Full wwPDB EM Validation Report

Mar 5, 2026 – 07:56 PM UTC

PDB ID	:	6O9J / pdb_00006o9j
EMDB ID	:	EMD-0661
Title	:	70S Elongation Competent Ribosome
Authors	:	Frank, J.; Gonzalez Jr., R.L.; Kaledhonkar, S.; Fu, Z.; Caban, K.; Li, W.; Chen, B.; Sun, M.
Deposited on	:	2019-03-14
Resolution	:	3.90 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:

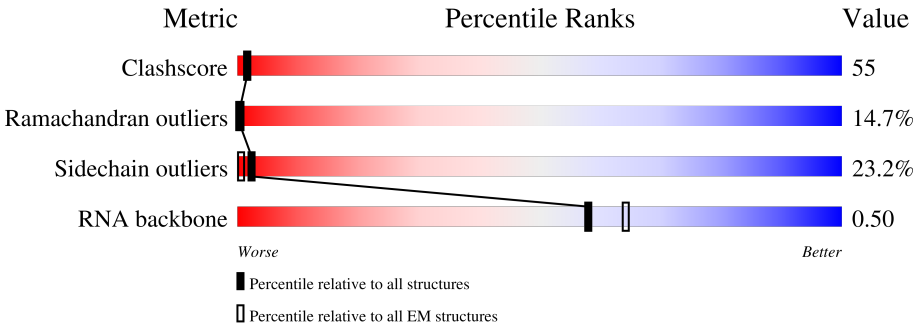
EMDB validation analysis	:	0.0.1.dev132
MolProbity	:	4-5-2 with Phenix2.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics	:	202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh &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

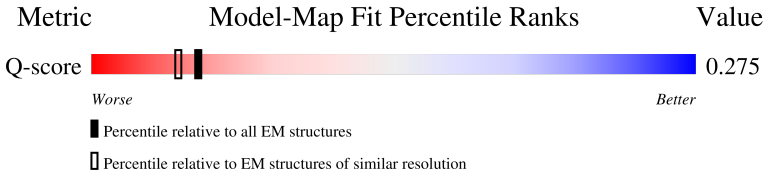
1 Overall quality at a glance

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

The reported resolution of this entry is 3.90 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	8855 (3.40 - 4.40)

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 <=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	A	117	30% 56% 14%
2	B	2841	26% 61% 12%
3	V	94	23% 56% 19%

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Mol	Chain	Length	Quality of chain
4	C	267	12% 10% 42% 37% 11%
5	D	209	12% 13% 44% 38% 5%
6	E	201	15% 14% 47% 32% 6%
7	F	178	23% 17% 47% 31%
8	G	176	15% 21% 56% 20%
9	H	149	47% 23% 56% 19%
10	J	140	11% 9% 50% 36% 5%
11	K	121	16% 55% 24% 6%
12	L	144	24% 13% 31% 30% 26%
13	M	136	15% 17% 40% 31% 12%
14	N	127	13% 20% 46% 29% 5%
15	O	117	19% 18% 41% 33% 8%
16	P	114	11% 9% 26% 49% 16%
17	Q	117	13% 63% 20%
18	R	103	15% 12% 53% 27% 8%
19	S	110	6% 26% 48% 19% 6%
20	T	99	15% 14% 51% 26% 9%
21	U	102	16% 16% 46% 33% 5%
22	W	84	26% 14% 40% 32% 13%
23	X	63	11% 17% 48% 30% 5%
24	Y	58	10% 24% 53% 16% 7%
25	Z	70	7% 16% 47% 21% 16%
26	1	56	20% 18% 43% 23% 16%
27	2	54	22% 17% 44% 33% 6%
28	3	46	13% 22% 46% 33%

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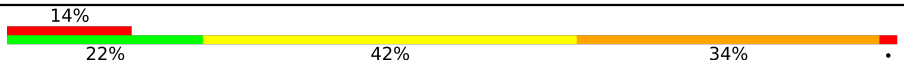
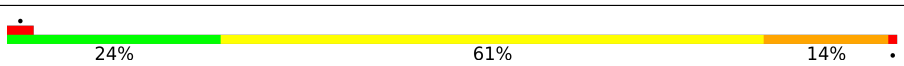
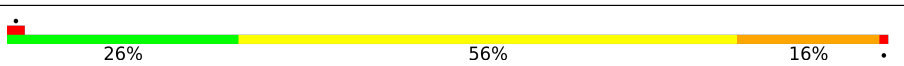
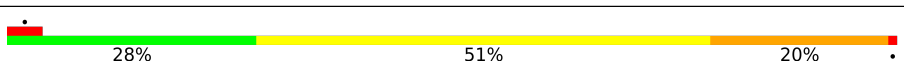
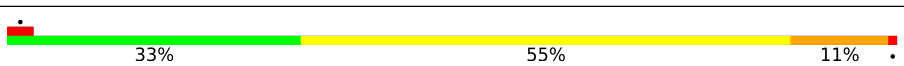
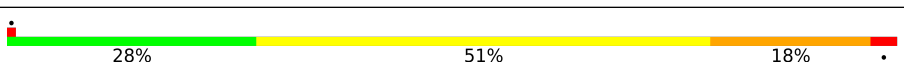
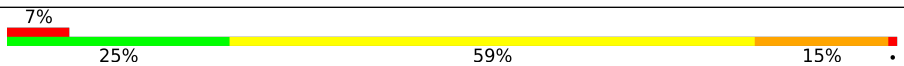
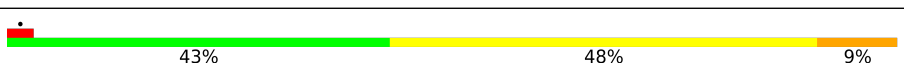
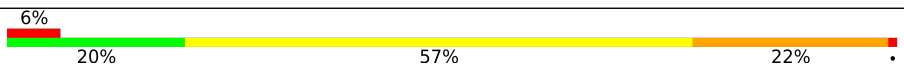
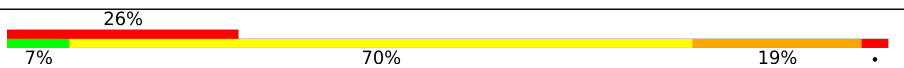
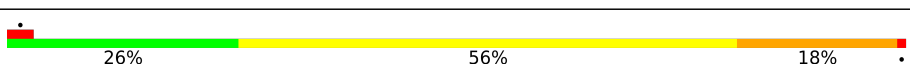
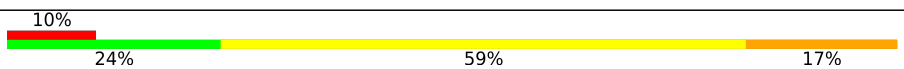
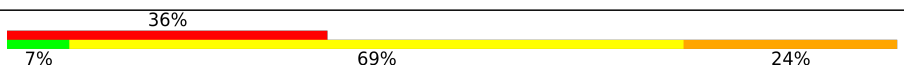
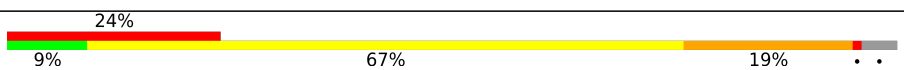
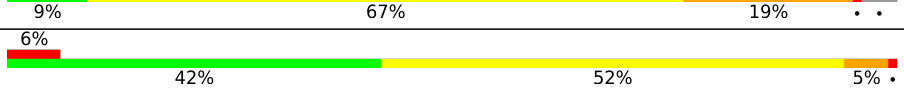
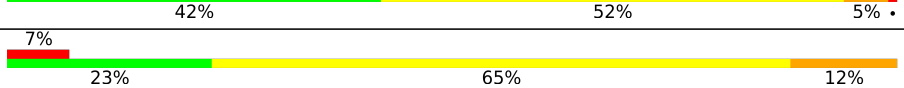
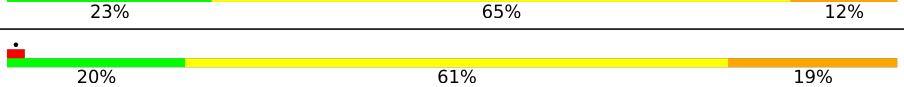
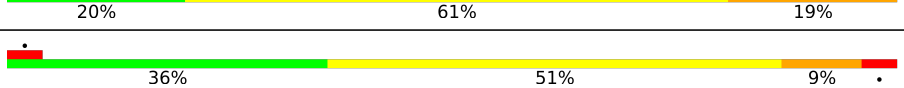
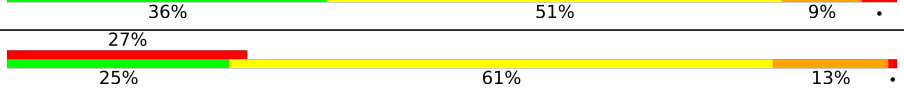
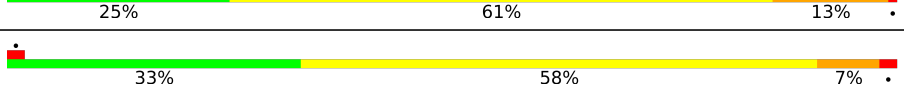
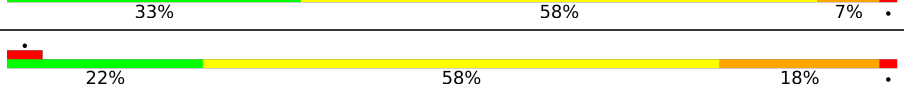
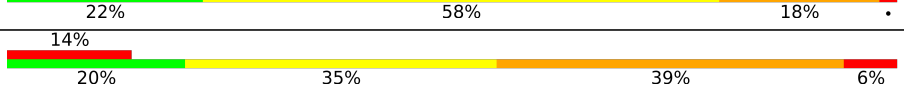
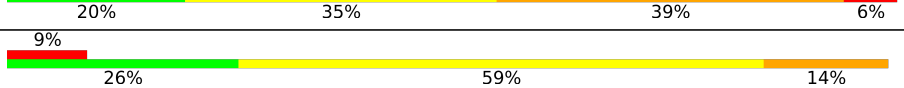
Mol	Chain	Length	Quality of chain
29	4	64	
30	5	38	
31	6	141	
32	a	1530	
33	c	206	
34	d	205	
35	e	150	
36	f	100	
37	g	150	
38	h	129	
39	i	127	
40	j	98	
41	k	117	
42	l	123	
43	m	114	
44	n	100	
45	o	88	
46	p	82	
47	q	80	
48	r	55	
49	s	79	
50	t	85	
51	7	218	
52	u	51	
53	v	76	

2 Entry composition

There are 53 unique types of molecules in this entry. The entry contains 142682 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
1	A	117	2507	1116	459	815	117	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
2	B	2841	60995	27210	11229	19715	2841	0	0

- Molecule 3 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	V	94	753	479	137	134	3	0	0

- Molecule 4 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	C	267	2053	1271	416	359	7	0	0

- Molecule 5 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	D	209	1565	979	288	294	4	0	0

- Molecule 6 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	E	201	1552	974	283	290	5	0	0

- Molecule 7 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	F	178	Total	C	N	O	S	0	0
			1420	905	251	258	6		

- Molecule 8 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	G	176	Total	C	N	O	S	0	0
			1323	832	243	246	2		

- Molecule 9 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	H	149	Total	C	N	O	S	0	0
			1111	699	197	214	1		

- Molecule 10 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	J	140	Total	C	N	O	S	0	0
			1112	704	210	194	4		

- Molecule 11 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	K	121	Total	C	N	O	S	0	0
			930	582	179	164	5		

- Molecule 12 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	L	144	Total	C	N	O	S	0	0
			1053	654	207	190	2		

- Molecule 13 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	M	136	Total	C	N	O	S	0	0
			1074	686	205	177	6		

- Molecule 14 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	N	127	Total	C	N	O	S	0	0
			1008	621	204	178	5		

- Molecule 15 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	O	117	Total	C	N	O	S	0	0
			900	557	179	163	1		

- Molecule 16 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	P	114	Total	C	N	O	S	0	0
			917	574	179	163	1		

- Molecule 17 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms				AltConf	Trace
17	Q	117	Total	C	N	O	0	0
			947	604	192	151		

- Molecule 18 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	R	103	Total	C	N	O	S	0	0
			816	516	153	145	2		

- Molecule 19 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	S	110	Total	C	N	O	S	0	0
			857	532	166	156	3		

- Molecule 20 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	T	99	Total	C	N	O	S	0	0
			777	491	145	139	2		

- Molecule 21 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms				AltConf	Trace
21	U	102	Total 779	C 492	N 146	O 141	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
22	W	84	Total 634	C 391	N 129	O 113	S 1	0	0

- Molecule 23 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	X	63	Total 509	C 313	N 99	O 95	S 2	0	0

- Molecule 24 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	Y	58	Total 449	C 281	N 87	O 79	S 2	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
25	Z	70	Total 549	C 339	N 104	O 100	S 6	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
26	1	56	Total 444	C 269	N 94	O 80	S 1	0	0

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

Mol	Chain	Residues	Atoms				AltConf	Trace
27	2	54	Total 441	C 284	N 81	O 76	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
28	3	46	Total	C	N	O	S	0	0
			377	228	90	57	2		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
29	4	64	Total	C	N	O	S	0	0
			504	323	105	74	2		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
30	5	38	Total	C	N	O	S	0	0
			302	185	65	48	4		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
31	6	141	Total	C	N	O	S	0	0
			1032	651	179	196	6		

- Molecule 32 is a RNA chain called 16S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	a	1530	Total	C	N	O	P	0	0
			32831	14642	6024	10635	1530		

- Molecule 33 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	c	206	Total	C	N	O	S	0	0
			1624	1028	305	288	3		

- Molecule 34 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	d	205	Total	C	N	O	S	0	0
			1643	1026	315	298	4		

- Molecule 35 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	e	150	Total	C	N	O	S	0	0
			1105	687	211	201	6		

- Molecule 36 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	f	100	Total	C	N	O	S	0	0
			817	515	148	148	6		

- Molecule 37 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	g	150	Total	C	N	O	S	0	0
			1174	730	226	214	4		

- Molecule 38 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	h	129	Total	C	N	O	S	0	0
			979	616	173	184	6		

- Molecule 39 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	i	127	Total	C	N	O	S	0	0
			1022	634	206	179	3		

- Molecule 40 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	j	98	Total	C	N	O	S	0	0
			786	493	150	142	1		

- Molecule 41 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	k	117	Total	C	N	O	S	0	0
			877	540	174	160	3		

- Molecule 42 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	l	123	Total	C	N	O	S	0	0
			955	590	196	165	4		

- Molecule 43 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	m	114	Total	C	N	O	S	0	0
			883	546	178	156	3		

- Molecule 44 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	n	96	Total	C	N	O	S	0	0
			774	483	160	128	3		

- Molecule 45 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	o	88	Total	C	N	O	S	0	0
			716	440	146	129	1		

- Molecule 46 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	p	82	Total	C	N	O	S	0	0
			649	406	128	114	1		

- Molecule 47 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	q	80	Total	C	N	O	S	0	0
			648	411	121	113	3		

- Molecule 48 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				AltConf	Trace
48	r	55	Total	C	N	O	0	0
			455	288	86	81		

- Molecule 49 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	s	79	Total	C	N	O	S	0	0
			637	408	120	107	2		

- Molecule 50 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	t	85	Total	C	N	O	S	0	0
			665	411	137	114	3		

- Molecule 51 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	7	218	Total	C	N	O	S	0	0
			1704	1081	305	311	7		

- Molecule 52 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	u	51	Total	C	N	O	S	0	0
			425	265	86	73	1		

- Molecule 53 is a RNA chain called P-tRNA.

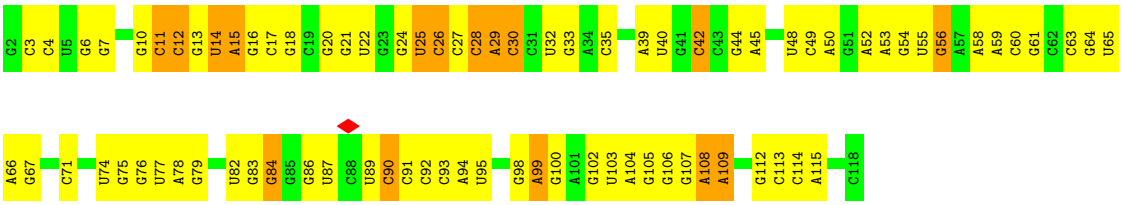
Mol	Chain	Residues	Atoms					AltConf	Trace
53	v	76	Total	C	N	O	P	0	0
			1623	723	290	534	76		

3 Residue-property plots (i)

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

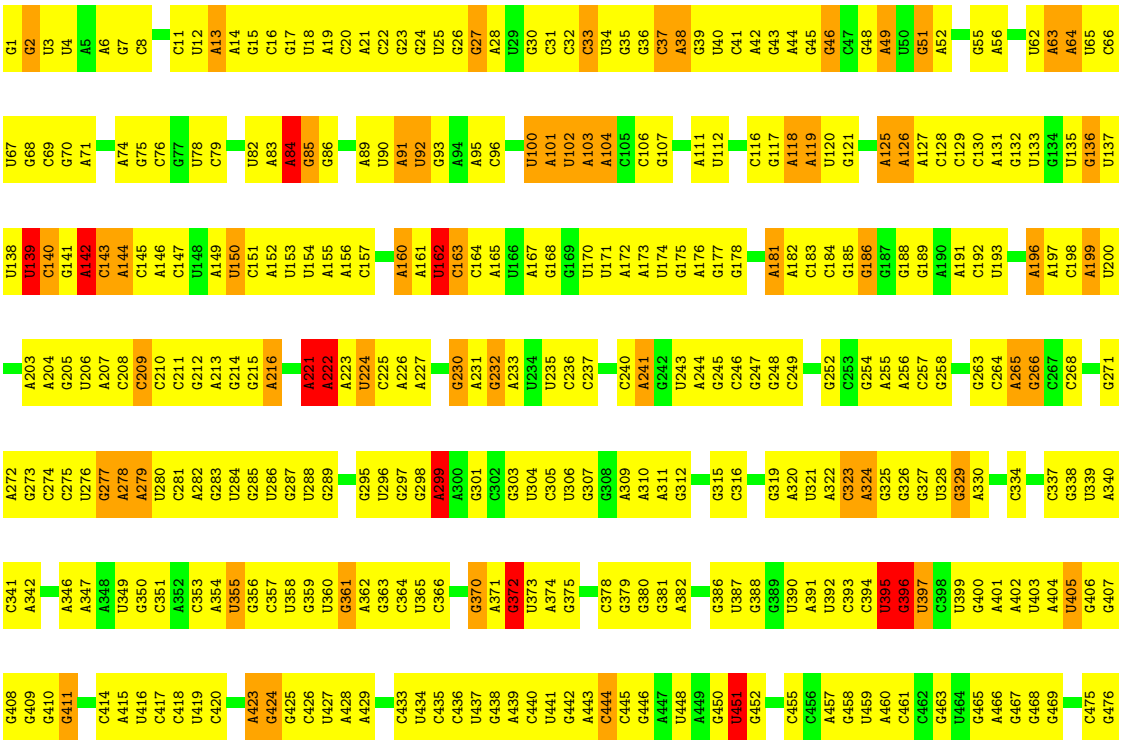
- Molecule 1: 5S rRNA

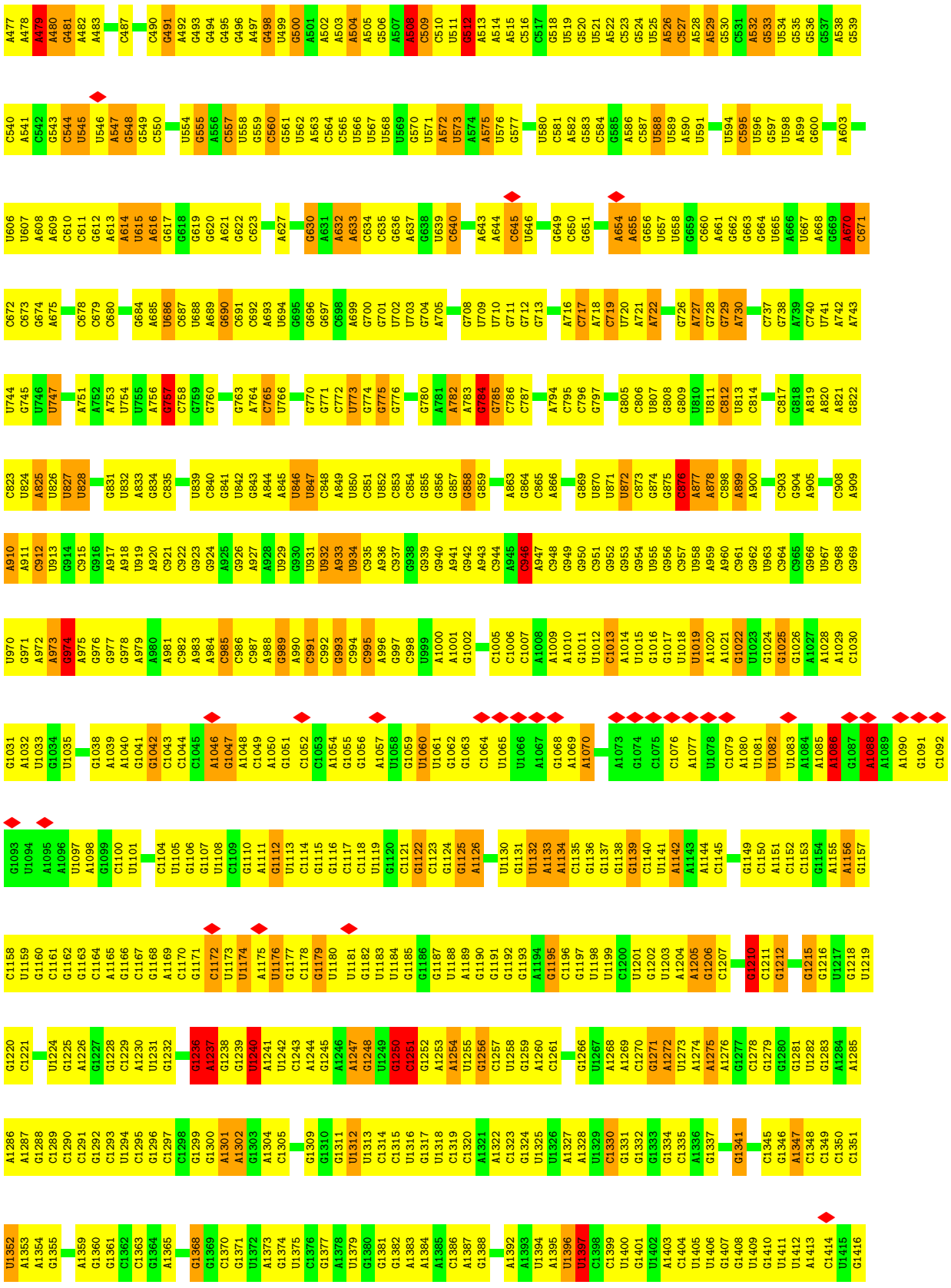
Chain A:

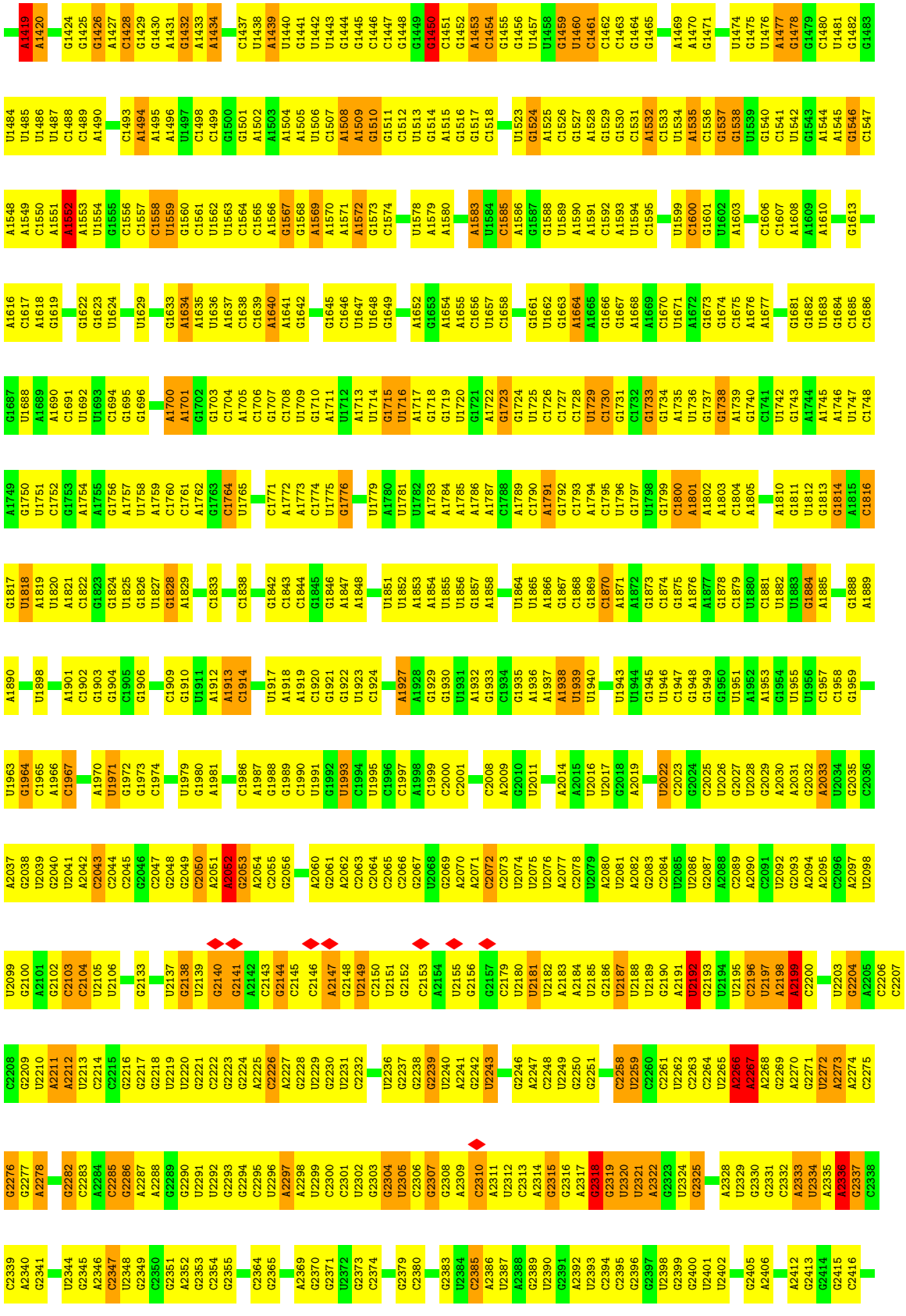


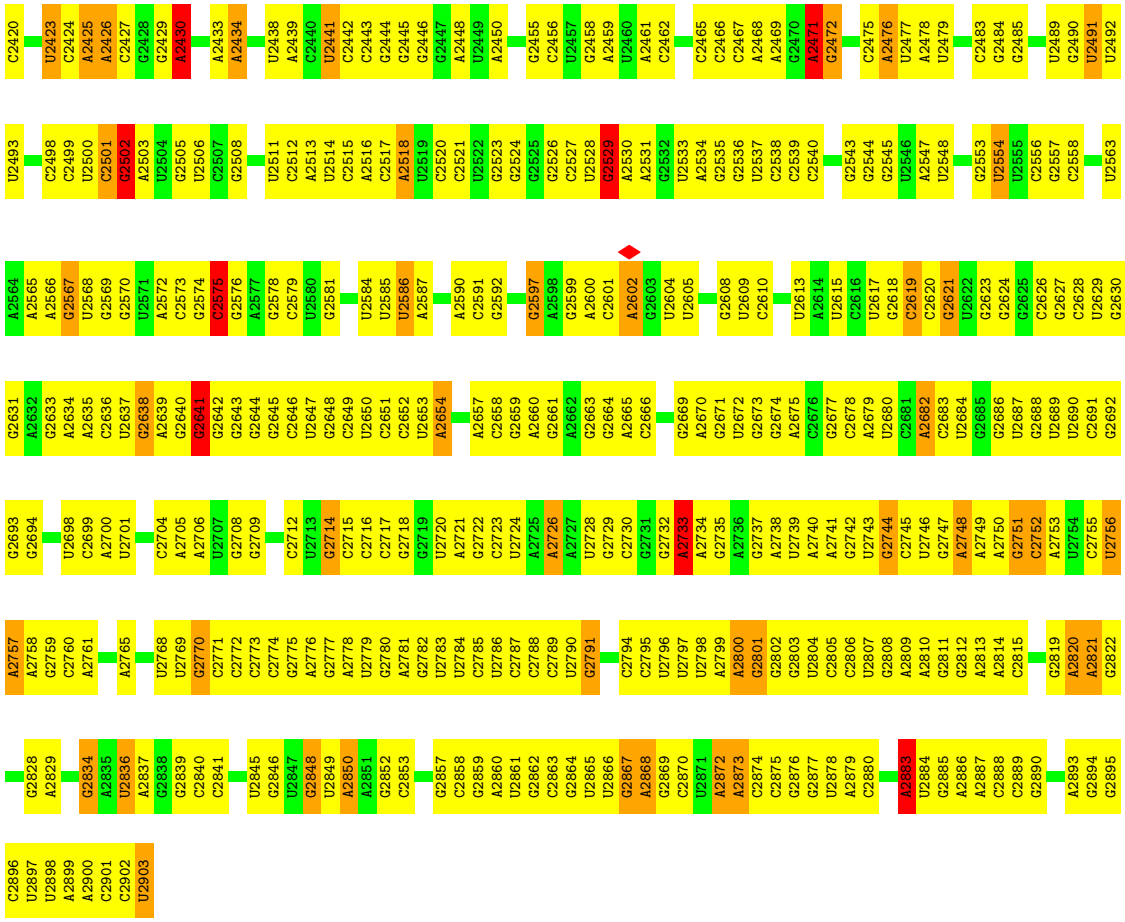
- Molecule 2: 23S rRNA

Chain B:



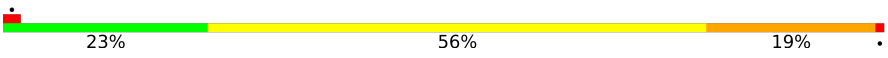


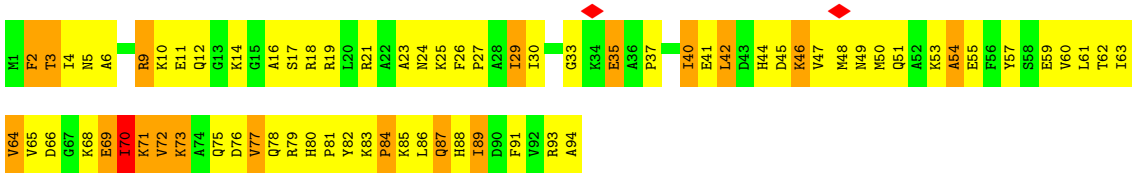




• Molecule 3: 50S ribosomal protein L25

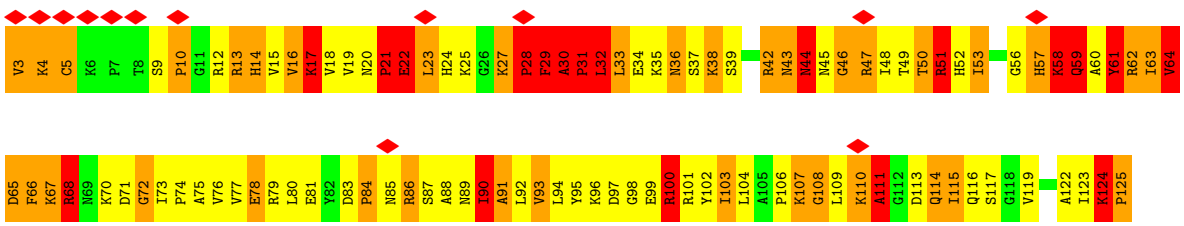
Chain V:

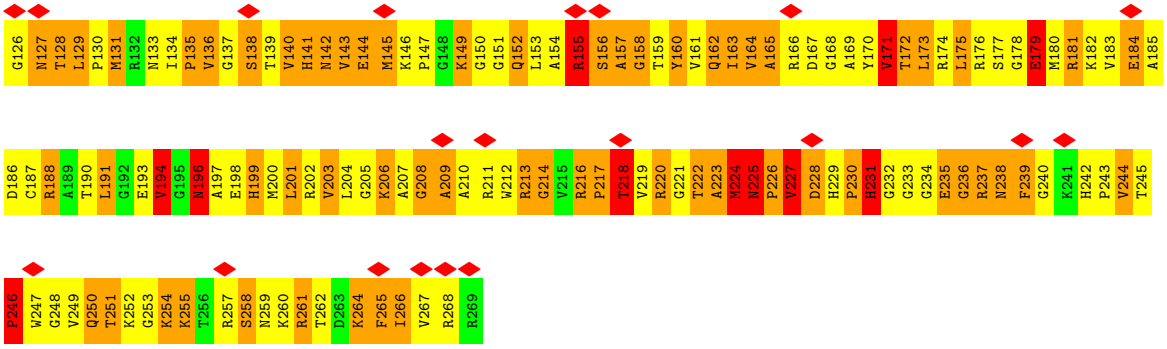




• Molecule 4: 50S ribosomal protein L2

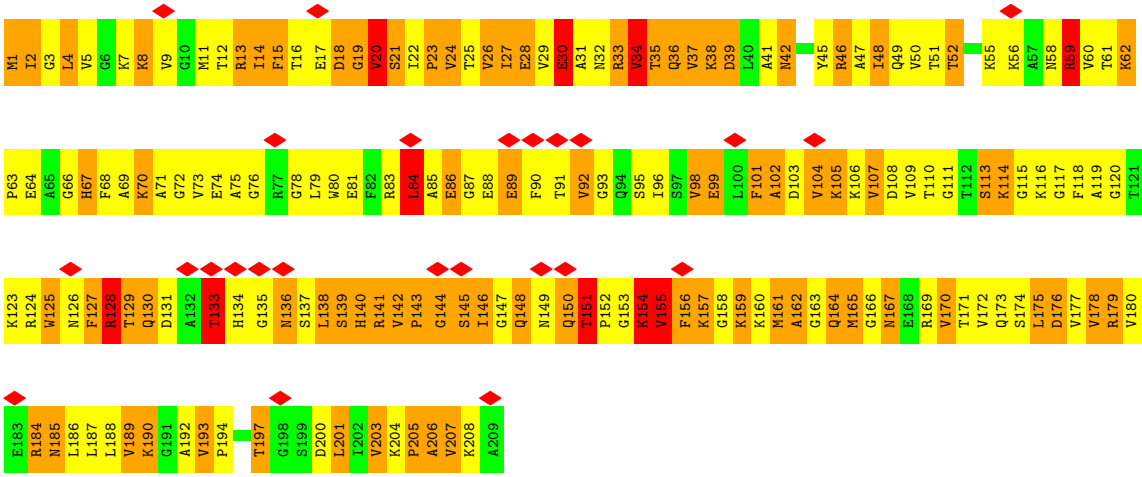
Chain C:





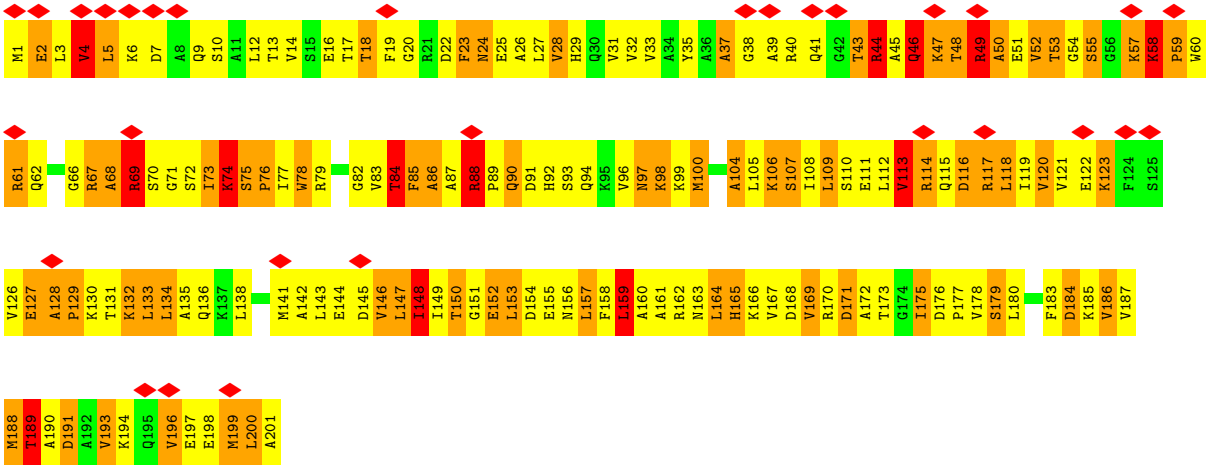
• Molecule 5: 50S ribosomal protein L3

Chain D:



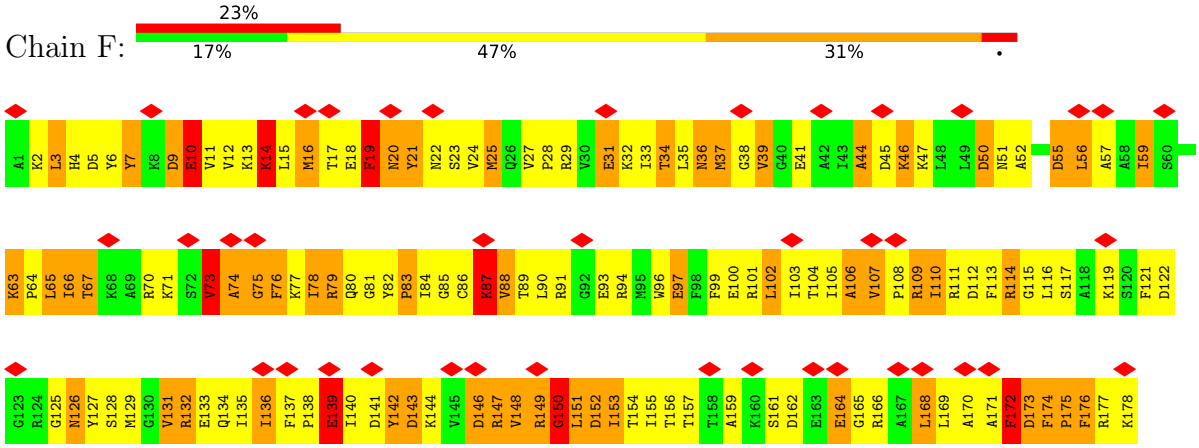
• Molecule 6: 50S ribosomal protein L4

Chain E:



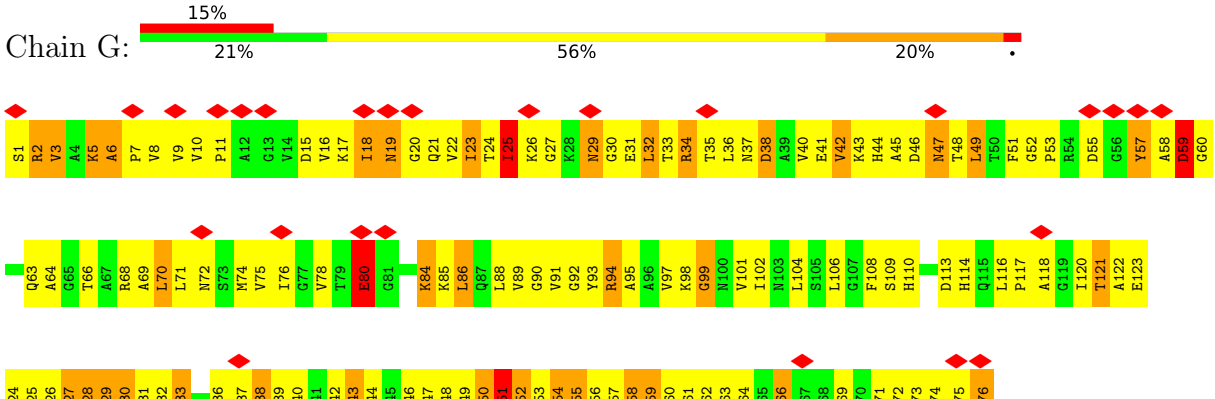
• Molecule 7: 50S ribosomal protein L5

Chain F:



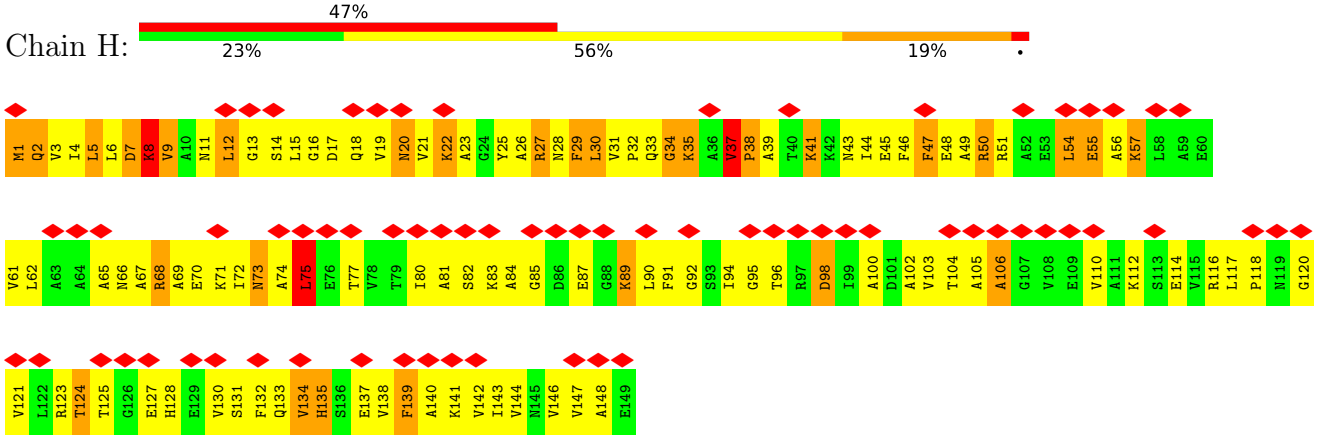
• Molecule 8: 50S ribosomal protein L6

Chain G:



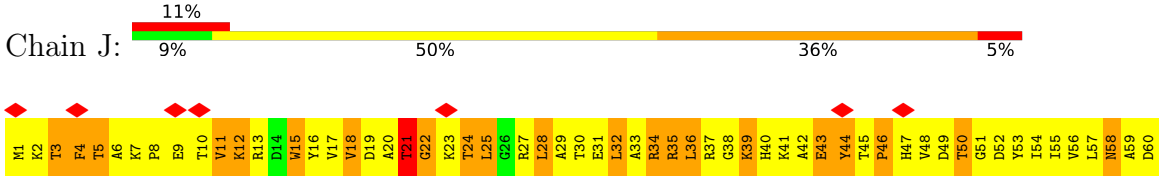
• Molecule 9: 50S ribosomal protein L9

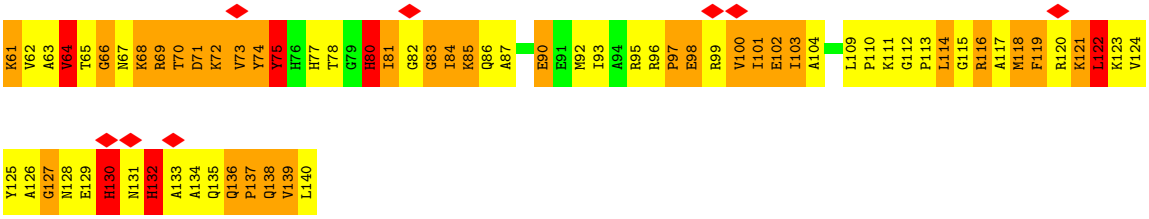
Chain H:



• Molecule 10: 50S ribosomal protein L13

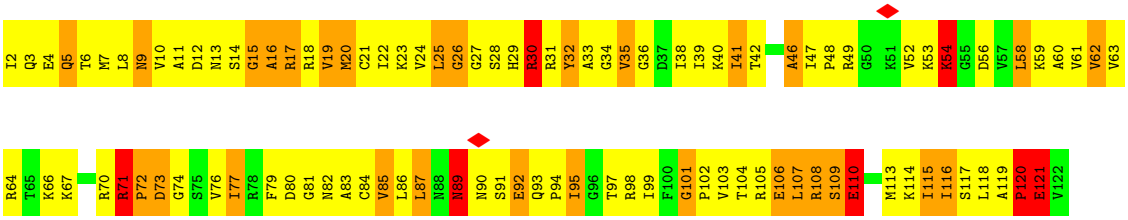
Chain J:





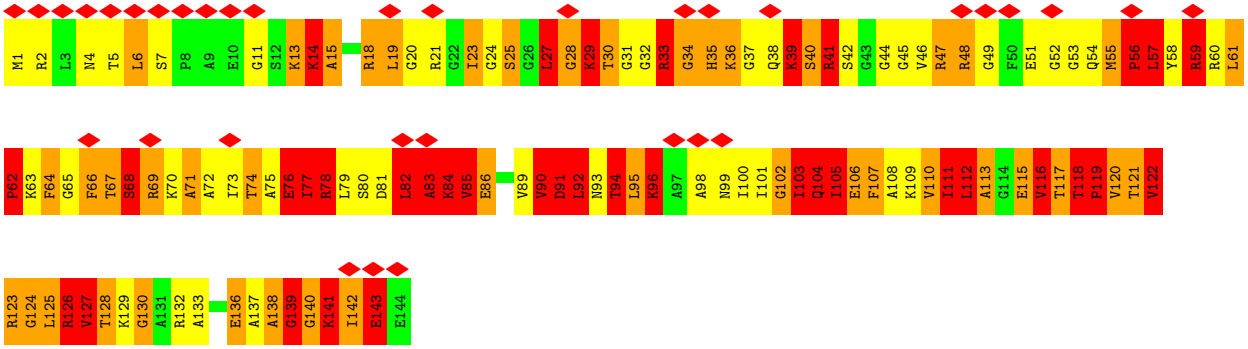
• Molecule 11: 50S ribosomal protein L14

Chain K:



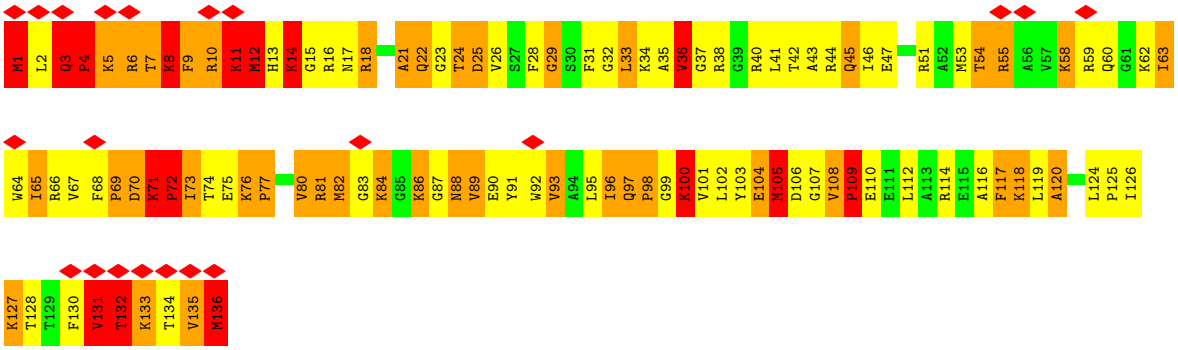
• Molecule 12: 50S ribosomal protein L15

Chain L:

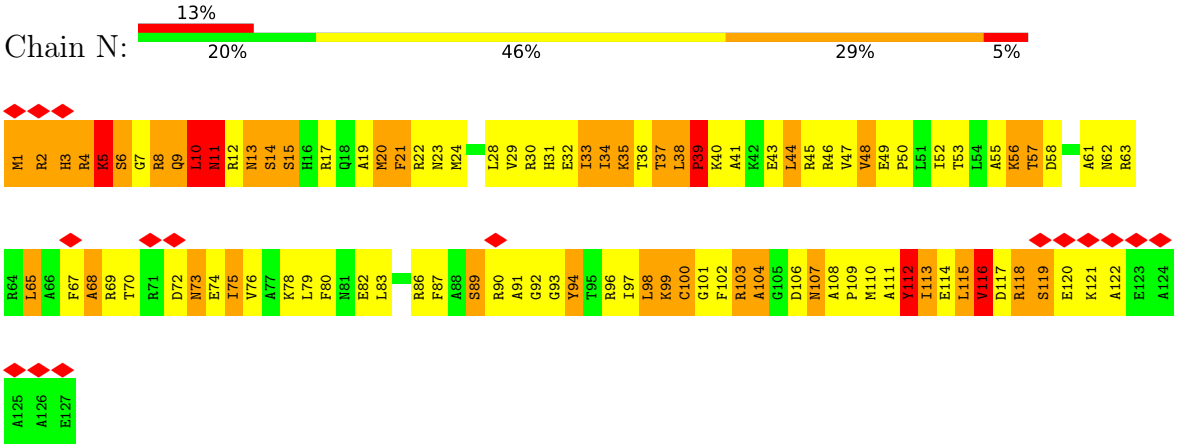


• Molecule 13: 50S ribosomal protein L16

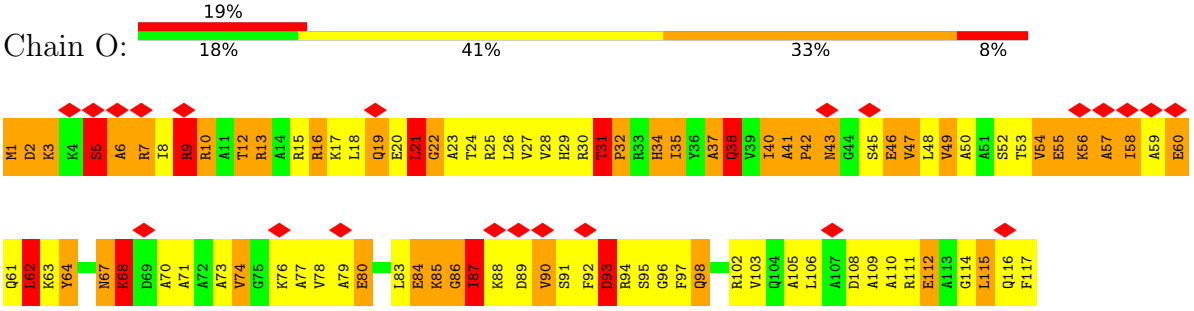
Chain M:



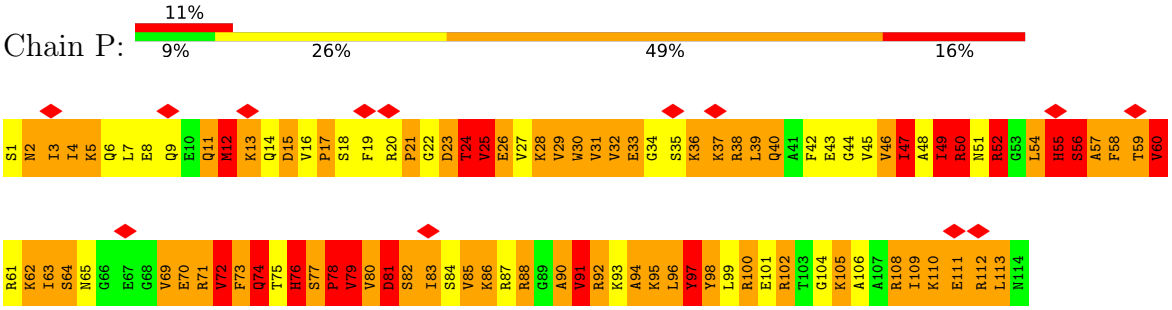
• Molecule 14: 50S ribosomal protein L17



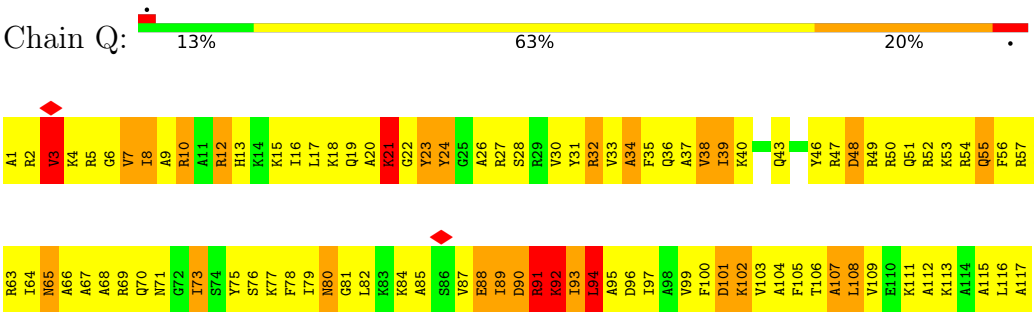
• Molecule 15: 50S ribosomal protein L18



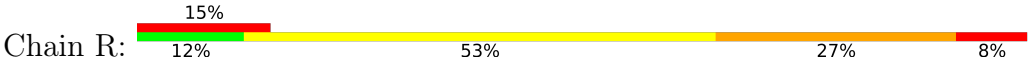
• Molecule 16: 50S ribosomal protein L19

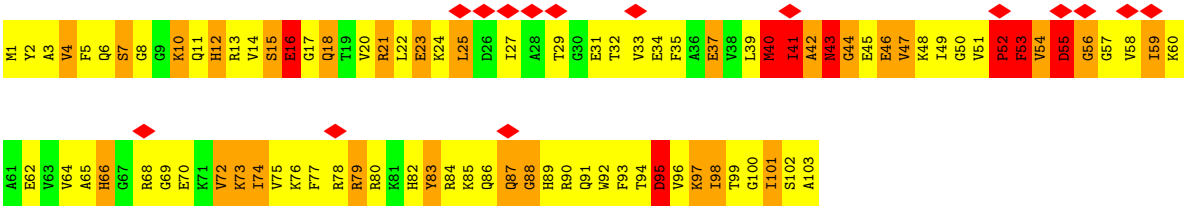


• Molecule 17: 50S ribosomal protein L20



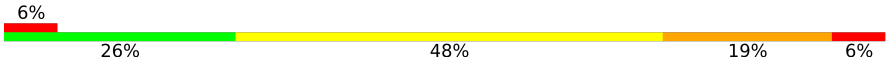
• Molecule 18: 50S ribosomal protein L21

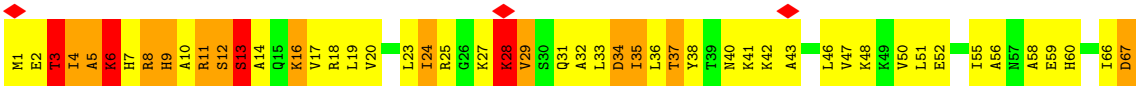


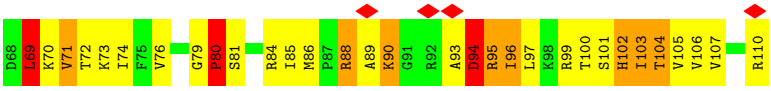


• Molecule 19: 50S ribosomal protein L22

Chain S:

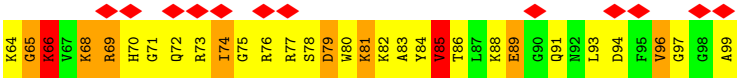






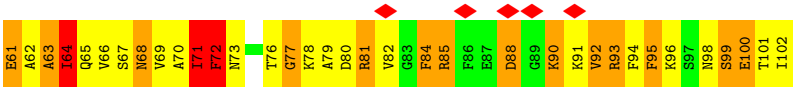
• Molecule 20: 50S ribosomal protein L23

Chain T:



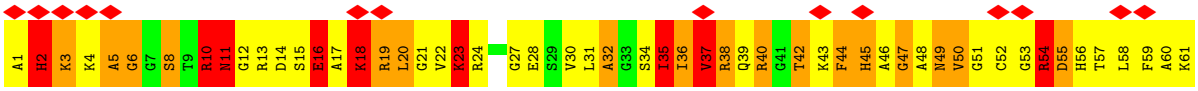
• Molecule 21: 50S ribosomal protein L24

Chain U:



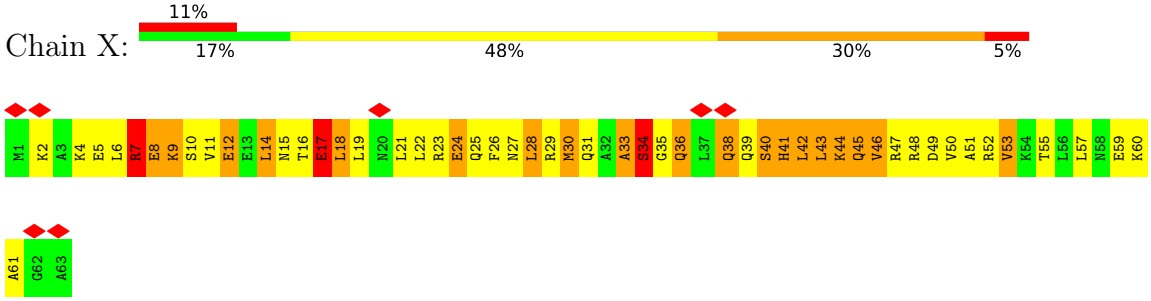
• Molecule 22: 50S ribosomal protein L27

Chain W:



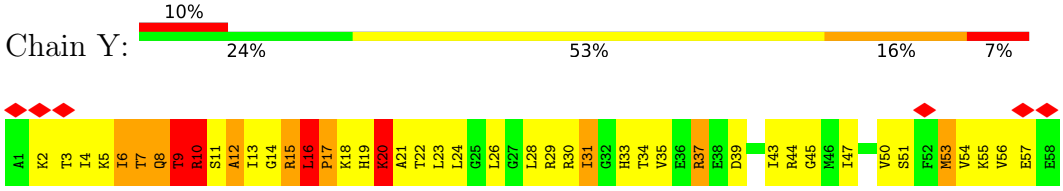
• Molecule 23: 50S ribosomal protein L29

Chain X:



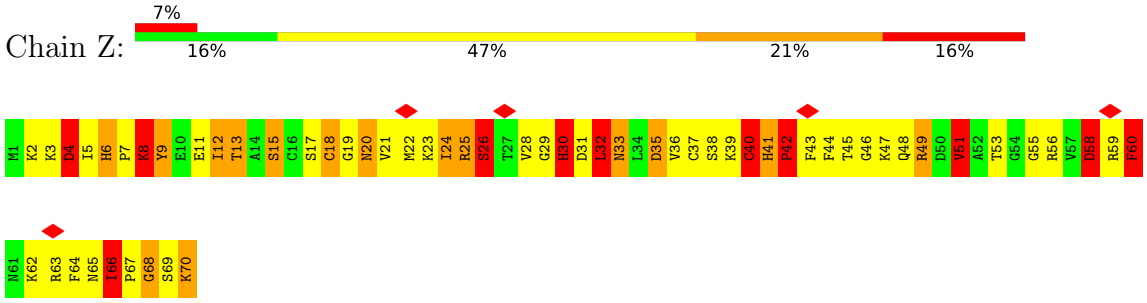
• Molecule 24: 50S ribosomal protein L30

Chain Y:



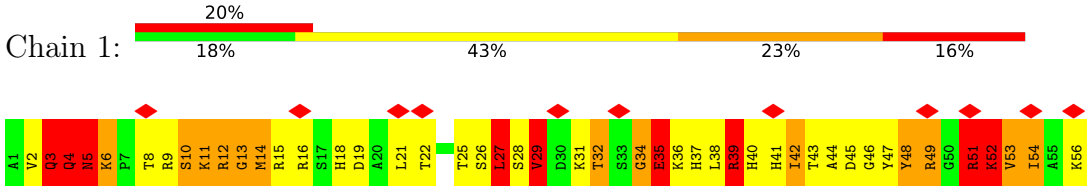
• Molecule 25: 50S ribosomal protein L31

Chain Z:



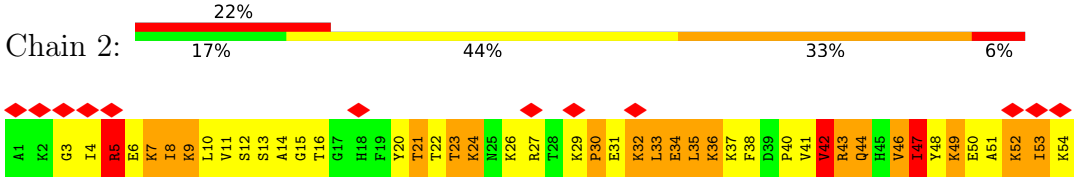
• Molecule 26: 50S ribosomal protein L32

Chain 1:



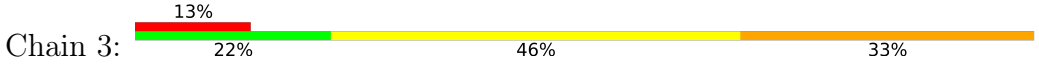
• Molecule 27: 50S ribosomal protein L33

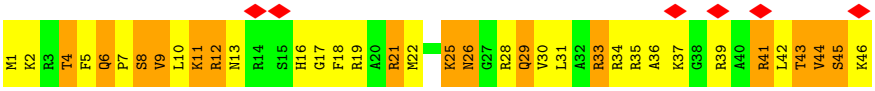
Chain 2:



• Molecule 28: 50S ribosomal protein L34

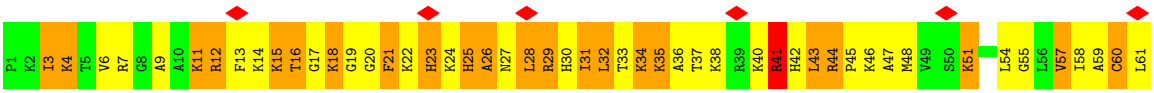
Chain 3:





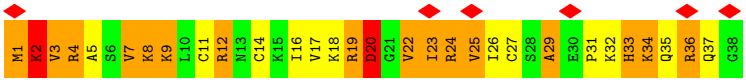
• Molecule 29: 50S ribosomal protein L35

Chain 4:



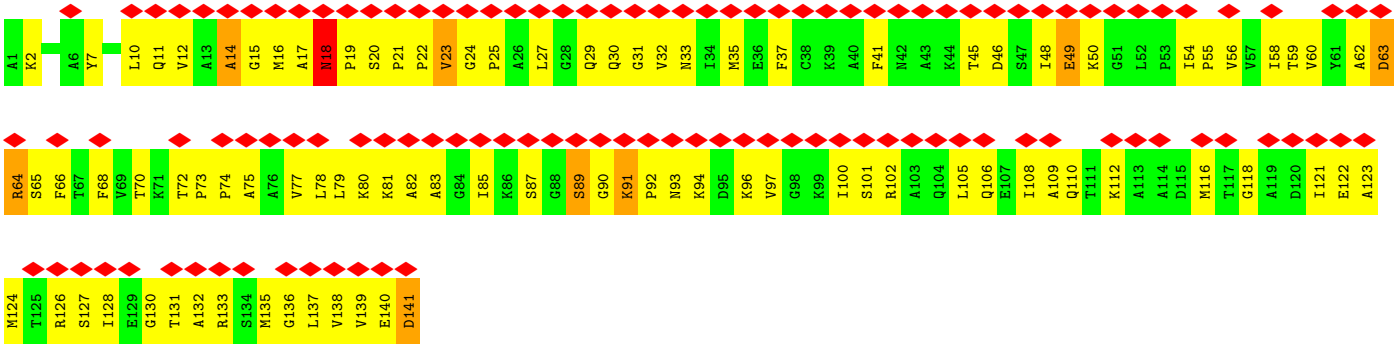
• Molecule 30: 50S ribosomal protein L36

Chain 5:



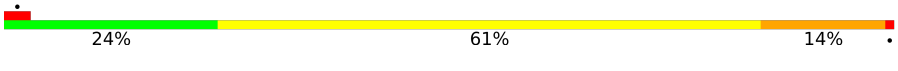
• Molecule 31: 50S ribosomal protein L11

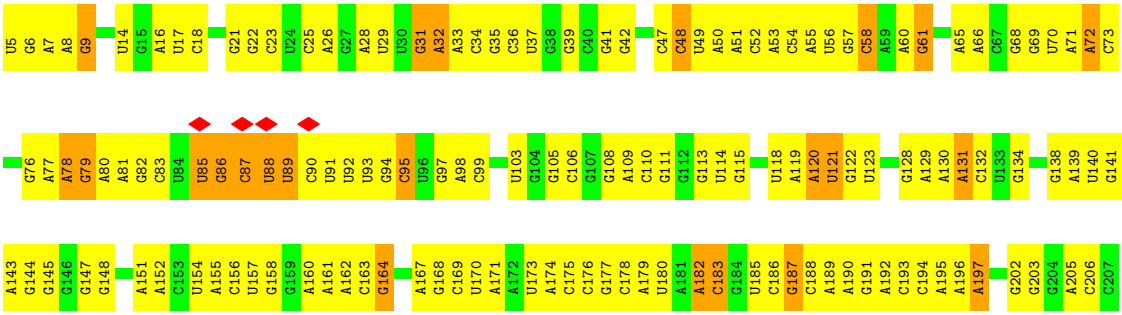
Chain 6:

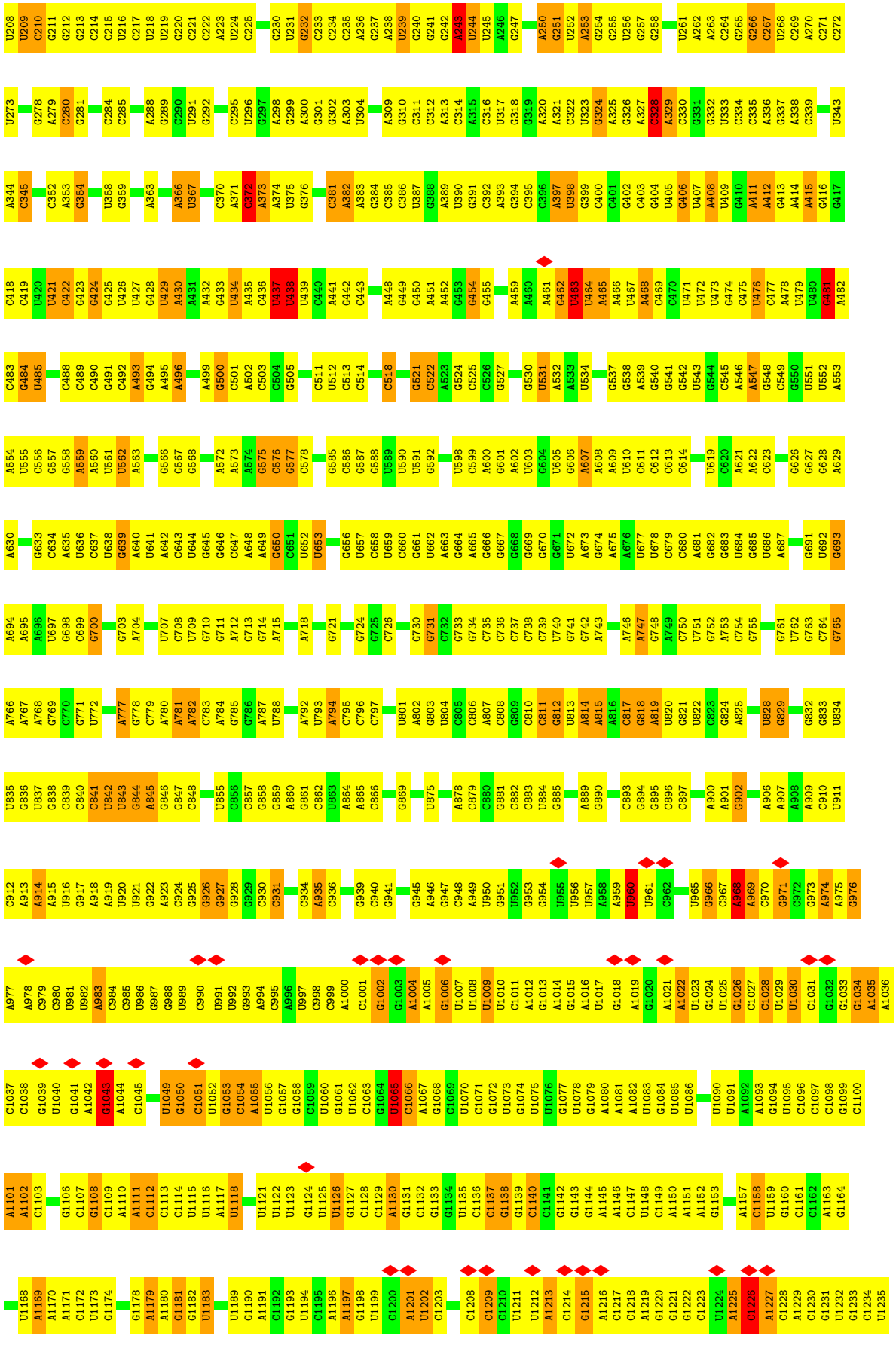


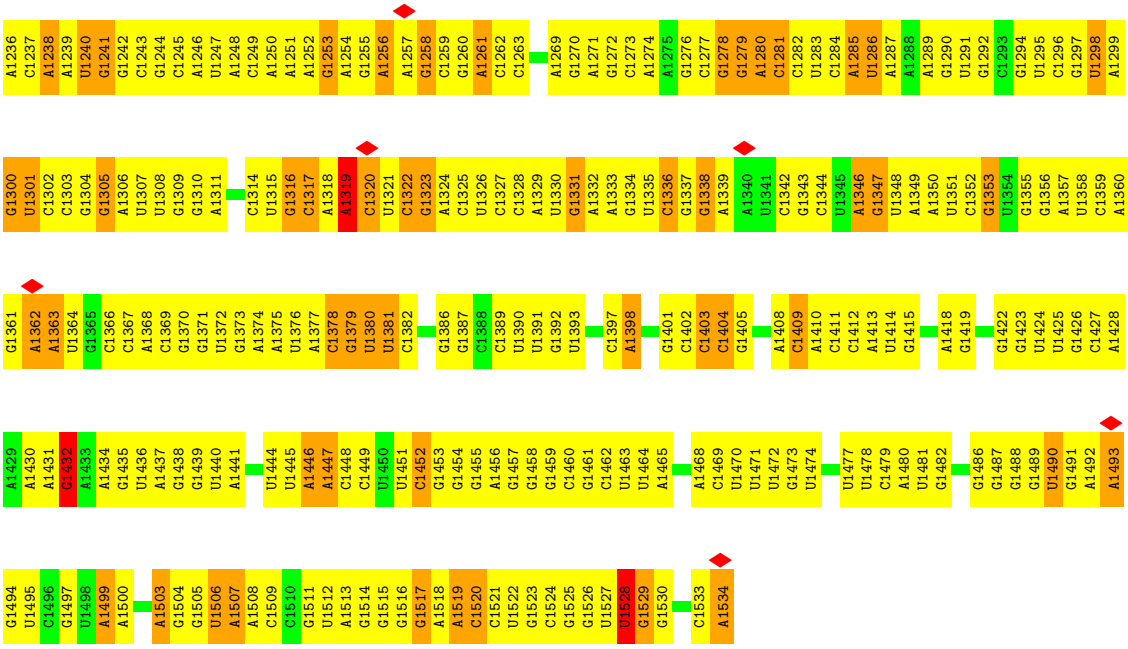
• Molecule 32: 16S rRNA

Chain a:



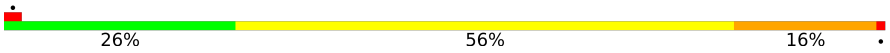


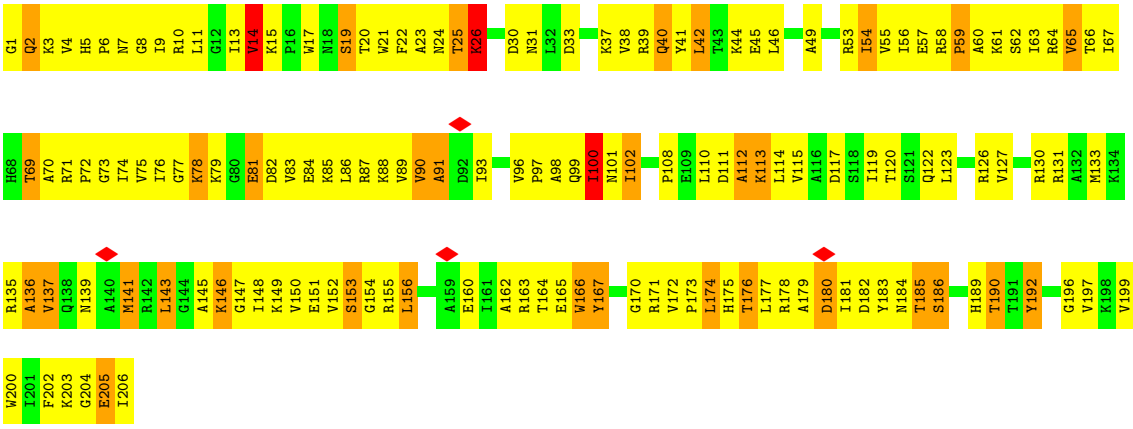




• Molecule 33: 30S ribosomal protein S3

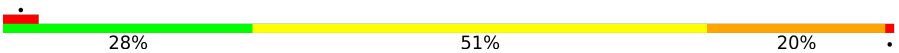
Chain c:

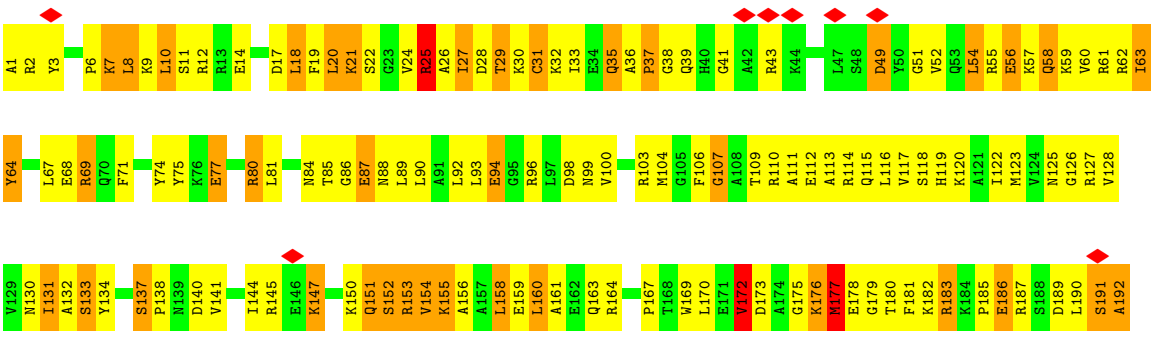




• Molecule 34: 30S ribosomal protein S4

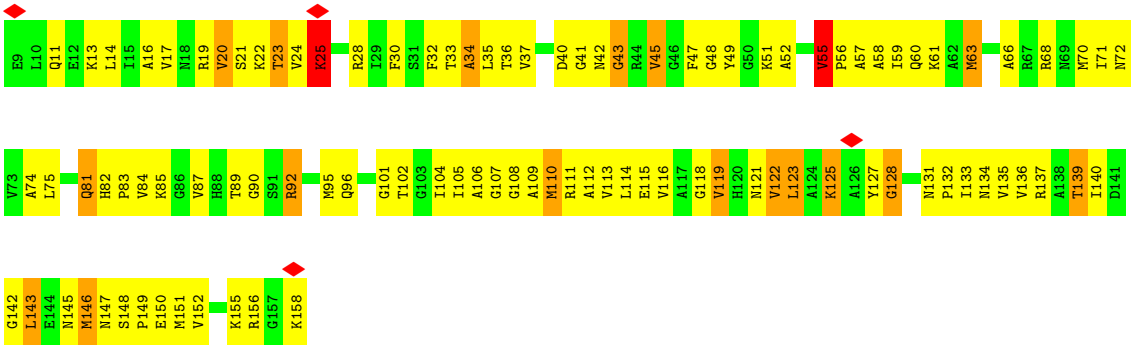
Chain d:





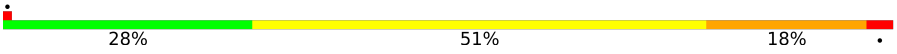
• Molecule 35: 30S ribosomal protein S5

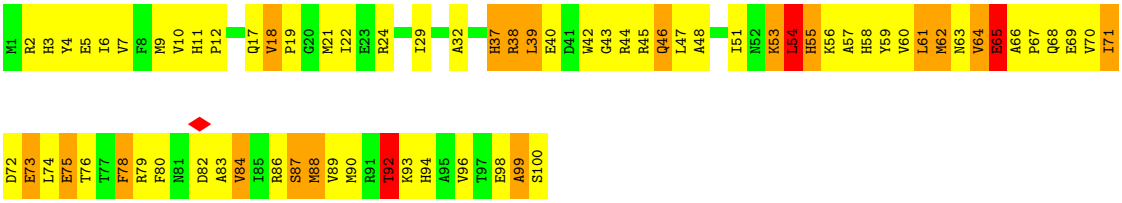
Chain e:



• Molecule 36: 30S ribosomal protein S6

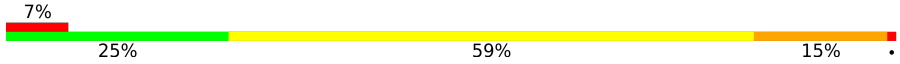
Chain f:

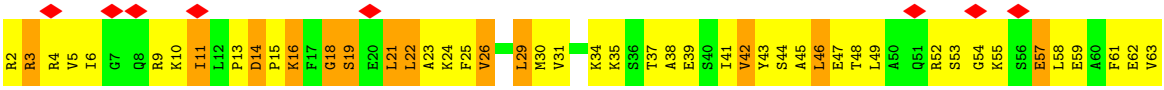


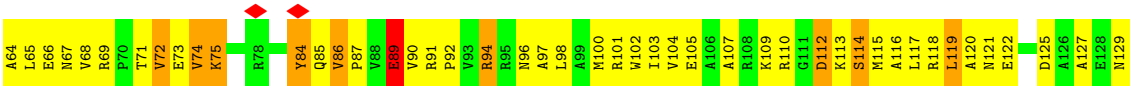


• Molecule 37: 30S ribosomal protein S7

Chain g:

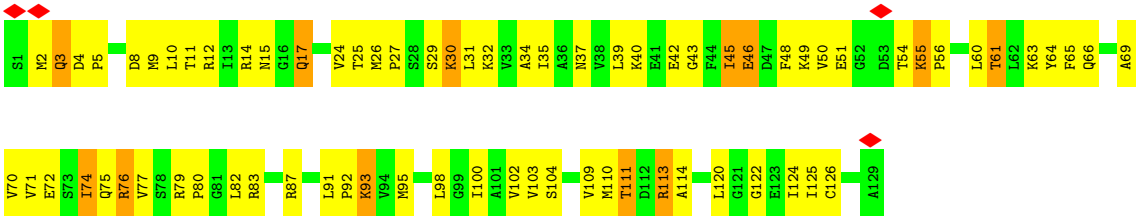






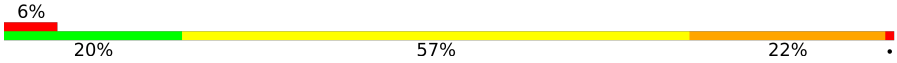
• Molecule 38: 30S ribosomal protein S8

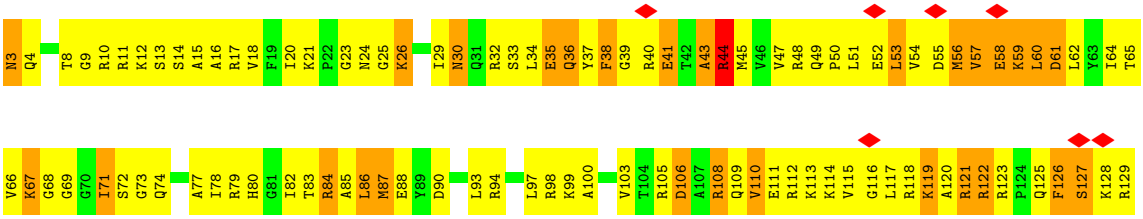
Chain h:



• Molecule 39: 30S ribosomal protein S9

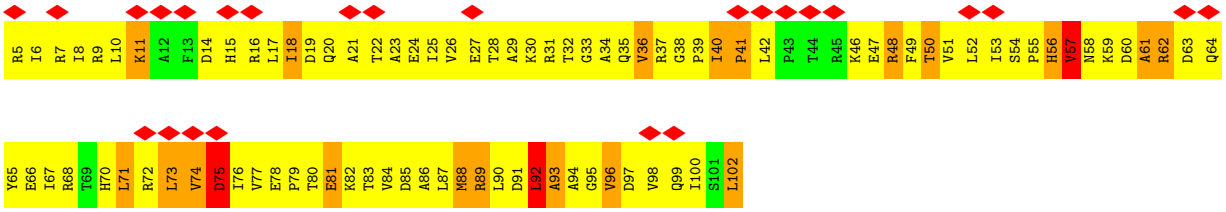
Chain i:





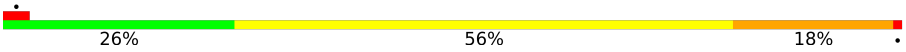
• Molecule 40: 30S ribosomal protein S10

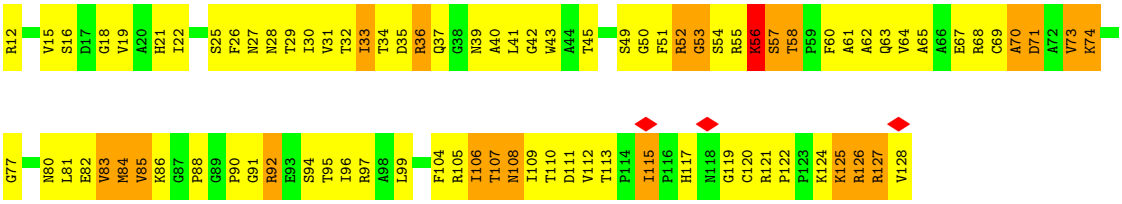
Chain j:



• Molecule 41: 30S ribosomal protein S11

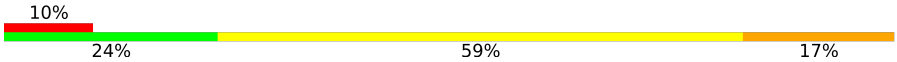
Chain k:

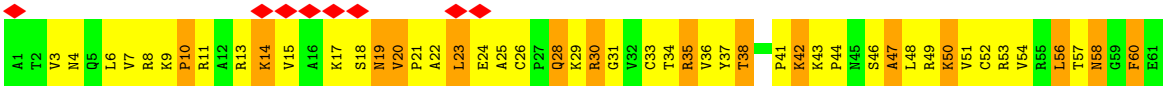




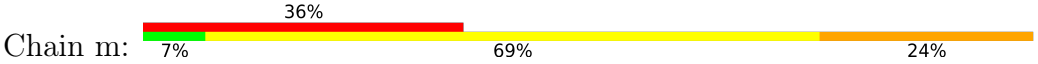
• Molecule 42: 30S ribosomal protein S12

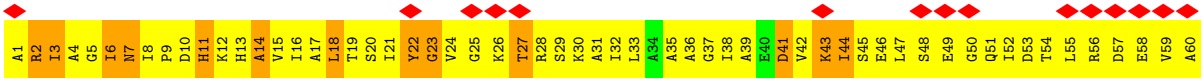
Chain l:

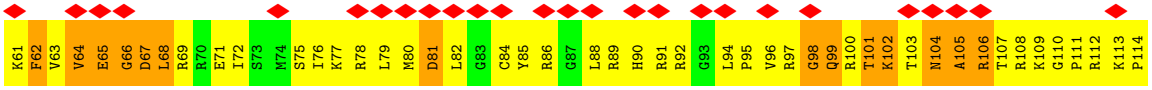




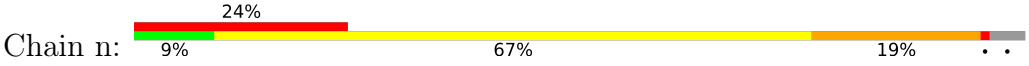
• Molecule 43: 30S ribosomal protein S13

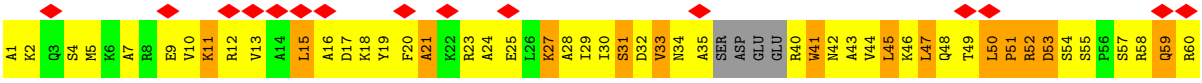


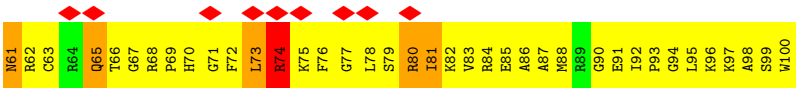




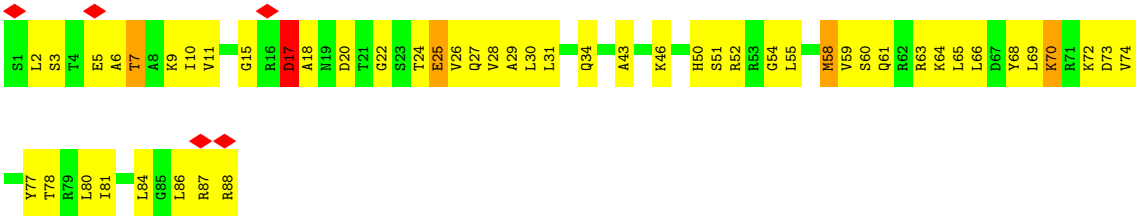
• Molecule 44: 30S ribosomal protein S14



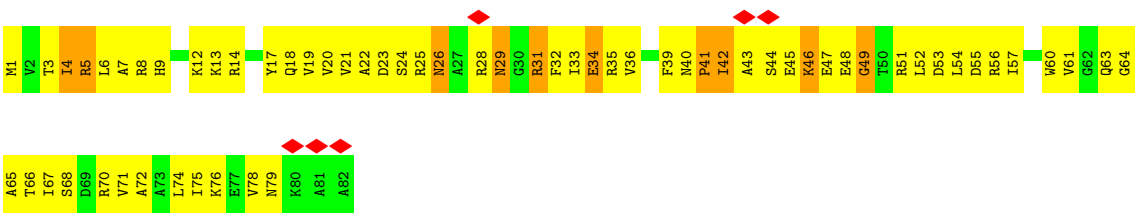




• Molecule 45: 30S ribosomal protein S15

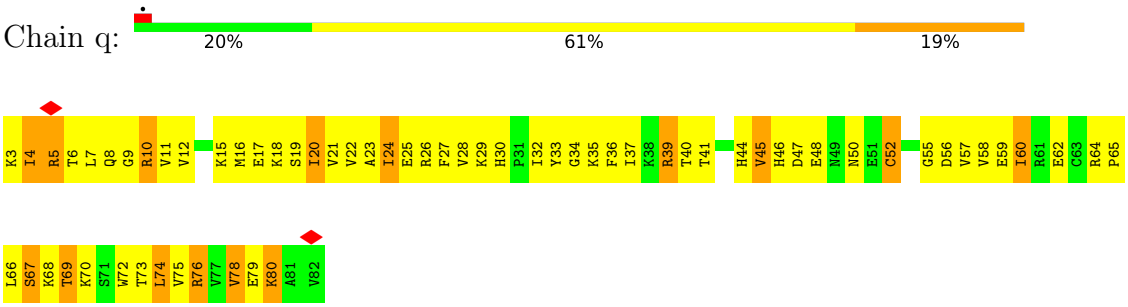


• Molecule 46: 30S ribosomal protein S16



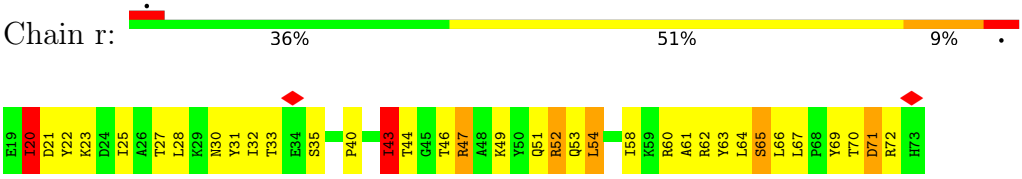
• Molecule 47: 30S ribosomal protein S17

Chain q:



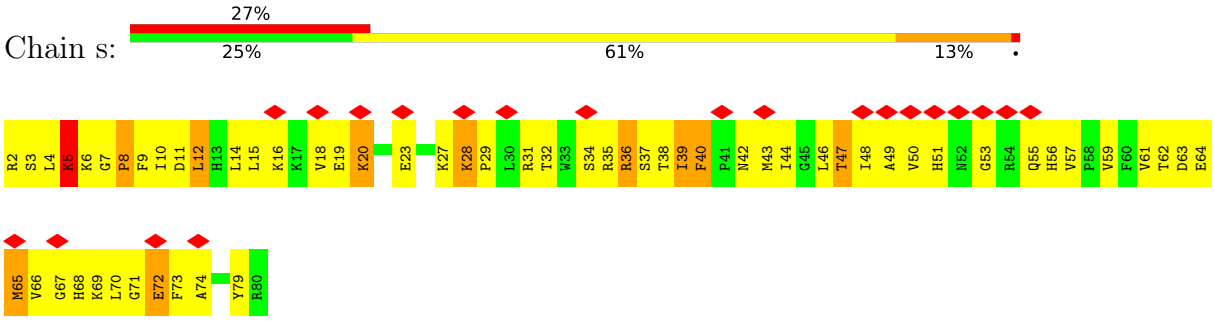
• Molecule 48: 30S ribosomal protein S18

Chain r:



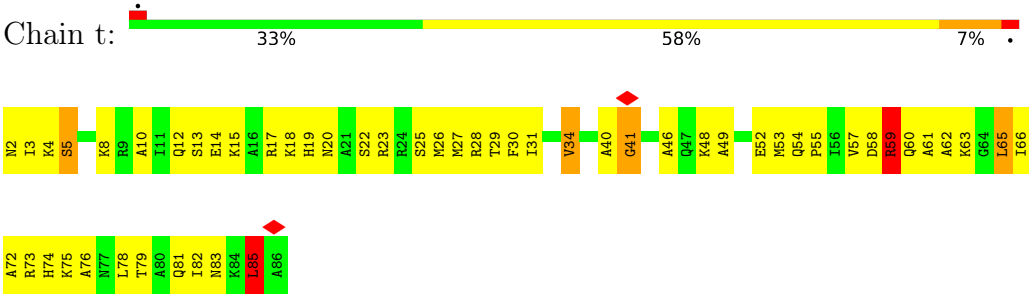
• Molecule 49: 30S ribosomal protein S19

Chain s:



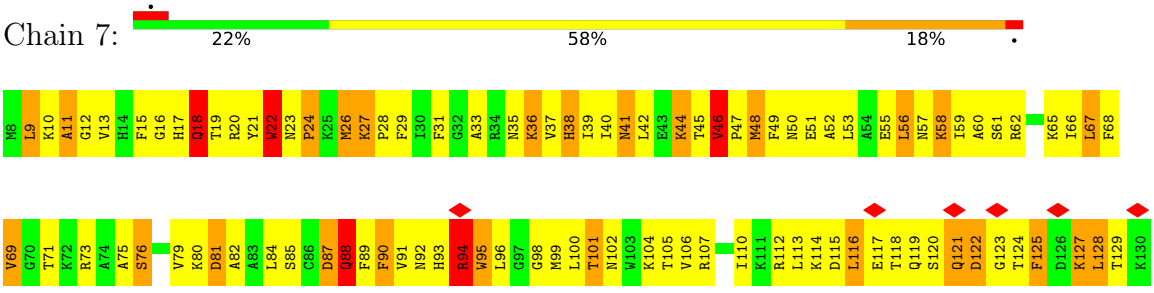
• Molecule 50: 30S ribosomal protein S20

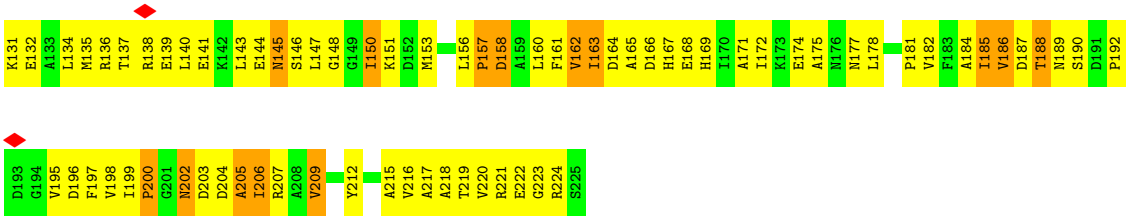
Chain t:



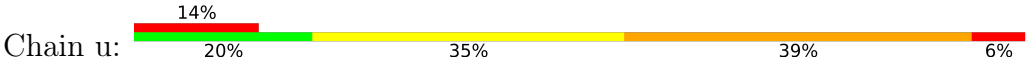
• Molecule 51: 30S ribosomal protein S2

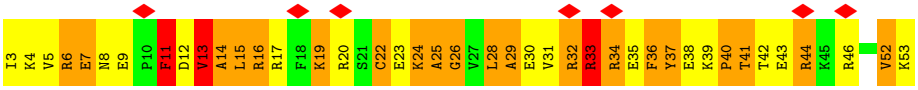
Chain 7:



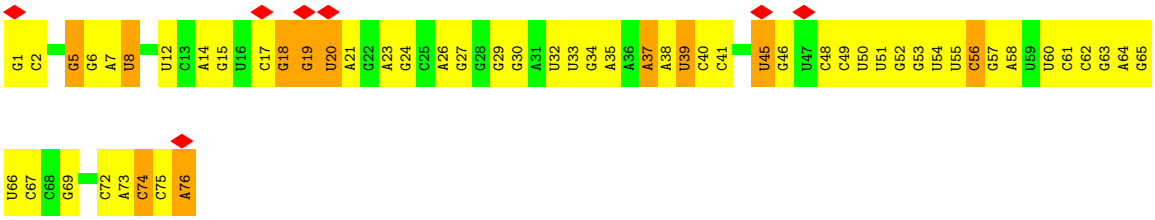


• Molecule 52: 30S ribosomal protein S21





• Molecule 53: P-tRNA



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	46042	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TECNAI F30	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	8	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.302	Depositor
Minimum map value	-0.149	Depositor
Average map value	0.002	Depositor
Map value standard deviation	0.013	Depositor
Recommended contour level	0.03	Depositor
Map size (Å)	424.96, 424.96, 424.96	wwPDB
Map dimensions	256, 256, 256	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.66, 1.66, 1.66	Depositor

5 Model quality

5.1 Standard geometry

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	A	0.28	0/2803	0.62	0/4371
2	B	0.30	5/68314 (0.0%)	0.66	96/106569 (0.1%)
3	V	0.38	0/766	0.82	1/1025 (0.1%)
4	C	0.51	0/2092	1.24	25/2813 (0.9%)
5	D	0.52	0/1586	1.17	16/2134 (0.7%)
6	E	0.55	2/1571 (0.1%)	1.40	24/2113 (1.1%)
7	F	0.41	0/1444	1.36	31/1937 (1.6%)
8	G	0.39	0/1343	1.00	9/1816 (0.5%)
9	H	0.33	0/1122	0.90	4/1515 (0.3%)
10	J	0.43	0/1135	1.06	11/1529 (0.7%)
11	K	0.44	0/939	1.46	21/1258 (1.7%)
12	L	0.96	5/1062 (0.5%)	2.35	65/1413 (4.6%)
13	M	0.68	2/1093 (0.2%)	1.43	24/1460 (1.6%)
14	N	0.46	0/1021	1.17	16/1364 (1.2%)
15	O	0.36	0/910	1.08	11/1219 (0.9%)
16	P	0.78	1/929 (0.1%)	2.02	43/1242 (3.5%)
17	Q	0.53	1/960 (0.1%)	1.24	9/1278 (0.7%)
18	R	1.37	7/829 (0.8%)	1.75	24/1107 (2.2%)
19	S	0.35	0/864	0.93	4/1156 (0.3%)
20	T	0.54	1/784 (0.1%)	1.05	9/1048 (0.9%)
21	U	0.41	0/787	1.09	9/1051 (0.9%)
22	W	0.43	0/642	1.34	15/848 (1.8%)
23	X	0.36	0/510	1.10	4/677 (0.6%)
24	Y	0.41	0/453	0.84	1/605 (0.2%)
25	Z	0.57	0/559	1.51	10/745 (1.3%)
26	1	0.79	1/450 (0.2%)	1.63	17/599 (2.8%)
27	2	0.42	0/448	0.92	2/594 (0.3%)
28	3	0.40	0/380	0.97	2/498 (0.4%)
29	4	0.57	0/513	1.15	4/676 (0.6%)
30	5	0.55	1/303 (0.3%)	1.11	3/397 (0.8%)
31	6	0.34	0/1046	1.00	9/1410 (0.6%)
32	a	0.27	1/36762 (0.0%)	0.63	27/57350 (0.0%)
33	c	0.28	0/1651	0.74	1/2225 (0.0%)
34	d	0.27	0/1665	0.72	1/2227 (0.0%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
35	e	0.30	0/1118	0.76	1/1504 (0.1%)
36	f	0.30	0/835	0.81	2/1128 (0.2%)
37	g	0.27	0/1187	0.74	0/1591
38	h	0.28	0/989	0.79	0/1326
39	i	0.28	0/1034	0.75	0/1375
40	j	0.29	0/796	0.71	0/1077
41	k	0.30	0/893	0.80	2/1205 (0.2%)
42	l	0.28	0/969	0.72	0/1300
43	m	0.27	0/892	0.77	0/1193
44	n	0.28	0/785	0.74	0/1043
45	o	0.27	0/724	0.73	1/966 (0.1%)
46	p	0.29	0/659	0.76	0/884
47	q	0.26	0/657	0.63	0/881
48	r	0.31	0/462	0.71	0/621
49	s	0.29	0/652	0.72	0/877
50	t	0.28	0/671	0.79	1/888 (0.1%)
51	7	0.31	1/1735 (0.1%)	0.77	1/2338 (0.0%)
52	u	1.53	5/430 (1.2%)	1.15	7/570 (1.2%)
53	v	0.41	0/1813	0.51	0/2823
All	All	0.36	33/155037 (0.0%)	0.80	563/231859 (0.2%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
2	B	0	61
4	C	0	3
9	H	0	1
10	J	0	2
12	L	0	1
16	P	0	1
17	Q	0	1
18	R	0	1
32	a	0	16
52	u	0	1
All	All	0	88

All (33) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
52	u	15	LEU	C-N	-23.68	0.99	1.33
18	R	54	VAL	N-CA	-18.64	1.23	1.46
18	R	54	VAL	CA-CB	17.35	1.78	1.54
18	R	54	VAL	CA-C	14.95	1.71	1.52
18	R	53	PHE	CB-CG	13.51	1.81	1.50
52	u	25	ALA	C-N	-11.83	1.16	1.33
52	u	29	ALA	C-N	11.73	1.49	1.33
18	R	53	PHE	CA-CB	11.02	1.70	1.53
52	u	11	PHE	C-N	-9.11	1.21	1.33
26	1	52	LYS	N-CA	8.58	1.56	1.46
2	B	2196	C	O3'-P	8.15	1.73	1.61
13	M	136	MET	SD-CE	7.97	1.99	1.79
2	B	1086	A	C5-C6	-7.95	1.25	1.41
12	L	84	LYS	CA-C	7.42	1.62	1.52
20	T	2	ILE	N-CA	-7.39	1.37	1.46
6	E	46	GLN	CB-CG	7.25	1.74	1.52
18	R	53	PHE	C-N	-7.24	1.23	1.33
16	P	25	VAL	CA-CB	-6.98	1.45	1.54
52	u	7	GLU	C-N	6.79	1.43	1.33
18	R	55	ASP	N-CA	6.36	1.54	1.46
2	B	2191	A	O3'-P	-5.96	1.52	1.61
13	M	8	LYS	CA-C	-5.85	1.46	1.53
2	B	2052	A	C4'-C3'	-5.69	1.44	1.52
6	E	100	MET	SD-CE	-5.59	1.65	1.79
30	5	1	MET	SD-CE	-5.50	1.65	1.79
17	Q	3	VAL	CA-C	-5.43	1.46	1.52
12	L	15	ALA	CA-CB	-5.40	1.46	1.53
32	a	463	U	O3'-P	-5.38	1.53	1.61
12	L	84	LYS	N-CA	5.34	1.53	1.46
51	7	46	VAL	CA-CB	5.32	1.56	1.54
12	L	118	THR	CA-CB	5.25	1.61	1.53
2	B	1248	G	C4'-C3'	5.20	1.60	1.53
12	L	85	VAL	N-CA	5.08	1.52	1.46

All (563) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	E	73	ILE	N-CA-C	20.95	131.70	112.43
6	E	74	LYS	N-CA-C	-19.18	90.85	112.72
18	R	54	VAL	CB-CA-C	17.59	140.13	111.29
12	L	6	LEU	N-CA-C	16.94	134.26	111.90
16	P	40	GLN	N-CA-C	-16.82	89.08	112.13
18	R	54	VAL	N-CA-C	-16.52	74.98	109.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	L	105	ILE	N-CA-C	16.50	133.98	108.89
12	L	76	GLU	N-CA-C	-13.55	92.26	110.55
12	L	103	ILE	N-CA-C	13.51	127.71	107.99
16	P	54	LEU	N-CA-C	13.45	126.63	108.07
16	P	72	VAL	N-CA-C	13.41	137.23	109.34
17	Q	3	VAL	CB-CA-C	-13.32	94.56	112.02
18	R	54	VAL	N-CA-CB	-13.28	89.31	111.23
12	L	18	ARG	N-CA-C	13.22	128.65	108.96
12	L	118	THR	CA-C-N	12.84	135.89	119.84
12	L	118	THR	C-N-CA	12.84	135.89	119.84
2	B	2052	A	C5'-C4'-C3'	-12.79	96.82	116.00
12	L	39	LYS	N-CA-C	-12.45	94.61	111.54
12	L	112	LEU	N-CA-C	-12.32	90.01	109.72
18	R	53	PHE	CA-C-O	12.21	136.02	121.36
16	P	70	GLU	N-CA-C	12.19	128.03	107.93
16	P	14	GLN	N-CA-C	-12.11	93.50	112.99
18	R	43	ASN	N-CA-C	-11.80	97.15	113.56
13	M	5	LYS	N-CA-C	-11.65	85.99	110.80
18	R	46	GLU	N-CA-C	11.60	130.84	107.41
18	R	40	MET	N-CA-C	-11.32	99.47	113.28
18	R	50	GLY	N-CA-C	-11.07	95.53	111.03
17	Q	3	VAL	N-CA-C	-11.03	100.16	110.53
4	C	238	ASN	N-CA-C	11.02	127.50	111.96
12	L	59	ARG	N-CA-C	-10.98	100.43	114.04
7	F	106	ALA	N-CA-C	10.93	126.33	111.90
10	J	115	GLY	N-CA-C	-10.93	98.78	112.77
16	P	28	LYS	N-CA-C	-10.82	91.76	108.96
16	P	79	VAL	N-CA-C	10.80	131.80	109.34
28	3	41	ARG	N-CA-C	-10.78	99.32	111.82
25	Z	20	ASN	N-CA-C	10.76	124.71	108.46
5	D	146	ILE	N-CA-C	10.71	123.17	108.17
2	B	2791	G	O5'-P-OP1	-10.58	76.26	108.00
12	L	86	GLU	N-CA-C	-10.52	98.73	112.41
6	E	84	THR	N-CA-C	10.51	133.18	110.80
16	P	71	ARG	N-CA-C	10.42	132.99	110.80
2	B	37	C	C4'-C3'-O3'	10.40	128.59	113.00
12	L	25	SER	N-CA-C	-10.34	100.01	111.28
11	K	90	ASN	N-CA-C	10.29	123.76	111.82
13	M	6	ARG	N-CA-C	-10.29	95.06	110.28
10	J	80	HIS	N-CA-C	10.28	127.07	113.30
5	D	133	THR	N-CA-C	10.26	122.05	111.07
18	R	54	VAL	CG1-CB-CG2	-10.24	88.27	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
7	F	50	ASP	N-CA-C	-10.19	100.96	113.50
12	L	85	VAL	N-CA-C	-10.14	88.25	109.34
12	L	89	VAL	N-CA-C	-10.12	103.48	113.20
5	D	19	GLY	N-CA-C	-10.12	101.17	115.43
11	K	13	ASN	N-CA-C	10.00	121.88	108.38
26	1	52	LYS	CB-CA-C	-9.99	92.81	109.80
12	L	5	THR	CA-C-N	9.98	136.76	122.08
12	L	5	THR	C-N-CA	9.98	136.76	122.08
5	D	143	PRO	N-CA-C	-9.90	99.46	113.81
17	Q	8	ILE	N-CA-C	-9.90	103.83	113.53
13	M	132	THR	N-CA-C	9.88	131.84	110.80
17	Q	7	VAL	N-CA-C	9.83	121.82	110.62
18	R	53	PHE	N-CA-CB	9.79	126.37	110.41
18	R	44	GLY	N-CA-C	-9.76	100.92	114.67
6	E	88	ARG	CA-C-N	9.72	129.84	119.05
6	E	88	ARG	C-N-CA	9.72	129.84	119.05
7	F	107	VAL	N-CA-C	-9.68	98.58	112.61
21	U	33	VAL	N-CA-C	9.65	116.54	106.21
7	F	74	ALA	N-CA-C	9.61	124.36	110.24
12	L	68	SER	N-CA-C	9.57	131.18	110.80
5	D	151	THR	N-CA-C	9.55	119.33	108.25
2	B	2790	U	OP1-P-O3'	9.53	136.59	108.00
12	L	102	GLY	CA-C-N	-9.49	110.75	122.90
12	L	102	GLY	C-N-CA	-9.49	110.75	122.90
16	P	29	VAL	N-CA-C	-9.33	93.89	107.98
12	L	105	ILE	CA-C-N	9.27	133.67	120.79
12	L	105	ILE	C-N-CA	9.27	133.67	120.79
13	M	25	ASP	N-CA-C	9.18	122.64	108.96
12	L	138	ALA	N-CA-C	9.16	122.81	108.79
26	1	51	ARG	CA-C-N	9.15	137.82	121.89
26	1	51	ARG	C-N-CA	9.15	137.82	121.89
16	P	51	ASN	N-CA-C	9.12	122.53	108.30
12	L	20	GLY	N-CA-C	9.05	128.85	112.02
19	S	41	LYS	N-CA-C	-9.04	93.90	108.55
11	K	91	SER	N-CA-C	-9.04	91.88	108.24
12	L	126	ARG	N-CA-C	9.04	130.05	110.80
2	B	479	A	C4'-C3'-O3'	-9.00	95.91	109.40
8	G	158	GLY	N-CA-C	-8.98	103.24	114.92
12	L	28	GLY	N-CA-C	-8.94	103.60	115.40
6	E	88	ARG	N-CA-C	8.94	116.17	108.13
4	C	30	ALA	CA-C-N	-8.91	108.71	119.84
4	C	30	ALA	C-N-CA	-8.91	108.71	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	D	136	ASN	N-CA-C	-8.91	101.99	112.86
12	L	137	ALA	N-CA-C	-8.89	102.34	113.01
22	W	11	ASN	N-CA-C	8.86	129.68	110.80
25	Z	43	PHE	N-CA-C	-8.83	95.37	109.59
4	C	264	LYS	N-CA-C	8.80	123.38	109.65
2	B	139	U	N1-C1'-C2'	-8.74	100.89	114.00
4	C	138	SER	N-CA-C	-8.65	102.63	113.01
32	a	328	C	C2'-C3'-O3'	8.59	122.38	109.50
7	F	51	ASN	N-CA-C	-8.54	102.57	113.16
12	L	77	ILE	N-CA-C	-8.49	91.68	109.34
12	L	14	LYS	N-CA-C	-8.47	92.75	110.80
2	B	773	U	C5'-C4'-C3'	-8.45	103.33	116.00
2	B	1350	C	C5'-C4'-C3'	-8.44	103.34	116.00
12	L	78	ARG	N-CA-C	8.44	128.78	110.80
26	1	52	LYS	N-CA-CB	8.42	124.69	110.71
21	U	33	VAL	CB-CA-C	-8.35	103.87	113.22
23	X	33	ALA	N-CA-C	8.32	128.53	110.80
4	C	83	ASP	CA-C-N	8.31	130.23	119.84
4	C	83	ASP	C-N-CA	8.31	130.23	119.84
6	E	107	SER	N-CA-C	-8.30	103.16	113.20
26	1	4	GLN	N-CA-C	-8.29	98.00	108.45
15	O	6	ALA	N-CA-C	-8.28	104.32	114.75
4	C	32	LEU	N-CA-C	8.27	128.42	110.80
29	4	34	LYS	N-CA-C	-8.25	103.12	113.02
13	M	3	GLN	CA-C-N	8.22	130.12	119.84
13	M	3	GLN	C-N-CA	8.22	130.12	119.84
22	W	10	ARG	N-CA-C	8.22	128.31	110.80
10	J	71	ASP	N-CA-C	8.20	116.62	108.75
2	B	2791	G	O5'-P-OP2	8.17	132.52	108.00
12	L	92	LEU	N-CA-C	8.12	128.09	110.80
14	N	5	LYS	N-CA-C	8.10	128.04	110.80
18	R	53	PHE	O-C-N	8.07	132.10	123.06
12	L	67	THR	N-CA-C	8.07	128.00	110.80
5	D	144	GLY	N-CA-C	-8.01	103.69	115.63
12	L	118	THR	C-N-CD	-8.01	92.17	125.00
25	Z	41	HIS	CA-C-N	7.99	129.83	119.84
25	Z	41	HIS	C-N-CA	7.99	129.83	119.84
6	E	85	PHE	N-CA-C	-7.93	99.60	111.81
2	B	670	A	C4'-C3'-O3'	7.92	121.27	109.40
12	L	125	LEU	N-CA-C	-7.91	93.95	110.80
9	H	105	ALA	N-CA-C	-7.91	103.64	113.20
5	D	154	LYS	N-CA-C	-7.85	94.08	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
16	P	6	GLN	N-CA-C	-7.83	103.87	113.19
9	H	120	GLY	N-CA-C	-7.83	102.52	112.54
18	R	53	PHE	N-CA-C	-7.80	97.92	110.32
2	B	825	A	C5'-C4'-C3'	-7.79	104.32	116.00
31	6	65	SER	N-CA-C	-7.78	100.50	110.53
25	Z	51	VAL	N-CA-C	-7.76	105.14	111.81
2	B	38	A	C5'-C4'-C3'	-7.75	104.38	116.00
14	N	15	SER	N-CA-C	-7.74	102.48	112.23
26	1	52	LYS	N-CA-C	-7.70	94.62	108.48
13	M	29	GLY	N-CA-C	7.69	117.21	110.21
13	M	65	ILE	N-CA-C	-7.60	97.52	108.53
12	L	86	GLU	CB-CG-CD	7.58	125.49	112.60
7	F	47	LYS	N-CA-C	-7.56	102.97	111.14
13	M	8	LYS	N-CA-C	-7.56	95.36	108.52
2	B	2052	A	O4'-C4'-C3'	7.54	111.54	104.00
17	Q	94	LEU	N-CA-C	-7.53	103.97	113.01
16	P	78	PRO	N-CA-C	7.51	127.94	112.47
16	P	82	SER	N-CA-C	7.50	126.78	110.80
14	N	6	SER	N-CA-C	-7.48	97.68	108.60
7	F	150	GLY	N-CA-C	7.47	130.89	113.18
16	P	81	ASP	N-CA-C	-7.45	94.93	110.80
20	T	28	ASN	N-CA-C	-7.45	100.22	110.35
25	Z	68	GLY	N-CA-C	-7.43	95.57	113.18
14	N	2	ARG	N-CA-C	-7.38	95.09	110.80
12	L	127	VAL	N-CA-C	7.37	124.67	109.34
32	a	372	C	C2'-C3'-O3'	7.37	120.56	109.50
14	N	4	ARG	N-CA-C	7.35	126.45	110.80
7	F	73	VAL	N-CA-C	7.34	124.62	109.34
16	P	71	ARG	CA-C-N	7.34	135.18	121.97
16	P	71	ARG	C-N-CA	7.34	135.18	121.97
2	B	2790	U	O3'-P-O5'	-7.33	93.01	104.00
6	E	75	SER	CA-C-N	7.33	129.00	119.84
6	E	75	SER	C-N-CA	7.33	129.00	119.84
16	P	74	GLN	N-CA-C	-7.29	98.76	109.11
25	Z	42	PRO	N-CA-C	7.28	127.46	112.47
12	L	71	ALA	N-CA-C	-7.27	99.68	110.23
2	B	1818	U	C4'-C3'-O3'	-7.27	102.10	113.00
7	F	164	GLU	N-CA-C	-7.27	103.35	111.71
11	K	89	ASN	N-CA-C	7.27	126.28	110.80
13	M	131	VAL	N-CA-C	7.26	124.45	109.34
22	W	10	ARG	CA-C-N	7.26	135.41	121.54
22	W	10	ARG	C-N-CA	7.26	135.41	121.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	1	5	ASN	N-CA-C	7.24	126.21	110.80
30	5	34	LYS	N-CA-C	-7.22	104.45	113.55
2	B	2259	U	C5'-C4'-C3'	-7.22	105.17	116.00
7	F	14	LYS	N-CA-C	-7.21	95.45	110.80
26	1	27	LEU	N-CA-C	7.17	121.47	110.36
14	N	100	CYS	N-CA-C	-7.16	95.55	110.80
15	O	86	GLY	N-CA-C	7.15	123.14	113.99
25	Z	26	SER	N-CA-C	7.15	126.03	110.80
26	1	6	LYS	CA-C-N	7.15	128.78	119.84
26	1	6	LYS	C-N-CA	7.15	128.78	119.84
13	M	3	GLN	C-N-CD	-7.15	95.69	125.00
11	K	71	ARG	CA-C-N	-7.14	110.91	119.84
11	K	71	ARG	C-N-CA	-7.14	110.91	119.84
26	1	52	LYS	CA-CB-CG	7.12	128.34	114.10
4	C	28	PRO	CA-C-N	7.11	135.11	121.54
4	C	28	PRO	C-N-CA	7.11	135.11	121.54
11	K	101	GLY	CA-C-N	7.09	127.54	120.52
11	K	101	GLY	C-N-CA	7.09	127.54	120.52
8	G	80	GLU	N-CA-C	7.09	119.00	111.28
12	L	86	GLU	N-CA-CB	-7.06	99.55	111.20
4	C	28	PRO	N-CA-C	7.06	127.01	112.47
22	W	14	ASP	N-CA-C	7.05	119.41	110.24
7	F	20	ASN	N-CA-C	7.05	125.81	110.80
15	O	58	ILE	N-CA-C	-7.04	106.06	111.62
10	J	4	PHE	N-CA-C	-7.04	95.82	110.80
11	K	30	ARG	N-CA-C	-7.04	99.48	109.96
2	B	1125	G	C4'-C3'-O3'	-6.97	102.54	113.00
15	O	93	ASP	N-CA-C	-6.97	97.54	108.90
23	X	17	GLU	N-CA-C	-6.96	104.60	113.23
10	J	32	LEU	N-CA-C	-6.94	105.34	113.88
2	B	1250	G	C4'-C3'-O3'	6.94	119.81	109.40
12	L	83	ALA	N-CA-C	-6.94	96.03	110.80
6	E	48	THR	N-CA-C	6.93	116.46	108.49
12	L	77	ILE	CA-C-N	-6.91	108.33	121.54
12	L	77	ILE	C-N-CA	-6.91	108.33	121.54
16	P	50	ARG	N-CA-C	-6.91	96.09	110.80
21	U	32	LYS	N-CA-C	6.90	120.64	109.40
12	L	94	THR	N-CA-C	6.86	125.41	110.80
11	K	54	LYS	N-CA-C	6.85	119.69	108.52
30	5	18	LYS	N-CA-C	6.85	121.62	112.30
6	E	50	ALA	N-CA-C	-6.83	104.94	113.20
15	O	5	SER	N-CA-C	6.81	117.48	107.88

