HD13	30:P:88:MET:CA	1.67	1.24
12:AB:146:ILE:N	30:P:88:MET:CG	1.93	1.24
16:AG:287:ALA:CA	16:AG:331:LEU:CD1	2.02	1.24
8:7:21:U:H5	23:I:80:LYS:O	1.17	1.24
16:AG:362:TYR:O	16:AG:413:ALA:HB2	1.35	1.24
11:AA:373:GLY:O	12:AB:83:ALA:HB1	1.32	1.23
12:AB:145:LEU:CB	30:P:88:MET:CB	2.15	1.23
16:AG:287:ALA:CB	16:AG:331:LEU:CD1	2.16	1.23
16:AG:355:ALA:HA	16:AG:382:GLU:OE2	1.37	1.23
16:AG:363:LEU:HD23	16:AG:409:ARG:C	1.63	1.23
16:AG:353:HIS:C	16:AG:356:ILE:HG23	1.62	1.23
16:AG:244:ARG:O	25:K:69:ARG:CD	1.88	1.22
16:AG:355:ALA:CB	16:AG:382:GLU:CD	2.10	1.22
6:5:9:DA:C5'	11:AA:473:ARG:CB	2.02	1.22
16:AG:425:LEU:CG	16:AG:429:LYS:HE2	1.69	1.22
16:AG:123:ARG:HH12	16:AG:191:ARG:CA	1.36	1.21
16:AG:219:GLU:HB3	21:G:156:GLY:CA	1.70	1.21
16:AG:433:ASP:O	16:AG:456:LEU:HD11	1.35	1.21
16:AG:123:ARG:NH1	16:AG:191:ARG:C	1.98	1.21
11:AA:859:GLU:OE1	16:AG:38:LYS:HD2	1.35	1.20
16:AG:393:LEU:HA	16:AG:398:LEU:CD2	1.69	1.19
12:AB:145:LEU:HD22	30:P:88:MET:CG	1.71	1.19
12:AB:145:LEU:HA	30:P:88:MET:CB	1.72	1.19
8:7:22:U:H5''	23:I:80:LYS:CG	1.71	1.18
16:AG:187:ARG:HB3	16:AG:188:PRO:HD2	1.21	1.18
16:AG:355:ALA:HB2	16:AG:382:GLU:OE1	1.40	1.18
16:AG:442:ARG:O	16:AG:446:PHE:CD2	1.95	1.18
11:AA:859:GLU:CG	16:AG:38:LYS:HB2	1.71	1.18
11:AA:481:LEU:CB	12:AB:23:ARG:NH2	2.07	1.18
13:AD:290:LEU:O	16:AG:82:TYR:CE2	1.97	1.17
56:p:159:GLY:O	56:p:163:ARG:NH1	1.77	1.17
6:5:9:DA:C5'	11:AA:473:ARG:CG	2.22	1.17
16:AG:353:HIS:O	16:AG:357:ASP:N	1.77	1.17
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
11:AA:859:GLU:OE1	16:AG:38:LYS:CB	1.91	1.16
12:AB:109:THR:HB	12:AB:110:PRO:CD	1.71	1.16
16:AG:218:GLU:C	21:G:108:ARG:HH22	1.53	1.16
11:AA:859:GLU:OE1	16:AG:38:LYS:CD	1.92	1.16
16:AG:434:LEU:HD21	16:AG:456:LEU:HA	1.26	1.16
58:r:135:HIS:ND1	58:r:137:GLU:OE1	1.77	1.16

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:381:LEU:HA	16:AG:384:LEU:HD12	1.21	1.16
8:7:21:U:C5	23:I:80:LYS:O	1.99	1.15
11:AA:481:LEU:CG	12:AB:23:ARG:CZ	1.99	1.15
11:AA:481:LEU:CD1	12:AB:23:ARG:HE	1.57	1.15
11:AA:855:PRO:HB3	16:AG:105:ILE:CG1	1.76	1.15
11:AA:481:LEU:HB3	12:AB:23:ARG:NH2	1.61	1.14
11:AA:859:GLU:CB	16:AG:38:LYS:N	2.09	1.14
16:AG:355:ALA:HA	16:AG:382:GLU:CD	1.71	1.14
16:AG:424:SER:O	16:AG:429:LYS:HG2	1.47	1.14
14:AE:287:ALA:HB2	14:AE:292:VAL:CG1	1.78	1.14
16:AG:355:ALA:HB1	16:AG:382:GLU:CG	1.77	1.13
6:5:9:DA:H5'	11:AA:473:ARG:CG	1.76	1.13
10:A:76:A:O2'	41:a:2394:C:N3	1.81	1.13
12:AB:123:PHE:HE1	30:P:81:GLU:OE1	1.31	1.13
16:AG:422:GLU:HA	16:AG:426:GLY:CA	1.79	1.13
6:5:9:DA:OP2	11:AA:473:ARG:HB2	0.97	1.13
7:6:25:DT:C3'	11:AA:496:LYS:HG3	1.74	1.12
11:AA:859:GLU:HB2	16:AG:37:LYS:C	1.74	1.12
12:AB:145:LEU:CG	30:P:88:MET:HB3	1.70	1.12
16:AG:393:LEU:HB3	16:AG:398:LEU:HD23	1.26	1.12
11:AA:481:LEU:HG	12:AB:23:ARG:NE	0.79	1.12
16:AG:123:ARG:NH1	16:AG:191:ARG:O	1.80	1.12
38:X:81:MET:HE1	38:X:92:ARG:HB3	1.20	1.12
12:AB:145:LEU:HG	30:P:85:ASP:OD1	1.46	1.12
10:B:75:C:OP2	41:a:2602:A:O2'	1.67	1.12
41:a:2335:A:OP2	64:x:13:ARG:NE	1.81	1.12
16:AG:425:LEU:HA	16:AG:429:LYS:CG	1.80	1.12
37:W:40:ILE:HD13	37:W:66:MET:SD	1.89	1.12
16:AG:393:LEU:HD22	16:AG:398:LEU:HD11	1.28	1.11
26:L:9:MET:HE1	26:L:85:ILE:HB	1.17	1.11
46:f:4:THR:OG1	46:f:37:GLU:OE2	1.68	1.11
16:AG:353:HIS:O	16:AG:356:ILE:CG2	1.99	1.11
36:V:7:THR:OG1	36:V:60:GLU:OE2	1.66	1.11
58:r:135:HIS:HD1	58:r:137:GLU:CD	1.59	1.11
11:AA:855:PRO:HB3	16:AG:105:ILE:HD11	1.20	1.11
16:AG:244:ARG:O	25:K:69:ARG:HD2	1.44	1.11
16:AG:285:ILE:HG23	16:AG:293:VAL:HG12	1.25	1.11
16:AG:285:ILE:CG1	16:AG:293:VAL:HG11	1.79	1.11
12:AB:145:LEU:CD1	30:P:88:MET:N	2.14	1.11
16:AG:393:LEU:CD2	16:AG:398:LEU:CD1	2.27	1.11
16:AG:430:PRO:HG2	16:AG:435:LEU:HD21	1.29	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:279:ASN:OD1	16:AG:280:PRO:HD3	1.50	1.10
39:Y:96:LYS:HE3	39:Y:136:GLY:HA3	1.29	1.10
12:AB:81:PHE:HE1	14:AE:141:PHE:O	0.76	1.10
16:AG:244:ARG:CB	25:K:69:ARG:NE	2.14	1.10
16:AG:434:LEU:CD2	16:AG:459:LEU:HD12	1.81	1.10
12:AB:92:VAL:CG2	14:AE:289:ASP:HB3	1.81	1.10
12:AB:41:GLY:O	12:AB:156:ASN:ND2	1.84	1.10
16:AG:123:ARG:HH12	16:AG:191:ARG:C	1.57	1.10
12:AB:106:ASP:HB3	12:AB:107:PRO:HD2	1.24	1.09
12:AB:145:LEU:CD1	30:P:88:MET:H	1.65	1.09
8:7:11:U:C4'	25:K:20:ARG:NH2	2.16	1.09
16:AG:434:LEU:HD23	16:AG:456:LEU:HD23	1.10	1.09
11:AA:387:ASN:CG	11:AA:394:ARG:HH11	1.55	1.09
16:AG:451:ARG:NH1	16:AG:467:LEU:HA	1.68	1.09
12:AB:117:ILE:HD13	14:AE:53:ARG:HD3	1.16	1.09
12:AB:145:LEU:CD1	30:P:88:MET:CB	2.31	1.09
14:AE:288:PRO:HD2	14:AE:291:ILE:HG21	1.10	1.09
16:AG:219:GLU:CB	21:G:156:GLY:HA3	1.81	1.09
39:Y:5:GLN:HG2	39:Y:61:TYR:CE1	1.87	1.08
61:u:122:VAL:HG12	61:u:125:LEU:HD21	1.34	1.08
16:AG:385:ALA:HB1	16:AG:411:LYS:HE3	1.35	1.08
16:AG:434:LEU:HA	16:AG:456:LEU:HD21	1.25	1.08
12:AB:117:ILE:HD13	14:AE:53:ARG:CD	1.83	1.08
16:AG:451:ARG:HH12	16:AG:467:LEU:C	1.62	1.08
14:AE:79:LYS:HA	14:AE:81:ARG:NH2	1.66	1.08
11:AA:469:VAL:O	11:AA:473:ARG:HG2	1.53	1.07
16:AG:218:GLU:HA	21:G:108:ARG:HH12	1.14	1.07
53:m:22:MET:O	53:m:28:ARG:NH1	1.87	1.07
11:AA:373:GLY:O	12:AB:83:ALA:CB	2.02	1.07
12:AB:38:ILE:HD13	12:AB:110:PRO:HD2	1.34	1.07
12:AB:145:LEU:HD13	30:P:88:MET:CB	1.85	1.07
16:AG:181:GLY:HA2	16:AG:204:MET:SD	1.93	1.07
16:AG:219:GLU:CB	21:G:156:GLY:CA	2.33	1.07
12:AB:51:PHE:CZ	14:AE:288:PRO:HG3	1.89	1.07
16:AG:363:LEU:HD21	16:AG:410:ALA:H	0.94	1.07
16:AG:422:GLU:HA	16:AG:426:GLY:HA3	1.33	1.07
9:9:50:VAL:HG22	39:Y:119:ALA:HB3	1.33	1.07
16:AG:302:LYS:H	16:AG:302:LYS:HE3	1.16	1.07
16:AG:385:ALA:CB	16:AG:411:LYS:CE	2.33	1.07
18:D:1309:G:OP2	38:X:98:ARG:NE	1.88	1.07
16:AG:393:LEU:CB	16:AG:398:LEU:HD21	1.58	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:365:ILE:HD13	16:AG:406:LEU:HD22	1.37	1.06
16:AG:365:ILE:HD13	16:AG:406:LEU:CD2	1.85	1.06
27:M:4:ARG:HG3	27:M:5:ARG:HG3	1.33	1.06
16:AG:285:ILE:HG13	16:AG:293:VAL:CG1	1.86	1.06
39:Y:14:ALA:HB1	39:Y:50:LYS:HD2	1.37	1.06
9:9:46:ARG:HG3	9:9:94:ARG:HH21	1.12	1.05
16:AG:219:GLU:HB3	21:G:156:GLY:HA3	1.27	1.05
16:AG:244:ARG:O	25:K:69:ARG:NE	1.89	1.05
16:AG:244:ARG:HB3	25:K:69:ARG:HE	0.93	1.05
20:F:37:PHE:HB2	31:Q:126:LYS:HE2	1.35	1.05
39:Y:56:VAL:HA	39:Y:71:LYS:HZ1	1.21	1.05
6:5:9:DA:H5'	11:AA:473:ARG:HG3	1.09	1.05
16:AG:434:LEU:CD2	16:AG:456:LEU:CA	2.33	1.05
16:AG:393:LEU:HD22	16:AG:398:LEU:CD2	1.71	1.05
16:AG:187:ARG:HB3	16:AG:188:PRO:HD3	1.32	1.05
16:AG:285:ILE:HG23	16:AG:293:VAL:CG1	1.87	1.05
6:5:9:DA:C5'	11:AA:473:ARG:HG3	1.82	1.04
12:AB:60:ASP:H	12:AB:61:PRO:CD	1.66	1.04
16:AG:361:LYS:HE2	16:AG:417:ILE:HG12	1.39	1.04
8:7:11:U:O2'	25:K:33:PHE:CE1	2.10	1.04
9:9:136:ILE:HD12	9:9:139:LEU:HD12	1.38	1.04
16:AG:393:LEU:HD22	16:AG:398:LEU:HD21	1.26	1.04
16:AG:425:LEU:CG	16:AG:429:LYS:CE	2.34	1.04
20:F:25:LYS:NZ	22:H:336:ASP:OD1	1.90	1.04
26:L:9:MET:HE1	26:L:85:ILE:CB	1.86	1.04
16:AG:448:LEU:CD2	16:AG:473:LEU:CD1	2.36	1.04
47:g:58:ASP:OD1	47:g:62:LYS:NZ	1.90	1.04
52:l:1:MET:HE2	52:l:16:GLU:HA	1.40	1.04
7:6:18:DT:H3	8:7:37:A:N6	1.55	1.03
9:9:48:ALA:HB3	9:9:51:TYR:HE1	1.20	1.03
14:AE:287:ALA:HB2	14:AE:292:VAL:HG13	1.08	1.03
16:AG:425:LEU:HA	16:AG:429:LYS:HG3	1.33	1.03
9:9:103:ASN:ND2	9:9:107:GLU:OE2	1.90	1.03
16:AG:168:LEU:HD22	16:AG:231:GLY:HA2	1.40	1.03
16:AG:219:GLU:CG	21:G:156:GLY:HA3	1.87	1.03
16:AG:434:LEU:HD23	16:AG:456:LEU:HA	1.34	1.03
50:j:179:ARG:NH1	50:j:180:VAL:O	1.92	1.03
50:j:184:ARG:NH2	65:y:7:GLN:OE1	1.90	1.03
56:p:149:ARG:NH2	56:p:152:ARG:O	1.91	1.03
8:7:4:U:O2'	18:D:1403:C:O2	1.75	1.03
12:AB:160:ARG:HH11	12:AB:160:ARG:HB2	1.19	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AB:148:LYS:HZ2	30:P:100:ILE:HB	1.19	1.02
23:I:123:GLN:OE1	23:I:126:ARG:NH2	1.92	1.02
65:y:51:ARG:NH1	65:y:56:HIS:O	1.91	1.02
9:9:31:ARG:NH1	41:a:1054:A:O4'	1.91	1.02
12:AB:106:ASP:HB3	12:AB:107:PRO:CD	1.85	1.02
39:Y:93:ASN:HA	39:Y:135:MET:CE	1.88	1.02
26:L:42:TRP:CH2	26:L:102:MET:HG3	1.94	1.02
7:6:25:DT:H3'	11:AA:496:LYS:HG3	1.41	1.02
9:9:3:LEU:HD12	9:9:4:ASN:H	1.25	1.02
11:AA:860:ALA:HB2	16:AG:37:LYS:HG3	1.42	1.02
16:AG:219:GLU:HG3	21:G:156:GLY:HA3	1.37	1.02
16:AG:363:LEU:HD23	16:AG:409:ARG:CA	1.89	1.02
9:9:43:LYS:HG3	9:9:46:ARG:HH12	1.22	1.02
16:AG:168:LEU:HD21	16:AG:231:GLY:CA	1.83	1.02
16:AG:425:LEU:C	16:AG:429:LYS:HE3	1.84	1.02
59:s:72:LYS:HD3	59:s:74:TYR:OH	1.59	1.02
16:AG:434:LEU:HD21	16:AG:456:LEU:CA	1.89	1.01
18:D:564:C:OP2	32:R:12:ARG:NH2	1.91	1.01
11:AA:859:GLU:HB2	16:AG:37:LYS:CA	1.90	1.01
16:AG:363:LEU:HG	16:AG:410:ALA:HB2	1.37	1.01
12:AB:64:ILE:H	12:AB:64:ILE:HD12	1.26	1.01
12:AB:87:ILE:HD11	14:AE:162:GLU:HG3	1.43	1.01
12:AB:145:LEU:HB3	30:P:88:MET:HB2	1.38	1.01
10:B:30:G:HO2'	18:D:1339:A:H2	1.03	1.01
16:AG:365:ILE:CG2	16:AG:409:ARG:NH1	2.23	1.01
23:I:152:GLU:OE2	23:I:154:SER:OG	1.77	1.01
14:AE:287:ALA:CB	14:AE:292:VAL:CG1	2.38	1.00
16:AG:168:LEU:HD21	16:AG:231:GLY:N	1.76	1.00
16:AG:387:VAL:HG12	16:AG:388:PRO:HD2	1.06	1.00
16:AG:393:LEU:CG	16:AG:398:LEU:CD2	2.30	1.00
52:l:1:MET:HE1	52:l:20:GLY:HA3	1.43	1.00
8:7:3:G:H5''	18:D:1500:A:N6	1.75	1.00
12:AB:138:ARG:HH11	12:AB:138:ARG:HB2	1.19	1.00
16:AG:131:ARG:O	16:AG:134:GLU:HG3	1.61	1.00
16:AG:361:LYS:CE	16:AG:417:ILE:HG12	1.90	1.00
16:AG:363:LEU:CD2	16:AG:409:ARG:HB2	1.91	1.00
11:AA:859:GLU:HG3	16:AG:38:LYS:CA	1.91	1.00
12:AB:115:LYS:HA	12:AB:115:LYS:HZ2	1.27	1.00
13:AD:290:LEU:O	16:AG:82:TYR:HE2	1.39	1.00
14:AE:70:CYS:SG	14:AE:85:CYS:SG	2.60	1.00
16:AG:187:ARG:CB	16:AG:188:PRO:CD	2.37	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:422:GLU:HA	16:AG:426:GLY:N	1.75	1.00
39:Y:60:VAL:HG22	39:Y:66:PHE:HB3	1.44	1.00
16:AG:355:ALA:HB1	16:AG:382:GLU:HG3	1.41	1.00
16:AG:425:LEU:CA	16:AG:429:LYS:CE	2.30	1.00
11:AA:857:VAL:N	16:AG:35:THR:HG21	1.76	1.00
12:AB:117:ILE:CD1	14:AE:53:ARG:CD	2.40	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	1.94	1.00
39:Y:93:ASN:HA	39:Y:135:MET:HE1	1.00	1.00
16:AG:287:ALA:HA	16:AG:331:LEU:HD11	1.40	0.99
12:AB:123:PHE:CE1	30:P:81:GLU:OE1	2.14	0.99
12:AB:109:THR:HB	12:AB:110:PRO:HD2	1.44	0.99
18:D:377:G:OP1	35:U:5:ARG:NH1	1.94	0.99
9:9:88:HIS:HB3	9:9:89:PRO:HD3	1.44	0.99
21:G:49:MET:HE1	21:G:201:PRO:HD3	1.42	0.99
16:AG:434:LEU:CD2	16:AG:456:LEU:HD23	1.92	0.99
16:AG:434:LEU:HD23	16:AG:456:LEU:CD2	1.91	0.99
16:AG:393:LEU:HD22	16:AG:398:LEU:CG	1.93	0.99
16:AG:442:ARG:O	16:AG:446:PHE:HD2	1.34	0.99
33:S:86:GLU:OE1	33:S:90:ARG:NH1	1.96	0.99
6:5:14:DT:H71	11:AA:201:ARG:NH2	1.77	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
16:AG:244:ARG:HB3	25:K:69:ARG:NE	1.77	0.98
6:5:16:DA:N6	11:AA:150:HIS:HA	1.78	0.98
26:L:42:TRP:HH2	26:L:102:MET:HG3	1.25	0.98
11:AA:859:GLU:HB2	16:AG:37:LYS:CB	1.92	0.98
12:AB:145:LEU:CA	30:P:88:MET:HG3	1.71	0.98
11:AA:474:ALA:O	11:AA:477:GLU:HB3	1.64	0.97
16:AG:362:TYR:O	16:AG:413:ALA:CB	2.10	0.97
16:AG:437:LEU:CD2	16:AG:456:LEU:CD1	2.34	0.97
14:AE:288:PRO:CD	14:AE:291:ILE:HG21	1.92	0.97
16:AG:393:LEU:CA	16:AG:398:LEU:HD23	1.88	0.97
11:AA:481:LEU:CB	12:AB:23:ARG:HH21	1.69	0.97
33:S:92:GLU:OE1	33:S:92:GLU:N	1.97	0.97
21:G:154:MET:HE2	21:G:158:PRO:HD3	1.44	0.97
16:AG:279:ASN:CG	16:AG:280:PRO:CD	2.38	0.97
8:7:11:U:H4'	25:K:20:ARG:HH22	1.18	0.97
16:AG:355:ALA:HB2	16:AG:382:GLU:CD	1.83	0.97
39:Y:93:ASN:CA	39:Y:135:MET:HE1	1.94	0.97
59:s:12:LYS:NZ	59:s:14:ASP:OD1	1.96	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:9:58:THR:HG21	9:9:81:LEU:HD23	1.47	0.96
14:AE:70:CYS:SG	14:AE:72:CYS:SG	2.61	0.96
11:AA:387:ASN:ND2	11:AA:394:ARG:HH12	1.61	0.96
16:AG:168:LEU:HD21	16:AG:230:PRO:C	1.89	0.96
16:AG:228:ARG:HA	16:AG:327:LEU:HD11	1.46	0.96
18:D:562:U:O2'	32:R:14:ARG:NH1	1.98	0.96
41:a:2093:G:OP1	58:r:22:LYS:NZ	1.98	0.96
64:x:111:ARG:NH2	64:x:117:PHE:OXT	1.99	0.96
9:9:95:LEU:HD13	9:9:98:GLU:OE2	1.65	0.96
16:AG:424:SER:O	16:AG:429:LYS:CG	2.13	0.96
16:AG:336:LEU:HD12	16:AG:336:LEU:H	1.26	0.96
16:AG:433:ASP:O	16:AG:456:LEU:CD1	2.13	0.96
11:AA:859:GLU:CG	16:AG:38:LYS:CB	2.43	0.96
18:D:1344:C:OP1	29:O:124:ARG:NH1	1.98	0.96
6:5:7:DT:OP1	12:AB:10:LYS:NZ	1.96	0.96
16:AG:214:PRO:O	16:AG:218:GLU:OE2	1.83	0.96
11:AA:855:PRO:CB	16:AG:105:ILE:HG12	1.96	0.95
16:AG:448:LEU:HD21	16:AG:473:LEU:HD13	1.48	0.95
8:7:2:U:P	18:D:1505:G:H8	1.88	0.95
14:AE:85:CYS:HG	68:AE:1502:ZN:ZN	0.66	0.95
16:AG:380:THR:O	16:AG:384:LEU:CD1	2.13	0.95
7:6:25:DT:OP1	11:AA:496:LYS:HA	1.12	0.95
12:AB:37:LYS:HD3	12:AB:107:PRO:CG	1.97	0.95
16:AG:440:VAL:CG2	16:AG:481:LEU:HD22	1.97	0.95
14:AE:79:LYS:HA	14:AE:81:ARG:HH12	1.32	0.95
39:Y:75:ALA:HB2	39:Y:112:LYS:HE3	1.48	0.95
8:7:22:U:H4'	23:I:80:LYS:CD	1.96	0.95
16:AG:363:LEU:HG	16:AG:410:ALA:CB	1.97	0.95
40:Z:14:MET:HB3	40:Z:17:MET:HG2	1.46	0.95
9:9:3:LEU:HD12	9:9:4:ASN:N	1.82	0.95
12:AB:87:ILE:CD1	14:AE:162:GLU:HG3	1.95	0.95
16:AG:218:GLU:HA	21:G:108:ARG:NH1	1.80	0.95
16:AG:219:GLU:HB3	21:G:156:GLY:HA2	1.48	0.95
7:6:18:DT:H3	8:7:37:A:H61	1.05	0.94
9:9:61:ARG:NH1	41:a:1047:G:N7	2.15	0.94
11:AA:855:PRO:CB	16:AG:105:ILE:CG1	2.43	0.94
12:AB:92:VAL:HG22	14:AE:289:ASP:HB3	1.44	0.94
23:I:164:ARG:NH2	23:I:166:GLU:OE2	1.99	0.94
11:AA:387:ASN:ND2	11:AA:394:ARG:NH1	2.15	0.94
16:AG:393:LEU:HA	16:AG:398:LEU:HD22	0.96	0.94
41:a:30:G:OP2	66:z:5:LYS:NZ	2.00	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:258:ARG:HH11	16:AG:258:ARG:HG2	1.31	0.94
16:AG:393:LEU:HD23	16:AG:398:LEU:CD2	1.93	0.94
16:AG:393:LEU:HB3	16:AG:398:LEU:HD21	1.25	0.94
39:Y:5:GLN:HG2	39:Y:61:TYR:HE1	1.32	0.94
9:9:23:LEU:HD13	9:9:92:ALA:CB	1.98	0.94
16:AG:123:ARG:HH12	16:AG:191:ARG:HA	1.32	0.94
36:V:7:THR:OG1	36:V:61:ILE:O	1.85	0.94
16:AG:448:LEU:HD21	16:AG:473:LEU:HD11	1.48	0.94
6:5:16:DA:H61	11:AA:150:HIS:HA	1.29	0.94
16:AG:387:VAL:HG12	16:AG:388:PRO:HD3	1.47	0.94
16:AG:393:LEU:CD2	16:AG:398:LEU:HD22	1.90	0.94
12:AB:51:PHE:HZ	14:AE:288:PRO:HG3	1.29	0.94
16:AG:279:ASN:CG	16:AG:280:PRO:HD3	1.93	0.94
8:7:22:U:H5''	23:I:80:LYS:HG3	0.95	0.94
12:AB:148:LYS:NZ	30:P:100:ILE:HB	1.83	0.94
11:AA:857:VAL:C	16:AG:35:THR:CB	2.34	0.93
56:p:38:ASN:ND2	56:p:64:GLN:OE1	2.00	0.93
39:Y:33:ASN:HB3	39:Y:36:GLU:HG2	1.48	0.93
9:9:88:HIS:HB3	9:9:89:PRO:CD	1.97	0.93
16:AG:365:ILE:CD1	16:AG:406:LEU:HD22	1.97	0.93
8:7:22:U:H4'	23:I:80:LYS:HD2	1.48	0.93
9:9:23:LEU:HD13	9:9:92:ALA:HB1	1.49	0.93
9:9:31:ARG:HD2	41:a:1053:C:O2'	1.66	0.93
16:AG:123:ARG:CZ	16:AG:191:ARG:O	2.17	0.93
16:AG:168:LEU:HD22	16:AG:231:GLY:HA3	1.00	0.93
1:0:18:GLN:N	1:0:18:GLN:OE1	2.01	0.93
12:AB:37:LYS:HD3	12:AB:107:PRO:HG2	1.47	0.93
16:AG:451:ARG:NH1	16:AG:467:LEU:CA	2.30	0.93
10:B:76:A:N3	41:a:2493:U:H4'	1.84	0.93
26:L:9:MET:CE	26:L:85:ILE:HB	1.97	0.93
6:5:9:DA:OP2	11:AA:473:ARG:CG	2.16	0.93
16:AG:171:GLU:OE2	16:AG:267:GLY:HA3	1.68	0.93
16:AG:240:THR:OG1	16:AG:247:PRO:HG3	1.69	0.93
16:AG:244:ARG:HB2	25:K:69:ARG:NE	1.84	0.93
39:Y:14:ALA:O	39:Y:50:LYS:HE3	1.67	0.93
41:a:1042:G:HO2'	41:a:1043:C:H6	1.10	0.93
60:t:90:ASN:OD1	60:t:91:SER:N	2.02	0.93
8:7:21:U:H5''	23:I:80:LYS:H	1.35	0.92
12:AB:38:ILE:HG12	12:AB:110:PRO:HG2	1.49	0.92
18:D:526:C:OP2	32:R:88:LYS:NZ	2.01	0.92
12:AB:146:ILE:HG23	30:P:88:MET:HA	1.52	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:9:50:VAL:HG22	39:Y:119:ALA:CB	1.98	0.92
14:AE:59:ALA:CB	14:AE:71:LEU:HD21	1.99	0.92
16:AG:393:LEU:CD2	16:AG:398:LEU:HD11	1.90	0.92
12:AB:92:VAL:HG22	14:AE:289:ASP:CB	1.98	0.92
16:AG:363:LEU:CG	16:AG:410:ALA:HB2	1.99	0.92
16:AG:425:LEU:CD2	16:AG:429:LYS:CE	2.13	0.92
16:AG:451:ARG:NH1	16:AG:466:ASP:O	2.02	0.92
16:AG:425:LEU:HA	16:AG:429:LYS:CD	2.00	0.91
16:AG:453:VAL:HG13	16:AG:458:ASP:CB	2.00	0.91
41:a:2293:G:OP1	64:x:94:ARG:NH1	2.04	0.91
16:AG:385:ALA:HB3	16:AG:411:LYS:CE	2.00	0.91
41:a:2682:A:O4'	50:j:11:MET:SD	2.29	0.91
11:AA:860:ALA:CB	16:AG:37:LYS:HG3	2.00	0.91
16:AG:174:ARG:HB3	16:AG:175:PRO:HD2	1.51	0.91
17:C:60:LYS:HZ2	18:D:734:G:C2'	1.84	0.91
16:AG:183:LEU:HG	16:AG:197:VAL:HG13	1.51	0.91
8:7:2:U:P	18:D:1505:G:C8	2.64	0.91
8:7:32:U:H5'	11:AA:1259:LEU:HD21	1.53	0.91
12:AB:145:LEU:C	30:P:88:MET:CG	2.21	0.91
10:B:38:A:H4'	18:D:790:A:O4'	1.71	0.91
7:6:25:DT:H2'	11:AA:496:LYS:HE3	1.51	0.91
39:Y:79:LEU:HD21	39:Y:105:LEU:HD21	1.52	0.91
12:AB:11:ARG:HH11	12:AB:11:ARG:HG3	1.35	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
16:AG:434:LEU:HD22	16:AG:459:LEU:HD12	0.93	0.90
41:a:1818:U:OP2	48:h:156:ARG:NH1	2.03	0.90
27:M:50:LEU:HD21	27:M:121:ALA:HA	1.52	0.90
62:v:111:GLU:O	62:v:114:ARG:HG2	1.71	0.90
65:y:89:ARG:NE	65:y:113:ARG:O	2.05	0.90
16:AG:200:SER:O	16:AG:230:PRO:HG2	1.71	0.90
16:AG:285:ILE:HG13	16:AG:293:VAL:HG11	1.45	0.90
36:V:27:ARG:NH1	36:V:42:THR:OG1	2.03	0.90
6:5:9:DA:P	11:AA:473:ARG:HB2	2.10	0.90
12:AB:146:ILE:HD11	30:P:87:LEU:CB	2.02	0.90
16:AG:363:LEU:HD23	16:AG:409:ARG:CB	2.00	0.90
64:x:36:TYR:OH	64:x:38:GLN:NE2	2.05	0.90
13:AD:287:VAL:CB	16:AG:78:GLU:OE1	2.19	0.90
16:AG:434:LEU:HD21	16:AG:455:THR:O	1.69	0.90
16:AG:434:LEU:HD23	16:AG:456:LEU:CA	2.00	0.90
31:Q:51:GLY:O	31:Q:56:ARG:NH2	2.03	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:9:92:ALA:O	9:9:129:LEU:HD13	1.70	0.90
12:AB:109:THR:HB	12:AB:110:PRO:HD3	1.50	0.90
16:AG:422:GLU:CA	16:AG:426:GLY:HA3	2.02	0.90
16:AG:106:THR:HA	16:AG:110:ALA:HB3	1.53	0.90
16:AG:218:GLU:C	21:G:108:ARG:NH2	2.30	0.90
47:g:27:THR:OG1	54:n:140:GLU:OE1	1.88	0.90
16:AG:453:VAL:HG23	16:AG:462:GLN:NE2	1.86	0.89
45:e:23:ARG:NH1	45:e:24:GLU:OE2	2.06	0.89
41:a:2393:U:OP1	55:o:30:ARG:NE	2.05	0.89
31:Q:15:GLN:NE2	31:Q:76:GLU:O	2.06	0.89
16:AG:123:ARG:NH1	16:AG:191:ARG:CA	2.11	0.89
16:AG:434:LEU:HD21	16:AG:455:THR:C	1.97	0.89
20:F:31:GLU:OE2	20:F:35:ARG:NE	2.06	0.89
47:g:16:CYS:HB2	47:g:37:CYS:HB3	1.54	0.89
6:5:9:DA:H5''	11:AA:473:ARG:CG	1.95	0.89
11:AA:859:GLU:N	16:AG:37:LYS:HB2	1.87	0.89
12:AB:146:ILE:N	30:P:88:MET:HA	1.87	0.89
16:AG:365:ILE:HG21	16:AG:409:ARG:NH1	1.87	0.89
16:AG:240:THR:OG1	16:AG:247:PRO:CG	2.20	0.89
16:AG:425:LEU:CA	16:AG:429:LYS:HG3	2.02	0.89
17:C:38:LYS:NZ	18:D:718:A:N1	2.19	0.89
18:D:1439:G:OP1	19:E:33:LYS:NZ	2.05	0.89
3:2:54:GLU:OE1	3:2:91:GLN:NE2	2.06	0.89
12:AB:138:ARG:HB2	12:AB:138:ARG:NH1	1.86	0.89
33:S:90:ARG:HG3	33:S:92:GLU:OE1	1.73	0.89
61:u:93:ASN:OD1	61:u:94:THR:N	2.05	0.89
9:9:8:LYS:O	9:9:12:VAL:HG23	1.73	0.89
16:AG:363:LEU:HD22	16:AG:409:ARG:HB2	1.53	0.89
27:M:66:LEU:HD13	27:M:101:MET:CE	2.02	0.89
39:Y:45:THR:CG2	39:Y:50:LYS:HD3	2.02	0.88
12:AB:60:ASP:N	12:AB:61:PRO:CD	2.36	0.88
18:D:280:C:O2	36:V:40:ARG:CZ	2.21	0.88
41:a:404:A:O2'	41:a:405:U:OP2	1.90	0.88
14:AE:59:ALA:CB	14:AE:71:LEU:CD2	2.51	0.88
41:a:585:G:N7	66:z:6:ARG:NH1	2.21	0.88
12:AB:161:LYS:N	12:AB:161:LYS:HD3	1.86	0.88
27:M:4:ARG:HG2	27:M:5:ARG:CZ	2.03	0.88
39:Y:129:GLU:HB3	39:Y:133:ARG:NH1	1.87	0.88
41:a:78:U:OP1	45:e:4:LYS:NZ	2.06	0.88
16:AG:302:LYS:HE3	16:AG:302:LYS:N	1.87	0.88
17:C:60:LYS:NZ	18:D:735:C:O4'	2.06	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:362:TYR:C	16:AG:413:ALA:HB2	1.99	0.88
12:AB:117:ILE:HD11	14:AE:53:ARG:HD3	1.52	0.88
27:M:13:LEU:HD12	27:M:14:PRO:HD2	1.54	0.88
12:AB:145:LEU:HD13	30:P:88:MET:H	1.15	0.88
18:D:545:C:H5'	24:J:69:GLU:HG3	1.55	0.88
41:a:2756:U:OP2	57:q:19:ARG:NE	2.06	0.88
13:AD:290:LEU:O	16:AG:82:TYR:CZ	2.26	0.88
14:AE:78:LEU:C	14:AE:81:ARG:HH11	1.79	0.88
16:AG:422:GLU:HA	16:AG:426:GLY:H	1.34	0.88
52:l:170:ARG:NH1	52:l:174:GLY:O	2.05	0.88
9:9:48:ALA:HB3	9:9:51:TYR:CE1	2.09	0.88
10:A:76:A:N6	41:a:2422:C:O4'	2.06	0.88
16:AG:248:VAL:HG13	16:AG:273:ILE:HB	1.56	0.88
14:AE:79:LYS:N	14:AE:81:ARG:NH1	2.22	0.87
16:AG:363:LEU:HG	16:AG:410:ALA:CA	2.04	0.87
17:C:27:ALA:O	17:C:30:LYS:HG2	1.74	0.87
39:Y:100:ILE:HD12	39:Y:105:LEU:HD11	1.54	0.87
63:w:24:MET:HA	63:w:24:MET:HE3	1.54	0.87
24:J:67:VAL:HB	24:J:72:PHE:CZ	2.09	0.87
8:7:22:U:C4'	23:I:80:LYS:HG3	2.02	0.87
28:N:5:ASP:OD2	28:N:77:ARG:NH1	2.07	0.87
16:AG:434:LEU:HA	16:AG:456:LEU:HD23	1.53	0.87
16:AG:486:ARG:O	16:AG:490:TRP:HD1	1.57	0.87
16:AG:141:VAL:HG22	16:AG:178:ARG:HG2	1.57	0.87
41:a:2780:G:OP2	59:s:120:ARG:NH1	2.07	0.87
38:X:81:MET:HE2	41:a:888:C:C5	2.09	0.87
39:Y:129:GLU:HB3	39:Y:133:ARG:HH12	1.38	0.87
16:AG:362:TYR:C	16:AG:413:ALA:CB	2.48	0.87
16:AG:430:PRO:HG2	16:AG:435:LEU:CD2	2.05	0.87
44:d:55:U:H1'	54:n:26:MET:HE2	1.57	0.87
59:s:13:ARG:NH1	59:s:49:ASP:O	2.07	0.87
59:s:98:GLU:OE2	59:s:126:ALA:N	2.07	0.87
11:AA:858:GLY:HA3	16:AG:35:THR:O	1.73	0.86
16:AG:244:ARG:HB2	25:K:69:ARG:CD	2.04	0.86
23:I:58:GLU:OE1	23:I:65:ARG:NH1	2.08	0.86
39:Y:99:LYS:HD2	39:Y:140:GLU:OE1	1.75	0.86
16:AG:61:ARG:HD3	16:AG:63:LEU:HD21	1.57	0.86
52:l:170:ARG:NH1	52:l:176:ASP:OD1	2.07	0.86
59:s:37:ARG:HA	59:s:118:MET:HE3	1.54	0.86
16:AG:171:GLU:CD	16:AG:267:GLY:HA3	1.99	0.86
39:Y:15:GLY:HA2	39:Y:50:LYS:HG3	1.57	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:855:PRO:HB3	16:AG:105:ILE:HG12	1.54	0.86
12:AB:145:LEU:CD1	30:P:88:MET:HB3	2.02	0.86
16:AG:434:LEU:HD12	16:AG:454:CYS:O	1.75	0.86
16:AG:302:LYS:O	16:AG:302:LYS:NZ	2.08	0.86
16:AG:254:MET:HA	16:AG:254:MET:HE3	1.55	0.86
39:Y:48:ILE:HG13	39:Y:49:GLU:H	1.41	0.86
39:Y:100:ILE:HD12	39:Y:105:LEU:CD1	2.05	0.86
1:O:87:GLN:NE2	1:O:88:GLY:O	2.09	0.85
16:AG:453:VAL:HG13	16:AG:458:ASP:HB2	1.55	0.85
36:V:77:ARG:NH2	36:V:78:VAL:O	2.08	0.85
12:AB:81:PHE:HE1	14:AE:141:PHE:C	1.82	0.85
12:AB:161:LYS:O	12:AB:161:LYS:NZ	2.08	0.85
14:AE:78:LEU:C	14:AE:81:ARG:NH1	2.24	0.85
62:v:95:LEU:O	62:v:100:LYS:NZ	2.08	0.85
12:AB:140:MET:SD	12:AB:140:MET:N	2.50	0.85
11:AA:859:GLU:OE1	16:AG:38:LYS:CG	2.24	0.85
12:AB:148:LYS:HZ3	30:P:100:ILE:HG22	1.40	0.85
36:V:25:ILE:O	36:V:27:ARG:NH2	2.10	0.85
61:u:90:VAL:HG13	61:u:95:LEU:HD21	1.57	0.85
16:AG:187:ARG:CB	16:AG:188:PRO:HD2	2.03	0.85
54:n:23:ASN:OD1	54:n:24:SER:N	2.09	0.85
9:9:58:THR:CG2	9:9:81:LEU:HD23	2.06	0.85
12:AB:51:PHE:CZ	14:AE:288:PRO:CG	2.59	0.85
29:O:84:THR:HG21	29:O:103:PHE:HB3	1.59	0.85
42:b:36:ILE:HG21	42:b:39:ARG:HD3	1.59	0.85
7:6:25:DT:C2'	11:AA:496:LYS:HG3	2.05	0.84
1:O:68:ARG:NH1	41:a:1223:G:OP1	2.10	0.84
16:AG:355:ALA:CA	16:AG:382:GLU:CD	2.49	0.84
16:AG:244:ARG:HB2	25:K:69:ARG:HD3	1.59	0.84
16:AG:448:LEU:CD2	16:AG:473:LEU:HD11	2.05	0.84
11:AA:855:PRO:CB	16:AG:105:ILE:HD11	2.05	0.84
16:AG:285:ILE:CG2	16:AG:293:VAL:HG12	2.05	0.84
38:X:81:MET:CE	38:X:92:ARG:HB3	2.06	0.84
39:Y:75:ALA:CB	39:Y:112:LYS:HE3	2.07	0.84
47:g:26:SER:OG	54:n:140:GLU:OE2	1.94	0.84
62:v:77:PRO:HG2	62:v:80:VAL:HG21	1.58	0.84
63:w:38:LEU:HD13	63:w:111:ALA:HB2	1.60	0.84
6:5:16:DA:N6	11:AA:151:ARG:N	2.25	0.84
12:AB:38:ILE:CD1	12:AB:110:PRO:HD2	2.07	0.84
16:AG:425:LEU:HG	16:AG:429:LYS:CE	2.07	0.84
19:E:9:LYS:O	19:E:13:GLN:NE2	2.10	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:t:20:MET:HB3	60:t:44:LYS:HZ3	1.41	0.84
6:5:9:DA:P	11:AA:473:ARG:CB	2.66	0.84
5:4:58:SER:OG	5:4:59:GLU:OE1	1.96	0.84
12:AB:96:LEU:HD11	14:AE:288:PRO:HB3	1.58	0.84
16:AG:287:ALA:HB2	16:AG:331:LEU:HD13	1.59	0.84
16:AG:365:ILE:CG2	16:AG:409:ARG:HH12	1.91	0.84
16:AG:385:ALA:HB1	16:AG:411:LYS:CE	2.04	0.84
39:Y:96:LYS:CE	39:Y:136:GLY:HA3	2.08	0.84
16:AG:203:GLU:HA	16:AG:206:ILE:HG12	1.60	0.83
16:AG:387:VAL:CB	16:AG:388:PRO:HD2	2.06	0.83
9:9:43:LYS:O	9:9:46:ARG:HG2	1.78	0.83
12:AB:35:LEU:HA	12:AB:104:ILE:HG22	1.59	0.83
16:AG:210:ARG:HG3	16:AG:216:ILE:HB	1.59	0.83
39:Y:74:PRO:HG2	39:Y:77:VAL:HB	1.60	0.83
62:v:7:THR:OG1	62:v:10:ARG:NH1	2.11	0.83
66:z:74:ILE:HD11	66:z:79:PHE:HA	1.60	0.83
10:A:33:U:OP1	27:M:77:SER:OG	1.94	0.83
12:AB:37:LYS:HG2	12:AB:107:PRO:CD	2.09	0.83
12:AB:146:ILE:HG23	30:P:88:MET:CA	2.08	0.83
8:7:2:U:OP2	18:D:1505:G:C8	2.30	0.83
16:AG:213:VAL:HG11	16:AG:251:CYS:HA	1.59	0.83
56:p:121:ILE:HD12	56:p:141:ILE:HG22	1.60	0.83
16:AG:127:VAL:CG2	16:AG:192:GLY:HA2	2.09	0.83
16:AG:168:LEU:HD23	16:AG:231:GLY:HA3	1.56	0.83
16:AG:433:ASP:C	16:AG:456:LEU:HG	2.03	0.83
18:D:742:G:OP1	34:T:58:ARG:NH2	2.12	0.83
41:a:2682:A:O2'	50:j:13:ARG:NE	2.12	0.83
48:h:175:ARG:HG3	48:h:181:MET:HE1	1.58	0.83
59:s:102:GLU:OE1	59:s:102:GLU:N	2.10	0.83
38:X:81:MET:HE1	38:X:92:ARG:CB	2.08	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
16:AG:252:VAL:HA	16:AG:259:VAL:HG23	1.61	0.83
61:u:122:VAL:CG1	61:u:125:LEU:HD21	2.07	0.83
8:7:3:G:C5'	18:D:1500:A:H62	1.92	0.83
41:a:1257:C:H4'	52:l:78:TRP:CE2	2.14	0.83
16:AG:285:ILE:CG2	16:AG:293:VAL:CG1	2.57	0.83
23:I:22:TRP:CZ3	23:I:24:ALA:HB2	2.14	0.83
12:AB:146:ILE:N	30:P:88:MET:CB	2.42	0.82
41:a:2356:U:H5''	42:b:20:ARG:HD2	1.61	0.82
9:9:43:LYS:HG3	9:9:46:ARG:NH1	1.94	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:287:ALA:HA	16:AG:331:LEU:HD12	0.88	0.82
10:B:6:G:O2'	10:B:7:G:O5'	1.96	0.82
50:j:152:PRO:HG3	50:j:156:PHE:CZ	2.14	0.82
12:AB:60:ASP:H	12:AB:61:PRO:HD3	1.41	0.82
16:AG:279:ASN:CG	16:AG:280:PRO:HD2	2.04	0.82
39:Y:116:MET:HG2	39:Y:124:MET:HG2	1.60	0.82
60:t:7:MET:HG3	60:t:18:ARG:CZ	2.10	0.82
16:AG:353:HIS:CA	16:AG:356:ILE:HG23	2.09	0.82
16:AG:362:TYR:HA	16:AG:413:ALA:CB	2.09	0.82
41:a:2393:U:H5''	55:o:30:ARG:CZ	2.09	0.82
8:7:29:A:OP1	8:7:29:A:H4'	1.80	0.82
9:9:1:MET:HE1	9:9:7:ASP:HB3	1.61	0.82
9:9:3:LEU:HD11	9:9:5:LEU:HD23	1.62	0.82
11:AA:481:LEU:CD2	12:AB:23:ARG:CZ	2.45	0.82
12:AB:14:LEU:HD13	12:AB:49:PRO:HG2	1.61	0.82
21:G:105:LYS:O	21:G:109:GLN:NE2	2.12	0.82
41:a:1613:G:O2'	53:m:3:ARG:NH2	2.12	0.82
41:a:2298:A:OP1	54:n:72:LYS:NZ	2.11	0.82
56:p:7:ALA:O	56:p:69:ARG:NE	2.12	0.82
16:AG:243:LYS:HB3	16:AG:245:ILE:HD11	1.59	0.82
16:AG:354:ALA:HA	16:AG:357:ASP:HB3	1.60	0.82
16:AG:361:LYS:CD	16:AG:417:ILE:HG12	2.10	0.82
54:n:73:SER:OG	54:n:79:ILE:O	1.96	0.82
12:AB:64:ILE:HG21	12:AB:68:THR:HG23	1.59	0.82
16:AG:226:ALA:HA	16:AG:236:ILE:HG13	1.61	0.82
16:AG:241:ASN:ND2	21:G:159:ASP:OD1	2.12	0.82
16:AG:451:ARG:HH11	16:AG:467:LEU:HA	1.42	0.82
6:5:16:DA:N6	11:AA:150:HIS:CA	2.41	0.82
39:Y:14:ALA:HB3	39:Y:51:GLY:H	1.45	0.82
9:9:129:LEU:H	9:9:130:PRO:HD2	1.45	0.81
12:AB:43:ARG:HH22	12:AB:133:PRO:HB2	1.45	0.81
39:Y:45:THR:HG22	39:Y:50:LYS:HD3	1.59	0.81
10:A:6:G:O2'	10:A:7:G:O5'	1.96	0.81
11:AA:387:ASN:CB	11:AA:394:ARG:HH11	1.93	0.81
11:AA:859:GLU:H	16:AG:37:LYS:HB2	1.43	0.81
12:AB:60:ASP:N	12:AB:61:PRO:HD2	1.96	0.81
12:AB:81:PHE:HZ	14:AE:141:PHE:HB3	1.45	0.81
12:AB:129:ILE:HB	12:AB:142:LEU:HD22	1.61	0.81
14:AE:287:ALA:HB1	14:AE:292:VAL:HG13	1.60	0.81
16:AG:425:LEU:HG	16:AG:429:LYS:CD	2.10	0.81
41:a:2356:U:O3'	42:b:20:ARG:NH1	2.14	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:t:12:ASP:OD2	60:t:85:VAL:HG13	1.80	0.81
16:AG:285:ILE:CB	16:AG:293:VAL:HG11	2.09	0.81
16:AG:434:LEU:CG	16:AG:455:THR:C	2.54	0.81
16:AG:451:ARG:NE	16:AG:470:ILE:HG13	1.95	0.81
56:p:104:ASN:ND2	56:p:114:ASP:OD1	2.12	0.81
9:9:25:ALA:HB3	9:9:99:PHE:CD2	2.16	0.81
9:9:52:MET:HG2	9:9:95:LEU:HD11	1.62	0.81
16:AG:133:HIS:ND1	16:AG:136:GLU:OE1	2.13	0.81
66:z:69:ALA:HB1	66:z:74:ILE:HG23	1.63	0.81
6:5:14:DT:H71	11:AA:201:ARG:HH22	1.46	0.81
8:7:22:U:H4'	23:I:80:LYS:CG	2.10	0.81
39:Y:58:ILE:HG22	39:Y:60:VAL:HG23	1.63	0.81
41:a:1818:U:O5'	48:h:156:ARG:NH2	2.14	0.81
66:z:74:ILE:HD13	66:z:79:PHE:HD1	1.46	0.81
6:5:16:DA:H61	11:AA:150:HIS:CA	1.93	0.81
16:AG:219:GLU:CG	21:G:156:GLY:CA	2.57	0.81
52:l:1:MET:HE1	52:l:20:GLY:CA	2.11	0.81
16:AG:287:ALA:HB1	16:AG:331:LEU:HD12	1.62	0.80
18:D:311:C:OP1	35:U:31:ARG:NH2	2.13	0.80
19:E:28:MET:HE1	19:E:58:VAL:HA	1.63	0.80
8:7:21:U:H5	23:I:80:LYS:C	1.88	0.80
16:AG:12:VAL:HB	16:AG:16:LYS:HG3	1.61	0.80
16:AG:425:LEU:HD23	16:AG:429:LYS:HE2	0.81	0.80
20:F:37:PHE:HB2	31:Q:126:LYS:CE	2.10	0.80
8:7:2:U:OP1	18:D:1505:G:C8	2.33	0.80
9:9:46:ARG:HG3	9:9:94:ARG:NH2	1.94	0.80
39:Y:40:ALA:HB1	39:Y:68:PHE:CE1	2.16	0.80
52:l:112:LEU:HD12	52:l:117:ARG:HB2	1.62	0.80
16:AG:385:ALA:HB3	16:AG:411:LYS:HE3	1.57	0.80
41:a:1655:A:H1'	50:j:118:PHE:HE2	1.46	0.80
41:a:2682:A:C8	50:j:11:MET:CE	2.65	0.80
61:u:122:VAL:HG13	61:u:125:LEU:HD11	1.61	0.80
12:AB:115:LYS:HZ2	12:AB:115:LYS:CA	1.94	0.80
16:AG:133:HIS:HD1	16:AG:136:GLU:CD	1.90	0.80
39:Y:9:LYS:HE2	39:Y:55:PRO:HB3	1.63	0.80
12:AB:161:LYS:HD3	12:AB:161:LYS:H	1.46	0.80
16:AG:362:TYR:HA	16:AG:413:ALA:HB1	1.62	0.80
16:AG:440:VAL:CG2	16:AG:481:LEU:CD2	2.59	0.80
16:AG:451:ARG:NH1	16:AG:467:LEU:C	2.40	0.80
17:C:60:LYS:HZ3	18:D:735:C:P	2.04	0.80
18:D:107:G:O6	19:E:10:ARG:NE	2.13	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:2393:U:H5''	55:o:30:ARG:NH1	1.97	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
12:AB:31:PRO:HB2	12:AB:50:LEU:HB3	1.64	0.80
12:AB:33:ILE:HD12	12:AB:100:LYS:HB3	1.62	0.80
48:h:130:LEU:HA	48:h:189:ARG:HH11	1.45	0.80
16:AG:219:GLU:HG3	21:G:156:GLY:CA	2.12	0.80
41:a:2636:C:H4'	50:j:81:GLU:OE1	1.82	0.80
1:0:86:GLN:OE1	41:a:1225:G:H4'	1.81	0.79
9:9:77:VAL:HG13	9:9:114:GLU:OE1	1.81	0.79
16:AG:379:SER:OG	16:AG:384:LEU:HD21	1.81	0.79
26:L:102:MET:SD	26:L:102:MET:N	2.46	0.79
27:M:20:SER:HB3	27:M:23:LEU:HD13	1.63	0.79
52:l:111:GLU:OE2	52:l:114:ARG:NH1	2.14	0.79
60:t:98:ARG:NH2	60:t:118:LEU:O	2.14	0.79
9:9:112:ALA:O	9:9:123:ILE:HD11	1.83	0.79
4:3:46:GLN:OE1	4:3:56:GLY:HA2	1.82	0.79
12:AB:160:ARG:HB2	12:AB:160:ARG:NH1	1.98	0.79
16:AG:437:LEU:HD21	16:AG:456:LEU:HD13	0.81	0.79
26:L:70:VAL:O	26:L:74:LEU:HD23	1.81	0.79
9:9:5:LEU:O	9:9:9:GLN:NE2	2.15	0.79
12:AB:145:LEU:C	30:P:88:MET:CB	2.51	0.79
12:AB:146:ILE:HD11	30:P:87:LEU:HB2	1.62	0.79
14:AE:81:ARG:H	14:AE:81:ARG:HD2	1.45	0.79
16:AG:363:LEU:CG	16:AG:410:ALA:N	2.45	0.79
39:Y:102:ARG:HD2	39:Y:141:ASP:CA	2.13	0.79
48:h:258:ARG:NH1	48:h:264:ASP:OD1	2.14	0.79
56:p:107:LEU:HB3	56:p:152:ARG:HE	1.47	0.79
9:9:118:ILE:HB	9:9:119:PRO:HD3	1.64	0.79
16:AG:235:LYS:HD3	16:AG:327:LEU:HG	1.65	0.79
16:AG:353:HIS:C	16:AG:356:ILE:CG2	2.50	0.79
16:AG:451:ARG:NH2	16:AG:470:ILE:HG13	1.97	0.79
54:n:117:LEU:HD13	54:n:176:PRO:HG2	1.64	0.79
12:AB:148:LYS:HZ3	30:P:100:ILE:CG2	1.94	0.79
12:AB:149:GLU:OE1	12:AB:151:LYS:NZ	2.14	0.79
28:N:27:MET:N	28:N:58:GLU:OE2	2.16	0.79
9:9:3:LEU:CD1	9:9:4:ASN:H	1.96	0.79
12:AB:145:LEU:HA	30:P:88:MET:HG3	0.80	0.79
16:AG:365:ILE:CD1	16:AG:406:LEU:CD2	2.58	0.79
16:AG:451:ARG:HH12	16:AG:467:LEU:CA	1.92	0.79
18:D:275:G:H4'	36:V:16:LYS:HD2	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
8:7:22:U:H4'	23:I:80:LYS:HG3	1.64	0.79
8:7:30:U:OP2	14:AE:398:LYS:NZ	2.16	0.79
16:AG:244:ARG:HB2	25:K:69:ARG:HE	1.35	0.79
24:J:62:ARG:NH1	24:J:69:GLU:OE2	2.16	0.79
33:S:12:LYS:O	33:S:16:LEU:HD23	1.83	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	0.78
18:D:673:A:H2'	18:D:674:G:C8	2.18	0.78
41:a:1453:A:N1	63:w:74:GLU:OE1	2.16	0.78
47:g:18:CYS:HB3	47:g:40:CYS:CB	2.13	0.78
48:h:53:HIS:HE2	48:h:219:THR:HA	1.45	0.78
12:AB:109:THR:CB	12:AB:110:PRO:CD	2.56	0.78
43:c:30:LEU:HD12	43:c:31:PRO:HD2	1.63	0.78
8:7:3:G:C5'	18:D:1500:A:N6	2.46	0.78
16:AG:425:LEU:CA	16:AG:429:LYS:CG	2.60	0.78
17:C:38:LYS:HE2	17:C:38:LYS:HA	1.64	0.78
9:9:60:LEU:HD23	9:9:64:VAL:HG21	1.65	0.78
12:AB:21:LEU:HD11	12:AB:57:VAL:HG12	1.65	0.78
16:AG:189:GLU:HB3	16:AG:194:GLN:HG3	1.64	0.78
29:O:56:ASP:O	29:O:60:LYS:NZ	2.16	0.78
64:x:104:GLN:NE2	64:x:108:ASP:OD2	2.16	0.78
6:5:16:DA:C6	11:AA:151:ARG:HG3	2.19	0.78
16:AG:233:ARG:HB2	16:AG:327:LEU:HD23	1.66	0.78
39:Y:9:LYS:HE2	39:Y:55:PRO:CG	2.14	0.78
16:AG:363:LEU:HD23	16:AG:409:ARG:HB2	1.62	0.78
16:AG:365:ILE:HG21	16:AG:409:ARG:HH12	1.42	0.78
16:AG:402:THR:O	16:AG:405:ALA:HB3	1.84	0.78
16:AG:412:ASN:O	16:AG:416:THR:HG23	1.84	0.78
18:D:652:U:O3'	28:N:56:LYS:NZ	2.13	0.78
27:M:40:GLU:OE2	29:O:41:ARG:NH2	2.17	0.78
28:N:9:ASP:OD2	28:N:13:ARG:NH1	2.15	0.78
41:a:1276:A:O2'	63:w:20:MET:CE	2.30	0.78
57:q:2:LYS:NZ	57:q:32:LYS:O	2.17	0.78
9:9:81:LEU:HD21	41:a:1107:G:H4'	1.64	0.78
16:AG:425:LEU:HA	16:AG:429:LYS:HE3	0.95	0.78
13:AD:290:LEU:O	16:AG:82:TYR:OH	2.02	0.78
9:9:34:THR:O	9:9:38:MET:HG2	1.83	0.78
22:H:306:VAL:HA	22:H:309:MET:SD	2.23	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:W:40:ILE:HG23	37:W:44:MET:SD	2.24	0.78
12:AB:51:PHE:CE2	14:AE:288:PRO:CG	2.67	0.78
12:AB:151:LYS:HZ3	12:AB:151:LYS:N	1.82	0.78
16:AG:381:LEU:CA	16:AG:384:LEU:HD12	2.08	0.78
9:9:19:ALA:HA	9:9:70:GLU:HG2	1.66	0.77
9:9:94:ARG:HB2	9:9:97:LYS:HE2	1.67	0.77
16:AG:354:ALA:HA	16:AG:357:ASP:CB	2.14	0.77
16:AG:430:PRO:CG	16:AG:435:LEU:HD21	2.10	0.77
16:AG:381:LEU:HA	16:AG:384:LEU:CD1	2.09	0.77
16:AG:434:LEU:CD2	16:AG:456:LEU:N	2.46	0.77
16:AG:447:LYS:O	16:AG:470:ILE:CD1	2.31	0.77
27:M:18:PHE:HE2	27:M:47:LEU:HD21	1.48	0.77
35:U:3:THR:HG21	35:U:5:ARG:CZ	2.13	0.77
60:t:8:LEU:C	60:t:18:ARG:HH12	1.92	0.77
60:t:20:MET:HB3	60:t:44:LYS:NZ	1.98	0.77
39:Y:81:LYS:HZ2	39:Y:86:LYS:HE2	1.49	0.77
39:Y:93:ASN:C	39:Y:94:LYS:HD2	2.09	0.77
18:D:375:U:OP2	35:U:70:ARG:NH2	2.18	0.77
35:U:3:THR:HG21	35:U:5:ARG:NH1	1.99	0.77
10:B:18:G:N2	10:B:55:U:O2	2.17	0.77
41:a:1801:A:P	48:h:146:MET:HE1	2.25	0.77
12:AB:7:LEU:HD13	12:AB:75:VAL:HG21	1.65	0.77
16:AG:387:VAL:CG1	16:AG:388:PRO:CD	2.41	0.77
40:Z:2:ILE:HG22	40:Z:4:LYS:H	1.50	0.77
16:AG:307:ILE:HB	16:AG:338:VAL:HA	1.66	0.77
18:D:1227:A:OP1	38:X:93:ARG:NH2	2.18	0.77
31:Q:84:VAL:HG23	31:Q:107:ILE:HD11	1.67	0.77
16:AG:434:LEU:CA	16:AG:456:LEU:HD21	2.12	0.77
11:AA:856:ASN:C	16:AG:35:THR:HG21	2.10	0.77
16:AG:258:ARG:HG2	16:AG:258:ARG:NH1	1.99	0.77
31:Q:87:LYS:CG	31:Q:113:VAL:HG23	2.15	0.77
41:a:1405:U:H2'	41:a:1406:U:C6	2.20	0.77
8:7:2:U:OP1	18:D:1505:G:H8	1.65	0.76
37:W:44:MET:SD	37:W:62:VAL:HG11	2.25	0.76
59:s:37:ARG:HA	59:s:118:MET:CE	2.14	0.76
16:AG:451:ARG:CZ	16:AG:470:ILE:HG13	2.16	0.76
41:a:2511:U:C4'	50:j:130:GLN:OE1	2.33	0.76
6:5:14:DT:C7	11:AA:201:ARG:NH2	2.47	0.76
12:AB:151:LYS:HZ3	12:AB:151:LYS:CA	1.98	0.76
16:AG:434:LEU:HD11	16:AG:455:THR:O	1.85	0.76
16:AG:451:ARG:HE	16:AG:470:ILE:HG13	1.50	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:354:ALA:O	16:AG:355:ALA:C	2.26	0.76
40:Z:14:MET:HG3	40:Z:15:SER:H	1.48	0.76
41:a:1828:G:O6	48:h:221:ARG:NH1	2.19	0.76
63:w:12:ARG:O	63:w:17:ARG:NH2	2.19	0.76
9:9:27:VAL:HG13	9:9:83:ALA:HB3	1.66	0.76
24:J:58:LYS:NZ	24:J:69:GLU:OE2	2.15	0.76
10:A:18:G:N2	10:A:55:U:O2	2.17	0.76
11:AA:859:GLU:HG3	16:AG:38:LYS:CB	2.13	0.76
16:AG:283:PHE:CZ	16:AG:331:LEU:O	2.39	0.76
16:AG:284:VAL:HG12	16:AG:296:ILE:HD13	1.65	0.76
16:AG:354:ALA:C	16:AG:356:ILE:H	1.93	0.76
18:D:375:U:P	35:U:70:ARG:HE	2.07	0.76
41:a:686:U:O4	53:m:12:ARG:HD3	1.86	0.76
14:AE:59:ALA:HB1	14:AE:71:LEU:CD2	2.16	0.76
41:a:1406:U:O2'	41:a:1407:G:O5'	2.02	0.76
41:a:2335:A:OP2	64:x:13:ARG:CZ	2.33	0.76
62:v:1:MET:HA	62:v:1:MET:HE3	1.67	0.76
16:AG:425:LEU:CB	16:AG:429:LYS:HE3	2.16	0.76
21:G:49:MET:CE	21:G:201:PRO:HD3	2.16	0.76
12:AB:81:PHE:CZ	14:AE:141:PHE:HB3	2.21	0.76
16:AG:131:ARG:HA	16:AG:186:VAL:HG11	1.68	0.76
16:AG:201:LYS:HD2	16:AG:201:LYS:N	2.01	0.76
59:s:15:TRP:CZ3	59:s:135:GLN:HA	2.21	0.76
9:9:5:LEU:C	9:9:9:GLN:HE22	1.94	0.76
9:9:77:VAL:HG12	9:9:82:ILE:HG21	1.68	0.76
12:AB:42:LYS:HD2	12:AB:42:LYS:N	1.98	0.76
16:AG:240:THR:CG2	16:AG:247:PRO:HG3	2.16	0.76
21:G:30:PHE:CD1	21:G:201:PRO:HG3	2.21	0.76
25:K:142:ASP:O	25:K:145:GLU:HG3	1.86	0.76
16:AG:248:VAL:HG22	16:AG:273:ILE:HG22	1.68	0.75
16:AG:313:ASN:N	16:AG:313:ASN:OD1	2.19	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	2.59	0.75
26:L:42:TRP:HZ3	26:L:45:ARG:HH22	1.32	0.75
41:a:2297:A:N1	41:a:2321:U:C4	2.53	0.75
2:1:11:ARG:CZ	2:1:98:LYS:HE3	2.16	0.75
5:4:50:MET:O	5:4:56:PHE:CE2	2.38	0.75
54:n:4:LEU:HD11	54:n:101:GLU:CA	2.16	0.75
2:1:24:ILE:HG21	2:1:36:LEU:HD11	1.68	0.75
16:AG:354:ALA:O	16:AG:356:ILE:N	2.19	0.75
38:X:57:ARG:NH2	47:g:35:ASP:OD1	2.19	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:196:A:OP2	61:u:47:ARG:NH1	2.18	0.75
16:AG:218:GLU:CA	21:G:108:ARG:HH22	2.00	0.75
16:AG:371:THR:O	16:AG:375:GLU:HG3	1.86	0.75
38:X:28:THR:HG23	38:X:31:LYS:HE3	1.68	0.75
41:a:742:A:H2'	41:a:743:A:C8	2.22	0.75
12:AB:87:ILE:H	12:AB:87:ILE:HD12	1.52	0.75
12:AB:155:LYS:HB3	12:AB:158:GLU:HG3	1.69	0.75
21:G:154:MET:CE	21:G:158:PRO:HD3	2.16	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
9:9:134:GLU:OE2	9:9:136:ILE:HG22	1.85	0.75
22:H:52:GLN:OE1	22:H:86:ARG:CB	2.34	0.75
16:AG:228:ARG:HD2	16:AG:236:ILE:HB	1.68	0.75
39:Y:126:ARG:NH2	41:a:1083:U:OP1	2.19	0.75
60:t:42:THR:O	60:t:44:LYS:NZ	2.19	0.75
17:C:60:LYS:HZ2	18:D:734:G:H2'	1.50	0.75
21:G:20:THR:HA	21:G:39:HIS:CE1	2.21	0.75
41:a:537:G:OP2	59:s:2:LYS:NZ	2.20	0.75
42:b:68:LYS:NZ	42:b:70:GLU:OE1	2.19	0.75
54:n:56:ASP:OD2	54:n:150:ARG:NH1	2.20	0.75
2:1:25:ARG:HH22	41:a:520:G:P	2.10	0.75
16:AG:425:LEU:HD23	16:AG:429:LYS:NZ	1.99	0.75
50:j:46:ARG:NH2	50:j:88:GLU:O	2.19	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
11:AA:857:VAL:N	16:AG:35:THR:CG2	2.49	0.74
16:AG:62:TRP:HB3	16:AG:75:ILE:HD11	1.69	0.74
18:D:550:G:O2'	32:R:116:LYS:NZ	2.19	0.74
18:D:739:C:O2'	34:T:42:HIS:ND1	2.18	0.74
20:F:63:GLU:OE1	20:F:67:ARG:NH1	2.20	0.74
27:M:18:PHE:CE2	27:M:47:LEU:HD21	2.21	0.74
34:T:64:ARG:CZ	34:T:89:ARG:HH22	2.00	0.74
12:AB:143:LEU:N	12:AB:143:LEU:HD12	2.01	0.74
9:9:59:LEU:HD13	9:9:62:ARG:HD2	1.70	0.74
11:AA:859:GLU:CB	16:AG:37:LYS:C	2.48	0.74
12:AB:51:PHE:CE2	14:AE:288:PRO:HG3	2.22	0.74
16:AG:425:LEU:HG	16:AG:429:LYS:HE2	1.65	0.74
5:4:45:ASP:OD1	5:4:46:LYS:N	2.21	0.74
9:9:37:LYS:O	9:9:41:LEU:HG	1.86	0.74
17:C:38:LYS:HD3	18:D:719:C:H1'	1.67	0.74
44:d:42:C:O5'	54:n:64:LYS:NZ	2.20	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:404:G:OP1	24:J:115:ARG:NH1	2.19	0.74
52:l:90:GLN:NE2	52:l:91:ASP:O	2.21	0.74
18:D:1217:C:OP2	33:S:9:ARG:NH2	2.19	0.74
31:Q:87:LYS:HG2	31:Q:113:VAL:HG23	1.67	0.74
58:r:6:LEU:HD11	58:r:37:VAL:HG23	1.69	0.74
17:C:60:LYS:NZ	18:D:734:G:O3'	2.20	0.74
39:Y:56:VAL:CA	39:Y:71:LYS:HZ1	1.99	0.74
41:a:1276:A:O2'	63:w:20:MET:HE2	1.87	0.74
9:9:23:LEU:HD11	9:9:96:PHE:CD2	2.23	0.74
12:AB:117:ILE:HG22	12:AB:160:ARG:HG2	1.68	0.74
16:AG:279:ASN:CB	16:AG:280:PRO:CD	2.66	0.74
16:AG:393:LEU:C	16:AG:398:LEU:HD23	2.13	0.74
22:H:303:LEU:O	22:H:305:HIS:N	2.20	0.74
39:Y:102:ARG:CD	39:Y:141:ASP:HA	2.18	0.74
42:b:21:LEU:HD21	42:b:41:ARG:HE	1.51	0.74
5:4:57:TYR:HB3	62:v:136:MET:CE	2.17	0.74
8:7:22:U:H5''	23:I:80:LYS:CB	2.18	0.74
16:AG:254:MET:HA	16:AG:254:MET:CE	2.17	0.74
16:AG:363:LEU:CD2	16:AG:409:ARG:CB	2.62	0.74
16:AG:385:ALA:HB3	16:AG:411:LYS:HE2	1.68	0.74
11:AA:387:ASN:OD1	11:AA:394:ARG:NH1	2.21	0.74
12:AB:143:LEU:HD12	12:AB:143:LEU:H	1.50	0.74
16:AG:429:LYS:H	16:AG:429:LYS:HD2	1.53	0.74
56:p:69:ARG:NH1	56:p:73:ASN:OD1	2.21	0.74
63:w:33:ILE:HD11	63:w:112:TYR:CD1	2.23	0.74
16:AG:219:GLU:HA	16:AG:219:GLU:OE2	1.87	0.73
22:H:36:VAL:O	22:H:37:LEU:HD12	1.87	0.73
24:J:105:MET:CE	24:J:171:LEU:HD13	2.18	0.73
40:Z:6:GLN:OE1	40:Z:10:ALA:HB2	1.88	0.73
63:w:60:VAL:HG22	63:w:63:ARG:NH1	2.03	0.73
2:1:25:ARG:NH2	41:a:520:G:H5'	2.03	0.73
16:AG:425:LEU:O	16:AG:429:LYS:HE3	1.87	0.73
9:9:36:ASP:O	9:9:39:THR:HG22	1.87	0.73
11:AA:860:ALA:H	16:AG:37:LYS:CB	2.02	0.73
16:AG:434:LEU:HD21	16:AG:456:LEU:N	2.03	0.73
47:g:18:CYS:CB	47:g:40:CYS:HB3	2.17	0.73
54:n:127:ASN:OD1	54:n:158:THR:N	2.18	0.73
62:v:97:GLN:N	62:v:100:LYS:HE3	2.04	0.73
5:4:75:GLN:HG3	5:4:92:VAL:HG23	1.70	0.73
9:9:56:ARG:O	9:9:56:ARG:HG2	1.88	0.73
18:D:375:U:OP1	35:U:70:ARG:HG2	1.88	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:E:21:ASN:C	19:E:25:ARG:HE	1.96	0.73
39:Y:9:LYS:HE2	39:Y:55:PRO:CB	2.17	0.73
8:7:3:G:H5''	18:D:1500:A:H62	1.49	0.73
9:9:43:LYS:NZ	9:9:98:GLU:HB2	2.04	0.73
14:AE:81:ARG:HD2	14:AE:81:ARG:N	2.03	0.73
18:D:1158:C:O2'	21:G:132:LYS:NZ	2.21	0.73
39:Y:100:ILE:HG13	39:Y:139:VAL:CG2	2.18	0.73
41:a:465:G:OP1	53:m:12:ARG:NH2	2.22	0.73
48:h:130:LEU:HA	48:h:189:ARG:NH1	2.03	0.73
8:7:28:G:P	16:AG:112:GLN:HG3	2.28	0.73
11:AA:481:LEU:CB	12:AB:23:ARG:CZ	2.61	0.73
17:C:18:VAL:O	17:C:51:TYR:OH	2.06	0.73
17:C:38:LYS:NZ	18:D:718:A:C2	2.57	0.73
2:1:23:LEU:HD11	49:i:24:ALA:HB2	1.70	0.73
34:T:76:ALA:O	34:T:80:GLN:NE2	2.22	0.73
47:g:18:CYS:CB	47:g:40:CYS:CB	2.67	0.73
49:i:55:ILE:HD13	63:w:112:TYR:CZ	2.23	0.73
56:p:85:LYS:HE3	56:p:164:TYR:CD1	2.24	0.73
18:D:376:G:H5''	35:U:5:ARG:HD2	1.67	0.73
24:J:100:ASN:OD1	24:J:111:ARG:NH1	2.21	0.73
8:7:13:U:H3	24:J:47:ARG:HH11	1.37	0.73
9:9:129:LEU:HD12	9:9:130:PRO:HD3	1.70	0.73
18:D:13:U:C4	18:D:915:A:N6	2.57	0.73
39:Y:102:ARG:CZ	39:Y:139:VAL:HG11	2.19	0.73
62:v:50:ARG:HA	62:v:53:MET:SD	2.29	0.73
9:9:94:ARG:HB3	9:9:97:LYS:HZ3	1.54	0.73
23:I:142:MET:HE3	23:I:170:GLU:OE1	1.89	0.73
29:O:47:VAL:HA	29:O:50:GLN:HG2	1.70	0.73
32:R:56:ARG:HG2	32:R:62:GLU:OE2	1.89	0.73
34:T:21:ASP:O	34:T:22:THR:OG1	2.07	0.73
11:AA:855:PRO:CA	16:AG:105:ILE:HG12	2.19	0.72
16:AG:363:LEU:CD1	16:AG:410:ALA:HB2	2.17	0.72
17:C:73:ARG:NH1	31:Q:113:VAL:HG12	2.02	0.72
24:J:184:ARG:NH1	24:J:187:GLU:OE1	2.22	0.72
55:o:25:LYS:HB3	61:u:62:PRO:HG2	1.71	0.72
60:t:17:ARG:HB2	60:t:45:GLU:OE1	1.88	0.72
16:AG:365:ILE:HG23	16:AG:409:ARG:NH1	2.02	0.72
16:AG:393:LEU:CD2	16:AG:398:LEU:CG	2.58	0.72
16:AG:434:LEU:HG	16:AG:455:THR:C	2.14	0.72
18:D:311:C:P	35:U:31:ARG:HH22	2.12	0.72
6:5:9:DA:OP2	11:AA:470:ARG:HA	1.90	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AB:146:ILE:N	30:P:88:MET:CA	2.52	0.72
12:AB:146:ILE:HG23	30:P:88:MET:O	1.89	0.72
38:X:81:MET:HE2	41:a:888:C:C6	2.24	0.72
12:AB:37:LYS:HG2	12:AB:107:PRO:HD3	1.70	0.72
16:AG:365:ILE:CG2	16:AG:409:ARG:HH11	2.01	0.72
16:AG:442:ARG:HB3	16:AG:446:PHE:HE2	1.53	0.72
23:I:147:LYS:NZ	23:I:204:LYS:O	2.22	0.72
41:a:1278:C:H4'	63:w:24:MET:HE1	1.70	0.72
43:c:71:LEU:HB3	43:c:76:GLU:OE2	1.88	0.72
5:4:77:VAL:CG2	5:4:79:ARG:HE	2.03	0.72
9:9:78:GLY:N	9:9:79:PRO:HD2	2.04	0.72
16:AG:198:THR:HB	16:AG:201:LYS:HD3	1.70	0.72
26:L:36:ILE:CD1	26:L:64:VAL:HG22	2.18	0.72
27:M:103:TRP:CG	27:M:137:LYS:HZ2	2.08	0.72
39:Y:100:ILE:HD11	39:Y:139:VAL:HB	1.69	0.72
12:AB:16:ARG:HB3	12:AB:73:ARG:HD2	1.71	0.72
16:AG:352:ALA:O	16:AG:356:ILE:HG22	1.90	0.72
10:B:13:C:OP2	41:a:1907:G:N2	2.23	0.72
62:v:73:ILE:HD11	62:v:93:VAL:HG22	1.70	0.72
9:9:27:VAL:CG1	9:9:83:ALA:HB3	2.20	0.72
14:AE:68:TYR:HA	14:AE:92:VAL:HG23	1.72	0.72
14:AE:77:ARG:NE	14:AE:77:ARG:HA	2.04	0.72
16:AG:282:GLN:NE2	16:AG:282:GLN:HA	2.05	0.72
10:B:76:A:C2	41:a:2493:U:H4'	2.24	0.72
18:D:973:G:O4'	30:P:57:VAL:HG22	1.90	0.72
20:F:32:VAL:HG12	20:F:36:GLU:OE1	1.90	0.72
39:Y:81:LYS:HD2	39:Y:81:LYS:N	2.05	0.72
6:5:16:DA:H62	11:AA:151:ARG:H	1.37	0.72
16:AG:393:LEU:CD2	16:AG:398:LEU:HD13	2.19	0.72
10:B:53:G:C2	10:B:54:U:C5	2.77	0.72
20:F:13:ASP:OD1	20:F:14:VAL:N	2.22	0.72
21:G:19:GLN:NE2	22:H:75:VAL:O	2.23	0.72
8:7:11:U:O2'	25:K:33:PHE:HE1	1.71	0.72
8:7:18:U:C6	8:7:18:U:H5''	2.24	0.72
19:E:75:HIS:CE1	19:E:79:LEU:HD11	2.25	0.72
27:M:55:GLY:O	27:M:56:LYS:O	2.07	0.72
34:T:64:ARG:NH1	34:T:64:ARG:HA	2.05	0.72
41:a:2884:U:OP2	49:i:40:ARG:NH2	2.23	0.72
48:h:123:ALA:HB1	48:h:125:LYS:NZ	2.04	0.72
30:P:47:GLU:N	30:P:47:GLU:OE1	2.23	0.72
16:AG:262:VAL:HA	16:AG:265:GLU:HB2	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:I:166:GLU:OE1	23:I:166:GLU:N	2.23	0.71
24:J:76:TYR:CE2	24:J:204:TYR:HB2	2.24	0.71
39:Y:14:ALA:CB	39:Y:50:LYS:HD2	2.16	0.71
66:z:92:ARG:HG3	66:z:95:LEU:HD12	1.71	0.71
9:9:47:GLU:HB3	9:9:51:TYR:CZ	2.24	0.71
9:9:56:ARG:NH2	41:a:1084:A:O4'	2.23	0.71
16:AG:297:VAL:HG23	16:AG:306:ASP:HB2	1.71	0.71
18:D:1208:C:H2'	18:D:1209:C:H6	1.55	0.71
23:I:142:MET:HE1	23:I:148:GLY:HA2	1.72	0.71
10:A:53:G:C2	10:A:54:U:C5	2.77	0.71
16:AG:127:VAL:HG22	16:AG:192:GLY:C	2.15	0.71
18:D:653:U:C6	28:N:56:LYS:HE3	2.25	0.71
23:I:22:TRP:HZ3	23:I:24:ALA:HB2	1.53	0.71
41:a:2328:A:H2'	41:a:2329:U:C6	2.25	0.71
56:p:17:VAL:O	56:p:18:LYS:HE2	1.89	0.71
2:1:86:MET:HE1	2:1:88:ARG:HD3	1.71	0.71
14:AE:64:PRO:HG3	14:AE:90:VAL:CG1	2.20	0.71
18:D:13:U:O4	18:D:21:G:C2	2.43	0.71
34:T:63:ARG:O	34:T:67:LEU:HD23	1.90	0.71
60:t:8:LEU:C	60:t:18:ARG:NH1	2.48	0.71
12:AB:146:ILE:CD1	30:P:87:LEU:CB	2.67	0.71
16:AG:434:LEU:CD2	16:AG:459:LEU:CD1	2.54	0.71
18:D:1328:C:O2'	38:X:29:ARG:NH2	2.24	0.71
23:I:74:GLY:O	23:I:78:GLY:N	2.24	0.71
9:9:31:ARG:HD2	41:a:1053:C:HO2'	1.55	0.71
11:AA:474:ALA:O	11:AA:477:GLU:CB	2.37	0.71
16:AG:220:VAL:O	16:AG:240:THR:HG22	1.90	0.71
16:AG:422:GLU:CB	16:AG:426:GLY:HA3	2.21	0.71
23:I:39:VAL:O	23:I:43:LEU:HD23	1.90	0.71
52:l:6:LYS:NZ	52:l:120:VAL:O	2.24	0.71
32:R:5:ASN:OD1	36:V:36:LYS:NZ	2.24	0.71
41:a:987:C:O3'	46:f:11:ARG:NH1	2.23	0.71
47:g:5:ILE:HD12	54:n:64:LYS:HE3	1.72	0.71
1:0:10:LYS:HE2	41:a:994:C:O2'	1.90	0.71
12:AB:146:ILE:CG2	30:P:88:MET:HA	2.20	0.71
16:AG:102:PHE:HB2	16:AG:105:ILE:HG21	1.73	0.71
16:AG:223:ILE:O	16:AG:223:ILE:HD13	1.89	0.71
16:AG:336:LEU:HD12	16:AG:336:LEU:N	2.01	0.71
16:AG:413:ALA:O	16:AG:416:THR:OG1	2.05	0.71
18:D:375:U:OP1	35:U:70:ARG:NE	2.24	0.71
30:P:18:ILE:O	30:P:22:THR:HG23	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1824:G:OP1	48:h:52:ARG:NH2	2.23	0.71
52:l:6:LYS:NZ	52:l:120:VAL:N	2.39	0.71
9:9:122:GLN:HG2	9:9:123:ILE:N	2.06	0.71
11:AA:860:ALA:N	16:AG:37:LYS:CB	2.54	0.71
18:D:1376:U:OP2	27:M:25:LYS:NZ	2.24	0.71
22:H:332:VAL:HG22	22:H:342:ILE:HD11	1.73	0.71
25:K:93:ARG:HB3	25:K:93:ARG:CZ	2.21	0.71
33:S:90:ARG:HG3	33:S:92:GLU:CD	2.15	0.71
41:a:871:U:H2'	41:a:872:U:C6	2.26	0.71
59:s:15:TRP:CZ3	59:s:135:GLN:HG3	2.24	0.71
16:AG:285:ILE:CG1	16:AG:293:VAL:CG1	2.53	0.71
18:D:736:C:C5'	26:L:90:MET:HE2	2.21	0.71
41:a:1825:U:OP2	48:h:52:ARG:NH1	2.23	0.71
2:1:83:LYS:HB2	2:1:95:ARG:HD3	1.72	0.70
3:2:56:GLU:OE2	3:2:88:LYS:HA	1.90	0.70
11:AA:65:ASN:HB3	11:AA:105:TYR:HB2	1.73	0.70
11:AA:859:GLU:CG	16:AG:38:LYS:CA	2.61	0.70
12:AB:60:ASP:H	12:AB:61:PRO:HD2	1.50	0.70
16:AG:354:ALA:C	16:AG:356:ILE:N	2.43	0.70
25:K:69:ARG:CZ	25:K:69:ARG:HA	2.20	0.70
29:O:7:TYR:N	29:O:89:GLU:OE2	2.24	0.70
41:a:2469:A:N6	41:a:2481:G:O2'	2.23	0.70
41:a:2780:G:P	59:s:120:ARG:HH11	2.12	0.70
7:6:25:DT:H2'	11:AA:496:LYS:HG3	1.73	0.70
17:C:57:ARG:HE	17:C:61:ARG:HH12	1.37	0.70
18:D:636:U:H4'	36:V:6:ARG:CZ	2.19	0.70
31:Q:72:ASP:O	31:Q:75:LYS:NZ	2.21	0.70
62:v:39:GLY:N	62:v:96:ILE:O	2.22	0.70
12:AB:145:LEU:CD2	30:P:88:MET:CG	2.50	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:393:LEU:CB	16:AG:398:LEU:HD23	1.80	0.70
18:D:564:C:P	32:R:12:ARG:NH2	2.64	0.70
39:Y:57:VAL:O	39:Y:69:VAL:HG22	1.91	0.70
4:3:46:GLN:NE2	4:3:47:LYS:O	2.24	0.70
12:AB:51:PHE:CE2	14:AE:288:PRO:HG2	2.26	0.70
16:AG:389:MET:O	16:AG:404:GLU:OE2	2.09	0.70
16:AG:433:ASP:C	16:AG:456:LEU:CG	2.64	0.70
18:D:739:C:HO2'	34:T:42:HIS:CE1	2.09	0.70
16:AG:302:LYS:H	16:AG:302:LYS:CE	2.01	0.70
16:AG:355:ALA:CB	16:AG:382:GLU:OE1	2.18	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:M:16:PRO:HB3	29:O:46:MET:HG3	1.73	0.70
29:O:112:GLU:OE2	29:O:115:LYS:NZ	2.23	0.70
48:h:133:ARG:NE	48:h:187:ASP:OD2	2.25	0.70
54:n:134:GLU:HG2	54:n:137:ILE:HG23	1.72	0.70
59:s:15:TRP:NE1	59:s:53:TYR:HD2	1.90	0.70
63:w:42:LYS:N	63:w:42:LYS:HD3	2.05	0.70
9:9:6:GLN:HA	9:9:9:GLN:NE2	2.06	0.70
11:AA:856:ASN:C	16:AG:35:THR:CG2	2.65	0.70
16:AG:486:ARG:O	16:AG:490:TRP:CD1	2.41	0.70
47:g:16:CYS:CB	47:g:37:CYS:HB3	2.21	0.70
62:v:53:MET:HE3	62:v:120:ALA:HB2	1.74	0.70
14:AE:59:ALA:HB1	14:AE:71:LEU:HD22	1.71	0.70
16:AG:243:LYS:HG3	21:G:179:LEU:HA	1.73	0.70
16:AG:362:TYR:CA	16:AG:413:ALA:CB	2.69	0.70
25:K:111:MET:O	25:K:115:LEU:HD23	1.91	0.70
39:Y:19:PRO:HG2	39:Y:23:VAL:HG23	1.73	0.70
9:9:142:THR:OG1	40:Z:7:ILE:HG21	1.90	0.70
12:AB:146:ILE:H	30:P:88:MET:CB	2.02	0.70
16:AG:285:ILE:HG13	16:AG:293:VAL:HG13	1.71	0.70
16:AG:403:VAL:HG22	16:AG:406:LEU:HD12	1.71	0.70
16:AG:434:LEU:CA	16:AG:456:LEU:CD2	2.58	0.70
28:N:87:LYS:HD2	28:N:91:GLU:HB3	1.73	0.70
41:a:2682:A:C8	50:j:11:MET:HE2	2.25	0.70
2:1:25:ARG:HH22	41:a:520:G:C5'	2.04	0.70
23:I:24:ALA:HB3	23:I:29:PHE:CE2	2.27	0.70
41:a:2350:C:OP1	55:o:45:ARG:NH2	2.25	0.70
48:h:180:GLU:C	48:h:181:MET:HE2	2.17	0.70
12:AB:145:LEU:CA	30:P:88:MET:HG2	1.83	0.70
14:AE:79:LYS:CA	14:AE:81:ARG:NH2	2.41	0.70
16:AG:434:LEU:HD11	16:AG:455:THR:C	2.17	0.70
21:G:126:PHE:O	21:G:127:ASP:O	2.10	0.70
41:a:1190:G:OP1	61:u:30:THR:OG1	2.10	0.70
58:r:33:GLN:OE1	58:r:35:LYS:NZ	2.24	0.70
62:v:105:MET:SD	62:v:117:PHE:CZ	2.85	0.70
12:AB:20:HIS:HD2	12:AB:73:ARG:HB2	1.57	0.69
12:AB:87:ILE:HD12	12:AB:87:ILE:N	2.07	0.69
39:Y:19:PRO:O	39:Y:24:GLY:HA2	1.92	0.69
39:Y:100:ILE:HG13	39:Y:139:VAL:HG23	1.74	0.69
39:Y:100:ILE:CG1	39:Y:139:VAL:HB	2.22	0.69
41:a:1012:U:O4	59:s:30:THR:HG21	1.92	0.69
52:l:17:THR:HA	52:l:21:ARG:HH21	1.57	0.69