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	O	16	ARG	N-CA-C	-6.81	104.94	113.18
52	u	15	LEU	CA-C-N	6.80	136.13	121.64
52	u	15	LEU	C-N-CA	6.80	136.13	121.64
20	T	76	ARG	N-CA-C	6.80	117.02	108.45
16	P	73	PHE	N-CA-C	-6.78	98.68	109.59
11	K	21	CYS	N-CA-C	-6.77	99.00	109.76
18	R	53	PHE	CA-C-N	6.76	134.14	121.97
18	R	53	PHE	C-N-CA	6.76	134.14	121.97
2	B	2266	A	C4'-C3'-O3'	-6.76	99.26	109.40
6	E	159	LEU	N-CA-C	-6.75	105.12	113.15
16	P	58	PHE	N-CA-C	-6.75	102.10	111.81
2	B	2501	C	C4'-C3'-O3'	-6.73	102.90	113.00
22	W	16	GLU	N-CA-C	6.73	125.13	110.80
4	C	25	LYS	N-CA-C	-6.73	104.03	111.36
12	L	129	LYS	N-CA-C	-6.71	104.03	111.82
16	P	109	ILE	N-CA-C	-6.71	95.38	109.34
7	F	44	ALA	N-CA-C	6.68	121.14	113.19
6	E	46	GLN	CB-CG-CD	6.68	123.95	112.60
17	Q	48	ASP	N-CA-C	6.65	118.53	111.28
22	W	3	LYS	N-CA-C	-6.65	101.80	111.30
20	T	62	VAL	N-CA-C	6.64	123.15	109.34
22	W	74	LYS	CB-CA-C	-6.64	107.89	115.79
10	J	5	THR	N-CA-C	-6.63	100.66	110.48
12	L	139	GLY	N-CA-C	6.62	128.88	113.18
26	1	13	GLY	N-CA-C	-6.62	107.05	114.40
32	a	232	G	C5'-C4'-C3'	-6.62	106.08	116.00
13	M	82	MET	N-CA-C	-6.61	105.09	113.02
32	a	120	A	C4'-C3'-O3'	-6.61	103.09	113.00
31	6	89	SER	N-CA-C	6.60	118.47	111.28
9	H	37	VAL	N-CA-C	6.59	123.12	108.88
12	L	111	ILE	N-CA-C	-6.58	95.64	109.34
32	a	1528	U	C2'-C3'-O3'	6.58	119.38	109.50
20	T	2	ILE	CB-CA-C	6.57	122.06	111.29
14	N	14	SER	N-CA-C	-6.54	105.29	113.20
5	D	13	ARG	N-CA-C	-6.53	100.59	109.54
13	M	4	PRO	N-CA-C	-6.51	99.06	112.47
16	P	80	VAL	N-CA-C	6.50	122.86	109.34
18	R	52	PRO	CA-C-N	-6.50	110.96	122.07
18	R	52	PRO	C-N-CA	-6.50	110.96	122.07
2	B	745	G	C5'-C4'-C3'	-6.50	106.25	116.00
5	D	20	VAL	N-CA-C	-6.50	103.54	110.36
32	a	968	A	C4'-C3'-O3'	-6.49	99.66	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
11	K	79	PHE	N-CA-C	-6.49	98.32	108.90
2	B	2575	C	C2'-C3'-O3'	-6.49	103.97	113.70
16	P	5	LYS	N-CA-C	-6.49	105.01	113.12
32	a	960	U	C2'-C3'-O3'	6.49	119.23	109.50
6	E	46	GLN	CA-CB-CG	6.48	127.05	114.10
16	P	77	SER	CA-C-N	6.48	127.94	119.84
16	P	77	SER	C-N-CA	6.48	127.94	119.84
8	G	38	ASP	N-CA-C	6.47	118.00	111.07
16	P	47	ILE	N-CA-C	6.46	122.78	109.34
16	P	36	LYS	N-CA-C	6.45	119.24	109.95
20	T	2	ILE	N-CA-C	-6.44	95.94	109.34
26	1	22	THR	N-CA-C	6.43	119.19	109.41
2	B	37	C	C3'-C2'-O2'	-6.43	101.06	110.70
2	B	2336	A	C2'-C3'-O3'	6.42	119.14	109.50
2	B	38	A	N9-C1'-C2'	6.40	121.60	112.00
2	B	268	C	C5'-C4'-C3'	-6.40	106.41	116.00
2	B	1236	G	C4'-C3'-O3'	-6.38	103.42	113.00
2	B	675	A	C4'-C3'-O3'	-6.38	103.43	113.00
51	7	44	LYS	N-CA-C	-6.38	105.13	113.17
31	6	91	LYS	CA-C-N	6.38	126.40	119.90
31	6	91	LYS	C-N-CA	6.38	126.40	119.90
27	2	47	ILE	N-CA-C	6.36	122.57	109.34
16	P	95	LYS	N-CA-C	-6.34	103.62	112.25
2	B	2641	G	N9-C1'-C2'	-6.34	102.49	112.00
5	D	179	ARG	N-CA-C	6.34	116.44	108.45
2	B	2619	C	C5'-C4'-C3'	-6.33	106.51	116.00
16	P	49	ILE	N-CA-C	6.32	122.48	109.34
6	E	58	LYS	N-CA-C	6.32	123.77	109.81
52	u	29	ALA	CA-C-N	-6.31	111.82	120.28
52	u	29	ALA	C-N-CA	-6.31	111.82	120.28
18	R	53	PHE	CA-CB-CG	6.30	120.10	113.80
32	a	243	A	C4'-C3'-O3'	6.29	118.83	109.40
2	B	690	G	C5'-C4'-C3'	-6.28	106.58	116.00
18	R	54	VAL	CA-C-N	6.28	133.54	121.54
18	R	54	VAL	C-N-CA	6.28	133.54	121.54
5	D	15	PHE	N-CA-C	-6.28	102.20	110.43
12	L	123	ARG	N-CA-C	-6.26	97.47	110.80
26	1	51	ARG	CA-C-O	-6.26	111.56	120.51
16	P	33	GLU	CB-CA-C	-6.25	109.38	116.63
32	a	811	C	C4'-C3'-O3'	-6.23	103.66	113.00
7	F	91	ARG	N-CA-C	-6.21	106.67	114.56
25	Z	60	PHE	N-CA-C	-6.21	97.57	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	C	31	PRO	N-CA-C	6.21	125.25	112.47
7	F	172	PHE	N-CA-C	-6.17	97.66	110.80
11	K	81	GLY	N-CA-C	-6.17	102.11	110.80
13	M	11	LYS	N-CA-C	6.16	123.92	110.80
12	L	41	ARG	N-CA-C	6.15	123.89	110.80
16	P	63	ILE	N-CA-C	-6.14	100.86	109.21
2	B	1251	C	C5'-C4'-C3'	6.12	124.38	115.20
4	C	64	VAL	N-CA-C	6.11	122.06	109.34
12	L	130	GLY	N-CA-C	-6.11	105.40	112.73
8	G	109	SER	N-CA-C	-6.09	101.40	110.23
4	C	21	PRO	N-CA-C	6.08	125.00	112.47
22	W	11	ASN	N-CA-CB	-6.08	100.22	110.49
7	F	119	LYS	N-CA-C	6.06	119.03	109.39
22	W	2	HIS	N-CA-C	6.06	123.70	110.80
2	B	37	C	C2'-C3'-O3'	-6.05	104.63	113.70
6	E	116	ASP	N-CA-C	6.05	118.75	108.90
18	R	88	GLY	N-CA-C	-6.04	98.86	113.18
32	a	765	G	C4'-C3'-O3'	6.03	122.05	113.00
32	a	765	G	N9-C1'-C2'	-6.03	102.96	112.00
2	B	395	U	C4'-C3'-O3'	-6.03	103.96	113.00
4	C	100	ARG	N-CA-C	6.02	118.62	107.60
2	B	1250	G	C4'-C3'-C2'	6.01	108.61	102.60
20	T	2	ILE	N-CA-CB	-6.01	101.32	111.23
32	a	438	U	N1-C1'-C2'	-6.00	105.00	114.00
2	B	784	G	C4'-C3'-O3'	-5.99	104.01	113.00
2	B	2282	G	C4'-C3'-O3'	5.99	118.39	109.40
13	M	24	THR	N-CA-C	5.98	119.72	111.71
30	5	2	LYS	N-CA-C	-5.98	104.89	111.82
14	N	118	ARG	CD-NE-CZ	5.96	132.75	124.40
6	E	189	THR	CB-CA-C	-5.96	109.68	116.54
8	G	129	GLU	N-CA-C	5.94	118.92	109.65
32	a	1065	U	C2'-C3'-O3'	5.93	118.40	109.50
4	C	179	GLU	CB-CA-C	-5.93	109.72	116.54
7	F	107	VAL	N-CA-CB	5.93	114.24	110.50
21	U	46	LYS	N-CA-C	-5.92	100.31	109.79
7	F	19	PHE	N-CA-C	-5.91	98.21	110.80
16	P	57	ALA	N-CA-C	-5.90	98.23	110.80
18	R	16	GLU	N-CA-C	-5.90	104.20	111.40
15	O	41	ALA	N-CA-C	-5.90	101.94	110.08
23	X	34	SER	N-CA-C	-5.88	98.27	110.80
2	B	150	U	C5'-C4'-C3'	-5.86	107.20	116.00
16	P	64	SER	N-CA-C	5.86	118.28	108.02

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	B	2903	U	C4'-C3'-O3'	5.86	121.79	113.00
22	W	54	ARG	N-CA-C	5.86	117.77	110.91
12	L	122	VAL	N-CA-C	5.86	116.84	108.93
16	P	52	ARG	N-CA-C	-5.86	98.32	110.80
16	P	91	VAL	N-CA-C	5.84	121.50	109.34
33	c	137	VAL	N-CA-C	-5.84	108.16	113.71
2	B	2050	C	C4'-C3'-O3'	-5.84	104.24	113.00
12	L	124	GLY	N-CA-C	-5.83	107.13	115.64
19	S	24	ILE	N-CA-C	5.83	116.26	107.75
11	K	77	ILE	CB-CA-C	-5.83	103.09	111.19
22	W	15	SER	N-CA-C	5.82	116.77	108.74
13	M	100	LYS	N-CA-C	5.82	117.52	107.93
2	B	1363	C	C5'-C4'-C3'	-5.81	107.28	116.00
12	L	127	VAL	CA-C-N	5.81	132.64	121.54
12	L	127	VAL	C-N-CA	5.81	132.64	121.54
2	B	1397	U	C5'-C4'-C3'	-5.80	106.50	115.20
2	B	2430	A	C4'-C3'-O3'	-5.80	104.30	113.00
2	B	2103	C	C4'-C3'-O3'	-5.80	104.31	113.00
10	J	75	TYR	N-CA-C	-5.80	99.89	108.99
2	B	848	C	C5'-C4'-C3'	-5.79	107.31	116.00
12	L	84	LYS	N-CA-C	5.79	123.14	110.80
50	t	65	LEU	CB-CA-C	-5.78	109.89	116.54
6	E	44	ARG	N-CA-C	5.77	123.10	110.80
2	B	403	U	C4'-C3'-O3'	-5.77	104.35	113.00
24	Y	20	LYS	N-CA-C	-5.76	105.08	111.36
26	1	54	ILE	N-CA-C	5.75	116.14	107.75
13	M	7	THR	N-CA-C	-5.75	102.95	110.53
15	O	46	GLU	N-CA-C	-5.75	106.11	113.01
12	L	45	GLY	CA-C-N	-5.74	117.34	122.97
12	L	45	GLY	C-N-CA	-5.74	117.34	122.97
17	Q	107	ALA	N-CA-C	-5.74	106.23	113.18
11	K	117	SER	N-CA-C	-5.74	106.13	113.02
52	u	19	LYS	N-CA-C	-5.74	106.24	113.18
12	L	62	PRO	CA-N-CD	-5.73	103.97	112.00
21	U	49	PRO	N-CA-C	-5.73	100.67	112.47
29	4	41	ARG	N-CA-C	-5.73	98.56	108.69
16	P	104	GLY	N-CA-C	5.72	126.73	113.18
2	B	2575	C	C5'-C4'-C3'	5.71	124.57	116.00
28	3	4	THR	N-CA-C	5.71	122.96	110.80
7	F	146	ASP	N-CA-C	-5.70	103.59	110.44
2	B	1240	U	C4'-C3'-O3'	-5.70	104.45	113.00
2	B	1210	G	C4'-C3'-O3'	5.69	117.93	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
16	P	72	VAL	CB-CA-C	-5.69	101.96	111.29
2	B	508	A	C4'-C3'-O3'	-5.68	104.48	113.00
10	J	122	LEU	N-CA-C	-5.68	106.01	114.64
12	L	65	GLY	N-CA-C	-5.68	102.76	112.30
2	B	2192	U	C5'-C4'-C3'	-5.67	107.50	116.00
7	F	110	ILE	N-CA-C	5.65	117.73	108.97
32	a	1534	A	C4'-C3'-O3'	5.65	121.47	113.00
12	L	119	PRO	CA-N-CD	-5.65	104.10	112.00
2	B	375	G	C5'-C4'-C3'	-5.64	107.53	116.00
13	M	108	VAL	CA-C-N	5.64	126.90	119.84
13	M	108	VAL	C-N-CA	5.64	126.90	119.84
32	a	1432	G	C4'-C3'-O3'	-5.64	104.53	113.00
14	N	118	ARG	NE-CZ-NH1	5.64	127.14	121.50
6	E	94	GLN	N-CA-C	-5.64	101.36	110.32
32	a	1118	U	C5'-C4'-C3'	-5.64	107.54	116.00
2	B	614	A	C4'-C3'-O3'	-5.64	100.94	109.40
32	a	1004	A	C4'-C3'-O3'	-5.63	104.55	113.00
2	B	2053	G	C4'-C3'-O3'	5.63	121.45	113.00
2	B	1237	A	N9-C1'-C2'	5.63	120.44	112.00
2	B	2430	A	N9-C1'-C2'	5.62	120.44	112.00
7	F	10	GLU	N-CA-C	5.62	122.77	110.80
26	1	48	TYR	N-CA-C	-5.62	105.54	112.90
16	P	86	LYS	N-CA-C	5.62	117.84	109.25
18	R	42	ALA	N-CA-C	-5.61	105.57	113.20
2	B	2471	A	C4'-C3'-O3'	5.61	117.81	109.40
2	B	2733	A	N9-C1'-C2'	-5.60	103.60	112.00
20	T	1	MET	N-CA-C	-5.60	95.31	111.00
7	F	25	MET	N-CA-C	-5.60	106.12	113.12
12	L	96	LYS	N-CA-C	5.59	118.67	109.72
21	U	99	SER	CB-CA-C	-5.59	108.31	116.53
32	a	437	U	N1-C1'-C2'	5.59	120.38	112.00
22	W	72	GLY	CA-C-N	5.58	126.82	119.84
22	W	72	GLY	C-N-CA	5.58	126.82	119.84
6	E	146	VAL	N-CA-C	-5.58	105.67	112.76
11	K	16	ALA	N-CA-C	5.58	122.69	110.80
34	d	49	ASP	N-CA-C	-5.58	107.48	114.56
29	4	11	LYS	N-CA-C	5.57	117.22	111.03
2	B	1523	U	C4'-C3'-O3'	-5.57	104.65	113.00
2	B	1552	A	C4'-C3'-O3'	5.56	121.33	113.00
18	R	56	GLY	N-CA-C	-5.55	100.03	113.18
13	M	10	ARG	N-CA-C	5.55	122.61	110.80
2	B	560	C	C5'-C4'-C3'	-5.54	107.69	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	B	1600	C	C5'-C4'-C3'	-5.54	107.70	116.00
2	B	1664	A	C5'-C4'-C3'	-5.52	107.72	116.00
4	C	48	ILE	N-CA-C	5.52	120.83	109.34
11	K	106	GLU	N-CA-C	-5.51	106.39	113.23
4	C	111	ALA	N-CA-C	5.50	122.52	110.80
15	O	43	ASN	N-CA-C	-5.50	107.82	114.75
7	F	65	LEU	N-CA-C	-5.49	107.12	113.88
2	B	2790	U	C4'-C3'-O3'	-5.49	104.76	113.00
20	T	27	SER	N-CA-C	5.48	117.56	108.13
2	B	299	A	N9-C1'-C2'	5.48	120.22	112.00
2	B	931	U	C4'-C3'-O3'	-5.46	104.81	113.00
7	F	78	ILE	N-CA-C	-5.46	100.34	107.88
7	F	109	ARG	N-CA-C	5.46	119.11	112.23
2	B	2502	G	C4'-C3'-O3'	-5.46	104.81	113.00
2	B	372	G	C4'-C3'-O3'	-5.45	101.22	109.40
2	B	139	U	C1'-C2'-O2'	-5.45	103.63	111.80
7	F	106	ALA	CA-C-N	-5.45	116.81	120.24
7	F	106	ALA	C-N-CA	-5.45	116.81	120.24
2	B	2052	A	C4'-C3'-C2'	-5.44	97.16	102.60
10	J	71	ASP	CB-CA-C	-5.43	108.54	116.53
2	B	1237	A	C4'-C3'-O3'	-5.43	104.86	113.00
4	C	44	ASN	N-CA-C	-5.43	99.24	110.80
8	G	154	GLU	CA-C-N	5.42	126.62	119.84
8	G	154	GLU	C-N-CA	5.42	126.62	119.84
16	P	37	LYS	N-CA-C	-5.42	99.25	110.80
29	4	61	LEU	N-CA-C	-5.42	103.25	110.07
2	B	1254	A	C4'-C3'-O3'	-5.41	104.88	113.00
10	J	21	THR	N-CA-C	-5.41	106.75	113.19
4	C	89	ASN	CB-CA-C	-5.41	109.36	115.79
14	N	44	LEU	N-CA-C	5.40	116.85	111.07
2	B	974	G	C4'-C3'-O3'	-5.40	101.30	109.40
36	f	99	ALA	CB-CA-C	-5.38	110.39	116.63
45	o	43	ALA	N-CA-C	-5.37	105.53	111.71
2	B	1552	A	N9-C1'-C2'	-5.37	103.95	112.00
12	L	19	LEU	N-CA-C	5.37	118.25	107.41
6	E	73	ILE	CA-C-O	5.36	124.84	119.97
32	a	1049	U	C2'-C3'-O3'	5.36	117.54	109.50
14	N	10	LEU	N-CA-C	-5.35	100.94	109.07
25	Z	22	MET	N-CA-C	-5.34	104.98	112.25
19	S	35	ILE	N-CA-C	-5.33	106.31	112.98
27	2	3	GLY	N-CA-C	-5.33	102.18	111.62
12	L	49	GLY	N-CA-C	-5.33	106.67	114.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	U	53	GLN	N-CA-C	-5.33	98.03	109.81
32	a	814	A	C5'-C4'-C3'	5.33	123.99	116.00
6	E	73	ILE	CA-C-N	5.32	131.29	122.73
6	E	73	ILE	C-N-CA	5.32	131.29	122.73
32	a	965	U	C4'-C3'-O3'	-5.32	105.03	113.00
12	L	115	GLU	N-CA-C	5.31	118.20	109.76
2	B	1419	A	C4'-C3'-O3'	-5.31	105.04	113.00
7	F	132	ARG	N-CA-C	5.30	119.98	112.93
35	e	55	VAL	CB-CA-C	-5.30	108.66	113.70
11	K	5	GLN	N-CA-C	-5.30	99.51	110.80
2	B	1818	U	N1-C1'-C2'	5.30	119.95	112.00
11	K	92	GLU	N-CA-C	5.30	117.71	110.24
2	B	557	C	C3'-C2'-O2'	5.30	118.64	110.70
16	P	62	LYS	N-CA-C	-5.29	99.53	110.80
15	O	12	THR	N-CA-C	5.29	117.46	111.11
13	M	135	VAL	N-CA-C	5.29	115.51	108.11
17	Q	3	VAL	N-CA-CB	5.29	117.34	110.57
36	f	18	VAL	CB-CA-C	-5.29	108.68	113.70
31	6	64	ARG	N-CA-C	-5.26	107.22	113.38
32	a	1528	U	C4'-C3'-O3'	5.26	117.29	109.40
13	M	1	MET	CG-SD-CE	5.26	112.46	100.90
5	D	145	SER	N-CA-CB	-5.25	101.62	110.49
2	B	1250	G	C5'-C4'-C3'	-5.24	107.34	115.20
2	B	1294	U	C5'-C4'-C3'	-5.24	108.14	116.00
32	a	1226	C	C2'-C3'-O3'	5.24	117.36	109.50
2	B	876	C	C4'-C3'-O3'	5.24	120.86	113.00
14	N	118	ARG	NH1-CZ-NH2	-5.24	112.49	119.30
2	B	595	C	C5'-C4'-C3'	-5.23	108.16	116.00
4	C	123	ILE	N-CA-C	5.22	111.80	106.21
9	H	106	ALA	N-CA-C	-5.22	108.67	114.62
32	a	1043	G	N9-C1'-C2'	5.22	119.82	112.00
16	P	31	VAL	N-CA-C	-5.21	100.87	108.17
31	6	18	ASN	CA-C-N	-5.21	114.41	119.78
31	6	18	ASN	C-N-CA	-5.21	114.41	119.78
2	B	2199	A	C5'-C4'-C3'	-5.21	108.18	116.00
52	u	46	ARG	N-CA-C	-5.21	106.98	113.55
14	N	4	ARG	CA-C-N	5.21	131.49	121.54
14	N	4	ARG	C-N-CA	5.21	131.49	121.54
32	a	1319	A	N9-C1'-C2'	5.21	119.81	112.00
52	u	29	ALA	N-CA-C	-5.20	106.04	112.38
16	P	13	LYS	N-CA-C	-5.19	100.06	108.41
32	a	366	A	C2'-C3'-O3'	5.18	117.27	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	D	151	THR	CA-C-N	-5.18	113.37	119.84
5	D	151	THR	C-N-CA	-5.18	113.37	119.84
12	L	77	ILE	O-C-N	-5.17	116.10	122.57
41	k	105	ARG	CA-C-O	5.17	120.94	117.94
13	M	8	LYS	CA-C-O	-5.17	116.15	122.41
2	B	84	A	C4'-C3'-O3'	-5.17	101.65	109.40
2	B	989	G	C4'-C3'-O3'	-5.17	105.25	113.00
2	B	2267	A	C4'-C3'-O3'	-5.16	105.26	113.00
5	D	144	GLY	CA-C-O	5.16	124.11	118.95
7	F	107	VAL	CB-CA-C	-5.15	108.89	114.35
41	k	105	ARG	CB-CA-C	-5.15	109.65	117.07
16	P	30	TRP	N-CA-C	-5.15	102.58	110.30
2	B	162	U	C4'-C3'-O3'	5.14	117.12	109.40
2	B	27	G	C4'-C3'-O3'	-5.14	105.29	113.00
32	a	855	U	C5'-C4'-C3'	-5.14	108.29	116.00
20	T	24	MET	N-CA-C	5.13	118.01	107.69
4	C	90	ILE	N-CA-C	5.13	120.02	109.34
4	C	57	HIS	N-CA-C	5.12	116.58	109.31
22	W	37	VAL	N-CA-C	5.11	119.97	109.34
2	B	451	U	C4'-C3'-O3'	-5.11	105.33	113.00
7	F	71	LYS	N-CA-C	5.11	117.57	109.24
7	F	79	ARG	N-CA-C	5.10	117.41	110.88
19	S	94	ASP	N-CA-C	5.10	116.62	107.80
2	B	512	G	C4'-C3'-O3'	-5.09	105.37	113.00
2	B	2197	U	C4'-C3'-O3'	-5.09	101.77	109.40
11	K	121	GLU	N-CA-C	5.09	121.64	110.80
3	V	2	PHE	CB-CA-C	-5.09	109.17	115.89
14	N	68	ALA	N-CA-C	5.09	118.94	112.12
2	B	1082	U	N1-C1'-C2'	5.08	119.61	112.00
4	C	42	ARG	N-CA-C	5.07	117.83	110.17
23	X	7	ARG	N-CA-C	5.07	121.60	110.80
2	B	380	G	C5'-C4'-C3'	-5.07	108.40	116.00
31	6	63	ASP	N-CA-C	-5.06	106.94	113.01
2	B	1419	A	N9-C1'-C2'	5.06	119.59	112.00
12	L	116	VAL	N-CA-C	5.06	119.86	109.34
10	J	102	GLU	N-CA-C	-5.05	105.21	111.33
17	Q	3	VAL	O-C-N	5.05	127.15	121.90
14	N	38	LEU	N-CA-C	-5.05	106.00	113.16
26	1	3	GLN	N-CA-C	-5.04	101.78	109.65
7	F	143	ASP	N-CA-C	-5.04	100.06	110.80
2	B	2529	G	C4'-C3'-O3'	-5.04	105.44	113.00
12	L	69	ARG	N-CA-C	-5.04	102.74	110.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
11	K	110	GLU	N-CA-C	5.04	121.52	110.80
21	U	32	LYS	CA-C-N	5.04	126.38	121.65
21	U	32	LYS	C-N-CA	5.04	126.38	121.65
2	B	2471	A	C5'-C4'-C3'	-5.03	107.65	115.20
15	O	62	LEU	N-CA-C	-5.03	105.03	110.91
13	M	71	LYS	N-CA-C	5.01	120.89	109.81
2	B	1251	C	C4'-C3'-O3'	-5.01	101.89	109.40
8	G	138	GLN	CA-C-N	5.01	127.06	120.60
8	G	138	GLN	C-N-CA	5.01	127.06	120.60
31	6	31	GLY	N-CA-C	-5.01	107.79	116.01
12	L	82	LEU	N-CA-C	5.00	121.46	110.80

There are no chirality outliers.

All (88) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	B	1060	U	Sidechain
2	B	1086	A	Sidechain
2	B	1088	A	Sidechain
2	B	1119	U	Sidechain
2	B	1215	G	Sidechain
2	B	1240	U	Sidechain
2	B	1247	A	Sidechain
2	B	1347	A	Sidechain
2	B	136	G	Sidechain
2	B	1377	G	Sidechain
2	B	139	U	Sidechain
2	B	1419	A	Sidechain
2	B	142	A	Sidechain
2	B	1426	G	Sidechain
2	B	143	C	Sidechain
2	B	1432	G	Sidechain
2	B	1439	A	Sidechain
2	B	1450	G	Sidechain
2	B	1462	C	Sidechain
2	B	1546	G	Sidechain
2	B	1572	A	Sidechain
2	B	1814	G	Sidechain
2	B	1828	G	Sidechain
2	B	1869	G	Sidechain
2	B	1964	G	Sidechain
2	B	2052	A	Sidechain

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Mol	Chain	Res	Type	Group
2	B	2138	G	Sidechain
2	B	221	A	Sidechain
2	B	222	A	Sidechain
2	B	2267	A	Sidechain
2	B	2272	U	Sidechain
2	B	2285	C	Sidechain
2	B	2318	G	Sidechain
2	B	232	G	Sidechain
2	B	2471	A	Sidechain
2	B	2508	G	Sidechain
2	B	2575	C	Sidechain
2	B	2638	G	Sidechain
2	B	2641	G	Sidechain
2	B	2733	A	Sidechain
2	B	2770	G	Sidechain
2	B	2834	G	Sidechain
2	B	2848	G	Sidechain
2	B	2857	G	Sidechain
2	B	2868	A	Sidechain
2	B	2883	A	Sidechain
2	B	299	A	Sidechain
2	B	361	G	Sidechain
2	B	370	G	Sidechain
2	B	396	G	Sidechain
2	B	487	C	Sidechain
2	B	500	G	Sidechain
2	B	51	G	Sidechain
2	B	526	A	Sidechain
2	B	630	G	Sidechain
2	B	633	A	Sidechain
2	B	727	A	Sidechain
2	B	729	G	Sidechain
2	B	757	G	Sidechain
2	B	942	G	Sidechain
2	B	946	C	Sidechain
4	C	160	TYR	Sidechain
4	C	29	PHE	Sidechain
4	C	61	TYR	Sidechain
9	H	49	ALA	Peptide
10	J	75	TYR	Sidechain
10	J	80	HIS	Sidechain
12	L	66	PHE	Sidechain

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Mol	Chain	Res	Type	Group
16	P	97	TYR	Sidechain
17	Q	46	TYR	Sidechain
18	R	53	PHE	Mainchain
32	a	1006	G	Sidechain
32	a	1028	C	Sidechain
32	a	1319	A	Sidechain
32	a	1331	G	Sidechain
32	a	1441	A	Sidechain
32	a	187	G	Sidechain
32	a	281	G	Sidechain
32	a	437	U	Sidechain
32	a	438	U	Sidechain
32	a	454	G	Sidechain
32	a	481	G	Sidechain
32	a	496	A	Sidechain
32	a	521	G	Sidechain
32	a	575	G	Sidechain
32	a	58	C	Sidechain
32	a	703	G	Sidechain
52	u	11	PHE	Mainchain

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2507	0	1270	87	0
2	B	60995	0	30679	2441	0
3	V	753	0	780	107	0
4	C	2053	0	2122	456	0
5	D	1565	0	1616	392	0
6	E	1552	0	1619	269	0
7	F	1420	0	1448	511	0
8	G	1323	0	1374	189	0
9	H	1111	0	1148	224	0
10	J	1112	0	1147	225	0
11	K	930	0	1000	135	0
12	L	1053	0	1129	293	0
13	M	1074	0	1157	251	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
14	N	1008	0	1045	160	0
15	O	900	0	935	142	0
16	P	917	0	965	219	0
17	Q	947	0	1022	183	0
18	R	816	0	839	175	0
19	S	857	0	922	121	0
20	T	777	0	840	148	0
21	U	779	0	834	161	0
22	W	634	0	656	162	0
23	X	509	0	543	73	0
24	Y	449	0	491	63	0
25	Z	549	0	552	116	0
26	1	444	0	461	78	0
27	2	441	0	485	67	0
28	3	377	0	418	56	0
29	4	504	0	574	111	0
30	5	302	0	343	44	0
31	6	1032	0	1088	131	0
32	a	32831	0	16416	3918	0
33	c	1624	0	1680	660	0
34	d	1643	0	1710	217	0
35	e	1105	0	1148	120	0
36	f	817	0	807	95	0
37	g	1174	0	1225	206	0
38	h	979	0	1034	80	0
39	i	1022	0	1068	254	0
40	j	786	0	782	1068	0
41	k	877	0	887	127	0
42	l	955	0	1019	112	0
43	m	883	0	892	1117	0
44	n	774	0	791	897	0
45	o	716	0	742	64	0
46	p	649	0	666	100	0
47	q	648	0	691	85	0
48	r	455	0	478	54	0
49	s	637	0	660	292	0
50	t	665	0	713	100	0
51	7	1704	0	1732	203	0
52	u	425	0	448	103	0
53	v	1623	0	816	182	0
All	All	142682	0	95907	13185	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 55.

All (13185) 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)
32:a:1335:U:C6	43:m:11:HIS:CG	1.78	1.68
32:a:988:G:C6	44:n:46:LYS:HG2	1.23	1.67
32:a:1016:A:C8	44:n:31:SER:HA	1.17	1.67
32:a:1233:G:P	39:i:125:GLN:HG2	1.24	1.65
32:a:1330:U:C5	43:m:64:VAL:CG1	1.80	1.64
18:R:53:PHE:CB	18:R:53:PHE:CG	1.81	1.63
33:c:63:ILE:CA	40:j:66:GLU:HB3	1.22	1.63
32:a:1306:A:C2	43:m:29:SER:HB2	1.34	1.62
32:a:1329:A:C6	43:m:62:PHE:HD2	1.04	1.62
32:a:1335:U:H3’	43:m:11:HIS:CE1	1.16	1.61
32:a:1335:U:C5	43:m:11:HIS:HB2	1.27	1.61
32:a:1301:U:C4	43:m:8:ILE:CG1	1.77	1.60
32:a:1153:G:C8	40:j:92:LEU:CA	1.79	1.60
32:a:1153:G:C8	40:j:92:LEU:HA	1.25	1.60
32:a:1240:U:C4’	37:g:37:THR:HG21	1.18	1.60
32:a:1306:A:C2	43:m:29:SER:CB	1.83	1.59
32:a:1358:U:C6	44:n:69:PRO:CD	1.82	1.59
32:a:1153:G:C8	40:j:92:LEU:HD13	1.35	1.59
32:a:1308:U:C5’	43:m:27:THR:HB	1.29	1.59
7:F:77:LYS:HE2	53:v:19:G:C6	1.09	1.59
32:a:1308:U:C4’	43:m:27:THR:HB	1.16	1.59
32:a:1216:A:H4’	44:n:50:LEU:CD1	1.33	1.58
32:a:1302:C:H4’	43:m:6:ILE:CG2	1.17	1.58
32:a:1111:A:C2	33:c:176:THR:HG23	1.37	1.58
33:c:75:VAL:HG12	40:j:53:ILE:C	1.16	1.58
32:a:1126:U:H5’	40:j:77:VAL:CG2	1.21	1.58
32:a:1302:C:C4’	43:m:6:ILE:HG22	1.28	1.58
33:c:79:LYS:CE	40:j:56:HIS:CE1	1.82	1.57
32:a:1153:G:C5	40:j:92:LEU:HD13	1.25	1.57
32:a:1335:U:H6	43:m:11:HIS:CG	1.09	1.57
32:a:1333:A:C4’	43:m:16:ILE:CG2	1.81	1.57
32:a:1014:A:C1’	49:s:10:ILE:HD11	1.11	1.57
32:a:1124:G:C5	40:j:87:LEU:HB2	1.35	1.57
32:a:1151:A:H4’	40:j:21:ALA:C	1.22	1.57
32:a:1234:C:H2’	43:m:50:GLY:C	1.16	1.57
32:a:1128:C:H1’	40:j:83:THR:CG2	1.32	1.56
32:a:1153:G:H8	40:j:92:LEU:CA	1.09	1.56
32:a:1329:A:C6	43:m:62:PHE:CD2	1.93	1.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1240:U:H4'	37:g:37:THR:CG2	1.13	1.56
32:a:1333:A:C5'	43:m:16:ILE:CG2	1.75	1.56
7:F:77:LYS:CE	53:v:19:G:C6	1.76	1.56
9:H:15:LEU:HD23	9:H:51:ARG:CD	1.31	1.56
18:R:54:VAL:CA	18:R:54:VAL:CB	1.78	1.55
32:a:1128:C:C1'	40:j:83:THR:CG2	1.84	1.55
32:a:1305:G:C4'	43:m:55:LEU:HB2	1.08	1.55
32:a:1153:G:C8	40:j:92:LEU:CD1	1.88	1.55
33:c:63:ILE:HA	40:j:66:GLU:CB	1.24	1.54
32:a:1124:G:C6	40:j:87:LEU:HB2	1.30	1.54
32:a:975:A:C8	44:n:2:LYS:HG2	1.39	1.54
32:a:1358:U:H5	44:n:68:ARG:CA	1.15	1.54
7:F:77:LYS:HE2	53:v:19:G:C5	1.40	1.53
7:F:176:PHE:CA	43:m:102:LYS:HD2	1.36	1.53
32:a:1216:A:C2	44:n:47:LEU:HA	1.42	1.53
9:H:15:LEU:HD22	9:H:51:ARG:CZ	1.38	1.53
7:F:73:VAL:HG22	53:v:56:C:C6	1.29	1.53
32:a:1261:A:C5	44:n:100:TRP:CZ3	1.94	1.53
32:a:1333:A:H5'	43:m:16:ILE:CG2	1.22	1.53
32:a:1335:U:C5	43:m:11:HIS:CB	1.90	1.53
7:F:113:PHE:HB3	43:m:95:PRO:CG	1.05	1.52
32:a:949:A:H5'	43:m:36:ALA:N	1.24	1.52
32:a:1236:A:C2	43:m:45:SER:C	1.87	1.52
32:a:1128:C:C1'	40:j:83:THR:HG21	1.34	1.52
32:a:1257:A:C5	44:n:74:ARG:NH1	1.78	1.52
32:a:1330:U:H5	43:m:64:VAL:CG1	1.11	1.52
32:a:1358:U:C5	44:n:69:PRO:HD2	1.44	1.52
32:a:1126:U:C5'	40:j:77:VAL:HG22	1.38	1.52
33:c:75:VAL:CG1	40:j:53:ILE:CG2	1.82	1.52
32:a:1150:A:N6	40:j:87:LEU:HA	1.19	1.51
32:a:1306:A:H4'	43:m:33:LEU:CD2	1.32	1.51
32:a:1261:A:C6	44:n:100:TRP:CE3	1.97	1.51
32:a:1333:A:C5'	43:m:16:ILE:HG23	1.32	1.51
32:a:1016:A:H8	44:n:31:SER:CA	1.17	1.51
32:a:1305:G:H4'	43:m:55:LEU:CB	1.35	1.51
32:a:1124:G:C4'	40:j:8:ILE:HD11	1.05	1.51
32:a:1125:U:P	40:j:76:ILE:HG13	1.48	1.50
32:a:1261:A:C5	44:n:100:TRP:CE3	1.99	1.50
32:a:1147:C:H1'	40:j:82:LYS:CG	1.39	1.50
32:a:1151:A:H4'	40:j:21:ALA:CA	1.40	1.50
7:F:109:ARG:HH11	43:m:109:LYS:C	1.15	1.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:946:A:C6	43:m:47:LEU:HA	1.45	1.49
32:a:1255:G:C6	44:n:84:ARG:O	1.63	1.49
7:F:108:PRO:HB2	43:m:94:LEU:CD2	1.43	1.49
32:a:1358:U:C5	44:n:68:ARG:HA	0.98	1.49
32:a:1124:G:C4'	40:j:8:ILE:CD1	1.90	1.48
32:a:1128:C:C1'	40:j:83:THR:CB	1.87	1.48
32:a:1301:U:N3	43:m:8:ILE:CG1	1.69	1.48
32:a:1334:G:C1'	43:m:44:ILE:N	1.72	1.48
32:a:1255:G:C6	44:n:87:ALA:N	1.72	1.48
32:a:1347:G:C2	39:i:108:ARG:NH2	1.75	1.48
7:F:77:LYS:CE	53:v:19:G:N1	1.73	1.48
33:c:85:LYS:CD	40:j:60:ASP:HB3	1.04	1.48
7:F:113:PHE:CA	43:m:95:PRO:HG3	1.39	1.48
32:a:1014:A:C8	49:s:15:LEU:CD2	1.94	1.47
32:a:1146:A:H5"	40:j:85:ASP:CG	1.04	1.47
32:a:1306:A:N3	43:m:29:SER:HB2	1.23	1.47
32:a:1359:C:C5	44:n:67:GLY:O	1.68	1.47
32:a:1302:C:H5"	43:m:6:ILE:CB	1.03	1.46
32:a:1306:A:C4'	43:m:33:LEU:HD23	1.37	1.46
7:F:117:SER:N	43:m:100:ARG:HH21	1.10	1.46
9:H:15:LEU:CD2	9:H:51:ARG:NE	1.77	1.46
32:a:1127:G:C5	40:j:76:ILE:CG2	1.97	1.46
32:a:1261:A:N7	44:n:100:TRP:CZ3	1.83	1.46
32:a:1150:A:C6	40:j:87:LEU:HA	1.47	1.45
33:c:65:VAL:CB	40:j:64:GLN:C	1.87	1.45
33:c:79:LYS:CE	40:j:56:HIS:ND1	1.69	1.45
32:a:1147:C:C2	40:j:82:LYS:HG2	1.47	1.45
32:a:1216:A:N3	44:n:47:LEU:HA	1.27	1.45
32:a:1301:U:C2	43:m:8:ILE:CD1	1.98	1.45
33:c:57:GLU:HB3	40:j:67:ILE:CG1	1.47	1.45
33:c:79:LYS:HE3	40:j:56:HIS:CE1	0.94	1.45
32:a:1152:A:N6	40:j:90:LEU:CA	1.77	1.44
32:a:1335:U:C3'	43:m:11:HIS:CE1	1.78	1.44
33:c:83:VAL:O	40:j:62:ARG:CG	1.65	1.44
7:F:113:PHE:HB3	43:m:95:PRO:CD	1.46	1.44
32:a:1347:G:C6	39:i:108:ARG:NH1	1.85	1.44
7:F:113:PHE:CB	43:m:95:PRO:HG3	0.98	1.44
32:a:1016:A:H2	44:n:42:ASN:CA	1.29	1.43
7:F:175:PRO:HB2	43:m:102:LYS:CA	1.45	1.43
32:a:1124:G:C5	40:j:87:LEU:CB	2.00	1.43
32:a:1127:G:C5	40:j:76:ILE:HG22	1.52	1.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1235:U:O5'	43:m:50:GLY:CA	1.64	1.43
32:a:1153:G:C5	40:j:92:LEU:CD1	1.84	1.43
32:a:1302:C:C5'	43:m:6:ILE:HB	0.98	1.43
32:a:1016:A:C2	44:n:42:ASN:HA	1.53	1.43
32:a:1220:G:H8	49:s:8:PRO:CA	1.08	1.43
32:a:976:G:N7	44:n:69:PRO:HG3	1.23	1.42
32:a:1151:A:C5'	40:j:24:GLU:HB2	1.47	1.42
32:a:1332:A:C6	43:m:18:LEU:CG	1.76	1.42
2:B:2602:A:N9	53:v:74:C:H5'	1.23	1.42
7:F:109:ARG:CZ	43:m:110:GLY:CA	1.75	1.42
7:F:109:ARG:NH1	43:m:110:GLY:CA	1.78	1.42
32:a:949:A:H5'	43:m:35:ALA:C	1.41	1.42
32:a:1014:A:H1'	49:s:10:ILE:CD1	1.49	1.42
32:a:1219:A:N7	49:s:7:GLY:CA	1.81	1.42
32:a:1217:C:C5'	44:n:50:LEU:HD23	1.44	1.42
32:a:1330:U:C5	43:m:64:VAL:HG13	0.91	1.42
7:F:134:GLN:HG3	43:m:107:THR:CA	1.48	1.42
32:a:1218:C:C6	44:n:48:GLN:HB3	1.55	1.42
32:a:1234:C:C2'	43:m:50:GLY:O	1.68	1.42
33:c:75:VAL:N	40:j:55:PRO:HD2	1.26	1.42
32:a:968:A:P	39:i:129:ARG:HH11	1.43	1.41
32:a:1147:C:C1'	40:j:82:LYS:CG	1.97	1.41
32:a:1149:C:H6	40:j:31:ARG:NH2	1.10	1.41
32:a:1304:G:C2'	43:m:52:ILE:HD11	0.93	1.41
32:a:1125:U:C2	40:j:74:VAL:HG12	1.55	1.41
7:F:77:LYS:NZ	53:v:19:G:N1	1.67	1.41
32:a:437:U:H5"	34:d:151:GLN:NE2	1.30	1.41
32:a:1151:A:C3'	40:j:21:ALA:HA	1.48	1.41
32:a:1279:G:N2	44:n:92:ILE:CB	1.80	1.41
32:a:1306:A:O2'	43:m:33:LEU:CG	1.67	1.41
32:a:1330:U:H3	43:m:24:VAL:CG1	1.29	1.41
7:F:115:GLY:N	43:m:100:ARG:HA	1.09	1.40
7:F:117:SER:H	43:m:100:ARG:NH2	1.07	1.40
32:a:988:G:H1	44:n:46:LYS:CA	1.32	1.40
32:a:1146:A:C5'	40:j:85:ASP:CG	1.94	1.40
32:a:1236:A:C6	43:m:45:SER:O	1.70	1.40
32:a:1257:A:N7	44:n:74:ARG:NH1	1.61	1.40
32:a:1279:G:N2	44:n:92:ILE:HB	1.11	1.40
9:H:46:PHE:HB3	9:H:50:ARG:NH2	1.31	1.40
52:u:14:ALA:HA	52:u:16:ARG:NH1	1.36	1.40
32:a:1300:G:O6	43:m:11:HIS:CA	1.70	1.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2602:A:C4	53:v:74:C:C5'	2.04	1.40
7:F:115:GLY:H	43:m:100:ARG:CA	1.30	1.39
32:a:1305:G:O3'	43:m:55:LEU:CB	1.68	1.39
33:c:100:ILE:HG13	40:j:63:ASP:N	1.36	1.39
32:a:1359:C:C6	44:n:62:ARG:HA	1.58	1.39
32:a:935:A:N6	37:g:2:ARG:CD	1.84	1.39
32:a:981:U:H6	44:n:58:ARG:NE	1.17	1.39
32:a:1358:U:C6	44:n:69:PRO:HD2	1.46	1.39
33:c:85:LYS:HD2	40:j:60:ASP:CB	1.47	1.39
32:a:1124:G:H4'	40:j:8:ILE:CD1	1.44	1.38
32:a:1126:U:H2'	40:j:36:VAL:CG1	0.98	1.38
33:c:75:VAL:CG1	40:j:53:ILE:HG22	0.92	1.38
32:a:1150:A:H61	40:j:87:LEU:CA	1.35	1.38
32:a:1319:A:H5'	49:s:68:HIS:CE1	1.55	1.38
9:H:38:PRO:O	9:H:43:ASN:HB2	1.21	1.38
32:a:1356:G:H5"	44:n:81:ILE:CD1	1.30	1.38
2:B:2602:A:C4	53:v:74:C:H5'	1.55	1.38
32:a:1358:U:C6	44:n:68:ARG:HA	1.56	1.38
32:a:935:A:N6	37:g:2:ARG:HD2	1.08	1.38
32:a:1305:G:O3'	43:m:55:LEU:CA	1.69	1.38
32:a:1306:A:N6	43:m:18:LEU:O	1.57	1.38
32:a:1358:U:C5	44:n:68:ARG:CA	1.89	1.38
52:u:14:ALA:O	52:u:16:ARG:NE	1.58	1.37
32:a:988:G:C6	44:n:46:LYS:CG	2.04	1.37
32:a:1152:A:N6	40:j:90:LEU:HA	1.07	1.37
32:a:1217:C:O2	44:n:45:LEU:C	1.67	1.37
32:a:1306:A:C4	43:m:29:SER:HB2	1.59	1.37
7:F:109:ARG:CZ	43:m:110:GLY:HA2	1.02	1.37
32:a:975:A:C4	44:n:2:LYS:N	1.85	1.37
32:a:1151:A:C5'	40:j:24:GLU:CB	2.02	1.37
32:a:1152:A:C5	40:j:92:LEU:HD22	1.58	1.37
2:B:2602:A:C2	53:v:74:C:OP2	1.78	1.36
32:a:1128:C:H1'	40:j:83:THR:CB	0.91	1.36
33:c:100:ILE:CG1	40:j:63:ASP:HB3	1.52	1.36
32:a:1219:A:C5	49:s:7:GLY:CA	2.08	1.36
7:F:176:PHE:HA	43:m:102:LYS:CD	1.53	1.36
32:a:946:A:N1	43:m:47:LEU:CA	1.72	1.36
32:a:1372:U:OP2	39:i:12:LYS:CD	1.70	1.36
32:a:1016:A:C8	44:n:31:SER:CA	1.96	1.36
9:H:46:PHE:CA	9:H:50:ARG:HH22	1.39	1.36
32:a:995:C:C6	44:n:23:ARG:NH1	1.92	1.36

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1329:A:N6	43:m:62:PHE:HB3	1.37	1.36
7:F:175:PRO:CB	43:m:102:LYS:HA	1.56	1.35
32:a:1016:A:C2'	44:n:44:VAL:HG12	1.56	1.35
32:a:1255:G:C5'	44:n:82:LYS:HB3	1.54	1.35
32:a:1331:G:OP2	43:m:22:TYR:HA	1.20	1.35
32:a:988:G:C5	44:n:46:LYS:HG2	1.62	1.35
32:a:1216:A:C2	44:n:47:LEU:CA	2.04	1.35
32:a:1216:A:C2	44:n:47:LEU:HD12	1.61	1.35
32:a:1217:C:C6	44:n:49:THR:N	1.90	1.35
32:a:1375:A:OP2	37:g:9:ARG:CD	1.73	1.35
7:F:105:ILE:CG2	43:m:113:LYS:HB2	1.54	1.35
32:a:1279:G:N1	44:n:92:ILE:HG13	1.39	1.35
32:a:935:A:C6	37:g:2:ARG:HD2	1.62	1.35
32:a:1304:G:N7	43:m:2:ARG:HA	1.40	1.35
33:c:87:ARG:NH2	40:j:62:ARG:NH2	1.75	1.35
32:a:1126:U:C2'	40:j:36:VAL:HG12	0.94	1.34
32:a:1219:A:N7	49:s:7:GLY:HA2	1.04	1.34
32:a:1301:U:C5	43:m:8:ILE:HG13	1.60	1.34
33:c:100:ILE:CG1	40:j:63:ASP:CB	2.05	1.34
32:a:976:G:H1	44:n:70:HIS:CD2	1.46	1.34
32:a:1017:U:O2	44:n:40:ARG:N	1.59	1.34
32:a:1332:A:N1	43:m:18:LEU:HG	1.40	1.34
32:a:1232:U:O3'	39:i:125:GLN:CG	1.76	1.34
33:c:79:LYS:CD	40:j:56:HIS:ND1	1.88	1.34
33:c:83:VAL:O	40:j:62:ARG:CD	1.75	1.34
32:a:1301:U:C2	43:m:8:ILE:HG12	1.63	1.33
32:a:1308:U:C5'	43:m:27:THR:CB	2.06	1.33
32:a:981:U:C6	44:n:58:ARG:CZ	2.10	1.33
32:a:1129:C:O2	40:j:80:THR:CG2	1.75	1.33
32:a:1329:A:N1	43:m:62:PHE:CD2	1.96	1.33
33:c:46:LEU:CD2	40:j:53:ILE:HG21	1.59	1.33
32:a:1151:A:C4'	40:j:21:ALA:HA	1.57	1.33
32:a:1234:C:H2'	43:m:50:GLY:O	1.19	1.33
32:a:1258:G:N7	44:n:75:LYS:HG2	1.42	1.33
32:a:1329:A:N1	43:m:62:PHE:HD2	1.26	1.33
32:a:982:U:O2'	49:s:6:LYS:CE	1.72	1.33
32:a:1258:G:C8	44:n:75:LYS:HB3	1.62	1.33
32:a:1129:C:C2	40:j:80:THR:CG2	2.11	1.32
32:a:1129:C:C5	40:j:33:GLY:O	1.80	1.32
32:a:1151:A:O3'	40:j:21:ALA:HA	1.23	1.32
32:a:1152:A:OP1	40:j:21:ALA:CB	1.76	1.32

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:976:G:N7	44:n:69:PRO:CG	1.91	1.32
32:a:1127:G:C6	40:j:76:ILE:HB	1.61	1.32
32:a:1146:A:H5"	40:j:85:ASP:CB	1.57	1.32
32:a:1153:G:N7	40:j:92:LEU:CG	1.92	1.32
32:a:1380:U:O4	37:g:2:ARG:CG	1.77	1.32
33:c:63:ILE:HG22	40:j:66:GLU:CD	1.51	1.32
32:a:193:C:O4'	50:t:54:GLN:NE2	1.61	1.32
32:a:1279:G:C2	44:n:87:ALA:HA	1.62	1.32
32:a:1306:A:C2'	43:m:33:LEU:HG	1.60	1.32
33:c:87:ARG:HG3	40:j:50:THR:CB	1.59	1.32
33:c:100:ILE:HG13	40:j:63:ASP:CB	1.58	1.32
32:a:1298:U:H6	37:g:112:ASP:O	1.04	1.32
52:u:14:ALA:CA	52:u:16:ARG:NH1	1.92	1.32
32:a:1014:A:C1'	49:s:10:ILE:CD1	2.02	1.31
32:a:1125:U:O2	40:j:74:VAL:CG1	1.76	1.31
32:a:1150:A:O4'	40:j:28:THR:N	1.61	1.31
32:a:1305:G:C3'	43:m:55:LEU:CB	2.06	1.31
9:H:38:PRO:HB2	9:H:43:ASN:ND2	1.45	1.31
32:a:1127:G:O6	40:j:76:ILE:HB	1.14	1.31
33:c:67:ILE:CG1	40:j:63:ASP:OD2	1.76	1.31
32:a:948:C:C2	43:m:38:ILE:HD13	1.65	1.31
32:a:1111:A:C2	33:c:176:THR:CG2	2.13	1.31
32:a:1221:G:N9	49:s:3:SER:O	1.61	1.31
33:c:79:LYS:H	40:j:57:VAL:N	1.28	1.31
32:a:1279:G:H1	44:n:92:ILE:CD1	1.43	1.31
32:a:1308:U:C4'	43:m:27:THR:CB	2.06	1.31
32:a:1333:A:C4	43:m:14:ALA:HA	1.48	1.31
33:c:87:ARG:CG	40:j:50:THR:HB	1.61	1.31
9:H:38:PRO:O	9:H:43:ASN:CB	1.79	1.31
32:a:1016:A:C2	44:n:42:ASN:CA	2.09	1.31
32:a:1150:A:N6	40:j:87:LEU:CA	1.90	1.31
32:a:1233:G:P	39:i:125:GLN:CG	2.13	1.31
32:a:1124:G:C5'	40:j:8:ILE:HD11	1.61	1.30
32:a:1216:A:N3	44:n:47:LEU:HD12	1.44	1.30
32:a:1306:A:N6	43:m:24:VAL:HG21	1.46	1.30
9:H:46:PHE:CB	9:H:50:ARG:HH22	1.43	1.30
32:a:980:C:C2	44:n:58:ARG:HA	1.66	1.30
32:a:1016:A:N3	44:n:45:LEU:CB	1.94	1.30
32:a:982:U:O2'	44:n:52:ARG:CD	1.73	1.30
32:a:1130:A:C5'	40:j:82:LYS:HZ1	1.42	1.30
32:a:1234:C:C3'	43:m:50:GLY:HA3	1.62	1.30

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:981:U:C6	44:n:58:ARG:NE	1.99	1.30
33:c:100:ILE:HG13	40:j:63:ASP:CA	1.60	1.30
7:F:105:ILE:HD13	43:m:113:LYS:CB	1.48	1.30
33:c:22:PHE:H	40:j:68:ARG:CB	1.44	1.30
9:H:15:LEU:CD2	9:H:51:ARG:CZ	2.06	1.29
32:a:1151:A:C2	40:j:90:LEU:O	1.63	1.29
32:a:1152:A:N7	40:j:92:LEU:HD22	1.44	1.29
32:a:1218:C:H6	44:n:48:GLN:CG	1.42	1.29
32:a:1240:U:OP1	37:g:115:MET:HB3	1.24	1.29
32:a:1304:G:C8	43:m:2:ARG:HA	1.65	1.29
32:a:1308:U:H4'	43:m:27:THR:CB	1.58	1.29
32:a:988:G:N1	44:n:46:LYS:CA	1.93	1.29
32:a:1013:G:H4'	49:s:16:LYS:NZ	1.45	1.29
32:a:1220:G:C8	49:s:8:PRO:CA	1.94	1.29
32:a:1257:A:C5	44:n:74:ARG:CZ	1.97	1.29
32:a:1149:C:C6	40:j:31:ARG:NH2	2.01	1.29
32:a:1328:C:O2'	43:m:68:LEU:HD23	1.24	1.28
32:a:949:A:C5'	43:m:35:ALA:C	2.05	1.28
32:a:975:A:N3	44:n:2:LYS:N	1.77	1.28
32:a:988:G:C8	44:n:46:LYS:NZ	1.99	1.28
32:a:1017:U:O5'	44:n:44:VAL:HG11	1.23	1.28
32:a:1127:G:O6	40:j:76:ILE:CB	1.80	1.28
32:a:1280:A:C8	40:j:26:VAL:HG22	1.57	1.28
32:a:1129:C:C6	40:j:33:GLY:HA2	1.68	1.28
32:a:196:A:O5'	50:t:63:LYS:HE2	1.28	1.28
32:a:1216:A:C4'	44:n:50:LEU:CD1	2.11	1.28
32:a:1234:C:H2'	43:m:50:GLY:CA	1.63	1.28
32:a:1335:U:H5	43:m:11:HIS:CB	1.35	1.28
32:a:1219:A:C8	49:s:7:GLY:HA2	1.69	1.27
32:a:1231:G:O3'	39:i:127:SER:CB	1.77	1.27
32:a:1333:A:C4'	43:m:16:ILE:HG22	1.52	1.27
33:c:65:VAL:HG23	40:j:65:TYR:N	0.95	1.27
32:a:1220:G:H8	49:s:8:PRO:C	1.37	1.27
32:a:1238:A:N1	43:m:2:ARG:NH2	1.79	1.27
32:a:1255:G:H5'	44:n:82:LYS:CB	1.63	1.27
32:a:1334:G:H1'	43:m:44:ILE:N	0.96	1.27
7:F:110:ILE:N	43:m:105:ALA:HB1	1.47	1.27
32:a:994:A:O2'	44:n:19:TYR:HD2	0.93	1.27
32:a:1126:U:C5	40:j:74:VAL:HA	1.69	1.27
32:a:1301:U:C2	43:m:8:ILE:CG1	2.13	1.27
33:c:63:ILE:O	40:j:49:PHE:N	1.66	1.27

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:c:87:ARG:NH2	40:j:62:ARG:CZ	1.95	1.27
7:F:134:GLN:HG2	43:m:107:THR:OG1	1.34	1.27
32:a:982:U:O2'	44:n:52:ARG:NH1	1.65	1.27
32:a:1128:C:O2'	40:j:83:THR:HG23	1.22	1.27
32:a:1258:G:C8	44:n:75:LYS:CG	2.17	1.27
33:c:58:ARG:CB	40:j:68:ARG:HD2	1.64	1.27
33:c:84:GLU:CB	40:j:59:LYS:HB2	1.62	1.27
32:a:946:A:N9	43:m:42:VAL:HB	1.29	1.27
32:a:981:U:OP2	49:s:6:LYS:NZ	1.65	1.27
7:F:116:LEU:HD23	43:m:102:LYS:CG	1.62	1.26
32:a:1017:U:O5'	44:n:44:VAL:CG1	1.82	1.26
32:a:1305:G:OP2	43:m:3:ILE:HA	1.30	1.26
32:a:1337:G:H22	43:m:45:SER:CB	1.48	1.26
33:c:75:VAL:N	40:j:55:PRO:CD	1.97	1.26
7:F:108:PRO:HB3	43:m:101:THR:OG1	1.09	1.26
32:a:1297:G:N2	37:g:114:SER:OG	1.67	1.26
32:a:1301:U:C5	43:m:8:ILE:CD1	2.19	1.26
32:a:1332:A:H1'	43:m:15:VAL:C	1.54	1.26
32:a:1357:A:N3	44:n:1:ALA:N	1.79	1.26
32:a:1016:A:C2	44:n:41:TRP:C	2.11	1.26
32:a:1229:A:O3'	53:v:30:G:H4'	1.20	1.26
32:a:1276:G:C6	44:n:95:LEU:CD1	2.17	1.26
32:a:1305:G:N1	43:m:21:ILE:HG12	1.49	1.26
33:c:98:ALA:HB1	40:j:64:GLN:CB	1.65	1.26
7:F:105:ILE:HG21	43:m:113:LYS:CB	1.66	1.26
7:F:115:GLY:N	43:m:100:ARG:CA	1.92	1.26
32:a:1358:U:C6	44:n:69:PRO:HD3	1.57	1.26
32:a:1016:A:N3	44:n:45:LEU:HB3	1.46	1.26
32:a:1126:U:O2'	40:j:36:VAL:HG12	1.31	1.26
32:a:1129:C:O2	40:j:80:THR:HG23	1.09	1.26
32:a:1218:C:N4	44:n:49:THR:OG1	1.66	1.26
32:a:1333:A:O5'	43:m:12:LYS:HB3	1.13	1.26
32:a:1016:A:H1'	44:n:45:LEU:CA	1.65	1.25
32:a:1127:G:C6	40:j:76:ILE:CB	2.17	1.25
32:a:1220:G:C8	49:s:8:PRO:C	2.12	1.25
32:a:1347:G:N3	39:i:108:ARG:NH2	1.83	1.25
32:a:1111:A:N1	33:c:176:THR:HG23	1.51	1.25
32:a:1152:A:OP1	40:j:21:ALA:N	1.68	1.25
32:a:1219:A:C5	49:s:7:GLY:HA3	1.66	1.25
32:a:1240:U:C4'	37:g:37:THR:CG2	1.82	1.25
32:a:1279:G:H1	44:n:92:ILE:CG1	1.50	1.25

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1318:A:O2'	49:s:68:HIS:HB2	1.25	1.25
32:a:1014:A:C8	49:s:15:LEU:HD21	1.60	1.25
32:a:1356:G:C5'	44:n:81:ILE:CD1	2.13	1.25
7:F:110:ILE:H	43:m:105:ALA:CB	1.49	1.25
32:a:990:C:C5'	44:n:43:ALA:HB3	1.63	1.25
32:a:1261:A:C8	44:n:100:TRP:HZ3	1.55	1.25
32:a:1305:G:O3'	43:m:55:LEU:C	1.77	1.25
33:c:79:LYS:N	40:j:57:VAL:N	1.83	1.25
32:a:1279:G:N1	44:n:92:ILE:CG1	2.00	1.24
32:a:1298:U:C6	37:g:112:ASP:O	1.90	1.24
32:a:1147:C:C1'	40:j:82:LYS:HG2	1.60	1.24
32:a:1147:C:N1	40:j:82:LYS:HG2	1.51	1.24
32:a:1279:G:H22	44:n:92:ILE:CD1	1.51	1.24
32:a:1304:G:H2'	43:m:3:ILE:CD1	1.66	1.24
32:a:1016:A:C2	44:n:41:TRP:O	1.90	1.24
32:a:1359:C:N4	44:n:63:CYS:HB2	1.48	1.24
32:a:990:C:C6	44:n:43:ALA:HB1	1.71	1.24
32:a:995:C:H6	44:n:23:ARG:NH1	1.26	1.23
32:a:1151:A:C4'	40:j:21:ALA:CA	2.11	1.23
32:a:1234:C:N1	43:m:50:GLY:O	1.71	1.23
32:a:1234:C:C2	43:m:50:GLY:O	1.91	1.23
32:a:1255:G:C5	44:n:87:ALA:N	2.05	1.23
32:a:1276:G:N1	44:n:95:LEU:HD11	1.52	1.23
32:a:1017:U:C5	44:n:32:ASP:N	2.04	1.23
32:a:1127:G:C6	40:j:76:ILE:CG2	2.19	1.23
32:a:1335:U:H6	43:m:11:HIS:ND1	1.34	1.23
7:F:117:SER:H	43:m:100:ARG:CZ	1.52	1.23
32:a:1014:A:O4'	49:s:10:ILE:HD11	1.36	1.23
32:a:1229:A:O2'	53:v:30:G:H5'	1.33	1.23
32:a:1258:G:C8	44:n:75:LYS:CB	2.20	1.23
32:a:1308:U:H5'	43:m:27:THR:CB	1.63	1.23
32:a:1347:G:H2'	39:i:109:GLN:O	1.34	1.23
33:c:75:VAL:H	40:j:55:PRO:CD	1.48	1.23
32:a:1306:A:N6	43:m:24:VAL:CG2	2.01	1.23
33:c:65:VAL:HG21	40:j:64:GLN:CA	1.66	1.23
7:F:116:LEU:HD21	43:m:102:LYS:C	1.64	1.22
9:H:15:LEU:CD2	9:H:51:ARG:CD	2.10	1.22
32:a:1305:G:C3'	43:m:55:LEU:HB2	1.66	1.22
32:a:1333:A:O4'	43:m:16:ILE:HG22	1.07	1.22
7:F:109:ARG:NH1	43:m:109:LYS:O	1.73	1.22
9:H:46:PHE:CB	9:H:50:ARG:NH2	2.00	1.22

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:988:G:N7	44:n:46:LYS:NZ	1.87	1.22
32:a:1283:U:C5	44:n:88:MET:SD	2.33	1.22
32:a:1330:U:H3'	43:m:22:TYR:C	1.63	1.22
32:a:1331:G:O6	43:m:4:ALA:CB	1.86	1.22
32:a:1335:U:H3'	43:m:11:HIS:NE2	1.53	1.22
33:c:57:GLU:CB	40:j:67:ILE:HG13	1.68	1.22
33:c:62:SER:CB	40:j:48:ARG:H	1.34	1.22
33:c:79:LYS:N	40:j:57:VAL:H	1.35	1.22
33:c:87:ARG:NH2	40:j:62:ARG:NE	1.87	1.22
7:F:73:VAL:CG2	53:v:56:C:C6	2.03	1.22
7:F:111:ARG:NH1	43:m:96:VAL:HG22	1.52	1.22
32:a:1234:C:C2'	43:m:50:GLY:C	2.09	1.22
2:B:2602:A:OP2	53:v:74:C:O2'	1.56	1.22
32:a:1113:C:C6	33:c:177:LEU:CD1	2.22	1.22
32:a:1127:G:H5'	40:j:30:LYS:NZ	1.36	1.22
32:a:1236:A:C4	43:m:47:LEU:HB2	1.59	1.22
32:a:984:C:N4	49:s:5:LYS:HB2	1.52	1.22
32:a:1147:C:C1'	40:j:82:LYS:HG3	1.60	1.22
32:a:1151:A:C4'	40:j:21:ALA:C	2.11	1.22
32:a:1151:A:OP1	40:j:23:ALA:HB3	1.36	1.22
32:a:1276:G:C6	44:n:95:LEU:HD11	1.75	1.22
32:a:1332:A:C1'	43:m:15:VAL:O	1.86	1.22
33:c:65:VAL:CG2	40:j:64:GLN:CA	2.17	1.22
32:a:1306:A:C6	43:m:18:LEU:O	1.92	1.21
52:u:14:ALA:N	52:u:16:ARG:NH1	1.88	1.21
32:a:1235:U:O2	43:m:47:LEU:HD23	1.38	1.21
32:a:1360:A:H5'	44:n:61:ASN:OD1	1.36	1.21
33:c:42:LEU:CD1	40:j:53:ILE:HD11	1.70	1.21
9:H:15:LEU:HD22	9:H:51:ARG:NH1	1.54	1.21
32:a:1279:G:C2	44:n:87:ALA:CA	2.20	1.21
32:a:948:C:C1'	43:m:38:ILE:HG12	1.60	1.21
33:c:59:PRO:HA	40:j:67:ILE:O	1.36	1.21
32:a:946:A:C4	43:m:42:VAL:HB	1.76	1.21
32:a:1127:G:N7	40:j:76:ILE:HG22	1.55	1.21
33:c:62:SER:OG	40:j:48:ARG:N	1.72	1.21
7:F:109:ARG:NH1	43:m:109:LYS:C	1.96	1.20
32:a:1262:C:C1'	44:n:100:TRP:H	1.54	1.20
32:a:976:G:N1	44:n:70:HIS:CD2	2.08	1.20
32:a:1128:C:O2'	40:j:83:THR:CG2	1.87	1.20
33:c:75:VAL:CG1	40:j:53:ILE:C	2.09	1.20
36:f:100:SER:HA	48:r:23:LYS:NZ	1.56	1.20

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:948:C:O2	43:m:36:ALA:O	1.60	1.20
32:a:1335:U:C6	43:m:11:HIS:HB2	1.74	1.20
32:a:1150:A:H61	40:j:87:LEU:C	1.47	1.20
32:a:1355:G:O3'	44:n:81:ILE:HG21	1.19	1.20
32:a:990:C:O5'	44:n:43:ALA:CB	1.91	1.19
32:a:1152:A:N7	40:j:92:LEU:CD2	2.04	1.19
32:a:1217:C:H5'	44:n:50:LEU:CD2	1.71	1.19
32:a:1304:G:C8	43:m:2:ARG:CA	2.24	1.19
32:a:1372:U:OP2	39:i:12:LYS:HD2	1.38	1.19
7:F:111:ARG:HH12	43:m:96:VAL:CG2	1.54	1.19
32:a:1153:G:C8	40:j:92:LEU:N	2.08	1.19
32:a:1356:G:C5'	44:n:81:ILE:HD13	1.70	1.19
33:c:21:TRP:CB	40:j:68:ARG:HD3	1.73	1.19
32:a:1128:C:N4	40:j:78:GLU:O	1.74	1.19
32:a:1236:A:N1	43:m:45:SER:O	1.64	1.19
32:a:1329:A:N6	43:m:62:PHE:CB	2.05	1.19
33:c:79:LYS:HD3	40:j:56:HIS:ND1	1.52	1.19
32:a:980:C:O2	44:n:58:ARG:HA	1.08	1.19
32:a:990:C:H6	44:n:43:ALA:CB	1.55	1.19
32:a:1218:C:OP1	44:n:20:PHE:CZ	1.95	1.19
32:a:1218:C:C6	44:n:48:GLN:CB	2.24	1.19
32:a:1234:C:C1'	43:m:50:GLY:O	1.89	1.19
32:a:1306:A:C4'	43:m:33:LEU:CD2	2.03	1.19
32:a:1347:G:C5	39:i:108:ARG:NH1	2.11	1.18
32:a:981:U:C6	44:n:58:ARG:NH2	2.11	1.18
32:a:1013:G:C3'	49:s:19:GLU:OE2	1.77	1.18
32:a:1129:C:OP2	40:j:32:THR:O	1.56	1.18
32:a:1321:U:C6	49:s:2:ARG:HD3	1.77	1.18
32:a:976:G:N1	44:n:70:HIS:NE2	1.90	1.18
32:a:1015:G:C8	44:n:40:ARG:NH1	2.11	1.18
32:a:1235:U:O4'	43:m:54:THR:HG23	1.05	1.18
32:a:1305:G:C4'	43:m:55:LEU:CB	1.99	1.18
32:a:1321:U:C5	49:s:2:ARG:CD	2.25	1.18
32:a:1334:G:C1'	43:m:44:ILE:H	1.36	1.18
32:a:1375:A:H5"	37:g:24:LYS:NZ	1.58	1.18
33:c:67:ILE:CD1	40:j:53:ILE:HG12	1.73	1.18
33:c:99:GLN:O	40:j:64:GLN:HA	1.41	1.18
32:a:1151:A:H4'	40:j:21:ALA:O	1.41	1.18
32:a:1321:U:N3	49:s:2:ARG:HG2	1.56	1.18
33:c:100:ILE:CB	40:j:63:ASP:H	1.57	1.18
32:a:1221:G:C8	49:s:3:SER:O	1.97	1.18

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1248:A:C2	39:i:71:ILE:HD11	1.76	1.18
32:a:1257:A:C8	44:n:74:ARG:NH1	2.11	1.18
32:a:1262:C:H1'	44:n:100:TRP:N	1.57	1.18
32:a:1278:G:H2'	44:n:93:PRO:CD	1.56	1.18
32:a:1308:U:H5'	43:m:27:THR:C	1.68	1.18
7:F:134:GLN:CB	43:m:106:ARG:HB3	1.73	1.17
32:a:437:U:C5'	34:d:151:GLN:NE2	2.06	1.17
32:a:1151:A:O5'	40:j:24:GLU:CB	1.81	1.17
7:F:110:ILE:HG13	43:m:105:ALA:HA	1.17	1.17
32:a:1253:G:H1	44:n:84:ARG:CD	1.55	1.17
2:B:2602:A:H2'	53:v:74:C:C5'	1.74	1.17
32:a:1123:U:O2'	40:j:8:ILE:HD12	1.44	1.17
32:a:1234:C:O2'	43:m:54:THR:CG2	1.92	1.17
32:a:1236:A:N1	43:m:45:SER:C	1.70	1.17
32:a:1240:U:O2'	37:g:31:VAL:CG1	1.91	1.17
32:a:1321:U:C5	49:s:2:ARG:HD3	1.79	1.17
32:a:1016:A:H8	44:n:31:SER:CB	1.58	1.17
32:a:1334:G:H1'	43:m:44:ILE:CA	1.65	1.17
32:a:984:C:N4	49:s:5:LYS:CB	2.08	1.17
32:a:1125:U:P	40:j:76:ILE:CG1	2.31	1.17
32:a:1319:A:H5'	49:s:68:HIS:ND1	1.59	1.17
7:F:116:LEU:CD2	43:m:102:LYS:HG3	1.73	1.16
32:a:1013:G:C6	44:n:33:VAL:N	2.14	1.16
32:a:1220:G:C8	49:s:9:PHE:N	1.89	1.16
32:a:1331:G:C8	43:m:22:TYR:N	2.12	1.16
32:a:439:U:H4'	34:d:120:LYS:HZ2	1.11	1.16
32:a:994:A:H2'	44:n:19:TYR:CE2	1.81	1.16
32:a:1011:C:C4	44:n:33:VAL:HG12	1.79	1.16
32:a:1017:U:H4'	44:n:44:VAL:HG21	1.25	1.16
32:a:1235:U:P	43:m:50:GLY:CA	2.32	1.16
32:a:1255:G:C5	44:n:84:ARG:C	2.23	1.16
32:a:1306:A:C6	43:m:24:VAL:HG21	1.80	1.16
32:a:1333:A:C5'	43:m:12:LYS:HB3	1.74	1.16
33:c:21:TRP:HB2	40:j:68:ARG:CD	1.75	1.16
33:c:82:ASP:HB2	40:j:54:SER:HB3	1.27	1.16
32:a:1258:G:H8	44:n:75:LYS:CB	1.55	1.16
32:a:1301:U:C2	43:m:8:ILE:HD11	1.69	1.16
32:a:1302:C:C4'	43:m:6:ILE:CG2	1.96	1.16
32:a:1125:U:OP2	40:j:76:ILE:HG13	1.42	1.16
32:a:1128:C:C2'	40:j:83:THR:HG21	1.74	1.16
32:a:1319:A:C5'	49:s:68:HIS:CE1	2.27	1.16

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:429:U:H3'	34:d:8:LEU:HD23	1.25	1.16
32:a:980:C:H2'	44:n:58:ARG:CG	1.75	1.16
32:a:1013:G:N1	44:n:32:ASP:HA	1.59	1.16
32:a:1329:A:C8	43:m:68:LEU:HG	1.80	1.16
11:K:71:ARG:HB3	11:K:72:PRO:HD2	1.22	1.15
32:a:975:A:H1'	44:n:1:ALA:CA	1.40	1.15
32:a:994:A:H2	44:n:19:TYR:OH	1.23	1.15
32:a:1257:A:C6	44:n:74:ARG:CZ	2.29	1.15
32:a:1329:A:N6	43:m:62:PHE:CD2	2.14	1.15
33:c:63:ILE:CB	40:j:66:GLU:HB3	1.76	1.15
32:a:1279:G:N2	44:n:92:ILE:CG1	2.07	1.15
32:a:1333:A:O5'	43:m:12:LYS:CB	1.95	1.15
32:a:975:A:C8	44:n:2:LYS:CG	2.28	1.15
32:a:1229:A:O2'	53:v:30:G:C5'	1.93	1.15
52:u:14:ALA:CA	52:u:16:ARG:CZ	2.24	1.15
7:F:113:PHE:N	43:m:95:PRO:CB	2.09	1.15
32:a:1014:A:O3'	49:s:40:PHE:CE2	1.98	1.15
32:a:1335:U:C6	43:m:11:HIS:CB	2.13	1.15
7:F:113:PHE:H	43:m:95:PRO:CB	1.57	1.15
32:a:1016:A:H2'	44:n:44:VAL:CG1	1.77	1.15
32:a:1147:C:O2	40:j:82:LYS:HG2	1.42	1.15
32:a:1279:G:C2	44:n:92:ILE:CG1	2.30	1.15
32:a:1332:A:H1'	43:m:15:VAL:O	0.99	1.15
7:F:116:LEU:HG	43:m:102:LYS:HB2	1.29	1.14
7:F:175:PRO:C	43:m:102:LYS:HB3	1.71	1.14
32:a:376:G:H5"	46:p:5:ARG:HB2	1.21	1.14
32:a:1112:C:N3	33:c:177:LEU:HG	1.58	1.14
32:a:1128:C:C2'	40:j:83:THR:CG2	2.25	1.14
32:a:1152:A:P	40:j:21:ALA:HB2	1.86	1.14
32:a:1279:G:N1	44:n:92:ILE:CD1	2.07	1.14
32:a:1304:G:C8	43:m:1:ALA:O	1.99	1.14
32:a:1328:C:O2'	43:m:71:GLU:OE2	1.64	1.14
32:a:1332:A:C6	43:m:18:LEU:HG	0.86	1.14
32:a:1375:A:C5'	37:g:24:LYS:HZ3	1.58	1.14
33:c:74:ILE:O	40:j:54:SER:OG	1.66	1.14
33:c:100:ILE:CG1	40:j:63:ASP:N	2.08	1.14
7:F:115:GLY:H	43:m:100:ARG:C	1.54	1.14
32:a:980:C:O2	44:n:58:ARG:CA	1.71	1.14
32:a:1303:C:OP1	43:m:2:ARG:CB	1.92	1.14
33:c:22:PHE:N	40:j:68:ARG:HB2	1.62	1.14
7:F:74:ALA:H	53:v:56:C:C4'	1.55	1.14

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1124:G:C5'	40:j:8:ILE:CD1	2.21	1.14
32:a:1152:A:OP1	40:j:21:ALA:HB2	1.38	1.14
32:a:1231:G:O3'	39:i:127:SER:HB2	1.29	1.14
32:a:1235:U:O5'	43:m:50:GLY:HA2	0.99	1.14
32:a:1279:G:N3	44:n:87:ALA:CA	2.03	1.14
33:c:98:ALA:CB	40:j:64:GLN:HB3	1.75	1.14
2:B:1913:A:N6	32:a:1492:A:C2	2.16	1.14
7:F:134:GLN:CG	43:m:107:THR:OG1	1.95	1.14
32:a:1333:A:C4	43:m:14:ALA:CA	2.28	1.14
32:a:1334:G:H3'	43:m:11:HIS:HA	1.25	1.14
7:F:134:GLN:HB2	43:m:106:ARG:HB3	1.22	1.14
32:a:1232:U:O3'	39:i:125:GLN:HG3	1.35	1.14
32:a:935:A:H61	37:g:2:ARG:CG	1.61	1.13
32:a:1124:G:O3'	40:j:76:ILE:CG1	1.95	1.13
32:a:1234:C:C2'	43:m:50:GLY:CA	2.24	1.13
32:a:1235:U:C5'	43:m:50:GLY:HA2	1.77	1.13
32:a:1279:G:N2	44:n:92:ILE:CD1	2.12	1.13
32:a:1305:G:O3'	43:m:55:LEU:HB3	1.35	1.13
9:H:39:ALA:O	9:H:44:ILE:HD11	1.44	1.13
32:a:1128:C:O4'	40:j:83:THR:HG21	1.47	1.13
32:a:1153:G:N7	40:j:92:LEU:HD11	1.55	1.13
32:a:1230:C:P	53:v:30:G:H4'	1.89	1.13
32:a:1279:G:N2	44:n:92:ILE:HD12	1.62	1.13
32:a:1304:G:H5"	43:m:56:ARG:NH2	1.61	1.13
32:a:1380:U:C4	37:g:2:ARG:HG3	1.82	1.13
6:E:48:THR:HG22	6:E:49:ARG:H	0.97	1.13
7:F:113:PHE:N	43:m:95:PRO:HB3	1.63	1.13
9:H:15:LEU:CD2	9:H:51:ARG:HD2	1.70	1.13
32:a:947:G:C6	43:m:38:ILE:HG23	1.83	1.13
32:a:1150:A:H4'	40:j:27:GLU:H	1.02	1.13
32:a:1216:A:C4'	44:n:50:LEU:HD12	1.73	1.13
32:a:1257:A:O5'	44:n:74:ARG:HD3	1.46	1.13
32:a:1331:G:C5'	43:m:21:ILE:O	1.96	1.13
32:a:990:C:C5'	44:n:43:ALA:CB	2.26	1.13
32:a:1129:C:C2	40:j:80:THR:HG21	1.81	1.13
32:a:1169:A:H4'	51:7:138:ARG:HH22	1.09	1.13
33:c:63:ILE:C	40:j:49:PHE:H	1.55	1.13
7:F:113:PHE:CE1	43:m:100:ARG:O	1.88	1.12
32:a:1218:C:OP1	44:n:20:PHE:HZ	1.30	1.13
32:a:1236:A:N3	43:m:47:LEU:HB2	1.64	1.12
32:a:1255:G:C6	44:n:84:ARG:C	2.25	1.12

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1307:U:C6	43:m:28:ARG:O	1.97	1.12
2:B:396:G:H4'	25:Z:28:VAL:HG21	1.29	1.12
32:a:1124:G:C6	40:j:87:LEU:CB	2.07	1.12
32:a:1129:C:C2	40:j:80:THR:HG23	1.76	1.12
32:a:1334:G:C4	43:m:10:ASP:HA	1.78	1.12
7:F:117:SER:N	43:m:100:ARG:NH2	1.76	1.12
32:a:975:A:N9	44:n:2:LYS:N	1.96	1.12
32:a:1241:G:OP1	37:g:34:LYS:NZ	1.80	1.12
32:a:947:G:N9	43:m:38:ILE:HG22	0.93	1.12
32:a:948:C:H1'	43:m:38:ILE:CG1	1.76	1.12
32:a:1125:U:H3'	40:j:76:ILE:C	1.74	1.12
32:a:1279:G:H22	44:n:92:ILE:CG1	1.60	1.12
32:a:1335:U:C5	43:m:11:HIS:CG	2.28	1.12
33:c:84:GLU:C	40:j:62:ARG:HD2	1.56	1.12
7:F:73:VAL:CG1	53:v:57:G:C8	2.33	1.12
7:F:108:PRO:HB2	43:m:94:LEU:HD22	1.20	1.12
32:a:976:G:C6	44:n:70:HIS:CD2	2.36	1.12
32:a:982:U:C6	44:n:58:ARG:NH2	2.17	1.12
32:a:1112:C:C4	33:c:177:LEU:HG	1.85	1.12
32:a:1113:C:C6	33:c:177:LEU:HD12	1.80	1.12
32:a:1127:G:C6	40:j:76:ILE:HG21	1.84	1.12
32:a:1130:A:N6	40:j:80:THR:HG22	1.63	1.12
7:F:77:LYS:HE2	53:v:19:G:N1	1.40	1.11
32:a:946:A:C6	43:m:47:LEU:CA	2.24	1.11
32:a:976:G:O6	44:n:70:HIS:CD2	2.03	1.11
32:a:1126:U:C4	40:j:74:VAL:HA	1.85	1.11
32:a:1153:G:N7	40:j:92:LEU:HD12	1.45	1.11
33:c:58:ARG:HA	40:j:66:GLU:CB	1.62	1.11
32:a:1014:A:C8	49:s:15:LEU:HD22	1.72	1.11
32:a:1229:A:H4'	53:v:29:G:O2'	1.49	1.11
32:a:1359:C:C5	44:n:67:GLY:C	2.21	1.11
32:a:984:C:H42	49:s:5:LYS:CB	1.62	1.11
32:a:988:G:N1	44:n:46:LYS:HA	1.54	1.11
32:a:1125:U:O2	40:j:74:VAL:HG12	0.94	1.11
32:a:1258:G:O2'	44:n:83:VAL:HG21	1.47	1.11
32:a:1281:C:H41	40:j:40:ILE:HG23	1.16	1.11
32:a:1302:C:C4'	43:m:6:ILE:CB	2.23	1.11
32:a:1328:C:C2'	43:m:68:LEU:HD23	1.80	1.11
32:a:1358:U:H3'	44:n:62:ARG:HG2	1.31	1.11
32:a:975:A:N3	44:n:1:ALA:N	1.99	1.11
32:a:1152:A:OP1	40:j:21:ALA:CA	1.99	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1234:C:H3'	43:m:50:GLY:HA3	1.12	1.11
32:a:1253:G:N1	44:n:84:ARG:HD3	1.65	1.11
32:a:1302:C:C5'	43:m:6:ILE:CB	1.79	1.11
33:c:67:ILE:HD12	40:j:53:ILE:CG1	1.78	1.11
33:c:75:VAL:HG13	40:j:53:ILE:CG2	1.55	1.11
41:k:124:LYS:HA	52:u:34:ARG:HB3	1.32	1.11
2:B:692:C:H5'	4:C:42:ARG:HB2	1.32	1.11
32:a:948:C:O5'	43:m:38:ILE:O	1.69	1.11
32:a:1017:U:C4	44:n:32:ASP:N	1.95	1.11
32:a:1331:G:P	43:m:22:TYR:HA	1.91	1.11
32:a:1332:A:N6	43:m:18:LEU:HG	1.66	1.11
33:c:74:ILE:C	40:j:54:SER:OG	1.94	1.11
18:R:74:ILE:HA	18:R:90:ARG:HE	1.15	1.10
32:a:980:C:O2'	44:n:55:SER:HB2	1.46	1.10
32:a:982:U:O2'	49:s:6:LYS:HE2	1.10	1.10
32:a:1016:A:C2	44:n:42:ASN:N	2.19	1.10
32:a:1221:G:C2'	49:s:3:SER:O	1.99	1.10
32:a:1235:U:P	43:m:50:GLY:HA2	1.92	1.10
32:a:1241:G:OP1	37:g:34:LYS:CE	1.99	1.10
32:a:1359:C:H5	44:n:67:GLY:C	1.55	1.10
33:c:42:LEU:CD1	40:j:53:ILE:CD1	2.29	1.10
33:c:42:LEU:HD11	40:j:53:ILE:HD11	1.11	1.10
7:F:77:LYS:CE	53:v:19:G:C2	2.34	1.10
7:F:77:LYS:CD	53:v:19:G:C2	2.34	1.10
7:F:116:LEU:HD22	43:m:103:THR:OG1	1.48	1.10
13:M:3:GLN:N	13:M:4:PRO:HD2	1.41	1.10
32:a:968:A:P	39:i:129:ARG:NH1	2.21	1.10
32:a:1151:A:O4'	40:j:24:GLU:HB3	1.51	1.10
32:a:1257:A:O4'	44:n:74:ARG:HD2	1.36	1.10
32:a:1278:G:H2'	44:n:93:PRO:HD3	1.28	1.10
7:F:116:LEU:CG	43:m:102:LYS:HB2	1.81	1.10
32:a:1124:G:O4'	40:j:8:ILE:HD11	1.46	1.10
32:a:1147:C:C2	40:j:82:LYS:CG	2.25	1.10
32:a:1218:C:C6	44:n:48:GLN:CG	2.34	1.10
2:B:2602:A:C4	53:v:74:C:H5"	1.85	1.10
7:F:105:ILE:CD1	43:m:113:LYS:HB3	1.81	1.10
7:F:109:ARG:N	43:m:105:ALA:HB3	1.67	1.10
7:F:138:PRO:N	43:m:112:ARG:O	1.83	1.10
32:a:981:U:OP2	44:n:52:ARG:HD3	1.51	1.10
32:a:1261:A:C8	44:n:98:ALA:HB3	1.86	1.10
32:a:1320:C:H6	49:s:72:GLU:HG3	1.10	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:c:65:VAL:HG23	40:j:65:TYR:CA	1.82	1.10
33:c:82:ASP:OD2	40:j:54:SER:HB2	1.50	1.10
32:a:1130:A:H62	40:j:80:THR:HG22	1.12	1.10
32:a:1256:A:P	44:n:78:LEU:HG	1.89	1.10
32:a:1304:G:O2'	43:m:52:ILE:CG1	1.98	1.10
4:C:30:ALA:H	4:C:31:PRO:HD3	1.12	1.09
5:D:154:LYS:HZ2	5:D:156:PHE:HA	1.15	1.09
12:L:55:MET:HG2	12:L:56:PRO:HD3	1.32	1.09
32:a:1122:U:C6	40:j:88:MET:HB3	1.79	1.09
32:a:1147:C:N1	40:j:82:LYS:CG	2.10	1.09
32:a:1217:C:H5'	44:n:50:LEU:HD23	1.15	1.09
32:a:1348:U:OP1	39:i:111:GLU:HB2	1.52	1.09
33:c:75:VAL:HG12	40:j:53:ILE:CA	1.81	1.09
33:c:84:GLU:HB3	40:j:59:LYS:HB2	1.26	1.09
7:F:134:GLN:HG3	43:m:107:THR:N	1.65	1.09
16:P:52:ARG:HB3	16:P:60:VAL:HG11	1.30	1.09
32:a:1015:G:H3'	44:n:31:SER:O	1.50	1.09
32:a:1257:A:C5'	44:n:75:LYS:HA	1.79	1.09
32:a:1306:A:P	43:m:55:LEU:O	2.09	1.09
33:c:63:ILE:HA	40:j:66:GLU:CA	1.82	1.09
7:F:73:VAL:CG1	53:v:57:G:H8	1.62	1.09
7:F:116:LEU:CD2	43:m:103:THR:OG1	2.01	1.09
9:H:50:ARG:H	9:H:50:ARG:HD3	1.17	1.09
32:a:990:C:H5'	44:n:43:ALA:HB3	1.23	1.09
32:a:1016:A:N7	44:n:40:ARG:HA	1.45	1.09
32:a:1126:U:H2'	40:j:36:VAL:HG13	1.29	1.09
32:a:1255:G:O5'	44:n:78:LEU:HD13	1.13	1.09
32:a:1255:G:OP1	44:n:78:LEU:HD22	1.50	1.09
32:a:1306:A:C2	43:m:29:SER:OG	2.05	1.09
32:a:1333:A:C5'	43:m:16:ILE:HG21	1.65	1.09
33:c:85:LYS:CD	40:j:60:ASP:CB	1.92	1.09
4:C:124:LYS:HB2	4:C:125:PRO:HD3	1.10	1.09
7:F:110:ILE:HG13	43:m:105:ALA:CA	1.80	1.09
32:a:1130:A:C5'	40:j:82:LYS:NZ	2.15	1.09
32:a:1148:U:N3	40:j:83:THR:HG22	1.66	1.09
32:a:1337:G:N2	43:m:45:SER:HB3	1.66	1.09
33:c:74:ILE:C	40:j:55:PRO:HD2	1.78	1.09
2:B:2578:G:H1'	5:D:145:SER:HB3	1.29	1.09
32:a:1016:A:H2'	44:n:44:VAL:HG12	1.13	1.09
32:a:1216:A:H4'	44:n:50:LEU:HD12	1.15	1.09
32:a:1235:U:H4'	43:m:54:THR:N	1.65	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1236:A:C4	43:m:47:LEU:CB	2.26	1.09
32:a:1333:A:N3	43:m:14:ALA:HA	1.68	1.09
40:j:35:GLN:HB3	40:j:77:VAL:HG23	1.34	1.09
51:7:163:ILE:HG23	51:7:164:ASP:H	1.17	1.09
18:R:54:VAL:CB	18:R:54:VAL:N	2.15	1.08
32:a:1128:C:H1'	40:j:83:THR:HB	1.27	1.08
32:a:1318:A:H1'	49:s:67:GLY:H	1.03	1.08
33:c:59:PRO:CA	40:j:67:ILE:O	2.00	1.08
7:F:134:GLN:HG3	43:m:107:THR:HA	1.28	1.08
12:L:61:LEU:HB3	12:L:62:PRO:HD2	1.12	1.08
32:a:1127:G:C5'	40:j:30:LYS:NZ	2.11	1.08
32:a:1308:U:H5'	43:m:27:THR:CA	1.82	1.08
32:a:1327:C:OP2	43:m:60:ALA:O	1.69	1.08
32:a:1331:G:N7	43:m:64:VAL:HG11	1.68	1.08
32:a:946:A:N9	43:m:42:VAL:CB	2.15	1.08
32:a:1014:A:N7	49:s:15:LEU:HD21	1.67	1.08
32:a:1015:G:H8	44:n:40:ARG:NH1	1.46	1.08
32:a:1221:G:C1'	49:s:3:SER:O	2.00	1.08
32:a:1257:A:H5"	44:n:75:LYS:HA	1.09	1.08
2:B:2092:U:OP2	9:H:27:ARG:NH2	1.86	1.08
4:C:20:ASN:HB3	4:C:202:ARG:HB3	1.33	1.08
32:a:1151:A:O3'	40:j:21:ALA:CA	1.99	1.08
32:a:1234:C:C3'	43:m:50:GLY:CA	2.31	1.08
33:c:83:VAL:O	40:j:62:ARG:CB	1.99	1.08
33:c:87:ARG:HH22	40:j:62:ARG:NH2	1.39	1.08
2:B:37:C:H2'	6:E:46:GLN:HG2	1.36	1.08
32:a:994:A:C2	44:n:19:TYR:OH	1.97	1.08
32:a:1151:A:C3'	40:j:21:ALA:CA	2.32	1.08
32:a:1303:C:OP1	43:m:2:ARG:HB2	1.26	1.08
33:c:102:ILE:CG2	40:j:52:LEU:O	2.01	1.08
33:c:102:ILE:N	40:j:51:VAL:HG11	1.69	1.08
7:F:74:ALA:H	53:v:56:C:H4'	0.92	1.07
7:F:108:PRO:CB	43:m:94:LEU:CD2	2.32	1.07
32:a:1319:A:C5'	49:s:68:HIS:ND1	2.16	1.07
32:a:1014:A:O4'	49:s:10:ILE:CD1	2.01	1.07
32:a:1216:A:H4'	44:n:50:LEU:HD13	1.14	1.07
32:a:1355:G:O3'	44:n:81:ILE:CG2	2.00	1.07
7:F:101:ARG:HD2	43:m:113:LYS:O	1.47	1.07
32:a:1348:U:H4'	39:i:121:ARG:NH1	1.67	1.07
32:a:1375:A:C5'	37:g:24:LYS:NZ	2.16	1.07
33:c:58:ARG:CA	40:j:66:GLU:HB2	1.82	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:980:C:H2'	44:n:58:ARG:CB	1.84	1.07
32:a:1280:A:C8	40:j:26:VAL:CG2	2.30	1.07
32:a:1330:U:N3	43:m:24:VAL:HG13	1.15	1.07
33:c:82:ASP:CB	40:j:54:SER:HB3	1.84	1.07
32:a:994:A:C4	44:n:50:LEU:CD1	2.36	1.07
32:a:1220:G:C8	49:s:8:PRO:HA	1.78	1.07
32:a:1229:A:HO2'	53:v:30:G:C5'	1.65	1.07
32:a:1235:U:O4'	43:m:54:THR:CG2	2.01	1.07
32:a:1123:U:C5	40:j:88:MET:HA	1.83	1.06
32:a:1219:A:C6	49:s:7:GLY:HA3	1.89	1.06
32:a:1279:G:N3	44:n:87:ALA:HA	1.64	1.06
32:a:1335:U:C6	43:m:11:HIS:CD2	2.43	1.06
33:c:85:LYS:HD2	40:j:60:ASP:HB2	1.30	1.06
32:a:1013:G:H1	44:n:32:ASP:HA	0.94	1.06
32:a:1016:A:N1	44:n:41:TRP:C	2.12	1.06
32:a:1123:U:O3'	40:j:100:ILE:CB	2.02	1.06
32:a:1123:U:O3'	40:j:100:ILE:HB	1.11	1.06
32:a:1279:G:C2	44:n:92:ILE:HD12	1.89	1.06
32:a:1306:A:O2'	43:m:33:LEU:HG	0.88	1.06
2:B:2602:A:O2'	53:v:74:C:O5'	1.74	1.06
7:F:111:ARG:NH1	43:m:96:VAL:CG2	2.15	1.06
7:F:116:LEU:CD2	43:m:102:LYS:CB	2.33	1.06
33:c:22:PHE:O	40:j:68:ARG:HG2	1.55	1.06
32:a:981:U:H5"	44:n:53:ASP:HA	1.32	1.06
32:a:1305:G:C3'	43:m:55:LEU:C	2.19	1.06
32:a:1358:U:H3'	44:n:62:ARG:CG	1.81	1.06
4:C:107:LYS:HB2	4:C:194:VAL:HG11	1.36	1.06
32:a:1232:U:C3'	39:i:125:GLN:HG3	1.86	1.06
32:a:1278:G:C2'	44:n:93:PRO:CD	2.29	1.06
32:a:1280:A:N6	40:j:29:ALA:HB3	1.70	1.06
32:a:1317:C:N3	49:s:66:VAL:C	2.13	1.06
33:c:84:GLU:N	40:j:59:LYS:O	1.72	1.06
7:F:114:ARG:HB2	43:m:99:GLN:N	1.70	1.05
32:a:1130:A:O5'	40:j:82:LYS:NZ	1.89	1.05
32:a:1337:G:N2	43:m:45:SER:CB	2.19	1.05
33:c:57:GLU:CB	40:j:67:ILE:CG1	2.27	1.05
7:F:73:VAL:CG1	53:v:56:C:H3'	1.79	1.05
32:a:946:A:N1	43:m:47:LEU:HA	1.24	1.05
32:a:990:C:O5'	44:n:43:ALA:HB2	1.51	1.05
33:c:82:ASP:CG	40:j:54:SER:CB	2.29	1.05
33:c:84:GLU:HB3	40:j:59:LYS:C	1.79	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2641:G:H5”	10:J:78:THR:HG21	1.30	1.05
32:a:990:C:O4’	44:n:43:ALA:HB1	1.56	1.05
32:a:1149:C:O3’	40:j:27:GLU:HG2	1.56	1.05
32:a:1151:A:H5’	40:j:24:GLU:CB	1.87	1.05
32:a:1317:C:N3	49:s:67:GLY:N	2.03	1.05
32:a:1330:U:C6	43:m:64:VAL:HG13	1.92	1.05
2:B:2602:A:C2’	53:v:74:C:C5’	2.34	1.05
7:F:77:LYS:NZ	53:v:19:G:H1	1.36	1.05
32:a:949:A:C5’	43:m:36:ALA:N	2.16	1.05
32:a:1124:G:O3’	40:j:76:ILE:HG12	1.52	1.05
32:a:1130:A:H5’	40:j:82:LYS:NZ	1.70	1.05
32:a:1301:U:C5	43:m:8:ILE:HD11	1.86	1.05
32:a:1328:C:H2’	43:m:68:LEU:HG	1.39	1.05
32:a:1330:U:H3’	43:m:23:GLY:N	1.70	1.05
32:a:1331:G:OP2	43:m:22:TYR:CA	2.04	1.05
32:a:1013:G:O6	44:n:33:VAL:N	1.88	1.05
32:a:1015:G:OP1	49:s:42:ASN:ND2	1.89	1.05
33:c:58:ARG:CA	40:j:66:GLU:CB	2.29	1.05
33:c:84:GLU:HB3	40:j:59:LYS:CB	1.86	1.05
33:c:100:ILE:HG12	40:j:63:ASP:CB	1.75	1.05
7:F:77:LYS:HE2	53:v:19:G:C4	1.91	1.04
7:F:77:LYS:HD2	53:v:19:G:C2	1.91	1.04
7:F:108:PRO:CB	43:m:101:THR:OG1	2.05	1.04
32:a:945:G:H21	43:m:43:LYS:HB2	1.13	1.04
32:a:988:G:O3’	44:n:42:ASN:CG	1.98	1.04
32:a:1015:G:P	44:n:40:ARG:HH22	1.79	1.04
32:a:1146:A:H5”	40:j:85:ASP:OD2	1.56	1.04
32:a:1151:A:N6	40:j:89:ARG:C	1.87	1.04
32:a:1190:G:OP1	33:c:3:LYS:HA	1.55	1.04
33:c:99:GLN:OE1	40:j:49:PHE:HA	1.54	1.04
6:E:128:ALA:HB3	6:E:129:PRO:HD3	1.39	1.04
24:Y:16:LEU:HB2	24:Y:17:PRO:HD3	1.37	1.04
32:a:1126:U:OP1	40:j:37:ARG:CD	2.05	1.04
32:a:1149:C:C6	40:j:31:ARG:CZ	2.40	1.04
32:a:1236:A:C2	43:m:46:GLU:N	2.12	1.04
32:a:1248:A:H2	39:i:71:ILE:HD11	0.89	1.04
32:a:1375:A:OP2	37:g:9:ARG:HD2	0.87	1.04
33:c:58:ARG:HB2	40:j:68:ARG:HD2	1.34	1.04
33:c:84:GLU:C	40:j:62:ARG:CD	2.31	1.04
32:a:966:G:O2’	39:i:129:ARG:OXT	1.75	1.04
32:a:1152:A:P	40:j:21:ALA:CA	2.45	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1218:C:OP2	44:n:48:GLN:O	1.75	1.04
32:a:1240:U:O4'	37:g:37:THR:HG22	1.57	1.04
32:a:1329:A:C2	43:m:23:GLY:O	2.09	1.04
32:a:1014:A:N7	49:s:15:LEU:CD2	2.19	1.04
32:a:1146:A:C5'	40:j:85:ASP:CB	2.31	1.04
32:a:1308:U:C5'	43:m:27:THR:C	2.29	1.04
2:B:2602:A:C1'	53:v:74:C:H5'	1.87	1.04
7:F:74:ALA:N	53:v:56:C:C4'	1.99	1.04
32:a:1216:A:N3	44:n:47:LEU:CD1	2.21	1.04
32:a:1328:C:H2'	43:m:68:LEU:CG	1.88	1.04
33:c:22:PHE:N	40:j:68:ARG:CB	2.16	1.04
33:c:99:GLN:O	40:j:63:ASP:O	1.75	1.04
7:F:109:ARG:NH1	43:m:110:GLY:HA3	1.73	1.03
32:a:1014:A:C8	49:s:15:LEU:CD1	2.41	1.03
32:a:1121:U:O2	40:j:91:ASP:OD1	1.75	1.03
32:a:1148:U:C4	40:j:83:THR:HG22	1.93	1.03
32:a:1150:A:O5'	40:j:28:THR:HG23	1.58	1.03
32:a:1258:G:O2'	44:n:83:VAL:CG2	2.06	1.03
32:a:1304:G:H2'	43:m:3:ILE:HD11	1.08	1.03
32:a:1321:U:C2	49:s:2:ARG:HG2	1.92	1.03
33:c:73:GLY:O	40:j:55:PRO:O	1.76	1.03
32:a:949:A:H5"	43:m:35:ALA:CA	1.89	1.03
32:a:1279:G:N2	44:n:87:ALA:HA	1.71	1.03
32:a:1304:G:H2'	43:m:3:ILE:CG1	1.86	1.03
32:a:1333:A:H4'	43:m:16:ILE:HG21	1.31	1.03
33:c:58:ARG:HB3	40:j:68:ARG:HD2	1.31	1.03
7:F:73:VAL:CG2	53:v:56:C:H6	1.54	1.03
9:H:46:PHE:HA	9:H:50:ARG:HH22	1.23	1.03
32:a:990:C:H6	44:n:43:ALA:HB1	0.94	1.03
32:a:1124:G:H5'	40:j:8:ILE:CD1	1.85	1.03
32:a:1255:G:O5'	44:n:78:LEU:CD1	1.99	1.03
32:a:1258:G:N7	44:n:75:LYS:CG	2.17	1.03
32:a:1372:U:OP2	39:i:12:LYS:HD3	1.54	1.03
6:E:153:LEU:HD13	6:E:193:VAL:HG21	1.38	1.03
11:K:66:LYS:HG2	11:K:80:ASP:HA	1.40	1.03
32:a:980:C:O2'	44:n:55:SER:CB	2.05	1.03
32:a:1304:G:O2'	43:m:52:ILE:HD12	1.22	1.03
32:a:1331:G:C4'	43:m:21:ILE:O	2.05	1.03
33:c:22:PHE:HZ	40:j:72:ARG:NH2	1.55	1.03
7:F:176:PHE:N	43:m:102:LYS:HB3	1.73	1.03
32:a:1016:A:H1'	44:n:45:LEU:HA	1.03	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1016:A:N7	44:n:31:SER:HA	1.73	1.03
32:a:1146:A:N1	40:j:82:LYS:HE3	1.71	1.03
32:a:1217:C:C5'	44:n:50:LEU:CD2	2.32	1.03
32:a:1259:C:H5'	44:n:83:VAL:HG21	1.39	1.03
32:a:1261:A:C5	44:n:98:ALA:HB1	1.87	1.03
32:a:1358:U:C5	44:n:69:PRO:CD	2.19	1.03
32:a:1358:U:C3'	44:n:62:ARG:HG2	1.81	1.03
33:c:65:VAL:CB	40:j:64:GLN:O	1.95	1.03
33:c:83:VAL:O	40:j:62:ARG:HD2	1.48	1.03
7:F:135:ILE:HG12	43:m:112:ARG:HG3	1.40	1.02
9:H:6:LEU:HD11	9:H:51:ARG:HG3	1.42	1.02
22:W:24:ARG:HB2	22:W:59:PHE:HB2	1.38	1.02
32:a:439:U:H4'	34:d:120:LYS:NZ	1.71	1.02
32:a:1218:C:O2	44:n:45:LEU:HG	1.56	1.02
32:a:1303:C:OP1	43:m:5:GLY:CA	2.07	1.02
32:a:1318:A:O2'	49:s:68:HIS:CB	2.07	1.02
32:a:1329:A:H8	43:m:68:LEU:HG	1.09	1.02
33:c:78:LYS:HG2	33:c:81:GLU:HB2	1.36	1.02
2:B:2602:A:N7	53:v:75:C:C5	2.26	1.02
9:H:15:LEU:HD23	9:H:51:ARG:NE	1.53	1.02
32:a:405:U:O4	34:d:1:ALA:HA	1.58	1.02
32:a:1016:A:N7	44:n:40:ARG:CA	2.18	1.02
32:a:1153:G:C8	40:j:92:LEU:CB	2.42	1.02
32:a:1235:U:C4'	43:m:54:THR:HG23	1.88	1.02
32:a:1359:C:H5	44:n:67:GLY:O	1.14	1.02
10:J:11:VAL:HG13	10:J:12:LYS:H	1.24	1.02
24:Y:10:ARG:HE	24:Y:31:ILE:HG13	1.22	1.02
32:a:1109:C:OP2	33:c:175:HIS:CD2	2.13	1.02
32:a:1124:G:C5	40:j:87:LEU:HB3	1.92	1.02
32:a:1240:U:C3'	37:g:37:THR:HG21	1.90	1.02
32:a:1258:G:O2'	44:n:73:LEU:HD13	1.25	1.02
32:a:1279:G:H22	44:n:92:ILE:CB	1.54	1.02
33:c:23:ALA:HB2	40:j:68:ARG:NH1	1.74	1.02
33:c:42:LEU:HD12	40:j:53:ILE:CD1	1.88	1.02
33:c:67:ILE:HG12	40:j:63:ASP:OD2	1.59	1.02
33:c:79:LYS:HE2	40:j:56:HIS:ND1	1.74	1.02
7:F:136:ILE:O	43:m:112:ARG:HA	1.27	1.02
32:a:1146:A:C2	40:j:82:LYS:HE3	1.94	1.02
32:a:1328:C:H2'	43:m:68:LEU:CD2	1.89	1.02
32:a:1347:G:C8	39:i:108:ARG:O	2.11	1.02
33:c:75:VAL:HG11	40:j:53:ILE:HG22	1.06	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:24:VAL:HG21	5:D:193:VAL:HG11	1.38	1.02
32:a:845:A:H4'	48:r:47:ARG:NH2	1.75	1.02
32:a:1218:C:H6	44:n:48:GLN:CB	1.65	1.02
32:a:1221:G:C3'	49:s:3:SER:O	2.06	1.02
32:a:1333:A:H4'	43:m:16:ILE:CG2	1.85	1.02
32:a:949:A:H5"	43:m:35:ALA:HA	1.40	1.01
32:a:1216:A:C2	44:n:47:LEU:N	2.28	1.01
32:a:1253:G:H1	44:n:84:ARG:HD3	0.86	1.01
32:a:1359:C:C5	44:n:62:ARG:HA	1.95	1.01
33:c:62:SER:OG	40:j:47:GLU:HA	1.57	1.01
33:c:87:ARG:NH2	40:j:62:ARG:HH21	1.40	1.01
37:g:125:ASP:HB3	37:g:130:LYS:HB3	1.39	1.01
32:a:935:A:N6	37:g:2:ARG:HB2	1.75	1.01
32:a:1128:C:C4'	40:j:83:THR:HG21	1.90	1.01
32:a:1240:U:C4'	37:g:37:THR:HG22	1.83	1.01
32:a:1331:G:H1	43:m:59:VAL:HG21	1.25	1.01
7:F:77:LYS:NZ	53:v:19:G:C6	2.14	1.01
9:H:82:SER:H	9:H:146:VAL:HG13	1.25	1.01
32:a:1216:A:C2	44:n:47:LEU:CD1	2.41	1.01
33:c:67:ILE:HG13	40:j:63:ASP:OD2	1.55	1.01
52:u:14:ALA:N	52:u:16:ARG:CZ	2.23	1.01
32:a:1237:C:H4'	43:m:10:ASP:OD2	1.58	1.01
32:a:1333:A:C4'	43:m:16:ILE:HG21	1.68	1.01
33:c:21:TRP:HB2	40:j:68:ARG:HD3	1.01	1.01
33:c:22:PHE:CZ	40:j:72:ARG:NH2	2.28	1.01
33:c:87:ARG:NH2	40:j:62:ARG:HE	1.51	1.01
2:B:2602:A:N9	53:v:74:C:C5'	2.18	1.01
32:a:994:A:C4	44:n:50:LEU:HD13	1.94	1.01
32:a:1229:A:O3'	53:v:30:G:C4'	2.08	1.01
32:a:1234:C:O2'	43:m:54:THR:HG21	1.56	1.01
32:a:1279:G:C2	44:n:92:ILE:CD1	2.44	1.01
33:c:22:PHE:H	40:j:68:ARG:HB2	1.12	1.01
32:a:988:G:H1	44:n:46:LYS:HA	0.84	1.00
32:a:994:A:C2'	44:n:19:TYR:CD2	2.44	1.00
32:a:1129:C:OP2	40:j:32:THR:C	1.78	1.00
32:a:1148:U:C2'	40:j:31:ARG:CZ	2.32	1.00
32:a:1320:C:C6	49:s:72:GLU:HG3	1.95	1.00
33:c:87:ARG:CZ	40:j:62:ARG:NE	2.22	1.00
7:F:113:PHE:CD1	43:m:100:ARG:O	2.09	1.00
7:F:113:PHE:C	43:m:95:PRO:CG	2.34	1.00
16:P:25:VAL:HG13	16:P:88:ARG:H	1.25	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:53:PHE:HB3	18:R:55:ASP:N	1.76	1.00
32:a:542:G:OP1	34:d:9:LYS:NZ	1.93	1.00
32:a:1235:U:O5'	43:m:50:GLY:N	1.93	1.00
32:a:1259:C:O4'	44:n:83:VAL:HB	1.60	1.00
33:c:58:ARG:HA	40:j:66:GLU:HB2	1.04	1.00
33:c:64:ARG:NH2	40:j:67:ILE:HD12	1.75	1.00
32:a:1255:G:H5'	44:n:82:LYS:HB2	1.39	1.00
32:a:1262:C:C2'	44:n:100:TRP:OXT	2.10	1.00
32:a:1333:A:O4'	43:m:16:ILE:CG2	1.94	1.00
32:a:1361:G:OP2	44:n:69:PRO:O	1.78	1.00
52:u:29:ALA:HB1	52:u:32:ARG:HH21	1.26	1.00
2:B:37:C:H2'	6:E:46:GLN:CG	1.91	1.00
32:a:945:G:H22	43:m:46:GLU:H	1.04	1.00
32:a:948:C:C2	43:m:38:ILE:CD1	2.44	1.00
32:a:1235:U:C4'	43:m:54:THR:H	1.75	1.00
32:a:1241:G:OP1	37:g:34:LYS:HE2	1.59	1.00
32:a:1257:A:O4'	44:n:74:ARG:CD	2.05	1.00
7:F:109:ARG:NH2	43:m:110:GLY:HA2	1.75	1.00
13:M:3:GLN:H	13:M:4:PRO:CD	1.74	1.00
32:a:975:A:C4	44:n:1:ALA:N	2.29	1.00
32:a:994:A:H1'	44:n:50:LEU:HD21	1.39	1.00
32:a:1329:A:H62	43:m:62:PHE:HB3	0.86	1.00
32:a:1331:G:H8	43:m:22:TYR:N	1.22	1.00
32:a:1359:C:H41	44:n:63:CYS:CB	1.73	1.00
7:F:109:ARG:NH1	43:m:110:GLY:N	1.97	1.00
14:N:44:LEU:HD23	14:N:113:ILE:HD12	1.44	1.00
33:c:74:ILE:C	40:j:54:SER:HG	1.67	1.00
32:a:994:A:O2'	44:n:19:TYR:CD2	1.72	1.00
32:a:1319:A:C4'	49:s:68:HIS:CE1	2.45	1.00
7:F:74:ALA:N	53:v:56:C:H4'	1.69	0.99
7:F:117:SER:CA	43:m:100:ARG:HH21	1.72	0.99
32:a:975:A:C1'	44:n:2:LYS:N	2.05	0.99
33:c:82:ASP:CG	40:j:54:SER:HB2	1.84	0.99
32:a:990:C:P	44:n:43:ALA:HB2	2.01	0.99
32:a:1126:U:OP1	40:j:37:ARG:NE	1.94	0.99
32:a:1305:G:OP2	43:m:3:ILE:CA	2.10	0.99
33:c:75:VAL:HG12	40:j:54:SER:N	1.77	0.99
32:a:1011:C:N4	44:n:34:ASN:HA	1.76	0.99
32:a:1301:U:C5	43:m:8:ILE:CG1	2.18	0.99
33:c:22:PHE:H	40:j:68:ARG:HB3	1.23	0.99
32:a:1240:U:OP1	37:g:115:MET:CB	2.10	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1279:G:C2	44:n:92:ILE:HG13	1.94	0.99
32:a:1300:G:C4	43:m:10:ASP:N	2.20	0.99
7:F:73:VAL:HG13	53:v:56:C:C2	1.92	0.99
7:F:109:ARG:HD2	43:m:109:LYS:N	1.48	0.99
7:F:113:PHE:H	43:m:95:PRO:HB3	0.86	0.99
32:a:450:G:H4'	46:p:41:PRO:HB2	1.40	0.99
32:a:1153:G:N7	40:j:92:LEU:CD1	0.84	0.99
32:a:1301:U:C6	43:m:8:ILE:CG1	2.46	0.99
32:a:1301:U:C6	43:m:8:ILE:HG13	1.97	0.99
32:a:980:C:O3'	44:n:55:SER:OG	1.80	0.99
32:a:1151:A:C4'	40:j:24:GLU:HB2	1.93	0.99
32:a:1240:U:C4	37:g:29:LEU:HG	1.98	0.99
32:a:1258:G:C8	44:n:75:LYS:HG2	1.92	0.99
32:a:1283:U:C5	44:n:88:MET:HE3	1.98	0.99
32:a:1357:A:H3'	44:n:68:ARG:N	1.76	0.99
32:a:975:A:N9	44:n:2:LYS:HG2	1.65	0.99
32:a:1081:A:OP1	35:e:21:SER:O	1.78	0.99
32:a:1151:A:O5'	40:j:24:GLU:HB2	1.05	0.99
33:c:59:PRO:HB2	40:j:47:GLU:OE2	1.45	0.99
32:a:1303:C:O3'	43:m:1:ALA:HB3	1.62	0.99
32:a:988:G:N1	44:n:46:LYS:N	1.98	0.99
32:a:1279:G:H21	44:n:92:ILE:HB	1.17	0.99
2:B:1021:A:H62	2:B:1141:U:H3	1.01	0.98
32:a:948:C:O2	43:m:38:ILE:HD13	1.62	0.98
32:a:1146:A:C2	40:j:82:LYS:CE	2.45	0.98
32:a:1301:U:C4	43:m:8:ILE:CD1	0.94	0.98
38:h:92:PRO:HA	38:h:93:LYS:HZ2	1.28	0.98
33:c:83:VAL:O	40:j:62:ARG:HG3	1.58	0.98
2:B:200:U:H5"	25:Z:20:ASN:HB3	1.41	0.98
32:a:1016:A:C1'	44:n:45:LEU:HA	1.92	0.98
32:a:1283:U:C6	44:n:88:MET:HE3	1.98	0.98
32:a:1304:G:N7	43:m:2:ARG:CA	2.24	0.98
2:B:2602:A:OP1	53:v:74:C:H4'	1.62	0.98
32:a:1126:U:C5	40:j:74:VAL:CA	2.45	0.98
32:a:1151:A:C4'	40:j:21:ALA:O	2.05	0.98
32:a:1216:A:H2	44:n:47:LEU:CA	1.75	0.98
32:a:1304:G:C3'	43:m:52:ILE:HD11	1.94	0.98
33:c:59:PRO:CD	40:j:67:ILE:H	1.75	0.98
7:F:109:ARG:HH11	43:m:110:GLY:N	1.51	0.98
7:F:113:PHE:C	43:m:95:PRO:HG3	1.88	0.98
9:H:3:VAL:HB	9:H:37:VAL:HB	1.45	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:Y:9:THR:HB	24:Y:54:VAL:HA	1.45	0.98
32:a:1150:A:N3	40:j:25:ILE:HA	1.79	0.98
32:a:1333:A:O5'	43:m:17:ALA:HB2	1.61	0.98
9:H:46:PHE:CA	9:H:50:ARG:NH2	2.21	0.98
32:a:1017:U:C5'	44:n:44:VAL:HG11	1.92	0.98
20:T:12:ARG:HH21	23:X:29:ARG:HH12	1.03	0.98
32:a:947:G:C1'	43:m:38:ILE:HG22	1.92	0.98
32:a:1256:A:OP1	44:n:78:LEU:HG	1.63	0.98
32:a:1375:A:OP1	37:g:24:LYS:NZ	1.94	0.98
7:F:73:VAL:CG1	53:v:56:C:C3'	2.24	0.98
32:a:976:G:O6	44:n:70:HIS:CG	2.16	0.98
32:a:1221:G:N1	49:s:5:LYS:HD2	1.79	0.98
32:a:1240:U:O2	37:g:38:ALA:CA	2.12	0.98
12:L:77:ILE:HB	12:L:110:VAL:HG22	1.46	0.98
32:a:994:A:N3	44:n:19:TYR:CE2	2.32	0.98
32:a:1127:G:O6	40:j:76:ILE:CD1	2.11	0.98
32:a:1331:G:O4'	43:m:21:ILE:O	1.58	0.98
32:a:1335:U:H5	43:m:11:HIS:HB3	1.28	0.98
2:B:2575:C:H4'	5:D:148:GLN:C	1.88	0.98
12:L:61:LEU:CB	12:L:62:PRO:HD2	1.94	0.98
32:a:1297:G:N2	37:g:114:SER:HG	1.51	0.98
32:a:1329:A:OP2	43:m:64:VAL:O	1.80	0.98
32:a:1372:U:O3'	39:i:72:SER:OG	1.82	0.98
51:7:46:VAL:HG13	51:7:47:PRO:HD3	1.45	0.98
18:R:78:ARG:HB3	18:R:87:GLN:HA	1.42	0.97
32:a:1150:A:H4'	40:j:23:ALA:O	1.63	0.97
32:a:1255:G:C5'	44:n:82:LYS:CB	2.30	0.97
32:a:1306:A:N3	43:m:29:SER:CB	2.00	0.97
32:a:1380:U:O4	37:g:2:ARG:HG3	0.81	0.97
7:F:73:VAL:HG22	53:v:56:C:C5	1.98	0.97
8:G:157:LYS:HG3	8:G:159:LYS:HZ2	1.28	0.97
32:a:1017:U:O4	44:n:34:ASN:OD1	1.82	0.97
32:a:1248:A:H2	39:i:71:ILE:CD1	1.76	0.97
32:a:1331:G:O6	43:m:4:ALA:HB2	1.63	0.97
32:a:1334:G:C8	43:m:12:LYS:N	2.32	0.97
32:a:1152:A:P	40:j:21:ALA:N	2.36	0.97
32:a:1253:G:H3'	44:n:85:GLU:OE2	1.64	0.97
2:B:2615:U:H1'	26:1:6:LYS:HE3	1.46	0.97
13:M:3:GLN:H	13:M:4:PRO:HD2	1.01	0.97
32:a:1148:U:H2'	40:j:31:ARG:CZ	1.46	0.97
2:B:2575:C:H5"	5:D:149:ASN:HB2	1.46	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Z:3:LYS:HB2	25:Z:51:VAL:HG21	1.45	0.97
32:a:1331:G:C6	43:m:4:ALA:CB	2.48	0.97
32:a:1357:A:OP2	44:n:68:ARG:CB	2.13	0.97
32:a:1357:A:OP2	44:n:68:ARG:HB3	1.63	0.97
32:a:1144:G:N7	40:j:79:PRO:HG2	1.79	0.97
32:a:1304:G:O6	43:m:7:ASN:O	1.78	0.97
36:f:53:LYS:HD3	36:f:54:LEU:H	1.30	0.97
2:B:2602:A:N7	53:v:75:C:H5	1.61	0.97
32:a:982:U:HO2'	49:s:6:LYS:HE2	1.14	0.97
32:a:1073:U:P	35:e:61:LYS:NZ	2.37	0.97
32:a:1216:A:C5'	44:n:50:LEU:HD12	1.94	0.97
2:B:2602:A:C2'	53:v:74:C:O5'	2.12	0.97
7:F:110:ILE:CG1	43:m:105:ALA:HA	1.94	0.97
7:F:139:GLU:OE2	43:m:114:PRO:CG	2.12	0.97
32:a:1013:G:H1	44:n:32:ASP:CA	1.78	0.97
32:a:1112:C:H1'	33:c:178:ARG:CB	1.95	0.97
32:a:1123:U:C5	40:j:88:MET:CA	2.41	0.97
32:a:1304:G:H3'	43:m:3:ILE:CG1	1.95	0.97
32:a:1359:C:H41	44:n:63:CYS:HB2	1.17	0.97
32:a:1372:U:OP1	39:i:73:GLY:N	1.97	0.97
16:P:28:LYS:HD3	16:P:44:GLY:H	1.29	0.97
32:a:1017:U:H5"	44:n:30:ILE:H	1.29	0.97
32:a:1127:G:O6	40:j:76:ILE:HD12	1.63	0.97
32:a:1258:G:H8	44:n:75:LYS:HB3	0.81	0.97
32:a:1302:C:C5'	43:m:6:ILE:CG2	2.32	0.97
2:B:2575:C:H5"	5:D:149:ASN:CB	1.94	0.96
32:a:1016:A:N1	44:n:42:ASN:N	2.12	0.96
32:a:1149:C:H6	40:j:31:ARG:CZ	1.73	0.96
13:M:28:PHE:HB3	13:M:102:LEU:HD21	1.44	0.96
32:a:1151:A:OP1	40:j:23:ALA:CB	2.14	0.96
32:a:1235:U:O5'	43:m:49:GLU:C	2.08	0.96
32:a:1261:A:C8	44:n:98:ALA:CB	2.47	0.96
32:a:1329:A:C8	43:m:68:LEU:CG	2.38	0.96
33:c:46:LEU:HD22	40:j:53:ILE:HG21	1.46	0.96
7:F:134:GLN:CG	43:m:107:THR:CA	2.42	0.96
32:a:1112:C:N3	33:c:177:LEU:CG	2.21	0.96
32:a:1130:A:H62	40:j:80:THR:CG2	1.78	0.96
32:a:1240:U:O2	37:g:38:ALA:HB2	1.65	0.96
32:a:1458:G:H5"	50:t:25:SER:OG	1.64	0.96
32:a:1331:G:C5	43:m:64:VAL:HG11	2.00	0.96
13:M:3:GLN:N	13:M:4:PRO:CD	2.28	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1261:A:C8	44:n:100:TRP:CZ3	2.39	0.96
33:c:63:ILE:HD11	40:j:64:GLN:HB2	1.47	0.96
32:a:1255:G:O5'	44:n:82:LYS:HB3	1.43	0.96
33:c:79:LYS:HE3	40:j:56:HIS:ND1	1.49	0.96
32:a:177:G:H5"	50:t:59:ARG:HH21	1.30	0.96
32:a:408:A:OP1	34:d:111:ALA:HB3	1.65	0.96
32:a:1333:A:N3	43:m:14:ALA:CA	2.26	0.96
2:B:38:A:O4'	6:E:46:GLN:HG3	1.65	0.96
2:B:547:A:H3'	2:B:548:G:H8	1.28	0.96
7:F:134:GLN:HB2	43:m:106:ARG:CB	1.94	0.96
33:c:42:LEU:HD12	40:j:53:ILE:HD13	1.44	0.96
32:a:945:G:N2	43:m:43:LYS:HB2	1.79	0.96
32:a:1237:C:N3	43:m:45:SER:O	1.72	0.96
32:a:1308:U:H4'	43:m:27:THR:HB	0.98	0.96
7:F:116:LEU:CD2	43:m:102:LYS:CG	2.25	0.95
32:a:1128:C:H1'	40:j:83:THR:OG1	1.37	0.95
32:a:1150:A:C4'	40:j:27:GLU:H	1.78	0.95
32:a:1152:A:OP1	40:j:17:LEU:O	1.84	0.95
7:F:113:PHE:CB	43:m:95:PRO:CG	1.81	0.95
7:F:139:GLU:OE2	43:m:114:PRO:HG3	1.66	0.95
10:J:16:TYR:HB2	10:J:54:ILE:HG22	1.48	0.95
11:K:64:ARG:H	11:K:83:ALA:HB3	1.26	0.95
32:a:1014:A:H8	49:s:15:LEU:CD1	1.76	0.95
33:c:46:LEU:CD2	40:j:53:ILE:CG2	2.43	0.95
33:c:75:VAL:H	40:j:55:PRO:HD3	1.31	0.95
5:D:170:VAL:HG13	5:D:171:THR:H	1.27	0.95
23:X:28:LEU:HB3	23:X:34:SER:HA	1.46	0.95
32:a:1262:C:H2'	44:n:100:TRP:OXT	1.66	0.95
32:a:1337:G:H22	43:m:45:SER:HB3	1.26	0.95
12:L:78:ARG:HG2	12:L:99:ASN:HB3	1.48	0.95
32:a:1307:U:H6	43:m:28:ARG:O	1.47	0.95
10:J:25:LEU:HG	10:J:64:VAL:H	1.32	0.95
13:M:3:GLN:C	13:M:5:LYS:N	2.15	0.95
32:a:403:C:OP1	34:d:133:SER:OG	1.84	0.95
32:a:935:A:H62	37:g:2:ARG:HB2	1.31	0.95
32:a:1151:A:O4'	40:j:24:GLU:CB	2.15	0.95
32:a:1016:A:N3	44:n:41:TRP:O	1.98	0.95
32:a:1127:G:C5	40:j:76:ILE:CB	2.43	0.95
32:a:1240:U:O2'	37:g:31:VAL:HG13	1.66	0.95
49:s:49:ALA:HB1	49:s:56:HIS:HB3	1.47	0.95
51:7:67:LEU:HD11	51:7:157:PRO:HB3	1.47	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1129:C:C6	40:j:33:GLY:CA	2.49	0.95
4:C:124:LYS:HB2	4:C:125:PRO:CD	1.96	0.95
32:a:1329:A:N6	43:m:62:PHE:HD2	1.54	0.95
7:F:113:PHE:CA	43:m:95:PRO:CG	2.21	0.95
7:F:116:LEU:HG	43:m:102:LYS:CB	1.84	0.95
32:a:968:A:OP2	39:i:129:ARG:HD3	1.65	0.95
32:a:1124:G:N7	40:j:87:LEU:HB3	1.81	0.95
32:a:1128:C:OP1	40:j:32:THR:HA	1.64	0.95
32:a:1148:U:H2'	40:j:31:ARG:NH1	1.81	0.95
32:a:1276:G:H1'	44:n:97:LYS:N	1.63	0.95
32:a:1321:U:C5	49:s:2:ARG:HD2	2.01	0.95
2:B:2333:A:H4'	2:B:2334:U:H5"	1.48	0.95
23:X:36:GLN:HE22	23:X:38:GLN:HE22	1.13	0.95
32:a:982:U:O2'	44:n:52:ARG:CZ	2.14	0.95
32:a:1150:A:H4'	40:j:27:GLU:N	1.74	0.95
32:a:1217:C:C2	44:n:45:LEU:C	2.43	0.95
52:u:14:ALA:HA	52:u:16:ARG:CZ	1.90	0.95
6:E:60:TRP:HE1	6:E:73:ILE:HD11	1.32	0.94
7:F:116:LEU:CD2	43:m:102:LYS:HB2	1.95	0.94
32:a:196:A:P	50:t:63:LYS:HE2	2.05	0.94
32:a:1124:G:H4'	40:j:8:ILE:CG1	1.95	0.94
32:a:1218:C:H6	44:n:48:GLN:HG2	1.29	0.94
32:a:187:G:H4'	50:t:79:THR:HG21	1.49	0.94
32:a:935:A:C6	37:g:2:ARG:CD	2.41	0.94
32:a:1330:U:O2'	43:m:24:VAL:O	1.82	0.94
2:B:2602:A:H2'	53:v:74:C:C4'	1.97	0.94
8:G:15:ASP:HB3	8:G:26:LYS:HB2	1.47	0.94
32:a:1151:A:C4'	40:j:24:GLU:CB	2.46	0.94
32:a:1320:C:OP1	49:s:68:HIS:HE1	1.50	0.94
32:a:1331:G:O5'	43:m:21:ILE:O	1.82	0.94
7:F:176:PHE:C	43:m:102:LYS:HD2	1.93	0.94
29:4:34:LYS:HB3	29:4:35:LYS:HE2	1.47	0.94
32:a:1283:U:C5	44:n:88:MET:CE	2.50	0.94
41:k:110:THR:CG2	52:u:4:LYS:HD2	1.97	0.94
32:a:1150:A:C6	40:j:87:LEU:CA	2.42	0.94
32:a:1240:U:H4'	37:g:37:THR:HG23	1.49	0.94
32:a:1276:G:N1	44:n:95:LEU:CD1	2.24	0.94
32:a:1129:C:H6	40:j:33:GLY:HA2	1.05	0.94
32:a:1144:G:N7	40:j:79:PRO:CG	2.29	0.94
33:c:100:ILE:CG1	40:j:63:ASP:H	1.72	0.94
33:c:101:ASN:C	40:j:51:VAL:HG11	1.57	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:m:11:HIS:H	43:m:44:ILE:HD11	1.32	0.94
2:B:2204:G:H5'	4:C:149:LYS:HE3	1.50	0.94
5:D:149:ASN:HB3	5:D:150:GLN:HG2	1.49	0.94
7:F:175:PRO:C	43:m:102:LYS:CB	2.41	0.94
21:U:84:PHE:HB3	21:U:92:VAL:HG22	1.49	0.94
32:a:946:A:N6	43:m:47:LEU:HA	1.81	0.94
32:a:1338:G:H21	53:v:41:C:H4'	1.32	0.94
32:a:1221:G:OP1	49:s:69:LYS:HE3	1.68	0.94
32:a:1261:A:C6	44:n:100:TRP:HE3	1.74	0.94
33:c:79:LYS:N	40:j:57:VAL:CA	2.25	0.94
13:M:3:GLN:C	13:M:5:LYS:H	1.58	0.94
21:U:23:LYS:HG3	21:U:24:VAL:HG23	1.50	0.94
32:a:1221:G:H3'	49:s:3:SER:O	1.68	0.94
32:a:1221:G:O6	49:s:5:LYS:HB2	1.67	0.94
32:a:1235:U:C4'	43:m:54:THR:N	2.31	0.94
32:a:1304:G:H3'	43:m:3:ILE:HG13	1.50	0.94
32:a:1358:U:OP2	44:n:63:CYS:HB3	1.68	0.94
2:B:1450:G:H21	2:B:1452:G:H1	1.14	0.93
32:a:437:U:C5'	34:d:151:GLN:HE21	1.73	0.93
32:a:984:C:H42	49:s:5:LYS:HB2	0.79	0.93
32:a:1255:G:H4'	44:n:83:VAL:HG22	1.49	0.93
40:j:88:MET:HB2	40:j:89:ARG:HH12	1.32	0.93
10:J:100:VAL:HG13	10:J:101:ILE:HG22	1.49	0.93
14:N:10:LEU:H	14:N:17:ARG:HH12	1.12	0.93
32:a:1112:C:H1'	33:c:178:ARG:HB2	1.51	0.93
32:a:1216:A:N3	44:n:47:LEU:CA	2.16	0.93
32:a:1221:G:C6	49:s:5:LYS:CE	2.45	0.93
32:a:1304:G:OP2	43:m:3:ILE:N	2.01	0.93
4:C:42:ARG:HG2	4:C:43:ASN:H	1.29	0.93
19:S:50:VAL:HG11	19:S:103:ILE:HG21	1.51	0.93
32:a:1126:U:OP1	40:j:37:ARG:HD2	1.65	0.93
33:c:81:GLU:HG2	40:j:58:ASN:OD1	1.67	0.93
17:Q:73:ILE:HG23	17:Q:77:LYS:HB2	1.47	0.93
32:a:1320:C:H5	49:s:69:LYS:H	1.08	0.93
33:c:85:LYS:HD2	40:j:60:ASP:HB3	1.08	0.93
32:a:968:A:OP2	39:i:129:ARG:CD	2.15	0.93
32:a:1358:U:C3'	44:n:62:ARG:CG	2.18	0.93
33:c:82:ASP:CB	40:j:54:SER:CB	2.47	0.93
1:A:75:G:H1'	3:V:29:ILE:HD13	1.50	0.93
2:B:663:G:H5"	12:L:25:SER:HB2	1.51	0.93
32:a:1153:G:C5	40:j:92:LEU:HD11	1.89	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:k:110:THR:HG21	52:u:4:LYS:HD2	1.49	0.93
32:a:1150:A:H1'	40:j:25:ILE:C	1.60	0.93
32:a:1304:G:O2'	43:m:52:ILE:HD13	1.11	0.93
33:c:87:ARG:HH21	40:j:62:ARG:HH21	1.17	0.93
38:h:103:VAL:HG12	38:h:124:ILE:HA	1.46	0.93
32:a:1015:G:C3'	44:n:31:SER:O	2.17	0.93
32:a:1127:G:O6	40:j:76:ILE:CG1	2.16	0.93
2:B:1060:U:N3	2:B:1088:A:N7	2.17	0.93
7:F:108:PRO:CB	43:m:94:LEU:HD22	1.98	0.93
32:a:1304:G:C3'	43:m:3:ILE:CG1	2.47	0.93
6:E:48:THR:HG22	6:E:49:ARG:N	1.80	0.93
32:a:1126:U:C5'	40:j:77:VAL:CG2	2.13	0.93
32:a:1129:C:H5	40:j:33:GLY:O	1.26	0.93
32:a:1147:C:OP2	40:j:85:ASP:O	1.87	0.93
12:L:79:LEU:HA	12:L:113:ALA:HB3	1.50	0.92
23:X:30:MET:HG3	23:X:31:GLN:H	1.33	0.92
32:a:1018:G:N7	44:n:34:ASN:HB2	1.76	0.92
32:a:1303:C:OP1	43:m:5:GLY:HA2	1.66	0.92
33:c:83:VAL:C	40:j:62:ARG:CD	2.42	0.92
33:c:84:GLU:O	40:j:62:ARG:CD	2.17	0.92
7:F:101:ARG:CD	43:m:113:LYS:O	2.16	0.92
32:a:1218:C:C4	44:n:49:THR:OG1	2.22	0.92
32:a:1236:A:N6	43:m:46:GLU:O	1.77	0.92
32:a:988:G:N1	44:n:46:LYS:CG	2.32	0.92
32:a:1219:A:O2'	49:s:9:PHE:CA	2.17	0.92
32:a:1255:G:O6	44:n:88:MET:N	2.02	0.92
33:c:84:GLU:HB2	40:j:59:LYS:HB2	1.49	0.92
5:D:8:LYS:HB3	16:P:5:LYS:NZ	1.85	0.92
9:H:38:PRO:HB2	9:H:43:ASN:CG	1.94	0.92
32:a:990:C:O4'	44:n:43:ALA:CB	2.17	0.92
32:a:1152:A:P	40:j:21:ALA:CB	2.51	0.92
32:a:1278:G:H5"	44:n:93:PRO:HA	1.49	0.92
33:c:63:ILE:CG2	40:j:66:GLU:CD	2.40	0.92
41:k:126:ARG:HB2	52:u:33:ARG:HD2	1.49	0.92
32:a:1150:A:C1'	40:j:25:ILE:C	2.39	0.92
32:a:1304:G:H8	43:m:1:ALA:C	1.78	0.92
32:a:1318:A:H1'	49:s:67:GLY:N	1.85	0.92
32:a:1318:A:C4'	49:s:66:VAL:H	1.82	0.92
32:a:1318:A:C4'	49:s:66:VAL:N	2.33	0.92
2:B:923:G:H1'	22:W:23:LYS:HD3	1.50	0.92
9:H:83:LYS:HB3	9:H:91:PHE:HB2	1.50	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:F:108:PRO:HB2	43:m:94:LEU:HD21	1.52	0.92
7:F:115:GLY:H	43:m:101:THR:N	1.66	0.92
32:a:1304:G:C2'	43:m:3:ILE:CG1	2.47	0.92
32:a:1347:G:C2'	39:i:109:GLN:O	2.18	0.92
32:a:738:C:OP1	36:f:2:ARG:NH1	2.02	0.92
32:a:994:A:C2'	44:n:19:TYR:CE2	2.53	0.92
32:a:1360:A:H5'	44:n:61:ASN:CG	1.95	0.92
4:C:19:VAL:HG12	4:C:20:ASN:H	1.35	0.92
9:H:15:LEU:HD23	9:H:51:ARG:HD2	0.92	0.92
32:a:994:A:H1'	44:n:50:LEU:CD2	1.98	0.92
32:a:1358:U:H5	44:n:68:ARG:CB	1.82	0.92
7:F:77:LYS:HE2	53:v:19:G:C2	2.00	0.92
7:F:135:ILE:CG2	43:m:111:PRO:HA	2.00	0.92
32:a:1127:G:C5	40:j:76:ILE:HB	2.05	0.92
32:a:1371:G:OP2	39:i:110:VAL:CG2	2.18	0.92
33:c:60:ALA:O	40:j:46:LYS:O	1.61	0.92
33:c:77:GLY:N	40:j:56:HIS:O	2.02	0.92
33:c:87:ARG:CZ	40:j:62:ARG:HE	1.80	0.92
32:a:376:G:O3'	46:p:5:ARG:NH1	2.03	0.91
32:a:1221:G:H1	49:s:5:LYS:HD2	1.33	0.91
32:a:1234:C:O2'	43:m:54:THR:HG22	1.70	0.91
32:a:1014:A:H8	49:s:15:LEU:HD11	1.34	0.91
32:a:1016:A:N3	44:n:45:LEU:HB2	1.80	0.91
36:f:100:SER:HA	48:r:23:LYS:HZ2	1.28	0.91
2:B:85:G:H5'	21:U:28:LEU:HA	1.52	0.91
5:D:2:ILE:HG21	5:D:204:LYS:HA	1.50	0.91
21:U:78:LYS:HE3	21:U:96:LYS:HB2	1.50	0.91
32:a:994:A:C4	44:n:50:LEU:HD11	2.02	0.91
32:a:1334:G:C1'	43:m:43:LYS:C	2.44	0.91
4:C:124:LYS:CB	4:C:125:PRO:HD3	2.00	0.91
7:F:134:GLN:HG2	43:m:107:THR:HG1	1.35	0.91
32:a:1016:A:C2	44:n:45:LEU:HB3	2.05	0.91
32:a:1262:C:H1'	44:n:100:TRP:H	1.14	0.91
32:a:1278:G:N1	44:n:76:PHE:HE2	1.63	0.91
33:c:85:LYS:HG3	40:j:60:ASP:CG	1.92	0.91
2:B:2602:A:N6	53:v:75:C:H41	1.68	0.91
7:F:116:LEU:CD2	43:m:102:LYS:C	2.43	0.91
17:Q:48:ASP:HA	17:Q:51:GLN:HG2	1.50	0.91
32:a:1127:G:H5'	40:j:30:LYS:HZ3	1.31	0.91
5:D:118:PHE:HA	5:D:164:GLN:HA	1.52	0.91
32:a:1249:C:O2'	39:i:69:GLY:O	1.88	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:c:75:VAL:HG11	40:j:53:ILE:CG2	1.72	0.91
32:a:1073:U:P	35:e:61:LYS:HZ1	1.93	0.91
32:a:1317:C:O2'	49:s:63:ASP:O	1.87	0.91
33:c:84:GLU:O	40:j:62:ARG:HD2	1.69	0.91
16:P:47:ILE:HG22	16:P:48:ALA:H	1.33	0.91
27:2:12:SER:HA	27:2:50:GLU:HB3	1.52	0.91
32:a:1013:G:C4'	49:s:16:LYS:NZ	2.33	0.91
32:a:1232:U:O3'	39:i:125:GLN:HG2	1.50	0.91
32:a:1258:G:O4'	44:n:76:PHE:N	2.02	0.91
33:c:67:ILE:CD1	40:j:53:ILE:CG1	2.42	0.91
33:c:98:ALA:HB3	40:j:64:GLN:OE1	1.71	0.91
2:B:1658:C:OP1	5:D:136:ASN:HA	1.71	0.91
32:a:1220:G:C8	49:s:4:LEU:HD13	1.79	0.91
32:a:1321:U:C4	49:s:2:ARG:HG2	2.06	0.91
32:a:1375:A:H5"	37:g:24:LYS:HZ3	0.76	0.91
2:B:1112:G:H4'	8:G:2:ARG:HG2	1.53	0.91
32:a:945:G:O6	43:m:46:GLU:O	1.87	0.91
32:a:1301:U:C4	43:m:8:ILE:HD12	0.93	0.91
33:c:84:GLU:CB	40:j:59:LYS:CB	2.44	0.91
36:f:53:LYS:HZ3	36:f:53:LYS:HA	1.36	0.91
7:F:109:ARG:H	43:m:105:ALA:HB3	1.21	0.90
13:M:3:GLN:O	13:M:6:ARG:N	2.04	0.90
32:a:1240:U:O2	37:g:38:ALA:CB	2.19	0.90
36:f:88:MET:HE1	36:f:90:MET:HG3	1.52	0.90
51:7:150:ILE:HG13	51:7:153:MET:HE3	1.53	0.90
5:D:165:MET:HE3	5:D:166:GLY:H	1.36	0.90
32:a:1150:A:N6	40:j:86:ALA:O	2.03	0.90
32:a:1255:G:H2'	44:n:92:ILE:HD11	1.53	0.90
4:C:20:ASN:HB2	4:C:203:VAL:HG13	1.51	0.90
9:H:132:PHE:HB3	9:H:140:ALA:HB3	1.54	0.90
10:J:73:VAL:HB	10:J:75:TYR:CE1	2.06	0.90
32:a:980:C:C3'	44:n:58:ARG:HD2	1.99	0.90
32:a:981:U:OP2	49:s:6:LYS:CE	2.19	0.90
32:a:1073:U:OP1	35:e:61:LYS:NZ	2.02	0.90
32:a:1150:A:C4'	40:j:28:THR:H	1.83	0.90
28:3:42:LEU:HD11	28:3:44:VAL:HG13	1.53	0.90
32:a:935:A:N6	37:g:2:ARG:CB	2.34	0.90
32:a:982:U:C2'	44:n:52:ARG:HH11	1.84	0.90
32:a:1146:A:C5'	40:j:85:ASP:HB3	2.00	0.90
32:a:1329:A:N1	43:m:62:PHE:CE2	2.38	0.90
32:a:1330:U:H5"	43:m:69:ARG:NH2	1.84	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:G:26:LYS:HA	8:G:31:GLU:HG2	1.54	0.90
11:K:103:VAL:HB	11:K:107:LEU:HD23	1.52	0.90
32:a:1017:U:C4'	44:n:44:VAL:HG11	2.01	0.90
47:q:18:LYS:HG2	47:q:48:GLU:HA	1.52	0.90
7:F:109:ARG:N	43:m:105:ALA:CB	2.35	0.90
32:a:407:U:H1'	34:d:115:GLN:OE1	1.71	0.90
32:a:935:A:N6	37:g:2:ARG:CG	2.28	0.90
32:a:1151:A:H61	40:j:89:ARG:C	1.40	0.90
32:a:1329:A:N6	43:m:62:PHE:CG	2.38	0.90
32:a:1347:G:C4	39:i:108:ARG:NH2	2.39	0.90
32:a:1124:G:N7	40:j:88:MET:CE	2.35	0.90
32:a:1255:G:C4'	44:n:83:VAL:HG22	2.02	0.90
32:a:1334:G:H3'	43:m:11:HIS:CA	2.02	0.90
32:a:1359:C:C5	44:n:63:CYS:N	2.40	0.90
33:c:59:PRO:HD3	40:j:67:ILE:H	1.34	0.90
31:6:105:LEU:HD11	31:6:139:VAL:HG11	1.54	0.90
32:a:939:G:H5'	37:g:101:ARG:HH22	1.36	0.90
32:a:1013:G:C2'	49:s:19:GLU:OE2	2.20	0.90
32:a:1305:G:H5"	43:m:3:ILE:HG23	1.53	0.90
32:a:1318:A:O4'	49:s:66:VAL:N	2.03	0.90
33:c:67:ILE:CD1	40:j:63:ASP:OD2	2.20	0.90
11:K:26:GLY:HA3	11:K:30:ARG:HE	1.35	0.90
32:a:994:A:H2'	44:n:19:TYR:HE2	1.19	0.90
32:a:1055:A:O2'	33:c:160:GLU:CD	2.15	0.90
32:a:1240:U:O4	37:g:29:LEU:HG	1.72	0.90
32:a:1301:U:O4	43:m:8:ILE:HD12	0.73	0.90
33:c:21:TRP:HB2	40:j:68:ARG:HB2	1.51	0.90
33:c:62:SER:HG	40:j:47:GLU:HA	1.36	0.90
52:u:14:ALA:C	52:u:16:ARG:NE	2.30	0.90
7:F:110:ILE:HG13	43:m:105:ALA:C	1.97	0.90
32:a:1126:U:H5	40:j:74:VAL:O	1.54	0.90
32:a:1240:U:O4'	37:g:37:THR:CG2	2.16	0.90
32:a:1331:G:O6	43:m:4:ALA:HB1	1.69	0.90
33:c:62:SER:OG	40:j:47:GLU:CA	2.19	0.90
33:c:100:ILE:CB	40:j:63:ASP:N	2.31	0.90
5:D:138:LEU:HD23	5:D:138:LEU:H	1.34	0.89
8:G:29:ASN:HB2	8:G:78:VAL:HA	1.54	0.89
32:a:1014:A:H1'	49:s:10:ILE:HD11	0.90	0.89
32:a:1277:C:O4'	44:n:96:LYS:HA	1.71	0.89
32:a:1328:C:C2'	43:m:68:LEU:CD2	2.48	0.89
32:a:1359:C:C6	44:n:67:GLY:O	2.24	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:c:67:ILE:HD12	40:j:53:ILE:HG12	0.92	0.89
10:J:73:VAL:HB	10:J:75:TYR:HE1	1.34	0.89
25:Z:36:VAL:HA	25:Z:42:PRO:HD3	1.55	0.89
32:a:1335:U:H5'	43:m:45:SER:HB2	1.52	0.89
44:n:60:ARG:HD3	44:n:60:ARG:H	1.37	0.89
2:B:1283:G:H22	2:B:1286:A:H5'	1.37	0.89
32:a:254:G:OP1	47:q:68:LYS:O	1.90	0.89
12:L:85:VAL:HG21	12:L:98:ALA:H	1.35	0.89
17:Q:30:VAL:HG12	17:Q:32:ARG:H	1.37	0.89
32:a:982:U:O2'	49:s:6:LYS:HE3	1.69	0.89
32:a:1012:A:C5	44:n:33:VAL:HG22	2.07	0.89
32:a:1124:G:C4	40:j:87:LEU:HB2	2.08	0.89
32:a:1219:A:O2'	49:s:9:PHE:HA	1.70	0.89
32:a:1233:G:OP1	39:i:125:GLN:HG2	1.72	0.89
32:a:1257:A:O5'	44:n:74:ARG:O	1.89	0.89
2:B:2602:A:H2'	53:v:74:C:H4'	1.52	0.89
16:P:108:ARG:H	16:P:108:ARG:HD2	1.38	0.89
32:a:1257:A:P	44:n:74:ARG:O	2.31	0.89
39:i:51:LEU:HD23	39:i:56:MET:HE3	1.51	0.89
32:a:186:C:O3'	50:t:76:ALA:HB2	1.72	0.89
32:a:796:C:H5'	41:k:128:VAL:HG13	1.53	0.89
32:a:967:C:H4'	39:i:129:ARG:HB3	1.55	0.89
7:F:114:ARG:NH1	43:m:85:TYR:HE2	1.68	0.89
7:F:135:ILE:C	43:m:112:ARG:HG2	1.97	0.89
16:P:26:GLU:HB3	16:P:46:VAL:HG22	1.55	0.89
32:a:988:G:C5	44:n:46:LYS:NZ	2.40	0.89
32:a:1304:G:H8	43:m:2:ARG:CA	1.79	0.89
32:a:1375:A:P	37:g:24:LYS:HZ1	1.96	0.89
32:a:1086:U:H3	32:a:1099:G:H22	1.14	0.89
32:a:1330:U:C3'	43:m:23:GLY:N	2.35	0.89
6:E:128:ALA:CB	6:E:129:PRO:HD3	2.03	0.89
7:F:105:ILE:CD1	43:m:113:LYS:CB	2.44	0.89
24:Y:9:THR:HA	24:Y:55:LYS:HG3	1.55	0.89
32:a:538:G:P	42:l:111:GLN:HG3	2.13	0.89
32:a:976:G:H1	44:n:70:HIS:HE2	1.15	0.89
32:a:1259:C:O4'	44:n:83:VAL:CB	2.21	0.89
32:a:1359:C:C6	44:n:62:ARG:CA	2.53	0.89
32:a:1359:C:N4	44:n:63:CYS:CB	2.32	0.89
41:k:22:ILE:HG21	41:k:95:THR:HG21	1.53	0.89
2:B:2602:A:H62	53:v:75:C:H41	1.15	0.89
7:F:110:ILE:H	43:m:105:ALA:HB1	0.72	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:8:LEU:HD23	11:K:82:ASN:HB3	1.53	0.89
18:R:54:VAL:HB	18:R:54:VAL:H	1.37	0.89
32:a:1014:A:O3'	49:s:40:PHE:HE2	1.28	0.89
32:a:1121:U:C6	40:j:89:ARG:NH2	2.40	0.89
32:a:1218:C:C5	44:n:49:THR:OG1	2.25	0.89
7:F:134:GLN:HG3	43:m:107:THR:CB	2.03	0.88
15:O:26:LEU:HB2	15:O:93:ASP:HA	1.54	0.88
32:a:177:G:P	50:t:23:ARG:HH22	1.96	0.88
32:a:1147:C:H1'	40:j:82:LYS:HG3	1.25	0.88
32:a:1304:G:O2'	43:m:52:ILE:CD1	0.59	0.88
32:a:1304:G:C1'	43:m:52:ILE:HD11	2.03	0.88
52:u:14:ALA:HA	52:u:16:ARG:HH11	1.03	0.88
22:W:35:ILE:HG23	22:W:36:ILE:H	1.34	0.88
32:a:947:G:N1	43:m:51:GLN:OE1	2.05	0.88
32:a:1301:U:N1	43:m:8:ILE:HG12	1.88	0.88
36:f:100:SER:CA	48:r:23:LYS:NZ	2.36	0.88
39:i:34:LEU:HD11	39:i:47:VAL:HG21	1.56	0.88
49:s:18:VAL:HG21	49:s:43:MET:HG2	1.53	0.88
7:F:114:ARG:C	43:m:100:ARG:HA	1.98	0.88
32:a:1013:G:N1	44:n:32:ASP:CA	2.34	0.88
32:a:1019:A:C8	44:n:35:ALA:HA	2.01	0.88
32:a:1122:U:H3	40:j:90:LEU:H	0.95	0.88
2:B:2602:A:H2	53:v:74:C:OP2	1.44	0.88
32:a:1013:G:H4'	49:s:16:LYS:HZ2	1.07	0.88
32:a:1122:U:H3	40:j:90:LEU:N	1.70	0.88
32:a:1128:C:HO2'	40:j:83:THR:HG23	1.30	0.88
32:a:1261:A:C4	44:n:100:TRP:CZ3	2.61	0.88
52:u:13:VAL:HG13	52:u:14:ALA:H	1.38	0.88
32:a:1015:G:H8	44:n:40:ARG:HH12	1.19	0.88
32:a:1279:G:H1	44:n:92:ILE:HD11	1.37	0.88
32:a:1306:A:H5"	43:m:32:ILE:HG12	1.53	0.88
33:c:75:VAL:CG1	40:j:53:ILE:CB	2.50	0.88
7:F:115:GLY:CA	43:m:100:ARG:HA	2.03	0.88
31:6:27:LEU:HD23	31:6:27:LEU:H	1.37	0.88
32:a:1304:G:O3'	43:m:52:ILE:HG13	1.74	0.88
32:a:1321:U:C4	49:s:2:ARG:CD	2.56	0.88
3:V:4:ILE:HB	3:V:63:ILE:HA	1.55	0.88
12:L:111:ILE:HD13	12:L:111:ILE:H	1.38	0.88
16:P:24:THR:HG21	16:P:111:GLU:HG2	1.55	0.88
32:a:408:A:O5'	34:d:109:THR:HG21	1.73	0.88
32:a:1128:C:C1'	40:j:83:THR:OG1	1.79	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1255:G:N1	44:n:84:ARG:O	2.07	0.88
32:a:1329:A:H62	43:m:62:PHE:CB	1.78	0.88
43:m:78:ARG:HH21	43:m:79:LEU:HG	1.37	0.88
18:R:47:VAL:HG22	18:R:48:LYS:H	1.34	0.88
32:a:988:G:O3'	44:n:42:ASN:ND2	2.06	0.88
32:a:1013:G:C5	44:n:40:ARG:NH2	2.01	0.88
32:a:1255:G:O6	44:n:84:ARG:O	1.90	0.88
32:a:1333:A:N1	43:m:44:ILE:HA	1.89	0.88
39:i:67:LYS:HZ2	40:j:32:THR:HG21	1.39	0.88
50:t:68:LYS:HG3	50:t:69:ASN:H	1.36	0.88
7:F:105:ILE:HD13	43:m:113:LYS:HB3	0.90	0.88
32:a:1218:C:C6	44:n:48:GLN:HG2	2.05	0.88
32:a:1238:A:N7	43:m:8:ILE:HD13	1.89	0.88
32:a:1261:A:C4	44:n:100:TRP:CE3	2.61	0.88
2:B:1141:U:H4'	2:B:1142:A:O4'	1.74	0.88
17:Q:92:LYS:HA	17:Q:95:ALA:HB2	1.54	0.88
32:a:970:C:H41	39:i:128:LYS:HB3	1.38	0.88
32:a:980:C:H2'	44:n:58:ARG:HG3	1.52	0.88
32:a:1217:C:O2	44:n:46:LYS:N	2.05	0.88
32:a:1303:C:OP1	43:m:5:GLY:C	1.90	0.88
32:a:1304:G:C3'	43:m:3:ILE:HG12	2.04	0.88
32:a:1305:G:N7	43:m:4:ALA:N	2.09	0.88
33:c:21:TRP:CG	40:j:68:ARG:HD3	2.08	0.88
10:J:7:LYS:HD2	10:J:49:ASP:HB2	1.54	0.87
32:a:1218:C:O4'	44:n:48:GLN:HG2	1.74	0.87
32:a:1305:G:N1	43:m:21:ILE:CG1	2.37	0.87
32:a:1306:A:N1	43:m:29:SER:CB	2.37	0.87
37:g:112:ASP:HB2	37:g:118:ARG:HG2	1.55	0.87
7:F:33:ILE:HG22	7:F:155:ILE:HG12	1.56	0.87
11:K:70:ARG:HB3	11:K:76:VAL:HG22	1.55	0.87
32:a:1011:C:O2	44:n:35:ALA:HB3	1.73	0.87
32:a:1330:U:C3'	43:m:22:TYR:C	2.47	0.87
5:D:16:THR:HA	16:P:79:VAL:HB	1.55	0.87
22:W:42:THR:HB	22:W:65:LYS:HA	1.56	0.87
32:a:966:G:C1'	53:v:34:G:H4'	2.04	0.87
32:a:980:C:OP2	49:s:5:LYS:HA	1.73	0.87
32:a:1306:A:C2	43:m:29:SER:HB3	2.08	0.87
32:a:1320:C:C5	49:s:69:LYS:N	2.39	0.87
2:B:654:A:H2'	2:B:655:A:H5"	1.55	0.87
11:K:71:ARG:HB3	11:K:72:PRO:CD	2.02	0.87
19:S:18:ARG:HH12	19:S:25:ARG:HH22	1.21	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:6:25:PRO:O	31:6:29:GLN:HG2	1.75	0.87
32:a:1016:A:C4	44:n:45:LEU:HB2	2.09	0.87
32:a:1358:U:C5'	44:n:62:ARG:HD3	2.03	0.87
33:c:100:ILE:CG2	40:j:63:ASP:H	1.87	0.87
44:n:60:ARG:HH21	44:n:62:ARG:HE	1.21	0.87
7:F:109:ARG:NH1	43:m:110:GLY:HA2	1.60	0.87
7:F:136:ILE:O	43:m:106:ARG:NH2	1.94	0.87
32:a:1304:G:C8	43:m:1:ALA:C	2.51	0.87
32:a:1222:G:C2	49:s:5:LYS:HD3	2.08	0.87
33:c:58:ARG:HG2	33:c:63:ILE:HG22	1.48	0.87
34:d:60:VAL:HA	34:d:63:ILE:HD12	1.57	0.87
52:u:13:VAL:C	52:u:16:ARG:HH12	1.81	0.87
9:H:39:ALA:O	9:H:44:ILE:CD1	2.22	0.87
32:a:1281:C:C2	40:j:38:GLY:HA3	2.10	0.87
32:a:1331:G:N7	43:m:64:VAL:CG1	2.38	0.87
33:c:22:PHE:O	40:j:68:ARG:NH1	2.08	0.87
15:O:68:LYS:HD3	15:O:68:LYS:H	1.40	0.87
17:Q:33:VAL:HG13	17:Q:34:ALA:H	1.39	0.87
32:a:1278:G:N1	44:n:76:PHE:CE2	2.41	0.87
42:l:8:ARG:HG3	42:l:9:LYS:H	1.40	0.87
10:J:71:ASP:CG	10:J:72:LYS:H	1.80	0.86
24:Y:6:ILE:HG22	24:Y:56:VAL:HG23	1.54	0.86
32:a:974:A:O5'	44:n:4:SER:OG	1.92	0.86
32:a:1016:A:H2	44:n:42:ASN:HA	0.70	0.86
33:c:100:ILE:HG12	40:j:63:ASP:HB3	0.87	0.86
48:r:52:ARG:HB3	48:r:52:ARG:HH11	1.40	0.86
51:7:131:LYS:HA	51:7:134:LEU:HD12	1.56	0.86
4:C:53:ILE:HG12	4:C:218:THR:HA	1.55	0.86
32:a:1153:G:H8	40:j:92:LEU:CB	1.86	0.86
32:a:1307:U:O2	43:m:25:GLY:O	1.93	0.86
32:a:1331:G:N1	43:m:59:VAL:HG21	1.90	0.86
32:a:1332:A:H2	43:m:14:ALA:CB	1.88	0.86
32:a:1334:G:H8	43:m:12:LYS:O	1.57	0.86
32:a:1348:U:H4'	39:i:121:ARG:HH12	1.40	0.86
33:c:65:VAL:HB	40:j:64:GLN:C	2.00	0.86
32:a:1217:C:O2	44:n:45:LEU:O	1.93	0.86
32:a:1319:A:H4'	49:s:68:HIS:CE1	2.07	0.86
39:i:29:ILE:HG22	39:i:64:ILE:HB	1.57	0.86
2:B:997:G:OP1	17:Q:92:LYS:HD2	1.74	0.86
7:F:73:VAL:HG13	53:v:57:G:C8	2.08	0.86
29:4:12:ARG:HB3	29:4:23:HIS:HA	1.55	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:981:U:H6	44:n:58:ARG:HE	0.88	0.86
4:C:135:PRO:HG2	36:f:80:PHE:CE1	2.10	0.86
32:a:994:A:N3	44:n:50:LEU:HD11	1.91	0.86
32:a:1013:G:H22	44:n:31:SER:C	1.83	0.86
32:a:1125:U:H3'	40:j:77:VAL:N	1.89	0.86
32:a:1150:A:C4'	40:j:27:GLU:N	2.37	0.86
32:a:1235:U:H2'	43:m:52:ILE:CG2	2.04	0.86
32:a:1330:U:C2'	43:m:24:VAL:O	2.24	0.86
2:B:630:G:H1	12:L:69:ARG:HH22	1.22	0.86
7:F:106:ALA:HB3	43:m:106:ARG:NH2	1.90	0.86
17:Q:16:ILE:HD13	17:Q:34:ALA:HB2	1.57	0.86
32:a:1279:G:C8	44:n:91:GLU:HG3	2.09	0.86
32:a:1331:G:C6	43:m:4:ALA:HB2	2.09	0.86
4:C:229:HIS:NE2	4:C:244:VAL:HG22	1.91	0.86
7:F:109:ARG:CD	43:m:109:LYS:N	2.37	0.86
32:a:1101:A:H4'	32:a:1102:A:O5'	1.76	0.86
32:a:1153:G:C8	40:j:92:LEU:HD12	1.87	0.86
32:a:1236:A:C2	43:m:45:SER:CA	2.58	0.86
32:a:1320:C:C6	49:s:72:GLU:CG	2.59	0.86
32:a:1331:G:H8	43:m:22:TYR:H	1.17	0.86
2:B:1639:C:H2'	2:B:1640:A:H5"	1.58	0.86
4:C:30:ALA:N	4:C:31:PRO:HD3	1.89	0.86
32:a:1255:G:C5	44:n:85:GLU:N	2.44	0.86
33:c:67:ILE:CD1	40:j:63:ASP:HB2	2.06	0.86
7:F:134:GLN:CG	43:m:107:THR:HA	2.04	0.86
13:M:69:PRO:HB3	13:M:93:VAL:HG12	1.58	0.86
32:a:186:C:O3'	50:t:76:ALA:CB	2.24	0.86
32:a:948:C:C4	43:m:37:GLY:O	2.29	0.86
32:a:1255:G:P	44:n:78:LEU:HD22	2.16	0.86
2:B:161:A:H3'	2:B:162:U:H5"	1.56	0.86
32:a:1151:A:C5'	40:j:24:GLU:HB3	2.06	0.86
32:a:1258:G:O2'	44:n:73:LEU:CD1	2.20	0.86
2:B:997:G:H5'	17:Q:91:ARG:HG3	1.56	0.85
2:B:2502:G:H5'	2:B:2503:A:H5"	1.57	0.85
3:V:77:VAL:HA	3:V:89:ILE:HG22	1.58	0.85
4:C:181:ARG:HH12	4:C:260:LYS:HD2	1.38	0.85
5:D:115:GLY:HA2	5:D:165:MET:HG3	1.58	0.85
32:a:1014:A:H8	49:s:15:LEU:CD2	1.82	0.85
32:a:1236:A:O2'	43:m:52:ILE:HG12	1.75	0.85
32:a:1328:C:O5'	43:m:63:VAL:HG13	1.75	0.85
43:m:48:SER:H	43:m:51:GLN:HB2	1.38	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:976:G:H5”	44:n:62:ARG:NH2	1.89	0.85
32:a:1277:C:H5’	44:n:96:LYS:HB3	1.58	0.85
32:a:1305:G:C2	43:m:21:ILE:HG12	2.11	0.85
34:d:160:LEU:H	34:d:160:LEU:HD13	1.41	0.85
13:M:1:MET:HE3	13:M:2:LEU:HG	1.58	0.85
32:a:1305:G:H4’	43:m:55:LEU:CA	2.06	0.85
32:a:1330:U:C4	43:m:64:VAL:CG1	2.58	0.85
32:a:1358:U:C4	44:n:69:PRO:HD2	2.09	0.85
2:B:2602:A:N3	53:v:74:C:C5’	2.39	0.85
32:a:1276:G:H1’	44:n:97:LYS:O	1.75	0.85
40:j:8:ILE:HD12	40:j:100:ILE:HG22	1.58	0.85
46:p:46:LYS:H	46:p:46:LYS:HD3	1.39	0.85
4:C:196:ASN:HB2	4:C:199:HIS:HD2	1.42	0.85
6:E:18:THR:HG23	6:E:20:GLY:H	1.41	0.85
7:F:115:GLY:HA3	7:F:177:ARG:HB2	1.58	0.85
8:G:32:LEU:HD21	8:G:74:MET:HB3	1.57	0.85
32:a:966:G:H1’	53:v:34:G:H4’	1.59	0.85
32:a:1306:A:C4	43:m:29:SER:CB	2.51	0.85
33:c:75:VAL:HG12	40:j:53:ILE:CB	2.05	0.85
5:D:34:VAL:HG22	5:D:89:GLU:HG2	1.58	0.85
12:L:82:LEU:HD13	12:L:83:ALA:H	1.39	0.85
18:R:1:MET:HA	18:R:46:GLU:HB2	1.58	0.85
32:a:1305:G:C2	43:m:21:ILE:CG1	2.60	0.85
32:a:1358:U:C4’	44:n:62:ARG:HD3	1.70	0.85
45:o:25:GLU:HG3	45:o:80:LEU:HD12	1.58	0.85
4:C:143:VAL:HG12	4:C:144:GLU:H	1.40	0.85
32:a:699:C:H2’	32:a:700:G:H5”	1.57	0.85
33:c:57:GLU:CB	40:j:67:ILE:HG12	2.07	0.85
2:B:2578:G:C1’	5:D:145:SER:HB3	2.06	0.85
6:E:141:MET:SD	6:E:143:LEU:HB2	2.17	0.85
7:F:108:PRO:HB2	43:m:94:LEU:HD23	1.59	0.85
15:O:8:ILE:HG22	15:O:10:ARG:HG2	1.56	0.85
25:Z:63:ARG:CZ	25:Z:63:ARG:HA	2.06	0.85
32:a:243:A:H4’	32:a:244:U:H5’	1.59	0.85
32:a:949:A:H5’	43:m:36:ALA:CA	2.06	0.85
32:a:1217:C:C2	44:n:45:LEU:O	2.30	0.85
32:a:1276:G:C6	44:n:95:LEU:HD12	2.11	0.85
32:a:1330:U:OP1	43:m:22:TYR:HB3	1.75	0.85
32:a:1375:A:P	37:g:24:LYS:NZ	2.48	0.85
33:c:76:ILE:O	40:j:57:VAL:O	1.86	0.85
52:u:14:ALA:O	52:u:16:ARG:CZ	2.25	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:63:LYS:HG3	29:4:11:LYS:HA	1.59	0.85
32:a:988:G:C6	44:n:46:LYS:CB	2.59	0.85
32:a:1126:U:C2'	40:j:36:VAL:CG1	1.75	0.85
32:a:1169:A:H4'	51:7:138:ARG:NH2	1.91	0.85
32:a:1276:G:C1'	44:n:97:LYS:O	2.25	0.85
2:B:704:G:H2'	2:B:726:G:H22	1.41	0.85
2:B:1368:G:H5'	28:3:25:LYS:HD3	1.59	0.85
5:D:14:ILE:HA	5:D:19:GLY:HA2	1.58	0.85
32:a:975:A:H1'	44:n:1:ALA:HA	1.56	0.85
32:a:1128:C:H4'	40:j:31:ARG:HB2	1.58	0.85
32:a:1357:A:OP2	44:n:68:ARG:HD2	1.75	0.85
33:c:75:VAL:HG12	40:j:53:ILE:O	1.77	0.85
38:h:54:THR:HG23	38:h:55:LYS:HG2	1.59	0.85
2:B:143:C:O2'	20:T:5:GLU:HA	1.75	0.84
2:B:855:G:N2	22:W:23:LYS:HD2	1.91	0.84
7:F:139:GLU:CD	43:m:114:PRO:HG3	2.02	0.84
16:P:47:ILE:HG23	16:P:63:ILE:HG23	1.59	0.84
33:c:57:GLU:HG2	40:j:67:ILE:CG1	2.06	0.84
51:7:33:ALA:HA	51:7:38:HIS:HA	1.59	0.84
2:B:528:A:N1	2:B:2042:A:H2'	1.91	0.84
32:a:1127:G:C8	40:j:76:ILE:HG22	2.12	0.84
33:c:65:VAL:CG2	40:j:65:TYR:CA	2.46	0.84
2:B:27:G:H22	2:B:512:G:H2'	1.42	0.84
15:O:19:GLN:HA	22:W:76:ARG:HH22	1.42	0.84
32:a:1257:A:C4	44:n:74:ARG:NH1	2.41	0.84
32:a:1279:G:C2	44:n:92:ILE:CB	2.58	0.84
32:a:1305:G:O3'	43:m:55:LEU:O	1.90	0.84
32:a:1306:A:H61	43:m:24:VAL:CG2	1.86	0.84
33:c:65:VAL:HG12	40:j:65:TYR:CE2	2.12	0.84
45:o:6:ALA:HA	45:o:9:LYS:HE3	1.59	0.84
7:F:111:ARG:HH12	43:m:96:VAL:HG21	1.42	0.84
29:4:7:ARG:HE	29:4:11:LYS:HZ3	1.26	0.84
32:a:1232:U:P	39:i:125:GLN:OE1	2.35	0.84
32:a:1281:C:N4	40:j:40:ILE:HG23	1.91	0.84
32:a:1335:U:C3'	43:m:11:HIS:HE1	1.33	0.84
33:c:46:LEU:HD21	40:j:53:ILE:HG21	1.59	0.84
6:E:153:LEU:H	6:E:171:ASP:HB3	1.42	0.84
32:a:1126:U:H5	40:j:74:VAL:CA	1.87	0.84
47:q:27:PHE:HB3	47:q:36:PHE:HB3	1.59	0.84
9:H:50:ARG:HD3	9:H:50:ARG:N	1.93	0.84
32:a:1216:A:O2'	44:n:50:LEU:HD22	1.76	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:p:20:VAL:HG23	46:p:35:ARG:HA	1.57	0.84
52:u:14:ALA:O	52:u:16:ARG:CD	2.25	0.84
32:a:935:A:H61	37:g:2:ARG:CD	1.64	0.84
32:a:981:U:H5"	44:n:53:ASP:CA	2.08	0.84
2:B:2602:A:H2'	53:v:74:C:O5'	1.74	0.84
12:L:29:LYS:HD2	12:L:31:GLY:H	1.42	0.84
12:L:118:THR:HG23	12:L:119:PRO:HD3	1.59	0.84
13:M:42:THR:HA	13:M:92:TRP:CD1	2.12	0.84
14:N:1:MET:HE3	14:N:3:HIS:H	1.40	0.84
20:T:64:LYS:HE2	20:T:79:ASP:HB2	1.59	0.84
25:Z:41:HIS:HB2	25:Z:42:PRO:HD2	1.58	0.84
31:6:55:PRO:HD3	31:6:74:PRO:HD3	1.60	0.84
32:a:995:C:C5	44:n:23:ARG:NH1	2.30	0.84
32:a:1218:C:N4	44:n:49:THR:HG1	1.75	0.84
32:a:1347:G:N7	39:i:11:ARG:NH2	2.26	0.84
5:D:38:LYS:HG2	5:D:39:ASP:H	1.42	0.84
7:F:134:GLN:HB3	43:m:106:ARG:HB3	1.58	0.84
32:a:692:U:H5	41:k:27:ASN:HD22	1.25	0.84
32:a:975:A:H8	44:n:2:LYS:HG2	1.36	0.84
32:a:1126:U:H5	40:j:74:VAL:C	1.85	0.84
32:a:1235:U:P	43:m:50:GLY:HA3	2.17	0.84
2:B:2478:A:H5'	30:5:32:LYS:HD2	1.60	0.84
4:C:229:HIS:HE2	4:C:244:VAL:HG22	1.43	0.84
25:Z:32:LEU:HD11	25:Z:47:LYS:HG3	1.58	0.84
28:3:13:ASN:HA	28:3:18:PHE:HB2	1.60	0.84
32:a:984:C:N3	49:s:5:LYS:HD2	1.92	0.84
32:a:1126:U:H5'	40:j:77:VAL:HG21	1.55	0.84
32:a:1217:C:C6	44:n:48:GLN:C	2.53	0.84
32:a:1220:G:C5	49:s:4:LEU:HB3	2.13	0.84
52:u:13:VAL:C	52:u:16:ARG:NH1	2.35	0.84
7:F:7:TYR:HA	7:F:11:VAL:HB	1.60	0.83
15:O:1:MET:HG2	15:O:3:LYS:H	1.43	0.83
32:a:976:G:N7	44:n:69:PRO:HG2	1.91	0.83
32:a:1334:G:C8	43:m:12:LYS:O	2.31	0.83
33:c:60:ALA:O	40:j:48:ARG:NH1	2.11	0.83
51:7:163:ILE:HG23	51:7:164:ASP:N	1.91	0.83
18:R:5:PHE:HA	18:R:40:MET:HG2	1.60	0.83
25:Z:33:ASN:HB2	25:Z:44:PHE:HB2	1.60	0.83
32:a:1015:G:OP2	44:n:40:ARG:NH2	2.11	0.83
32:a:1261:A:C5	44:n:98:ALA:CB	2.61	0.83
32:a:1302:C:H5"	43:m:6:ILE:CG1	2.08	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1330:U:C5'	43:m:69:ARG:NH2	2.41	0.83
32:a:1332:A:H2	43:m:14:ALA:HB1	1.43	0.83
5:D:16:THR:HG23	5:D:17:GLU:H	1.43	0.83
7:F:151:LEU:HD23	7:F:153:ILE:HD11	1.60	0.83
13:M:126:ILE:HG13	13:M:127:LYS:H	1.43	0.83
22:W:28:GLU:H	22:W:61:LYS:HB2	1.44	0.83
32:a:949:A:O5'	43:m:37:GLY:N	2.11	0.83
32:a:1152:A:C6	40:j:92:LEU:HD22	2.13	0.83
32:a:707:U:OP1	41:k:86:LYS:NZ	2.11	0.83
32:a:1016:A:OP2	44:n:32:ASP:HB2	1.78	0.83
32:a:1121:U:C5	40:j:89:ARG:NH2	2.47	0.83
32:a:1147:C:H1'	40:j:82:LYS:CD	2.08	0.83
33:c:87:ARG:HG3	40:j:50:THR:CG2	2.07	0.83
2:B:662:G:H4'	12:L:24:GLY:H	1.43	0.83
9:H:84:ALA:HA	9:H:90:LEU:HG	1.59	0.83
18:R:8:GLY:HA3	18:R:22:LEU:HD11	1.60	0.83
32:a:1147:C:O2	40:j:82:LYS:CG	2.20	0.83
7:F:73:VAL:HG12	53:v:56:C:H3'	1.49	0.83
7:F:138:PRO:N	43:m:112:ARG:C	2.12	0.83
32:a:437:U:H5"	34:d:151:GLN:HE21	0.81	0.83
32:a:988:G:C6	44:n:46:LYS:HA	2.13	0.83
32:a:1125:U:C2	40:j:74:VAL:CG1	2.48	0.83
32:a:1304:G:C8	43:m:2:ARG:C	2.57	0.83
32:a:1322:C:O3'	49:s:2:ARG:NH2	2.12	0.83
32:a:1357:A:H1'	44:n:1:ALA:N	1.93	0.83
2:B:2867:G:H2'	2:B:2867:G:N3	1.93	0.83
5:D:8:LYS:HB3	16:P:5:LYS:HZ1	1.39	0.83
6:E:89:PRO:O	6:E:90:GLN:HG2	1.78	0.83
12:L:38:GLN:CD	12:L:39:LYS:H	1.86	0.83
20:T:58:VAL:HG13	20:T:85:VAL:HG12	1.61	0.83
22:W:40:ARG:HH12	22:W:68:PHE:HA	1.44	0.83
32:a:752:G:H5"	45:o:68:TYR:OH	1.77	0.83
32:a:1279:G:C2	44:n:87:ALA:N	2.08	0.83
32:a:1321:U:C4	49:s:2:ARG:HD2	2.13	0.83
32:a:1357:A:H3'	44:n:68:ARG:H	1.44	0.83
32:a:1358:U:O4	44:n:68:ARG:HG3	1.79	0.83
33:c:67:ILE:CD1	40:j:53:ILE:CD1	2.56	0.83
7:F:114:ARG:HH12	43:m:85:TYR:HE2	1.25	0.83
33:c:146:LYS:HE3	33:c:202:PHE:HE2	1.42	0.83
2:B:2602:A:C2'	53:v:74:C:H5'	2.00	0.83
5:D:119:ALA:HA	5:D:123:LYS:HE2	1.60	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1128:C:O5'	40:j:32:THR:C	2.07	0.83
32:a:1255:G:N7	44:n:85:GLU:N	2.26	0.83
32:a:1375:A:O5'	37:g:24:LYS:NZ	2.11	0.83
42:l:56:LEU:HD11	42:l:81:ILE:HD12	1.61	0.83
22:W:27:GLY:HA2	22:W:60:ALA:HA	1.61	0.83
22:W:43:LYS:HG2	22:W:76:ARG:HH21	1.44	0.83
32:a:1125:U:N3	40:j:36:VAL:HG22	1.94	0.83
32:a:1126:U:C5	40:j:74:VAL:O	2.32	0.83
32:a:1152:A:N7	40:j:92:LEU:HD23	1.92	0.83
33:c:62:SER:CB	40:j:48:ARG:N	2.11	0.83
33:c:62:SER:OG	40:j:47:GLU:C	2.22	0.83
33:c:63:ILE:HG22	40:j:66:GLU:CG	2.09	0.83
33:c:84:GLU:HB3	40:j:59:LYS:CA	2.09	0.83
33:c:102:ILE:HG21	40:j:52:LEU:O	1.76	0.83
34:d:159:GLU:HG3	34:d:160:LEU:N	1.94	0.83
39:i:67:LYS:NZ	40:j:32:THR:HG21	1.91	0.83
5:D:91:THR:HG23	5:D:92:VAL:HG12	1.61	0.82
9:H:5:LEU:HD22	9:H:5:LEU:H	1.44	0.82
32:a:1318:A:H4'	49:s:66:VAL:N	1.94	0.82
44:n:58:ARG:HE	49:s:6:LYS:HZ1	1.27	0.82
20:T:64:LYS:HB3	20:T:77:ARG:HD3	1.59	0.82
32:a:994:A:C5	44:n:50:LEU:HD13	2.13	0.82
32:a:1152:A:N1	40:j:91:ASP:OD2	1.97	0.82
32:a:1304:G:C2'	43:m:3:ILE:HD11	2.01	0.82
2:B:1060:U:C2	2:B:1088:A:N7	2.46	0.82
29:4:7:ARG:HH21	29:4:11:LYS:HZ1	1.27	0.82
32:a:948:C:P	43:m:33:LEU:CB	2.58	0.82
32:a:975:A:H1'	44:n:1:ALA:N	1.92	0.82
32:a:982:U:HO2'	44:n:52:ARG:HH11	1.24	0.82
32:a:1149:C:C6	40:j:31:ARG:NE	2.46	0.82
32:a:1304:G:H5"	43:m:56:ARG:CZ	2.08	0.82
32:a:1333:A:H5"	43:m:12:LYS:HD2	1.60	0.82
18:R:54:VAL:CB	18:R:54:VAL:H	1.87	0.82
32:a:1332:A:C6	43:m:18:LEU:CD2	2.61	0.82
32:a:1373:G:P	39:i:72:SER:HG	2.02	0.82
2:B:1454:C:H5'	14:N:63:ARG:HH21	1.41	0.82
2:B:2393:U:H5"	12:L:62:PRO:HA	1.62	0.82
9:H:15:LEU:HD21	9:H:51:ARG:NE	1.94	0.82
27:2:14:ALA:HA	27:2:48:TYR:HA	1.61	0.82
32:a:429:U:C3'	34:d:8:LEU:HD23	2.08	0.82
32:a:1259:C:C5'	44:n:73:LEU:HD11	2.09	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2602:A:C8	53:v:74:C:H5'	2.14	0.82
4:C:23:LEU:H	4:C:202:ARG:NH2	1.77	0.82
9:H:4:ILE:HG21	9:H:47:PHE:HB2	1.62	0.82
29:4:24:LYS:HA	29:4:45:PRO:HB3	1.61	0.82
32:a:975:A:O2'	44:n:5:MET:HB2	1.79	0.82
32:a:1013:G:C4'	49:s:16:LYS:HZ2	1.89	0.82
12:L:117:THR:HG21	12:L:120:VAL:HB	1.61	0.82
13:M:32:GLY:H	13:M:128:THR:HG22	1.44	0.82
32:a:1015:G:OP2	44:n:40:ARG:NH1	2.13	0.82
36:f:100:SER:HA	48:r:23:LYS:CE	2.09	0.82
2:B:2053:G:OP1	5:D:150:GLN:HA	1.78	0.82
23:X:24:GLU:HA	23:X:28:LEU:HB2	1.60	0.82
37:g:21:LEU:HD23	37:g:21:LEU:H	1.45	0.82
2:B:2575:C:H4'	5:D:149:ASN:N	1.95	0.82
4:C:23:LEU:HD12	4:C:202:ARG:HH22	1.43	0.82
8:G:19:ASN:HB3	8:G:22:VAL:HG13	1.59	0.82
32:a:1125:U:OP2	40:j:76:ILE:CG1	2.27	0.82
5:D:62:LYS:HG2	5:D:63:PRO:CD	2.10	0.82
32:a:948:C:H1'	43:m:38:ILE:HG12	0.83	0.82
32:a:1330:U:C5	43:m:64:VAL:HG11	2.11	0.82
32:a:1333:A:N1	43:m:44:ILE:CA	2.41	0.82
2:B:858:G:N3	2:B:2268:A:H2'	1.93	0.81
2:B:1913:A:N6	32:a:1492:A:N3	2.28	0.81
2:B:2304:G:H22	2:B:2312:U:H3	1.26	0.81
7:F:115:GLY:N	43:m:101:THR:N	2.28	0.81
13:M:67:VAL:HB	13:M:100:LYS:HG2	1.62	0.81
32:a:990:C:C6	44:n:43:ALA:CB	2.45	0.81
32:a:1149:C:H6	40:j:31:ARG:HH21	0.83	0.81
32:a:1258:G:C8	44:n:75:LYS:HG3	2.15	0.81
32:a:1305:G:O2'	43:m:55:LEU:HB3	1.79	0.81
33:c:58:ARG:HB2	40:j:68:ARG:CD	2.09	0.81
2:B:2572:A:N7	5:D:150:GLN:HB2	1.96	0.81
2:B:2602:A:H62	53:v:75:C:N4	1.77	0.81
2:B:2618:G:H21	5:D:155:VAL:HG21	1.45	0.81
7:F:111:ARG:HH11	43:m:96:VAL:HG22	1.45	0.81
7:F:135:ILE:C	43:m:112:ARG:CG	2.53	0.81
15:O:19:GLN:H	22:W:76:ARG:HH12	1.28	0.81
29:4:12:ARG:NH1	29:4:12:ARG:HB2	1.95	0.81
32:a:947:G:H2'	43:m:38:ILE:HB	1.62	0.81
32:a:1014:A:H1'	49:s:10:ILE:CG1	2.10	0.81
32:a:1124:G:H4'	40:j:8:ILE:HD13	1.61	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1151:A:C5'	40:j:21:ALA:C	2.52	0.81
32:a:1304:G:C6	43:m:7:ASN:O	2.32	0.81
32:a:1306:A:H5'	43:m:55:LEU:HD22	1.62	0.81
32:a:1323:G:H2'	32:a:1324:A:C8	2.15	0.81
32:a:1334:G:H8	43:m:12:LYS:N	1.78	0.81
34:d:36:ALA:HA	34:d:41:GLY:HA3	1.61	0.81
42:l:48:LEU:HD23	42:l:48:LEU:H	1.42	0.81
4:C:30:ALA:H	4:C:31:PRO:CD	1.93	0.81
17:Q:16:ILE:HD12	17:Q:17:LEU:N	1.95	0.81
18:R:37:GLU:HG2	18:R:62:GLU:H	1.44	0.81
18:R:65:ALA:HB3	18:R:99:THR:H	1.45	0.81
22:W:40:ARG:NH1	22:W:68:PHE:HA	1.95	0.81
32:a:939:G:C5'	37:g:101:ARG:HH22	1.93	0.81
33:c:57:GLU:CG	40:j:67:ILE:CG1	2.57	0.81
33:c:65:VAL:CG1	40:j:65:TYR:CE2	2.60	0.81
5:D:62:LYS:HG2	5:D:63:PRO:HD3	1.60	0.81
17:Q:93:ILE:HG23	17:Q:94:LEU:HD13	1.61	0.81
23:X:22:LEU:HB3	23:X:26:PHE:HB2	1.61	0.81
30:5:3:VAL:HB	30:5:35:GLN:HA	1.62	0.81
31:6:106:GLN:O	31:6:110:GLN:HG3	1.81	0.81
32:a:989:U:C2	44:n:43:ALA:HA	1.70	0.81
32:a:1017:U:H4'	44:n:44:VAL:CG2	2.09	0.81
32:a:1129:C:C5	40:j:33:GLY:C	2.59	0.81
32:a:1280:A:H62	40:j:29:ALA:HB3	1.42	0.81
32:a:1291:U:H4'	39:i:41:GLU:HA	1.62	0.81
32:a:1358:U:C6	44:n:68:ARG:CA	2.38	0.81
36:f:64:VAL:HG12	36:f:65:GLU:H	1.45	0.81
4:C:155:ARG:HE	4:C:157:ALA:HB3	1.44	0.81
7:F:117:SER:H	43:m:100:ARG:NE	1.78	0.81
32:a:1258:G:H1'	44:n:76:PHE:HB2	1.63	0.81
32:a:1304:G:C3'	43:m:3:ILE:HG13	2.08	0.81
32:a:1304:G:P	43:m:3:ILE:H	2.03	0.81
2:B:1178:C:H2'	2:B:1179:G:C8	2.16	0.81
7:F:77:LYS:CE	53:v:19:G:C5	2.31	0.81
7:F:135:ILE:HG22	43:m:111:PRO:HA	1.59	0.81
29:4:11:LYS:HG2	29:4:12:ARG:HG3	1.61	0.81
32:a:186:C:H5'	50:t:72:ALA:HB1	1.61	0.81
32:a:193:C:C1'	50:t:54:GLN:HE21	1.94	0.81
32:a:1055:A:O2'	33:c:160:GLU:CG	2.28	0.81
33:c:22:PHE:HZ	40:j:72:ARG:HH22	1.25	0.81
12:L:27:LEU:H	12:L:27:LEU:HD12	1.46	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:W:28:GLU:HB3	22:W:30:VAL:HG23	1.63	0.81
32:a:968:A:OP1	39:i:129:ARG:NH1	2.12	0.81
32:a:981:U:C5'	44:n:53:ASP:HA	2.11	0.81
33:c:49:ALA:HB1	33:c:75:VAL:HG22	1.62	0.81
13:M:70:ASP:N	13:M:71:LYS:HZ2	1.79	0.81
32:a:1317:C:H42	49:s:67:GLY:HA3	1.45	0.81
45:o:70:LYS:HZ1	45:o:74:VAL:HG13	1.45	0.81
2:B:423:A:H5'	2:B:424:G:H5"	1.62	0.81
9:H:3:VAL:HB	9:H:37:VAL:CB	2.10	0.81
12:L:38:GLN:H	12:L:41:ARG:HH11	1.29	0.81
14:N:119:SER:HB2	14:N:121:LYS:HG2	1.63	0.81
22:W:31:LEU:HD11	22:W:34:SER:HB2	1.61	0.81
32:a:376:G:OP1	46:p:6:LEU:N	2.14	0.81
32:a:946:A:C8	43:m:42:VAL:HB	2.14	0.81
32:a:1015:G:P	44:n:40:ARG:HH12	2.03	0.81
33:c:83:VAL:HA	40:j:62:ARG:H	1.46	0.81
33:c:155:ARG:H	33:c:162:ALA:HA	1.45	0.81
50:t:30:PHE:HB3	50:t:53:MET:HB3	1.63	0.81
10:J:135:GLN:HG2	10:J:137:PRO:HD2	1.60	0.80
13:M:108:VAL:HG23	13:M:112:LEU:HD11	1.63	0.80
32:a:1130:A:H5'	40:j:82:LYS:HZ3	1.46	0.80
32:a:1218:C:C2	44:n:45:LEU:HG	2.15	0.80
32:a:1261:A:C6	44:n:100:TRP:CD2	2.69	0.80
33:c:64:ARG:O	40:j:49:PHE:O	1.99	0.80
35:e:105:ILE:HB	35:e:123:LEU:HA	1.61	0.80
45:o:7:THR:HG22	45:o:30:LEU:HD11	1.62	0.80
8:G:20:GLY:HA2	8:G:41:GLU:HG2	1.62	0.80
32:a:193:C:C1'	50:t:54:GLN:NE2	2.44	0.80
32:a:1334:G:H8	43:m:12:LYS:H	1.27	0.80
32:a:1334:G:OP2	43:m:11:HIS:O	1.99	0.80
32:a:1347:G:C4	39:i:108:ARG:CZ	2.64	0.80
33:c:75:VAL:H	40:j:55:PRO:HD2	1.08	0.80
2:B:444:C:O2'	6:E:47:LYS:HE2	1.81	0.80
2:B:855:G:H21	22:W:23:LYS:HD2	1.45	0.80
24:Y:7:THR:HA	24:Y:34:THR:HA	1.63	0.80
24:Y:15:ARG:HE	24:Y:15:ARG:N	1.79	0.80
32:a:949:A:C5'	43:m:35:ALA:CA	2.53	0.80
32:a:1014:A:H8	49:s:15:LEU:HD21	1.42	0.80
32:a:1129:C:N3	40:j:80:THR:OG1	2.13	0.80
32:a:1217:C:C5	44:n:49:THR:N	2.28	0.80
32:a:1145:A:H1'	40:j:85:ASP:CG	2.06	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1221:G:O6	49:s:5:LYS:CB	2.27	0.80
32:a:1304:G:H8	43:m:2:ARG:N	1.79	0.80
32:a:1306:A:O4'	43:m:33:LEU:HD21	1.81	0.80
32:a:1306:A:C5	43:m:29:SER:HB2	2.14	0.80
41:k:115:ILE:HD11	48:r:72:ARG:NH2	1.96	0.80
2:B:1131:G:H1'	2:B:1133:A:H62	1.46	0.80
4:C:77:VAL:HG21	4:C:109:LEU:HG	1.64	0.80
32:a:664:G:H22	32:a:741:G:H1	1.25	0.80
32:a:1127:G:N1	40:j:34:ALA:CB	2.14	0.80
32:a:1211:U:H4'	32:a:1213:A:H1'	1.64	0.80
33:c:58:ARG:HD3	40:j:68:ARG:NE	1.96	0.80
43:m:33:LEU:HD22	43:m:38:ILE:HB	1.61	0.80
7:F:107:VAL:N	7:F:108:PRO:HD2	1.95	0.80
7:F:107:VAL:HG12	43:m:101:THR:O	1.81	0.80
32:a:1145:A:H62	40:j:79:PRO:HA	1.44	0.80
32:a:1257:A:H5"	44:n:75:LYS:CA	2.04	0.80
32:a:1301:U:N1	43:m:8:ILE:CG1	2.43	0.80
32:a:1409:C:N4	32:a:1491:G:H1	1.79	0.80
10:J:71:ASP:CG	10:J:72:LYS:N	2.39	0.80
12:L:67:THR:HG23	12:L:68:SER:H	1.45	0.80
13:M:107:GLY:C	13:M:109:PRO:HD2	2.06	0.80
33:c:84:GLU:CB	40:j:59:LYS:C	2.54	0.80
9:H:37:VAL:H	9:H:38:PRO:HD2	1.46	0.80
12:L:61:LEU:HB3	12:L:62:PRO:CD	2.06	0.80
32:a:408:A:O5'	34:d:109:THR:CG2	2.30	0.80
32:a:1276:G:C5	44:n:95:LEU:HD12	2.17	0.80
51:7:202:ASN:HD22	51:7:204:ASP:H	1.26	0.80
2:B:543:G:H2'	2:B:544:C:H5"	1.64	0.80
5:D:22:ILE:N	5:D:23:PRO:HD3	1.97	0.80
7:F:113:PHE:CG	43:m:95:PRO:HG3	2.12	0.80
10:J:49:ASP:HA	10:J:114:LEU:HD11	1.64	0.80
16:P:9:GLN:HB3	16:P:56:SER:HB2	1.62	0.80
19:S:89:ALA:HA	19:S:90:LYS:NZ	1.97	0.80
29:4:7:ARG:NH2	29:4:11:LYS:HZ1	1.80	0.80
32:a:1121:U:O4	40:j:89:ARG:C	2.24	0.80
32:a:1122:U:N3	40:j:90:LEU:N	2.27	0.80
32:a:1151:A:N6	40:j:89:ARG:O	2.13	0.80
33:c:102:ILE:HG23	40:j:52:LEU:O	1.82	0.80
7:F:114:ARG:HB2	43:m:98:GLY:C	2.06	0.80
7:F:116:LEU:HA	43:m:100:ARG:NE	1.97	0.80
11:K:71:ARG:CB	11:K:72:PRO:HD2	2.09	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:47:VAL:HG13	18:R:49:ILE:H	1.46	0.80
18:R:74:ILE:HA	18:R:90:ARG:NE	1.97	0.80
32:a:1304:G:H4'	43:m:52:ILE:HG12	1.63	0.80
33:c:87:ARG:HG3	40:j:50:THR:HB	0.83	0.80
51:7:112:ARG:O	51:7:116:LEU:HB2	1.82	0.80
2:B:2602:A:N3	53:v:74:C:OP2	2.15	0.79
2:B:2795:C:H2'	2:B:2796:U:O4'	1.82	0.79
18:R:53:PHE:CB	18:R:55:ASP:H	1.96	0.79
30:5:24:ARG:HG2	30:5:26:ILE:HG12	1.65	0.79
32:a:1013:G:O5'	49:s:19:GLU:CB	2.30	0.79
32:a:1333:A:P	43:m:17:ALA:HB2	2.21	0.79
7:F:108:PRO:N	43:m:101:THR:O	2.14	0.79
8:G:71:LEU:HA	8:G:74:MET:SD	2.23	0.79
30:5:14:CYS:HA	30:5:26:ILE:O	1.82	0.79
32:a:982:U:O2'	44:n:52:ARG:NE	2.13	0.79
32:a:1218:C:P	44:n:20:PHE:HZ	2.04	0.79
35:e:83:PRO:HB3	35:e:96:GLN:HG3	1.65	0.79
16:P:49:ILE:C	16:P:50:ARG:HG3	2.06	0.79
18:R:1:MET:HA	18:R:46:GLU:CB	2.11	0.79
32:a:1013:G:O5'	49:s:19:GLU:HB2	1.82	0.79
32:a:1126:U:O2'	40:j:36:VAL:CG1	2.02	0.79
32:a:1153:G:C8	40:j:91:ASP:C	2.59	0.79
32:a:1236:A:C8	43:m:48:SER:CA	2.52	0.79
32:a:1277:C:C5'	44:n:96:LYS:HB3	2.12	0.79
32:a:1279:G:OP1	40:j:41:PRO:HG3	1.82	0.79
32:a:1302:C:H5"	43:m:6:ILE:CA	2.11	0.79
33:c:87:ARG:HH21	40:j:62:ARG:NE	1.81	0.79
51:7:61:SER:HA	51:7:224:ARG:HA	1.62	0.79
52:u:14:ALA:C	52:u:16:ARG:CZ	2.56	0.79
8:G:157:LYS:HB2	8:G:159:LYS:HG2	1.64	0.79
9:H:73:ASN:N	9:H:73:ASN:HD22	1.80	0.79
15:O:50:ALA:HB2	15:O:83:LEU:HD11	1.64	0.79
26:1:52:LYS:HA	26:1:52:LYS:NZ	1.98	0.79
32:a:177:G:C5'	50:t:59:ARG:HE	1.94	0.79
32:a:946:A:C6	43:m:47:LEU:N	2.49	0.79
32:a:981:U:P	49:s:6:LYS:NZ	2.55	0.79
32:a:1151:A:H2	40:j:90:LEU:O	1.11	0.79
32:a:1240:U:O2	37:g:38:ALA:HA	1.82	0.79
32:a:1359:C:N4	44:n:68:ARG:HB3	1.96	0.79
2:B:287:G:H2'	2:B:288:U:C6	2.18	0.79
5:D:120:GLY:H	5:D:123:LYS:HG3	1.46	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1146:A:H2	40:j:82:LYS:CE	1.92	0.79
32:a:1229:A:C4'	53:v:29:G:O2'	2.30	0.79
32:a:1238:A:C2	43:m:2:ARG:NH2	2.51	0.79
32:a:1329:A:P	43:m:64:VAL:O	2.41	0.79
32:a:1330:U:H5	43:m:64:VAL:CB	1.95	0.79
33:c:76:ILE:C	40:j:54:SER:HB3	2.07	0.79
36:f:100:SER:CA	48:r:23:LYS:HZ2	1.96	0.79
2:B:483:A:H5'	21:U:43:LYS:HE2	1.65	0.79
31:6:89:SER:HA	31:6:97:VAL:HG21	1.62	0.79
33:c:22:PHE:N	40:j:68:ARG:HB3	1.91	0.79
33:c:65:VAL:CG2	40:j:64:GLN:C	0.84	0.79
39:i:23:GLY:H	39:i:60:LEU:HA	1.48	0.79
47:q:10:ARG:CZ	47:q:11:VAL:H	1.95	0.79
2:B:997:G:H4'	17:Q:91:ARG:HE	1.47	0.79
7:F:108:PRO:HB3	43:m:101:THR:CB	2.12	0.79
32:a:1278:G:H5"	44:n:93:PRO:CA	2.12	0.79
2:B:28:A:H61	2:B:512:G:H1'	1.46	0.79
5:D:5:VAL:HG11	5:D:28:GLU:HA	1.64	0.79
7:F:73:VAL:HG12	53:v:57:G:H8	1.47	0.79
20:T:11:LEU:HB2	20:T:32:LEU:HD23	1.65	0.79
22:W:17:ALA:HA	22:W:35:ILE:O	1.83	0.79
32:a:1015:G:P	44:n:40:ARG:NH2	2.56	0.79
32:a:1237:C:C4'	43:m:10:ASP:OD2	2.31	0.79
32:a:1283:U:H5	44:n:88:MET:SD	2.02	0.79
5:D:2:ILE:HG13	5:D:3:GLY:H	1.48	0.79
15:O:64:TYR:HE1	15:O:74:VAL:HG11	1.47	0.79
20:T:61:LEU:HD12	20:T:62:VAL:H	1.47	0.79
32:a:988:G:C6	44:n:46:LYS:CA	2.66	0.79
32:a:1014:A:C8	49:s:15:LEU:CG	2.65	0.79
33:c:57:GLU:HB3	40:j:67:ILE:HG13	0.80	0.79
6:E:73:ILE:C	6:E:75:SER:H	1.88	0.79
7:F:34:THR:HG23	7:F:89:THR:HG22	1.63	0.79
7:F:105:ILE:HD13	43:m:113:LYS:HB2	1.63	0.79
7:F:116:LEU:HD23	43:m:102:LYS:HG3	0.85	0.79
19:S:71:VAL:HA	19:S:106:VAL:O	1.82	0.79
32:a:1305:G:C3'	43:m:55:LEU:HB3	1.89	0.79
32:a:1305:G:C6	43:m:21:ILE:HG12	2.18	0.79
32:a:1360:A:C5'	44:n:61:ASN:OD1	2.27	0.79
36:f:38:ARG:HB3	36:f:63:ASN:HB2	1.64	0.79
5:D:151:THR:O	5:D:152:PRO:C	2.26	0.78
22:W:49:ASN:HB2	22:W:53:GLY:HA3	1.64	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1332:A:N6	43:m:18:LEU:CD2	2.45	0.78
32:a:1349:A:OP1	39:i:121:ARG:HB3	1.83	0.78
43:m:19:THR:HA	43:m:24:VAL:HG23	1.64	0.78