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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	0.69
57:q:25:VAL:HB	57:q:35:GLN:OE1	1.92	0.69
59:s:73:VAL:C	59:s:74:TYR:CD2	2.70	0.69
12:AB:69:ILE:HD12	12:AB:69:ILE:N	2.07	0.69
16:AG:171:GLU:OE1	16:AG:267:GLY:HA3	1.92	0.69
18:D:274:A:H4'	36:V:16:LYS:CE	2.22	0.69
31:Q:52:PHE:HD2	31:Q:56:ARG:HG2	1.56	0.69
10:A:37:A:O2'	10:A:38:A:H5'	1.92	0.69
11:AA:859:GLU:HG3	16:AG:38:LYS:H	0.55	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	1.92	0.69
16:AG:102:PHE:HB2	16:AG:105:ILE:CG2	2.22	0.69
26:L:42:TRP:CH2	26:L:102:MET:CG	2.74	0.69
27:M:4:ARG:HG2	27:M:5:ARG:NH1	2.08	0.69
27:M:66:LEU:HG	27:M:70:ARG:HE	1.57	0.69
30:P:86:ALA:O	30:P:90:LEU:HD13	1.93	0.69
38:X:71:ARG:CZ	38:X:72:GLU:HG3	2.22	0.69
39:Y:102:ARG:HD2	39:Y:141:ASP:HA	1.74	0.69
40:Z:14:MET:HB3	40:Z:17:MET:CG	2.21	0.69
54:n:69:LYS:HD3	54:n:84:PRO:HA	1.74	0.69
61:u:123:ARG:NH2	61:u:143:GLU:OE2	2.25	0.69
12:AB:146:ILE:HG23	30:P:88:MET:C	2.17	0.69
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
38:X:66:GLU:OE1	38:X:66:GLU:N	2.23	0.69
48:h:205:LEU:HD12	48:h:210:ALA:HB1	1.75	0.69
63:w:45:ARG:O	63:w:49:GLU:OE1	2.11	0.69
2:1:7:HIS:CD2	2:1:10:ALA:HB2	2.27	0.69
11:AA:858:GLY:N	16:AG:35:THR:HB	2.05	0.69
12:AB:152:HIS:NE2	30:P:81:GLU:HG3	2.08	0.69
16:AG:433:ASP:O	16:AG:437:LEU:HG	1.92	0.69
24:J:76:TYR:HE2	24:J:204:TYR:HB2	1.57	0.69
16:AG:266:LEU:H	16:AG:266:LEU:CD2	2.06	0.69
10:B:38:A:O2'	18:D:790:A:OP1	2.09	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
25:K:111:MET:CE	25:K:125:ALA:HB1	2.23	0.69
41:a:2356:U:H5''	42:b:20:ARG:CD	2.21	0.69
10:A:6:G:HO2'	10:A:7:G:C5'	2.05	0.69
11:AA:860:ALA:N	16:AG:37:LYS:HB3	2.07	0.69
16:AG:171:GLU:OE2	16:AG:267:GLY:CA	2.41	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:393:LEU:HD23	16:AG:398:LEU:CD1	2.19	0.69
16:AG:462:GLN:OE1	16:AG:467:LEU:HD21	1.93	0.69
10:B:58:A:O2'	10:B:59:A:H3'	1.93	0.69
19:E:9:LYS:C	19:E:13:GLN:HE22	2.00	0.69
19:E:25:ARG:CD	19:E:66:LEU:HD11	2.22	0.69
21:G:26:LYS:HD2	21:G:193:PRO:HG2	1.74	0.69
25:K:115:LEU:HD12	25:K:120:VAL:HG11	1.75	0.69
39:Y:91:LYS:NZ	39:Y:97:VAL:HG21	2.07	0.69
41:a:2742:G:OP1	57:q:36:ARG:NH1	2.25	0.69
12:AB:148:LYS:NZ	30:P:100:ILE:CB	2.56	0.69
16:AG:279:ASN:CB	16:AG:280:PRO:HD2	2.22	0.69
16:AG:429:LYS:CD	16:AG:429:LYS:H	2.05	0.69
18:D:1308:U:OP1	38:X:100:GLN:NE2	2.26	0.69
22:H:22:SER:N	22:H:69:ASP:OD2	2.26	0.69
26:L:35:LYS:NZ	26:L:36:ILE:O	2.26	0.69
47:g:5:ILE:HB	54:n:64:LYS:HD3	1.75	0.69
61:u:55:MET:HE1	61:u:60:ARG:HG2	1.75	0.69
9:9:43:LYS:HZ2	9:9:101:LYS:HE2	1.58	0.69
9:9:52:MET:HE1	9:9:85:SER:C	2.17	0.69
16:AG:285:ILE:CD1	16:AG:293:VAL:HG11	2.22	0.69
16:AG:355:ALA:C	16:AG:380:THR:HG21	2.18	0.69
34:T:27:VAL:O	34:T:31:LEU:HD23	1.93	0.69
39:Y:116:MET:CG	39:Y:124:MET:HG2	2.21	0.69
39:Y:118:GLY:O	39:Y:124:MET:HE3	1.93	0.69
41:a:1655:A:H1'	50:j:118:PHE:CE2	2.28	0.69
54:n:56:ASP:HB3	54:n:150:ARG:NH2	2.07	0.69
5:4:53:LYS:HD2	5:4:56:PHE:CE2	2.28	0.68
5:4:63:ILE:HD11	5:4:91:PHE:CD2	2.28	0.68
8:7:8:U:OP2	18:D:1397:C:N3	2.26	0.68
16:AG:235:LYS:HZ2	16:AG:331:LEU:HG	1.58	0.68
38:X:28:THR:HG23	38:X:31:LYS:CE	2.22	0.68
40:Z:2:ILE:HG22	40:Z:5:ASP:H	1.58	0.68
41:a:1653:G:H3'	63:w:2:ARG:HD2	1.74	0.68
27:M:111:ARG:O	27:M:119:ARG:NH2	2.27	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:94:GLU:HA	54:n:97:TRP:HE3	1.59	0.68
60:t:5:GLN:HA	60:t:20:MET:HE2	1.74	0.68
2:1:25:ARG:HH22	41:a:520:G:H5'	1.58	0.68
4:3:72:ILE:HD12	4:3:83:VAL:HG21	1.76	0.68
8:7:23:U:H2'	14:AE:68:TYR:OH	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:9:44:ALA:HB1	9:9:52:MET:HB3	1.74	0.68
9:9:92:ALA:HB1	9:9:129:LEU:HD22	1.74	0.68
18:D:1344:C:P	29:O:124:ARG:HH11	2.16	0.68
36:V:16:LYS:HD3	36:V:16:LYS:C	2.17	0.68
38:X:90:ARG:CD	38:X:97:VAL:HA	2.23	0.68
46:f:16:ARG:NE	46:f:54:MET:SD	2.66	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
12:AB:145:LEU:HD12	30:P:88:MET:H	1.56	0.68
16:AG:453:VAL:CG2	16:AG:462:GLN:NE2	2.56	0.68
10:B:37:A:O2'	10:B:38:A:H5'	1.93	0.68
33:S:20:TYR:HE2	33:S:52:PRO:HG2	1.58	0.68
62:v:1:MET:HE1	62:v:43:ALA:C	2.18	0.68
1:0:52:PRO:HB3	66:z:89:GLU:OE2	1.94	0.68
9:9:43:LYS:HA	9:9:46:ARG:CZ	2.23	0.68
11:AA:859:GLU:HB2	16:AG:38:LYS:N	1.86	0.68
19:E:78:ASN:O	19:E:82:GLN:OE1	2.10	0.68
27:M:109:ARG:HD2	27:M:116:MET:HE1	1.76	0.68
2:1:19:LEU:HD21	49:i:22:LEU:HB2	1.75	0.68
9:9:43:LYS:NZ	9:9:101:LYS:HE2	2.09	0.68
11:AA:859:GLU:HB2	16:AG:37:LYS:HB3	1.75	0.68
14:AE:1033:GLY:HA3	14:AE:1081:VAL:O	1.92	0.68
23:I:134:MET:HE1	23:I:167:TRP:HA	1.76	0.68
35:U:45:GLU:HG3	35:U:46:LYS:HD3	1.76	0.68
37:W:36:ARG:NH2	37:W:75:ALA:O	2.26	0.68
52:l:101:TYR:CE2	52:l:105:LEU:HD11	2.28	0.68
62:v:111:GLU:O	62:v:115:GLU:OE1	2.11	0.68
16:AG:365:ILE:HD13	16:AG:406:LEU:HD21	1.70	0.68
20:F:12:PHE:CE1	31:Q:107:ILE:HG22	2.29	0.68
26:L:18:VAL:HA	26:L:21:MET:HE2	1.75	0.68
5:4:50:MET:HA	5:4:56:PHE:CZ	2.29	0.68
5:4:77:VAL:HG23	5:4:89:ILE:HG12	1.76	0.68
18:D:673:A:H5''	26:L:86:ARG:NH1	2.09	0.68
26:L:9:MET:HE1	26:L:85:ILE:CG2	2.22	0.68
9:9:44:ALA:HA	9:9:47:GLU:OE1	1.94	0.68
23:I:134:MET:HE3	23:I:151:VAL:HG23	1.74	0.68
31:Q:80:LYS:HB3	31:Q:106:ARG:NH1	2.09	0.68
33:S:42:TRP:CZ3	47:g:66:ILE:HG23	2.29	0.68
41:a:1056:G:O2'	41:a:1103:A:N6	2.27	0.68
41:a:2314:A:H1'	54:n:155:THR:HG21	1.73	0.68
52:l:6:LYS:HE3	52:l:119:ILE:HG23	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AB:106:ASP:CB	12:AB:107:PRO:CD	2.62	0.67
22:H:23:ILE:N	22:H:69:ASP:OD2	2.27	0.67
27:M:20:SER:CB	27:M:23:LEU:HD13	2.24	0.67
41:a:1800:C:OP2	48:h:182:ARG:NH1	2.27	0.67
48:h:76:ALA:HB1	48:h:94:VAL:HG12	1.76	0.67
10:A:58:A:O2'	10:A:59:A:H3'	1.93	0.67
16:AG:298:VAL:HA	16:AG:303:HIS:HD1	1.58	0.67
10:B:6:G:HO2'	10:B:7:G:C5'	2.07	0.67
18:D:588:G:H4'	28:N:3:MET:HE1	1.77	0.67
41:a:111:A:O3'	45:e:58:ASN:ND2	2.28	0.67
41:a:2420:C:H5''	51:k:8:LYS:CE	2.25	0.67
60:t:9:ASN:OD1	60:t:10:VAL:N	2.27	0.67
63:w:24:MET:HE2	63:w:34:ILE:CD1	2.24	0.67
7:6:20:DA:N6	8:7:36:G:N1	2.41	0.67
12:AB:145:LEU:HD12	30:P:86:ALA:C	2.18	0.67
14:AE:59:ALA:HB2	14:AE:71:LEU:HD21	1.74	0.67
16:AG:60:ARG:HG3	16:AG:98:GLU:HG3	1.74	0.67
16:AG:207:GLU:HA	16:AG:210:ARG:HB2	1.76	0.67
16:AG:353:HIS:C	16:AG:357:ASP:H	2.01	0.67
12:AB:64:ILE:HD12	12:AB:64:ILE:N	2.07	0.67
16:AG:385:ALA:HB2	16:AG:411:LYS:HE3	1.69	0.67
16:AG:440:VAL:HG23	16:AG:481:LEU:HD22	1.76	0.67
19:E:79:LEU:HA	19:E:82:GLN:OE1	1.94	0.67
26:L:42:TRP:HZ2	26:L:102:MET:SD	2.17	0.67
32:R:27:CYS:HB2	32:R:30:LYS:HE2	1.75	0.67
33:S:19:LYS:HG3	33:S:20:TYR:CD1	2.29	0.67
39:Y:116:MET:HG2	39:Y:124:MET:CG	2.24	0.67
5:4:75:GLN:HG3	5:4:92:VAL:CG2	2.25	0.67
13:AD:48:LEU:HB2	13:AD:183:ILE:HD11	1.76	0.67
16:AG:239:LYS:HG3	16:AG:276:TRP:HB3	1.75	0.67
16:AG:447:LYS:O	16:AG:470:ILE:HD13	1.95	0.67
10:B:24:U:O2'	41:a:1922:G:O3'	2.12	0.67
18:D:1151:A:HO2'	18:D:1152:A:P	2.18	0.67
20:F:8:GLU:OE2	20:F:9:ASN:ND2	2.26	0.67
22:H:304:VAL:O	22:H:304:VAL:HG12	1.94	0.67
39:Y:32:VAL:HG22	39:Y:60:VAL:HG21	1.76	0.67
41:a:666:A:H1'	55:o:4:ILE:HD12	1.77	0.67
52:l:118:LEU:HD11	52:l:188:MET:SD	2.34	0.67
56:p:85:LYS:CE	56:p:164:TYR:HD1	2.07	0.67
62:v:1:MET:HE1	62:v:44:ARG:N	2.09	0.67
66:z:79:PHE:HE1	66:z:110:VAL:HA	1.60	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:4:89:ILE:HG21	5:4:91:PHE:CE1	2.29	0.67
9:9:47:GLU:HG3	9:9:94:ARG:CZ	2.24	0.67
9:9:73:LYS:HG2	9:9:117:LEU:HD12	1.76	0.67
16:AG:380:THR:O	16:AG:384:LEU:HD12	1.95	0.67
18:D:945:G:C2	18:D:946:A:C8	2.83	0.67
19:E:25:ARG:HD2	19:E:66:LEU:HD11	1.75	0.67
38:X:81:MET:CE	41:a:888:C:C5	2.78	0.67
5:4:56:PHE:O	5:4:61:LEU:HD11	1.95	0.67
12:AB:6:LEU:HB3	12:AB:79:VAL:HG11	1.76	0.67
16:AG:168:LEU:HB2	16:AG:171:GLU:HB2	1.76	0.67
16:AG:228:ARG:HA	16:AG:327:LEU:CD1	2.22	0.67
18:D:274:A:H4'	36:V:16:LYS:HE3	1.76	0.67
18:D:876:C:H1'	28:N:12:THR:HG21	1.76	0.67
24:J:121:LYS:HG2	24:J:131:ASN:HD21	1.59	0.67
39:Y:23:VAL:HG23	39:Y:24:GLY:H	1.58	0.67
39:Y:85:ILE:H	39:Y:85:ILE:HD12	1.59	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
10:B:75:C:OP2	41:a:2602:A:C2'	2.43	0.67
18:D:1308:U:P	38:X:100:GLN:HE22	2.16	0.67
20:F:31:GLU:OE1	20:F:34:ARG:NH2	2.28	0.67
22:H:308:GLU:O	22:H:310:ASP:N	2.26	0.67
25:K:156:LYS:HE3	28:N:71:VAL:HG13	1.76	0.67
34:T:80:GLN:O	34:T:83:GLU:HG3	1.95	0.67
38:X:90:ARG:HD2	38:X:97:VAL:HA	1.77	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:NZ	2.09	0.67
46:f:41:THR:O	46:f:44:ILE:HG22	1.94	0.67
48:h:129:THR:HG22	48:h:189:ARG:HD2	1.77	0.67
66:z:68:ALA:HB1	66:z:106:PHE:CE2	2.29	0.67
12:AB:145:LEU:CD1	30:P:86:ALA:O	2.43	0.67
16:AG:448:LEU:CD2	16:AG:473:LEU:HD12	2.24	0.67
39:Y:37:PHE:CZ	39:Y:56:VAL:HG11	2.29	0.67
41:a:1802:A:H2'	41:a:1803:A:C8	2.30	0.67
50:j:3:GLY:O	50:j:4:LEU:HD12	1.95	0.67
8:7:11:U:H4'	25:K:20:ARG:HH21	1.53	0.67
8:7:41:G:OP1	11:AA:1073:LYS:NZ	2.23	0.67
9:9:139:LEU:HD21	40:Z:11:VAL:HG22	1.76	0.67
12:AB:151:LYS:HZ3	12:AB:151:LYS:CB	2.08	0.67
16:AG:243:LYS:CD	21:G:179:LEU:HD22	2.25	0.67
18:D:564:C:OP1	32:R:12:ARG:NH1	2.27	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:G:100:MET:HE1	21:G:101:LEU:HD21	1.75	0.67
26:L:38:ARG:NH1	26:L:99:ALA:HB2	2.09	0.67
37:W:62:VAL:HG13	37:W:66:MET:HE3	1.77	0.67
16:AG:284:VAL:CG1	16:AG:296:ILE:HD13	2.25	0.66
17:C:13:PHE:HB3	17:C:51:TYR:CE1	2.30	0.66
41:a:1665:A:O5'	60:t:66:LYS:NZ	2.28	0.66
41:a:2682:A:O4'	50:j:11:MET:HE1	1.95	0.66
60:t:38:ILE:HD11	60:t:112:PHE:HZ	1.60	0.66
16:AG:393:LEU:O	16:AG:398:LEU:HD23	1.95	0.66
17:C:51:TYR:CD1	17:C:54:GLN:NE2	2.63	0.66
18:D:43:C:OP1	35:U:12:LYS:NZ	2.29	0.66
28:N:67:GLN:OE1	28:N:67:GLN:N	2.28	0.66
41:a:927:A:H2'	41:a:928:A:C8	2.30	0.66
41:a:2682:A:C8	50:j:11:MET:HE1	2.30	0.66
58:r:37:VAL:HG12	58:r:43:ASN:ND2	2.09	0.66
59:s:13:ARG:HH22	59:s:50:THR:HA	1.60	0.66
11:AA:857:VAL:C	16:AG:35:THR:CG2	2.67	0.66
12:AB:87:ILE:HD11	14:AE:162:GLU:CG	2.23	0.66
16:AG:308:ALA:HB2	16:AG:344:LEU:HD11	1.77	0.66
16:AG:323:GLN:HA	16:AG:323:GLN:HE21	1.59	0.66
21:G:53:ALA:HA	21:G:56:GLU:OE1	1.96	0.66
41:a:1816:C:N4	48:h:35:GLU:OE2	2.20	0.66
62:v:1:MET:HE1	62:v:44:ARG:HA	1.76	0.66
12:AB:145:LEU:CD1	30:P:88:MET:HB2	2.12	0.66
17:C:70:TYR:CE2	18:D:674:G:H4'	2.30	0.66
39:Y:102:ARG:HG3	39:Y:140:GLU:O	1.96	0.66
46:f:40:ASP:C	46:f:45:ARG:HH22	2.03	0.66
54:n:93:GLY:O	54:n:96:MET:N	2.29	0.66
63:w:49:GLU:OE1	63:w:49:GLU:N	2.26	0.66
16:AG:363:LEU:HD21	16:AG:410:ALA:N	1.79	0.66
16:AG:422:GLU:CA	16:AG:426:GLY:H	2.08	0.66
10:B:75:C:P	41:a:2602:A:HO2'	2.13	0.66
18:D:1228:C:OP2	38:X:110:LYS:NZ	2.28	0.66
33:S:42:TRP:HH2	47:g:66:ILE:HA	1.61	0.66
41:a:1454:C:O4'	63:w:63:ARG:NE	2.28	0.66
57:q:1:MET:HE1	57:q:35:GLN:CA	2.25	0.66
10:A:32:C:H4'	27:M:86:GLN:NE2	2.10	0.66
12:AB:118:ILE:HD13	12:AB:118:ILE:N	2.11	0.66
22:H:163:ARG:N	22:H:298:GLU:OE2	2.28	0.66
23:I:151:VAL:HG12	23:I:200:VAL:HG23	1.77	0.66
48:h:52:ARG:HE	48:h:53:HIS:HE1	1.44	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:t:112:PHE:HD2	60:t:115:ILE:HD12	1.59	0.66
9:9:14:GLU:O	9:9:18:VAL:HG23	1.96	0.66
9:9:23:LEU:HD13	9:9:92:ALA:HB2	1.77	0.66
43:c:71:LEU:HB3	43:c:76:GLU:CD	2.20	0.66
52:l:40:ARG:HD2	52:l:92:HIS:ND1	2.11	0.66
9:9:25:ALA:HB3	9:9:99:PHE:HD2	1.61	0.66
12:AB:5:TYR:HB2	12:AB:57:VAL:HG23	1.76	0.66
38:X:28:THR:HA	38:X:31:LYS:HE3	1.78	0.66
60:t:99:ILE:HD13	60:t:118:LEU:HB2	1.77	0.66
9:9:28:ALA:H	9:9:110:ALA:HA	1.61	0.66
11:AA:387:ASN:CG	11:AA:394:ARG:HH12	1.81	0.66
12:AB:105:VAL:HG11	14:AE:285:LEU:HD11	1.78	0.66
19:E:54:MET:HE1	19:E:75:HIS:CE1	2.31	0.66
21:G:90:PHE:CE2	21:G:154:MET:HE3	2.31	0.66
62:v:111:GLU:HG2	62:v:112:LEU:HD12	1.78	0.66
9:9:139:LEU:CD2	40:Z:11:VAL:HG22	2.26	0.66
10:A:71:C:H3'	10:A:72:A:C8	2.31	0.66
12:AB:8:TYR:OH	14:AE:278:ARG:NH2	2.29	0.66
16:AG:123:ARG:HG2	16:AG:191:ARG:O	1.96	0.66
18:D:280:C:H1'	36:V:40:ARG:NH2	2.11	0.66
27:M:23:LEU:HD21	27:M:59:LEU:HD21	1.76	0.66
27:M:46:ALA:CB	27:M:120:LEU:HD22	2.25	0.66
29:O:86:ALA:O	29:O:89:GLU:HG2	1.95	0.66
39:Y:45:THR:HG21	39:Y:50:LYS:HD3	1.76	0.66
41:a:752:A:OP1	53:m:1:MET:HE1	1.95	0.66
16:AG:425:LEU:CB	16:AG:429:LYS:CE	2.71	0.65
10:B:71:C:H3'	10:B:72:A:C8	2.30	0.65
20:F:58:LYS:O	20:F:62:ARG:HG2	1.96	0.65
27:M:26:PHE:HD1	27:M:101:MET:SD	2.19	0.65
41:a:2175:C:H2'	41:a:2176:A:C8	2.31	0.65
62:v:45:GLN:NE2	62:v:125:PRO:HD3	2.10	0.65
5:4:84:PRO:O	5:4:85:LYS:HE2	1.96	0.65
16:AG:353:HIS:HA	16:AG:356:ILE:HG23	1.78	0.65
21:G:101:LEU:HD22	21:G:157:LEU:CD1	2.26	0.65
24:J:196:ASN:OD1	24:J:198:HIS:CE1	2.49	0.65
39:Y:5:GLN:HG2	39:Y:61:TYR:CD1	2.31	0.65
39:Y:79:LEU:HD21	39:Y:105:LEU:CD2	2.24	0.65
41:a:2355:G:C2'	41:a:2356:U:H5'	2.26	0.65
51:k:21:TYR:OH	51:k:39:PHE:O	2.10	0.65
19:E:21:ASN:C	19:E:25:ARG:NE	2.54	0.65
21:G:90:PHE:CD2	21:G:154:MET:HE3	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:G:134:ALA:O	21:G:137:ARG:HG2	1.96	0.65
10:A:76:A:N6	41:a:2422:C:O5'	2.29	0.65
16:AG:235:LYS:NZ	16:AG:331:LEU:HG	2.10	0.65
18:D:246:A:C2	18:D:282:A:C5	2.84	0.65
18:D:1151:A:O2'	18:D:1152:A:O5'	2.13	0.65
18:D:1158:C:O2'	21:G:132:LYS:CE	2.45	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
41:a:2572:A:N7	50:j:150:GLN:NE2	2.45	0.65
41:a:2636:C:O2'	50:j:45:TYR:OH	1.99	0.65
50:j:55:LYS:HZ1	50:j:59:ARG:C	2.05	0.65
56:p:52:PHE:CD1	56:p:69:ARG:HD3	2.32	0.65
60:t:1:MET:HE1	60:t:32:TYR:CG	2.31	0.65
60:t:1:MET:HE1	60:t:32:TYR:CD1	2.31	0.65
14:AE:58:CYS:SG	14:AE:59:ALA:N	2.69	0.65
14:AE:85:CYS:SG	68:AE:1502:ZN:ZN	1.79	0.65
16:AG:321:ASN:OD1	16:AG:321:ASN:N	2.25	0.65
16:AG:425:LEU:HG	16:AG:429:LYS:HD3	1.78	0.65
22:H:303:LEU:O	22:H:303:LEU:HG	1.96	0.65
39:Y:81:LYS:NZ	39:Y:86:LYS:HE2	2.12	0.65
39:Y:102:ARG:NE	39:Y:102:ARG:HA	2.11	0.65
44:d:55:U:H1'	54:n:26:MET:CE	2.26	0.65
47:g:58:ASP:C	47:g:62:LYS:NZ	2.55	0.65
59:s:43:GLU:OE1	59:s:43:GLU:N	2.29	0.65
62:v:45:GLN:NE2	62:v:125:PRO:CD	2.59	0.65
5:4:50:MET:HB3	5:4:56:PHE:CE1	2.31	0.65
12:AB:64:ILE:H	12:AB:64:ILE:CD1	1.97	0.65
12:AB:92:VAL:HG21	14:AE:289:ASP:HB3	1.78	0.65
17:C:34:THR:N	17:C:38:LYS:O	2.30	0.65
17:C:73:ARG:HH12	31:Q:113:VAL:CB	2.09	0.65
18:D:375:U:P	35:U:70:ARG:NE	2.69	0.65
18:D:1308:U:P	38:X:100:GLN:NE2	2.70	0.65
39:Y:24:GLY:O	39:Y:27:LEU:HG	1.96	0.65
41:a:1278:C:C4'	63:w:24:MET:HE1	2.27	0.65
41:a:1596:A:H2'	41:a:1597:A:C8	2.32	0.65
41:a:2356:U:O3'	42:b:20:ARG:CZ	2.45	0.65
55:o:30:ARG:HH12	61:u:62:PRO:CB	2.10	0.65
59:s:53:TYR:CE1	59:s:121:LYS:HD2	2.32	0.65
62:v:31:PHE:N	62:v:104:GLU:OE2	2.30	0.65
66:z:41:LYS:HG3	66:z:45:TYR:CE2	2.32	0.65
6:5:16:DA:N6	11:AA:150:HIS:C	2.55	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:7:21:U:OP1	23:I:80:LYS:HG2	1.96	0.65
9:9:25:ALA:HB2	9:9:96:PHE:CE1	2.31	0.65
9:9:47:GLU:HG2	9:9:95:LEU:HD21	1.78	0.65
12:AB:11:ARG:HG3	12:AB:11:ARG:NH1	2.09	0.65
12:AB:43:ARG:HH22	12:AB:133:PRO:CB	2.09	0.65
14:AE:288:PRO:HD2	14:AE:291:ILE:HG22	1.74	0.65
27:M:4:ARG:CG	27:M:5:ARG:CZ	2.75	0.65
36:V:60:GLU:OE1	36:V:76:VAL:CG2	2.45	0.65
41:a:998:C:OP2	66:z:92:ARG:NH2	2.29	0.65
48:h:53:HIS:NE2	48:h:219:THR:HA	2.11	0.65
52:l:45:ALA:HB1	52:l:88:ARG:NH2	2.12	0.65
59:s:15:TRP:NE1	59:s:53:TYR:CD2	2.63	0.65
60:t:42:THR:HG23	60:t:44:LYS:NZ	2.12	0.65
66:z:85:LYS:HD2	66:z:116:ALA:HB1	1.78	0.65
8:7:21:U:O4	23:I:82:GLU:HB2	1.97	0.65
9:9:24:SER:OG	9:9:86:MET:HE2	1.96	0.65
12:AB:43:ARG:NH2	12:AB:133:PRO:HB2	2.12	0.65
16:AG:425:LEU:O	16:AG:429:LYS:CE	2.45	0.65
24:J:150:LYS:HE2	24:J:178:MET:HE2	1.79	0.65
40:Z:22:LEU:O	40:Z:26:MET:HE1	1.97	0.65
11:AA:858:GLY:CA	16:AG:35:THR:C	2.69	0.65
16:AG:183:LEU:HA	16:AG:197:VAL:HA	1.78	0.65
39:Y:20:SER:HB2	39:Y:21:PRO:HD3	1.79	0.65
41:a:1824:G:OP1	48:h:52:ARG:CZ	2.44	0.65
2:1:71:VAL:HB	2:1:74:ILE:HD11	1.79	0.65
3:2:9:LYS:O	3:2:12:ARG:NH1	2.29	0.65
8:7:22:U:C5'	23:I:80:LYS:CG	2.51	0.65
14:AE:84:ILE:HG22	14:AE:91:GLU:HG3	1.78	0.65
16:AG:393:LEU:HD23	16:AG:398:LEU:HD13	1.78	0.65
16:AG:453:VAL:HG13	16:AG:458:ASP:HB3	1.77	0.65
22:H:277:GLY:HA2	22:H:331:MET:CE	2.27	0.65
22:H:308:GLU:HG2	22:H:309:MET:H	1.61	0.65
33:S:87:ALA:CA	33:S:90:ARG:NH1	2.60	0.65
34:T:53:ARG:O	34:T:57:LEU:HD23	1.96	0.65
41:a:614:A:O2'	41:a:615:U:OP2	2.12	0.65
41:a:2308:G:C5	54:n:77:PHE:CZ	2.85	0.65
41:a:2682:A:H2'	41:a:2683:C:O4'	1.96	0.65
41:a:2723:C:H5''	63:w:1:MET:HE3	1.78	0.65
43:c:66:THR:HG22	43:c:70:GLU:OE2	1.97	0.65
52:l:62:GLN:O	52:l:69:ARG:NE	2.30	0.65
52:l:147:LEU:HB2	52:l:183:PHE:HD2	1.62	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:7:9:U:N3	18:D:1196:A:N7	2.45	0.64
19:E:16:LYS:O	19:E:19:LYS:HG2	1.97	0.64
19:E:28:MET:SD	19:E:61:GLN:HG3	2.36	0.64
32:R:30:LYS:HB3	32:R:57:LEU:HD11	1.78	0.64
52:l:194:LYS:O	52:l:198:GLU:OE1	2.15	0.64
56:p:107:LEU:O	56:p:152:ARG:CZ	2.45	0.64
3:2:3:ARG:NH1	3:2:5:GLU:OE2	2.30	0.64
8:7:11:U:C4'	25:K:20:ARG:HH22	1.93	0.64
12:AB:145:LEU:HD22	30:P:88:MET:HB3	0.75	0.64
14:AE:79:LYS:C	14:AE:81:ARG:NH2	2.56	0.64
16:AG:213:VAL:HG22	16:AG:216:ILE:HG13	1.78	0.64
21:G:26:LYS:NZ	21:G:193:PRO:HG2	2.12	0.64
21:G:114:LEU:HD13	21:G:144:LEU:CB	2.28	0.64
24:J:62:ARG:HG2	24:J:72:PHE:CZ	2.33	0.64
29:O:83:ILE:O	29:O:87:LEU:HD23	1.96	0.64
39:Y:5:GLN:HE22	39:Y:60:VAL:N	1.96	0.64
54:n:117:LEU:HD13	54:n:176:PRO:CG	2.26	0.64
11:AA:528:ARG:NH2	11:AA:576:SER:O	2.30	0.64
14:AE:79:LYS:CA	14:AE:81:ARG:HH12	1.96	0.64
21:G:23:TRP:CD1	21:G:39:HIS:HE1	2.14	0.64
21:G:49:MET:HE1	21:G:201:PRO:CD	2.23	0.64
24:J:138:SER:O	24:J:141:ASP:CG	2.41	0.64
27:M:23:LEU:HD12	27:M:23:LEU:N	2.13	0.64
29:O:5:GLN:NE2	29:O:20:PHE:HB3	2.10	0.64
39:Y:126:ARG:NH2	41:a:1083:U:P	2.70	0.64
58:r:137:GLU:HG2	58:r:138:VAL:N	2.11	0.64
62:v:105:MET:CE	62:v:108:VAL:HG21	2.27	0.64
63:w:35:LYS:HZ2	63:w:112:TYR:HE2	1.45	0.64
1:0:55:ASP:OD1	1:0:56:GLY:N	2.27	0.64
9:9:43:LYS:HD3	9:9:98:GLU:HG3	1.78	0.64
11:AA:314:ASN:HD21	11:AA:348:SER:HA	1.62	0.64
12:AB:129:ILE:H	12:AB:142:LEU:HB3	1.62	0.64
14:AE:79:LYS:C	14:AE:81:ARG:CZ	2.71	0.64
16:AG:133:HIS:ND1	16:AG:136:GLU:CD	2.55	0.64
20:F:58:LYS:O	20:F:62:ARG:CG	2.45	0.64
22:H:119:GLY:HA2	22:H:133:GLY:HA2	1.79	0.64
26:L:2:ARG:CZ	26:L:68:GLN:NE2	2.60	0.64
27:M:23:LEU:HD21	27:M:59:LEU:CD2	2.27	0.64
28:N:10:MET:HG3	28:N:27:MET:HE1	1.78	0.64
33:S:87:ALA:HA	33:S:90:ARG:CZ	2.28	0.64
36:V:31:HIS:CD2	36:V:34:TYR:H	2.16	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:Y:102:ARG:HD2	39:Y:141:ASP:CB	2.27	0.64
52:l:149:ILE:HD11	52:l:188:MET:HG2	1.78	0.64
56:p:149:ARG:CZ	56:p:162:VAL:O	2.45	0.64
61:u:122:VAL:CG1	61:u:125:LEU:HD11	2.27	0.64
4:3:26:LYS:HB2	4:3:35:ILE:HG23	1.78	0.64
6:5:16:DA:H61	11:AA:150:HIS:C	2.05	0.64
10:A:19:G:C2	41:a:2112:G:O4'	2.50	0.64
10:A:32:C:H4'	27:M:86:GLN:HE21	1.62	0.64
16:AG:64:VAL:HG22	16:AG:75:ILE:HD12	1.78	0.64
33:S:53:ARG:HB3	33:S:59:ARG:NH1	2.11	0.64
34:T:64:ARG:NH1	34:T:89:ARG:HH22	1.94	0.64
39:Y:21:PRO:HB2	39:Y:22:PRO:HD3	1.80	0.64
39:Y:79:LEU:CD2	39:Y:105:LEU:HD21	2.27	0.64
39:Y:102:ARG:NE	39:Y:139:VAL:HG21	2.13	0.64
16:AG:232:SER:HB2	16:AG:323:GLN:OE1	1.96	0.64
16:AG:434:LEU:HD12	16:AG:454:CYS:C	2.22	0.64
10:B:22:G:H2'	10:B:23:C:C6	2.32	0.64
17:C:73:ARG:HH12	31:Q:113:VAL:HA	1.62	0.64
25:K:61:GLN:HA	25:K:64:MET:CE	2.27	0.64
25:K:148:ASN:OD1	28:N:96:MET:CE	2.45	0.64
34:T:3:LEU:HD22	34:T:8:THR:CG2	2.27	0.64
38:X:16:VAL:HG23	38:X:17:ILE:HD12	1.80	0.64
41:a:617:G:H4'	52:l:199:MET:HE1	1.78	0.64
41:a:1067:A:O2'	41:a:1068:G:O4'	2.16	0.64
20:F:10:GLU:OE2	20:F:18:ARG:NE	2.30	0.64
22:H:70:VAL:HG12	22:H:83:LEU:O	1.98	0.64
26:L:25:TYR:O	26:L:29:ILE:HD12	1.97	0.64
35:U:5:ARG:HG2	35:U:68:SER:HB2	1.80	0.64
39:Y:48:ILE:HG13	39:Y:49:GLU:N	2.10	0.64
39:Y:99:LYS:HD2	39:Y:140:GLU:CD	2.22	0.64
61:u:84:LYS:HZ2	61:u:98:ALA:C	2.03	0.64
4:3:34:VAL:HG13	4:3:67:VAL:HG22	1.78	0.64
9:9:56:ARG:H	9:9:56:ARG:HD3	1.63	0.64
10:A:54:U:H3	10:A:58:A:N6	1.96	0.64
16:AG:107:THR:HA	16:AG:111:LYS:HG3	1.79	0.64
16:AG:227:ALA:HB3	16:AG:331:LEU:HA	1.78	0.64
16:AG:233:ARG:CB	16:AG:327:LEU:HD23	2.28	0.64
16:AG:433:ASP:O	16:AG:456:LEU:CG	2.45	0.64
10:B:76:A:H1'	41:a:2494:G:OP1	1.98	0.64
18:D:675:A:H1'	31:Q:118:HIS:CD2	2.33	0.64
18:D:1323:G:H2'	18:D:1324:A:C8	2.33	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:I:132:ARG:O	23:I:135:LYS:HG2	1.97	0.64
39:Y:14:ALA:HB3	39:Y:51:GLY:N	2.12	0.64
39:Y:14:ALA:C	39:Y:50:LYS:HE3	2.22	0.64
39:Y:86:LYS:HD3	39:Y:86:LYS:C	2.23	0.64
64:x:114:GLY:O	64:x:116:GLN:NE2	2.31	0.64
11:AA:62:TYR:HE2	12:AB:71:ALA:O	1.81	0.64
12:AB:108:ALA:O	12:AB:162:LEU:OXT	2.16	0.64
16:AG:162:ILE:HD11	16:AG:199:ARG:HD2	1.80	0.64
16:AG:205:LEU:HA	16:AG:208:LEU:HB2	1.80	0.64
10:B:54:U:H3	10:B:58:A:N6	1.96	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
41:a:2311:A:N3	54:n:85:ILE:HD11	2.13	0.64
11:AA:387:ASN:HB3	11:AA:394:ARG:HH11	1.63	0.64
16:AG:131:ARG:HG2	16:AG:186:VAL:HG12	1.80	0.64
21:G:19:GLN:HG3	22:H:76:GLU:HB3	1.79	0.64
21:G:27:MET:HG2	21:G:189:THR:HA	1.78	0.64
25:K:137:VAL:O	25:K:140:THR:OG1	2.15	0.64
41:a:2335:A:P	64:x:13:ARG:CZ	2.87	0.64
65:y:31:TRP:CZ3	65:y:38:LYS:HD3	2.33	0.64
3:2:36:LYS:HE3	3:2:79:ASP:OD2	1.98	0.63
9:9:47:GLU:HB3	9:9:51:TYR:OH	1.97	0.63
9:9:100:ALA:HB2	9:9:125:ARG:NE	2.13	0.63
9:9:117:LEU:O	9:9:117:LEU:HD23	1.98	0.63
10:A:22:G:H2'	10:A:23:C:C6	2.32	0.63
16:AG:361:LYS:CD	16:AG:417:ILE:CG1	2.75	0.63
18:D:714:G:H2'	18:D:715:A:C8	2.32	0.63
33:S:77:PHE:HE1	33:S:93:ILE:HG21	1.63	0.63
39:Y:31:GLY:C	39:Y:60:VAL:HG11	2.23	0.63
41:a:537:G:OP1	59:s:2:LYS:HE2	1.98	0.63
41:a:2682:A:O5'	50:j:11:MET:HE1	1.98	0.63
44:d:5:U:OP1	44:d:61:G:O2'	2.16	0.63
1:0:84:ARG:NH1	41:a:813:U:OP1	2.31	0.63
2:1:25:ARG:NH2	41:a:520:G:C5'	2.60	0.63
5:4:57:TYR:OH	5:4:79:ARG:NH2	2.24	0.63
16:AG:226:ALA:O	16:AG:228:ARG:HD3	1.97	0.63
16:AG:349:GLN:C	16:AG:351:GLU:H	2.05	0.63
34:T:88:ARG:NH2	41:a:714:U:OP2	2.31	0.63
48:h:251:GLN:HE22	48:h:253:LYS:C	2.07	0.63
9:9:7:ASP:O	9:9:11:ILE:HD12	1.98	0.63
11:AA:1282:GLY:HA3	15:AF:17:PHE:HE1	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:C:13:PHE:CE2	17:C:21:ILE:HD11	2.34	0.63
18:D:738:C:H5''	26:L:68:GLN:NE2	2.12	0.63
32:R:25:GLU:CD	32:R:59:ASN:HD22	2.05	0.63
41:a:196:A:C2	61:u:50:PHE:HZ	2.16	0.63
54:n:135:GLN:HG3	54:n:150:ARG:NH2	2.13	0.63
8:7:9:U:N3	18:D:1196:A:C8	2.66	0.63
11:AA:120:GLN:NE2	11:AA:490:GLN:OE1	2.32	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
49:i:17:ARG:HA	49:i:20:ASP:OD1	1.99	0.63
52:l:112:LEU:HG	52:l:118:LEU:HB2	1.79	0.63
8:7:21:U:O4	23:I:82:GLU:OE1	2.17	0.63
16:AG:353:HIS:CA	16:AG:356:ILE:CG2	2.76	0.63
18:D:1290:G:H4'	27:M:35:LYS:HZ3	1.63	0.63
23:I:156:ARG:HH11	23:I:193:TYR:HB3	1.63	0.63
39:Y:37:PHE:CE1	39:Y:56:VAL:HG11	2.33	0.63
41:a:2393:U:P	55:o:30:ARG:NE	2.70	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
9:9:24:SER:OG	9:9:116:GLU:HG3	1.98	0.63
16:AG:422:GLU:HG2	16:AG:426:GLY:HA3	1.80	0.63
33:S:13:ARG:HB3	33:S:60:GLN:HG3	1.81	0.63
37:W:66:MET:SD	37:W:66:MET:O	2.57	0.63
41:a:2013:A:N1	41:a:2613:U:O4	2.32	0.63
9:9:77:VAL:HG12	9:9:77:VAL:O	1.99	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
21:G:118:GLU:O	21:G:121:SER:OG	2.15	0.63
39:Y:100:ILE:CD1	39:Y:139:VAL:HB	2.29	0.63
62:v:88:ASN:OD1	62:v:89:VAL:N	2.32	0.63
1:0:51:VAL:HG23	66:z:86:ALA:O	1.98	0.63
9:9:50:VAL:HG23	39:Y:120:ASP:OD2	1.98	0.63
9:9:73:LYS:NZ	9:9:115:GLY:O	2.31	0.63
9:9:113:PHE:O	9:9:123:ILE:HG13	1.99	0.63
12:AB:50:LEU:HD13	12:AB:100:LYS:HG2	1.79	0.63
16:AG:223:ILE:HA	16:AG:238:VAL:HG12	1.81	0.63
35:U:18:GLN:OE1	35:U:37:GLY:O	2.17	0.63
41:a:2419:U:H4'	51:k:22:THR:HG21	1.78	0.63
41:a:2682:A:O4'	50:j:11:MET:CE	2.47	0.63
52:l:69:ARG:NH1	52:l:69:ARG:HA	2.13	0.63
1:0:82:HIS:CG	1:0:82:HIS:O	2.52	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:4:50:MET:O	5:4:52:ALA:N	2.31	0.63
5:4:80:HIS:CE1	5:4:82:TYR:H	2.17	0.63
6:5:9:DA:O5'	11:AA:473:ARG:HB3	1.95	0.63
12:AB:2:GLN:HG3	12:AB:59:PHE:HA	1.80	0.63
12:AB:81:PHE:CZ	14:AE:141:PHE:CB	2.81	0.63
12:AB:117:ILE:HD11	14:AE:53:ARG:CD	2.18	0.63
16:AG:354:ALA:HA	16:AG:357:ASP:CA	2.29	0.63
18:D:718:A:H5'	31:Q:119:ASN:ND2	2.13	0.63
24:J:99:ASP:OD1	24:J:100:ASN:N	2.31	0.63
39:Y:102:ARG:HG3	39:Y:141:ASP:HA	1.80	0.63
45:e:13:GLU:O	45:e:17:GLU:OE1	2.16	0.63
54:n:33:LYS:HA	54:n:96:MET:SD	2.39	0.63
60:t:8:LEU:N	60:t:18:ARG:NH1	2.46	0.63
63:w:33:ILE:CG1	63:w:112:TYR:HD1	2.11	0.63
3:2:56:GLU:OE2	3:2:87:LEU:C	2.42	0.62
4:3:68:SER:OG	41:a:335:C:O2	2.15	0.62
11:AA:478:ARG:HD2	11:AA:492:MET:HA	1.80	0.62
11:AA:855:PRO:HA	16:AG:105:ILE:HG12	1.79	0.62
11:AA:858:GLY:HA3	16:AG:35:THR:C	2.24	0.62
16:AG:354:ALA:CA	16:AG:357:ASP:H	2.10	0.62
18:D:1226:C:H2'	38:X:102:THR:OG1	1.98	0.62
52:l:23:PHE:HB2	52:l:111:GLU:OE2	1.99	0.62
59:s:37:ARG:NH2	59:s:44:TYR:OH	2.32	0.62
59:s:72:LYS:HD3	59:s:74:TYR:HH	1.64	0.62
8:7:11:U:O2'	25:K:33:PHE:CZ	2.52	0.62
12:AB:92:VAL:HG22	14:AE:289:ASP:HB2	1.77	0.62
16:AG:243:LYS:CG	21:G:179:LEU:HA	2.29	0.62
16:AG:433:ASP:C	16:AG:456:LEU:CD1	2.72	0.62
16:AG:434:LEU:CD1	16:AG:454:CYS:C	2.72	0.62
22:H:19:ARG:O	22:H:72:LEU:HB2	1.98	0.62
25:K:61:GLN:HA	25:K:64:MET:HE3	1.81	0.62
25:K:140:THR:O	25:K:144:LEU:HD23	1.99	0.62
39:Y:9:LYS:HG2	39:Y:55:PRO:HB3	1.80	0.62
8:7:32:U:C5'	11:AA:1259:LEU:HD21	2.27	0.62
11:AA:859:GLU:CG	16:AG:37:LYS:H	2.12	0.62
12:AB:117:ILE:HA	12:AB:127:GLN:HG2	1.80	0.62
12:AB:145:LEU:CD1	30:P:86:ALA:C	2.73	0.62
16:AG:424:SER:C	16:AG:429:LYS:CG	2.72	0.62
10:B:31:G:O3'	18:D:1340:A:O2'	2.17	0.62
21:G:126:PHE:O	21:G:126:PHE:CD1	2.53	0.62
22:H:135:LEU:O	22:H:169:SER:HA	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:Y:55:PRO:HB2	39:Y:71:LYS:HE2	1.80	0.62
52:l:6:LYS:HE3	52:l:119:ILE:CG2	2.28	0.62
5:4:76:ASP:OD1	5:4:77:VAL:N	2.33	0.62
9:9:129:LEU:N	9:9:130:PRO:HD2	2.12	0.62
14:AE:72:CYS:HG	14:AE:85:CYS:HG	1.40	0.62
16:AG:285:ILE:CG2	16:AG:293:VAL:HG11	2.28	0.62
18:D:13:U:O2	18:D:914:A:C8	2.52	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
18:D:1228:C:OP1	38:X:107:ARG:NH1	2.32	0.62
21:G:49:MET:HE3	21:G:199:VAL:O	1.99	0.62
22:H:16:ILE:HG22	22:H:25:ARG:NH2	2.14	0.62
29:O:123:ARG:HG2	29:O:123:ARG:O	1.99	0.62
37:W:40:ILE:CD1	37:W:66:MET:SD	2.77	0.62
39:Y:80:LYS:HG3	39:Y:86:LYS:O	2.00	0.62
51:k:21:TYR:CE2	51:k:38:LYS:HG2	2.34	0.62
63:w:37:THR:OG1	63:w:40:LYS:HD2	2.00	0.62
9:9:23:LEU:HD11	9:9:96:PHE:CE2	2.34	0.62
18:D:932:C:H5'	27:M:4:ARG:HH11	1.62	0.62
27:M:66:LEU:HD13	27:M:101:MET:HE1	1.81	0.62
32:R:75:GLN:OE1	32:R:75:GLN:N	2.32	0.62
41:a:2315:G:H4'	54:n:127:ASN:ND2	2.14	0.62
54:n:38:MET:SD	54:n:150:ARG:HD2	2.39	0.62
65:y:64:ILE:HG13	65:y:64:ILE:O	1.97	0.62
16:AG:287:ALA:HB1	16:AG:331:LEU:HB3	1.81	0.62
16:AG:402:THR:O	16:AG:406:LEU:N	2.33	0.62
18:D:522:C:OP2	32:R:66:TYR:OH	2.17	0.62
27:M:17:LYS:HG3	27:M:18:PHE:CD1	2.35	0.62
39:Y:99:LYS:NZ	39:Y:138:VAL:HG13	2.13	0.62
41:a:985:C:C2	41:a:986:C:C5	2.88	0.62
41:a:2725:A:C4	41:a:2727:A:C8	2.87	0.62
58:r:5:LEU:HD12	58:r:17:ASP:O	2.00	0.62
8:7:9:U:O4	18:D:1196:A:N9	2.32	0.62
16:AG:174:ARG:HB3	16:AG:175:PRO:CD	2.25	0.62
16:AG:285:ILE:HD13	16:AG:285:ILE:N	2.15	0.62
16:AG:440:VAL:HG23	16:AG:481:LEU:CD2	2.29	0.62
18:D:1157:A:C2	18:D:1181:G:C4	2.88	0.62
22:H:61:GLU:HG2	22:H:62:ILE:HG23	1.81	0.62
30:P:23:ALA:O	30:P:27:GLU:OE1	2.18	0.62
30:P:24:GLU:HA	30:P:27:GLU:OE1	1.98	0.62
38:X:16:VAL:HG12	38:X:34:LEU:HD12	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:Y:99:LYS:NZ	39:Y:140:GLU:OE2	2.26	0.62
7:6:25:DT:H2'	11:AA:496:LYS:CE	2.28	0.62
12:AB:87:ILE:CD1	12:AB:87:ILE:H	2.09	0.62
12:AB:146:ILE:CB	30:P:88:MET:HA	2.30	0.62
12:AB:147:ASN:HB2	30:P:100:ILE:HD11	1.81	0.62
16:AG:323:GLN:HE21	16:AG:323:GLN:CA	2.12	0.62
23:I:58:GLU:OE2	30:P:94:ALA:CB	2.48	0.62
41:a:1824:G:C3'	48:h:52:ARG:HH12	2.13	0.62
46:f:10:THR:HB	46:f:56:LYS:HZ2	1.65	0.62
62:v:1:MET:HE1	62:v:44:ARG:CA	2.30	0.62
5:4:77:VAL:HG11	5:4:79:ARG:HH21	1.64	0.62
10:A:5:G:H2'	10:A:6:G:H5'	1.82	0.62
12:AB:38:ILE:HD12	12:AB:38:ILE:N	2.15	0.62
25:K:69:ARG:NE	25:K:69:ARG:HA	2.15	0.62
39:Y:102:ARG:HA	39:Y:102:ARG:HE	1.64	0.62
59:s:98:GLU:O	59:s:102:GLU:OE1	2.18	0.62
9:9:52:MET:C	9:9:52:MET:HE3	2.25	0.62
16:AG:266:LEU:H	16:AG:266:LEU:HD23	1.63	0.62
16:AG:389:MET:HE3	16:AG:407:ARG:HD2	1.81	0.62
24:J:74:ASN:HA	24:J:77:LYS:HZ3	1.63	0.62
27:M:18:PHE:HD2	27:M:59:LEU:HD21	1.65	0.62
41:a:1277:G:N3	63:w:23:ASN:ND2	2.47	0.62
41:a:1839:G:C8	41:a:1927:A:H1'	2.35	0.62
63:w:42:LYS:HE2	63:w:97:ILE:HG21	1.82	0.62
5:4:77:VAL:HG22	5:4:79:ARG:HE	1.64	0.61
8:7:29:A:H2'	8:7:29:A:N3	2.13	0.61
11:AA:859:GLU:CB	16:AG:37:LYS:CB	2.75	0.61
16:AG:428:ASN:O	16:AG:428:ASN:ND2	2.32	0.61
19:E:81:ALA:C	19:E:85:LYS:HZ3	2.07	0.61
21:G:19:GLN:OE1	21:G:21:ARG:HG2	2.00	0.61
22:H:135:LEU:CB	22:H:167:VAL:CB	2.78	0.61
33:S:19:LYS:HG3	33:S:20:TYR:CE1	2.35	0.61
41:a:1138:G:N3	59:s:108:MET:HE2	2.14	0.61
63:w:47:VAL:O	63:w:51:LEU:HD23	2.00	0.61
6:5:16:DA:H62	11:AA:151:ARG:N	1.91	0.61
16:AG:453:VAL:HG21	16:AG:462:GLN:CD	2.25	0.61
18:D:406:G:H21	24:J:116:GLN:HE22	1.46	0.61
31:Q:84:VAL:HG23	31:Q:107:ILE:CD1	2.30	0.61
38:X:28:THR:CG2	38:X:31:LYS:HE3	2.30	0.61
3:2:56:GLU:OE2	3:2:87:LEU:O	2.18	0.61
6:5:16:DA:C5	11:AA:151:ARG:HG3	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:G:30:PHE:CD1	21:G:201:PRO:CG	2.83	0.61
41:a:754:U:H2'	41:a:755:U:C6	2.34	0.61
48:h:141:VAL:HG23	48:h:162:VAL:CG1	2.31	0.61
16:AG:218:GLU:HA	21:G:108:ARG:CZ	2.30	0.61
16:AG:301:ASP:OD1	16:AG:301:ASP:N	2.32	0.61
10:B:5:G:H2'	10:B:6:G:H5'	1.83	0.61
18:D:1309:G:P	38:X:98:ARG:HE	2.20	0.61
41:a:1406:U:C2	41:a:1407:G:C8	2.88	0.61
8:7:7:U:H6	8:7:7:U:H5''	1.64	0.61
11:AA:55:SER:OG	11:AA:465:ARG:NH1	2.33	0.61
12:AB:15:GLN:OE1	12:AB:15:GLN:HA	1.99	0.61
12:AB:38:ILE:CG1	12:AB:110:PRO:HG2	2.28	0.61
12:AB:138:ARG:HA	12:AB:155:LYS:HA	1.81	0.61
12:AB:155:LYS:HD3	12:AB:157:THR:H	1.66	0.61
16:AG:127:VAL:CG2	16:AG:192:GLY:CA	2.78	0.61
18:D:563:A:C2	18:D:567:G:C5	2.89	0.61
28:N:43:GLU:CD	28:N:101:ILE:HG21	2.25	0.61
29:O:94:LEU:HB3	29:O:97:GLU:OE2	2.01	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:2307:G:O4'	41:a:2308:G:C5	2.52	0.61
55:o:32:ILE:HG13	55:o:32:ILE:O	2.00	0.61
59:s:11:VAL:HG11	59:s:13:ARG:NH1	2.15	0.61
7:6:23:DT:C5'	14:AE:259:ARG:HH12	2.14	0.61
9:9:61:ARG:NE	41:a:1046:A:O5'	2.34	0.61
10:A:33:U:O3'	27:M:84:THR:OG1	2.16	0.61
16:AG:437:LEU:CD2	16:AG:456:LEU:HD11	2.27	0.61
18:D:1124:G:O2'	18:D:1145:A:N6	2.33	0.61
25:K:81:LEU:HG	25:K:96:MET:HE1	1.83	0.61
34:T:67:LEU:HD12	34:T:78:TYR:CE1	2.35	0.61
37:W:12:ASP:OD2	37:W:35:SER:OG	2.14	0.61
39:Y:91:LYS:HZ1	39:Y:97:VAL:HG21	1.65	0.61
41:a:2682:A:H8	50:j:11:MET:HE1	1.66	0.61
50:j:1:MET:HE2	50:j:100:LEU:HD11	1.83	0.61
1:0:73:LYS:NZ	41:a:1225:G:OP1	2.34	0.61
12:AB:87:ILE:CD1	14:AE:162:GLU:CG	2.75	0.61
16:AG:27:LEU:HD22	16:AG:114:ILE:HG23	1.82	0.61
16:AG:63:LEU:HG	16:AG:73:LYS:HB3	1.82	0.61
16:AG:168:LEU:HD21	16:AG:230:PRO:O	2.00	0.61
16:AG:244:ARG:O	25:K:69:ARG:CZ	2.49	0.61
16:AG:288:MET:SD	16:AG:293:VAL:N	2.72	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:G:110:SER:HA	21:G:113:ARG:HE	1.65	0.61
23:I:45:LYS:NZ	23:I:46:GLU:OE1	2.29	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
39:Y:79:LEU:CD1	39:Y:132:ALA:HA	2.29	0.61
40:Z:8:ILE:HG13	40:Z:9:GLU:N	2.15	0.61
47:g:1:MET:HE2	47:g:6:HIS:CD2	2.35	0.61
9:9:23:LEU:HA	9:9:118:ILE:CG1	2.31	0.61
14:AE:741:ALA:O	14:AE:762:ASN:ND2	2.32	0.61
14:AE:1161:GLY:HA3	14:AE:1179:PRO:HA	1.83	0.61
10:B:65:C:H2'	10:B:66:C:H5'	1.83	0.61
18:D:1006:G:H2'	18:D:1007:U:C6	2.36	0.61
18:D:1152:A:OP1	30:P:70:HIS:ND1	2.29	0.61
27:M:103:TRP:O	27:M:106:GLU:HG3	2.01	0.61
29:O:55:VAL:O	29:O:57:MET:N	2.34	0.61
36:V:60:GLU:OE1	36:V:76:VAL:HG23	2.01	0.61
36:V:61:ILE:HG13	36:V:73:TRP:CZ3	2.36	0.61
51:k:34:LEU:HB3	51:k:51:GLU:CG	2.31	0.61
51:k:34:LEU:HB3	51:k:51:GLU:HG3	1.82	0.61
66:z:74:ILE:HD13	66:z:79:PHE:CD1	2.34	0.61
2:1:98:LYS:NZ	41:a:2011:U:O3'	2.34	0.61
9:9:25:ALA:HB2	9:9:96:PHE:CD1	2.36	0.61
16:AG:425:LEU:O	16:AG:429:LYS:NZ	2.33	0.61
17:C:45:THR:HA	22:H:340:ARG:NH2	2.15	0.61
21:G:38:VAL:CG2	22:H:75:VAL:HG21	2.30	0.61
39:Y:19:PRO:O	39:Y:24:GLY:CA	2.48	0.61
55:o:13:ARG:HD3	61:u:58:TYR:O	2.00	0.61
16:AG:243:LYS:HE2	21:G:179:LEU:CD2	2.31	0.61
16:AG:320:ARG:CG	16:AG:320:ARG:HH11	2.14	0.61
16:AG:434:LEU:CD1	16:AG:455:THR:C	2.74	0.61
16:AG:451:ARG:CZ	16:AG:469:ASP:HB2	2.31	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
37:W:45:ILE:HA	37:W:62:VAL:CG1	2.31	0.61
52:l:1:MET:CE	52:l:16:GLU:HA	2.25	0.61
58:r:114:GLU:OE2	58:r:134:VAL:N	2.33	0.61
8:7:11:U:O4'	25:K:20:ARG:NH2	2.32	0.60
12:AB:69:ILE:HD12	12:AB:69:ILE:H	1.65	0.60
12:AB:80:ARG:HB3	14:AE:297:ARG:NH2	2.14	0.60
12:AB:92:VAL:CG2	14:AE:289:ASP:CB	2.62	0.60
12:AB:160:ARG:HH11	12:AB:160:ARG:CB	2.04	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:243:LYS:HG3	21:G:179:LEU:CA	2.30	0.60
16:AG:421:GLN:O	16:AG:425:LEU:N	2.34	0.60
18:D:652:U:H4'	28:N:56:LYS:NZ	2.16	0.60
23:I:14:ILE:HG22	23:I:15:VAL:HG13	1.82	0.60
28:N:88:ARG:HB2	28:N:91:GLU:OE1	2.01	0.60
33:S:87:ALA:HA	33:S:90:ARG:NH1	2.15	0.60
35:U:5:ARG:HH22	35:U:24:SER:HA	1.66	0.60
39:Y:72:THR:OG1	39:Y:73:PRO:HD2	2.01	0.60
59:s:13:ARG:HH22	59:s:50:THR:CA	2.14	0.60
59:s:74:TYR:CD2	59:s:74:TYR:N	2.69	0.60
62:v:111:GLU:HA	62:v:114:ARG:HE	1.66	0.60
66:z:74:ILE:HD11	66:z:79:PHE:CA	2.30	0.60
9:9:50:VAL:CG2	39:Y:119:ALA:HB3	2.20	0.60
14:AE:888:CYS:SG	14:AE:889:ASP:N	2.74	0.60
16:AG:303:HIS:HB3	16:AG:334:TRP:HZ3	1.66	0.60
16:AG:363:LEU:CD2	16:AG:409:ARG:CA	2.71	0.60
16:AG:380:THR:C	16:AG:384:LEU:HD11	2.24	0.60
39:Y:9:LYS:HE2	39:Y:55:PRO:HG3	1.82	0.60
41:a:271:G:C4	41:a:272:A:C8	2.89	0.60
14:AE:785:ASP:O	14:AE:789:LYS:HB2	2.01	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	1.84	0.60
16:AG:243:LYS:HD2	21:G:179:LEU:HD22	1.83	0.60
16:AG:424:SER:C	16:AG:429:LYS:HG3	2.26	0.60
19:E:28:MET:SD	19:E:57:ILE:HG22	2.42	0.60
21:G:114:LEU:HD13	21:G:144:LEU:HB2	1.84	0.60
25:K:112:ARG:O	25:K:116:GLU:OE1	2.19	0.60
25:K:159:LYS:NZ	28:N:44:GLY:HA3	2.16	0.60
41:a:413:C:H2'	41:a:414:C:H6	1.66	0.60
41:a:548:G:H3'	41:a:549:G:O4'	2.01	0.60
41:a:753:A:C2	41:a:754:U:C6	2.89	0.60
47:g:65:ASN:OD1	47:g:66:ILE:N	2.30	0.60
48:h:84:ASP:HB2	48:h:91:ILE:HD12	1.84	0.60
48:h:164:ILE:HG23	48:h:164:ILE:O	2.01	0.60
2:1:1:MET:SD	2:1:3:THR:OG1	2.59	0.60
9:9:14:GLU:OE1	9:9:62:ARG:O	2.19	0.60
10:A:65:C:H2'	10:A:66:C:H5'	1.83	0.60
11:AA:1072:ASN:ND2	11:AA:1111:GLN:OE1	2.34	0.60
12:AB:14:LEU:HD23	12:AB:14:LEU:C	2.27	0.60
14:AE:1275:LEU:HB3	14:AE:1278:GLU:HB2	1.83	0.60
10:B:36:U:H2'	10:B:37:A:C8	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:O:57:MET:HA	29:O:60:LYS:HE2	1.83	0.60
39:Y:5:GLN:CG	39:Y:61:TYR:CE1	2.76	0.60
9:9:47:GLU:HA	9:9:94:ARG:HH22	1.64	0.60
11:AA:472:GLU:HG3	11:AA:473:ARG:HD3	1.83	0.60
25:K:113:ALA:HA	25:K:116:GLU:OE1	2.00	0.60
26:L:42:TRP:CZ2	26:L:102:MET:HG3	2.37	0.60
41:a:639:U:H2'	41:a:640:C:C6	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
61:u:76:GLU:HG3	61:u:111:ILE:CD1	2.31	0.60
6:5:9:DA:P	11:AA:473:ARG:CG	2.88	0.60
12:AB:117:ILE:CD1	14:AE:53:ARG:NE	2.64	0.60
16:AG:31:LEU:HD21	16:AG:107:THR:HG23	1.84	0.60
18:D:1290:G:H4'	27:M:35:LYS:NZ	2.17	0.60
20:F:49:LYS:O	20:F:53:VAL:HG23	2.02	0.60
21:G:35:ARG:HB3	22:H:14:LYS:HZ3	1.66	0.60
27:M:137:LYS:O	27:M:141:VAL:HG23	2.01	0.60
29:O:56:ASP:O	29:O:57:MET:HE2	2.02	0.60
30:P:25:ILE:O	30:P:28:THR:OG1	2.19	0.60
39:Y:36:GLU:HG3	39:Y:66:PHE:CE1	2.36	0.60
46:f:40:ASP:C	46:f:45:ARG:NH2	2.60	0.60
46:f:41:THR:O	46:f:44:ILE:N	2.30	0.60
49:i:22:LEU:HG	49:i:23:THR:N	2.17	0.60
54:n:25:VAL:O	54:n:28:VAL:HG12	2.02	0.60
59:s:102:GLU:HB3	59:s:119:PHE:HZ	1.66	0.60
2:1:31:GLN:OE1	2:1:31:GLN:N	2.28	0.60
12:AB:2:GLN:HG3	12:AB:61:PRO:HD3	1.83	0.60
12:AB:14:LEU:HD23	12:AB:14:LEU:O	2.01	0.60
14:AE:64:PRO:HG3	14:AE:90:VAL:HG12	1.83	0.60
16:AG:197:VAL:HG11	16:AG:199:ARG:HH21	1.66	0.60
16:AG:253:GLY:HA3	16:AG:258:ARG:HD2	1.82	0.60
18:D:1169:A:H2'	18:D:1170:A:C8	2.37	0.60
28:N:104:VAL:HG23	28:N:125:ILE:HD13	1.83	0.60
48:h:67:PHE:CE1	48:h:156:ARG:HD2	2.37	0.60
54:n:38:MET:HG3	54:n:57:LEU:HD21	1.83	0.60
9:9:7:ASP:OD1	9:9:8:LYS:N	2.35	0.60
9:9:23:LEU:HD21	9:9:96:PHE:CG	2.36	0.60
10:A:36:U:H2'	10:A:37:A:C8	2.36	0.60
13:AD:211:ILE:HG12	13:AD:219:ARG:HH12	1.65	0.60
18:D:1160:G:C2	18:D:1161:C:C6	2.89	0.60
25:K:45:ARG:HB3	25:K:71:MET:HE2	1.81	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:L:102:MET:HG2	26:L:103:VAL:N	2.06	0.60
41:a:2189:U:P	41:a:2189:U:O4'	2.60	0.60
47:g:5:ILE:HD12	54:n:64:LYS:CE	2.31	0.60
54:n:122:PHE:CZ	54:n:170:LEU:HD12	2.36	0.60
55:o:30:ARG:HH12	61:u:62:PRO:CA	2.14	0.60
59:s:73:VAL:HG13	59:s:86:GLN:HG2	1.84	0.60
60:t:8:LEU:N	60:t:18:ARG:HH12	1.98	0.60
62:v:38:ARG:HA	62:v:96:ILE:O	2.00	0.60
62:v:75:GLU:HG3	62:v:90:GLU:OE1	2.01	0.60
62:v:77:PRO:HG2	62:v:80:VAL:CG2	2.31	0.60
7:6:18:DT:N3	8:7:37:A:N6	2.36	0.60
13:AD:112:ALA:HB3	13:AD:126:PRO:HA	1.83	0.60
27:M:50:LEU:HD21	27:M:121:ALA:CA	2.28	0.60
27:M:111:ARG:O	27:M:119:ARG:NH1	2.34	0.60
38:X:55:THR:O	38:X:59:GLU:OE1	2.18	0.60
41:a:323:C:H2'	52:l:163:ASN:OD1	2.02	0.60
41:a:575:A:C2	41:a:576:U:C5	2.90	0.60
41:a:1070:A:N7	41:a:1096:A:O2'	2.34	0.60
41:a:1432:G:H2'	41:a:1433:A:C8	2.37	0.60
61:u:51:GLU:OE1	61:u:51:GLU:N	2.34	0.60
1:0:51:VAL:O	1:0:51:VAL:HG13	2.02	0.60
9:9:47:GLU:HG3	9:9:94:ARG:NH1	2.16	0.60
9:9:123:ILE:O	9:9:123:ILE:HG23	2.02	0.60
16:AG:202:PRO:O	16:AG:205:LEU:HD12	2.02	0.60
16:AG:434:LEU:HG	16:AG:456:LEU:N	2.16	0.60
18:D:1125:U:C2	18:D:1127:G:C8	2.89	0.60
22:H:333:LEU:O	22:H:334:ASP:OD1	2.19	0.60
30:P:86:ALA:C	30:P:90:LEU:HD13	2.27	0.60
36:V:10:GLY:HA3	36:V:25:ILE:HD13	1.83	0.60
38:X:81:MET:HE1	38:X:92:ARG:HD3	1.83	0.60
39:Y:126:ARG:HH22	41:a:1083:U:P	2.25	0.60
41:a:563:A:OP1	66:z:41:LYS:NZ	2.35	0.60
41:a:995:C:O2	59:s:3:THR:OG1	2.17	0.60
12:AB:145:LEU:HD22	30:P:88:MET:HG3	1.78	0.59
14:AE:506:VAL:HG23	14:AE:628:GLY:HA3	1.83	0.59
16:AG:219:GLU:CG	21:G:156:GLY:N	2.64	0.59
17:C:51:TYR:HD1	17:C:54:GLN:NE2	2.00	0.59
18:D:657:U:C4'	34:T:28:GLN:HE22	2.15	0.59
24:J:62:ARG:HG2	24:J:72:PHE:CE1	2.37	0.59
39:Y:23:VAL:HG23	39:Y:24:GLY:N	2.17	0.59
50:j:25:THR:HG21	50:j:193:VAL:HG22	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:s:13:ARG:NH2	59:s:49:ASP:O	2.34	0.59
60:t:5:GLN:HA	60:t:20:MET:CE	2.32	0.59
60:t:8:LEU:CA	60:t:18:ARG:HH12	2.15	0.59
63:w:60:VAL:HA	63:w:63:ARG:NH1	2.17	0.59
2:1:86:MET:CE	2:1:88:ARG:HD3	2.32	0.59
3:2:56:GLU:OE1	3:2:56:GLU:N	2.33	0.59
7:6:25:DT:OP1	11:AA:496:LYS:C	2.43	0.59
9:9:98:GLU:HA	9:9:101:LYS:HG2	1.83	0.59
16:AG:137:ILE:O	16:AG:137:ILE:HG22	2.03	0.59
16:AG:233:ARG:HG2	16:AG:270:ARG:HB2	1.84	0.59
16:AG:422:GLU:CA	16:AG:426:GLY:CA	2.65	0.59
21:G:23:TRP:HZ3	21:G:25:PRO:HA	1.67	0.59
21:G:26:LYS:CD	21:G:193:PRO:HG2	2.32	0.59
28:N:106:THR:HB	28:N:121:LEU:HD13	1.83	0.59
9:9:97:LYS:NZ	9:9:130:PRO:HA	2.17	0.59
16:AG:433:ASP:HB3	16:AG:456:LEU:HD12	1.83	0.59
18:D:13:U:N3	18:D:915:A:N6	2.50	0.59
18:D:496:A:N3	18:D:496:A:H2'	2.17	0.59
18:D:718:A:O2'	20:F:34:ARG:NH2	2.34	0.59
18:D:878:A:OP2	28:N:80:ARG:NH1	2.35	0.59
18:D:921:U:H4'	25:K:23:LYS:NZ	2.18	0.59
18:D:1145:A:O2'	18:D:1146:A:O5'	2.18	0.59
22:H:81:GLU:O	22:H:82:THR:HG23	2.02	0.59
26:L:9:MET:HE2	26:L:51:ILE:HD11	1.83	0.59
41:a:2363:G:OP2	55:o:40:ARG:HD2	2.01	0.59
41:a:2780:G:P	59:s:120:ARG:NH1	2.74	0.59
1:0:68:ARG:HH12	41:a:1223:G:P	2.24	0.59
8:7:9:U:O4	18:D:1196:A:C8	2.55	0.59
9:9:54:VAL:HG13	9:9:54:VAL:O	2.03	0.59
14:AE:92:VAL:HG22	14:AE:92:VAL:O	2.01	0.59
16:AG:279:ASN:HB3	16:AG:280:PRO:HD2	1.83	0.59
18:D:718:A:C4	31:Q:118:HIS:ND1	2.71	0.59
19:E:32:ILE:HG12	19:E:75:HIS:CE1	2.37	0.59
25:K:86:LYS:HZ2	25:K:95:PHE:HE1	1.51	0.59
27:M:18:PHE:HB3	27:M:59:LEU:HD11	1.84	0.59
28:N:47:GLU:OE2	28:N:64:LYS:HA	2.03	0.59
32:R:7:LEU:CD2	32:R:12:ARG:NH2	2.65	0.59
34:T:64:ARG:CZ	34:T:64:ARG:HB3	2.32	0.59
41:a:468:G:N7	53:m:39:ARG:NH2	2.42	0.59
51:k:8:LYS:HZ1	51:k:54:ILE:HG12	1.67	0.59
51:k:19:HIS:ND1	51:k:41:PRO:CD	2.65	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:s:55:ILE:HG13	59:s:123:LYS:NZ	2.17	0.59
63:w:33:ILE:CG1	63:w:112:TYR:CD1	2.85	0.59
65:y:7:GLN:CD	65:y:7:GLN:C	2.71	0.59
3:2:56:GLU:OE1	3:2:86:THR:O	2.19	0.59
6:5:16:DA:N6	11:AA:151:ARG:HG3	2.17	0.59
7:6:20:DA:C6	8:7:36:G:C2	2.91	0.59
9:9:103:ASN:HA	9:9:107:GLU:OE2	2.02	0.59
11:AA:69:GLN:HE21	11:AA:101:ARG:HD2	1.67	0.59
18:D:890:G:O2'	18:D:906:A:N6	2.35	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
24:J:74:ASN:HA	24:J:77:LYS:NZ	2.17	0.59
25:K:16:ILE:HD11	25:K:38:VAL:HG12	1.83	0.59
41:a:856:G:H2'	41:a:857:G:C8	2.37	0.59
41:a:1322:A:C5	41:a:1323:C:C5	2.90	0.59
48:h:30:PHE:O	48:h:34:LEU:HD23	2.02	0.59
11:AA:838:CYS:HB2	11:AA:918:LEU:HD22	1.85	0.59
16:AG:240:THR:OG1	16:AG:247:PRO:HG2	2.01	0.59
16:AG:240:THR:CB	16:AG:247:PRO:HG3	2.32	0.59
16:AG:353:HIS:O	16:AG:356:ILE:C	2.43	0.59
17:C:12:ARG:CG	22:H:264:GLU:CB	2.80	0.59
17:C:73:ARG:NH1	31:Q:113:VAL:HA	2.18	0.59
21:G:128:LYS:HD2	21:G:128:LYS:O	2.03	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
38:X:25:VAL:HG23	38:X:29:ARG:HB2	1.85	0.59
41:a:947:A:H2'	41:a:948:C:C6	2.37	0.59
51:k:35:GLU:OE2	51:k:48:ILE:HG23	2.03	0.59
54:n:122:PHE:O	54:n:123:ASP:OD1	2.19	0.59
8:7:15:U:OP1	23:I:132:ARG:NH2	2.35	0.59
10:A:69:C:H2'	10:A:70:G:O4'	2.02	0.59
16:AG:437:LEU:HD22	16:AG:488:ILE:CD1	2.33	0.59
10:B:69:C:H2'	10:B:70:G:O4'	2.02	0.59
17:C:73:ARG:CZ	31:Q:113:VAL:HG12	2.32	0.59
18:D:736:C:O2'	26:L:88:MET:HE1	2.02	0.59
18:D:1055:A:C2'	23:I:156:ARG:HH21	2.15	0.59
22:H:155:LYS:O	22:H:169:SER:N	2.35	0.59
33:S:42:TRP:CH2	47:g:66:ILE:HA	2.38	0.59
35:U:76:LYS:C	35:U:80:LYS:HZ3	2.10	0.59
41:a:1172:C:H2'	41:a:1173:U:O4'	2.02	0.59
41:a:1798:U:OP2	48:h:271:ARG:NH2	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:2298:A:C4	41:a:2321:U:C5	2.90	0.59
45:e:2:LYS:CE	45:e:52:ARG:HE	2.15	0.59
53:m:1:MET:HE3	53:m:3:ARG:HH11	1.67	0.59
1:0:61:ALA:HB1	1:0:96:VAL:HG22	1.84	0.59
9:9:17:GLU:HG2	9:9:88:HIS:NE2	2.18	0.59
9:9:46:ARG:CG	9:9:94:ARG:HH21	2.02	0.59
16:AG:354:ALA:HA	16:AG:357:ASP:N	2.18	0.59
17:C:29:LEU:HD23	17:C:59:ILE:HD13	1.83	0.59
23:I:24:ALA:C	23:I:29:PHE:HE2	2.11	0.59
25:K:12:GLN:HB3	25:K:14:LYS:NZ	2.18	0.59
28:N:43:GLU:HG2	28:N:101:ILE:HD13	1.84	0.59
39:Y:5:GLN:HE22	39:Y:60:VAL:C	2.10	0.59
41:a:993:G:OP2	66:z:51:ARG:NH2	2.36	0.59
41:a:1065:U:O2'	41:a:1066:U:O5'	2.16	0.59
41:a:1406:U:O2'	41:a:1407:G:O4'	2.20	0.59
41:a:2682:A:H8	50:j:11:MET:CE	2.16	0.59
54:n:4:LEU:HD11	54:n:101:GLU:HA	1.84	0.59
10:A:70:G:H2'	10:A:71:C:H5''	1.85	0.59
12:AB:59:PHE:N	12:AB:59:PHE:HD1	2.01	0.59
12:AB:79:VAL:HG13	12:AB:79:VAL:O	2.02	0.59
14:AE:86:GLU:OE1	14:AE:86:GLU:N	2.34	0.59
35:U:19:VAL:HG12	35:U:37:GLY:C	2.28	0.59
38:X:25:VAL:HG23	38:X:29:ARG:CB	2.32	0.59
41:a:372:G:O2'	41:a:400:G:O6	2.16	0.59
41:a:1277:G:H5'	63:w:20:MET:HE2	1.84	0.59
41:a:1817:G:H3'	48:h:156:ARG:HH22	1.67	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
45:e:4:LYS:HZ2	45:e:7:ARG:HH12	1.51	0.59
58:r:68:ARG:O	58:r:72:ILE:HD12	2.03	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:O4'	2.21	0.59
9:9:60:LEU:HA	9:9:64:VAL:HB	1.84	0.59
11:AA:373:GLY:O	12:AB:83:ALA:HB3	2.01	0.59
14:AE:1221:LEU:HD22	14:AE:1306:LEU:HB2	1.85	0.59
16:AG:243:LYS:HG3	21:G:179:LEU:CB	2.33	0.59
16:AG:453:VAL:CG2	16:AG:462:GLN:CD	2.76	0.59
16:AG:453:VAL:HG11	16:AG:459:LEU:HG	1.84	0.59
21:G:35:ARG:HD2	22:H:14:LYS:HE3	1.84	0.59
22:H:131:LEU:CB	22:H:167:VAL:HA	2.32	0.59
36:V:11:ARG:HE	36:V:58:VAL:CG2	2.16	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:15:G:O2'	49:i:15:MET:CE	2.51	0.59
48:h:62:TYR:CE2	48:h:64:ILE:HD13	2.38	0.59
52:l:62:GLN:O	52:l:69:ARG:HD3	2.03	0.59
56:p:85:LYS:NZ	56:p:164:TYR:HD1	2.01	0.59
59:s:102:GLU:CD	59:s:124:VAL:HG11	2.28	0.59
61:u:76:GLU:HG3	61:u:111:ILE:HD13	1.84	0.59
6:5:9:DA:O5'	11:AA:473:ARG:CB	2.49	0.58
8:7:18:U:C6	8:7:18:U:C5'	2.85	0.58
9:9:43:LYS:HZ3	9:9:98:GLU:HB2	1.65	0.58
9:9:51:TYR:HB2	9:9:88:HIS:CB	2.32	0.58
16:AG:187:ARG:CB	16:AG:188:PRO:HD3	2.20	0.58
16:AG:361:LYS:CE	16:AG:417:ILE:CG1	2.74	0.58
22:H:273:ARG:CZ	22:H:297:GLU:HG3	2.33	0.58
25:K:93:ARG:HB3	25:K:93:ARG:NH2	2.18	0.58
31:Q:20:VAL:CG1	31:Q:85:MET:HE1	2.33	0.58
33:S:20:TYR:HD2	33:S:55:SER:OG	1.85	0.58
34:T:11:ILE:HG21	34:T:31:LEU:HD13	1.85	0.58
38:X:22:ILE:HG23	38:X:66:GLU:OE2	2.03	0.58
39:Y:70:THR:O	39:Y:71:LYS:HG3	2.03	0.58
41:a:2460:U:C2	41:a:2461:A:C8	2.91	0.58
3:2:56:GLU:OE1	3:2:87:LEU:C	2.46	0.58
9:9:33:VAL:HG22	9:9:36:ASP:CG	2.27	0.58
11:AA:1142:ARG:NH1	11:AA:1161:LEU:O	2.36	0.58
12:AB:145:LEU:CD2	30:P:88:MET:HG3	2.29	0.58
19:E:61:GLN:NE2	19:E:66:LEU:HD22	2.18	0.58
24:J:91:LEU:HD21	24:J:195:ILE:HD12	1.84	0.58
27:M:50:LEU:HD11	27:M:124:LEU:HB2	1.84	0.58
34:T:60:VAL:O	34:T:64:ARG:HG2	2.03	0.58
41:a:2189:U:O4'	41:a:2189:U:OP1	2.21	0.58
50:j:46:ARG:NH1	50:j:85:ALA:O	2.32	0.58
54:n:4:LEU:HD11	54:n:101:GLU:N	2.18	0.58
56:p:85:LYS:CE	56:p:164:TYR:CD1	2.86	0.58
8:7:10:U:H5''	8:7:10:U:O2	2.03	0.58
9:9:78:GLY:N	9:9:79:PRO:CD	2.66	0.58
9:9:94:ARG:CB	9:9:97:LYS:HE2	2.32	0.58
16:AG:25:GLU:HG3	16:AG:49:ILE:HD11	1.86	0.58
16:AG:212:GLU:HB3	16:AG:258:ARG:HB3	1.84	0.58
18:D:972:C:O2'	30:P:57:VAL:HG13	2.03	0.58
23:I:142:MET:HE2	23:I:149:ILE:HG22	1.83	0.58
39:Y:33:ASN:HB3	39:Y:36:GLU:CG	2.30	0.58
39:Y:102:ARG:CG	39:Y:141:ASP:HA	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:Z:8:ILE:HG13	40:Z:9:GLU:H	1.68	0.58
41:a:654:A:H61	55:o:19:LYS:HD2	1.68	0.58
52:l:119:ILE:O	52:l:187:VAL:HA	2.03	0.58
54:n:46:ASP:OD1	54:n:49:LEU:HD13	2.03	0.58
66:z:74:ILE:CD1	66:z:74:ILE:CB	2.76	0.58
8:7:29:A:H5'	8:7:30:U:H5''	1.85	0.58
12:AB:145:LEU:C	30:P:88:MET:HB2	2.20	0.58
14:AE:1143:ASP:OD1	14:AE:1148:ARG:NH1	2.37	0.58
16:AG:31:LEU:HD23	16:AG:106:THR:HB	1.85	0.58
16:AG:139:THR:HG22	16:AG:180:ARG:HB3	1.83	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	1.84	0.58
21:G:96:TRP:CH2	21:G:100:MET:HE3	2.38	0.58
21:G:106:THR:HA	21:G:109:GLN:NE2	2.18	0.58
25:K:10:GLU:OE1	25:K:10:GLU:N	2.35	0.58
25:K:148:ASN:OD1	28:N:96:MET:HE1	2.03	0.58
25:K:156:LYS:HA	28:N:66:PHE:CD2	2.39	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
59:s:132:HIS:O	59:s:135:GLN:HB2	2.03	0.58
59:s:133:ALA:C	59:s:135:GLN:N	2.60	0.58
1:0:16:GLU:C	1:0:18:GLN:OE1	2.46	0.58
5:4:63:ILE:HD11	5:4:91:PHE:CE2	2.37	0.58
6:5:9:DA:P	11:AA:470:ARG:HA	2.43	0.58
8:7:7:U:H5''	8:7:7:U:C6	2.39	0.58
9:9:98:GLU:HA	9:9:101:LYS:HZ3	1.69	0.58
12:AB:146:ILE:H	30:P:88:MET:CA	2.16	0.58
12:AB:148:LYS:NZ	30:P:100:ILE:CG2	2.65	0.58
17:C:73:ARG:HH12	31:Q:113:VAL:CA	2.16	0.58
18:D:1107:C:P	23:I:172:ARG:HG3	2.43	0.58
18:D:1308:U:P	38:X:98:ARG:HG3	2.43	0.58
38:X:93:ARG:HG2	38:X:95:LEU:HD23	1.85	0.58
41:a:607:U:C5	41:a:620:G:C4	2.91	0.58
41:a:1197:G:H2'	41:a:1198:U:H6	1.68	0.58
41:a:1278:C:O2'	63:w:27:SER:OG	2.16	0.58
46:f:10:THR:HG22	46:f:54:MET:C	2.27	0.58
58:r:97:ARG:NH1	58:r:101:ASP:OD2	2.37	0.58
60:t:121:GLU:OE2	65:y:41:GLN:NE2	2.37	0.58
61:u:91:ASP:O	61:u:95:LEU:HD23	2.03	0.58
3:2:1:MET:N	41:a:142:A:O2'	2.33	0.58
10:A:60:U:H4'	10:A:61:C:OP2	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:363:LEU:HG	16:AG:410:ALA:N	2.16	0.58
16:AG:387:VAL:HB	16:AG:388:PRO:HD2	1.85	0.58
17:C:16:GLU:OE1	17:C:18:VAL:N	2.36	0.58
18:D:439:U:O2	18:D:440:C:C5	2.56	0.58
36:V:4:LYS:HD2	36:V:5:ILE:HG23	1.86	0.58
41:a:2547:A:H2'	41:a:2548:U:C6	2.38	0.58
59:s:39:LYS:HA	59:s:44:TYR:CD1	2.39	0.58
4:3:94:ARG:HB3	4:3:103:ILE:HD12	1.86	0.58
6:5:14:DT:O4	11:AA:201:ARG:NH2	2.30	0.58
12:AB:115:LYS:HB3	12:AB:127:GLN:HE22	1.69	0.58
16:AG:33:THR:HG23	16:AG:43:ILE:HD11	1.85	0.58
16:AG:434:LEU:N	16:AG:456:LEU:HG	2.17	0.58
10:B:30:G:O2'	18:D:1339:A:C2	2.52	0.58
18:D:829:G:O3'	21:G:23:TRP:CZ2	2.56	0.58
39:Y:56:VAL:HA	39:Y:71:LYS:NZ	2.08	0.58
39:Y:109:ALA:HB2	39:Y:128:ILE:HG13	1.86	0.58
41:a:567:U:OP2	61:u:29:LYS:NZ	2.35	0.58
41:a:1021:A:N1	41:a:1141:U:O4	2.37	0.58
41:a:2243:U:H2'	41:a:2244:U:C6	2.38	0.58
41:a:2259:U:N3	41:a:2260:C:C5	2.71	0.58
41:a:2335:A:OP2	64:x:13:ARG:CD	2.51	0.58
51:k:7:GLU:CD	51:k:7:GLU:H	2.11	0.58
52:l:170:ARG:CZ	52:l:175:ILE:HA	2.33	0.58
56:p:149:ARG:NH2	56:p:162:VAL:N	2.52	0.58
59:s:120:ARG:CZ	59:s:120:ARG:HB2	2.34	0.58
61:u:55:MET:CE	61:u:60:ARG:HG2	2.33	0.58
9:9:23:LEU:N	9:9:118:ILE:HD11	2.19	0.58
9:9:24:SER:HB2	9:9:86:MET:HA	1.86	0.58
9:9:73:LYS:CG	9:9:117:LEU:HD12	2.32	0.58
12:AB:133:PRO:HD3	12:AB:140:MET:HE3	1.85	0.58
12:AB:145:LEU:HD11	30:P:86:ALA:O	2.04	0.58
16:AG:413:ALA:HA	16:AG:416:THR:OG1	2.03	0.58
10:B:15:G:N1	10:B:20:U:O2	2.37	0.58
17:C:13:PHE:HB3	17:C:51:TYR:CD1	2.39	0.58
18:D:695:A:H8	18:D:695:A:H5''	1.69	0.58
28:N:7:ILE:HB	28:N:77:ARG:NH1	2.18	0.58
39:Y:78:LEU:HD12	39:Y:112:LYS:HZ1	1.68	0.58
41:a:2683:C:H4'	50:j:13:ARG:CZ	2.34	0.58
59:s:53:TYR:CD1	59:s:121:LYS:HD2	2.39	0.58
62:v:97:GLN:H	62:v:100:LYS:HZ1	1.51	0.58
5:4:46:LYS:O	5:4:50:MET:HG2	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1254:VAL:O	14:AE:99:ARG:NH2	2.37	0.58
16:AG:130:PHE:C	16:AG:186:VAL:HG11	2.28	0.58
21:G:35:ARG:HD2	22:H:14:LYS:CE	2.34	0.58
25:K:146:ASN:OD1	25:K:147:MET:N	2.37	0.58
29:O:94:LEU:O	29:O:98:LEU:HD13	2.04	0.58
30:P:22:THR:O	30:P:26:VAL:HG23	2.03	0.58
31:Q:52:PHE:CD2	31:Q:56:ARG:HG2	2.39	0.58
31:Q:87:LYS:HG3	31:Q:113:VAL:HG23	1.86	0.58
41:a:2189:U:O2'	41:a:2190:G:O4'	2.22	0.58
46:f:40:ASP:OD1	46:f:45:ARG:NH2	2.37	0.58
52:l:148:ILE:HD13	52:l:187:VAL:HB	1.85	0.58
58:r:30:LEU:HD23	58:r:35:LYS:HE2	1.85	0.58
62:v:49:ALA:O	62:v:52:ALA:N	2.37	0.58
4:3:6:ARG:NH1	41:a:84:A:O2'	2.36	0.58
9:9:4:ASN:HB3	9:9:8:LYS:NZ	2.19	0.58
16:AG:287:ALA:CB	16:AG:331:LEU:HB3	2.33	0.58
16:AG:352:ALA:O	16:AG:356:ILE:CG2	2.51	0.58
16:AG:392:LEU:CD2	16:AG:395:ILE:HD11	2.34	0.58
18:D:1082:A:OP1	25:K:23:LYS:NZ	2.34	0.58
25:K:136:VAL:O	25:K:140:THR:HG23	2.04	0.58
27:M:24:ALA:O	27:M:27:VAL:HG22	2.04	0.58
28:N:52:GLU:OE1	28:N:53:GLY:N	2.37	0.58
29:O:5:GLN:NE2	29:O:20:PHE:CB	2.67	0.58
41:a:70:G:H4'	41:a:71:A:OP1	2.03	0.58
41:a:832:U:H2'	41:a:833:A:H8	1.69	0.58
41:a:1682:G:H2'	41:a:1683:U:C6	2.39	0.58
45:e:2:LYS:HD2	45:e:6:LEU:HD11	1.85	0.58
45:e:18:LEU:HD11	45:e:54:LYS:HE3	1.86	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	0.57
4:3:7:ARG:HH22	41:a:98:G:N2	2.00	0.57
5:4:31:TYR:OH	44:d:103:U:O2'	2.20	0.57
10:A:15:G:N1	10:A:20:U:O2	2.37	0.57
11:AA:859:GLU:HG2	16:AG:37:LYS:H	1.69	0.57
16:AG:434:LEU:HD11	16:AG:455:THR:N	2.19	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
39:Y:32:VAL:HG22	39:Y:60:VAL:CG2	2.34	0.57
41:a:1028:A:H2'	41:a:1029:A:C8	2.37	0.57
2:1:73:LYS:C	2:1:74:ILE:HD12	2.29	0.57
16:AG:162:ILE:HD13	16:AG:167:MET:HE2	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:210:ARG:HE	16:AG:216:ILE:HG22	1.69	0.57
18:D:588:G:H4'	28:N:3:MET:CE	2.33	0.57
18:D:915:A:N6	18:D:916:U:C4	2.72	0.57
20:F:16:LEU:C	20:F:20:LYS:HZ3	2.11	0.57
22:H:75:VAL:HG23	22:H:81:GLU:OE2	2.04	0.57
28:N:8:ALA:O	28:N:12:THR:HG23	2.03	0.57
29:O:49:ARG:HB3	29:O:53:GLU:OE2	2.02	0.57
34:T:28:GLN:HB2	34:T:66:LEU:HD21	1.86	0.57
34:T:32:LEU:HD11	34:T:62:GLN:OE1	2.04	0.57
35:U:12:LYS:CD	35:U:13:LYS:HG2	2.33	0.57
35:U:14:ARG:HD3	35:U:42:ILE:HG21	1.86	0.57
41:a:580:U:H2'	41:a:581:C:H6	1.69	0.57
48:h:181:MET:HE2	48:h:181:MET:N	2.18	0.57
53:m:12:ARG:NE	53:m:44:VAL:HG21	2.19	0.57
6:5:25:DA:C2	7:6:5:DG:C2	2.92	0.57
16:AG:367:GLU:O	16:AG:371:THR:HG23	2.04	0.57
19:E:61:GLN:HE21	19:E:66:LEU:HD22	1.69	0.57
23:I:82:GLU:O	23:I:86:LYS:HD3	2.04	0.57
26:L:95:ALA:O	26:L:96:VAL:C	2.47	0.57
44:d:42:C:P	54:n:64:LYS:HZ1	2.26	0.57
44:d:48:U:H2'	44:d:49:C:C6	2.40	0.57
52:l:17:THR:HA	52:l:21:ARG:NH2	2.19	0.57
58:r:37:VAL:HG12	58:r:43:ASN:HD21	1.68	0.57
5:4:2:PHE:HE2	5:4:55:GLU:HG2	1.68	0.57
5:4:60:VAL:HG12	5:4:71:LYS:HE2	1.85	0.57
8:7:21:U:C4	23:I:82:GLU:HB2	2.40	0.57
11:AA:707:ALA:O	11:AA:711:ASP:HB2	2.03	0.57
12:AB:115:LYS:HZ2	12:AB:115:LYS:CB	2.17	0.57
16:AG:63:LEU:HD23	16:AG:63:LEU:H	1.69	0.57
16:AG:318:ILE:HG12	16:AG:338:VAL:HG11	1.85	0.57
18:D:1356:G:H2'	18:D:1357:A:C8	2.40	0.57
21:G:52:GLU:O	21:G:56:GLU:OE1	2.23	0.57
21:G:66:LYS:HB3	21:G:154:MET:CE	2.34	0.57
39:Y:116:MET:HB3	39:Y:124:MET:HE2	1.86	0.57
41:a:500:G:N1	41:a:503:A:OP2	2.37	0.57
41:a:1198:U:H2'	41:a:1199:U:C6	2.39	0.57
41:a:2395:C:H2'	41:a:2396:G:O4'	2.03	0.57
44:d:106:G:H2'	44:d:107:G:O4'	2.04	0.57
62:v:1:MET:HE3	62:v:1:MET:CA	2.34	0.57
63:w:9:GLN:O	63:w:17:ARG:HD3	2.04	0.57
11:AA:13:LYS:HB2	11:AA:1180:MET:HE2	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:173:PHE:N	16:AG:173:PHE:CD2	2.73	0.57
10:B:30:G:O2'	18:D:1339:A:H2	1.80	0.57
18:D:280:C:O2	36:V:40:ARG:NH2	2.37	0.57
24:J:196:ASN:ND2	24:J:199:LEU:HG	2.20	0.57
27:M:23:LEU:HD12	27:M:23:LEU:H	1.70	0.57
30:P:86:ALA:O	30:P:90:LEU:CD1	2.53	0.57
36:V:42:THR:HG22	36:V:44:LEU:CD1	2.34	0.57
41:a:685:A:O2'	41:a:773:U:O4	2.17	0.57
41:a:2349:G:C6	41:a:2369:A:C6	2.92	0.57
41:a:2816:G:O4'	49:i:41:HIS:CE1	2.57	0.57
62:v:26:VAL:HG13	62:v:104:GLU:CD	2.30	0.57
11:AA:1223:ARG:NH2	14:AE:721:SER:OG	2.38	0.57
14:AE:144:TYR:OH	14:AE:293:ARG:NH2	2.37	0.57
10:B:70:G:H2'	10:B:71:C:H5''	1.85	0.57
17:C:60:LYS:NZ	18:D:734:G:C2'	2.64	0.57
21:G:107:VAL:O	21:G:111:ILE:HG12	2.04	0.57
23:I:25:ASN:N	23:I:29:PHE:HE2	2.01	0.57
27:M:26:PHE:CD1	27:M:101:MET:SD	2.97	0.57
27:M:66:LEU:HD11	27:M:100:ALA:HB3	1.85	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
41:a:1141:U:H5	59:s:68:LYS:NZ	2.02	0.57
41:a:2093:G:P	58:r:22:LYS:HZ2	2.20	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
51:k:34:LEU:H	51:k:51:GLU:CD	2.12	0.57
55:o:55:LEU:HD21	55:o:59:ILE:HD11	1.87	0.57
59:s:31:GLU:OE2	59:s:35:ARG:NH1	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
3:2:56:GLU:CD	3:2:87:LEU:C	2.73	0.57
9:9:38:MET:SD	39:Y:117:THR:HG22	2.45	0.57
16:AG:233:ARG:HH12	16:AG:324:ASN:N	2.02	0.57
10:B:60:U:H4'	10:B:61:C:OP2	2.04	0.57
22:H:273:ARG:HD3	22:H:280:LEU:HD11	1.85	0.57
27:M:28:ASN:HA	27:M:31:MET:HE3	1.85	0.57
34:T:21:ASP:OD1	34:T:22:THR:N	2.34	0.57
41:a:3:U:H2'	41:a:4:U:H6	1.69	0.57
41:a:782:A:C2	48:h:225:MET:HE2	2.39	0.57
41:a:1360:G:N7	41:a:1361:G:C8	2.73	0.57
41:a:1818:U:OP2	48:h:156:ARG:CZ	2.53	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1869:G:N2	41:a:1871:A:O2'	2.37	0.57
53:m:24:THR:HG23	53:m:27:GLY:H	1.68	0.57
61:u:61:LEU:HB3	61:u:62:PRO:HD2	1.85	0.57
11:AA:818:VAL:HG22	11:AA:1096:ILE:HG12	1.87	0.57
11:AA:857:VAL:O	16:AG:35:THR:CG2	2.49	0.57
12:AB:59:PHE:N	12:AB:59:PHE:CD1	2.73	0.57
16:AG:392:LEU:HD22	16:AG:395:ILE:HD11	1.87	0.57
18:D:911:U:H2'	18:D:912:C:C6	2.40	0.57
41:a:5:A:H2'	41:a:6:A:C8	2.39	0.57
42:b:55:ARG:NE	42:b:55:ARG:HA	2.20	0.57
65:y:51:ARG:HD3	65:y:58:ALA:HB3	1.86	0.57
1:0:15:SER:HB2	1:0:18:GLN:NE2	2.19	0.57
5:4:48:MET:HE3	5:4:84:PRO:O	2.05	0.57
8:7:12:U:H3'	8:7:12:U:H6	1.70	0.57
16:AG:61:ARG:HD2	16:AG:73:LYS:HD3	1.86	0.57
16:AG:434:LEU:HD23	16:AG:456:LEU:CG	2.35	0.57
31:Q:15:GLN:OE1	31:Q:78:GLY:HA3	2.05	0.57
39:Y:58:ILE:HG23	39:Y:66:PHE:CE2	2.40	0.57
41:a:1442:U:H2'	41:a:1443:U:C6	2.40	0.57
41:a:1824:G:H5''	48:h:52:ARG:HH22	1.69	0.57
48:h:52:ARG:HE	48:h:53:HIS:CE1	2.23	0.57
62:v:41:LEU:CD2	62:v:45:GLN:HE22	2.18	0.57
11:AA:1122:LYS:NZ	11:AA:1126:ASP:OD1	2.38	0.57
11:AA:1142:ARG:NH2	11:AA:1166:ASP:OD1	2.38	0.57
13:AC:82:LEU:HD11	13:AC:171:LEU:HD23	1.86	0.57
16:AG:425:LEU:N	16:AG:429:LYS:HG3	2.20	0.57
30:P:63:ASP:OD2	30:P:64:GLN:N	2.38	0.57
37:W:40:ILE:HG21	37:W:66:MET:SD	2.45	0.57
40:Z:14:MET:HG3	40:Z:15:SER:N	2.17	0.57
41:a:811:U:H2'	61:u:21:ARG:HA	1.86	0.57
41:a:1047:G:HO2'	41:a:1110:G:H1	1.53	0.57
50:j:180:VAL:O	50:j:180:VAL:HG13	2.05	0.57
61:u:84:LYS:NZ	61:u:98:ALA:O	2.20	0.57
62:v:105:MET:HE2	62:v:108:VAL:HG21	1.87	0.57
66:z:74:ILE:HG12	66:z:79:PHE:HB2	1.86	0.57
9:9:124:ASP:OD2	9:9:126:LEU:HD21	2.05	0.56
12:AB:141:LEU:N	12:AB:141:LEU:HD23	2.20	0.56
16:AG:49:ILE:HG22	16:AG:49:ILE:O	2.04	0.56
16:AG:130:PHE:HB3	16:AG:186:VAL:HG22	1.86	0.56
16:AG:221:ILE:HD13	16:AG:247:PRO:HA	1.85	0.56
22:H:51:GLU:OE1	22:H:51:GLU:N	2.37	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:L:14:GLN:OE1	26:L:83:ALA:HA	2.05	0.56
38:X:28:THR:HG22	38:X:29:ARG:NH1	2.20	0.56