51:7:9:LEU:HD22	51:7:11:ALA:H	1.48	0.78
2:B:1959:G:H1'	32:a:1418:A:H1'	1.65	0.78
4:C:153:LEU:HD23	4:C:153:LEU:H	1.49	0.78
32:a:538:G:OP2	42:l:111:GLN:NE2	2.16	0.78
32:a:948:C:O4'	43:m:33:LEU:HD22	1.82	0.78
32:a:948:C:O4'	43:m:38:ILE:HB	1.82	0.78
32:a:949:A:H5"	43:m:35:ALA:C	1.96	0.78
32:a:1005:A:H2'	32:a:1006:G:O4'	1.83	0.78
32:a:1332:A:C1'	43:m:15:VAL:C	2.45	0.78
33:c:63:ILE:C	40:j:48:ARG:CB	2.56	0.78
2:B:38:A:H2'	2:B:39:G:O4'	1.82	0.78
2:B:1024:G:H3'	2:B:1025:G:H5"	1.64	0.78
2:B:2602:A:C8	53:v:74:C:H3'	2.18	0.78
2:B:2602:A:P	53:v:74:C:H4'	2.23	0.78
4:C:50:THR:HG22	4:C:51:ARG:HG3	1.63	0.78
6:E:120:VAL:H	6:E:189:THR:HG23	1.47	0.78
7:F:113:PHE:CB	43:m:95:PRO:CD	2.37	0.78
16:P:59:THR:HG23	16:P:76:HIS:CD2	2.19	0.78
30:5:24:ARG:HH12	30:5:36:ARG:HB2	1.48	0.78
31:6:63:ASP:O	31:6:64:ARG:HG3	1.84	0.78
32:a:65:A:N3	32:a:65:A:H2'	1.98	0.78
33:c:63:ILE:C	40:j:49:PHE:N	2.30	0.78
39:i:110:VAL:HG12	39:i:111:GLU:H	1.47	0.78
7:F:111:ARG:HD2	43:m:108:ARG:NE	1.98	0.78
14:N:114:GLU:HG2	14:N:115:LEU:H	1.48	0.78
32:a:429:U:H3'	34:d:8:LEU:CD2	2.11	0.78
32:a:1190:G:O2'	33:c:2:GLN:HB2	1.84	0.78
33:c:102:ILE:N	40:j:51:VAL:CG1	2.47	0.78
7:F:116:LEU:HD21	43:m:103:THR:OG1	1.83	0.78
19:S:27:LYS:H	19:S:27:LYS:HD2	1.46	0.78
32:a:978:A:O2'	49:s:2:ARG:HA	1.83	0.78
32:a:1125:U:C3'	40:j:76:ILE:C	2.57	0.78
32:a:1250:A:H4'	39:i:69:GLY:H	1.49	0.78
32:a:1321:U:C4	49:s:2:ARG:CG	2.66	0.78
32:a:1332:A:O4'	43:m:19:THR:N	2.17	0.78
47:q:10:ARG:NH1	47:q:56:ASP:H	1.79	0.78
47:q:16:MET:HB2	47:q:19:SER:HB2	1.64	0.78
52:u:36:PHE:HB3	52:u:40:PRO:HD3	1.64	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:140:VAL:O	4:C:193:GLU:HB2	1.83	0.78
6:E:84:THR:HG23	6:E:85:PHE:H	1.48	0.78
14:N:19:ALA:HA	14:N:22:ARG:HG2	1.65	0.78
29:4:31:ILE:HG22	29:4:32:LEU:HG	1.64	0.78
32:a:186:C:C5'	50:t:72:ALA:HB1	2.13	0.78
33:c:100:ILE:HG13	40:j:63:ASP:HB2	1.63	0.78
22:W:16:GLU:HG2	22:W:37:VAL:HG22	1.64	0.78
32:a:935:A:H61	37:g:2:ARG:CB	1.95	0.78
32:a:989:U:P	44:n:42:ASN:ND2	2.56	0.78
32:a:1127:G:N7	40:j:76:ILE:CB	2.46	0.78
2:B:972:A:H3'	2:B:973:A:H5"	1.65	0.78
5:D:154:LYS:HZ1	10:J:81:ILE:HD13	1.47	0.78
9:H:21:VAL:HG22	9:H:22:LYS:H	1.48	0.78
12:L:56:PRO:HA	12:L:60:ARG:NH2	1.99	0.78
12:L:80:SER:HB2	12:L:113:ALA:H	1.49	0.78
13:M:77:PRO:HD3	13:M:86:LYS:HD3	1.65	0.78
32:a:1254:A:H1'	44:n:81:ILE:CB	2.12	0.78
32:a:1306:A:C2	43:m:15:VAL:O	2.37	0.78
33:c:65:VAL:HG23	40:j:64:GLN:C	0.68	0.78
2:B:65:U:H4'	20:T:70:HIS:HD1	1.48	0.78
4:C:87:SER:O	4:C:157:ALA:HB2	1.84	0.78
20:T:96:VAL:HG22	20:T:97:GLY:H	1.48	0.78
32:a:988:G:C5	44:n:46:LYS:CG	2.46	0.78
32:a:1253:G:C3'	44:n:85:GLU:OE2	2.31	0.78
2:B:1243:C:O2'	12:L:15:ALA:HB3	1.83	0.78
4:C:216:ARG:HB3	4:C:216:ARG:HH11	1.49	0.78
9:H:128:HIS:HB3	9:H:144:VAL:HB	1.64	0.78
32:a:995:C:O4'	44:n:19:TYR:CE2	2.37	0.78
32:a:1318:A:C1'	49:s:66:VAL:H	1.97	0.78
32:a:1358:U:N1	44:n:69:PRO:CD	2.46	0.78
33:c:21:TRP:CB	40:j:68:ARG:HB2	2.14	0.78
39:i:12:LYS:H	39:i:109:GLN:HE22	1.30	0.78
40:j:35:GLN:HB2	40:j:78:GLU:HB2	1.64	0.78
7:F:12:VAL:HG13	7:F:27:VAL:HG21	1.66	0.77
17:Q:88:GLU:HA	18:R:53:PHE:CD1	2.18	0.77
31:6:122:GLU:O	31:6:126:ARG:HG3	1.82	0.77
32:a:1261:A:C5	44:n:100:TRP:HE3	1.85	0.77
32:a:1308:U:H2'	32:a:1309:G:H8	1.50	0.77
47:q:11:VAL:HA	47:q:22:VAL:HG22	1.66	0.77
7:F:175:PRO:HB2	43:m:102:LYS:CB	2.14	0.77
16:P:13:LYS:NZ	16:P:17:PRO:HG3	1.98	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:26:GLU:HA	16:P:47:ILE:H	1.49	0.77
32:a:194:C:O4'	50:t:58:ASP:CB	2.32	0.77
32:a:1255:G:H5'	44:n:82:LYS:HB3	1.23	0.77
32:a:1308:U:H4'	43:m:27:THR:OG1	1.84	0.77
32:a:1378:C:O5'	37:g:5:VAL:HG12	1.83	0.77
52:u:3:ILE:HA	52:u:19:LYS:HG2	1.64	0.77
52:u:14:ALA:C	52:u:16:ARG:HD2	2.09	0.77
2:B:2839:G:H21	14:N:92:GLY:HA3	1.48	0.77
5:D:128:ARG:HD2	5:D:144:GLY:HA3	1.66	0.77
13:M:71:LYS:HD3	13:M:92:TRP:N	1.98	0.77
15:O:49:VAL:HG22	15:O:50:ALA:H	1.47	0.77
32:a:1124:G:N1	40:j:87:LEU:HB2	1.97	0.77
32:a:1126:U:H5	40:j:74:VAL:HA	1.39	0.77
32:a:1304:G:C2'	43:m:3:ILE:HG13	2.13	0.77
44:n:30:ILE:HG21	44:n:41:TRP:HB2	1.65	0.77
2:B:1174:U:H4'	2:B:1176:U:H3	1.46	0.77
7:F:74:ALA:CA	53:v:56:C:O3'	2.32	0.77
10:J:39:LYS:HZ1	17:Q:69:ARG:HD2	1.48	0.77
20:T:88:LYS:HG2	20:T:89:GLU:H	1.49	0.77
26:1:45:ASP:HB2	26:1:47:TYR:CD1	2.19	0.77
32:a:948:C:C5	43:m:37:GLY:O	2.25	0.77
32:a:1234:C:O2	43:m:51:GLN:HA	1.85	0.77
32:a:1236:A:C5	43:m:45:SER:O	2.37	0.77
32:a:1279:G:N3	44:n:87:ALA:C	2.41	0.77
35:e:87:VAL:HG12	35:e:92:ARG:HA	1.64	0.77
38:h:113:ARG:HH21	38:h:114:ALA:HA	1.49	0.77
13:M:100:LYS:HE3	13:M:100:LYS:H	1.49	0.77
27:2:31:GLU:HG3	27:2:32:LYS:H	1.49	0.77
28:3:44:VAL:HG23	28:3:45:SER:H	1.49	0.77
32:a:1113:C:O4'	33:c:177:LEU:HD13	1.84	0.77
32:a:1259:C:H5'	44:n:83:VAL:CG2	2.15	0.77
32:a:1306:A:O4'	43:m:33:LEU:CD2	2.32	0.77
44:n:12:ARG:HA	44:n:15:LEU:HD11	1.66	0.77
4:C:257:ARG:O	4:C:261:ARG:HG3	1.85	0.77
7:F:114:ARG:HE	43:m:98:GLY:HA2	1.48	0.77
15:O:67:ASN:HA	15:O:71:ALA:HB3	1.66	0.77
19:S:10:ALA:O	19:S:11:ARG:HB3	1.85	0.77
19:S:24:ILE:HD13	19:S:36:LEU:HD21	1.65	0.77
32:a:36:C:H5"	42:l:119:LYS:HB3	1.66	0.77
32:a:1357:A:H3'	44:n:67:GLY:C	2.10	0.77
32:a:1357:A:C3'	44:n:67:GLY:CA	2.42	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1375:A:P	37:g:9:ARG:HD2	2.21	0.77
2:B:2420:C:OP1	29:4:34:LYS:HB2	1.85	0.77
7:F:134:GLN:CG	43:m:107:THR:N	2.47	0.77
16:P:52:ARG:O	16:P:60:VAL:HG21	1.85	0.77
29:4:41:ARG:HD3	29:4:43:LEU:H	1.49	0.77
32:a:980:C:H2'	44:n:58:ARG:HB2	1.64	0.77
32:a:994:A:N3	44:n:19:TYR:HE2	1.82	0.77
32:a:1122:U:O2	40:j:90:LEU:O	2.03	0.77
33:c:57:GLU:HG2	40:j:67:ILE:CD1	2.15	0.77
33:c:57:GLU:HG2	40:j:67:ILE:HG12	1.65	0.77
45:o:81:ILE:HA	45:o:86:LEU:HD12	1.67	0.77
2:B:812:C:H5'	12:L:32:GLY:HA2	1.67	0.77
4:C:179:GLU:HG3	4:C:266:ILE:HG22	1.67	0.77
13:M:3:GLN:O	13:M:5:LYS:N	2.17	0.77
13:M:23:GLY:N	13:M:96:ILE:HD12	2.00	0.77
32:a:974:A:H4'	44:n:5:MET:SD	2.25	0.77
32:a:976:G:C8	44:n:69:PRO:HG3	2.14	0.77
32:a:1013:G:H4'	49:s:16:LYS:CE	2.15	0.77
32:a:1123:U:O2'	40:j:8:ILE:CD1	2.28	0.77
32:a:1219:A:C8	49:s:7:GLY:CA	2.46	0.77
32:a:1255:G:C6	44:n:88:MET:N	2.52	0.77
42:l:35:ARG:NH2	42:l:75:GLU:HB3	2.00	0.77
24:Y:16:LEU:HB2	24:Y:17:PRO:CD	2.13	0.77
32:a:1127:G:O5'	40:j:36:VAL:HB	1.85	0.77
32:a:1127:G:N2	40:j:83:THR:HB	2.00	0.77
32:a:1149:C:H3'	40:j:28:THR:HG22	1.67	0.77
32:a:1283:U:O2	44:n:84:ARG:HA	1.84	0.77
43:m:11:HIS:N	43:m:44:ILE:HD11	1.99	0.77
2:B:1177:G:H2'	2:B:1178:C:C6	2.20	0.77
7:F:73:VAL:HG12	53:v:56:C:C3'	1.78	0.77
10:J:75:TYR:HA	10:J:86:GLN:O	1.84	0.77
14:N:29:VAL:HG21	14:N:75:ILE:HD11	1.66	0.77
18:R:53:PHE:CB	18:R:55:ASP:N	2.47	0.77
20:T:24:MET:HG3	20:T:28:ASN:HA	1.65	0.77
32:a:1111:A:H2	33:c:176:THR:CG2	1.98	0.77
32:a:1235:U:C4	43:m:48:SER:N	2.52	0.77
32:a:1306:A:O2'	43:m:33:LEU:CB	2.33	0.77
41:k:30:ILE:HG22	41:k:45:THR:HA	1.67	0.77
45:o:2:LEU:HD22	45:o:7:THR:HG23	1.65	0.77
50:t:27:MET:HE1	50:t:66:ILE:HG12	1.66	0.77
2:B:751:A:H5'	19:S:90:LYS:HE2	1.67	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2576:G:N2	5:D:149:ASN:HD21	1.82	0.76
3:V:80:HIS:HD2	3:V:82:TYR:H	1.32	0.76
5:D:17:GLU:HB2	16:P:80:VAL:HG21	1.67	0.76
7:F:105:ILE:HG21	43:m:113:LYS:HB2	0.80	0.76
10:J:7:LYS:HD3	10:J:48:VAL:HB	1.66	0.76
12:L:117:THR:HG21	12:L:120:VAL:CB	2.16	0.76
32:a:1217:C:H5"	44:n:50:LEU:HD23	1.65	0.76
33:c:75:VAL:HG13	40:j:53:ILE:HG22	0.77	0.76
37:g:147:ASN:OD1	41:k:55:ARG:NH1	2.18	0.76
51:7:120:SER:HA	51:7:125:PHE:HB3	1.67	0.76
12:L:103:ILE:HD13	12:L:105:ILE:H	1.50	0.76
15:O:19:GLN:HA	22:W:76:ARG:NH2	1.98	0.76
32:a:78:A:H2'	32:a:79:G:C8	2.20	0.76
32:a:1146:A:H5'	40:j:85:ASP:HB3	1.67	0.76
33:c:57:GLU:HB3	40:j:67:ILE:HG12	1.58	0.76
2:B:2602:A:C5	53:v:74:C:H5"	2.20	0.76
5:D:107:VAL:HA	5:D:205:PRO:O	1.85	0.76
9:H:38:PRO:CB	9:H:43:ASN:ND2	2.40	0.76
32:a:1217:C:O2	44:n:44:VAL:O	2.03	0.76
2:B:443:A:H5"	6:E:44:ARG:HH12	1.50	0.76
2:B:2723:C:H5"	14:N:3:HIS:HB2	1.66	0.76
5:D:1:MET:HE3	5:D:84:LEU:HD13	1.65	0.76
5:D:18:ASP:HB3	5:D:20:VAL:HG22	1.67	0.76
7:F:101:ARG:HD2	7:F:105:ILE:HD12	1.68	0.76
15:O:48:LEU:HD23	15:O:49:VAL:H	1.49	0.76
20:T:12:ARG:HH21	23:X:29:ARG:NH1	1.82	0.76
31:6:27:LEU:HD12	31:6:32:VAL:HG11	1.65	0.76
32:a:439:U:O3'	34:d:120:LYS:NZ	2.17	0.76
32:a:946:A:OP1	43:m:41:ASP:HB2	1.86	0.76
32:a:1013:G:C6	44:n:32:ASP:HA	2.20	0.76
32:a:1219:A:C5	49:s:7:GLY:C	2.63	0.76
32:a:1279:G:C5	44:n:91:GLU:HB2	2.21	0.76
32:a:1357:A:H3'	44:n:67:GLY:CA	2.14	0.76
33:c:57:GLU:CG	40:j:67:ILE:HG12	2.16	0.76
34:d:187:ARG:HA	34:d:190:LEU:HD22	1.65	0.76
2:B:483:A:H4'	21:U:45:GLN:HA	1.65	0.76
17:Q:93:ILE:HG23	17:Q:94:LEU:H	1.49	0.76
21:U:7:ASP:CA	21:U:24:VAL:HA	2.15	0.76
23:X:38:GLN:NE2	23:X:38:GLN:H	1.84	0.76
27:2:42:VAL:HG12	27:2:43:ARG:NE	2.00	0.76
30:5:25:VAL:HB	30:5:33:HIS:O	1.84	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1232:U:C3'	39:i:125:GLN:CG	2.52	0.76
32:a:1281:C:N1	40:j:38:GLY:HA3	2.00	0.76
32:a:1334:G:O4'	43:m:44:ILE:N	2.17	0.76
37:g:87:PRO:HG2	37:g:151:ALA:HB2	1.66	0.76
46:p:42:ILE:HB	46:p:46:LYS:HD2	1.67	0.76
51:7:41:ASN:HD22	51:7:44:LYS:HE2	1.51	0.76
2:B:140:C:H4'	2:B:141:G:H21	1.51	0.76
2:B:742:A:H2'	2:B:743:A:H8	1.50	0.76
2:B:1275:A:H3'	2:B:1275:A:N3	1.99	0.76
7:F:113:PHE:HB3	43:m:95:PRO:HD3	1.63	0.76
10:J:81:ILE:HG23	10:J:82:GLY:N	1.99	0.76
11:K:35:VAL:HG23	11:K:36:GLY:H	1.49	0.76
18:R:90:ARG:HH11	18:R:91:GLN:H	1.33	0.76
32:a:1124:G:O5'	40:j:6:ILE:HG21	1.63	0.76
32:a:1129:C:N1	40:j:80:THR:HG21	2.01	0.76
32:a:1231:G:C3'	39:i:127:SER:HB2	2.15	0.76
32:a:1330:U:N3	43:m:24:VAL:CG1	2.00	0.76
32:a:1347:G:H8	39:i:108:ARG:O	1.68	0.76
2:B:692:C:C5'	4:C:42:ARG:HB2	2.15	0.76
2:B:2563:U:H5"	11:K:27:GLY:HA2	1.68	0.76
5:D:138:LEU:HD23	5:D:138:LEU:N	2.00	0.76
7:F:36:ASN:HB2	7:F:87:LYS:HA	1.66	0.76
7:F:113:PHE:O	43:m:95:PRO:CG	2.32	0.76
18:R:53:PHE:HB3	18:R:55:ASP:H	1.47	0.76
32:a:982:U:H2'	44:n:58:ARG:NH2	2.01	0.76
32:a:1150:A:N3	40:j:25:ILE:HG12	2.01	0.76
32:a:1153:G:C6	40:j:92:LEU:HD11	2.19	0.76
32:a:1304:G:C5'	43:m:56:ARG:NH2	2.45	0.76
32:a:1306:A:N1	43:m:29:SER:HB2	1.96	0.76
33:c:8:GLY:HA2	33:c:11:LEU:HG	1.67	0.76
41:k:86:LYS:HB2	41:k:112:VAL:HG23	1.68	0.76
2:B:703:U:H2'	2:B:704:G:O4'	1.86	0.76
2:B:954:G:OP1	13:M:17:ASN:HB2	1.86	0.76
32:a:1014:A:C8	49:s:15:LEU:HD11	2.16	0.76
32:a:1016:A:C8	44:n:31:SER:CB	2.35	0.76
32:a:1320:C:OP1	49:s:68:HIS:CE1	2.37	0.76
33:c:21:TRP:HB2	40:j:68:ARG:CB	2.15	0.76
33:c:57:GLU:HG2	40:j:67:ILE:HD11	1.67	0.76
33:c:87:ARG:HH21	40:j:62:ARG:NH2	1.70	0.76
2:B:162:U:H4'	2:B:163:C:OP1	1.86	0.76
2:B:2086:U:H2'	2:B:2087:G:C8	2.21	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:59:PRO:HD2	6:E:60:TRP:NE1	2.01	0.76
7:F:116:LEU:HG	7:F:176:PHE:HA	1.68	0.76
8:G:120:ILE:HG12	8:G:140:ILE:HG22	1.68	0.76
10:J:101:ILE:HG23	10:J:102:GLU:H	1.50	0.76
14:N:24:MET:HE3	14:N:44:LEU:HD22	1.66	0.76
25:Z:3:LYS:HG2	25:Z:8:LYS:HA	1.68	0.76
27:2:53:ILE:HD13	27:2:54:LYS:N	1.99	0.76
32:a:1150:A:N6	40:j:87:LEU:C	2.32	0.76
32:a:1334:G:O4'	43:m:12:LYS:O	2.03	0.76
33:c:87:ARG:HH21	40:j:62:ARG:HE	1.28	0.76
43:m:21:ILE:HG22	43:m:64:VAL:HG11	1.67	0.76
52:u:14:ALA:C	52:u:16:ARG:CD	2.58	0.76
2:B:919:U:H2'	2:B:920:A:C8	2.21	0.76
8:G:153:PRO:HG2	8:G:162:ARG:HB3	1.68	0.76
9:H:41:LYS:N	9:H:41:LYS:HD2	2.01	0.76
19:S:18:ARG:HH12	19:S:25:ARG:NH2	1.83	0.76
32:a:376:G:C5'	46:p:5:ARG:HB2	2.12	0.76
32:a:1100:C:OP2	51:7:94:ARG:HD3	1.86	0.76
32:a:1122:U:C4	40:j:90:LEU:N	2.49	0.76
32:a:1149:C:O4'	40:j:31:ARG:HG2	1.86	0.76
32:a:1240:U:O2'	37:g:31:VAL:HG11	1.86	0.76
32:a:1308:U:C5'	43:m:27:THR:CG2	2.63	0.76
2:B:370:G:O2'	2:B:423:A:H3'	1.85	0.75
2:B:2469:A:H4'	13:M:55:ARG:HG3	1.68	0.75
5:D:154:LYS:C	5:D:156:PHE:H	1.91	0.75
32:a:450:G:H4'	46:p:41:PRO:CB	2.14	0.75
32:a:948:C:O2	43:m:38:ILE:CD1	2.32	0.75
32:a:975:A:C1'	44:n:1:ALA:CA	2.36	0.75
32:a:1125:U:C3'	40:j:77:VAL:HG13	2.13	0.75
32:a:1330:U:H3'	43:m:22:TYR:CA	2.16	0.75
32:a:1330:U:O4	43:m:64:VAL:CG2	2.34	0.75
34:d:104:MET:HE2	34:d:170:LEU:HD13	1.67	0.75
2:B:28:A:N6	2:B:512:G:H1'	2.02	0.75
3:V:79:ARG:HA	3:V:86:LEU:HA	1.69	0.75
6:E:133:LEU:HD12	6:E:136:GLN:HG3	1.68	0.75
7:F:73:VAL:HG11	53:v:55:U:H2'	1.68	0.75
7:F:79:ARG:HG2	53:v:56:C:C5	2.20	0.75
9:H:82:SER:N	9:H:146:VAL:HG13	2.00	0.75
32:a:840:C:H2'	32:a:842:U:H5"	1.67	0.75
32:a:947:G:H2'	43:m:38:ILE:C	2.11	0.75
32:a:1011:C:H4'	49:s:23:GLU:OE2	1.86	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1216:A:N3	44:n:47:LEU:CG	2.49	0.75
32:a:1349:A:OP1	39:i:121:ARG:CB	2.34	0.75
33:c:46:LEU:HD23	40:j:53:ILE:HG21	1.63	0.75
2:B:1912:A:C2	32:a:1494:G:N2	2.53	0.75
2:B:2287:A:O2'	2:B:2288:A:H2'	1.83	0.75
4:C:50:THR:C	4:C:51:ARG:HG3	2.12	0.75
5:D:110:THR:HG22	5:D:171:THR:HA	1.68	0.75
13:M:69:PRO:HB2	13:M:71:LYS:NZ	2.02	0.75
14:N:28:LEU:HD11	14:N:44:LEU:HD21	1.68	0.75
20:T:1:MET:HE3	20:T:2:ILE:HB	1.68	0.75
30:5:4:ARG:O	30:5:4:ARG:HG2	1.85	0.75
32:a:1111:A:C2	33:c:176:THR:HG22	2.20	0.75
32:a:1333:A:C2	43:m:44:ILE:N	2.54	0.75
33:c:63:ILE:CA	40:j:66:GLU:CB	2.11	0.75
49:s:35:ARG:HG2	49:s:50:VAL:HG13	1.66	0.75
2:B:2346:A:H3'	2:B:2347:C:H5"	1.67	0.75
7:F:77:LYS:HE3	53:v:19:G:C6	2.15	0.75
22:W:6:GLY:C	22:W:8:SER:H	1.94	0.75
31:6:109:ALA:HB1	31:6:124:MET:HG3	1.66	0.75
33:c:17:TRP:CH2	40:j:16:ARG:HD3	2.21	0.75
51:7:67:LEU:HD22	51:7:67:LEU:H	1.52	0.75
51:7:162:VAL:HG13	51:7:184:ALA:HB2	1.67	0.75
2:B:508:A:H2'	2:B:509:C:H5'	1.69	0.75
2:B:2052:A:H5'	5:D:148:GLN:C	2.12	0.75
27:2:9:LYS:HG2	29:4:34:LYS:NZ	2.00	0.75
32:a:1332:A:C2	43:m:18:LEU:HD12	2.22	0.75
32:a:1338:G:N2	53:v:41:C:H4'	2.01	0.75
33:c:87:ARG:CD	40:j:50:THR:HB	2.16	0.75
9:H:46:PHE:HA	9:H:50:ARG:NH2	1.96	0.75
10:J:24:THR:C	10:J:25:LEU:HD22	2.12	0.75
13:M:70:ASP:H	13:M:71:LYS:HZ2	1.34	0.75
14:N:70:THR:HG21	14:N:75:ILE:HG22	1.68	0.75
22:W:39:GLN:HA	22:W:68:PHE:HA	1.68	0.75
31:6:89:SER:HB2	31:6:136:GLY:HA3	1.68	0.75
32:a:781:A:H2'	32:a:782:A:H5'	1.69	0.75
32:a:1127:G:N7	40:j:76:ILE:CG2	2.27	0.75
32:a:1347:G:N2	39:i:108:ARG:HH22	1.74	0.75
32:a:1375:A:OP2	37:g:9:ARG:CG	2.35	0.75
46:p:52:LEU:HG	46:p:75:ILE:HG12	1.69	0.75
2:B:2239:G:H5'	4:C:246:PRO:CD	2.16	0.75
15:O:68:LYS:HD3	15:O:68:LYS:N	2.02	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:437:U:H2'	32:a:438:U:O4'	1.85	0.75
32:a:764:C:H3'	32:a:765:G:H21	1.51	0.75
32:a:1016:A:C1'	44:n:45:LEU:CA	2.58	0.75
32:a:1221:G:C6	49:s:5:LYS:HD2	2.22	0.75
32:a:1337:G:N2	43:m:46:GLU:N	2.35	0.75
32:a:1358:U:C5	44:n:68:ARG:C	2.64	0.75
33:c:184:ASN:HD22	33:c:185:THR:H	1.32	0.75
41:k:124:LYS:CA	52:u:34:ARG:HB3	2.15	0.75
2:B:125:A:H3'	2:B:126:A:C5'	2.17	0.75
2:B:480:A:H4'	21:U:42:LYS:HG2	1.67	0.75
2:B:1283:G:N2	2:B:1286:A:H5'	2.02	0.75
23:X:36:GLN:HE22	23:X:38:GLN:NE2	1.84	0.75
25:Z:5:ILE:HB	25:Z:51:VAL:CG1	2.15	0.75
32:a:1127:G:C4	40:j:76:ILE:HG22	2.19	0.75
32:a:1261:A:N7	44:n:98:ALA:HB1	2.01	0.75
2:B:479:A:O2'	2:B:481:G:H5'	1.86	0.75
4:C:128:THR:HA	4:C:190:THR:HA	1.67	0.75
13:M:65:ILE:HG22	13:M:101:VAL:HA	1.67	0.75
18:R:4:VAL:HA	18:R:12:HIS:HB3	1.69	0.75
32:a:196:A:O5'	50:t:63:LYS:CE	2.24	0.75
32:a:1217:C:H5'	44:n:50:LEU:HD22	1.68	0.75
2:B:2674:G:H4'	11:K:30:ARG:HG2	1.67	0.74
7:F:108:PRO:CB	43:m:94:LEU:HD21	2.13	0.74
16:P:13:LYS:HZ2	16:P:17:PRO:HG3	1.52	0.74
32:a:1126:U:O4	40:j:74:VAL:HA	1.85	0.74
32:a:1150:A:C4	40:j:25:ILE:HA	2.22	0.74
32:a:1222:G:N9	49:s:5:LYS:NZ	2.14	0.74
32:a:1333:A:OP2	43:m:17:ALA:CB	2.35	0.74
4:C:117:SER:HB3	4:C:127:ASN:CG	2.12	0.74
16:P:25:VAL:HG11	16:P:87:ARG:HA	1.68	0.74
31:6:7:TYR:HB2	31:6:58:ILE:O	1.87	0.74
32:a:194:C:O4'	50:t:58:ASP:HB2	1.87	0.74
32:a:975:A:N3	44:n:1:ALA:CA	2.49	0.74
32:a:1216:A:H5"	44:n:50:LEU:HD12	1.69	0.74
32:a:1255:G:C4'	44:n:83:VAL:CG2	2.65	0.74
32:a:1319:A:H5'	49:s:68:HIS:HE1	1.47	0.74
32:a:1347:G:C5	39:i:108:ARG:CZ	2.70	0.74
51:7:204:ASP:CG	51:7:205:ALA:H	1.95	0.74
5:D:159:LYS:HD2	5:D:161:MET:HE3	1.69	0.74
7:F:64:PRO:HA	7:F:88:VAL:HG22	1.68	0.74
11:K:54:LYS:HZ3	32:a:1422:G:P	2.10	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:11:LYS:HG2	13:M:12:MET:H	1.51	0.74
32:a:1147:C:O4'	40:j:82:LYS:HG3	1.86	0.74
32:a:1330:U:O4	43:m:64:VAL:HG21	1.87	0.74
2:B:163:C:H2'	2:B:164:C:O4'	1.87	0.74
4:C:127:ASN:HD22	4:C:128:THR:H	1.35	0.74
10:J:57:LEU:HB3	10:J:128:ASN:HA	1.68	0.74
32:a:1013:G:H4'	49:s:16:LYS:HZ3	1.48	0.74
32:a:1123:U:H5	40:j:88:MET:HA	1.51	0.74
32:a:1298:U:C6	37:g:118:ARG:NH2	2.50	0.74
52:u:14:ALA:HA	52:u:16:ARG:CD	2.16	0.74
7:F:73:VAL:HG11	53:v:57:G:C8	2.20	0.74
20:T:30:ILE:HG23	20:T:31:VAL:N	2.01	0.74
25:Z:55:GLY:HA2	25:Z:63:ARG:HG3	1.69	0.74
32:a:752:G:C5'	45:o:68:TYR:OH	2.36	0.74
32:a:812:G:H2'	32:a:812:G:N3	2.02	0.74
32:a:1113:C:C1'	33:c:177:LEU:HD13	2.17	0.74
32:a:1125:U:H5'	40:j:7:ARG:HA	1.69	0.74
32:a:1218:C:O4'	44:n:48:GLN:CG	2.36	0.74
32:a:1219:A:C4	49:s:7:GLY:C	2.65	0.74
32:a:1297:G:H21	37:g:114:SER:HG	0.74	0.74
32:a:1356:G:H5"	44:n:81:ILE:HD13	0.75	0.74
2:B:742:A:H2'	2:B:743:A:C8	2.21	0.74
2:B:2354:C:H4'	22:W:30:VAL:HG13	1.69	0.74
5:D:8:LYS:HA	5:D:197:THR:HG23	1.69	0.74
7:F:79:ARG:HD3	53:v:56:C:C5	2.21	0.74
14:N:100:CYS:HB3	14:N:110:MET:HB2	1.70	0.74
16:P:47:ILE:HG22	16:P:48:ALA:N	2.01	0.74
26:1:29:VAL:HG23	26:1:36:LYS:NZ	2.02	0.74
32:a:376:G:H5"	46:p:5:ARG:CB	2.10	0.74
32:a:1124:G:C5'	40:j:8:ILE:HD13	2.16	0.74
32:a:1221:G:C6	49:s:5:LYS:CD	2.71	0.74
32:a:1358:U:N1	44:n:69:PRO:HD3	2.02	0.74
33:c:22:PHE:O	40:j:68:ARG:CG	2.34	0.74
33:c:100:ILE:HD13	40:j:51:VAL:CB	2.17	0.74
43:m:15:VAL:HG23	43:m:33:LEU:HD12	1.70	0.74
2:B:150:U:H2'	2:B:151:C:C6	2.23	0.74
2:B:856:G:H21	22:W:22:VAL:HG11	1.53	0.74
2:B:1255:U:H2'	6:E:67:ARG:HB3	1.68	0.74
3:V:35:GLU:HG3	3:V:93:ARG:HD3	1.69	0.74
5:D:142:VAL:C	5:D:144:GLY:N	2.39	0.74
6:E:48:THR:CG2	6:E:49:ARG:H	1.79	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:F:73:VAL:CG1	53:v:56:C:C2	2.69	0.74
7:F:117:SER:CB	43:m:100:ARG:HH21	1.99	0.74
20:T:93:LEU:H	20:T:93:LEU:HD22	1.53	0.74
31:6:20:SER:HB3	31:6:21:PRO:HD3	1.67	0.74
32:a:1220:G:O6	49:s:6:LYS:O	2.05	0.74
32:a:1236:A:OP2	43:m:49:GLU:HA	1.88	0.74
32:a:1256:A:P	44:n:78:LEU:CG	2.63	0.74
32:a:1257:A:C6	44:n:74:ARG:NH2	2.55	0.74
32:a:1281:C:C6	40:j:38:GLY:HA3	2.22	0.74
2:B:85:G:C5'	21:U:28:LEU:HA	2.18	0.74
2:B:1112:G:H5'	8:G:2:ARG:HH21	1.53	0.74
32:a:546:A:OP1	34:d:69:ARG:HB2	1.88	0.74
32:a:946:A:C5	43:m:46:GLU:C	2.65	0.74
32:a:966:G:N9	53:v:34:G:H4'	2.02	0.74
32:a:988:G:O6	44:n:46:LYS:HG2	1.83	0.74
39:i:56:MET:HA	39:i:59:LYS:HZ2	1.52	0.74
42:l:66:ILE:HD13	42:l:73:LEU:HD12	1.69	0.74
6:E:98:LYS:HG3	6:E:99:LYS:N	2.02	0.74
12:L:82:LEU:HD21	12:L:92:LEU:HD12	1.68	0.74
22:W:66:VAL:HG22	22:W:67:LYS:N	2.03	0.74
31:6:14:ALA:HA	31:6:45:THR:HG21	1.68	0.74
32:a:1011:C:N4	44:n:34:ASN:CA	2.49	0.74
32:a:1236:A:C2'	43:m:52:ILE:HG12	2.16	0.74
32:a:1301:U:C4	43:m:8:ILE:HD11	1.04	0.74
32:a:1304:G:H4'	43:m:52:ILE:CG1	2.18	0.74
33:c:179:ALA:HB1	33:c:202:PHE:HE1	1.52	0.74
51:7:163:ILE:HD11	51:7:209:VAL:HG12	1.70	0.74
2:B:858:G:H21	2:B:2268:A:H3'	1.51	0.74
2:B:1469:A:H2'	2:B:1470:A:C8	2.22	0.74
2:B:2450:A:O2'	53:v:76:A:N6	2.20	0.74
6:E:113:VAL:HG23	6:E:117:ARG:CZ	2.18	0.74
12:L:30:THR:HA	12:L:36:LYS:NZ	2.03	0.74
31:6:89:SER:HA	31:6:97:VAL:CG2	2.17	0.74
32:a:278:G:H21	32:a:279:A:H62	1.36	0.74
32:a:430:A:OP1	34:d:8:LEU:N	2.21	0.74
32:a:439:U:C4'	34:d:120:LYS:NZ	2.50	0.74
32:a:1125:U:O2'	40:j:75:ASP:OD1	2.04	0.74
32:a:1151:A:H3'	40:j:20:GLN:C	2.11	0.74
32:a:1152:A:H61	40:j:90:LEU:HA	1.45	0.74
32:a:1235:U:O5'	43:m:49:GLU:O	1.96	0.74
32:a:1306:A:C1'	43:m:33:LEU:HG	2.17	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1372:U:OP2	39:i:12:LYS:CE	2.34	0.74
37:g:67:ASN:HD22	37:g:127:ALA:HA	1.51	0.74
40:j:19:ASP:O	40:j:22:THR:HG22	1.87	0.74
5:D:157:LYS:HZ3	5:D:158:GLY:HA3	1.51	0.73
7:F:114:ARG:NE	43:m:98:GLY:HA2	2.03	0.73
10:J:25:LEU:HD12	10:J:62:VAL:HA	1.70	0.73
12:L:27:LEU:C	12:L:29:LYS:H	1.93	0.73
32:a:1016:A:O2'	44:n:44:VAL:HG12	1.86	0.73
32:a:1371:G:OP2	39:i:110:VAL:HG22	1.88	0.73
33:c:25:THR:HG21	44:n:65:GLN:HE22	1.53	0.73
33:c:100:ILE:HG21	40:j:62:ARG:HA	1.68	0.73
12:L:30:THR:HB	12:L:36:LYS:HB2	1.70	0.73
12:L:110:VAL:HB	12:L:126:ARG:NH2	2.02	0.73
32:a:193:C:O2'	50:t:58:ASP:OD2	2.04	0.73
32:a:994:A:C2'	44:n:19:TYR:HD2	1.90	0.73
32:a:1128:C:P	40:j:32:THR:HA	2.26	0.73
32:a:1152:A:H61	40:j:90:LEU:CA	1.99	0.73
32:a:1216:A:C2	44:n:47:LEU:CB	2.71	0.73
32:a:1221:G:C5	49:s:5:LYS:NZ	2.40	0.73
32:a:1258:G:HO2'	44:n:73:LEU:HD13	1.52	0.73
33:c:83:VAL:C	40:j:62:ARG:CG	2.59	0.73
2:B:2216:G:H2'	2:B:2217:G:H8	1.52	0.73
3:V:80:HIS:CD2	3:V:83:LYS:H	2.05	0.73
7:F:113:PHE:HE1	43:m:100:ARG:O	1.68	0.73
26:1:39:ARG:HB3	26:1:39:ARG:HH11	1.52	0.73
32:a:947:G:C1'	43:m:38:ILE:CG2	2.60	0.73
32:a:948:C:OP2	43:m:39:ALA:HA	1.88	0.73
32:a:988:G:N1	44:n:46:LYS:CB	2.51	0.73
32:a:1152:A:H62	40:j:90:LEU:HA	0.91	0.73
32:a:1348:U:H4'	39:i:121:ARG:HH11	1.54	0.73
2:B:37:C:C2'	6:E:46:GLN:HG2	2.16	0.73
4:C:224:MET:HA	4:C:232:GLY:HA2	1.68	0.73
6:E:105:LEU:HD22	6:E:177:PRO:HG2	1.70	0.73
17:Q:33:VAL:HG23	17:Q:37:ALA:HB3	1.70	0.73
32:a:947:G:H4'	43:m:15:VAL:H	1.53	0.73
32:a:980:C:O3'	44:n:55:SER:CB	2.36	0.73
32:a:1126:U:O2	40:j:39:PRO:HD2	1.88	0.73
32:a:1221:G:C4	49:s:3:SER:O	2.41	0.73
32:a:1337:G:N2	43:m:45:SER:OG	2.19	0.73
32:a:1358:U:H6	44:n:69:PRO:HD3	1.45	0.73
34:d:10:LEU:HD21	34:d:62:ARG:HD3	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:p:71:VAL:HA	46:p:74:LEU:HG	1.69	0.73
6:E:27:LEU:HD23	6:E:100:MET:HE2	1.69	0.73
9:H:4:ILE:HG21	9:H:47:PHE:CB	2.19	0.73
11:K:101:GLY:O	11:K:119:ALA:HB1	1.87	0.73
13:M:9:PHE:HA	13:M:10:ARG:HH21	1.53	0.73
27:2:12:SER:HB2	27:2:21:THR:O	1.87	0.73
32:a:1236:A:H2	43:m:43:LYS:O	1.71	0.73
32:a:1305:G:H1	43:m:21:ILE:HG12	1.52	0.73
32:a:1306:A:H62	43:m:21:ILE:HD12	1.53	0.73
33:c:64:ARG:NH2	40:j:67:ILE:CD1	2.51	0.73
33:c:67:ILE:HD11	40:j:63:ASP:OD2	1.85	0.73
33:c:99:GLN:OE1	40:j:49:PHE:CA	2.36	0.73
13:M:96:ILE:HG23	13:M:97:GLN:H	1.52	0.73
13:M:109:PRO:HA	13:M:112:LEU:HB2	1.69	0.73
32:a:1113:C:H6	33:c:177:LEU:HD12	1.52	0.73
32:a:1306:A:C6	43:m:24:VAL:CG2	2.59	0.73
32:a:1359:C:C5	44:n:62:ARG:CA	2.71	0.73
2:B:135:U:H2'	2:B:136:G:C8	2.23	0.73
2:B:138:U:H2'	2:B:140:C:H1'	1.71	0.73
2:B:1797:G:O3'	4:C:253:GLY:HA2	1.89	0.73
3:V:24:ASN:O	3:V:44:HIS:HB2	1.89	0.73
5:D:154:LYS:NZ	5:D:157:LYS:H	1.86	0.73
9:H:57:LYS:HG3	9:H:61:VAL:HG21	1.71	0.73
23:X:14:LEU:O	23:X:17:GLU:HB2	1.87	0.73
26:1:36:LYS:HG3	26:1:40:HIS:O	1.88	0.73
32:a:186:C:H5'	50:t:72:ALA:CA	2.19	0.73
32:a:948:C:C2	43:m:38:ILE:CG1	2.69	0.73
32:a:1125:U:H2'	32:a:1126:U:H5"	1.70	0.73
32:a:1306:A:C4'	43:m:33:LEU:CG	2.66	0.73
32:a:1461:G:H2'	32:a:1462:C:C6	2.23	0.73
35:e:156:ARG:HD2	38:h:42:GLU:O	1.88	0.73
12:L:56:PRO:C	12:L:60:ARG:HB2	2.13	0.73
12:L:85:VAL:HG11	12:L:98:ALA:HB3	1.71	0.73
15:O:17:LYS:HE3	15:O:43:ASN:HB2	1.70	0.73
21:U:69:VAL:HG13	21:U:77:GLY:H	1.54	0.73
32:a:1150:A:OP2	40:j:28:THR:HG22	1.88	0.73
32:a:1235:U:C6	43:m:48:SER:O	2.41	0.73
32:a:1306:A:C4'	43:m:33:LEU:HD21	2.14	0.73
32:a:1347:G:C2	39:i:108:ARG:CZ	2.71	0.73
33:c:21:TRP:C	40:j:68:ARG:HB2	2.14	0.73
2:B:2147:A:H5'	2:B:2148:G:H5'	1.71	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:33:ARG:HG3	5:D:93:GLY:HA2	1.70	0.73
5:D:154:LYS:O	5:D:155:VAL:HG12	1.88	0.73
7:F:133:GLU:O	43:m:106:ARG:HB2	1.87	0.73
9:H:6:LEU:HA	9:H:15:LEU:C	2.14	0.73
13:M:41:LEU:HB2	13:M:93:VAL:HG22	1.70	0.73
23:X:49:ASP:HB3	23:X:52:ARG:HH21	1.52	0.73
28:3:13:ASN:HB2	28:3:18:PHE:HD2	1.53	0.73
32:a:1126:U:OP1	40:j:37:ARG:CZ	2.37	0.73
32:a:1144:G:H2'	40:j:80:THR:O	1.88	0.73
32:a:1218:C:OP1	44:n:20:PHE:CE2	2.42	0.73
32:a:1300:G:O6	43:m:11:HIS:N	0.58	0.73
32:a:1306:A:H4'	43:m:33:LEU:CG	2.15	0.73
32:a:1308:U:H2'	32:a:1309:G:C8	2.24	0.73
32:a:1332:A:N1	43:m:18:LEU:CG	2.18	0.73
46:p:26:ASN:CG	46:p:31:ARG:HB3	2.13	0.73
51:7:116:LEU:HD11	51:7:139:GLU:HB3	1.71	0.73
52:u:14:ALA:N	52:u:16:ARG:HH12	1.81	0.73
2:B:1178:C:H2'	2:B:1179:G:H8	1.53	0.73
2:B:1203:U:H3'	2:B:1204:A:H5"	1.70	0.73
6:E:60:TRP:NE1	6:E:73:ILE:HD11	2.03	0.73
7:F:176:PHE:CA	43:m:102:LYS:CD	2.33	0.73
11:K:7:MET:HE1	11:K:20:MET:HB2	1.70	0.73
32:a:1017:U:O5'	44:n:44:VAL:HG13	1.89	0.73
32:a:1357:A:C1'	44:n:1:ALA:N	2.49	0.73
32:a:1359:C:H6	44:n:62:ARG:HA	1.49	0.73
33:c:63:ILE:CB	40:j:66:GLU:CB	2.60	0.73
40:j:39:PRO:HA	40:j:74:VAL:HG22	1.70	0.73
2:B:1324:G:H1'	2:B:1616:A:N6	2.03	0.72
32:a:545:C:H5"	34:d:68:GLU:HG2	1.71	0.72
32:a:1261:A:N1	44:n:100:TRP:CE3	2.57	0.72
32:a:1330:U:OP2	43:m:65:GLU:N	2.22	0.72
33:c:59:PRO:N	40:j:67:ILE:O	2.21	0.72
52:u:20:ARG:HA	52:u:24:LYS:HG3	1.70	0.72
4:C:88:ALA:HB1	4:C:156:SER:HB3	1.71	0.72
4:C:141:HIS:CD2	4:C:193:GLU:H	2.07	0.72
5:D:154:LYS:NZ	5:D:156:PHE:HA	2.00	0.72
9:H:4:ILE:H	9:H:37:VAL:HB	1.53	0.72
31:6:21:PRO:HB2	31:6:22:PRO:HD3	1.70	0.72
32:a:927:G:H4'	32:a:1503:A:N7	2.03	0.72
32:a:975:A:N3	44:n:1:ALA:C	2.47	0.72
32:a:1319:A:O3'	49:s:68:HIS:NE2	2.21	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1330:U:P	43:m:22:TYR:HB3	2.30	0.72
33:c:63:ILE:C	40:j:48:ARG:CA	2.59	0.72
34:d:84:ASN:ND2	34:d:87:GLU:H	1.87	0.72
41:k:42:GLY:HA3	41:k:73:VAL:HG22	1.71	0.72
44:n:63:CYS:HB3	44:n:67:GLY:N	2.04	0.72
2:B:2471:A:O2'	2:B:2472:G:H8	1.73	0.72
2:B:2527:C:H1'	30:5:1:MET:HB3	1.71	0.72
26:1:45:ASP:HB2	26:1:47:TYR:HD1	1.53	0.72
32:a:412:A:H1'	32:a:413:G:H8	1.54	0.72
32:a:947:G:H2'	43:m:38:ILE:O	1.88	0.72
32:a:1016:A:H2'	44:n:44:VAL:CB	2.20	0.72
32:a:1280:A:H62	40:j:25:ILE:CG2	2.01	0.72
32:a:1331:G:O5'	43:m:21:ILE:C	2.32	0.72
32:a:1338:G:N2	53:v:41:C:O2'	2.23	0.72
33:c:83:VAL:HG13	40:j:52:LEU:N	1.96	0.72
35:e:156:ARG:HB2	38:h:43:GLY:HA3	1.71	0.72
2:B:811:U:H2'	12:L:31:GLY:HA3	1.71	0.72
7:F:107:VAL:C	43:m:101:THR:O	2.32	0.72
7:F:133:GLU:HG2	7:F:147:ARG:HG2	1.71	0.72
32:a:1016:A:H1'	44:n:45:LEU:CB	2.19	0.72
32:a:1113:C:C6	33:c:177:LEU:HD13	2.22	0.72
32:a:1128:C:C2'	40:j:83:THR:OG1	2.37	0.72
32:a:1356:G:OP2	44:n:80:ARG:NH2	2.22	0.72
33:c:63:ILE:CA	40:j:48:ARG:CB	2.03	0.72
33:c:67:ILE:HD11	40:j:63:ASP:HB2	1.69	0.72
7:F:113:PHE:HE1	43:m:103:THR:H	1.36	0.72
7:F:117:SER:N	43:m:100:ARG:NE	2.36	0.72
12:L:30:THR:HA	12:L:36:LYS:HZ1	1.55	0.72
12:L:118:THR:CG2	12:L:119:PRO:HD3	2.19	0.72
14:N:76:VAL:HA	14:N:79:LEU:HD12	1.71	0.72
16:P:59:THR:HG23	16:P:76:HIS:NE2	2.04	0.72
17:Q:88:GLU:HA	18:R:53:PHE:CE1	2.25	0.72
32:a:8:A:H2'	34:d:205:LYS:O	1.90	0.72
32:a:980:C:O2'	44:n:55:SER:HB3	1.89	0.72
32:a:1055:A:HO2'	33:c:160:GLU:CD	1.92	0.72
32:a:1218:C:H2'	32:a:1219:A:H8	1.55	0.72
32:a:1255:G:H2'	44:n:92:ILE:CD1	2.19	0.72
32:a:1305:G:C2'	43:m:55:LEU:HB3	2.19	0.72
33:c:98:ALA:HB1	40:j:64:GLN:HB3	0.79	0.72
34:d:94:GLU:HG3	34:d:103:ARG:HH12	1.54	0.72
2:B:445:C:OP1	17:Q:1:ALA:HB3	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1453:A:N6	14:N:74:GLU:HG2	2.04	0.72
2:B:2498:C:O2'	2:B:2499:C:H5'	1.89	0.72
4:C:50:THR:O	4:C:51:ARG:HG3	1.89	0.72
15:O:8:ILE:HG22	15:O:10:ARG:H	1.52	0.72
18:R:69:GLY:HA2	18:R:96:VAL:HA	1.69	0.72
19:S:47:VAL:HG12	19:S:103:ILE:HD13	1.70	0.72
24:Y:18:LYS:NZ	24:Y:53:MET:HE2	2.04	0.72
28:3:34:ARG:HE	28:3:42:LEU:HD13	1.54	0.72
32:a:980:C:H1'	44:n:57:SER:HB2	1.71	0.72
32:a:1305:G:P	43:m:53:ASP:HA	2.30	0.72
33:c:79:LYS:CA	40:j:57:VAL:H	2.03	0.72
34:d:156:ALA:O	34:d:159:GLU:HG2	1.90	0.72
37:g:100:MET:HA	37:g:103:ILE:HD12	1.71	0.72
2:B:45:G:H5'	2:B:46:G:H5'	1.71	0.72
5:D:92:VAL:HG13	5:D:93:GLY:H	1.53	0.72
7:F:126:ASN:HD22	7:F:126:ASN:N	1.87	0.72
11:K:48:PRO:HB3	32:a:1422:G:H5'	1.72	0.72
13:M:73:ILE:O	13:M:74:THR:HB	1.88	0.72
32:a:1015:G:H2'	44:n:31:SER:HB3	1.72	0.72
32:a:1218:C:C5	44:n:48:GLN:HB3	2.23	0.72
32:a:1307:U:O3'	43:m:31:ALA:N	1.84	0.72
32:a:1330:U:H2'	43:m:24:VAL:O	1.88	0.72
33:c:5:HIS:HD2	33:c:8:GLY:H	1.35	0.72
35:e:108:GLY:H	35:e:110:MET:HE1	1.53	0.72
2:B:146:A:H2'	2:B:147:C:C6	2.25	0.72
2:B:1060:U:C4	2:B:1088:A:N6	2.58	0.72
4:C:245:THR:O	4:C:247:TRP:N	2.22	0.72
5:D:11:MET:HG2	5:D:12:THR:H	1.55	0.72
10:J:112:GLY:O	10:J:116:ARG:HB2	1.88	0.72
18:R:42:ALA:HA	18:R:54:VAL:HA	1.71	0.72
25:Z:25:ARG:HG3	25:Z:26:SER:N	2.04	0.72
32:a:947:G:C6	43:m:51:GLN:OE1	2.42	0.72
32:a:1126:U:H3'	40:j:35:GLN:C	1.99	0.72
33:c:153:SER:HB2	33:c:196:GLY:H	1.54	0.72
52:u:40:PRO:HG2	52:u:41:THR:H	1.54	0.72
2:B:442:G:H1'	6:E:44:ARG:HD2	1.70	0.72
2:B:1486:U:H2'	2:B:1487:U:C6	2.25	0.72
11:K:2:ILE:HG22	11:K:67:LYS:NZ	2.04	0.72
32:a:990:C:C4'	44:n:43:ALA:CB	2.67	0.72
32:a:1107:C:OP1	33:c:172:VAL:N	2.23	0.72
32:a:1127:G:O4'	40:j:36:VAL:HG21	1.88	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1150:A:H1'	40:j:25:ILE:O	1.87	0.72
32:a:1261:A:N9	44:n:98:ALA:HB3	2.03	0.72
32:a:1331:G:N7	43:m:65:GLU:OE2	2.23	0.72
32:a:1335:U:C6	43:m:11:HIS:ND1	2.24	0.72
35:e:131:ASN:HD21	35:e:133:ILE:HB	1.54	0.72
2:B:1437:C:H2'	2:B:1438:U:C6	2.25	0.72
6:E:146:VAL:O	6:E:147:LEU:HB2	1.88	0.72
7:F:116:LEU:HD21	43:m:102:LYS:HB2	1.72	0.72
12:L:94:THR:HG23	12:L:95:LEU:HD12	1.72	0.72
14:N:44:LEU:O	14:N:47:VAL:HG22	1.90	0.72
22:W:47:GLY:HA3	22:W:55:ASP:HB3	1.72	0.72
25:Z:69:SER:O	25:Z:70:LYS:HB2	1.90	0.72
32:a:186:C:O3'	50:t:76:ALA:CA	2.38	0.72
32:a:1130:A:N6	40:j:80:THR:CG2	2.44	0.72
32:a:1333:A:N3	43:m:14:ALA:N	2.36	0.72
41:k:92:ARG:HB3	41:k:92:ARG:HH11	1.54	0.72
2:B:1392:A:H62	20:T:18:GLU:HG2	1.53	0.71
4:C:106:PRO:HD2	4:C:109:LEU:HD22	1.72	0.71
7:F:109:ARG:HD2	43:m:108:ARG:C	2.14	0.71
16:P:23:ASP:H	16:P:93:LYS:HE2	1.54	0.71
32:a:501:C:H2'	32:a:502:A:H8	1.53	0.71
32:a:948:C:C1'	43:m:38:ILE:CG1	2.30	0.71
32:a:981:U:P	49:s:6:LYS:HZ2	2.13	0.71
32:a:1359:C:H2'	44:n:69:PRO:O	1.89	0.71
33:c:73:GLY:O	40:j:55:PRO:C	2.33	0.71
33:c:87:ARG:HE	40:j:52:LEU:CD1	2.03	0.71
33:c:100:ILE:HG21	40:j:63:ASP:H	1.55	0.71
50:t:81:GLN:O	50:t:85:LEU:HB3	1.90	0.71
7:F:113:PHE:O	43:m:95:PRO:HB2	1.89	0.71
7:F:151:LEU:HD22	43:m:112:ARG:NH1	2.05	0.71
12:L:29:LYS:HD2	12:L:30:THR:H	1.55	0.71
12:L:120:VAL:HG22	12:L:122:VAL:HG22	1.71	0.71
19:S:7:HIS:HB3	19:S:102:HIS:HA	1.71	0.71
20:T:24:MET:HE2	20:T:29:THR:H	1.54	0.71
32:a:1013:G:OP2	49:s:19:GLU:O	2.08	0.71
32:a:1304:G:H3'	43:m:3:ILE:HG12	1.68	0.71
32:a:1319:A:O3'	49:s:68:HIS:CE1	2.43	0.71
32:a:1334:G:H8	43:m:12:LYS:C	1.97	0.71
32:a:1369:C:OP2	39:i:113:LYS:N	2.23	0.71
41:k:56:LYS:O	41:k:58:THR:HG22	1.90	0.71
50:t:60:GLN:HE21	50:t:61:ALA:H	1.36	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:775:G:H4’	2:B:776:G:H5’	1.72	0.71
32:a:980:C:C2’	44:n:58:ARG:HG3	2.20	0.71
32:a:1073:U:P	35:e:61:LYS:HZ2	2.07	0.71
32:a:1308:U:H5’	43:m:27:THR:CG2	2.20	0.71
32:a:1328:C:C4	43:m:63:VAL:HG23	1.68	0.71
43:m:44:ILE:HA	43:m:47:LEU:HD13	1.71	0.71
2:B:442:G:H22	6:E:46:GLN:NE2	1.87	0.71
2:B:1923:U:OP1	53:v:24:G:O2’	2.07	0.71
2:B:1993:U:H4’	5:D:134:HIS:HE1	1.55	0.71
2:B:2328:A:H2’	2:B:2329:U:C6	2.24	0.71
7:F:134:GLN:CG	43:m:107:THR:CB	2.66	0.71
12:L:62:PRO:O	29:4:24:LYS:HD3	1.90	0.71
18:R:43:ASN:C	18:R:45:GLU:H	1.98	0.71
19:S:66:ILE:H	19:S:66:ILE:HD12	1.54	0.71
32:a:1218:C:H2’	32:a:1219:A:C8	2.25	0.71
33:c:63:ILE:O	40:j:48:ARG:HB2	1.89	0.71
42:l:35:ARG:HG3	42:l:36:VAL:H	1.55	0.71
2:B:2895:G:H2’	2:B:2896:C:C6	2.25	0.71
7:F:114:ARG:N	43:m:101:THR:H	1.88	0.71
9:H:38:PRO:O	9:H:43:ASN:HB3	1.88	0.71
32:a:177:G:H5’	50:t:59:ARG:NE	2.06	0.71
32:a:1305:G:C2’	43:m:55:LEU:CB	2.69	0.71
32:a:1357:A:OP1	44:n:63:CYS:SG	2.49	0.71
33:c:82:ASP:CG	40:j:54:SER:HB3	2.05	0.71
35:e:95:MET:HE1	35:e:114:LEU:HD21	1.72	0.71
46:p:67:ILE:HG13	46:p:71:VAL:HG13	1.71	0.71
2:B:662:G:H4’	12:L:24:GLY:N	2.05	0.71
5:D:129:THR:O	5:D:130:GLN:HB2	1.90	0.71
5:D:187:LEU:HD23	5:D:188:LEU:N	2.05	0.71
6:E:131:THR:O	6:E:134:LEU:HB2	1.90	0.71
16:P:28:LYS:HD3	16:P:44:GLY:N	2.03	0.71
17:Q:30:VAL:O	17:Q:33:VAL:HG12	1.91	0.71
21:U:40:LEU:HD13	21:U:41:VAL:N	2.06	0.71
32:a:1017:U:H5”	44:n:30:ILE:N	2.05	0.71
32:a:1122:U:C5	40:j:89:ARG:NH2	2.59	0.71
32:a:1332:A:C2	43:m:18:LEU:CG	2.73	0.71
2:B:743:A:O2’	2:B:744:U:H5’	1.91	0.71
2:B:1639:C:C2’	2:B:1640:A:H5”	2.21	0.71
2:B:1803:A:O3’	4:C:254:LYS:HD2	1.90	0.71
7:F:107:VAL:HG21	7:F:175:PRO:HG3	1.71	0.71
13:M:100:LYS:O	13:M:100:LYS:HD2	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:239:U:H4'	32:a:239:U:OP1	1.90	0.71
32:a:408:A:P	34:d:109:THR:HG21	2.30	0.71
32:a:1121:U:C2	40:j:91:ASP:OD1	2.44	0.71
32:a:1278:G:H1	44:n:76:PHE:HE2	1.39	0.71
32:a:1332:A:C4'	43:m:19:THR:HG1	2.02	0.71
33:c:21:TRP:CA	40:j:68:ARG:HB2	2.21	0.71
33:c:75:VAL:CG1	40:j:53:ILE:O	2.36	0.71
36:f:100:SER:HA	48:r:23:LYS:HZ1	1.53	0.71
46:p:42:ILE:HG22	46:p:43:ALA:H	1.55	0.71
2:B:118:A:H5'	2:B:119:A:H8	1.56	0.71
5:D:62:LYS:H	5:D:62:LYS:CD	2.04	0.71
6:E:31:VAL:HG22	6:E:96:VAL:HG21	1.72	0.71
21:U:7:ASP:HA	21:U:24:VAL:HA	1.72	0.71
32:a:685:G:O4'	41:k:40:ALA:HB3	1.91	0.71
32:a:1016:A:C3'	44:n:44:VAL:HG12	2.20	0.71
33:c:84:GLU:O	40:j:62:ARG:HD3	1.91	0.71
43:m:77:LYS:HA	43:m:80:MET:HB3	1.71	0.71
52:u:29:ALA:CB	52:u:32:ARG:HH21	2.02	0.71
2:B:1813:G:H21	4:C:51:ARG:HG2	1.55	0.71
9:H:3:VAL:HG22	9:H:21:VAL:HG11	1.73	0.71
14:N:101:GLY:HA2	14:N:109:PRO:HA	1.73	0.71
22:W:66:VAL:HG13	22:W:67:LYS:H	1.56	0.71
32:a:814:A:H5'	32:a:1511:G:H4'	1.73	0.71
32:a:949:A:C5'	43:m:37:GLY:N	2.54	0.71
32:a:1123:U:H5	40:j:88:MET:CA	1.99	0.71
32:a:1258:G:N3	44:n:83:VAL:CG1	2.54	0.71
32:a:1305:G:O3'	43:m:55:LEU:HA	1.85	0.71
32:a:1305:G:O2'	43:m:55:LEU:HD13	1.89	0.71
33:c:67:ILE:HD13	40:j:53:ILE:HD13	1.72	0.71
33:c:83:VAL:C	40:j:62:ARG:HG3	2.16	0.71
34:d:194:ILE:HD13	34:d:195:ASN:N	2.06	0.71
2:B:2512:C:H4'	5:D:146:ILE:HG12	1.72	0.71
4:C:3:VAL:HG12	4:C:4:LYS:H	1.56	0.71
7:F:73:VAL:O	53:v:56:C:O2	2.07	0.71
18:R:54:VAL:CA	18:R:54:VAL:CG1	2.69	0.71
32:a:1013:G:H2'	49:s:19:GLU:OE2	1.91	0.71
32:a:1124:G:N7	40:j:88:MET:HE3	2.05	0.71
32:a:1330:U:H2'	32:a:1331:G:H5'	1.72	0.71
43:m:78:ARG:NH2	43:m:79:LEU:HG	2.05	0.71
51:7:46:VAL:HA	51:7:49:PHE:HD2	1.55	0.71
2:B:2155:U:H2'	2:B:2156:G:O4'	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:3:GLY:HA2	5:D:49:GLN:OE1	1.91	0.70
5:D:21:SER:C	5:D:23:PRO:HD3	2.15	0.70
6:E:193:VAL:HG12	6:E:194:LYS:HD2	1.73	0.70
7:F:111:ARG:CD	43:m:108:ARG:NE	2.54	0.70
20:T:66:LYS:H	20:T:77:ARG:HA	1.56	0.70
32:a:780:A:O2'	32:a:781:A:H5"	1.91	0.70
32:a:1011:C:C4'	49:s:23:GLU:OE2	2.34	0.70
32:a:1015:G:OP2	44:n:40:ARG:CZ	2.38	0.70
32:a:1148:U:C4	40:j:83:THR:HA	2.25	0.70
32:a:1236:A:P	43:m:49:GLU:HA	2.30	0.70
32:a:1471:U:O2'	32:a:1472:U:H5'	1.90	0.70
2:B:1913:A:H1'	2:B:1914:C:OP1	1.90	0.70
5:D:170:VAL:HG13	5:D:171:THR:N	2.06	0.70
10:J:11:VAL:HG13	10:J:12:LYS:N	2.02	0.70
20:T:8:LEU:HB3	23:X:19:LEU:HD11	1.71	0.70
32:a:1126:U:C1'	40:j:36:VAL:HG12	2.11	0.70
32:a:1153:G:C8	40:j:92:LEU:CG	2.59	0.70
32:a:1305:G:HO2'	43:m:55:LEU:HB3	1.55	0.70
32:a:1359:C:H5	44:n:63:CYS:H	1.37	0.70
2:B:1594:U:H2'	2:B:1595:C:C6	2.27	0.70
4:C:22:GLU:HA	4:C:202:ARG:CZ	2.22	0.70
6:E:146:VAL:O	6:E:184:ASP:HB2	1.92	0.70
12:L:82:LEU:HD13	12:L:83:ALA:N	2.05	0.70
12:L:142:ILE:HG13	12:L:143:GLU:H	1.57	0.70
15:O:17:LYS:HE2	22:W:77:LYS:HD2	1.73	0.70
22:W:24:ARG:HB3	22:W:57:THR:O	1.90	0.70
32:a:186:C:H5'	50:t:72:ALA:CB	2.20	0.70
32:a:946:A:C6	43:m:46:GLU:C	2.69	0.70
32:a:1235:U:H2'	43:m:52:ILE:HG23	1.73	0.70
32:a:1261:A:N7	44:n:100:TRP:CH2	2.56	0.70
32:a:1302:C:C4'	43:m:6:ILE:CA	2.67	0.70
33:c:100:ILE:HD13	40:j:51:VAL:HG12	1.72	0.70
47:q:29:LYS:HD3	47:q:35:LYS:N	2.06	0.70
7:F:73:VAL:HG11	53:v:57:G:H8	1.55	0.70
7:F:137:PHE:C	43:m:112:ARG:O	2.32	0.70
32:a:945:G:N2	43:m:46:GLU:H	1.75	0.70
32:a:1259:C:O4'	44:n:83:VAL:CG1	2.40	0.70
32:a:1409:C:H42	32:a:1491:G:H1	1.40	0.70
42:l:98:ARG:HA	42:l:98:ARG:HE	1.55	0.70
2:B:38:A:C8	6:E:46:GLN:CD	2.69	0.70
2:B:265:A:O2'	2:B:266:G:H4'	1.90	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1083:U:H1'	2:B:1086:A:H61	1.55	0.70
2:B:2484:G:H1'	13:M:119:LEU:HD12	1.73	0.70
4:C:74:PRO:HB2	4:C:96:LYS:HE3	1.74	0.70
24:Y:54:VAL:HG22	24:Y:55:LYS:H	1.55	0.70
25:Z:59:ARG:HE	25:Z:62:LYS:HD2	1.56	0.70
31:6:135:MET:HG3	31:6:137:LEU:HG	1.73	0.70
32:a:948:C:C4'	43:m:36:ALA:HB3	2.22	0.70
32:a:984:C:N4	49:s:5:LYS:HB3	2.04	0.70
32:a:1151:A:C4'	40:j:24:GLU:HB3	2.15	0.70
32:a:1254:A:H1'	44:n:81:ILE:CD1	2.22	0.70
32:a:1301:U:C4	43:m:8:ILE:HG13	1.81	0.70
32:a:1329:A:C2	43:m:62:PHE:CE2	2.79	0.70
39:i:71:ILE:H	39:i:71:ILE:HD12	1.55	0.70
43:m:38:ILE:HG13	43:m:55:LEU:HD21	1.72	0.70
2:B:85:G:H5'	21:U:28:LEU:CA	2.21	0.70
4:C:127:ASN:HD22	4:C:128:THR:N	1.90	0.70
5:D:148:GLN:HG3	5:D:151:THR:OG1	1.91	0.70
12:L:25:SER:HB3	12:L:27:LEU:HG	1.72	0.70
13:M:100:LYS:HE3	13:M:100:LYS:N	2.07	0.70
16:P:92:ARG:CZ	16:P:110:LYS:HB3	2.21	0.70
21:U:79:ALA:O	21:U:96:LYS:HA	1.92	0.70
30:5:24:ARG:HA	30:5:34:LYS:O	1.90	0.70
31:6:32:VAL:HG22	31:6:60:VAL:HG21	1.73	0.70
32:a:1016:A:OP2	44:n:32:ASP:CB	2.39	0.70
38:h:49:LYS:HG3	38:h:50:VAL:H	1.56	0.70
2:B:590:A:H2'	2:B:591:U:C6	2.27	0.70
2:B:1440:U:H2'	2:B:1441:G:H8	1.57	0.70
2:B:1799:G:H4'	2:B:1800:C:O5'	1.92	0.70
4:C:110:LYS:HD2	4:C:111:ALA:H	1.55	0.70
7:F:138:PRO:CD	43:m:112:ARG:O	2.28	0.70
9:H:46:PHE:HB3	9:H:50:ARG:HH21	1.51	0.70
10:J:77:HIS:HD2	10:J:85:LYS:H	1.39	0.70
16:P:5:LYS:C	16:P:7:LEU:H	1.96	0.70
17:Q:57:ARG:HD2	17:Q:92:LYS:HZ2	1.57	0.70
32:a:376:G:H5'	46:p:6:LEU:O	1.91	0.70
32:a:939:G:H5'	37:g:101:ARG:NH2	2.05	0.70
32:a:968:A:OP2	39:i:129:ARG:HD2	1.91	0.70
32:a:1121:U:O2	40:j:91:ASP:CG	2.34	0.70
32:a:1306:A:C5'	43:m:32:ILE:HG12	2.22	0.70
32:a:1320:C:P	49:s:68:HIS:CE1	2.84	0.70
9:H:134:VAL:HG13	9:H:135:HIS:H	1.56	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:8:ARG:CZ	19:S:102:HIS:NE2	2.55	0.70
24:Y:10:ARG:NE	24:Y:31:ILE:HG13	2.02	0.70
32:a:673:A:H2'	32:a:674:G:C8	2.27	0.70
32:a:922:G:H2'	32:a:923:A:C8	2.27	0.70
32:a:994:A:N3	44:n:19:TYR:CZ	2.59	0.70
32:a:1148:U:O4	40:j:83:THR:O	2.09	0.70
32:a:1308:U:C4	43:m:24:VAL:HG12	2.27	0.70
41:k:19:VAL:HG12	41:k:82:GLU:HB2	1.74	0.70
42:l:28:GLN:HG3	42:l:80:LEU:HD21	1.73	0.70
44:n:58:ARG:HE	49:s:6:LYS:NZ	1.89	0.70
51:7:212:TYR:O	51:7:216:VAL:HG23	1.92	0.70
4:C:110:LYS:HD2	4:C:111:ALA:N	2.07	0.70
10:J:17:VAL:HG13	10:J:57:LEU:HD21	1.73	0.70
20:T:8:LEU:HD23	20:T:8:LEU:H	1.56	0.70
32:a:186:C:O3'	50:t:76:ALA:HA	1.92	0.70
2:B:25:U:H5"	19:S:80:PRO:HD3	1.73	0.70
2:B:851:C:O2'	24:Y:45:GLY:HA3	1.92	0.70
2:B:2064:C:H2'	2:B:2065:C:C6	2.27	0.70
9:H:81:ALA:HA	9:H:146:VAL:HA	1.74	0.70
32:a:1112:C:O2'	33:c:178:ARG:HB2	1.91	0.70
32:a:1218:C:P	44:n:48:GLN:O	2.49	0.70
32:a:1283:U:C6	44:n:88:MET:CE	2.71	0.70
32:a:1372:U:C3'	39:i:72:SER:HG	2.03	0.70
2:B:2092:U:P	9:H:27:ARG:NH2	2.65	0.69
5:D:106:LYS:NZ	5:D:208:LYS:HD3	2.07	0.69
31:6:11:GLN:HA	31:6:55:PRO:HA	1.74	0.69
32:a:1127:G:C8	40:j:36:VAL:N	2.54	0.69
32:a:1306:A:N1	43:m:29:SER:HB3	2.06	0.69
32:a:1306:A:H2	43:m:15:VAL:O	1.73	0.69
32:a:1321:U:C2	49:s:2:ARG:CG	2.73	0.69
33:c:57:GLU:HB2	33:c:64:ARG:HB2	1.73	0.69
2:B:1082:U:N3	2:B:1086:A:C6	2.59	0.69
4:C:107:LYS:H	4:C:194:VAL:HG21	1.55	0.69
6:E:4:VAL:HB	6:E:117:ARG:HH21	1.56	0.69
6:E:135:ALA:HA	6:E:138:LEU:HB2	1.74	0.69
9:H:82:SER:HB2	9:H:94:ILE:HD11	1.74	0.69
13:M:108:VAL:O	13:M:110:GLU:N	2.25	0.69
18:R:78:ARG:CB	18:R:87:GLN:HA	2.20	0.69
25:Z:59:ARG:HH21	25:Z:62:LYS:NZ	1.88	0.69
32:a:177:G:H5"	50:t:59:ARG:NH2	2.06	0.69
32:a:1011:C:C5	44:n:33:VAL:HG12	2.27	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1318:A:O3'	49:s:64:GLU:OE2	2.09	0.69
32:a:1328:C:O2'	43:m:68:LEU:CD2	2.21	0.69
32:a:1379:G:O6	37:g:2:ARG:HA	1.92	0.69
1:A:98:G:H1	3:V:14:LYS:HB2	1.57	0.69
2:B:78:U:H2'	2:B:79:C:C6	2.26	0.69
2:B:101:A:OP1	21:U:90:LYS:HB3	1.92	0.69
2:B:1676:A:O2'	5:D:133:THR:HG23	1.92	0.69
4:C:119:VAL:HG22	4:C:133:ASN:HD21	1.58	0.69
6:E:118:LEU:HD12	6:E:187:VAL:HG12	1.73	0.69
6:E:119:ILE:HA	6:E:189:THR:HA	1.74	0.69
13:M:108:VAL:N	13:M:109:PRO:HD2	2.06	0.69
25:Z:59:ARG:HH21	25:Z:62:LYS:HZ2	1.38	0.69
32:a:1255:G:OP1	44:n:78:LEU:CD2	2.37	0.69
33:c:83:VAL:C	40:j:62:ARG:NE	2.45	0.69
39:i:112:ARG:NH1	39:i:112:ARG:HB2	2.07	0.69
49:s:48:ILE:HB	49:s:59:VAL:HB	1.73	0.69
2:B:1857:G:H2'	2:B:1884:G:H22	1.57	0.69
5:D:37:VAL:HG22	5:D:46:ARG:HE	1.57	0.69
12:L:38:GLN:O	12:L:39:LYS:HG3	1.92	0.69
12:L:85:VAL:CG2	12:L:98:ALA:H	2.06	0.69
26:1:31:LYS:HD3	26:1:47:TYR:HE2	1.57	0.69
32:a:1122:U:H5	40:j:89:ARG:NH2	1.90	0.69
32:a:1127:G:H3'	40:j:34:ALA:O	1.93	0.69
32:a:1182:G:H4'	32:a:1183:U:C5'	2.21	0.69
33:c:102:ILE:H	40:j:51:VAL:HG11	1.54	0.69
40:j:40:ILE:HG13	40:j:73:LEU:HB3	1.75	0.69
46:p:7:ALA:HB1	46:p:29:ASN:HB3	1.74	0.69
51:7:67:LEU:HD12	51:7:153:MET:HE2	1.74	0.69
52:u:14:ALA:CA	52:u:16:ARG:HD2	2.22	0.69
5:D:114:LYS:HB3	14:N:3:HIS:NE2	2.08	0.69
13:M:69:PRO:HB2	13:M:71:LYS:HZ1	1.55	0.69
17:Q:96:ASP:O	17:Q:99:VAL:HG22	1.90	0.69
20:T:30:ILE:HG22	20:T:85:VAL:HG22	1.74	0.69
22:W:43:LYS:HG2	22:W:76:ARG:NH2	2.07	0.69
32:a:1127:G:C5	40:j:76:ILE:HG21	2.00	0.69
32:a:1236:A:OP1	43:m:56:ARG:CZ	2.39	0.69
32:a:1261:A:N6	44:n:100:TRP:CE3	2.58	0.69
32:a:1371:G:OP1	39:i:12:LYS:HG2	1.92	0.69
33:c:99:GLN:CD	40:j:49:PHE:HA	1.92	0.69
37:g:38:ALA:O	37:g:41:ILE:HG22	1.92	0.69
40:j:56:HIS:O	40:j:57:VAL:HG12	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1913:A:H61	32:a:1492:A:H2	1.28	0.69
2:B:2052:A:H4'	5:D:148:GLN:HG2	1.73	0.69
4:C:180:MET:HB2	4:C:265:PHE:HB3	1.73	0.69
7:F:110:ILE:H	43:m:105:ALA:CA	2.05	0.69
7:F:135:ILE:HD13	7:F:138:PRO:HA	1.72	0.69
9:H:125:THR:HA	9:H:146:VAL:HB	1.73	0.69
11:K:2:ILE:HD11	11:K:8:LEU:HD11	1.75	0.69
12:L:63:LYS:HD3	29:4:7:ARG:CZ	2.22	0.69
12:L:120:VAL:HG12	12:L:138:ALA:HB3	1.73	0.69
18:R:18:GLN:HE21	18:R:99:THR:HB	1.57	0.69
29:4:41:ARG:HB3	29:4:43:LEU:HD22	1.73	0.69
32:a:1125:U:O4	40:j:25:ILE:CG2	2.40	0.69
33:c:65:VAL:CG2	40:j:65:TYR:HA	2.21	0.69
33:c:87:ARG:HE	40:j:52:LEU:HD12	1.58	0.69
37:g:13:PRO:HB2	37:g:18:GLY:HA2	1.72	0.69
2:B:1902:C:H4'	4:C:240:GLY:O	1.92	0.69
8:G:40:VAL:HG13	8:G:52:GLY:O	1.92	0.69
12:L:63:LYS:N	29:4:24:LYS:HZ2	1.91	0.69
17:Q:10:ARG:HA	17:Q:10:ARG:CZ	2.22	0.69
20:T:13:ALA:O	20:T:32:LEU:HA	1.93	0.69
32:a:279:A:H5"	32:a:280:C:H3'	1.74	0.69
32:a:1124:G:H4'	40:j:8:ILE:HG12	1.75	0.69
32:a:1230:C:P	53:v:30:G:C4'	2.77	0.69
32:a:1307:U:O2	43:m:29:SER:HB3	1.57	0.69
42:l:80:LEU:HD23	42:l:97:VAL:HG21	1.75	0.69
2:B:1565:C:OP1	4:C:23:LEU:HD23	1.93	0.69
2:B:2512:C:H1'	5:D:146:ILE:HG23	1.75	0.69
2:B:2621:G:O2'	5:D:164:GLN:HB2	1.93	0.69
2:B:2784:U:H5"	5:D:41:ALA:HB1	1.75	0.69
3:V:76:ASP:HB2	13:M:136:MET:SD	2.33	0.69
7:F:107:VAL:N	7:F:108:PRO:CD	2.55	0.69
7:F:116:LEU:CD2	43:m:103:THR:N	2.55	0.69
7:F:138:PRO:O	43:m:112:ARG:O	2.11	0.69
9:H:50:ARG:H	9:H:50:ARG:CD	2.02	0.69
9:H:140:ALA:C	9:H:141:LYS:HD3	2.18	0.69
12:L:78:ARG:HH21	12:L:82:LEU:HD23	1.58	0.69
14:N:115:LEU:O	14:N:116:VAL:HG12	1.91	0.69
17:Q:77:LYS:HB3	17:Q:116:LEU:HD11	1.75	0.69
18:R:66:HIS:H	18:R:98:ILE:HD13	1.57	0.69
18:R:90:ARG:NH1	18:R:91:GLN:H	1.90	0.69
21:U:11:ILE:HB	21:U:69:VAL:HB	1.72	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Z:5:ILE:HB	25:Z:51:VAL:HG12	1.74	0.69
26:1:29:VAL:HG23	26:1:36:LYS:HZ3	1.56	0.69
32:a:1126:U:O2	40:j:39:PRO:CD	2.34	0.69
32:a:1150:A:N1	40:j:87:LEU:CA	2.40	0.69
32:a:1218:C:C2	44:n:45:LEU:O	2.46	0.69
32:a:1276:G:C5	44:n:95:LEU:CD1	2.74	0.69
32:a:1305:G:H2'	43:m:18:LEU:HD21	1.73	0.69
32:a:1333:A:C2	43:m:44:ILE:HA	2.27	0.69
32:a:1348:U:OP1	39:i:111:GLU:CB	2.37	0.69
33:c:99:GLN:O	40:j:64:GLN:CA	2.30	0.69
51:7:141:GLU:O	51:7:145:ASN:HB2	1.93	0.69
2:B:1182:G:H2'	2:B:1183:U:O4'	1.93	0.69
7:F:111:ARG:CD	43:m:108:ARG:CZ	2.71	0.69
17:Q:52:ARG:NH2	17:Q:55:GLN:HG2	2.07	0.69
21:U:3:LYS:HE3	21:U:81:ARG:NH2	2.07	0.69
25:Z:26:SER:O	25:Z:28:VAL:HG13	1.93	0.69
32:a:390:U:H2'	32:a:391:G:C8	2.27	0.69
32:a:975:A:C4	44:n:2:LYS:CA	2.75	0.69
32:a:979:C:N3	44:n:57:SER:HB3	2.08	0.69
32:a:1125:U:C4	40:j:36:VAL:HG22	2.27	0.69
32:a:1129:C:C4	40:j:80:THR:OG1	2.45	0.69
32:a:1215:G:H22	44:n:47:LEU:HD11	1.57	0.69
32:a:1219:A:C8	49:s:7:GLY:C	2.71	0.69
32:a:1332:A:N1	43:m:18:LEU:CD1	2.56	0.69
32:a:1332:A:C4'	43:m:19:THR:OG1	2.40	0.69
32:a:1333:A:OP1	43:m:12:LYS:NZ	2.24	0.69
35:e:101:GLY:H	35:e:121:ASN:HD21	1.41	0.69
35:e:155:LYS:HE3	38:h:70:VAL:HG13	1.74	0.69
2:B:990:A:H1'	2:B:1156:A:C2	2.27	0.69
7:F:113:PHE:CA	43:m:95:PRO:CB	2.66	0.69
7:F:117:SER:N	43:m:100:ARG:HE	1.90	0.69
9:H:8:LYS:HB3	9:H:14:SER:HA	1.75	0.69
10:J:99:ARG:HA	10:J:103:ILE:HG13	1.75	0.69
14:N:73:ASN:HD22	14:N:73:ASN:N	1.91	0.69
17:Q:33:VAL:HG13	17:Q:34:ALA:N	2.07	0.69
23:X:30:MET:HG3	23:X:31:GLN:N	2.08	0.69
32:a:1236:A:N3	43:m:47:LEU:CB	2.47	0.69
32:a:1280:A:N6	40:j:29:ALA:CB	2.51	0.69
32:a:1304:G:H5"	43:m:56:ARG:HH21	1.52	0.69
38:h:30:LYS:HA	38:h:30:LYS:HZ2	1.58	0.69
39:i:40:ARG:H	39:i:44:ARG:HE	1.39	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:r:46:THR:HG23	48:r:51:GLN:HB2	1.75	0.69
2:B:1485:U:H2'	2:B:1486:U:C6	2.28	0.68
4:C:68:ARG:HH21	4:C:190:THR:HG23	1.58	0.68
4:C:181:ARG:NH1	4:C:260:LYS:HD2	2.08	0.68
7:F:77:LYS:HD2	53:v:19:G:N2	2.08	0.68
10:J:58:ASN:ND2	10:J:128:ASN:HB2	2.08	0.68
28:3:33:ARG:O	28:3:37:LYS:HB2	1.93	0.68
32:a:71:A:H61	32:a:99:C:H1'	1.56	0.68
32:a:518:C:H2'	32:a:530:G:C8	2.28	0.68
32:a:980:C:H1'	44:n:57:SER:CB	2.23	0.68
32:a:980:C:H3'	44:n:58:ARG:HD2	1.75	0.68
32:a:1326:U:H2'	32:a:1327:C:C6	2.28	0.68
33:c:58:ARG:CB	40:j:68:ARG:CD	2.58	0.68
33:c:83:VAL:C	40:j:62:ARG:HD2	2.13	0.68
42:l:79:ILE:HD13	42:l:96:THR:HG22	1.74	0.68
43:m:18:LEU:HB3	43:m:29:SER:HB2	1.67	0.68
2:B:630:G:H1	12:L:69:ARG:NH2	1.90	0.68
2:B:1450:G:N2	2:B:1452:G:H1	1.91	0.68
2:B:2301:C:H2'	2:B:2302:U:C6	2.28	0.68
2:B:2723:C:OP1	14:N:3:HIS:HB3	1.94	0.68
4:C:155:ARG:HB3	4:C:159:THR:HG21	1.74	0.68
5:D:117:GLY:O	5:D:165:MET:HB2	1.94	0.68
6:E:128:ALA:HB3	6:E:129:PRO:CD	2.20	0.68
7:F:79:ARG:CD	53:v:56:C:C5	2.73	0.68
13:M:108:VAL:N	13:M:109:PRO:CD	2.56	0.68
21:U:43:LYS:HA	21:U:57:ILE:HA	1.74	0.68
22:W:23:LYS:HB2	22:W:23:LYS:HZ2	1.58	0.68
23:X:21:LEU:HD23	23:X:47:ARG:HG3	1.74	0.68
32:a:1221:G:H3'	49:s:3:SER:C	2.17	0.68
33:c:58:ARG:NH1	40:j:66:GLU:OE1	2.22	0.68
33:c:63:ILE:HD11	40:j:64:GLN:CB	2.22	0.68
2:B:869:G:H2'	2:B:870:U:H6	1.58	0.68
2:B:1021:A:N6	2:B:1141:U:H3	1.82	0.68
2:B:2786:U:H4'	5:D:66:GLY:HA2	1.74	0.68
4:C:19:VAL:HG12	4:C:20:ASN:N	2.08	0.68
7:F:111:ARG:HD2	43:m:108:ARG:CZ	2.22	0.68
8:G:9:VAL:HG23	8:G:47:ASN:HB2	1.74	0.68
13:M:38:ARG:HG2	13:M:96:ILE:HG12	1.75	0.68
13:M:40:ARG:HH11	13:M:92:TRP:HE3	1.40	0.68
14:N:10:LEU:H	14:N:17:ARG:NH1	1.88	0.68
16:P:70:GLU:HG2	16:P:71:ARG:HG2	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Z:3:LYS:HE3	25:Z:8:LYS:HA	1.74	0.68
31:6:121:ILE:HA	31:6:124:MET:HE3	1.76	0.68
32:a:1021:A:H2'	32:a:1022:A:O4'	1.93	0.68
32:a:1125:U:O5'	40:j:76:ILE:HG13	1.93	0.68
32:a:1191:A:OP2	33:c:2:GLN:NE2	2.26	0.68
32:a:1236:A:C2	43:m:45:SER:O	2.24	0.68
32:a:1237:C:O2'	43:m:10:ASP:OD2	2.10	0.68
32:a:1332:A:C1'	43:m:19:THR:H	2.05	0.68
33:c:63:ILE:CG2	40:j:66:GLU:HB3	2.22	0.68
37:g:150:PHE:CZ	41:k:55:ARG:HG2	2.29	0.68
49:s:49:ALA:HA	49:s:57:VAL:O	1.93	0.68
2:B:191:A:H2'	2:B:192:C:C6	2.29	0.68
4:C:136:VAL:HG12	4:C:165:ALA:HA	1.75	0.68
7:F:63:LYS:HE2	7:F:64:PRO:HD2	1.73	0.68
7:F:138:PRO:CA	43:m:112:ARG:O	2.40	0.68
11:K:85:VAL:HG11	11:K:115:ILE:HD12	1.73	0.68
25:Z:63:ARG:HA	25:Z:63:ARG:NE	2.07	0.68
32:a:268:U:H2'	32:a:269:C:C6	2.28	0.68
32:a:1126:U:C5	40:j:74:VAL:C	2.66	0.68
32:a:1153:G:C4	40:j:92:LEU:HD13	2.16	0.68
32:a:1305:G:OP2	43:m:3:ILE:HG12	1.93	0.68
32:a:1412:C:H2'	32:a:1413:A:C8	2.29	0.68
35:e:155:LYS:HA	38:h:65:PHE:CD1	2.28	0.68
36:f:37:HIS:CE1	36:f:65:GLU:HB2	2.29	0.68
47:q:20:ILE:HG13	47:q:45:VAL:HB	1.73	0.68
52:u:7:GLU:OE2	52:u:15:LEU:HD22	1.93	0.68
1:A:49:C:H2'	1:A:50:A:H8	1.56	0.68
2:B:956:G:N2	2:B:959:A:H3'	2.09	0.68
2:B:1113:U:H5"	8:G:2:ARG:N	2.08	0.68
2:B:1959:G:C1'	32:a:1418:A:H1'	2.24	0.68
6:E:164:LEU:O	6:E:165:HIS:HB2	1.93	0.68
10:J:37:ARG:HH21	10:J:110:PRO:HG3	1.58	0.68
11:K:98:ARG:NH2	32:a:339:C:P	2.66	0.68
12:L:56:PRO:HA	12:L:60:ARG:CZ	2.23	0.68
21:U:38:ILE:HB	21:U:62:ALA:HB3	1.75	0.68
21:U:60:LYS:HG3	21:U:61:GLU:H	1.58	0.68
32:a:1125:U:O5'	40:j:76:ILE:N	2.25	0.68
32:a:1357:A:OP2	44:n:68:ARG:HB2	1.93	0.68
33:c:141:MET:HA	33:c:141:MET:HE3	1.75	0.68
2:B:1285:A:H2'	2:B:1286:A:H5"	1.75	0.68
7:F:33:ILE:HG13	7:F:34:THR:H	1.58	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:58:ASN:HA	10:J:126:ALA:HA	1.76	0.68
10:J:77:HIS:CD2	10:J:84:ILE:HB	2.29	0.68
12:L:106:GLU:HG2	12:L:107:PHE:H	1.57	0.68
15:O:10:ARG:HH11	15:O:10:ARG:HG3	1.59	0.68
15:O:15:ARG:HH22	15:O:17:LYS:HD2	1.59	0.68
18:R:18:GLN:HB3	18:R:99:THR:HA	1.75	0.68
32:a:753:A:OP1	45:o:72:LYS:HE3	1.94	0.68
32:a:1150:A:N1	40:j:87:LEU:HA	1.77	0.68
32:a:1259:C:H5'	44:n:73:LEU:HD11	1.74	0.68
33:c:63:ILE:HG22	40:j:66:GLU:OE2	1.92	0.68
33:c:64:ARG:HA	40:j:49:PHE:N	2.09	0.68
42:l:24:GLU:HB3	42:l:26:CYS:SG	2.34	0.68
44:n:30:ILE:H	44:n:30:ILE:HD12	1.56	0.68
2:B:1818:U:H5"	4:C:155:ARG:CG	2.24	0.68
2:B:2769:U:H2'	2:B:2770:G:H8	1.58	0.68
4:C:28:PRO:HB2	4:C:79:ARG:HH21	1.58	0.68
7:F:139:GLU:OE1	43:m:114:PRO:HG3	1.93	0.68
7:F:151:LEU:CD2	43:m:112:ARG:NH1	2.56	0.68
9:H:45:GLU:OE1	9:H:45:GLU:HA	1.92	0.68
10:J:10:THR:HB	10:J:13:ARG:HH12	1.58	0.68
10:J:43:GLU:HG3	10:J:44:TYR:H	1.58	0.68
18:R:6:GLN:HA	18:R:10:LYS:HA	1.74	0.68
32:a:1153:G:N7	40:j:92:LEU:N	2.42	0.68
32:a:1153:G:C1'	40:j:91:ASP:O	2.42	0.68
32:a:1190:G:H3'	33:c:2:GLN:O	1.93	0.68
32:a:1219:A:O2'	49:s:9:PHE:C	2.36	0.68
2:B:450:G:H4'	6:E:47:LYS:HZ2	1.57	0.68
2:B:2575:C:C5'	5:D:149:ASN:HB2	2.21	0.68
4:C:61:TYR:CD2	4:C:84:PRO:HD2	2.28	0.68
5:D:109:VAL:HG11	5:D:193:VAL:HG23	1.76	0.68
7:F:56:LEU:O	7:F:59:ILE:HG22	1.93	0.68
13:M:101:VAL:O	13:M:102:LEU:HD12	1.94	0.68
32:a:946:A:H1'	43:m:43:LYS:O	1.92	0.68
32:a:1000:A:H2'	32:a:1001:C:C6	2.29	0.68
32:a:1208:C:H2'	32:a:1209:C:O4'	1.93	0.68
32:a:1237:C:C4	43:m:45:SER:O	2.47	0.68
32:a:1337:G:H22	43:m:45:SER:C	2.00	0.68
33:c:9:ILE:HG23	33:c:10:ARG:HG3	1.76	0.68
33:c:67:ILE:HD11	40:j:63:ASP:CG	2.19	0.68
38:h:111:THR:HG23	38:h:114:ALA:HB2	1.76	0.68
39:i:33:SER:HB3	39:i:36:GLN:HB2	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:j:6:ILE:HG12	40:j:102:LEU:HD11	1.74	0.68
4:C:220:ARG:NE	4:C:220:ARG:HA	2.09	0.68
9:H:48:GLU:HA	9:H:51:ARG:HB2	1.76	0.68
9:H:73:ASN:ND2	9:H:74:ALA:H	1.91	0.68
17:Q:92:LYS:HG2	17:Q:93:ILE:H	1.59	0.68
32:a:976:G:C6	44:n:70:HIS:NE2	2.52	0.68
32:a:1335:U:OP2	43:m:11:HIS:HA	1.94	0.68
33:c:77:GLY:CA	40:j:58:ASN:HB2	2.24	0.68
37:g:15:PRO:O	39:i:45:MET:SD	2.52	0.68
2:B:65:U:H4'	20:T:70:HIS:ND1	2.10	0.68
4:C:22:GLU:HA	4:C:202:ARG:NH2	2.09	0.68
4:C:22:GLU:HA	4:C:202:ARG:NE	2.09	0.68
8:G:29:ASN:HD22	8:G:29:ASN:N	1.91	0.68
10:J:100:VAL:HG22	10:J:101:ILE:H	1.58	0.68
32:a:1060:U:H2'	32:a:1061:G:H8	1.58	0.68
32:a:1152:A:OP2	40:j:20:GLN:HB2	1.93	0.68
32:a:1251:A:H2'	32:a:1252:A:C8	2.28	0.68
32:a:1279:G:C2	44:n:92:ILE:HB	2.15	0.68
32:a:1305:G:C2'	43:m:18:LEU:HD21	2.24	0.68
32:a:1306:A:N6	43:m:24:VAL:HG22	2.06	0.68
42:l:20:VAL:HG13	42:l:94:TYR:HH	1.58	0.68
2:B:215:G:H4'	2:B:216:A:H4'	1.76	0.67
2:B:2307:G:H4'	2:B:2311:A:H61	1.58	0.67
4:C:27:LYS:N	4:C:28:PRO:CD	2.56	0.67
4:C:163:ILE:HG22	4:C:164:VAL:H	1.59	0.67
6:E:73:ILE:HG22	6:E:73:ILE:O	1.91	0.67
10:J:7:LYS:NZ	10:J:48:VAL:HB	2.09	0.67
18:R:6:GLN:HB3	18:R:10:LYS:HE3	1.76	0.67
18:R:62:GLU:HG3	18:R:103:ALA:HA	1.75	0.67
32:a:967:C:H3'	32:a:968:A:H5'	1.75	0.67
32:a:1146:A:C5'	40:j:85:ASP:OD1	2.42	0.67
32:a:1153:G:N3	40:j:91:ASP:OD1	2.26	0.67
32:a:1234:C:O2	43:m:50:GLY:O	2.11	0.67
32:a:1305:G:O5'	43:m:53:ASP:HA	1.93	0.67
32:a:1372:U:OP2	39:i:12:LYS:NZ	2.26	0.67
33:c:64:ARG:HH21	40:j:67:ILE:HD12	1.58	0.67
45:o:68:TYR:CZ	45:o:72:LYS:HG3	2.29	0.67
52:u:14:ALA:HA	52:u:16:ARG:HD2	1.76	0.67
2:B:479:A:N3	2:B:481:G:H5"	2.09	0.67
2:B:1112:G:H5'	8:G:2:ARG:HE	1.58	0.67
2:B:1354:A:H2'	2:B:1355:G:O4'	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:15:PHE:HD2	5:D:18:ASP:HB2	1.58	0.67
21:U:3:LYS:HE3	21:U:81:ARG:HH22	1.59	0.67
32:a:1011:C:N3	44:n:33:VAL:HG12	2.09	0.67
32:a:1220:G:H5"	49:s:38:THR:CB	2.24	0.67
32:a:1359:C:N4	44:n:79:SER:OG	2.27	0.67
40:j:71:LEU:H	40:j:71:LEU:HD12	1.58	0.67
10:J:67:ASN:O	10:J:70:THR:HG22	1.94	0.67
14:N:98:LEU:O	14:N:111:ALA:HA	1.94	0.67
21:U:95:PHE:HD1	21:U:96:LYS:HG2	1.60	0.67
32:a:376:G:OP1	46:p:5:ARG:CB	2.42	0.67
32:a:473:U:H2'	32:a:474:G:H8	1.58	0.67
32:a:750:C:O2'	45:o:22:GLY:HA3	1.94	0.67
32:a:983:A:OP1	44:n:51:PRO:O	2.11	0.67
32:a:1127:G:H22	40:j:83:THR:C	2.02	0.67
32:a:1235:U:O2	43:m:47:LEU:CD2	2.31	0.67
32:a:1235:U:C4'	43:m:54:THR:CG2	2.70	0.67
32:a:1280:A:O4'	40:j:26:VAL:CG2	2.40	0.67
32:a:1305:G:OP1	43:m:53:ASP:HA	1.95	0.67
32:a:1319:A:P	49:s:64:GLU:OE2	2.52	0.67
32:a:1332:A:O4'	43:m:19:THR:OG1	2.12	0.67
51:7:119:GLN:HE22	51:7:127:LYS:HD3	1.60	0.67
51:7:202:ASN:ND2	51:7:204:ASP:H	1.92	0.67
2:B:2324:U:H5'	2:B:2325:G:H5"	1.77	0.67
2:B:2602:A:N7	53:v:75:C:C6	2.62	0.67
4:C:140:VAL:O	4:C:141:HIS:HB2	1.93	0.67
4:C:144:GLU:HB2	4:C:146:LYS:O	1.94	0.67
10:J:7:LYS:HZ2	10:J:49:ASP:H	1.41	0.67
32:a:1016:A:N3	44:n:45:LEU:N	2.43	0.67
32:a:1234:C:C2'	43:m:50:GLY:HA2	2.20	0.67
32:a:1255:G:C8	44:n:86:ALA:HB3	2.29	0.67
32:a:1261:A:N1	44:n:100:TRP:HE3	1.90	0.67
32:a:1261:A:C2	44:n:100:TRP:HE3	2.12	0.67
32:a:1278:G:C4	44:n:93:PRO:HD2	2.29	0.67
32:a:1334:G:H8	43:m:12:LYS:CA	2.06	0.67
38:h:64:TYR:HB3	38:h:69:ALA:HA	1.77	0.67
51:7:53:LEU:HD21	51:7:212:TYR:HE2	1.60	0.67
2:B:1568:G:OP1	4:C:61:TYR:HB2	1.94	0.67
2:B:2840:C:H5"	14:N:53:THR:HG21	1.75	0.67
5:D:128:ARG:HD2	5:D:144:GLY:CA	2.25	0.67
10:J:11:VAL:HG11	10:J:44:TYR:CE1	2.29	0.67
27:2:46:VAL:HG22	27:2:47:ILE:H	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:984:C:N3	49:s:5:LYS:CD	2.58	0.67
32:a:1122:U:C2	40:j:88:MET:HA	2.30	0.67
32:a:1232:U:C4'	39:i:125:GLN:HG3	2.25	0.67
32:a:1255:G:H4'	44:n:83:VAL:CG2	2.22	0.67
32:a:1278:G:C2'	44:n:93:PRO:HD3	2.13	0.67
32:a:1328:C:C2'	43:m:68:LEU:HA	2.19	0.67
32:a:1357:A:H1'	44:n:1:ALA:H3	1.60	0.67
33:c:46:LEU:HD11	33:c:86:LEU:HD21	1.76	0.67
33:c:154:GLY:HA3	33:c:162:ALA:HB1	1.76	0.67
34:d:159:GLU:HG3	34:d:160:LEU:H	1.59	0.67
2:B:1818:U:H2'	4:C:152:GLN:O	1.94	0.67
2:B:2037:A:H2'	2:B:2038:G:C8	2.29	0.67
7:F:116:LEU:HA	43:m:100:ARG:CZ	2.25	0.67
32:a:177:G:H5'	50:t:59:ARG:HE	1.58	0.67
32:a:975:A:C1'	44:n:1:ALA:H2	2.07	0.67
32:a:976:G:C5	44:n:69:PRO:HG2	2.29	0.67
32:a:981:U:P	44:n:55:SER:OG	2.52	0.67
32:a:1112:C:C1'	33:c:178:ARG:HB2	2.23	0.67
32:a:1127:G:N2	40:j:83:THR:O	2.27	0.67
32:a:1259:C:H4'	44:n:80:ARG:HA	1.77	0.67
41:k:69:CYS:C	41:k:71:ASP:H	2.01	0.67
2:B:86:G:OP1	21:U:29:SER:HB2	1.95	0.67
2:B:594:U:H2'	2:B:595:C:C6	2.29	0.67
2:B:1843:C:H5"	4:C:252:LYS:NZ	2.10	0.67
2:B:1856:U:H2'	2:B:1857:G:O4'	1.95	0.67
5:D:101:PHE:O	5:D:102:ALA:HB3	1.95	0.67
14:N:72:ASP:HB3	14:N:74:GLU:HG3	1.76	0.67
32:a:538:G:OP2	42:l:111:GLN:CG	2.43	0.67
32:a:1014:A:H5'	49:s:15:LEU:HA	1.77	0.67
32:a:1071:C:H2'	32:a:1072:G:H8	1.60	0.67
32:a:1250:A:H5"	39:i:68:GLY:HA2	1.76	0.67
33:c:46:LEU:HD21	40:j:53:ILE:CG2	2.20	0.67
33:c:65:VAL:CG2	40:j:65:TYR:N	1.79	0.67
33:c:83:VAL:O	40:j:62:ARG:CA	2.43	0.67
33:c:141:MET:HE1	33:c:147:GLY:H	1.59	0.67
33:c:176:THR:HB	33:c:179:ALA:HB2	1.77	0.67
38:h:102:VAL:HG12	38:h:125:ILE:HD12	1.76	0.67
40:j:87:LEU:HB3	40:j:88:MET:HE3	1.75	0.67
48:r:58:ILE:O	48:r:62:ARG:HG3	1.94	0.67
51:7:102:ASN:O	51:7:106:VAL:HG23	1.93	0.67
51:7:198:VAL:HG22	51:7:200:PRO:HD3	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:95:A:H4'	23:X:40:SER:HB3	1.77	0.67
2:B:1459:G:O2'	2:B:1460:U:H5'	1.95	0.67
2:B:1654:A:OP1	14:N:1:MET:HB2	1.95	0.67
2:B:2270:A:H4'	22:W:18:LYS:CG	2.25	0.67
2:B:2645:G:H3'	2:B:2646:C:H5'	1.76	0.67
6:E:48:THR:HG23	6:E:86:ALA:HB1	1.76	0.67
7:F:110:ILE:N	43:m:105:ALA:CB	2.29	0.67
7:F:174:PHE:N	7:F:175:PRO:CD	2.57	0.67
9:H:26:ALA:HB1	9:H:31:VAL:HG23	1.76	0.67
15:O:55:GLU:HG3	15:O:56:LYS:H	1.59	0.67
16:P:22:GLY:HA3	16:P:91:VAL:HG13	1.75	0.67
18:R:78:ARG:HD3	18:R:88:GLY:N	2.10	0.67
20:T:65:GLY:O	20:T:66:LYS:HB3	1.93	0.67
32:a:407:U:C1'	34:d:115:GLN:OE1	2.43	0.67
32:a:1151:A:H5'	40:j:24:GLU:CA	2.01	0.67
32:a:1253:G:C2'	44:n:85:GLU:OE2	2.43	0.67
2:B:150:U:H2'	2:B:151:C:H6	1.58	0.67
2:B:528:A:C2	2:B:2043:C:H4'	2.30	0.67
7:F:115:GLY:N	43:m:100:ARG:C	2.34	0.67
8:G:175:LYS:HD3	8:G:176:LYS:N	2.09	0.67
9:H:130:VAL:HB	9:H:142:VAL:HB	1.76	0.67
13:M:8:LYS:HD2	13:M:70:ASP:HA	1.76	0.67
15:O:9:ARG:HA	15:O:12:THR:HG23	1.76	0.67
32:a:881:G:OP2	42:l:8:ARG:NH1	2.28	0.67
32:a:975:A:C8	44:n:2:LYS:CD	2.78	0.67
32:a:981:U:N1	44:n:58:ARG:NH2	2.39	0.67
32:a:1113:C:N1	33:c:177:LEU:CD1	2.57	0.67
32:a:1145:A:N6	40:j:78:GLU:O	2.28	0.67
32:a:1221:G:C6	49:s:5:LYS:HE3	2.27	0.67
32:a:1235:U:N1	43:m:48:SER:O	2.28	0.67
32:a:1236:A:H4'	32:a:1304:G:H4'	1.76	0.67
32:a:1278:G:N7	44:n:93:PRO:HG2	2.09	0.67
32:a:1367:C:OP2	39:i:117:LEU:O	2.13	0.67
32:a:1372:U:H5"	39:i:72:SER:CB	2.25	0.67
9:H:87:GLU:HG2	36:f:24:ARG:NH2	2.10	0.67
16:P:38:ARG:C	16:P:39:LEU:HD12	2.20	0.67
23:X:55:THR:HG22	23:X:59:GLU:OE1	1.95	0.67
32:a:845:A:C4'	48:r:47:ARG:NH2	2.55	0.67
32:a:1130:A:N6	40:j:81:GLU:N	2.43	0.67
32:a:1148:U:C2	40:j:83:THR:HG22	2.29	0.67
32:a:1255:G:C6	44:n:86:ALA:C	2.69	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1258:G:O2'	44:n:83:VAL:HG22	1.94	0.67
32:a:1333:A:C2	43:m:44:ILE:CA	2.77	0.67
32:a:1335:U:O4'	43:m:11:HIS:ND1	2.28	0.67
33:c:62:SER:HB2	40:j:48:ARG:O	1.94	0.67
2:B:64:A:H2'	2:B:65:U:C6	2.31	0.66
2:B:1015:U:H2'	2:B:1016:G:H8	1.60	0.66
2:B:1387:A:H2'	2:B:1388:G:H8	1.60	0.66
2:B:1454:C:C5'	14:N:63:ARG:HH21	2.07	0.66
2:B:2308:G:H5'	2:B:2309:A:H5"	1.77	0.66
9:H:51:ARG:HG2	9:H:51:ARG:O	1.95	0.66
14:N:37:THR:HA	14:N:109:PRO:O	1.95	0.66
25:Z:49:ARG:C	25:Z:51:VAL:H	2.03	0.66
30:5:14:CYS:SG	30:5:25:VAL:HG12	2.36	0.66
32:a:667:G:H4'	45:o:50:HIS:CE1	2.30	0.66
32:a:753:A:OP1	45:o:72:LYS:NZ	2.28	0.66
32:a:1152:A:C6	40:j:90:LEU:CA	2.34	0.66
32:a:1241:G:H2'	32:a:1242:G:H8	1.59	0.66
32:a:1306:A:C6	43:m:29:SER:HB2	2.30	0.66
33:c:13:ILE:O	33:c:14:VAL:HG22	1.95	0.66
36:f:10:VAL:HA	36:f:84:VAL:HA	1.77	0.66
2:B:222:A:H61	2:B:232:G:H1'	1.61	0.66
2:B:2339:C:H2'	2:B:2340:A:H8	1.61	0.66
3:V:57:TYR:HB3	13:M:133:LYS:HG3	1.76	0.66
3:V:80:HIS:N	3:V:87:GLN:HE22	1.94	0.66
9:H:3:VAL:HG22	9:H:21:VAL:HG21	1.78	0.66
13:M:4:PRO:O	13:M:5:LYS:C	2.36	0.66
16:P:77:SER:HB2	16:P:78:PRO:HD3	1.76	0.66
22:W:46:ALA:H	22:W:75:ASN:CG	2.02	0.66
24:Y:15:ARG:HH11	24:Y:53:MET:HE1	1.60	0.66
31:6:27:LEU:H	31:6:27:LEU:CD2	2.08	0.66
32:a:17:U:H2'	32:a:18:C:C6	2.30	0.66
32:a:947:G:C8	43:m:39:ALA:O	2.48	0.66
32:a:1146:A:H2	40:j:82:LYS:HE2	1.59	0.66
32:a:1331:G:C6	43:m:4:ALA:HB3	2.28	0.66
2:B:287:G:H2'	2:B:288:U:H6	1.58	0.66
2:B:1531:C:H2'	2:B:1532:A:C8	2.31	0.66
4:C:155:ARG:HG2	4:C:155:ARG:HH21	1.59	0.66
7:F:176:PHE:HA	43:m:102:LYS:HD2	0.68	0.66
19:S:52:GLU:HA	19:S:55:ILE:HG22	1.77	0.66
32:a:901:A:H5'	32:a:902:G:OP2	1.94	0.66
32:a:1108:G:OP2	33:c:174:LEU:HD12	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1148:U:C4	40:j:83:THR:CG2	2.76	0.66
32:a:1289:A:N6	39:i:71:ILE:CD1	2.58	0.66
32:a:1304:G:OP2	43:m:2:ARG:C	2.35	0.66
32:a:1306:A:O2'	43:m:33:LEU:CD1	2.43	0.66
33:c:63:ILE:CG2	40:j:66:GLU:OE2	2.44	0.66
33:c:79:LYS:HE3	40:j:56:HIS:HE1	0.85	0.66
33:c:100:ILE:HD13	40:j:51:VAL:CG1	2.24	0.66
33:c:100:ILE:HG22	40:j:50:THR:C	1.96	0.66
34:d:12:ARG:HD2	34:d:37:PRO:HA	1.75	0.66
38:h:111:THR:H	38:h:114:ALA:HB3	1.59	0.66
50:t:28:ARG:HA	50:t:31:ILE:HD12	1.77	0.66
2:B:320:A:H4'	2:B:322:A:N7	2.09	0.66
2:B:633:A:O5'	2:B:633:A:H8	1.79	0.66
22:W:44:PHE:O	22:W:76:ARG:HA	1.96	0.66
25:Z:5:ILE:HD12	25:Z:5:ILE:H	1.59	0.66
32:a:845:A:H4'	48:r:47:ARG:HH21	1.60	0.66
32:a:845:A:H4'	48:r:47:ARG:HH22	1.58	0.66
32:a:1216:A:H2	44:n:47:LEU:N	1.80	0.66
32:a:1255:G:C4	44:n:87:ALA:N	2.61	0.66
32:a:1359:C:H3'	44:n:62:ARG:H	1.59	0.66
50:t:48:LYS:O	50:t:52:GLU:HB2	1.96	0.66
2:B:91:A:H2'	2:B:92:U:C6	2.29	0.66
2:B:968:C:H2'	2:B:969:G:H8	1.61	0.66
2:B:2216:G:H2'	2:B:2217:G:C8	2.30	0.66
3:V:14:LYS:NZ	3:V:18:ARG:HD2	2.11	0.66
7:F:113:PHE:C	43:m:95:PRO:HG2	2.21	0.66
7:F:116:LEU:HD22	43:m:103:THR:CB	2.24	0.66
8:G:5:LYS:HB3	8:G:68:ARG:NH2	2.10	0.66
9:H:6:LEU:HD12	9:H:15:LEU:HA	1.77	0.66
12:L:95:LEU:HD12	12:L:95:LEU:H	1.58	0.66
32:a:1026:G:H2'	32:a:1027:C:C6	2.31	0.66
32:a:1219:A:C4	49:s:7:GLY:O	2.49	0.66
32:a:1347:G:N1	39:i:108:ARG:NH2	2.36	0.66
2:B:784:G:H5"	4:C:225:ASN:HD21	1.60	0.66
2:B:854:C:H2'	2:B:855:G:H8	1.61	0.66
2:B:1022:G:N7	10:J:68:LYS:HE3	2.10	0.66
2:B:2039:U:H2'	2:B:2040:G:C8	2.31	0.66
3:V:77:VAL:HG21	3:V:79:ARG:HH21	1.61	0.66
4:C:76:VAL:O	4:C:93:VAL:HA	1.96	0.66
6:E:59:PRO:HD2	6:E:60:TRP:CE2	2.31	0.66
13:M:4:PRO:O	13:M:5:LYS:O	2.12	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:45:VAL:HG13	16:P:65:ASN:HD22	1.59	0.66
22:W:23:LYS:HE3	22:W:24:ARG:O	1.96	0.66
25:Z:25:ARG:HH11	25:Z:25:ARG:HB2	1.60	0.66
26:1:11:LYS:HG3	26:1:12:ARG:N	2.10	0.66
26:1:35:GLU:CD	26:1:43:THR:HG22	2.20	0.66
32:a:980:C:HO2'	44:n:55:SER:HB3	1.59	0.66
32:a:1029:U:H5"	32:a:1030:U:H5	1.59	0.66
32:a:1358:U:C5	44:n:68:ARG:CB	2.67	0.66
33:c:75:VAL:CG1	40:j:54:SER:N	2.46	0.66
46:p:51:ARG:HB3	46:p:51:ARG:NH1	2.10	0.66
52:u:3:ILE:HG12	52:u:19:LYS:HG2	1.77	0.66
2:B:192:C:H2'	2:B:193:U:H5'	1.77	0.66
2:B:322:A:OP1	6:E:162:ARG:HG2	1.95	0.66
2:B:324:A:H2'	2:B:325:G:O4'	1.95	0.66
2:B:1060:U:O2	2:B:1088:A:N7	2.27	0.66
4:C:155:ARG:HG2	4:C:155:ARG:NH2	2.10	0.66
8:G:86:LEU:HB2	8:G:130:ILE:HB	1.76	0.66
12:L:62:PRO:HB3	29:4:29:ARG:NH2	2.10	0.66
14:N:12:ARG:HD3	14:N:20:MET:HG3	1.78	0.66
32:a:194:C:C4'	50:t:58:ASP:HB2	2.25	0.66
32:a:982:U:HO2'	44:n:52:ARG:NH1	1.86	0.66
32:a:1279:G:H1'	44:n:87:ALA:O	1.95	0.66
33:c:96:VAL:HB	40:j:48:ARG:NE	2.11	0.66
36:f:9:MET:HE1	48:r:64:LEU:HA	1.78	0.66
52:u:14:ALA:CA	52:u:16:ARG:NE	2.59	0.66
2:B:138:U:H2'	2:B:140:C:C1'	2.25	0.66
2:B:155:A:H2'	2:B:156:A:C8	2.30	0.66
2:B:855:G:H21	22:W:23:LYS:CD	2.09	0.66
2:B:1652:A:H62	14:N:11:ASN:ND2	1.94	0.66
2:B:1838:C:N4	2:B:1898:U:H2'	2.11	0.66
2:B:2572:A:C5	5:D:150:GLN:HB2	2.30	0.66
3:V:70:ILE:HG12	3:V:71:LYS:H	1.61	0.66
7:F:116:LEU:HD21	43:m:102:LYS:CB	2.17	0.66
7:F:176:PHE:C	43:m:102:LYS:CD	2.66	0.66
8:G:86:LEU:HD13	8:G:163:TYR:HA	1.78	0.66
10:J:10:THR:HB	10:J:13:ARG:NH1	2.11	0.66
12:L:100:ILE:HG12	12:L:102:GLY:H	1.59	0.66
14:N:34:ILE:HD13	14:N:34:ILE:N	2.11	0.66
18:R:42:ALA:HA	18:R:54:VAL:HG22	1.77	0.66
32:a:501:C:H2'	32:a:502:A:C8	2.30	0.66
32:a:947:G:O6	43:m:51:GLN:OE1	2.14	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1235:U:H4'	43:m:53:ASP:C	2.21	0.66
51:7:67:LEU:HD21	51:7:157:PRO:HG3	1.76	0.66
52:u:36:PHE:HB3	52:u:40:PRO:CD	2.25	0.66
2:B:27:G:N2	2:B:512:G:H2'	2.09	0.66
2:B:139:U:N3	20:T:1:MET:HB2	2.10	0.66
2:B:1309:G:H4'	28:3:7:PRO:HG2	1.78	0.66
2:B:1727:C:H2'	2:B:1728:C:C6	2.31	0.66
2:B:2198:A:H4'	2:B:2199:A:OP1	1.95	0.66
2:B:2239:G:H5'	4:C:246:PRO:HD2	1.77	0.66
9:H:39:ALA:C	9:H:44:ILE:HD11	2.20	0.66
10:J:3:THR:HG21	17:Q:93:ILE:HG13	1.78	0.66
18:R:53:PHE:CD1	18:R:54:VAL:HB	2.30	0.66
32:a:1262:C:C1'	44:n:100:TRP:N	2.28	0.66
32:a:1280:A:C4	40:j:30:LYS:HE2	2.31	0.66
32:a:1302:C:C5'	43:m:6:ILE:CA	2.70	0.66
32:a:1329:A:OP1	43:m:67:ASP:N	2.18	0.66
32:a:1371:G:OP2	39:i:110:VAL:HG21	1.95	0.66
33:c:86:LEU:CD1	40:j:61:ALA:HB1	2.26	0.66
35:e:23:THR:HG23	35:e:28:ARG:HD3	1.78	0.66
38:h:5:PRO:HB2	38:h:32:LYS:NZ	2.11	0.66
43:m:64:VAL:HA	43:m:68:LEU:HD12	1.76	0.66
2:B:279:A:N6	2:B:361:G:H1'	2.10	0.66
2:B:691:C:O2'	4:C:42:ARG:HD2	1.96	0.66
2:B:1410:G:H2'	2:B:1411:U:C6	2.31	0.66
2:B:1447:C:H2'	2:B:1448:G:H8	1.61	0.66
2:B:2039:U:H2'	2:B:2040:G:H8	1.59	0.66
2:B:2339:C:H2'	2:B:2340:A:C8	2.30	0.66
6:E:113:VAL:HG23	6:E:117:ARG:NH2	2.11	0.66
8:G:23:ILE:O	8:G:33:THR:HA	1.95	0.66
23:X:19:LEU:O	23:X:22:LEU:HB2	1.96	0.66
29:4:7:ARG:HE	29:4:11:LYS:NZ	1.94	0.66
30:5:20:ASP:OD2	30:5:22:VAL:HG13	1.96	0.66
32:a:441:A:H61	32:a:493:A:H62	1.44	0.66
32:a:1234:C:C2'	43:m:54:THR:HG21	2.25	0.66
32:a:1259:C:C5'	44:n:83:VAL:HG21	2.21	0.66
32:a:1332:A:O5'	43:m:17:ALA:O	2.14	0.66
33:c:74:ILE:O	40:j:54:SER:CB	2.44	0.66
33:c:79:LYS:CD	40:j:56:HIS:CE1	2.58	0.66
33:c:133:MET:HE2	33:c:152:VAL:HG21	1.76	0.66
2:B:394:C:H2'	2:B:395:U:O4'	1.96	0.65
2:B:442:G:N2	6:E:46:GLN:NE2	2.44	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:467:G:OP1	28:3:33:ARG:HD3	1.96	0.65
2:B:1484:U:H2'	2:B:1485:U:C6	2.31	0.65
2:B:2395:C:H2'	2:B:2396:G:O4'	1.96	0.65
2:B:2557:G:H2'	2:B:2558:C:C6	2.32	0.65
7:F:35:LEU:HA	7:F:153:ILE:HA	1.78	0.65
7:F:108:PRO:CG	43:m:94:LEU:HD21	2.26	0.65
10:J:119:PHE:CG	10:J:120:ARG:N	2.63	0.65
11:K:98:ARG:HA	11:K:118:LEU:HD22	1.77	0.65
15:O:40:ILE:HA	15:O:48:LEU:HB3	1.77	0.65
15:O:56:LYS:HE3	15:O:57:ALA:N	2.11	0.65
16:P:52:ARG:HB3	16:P:60:VAL:CG1	2.18	0.65