41:a:64:A:H2'	41:a:65:U:C6	2.40	0.56
41:a:593:U:H2'	41:a:594:U:C6	2.39	0.56
41:a:1565:C:OP1	48:h:18:LYS:NZ	2.26	0.56
41:a:1568:G:N7	48:h:28:LYS:NZ	2.52	0.56
42:b:51:VAL:C	42:b:62:LYS:HZ3	2.12	0.56
52:l:136:GLN:NE2	52:l:140:ASP:OD2	2.37	0.56
62:v:70:ASP:C	62:v:92:TRP:HZ3	2.13	0.56
6:5:15:DT:C2	11:AA:183:TRP:CD1	2.93	0.56
11:AA:839:VAL:HG12	11:AA:1049:ILE:HG12	1.87	0.56
12:AB:6:LEU:HD22	12:AB:79:VAL:HG21	1.86	0.56
16:AG:9:VAL:HA	16:AG:24:PHE:CZ	2.40	0.56
16:AG:131:ARG:CA	16:AG:186:VAL:HG11	2.35	0.56
16:AG:307:ILE:HD11	16:AG:336:LEU:HB2	1.87	0.56
16:AG:363:LEU:CG	16:AG:410:ALA:CB	2.71	0.56
17:C:55:LEU:O	17:C:59:ILE:HG12	2.04	0.56
18:D:439:U:O2	18:D:440:C:C6	2.58	0.56
22:H:163:ARG:CB	22:H:298:GLU:HG3	2.35	0.56
23:I:6:HIS:HB3	33:S:89:MET:SD	2.45	0.56
41:a:5:A:H2'	41:a:6:A:H8	1.70	0.56
41:a:628:G:C6	41:a:636:G:C2	2.92	0.56
41:a:2483:C:O2	62:v:51:ARG:NH2	2.38	0.56
47:g:58:ASP:C	47:g:62:LYS:HZ3	2.11	0.56
58:r:6:LEU:HD11	58:r:37:VAL:CG2	2.34	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
10:A:75:C:O2'	10:A:76:A:C8	2.58	0.56
11:AA:516:ASP:OD1	11:AA:516:ASP:O	2.23	0.56
12:AB:160:ARG:HD3	14:AE:52:GLU:OE2	2.05	0.56
13:AC:45:ARG:HD3	13:AD:38:THR:HB	1.87	0.56
16:AG:201:LYS:HB3	16:AG:201:LYS:HZ3	1.71	0.56
16:AG:362:TYR:CA	16:AG:413:ALA:HB1	2.30	0.56
16:AG:362:TYR:CZ	16:AG:382:GLU:HG2	2.40	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:440:C:C4	18:D:441:A:N7	2.73	0.56
18:D:512:U:OP1	24:J:44:ARG:NH1	2.38	0.56
18:D:521:G:O5'	32:R:70:GLU:OE1	2.23	0.56
18:D:1381:U:C2	18:D:1382:C:C6	2.93	0.56
18:D:1515:G:H2'	18:D:1516:G:H8	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:G:131:LYS:HG3	21:G:132:LYS:HD2	1.87	0.56
22:H:280:LEU:N	22:H:330:VAL:O	2.31	0.56
22:H:297:GLU:HG2	22:H:300:VAL:HG21	1.86	0.56
23:I:85:GLU:OE2	23:I:88:ARG:NH1	2.26	0.56
23:I:151:VAL:HG12	23:I:200:VAL:CG2	2.35	0.56
24:J:62:ARG:HA	24:J:72:PHE:CE1	2.41	0.56
28:N:66:PHE:CG	28:N:67:GLN:OE1	2.57	0.56
29:O:118:LEU:CD2	29:O:124:ARG:HA	2.35	0.56
37:W:64:ASP:OD2	47:g:57:VAL:HG23	2.06	0.56
41:a:16:C:C4'	49:i:15:MET:HE3	2.35	0.56
41:a:78:U:H5''	45:e:4:LYS:NZ	2.19	0.56
41:a:228:C:N4	41:a:2407:A:N3	2.52	0.56
41:a:589:U:H2'	41:a:590:A:H8	1.71	0.56
41:a:839:U:C2	41:a:840:C:C5	2.93	0.56
41:a:839:U:H2'	41:a:840:C:C6	2.40	0.56
41:a:2071:A:H2'	41:a:2072:C:C6	2.40	0.56
41:a:2822:G:O2'	41:a:2824:C:OP2	2.20	0.56
42:b:45:PHE:CD2	42:b:80:ILE:HD11	2.40	0.56
42:b:51:VAL:C	42:b:62:LYS:NZ	2.63	0.56
44:d:42:C:C5'	54:n:64:LYS:HZ1	2.18	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
54:n:163:ASP:OD1	54:n:164:GLU:N	2.39	0.56
56:p:109:PHE:CE1	56:p:152:ARG:NH1	2.74	0.56
60:t:112:PHE:CD2	60:t:115:ILE:HD12	2.39	0.56
4:3:6:ARG:CZ	41:a:84:A:H2'	2.35	0.56
16:AG:233:ARG:O	16:AG:327:LEU:HD21	2.04	0.56
10:B:5:G:H2'	10:B:6:G:C5'	2.36	0.56
18:D:193:C:O2'	19:E:59:ASP:OD2	2.23	0.56
18:D:562:U:C3'	32:R:14:ARG:HH11	2.18	0.56
22:H:117:LYS:CB	22:H:279:LYS:O	2.54	0.56
34:T:32:LEU:CD1	34:T:62:GLN:OE1	2.53	0.56
34:T:35:GLN:CB	34:T:59:MET:HE1	2.35	0.56
35:U:39:PHE:HD1	35:U:50:THR:HG22	1.70	0.56
41:a:1693:U:O2'	48:h:14:ARG:NH2	2.38	0.56
47:g:47:LYS:HG2	54:n:115:ARG:NH2	2.20	0.56
59:s:37:ARG:HD3	59:s:39:LYS:HD2	1.88	0.56
59:s:73:VAL:HG12	59:s:74:TYR:N	2.20	0.56
60:t:20:MET:HB3	60:t:44:LYS:CE	2.35	0.56
5:4:57:TYR:CD2	62:v:136:MET:HE2	2.40	0.56
16:AG:283:PHE:CE2	16:AG:331:LEU:O	2.58	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:457:GLU:HG2	16:AG:489:CYS:SG	2.45	0.56
19:E:61:GLN:HE21	19:E:66:LEU:CD2	2.18	0.56
22:H:100:LYS:O	22:H:104:ASP:N	2.38	0.56
22:H:116:VAL:CA	22:H:279:LYS:HD2	2.35	0.56
27:M:68:ASN:ND2	27:M:130:ASN:OD1	2.38	0.56
30:P:15:HIS:HA	30:P:18:ILE:HG22	1.88	0.56
31:Q:87:LYS:HG3	31:Q:113:VAL:CG2	2.35	0.56
39:Y:77:VAL:HG13	39:Y:81:LYS:HZ3	1.71	0.56
41:a:1857:G:O2'	41:a:1884:G:N2	2.38	0.56
43:c:66:THR:O	43:c:70:GLU:OE1	2.23	0.56
48:h:183:LYS:HE2	48:h:266:PHE:HA	1.88	0.56
51:k:19:HIS:ND1	51:k:41:PRO:HD2	2.21	0.56
52:l:42:GLY:CA	52:l:92:HIS:HE1	2.18	0.56
56:p:85:LYS:HE3	56:p:164:TYR:CE1	2.41	0.56
63:w:67:PHE:O	63:w:71:ARG:N	2.39	0.56
5:4:55:GLU:O	5:4:59:GLU:OE1	2.24	0.56
9:9:56:ARG:NH2	41:a:1084:A:C1'	2.69	0.56
10:A:5:G:H2'	10:A:6:G:C5'	2.35	0.56
12:AB:141:LEU:HD21	12:AB:154:VAL:HG12	1.86	0.56
16:AG:243:LYS:HG3	21:G:179:LEU:CD2	2.35	0.56
20:F:26:ALA:HB3	20:F:28:VAL:HG23	1.88	0.56
27:M:66:LEU:HD23	27:M:70:ARG:HH21	1.69	0.56
30:P:21:ALA:O	30:P:24:GLU:HG3	2.04	0.56
33:S:63:ARG:NH2	33:S:68:GLY:O	2.32	0.56
34:T:3:LEU:HB2	34:T:35:GLN:CD	2.31	0.56
41:a:659:G:H1'	52:l:100:MET:HE1	1.87	0.56
42:b:21:LEU:HD21	42:b:41:ARG:NE	2.20	0.56
63:w:24:MET:HE2	63:w:34:ILE:HD13	1.88	0.56
5:4:77:VAL:HG11	5:4:79:ARG:NH2	2.21	0.56
7:6:23:DT:O5'	14:AE:259:ARG:NH1	2.39	0.56
16:AG:63:LEU:HD23	16:AG:63:LEU:N	2.21	0.56
16:AG:266:LEU:HD23	16:AG:266:LEU:N	2.19	0.56
16:AG:302:LYS:NZ	16:AG:302:LYS:HB2	2.20	0.56
16:AG:354:ALA:HA	16:AG:357:ASP:H	1.70	0.56
10:B:75:C:O2'	10:B:76:A:C8	2.58	0.56
21:G:19:GLN:CG	22:H:76:GLU:HB3	2.34	0.56
23:I:150:LYS:HE3	23:I:201:TRP:CZ3	2.41	0.56
24:J:121:LYS:HG2	24:J:131:ASN:ND2	2.20	0.56
27:M:134:ALA:O	27:M:137:LYS:HG2	2.05	0.56
28:N:7:ILE:O	28:N:10:MET:HB3	2.05	0.56
38:X:16:VAL:CG2	38:X:17:ILE:HD12	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1365:A:O2'	43:c:11:ARG:NH1	2.39	0.56
41:a:2189:U:O2'	41:a:2190:G:C5'	2.54	0.56
41:a:2849:U:P	65:y:93:ARG:NH2	2.78	0.56
44:d:45:A:H5'	54:n:92:ARG:NH1	2.20	0.56
48:h:175:ARG:CG	48:h:181:MET:HE1	2.35	0.56
49:i:40:ARG:HG3	49:i:41:HIS:ND1	2.21	0.56
55:o:30:ARG:HH12	61:u:62:PRO:HB3	1.70	0.56
62:v:37:GLY:C	62:v:126:ILE:HD11	2.30	0.56
65:y:106:LYS:HA	65:y:109:ARG:NH2	2.20	0.56
5:4:80:HIS:CE1	5:4:83:LYS:HG3	2.41	0.56
9:9:47:GLU:O	9:9:51:TYR:CE1	2.59	0.56
18:D:1366:C:O2'	30:P:62:ARG:NH2	2.38	0.56
24:J:138:SER:O	24:J:141:ASP:OD1	2.24	0.56
25:K:148:ASN:ND2	25:K:153:VAL:HG12	2.20	0.56
32:R:4:VAL:HG13	32:R:5:ASN:N	2.20	0.56
41:a:1570:A:H2'	41:a:1571:A:C8	2.40	0.56
41:a:2192:U:H2'	41:a:2193:G:C8	2.40	0.56
52:l:62:GLN:HA	52:l:69:ARG:NH2	2.20	0.56
54:n:62:GLY:C	54:n:95:ARG:NH2	2.63	0.56
55:o:30:ARG:NH1	61:u:62:PRO:HB3	2.21	0.56
56:p:94:TYR:CE1	56:p:107:LEU:O	2.59	0.56
60:t:12:ASP:CG	60:t:85:VAL:HG13	2.30	0.56
63:w:35:LYS:NZ	63:w:112:TYR:HE2	2.04	0.56
5:4:53:LYS:HB2	5:4:56:PHE:CE2	2.40	0.56
8:7:8:U:H5'	18:D:1397:C:C2	2.41	0.56
9:9:43:LYS:HD3	9:9:98:GLU:CG	2.35	0.56
16:AG:437:LEU:HD22	16:AG:488:ILE:HD12	1.88	0.56
16:AG:447:LYS:O	16:AG:470:ILE:HD11	2.05	0.56
10:B:18:G:H1'	10:B:58:A:C2	2.41	0.56
18:D:280:C:H1'	36:V:40:ARG:NH1	2.21	0.56
18:D:502:A:O3'	32:R:116:LYS:HE2	2.06	0.56
18:D:692:U:N3	18:D:695:A:OP2	2.34	0.56
18:D:946:A:H2'	18:D:947:G:C8	2.41	0.56
26:L:42:TRP:CZ2	26:L:102:MET:CG	2.89	0.56
34:T:10:LYS:O	34:T:14:GLU:OE1	2.23	0.56
41:a:17:G:H2'	41:a:18:U:C6	2.41	0.56
41:a:2720:U:OP1	65:y:53:ARG:NH2	2.39	0.56
45:e:2:LYS:HE2	45:e:52:ARG:HE	1.71	0.56
45:e:23:ARG:HG3	45:e:24:GLU:N	2.21	0.56
59:s:73:VAL:C	59:s:74:TYR:HD2	2.14	0.56
61:u:125:LEU:HD23	61:u:125:LEU:N	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:7:11:U:O2	8:7:11:U:H2'	2.06	0.56
16:AG:355:ALA:HB1	16:AG:382:GLU:CB	2.36	0.56
22:H:116:VAL:HA	22:H:279:LYS:HD2	1.88	0.56
23:I:140:ASN:O	23:I:144:LEU:HD23	2.06	0.56
23:I:156:ARG:NH1	23:I:193:TYR:O	2.39	0.56
25:K:74:VAL:HG11	25:K:144:LEU:HD12	1.88	0.56
41:a:1059:G:H2'	41:a:1060:U:C5	2.41	0.56
41:a:2291:U:H2'	41:a:2292:U:C6	2.40	0.56
64:x:21:LEU:HD22	64:x:23:ALA:HB2	1.87	0.56
64:x:36:TYR:CD2	64:x:52:SER:HB2	2.41	0.56
4:3:69:ASN:ND2	41:a:329:G:OP2	2.37	0.55
9:9:27:VAL:HG13	9:9:27:VAL:O	2.05	0.55
10:A:16:C:O2	41:a:2181:U:H5'	2.06	0.55
11:AA:481:LEU:HD23	12:AB:23:ARG:HH22	1.54	0.55
16:AG:285:ILE:HD12	16:AG:293:VAL:HG11	1.88	0.55
16:AG:287:ALA:HB1	16:AG:331:LEU:CB	2.36	0.55
18:D:110:C:O2'	35:U:25:ARG:O	2.21	0.55
18:D:827:U:O4	18:D:872:A:N1	2.39	0.55
18:D:1145:A:HO2'	18:D:1146:A:P	2.28	0.55
21:G:19:GLN:HG3	22:H:76:GLU:CB	2.35	0.55
21:G:35:ARG:HG2	21:G:40:ILE:HG13	1.86	0.55
23:I:31:ASP:HA	33:S:65:ARG:HH22	1.71	0.55
23:I:66:VAL:HB	23:I:101:ILE:HD12	1.88	0.55
27:M:95:ARG:O	27:M:99:LEU:HG	2.05	0.55
31:Q:61:PHE:O	31:Q:64:GLN:HG2	2.06	0.55
38:X:71:ARG:NE	47:g:50:ASP:O	2.39	0.55
38:X:95:LEU:O	38:X:109:ARG:NH2	2.39	0.55
41:a:608:A:H2'	41:a:609:A:C8	2.41	0.55
41:a:784:G:H5'	41:a:785:G:OP1	2.06	0.55
41:a:923:G:O4'	42:b:29:GLU:OE2	2.24	0.55
41:a:1038:G:H2'	41:a:1039:A:C8	2.42	0.55
41:a:1799:G:C2	48:h:154:LEU:HD23	2.41	0.55
41:a:2299:U:H2'	41:a:2300:C:H6	1.71	0.55
41:a:2517:C:C2	41:a:2542:A:N6	2.74	0.55
55:o:16:LYS:HD2	55:o:65:ALA:HB1	1.88	0.55
4:3:47:LYS:HE3	41:a:483:A:OP1	2.07	0.55
8:7:18:U:O2	8:7:18:U:H2'	2.06	0.55
12:AB:44:THR:HG23	12:AB:136:GLU:OE2	2.07	0.55
13:AC:28:LEU:HD22	13:AC:201:LEU:HD23	1.88	0.55
16:AG:46:ARG:HH11	16:AG:61:ARG:HB3	1.71	0.55
18:D:276:G:H5'	36:V:17:MET:CE	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:G:187:VAL:HG21	21:G:199:VAL:HG23	1.89	0.55
22:H:268:VAL:HG23	22:H:269:ALA:H	1.72	0.55
40:Z:2:ILE:HB	40:Z:5:ASP:HB3	1.88	0.55
45:e:2:LYS:HE2	45:e:49:ASP:HA	1.88	0.55
4:3:48:PRO:HG3	4:3:56:GLY:HA3	1.89	0.55
10:A:22:G:O2'	10:A:23:C:P	2.65	0.55
12:AB:37:LYS:HG2	12:AB:107:PRO:HD2	1.88	0.55
16:AG:220:VAL:HG12	16:AG:245:ILE:HG21	1.88	0.55
16:AG:285:ILE:O	16:AG:288:MET:CE	2.54	0.55
16:AG:355:ALA:CB	16:AG:382:GLU:CG	2.54	0.55
18:D:321:A:N7	18:D:328:C:O2'	2.38	0.55
18:D:672:U:O2'	18:D:673:A:H5'	2.06	0.55
18:D:1439:G:P	19:E:33:LYS:HZ1	2.26	0.55
41:a:1266:G:OP1	49:i:16:ARG:NE	2.35	0.55
41:a:2742:G:P	57:q:36:ARG:NH1	2.80	0.55
41:a:2803:G:H2'	41:a:2804:U:C6	2.41	0.55
52:l:1:MET:HE1	52:l:20:GLY:N	2.21	0.55
59:s:13:ARG:CZ	59:s:49:ASP:O	2.54	0.55
2:1:7:HIS:HD2	2:1:10:ALA:HB2	1.69	0.55
4:3:26:LYS:HE2	4:3:26:LYS:HA	1.88	0.55
8:7:1:A:H2'	8:7:2:U:H6	1.70	0.55
9:9:112:ALA:O	9:9:123:ILE:CD1	2.54	0.55
10:A:56:C:H1'	41:a:2112:G:C6	2.42	0.55
12:AB:147:ASN:HB2	30:P:100:ILE:CD1	2.35	0.55
16:AG:354:ALA:CA	16:AG:357:ASP:HB3	2.32	0.55
18:D:588:G:C5'	28:N:3:MET:HE1	2.36	0.55
18:D:662:U:O2'	18:D:836:G:OP1	2.21	0.55
21:G:27:MET:CE	21:G:187:VAL:HG12	2.37	0.55
22:H:268:VAL:HG23	22:H:269:ALA:N	2.22	0.55
28:N:7:ILE:O	28:N:11:LEU:CD1	2.55	0.55
30:P:26:VAL:O	30:P:30:LYS:HG3	2.07	0.55
41:a:1289:C:C2	41:a:1290:C:C5	2.94	0.55
45:e:53:VAL:O	45:e:57:LEU:HD23	2.07	0.55
46:f:7:ILE:CG2	46:f:55:VAL:HG21	2.35	0.55
58:r:4:ILE:HD12	58:r:17:ASP:O	2.05	0.55
60:t:59:LYS:CD	60:t:89:ASN:HA	2.36	0.55
65:y:9:GLU:OE2	65:y:55:LEU:N	2.37	0.55
9:9:98:GLU:HA	9:9:101:LYS:NZ	2.22	0.55
12:AB:33:ILE:HG22	12:AB:50:LEU:HB2	1.89	0.55
12:AB:109:THR:CB	12:AB:110:PRO:HD2	2.26	0.55
16:AG:127:VAL:HG21	16:AG:192:GLY:HA2	1.84	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:50:A:O2'	18:D:360:G:N2	2.40	0.55
18:D:1071:C:H2'	18:D:1072:G:H8	1.71	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
31:Q:46:THR:OG1	31:Q:49:GLY:N	2.34	0.55
39:Y:99:LYS:HZ3	39:Y:138:VAL:HG13	1.71	0.55
41:a:84:A:N1	41:a:98:G:O2'	2.37	0.55
41:a:857:G:H5''	42:b:78:LYS:HZ2	1.72	0.55
41:a:930:G:H1'	46:f:25:LEU:HD21	1.87	0.55
41:a:2335:A:OP2	64:x:13:ARG:HB3	2.06	0.55
41:a:2591:C:H2'	41:a:2592:G:C8	2.42	0.55
47:g:5:ILE:CD1	54:n:64:LYS:HE3	2.36	0.55
58:r:54:LEU:HA	58:r:57:LYS:NZ	2.20	0.55
9:9:24:SER:CB	9:9:86:MET:HE2	2.36	0.55
9:9:31:ARG:CD	41:a:1053:C:O2'	2.47	0.55
11:AA:143:ARG:NH2	11:AA:512:SER:O	2.40	0.55
11:AA:1070:HIS:NE2	11:AA:1114:GLU:OE1	2.36	0.55
12:AB:96:LEU:CD1	14:AE:288:PRO:HB3	2.35	0.55
16:AG:162:ILE:HG22	16:AG:162:ILE:O	2.06	0.55
16:AG:320:ARG:NH1	16:AG:320:ARG:HG2	2.22	0.55
16:AG:380:THR:C	16:AG:384:LEU:CD1	2.79	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
27:M:71:PRO:HG3	27:M:103:TRP:CH2	2.42	0.55
38:X:93:ARG:CG	38:X:95:LEU:HD23	2.35	0.55
39:Y:45:THR:HG21	39:Y:50:LYS:HZ2	1.72	0.55
41:a:1349:C:C2	41:a:1350:C:C5	2.95	0.55
41:a:1469:A:H2'	41:a:1470:A:C8	2.42	0.55
41:a:1720:U:H2'	41:a:1721:G:O4'	2.06	0.55
45:e:56:LEU:O	45:e:59:GLU:HG3	2.06	0.55
50:j:11:MET:SD	50:j:11:MET:C	2.90	0.55
50:j:78:GLY:C	50:j:79:LEU:HD22	2.32	0.55
52:l:147:LEU:HD11	52:l:170:ARG:HD2	1.89	0.55
60:t:20:MET:CB	60:t:44:LYS:HZ3	2.15	0.55
60:t:42:THR:CG2	60:t:44:LYS:HZ1	2.19	0.55
60:t:59:LYS:HD2	60:t:89:ASN:HA	1.87	0.55
65:y:15:GLN:NE2	65:y:16:ASP:OD1	2.40	0.55
1:O:10:LYS:HE2	41:a:996:A:OP1	2.07	0.55
5:4:80:HIS:CD2	5:4:81:PRO:HD2	2.41	0.55
5:4:80:HIS:ND1	5:4:83:LYS:N	2.55	0.55
11:AA:143:ARG:NH1	11:AA:507:GLY:O	2.32	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:985:GLU:HB3	11:AA:988:LYS:HB2	1.89	0.55
16:AG:168:LEU:CD2	16:AG:230:PRO:O	2.55	0.55
10:B:75:C:P	41:a:2602:A:O2'	2.60	0.55
18:D:1076:U:OP1	21:G:174:LYS:NZ	2.40	0.55
20:F:19:PHE:CE2	31:Q:110:ILE:HG22	2.42	0.55
26:L:99:ALA:HB3	26:L:104:LYS:NZ	2.22	0.55
38:X:28:THR:O	38:X:31:LYS:HG2	2.07	0.55
39:Y:123:ALA:O	39:Y:126:ARG:HG3	2.07	0.55
41:a:888:C:N4	41:a:889:C:N4	2.55	0.55
41:a:960:A:H61	62:v:82:MET:HE1	1.71	0.55
41:a:1708:C:C2	41:a:1709:U:C5	2.95	0.55
41:a:2315:G:H4'	54:n:127:ASN:HD22	1.71	0.55
41:a:2557:G:H2'	41:a:2558:C:C6	2.42	0.55
48:h:67:PHE:CE1	48:h:105:LEU:HD11	2.42	0.55
2:1:62:ASP:OD1	2:1:62:ASP:O	2.25	0.55
3:2:56:GLU:CD	3:2:88:LYS:HA	2.31	0.55
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
16:AG:218:GLU:HA	21:G:108:ARG:NH2	2.21	0.55
10:B:32:C:H5'	18:D:1340:A:O3'	2.06	0.55
17:C:39:ILE:HD12	18:D:719:C:O2	2.07	0.55
18:D:324:G:N1	18:D:327:A:OP2	2.39	0.55
18:D:713:G:H2'	18:D:714:G:C8	2.42	0.55
23:I:164:ARG:CZ	23:I:166:GLU:OE2	2.54	0.55
24:J:162:ALA:HA	24:J:165:ARG:CZ	2.36	0.55
30:P:47:GLU:OE1	30:P:67:ILE:O	2.24	0.55
35:U:23:ASP:HB3	35:U:26:ASN:OD1	2.07	0.55
39:Y:15:GLY:HA2	39:Y:50:LYS:CG	2.33	0.55
41:a:1980:G:O2'	41:a:1982:U:OP2	2.23	0.55
48:h:157:SER:O	48:h:195:VAL:HG11	2.07	0.55
50:j:55:LYS:NZ	50:j:60:VAL:N	2.55	0.55
62:v:96:ILE:HA	62:v:100:LYS:NZ	2.21	0.55
2:1:43:ALA:O	2:1:47:VAL:HG12	2.07	0.55
5:4:57:TYR:CB	62:v:136:MET:CE	2.84	0.55
11:AA:859:GLU:CA	16:AG:37:LYS:HB2	2.36	0.55
14:AE:287:ALA:CB	14:AE:292:VAL:HG22	2.37	0.55
20:F:19:PHE:CE1	20:F:23:CYS:SG	3.00	0.55
25:K:99:ALA:HB2	25:K:124:LEU:HG	1.88	0.55
28:N:7:ILE:O	28:N:11:LEU:HD13	2.06	0.55
28:N:78:VAL:HG12	28:N:85:ILE:HG21	1.89	0.55
38:X:95:LEU:HB3	38:X:96:PRO:CD	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:3:U:H2'	41:a:4:U:C6	2.42	0.55
41:a:1019:U:O4	41:a:1142:A:N1	2.40	0.55
41:a:1321:A:C4	41:a:1322:A:C8	2.95	0.55
41:a:1433:A:H2'	41:a:1434:A:O4'	2.07	0.55
41:a:1567:G:OP2	48:h:83:TYR:OH	2.19	0.55
41:a:1774:C:O2	41:a:1774:C:H2'	2.07	0.55
41:a:2191:A:H2'	41:a:2192:U:H6	1.70	0.55
41:a:2638:G:O2'	41:a:2775:G:N2	2.37	0.55
47:g:61:ASN:OD1	47:g:65:ASN:ND2	2.40	0.55
57:q:1:MET:HE1	57:q:35:GLN:C	2.32	0.55
60:t:35:VAL:HG23	60:t:63:VAL:HA	1.89	0.55
10:A:76:A:N1	41:a:2422:C:C6	2.75	0.55
11:AA:29:SER:O	11:AA:33:ASP:HB2	2.07	0.55
16:AG:133:HIS:CE1	16:AG:136:GLU:OE1	2.59	0.55
16:AG:218:GLU:HA	21:G:108:ARG:HH22	1.71	0.55
16:AG:334:TRP:N	16:AG:334:TRP:CD1	2.73	0.55
17:C:34:THR:HG22	17:C:36:SER:H	1.72	0.55
18:D:1078:U:O3'	25:K:138:ARG:NH2	2.40	0.55
19:E:32:ILE:HG23	19:E:75:HIS:NE2	2.21	0.55
19:E:78:ASN:C	19:E:82:GLN:OE1	2.50	0.55
21:G:5:SER:OG	21:G:8:ASP:OD2	2.24	0.55
22:H:5:PHE:O	22:H:9:PHE:HD1	1.90	0.55
26:L:39:LEU:HB3	26:L:62:MET:HE1	1.88	0.55
33:S:27:LEU:HD21	33:S:48:LEU:N	2.21	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:851:C:H2'	41:a:852:U:H6	1.72	0.55
41:a:1665:A:O3'	60:t:66:LYS:HD3	2.07	0.55
47:g:2:LYS:HB2	47:g:5:ILE:HD11	1.88	0.55
52:l:60:TRP:CD1	52:l:65:THR:HG21	2.43	0.55
54:n:5:HIS:HD2	54:n:97:TRP:CE2	2.24	0.55
62:v:111:GLU:OE1	62:v:111:GLU:N	2.32	0.55
8:7:1:A:C4	8:7:2:U:C5	2.95	0.54
8:7:6:U:C2	18:D:1493:A:C2	2.95	0.54
10:A:22:G:H2'	10:A:23:C:H6	1.71	0.54
12:AB:149:GLU:O	12:AB:149:GLU:HG3	2.04	0.54
16:AG:288:MET:HE2	16:AG:293:VAL:HB	1.89	0.54
16:AG:434:LEU:HD22	16:AG:459:LEU:CG	2.31	0.54
10:B:22:G:H2'	10:B:23:C:H6	1.70	0.54
10:B:60:U:P	10:B:61:C:H41	2.30	0.54
18:D:280:C:H1'	36:V:40:ARG:CZ	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:547:A:OP1	24:J:70:ARG:NH2	2.41	0.54
21:G:30:PHE:CD1	21:G:45:LYS:NZ	2.74	0.54
26:L:39:LEU:O	26:L:39:LEU:HD12	2.07	0.54
41:a:2683:C:H4'	50:j:13:ARG:NH2	2.22	0.54
45:e:20:ASN:O	45:e:23:ARG:HG2	2.06	0.54
3:2:2:ILE:HG21	3:2:42:GLU:OE1	2.06	0.54
4:3:7:ARG:HB3	41:a:85:G:OP2	2.08	0.54
14:AE:886:VAL:HG11	14:AE:1230:THR:HG21	1.89	0.54
16:AG:130:PHE:O	16:AG:186:VAL:HG11	2.07	0.54
16:AG:168:LEU:CD2	16:AG:231:GLY:HA2	2.09	0.54
16:AG:235:LYS:HG2	16:AG:235:LYS:O	2.07	0.54
16:AG:448:LEU:HD11	16:AG:481:LEU:HD13	1.89	0.54
10:B:37:A:H2'	10:B:38:A:O4'	2.07	0.54
18:D:695:A:OP1	31:Q:53:ARG:HD3	2.07	0.54
19:E:9:LYS:C	19:E:13:GLN:NE2	2.62	0.54
25:K:112:ARG:HG3	25:K:116:GLU:OE2	2.06	0.54
27:M:103:TRP:HB3	27:M:137:LYS:HD3	1.89	0.54
29:O:88:MET:HE1	29:O:95:ARG:HA	1.89	0.54
41:a:64:A:H2'	41:a:65:U:H6	1.71	0.54
41:a:151:C:C2	41:a:152:A:C8	2.95	0.54
41:a:2356:U:H4'	42:b:20:ARG:HH11	1.73	0.54
41:a:2741:A:O3'	57:q:36:ARG:NH1	2.40	0.54
41:a:2833:U:O2	50:j:58:ASN:ND2	2.41	0.54
41:a:2838:G:C4	41:a:2839:G:C8	2.95	0.54
50:j:156:PHE:CD2	59:s:81:ILE:HD13	2.42	0.54
51:k:7:GLU:CG	51:k:27:LYS:HZ3	2.20	0.54
65:y:31:TRP:CZ3	65:y:40:LEU:HD11	2.43	0.54
9:9:23:LEU:HD21	9:9:96:PHE:CD1	2.42	0.54
10:A:18:G:H1'	10:A:58:A:C2	2.41	0.54
16:AG:131:ARG:O	16:AG:134:GLU:CG	2.47	0.54
16:AG:179:VAL:HB	16:AG:199:ARG:HH11	1.73	0.54
16:AG:320:ARG:HB2	16:AG:323:GLN:HB2	1.88	0.54
18:D:375:U:OP1	35:U:70:ARG:CG	2.54	0.54
18:D:671:G:O3'	26:L:79:ARG:NH2	2.39	0.54
23:I:132:ARG:HA	23:I:135:LYS:HE3	1.89	0.54
25:K:14:LYS:HD3	25:K:117:VAL:CG1	2.38	0.54
27:M:79:ARG:O	27:M:79:ARG:HD2	2.06	0.54
32:R:27:CYS:SG	32:R:30:LYS:NZ	2.68	0.54
32:R:109:ASP:C	32:R:111:LYS:HZ3	2.15	0.54
33:S:87:ALA:HB1	33:S:93:ILE:HG13	1.87	0.54
41:a:16:C:O4'	49:i:15:MET:CE	2.55	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1348:C:C5	41:a:1349:C:C5	2.95	0.54
41:a:1386:C:H2'	41:a:1387:A:C8	2.42	0.54
41:a:1817:G:C6	41:a:1818:U:C5	2.95	0.54
41:a:2376:A:N3	64:x:111:ARG:NH1	2.54	0.54
46:f:10:THR:HB	46:f:56:LYS:NZ	2.22	0.54
48:h:62:TYR:CD2	48:h:64:ILE:HD13	2.41	0.54
56:p:149:ARG:NE	56:p:162:VAL:O	2.40	0.54
58:r:135:HIS:ND1	58:r:137:GLU:CD	2.44	0.54
58:r:143:ILE:O	58:r:143:ILE:HG13	2.08	0.54
9:9:3:LEU:HD12	9:9:4:ASN:CA	2.37	0.54
12:AB:2:GLN:HA	12:AB:61:PRO:HD3	1.88	0.54
16:AG:305:MET:HG3	16:AG:336:LEU:HB3	1.89	0.54
10:B:22:G:O2'	10:B:23:C:P	2.65	0.54
19:E:24:ARG:O	19:E:28:MET:HG2	2.08	0.54
22:H:279:LYS:HA	22:H:331:MET:HB3	1.89	0.54
25:K:77:ASN:HB2	25:K:82:GLN:HG3	1.89	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:1082:U:O4	41:a:1086:A:N1	2.39	0.54
41:a:1353:A:H2'	41:a:1354:A:C8	2.43	0.54
41:a:2020:A:C2	41:a:2022:U:O4'	2.61	0.54
41:a:2649:C:H2'	41:a:2650:U:H6	1.73	0.54
45:e:28:LEU:HD23	45:e:43:LEU:HD22	1.88	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	2.20	0.54
13:AC:100:LEU:HD23	13:AC:115:ILE:HG21	1.90	0.54
14:AE:342:LEU:HD23	14:AE:1352:ILE:HG23	1.90	0.54
14:AE:968:ASN:HA	14:AE:1117:SER:HB2	1.90	0.54
16:AG:131:ARG:HA	16:AG:186:VAL:CG1	2.38	0.54
22:H:9:PHE:O	22:H:13:LEU:HD23	2.07	0.54
22:H:118:GLY:O	22:H:133:GLY:HA2	2.06	0.54
25:K:45:ARG:C	25:K:71:MET:HE2	2.32	0.54
28:N:50:LYS:HE2	28:N:50:LYS:HA	1.89	0.54
39:Y:44:LYS:O	39:Y:44:LYS:HD2	2.07	0.54
39:Y:45:THR:HG21	39:Y:50:LYS:CD	2.36	0.54
41:a:537:G:OP2	59:s:2:LYS:CE	2.55	0.54
41:a:839:U:H2'	41:a:840:C:H6	1.73	0.54
41:a:1563:U:H2'	41:a:1564:C:C6	2.43	0.54
41:a:1830:C:C2	41:a:1831:G:C8	2.96	0.54
41:a:2297:A:C2	41:a:2320:U:O4'	2.61	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:b:68:LYS:HZ2	42:b:70:GLU:CD	2.13	0.54
54:n:16:LEU:HD11	54:n:169:LEU:CD1	2.38	0.54
66:z:92:ARG:HA	66:z:95:LEU:HD12	1.89	0.54
1:0:13:ARG:NH2	66:z:97:ASP:OD1	2.40	0.54
2:1:25:ARG:NH2	41:a:519:U:O3'	2.40	0.54
5:4:57:TYR:HB3	62:v:136:MET:HE3	1.87	0.54
7:6:20:DA:N6	8:7:36:G:C2	2.76	0.54
7:6:20:DA:C6	8:7:36:G:N2	2.76	0.54
11:AA:103:VAL:HB	11:AA:114:VAL:HG11	1.89	0.54
10:B:31:G:O2'	18:D:1340:A:H4'	2.08	0.54
18:D:17:U:H2'	18:D:18:C:C6	2.42	0.54
18:D:73:C:O2	18:D:73:C:H2'	2.07	0.54
18:D:106:C:N4	19:E:10:ARG:NH2	2.56	0.54
19:E:25:ARG:HD3	19:E:66:LEU:HD11	1.90	0.54
22:H:332:VAL:HG12	22:H:334:ASP:H	1.73	0.54
24:J:61:VAL:HG21	24:J:200:ILE:HD11	1.90	0.54
25:K:157:ARG:NE	28:N:43:GLU:O	2.40	0.54
27:M:23:LEU:O	27:M:27:VAL:HG13	2.07	0.54
27:M:103:TRP:CD1	27:M:137:LYS:HZ2	2.25	0.54
28:N:87:LYS:HG2	28:N:92:LEU:HA	1.90	0.54
32:R:74:LEU:HD11	32:R:80:ILE:HD11	1.90	0.54
33:S:42:TRP:CH2	47:g:66:ILE:HG23	2.42	0.54
41:a:743:A:O2'	41:a:1659:G:OP1	2.25	0.54
41:a:2064:C:H2'	41:a:2065:C:C6	2.42	0.54
51:k:5:ILE:HG23	51:k:28:ARG:NH1	2.21	0.54
59:s:15:TRP:HE3	59:s:135:GLN:O	1.90	0.54
1:0:10:LYS:CE	41:a:996:A:OP1	2.56	0.54
5:4:35:GLU:OE1	5:4:93:ARG:CZ	2.56	0.54
11:AA:360:LEU:HD13	11:AA:378:ARG:HH11	1.72	0.54
18:D:37:U:O4	18:D:397:A:N1	2.40	0.54
21:G:19:GLN:CD	22:H:76:GLU:HB3	2.33	0.54
23:I:85:GLU:HG3	23:I:89:LYS:NZ	2.23	0.54
25:K:131:THR:O	25:K:131:THR:HG22	2.08	0.54
26:L:3:HIS:CG	26:L:65:GLU:OE1	2.61	0.54
39:Y:32:VAL:HA	39:Y:60:VAL:HG21	1.90	0.54
39:Y:102:ARG:HG3	39:Y:140:GLU:C	2.33	0.54
41:a:134:G:H2'	41:a:135:U:C6	2.43	0.54
41:a:588:U:H2'	41:a:589:U:C6	2.43	0.54
41:a:1084:A:N7	41:a:1085:A:C6	2.76	0.54
41:a:2038:G:H2'	41:a:2039:U:O4'	2.08	0.54
50:j:4:LEU:HG	50:j:32:ASN:OD1	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:l:175:ILE:CG2	52:l:180:LEU:HD11	2.38	0.54
54:n:134:GLU:N	54:n:134:GLU:OE1	2.40	0.54
59:s:74:TYR:CE2	59:s:92:MET:HE1	2.42	0.54
60:t:2:ILE:CG2	60:t:8:LEU:HD11	2.38	0.54
60:t:73:ASP:OD2	65:y:80:VAL:HG11	2.08	0.54
5:4:6:ALA:HB3	5:4:65:VAL:CG2	2.37	0.54
9:9:61:ARG:NH2	41:a:1045:C:O3'	2.40	0.54
9:9:73:LYS:HD2	9:9:73:LYS:O	2.06	0.54
11:AA:243:PRO:HB2	11:AA:274:ILE:HG23	1.90	0.54
11:AA:684:ASN:OD1	11:AA:687:ARG:NH2	2.41	0.54
11:AA:811:ASN:HA	11:AA:815:SER:HB2	1.90	0.54
12:AB:6:LEU:HD13	12:AB:79:VAL:HG21	1.89	0.54
16:AG:223:ILE:HD13	16:AG:223:ILE:C	2.32	0.54
16:AG:362:TYR:CE1	16:AG:414:LEU:HD21	2.43	0.54
18:D:736:C:H2'	18:D:737:C:C6	2.43	0.54
20:F:31:GLU:O	20:F:34:ARG:HG2	2.08	0.54
25:K:86:LYS:N	25:K:86:LYS:HD2	2.23	0.54
30:P:5:ARG:HG3	30:P:7:ARG:NH1	2.23	0.54
32:R:56:ARG:HA	32:R:62:GLU:OE2	2.08	0.54
39:Y:77:VAL:O	39:Y:77:VAL:HG12	2.08	0.54
41:a:581:C:H2'	41:a:582:A:H8	1.73	0.54
41:a:2454:G:C4	41:a:2455:G:C8	2.96	0.54
60:t:41:ILE:HD11	60:t:86:LEU:HD22	1.89	0.54
63:w:94:TYR:C	63:w:116:VAL:HG23	2.32	0.54
2:1:33:LEU:HD23	2:1:51:LEU:HD23	1.89	0.54
11:AA:373:GLY:C	12:AB:83:ALA:HB1	2.24	0.54
11:AA:633:LEU:HD13	11:AA:644:LEU:HD23	1.89	0.54
12:AB:134:ASP:HB3	12:AB:138:ARG:HB3	1.88	0.54
14:AE:66:LYS:HB2	14:AE:69:GLU:CB	2.38	0.54
16:AG:358:THR:O	16:AG:358:THR:OG1	2.25	0.54
16:AG:374:VAL:O	16:AG:374:VAL:HG12	2.08	0.54
17:C:40:VAL:HG13	22:H:339:ARG:HD3	1.89	0.54
18:D:76:G:C4	18:D:77:A:C8	2.95	0.54
18:D:1358:U:O4	18:D:1363:A:N1	2.41	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
24:J:175:ALA:O	24:J:178:MET:SD	2.65	0.54
29:O:10:GLY:HA3	29:O:78:ALA:O	2.08	0.54
31:Q:79:ILE:O	31:Q:105:PHE:HE1	1.91	0.54
32:R:110:ARG:NE	32:R:117:TYR:CD2	2.76	0.54
34:T:3:LEU:HD22	34:T:8:THR:HG22	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:X:28:THR:CA	38:X:31:LYS:HE3	2.37	0.54
38:X:96:PRO:HG3	38:X:102:THR:HG22	1.89	0.54
41:a:1000:A:H2'	41:a:1001:A:C8	2.43	0.54
41:a:1656:C:OP1	50:j:141:ARG:CD	2.55	0.54
41:a:2351:G:O6	55:o:39:LYS:CE	2.55	0.54
57:q:9:LYS:HZ3	57:q:11:CYS:C	2.16	0.54
60:t:14:SER:OG	60:t:86:LEU:HD12	2.08	0.54
62:v:97:GLN:H	62:v:100:LYS:CE	2.21	0.54
64:x:38:GLN:HG2	64:x:50:ALA:CB	2.38	0.54
3:2:30:ILE:HG22	3:2:32:LEU:CD2	2.38	0.54
9:9:3:LEU:CG	9:9:4:ASN:H	2.21	0.54
12:AB:37:LYS:CG	12:AB:107:PRO:CD	2.85	0.54
13:AD:100:LEU:HD21	13:AD:121:VAL:HG11	1.90	0.54
14:AE:1346:GLY:O	14:AE:1350:ASN:ND2	2.41	0.54
16:AG:299:ASP:HB2	16:AG:303:HIS:HA	1.89	0.54
16:AG:327:LEU:HD12	16:AG:327:LEU:O	2.07	0.54
16:AG:448:LEU:HD22	16:AG:467:LEU:HD22	1.89	0.54
17:C:13:PHE:CZ	17:C:21:ILE:HG12	2.42	0.54
18:D:197:A:H1'	18:D:198:G:OP2	2.08	0.54
18:D:399:G:H2'	18:D:400:C:C6	2.43	0.54
18:D:679:C:C2	18:D:680:C:C5	2.95	0.54
19:E:25:ARG:HD3	19:E:66:LEU:HD21	1.90	0.54
19:E:32:ILE:CG2	19:E:75:HIS:NE2	2.71	0.54
26:L:62:MET:HA	26:L:62:MET:HE3	1.90	0.54
27:M:31:MET:SD	27:M:36:LYS:HA	2.48	0.54
28:N:83:LEU:HD21	32:R:4:VAL:HG11	1.89	0.54
39:Y:33:ASN:HB2	39:Y:36:GLU:OE2	2.08	0.54
39:Y:116:MET:HG2	39:Y:124:MET:HB3	1.90	0.54
41:a:2002:G:OP1	63:w:17:ARG:NH2	2.26	0.54
48:h:107:PRO:HD2	48:h:110:LEU:HD22	1.89	0.54
59:s:133:ALA:C	59:s:135:GLN:H	2.16	0.54
61:u:76:GLU:CG	61:u:111:ILE:HD13	2.37	0.54
65:y:27:GLU:HB3	65:y:87:LYS:NZ	2.22	0.54
12:AB:43:ARG:NH2	12:AB:133:PRO:CB	2.69	0.53
18:D:750:C:C2	18:D:751:U:C5	2.96	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
29:O:67:VAL:C	29:O:68:LYS:HD2	2.33	0.53
38:X:81:MET:CE	38:X:92:ARG:HD3	2.38	0.53
39:Y:80:LYS:CG	39:Y:86:LYS:O	2.56	0.53
41:a:2747:G:O6	41:a:2755:C:H5''	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:2766:A:C2	41:a:2767:C:C6	2.96	0.53
61:u:57:LEU:HA	61:u:60:ARG:HD2	1.89	0.53
62:v:45:GLN:HE21	62:v:124:LEU:HD23	1.72	0.53
62:v:96:ILE:HA	62:v:100:LYS:CE	2.38	0.53
63:w:35:LYS:NZ	63:w:112:TYR:CE2	2.76	0.53
63:w:44:LEU:HD22	63:w:113:ILE:HD13	1.90	0.53
2:1:41:LYS:HE3	41:a:2010:G:P	2.48	0.53
5:4:80:HIS:ND1	5:4:83:LYS:HB2	2.23	0.53
9:9:97:LYS:HD3	9:9:130:PRO:HG3	1.89	0.53
10:A:41:C:O4'	27:M:143:ARG:NH1	2.41	0.53
18:D:1399:C:O2	18:D:1502:A:N6	2.40	0.53
27:M:85:TYR:CD2	27:M:151:PHE:CZ	2.96	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
36:V:7:THR:CB	36:V:60:GLU:OE2	2.56	0.53
41:a:1790:C:H2'	41:a:1791:A:C5	2.43	0.53
41:a:2259:U:C2	41:a:2260:C:C6	2.96	0.53
48:h:17:VAL:HB	48:h:204:VAL:HG12	1.89	0.53
50:j:55:LYS:NZ	50:j:59:ARG:HB3	2.23	0.53
50:j:124:ARG:NH1	50:j:161:MET:O	2.41	0.53
62:v:97:GLN:N	62:v:100:LYS:CE	2.72	0.53
66:z:78:LYS:CD	66:z:117:LEU:CD2	2.84	0.53
3:2:6:ARG:NH2	3:2:10:VAL:HG22	2.23	0.53
8:7:13:U:H6	8:7:13:U:H5''	1.73	0.53
9:9:52:MET:HE1	9:9:85:SER:CA	2.38	0.53
13:AC:43:LEU:HD13	13:AC:217:ILE:HD11	1.90	0.53
16:AG:31:LEU:HD23	16:AG:106:THR:CB	2.39	0.53
23:I:85:GLU:O	23:I:89:LYS:HE2	2.09	0.53
26:L:42:TRP:CZ2	26:L:102:MET:SD	3.01	0.53
41:a:2308:G:C5	54:n:77:PHE:HZ	2.26	0.53
41:a:2356:U:C5'	42:b:20:ARG:HD2	2.36	0.53
47:g:47:LYS:HD3	54:n:178:ARG:HH22	1.73	0.53
48:h:74:ILE:CG2	48:h:96:TYR:HD1	2.21	0.53
52:l:60:TRP:NE1	52:l:69:ARG:HH12	2.07	0.53
54:n:71:ARG:O	54:n:81:GLN:NE2	2.40	0.53
54:n:72:LYS:HA	54:n:81:GLN:HE22	1.74	0.53
54:n:114:PHE:O	54:n:115:ARG:NE	2.34	0.53
54:n:132:VAL:CG2	54:n:152:LEU:HD23	2.39	0.53
58:r:33:GLN:HB3	58:r:35:LYS:HZ3	1.72	0.53
60:t:1:MET:CE	60:t:32:TYR:HB3	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:u:111:ILE:HD12	61:u:111:ILE:N	2.24	0.53
62:v:21:ALA:HB2	62:v:100:LYS:HG3	1.90	0.53
3:2:19:LYS:O	3:2:22:THR:OG1	2.22	0.53
3:2:56:GLU:OE1	3:2:87:LEU:CA	2.56	0.53
9:9:129:LEU:HD12	9:9:129:LEU:C	2.32	0.53
9:9:136:ILE:CD1	9:9:139:LEU:HD12	2.25	0.53
12:AB:69:ILE:H	12:AB:69:ILE:CD1	2.19	0.53
14:AE:1175:LEU:O	14:AE:1187:GLU:HA	2.08	0.53
10:B:38:A:O2'	18:D:790:A:O5'	2.27	0.53
17:C:54:GLN:HG3	17:C:55:LEU:N	2.21	0.53
18:D:1308:U:H3'	38:X:98:ARG:CZ	2.39	0.53
21:G:53:ALA:CA	21:G:56:GLU:OE1	2.57	0.53
21:G:148:LEU:HD22	21:G:151:ILE:HD11	1.90	0.53
25:K:137:VAL:O	25:K:141:ILE:HG12	2.09	0.53
30:P:27:GLU:HA	30:P:30:LYS:NZ	2.23	0.53
30:P:47:GLU:OE1	30:P:67:ILE:HG23	2.09	0.53
31:Q:84:VAL:CG2	31:Q:107:ILE:HD11	2.37	0.53
41:a:1412:U:C4	41:a:1413:A:N7	2.77	0.53
41:a:1779:U:H5	41:a:1784:A:N7	2.06	0.53
41:a:1820:U:C4	48:h:159:GLY:HA3	2.44	0.53
41:a:2387:U:O4'	42:b:41:ARG:NH1	2.41	0.53
41:a:2849:U:O5'	65:y:93:ARG:NH2	2.42	0.53
52:l:62:GLN:O	52:l:69:ARG:CD	2.56	0.53
53:m:25:LYS:HG3	53:m:29:GLN:HE22	1.73	0.53
60:t:1:MET:CE	60:t:32:TYR:CB	2.87	0.53
60:t:18:ARG:HB3	60:t:45:GLU:HB3	1.89	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	1.91	0.53
14:AE:901:ARG:HH21	14:AE:906:GLY:HA2	1.73	0.53
16:AG:379:SER:HG	16:AG:384:LEU:HD21	1.69	0.53
17:C:12:ARG:NH2	17:C:13:PHE:CE1	2.77	0.53
17:C:60:LYS:HD2	18:D:734:G:O2'	2.07	0.53
18:D:769:G:H4'	18:D:1513:A:H4'	1.90	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
26:L:36:ILE:O	26:L:36:ILE:HG23	2.08	0.53
28:N:31:LYS:HE3	28:N:31:LYS:HA	1.89	0.53
36:V:31:HIS:ND1	36:V:32:PRO:HD2	2.23	0.53
39:Y:77:VAL:HA	39:Y:80:LYS:HD3	1.90	0.53
41:a:125:A:OP2	53:m:19:ARG:NH2	2.39	0.53
41:a:2063:C:O2	41:a:2063:C:H2'	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:h:123:ALA:HB1	48:h:125:LYS:HZ1	1.74	0.53
50:j:4:LEU:HD23	50:j:29:VAL:HG11	1.89	0.53
50:j:48:ILE:HG12	50:j:84:LEU:HD21	1.90	0.53
52:l:62:GLN:HA	52:l:69:ARG:HH21	1.73	0.53
52:l:69:ARG:HA	52:l:69:ARG:CZ	2.37	0.53
54:n:42:GLU:HG3	54:n:49:LEU:HD23	1.91	0.53
64:x:48:LEU:CD2	64:x:87:ILE:HD11	2.38	0.53
2:1:31:GLN:O	2:1:35:ILE:HG12	2.07	0.53
8:7:3:G:H3'	18:D:1500:A:N6	2.24	0.53
13:AD:205:MET:HE3	13:AD:213:PRO:HB3	1.91	0.53
18:D:1329:A:P	38:X:28:THR:HB	2.48	0.53
19:E:22:ALA:CA	19:E:25:ARG:HH21	2.21	0.53
21:G:18:HIS:HA	22:H:43:LYS:HD2	1.90	0.53
29:O:5:GLN:NE2	29:O:22:LYS:NZ	2.56	0.53
31:Q:86:VAL:O	31:Q:113:VAL:HG22	2.08	0.53
54:n:46:ASP:CG	54:n:49:LEU:HD13	2.33	0.53
56:p:89:LEU:HD22	56:p:162:VAL:HG22	1.91	0.53
63:w:14:SER:HA	63:w:17:ARG:CZ	2.39	0.53
4:3:26:LYS:HE3	4:3:37:GLU:HB2	1.90	0.53
14:AE:679:TYR:OH	14:AE:754:ILE:O	2.23	0.53
16:AG:243:LYS:CE	21:G:179:LEU:CD2	2.87	0.53
18:D:274:A:H4'	36:V:16:LYS:NZ	2.24	0.53
18:D:552:U:O2'	32:R:83:ARG:O	2.18	0.53
22:H:71:ALA:C	22:H:72:LEU:HD12	2.32	0.53
24:J:67:VAL:HB	24:J:72:PHE:CE1	2.43	0.53
24:J:105:MET:HE1	24:J:171:LEU:HB3	1.89	0.53
39:Y:78:LEU:HD13	39:Y:108:ILE:HG12	1.90	0.53
40:Z:18:ASP:HB3	40:Z:22:LEU:CD1	2.39	0.53
41:a:67:U:N3	41:a:74:A:C6	2.77	0.53
41:a:78:U:H2'	41:a:79:C:C6	2.44	0.53
41:a:590:A:H2'	41:a:591:U:C6	2.44	0.53
41:a:813:U:H2'	41:a:814:C:H6	1.74	0.53
41:a:998:C:OP1	66:z:84:LYS:NZ	2.39	0.53
41:a:1348:C:C4	41:a:1349:C:C6	2.97	0.53
41:a:2537:U:H2'	41:a:2538:C:C6	2.43	0.53
41:a:2867:G:C6	65:y:21:ARG:NH1	2.76	0.53
51:k:8:LYS:NZ	51:k:54:ILE:HG12	2.23	0.53
54:n:29:PRO:HB2	54:n:169:LEU:HD22	1.91	0.53
62:v:45:GLN:NE2	62:v:125:PRO:HD2	2.22	0.53
7:6:14:DC:H2'	7:6:15:DC:C6	2.43	0.53
14:AE:514:THR:HG21	14:AE:596:LEU:HD12	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:213:VAL:HG22	16:AG:213:VAL:O	2.08	0.53
10:B:38:A:O2'	18:D:790:A:P	2.66	0.53
21:G:23:TRP:HZ3	21:G:25:PRO:CA	2.22	0.53
21:G:23:TRP:HB3	21:G:39:HIS:CE1	2.44	0.53
23:I:49:LYS:NZ	23:I:75:ILE:HD11	2.24	0.53
27:M:38:THR:O	27:M:42:ILE:HG12	2.08	0.53
31:Q:20:VAL:HB	31:Q:35:THR:HG23	1.89	0.53
37:W:66:MET:HG2	37:W:74:PHE:CZ	2.44	0.53
41:a:151:C:H2'	41:a:152:A:H8	1.72	0.53
41:a:372:G:O2'	43:c:54:LYS:HE3	2.09	0.53
41:a:414:C:H2'	41:a:415:A:C8	2.44	0.53
41:a:1278:C:H5'	63:w:24:MET:SD	2.49	0.53
41:a:1340:U:C5	41:a:1603:A:C8	2.97	0.53
41:a:1657:U:O2'	50:j:138:LEU:HD22	2.08	0.53
41:a:1818:U:C6	48:h:156:ARG:NH2	2.77	0.53
41:a:2847:U:H2'	41:a:2848:G:O4'	2.09	0.53
52:l:188:MET:HE2	52:l:193:VAL:HA	1.89	0.53
61:u:54:GLN:NE2	61:u:60:ARG:HH12	2.07	0.53
7:6:19:DC:H2'	7:6:20:DA:H8	1.74	0.53
13:AD:28:LEU:HD12	13:AD:201:LEU:HD23	1.91	0.53
16:AG:21:GLU:HB3	16:AG:49:ILE:HD12	1.91	0.53
18:D:1208:C:H2'	18:D:1209:C:C6	2.40	0.53
22:H:45:GLU:OE1	22:H:45:GLU:N	2.41	0.53
23:I:58:GLU:OE2	23:I:60:PRO:HD3	2.09	0.53
24:J:50:ASP:O	24:J:53:VAL:HG22	2.09	0.53
27:M:4:ARG:CG	27:M:5:ARG:NH1	2.71	0.53
31:Q:84:VAL:HG21	31:Q:97:ILE:CD1	2.39	0.53
39:Y:9:LYS:CG	39:Y:55:PRO:HB3	2.39	0.53
39:Y:129:GLU:CB	39:Y:133:ARG:HH12	2.16	0.53
41:a:537:G:P	59:s:2:LYS:HE2	2.49	0.53
41:a:1295:C:C2	41:a:1296:G:C8	2.97	0.53
41:a:2328:A:H2'	41:a:2329:U:H6	1.68	0.53
50:j:131:ASP:OD2	50:j:132:ALA:N	2.42	0.53
52:l:60:TRP:NE1	52:l:69:ARG:NH1	2.56	0.53
57:q:25:VAL:CB	57:q:35:GLN:OE1	2.56	0.53
62:v:115:GLU:O	62:v:119:LEU:HD23	2.09	0.53
3:2:33:LYS:HG3	3:2:80:TRP:CE3	2.44	0.53
5:4:19:ARG:NH1	44:d:95:U:OP2	2.41	0.53
11:AA:524:ILE:HG21	11:AA:708:VAL:HG13	1.92	0.53
12:AB:84:SER:OG	12:AB:85:PRO:HD2	2.08	0.53
12:AB:126:PHE:N	12:AB:126:PHE:CD1	2.77	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AE:1045:THR:O	14:AE:1067:ARG:NH2	2.41	0.53
16:AG:233:ARG:C	16:AG:327:LEU:HD21	2.34	0.53
18:D:1439:G:P	19:E:33:LYS:NZ	2.82	0.53
20:F:17:ARG:HA	20:F:20:LYS:NZ	2.24	0.53
27:M:79:ARG:HB2	27:M:84:THR:HG23	1.90	0.53
29:O:47:VAL:O	29:O:80:ARG:HD2	2.09	0.53
32:R:35:THR:OG1	32:R:56:ARG:HG3	2.08	0.53
41:a:1665:A:C3'	60:t:66:LYS:HZ2	2.22	0.53
51:k:29:THR:HG23	51:k:30:LYS:HG2	1.90	0.53
59:s:9:GLU:HG2	59:s:10:THR:HG23	1.90	0.53
5:4:35:GLU:OE1	5:4:36:ALA:O	2.27	0.52
8:7:3:G:C4'	18:D:1500:A:H62	2.22	0.52
10:A:16:C:O2	41:a:2181:U:C5'	2.57	0.52
11:AA:859:GLU:CB	16:AG:38:LYS:HB2	2.37	0.52
11:AA:1117:LEU:HD12	11:AA:1195:ILE:HG12	1.90	0.52
16:AG:434:LEU:CG	16:AG:456:LEU:N	2.71	0.52
16:AG:440:VAL:HG21	16:AG:481:LEU:HD22	1.88	0.52
21:G:168:HIS:HB3	21:G:169:GLU:OE1	2.10	0.52
39:Y:126:ARG:NH1	41:a:1082:U:C5'	2.72	0.52
41:a:15:G:H2'	49:i:15:MET:HE1	1.90	0.52
41:a:271:G:C4	41:a:272:A:N7	2.77	0.52
41:a:617:G:C4'	52:l:199:MET:HE1	2.39	0.52
41:a:995:C:N4	59:s:2:LYS:HG3	2.24	0.52
41:a:2315:G:O2'	54:n:125:ARG:HD3	2.09	0.52
41:a:2473:U:O2	41:a:2473:U:H2'	2.09	0.52
54:n:94:GLU:HA	54:n:97:TRP:CE3	2.43	0.52
60:t:2:ILE:HG23	60:t:8:LEU:HD11	1.91	0.52
1:0:4:VAL:HG22	1:0:40:MET:HB3	1.91	0.52
8:7:9:U:C4	18:D:1196:A:C8	2.97	0.52
11:AA:628:HIS:HB3	11:AA:647:ARG:HH21	1.74	0.52
16:AG:402:THR:HA	16:AG:405:ALA:HB3	1.91	0.52
21:G:127:ASP:O	21:G:128:LYS:HB3	2.09	0.52
24:J:74:ASN:O	24:J:77:LYS:HG2	2.09	0.52
31:Q:20:VAL:HG13	31:Q:85:MET:HE1	1.90	0.52
41:a:645:C:H2'	41:a:647:G:C8	2.45	0.52
41:a:1167:C:C2	41:a:1168:G:C8	2.97	0.52
41:a:1379:U:H4'	41:a:1380:G:OP1	2.09	0.52
41:a:1801:A:OP2	48:h:146:MET:HE1	2.09	0.52
41:a:2049:G:N2	50:j:161:MET:HE1	2.24	0.52
48:h:52:ARG:NE	48:h:53:HIS:HE1	2.07	0.52
48:h:108:LYS:HD3	48:h:194:GLU:HB2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:j:131:ASP:OD1	50:j:134:HIS:HB2	2.10	0.52
53:m:26:ASN:O	53:m:30:VAL:HG23	2.08	0.52
55:o:25:LYS:HB3	61:u:62:PRO:CG	2.40	0.52
56:p:33:LEU:HD11	56:p:136:ALA:HB1	1.89	0.52
2:1:27:LYS:O	2:1:71:VAL:HG22	2.10	0.52
9:9:93:ALA:O	9:9:129:LEU:O	2.27	0.52
11:AA:860:ALA:H	16:AG:37:LYS:HB2	1.73	0.52
12:AB:43:ARG:CZ	12:AB:133:PRO:HG3	2.38	0.52
16:AG:398:LEU:HG	16:AG:398:LEU:O	2.09	0.52
23:I:24:ALA:C	23:I:29:PHE:CE2	2.87	0.52
29:O:112:GLU:HG3	29:O:115:LYS:HZ3	1.73	0.52
31:Q:23:ILE:N	31:Q:87:LYS:HZ1	2.07	0.52
32:R:102:LEU:O	32:R:103:ASP:OD1	2.26	0.52
33:S:54:ASP:HA	33:S:59:ARG:HD2	1.90	0.52
34:T:3:LEU:HD22	34:T:8:THR:HG23	1.92	0.52
39:Y:16:MET:HG2	39:Y:16:MET:O	2.09	0.52
41:a:1145:C:C2	41:a:1146:C:C5	2.97	0.52
41:a:1145:C:N3	41:a:1146:C:C5	2.77	0.52
46:f:10:THR:HG23	46:f:11:ARG:HG2	1.90	0.52
50:j:146:ILE:HA	50:j:159:LYS:HZ1	1.74	0.52
54:n:93:GLY:HA2	54:n:97:TRP:CZ3	2.44	0.52
59:s:25:LEU:CD1	59:s:101:ILE:HD13	2.39	0.52
8:7:8:U:OP2	18:D:1397:C:C2	2.62	0.52
9:9:51:TYR:HB2	9:9:88:HIS:HB2	1.90	0.52
14:AE:510:LEU:HD22	14:AE:601:ILE:HD12	1.92	0.52
18:D:1175:G:N3	18:D:1176:A:C8	2.77	0.52
27:M:27:VAL:HG12	27:M:43:VAL:HG21	1.90	0.52
29:O:21:ILE:HD11	29:O:87:LEU:HD22	1.90	0.52
38:X:22:ILE:HB	38:X:25:VAL:CG1	2.39	0.52
41:a:1204:A:O4'	41:a:1206:G:C8	2.63	0.52
41:a:2093:G:OP2	58:r:22:LYS:HE3	2.09	0.52
41:a:2355:G:H2'	41:a:2356:U:H5'	1.91	0.52
48:h:34:LEU:HD12	48:h:61:ALA:HB1	1.91	0.52
56:p:9:VAL:HG22	56:p:69:ARG:NH1	2.25	0.52
3:2:54:GLU:OE1	3:2:54:GLU:N	2.38	0.52
9:9:55:VAL:HG12	9:9:56:ARG:N	2.25	0.52
9:9:61:ARG:NE	41:a:1046:A:P	2.83	0.52
14:AE:122:SER:HB2	14:AE:132:LEU:HD12	1.91	0.52
14:AE:1179:PRO:HB2	14:AE:1182:GLY:H	1.75	0.52
16:AG:285:ILE:CD1	16:AG:285:ILE:N	2.73	0.52
17:C:38:LYS:HE2	17:C:38:LYS:CA	2.37	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:339:C:H2'	18:D:340:U:H6	1.73	0.52
39:Y:78:LEU:HD12	39:Y:112:LYS:NZ	2.24	0.52
41:a:1666:G:OP1	60:t:66:LYS:HD3	2.10	0.52
48:h:76:ALA:HB1	48:h:94:VAL:CG1	2.39	0.52
61:u:56:PRO:O	61:u:60:ARG:HG3	2.10	0.52
66:z:108:ALA:O	66:z:111:GLU:HG3	2.09	0.52
2:1:61:ASN:OD1	41:a:496:G:H1'	2.09	0.52
3:2:19:LYS:NZ	41:a:1340:U:OP1	2.34	0.52
4:3:6:ARG:HG3	41:a:84:A:H3'	1.91	0.52
9:9:87:GLU:OE2	9:9:95:LEU:HG	2.09	0.52
11:AA:1287:LEU:HD13	14:AE:1357:ILE:HD11	1.91	0.52
12:AB:129:ILE:HG22	12:AB:142:LEU:HB2	1.92	0.52
14:AE:77:ARG:HD3	14:AE:78:LEU:H	1.73	0.52
16:AG:218:GLU:CA	21:G:108:ARG:NH2	2.68	0.52
16:AG:285:ILE:HD12	16:AG:293:VAL:HG21	1.92	0.52
16:AG:399:ASP:OD2	16:AG:399:ASP:N	2.40	0.52
18:D:73:C:O2	18:D:73:C:C2'	2.57	0.52
18:D:452:A:H2'	18:D:453:G:O4'	2.10	0.52
18:D:512:U:P	24:J:44:ARG:NH1	2.83	0.52
18:D:932:C:C5'	27:M:4:ARG:HH11	2.21	0.52
23:I:183:ASP:HB3	23:I:204:LYS:NZ	2.25	0.52
25:K:158:GLY:C	25:K:159:LYS:HD2	2.34	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
39:Y:126:ARG:NH1	41:a:1083:U:P	2.83	0.52
39:Y:139:VAL:HG22	39:Y:140:GLU:N	2.25	0.52
41:a:2727:A:O2'	60:t:70:ARG:NH2	2.43	0.52
63:w:33:ILE:CD1	63:w:112:TYR:CD1	2.91	0.52
63:w:37:THR:OG1	63:w:40:LYS:CD	2.57	0.52
5:4:63:ILE:CD1	5:4:91:PHE:CD2	2.93	0.52
9:9:43:LYS:O	9:9:47:GLU:OE1	2.28	0.52
12:AB:115:LYS:CB	12:AB:115:LYS:NZ	2.73	0.52
16:AG:12:VAL:HG23	16:AG:16:LYS:HE2	1.92	0.52
16:AG:442:ARG:C	16:AG:446:PHE:HD2	2.15	0.52
16:AG:444:LEU:HD22	16:AG:473:LEU:HD21	1.92	0.52
10:B:76:A:H1'	41:a:2494:G:P	2.50	0.52
18:D:62:U:H2'	18:D:63:C:C6	2.44	0.52
18:D:842:U:H3'	18:D:843:U:C5'	2.39	0.52
18:D:1371:G:O3'	29:O:71:GLY:HA3	2.10	0.52
23:I:105:GLU:OE1	23:I:107:ARG:NE	2.42	0.52
23:I:142:MET:CE	23:I:170:GLU:OE1	2.58	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
26:L:88:MET:HE2	26:L:90:MET:HE3	1.91	0.52
27:M:111:ARG:N	27:M:119:ARG:NH2	2.58	0.52
29:O:118:LEU:HD23	29:O:124:ARG:HA	1.91	0.52
31:Q:61:PHE:CD1	31:Q:64:GLN:NE2	2.78	0.52
33:S:79:LEU:HB2	33:S:84:VAL:HG22	1.91	0.52
37:W:47:LEU:O	37:W:62:VAL:HG23	2.09	0.52
38:X:96:PRO:CG	38:X:102:THR:HG22	2.40	0.52
41:a:2308:G:C6	54:n:77:PHE:CZ	2.97	0.52
47:g:11:GLU:HA	47:g:25:ARG:HA	1.90	0.52
60:t:38:ILE:HD11	60:t:112:PHE:CZ	2.43	0.52
2:1:24:ILE:O	2:1:71:VAL:HG21	2.08	0.52
6:5:9:DA:OP2	11:AA:473:ARG:HG2	2.05	0.52
10:A:6:G:C4	10:A:7:G:C8	2.98	0.52
14:AE:1000:GLY:HA3	14:AE:1026:PRO:HG2	1.90	0.52
16:AG:9:VAL:HG22	16:AG:24:PHE:CE2	2.45	0.52
16:AG:244:ARG:C	25:K:69:ARG:NE	2.66	0.52
16:AG:353:HIS:O	16:AG:356:ILE:CB	2.58	0.52
16:AG:363:LEU:CG	16:AG:410:ALA:CA	2.81	0.52
10:B:48:C:O2'	10:B:49:G:OP2	2.27	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
23:I:178:LEU:HD23	23:I:178:LEU:C	2.35	0.52
28:N:79:SER:HB2	28:N:85:ILE:HG22	1.92	0.52
29:O:9:THR:HB	29:O:85:ARG:NH1	2.25	0.52
32:R:24:LEU:C	32:R:25:GLU:OE1	2.52	0.52
34:T:24:SER:O	34:T:28:GLN:HG2	2.09	0.52
37:W:17:LYS:HB3	37:W:21:LYS:HZ3	1.75	0.52
41:a:150:U:H2'	41:a:151:C:C6	2.44	0.52
41:a:632:A:H2'	41:a:633:A:C8	2.44	0.52
41:a:963:U:C2	41:a:964:C:C5	2.97	0.52
41:a:1996:C:H4'	50:j:128:ARG:HH12	1.75	0.52
41:a:2723:C:H4'	63:w:1:MET:HE3	1.92	0.52
50:j:152:PRO:CG	50:j:156:PHE:CZ	2.91	0.52
51:k:21:TYR:CE2	51:k:49:TYR:CD2	2.98	0.52
54:n:71:ARG:C	54:n:81:GLN:HE22	2.17	0.52
59:s:15:TRP:CE3	59:s:135:GLN:O	2.63	0.52
62:v:20:LEU:H	62:v:20:LEU:HD23	1.73	0.52
66:z:78:LYS:HD3	66:z:117:LEU:HD23	1.88	0.52
1:0:5:PHE:HB3	1:0:59:ILE:HD12	1.91	0.52
7:6:17:DC:H42	8:7:38:G:H1	1.57	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:475:VAL:C	11:AA:477:GLU:H	2.17	0.52
14:AE:526:VAL:HG12	14:AE:549:LYS:HB2	1.90	0.52
16:AG:11:ALA:HB3	16:AG:12:VAL:HA	1.92	0.52
10:B:31:G:H2'	10:B:32:C:O4'	2.10	0.52
18:D:936:C:C2	18:D:937:A:C8	2.98	0.52
21:G:17:GLY:HA3	21:G:41:ILE:HD11	1.92	0.52
27:M:17:LYS:HZ2	27:M:18:PHE:HE1	1.55	0.52
41:a:139:U:OP2	41:a:140:C:N4	2.43	0.52
41:a:833:A:H2'	41:a:834:G:C8	2.44	0.52
41:a:1266:G:O2'	41:a:2012:G:O6	2.22	0.52
41:a:1394:U:H4'	41:a:1603:A:H4'	1.92	0.52
41:a:1681:G:H2'	41:a:1757:A:N1	2.25	0.52
41:a:2287:A:C8	41:a:2289:G:C8	2.96	0.52
41:a:2649:C:C2	41:a:2650:U:C5	2.97	0.52
41:a:2848:G:O2'	41:a:2867:G:N2	2.37	0.52
56:p:32:GLU:C	56:p:33:LEU:HD12	2.34	0.52
56:p:149:ARG:CZ	56:p:154:PRO:HD3	2.40	0.52
58:r:2:GLN:HG3	58:r:39:ALA:CB	2.40	0.52
58:r:29:PHE:CE2	58:r:35:LYS:HE3	2.45	0.52
59:s:98:GLU:O	59:s:99:ARG:C	2.53	0.52
60:t:71:ARG:NH2	60:t:123:LEU:O	2.42	0.52
62:v:112:LEU:HA	62:v:115:GLU:OE1	2.10	0.52
4:3:66:GLN:OE1	4:3:69:ASN:ND2	2.43	0.52
8:7:2:U:H2'	8:7:3:G:C8	2.45	0.52
9:9:24:SER:HG	9:9:85:SER:C	2.18	0.52
12:AB:115:LYS:HB3	12:AB:115:LYS:NZ	2.24	0.52
12:AB:146:ILE:CA	30:P:88:MET:HA	2.39	0.52
16:AG:243:LYS:HG3	21:G:179:LEU:HB3	1.92	0.52
18:D:1158:C:O2'	21:G:132:LYS:HE2	2.09	0.52
21:G:165:ASP:O	21:G:169:GLU:OE1	2.28	0.52
22:H:36:VAL:O	22:H:48:ILE:HB	2.10	0.52
28:N:66:PHE:CD2	28:N:67:GLN:OE1	2.62	0.52
31:Q:52:PHE:CZ	31:Q:65:VAL:HG21	2.45	0.52
34:T:15:PHE:CD2	34:T:30:ALA:CB	2.92	0.52
36:V:62:ARG:CA	36:V:73:TRP:CZ3	2.93	0.52
38:X:13:LYS:HE3	38:X:17:ILE:HG21	1.91	0.52
41:a:1707:G:C8	41:a:1756:G:C5	2.98	0.52
41:a:1818:U:O2'	48:h:153:GLN:O	2.23	0.52
41:a:2473:U:C4	41:a:2474:U:C5	2.97	0.52
52:l:6:LYS:CE	52:l:119:ILE:HG23	2.40	0.52
58:r:6:LEU:CD1	58:r:37:VAL:HG23	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:v:1:MET:CE	62:v:44:ARG:HA	2.38	0.52
1:0:71:LYS:HG3	1:0:73:LYS:HE3	1.91	0.51
5:4:80:HIS:CD2	5:4:83:LYS:HZ3	2.28	0.51
6:5:17:DC:H5''	6:5:17:DC:H6	1.75	0.51
16:AG:63:LEU:HA	16:AG:92:TYR:HA	1.92	0.51
17:C:71:THR:H	17:C:74:HIS:HE1	1.58	0.51
18:D:122:G:C5	18:D:123:U:C5	2.98	0.51
18:D:500:G:H2'	18:D:501:C:C6	2.45	0.51
18:D:564:C:P	32:R:12:ARG:HH22	2.30	0.51
18:D:679:C:H2'	18:D:680:C:H6	1.74	0.51
20:F:37:PHE:HB3	31:Q:124:PRO:O	2.10	0.51
22:H:321:VAL:HG13	22:H:322:VAL:HG23	1.91	0.51
26:L:33:GLU:HG3	26:L:33:GLU:O	2.10	0.51
29:O:30:ILE:HD13	29:O:39:PHE:HE2	1.75	0.51
29:O:57:MET:HA	29:O:60:LYS:CE	2.40	0.51
32:R:110:ARG:HE	32:R:117:TYR:HD2	1.57	0.51
41:a:65:U:H2'	41:a:66:C:H6	1.75	0.51
47:g:47:LYS:HE2	54:n:115:ARG:NE	2.25	0.51
48:h:18:LYS:HE3	48:h:20:VAL:CG2	2.40	0.51
60:t:42:THR:HG23	60:t:44:LYS:HZ1	1.75	0.51
66:z:65:ILE:HB	66:z:76:TYR:CE1	2.45	0.51
3:2:3:ARG:NH2	3:2:4:GLU:HB2	2.26	0.51
5:4:51:GLN:OE1	5:4:57:TYR:OH	2.27	0.51
9:9:3:LEU:CD1	9:9:4:ASN:N	2.63	0.51
11:AA:125:GLY:HA2	11:AA:499:SER:HB2	1.92	0.51
11:AA:714:VAL:HB	11:AA:787:PRO:HD2	1.92	0.51
12:AB:116:VAL:HG21	12:AB:130:PHE:CE1	2.45	0.51
12:AB:141:LEU:HD11	12:AB:154:VAL:HG11	1.90	0.51
16:AG:233:ARG:NH1	16:AG:324:ASN:HB2	2.25	0.51
18:D:1240:U:C5	27:M:116:MET:HE2	2.44	0.51
22:H:335:ILE:HG12	22:H:342:ILE:HD12	1.92	0.51
32:R:62:GLU:OE2	32:R:62:GLU:HA	2.11	0.51
33:S:87:ALA:N	33:S:90:ARG:NH1	2.58	0.51
34:T:64:ARG:HA	34:T:64:ARG:HH11	1.75	0.51
38:X:68:ASP:O	38:X:71:ARG:HG3	2.09	0.51
39:Y:58:ILE:HG23	39:Y:66:PHE:CD2	2.44	0.51
41:a:658:U:O2'	52:l:97:ASN:OD1	2.28	0.51
41:a:888:C:C4	41:a:889:C:C4	2.97	0.51
41:a:1009:A:OP2	59:s:39:LYS:NZ	2.37	0.51
41:a:1453:A:C8	63:w:73:ASN:OD1	2.64	0.51
41:a:2086:U:H2'	41:a:2087:G:C8	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:2758:A:H1'	56:p:38:ASN:HD21	1.75	0.51
44:d:42:C:P	54:n:64:LYS:NZ	2.83	0.51
50:j:68:PHE:CD2	50:j:75:ALA:HA	2.46	0.51
54:n:30:ARG:HB2	54:n:30:ARG:NH2	2.26	0.51
55:o:19:LYS:HE2	55:o:19:LYS:HA	1.91	0.51
59:s:31:GLU:HG2	59:s:142:ILE:HG12	1.92	0.51
63:w:24:MET:HA	63:w:24:MET:CE	2.33	0.51
63:w:82:GLU:OE1	63:w:82:GLU:N	2.44	0.51
1:0:17:GLY:HA2	1:0:97:LYS:HE2	1.92	0.51
11:AA:255:ILE:HB	11:AA:263:VAL:HB	1.93	0.51
12:AB:38:ILE:CD1	12:AB:38:ILE:N	2.73	0.51
13:AC:140:ILE:HD12	13:AC:142:MET:HE3	1.91	0.51
16:AG:282:GLN:NE2	16:AG:282:GLN:CA	2.73	0.51
16:AG:329:SER:HA	16:AG:336:LEU:HG	1.92	0.51
16:AG:453:VAL:HG11	16:AG:459:LEU:CD2	2.41	0.51
17:C:60:LYS:CE	18:D:735:C:C4'	2.88	0.51
18:D:925:G:C2	18:D:927:G:C8	2.98	0.51
18:D:1176:A:H2'	18:D:1177:G:C8	2.46	0.51
21:G:16:PHE:HB3	22:H:43:LYS:HA	1.93	0.51
21:G:26:LYS:HD2	21:G:193:PRO:CG	2.40	0.51
41:a:960:A:H61	62:v:82:MET:CE	2.24	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:1416:G:HO2'	41:a:1417:C:P	2.33	0.51
41:a:2252:G:H2'	41:a:2253:G:H8	1.76	0.51
50:j:122:VAL:HG21	50:j:141:ARG:HG3	1.92	0.51
51:k:19:HIS:CE1	51:k:41:PRO:HD3	2.45	0.51
51:k:21:TYR:CE2	51:k:49:TYR:CE2	2.99	0.51
54:n:8:TYR:HE2	54:n:30:ARG:HE	1.58	0.51
54:n:136:ILE:HD12	54:n:141:ILE:HG23	1.92	0.51
59:s:15:TRP:CZ3	59:s:135:GLN:CA	2.93	0.51
60:t:103:VAL:HG21	60:t:107:LEU:CD2	2.41	0.51
62:v:45:GLN:HE21	62:v:124:LEU:HA	1.75	0.51
62:v:115:GLU:HA	62:v:118:LYS:NZ	2.25	0.51
5:4:2:PHE:CE2	5:4:55:GLU:HG2	2.45	0.51
9:9:88:HIS:O	9:9:89:PRO:C	2.51	0.51
10:A:48:C:C5	10:A:59:A:C8	2.98	0.51
11:AA:246:LEU:HB3	11:AA:269:ILE:HD13	1.91	0.51
11:AA:859:GLU:OE1	16:AG:38:LYS:CE	2.57	0.51
12:AB:42:LYS:HD2	12:AB:42:LYS:H	1.72	0.51
12:AB:116:VAL:HG11	12:AB:130:PHE:CE2	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:139:THR:HA	16:AG:180:ARG:HA	1.92	0.51
18:D:868:C:H2'	18:D:869:G:O4'	2.10	0.51
18:D:934:C:C4	18:D:1345:U:C5	2.98	0.51
21:G:26:LYS:HE3	21:G:194:ASP:OD1	2.10	0.51
23:I:108:LYS:N	23:I:108:LYS:HD2	2.26	0.51
25:K:36:LEU:HD13	25:K:134:ILE:CD1	2.41	0.51
26:L:45:ARG:HA	26:L:45:ARG:NE	2.26	0.51
29:O:123:ARG:O	29:O:123:ARG:CG	2.58	0.51
30:P:73:LEU:HD21	30:P:75:ASP:OD2	2.10	0.51
38:X:71:ARG:HH12	47:g:52:ALA:HB3	1.75	0.51
40:Z:26:MET:HA	40:Z:30:PHE:CD1	2.46	0.51
41:a:607:U:C5	41:a:620:G:C5	2.97	0.51
41:a:626:A:N3	61:u:78:ARG:CZ	2.74	0.51
41:a:628:G:C5	41:a:636:G:N2	2.79	0.51
41:a:2006:C:C2	41:a:2007:U:C5	2.99	0.51
41:a:2040:G:OP1	59:s:106:LYS:NZ	2.38	0.51
41:a:2698:U:H2'	41:a:2699:C:C6	2.46	0.51
44:d:15:A:O4'	44:d:109:A:C8	2.63	0.51
50:j:55:LYS:HZ2	50:j:60:VAL:HB	1.73	0.51
60:t:99:ILE:HD13	60:t:118:LEU:CB	2.39	0.51
61:u:58:TYR:CE2	61:u:59:ARG:HG2	2.44	0.51
66:z:74:ILE:HG13	66:z:78:LYS:CE	2.40	0.51
6:5:9:DA:OP2	11:AA:470:ARG:O	2.28	0.51
8:7:13:U:H5''	8:7:13:U:C6	2.45	0.51
9:9:136:ILE:HG13	9:9:136:ILE:O	2.09	0.51
11:AA:855:PRO:HD2	11:AA:887:VAL:HG11	1.91	0.51
14:AE:795:TYR:OH	14:AE:1326:GLN:NE2	2.42	0.51
17:C:70:TYR:CE2	26:L:49:TYR:CZ	2.98	0.51
18:D:107:G:C5	19:E:10:ARG:NH2	2.79	0.51
18:D:754:C:OP1	34:T:72:ARG:NH1	2.44	0.51
22:H:279:LYS:HA	22:H:331:MET:CB	2.41	0.51
23:I:68:ILE:HG13	23:I:101:ILE:HD11	1.93	0.51
25:K:134:ILE:HG23	25:K:135:ASN:N	2.24	0.51
27:M:4:ARG:HG3	27:M:5:ARG:CG	2.22	0.51
30:P:22:THR:O	30:P:25:ILE:HG22	2.10	0.51
32:R:3:THR:O	32:R:6:GLN:N	2.44	0.51
34:T:64:ARG:NH2	34:T:89:ARG:HH22	2.07	0.51
39:Y:55:PRO:C	39:Y:71:LYS:HE2	2.36	0.51
41:a:1243:C:H1'	61:u:4:ASN:O	2.09	0.51
41:a:1314:C:C2	41:a:1315:C:C5	2.98	0.51
41:a:1346:G:C6	41:a:1601:G:C6	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1666:G:P	60:t:66:LYS:HD3	2.50	0.51
41:a:2391:G:P	55:o:32:ILE:HD12	2.50	0.51
41:a:2812:G:H2'	41:a:2813:A:C8	2.45	0.51
49:i:26:THR:HG23	49:i:27:SER:N	2.25	0.51
61:u:14:LYS:HE2	61:u:14:LYS:HA	1.91	0.51
61:u:122:VAL:HG13	61:u:125:LEU:CD1	2.34	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
9:9:59:LEU:HB2	9:9:62:ARG:HG3	1.92	0.51
12:AB:37:LYS:CD	12:AB:109:THR:HG21	2.41	0.51
12:AB:107:PRO:HG2	12:AB:109:THR:HG23	1.93	0.51
14:AE:77:ARG:HB3	14:AE:80:HIS:HB2	1.93	0.51
16:AG:360:THR:HG22	16:AG:360:THR:O	2.10	0.51
10:B:48:C:C5	10:B:59:A:C8	2.98	0.51
10:B:56:C:H2'	10:B:57:A:H5''	1.93	0.51
18:D:58:C:O2	18:D:58:C:H2'	2.09	0.51
18:D:718:A:H5'	31:Q:119:ASN:HD22	1.76	0.51
21:G:23:TRP:CD1	21:G:39:HIS:CE1	2.97	0.51
29:O:7:TYR:H	29:O:89:GLU:CD	2.19	0.51
34:T:5:THR:HG23	34:T:6:GLU:N	2.25	0.51
41:a:872:U:H2'	41:a:873:C:H6	1.75	0.51
41:a:910:A:C8	62:v:12:MET:CE	2.94	0.51
41:a:1198:U:C2	41:a:1199:U:C5	2.98	0.51
59:s:15:TRP:CD1	59:s:53:TYR:HB2	2.45	0.51
62:v:53:MET:HE3	62:v:120:ALA:CB	2.40	0.51
62:v:105:MET:HE2	62:v:108:VAL:CG2	2.40	0.51
64:x:53:THR:HG23	64:x:74:VAL:HG21	1.92	0.51
65:y:9:GLU:CG	65:y:55:LEU:HB2	2.40	0.51
9:9:94:ARG:HB2	9:9:97:LYS:CE	2.36	0.51
10:A:56:C:C5	41:a:2168:G:C6	2.98	0.51
12:AB:8:TYR:CE1	12:AB:53:ASN:HB2	2.46	0.51
14:AE:430:HIS:HB3	14:AE:925:GLU:HG3	1.93	0.51
18:D:21:G:C2	18:D:22:G:C5	2.99	0.51
18:D:107:G:C6	19:E:10:ARG:NH2	2.79	0.51
18:D:280:C:H1'	36:V:40:ARG:HH22	1.75	0.51
21:G:9:MET:HE1	21:G:47:VAL:CG2	2.40	0.51
27:M:66:LEU:CD1	27:M:101:MET:CE	2.84	0.51
34:T:3:LEU:HD23	34:T:3:LEU:C	2.36	0.51
40:Z:15:SER:O	40:Z:19:VAL:HG23	2.11	0.51
41:a:703:U:H2'	41:a:704:G:O4'	2.11	0.51
41:a:2305:U:H4'	54:n:133:ARG:NH2	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:2311:A:C5	54:n:77:PHE:CD2	2.98	0.51
41:a:2428:G:H21	61:u:60:ARG:CZ	2.23	0.51
41:a:2646:C:OP2	41:a:2732:G:O2'	2.25	0.51
41:a:2682:A:C2	50:j:23:PRO:HB3	2.46	0.51
46:f:4:THR:CB	46:f:37:GLU:OE2	2.58	0.51
48:h:130:LEU:HD21	48:h:192:LEU:HD21	1.93	0.51
52:l:170:ARG:CZ	52:l:176:ASP:OD1	2.58	0.51
58:r:71:LYS:HZ2	58:r:72:ILE:HA	1.74	0.51
1:0:37:GLU:O	1:0:37:GLU:HG3	2.11	0.51
4:3:85:PHE:CE1	4:3:94:ARG:HG2	2.46	0.51
5:4:2:PHE:CE1	5:4:56:PHE:CE1	2.99	0.51
8:7:31:U:O2	8:7:31:U:H2'	2.10	0.51
9:9:106:PHE:CG	9:9:106:PHE:O	2.63	0.51
10:A:23:C:H2'	10:A:24:U:C6	2.46	0.51
16:AG:285:ILE:HG23	16:AG:293:VAL:HG11	1.82	0.51
18:D:678:U:H2'	18:D:679:C:H6	1.76	0.51
20:F:36:GLU:OE2	20:F:36:GLU:HA	2.11	0.51
23:I:23:PHE:HD2	30:P:97:ASP:HB2	1.74	0.51
26:L:4:TYR:OH	26:L:68:GLN:HG2	2.11	0.51
29:O:51:PRO:HA	29:O:103:PHE:HE2	1.76	0.51
30:P:7:ARG:HD3	30:P:75:ASP:OD1	2.10	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:414:C:H2'	41:a:415:A:H8	1.75	0.51
41:a:993:G:C6	41:a:1162:G:C6	2.98	0.51
41:a:1318:U:C2	41:a:1319:C:C5	2.99	0.51
41:a:1668:A:O2'	41:a:1674:G:N7	2.32	0.51
41:a:2266:A:H4'	41:a:2267:A:N3	2.26	0.51
41:a:2387:U:C4'	42:b:41:ARG:HH12	2.24	0.51
41:a:2588:G:O6	41:a:2607:G:C6	2.64	0.51
52:l:168:ASP:HB3	52:l:183:PHE:HE2	1.75	0.51
54:n:15:LYS:O	54:n:18:THR:N	2.43	0.51
61:u:58:TYR:CD2	61:u:59:ARG:HG2	2.46	0.51
5:4:48:MET:CE	5:4:86:LEU:HG	2.40	0.51
6:5:9:DA:P	11:AA:473:ARG:HG3	2.51	0.51
8:7:3:G:C4'	18:D:1500:A:N6	2.74	0.51
9:9:47:GLU:O	9:9:49:GLY:N	2.43	0.51
10:A:33:U:H5''	27:M:84:THR:HG21	1.93	0.51
12:AB:92:VAL:HG13	12:AB:96:LEU:HD13	1.93	0.51
13:AD:182:ARG:NH1	14:AE:534:GLU:OE1	2.44	0.51
14:AE:959:LYS:HB3	14:AE:983:LYS:HB2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:C:51:TYR:O	17:C:54:GLN:HG3	2.11	0.51
18:D:49:U:C2	18:D:361:G:N2	2.79	0.51
18:D:276:G:C5'	36:V:17:MET:CE	2.89	0.51
18:D:512:U:P	24:J:44:ARG:HH12	2.33	0.51
18:D:612:C:C2	18:D:613:C:C5	2.99	0.51
19:E:75:HIS:CE1	19:E:79:LEU:CD1	2.93	0.51
22:H:32:ASP:OD1	22:H:35:VAL:CG2	2.58	0.51
26:L:67:PRO:O	26:L:70:VAL:HG22	2.11	0.51
32:R:54:ARG:HH11	32:R:62:GLU:HG3	1.76	0.51
38:X:31:LYS:HG3	38:X:32:ALA:N	2.25	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:580:U:H2'	41:a:581:C:C6	2.46	0.51
41:a:1791:A:C2	41:a:1829:A:C4'	2.93	0.51
41:a:2133:G:O2'	41:a:2157:G:N2	2.44	0.51
41:a:2329:U:H2'	41:a:2330:G:C8	2.45	0.51
41:a:2466:C:N3	41:a:2467:C:C5	2.79	0.51
41:a:2814:A:H2'	41:a:2815:C:H6	1.75	0.51
49:i:30:VAL:HG22	49:i:37:LYS:CD	2.41	0.51
50:j:154:LYS:HE3	50:j:156:PHE:CE1	2.46	0.51
52:l:6:LYS:HZ2	52:l:119:ILE:HA	1.76	0.51
59:s:35:ARG:HA	59:s:40:HIS:CE1	2.46	0.51
66:z:65:ILE:HB	66:z:76:TYR:HE1	1.75	0.51
9:9:78:GLY:H	9:9:79:PRO:HD2	1.75	0.51
12:AB:117:ILE:HA	12:AB:127:GLN:HA	1.92	0.51
13:AD:16:ILE:HG23	13:AD:26:VAL:HG22	1.91	0.51
14:AE:157:GLN:HE22	14:AE:188:LEU:HD22	1.76	0.51
14:AE:693:VAL:HG21	14:AE:743:MET:HE3	1.93	0.51
16:AG:218:GLU:O	21:G:108:ARG:NH2	2.44	0.51
16:AG:285:ILE:HD13	16:AG:285:ILE:H	1.76	0.51
16:AG:365:ILE:HD11	16:AG:406:LEU:HD22	1.87	0.51
10:B:6:G:C4	10:B:7:G:C8	2.98	0.51
17:C:12:ARG:HG3	22:H:264:GLU:CB	2.41	0.51
18:D:501:C:H2'	18:D:502:A:C8	2.46	0.51
18:D:580:C:H2'	18:D:581:G:O4'	2.11	0.51
18:D:1106:G:O3'	23:I:172:ARG:HG3	2.11	0.51
23:I:142:MET:HE3	23:I:170:GLU:C	2.36	0.51
27:M:35:LYS:HE3	27:M:38:THR:OG1	2.11	0.51
30:P:24:GLU:O	30:P:28:THR:HG23	2.10	0.51
31:Q:63:ALA:HB1	31:Q:96:THR:CG2	2.41	0.51
41:a:372:G:C8	43:c:61:LYS:HD2	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1656:C:OP1	50:j:141:ARG:HD3	2.10	0.51
41:a:1853:A:H2'	41:a:1854:A:C8	2.46	0.51
41:a:1999:C:O3'	41:a:2722:G:N2	2.44	0.51
41:a:2093:G:OP2	58:r:22:LYS:HG2	2.11	0.51
41:a:2230:G:C5'	43:c:30:LEU:HD23	2.41	0.51
41:a:2420:C:H5''	51:k:8:LYS:HE2	1.92	0.51
43:c:71:LEU:HB3	43:c:76:GLU:CG	2.41	0.51
45:e:20:ASN:HA	45:e:23:ARG:HE	1.76	0.51
46:f:41:THR:N	46:f:45:ARG:HH22	2.09	0.51
48:h:124:ILE:O	48:h:125:LYS:HD3	2.10	0.51
52:l:170:ARG:HH12	52:l:176:ASP:N	2.09	0.51
56:p:127:THR:HG22	56:p:128:GLN:N	2.26	0.51
61:u:90:VAL:CG1	61:u:95:LEU:HD21	2.33	0.51
62:v:105:MET:SD	62:v:113:ALA:HB1	2.51	0.51
63:w:87:PHE:HZ	63:w:115:LEU:HG	1.77	0.51
10:A:31:G:H2'	10:A:32:C:O4'	2.10	0.50
12:AB:146:ILE:CD1	30:P:87:LEU:HB3	2.39	0.50
12:AB:152:HIS:CE1	30:P:81:GLU:CD	2.88	0.50
14:AE:67:ASP:C	14:AE:69:GLU:H	2.18	0.50
14:AE:287:ALA:HB2	14:AE:292:VAL:HG11	1.85	0.50
16:AG:5:ILE:HA	16:AG:8:VAL:HB	1.93	0.50
18:D:335:C:C2	18:D:336:A:C8	2.99	0.50
18:D:1226:C:C2'	38:X:102:THR:OG1	2.58	0.50
21:G:35:ARG:HB3	22:H:14:LYS:NZ	2.26	0.50
21:G:169:GLU:OE1	21:G:169:GLU:N	2.44	0.50
22:H:163:ARG:CA	22:H:298:GLU:HG3	2.41	0.50
22:H:273:ARG:NH1	22:H:297:GLU:HB2	2.25	0.50
26:L:11:HIS:HB3	26:L:14:GLN:OE1	2.11	0.50
30:P:15:HIS:HB3	30:P:70:HIS:CE1	2.46	0.50
39:Y:126:ARG:HD2	39:Y:127:SER:N	2.27	0.50
41:a:1064:C:O2'	41:a:1065:U:C6	2.63	0.50
41:a:1154:G:OP2	66:z:58:ARG:CZ	2.58	0.50
41:a:2298:A:O3'	54:n:72:LYS:HE2	2.11	0.50
41:a:2813:A:C4	41:a:2814:A:C8	2.99	0.50
53:m:25:LYS:C	53:m:29:GLN:HE22	2.20	0.50
56:p:162:VAL:O	56:p:162:VAL:HG12	2.11	0.50
62:v:31:PHE:O	62:v:104:GLU:CD	2.54	0.50
63:w:73:ASN:C	63:w:73:ASN:HD22	2.17	0.50
64:x:4:LYS:N	64:x:4:LYS:HD3	2.26	0.50
66:z:53:ARG:HG3	66:z:57:PHE:HE2	1.75	0.50
66:z:82:GLY:HA3	66:z:117:LEU:CD1	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:4:48:MET:HE2	5:4:86:LEU:HG	1.93	0.50
6:5:9:DA:H5''	11:AA:473:ARG:HB3	0.54	0.50
8:7:12:U:H5''	25:K:56:VAL:HG21	1.93	0.50
9:9:58:THR:HG21	9:9:81:LEU:CD2	2.31	0.50
10:A:19:G:N2	41:a:2112:G:O4'	2.44	0.50
14:AE:640:GLY:N	14:AE:643:ASP:OD2	2.42	0.50
16:AG:362:TYR:CE2	16:AG:382:GLU:HG2	2.45	0.50
16:AG:384:LEU:O	16:AG:387:VAL:HG23	2.11	0.50
18:D:501:C:H2'	18:D:502:A:H8	1.75	0.50
21:G:38:VAL:HG22	22:H:75:VAL:HG21	1.92	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
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
41:a:271:G:H4'	41:a:272:A:OP1	2.10	0.50
41:a:413:C:H2'	41:a:414:C:C6	2.46	0.50
41:a:1790:C:C3'	41:a:1791:A:C8	2.94	0.50
41:a:2063:C:O2	41:a:2450:A:N1	2.45	0.50
42:b:55:ARG:HA	42:b:55:ARG:CZ	2.41	0.50
59:s:15:TRP:CH2	59:s:135:GLN:HG3	2.46	0.50
10:A:23:C:H2'	10:A:24:U:H6	1.77	0.50
18:D:160:A:H2'	18:D:161:A:O4'	2.12	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	2.11	0.50
18:D:744:C:H2'	18:D:745:G:C8	2.47	0.50
18:D:767:A:H2'	18:D:768:A:O4'	2.11	0.50
36:V:15:ASP:OD1	36:V:55:ILE:HD11	2.11	0.50
39:Y:37:PHE:HE1	39:Y:58:ILE:HD11	1.77	0.50
41:a:756:A:H2'	41:a:757:G:O4'	2.11	0.50
41:a:1141:U:H5	59:s:68:LYS:HZ1	1.59	0.50
41:a:1996:C:H5''	50:j:128:ARG:NH1	2.26	0.50
41:a:2259:U:C6	41:a:2427:C:C4	2.99	0.50
41:a:2387:U:H4'	42:b:41:ARG:HH12	1.76	0.50
52:l:194:LYS:O	52:l:197:GLU:N	2.45	0.50
60:t:17:ARG:NH2	60:t:47:ILE:HG23	2.25	0.50
63:w:58:ASP:OD1	63:w:63:ARG:NH2	2.44	0.50
65:y:106:LYS:HD3	65:y:109:ARG:NH2	2.26	0.50
9:9:55:VAL:CG1	9:9:56:ARG:N	2.74	0.50
10:A:68:C:C3'	10:A:69:C:H5''	2.42	0.50
11:AA:146:VAL:HG21	11:AA:513:GLN:HE21	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:422:GLU:O	16:AG:427:ASP:N	2.45	0.50
17:C:51:TYR:HD1	17:C:54:GLN:HE22	1.58	0.50
17:C:66:SER:HA	26:L:49:TYR:CE1	2.47	0.50
20:F:25:LYS:HE3	22:H:336:ASP:OD2	2.11	0.50
21:G:109:GLN:C	21:G:113:ARG:HE	2.19	0.50
31:Q:27:PHE:CE2	31:Q:89:PRO:HG2	2.46	0.50
41:a:1589:U:O2'	41:a:1590:A:O5'	2.28	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
47:g:7:PRO:HD2	54:n:62:GLY:O	2.11	0.50
59:s:30:THR:HG23	59:s:31:GLU:N	2.26	0.50
59:s:72:LYS:HD3	59:s:74:TYR:CZ	2.43	0.50
59:s:74:TYR:N	59:s:74:TYR:HD2	2.10	0.50
63:w:58:ASP:CG	63:w:80:PHE:CZ	2.89	0.50
3:2:49:LYS:HE2	3:2:49:LYS:HA	1.93	0.50
5:4:6:ALA:HB3	5:4:65:VAL:HG22	1.93	0.50