32:a:1347:G:C6	39:i:108:ARG:CZ	2.77	0.65
33:c:64:ARG:HA	40:j:49:PHE:CB	2.26	0.65
33:c:84:GLU:CB	40:j:59:LYS:CA	2.74	0.65
36:f:3:HIS:HA	36:f:65:GLU:HA	1.77	0.65
2:B:340:A:H2'	2:B:341:C:O4'	1.95	0.65
2:B:1866:A:H2'	2:B:1867:G:O4'	1.96	0.65
2:B:2025:C:H2'	2:B:2026:U:C6	2.31	0.65
4:C:16:VAL:C	4:C:17:LYS:HE2	2.22	0.65
4:C:171:VAL:HB	4:C:182:LYS:HB3	1.77	0.65
5:D:83:ARG:HG2	5:D:84:LEU:N	2.12	0.65
5:D:98:VAL:HA	5:D:101:PHE:CE1	2.30	0.65
6:E:44:ARG:HD3	6:E:44:ARG:H	1.60	0.65
12:L:54:GLN:HB3	12:L:56:PRO:HD2	1.78	0.65
32:a:1017:U:C5	44:n:32:ASP:HB3	2.31	0.65
32:a:1305:G:H4'	43:m:55:LEU:CG	2.22	0.65
32:a:1347:G:O6	39:i:11:ARG:NH1	2.29	0.65
32:a:1359:C:N4	44:n:68:ARG:N	2.31	0.65
40:j:53:ILE:HG12	40:j:63:ASP:HB2	1.78	0.65
44:n:60:ARG:HE	44:n:62:ARG:NE	1.93	0.65
2:B:1406:U:H2'	2:B:1407:G:H8	1.60	0.65
2:B:2859:G:H2'	2:B:2860:A:C8	2.31	0.65
3:V:26:PHE:HE2	3:V:44:HIS:HA	1.61	0.65
5:D:130:GLN:NE2	5:D:138:LEU:HD12	2.12	0.65
15:O:37:ALA:O	15:O:38:GLN:HG2	1.97	0.65
19:S:17:VAL:HA	19:S:43:ALA:HB1	1.77	0.65
22:W:23:LYS:HB2	22:W:23:LYS:NZ	2.12	0.65
24:Y:20:LYS:HA	24:Y:24:LEU:HB2	1.77	0.65
32:a:1127:G:C5'	40:j:36:VAL:HB	2.27	0.65
32:a:1220:G:H5"	49:s:38:THR:HB	1.78	0.65
32:a:1254:A:H1'	44:n:81:ILE:HB	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:c:83:VAL:O	40:j:62:ARG:N	2.29	0.65
33:c:100:ILE:HD13	40:j:51:VAL:HB	1.78	0.65
2:B:37:C:C2	6:E:46:GLN:CD	2.75	0.65
26:1:41:HIS:CG	26:1:48:TYR:HA	2.31	0.65
32:a:980:C:H2'	44:n:58:ARG:CD	2.26	0.65
32:a:990:C:C4'	44:n:43:ALA:HB3	2.25	0.65
32:a:1123:U:O2'	32:a:1124:G:H5'	1.96	0.65
32:a:1333:A:P	43:m:17:ALA:CB	2.82	0.65
32:a:1342:C:H2'	32:a:1343:G:H8	1.61	0.65
33:c:63:ILE:CD1	40:j:64:GLN:HB2	2.23	0.65
33:c:65:VAL:CB	40:j:65:TYR:N	2.31	0.65
33:c:101:ASN:C	40:j:51:VAL:CG1	2.44	0.65
34:d:84:ASN:HD22	34:d:87:GLU:H	1.43	0.65
35:e:82:HIS:CD2	38:h:95:MET:HG3	2.31	0.65
45:o:31:LEU:HD12	45:o:58:MET:HB2	1.78	0.65
2:B:784:G:O2'	2:B:785:G:H5"	1.97	0.65
2:B:934:U:H2'	2:B:935:C:C6	2.31	0.65
2:B:2619:C:H4'	5:D:157:LYS:HA	1.78	0.65
5:D:170:VAL:HG21	5:D:194:PRO:HG2	1.77	0.65
7:F:33:ILE:HA	7:F:155:ILE:HA	1.77	0.65
10:J:18:VAL:HG22	10:J:56:VAL:HA	1.78	0.65
12:L:69:ARG:HG3	12:L:69:ARG:O	1.95	0.65
13:M:9:PHE:CG	13:M:10:ARG:N	2.64	0.65
13:M:12:MET:HG2	13:M:12:MET:O	1.96	0.65
13:M:33:LEU:HB2	13:M:101:VAL:CG2	2.27	0.65
21:U:39:ASN:ND2	21:U:42:LYS:HE2	2.11	0.65
32:a:1014:A:C8	49:s:15:LEU:HD13	2.24	0.65
32:a:1062:U:H2'	32:a:1063:C:C6	2.32	0.65
32:a:1235:U:O4'	43:m:50:GLY:C	2.36	0.65
32:a:1255:G:N1	44:n:88:MET:N	2.43	0.65
32:a:1283:U:C4	44:n:88:MET:HE3	2.30	0.65
33:c:67:ILE:CD1	40:j:53:ILE:HD13	2.25	0.65
34:d:19:PHE:HB2	34:d:110:ARG:HH12	1.60	0.65
37:g:149:ALA:O	41:k:58:THR:HG21	1.96	0.65
40:j:37:ARG:NE	40:j:77:VAL:HG11	2.11	0.65
1:A:114:C:O2'	15:O:49:VAL:HG21	1.95	0.65
2:B:1132:U:H5"	10:J:85:LYS:HZ2	1.60	0.65
2:B:1794:A:H2'	2:B:1795:C:C6	2.31	0.65
4:C:68:ARG:HD3	4:C:103:ILE:CD1	2.27	0.65
10:J:25:LEU:HG	10:J:64:VAL:N	2.10	0.65
13:M:33:LEU:N	13:M:101:VAL:HG22	2.12	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:922:G:H4'	35:e:24:VAL:HA	1.79	0.65
32:a:1113:C:C6	33:c:177:LEU:HD11	2.30	0.65
32:a:1125:U:O4	40:j:25:ILE:HG23	1.97	0.65
32:a:1190:G:OP1	33:c:3:LYS:CA	2.37	0.65
33:c:17:TRP:HZ2	40:j:16:ARG:NH1	1.94	0.65
40:j:11:LYS:HG2	40:j:97:ASP:HB3	1.78	0.65
43:m:3:ILE:HG23	43:m:56:ARG:HG2	1.78	0.65
47:q:10:ARG:HH11	47:q:55:GLY:H	1.43	0.65
2:B:1373:A:H2'	2:B:1374:G:O4'	1.96	0.65
2:B:2512:C:H5"	5:D:125:TRP:HZ3	1.61	0.65
2:B:2759:G:H4'	8:G:34:ARG:HH12	1.62	0.65
4:C:53:ILE:HG21	4:C:218:THR:HG23	1.78	0.65
5:D:37:VAL:HB	5:D:42:ASN:CG	2.21	0.65
17:Q:85:ALA:CB	17:Q:88:GLU:HB2	2.27	0.65
32:a:278:G:N2	32:a:279:A:H62	1.93	0.65
32:a:333:U:OP1	50:t:2:ASN:N	2.29	0.65
32:a:405:U:O4	34:d:1:ALA:CA	2.41	0.65
32:a:1123:U:O5'	40:j:100:ILE:HD12	1.52	0.65
32:a:1127:G:C6	40:j:76:ILE:CD1	2.78	0.65
32:a:1127:G:N7	40:j:76:ILE:HA	2.11	0.65
32:a:1277:C:O3'	44:n:90:GLY:HA2	1.97	0.65
32:a:1335:U:H5'	43:m:45:SER:CB	2.25	0.65
32:a:1358:U:H5"	44:n:62:ARG:HD3	1.78	0.65
33:c:87:ARG:HH21	40:j:52:LEU:HD11	1.60	0.65
35:e:109:ALA:HB3	35:e:135:VAL:HG23	1.76	0.65
41:k:126:ARG:HB2	52:u:33:ARG:CD	2.23	0.65
2:B:85:G:OP1	21:U:5:ARG:HA	1.96	0.65
2:B:143:C:H2'	2:B:144:A:C1'	2.27	0.65
2:B:329:G:H1	21:U:16:LYS:HD3	1.61	0.65
2:B:811:U:C5	12:L:29:LYS:HD3	2.31	0.65
2:B:1844:C:OP1	4:C:252:LYS:HA	1.95	0.65
2:B:2331:G:H5'	22:W:70:VAL:HG13	1.79	0.65
2:B:2393:U:H5'	12:L:62:PRO:HD3	1.77	0.65
6:E:116:ASP:HB2	6:E:185:LYS:HA	1.78	0.65
7:F:113:PHE:O	43:m:95:PRO:CB	2.45	0.65
7:F:176:PHE:HA	43:m:102:LYS:CE	2.24	0.65
9:H:38:PRO:O	9:H:43:ASN:CG	2.40	0.65
16:P:38:ARG:CG	16:P:39:LEU:H	2.10	0.65
18:R:53:PHE:HB3	18:R:55:ASP:HB2	1.79	0.65
26:1:8:THR:HG23	26:1:9:ARG:H	1.61	0.65
32:a:559:A:H4'	32:a:560:A:H3'	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1326:U:H2'	32:a:1327:C:H6	1.61	0.65
32:a:1368:A:OP2	39:i:114:LYS:C	2.39	0.65
33:c:185:THR:HG22	33:c:186:SER:H	1.62	0.65
38:h:30:LYS:HA	38:h:30:LYS:NZ	2.12	0.65
53:v:20:U:OP1	53:v:20:U:O4'	2.15	0.65
2:B:263:G:H2'	2:B:264:C:O4'	1.97	0.65
2:B:441:U:H2'	2:B:442:G:H8	1.61	0.65
2:B:911:A:N6	13:M:13:HIS:HB3	2.12	0.65
2:B:1113:U:H5"	8:G:1:SER:HA	1.78	0.65
2:B:2901:C:H2'	2:B:2902:C:H5'	1.79	0.65
6:E:149:ILE:HG13	6:E:186:VAL:HG13	1.77	0.65
7:F:135:ILE:HG23	43:m:112:ARG:N	2.11	0.65
12:L:38:GLN:H	12:L:41:ARG:NH1	1.94	0.65
13:M:36:VAL:HA	13:M:97:GLN:HG2	1.78	0.65
15:O:38:GLN:HA	15:O:50:ALA:HB3	1.77	0.65
15:O:40:ILE:HD13	15:O:40:ILE:H	1.61	0.65
17:Q:39:ILE:O	17:Q:43:GLN:HG3	1.95	0.65
22:W:31:LEU:HD11	22:W:34:SER:CB	2.27	0.65
22:W:66:VAL:HG22	22:W:67:LYS:H	1.60	0.65
32:a:1279:G:N1	44:n:92:ILE:HD12	1.92	0.65
32:a:1513:A:H2'	32:a:1514:G:C8	2.32	0.65
33:c:82:ASP:CA	40:j:58:ASN:HB3	2.26	0.65
33:c:113:LYS:HE2	33:c:117:ASP:OD2	1.97	0.65
4:C:92:LEU:O	4:C:93:VAL:HB	1.95	0.65
5:D:128:ARG:HH11	5:D:144:GLY:CA	2.10	0.65
6:E:198:GLU:C	6:E:200:LEU:H	2.05	0.65
7:F:132:ARG:HD3	7:F:133:GLU:HB2	1.78	0.65
10:J:39:LYS:NZ	17:Q:69:ARG:HD2	2.11	0.65
12:L:91:ASP:HB2	12:L:123:ARG:HH11	1.62	0.65
17:Q:97:ILE:HA	17:Q:100:PHE:CZ	2.33	0.65
32:a:131:A:H2'	32:a:132:C:C6	2.32	0.65
32:a:264:C:O2'	47:q:65:PRO:HG2	1.97	0.65
32:a:990:C:H1'	44:n:47:LEU:HD22	1.78	0.65
32:a:1300:G:H1'	32:a:1301:U:H5	1.61	0.65
32:a:1331:G:C8	43:m:65:GLU:OE2	2.50	0.65
32:a:1333:A:H5'	43:m:16:ILE:HG23	0.65	0.65
32:a:1342:C:H2'	32:a:1343:G:C8	2.32	0.65
34:d:123:MET:HA	34:d:128:VAL:HA	1.77	0.65
37:g:144:ALA:C	37:g:146:ALA:H	2.04	0.65
51:7:52:ALA:O	51:7:56:LEU:HD22	1.96	0.65
2:B:282:A:H2'	2:B:283:G:C8	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1386:C:H2'	2:B:1387:A:C8	2.32	0.64
2:B:2336:A:H1'	2:B:2337:G:OP1	1.95	0.64
4:C:30:ALA:N	4:C:31:PRO:CD	2.53	0.64
5:D:154:LYS:HZ3	5:D:157:LYS:H	1.45	0.64
6:E:115:GLN:HA	6:E:185:LYS:HE3	1.79	0.64
16:P:38:ARG:HG3	16:P:39:LEU:H	1.62	0.64
18:R:5:PHE:HA	18:R:40:MET:CG	2.27	0.64
19:S:6:LYS:HB3	19:S:104:THR:HG22	1.78	0.64
32:a:539:A:H2'	32:a:540:G:C8	2.32	0.64
32:a:1128:C:C5	40:j:33:GLY:O	2.49	0.64
32:a:1328:C:C2'	43:m:68:LEU:CG	2.71	0.64
32:a:1358:U:C5	44:n:69:PRO:N	2.65	0.64
33:c:98:ALA:CB	40:j:64:GLN:CB	2.53	0.64
1:A:60:C:H2'	1:A:61:G:C8	2.31	0.64
2:B:21:A:O2'	2:B:22:C:H5'	1.97	0.64
2:B:215:G:C4'	2:B:216:A:H4'	2.27	0.64
2:B:2228:G:H2'	2:B:2229:U:C6	2.33	0.64
3:V:5:ASN:HA	3:V:64:VAL:HB	1.79	0.64
7:F:108:PRO:CD	43:m:101:THR:O	2.46	0.64
7:F:114:ARG:N	43:m:101:THR:N	2.44	0.64
14:N:62:ASN:ND2	14:N:80:PHE:HB3	2.12	0.64
22:W:32:ALA:O	22:W:66:VAL:HG11	1.96	0.64
25:Z:3:LYS:HB2	25:Z:51:VAL:CG2	2.25	0.64
32:a:238:A:H2'	32:a:239:U:H5"	1.77	0.64
32:a:269:C:H2'	32:a:270:A:C8	2.32	0.64
32:a:1235:U:C1'	43:m:54:THR:H	2.09	0.64
32:a:1240:U:O3'	37:g:37:THR:HG21	1.97	0.64
32:a:1305:G:O2'	43:m:55:LEU:CB	2.45	0.64
35:e:104:ILE:HD13	35:e:115:GLU:HG3	1.78	0.64
37:g:148:LYS:HG3	37:g:151:ALA:HB3	1.79	0.64
43:m:103:THR:HG22	43:m:104:ASN:H	1.62	0.64
2:B:181:A:H2'	2:B:182:A:H8	1.62	0.64
2:B:773:U:H5'	2:B:774:G:OP2	1.97	0.64
2:B:1508:A:H5"	2:B:1509:A:N7	2.12	0.64
2:B:2758:A:H2'	2:B:2759:G:O4'	1.96	0.64
5:D:34:VAL:HG22	5:D:89:GLU:CG	2.25	0.64
7:F:136:ILE:O	43:m:112:ARG:CA	2.18	0.64
12:L:94:THR:HB	12:L:103:ILE:HG13	1.78	0.64
16:P:5:LYS:C	16:P:7:LEU:N	2.55	0.64
26:1:52:LYS:HA	26:1:52:LYS:HZ3	1.62	0.64
29:4:24:LYS:NZ	29:4:29:ARG:HH22	1.96	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:4:41:ARG:NH1	29:4:42:HIS:HB3	2.13	0.64
31:6:100:ILE:O	31:6:139:VAL:HA	1.97	0.64
32:a:989:U:P	44:n:42:ASN:CG	2.81	0.64
32:a:1016:A:H2	44:n:42:ASN:C	2.05	0.64
32:a:1257:A:C5'	44:n:74:ARG:HD3	2.27	0.64
34:d:2:ARG:HG3	34:d:114:ARG:CZ	2.27	0.64
36:f:40:GLU:HG3	36:f:42:TRP:HE1	1.60	0.64
36:f:86:ARG:HH11	48:r:63:TYR:HB3	1.62	0.64
39:i:20:ILE:HG23	39:i:60:LEU:HD13	1.79	0.64
50:t:59:ARG:HB2	50:t:59:ARG:HH11	1.62	0.64
53:v:26:A:C2'	53:v:27:G:H5'	2.28	0.64
2:B:170:U:H2'	2:B:171:U:C6	2.33	0.64
2:B:607:U:OP2	6:E:98:LYS:HG2	1.97	0.64
2:B:2749:A:OP2	8:G:3:VAL:HG11	1.97	0.64
6:E:43:THR:HG23	6:E:44:ARG:NE	2.12	0.64
12:L:132:ARG:O	12:L:136:GLU:HB3	1.98	0.64
13:M:67:VAL:HG21	13:M:95:LEU:HD21	1.78	0.64
15:O:10:ARG:HG3	15:O:10:ARG:NH1	2.13	0.64
20:T:28:ASN:HD22	20:T:28:ASN:N	1.95	0.64
31:6:20:SER:O	31:6:25:PRO:HD2	1.96	0.64
32:a:270:A:H2'	32:a:271:C:C6	2.31	0.64
32:a:946:A:C2	43:m:47:LEU:N	2.64	0.64
32:a:1014:A:N9	49:s:15:LEU:HD13	2.13	0.64
32:a:1182:G:H4'	32:a:1183:U:H5'	1.79	0.64
32:a:1358:U:H6	44:n:67:GLY:O	1.80	0.64
32:a:1359:C:H42	44:n:68:ARG:HB3	1.61	0.64
46:p:68:SER:HB3	46:p:71:VAL:HG12	1.80	0.64
2:B:992:C:H2'	2:B:993:G:H8	1.63	0.64
2:B:1440:U:H2'	2:B:1441:G:C8	2.31	0.64
2:B:2092:U:P	9:H:27:ARG:HH21	2.21	0.64
2:B:2354:C:H4'	22:W:30:VAL:HG22	1.79	0.64
2:B:2800:A:H2'	2:B:2801:G:O4'	1.97	0.64
4:C:143:VAL:O	4:C:152:GLN:HB2	1.97	0.64
4:C:164:VAL:HB	4:C:167:ASP:OD1	1.98	0.64
7:F:74:ALA:HA	53:v:56:C:O3'	1.95	0.64
8:G:6:ALA:HB3	8:G:7:PRO:HD3	1.80	0.64
8:G:148:ARG:HH21	8:G:153:PRO:HD2	1.62	0.64
10:J:35:ARG:HH21	10:J:40:HIS:N	1.95	0.64
12:L:91:ASP:HA	12:L:123:ARG:HB2	1.80	0.64
12:L:118:THR:N	12:L:119:PRO:CD	2.56	0.64
14:N:24:MET:HE1	14:N:40:LYS:HB3	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:37:GLU:OE1	18:R:62:GLU:HB2	1.97	0.64
18:R:53:PHE:O	18:R:54:VAL:O	2.15	0.64
32:a:87:C:H2'	32:a:88:U:H4'	1.79	0.64
32:a:1014:A:O3'	49:s:40:PHE:CD2	2.51	0.64
32:a:1232:U:OP1	39:i:127:SER:N	2.27	0.64
32:a:1359:C:H3'	44:n:62:ARG:N	2.12	0.64
33:c:63:ILE:C	40:j:48:ARG:HA	2.20	0.64
33:c:67:ILE:HD11	40:j:63:ASP:CB	2.27	0.64
2:B:172:A:H2'	2:B:173:A:C8	2.33	0.64
2:B:418:C:H2'	2:B:419:U:C6	2.32	0.64
2:B:441:U:O2'	2:B:442:G:H5'	1.97	0.64
2:B:1224:U:H4'	18:R:90:ARG:HB3	1.79	0.64
4:C:170:TYR:O	4:C:171:VAL:HG13	1.97	0.64
4:C:196:ASN:HB2	4:C:199:HIS:CD2	2.30	0.64
5:D:23:PRO:HB3	5:D:189:VAL:N	2.11	0.64
10:J:15:TRP:HA	10:J:53:TYR:O	1.98	0.64
10:J:90:GLU:O	10:J:93:ILE:HG22	1.98	0.64
12:L:14:LYS:HZ3	12:L:14:LYS:HA	1.63	0.64
17:Q:57:ARG:HA	17:Q:60:TRP:HE3	1.62	0.64
22:W:66:VAL:HG13	22:W:67:LYS:HG3	1.79	0.64
29:4:7:ARG:NE	29:4:11:LYS:HZ3	1.95	0.64
32:a:203:G:H1'	32:a:465:A:N6	2.13	0.64
32:a:817:C:H1'	32:a:819:A:H5'	1.80	0.64
32:a:859:G:H2'	32:a:860:A:C8	2.32	0.64
32:a:1013:G:C5'	49:s:16:LYS:HD3	2.27	0.64
32:a:1235:U:C5	43:m:48:SER:HB2	2.33	0.64
32:a:1282:C:N3	44:n:87:ALA:C	2.45	0.64
33:c:98:ALA:CB	40:j:64:GLN:CG	2.76	0.64
34:d:88:ASN:O	34:d:92:LEU:HD23	1.97	0.64
45:o:29:ALA:HA	45:o:84:LEU:HD21	1.80	0.64
2:B:1176:U:H2'	2:B:1177:G:O4'	1.98	0.64
2:B:1219:U:H2'	2:B:1220:G:C8	2.33	0.64
2:B:2722:G:H2'	2:B:2723:C:C6	2.33	0.64
3:V:69:GLU:HG2	3:V:70:ILE:N	2.12	0.64
4:C:141:HIS:CB	4:C:190:THR:HB	2.28	0.64
5:D:5:VAL:HG11	5:D:29:VAL:H	1.63	0.64
5:D:167:ASN:ND2	5:D:167:ASN:H	1.96	0.64
8:G:25:ILE:O	8:G:31:GLU:HA	1.97	0.64
13:M:35:ALA:HB3	13:M:97:GLN:C	2.23	0.64
14:N:116:VAL:HG22	14:N:117:ASP:H	1.63	0.64
16:P:23:ASP:N	16:P:93:LYS:HE2	2.13	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:63:VAL:HG13	20:T:80:TRP:HB2	1.79	0.64
21:U:9:GLU:HA	21:U:23:LYS:HA	1.80	0.64
31:6:91:LYS:HB2	31:6:94:LYS:HD2	1.78	0.64
32:a:188:C:H2'	32:a:189:A:O4'	1.97	0.64
32:a:269:C:H2'	32:a:270:A:H8	1.63	0.64
32:a:878:A:OP1	38:h:80:PRO:HG2	1.98	0.64
32:a:1357:A:C1'	44:n:1:ALA:H1	2.10	0.64
32:a:1359:C:N4	44:n:68:ARG:CB	2.51	0.64
33:c:17:TRP:HZ2	40:j:16:ARG:HH11	1.46	0.64
33:c:87:ARG:NE	40:j:62:ARG:HE	1.95	0.64
33:c:98:ALA:CB	40:j:64:GLN:OE1	2.45	0.64
33:c:178:ARG:O	33:c:178:ARG:HG2	1.96	0.64
44:n:12:ARG:HH11	44:n:60:ARG:NH1	1.95	0.64
2:B:142:A:H1'	20:T:2:ILE:HG21	1.79	0.64
2:B:616:A:H3'	2:B:617:G:H8	1.62	0.64
2:B:1097:U:H2'	2:B:1098:A:H5'	1.80	0.64
2:B:2053:G:OP1	5:D:149:ASN:O	2.16	0.64
4:C:66:PHE:O	4:C:68:ARG:N	2.30	0.64
4:C:127:ASN:ND2	4:C:128:THR:H	1.95	0.64
4:C:171:VAL:HG12	4:C:183:VAL:C	2.22	0.64
11:K:99:ILE:HG12	11:K:115:ILE:HG13	1.80	0.64
12:L:63:LYS:HG3	29:4:11:LYS:CA	2.26	0.64
12:L:78:ARG:N	12:L:110:VAL:HG13	2.13	0.64
12:L:94:THR:HA	12:L:96:LYS:HE2	1.79	0.64
18:R:66:HIS:N	18:R:98:ILE:HD13	2.12	0.64
29:4:24:LYS:HZ3	29:4:29:ARG:HH22	1.44	0.64
32:a:130:A:O4'	47:q:64:ARG:HD2	1.98	0.64
32:a:312:C:H2'	32:a:313:A:C8	2.33	0.64
32:a:1125:U:O2	40:j:36:VAL:HG13	1.97	0.64
32:a:1216:A:O2'	44:n:50:LEU:CD2	2.42	0.64
32:a:1279:G:N7	44:n:91:GLU:HG3	2.13	0.64
32:a:1308:U:O4	43:m:28:ARG:CZ	2.37	0.64
32:a:1330:U:P	43:m:22:TYR:CB	2.86	0.64
32:a:1332:A:N6	43:m:18:LEU:CG	2.38	0.64
33:c:84:GLU:HB3	40:j:59:LYS:O	1.91	0.64
44:n:51:PRO:HB2	44:n:54:SER:HB3	1.79	0.64
51:7:41:ASN:ND2	51:7:44:LYS:HB2	2.13	0.64
2:B:85:G:H5"	21:U:28:LEU:HD23	1.79	0.64
2:B:559:G:H1'	17:Q:55:GLN:NE2	2.12	0.64
2:B:2813:A:H2'	2:B:2814:A:C8	2.33	0.64
2:B:2880:C:H1'	14:N:92:GLY:O	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:23:LEU:H	4:C:202:ARG:HH21	1.46	0.64
4:C:29:PHE:HB2	4:C:31:PRO:CD	2.28	0.64
7:F:116:LEU:HD21	43:m:103:THR:N	2.13	0.64
8:G:137:LYS:HA	8:G:140:ILE:HG12	1.80	0.64
12:L:30:THR:HG22	12:L:36:LYS:HZ2	1.62	0.64
12:L:118:THR:CB	12:L:119:PRO:HD3	2.28	0.64
19:S:28:LYS:HD3	19:S:71:VAL:HG21	1.80	0.64
19:S:34:ASP:H	19:S:37:THR:HG22	1.61	0.64
19:S:89:ALA:HA	19:S:90:LYS:HZ2	1.63	0.64
31:6:116:MET:HE1	31:6:124:MET:O	1.97	0.64
32:a:1017:U:H2'	32:a:1018:G:C8	2.31	0.64
32:a:1305:G:O2'	43:m:18:LEU:HD21	1.97	0.64
36:f:53:LYS:HA	36:f:53:LYS:NZ	2.12	0.64
51:7:65:LYS:HD2	51:7:157:PRO:HA	1.80	0.64
2:B:125:A:H4'	28:3:13:ASN:CG	2.23	0.64
2:B:450:G:H4'	6:E:47:LYS:HG2	1.80	0.64
2:B:589:U:H2'	2:B:590:A:C8	2.33	0.64
2:B:2008:C:H2'	2:B:2009:A:H8	1.63	0.64
2:B:2591:C:H2'	2:B:2592:G:C8	2.33	0.64
5:D:142:VAL:HB	5:D:143:PRO:HD2	1.80	0.64
5:D:149:ASN:CB	5:D:150:GLN:HG2	2.25	0.64
6:E:159:LEU:HA	6:E:169:VAL:HG21	1.80	0.64
7:F:111:ARG:HD2	43:m:108:ARG:HE	1.62	0.64
11:K:98:ARG:C	11:K:99:ILE:HD12	2.23	0.64
12:L:122:VAL:HG23	12:L:139:GLY:O	1.98	0.64
13:M:71:LYS:HE2	13:M:91:TYR:HB3	1.80	0.64
13:M:73:ILE:HD11	13:M:92:TRP:HB2	1.79	0.64
26:1:32:THR:HG23	26:1:34:GLY:H	1.63	0.64
29:4:16:THR:HG21	29:4:22:LYS:HZ1	1.63	0.64
32:a:187:G:OP1	50:t:76:ALA:HB1	1.97	0.64
32:a:205:A:H2'	32:a:206:C:H6	1.61	0.64
32:a:393:A:OP1	46:p:13:LYS:HE2	1.98	0.64
32:a:947:G:OP2	43:m:41:ASP:OD1	2.16	0.64
32:a:948:C:C4	43:m:37:GLY:C	2.65	0.64
32:a:967:C:O3'	39:i:129:ARG:NH1	2.31	0.64
32:a:1468:A:H2'	32:a:1469:C:O4'	1.98	0.64
33:c:146:LYS:HD3	33:c:204:GLY:HA2	1.79	0.64
38:h:9:MET:HE1	38:h:32:LYS:O	1.97	0.64
43:m:52:ILE:HD12	43:m:55:LEU:HD12	1.79	0.64
2:B:346:A:H2'	2:B:347:A:O4'	1.98	0.63
2:B:813:U:H2'	2:B:814:C:C6	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1470:A:H3'	2:B:1471:G:H8	1.62	0.63
2:B:1797:G:H5'	4:C:251:THR:HA	1.78	0.63
2:B:2336:A:N6	22:W:69:GLU:HG3	2.12	0.63
4:C:222:THR:C	4:C:224:MET:H	2.06	0.63
7:F:107:VAL:HG12	43:m:101:THR:C	2.12	0.63
7:F:115:GLY:N	43:m:101:THR:H	1.95	0.63
7:F:116:LEU:HD21	43:m:102:LYS:O	1.97	0.63
7:F:117:SER:CB	43:m:100:ARG:NH2	2.60	0.63
13:M:70:ASP:H	13:M:71:LYS:NZ	1.95	0.63
13:M:82:MET:HB2	13:M:84:LYS:NZ	2.13	0.63
15:O:87:ILE:HG22	15:O:115:LEU:H	1.63	0.63
16:P:1:SER:HA	16:P:4:ILE:HD12	1.79	0.63
33:c:59:PRO:CB	40:j:47:GLU:OE2	2.35	0.63
36:f:92:THR:HG23	36:f:93:LYS:H	1.64	0.63
40:j:15:HIS:HA	40:j:18:ILE:HG22	1.79	0.63
44:n:60:ARG:NH2	44:n:62:ARG:HE	1.92	0.63
49:s:39:ILE:HG21	49:s:65:MET:HB3	1.80	0.63
2:B:794:A:H2'	2:B:795:C:C6	2.34	0.63
2:B:1442:U:H2'	2:B:1443:U:C6	2.34	0.63
5:D:154:LYS:C	5:D:156:PHE:N	2.51	0.63
9:H:35:LYS:O	9:H:37:VAL:HG13	1.98	0.63
16:P:84:SER:O	16:P:86:LYS:N	2.31	0.63
32:a:194:C:O4'	50:t:58:ASP:HB3	1.98	0.63
32:a:947:G:H2'	43:m:38:ILE:CB	2.27	0.63
32:a:994:A:H2'	44:n:19:TYR:CD2	2.17	0.63
32:a:1013:G:O5'	49:s:19:GLU:HB3	1.97	0.63
32:a:1276:G:H1'	44:n:97:LYS:C	2.22	0.63
32:a:1447:A:H5'	32:a:1448:C:H5	1.63	0.63
33:c:67:ILE:HD12	40:j:63:ASP:HB2	1.81	0.63
38:h:63:LYS:HG2	38:h:70:VAL:HG21	1.80	0.63
2:B:946:C:H2'	2:B:947:A:C8	2.33	0.63
2:B:1189:A:O3'	12:L:41:ARG:HG2	1.98	0.63
2:B:1210:G:H5'	2:B:1212:G:O4'	1.99	0.63
2:B:1790:C:H4'	4:C:207:ALA:HB2	1.81	0.63
2:B:2077:A:H2'	2:B:2078:C:C6	2.34	0.63
4:C:53:ILE:HD13	4:C:218:THR:HG23	1.80	0.63
6:E:152:GLU:HG2	6:E:153:LEU:N	2.13	0.63
7:F:73:VAL:HG22	53:v:56:C:H6	1.01	0.63
7:F:105:ILE:HG21	43:m:113:LYS:CA	2.26	0.63
7:F:110:ILE:O	43:m:95:PRO:HB3	1.98	0.63
12:L:77:ILE:HG22	12:L:78:ARG:H	1.64	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:49:GLU:HB2	14:N:50:PRO:HD3	1.78	0.63
16:P:59:THR:O	16:P:60:VAL:HG13	1.99	0.63
32:a:1013:G:C6	44:n:32:ASP:C	2.76	0.63
32:a:1225:A:H3'	32:a:1226:C:H6	1.61	0.63
32:a:1301:U:C6	43:m:8:ILE:HD11	2.30	0.63
32:a:1358:U:H5	44:n:68:ARG:C	1.99	0.63
32:a:1375:A:C5'	37:g:24:LYS:HZ2	2.11	0.63
33:c:146:LYS:HE3	33:c:202:PHE:CE2	2.30	0.63
35:e:104:ILE:HD11	35:e:114:LEU:HB2	1.79	0.63
39:i:40:ARG:N	39:i:44:ARG:HE	1.96	0.63
2:B:62:U:H3'	2:B:63:A:H8	1.62	0.63
2:B:395:U:H2'	2:B:396:G:N7	2.14	0.63
2:B:720:U:H2'	2:B:721:A:C8	2.32	0.63
2:B:1041:G:H2'	2:B:1042:G:C8	2.33	0.63
2:B:2602:A:C5	53:v:74:C:C5'	2.76	0.63
4:C:68:ARG:NH2	4:C:127:ASN:HA	2.13	0.63
5:D:83:ARG:HG2	5:D:84:LEU:H	1.63	0.63
6:E:72:SER:O	6:E:75:SER:HB2	1.99	0.63
8:G:16:VAL:HG21	8:G:44:HIS:NE2	2.14	0.63
9:H:3:VAL:HG13	9:H:21:VAL:HG11	1.78	0.63
11:K:71:ARG:O	11:K:72:PRO:C	2.34	0.63
12:L:29:LYS:HD2	12:L:31:GLY:N	2.11	0.63
21:U:78:LYS:HG3	21:U:96:LYS:HE3	1.79	0.63
26:1:51:ARG:HD2	26:1:56:LYS:OXT	1.97	0.63
32:a:78:A:H2'	32:a:79:G:H8	1.62	0.63
32:a:186:C:H4'	50:t:72:ALA:O	1.98	0.63
32:a:1150:A:C2	40:j:25:ILE:HG12	2.33	0.63
33:c:84:GLU:HB2	40:j:59:LYS:CB	2.23	0.63
35:e:140:ILE:HA	35:e:143:LEU:HD12	1.81	0.63
38:h:11:THR:HA	38:h:14:ARG:NH1	2.14	0.63
41:k:88:PRO:HA	41:k:92:ARG:HE	1.63	0.63
42:l:20:VAL:HG13	42:l:94:TYR:OH	1.98	0.63
46:p:67:ILE:HD11	46:p:72:ALA:HA	1.81	0.63
52:u:39:LYS:N	52:u:40:PRO:HD2	2.13	0.63
1:A:60:C:H2'	1:A:61:G:H8	1.63	0.63
2:B:1791:A:H1'	4:C:206:LYS:NZ	2.14	0.63
2:B:2467:C:O4'	13:M:118:LYS:HG2	1.98	0.63
5:D:5:VAL:HG11	5:D:29:VAL:N	2.14	0.63
9:H:69:ALA:HB2	9:H:139:PHE:O	1.98	0.63
9:H:116:ARG:HB2	9:H:133:GLN:HB2	1.80	0.63
12:L:111:ILE:H	12:L:111:ILE:CD1	2.12	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:35:ALA:O	13:M:36:VAL:HG22	1.98	0.63
17:Q:65:ASN:HA	17:Q:75:TYR:HB2	1.81	0.63
17:Q:92:LYS:CG	17:Q:93:ILE:H	2.12	0.63
19:S:71:VAL:HG22	19:S:107:VAL:HG12	1.80	0.63
23:X:12:GLU:HB2	23:X:14:LEU:CD1	2.28	0.63
32:a:105:G:H2'	32:a:106:C:C6	2.33	0.63
32:a:947:G:O5'	43:m:39:ALA:O	2.04	0.63
32:a:981:U:P	49:s:6:LYS:HZ1	2.19	0.63
32:a:1229:A:O2'	53:v:30:G:O5'	2.00	0.63
32:a:1280:A:C8	40:j:36:VAL:HG11	2.33	0.63
32:a:1306:A:OP2	43:m:59:VAL:HB	1.98	0.63
32:a:1334:G:C2	43:m:10:ASP:HA	2.27	0.63
34:d:56:GLU:HG2	34:d:195:ASN:HD22	1.63	0.63
36:f:9:MET:HA	36:f:58:HIS:O	1.99	0.63
47:q:10:ARG:HH11	47:q:55:GLY:N	1.97	0.63
1:A:20:G:H2'	1:A:21:G:H8	1.63	0.63
2:B:275:C:H2'	2:B:276:U:O4'	1.98	0.63
2:B:1174:U:H4'	2:B:1176:U:N3	2.13	0.63
2:B:1412:U:H2'	2:B:1413:A:C8	2.33	0.63
4:C:68:ARG:NH2	4:C:190:THR:HG23	2.13	0.63
4:C:119:VAL:HG22	4:C:133:ASN:ND2	2.13	0.63
4:C:146:LYS:HB3	4:C:147:PRO:HD2	1.81	0.63
10:J:37:ARG:NH2	10:J:110:PRO:HG3	2.13	0.63
12:L:142:ILE:HG13	12:L:143:GLU:N	2.13	0.63
14:N:96:ARG:HH21	14:N:118:ARG:HB3	1.62	0.63
22:W:30:VAL:HG12	22:W:31:LEU:N	2.14	0.63
25:Z:32:LEU:HD22	25:Z:33:ASN:N	2.14	0.63
32:a:430:A:OP2	34:d:7:LYS:CB	2.46	0.63
32:a:1118:U:H1'	32:a:1179:A:C4	2.34	0.63
32:a:1129:C:C1'	40:j:80:THR:HG21	2.28	0.63
32:a:1145:A:C1'	40:j:85:ASP:CG	2.72	0.63
32:a:1261:A:N9	44:n:98:ALA:CB	2.44	0.63
32:a:1277:C:O4'	44:n:96:LYS:CA	2.45	0.63
47:q:26:ARG:HE	47:q:39:ARG:NH1	1.97	0.63
47:q:59:GLU:H	47:q:74:LEU:HD23	1.62	0.63
52:u:36:PHE:HB3	52:u:40:PRO:CG	2.29	0.63
2:B:2537:U:H2'	2:B:2538:C:C6	2.34	0.63
4:C:166:ARG:NH2	36:f:82:ASP:OD2	2.32	0.63
5:D:37:VAL:HG12	5:D:38:LYS:HZ3	1.63	0.63
5:D:170:VAL:HG11	5:D:194:PRO:HG2	1.80	0.63
32:a:1273:C:O2	44:n:100:TRP:NE1	2.32	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1359:C:C2’	44:n:69:PRO:O	2.45	0.63
33:c:75:VAL:HG11	40:j:53:ILE:HG23	1.76	0.63
35:e:114:LEU:HD22	35:e:119:VAL:HG21	1.80	0.63
37:g:44:SER:O	37:g:48:THR:HG23	1.99	0.63
44:n:71:GLY:O	44:n:79:SER:HA	1.98	0.63
47:q:10:ARG:HA	47:q:10:ARG:HE	1.62	0.63
49:s:31:ARG:HG3	49:s:56:HIS:NE2	2.13	0.63
51:7:202:ASN:HD22	51:7:204:ASP:N	1.95	0.63
6:E:150:THR:HA	6:E:187:VAL:HG23	1.81	0.63
9:H:15:LEU:HD21	9:H:51:ARG:CZ	2.21	0.63
10:J:8:PRO:HB2	10:J:11:VAL:HB	1.81	0.63
10:J:45:THR:HG22	17:Q:63:ARG:NH2	2.13	0.63
18:R:39:LEU:HD12	18:R:60:LYS:HB2	1.80	0.63
32:a:980:C:C2’	44:n:58:ARG:CG	2.65	0.63
32:a:1240:U:C2’	37:g:31:VAL:CG1	2.76	0.63
32:a:1255:G:C8	44:n:86:ALA:CB	2.82	0.63
32:a:1289:A:H61	39:i:71:ILE:CD1	2.12	0.63
32:a:1304:G:C3’	43:m:52:ILE:CD1	2.65	0.63
32:a:1306:A:C2’	43:m:33:LEU:CG	2.54	0.63
32:a:1306:A:OP1	43:m:55:LEU:O	2.15	0.63
32:a:1319:A:H4’	49:s:68:HIS:NE2	2.14	0.63
32:a:1331:G:C4’	43:m:21:ILE:C	2.67	0.63
32:a:1332:A:C2	43:m:14:ALA:HB1	2.31	0.63
33:c:69:THR:HG21	33:c:75:VAL:HG21	1.81	0.63
34:d:99:ASN:ND2	34:d:110:ARG:HE	1.97	0.63
35:e:45:VAL:O	35:e:71:ILE:HG22	1.98	0.63
2:B:469:G:OP2	6:E:55:SER:HB3	1.99	0.63
2:B:1495:A:H2’	2:B:1496:A:C8	2.33	0.63
2:B:2722:G:H2’	2:B:2723:C:H6	1.64	0.63
2:B:2820:A:C4	14:N:4:ARG:HD3	2.34	0.63
4:C:159:THR:C	4:C:160:TYR:HD2	2.07	0.63
4:C:181:ARG:HH22	4:C:260:LYS:HZ2	1.45	0.63
4:C:224:MET:HG3	4:C:233:GLY:O	1.99	0.63
9:H:41:LYS:HD2	9:H:41:LYS:H	1.63	0.63
10:J:58:ASN:HA	10:J:127:GLY:N	2.14	0.63
11:K:108:ARG:HA	11:K:116:ILE:HG21	1.79	0.63
19:S:89:ALA:HA	19:S:90:LYS:HZ1	1.64	0.63
32:a:1014:A:P	49:s:16:LYS:N	2.66	0.63
32:a:1232:U:H4’	39:i:125:GLN:O	1.99	0.63
32:a:1306:A:H5’	43:m:55:LEU:CD2	2.27	0.63
32:a:1391:U:H2’	32:a:1392:G:C8	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:c:151:GLU:O	33:c:197:VAL:HA	1.99	0.63
35:e:35:LEU:HD11	35:e:136:VAL:HG11	1.81	0.63
43:m:68:LEU:O	43:m:72:ILE:HD13	1.99	0.63
44:n:30:ILE:HB	44:n:44:VAL:HG11	1.78	0.63
52:u:26:GLY:C	52:u:28:LEU:H	2.05	0.63
1:A:49:C:H2'	1:A:50:A:C8	2.34	0.62
2:B:1381:G:C2'	2:B:1382:G:H5'	2.29	0.62
2:B:1590:A:H2'	2:B:1591:A:C8	2.34	0.62
4:C:45:ASN:O	4:C:46:GLY:C	2.41	0.62
4:C:231:HIS:ND1	4:C:231:HIS:O	2.31	0.62
5:D:128:ARG:NH1	5:D:130:GLN:NE2	2.46	0.62
9:H:39:ALA:C	9:H:44:ILE:CD1	2.71	0.62
21:U:35:VAL:HG12	21:U:36:GLU:H	1.64	0.62
31:6:105:LEU:HD11	31:6:139:VAL:CG1	2.28	0.62
32:a:1253:G:N1	44:n:84:ARG:CD	2.41	0.62
32:a:1298:U:H2'	37:g:112:ASP:O	1.99	0.62
32:a:1337:G:H22	43:m:45:SER:CA	2.09	0.62
33:c:61:LYS:O	33:c:96:VAL:HB	1.98	0.62
33:c:64:ARG:HA	40:j:49:PHE:HB2	1.80	0.62
33:c:65:VAL:CG2	40:j:64:GLN:O	0.57	0.62
39:i:113:LYS:HA	39:i:120:ALA:HB2	1.81	0.62
42:l:43:LYS:N	42:l:44:PRO:HD2	2.14	0.62
51:7:118:THR:O	51:7:121:GLN:HB3	1.98	0.62
51:7:148:GLY:O	51:7:151:LYS:HE2	1.99	0.62
1:A:29:A:H3'	1:A:30:C:H6	1.65	0.62
2:B:7:G:H1'	10:J:135:GLN:HE21	1.63	0.62
2:B:142:A:H2'	2:B:143:C:C6	2.33	0.62
2:B:580:U:H2'	2:B:581:C:C6	2.35	0.62
2:B:704:G:H1'	2:B:727:A:N6	2.14	0.62
2:B:1909:C:H5'	53:v:12:U:OP1	1.99	0.62
6:E:127:GLU:HB2	6:E:130:LYS:HB2	1.80	0.62
9:H:124:THR:HG22	9:H:125:THR:H	1.64	0.62
25:Z:9:TYR:CZ	25:Z:11:GLU:HB2	2.34	0.62
27:2:13:SER:N	27:2:50:GLU:HA	2.13	0.62
32:a:1125:U:C2	40:j:36:VAL:HG22	2.34	0.62
32:a:1218:C:N1	44:n:45:LEU:O	2.32	0.62
32:a:1305:G:H4'	43:m:55:LEU:HB2	0.63	0.62
32:a:1335:U:C5	43:m:11:HIS:CD2	2.82	0.62
33:c:100:ILE:HB	40:j:63:ASP:H	1.50	0.62
50:t:4:LYS:HD2	50:t:5:SER:N	2.14	0.62
50:t:15:LYS:HD3	50:t:18:LYS:HE3	1.79	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:7:27:LYS:HB3	51:7:28:PRO:HD3	1.82	0.62
51:7:75:ALA:O	51:7:79:VAL:HB	1.98	0.62
2:B:143:C:O2	20:T:4:GLU:HG2	1.99	0.62
2:B:632:A:H2'	2:B:633:A:C8	2.33	0.62
2:B:877:A:H2'	2:B:899:A:N1	2.13	0.62
2:B:1429:G:H2'	2:B:1430:G:H8	1.64	0.62
7:F:79:ARG:CG	53:v:56:C:C5	2.83	0.62
8:G:10:VAL:HG12	8:G:47:ASN:O	1.99	0.62
12:L:55:MET:N	12:L:56:PRO:CD	2.62	0.62
12:L:118:THR:H	12:L:119:PRO:CD	2.11	0.62
14:N:19:ALA:C	14:N:21:PHE:H	2.06	0.62
32:a:678:U:H2'	32:a:679:C:C6	2.34	0.62
32:a:995:C:H5'	44:n:19:TYR:CD2	2.35	0.62
32:a:1334:G:N3	43:m:10:ASP:HA	2.12	0.62
33:c:5:HIS:CD2	33:c:8:GLY:H	2.16	0.62
39:i:51:LEU:HB3	39:i:56:MET:HG2	1.81	0.62
52:u:40:PRO:O	52:u:44:ARG:HB2	1.98	0.62
2:B:279:A:C2	2:B:362:A:H4'	2.34	0.62
2:B:2405:G:H1'	2:B:2412:A:H61	1.64	0.62
4:C:138:SER:HA	4:C:162:GLN:HG2	1.79	0.62
5:D:2:ILE:HB	5:D:205:PRO:HD3	1.80	0.62
10:J:41:LYS:O	17:Q:66:ALA:HB1	1.98	0.62
17:Q:60:TRP:CE2	17:Q:93:ILE:HA	2.34	0.62
21:U:39:ASN:HD21	21:U:60:LYS:HB3	1.64	0.62
25:Z:53:THR:HA	25:Z:56:ARG:HD2	1.81	0.62
32:a:1060:U:OP2	33:c:1:GLY:HA3	2.00	0.62
32:a:1144:G:O2'	40:j:81:GLU:HB3	1.99	0.62
32:a:1152:A:C5	40:j:92:LEU:CD2	2.53	0.62
32:a:1218:C:C6	44:n:45:LEU:O	2.52	0.62
32:a:1235:U:P	43:m:50:GLY:N	2.69	0.62
33:c:90:VAL:O	40:j:64:GLN:OE1	2.06	0.62
2:B:636:G:OP2	12:L:128:THR:HG22	1.99	0.62
2:B:1040:A:H2	2:B:1115:G:H22	1.47	0.62
2:B:1251:C:H6	17:Q:5:ARG:HH21	1.46	0.62
7:F:113:PHE:O	43:m:95:PRO:HG2	1.98	0.62
9:H:73:ASN:HD22	9:H:73:ASN:H	1.47	0.62
21:U:27:VAL:HA	21:U:32:LYS:O	1.99	0.62
22:W:17:ALA:O	22:W:35:ILE:HA	2.00	0.62
32:a:79:G:H2'	32:a:80:A:C8	2.34	0.62
32:a:521:G:H4'	42:l:69:GLU:HG3	1.80	0.62
32:a:1055:A:O2'	33:c:160:GLU:OE2	2.12	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1128:C:C5	40:j:33:GLY:C	2.40	0.62
32:a:1279:G:C5'	40:j:41:PRO:HD3	2.29	0.62
32:a:1305:G:C3'	43:m:55:LEU:O	2.45	0.62
33:c:64:ARG:HA	40:j:49:PHE:CA	2.30	0.62
33:c:64:ARG:HH22	40:j:67:ILE:HD12	1.63	0.62
33:c:100:ILE:HG21	40:j:62:ARG:CA	2.29	0.62
39:i:56:MET:HE2	39:i:57:VAL:H	1.64	0.62
45:o:11:VAL:HG23	45:o:26:VAL:HG11	1.82	0.62
2:B:545:U:H2'	2:B:547:A:OP2	2.00	0.62
2:B:1131:G:H1'	2:B:1133:A:N6	2.14	0.62
2:B:1535:A:H3'	2:B:1536:C:C6	2.35	0.62
2:B:2241:A:H2'	2:B:2242:G:C8	2.34	0.62
2:B:2405:G:H1'	2:B:2412:A:N6	2.15	0.62
2:B:2783:U:H2'	2:B:2784:U:C6	2.35	0.62
5:D:12:THR:OG1	5:D:14:ILE:HG12	2.00	0.62
6:E:151:GLY:O	6:E:190:ALA:HB2	2.00	0.62
7:F:64:PRO:HA	7:F:88:VAL:CG2	2.29	0.62
8:G:88:LEU:HD11	8:G:95:ALA:HB2	1.81	0.62
10:J:41:LYS:NZ	10:J:46:PRO:HD3	2.15	0.62
18:R:2:TYR:H	18:R:46:GLU:HB2	1.63	0.62
18:R:37:GLU:CG	18:R:62:GLU:H	2.13	0.62
31:6:77:VAL:HA	31:6:80:LYS:CE	2.29	0.62
32:a:69:G:H2'	32:a:70:U:C6	2.34	0.62
32:a:524:G:H2'	32:a:525:C:C6	2.33	0.62
32:a:882:C:O2'	32:a:883:C:H5'	1.99	0.62
32:a:983:A:H5'	32:a:984:C:OP2	1.99	0.62
32:a:994:A:N9	44:n:50:LEU:HD13	2.13	0.62
32:a:1016:A:C4	44:n:41:TRP:O	2.52	0.62
32:a:1221:G:N1	49:s:5:LYS:CD	2.43	0.62
32:a:1305:G:H3'	43:m:55:LEU:C	2.23	0.62
32:a:1347:G:N1	39:i:108:ARG:NH1	2.34	0.62
2:B:596:U:H2'	2:B:597:G:C8	2.34	0.62
2:B:1460:U:H5"	2:B:1461:C:C6	2.34	0.62
2:B:1854:A:H62	2:B:1888:G:H8	1.47	0.62
2:B:2041:U:H2'	2:B:2042:A:C8	2.34	0.62
2:B:2789:C:H2'	2:B:2893:A:N7	2.13	0.62
9:H:66:ASN:HA	9:H:138:VAL:HG21	1.81	0.62
20:T:50:LEU:C	20:T:52:GLU:H	2.08	0.62
21:U:88:ASP:HB2	21:U:91:LYS:O	1.99	0.62
25:Z:30:HIS:H	25:Z:48:GLN:CD	2.07	0.62
27:2:42:VAL:CG1	27:2:43:ARG:HG3	2.30	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:976:G:O6	44:n:69:PRO:HG2	2.00	0.62
32:a:990:C:C4'	44:n:43:ALA:HB1	2.29	0.62
32:a:1111:A:H2	33:c:176:THR:HA	1.64	0.62
32:a:1151:A:H5'	40:j:24:GLU:HB3	1.69	0.62
32:a:1505:G:H4'	32:a:1506:U:H5"	1.81	0.62
33:c:65:VAL:CB	40:j:64:GLN:CA	2.70	0.62
37:g:97:ALA:HA	37:g:100:MET:HE3	1.82	0.62
39:i:10:ARG:HB2	39:i:14:SER:O	2.00	0.62
42:l:85:ARG:HA	42:l:93:ARG:HA	1.80	0.62
45:o:87:ARG:NH1	45:o:87:ARG:HA	2.15	0.62
46:p:42:ILE:HG22	46:p:43:ALA:N	2.14	0.62
2:B:2420:C:OP1	29:4:34:LYS:HE3	1.99	0.62
3:V:21:ARG:HA	3:V:25:LYS:O	2.00	0.62
7:F:107:VAL:H	7:F:108:PRO:HD2	1.64	0.62
9:H:37:VAL:N	9:H:38:PRO:HD2	2.13	0.62
10:J:28:LEU:HD23	10:J:29:ALA:N	2.14	0.62
10:J:81:ILE:HG12	10:J:82:GLY:H	1.65	0.62
11:K:102:PRO:HA	11:K:121:GLU:HB3	1.81	0.62
21:U:4:ILE:HG21	21:U:25:LYS:HE2	1.80	0.62
32:a:187:G:H4'	50:t:79:THR:CG2	2.26	0.62
32:a:429:U:H5'	34:d:8:LEU:HG	1.81	0.62
32:a:531:U:H5'	32:a:531:U:H6	1.63	0.62
32:a:684:U:O2'	41:k:39:ASN:HB3	1.99	0.62
32:a:976:G:C6	44:n:69:PRO:HG2	2.35	0.62
32:a:980:C:C2'	44:n:55:SER:HB2	2.29	0.62
32:a:1108:G:OP2	33:c:174:LEU:CD1	2.47	0.62
32:a:1221:G:C4	49:s:4:LEU:HD23	2.26	0.62
32:a:1232:U:OP1	39:i:125:GLN:OE1	2.17	0.62
32:a:1234:C:C2	43:m:51:GLN:HA	2.35	0.62
32:a:1321:U:C6	49:s:2:ARG:CD	2.60	0.62
33:c:73:GLY:C	40:j:55:PRO:O	2.42	0.62
39:i:35:GLU:HA	39:i:39:GLY:HA3	1.82	0.62
1:A:104:A:H2'	1:A:105:G:O4'	2.00	0.62
2:B:608:A:H2'	2:B:609:A:C8	2.35	0.62
2:B:1060:U:C5	31:6:131:THR:HG22	2.35	0.62
2:B:1484:U:H2'	2:B:1485:U:H6	1.64	0.62
2:B:1590:A:H2'	2:B:1591:A:H8	1.65	0.62
2:B:2267:A:N6	2:B:2272:U:C4	2.68	0.62
9:H:87:GLU:CG	36:f:24:ARG:NH2	2.63	0.62
10:J:11:VAL:HG11	10:J:44:TYR:CD1	2.35	0.62
10:J:102:GLU:HG2	10:J:103:ILE:HG12	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:102:GLU:HG2	10:J:103:ILE:N	2.15	0.62
24:Y:9:THR:HB	24:Y:54:VAL:CA	2.25	0.62
31:6:74:PRO:O	31:6:77:VAL:HG22	1.99	0.62
32:a:505:G:H5'	32:a:534:U:H2'	1.81	0.62
32:a:921:U:O2'	35:e:23:THR:O	2.16	0.62
32:a:1253:G:H2'	44:n:85:GLU:OE2	2.00	0.62
32:a:1357:A:C8	44:n:68:ARG:HB2	2.35	0.62
33:c:46:LEU:HD23	40:j:53:ILE:CG2	2.26	0.62
33:c:63:ILE:CA	40:j:66:GLU:CA	2.65	0.62
33:c:184:ASN:HD22	33:c:185:THR:N	1.98	0.62
41:k:115:ILE:HD11	48:r:72:ARG:CZ	2.30	0.62
42:l:64:SER:OG	42:l:96:THR:HG23	2.00	0.62
52:u:14:ALA:CA	52:u:16:ARG:CD	2.78	0.62
2:B:13:A:H61	2:B:525:U:H2'	1.63	0.62
2:B:2834:G:H1'	2:B:2883:A:N6	2.14	0.62
4:C:66:PHE:O	4:C:67:LYS:C	2.42	0.62
4:C:117:SER:HB3	4:C:127:ASN:ND2	2.14	0.62
4:C:209:ALA:HB1	4:C:213:ARG:NH1	2.15	0.62
6:E:147:LEU:O	6:E:148:ILE:HG13	1.98	0.62
7:F:36:ASN:HD22	7:F:87:LYS:H	1.48	0.62
7:F:83:PRO:HG2	7:F:84:ILE:H	1.64	0.62
7:F:136:ILE:C	43:m:112:ARG:N	2.38	0.62
7:F:140:ILE:HG22	7:F:142:TYR:H	1.64	0.62
9:H:125:THR:CB	9:H:146:VAL:HB	2.29	0.62
14:N:1:MET:HE2	14:N:4:ARG:O	2.00	0.62
30:5:33:HIS:H	30:5:33:HIS:CD2	2.17	0.62
32:a:60:A:H4'	32:a:61:G:O5'	1.99	0.62
32:a:429:U:OP2	34:d:31:CYS:HA	2.00	0.62
32:a:1011:C:H2'	32:a:1012:A:H8	1.64	0.62
32:a:1513:A:H2'	32:a:1514:G:H8	1.65	0.62
33:c:67:ILE:HG13	40:j:63:ASP:CG	2.25	0.62
34:d:99:ASN:CG	34:d:103:ARG:HH21	2.06	0.62
34:d:123:MET:HE3	34:d:126:GLY:HA2	1.81	0.62
46:p:9:HIS:HE1	46:p:29:ASN:HB2	1.63	0.62
47:q:26:ARG:HH21	47:q:39:ARG:CZ	2.13	0.62
50:t:60:GLN:H	50:t:60:GLN:CD	2.07	0.62
51:7:96:LEU:HD21	51:7:146:SER:HB2	1.82	0.62
2:B:265:A:HO2'	2:B:266:G:H4'	1.64	0.61
2:B:482:A:H5"	21:U:43:LYS:HE3	1.82	0.61
2:B:664:G:H2'	2:B:665:U:H6	1.65	0.61
2:B:854:C:H2'	2:B:855:G:C8	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1117:C:H2'	2:B:1118:C:C6	2.35	0.61
2:B:2704:C:H2'	2:B:2705:A:O4'	1.99	0.61
2:B:2814:A:H2'	2:B:2815:C:H6	1.64	0.61
4:C:103:ILE:HG22	4:C:104:LEU:N	2.15	0.61
5:D:60:VAL:HB	5:D:63:PRO:HG2	1.80	0.61
5:D:140:HIS:O	5:D:142:VAL:N	2.32	0.61
7:F:41:GLU:HB2	7:F:45:ASP:N	2.15	0.61
14:N:13:ASN:HD22	14:N:15:SER:HB2	1.65	0.61
14:N:37:THR:HG1	14:N:40:LYS:HB2	1.65	0.61
23:X:49:ASP:HB3	23:X:52:ARG:NH2	2.15	0.61
26:1:35:GLU:C	26:1:37:HIS:H	2.06	0.61
32:a:193:C:H1'	50:t:54:GLN:HE21	1.63	0.61
32:a:476:U:H2'	32:a:477:C:C6	2.35	0.61
32:a:918:A:H2'	32:a:919:A:C8	2.35	0.61
32:a:935:A:H62	37:g:2:ARG:HD2	1.48	0.61
32:a:995:C:P	44:n:23:ARG:HH11	2.23	0.61
32:a:1109:C:H42	32:a:1110:A:N6	1.98	0.61
32:a:1128:C:C4	40:j:78:GLU:O	2.51	0.61
32:a:1280:A:O4'	40:j:26:VAL:HG21	1.99	0.61
32:a:1301:U:N3	43:m:8:ILE:CD1	0.67	0.61
32:a:1310:G:O6	43:m:62:PHE:CE1	2.52	0.61
32:a:1358:U:N1	44:n:69:PRO:HD2	2.10	0.61
32:a:1362:A:H5'	44:n:70:HIS:HE1	1.65	0.61
33:c:75:VAL:CB	40:j:53:ILE:C	2.72	0.61
43:m:5:GLY:O	43:m:6:ILE:HG12	2.00	0.61
51:7:69:VAL:O	51:7:163:ILE:HG22	2.00	0.61
2:B:55:G:P	28:3:35:ARG:HH21	2.23	0.61
2:B:107:G:H21	2:B:346:A:N6	1.97	0.61
2:B:444:C:H5"	6:E:44:ARG:NH1	2.14	0.61
2:B:917:A:C2	2:B:918:A:H1'	2.35	0.61
2:B:1064:C:H4'	31:6:90:GLY:HA2	1.82	0.61
2:B:1203:U:H3'	2:B:1204:A:C5'	2.30	0.61
2:B:1794:A:H2'	2:B:1795:C:H6	1.64	0.61
2:B:1913:A:C6	32:a:1492:A:C2	2.89	0.61
2:B:2179:C:H2'	2:B:2180:U:C6	2.34	0.61
4:C:20:ASN:HD22	4:C:202:ARG:HA	1.63	0.61
7:F:139:GLU:OE2	43:m:114:PRO:HG2	1.96	0.61
11:K:63:VAL:HB	11:K:83:ALA:CB	2.29	0.61
13:M:64:TRP:O	13:M:102:LEU:HB2	2.01	0.61
15:O:41:ALA:HB1	15:O:42:PRO:HD2	1.82	0.61
16:P:26:GLU:HA	16:P:47:ILE:N	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:68:ARG:HD2	18:R:70:GLU:OE1	1.99	0.61
18:R:79:ARG:HD3	18:R:86:GLN:CD	2.25	0.61
21:U:45:GLN:C	21:U:47:PRO:HD3	2.24	0.61
21:U:90:LYS:HD2	21:U:91:LYS:HZ3	1.65	0.61
25:Z:25:ARG:HG3	25:Z:26:SER:H	1.65	0.61
32:a:212:G:H2'	32:a:213:G:H8	1.65	0.61
32:a:429:U:H5'	34:d:8:LEU:CG	2.29	0.61
32:a:980:C:C2	44:n:58:ARG:HG3	2.35	0.61
32:a:1109:C:OP2	33:c:175:HIS:NE2	2.34	0.61
32:a:1262:C:H1'	44:n:99:SER:C	2.23	0.61
34:d:163:GLN:HB2	34:d:164:ARG:NH1	2.14	0.61
44:n:15:LEU:HD12	44:n:16:ALA:N	2.14	0.61
2:B:36:G:H2'	2:B:37:C:O4'	2.00	0.61
2:B:274:C:H2'	2:B:275:C:O4'	2.00	0.61
2:B:564:C:O2'	2:B:565:C:H5'	2.00	0.61
2:B:1054:A:H2'	2:B:1055:G:H8	1.65	0.61
2:B:1818:U:O3'	4:C:155:ARG:HB2	2.01	0.61
2:B:1913:A:C6	32:a:1492:A:N3	2.67	0.61
2:B:2591:C:H2'	2:B:2592:G:H8	1.65	0.61
4:C:143:VAL:HG11	4:C:173:LEU:HD11	1.81	0.61
5:D:157:LYS:NZ	5:D:158:GLY:HA3	2.15	0.61
7:F:77:LYS:CE	53:v:19:G:C4	2.72	0.61
7:F:77:LYS:NZ	53:v:19:G:O6	2.31	0.61
8:G:32:LEU:HD21	8:G:74:MET:CB	2.29	0.61
10:J:18:VAL:CG2	10:J:56:VAL:HA	2.30	0.61
16:P:27:VAL:HG21	16:P:86:LYS:HB2	1.82	0.61
25:Z:8:LYS:HD2	25:Z:9:TYR:H	1.63	0.61
31:6:11:GLN:HG3	31:6:11:GLN:O	2.00	0.61
32:a:662:U:H2'	32:a:663:A:C8	2.34	0.61
32:a:752:G:C4'	45:o:68:TYR:OH	2.48	0.61
32:a:1302:C:C3'	43:m:6:ILE:HG22	2.25	0.61
32:a:1357:A:H4'	44:n:66:THR:C	2.25	0.61
40:j:15:HIS:HD2	40:j:18:ILE:HG22	1.65	0.61
53:v:40:C:H2'	53:v:41:C:H6	1.63	0.61
1:A:98:G:H1	3:V:14:LYS:CB	2.12	0.61
2:B:143:C:H2'	2:B:144:A:N9	2.16	0.61
2:B:796:C:H2'	2:B:797:G:H8	1.64	0.61
2:B:1183:U:H2'	2:B:1184:U:C6	2.35	0.61
2:B:2037:A:H2'	2:B:2038:G:H8	1.64	0.61
3:V:40:ILE:HD13	3:V:40:ILE:H	1.66	0.61
7:F:77:LYS:CD	53:v:19:G:N3	2.62	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:F:79:ARG:HG2	53:v:56:C:C4	2.34	0.61
12:L:54:GLN:C	12:L:56:PRO:HD2	2.25	0.61
14:N:4:ARG:HG3	14:N:5:LYS:N	2.16	0.61
14:N:98:LEU:HB2	14:N:112:TYR:CE1	2.35	0.61
18:R:42:ALA:CA	18:R:54:VAL:HA	2.30	0.61
32:a:538:G:OP1	42:l:111:GLN:N	2.33	0.61
32:a:692:U:H5	41:k:27:ASN:ND2	1.95	0.61
32:a:1038:C:H2'	32:a:1039:G:H8	1.64	0.61
32:a:1153:G:H8	40:j:92:LEU:HA	0.46	0.61
32:a:1171:A:H2'	32:a:1172:C:H6	1.64	0.61
32:a:1285:A:H4'	32:a:1286:U:C5	2.36	0.61
33:c:96:VAL:HB	40:j:48:ARG:HE	1.65	0.61
41:k:69:CYS:O	41:k:73:VAL:HG23	2.00	0.61
7:F:9:ASP:O	7:F:10:GLU:HB2	2.00	0.61
12:L:66:PHE:CD1	12:L:66:PHE:N	2.69	0.61
13:M:63:ILE:HD11	13:M:65:ILE:HG23	1.82	0.61
15:O:48:LEU:HD23	15:O:49:VAL:N	2.16	0.61
21:U:11:ILE:HB	21:U:69:VAL:CB	2.30	0.61
21:U:12:VAL:HG11	21:U:18:LYS:H	1.65	0.61
31:6:85:ILE:HD13	31:6:137:LEU:HD21	1.82	0.61
32:a:121:U:OP1	32:a:121:U:H3'	2.00	0.61
32:a:982:U:O2'	44:n:52:ARG:HD2	0.99	0.61
32:a:1016:A:N3	44:n:45:LEU:CA	2.63	0.61
32:a:1122:U:H5	40:j:89:ARG:HH22	1.47	0.61
32:a:1193:G:O2'	32:a:1194:U:H5'	2.01	0.61
32:a:1261:A:N9	44:n:100:TRP:HZ3	1.98	0.61
33:c:98:ALA:HB1	40:j:64:GLN:CG	2.28	0.61
38:h:92:PRO:HA	38:h:93:LYS:NZ	2.09	0.61
41:k:95:THR:HG23	41:k:96:ILE:H	1.65	0.61
1:A:50:A:H5"	15:O:68:LYS:HD2	1.82	0.61
2:B:142:A:H1'	20:T:2:ILE:CG2	2.30	0.61
2:B:478:A:N1	2:B:500:G:H4'	2.16	0.61
2:B:598:U:H2'	2:B:599:A:H8	1.65	0.61
2:B:764:A:OP2	4:C:213:ARG:NH2	2.33	0.61
2:B:929:U:H5'	24:Y:37:ARG:NH1	2.15	0.61
2:B:1198:U:H2'	2:B:1199:U:C6	2.35	0.61
2:B:1405:U:H2'	2:B:1406:U:C6	2.36	0.61
2:B:1406:U:H2'	2:B:1407:G:C8	2.35	0.61
2:B:2291:U:H2'	2:B:2292:U:C6	2.36	0.61
2:B:2292:U:H2'	2:B:2293:G:H8	1.65	0.61
2:B:2751:G:O5'	8:G:3:VAL:HG13	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2784:U:H2'	2:B:2785:C:C6	2.35	0.61
10:J:20:ALA:HB1	10:J:59:ALA:HA	1.83	0.61
13:M:88:ASN:O	13:M:89:VAL:HG12	2.00	0.61
18:R:35:PHE:HB2	18:R:64:VAL:CG2	2.31	0.61
21:U:6:ARG:C	21:U:8:ASP:H	2.07	0.61
32:a:501:C:H1'	32:a:549:C:H1'	1.81	0.61
32:a:974:A:C4'	44:n:5:MET:SD	2.88	0.61
32:a:1013:G:C5'	49:s:19:GLU:HB2	2.31	0.61
32:a:1109:C:P	33:c:175:HIS:NE2	2.74	0.61
32:a:1151:A:C3'	40:j:20:GLN:C	2.72	0.61
32:a:1225:A:H3'	32:a:1226:C:C6	2.35	0.61
32:a:1278:G:O5'	44:n:92:ILE:O	2.07	0.61
32:a:1300:G:H1'	32:a:1301:U:C5	2.36	0.61
32:a:1301:U:H5"	43:m:7:ASN:HA	1.83	0.61
32:a:1304:G:HO2'	43:m:52:ILE:HD12	1.19	0.61
32:a:1319:A:H4'	49:s:68:HIS:CD2	2.35	0.61
43:m:88:LEU:O	43:m:92:ARG:HG3	2.00	0.61
2:B:1158:C:H5"	24:Y:30:ARG:HD3	1.82	0.61
2:B:1485:U:H2'	2:B:1486:U:H6	1.64	0.61
2:B:2144:G:H2'	2:B:2146:C:OP2	2.01	0.61
2:B:2597:G:H5"	4:C:239:PHE:O	2.00	0.61
2:B:2852:G:H2'	2:B:2853:C:C6	2.36	0.61
6:E:170:ARG:HH21	6:E:175:ILE:HD12	1.66	0.61
7:F:113:PHE:N	43:m:95:PRO:HB2	2.09	0.61
7:F:113:PHE:HE1	43:m:103:THR:N	1.99	0.61
7:F:115:GLY:CA	43:m:100:ARG:CA	2.67	0.61
10:J:16:TYR:O	10:J:55:ILE:HG22	2.01	0.61
12:L:63:LYS:HB2	29:4:11:LYS:NZ	2.15	0.61
16:P:76:HIS:CD2	16:P:76:HIS:H	2.18	0.61
16:P:93:LYS:HB3	16:P:96:LEU:HA	1.83	0.61
27:2:42:VAL:HG13	27:2:43:ARG:N	2.16	0.61
29:4:24:LYS:HZ1	29:4:29:ARG:HH12	1.46	0.61
30:5:7:VAL:O	30:5:23:ILE:HG21	2.01	0.61
32:a:590:U:H2'	32:a:591:U:H6	1.66	0.61
32:a:982:U:N1	44:n:58:ARG:NH2	2.48	0.61
32:a:1169:A:O3'	51:7:138:ARG:NH2	2.34	0.61
32:a:1236:A:C8	43:m:52:ILE:HG22	2.35	0.61
33:c:45:GLU:C	33:c:46:LEU:HD12	2.25	0.61
33:c:82:ASP:OD2	40:j:54:SER:CB	2.34	0.61
44:n:11:LYS:O	44:n:15:LEU:HG	1.99	0.61
2:B:181:A:H2'	2:B:182:A:C8	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:423:A:H5'	2:B:424:G:C5'	2.28	0.61
2:B:856:G:H2'	2:B:857:G:C8	2.36	0.61
2:B:990:A:H1'	2:B:1156:A:H2	1.65	0.61
2:B:2784:U:H2'	2:B:2785:C:H6	1.65	0.61
5:D:12:THR:HB	5:D:21:SER:O	2.01	0.61
5:D:142:VAL:O	5:D:143:PRO:C	2.42	0.61
11:K:54:LYS:NZ	32:a:1422:G:OP1	2.32	0.61
17:Q:27:ARG:HA	17:Q:33:VAL:HB	1.83	0.61
17:Q:85:ALA:HB1	17:Q:88:GLU:HB2	1.83	0.61
22:W:49:ASN:HB2	22:W:53:GLY:CA	2.30	0.61
31:6:32:VAL:HG22	31:6:60:VAL:CG2	2.31	0.61
32:a:9:G:OP2	35:e:125:LYS:HE3	2.01	0.61
32:a:763:G:H2'	32:a:764:C:H6	1.65	0.61
32:a:946:A:P	43:m:41:ASP:HB2	2.40	0.61
32:a:1015:G:P	44:n:40:ARG:NH1	2.73	0.61
32:a:1124:G:C4'	40:j:8:ILE:CG1	2.67	0.61
32:a:1153:G:N7	40:j:92:LEU:CD2	2.64	0.61
32:a:1216:A:H2	44:n:47:LEU:CB	2.11	0.61
32:a:1305:G:O5'	43:m:52:ILE:O	2.19	0.61
33:c:81:GLU:N	40:j:57:VAL:C	2.56	0.61
41:k:86:LYS:HG3	41:k:113:THR:HA	1.82	0.61
43:m:98:GLY:H	43:m:99:GLN:HE21	1.49	0.61
2:B:417:C:H2'	2:B:418:C:H6	1.65	0.61
2:B:527:C:H5"	2:B:2779:U:O2	2.00	0.61
2:B:992:C:O2'	2:B:993:G:H5'	2.01	0.61
2:B:1874:C:H2'	2:B:1875:G:O4'	2.00	0.61
2:B:2602:A:N3	53:v:74:C:P	2.74	0.61
4:C:77:VAL:HG23	4:C:115:ILE:HD11	1.83	0.61
15:O:41:ALA:HB3	15:O:45:SER:HB3	1.82	0.61
16:P:31:VAL:HA	16:P:81:ASP:CB	2.31	0.61
23:X:22:LEU:HA	23:X:47:ARG:HH12	1.65	0.61
26:1:8:THR:HG23	26:1:9:ARG:N	2.16	0.61
32:a:677:U:H1'	41:k:120:CYS:SG	2.41	0.61
32:a:1060:U:H2'	32:a:1061:G:C8	2.35	0.61
32:a:1235:U:H5'	43:m:54:THR:HG22	1.83	0.61
32:a:1258:G:N2	44:n:92:ILE:HD13	2.15	0.61
32:a:1289:A:H61	39:i:71:ILE:HD12	1.66	0.61
32:a:1298:U:OP2	37:g:113:LYS:HA	2.00	0.61
33:c:82:ASP:CA	40:j:58:ASN:CB	2.64	0.61
34:d:191:SER:O	34:d:192:ALA:HB2	2.01	0.61
35:e:85:LYS:HE2	35:e:92:ARG:NH1	2.16	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:i:30:ASN:ND2	39:i:65:THR:HA	2.14	0.61
45:o:55:LEU:O	45:o:59:VAL:HG23	2.01	0.61
47:q:59:GLU:H	47:q:74:LEU:CD2	2.14	0.61
2:B:1175:A:H3'	2:B:1176:U:O4'	2.01	0.61
2:B:1197:G:H2'	2:B:1198:U:C6	2.35	0.61
2:B:1821:A:H5'	4:C:155:ARG:HD2	1.81	0.61
4:C:224:MET:HA	4:C:232:GLY:CA	2.30	0.61
7:F:106:ALA:CB	7:F:136:ILE:HG23	2.30	0.61
10:J:34:ARG:HB3	10:J:39:LYS:HB2	1.83	0.61
10:J:63:ALA:HA	10:J:69:ARG:HD2	1.82	0.61
16:P:62:LYS:HE2	16:P:74:GLN:HE22	1.66	0.61
17:Q:57:ARG:HD2	17:Q:92:LYS:NZ	2.16	0.61
32:a:753:A:OP1	45:o:72:LYS:CE	2.49	0.61
32:a:1218:C:H5	44:n:49:THR:OG1	1.81	0.61
32:a:1359:C:H5'	44:n:62:ARG:CZ	2.30	0.61
34:d:94:GLU:HG3	34:d:103:ARG:NH1	2.16	0.61
35:e:96:GLN:HB3	35:e:123:LEU:CD1	2.31	0.61
39:i:117:LEU:HD22	39:i:123:ARG:HG2	1.83	0.61
49:s:5:LYS:HE3	49:s:5:LYS:N	2.15	0.61
49:s:50:VAL:O	49:s:56:HIS:HA	2.00	0.61
2:B:240:C:H3'	2:B:241:A:H5"	1.83	0.60
2:B:946:C:H2'	2:B:947:A:H8	1.66	0.60
2:B:2461:A:H2'	2:B:2462:C:C6	2.36	0.60
2:B:2579:C:O2'	5:D:138:LEU:HD13	2.01	0.60
3:V:44:HIS:NE2	3:V:85:LYS:HB2	2.16	0.60
6:E:9:GLN:NE2	6:E:120:VAL:HG13	2.15	0.60
7:F:34:THR:O	7:F:153:ILE:HA	2.01	0.60
9:H:4:ILE:C	9:H:37:VAL:HG12	2.26	0.60
9:H:121:VAL:HG21	9:H:128:HIS:NE2	2.16	0.60
14:N:32:GLU:HA	14:N:115:LEU:HD21	1.82	0.60
17:Q:60:TRP:O	17:Q:63:ARG:HG2	2.00	0.60
24:Y:3:THR:HG21	24:Y:43:ILE:HB	1.83	0.60
24:Y:9:THR:CB	24:Y:54:VAL:HA	2.26	0.60
25:Z:15:SER:HB2	25:Z:25:ARG:NH1	2.15	0.60
32:a:36:C:H5"	42:l:119:LYS:CB	2.30	0.60
32:a:93:U:H3'	32:a:94:G:H5"	1.83	0.60
32:a:763:G:H2'	32:a:764:C:C6	2.36	0.60
32:a:1074:G:H2'	32:a:1075:U:C6	2.35	0.60
32:a:1220:G:H5"	49:s:38:THR:OG1	2.01	0.60
34:d:7:LYS:HE2	34:d:20:LEU:HD22	1.83	0.60
34:d:20:LEU:H	34:d:20:LEU:HD12	1.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:n:20:PHE:HA	44:n:24:ALA:HB2	1.83	0.60
2:B:19:A:H2'	2:B:20:C:C6	2.36	0.60
2:B:558:U:OP1	10:J:113:PRO:HG2	2.01	0.60
2:B:1192:G:O2'	2:B:1193:G:H5'	2.01	0.60
2:B:1826:G:OP2	4:C:221:GLY:HA2	2.01	0.60
2:B:2144:G:H22	2:B:2148:G:H1'	1.64	0.60
2:B:2266:A:H4'	2:B:2267:A:N7	2.16	0.60
5:D:88:GLU:CG	5:D:89:GLU:H	2.14	0.60
5:D:175:LEU:HD11	5:D:192:ALA:HB3	1.82	0.60
7:F:111:ARG:HD2	43:m:108:ARG:NH2	2.16	0.60
8:G:97:VAL:HG23	8:G:124:CYS:SG	2.41	0.60
11:K:47:ILE:HG23	11:K:48:PRO:HD2	1.83	0.60
11:K:103:VAL:HB	11:K:107:LEU:CD2	2.28	0.60
12:L:78:ARG:NH2	12:L:82:LEU:HD23	2.16	0.60
13:M:58:LYS:C	13:M:60:GLN:H	2.09	0.60
14:N:35:LYS:HA	14:N:112:TYR:HA	1.83	0.60
26:1:52:LYS:HA	26:1:52:LYS:HZ2	1.66	0.60
32:a:194:C:O2'	32:a:195:A:H5'	2.01	0.60
32:a:398:U:H2'	32:a:399:G:H8	1.66	0.60
32:a:1257:A:O5'	44:n:74:ARG:CD	2.36	0.60
32:a:1257:A:C5'	44:n:75:LYS:CA	2.64	0.60
32:a:1261:A:N7	44:n:98:ALA:CB	2.62	0.60
32:a:1261:A:N6	44:n:100:TRP:CD2	2.69	0.60
32:a:1357:A:C4	44:n:1:ALA:N	2.45	0.60
32:a:1359:C:H41	44:n:68:ARG:N	1.98	0.60
32:a:1359:C:H6	44:n:62:ARG:HG2	1.64	0.60
32:a:1518:A:H2'	32:a:1519:A:C8	2.35	0.60
35:e:33:THR:O	35:e:34:ALA:HB3	2.00	0.60
37:g:22:LEU:O	37:g:25:PHE:HB3	2.01	0.60
37:g:49:LEU:HB2	37:g:57:GLU:HG3	1.82	0.60
37:g:117:LEU:HD22	37:g:120:ALA:HB3	1.83	0.60
38:h:5:PRO:HB2	38:h:32:LYS:HZ1	1.66	0.60
43:m:98:GLY:H	43:m:99:GLN:NE2	2.00	0.60
51:7:163:ILE:O	51:7:185:ILE:HG13	1.99	0.60
53:v:26:A:H2'	53:v:27:G:H5'	1.82	0.60
2:B:100:U:H4'	21:U:90:LYS:CE	2.31	0.60
2:B:1690:A:H2'	2:B:1691:C:O4'	2.01	0.60
2:B:1779:U:H5	2:B:1784:A:N7	2.00	0.60
2:B:2512:C:C4'	5:D:146:ILE:HG12	2.31	0.60
4:C:29:PHE:HB2	4:C:31:PRO:HD2	1.83	0.60
4:C:140:VAL:HG23	4:C:193:GLU:OE2	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:106:LYS:HA	6:E:108:ILE:HD13	1.83	0.60
7:F:133:GLU:HG3	7:F:134:GLN:H	1.64	0.60
8:G:124:CYS:HB3	8:G:129:GLU:O	2.01	0.60
8:G:173:ALA:HB3	8:G:174:LYS:NZ	2.16	0.60
12:L:55:MET:N	12:L:56:PRO:HD2	2.16	0.60
16:P:23:ASP:HA	16:P:49:ILE:HB	1.83	0.60
20:T:69:ARG:H	20:T:75:GLY:HA3	1.66	0.60
26:1:26:SER:HB2	26:1:38:LEU:HD12	1.83	0.60
32:a:430:A:OP2	34:d:7:LYS:HB3	2.01	0.60
32:a:718:A:N6	48:r:62:ARG:HH12	2.00	0.60
32:a:783:C:O2'	32:a:784:A:H5'	2.02	0.60
32:a:832:G:O2'	32:a:833:G:H5'	2.01	0.60
32:a:1124:G:O4'	40:j:8:ILE:CD1	2.27	0.60
32:a:1323:G:H2'	32:a:1324:A:H8	1.66	0.60
33:c:63:ILE:HG22	40:j:66:GLU:CB	2.31	0.60
33:c:86:LEU:N	40:j:60:ASP:C	2.59	0.60
34:d:58:GLN:HA	34:d:61:ARG:HB2	1.83	0.60
34:d:154:VAL:HG13	34:d:155:LYS:H	1.66	0.60
36:f:40:GLU:HG3	36:f:42:TRP:NE1	2.16	0.60
49:s:11:ASP:CG	49:s:34:SER:HB2	2.26	0.60
50:t:60:GLN:NE2	50:t:61:ALA:H	1.99	0.60
1:A:48:U:H2'	1:A:49:C:C6	2.36	0.60
2:B:116:C:H2'	2:B:117:G:C8	2.36	0.60
2:B:222:A:N6	2:B:232:G:H1'	2.17	0.60
2:B:414:C:H2'	2:B:415:A:C8	2.37	0.60
2:B:437:U:H2'	2:B:438:G:C8	2.36	0.60
2:B:903:C:H2'	2:B:904:G:H8	1.64	0.60
2:B:1015:U:H2'	2:B:1016:G:C8	2.37	0.60
2:B:1060:U:OP2	31:6:74:PRO:HA	2.01	0.60
2:B:1515:A:H2'	2:B:1516:G:O4'	2.01	0.60
2:B:2547:A:H2'	2:B:2548:U:C6	2.37	0.60
2:B:2836:U:H2'	2:B:2837:A:H8	1.65	0.60
9:H:2:GLN:N	9:H:21:VAL:HG12	2.15	0.60
9:H:116:ARG:HB3	9:H:131:SER:O	2.01	0.60
10:J:7:LYS:C	10:J:9:GLU:H	2.10	0.60
11:K:11:ALA:HB3	11:K:85:VAL:CG2	2.32	0.60
11:K:119:ALA:O	11:K:120:PRO:C	2.44	0.60
12:L:78:ARG:H	12:L:78:ARG:CZ	2.13	0.60
12:L:109:LYS:HA	12:L:126:ARG:HB2	1.83	0.60
16:P:47:ILE:CG2	16:P:48:ALA:H	2.11	0.60
32:a:1111:A:HO2'	32:a:1112:C:H6	1.49	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1189:U:H5”	33:c:4:VAL:HB	1.83	0.60
32:a:1237:C:C3’	43:m:10:ASP:OD2	2.50	0.60
32:a:1279:G:C6	44:n:91:GLU:HB2	2.36	0.60
32:a:1283:U:H3	44:n:84:ARG:C	2.07	0.60
34:d:120:LYS:HB2	34:d:145:ARG:HH21	1.66	0.60
51:7:17:HIS:HB2	51:7:202:ASN:OD1	2.00	0.60
2:B:936:A:H2’	2:B:937:C:C6	2.37	0.60
2:B:2386:A:H4’	22:W:38:ARG:HB2	1.84	0.60
2:B:2872:A:O2’	2:B:2873:A:H5”	2.01	0.60
4:C:229:HIS:ND1	4:C:230:PRO:HD2	2.16	0.60
5:D:17:GLU:CB	16:P:80:VAL:HG21	2.32	0.60
7:F:110:ILE:N	43:m:105:ALA:CA	2.62	0.60
7:F:117:SER:N	43:m:100:ARG:CZ	2.34	0.60
12:L:47:ARG:HD2	12:L:48:ARG:N	2.17	0.60
14:N:7:GLY:O	14:N:8:ARG:HB2	2.01	0.60
32:a:80:A:H2’	32:a:81:A:O4’	2.01	0.60
32:a:1250:A:C5’	39:i:69:GLY:H	2.14	0.60
32:a:1295:U:H2’	32:a:1296:C:C6	2.36	0.60
49:s:7:GLY:H	49:s:8:PRO:HD3	1.67	0.60
49:s:28:LYS:HB2	49:s:29:PRO:HD2	1.84	0.60
50:t:54:GLN:N	50:t:55:PRO:HD2	2.16	0.60
51:7:76:SER:O	51:7:79:VAL:HG12	2.01	0.60
2:B:1171:G:H2’	2:B:1172:C:O4’	2.02	0.60
2:B:2575:C:H5”	5:D:149:ASN:HB3	1.80	0.60
2:B:2669:G:H2’	2:B:2670:A:H8	1.66	0.60
7:F:59:ILE:HD11	7:F:137:PHE:CD2	2.37	0.60
7:F:102:LEU:HD11	7:F:129:MET:HE1	1.84	0.60
12:L:27:LEU:HD12	12:L:27:LEU:N	2.16	0.60
22:W:40:ARG:NH1	22:W:40:ARG:N	2.50	0.60
22:W:66:VAL:HG13	22:W:67:LYS:N	2.16	0.60
32:a:590:U:H2’	32:a:591:U:C6	2.35	0.60
32:a:1306:A:C3’	43:m:33:LEU:HG	2.28	0.60
32:a:1332:A:C2	43:m:18:LEU:CD1	2.84	0.60
33:c:21:TRP:CD2	40:j:68:ARG:HD3	2.37	0.60
33:c:63:ILE:C	40:j:48:ARG:HB2	2.25	0.60
39:i:18:VAL:HG11	39:i:82:ILE:HG12	1.83	0.60
41:k:110:THR:HG21	52:u:4:LYS:CD	2.28	0.60
2:B:280:U:H2’	2:B:281:C:C6	2.36	0.60
2:B:458:G:N2	2:B:469:G:H2’	2.17	0.60
2:B:869:G:H2’	2:B:870:U:C6	2.37	0.60
2:B:1188:U:H4’	18:R:83:TYR:HB2	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1437:C:H2'	2:B:1438:U:H6	1.67	0.60
2:B:2469:A:H5"	13:M:55:ARG:HD2	1.82	0.60
2:B:2600:A:O2'	2:B:2601:C:H5'	2.01	0.60
5:D:84:LEU:HD21	5:D:86:GLU:HB2	1.82	0.60
10:J:80:HIS:O	10:J:81:ILE:C	2.45	0.60
10:J:81:ILE:HG23	10:J:82:GLY:H	1.67	0.60
12:L:64:PHE:CD1	29:4:24:LYS:HB2	2.36	0.60
16:P:27:VAL:HG12	16:P:47:ILE:HD11	1.82	0.60
16:P:52:ARG:HG2	16:P:54:LEU:HB2	1.83	0.60
20:T:3:ARG:O	20:T:3:ARG:HG2	2.00	0.60
32:a:801:U:H2'	32:a:802:A:H8	1.66	0.60
32:a:1128:C:C3'	40:j:83:THR:HG21	2.31	0.60
32:a:1152:A:N6	40:j:90:LEU:C	2.15	0.60
32:a:1310:G:O6	43:m:62:PHE:CD1	2.55	0.60
33:c:81:GLU:H	40:j:57:VAL:C	2.09	0.60
42:l:78:VAL:HG12	42:l:101:LEU:HD23	1.82	0.60
2:B:196:A:H2'	2:B:196:A:N3	2.16	0.60
2:B:364:C:H2'	2:B:365:U:C6	2.36	0.60
2:B:639:U:H2'	2:B:640:C:C6	2.35	0.60
2:B:833:A:H2'	2:B:834:G:C8	2.36	0.60
2:B:855:G:H21	22:W:23:LYS:CB	2.15	0.60
2:B:2138:G:H2'	2:B:2139:U:C6	2.36	0.60
2:B:2527:C:O2'	30:5:1:MET:HA	2.00	0.60
2:B:2813:A:H2'	2:B:2814:A:H8	1.67	0.60
4:C:191:LEU:O	4:C:191:LEU:HD22	2.01	0.60
4:C:226:PRO:HD3	4:C:233:GLY:N	2.17	0.60
6:E:3:LEU:O	6:E:4:VAL:HG12	2.02	0.60
17:Q:88:GLU:OE1	17:Q:111:LYS:HD2	2.00	0.60
22:W:39:GLN:C	22:W:40:ARG:HG3	2.26	0.60
24:Y:44:ARG:HG3	24:Y:45:GLY:N	2.15	0.60
32:a:988:G:C2	44:n:46:LYS:HG3	2.36	0.60
32:a:995:C:H6	44:n:23:ARG:HH11	1.38	0.60
32:a:1124:G:O6	40:j:86:ALA:N	2.32	0.60
32:a:1236:A:O2'	43:m:52:ILE:CG1	2.48	0.60
32:a:1438:G:O2'	32:a:1439:G:H5'	2.01	0.60
34:d:20:LEU:O	34:d:21:LYS:HE3	2.02	0.60
44:n:63:CYS:SG	44:n:66:THR:HG22	2.41	0.60
2:B:198:C:C2'	2:B:199:A:H5"	2.32	0.60
2:B:419:U:H2'	2:B:420:C:H6	1.66	0.60
2:B:547:A:H3'	2:B:548:G:C8	2.21	0.60
2:B:704:G:H1'	2:B:727:A:H61	1.67	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:921:C:O2'	2:B:922:C:H5'	2.02	0.60
2:B:1082:U:O4	2:B:1086:A:C2	2.54	0.60
2:B:2688:G:H1'	2:B:2721:A:N6	2.17	0.60
2:B:2873:A:N3	14:N:6:SER:HA	2.16	0.60
7:F:113:PHE:N	43:m:95:PRO:CG	2.52	0.60
7:F:125:GLY:HA3	7:F:159:ALA:HB3	1.83	0.60
9:H:69:ALA:HB2	9:H:140:ALA:HA	1.83	0.60
12:L:60:ARG:HD3	29:4:11:LYS:HE2	1.84	0.60
15:O:35:ILE:HD13	15:O:35:ILE:N	2.17	0.60
25:Z:44:PHE:HD1	25:Z:44:PHE:H	1.50	0.60
29:4:26:ALA:HB1	29:4:29:ARG:CG	2.31	0.60
32:a:1148:U:N3	40:j:83:THR:CG2	2.55	0.60
32:a:1281:C:H5'	32:a:1282:C:H5	1.66	0.60
33:c:30:ASP:O	33:c:33:ASP:HB3	2.01	0.60
33:c:77:GLY:HA3	40:j:58:ASN:HB2	1.83	0.60
35:e:110:MET:HB3	35:e:139:THR:HG21	1.82	0.60
37:g:59:GLU:O	37:g:63:VAL:HG23	2.02	0.60
51:7:37:VAL:HG22	51:7:38:HIS:N	2.17	0.60
51:7:166:ASP:OD1	51:7:190:SER:HA	2.02	0.60
2:B:26:G:H1'	2:B:515:A:N6	2.17	0.60
2:B:708:G:H2'	2:B:709:U:C6	2.36	0.60
2:B:1319:C:O2'	2:B:1320:C:H5'	2.01	0.60
2:B:1790:C:P	4:C:219:VAL:HB	2.42	0.60
2:B:1820:U:O2	4:C:200:MET:HB2	2.02	0.60
2:B:1948:G:O2'	32:a:1418:A:N1	2.31	0.60
2:B:2500:U:H5'	2:B:2501:C:OP2	2.02	0.60
2:B:2769:U:H2'	2:B:2770:G:C8	2.37	0.60
2:B:2848:G:C4	16:P:96:LEU:HD23	2.37	0.60
4:C:37:SER:OG	4:C:38:LYS:N	2.34	0.60
4:C:220:ARG:HH11	4:C:220:ARG:HG3	1.67	0.60
4:C:224:MET:O	4:C:225:ASN:HB2	2.01	0.60
6:E:91:ASP:O	6:E:92:HIS:HB2	2.01	0.60
6:E:180:LEU:HA	6:E:186:VAL:HG21	1.84	0.60
9:H:11:ASN:ND2	9:H:12:LEU:H	2.00	0.60
11:K:98:ARG:NH2	32:a:339:C:OP2	2.34	0.60
11:K:99:ILE:HG22	11:K:119:ALA:HB2	1.83	0.60
12:L:77:ILE:HB	12:L:110:VAL:CG2	2.29	0.60
14:N:28:LEU:HD12	14:N:28:LEU:H	1.67	0.60
17:Q:102:LYS:N	17:Q:102:LYS:HD2	2.17	0.60
18:R:20:VAL:HG13	18:R:97:LYS:NZ	2.16	0.60
22:W:6:GLY:C	22:W:8:SER:N	2.60	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:57:G:H2'	32:a:58:C:C6	2.37	0.60
32:a:1150:A:O5'	40:j:28:THR:CG2	2.43	0.60
32:a:1260:G:H4'	32:a:1284:C:H5'	1.83	0.60
37:g:64:ALA:HA	37:g:127:ALA:HB2	1.82	0.60
40:j:25:ILE:HG23	40:j:29:ALA:HB3	1.83	0.60
40:j:88:MET:HB2	40:j:89:ARG:NH1	2.11	0.60
44:n:52:ARG:NH1	49:s:6:LYS:HE2	2.16	0.60
51:7:53:LEU:HD21	51:7:212:TYR:CE2	2.37	0.60
2:B:587:C:OP2	12:L:29:LYS:HG2	2.01	0.59
2:B:721:A:H2'	2:B:722:A:C8	2.37	0.59
2:B:1722:A:N6	2:B:1738:G:H1'	2.17	0.59
2:B:2292:U:H2'	2:B:2293:G:C8	2.37	0.59
2:B:2723:C:H5"	14:N:3:HIS:CB	2.32	0.59
2:B:2741:A:H2'	2:B:2742:G:O4'	2.02	0.59
4:C:22:GLU:CD	4:C:202:ARG:HE	2.09	0.59
4:C:68:ARG:HD2	4:C:127:ASN:HD21	1.67	0.59
4:C:140:VAL:HG23	4:C:141:HIS:H	1.67	0.59
6:E:48:THR:CG2	6:E:86:ALA:HB1	2.31	0.59
6:E:98:LYS:HG3	6:E:99:LYS:H	1.65	0.59
7:F:70:ARG:HA	7:F:80:GLN:HG3	1.84	0.59
7:F:177:ARG:HG2	7:F:178:LYS:H	1.67	0.59
9:H:2:GLN:HE22	9:H:19:VAL:C	2.09	0.59
11:K:60:ALA:HA	11:K:87:LEU:HG	1.83	0.59
11:K:99:ILE:HD13	11:K:118:LEU:HD13	1.83	0.59
12:L:117:THR:HB	12:L:119:PRO:O	2.02	0.59
13:M:88:ASN:ND2	13:M:88:ASN:N	2.49	0.59
18:R:79:ARG:HD3	18:R:86:GLN:NE2	2.16	0.59
29:4:44:ARG:HB3	29:4:45:PRO:HD2	1.84	0.59
31:6:37:PHE:HB2	31:6:66:PHE:CZ	2.36	0.59
32:a:390:U:H2'	32:a:391:G:H8	1.66	0.59
32:a:740:U:HO2'	45:o:51:SER:CB	2.15	0.59
32:a:980:C:C2'	44:n:58:ARG:HD2	2.32	0.59
32:a:981:U:P	44:n:55:SER:HG	2.23	0.59
32:a:1011:C:H2'	32:a:1012:A:C8	2.37	0.59
32:a:1121:U:C2	40:j:91:ASP:CG	2.80	0.59
32:a:1276:G:H1'	44:n:97:LYS:CA	2.31	0.59
32:a:1372:U:H5"	39:i:72:SER:HB2	1.84	0.59
33:c:67:ILE:CD1	40:j:63:ASP:CB	2.77	0.59
34:d:94:GLU:HA	34:d:103:ARG:HH22	1.67	0.59
38:h:42:GLU:HG3	38:h:100:ILE:HD13	1.84	0.59
39:i:15:ALA:O	39:i:66:VAL:HG23	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:i:87:MET:HE3	39:i:94:ARG:HE	1.66	0.59
42:l:35:ARG:HA	42:l:35:ARG:HE	1.67	0.59
47:q:7:LEU:HD13	47:q:24:ILE:HG12	1.84	0.59
51:7:26:MET:HE3	51:7:192:PRO:HG3	1.84	0.59
51:7:31:PHE:HB3	51:7:39:ILE:HB	1.84	0.59
2:B:278:A:N3	2:B:278:A:H2'	2.16	0.59
2:B:1007:C:H5"	10:J:37:ARG:NH2	2.16	0.59
2:B:1076:C:H4'	31:6:94:LYS:NZ	2.15	0.59
2:B:1080:A:H2'	2:B:1081:U:H6	1.67	0.59
2:B:1082:U:C4	2:B:1086:A:C2	2.90	0.59
2:B:1327:A:H2'	2:B:1328:A:O4'	2.02	0.59
2:B:1913:A:N1	32:a:1492:A:N3	2.49	0.59
2:B:2229:U:H2'	2:B:2230:G:C8	2.37	0.59
4:C:198:GLU:HA	4:C:201:LEU:HB2	1.83	0.59
5:D:22:ILE:N	5:D:23:PRO:CD	2.65	0.59
6:E:18:THR:HG23	6:E:20:GLY:N	2.15	0.59
6:E:43:THR:O	6:E:89:PRO:HA	2.02	0.59
13:M:66:ARG:H	13:M:100:LYS:HB2	1.67	0.59
14:N:116:VAL:HG13	14:N:117:ASP:N	2.17	0.59
17:Q:47:ARG:HH22	17:Q:50:ARG:HG2	1.66	0.59
17:Q:92:LYS:CA	17:Q:95:ALA:HB2	2.29	0.59
20:T:23:ALA:O	20:T:24:MET:HE3	2.02	0.59
20:T:30:ILE:O	20:T:84:TYR:HA	2.02	0.59
25:Z:66:ILE:HB	25:Z:67:PRO:HD3	1.85	0.59
32:a:995:C:O4'	44:n:19:TYR:CZ	2.54	0.59
32:a:1016:A:C2	44:n:42:ASN:C	2.80	0.59
32:a:1127:G:O4'	40:j:36:VAL:CG2	2.42	0.59
32:a:1151:A:C8	40:j:90:LEU:HD13	2.34	0.59
32:a:1300:G:O6	43:m:11:HIS:CB	2.47	0.59
33:c:21:TRP:HB2	40:j:68:ARG:CG	2.32	0.59
33:c:102:ILE:HG22	40:j:53:ILE:HA	1.84	0.59
37:g:3:ARG:HB3	37:g:3:ARG:NH1	2.16	0.59
38:h:12:ARG:HD3	38:h:26:MET:HE3	1.84	0.59
39:i:17:ARG:O	39:i:64:ILE:HA	2.02	0.59
42:l:19:ASN:HB2	42:l:93:ARG:NH1	2.18	0.59
1:A:12:C:H41	22:W:50:VAL:HG23	1.67	0.59
2:B:2236:U:H2'	2:B:2237:G:O4'	2.02	0.59
2:B:2639:A:H2'	2:B:2640:G:O4'	2.02	0.59
2:B:2804:U:H2'	2:B:2805:C:H6	1.66	0.59
3:V:46:LYS:O	3:V:50:MET:HG3	2.02	0.59
10:J:17:VAL:HG23	10:J:139:VAL:HB	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:38:GLN:C	12:L:40:SER:N	2.53	0.59
13:M:41:LEU:HG	13:M:95:LEU:HD12	1.85	0.59
14:N:82:GLU:O	14:N:86:ARG:HG3	2.02	0.59
16:P:99:LEU:HD12	16:P:101:GLU:OE2	2.02	0.59
21:U:81:ARG:HD2	21:U:81:ARG:N	2.16	0.59
32:a:408:A:OP1	34:d:109:THR:HG21	2.02	0.59
32:a:429:U:H1'	32:a:430:A:H5"	1.84	0.59
32:a:1013:G:O6	44:n:32:ASP:OD1	2.20	0.59
32:a:1276:G:C4	44:n:96:LYS:N	2.70	0.59
32:a:1305:G:C4	43:m:21:ILE:HD11	2.37	0.59
32:a:1329:A:C2	43:m:62:PHE:HE2	2.19	0.59
32:a:1331:G:H1	43:m:59:VAL:CG2	2.08	0.59
33:c:96:VAL:CB	40:j:48:ARG:HE	2.15	0.59
34:d:118:SER:HA	34:d:130:ASN:HB2	1.85	0.59
36:f:99:ALA:O	36:f:100:SER:HB2	2.01	0.59
37:g:11:ILE:HG12	37:g:24:LYS:HE2	1.85	0.59
47:q:28:VAL:C	47:q:36:PHE:HA	2.27	0.59
48:r:52:ARG:HB3	48:r:52:ARG:NH1	2.14	0.59
53:v:45:U:H5"	53:v:46:G:OP2	2.03	0.59
3:V:70:ILE:N	3:V:70:ILE:HD13	2.16	0.59
4:C:37:SER:H	4:C:62:ARG:HB2	1.66	0.59
5:D:52:THR:HG22	5:D:75:ALA:HB1	1.84	0.59
12:L:77:ILE:HG13	12:L:108:ALA:HB1	1.83	0.59
19:S:7:HIS:CG	19:S:8:ARG:H	2.19	0.59
21:U:5:ARG:HG2	21:U:6:ARG:H	1.67	0.59
21:U:90:LYS:HG3	21:U:91:LYS:H	1.68	0.59
22:W:55:ASP:CG	22:W:56:HIS:N	2.59	0.59
26:1:4:GLN:O	26:1:5:ASN:C	2.44	0.59
31:6:102:ARG:HD3	31:6:141:ASP:CG	2.27	0.59
32:a:1235:U:C2	43:m:48:SER:O	2.55	0.59
32:a:1279:G:OP1	40:j:41:PRO:CG	2.50	0.59
32:a:1306:A:N3	43:m:15:VAL:HA	2.16	0.59
32:a:1358:U:C6	44:n:69:PRO:N	2.68	0.59
36:f:86:ARG:NH1	48:r:63:TYR:HB3	2.17	0.59
45:o:60:SER:HA	45:o:63:ARG:NH1	2.17	0.59
45:o:78:THR:HA	45:o:81:ILE:HG12	1.85	0.59
53:v:14:A:C2	53:v:15:G:H1'	2.37	0.59
1:A:27:C:H5'	15:O:34:HIS:CE1	2.37	0.59
2:B:1219:U:H2'	2:B:1220:G:H8	1.65	0.59
2:B:1709:U:H2'	2:B:1710:G:H8	1.66	0.59
2:B:1857:G:H1'	2:B:1885:A:N6	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2602:A:C6	53:v:74:C:C5	2.91	0.59
2:B:2621:G:HO2'	5:D:164:GLN:HB2	1.67	0.59
4:C:172:THR:O	4:C:173:LEU:HB2	2.01	0.59
7:F:108:PRO:HA	7:F:113:PHE:CD1	2.38	0.59
7:F:136:ILE:C	43:m:111:PRO:C	2.71	0.59
8:G:157:LYS:HG3	8:G:159:LYS:NZ	2.11	0.59
17:Q:94:LEU:HD13	17:Q:94:LEU:H	1.66	0.59
18:R:53:PHE:O	18:R:54:VAL:C	2.37	0.59
25:Z:69:SER:C	25:Z:70:LYS:HE2	2.28	0.59
32:a:241:G:O2'	32:a:242:G:H5'	2.03	0.59
32:a:975:A:C1'	44:n:1:ALA:N	2.59	0.59
32:a:1127:G:C4	40:j:76:ILE:CG2	2.80	0.59
32:a:1220:G:H5'	49:s:10:ILE:HG23	1.85	0.59
32:a:1357:A:C4'	44:n:66:THR:C	2.50	0.59
32:a:1358:U:C2'	44:n:69:PRO:HD3	2.33	0.59
33:c:99:GLN:C	40:j:63:ASP:O	2.41	0.59
34:d:90:LEU:HA	34:d:93:LEU:HD12	1.83	0.59
44:n:58:ARG:NE	49:s:6:LYS:HZ1	1.97	0.59
46:p:1:MET:N	46:p:24:SER:HB3	2.18	0.59
2:B:1155:A:N6	24:Y:10:ARG:HH22	2.00	0.59
2:B:1387:A:H5'	2:B:1469:A:H1'	1.84	0.59
2:B:2000:C:O2'	2:B:2001:C:H5'	2.02	0.59
2:B:2898:U:H2'	2:B:2899:A:H8	1.68	0.59
4:C:50:THR:HG22	4:C:51:ARG:CG	2.31	0.59
5:D:150:GLN:C	5:D:151:THR:CG2	2.75	0.59
10:J:17:VAL:CG1	10:J:57:LEU:HD21	2.32	0.59
17:Q:101:ASP:HB3	17:Q:104:ALA:HB3	1.84	0.59
18:R:37:GLU:HG2	18:R:62:GLU:N	2.17	0.59
18:R:97:LYS:O	18:R:98:ILE:HB	2.01	0.59
29:4:48:MET:SD	29:4:51:LYS:HG2	2.42	0.59
32:a:118:U:O4	32:a:288:A:H2'	2.02	0.59
32:a:186:C:P	50:t:72:ALA:HB1	2.42	0.59
32:a:370:C:H2'	32:a:371:A:H8	1.66	0.59
32:a:858:G:O6	32:a:869:G:H3'	2.01	0.59
32:a:946:A:OP1	43:m:41:ASP:CB	2.50	0.59
32:a:948:C:OP1	43:m:33:LEU:HB2	2.03	0.59
32:a:1015:G:O5'	44:n:40:ARG:NH1	2.35	0.59
32:a:1017:U:C4	44:n:32:ASP:HB3	2.37	0.59
32:a:1090:U:H2'	32:a:1091:U:C6	2.37	0.59
32:a:1229:A:HO2'	53:v:30:G:P	2.26	0.59
32:a:1303:C:C2	43:m:1:ALA:O	2.56	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1360:A:P	44:n:61:ASN:OD1	2.61	0.59
36:f:100:SER:HA	48:r:23:LYS:CD	2.31	0.59
37:g:53:SER:HB2	37:g:55:LYS:NZ	2.18	0.59
43:m:89:ARG:HB2	43:m:96:VAL:HG12	1.84	0.59
53:v:38:A:H2'	53:v:39:U:O5'	2.03	0.59
2:B:1187:G:H5"	18:R:84:ARG:CZ	2.33	0.59
2:B:2774:C:H2'	2:B:2775:G:O4'	2.01	0.59
22:W:23:LYS:NZ	22:W:24:ARG:HG2	2.18	0.59
32:a:967:C:H3'	32:a:968:A:C5'	2.33	0.59
32:a:984:C:H41	44:n:52:ARG:HH12	1.50	0.59
32:a:994:A:C2	44:n:19:TYR:CZ	2.90	0.59
32:a:1150:A:P	40:j:28:THR:CG2	2.91	0.59
32:a:1257:A:O5'	44:n:74:ARG:C	2.46	0.59
32:a:1280:A:N7	40:j:25:ILE:HG22	2.18	0.59
32:a:1318:A:C2'	49:s:68:HIS:HB2	2.29	0.59
33:c:65:VAL:HG21	40:j:64:GLN:N	2.16	0.59
33:c:83:VAL:C	40:j:59:LYS:O	2.44	0.59
1:A:52:A:H2'	1:A:53:A:O4'	2.03	0.59
2:B:315:G:H2'	2:B:316:C:C6	2.37	0.59
2:B:459:U:H5'	28:3:41:ARG:HE	1.67	0.59
2:B:967:U:H2'	2:B:968:C:C6	2.37	0.59
2:B:1469:A:H2'	2:B:1470:A:H8	1.66	0.59
2:B:2301:C:H2'	2:B:2302:U:H6	1.65	0.59
6:E:196:VAL:O	6:E:199:MET:HE2	2.03	0.59
7:F:79:ARG:CG	53:v:56:C:C4	2.86	0.59
18:R:69:GLY:O	18:R:70:GLU:HG3	2.02	0.59
21:U:7:ASP:N	21:U:24:VAL:HA	2.17	0.59
21:U:73:ASN:HB2	21:U:96:LYS:NZ	2.18	0.59
32:a:1074:G:H2'	32:a:1075:U:H6	1.67	0.59
32:a:1236:A:C8	43:m:48:SER:C	2.80	0.59
32:a:1243:C:H2'	32:a:1244:G:H8	1.67	0.59
32:a:1333:A:OP1	43:m:12:LYS:CD	2.51	0.59
33:c:100:ILE:HD12	40:j:52:LEU:C	2.26	0.59
33:c:183:TYR:HA	33:c:199:VAL:O	2.03	0.59
38:h:79:ARG:HB2	38:h:80:PRO:HD2	1.84	0.59
2:B:19:A:H5"	17:Q:20:ALA:O	2.02	0.59
2:B:956:G:H5"	13:M:76:LYS:HD3	1.83	0.59
2:B:1381:G:H2'	2:B:1382:G:H5'	1.84	0.59
2:B:2297:A:N6	2:B:2319:G:H5"	2.18	0.59
2:B:2305:U:N3	7:F:150:GLY:HA3	2.17	0.59
2:B:2328:A:H2'	2:B:2329:U:H6	1.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2393:U:C5'	12:L:62:PRO:HA	2.31	0.59
2:B:2804:U:H2'	2:B:2805:C:C6	2.38	0.59
4:C:124:LYS:CB	4:C:125:PRO:CD	2.71	0.59
4:C:141:HIS:HB3	4:C:190:THR:HB	1.85	0.59
5:D:34:VAL:HG23	5:D:93:GLY:HA3	1.84	0.59
5:D:101:PHE:O	5:D:102:ALA:CB	2.51	0.59
5:D:193:VAL:HG13	5:D:193:VAL:O	2.02	0.59
8:G:8:VAL:O	8:G:48:THR:HA	2.02	0.59
8:G:42:VAL:HG12	8:G:51:PHE:HD1	1.68	0.59
23:X:36:GLN:NE2	23:X:38:GLN:HE22	1.93	0.59
28:3:12:ARG:HH21	28:3:18:PHE:H	1.50	0.59
28:3:17:GLY:HA2	28:3:21:ARG:NH1	2.17	0.59
32:a:375:U:O3'	46:p:6:LEU:HB2	2.03	0.59
32:a:926:G:N2	32:a:1505:G:H2'	2.18	0.59
32:a:1163:A:H2'	32:a:1164:G:H8	1.67	0.59
32:a:1221:G:H2'	49:s:3:SER:O	1.97	0.59
32:a:1234:C:O2	43:m:38:ILE:HD11	2.03	0.59
32:a:1261:A:C4	44:n:100:TRP:HZ3	2.08	0.59
32:a:1304:G:C3'	43:m:52:ILE:CG1	2.81	0.59
32:a:1304:G:C5'	43:m:56:ARG:HH21	2.11	0.59
33:c:83:VAL:O	40:j:62:ARG:HB2	2.00	0.59
36:f:100:SER:N	48:r:23:LYS:HZ1	2.01	0.59
38:h:8:ASP:O	38:h:12:ARG:HG3	2.03	0.59
51:7:67:LEU:HD13	51:7:67:LEU:N	2.18	0.59
2:B:126:A:O5'	28:3:19:ARG:HB3	2.02	0.59
2:B:1041:G:H2'	2:B:1042:G:H8	1.68	0.59
2:B:1229:C:H2'	2:B:1230:A:H8	1.68	0.59
2:B:2615:U:H1'	26:1:6:LYS:CE	2.29	0.59
4:C:227:VAL:HG12	4:C:228:ASP:OD1	2.03	0.59
8:G:132:LEU:HD11	8:G:144:ALA:HB2	1.85	0.59
8:G:148:ARG:NH2	8:G:153:PRO:HD2	2.18	0.59
9:H:85:GLY:O	9:H:89:LYS:N	2.36	0.59
10:J:64:VAL:HG11	10:J:68:LYS:HD2	1.84	0.59
13:M:31:PHE:CD2	13:M:128:THR:HG21	2.38	0.59
19:S:14:ALA:O	19:S:17:VAL:HG22	2.03	0.59
20:T:38:ALA:O	20:T:42:GLU:HB2	2.03	0.59
22:W:10:ARG:CB	22:W:10:ARG:HH11	2.16	0.59
31:6:130:GLY:HA2	31:6:133:ARG:HH21	1.67	0.59
32:a:677:U:H3	32:a:713:G:H22	1.51	0.59
32:a:947:G:H5'	43:m:14:ALA:H	1.68	0.59
32:a:1116:U:O2'	32:a:1117:A:H5'	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1216:A:C4'	44:n:50:LEU:HD13	2.03	0.59
32:a:1230:C:H5'	53:v:30:G:C5'	2.33	0.59
32:a:1281:C:C2	40:j:38:GLY:CA	2.80	0.59
32:a:1284:C:H3'	32:a:1285:A:H5"	1.84	0.59
32:a:1304:G:C4'	43:m:52:ILE:CG1	2.81	0.59
32:a:1338:G:H2'	32:a:1339:A:C8	2.38	0.59
34:d:137:SER:HB2	34:d:138:PRO:HD2	1.85	0.59
2:B:364:C:H2'	2:B:365:U:H6	1.68	0.58
2:B:419:U:H2'	2:B:420:C:C6	2.38	0.58
2:B:966:G:H2'	2:B:967:U:C6	2.38	0.58
2:B:974:G:H1'	2:B:975:A:C8	2.39	0.58
2:B:1552:A:H2'	2:B:1553:A:H5'	1.84	0.58
2:B:2814:A:H2'	2:B:2815:C:C6	2.38	0.58
4:C:75:ALA:HB1	4:C:93:VAL:HG13	1.84	0.58
7:F:108:PRO:HD3	43:m:101:THR:O	2.03	0.58
9:H:17:ASP:OD2	9:H:21:VAL:HB	2.02	0.58
21:U:23:LYS:O	21:U:25:LYS:HG3	2.03	0.58
26:1:2:VAL:HG22	26:1:3:GLN:H	1.67	0.58
27:2:9:LYS:HG2	29:4:34:LYS:HZ1	1.66	0.58
27:2:22:THR:O	27:2:23:THR:HG23	2.03	0.58
32:a:105:G:H2'	32:a:106:C:H6	1.66	0.58
32:a:920:U:H2'	32:a:921:U:C6	2.38	0.58
32:a:1218:C:O2	44:n:45:LEU:CG	2.41	0.58
32:a:1283:U:N3	44:n:84:ARG:O	2.33	0.58
32:a:1330:U:C5	43:m:64:VAL:CB	2.79	0.58
32:a:1331:G:OP2	43:m:22:TYR:CD2	2.56	0.58
32:a:1361:G:H2'	32:a:1362:A:H5"	1.85	0.58
32:a:1444:U:H2'	32:a:1445:U:C6	2.38	0.58
33:c:77:GLY:CA	40:j:58:ASN:CB	2.81	0.58
34:d:59:LYS:O	34:d:63:ILE:HG13	2.02	0.58
40:j:26:VAL:O	40:j:30:LYS:HB3	2.02	0.58
41:k:58:THR:HG23	41:k:61:ALA:HB2	1.85	0.58
47:q:10:ARG:HA	47:q:10:ARG:NE	2.18	0.58
49:s:50:VAL:HB	49:s:57:VAL:HG22	1.84	0.58
2:B:1082:U:C4	2:B:1086:A:N1	2.71	0.58
2:B:1486:U:H2'	2:B:1487:U:H6	1.66	0.58
2:B:2052:A:H5'	5:D:148:GLN:O	2.02	0.58
4:C:10:PRO:HD2	4:C:202:ARG:HH12	1.67	0.58
5:D:23:PRO:HB3	5:D:189:VAL:H	1.67	0.58
5:D:107:VAL:HG23	5:D:204:LYS:O	2.04	0.58
22:W:40:ARG:NH1	22:W:40:ARG:H	2.01	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:6:121:ILE:O	31:6:124:MET:HG2	2.03	0.58
32:a:392:C:P	46:p:8:ARG:NH2	2.76	0.58
32:a:987:G:H2'	32:a:988:G:H8	1.69	0.58
32:a:1317:C:O3'	49:s:63:ASP:O	2.21	0.58
32:a:1332:A:C2	43:m:14:ALA:CB	2.76	0.58
32:a:1338:G:N2	53:v:41:C:C4'	2.66	0.58
32:a:1373:G:OP2	39:i:72:SER:HB3	2.03	0.58
34:d:11:SER:OG	34:d:17:ASP:HA	2.02	0.58
34:d:25:ARG:NH1	34:d:30:LYS:HG2	2.18	0.58
37:g:74:VAL:HG12	37:g:75:LYS:H	1.68	0.58
39:i:18:VAL:HG22	39:i:64:ILE:HG23	1.85	0.58
51:7:128:LEU:HG	51:7:132:GLU:HG2	1.83	0.58
52:u:13:VAL:HG13	52:u:14:ALA:N	2.16	0.58
2:B:943:A:P	12:L:42:SER:HB3	2.44	0.58
4:C:139:THR:HA	4:C:193:GLU:OE1	2.03	0.58
6:E:109:LEU:HD23	6:E:110:SER:N	2.18	0.58
6:E:122:GLU:HB3	6:E:152:GLU:HB2	1.85	0.58
6:E:156:ASN:ND2	6:E:157:LEU:HG	2.17	0.58
7:F:108:PRO:C	43:m:109:LYS:HB3	2.27	0.58
7:F:111:ARG:HD3	43:m:108:ARG:CZ	2.33	0.58
7:F:174:PHE:N	7:F:175:PRO:HD2	2.18	0.58
10:J:139:VAL:O	10:J:140:LEU:HD23	2.03	0.58
12:L:27:LEU:C	12:L:29:LYS:N	2.62	0.58
19:S:86:MET:O	19:S:94:ASP:HB3	2.03	0.58
19:S:103:ILE:HG23	19:S:104:THR:N	2.18	0.58
29:4:16:THR:HG21	29:4:22:LYS:NZ	2.18	0.58
30:5:11:CYS:SG	30:5:12:ARG:N	2.75	0.58
31:6:79:LEU:HD23	31:6:108:ILE:CD1	2.33	0.58
32:a:451:A:H4'	32:a:452:A:O4'	2.03	0.58
32:a:978:A:O2'	49:s:2:ARG:CA	2.51	0.58
32:a:1014:A:N7	49:s:15:LEU:HD22	1.99	0.58
32:a:1150:A:N6	40:j:86:ALA:C	2.61	0.58
32:a:1234:C:C2'	43:m:54:THR:CG2	2.81	0.58
32:a:1238:A:C2	32:a:1241:G:H1'	2.38	0.58
32:a:1258:G:O5'	44:n:75:LYS:N	2.36	0.58
34:d:138:PRO:HA	34:d:181:PHE:HD2	1.68	0.58
34:d:173:ASP:HB3	34:d:178:GLU:HB3	1.85	0.58
38:h:64:TYR:HA	38:h:70:VAL:HG23	1.85	0.58
39:i:18:VAL:HG22	39:i:64:ILE:HG12	1.85	0.58
2:B:416:U:H2'	2:B:417:C:C6	2.39	0.58
2:B:441:U:H2'	2:B:442:G:C8	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:671:C:N4	12:L:39:LYS:HG2	2.18	0.58
2:B:2274:A:H2'	2:B:2276:G:OP1	2.02	0.58
2:B:2415:G:H2'	2:B:2416:C:C6	2.38	0.58
8:G:159:LYS:HG3	8:G:159:LYS:O	2.02	0.58
11:K:80:ASP:OD1	16:P:70:GLU:HB3	2.03	0.58
11:K:97:THR:OG1	11:K:98:ARG:HD2	2.02	0.58
16:P:13:LYS:HA	16:P:15:ASP:OD1	2.04	0.58
16:P:97:TYR:O	16:P:98:TYR:HB2	2.03	0.58
21:U:13:LEU:HG	21:U:69:VAL:HG22	1.85	0.58
27:2:35:LEU:C	27:2:36:LYS:HD2	2.28	0.58
32:a:57:G:H2'	32:a:58:C:H6	1.68	0.58
32:a:407:U:O3'	34:d:112:GLU:HB2	2.03	0.58
32:a:586:C:O2'	32:a:587:G:H5'	2.04	0.58
32:a:1014:A:H8	49:s:15:LEU:CG	2.09	0.58
32:a:1017:U:C2	44:n:40:ARG:N	2.61	0.58
32:a:1026:G:H2'	32:a:1027:C:H6	1.67	0.58
32:a:1236:A:OP2	43:m:49:GLU:CA	2.44	0.58
32:a:1249:C:O2'	39:i:74:GLN:NE2	2.35	0.58
32:a:1253:G:C2	44:n:84:ARG:HD3	2.36	0.58
32:a:1280:A:N1	40:j:27:GLU:C	2.56	0.58
32:a:1283:U:C4	44:n:88:MET:CE	2.86	0.58
32:a:1305:G:OP2	43:m:3:ILE:CB	2.50	0.58
32:a:1306:A:P	43:m:55:LEU:CA	2.91	0.58
39:i:118:ARG:HH22	39:i:122:ARG:HH21	1.52	0.58
41:k:52:ARG:HD2	41:k:53:GLY:N	2.19	0.58
43:m:48:SER:O	43:m:52:ILE:HG22	2.03	0.58
51:7:147:LEU:O	51:7:150:ILE:HG22	2.03	0.58
1:A:86:G:H2'	1:A:87:U:O4'	2.04	0.58
2:B:363:G:H2'	2:B:364:C:C6	2.38	0.58
2:B:594:U:H2'	2:B:595:C:H6	1.66	0.58
2:B:751:A:C5'	19:S:90:LYS:HE2	2.33	0.58
2:B:2246:G:H2'	2:B:2247:A:C8	2.38	0.58
2:B:2392:A:OP2	29:4:31:ILE:HD13	2.03	0.58
2:B:2849:U:H4'	2:B:2850:A:H5'	1.84	0.58
4:C:42:ARG:HG2	4:C:43:ASN:N	2.06	0.58
7:F:116:LEU:HD21	43:m:102:LYS:CA	2.31	0.58
7:F:176:PHE:N	43:m:102:LYS:CB	2.59	0.58
10:J:61:LYS:HA	10:J:61:LYS:HE2	1.86	0.58
10:J:73:VAL:HG23	10:J:74:TYR:H	1.69	0.58
10:J:125:TYR:HE2	10:J:134:ALA:HB2	1.67	0.58
12:L:96:LYS:HD3	12:L:96:LYS:N	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:16:ARG:NE	15:O:16:ARG:HA	2.18	0.58
16:P:27:VAL:HG12	16:P:47:ILE:CD1	2.33	0.58
19:S:17:VAL:HG23	19:S:76:VAL:HG11	1.85	0.58
20:T:61:LEU:HD12	20:T:62:VAL:N	2.18	0.58
32:a:95:C:O2	32:a:95:C:H2'	2.02	0.58
32:a:272:C:H2'	32:a:273:U:H6	1.68	0.58
32:a:1218:C:H6	44:n:48:GLN:HG3	1.56	0.58
32:a:1240:U:O2'	37:g:31:VAL:HG12	1.97	0.58
32:a:1262:C:O2'	44:n:100:TRP:OXT	2.21	0.58
32:a:1304:G:C5	43:m:7:ASN:O	2.56	0.58
32:a:1318:A:O2'	49:s:68:HIS:N	2.37	0.58
33:c:78:LYS:CG	33:c:81:GLU:HB2	2.24	0.58
44:n:60:ARG:HD3	44:n:60:ARG:N	2.11	0.58
51:7:18:GLN:O	51:7:37:VAL:HG23	2.03	0.58
2:B:276:U:O2'	2:B:277:G:H5'	2.03	0.58
2:B:303:G:H2'	2:B:304:U:C6	2.39	0.58
2:B:417:C:H2'	2:B:418:C:C6	2.37	0.58
2:B:1799:G:OP1	4:C:255:LYS:HG2	2.04	0.58
2:B:2602:A:C2	53:v:74:C:P	2.95	0.58
2:B:2749:A:P	8:G:3:VAL:HG11	2.44	0.58
3:V:80:HIS:HB2	3:V:85:LYS:HG3	1.86	0.58
4:C:164:VAL:HB	4:C:167:ASP:CG	2.29	0.58
5:D:62:LYS:H	5:D:62:LYS:HE3	1.68	0.58
15:O:40:ILE:HG12	15:O:41:ALA:O	2.03	0.58
23:X:36:GLN:NE2	23:X:36:GLN:H	2.02	0.58
29:4:12:ARG:HB2	29:4:12:ARG:HH11	1.64	0.58
32:a:134:G:O6	46:p:25:ARG:CZ	2.52	0.58
32:a:436:C:O2'	32:a:437:U:H5'	2.03	0.58
32:a:982:U:H2'	44:n:58:ARG:HH21	1.67	0.58
32:a:1016:A:O3'	44:n:27:LYS:CD	2.51	0.58
32:a:1091:U:H2'	32:a:1093:A:OP2	2.04	0.58
32:a:1109:C:P	33:c:175:HIS:CD2	2.96	0.58
32:a:1127:G:N7	40:j:76:ILE:CA	2.67	0.58
32:a:1150:A:C2	40:j:29:ALA:HB2	2.38	0.58
32:a:1240:U:O2	37:g:38:ALA:N	2.37	0.58
32:a:1276:G:C4	44:n:95:LEU:HD12	2.39	0.58
32:a:1278:G:N7	44:n:93:PRO:CG	2.66	0.58
32:a:1358:U:C5	44:n:68:ARG:CG	2.87	0.58
33:c:102:ILE:HG21	40:j:53:ILE:O	2.03	0.58
42:l:19:ASN:O	42:l:20:VAL:HG23	2.03	0.58
50:t:67:HIS:O	50:t:70:LYS:HG2	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:586:A:H5”	6:E:85:PHE:CE1	2.39	0.58
2:B:596:U:H2’	2:B:597:G:H8	1.69	0.58
2:B:958:U:C4	13:M:18:ARG:HB2	2.39	0.58
2:B:972:A:C3’	2:B:973:A:H5”	2.33	0.58
2:B:1187:G:H5”	18:R:84:ARG:NE	2.18	0.58
2:B:2415:G:H2’	2:B:2416:C:H6	1.69	0.58
2:B:2619:C:H1’	5:D:155:VAL:HG11	1.85	0.58
11:K:2:ILE:HG22	11:K:67:LYS:HZ1	1.67	0.58
13:M:3:GLN:OE1	13:M:47:GLU:HB2	2.03	0.58
14:N:83:LEU:HA	14:N:86:ARG:HD3	1.84	0.58
17:Q:92:LYS:O	17:Q:94:LEU:HD13	2.04	0.58
19:S:18:ARG:NH1	19:S:25:ARG:HH22	1.97	0.58
19:S:56:ALA:C	19:S:58:ALA:H	2.11	0.58
20:T:8:LEU:CB	23:X:19:LEU:HD11	2.34	0.58
21:U:11:ILE:HG23	21:U:20:LYS:O	2.04	0.58
23:X:44:LYS:HD2	23:X:48:ARG:HE	1.68	0.58
28:3:43:THR:O	28:3:44:VAL:C	2.47	0.58
31:6:85:ILE:CD1	31:6:137:LEU:HD21	2.34	0.58
32:a:672:U:H2’	32:a:673:A:C8	2.39	0.58
32:a:990:C:C6	44:n:43:ALA:CA	2.85	0.58
32:a:990:C:P	44:n:43:ALA:CB	2.79	0.58
32:a:1013:G:C4’	49:s:16:LYS:HZ3	2.10	0.58
32:a:1124:G:O5’	40:j:6:ILE:CG2	2.32	0.58
32:a:1150:A:C4’	40:j:28:THR:N	2.54	0.58
32:a:1241:G:H2’	32:a:1242:G:C8	2.38	0.58
32:a:1254:A:N3	44:n:80:ARG:O	2.37	0.58
32:a:1333:A:OP1	43:m:12:LYS:HD2	2.03	0.58
34:d:169:TRP:NE1	34:d:170:LEU:HD23	2.18	0.58
41:k:18:GLY:O	41:k:81:LEU:HB2	2.04	0.58
41:k:83:VAL:HG23	41:k:109:ILE:HA	1.84	0.58
51:7:41:ASN:ND2	51:7:44:LYS:HE2	2.17	0.58
2:B:139:U:O2’	20:T:1:MET:HA	2.03	0.58
2:B:184:C:H2’	2:B:185:G:H8	1.68	0.58
2:B:189:G:H2’	2:B:205:G:N2	2.19	0.58
2:B:450:G:H4’	6:E:47:LYS:NZ	2.18	0.58
2:B:997:G:C5’	17:Q:91:ARG:HG3	2.32	0.58
2:B:1550:C:H2’	2:B:1551:A:H8	1.69	0.58
2:B:1655:A:C2	2:B:2049:G:H5”	2.38	0.58
2:B:2278:A:C8	22:W:8:SER:HB3	2.38	0.58
3:V:63:ILE:O	3:V:65:VAL:HG22	2.03	0.58
7:F:102:LEU:O	7:F:107:VAL:HG23	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:98:GLN:O	15:O:103:VAL:HG21	2.04	0.58
15:O:108:ASP:HB3	15:O:111:ARG:NH2	2.19	0.58
24:Y:7:THR:HB	24:Y:34:THR:HB	1.85	0.58
31:6:109:ALA:HB1	31:6:124:MET:CG	2.33	0.58
32:a:699:C:C2'	32:a:700:G:H5"	2.30	0.58
32:a:1261:A:C4	44:n:100:TRP:HE3	2.09	0.58
32:a:1306:A:P	43:m:55:LEU:C	2.76	0.58
32:a:1333:A:C5'	43:m:12:LYS:HD2	2.31	0.58
42:l:22:ALA:HB2	42:l:56:LEU:HD21	1.85	0.58
1:A:63:C:H2'	1:A:64:G:H8	1.69	0.58
2:B:45:G:C5'	2:B:46:G:H5'	2.32	0.58
2:B:580:U:O3'	17:Q:30:VAL:HG13	2.03	0.58
2:B:910:A:H62	13:M:15:GLY:HA3	1.68	0.58
2:B:1681:G:H2'	2:B:1757:A:N1	2.19	0.58
2:B:2578:G:N3	5:D:145:SER:HB2	2.19	0.58
2:B:2602:A:N3	53:v:74:C:O5'	2.36	0.58
3:V:79:ARG:C	3:V:87:GLN:HE22	2.12	0.58
4:C:204:LEU:HB3	4:C:210:ALA:HB1	1.85	0.58
5:D:138:LEU:N	5:D:138:LEU:CD2	2.66	0.58
6:E:152:GLU:O	6:E:153:LEU:HB2	2.04	0.58
7:F:37:MET:HE3	7:F:56:LEU:HD12	1.86	0.58
7:F:161:SER:OG	7:F:164:GLU:HB2	2.03	0.58
10:J:41:LYS:HD2	10:J:44:TYR:O	2.03	0.58
11:K:70:ARG:CB	11:K:76:VAL:HG22	2.31	0.58
13:M:116:ALA:HA	13:M:119:LEU:HD23	1.86	0.58
15:O:58:ILE:HG13	15:O:59:ALA:N	2.19	0.58
15:O:64:TYR:CE1	15:O:74:VAL:HG11	2.34	0.58
16:P:2:ASN:HD22	16:P:2:ASN:H	1.52	0.58
17:Q:27:ARG:HG3	17:Q:32:ARG:NH2	2.19	0.58
21:U:94:PHE:HD2	21:U:95:PHE:H	1.50	0.58
22:W:21:GLY:HA3	22:W:32:ALA:CB	2.34	0.58
23:X:44:LYS:CD	23:X:48:ARG:HE	2.16	0.58
25:Z:25:ARG:HH11	25:Z:25:ARG:CB	2.17	0.58
26:1:42:ILE:HD11	26:1:44:ALA:HB3	1.86	0.58
27:2:31:GLU:HB3	27:2:32:LYS:HE3	1.86	0.58
31:6:77:VAL:HA	31:6:80:LYS:HE2	1.84	0.58
32:a:865:A:H5'	32:a:1078:U:O4	2.04	0.58
32:a:1151:A:C3'	40:j:21:ALA:N	2.66	0.58
32:a:1151:A:O3'	40:j:21:ALA:CB	2.52	0.58
32:a:1236:A:O5'	43:m:49:GLU:HA	2.04	0.58
33:c:81:GLU:CG	40:j:58:ASN:OD1	2.48	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:e:13:LYS:HD2	35:e:112:ALA:HB1	1.85	0.58
39:i:80:HIS:O	39:i:84:ARG:HB2	2.04	0.58
1:A:32:U:H2'	1:A:33:G:O4'	2.04	0.58
1:A:39:A:O2'	1:A:40:U:H5'	2.03	0.58
1:A:107:G:O2'	1:A:108:A:H5'	2.04	0.58
2:B:6:A:O2'	10:J:135:GLN:HB2	2.04	0.58
2:B:27:G:H1'	2:B:513:A:N6	2.19	0.58
2:B:329:G:O6	21:U:16:LYS:HB2	2.04	0.58
2:B:433:C:O2'	2:B:434:U:H5'	2.04	0.58
2:B:519:U:H5"	19:S:18:ARG:NH2	2.19	0.58
2:B:705:A:N6	2:B:726:G:H1'	2.19	0.58
2:B:811:U:H2'	12:L:31:GLY:CA	2.33	0.58
2:B:1166:G:H2'	2:B:1167:C:C6	2.39	0.58
2:B:1439:A:C6	2:B:1552:A:N7	2.71	0.58
2:B:1932:A:H2'	2:B:1933:G:O4'	2.04	0.58
2:B:2144:G:C4	2:B:2146:C:H5'	2.39	0.58
2:B:2845:U:H4'	16:P:54:LEU:HD21	1.85	0.58
2:B:2888:C:H2'	2:B:2889:C:C6	2.39	0.58
3:V:46:LYS:HA	3:V:46:LYS:HE3	1.85	0.58
7:F:13:LYS:HD3	7:F:16:MET:HG3	1.85	0.58
10:J:35:ARG:HA	10:J:35:ARG:NE	2.19	0.58
12:L:55:MET:HG2	12:L:56:PRO:CD	2.22	0.58
14:N:57:THR:OG1	14:N:61:ALA:HB3	2.04	0.58
16:P:38:ARG:HH11	16:P:39:LEU:H	1.52	0.58
16:P:47:ILE:HA	16:P:63:ILE:HG23	1.86	0.58
18:R:41:ILE:C	18:R:43:ASN:H	2.11	0.58
19:S:70:LYS:O	19:S:71:VAL:HB	2.04	0.58
20:T:8:LEU:HA	23:X:19:LEU:HD21	1.84	0.58
28:3:21:ARG:HB3	28:3:31:LEU:HD21	1.86	0.58
32:a:160:A:H2'	32:a:161:A:O4'	2.04	0.58
32:a:994:A:H2	44:n:19:TYR:HH	0.65	0.58
32:a:1014:A:OP2	49:s:16:LYS:CA	2.52	0.58
32:a:1259:C:O4'	44:n:83:VAL:HG11	2.02	0.58
32:a:1305:G:C2'	43:m:55:LEU:HB2	2.31	0.58
32:a:1307:U:H6	43:m:32:ILE:HG22	1.69	0.58
32:a:1358:U:H6	44:n:69:PRO:CD	1.95	0.58
32:a:1508:A:H2'	32:a:1509:C:C6	2.39	0.58
33:c:65:VAL:HB	40:j:64:GLN:CA	2.33	0.58
33:c:79:LYS:HE2	40:j:56:HIS:CE1	2.16	0.58
33:c:112:ALA:HB1	33:c:199:VAL:HG23	1.84	0.58
52:u:14:ALA:H	52:u:16:ARG:CZ	2.15	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:144:A:H2'	2:B:145:C:H6	1.69	0.57
2:B:977:G:O2'	2:B:978:G:H5'	2.04	0.57
2:B:1505:A:H2'	2:B:1506:U:C6	2.38	0.57
2:B:1759:A:H4'	2:B:2715:C:O4'	2.04	0.57
2:B:1973:G:H2'	2:B:1974:C:C6	2.38	0.57
4:C:12:ARG:NE	4:C:18:VAL:HG11	2.19	0.57
5:D:45:TYR:O	5:D:46:ARG:HG2	2.04	0.57
6:E:142:ALA:C	6:E:143:LEU:HD12	2.29	0.57
7:F:135:ILE:CG2	43:m:111:PRO:CA	2.80	0.57
10:J:41:LYS:HZ3	10:J:46:PRO:HD3	1.68	0.57
11:K:25:LEU:HD12	11:K:38:ILE:HB	1.84	0.57
13:M:105:MET:HE3	13:M:106:ASP:C	2.29	0.57
15:O:17:LYS:O	15:O:21:LEU:HA	2.03	0.57
17:Q:10:ARG:HA	17:Q:10:ARG:NE	2.19	0.57
22:W:45:HIS:HA	22:W:75:ASN:CB	2.34	0.57
31:6:102:ARG:HD3	31:6:141:ASP:OD2	2.04	0.57
32:a:177:G:C5'	50:t:59:ARG:NE	2.63	0.57
32:a:312:C:H2'	32:a:313:A:H8	1.68	0.57
32:a:784:A:H2'	32:a:785:G:H8	1.69	0.57
32:a:1145:A:N6	40:j:76:ILE:HD12	2.19	0.57
32:a:1334:G:C2	43:m:10:ASP:CG	2.82	0.57
32:a:1337:G:H21	43:m:45:SER:HB3	1.63	0.57
32:a:1347:G:N2	39:i:108:ARG:NH2	2.41	0.57
33:c:76:ILE:HD13	40:j:54:SER:O	2.03	0.57
47:q:46:HIS:HB2	47:q:70:LYS:HE3	1.85	0.57
2:B:1244:A:O2'	2:B:1245:G:H5'	2.04	0.57
2:B:1301:A:O2'	2:B:1302:A:H2'	2.05	0.57
2:B:1534:U:H2'	2:B:1536:C:C4	2.39	0.57
2:B:1818:U:C3'	4:C:155:ARG:HB2	2.34	0.57
5:D:45:TYR:CE2	5:D:83:ARG:HG3	2.40	0.57
6:E:120:VAL:H	6:E:189:THR:CG2	2.15	0.57
7:F:74:ALA:HA	53:v:57:G:H5'	1.85	0.57
9:H:8:LYS:O	9:H:8:LYS:HD3	2.04	0.57
11:K:47:ILE:HG22	11:K:49:ARG:H	1.68	0.57
12:L:94:THR:HB	12:L:103:ILE:CG1	2.34	0.57
21:U:85:ARG:HD3	21:U:85:ARG:N	2.18	0.57
24:Y:16:LEU:N	24:Y:16:LEU:HD12	2.19	0.57
31:6:122:GLU:CD	31:6:122:GLU:H	2.12	0.57
32:a:376:G:H4'	46:p:5:ARG:HH11	1.70	0.57
32:a:990:C:C1'	44:n:43:ALA:HB1	2.34	0.57
32:a:1163:A:H2'	32:a:1164:G:C8	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:c:90:VAL:CG2	33:c:98:ALA:HB3	2.34	0.57
34:d:69:ARG:HA	34:d:69:ARG:HE	1.68	0.57
35:e:90:GLY:O	35:e:128:GLY:HA3	2.04	0.57
36:f:17:GLN:HG2	36:f:21:MET:HG3	1.86	0.57
37:g:53:SER:HB2	37:g:55:LYS:HZ2	1.68	0.57
39:i:18:VAL:HG13	39:i:64:ILE:HG12	1.85	0.57
47:q:17:GLU:C	47:q:19:SER:H	2.11	0.57
2:B:37:C:O2'	6:E:46:GLN:HB3	2.05	0.57
2:B:79:C:O2'	2:B:346:A:H1'	2.04	0.57
2:B:272:A:H2'	2:B:273:G:H8	1.69	0.57
2:B:832:U:H2'	2:B:833:A:C8	2.39	0.57
2:B:1299:G:H4'	2:B:1301:A:H1'	1.86	0.57
2:B:1464:G:H2'	2:B:1465:G:H8	1.69	0.57
2:B:2615:U:C1'	26:1:6:LYS:HE3	2.28	0.57
2:B:2646:C:H2'	2:B:2647:U:O4'	2.04	0.57
2:B:2811:G:OP1	5:D:62:LYS:HE2	2.04	0.57
2:B:2840:C:H5"	14:N:53:THR:CG2	2.34	0.57
4:C:23:LEU:N	4:C:202:ARG:NH2	2.51	0.57
4:C:216:ARG:HB3	4:C:217:PRO:CD	2.33	0.57
5:D:52:THR:HG22	5:D:76:GLY:N	2.20	0.57
5:D:62:LYS:H	5:D:62:LYS:CE	2.17	0.57
7:F:108:PRO:HA	43:m:101:THR:HA	1.85	0.57
8:G:94:ARG:HB2	8:G:94:ARG:HH11	1.68	0.57
10:J:45:THR:CB	17:Q:63:ARG:HH22	2.18	0.57
13:M:96:ILE:HG23	13:M:97:GLN:N	2.18	0.57
14:N:48:VAL:O	14:N:52:ILE:HG12	2.04	0.57
32:a:91:U:H2'	32:a:92:U:C6	2.40	0.57
32:a:202:G:H2'	32:a:203:G:C8	2.39	0.57
32:a:270:A:H2'	32:a:271:C:H6	1.68	0.57
32:a:363:A:H5'	42:l:80:LEU:HD11	1.87	0.57
32:a:555:U:H2'	32:a:556:C:C6	2.39	0.57
32:a:922:G:N3	32:a:1398:A:H2	2.02	0.57
32:a:978:A:H5'	32:a:1362:A:N6	2.19	0.57
32:a:994:A:C5	44:n:50:LEU:CD1	2.82	0.57
32:a:1035:A:H2'	32:a:1036:A:H8	1.69	0.57
32:a:1463:U:H2'	32:a:1464:U:C6	2.39	0.57
33:c:77:GLY:HA2	40:j:58:ASN:ND2	2.19	0.57
34:d:24:VAL:HG23	34:d:25:ARG:HD2	1.86	0.57
36:f:18:VAL:N	36:f:19:PRO:HD2	2.19	0.57
36:f:42:TRP:HB2	36:f:59:TYR:HB2	1.85	0.57
39:i:82:ILE:O	39:i:86:LEU:HD22	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:n:11:LYS:HA	44:n:11:LYS:HZ2	1.69	0.57
46:p:1:MET:HE1	46:p:64:GLY:O	2.03	0.57
2:B:17:G:H2'	2:B:18:U:C6	2.38	0.57
2:B:1083:U:H1'	2:B:1086:A:N6	2.19	0.57
2:B:1676:A:H2'	2:B:1677:A:O4'	2.04	0.57
2:B:1709:U:H2'	2:B:1710:G:C8	2.40	0.57
2:B:2285:C:H41	27:2:24:LYS:HZ2	1.52	0.57
2:B:2296:U:H4'	2:B:2297:A:OP1	2.02	0.57
3:V:14:LYS:HZ2	3:V:18:ARG:HD2	1.67	0.57
7:F:133:GLU:OE1	7:F:147:ARG:HD3	2.05	0.57
8:G:126:THR:C	8:G:128:THR:H	2.11	0.57
11:K:41:ILE:HG23	11:K:42:THR:N	2.19	0.57
13:M:33:LEU:HB2	13:M:101:VAL:HG21	1.87	0.57
20:T:77:ARG:HG2	20:T:78:SER:H	1.69	0.57
31:6:10:LEU:HD12	31:6:10:LEU:O	2.04	0.57
32:a:947:G:H1	43:m:51:GLN:CD	2.11	0.57
32:a:1081:A:OP1	35:e:22:LYS:HB2	2.04	0.57
32:a:1142:G:H2'	32:a:1143:G:O4'	2.04	0.57
32:a:1222:G:C8	49:s:3:SER:HA	2.39	0.57
32:a:1330:U:C2'	32:a:1331:G:H5'	2.35	0.57
32:a:1506:U:H4'	41:k:128:VAL:OXT	2.04	0.57
44:n:61:ASN:O	44:n:62:ARG:HB2	2.03	0.57
2:B:65:U:H2'	2:B:66:C:H6	1.69	0.57
2:B:1802:A:H2'	2:B:1803:A:C8	2.39	0.57
2:B:2734:A:H2'	2:B:2735:G:H5'	1.86	0.57
2:B:2809:A:H2'	2:B:2810:A:C8	2.39	0.57
4:C:225:ASN:O	4:C:227:VAL:N	2.38	0.57
5:D:16:THR:CA	16:P:79:VAL:HB	2.31	0.57
9:H:89:LYS:O	9:H:90:LEU:HD12	2.03	0.57
10:J:81:ILE:O	10:J:84:ILE:HG12	2.04	0.57
12:L:103:ILE:HD13	12:L:104:GLN:H	1.70	0.57
17:Q:27:ARG:HG3	17:Q:32:ARG:HH21	1.69	0.57
17:Q:102:LYS:HD2	17:Q:102:LYS:H	1.68	0.57
27:2:12:SER:HA	27:2:50:GLU:CB	2.30	0.57
32:a:168:G:O2'	32:a:169:C:H5'	2.03	0.57
32:a:686:U:C4'	41:k:43:TRP:HE1	2.16	0.57
32:a:1282:C:H1'	44:n:96:LYS:HA	1.86	0.57
32:a:1360:A:C5'	44:n:61:ASN:CG	2.75	0.57
32:a:1362:A:H5'	44:n:70:HIS:CE1	2.39	0.57
33:c:46:LEU:HD23	33:c:75:VAL:HG13	1.86	0.57
33:c:62:SER:CB	40:j:48:ARG:NH1	2.66	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:c:65:VAL:HG21	40:j:64:GLN:CB	2.32	0.57
34:d:111:ALA:O	34:d:114:ARG:HB3	2.04	0.57
35:e:104:ILE:CD1	35:e:114:LEU:HB2	2.34	0.57
36:f:4:TYR:O	36:f:63:ASN:HA	2.04	0.57
38:h:45:ILE:C	38:h:63:LYS:HZ1	2.12	0.57
42:l:42:LYS:HE3	42:l:90:PRO:HD3	1.84	0.57
44:n:30:ILE:CG2	44:n:41:TRP:HB2	2.34	0.57
2:B:244:A:H2'	2:B:245:G:O4'	2.04	0.57
2:B:657:U:H2'	2:B:658:U:C6	2.39	0.57
2:B:1024:G:C3'	2:B:1025:G:H5"	2.34	0.57
2:B:1951:U:H2'	2:B:1953:A:OP2	2.05	0.57
2:B:2688:G:H1'	2:B:2721:A:H61	1.69	0.57
3:V:84:PRO:HG3	13:M:127:LYS:CE	2.34	0.57
4:C:154:ALA:C	4:C:156:SER:H	2.11	0.57
5:D:35:THR:HG22	5:D:46:ARG:HH22	1.70	0.57
6:E:50:ALA:O	6:E:74:LYS:HB2	2.04	0.57
8:G:17:LYS:HB3	8:G:24:THR:CG2	2.34	0.57
12:L:119:PRO:O	12:L:120:VAL:HB	2.03	0.57
13:M:8:LYS:H	13:M:8:LYS:HE2	1.70	0.57
13:M:102:LEU:HB3	13:M:104:GLU:OE2	2.04	0.57
18:R:47:VAL:C	18:R:49:ILE:H	2.11	0.57
29:4:15:LYS:HG2	29:4:19:GLY:HA2	1.87	0.57
32:a:193:C:C4'	50:t:54:GLN:NE2	2.64	0.57
32:a:626:G:H2'	32:a:627:G:C8	2.38	0.57
32:a:752:G:H4'	45:o:68:TYR:OH	2.04	0.57
32:a:940:C:H2'	32:a:941:G:H8	1.69	0.57
32:a:1073:U:OP2	35:e:61:LYS:NZ	2.36	0.57
32:a:1080:A:H5"	35:e:20:VAL:HG11	1.87	0.57
32:a:1150:A:C5'	40:j:28:THR:N	2.62	0.57
32:a:1172:C:H2'	32:a:1173:U:C6	2.39	0.57
32:a:1218:C:P	44:n:20:PHE:CZ	2.89	0.57
47:q:16:MET:CB	47:q:19:SER:HB2	2.35	0.57
52:u:36:PHE:CB	52:u:40:PRO:HD3	2.35	0.57
2:B:729:G:H5"	2:B:730:A:H5"	1.86	0.57
2:B:932:U:H5'	2:B:933:A:OP1	2.05	0.57
2:B:1714:U:H3'	2:B:1715:G:C5'	2.35	0.57
2:B:1791:A:OP1	4:C:211:ARG:HG2	2.04	0.57
2:B:2064:C:H2'	2:B:2065:C:H6	1.69	0.57
2:B:2213:U:O2	2:B:2213:U:C2'	2.52	0.57
2:B:2228:G:H2'	2:B:2229:U:H6	1.66	0.57
2:B:2679:A:O2'	2:B:2680:U:H5'	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:115:GLY:O	14:N:3:HIS:NE2	2.37	0.57
6:E:153:LEU:HD21	6:E:201:ALA:O	2.04	0.57
10:J:19:ASP:HB2	10:J:21:THR:HG23	1.85	0.57
11:K:64:ARG:N	11:K:83:ALA:HB3	2.09	0.57
15:O:13:ARG:HB2	15:O:13:ARG:HH11	1.69	0.57
16:P:7:LEU:O	16:P:7:LEU:HD13	2.05	0.57
16:P:25:VAL:CG1	16:P:87:ARG:HA	2.33	0.57
16:P:108:ARG:HG2	32:a:1463:U:OP1	2.05	0.57
18:R:54:VAL:CB	18:R:54:VAL:HA	2.17	0.57
32:a:239:U:C5’	32:a:239:U:H6	2.18	0.57
32:a:948:C:O4’	43:m:33:LEU:CD2	2.52	0.57
32:a:1128:C:C1’	40:j:83:THR:HB	2.00	0.57
32:a:1150:A:OP2	40:j:28:THR:CG2	2.53	0.57
32:a:1291:U:O3’	39:i:40:ARG:O	2.23	0.57
32:a:1301:U:C2	43:m:8:ILE:HD13	2.04	0.57
32:a:1358:U:H3’	44:n:67:GLY:O	2.04	0.57
32:a:1446:A:H2’	32:a:1447:A:H5”	1.86	0.57
33:c:58:ARG:HD3	40:j:68:ARG:HE	1.67	0.57
34:d:117:VAL:O	34:d:130:ASN:HA	2.05	0.57
34:d:196:GLU:HA	34:d:199:ILE:HD12	1.85	0.57
36:f:53:LYS:CD	36:f:54:LEU:H	2.11	0.57
38:h:26:MET:HB2	38:h:27:PRO:HD2	1.86	0.57
43:m:95:PRO:HD3	43:m:108:ARG:HG2	1.87	0.57
46:p:23:ASP:O	46:p:26:ASN:HB2	2.05	0.57
50:t:34:VAL:HG22	50:t:49:ALA:HB1	1.87	0.57
51:7:119:GLN:O	51:7:124:THR:HG23	2.05	0.57
2:B:18:U:H2’	2:B:19:A:H8	1.69	0.57
2:B:634:C:H2’	2:B:635:C:C6	2.40	0.57
2:B:986:C:O2’	2:B:987:C:H5’	2.05	0.57
2:B:1151:A:H4’	17:Q:80:ASN:OD1	2.04	0.57
2:B:1204:A:N1	2:B:1241:A:N1	2.52	0.57
2:B:1812:U:H1’	4:C:45:ASN:OD1	2.05	0.57
2:B:2218:G:H2’	2:B:2219:U:C6	2.40	0.57
2:B:2898:U:H2’	2:B:2899:A:C8	2.40	0.57
3:V:4:ILE:HD11	3:V:61:LEU:HD12	1.87	0.57
7:F:114:ARG:NH2	43:m:96:VAL:C	2.63	0.57
7:F:116:LEU:HD12	7:F:176:PHE:CD2	2.39	0.57
13:M:8:LYS:O	13:M:9:PHE:C	2.47	0.57
14:N:37:THR:OG1	14:N:40:LYS:HB2	2.04	0.57
15:O:16:ARG:HG3	15:O:20:GLU:HG3	1.85	0.57
17:Q:21:LYS:C	17:Q:23:TYR:H	2.12	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:1:MET:HA	18:R:46:GLU:HB3	1.86	0.57
20:T:64:LYS:HB3	20:T:77:ARG:HH11	1.70	0.57
25:Z:47:LYS:HB2	25:Z:51:VAL:HB	1.86	0.57
32:a:16:A:O2'	32:a:17:U:H5'	2.05	0.57
32:a:85:U:H4'	32:a:86:G:H4'	1.86	0.57
32:a:129:A:H1'	32:a:130:A:C8	2.40	0.57
32:a:190:A:H8	32:a:190:A:O5'	1.87	0.57
32:a:203:G:H1'	32:a:465:A:H62	1.69	0.57
32:a:678:U:H2'	32:a:679:C:H6	1.70	0.57
32:a:1125:U:C4	40:j:25:ILE:CG2	2.88	0.57
32:a:1131:G:O6	40:j:81:GLU:OE1	2.22	0.57
32:a:1152:A:C5	40:j:90:LEU:C	2.38	0.57
37:g:4:ARG:NE	37:g:5:VAL:H	2.02	0.57
37:g:96:ASN:O	37:g:100:MET:HG3	2.04	0.57
46:p:51:ARG:O	46:p:52:LEU:HD13	2.03	0.57
2:B:1155:A:H61	24:Y:10:ARG:HH22	1.53	0.57
2:B:1593:A:H2'	2:B:1594:U:C6	2.39	0.57
2:B:1676:A:C1'	5:D:134:HIS:HB3	2.35	0.57
2:B:2314:A:H2'	2:B:2315:G:C8	2.40	0.57
2:B:2331:G:H2'	2:B:2332:C:C6	2.40	0.57
4:C:21:PRO:O	4:C:22:GLU:HB2	2.04	0.57
5:D:16:THR:C	16:P:80:VAL:HB	2.29	0.57
12:L:57:LEU:C	12:L:59:ARG:H	2.11	0.57
14:N:38:LEU:HB2	14:N:39:PRO:HD3	1.86	0.57
16:P:8:GLU:HA	16:P:11:GLN:HG3	1.86	0.57
18:R:20:VAL:HB	18:R:95:ASP:HB2	1.87	0.57
18:R:47:VAL:HG22	18:R:48:LYS:N	2.14	0.57
21:U:82:VAL:HB	21:U:94:PHE:CD2	2.40	0.57
32:a:72:A:H2'	32:a:73:C:H6	1.70	0.57
32:a:176:C:H2'	32:a:177:G:N3	2.20	0.57
32:a:538:G:OP2	42:l:111:GLN:HB2	2.05	0.57
32:a:881:G:P	42:l:8:ARG:NH1	2.78	0.57
32:a:1112:C:H1'	33:c:178:ARG:HB3	1.82	0.57
32:a:1282:C:O2'	44:n:97:LYS:HD3	2.00	0.57
32:a:1304:G:O3'	43:m:52:ILE:CG1	2.50	0.57
32:a:1305:G:P	43:m:3:ILE:HG12	2.44	0.57
33:c:83:VAL:CA	40:j:62:ARG:H	2.14	0.57
33:c:98:ALA:HB3	40:j:64:GLN:CD	2.29	0.57
36:f:54:LEU:CD1	36:f:55:HIS:H	2.18	0.57
39:i:118:ARG:NH1	39:i:122:ARG:HE	2.03	0.57
41:k:25:SER:HB3	41:k:28:ASN:O	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:k:95:THR:HG23	41:k:96:ILE:N	2.20	0.57
45:o:60:SER:HA	45:o:63:ARG:HH12	1.68	0.57
53:v:7:A:H3'	53:v:8:U:H5'	1.85	0.57
2:B:436:C:O2'	2:B:437:U:H5'	2.05	0.57
2:B:660:C:H2'	2:B:661:A:C8	2.40	0.57
2:B:764:A:H5"	4:C:208:GLY:CA	2.35	0.57
2:B:1515:A:H5'	2:B:1557:C:H5'	1.87	0.57
2:B:2650:U:H2'	2:B:2651:C:C6	2.40	0.57
5:D:88:GLU:HG2	5:D:89:GLU:H	1.70	0.57
6:E:6:LYS:NZ	6:E:119:ILE:H	2.03	0.57
7:F:127:TYR:OH	43:m:100:ARG:NH1	2.27	0.57
9:H:15:LEU:O	9:H:47:PHE:CE1	2.57	0.57
9:H:82:SER:HB3	9:H:90:LEU:HD23	1.86	0.57
9:H:125:THR:CA	9:H:146:VAL:HB	2.34	0.57
10:J:58:ASN:O	10:J:126:ALA:HA	2.05	0.57
12:L:63:LYS:CG	29:4:11:LYS:HA	2.32	0.57
13:M:5:LYS:O	13:M:5:LYS:HD2	2.05	0.57
13:M:14:LYS:NZ	13:M:14:LYS:HB3	2.20	0.57
14:N:107:ASN:OD1	19:S:40:ASN:HB3	2.04	0.57
16:P:24:THR:CG2	16:P:111:GLU:HG2	2.33	0.57
21:U:29:SER:O	21:U:30:SER:HB2	2.04	0.57
32:a:946:A:C4'	43:m:43:LYS:HD2	2.34	0.57
32:a:1170:A:H8	32:a:1170:A:O5'	1.88	0.57
32:a:1329:A:C6	43:m:62:PHE:CG	2.77	0.57
34:d:25:ARG:HH12	34:d:30:LYS:HG2	1.69	0.57
34:d:170:LEU:HB2	34:d:180:THR:O	2.04	0.57
37:g:112:ASP:CB	37:g:118:ARG:HG2	2.33	0.57
37:g:132:THR:HG22	37:g:136:LYS:HG3	1.87	0.57
40:j:30:LYS:HB2	40:j:36:VAL:HG21	1.85	0.57
42:l:8:ARG:HG3	42:l:9:LYS:N	2.17	0.57
44:n:9:GLU:HB2	44:n:60:ARG:NH2	2.20	0.57
44:n:24:ALA:HB1	44:n:27:LYS:HE3	1.87	0.57
2:B:182:A:H2'	2:B:183:C:C6	2.40	0.56
2:B:296:U:H2'	2:B:297:G:H8	1.69	0.56
2:B:448:U:H1'	6:E:79:ARG:HG3	1.85	0.56
2:B:910:A:H2'	2:B:911:A:C8	2.39	0.56
2:B:992:C:H1'	18:R:91:GLN:HG3	1.87	0.56
2:B:1447:C:H2'	2:B:1448:G:C8	2.39	0.56
2:B:1570:A:H2'	2:B:1571:A:C8	2.40	0.56
2:B:1857:G:H2'	2:B:1884:G:N2	2.20	0.56
2:B:2213:U:O2	2:B:2213:U:H2'	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2308:G:N3	2:B:2308:G:H5"	2.20	0.56
2:B:2617:U:C2'	2:B:2618:G:H5'	2.35	0.56
5:D:128:ARG:HE	5:D:128:ARG:C	2.13	0.56
7:F:114:ARG:HH22	43:m:96:VAL:C	2.13	0.56
8:G:122:ALA:HA	8:G:131:VAL:O	2.05	0.56
11:K:58:LEU:HB3	11:K:89:ASN:HD21	1.70	0.56
12:L:13:LYS:O	12:L:14:LYS:HB2	2.05	0.56
12:L:38:GLN:NE2	12:L:39:LYS:H	2.03	0.56
17:Q:106:THR:O	17:Q:109:VAL:HG22	2.05	0.56
21:U:25:LYS:HG2	21:U:35:VAL:HG22	1.87	0.56
22:W:19:ARG:HH22	22:W:71:LYS:HD2	1.70	0.56
22:W:35:ILE:HG23	22:W:36:ILE:N	2.14	0.56
32:a:384:G:H2'	32:a:385:C:C6	2.39	0.56
32:a:449:G:H2'	32:a:450:G:C8	2.40	0.56
32:a:1077:G:N2	32:a:1079:G:H3'	2.19	0.56
32:a:1102:A:H2'	32:a:1103:C:C6	2.40	0.56
32:a:1149:C:C3'	40:j:28:THR:HG22	2.33	0.56
32:a:1150:A:N6	40:j:87:LEU:O	2.37	0.56
32:a:1232:U:H3'	39:i:125:GLN:CD	2.29	0.56
32:a:1259:C:C5'	44:n:73:LEU:CD1	2.83	0.56
32:a:1308:U:O4	43:m:24:VAL:HG12	2.05	0.56
34:d:25:ARG:HH11	34:d:30:LYS:HE3	1.70	0.56
36:f:100:SER:H	48:r:23:LYS:HZ1	1.52	0.56
37:g:72:VAL:HA	37:g:89:GLU:HA	1.87	0.56
52:u:13:VAL:O	52:u:14:ALA:HB2	2.05	0.56
2:B:141:G:O6	20:T:1:MET:HE1	2.05	0.56
2:B:527:C:H5"	2:B:2779:U:C2	2.40	0.56
2:B:634:C:H2'	2:B:635:C:H6	1.70	0.56
2:B:1060:U:H5	31:6:131:THR:HG22	1.70	0.56
2:B:2262:U:H2'	2:B:2263:C:H6	1.69	0.56
2:B:2578:G:H1'	5:D:145:SER:CB	2.20	0.56
2:B:2789:C:H3'	2:B:2893:A:H62	1.70	0.56
6:E:152:GLU:HB3	6:E:171:ASP:OD2	2.04	0.56
7:F:12:VAL:HG22	7:F:27:VAL:HG11	1.86	0.56
8:G:5:LYS:HB3	8:G:68:ARG:CZ	2.35	0.56
11:K:73:ASP:OD1	11:K:74:GLY:N	2.37	0.56
12:L:77:ILE:HA	12:L:101:ILE:HD13	1.86	0.56
15:O:8:ILE:O	15:O:10:ARG:N	2.38	0.56
15:O:15:ARG:NH2	15:O:17:LYS:HD2	2.19	0.56
18:R:75:VAL:H	18:R:90:ARG:NE	2.02	0.56
19:S:32:ALA:C	19:S:33:LEU:HD22	2.29	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:W:45:HIS:ND1	22:W:45:HIS:N	2.52	0.56
32:a:946:A:H4'	43:m:43:LYS:HD2	1.87	0.56
32:a:948:C:H4'	43:m:36:ALA:HB3	1.87	0.56
32:a:987:G:H2'	32:a:988:G:C8	2.40	0.56
32:a:994:A:C8	44:n:50:LEU:HD13	2.39	0.56
32:a:1145:A:O4'	40:j:85:ASP:OD2	2.23	0.56
32:a:1334:G:N7	43:m:12:LYS:HB2	2.20	0.56
34:d:60:VAL:HB	34:d:194:ILE:HG13	1.86	0.56
36:f:3:HIS:HB2	36:f:92:THR:CB	2.35	0.56
37:g:4:ARG:CZ	37:g:5:VAL:H	2.18	0.56
38:h:29:SER:CB	38:h:32:LYS:HZ2	2.18	0.56
2:B:322:A:H5'	2:B:340:A:C1'	2.36	0.56
2:B:322:A:H5'	2:B:340:A:H1'	1.87	0.56
2:B:864:G:O2'	2:B:865:C:H5'	2.05	0.56
2:B:903:C:H2'	2:B:904:G:C8	2.40	0.56
2:B:1013:C:H2'	2:B:1014:A:C8	2.40	0.56
2:B:1121:C:H2'	2:B:1122:G:O4'	2.05	0.56
2:B:1534:U:HO2'	2:B:1535:A:H8	1.53	0.56
2:B:1551:A:H3'	2:B:1552:A:H5"	1.88	0.56
2:B:1819:A:OP1	4:C:153:LEU:HB2	2.05	0.56
2:B:2077:A:H2'	2:B:2078:C:H6	1.69	0.56
2:B:2246:G:H2'	2:B:2247:A:H8	1.70	0.56
2:B:2443:C:O2'	2:B:2444:G:H5'	2.05	0.56
2:B:2803:G:H2'	2:B:2804:U:C6	2.39	0.56
3:V:66:ASP:HB3	3:V:68:LYS:HG2	1.85	0.56
4:C:155:ARG:HH11	4:C:157:ALA:HB2	1.70	0.56
4:C:208:GLY:C	4:C:210:ALA:H	2.12	0.56
5:D:119:ALA:HA	5:D:123:LYS:CE	2.34	0.56
5:D:167:ASN:H	5:D:167:ASN:HD22	1.54	0.56
6:E:38:GLY:C	6:E:40:ARG:H	2.12	0.56
7:F:108:PRO:O	43:m:94:LEU:HD23	2.05	0.56
7:F:165:GLY:HA2	7:F:168:LEU:HD21	1.87	0.56
8:G:10:VAL:HG12	8:G:47:ASN:HA	1.85	0.56
9:H:4:ILE:HG21	9:H:47:PHE:CG	2.41	0.56
9:H:21:VAL:HG13	9:H:22:LYS:O	2.05	0.56
11:K:2:ILE:HG23	11:K:33:ALA:O	2.06	0.56
15:O:55:GLU:HB2	15:O:60:GLU:O	2.05	0.56
17:Q:93:ILE:HG23	17:Q:94:LEU:N	2.19	0.56
18:R:59:ILE:HG13	18:R:59:ILE:O	2.05	0.56
18:R:85:LYS:C	18:R:87:GLN:H	2.13	0.56
29:4:7:ARG:NE	29:4:11:LYS:NZ	2.54	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:4:12:ARG:NH2	29:4:55:GLY:HA3	2.20	0.56
29:4:29:ARG:HA	29:4:33:THR:CG2	2.35	0.56
32:a:335:C:H2'	32:a:336:A:C8	2.41	0.56
32:a:372:C:H4'	32:a:373:A:H5'	1.87	0.56
32:a:924:C:O2'	32:a:925:G:H5'	2.05	0.56
32:a:967:C:OP1	32:a:969:A:H5'	2.05	0.56
32:a:985:C:H2'	32:a:986:U:C6	2.41	0.56
32:a:1113:C:C5	33:c:177:LEU:HD12	2.38	0.56
32:a:1148:U:C3'	40:j:31:ARG:CZ	2.82	0.56
32:a:1201:A:H1'	32:a:1202:U:OP2	2.04	0.56
32:a:1236:A:N9	43:m:47:LEU:HB2	2.15	0.56
32:a:1280:A:H62	40:j:25:ILE:HG22	1.67	0.56
32:a:1294:G:H2'	32:a:1295:U:C6	2.40	0.56
32:a:1306:A:C5'	43:m:33:LEU:HD23	2.28	0.56
32:a:1306:A:H2	43:m:19:THR:HG23	1.69	0.56
32:a:1307:U:O5'	43:m:28:ARG:O	2.23	0.56
32:a:1319:A:H4'	49:s:68:HIS:CG	2.40	0.56
33:c:21:TRP:CZ3	40:j:68:ARG:NH2	2.67	0.56
33:c:76:ILE:C	40:j:54:SER:CB	2.74	0.56
33:c:87:ARG:CG	40:j:50:THR:CB	2.47	0.56
37:g:114:SER:C	37:g:118:ARG:HG3	2.30	0.56
41:k:32:THR:HA	41:k:43:TRP:HA	1.88	0.56
41:k:92:ARG:HB3	41:k:92:ARG:NH1	2.19	0.56
46:p:12:LYS:HD2	46:p:13:LYS:HE3	1.87	0.56
46:p:41:PRO:O	46:p:42:ILE:HD13	2.06	0.56
47:q:75:VAL:HG23	47:q:76:ARG:H	1.70	0.56
49:s:49:ALA:HB1	49:s:56:HIS:CB	2.30	0.56
1:A:20:G:H2'	1:A:21:G:C8	2.40	0.56
2:B:737:C:O2'	2:B:738:G:H5'	2.05	0.56
2:B:813:U:H2'	2:B:814:C:H6	1.70	0.56
2:B:1061:U:O4'	2:B:1070:A:H1'	2.06	0.56
2:B:1079:C:O2'	31:6:133:ARG:NH2	2.38	0.56
2:B:1548:A:H2'	2:B:1549:A:H8	1.70	0.56
2:B:2528:U:O2'	2:B:2529:G:H3'	2.06	0.56
2:B:2602:A:N6	53:v:74:C:C5	2.73	0.56
4:C:71:ASP:C	4:C:73:ILE:HD12	2.31	0.56
4:C:144:GLU:OE1	4:C:188:ARG:HG3	2.06	0.56
5:D:11:MET:SD	16:P:9:GLN:HG2	2.46	0.56
7:F:110:ILE:HG22	7:F:112:ASP:H	1.71	0.56
9:H:134:VAL:HG13	9:H:135:HIS:N	2.21	0.56
10:J:41:LYS:HD2	10:J:44:TYR:HB2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:57:LEU:HD12	10:J:128:ASN:C	2.30	0.56
12:L:77:ILE:HD13	12:L:92:LEU:HD13	1.87	0.56
12:L:82:LEU:HD22	12:L:86:GLU:OE1	2.06	0.56
22:W:36:ILE:HD12	22:W:70:VAL:HG21	1.86	0.56
23:X:41:HIS:HB2	23:X:45:GLN:OE1	2.06	0.56
25:Z:66:ILE:C	25:Z:68:GLY:H	2.13	0.56
29:4:27:ASN:HB3	29:4:28:LEU:HG	1.88	0.56
32:a:408:A:OP1	34:d:109:THR:CG2	2.53	0.56
32:a:657:U:H4'	45:o:27:GLN:HG3	1.87	0.56
32:a:803:G:H2'	32:a:804:U:C6	2.40	0.56
32:a:940:C:H2'	32:a:941:G:C8	2.40	0.56
32:a:1126:U:C5'	40:j:77:VAL:HG21	2.20	0.56
32:a:1149:C:C6	40:j:28:THR:HB	2.41	0.56
32:a:1237:C:OP1	43:m:1:ALA:HB2	2.05	0.56
32:a:1305:G:OP2	43:m:3:ILE:CG1	2.53	0.56
32:a:1329:A:C2	43:m:62:PHE:CD2	2.88	0.56
32:a:1331:G:OP2	43:m:22:TYR:HD2	1.87	0.56
32:a:1349:A:OP1	39:i:121:ARG:HB2	2.05	0.56
32:a:1422:G:O2'	32:a:1423:G:H5'	2.05	0.56
32:a:1490:U:H5'	32:a:1491:G:OP2	2.05	0.56
34:d:99:ASN:HD21	34:d:110:ARG:HE	1.52	0.56
43:m:2:ARG:HB3	43:m:6:ILE:O	2.06	0.56
44:n:27:LYS:HD2	44:n:27:LYS:C	2.30	0.56
46:p:18:GLN:NE2	46:p:35:ARG:HD2	2.20	0.56
52:u:14:ALA:HA	52:u:16:ARG:NE	2.18	0.56
1:A:28:C:H5'	1:A:29:A:OP2	2.05	0.56
2:B:141:G:C2	20:T:2:ILE:HG13	2.40	0.56
2:B:784:G:H5"	4:C:225:ASN:ND2	2.19	0.56
2:B:828:U:H4'	2:B:831:G:N1	2.20	0.56
2:B:1258:U:O4'	6:E:79:ARG:HD3	2.06	0.56
2:B:1429:G:H2'	2:B:1430:G:C8	2.41	0.56
2:B:1903:G:OP1	4:C:239:PHE:HA	2.05	0.56
2:B:1935:G:H1'	2:B:1964:G:N2	2.21	0.56
4:C:28:PRO:HB2	4:C:79:ARG:NH2	2.19	0.56
4:C:216:ARG:HH11	4:C:217:PRO:HD2	1.70	0.56
5:D:31:ALA:HB2	5:D:49:GLN:NE2	2.19	0.56
7:F:113:PHE:CB	43:m:95:PRO:HD3	2.27	0.56
8:G:116:LEU:HD21	8:G:120:ILE:HB	1.88	0.56
9:H:83:LYS:CB	9:H:91:PHE:HB2	2.30	0.56
11:K:5:GLN:HA	11:K:20:MET:SD	2.46	0.56
13:M:69:PRO:O	13:M:70:ASP:HB3	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:22:LEU:O	18:R:96:VAL:HG22	2.05	0.56
19:S:7:HIS:HB3	19:S:102:HIS:CA	2.36	0.56
22:W:44:PHE:CE2	22:W:60:ALA:HB3	2.41	0.56
28:3:22:MET:HE2	28:3:31:LEU:HG	1.88	0.56
32:a:1153:G:O4'	40:j:91:ASP:O	2.23	0.56
32:a:1246:A:H2'	32:a:1247:U:C6	2.41	0.56
32:a:1280:A:N3	40:j:30:LYS:HE2	2.19	0.56
32:a:1331:G:OP2	43:m:22:TYR:CB	2.53	0.56
32:a:1331:G:N1	43:m:59:VAL:CG2	2.66	0.56
32:a:1522:U:O2'	32:a:1523:G:H5'	2.06	0.56
35:e:82:HIS:HB2	35:e:83:PRO:HD2	1.88	0.56
41:k:61:ALA:O	41:k:64:VAL:HG12	2.06	0.56
42:l:37:TYR:HB2	42:l:51:VAL:HG23	1.88	0.56
49:s:32:THR:HB	49:s:49:ALA:O	2.06	0.56
1:A:6:G:H2'	1:A:7:G:C8	2.40	0.56
2:B:37:C:H2'	6:E:46:GLN:CB	2.35	0.56
2:B:644:A:O2'	2:B:645:C:H2'	2.05	0.56
2:B:1197:G:H2'	2:B:1198:U:H6	1.70	0.56
2:B:1229:C:H2'	2:B:1230:A:C8	2.40	0.56
2:B:1412:U:H2'	2:B:1413:A:H8	1.69	0.56
2:B:2751:G:H5"	8:G:3:VAL:HA	1.88	0.56
2:B:2800:A:N3	2:B:2801:G:H1'	2.20	0.56
4:C:27:LYS:HB3	4:C:80:LEU:O	2.06	0.56
5:D:4:LEU:HB2	5:D:201:LEU:O	2.05	0.56
5:D:116:LYS:H	5:D:165:MET:HG3	1.70	0.56
6:E:138:LEU:HD22	6:E:144:GLU:HA	1.86	0.56
7:F:41:GLU:HB3	7:F:44:ALA:HB3	1.87	0.56
9:H:11:ASN:HD22	9:H:12:LEU:H	1.54	0.56
12:L:126:ARG:HE	12:L:127:VAL:N	2.04	0.56
15:O:54:VAL:O	15:O:62:LEU:HD23	2.06	0.56
15:O:76:LYS:HG2	15:O:110:ALA:HB2	1.87	0.56
16:P:91:VAL:HB	16:P:113:LEU:CB	2.35	0.56
21:U:44:HIS:HB2	21:U:55:GLY:C	2.31	0.56
24:Y:18:LYS:HZ1	24:Y:53:MET:HE2	1.70	0.56
25:Z:5:ILE:HB	25:Z:51:VAL:HG13	1.86	0.56
29:4:26:ALA:HB1	29:4:29:ARG:HG3	1.87	0.56
31:6:91:LYS:HG3	31:6:91:LYS:O	2.05	0.56
32:a:1017:U:C5'	44:n:27:LYS:HA	2.09	0.56
32:a:1148:U:O4	40:j:83:THR:CA	2.53	0.56
32:a:1217:C:C5	44:n:49:THR:CA	2.89	0.56
32:a:1240:U:H4'	37:g:37:THR:HG21	0.57	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1253:G:H1	44:n:84:ARG:NE	2.02	0.56
32:a:1358:U:H5	44:n:68:ARG:CG	2.17	0.56
33:c:21:TRP:CB	40:j:68:ARG:H	2.19	0.56
49:s:59:VAL:HG11	49:s:70:LEU:HD11	1.88	0.56
53:v:20:U:O4'	53:v:20:U:P	2.64	0.56
2:B:82:U:H2'	2:B:83:A:C8	2.41	0.56
2:B:84:A:H3'	21:U:5:ARG:HG3	1.87	0.56
2:B:1040:A:H4'	3:V:49:ASN:ND2	2.20	0.56
2:B:1117:C:H2'	2:B:1118:C:H6	1.71	0.56
2:B:1553:A:O2'	2:B:1554:U:H2'	2.06	0.56
2:B:1878:G:H2'	2:B:1879:C:C6	2.41	0.56
4:C:242:HIS:N	4:C:243:PRO:CD	2.68	0.56
5:D:35:THR:HB	5:D:48:ILE:HB	1.88	0.56
7:F:126:ASN:N	7:F:126:ASN:ND2	2.51	0.56
8:G:85:LYS:HA	8:G:130:ILE:O	2.06	0.56
9:H:80:ILE:HD11	9:H:102:ALA:HA	1.86	0.56
10:J:25:LEU:HD12	10:J:62:VAL:CA	2.35	0.56
10:J:81:ILE:CG1	10:J:82:GLY:H	2.19	0.56
10:J:102:GLU:OE2	10:J:124:VAL:HG11	2.06	0.56
14:N:34:ILE:O	14:N:34:ILE:HG12	2.05	0.56
15:O:105:ALA:O	15:O:109:ALA:HB2	2.05	0.56
17:Q:4:LYS:O	17:Q:7:VAL:HG13	2.05	0.56
18:R:5:PHE:CG	18:R:6:GLN:N	2.73	0.56
18:R:35:PHE:HB2	18:R:64:VAL:HG21	1.88	0.56
18:R:90:ARG:NH2	18:R:92:TRP:HB3	2.20	0.56
21:U:23:LYS:O	21:U:25:LYS:N	2.39	0.56
27:2:42:VAL:HG12	27:2:43:ARG:HG3	1.86	0.56
31:6:10:LEU:HD13	31:6:12:VAL:HG13	1.87	0.56
32:a:674:G:H2'	32:a:675:A:H8	1.70	0.56
32:a:883:C:O2'	32:a:884:U:H5'	2.05	0.56
32:a:1016:A:C6	44:n:41:TRP:C	2.81	0.56
32:a:1235:U:C2	43:m:47:LEU:HB3	2.41	0.56
32:a:1276:G:C2	44:n:95:LEU:CD1	2.89	0.56
32:a:1283:U:C2	44:n:84:ARG:HA	2.41	0.56
33:c:22:PHE:CE2	40:j:72:ARG:NH2	2.73	0.56
33:c:76:ILE:CD1	40:j:54:SER:O	2.53	0.56
34:d:32:LYS:O	34:d:35:GLN:HB2	2.05	0.56
35:e:132:PRO:HA	35:e:135:VAL:HG22	1.88	0.56
41:k:15:VAL:HG21	41:k:41:LEU:HD11	1.88	0.56
47:q:45:VAL:HG12	47:q:46:HIS:H	1.70	0.56
49:s:44:ILE:HA	49:s:61:VAL:HB	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:u:38:GLU:C	52:u:40:PRO:HD2	2.31	0.56
53:v:5:G:C2	53:v:69:G:C2	2.92	0.56
2:B:796:C:H2'	2:B:797:G:C8	2.41	0.56
2:B:956:G:H22	2:B:959:A:H3'	1.69	0.56
2:B:1097:U:C2'	2:B:1098:A:H5'	2.36	0.56
2:B:1441:G:H2'	2:B:1442:U:C6	2.41	0.56
2:B:1537:G:H3'	2:B:1537:G:N3	2.21	0.56
2:B:1548:A:H2'	2:B:1549:A:C8	2.40	0.56
2:B:1676:A:O4'	5:D:134:HIS:HB3	2.06	0.56
2:B:2218:G:H2'	2:B:2219:U:H6	1.71	0.56
2:B:2335:A:OP2	15:O:9:ARG:HG3	2.06	0.56
2:B:2369:A:O2'	2:B:2370:G:H5'	2.06	0.56
4:C:155:ARG:O	4:C:157:ALA:N	2.39	0.56
5:D:4:LEU:HD13	5:D:79:LEU:HD11	1.87	0.56
5:D:84:LEU:CD2	5:D:86:GLU:HB2	2.35	0.56
5:D:120:GLY:H	5:D:123:LYS:CG	2.16	0.56
7:F:136:ILE:HB	43:m:112:ARG:NE	2.21	0.56
8:G:86:LEU:HD12	8:G:161:VAL:HG12	1.88	0.56
8:G:106:LEU:HD23	8:G:151:ARG:HB2	1.88	0.56
11:K:107:LEU:HD11	11:K:115:ILE:HG21	1.87	0.56
12:L:77:ILE:HG22	12:L:78:ARG:N	2.19	0.56
16:P:52:ARG:HH11	16:P:54:LEU:CB	2.19	0.56
18:R:4:VAL:CA	18:R:12:HIS:HB3	2.33	0.56
18:R:42:ALA:C	18:R:44:GLY:N	2.60	0.56
22:W:42:THR:HG22	22:W:43:LYS:O	2.05	0.56
32:a:163:C:H2'	32:a:164:G:O4'	2.06	0.56
32:a:313:A:H2'	32:a:314:C:C6	2.40	0.56
32:a:372:C:H1'	32:a:373:A:OP2	2.05	0.56
32:a:629:A:H2'	32:a:630:A:O4'	2.06	0.56
32:a:769:G:H4'	32:a:1513:A:H4'	1.87	0.56
32:a:845:A:H3'	32:a:846:G:O4'	2.06	0.56
32:a:980:C:N1	44:n:58:ARG:HG3	2.20	0.56
32:a:1013:G:H5"	49:s:16:LYS:HA	1.88	0.56
32:a:1282:C:O2'	44:n:97:LYS:CD	2.42	0.56
32:a:1358:U:H2'	44:n:69:PRO:HD3	1.88	0.56
33:c:75:VAL:N	40:j:55:PRO:HD3	2.01	0.56
33:c:102:ILE:H	40:j:51:VAL:CG1	2.14	0.56
39:i:56:MET:CE	39:i:57:VAL:H	2.17	0.56
41:k:97:ARG:HB3	41:k:97:ARG:NH1	2.21	0.56
42:l:105:GLY:HA3	42:l:117:GLY:HA3	1.88	0.56
1:A:26:C:H2'	1:A:27:C:O4'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:45:G:H5'	2:B:46:G:OP1	2.06	0.56
2:B:143:C:H2'	2:B:144:A:C8	2.40	0.56
2:B:310:A:H5"	21:U:14:THR:O	2.06	0.56
2:B:969:G:H2'	2:B:970:U:C6	2.41	0.56
2:B:1251:C:H2'	17:Q:5:ARG:NH2	2.21	0.56
2:B:1754:A:OP1	16:P:95:LYS:HB2	2.06	0.56
2:B:1818:U:OP1	4:C:155:ARG:HA	2.06	0.56
2:B:2052:A:C4'	5:D:148:GLN:H	2.19	0.56
2:B:2247:A:H2'	2:B:2248:C:C6	2.41	0.56
2:B:2556:C:H2'	2:B:2557:G:O4'	2.06	0.56
4:C:257:ARG:NH1	4:C:257:ARG:HA	2.20	0.56
5:D:170:VAL:HG11	5:D:194:PRO:CB	2.35	0.56
6:E:48:THR:HG23	6:E:87:ALA:H	1.70	0.56
7:F:33:ILE:HD11	7:F:90:LEU:HD13	1.87	0.56
7:F:46:LYS:O	7:F:50:ASP:HB3	2.06	0.56
7:F:106:ALA:HB1	43:m:106:ARG:NH1	2.20	0.56
13:M:84:LYS:NZ	13:M:84:LYS:H	2.03	0.56
15:O:19:GLN:CA	22:W:76:ARG:HH22	2.18	0.56
15:O:40:ILE:HG22	15:O:48:LEU:O	2.06	0.56
16:P:26:GLU:CB	16:P:46:VAL:HG22	2.32	0.56
21:U:25:LYS:HA	21:U:35:VAL:H	1.70	0.56
24:Y:13:ILE:HA	24:Y:19:HIS:HE1	1.70	0.56
25:Z:58:ASP:CG	25:Z:63:ARG:HH11	2.13	0.56
27:2:31:GLU:O	27:2:33:LEU:HG	2.05	0.56
31:6:23:VAL:HG23	31:6:24:GLY:H	1.70	0.56
32:a:1128:C:O4'	40:j:83:THR:CG2	2.29	0.56
32:a:1151:A:H5"	40:j:21:ALA:C	2.28	0.56
32:a:1216:A:C2	44:n:46:LYS:C	2.84	0.56
32:a:1236:A:C8	43:m:48:SER:HA	2.23	0.56
32:a:1243:C:H2'	32:a:1244:G:C8	2.41	0.56
32:a:1328:C:O2'	43:m:68:LEU:HA	2.06	0.56
32:a:1331:G:C2	43:m:59:VAL:HG21	2.41	0.56
33:c:71:ARG:HB3	33:c:74:ILE:HG22	1.87	0.56
34:d:98:ASP:CG	34:d:132:ALA:HB1	2.30	0.56
35:e:45:VAL:CG1	35:e:116:VAL:HG23	2.36	0.56
37:g:13:PRO:HB2	37:g:18:GLY:CA	2.36	0.56
39:i:61:ASP:O	39:i:62:LEU:HD13	2.05	0.56
44:n:30:ILE:HG21	44:n:44:VAL:HG21	1.88	0.56
44:n:66:THR:HG23	44:n:67:GLY:N	2.20	0.56
2:B:243:U:OP1	29:4:4:LYS:HG2	2.05	0.56
2:B:973:A:H8	2:B:973:A:OP1	1.89	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1716:U:H2'	2:B:1717:A:C8	2.41	0.56
2:B:2053:G:OP1	5:D:150:GLN:CA	2.50	0.56
2:B:2533:U:H2'	2:B:2534:A:O4'	2.06	0.56
4:C:164:VAL:HB	4:C:167:ASP:OD2	2.05	0.56
7:F:37:MET:HG2	7:F:86:CYS:HB2	1.88	0.56
7:F:65:LEU:C	7:F:67:THR:H	2.12	0.56
13:M:88:ASN:N	13:M:88:ASN:HD22	2.02	0.56
14:N:33:ILE:HD13	14:N:33:ILE:N	2.21	0.56
15:O:76:LYS:HB2	15:O:106:LEU:HD22	1.88	0.56
19:S:29:VAL:HG21	19:S:69:LEU:C	2.30	0.56
20:T:48:GLN:HG3	20:T:49:LYS:N	2.20	0.56
32:a:1053:G:H4'	32:a:1054:C:H5'	1.87	0.56
32:a:1244:G:H2'	32:a:1245:C:C6	2.40	0.56
32:a:1259:C:C4'	44:n:83:VAL:HB	2.36	0.56
33:c:84:GLU:CG	40:j:59:LYS:HB2	2.34	0.56
37:g:67:ASN:ND2	37:g:127:ALA:HA	2.20	0.56
53:v:54:U:O5'	53:v:54:U:H6	1.89	0.56
2:B:125:A:H3'	2:B:126:A:H5"	1.88	0.55
2:B:395:U:H2'	2:B:396:G:C8	2.41	0.55
2:B:716:A:OP1	45:o:88:ARG:HG3	2.06	0.55
2:B:771:G:O2'	2:B:772:C:H5'	2.06	0.55
2:B:898:C:H2'	2:B:899:A:C8	2.41	0.55
2:B:1658:C:OP1	5:D:136:ASN:CA	2.50	0.55
2:B:2351:G:O6	29:4:38:LYS:HD2	2.05	0.55
2:B:2354:C:O2'	22:W:31:LEU:HB2	2.06	0.55
2:B:2617:U:H2'	2:B:2618:G:H5'	1.88	0.55
4:C:15:VAL:HG12	4:C:16:VAL:HG23	1.86	0.55
4:C:160:TYR:O	4:C:161:VAL:HG23	2.06	0.55
5:D:86:GLU:HG2	5:D:87:GLY:H	1.71	0.55
7:F:23:SER:C	7:F:25:MET:H	2.14	0.55
8:G:97:VAL:HG21	8:G:123:GLU:HA	1.87	0.55
13:M:5:LYS:HD3	13:M:91:TYR:CG	2.41	0.55
13:M:126:ILE:HG13	13:M:127:LYS:N	2.19	0.55
14:N:19:ALA:C	14:N:21:PHE:N	2.62	0.55
19:S:88:ARG:HD2	19:S:93:ALA:HB3	1.86	0.55
20:T:8:LEU:HA	23:X:19:LEU:HD11	1.88	0.55
27:2:42:VAL:HG12	27:2:43:ARG:HE	1.70	0.55
27:2:47:ILE:HG13	27:2:48:TYR:H	1.71	0.55
32:a:764:C:H2'	32:a:765:G:H5'	1.87	0.55
32:a:1014:A:OP2	49:s:16:LYS:HA	2.07	0.55
32:a:1027:C:H2'	32:a:1028:C:H6	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1235:U:H2'	43:m:52:ILE:HG22	1.88	0.55
32:a:1258:G:N3	44:n:83:VAL:HG13	2.20	0.55
32:a:1308:U:H5"	43:m:27:THR:CG2	2.36	0.55
32:a:1392:G:H2'	32:a:1393:U:C6	2.41	0.55
37:g:45:ALA:HB1	37:g:120:ALA:HB2	1.88	0.55
47:q:10:ARG:CZ	47:q:56:ASP:H	2.20	0.55
48:r:52:ARG:HH11	48:r:52:ARG:CB	2.15	0.55
51:7:216:VAL:O	51:7:220:VAL:HG23	2.06	0.55
2:B:209:C:H2'	2:B:210:C:H6	1.71	0.55
2:B:272:A:H2'	2:B:273:G:C8	2.41	0.55
2:B:1163:G:O2'	2:B:1164:C:H5'	2.06	0.55
2:B:1700:A:H2'	2:B:1701:A:H5'	1.87	0.55
2:B:1843:C:H5"	4:C:252:LYS:HZ1	1.71	0.55
2:B:1912:A:C6	32:a:1408:A:H1'	2.41	0.55
2:B:2304:G:N2	2:B:2312:U:H3	2.00	0.55
4:C:63:ILE:HG22	4:C:64:VAL:H	1.70	0.55
7:F:99:PHE:C	7:F:101:ARG:H	2.13	0.55
8:G:102:ILE:HG22	8:G:114:HIS:O	2.06	0.55
8:G:163:TYR:HB2	8:G:166:GLU:HB2	1.89	0.55
9:H:26:ALA:HA	9:H:30:LEU:HB2	1.88	0.55
9:H:73:ASN:N	9:H:73:ASN:ND2	2.52	0.55
10:J:25:LEU:HD13	10:J:25:LEU:N	2.21	0.55
12:L:62:PRO:C	29:4:24:LYS:HD3	2.31	0.55
16:P:15:ASP:OD1	16:P:15:ASP:N	2.38	0.55
16:P:22:GLY:HA2	16:P:93:LYS:HE2	1.87	0.55
19:S:9:HIS:O	19:S:10:ALA:HB3	2.04	0.55
21:U:10:VAL:HG21	21:U:25:LYS:HZ2	1.71	0.55
32:a:538:G:P	42:l:111:GLN:CG	2.93	0.55
32:a:810:C:O2'	32:a:811:C:H5'	2.06	0.55
32:a:1147:C:C5	40:j:81:GLU:O	2.60	0.55
32:a:1235:U:H5'	43:m:54:THR:CG2	2.36	0.55
32:a:1258:G:N3	44:n:76:PHE:CG	2.45	0.55
32:a:1306:A:H62	43:m:21:ILE:CD1	2.19	0.55
33:c:77:GLY:N	40:j:56:HIS:C	2.59	0.55
34:d:84:ASN:OD1	35:e:101:GLY:HA2	2.06	0.55
39:i:51:LEU:HD11	39:i:82:ILE:HD13	1.87	0.55
44:n:65:GLN:HB2	44:n:78:LEU:HD22	1.87	0.55
46:p:42:ILE:HB	46:p:46:LYS:CD	2.36	0.55
50:t:68:LYS:CG	50:t:69:ASN:H	2.12	0.55
52:u:14:ALA:N	52:u:16:ARG:NH2	2.55	0.55
2:B:111:A:H2'	2:B:112:U:O4'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1181:U:H2'	2:B:1182:G:C8	2.41	0.55
2:B:1820:U:H3	4:C:197:ALA:CB	2.20	0.55
2:B:1847:A:H4'	2:B:1848:A:C8	2.42	0.55
2:B:2305:U:H1'	7:F:132:ARG:HA	1.87	0.55
2:B:2794:C:H2'	2:B:2795:C:C6	2.41	0.55
2:B:2840:C:H2'	2:B:2841:C:H6	1.71	0.55
4:C:68:ARG:HD3	4:C:103:ILE:HD11	1.88	0.55
5:D:29:VAL:HG12	5:D:185:ASN:ND2	2.21	0.55
6:E:106:LYS:HB2	6:E:106:LYS:NZ	2.20	0.55
10:J:58:ASN:HA	10:J:127:GLY:H	1.70	0.55
12:L:92:LEU:HG	12:L:96:LYS:HZ3	1.72	0.55
15:O:21:LEU:HD13	15:O:22:GLY:N	2.21	0.55
16:P:47:ILE:HG23	16:P:63:ILE:HA	1.88	0.55
16:P:47:ILE:CG2	16:P:63:ILE:HG23	2.34	0.55
31:6:49:GLU:CG	31:6:54:ILE:HD11	2.36	0.55
32:a:278:G:H21	32:a:279:A:N6	2.04	0.55
32:a:393:A:H5'	32:a:483:C:O2'	2.06	0.55
32:a:555:U:H2'	32:a:556:C:H6	1.71	0.55
32:a:844:G:N2	32:a:845:A:H62	2.03	0.55
32:a:1115:U:H2'	32:a:1116:U:C6	2.41	0.55
32:a:1239:A:H5'	37:g:115:MET:HB2	1.88	0.55
32:a:1357:A:H8	44:n:68:ARG:HB2	1.70	0.55
37:g:19:SER:OG	37:g:22:LEU:HB2	2.06	0.55
39:i:49:GLN:NE2	39:i:79:ARG:HD2	2.22	0.55
39:i:51:LEU:HD11	39:i:82:ILE:HG21	1.87	0.55
42:l:30:ARG:CB	42:l:30:ARG:HH11	2.19	0.55
43:m:22:TYR:HB3	43:m:69:ARG:NH2	2.20	0.55
51:7:138:ARG:HA	51:7:141:GLU:OE2	2.06	0.55
51:7:204:ASP:CG	51:7:205:ALA:N	2.63	0.55
2:B:230:G:H2'	2:B:231:A:H8	1.72	0.55
2:B:2189:U:H2'	2:B:2190:G:H8	1.70	0.55
2:B:2270:A:H4'	22:W:18:LYS:HG2	1.87	0.55
2:B:2294:G:O2'	2:B:2295:C:H5'	2.06	0.55
2:B:2729:G:H2'	2:B:2730:C:C6	2.41	0.55
2:B:2760:C:O2'	2:B:2761:A:H5'	2.07	0.55
4:C:67:LYS:HG3	4:C:68:ARG:H	1.71	0.55
4:C:80:LEU:HA	4:C:91:ALA:HA	1.87	0.55
5:D:58:ASN:O	5:D:59:ARG:HB2	2.06	0.55
5:D:206:ALA:C	5:D:208:LYS:H	2.14	0.55
6:E:132:LYS:HB2	6:E:132:LYS:HZ2	1.71	0.55
6:E:149:ILE:HD11	6:E:180:LEU:HD23	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:194:LYS:HE3	6:E:201:ALA:HB2	1.88	0.55
10:J:15:TRP:HB3	10:J:53:TYR:CD2	2.41	0.55
10:J:57:LEU:HD12	10:J:128:ASN:HA	1.89	0.55
11:K:76:VAL:O	16:P:73:PHE:HA	2.06	0.55
11:K:104:THR:O	11:K:107:LEU:HB3	2.07	0.55
13:M:3:GLN:HG2	13:M:47:GLU:N	2.21	0.55
13:M:73:ILE:HD11	13:M:92:TRP:H	1.71	0.55
21:U:94:PHE:CZ	21:U:100:GLU:HA	2.42	0.55
32:a:86:G:H4'	32:a:86:G:OP1	2.05	0.55
32:a:845:A:C4'	48:r:47:ARG:HH22	2.18	0.55
32:a:1108:G:P	33:c:174:LEU:HD11	2.47	0.55
32:a:1150:A:C4'	40:j:23:ALA:O	2.30	0.55
32:a:1171:A:H2'	32:a:1172:C:C6	2.40	0.55
32:a:1277:C:P	44:n:96:LYS:HB3	2.46	0.55
33:c:151:GLU:HB2	33:c:200:TRP:HZ3	1.71	0.55
40:j:11:LYS:NZ	40:j:99:GLN:H	2.05	0.55
43:m:106:ARG:NH1	43:m:109:LYS:HD2	2.21	0.55
46:p:51:ARG:HB3	46:p:51:ARG:HH11	1.71	0.55
2:B:11:C:H2'	2:B:12:U:H5'	1.88	0.55
2:B:1112:G:C4'	8:G:2:ARG:HG2	2.32	0.55
2:B:1162:G:O2'	2:B:1163:G:H5'	2.06	0.55
2:B:1166:G:H2'	2:B:1167:C:H6	1.72	0.55
2:B:1270:C:H5"	2:B:1271:G:O5'	2.06	0.55
2:B:1534:U:H2'	2:B:1536:C:N3	2.21	0.55
2:B:2230:G:H1'	25:Z:30:HIS:CD2	2.41	0.55
2:B:2527:C:H5"	30:5:31:PRO:HB2	1.89	0.55
2:B:2786:U:C4'	5:D:66:GLY:HA2	2.36	0.55
3:V:42:LEU:HB2	3:V:47:VAL:HG21	1.87	0.55
4:C:238:ASN:HB3	4:C:242:HIS:NE2	2.22	0.55
5:D:118:PHE:CA	5:D:164:GLN:HG3	2.35	0.55
6:E:1:MET:O	6:E:14:VAL:HG22	2.06	0.55
8:G:153:PRO:HB3	8:G:158:GLY:O	2.07	0.55
10:J:46:PRO:O	10:J:47:HIS:HB2	2.05	0.55
16:P:108:ARG:NH2	32:a:1464:U:OP2	2.38	0.55
16:P:109:ILE:O	16:P:110:LYS:C	2.49	0.55
23:X:45:GLN:NE2	23:X:45:GLN:H	2.05	0.55
32:a:982:U:OP2	44:n:53:ASP:OD2	1.95	0.55
32:a:1014:A:OP1	49:s:16:LYS:N	2.38	0.55
32:a:1016:A:H1'	44:n:45:LEU:HB2	1.87	0.55
32:a:1135:U:O2	32:a:1135:U:H2'	2.07	0.55
32:a:1240:U:OP1	37:g:115:MET:CG	2.54	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1240:U:O4	37:g:29:LEU:CG	2.51	0.55
32:a:1319:A:C3'	49:s:68:HIS:CE1	2.89	0.55
32:a:1358:U:OP2	44:n:63:CYS:CB	2.51	0.55
33:c:83:VAL:HG12	40:j:62:ARG:HE	1.70	0.55
33:c:154:GLY:HA2	33:c:163:ARG:O	2.06	0.55
37:g:85:GLN:O	37:g:86:VAL:C	2.49	0.55
39:i:23:GLY:O	39:i:24:ASN:HB2	2.06	0.55
44:n:30:ILE:C	44:n:32:ASP:H	2.13	0.55
51:7:38:HIS:O	51:7:39:ILE:HD13	2.06	0.55
51:7:67:LEU:HD21	51:7:157:PRO:CG	2.37	0.55
51:7:125:PHE:H	51:7:125:PHE:HD2	1.53	0.55
2:B:49:A:OP1	2:B:49:A:H4'	2.07	0.55
2:B:650:C:H5"	29:4:22:LYS:NZ	2.22	0.55
2:B:686:U:H1'	28:3:5:PHE:O	2.06	0.55
2:B:718:A:H3'	2:B:719:C:H6	1.71	0.55
2:B:1125:G:H3'	2:B:1126:A:H5"	1.88	0.55
2:B:1242:U:H2'	2:B:1243:C:C6	2.42	0.55
2:B:2578:G:N3	5:D:145:SER:CB	2.70	0.55
2:B:2682:A:H5"	16:P:55:HIS:NE2	2.21	0.55
2:B:2751:G:OP1	8:G:1:SER:HB2	2.07	0.55
2:B:2836:U:H2'	2:B:2837:A:C8	2.41	0.55
4:C:235:GLU:HG3	4:C:237:ARG:HD3	1.89	0.55
5:D:128:ARG:CZ	5:D:130:GLN:CD	2.80	0.55
5:D:151:THR:O	5:D:152:PRO:O	2.24	0.55
7:F:121:PHE:CZ	7:F:169:LEU:HD12	2.42	0.55
10:J:45:THR:HG22	17:Q:63:ARG:HH22	1.72	0.55
20:T:24:MET:CE	20:T:29:THR:H	2.20	0.55
20:T:62:VAL:O	20:T:63:VAL:O	2.24	0.55
22:W:44:PHE:HB3	22:W:76:ARG:CG	2.35	0.55
32:a:190:A:H2'	32:a:191:G:O4'	2.07	0.55
32:a:389:A:H3'	32:a:390:U:H6	1.70	0.55
32:a:398:U:H2'	32:a:399:G:C8	2.42	0.55
32:a:560:A:H4'	32:a:561:U:H5"	1.86	0.55
32:a:764:C:C2'	32:a:765:G:H5'	2.37	0.55
32:a:982:U:C1'	44:n:52:ARG:HH11	2.20	0.55
32:a:1259:C:H5'	44:n:73:LEU:CD1	2.37	0.55
32:a:1337:G:C2	43:m:46:GLU:HA	2.41	0.55
32:a:1359:C:H41	44:n:63:CYS:HB3	1.67	0.55
33:c:39:ARG:HG3	33:c:54:ILE:HG21	1.87	0.55
42:l:3:VAL:O	42:l:7:VAL:HG23	2.06	0.55
42:l:83:GLY:HA2	42:l:94:TYR:HD1	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:o:54:GLY:O	45:o:58:MET:HG2	2.07	0.55
51:7:10:LYS:C	51:7:12:GLY:H	2.14	0.55
52:u:39:LYS:N	52:u:40:PRO:CD	2.69	0.55
2:B:498:G:O2'	2:B:499:U:H5'	2.07	0.55
2:B:643:A:N6	2:B:2370:G:H1'	2.21	0.55
2:B:934:U:H2'	2:B:935:C:H6	1.71	0.55
2:B:1118:C:H5"	3:V:84:PRO:HD2	1.89	0.55
2:B:1742:U:H2'	2:B:1743:G:C8	2.42	0.55
2:B:2867:G:N3	2:B:2867:G:C2'	2.67	0.55
7:F:136:ILE:N	43:m:112:ARG:HG2	2.09	0.55
20:T:15:HIS:ND1	20:T:31:VAL:HG11	2.21	0.55
20:T:96:VAL:HG22	20:T:97:GLY:N	2.18	0.55
22:W:58:LEU:HA	22:W:79:ILE:HG21	1.88	0.55
32:a:6:G:H4'	32:a:298:A:H4'	1.88	0.55
32:a:32:A:H2'	32:a:33:A:C8	2.42	0.55
32:a:1121:U:H6	40:j:89:ARG:HH21	1.45	0.55
32:a:1235:U:OP2	43:m:50:GLY:CA	2.55	0.55
32:a:1276:G:C6	44:n:95:LEU:HD13	2.34	0.55
32:a:1304:G:P	43:m:3:ILE:N	2.74	0.55
32:a:1492:A:H2'	32:a:1493:A:O4'	2.06	0.55
33:c:42:LEU:O	33:c:46:LEU:HB2	2.07	0.55
33:c:65:VAL:HG21	40:j:64:GLN:O	0.88	0.55
33:c:133:MET:HE2	33:c:152:VAL:CG2	2.37	0.55
2:B:650:C:H5"	29:4:22:LYS:HZ3	1.72	0.55
2:B:845:A:C2	2:B:847:U:H1'	2.42	0.55
2:B:1038:G:H2'	2:B:1039:A:C8	2.41	0.55
2:B:2895:G:H2'	2:B:2896:C:H6	1.68	0.55
5:D:142:VAL:HB	5:D:143:PRO:CD	2.37	0.55
12:L:118:THR:N	12:L:119:PRO:HD3	2.21	0.55
14:N:22:ARG:HG3	14:N:23:ASN:N	2.20	0.55
14:N:113:ILE:HG22	14:N:114:GLU:N	2.22	0.55
16:P:99:LEU:HD21	16:P:109:ILE:HG23	1.88	0.55
19:S:29:VAL:HG22	19:S:71:VAL:HG23	1.89	0.55
20:T:62:VAL:O	20:T:63:VAL:HG12	2.06	0.55
28:3:8:SER:OG	28:3:11:LYS:HB2	2.07	0.55
29:4:23:HIS:CD2	29:4:47:ALA:HA	2.41	0.55
32:a:196:A:P	50:t:63:LYS:CE	2.88	0.55
32:a:946:A:C8	43:m:42:VAL:CB	2.82	0.55
32:a:966:G:C4	53:v:34:G:H4'	2.41	0.55
32:a:988:G:N1	44:n:46:LYS:HG3	2.21	0.55
32:a:1473:G:H2'	32:a:1474:U:O4'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:c:73:GLY:HA2	40:j:55:PRO:O	2.06	0.55
35:e:95:MET:HE3	35:e:139:THR:HG22	1.89	0.55
43:m:13:HIS:HB2	43:m:16:ILE:CG2	2.37	0.55
43:m:64:VAL:HG12	43:m:65:GLU:H	1.71	0.55
46:p:51:ARG:C	46:p:52:LEU:HD22	2.31	0.55
2:B:414:C:H2'	2:B:415:A:H8	1.71	0.55
2:B:871:U:H2'	2:B:872:U:H6	1.72	0.55
2:B:995:C:N4	10:J:2:LYS:HB3	2.22	0.55
2:B:1583:A:H4'	2:B:1585:C:C4	2.42	0.55
2:B:1641:A:H2'	2:B:1642:G:O4'	2.07	0.55
2:B:1771:C:H2'	2:B:1772:A:C8	2.42	0.55
2:B:2666:C:O2	2:B:2666:C:O4'	2.25	0.55
2:B:2698:U:H2'	2:B:2699:C:C6	2.42	0.55
3:V:77:VAL:HG21	3:V:79:ARG:HE	1.71	0.55
4:C:37:SER:H	4:C:62:ARG:CB	2.20	0.55
6:E:118:LEU:N	6:E:118:LEU:HD23	2.21	0.55
10:J:43:GLU:O	10:J:44:TYR:C	2.50	0.55
13:M:3:GLN:HG2	13:M:46:ILE:HB	1.89	0.55
13:M:3:GLN:HB3	13:M:46:ILE:HB	1.89	0.55
17:Q:73:ILE:HG13	17:Q:77:LYS:HD2	1.87	0.55
19:S:29:VAL:HG11	19:S:69:LEU:HB2	1.89	0.55
20:T:1:MET:CG	20:T:2:ILE:H	2.19	0.55
32:a:408:A:P	34:d:109:THR:CG2	2.95	0.55
32:a:1008:U:H2'	32:a:1009:U:H4'	1.87	0.55
32:a:1236:A:H2	43:m:46:GLU:N	1.93	0.55
33:c:67:ILE:HG21	40:j:53:ILE:HG23	1.89	0.55
33:c:83:VAL:HA	40:j:62:ARG:N	2.20	0.55
33:c:99:GLN:OE1	40:j:48:ARG:O	2.25	0.55
34:d:117:VAL:HG12	34:d:130:ASN:HA	1.88	0.55
35:e:155:LYS:HG3	38:h:65:PHE:HB2	1.89	0.55
39:i:30:ASN:N	39:i:30:ASN:HD22	2.04	0.55
41:k:58:THR:HG23	41:k:61:ALA:CB	2.36	0.55
46:p:20:VAL:HG22	46:p:21:VAL:N	2.21	0.55
2:B:27:G:HO2'	2:B:28:A:H8	1.51	0.55
2:B:142:A:N3	20:T:2:ILE:HG23	2.22	0.55
2:B:396:G:H5'	25:Z:9:TYR:HB2	1.89	0.55
2:B:753:A:H2'	2:B:754:U:C6	2.42	0.55
2:B:758:C:O2	2:B:1981:A:H2	1.88	0.55
2:B:1387:A:H2'	2:B:1388:G:C8	2.40	0.55
2:B:2852:G:H2'	2:B:2853:C:H6	1.72	0.55
6:E:29:HIS:O	6:E:33:VAL:HG23	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:F:173:ASP:CG	7:F:173:ASP:O	2.47	0.55
9:H:11:ASN:ND2	9:H:12:LEU:N	2.55	0.55
9:H:56:ALA:HB3	9:H:57:LYS:NZ	2.21	0.55
9:H:82:SER:H	9:H:146:VAL:CG1	2.10	0.55
14:N:32:GLU:HB3	14:N:33:ILE:HD13	1.89	0.55
15:O:1:MET:HG2	15:O:2:ASP:N	2.21	0.55
15:O:16:ARG:O	15:O:20:GLU:HB2	2.07	0.55
16:P:63:ILE:O	16:P:72:VAL:HG12	2.07	0.55
18:R:39:LEU:HG	18:R:41:ILE:CG1	2.37	0.55
23:X:59:GLU:C	23:X:61:ALA:H	2.15	0.55
25:Z:29:GLY:HA3	25:Z:48:GLN:OE1	2.07	0.55
27:2:42:VAL:O	27:2:43:ARG:HB2	2.07	0.55
32:a:218:U:H2'	32:a:219:U:C6	2.41	0.55
32:a:921:U:H2'	32:a:922:G:O4'	2.06	0.55
32:a:1126:U:C3'	40:j:36:VAL:CB	2.49	0.55
32:a:1160:G:H2'	32:a:1161:C:H6	1.72	0.55
32:a:1217:C:O2	44:n:45:LEU:CA	2.50	0.55
32:a:1235:U:N3	43:m:47:LEU:HB3	2.22	0.55
32:a:1256:A:O2'	44:n:75:LYS:HA	2.06	0.55
32:a:1310:G:H2'	32:a:1311:A:O4'	2.07	0.55
36:f:64:VAL:HG12	36:f:65:GLU:N	2.18	0.55
48:r:23:LYS:C	48:r:25:ILE:H	2.14	0.55
49:s:69:LYS:O	49:s:72:GLU:HB2	2.07	0.55
51:7:46:VAL:O	51:7:49:PHE:HB2	2.07	0.55
2:B:16:C:O3'	26:1:10:SER:HA	2.06	0.54
2:B:452:G:OP1	6:E:52:VAL:HG22	2.07	0.54
2:B:633:A:OP1	12:L:69:ARG:HB2	2.07	0.54
2:B:1332:G:H2'	2:B:1332:G:N3	2.21	0.54
2:B:1913:A:N6	32:a:1408:A:H61	2.03	0.54
2:B:2150:C:H2'	2:B:2151:U:O4'	2.05	0.54
2:B:2240:U:O2'	2:B:2241:A:H5'	2.07	0.54
2:B:2602:A:C5	53:v:75:C:H5	2.24	0.54
5:D:1:MET:HE3	5:D:84:LEU:HB2	1.89	0.54
7:F:73:VAL:HB	53:v:56:C:O5'	1.81	0.54
7:F:169:LEU:HA	7:F:172:PHE:CZ	2.42	0.54
9:H:9:VAL:C	9:H:11:ASN:H	2.14	0.54
10:J:1:MET:SD	18:R:14:VAL:HG21	2.47	0.54
10:J:18:VAL:HG22	10:J:55:ILE:O	2.07	0.54
12:L:78:ARG:NH2	12:L:110:VAL:HG11	2.22	0.54
12:L:79:LEU:CA	12:L:113:ALA:HB3	2.31	0.54
13:M:18:ARG:HB3	13:M:40:ARG:NH2	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:76:HIS:CD2	16:P:76:HIS:N	2.74	0.54
17:Q:97:ILE:HD13	17:Q:100:PHE:CZ	2.42	0.54
20:T:9:LYS:HG2	23:X:22:LEU:HD11	1.88	0.54
22:W:6:GLY:O	22:W:8:SER:N	2.40	0.54
25:Z:59:ARG:HE	25:Z:62:LYS:CD	2.19	0.54
26:1:9:ARG:O	26:1:11:LYS:N	2.40	0.54
26:1:11:LYS:HG3	26:1:12:ARG:H	1.72	0.54
27:2:13:SER:H	27:2:50:GLU:HA	1.72	0.54
31:6:46:ASP:HA	31:6:50:LYS:HG3	1.87	0.54
31:6:124:MET:O	31:6:128:ILE:HG12	2.06	0.54
32:a:881:G:P	42:l:8:ARG:HH12	2.28	0.54
32:a:984:C:N4	49:s:5:LYS:CG	2.69	0.54
32:a:1013:G:C6	44:n:32:ASP:CA	2.88	0.54
32:a:1113:C:H5”	33:c:13:ILE:HG13	1.87	0.54
32:a:1150:A:N3	40:j:29:ALA:HB2	2.22	0.54
32:a:1216:A:N3	44:n:47:LEU:CB	2.69	0.54
32:a:1319:A:H4’	49:s:68:HIS:ND1	2.22	0.54
32:a:1427:C:O2’	32:a:1428:A:H5’	2.07	0.54
32:a:1479:C:H2’	32:a:1480:A:H8	1.71	0.54
33:c:60:ALA:C	40:j:48:ARG:NH1	2.62	0.54
33:c:156:LEU:H	33:c:156:LEU:HD12	1.72	0.54
37:g:100:MET:O	37:g:104:VAL:HG23	2.08	0.54
39:i:38:PHE:O	39:i:44:ARG:HG2	2.07	0.54
44:n:42:ASN:HB3	44:n:46:LYS:HE2	1.89	0.54
51:7:112:ARG:HA	51:7:115:ASP:OD2	2.07	0.54
51:7:144:GLU:O	51:7:148:GLY:HA3	2.06	0.54
2:B:142:A:H2’	2:B:143:C:C5	2.42	0.54
2:B:753:A:H2’	2:B:754:U:H6	1.72	0.54
2:B:988:A:H3’	24:Y:12:ALA:HB2	1.89	0.54
2:B:1006:C:O2’	2:B:1007:C:H5’	2.07	0.54
2:B:2287:A:HO2’	2:B:2288:A:H2’	1.71	0.54
4:C:222:THR:HA	4:C:231:HIS:CE1	2.42	0.54
7:F:36:ASN:O	7:F:152:ASP:HB2	2.06	0.54
7:F:175:PRO:CB	43:m:102:LYS:CA	2.42	0.54
9:H:66:ASN:CB	9:H:138:VAL:HG11	2.37	0.54
10:J:34:ARG:HB3	10:J:39:LYS:HD2	1.89	0.54
12:L:77:ILE:HG22	12:L:78:ARG:CZ	2.37	0.54
14:N:33:ILE:HD13	14:N:33:ILE:H	1.71	0.54
15:O:24:THR:OG1	15:O:91:SER:HA	2.07	0.54
16:P:18:SER:HB2	16:P:87:ARG:NE	2.22	0.54
18:R:62:GLU:CG	18:R:103:ALA:HA	2.36	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:78:ARG:HB3	18:R:87:GLN:CA	2.29	0.54
28:3:25:LYS:HE3	28:3:25:LYS:H	1.73	0.54
32:a:194:C:C1'	50:t:58:ASP:HB3	2.37	0.54
32:a:598:U:OP1	47:q:36:PHE:CZ	2.60	0.54
32:a:995:C:H5"	44:n:18:LYS:O	2.07	0.54
32:a:1017:U:O2'	44:n:41:TRP:HB2	2.06	0.54
32:a:1109:C:OP2	33:c:175:HIS:CG	2.59	0.54
32:a:1111:A:O2'	32:a:1112:C:H6	1.90	0.54
32:a:1125:U:H3'	40:j:76:ILE:CA	2.36	0.54
32:a:1329:A:OP1	43:m:66:GLY:C	2.50	0.54
32:a:1346:A:N1	32:a:1374:A:H5"	2.21	0.54
33:c:21:TRP:CB	33:c:58:ARG:HB2	2.37	0.54
33:c:63:ILE:CG2	40:j:66:GLU:CG	2.82	0.54
35:e:56:PRO:O	35:e:60:GLN:HG3	2.07	0.54
36:f:61:LEU:HD12	36:f:63:ASN:OD1	2.07	0.54
45:o:84:LEU:HD22	45:o:86:LEU:HD11	1.89	0.54
46:p:12:LYS:HD2	46:p:13:LYS:HG3	1.89	0.54
47:q:74:LEU:HD22	47:q:75:VAL:N	2.21	0.54
48:r:33:THR:HG23	48:r:35:SER:H	1.73	0.54
51:7:113:LEU:HD23	51:7:113:LEU:C	2.32	0.54
2:B:172:A:H2'	2:B:173:A:H8	1.70	0.54
2:B:277:G:H5"	2:B:278:A:N7	2.22	0.54
2:B:407:G:O2'	2:B:408:G:H5'	2.06	0.54
2:B:1000:A:H2'	2:B:1001:A:C8	2.42	0.54
2:B:1028:A:H2'	2:B:1029:A:C8	2.43	0.54
2:B:2066:C:O2'	2:B:2067:G:H5'	2.07	0.54
2:B:2184:A:H2'	2:B:2185:U:C6	2.42	0.54
2:B:2678:C:H2'	2:B:2679:A:C8	2.42	0.54
4:C:129:LEU:CD2	4:C:133:ASN:HB2	2.37	0.54
9:H:6:LEU:CD2	9:H:54:LEU:HG	2.37	0.54
9:H:47:PHE:CD1	9:H:47:PHE:C	2.86	0.54
10:J:42:ALA:HB1	17:Q:67:ALA:HB2	1.90	0.54
15:O:49:VAL:HG22	15:O:50:ALA:N	2.19	0.54
17:Q:4:LYS:O	17:Q:7:VAL:HG22	2.07	0.54
27:2:8:ILE:HG23	27:2:27:ARG:HE	1.72	0.54
31:6:130:GLY:HA2	31:6:133:ARG:NH2	2.23	0.54
31:6:138:VAL:HG12	31:6:139:VAL:N	2.21	0.54
32:a:538:G:OP2	42:l:111:GLN:HG3	2.07	0.54
32:a:686:U:H4'	41:k:43:TRP:HE1	1.71	0.54
32:a:801:U:H2'	32:a:802:A:C8	2.42	0.54
32:a:1016:A:N7	44:n:40:ARG:CB	2.68	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1027:C:H2'	32:a:1028:C:C6	2.41	0.54
32:a:1254:A:O2'	44:n:81:ILE:HD12	2.07	0.54
32:a:1258:G:C5'	44:n:75:LYS:N	2.71	0.54
32:a:1258:G:C2	44:n:76:PHE:CZ	2.30	0.54
32:a:1324:A:H2'	32:a:1325:C:H6	1.72	0.54
32:a:1491:G:H5"	32:a:1492:A:OP2	2.07	0.54
33:c:77:GLY:HA2	40:j:58:ASN:CG	2.32	0.54
33:c:126:ARG:HH22	33:c:190:THR:HG22	1.72	0.54
39:i:50:PRO:HG2	39:i:51:LEU:HD12	1.88	0.54
44:n:17:ASP:HA	44:n:21:ALA:CB	2.37	0.54
1:A:113:C:H4'	15:O:47:VAL:HG12	1.88	0.54
2:B:41:C:H2'	2:B:42:A:C8	2.42	0.54
2:B:170:U:H2'	2:B:171:U:H6	1.69	0.54
2:B:620:G:H5'	2:B:620:G:N3	2.22	0.54
2:B:651:G:P	29:4:16:THR:HB	2.47	0.54
2:B:770:G:O2'	2:B:771:G:H5'	2.07	0.54
2:B:1256:G:H21	6:E:77:ILE:HG23	1.73	0.54
2:B:1816:C:C5	4:C:62:ARG:HD2	2.42	0.54
2:B:2680:U:H5'	5:D:194:PRO:HA	1.87	0.54
2:B:2785:C:H2'	2:B:2786:U:C6	2.42	0.54
2:B:2839:G:H2'	2:B:2840:C:C6	2.42	0.54
6:E:187:VAL:HG23	6:E:187:VAL:O	2.07	0.54
8:G:17:LYS:O	8:G:23:ILE:HD12	2.07	0.54
9:H:46:PHE:C	9:H:50:ARG:NH2	2.65	0.54
11:K:98:ARG:HD2	11:K:98:ARG:H	1.71	0.54
12:L:60:ARG:HH11	12:L:60:ARG:HA	1.72	0.54
16:P:47:ILE:HG23	16:P:63:ILE:CG2	2.33	0.54
18:R:80:ARG:HG3	18:R:80:ARG:O	2.06	0.54
21:U:99:SER:OG	21:U:102:ILE:HD11	2.07	0.54
23:X:14:LEU:HG	23:X:53:VAL:HG12	1.88	0.54
31:6:18:ASN:N	31:6:19:PRO:HD2	2.23	0.54
32:a:173:U:H5'	32:a:197:A:O4'	2.07	0.54
32:a:477:C:H2'	32:a:478:A:C8	2.42	0.54
32:a:975:A:C8	44:n:2:LYS:HD3	2.43	0.54
32:a:1071:C:H2'	32:a:1072:G:C8	2.42	0.54
32:a:1129:C:C2	40:j:80:THR:CB	2.88	0.54
32:a:1279:G:C8	44:n:85:GLU:O	2.60	0.54
32:a:1333:A:H5"	43:m:12:LYS:CD	2.35	0.54
37:g:110:ARG:HH22	37:g:121:ASN:HB3	1.72	0.54
45:o:70:LYS:HZ1	45:o:74:VAL:CG1	2.18	0.54
50:t:82:ILE:HG13	50:t:83:ASN:N	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:99:A:N3	1:A:99:A:H2'	2.23	0.54
2:B:6:A:H2'	2:B:7:G:C8	2.42	0.54
2:B:26:G:H1'	2:B:514:A:N6	2.22	0.54
2:B:598:U:H2'	2:B:599:A:C8	2.42	0.54
2:B:664:G:H2'	2:B:665:U:C6	2.42	0.54
2:B:866:A:H61	2:B:913:U:C4'	2.19	0.54
2:B:922:C:H2'	2:B:923:G:C8	2.42	0.54
2:B:1046:A:C3'	2:B:1047:G:H5"	2.37	0.54
2:B:1259:G:H2'	2:B:1260:A:H8	1.73	0.54
2:B:1506:U:H2'	2:B:1507:C:C6	2.42	0.54
2:B:1939:U:H5'	2:B:1939:U:H6	1.72	0.54
2:B:2008:C:H2'	2:B:2009:A:C8	2.40	0.54
2:B:2097:A:H2'	2:B:2098:U:C6	2.43	0.54
2:B:2820:A:O4'	14:N:4:ARG:HB2	2.07	0.54
4:C:224:MET:HB3	4:C:233:GLY:H	1.72	0.54
6:E:44:ARG:O	6:E:45:ALA:C	2.49	0.54
6:E:52:VAL:HG22	6:E:53:THR:H	1.72	0.54
7:F:175:PRO:HB2	43:m:102:LYS:HA	0.64	0.54
11:K:107:LEU:C	11:K:109:SER:H	2.15	0.54
11:K:108:ARG:HD2	11:K:113:MET:CE	2.38	0.54
14:N:86:ARG:HH21	14:N:116:VAL:CG1	2.20	0.54
16:P:7:LEU:HD13	16:P:11:GLN:HG2	1.88	0.54
16:P:8:GLU:HA	16:P:11:GLN:CG	2.38	0.54
18:R:66:HIS:HA	18:R:98:ILE:HD13	1.89	0.54
19:S:32:ALA:O	19:S:33:LEU:HD13	2.08	0.54
20:T:30:ILE:HG22	20:T:84:TYR:O	2.07	0.54
29:4:4:LYS:HE3	29:4:58:ILE:HB	1.90	0.54
32:a:97:G:H2'	32:a:98:A:O4'	2.07	0.54
32:a:439:U:C3'	34:d:120:LYS:HZ3	2.20	0.54
32:a:975:A:N9	44:n:2:LYS:CA	2.69	0.54
32:a:980:C:C2	44:n:58:ARG:CA	2.54	0.54
32:a:994:A:C1'	44:n:50:LEU:CD2	2.81	0.54
32:a:1012:A:OP2	49:s:23:GLU:HA	2.05	0.54
32:a:1153:G:C2	40:j:91:ASP:OD1	2.60	0.54
32:a:1169:A:C4'	51:7:138:ARG:HH22	1.99	0.54
40:j:81:GLU:HA	40:j:84:VAL:HG22	1.89	0.54
42:l:20:VAL:O	42:l:23:LEU:HG	2.08	0.54
2:B:18:U:H2'	2:B:19:A:C8	2.43	0.54
2:B:131:A:H2'	2:B:132:G:H8	1.73	0.54
2:B:540:C:O2'	2:B:541:A:H5'	2.08	0.54
2:B:663:G:OP1	12:L:27:LEU:HD21	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1013:C:H2'	2:B:1014:A:H8	1.72	0.54
2:B:1181:U:H2'	2:B:1182:G:H8	1.72	0.54
2:B:1252:G:O6	17:Q:35:PHE:HB2	2.08	0.54
2:B:2212:A:N7	2:B:2214:C:N4	2.55	0.54
2:B:2278:A:H8	22:W:8:SER:HB3	1.72	0.54
2:B:2626:C:O2'	2:B:2627:G:H5'	2.08	0.54
4:C:21:PRO:N	4:C:202:ARG:HD2	2.22	0.54
5:D:24:VAL:CG2	5:D:193:VAL:HG11	2.27	0.54
5:D:106:LYS:HZ3	5:D:208:LYS:HD3	1.70	0.54
5:D:192:ALA:O	5:D:193:VAL:HG12	2.08	0.54
9:H:6:LEU:HA	9:H:15:LEU:CA	2.38	0.54
16:P:38:ARG:HH11	16:P:39:LEU:N	2.06	0.54
19:S:85:ILE:HG22	19:S:86:MET:N	2.22	0.54
20:T:16:VAL:HG13	20:T:16:VAL:O	2.08	0.54
29:4:24:LYS:HA	29:4:45:PRO:CB	2.34	0.54
30:5:2:LYS:HB3	30:5:2:LYS:NZ	2.23	0.54
31:6:63:ASP:O	31:6:64:ARG:CG	2.53	0.54
32:a:134:G:O6	46:p:25:ARG:NH2	2.41	0.54
32:a:405:U:OP2	34:d:114:ARG:NH2	2.41	0.54
32:a:859:G:H2'	32:a:860:A:H8	1.71	0.54
32:a:865:A:H2'	32:a:866:C:C6	2.43	0.54
32:a:930:C:H2'	32:a:931:C:O4'	2.08	0.54
32:a:949:A:O4'	43:m:36:ALA:C	2.51	0.54
32:a:1216:A:H2'	44:n:47:LEU:O	2.08	0.54
32:a:1512:U:O2'	32:a:1513:A:H5'	2.07	0.54
33:c:75:VAL:CB	40:j:53:ILE:O	2.55	0.54
41:k:54:SER:HA	41:k:56:LYS:HE3	1.90	0.54
51:7:87:ASP:O	51:7:88:GLN:HG3	2.07	0.54
51:7:113:LEU:HG	51:7:143:LEU:HB3	1.89	0.54
2:B:37:C:C2'	6:E:46:GLN:HB3	2.38	0.54
2:B:365:U:H2'	2:B:366:C:C6	2.43	0.54
2:B:969:G:H2'	2:B:970:U:H6	1.73	0.54
2:B:1188:U:O2'	2:B:1189:A:H5'	2.08	0.54
2:B:1551:A:C3'	2:B:1552:A:H5"	2.37	0.54
2:B:2784:U:H4'	5:D:41:ALA:O	2.08	0.54
3:V:40:ILE:HD13	3:V:40:ILE:N	2.23	0.54
4:C:107:LYS:H	4:C:194:VAL:CG2	2.20	0.54
4:C:129:LEU:HD23	4:C:130:PRO:HD2	1.88	0.54
5:D:2:ILE:HG21	5:D:203:VAL:O	2.07	0.54
5:D:15:PHE:HB3	5:D:18:ASP:HB2	1.89	0.54
5:D:37:VAL:HG22	5:D:46:ARG:NE	2.21	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:146:ILE:N	5:D:146:ILE:HD12	2.22	0.54
6:E:123:LYS:HB3	6:E:126:VAL:HG23	1.90	0.54
6:E:149:ILE:HG12	6:E:186:VAL:HG22	1.90	0.54
10:J:119:PHE:HE1	10:J:121:LYS:HD3	1.72	0.54
10:J:136:GLN:N	10:J:137:PRO:CD	2.71	0.54
11:K:16:ALA:N	11:K:46:ALA:HA	2.22	0.54
11:K:56:ASP:O	11:K:58:LEU:HG	2.07	0.54
12:L:123:ARG:HB3	12:L:143:GLU:OE1	2.07	0.54
16:P:96:LEU:HG	16:P:97:TYR:H	1.71	0.54
18:R:48:LYS:HG3	18:R:49:ILE:CD1	2.37	0.54
20:T:56:GLU:HB2	20:T:86:THR:OG1	2.06	0.54
24:Y:35:VAL:CG1	24:Y:37:ARG:HH21	2.21	0.54
32:a:189:A:H2'	32:a:190:A:C8	2.43	0.54
32:a:980:C:C3'	44:n:58:ARG:CD	2.81	0.54
32:a:994:A:H1'	44:n:50:LEU:HD22	1.88	0.54
32:a:1150:A:P	40:j:28:THR:HG22	2.47	0.54
32:a:1254:A:C5	44:n:84:ARG:HB3	1.91	0.54
32:a:1258:G:H5'	44:n:75:LYS:N	2.23	0.54
36:f:18:VAL:O	36:f:22:ILE:HG13	2.07	0.54
38:h:9:MET:HA	38:h:26:MET:HE2	1.89	0.54
41:k:51:PHE:CE1	41:k:61:ALA:HB1	2.43	0.54
41:k:122:PRO:HG2	52:u:35:GLU:HG2	1.89	0.54
53:v:51:U:H2'	53:v:52:G:H8	1.72	0.54
1:A:90:C:H2'	1:A:91:C:O4'	2.07	0.54
2:B:997:G:O2'	2:B:998:C:H5'	2.07	0.54
2:B:1060:U:O2	2:B:1088:A:C8	2.60	0.54
2:B:1130:U:O2'	2:B:1131:G:H2'	2.07	0.54
2:B:2011:U:OP2	19:S:16:LYS:HE3	2.07	0.54
2:B:2206:C:O2'	2:B:2207:C:H5'	2.07	0.54
2:B:2273:A:H2'	2:B:2274:A:C8	2.42	0.54
2:B:2590:A:H2'	2:B:2591:C:C6	2.43	0.54
4:C:114:GLN:HB2	4:C:124:LYS:NZ	2.23	0.54
5:D:109:VAL:O	5:D:172:VAL:HG22	2.06	0.54
5:D:118:PHE:N	5:D:164:GLN:HG3	2.23	0.54
8:G:60:GLY:O	8:G:63:GLN:HG2	2.08	0.54
8:G:84:LYS:HA	8:G:84:LYS:HZ3	1.73	0.54
9:H:121:VAL:HG11	9:H:128:HIS:CD2	2.43	0.54
10:J:64:VAL:HG12	10:J:65:THR:H	1.71	0.54
15:O:20:GLU:HB3	15:O:23:ALA:CB	2.37	0.54
18:R:53:PHE:HB3	18:R:55:ASP:CA	2.37	0.54
18:R:66:HIS:CA	18:R:98:ILE:HD13	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:34:ASP:H	19:S:37:THR:CG2	2.20	0.54
20:T:12:ARG:NH2	23:X:29:ARG:HH12	1.88	0.54
21:U:59:GLU:O	21:U:60:LYS:HB2	2.08	0.54
24:Y:16:LEU:HD12	24:Y:16:LEU:H	1.71	0.54
24:Y:54:VAL:HG22	24:Y:55:LYS:N	2.22	0.54
27:2:42:VAL:CG1	27:2:43:ARG:N	2.69	0.54
32:a:602:A:O2'	32:a:603:U:H5'	2.08	0.54
32:a:636:U:H2'	32:a:637:C:C6	2.43	0.54
32:a:766:A:H2'	32:a:767:A:O4'	2.08	0.54
32:a:973:G:H3'	32:a:974:A:H5"	1.90	0.54
32:a:1040:U:H2'	32:a:1041:G:C8	2.43	0.54
32:a:1218:C:O4'	44:n:48:GLN:CB	2.55	0.54
32:a:1220:G:N7	49:s:4:LEU:HB3	2.23	0.54
32:a:1256:A:O4'	44:n:76:PHE:CD2	2.61	0.54
32:a:1358:U:C4	44:n:68:ARG:HG3	2.42	0.54
32:a:1359:C:N4	44:n:79:SER:HG	2.06	0.54
32:a:1435:G:H2'	32:a:1436:U:C6	2.43	0.54
32:a:1448:C:H2'	32:a:1449:C:C6	2.42	0.54
33:c:166:TRP:HA	33:c:166:TRP:CE3	2.42	0.54
34:d:144:ILE:CD1	34:d:154:VAL:HG21	2.38	0.54
42:l:58:ASN:H	42:l:58:ASN:ND2	2.06	0.54
52:u:26:GLY:C	52:u:28:LEU:N	2.66	0.54
53:v:51:U:H2'	53:v:52:G:C8	2.43	0.54
53:v:75:C:H3'	53:v:76:A:H3'	1.89	0.54
2:B:329:G:H1	21:U:16:LYS:HZ3	1.55	0.54
2:B:346:A:N3	2:B:346:A:H5'	2.22	0.54
2:B:378:C:O2'	2:B:379:G:H5'	2.07	0.54
2:B:548:G:H5"	2:B:549:G:O4'	2.07	0.54
2:B:926:G:H2'	2:B:927:A:H8	1.73	0.54
2:B:1054:A:O2'	2:B:1055:G:H5'	2.08	0.54
2:B:1254:A:H2'	6:E:69:ARG:HH12	1.73	0.54
2:B:1550:C:H2'	2:B:1551:A:C8	2.43	0.54
2:B:2484:G:O2'	2:B:2485:G:H5'	2.08	0.54
5:D:38:LYS:HG2	5:D:39:ASP:N	2.19	0.54
6:E:132:LYS:HB2	6:E:132:LYS:NZ	2.23	0.54
7:F:133:GLU:O	43:m:106:ARG:CB	2.55	0.54
7:F:134:GLN:CD	43:m:107:THR:HA	2.33	0.54
9:H:31:VAL:HG22	9:H:37:VAL:HG22	1.89	0.54
10:J:13:ARG:HH11	10:J:13:ARG:HG3	1.73	0.54
10:J:35:ARG:HE	10:J:39:LYS:HB3	1.71	0.54
11:K:25:LEU:C	11:K:27:GLY:H	2.16	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:117:THR:HG21	12:L:120:VAL:CG1	2.38	0.54
13:M:71:LYS:C	13:M:71:LYS:HD2	2.32	0.54
15:O:1:MET:HG3	15:O:3:LYS:HE3	1.90	0.54
17:Q:51:GLN:O	17:Q:54:ARG:HG2	2.07	0.54
19:S:33:LEU:HB3	19:S:37:THR:HB	1.90	0.54
25:Z:17:SER:N	25:Z:21:VAL:HG23	2.23	0.54
32:a:77:A:H2'	32:a:78:A:C8	2.43	0.54
32:a:878:A:H5"	38:h:80:PRO:HG2	1.89	0.54
32:a:966:G:C4	53:v:34:G:C4'	2.91	0.54
32:a:1256:A:O2'	44:n:75:LYS:CA	2.55	0.54
32:a:1279:G:H21	44:n:87:ALA:HA	1.66	0.54
33:c:53:ARG:HG2	33:c:54:ILE:H	1.72	0.54
33:c:58:ARG:HD3	40:j:68:ARG:CD	2.37	0.54
33:c:59:PRO:N	40:j:47:GLU:N	2.43	0.54
42:l:86:VAL:HG11	42:l:89:LEU:HD23	1.90	0.54
49:s:20:LYS:O	49:s:23:GLU:HB3	2.07	0.54
51:7:148:GLY:HA2	51:7:151:LYS:HD3	1.89	0.54
1:A:78:A:H2'	1:A:79:G:O4'	2.07	0.54
2:B:404:A:H4'	2:B:405:U:H5'	1.89	0.54
2:B:557:C:O2'	10:J:114:LEU:HD13	2.08	0.54
2:B:705:A:N6	2:B:726:G:O2'	2.41	0.54
2:B:1112:G:H5'	8:G:2:ARG:NH2	2.22	0.54
2:B:1132:U:H5	10:J:85:LYS:HE2	1.71	0.54
2:B:1464:G:H2'	2:B:1465:G:C8	2.43	0.54
2:B:2678:C:H2'	2:B:2679:A:H8	1.73	0.54
4:C:20:ASN:HB2	4:C:203:VAL:CG1	2.31	0.54
4:C:21:PRO:HG2	4:C:202:ARG:NH1	2.23	0.54
4:C:160:TYR:CG	4:C:193:GLU:HG2	2.43	0.54
4:C:209:ALA:HA	4:C:213:ARG:CZ	2.38	0.54
6:E:52:VAL:HG13	6:E:53:THR:N	2.23	0.54
7:F:114:ARG:NH1	43:m:85:TYR:CE2	2.61	0.54
7:F:121:PHE:HE2	7:F:166:ARG:H	1.56	0.54
8:G:137:LYS:HA	8:G:140:ILE:CG1	2.38	0.54
8:G:171:LYS:O	8:G:172:GLU:HG2	2.08	0.54
9:H:39:ALA:HA	9:H:44:ILE:HG13	1.89	0.54
11:K:102:PRO:HB3	11:K:121:GLU:OE1	2.09	0.54
12:L:125:LEU:C	12:L:126:ARG:HG3	2.31	0.54
13:M:96:ILE:HD13	13:M:97:GLN:CB	2.38	0.54
17:Q:92:LYS:O	17:Q:94:LEU:N	2.41	0.54
26:1:2:VAL:HG22	26:1:3:GLN:N	2.23	0.54
29:4:16:THR:C	29:4:18:LYS:H	2.16	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1125:U:H5'	40:j:7:ARG:CA	2.38	0.54
32:a:1152:A:C8	40:j:92:LEU:HB2	2.42	0.54
32:a:1254:A:C1'	44:n:81:ILE:HB	2.38	0.54
32:a:1258:G:H1'	44:n:76:PHE:CB	1.76	0.54
32:a:1499:A:O2'	32:a:1500:A:H5'	2.08	0.54
35:e:55:VAL:N	35:e:56:PRO:HD2	2.23	0.54
36:f:6:ILE:HD13	36:f:89:VAL:HB	1.89	0.54
38:h:50:VAL:HG22	38:h:51:GLU:N	2.22	0.54
39:i:11:ARG:HA	39:i:105:ARG:NE	2.23	0.54
39:i:113:LYS:HG2	39:i:114:LYS:N	2.22	0.54
41:k:33:ILE:O	41:k:41:LEU:HB2	2.07	0.54
46:p:40:ASN:HB3	46:p:49:GLY:O	2.08	0.54
47:q:32:ILE:HG13	47:q:33:TYR:N	2.21	0.54
47:q:44:HIS:O	47:q:72:TRP:HB2	2.07	0.54