5:4:50:MET:CA	5:4:56:PHE:CZ	2.94	0.50
6:5:8:DT:O4	12:AB:10:LYS:NZ	2.38	0.50
9:9:6:GLN:HA	9:9:9:GLN:HE22	1.75	0.50
11:AA:529:ARG:HH11	11:AA:572:ILE:HG22	1.77	0.50
13:AD:287:VAL:C	16:AG:78:GLU:OE1	2.55	0.50
17:C:24:LYS:HB3	26:L:102:MET:HE1	1.93	0.50
17:C:60:LYS:NZ	18:D:735:C:C5'	2.75	0.50
18:D:10:A:OP2	25:K:131:THR:HG21	2.12	0.50
19:E:54:MET:CE	19:E:75:HIS:HE1	2.24	0.50
24:J:104:ARG:NE	24:J:104:ARG:HA	2.27	0.50
25:K:113:ALA:CA	25:K:116:GLU:OE1	2.60	0.50
25:K:159:LYS:HZ3	28:N:44:GLY:HA3	1.76	0.50
26:L:66:ALA:HB1	26:L:67:PRO:HD2	1.94	0.50
34:T:3:LEU:HD12	34:T:35:GLN:OE1	2.10	0.50
34:T:11:ILE:HD11	34:T:30:ALA:C	2.36	0.50
38:X:65:VAL:HG23	38:X:66:GLU:OE1	2.12	0.50
39:Y:126:ARG:HD2	39:Y:126:ARG:C	2.36	0.50
39:Y:126:ARG:CZ	41:a:1083:U:P	3.00	0.50
41:a:16:C:O4'	49:i:15:MET:HE3	2.12	0.50
41:a:594:U:H2'	41:a:595:C:C6	2.47	0.50
41:a:672:C:O2'	52:l:77:ILE:HD11	2.11	0.50
41:a:1348:C:O2	41:a:1348:C:H2'	2.11	0.50
41:a:1956:U:C4	41:a:1957:C:C5	2.99	0.50
41:a:2230:G:H5'	43:c:30:LEU:HD23	1.94	0.50
50:j:184:ARG:HH12	65:y:7:GLN:NE2	2.09	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:84:ILE:HG23	59:s:84:ILE:O	2.11	0.50
61:u:55:MET:HE1	61:u:60:ARG:HA	1.94	0.50
62:v:50:ARG:CA	62:v:53:MET:SD	3.00	0.50
65:y:27:GLU:HB3	65:y:87:LYS:HZ1	1.75	0.50
4:3:6:ARG:HG2	4:3:7:ARG:H	1.77	0.50
16:AG:363:LEU:HD11	16:AG:410:ALA:HB2	1.92	0.50
17:C:60:LYS:NZ	18:D:735:C:C4'	2.74	0.50
17:C:60:LYS:HE3	18:D:735:C:C4'	2.42	0.50
18:D:61:G:N7	19:E:6:SER:OG	2.33	0.50
18:D:339:C:C2	18:D:340:U:C5	2.99	0.50
18:D:728:A:H2'	18:D:729:A:C8	2.46	0.50
18:D:864:A:H2'	18:D:865:A:C8	2.47	0.50
23:I:82:GLU:O	23:I:86:LYS:CD	2.60	0.50
25:K:111:MET:O	25:K:114:VAL:HG12	2.11	0.50
29:O:88:MET:SD	29:O:95:ARG:CZ	2.99	0.50
34:T:33:THR:OG1	34:T:63:ARG:NH1	2.45	0.50
37:W:41:PHE:O	37:W:44:MET:HG3	2.11	0.50
37:W:45:ILE:HA	37:W:62:VAL:HG11	1.92	0.50
41:a:44:A:H2'	41:a:45:G:O4'	2.12	0.50
41:a:65:U:C2	41:a:66:C:C6	3.00	0.50
41:a:1598:A:C5	41:a:1599:U:C5	2.99	0.50
52:l:155:GLU:HG2	52:l:156:ASN:N	2.27	0.50
59:s:55:ILE:CG1	59:s:123:LYS:HE2	2.42	0.50
60:t:121:GLU:HG3	60:t:123:LEU:HD12	1.94	0.50
62:v:73:ILE:HD12	62:v:73:ILE:N	2.26	0.50
63:w:12:ARG:NE	63:w:20:MET:HE1	2.26	0.50
5:4:62:THR:OG1	5:4:71:LYS:HE3	2.11	0.50
9:9:30:SER:O	9:9:31:ARG:CZ	2.59	0.50
10:A:56:C:H2'	10:A:57:A:H5''	1.93	0.50
12:AB:156:ASN:HA	12:AB:159:PHE:CZ	2.46	0.50
14:AE:71:LEU:HD22	14:AE:90:VAL:HG21	1.93	0.50
16:AG:296:ILE:HD11	16:AG:307:ILE:HD13	1.93	0.50
16:AG:448:LEU:CG	16:AG:473:LEU:HD11	2.42	0.50
10:B:23:C:H2'	10:B:24:U:C6	2.46	0.50
18:D:109:A:H2'	18:D:326:G:N2	2.27	0.50
18:D:311:C:O5'	18:D:311:C:H6	1.94	0.50
18:D:564:C:H5'	36:V:34:TYR:HE1	1.76	0.50
25:K:62:LYS:HA	25:K:62:LYS:HE3	1.92	0.50
26:L:35:LYS:HG3	26:L:36:ILE:N	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:M:74:GLU:OE1	27:M:75:VAL:O	2.30	0.50
28:N:35:ALA:O	28:N:39:VAL:HG23	2.12	0.50
30:P:37:ARG:HB3	30:P:75:ASP:HB2	1.94	0.50
33:S:87:ALA:HA	33:S:90:ARG:HG2	1.94	0.50
35:U:73:ALA:HA	35:U:76:LYS:CE	2.42	0.50
38:X:92:ARG:HD2	41:a:888:C:OP1	2.12	0.50
39:Y:57:VAL:HG23	39:Y:71:LYS:HD3	1.94	0.50
41:a:813:U:H2'	41:a:814:C:C6	2.46	0.50
41:a:1823:G:O2'	41:a:1824:G:H5'	2.12	0.50
41:a:2063:C:C4	41:a:2064:C:C5	3.00	0.50
41:a:2082:A:H2'	41:a:2083:G:O4'	2.12	0.50
41:a:2179:C:C2	41:a:2180:U:C5	3.00	0.50
47:g:47:LYS:NZ	54:n:115:ARG:HA	2.27	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
51:k:34:LEU:CB	51:k:51:GLU:OE2	2.60	0.50
59:s:98:GLU:HB3	59:s:102:GLU:OE2	2.12	0.50
60:t:34:GLY:N	60:t:37:ASP:OD2	2.39	0.50
62:v:114:ARG:C	62:v:118:LYS:HZ3	2.19	0.50
3:2:12:ARG:HH21	45:e:29:ARG:CZ	2.25	0.50
11:AA:232:ILE:HG12	11:AA:237:LEU:HG	1.93	0.50
12:AB:156:ASN:HA	12:AB:159:PHE:CE1	2.46	0.50
16:AG:123:ARG:NH1	16:AG:123:ARG:HG2	2.26	0.50
16:AG:171:GLU:OE2	16:AG:267:GLY:C	2.54	0.50
18:D:136:C:C2	18:D:137:U:C6	3.00	0.50
18:D:652:U:C3'	28:N:56:LYS:HZ1	2.19	0.50
18:D:1017:U:O2'	18:D:1018:G:O4'	2.30	0.50
18:D:1071:C:H2'	18:D:1072:G:C8	2.47	0.50
22:H:48:ILE:HG22	22:H:49:PRO:O	2.10	0.50
25:K:134:ILE:O	25:K:137:VAL:HG12	2.12	0.50
26:L:9:MET:O	26:L:84:VAL:HA	2.12	0.50
34:T:33:THR:HG21	34:T:85:LEU:HD12	1.94	0.50
38:X:71:ARG:HD2	38:X:72:GLU:N	2.26	0.50
41:a:234:U:C2	41:a:235:U:C6	3.00	0.50
41:a:560:C:O2	66:z:48:ARG:NH1	2.37	0.50
41:a:851:C:C2	41:a:852:U:C5	3.00	0.50
41:a:2063:C:C2	41:a:2064:C:C6	3.00	0.50
41:a:2362:C:O5'	55:o:40:ARG:NH2	2.45	0.50
41:a:2547:A:H2'	41:a:2548:U:H6	1.77	0.50
43:c:65:ASP:CG	43:c:66:THR:N	2.70	0.50
52:l:97:ASN:ND2	52:l:100:MET:HE2	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:o:31:HIS:O	55:o:32:ILE:C	2.54	0.50
56:p:26:ILE:HG22	56:p:75:MET:HE2	1.93	0.50
58:r:90:LEU:HD21	58:r:94:ILE:CD1	2.42	0.50
59:s:13:ARG:HH22	59:s:49:ASP:C	2.19	0.50
62:v:41:LEU:HD22	62:v:45:GLN:NE2	2.27	0.50
63:w:24:MET:HE3	63:w:24:MET:CA	2.34	0.50
2:1:36:LEU:HD23	2:1:48:LYS:HB2	1.93	0.50
9:9:67:THR:N	9:9:68:PRO:CD	2.75	0.50
11:AA:93:SER:HA	11:AA:128:PRO:HA	1.93	0.50
16:AG:283:PHE:CE2	16:AG:332:SER:HA	2.47	0.50
10:B:32:C:H2'	10:B:33:U:H5'	1.94	0.50
10:B:68:C:C3'	10:B:69:C:H5''	2.42	0.50
18:D:657:U:C1'	34:T:28:GLN:HE22	2.23	0.50
18:D:816:A:OP1	18:D:1526:G:O2'	2.27	0.50
18:D:821:G:H2'	18:D:822:U:C6	2.47	0.50
18:D:958:A:O4'	37:W:55:ARG:NH1	2.45	0.50
21:G:187:VAL:HG13	21:G:191:SER:HB2	1.93	0.50
22:H:267:TRP:CE3	22:H:340:ARG:HG3	2.47	0.50
27:M:111:ARG:NH2	27:M:126:ASP:OD2	2.43	0.50
39:Y:60:VAL:CG2	39:Y:66:PHE:HB3	2.29	0.50
41:a:4:U:C2	41:a:5:A:C8	3.00	0.50
41:a:780:G:C2	41:a:782:A:C2	3.00	0.50
41:a:1205:A:C2	52:l:165:HIS:CE1	3.00	0.50
41:a:1799:G:N2	48:h:154:LEU:HD23	2.26	0.50
41:a:2193:G:O2'	41:a:2194:U:OP1	2.28	0.50
41:a:2290:G:H2'	41:a:2291:U:C6	2.47	0.50
54:n:122:PHE:CE2	54:n:128:TYR:CD1	3.00	0.50
56:p:24:ILE:HG22	56:p:35:ARG:O	2.11	0.50
60:t:114:LYS:O	60:t:118:LEU:HD23	2.12	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
3:2:14:PRO:HA	3:2:32:LEU:HD13	1.94	0.49
5:4:2:PHE:HB2	5:4:61:LEU:HG	1.94	0.49
9:9:43:LYS:HA	9:9:46:ARG:NH1	2.26	0.49
11:AA:974:ARG:HD2	11:AA:1014:LEU:HD21	1.92	0.49
12:AB:64:ILE:N	12:AB:64:ILE:CD1	2.73	0.49
12:AB:116:VAL:HA	12:AB:162:LEU:HD13	1.94	0.49
12:AB:138:ARG:HD3	12:AB:153:SER:HB3	1.93	0.49
14:AE:412:LEU:HD22	14:AE:441:LEU:HD21	1.94	0.49
16:AG:353:HIS:HA	16:AG:356:ILE:HG21	1.94	0.49
16:AG:369:PHE:O	16:AG:373:LEU:HG	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:C:41:PRO:HD2	22:H:339:ARG:NE	2.26	0.49
18:D:626:G:O3'	35:U:51:ARG:NH1	2.45	0.49
18:D:1073:U:O2'	21:G:105:LYS:HE3	2.11	0.49
18:D:1492:A:O2'	18:D:1493:A:H5''	2.11	0.49
20:F:6:VAL:HG12	31:Q:108:THR:O	2.11	0.49
23:I:77:ILE:HA	23:I:84:VAL:HG13	1.94	0.49
24:J:170:TRP:CD2	24:J:186:PRO:HB3	2.47	0.49
41:a:235:U:C2	41:a:236:C:C5	3.00	0.49
41:a:272:A:N3	41:a:273:G:C8	2.80	0.49
41:a:1801:A:OP1	48:h:146:MET:HE1	2.11	0.49
41:a:2193:G:HO2'	41:a:2194:U:P	2.35	0.49
47:g:36:VAL:HG21	47:g:41:HIS:ND1	2.27	0.49
2:1:35:ILE:O	2:1:39:THR:HG23	2.12	0.49
9:9:87:GLU:OE2	9:9:95:LEU:HB2	2.12	0.49
10:A:15:G:H2'	10:A:15:G:N3	2.27	0.49
11:AA:62:TYR:CE2	12:AB:71:ALA:O	2.63	0.49
11:AA:400:VAL:HG11	11:AA:452:ARG:HD2	1.94	0.49
12:AB:14:LEU:C	12:AB:14:LEU:CD2	2.86	0.49
14:AE:209:ASN:HB3	14:AE:214:ARG:HH21	1.77	0.49
16:AG:65:VAL:HG12	16:AG:66:ASP:H	1.76	0.49
17:C:13:PHE:CB	17:C:51:TYR:CD1	2.95	0.49
18:D:35:G:H2'	18:D:36:C:C6	2.48	0.49
18:D:653:U:O4'	28:N:56:LYS:CE	2.60	0.49
21:G:114:LEU:HD13	21:G:144:LEU:HB3	1.94	0.49
22:H:304:VAL:HG11	22:H:346:LEU:HB2	1.93	0.49
26:L:70:VAL:O	26:L:74:LEU:CD2	2.56	0.49
32:R:38:TYR:HE2	32:R:40:THR:CG2	2.25	0.49
37:W:49:ILE:HG23	37:W:49:ILE:O	2.12	0.49
38:X:3:ARG:HH22	47:g:36:VAL:HG12	1.77	0.49
40:Z:18:ASP:HB3	40:Z:22:LEU:HD12	1.93	0.49
41:a:69:C:O2	41:a:73:A:O2'	2.26	0.49
41:a:125:A:C5	53:m:10:LEU:HD13	2.46	0.49
41:a:537:G:P	59:s:2:LYS:CE	3.00	0.49
41:a:1036:G:C6	41:a:1120:G:C5	3.00	0.49
41:a:2392:A:C8	41:a:2429:G:C2	3.00	0.49
2:1:71:VAL:O	2:1:71:VAL:HG23	2.13	0.49
9:9:10:ALA:O	9:9:14:GLU:HG3	2.12	0.49
11:AA:618:GLN:HG3	14:AE:770:LEU:HD13	1.95	0.49
12:AB:38:ILE:CD1	12:AB:110:PRO:CD	2.86	0.49
14:AE:287:ALA:HB3	14:AE:292:VAL:HG22	1.94	0.49
14:AE:429:LEU:HB3	14:AE:925:GLU:HG2	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:183:LEU:HD23	16:AG:197:VAL:HG22	1.94	0.49
10:B:15:G:H2'	10:B:15:G:N3	2.27	0.49
17:C:73:ARG:HH12	31:Q:113:VAL:HB	1.76	0.49
18:D:373:A:C2	18:D:482:A:C6	3.00	0.49
18:D:376:G:OP2	35:U:70:ARG:HD3	2.13	0.49
18:D:555:U:H2'	18:D:556:C:C6	2.46	0.49
21:G:109:GLN:O	21:G:113:ARG:NE	2.45	0.49
21:G:111:ILE:HD13	21:G:148:LEU:HD13	1.95	0.49
25:K:34:THR:HG22	25:K:52:LYS:HD3	1.94	0.49
25:K:46:VAL:N	25:K:71:MET:HE2	2.27	0.49
25:K:156:LYS:NZ	28:N:71:VAL:O	2.42	0.49
28:N:83:LEU:HD11	32:R:4:VAL:HB	1.94	0.49
28:N:110:VAL:C	28:N:111:MET:SD	2.95	0.49
41:a:251:A:OP1	61:u:58:TYR:OH	2.23	0.49
41:a:2065:C:H2'	41:a:2066:C:H6	1.77	0.49
41:a:2349:G:O6	41:a:2369:A:N6	2.46	0.49
41:a:2740:A:H2'	41:a:2741:A:C8	2.47	0.49
41:a:2849:U:OP2	65:y:93:ARG:CZ	2.60	0.49
47:g:58:ASP:CG	47:g:62:LYS:NZ	2.67	0.49
48:h:124:ILE:C	48:h:125:LYS:HD3	2.36	0.49
48:h:160:THR:O	48:h:195:VAL:HG12	2.12	0.49
49:i:40:ARG:NH1	49:i:41:HIS:CD2	2.80	0.49
60:t:7:MET:SD	60:t:18:ARG:NE	2.85	0.49
62:v:29:GLY:HA3	62:v:104:GLU:HG3	1.94	0.49
65:y:9:GLU:HG3	65:y:55:LEU:CB	2.43	0.49
2:1:23:LEU:HD21	2:1:35:ILE:HG22	1.94	0.49
9:9:108:VAL:O	9:9:109:LYS:HB3	2.13	0.49
11:AA:400:VAL:HG21	11:AA:452:ARG:HE	1.77	0.49
11:AA:1340:GLU:HB2	14:AE:19:ALA:HB3	1.94	0.49
16:AG:130:PHE:C	16:AG:186:VAL:CG1	2.86	0.49
16:AG:365:ILE:CD1	16:AG:406:LEU:HD21	2.38	0.49
18:D:36:C:C4	18:D:37:U:C5	3.00	0.49
18:D:406:G:C5	18:D:495:A:C5	3.01	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
19:E:54:MET:HE1	19:E:75:HIS:HE1	1.77	0.49
22:H:303:LEU:O	22:H:303:LEU:CG	2.60	0.49
36:V:42:THR:HG22	36:V:44:LEU:HD12	1.95	0.49
39:Y:77:VAL:HG13	39:Y:81:LYS:NZ	2.27	0.49
41:a:1790:C:H2'	41:a:1791:A:C8	2.48	0.49
41:a:2489:U:H2'	41:a:2490:G:O4'	2.12	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
41:a:2884:U:H3	49:i:40:ARG:NH1	2.09	0.49
52:l:5:LEU:HD23	52:l:122:GLU:HG3	1.95	0.49
56:p:94:TYR:CE1	56:p:152:ARG:HD2	2.48	0.49
62:v:70:ASP:C	62:v:92:TRP:CZ3	2.91	0.49
64:x:90:VAL:HG22	64:x:115:LEU:HD11	1.94	0.49
66:z:74:ILE:HG13	66:z:78:LYS:HE3	1.94	0.49
9:9:52:MET:CE	9:9:85:SER:HB2	2.42	0.49
9:9:97:LYS:HZ1	9:9:130:PRO:HA	1.76	0.49
12:AB:21:LEU:HD13	12:AB:26:VAL:HG22	1.95	0.49
16:AG:110:ALA:C	16:AG:112:GLN:H	2.20	0.49
16:AG:323:GLN:CA	16:AG:323:GLN:NE2	2.75	0.49
16:AG:433:ASP:O	16:AG:456:LEU:HD21	2.12	0.49
17:C:25:ASP:O	17:C:29:LEU:HD13	2.11	0.49
18:D:736:C:H2'	18:D:737:C:H6	1.78	0.49
18:D:1227:A:H5'	38:X:110:LYS:NZ	2.28	0.49
25:K:13:GLU:C	25:K:14:LYS:HD2	2.38	0.49
25:K:157:ARG:HH12	28:N:43:GLU:CD	2.20	0.49
27:M:109:ARG:O	27:M:119:ARG:NH2	2.46	0.49
29:O:52:LEU:O	29:O:55:VAL:O	2.31	0.49
34:T:64:ARG:CZ	34:T:64:ARG:CB	2.91	0.49
35:U:18:GLN:NE2	35:U:35:ARG:HE	2.10	0.49
41:a:57:C:H2'	41:a:58:G:O4'	2.12	0.49
41:a:840:C:C2	41:a:841:G:C8	3.01	0.49
41:a:1199:U:H2'	41:a:1200:C:H6	1.77	0.49
52:l:195:GLN:HA	52:l:198:GLU:OE1	2.13	0.49
60:t:88:ASN:OD1	60:t:89:ASN:N	2.46	0.49
7:6:19:DC:H2'	7:6:20:DA:C8	2.48	0.49
9:9:25:ALA:CB	9:9:99:PHE:HD2	2.26	0.49
9:9:52:MET:HG2	9:9:95:LEU:CD1	2.39	0.49
9:9:67:THR:O	9:9:72:LEU:HG	2.12	0.49
12:AB:110:PRO:HA	12:AB:130:PHE:CD2	2.48	0.49
16:AG:434:LEU:CD2	16:AG:455:THR:O	2.50	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:953:G:O6	38:X:103:LYS:CE	2.60	0.49
21:G:110:SER:CA	21:G:113:ARG:HE	2.25	0.49
27:M:132:GLY:O	27:M:136:LYS:NZ	2.45	0.49
30:P:7:ARG:HD3	30:P:75:ASP:CG	2.36	0.49
31:Q:98:ARG:HG2	31:Q:98:ARG:HH11	1.78	0.49
36:V:42:THR:HG22	36:V:44:LEU:HD11	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:V:62:ARG:HA	36:V:73:TRP:CZ3	2.47	0.49
38:X:81:MET:HG2	41:a:888:C:C4	2.48	0.49
41:a:26:G:H2'	41:a:27:G:O4'	2.13	0.49
41:a:636:G:N2	61:u:76:GLU:OE2	2.45	0.49
41:a:851:C:H2'	41:a:852:U:C6	2.46	0.49
41:a:1142:A:C4	41:a:1144:A:N7	2.80	0.49
41:a:1843:C:C2	41:a:1844:C:C5	3.00	0.49
41:a:2014:A:H2'	41:a:2015:A:C8	2.48	0.49
41:a:2159:G:H2'	41:a:2160:C:C6	2.47	0.49
46:f:3:LYS:HE2	46:f:3:LYS:HA	1.95	0.49
46:f:41:THR:CA	46:f:45:ARG:HH22	2.26	0.49
52:l:141:MET:O	52:l:142:ALA:HB3	2.13	0.49
63:w:82:GLU:O	63:w:86:ARG:HG2	2.13	0.49
66:z:79:PHE:CE1	66:z:110:VAL:HG22	2.48	0.49
1:0:73:LYS:HE2	1:0:73:LYS:HA	1.95	0.49
8:7:3:G:H5''	18:D:1501:C:N4	2.27	0.49
11:AA:18:ARG:HE	11:AA:620:ASN:HA	1.77	0.49
13:AD:100:LEU:HB2	13:AD:144:ILE:HG23	1.94	0.49
18:D:877:G:H5''	28:N:80:ARG:HD2	1.94	0.49
18:D:1218:C:H2'	18:D:1219:A:C8	2.48	0.49
20:F:63:GLU:O	20:F:67:ARG:HD2	2.12	0.49
24:J:113:GLU:O	24:J:117:LEU:HG	2.13	0.49
39:Y:21:PRO:CB	39:Y:22:PRO:HD3	2.41	0.49
39:Y:86:LYS:HD3	39:Y:86:LYS:O	2.11	0.49
39:Y:126:ARG:HH12	41:a:1082:U:C3'	2.26	0.49
41:a:1590:A:H2'	41:a:1591:A:C8	2.48	0.49
41:a:1792:G:H5''	48:h:204:VAL:HG23	1.95	0.49
41:a:1808:A:O2'	43:c:3:ARG:NH1	2.46	0.49
41:a:2515:C:H2'	41:a:2516:A:H8	1.78	0.49
48:h:52:ARG:HG3	48:h:53:HIS:ND1	2.27	0.49
56:p:94:TYR:C	56:p:95:ARG:HD2	2.38	0.49
57:q:10:LEU:HD23	57:q:33:HIS:CD2	2.47	0.49
59:s:125:TYR:HE2	59:s:130:HIS:HB2	1.78	0.49
66:z:51:ARG:N	66:z:51:ARG:HD2	2.28	0.49
9:9:77:VAL:CG1	9:9:82:ILE:HG21	2.41	0.49
10:A:47:U:O2'	10:A:50:U:P	2.71	0.49
14:AE:814:CYS:SG	14:AE:815:GLY:N	2.85	0.49
16:AG:216:ILE:HG12	16:AG:221:ILE:HB	1.93	0.49
16:AG:244:ARG:CD	16:AG:244:ARG:N	2.73	0.49
18:D:404:G:O2'	18:D:498:A:N1	2.37	0.49
18:D:500:G:H2'	18:D:501:C:H6	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:1324:A:H2'	18:D:1325:C:H6	1.78	0.49
25:K:88:VAL:HG12	25:K:93:ARG:HA	1.93	0.49
26:L:65:GLU:OE1	26:L:65:GLU:HA	2.12	0.49
28:N:96:MET:HG2	28:N:96:MET:O	2.13	0.49
30:P:64:GLN:OE1	30:P:65:TYR:O	2.31	0.49
34:T:35:GLN:HB3	34:T:59:MET:HE1	1.95	0.49
41:a:3:U:C2	41:a:4:U:C5	3.00	0.49
41:a:583:G:OP1	66:z:11:ARG:NH2	2.46	0.49
41:a:1571:A:H2'	41:a:1572:A:C8	2.47	0.49
41:a:2902:C:N4	41:a:2903:U:O4	2.45	0.49
51:k:21:TYR:CE2	51:k:38:LYS:CG	2.96	0.49
54:n:134:GLU:CG	54:n:137:ILE:HG23	2.40	0.49
59:s:1:MET:HE2	66:z:97:ASP:OD2	2.13	0.49
59:s:131:ASN:OD1	59:s:131:ASN:O	2.30	0.49
61:u:77:ILE:HD11	61:u:108:ALA:HB1	1.95	0.49
62:v:57:VAL:HG22	62:v:60:GLN:O	2.13	0.49
63:w:114:GLU:N	63:w:114:GLU:OE1	2.46	0.49
65:y:7:GLN:NE2	65:y:10:GLN:HE21	2.11	0.49
4:3:94:ARG:CB	4:3:103:ILE:HD12	2.43	0.49
11:AA:318:SER:OG	11:AA:320:ASP:OD1	2.31	0.49
12:AB:18:GLN:NE2	12:AB:28:CYS:SG	2.86	0.49
12:AB:78:PHE:CD2	12:AB:78:PHE:N	2.73	0.49
12:AB:88:VAL:O	12:AB:88:VAL:HG12	2.13	0.49
14:AE:425:ARG:NH1	14:AE:458:ASN:O	2.45	0.49
16:AG:453:VAL:HG11	16:AG:459:LEU:CG	2.42	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
31:Q:31:ILE:HD12	31:Q:46:THR:HG22	1.94	0.49
32:R:80:ILE:HG22	32:R:81:LEU:N	2.27	0.49
34:T:71:LYS:HE2	34:T:78:TYR:CE2	2.48	0.49
36:V:17:MET:HG3	36:V:20:SER:HB2	1.95	0.49
39:Y:20:SER:CB	39:Y:21:PRO:HD3	2.43	0.49
41:a:1199:U:H2'	41:a:1200:C:C6	2.47	0.49
41:a:1454:C:H4'	63:w:63:ARG:NH1	2.27	0.49
41:a:1791:A:C2	41:a:1829:A:O4'	2.65	0.49
41:a:1932:A:H2'	41:a:1933:G:O4'	2.13	0.49
41:a:2313:C:H5''	54:n:88:LYS:HD2	1.95	0.49
41:a:2351:G:O6	55:o:39:LYS:HE3	2.13	0.49
41:a:2754:U:O3'	57:q:19:ARG:NH2	2.46	0.49
43:c:6:GLN:CD	43:c:49:LEU:HD22	2.38	0.49
48:h:261:LYS:HA	48:h:264:ASP:OD2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:9:LYS:HG2	11:AA:1171:ARG:HH12	1.77	0.49
12:AB:141:LEU:HG	12:AB:154:VAL:HB	1.95	0.49
18:D:43:C:P	35:U:12:LYS:NZ	2.86	0.49
18:D:674:G:P	26:L:86:ARG:HH22	2.35	0.49
18:D:718:A:C8	31:Q:118:HIS:HB3	2.48	0.49
20:F:4:ILE:CD1	20:F:19:PHE:HA	2.43	0.49
23:I:164:ARG:HD2	23:I:166:GLU:OE2	2.12	0.49
23:I:188:GLU:OE1	23:I:188:GLU:N	2.45	0.49
26:L:38:ARG:HD2	26:L:40:GLU:OE2	2.13	0.49
37:W:44:MET:SD	37:W:62:VAL:CG1	2.99	0.49
41:a:1385:A:O2'	41:a:1396:U:O2	2.31	0.49
41:a:2485:G:O3'	62:v:125:PRO:HB3	2.12	0.49
41:a:2591:C:H2'	41:a:2592:G:H8	1.78	0.49
41:a:2684:U:C4	41:a:2685:G:N7	2.81	0.49
54:n:70:ALA:O	54:n:81:GLN:OE1	2.31	0.49
56:p:69:ARG:NH1	56:p:73:ASN:HD21	2.11	0.49
57:q:2:LYS:CE	57:q:35:GLN:HE21	2.25	0.49
59:s:123:LYS:CE	59:s:132:HIS:HD2	2.25	0.49
65:y:9:GLU:HG3	65:y:55:LEU:HB2	1.95	0.49
66:z:58:ARG:HA	66:z:61:TRP:CE3	2.48	0.49
3:2:2:ILE:HG12	3:2:42:GLU:CD	2.37	0.48
3:2:10:VAL:HG12	3:2:11:LEU:HD12	1.93	0.48
5:4:1:MET:SD	5:4:3:THR:OG1	2.71	0.48
5:4:77:VAL:HG13	5:4:77:VAL:O	2.13	0.48
10:A:21:A:H4'	10:A:21:A:OP1	2.13	0.48
11:AA:554:HIS:HD2	11:AA:558:VAL:HB	1.77	0.48
12:AB:143:LEU:HD22	12:AB:152:HIS:CD2	2.48	0.48
16:AG:248:VAL:HG21	16:AG:275:LEU:HG	1.94	0.48
16:AG:361:LYS:HD2	16:AG:417:ILE:HG12	1.92	0.48
16:AG:453:VAL:HG11	16:AG:459:LEU:HD23	1.95	0.48
18:D:71:A:N1	18:D:100:G:C8	2.81	0.48
18:D:563:A:N1	18:D:884:U:O4	2.46	0.48
18:D:739:C:O2	34:T:42:HIS:HE1	1.94	0.48
22:H:342:ILE:HG12	22:H:344:LEU:HD12	1.93	0.48
23:I:119:SER:O	23:I:123:GLN:HG2	2.13	0.48
23:I:142:MET:HG3	23:I:170:GLU:OE1	2.13	0.48
24:J:62:ARG:NE	24:J:72:PHE:CE2	2.81	0.48
32:R:74:LEU:HD11	32:R:80:ILE:CD1	2.43	0.48
41:a:2189:U:O2'	41:a:2190:G:O5'	2.31	0.48
41:a:2809:A:H2'	41:a:2810:A:C8	2.48	0.48
47:g:47:LYS:HE2	54:n:115:ARG:HA	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:g:63:ARG:HG3	47:g:64:PHE:CD1	2.48	0.48
52:l:149:ILE:CG2	52:l:175:ILE:HD11	2.43	0.48
54:n:8:TYR:HA	54:n:12:VAL:HB	1.95	0.48
60:t:1:MET:HE3	60:t:32:TYR:HB3	1.95	0.48
62:v:58:LYS:O	62:v:59:ARG:HG3	2.13	0.48
63:w:60:VAL:HG22	63:w:63:ARG:HH12	1.78	0.48
4:3:84:GLY:HA3	4:3:95:PHE:CZ	2.48	0.48
5:4:35:GLU:OE1	5:4:93:ARG:NH2	2.46	0.48
11:AA:1314:GLN:HB2	15:AF:28:ARG:HH12	1.78	0.48
14:AE:53:ARG:HA	14:AE:54:ASP:HA	1.59	0.48
16:AG:148:ASP:HA	16:AG:164:ARG:CD	2.43	0.48
18:D:1314:C:H2'	18:D:1315:U:H6	1.78	0.48
18:D:1319:A:C8	18:D:1323:G:C6	3.01	0.48
18:D:1439:G:OP1	19:E:33:LYS:CE	2.61	0.48
21:G:126:PHE:C	21:G:127:ASP:O	2.55	0.48
27:M:108:ALA:O	27:M:119:ARG:NH2	2.45	0.48
29:O:12:ARG:HD3	29:O:13:LYS:H	1.78	0.48
29:O:32:GLN:HG3	29:O:32:GLN:O	2.13	0.48
32:R:7:LEU:HD23	36:V:34:TYR:OH	2.12	0.48
39:Y:126:ARG:NH1	41:a:1082:U:O5'	2.46	0.48
41:a:132:G:H2'	41:a:133:U:C6	2.47	0.48
41:a:379:G:N1	41:a:396:G:C6	2.82	0.48
41:a:760:G:H2'	41:a:761:A:O4'	2.14	0.48
41:a:1021:A:H3'	41:a:1021:A:N3	2.27	0.48
47:g:58:ASP:C	47:g:62:LYS:HZ1	2.21	0.48
49:i:28:LEU:O	49:i:37:LYS:NZ	2.46	0.48
50:j:101:PHE:CZ	50:j:203:VAL:HG12	2.48	0.48
59:s:54:ILE:O	59:s:123:LYS:HG2	2.12	0.48
59:s:73:VAL:CG1	59:s:74:TYR:N	2.75	0.48
61:u:117:THR:HG23	61:u:118:THR:N	2.28	0.48
63:w:33:ILE:HD11	63:w:112:TYR:CE1	2.48	0.48
4:3:6:ARG:NH1	41:a:84:A:H2'	2.28	0.48
6:5:17:DC:C5	11:AA:542:ARG:HD3	2.48	0.48
10:A:22:G:O2'	10:A:23:C:O5'	2.31	0.48
12:AB:7:LEU:CD2	12:AB:78:PHE:HA	2.43	0.48
15:AF:3:ARG:NH1	15:AF:55:GLU:OE2	2.40	0.48
16:AG:305:MET:HG2	16:AG:336:LEU:HA	1.94	0.48
16:AG:349:GLN:C	16:AG:351:GLU:N	2.71	0.48
16:AG:467:LEU:HD12	16:AG:482:ILE:HD11	1.95	0.48
10:B:21:A:H4'	10:B:21:A:OP1	2.13	0.48
10:B:47:U:O2'	10:B:50:U:P	2.70	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:373:A:C2	18:D:374:A:C8	3.01	0.48
18:D:429:U:N3	18:D:431:A:N6	2.61	0.48
18:D:744:C:H2'	18:D:745:G:H8	1.77	0.48
18:D:893:C:C2	18:D:894:G:C8	3.01	0.48
21:G:23:TRP:CZ3	21:G:25:PRO:HA	2.47	0.48
21:G:49:MET:CE	21:G:201:PRO:CD	2.87	0.48
22:H:112:ILE:HA	22:H:121:THR:O	2.12	0.48
23:I:134:MET:HE2	23:I:168:TYR:CG	2.49	0.48
25:K:157:ARG:CZ	28:N:43:GLU:HG3	2.43	0.48
35:U:12:LYS:HD3	35:U:13:LYS:HG2	1.93	0.48
41:a:2061:G:C2	41:a:2063:C:C5	3.01	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
41:a:2677:G:C6	41:a:2731:G:C6	3.01	0.48
41:a:2771:C:C2	41:a:2772:C:C5	3.01	0.48
48:h:141:VAL:HG23	48:h:162:VAL:HG12	1.94	0.48
54:n:22:TYR:HE2	54:n:29:PRO:HD3	1.79	0.48
65:y:40:LEU:HD12	65:y:40:LEU:N	2.28	0.48
12:AB:143:LEU:H	12:AB:143:LEU:CD1	2.22	0.48
14:AE:107:LEU:HD22	14:AE:299:LEU:HD21	1.94	0.48
16:AG:200:SER:C	16:AG:230:PRO:HG2	2.38	0.48
16:AG:400:GLU:H	16:AG:400:GLU:HG2	1.40	0.48
18:D:377:G:OP1	35:U:5:ARG:CZ	2.60	0.48
18:D:562:U:O3'	32:R:14:ARG:NH1	2.46	0.48
18:D:610:U:O2	18:D:610:U:H2'	2.12	0.48
18:D:718:A:C5	31:Q:118:HIS:ND1	2.81	0.48
18:D:977:A:O2'	18:D:979:C:OP2	2.25	0.48
19:E:22:ALA:HA	19:E:25:ARG:HE	1.79	0.48
24:J:62:ARG:CZ	24:J:69:GLU:HG2	2.44	0.48
24:J:195:ILE:HG13	24:J:195:ILE:O	2.14	0.48
26:L:62:MET:HE3	26:L:62:MET:CA	2.43	0.48
27:M:138:ARG:HG2	27:M:142:HIS:CE1	2.48	0.48
29:O:52:LEU:HB3	29:O:58:VAL:HG12	1.94	0.48
39:Y:99:LYS:NZ	39:Y:138:VAL:O	2.44	0.48
41:a:39:G:H1'	52:l:43:THR:HG21	1.96	0.48
41:a:265:A:N1	41:a:427:U:O2'	2.40	0.48
41:a:1042:G:C4	41:a:1043:C:C6	3.02	0.48
41:a:2093:G:N7	41:a:2225:A:H2'	2.28	0.48
42:b:47:ALA:HB2	42:b:59:LEU:HD11	1.94	0.48
51:k:9:ILE:CG2	51:k:27:LYS:HZ1	2.26	0.48
52:l:6:LYS:HZ1	52:l:120:VAL:N	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:s:88:THR:O	59:s:92:MET:HE2	2.13	0.48
65:y:13:MET:HG3	65:y:77:HIS:CE1	2.49	0.48
66:z:72:ASN:ND2	66:z:106:PHE:CE2	2.81	0.48
1:0:61:ALA:HB1	1:0:96:VAL:CG2	2.43	0.48
2:1:17:VAL:HG12	2:1:76:VAL:HG21	1.94	0.48
2:1:20:VAL:O	2:1:23:LEU:HB3	2.13	0.48
2:1:95:ARG:NH1	2:1:97:LEU:HG	2.28	0.48
8:7:21:U:H5'	23:I:80:LYS:CG	2.43	0.48
9:9:31:ARG:HH22	41:a:1106:G:N2	2.10	0.48
11:AA:477:GLU:HG2	12:AB:72:THR:HB	1.95	0.48
11:AA:565:GLU:HA	11:AA:569:ILE:HG12	1.95	0.48
12:AB:21:LEU:HD22	12:AB:26:VAL:HG13	1.95	0.48
12:AB:73:ARG:HA	12:AB:73:ARG:HE	1.79	0.48
10:B:22:G:O2'	10:B:23:C:O5'	2.32	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:331:G:H2'	19:E:4:ILE:HD11	1.95	0.48
27:M:31:MET:HE3	27:M:31:MET:HB2	1.76	0.48
27:M:129:GLU:O	27:M:130:ASN:HB2	2.13	0.48
29:O:86:ALA:HA	29:O:89:GLU:HG2	1.95	0.48
38:X:16:VAL:HG23	38:X:17:ILE:N	2.29	0.48
40:Z:29:LYS:HG3	40:Z:30:PHE:CE2	2.49	0.48
41:a:6:A:N3	59:s:135:GLN:NE2	2.59	0.48
41:a:6:A:O3'	59:s:132:HIS:CE1	2.67	0.48
41:a:145:C:H2'	41:a:146:A:H8	1.77	0.48
41:a:208:C:H2'	41:a:209:C:H6	1.78	0.48
41:a:1664:A:C2'	41:a:1665:A:H5'	2.43	0.48
41:a:2685:G:OP1	60:t:78:ARG:NH2	2.47	0.48
41:a:2884:U:N3	49:i:40:ARG:NH1	2.62	0.48
42:b:45:PHE:HD2	42:b:80:ILE:HD11	1.77	0.48
44:d:117:G:OP1	64:x:56:LYS:HD3	2.14	0.48
46:f:41:THR:N	46:f:45:ARG:NH2	2.61	0.48
49:i:40:ARG:NH1	49:i:41:HIS:CG	2.81	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
63:w:38:LEU:N	63:w:39:PRO:CD	2.76	0.48
66:z:78:LYS:CD	66:z:117:LEU:HD21	2.43	0.48
3:2:11:LEU:HD11	3:2:46:ALA:HB3	1.95	0.48
9:9:24:SER:O	9:9:116:GLU:HB2	2.14	0.48
10:A:32:C:H2'	10:A:33:U:H5'	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:A:70:G:C3'	10:A:71:C:H5''	2.43	0.48
12:AB:152:HIS:CE1	30:P:81:GLU:HG3	2.47	0.48
14:AE:417:ARG:NH1	15:AF:43:ASN:O	2.45	0.48
10:B:23:C:H2'	10:B:24:U:H6	1.77	0.48
18:D:72:A:C5	18:D:73:C:C5	3.02	0.48
18:D:311:C:P	35:U:31:ARG:NH2	2.85	0.48
18:D:908:A:H2'	18:D:909:A:C8	2.47	0.48
18:D:1530:G:H2'	18:D:1531:A:C8	2.49	0.48
21:G:131:LYS:HE3	21:G:132:LYS:NZ	2.29	0.48
25:K:16:ILE:H	25:K:16:ILE:HD12	1.79	0.48
25:K:112:ARG:C	25:K:116:GLU:OE1	2.57	0.48
26:L:36:ILE:HD12	26:L:63:ASN:O	2.14	0.48
28:N:40:LEU:O	28:N:44:GLY:N	2.47	0.48
30:P:5:ARG:HG3	30:P:7:ARG:HH12	1.78	0.48
30:P:63:ASP:OD1	30:P:65:TYR:CZ	2.66	0.48
41:a:807:U:OP2	61:u:41:ARG:NH1	2.42	0.48
51:k:7:GLU:HG2	51:k:27:LYS:NZ	2.29	0.48
52:l:147:LEU:HD11	52:l:170:ARG:CD	2.43	0.48
62:v:29:GLY:H	62:v:104:GLU:HG2	1.79	0.48
62:v:42:THR:HA	62:v:93:VAL:HG12	1.95	0.48
1:0:68:ARG:NH2	1:0:90:ARG:HD3	2.29	0.48
5:4:1:MET:O	5:4:1:MET:HE3	2.13	0.48
5:4:89:ILE:CG2	5:4:91:PHE:CE1	2.95	0.48
9:9:95:LEU:HD12	9:9:99:PHE:CZ	2.49	0.48
11:AA:363:LEU:HB3	11:AA:381:ALA:HB1	1.96	0.48
14:AE:678:ARG:NH1	14:AE:756:GLU:OE1	2.46	0.48
14:AE:749:LYS:HD3	14:AE:753:SER:HB2	1.94	0.48
16:AG:18:LEU:HB3	16:AG:19:PRO:HD2	1.95	0.48
16:AG:37:LYS:HD3	16:AG:37:LYS:HA	1.67	0.48
16:AG:110:ALA:C	16:AG:112:GLN:N	2.69	0.48
16:AG:243:LYS:O	16:AG:243:LYS:HD3	2.14	0.48
16:AG:389:MET:HA	16:AG:407:ARG:NH1	2.29	0.48
16:AG:440:VAL:HG22	16:AG:481:LEU:HD21	1.95	0.48
18:D:123:U:H5''	18:D:311:C:O2'	2.14	0.48
20:F:62:ARG:HD2	20:F:63:GLU:N	2.29	0.48
24:J:124:MET:HE2	24:J:128:ARG:CA	2.43	0.48
33:S:20:TYR:CD2	33:S:55:SER:OG	2.67	0.48
34:T:5:THR:O	34:T:8:THR:OG1	2.27	0.48
38:X:86:TYR:HE2	38:X:90:ARG:NH2	2.11	0.48
41:a:15:G:C2'	49:i:15:MET:HE1	2.42	0.48
41:a:208:C:C2	41:a:209:C:C5	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:920:A:C5	41:a:921:C:C5	3.01	0.48
41:a:1825:U:P	48:h:52:ARG:NH1	2.86	0.48
41:a:1921:G:C2'	41:a:1922:G:H5'	2.43	0.48
41:a:2012:G:H8	41:a:2012:G:O5'	1.96	0.48
41:a:2259:U:C2	41:a:2260:C:C5	3.01	0.48
47:g:47:LYS:HE2	54:n:115:ARG:CZ	2.43	0.48
48:h:130:LEU:HG	48:h:135:ILE:HG13	1.96	0.48
52:l:112:LEU:CD1	52:l:117:ARG:HB2	2.39	0.48
54:n:16:LEU:HD12	54:n:28:VAL:CG2	2.43	0.48
54:n:67:ILE:HD13	54:n:87:CYS:HB3	1.95	0.48
59:s:15:TRP:HD1	59:s:53:TYR:HB2	1.78	0.48
59:s:123:LYS:HD2	59:s:132:HIS:HD2	1.78	0.48
4:3:28:VAL:HG23	4:3:34:VAL:HG12	1.96	0.48
5:4:69:GLU:H	5:4:69:GLU:CD	2.22	0.48
9:9:31:ARG:NE	9:9:31:ARG:HA	2.28	0.48
11:AA:836:LEU:HD13	11:AA:1054:LEU:HD13	1.95	0.48
11:AA:848:GLU:HG2	11:AA:888:THR:HG22	1.96	0.48
12:AB:37:LYS:CD	12:AB:107:PRO:CG	2.81	0.48
13:AC:102:LEU:HD12	13:AC:115:ILE:HG12	1.96	0.48
14:AE:520:ALA:HB3	14:AE:546:ALA:HB2	1.95	0.48
17:C:45:THR:HA	22:H:340:ARG:HH21	1.77	0.48
18:D:123:U:C2	18:D:124:C:C5	3.01	0.48
18:D:1307:U:H2'	18:D:1308:U:C6	2.49	0.48
24:J:61:VAL:HA	24:J:64:ILE:HD12	1.96	0.48
24:J:170:TRP:CZ3	24:J:190:ASP:HB3	2.48	0.48
30:P:15:HIS:O	30:P:18:ILE:HG22	2.14	0.48
33:S:47:LYS:O	33:S:50:THR:OG1	2.25	0.48
36:V:50:ASN:HB2	36:V:52:GLU:OE2	2.13	0.48
39:Y:99:LYS:CD	39:Y:138:VAL:O	2.61	0.48
40:Z:26:MET:O	40:Z:30:PHE:HB2	2.14	0.48
41:a:67:U:N3	41:a:74:A:N6	2.62	0.48
41:a:581:C:C2	41:a:582:A:C8	3.01	0.48
41:a:962:G:C5	41:a:963:U:C5	3.01	0.48
41:a:984:A:N3	41:a:984:A:H2'	2.29	0.48
41:a:2296:U:H4'	41:a:2297:A:OP1	2.14	0.48
45:e:2:LYS:HZ1	45:e:49:ASP:C	2.22	0.48
50:j:124:ARG:HA	50:j:165:MET:CE	2.44	0.48
52:l:119:ILE:O	52:l:188:MET:N	2.35	0.48
56:p:9:VAL:HG23	56:p:69:ARG:HD2	1.95	0.48
58:r:137:GLU:CG	58:r:138:VAL:HG23	2.39	0.48
62:v:41:LEU:HG	62:v:96:ILE:HG13	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1:1:MET:CG	2:1:62:ASP:OD2	2.61	0.48
3:2:69:ARG:HG3	3:2:74:ILE:HD13	1.96	0.48
9:9:52:MET:HE2	9:9:85:SER:HB2	1.95	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	1.94	0.48
12:AB:100:LYS:N	12:AB:101:PRO:HD3	2.28	0.48
16:AG:444:LEU:HD22	16:AG:473:LEU:CD2	2.43	0.48
18:D:1172:C:H2'	18:D:1173:U:C6	2.49	0.48
18:D:1397:C:OP1	18:D:1397:C:H2'	2.13	0.48
23:I:134:MET:HG3	23:I:151:VAL:CG2	2.44	0.48
23:I:156:ARG:HG2	23:I:193:TYR:HB2	1.95	0.48
27:M:135:VAL:HG23	27:M:136:LYS:HD2	1.96	0.48
29:O:21:ILE:HD12	29:O:86:ALA:HB1	1.96	0.48
31:Q:94:GLU:O	31:Q:97:ILE:HG22	2.13	0.48
34:T:77:ARG:HH21	34:T:80:GLN:NE2	2.11	0.48
36:V:11:ARG:HD2	36:V:56:GLY:C	2.39	0.48
41:a:1321:A:C5	41:a:1322:A:C8	3.02	0.48
41:a:2043:C:C2	41:a:2044:C:C5	3.02	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:2537:U:H2'	41:a:2538:C:H6	1.79	0.48
51:k:19:HIS:CD2	51:k:20:PHE:N	2.81	0.48
1:0:6:GLN:OE1	1:0:11:GLN:HG2	2.14	0.48
9:9:16:SER:HB2	9:9:20:LYS:NZ	2.29	0.48
9:9:103:ASN:HA	9:9:107:GLU:HG3	1.96	0.48
10:A:26:G:H1	10:A:44:A:N6	2.12	0.48
11:AA:411:ARG:NH2	11:AA:427:ASP:OD2	2.44	0.48
16:AG:59:PHE:CD1	16:AG:97:ILE:HG23	2.49	0.48
16:AG:64:VAL:HA	16:AG:75:ILE:HB	1.94	0.48
16:AG:433:ASP:C	16:AG:456:LEU:HD11	2.23	0.48
18:D:110:C:H2'	18:D:111:G:O4'	2.14	0.48
18:D:378:G:H2'	18:D:379:C:C6	2.49	0.48
18:D:429:U:O2	18:D:430:A:C8	2.66	0.48
18:D:1127:G:C2	18:D:1128:C:C6	3.01	0.48
18:D:1314:C:H2'	18:D:1315:U:C6	2.48	0.48
21:G:110:SER:CA	21:G:113:ARG:HH21	2.27	0.48
25:K:57:PRO:HA	25:K:60:ILE:HG12	1.96	0.48
25:K:157:ARG:NH1	28:N:43:GLU:HA	2.29	0.48
29:O:49:ARG:C	29:O:53:GLU:OE1	2.57	0.48
29:O:118:LEU:HD22	29:O:123:ARG:C	2.39	0.48
34:T:29:VAL:HG22	34:T:66:LEU:HD23	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:X:5:ALA:HB3	38:X:66:GLU:OE2	2.14	0.48
38:X:94:GLY:C	38:X:95:LEU:HD22	2.38	0.48
41:a:272:A:C2	41:a:273:G:C5	3.02	0.48
41:a:576:U:H2'	41:a:577:G:C8	2.48	0.48
41:a:624:C:O2'	41:a:657:U:OP1	2.29	0.48
41:a:654:A:N6	55:o:19:LYS:HD2	2.29	0.48
41:a:1141:U:H4'	41:a:1142:A:O5'	2.13	0.48
41:a:1666:G:H1'	60:t:3:GLN:NE2	2.29	0.48
41:a:2193:G:O2'	41:a:2194:U:P	2.72	0.48
41:a:2314:A:P	54:n:88:LYS:HZ2	2.36	0.48
41:a:2373:G:H2'	41:a:2374:C:C6	2.49	0.48
45:e:10:SER:OG	45:e:13:GLU:HG2	2.13	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
61:u:59:ARG:HH11	61:u:59:ARG:HG3	1.77	0.48
2:1:23:LEU:HD21	2:1:35:ILE:CG2	2.44	0.47
9:9:99:PHE:O	9:9:103:ASN:OD1	2.32	0.47
11:AA:207:THR:OG1	11:AA:354:ASP:OD2	2.32	0.47
12:AB:18:GLN:HG3	12:AB:18:GLN:O	2.14	0.47
16:AG:285:ILE:O	16:AG:288:MET:HE3	2.14	0.47
16:AG:440:VAL:CG2	16:AG:481:LEU:HD21	2.41	0.47
18:D:1428:A:H2'	18:D:1429:A:O4'	2.13	0.47
26:L:9:MET:HE2	26:L:51:ILE:CD1	2.44	0.47
33:S:12:LYS:HD2	33:S:16:LEU:CD2	2.44	0.47
33:S:57:PRO:HA	33:S:60:GLN:OE1	2.13	0.47
37:W:33:THR:HG21	37:W:49:ILE:HD11	1.94	0.47
38:X:9:ILE:HG13	38:X:10:PRO:HD2	1.95	0.47
41:a:1048:A:C4	41:a:1049:C:C5	3.02	0.47
41:a:1858:A:N6	41:a:1884:G:H1'	2.29	0.47
41:a:2327:A:H2'	41:a:2328:A:C8	2.49	0.47
43:c:67:VAL:HA	43:c:70:GLU:OE1	2.14	0.47
47:g:5:ILE:CD1	54:n:64:LYS:CE	2.92	0.47
47:g:45:THR:O	47:g:49:ARG:CZ	2.63	0.47
51:k:7:GLU:HG3	51:k:27:LYS:HZ3	1.79	0.47
52:l:42:GLY:HA3	52:l:92:HIS:CE1	2.49	0.47
54:n:38:MET:HE3	54:n:57:LEU:HG	1.96	0.47
54:n:93:GLY:C	54:n:97:TRP:CZ3	2.92	0.47
62:v:41:LEU:HD22	62:v:45:GLN:HE22	1.78	0.47
3:2:56:GLU:OE2	3:2:88:LYS:CA	2.61	0.47
9:9:38:MET:SD	39:Y:117:THR:CG2	3.02	0.47
9:9:51:TYR:CD2	9:9:88:HIS:HB2	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:A:35:A:H2'	10:A:36:U:C6	2.49	0.47
10:A:72:A:H2'	10:A:73:A:H5''	1.95	0.47
10:A:75:C:O2'	10:A:76:A:N7	2.48	0.47
12:AB:6:LEU:HD11	14:AE:291:ILE:CD1	2.44	0.47
12:AB:29:LEU:HG	12:AB:56:PHE:HB2	1.94	0.47
12:AB:159:PHE:C	12:AB:159:PHE:CD2	2.91	0.47
13:AD:182:ARG:O	13:AD:205:MET:HA	2.14	0.47
14:AE:1350:ASN:HA	14:AE:1353:VAL:HG12	1.97	0.47
16:AG:27:LEU:HD22	16:AG:114:ILE:HG12	1.96	0.47
16:AG:168:LEU:CD2	16:AG:230:PRO:C	2.74	0.47
16:AG:422:GLU:CA	16:AG:426:GLY:N	2.62	0.47
18:D:109:A:C6	18:D:326:G:C6	3.02	0.47
18:D:330:C:O2	18:D:330:C:H2'	2.14	0.47
18:D:1149:C:H2'	18:D:1150:A:H8	1.79	0.47
18:D:1325:C:C2	18:D:1326:U:C5	3.02	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
38:X:86:TYR:CE2	38:X:90:ARG:NE	2.82	0.47
41:a:1830:C:N3	41:a:1831:G:N7	2.61	0.47
41:a:2070:A:H2'	41:a:2071:A:O4'	2.14	0.47
55:o:33:LEU:O	55:o:41:LYS:NZ	2.45	0.47
56:p:94:TYR:HD1	56:p:107:LEU:HD23	1.79	0.47
64:x:115:LEU:HD23	64:x:117:PHE:CE1	2.48	0.47
66:z:53:ARG:HG2	66:z:57:PHE:CE2	2.49	0.47
2:1:28:LYS:HB2	2:1:31:GLN:OE1	2.14	0.47
10:A:65:C:C2'	10:A:66:C:H5'	2.44	0.47
14:AE:291:ILE:O	14:AE:293:ARG:N	2.46	0.47
14:AE:437:PHE:HZ	14:AE:453:VAL:HG11	1.79	0.47
16:AG:61:ARG:HD2	16:AG:73:LYS:CD	2.44	0.47
16:AG:233:ARG:O	16:AG:327:LEU:CD2	2.62	0.47
10:B:12:G:C2'	10:B:13:C:OP1	2.61	0.47
17:C:60:LYS:NZ	18:D:734:G:H2'	2.25	0.47
18:D:35:G:H2'	18:D:36:C:H6	1.79	0.47
18:D:611:C:C2	18:D:612:C:C5	3.02	0.47
18:D:1412:C:H2'	18:D:1413:A:C8	2.49	0.47
28:N:34:VAL:HG22	28:N:59:LEU:HD21	1.96	0.47
32:R:2:ALA:N	32:R:7:LEU:HD11	2.30	0.47
33:S:74:LEU:HD23	33:S:77:PHE:CD2	2.49	0.47
39:Y:74:PRO:O	39:Y:78:LEU:HG	2.13	0.47
41:a:600:G:H2'	41:a:601:C:C6	2.49	0.47
41:a:689:A:H2'	41:a:690:G:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:783:A:N3	41:a:783:A:H2'	2.29	0.47
41:a:1385:A:C4	41:a:1386:C:C5	3.02	0.47
41:a:1841:U:C2	41:a:1842:G:C8	3.02	0.47
41:a:1844:C:C2	41:a:1845:G:C8	3.02	0.47
41:a:2298:A:H5''	54:n:72:LYS:CE	2.44	0.47
41:a:2788:C:H2'	41:a:2789:C:C6	2.50	0.47
41:a:2814:A:C4	41:a:2815:C:C5	3.03	0.47
56:p:18:LYS:HE2	56:p:18:LYS:HA	1.96	0.47
60:t:42:THR:C	60:t:44:LYS:HZ2	2.16	0.47
2:1:25:ARG:HH12	41:a:520:G:P	2.37	0.47
2:1:95:ARG:NH1	2:1:97:LEU:CD2	2.77	0.47
10:A:12:G:C2'	10:A:13:C:OP1	2.61	0.47
11:AA:400:VAL:HG22	11:AA:584:TYR:HB3	1.96	0.47
11:AA:689:ALA:HB2	11:AA:1233:LEU:HD23	1.97	0.47
12:AB:64:ILE:HG22	12:AB:67:THR:HB	1.97	0.47
13:AD:59:VAL:HG22	13:AD:144:ILE:HA	1.97	0.47
16:AG:209:PHE:CE1	16:AG:262:VAL:HG21	2.49	0.47
16:AG:243:LYS:HG3	21:G:179:LEU:HD22	1.97	0.47
16:AG:342:ASP:N	16:AG:342:ASP:OD1	2.45	0.47
17:C:73:ARG:NH1	31:Q:113:VAL:CG1	2.76	0.47
18:D:61:G:O6	19:E:10:ARG:NH2	2.47	0.47
18:D:520:A:O2'	32:R:70:GLU:CD	2.57	0.47
18:D:636:U:H5'	36:V:6:ARG:NE	2.29	0.47
18:D:1176:A:H2'	18:D:1177:G:O4'	2.14	0.47
18:D:1308:U:P	38:X:98:ARG:CG	3.03	0.47
18:D:1308:U:H3'	38:X:98:ARG:NH2	2.29	0.47
19:E:19:LYS:CG	19:E:20:HIS:N	2.76	0.47
20:F:25:LYS:NZ	22:H:336:ASP:CG	2.68	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
22:H:5:PHE:CE1	22:H:9:PHE:HE1	2.31	0.47
22:H:70:VAL:HA	22:H:85:SER:HA	1.95	0.47
23:I:49:LYS:HZ3	23:I:75:ILE:HD11	1.80	0.47
25:K:148:ASN:ND2	25:K:153:VAL:CG1	2.77	0.47
25:K:156:LYS:HE3	28:N:71:VAL:CG1	2.41	0.47
27:M:71:PRO:HG3	27:M:103:TRP:HH2	1.76	0.47
27:M:109:ARG:C	27:M:119:ARG:HH21	2.23	0.47
33:S:63:ARG:HD3	33:S:68:GLY:O	2.15	0.47
36:V:31:HIS:HD2	36:V:34:TYR:H	1.62	0.47
39:Y:19:PRO:HG2	39:Y:24:GLY:H	1.79	0.47
41:a:1607:C:N4	41:a:1622:G:OP2	2.35	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1790:C:H2'	41:a:1791:A:N7	2.29	0.47
41:a:1794:A:H2'	41:a:1795:C:H6	1.80	0.47
41:a:2419:U:O2'	41:a:2420:C:H5'	2.14	0.47
53:m:25:LYS:HE2	53:m:28:ARG:HH21	1.78	0.47
57:q:1:MET:CA	57:q:1:MET:HE3	2.43	0.47
57:q:14:CYS:SG	57:q:33:HIS:HB3	2.53	0.47
59:s:39:LYS:HA	59:s:44:TYR:HD1	1.78	0.47
2:1:11:ARG:CZ	2:1:11:ARG:HB3	2.45	0.47
5:4:11:GLU:OE2	5:4:19:ARG:NH2	2.48	0.47
5:4:59:GLU:OE1	5:4:59:GLU:N	2.47	0.47
9:9:40:GLU:CD	9:9:54:VAL:HG11	2.39	0.47
11:AA:858:GLY:CA	16:AG:35:THR:HB	2.43	0.47
12:AB:133:PRO:CD	12:AB:140:MET:HE3	2.45	0.47
16:AG:62:TRP:CD1	16:AG:95:ASP:HB2	2.49	0.47
16:AG:288:MET:O	16:AG:288:MET:HG2	2.13	0.47
16:AG:434:LEU:HD11	16:AG:454:CYS:C	2.39	0.47
10:B:35:A:H2'	10:B:36:U:C6	2.50	0.47
10:B:70:G:C3'	10:B:71:C:H5''	2.44	0.47
17:C:12:ARG:CZ	17:C:13:PHE:CE1	2.97	0.47
18:D:306:A:C5	18:D:307:C:C5	3.02	0.47
18:D:537:G:OP1	32:R:110:ARG:NH2	2.38	0.47
23:I:25:ASN:O	23:I:27:LYS:N	2.47	0.47
24:J:41:HIS:ND1	24:J:44:ARG:NH1	2.63	0.47
24:J:76:TYR:CE2	24:J:204:TYR:CB	2.95	0.47
27:M:142:HIS:O	27:M:146:GLU:HG2	2.13	0.47
37:W:9:PRO:HD3	47:g:64:PHE:CD2	2.49	0.47
39:Y:52:LEU:O	39:Y:54:ILE:HG12	2.14	0.47
41:a:921:C:C2	41:a:922:C:C5	3.03	0.47
41:a:1333:G:C2	41:a:1334:G:C8	3.03	0.47
41:a:1349:C:N3	41:a:1350:C:C5	2.83	0.47
41:a:1442:U:H2'	41:a:1443:U:H6	1.79	0.47
41:a:1708:C:H2'	41:a:1709:U:H6	1.79	0.47
41:a:2513:A:H2'	41:a:2514:U:C6	2.50	0.47
41:a:2520:C:C6	41:a:2567:G:H1'	2.50	0.47
42:b:51:VAL:N	42:b:62:LYS:HZ3	2.13	0.47
45:e:20:ASN:HA	45:e:23:ARG:NE	2.30	0.47
45:e:24:GLU:O	45:e:25:GLN:C	2.57	0.47
52:l:23:PHE:CE2	52:l:25:GLU:HA	2.50	0.47
62:v:53:MET:HB2	62:v:116:ALA:HB1	1.97	0.47
62:v:59:ARG:CZ	62:v:59:ARG:O	2.63	0.47
64:x:41:ALA:HB2	64:x:48:LEU:HD11	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:4:2:PHE:CE1	5:4:56:PHE:CZ	3.03	0.47
5:4:21:ARG:HA	5:4:25:LYS:O	2.14	0.47
8:7:8:U:OP2	18:D:1397:C:O2	2.33	0.47
8:7:30:U:O2	8:7:30:U:H3'	2.14	0.47
10:A:33:U:H4'	27:M:84:THR:HB	1.97	0.47
11:AA:475:VAL:C	11:AA:477:GLU:N	2.69	0.47
14:AE:66:LYS:HB2	14:AE:69:GLU:HB3	1.96	0.47
16:AG:207:GLU:HG3	16:AG:210:ARG:HB3	1.96	0.47
16:AG:220:VAL:CG1	16:AG:245:ILE:HG21	2.44	0.47
16:AG:299:ASP:CB	16:AG:303:HIS:HA	2.44	0.47
10:B:26:G:H1	10:B:44:A:N6	2.12	0.47
17:C:38:LYS:HA	17:C:38:LYS:CE	2.37	0.47
17:C:60:LYS:HE3	18:D:735:C:H4'	1.97	0.47
18:D:307:C:O2	18:D:307:C:H2'	2.15	0.47
18:D:309:A:O2'	18:D:607:A:N1	2.44	0.47
18:D:745:G:H2'	18:D:746:A:C8	2.50	0.47
18:D:808:C:OP1	34:T:48:LYS:HE3	2.14	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
27:M:18:PHE:CD2	27:M:59:LEU:HD21	2.46	0.47
32:R:99:ARG:NE	32:R:104:CYS:SG	2.87	0.47
35:U:26:ASN:ND2	35:U:31:ARG:HE	2.12	0.47
41:a:104:A:C5	41:a:105:C:C5	3.02	0.47
41:a:247:G:H4'	41:a:386:G:C5	2.49	0.47
41:a:257:C:O2	61:u:104:GLN:NE2	2.48	0.47
41:a:858:G:OP2	42:b:78:LYS:NZ	2.35	0.47
41:a:963:U:H2'	41:a:964:C:H6	1.79	0.47
41:a:1656:C:P	50:j:141:ARG:HD2	2.54	0.47
41:a:1790:C:O3'	41:a:1791:A:C8	2.68	0.47
41:a:2300:C:H2'	41:a:2301:C:H6	1.79	0.47
41:a:2314:A:C1'	54:n:155:THR:HG21	2.42	0.47
42:b:26:PHE:H	42:b:29:GLU:HG3	1.79	0.47
51:k:25:LYS:HD3	51:k:51:GLU:OE2	2.15	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
1:0:82:HIS:CD2	61:u:23:ILE:HG12	2.50	0.47
8:7:28:G:P	16:AG:112:GLN:HE21	2.38	0.47
9:9:38:MET:HA	9:9:41:LEU:HD12	1.96	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:27:LEU:O	11:AA:528:ARG:NH1	2.43	0.47
11:AA:481:LEU:HD11	12:AB:23:ARG:HE	1.66	0.47
12:AB:15:GLN:HE22	12:AB:32:MET:HE1	1.79	0.47
12:AB:35:LEU:HD13	12:AB:106:ASP:OD1	2.15	0.47
12:AB:51:PHE:HB3	12:AB:52:PRO:CD	2.45	0.47
12:AB:87:ILE:CG1	14:AE:162:GLU:HG3	2.45	0.47
12:AB:160:ARG:NH1	12:AB:160:ARG:CB	2.73	0.47
13:AD:35:PHE:HA	13:AD:38:THR:HG22	1.97	0.47
14:AE:67:ASP:C	14:AE:69:GLU:N	2.71	0.47
14:AE:77:ARG:HA	14:AE:77:ARG:CZ	2.44	0.47
14:AE:86:GLU:N	14:AE:86:GLU:CD	2.73	0.47
14:AE:218:THR:HA	14:AE:221:ILE:HG22	1.96	0.47
16:AG:33:THR:CG2	16:AG:43:ILE:HD11	2.44	0.47
16:AG:61:ARG:HA	16:AG:94:GLU:HA	1.97	0.47
16:AG:233:ARG:HG2	16:AG:270:ARG:CB	2.45	0.47
16:AG:277:ASP:HB2	16:AG:282:GLN:HG3	1.95	0.47
16:AG:314:LEU:HB3	16:AG:318:ILE:HD12	1.97	0.47
16:AG:448:LEU:HD23	16:AG:473:LEU:HD12	1.95	0.47
10:B:70:G:C2'	10:B:71:C:H5''	2.45	0.47
18:D:35:G:N3	32:R:115:SER:OG	2.47	0.47
18:D:687:A:C2	18:D:704:A:C4	3.02	0.47
18:D:864:A:H5'	25:K:90:THR:O	2.14	0.47
18:D:977:A:H1'	18:D:982:U:O4	2.15	0.47
18:D:1149:C:C2	18:D:1150:A:C8	3.03	0.47
18:D:1382:C:N3	18:D:1383:C:C5	2.83	0.47
19:E:9:LYS:O	19:E:12:ILE:HG12	2.14	0.47
20:F:64:ASN:HA	20:F:67:ARG:HD3	1.97	0.47
21:G:117:LEU:HD21	21:G:141:LEU:HB2	1.96	0.47
22:H:37:LEU:HD11	22:H:47:ALA:HA	1.96	0.47
23:I:132:ARG:CA	23:I:135:LYS:HE3	2.44	0.47
24:J:62:ARG:HA	24:J:72:PHE:CZ	2.50	0.47
24:J:139:PRO:N	24:J:182:PHE:HE2	2.12	0.47
25:K:157:ARG:NH1	28:N:43:GLU:CD	2.72	0.47
25:K:165:LEU:HD12	28:N:114:ARG:NH1	2.30	0.47
27:M:66:LEU:HD13	27:M:101:MET:HE3	1.93	0.47
27:M:71:PRO:O	27:M:96:ARG:NH1	2.47	0.47
27:M:111:ARG:O	27:M:119:ARG:CZ	2.63	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
30:P:10:LEU:C	30:P:11:LYS:HD3	2.40	0.47
30:P:13:PHE:CE1	30:P:67:ILE:HD11	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:P:13:PHE:CZ	30:P:67:ILE:HD11	2.50	0.47
30:P:26:VAL:HG12	30:P:30:LYS:HZ2	1.79	0.47
30:P:27:GLU:HA	30:P:30:LYS:HZ1	1.78	0.47
34:T:71:LYS:HZ3	34:T:78:TYR:HD2	1.61	0.47
34:T:77:ARG:NH2	34:T:80:GLN:NE2	2.62	0.47
36:V:62:ARG:C	36:V:73:TRP:CE3	2.92	0.47
37:W:63:THR:HG22	37:W:64:ASP:N	2.30	0.47
39:Y:102:ARG:HH11	39:Y:141:ASP:CG	2.23	0.47
41:a:15:G:O2'	49:i:15:MET:HE2	2.15	0.47
41:a:591:U:C2	41:a:592:A:C8	3.03	0.47
41:a:592:A:C2	55:o:4:ILE:HD11	2.49	0.47
41:a:871:U:H2'	41:a:872:U:H6	1.78	0.47
41:a:880:G:C2	41:a:881:G:C8	3.02	0.47
41:a:1405:U:H2'	41:a:1406:U:C5	2.49	0.47
41:a:1770:G:C6	41:a:1983:G:C5	3.03	0.47
41:a:1818:U:H6	48:h:156:ARG:NH2	2.12	0.47
41:a:1936:A:N7	41:a:1945:G:C8	2.83	0.47
41:a:2091:C:O2	43:c:34:HIS:CE1	2.67	0.47
41:a:2294:G:OP1	64:x:98:GLN:OE1	2.33	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:2351:G:O6	55:o:39:LYS:NZ	2.48	0.47
41:a:2803:G:H2'	41:a:2804:U:C5	2.50	0.47
46:f:41:THR:O	46:f:42:PRO:C	2.58	0.47
48:h:181:MET:HE2	48:h:181:MET:CA	2.45	0.47
48:h:205:LEU:HD12	48:h:210:ALA:CB	2.44	0.47
50:j:91:THR:HB	50:j:94:GLN:CG	2.44	0.47
52:l:6:LYS:HZ1	52:l:119:ILE:C	2.23	0.47
52:l:59:PRO:HB2	52:l:60:TRP:CE3	2.50	0.47
52:l:148:ILE:CD1	52:l:187:VAL:HB	2.44	0.47
59:s:13:ARG:NH2	59:s:50:THR:HA	2.27	0.47
60:t:20:MET:HB3	60:t:44:LYS:HE2	1.95	0.47
61:u:19:LEU:CD2	61:u:27:LEU:HD12	2.45	0.47
62:v:31:PHE:O	62:v:104:GLU:OE1	2.33	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
66:z:69:ALA:HA	66:z:106:PHE:HZ	1.80	0.47
3:2:1:MET:HE1	41:a:139:U:C4	2.50	0.47
9:9:3:LEU:O	9:9:4:ASN:OD1	2.32	0.47
9:9:18:VAL:CG1	9:9:71:CYS:HB2	2.45	0.47
10:A:52:G:C6	10:A:63:G:O6	2.68	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:857:VAL:CA	16:AG:35:THR:CG2	2.92	0.47
11:AA:1286:THR:O	11:AA:1290:MET:HB2	2.14	0.47
12:AB:33:ILE:HG23	12:AB:33:ILE:O	2.15	0.47
12:AB:117:ILE:CA	12:AB:127:GLN:HG2	2.43	0.47
14:AE:1037:PHE:HB3	14:AE:1040:MET:HB2	1.97	0.47
16:AG:353:HIS:O	16:AG:356:ILE:CA	2.63	0.47
10:B:30:G:O2'	10:B:31:G:H5'	2.15	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:16:GLU:OE1	17:C:18:VAL:HB	2.14	0.47
18:D:375:U:H1'	35:U:28:ARG:HH22	1.79	0.47
18:D:1238:A:H2	18:D:1241:G:N3	2.13	0.47
20:F:37:PHE:HA	31:Q:123:PRO:HB2	1.97	0.47
20:F:58:LYS:O	20:F:62:ARG:NE	2.45	0.47
29:O:7:TYR:O	29:O:89:GLU:CD	2.58	0.47
31:Q:85:MET:HB3	31:Q:113:VAL:HG11	1.96	0.47
33:S:63:ARG:NH2	33:S:70:PRO:HD3	2.30	0.47
33:S:79:LEU:HB2	33:S:84:VAL:CG2	2.45	0.47
34:T:48:LYS:O	34:T:50:HIS:N	2.48	0.47
36:V:30:LYS:HD3	36:V:35:GLY:HA2	1.97	0.47
37:W:77:THR:OG1	37:W:78:ARG:HD2	2.15	0.47
39:Y:37:PHE:HZ	39:Y:56:VAL:HG11	1.79	0.47
39:Y:126:ARG:NH1	41:a:1083:U:OP2	2.47	0.47
41:a:879:G:H2'	41:a:880:G:O4'	2.14	0.47
41:a:2064:C:H2'	41:a:2065:C:H6	1.80	0.47
41:a:2200:C:OP2	43:c:37:ARG:NH2	2.48	0.47
41:a:2299:U:H2'	41:a:2300:C:C6	2.49	0.47
41:a:2517:C:O2	41:a:2542:A:N6	2.48	0.47
41:a:2702:G:C5	41:a:2703:C:C5	3.03	0.47
62:v:30:SER:N	62:v:104:GLU:OE2	2.48	0.47
64:x:115:LEU:HD23	64:x:117:PHE:HE1	1.79	0.47
1:0:4:VAL:HG23	1:0:39:LEU:HB2	1.97	0.47
4:3:40:ASN:OD1	4:3:65:ILE:HB	2.14	0.47
4:3:96:PHE:CE1	4:3:103:ILE:HG12	2.50	0.47
8:7:22:U:H5''	23:I:80:LYS:HB2	1.95	0.47
8:7:22:U:C4'	23:I:80:LYS:CG	2.75	0.47
9:9:69:PHE:C	9:9:72:LEU:HD11	2.40	0.47
11:AA:786:GLY:N	11:AA:789:THR:OG1	2.41	0.47
11:AA:860:ALA:HB3	16:AG:37:LYS:HG3	1.94	0.47
11:AA:1280:ALA:HB1	14:AE:918:ILE:HG22	1.95	0.47
12:AB:9:CYS:H	12:AB:53:ASN:HB3	1.77	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AB:130:PHE:HB3	12:AB:140:MET:HE2	1.96	0.47
16:AG:1:MET:SD	16:AG:53:SER:HA	2.55	0.47
16:AG:26:ALA:HB1	16:AG:117:LYS:HG2	1.96	0.47
10:B:48:C:C2'	10:B:49:G:OP2	2.62	0.47
18:D:1227:A:C2	18:D:1228:C:C6	3.02	0.47
18:D:1363:A:C5	18:D:1365:G:C6	3.03	0.47
21:G:19:GLN:OE1	21:G:21:ARG:CG	2.63	0.47
22:H:277:GLY:HA2	22:H:331:MET:HE3	1.97	0.47
25:K:96:MET:HG2	25:K:125:ALA:HB2	1.96	0.47
29:O:127:PHE:CD1	29:O:128:SER:N	2.83	0.47
34:T:11:ILE:HG21	34:T:31:LEU:CD1	2.45	0.47
41:a:872:U:H2'	41:a:873:C:C6	2.50	0.47
41:a:1223:G:N2	41:a:1226:A:OP2	2.43	0.47
41:a:1429:G:H2'	41:a:1430:G:H8	1.79	0.47
41:a:2243:U:H2'	41:a:2244:U:H6	1.80	0.47
41:a:2314:A:P	54:n:88:LYS:NZ	2.87	0.47
42:b:53:CYS:SG	42:b:57:HIS:HA	2.55	0.47
47:g:56:ARG:HH21	47:g:59:ARG:HH21	1.62	0.47
49:i:4:GLN:OE1	49:i:8:PRO:CD	2.63	0.47
52:l:42:GLY:HA3	52:l:92:HIS:HE1	1.80	0.47
56:p:52:PHE:CZ	56:p:72:LEU:HD22	2.50	0.47
58:r:18:GLN:HE22	58:r:39:ALA:HB2	1.78	0.47
59:s:56:VAL:O	59:s:124:VAL:HA	2.14	0.47
5:4:48:MET:HE3	5:4:85:LYS:HA	1.97	0.47
5:4:53:LYS:O	5:4:56:PHE:HD2	1.97	0.47
7:6:10:DG:OP1	14:AE:311:ARG:NH2	2.47	0.47
11:AA:1311:GLY:O	15:AF:31:GLN:NE2	2.47	0.47
11:AA:1314:GLN:HA	15:AF:28:ARG:HH22	1.80	0.47
12:AB:42:LYS:N	12:AB:42:LYS:CD	2.73	0.47
14:AE:210:SER:O	14:AE:214:ARG:N	2.43	0.47
14:AE:977:SER:OG	14:AE:980:THR:OG1	2.32	0.47
16:AG:36:LYS:HB2	16:AG:101:THR:HG21	1.97	0.47
16:AG:36:LYS:HE3	16:AG:43:ILE:HG12	1.95	0.47
16:AG:87:LEU:HD22	16:AG:93:VAL:HG21	1.96	0.47
16:AG:429:LYS:HD2	16:AG:429:LYS:N	2.24	0.47
18:D:13:U:C4	18:D:21:G:C2	3.03	0.47
18:D:737:C:C2	18:D:738:C:C5	3.03	0.47
18:D:1189:U:OP1	33:S:98:LYS:NZ	2.48	0.47
18:D:1458:G:H5''	19:E:26:SER:OG	2.14	0.47
21:G:110:SER:HA	21:G:113:ARG:HH21	1.79	0.47
21:G:197:ASP:OD2	21:G:198:PHE:CE2	2.68	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:L:17:GLN:C	26:L:21:MET:HE1	2.40	0.47
27:M:17:LYS:HZ2	27:M:18:PHE:HD1	1.59	0.47
27:M:116:MET:HA	27:M:119:ARG:HD3	1.97	0.47
32:R:74:LEU:HD11	32:R:80:ILE:HG13	1.96	0.47
39:Y:96:LYS:HD2	39:Y:136:GLY:O	2.15	0.47
41:a:404:A:H4'	41:a:405:U:O5'	2.15	0.47
41:a:1068:G:O6	41:a:1069:A:N6	2.48	0.47
41:a:1200:C:C2	41:a:1201:U:C5	3.03	0.47
41:a:1278:C:H2'	41:a:1279:G:H8	1.80	0.47
41:a:1441:G:H2'	41:a:1442:U:C6	2.50	0.47
41:a:1467:U:C4	41:a:1546:G:C2	3.03	0.47
41:a:1791:A:C2	41:a:1829:A:H4'	2.49	0.47
41:a:2013:A:C2	41:a:2613:U:O4	2.68	0.47
41:a:2250:G:OP1	62:v:84:LYS:NZ	2.48	0.47
41:a:2700:A:H2'	41:a:2701:U:C6	2.50	0.47
41:a:2748:A:C2	41:a:2757:A:C5	3.03	0.47
50:j:1:MET:O	50:j:204:LYS:HD2	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
62:v:41:LEU:HG	62:v:96:ILE:CG1	2.45	0.47
63:w:44:LEU:C	63:w:44:LEU:HD23	2.39	0.47
1:0:4:VAL:CG2	1:0:40:MET:HB3	2.45	0.46
5:4:53:LYS:HB3	5:4:55:GLU:OE1	2.16	0.46
9:9:60:LEU:O	9:9:64:VAL:HB	2.15	0.46
11:AA:103:VAL:HG12	11:AA:117:ILE:HG22	1.97	0.46
11:AA:812:PHE:HZ	14:AE:503:SER:HB2	1.80	0.46
12:AB:13:GLN:HG2	12:AB:73:ARG:NH2	2.30	0.46
14:AE:616:PRO:HA	14:AE:619:ILE:HG22	1.96	0.46
16:AG:240:THR:HG21	16:AG:247:PRO:HG3	1.92	0.46
18:D:22:G:C5	18:D:23:C:C5	3.03	0.46
18:D:339:C:H2'	18:D:340:U:C6	2.50	0.46
18:D:436:C:C2	18:D:437:U:C5	3.02	0.46
18:D:1368:A:OP1	29:O:113:ARG:NH2	2.48	0.46
21:G:110:SER:HA	21:G:113:ARG:NE	2.29	0.46
22:H:304:VAL:O	22:H:304:VAL:CG1	2.63	0.46
23:I:22:TRP:CZ2	23:I:32:ASN:HB2	2.50	0.46
23:I:134:MET:HE1	23:I:167:TRP:CA	2.43	0.46
28:N:112:THR:HG23	28:N:115:ALA:H	1.80	0.46
29:O:89:GLU:O	29:O:92:GLU:OE1	2.32	0.46
34:T:47:LYS:HD3	34:T:47:LYS:N	2.30	0.46
41:a:396:G:C6	41:a:397:U:C4	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:581:C:H2'	41:a:582:A:C8	2.50	0.46
41:a:1598:A:C4	41:a:1599:U:C6	3.03	0.46
41:a:2345:G:C5	41:a:2347:C:C5	3.02	0.46
41:a:2725:A:C4	41:a:2727:A:N7	2.83	0.46
41:a:2743:U:O2'	56:p:153:ARG:NH1	2.48	0.46
44:d:42:C:C5	54:n:66:LEU:HD12	2.49	0.46
48:h:108:LYS:HZ3	48:h:194:GLU:N	2.13	0.46
50:j:9:VAL:O	50:j:197:THR:HG23	2.15	0.46
50:j:55:LYS:HZ2	50:j:60:VAL:CA	2.28	0.46
57:q:2:LYS:HE2	57:q:35:GLN:HG3	1.97	0.46
59:s:136:GLN:N	59:s:137:PRO:CD	2.78	0.46
62:v:111:GLU:O	62:v:112:LEU:C	2.57	0.46
66:z:113:ALA:O	66:z:117:LEU:HD13	2.15	0.46
1:0:58:VAL:HG13	1:0:60:LYS:HZ3	1.79	0.46
2:1:105:VAL:HG13	2:1:105:VAL:O	2.14	0.46
10:A:19:G:O6	41:a:2112:G:O5'	2.34	0.46
12:AB:127:GLN:HE21	12:AB:127:GLN:HB3	1.49	0.46
12:AB:132:GLU:OE1	12:AB:133:PRO:HD2	2.15	0.46
16:AG:442:ARG:C	16:AG:446:PHE:CD2	2.85	0.46
10:B:24:U:H2'	10:B:25:C:C6	2.51	0.46
10:B:47:U:H2'	10:B:48:C:H4'	1.97	0.46
10:B:75:C:O2'	10:B:76:A:N7	2.48	0.46
17:C:31:ASN:OD1	22:H:268:VAL:HG12	2.15	0.46
18:D:520:A:O3'	32:R:70:GLU:OE2	2.32	0.46
18:D:821:G:H2'	18:D:822:U:H6	1.80	0.46
18:D:1109:C:C2	18:D:1110:A:C8	3.04	0.46
18:D:1225:A:H2'	18:D:1226:C:C5	2.49	0.46
21:G:18:HIS:CE1	21:G:205:ASP:OD1	2.69	0.46
23:I:107:ARG:HB3	23:I:108:LYS:HD2	1.96	0.46
25:K:12:GLN:HB3	25:K:14:LYS:HZ2	1.79	0.46
32:R:18:LYS:NZ	32:R:19:SER:O	2.47	0.46
38:X:3:ARG:HB3	47:g:35:ASP:OD2	2.15	0.46
41:a:6:A:H5'	59:s:131:ASN:OD1	2.15	0.46
41:a:753:A:C6	41:a:754:U:C5	3.04	0.46
41:a:1006:C:C2	41:a:1138:G:N2	2.83	0.46
41:a:1794:A:H2'	41:a:1795:C:C6	2.50	0.46
41:a:2190:G:H2'	41:a:2191:A:C8	2.50	0.46
41:a:2646:C:O5'	41:a:2646:C:H6	1.98	0.46
41:a:2840:C:C2	41:a:2841:C:C5	3.03	0.46
43:c:71:LEU:O	43:c:76:GLU:HG3	2.16	0.46
55:o:62:LEU:HG	55:o:65:ALA:HA	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:r:18:GLN:OE1	58:r:39:ALA:HB1	2.15	0.46
4:3:47:LYS:NZ	41:a:482:A:O5'	2.48	0.46
8:7:7:U:C6	8:7:7:U:C3'	2.97	0.46
13:AD:182:ARG:HD2	14:AE:581:MET:HE1	1.97	0.46
14:AE:287:ALA:CB	14:AE:292:VAL:CG2	2.93	0.46
18:D:611:C:C2	18:D:612:C:C6	3.04	0.46
18:D:983:A:H5'	18:D:984:C:OP2	2.14	0.46
21:G:207:ILE:HG23	21:G:208:ARG:N	2.30	0.46
23:I:134:MET:HE2	23:I:168:TYR:CB	2.46	0.46
23:I:181:ASP:HB2	23:I:207:ILE:HD11	1.97	0.46
27:M:69:VAL:HA	27:M:138:ARG:HD3	1.97	0.46
27:M:95:ARG:CZ	27:M:99:LEU:HD21	2.45	0.46
29:O:63:LEU:HD13	29:O:65:ILE:HD11	1.97	0.46
34:T:15:PHE:CD2	34:T:30:ALA:HB2	2.49	0.46
41:a:1197:G:C4	41:a:1198:U:C5	3.02	0.46
41:a:1477:A:N6	41:a:1514:G:O2'	2.45	0.46
41:a:1786:A:H1'	41:a:1938:A:N6	2.31	0.46
41:a:2298:A:C4	41:a:2321:U:H5	2.31	0.46
41:a:2393:U:C5'	55:o:30:ARG:NH1	2.76	0.46
41:a:2766:A:C5	41:a:2767:C:C5	3.03	0.46
41:a:2784:U:H2'	41:a:2785:C:H6	1.80	0.46
48:h:52:ARG:NE	48:h:53:HIS:CE1	2.83	0.46
48:h:138:GLY:H	48:h:164:ILE:HG23	1.79	0.46
58:r:58:LEU:O	58:r:61:VAL:HG22	2.14	0.46
64:x:90:VAL:HG13	64:x:115:LEU:HD11	1.96	0.46
3:2:18:GLU:O	3:2:22:THR:HG23	2.15	0.46
9:9:25:ALA:HB3	9:9:99:PHE:CE2	2.51	0.46
11:AA:469:VAL:O	11:AA:473:ARG:CG	2.45	0.46
12:AB:51:PHE:HE2	14:AE:288:PRO:HG2	1.79	0.46
12:AB:151:LYS:NZ	12:AB:151:LYS:HB2	2.28	0.46
14:AE:288:PRO:HD2	14:AE:291:ILE:CB	2.42	0.46
14:AE:290:ILE:O	14:AE:290:ILE:HG12	2.14	0.46
16:AG:226:ALA:HB1	16:AG:228:ARG:HH11	1.81	0.46
16:AG:362:TYR:HA	16:AG:413:ALA:HB3	1.94	0.46
10:B:65:C:C2'	10:B:66:C:H5'	2.44	0.46
17:C:12:ARG:NH1	17:C:13:PHE:CE1	2.84	0.46
17:C:21:ILE:CD1	17:C:54:GLN:NE2	2.79	0.46
18:D:915:A:C5	18:D:916:U:C6	3.04	0.46
20:F:12:PHE:CE1	31:Q:107:ILE:CG2	2.98	0.46
22:H:302:GLY:HA3	22:H:344:LEU:HD13	1.96	0.46
25:K:143:GLY:O	25:K:146:ASN:OD1	2.34	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:L:43:GLY:HA2	26:L:58:HIS:CE1	2.51	0.46
27:M:74:GLU:CG	27:M:91:VAL:CG1	2.94	0.46
31:Q:116:ILE:HG13	31:Q:116:ILE:O	2.14	0.46
37:W:32:ARG:NH2	37:W:34:TRP:CZ3	2.84	0.46
41:a:57:C:C2	41:a:58:G:C8	3.04	0.46
41:a:391:A:C5	41:a:392:U:C5	3.04	0.46
41:a:909:A:H2'	41:a:912:C:H5	1.80	0.46
41:a:2197:U:C5	41:a:2224:G:C6	3.03	0.46
41:a:2700:A:H2'	41:a:2701:U:H6	1.80	0.46
43:c:76:GLU:OE1	43:c:77:LYS:O	2.34	0.46
45:e:12:GLU:CG	45:e:13:GLU:N	2.78	0.46
54:n:142:ASP:CB	54:n:145:LYS:HE2	2.40	0.46
8:7:35:U:H4'	14:AE:322:ARG:CZ	2.46	0.46
10:A:48:C:C2'	10:A:49:G:OP2	2.62	0.46
11:AA:176:ILE:HD11	11:AA:428:VAL:HG21	1.98	0.46
11:AA:230:PHE:HB2	11:AA:333:ILE:HB	1.98	0.46
14:AE:797:THR:HG22	14:AE:924:GLY:HA3	1.97	0.46
16:AG:434:LEU:HD11	16:AG:455:THR:CA	2.46	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:610:U:N3	18:D:611:C:C5	2.83	0.46
18:D:826:C:O2	28:N:16:ASN:ND2	2.49	0.46
18:D:829:G:O3'	21:G:23:TRP:HZ2	1.95	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
19:E:82:GLN:HA	19:E:85:LYS:NZ	2.31	0.46
29:O:58:VAL:HG23	29:O:59:GLU:N	2.31	0.46
37:W:9:PRO:HB3	47:g:64:PHE:CZ	2.51	0.46
41:a:136:G:C6	41:a:144:A:C6	3.04	0.46
41:a:626:A:C2	61:u:78:ARG:CZ	2.98	0.46
41:a:2314:A:O2'	54:n:155:THR:HG21	2.15	0.46
49:i:28:LEU:HB2	49:i:37:LYS:HE3	1.97	0.46
49:i:52:ARG:HA	49:i:52:ARG:NE	2.30	0.46
49:i:55:ILE:HD13	63:w:112:TYR:CE1	2.50	0.46
51:k:34:LEU:HB2	51:k:51:GLU:OE2	2.16	0.46
61:u:110:VAL:HG23	61:u:125:LEU:HD12	1.97	0.46
63:w:24:MET:HG3	63:w:44:LEU:HD12	1.97	0.46
66:z:69:ALA:O	66:z:74:ILE:HG22	2.15	0.46
66:z:108:ALA:O	66:z:112:LYS:HG2	2.15	0.46
2:1:11:ARG:NH1	2:1:11:ARG:HB3	2.30	0.46
5:4:23:ALA:O	5:4:24:ASN:OD1	2.33	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:4:53:LYS:HD2	5:4:56:PHE:HE2	1.77	0.46
7:6:25:DT:H2'	11:AA:496:LYS:CG	2.44	0.46
8:7:32:U:H6	8:7:32:U:H3'	1.80	0.46
10:A:47:U:H2'	10:A:48:C:H4'	1.97	0.46
13:AD:86:LYS:NZ	14:AE:532:GLU:OE2	2.44	0.46
14:AE:781:LYS:HD2	14:AE:933:ARG:HH12	1.81	0.46
16:AG:80:ALA:HB1	16:AG:87:LEU:HB2	1.98	0.46
10:B:50:U:H2'	10:B:51:C:C6	2.51	0.46
17:C:33:ILE:O	22:H:338:GLU:CG	2.64	0.46
18:D:771:G:C6	18:D:809:G:C6	3.03	0.46
18:D:1324:A:H2'	18:D:1325:C:C6	2.50	0.46
22:H:287:LEU:HG	22:H:292:CYS:HA	1.98	0.46
25:K:86:LYS:HE3	25:K:95:PHE:CD1	2.51	0.46
27:M:69:VAL:HG23	27:M:100:ALA:HB1	1.97	0.46
28:N:6:PRO:O	28:N:33:LYS:NZ	2.48	0.46
31:Q:20:VAL:HB	31:Q:35:THR:CG2	2.45	0.46
32:R:68:GLY:O	32:R:99:ARG:NH1	2.48	0.46
36:V:61:ILE:C	36:V:73:TRP:HZ3	2.23	0.46
37:W:32:ARG:NH2	37:W:34:TRP:HZ3	2.14	0.46
39:Y:59:THR:C	39:Y:66:PHE:HB2	2.41	0.46
39:Y:106:GLN:OE1	39:Y:125:THR:HG21	2.15	0.46
41:a:584:C:N4	41:a:585:G:C6	2.83	0.46
41:a:644:A:H2'	41:a:645:C:O4'	2.15	0.46
41:a:1433:A:H2'	41:a:1434:A:C1'	2.46	0.46
41:a:2236:U:H2'	41:a:2237:G:O4'	2.15	0.46
41:a:2297:A:N1	41:a:2321:U:O4	2.47	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
42:b:51:VAL:HG12	42:b:59:LEU:HD12	1.96	0.46
44:d:83:G:H1'	46:f:53:PHE:CE1	2.51	0.46
50:j:5:VAL:HG22	50:j:202:ILE:CD1	2.46	0.46
52:l:1:MET:CE	52:l:20:GLY:N	2.79	0.46
52:l:108:ILE:HD11	52:l:180:LEU:HD13	1.98	0.46
52:l:175:ILE:HG21	52:l:180:LEU:HD11	1.97	0.46
52:l:195:GLN:CA	52:l:198:GLU:OE1	2.64	0.46
56:p:8:PRO:C	56:p:69:ARG:HH21	2.23	0.46
57:q:1:MET:HE1	57:q:35:GLN:HA	1.95	0.46
59:s:17:VAL:HG23	59:s:137:PRO:HB2	1.98	0.46
1:0:73:LYS:HZ1	1:0:88:GLY:HA3	1.81	0.46
2:1:50:VAL:HG12	2:1:105:VAL:CG1	2.45	0.46
3:2:57:VAL:HG12	3:2:86:THR:OG1	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:6:25:DT:OP1	11:AA:496:LYS:O	2.34	0.46
9:9:24:SER:HB3	9:9:116:GLU:HG3	1.94	0.46
9:9:59:LEU:HB2	9:9:62:ARG:CG	2.45	0.46
14:AE:513:MET:HB3	14:AE:513:MET:HE2	1.79	0.46
14:AE:1108:GLN:HE21	14:AE:1123:ARG:HH12	1.62	0.46
16:AG:183:LEU:CD2	16:AG:197:VAL:HG22	2.45	0.46
17:C:12:ARG:NH2	17:C:28:THR:CG2	2.79	0.46
18:D:371:A:H2'	18:D:372:C:O4'	2.15	0.46
18:D:1055:A:H1'	23:I:156:ARG:NH2	2.31	0.46
34:T:15:PHE:CE2	34:T:30:ALA:HB1	2.51	0.46
36:V:27:ARG:HH12	36:V:42:THR:CB	2.26	0.46
39:Y:126:ARG:HH12	41:a:1082:U:C5'	2.29	0.46
41:a:67:U:N3	41:a:68:G:C5	2.84	0.46
41:a:78:U:OP1	45:e:4:LYS:CE	2.63	0.46
41:a:666:A:H4'	61:u:48:ARG:HD2	1.97	0.46
41:a:1406:U:O2'	41:a:1407:G:P	2.74	0.46
41:a:1499:C:C2	41:a:1500:G:C8	3.03	0.46
41:a:2362:C:OP2	55:o:40:ARG:CZ	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	2.30	0.46
44:d:44:G:H3'	54:n:92:ARG:HH22	1.81	0.46
45:e:10:SER:OG	45:e:12:GLU:HG2	2.15	0.46
47:g:47:LYS:CD	54:n:178:ARG:HH22	2.29	0.46
60:t:8:LEU:N	60:t:8:LEU:HD12	2.30	0.46
1:0:71:LYS:HE2	1:0:90:ARG:HD2	1.97	0.46
3:2:3:ARG:CZ	3:2:5:GLU:OE1	2.64	0.46
10:A:24:U:H2'	10:A:25:C:C6	2.51	0.46
10:A:46:G:H1'	10:A:47:U:C5	2.51	0.46
10:A:50:U:H2'	10:A:51:C:C6	2.51	0.46
11:AA:28:LEU:HD21	11:AA:524:ILE:HG13	1.97	0.46
14:AE:1321:SER:OG	14:AE:1349:GLU:OE2	2.32	0.46
16:AG:479:GLY:O	16:AG:483:MET:HG2	2.15	0.46
10:B:75:C:P	41:a:2602:A:H2'	2.55	0.46
17:C:34:THR:HB	17:C:38:LYS:H	1.81	0.46
18:D:440:C:C2	18:D:441:A:C8	3.04	0.46
18:D:915:A:C6	18:D:916:U:C5	3.04	0.46
18:D:1132:C:O2	18:D:1132:C:H2'	2.16	0.46
22:H:24:VAL:HG23	22:H:24:VAL:O	2.16	0.46
24:J:105:MET:HE3	24:J:171:LEU:HD13	1.97	0.46
25:K:16:ILE:HD11	25:K:38:VAL:CG1	2.46	0.46
26:L:47:LEU:HD13	26:L:51:ILE:HG12	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:S:6:MET:HE3	33:S:63:ARG:NH1	2.31	0.46
33:S:82:ILE:HG23	33:S:83:LYS:N	2.31	0.46
38:X:104:THR:O	38:X:104:THR:HG22	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:451:U:C5'	52:l:47:LYS:HZ3	2.28	0.46
41:a:609:A:H3'	41:a:610:C:H6	1.80	0.46
41:a:985:C:N3	41:a:986:C:C5	2.84	0.46
41:a:1665:A:O3'	60:t:66:LYS:NZ	2.44	0.46
41:a:1707:G:C4	41:a:1708:C:C5	3.04	0.46
41:a:1796:U:H2'	41:a:1797:G:C8	2.50	0.46
41:a:1800:C:HO2'	41:a:1818:U:H3	1.64	0.46
42:b:26:PHE:O	42:b:29:GLU:HG2	2.15	0.46
44:d:82:U:O2'	46:f:53:PHE:HE2	1.98	0.46
47:g:18:CYS:HB2	47:g:40:CYS:HB3	1.96	0.46
49:i:4:GLN:OE1	49:i:7:LYS:HA	2.16	0.46
52:l:130:LYS:HB2	52:l:133:LEU:HD12	1.97	0.46
54:n:171:ALA:O	54:n:174:ASP:N	2.47	0.46
55:o:31:HIS:O	55:o:32:ILE:O	2.33	0.46
56:p:69:ARG:NH1	56:p:73:ASN:CG	2.74	0.46
57:q:1:MET:HE3	57:q:1:MET:HA	1.97	0.46
59:s:55:ILE:HG13	59:s:123:LYS:CE	2.46	0.46
63:w:48:VAL:CG1	63:w:49:GLU:OE1	2.64	0.46
63:w:115:LEU:HD23	63:w:117:ASP:N	2.30	0.46
3:2:3:ARG:HH22	3:2:4:GLU:HB2	1.81	0.46
8:7:1:A:H2'	8:7:2:U:C6	2.50	0.46
11:AA:735:LYS:HA	11:AA:748:ILE:HG22	1.97	0.46
11:AA:1002:LEU:HD21	11:AA:1007:LYS:HB2	1.98	0.46
12:AB:98:VAL:O	12:AB:98:VAL:HG22	2.16	0.46
14:AE:319:SER:HA	14:AE:320:ASN:HA	1.74	0.46
14:AE:516:ASP:OD1	14:AE:516:ASP:N	2.47	0.46
16:AG:233:ARG:HB2	16:AG:327:LEU:CD2	2.42	0.46
17:C:65:LEU:HG	17:C:65:LEU:O	2.16	0.46
18:D:110:C:O4'	35:U:25:ARG:NH2	2.49	0.46
18:D:653:U:N1	28:N:56:LYS:HE3	2.30	0.46
18:D:827:U:O4	18:D:872:A:C2	2.69	0.46
18:D:1226:C:H4'	18:D:1227:A:OP1	2.16	0.46
18:D:1323:G:H2'	18:D:1324:A:H8	1.78	0.46
20:F:12:PHE:CD1	31:Q:101:ASN:ND2	2.84	0.46
22:H:303:LEU:C	22:H:305:HIS:N	2.73	0.46
26:L:96:VAL:O	26:L:96:VAL:HG23	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:M:44:TYR:C	27:M:44:TYR:CD2	2.94	0.46
28:N:114:ARG:HD2	28:N:114:ARG:C	2.41	0.46
30:P:10:LEU:HD22	30:P:22:THR:HG22	1.98	0.46
30:P:59:LYS:HE2	30:P:62:ARG:NH2	2.31	0.46
32:R:5:ASN:HB3	32:R:9:ARG:HH22	1.80	0.46
33:S:12:LYS:NZ	33:S:16:LEU:HD21	2.31	0.46
34:T:3:LEU:HD23	34:T:4:SER:O	2.15	0.46
41:a:374:A:C2	41:a:375:G:H1'	2.51	0.46
41:a:832:U:H2'	41:a:833:A:C8	2.50	0.46
41:a:1803:A:O2'	48:h:257:THR:HG21	2.16	0.46
45:e:12:GLU:HG2	45:e:13:GLU:H	1.80	0.46
47:g:8:LYS:NZ	47:g:10:GLU:HB2	2.31	0.46
48:h:2:ALA:N	48:h:20:VAL:O	2.49	0.46
50:j:48:ILE:CD1	50:j:84:LEU:HD11	2.46	0.46
52:l:35:TYR:CD2	52:l:178:VAL:HG11	2.51	0.46
55:o:49:MET:H	55:o:49:MET:HE2	1.81	0.46
58:r:72:ILE:HG22	58:r:72:ILE:O	2.16	0.46
59:s:123:LYS:HD2	59:s:132:HIS:CD2	2.50	0.46
60:t:50:GLY:O	60:t:53:LYS:NZ	2.47	0.46
5:4:53:LYS:HD2	5:4:56:PHE:CZ	2.50	0.46
9:9:3:LEU:HD12	9:9:5:LEU:H	1.82	0.46
10:A:32:C:C2'	10:A:33:U:H5'	2.46	0.46
12:AB:24:GLN:HE22	12:AB:70:ASN:HB3	1.80	0.46
12:AB:84:SER:OG	12:AB:85:PRO:CD	2.64	0.46
14:AE:388:ARG:NH2	14:AE:414:GLU:OE1	2.49	0.46
14:AE:848:VAL:HB	14:AE:858:VAL:HG22	1.98	0.46
16:AG:413:ALA:C	16:AG:416:THR:HG1	2.16	0.46
10:B:6:G:O2'	10:B:7:G:H8	1.98	0.46
17:C:14:THR:HG21	17:C:48:ARG:CD	2.46	0.46
18:D:736:C:H5'	26:L:90:MET:HE2	1.97	0.46
18:D:1512:U:H2'	18:D:1513:A:C8	2.51	0.46
22:H:270:ILE:HG23	22:H:270:ILE:O	2.15	0.46
23:I:58:GLU:OE2	30:P:94:ALA:HB1	2.16	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
27:M:78:ARG:CG	27:M:80:VAL:HG13	2.46	0.46
29:O:46:MET:HB3	29:O:50:GLN:NE2	2.31	0.46
30:P:63:ASP:OD2	30:P:63:ASP:C	2.59	0.46
39:Y:59:THR:O	39:Y:66:PHE:HB2	2.16	0.46
39:Y:102:ARG:NE	39:Y:139:VAL:CG2	2.78	0.46
41:a:182:A:H2'	41:a:183:C:H6	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:392:U:C2	41:a:393:C:C5	3.04	0.46
41:a:590:A:H2'	41:a:591:U:H6	1.80	0.46
41:a:893:C:H2'	41:a:894:U:C5	2.51	0.46
41:a:1065:U:HO2'	41:a:1066:U:C5'	2.27	0.46
41:a:1406:U:O2	41:a:1407:G:C8	2.69	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:2309:A:H2'	41:a:2310:C:O4'	2.16	0.46
41:a:2373:G:H2'	41:a:2374:C:H6	1.81	0.46
47:g:1:MET:SD	47:g:3:LYS:HE2	2.56	0.46
47:g:16:CYS:SG	47:g:37:CYS:N	2.89	0.46
50:j:5:VAL:HB	50:j:32:ASN:ND2	2.31	0.46
50:j:55:LYS:NZ	50:j:56:LYS:O	2.49	0.46
51:k:19:HIS:CE1	51:k:41:PRO:CD	2.99	0.46
56:p:155:GLU:O	56:p:159:GLY:HA2	2.15	0.46
59:s:25:LEU:HD11	59:s:101:ILE:HD13	1.98	0.46
3:2:5:GLU:HA	45:e:22:LEU:CD2	2.45	0.45
3:2:65:GLY:H	3:2:76:ARG:HH12	1.64	0.45
4:3:46:GLN:NE2	4:3:54:GLN:HG2	2.31	0.45
5:4:50:MET:CB	5:4:56:PHE:CE1	2.98	0.45
5:4:57:TYR:HD2	62:v:136:MET:HE2	1.81	0.45
9:9:61:ARG:CD	41:a:1046:A:O5'	2.64	0.45
10:A:68:C:H3'	10:A:69:C:H5''	1.97	0.45
16:AG:127:VAL:HG22	16:AG:192:GLY:CA	2.46	0.45
10:B:46:G:H1'	10:B:47:U:C5	2.51	0.45
18:D:915:A:C5	18:D:916:U:C5	3.04	0.45
18:D:928:G:H2'	18:D:929:G:H8	1.81	0.45
18:D:1108:G:C5	18:D:1109:C:C5	3.04	0.45
18:D:1435:G:H2'	18:D:1436:U:C6	2.51	0.45
21:G:19:GLN:NE2	22:H:75:VAL:HG13	2.30	0.45
26:L:35:LYS:HD2	26:L:36:ILE:H	1.82	0.45
26:L:38:ARG:NE	26:L:97:THR:O	2.49	0.45
27:M:132:GLY:O	27:M:136:LYS:HD3	2.16	0.45
33:S:77:PHE:CE1	33:S:93:ILE:HD13	2.51	0.45
34:T:75:VAL:HG13	34:T:76:ALA:N	2.31	0.45
38:X:13:LYS:HZ2	38:X:17:ILE:HG21	1.81	0.45
38:X:56:LEU:HA	38:X:59:GLU:OE1	2.16	0.45
41:a:493:G:H2'	41:a:494:G:O4'	2.16	0.45
41:a:1019:U:O4	41:a:1142:A:C2	2.69	0.45
41:a:2289:G:C2	41:a:2290:G:C8	3.04	0.45
44:d:45:A:C5'	54:n:92:ARG:NH1	2.79	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:l:21:ARG:HA	52:l:21:ARG:NE	2.31	0.45
52:l:149:ILE:CD1	52:l:188:MET:HG2	2.46	0.45
54:n:122:PHE:HZ	54:n:170:LEU:HD12	1.81	0.45
57:q:30:GLU:HB3	57:q:33:HIS:ND1	2.31	0.45
65:y:103:ARG:HD3	65:y:107:ALA:C	2.41	0.45
2:1:20:VAL:CG1	2:1:47:VAL:HG11	2.46	0.45
9:9:34:THR:HA	9:9:37:LYS:NZ	2.32	0.45
9:9:43:LYS:HE3	9:9:102:ALA:HB2	1.97	0.45
10:A:6:G:O2'	10:A:7:G:H8	1.98	0.45
11:AA:481:LEU:CD2	12:AB:23:ARG:NE	2.61	0.45
11:AA:800:MET:HB2	11:AA:800:MET:HE3	1.69	0.45
14:AE:804:ALA:O	14:AE:806:ASP:N	2.47	0.45
14:AE:1289:ASN:ND2	14:AE:1300:ALA:O	2.46	0.45
16:AG:138:ILE:HD12	16:AG:183:LEU:CD1	2.45	0.45
16:AG:197:VAL:HG11	16:AG:199:ARG:NH2	2.30	0.45
10:B:32:C:C2'	10:B:33:U:H5'	2.46	0.45
18:D:13:U:O2	18:D:915:A:N7	2.49	0.45
18:D:269:C:H2'	18:D:270:A:C8	2.51	0.45
18:D:413:G:N2	18:D:428:G:H1'	2.31	0.45
18:D:723:U:O2	20:F:49:LYS:HE3	2.16	0.45
18:D:765:G:C6	18:D:812:G:C4	3.04	0.45
18:D:983:A:H2	18:D:984:C:C6	2.34	0.45
18:D:1173:U:H2'	18:D:1174:G:O4'	2.16	0.45
18:D:1202:U:C5	18:D:1203:C:C5	3.05	0.45
20:F:63:GLU:HG2	20:F:67:ARG:CZ	2.46	0.45
22:H:115:LYS:HA	22:H:119:GLY:C	2.40	0.45
25:K:145:GLU:CD	25:K:146:ASN:N	2.75	0.45
25:K:150:PRO:O	25:K:153:VAL:HG22	2.16	0.45
28:N:25:VAL:HG23	28:N:63:LEU:CD1	2.46	0.45
28:N:89:LYS:HG3	28:N:90:ASP:N	2.31	0.45
30:P:26:VAL:C	30:P:30:LYS:HZ3	2.24	0.45
32:R:2:ALA:CA	32:R:7:LEU:HD11	2.45	0.45
32:R:30:LYS:O	32:R:81:LEU:HD12	2.16	0.45
34:T:8:THR:O	34:T:11:ILE:HG22	2.16	0.45
39:Y:102:ARG:HD3	39:Y:141:ASP:OD1	2.16	0.45
41:a:78:U:P	45:e:4:LYS:NZ	2.89	0.45
41:a:306:U:H2'	41:a:307:G:O4'	2.16	0.45
41:a:396:G:C5	41:a:397:U:C5	3.03	0.45
41:a:2049:G:N2	50:j:161:MET:CE	2.80	0.45
41:a:2814:A:C5	41:a:2815:C:C5	3.05	0.45
50:j:74:GLU:HG2	50:j:75:ALA:N	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:p:149:ARG:CZ	56:p:162:VAL:C	2.89	0.45
59:s:73:VAL:CG1	59:s:86:GLN:HG2	2.46	0.45
64:x:90:VAL:CG2	64:x:115:LEU:HD21	2.46	0.45
65:y:106:LYS:CD	65:y:109:ARG:NH2	2.79	0.45
2:1:24:ILE:HG21	2:1:36:LEU:CD1	2.42	0.45
2:1:86:MET:SD	2:1:88:ARG:HD2	2.56	0.45
4:3:47:LYS:HZ3	41:a:482:A:P	2.40	0.45
4:3:66:GLN:OE1	41:a:329:G:OP2	2.34	0.45
13:AD:185:TYR:HA	13:AD:202:VAL:O	2.16	0.45
18:D:197:A:C6	18:D:221:C:H4'	2.50	0.45
18:D:377:G:H2'	18:D:378:G:H8	1.81	0.45
18:D:878:A:P	28:N:80:ARG:HH11	2.39	0.45
18:D:980:C:C5	18:D:981:U:C2	3.04	0.45
18:D:1315:U:O2	18:D:1360:A:H2	2.00	0.45
20:F:16:LEU:HD12	31:Q:98:ARG:HH21	1.81	0.45
22:H:32:ASP:OD1	22:H:35:VAL:HG23	2.17	0.45
23:I:114:LYS:HB2	23:I:185:ASN:ND2	2.32	0.45
24:J:74:ASN:CA	24:J:77:LYS:HZ3	2.29	0.45
26:L:9:MET:C	26:L:9:MET:SD	3.00	0.45
26:L:94:HIS:CG	26:L:95:ALA:H	2.34	0.45
28:N:8:ALA:N	28:N:77:ARG:HH11	2.14	0.45
32:R:18:LYS:HD3	32:R:19:SER:O	2.16	0.45
35:U:73:ALA:HA	35:U:76:LYS:HE3	1.98	0.45
38:X:55:THR:HG22	38:X:59:GLU:OE2	2.17	0.45
41:a:247:G:O6	55:o:12:LYS:NZ	2.39	0.45
41:a:372:G:O2'	43:c:54:LYS:CE	2.64	0.45
41:a:644:A:C2	41:a:2369:A:H1'	2.51	0.45
41:a:1107:G:C5	41:a:1108:U:C5	3.04	0.45
41:a:1131:G:OP1	59:s:81:ILE:O	2.34	0.45
41:a:1432:G:H2'	41:a:1433:A:H8	1.79	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:1797:G:O2'	48:h:257:THR:HG22	2.16	0.45
41:a:2616:C:N3	41:a:2617:U:C5	2.84	0.45
41:a:2848:G:C2	41:a:2867:G:C4	3.05	0.45
44:d:57:A:C5	54:n:26:MET:CE	2.99	0.45
51:k:7:GLU:OE2	51:k:27:LYS:HG3	2.16	0.45
52:l:60:TRP:CD1	52:l:69:ARG:HH12	2.33	0.45
53:m:12:ARG:CG	53:m:44:VAL:HG21	2.47	0.45
56:p:11:VAL:HG12	56:p:48:ASN:O	2.17	0.45
60:t:76:VAL:HG12	65:y:73:VAL:HB	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:y:106:LYS:CD	65:y:109:ARG:HH22	2.29	0.45
66:z:89:GLU:N	66:z:89:GLU:OE1	2.50	0.45
9:9:23:LEU:HA	9:9:118:ILE:HD11	1.99	0.45
9:9:68:PRO:O	9:9:72:LEU:HD21	2.16	0.45
12:AB:50:LEU:HD13	12:AB:100:LYS:CG	2.46	0.45
14:AE:420:PRO:HA	14:AE:437:PHE:O	2.16	0.45
14:AE:1341:ARG:NH1	14:AE:1343:GLU:OE2	2.49	0.45
16:AG:288:MET:HE3	16:AG:289:ALA:N	2.31	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:878:A:P	28:N:80:ARG:NH1	2.89	0.45
18:D:1209:C:C2	18:D:1210:C:C5	3.04	0.45
19:E:54:MET:C	19:E:54:MET:SD	3.00	0.45
21:G:77:SER:O	21:G:80:VAL:HG12	2.17	0.45
21:G:128:LYS:C	21:G:129:LEU:HD12	2.42	0.45
22:H:32:ASP:OD1	22:H:35:VAL:HG22	2.17	0.45
22:H:288:THR:O	22:H:288:THR:HG22	2.16	0.45
23:I:72:ARG:NE	23:I:75:ILE:HB	2.32	0.45
23:I:84:VAL:HG23	23:I:85:GLU:N	2.31	0.45
23:I:183:ASP:HB3	23:I:204:LYS:HZ2	1.81	0.45
26:L:98:GLU:HA	26:L:98:GLU:OE1	2.16	0.45
29:O:88:MET:CE	29:O:95:ARG:HG3	2.46	0.45
29:O:113:ARG:HD2	33:S:101:TRP:CD1	2.52	0.45
34:T:76:ALA:C	34:T:80:GLN:NE2	2.68	0.45
37:W:44:MET:HE1	37:W:62:VAL:CG2	2.46	0.45
38:X:55:THR:C	38:X:59:GLU:OE1	2.60	0.45
39:Y:19:PRO:HG2	39:Y:23:VAL:CG2	2.42	0.45
41:a:235:U:N3	41:a:236:C:C5	2.84	0.45
41:a:783:A:O2'	41:a:785:G:OP1	2.35	0.45
41:a:858:G:P	42:b:78:LYS:HZ1	2.37	0.45
41:a:952:G:C6	41:a:966:G:C6	3.05	0.45
41:a:1656:C:H2'	41:a:1657:U:H6	1.81	0.45
41:a:1790:C:C2'	41:a:1791:A:C8	3.00	0.45
41:a:2149:U:H2'	41:a:2150:C:C6	2.52	0.45
41:a:2262:U:OP1	41:a:2387:U:O2'	2.33	0.45
41:a:2364:C:H2'	41:a:2365:G:O4'	2.15	0.45
41:a:2529:G:N7	57:q:32:LYS:NZ	2.63	0.45
41:a:2755:C:H3'	57:q:19:ARG:NH2	2.31	0.45
50:j:55:LYS:HZ1	50:j:59:ARG:HB3	1.81	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	2.95	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:o:26:HIS:CE1	55:o:48:ALA:HB2	2.51	0.45
56:p:11:VAL:HG13	56:p:11:VAL:O	2.17	0.45
56:p:91:GLY:HA3	56:p:94:TYR:CD2	2.52	0.45
58:r:31:VAL:HB	58:r:32:PRO:HD3	1.97	0.45
60:t:108:ARG:CG	60:t:116:ILE:HD13	2.46	0.45
65:y:14:LYS:NZ	65:y:76:THR:O	2.49	0.45
5:4:50:MET:C	5:4:56:PHE:CZ	2.94	0.45
9:9:11:ILE:HG12	9:9:65:GLU:HG2	1.98	0.45
9:9:61:ARG:HE	41:a:1046:A:P	2.39	0.45
9:9:94:ARG:CB	9:9:97:LYS:CE	2.94	0.45
11:AA:481:LEU:CD1	12:AB:23:ARG:NE	2.42	0.45
11:AA:562:GLU:OE1	11:AA:662:SER:OG	2.28	0.45
11:AA:1246:ARG:HH11	11:AA:1266:GLY:HA2	1.82	0.45
13:AC:64:VAL:HG11	13:AC:78:ILE:HG21	1.97	0.45
14:AE:79:LYS:CB	14:AE:81:ARG:HH12	2.28	0.45
14:AE:482:ALA:HA	15:AF:6:VAL:HG21	1.98	0.45
16:AG:3:LYS:HB3	16:AG:6:LEU:HD12	1.99	0.45
16:AG:123:ARG:HG2	16:AG:123:ARG:HH11	1.82	0.45
16:AG:339:MET:HE2	16:AG:343:ASP:HB3	1.99	0.45
16:AG:429:LYS:HB2	16:AG:430:PRO:HD2	1.99	0.45
16:AG:437:LEU:CG	16:AG:456:LEU:CD1	2.92	0.45
17:C:12:ARG:HB2	22:H:264:GLU:CB	2.46	0.45
18:D:106:C:N4	19:E:10:ARG:HH22	2.12	0.45
18:D:126:G:OP1	18:D:605:U:O2'	2.19	0.45
18:D:642:A:H2'	18:D:643:C:H6	1.80	0.45
20:F:12:PHE:CD1	31:Q:101:ASN:CG	2.95	0.45
21:G:27:MET:HG3	21:G:27:MET:O	2.16	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
29:O:80:ARG:NH2	29:O:103:PHE:CE1	2.85	0.45
29:O:86:ALA:O	29:O:89:GLU:CG	2.64	0.45
36:V:7:THR:CG2	36:V:60:GLU:OE2	2.63	0.45
39:Y:102:ARG:HH21	39:Y:105:LEU:HD12	1.81	0.45
41:a:152:A:H2'	41:a:153:U:C6	2.51	0.45
41:a:607:U:C6	41:a:620:G:C5	3.04	0.45
41:a:2061:G:N2	41:a:2063:C:C6	2.84	0.45
41:a:2065:C:C2	41:a:2066:C:C5	3.04	0.45
41:a:2093:G:O2'	41:a:2198:A:N1	2.41	0.45
41:a:2683:C:OP1	65:y:51:ARG:NH2	2.46	0.45
41:a:2766:A:C6	41:a:2767:C:C5	3.05	0.45
46:f:12:SER:C	46:f:54:MET:HE1	2.40	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:h:33:LEU:O	48:h:64:ILE:HG12	2.16	0.45
49:i:30:VAL:HG22	49:i:37:LYS:HD2	1.99	0.45
49:i:40:ARG:HH12	49:i:41:HIS:CD2	2.34	0.45
52:l:73:ILE:HG13	52:l:73:ILE:O	2.17	0.45
52:l:95:LYS:HE2	52:l:97:ASN:OD1	2.17	0.45
60:t:24:VAL:HG23	60:t:33:ALA:HB2	1.97	0.45
63:w:37:THR:HG21	63:w:40:LYS:HZ2	1.81	0.45
64:x:35:ILE:HD11	64:x:102:ARG:HH21	1.81	0.45
2:1:78:GLU:OE2	41:a:1262:A:OP1	2.35	0.45
4:3:4:LYS:O	4:3:94:ARG:NH2	2.40	0.45
5:4:16:ALA:O	5:4:20:LEU:HG	2.17	0.45
9:9:6:GLN:CA	9:9:9:GLN:NE2	2.78	0.45
12:AB:116:VAL:HG12	12:AB:162:LEU:H	1.81	0.45
14:AE:438:GLU:OE2	14:AE:481:ARG:NH1	2.45	0.45
16:AG:38:LYS:HB3	16:AG:39:TYR:H	1.55	0.45
16:AG:362:TYR:HE1	16:AG:414:LEU:HD21	1.80	0.45
18:D:110:C:H1'	35:U:25:ARG:NH1	2.31	0.45
18:D:511:C:C2	18:D:512:U:C5	3.05	0.45
18:D:984:C:C2	18:D:985:C:C5	3.05	0.45
18:D:1086:U:O2	18:D:1086:U:H2'	2.16	0.45
23:I:142:MET:HE3	23:I:170:GLU:HB3	1.98	0.45
25:K:13:GLU:O	25:K:13:GLU:HG2	2.16	0.45
26:L:18:VAL:N	26:L:19:PRO:CD	2.80	0.45
26:L:100:SER:HB2	26:L:101:PRO:HD2	1.98	0.45
27:M:134:ALA:HA	27:M:137:LYS:CD	2.46	0.45
28:N:26:THR:OG1	28:N:58:GLU:CG	2.65	0.45
31:Q:88:GLY:H	31:Q:114:THR:HG22	1.81	0.45
32:R:31:ARG:O	32:R:57:LEU:HD12	2.17	0.45
34:T:15:PHE:HE2	34:T:30:ALA:HB1	1.82	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
39:Y:102:ARG:HE	39:Y:139:VAL:HG21	1.79	0.45
41:a:582:A:H5''	66:z:11:ARG:HH12	1.81	0.45
41:a:669:G:H2'	41:a:670:A:N7	2.31	0.45
41:a:685:A:C8	41:a:773:U:C4	3.04	0.45
41:a:1796:U:H2'	41:a:1797:G:H8	1.81	0.45
41:a:2262:U:N3	41:a:2263:C:C5	2.85	0.45
41:a:2478:A:C8	41:a:2529:G:C5	3.04	0.45
41:a:2743:U:H2'	41:a:2744:G:O4'	2.17	0.45
46:f:27:LEU:O	46:f:38:ARG:NE	2.44	0.45
50:j:3:GLY:O	50:j:82:PHE:CE2	2.69	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:n:4:LEU:HD21	54:n:101:GLU:HG3	1.97	0.45
54:n:22:TYR:CE2	54:n:28:VAL:HA	2.52	0.45
55:o:55:LEU:CD2	55:o:59:ILE:HD11	2.46	0.45
58:r:54:LEU:HA	58:r:57:LYS:HZ3	1.82	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	2.24	0.45
65:y:31:TRP:CZ3	65:y:40:LEU:CD1	3.00	0.45
9:9:87:GLU:OE2	9:9:95:LEU:CG	2.64	0.45
9:9:88:HIS:CB	9:9:89:PRO:CD	2.81	0.45
10:A:48:C:O2'	10:A:49:G:OP2	2.27	0.45
11:AA:557:ARG:NH2	11:AA:607:SER:O	2.50	0.45
11:AA:712:SER:OG	11:AA:713:GLY:N	2.49	0.45
12:AB:4:TRP:NE1	12:AB:93:ILE:HG21	2.31	0.45
12:AB:116:VAL:HG21	12:AB:130:PHE:CD1	2.52	0.45
14:AE:287:ALA:HB3	14:AE:292:VAL:CG2	2.46	0.45
16:AG:442:ARG:O	16:AG:446:PHE:CE2	2.63	0.45
18:D:277:C:OP1	36:V:43:LYS:HD2	2.15	0.45
18:D:278:G:OP2	36:V:43:LYS:NZ	2.49	0.45
18:D:696:A:H2'	18:D:697:U:H6	1.81	0.45
18:D:1437:A:C2	18:D:1438:G:C8	3.05	0.45
20:F:38:TYR:O	31:Q:126:LYS:HE3	2.17	0.45
21:G:101:LEU:HD22	21:G:157:LEU:HD12	1.99	0.45
23:I:14:ILE:HG13	23:I:178:LEU:HD21	1.98	0.45
23:I:24:ALA:HB3	23:I:29:PHE:CD2	2.51	0.45
23:I:135:LYS:O	23:I:138:VAL:HG12	2.17	0.45
25:K:13:GLU:OE1	25:K:13:GLU:N	2.50	0.45
27:M:31:MET:HE1	27:M:36:LYS:CD	2.46	0.45
27:M:138:ARG:O	27:M:142:HIS:ND1	2.46	0.45
29:O:51:PRO:CA	29:O:103:PHE:HE2	2.30	0.45
30:P:28:THR:HG22	30:P:90:LEU:HD23	1.98	0.45
33:S:86:GLU:OE2	33:S:90:ARG:HD3	2.16	0.45
34:T:15:PHE:CE2	34:T:30:ALA:CB	2.99	0.45
35:U:45:GLU:HG3	35:U:46:LYS:CD	2.45	0.45
38:X:11:ASP:HA	38:X:45:ILE:HB	1.99	0.45
39:Y:126:ARG:HH12	41:a:1083:U:P	2.40	0.45
41:a:111:A:O2'	45:e:58:ASN:ND2	2.46	0.45
41:a:152:A:H2'	41:a:153:U:H6	1.82	0.45
41:a:219:A:H2'	41:a:220:G:C8	2.52	0.45
41:a:535:G:H2'	41:a:536:G:O4'	2.17	0.45
41:a:598:U:H2'	41:a:599:A:C8	2.52	0.45
41:a:837:C:N3	41:a:941:A:N6	2.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1370:C:H2'	41:a:1371:G:O4'	2.16	0.45
41:a:1613:G:O2'	53:m:3:ARG:CZ	2.64	0.45
50:j:172:VAL:HG11	50:j:175:LEU:HD11	1.99	0.45
56:p:18:LYS:HG3	56:p:27:LYS:NZ	2.32	0.45
57:q:1:MET:HE3	57:q:2:LYS:N	2.31	0.45
65:y:15:GLN:NE2	65:y:16:ASP:CG	2.75	0.45
3:2:64:LYS:CE	41:a:1312:U:O4	2.64	0.45
8:7:11:U:C4'	25:K:20:ARG:HH21	2.16	0.45
9:9:58:THR:HG23	41:a:1108:U:OP1	2.17	0.45
14:AE:774:ILE:HA	14:AE:777:HIS:HD2	1.82	0.45
15:AF:25:ARG:NH1	15:AF:61:ASN:OD1	2.49	0.45
16:AG:19:PRO:HG2	16:AG:19:PRO:O	2.17	0.45
10:B:71:C:C3'	10:B:72:A:C8	2.99	0.45
18:D:918:A:H2'	18:D:919:A:C8	2.51	0.45
18:D:958:A:C4	37:W:55:ARG:HD3	2.52	0.45
21:G:117:LEU:HD23	21:G:141:LEU:HA	1.98	0.45
22:H:53:PHE:CE1	22:H:68:VAL:HG21	2.52	0.45
23:I:165:THR:C	23:I:166:GLU:OE1	2.60	0.45
26:L:17:GLN:CB	26:L:21:MET:HE1	2.47	0.45
27:M:16:PRO:CB	29:O:46:MET:HG3	2.42	0.45
27:M:134:ALA:O	27:M:137:LYS:CG	2.65	0.45
27:M:138:ARG:HG2	27:M:142:HIS:HE1	1.81	0.45
30:P:47:GLU:HB2	30:P:67:ILE:HG22	1.99	0.45
39:Y:5:GLN:NE2	39:Y:60:VAL:C	2.74	0.45
39:Y:93:ASN:O	39:Y:94:LYS:HD2	2.16	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:1665:A:C5'	60:t:66:LYS:NZ	2.79	0.45
41:a:2650:U:H2'	41:a:2651:C:H6	1.81	0.45
41:a:2723:C:H2'	41:a:2724:U:O4'	2.16	0.45
41:a:2727:A:O3'	60:t:70:ARG:NH2	2.50	0.45
43:c:43:GLU:OE1	43:c:45:ARG:CB	2.65	0.45
45:e:24:GLU:O	45:e:28:LEU:HD13	2.17	0.45
46:f:41:THR:C	46:f:45:ARG:NH2	2.75	0.45
46:f:51:VAL:O	46:f:55:VAL:HG12	2.16	0.45
52:l:194:LYS:HG3	52:l:198:GLU:OE2	2.16	0.45
54:n:127:ASN:OD1	54:n:157:THR:HA	2.16	0.45
63:w:79:LEU:HD23	63:w:83:LEU:HD12	1.99	0.45
2:1:20:VAL:HG11	2:1:47:VAL:HG11	1.99	0.45
5:4:29:ILE:HD13	44:d:74:U:O2	2.17	0.45
9:9:23:LEU:O	9:9:87:GLU:CD	2.60	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:9:59:LEU:HD22	9:9:62:ARG:HE	1.81	0.45
10:A:3:C:H2'	10:A:4:G:H8	1.82	0.45
10:A:8:U:O2'	10:A:47:U:C4	2.67	0.45
10:A:71:C:H2'	10:A:72:A:N9	2.32	0.45
11:AA:812:PHE:O	14:AE:504:GLN:NE2	2.40	0.45
12:AB:21:LEU:HD12	12:AB:28:CYS:SG	2.56	0.45
12:AB:115:LYS:HA	12:AB:115:LYS:NZ	2.13	0.45
12:AB:151:LYS:HZ3	12:AB:151:LYS:HB2	1.79	0.45
12:AB:154:VAL:HG13	12:AB:158:GLU:HB2	1.99	0.45
16:AG:403:VAL:C	16:AG:405:ALA:N	2.73	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:280:C:O2	36:V:40:ARG:NE	2.48	0.45
18:D:653:U:O4'	28:N:56:LYS:HE3	2.16	0.45
18:D:753:A:OP1	34:T:73:LYS:NZ	2.50	0.45
18:D:1389:C:H2'	18:D:1390:U:O4'	2.17	0.45
18:D:1436:U:H2'	18:D:1437:A:H8	1.82	0.45
19:E:54:MET:O	19:E:58:VAL:HG23	2.16	0.45
24:J:76:TYR:HE2	24:J:204:TYR:CB	2.26	0.45
25:K:76:LEU:HD12	25:K:76:LEU:O	2.17	0.45
30:P:5:ARG:HE	30:P:7:ARG:CZ	2.30	0.45
30:P:90:LEU:HD12	30:P:90:LEU:N	2.31	0.45
38:X:14:HIS:HB2	38:X:17:ILE:HD13	1.99	0.45
38:X:16:VAL:HG23	38:X:17:ILE:CD1	2.47	0.45
39:Y:45:THR:HG22	39:Y:45:THR:O	2.16	0.45
39:Y:76:ALA:O	39:Y:80:LYS:NZ	2.33	0.45
41:a:132:G:H2'	41:a:133:U:H6	1.80	0.45
41:a:1310:G:N2	41:a:1313:U:C4	2.85	0.45
41:a:2095:A:O5'	58:r:11:ASN:OD1	2.35	0.45
44:d:8:C:O3'	64:x:25:ARG:NH1	2.48	0.45
50:j:11:MET:HE3	50:j:11:MET:HB3	1.63	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
60:t:17:ARG:NH2	60:t:47:ILE:CG2	2.80	0.45
61:u:101:ILE:HG13	61:u:102:GLY:H	1.82	0.45
61:u:101:ILE:C	61:u:105:ILE:HD12	2.42	0.45
61:u:103:ILE:HG23	61:u:104:GLN:HG2	1.99	0.45
10:A:53:G:N3	10:A:54:U:C5	2.85	0.45
11:AA:829:THR:HG23	11:AA:1059:ARG:HG2	1.99	0.45
12:AB:11:ARG:HH22	14:AE:278:ARG:NH1	2.14	0.45
12:AB:79:VAL:HG22	14:AE:294:ASN:ND2	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AB:145:LEU:HD22	30:P:88:MET:SD	2.54	0.45
13:AD:212:ASP:OD1	13:AD:212:ASP:N	2.48	0.45
14:AE:708:ASN:N	14:AE:708:ASN:OD1	2.50	0.45
14:AE:907:HIS:ND1	14:AE:908:ILE:O	2.48	0.45
16:AG:393:LEU:CG	16:AG:398:LEU:HD22	2.22	0.45
10:B:18:G:N2	10:B:58:A:N7	2.65	0.45
10:B:71:C:H2'	10:B:72:A:N9	2.32	0.45
18:D:151:A:C5	18:D:152:A:C8	3.04	0.45
18:D:1060:U:H5''	30:P:53:ILE:HD12	1.99	0.45
18:D:1250:A:H2'	18:D:1251:A:C8	2.52	0.45
18:D:1333:A:H2'	18:D:1334:G:O4'	2.17	0.45
18:D:1408:A:H2'	18:D:1409:C:C6	2.52	0.45
21:G:19:GLN:HE21	22:H:75:VAL:C	2.24	0.45
21:G:66:LYS:HB3	21:G:154:MET:HE3	1.99	0.45
21:G:96:TRP:CZ2	21:G:100:MET:HE3	2.52	0.45
22:H:49:PRO:CD	22:H:84:LEU:HD21	2.48	0.45
23:I:72:ARG:HD3	23:I:75:ILE:HG22	1.99	0.45
24:J:172:GLU:CD	24:J:183:LYS:HD2	2.42	0.45
27:M:87:VAL:HG12	27:M:151:PHE:HD2	1.81	0.45
31:Q:52:PHE:CE1	31:Q:65:VAL:HG21	2.52	0.45
32:R:122:PRO:C	32:R:123:LYS:HE2	2.42	0.45
34:T:11:ILE:HD13	34:T:31:LEU:HA	1.99	0.45
38:X:2:ALA:HB1	38:X:9:ILE:CG2	2.47	0.45
38:X:90:ARG:HD3	38:X:96:PRO:O	2.17	0.45
39:Y:60:VAL:HG22	39:Y:66:PHE:CD1	2.52	0.45
41:a:15:G:O2'	49:i:15:MET:HE1	2.16	0.45
41:a:782:A:N1	48:h:225:MET:HE2	2.32	0.45
41:a:1042:G:C5	41:a:1043:C:C5	3.05	0.45
41:a:1182:G:H2'	41:a:1183:U:O4'	2.17	0.45
41:a:1250:G:OP2	61:u:21:ARG:NE	2.47	0.45
41:a:1398:C:C2	41:a:1399:C:C5	3.04	0.45
41:a:1441:G:H2'	41:a:1442:U:H6	1.82	0.45
41:a:1753:G:N2	41:a:1755:A:H3'	2.32	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:2347:C:C2	41:a:2348:U:C5	3.05	0.45
41:a:2492:U:C2'	41:a:2493:U:H5'	2.48	0.45
41:a:2783:U:H2'	41:a:2784:U:C6	2.52	0.45
41:a:2839:G:C5	41:a:2840:C:C5	3.05	0.45
48:h:52:ARG:CD	48:h:53:HIS:CE1	3.00	0.45
48:h:123:ALA:HB1	48:h:125:LYS:CE	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:l:23:PHE:CD1	52:l:111:GLU:CG	3.00	0.45
52:l:198:GLU:OE1	52:l:198:GLU:N	2.43	0.45
58:r:127:GLU:OE2	58:r:143:ILE:HB	2.17	0.45
63:w:12:ARG:HE	63:w:20:MET:HE1	1.82	0.45
66:z:76:TYR:O	66:z:80:ILE:HG12	2.16	0.45
1:0:74:ILE:HD12	1:0:74:ILE:N	2.32	0.44
4:3:5:ILE:HG13	4:3:72:ILE:HD11	1.99	0.44
5:4:31:TYR:O	5:4:92:VAL:HA	2.17	0.44
7:6:24:DA:OP2	7:6:24:DA:C8	2.70	0.44
8:7:2:U:OP2	18:D:926:G:N2	2.50	0.44
9:9:122:GLN:OE1	9:9:122:GLN:N	2.49	0.44
11:AA:477:GLU:CD	11:AA:477:GLU:C	2.85	0.44
11:AA:813:GLU:HB2	14:AE:461:PHE:HD2	1.83	0.44
12:AB:11:ARG:NH1	12:AB:11:ARG:CG	2.73	0.44
12:AB:148:LYS:HZ3	30:P:100:ILE:CB	2.25	0.44
13:AD:15:ASP:OD1	13:AD:27:THR:OG1	2.30	0.44
14:AE:283:LEU:HD23	14:AE:292:VAL:HG11	1.99	0.44
10:B:71:C:H2'	10:B:72:A:C1'	2.47	0.44
18:D:1287:A:H2'	18:D:1288:A:C8	2.52	0.44
18:D:1436:U:H2'	18:D:1437:A:C8	2.52	0.44
20:F:26:ALA:CB	20:F:28:VAL:HG23	2.47	0.44
23:I:85:GLU:O	23:I:89:LYS:CE	2.64	0.44
26:L:9:MET:HE3	26:L:9:MET:HB3	1.85	0.44
30:P:64:GLN:HG2	33:S:101:TRP:CH2	2.52	0.44
33:S:6:MET:HE3	33:S:63:ARG:HH11	1.82	0.44
33:S:13:ARG:HB3	33:S:60:GLN:HE21	1.81	0.44
39:Y:15:GLY:CA	39:Y:50:LYS:HG3	2.40	0.44
41:a:575:A:C2	41:a:576:U:C6	3.05	0.44
41:a:654:A:H61	55:o:19:LYS:CD	2.31	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:C5	3.05	0.44
41:a:730:A:C2	41:a:731:C:C6	3.05	0.44
41:a:966:G:O4'	41:a:2267:A:N6	2.51	0.44
41:a:980:A:N7	41:a:1136:G:H5'	2.32	0.44
41:a:1013:C:C2	41:a:1014:A:C8	3.04	0.44
41:a:1349:C:O2	41:a:1349:C:H2'	2.17	0.44
41:a:1792:G:C5'	48:h:204:VAL:HG23	2.47	0.44
41:a:2646:C:H2'	41:a:2647:U:O4'	2.17	0.44
43:c:41:GLU:O	43:c:44:LYS:HD2	2.16	0.44
48:h:251:GLN:OE1	48:h:255:LYS:CB	2.66	0.44
59:s:31:GLU:HG2	59:s:142:ILE:HG23	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:u:55:MET:SD	61:u:60:ARG:N	2.90	0.44
3:2:64:LYS:HD2	41:a:1312:U:C4	2.51	0.44
8:7:9:U:OP2	8:7:9:U:C6	2.70	0.44
9:9:14:GLU:OE1	9:9:63:ALA:HA	2.17	0.44
11:AA:746:ALA:O	11:AA:974:ARG:NH2	2.45	0.44
11:AA:1088:ASP:OD1	11:AA:1088:ASP:N	2.51	0.44
16:AG:314:LEU:HD22	16:AG:318:ILE:HD11	1.98	0.44
10:B:3:C:H2'	10:B:4:G:C8	2.53	0.44
18:D:13:U:O4	18:D:20:U:O4	2.34	0.44
18:D:414:A:C4	18:D:415:A:C8	3.05	0.44
18:D:429:U:O2	18:D:430:A:N7	2.50	0.44
18:D:524:G:H2'	18:D:525:C:C6	2.52	0.44
18:D:604:G:H2'	18:D:605:U:O4'	2.17	0.44
18:D:636:U:H2'	18:D:637:C:C6	2.52	0.44
18:D:1240:U:OP1	27:M:116:MET:HB2	2.17	0.44
18:D:1308:U:H3'	38:X:98:ARG:NE	2.32	0.44
18:D:1486:G:H2'	18:D:1487:G:O4'	2.18	0.44
19:E:49:LYS:O	19:E:53:GLU:HG2	2.16	0.44
21:G:64:LYS:HE2	21:G:64:LYS:HA	1.99	0.44
22:H:37:LEU:HG	22:H:46:SER:O	2.16	0.44
22:H:297:GLU:OE1	22:H:297:GLU:N	2.49	0.44
23:I:39:VAL:HG23	23:I:40:ARG:N	2.32	0.44
26:L:72:ASP:O	26:L:76:THR:HG23	2.17	0.44
30:P:24:GLU:OE2	30:P:92:LEU:CD2	2.66	0.44
34:T:10:LYS:CD	34:T:14:GLU:OE2	2.65	0.44
41:a:30:G:H2'	41:a:31:C:H6	1.81	0.44
41:a:400:G:OP2	43:c:57:ARG:NH1	2.46	0.44
41:a:580:U:O3'	66:z:31:VAL:HG13	2.17	0.44
41:a:861:A:H2'	41:a:862:G:O4'	2.17	0.44
41:a:1007:C:H5''	59:s:37:ARG:NE	2.31	0.44
41:a:1144:A:C4	41:a:1145:C:C5	3.05	0.44
41:a:1146:C:C2	41:a:1147:A:C8	3.05	0.44
41:a:1444:G:C4	41:a:1445:G:C8	3.04	0.44
41:a:1565:C:O2'	41:a:1567:G:N7	2.47	0.44
41:a:2175:C:C2'	41:a:2176:A:C8	3.00	0.44
41:a:2747:G:C2	41:a:2756:U:C5	3.05	0.44
46:f:12:SER:CA	46:f:32:ILE:HD11	2.47	0.44
52:l:1:MET:HE3	52:l:19:PHE:C	2.43	0.44
52:l:147:LEU:HB2	52:l:183:PHE:CD2	2.48	0.44
54:n:117:LEU:N	54:n:177:PHE:O	2.51	0.44
58:r:135:HIS:CE1	58:r:137:GLU:OE1	2.62	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:s:118:MET:HB3	59:s:118:MET:HE2	1.81	0.44
59:s:132:HIS:HA	59:s:135:GLN:OE1	2.17	0.44
60:t:18:ARG:NE	60:t:18:ARG:HA	2.33	0.44
63:w:60:VAL:HA	63:w:63:ARG:CZ	2.48	0.44
63:w:87:PHE:HE2	63:w:115:LEU:HD11	1.83	0.44
64:x:88:LYS:O	64:x:115:LEU:HD12	2.16	0.44
1:0:71:LYS:CG	1:0:73:LYS:HE3	2.47	0.44
4:3:49:VAL:HG23	4:3:51:ALA:O	2.16	0.44
5:4:55:GLU:OE1	5:4:55:GLU:N	2.42	0.44
9:9:4:ASN:OD1	41:a:1046:A:N7	2.50	0.44
10:A:18:G:N2	10:A:58:A:N7	2.65	0.44
10:A:18:G:N7	10:A:57:A:N6	2.65	0.44
10:A:72:A:C3'	10:A:73:A:H5''	2.47	0.44
12:AB:150:ILE:HG12	12:AB:152:HIS:CD2	2.52	0.44
16:AG:63:LEU:HD22	16:AG:92:TYR:CD1	2.48	0.44
16:AG:252:VAL:HG13	16:AG:256:GLY:HA2	1.99	0.44
16:AG:425:LEU:HD23	16:AG:429:LYS:HZ3	1.80	0.44
10:B:3:C:H2'	10:B:4:G:H8	1.82	0.44
18:D:153:C:C2	18:D:154:U:C5	3.06	0.44
18:D:715:A:H2'	18:D:716:A:C8	2.52	0.44
18:D:735:C:C2	18:D:736:C:C5	3.05	0.44
18:D:824:G:C6	18:D:877:G:C6	3.05	0.44
18:D:982:U:P	33:S:6:MET:HE2	2.56	0.44
18:D:1006:G:H2'	18:D:1007:U:H6	1.81	0.44
18:D:1366:C:HO2'	30:P:62:ARG:HH22	1.66	0.44
19:E:16:LYS:HG3	19:E:19:LYS:HE3	1.98	0.44
21:G:52:GLU:C	21:G:56:GLU:OE1	2.60	0.44
23:I:147:LYS:HE2	23:I:204:LYS:C	2.43	0.44
24:J:35:GLU:HG2	24:J:36:GLN:N	2.32	0.44
26:L:5:GLU:CD	26:L:61:LEU:HD11	2.42	0.44
30:P:40:ILE:HD12	30:P:73:LEU:CD2	2.48	0.44
32:R:38:TYR:CE2	32:R:40:THR:CG2	3.01	0.44
34:T:3:LEU:CD2	34:T:8:THR:HG23	2.47	0.44
35:U:6:LEU:HD23	35:U:17:TYR:CB	2.47	0.44
41:a:564:C:H1'	66:z:37:GLN:NE2	2.32	0.44
41:a:607:U:C6	41:a:620:G:N7	2.85	0.44
41:a:1084:A:N6	41:a:1085:A:N1	2.66	0.44
41:a:1863:G:H2'	41:a:1864:U:H6	1.82	0.44
41:a:2356:U:H4'	42:b:20:ARG:HD2	1.99	0.44
41:a:2747:G:N2	41:a:2756:U:C6	2.85	0.44
45:e:13:GLU:C	45:e:17:GLU:OE1	2.61	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:h:164:ILE:O	48:h:164:ILE:CG2	2.65	0.44
48:h:220:VAL:HG23	48:h:225:MET:HE3	2.00	0.44
48:h:240:PHE:CD2	48:h:240:PHE:O	2.71	0.44
48:h:265:LYS:HG3	48:h:266:PHE:CD2	2.52	0.44
52:l:117:ARG:NH1	61:u:1:MET:HE2	2.32	0.44
54:n:15:LYS:O	54:n:19:GLU:OE1	2.35	0.44
54:n:16:LEU:HD11	54:n:169:LEU:HD13	1.99	0.44
55:o:8:ARG:HA	55:o:8:ARG:HE	1.82	0.44
55:o:39:LYS:HG2	55:o:42:ARG:HH12	1.82	0.44
61:u:91:ASP:HB2	61:u:93:ASN:OD1	2.17	0.44
61:u:95:LEU:HD12	61:u:100:ILE:HG21	1.99	0.44
62:v:3:GLN:OE1	62:v:4:PRO:O	2.35	0.44
63:w:56:LYS:NZ	63:w:90:ARG:O	2.47	0.44
1:0:13:ARG:CZ	66:z:97:ASP:CG	2.91	0.44
9:9:129:LEU:CD1	9:9:130:PRO:HD3	2.45	0.44
11:AA:557:ARG:HB3	11:AA:587:LEU:HD13	2.00	0.44
12:AB:67:THR:HG22	12:AB:68:THR:CG2	2.47	0.44
12:AB:117:ILE:HD11	14:AE:53:ARG:CZ	2.47	0.44
12:AB:145:LEU:HD21	30:P:89:ARG:HG3	1.99	0.44
16:AG:228:ARG:HB3	16:AG:234:ALA:HA	1.98	0.44
16:AG:243:LYS:HB2	21:G:179:LEU:O	2.17	0.44
10:B:18:G:C5	10:B:57:A:N6	2.85	0.44
18:D:33:A:H2'	18:D:34:C:C6	2.53	0.44
18:D:564:C:OP1	32:R:12:ARG:CZ	2.66	0.44
18:D:675:A:C1'	31:Q:118:HIS:CD2	2.99	0.44
18:D:704:A:C4	18:D:705:G:C8	3.06	0.44
20:F:58:LYS:HD2	20:F:58:LYS:C	2.42	0.44
22:H:303:LEU:O	22:H:304:VAL:C	2.59	0.44
22:H:332:VAL:O	22:H:333:LEU:HB2	2.18	0.44
23:I:58:GLU:OE1	23:I:65:ARG:CZ	2.65	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
32:R:110:ARG:N	32:R:111:LYS:HZ3	2.15	0.44
34:T:11:ILE:HD11	34:T:30:ALA:HB1	1.98	0.44
34:T:26:GLU:HG3	34:T:27:VAL:N	2.33	0.44
34:T:71:LYS:HE2	34:T:78:TYR:CD2	2.52	0.44
36:V:64:CYS:SG	36:V:74:THR:OG1	2.69	0.44
37:W:62:VAL:HG13	37:W:66:MET:CE	2.44	0.44
37:W:79:THR:HG23	37:W:79:THR:O	2.18	0.44
38:X:3:ARG:NH2	54:n:110:ARG:HD2	2.32	0.44
39:Y:12:VAL:HG22	39:Y:54:ILE:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:Y:14:ALA:O	39:Y:16:MET:N	2.51	0.44
39:Y:33:ASN:OD1	39:Y:35:MET:HE2	2.18	0.44
41:a:66:C:N4	41:a:74:A:N6	2.66	0.44
41:a:1020:A:C2	41:a:1141:U:C2	3.06	0.44
41:a:1342:A:O2'	41:a:1344:U:OP2	2.31	0.44
41:a:1434:A:H2'	41:a:1435:G:C8	2.53	0.44
41:a:1656:C:C2	41:a:1657:U:C5	3.05	0.44
41:a:2572:A:OP2	50:j:149:ASN:O	2.35	0.44
41:a:2616:C:C2	41:a:2617:U:C6	3.06	0.44
48:h:74:ILE:HB	48:h:96:TYR:CD1	2.53	0.44
48:h:200:HIS:O	48:h:203:ARG:HG2	2.17	0.44
56:p:69:ARG:NH1	56:p:73:ASN:ND2	2.66	0.44
63:w:38:LEU:HD12	63:w:38:LEU:HA	1.72	0.44
4:3:6:ARG:CG	4:3:7:ARG:H	2.31	0.44
8:7:21:U:H5''	23:I:80:LYS:N	2.18	0.44
9:9:19:ALA:CB	9:9:69:PHE:HE2	2.31	0.44
9:9:92:ALA:HB3	9:9:129:LEU:HB2	1.99	0.44
10:A:11:A:H2'	10:A:12:G:O4'	2.17	0.44
10:A:18:G:C5	10:A:57:A:N6	2.85	0.44
10:A:71:C:H2'	10:A:72:A:C1'	2.47	0.44
11:AA:477:GLU:HB2	12:AB:72:THR:HG21	1.99	0.44
11:AA:674:ASP:OD2	11:AA:1070:HIS:ND1	2.50	0.44
12:AB:119:THR:HB	12:AB:160:ARG:HB2	2.00	0.44
16:AG:219:GLU:CB	21:G:156:GLY:N	2.80	0.44
10:B:18:G:N7	10:B:57:A:N6	2.65	0.44
10:B:75:C:P	41:a:2602:A:C2'	3.05	0.44
17:C:34:THR:OG1	17:C:38:LYS:HB2	2.18	0.44
17:C:70:TYR:CE2	26:L:49:TYR:CE1	3.05	0.44
18:D:262:A:H2'	18:D:263:A:C8	2.53	0.44
18:D:360:G:H2'	18:D:361:G:C8	2.53	0.44
18:D:598:U:C2	18:D:599:C:C5	3.06	0.44
18:D:642:A:C5	18:D:643:C:C5	3.06	0.44
18:D:1055:A:O2'	23:I:156:ARG:NH2	2.47	0.44
18:D:1146:A:C5	18:D:1147:C:C5	3.06	0.44
18:D:1152:A:OP1	30:P:72:ARG:NH1	2.43	0.44
19:E:25:ARG:O	19:E:28:MET:HB2	2.18	0.44
22:H:12:SER:O	22:H:16:ILE:HG13	2.18	0.44
22:H:76:GLU:OE1	22:H:79:PHE:HA	2.18	0.44
26:L:85:ILE:HG22	26:L:86:ARG:HG2	1.99	0.44
29:O:86:ALA:C	29:O:89:GLU:HG2	2.43	0.44
29:O:94:LEU:O	29:O:97:GLU:CD	2.60	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:P:66:GLU:HG3	33:S:99:ALA:HB2	2.00	0.44
30:P:73:LEU:C	30:P:73:LEU:HD23	2.42	0.44
31:Q:21:ALA:HB3	31:Q:84:VAL:HG22	1.99	0.44
35:U:8:ARG:H	35:U:28:ARG:HD3	1.81	0.44
36:V:31:HIS:NE2	36:V:34:TYR:HD2	2.15	0.44
39:Y:64:ARG:O	39:Y:64:ARG:HG3	2.17	0.44
41:a:145:C:H2'	41:a:146:A:C8	2.53	0.44
41:a:536:G:H4'	66:z:57:PHE:CZ	2.53	0.44
41:a:536:G:H4'	66:z:57:PHE:HZ	1.82	0.44
41:a:1824:G:P	48:h:52:ARG:CZ	3.06	0.44
41:a:1839:G:C4	41:a:1840:G:C8	3.06	0.44
41:a:2098:U:H2'	41:a:2099:U:O4'	2.17	0.44
41:a:2297:A:C2	41:a:2320:U:C1'	3.00	0.44
41:a:2345:G:N3	41:a:2381:A:H2'	2.33	0.44
47:g:30:HIS:CG	47:g:31:ASP:N	2.85	0.44
50:j:61:THR:OG1	50:j:63:PRO:HD2	2.18	0.44
52:l:112:LEU:HD23	52:l:118:LEU:HD13	1.99	0.44
55:o:31:HIS:C	55:o:33:LEU:HG	2.42	0.44
59:s:28:LEU:HD12	59:s:142:ILE:CG2	2.47	0.44
59:s:124:VAL:O	59:s:125:TYR:HD1	2.01	0.44
63:w:98:LEU:N	63:w:112:TYR:O	2.51	0.44
65:y:7:GLN:HE21	65:y:10:GLN:HE21	1.65	0.44
11:AA:477:GLU:CA	12:AB:72:THR:HG21	2.48	0.44
14:AE:41:PRO:HB2	14:AE:270:ARG:HG3	1.99	0.44
10:B:11:A:H2'	10:B:12:G:O4'	2.18	0.44
18:D:376:G:C2	18:D:389:A:C2	3.06	0.44
18:D:1160:G:C6	18:D:1161:C:C5	3.06	0.44
21:G:100:MET:SD	21:G:101:LEU:HD23	2.56	0.44
21:G:163:VAL:CG1	21:G:185:ALA:HA	2.47	0.44
22:H:8:LEU:HD12	22:H:11:GLU:OE2	2.18	0.44
22:H:71:ALA:HB3	22:H:83:LEU:O	2.18	0.44
22:H:294:VAL:HG11	22:H:330:VAL:HG21	2.00	0.44
23:I:151:VAL:CG1	23:I:200:VAL:HG23	2.47	0.44
24:J:69:GLU:HA	24:J:72:PHE:HD2	1.83	0.44
25:K:50:TYR:C	25:K:66:LYS:HE3	2.43	0.44
28:N:35:ALA:HB1	28:N:110:VAL:HG11	1.99	0.44
31:Q:51:GLY:O	31:Q:56:ARG:NH1	2.50	0.44
31:Q:91:PRO:HD2	31:Q:92:GLY:H	1.83	0.44
36:V:27:ARG:HH22	36:V:42:THR:N	2.16	0.44
41:a:234:U:C4	41:a:235:U:C5	3.05	0.44
41:a:597:G:H2'	41:a:598:U:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:841:G:H2'	41:a:842:U:C6	2.52	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:2450:A:C2	41:a:2451:A:C4	3.06	0.44
41:a:2718:G:O2'	41:a:2847:U:H5''	2.18	0.44
46:f:31:ARG:HG2	46:f:34:HIS:HB2	2.00	0.44
48:h:108:LYS:HZ3	48:h:194:GLU:H	1.64	0.44
49:i:17:ARG:CA	49:i:20:ASP:OD1	2.66	0.44
50:j:81:GLU:O	50:j:82:PHE:HD1	2.01	0.44
50:j:104:VAL:HG12	50:j:105:LYS:N	2.33	0.44
55:o:55:LEU:C	55:o:55:LEU:HD23	2.42	0.44
56:p:8:PRO:C	56:p:69:ARG:NH2	2.75	0.44
59:s:98:GLU:O	59:s:100:VAL:N	2.50	0.44
60:t:1:MET:CE	60:t:32:TYR:CG	2.99	0.44
60:t:48:PRO:HB2	60:t:49:ARG:HE	1.81	0.44
62:v:104:GLU:OE1	62:v:104:GLU:HA	2.17	0.44
65:y:31:TRP:CH2	65:y:40:LEU:HD11	2.52	0.44
1:0:73:LYS:HD3	1:0:86:GLN:HE21	1.82	0.44
4:3:7:ARG:NH2	41:a:84:A:O2'	2.51	0.44
8:7:4:U:C5	18:D:1403:C:H1'	2.52	0.44
9:9:138:ARG:NH1	40:Z:10:ALA:O	2.51	0.44
11:AA:1157:GLN:HG3	11:AA:1159:VAL:HG13	2.00	0.44
16:AG:227:ALA:CB	16:AG:331:LEU:HA	2.46	0.44
16:AG:430:PRO:CG	16:AG:435:LEU:CD2	2.85	0.44
16:AG:440:VAL:HG13	16:AG:444:LEU:HB2	2.00	0.44
17:C:29:LEU:CD2	17:C:59:ILE:HD13	2.48	0.44
18:D:198:G:OP2	18:D:198:G:C8	2.70	0.44
18:D:219:U:C2	18:D:220:G:C8	3.05	0.44
18:D:284:C:C2	18:D:285:C:C5	3.06	0.44
18:D:1062:U:H2'	18:D:1063:C:C6	2.53	0.44
18:D:1120:C:H2'	18:D:1121:U:H6	1.83	0.44
18:D:1434:A:H2'	18:D:1435:G:O4'	2.18	0.44
21:G:9:MET:HE1	21:G:47:VAL:HG22	1.99	0.44
21:G:171:ILE:H	21:G:171:ILE:HD12	1.82	0.44
22:H:308:GLU:C	22:H:310:ASP:H	2.25	0.44
22:H:332:VAL:O	22:H:344:LEU:HA	2.17	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
37:W:5:LEU:HD12	37:W:6:LYS:N	2.32	0.44
38:X:71:ARG:NH1	38:X:72:GLU:HG3	2.33	0.44
38:X:106:ALA:HB3	38:X:110:LYS:CD	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:153:U:H2'	41:a:154:U:C6	2.53	0.44
41:a:479:A:H4'	41:a:480:A:OP1	2.18	0.44
41:a:598:U:H2'	41:a:599:A:H8	1.82	0.44
41:a:1936:A:C8	41:a:1945:G:N7	2.86	0.44
41:a:1997:C:OP1	50:j:128:ARG:NH1	2.50	0.44
41:a:2021:C:OP1	49:i:9:THR:HG21	2.18	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:2245:U:O2'	41:a:2436:G:OP2	2.27	0.44
41:a:2305:U:H5''	54:n:131:GLY:HA3	2.00	0.44
41:a:2484:G:OP1	62:v:44:ARG:HD2	2.18	0.44
41:a:2514:U:H2'	41:a:2515:C:H6	1.81	0.44
45:e:59:GLU:CD	45:e:60:LYS:N	2.76	0.44
46:f:4:THR:CG2	46:f:37:GLU:OE2	2.65	0.44
46:f:41:THR:O	46:f:43:ALA:N	2.51	0.44
48:h:146:MET:HE2	48:h:153:GLN:OE1	2.17	0.44
54:n:10:ASP:OD1	54:n:11:GLU:HG3	2.17	0.44
54:n:175:PHE:CG	54:n:176:PRO:HD2	2.52	0.44
62:v:39:GLY:O	62:v:96:ILE:N	2.33	0.44
66:z:66:ASN:CG	66:z:76:TYR:HB2	2.42	0.44
2:1:36:LEU:N	2:1:36:LEU:HD12	2.33	0.44
3:2:56:GLU:CD	3:2:88:LYS:N	2.76	0.44
6:5:18:DG:C4	6:5:19:DC:C5	3.06	0.44
11:AA:11:ILE:HG22	11:AA:1172:LEU:HD11	1.99	0.44
11:AA:444:ASP:OD1	11:AA:444:ASP:N	2.51	0.44
12:AB:38:ILE:HD13	12:AB:110:PRO:CD	2.24	0.44
13:AD:192:VAL:HG12	13:AD:193:GLU:H	1.83	0.44
16:AG:320:ARG:HB2	16:AG:323:GLN:CB	2.48	0.44
17:C:41:PRO:HD2	22:H:339:ARG:CZ	2.47	0.44
18:D:736:C:H4'	26:L:88:MET:HE2	1.99	0.44
18:D:754:C:O5'	34:T:72:ARG:NH1	2.51	0.44
18:D:1060:U:OP1	33:S:85:ARG:NH1	2.48	0.44
19:E:58:VAL:HG12	19:E:72:ALA:HB1	1.99	0.44
21:G:48:PRO:O	21:G:52:GLU:HG2	2.18	0.44
25:K:50:TYR:O	25:K:66:LYS:HE3	2.17	0.44
25:K:93:ARG:NH2	25:K:93:ARG:CB	2.80	0.44
32:R:30:LYS:C	32:R:81:LEU:HD12	2.42	0.44
33:S:13:ARG:HB3	33:S:60:GLN:CG	2.46	0.44
34:T:32:LEU:HD12	34:T:63:ARG:HA	1.98	0.44
41:a:65:U:N3	41:a:66:C:C5	2.86	0.44
41:a:782:A:C6	48:h:225:MET:HE2	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1996:C:OP1	60:t:31:ARG:NH2	2.51	0.44
54:n:6:ASP:O	54:n:10:ASP:OD2	2.36	0.44
55:o:30:ARG:HH12	61:u:62:PRO:N	2.15	0.44
62:v:38:ARG:HB2	62:v:98:PRO:HD3	2.00	0.44
62:v:111:GLU:HG2	62:v:112:LEU:N	2.33	0.44
2:1:86:MET:HE1	2:1:88:ARG:CD	2.42	0.44
8:7:39:A:O3'	11:AA:688:GLN:NE2	2.51	0.44
11:AA:24:VAL:HG11	11:AA:704:MET:HE1	1.99	0.44
12:AB:129:ILE:HG22	12:AB:142:LEU:CB	2.48	0.44
16:AG:143:LYS:HG3	16:AG:153:ASP:HB2	1.99	0.44
16:AG:353:HIS:C	16:AG:357:ASP:HB2	2.43	0.44
17:C:34:THR:HG22	17:C:35:GLU:N	2.33	0.44
17:C:40:VAL:HG22	22:H:339:ARG:HE	1.83	0.44
18:D:108:G:H5''	18:D:108:G:N3	2.33	0.44
18:D:323:U:H4'	19:E:17:ALA:HB3	1.99	0.44
18:D:610:U:C2	18:D:611:C:C6	3.06	0.44
18:D:622:A:C8	18:D:623:C:C5	3.06	0.44
18:D:676:A:H2'	18:D:677:U:H6	1.82	0.44
18:D:678:U:H2'	18:D:679:C:C6	2.53	0.44
18:D:1240:U:H5	27:M:116:MET:HE2	1.83	0.44
18:D:1244:G:C6	18:D:1294:G:C6	3.06	0.44
19:E:78:ASN:O	19:E:82:GLN:CD	2.61	0.44
21:G:134:ALA:HA	21:G:137:ARG:HE	1.83	0.44
22:H:53:PHE:HE1	22:H:68:VAL:HG21	1.82	0.44
23:I:34:ASP:HB2	33:S:65:ARG:CZ	2.48	0.44
24:J:49:SER:O	24:J:53:VAL:HG13	2.18	0.44
26:L:2:ARG:HB2	26:L:4:TYR:CE1	2.53	0.44
29:O:89:GLU:HG3	29:O:90:TYR:N	2.33	0.44
31:Q:83:GLU:OE1	31:Q:83:GLU:N	2.51	0.44
31:Q:84:VAL:HG21	31:Q:97:ILE:HD11	1.99	0.44
33:S:86:GLU:O	33:S:90:ARG:HG2	2.17	0.44
39:Y:82:ALA:HB3	39:Y:108:ILE:CD1	2.48	0.44
41:a:208:C:H2'	41:a:209:C:C6	2.53	0.44
41:a:221:A:C4	41:a:266:G:N7	2.85	0.44
41:a:579:G:H2'	41:a:580:U:C6	2.53	0.44
41:a:594:U:C2	41:a:595:C:C5	3.05	0.44
41:a:675:A:N3	41:a:2443:C:O2'	2.47	0.44
41:a:957:C:H5'	62:v:75:GLU:OE1	2.17	0.44
41:a:1021:A:C2	41:a:1141:U:O4	2.71	0.44
41:a:1360:G:C8	41:a:1361:G:C8	3.06	0.44
41:a:2025:C:H2'	41:a:2026:U:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:2093:G:P	58:r:22:LYS:HG2	2.58	0.44
41:a:2179:C:H2'	41:a:2180:U:H6	1.83	0.44
41:a:2548:U:C2	41:a:2549:G:C8	3.06	0.44
41:a:2617:U:C2	41:a:2618:G:C8	3.06	0.44
43:c:33:LEU:O	43:c:34:HIS:CG	2.70	0.44
44:d:45:A:C4	44:d:46:A:C8	3.05	0.44
44:d:69:G:C5	44:d:70:C:C6	3.06	0.44
50:j:131:ASP:OD1	50:j:133:THR:O	2.36	0.44
52:l:23:PHE:CE2	52:l:25:GLU:HB2	2.52	0.44
52:l:90:GLN:OE1	52:l:92:HIS:CD2	2.70	0.44
56:p:27:LYS:HG2	56:p:32:GLU:HG3	2.00	0.44
56:p:83:PHE:HB2	56:p:141:ILE:HD13	2.00	0.44
56:p:94:TYR:CE1	56:p:152:ARG:CD	3.01	0.44
60:t:44:LYS:N	60:t:44:LYS:HD2	2.33	0.44
1:0:1:MET:HE3	1:0:43:ASN:OD1	2.18	0.43
3:2:56:GLU:OE1	3:2:86:THR:C	2.61	0.43
9:9:4:ASN:HB3	9:9:8:LYS:HZ2	1.81	0.43
11:AA:998:LEU:HG	11:AA:1011:LEU:HB3	1.99	0.43
11:AA:1244:HIS:NE2	11:AA:1266:GLY:O	2.44	0.43
12:AB:4:TRP:CD1	12:AB:93:ILE:HG13	2.53	0.43
12:AB:43:ARG:NH1	12:AB:133:PRO:HG3	2.33	0.43
12:AB:68:THR:O	12:AB:68:THR:OG1	2.26	0.43
12:AB:151:LYS:NZ	12:AB:151:LYS:N	2.60	0.43
14:AE:708:ASN:HA	14:AE:713:GLU:HA	2.00	0.43
10:B:75:C:OP1	41:a:2602:A:C8	2.71	0.43
18:D:415:A:C6	18:D:416:G:C5	3.05	0.43
18:D:511:C:C2	18:D:512:U:C6	3.06	0.43
18:D:621:A:H2'	18:D:622:A:C8	2.53	0.43
19:E:21:ASN:HB3	19:E:25:ARG:CZ	2.48	0.43
19:E:66:LEU:HD12	19:E:66:LEU:HA	1.85	0.43
20:F:66:ARG:NH2	20:F:67:ARG:NH2	2.66	0.43
21:G:206:ALA:O	21:G:210:VAL:HG23	2.18	0.43
22:H:5:PHE:CZ	22:H:9:PHE:CE1	3.06	0.43
22:H:19:ARG:O	22:H:72:LEU:HD13	2.18	0.43
22:H:49:PRO:HD3	22:H:84:LEU:HD21	1.99	0.43
23:I:55:ILE:HD12	23:I:68:ILE:HG12	1.99	0.43
23:I:152:GLU:OE2	23:I:165:THR:HG23	2.18	0.43
26:L:78:PHE:HD1	26:L:87:SER:HB3	1.82	0.43
28:N:110:VAL:O	28:N:111:MET:SD	2.75	0.43
29:O:113:ARG:HG3	29:O:115:LYS:HZ2	1.83	0.43
30:P:45:ARG:HD3	30:P:47:GLU:OE2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:R:57:LEU:HD23	32:R:59:ASN:CG	2.43	0.43
34:T:63:ARG:HD2	34:T:67:LEU:HD21	2.00	0.43
37:W:39:THR:HG22	37:W:40:ILE:N	2.33	0.43
50:j:204:LYS:HD3	50:j:205:PRO:HD2	2.00	0.43
51:k:7:GLU:HG2	51:k:27:LYS:HZ3	1.82	0.43
53:m:41:ARG:NE	53:m:41:ARG:HA	2.33	0.43
54:n:63:GLN:HG3	54:n:95:ARG:HD3	1.99	0.43
54:n:79:ILE:O	54:n:79:ILE:HG13	2.18	0.43
55:o:45:ARG:HD2	55:o:45:ARG:C	2.43	0.43
56:p:115:HIS:HD1	56:p:151:TYR:HE2	1.65	0.43
57:q:3:VAL:HG12	57:q:36:ARG:HB3	2.00	0.43
63:w:13:ASN:O	63:w:17:ARG:HG3	2.17	0.43
63:w:96:ARG:O	63:w:113:ILE:HA	2.18	0.43
1:0:60:LYS:N	1:0:60:LYS:HD3	2.33	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
9:9:70:GLU:HG3	9:9:71:CYS:N	2.34	0.43
12:AB:16:ARG:HB3	12:AB:73:ARG:CD	2.45	0.43
12:AB:131:THR:H	12:AB:140:MET:HE2	1.83	0.43
16:AG:343:ASP:HB3	16:AG:347:LYS:HE3	2.00	0.43
16:AG:402:THR:C	16:AG:405:ALA:HB3	2.41	0.43
10:B:31:G:H5'	18:D:1339:A:C2	2.54	0.43
18:D:235:C:H2'	18:D:236:A:H8	1.83	0.43
18:D:337:G:H2'	18:D:338:A:H8	1.81	0.43
18:D:986:U:H2'	18:D:987:G:C8	2.53	0.43
18:D:1325:C:N3	18:D:1326:U:C5	2.86	0.43
19:E:22:ALA:CA	19:E:25:ARG:HE	2.31	0.43
21:G:110:SER:OG	21:G:113:ARG:NH2	2.47	0.43
21:G:117:LEU:HD21	21:G:141:LEU:CA	2.48	0.43
22:H:52:GLN:OE1	22:H:52:GLN:HA	2.18	0.43
22:H:74:ALA:HB3	22:H:83:LEU:HD23	1.99	0.43
23:I:54:ARG:NH1	23:I:69:HIS:NE2	2.66	0.43
23:I:112:ASP:O	23:I:116:VAL:HG23	2.18	0.43
23:I:157:LEU:CD1	23:I:166:GLU:OE1	2.66	0.43
25:K:132:ASN:OD1	25:K:134:ILE:HG22	2.18	0.43
28:N:31:LYS:N	28:N:31:LYS:HD2	2.34	0.43
28:N:35:ALA:HB1	28:N:110:VAL:CG1	2.48	0.43
31:Q:63:ALA:CB	31:Q:92:GLY:HA3	2.48	0.43
34:T:10:LYS:HE2	34:T:10:LYS:HA	2.01	0.43
36:V:30:LYS:HB2	36:V:37:PHE:CE1	2.52	0.43
38:X:81:MET:HE1	38:X:92:ARG:CD	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:Y:19:PRO:CG	39:Y:23:VAL:CG2	2.95	0.43
39:Y:44:LYS:HG2	39:Y:68:PHE:HE2	1.82	0.43
39:Y:99:LYS:CE	39:Y:140:GLU:OE2	2.67	0.43
41:a:74:A:N7	41:a:88:G:C5	2.87	0.43
41:a:128:C:C2	41:a:129:C:C5	3.06	0.43
41:a:1319:C:O2'	41:a:1320:C:H5'	2.18	0.43
41:a:1409:U:C2	41:a:1410:G:C8	3.06	0.43
41:a:1414:C:H2'	41:a:1415:U:C6	2.52	0.43
41:a:1956:U:C2	41:a:1957:C:C6	3.06	0.43
41:a:2884:U:O2	49:i:40:ARG:NH2	2.51	0.43
52:l:23:PHE:CE2	52:l:25:GLU:CB	3.01	0.43
54:n:126:GLY:HA2	54:n:163:ASP:HA	2.00	0.43
55:o:13:ARG:HG2	61:u:62:PRO:O	2.18	0.43
56:p:149:ARG:HD2	56:p:162:VAL:O	2.18	0.43
58:r:93:SER:OG	58:r:121:VAL:HG13	2.18	0.43
64:x:50:ALA:O	64:x:81:ARG:NH2	2.51	0.43
66:z:14:HIS:O	66:z:18:LEU:HD23	2.18	0.43
2:1:1:MET:SD	2:1:62:ASP:OD2	2.76	0.43
5:4:31:TYR:HE2	44:d:104:A:O4'	2.01	0.43
6:5:20:DC:H1'	6:5:21:DA:H5'	2.00	0.43
9:9:18:VAL:HG13	9:9:71:CYS:HB2	2.00	0.43
9:9:23:LEU:HA	9:9:118:ILE:HG13	2.01	0.43
11:AA:560:PRO:HB2	14:AE:776:THR:HG21	2.00	0.43
13:AD:29:GLU:HB3	13:AD:200:LYS:HG3	1.99	0.43
16:AG:15:GLU:HA	16:AG:18:LEU:HB2	2.00	0.43
16:AG:226:ALA:HB1	16:AG:228:ARG:NH1	2.34	0.43
10:B:38:A:HO2'	18:D:790:A:P	2.35	0.43
17:C:18:VAL:HG13	17:C:51:TYR:HE1	1.83	0.43
18:D:404:G:N7	24:J:2:ALA:HB3	2.33	0.43
18:D:622:A:C8	18:D:623:C:C6	3.06	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:892:A:H2'	18:D:893:C:H6	1.83	0.43
18:D:1120:C:C2	18:D:1121:U:C5	3.06	0.43
18:D:1208:C:C2	18:D:1209:C:C6	3.07	0.43
22:H:31:ILE:O	22:H:31:ILE:HG13	2.18	0.43
23:I:149:ILE:HG13	23:I:201:TRP:O	2.18	0.43
23:I:156:ARG:CG	23:I:193:TYR:HB2	2.47	0.43
25:K:134:ILE:CG2	25:K:135:ASN:N	2.81	0.43
25:K:157:ARG:NH2	28:N:43:GLU:OE2	2.46	0.43
26:L:53:LYS:HD2	26:L:53:LYS:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:O:56:ASP:OD1	29:O:56:ASP:N	2.51	0.43
32:R:56:ARG:HG2	32:R:62:GLU:CD	2.41	0.43
32:R:74:LEU:HD11	32:R:80:ILE:CG1	2.48	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
41:a:68:G:N2	41:a:74:A:OP2	2.51	0.43
41:a:900:A:C5	41:a:901:C:C5	3.06	0.43
41:a:1114:C:H2'	41:a:1115:G:C8	2.53	0.43
41:a:1657:U:C2	41:a:1658:C:C5	3.06	0.43
41:a:1683:U:H2'	41:a:1684:G:H8	1.83	0.43
41:a:2387:U:C4'	42:b:41:ARG:NH1	2.81	0.43
41:a:2615:U:C2	49:i:4:GLN:HA	2.53	0.43
41:a:2806:C:H2'	41:a:2807:U:O4'	2.18	0.43
41:a:2846:G:H2'	41:a:2847:U:O4'	2.18	0.43
49:i:23:THR:O	49:i:23:THR:HG23	2.17	0.43
49:i:55:ILE:CD1	63:w:112:TYR:CD2	3.02	0.43
55:o:45:ARG:HB3	55:o:46:PRO:CD	2.48	0.43
58:r:90:LEU:HD21	58:r:94:ILE:HD11	2.00	0.43
62:v:72:PRO:C	62:v:73:ILE:HD12	2.43	0.43
66:z:76:TYR:OH	66:z:92:ARG:HG2	2.19	0.43
1:0:77:PHE:CD2	66:z:40:ILE:HG21	2.53	0.43
2:1:19:LEU:HD23	2:1:19:LEU:C	2.43	0.43
2:1:36:LEU:HD23	2:1:48:LYS:CA	2.48	0.43
3:2:6:ARG:NE	3:2:42:GLU:CD	2.76	0.43
10:A:3:C:H2'	10:A:4:G:C8	2.52	0.43
10:A:19:G:O6	41:a:2111:U:H3'	2.18	0.43
11:AA:811:ASN:ND2	11:AA:1098:LEU:O	2.51	0.43
12:AB:43:ARG:NH2	12:AB:133:PRO:CG	2.82	0.43
12:AB:55:LEU:CD2	12:AB:57:VAL:HG13	2.47	0.43
13:AD:78:ILE:HA	13:AD:81:ILE:HG22	2.00	0.43
16:AG:227:ALA:CB	16:AG:330:GLN:C	2.91	0.43
16:AG:227:ALA:HB2	16:AG:330:GLN:O	2.18	0.43
16:AG:433:ASP:HB3	16:AG:456:LEU:CD1	2.47	0.43
10:B:72:A:C3'	10:B:73:A:H5''	2.47	0.43
18:D:76:G:C5	18:D:77:A:C8	3.06	0.43
18:D:633:G:H2'	18:D:634:C:H6	1.82	0.43
18:D:739:C:O2'	34:T:42:HIS:CE1	2.68	0.43
20:F:51:SER:OG	20:F:55:ARG:NH2	2.52	0.43
22:H:123:GLU:HA	22:H:128:ARG:HA	2.00	0.43
22:H:163:ARG:N	22:H:298:GLU:CG	2.81	0.43
22:H:332:VAL:CG1	22:H:335:ILE:HG13	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:I:69:HIS:CD2	23:I:104:ALA:HB3	2.54	0.43
23:I:134:MET:HG3	23:I:151:VAL:HG21	2.00	0.43
29:O:63:LEU:CD1	29:O:65:ILE:HD11	2.48	0.43
31:Q:14:LYS:HD3	31:Q:15:GLN:N	2.32	0.43
32:R:24:LEU:HD23	32:R:95:TYR:HE1	1.83	0.43
37:W:68:GLY:HA3	47:g:59:ARG:HH22	1.82	0.43
38:X:64:VAL:O	38:X:64:VAL:HG13	2.19	0.43
41:a:6:A:O2'	59:s:132:HIS:ND1	2.50	0.43
41:a:27:G:C4	41:a:512:G:N2	2.86	0.43
41:a:39:G:H2'	41:a:40:U:H6	1.83	0.43
41:a:78:U:C5'	45:e:4:LYS:NZ	2.81	0.43
41:a:150:U:C2	41:a:151:C:C5	3.06	0.43
41:a:197:A:N6	41:a:2430:A:H2'	2.34	0.43
41:a:963:U:H2'	41:a:964:C:C6	2.53	0.43
41:a:1169:A:N3	41:a:1169:A:O4'	2.51	0.43
41:a:1695:G:N7	48:h:14:ARG:NH2	2.66	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:2627:G:O2'	41:a:2781:A:N1	2.43	0.43
41:a:2768:U:OP1	59:s:85:LYS:HE3	2.19	0.43
44:d:55:U:O2'	54:n:26:MET:CE	2.67	0.43
46:f:6:LYS:HD3	46:f:6:LYS:N	2.33	0.43
46:f:10:THR:CB	46:f:56:LYS:NZ	2.81	0.43
50:j:16:THR:HG23	50:j:20:VAL:O	2.18	0.43
50:j:107:VAL:HG13	50:j:177:VAL:HG11	2.01	0.43
54:n:40:VAL:HG13	54:n:42:GLU:CD	2.43	0.43
54:n:66:LEU:HD23	54:n:67:ILE:N	2.34	0.43
54:n:132:VAL:CG2	54:n:152:LEU:CD2	2.97	0.43
58:r:6:LEU:C	58:r:15:LEU:HD13	2.43	0.43
60:t:1:MET:HE1	60:t:32:TYR:CB	2.49	0.43
1:0:93:PHE:CD1	1:0:93:PHE:C	2.96	0.43
4:3:7:ARG:HG3	4:3:8:ASP:N	2.33	0.43
8:7:1:A:C6	10:B:37:A:N1	2.86	0.43
9:9:105:LYS:O	9:9:106:PHE:HB3	2.18	0.43
11:AA:694:ARG:HH22	13:AC:80:GLU:HG3	1.82	0.43
12:AB:117:ILE:HD11	14:AE:53:ARG:NH1	2.33	0.43
14:AE:412:LEU:HA	14:AE:415:VAL:HG22	2.01	0.43
16:AG:277:ASP:HB2	16:AG:282:GLN:CB	2.49	0.43
16:AG:429:LYS:CB	16:AG:430:PRO:HD2	2.47	0.43
10:B:19:G:N3	10:B:57:A:C4	2.87	0.43
10:B:35:A:H2'	10:B:36:U:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:C:27:ALA:CA	17:C:30:LYS:HE3	2.48	0.43
18:D:384:G:H2'	18:D:385:C:C6	2.54	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:975:A:H8	18:D:1357:A:HO2'	1.65	0.43
18:D:1317:C:OP2	33:S:28:LYS:CE	2.67	0.43
20:F:32:VAL:HG11	31:Q:89:PRO:HG3	1.99	0.43
21:G:9:MET:HE2	21:G:43:LEU:HD22	2.00	0.43
22:H:305:HIS:CG	22:H:306:VAL:H	2.36	0.43
35:U:5:ARG:HA	35:U:71:VAL:HG21	2.01	0.43
39:Y:41:PHE:O	39:Y:45:THR:OG1	2.22	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:C6	2.53	0.43
41:a:870:U:N3	41:a:871:U:C5	2.86	0.43
41:a:1141:U:O2	41:a:1142:A:N6	2.52	0.43
41:a:1269:A:H2'	41:a:1270:C:C6	2.54	0.43
41:a:1406:U:O2'	41:a:1407:G:C5'	2.66	0.43
41:a:2092:U:C2	41:a:2225:A:O2'	2.71	0.43
41:a:2665:A:C2	41:a:2666:C:C6	3.07	0.43
65:y:55:LEU:HA	65:y:77:HIS:CD2	2.54	0.43
2:1:36:LEU:CD2	2:1:48:LYS:HA	2.48	0.43
2:1:99:ARG:CZ	2:1:99:ARG:HB2	2.49	0.43
8:7:12:U:C3'	8:7:12:U:C6	3.00	0.43
9:9:118:ILE:CB	9:9:119:PRO:HD3	2.44	0.43
10:A:35:A:H2'	10:A:36:U:O4'	2.18	0.43
11:AA:1275:VAL:HG13	11:AA:1287:LEU:HD11	2.01	0.43
16:AG:43:ILE:HB	16:AG:44:ASP:H	1.53	0.43
16:AG:167:MET:HE3	16:AG:173:PHE:CZ	2.53	0.43
16:AG:219:GLU:CB	21:G:156:GLY:HA2	2.24	0.43
16:AG:224:LYS:HB2	16:AG:276:TRP:CH2	2.54	0.43
16:AG:320:ARG:HH11	16:AG:320:ARG:HG2	1.80	0.43
18:D:283:U:C2	18:D:284:C:C6	3.06	0.43
18:D:296:U:O2'	18:D:556:C:O2	2.34	0.43
18:D:316:C:C2	18:D:317:U:C5	3.06	0.43
18:D:953:G:O6	38:X:103:LYS:HE3	2.18	0.43
18:D:1157:A:C2	18:D:1181:G:C5	3.06	0.43
18:D:1302:C:OP1	38:X:13:LYS:NZ	2.30	0.43
18:D:1477:U:H2'	18:D:1478:U:C6	2.53	0.43
22:H:19:ARG:N	22:H:19:ARG:HD3	2.32	0.43
22:H:76:GLU:OE2	22:H:78:GLY:C	2.61	0.43
23:I:14:ILE:HB	23:I:178:LEU:HD21	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:I:22:TRP:CZ2	23:I:32:ASN:CB	3.01	0.43
25:K:15:LEU:HD23	25:K:15:LEU:H	1.83	0.43
27:M:78:ARG:HG3	27:M:80:VAL:HG13	2.00	0.43
28:N:66:PHE:C	28:N:67:GLN:OE1	2.62	0.43
38:X:90:ARG:HD3	38:X:97:VAL:HA	2.01	0.43
38:X:90:ARG:NH1	38:X:96:PRO:O	2.51	0.43
39:Y:102:ARG:NH1	39:Y:139:VAL:HG11	2.33	0.43
41:a:250:G:H2'	41:a:251:A:C8	2.54	0.43
41:a:271:G:C2	41:a:272:A:C5	3.07	0.43
41:a:531:C:C5	41:a:2035:G:C2	3.07	0.43
41:a:838:C:C2	41:a:839:U:C6	3.07	0.43
41:a:1665:A:O3'	60:t:66:LYS:CD	2.67	0.43
41:a:1913:A:OP2	41:a:1913:A:H3'	2.18	0.43
41:a:2547:A:H5'	60:t:29:HIS:NE2	2.34	0.43
44:d:31:C:C2	44:d:32:U:C5	3.06	0.43
44:d:46:A:C5	44:d:47:C:C5	3.06	0.43
44:d:89:U:O2'	44:d:90:C:P	2.77	0.43
53:m:26:ASN:HA	53:m:29:GLN:HE21	1.83	0.43
61:u:95:LEU:HD13	61:u:100:ILE:HD12	2.01	0.43
62:v:53:MET:O	62:v:57:VAL:HG12	2.18	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
1:0:46:GLU:HG2	1:0:48:LYS:NZ	2.32	0.43
3:2:37:ASP:OD2	3:2:37:ASP:C	2.62	0.43
9:9:3:LEU:CD1	9:9:5:LEU:H	2.31	0.43
10:A:32:C:O3'	27:M:86:GLN:NE2	2.51	0.43
12:AB:141:LEU:HB2	12:AB:143:LEU:HD11	2.01	0.43
14:AE:975:ILE:HG22	14:AE:977:SER:H	1.83	0.43
16:AG:266:LEU:CD2	16:AG:266:LEU:N	2.73	0.43
18:D:43:C:P	35:U:12:LYS:HE3	2.59	0.43
18:D:1104:G:H4'	21:G:113:ARG:HH22	1.83	0.43
18:D:1172:C:H2'	18:D:1173:U:H6	1.82	0.43
18:D:1184:G:C2	18:D:1185:G:C8	3.07	0.43
18:D:1408:A:H2'	18:D:1409:C:H6	1.84	0.43
19:E:60:ARG:HG3	19:E:64:LYS:NZ	2.34	0.43
21:G:131:LYS:O	21:G:135:LEU:HD13	2.19	0.43
23:I:22:TRP:CH2	23:I:32:ASN:HB2	2.54	0.43
28:N:26:THR:HG1	28:N:58:GLU:CG	2.31	0.43
29:O:21:ILE:CD1	29:O:86:ALA:CB	2.96	0.43
30:P:52:LEU:HB2	33:S:81:ARG:NH1	2.33	0.43
31:Q:84:VAL:HG11	31:Q:97:ILE:HD13	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:66:C:H42	41:a:74:A:H62	1.67	0.43
41:a:533:G:H2'	41:a:534:U:C6	2.54	0.43
41:a:841:G:C6	41:a:938:G:C6	3.06	0.43
41:a:997:G:H5''	66:z:92:ARG:NH1	2.34	0.43
41:a:1223:G:N1	41:a:1226:A:OP2	2.49	0.43
41:a:1385:A:C4	41:a:1403:A:C2	3.06	0.43
41:a:1443:U:H2'	41:a:1444:G:H8	1.82	0.43
41:a:1587:G:H2'	41:a:1588:G:C8	2.54	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:2332:C:OP1	42:b:77:ARG:NH2	2.52	0.43
41:a:2462:C:C2	41:a:2463:C:C5	3.07	0.43
41:a:2466:C:C2	41:a:2467:C:C5	3.06	0.43
41:a:2845:U:H5''	65:y:52:ASN:O	2.18	0.43
42:b:39:ARG:HA	42:b:39:ARG:HD2	1.92	0.43
45:e:56:LEU:C	45:e:59:GLU:HG3	2.44	0.43
49:i:17:ARG:CB	49:i:20:ASP:OD1	2.67	0.43
52:l:6:LYS:CE	52:l:119:ILE:CG2	2.94	0.43
54:n:15:LYS:C	54:n:19:GLU:OE1	2.62	0.43
60:t:118:LEU:O	60:t:119:ALA:C	2.62	0.43
62:v:112:LEU:HD12	62:v:112:LEU:N	2.34	0.43
63:w:73:ASN:C	63:w:73:ASN:ND2	2.76	0.43
9:9:24:SER:O	9:9:96:PHE:CE1	2.72	0.43
10:A:19:G:N2	41:a:2112:G:C1'	2.82	0.43
11:AA:856:ASN:C	16:AG:35:THR:HG22	2.44	0.43
14:AE:859:PRO:HD2	14:AE:862:THR:HG21	2.01	0.43
16:AG:126:VAL:HG13	16:AG:130:PHE:CE2	2.53	0.43
16:AG:142:VAL:HB	16:AG:175:PRO:HA	1.99	0.43
16:AG:183:LEU:HD22	16:AG:195:LEU:HD13	2.00	0.43
16:AG:226:ALA:O	16:AG:228:ARG:N	2.52	0.43
16:AG:363:LEU:CD2	16:AG:409:ARG:N	2.81	0.43
18:D:1149:C:N3	18:D:1150:A:N7	2.67	0.43
26:L:1:MET:HE2	26:L:67:PRO:N	2.34	0.43
28:N:10:MET:CG	28:N:27:MET:HE1	2.48	0.43
28:N:84:ARG:HD2	28:N:124:GLU:OE1	2.17	0.43
35:U:7:ALA:HA	35:U:28:ARG:HD3	2.01	0.43
35:U:8:ARG:HD3	35:U:17:TYR:CE1	2.54	0.43
35:U:12:LYS:HD2	35:U:13:LYS:HG2	2.00	0.43
37:W:12:ASP:OD2	37:W:35:SER:CB	2.66	0.43
38:X:22:ILE:HG23	38:X:66:GLU:CD	2.43	0.43
38:X:79:ARG:NH1	47:g:56:ARG:NH1	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:Y:14:ALA:O	39:Y:15:GLY:C	2.61	0.43
40:Z:29:LYS:O	40:Z:30:PHE:HD2	2.02	0.43
41:a:192:C:C5	41:a:193:U:C6	3.07	0.43
41:a:538:A:H2'	41:a:539:G:O4'	2.18	0.43
41:a:607:U:N3	41:a:608:A:N7	2.66	0.43
41:a:996:A:N6	41:a:1160:G:C6	2.87	0.43
41:a:1074:G:C6	41:a:1075:C:N4	2.87	0.43
41:a:1879:C:H2'	41:a:1880:U:O4'	2.18	0.43
41:a:2332:C:P	42:b:77:ARG:HH21	2.42	0.43
41:a:2615:U:H2'	41:a:2616:C:H6	1.83	0.43
41:a:2702:G:C4	41:a:2703:C:C5	3.06	0.43
47:g:47:LYS:CE	54:n:115:ARG:HA	2.49	0.43
47:g:59:ARG:HH11	47:g:63:ARG:CD	2.31	0.43
54:n:12:VAL:HG13	54:n:172:ALA:CB	2.49	0.43
56:p:121:ILE:HD12	56:p:141:ILE:CG2	2.39	0.43
60:t:108:ARG:HG2	60:t:116:ILE:HD13	2.01	0.43
65:y:106:LYS:CA	65:y:109:ARG:NH2	2.81	0.43
10:A:49:G:H8	10:A:49:G:O5'	2.01	0.43
10:A:57:A:O5'	10:A:58:A:P	2.77	0.43
12:AB:8:TYR:CD1	12:AB:53:ASN:HB2	2.54	0.43
12:AB:51:PHE:HE2	14:AE:288:PRO:CG	2.29	0.43
12:AB:150:ILE:HG12	12:AB:152:HIS:NE2	2.34	0.43
13:AD:68:TYR:HE1	13:AD:79:LEU:HD13	1.82	0.43
14:AE:658:GLU:HA	14:AE:661:VAL:HG22	2.00	0.43
14:AE:1036:ARG:HE	14:AE:1081:VAL:HG21	1.84	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
18:D:13:U:N3	18:D:915:A:C6	2.86	0.43
18:D:619:U:O4'	24:J:128:ARG:CZ	2.67	0.43
18:D:674:G:H2'	18:D:675:A:H8	1.84	0.43
18:D:679:C:N3	18:D:680:C:C5	2.87	0.43
18:D:723:U:C2	20:F:49:LYS:HE3	2.54	0.43
18:D:1125:U:N3	18:D:1127:G:C8	2.86	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
18:D:1329:A:OP1	38:X:28:THR:CB	2.66	0.43
18:D:1437:A:N3	18:D:1438:G:C8	2.86	0.43
22:H:303:LEU:CD2	22:H:305:HIS:HB3	2.48	0.43
25:K:45:ARG:CG	25:K:45:ARG:NE	2.72	0.43
25:K:68:ARG:O	25:K:69:ARG:NH1	2.52	0.43
26:L:99:ALA:HB3	26:L:104:LYS:HZ3	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:T:10:LYS:HA	34:T:10:LYS:CE	2.49	0.43
34:T:63:ARG:HD2	34:T:67:LEU:HD23	2.01	0.43
39:Y:14:ALA:C	39:Y:50:LYS:HD2	2.44	0.43
41:a:30:G:O2'	41:a:1214:A:N3	2.49	0.43
41:a:125:A:C6	53:m:10:LEU:HD13	2.54	0.43
41:a:573:U:O2'	41:a:574:A:H3'	2.19	0.43
41:a:685:A:N1	41:a:787:C:H1'	2.33	0.43
41:a:1144:A:C5	41:a:1145:C:C5	3.07	0.43
41:a:1709:U:H2'	41:a:1710:G:H8	1.82	0.43
41:a:2037:A:H2'	41:a:2038:G:C8	2.54	0.43
41:a:2313:C:O3'	54:n:88:LYS:NZ	2.48	0.43
41:a:2477:U:O2	57:q:4:ARG:NH2	2.51	0.43
41:a:2723:C:C5'	63:w:1:MET:HE3	2.49	0.43
48:h:71:LYS:HB2	48:h:96:TYR:CZ	2.54	0.43
48:h:91:ILE:HG22	48:h:92:ALA:N	2.33	0.43
48:h:130:LEU:CD2	48:h:192:LEU:HD21	2.48	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
60:t:110:GLU:OE1	60:t:110:GLU:HA	2.19	0.43
62:v:115:GLU:O	62:v:116:ALA:C	2.61	0.43
65:y:106:LYS:CB	65:y:109:ARG:HH22	2.32	0.43
66:z:82:GLY:CA	66:z:117:LEU:HD11	2.48	0.43
4:3:35:ILE:HD11	4:3:62:GLU:C	2.44	0.43
12:AB:73:ARG:HB3	12:AB:74:GLY:H	1.61	0.43
13:AD:76:GLU:HB3	13:AD:80:GLU:HB3	2.01	0.43
17:C:27:ALA:HB1	17:C:30:LYS:HE3	2.00	0.43
17:C:60:LYS:CE	18:D:735:C:O4'	2.65	0.43
18:D:119:A:C2	18:D:240:G:C8	3.07	0.43
18:D:320:A:H2'	18:D:321:A:O4'	2.19	0.43
18:D:416:G:C4	18:D:417:G:C8	3.07	0.43
18:D:553:A:H2'	18:D:554:A:H8	1.84	0.43
18:D:562:U:C3'	32:R:14:ARG:NH1	2.81	0.43
18:D:563:A:C2	18:D:567:G:C6	3.07	0.43
18:D:687:A:C2	18:D:704:A:C6	3.07	0.43
18:D:690:G:H2'	18:D:691:G:C8	2.54	0.43
18:D:796:C:N3	18:D:797:C:C5	2.87	0.43
18:D:1276:G:O5'	18:D:1276:G:H8	2.02	0.43
19:E:16:LYS:HA	19:E:19:LYS:HE3	2.00	0.43
20:F:31:GLU:CD	20:F:34:ARG:NH2	2.77	0.43
21:G:23:TRP:CZ3	21:G:25:PRO:CA	3.01	0.43
21:G:26:LYS:CE	21:G:193:PRO:HG2	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:G:208:ARG:NH1	21:G:211:THR:CG2	2.82	0.43
22:H:310:ASP:HB2	22:H:316:ILE:HD11	2.00	0.43
23:I:54:ARG:NH2	23:I:56:VAL:CG2	2.82	0.43
24:J:41:HIS:ND1	24:J:44:ARG:CZ	2.82	0.43
25:K:157:ARG:HG2	25:K:159:LYS:HD3	2.01	0.43
29:O:51:PRO:HB3	29:O:103:PHE:HD2	1.83	0.43
35:U:9:HIS:O	35:U:16:PHE:HB3	2.18	0.43
37:W:69:HIS:ND1	37:W:74:PHE:HZ	2.17	0.43
41:a:61:C:C2	41:a:94:A:C2	3.06	0.43
41:a:553:G:C5	41:a:554:U:C5	3.07	0.43
41:a:639:U:H2'	41:a:640:C:H6	1.82	0.43
41:a:814:C:C2	41:a:815:C:C5	3.07	0.43
41:a:1024:G:OP2	41:a:1025:G:O2'	2.25	0.43
41:a:1443:U:H2'	41:a:1444:G:C8	2.54	0.43
41:a:1506:U:H2'	41:a:1507:C:C6	2.54	0.43
41:a:1707:G:C5	41:a:1708:C:C5	3.07	0.43
41:a:1789:A:OP2	48:h:221:ARG:NH1	2.52	0.43
41:a:2298:A:P	54:n:72:LYS:HZ3	2.38	0.43
41:a:2859:G:H2'	41:a:2860:A:C8	2.54	0.43
48:h:183:LYS:CE	48:h:265:LYS:O	2.67	0.43
50:j:181:ASP:HB3	50:j:186:LEU:HB2	1.99	0.43
52:l:47:LYS:HA	52:l:51:GLU:CD	2.44	0.43
52:l:131:THR:HG22	52:l:160:ALA:O	2.18	0.43
54:n:92:ARG:CZ	54:n:92:ARG:HB3	2.47	0.43
56:p:85:LYS:HA	56:p:85:LYS:HD2	1.77	0.43
59:s:1:MET:SD	59:s:2:LYS:C	3.02	0.43
62:v:1:MET:HA	62:v:1:MET:CE	2.38	0.43
62:v:1:MET:SD	62:v:44:ARG:HA	2.59	0.43
62:v:31:PHE:C	62:v:104:GLU:OE1	2.62	0.43
62:v:96:ILE:HA	62:v:100:LYS:HE3	2.00	0.43
3:2:42:GLU:OE1	3:2:42:GLU:HA	2.18	0.42
4:3:6:ARG:N	4:3:9:ASP:OD2	2.49	0.42
10:A:19:G:N3	10:A:57:A:C4	2.87	0.42
10:A:22:G:OP2	10:A:22:G:C8	2.72	0.42
10:A:47:U:O2'	10:A:50:U:OP1	2.37	0.42
11:AA:125:GLY:H	11:AA:495:ALA:HB1	1.84	0.42
11:AA:646:SER:OG	11:AA:647:ARG:N	2.52	0.42
11:AA:1313:HIS:CD2	15:AF:31:GLN:HE22	2.37	0.42
12:AB:20:HIS:CE1	12:AB:71:ALA:HB3	2.54	0.42
12:AB:144:ASN:HA	12:AB:149:GLU:HA	2.01	0.42
14:AE:59:ALA:HB3	14:AE:71:LEU:CD2	2.42	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AE:74:LYS:HB2	14:AE:74:LYS:HE2	1.60	0.42
14:AE:79:LYS:HG3	14:AE:81:ARG:HH12	1.83	0.42
14:AE:362:ARG:H	14:AE:365:GLN:HE21	1.66	0.42
14:AE:694:SER:OG	14:AE:738:ARG:NE	2.52	0.42
16:AG:288:MET:HE2	16:AG:288:MET:HB3	1.75	0.42
18:D:34:C:H2'	18:D:35:G:H8	1.83	0.42
18:D:393:A:C2	18:D:394:G:C8	3.07	0.42
18:D:414:A:C2	18:D:415:A:H1'	2.53	0.42
18:D:545:C:C5'	24:J:69:GLU:HG3	2.38	0.42
18:D:671:G:H4'	26:L:79:ARG:HH12	1.83	0.42
18:D:673:A:H2'	18:D:674:G:H8	1.79	0.42
18:D:792:A:H1'	18:D:794:A:N7	2.34	0.42
18:D:1073:U:C2	18:D:1074:G:C8	3.07	0.42
20:F:5:LYS:HD3	31:Q:109:ASN:OD1	2.19	0.42
24:J:117:LEU:HD23	24:J:154:ARG:HH21	1.84	0.42
26:L:9:MET:HE3	26:L:86:ARG:N	2.33	0.42
26:L:18:VAL:HA	26:L:21:MET:CE	2.47	0.42
27:M:16:PRO:HB3	29:O:46:MET:CG	2.47	0.42
29:O:39:PHE:CD1	29:O:44:ALA:HB1	2.53	0.42