50:t:74:HIS:O	50:t:78:LEU:HD12	2.08	0.54
51:7:71:THR:HG23	51:7:93:HIS:C	2.33	0.54
51:7:163:ILE:CD1	51:7:209:VAL:HG12	2.38	0.54
2:B:64:A:H2'	2:B:65:U:H6	1.72	0.53
2:B:1155:A:H61	24:Y:10:ARG:HH12	1.54	0.53
2:B:1945:G:H2'	2:B:1946:U:C6	2.43	0.53
2:B:2787:C:O2'	2:B:2788:C:H5'	2.08	0.53
6:E:50:ALA:O	6:E:74:LYS:HD2	2.08	0.53
7:F:106:ALA:HB1	7:F:136:ILE:HG23	1.90	0.53
7:F:151:LEU:CD2	7:F:153:ILE:HD11	2.37	0.53
9:H:90:LEU:HD13	9:H:123:ARG:O	2.08	0.53
11:K:59:LYS:HD2	11:K:92:GLU:OE2	2.08	0.53
12:L:29:LYS:NZ	12:L:31:GLY:HA3	2.24	0.53
12:L:95:LEU:HD12	12:L:95:LEU:N	2.21	0.53
17:Q:69:ARG:HG3	17:Q:70:GLN:N	2.23	0.53
19:S:34:ASP:N	19:S:37:THR:HG22	2.23	0.53
22:W:23:LYS:HG3	22:W:24:ARG:N	2.23	0.53
22:W:43:LYS:HA	22:W:63:ASP:OD1	2.07	0.53
32:a:53:A:C2	32:a:54:C:H1'	2.43	0.53
32:a:415:A:H3'	32:a:416:G:H8	1.72	0.53
32:a:626:G:H2'	32:a:627:G:H8	1.74	0.53
32:a:718:A:C5	41:k:117:HIS:CD2	2.95	0.53
32:a:840:C:C2'	32:a:842:U:H5"	2.38	0.53
32:a:1035:A:H2'	32:a:1036:A:C8	2.43	0.53
32:a:1100:C:O2'	32:a:1101:A:H5'	2.07	0.53
32:a:1240:U:N3	37:g:29:LEU:HG	2.23	0.53
32:a:1279:G:H1'	44:n:87:ALA:C	2.34	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1319:A:O5'	49:s:68:HIS:ND1	2.40	0.53
32:a:1363:A:N3	32:a:1363:A:H2'	2.22	0.53
33:c:64:ARG:HA	40:j:49:PHE:H	1.67	0.53
33:c:77:GLY:HA2	40:j:58:ASN:CB	2.38	0.53
47:q:64:ARG:HG3	47:q:65:PRO:HD2	1.89	0.53
51:7:67:LEU:HA	51:7:89:PHE:O	2.07	0.53
2:B:691:C:H4'	4:C:42:ARG:NE	2.24	0.53
4:C:257:ARG:HA	4:C:257:ARG:CZ	2.36	0.53
5:D:17:GLU:CG	16:P:80:VAL:HG21	2.38	0.53
6:E:111:GLU:C	6:E:113:VAL:H	2.16	0.53
7:F:109:ARG:CZ	43:m:109:LYS:C	2.67	0.53
7:F:116:LEU:CD2	43:m:102:LYS:CA	2.85	0.53
9:H:66:ASN:HB2	9:H:138:VAL:HG11	1.91	0.53
13:M:72:PRO:HB3	13:M:88:ASN:OD1	2.08	0.53
14:N:86:ARG:HH21	14:N:116:VAL:HG11	1.72	0.53
16:P:16:VAL:O	16:P:17:PRO:O	2.26	0.53
23:X:14:LEU:HD21	23:X:57:LEU:HB2	1.90	0.53
25:Z:35:ASP:C	25:Z:42:PRO:HB3	2.33	0.53
32:a:946:A:H3'	43:m:42:VAL:CG1	2.20	0.53
32:a:988:G:O6	44:n:46:LYS:CB	2.56	0.53
32:a:1152:A:C6	40:j:90:LEU:HA	2.06	0.53
32:a:1230:C:H5'	53:v:30:G:H5'	1.90	0.53
32:a:1236:A:C8	43:m:52:ILE:CG2	2.91	0.53
32:a:1303:C:N3	43:m:10:ASP:OD1	2.41	0.53
33:c:6:PRO:HG3	33:c:200:TRP:HE1	1.73	0.53
35:e:95:MET:HE2	35:e:114:LEU:HD11	1.90	0.53
35:e:150:GLU:C	35:e:152:VAL:H	2.16	0.53
37:g:115:MET:HE3	37:g:119:LEU:HB2	1.89	0.53
40:j:22:THR:HG23	40:j:23:ALA:N	2.24	0.53
44:n:15:LEU:HD12	44:n:16:ALA:H	1.71	0.53
1:A:54:G:H2'	1:A:55:U:C6	2.43	0.53
1:A:91:C:O2'	1:A:92:C:H5'	2.09	0.53
2:B:184:C:H2'	2:B:185:G:C8	2.43	0.53
2:B:538:A:O2'	2:B:539:G:H5'	2.08	0.53
2:B:823:C:O2'	2:B:824:U:H5'	2.08	0.53
2:B:1810:A:H2'	2:B:1811:G:O4'	2.08	0.53
2:B:1909:C:C5'	53:v:12:U:OP1	2.57	0.53
2:B:2849:U:N3	2:B:2867:G:H1'	2.22	0.53
4:C:27:LYS:HA	4:C:79:ARG:NH1	2.22	0.53
4:C:247:TRP:O	4:C:247:TRP:HD1	1.92	0.53
5:D:62:LYS:H	5:D:62:LYS:HD3	1.71	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:92:VAL:HG13	5:D:93:GLY:N	2.23	0.53
6:E:53:THR:O	6:E:55:SER:N	2.41	0.53
7:F:33:ILE:HD11	7:F:90:LEU:HB2	1.89	0.53
8:G:5:LYS:HG3	8:G:68:ARG:HB2	1.89	0.53
13:M:82:MET:HB2	13:M:84:LYS:CE	2.38	0.53
17:Q:94:LEU:HD22	17:Q:95:ALA:N	2.23	0.53
18:R:64:VAL:HB	18:R:98:ILE:HD12	1.90	0.53
31:6:23:VAL:HG23	31:6:24:GLY:N	2.23	0.53
32:a:370:C:H2'	32:a:371:A:C8	2.42	0.53
32:a:513:C:H2'	32:a:514:C:H6	1.73	0.53
32:a:621:A:H2'	32:a:622:A:C8	2.43	0.53
32:a:948:C:P	43:m:33:LEU:HB2	2.39	0.53
32:a:1039:G:H2'	32:a:1040:U:C6	2.43	0.53
32:a:1257:A:C2'	44:n:74:ARG:CD	2.61	0.53
32:a:1276:G:H1	44:n:95:LEU:HD11	1.59	0.53
32:a:1306:A:C6	43:m:29:SER:CB	2.89	0.53
32:a:1330:U:H3'	43:m:22:TYR:HA	1.90	0.53
32:a:1336:C:OP1	43:m:11:HIS:CE1	2.60	0.53
32:a:1409:C:N4	32:a:1491:G:N1	2.54	0.53
35:e:74:ALA:HB1	35:e:148:SER:HB3	1.91	0.53
35:e:134:ASN:O	35:e:137:ARG:HG2	2.07	0.53
49:s:29:PRO:HA	49:s:47:THR:HB	1.89	0.53
2:B:131:A:H2'	2:B:132:G:C8	2.44	0.53
2:B:136:G:H2'	2:B:137:U:C6	2.44	0.53
2:B:144:A:H2'	2:B:145:C:C6	2.43	0.53
2:B:950:G:H2'	2:B:951:C:C6	2.43	0.53
2:B:1724:G:H2'	2:B:1725:U:H6	1.73	0.53
2:B:1904:G:H1'	2:B:1927:A:N1	2.24	0.53
2:B:2379:G:H2'	2:B:2380:C:C6	2.43	0.53
2:B:2771:C:H2'	2:B:2772:C:C6	2.43	0.53
2:B:2849:U:H4'	2:B:2850:A:C5'	2.38	0.53
5:D:5:VAL:HB	5:D:27:ILE:O	2.09	0.53
5:D:68:PHE:O	5:D:70:LYS:N	2.40	0.53
7:F:59:ILE:HD13	7:F:59:ILE:O	2.08	0.53
7:F:66:ILE:HA	7:F:85:GLY:O	2.08	0.53
7:F:113:PHE:O	43:m:99:GLN:N	2.39	0.53
10:J:19:ASP:OD1	10:J:20:ALA:N	2.42	0.53
12:L:77:ILE:HG22	12:L:78:ARG:NE	2.23	0.53
12:L:85:VAL:HG21	12:L:98:ALA:N	2.16	0.53
12:L:90:VAL:HG21	12:L:121:THR:H	1.74	0.53
15:O:54:VAL:HG21	15:O:78:VAL:HG11	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:73:ALA:HA	15:O:109:ALA:HB2	1.90	0.53
29:4:12:ARG:HB2	29:4:12:ARG:CZ	2.38	0.53
29:4:13:PHE:O	29:4:14:LYS:HG2	2.09	0.53
31:6:79:LEU:HD11	31:6:131:THR:OG1	2.08	0.53
31:6:83:ALA:N	31:6:100:ILE:HD11	2.24	0.53
32:a:376:G:P	46:p:6:LEU:H	2.32	0.53
32:a:824:G:O2'	32:a:825:A:H5'	2.08	0.53
32:a:1074:G:H5'	51:7:104:LYS:NZ	2.23	0.53
32:a:1320:C:H4'	49:s:72:GLU:OE1	2.07	0.53
32:a:1347:G:N1	39:i:108:ARG:CZ	2.71	0.53
32:a:1507:A:H2'	32:a:1508:A:C8	2.44	0.53
32:a:1508:A:H2'	32:a:1509:C:H6	1.73	0.53
33:c:21:TRP:HB3	40:j:68:ARG:H	1.72	0.53
33:c:59:PRO:N	40:j:67:ILE:H	1.92	0.53
33:c:87:ARG:HH22	40:j:62:ARG:CZ	1.88	0.53
36:f:47:LEU:HD13	36:f:51:ILE:HG22	1.91	0.53
37:g:16:LYS:HG3	37:g:43:TYR:OH	2.08	0.53
39:i:24:ASN:O	39:i:61:ASP:HA	2.09	0.53
42:l:56:LEU:HB3	42:l:58:ASN:ND2	2.23	0.53
46:p:57:ILE:O	46:p:61:VAL:HG22	2.09	0.53
48:r:44:THR:HG22	48:r:46:THR:HB	1.90	0.53
50:t:53:MET:O	50:t:57:VAL:HG23	2.08	0.53
51:7:67:LEU:HD12	51:7:153:MET:CE	2.39	0.53
2:B:200:U:C5'	25:Z:20:ASN:HB3	2.28	0.53
2:B:566:U:O2'	2:B:567:U:H5'	2.08	0.53
2:B:588:U:OP1	12:L:28:GLY:HA2	2.07	0.53
2:B:699:A:H2'	2:B:700:G:O4'	2.08	0.53
2:B:1082:U:C2	2:B:1086:A:C6	2.97	0.53
2:B:1123:C:H2'	2:B:1124:G:H8	1.73	0.53
2:B:1959:G:H4'	32:a:1418:A:C4'	2.38	0.53
2:B:2893:A:H5"	2:B:2894:G:H5'	1.90	0.53
3:V:89:ILE:HD12	3:V:89:ILE:O	2.08	0.53
4:C:172:THR:HG22	4:C:173:LEU:H	1.73	0.53
7:F:78:ILE:HG23	7:F:82:TYR:HD1	1.74	0.53
7:F:175:PRO:C	43:m:102:LYS:HB2	2.32	0.53
16:P:83:ILE:HG22	16:P:85:VAL:H	1.73	0.53
16:P:92:ARG:NH2	16:P:110:LYS:HE2	2.24	0.53
18:R:47:VAL:HG13	18:R:49:ILE:N	2.20	0.53
20:T:84:TYR:O	20:T:85:VAL:HG22	2.09	0.53
22:W:28:GLU:C	22:W:30:VAL:H	2.16	0.53
27:2:44:GLN:OE1	27:2:46:VAL:HB	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:403:C:O2'	32:a:404:G:H5'	2.09	0.53
32:a:437:U:C5'	34:d:151:GLN:HE22	2.10	0.53
32:a:638:U:H2'	32:a:639:G:O4'	2.08	0.53
32:a:664:G:N2	32:a:741:G:H1	2.02	0.53
32:a:1278:G:C5	44:n:93:PRO:HG2	2.44	0.53
32:a:1381:U:O2'	32:a:1382:C:H5'	2.08	0.53
33:c:65:VAL:HG22	40:j:64:GLN:O	0.71	0.53
38:h:43:GLY:O	38:h:63:LYS:HE3	2.09	0.53
51:7:23:ASN:HD22	51:7:23:ASN:C	2.16	0.53
53:v:23:A:H2'	53:v:24:G:C8	2.44	0.53
2:B:1083:U:H2'	2:B:1085:A:OP2	2.08	0.53
2:B:1545:A:H2'	2:B:1546:G:O4'	2.08	0.53
2:B:2027:G:O2'	2:B:2028:U:H5'	2.08	0.53
2:B:2365:G:H4'	22:W:65:LYS:HD3	1.91	0.53
2:B:2526:G:H2'	2:B:2527:C:C6	2.44	0.53
4:C:212:TRP:CZ3	4:C:217:PRO:HD3	2.43	0.53
5:D:175:LEU:HD22	5:D:189:VAL:HG12	1.91	0.53
15:O:87:ILE:HG13	15:O:88:LYS:H	1.73	0.53
17:Q:39:ILE:HG23	18:R:80:ARG:HD3	1.91	0.53
19:S:7:HIS:CD2	19:S:8:ARG:H	2.27	0.53
32:a:186:C:H4'	50:t:76:ALA:N	2.24	0.53
32:a:214:C:H2'	32:a:215:C:C6	2.44	0.53
32:a:252:U:H2'	32:a:253:A:H8	1.74	0.53
32:a:1014:A:C1'	49:s:15:LEU:HD13	1.77	0.53
32:a:1255:G:C2'	44:n:83:VAL:HG22	2.39	0.53
32:a:1258:G:H21	44:n:83:VAL:HG12	1.74	0.53
33:c:17:TRP:CZ2	40:j:16:ARG:NH1	2.74	0.53
33:c:86:LEU:HD11	40:j:61:ALA:HB1	1.90	0.53
33:c:98:ALA:HB3	40:j:64:GLN:CG	2.39	0.53
36:f:46:GLN:HA	36:f:56:LYS:HG3	1.89	0.53
38:h:49:LYS:HG3	38:h:50:VAL:N	2.21	0.53
45:o:15:GLY:HA3	45:o:20:ASP:OD1	2.09	0.53
2:B:55:G:H2'	2:B:56:A:H8	1.73	0.53
2:B:1395:A:H4'	2:B:1397:U:C5	2.44	0.53
2:B:1441:G:H2'	2:B:1442:U:H6	1.73	0.53
2:B:1442:U:H2'	2:B:1443:U:H6	1.71	0.53
2:B:1515:A:H4'	2:B:1556:C:O2'	2.08	0.53
2:B:1579:A:H2'	2:B:1580:A:C8	2.43	0.53
2:B:2539:C:O2'	2:B:2540:C:H5'	2.09	0.53
2:B:2669:G:H2'	2:B:2670:A:C8	2.43	0.53
2:B:2740:A:H2'	2:B:2741:A:C8	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:44:ARG:HG2	6:E:45:ALA:H	1.73	0.53
6:E:141:MET:SD	6:E:143:LEU:HD22	2.48	0.53
7:F:111:ARG:C	43:m:95:PRO:HB3	2.33	0.53
24:Y:3:THR:O	24:Y:6:ILE:HG23	2.08	0.53
32:a:36:C:H2'	32:a:37:U:O4'	2.09	0.53
32:a:202:G:H2'	32:a:203:G:H8	1.73	0.53
32:a:945:G:H21	43:m:43:LYS:CB	2.04	0.53
32:a:947:G:C2'	43:m:38:ILE:HB	2.37	0.53
32:a:980:C:H1'	44:n:57:SER:C	2.32	0.53
32:a:1232:U:O5'	39:i:125:GLN:OE1	2.27	0.53
32:a:1236:A:OP1	43:m:56:ARG:NH2	2.42	0.53
32:a:1279:G:C4	44:n:87:ALA:C	2.87	0.53
32:a:1306:A:H2	43:m:29:SER:HG	1.44	0.53
33:c:38:VAL:HG23	33:c:39:ARG:N	2.23	0.53
33:c:55:VAL:HG12	33:c:56:ILE:N	2.23	0.53
33:c:59:PRO:HD3	40:j:67:ILE:N	2.15	0.53
33:c:156:LEU:HD11	33:c:163:ARG:O	2.08	0.53
35:e:84:VAL:HG22	35:e:85:LYS:H	1.73	0.53
39:i:43:ALA:C	39:i:45:MET:H	2.16	0.53
39:i:90:ASP:O	39:i:93:LEU:HG	2.09	0.53
45:o:2:LEU:HD23	45:o:3:SER:N	2.24	0.53
47:q:45:VAL:HG11	47:q:74:LEU:HB2	1.89	0.53
50:t:60:GLN:CD	50:t:60:GLN:N	2.67	0.53
2:B:520:G:H2'	2:B:521:U:C6	2.44	0.53
2:B:586:A:H5"	6:E:85:PHE:HE1	1.71	0.53
2:B:943:A:OP1	12:L:42:SER:HB3	2.09	0.53
2:B:1028:A:N6	2:B:1125:G:H2'	2.24	0.53
2:B:1488:C:O2'	2:B:1489:C:H5'	2.09	0.53
2:B:1573:G:H2'	2:B:1574:C:H5'	1.91	0.53
2:B:2074:U:H2'	2:B:2075:U:C6	2.44	0.53
2:B:2147:A:H5'	2:B:2148:G:C5'	2.39	0.53
2:B:2576:G:N2	5:D:149:ASN:ND2	2.54	0.53
2:B:2743:U:H2'	2:B:2744:G:O4'	2.09	0.53
2:B:2820:A:O5'	14:N:4:ARG:HA	2.08	0.53
3:V:63:ILE:HD11	3:V:72:VAL:HG21	1.91	0.53
5:D:26:VAL:HG23	5:D:187:LEU:HB3	1.90	0.53
5:D:48:ILE:HD12	5:D:80:TRP:HE1	1.72	0.53
6:E:44:ARG:HD3	6:E:44:ARG:N	2.24	0.53
6:E:88:ARG:NH1	6:E:88:ARG:HB2	2.24	0.53
8:G:42:VAL:HG12	8:G:51:PHE:CD1	2.44	0.53
10:J:46:PRO:C	10:J:48:VAL:H	2.15	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:18:ARG:HB3	13:M:40:ARG:HH22	1.73	0.53
14:N:35:LYS:HA	14:N:111:ALA:O	2.08	0.53
15:O:1:MET:HE2	15:O:3:LYS:HB2	1.89	0.53
16:P:54:LEU:O	16:P:56:SER:N	2.41	0.53
19:S:8:ARG:NH1	19:S:80:PRO:HD2	2.24	0.53
19:S:29:VAL:C	19:S:31:GLN:H	2.15	0.53
20:T:88:LYS:CG	20:T:89:GLU:H	2.20	0.53
27:2:51:ALA:C	27:2:52:LYS:HD2	2.34	0.53
31:6:102:ARG:HD3	31:6:141:ASP:OD1	2.08	0.53
32:a:1013:G:N2	44:n:31:SER:C	2.60	0.53
32:a:1042:A:H2'	32:a:1043:G:O4'	2.08	0.53
32:a:1125:U:N3	40:j:36:VAL:CG2	2.70	0.53
32:a:1170:A:H2'	32:a:1171:A:O4'	2.09	0.53
32:a:1222:G:C8	49:s:3:SER:C	2.87	0.53
32:a:1280:A:H62	40:j:25:ILE:HG23	1.73	0.53
33:c:111:ASP:O	33:c:115:VAL:HG23	2.08	0.53
34:d:17:ASP:OD2	34:d:27:ILE:HG12	2.08	0.53
35:e:81:GLN:HE21	35:e:147:ASN:C	2.17	0.53
38:h:5:PRO:O	38:h:32:LYS:HE3	2.09	0.53
48:r:62:ARG:HD3	48:r:69:TYR:HA	1.90	0.53
49:s:18:VAL:CG2	49:s:43:MET:HG2	2.32	0.53
2:B:236:C:O2'	2:B:237:C:H5'	2.09	0.53
2:B:857:G:O2'	2:B:858:G:H5'	2.09	0.53
2:B:1112:G:H4'	8:G:2:ARG:HE	1.73	0.53
2:B:1509:A:H5'	2:B:1510:G:H5'	1.89	0.53
2:B:1528:A:H2'	2:B:1529:G:O4'	2.09	0.53
2:B:1739:A:H2'	2:B:1740:G:C8	2.44	0.53
2:B:1821:A:H2'	2:B:1822:C:C6	2.43	0.53
2:B:1842:G:H2'	2:B:1843:C:H6	1.74	0.53
2:B:2336:A:HO2'	2:B:2337:G:P	2.32	0.53
4:C:68:ARG:HD2	4:C:127:ASN:ND2	2.23	0.53
5:D:154:LYS:HZ3	5:D:157:LYS:N	2.06	0.53
5:D:170:VAL:HG11	5:D:194:PRO:CG	2.39	0.53
7:F:66:ILE:HG22	7:F:83:PRO:HB2	1.91	0.53
7:F:117:SER:HB3	43:m:100:ARG:NH2	2.23	0.53
7:F:131:VAL:HG11	43:m:104:ASN:HA	1.90	0.53
8:G:126:THR:HG23	8:G:128:THR:HG23	1.91	0.53
9:H:89:LYS:HZ1	9:H:90:LEU:HB2	1.74	0.53
18:R:78:ARG:HG2	18:R:88:GLY:H	1.74	0.53
21:U:100:GLU:O	21:U:102:ILE:HG13	2.08	0.53
29:4:23:HIS:CD2	29:4:23:HIS:H	2.27	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:4:26:ALA:HB3	29:4:29:ARG:CZ	2.39	0.53
32:a:185:U:O2'	50:t:72:ALA:HA	2.08	0.53
32:a:399:G:H2'	32:a:400:C:C6	2.43	0.53
32:a:746:A:H2'	32:a:747:A:C8	2.44	0.53
32:a:1127:G:N2	40:j:83:THR:C	2.66	0.53
32:a:1306:A:H2	43:m:29:SER:OG	1.76	0.53
32:a:1307:U:C6	43:m:32:ILE:HG22	2.43	0.53
32:a:1367:C:OP1	39:i:116:GLY:N	2.38	0.53
34:d:25:ARG:HD3	34:d:26:ALA:H	1.73	0.53
35:e:71:ILE:HG12	35:e:72:ASN:N	2.24	0.53
37:g:91:ARG:HB3	37:g:92:PRO:HD2	1.91	0.53
39:i:44:ARG:N	39:i:44:ARG:HH11	2.06	0.53
41:k:70:ALA:HB1	41:k:74:LYS:HE3	1.89	0.53
46:p:12:LYS:C	46:p:14:ARG:H	2.17	0.53
51:7:185:ILE:HG22	51:7:199:ILE:HB	1.91	0.53
2:B:615:U:C2	6:E:38:GLY:HA3	2.44	0.53
2:B:709:U:H2'	2:B:710:U:C6	2.44	0.53
2:B:854:C:O2'	2:B:855:G:H5'	2.09	0.53
2:B:1113:U:H5"	8:G:1:SER:CA	2.39	0.53
2:B:1688:U:O2	2:B:1700:A:H5'	2.09	0.53
2:B:2333:A:O2'	15:O:7:ARG:HD3	2.09	0.53
2:B:2620:C:O4'	5:D:161:MET:HG3	2.09	0.53
4:C:44:ASN:HA	4:C:49:THR:O	2.09	0.53
4:C:53:ILE:HD13	4:C:218:THR:CG2	2.39	0.53
4:C:141:HIS:CG	4:C:190:THR:HB	2.44	0.53
4:C:160:TYR:CD2	4:C:193:GLU:HG2	2.44	0.53
12:L:39:LYS:HB3	12:L:46:VAL:HG13	1.91	0.53
17:Q:111:LYS:HB2	18:R:52:PRO:HB3	1.91	0.53
20:T:34:VAL:CG1	20:T:43:ILE:HD11	2.39	0.53
20:T:66:LYS:N	20:T:77:ARG:HA	2.24	0.53
22:W:42:THR:HG21	22:W:66:VAL:HG12	1.90	0.53
23:X:27:ASN:O	23:X:30:MET:HG2	2.08	0.53
25:Z:13:THR:HG23	25:Z:25:ARG:HB3	1.91	0.53
25:Z:66:ILE:C	25:Z:68:GLY:N	2.64	0.53
32:a:264:C:O2'	47:q:65:PRO:O	2.27	0.53
32:a:411:A:O2'	32:a:412:A:H4'	2.09	0.53
32:a:860:A:H2'	32:a:861:G:O4'	2.09	0.53
32:a:956:U:O2'	32:a:957:U:H5'	2.09	0.53
32:a:994:A:N9	44:n:50:LEU:CD1	2.71	0.53
32:a:1132:C:H2'	32:a:1133:G:O4'	2.09	0.53
32:a:1235:U:C4	43:m:48:SER:HB2	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1280:A:H4'	40:j:39:PRO:HG3	1.88	0.53
32:a:1304:G:N7	43:m:2:ARG:C	2.63	0.53
32:a:1439:G:H2'	32:a:1440:U:O4'	2.08	0.53
33:c:39:ARG:HG3	33:c:54:ILE:HD13	1.91	0.53
36:f:55:HIS:O	36:f:56:LYS:HG3	2.08	0.53
37:g:45:ALA:HA	37:g:48:THR:OG1	2.08	0.53
39:i:38:PHE:O	39:i:41:GLU:HB2	2.09	0.53
47:q:4:ILE:HD12	47:q:5:ARG:H	1.73	0.53
49:s:20:LYS:HZ2	49:s:20:LYS:HB3	1.73	0.53
49:s:50:VAL:H	49:s:57:VAL:H	1.57	0.53
2:B:100:U:OP1	2:B:100:U:H2'	2.09	0.52
2:B:254:G:O6	29:4:3:ILE:HG22	2.10	0.52
2:B:496:G:H2'	2:B:497:A:O4'	2.09	0.52
2:B:740:C:H5"	2:B:1784:A:OP1	2.09	0.52
2:B:747:U:H4'	19:S:89:ALA:HB2	1.91	0.52
2:B:1346:G:O2'	2:B:1347:A:H5'	2.08	0.52
2:B:1429:G:O2'	2:B:1430:G:H5'	2.09	0.52
2:B:1439:A:C5	2:B:1552:A:N6	2.77	0.52
2:B:1444:G:H2'	2:B:1445:G:H8	1.74	0.52
2:B:1799:G:C5	4:C:175:LEU:HD13	2.44	0.52
3:V:76:ASP:OD1	13:M:135:VAL:HA	2.09	0.52
4:C:171:VAL:HB	4:C:182:LYS:CB	2.39	0.52
5:D:150:GLN:C	5:D:151:THR:HG22	2.35	0.52
6:E:6:LYS:HB2	6:E:12:LEU:HD11	1.91	0.52
6:E:9:GLN:CD	6:E:120:VAL:HG13	2.33	0.52
6:E:128:ALA:CB	6:E:129:PRO:CD	2.78	0.52
6:E:130:LYS:HE2	6:E:130:LYS:HA	1.91	0.52
7:F:136:ILE:HA	43:m:110:GLY:O	2.09	0.52
8:G:27:GLY:HA3	8:G:78:VAL:HB	1.90	0.52
13:M:105:MET:HE2	13:M:105:MET:O	2.09	0.52
16:P:25:VAL:HG11	16:P:86:LYS:O	2.09	0.52
18:R:39:LEU:HD11	18:R:57:GLY:O	2.08	0.52
20:T:88:LYS:HG2	20:T:89:GLU:N	2.23	0.52
22:W:44:PHE:CD1	22:W:44:PHE:C	2.88	0.52
23:X:8:GLU:O	23:X:10:SER:N	2.42	0.52
26:1:46:GLY:O	26:1:52:LYS:HB3	2.09	0.52
27:2:34:GLU:O	27:2:35:LEU:HB3	2.09	0.52
32:a:128:G:H2'	32:a:129:A:C8	2.44	0.52
32:a:317:U:H2'	32:a:318:G:H8	1.74	0.52
32:a:320:A:H2'	32:a:321:A:C8	2.44	0.52
32:a:423:G:H2'	32:a:424:G:O4'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:946:A:C5	43:m:47:LEU:N	2.77	0.52
32:a:997:U:O2'	32:a:998:C:H5'	2.09	0.52
32:a:1112:C:H1'	33:c:178:ARG:N	2.24	0.52
32:a:1151:A:H4'	40:j:21:ALA:HA	1.23	0.52
32:a:1280:A:C4	40:j:30:LYS:HB3	2.44	0.52
32:a:1305:G:O2'	43:m:55:LEU:CD1	2.56	0.52
34:d:54:LEU:O	34:d:54:LEU:HD22	2.09	0.52
37:g:143:MET:O	37:g:147:ASN:HB2	2.10	0.52
39:i:30:ASN:ND2	39:i:30:ASN:N	2.56	0.52
41:k:69:CYS:C	41:k:71:ASP:N	2.66	0.52
41:k:124:LYS:HA	52:u:34:ARG:CB	2.21	0.52
42:l:35:ARG:CZ	42:l:75:GLU:HB3	2.39	0.52
47:q:18:LYS:HA	47:q:47:ASP:O	2.08	0.52
51:7:96:LEU:H	51:7:99:MET:HE3	1.73	0.52
51:7:185:ILE:HA	51:7:199:ILE:HB	1.90	0.52
2:B:718:A:H3'	2:B:719:C:C6	2.44	0.52
2:B:975:A:H1'	2:B:990:A:C2	2.45	0.52
2:B:991:C:H2'	2:B:992:C:H6	1.74	0.52
2:B:1192:G:C2'	2:B:1193:G:H5'	2.39	0.52
2:B:1316:U:O2'	2:B:1317:G:H5'	2.08	0.52
2:B:1405:U:H2'	2:B:1406:U:H6	1.75	0.52
2:B:1474:U:H2'	2:B:1475:G:H5'	1.90	0.52
2:B:2195:U:H2'	2:B:2196:C:C6	2.44	0.52
2:B:2344:U:H4'	2:B:2345:G:OP1	2.09	0.52
2:B:2393:U:H5'	12:L:62:PRO:CD	2.39	0.52
2:B:2862:G:H2'	2:B:2863:C:C6	2.44	0.52
4:C:10:PRO:HG2	4:C:23:LEU:HD11	1.89	0.52
4:C:128:THR:HG22	4:C:188:ARG:HB2	1.89	0.52
6:E:3:LEU:HB2	6:E:12:LEU:HD13	1.91	0.52
10:J:99:ARG:O	10:J:100:VAL:HB	2.08	0.52
10:J:109:LEU:O	10:J:111:LYS:HG3	2.09	0.52
16:P:52:ARG:CG	16:P:54:LEU:HB2	2.40	0.52
16:P:69:VAL:HG12	16:P:70:GLU:N	2.24	0.52
18:R:85:LYS:C	18:R:87:GLN:N	2.66	0.52
20:T:30:ILE:CG2	20:T:31:VAL:N	2.71	0.52
21:U:35:VAL:C	21:U:36:GLU:HG2	2.34	0.52
22:W:42:THR:CB	22:W:66:VAL:H	2.22	0.52
27:2:33:LEU:O	27:2:34:GLU:HG2	2.10	0.52
29:4:4:LYS:NZ	29:4:59:ALA:H	2.07	0.52
31:6:116:MET:CE	31:6:127:SER:HB2	2.40	0.52
32:a:71:A:N6	32:a:99:C:H1'	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:815:A:H4'	32:a:817:C:C4	2.44	0.52
32:a:920:U:H2'	32:a:921:U:H6	1.74	0.52
32:a:980:C:OP1	49:s:6:LYS:HA	2.08	0.52
32:a:1013:G:H4'	49:s:16:LYS:CD	2.38	0.52
32:a:1145:A:H61	40:j:76:ILE:HD12	1.73	0.52
32:a:1488:G:O2'	32:a:1489:G:H5'	2.08	0.52
33:c:23:ALA:CB	40:j:68:ARG:NH1	2.60	0.52
33:c:74:ILE:CA	40:j:55:PRO:HD2	2.20	0.52
35:e:40:ASP:C	35:e:42:ASN:H	2.17	0.52
39:i:24:ASN:CA	39:i:26:LYS:HZ3	2.22	0.52
40:j:7:ARG:HA	40:j:75:ASP:HB2	1.90	0.52
49:s:62:THR:HB	49:s:64:GLU:OE1	2.09	0.52
2:B:554:U:H2'	2:B:555:G:O4'	2.09	0.52
2:B:672:C:O2'	2:B:673:C:H5'	2.09	0.52
2:B:809:G:O6	12:L:39:LYS:HE3	2.09	0.52
2:B:1220:G:H2'	2:B:1221:C:C6	2.45	0.52
2:B:1259:G:H2'	2:B:1260:A:C8	2.45	0.52
2:B:1454:C:H5'	14:N:63:ARG:NH2	2.19	0.52
2:B:1789:A:OP1	4:C:219:VAL:HG12	2.09	0.52
2:B:2181:U:H2'	2:B:2182:U:O4'	2.10	0.52
2:B:2682:A:N3	5:D:22:ILE:HD11	2.24	0.52
2:B:2800:A:H2'	2:B:2801:G:C1'	2.39	0.52
3:V:9:ARG:HH12	3:V:27:PRO:HA	1.74	0.52
4:C:10:PRO:HD2	4:C:23:LEU:HD11	1.91	0.52
4:C:12:ARG:HB2	4:C:18:VAL:HG12	1.91	0.52
4:C:139:THR:CG2	4:C:193:GLU:HB3	2.40	0.52
5:D:15:PHE:CD2	5:D:18:ASP:HB2	2.40	0.52
7:F:73:VAL:HG11	53:v:56:C:H3'	1.86	0.52
9:H:1:MET:C	9:H:21:VAL:HG12	2.34	0.52
9:H:57:LYS:HE3	9:H:61:VAL:HG23	1.92	0.52
11:K:84:CYS:O	11:K:85:VAL:HB	2.10	0.52
12:L:63:LYS:N	29:4:24:LYS:NZ	2.56	0.52
14:N:96:ARG:O	14:N:113:ILE:HA	2.08	0.52
19:S:42:LYS:O	19:S:46:LEU:HG	2.09	0.52
25:Z:40:CYS:O	25:Z:41:HIS:HB3	2.08	0.52
32:a:376:G:O3'	46:p:5:ARG:HG2	2.10	0.52
32:a:408:A:H3'	32:a:409:U:H6	1.74	0.52
32:a:499:A:H4'	32:a:500:G:OP1	2.09	0.52
32:a:960:U:O2'	32:a:1223:C:H4'	2.08	0.52
32:a:1129:C:C2	40:j:80:THR:OG1	2.58	0.52
32:a:1151:A:C1'	40:j:24:GLU:CB	2.87	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1333:A:P	43:m:12:LYS:CB	2.97	0.52
32:a:1347:G:H2'	39:i:109:GLN:C	2.25	0.52
33:c:21:TRP:CB	40:j:68:ARG:CD	2.58	0.52
34:d:138:PRO:HA	34:d:181:PHE:CD2	2.43	0.52
34:d:197:HIS:HA	34:d:200:VAL:HG22	1.91	0.52
37:g:16:LYS:C	37:g:16:LYS:HD3	2.33	0.52
40:j:39:PRO:CA	40:j:74:VAL:HG22	2.38	0.52
42:l:90:PRO:C	42:l:92:VAL:H	2.17	0.52
45:o:6:ALA:O	45:o:9:LYS:HB3	2.10	0.52
47:q:4:ILE:HD12	47:q:4:ILE:H	1.74	0.52
51:7:66:ILE:C	51:7:67:LEU:HD13	2.34	0.52
51:7:67:LEU:HD22	51:7:67:LEU:N	2.21	0.52
2:B:43:G:H2'	2:B:44:A:O4'	2.10	0.52
2:B:62:U:H3'	2:B:63:A:C8	2.44	0.52
2:B:433:C:H2'	2:B:434:U:C6	2.45	0.52
2:B:1080:A:O2'	2:B:1081:U:H5'	2.10	0.52
2:B:1785:A:H2'	2:B:1787:A:N7	2.24	0.52
2:B:2298:A:H2'	2:B:2299:U:O4'	2.09	0.52
2:B:2785:C:H2'	2:B:2786:U:H6	1.73	0.52
6:E:133:LEU:HD12	6:E:136:GLN:CG	2.38	0.52
6:E:149:ILE:CG1	6:E:186:VAL:HG13	2.39	0.52
7:F:63:LYS:HE2	7:F:64:PRO:CD	2.38	0.52
7:F:108:PRO:CA	43:m:101:THR:O	2.58	0.52
8:G:137:LYS:O	8:G:140:ILE:HG13	2.09	0.52
8:G:139:VAL:O	8:G:143:VAL:HG23	2.08	0.52
10:J:58:ASN:C	10:J:60:ASP:H	2.18	0.52
12:L:80:SER:O	12:L:116:VAL:HA	2.10	0.52
15:O:46:GLU:C	15:O:48:LEU:H	2.18	0.52
18:R:53:PHE:CB	18:R:55:ASP:HB2	2.39	0.52
31:6:27:LEU:HB2	31:6:32:VAL:HG21	1.91	0.52
32:a:598:U:OP1	47:q:36:PHE:HZ	1.93	0.52
32:a:846:G:H2'	32:a:846:G:N3	2.23	0.52
32:a:889:A:H61	32:a:907:A:H3'	1.74	0.52
32:a:1128:C:OP2	40:j:34:ALA:O	2.27	0.52
32:a:1149:C:C3'	40:j:31:ARG:NH2	2.71	0.52
32:a:1219:A:O5'	49:s:8:PRO:HD2	2.09	0.52
32:a:1238:A:N7	43:m:8:ILE:HG21	2.24	0.52
32:a:1289:A:H2'	32:a:1290:G:H5'	1.91	0.52
34:d:58:GLN:OE1	34:d:62:ARG:HG3	2.09	0.52
37:g:142:ARG:C	37:g:146:ALA:HB3	2.34	0.52
39:i:56:MET:SD	39:i:57:VAL:N	2.82	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:k:36:ARG:HG2	41:k:37:GLN:H	1.74	0.52
43:m:106:ARG:HD3	43:m:110:GLY:O	2.10	0.52
47:q:35:LYS:O	47:q:37:ILE:HG13	2.10	0.52
49:s:29:PRO:CA	49:s:47:THR:HB	2.40	0.52
52:u:36:PHE:HB3	52:u:40:PRO:HG3	1.90	0.52
1:A:17:C:O2'	1:A:18:G:H5'	2.09	0.52
2:B:203:A:H2'	2:B:204:A:C8	2.44	0.52
2:B:1274:A:N3	2:B:1297:C:H1'	2.25	0.52
2:B:1564:C:O2'	2:B:1565:C:H5'	2.10	0.52
2:B:2305:U:H2'	2:B:2306:C:C6	2.45	0.52
2:B:2728:U:H2'	2:B:2729:G:H8	1.74	0.52
4:C:222:THR:C	4:C:224:MET:N	2.67	0.52
5:D:13:ARG:HA	5:D:13:ARG:HH11	1.75	0.52
5:D:138:LEU:O	5:D:139:SER:C	2.53	0.52
6:E:43:THR:O	6:E:43:THR:HG22	2.08	0.52
9:H:100:ALA:O	9:H:103:VAL:HG22	2.10	0.52
10:J:72:LYS:HB2	10:J:90:GLU:HB2	1.91	0.52
12:L:93:ASN:O	12:L:94:THR:HB	2.09	0.52
16:P:57:ALA:C	16:P:59:THR:H	2.18	0.52
17:Q:23:TYR:O	17:Q:24:TYR:HB2	2.09	0.52
17:Q:68:ALA:HB2	17:Q:105:PHE:HZ	1.75	0.52
21:U:2:ALA:C	21:U:3:LYS:HD3	2.34	0.52
22:W:57:THR:O	22:W:58:LEU:HB3	2.09	0.52
32:a:472:U:H2'	32:a:473:U:C6	2.44	0.52
32:a:712:A:O2'	32:a:713:G:H5'	2.10	0.52
32:a:1366:C:H2'	32:a:1367:C:C6	2.45	0.52
32:a:1370:G:H3'	39:i:110:VAL:HG21	1.90	0.52
32:a:1452:C:H4'	32:a:1453:G:C5'	2.39	0.52
32:a:1521:C:O2'	32:a:1522:U:H5'	2.10	0.52
33:c:186:SER:HB3	33:c:197:VAL:CG1	2.39	0.52
34:d:117:VAL:HG12	34:d:130:ASN:C	2.35	0.52
34:d:186:GLU:O	34:d:190:LEU:HD13	2.09	0.52
36:f:37:HIS:HE1	36:f:65:GLU:HB2	1.73	0.52
37:g:11:ILE:HD12	37:g:11:ILE:H	1.75	0.52
41:k:28:ASN:ND2	41:k:29:THR:N	2.58	0.52
41:k:88:PRO:HA	41:k:92:ARG:NE	2.23	0.52
42:l:48:LEU:H	42:l:48:LEU:CD2	2.18	0.52
47:q:56:ASP:HB3	47:q:79:GLU:O	2.09	0.52
51:7:68:PHE:HA	51:7:161:PHE:O	2.10	0.52
52:u:37:TYR:C	52:u:40:PRO:HD2	2.33	0.52
1:A:42:C:H6	7:F:65:LEU:HD13	1.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:355:U:H2'	2:B:356:G:C8	2.44	0.52
2:B:494:G:O2'	2:B:495:G:H5'	2.09	0.52
2:B:1549:A:H2'	2:B:1550:C:C6	2.45	0.52
2:B:2104:C:H2'	2:B:2105:U:C5	2.44	0.52
2:B:2210:U:N3	2:B:2212:A:N7	2.58	0.52
2:B:2618:G:O2'	5:D:154:LYS:O	2.26	0.52
4:C:68:ARG:HD3	4:C:103:ILE:HD12	1.91	0.52
5:D:62:LYS:N	5:D:63:PRO:HD2	2.25	0.52
6:E:104:ALA:O	6:E:105:LEU:HD23	2.09	0.52
7:F:106:ALA:CB	43:m:106:ARG:NH2	2.66	0.52
8:G:126:THR:CG2	8:G:128:THR:HG23	2.39	0.52
10:J:18:VAL:O	10:J:57:LEU:HD23	2.10	0.52
10:J:25:LEU:HD12	10:J:62:VAL:HG12	1.91	0.52
13:M:96:ILE:HD13	13:M:97:GLN:HB2	1.91	0.52
14:N:21:PHE:CE1	14:N:43:GLU:HG2	2.44	0.52
15:O:2:ASP:HA	15:O:5:SER:O	2.10	0.52
32:a:195:A:H1'	32:a:222:C:O2'	2.09	0.52
32:a:610:U:O2	32:a:610:U:O4'	2.28	0.52
32:a:742:G:O2'	32:a:743:A:H5'	2.08	0.52
32:a:945:G:O6	43:m:46:GLU:C	2.31	0.52
32:a:1283:U:H2'	32:a:1284:C:C6	2.44	0.52
33:c:63:ILE:CG2	40:j:66:GLU:CB	2.87	0.52
34:d:18:LEU:HB2	34:d:20:LEU:HD11	1.92	0.52
39:i:113:LYS:HG2	39:i:114:LYS:H	1.73	0.52
44:n:42:ASN:O	44:n:46:LYS:HG3	2.06	0.52
2:B:582:A:H2'	2:B:583:G:H8	1.75	0.52
2:B:600:G:O4'	6:E:100:MET:HE3	2.10	0.52
2:B:811:U:O2	2:B:1250:G:H3'	2.10	0.52
2:B:852:U:H2'	2:B:853:C:C6	2.45	0.52
2:B:877:A:H2	2:B:900:A:N7	2.08	0.52
2:B:1736:U:H2'	2:B:1737:G:O4'	2.09	0.52
2:B:1771:C:H2'	2:B:1772:A:H8	1.73	0.52
4:C:63:ILE:HG21	4:C:90:ILE:HD13	1.92	0.52
4:C:136:VAL:HA	4:C:165:ALA:HA	1.92	0.52
5:D:154:LYS:NZ	5:D:157:LYS:N	2.57	0.52
5:D:175:LEU:HD13	5:D:189:VAL:HG11	1.92	0.52
9:H:83:LYS:HB2	9:H:92:GLY:H	1.74	0.52
10:J:34:ARG:HD3	10:J:39:LYS:HB2	1.92	0.52
11:K:104:THR:HB	11:K:106:GLU:OE1	2.10	0.52
18:R:47:VAL:C	18:R:49:ILE:N	2.67	0.52
19:S:86:MET:HB2	19:S:96:ILE:HD11	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:W:69:GLU:O	22:W:69:GLU:HG2	2.10	0.52
23:X:40:SER:O	23:X:42:LEU:HD12	2.09	0.52
32:a:437:U:H5"	34:d:151:GLN:HE22	1.55	0.52
32:a:474:G:H2'	32:a:475:C:C6	2.45	0.52
32:a:939:G:C4'	37:g:101:ARG:HH22	2.22	0.52
32:a:1122:U:N3	40:j:88:MET:HA	2.18	0.52
32:a:1127:G:OP2	40:j:35:GLN:CG	2.57	0.52
32:a:1146:A:C5'	40:j:85:ASP:OD2	2.31	0.52
32:a:1232:U:C5'	39:i:125:GLN:HG3	2.39	0.52
32:a:1331:G:H22	43:m:59:VAL:HG21	1.75	0.52
32:a:1334:G:H1'	43:m:44:ILE:H	0.88	0.52
32:a:1376:U:H2'	32:a:1377:A:H8	1.75	0.52
33:c:23:ALA:HB2	40:j:68:ARG:CZ	2.37	0.52
33:c:146:LYS:HG3	33:c:202:PHE:HD2	1.75	0.52
36:f:40:GLU:CG	36:f:42:TRP:HE1	2.22	0.52
40:j:55:PRO:O	40:j:56:HIS:HB3	2.10	0.52
44:n:9:GLU:O	44:n:13:VAL:HG23	2.09	0.52
51:7:53:LEU:HD12	51:7:219:THR:HG21	1.92	0.52
2:B:529:A:OP2	10:J:113:PRO:HD3	2.08	0.52
2:B:587:C:H4'	2:B:588:U:C6	2.44	0.52
2:B:1107:G:H2'	2:B:1108:U:O4'	2.10	0.52
2:B:1444:G:H2'	2:B:1445:G:C8	2.44	0.52
2:B:1722:A:H61	2:B:1738:G:H1'	1.75	0.52
2:B:1817:G:OP1	4:C:62:ARG:NH2	2.43	0.52
2:B:2186:G:H2'	2:B:2187:U:O4'	2.09	0.52
2:B:2712:C:H3'	2:B:2714:G:H5"	1.92	0.52
4:C:131:MET:HE1	4:C:143:VAL:HG11	1.91	0.52
7:F:59:ILE:HD11	7:F:137:PHE:CG	2.45	0.52
7:F:131:VAL:CG1	43:m:104:ASN:CA	2.85	0.52
9:H:6:LEU:HD13	9:H:47:PHE:O	2.10	0.52
9:H:128:HIS:CB	9:H:144:VAL:HB	2.38	0.52
11:K:63:VAL:HB	11:K:83:ALA:HB3	1.91	0.52
12:L:81:ASP:HB3	12:L:86:GLU:OE2	2.10	0.52
15:O:64:TYR:CD1	15:O:74:VAL:HG21	2.45	0.52
16:P:90:ALA:HB3	16:P:112:ARG:HA	1.92	0.52
19:S:90:LYS:N	19:S:90:LYS:HE3	2.25	0.52
21:U:94:PHE:CD2	21:U:95:PHE:N	2.78	0.52
25:Z:30:HIS:HE1	25:Z:49:ARG:HB2	1.74	0.52
29:4:41:ARG:CZ	29:4:42:HIS:H	2.22	0.52
32:a:56:U:H2'	32:a:57:G:C8	2.45	0.52
32:a:208:U:H2'	32:a:210:C:C5	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1123:U:C6	40:j:87:LEU:HD12	1.85	0.52
32:a:1412:C:H2'	32:a:1413:A:H8	1.73	0.52
32:a:1423:G:H2'	32:a:1424:U:O4'	2.10	0.52
33:c:135:ARG:C	33:c:137:VAL:H	2.17	0.52
37:g:14:ASP:OD2	37:g:22:LEU:HD12	2.10	0.52
37:g:110:ARG:HH22	37:g:121:ASN:CB	2.23	0.52
39:i:93:LEU:HD13	39:i:97:LEU:HD23	1.92	0.52
41:k:83:VAL:HG21	41:k:109:ILE:HG12	1.92	0.52
47:q:24:ILE:HB	47:q:41:THR:HB	1.92	0.52
2:B:156:A:H2'	2:B:157:C:C6	2.45	0.52
2:B:1083:U:C2	2:B:1086:A:N1	2.78	0.52
2:B:1737:G:H5'	2:B:1738:G:OP2	2.10	0.52
2:B:2149:U:O2'	2:B:2150:C:H5'	2.10	0.52
2:B:2297:A:H61	2:B:2319:G:C3'	2.23	0.52
2:B:2586:U:H2'	2:B:2587:A:C8	2.44	0.52
2:B:2599:G:N7	4:C:234:GLY:HA2	2.25	0.52
2:B:2811:G:OP1	5:D:61:THR:HB	2.09	0.52
3:V:6:ALA:HB1	3:V:41:GLU:O	2.10	0.52
5:D:45:TYR:CZ	5:D:83:ARG:HG3	2.45	0.52
6:E:24:ASN:O	6:E:24:ASN:CG	2.52	0.52
7:F:77:LYS:HZ3	53:v:19:G:H1	0.56	0.52
12:L:14:LYS:HA	12:L:14:LYS:NZ	2.24	0.52
15:O:8:ILE:C	15:O:10:ARG:H	2.18	0.52
15:O:58:ILE:HG13	15:O:59:ALA:H	1.74	0.52
21:U:2:ALA:C	21:U:4:ILE:H	2.16	0.52
27:2:46:VAL:C	27:2:47:ILE:HG12	2.34	0.52
32:a:266:G:O2'	32:a:267:C:H3'	2.10	0.52
32:a:981:U:OP1	44:n:55:SER:OG	2.28	0.52
32:a:1129:C:H1'	40:j:80:THR:HG21	1.90	0.52
32:a:1148:U:C2'	40:j:31:ARG:NH1	2.65	0.52
32:a:1254:A:O2'	44:n:79:SER:O	2.28	0.52
32:a:1256:A:OP2	44:n:78:LEU:HD11	2.09	0.52
32:a:1257:A:C4'	44:n:74:ARG:CD	2.87	0.52
32:a:1330:U:C2'	43:m:23:GLY:N	2.71	0.52
32:a:1348:U:C4'	39:i:121:ARG:HH12	2.18	0.52
32:a:1372:U:C5'	39:i:72:SER:HB2	2.39	0.52
33:c:85:LYS:N	40:j:60:ASP:C	2.36	0.52
34:d:96:ARG:O	34:d:100:VAL:HG23	2.09	0.52
36:f:67:PRO:HG2	36:f:70:VAL:HG22	1.92	0.52
37:g:19:SER:OG	37:g:21:LEU:HG	2.10	0.52
39:i:32:ARG:NH2	39:i:36:GLN:HG2	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:i:49:GLN:HE21	39:i:79:ARG:HD2	1.75	0.52
41:k:80:ASN:HD21	41:k:107:THR:CG2	2.23	0.52
42:l:22:ALA:HB2	42:l:56:LEU:CD2	2.39	0.52
43:m:106:ARG:CZ	43:m:109:LYS:HD2	2.40	0.52
51:7:162:VAL:HG13	51:7:184:ALA:CB	2.39	0.52
2:B:167:A:H2'	2:B:168:G:O4'	2.10	0.52
2:B:354:A:H2'	2:B:355:U:O4'	2.09	0.52
2:B:611:C:H2'	2:B:612:G:O4'	2.10	0.52
2:B:950:G:H2'	2:B:951:C:H6	1.74	0.52
2:B:1360:G:H2'	2:B:1361:G:H5'	1.92	0.52
2:B:1681:G:N3	2:B:1762:A:H2'	2.25	0.52
2:B:1979:U:O2'	2:B:1980:G:H5'	2.09	0.52
2:B:2491:U:H5"	2:B:2570:G:C5'	2.40	0.52
2:B:2602:A:C8	53:v:74:C:C3'	2.92	0.52
4:C:66:PHE:O	4:C:68:ARG:HG2	2.10	0.52
5:D:8:LYS:HD2	16:P:5:LYS:NZ	2.24	0.52
5:D:74:GLU:OE1	5:D:74:GLU:HA	2.10	0.52
6:E:143:LEU:HD21	6:E:185:LYS:HD3	1.92	0.52
8:G:84:LYS:HZ2	8:G:85:LYS:N	2.08	0.52
10:J:7:LYS:HD3	10:J:48:VAL:CB	2.39	0.52
10:J:78:THR:C	10:J:80:HIS:H	2.18	0.52
10:J:125:TYR:CE2	10:J:134:ALA:HB2	2.45	0.52
15:O:76:LYS:HE3	15:O:80:GLU:HB2	1.91	0.52
19:S:28:LYS:HB3	19:S:71:VAL:HB	1.91	0.52
24:Y:18:LYS:HZ2	24:Y:53:MET:HE2	1.72	0.52
28:3:34:ARG:HE	28:3:42:LEU:CD1	2.23	0.52
32:a:120:A:H2'	32:a:121:U:H5"	1.91	0.52
32:a:1005:A:H3'	32:a:1006:G:H8	1.74	0.52
32:a:1098:C:C2'	32:a:1099:G:H5'	2.40	0.52
32:a:1124:G:N7	40:j:88:MET:HE1	2.21	0.52
32:a:1150:A:P	40:j:28:THR:HG23	2.49	0.52
32:a:1216:A:C4	44:n:47:LEU:HD12	2.37	0.52
32:a:1240:U:OP2	37:g:116:ALA:HB2	2.10	0.52
32:a:1247:U:O2'	32:a:1248:A:H5'	2.10	0.52
32:a:1281:C:O2	40:j:37:ARG:HG2	2.10	0.52
32:a:1301:U:H3'	43:m:7:ASN:HA	1.92	0.52
32:a:1304:G:N7	43:m:7:ASN:O	2.42	0.52
32:a:1372:U:P	39:i:12:LYS:HD2	2.46	0.52
32:a:1390:U:H2'	32:a:1391:U:C6	2.45	0.52
33:c:65:VAL:CB	40:j:64:GLN:N	2.74	0.52
37:g:30:MET:SD	37:g:35:LYS:HB2	2.50	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:k:81:LEU:HD22	41:k:104:PHE:HB3	1.92	0.52
42:l:20:VAL:O	42:l:20:VAL:HG12	2.08	0.52
47:q:60:ILE:HD13	47:q:60:ILE:N	2.25	0.52
47:q:80:LYS:O	47:q:80:LYS:HE3	2.09	0.52
48:r:25:ILE:HG13	48:r:67:LEU:HD11	1.91	0.52
52:u:14:ALA:H	52:u:16:ARG:NH2	2.07	0.52
52:u:43:GLU:HA	52:u:43:GLU:OE1	2.10	0.52
2:B:160:A:H2'	2:B:161:A:C8	2.45	0.51
2:B:1047:G:HO2'	2:B:1048:A:P	2.32	0.51
2:B:1599:U:H2'	2:B:1600:C:C6	2.45	0.51
2:B:2229:U:H2'	2:B:2230:G:H8	1.75	0.51
2:B:2511:U:H4'	5:D:128:ARG:CZ	2.39	0.51
2:B:2665:A:C2'	2:B:2666:C:H5'	2.40	0.51
2:B:2734:A:C2'	2:B:2735:G:H5'	2.39	0.51
2:B:2848:G:O2'	16:P:96:LEU:HD22	2.10	0.51
3:V:26:PHE:CE2	3:V:44:HIS:HA	2.44	0.51
5:D:83:ARG:HG2	5:D:83:ARG:HH11	1.75	0.51
5:D:124:ARG:NH2	5:D:163:GLY:HA3	2.25	0.51
6:E:17:THR:O	6:E:18:THR:HG22	2.10	0.51
6:E:141:MET:CG	6:E:143:LEU:HB2	2.40	0.51
6:E:144:GLU:C	6:E:146:VAL:H	2.18	0.51
8:G:104:LEU:HB3	8:G:106:LEU:HD13	1.92	0.51
16:P:77:SER:H	16:P:78:PRO:CD	2.23	0.51
18:R:49:ILE:O	18:R:51:VAL:HG23	2.09	0.51
19:S:6:LYS:HA	19:S:104:THR:HA	1.91	0.51
29:4:29:ARG:HA	29:4:33:THR:HG23	1.91	0.51
32:a:337:G:H2'	32:a:338:A:C8	2.45	0.51
32:a:1122:U:H2'	32:a:1123:U:C6	2.45	0.51
32:a:1329:A:C6	43:m:62:PHE:HB3	2.31	0.51
34:d:107:GLY:HA2	34:d:112:GLU:OE1	2.10	0.51
36:f:43:GLY:O	36:f:58:HIS:HA	2.09	0.51
37:g:45:ALA:HB2	37:g:116:ALA:O	2.10	0.51
37:g:72:VAL:HB	37:g:144:ALA:HB3	1.92	0.51
39:i:99:LYS:HD3	39:i:100:ALA:N	2.25	0.51
45:o:66:LEU:HB3	45:o:77:TYR:HE1	1.74	0.51
51:7:95:TRP:CZ3	51:7:171:ALA:HA	2.44	0.51
2:B:458:G:H5"	28:3:39:ARG:O	2.10	0.51
2:B:784:G:C5'	4:C:225:ASN:HD21	2.23	0.51
2:B:956:G:H1'	13:M:81:ARG:HH22	1.76	0.51
2:B:1132:U:H5"	10:J:85:LYS:NZ	2.25	0.51
2:B:1923:U:H2'	2:B:1924:C:C6	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2188:U:H2'	2:B:2189:U:C6	2.44	0.51
2:B:2305:U:H3	7:F:150:GLY:HA3	1.75	0.51
2:B:2333:A:HO2'	15:O:7:ARG:HD3	1.76	0.51
2:B:2425:A:H5'	2:B:2427:C:O4'	2.11	0.51
2:B:2834:G:H1'	2:B:2883:A:H61	1.74	0.51
2:B:2839:G:H2'	2:B:2840:C:H6	1.75	0.51
4:C:212:TRP:C	4:C:214:GLY:H	2.18	0.51
6:E:153:LEU:HD11	6:E:201:ALA:HA	1.93	0.51
9:H:15:LEU:CG	9:H:51:ARG:HD2	2.39	0.51
13:M:11:LYS:HG2	13:M:12:MET:N	2.20	0.51
13:M:34:LYS:HA	13:M:99:GLY:HA3	1.92	0.51
13:M:96:ILE:O	13:M:97:GLN:HG3	2.10	0.51
15:O:53:THR:O	15:O:54:VAL:C	2.52	0.51
19:S:29:VAL:C	19:S:31:GLN:N	2.67	0.51
26:1:16:ARG:HA	26:1:19:ASP:OD2	2.09	0.51
30:5:9:LYS:O	30:5:25:VAL:HG13	2.10	0.51
32:a:177:G:P	50:t:59:ARG:HE	2.33	0.51
32:a:186:C:C4'	50:t:75:LYS:HB2	2.41	0.51
32:a:391:G:H5"	46:p:8:ARG:HD3	1.92	0.51
32:a:936:C:H1'	32:a:1382:C:H42	1.74	0.51
32:a:947:G:H5'	43:m:14:ALA:N	2.24	0.51
32:a:1016:A:OP2	44:n:32:ASP:CA	2.55	0.51
32:a:1217:C:C5	44:n:49:THR:CB	2.94	0.51
32:a:1217:C:HO2'	44:n:48:GLN:CD	2.17	0.51
32:a:1219:A:H2'	32:a:1220:G:C8	2.21	0.51
32:a:1298:U:N1	37:g:118:ARG:NH2	2.56	0.51
32:a:1333:A:OP2	43:m:17:ALA:HB1	2.10	0.51
33:c:155:ARG:N	33:c:162:ALA:HA	2.21	0.51
34:d:122:ILE:O	34:d:128:VAL:HG23	2.10	0.51
35:e:110:MET:O	35:e:113:VAL:HG22	2.10	0.51
38:h:104:SER:O	38:h:122:GLY:HA3	2.10	0.51
41:k:63:GLN:HB3	41:k:94:SER:OG	2.10	0.51
42:l:103:CYS:SG	42:l:104:SER:N	2.83	0.51
42:l:121:PRO:C	42:l:123:ALA:H	2.17	0.51
51:7:55:GLU:HG3	51:7:197:PHE:CZ	2.45	0.51
2:B:460:A:H2'	2:B:461:C:O4'	2.10	0.51
2:B:523:C:O2'	2:B:524:G:H5'	2.11	0.51
2:B:1105:U:H2'	2:B:1106:G:C8	2.46	0.51
2:B:1317:G:H2'	2:B:1318:U:O4'	2.11	0.51
2:B:1487:U:H2'	2:B:1488:C:H6	1.76	0.51
2:B:1750:G:H2'	2:B:1751:U:C6	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1854:A:N6	2:B:1888:G:H1’	2.26	0.51
2:B:1948:G:N3	32:a:1418:A:H2	2.08	0.51
2:B:2483:C:H4’	13:M:51:ARG:HH12	1.76	0.51
2:B:2491:U:H5”	2:B:2570:G:H5”	1.92	0.51
2:B:2869:G:H2’	2:B:2870:C:C6	2.46	0.51
4:C:128:THR:CA	4:C:190:THR:HA	2.39	0.51
7:F:102:LEU:C	7:F:107:VAL:HG23	2.35	0.51
13:M:53:MET:O	13:M:54:THR:HG23	2.11	0.51
19:S:79:GLY:O	19:S:80:PRO:C	2.54	0.51
20:T:5:GLU:CG	20:T:6:ARG:H	2.23	0.51
20:T:6:ARG:C	20:T:8:LEU:N	2.68	0.51
22:W:59:PHE:HE2	22:W:81:ILE:HD13	1.76	0.51
28:3:44:VAL:HG23	28:3:45:SER:N	2.24	0.51
32:a:187:G:P	50:t:76:ALA:CB	2.98	0.51
32:a:600:A:H2’	32:a:601:G:H8	1.74	0.51
32:a:693:G:H2’	32:a:694:A:O4’	2.10	0.51
32:a:975:A:H5”	32:a:976:G:O5’	2.10	0.51
32:a:979:C:H2’	32:a:980:C:O4’	2.10	0.51
32:a:1040:U:H2’	32:a:1041:G:H8	1.74	0.51
32:a:1123:U:C5	40:j:88:MET:HG3	2.45	0.51
32:a:1280:A:C2	40:j:30:LYS:HB3	2.45	0.51
32:a:1306:A:N3	43:m:29:SER:OG	2.31	0.51
33:c:64:ARG:CA	40:j:49:PHE:H	2.23	0.51
33:c:67:ILE:CD1	40:j:63:ASP:CG	2.81	0.51
33:c:73:GLY:CA	40:j:55:PRO:O	2.58	0.51
33:c:76:ILE:C	33:c:82:ASP:HB2	2.36	0.51
33:c:141:MET:CE	33:c:147:GLY:H	2.23	0.51
33:c:186:SER:O	33:c:197:VAL:HG12	2.11	0.51
41:k:80:ASN:HD21	41:k:107:THR:HG23	1.76	0.51
42:l:95:HIS:HD1	42:l:96:THR:N	2.09	0.51
46:p:9:HIS:CE1	46:p:29:ASN:HB2	2.44	0.51
48:r:62:ARG:HD2	48:r:69:TYR:CD2	2.46	0.51
51:7:76:SER:OG	51:7:92:ASN:HB2	2.10	0.51
2:B:15:G:O2’	2:B:16:C:H5’	2.10	0.51
2:B:146:A:H2’	2:B:147:C:H6	1.72	0.51
2:B:575:A:O2’	2:B:576:U:H5’	2.10	0.51
2:B:667:U:H2’	2:B:668:A:O4’	2.10	0.51
2:B:1051:G:H2’	2:B:1052:C:C6	2.45	0.51
2:B:1187:G:H5”	18:R:84:ARG:CD	2.39	0.51
2:B:1312:U:OP2	20:T:66:LYS:HG2	2.10	0.51
2:B:1682:G:H2’	2:B:1683:U:C6	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2222:C:O2'	2:B:2223:G:H5'	2.09	0.51
2:B:2336:A:H61	22:W:69:GLU:HG3	1.74	0.51
2:B:2820:A:H4'	14:N:4:ARG:H	1.76	0.51
4:C:180:MET:HB2	4:C:265:PHE:CB	2.41	0.51
5:D:98:VAL:HA	5:D:101:PHE:CZ	2.46	0.51
6:E:104:ALA:C	6:E:105:LEU:HD23	2.35	0.51
6:E:158:PHE:C	6:E:160:ALA:H	2.17	0.51
7:F:175:PRO:CA	43:m:102:LYS:HB3	2.37	0.51
8:G:26:LYS:CA	8:G:31:GLU:HG2	2.34	0.51
8:G:84:LYS:HB3	8:G:132:LEU:HD12	1.93	0.51
9:H:3:VAL:CG2	9:H:21:VAL:HG21	2.39	0.51
10:J:36:LEU:HD11	10:J:122:LEU:HD23	1.92	0.51
12:L:120:VAL:O	12:L:120:VAL:HG13	2.10	0.51
15:O:43:ASN:HA	15:O:46:GLU:OE2	2.10	0.51
17:Q:91:ARG:HG2	18:R:10:LYS:CE	2.40	0.51
22:W:10:ARG:HH11	22:W:10:ARG:HB3	1.75	0.51
22:W:49:ASN:O	22:W:50:VAL:HB	2.11	0.51
31:6:77:VAL:HA	31:6:80:LYS:HE3	1.92	0.51
32:a:279:A:H4'	32:a:280:C:OP2	2.10	0.51
32:a:476:U:H2'	32:a:477:C:H6	1.73	0.51
32:a:1257:A:N9	44:n:74:ARG:NH1	2.58	0.51
32:a:1262:C:C1'	44:n:100:TRP:OXT	2.57	0.51
32:a:1279:G:C4	44:n:91:GLU:N	2.79	0.51
35:e:14:LEU:HA	35:e:36:THR:HG22	1.92	0.51
37:g:14:ASP:CG	37:g:15:PRO:HD2	2.35	0.51
38:h:76:ARG:HG3	38:h:76:ARG:HH11	1.74	0.51
39:i:110:VAL:HG12	39:i:111:GLU:N	2.20	0.51
51:7:95:TRP:HH2	51:7:100:LEU:HB2	1.75	0.51
52:u:5:VAL:HG12	52:u:6:ARG:N	2.25	0.51
2:B:527:C:H4'	2:B:527:C:OP1	2.10	0.51
2:B:794:A:H2'	2:B:795:C:H6	1.74	0.51
2:B:1374:G:H2'	2:B:1375:U:C6	2.45	0.51
2:B:1568:G:C5'	4:C:60:ALA:HB3	2.41	0.51
2:B:1571:A:H2'	2:B:1572:A:C8	2.46	0.51
3:V:41:GLU:C	3:V:42:LEU:HD23	2.35	0.51
5:D:5:VAL:HG21	5:D:28:GLU:HA	1.92	0.51
6:E:143:LEU:HD23	6:E:185:LYS:HB2	1.92	0.51
8:G:34:ARG:HG3	8:G:35:THR:N	2.25	0.51
10:J:20:ALA:HB2	10:J:56:VAL:HG13	1.93	0.51
12:L:117:THR:C	12:L:118:THR:HG22	2.36	0.51
13:M:42:THR:HA	13:M:92:TRP:HD1	1.73	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:22:ARG:NH1	14:N:69:ARG:HA	2.24	0.51
20:T:31:VAL:O	20:T:83:ALA:O	2.28	0.51
22:W:36:ILE:HG21	22:W:68:PHE:CD2	2.46	0.51
26:1:32:THR:OG1	26:1:42:ILE:HD12	2.10	0.51
31:6:85:ILE:HD12	31:6:87:SER:O	2.10	0.51
32:a:237:G:O2'	32:a:238:A:H5'	2.11	0.51
32:a:309:A:H2'	32:a:310:G:H8	1.76	0.51
32:a:663:A:O2'	32:a:664:G:H5'	2.11	0.51
32:a:909:A:H2'	32:a:910:C:O4'	2.11	0.51
32:a:935:A:H61	37:g:2:ARG:HG3	1.63	0.51
32:a:990:C:H1'	44:n:47:LEU:HD13	1.91	0.51
32:a:1121:U:H3	40:j:91:ASP:CG	2.18	0.51
32:a:1129:C:O2	40:j:80:THR:HG21	1.79	0.51
32:a:1372:U:H5"	39:i:72:SER:OG	2.10	0.51
32:a:1434:A:H2'	32:a:1435:G:C8	2.46	0.51
33:c:67:ILE:HD11	40:j:53:ILE:CD1	2.40	0.51
33:c:74:ILE:C	40:j:54:SER:CB	2.82	0.51
35:e:37:VAL:HG11	35:e:113:VAL:HG12	1.92	0.51
35:e:156:ARG:HB3	38:h:43:GLY:O	2.11	0.51
42:l:31:GLY:HA3	42:l:54:VAL:CG1	2.41	0.51
42:l:106:VAL:CG2	42:l:116:TYR:HB3	2.40	0.51
51:7:96:LEU:HB2	51:7:99:MET:HE3	1.91	0.51
2:B:6:A:H2'	2:B:7:G:H8	1.74	0.51
2:B:95:A:H1'	23:X:41:HIS:ND1	2.26	0.51
2:B:337:C:H2'	2:B:338:G:O4'	2.10	0.51
2:B:445:C:O2'	2:B:446:G:H5'	2.10	0.51
2:B:649:G:N2	29:4:44:ARG:HH22	2.09	0.51
2:B:705:A:H61	2:B:726:G:H1'	1.75	0.51
2:B:1025:G:H8	2:B:1025:G:OP1	1.94	0.51
2:B:1334:G:O2'	2:B:1335:C:H5'	2.11	0.51
2:B:1601:G:OP1	20:T:62:VAL:HG21	2.10	0.51
2:B:1842:G:H2'	2:B:1843:C:C6	2.45	0.51
2:B:2465:C:O2'	2:B:2466:C:H5'	2.11	0.51
2:B:2516:A:O2'	2:B:2517:C:H5'	2.11	0.51
2:B:2732:G:H3'	2:B:2733:A:H5'	1.91	0.51
4:C:63:ILE:O	4:C:64:VAL:HG13	2.10	0.51
5:D:7:LYS:HA	5:D:26:VAL:HG12	1.92	0.51
7:F:107:VAL:HB	7:F:108:PRO:HD3	1.91	0.51
7:F:109:ARG:CB	7:F:136:ILE:HG13	2.41	0.51
10:J:56:VAL:HG12	10:J:57:LEU:N	2.26	0.51
16:P:84:SER:O	16:P:85:VAL:C	2.53	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:27:ARG:O	17:Q:33:VAL:HG21	2.10	0.51
17:Q:32:ARG:HD2	17:Q:32:ARG:C	2.36	0.51
22:W:16:GLU:HA	22:W:18:LYS:HE2	1.93	0.51
32:a:300:A:H2'	32:a:301:G:O4'	2.11	0.51
32:a:492:C:H2'	32:a:493:A:H5"	1.92	0.51
32:a:619:U:N3	34:d:131:ILE:HD12	2.26	0.51
32:a:980:C:H3'	44:n:58:ARG:CD	2.39	0.51
32:a:1051:C:H2'	32:a:1052:U:C6	2.45	0.51
32:a:1152:A:O5'	40:j:21:ALA:HB2	2.11	0.51
32:a:1277:C:O5'	44:n:96:LYS:HB3	2.09	0.51
33:c:55:VAL:O	40:j:65:TYR:CD2	2.64	0.51
37:g:66:GLU:HA	37:g:69:ARG:HE	1.75	0.51
44:n:27:LYS:HD2	44:n:28:ALA:N	2.26	0.51
51:7:67:LEU:HD11	51:7:157:PRO:CB	2.30	0.51
53:v:38:A:C2'	53:v:39:U:O5'	2.58	0.51
2:B:185:G:H2'	2:B:186:G:O4'	2.10	0.51
2:B:543:G:C2'	2:B:544:C:H5"	2.38	0.51
2:B:1061:U:H4'	2:B:1070:A:O3'	2.11	0.51
2:B:1164:C:H2'	2:B:1165:A:H8	1.76	0.51
2:B:1594:U:H2'	2:B:1595:C:H6	1.75	0.51
4:C:181:ARG:NH2	4:C:260:LYS:HZ2	2.09	0.51
6:E:88:ARG:HB2	6:E:88:ARG:HH11	1.75	0.51
7:F:32:LYS:O	7:F:156:THR:N	2.42	0.51
7:F:77:LYS:HD3	53:v:19:G:N3	2.26	0.51
8:G:153:PRO:HG3	8:G:160:GLY:C	2.35	0.51
10:J:29:ALA:O	10:J:33:ALA:N	2.44	0.51
12:L:63:LYS:HG3	29:4:11:LYS:HZ2	1.75	0.51
12:L:82:LEU:HD12	12:L:90:VAL:HG13	1.93	0.51
14:N:30:ARG:HB3	14:N:31:HIS:ND1	2.26	0.51
18:R:42:ALA:HB3	18:R:45:GLU:HB2	1.92	0.51
32:a:49:U:O2'	32:a:50:A:H2'	2.11	0.51
32:a:731:G:OP1	32:a:766:A:H1'	2.10	0.51
32:a:824:G:H2'	32:a:825:A:H8	1.76	0.51
32:a:945:G:H22	43:m:46:GLU:N	1.85	0.51
32:a:1033:G:H2'	32:a:1034:G:O4'	2.10	0.51
32:a:1110:A:N7	32:a:1111:A:N6	2.58	0.51
32:a:1152:A:OP1	40:j:21:ALA:HB3	1.99	0.51
32:a:1299:A:H62	32:a:1302:C:H5	1.57	0.51
32:a:1366:C:H2'	32:a:1367:C:H6	1.76	0.51
32:a:1477:U:H2'	32:a:1478:U:C6	2.46	0.51
33:c:99:GLN:O	40:j:63:ASP:C	2.49	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:d:131:ILE:O	34:d:134:TYR:HB2	2.10	0.51
39:i:87:MET:HE3	39:i:94:ARG:NE	2.25	0.51
41:k:56:LYS:H	41:k:56:LYS:HD3	1.75	0.51
43:m:38:ILE:HG13	43:m:55:LEU:CD2	2.41	0.51
51:7:37:VAL:HG22	51:7:38:HIS:H	1.76	0.51
53:v:63:G:H2'	53:v:64:A:C8	2.45	0.51
2:B:176:A:O2'	2:B:177:G:H5'	2.10	0.51
2:B:182:A:H2'	2:B:183:C:H6	1.74	0.51
2:B:1055:G:HO2'	2:B:1085:A:H2	1.57	0.51
2:B:1113:U:H5"	8:G:2:ARG:H	1.76	0.51
2:B:1180:U:O2'	2:B:1181:U:H5'	2.11	0.51
2:B:1292:G:H2'	2:B:1293:C:C6	2.46	0.51
2:B:1562:U:H2'	2:B:1563:U:C6	2.46	0.51
2:B:1889:A:H2'	2:B:1890:A:C8	2.45	0.51
2:B:2600:A:H62	4:C:235:GLU:HB3	1.75	0.51
3:V:21:ARG:HE	3:V:87:GLN:CB	2.23	0.51
4:C:140:VAL:C	4:C:193:GLU:HB2	2.36	0.51
4:C:224:MET:HE3	4:C:232:GLY:C	2.36	0.51
5:D:106:LYS:HA	5:D:176:ASP:HA	1.93	0.51
6:E:138:LEU:HD21	6:E:167:VAL:HG21	1.91	0.51
10:J:19:ASP:C	10:J:21:THR:H	2.19	0.51
12:L:67:THR:O	12:L:68:SER:CB	2.59	0.51
13:M:105:MET:HE3	13:M:106:ASP:O	2.11	0.51
16:P:32:VAL:HB	16:P:80:VAL:HG22	1.91	0.51
18:R:43:ASN:C	18:R:45:GLU:N	2.67	0.51
20:T:89:GLU:N	20:T:89:GLU:CD	2.69	0.51
21:U:73:ASN:HB2	21:U:96:LYS:HZ3	1.75	0.51
23:X:22:LEU:O	23:X:23:ARG:C	2.53	0.51
25:Z:59:ARG:HG3	25:Z:62:LYS:HB2	1.92	0.51
26:1:28:SER:O	26:1:32:THR:HG22	2.11	0.51
32:a:857:C:H2'	32:a:858:G:O4'	2.10	0.51
32:a:1285:A:N6	32:a:1355:G:H4'	2.26	0.51
33:c:21:TRP:HB3	33:c:58:ARG:HB2	1.93	0.51
33:c:77:GLY:N	40:j:54:SER:HB3	2.26	0.51
33:c:82:ASP:CB	40:j:54:SER:HB2	2.28	0.51
34:d:71:PHE:O	34:d:74:TYR:HB2	2.11	0.51
34:d:123:MET:HG3	34:d:127:ARG:C	2.36	0.51
35:e:109:ALA:CB	35:e:135:VAL:HG23	2.39	0.51
36:f:98:GLU:HG2	36:f:99:ALA:H	1.76	0.51
39:i:11:ARG:HA	39:i:105:ARG:HE	1.75	0.51
51:7:9:LEU:HD11	51:7:11:ALA:HB3	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:7:101:THR:HG23	51:7:102:ASN:H	1.75	0.51
1:A:21:G:O2'	1:A:22:U:H5'	2.11	0.51
1:A:113:C:H2'	1:A:114:C:O4'	2.11	0.51
2:B:65:U:H2'	2:B:66:C:C6	2.46	0.51
2:B:172:A:O2'	2:B:173:A:H5'	2.11	0.51
2:B:328:U:H4'	21:U:65:GLN:HG3	1.92	0.51
2:B:570:G:H2'	2:B:2030:A:N7	2.25	0.51
2:B:671:C:N4	12:L:39:LYS:HE3	2.25	0.51
2:B:1959:G:H4'	32:a:1418:A:H4'	1.92	0.51
2:B:2014:A:P	19:S:95:ARG:HH21	2.33	0.51
2:B:2076:U:O4'	2:B:2076:U:O2	2.29	0.51
3:V:16:ALA:HA	3:V:19:ARG:HE	1.76	0.51
4:C:220:ARG:HG3	4:C:220:ARG:NH1	2.26	0.51
5:D:51:THR:O	5:D:52:THR:HB	2.11	0.51
5:D:128:ARG:HH11	5:D:144:GLY:HA3	1.75	0.51
6:E:150:THR:HB	6:E:171:ASP:OD2	2.10	0.51
8:G:17:LYS:HB3	8:G:24:THR:HG22	1.93	0.51
9:H:19:VAL:O	9:H:20:ASN:C	2.54	0.51
13:M:73:ILE:HG22	13:M:74:THR:N	2.24	0.51
13:M:105:MET:HE3	13:M:107:GLY:HA3	1.92	0.51
14:N:52:ILE:HG21	14:N:94:TYR:CE2	2.46	0.51
15:O:19:GLN:N	22:W:76:ARG:HH12	2.01	0.51
16:P:61:ARG:NH2	16:P:75:THR:HB	2.26	0.51
20:T:3:ARG:HH21	20:T:8:LEU:CD2	2.24	0.51
20:T:20:ALA:C	20:T:22:THR:H	2.19	0.51
25:Z:59:ARG:HG3	25:Z:62:LYS:CG	2.41	0.51
28:3:34:ARG:HG3	28:3:34:ARG:HH11	1.74	0.51
32:a:219:U:H2'	32:a:220:G:C8	2.46	0.51
32:a:407:U:O2'	34:d:112:GLU:HG3	2.10	0.51
32:a:736:C:H2'	32:a:737:C:C6	2.45	0.51
32:a:1017:U:P	44:n:44:VAL:CG1	2.97	0.51
32:a:1126:U:OP1	40:j:77:VAL:HG11	1.43	0.51
32:a:1129:C:C5	40:j:33:GLY:CA	2.89	0.51
32:a:1235:U:OP2	43:m:50:GLY:N	2.44	0.51
32:a:1236:A:C2	43:m:45:SER:N	2.49	0.51
32:a:1280:A:H3'	40:j:39:PRO:HD3	1.93	0.51
32:a:1306:A:C2	43:m:19:THR:HG23	2.45	0.51
32:a:1321:U:H3	49:s:2:ARG:N	2.09	0.51
32:a:1334:G:C8	43:m:12:LYS:CA	2.88	0.51
32:a:1334:G:O2'	43:m:43:LYS:C	2.53	0.51
32:a:1337:G:N2	43:m:45:SER:C	2.64	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:c:71:ARG:O	33:c:74:ILE:HG22	2.11	0.51
34:d:115:GLN:HE21	34:d:119:HIS:CE1	2.28	0.51
42:l:3:VAL:HG23	42:l:4:ASN:OD1	2.11	0.51
42:l:54:VAL:HG12	42:l:56:LEU:HD12	1.93	0.51
44:n:17:ASP:HA	44:n:21:ALA:HB2	1.92	0.51
46:p:40:ASN:HD21	46:p:42:ILE:HG13	1.75	0.51
46:p:46:LYS:H	46:p:46:LYS:CD	2.10	0.51
51:7:49:PHE:O	51:7:53:LEU:HD23	2.10	0.51
53:v:49:C:N3	53:v:50:U:C5	2.79	0.51
2:B:584:C:OP2	17:Q:5:ARG:HB2	2.11	0.51
2:B:923:G:H1'	22:W:23:LYS:CD	2.31	0.51
2:B:1164:C:H2'	2:B:1165:A:C8	2.46	0.51
2:B:1547:C:H2'	2:B:1548:A:H8	1.75	0.51
2:B:1633:G:O2'	2:B:1634:A:H5"	2.10	0.51
2:B:2073:C:O2'	2:B:2074:U:H5'	2.11	0.51
3:V:23:ALA:O	3:V:24:ASN:HB2	2.10	0.51
5:D:108:ASP:CB	5:D:173:GLN:HA	2.40	0.51
7:F:109:ARG:CB	43:m:106:ARG:HA	2.22	0.51
8:G:15:ASP:O	8:G:25:ILE:HA	2.11	0.51
9:H:15:LEU:HB3	9:H:51:ARG:HD2	1.92	0.51
11:K:54:LYS:NZ	32:a:1422:G:P	2.82	0.51
16:P:23:ASP:H	16:P:93:LYS:CE	2.22	0.51
16:P:61:ARG:CZ	16:P:61:ARG:HB2	2.41	0.51
18:R:3:ALA:HB3	18:R:14:VAL:O	2.11	0.51
24:Y:37:ARG:HG3	24:Y:37:ARG:HH11	1.75	0.51
25:Z:3:LYS:HG3	25:Z:3:LYS:O	2.09	0.51
32:a:17:U:H2'	32:a:18:C:H6	1.74	0.51
32:a:187:G:C4'	50:t:79:THR:HG21	2.33	0.51
32:a:751:U:H2'	32:a:752:G:O4'	2.11	0.51
32:a:1014:A:C1'	49:s:15:LEU:CD1	2.65	0.51
32:a:1127:G:N1	40:j:34:ALA:HB2	1.53	0.51
32:a:1130:A:P	40:j:82:LYS:HZ1	2.29	0.51
32:a:1149:C:O4'	40:j:31:ARG:CG	2.56	0.51
32:a:1262:C:C1'	44:n:99:SER:HA	2.40	0.51
32:a:1331:G:N2	43:m:59:VAL:HG21	2.26	0.51
33:c:75:VAL:HB	40:j:53:ILE:O	2.10	0.51
33:c:83:VAL:HG22	40:j:52:LEU:C	1.86	0.51
33:c:89:VAL:C	33:c:91:ALA:H	2.19	0.51
33:c:110:LEU:O	33:c:203:LYS:HE2	2.11	0.51
37:g:23:ALA:O	37:g:26:VAL:HG22	2.11	0.51
38:h:8:ASP:OD2	38:h:12:ARG:HD2	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:h:60:LEU:HD12	38:h:60:LEU:N	2.26	0.51
41:k:56:LYS:O	41:k:58:THR:N	2.43	0.51
41:k:92:ARG:HH11	41:k:92:ARG:CB	2.23	0.51
41:k:125:LYS:O	41:k:126:ARG:O	2.29	0.51
42:l:30:ARG:HH11	42:l:30:ARG:HB3	1.75	0.51
45:o:7:THR:CG2	45:o:30:LEU:HD11	2.38	0.51
51:7:53:LEU:HA	51:7:56:LEU:HD23	1.92	0.51
51:7:132:GLU:O	51:7:136:ARG:HG3	2.11	0.51
52:u:29:ALA:HA	52:u:32:ARG:HB2	1.93	0.51
1:A:82:U:O2'	1:A:83:G:H5'	2.12	0.50
2:B:95:A:H4'	23:X:40:SER:CB	2.40	0.50
2:B:139:U:H5"	2:B:140:C:C5	2.45	0.50
2:B:948:C:H2'	2:B:949:G:H8	1.76	0.50
2:B:1541:C:H2'	2:B:1542:U:C6	2.46	0.50
2:B:1909:C:H2'	2:B:1910:G:H8	1.76	0.50
2:B:1939:U:O2	2:B:1967:C:H4'	2.11	0.50
2:B:2645:G:H4'	2:B:2732:G:H2'	1.92	0.50
4:C:119:VAL:HG22	4:C:130:PRO:HG2	1.92	0.50
7:F:135:ILE:HG23	43:m:111:PRO:HA	1.87	0.50
14:N:75:ILE:O	14:N:75:ILE:HD13	2.10	0.50
15:O:68:LYS:H	15:O:68:LYS:CD	2.19	0.50
19:S:71:VAL:HG22	19:S:107:VAL:CG1	2.40	0.50
20:T:33:LYS:HE3	20:T:80:TRP:NE1	2.26	0.50
21:U:43:LYS:HD2	21:U:44:HIS:N	2.26	0.50
21:U:47:PRO:O	21:U:49:PRO:HD3	2.11	0.50
22:W:36:ILE:HG21	22:W:68:PHE:HD2	1.75	0.50
22:W:45:HIS:HA	22:W:75:ASN:HB3	1.92	0.50
32:a:186:C:H4'	50:t:75:LYS:HB2	1.93	0.50
32:a:1013:G:H5"	49:s:16:LYS:HD3	1.92	0.50
32:a:1219:A:H3'	49:s:8:PRO:CD	2.37	0.50
32:a:1234:C:O3'	43:m:50:GLY:CA	2.58	0.50
32:a:1278:G:C4	44:n:93:PRO:CD	2.86	0.50
32:a:1524:C:H2'	32:a:1525:G:C8	2.46	0.50
33:c:65:VAL:HB	40:j:64:GLN:N	2.27	0.50
35:e:149:PRO:HA	38:h:98:LEU:HD21	1.93	0.50
36:f:6:ILE:HB	36:f:89:VAL:HB	1.93	0.50
42:l:20:VAL:HG22	42:l:94:TYR:CE1	2.46	0.50
53:v:8:U:H5"	53:v:49:C:OP2	2.11	0.50
2:B:142:A:H8	2:B:142:A:OP2	1.93	0.50
2:B:161:A:C3'	2:B:162:U:H5"	2.34	0.50
2:B:968:C:H2'	2:B:969:G:C8	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1011:G:H5”	17:Q:76:SER:OG	2.11	0.50
2:B:1313:U:H4’	2:B:1332:G:H4’	1.92	0.50
2:B:1400:U:H2’	2:B:1401:G:C8	2.46	0.50
2:B:1999:C:O2’	2:B:2000:C:H5’	2.11	0.50
2:B:2049:G:O2’	2:B:2050:C:H5’	2.11	0.50
2:B:2297:A:N6	2:B:2319:G:H3’	2.26	0.50
2:B:2301:C:O2’	2:B:2302:U:H5’	2.11	0.50
2:B:2659:G:OP1	8:G:157:LYS:HE2	2.12	0.50
2:B:2686:G:H2’	2:B:2687:U:C6	2.47	0.50
3:V:80:HIS:CD2	3:V:81:PRO:HD2	2.46	0.50
4:C:42:ARG:CG	4:C:43:ASN:H	2.11	0.50
5:D:142:VAL:O	5:D:144:GLY:N	2.44	0.50
6:E:44:ARG:C	6:E:46:GLN:N	2.68	0.50
7:F:128:SER:HA	7:F:154:THR:HG23	1.94	0.50
9:H:3:VAL:HB	9:H:37:VAL:CG2	2.41	0.50
10:J:7:LYS:HD2	10:J:49:ASP:CB	2.34	0.50
12:L:108:ALA:O	12:L:109:LYS:HB3	2.11	0.50
14:N:97:ILE:CD1	14:N:113:ILE:HG12	2.41	0.50
17:Q:33:VAL:CG2	17:Q:37:ALA:HB3	2.41	0.50
17:Q:48:ASP:O	17:Q:52:ARG:HB2	2.11	0.50
18:R:20:VAL:HG13	18:R:97:LYS:HZ2	1.75	0.50
18:R:68:ARG:HD2	18:R:70:GLU:CD	2.37	0.50
21:U:25:LYS:CG	21:U:35:VAL:HA	2.42	0.50
21:U:38:ILE:CB	21:U:62:ALA:HB3	2.40	0.50
32:a:36:C:OP1	42:l:119:LYS:HB3	2.11	0.50
32:a:545:C:O2’	32:a:546:A:H5’	2.10	0.50
32:a:642:A:H2’	32:a:643:C:C6	2.46	0.50
32:a:939:G:H4’	37:g:101:ARG:NH2	2.25	0.50
32:a:1305:G:C2	43:m:21:ILE:HG13	2.45	0.50
33:c:78:LYS:HE3	33:c:81:GLU:OE2	2.11	0.50
35:e:81:GLN:HG2	35:e:148:SER:HA	1.92	0.50
35:e:92:ARG:HB3	35:e:127:TYR:HB2	1.94	0.50
37:g:72:VAL:HB	37:g:144:ALA:CB	2.41	0.50
37:g:103:ILE:O	37:g:107:ALA:HB2	2.11	0.50
39:i:24:ASN:HA	39:i:26:LYS:HZ3	1.76	0.50
43:m:10:ASP:HA	43:m:44:ILE:CD1	2.41	0.50
43:m:18:LEU:O	43:m:21:ILE:HG13	2.10	0.50
51:7:163:ILE:CG2	51:7:164:ASP:H	1.98	0.50
1:A:42:C:C6	7:F:65:LEU:HD13	2.46	0.50
2:B:536:G:H4’	17:Q:56:PHE:CZ	2.46	0.50
2:B:660:C:H2’	2:B:661:A:H8	1.74	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:712:G:H2'	2:B:713:G:O4'	2.12	0.50
2:B:866:A:H61	2:B:913:U:H4'	1.77	0.50
2:B:1231:U:H2'	2:B:1232:G:H8	1.75	0.50
2:B:1747:U:H2'	2:B:1748:C:C6	2.47	0.50
2:B:1791:A:H5'	4:C:207:ALA:HA	1.93	0.50
2:B:1821:A:H5'	4:C:155:ARG:HH21	1.75	0.50
2:B:2285:C:OP1	27:2:26:LYS:HE3	2.11	0.50
3:V:77:VAL:CG2	3:V:79:ARG:HE	2.23	0.50
4:C:156:SER:O	4:C:157:ALA:C	2.54	0.50
6:E:141:MET:HG3	6:E:143:LEU:HB2	1.93	0.50
16:P:29:VAL:O	16:P:31:VAL:HG23	2.10	0.50
16:P:55:HIS:O	16:P:57:ALA:N	2.44	0.50
17:Q:33:VAL:O	17:Q:34:ALA:C	2.55	0.50
20:T:9:LYS:HE3	23:X:22:LEU:HD21	1.93	0.50
25:Z:5:ILE:HD13	25:Z:47:LYS:HB3	1.92	0.50
30:5:12:ARG:H	30:5:12:ARG:HD2	1.76	0.50
32:a:1015:G:C2'	44:n:31:SER:HB3	2.40	0.50
32:a:1113:C:N1	33:c:177:LEU:HD13	2.21	0.50
32:a:1131:G:C6	40:j:81:GLU:OE1	2.65	0.50
32:a:1257:A:C4'	44:n:74:ARG:HD3	2.42	0.50
32:a:1335:U:OP2	43:m:11:HIS:CG	2.64	0.50
32:a:1490:U:H3'	32:a:1491:G:H8	1.76	0.50
34:d:77:GLU:O	34:d:81:LEU:HG	2.11	0.50
34:d:172:VAL:HA	34:d:178:GLU:O	2.11	0.50
36:f:32:ALA:HB1	36:f:70:VAL:HG11	1.93	0.50
37:g:3:ARG:HB3	37:g:3:ARG:CZ	2.40	0.50
37:g:61:PHE:O	37:g:65:LEU:HD13	2.11	0.50
39:i:11:ARG:HG3	39:i:11:ARG:O	2.10	0.50
41:k:49:SER:HA	41:k:68:ARG:HH21	1.77	0.50
41:k:121:ARG:CZ	52:u:37:TYR:OH	2.59	0.50
43:m:27:THR:O	43:m:30:LYS:HB3	2.11	0.50
52:u:40:PRO:C	52:u:42:THR:N	2.69	0.50
1:A:64:G:O2'	1:A:65:U:H5'	2.11	0.50
2:B:26:G:H1'	2:B:515:A:H61	1.74	0.50
2:B:156:A:H2'	2:B:157:C:H6	1.76	0.50
2:B:327:G:H2'	2:B:328:U:C6	2.47	0.50
2:B:1184:U:O2'	2:B:1185:G:H5'	2.12	0.50
2:B:1494:A:H2'	2:B:1495:A:C8	2.46	0.50
2:B:2364:C:H2'	2:B:2365:G:O4'	2.10	0.50
2:B:2412:A:H2'	2:B:2413:G:O4'	2.10	0.50
2:B:2439:A:C8	2:B:2586:U:H4'	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:67:HIS:O	5:D:71:ALA:HB3	2.10	0.50
6:E:176:ASP:OD1	6:E:178:VAL:HG22	2.12	0.50
8:G:25:ILE:O	8:G:25:ILE:HG23	2.10	0.50
9:H:83:LYS:HB2	9:H:92:GLY:N	2.27	0.50
11:K:14:SER:O	11:K:52:VAL:HB	2.11	0.50
12:L:61:LEU:O	12:L:62:PRO:O	2.29	0.50
12:L:77:ILE:CD1	12:L:92:LEU:HD22	2.41	0.50
17:Q:92:LYS:O	17:Q:94:LEU:HD22	2.11	0.50
20:T:8:LEU:H	20:T:8:LEU:CD2	2.20	0.50
21:U:78:LYS:HB3	21:U:96:LYS:HB3	1.93	0.50
29:4:12:ARG:HG2	29:4:23:HIS:HB3	1.94	0.50
32:a:22:G:H4'	32:a:885:G:C8	2.47	0.50
32:a:33:A:H2'	32:a:34:C:C6	2.46	0.50
32:a:251:G:H4'	32:a:252:U:H5'	1.93	0.50
32:a:412:A:H1'	32:a:413:G:C8	2.43	0.50
32:a:439:U:C3'	34:d:120:LYS:NZ	2.75	0.50
32:a:642:A:H2'	32:a:643:C:H6	1.76	0.50
32:a:1169:A:H2'	32:a:1170:A:C8	2.46	0.50
32:a:1240:U:C2'	37:g:31:VAL:HG11	2.40	0.50
32:a:1330:U:C4	43:m:64:VAL:HG11	2.39	0.50
32:a:1334:G:C2'	43:m:44:ILE:N	2.68	0.50
32:a:1356:G:C5'	44:n:81:ILE:HD11	2.33	0.50
33:c:154:GLY:HA2	33:c:163:ARG:H	1.77	0.50
34:d:112:GLU:OE2	34:d:153:ARG:HD3	2.11	0.50
34:d:169:TRP:HB3	34:d:183:ARG:HH21	1.76	0.50
36:f:100:SER:HA	48:r:23:LYS:HD2	1.94	0.50
46:p:71:VAL:HA	46:p:74:LEU:CG	2.39	0.50
48:r:60:ARG:HG3	48:r:61:ALA:N	2.25	0.50
2:B:125:A:OP2	28:3:19:ARG:NH2	2.44	0.50
2:B:173:A:H2'	2:B:174:U:H6	1.75	0.50
2:B:511:U:O5'	2:B:511:U:H6	1.95	0.50
2:B:651:G:H4'	29:4:17:GLY:HA3	1.93	0.50
2:B:988:A:OP2	24:Y:11:SER:HA	2.11	0.50
2:B:1287:A:O2'	2:B:1288:G:H5'	2.12	0.50
2:B:1591:A:H2'	2:B:1592:C:C6	2.47	0.50
2:B:1710:G:H4'	2:B:2858:C:O2	2.12	0.50
2:B:2441:U:O2'	2:B:2442:C:H5'	2.12	0.50
2:B:2751:G:P	8:G:3:VAL:HG13	2.51	0.50
5:D:12:THR:O	5:D:13:ARG:HD2	2.11	0.50
7:F:126:ASN:ND2	7:F:157:THR:H	2.08	0.50
9:H:6:LEU:H	9:H:16:GLY:N	2.09	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:H:6:LEU:HG	9:H:54:LEU:HG	1.93	0.50
9:H:57:LYS:HG3	9:H:61:VAL:CG2	2.40	0.50
14:N:87:PHE:HB2	14:N:94:TYR:CZ	2.47	0.50
14:N:115:LEU:O	14:N:115:LEU:HG	2.10	0.50
16:P:8:GLU:OE1	16:P:8:GLU:N	2.45	0.50
16:P:59:THR:O	16:P:59:THR:HG22	2.10	0.50
16:P:61:ARG:NH2	16:P:63:ILE:HD11	2.25	0.50
19:S:29:VAL:CG2	19:S:71:VAL:HG23	2.41	0.50
19:S:48:LYS:O	19:S:51:LEU:HB3	2.12	0.50
22:W:16:GLU:N	22:W:18:LYS:NZ	2.60	0.50
30:5:22:VAL:HG11	30:5:36:ARG:HE	1.75	0.50
32:a:90:C:H2'	32:a:91:U:C6	2.47	0.50
32:a:711:G:O2'	32:a:712:A:H5'	2.11	0.50
32:a:807:A:H2'	32:a:808:C:C6	2.47	0.50
32:a:1112:C:C4	33:c:176:THR:HA	2.46	0.50
32:a:1142:G:H3'	32:a:1143:G:H8	1.76	0.50
34:d:84:ASN:HD22	34:d:87:GLU:N	2.10	0.50
34:d:183:ARG:HH22	34:d:186:GLU:H	1.58	0.50
36:f:100:SER:CA	48:r:23:LYS:HZ1	2.11	0.50
42:l:113:ARG:HA	42:l:118:VAL:HG23	1.93	0.50
51:7:31:PHE:HA	51:7:41:ASN:HB2	1.94	0.50
51:7:59:ILE:HD12	51:7:60:ALA:N	2.27	0.50
51:7:95:TRP:CE3	51:7:171:ALA:HA	2.47	0.50
53:v:1:G:C6	53:v:73:A:C2	2.99	0.50
2:B:189:G:H2'	2:B:205:G:H22	1.76	0.50
2:B:643:A:C6	27:2:42:VAL:HG22	2.46	0.50
2:B:741:U:H2'	2:B:742:A:C8	2.45	0.50
2:B:1373:A:H4'	2:B:2212:A:N3	2.27	0.50
2:B:1645:G:H5"	2:B:1646:C:H5'	1.93	0.50
2:B:2776:A:H4'	2:B:2777:G:C5'	2.42	0.50
5:D:120:GLY:HA2	5:D:162:ALA:HA	1.93	0.50
6:E:170:ARG:HH21	6:E:175:ILE:CD1	2.24	0.50
6:E:173:THR:O	6:E:175:ILE:HG22	2.12	0.50
7:F:126:ASN:OD1	7:F:156:THR:HG23	2.11	0.50
12:L:117:THR:CG2	12:L:120:VAL:HB	2.36	0.50
12:L:125:LEU:HA	12:L:142:ILE:O	2.11	0.50
13:M:42:THR:HG22	13:M:45:GLN:HB2	1.93	0.50
14:N:38:LEU:N	14:N:39:PRO:CD	2.75	0.50
15:O:1:MET:HG2	15:O:2:ASP:H	1.76	0.50
15:O:8:ILE:HG23	15:O:9:ARG:N	2.26	0.50
17:Q:92:LYS:O	17:Q:93:ILE:CG2	2.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:46:LYS:HB3	21:U:53:GLN:HB3	1.94	0.50
21:U:52:ASN:O	21:U:54:PRO:HD3	2.11	0.50
23:X:23:ARG:HH21	23:X:27:ASN:CG	2.20	0.50
24:Y:9:THR:OG1	24:Y:10:ARG:N	2.42	0.50
28:3:30:VAL:O	28:3:33:ARG:HG3	2.11	0.50
32:a:56:U:H2'	32:a:57:G:H8	1.77	0.50
32:a:409:U:OP1	34:d:22:SER:O	2.30	0.50
32:a:948:C:N3	43:m:38:ILE:HD13	2.18	0.50
32:a:1011:C:N3	44:n:35:ALA:N	2.59	0.50
32:a:1308:U:O4	43:m:28:ARG:NH1	2.44	0.50
32:a:1331:G:H5'	43:m:21:ILE:O	2.04	0.50
32:a:1460:C:H2'	32:a:1461:G:O4'	2.11	0.50
33:c:86:LEU:N	40:j:60:ASP:O	2.38	0.50
34:d:160:LEU:H	34:d:160:LEU:CD1	2.20	0.50
45:o:80:LEU:HD23	45:o:80:LEU:C	2.36	0.50
47:q:18:LYS:HE3	47:q:48:GLU:HG2	1.93	0.50
48:r:63:TYR:C	48:r:65:SER:H	2.19	0.50
51:7:100:LEU:O	51:7:178:LEU:HG	2.11	0.50
51:7:114:LYS:HA	51:7:117:GLU:OE1	2.12	0.50
2:B:125:A:H3'	2:B:126:A:H5'	1.93	0.50
2:B:224:U:O4	2:B:420:C:H5'	2.12	0.50
2:B:355:U:H2'	2:B:356:G:H8	1.77	0.50
2:B:418:C:H2'	2:B:419:U:H6	1.75	0.50
2:B:702:U:O2'	2:B:703:U:H5'	2.12	0.50
2:B:1132:U:C5	10:J:85:LYS:HE2	2.46	0.50
2:B:1215:G:O2'	2:B:1216:G:H5'	2.11	0.50
2:B:1917:U:H2'	2:B:1918:A:H5'	1.93	0.50
2:B:2276:G:OP2	13:M:83:GLY:HA3	2.12	0.50
2:B:2285:C:H41	27:2:24:LYS:NZ	2.09	0.50
2:B:2502:G:H5'	2:B:2503:A:C5'	2.33	0.50
2:B:2712:C:H2'	2:B:2714:G:O3'	2.12	0.50
2:B:2860:A:O5'	2:B:2860:A:H8	1.93	0.50
2:B:2874:C:H2'	2:B:2875:C:C6	2.46	0.50
6:E:43:THR:HG23	6:E:44:ARG:CZ	2.42	0.50
7:F:65:LEU:HD23	7:F:87:LYS:HD2	1.94	0.50
9:H:9:VAL:HB	9:H:35:LYS:HZ1	1.77	0.50
10:J:7:LYS:CD	10:J:48:VAL:HB	2.37	0.50
12:L:38:GLN:H	12:L:41:ARG:HD2	1.76	0.50
12:L:79:LEU:HD12	12:L:79:LEU:N	2.27	0.50
13:M:34:LYS:O	13:M:124:LEU:HB2	2.11	0.50
13:M:34:LYS:HD3	13:M:98:PRO:O	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:112:LEU:HD12	13:M:112:LEU:N	2.26	0.50
14:N:9:GLN:HA	14:N:17:ARG:NH1	2.27	0.50
15:O:1:MET:CG	15:O:2:ASP:N	2.73	0.50
17:Q:19:GLN:O	17:Q:20:ALA:C	2.55	0.50
17:Q:60:TRP:O	17:Q:64:ILE:HG13	2.10	0.50
21:U:5:ARG:CG	21:U:6:ARG:H	2.24	0.50
22:W:65:LYS:O	22:W:66:VAL:HB	2.11	0.50
24:Y:4:ILE:O	24:Y:5:LYS:HB2	2.12	0.50
25:Z:32:LEU:O	25:Z:46:GLY:HA2	2.12	0.50
31:6:7:TYR:HB2	31:6:59:THR:HA	1.93	0.50
32:a:72:A:H2'	32:a:73:C:C6	2.47	0.50
32:a:177:G:P	50:t:23:ARG:NH2	2.76	0.50
32:a:546:A:H4'	32:a:548:G:O3'	2.12	0.50
32:a:1086:U:H4'	32:a:1389:C:H5"	1.94	0.50
32:a:1219:A:N6	49:s:7:GLY:HA3	2.24	0.50
32:a:1452:C:H5'	32:a:1453:G:C4	2.47	0.50
33:c:83:VAL:HG12	33:c:87:ARG:HE	1.75	0.50
34:d:10:LEU:HD21	34:d:62:ARG:CD	2.41	0.50
37:g:94:ARG:HD3	37:g:98:LEU:HD11	1.93	0.50
45:o:78:THR:HA	45:o:81:ILE:CD1	2.42	0.50
1:A:58:A:H2'	1:A:59:A:O4'	2.11	0.50
2:B:257:C:H2'	2:B:258:G:O4'	2.12	0.50
2:B:323:C:H6	6:E:164:LEU:HB3	1.77	0.50
2:B:443:A:OP1	6:E:44:ARG:NH2	2.44	0.50
2:B:926:G:H2'	2:B:927:A:C8	2.47	0.50
2:B:1656:C:H2'	2:B:1657:U:H6	1.77	0.50
2:B:2303:G:H2'	2:B:2304:G:H5'	1.94	0.50
2:B:2512:C:H2'	2:B:2513:A:O4'	2.11	0.50
4:C:136:VAL:O	4:C:163:ILE:HB	2.12	0.50
6:E:3:LEU:HB2	6:E:12:LEU:HB2	1.94	0.50
7:F:97:GLU:O	7:F:100:GLU:HG3	2.11	0.50
10:J:78:THR:HB	10:J:80:HIS:HD2	1.76	0.50
12:L:56:PRO:O	12:L:60:ARG:N	2.44	0.50
12:L:92:LEU:HD21	12:L:96:LYS:HZ1	1.75	0.50
14:N:12:ARG:HD3	14:N:20:MET:HE3	1.94	0.50
17:Q:111:LYS:O	17:Q:115:ALA:HB2	2.10	0.50
18:R:39:LEU:HD12	18:R:60:LYS:N	2.26	0.50
25:Z:15:SER:CB	25:Z:23:LYS:HD3	2.41	0.50
32:a:98:A:H2'	32:a:99:C:C6	2.47	0.50
32:a:656:G:O3'	45:o:61:GLN:NE2	2.44	0.50
32:a:946:A:C8	43:m:42:VAL:CG1	2.95	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:971:G:OP1	32:a:971:G:H3'	2.12	0.50
32:a:990:C:O4'	44:n:43:ALA:HB3	2.08	0.50
32:a:1234:C:C3'	43:m:50:GLY:HA2	2.35	0.50
32:a:1281:C:OP2	44:n:88:MET:O	2.30	0.50
32:a:1332:A:H5'	43:m:19:THR:OG1	2.12	0.50
32:a:1335:U:C6	43:m:11:HIS:CE1	2.97	0.50
33:c:119:ILE:O	33:c:123:LEU:HG	2.12	0.50
34:d:64:TYR:H	34:d:64:TYR:HD1	1.59	0.50
46:p:52:LEU:HG	46:p:75:ILE:CG1	2.40	0.50
1:A:15:A:H1'	1:A:109:A:C8	2.46	0.50
2:B:161:A:H62	2:B:165:A:H61	1.58	0.50
2:B:295:G:O2'	2:B:296:U:H5'	2.12	0.50
2:B:298:G:H2'	2:B:339:U:O4	2.11	0.50
2:B:557:C:H2'	2:B:558:U:C6	2.47	0.50
2:B:685:A:H1'	2:B:688:U:O4	2.12	0.50
2:B:1019:U:H2'	2:B:1020:A:C8	2.47	0.50
2:B:1190:G:P	12:L:41:ARG:HG2	2.52	0.50
2:B:1351:C:O2'	2:B:1571:A:H1'	2.12	0.50
2:B:1751:U:H2'	2:B:1752:C:C6	2.47	0.50
2:B:2219:U:O2'	2:B:2220:U:H5'	2.11	0.50
2:B:2455:G:H2'	2:B:2456:C:C6	2.46	0.50
2:B:2803:G:H2'	2:B:2804:U:H6	1.76	0.50
4:C:38:LYS:HD3	4:C:39:SER:O	2.12	0.50
4:C:115:ILE:HA	4:C:126:GLY:CA	2.42	0.50
4:C:179:GLU:CG	4:C:266:ILE:HG22	2.40	0.50
5:D:62:LYS:HE3	5:D:62:LYS:N	2.27	0.50
5:D:170:VAL:HG22	5:D:171:THR:N	2.27	0.50
6:E:25:GLU:O	6:E:26:ALA:C	2.53	0.50
6:E:57:LYS:HA	6:E:57:LYS:HE3	1.94	0.50
8:G:10:VAL:HG13	8:G:10:VAL:O	2.11	0.50
11:K:36:GLY:HA2	11:K:62:VAL:O	2.12	0.50
12:L:116:VAL:HG12	12:L:117:THR:H	1.76	0.50
13:M:74:THR:HA	13:M:87:GLY:O	2.12	0.50
13:M:80:VAL:HG12	13:M:81:ARG:N	2.27	0.50
16:P:2:ASN:HD22	16:P:2:ASN:N	2.10	0.50
18:R:18:GLN:HA	18:R:99:THR:HA	1.93	0.50
18:R:42:ALA:HA	18:R:54:VAL:HG13	1.94	0.50
19:S:31:GLN:C	19:S:33:LEU:N	2.70	0.50
21:U:34:ILE:HG23	21:U:61:GLU:HB2	1.94	0.50
25:Z:19:GLY:O	25:Z:20:ASN:HB2	2.11	0.50
27:2:34:GLU:N	27:2:52:LYS:O	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:131:A:H2'	32:a:132:C:H6	1.75	0.50
32:a:205:A:H2'	32:a:206:C:C6	2.44	0.50
32:a:588:G:H5'	38:h:2:MET:O	2.11	0.50
32:a:840:C:C2	32:a:842:U:H4'	2.47	0.50
32:a:948:C:C2	43:m:36:ALA:O	2.56	0.50
32:a:1012:A:N1	44:n:32:ASP:O	2.45	0.50
32:a:1110:A:C2'	32:a:1111:A:H5'	2.42	0.50
32:a:1124:G:C4	40:j:87:LEU:CB	2.80	0.50
32:a:1221:G:C4	49:s:3:SER:C	2.85	0.50
32:a:1254:A:H1'	44:n:81:ILE:HD12	1.94	0.50
32:a:1307:U:O2	43:m:29:SER:CB	2.32	0.50
32:a:1320:C:H5	49:s:68:HIS:HD2	1.60	0.50
33:c:46:LEU:HD22	40:j:53:ILE:HD13	1.93	0.50
33:c:150:VAL:HG12	33:c:151:GLU:N	2.27	0.50
35:e:110:MET:SD	35:e:110:MET:N	2.85	0.50
36:f:39:LEU:HD13	36:f:40:GLU:H	1.77	0.50
40:j:88:MET:N	40:j:88:MET:SD	2.85	0.50
46:p:71:VAL:CA	46:p:74:LEU:HG	2.41	0.50
51:7:175:ALA:C	51:7:177:ASN:H	2.20	0.50
53:v:56:C:O2	53:v:56:C:H2'	2.11	0.50
1:A:50:A:H5"	15:O:68:LYS:HG3	1.94	0.49
2:B:41:C:H2'	2:B:42:A:H8	1.76	0.49
2:B:208:C:H2'	2:B:209:C:C6	2.46	0.49
2:B:446:G:OP2	17:Q:2:ARG:HD2	2.12	0.49
2:B:584:C:OP2	17:Q:5:ARG:HD3	2.12	0.49
2:B:1430:G:H2'	2:B:1431:A:H8	1.77	0.49
2:B:1637:A:H2'	2:B:1638:C:C6	2.47	0.49
2:B:1722:A:H2'	2:B:1723:G:C8	2.47	0.49
2:B:2196:C:O2'	2:B:2197:U:H5'	2.12	0.49
2:B:2258:C:OP2	22:W:3:LYS:HG2	2.12	0.49
2:B:2352:A:H2'	2:B:2353:G:O4'	2.11	0.49
2:B:2400:G:O2'	2:B:2401:U:H5'	2.12	0.49
2:B:2511:U:H2'	2:B:2512:C:O4'	2.11	0.49
2:B:2700:A:H2'	2:B:2701:U:H6	1.77	0.49
2:B:2729:G:H2'	2:B:2730:C:H6	1.75	0.49
3:V:10:LYS:HG2	3:V:11:GLU:HG3	1.93	0.49
6:E:44:ARG:N	6:E:44:ARG:CD	2.75	0.49
6:E:145:ASP:C	6:E:147:LEU:N	2.70	0.49
7:F:74:ALA:HB2	53:v:56:C:O3'	2.12	0.49
7:F:99:PHE:C	7:F:101:ARG:N	2.69	0.49
9:H:29:PHE:H	9:H:32:PRO:CG	2.25	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:H:35:LYS:H	9:H:35:LYS:HD2	1.76	0.49
9:H:89:LYS:HZ2	9:H:123:ARG:HD3	1.77	0.49
9:H:147:VAL:HG12	9:H:148:ALA:H	1.77	0.49
10:J:10:THR:CB	10:J:13:ARG:HH22	2.25	0.49
10:J:13:ARG:NH1	10:J:13:ARG:HG3	2.26	0.49
11:K:87:LEU:HA	11:K:95:ILE:H	1.75	0.49
13:M:97:GLN:N	13:M:98:PRO:CD	2.75	0.49
16:P:62:LYS:HG2	16:P:74:GLN:OE1	2.12	0.49
16:P:78:PRO:C	16:P:79:VAL:HG23	2.36	0.49
18:R:39:LEU:HA	18:R:60:LYS:O	2.12	0.49
19:S:24:ILE:O	19:S:74:ILE:HD12	2.11	0.49
20:T:29:THR:HG22	20:T:86:THR:HG22	1.94	0.49
21:U:35:VAL:HG12	21:U:36:GLU:N	2.27	0.49
22:W:24:ARG:HD2	22:W:59:PHE:HD1	1.77	0.49
27:2:33:LEU:N	27:2:52:LYS:HB3	2.27	0.49
32:a:33:A:H2'	32:a:34:C:H6	1.77	0.49
32:a:186:C:H5'	50:t:72:ALA:HA	1.94	0.49
32:a:988:G:C2	44:n:46:LYS:CG	2.95	0.49
32:a:1017:U:N3	44:n:32:ASP:N	2.44	0.49
32:a:1197:A:O2'	32:a:1198:G:H5'	2.10	0.49
32:a:1236:A:OP1	43:m:56:ARG:NH1	2.45	0.49
32:a:1317:C:N4	49:s:67:GLY:HA3	2.21	0.49
33:c:62:SER:HB3	40:j:48:ARG:NH1	2.27	0.49
33:c:71:ARG:NH2	33:c:74:ILE:HB	2.26	0.49
34:d:7:LYS:HG3	34:d:20:LEU:HB2	1.94	0.49
35:e:41:GLY:HA2	35:e:118:GLY:HA2	1.94	0.49
51:7:107:ARG:HA	51:7:110:ILE:CD1	2.42	0.49
2:B:37:C:O2'	6:E:47:LYS:HG3	2.12	0.49
2:B:363:G:H2'	2:B:364:C:H6	1.77	0.49
2:B:440:C:H2'	2:B:441:U:H6	1.77	0.49
2:B:492:A:H2'	2:B:493:G:O4'	2.12	0.49
2:B:532:A:H4'	2:B:533:G:C8	2.46	0.49
2:B:540:C:H2'	2:B:541:A:H8	1.77	0.49
2:B:2097:A:H2'	2:B:2098:U:H6	1.77	0.49
2:B:2247:A:O2'	2:B:2248:C:H5'	2.12	0.49
2:B:2307:G:H2'	2:B:2307:G:N3	2.26	0.49
2:B:2386:A:H2'	2:B:2387:U:C6	2.47	0.49
2:B:2757:A:H2'	2:B:2757:A:N3	2.26	0.49
3:V:17:SER:HB3	3:V:21:ARG:HH12	1.78	0.49
3:V:60:VAL:HG13	3:V:72:VAL:O	2.12	0.49
3:V:77:VAL:HG21	3:V:79:ARG:NH2	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:163:ILE:HG22	4:C:164:VAL:N	2.27	0.49
4:C:217:PRO:C	4:C:219:VAL:H	2.20	0.49
5:D:113:SER:O	5:D:167:ASN:HA	2.13	0.49
6:E:72:SER:C	6:E:73:ILE:HD13	2.37	0.49
9:H:4:ILE:CD1	9:H:44:ILE:HA	2.42	0.49
11:K:85:VAL:O	11:K:87:LEU:HD23	2.11	0.49
13:M:67:VAL:CG2	13:M:95:LEU:HD21	2.42	0.49
16:P:31:VAL:HA	16:P:81:ASP:HA	1.94	0.49
16:P:61:ARG:HH22	16:P:63:ILE:HD11	1.78	0.49
17:Q:16:ILE:HD11	17:Q:31:TYR:CD1	2.47	0.49
20:T:6:ARG:C	20:T:8:LEU:H	2.21	0.49
21:U:43:LYS:HZ3	21:U:45:GLN:HG2	1.77	0.49
22:W:35:ILE:HG13	22:W:36:ILE:N	2.27	0.49
30:5:11:CYS:HB3	30:5:14:CYS:SG	2.52	0.49
32:a:214:C:H2'	32:a:215:C:H6	1.76	0.49
32:a:235:C:H2'	32:a:236:A:C8	2.47	0.49
32:a:272:C:H2'	32:a:273:U:C6	2.45	0.49
32:a:838:G:H2'	32:a:839:C:O4'	2.11	0.49
32:a:841:C:H3'	32:a:843:U:OP2	2.12	0.49
32:a:980:C:C2'	44:n:58:ARG:CD	2.90	0.49
32:a:1007:U:H2'	32:a:1008:U:H6	1.77	0.49
32:a:1148:U:C4	40:j:83:THR:CA	2.93	0.49
32:a:1148:U:O4	40:j:83:THR:HA	2.13	0.49
32:a:1219:A:N9	49:s:7:GLY:C	2.70	0.49
32:a:1236:A:C2	43:m:43:LYS:O	2.60	0.49
32:a:1347:G:N3	39:i:108:ARG:HH22	1.44	0.49
33:c:115:VAL:CG1	33:c:137:VAL:HG13	2.43	0.49
38:h:29:SER:HB3	38:h:32:LYS:HZ2	1.77	0.49
39:i:112:ARG:HB2	39:i:112:ARG:HH11	1.77	0.49
43:m:89:ARG:NH1	43:m:94:LEU:HD13	2.27	0.49
51:7:27:LYS:C	51:7:29:PHE:H	2.21	0.49
51:7:36:LYS:N	51:7:36:LYS:HE3	2.27	0.49
51:7:71:THR:CG2	51:7:94:ARG:HH21	2.25	0.49
51:7:113:LEU:O	51:7:117:GLU:HG3	2.12	0.49
51:7:187:ASP:CG	51:7:188:THR:N	2.70	0.49
52:u:3:ILE:CA	52:u:19:LYS:HG2	2.39	0.49
52:u:8:ASN:O	52:u:9:GLU:HB2	2.12	0.49
2:B:811:U:OP2	12:L:31:GLY:HA2	2.13	0.49
2:B:825:A:H2'	2:B:826:U:O4'	2.12	0.49
2:B:827:U:H5'	2:B:828:U:O5'	2.12	0.49