32:R:3:THR:O	32:R:4:VAL:C	2.62	0.42
32:R:80:ILE:CG2	32:R:81:LEU:N	2.82	0.42
34:T:70:LEU:CD2	34:T:78:TYR:HA	2.49	0.42
37:W:44:MET:HE1	37:W:62:VAL:HG22	2.01	0.42
39:Y:32:VAL:HG13	39:Y:58:ILE:HG21	2.00	0.42
39:Y:139:VAL:HG22	39:Y:140:GLU:H	1.82	0.42
40:Z:2:ILE:CG2	40:Z:5:ASP:H	2.28	0.42
41:a:577:G:OP1	41:a:2502:G:O2'	2.36	0.42
41:a:1139:G:O3'	59:s:26:GLY:HA3	2.19	0.42
41:a:1141:U:H4'	41:a:1142:A:O4'	2.18	0.42
41:a:1792:G:H5'	48:h:204:VAL:CG2	2.49	0.42
41:a:2215:C:H2'	41:a:2216:G:C8	2.54	0.42
41:a:2649:C:H2'	41:a:2650:U:C6	2.51	0.42
44:d:39:A:C2	44:d:44:G:C2	3.07	0.42
44:d:48:U:P	64:x:30:ARG:HH22	2.41	0.42
49:i:55:ILE:HD13	63:w:112:TYR:CE2	2.54	0.42
52:l:6:LYS:NZ	52:l:119:ILE:C	2.77	0.42
54:n:20:PHE:HB3	54:n:22:TYR:CE1	2.54	0.42
54:n:73:SER:OG	54:n:80:ARG:HA	2.19	0.42
59:s:125:TYR:CD2	59:s:130:HIS:HB3	2.54	0.42
62:v:71:LYS:C	62:v:92:TRP:CE3	2.97	0.42
62:v:74:THR:HA	62:v:88:ASN:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:w:58:ASP:HB2	63:w:80:PHE:CE1	2.54	0.42
66:z:47:TYR:CZ	66:z:51:ARG:NH2	2.87	0.42
2:1:95:ARG:C	2:1:95:ARG:HD2	2.44	0.42
4:3:7:ARG:O	4:3:25:VAL:O	2.36	0.42
5:4:79:ARG:HA	5:4:79:ARG:HD3	1.83	0.42
8:7:34:G:C2'	8:7:35:U:H5'	2.49	0.42
9:9:129:LEU:N	9:9:130:PRO:CD	2.81	0.42
12:AB:21:LEU:HD11	12:AB:57:VAL:CG1	2.43	0.42
16:AG:10:GLU:C	16:AG:12:VAL:HG22	2.44	0.42
16:AG:56:PHE:CD1	16:AG:56:PHE:N	2.88	0.42
10:B:57:A:O5'	10:B:58:A:P	2.77	0.42
18:D:323:U:H2'	18:D:324:G:O4'	2.19	0.42
18:D:684:U:H2'	18:D:685:G:O4'	2.19	0.42
18:D:771:G:H2'	18:D:772:U:C6	2.54	0.42
18:D:1127:G:C6	18:D:1128:C:C5	3.07	0.42
20:F:3:VAL:HG22	31:Q:111:THR:HG23	2.00	0.42
22:H:74:ALA:HB3	22:H:83:LEU:CD2	2.50	0.42
25:K:77:ASN:O	25:K:80:THR:O	2.37	0.42
28:N:10:MET:HB2	28:N:33:LYS:HZ2	1.84	0.42
29:O:35:LEU:CD2	29:O:45:ARG:HG2	2.49	0.42
29:O:80:ARG:O	29:O:84:THR:HG23	2.19	0.42
30:P:56:HIS:C	30:P:57:VAL:HG23	2.44	0.42
32:R:23:ALA:O	32:R:25:GLU:OE1	2.36	0.42
34:T:3:LEU:HD23	34:T:4:SER:N	2.33	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:310:A:C2	41:a:330:A:C4	3.07	0.42
41:a:858:G:OP1	42:b:78:LYS:HE3	2.18	0.42
41:a:969:G:H2'	41:a:970:U:C6	2.53	0.42
41:a:1170:C:O2	41:a:1170:C:H2'	2.18	0.42
41:a:1282:U:H2'	41:a:1283:G:O4'	2.18	0.42
41:a:1770:G:C5	41:a:1983:G:C6	3.07	0.42
41:a:2297:A:C2	41:a:2321:U:C5	3.07	0.42
41:a:2585:U:O2	41:a:2585:U:O4'	2.37	0.42
44:d:82:U:O2	46:f:53:PHE:HZ	2.03	0.42
50:j:151:THR:HG23	50:j:151:THR:O	2.19	0.42
59:s:88:THR:OG1	59:s:91:GLU:HG3	2.18	0.42
60:t:43:ILE:HD12	60:t:56:ASP:HB2	2.01	0.42
60:t:59:LYS:NZ	60:t:92:GLU:CG	2.81	0.42
61:u:122:VAL:CG1	61:u:125:LEU:CD2	2.90	0.42
66:z:76:TYR:CZ	66:z:80:ILE:HD11	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:z:78:LYS:HG2	66:z:117:LEU:HD21	2.00	0.42
66:z:111:GLU:OE2	66:z:112:LYS:HD2	2.19	0.42
3:2:26:LYS:CE	3:2:26:LYS:HA	2.50	0.42
3:2:76:ARG:CZ	3:2:77:ARG:O	2.67	0.42
8:7:13:U:H3	24:J:47:ARG:NH1	2.10	0.42
9:9:35:VAL:HG22	9:9:35:VAL:O	2.19	0.42
9:9:80:THR:O	41:a:1108:U:OP1	2.37	0.42
10:A:18:G:H2'	10:A:57:A:C2	2.55	0.42
12:AB:154:VAL:HG11	12:AB:159:PHE:HB3	2.00	0.42
13:AC:228:LEU:HD21	13:AD:224:LEU:HD23	2.01	0.42
14:AE:66:LYS:HB2	14:AE:69:GLU:HB2	2.02	0.42
14:AE:134:ASP:HB3	14:AE:159:ILE:HG21	2.02	0.42
15:AF:58:LEU:HD12	15:AF:59:ILE:HG12	2.00	0.42
16:AG:87:LEU:CD2	16:AG:93:VAL:HG21	2.50	0.42
16:AG:185:SER:O	16:AG:185:SER:OG	2.37	0.42
16:AG:434:LEU:CD1	16:AG:455:THR:O	2.62	0.42
17:C:44:ILE:CG2	22:H:340:ARG:HB2	2.50	0.42
18:D:57:G:H2'	18:D:58:C:C6	2.54	0.42
18:D:381:C:H2'	18:D:382:A:O4'	2.19	0.42
18:D:662:U:H2'	18:D:663:A:C8	2.55	0.42
18:D:1103:C:O2	21:G:106:THR:HG21	2.18	0.42
18:D:1107:C:OP1	23:I:172:ARG:HG3	2.19	0.42
18:D:1499:A:H2'	18:D:1500:A:H8	1.84	0.42
18:D:1513:A:H2'	18:D:1514:G:H8	1.84	0.42
20:F:39:GLU:OE2	20:F:44:GLU:HA	2.19	0.42
23:I:36:ASP:OD1	23:I:57:ILE:HG21	2.19	0.42
23:I:156:ARG:O	23:I:156:ARG:HG3	2.19	0.42
24:J:139:PRO:N	24:J:182:PHE:CE2	2.88	0.42
27:M:4:ARG:HG2	27:M:5:ARG:NH2	2.32	0.42
31:Q:85:MET:HG3	31:Q:111:THR:HB	2.00	0.42
36:V:63:GLU:HB2	36:V:73:TRP:CZ2	2.54	0.42
41:a:104:A:C4	41:a:105:C:C6	3.08	0.42
41:a:133:U:H2'	41:a:134:G:C8	2.53	0.42
41:a:367:G:C4	41:a:368:A:C8	3.07	0.42
41:a:471:A:H2'	41:a:472:A:O4'	2.19	0.42
41:a:523:C:O2	41:a:554:U:O2'	2.37	0.42
41:a:587:C:O2	61:u:33:ARG:NH2	2.52	0.42
41:a:635:C:OP1	61:u:126:ARG:CZ	2.68	0.42
41:a:818:G:N1	41:a:1188:U:OP2	2.36	0.42
41:a:973:A:O4'	41:a:1188:U:C6	2.73	0.42
41:a:1008:A:OP2	59:s:37:ARG:NH1	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1028:A:N6	41:a:1125:G:H2'	2.34	0.42
41:a:1095:A:O2'	41:a:1096:A:O4'	2.36	0.42
41:a:1509:A:N3	41:a:1510:G:C8	2.87	0.42
41:a:1709:U:H2'	41:a:1710:G:C8	2.55	0.42
41:a:1824:G:H3'	48:h:52:ARG:HH12	1.84	0.42
41:a:1900:A:N1	41:a:1970:A:C6	2.87	0.42
41:a:2516:A:O2'	41:a:2517:C:H5'	2.18	0.42
41:a:2571:U:O2'	50:j:151:THR:HG23	2.20	0.42
43:c:66:THR:O	43:c:69:ALA:N	2.53	0.42
44:d:57:A:N7	54:n:26:MET:CE	2.82	0.42
48:h:45:ASN:OD1	48:h:46:ASN:N	2.51	0.42
48:h:144:VAL:HG21	48:h:162:VAL:HG11	2.01	0.42
50:j:55:LYS:HZ2	50:j:60:VAL:N	2.17	0.42
50:j:68:PHE:CE1	50:j:79:LEU:HD21	2.54	0.42
54:n:104:ILE:HD11	54:n:174:ASP:O	2.19	0.42
63:w:33:ILE:CD1	63:w:112:TYR:HD1	2.32	0.42
64:x:83:LEU:HD23	64:x:88:LYS:HD3	2.02	0.42
3:2:6:ARG:HE	3:2:42:GLU:CD	2.27	0.42
5:4:80:HIS:HE1	5:4:82:TYR:CG	2.37	0.42
9:9:129:LEU:HD12	9:9:130:PRO:CD	2.43	0.42
11:AA:300:ASP:OD1	11:AA:313:ALA:N	2.51	0.42
11:AA:861:ALA:HB1	11:AA:882:ILE:HD13	2.01	0.42
13:AD:31:LEU:HD21	13:AD:39:LEU:HD12	2.00	0.42
16:AG:21:GLU:HB3	16:AG:49:ILE:CD1	2.49	0.42
10:B:49:G:O5'	10:B:49:G:H8	2.01	0.42
17:C:20:GLU:OE1	17:C:21:ILE:O	2.36	0.42
18:D:246:A:C2	18:D:282:A:C4	3.06	0.42
18:D:415:A:C4	18:D:416:G:C8	3.07	0.42
18:D:768:A:C5	18:D:769:G:C8	3.08	0.42
18:D:946:A:C2	18:D:947:G:C5	3.08	0.42
18:D:1125:U:O2'	18:D:1126:U:O5'	2.32	0.42
18:D:1152:A:P	30:P:72:ARG:HH22	2.43	0.42
18:D:1315:U:H2'	18:D:1316:G:O4'	2.19	0.42
18:D:1359:C:OP2	33:S:75:ARG:NE	2.42	0.42
18:D:1381:U:C4	18:D:1382:C:C5	3.07	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
19:E:50:ALA:O	19:E:54:MET:HG3	2.19	0.42
19:E:60:ARG:O	19:E:64:LYS:HD3	2.19	0.42
21:G:55:ALA:O	21:G:59:LYS:HG2	2.19	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)
22:H:124:LEU:O	22:H:127:ILE:O	2.36	0.42
22:H:336:ASP:HB2	22:H:341:ARG:H	1.84	0.42
23:I:72:ARG:O	23:I:75:ILE:HG22	2.19	0.42
25:K:111:MET:O	25:K:112:ARG:C	2.63	0.42
26:L:36:ILE:HD12	26:L:36:ILE:HA	1.82	0.42
27:M:99:LEU:O	27:M:103:TRP:CG	2.73	0.42
30:P:64:GLN:HG2	33:S:101:TRP:HH2	1.84	0.42
31:Q:47:ALA:O	31:Q:52:PHE:HB2	2.19	0.42
33:S:77:PHE:HE1	33:S:93:ILE:CG2	2.30	0.42
37:W:45:ILE:HA	37:W:62:VAL:HG12	2.01	0.42
41:a:136:G:H2'	41:a:137:U:C6	2.54	0.42
41:a:780:G:O2'	41:a:783:A:N6	2.53	0.42
41:a:938:G:C2	41:a:939:G:C8	3.08	0.42
41:a:1009:A:N3	41:a:1153:C:O2'	2.48	0.42
41:a:1281:G:H2'	41:a:1282:U:C6	2.55	0.42
41:a:1361:G:H2'	41:a:1362:C:C6	2.54	0.42
41:a:2392:A:N3	61:u:55:MET:HE2	2.34	0.42
41:a:2469:A:C6	41:a:2482:A:C8	3.08	0.42
41:a:2590:A:H2'	41:a:2591:C:H6	1.83	0.42
41:a:2821:A:C2	41:a:2822:G:C4	3.07	0.42
41:a:2856:A:C6	41:a:2862:G:C6	3.08	0.42
45:e:20:ASN:O	45:e:24:GLU:HG2	2.20	0.42
45:e:25:GLN:OE1	45:e:50:VAL:HG21	2.19	0.42
51:k:34:LEU:HB3	51:k:51:GLU:OE2	2.19	0.42
52:l:170:ARG:NH1	52:l:175:ILE:HA	2.34	0.42
54:n:93:GLY:O	54:n:94:GLU:C	2.62	0.42
60:t:7:MET:C	60:t:18:ARG:NH1	2.77	0.42
1:0:77:PHE:CD1	1:0:77:PHE:C	2.98	0.42
2:1:75:PHE:HE2	2:1:77:ASP:OD2	2.02	0.42
3:2:11:LEU:HD11	3:2:46:ALA:CB	2.50	0.42
5:4:2:PHE:CD1	5:4:56:PHE:CE1	3.08	0.42
9:9:15:VAL:HG22	9:9:66:GLY:HA3	2.00	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:6:LEU:HG	12:AB:56:PHE:HE1	1.85	0.42
16:AG:288:MET:HE3	16:AG:288:MET:C	2.45	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:36:C:N4	18:D:37:U:C4	2.88	0.42
18:D:197:A:N6	18:D:221:C:H4'	2.35	0.42
18:D:299:G:H2'	18:D:300:A:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:619:U:H1'	24:J:128:ARG:NH1	2.35	0.42
18:D:689:C:H2'	18:D:690:G:O4'	2.19	0.42
18:D:1071:C:C5'	25:K:54:ARG:HH21	2.33	0.42
18:D:1080:A:OP1	25:K:50:TYR:OH	2.29	0.42
20:F:14:VAL:O	20:F:18:ARG:HG3	2.19	0.42
21:G:30:PHE:CE1	21:G:201:PRO:HG3	2.53	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
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
25:K:97:GLN:NE2	25:K:98:PRO:O	2.52	0.42
26:L:2:ARG:C	26:L:65:GLU:OE1	2.62	0.42
27:M:23:LEU:H	27:M:23:LEU:CD1	2.30	0.42
28:N:47:GLU:OE1	28:N:63:LEU:C	2.62	0.42
31:Q:64:GLN:HB2	31:Q:99:ALA:HB2	2.01	0.42
32:R:25:GLU:O	32:R:25:GLU:HG2	2.20	0.42
32:R:116:LYS:O	32:R:117:TYR:HD1	2.03	0.42
37:W:40:ILE:HG22	37:W:67:VAL:HA	2.01	0.42
38:X:71:ARG:CZ	47:g:50:ASP:O	2.67	0.42
41:a:729:G:C8	48:h:207:LYS:HD2	2.54	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:1827:U:O2'	41:a:1828:G:H5'	2.19	0.42
41:a:1839:G:O4'	41:a:1927:A:O4'	2.37	0.42
41:a:1874:C:H2'	41:a:1875:G:O4'	2.20	0.42
41:a:2049:G:H21	50:j:161:MET:HE2	1.84	0.42
41:a:2554:U:H2'	41:a:2555:U:C6	2.55	0.42
41:a:2557:G:H2'	41:a:2558:C:H6	1.84	0.42
41:a:2815:C:O2'	49:i:41:HIS:ND1	2.41	0.42
43:c:76:GLU:CD	43:c:76:GLU:C	2.87	0.42
51:k:9:ILE:HD12	51:k:51:GLU:HG2	2.01	0.42
53:m:25:LYS:O	53:m:28:ARG:N	2.52	0.42
54:n:38:MET:HE3	54:n:57:LEU:HD23	2.01	0.42
56:p:17:VAL:O	56:p:18:LYS:CE	2.65	0.42
62:v:45:GLN:HE22	62:v:125:PRO:HD2	1.84	0.42
62:v:49:ALA:O	62:v:50:ARG:C	2.62	0.42
66:z:79:PHE:CE1	66:z:110:VAL:HA	2.46	0.42
6:5:16:DA:OP1	11:AA:175:ARG:NH2	2.52	0.42
9:9:94:ARG:N	9:9:94:ARG:HD3	2.34	0.42
11:AA:22:LEU:HB3	11:AA:655:VAL:HG11	2.01	0.42
11:AA:859:GLU:CD	16:AG:38:LYS:HB3	2.27	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AE:836:ARG:HG3	14:AE:869:CYS:HB3	2.02	0.42
16:AG:314:LEU:HD23	16:AG:314:LEU:HA	1.85	0.42
10:B:22:G:C8	10:B:22:G:OP2	2.72	0.42
17:C:34:THR:HB	17:C:38:LYS:N	2.35	0.42
18:D:119:A:C4	18:D:240:G:N7	2.87	0.42
18:D:256:U:H2'	18:D:257:G:C8	2.55	0.42
18:D:374:A:C6	18:D:375:U:C4	3.08	0.42
18:D:505:G:C2	18:D:506:G:C5	3.07	0.42
18:D:545:C:OP2	24:J:62:ARG:NH1	2.53	0.42
18:D:964:A:C2	18:D:969:A:N3	2.87	0.42
18:D:1255:G:O2'	18:D:1258:G:N3	2.48	0.42
18:D:1381:U:N3	18:D:1382:C:C5	2.88	0.42
18:D:1410:A:H2'	18:D:1411:C:C6	2.54	0.42
18:D:1437:A:C4	18:D:1438:G:C8	3.08	0.42
18:D:1439:G:H2'	18:D:1440:U:O4'	2.20	0.42
18:D:1499:A:O2'	18:D:1500:A:H5'	2.20	0.42
21:G:105:LYS:C	21:G:109:GLN:HE22	2.24	0.42
23:I:132:ARG:CB	23:I:135:LYS:HE3	2.49	0.42
26:L:29:ILE:HD12	26:L:29:ILE:H	1.83	0.42
26:L:88:MET:SD	26:L:90:MET:HE3	2.60	0.42
26:L:94:HIS:CG	26:L:95:ALA:N	2.88	0.42
29:O:116:VAL:HG11	30:P:62:ARG:HD3	2.02	0.42
33:S:63:ARG:HH22	33:S:70:PRO:HD3	1.84	0.42
35:U:67:ILE:O	35:U:67:ILE:HG13	2.20	0.42
37:W:66:MET:SD	37:W:66:MET:C	3.03	0.42
39:Y:45:THR:HG21	39:Y:50:LYS:NZ	2.33	0.42
41:a:196:A:C5	41:a:805:G:C6	3.07	0.42
41:a:751:A:C6	41:a:789:A:C5	3.08	0.42
41:a:826:U:O2'	61:u:53:GLY:HA3	2.19	0.42
41:a:1125:G:OP2	41:a:1126:A:O2'	2.29	0.42
41:a:1399:C:C2	41:a:1400:U:C5	3.08	0.42
41:a:1511:G:H2'	41:a:1512:C:H6	1.84	0.42
41:a:1906:G:C8	41:a:1929:G:C4	3.08	0.42
41:a:1964:G:H4'	41:a:1965:C:OP2	2.19	0.42
41:a:2061:G:N3	41:a:2063:C:C5	2.87	0.42
41:a:2228:G:H2'	41:a:2229:U:C6	2.54	0.42
41:a:2287:A:N7	41:a:2289:G:C8	2.87	0.42
41:a:2465:C:O2	41:a:2465:C:H2'	2.18	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
41:a:2884:U:C2	49:i:40:ARG:CZ	3.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:j:170:VAL:HG13	50:j:194:PRO:CG	2.50	0.42
55:o:30:ARG:CZ	61:u:62:PRO:HB3	2.50	0.42
55:o:45:ARG:HB3	55:o:46:PRO:HD3	2.02	0.42
56:p:94:TYR:HE1	56:p:152:ARG:HD2	1.83	0.42
64:x:79:ALA:CB	64:x:113:ALA:HB3	2.49	0.42
65:y:110:ILE:O	65:y:110:ILE:HG13	2.19	0.42
8:7:12:U:H4'	25:K:56:VAL:HG11	2.02	0.42
9:9:23:LEU:CA	9:9:118:ILE:HD11	2.50	0.42
12:AB:29:LEU:HD12	12:AB:30:ALA:N	2.35	0.42
12:AB:110:PRO:HD3	12:AB:161:LYS:HB2	2.01	0.42
14:AE:97:VAL:HG12	14:AE:101:ARG:HG3	2.02	0.42
14:AE:117:LEU:HG	14:AE:118:LYS:HG3	2.00	0.42
16:AG:162:ILE:HD13	16:AG:167:MET:CE	2.49	0.42
16:AG:243:LYS:CD	21:G:179:LEU:CD2	2.95	0.42
10:B:18:G:H2'	10:B:57:A:C2	2.55	0.42
18:D:68:G:H3'	18:D:69:G:H5''	2.01	0.42
18:D:588:G:C4'	28:N:3:MET:HE1	2.48	0.42
18:D:611:C:N3	18:D:612:C:C5	2.87	0.42
18:D:745:G:H2'	18:D:746:A:H8	1.84	0.42
21:G:30:PHE:CG	21:G:45:LYS:NZ	2.87	0.42
23:I:184:TYR:O	23:I:185:ASN:CG	2.63	0.42
24:J:170:TRP:CD1	24:J:171:LEU:HG	2.54	0.42
31:Q:87:LYS:CG	31:Q:113:VAL:CG2	2.89	0.42
32:R:66:TYR:CE2	32:R:68:GLY:HA2	2.55	0.42
34:T:15:PHE:HD2	34:T:30:ALA:CB	2.31	0.42
38:X:3:ARG:CZ	54:n:110:ARG:HD2	2.49	0.42
39:Y:99:LYS:HD2	39:Y:140:GLU:OE2	2.19	0.42
41:a:307:G:N1	41:a:310:A:OP2	2.47	0.42
41:a:580:U:C2	41:a:581:C:C5	3.07	0.42
41:a:859:G:O2'	41:a:916:G:O6	2.37	0.42
41:a:1145:C:H2'	41:a:1146:C:H6	1.84	0.42
41:a:1386:C:H2'	41:a:1387:A:H8	1.81	0.42
41:a:1580:A:C8	41:a:1581:G:C8	3.08	0.42
41:a:2002:G:OP1	63:w:13:ASN:HA	2.20	0.42
41:a:2072:C:C2	41:a:2073:C:C5	3.08	0.42
41:a:2756:U:N3	41:a:2758:A:C6	2.87	0.42
43:c:4:VAL:HG22	43:c:11:ARG:HG2	2.00	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
48:h:71:LYS:CB	48:h:96:TYR:CZ	3.03	0.42
50:j:34:VAL:HG13	50:j:48:ILE:CG2	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:j:37:VAL:HG13	50:j:48:ILE:CD1	2.49	0.42
52:l:23:PHE:CD1	52:l:111:GLU:HG3	2.55	0.42
52:l:149:ILE:HG21	52:l:175:ILE:HD11	2.01	0.42
52:l:193:VAL:O	52:l:194:LYS:C	2.62	0.42
56:p:70:ALA:HA	56:p:73:ASN:HD22	1.84	0.42
58:r:114:GLU:OE2	58:r:133:GLN:N	2.53	0.42
59:s:15:TRP:CE3	59:s:135:GLN:HB3	2.55	0.42
60:t:7:MET:SD	60:t:18:ARG:HG3	2.59	0.42
63:w:38:LEU:HB3	63:w:39:PRO:HD3	2.02	0.42
63:w:60:VAL:CG2	63:w:63:ARG:NH1	2.78	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:88:LYS:O	64:x:116:GLN:OE1	2.38	0.42
3:2:5:GLU:HA	45:e:22:LEU:HD21	2.02	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	2.20	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
12:AB:73:ARG:HE	12:AB:73:ARG:CA	2.33	0.42
18:D:255:G:H2'	18:D:256:U:C6	2.55	0.42
18:D:501:C:H1'	18:D:549:C:H1'	2.01	0.42
18:D:519:C:H2'	18:D:520:A:O4'	2.20	0.42
18:D:539:A:H2'	18:D:540:G:C8	2.54	0.42
18:D:552:U:H2'	18:D:553:A:H8	1.85	0.42
18:D:980:C:H2'	18:D:981:U:H5'	2.01	0.42
18:D:1073:U:O2	21:G:103:ASN:ND2	2.52	0.42
18:D:1493:A:O2'	18:D:1494:G:P	2.78	0.42
19:E:9:LYS:CG	19:E:13:GLN:NE2	2.82	0.42
20:F:5:LYS:CD	31:Q:109:ASN:OD1	2.68	0.42
22:H:135:LEU:CB	22:H:157:ILE:CB	2.97	0.42
22:H:331:MET:SD	22:H:348:GLN:HG2	2.60	0.42
24:J:67:VAL:CG1	24:J:71:GLN:HB3	2.50	0.42
24:J:76:TYR:HE1	24:J:86:THR:CG2	2.33	0.42
25:K:80:THR:OG1	25:K:81:LEU:N	2.53	0.42
25:K:123:VAL:O	25:K:124:LEU:HD23	2.20	0.42
26:L:14:GLN:NE2	26:L:83:ALA:HB2	2.35	0.42
26:L:24:ARG:O	26:L:25:TYR:C	2.62	0.42
26:L:25:TYR:O	26:L:26:THR:C	2.61	0.42
30:P:7:ARG:HA	30:P:75:ASP:OD1	2.20	0.42
31:Q:20:VAL:CG1	31:Q:21:ALA:N	2.82	0.42
32:R:21:VAL:HG23	32:R:21:VAL:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:U:4:ILE:N	35:U:4:ILE:HD12	2.34	0.42
36:V:15:ASP:OD1	36:V:15:ASP:N	2.49	0.42
38:X:101:ARG:C	38:X:103:LYS:H	2.26	0.42
41:a:404:A:O2'	41:a:405:U:P	2.78	0.42
41:a:667:U:H2'	41:a:668:A:O4'	2.20	0.42
41:a:1076:C:H2'	41:a:1077:A:C8	2.54	0.42
41:a:1565:C:OP1	48:h:18:LYS:HD2	2.19	0.42
41:a:1657:U:H2'	41:a:1658:C:H6	1.83	0.42
41:a:2040:G:H2'	41:a:2041:U:O4'	2.20	0.42
41:a:2249:U:H3'	41:a:2250:G:C5'	2.49	0.42
41:a:2673:G:C2	41:a:2674:G:C8	3.08	0.42
44:d:57:A:C4	44:d:58:A:C8	3.07	0.42
45:e:13:GLU:O	45:e:14:LEU:C	2.63	0.42
48:h:94:VAL:HG12	48:h:95:LEU:N	2.34	0.42
48:h:196:GLY:O	48:h:198:ALA:N	2.53	0.42
50:j:152:PRO:HG3	50:j:156:PHE:CE1	2.53	0.42
52:l:105:LEU:O	52:l:109:LEU:HG	2.18	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
54:n:30:ARG:C	54:n:158:THR:HG1	2.28	0.42
55:o:22:PHE:CE1	55:o:62:LEU:HD23	2.55	0.42
55:o:29:LEU:O	55:o:29:LEU:HG	2.19	0.42
58:r:8:LYS:NZ	58:r:9:VAL:O	2.52	0.42
63:w:45:ARG:O	63:w:49:GLU:CD	2.62	0.42
66:z:111:GLU:OE2	66:z:112:LYS:HG2	2.19	0.42
3:2:9:LYS:C	3:2:12:ARG:HH22	2.28	0.42
8:7:23:U:C2'	14:AE:68:TYR:OH	2.66	0.42
9:9:118:ILE:HB	9:9:119:PRO:CD	2.42	0.42
14:AE:68:TYR:CA	14:AE:92:VAL:HG23	2.45	0.42
16:AG:152:LEU:HD11	16:AG:162:ILE:HD12	2.01	0.42
17:C:33:ILE:O	22:H:338:GLU:HB3	2.19	0.42
18:D:76:G:C5	18:D:77:A:N7	2.88	0.42
18:D:112:G:N1	18:D:330:C:C5	2.88	0.42
18:D:1172:C:C2	18:D:1173:U:C5	3.08	0.42
18:D:1202:U:N3	33:S:82:ILE:HD13	2.35	0.42
18:D:1328:C:H5''	38:X:28:THR:HG21	2.01	0.42
19:E:54:MET:CE	19:E:75:HIS:CE1	2.99	0.42
22:H:70:VAL:O	22:H:71:ALA:HB2	2.20	0.42
22:H:308:GLU:HB2	22:H:347:LYS:HB3	2.02	0.42
23:I:72:ARG:HD3	23:I:75:ILE:H	1.84	0.42
27:M:37:SER:HA	29:O:41:ARG:HH22	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:T:77:ARG:HA	34:T:77:ARG:NE	2.35	0.42
35:U:26:ASN:ND2	35:U:31:ARG:CD	2.83	0.42
36:V:61:ILE:HA	36:V:75:LEU:HA	2.02	0.42
38:X:71:ARG:NH1	47:g:51:VAL:O	2.52	0.42
39:Y:99:LYS:CE	39:Y:138:VAL:O	2.68	0.42
41:a:299:A:C5	41:a:322:A:C2	3.07	0.42
41:a:320:A:N3	52:l:163:ASN:ND2	2.67	0.42
41:a:353:C:C2	41:a:354:A:C8	3.07	0.42
41:a:407:G:C2	41:a:408:G:C8	3.07	0.42
41:a:789:A:N1	53:m:3:ARG:NH2	2.68	0.42
41:a:1065:U:O2'	41:a:1066:U:P	2.77	0.42
41:a:1560:G:C5	41:a:1561:C:C5	3.08	0.42
41:a:1778:U:C4	41:a:1784:A:C4	3.07	0.42
41:a:1906:G:C8	41:a:1929:G:C5	3.07	0.42
41:a:2093:G:P	58:r:22:LYS:CG	3.07	0.42
41:a:2226:C:H2'	41:a:2227:A:O4'	2.20	0.42
41:a:2590:A:C2	41:a:2591:C:C5	3.08	0.42
41:a:2756:U:C4	41:a:2759:G:O6	2.73	0.42
41:a:2759:G:O2'	56:p:35:ARG:NH1	2.53	0.42
41:a:2813:A:H2'	41:a:2814:A:H8	1.84	0.42
42:b:21:LEU:HD23	42:b:40:GLN:HA	2.00	0.42
44:d:113:C:HO2'	64:x:46:GLU:CD	2.28	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
50:j:184:ARG:NH2	65:y:7:GLN:CD	2.72	0.42
56:p:52:PHE:CE1	56:p:69:ARG:HD3	2.55	0.42
62:v:105:MET:HG2	62:v:117:PHE:CZ	2.54	0.42
63:w:70:THR:O	63:w:71:ARG:HB2	2.20	0.42
64:x:36:TYR:CD2	64:x:37:ALA:N	2.88	0.42
65:y:106:LYS:HB3	65:y:109:ARG:HH22	1.84	0.42
1:0:52:PRO:HB3	66:z:89:GLU:CD	2.44	0.42
3:2:57:VAL:HG22	3:2:58:VAL:N	2.35	0.42
5:4:18:ARG:NH1	44:d:93:C:OP2	2.53	0.42
9:9:33:VAL:H	9:9:36:ASP:CG	2.28	0.42
10:A:5:G:C2'	10:A:6:G:C5'	2.98	0.42
10:A:59:A:C5	10:A:60:U:C5	3.08	0.42
11:AA:484:LEU:HA	11:AA:485:ASP:HA	1.85	0.42
11:AA:849:GLU:HB2	11:AA:887:VAL:HG23	2.02	0.42
12:AB:34:THR:CG2	12:AB:45:ALA:HB1	2.50	0.42
14:AE:513:MET:HE1	14:AE:579:LEU:HD13	2.01	0.42
14:AE:609:TYR:HD2	14:AE:610:ARG:HD2	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:208:LEU:HD23	16:AG:208:LEU:HA	1.77	0.42
16:AG:211:ILE:HD12	16:AG:211:ILE:HA	1.85	0.42
16:AG:318:ILE:CG1	16:AG:338:VAL:HG11	2.48	0.42
16:AG:434:LEU:HG	16:AG:455:THR:CA	2.50	0.42
10:B:11:A:H2'	10:B:12:G:C8	2.54	0.42
10:B:59:A:C5	10:B:60:U:C5	3.08	0.42
17:C:12:ARG:CB	22:H:264:GLU:CB	2.98	0.42
17:C:30:LYS:HA	17:C:33:ILE:HG12	2.02	0.42
17:C:60:LYS:NZ	18:D:735:C:O5'	2.52	0.42
17:C:70:TYR:HE2	26:L:49:TYR:CZ	2.38	0.42
18:D:5:U:O2	18:D:5:U:O4'	2.37	0.42
18:D:13:U:C2	18:D:914:A:C8	3.08	0.42
18:D:21:G:H2'	18:D:22:G:C8	2.54	0.42
18:D:105:G:C5	18:D:106:C:C4	3.08	0.42
18:D:407:U:C2	18:D:408:A:C8	3.08	0.42
18:D:687:A:C8	18:D:701:U:C4	3.08	0.42
18:D:860:A:H2'	18:D:861:G:O4'	2.20	0.42
18:D:997:U:O2'	18:D:998:C:H5'	2.20	0.42
18:D:1202:U:C2	33:S:82:ILE:HD13	2.55	0.42
18:D:1227:A:H5'	38:X:110:LYS:HZ1	1.85	0.42
18:D:1526:G:P	20:F:42:THR:HG23	2.59	0.42
21:G:30:PHE:HA	21:G:45:LYS:NZ	2.35	0.42
22:H:86:ARG:O	22:H:89:ALA:HB3	2.20	0.42
23:I:105:GLU:CD	23:I:107:ARG:HH21	2.28	0.42
23:I:149:ILE:HG13	23:I:202:ILE:HG12	2.01	0.42
23:I:172:ARG:NH1	23:I:174:PRO:HG3	2.35	0.42
24:J:65:TYR:CE1	24:J:100:ASN:CG	2.98	0.42
25:K:88:VAL:HG12	25:K:93:ARG:HG2	2.02	0.42
25:K:123:VAL:C	25:K:124:LEU:HD23	2.45	0.42
29:O:97:GLU:HG2	29:O:98:LEU:N	2.35	0.42
30:P:59:LYS:HE2	30:P:62:ARG:CZ	2.50	0.42
31:Q:35:THR:HA	31:Q:42:LEU:HG	2.01	0.42
34:T:26:GLU:CG	34:T:27:VAL:N	2.83	0.42
35:U:14:ARG:CD	35:U:42:ILE:HG21	2.47	0.42
40:Z:14:MET:CG	40:Z:15:SER:H	2.25	0.42
41:a:1209:U:O2'	41:a:1237:A:N1	2.46	0.42
41:a:1252:G:H1	66:z:37:GLN:HE21	1.68	0.42
41:a:1597:A:H5''	41:a:1598:A:H5'	2.02	0.42
41:a:2586:U:H2'	41:a:2587:A:O4'	2.20	0.42
41:a:2722:G:C2'	41:a:2723:C:H5'	2.50	0.42
44:d:39:A:C2	44:d:44:G:C4	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:d:83:G:O4'	46:f:53:PHE:CE2	2.72	0.42
45:e:14:LEU:HA	45:e:17:GLU:OE1	2.20	0.42
45:e:37:LEU:HD21	45:e:43:LEU:CD2	2.49	0.42
52:l:108:ILE:HD11	52:l:180:LEU:CD1	2.50	0.42
54:n:136:ILE:HA	54:n:141:ILE:HG21	2.01	0.42
58:r:5:LEU:CD1	58:r:17:ASP:HB3	2.50	0.42
58:r:8:LYS:HD2	58:r:13:GLY:O	2.20	0.42
59:s:123:LYS:CD	59:s:132:HIS:HD2	2.33	0.42
60:t:116:ILE:HG13	60:t:117:SER:N	2.34	0.42
65:y:37:LYS:CA	65:y:37:LYS:HE3	2.49	0.42
2:1:23:LEU:CD2	2:1:39:THR:HG21	2.50	0.41
2:1:49:LYS:NZ	41:a:491:G:O6	2.50	0.41
2:1:74:ILE:HD12	2:1:74:ILE:N	2.34	0.41
3:2:3:ARG:HG3	3:2:5:GLU:OE1	2.19	0.41
10:A:31:G:H2'	10:A:32:C:C6	2.55	0.41
10:A:68:C:C4	10:A:69:C:C5	3.08	0.41
10:A:71:C:C3'	10:A:72:A:C8	2.99	0.41
11:AA:144:VAL:HG23	11:AA:515:MET:HB2	2.02	0.41
13:AD:48:LEU:HG	14:AE:535:ARG:HG3	2.02	0.41
16:AG:206:ILE:HD11	16:AG:226:ALA:HB2	2.02	0.41
16:AG:207:GLU:HG3	16:AG:210:ARG:CB	2.51	0.41
16:AG:243:LYS:CG	21:G:179:LEU:HD22	2.50	0.41
16:AG:244:ARG:N	16:AG:244:ARG:HE	2.18	0.41
16:AG:277:ASP:HB2	16:AG:282:GLN:CG	2.50	0.41
16:AG:296:ILE:CD1	16:AG:307:ILE:HA	2.50	0.41
18:D:250:A:O4'	18:D:252:U:C6	2.72	0.41
18:D:603:U:C2	18:D:604:G:C8	3.08	0.41
18:D:820:U:H4'	18:D:821:G:OP2	2.20	0.41
18:D:1061:G:H5'	30:P:61:ALA:HB2	2.02	0.41
18:D:1382:C:O2	18:D:1382:C:H2'	2.20	0.41
19:E:53:GLU:O	19:E:57:ILE:CD1	2.68	0.41
20:F:39:GLU:OE1	20:F:44:GLU:OE1	2.38	0.41
23:I:6:HIS:CD2	33:S:89:MET:HB3	2.55	0.41
24:J:62:ARG:CG	24:J:72:PHE:CZ	3.01	0.41
27:M:18:PHE:HD2	27:M:59:LEU:CD2	2.31	0.41
27:M:74:GLU:HG3	27:M:91:VAL:CG1	2.50	0.41
28:N:27:MET:CA	28:N:58:GLU:OE2	2.67	0.41
30:P:45:ARG:CD	30:P:47:GLU:OE2	2.67	0.41
31:Q:85:MET:HB3	31:Q:113:VAL:HG21	2.01	0.41
32:R:7:LEU:HD21	32:R:12:ARG:HH21	1.82	0.41
32:R:57:LEU:HG	32:R:58:THR:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:R:79:VAL:O	32:R:103:ASP:HB2	2.20	0.41
39:Y:96:LYS:CD	39:Y:136:GLY:HA3	2.50	0.41
40:Z:20:VAL:O	40:Z:20:VAL:CG1	2.65	0.41
41:a:16:C:O4'	49:i:15:MET:HE1	2.20	0.41
41:a:136:G:H2'	41:a:137:U:H6	1.85	0.41
41:a:579:G:H2'	41:a:580:U:H6	1.85	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:1069:A:C2	41:a:1073:A:C8	3.08	0.41
41:a:1080:A:C6	41:a:1081:U:C4	3.08	0.41
41:a:1212:G:O2'	41:a:1236:G:N2	2.47	0.41
41:a:1820:U:C2	48:h:201:MET:CE	3.03	0.41
41:a:1958:C:O2'	41:a:1959:G:H5'	2.20	0.41
41:a:2066:C:O2'	41:a:2067:G:H5'	2.20	0.41
41:a:2259:U:C5	41:a:2427:C:N4	2.88	0.41
41:a:2636:C:O2'	50:j:45:TYR:CZ	2.70	0.41
41:a:2708:G:O4'	63:w:71:ARG:NH1	2.53	0.41
52:l:46:GLN:O	52:l:88:ARG:NH2	2.53	0.41
56:p:89:LEU:HD22	56:p:162:VAL:HA	2.01	0.41
62:v:104:GLU:CD	62:v:105:MET:H	2.28	0.41
64:x:88:LYS:HB3	64:x:116:GLN:OE1	2.20	0.41
1:0:4:VAL:HG23	1:0:4:VAL:O	2.20	0.41
3:2:26:LYS:HA	3:2:26:LYS:HE3	2.02	0.41
3:2:30:ILE:HG22	3:2:32:LEU:HD22	2.02	0.41
4:3:6:ARG:HG2	4:3:7:ARG:N	2.35	0.41
5:4:77:VAL:HG21	5:4:79:ARG:HE	1.84	0.41
9:9:11:ILE:O	9:9:15:VAL:HG23	2.21	0.41
11:AA:22:LEU:HD22	11:AA:603:ILE:HG21	2.02	0.41
12:AB:33:ILE:HG21	12:AB:50:LEU:HD12	2.01	0.41
14:AE:1003:LEU:HD23	14:AE:1018:ALA:HB2	2.02	0.41
16:AG:131:ARG:HG2	16:AG:186:VAL:CG1	2.48	0.41
16:AG:148:ASP:HA	16:AG:164:ARG:HD2	2.02	0.41
16:AG:354:ALA:O	16:AG:358:THR:HG22	2.19	0.41
16:AG:363:LEU:HG	16:AG:410:ALA:HA	1.94	0.41
10:B:1:C:C5	10:B:2:G:N7	2.89	0.41
17:C:40:VAL:HG13	22:H:339:ARG:CD	2.49	0.41
18:D:306:A:C4	18:D:307:C:C6	3.08	0.41
18:D:1515:G:H2'	18:D:1516:G:C8	2.54	0.41
18:D:1524:C:H2'	18:D:1525:G:C8	2.55	0.41
22:H:287:LEU:HD23	22:H:318:PRO:HB2	2.02	0.41
22:H:293:PHE:HA	22:H:302:GLY:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:J:76:TYR:O	24:J:76:TYR:CD1	2.73	0.41
27:M:93:PRO:O	27:M:96:ARG:HG2	2.20	0.41
28:N:96:MET:HE2	28:N:99:LEU:HD12	2.03	0.41
33:S:10:GLU:OE1	33:S:63:ARG:HG3	2.20	0.41
34:T:18:ASP:O	34:T:19:ALA:HB3	2.20	0.41
34:T:70:LEU:HG	34:T:78:TYR:HB2	2.02	0.41
35:U:4:ILE:HG22	35:U:71:VAL:HG11	2.03	0.41
36:V:48:ASP:HB3	36:V:75:LEU:CD2	2.49	0.41
39:Y:60:VAL:CG2	39:Y:66:PHE:CD1	3.03	0.41
39:Y:63:ASP:C	39:Y:65:SER:H	2.28	0.41
41:a:138:U:C5	41:a:142:A:C6	3.08	0.41
41:a:209:C:N3	41:a:210:C:C5	2.88	0.41
41:a:532:A:OP1	66:z:45:TYR:OH	2.32	0.41
41:a:704:G:O2'	41:a:726:G:N2	2.45	0.41
41:a:958:U:C4	62:v:40:ARG:NH1	2.88	0.41
41:a:1246:A:H2'	41:a:1247:A:O4'	2.20	0.41
41:a:1773:A:C8	41:a:1829:A:C8	3.08	0.41
41:a:2291:U:H2'	41:a:2292:U:H6	1.85	0.41
42:b:40:GLN:NE2	42:b:59:LEU:HD23	2.35	0.41
47:g:16:CYS:CB	47:g:37:CYS:CB	2.90	0.41
48:h:53:HIS:NE2	48:h:219:THR:HG23	2.35	0.41
48:h:108:LYS:CG	48:h:109:GLY:N	2.83	0.41
49:i:22:LEU:CG	49:i:23:THR:N	2.84	0.41
50:j:57:ALA:O	50:j:60:VAL:HG12	2.19	0.41
50:j:61:THR:HG23	50:j:63:PRO:HD2	2.00	0.41
52:l:77:ILE:O	52:l:77:ILE:HG22	2.19	0.41
54:n:67:ILE:CD1	54:n:87:CYS:HB3	2.51	0.41
56:p:137:ASP:OD2	56:p:140:VAL:N	2.45	0.41
60:t:20:MET:H	60:t:44:LYS:HZ3	1.69	0.41
63:w:18:GLN:HE22	63:w:22:ARG:NE	2.18	0.41
3:2:22:THR:O	3:2:25:GLU:HG2	2.20	0.41
5:4:2:PHE:CZ	5:4:56:PHE:CZ	3.08	0.41
9:9:87:GLU:OE1	9:9:91:ALA:O	2.38	0.41
9:9:94:ARG:HB3	9:9:97:LYS:NZ	2.32	0.41
9:9:95:LEU:O	9:9:98:GLU:HG2	2.20	0.41
14:AE:800:LEU:HB3	14:AE:920:ALA:HB1	2.02	0.41
14:AE:1155:ILE:HG13	14:AE:1210:ILE:HB	2.02	0.41
10:B:5:G:C2'	10:B:6:G:C5'	2.98	0.41
17:C:13:PHE:CG	17:C:51:TYR:CD1	3.08	0.41
18:D:338:A:C5	18:D:339:C:C5	3.08	0.41
18:D:429:U:H3	18:D:431:A:N6	2.18	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:611:C:O2	18:D:611:C:H2'	2.19	0.41
18:D:671:G:O2'	26:L:79:ARG:NH1	2.54	0.41
18:D:908:A:H2'	18:D:909:A:H8	1.85	0.41
18:D:1241:G:H2'	18:D:1242:G:H8	1.85	0.41
18:D:1261:A:C5	18:D:1262:C:C6	3.07	0.41
22:H:54:LYS:HD3	22:H:58:GLY:HA2	2.02	0.41
23:I:66:VAL:HB	23:I:101:ILE:CD1	2.50	0.41
25:K:115:LEU:O	25:K:120:VAL:HG12	2.20	0.41
32:R:3:THR:O	32:R:6:GLN:HB2	2.20	0.41
36:V:43:LYS:C	36:V:44:LEU:HD12	2.45	0.41
39:Y:79:LEU:HD11	39:Y:132:ALA:HA	2.02	0.41
41:a:239:C:O2'	41:a:622:G:O2'	2.32	0.41
41:a:749:A:H2'	41:a:749:A:N3	2.35	0.41
41:a:1128:G:C6	41:a:2518:A:C6	3.08	0.41
41:a:1289:C:H2'	41:a:1290:C:H6	1.84	0.41
41:a:1343:G:C8	41:a:1597:A:C6	3.08	0.41
41:a:2310:C:O2'	54:n:74:VAL:HG12	2.20	0.41
41:a:2507:C:C2	41:a:2583:G:C2	3.07	0.41
41:a:2547:A:H4'	60:t:29:HIS:NE2	2.34	0.41
41:a:2649:C:C2	41:a:2650:U:C6	3.08	0.41
41:a:2884:U:P	49:i:40:ARG:NH2	2.93	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:175:LEU:HB3	50:j:189:VAL:CG1	2.50	0.41
52:l:6:LYS:NZ	52:l:119:ILE:CG2	2.83	0.41
52:l:31:VAL:HG21	52:l:104:ALA:CB	2.50	0.41
54:n:38:MET:HE3	54:n:57:LEU:CD2	2.50	0.41
54:n:38:MET:HE3	54:n:57:LEU:CG	2.49	0.41
58:r:66:ASN:CG	58:r:135:HIS:HB2	2.45	0.41
61:u:123:ARG:C	61:u:125:LEU:HD22	2.45	0.41
62:v:57:VAL:CG2	62:v:60:GLN:O	2.69	0.41
1:0:40:MET:HE1	66:z:105:ALA:HB1	2.01	0.41
2:1:31:GLN:H	2:1:31:GLN:CD	2.22	0.41
5:4:77:VAL:CG2	5:4:79:ARG:NE	2.78	0.41
6:5:23:DA:H2''	6:5:24:DC:C6	2.56	0.41
9:9:33:VAL:O	9:9:36:ASP:OD1	2.39	0.41
11:AA:469:VAL:HA	11:AA:472:GLU:HG2	2.02	0.41
11:AA:590:PRO:HB2	11:AA:655:VAL:HG21	2.01	0.41
12:AB:151:LYS:HB2	12:AB:151:LYS:HE2	1.80	0.41
14:AE:138:VAL:HG21	14:AE:145:VAL:HB	2.03	0.41
16:AG:26:ALA:CA	16:AG:117:LYS:HG2	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:323:GLN:HE21	16:AG:323:GLN:C	2.28	0.41
18:D:122:G:C4	18:D:123:U:C6	3.08	0.41
18:D:124:C:H2'	18:D:125:U:H6	1.84	0.41
18:D:517:G:O2'	18:D:530:G:H4'	2.21	0.41
18:D:520:A:C2'	32:R:70:GLU:OE1	2.67	0.41
18:D:1113:C:C2	18:D:1114:C:C5	3.08	0.41
18:D:1217:C:P	33:S:9:ARG:HE	2.41	0.41
18:D:1288:A:H2'	18:D:1289:A:O4'	2.21	0.41
19:E:48:GLN:CD	19:E:49:LYS:N	2.78	0.41
21:G:56:GLU:HG2	21:G:198:PHE:CZ	2.55	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
31:Q:20:VAL:HG12	31:Q:21:ALA:N	2.35	0.41
39:Y:57:VAL:CG2	39:Y:71:LYS:HD3	2.50	0.41
40:Z:29:LYS:C	40:Z:30:PHE:HD2	2.29	0.41
41:a:271:G:C2	41:a:272:A:C4	3.08	0.41
41:a:272:A:C2	41:a:273:G:C8	3.09	0.41
41:a:301:G:C4	41:a:302:C:C5	3.07	0.41
41:a:370:G:C6	41:a:424:G:N7	2.89	0.41
41:a:532:A:N7	41:a:2021:C:O2'	2.43	0.41
41:a:592:A:N3	55:o:4:ILE:HD11	2.35	0.41
41:a:888:C:C4	41:a:889:C:N4	2.89	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:2218:G:C5'	43:c:45:ARG:HH12	2.33	0.41
41:a:2511:U:C5'	50:j:130:GLN:OE1	2.69	0.41
41:a:2708:G:C2	41:a:2709:G:C8	3.08	0.41
43:c:3:ARG:CD	43:c:30:LEU:HD11	2.50	0.41
50:j:55:LYS:HD3	50:j:55:LYS:C	2.45	0.41
51:k:21:TYR:CZ	51:k:38:LYS:CG	3.04	0.41
52:l:170:ARG:HH22	52:l:176:ASP:H	1.68	0.41
54:n:9:LYS:HE3	54:n:9:LYS:HB3	1.91	0.41
54:n:138:PHE:O	54:n:141:ILE:HG22	2.20	0.41
56:p:109:PHE:CD1	56:p:152:ARG:NH1	2.88	0.41
59:s:28:LEU:HD12	59:s:142:ILE:HG21	2.01	0.41
59:s:125:TYR:HE2	59:s:130:HIS:CB	2.32	0.41
61:u:98:ALA:O	61:u:100:ILE:HG13	2.20	0.41
62:v:111:GLU:HA	62:v:114:ARG:NE	2.35	0.41
62:v:112:LEU:CA	62:v:115:GLU:OE1	2.68	0.41
64:x:21:LEU:C	64:x:21:LEU:HD23	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:2:19:LYS:HE2	3:2:84:TYR:OH	2.21	0.41
8:7:1:A:H61	10:B:37:A:N6	2.19	0.41
12:AB:102:LYS:HB3	12:AB:103:ASP:H	1.63	0.41
16:AG:34:ALA:HB3	16:AG:106:THR:CG2	2.51	0.41
18:D:376:G:O3'	35:U:5:ARG:NE	2.54	0.41
18:D:1186:G:H4'	29:O:112:GLU:OE2	2.21	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
19:E:22:ALA:N	19:E:25:ARG:HE	2.17	0.41
21:G:58:ASN:HB2	21:G:220:THR:OG1	2.21	0.41
22:H:267:TRP:CD2	22:H:340:ARG:HG3	2.55	0.41
25:K:100:SER:O	25:K:103:THR:HG22	2.20	0.41
28:N:83:LEU:HD11	32:R:4:VAL:CB	2.51	0.41
29:O:44:ALA:HA	29:O:47:VAL:HG22	2.03	0.41
30:P:40:ILE:HD12	30:P:73:LEU:HD22	2.02	0.41
34:T:64:ARG:CZ	34:T:89:ARG:HH12	2.33	0.41
41:a:126:A:OP1	53:m:45:SER:OG	2.37	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:909:A:C4	41:a:912:C:C5	3.09	0.41
41:a:985:C:O2	41:a:986:C:C6	2.73	0.41
41:a:1026:G:C8	41:a:1134:A:C4	3.08	0.41
41:a:1198:U:H2'	41:a:1199:U:H6	1.83	0.41
41:a:1996:C:OP1	60:t:31:ARG:NE	2.52	0.41
41:a:2244:U:O2'	41:a:2245:U:H5'	2.20	0.41
41:a:2686:G:H2'	41:a:2687:U:C6	2.56	0.41
42:b:30:SER:HA	42:b:66:LYS:HD2	2.03	0.41
46:f:4:THR:O	46:f:5:ILE:HD13	2.20	0.41
49:i:14:GLY:HA2	49:i:17:ARG:HG2	2.02	0.41
51:k:26:ASN:OD1	51:k:28:ARG:CZ	2.69	0.41
52:l:194:LYS:C	52:l:198:GLU:OE1	2.63	0.41
54:n:16:LEU:HD11	54:n:169:LEU:HD12	2.03	0.41
62:v:95:LEU:C	62:v:96:ILE:HD13	2.45	0.41
62:v:105:MET:HE1	62:v:113:ALA:HA	2.01	0.41
63:w:28:LEU:HD23	63:w:48:VAL:HG21	2.03	0.41
6:5:25:DA:N3	7:6:5:DG:N2	2.68	0.41
11:AA:741:MET:SD	11:AA:974:ARG:NH2	2.93	0.41
12:AB:6:LEU:HB3	12:AB:79:VAL:CG1	2.50	0.41
16:AG:285:ILE:CA	16:AG:293:VAL:HG11	2.51	0.41
10:B:12:G:H2'	10:B:13:C:OP1	2.20	0.41
18:D:124:C:H2'	18:D:125:U:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:678:U:C2	18:D:679:C:C5	3.08	0.41
18:D:695:A:O5'	31:Q:53:ARG:CZ	2.69	0.41
18:D:951:G:C6	18:D:1231:G:C6	3.08	0.41
18:D:1227:A:OP2	38:X:110:LYS:HE3	2.20	0.41
21:G:115:LYS:C	21:G:115:LYS:HD3	2.45	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:116:VAL:O	22:H:279:LYS:HG2	2.21	0.41
22:H:277:GLY:C	22:H:331:MET:HE3	2.45	0.41
23:I:155:GLY:HA2	23:I:163:ALA:HB1	2.03	0.41
26:L:35:LYS:CG	26:L:36:ILE:N	2.84	0.41
26:L:42:TRP:HB2	26:L:59:TYR:O	2.20	0.41
29:O:50:GLN:CA	29:O:53:GLU:OE1	2.69	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
31:Q:75:LYS:HG3	31:Q:76:GLU:N	2.35	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
33:S:86:GLU:CD	33:S:90:ARG:HD3	2.45	0.41
36:V:7:THR:C	36:V:8:LEU:HD12	2.46	0.41
39:Y:28:GLY:HA3	39:Y:32:VAL:HB	2.03	0.41
39:Y:34:ILE:O	39:Y:34:ILE:HG22	2.20	0.41
39:Y:60:VAL:CG2	39:Y:66:PHE:CB	2.96	0.41
41:a:66:C:H42	41:a:74:A:N6	2.19	0.41
41:a:134:G:H2'	41:a:135:U:H6	1.85	0.41
41:a:319:G:H2'	41:a:320:A:O4'	2.21	0.41
41:a:340:A:H2'	41:a:341:C:O4'	2.19	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
41:a:1427:A:H4'	41:a:1428:C:O4'	2.21	0.41
41:a:1430:G:H2'	41:a:1431:A:C8	2.56	0.41
41:a:1829:A:C8	41:a:1830:C:C5	3.08	0.41
41:a:1957:C:C2	41:a:1958:C:C5	3.09	0.41
41:a:2024:G:C5	41:a:2040:G:C2	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
41:a:2526:G:O2'	57:q:1:MET:HG2	2.21	0.41
48:h:161:TYR:HB3	48:h:194:GLU:HG2	2.03	0.41
48:h:183:LYS:NZ	48:h:266:PHE:O	2.52	0.41
48:h:189:ARG:HG3	48:h:190:ALA:N	2.36	0.41
49:i:4:GLN:OE1	49:i:8:PRO:HD3	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:j:37:VAL:HG22	50:j:48:ILE:HD12	2.02	0.41
50:j:68:PHE:CZ	50:j:79:LEU:HD21	2.56	0.41
52:l:194:LYS:O	52:l:195:GLN:C	2.64	0.41
53:m:25:LYS:HG3	53:m:29:GLN:NE2	2.34	0.41
54:n:132:VAL:HG11	54:n:137:ILE:HD11	2.01	0.41
56:p:91:GLY:HA2	56:p:160:LYS:CD	2.50	0.41
61:u:96:LYS:HG2	61:u:102:GLY:O	2.21	0.41
63:w:49:GLU:OE2	63:w:95:THR:CG2	2.69	0.41
64:x:15:ARG:C	64:x:19:GLN:NE2	2.78	0.41
66:z:91:ASP:O	66:z:95:LEU:HG	2.20	0.41
1:0:47:VAL:C	1:0:48:LYS:HD3	2.45	0.41
1:0:77:PHE:HE1	1:0:79:ARG:HA	1.86	0.41
8:7:12:U:H3'	8:7:12:U:C6	2.53	0.41
9:9:31:ARG:NH1	41:a:1054:A:C1'	2.80	0.41
9:9:139:LEU:HD22	40:Z:11:VAL:HG22	2.02	0.41
10:A:12:G:H2'	10:A:13:C:OP1	2.20	0.41
11:AA:741:MET:HE3	11:AA:974:ARG:HH12	1.84	0.41
11:AA:836:LEU:HD21	11:AA:921:PRO:HD3	2.02	0.41
14:AE:211:GLU:HA	14:AE:214:ARG:HD2	2.01	0.41
14:AE:247:PRO:HA	14:AE:250:ARG:HE	1.86	0.41
16:AG:161:VAL:HB	16:AG:196:PHE:CE1	2.54	0.41
16:AG:243:LYS:CG	21:G:179:LEU:CD2	2.98	0.41
16:AG:434:LEU:CD1	16:AG:455:THR:CA	2.98	0.41
10:B:38:A:H4'	18:D:790:A:C1'	2.49	0.41
17:C:38:LYS:NZ	18:D:718:A:C6	2.79	0.41
18:D:21:G:N2	18:D:22:G:C6	2.88	0.41
18:D:195:A:H5''	19:E:64:LYS:HZ1	1.84	0.41
18:D:1035:A:C6	18:D:1036:A:N7	2.88	0.41
18:D:1189:U:H4'	23:I:10:ILE:CD1	2.50	0.41
18:D:1411:C:H2'	18:D:1412:C:H6	1.85	0.41
19:E:45:ALA:O	19:E:48:GLN:NE2	2.49	0.41
20:F:66:ARG:NH2	20:F:67:ARG:HH22	2.19	0.41
21:G:6:MET:HA	21:G:9:MET:SD	2.61	0.41
22:H:309:MET:HE1	22:H:318:PRO:CA	2.51	0.41
22:H:330:VAL:HB	22:H:344:LEU:HD23	2.01	0.41
23:I:113:ALA:HB1	23:I:200:VAL:HG13	2.02	0.41
24:J:74:ASN:OD1	24:J:74:ASN:C	2.64	0.41
26:L:1:MET:CE	26:L:67:PRO:HD3	2.50	0.41
27:M:108:ALA:O	27:M:119:ARG:NE	2.51	0.41
28:N:59:LEU:HD23	28:N:59:LEU:HA	1.93	0.41
30:P:88:MET:C	30:P:88:MET:SD	3.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:Q:49:GLY:C	31:Q:51:GLY:H	2.29	0.41
33:S:10:GLU:CD	33:S:63:ARG:HD2	2.45	0.41
35:U:19:VAL:HG11	35:U:52:LEU:CD2	2.50	0.41
37:W:17:LYS:HB3	37:W:21:LYS:NZ	2.36	0.41
41:a:62:U:O2	41:a:62:U:H2'	2.20	0.41
41:a:67:U:C4	41:a:74:A:N6	2.89	0.41
41:a:320:A:H2'	52:l:131:THR:HG21	2.03	0.41
41:a:397:U:H2'	41:a:398:C:C6	2.56	0.41
41:a:458:G:N2	41:a:469:G:H2'	2.36	0.41
41:a:967:U:H2'	41:a:968:C:C6	2.56	0.41
41:a:1558:C:O4'	41:a:1560:G:C8	2.74	0.41
41:a:1945:G:H2'	41:a:1946:U:C6	2.56	0.41
41:a:2650:U:C2	41:a:2651:C:C5	3.08	0.41
54:n:141:ILE:HD11	54:n:146:VAL:CG1	2.51	0.41
54:n:170:LEU:HB2	54:n:177:PHE:HZ	1.86	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
63:w:18:GLN:CD	63:w:18:GLN:C	2.88	0.41
9:9:41:LEU:CD1	39:Y:117:THR:HG22	2.50	0.41
9:9:94:ARG:O	9:9:98:GLU:HG2	2.21	0.41
9:9:96:PHE:HB3	9:9:125:ARG:HH11	1.86	0.41
16:AG:27:LEU:CD2	16:AG:114:ILE:HG23	2.51	0.41
16:AG:316:GLN:HE21	16:AG:316:GLN:HB2	1.49	0.41
16:AG:381:LEU:CA	16:AG:384:LEU:CD1	2.86	0.41
17:C:44:ILE:HG22	22:H:340:ARG:HB2	2.02	0.41
17:C:54:GLN:HG3	17:C:55:LEU:H	1.85	0.41
18:D:18:C:C2	18:D:19:A:C8	3.09	0.41
18:D:356:A:C5	18:D:357:G:C8	3.08	0.41
18:D:375:U:H1'	35:U:28:ARG:NH2	2.36	0.41
18:D:695:A:OP1	31:Q:54:GLY:HA3	2.21	0.41
18:D:920:U:H2'	18:D:921:U:C6	2.56	0.41
18:D:985:C:C2	18:D:986:U:C5	3.08	0.41
18:D:1458:G:OP1	19:E:30:THR:OG1	2.30	0.41
22:H:303:LEU:O	22:H:305:HIS:HA	2.21	0.41
23:I:147:LYS:CE	23:I:204:LYS:O	2.68	0.41
27:M:17:LYS:NZ	27:M:18:PHE:CE1	2.78	0.41
29:O:25:ASN:HB2	29:O:27:LYS:NZ	2.36	0.41
29:O:50:GLN:OE1	29:O:50:GLN:HA	2.20	0.41
30:P:22:THR:HG21	30:P:72:ARG:HG3	2.03	0.41
32:R:57:LEU:HD23	32:R:59:ASN:OD1	2.20	0.41
35:U:69:ASP:OD1	35:U:69:ASP:C	2.63	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:Y:23:VAL:HG23	39:Y:27:LEU:HD23	2.02	0.41
40:Z:6:GLN:CD	40:Z:10:ALA:HB2	2.45	0.41
41:a:235:U:H2'	41:a:236:C:H6	1.86	0.41
41:a:443:A:N1	52:l:40:ARG:NH2	2.69	0.41
41:a:465:G:H2'	41:a:466:A:C8	2.56	0.41
41:a:920:A:H2'	41:a:921:C:H6	1.85	0.41
41:a:1057:A:C2	41:a:1082:U:N3	2.89	0.41
41:a:1588:G:N1	41:a:1589:U:O4	2.53	0.41
41:a:1946:U:H2'	41:a:1947:C:H6	1.84	0.41
41:a:2072:C:C2	41:a:2073:C:C6	3.08	0.41
41:a:2205:A:H2'	41:a:2206:C:C6	2.56	0.41
41:a:2357:G:OP1	42:b:20:ARG:CZ	2.68	0.41
41:a:2848:G:N2	41:a:2867:G:C4	2.89	0.41
44:d:55:U:H2'	44:d:56:G:C8	2.56	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
49:i:34:SER:OG	49:i:36:GLU:HG2	2.20	0.41
52:l:171:ASP:OD1	52:l:172:ALA:N	2.53	0.41
54:n:66:LEU:HD23	54:n:67:ILE:C	2.45	0.41
58:r:54:LEU:HD12	58:r:57:LYS:HE2	2.03	0.41
59:s:1:MET:SD	59:s:2:LYS:O	2.79	0.41
60:t:24:VAL:O	60:t:24:VAL:HG13	2.20	0.41
61:u:101:ILE:HG13	61:u:102:GLY:N	2.36	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
62:v:135:VAL:HG12	62:v:136:MET:CE	2.50	0.41
63:w:33:ILE:HG13	63:w:112:TYR:HD1	1.83	0.41
63:w:98:LEU:CD1	63:w:114:GLU:OE2	2.68	0.41
2:1:85:ILE:HG13	2:1:85:ILE:O	2.19	0.41
9:9:2:ALA:HB3	9:9:6:GLN:HB2	2.01	0.41
9:9:38:MET:SD	9:9:41:LEU:HD12	2.61	0.41
9:9:43:LYS:HZ2	9:9:98:GLU:HB2	1.82	0.41
9:9:117:LEU:O	9:9:117:LEU:CD2	2.67	0.41
10:A:9:G:O2'	10:A:45:G:H2'	2.20	0.41
10:A:19:G:O6	41:a:2112:G:P	2.79	0.41
11:AA:687:ARG:HH11	11:AA:687:ARG:HD3	1.75	0.41
11:AA:859:GLU:CA	16:AG:37:LYS:CB	2.98	0.41
11:AA:860:ALA:H	16:AG:37:LYS:CG	2.34	0.41
12:AB:16:ARG:HD3	12:AB:73:ARG:CZ	2.51	0.41
13:AD:205:MET:HE1	13:AD:217:ILE:HG13	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AE:438:GLU:HG3	14:AE:485:MET:HE1	2.03	0.41
14:AE:975:ILE:HD11	14:AE:1003:LEU:HG	2.02	0.41
16:AG:36:LYS:HB3	16:AG:36:LYS:HE2	1.87	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
16:AG:302:LYS:HZ1	16:AG:302:LYS:C	2.11	0.41
16:AG:307:ILE:HG13	16:AG:338:VAL:HG23	2.02	0.41
16:AG:374:VAL:O	16:AG:374:VAL:CG1	2.68	0.41
16:AG:433:ASP:O	16:AG:456:LEU:CD2	2.69	0.41
10:B:25:C:C4	10:B:26:G:C8	3.09	0.41
18:D:124:C:C2	18:D:125:U:C5	3.08	0.41
18:D:218:U:H2'	18:D:219:U:O4'	2.20	0.41
18:D:409:U:OP1	24:J:23:SER:OG	2.34	0.41
18:D:414:A:C2	18:D:415:A:N9	2.89	0.41
18:D:570:G:H1'	18:D:820:U:C4	2.55	0.41
18:D:643:C:C2	18:D:644:U:C5	3.08	0.41
18:D:718:A:C2	31:Q:118:HIS:CE1	3.09	0.41
18:D:963:G:C2	18:D:964:A:C8	3.09	0.41
18:D:982:U:H4'	18:D:983:A:O4'	2.21	0.41
18:D:986:U:H2'	18:D:987:G:O4'	2.19	0.41
18:D:1064:G:O2'	18:D:1190:G:N2	2.53	0.41
18:D:1228:C:OP1	38:X:107:ARG:CZ	2.69	0.41
18:D:1319:A:C8	18:D:1323:G:C5	3.08	0.41
21:G:85:LEU:HD23	21:G:85:LEU:C	2.46	0.41
21:G:117:LEU:CD2	21:G:141:LEU:HA	2.51	0.41
21:G:161:LEU:HD13	21:G:176:ALA:HB2	2.03	0.41
22:H:322:VAL:HG12	22:H:323:ASN:HB2	2.02	0.41
23:I:72:ARG:CD	23:I:75:ILE:HB	2.51	0.41
24:J:188:ARG:NH2	24:J:195:ILE:HG13	2.36	0.41
25:K:46:VAL:HG12	25:K:47:GLY:N	2.36	0.41
27:M:23:LEU:N	27:M:23:LEU:CD1	2.81	0.41
27:M:35:LYS:CE	27:M:38:THR:OG1	2.69	0.41
29:O:35:LEU:HD21	29:O:45:ARG:HG2	2.02	0.41
31:Q:21:ALA:HA	31:Q:34:ILE:HD13	2.02	0.41
31:Q:79:ILE:O	31:Q:105:PHE:CE1	2.72	0.41
35:U:34:GLU:OE1	35:U:60:TRP:NE1	2.54	0.41
36:V:11:ARG:HD3	36:V:57:ASP:C	2.46	0.41
38:X:3:ARG:NH2	47:g:35:ASP:HB2	2.36	0.41
39:Y:100:ILE:HG13	39:Y:139:VAL:CB	2.51	0.41
39:Y:102:ARG:CZ	39:Y:139:VAL:HG21	2.50	0.41
41:a:30:G:H2'	41:a:31:C:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:205:G:O2'	41:a:206:U:OP2	2.39	0.41
41:a:223:A:O2'	41:a:420:C:O2	2.36	0.41
41:a:690:G:H2'	41:a:691:C:H6	1.85	0.41
41:a:814:C:N3	41:a:815:C:C5	2.89	0.41
41:a:945:A:C4	41:a:2448:A:C2	3.09	0.41
41:a:1289:C:H2'	41:a:1290:C:C6	2.56	0.41
41:a:1571:A:H2'	41:a:1572:A:H8	1.86	0.41
41:a:1792:G:C5'	48:h:204:VAL:CG2	2.99	0.41
41:a:1824:G:O5'	48:h:52:ARG:NH1	2.53	0.41
41:a:1827:U:H2'	41:a:1828:G:O4'	2.20	0.41
41:a:1843:C:H2'	41:a:1844:C:H6	1.85	0.41
41:a:1944:U:C5	41:a:1955:U:C2	3.09	0.41
41:a:2097:A:H2'	41:a:2098:U:C6	2.55	0.41
41:a:2223:G:OP1	48:h:171:TYR:OH	2.37	0.41
41:a:2531:A:C4	41:a:2532:G:C8	3.09	0.41
41:a:2728:U:H5'	60:t:70:ARG:HH22	1.85	0.41
41:a:2784:U:H2'	41:a:2785:C:C6	2.55	0.41
41:a:2808:G:N1	41:a:2891:U:C5	2.89	0.41
41:a:2821:A:H4'	50:j:167:ASN:ND2	2.36	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
43:c:67:VAL:CA	43:c:70:GLU:OE1	2.69	0.41
44:d:113:C:O2'	64:x:46:GLU:CD	2.64	0.41
47:g:62:LYS:HE2	47:g:62:LYS:HB2	1.87	0.41
48:h:53:HIS:CD2	48:h:218:PRO:O	2.74	0.41
49:i:28:LEU:CB	49:i:37:LYS:HE3	2.51	0.41
50:j:47:ALA:O	50:j:48:ILE:HD13	2.20	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
51:k:26:ASN:OD1	51:k:28:ARG:NH1	2.54	0.41
53:m:26:ASN:HA	53:m:29:GLN:NE2	2.36	0.41
56:p:45:HIS:HA	56:p:50:LEU:HD13	2.01	0.41
56:p:149:ARG:HH12	56:p:154:PRO:HB3	1.85	0.41
58:r:76:GLU:OE2	58:r:142:VAL:HA	2.21	0.41
60:t:20:MET:CB	60:t:44:LYS:HE2	2.51	0.41
60:t:113:MET:SD	60:t:113:MET:C	3.03	0.41
61:u:123:ARG:HG3	61:u:143:GLU:OE2	2.21	0.41
62:v:105:MET:HG2	62:v:117:PHE:HZ	1.86	0.41
62:v:112:LEU:HD12	62:v:112:LEU:H	1.86	0.41
63:w:78:LYS:HA	63:w:82:GLU:OE1	2.21	0.41
64:x:86:GLY:HA2	64:x:88:LYS:HZ3	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:74:ILE:HD13	1:0:87:GLN:OE1	2.20	0.41
3:2:6:ARG:NH2	3:2:10:VAL:CG2	2.84	0.41
4:3:6:ARG:NH1	41:a:84:A:C2'	2.84	0.41
4:3:84:GLY:C	4:3:95:PHE:CE2	2.99	0.41
6:5:27:DG:N2	7:6:3:DC:O2	2.53	0.41
8:7:13:U:C6	8:7:13:U:C3'	3.03	0.41
8:7:35:U:H4'	14:AE:322:ARG:NH1	2.36	0.41
9:9:17:GLU:OE2	9:9:53:ARG:NH2	2.53	0.41
9:9:47:GLU:C	9:9:49:GLY:H	2.28	0.41
10:A:25:C:C4	10:A:26:G:C8	3.09	0.41
11:AA:559:CYS:HA	11:AA:560:PRO:HD3	1.90	0.41
11:AA:1072:ASN:OD1	11:AA:1072:ASN:N	2.52	0.41
12:AB:26:VAL:HB	12:AB:59:PHE:CD2	2.56	0.41
12:AB:134:ASP:H	12:AB:139:SER:HA	1.86	0.41
13:AC:42:ALA:HB1	13:AC:224:LEU:HD11	2.03	0.41
16:AG:41:GLN:HB2	16:AG:42:GLU:H	1.73	0.41
16:AG:202:PRO:C	16:AG:204:MET:N	2.79	0.41
16:AG:216:ILE:HG13	16:AG:216:ILE:H	1.63	0.41
16:AG:296:ILE:HD11	16:AG:307:ILE:CD1	2.50	0.41
16:AG:320:ARG:HD3	16:AG:320:ARG:HA	1.83	0.41
16:AG:363:LEU:HD21	16:AG:407:ARG:C	2.45	0.41
16:AG:437:LEU:CD2	16:AG:488:ILE:HD13	2.51	0.41
10:B:31:G:H2'	10:B:32:C:C6	2.55	0.41
10:B:68:C:C4	10:B:69:C:C5	3.08	0.41
18:D:104:G:C2	18:D:105:G:C5	3.09	0.41
18:D:437:U:H5''	24:J:152:GLN:CD	2.46	0.41
18:D:562:U:O3'	32:R:12:ARG:HD2	2.20	0.41
18:D:1372:U:H2'	18:D:1373:G:O4'	2.21	0.41
21:G:20:THR:O	21:G:23:TRP:CD1	2.74	0.41
21:G:47:VAL:N	21:G:48:PRO:HD2	2.35	0.41
21:G:90:PHE:CD2	21:G:154:MET:SD	3.14	0.41
21:G:94:HIS:O	21:G:95:ARG:C	2.64	0.41
21:G:96:TRP:CH2	21:G:100:MET:CE	3.03	0.41
21:G:187:VAL:N	21:G:200:ILE:O	2.40	0.41
22:H:34:ASP:OD1	22:H:50:ALA:HB3	2.20	0.41
24:J:197:GLU:HA	24:J:200:ILE:HD12	2.03	0.41
25:K:82:GLN:OE1	25:K:147:MET:SD	2.78	0.41
26:L:51:ILE:CG2	26:L:86:ARG:HH21	2.34	0.41
29:O:50:GLN:HA	29:O:53:GLU:OE1	2.20	0.41
31:Q:76:GLU:OE1	31:Q:76:GLU:HA	2.21	0.41
31:Q:94:GLU:O	31:Q:94:GLU:OE2	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:X:71:ARG:NH1	38:X:72:GLU:CG	2.84	0.41
41:a:16:C:C4'	49:i:15:MET:CE	2.99	0.41
41:a:151:C:C2	41:a:152:A:N7	2.89	0.41
41:a:529:A:C4	41:a:2023:C:C5	3.09	0.41
41:a:841:G:H2'	41:a:842:U:H6	1.86	0.41
41:a:1142:A:N3	41:a:1142:A:H2'	2.36	0.41
41:a:1197:G:H2'	41:a:1198:U:C6	2.54	0.41
41:a:1322:A:C4	41:a:1323:C:C6	3.08	0.41
41:a:1365:A:H4'	43:c:11:ARG:HH12	1.85	0.41
41:a:1607:C:H4'	41:a:1608:A:O5'	2.21	0.41
41:a:1946:U:H2'	41:a:1947:C:C6	2.56	0.41
41:a:1996:C:H4'	50:j:128:ARG:NH1	2.35	0.41
41:a:2246:G:H2'	41:a:2247:A:H8	1.86	0.41
41:a:2589:A:H2'	41:a:2590:A:H8	1.86	0.41
41:a:2627:G:H2'	41:a:2628:C:C6	2.56	0.41
42:b:70:GLU:HG3	42:b:72:LYS:HG2	2.03	0.41
47:g:57:VAL:O	47:g:58:ASP:C	2.62	0.41
48:h:84:ASP:OD2	48:h:91:ILE:HD11	2.21	0.41
51:k:9:ILE:HG22	51:k:27:LYS:HZ1	1.85	0.41
54:n:136:ILE:HA	54:n:141:ILE:CG2	2.51	0.41
56:p:80:THR:HG23	56:p:81:GLU:N	2.36	0.41
56:p:149:ARG:CZ	56:p:154:PRO:CD	2.98	0.41
60:t:80:ASP:OD1	65:y:68:GLU:OE2	2.39	0.41
65:y:4:ILE:O	65:y:8:LEU:HD13	2.21	0.41
65:y:31:TRP:CZ3	65:y:38:LYS:CD	3.03	0.41
4:3:47:LYS:NZ	41:a:482:A:H5''	2.37	0.40
5:4:48:MET:CE	5:4:85:LYS:HA	2.51	0.40
8:7:21:U:C6	8:7:21:U:C3'	3.04	0.40
9:9:27:VAL:HG12	9:9:83:ALA:HB3	2.01	0.40
9:9:77:VAL:O	9:9:77:VAL:CG1	2.66	0.40
9:9:96:PHE:O	9:9:125:ARG:NH1	2.54	0.40
10:A:16:C:O2	10:A:16:C:H2'	2.21	0.40
10:A:33:U:H5''	27:M:84:THR:CG2	2.50	0.40
11:AA:936:ARG:HB2	11:AA:1042:LEU:HD12	2.03	0.40
13:AD:46:ILE:HD11	13:AD:224:LEU:HD13	2.02	0.40
16:AG:285:ILE:O	16:AG:288:MET:HE2	2.19	0.40
10:B:9:G:H5''	10:B:11:A:OP2	2.21	0.40
10:B:47:U:O2'	10:B:50:U:OP1	2.37	0.40
17:C:12:ARG:NH1	17:C:13:PHE:CD1	2.89	0.40
18:D:107:G:C6	18:D:108:G:C4	3.09	0.40
18:D:602:A:H2'	18:D:603:U:H6	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:680:C:H2'	18:D:681:A:H8	1.85	0.40
18:D:960:U:O2'	18:D:1223:C:H4'	2.20	0.40
18:D:1119:C:C2	18:D:1120:C:C5	3.09	0.40
18:D:1141:C:O2'	18:D:1142:G:P	2.79	0.40
18:D:1174:G:H2'	18:D:1175:G:H5'	2.01	0.40
18:D:1411:C:H2'	18:D:1412:C:C6	2.56	0.40
22:H:42:LEU:HD23	22:H:81:GLU:HB3	2.04	0.40
23:I:123:GLN:HB3	23:I:128:VAL:HG21	2.02	0.40
24:J:76:TYR:CD1	24:J:76:TYR:C	2.98	0.40
24:J:138:SER:C	24:J:182:PHE:CE2	3.00	0.40
26:L:9:MET:CE	26:L:86:ARG:HG2	2.51	0.40
27:M:47:LEU:HD21	27:M:58:GLU:HB3	2.03	0.40
29:O:112:GLU:HG3	29:O:115:LYS:NZ	2.35	0.40
34:T:3:LEU:HB2	34:T:35:GLN:OE1	2.21	0.40
34:T:70:LEU:HD23	34:T:78:TYR:HD1	1.85	0.40
36:V:31:HIS:HD2	36:V:34:TYR:HB2	1.85	0.40
37:W:34:TRP:O	37:W:36:ARG:N	2.54	0.40
39:Y:82:ALA:CB	39:Y:108:ILE:HD12	2.50	0.40
41:a:181:A:H2'	41:a:182:A:C8	2.56	0.40
41:a:209:C:C2	41:a:210:C:C6	3.09	0.40
41:a:372:G:O4'	43:c:61:LYS:NZ	2.44	0.40
41:a:485:C:N3	41:a:486:C:C5	2.89	0.40
41:a:1048:A:C5	41:a:1049:C:C5	3.09	0.40
41:a:1589:U:O2'	41:a:1590:A:P	2.79	0.40
41:a:1858:A:C2	41:a:1885:A:C1'	3.05	0.40
41:a:1953:A:H2	41:a:2549:G:N3	2.18	0.40
41:a:2065:C:N3	41:a:2066:C:C5	2.89	0.40
41:a:2639:A:H2'	41:a:2640:G:O4'	2.21	0.40
42:b:55:ARG:CZ	42:b:55:ARG:CA	2.99	0.40
44:d:8:C:O2'	64:x:40:ILE:HD13	2.21	0.40
48:h:137:VAL:HA	48:h:164:ILE:HG23	2.03	0.40
51:k:8:LYS:HA	51:k:24:THR:HA	2.02	0.40
53:m:42:LEU:N	53:m:42:LEU:HD12	2.36	0.40
54:n:33:LYS:CA	54:n:96:MET:SD	3.07	0.40
54:n:61:SER:O	54:n:63:GLN:N	2.54	0.40
59:s:49:ASP:OD1	59:s:121:LYS:NZ	2.54	0.40
59:s:133:ALA:O	59:s:134:ALA:C	2.62	0.40
60:t:38:ILE:CD1	60:t:112:PHE:HZ	2.30	0.40
62:v:106:ASP:OD1	62:v:106:ASP:C	2.64	0.40
63:w:17:ARG:O	63:w:21:PHE:HD2	2.04	0.40
65:y:48:ILE:HD11	65:y:101:ARG:NH1	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:13:ARG:NH2	66:z:97:ASP:CG	2.79	0.40
2:1:32:ALA:O	2:1:36:LEU:CD1	2.70	0.40
2:1:93:ALA:HB2	41:a:1614:A:C2	2.57	0.40
3:2:50:LEU:HD23	45:e:26:PHE:CE1	2.56	0.40
4:3:86:ARG:CZ	4:3:95:PHE:CD2	3.04	0.40
4:3:86:ARG:NH2	4:3:95:PHE:CB	2.84	0.40
9:9:59:LEU:HD22	9:9:62:ARG:CD	2.51	0.40
12:AB:140:MET:SD	12:AB:140:MET:O	2.79	0.40
14:AE:205:LEU:HA	14:AE:205:LEU:HD23	1.89	0.40
16:AG:204:MET:SD	16:AG:204:MET:O	2.79	0.40
16:AG:239:LYS:CG	16:AG:276:TRP:HB3	2.47	0.40
10:B:9:G:O2'	10:B:45:G:H2'	2.20	0.40
17:C:44:ILE:HG21	22:H:339:ARG:C	2.45	0.40
17:C:51:TYR:HA	17:C:54:GLN:NE2	2.36	0.40
18:D:74:A:C4	18:D:75:G:C8	3.09	0.40
18:D:105:G:H2'	18:D:106:C:C6	2.56	0.40
18:D:567:G:H2'	18:D:568:G:O4'	2.21	0.40
18:D:680:C:C2	18:D:681:A:C8	3.09	0.40
18:D:958:A:H5'	37:W:55:ARG:HH12	1.86	0.40
18:D:1061:G:C6	18:D:1197:A:C6	3.09	0.40
18:D:1251:A:H2'	18:D:1252:A:O4'	2.20	0.40
18:D:1499:A:H3'	18:D:1499:A:OP2	2.22	0.40
18:D:1512:U:H2'	18:D:1513:A:H8	1.85	0.40
21:G:49:MET:HB3	21:G:49:MET:HE2	1.79	0.40
21:G:138:THR:O	21:G:142:GLU:HG2	2.22	0.40
21:G:176:ALA:O	21:G:180:GLY:N	2.52	0.40
23:I:8:ASN:O	23:I:12:LEU:CD2	2.69	0.40
23:I:147:LYS:CE	23:I:204:LYS:C	2.94	0.40
24:J:202:GLU:HA	24:J:205:SER:OG	2.22	0.40
26:L:24:ARG:NE	26:L:24:ARG:HA	2.36	0.40
28:N:83:LEU:HD21	32:R:4:VAL:HG21	2.02	0.40
30:P:21:ALA:HB1	30:P:92:LEU:HD23	2.03	0.40
31:Q:36:ASP:OD1	31:Q:40:ASN:N	2.53	0.40
32:R:4:VAL:CG1	32:R:5:ASN:N	2.83	0.40
32:R:27:CYS:CB	32:R:30:LYS:HE2	2.46	0.40
39:Y:9:LYS:O	39:Y:10:LEU:HG	2.21	0.40
39:Y:126:ARG:NH1	41:a:1082:U:O3'	2.51	0.40
41:a:10:A:C6	41:a:2800:A:C2	3.09	0.40
41:a:48:G:C2	41:a:178:G:C6	3.09	0.40
41:a:244:A:H2'	41:a:245:G:O4'	2.21	0.40
41:a:689:A:H2'	41:a:690:G:H8	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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: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
46:f:5:ILE:HG22	46:f:6:LYS:N	2.36	0.40
46:f:25:LEU:HD23	46:f:25:LEU:C	2.46	0.40
47:g:7:PRO:CG	54:n:62:GLY:O	2.69	0.40
48:h:163:GLN:HB3	48:h:175:ARG:HB3	2.02	0.40
48:h:165:VAL:HG12	48:h:175:ARG:NH2	2.35	0.40
50:j:11:MET:SD	50:j:12:THR:N	2.94	0.40
54:n:30:ARG:O	54:n:159:THR:HG23	2.22	0.40
58:r:8:LYS:HD2	58:r:9:VAL:H	1.86	0.40
60:t:61:VAL:HG11	60:t:112:PHE:CE2	2.56	0.40
63:w:45:ARG:HB3	63:w:45:ARG:CZ	2.50	0.40
66:z:66:ASN:OD1	66:z:70:ARG:NE	2.54	0.40
2:1:88:ARG:NH2	2:1:94:ASP:OD2	2.47	0.40
5:4:78:GLN:OE1	5:4:88:HIS:HB3	2.21	0.40
8:7:32:U:C3'	8:7:32:U:C6	3.04	0.40
8:7:40:G:C5'	11:AA:688:GLN:HE22	2.35	0.40
9:9:43:LYS:HA	9:9:46:ARG:NH2	2.35	0.40
9:9:122:GLN:HG2	9:9:123:ILE:HG22	2.04	0.40
11:AA:657:THR:HG21	11:AA:1188:ASP:HB2	2.03	0.40
11:AA:874:GLY:HA2	13:AC:66:HIS:HB3	2.03	0.40
11:AA:979:LEU:HD11	11:AA:1011:LEU:HD11	2.03	0.40
11:AA:987:GLU:HG2	11:AA:991:LYS:HE3	2.03	0.40
11:AA:998:LEU:HD21	11:AA:1015:ALA:HB2	2.02	0.40
12:AB:41:GLY:O	12:AB:156:ASN:CG	2.59	0.40
16:AG:234:ALA:HB3	16:AG:271:ILE:HD13	2.01	0.40
16:AG:323:GLN:NE2	16:AG:323:GLN:C	2.79	0.40
10:B:70:G:H3'	10:B:71:C:H5''	2.04	0.40
18:D:502:A:H2'	18:D:503:C:H6	1.86	0.40
18:D:1158:C:O2	18:D:1158:C:C2'	2.69	0.40
18:D:1367:C:O3'	29:O:116:VAL:HG22	2.21	0.40
18:D:1508:A:H2'	18:D:1509:C:H6	1.87	0.40
19:E:9:LYS:HG2	19:E:13:GLN:NE2	2.36	0.40
19:E:43:ASP:CG	19:E:46:ALA:HB3	2.46	0.40
23:I:6:HIS:CD2	23:I:9:GLY:H	2.39	0.40
23:I:23:PHE:CD2	30:P:97:ASP:HB2	2.53	0.40
29:O:7:TYR:CG	29:O:8:GLY:N	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:O:21:ILE:HD12	29:O:86:ALA:CB	2.50	0.40
33:S:37:SER:O	33:S:41:ARG:HG3	2.22	0.40
33:S:91:GLY:C	33:S:92:GLU:OE1	2.62	0.40
36:V:26:GLU:OE2	36:V:39:LYS:C	2.65	0.40
40:Z:6:GLN:HG3	40:Z:6:GLN:O	2.21	0.40
41:a:706:A:C2	41:a:707:G:H1'	2.57	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:1005:C:H1'	41:a:1012:U:N3	2.37	0.40
41:a:1144:A:C6	41:a:1145:C:C4	3.10	0.40
41:a:1406:U:C2	41:a:1407:G:N7	2.89	0.40
41:a:1548:A:H2'	41:a:1549:A:C8	2.56	0.40
41:a:2049:G:H21	50:j:161:MET:CE	2.33	0.40
41:a:2393:U:H2'	41:a:2394:C:C6	2.56	0.40
41:a:2422:C:N4	41:a:2424:C:N4	2.70	0.40
41:a:2483:C:H1'	62:v:51:ARG:CZ	2.51	0.40
41:a:2569:G:C2	41:a:2570:G:C8	3.09	0.40
48:h:74:ILE:HG22	48:h:96:TYR:HD1	1.86	0.40
50:j:175:LEU:HB3	50:j:189:VAL:HG12	2.02	0.40
50:j:176:ASP:OD2	50:j:176:ASP:C	2.65	0.40
52:l:170:ARG:CZ	52:l:174:GLY:O	2.66	0.40
59:s:114:LEU:O	59:s:118:MET:HG3	2.21	0.40
60:t:7:MET:CE	60:t:20:MET:HB2	2.51	0.40
60:t:59:LYS:HZ3	60:t:92:GLU:HG2	1.86	0.40
61:u:95:LEU:HD13	61:u:100:ILE:CD1	2.51	0.40
4:3:5:ILE:HG13	4:3:72:ILE:HG13	2.04	0.40
10:A:9:G:H5''	10:A:11:A:OP2	2.21	0.40
11:AA:524:ILE:HD12	11:AA:712:SER:HB2	2.02	0.40
13:AC:104:LYS:HG2	13:AC:110:VAL:HG22	2.03	0.40
14:AE:706:VAL:HG12	14:AE:715:LYS:HB3	2.04	0.40
14:AE:1175:LEU:HD22	14:AE:1190:ILE:HD11	2.04	0.40
16:AG:125:MET:SD	16:AG:125:MET:O	2.79	0.40
18:D:114:U:H2'	18:D:115:G:C8	2.56	0.40
18:D:983:A:C2	18:D:984:C:C6	3.10	0.40
19:E:15:GLU:CD	19:E:16:LYS:N	2.80	0.40
19:E:27:MET:SD	19:E:31:PHE:CE2	3.15	0.40
19:E:28:MET:HE3	19:E:28:MET:HB3	1.94	0.40
21:G:17:GLY:C	22:H:43:LYS:HD2	2.46	0.40
22:H:309:MET:HE2	22:H:309:MET:HB3	1.93	0.40
23:I:8:ASN:O	23:I:12:LEU:HD23	2.21	0.40
23:I:132:ARG:HA	23:I:135:LYS:HG2	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:J:196:ASN:OD1	24:J:198:HIS:ND1	2.54	0.40
25:K:46:VAL:C	25:K:71:MET:HG3	2.46	0.40
26:L:3:HIS:CD2	26:L:95:ALA:HA	2.56	0.40
30:P:47:GLU:N	30:P:47:GLU:CD	2.79	0.40
35:U:3:THR:HG22	35:U:22:ALA:O	2.21	0.40
35:U:18:GLN:CD	35:U:35:ARG:HE	2.30	0.40
35:U:73:ALA:HA	35:U:76:LYS:HE2	2.03	0.40
39:Y:55:PRO:C	39:Y:71:LYS:CE	2.95	0.40
41:a:1:G:H2'	41:a:2:G:C8	2.57	0.40
41:a:184:C:C2	41:a:213:A:N1	2.89	0.40
41:a:392:U:N3	41:a:393:C:C5	2.90	0.40
41:a:1059:G:C6	41:a:1080:A:N1	2.90	0.40
41:a:1196:C:H2'	41:a:1197:G:O4'	2.22	0.40
41:a:1248:G:O2'	66:z:3:ARG:HA	2.21	0.40
41:a:1351:C:H2'	41:a:1352:U:O4'	2.21	0.40
41:a:1366:A:H2'	41:a:1367:A:O4'	2.21	0.40
41:a:1398:C:H2'	41:a:1399:C:H6	1.86	0.40
41:a:1709:U:C2	41:a:1710:G:C8	3.10	0.40
41:a:1816:C:H3'	48:h:62:TYR:CE1	2.57	0.40
41:a:2204:G:C4	41:a:2205:A:C8	3.10	0.40
41:a:2314:A:O2'	54:n:155:THR:CG2	2.69	0.40
41:a:2364:C:O2'	42:b:58:THR:HG21	2.22	0.40
41:a:2422:C:C4	41:a:2424:C:C4	3.09	0.40
41:a:2759:G:H1'	56:p:35:ARG:HH22	1.87	0.40
41:a:2839:G:C4	41:a:2840:C:C6	3.09	0.40
41:a:2851:A:H2'	41:a:2852:G:C8	2.57	0.40
43:c:66:THR:O	43:c:67:VAL:C	2.65	0.40
44:d:47:C:C4	44:d:48:U:C5	3.09	0.40
48:h:124:ILE:O	48:h:124:ILE:HG22	2.21	0.40
51:k:7:GLU:OE2	51:k:27:LYS:N	2.50	0.40
52:l:97:ASN:CG	52:l:100:MET:HE2	2.45	0.40
56:p:121:ILE:CD1	56:p:141:ILE:HG22	2.42	0.40
58:r:110:VAL:HG21	58:r:114:GLU:OE1	2.21	0.40
59:s:53:TYR:HD1	59:s:121:LYS:HB3	1.86	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
64:x:4:LYS:O	64:x:8:ILE:HG12	2.22	0.40
66:z:74:ILE:CD1	66:z:79:PHE:HA	2.40	0.40
8:7:10:U:O2	8:7:10:U:H3'	2.21	0.40
9:9:60:LEU:HD23	9:9:60:LEU:HA	1.93	0.40
11:AA:477:GLU:CB	12:AB:72:THR:HG21	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AB:38:ILE:CD1	12:AB:38:ILE:H	2.35	0.40
13:AD:44:ARG:HA	13:AD:183:ILE:HD12	2.03	0.40
14:AE:79:LYS:HB3	14:AE:79:LYS:NZ	2.36	0.40
14:AE:291:ILE:HD13	14:AE:291:ILE:HA	1.85	0.40
14:AE:367:GLY:HA3	14:AE:448:GLN:HB2	2.03	0.40
14:AE:1063:ASP:O	14:AE:1067:ARG:NH1	2.55	0.40
16:AG:216:ILE:HG12	16:AG:221:ILE:CB	2.52	0.40
18:D:71:A:C6	18:D:100:G:N7	2.89	0.40
18:D:582:C:C2	18:D:583:A:C8	3.10	0.40
18:D:619:U:C1'	24:J:128:ARG:NH1	2.85	0.40
18:D:624:C:H2'	18:D:625:U:O4'	2.22	0.40
21:G:101:LEU:HD22	21:G:157:LEU:HD11	1.99	0.40
23:I:30:ALA:O	33:S:65:ARG:NH2	2.55	0.40
23:I:135:LYS:HG3	23:I:136:ARG:N	2.35	0.40
25:K:133:PRO:HA	25:K:136:VAL:HG12	2.02	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
28:N:50:LYS:HA	28:N:50:LYS:CE	2.52	0.40
29:O:118:LEU:HB3	29:O:120:LYS:O	2.21	0.40
34:T:67:LEU:CD1	34:T:78:TYR:CE1	3.04	0.40
35:U:6:LEU:N	35:U:6:LEU:HD12	2.36	0.40
39:Y:100:ILE:HG13	39:Y:139:VAL:HB	2.02	0.40
41:a:581:C:C2	41:a:582:A:N7	2.90	0.40
41:a:873:C:C2	41:a:874:G:C8	3.09	0.40
41:a:975:A:H1'	41:a:990:A:C2	2.56	0.40
41:a:2065:C:C2	41:a:2066:C:C6	3.09	0.40
41:a:2454:G:C5	41:a:2455:G:C8	3.09	0.40
41:a:2680:U:H1'	50:j:192:ALA:CB	2.52	0.40
44:d:57:A:N7	54:n:26:MET:HE3	2.36	0.40
45:e:14:LEU:CA	45:e:17:GLU:OE1	2.70	0.40
46:f:34:HIS:CD2	46:f:36:VAL:CG2	3.04	0.40
47:g:2:LYS:HB2	47:g:5:ILE:CD1	2.52	0.40
47:g:58:ASP:O	47:g:59:ARG:C	2.64	0.40
48:h:35:GLU:CD	48:h:64:ILE:HD11	2.46	0.40
48:h:142:HIS:ND1	48:h:193:GLY:O	2.41	0.40
50:j:104:VAL:CG1	50:j:106:LYS:O	2.69	0.40
52:l:148:ILE:O	52:l:169:VAL:HA	2.21	0.40
53:m:12:ARG:HG3	53:m:44:VAL:HG21	2.03	0.40
54:n:49:LEU:N	54:n:49:LEU:HD12	2.37	0.40
54:n:150:ARG:HG2	54:n:151:GLY:N	2.36	0.40
63:w:46:ARG:HE	63:w:46:ARG:HB3	1.65	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:w:60:VAL:HG22	63:w:63:ARG:HH11	1.80	0.40
63:w:84:GLY:N	63:w:85:PRO:HD2	2.36	0.40
63:w:98:LEU:HD12	63:w:114:GLU:OE2	2.21	0.40
65:y:48:ILE:HD11	65:y:101:ARG:HH11	1.86	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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%)	1195 (91%)	116 (9%)	1 (0%)	48	82
12	AB	159/162 (98%)	112 (70%)	30 (19%)	17 (11%)	0	6
13	AC	217/329 (66%)	203 (94%)	12 (6%)	2 (1%)	14	49
13	AD	293/329 (89%)	269 (92%)	24 (8%)	0	100	100
14	AE	1331/1407 (95%)	1213 (91%)	112 (8%)	6 (0%)	24	63
15	AF	80/91 (88%)	77 (96%)	3 (4%)	0	100	100
16	AG	493/495 (100%)	376 (76%)	88 (18%)	29 (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

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
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
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

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
54	n	175/179 (98%)	160 (91%)	14 (8%)	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%)	9187 (91%)	797 (8%)	74 (1%)	20	55

All (74) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
12	AB	52	PRO
12	AB	60	ASP
12	AB	87	ILE
12	AB	98	VAL
12	AB	109	THR
16	AG	34	ALA
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	39	VAL
12	AB	45	ALA
12	AB	79	VAL
12	AB	105	VAL
14	AE	92	VAL
14	AE	175	GLU
16	AG	63	LEU

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Mol	Chain	Res	Type
16	AG	103	ASP
16	AG	242	ASP
16	AG	268	GLY
16	AG	279	ASN
16	AG	365	ILE
22	H	171	ARG
22	H	305	HIS
22	H	309	MET
12	AB	61	PRO
12	AB	146	ILE
16	AG	33	THR
16	AG	200	SER
16	AG	305	MET
16	AG	319	GLY
16	AG	350	ALA
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
12	AB	67	THR
12	AB	72	THR
12	AB	106	ASP
12	AB	110	PRO
13	AC	193	GLU
16	AG	48	GLN
16	AG	265	GLU
16	AG	363	LEU
16	AG	401	PRO
22	H	82	THR
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
12	AB	74	GLY

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Mol	Chain	Res	Type
13	AC	192	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	63	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.

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%)	1129 (100%)	6 (0%)	81	82
12	AB	141/142 (99%)	64 (45%)	77 (55%)	0	0
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%)	285 (70%)	124 (30%)	0	2
17	C	57/65 (88%)	57 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
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%)	84 (98%)	2 (2%)	44	63
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
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

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
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%)	8070 (97%)	229 (3%)	38	59

All (229) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
11	AA	145	ILE
11	AA	477	GLU
11	AA	615	VAL
11	AA	914	LYS
11	AA	1076	ILE
11	AA	1151	LEU
12	AB	6	LEU
12	AB	7	LEU
12	AB	8	TYR
12	AB	16	ARG
12	AB	18	GLN
12	AB	19	GLU
12	AB	20	HIS
12	AB	21	LEU
12	AB	22	GLU
12	AB	23	ARG
12	AB	26	VAL

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Mol	Chain	Res	Type
12	AB	29	LEU
12	AB	32	MET
12	AB	33	ILE
12	AB	34	THR
12	AB	37	LYS
12	AB	38	ILE
12	AB	39	VAL
12	AB	40	ARG
12	AB	42	LYS
12	AB	43	ARG
12	AB	44	THR
12	AB	47	SER
12	AB	50	LEU
12	AB	57	VAL
12	AB	59	PHE
12	AB	60	ASP
12	AB	62	GLU
12	AB	63	VAL
12	AB	64	ILE
12	AB	66	THR
12	AB	67	THR
12	AB	68	THR
12	AB	69	ILE
12	AB	72	THR
12	AB	73	ARG
12	AB	75	VAL
12	AB	78	PHE
12	AB	79	VAL
12	AB	80	ARG
12	AB	81	PHE
12	AB	84	SER
12	AB	87	ILE
12	AB	88	VAL
12	AB	99	TYR
12	AB	100	LYS
12	AB	102	LYS
12	AB	103	ASP
12	AB	104	ILE
12	AB	115	LYS
12	AB	116	VAL
12	AB	117	ILE
12	AB	118	ILE

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Mol	Chain	Res	Type
12	AB	120	GLU
12	AB	123	PHE
12	AB	126	PHE
12	AB	127	GLN
12	AB	129	ILE
12	AB	134	ASP
12	AB	138	ARG
12	AB	140	MET
12	AB	141	LEU
12	AB	142	LEU
12	AB	143	LEU
12	AB	144	ASN
12	AB	145	LEU
12	AB	146	ILE
12	AB	148	LYS
12	AB	149	GLU
12	AB	150	ILE
12	AB	151	LYS
12	AB	153	SER
12	AB	154	VAL
12	AB	155	LYS
12	AB	160	ARG
12	AB	161	LYS
12	AB	162	LEU
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	105	ILE
16	AG	106	THR
16	AG	109	THR
16	AG	111	LYS
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

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Mol	Chain	Res	Type
16	AG	189	GLU
16	AG	195	LEU
16	AG	197	VAL
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

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Mol	Chain	Res	Type
16	AG	288	MET
16	AG	296	ILE
16	AG	297	VAL
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

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Mol	Chain	Res	Type
30	P	88	MET
30	P	100	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (120) 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	688	GLN
11	AA	808	ASN
11	AA	1237	HIS
11	AA	1288	GLN
11	AA	1313	HIS
12	AB	18	GLN
12	AB	20	HIS
12	AB	24	GLN
12	AB	70	ASN
12	AB	77	HIS
12	AB	94	HIS
12	AB	127	GLN
12	AB	147	ASN
12	AB	152	HIS
13	AC	23	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

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Mol	Chain	Res	Type
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	1235	ASN
14	AE	1238	GLN
14	AE	1326	GLN
15	AF	62	GLN
16	AG	112	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
21	G	109	GLN
23	I	3	GLN
23	I	6	HIS
23	I	8	ASN
23	I	32	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

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Mol	Chain	Res	Type
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
48	h	53	HIS
48	h	90	ASN
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
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%)	289 (19%)	20 (1%)
41	a	2859/2904 (98%)	512 (17%)	0
44	d	119/120 (99%)	15 (12%)	0
8	7	36/41 (87%)	26 (72%)	5 (13%)
All	All	4678/4759 (98%)	900 (19%)	41 (0%)

All (900) 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	29	A
8	7	30	U
8	7	31	U
8	7	32	U
8	7	35	U
8	7	37	A
10	A	2	G
10	A	6	G
10	A	7	G
10	A	8	U

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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	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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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	1065	U
41	a	1066	U
41	a	1067	A
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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	2213	U
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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 (41) 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	28	G
10	A	6	G
10	A	7	G
10	A	9	G

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Mol	Chain	Res	Type
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
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	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

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.

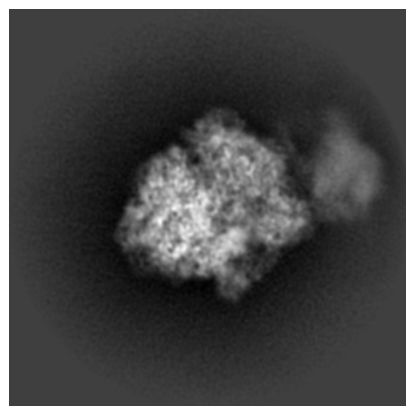
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-42474. These allow visual inspection of the internal detail of the map and identification of artifacts.

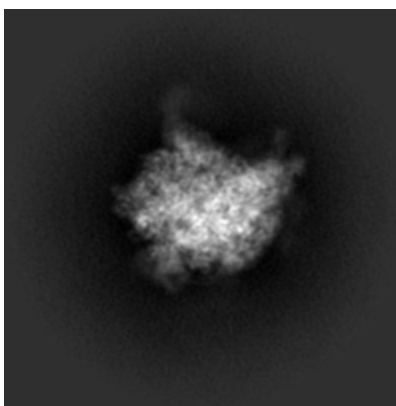
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

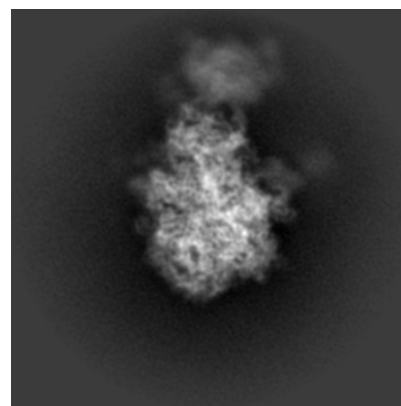
6.1.1 Primary map



X

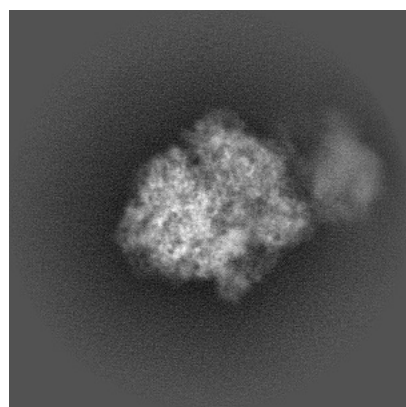


Y

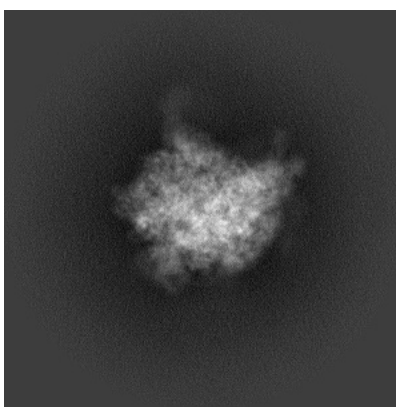


Z

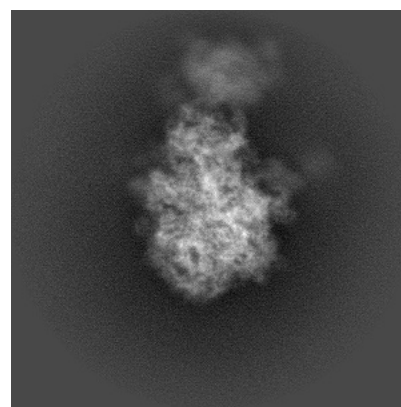
6.1.2 Raw map



X



Y

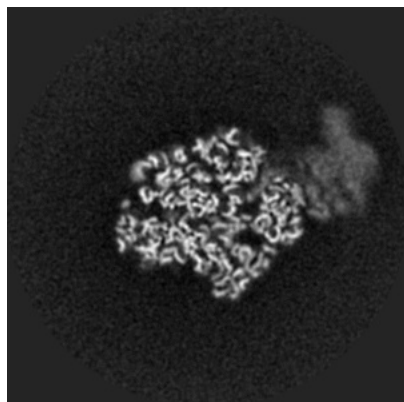


Z

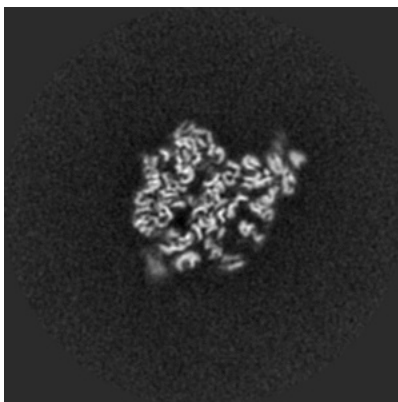
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

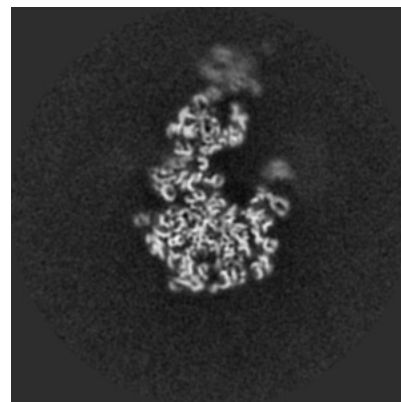
6.2.1 Primary map



X Index: 256

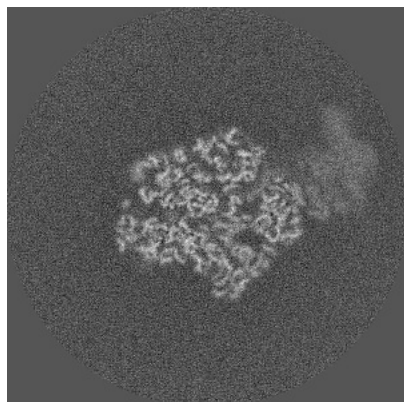


Y Index: 256

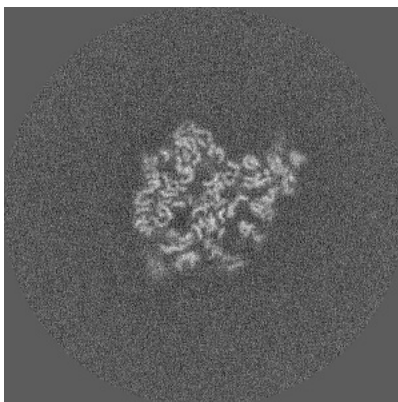


Z Index: 256

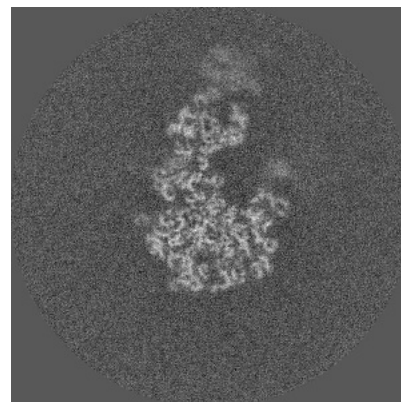
6.2.2 Raw map



X Index: 256



Y Index: 256

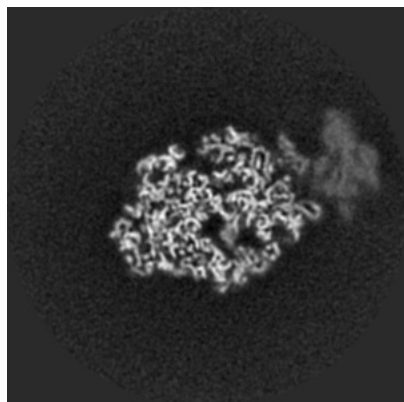


Z Index: 256

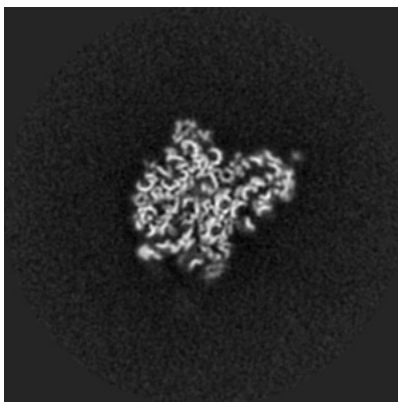
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

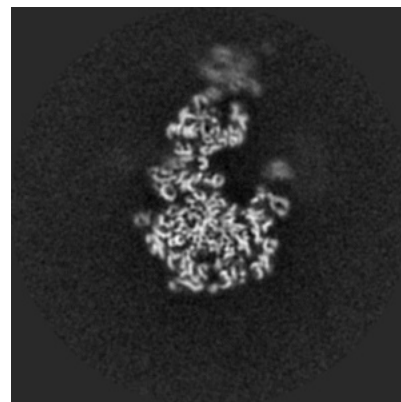
6.3.1 Primary map



X Index: 245

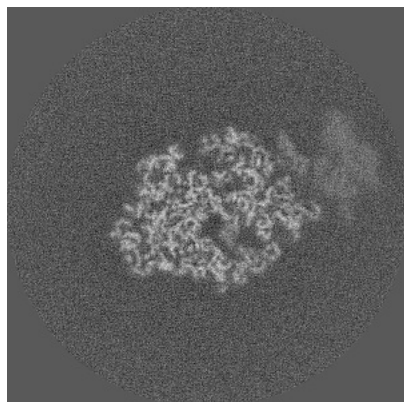


Y Index: 248

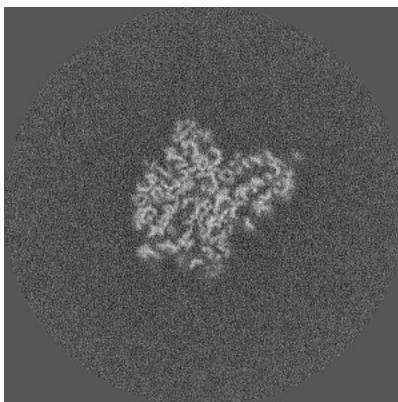


Z Index: 257

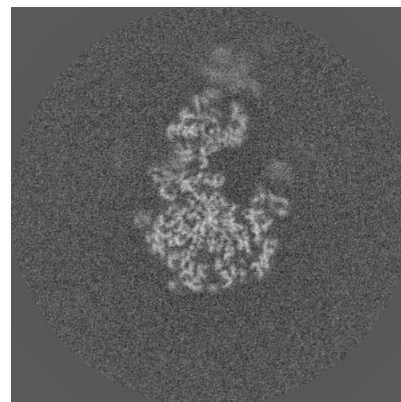
6.3.2 Raw map



X Index: 244



Y Index: 249



Z Index: 258

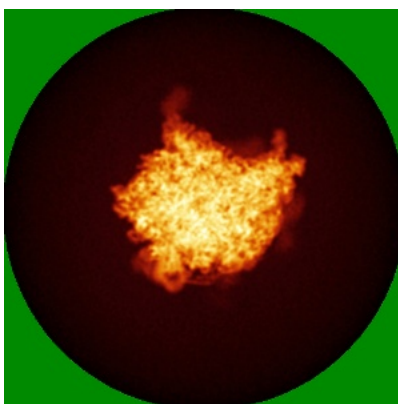
The images above show the largest variance slices of the map in three orthogonal directions.

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

6.4.1 Primary map



X

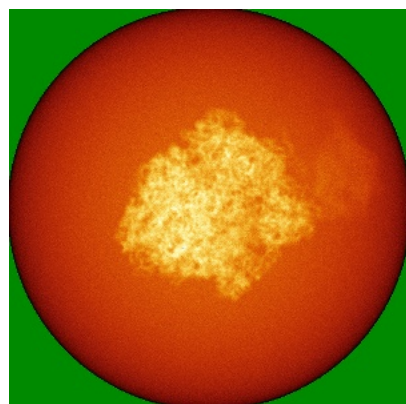


Y

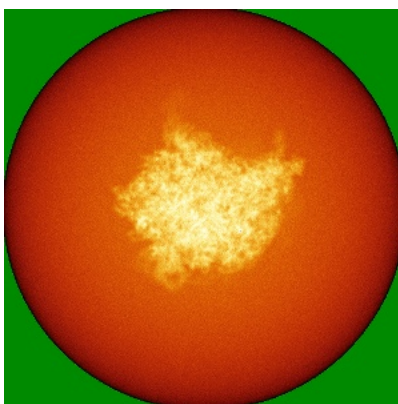


Z

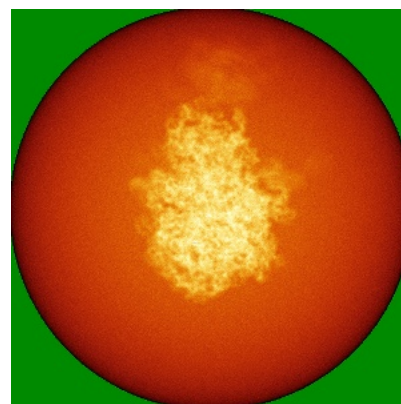
6.4.2 Raw map



X



Y

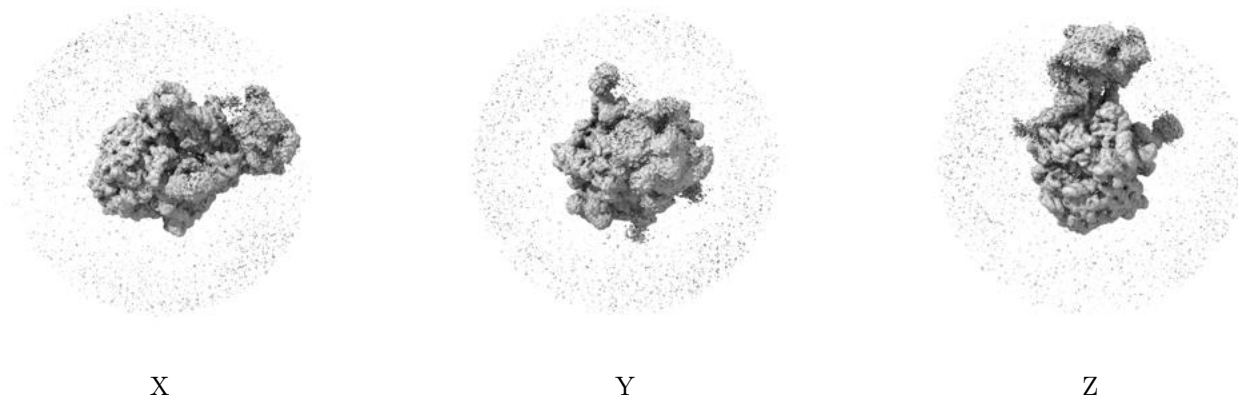


Z

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.

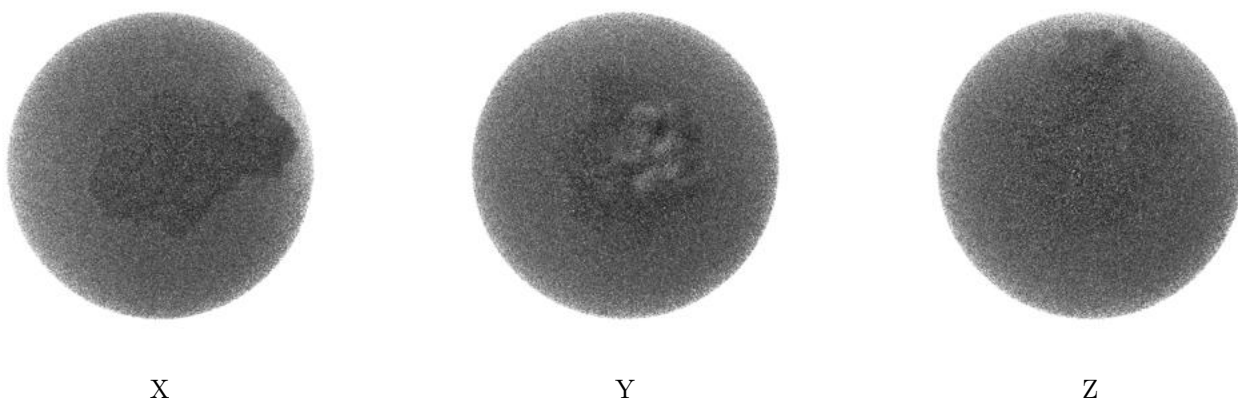
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.0019. 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.

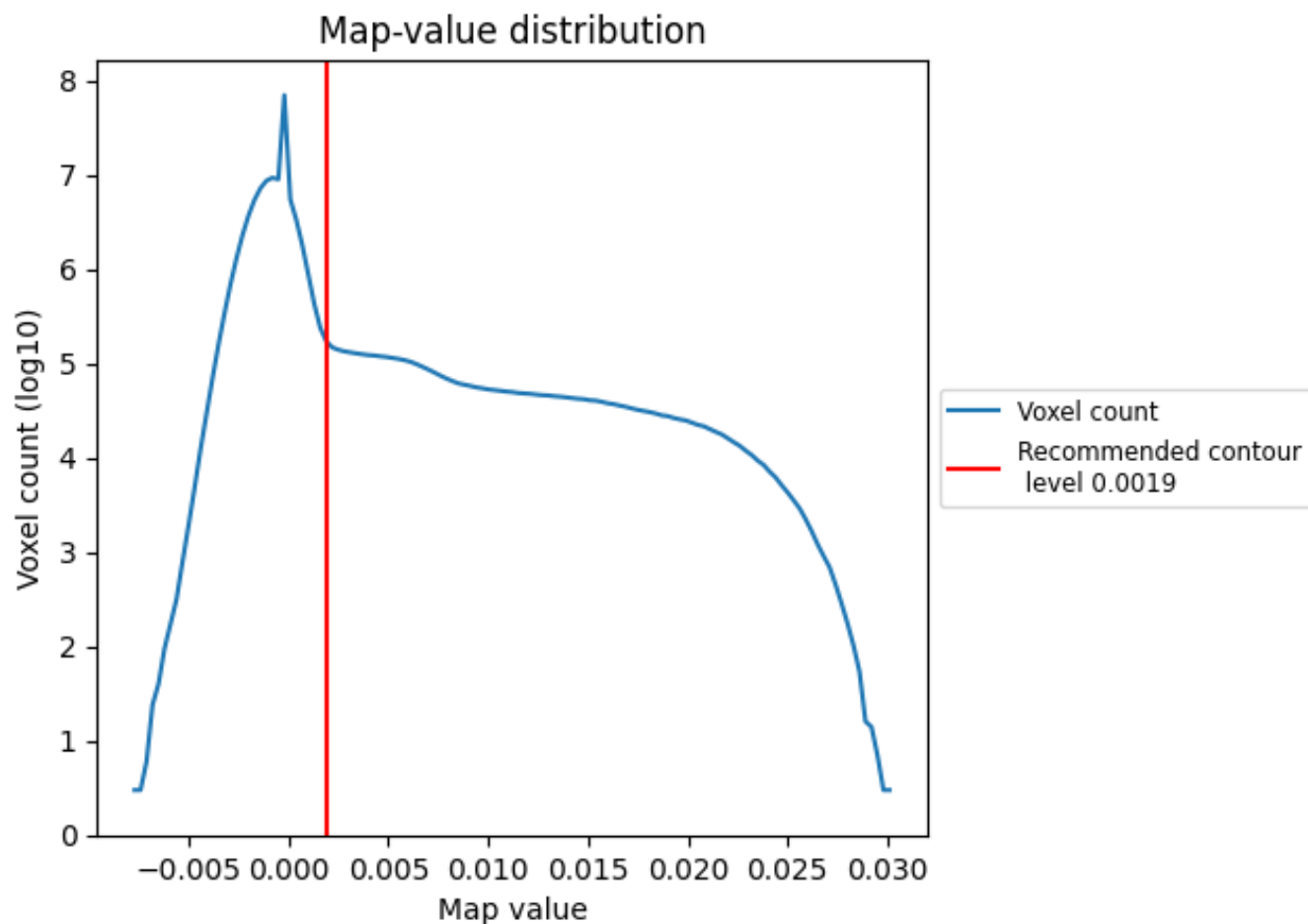
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

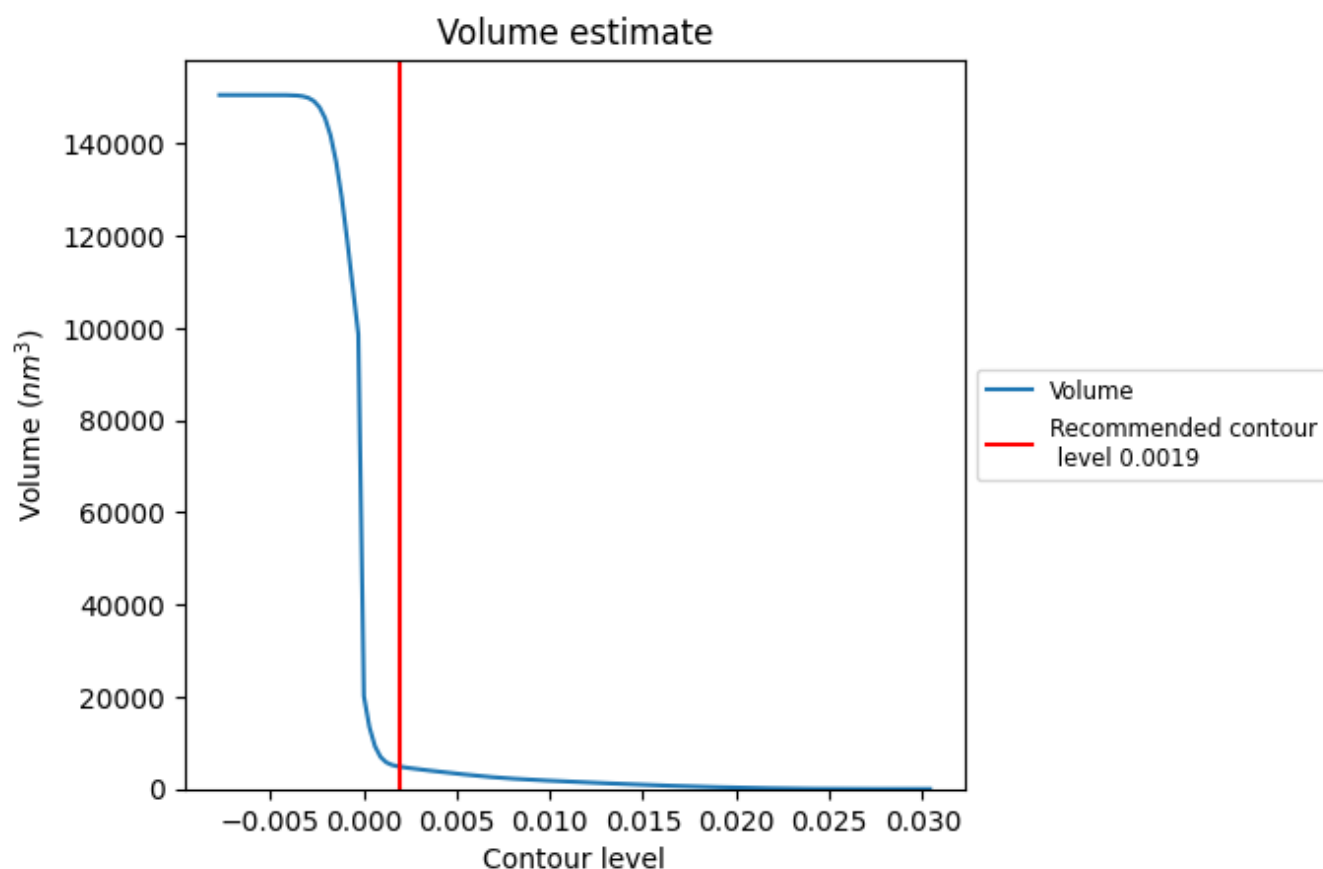
This section contains the results of statistical analysis of the map.

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.

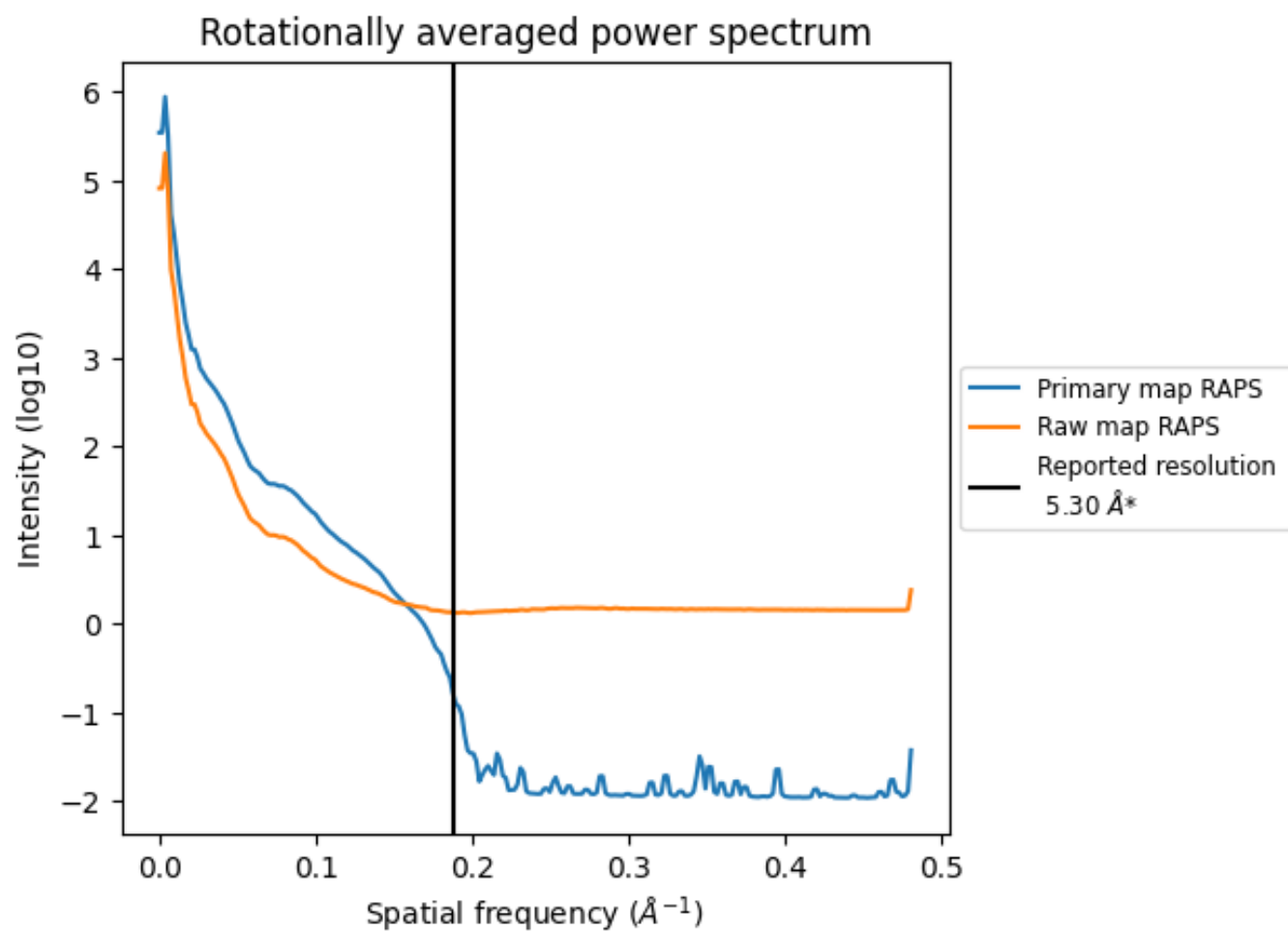
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 4878 nm^3 ; this corresponds to an approximate mass of 4406 kDa.

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

7.3 Rotationally averaged power spectrum ⓘ

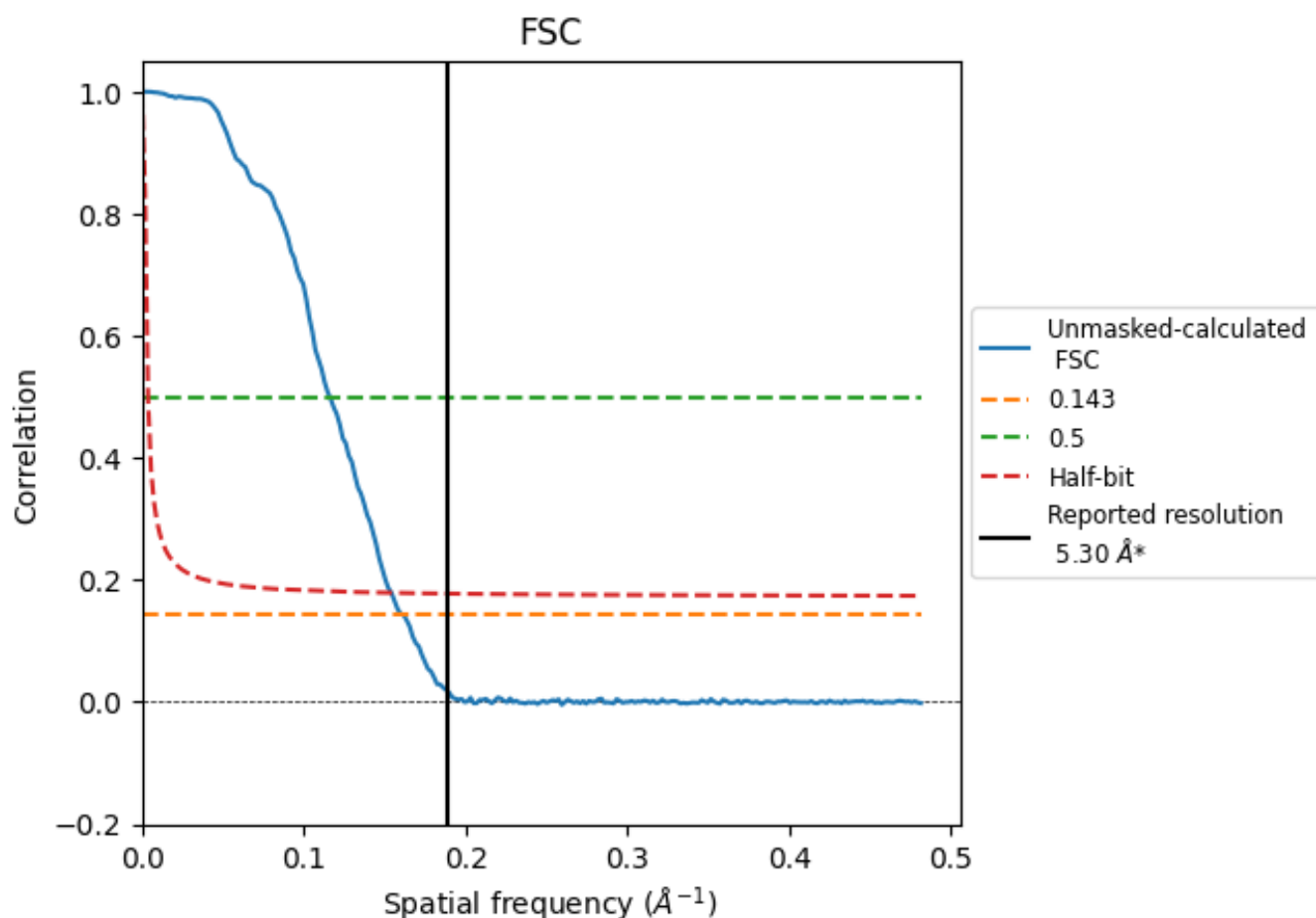


*Reported resolution corresponds to spatial frequency of 0.189 Å⁻¹

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](#)

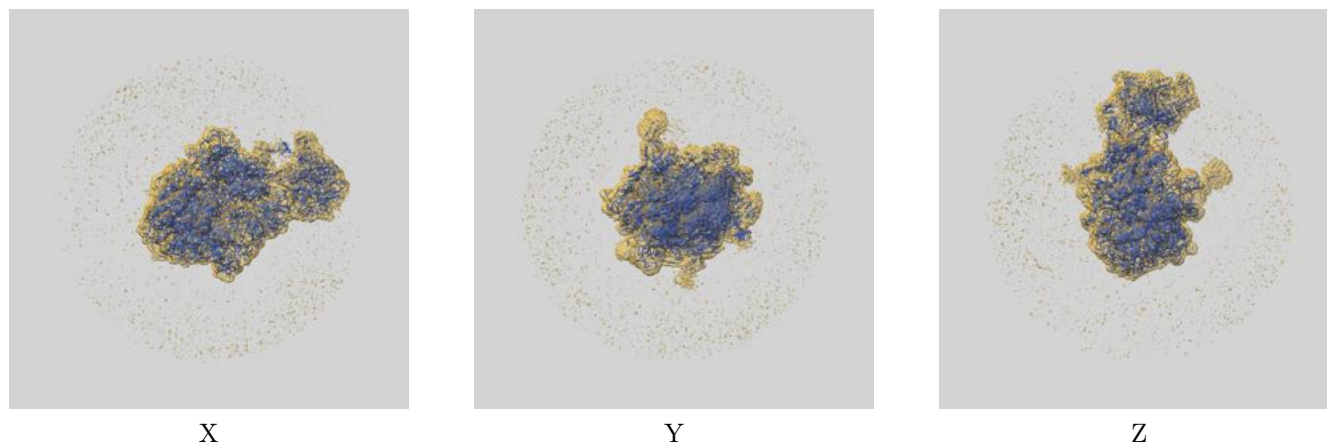
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	5.30	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	6.21	8.62	6.49

*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 6.21 differs from the reported value 5.3 by more than 10 %

9 Map-model fit [i](#)

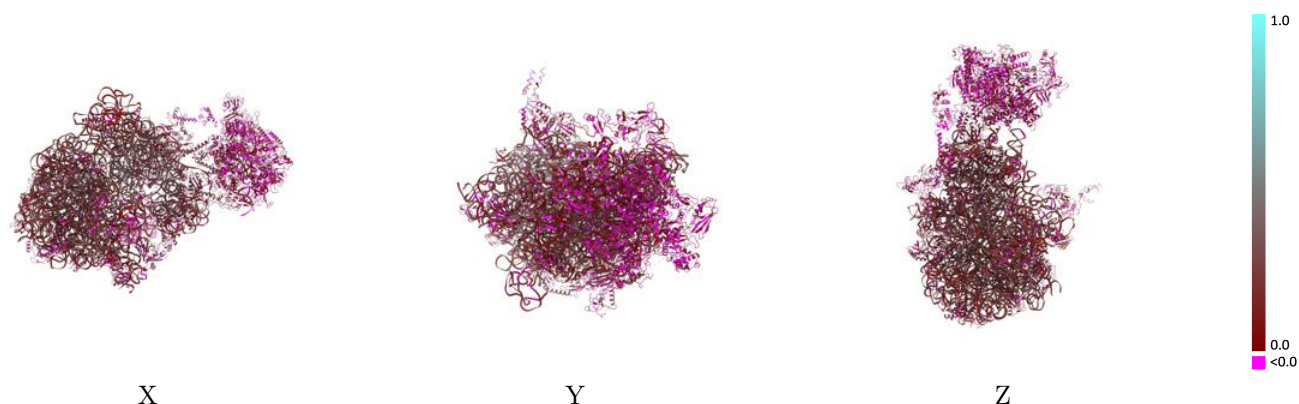
This section contains information regarding the fit between EMDB map EMD-42474 and PDB model 8UQM. Per-residue inclusion information can be found in section [3](#) on page [17](#).

9.1 Map-model overlay [i](#)



The images above show the 3D surface view of the map at the recommended contour level 0.0019 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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

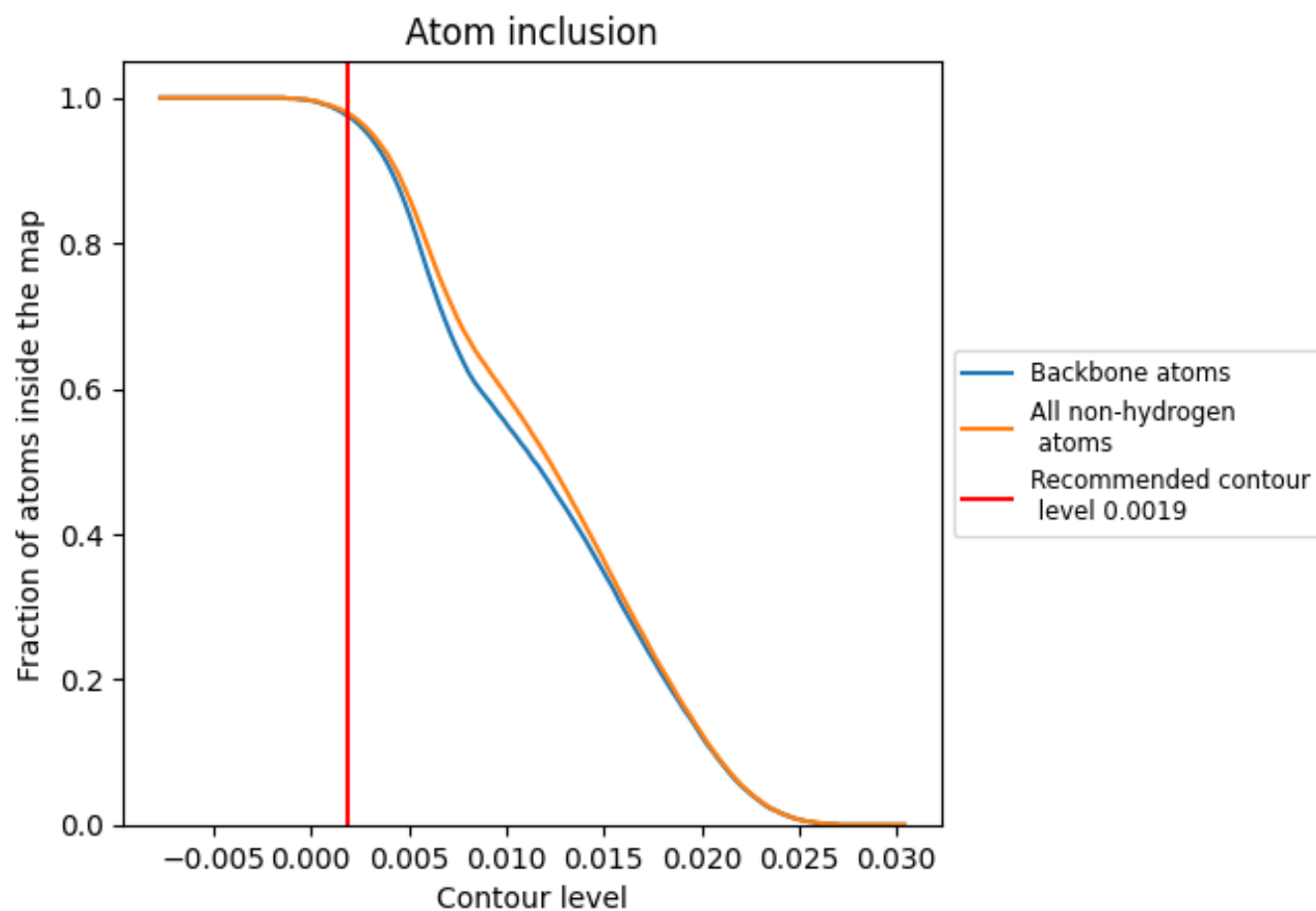


The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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

This section was not generated.

9.4 Atom inclusion [i](#)



At the recommended contour level, 97% of all backbone atoms, 98% 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 (0.0019) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9780	 0.1740
0	 0.9810	 0.1530
1	 0.9800	 0.1790
2	 0.9780	 0.1490
3	 0.9850	 0.1330
4	 0.9890	 0.1570
5	 0.8930	 0.0610
6	 0.9290	 0.0700
7	 0.9720	 0.1090
9	 0.9790	 0.1000
A	 0.9990	 0.1900
AA	 0.9770	 0.0680
AB	 0.9910	 0.0890
AC	 0.9870	 0.0430
AD	 0.8800	 0.0530
AE	 0.9670	 0.0700
AF	 0.8310	 0.0770
AG	 0.8160	 0.1010
B	 0.9540	 0.1070
C	 0.9940	 0.1630
D	 0.9980	 0.2310
E	 0.9910	 0.1510
F	 0.9790	 0.1830
G	 0.9690	 0.1560
H	 0.8700	 0.0550
I	 0.9790	 0.1950
J	 0.9920	 0.1760
K	 0.9950	 0.2210
L	 0.9920	 0.1570
M	 0.9900	 0.1500
N	 0.9780	 0.1820
O	 0.9870	 0.1400
P	 0.9860	 0.1630
Q	 0.9920	 0.1620
R	 0.9970	 0.2230



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Chain	Atom inclusion	Q-score
S	 0.9880	 0.1630
T	 0.9840	 0.1590
U	 0.9890	 0.1670
V	 0.9810	 0.1740
W	 0.9550	 0.1120
X	 0.9800	 0.1400
Y	 0.9170	 0.0750
Z	 1.0000	 0.0220
a	 0.9970	 0.2170
b	 0.9820	 0.1350
c	 0.9770	 0.1630
d	 0.9990	 0.1810
e	 0.9800	 0.1280
f	 0.9860	 0.1660
g	 0.9820	 0.1030
h	 0.9840	 0.1620
i	 0.9770	 0.1880
j	 0.9920	 0.1680
k	 0.9950	 0.1450
l	 0.9700	 0.1340
m	 0.9890	 0.1710
n	 0.9730	 0.1220
o	 0.9700	 0.1310
p	 0.9930	 0.1540
q	 0.9900	 0.1570
r	 0.9410	 0.1140
s	 0.9810	 0.1790
t	 0.9770	 0.1910
u	 0.9880	 0.1440
v	 0.9840	 0.1890
w	 0.9780	 0.1670
x	 0.9760	 0.0960
y	 0.9800	 0.1750
z	 0.9860	 0.1440