2:B:1287:A:H3'	2:B:1288:G:N2	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2398:U:H2'	2:B:2399:G:C8	2.48	0.49
2:B:2398:U:H2'	2:B:2399:G:H8	1.77	0.49
2:B:2665:A:O2'	2:B:2666:C:H5'	2.12	0.49
2:B:2756:U:OP2	30:5:19:ARG:HD3	2.12	0.49
4:C:29:PHE:HB2	4:C:31:PRO:HD3	1.94	0.49
5:D:33:ARG:C	5:D:35:THR:H	2.21	0.49
5:D:35:THR:HG22	5:D:46:ARG:NH2	2.26	0.49
5:D:38:LYS:HD3	5:D:38:LYS:N	2.27	0.49
5:D:125:TRP:O	5:D:126:ASN:HB2	2.12	0.49
12:L:51:GLU:O	12:L:52:GLY:C	2.55	0.49
13:M:8:LYS:HE2	13:M:8:LYS:N	2.27	0.49
14:N:22:ARG:HE	14:N:69:ARG:HE	1.58	0.49
18:R:33:VAL:O	18:R:34:GLU:HB2	2.11	0.49
19:S:47:VAL:O	19:S:51:LEU:HB2	2.13	0.49
19:S:86:MET:HB2	19:S:96:ILE:CD1	2.42	0.49
21:U:38:ILE:O	21:U:39:ASN:HB2	2.12	0.49
21:U:78:LYS:CE	21:U:96:LYS:HB2	2.33	0.49
27:2:29:LYS:O	27:2:30:PRO:C	2.55	0.49
32:a:90:C:H2'	32:a:91:U:H6	1.76	0.49
32:a:969:A:N3	32:a:970:C:O2	2.45	0.49
32:a:1235:U:C5'	43:m:54:THR:HG23	2.40	0.49
32:a:1305:G:N3	43:m:21:ILE:HD11	2.27	0.49
32:a:1317:C:C2'	49:s:63:ASP:O	2.59	0.49
32:a:1371:G:OP1	39:i:13:SER:OG	2.23	0.49
33:c:85:LYS:HE3	40:j:60:ASP:OD2	2.13	0.49
34:d:24:VAL:O	34:d:25:ARG:C	2.55	0.49
36:f:48:ALA:HB2	48:r:65:SER:O	2.12	0.49
37:g:144:ALA:C	37:g:146:ALA:N	2.70	0.49
41:k:88:PRO:HA	41:k:92:ARG:HD2	1.93	0.49
41:k:110:THR:HG22	52:u:4:LYS:HA	1.93	0.49
42:l:35:ARG:HG3	42:l:36:VAL:N	2.26	0.49
2:B:141:G:N2	20:T:2:ILE:HG13	2.28	0.49
2:B:279:A:H61	2:B:361:G:H1'	1.76	0.49
2:B:704:G:C2'	2:B:726:G:H22	2.20	0.49
2:B:716:A:H2'	2:B:717:C:O4'	2.11	0.49
2:B:847:U:O2	2:B:847:U:O4'	2.29	0.49
2:B:877:A:C2	2:B:900:A:N7	2.80	0.49
2:B:922:C:H2'	2:B:923:G:H8	1.77	0.49
2:B:1289:C:H2'	2:B:1290:C:C6	2.46	0.49
2:B:2263:C:H2'	2:B:2264:C:H6	1.77	0.49
2:B:2657:A:H2'	2:B:2658:C:O4'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2751:G:OP2	8:G:3:VAL:HG22	2.12	0.49
2:B:2874:C:OP1	14:N:5:LYS:HG2	2.13	0.49
2:B:2888:C:H2'	2:B:2889:C:H6	1.77	0.49
3:V:21:ARG:NH2	3:V:27:PRO:HG3	2.26	0.49
4:C:143:VAL:HG12	4:C:144:GLU:N	2.19	0.49
5:D:118:PHE:HA	5:D:164:GLN:HG3	1.93	0.49
7:F:114:ARG:HE	43:m:98:GLY:CA	2.21	0.49
7:F:151:LEU:HD22	43:m:112:ARG:NH2	2.28	0.49
8:G:37:ASN:HB3	8:G:63:GLN:HE22	1.78	0.49
8:G:102:ILE:O	8:G:113:ASP:HA	2.11	0.49
11:K:11:ALA:HB3	11:K:85:VAL:HG23	1.94	0.49
13:M:130:PHE:CD2	13:M:131:VAL:HG22	2.47	0.49
14:N:45:ARG:HB2	14:N:49:GLU:OE2	2.12	0.49
18:R:72:VAL:HG23	18:R:73:LYS:N	2.27	0.49
19:S:28:LYS:CB	19:S:71:VAL:HB	2.42	0.49
21:U:3:LYS:NZ	21:U:3:LYS:HB2	2.28	0.49
21:U:90:LYS:CD	21:U:91:LYS:HZ3	2.25	0.49
26:1:3:GLN:N	26:1:3:GLN:NE2	2.60	0.49
32:a:613:C:H2'	32:a:614:C:C6	2.46	0.49
32:a:900:A:H2'	32:a:901:A:C8	2.47	0.49
32:a:957:U:H3	32:a:960:U:H5"	1.77	0.49
32:a:1137:C:O2'	32:a:1138:G:H5"	2.12	0.49
32:a:1304:G:HO2'	43:m:52:ILE:CD1	1.14	0.49
32:a:1324:A:H2'	32:a:1325:C:C6	2.46	0.49
32:a:1372:U:C3'	39:i:72:SER:OG	2.55	0.49
33:c:22:PHE:CA	40:j:68:ARG:HB3	2.42	0.49
39:i:87:MET:SD	39:i:94:ARG:HG3	2.53	0.49
43:m:78:ARG:HH22	43:m:82:LEU:HD11	1.78	0.49
43:m:89:ARG:HH11	43:m:94:LEU:HD13	1.76	0.49
49:s:51:HIS:HA	49:s:55:GLN:O	2.12	0.49
51:7:76:SER:HA	51:7:92:ASN:HB2	1.94	0.49
53:v:1:G:H2'	53:v:2:C:H6	1.77	0.49
2:B:443:A:H5"	6:E:44:ARG:NH1	2.24	0.49
2:B:812:C:C5'	12:L:32:GLY:HA2	2.39	0.49
2:B:923:G:O2'	2:B:924:G:H5'	2.13	0.49
2:B:1183:U:H2'	2:B:1184:U:H6	1.78	0.49
2:B:1230:A:H2'	2:B:1231:U:H6	1.77	0.49
2:B:1424:G:H2'	2:B:1425:G:O4'	2.13	0.49
2:B:1684:G:H2'	2:B:1685:C:C6	2.47	0.49
2:B:1821:A:H5'	4:C:155:ARG:NH2	2.27	0.49
2:B:1878:G:H2'	2:B:1879:C:H6	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2471:A:O2'	2:B:2472:G:O5'	2.30	0.49
2:B:2484:G:H4'	13:M:45:GLN:OE1	2.12	0.49
2:B:2683:C:H2'	2:B:2684:U:C6	2.47	0.49
4:C:16:VAL:CA	4:C:17:LYS:HE2	2.42	0.49
5:D:5:VAL:HG11	5:D:28:GLU:CA	2.40	0.49
5:D:11:MET:HE2	5:D:12:THR:O	2.13	0.49
5:D:128:ARG:NE	5:D:129:THR:O	2.45	0.49
5:D:175:LEU:HB3	5:D:189:VAL:CG1	2.41	0.49
8:G:66:THR:O	8:G:70:LEU:HB2	2.13	0.49
8:G:89:VAL:HG21	8:G:162:ARG:HE	1.77	0.49
9:H:21:VAL:HG22	9:H:22:LYS:N	2.21	0.49
10:J:84:ILE:HG22	10:J:85:LYS:N	2.26	0.49
13:M:43:ALA:C	13:M:45:GLN:N	2.68	0.49
16:P:80:VAL:HG13	16:P:80:VAL:O	2.11	0.49
16:P:83:ILE:HB	16:P:85:VAL:HG23	1.93	0.49
16:P:91:VAL:HB	16:P:113:LEU:HB2	1.93	0.49
17:Q:35:PHE:HB3	17:Q:39:ILE:HD12	1.94	0.49
17:Q:112:ALA:HA	17:Q:115:ALA:HB3	1.94	0.49
18:R:65:ALA:O	18:R:66:HIS:HB2	2.11	0.49
20:T:29:THR:HG22	20:T:86:THR:HA	1.94	0.49
20:T:71:GLY:C	20:T:72:GLN:HG3	2.37	0.49
32:a:16:A:N1	32:a:919:A:H2	2.10	0.49
32:a:177:G:OP2	50:t:23:ARG:NH2	2.45	0.49
32:a:182:A:H1'	32:a:183:C:C5	2.47	0.49
32:a:216:U:H2'	32:a:217:C:C6	2.46	0.49
32:a:376:G:OP1	46:p:5:ARG:CA	2.60	0.49
32:a:560:A:H5'	32:a:566:G:N2	2.28	0.49
32:a:633:G:H2'	32:a:634:C:C6	2.47	0.49
32:a:667:G:H4'	45:o:50:HIS:ND1	2.28	0.49
32:a:979:C:C2	44:n:57:SER:HB3	2.47	0.49
32:a:1122:U:H5	40:j:89:ARG:CZ	2.26	0.49
32:a:1237:C:O3'	43:m:10:ASP:OD2	2.30	0.49
32:a:1343:G:H2'	32:a:1344:C:C6	2.46	0.49
33:c:49:ALA:HB1	33:c:75:VAL:CG2	2.40	0.49
33:c:57:GLU:CG	40:j:67:ILE:HD11	2.41	0.49
33:c:149:LYS:HB3	33:c:200:TRP:HB2	1.94	0.49
34:d:17:ASP:HB2	34:d:27:ILE:HG23	1.94	0.49
34:d:116:LEU:HB3	34:d:122:ILE:HD11	1.93	0.49
35:e:89:THR:HG21	35:e:134:ASN:ND2	2.27	0.49
36:f:12:PRO:HG3	36:f:54:LEU:HG	1.94	0.49
39:i:51:LEU:CD1	39:i:82:ILE:HG21	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:k:88:PRO:HB3	52:u:28:LEU:HD13	1.94	0.49
51:7:9:LEU:H	51:7:9:LEU:HD12	1.78	0.49
2:B:92:U:H2'	2:B:93:G:O4'	2.12	0.49
2:B:679:C:O2'	2:B:680:C:H5'	2.13	0.49
2:B:1009:A:O2'	17:Q:61:ILE:HD11	2.13	0.49
2:B:1057:A:C8	2:B:1086:A:C8	3.01	0.49
2:B:1199:U:C1'	17:Q:2:ARG:HB2	2.42	0.49
2:B:1400:U:H2'	2:B:1401:G:H8	1.77	0.49
2:B:1547:C:H2'	2:B:1548:A:C8	2.47	0.49
2:B:1676:A:H1'	5:D:134:HIS:HB3	1.94	0.49
2:B:2016:U:H2'	2:B:2017:U:C6	2.47	0.49
2:B:2192:U:H2'	2:B:2193:G:O4'	2.12	0.49
2:B:2623:G:O2'	2:B:2624:G:H5'	2.12	0.49
2:B:2636:C:H2'	2:B:2637:U:C6	2.47	0.49
3:V:30:ILE:HD11	3:V:63:ILE:HD12	1.94	0.49
3:V:77:VAL:HG12	13:M:133:LYS:HZ1	1.78	0.49
4:C:115:ILE:HG23	4:C:126:GLY:O	2.12	0.49
4:C:172:THR:O	4:C:173:LEU:CB	2.60	0.49
5:D:34:VAL:CG2	5:D:93:GLY:HA3	2.42	0.49
7:F:151:LEU:HD22	43:m:112:ARG:CZ	2.43	0.49
8:G:154:GLU:OE1	8:G:156:TYR:HB2	2.11	0.49
9:H:30:LEU:HD13	9:H:35:LYS:HD3	1.94	0.49
12:L:126:ARG:O	12:L:127:VAL:HG13	2.13	0.49
12:L:133:ALA:HA	12:L:136:GLU:OE2	2.12	0.49
15:O:34:HIS:ND1	15:O:34:HIS:N	2.59	0.49
16:P:45:VAL:HG21	16:P:73:PHE:HD1	1.78	0.49
20:T:69:ARG:N	20:T:75:GLY:HA3	2.27	0.49
26:1:29:VAL:HB	26:1:36:LYS:HD2	1.93	0.49
28:3:25:LYS:HE3	28:3:25:LYS:N	2.28	0.49
31:6:17:ALA:C	31:6:19:PRO:HD2	2.38	0.49
32:a:157:U:O2'	32:a:158:G:H5'	2.13	0.49
32:a:174:A:O2'	32:a:175:C:H5'	2.13	0.49
32:a:556:C:O2'	32:a:557:G:H5'	2.11	0.49
32:a:685:G:O2'	32:a:686:U:H5'	2.12	0.49
32:a:806:C:H2'	32:a:807:A:H8	1.77	0.49
32:a:946:A:C4	43:m:46:GLU:CB	2.85	0.49
32:a:946:A:C4	43:m:46:GLU:HB3	2.42	0.49
32:a:1304:G:C4'	43:m:52:ILE:HG12	2.38	0.49
39:i:64:ILE:HG22	39:i:65:THR:N	2.28	0.49
41:k:125:LYS:O	52:u:33:ARG:NH2	2.44	0.49
46:p:5:ARG:HD2	46:p:5:ARG:H	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:t:68:LYS:HG3	50:t:69:ASN:ND2	2.27	0.49
2:B:13:A:O2'	2:B:15:G:N7	2.43	0.49
2:B:15:G:H2'	2:B:16:C:H6	1.76	0.49
2:B:107:G:H21	2:B:346:A:H62	1.61	0.49
2:B:121:G:H4'	2:B:149:A:H5'	1.94	0.49
2:B:173:A:H2'	2:B:174:U:C6	2.48	0.49
2:B:671:C:H42	12:L:39:LYS:HE3	1.76	0.49
2:B:932:U:H2'	2:B:934:U:C4	2.48	0.49
2:B:1453:A:H61	14:N:74:GLU:HG2	1.73	0.49
2:B:2318:G:O2'	2:B:2319:G:C2	2.65	0.49
2:B:2879:A:H4'	2:B:2880:C:OP1	2.11	0.49
3:V:26:PHE:HZ	3:V:47:VAL:HB	1.77	0.49
4:C:130:PRO:HD2	4:C:133:ASN:HD22	1.77	0.49
4:C:164:VAL:O	4:C:164:VAL:HG12	2.12	0.49
4:C:266:ILE:HG13	4:C:266:ILE:O	2.13	0.49
5:D:111:GLY:HA3	5:D:194:PRO:O	2.13	0.49
5:D:142:VAL:C	5:D:144:GLY:H	2.13	0.49
5:D:172:VAL:HG21	5:D:175:LEU:HD12	1.94	0.49
6:E:85:PHE:O	6:E:86:ALA:C	2.55	0.49
7:F:116:LEU:CA	43:m:100:ARG:CZ	2.90	0.49
7:F:165:GLY:HA2	7:F:168:LEU:HD11	1.95	0.49
10:J:35:ARG:HH21	10:J:40:HIS:H	1.61	0.49
11:K:40:LYS:HA	11:K:59:LYS:HA	1.94	0.49
11:K:119:ALA:N	11:K:120:PRO:CD	2.76	0.49
12:L:21:ARG:HB3	12:L:21:ARG:NH1	2.28	0.49
12:L:82:LEU:HD21	12:L:92:LEU:CD1	2.38	0.49
12:L:85:VAL:N	12:L:86:GLU:HG3	2.28	0.49
13:M:73:ILE:HD13	13:M:90:GLU:HG2	1.94	0.49
15:O:41:ALA:O	15:O:42:PRO:C	2.56	0.49
17:Q:93:ILE:C	17:Q:95:ALA:N	2.69	0.49
19:S:106:VAL:HG12	19:S:107:VAL:N	2.28	0.49
21:U:6:ARG:C	21:U:8:ASP:N	2.71	0.49
22:W:56:HIS:CE1	22:W:58:LEU:HB2	2.48	0.49
28:3:17:GLY:HA2	28:3:21:ARG:HH12	1.76	0.49
32:a:110:C:H2'	32:a:111:G:O4'	2.12	0.49
32:a:708:C:H2'	32:a:709:U:C6	2.47	0.49
32:a:782:A:H2'	32:a:783:C:O4'	2.13	0.49
32:a:976:G:C5	44:n:69:PRO:CG	2.81	0.49
32:a:1074:G:H5'	51:7:104:LYS:HZ1	1.77	0.49
32:a:1121:U:N3	40:j:91:ASP:CG	2.71	0.49
32:a:1143:G:H22	40:j:80:THR:HG23	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1172:C:H2'	32:a:1173:U:H6	1.76	0.49
32:a:1217:C:O2'	44:n:48:GLN:CD	2.55	0.49
32:a:1335:U:P	43:m:11:HIS:HA	2.53	0.49
32:a:1337:G:C2	43:m:46:GLU:N	2.81	0.49
32:a:1481:U:H2'	32:a:1482:G:C8	2.47	0.49
33:c:63:ILE:HG13	40:j:64:GLN:C	2.38	0.49
33:c:150:VAL:HG12	33:c:151:GLU:H	1.77	0.49
34:d:2:ARG:O	34:d:3:TYR:HB2	2.11	0.49
41:k:22:ILE:CG2	41:k:95:THR:HG21	2.35	0.49
46:p:67:ILE:HG13	46:p:71:VAL:CG1	2.42	0.49
2:B:41:C:O2'	2:B:42:A:H5'	2.13	0.49
2:B:207:A:H2'	2:B:208:C:O4'	2.12	0.49
2:B:233:A:H61	2:B:428:A:H61	1.61	0.49
2:B:565:C:O2'	2:B:566:U:H5'	2.13	0.49
2:B:757:G:H2'	2:B:758:C:H5'	1.95	0.49
2:B:1171:G:H2'	2:B:1172:C:C1'	2.43	0.49
2:B:1560:G:H2'	2:B:1561:C:C6	2.47	0.49
2:B:1599:U:H2'	2:B:1600:C:H6	1.78	0.49
2:B:1619:G:O2'	28:3:1:MET:HE2	2.12	0.49
2:B:1812:U:H2'	2:B:1813:G:H8	1.78	0.49
2:B:1919:A:H2'	2:B:1920:C:H5'	1.95	0.49
2:B:2899:A:H2'	2:B:2900:A:C8	2.47	0.49
3:V:6:ALA:HB3	3:V:65:VAL:CG1	2.42	0.49
4:C:4:LYS:HG3	4:C:5:CYS:SG	2.53	0.49
4:C:16:VAL:HA	4:C:17:LYS:HE2	1.95	0.49
10:J:35:ARG:NH2	10:J:40:HIS:N	2.60	0.49
12:L:103:ILE:CD1	12:L:105:ILE:H	2.24	0.49
13:M:22:GLN:HG2	13:M:23:GLY:N	2.27	0.49
13:M:65:ILE:HG22	13:M:101:VAL:HG12	1.95	0.49
13:M:101:VAL:C	13:M:102:LEU:HD12	2.37	0.49
14:N:65:LEU:CD1	14:N:68:ALA:HB3	2.42	0.49
16:P:85:VAL:O	16:P:87:ARG:NH1	2.46	0.49
19:S:56:ALA:C	19:S:58:ALA:N	2.70	0.49
23:X:22:LEU:CD2	23:X:25:GLN:HB3	2.43	0.49
24:Y:8:GLN:O	24:Y:55:LYS:HE2	2.12	0.49
29:4:3:ILE:HD13	29:4:3:ILE:N	2.27	0.49
30:5:24:ARG:NH1	30:5:36:ARG:HB2	2.24	0.49
31:6:75:ALA:CB	31:6:131:THR:HG21	2.43	0.49
32:a:947:G:H4'	43:m:15:VAL:N	2.26	0.49
32:a:968:A:P	39:i:129:ARG:HD2	2.51	0.49
32:a:981:U:H5"	44:n:53:ASP:C	2.37	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1127:G:N7	40:j:36:VAL:N	2.60	0.49
32:a:1151:A:H61	40:j:89:ARG:CA	2.19	0.49
32:a:1232:U:H5"	39:i:125:GLN:HG3	1.94	0.49
33:c:83:VAL:HA	40:j:52:LEU:HA	1.47	0.49
33:c:113:LYS:HG3	33:c:117:ASP:OD2	2.13	0.49
34:d:11:SER:HB2	34:d:20:LEU:HD11	1.93	0.49
34:d:69:ARG:HE	34:d:69:ARG:CA	2.25	0.49
35:e:114:LEU:C	35:e:116:VAL:H	2.21	0.49
39:i:18:VAL:HG21	39:i:82:ILE:CG1	2.43	0.49
40:j:57:VAL:HG13	40:j:58:ASN:N	2.27	0.49
46:p:29:ASN:HD22	46:p:29:ASN:N	2.11	0.49
1:A:29:A:H3'	1:A:30:C:C6	2.45	0.49
2:B:559:G:H1'	17:Q:55:GLN:HE22	1.76	0.49
2:B:875:G:H2'	2:B:876:C:O2	2.13	0.49
2:B:991:C:H2'	2:B:992:C:C6	2.48	0.49
2:B:1010:A:O2'	2:B:1152:C:H1'	2.12	0.49
2:B:1144:A:O2'	2:B:1145:C:H5'	2.13	0.49
2:B:1430:G:H2'	2:B:1431:A:C8	2.48	0.49
2:B:1450:G:N2	2:B:1452:G:N1	2.55	0.49
2:B:1692:U:H2'	2:B:1694:C:C5	2.47	0.49
2:B:1729:U:C5	2:B:1730:C:H1'	2.48	0.49
2:B:1797:G:OP1	4:C:251:THR:HG23	2.12	0.49
2:B:2322:A:N6	2:B:2333:A:H62	2.11	0.49
2:B:2331:G:C5'	22:W:70:VAL:HG13	2.43	0.49
2:B:2334:U:OP2	15:O:7:ARG:HA	2.13	0.49
2:B:2840:C:H2'	2:B:2841:C:C6	2.47	0.49
4:C:137:GLY:C	4:C:139:THR:N	2.69	0.49
4:C:174:ARG:HG3	4:C:180:MET:SD	2.53	0.49
4:C:242:HIS:N	4:C:242:HIS:ND1	2.60	0.49
4:C:248:GLY:HA3	4:C:252:LYS:HE3	1.95	0.49
5:D:33:ARG:HG3	5:D:93:GLY:CA	2.41	0.49
5:D:61:THR:HB	5:D:62:LYS:CE	2.43	0.49
6:E:13:THR:HG22	6:E:119:ILE:HD12	1.94	0.49
8:G:84:LYS:O	8:G:132:LEU:HG	2.12	0.49
9:H:55:GLU:C	9:H:57:LYS:N	2.70	0.49
10:J:52:ASP:CG	10:J:53:TYR:H	2.20	0.49
12:L:110:VAL:HB	12:L:126:ARG:HH22	1.76	0.49
13:M:29:GLY:HA3	13:M:104:GLU:OE2	2.12	0.49
14:N:75:ILE:HD13	14:N:75:ILE:C	2.37	0.49
19:S:28:LYS:HB3	19:S:71:VAL:CG2	2.43	0.49
25:Z:29:GLY:C	25:Z:30:HIS:CG	2.91	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:2:15:GLY:HA3	27:2:47:ILE:HD12	1.95	0.49
32:a:235:C:H2'	32:a:236:A:H8	1.78	0.49
32:a:413:G:O6	34:d:30:LYS:HA	2.13	0.49
32:a:966:G:N3	53:v:34:G:H5'	2.28	0.49
32:a:1096:C:O2'	32:a:1097:C:H5'	2.12	0.49
32:a:1126:U:H3'	40:j:36:VAL:N	1.68	0.49
32:a:1271:A:H2'	32:a:1272:G:H8	1.78	0.49
32:a:1343:G:H2'	32:a:1344:C:H6	1.78	0.49
32:a:1464:U:H2'	32:a:1465:A:C8	2.48	0.49
33:c:100:ILE:CG1	40:j:63:ASP:HB2	2.24	0.49
34:d:51:GLY:O	34:d:55:ARG:HB2	2.12	0.49
36:f:54:LEU:HD13	36:f:55:HIS:H	1.77	0.49
40:j:41:PRO:O	40:j:71:LEU:HD13	2.13	0.49
41:k:52:ARG:O	41:k:54:SER:N	2.46	0.49
42:l:35:ARG:O	42:l:52:CYS:HB2	2.13	0.49
47:q:8:GLN:HB3	47:q:57:VAL:HG13	1.95	0.49
49:s:64:GLU:OE1	49:s:65:MET:HG3	2.12	0.49
2:B:7:G:H2'	2:B:8:C:O4'	2.13	0.49
2:B:589:U:H2'	2:B:590:A:H8	1.76	0.49
2:B:1018:U:O2'	2:B:1019:U:H5'	2.13	0.49
2:B:1225:G:H5"	18:R:78:ARG:HH22	1.78	0.49
2:B:1311:G:H21	2:B:1603:A:H62	1.60	0.49
2:B:1957:C:H2'	2:B:1958:C:C6	2.48	0.49
3:V:78:GLN:HB2	3:V:88:HIS:O	2.13	0.49
4:C:168:GLY:C	4:C:170:TYR:H	2.21	0.49
5:D:13:ARG:HA	5:D:13:ARG:NH1	2.27	0.49
5:D:200:ASP:O	5:D:201:LEU:HB2	2.13	0.49
7:F:33:ILE:HG13	7:F:34:THR:N	2.27	0.49
12:L:4:ASN:C	12:L:6:LEU:H	2.20	0.49
13:M:42:THR:HG23	13:M:45:GLN:H	1.77	0.49
13:M:65:ILE:HA	13:M:101:VAL:HA	1.94	0.49
15:O:8:ILE:C	15:O:10:ARG:N	2.71	0.49
17:Q:13:HIS:O	17:Q:17:LEU:HB2	2.13	0.49
23:X:45:GLN:H	23:X:45:GLN:HE21	1.61	0.49
23:X:47:ARG:O	23:X:47:ARG:HG2	2.13	0.49
25:Z:24:ILE:HG12	25:Z:25:ARG:N	2.28	0.49
26:1:35:GLU:OE2	26:1:43:THR:HG22	2.13	0.49
32:a:462:G:H3'	32:a:463:U:H5"	1.95	0.49
32:a:575:G:H4'	32:a:576:C:O5'	2.13	0.49
32:a:1125:U:O5'	40:j:76:ILE:CG1	2.57	0.49
32:a:1127:G:H21	40:j:83:THR:HB	1.75	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1128:C:C4	40:j:33:GLY:C	2.83	0.49
32:a:1305:G:H3'	43:m:55:LEU:O	2.13	0.49
32:a:1306:A:C4'	43:m:33:LEU:HG	2.40	0.49
32:a:1321:U:N3	49:s:2:ARG:CG	2.49	0.49
32:a:1322:C:N3	49:s:2:ARG:O	2.28	0.49
32:a:1329:A:O2'	32:a:1330:U:H5'	2.13	0.49
32:a:1332:A:H5'	43:m:19:THR:C	2.34	0.49
32:a:1526:G:O2'	32:a:1527:U:H5'	2.13	0.49
33:c:100:ILE:HG21	40:j:63:ASP:N	2.24	0.49
33:c:122:GLN:HE22	33:c:136:ALA:HB1	1.78	0.49
35:e:33:THR:O	35:e:34:ALA:CB	2.61	0.49
51:7:15:PHE:HD1	51:7:16:GLY:H	1.61	0.49
51:7:35:ASN:O	51:7:36:LYS:HB2	2.13	0.49
2:B:38:A:H1'	6:E:44:ARG:HA	1.95	0.48
2:B:689:A:H2'	2:B:690:G:C8	2.48	0.48
2:B:782:A:O2'	4:C:223:ALA:HB1	2.13	0.48
2:B:1112:G:C5'	8:G:2:ARG:HE	2.25	0.48
2:B:1220:G:H2'	2:B:1221:C:H6	1.77	0.48
2:B:1563:U:H2'	2:B:1564:C:C6	2.48	0.48
2:B:1957:C:H2'	2:B:1958:C:H6	1.77	0.48
2:B:2047:C:OP1	26:1:15:ARG:HD2	2.13	0.48
2:B:2053:G:OP1	5:D:149:ASN:C	2.56	0.48
2:B:2053:G:O2'	2:B:2054:A:H5'	2.13	0.48
2:B:2821:A:H2'	2:B:2822:G:C8	2.48	0.48
3:V:77:VAL:HG13	13:M:134:THR:O	2.13	0.48
9:H:69:ALA:CB	9:H:140:ALA:HA	2.43	0.48
12:L:64:PHE:H	29:4:24:LYS:HD2	1.78	0.48
12:L:77:ILE:HG22	12:L:78:ARG:NH2	2.28	0.48
12:L:124:GLY:O	12:L:125:LEU:HB2	2.13	0.48
13:M:2:LEU:HB3	13:M:4:PRO:HD2	1.94	0.48
14:N:101:GLY:H	14:N:110:MET:HB2	1.78	0.48
14:N:116:VAL:O	14:N:117:ASP:HB2	2.13	0.48
19:S:28:LYS:HA	19:S:31:GLN:HB2	1.95	0.48
20:T:1:MET:CE	20:T:2:ILE:HB	2.38	0.48
20:T:58:VAL:HA	20:T:85:VAL:HA	1.95	0.48
21:U:78:LYS:HB3	21:U:96:LYS:CB	2.43	0.48
22:W:66:VAL:O	22:W:67:LYS:C	2.56	0.48
26:1:28:SER:O	26:1:36:LYS:HB2	2.12	0.48
29:4:41:ARG:HB3	29:4:43:LEU:CD2	2.42	0.48
31:6:7:TYR:CD1	31:6:7:TYR:C	2.91	0.48
32:a:31:G:H2'	32:a:48:C:H5	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:764:C:H3'	32:a:765:G:N2	2.25	0.48
32:a:845:A:O3'	48:r:47:ARG:CZ	2.61	0.48
32:a:946:A:C6	43:m:46:GLU:O	2.66	0.48
32:a:984:C:H41	44:n:52:ARG:NH1	2.11	0.48
32:a:1148:U:C5	40:j:83:THR:HA	2.47	0.48
32:a:1232:U:H5"	39:i:125:GLN:C	2.38	0.48
32:a:1255:G:OP2	44:n:65:GLN:OE1	2.31	0.48
32:a:1257:A:C2'	44:n:74:ARG:HD3	2.40	0.48
32:a:1397:C:H4'	32:a:1398:A:OP2	2.13	0.48
38:h:29:SER:HB3	38:h:32:LYS:HG3	1.95	0.48
39:i:32:ARG:HD3	39:i:37:TYR:HD1	1.78	0.48
39:i:118:ARG:HH22	39:i:122:ARG:NH2	2.10	0.48
40:j:41:PRO:O	40:j:42:LEU:HB2	2.12	0.48
47:q:23:ALA:HB1	47:q:40:THR:HG23	1.94	0.48
53:v:74:C:H5'	53:v:75:C:OP2	2.07	0.48
1:A:52:A:H3'	1:A:53:A:C8	2.47	0.48
2:B:162:U:O2'	2:B:163:C:H5'	2.13	0.48
2:B:587:C:O5'	2:B:587:C:H6	1.97	0.48
2:B:807:U:O2'	2:B:808:G:H5'	2.14	0.48
2:B:918:A:H2'	2:B:919:U:H5'	1.95	0.48
2:B:962:G:N2	13:M:81:ARG:HH21	2.11	0.48
2:B:1359:A:H2'	2:B:1360:G:O4'	2.13	0.48
2:B:1560:G:H2'	2:B:1561:C:H6	1.78	0.48
2:B:2045:C:H5"	26:1:14:MET:HE3	1.95	0.48
2:B:2185:U:H2'	2:B:2186:G:H8	1.78	0.48
2:B:2195:U:H2'	2:B:2196:C:H6	1.76	0.48
2:B:2512:C:O2'	5:D:146:ILE:HG21	2.13	0.48
2:B:2848:G:C5	16:P:96:LEU:HD23	2.48	0.48
7:F:38:GLY:O	7:F:39:VAL:C	2.54	0.48
7:F:77:LYS:CD	53:v:19:G:C4	2.97	0.48
7:F:105:ILE:HG21	43:m:113:LYS:N	2.28	0.48
8:G:85:LYS:HB2	8:G:164:ALA:HB2	1.94	0.48
12:L:27:LEU:HB2	12:L:28:GLY:H	1.39	0.48
13:M:42:THR:O	13:M:44:ARG:N	2.41	0.48
16:P:7:LEU:O	16:P:11:GLN:HG2	2.13	0.48
16:P:52:ARG:HH11	16:P:54:LEU:HB2	1.78	0.48
23:X:36:GLN:H	23:X:36:GLN:CD	2.21	0.48
24:Y:6:ILE:HD13	24:Y:6:ILE:N	2.28	0.48
25:Z:49:ARG:O	25:Z:51:VAL:HG23	2.13	0.48
25:Z:59:ARG:NE	25:Z:62:LYS:HD2	2.26	0.48
32:a:34:C:H2'	32:a:35:G:C8	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:179:A:H2'	32:a:180:U:C6	2.48	0.48
32:a:218:U:H2'	32:a:219:U:H6	1.77	0.48
32:a:238:A:C2'	32:a:239:U:H5"	2.43	0.48
32:a:333:U:H2'	32:a:334:C:H6	1.79	0.48
32:a:426:U:H2'	32:a:427:U:C6	2.48	0.48
32:a:537:G:H2'	32:a:538:G:H8	1.78	0.48
32:a:600:A:H2'	32:a:601:G:C8	2.48	0.48
32:a:636:U:H2'	32:a:637:C:H6	1.78	0.48
32:a:806:C:H2'	32:a:807:A:C8	2.48	0.48
32:a:829:G:H4'	51:7:24:PRO:HG3	1.96	0.48
32:a:837:U:H2'	32:a:838:G:H8	1.77	0.48
32:a:915:A:H2'	32:a:916:U:H5'	1.94	0.48
32:a:1280:A:C5	40:j:30:LYS:HB3	2.48	0.48
32:a:1284:C:H3'	32:a:1285:A:C5'	2.42	0.48
33:c:67:ILE:CG1	40:j:63:ASP:CG	2.75	0.48
35:e:17:VAL:HA	35:e:34:ALA:HA	1.93	0.48
37:g:131:GLY:O	37:g:134:VAL:HG12	2.13	0.48
38:h:17:GLN:NE2	38:h:69:ALA:HB1	2.28	0.48
39:i:4:GLN:NE2	39:i:21:LYS:HE3	2.28	0.48
41:k:30:ILE:HG22	41:k:45:THR:CA	2.41	0.48
41:k:121:ARG:HG3	41:k:121:ARG:NH1	2.29	0.48
47:q:10:ARG:NE	47:q:10:ARG:CA	2.76	0.48
47:q:60:ILE:HB	47:q:72:TRP:HE3	1.78	0.48
47:q:68:LYS:O	47:q:69:THR:CB	2.61	0.48
48:r:40:PRO:HD2	48:r:43:ILE:HD11	1.94	0.48
51:7:162:VAL:HG21	51:7:168:GLU:HB2	1.95	0.48
51:7:218:ALA:HA	51:7:221:ARG:HE	1.76	0.48
2:B:100:U:H4'	21:U:90:LYS:CD	2.44	0.48
2:B:208:C:H2'	2:B:209:C:H6	1.78	0.48
2:B:235:U:H2'	2:B:236:C:C6	2.47	0.48
2:B:582:A:H2'	2:B:583:G:C8	2.49	0.48
2:B:727:A:OP1	2:B:1431:A:O2'	2.27	0.48
2:B:1199:U:H1'	17:Q:2:ARG:HB2	1.95	0.48
2:B:1652:A:H62	14:N:11:ASN:HD21	1.61	0.48
2:B:1789:A:H5'	4:C:220:ARG:HH21	1.78	0.48
2:B:2602:A:P	53:v:74:C:C4'	2.98	0.48
2:B:2671:G:H2'	2:B:2672:U:C6	2.49	0.48
5:D:61:THR:H	5:D:62:LYS:HE3	1.77	0.48
5:D:170:VAL:HG21	5:D:194:PRO:CG	2.42	0.48
5:D:170:VAL:CG1	5:D:171:THR:H	2.10	0.48
8:G:136:ASP:O	8:G:140:ILE:HG23	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:H:11:ASN:C	9:H:13:GLY:H	2.21	0.48
9:H:82:SER:HB3	9:H:90:LEU:CD2	2.43	0.48
11:K:108:ARG:HH21	16:P:36:LYS:HG3	1.77	0.48
13:M:95:LEU:HD22	13:M:98:PRO:HG3	1.94	0.48
14:N:17:ARG:O	14:N:21:PHE:HB2	2.14	0.48
14:N:99:LYS:CE	26:1:39:ARG:HH12	2.27	0.48
17:Q:105:PHE:O	17:Q:109:VAL:HG13	2.13	0.48
19:S:32:ALA:HA	19:S:51:LEU:HD11	1.94	0.48
20:T:31:VAL:CG1	20:T:82:LYS:HE3	2.44	0.48
21:U:5:ARG:HG2	21:U:6:ARG:N	2.28	0.48
21:U:44:HIS:ND1	21:U:56:GLY:HA3	2.27	0.48
22:W:2:HIS:CE1	22:W:4:LYS:HB3	2.48	0.48
25:Z:68:GLY:O	25:Z:69:SER:C	2.56	0.48
30:5:7:VAL:HG12	30:5:8:LYS:H	1.79	0.48
32:a:5:U:H1'	32:a:6:G:C2	2.48	0.48
32:a:406:G:H21	34:d:115:GLN:CD	2.22	0.48
32:a:513:C:H2'	32:a:514:C:C6	2.48	0.48
32:a:659:U:H2'	32:a:660:C:C6	2.49	0.48
32:a:677:U:H2'	32:a:678:U:C6	2.48	0.48
32:a:750:C:O2'	45:o:22:GLY:CA	2.62	0.48
32:a:812:G:N3	32:a:812:G:C2'	2.76	0.48
32:a:1018:G:H2'	32:a:1019:A:C8	2.48	0.48
32:a:1072:G:H2'	32:a:1073:U:C6	2.48	0.48
32:a:1150:A:O2'	40:j:22:THR:O	2.31	0.48
32:a:1256:A:OP1	44:n:78:LEU:CG	2.51	0.48
32:a:1285:A:H62	32:a:1355:G:H4'	1.76	0.48
32:a:1329:A:N1	43:m:23:GLY:O	2.44	0.48
32:a:1330:U:H3	43:m:24:VAL:HG13	0.43	0.48
33:c:63:ILE:HG22	40:j:66:GLU:OE1	2.04	0.48
50:t:40:ALA:O	50:t:41:GLY:C	2.56	0.48
50:t:61:ALA:HA	50:t:66:ILE:O	2.13	0.48
53:v:5:G:N3	53:v:69:G:C2	2.81	0.48
2:B:673:C:H5"	6:E:76:PRO:HD2	1.96	0.48
2:B:1055:G:O2'	2:B:1085:A:C2	2.66	0.48
2:B:1188:U:H4'	18:R:83:TYR:CB	2.42	0.48
2:B:1629:U:O2	2:B:2698:U:H5"	2.13	0.48
2:B:1719:G:O2'	2:B:1720:U:H5'	2.13	0.48
2:B:1948:G:O2'	2:B:1949:G:H5'	2.13	0.48
2:B:2648:G:H2'	2:B:2649:C:C6	2.48	0.48
2:B:2684:U:OP1	16:P:59:THR:HG22	2.12	0.48
4:C:141:HIS:N	4:C:193:GLU:OE2	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:262:THR:O	4:C:262:THR:HG23	2.14	0.48
5:D:128:ARG:HH12	5:D:130:GLN:NE2	2.09	0.48
7:F:144:LYS:HG2	7:F:144:LYS:O	2.13	0.48
9:H:81:ALA:CB	9:H:147:VAL:H	2.25	0.48
9:H:84:ALA:CA	9:H:90:LEU:HG	2.39	0.48
11:K:26:GLY:HA3	11:K:30:ARG:NE	2.17	0.48
11:K:98:ARG:CZ	32:a:339:C:OP1	2.61	0.48
13:M:73:ILE:CD1	13:M:92:TRP:H	2.27	0.48
13:M:86:LYS:HD2	13:M:86:LYS:H	1.78	0.48
18:R:76:LYS:HE3	18:R:78:ARG:HD2	1.95	0.48
22:W:27:GLY:HA2	22:W:60:ALA:CA	2.39	0.48
22:W:44:PHE:CE2	22:W:80:SER:HA	2.49	0.48
26:1:27:LEU:C	26:1:36:LYS:HD3	2.38	0.48
27:2:7:LYS:HD2	27:2:8:ILE:O	2.12	0.48
31:6:19:PRO:HB2	31:6:22:PRO:HD2	1.95	0.48
32:a:87:C:N3	32:a:88:U:H1'	2.28	0.48
32:a:192:A:O2'	50:t:54:GLN:OE1	2.20	0.48
32:a:220:G:O2'	32:a:221:C:H5'	2.12	0.48
32:a:254:G:O2'	32:a:255:G:H5'	2.13	0.48
32:a:255:G:H2'	32:a:256:U:C6	2.48	0.48
32:a:537:G:H2'	32:a:538:G:C8	2.47	0.48
32:a:948:C:P	43:m:38:ILE:O	2.70	0.48
32:a:978:A:O2'	49:s:2:ARG:HB3	2.13	0.48
32:a:1150:A:C1'	40:j:25:ILE:O	2.55	0.48
32:a:1221:G:H2'	49:s:3:SER:HB2	1.93	0.48
32:a:1305:G:C2	43:m:21:ILE:HD11	2.48	0.48
32:a:1478:U:H2'	32:a:1479:C:C6	2.48	0.48
33:c:66:THR:HA	33:c:101:ASN:O	2.14	0.48
34:d:194:ILE:HD11	34:d:199:ILE:HD11	1.95	0.48
37:g:87:PRO:CG	37:g:151:ALA:HB2	2.41	0.48
38:h:11:THR:HG22	38:h:15:ASN:ND2	2.29	0.48
41:k:82:GLU:HG3	41:k:107:THR:OG1	2.13	0.48
43:m:58:GLU:HA	43:m:61:LYS:HE2	1.94	0.48
44:n:74:ARG:HD3	44:n:74:ARG:O	2.13	0.48
49:s:12:LEU:O	49:s:15:LEU:HB3	2.13	0.48
51:7:60:ALA:HB3	51:7:223:GLY:HA3	1.95	0.48
51:7:215:ALA:O	51:7:218:ALA:HB3	2.13	0.48
53:v:63:G:H2'	53:v:64:A:O4'	2.14	0.48
2:B:39:G:H2'	2:B:40:U:C6	2.48	0.48
2:B:39:G:H2'	2:B:40:U:H6	1.78	0.48
2:B:125:A:H4'	28:3:13:ASN:OD1	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:350:G:H2'	2:B:351:C:C6	2.49	0.48
2:B:1661:G:O2'	2:B:1662:U:H5'	2.13	0.48
2:B:2197:U:O2'	2:B:2198:A:H2'	2.13	0.48
4:C:13:ARG:O	4:C:15:VAL:HG23	2.14	0.48
4:C:216:ARG:HB3	4:C:217:PRO:HD2	1.94	0.48
5:D:83:ARG:O	5:D:84:LEU:HB3	2.12	0.48
5:D:170:VAL:HG11	5:D:194:PRO:HB2	1.95	0.48
6:E:6:LYS:HB2	6:E:12:LEU:CD1	2.42	0.48
6:E:43:THR:HG1	6:E:44:ARG:HH21	1.60	0.48
9:H:4:ILE:O	9:H:37:VAL:HG12	2.14	0.48
11:K:103:VAL:HG22	11:K:121:GLU:O	2.13	0.48
12:L:81:ASP:O	12:L:82:LEU:C	2.54	0.48
13:M:95:LEU:HD22	13:M:98:PRO:CG	2.44	0.48
14:N:46:ARG:O	14:N:50:PRO:HG2	2.14	0.48
17:Q:5:ARG:O	17:Q:6:GLY:C	2.57	0.48
20:T:8:LEU:HD23	20:T:8:LEU:N	2.27	0.48
20:T:84:TYR:C	20:T:85:VAL:HG13	2.39	0.48
22:W:44:PHE:CD2	22:W:60:ALA:HB3	2.48	0.48
25:Z:8:LYS:HD2	25:Z:9:TYR:N	2.28	0.48
28:3:35:ARG:NH1	28:3:39:ARG:HA	2.28	0.48
29:4:44:ARG:CB	29:4:45:PRO:HD2	2.43	0.48
32:a:265:G:H2'	32:a:267:C:H5	1.78	0.48
32:a:796:C:H5'	41:k:128:VAL:CG1	2.34	0.48
32:a:911:U:H2'	32:a:912:C:C6	2.49	0.48
32:a:1014:A:O4'	49:s:10:ILE:HD12	2.07	0.48
32:a:1150:A:C5'	40:j:27:GLU:OE1	2.62	0.48
32:a:1152:A:C8	40:j:92:LEU:CD2	2.88	0.48
32:a:1235:U:C6	43:m:49:GLU:C	2.84	0.48
32:a:1330:U:C4	43:m:64:VAL:CG2	2.96	0.48
32:a:1330:U:O4	43:m:64:VAL:HG22	2.11	0.48
32:a:1334:G:OP2	43:m:12:LYS:HD3	2.13	0.48
32:a:1360:A:C5'	44:n:61:ASN:HB2	2.43	0.48
38:h:24:VAL:CG1	38:h:60:LEU:HB2	2.43	0.48
39:i:53:LEU:O	39:i:53:LEU:HD13	2.12	0.48
40:j:48:ARG:HA	40:j:66:GLU:HA	1.95	0.48
47:q:29:LYS:HA	47:q:35:LYS:C	2.39	0.48
51:7:22:TRP:CG	51:7:23:ASN:N	2.81	0.48
2:B:296:U:H2'	2:B:297:G:C8	2.48	0.48
2:B:299:A:N6	2:B:322:A:H1'	2.28	0.48
2:B:401:A:H2'	2:B:402:A:C8	2.49	0.48
2:B:580:U:O2'	2:B:581:C:H5'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:765:C:H2'	2:B:766:U:C6	2.48	0.48
2:B:773:U:H4'	4:C:47:ARG:HA	1.95	0.48
2:B:817:C:O2'	2:B:839:U:H5"	2.12	0.48
2:B:831:G:O3'	12:L:44:GLY:HA3	2.13	0.48
2:B:1205:A:H4'	2:B:1206:G:OP2	2.14	0.48
2:B:1947:C:O2'	2:B:1948:G:H5'	2.13	0.48
2:B:2692:G:O2'	2:B:2693:G:H5'	2.14	0.48
4:C:24:HIS:HB2	4:C:27:LYS:HE3	1.96	0.48
4:C:168:GLY:O	4:C:169:ALA:HB3	2.14	0.48
4:C:179:GLU:OE2	4:C:267:VAL:HG22	2.14	0.48
6:E:78:TRP:N	6:E:78:TRP:HE3	2.12	0.48
7:F:14:LYS:O	7:F:18:GLU:HB3	2.13	0.48
7:F:75:GLY:O	7:F:76:PHE:HB2	2.13	0.48
9:H:15:LEU:O	9:H:47:PHE:HE1	1.96	0.48
10:J:15:TRP:HB3	10:J:53:TYR:CE2	2.48	0.48
13:M:62:LYS:CB	13:M:104:GLU:HB2	2.44	0.48
16:P:29:VAL:O	16:P:30:TRP:C	2.56	0.48
17:Q:47:ARG:HH12	17:Q:50:ARG:HD2	1.79	0.48
18:R:5:PHE:N	18:R:12:HIS:CB	2.77	0.48
23:X:38:GLN:HG2	23:X:39:GLN:N	2.29	0.48
31:6:49:GLU:HG2	31:6:54:ILE:HD11	1.94	0.48
32:a:79:G:H2'	32:a:80:A:O4'	2.13	0.48
32:a:208:U:C2'	32:a:209:U:H5"	2.43	0.48
32:a:734:G:H2'	32:a:735:C:C6	2.49	0.48
32:a:982:U:C2'	44:n:58:ARG:NH2	2.75	0.48
32:a:1002:G:H2'	32:a:1002:G:N3	2.27	0.48
32:a:1231:G:C4'	39:i:127:SER:HB2	2.42	0.48
32:a:1259:C:C5	44:n:76:PHE:HE1	2.32	0.48
32:a:1304:G:C4'	43:m:56:ARG:HH21	2.26	0.48
32:a:1308:U:O5'	43:m:28:ARG:HA	2.13	0.48
33:c:8:GLY:HA2	33:c:11:LEU:CG	2.41	0.48
33:c:73:GLY:O	40:j:55:PRO:N	2.39	0.48
33:c:85:LYS:O	33:c:89:VAL:HG23	2.13	0.48
36:f:75:GLU:O	36:f:79:ARG:HG2	2.14	0.48
41:k:15:VAL:HG11	41:k:35:ASP:HB2	1.94	0.48
52:u:3:ILE:HA	52:u:19:LYS:CG	2.37	0.48
52:u:31:VAL:O	52:u:32:ARG:C	2.57	0.48
1:A:27:C:H3'	1:A:28:C:H6	1.78	0.48
1:A:30:C:H1'	1:A:58:A:N1	2.29	0.48
2:B:189:G:OP1	25:Z:24:ILE:HD12	2.13	0.48
2:B:273:G:H2'	2:B:274:C:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:898:C:N3	2:B:899:A:N6	2.61	0.48
2:B:1230:A:H2'	2:B:1231:U:C6	2.49	0.48
2:B:1526:C:H2'	2:B:1527:G:O4'	2.13	0.48
2:B:1666:G:O2'	2:B:1667:G:H5'	2.12	0.48
2:B:1965:C:H5"	2:B:1966:A:H2'	1.96	0.48
2:B:2152:G:H2'	2:B:2153:C:C6	2.49	0.48
3:V:72:VAL:O	3:V:94:ALA:HB2	2.14	0.48
4:C:10:PRO:CD	4:C:202:ARG:HH12	2.27	0.48
5:D:13:ARG:CZ	16:P:8:GLU:HB3	2.43	0.48
5:D:84:LEU:O	5:D:85:ALA:HB3	2.14	0.48
5:D:127:PHE:O	5:D:128:ARG:HB2	2.14	0.48
6:E:151:GLY:HA2	6:E:171:ASP:HA	1.95	0.48
7:F:77:LYS:HZ1	7:F:79:ARG:HE	1.61	0.48
8:G:75:VAL:HG23	8:G:76:ILE:N	2.28	0.48
9:H:1:MET:N	9:H:23:ALA:HB2	2.29	0.48
9:H:37:VAL:O	9:H:38:PRO:C	2.56	0.48
11:K:20:MET:O	11:K:42:THR:N	2.47	0.48
12:L:133:ALA:C	12:L:136:GLU:HG2	2.39	0.48
16:P:13:LYS:HE3	16:P:77:SER:HB3	1.96	0.48
17:Q:59:LEU:HD11	17:Q:63:ARG:NH2	2.29	0.48
17:Q:92:LYS:CG	17:Q:93:ILE:N	2.75	0.48
18:R:58:VAL:HG22	18:R:59:ILE:N	2.28	0.48
21:U:60:LYS:HG3	21:U:61:GLU:N	2.28	0.48
22:W:30:VAL:CG1	22:W:31:LEU:N	2.76	0.48
23:X:30:MET:CG	23:X:31:GLN:H	2.11	0.48
24:Y:9:THR:HB	24:Y:53:MET:O	2.12	0.48
27:2:15:GLY:CA	27:2:47:ILE:HD12	2.44	0.48
31:6:48:ILE:O	31:6:49:GLU:HB3	2.14	0.48
32:a:182:A:H1'	32:a:183:C:H5	1.79	0.48
32:a:437:U:O2'	34:d:119:HIS:CD2	2.67	0.48
32:a:980:C:C2'	44:n:58:ARG:HB2	2.40	0.48
32:a:1109:C:N4	32:a:1110:A:N6	2.62	0.48
32:a:1137:C:H1'	32:a:1138:G:N2	2.28	0.48
32:a:1147:C:H1'	40:j:82:LYS:HD3	1.94	0.48
32:a:1178:G:H2'	32:a:1180:A:OP2	2.13	0.48
32:a:1297:G:O2'	37:g:113:LYS:HG2	2.14	0.48
32:a:1307:U:O2'	43:m:26:LYS:C	2.52	0.48
32:a:1308:U:C5'	43:m:27:THR:CA	2.65	0.48
32:a:1314:C:H2'	32:a:1315:U:C6	2.49	0.48
33:c:85:LYS:N	40:j:61:ALA:N	2.61	0.48
34:d:145:ARG:C	34:d:147:LYS:H	2.22	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:h:10:LEU:HA	38:h:74:ILE:HD11	1.95	0.48
39:i:56:MET:HA	39:i:59:LYS:HB2	1.94	0.48
41:k:83:VAL:CG2	41:k:109:ILE:HG12	2.44	0.48
44:n:12:ARG:HH11	44:n:60:ARG:HH12	1.62	0.48
51:7:195:VAL:HG12	51:7:197:PHE:H	1.78	0.48
2:B:230:G:H2'	2:B:231:A:C8	2.48	0.48
2:B:478:A:H5"	2:B:479:A:OP2	2.13	0.48
2:B:609:A:H2'	2:B:610:C:O4'	2.12	0.48
2:B:1076:C:H4'	31:6:94:LYS:CE	2.43	0.48
2:B:1141:U:OP1	10:J:27:ARG:HD3	2.13	0.48
2:B:1533:C:O2'	2:B:1534:U:H5'	2.13	0.48
2:B:1583:A:H4'	2:B:1585:C:N3	2.29	0.48
3:V:53:LYS:HD2	3:V:54:ALA:N	2.29	0.48
4:C:155:ARG:NE	4:C:157:ALA:HB3	2.23	0.48
7:F:103:ILE:HG13	7:F:104:THR:H	1.77	0.48
7:F:110:ILE:O	43:m:95:PRO:HD3	2.13	0.48
9:H:130:VAL:O	9:H:142:VAL:N	2.45	0.48
12:L:61:LEU:HD13	12:L:61:LEU:N	2.28	0.48
14:N:1:MET:HE3	14:N:3:HIS:N	2.19	0.48
14:N:1:MET:SD	14:N:2:ARG:HD3	2.54	0.48
16:P:18:SER:C	16:P:20:ARG:H	2.21	0.48
22:W:40:ARG:HG3	22:W:40:ARG:HH11	1.78	0.48
24:Y:28:LEU:C	24:Y:29:ARG:HG2	2.39	0.48
25:Z:48:GLN:H	25:Z:51:VAL:HB	1.78	0.48
25:Z:59:ARG:HG3	25:Z:62:LYS:CB	2.44	0.48
27:2:20:TYR:O	27:2:21:THR:HB	2.13	0.48
27:2:34:GLU:OE1	27:2:36:LYS:HE2	2.13	0.48
31:6:64:ARG:HD2	31:6:64:ARG:C	2.38	0.48
32:a:21:G:H2'	32:a:22:G:C8	2.49	0.48
32:a:147:G:H2'	32:a:148:G:C8	2.49	0.48
32:a:193:C:H2'	32:a:194:C:C6	2.49	0.48
32:a:232:G:H1'	32:a:262:A:N1	2.29	0.48
32:a:327:A:H1'	32:a:329:A:O4'	2.13	0.48
32:a:946:A:C4	43:m:42:VAL:CB	2.71	0.48
32:a:953:G:H2'	32:a:954:G:O4'	2.14	0.48
32:a:1222:G:C8	49:s:3:SER:CA	2.97	0.48
32:a:1304:G:O6	43:m:7:ASN:C	2.52	0.48
32:a:1334:G:C8	43:m:12:LYS:HB2	2.49	0.48
32:a:1456:A:H2'	32:a:1457:G:O4'	2.14	0.48
34:d:93:LEU:O	34:d:96:ARG:HB3	2.14	0.48
35:e:45:VAL:HG23	35:e:71:ILE:CG2	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:e:63:MET:O	35:e:66:ALA:HB3	2.14	0.48
35:e:104:ILE:O	35:e:104:ILE:HG23	2.14	0.48
38:h:87:ARG:O	38:h:91:LEU:HG	2.14	0.48
42:l:80:LEU:O	42:l:97:VAL:HG23	2.14	0.48
47:q:10:ARG:NH1	47:q:11:VAL:HB	2.28	0.48
2:B:1076:C:H4'	31:6:94:LYS:HE3	1.94	0.48
2:B:1255:U:C2	6:E:67:ARG:HA	2.48	0.48
2:B:1269:A:H2'	2:B:1270:C:C6	2.48	0.48
2:B:1913:A:N1	32:a:1492:A:C2	2.82	0.48
2:B:2052:A:H2'	2:B:2052:A:N3	2.28	0.48
2:B:2147:A:H5'	2:B:2148:G:C4'	2.44	0.48
2:B:2649:C:H2'	2:B:2650:U:H6	1.78	0.48
3:V:44:HIS:O	3:V:48:MET:HB3	2.14	0.48
4:C:140:VAL:HA	4:C:191:LEU:HA	1.95	0.48
4:C:156:SER:O	4:C:194:VAL:O	2.32	0.48
4:C:205:GLY:O	4:C:206:LYS:HG2	2.14	0.48
5:D:1:MET:CE	5:D:84:LEU:HD13	2.39	0.48
5:D:108:ASP:HB3	5:D:173:GLN:HA	1.96	0.48
5:D:170:VAL:CG2	5:D:194:PRO:HG2	2.44	0.48
6:E:122:GLU:OE2	6:E:152:GLU:HG3	2.14	0.48
7:F:138:PRO:C	43:m:112:ARG:O	2.56	0.48
10:J:5:THR:HB	10:J:45:THR:HG23	1.96	0.48
12:L:140:GLY:O	12:L:141:LYS:O	2.32	0.48
13:M:58:LYS:C	13:M:60:GLN:N	2.71	0.48
14:N:28:LEU:HD22	14:N:48:VAL:HG11	1.95	0.48
21:U:27:VAL:HB	21:U:33:VAL:HG13	1.95	0.48
21:U:70:ALA:O	21:U:72:PHE:N	2.47	0.48
23:X:43:LEU:HA	23:X:47:ARG:HB3	1.96	0.48
25:Z:59:ARG:CG	25:Z:62:LYS:HB2	2.44	0.48
31:6:81:LYS:HG3	31:6:82:ALA:N	2.29	0.48
32:a:541:G:H2'	32:a:542:G:H8	1.79	0.48
32:a:864:A:H2'	32:a:865:A:C8	2.49	0.48
32:a:946:A:C8	43:m:42:VAL:HG12	2.49	0.48
32:a:1014:A:H5'	49:s:15:LEU:CA	2.42	0.48
32:a:1081:A:O2'	32:a:1082:A:H5'	2.14	0.48
32:a:1123:U:H5	40:j:88:MET:HG3	1.78	0.48
32:a:1235:U:OP2	43:m:50:GLY:HA3	2.14	0.48
32:a:1258:G:OP1	44:n:73:LEU:HA	2.14	0.48
32:a:1333:A:C8	43:m:14:ALA:O	2.67	0.48
32:a:1414:U:H2'	32:a:1415:G:H8	1.79	0.48
33:c:63:ILE:O	40:j:48:ARG:C	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:d:58:GLN:CD	34:d:62:ARG:HG3	2.39	0.48
36:f:67:PRO:O	36:f:70:VAL:HG22	2.13	0.48
40:j:5:ARG:HD3	40:j:5:ARG:N	2.29	0.48
40:j:22:THR:CG2	40:j:23:ALA:N	2.77	0.48
41:k:88:PRO:HD3	52:u:28:LEU:CD2	2.44	0.48
46:p:36:VAL:HG13	46:p:36:VAL:O	2.14	0.48
47:q:10:ARG:NH2	47:q:11:VAL:HG23	2.27	0.48
49:s:35:ARG:HG2	49:s:50:VAL:CG1	2.39	0.48
51:7:79:VAL:HG13	51:7:90:PHE:HD1	1.79	0.48
51:7:162:VAL:HG11	51:7:172:ILE:HG12	1.96	0.48
1:A:74:U:H2'	1:A:75:G:O4'	2.13	0.48
2:B:28:A:O2'	2:B:583:G:H5'	2.14	0.48
2:B:37:C:H2'	6:E:46:GLN:HB3	1.94	0.48
2:B:152:A:H2'	2:B:153:U:C6	2.49	0.48
2:B:211:C:O2'	2:B:212:G:H5'	2.13	0.48
2:B:306:U:H2'	2:B:307:G:O4'	2.14	0.48
2:B:329:G:H1	21:U:16:LYS:NZ	2.12	0.48
2:B:822:G:H2'	2:B:823:C:H6	1.79	0.48
2:B:1168:G:H2'	2:B:1169:A:O4'	2.13	0.48
2:B:1666:G:C2'	2:B:1667:G:H5'	2.43	0.48
2:B:1818:U:H5"	4:C:155:ARG:HG2	1.95	0.48
2:B:2070:A:H2'	2:B:2071:A:O4'	2.14	0.48
2:B:2223:G:H2'	2:B:2224:G:H5'	1.96	0.48
2:B:2373:G:H2'	2:B:2374:C:C6	2.49	0.48
2:B:2634:A:H2'	2:B:2635:A:C8	2.48	0.48
2:B:2761:A:H1'	8:G:142:GLN:NE2	2.29	0.48
3:V:21:ARG:HE	3:V:87:GLN:HB3	1.78	0.48
4:C:27:LYS:HA	4:C:79:ARG:HH12	1.78	0.48
5:D:13:ARG:NH1	16:P:12:MET:SD	2.87	0.48
6:E:111:GLU:O	6:E:113:VAL:HG12	2.14	0.48
6:E:145:ASP:C	6:E:147:LEU:H	2.20	0.48
7:F:109:ARG:C	43:m:105:ALA:HB1	2.29	0.48
7:F:133:GLU:O	7:F:134:GLN:HB2	2.14	0.48
9:H:121:VAL:HG21	9:H:128:HIS:HE2	1.77	0.48
13:M:80:VAL:HG12	13:M:81:ARG:HG2	1.95	0.48
17:Q:75:TYR:CZ	17:Q:79:ILE:HD11	2.49	0.48
22:W:45:HIS:CE1	22:W:64:GLY:HA3	2.49	0.48
25:Z:59:ARG:HE	25:Z:62:LYS:CE	2.27	0.48
32:a:212:G:H2'	32:a:213:G:C8	2.47	0.48
32:a:301:G:H2'	32:a:302:G:H8	1.79	0.48
32:a:321:A:O2'	32:a:322:C:H5'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:333:U:H2'	32:a:334:C:C6	2.49	0.48
32:a:672:U:H2'	32:a:673:A:H8	1.78	0.48
32:a:1153:G:N9	40:j:91:ASP:C	2.72	0.48
32:a:1189:U:H4'	33:c:4:VAL:HG11	1.95	0.48
32:a:1250:A:C4'	39:i:69:GLY:H	2.23	0.48
32:a:1294:G:H2'	32:a:1295:U:H6	1.79	0.48
32:a:1308:U:C5'	43:m:27:THR:HG22	2.42	0.48
32:a:1504:G:H4'	32:a:1505:G:C4	2.48	0.48
33:c:64:ARG:N	40:j:49:PHE:H	2.05	0.48
36:f:43:GLY:HA2	36:f:58:HIS:CE1	2.49	0.48
36:f:66:ALA:HB1	36:f:67:PRO:HD2	1.96	0.48
41:k:60:PHE:HA	41:k:63:GLN:OE1	2.14	0.48
41:k:63:GLN:O	41:k:67:GLU:HB3	2.14	0.48
44:n:78:LEU:HB2	44:n:83:VAL:HG22	1.82	0.48
44:n:79:SER:O	44:n:81:ILE:HD12	2.14	0.48
45:o:28:VAL:HG22	45:o:65:LEU:HB3	1.96	0.48
46:p:20:VAL:HG21	46:p:32:PHE:CD2	2.49	0.48
47:q:24:ILE:O	47:q:40:THR:HA	2.14	0.48
51:7:13:VAL:HG11	51:7:207:ARG:HB2	1.95	0.48
51:7:45:THR:HA	51:7:48:MET:HG3	1.95	0.48
1:A:49:C:O2'	1:A:50:A:H5'	2.14	0.47
1:A:86:G:H3'	1:A:87:U:H6	1.80	0.47
2:B:442:G:N2	6:E:46:GLN:HE21	2.10	0.47
2:B:974:G:O4'	2:B:990:A:N6	2.47	0.47
2:B:1137:G:H2'	2:B:1138:G:O4'	2.13	0.47
2:B:1188:U:C2'	2:B:1189:A:H5'	2.44	0.47
2:B:1714:U:H3'	2:B:1715:G:H5'	1.95	0.47
2:B:1913:A:N6	32:a:1492:A:H2	1.94	0.47
2:B:2537:U:H2'	2:B:2538:C:H6	1.76	0.47
2:B:2743:U:H3'	2:B:2744:G:H5"	1.96	0.47
2:B:2776:A:H4'	2:B:2777:G:O5'	2.13	0.47
3:V:26:PHE:HB2	3:V:27:PRO:HD2	1.95	0.47
5:D:4:LEU:HD23	5:D:49:GLN:HG2	1.96	0.47
6:E:134:LEU:HD22	6:E:138:LEU:HG	1.96	0.47
10:J:103:ILE:O	10:J:103:ILE:HG22	2.12	0.47
11:K:58:LEU:HB3	11:K:89:ASN:ND2	2.29	0.47
12:L:61:LEU:CB	12:L:62:PRO:CD	2.75	0.47
12:L:109:LYS:HA	12:L:126:ARG:CB	2.44	0.47
13:M:73:ILE:HD11	13:M:92:TRP:N	2.28	0.47
13:M:109:PRO:O	13:M:112:LEU:HB2	2.14	0.47
14:N:36:THR:O	14:N:40:LYS:HB2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:26:LEU:HD13	15:O:92:PHE:O	2.14	0.47
18:R:35:PHE:HB2	18:R:64:VAL:HG22	1.96	0.47
20:T:8:LEU:CA	23:X:19:LEU:HD11	2.44	0.47
25:Z:64:PHE:C	25:Z:66:ILE:H	2.22	0.47
28:3:35:ARG:O	28:3:39:ARG:HA	2.14	0.47
31:6:14:ALA:HB1	31:6:50:LYS:HA	1.96	0.47
32:a:343:U:O2'	32:a:344:A:H2'	2.14	0.47
32:a:1014:A:C2	32:a:1219:A:H1'	2.49	0.47
33:c:21:TRP:CD1	33:c:58:ARG:HD2	2.49	0.47
33:c:77:GLY:HA3	40:j:58:ASN:CB	2.36	0.47
34:d:94:GLU:HA	34:d:94:GLU:OE2	2.14	0.47
38:h:92:PRO:CA	38:h:93:LYS:HZ2	2.11	0.47
41:k:121:ARG:NH2	52:u:37:TYR:OH	2.46	0.47
46:p:33:ILE:N	46:p:33:ILE:HD12	2.29	0.47
47:q:10:ARG:NE	47:q:11:VAL:H	2.12	0.47
47:q:20:ILE:HG21	47:q:52:CYS:SG	2.53	0.47
48:r:64:LEU:CB	48:r:66:LEU:HG	2.44	0.47
51:7:160:LEU:O	51:7:182:VAL:HA	2.14	0.47
1:A:49:C:OP2	15:O:30:ARG:NH2	2.47	0.47
1:A:76:G:H2'	1:A:77:U:O4'	2.13	0.47
2:B:917:A:H2'	2:B:918:A:O4'	2.14	0.47
2:B:1936:A:H2	2:B:1943:U:C5	2.32	0.47
2:B:2053:G:H5'	5:D:151:THR:O	2.14	0.47
2:B:2083:G:H2'	2:B:2084:C:C6	2.50	0.47
2:B:2654:A:N1	2:B:2665:A:H5"	2.28	0.47
2:B:2828:G:O2'	2:B:2829:A:H5'	2.15	0.47
3:V:80:HIS:HD2	3:V:83:LYS:H	1.58	0.47
4:C:36:ASN:HB3	4:C:63:ILE:HD13	1.97	0.47
4:C:131:MET:O	4:C:134:ILE:HB	2.13	0.47
4:C:216:ARG:NH1	4:C:217:PRO:HD2	2.29	0.47
5:D:2:ILE:CG2	5:D:204:LYS:HA	2.33	0.47
5:D:86:GLU:CG	5:D:87:GLY:H	2.26	0.47
5:D:148:GLN:HB2	5:D:151:THR:HG23	1.95	0.47
6:E:72:SER:O	6:E:73:ILE:HD13	2.14	0.47
6:E:115:GLN:C	6:E:185:LYS:HG2	2.39	0.47
7:F:146:ASP:O	7:F:147:ARG:C	2.57	0.47
8:G:51:PHE:HE2	8:G:63:GLN:HE21	1.60	0.47
9:H:89:LYS:HE3	9:H:123:ARG:HB2	1.96	0.47
9:H:98:ASP:O	9:H:102:ALA:HB2	2.13	0.47
10:J:35:ARG:CZ	10:J:40:HIS:HB2	2.45	0.47
10:J:43:GLU:HB3	17:Q:99:VAL:HG12	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:107:LEU:O	11:K:107:LEU:HD12	2.14	0.47
12:L:91:ASP:HB2	12:L:123:ARG:HD2	1.97	0.47
13:M:41:LEU:C	13:M:43:ALA:H	2.21	0.47
14:N:19:ALA:O	14:N:21:PHE:N	2.47	0.47
16:P:59:THR:C	16:P:60:VAL:HG22	2.39	0.47
16:P:77:SER:N	16:P:78:PRO:CD	2.76	0.47
17:Q:89:ILE:HG12	17:Q:89:ILE:O	2.14	0.47
32:a:303:A:H2'	32:a:304:U:O4'	2.14	0.47
32:a:335:C:H2'	32:a:336:A:H8	1.78	0.47
32:a:370:C:O2'	32:a:371:A:H5'	2.13	0.47
32:a:677:U:H2'	32:a:678:U:H6	1.77	0.47
32:a:1055:A:O2'	33:c:160:GLU:HG2	2.11	0.47
32:a:1130:A:O2'	32:a:1131:G:H5'	2.13	0.47
32:a:1257:A:N3	44:n:74:ARG:O	2.46	0.47
32:a:1279:G:N7	44:n:91:GLU:CG	2.76	0.47
32:a:1281:C:H5'	32:a:1282:C:C5	2.48	0.47
32:a:1330:U:C4'	43:m:22:TYR:C	2.86	0.47
33:c:5:HIS:CD2	33:c:7:ASN:HB2	2.49	0.47
33:c:46:LEU:HD21	40:j:53:ILE:CB	2.44	0.47
33:c:57:GLU:N	40:j:66:GLU:N	2.61	0.47
33:c:178:ARG:O	33:c:206:ILE:HA	2.13	0.47
37:g:58:LEU:HB3	37:g:59:GLU:OE2	2.14	0.47
39:i:18:VAL:HG21	39:i:82:ILE:HG13	1.95	0.47
39:i:56:MET:HE2	39:i:56:MET:HB2	1.76	0.47
40:j:57:VAL:HG13	40:j:58:ASN:CG	2.40	0.47
44:n:59:GLN:N	44:n:59:GLN:NE2	2.61	0.47
2:B:26:G:H2'	2:B:27:G:C1'	2.44	0.47
2:B:1170:C:O2'	2:B:1171:G:H5'	2.15	0.47
2:B:1531:C:H2'	2:B:1532:A:H8	1.78	0.47
2:B:1729:U:H2'	2:B:1730:C:H4'	1.95	0.47
2:B:1771:C:O2'	2:B:1772:A:H5'	2.14	0.47
2:B:1999:C:H5"	2:B:2723:C:O2'	2.14	0.47
2:B:2221:G:H2'	2:B:2222:C:C6	2.50	0.47
2:B:2860:A:H2'	2:B:2861:U:O4'	2.14	0.47
4:C:33:LEU:HB3	4:C:34:GLU:H	1.55	0.47
4:C:61:TYR:HD2	4:C:84:PRO:HD2	1.76	0.47
5:D:17:GLU:HA	16:P:80:VAL:HG11	1.97	0.47
5:D:78:GLY:C	5:D:79:LEU:HD23	2.39	0.47
5:D:88:GLU:C	5:D:90:PHE:H	2.22	0.47
7:F:35:LEU:O	7:F:36:ASN:HB3	2.13	0.47
7:F:151:LEU:HD22	43:m:112:ARG:HH22	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:H:114:GLU:O	9:H:133:GLN:HB3	2.14	0.47
10:J:93:ILE:CD1	10:J:100:VAL:HG11	2.44	0.47
12:L:85:VAL:HG12	12:L:86:GLU:CG	2.44	0.47
13:M:23:GLY:H	13:M:96:ILE:HD12	1.74	0.47
13:M:64:TRP:O	13:M:102:LEU:N	2.47	0.47
14:N:1:MET:CE	14:N:2:ARG:HB2	2.45	0.47
14:N:8:ARG:CZ	14:N:46:ARG:HD2	2.44	0.47
18:R:31:GLU:O	18:R:32:THR:HB	2.14	0.47
18:R:53:PHE:HB3	18:R:55:ASP:CB	2.43	0.47
18:R:78:ARG:HD3	18:R:87:GLN:C	2.39	0.47
21:U:42:LYS:O	21:U:57:ILE:HG13	2.14	0.47
22:W:43:LYS:O	22:W:45:HIS:N	2.47	0.47
23:X:12:GLU:HB2	23:X:14:LEU:HD12	1.93	0.47
31:6:27:LEU:HD23	31:6:27:LEU:N	2.17	0.47
32:a:317:U:H2'	32:a:318:G:C8	2.49	0.47
32:a:405:U:C4	34:d:1:ALA:HA	2.45	0.47
32:a:577:G:O2'	32:a:578:C:H5'	2.14	0.47
32:a:591:U:H2'	32:a:592:G:H8	1.79	0.47
32:a:740:U:O2'	45:o:51:SER:OG	2.19	0.47
32:a:936:C:H42	37:g:2:ARG:HA	1.79	0.47
32:a:1017:U:C5	44:n:32:ASP:CB	2.94	0.47
32:a:1153:G:OP1	40:j:94:ALA:HB2	2.15	0.47
32:a:1215:G:H5'	32:a:1215:G:H8	1.78	0.47
32:a:1240:U:C2	37:g:38:ALA:HA	2.48	0.47
32:a:1280:A:H2'	40:j:36:VAL:HG11	1.96	0.47
32:a:1306:A:H4'	43:m:33:LEU:HA	1.96	0.47
32:a:1332:A:C1'	43:m:19:THR:N	2.76	0.47
32:a:1348:U:H2'	32:a:1349:A:H8	1.80	0.47
32:a:1352:C:H2'	32:a:1353:G:C8	2.50	0.47
32:a:1448:C:H2'	32:a:1449:C:H6	1.79	0.47
34:d:176:LYS:O	34:d:177:MET:C	2.57	0.47
36:f:18:VAL:HG21	36:f:58:HIS:CG	2.49	0.47
37:g:14:ASP:OD1	37:g:15:PRO:HD2	2.14	0.47
37:g:137:ARG:HG2	37:g:141:HIS:CE1	2.48	0.47
38:h:64:TYR:CA	38:h:70:VAL:HG23	2.45	0.47
39:i:30:ASN:HD21	39:i:65:THR:HA	1.80	0.47
42:l:58:ASN:HD22	42:l:58:ASN:N	2.11	0.47
49:s:4:LEU:N	49:s:5:LYS:HE3	2.29	0.47
51:7:163:ILE:HG13	51:7:185:ILE:HD11	1.96	0.47
51:7:206:ILE:O	51:7:209:VAL:HG23	2.14	0.47
2:B:64:A:N6	2:B:91:A:N6	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:86:G:P	21:U:29:SER:HB2	2.55	0.47
2:B:490:C:H3'	2:B:491:G:H5"	1.96	0.47
2:B:526:A:N6	2:B:2626:C:H4'	2.29	0.47
2:B:1080:A:H2'	2:B:1081:U:C6	2.48	0.47
2:B:1156:A:N6	17:Q:47:ARG:CD	2.77	0.47
2:B:1708:C:H2'	2:B:1709:U:H6	1.78	0.47
2:B:2379:G:H5'	15:O:20:GLU:OE1	2.13	0.47
2:B:2543:G:H2'	2:B:2544:G:O4'	2.14	0.47
2:B:2645:G:H3'	2:B:2646:C:C5'	2.42	0.47
3:V:80:HIS:CD2	3:V:83:LYS:HB2	2.50	0.47
4:C:46:GLY:O	4:C:47:ARG:HB2	2.14	0.47
4:C:59:GLN:O	4:C:60:ALA:HB3	2.14	0.47
5:D:141:ARG:O	5:D:142:VAL:C	2.54	0.47
6:E:121:VAL:HG12	6:E:122:GLU:N	2.30	0.47
7:F:107:VAL:HG11	7:F:175:PRO:HB2	1.95	0.47
8:G:40:VAL:CG2	8:G:53:PRO:HA	2.44	0.47
9:H:3:VAL:C	9:H:4:ILE:HG13	2.39	0.47
9:H:38:PRO:HB2	9:H:43:ASN:HD21	1.63	0.47
10:J:34:ARG:CG	10:J:39:LYS:HD2	2.44	0.47
12:L:94:THR:OG1	12:L:103:ILE:HB	2.14	0.47
13:M:35:ALA:C	13:M:36:VAL:HG13	2.39	0.47
15:O:41:ALA:CB	15:O:45:SER:HB3	2.43	0.47
16:P:22:GLY:CA	16:P:91:VAL:HG13	2.43	0.47
16:P:96:LEU:O	16:P:97:TYR:C	2.57	0.47
17:Q:21:LYS:HB3	17:Q:23:TYR:CD1	2.48	0.47
17:Q:91:ARG:N	17:Q:91:ARG:HD2	2.28	0.47
17:Q:101:ASP:OD2	17:Q:104:ALA:HB2	2.14	0.47
18:R:23:GLU:HA	18:R:96:VAL:HG13	1.96	0.47
18:R:39:LEU:CD1	18:R:60:LYS:HB2	2.44	0.47
18:R:58:VAL:HG22	18:R:59:ILE:HG23	1.96	0.47
19:S:3:THR:HG23	19:S:107:VAL:HG23	1.95	0.47
19:S:20:VAL:O	19:S:23:LEU:HB2	2.14	0.47
22:W:44:PHE:HB3	22:W:76:ARG:HG2	1.95	0.47
23:X:14:LEU:CD2	23:X:57:LEU:HB2	2.44	0.47
26:1:3:GLN:HB2	26:1:6:LYS:HE2	1.96	0.47
27:2:37:LYS:NZ	27:2:46:VAL:HA	2.29	0.47
32:a:264:C:HO2'	47:q:65:PRO:HG2	1.78	0.47
32:a:607:A:H2'	32:a:608:A:C8	2.50	0.47
32:a:994:A:C1'	44:n:50:LEU:HD22	2.44	0.47
32:a:1128:C:C4	40:j:33:GLY:O	2.68	0.47
32:a:1140:C:OP2	40:j:35:GLN:NE2	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1216:A:C2	44:n:47:LEU:CG	2.97	0.47
32:a:1308:U:H5'	43:m:27:THR:HG22	1.95	0.47
33:c:11:LEU:HD22	33:c:17:TRP:CD1	2.50	0.47
33:c:22:PHE:CZ	40:j:70:HIS:HB3	2.29	0.47
33:c:61:LYS:O	33:c:97:PRO:HD2	2.14	0.47
33:c:139:ASN:O	33:c:143:LEU:HD22	2.14	0.47
34:d:29:THR:O	34:d:30:LYS:HB2	2.13	0.47
36:f:38:ARG:HH21	36:f:96:VAL:CG1	2.28	0.47
41:k:15:VAL:HG21	41:k:41:LEU:CD1	2.44	0.47
43:m:15:VAL:HG13	43:m:29:SER:HG	1.79	0.47
43:m:77:LYS:O	43:m:81:ASP:N	2.44	0.47
46:p:26:ASN:OD1	46:p:31:ARG:HB3	2.14	0.47
48:r:70:THR:OG1	48:r:71:ASP:N	2.46	0.47
2:B:863:A:H2'	2:B:864:G:C8	2.50	0.47
2:B:984:A:P	2:B:985:C:H41	2.36	0.47
2:B:1059:G:N2	31:6:130:GLY:HA3	2.29	0.47
2:B:1159:U:H2'	2:B:1160:G:H8	1.78	0.47
2:B:1295:C:H2'	2:B:1296:G:C8	2.49	0.47
2:B:1438:U:N3	2:B:1552:A:N6	2.63	0.47
2:B:1846:G:H2'	2:B:1847:A:O4'	2.15	0.47
2:B:1870:C:H3'	2:B:1871:A:C8	2.49	0.47
2:B:1986:C:O2'	2:B:1987:A:H5'	2.14	0.47
2:B:2221:G:H2'	2:B:2222:C:H6	1.78	0.47
2:B:2518:A:H2'	2:B:2518:A:N3	2.28	0.47
2:B:2862:G:H2'	2:B:2863:C:H6	1.79	0.47
3:V:80:HIS:CA	3:V:87:GLN:HE22	2.28	0.47
4:C:75:ALA:HB2	4:C:95:TYR:CE1	2.50	0.47
4:C:81:GLU:O	4:C:90:ILE:HG22	2.15	0.47
4:C:103:ILE:CG2	4:C:104:LEU:N	2.77	0.47
4:C:155:ARG:O	4:C:156:SER:C	2.57	0.47
4:C:229:HIS:O	4:C:231:HIS:N	2.39	0.47
5:D:154:LYS:NZ	10:J:81:ILE:HG21	2.30	0.47
6:E:18:THR:O	6:E:19:PHE:C	2.57	0.47
6:E:165:HIS:C	6:E:166:LYS:HG3	2.39	0.47
7:F:77:LYS:HD3	53:v:19:G:C4	2.50	0.47
8:G:89:VAL:HG21	8:G:162:ARG:NE	2.30	0.47
12:L:71:ALA:HB1	12:L:74:THR:OG1	2.14	0.47
12:L:84:LYS:HA	12:L:84:LYS:HE3	1.97	0.47
13:M:117:PHE:HB2	13:M:124:LEU:HD21	1.97	0.47
14:N:118:ARG:HG2	26:1:52:LYS:HZ3	1.80	0.47
16:P:25:VAL:HG13	16:P:88:ARG:N	2.09	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:52:ARG:CZ	17:Q:55:GLN:HG2	2.43	0.47
17:Q:79:ILE:HA	17:Q:82:LEU:HD12	1.96	0.47
17:Q:95:ALA:C	17:Q:97:ILE:H	2.21	0.47
19:S:6:LYS:HB3	19:S:104:THR:HA	1.95	0.47
22:W:11:ASN:OD1	22:W:12:GLY:N	2.45	0.47
25:Z:5:ILE:HG23	25:Z:63:ARG:HE	1.78	0.47
26:1:11:LYS:C	26:1:13:GLY:H	2.22	0.47
32:a:78:A:O2'	32:a:79:G:H5'	2.14	0.47
32:a:429:U:H5'	34:d:8:LEU:HB2	1.96	0.47
32:a:797:C:OP1	41:k:125:LYS:HG2	2.14	0.47
32:a:901:A:H3'	32:a:902:G:O4'	2.15	0.47
32:a:970:C:N4	39:i:128:LYS:HB3	2.17	0.47
32:a:1122:U:C2	40:j:90:LEU:O	2.66	0.47
32:a:1125:U:C4	40:j:36:VAL:CG2	2.96	0.47
32:a:1305:G:O5'	43:m:53:ASP:CA	2.62	0.47
37:g:71:THR:HA	37:g:90:VAL:HG22	1.96	0.47
40:j:80:THR:N	40:j:84:VAL:HG11	2.29	0.47
46:p:29:ASN:N	46:p:29:ASN:ND2	2.60	0.47
46:p:39:PHE:CE1	46:p:74:LEU:HD22	2.49	0.47
51:7:50:ASN:O	51:7:51:GLU:C	2.58	0.47
51:7:131:LYS:HE3	51:7:135:MET:HE2	1.95	0.47
51:7:172:ILE:O	51:7:175:ALA:HB3	2.13	0.47
2:B:209:C:H2'	2:B:210:C:C6	2.49	0.47
2:B:978:G:H2'	2:B:979:A:H8	1.80	0.47
2:B:1172:C:H2'	2:B:1173:U:O4'	2.14	0.47
2:B:1439:A:N7	2:B:1440:U:C6	2.82	0.47
2:B:1938:A:O2'	2:B:1939:U:H5"	2.15	0.47
2:B:2070:A:H2'	2:B:2071:A:C8	2.49	0.47
2:B:2329:U:H2'	2:B:2330:G:C8	2.49	0.47
2:B:2527:C:H1'	30:5:1:MET:CB	2.40	0.47
3:V:4:ILE:HG22	3:V:63:ILE:HG23	1.96	0.47
4:C:70:LYS:HE3	4:C:99:GLU:HG2	1.97	0.47
4:C:179:GLU:HB2	4:C:266:ILE:HG22	1.95	0.47
4:C:185:ALA:C	4:C:187:CYS:H	2.21	0.47
4:C:258:SER:HB2	4:C:261:ARG:NH1	2.30	0.47
5:D:130:GLN:O	5:D:140:HIS:ND1	2.48	0.47
9:H:7:ASP:O	9:H:9:VAL:HG23	2.14	0.47
10:J:45:THR:CG2	17:Q:63:ARG:HH22	2.28	0.47
13:M:71:LYS:O	13:M:72:PRO:C	2.58	0.47
15:O:71:ALA:O	15:O:74:VAL:HG23	2.14	0.47
16:P:47:ILE:CA	16:P:63:ILE:HG23	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:99:ALA:HB3	23:X:30:MET:SD	2.54	0.47
22:W:21:GLY:HA3	22:W:32:ALA:HB1	1.96	0.47
25:Z:3:LYS:CD	25:Z:6:HIS:HB3	2.44	0.47
32:a:239:U:H5"	32:a:239:U:H6	1.78	0.47
32:a:430:A:OP2	34:d:7:LYS:HB2	2.14	0.47
32:a:894:G:O2'	32:a:895:G:H5'	2.15	0.47
32:a:975:A:H4'	32:a:976:G:OP2	2.14	0.47
32:a:1018:G:H2'	32:a:1019:A:H8	1.79	0.47
32:a:1124:G:H1	40:j:29:ALA:HA	1.65	0.47
32:a:1125:U:C2	40:j:36:VAL:HG13	2.50	0.47
32:a:1217:C:O2	44:n:44:VAL:C	2.57	0.47
32:a:1303:C:O2	43:m:1:ALA:O	2.33	0.47
32:a:1310:G:OP1	49:s:79:TYR:CD1	2.68	0.47
32:a:1318:A:O4'	49:s:66:VAL:HG23	2.15	0.47
32:a:1359:C:H42	44:n:79:SER:CB	2.27	0.47
32:a:1376:U:H2'	32:a:1377:A:C8	2.49	0.47
35:e:111:ARG:O	35:e:115:GLU:HG3	2.13	0.47
37:g:22:LEU:O	37:g:26:VAL:HG13	2.14	0.47
45:o:70:LYS:NZ	45:o:74:VAL:HG13	2.22	0.47
49:s:43:MET:O	49:s:46:LEU:HB2	2.14	0.47
51:7:80:LYS:O	51:7:84:LEU:N	2.47	0.47
51:7:128:LEU:HD13	51:7:129:THR:H	1.80	0.47
53:v:65:G:H2'	53:v:66:U:C6	2.49	0.47
2:B:27:G:H1'	2:B:513:A:H61	1.79	0.47
2:B:116:C:H2'	2:B:117:G:H8	1.79	0.47
2:B:309:A:H1'	2:B:329:G:N3	2.29	0.47
2:B:416:U:H2'	2:B:417:C:H6	1.79	0.47
2:B:572:A:H5"	2:B:573:U:OP2	2.15	0.47
2:B:636:G:O6	12:L:76:GLU:HG2	2.14	0.47
2:B:840:C:O2'	2:B:841:G:H5'	2.15	0.47
2:B:992:C:H2'	2:B:993:G:C8	2.46	0.47
2:B:993:G:O2'	2:B:994:C:H5'	2.15	0.47
2:B:1081:U:C5'	31:6:126:ARG:HD2	2.44	0.47
2:B:1113:U:H5"	8:G:1:SER:C	2.39	0.47
2:B:1156:A:N6	17:Q:47:ARG:HD3	2.29	0.47
2:B:1300:G:H4'	2:B:1301:A:O5'	2.13	0.47
2:B:1309:G:H4'	28:3:7:PRO:CG	2.43	0.47
2:B:1413:A:H2'	2:B:1414:C:C6	2.49	0.47
2:B:1501:G:O2'	2:B:1502:A:H5'	2.15	0.47
2:B:1637:A:H2'	2:B:1638:C:H6	1.80	0.47
2:B:1791:A:H1'	4:C:206:LYS:HZ2	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1995:U:OP1	5:D:129:THR:HG22	2.14	0.47
2:B:2052:A:H4'	5:D:148:GLN:CG	2.43	0.47
2:B:2213:U:H2'	2:B:2214:C:H5'	1.96	0.47
2:B:2308:G:H5'	2:B:2309:A:C5'	2.44	0.47
2:B:2331:G:O2'	22:W:69:GLU:CD	2.58	0.47
2:B:2425:A:H5"	2:B:2426:A:H3'	1.97	0.47
2:B:2471:A:O2'	2:B:2472:G:C8	2.55	0.47
2:B:2553:G:H2'	2:B:2554:U:C4'	2.44	0.47
2:B:2880:C:O2	14:N:93:GLY:HA3	2.15	0.47
3:V:61:LEU:O	3:V:71:LYS:HA	2.15	0.47
3:V:82:TYR:CD2	3:V:82:TYR:N	2.83	0.47
4:C:114:GLN:HB2	4:C:124:LYS:HZ1	1.79	0.47
4:C:141:HIS:O	4:C:143:VAL:HG23	2.14	0.47
5:D:3:GLY:CA	5:D:49:GLN:HE22	2.28	0.47
6:E:17:THR:C	6:E:199:MET:SD	2.98	0.47
6:E:58:LYS:HB3	6:E:71:GLY:C	2.39	0.47
6:E:119:ILE:HG23	6:E:189:THR:O	2.15	0.47
7:F:23:SER:C	7:F:25:MET:N	2.73	0.47
7:F:82:TYR:HB3	7:F:83:PRO:HD2	1.97	0.47
7:F:148:VAL:O	7:F:149:ARG:C	2.58	0.47
8:G:104:LEU:HB3	8:G:106:LEU:CD1	2.45	0.47
9:H:4:ILE:CG2	9:H:47:PHE:HB2	2.40	0.47
9:H:100:ALA:HB1	9:H:110:VAL:CG2	2.44	0.47
10:J:43:GLU:CB	17:Q:99:VAL:HG12	2.45	0.47
10:J:50:THR:OG1	10:J:51:GLY:N	2.47	0.47
11:K:10:VAL:HG11	11:K:15:GLY:O	2.15	0.47
13:M:67:VAL:HB	13:M:100:LYS:CG	2.39	0.47
13:M:69:PRO:CB	13:M:93:VAL:HG12	2.37	0.47
14:N:122:ALA:HA	26:1:49:ARG:NH1	2.29	0.47
16:P:59:THR:HA	16:P:76:HIS:HA	1.95	0.47
16:P:92:ARG:HH22	16:P:110:LYS:HE2	1.77	0.47
18:R:53:PHE:HA	18:R:54:VAL:HB	1.96	0.47
20:T:28:ASN:N	20:T:28:ASN:ND2	2.58	0.47
20:T:50:LEU:HD22	20:T:50:LEU:N	2.29	0.47
21:U:68:ASN:HD22	21:U:68:ASN:HA	1.53	0.47
21:U:96:LYS:HE2	21:U:98:ASN:HB3	1.95	0.47
22:W:19:ARG:NH2	22:W:71:LYS:HD2	2.30	0.47
22:W:23:LYS:HZ2	22:W:24:ARG:HG2	1.80	0.47
22:W:40:ARG:NH1	22:W:68:PHE:CA	2.75	0.47
24:Y:50:VAL:O	24:Y:53:MET:HB2	2.15	0.47
25:Z:31:ASP:HA	25:Z:47:LYS:O	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:1:32:THR:HG22	26:1:32:THR:O	2.13	0.47
28:3:35:ARG:HH12	28:3:39:ARG:HG2	1.80	0.47
31:6:72:THR:HB	31:6:73:PRO:HD2	1.96	0.47
31:6:77:VAL:HG23	31:6:78:LEU:N	2.29	0.47
32:a:87:C:H2'	32:a:88:U:C4'	2.44	0.47
32:a:252:U:H2'	32:a:253:A:C8	2.48	0.47
32:a:538:G:OP2	42:l:111:GLN:CD	2.57	0.47
32:a:546:A:N6	34:d:3:TYR:HA	2.29	0.47
32:a:708:C:H2'	32:a:709:U:H6	1.80	0.47
32:a:878:A:H1'	38:h:3:GLN:HE22	1.80	0.47
32:a:988:G:O6	44:n:46:LYS:HA	2.15	0.47
32:a:1017:U:H4'	44:n:44:VAL:HG11	1.94	0.47
32:a:1125:U:O2	40:j:74:VAL:HG13	1.97	0.47
32:a:1131:G:O2'	32:a:1132:C:H5'	2.15	0.47
32:a:1198:G:H2'	32:a:1199:U:C6	2.50	0.47
32:a:1261:A:N1	44:n:100:TRP:HB3	2.29	0.47
32:a:1276:G:N1	44:n:95:LEU:HD12	2.23	0.47
32:a:1283:U:H5'	44:n:97:LYS:HA	1.96	0.47
32:a:1304:G:O4'	43:m:1:ALA:O	2.33	0.47
32:a:1330:U:OP2	43:m:22:TYR:HB2	2.14	0.47
32:a:1358:U:H6	44:n:67:GLY:C	2.22	0.47
32:a:1452:C:H4'	32:a:1453:G:H5"	1.96	0.47
33:c:77:GLY:N	40:j:54:SER:CB	2.78	0.47
34:d:163:GLN:HB2	34:d:164:ARG:HH12	1.79	0.47
34:d:177:MET:HE2	34:d:177:MET:H	1.78	0.47
35:e:35:LEU:HD23	35:e:36:THR:N	2.30	0.47
37:g:132:THR:HA	37:g:135:LYS:HB3	1.97	0.47
39:i:38:PHE:C	39:i:44:ARG:HG2	2.39	0.47
40:j:8:ILE:H	40:j:75:ASP:HB2	1.80	0.47
40:j:35:GLN:H	40:j:78:GLU:HB3	1.80	0.47
43:m:15:VAL:HG13	43:m:29:SER:OG	2.13	0.47
44:n:15:LEU:C	44:n:17:ASP:H	2.21	0.47
44:n:72:PHE:CE2	44:n:77:GLY:HA2	2.49	0.47
49:s:4:LEU:O	49:s:6:LYS:N	2.48	0.47
50:t:57:VAL:C	50:t:60:GLN:HE22	2.23	0.47
51:7:46:VAL:CG1	51:7:47:PRO:HD3	2.31	0.47
53:v:32:U:C4	53:v:33:U:C5	3.02	0.47
2:B:131:A:O2'	2:B:132:G:H5'	2.15	0.47
2:B:233:A:N6	2:B:428:A:H61	2.12	0.47
2:B:1081:U:H5'	31:6:126:ARG:HD2	1.97	0.47
2:B:2019:A:O2'	17:Q:32:ARG:NH2	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2261:C:OP2	22:W:13:ARG:HB2	2.14	0.47
2:B:2309:A:C5	2:B:2310:C:N3	2.83	0.47
2:B:2568:U:H2'	2:B:2569:G:O4'	2.15	0.47
3:V:2:PHE:CB	3:V:61:LEU:HD22	2.45	0.47
4:C:87:SER:O	4:C:155:ARG:NH1	2.47	0.47
4:C:250:GLN:O	4:C:251:THR:HB	2.15	0.47
5:D:130:GLN:HG2	5:D:138:LEU:CD1	2.45	0.47
6:E:153:LEU:HA	6:E:171:ASP:O	2.15	0.47
7:F:73:VAL:CB	53:v:56:C:O5'	2.44	0.47
7:F:109:ARG:CA	43:m:105:ALA:CB	2.93	0.47
9:H:4:ILE:HD11	9:H:39:ALA:HA	1.97	0.47
11:K:28:SER:O	11:K:29:HIS:HB2	2.15	0.47
11:K:85:VAL:O	11:K:85:VAL:HG12	2.14	0.47
12:L:39:LYS:HB2	12:L:46:VAL:HG22	1.97	0.47
14:N:29:VAL:HB	14:N:75:ILE:HG12	1.96	0.47
15:O:64:TYR:CE1	15:O:74:VAL:HG21	2.49	0.47
16:P:29:VAL:O	16:P:44:GLY:HA3	2.15	0.47
17:Q:33:VAL:CG1	17:Q:34:ALA:H	2.18	0.47
17:Q:91:ARG:HD2	17:Q:91:ARG:HA	1.78	0.47
22:W:16:GLU:CG	22:W:37:VAL:HG22	2.39	0.47
30:5:25:VAL:HB	30:5:33:HIS:C	2.39	0.47
32:a:844:G:N7	32:a:846:G:N3	2.63	0.47
32:a:1121:U:H5	40:j:89:ARG:HE	1.63	0.47
32:a:1122:U:C6	40:j:88:MET:CB	2.38	0.47
32:a:1301:U:H3	43:m:8:ILE:CD1	1.05	0.47
32:a:1305:G:H4'	43:m:52:ILE:O	2.15	0.47
34:d:81:LEU:CD1	34:d:92:LEU:HD21	2.45	0.47
36:f:5:GLU:HA	36:f:63:ASN:HA	1.97	0.47
41:k:88:PRO:HD3	52:u:28:LEU:CD1	2.44	0.47
41:k:92:ARG:NH2	41:k:111:ASP:OD1	2.47	0.47
46:p:4:ILE:HA	46:p:20:VAL:O	2.15	0.47
47:q:22:VAL:HG21	47:q:58:VAL:HG21	1.96	0.47
51:7:82:ALA:O	51:7:217:ALA:HB2	2.15	0.47
51:7:162:VAL:O	51:7:184:ALA:HA	2.14	0.47
1:A:25:U:H5"	1:A:26:C:OP1	2.15	0.47
1:A:94:A:H2'	1:A:95:U:O4'	2.14	0.47
1:A:112:G:O2'	1:A:113:C:H5'	2.14	0.47
2:B:1184:U:H2'	2:B:1185:G:H8	1.80	0.47
2:B:1278:C:O2'	2:B:1279:G:H5'	2.15	0.47
2:B:1351:C:H4'	2:B:1572:A:O4'	2.14	0.47
2:B:1439:A:N7	2:B:1440:U:N1	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1917:U:C2'	2:B:1918:A:H5'	2.45	0.47
2:B:2249:U:H4'	2:B:2275:C:C5	2.50	0.47
2:B:2773:C:O2'	2:B:2774:C:H5'	2.15	0.47
3:V:63:ILE:HG22	3:V:65:VAL:HG13	1.97	0.47
5:D:22:ILE:O	5:D:23:PRO:O	2.33	0.47
7:F:55:ASP:OD1	7:F:148:VAL:HG11	2.15	0.47
8:G:173:ALA:C	8:G:174:LYS:HD2	2.40	0.47
9:H:4:ILE:HD11	9:H:44:ILE:HG13	1.97	0.47
9:H:7:ASP:OD2	9:H:54:LEU:CD1	2.63	0.47
10:J:81:ILE:CG2	10:J:82:GLY:N	2.68	0.47
11:K:12:ASP:HB3	11:K:85:VAL:HG13	1.97	0.47
12:L:78:ARG:CG	12:L:99:ASN:HB3	2.33	0.47
13:M:6:ARG:HG3	13:M:7:THR:O	2.15	0.47
13:M:38:ARG:HA	13:M:96:ILE:O	2.14	0.47
13:M:41:LEU:HB2	13:M:93:VAL:CG2	2.43	0.47
13:M:64:TRP:HB3	13:M:102:LEU:HB2	1.96	0.47
13:M:109:PRO:HA	13:M:112:LEU:HD22	1.95	0.47
13:M:119:LEU:N	13:M:119:LEU:HD22	2.30	0.47
15:O:30:ARG:O	15:O:31:THR:C	2.57	0.47
16:P:23:ASP:O	16:P:25:VAL:N	2.48	0.47
19:S:33:LEU:O	19:S:35:ILE:N	2.45	0.47
19:S:71:VAL:CG2	19:S:107:VAL:HG12	2.43	0.47
21:U:69:VAL:O	21:U:70:ALA:C	2.58	0.47
22:W:46:ALA:O	22:W:55:ASP:O	2.32	0.47
25:Z:30:HIS:C	25:Z:48:GLN:HG2	2.39	0.47
26:1:11:LYS:O	26:1:12:ARG:HB3	2.15	0.47
26:1:42:ILE:HD13	26:1:47:TYR:CE1	2.50	0.47
27:2:10:LEU:HD21	27:2:34:GLU:HG3	1.97	0.47
28:3:41:ARG:O	28:3:42:LEU:HB3	2.14	0.47
29:4:20:GLY:O	29:4:21:PHE:C	2.58	0.47
32:a:429:U:H5'	34:d:8:LEU:CB	2.44	0.47
32:a:1012:A:OP2	49:s:23:GLU:CA	2.54	0.47
32:a:1148:U:C5	40:j:86:ALA:CB	2.98	0.47
32:a:1220:G:C8	49:s:4:LEU:CD1	2.72	0.47
32:a:1221:G:C2'	49:s:3:SER:HB2	2.29	0.47
32:a:1305:G:C5'	43:m:3:ILE:HG23	2.35	0.47
35:e:45:VAL:HG12	35:e:116:VAL:HG23	1.97	0.47
40:j:11:LYS:HZ3	40:j:99:GLN:H	1.63	0.47
41:k:21:HIS:CE1	41:k:34:THR:HG21	2.50	0.47
41:k:109:ILE:O	41:k:110:THR:HG23	2.15	0.47
41:k:110:THR:HG21	52:u:4:LYS:HZ2	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:l:35:ARG:HH21	42:l:75:GLU:HB3	1.78	0.47
46:p:6:LEU:HD11	46:p:71:VAL:HB	1.96	0.47
51:7:156:LEU:H	51:7:156:LEU:HD12	1.79	0.47
52:u:3:ILE:HA	52:u:19:LYS:HE3	1.97	0.47
52:u:35:GLU:HB2	52:u:37:TYR:CZ	2.50	0.47
2:B:976:G:H5'	2:B:1156:A:N6	2.30	0.47
2:B:1241:A:H2'	2:B:1242:U:H5'	1.96	0.47
2:B:1692:U:H2'	2:B:1694:C:C4	2.49	0.47
2:B:1853:A:N1	2:B:2087:G:H1'	2.30	0.47
2:B:2472:G:H2'	2:B:2475:C:H42	1.79	0.47
2:B:2752:C:H2'	2:B:2753:A:O4'	2.15	0.47
2:B:2800:A:C4	2:B:2801:G:H1'	2.50	0.47
3:V:82:TYR:CB	13:M:36:VAL:HG12	2.45	0.47
5:D:122:VAL:HG21	5:D:141:ARG:HA	1.96	0.47
5:D:181:ASP:O	5:D:184:ARG:HB3	2.13	0.47
6:E:106:LYS:C	6:E:108:ILE:H	2.22	0.47
10:J:55:ILE:HA	10:J:122:LEU:O	2.14	0.47
10:J:74:TYR:O	10:J:87:ALA:HA	2.15	0.47
10:J:122:LEU:HD12	10:J:123:LYS:N	2.30	0.47
11:K:33:ALA:HB3	11:K:39:ILE:HD11	1.96	0.47
12:L:40:SER:C	12:L:41:ARG:HE	2.23	0.47
12:L:80:SER:OG	12:L:116:VAL:HG13	2.15	0.47
13:M:33:LEU:CD2	13:M:124:LEU:HG	2.45	0.47
13:M:42:THR:HG22	13:M:45:GLN:HG2	1.96	0.47
13:M:42:THR:HG23	13:M:45:GLN:N	2.31	0.47
14:N:106:ASP:O	14:N:108:ALA:N	2.48	0.47
16:P:91:VAL:HG12	16:P:92:ARG:N	2.30	0.47
17:Q:90:ASP:OD1	18:R:54:VAL:HG11	2.15	0.47
20:T:3:ARG:HH21	20:T:8:LEU:HD22	1.80	0.47
22:W:16:GLU:O	22:W:18:LYS:HD2	2.15	0.47
28:3:13:ASN:HB2	28:3:18:PHE:CD2	2.43	0.47
32:a:65:A:N3	32:a:65:A:C2'	2.74	0.47
32:a:114:U:H2'	32:a:115:G:C8	2.50	0.47
32:a:662:U:H2'	32:a:663:A:H8	1.80	0.47
32:a:916:U:H2'	32:a:917:G:H8	1.80	0.47
32:a:939:G:H4'	37:g:101:ARG:HH22	1.79	0.47
32:a:1071:C:O2'	32:a:1072:G:H5'	2.15	0.47
32:a:1118:U:H1'	32:a:1179:A:C5	2.50	0.47
32:a:1124:G:H5'	40:j:8:ILE:HD12	1.91	0.47
32:a:1148:U:H5	40:j:86:ALA:CB	2.28	0.47
32:a:1150:A:H3'	40:j:24:GLU:HG3	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1153:G:OP1	40:j:94:ALA:N	2.47	0.47
32:a:1304:G:H4'	43:m:56:ARG:HH21	1.79	0.47
32:a:1333:A:H4'	43:m:13:HIS:HB2	1.37	0.47
33:c:72:PRO:O	33:c:76:ILE:HG12	1.90	0.47
33:c:81:GLU:HA	40:j:59:LYS:CG	2.45	0.47
33:c:112:ALA:O	33:c:113:LYS:C	2.58	0.47
34:d:94:GLU:CA	34:d:103:ARG:HH22	2.27	0.47
34:d:147:LYS:H	34:d:147:LYS:HE3	1.80	0.47
39:i:44:ARG:O	39:i:47:VAL:HG22	2.15	0.47
50:t:49:ALA:HA	50:t:52:GLU:HB3	1.96	0.47
51:7:98:GLY:C	51:7:100:LEU:H	2.22	0.47
53:v:52:G:C6	53:v:53:G:N7	2.83	0.47
53:v:60:U:H5"	53:v:61:C:C5	2.49	0.47
1:A:89:U:O2	2:B:958:U:H2'	2.15	0.46
2:B:198:C:H2'	2:B:199:A:H5"	1.97	0.46
2:B:639:U:H2'	2:B:640:C:H6	1.79	0.46
2:B:832:U:O2'	12:L:53:GLY:HA3	2.15	0.46
2:B:943:A:OP2	12:L:42:SER:HB3	2.15	0.46
2:B:1091:G:O2'	2:B:1092:C:H5'	2.15	0.46
2:B:1260:A:O2'	2:B:1261:C:H5'	2.15	0.46
2:B:1477:A:H2'	2:B:1478:G:O4'	2.14	0.46
2:B:1592:C:H2'	2:B:1593:A:H8	1.80	0.46
2:B:1754:A:OP2	16:P:94:ALA:HB1	2.15	0.46
2:B:1993:U:H4'	5:D:134:HIS:CE1	2.41	0.46
2:B:2241:A:H2'	2:B:2242:G:H8	1.78	0.46
2:B:2896:C:H2'	2:B:2897:U:C6	2.50	0.46
3:V:16:ALA:HA	3:V:19:ARG:NE	2.29	0.46
4:C:51:ARG:HE	4:C:51:ARG:HB2	1.36	0.46
4:C:208:GLY:O	4:C:210:ALA:N	2.48	0.46
4:C:227:VAL:HG12	4:C:228:ASP:N	2.29	0.46
5:D:4:LEU:CD2	5:D:49:GLN:HG2	2.45	0.46
5:D:38:LYS:N	5:D:38:LYS:CD	2.78	0.46
5:D:157:LYS:O	5:D:157:LYS:HG3	2.15	0.46
8:G:23:ILE:HG13	8:G:24:THR:N	2.30	0.46
9:H:68:ARG:O	9:H:72:ILE:HG22	2.15	0.46
10:J:125:TYR:OH	10:J:133:ALA:HB3	2.15	0.46
12:L:13:LYS:HG3	12:L:14:LYS:H	1.80	0.46
12:L:117:THR:HG21	12:L:120:VAL:HG11	1.97	0.46
14:N:7:GLY:O	14:N:8:ARG:CB	2.63	0.46
14:N:57:THR:HG23	14:N:58:ASP:H	1.80	0.46
15:O:6:ALA:C	15:O:8:ILE:H	2.23	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:18:LEU:C	15:O:18:LEU:HD12	2.40	0.46
18:R:69:GLY:C	18:R:70:GLU:HG3	2.40	0.46
19:S:4:ILE:HG22	19:S:5:ALA:H	1.79	0.46
21:U:60:LYS:CG	21:U:61:GLU:H	2.27	0.46
25:Z:31:ASP:O	25:Z:32:LEU:HB3	2.15	0.46
32:a:551:U:O2'	32:a:552:U:H5'	2.16	0.46
32:a:741:G:O3'	45:o:54:GLY:HA3	2.15	0.46
32:a:967:C:H4'	39:i:129:ARG:HD2	1.97	0.46
32:a:1016:A:H5'	32:a:1218:C:H4'	1.97	0.46
32:a:1038:C:H2'	32:a:1039:G:C8	2.47	0.46
32:a:1149:C:H3'	40:j:31:ARG:NH2	2.29	0.46
32:a:1171:A:O2'	32:a:1172:C:H5'	2.15	0.46
32:a:1232:U:H3'	39:i:125:GLN:CG	2.40	0.46
32:a:1256:A:O4'	44:n:76:PHE:HD2	1.97	0.46
32:a:1494:G:H2'	32:a:1495:U:C6	2.50	0.46
33:c:110:LEU:HB3	33:c:203:LYS:HZ3	1.80	0.46
37:g:94:ARG:CD	37:g:98:LEU:HD11	2.45	0.46
39:i:49:GLN:N	39:i:50:PRO:HD2	2.30	0.46
43:m:72:ILE:O	43:m:76:ILE:HG13	2.15	0.46
47:q:56:ASP:C	47:q:79:GLU:HB3	2.40	0.46
50:t:70:LYS:HB2	50:t:70:LYS:NZ	2.30	0.46
51:7:138:ARG:HA	51:7:141:GLU:CD	2.40	0.46
2:B:32:C:H5'	2:B:1238:G:OP1	2.14	0.46
2:B:581:C:H2'	2:B:582:A:C8	2.50	0.46
2:B:1843:C:H4'	4:C:250:GLN:HB3	1.96	0.46
2:B:2354:C:C4'	22:W:30:VAL:HG13	2.42	0.46
2:B:2395:C:O5'	2:B:2395:C:H6	1.98	0.46
2:B:2617:U:H2'	2:B:2618:G:C5'	2.45	0.46
2:B:2819:G:H2'	2:B:2821:A:N7	2.29	0.46
4:C:16:VAL:O	4:C:16:VAL:HG12	2.14	0.46
4:C:78:GLU:CB	4:C:92:LEU:HD23	2.45	0.46
4:C:140:VAL:HG23	4:C:141:HIS:N	2.28	0.46
4:C:170:TYR:C	4:C:171:VAL:HG22	2.39	0.46
5:D:135:GLY:C	5:D:137:SER:N	2.68	0.46
5:D:175:LEU:CD2	5:D:190:LYS:HB3	2.45	0.46
6:E:144:GLU:C	6:E:146:VAL:N	2.71	0.46
11:K:108:ARG:HG3	11:K:108:ARG:HH11	1.79	0.46
12:L:96:LYS:O	12:L:100:ILE:HD12	2.14	0.46
13:M:90:GLU:O	13:M:91:TYR:HB2	2.14	0.46
13:M:131:VAL:HG23	13:M:132:THR:H	1.80	0.46
15:O:30:ARG:NH2	15:O:102:ARG:HD2	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:52:ARG:CB	16:P:60:VAL:HG11	2.22	0.46
18:R:47:VAL:HG22	18:R:48:LYS:HG2	1.97	0.46
19:S:6:LYS:HB2	19:S:6:LYS:NZ	2.30	0.46
19:S:17:VAL:HG21	19:S:101:SER:OG	2.15	0.46
19:S:34:ASP:HA	19:S:37:THR:HG22	1.96	0.46
22:W:64:GLY:O	22:W:65:LYS:O	2.33	0.46
27:2:9:LYS:N	27:2:9:LYS:HD2	2.30	0.46
29:4:48:MET:SD	29:4:51:LYS:HE3	2.55	0.46
32:a:608:A:H2'	32:a:609:A:O4'	2.14	0.46
32:a:946:A:H2'	43:m:42:VAL:HG23	1.09	0.46
32:a:1096:C:H2'	32:a:1097:C:C6	2.50	0.46
32:a:1150:A:N3	40:j:25:ILE:CA	2.67	0.46
32:a:1218:C:C1'	44:n:48:GLN:HG2	2.45	0.46
32:a:1367:C:O2'	32:a:1368:A:H5'	2.14	0.46
32:a:1432:G:H8	32:a:1432:G:OP2	1.97	0.46
33:c:77:GLY:HA2	40:j:57:VAL:HG13	1.44	0.46
34:d:167:PRO:HB2	34:d:170:LEU:HG	1.97	0.46
35:e:19:ARG:O	35:e:20:VAL:HB	2.14	0.46
36:f:71:ILE:HG13	36:f:72:ASP:N	2.29	0.46
38:h:34:ALA:HB1	38:h:109:VAL:HG21	1.97	0.46
42:l:106:VAL:HG22	42:l:117:GLY:H	1.79	0.46
43:m:11:HIS:O	43:m:12:LYS:HG2	2.14	0.46
43:m:53:ASP:OD1	43:m:56:ARG:HD2	2.15	0.46
45:o:87:ARG:HA	45:o:87:ARG:HH11	1.78	0.46
49:s:18:VAL:HB	49:s:43:MET:HE3	1.97	0.46
51:7:95:TRP:CH2	51:7:100:LEU:HB2	2.50	0.46
52:u:40:PRO:O	52:u:42:THR:N	2.48	0.46
1:A:50:A:H5"	15:O:68:LYS:CG	2.45	0.46
1:A:52:A:H3'	1:A:53:A:H8	1.80	0.46
2:B:19:A:H2'	2:B:20:C:H6	1.78	0.46
2:B:38:A:C4'	6:E:46:GLN:HG3	2.45	0.46
2:B:233:A:H61	2:B:428:A:N6	2.13	0.46
2:B:286:U:H2'	2:B:287:G:H8	1.78	0.46
2:B:288:U:O2'	2:B:289:G:H5'	2.15	0.46
2:B:533:G:H2'	2:B:534:U:C6	2.51	0.46
2:B:622:G:H2'	2:B:623:C:C6	2.50	0.46
2:B:1064:C:O2'	2:B:1065:U:H5'	2.16	0.46
2:B:1082:U:H2'	2:B:1083:U:O4'	2.16	0.46
2:B:1133:A:H4'	2:B:1134:A:H5"	1.95	0.46
2:B:1190:G:OP1	12:L:41:ARG:HG2	2.15	0.46
2:B:1352:U:O2'	2:B:1353:A:H5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1399:C:H2'	2:B:1400:U:C6	2.50	0.46
2:B:1432:G:O2'	2:B:1433:A:H5'	2.16	0.46
2:B:1921:G:O2'	2:B:1922:G:H5'	2.16	0.46
2:B:2028:U:H2'	2:B:2029:G:C8	2.51	0.46
2:B:2266:A:C4'	2:B:2267:A:N7	2.78	0.46
2:B:2543:G:H5'	2:B:2543:G:H8	1.79	0.46
2:B:2620:C:C4'	5:D:161:MET:HG3	2.45	0.46
2:B:2673:G:H2'	2:B:2674:G:C8	2.51	0.46
4:C:139:THR:HG22	4:C:193:GLU:HB3	1.98	0.46
4:C:216:ARG:HB3	4:C:216:ARG:NH1	2.26	0.46
5:D:13:ARG:NH1	16:P:8:GLU:HB3	2.30	0.46
5:D:49:GLN:O	5:D:78:GLY:HA2	2.15	0.46
7:F:12:VAL:HG13	7:F:27:VAL:CG2	2.42	0.46
7:F:37:MET:HE2	7:F:37:MET:HB3	1.77	0.46
7:F:73:VAL:HG12	53:v:57:G:C8	2.32	0.46
10:J:41:LYS:HG2	10:J:42:ALA:N	2.30	0.46
12:L:38:GLN:N	12:L:41:ARG:CD	2.77	0.46
12:L:82:LEU:O	12:L:117:THR:HG22	2.15	0.46
12:L:136:GLU:C	12:L:138:ALA:N	2.73	0.46
13:M:3:GLN:CB	13:M:46:ILE:HB	2.46	0.46
18:R:62:GLU:N	18:R:62:GLU:OE1	2.49	0.46
19:S:29:VAL:HG21	19:S:70:LYS:N	2.30	0.46
32:a:418:C:H2'	32:a:419:C:H6	1.78	0.46
32:a:437:U:H4'	34:d:151:GLN:HE22	1.80	0.46
32:a:844:G:H21	32:a:845:A:H62	1.61	0.46
32:a:1106:G:H4'	33:c:170:GLY:O	2.14	0.46
32:a:1106:G:H5"	33:c:171:ARG:HB3	1.96	0.46
32:a:1128:C:N3	40:j:80:THR:OG1	2.48	0.46
32:a:1222:G:H8	49:s:3:SER:C	2.22	0.46
32:a:1235:U:C5'	43:m:54:THR:CG2	2.93	0.46
32:a:1280:A:C3'	40:j:39:PRO:HD3	2.31	0.46
32:a:1292:G:H5"	39:i:40:ARG:HD3	1.97	0.46
32:a:1369:C:H2'	32:a:1370:G:C8	2.49	0.46
32:a:1494:G:O2'	32:a:1495:U:H5'	2.15	0.46
33:c:63:ILE:O	40:j:48:ARG:CB	2.58	0.46
37:g:42:VAL:O	37:g:46:LEU:HB2	2.16	0.46
40:j:89:ARG:NE	40:j:89:ARG:HA	2.31	0.46
46:p:33:ILE:HD12	46:p:33:ILE:H	1.79	0.46
47:q:20:ILE:CG1	47:q:45:VAL:HB	2.43	0.46
48:r:64:LEU:C	48:r:66:LEU:H	2.23	0.46
2:B:256:A:H2'	2:B:257:C:H6	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1295:C:H2'	2:B:1296:G:H8	1.81	0.46
2:B:1529:G:H2'	2:B:1530:G:C8	2.50	0.46
2:B:1789:A:H2'	2:B:1790:C:C6	2.51	0.46
2:B:2261:C:O2'	2:B:2262:U:H5'	2.15	0.46
2:B:2574:G:O2'	5:D:151:THR:HG21	2.16	0.46
2:B:2728:U:H2'	2:B:2729:G:C8	2.50	0.46
2:B:2783:U:H2'	2:B:2784:U:H6	1.79	0.46
4:C:242:HIS:N	4:C:243:PRO:HD3	2.30	0.46
6:E:28:VAL:O	6:E:32:VAL:HG23	2.14	0.46
7:F:6:TYR:O	7:F:11:VAL:HG23	2.15	0.46
7:F:87:LYS:O	7:F:88:VAL:HB	2.15	0.46
7:F:107:VAL:CG1	43:m:101:THR:O	2.60	0.46
7:F:108:PRO:O	43:m:109:LYS:HB3	2.15	0.46
7:F:135:ILE:HD12	7:F:140:ILE:HD12	1.98	0.46
7:F:171:ALA:N	7:F:173:ASP:OD1	2.48	0.46
8:G:25:ILE:HG21	8:G:74:MET:HB3	1.98	0.46
9:H:23:ALA:C	9:H:25:TYR:H	2.23	0.46
9:H:29:PHE:H	9:H:32:PRO:HD2	1.79	0.46
10:J:100:VAL:O	10:J:102:GLU:N	2.48	0.46
11:K:8:LEU:O	11:K:19:VAL:HG23	2.16	0.46
12:L:110:VAL:HB	12:L:126:ARG:CZ	2.46	0.46
16:P:11:GLN:O	16:P:12:MET:HG3	2.14	0.46
17:Q:78:PHE:CE1	17:Q:82:LEU:HD21	2.51	0.46
20:T:85:VAL:O	20:T:85:VAL:CG2	2.62	0.46
20:T:93:LEU:HD22	20:T:93:LEU:N	2.25	0.46
21:U:10:VAL:HG21	21:U:25:LYS:NZ	2.31	0.46
22:W:16:GLU:C	22:W:18:LYS:HD2	2.40	0.46
25:Z:15:SER:HB3	25:Z:23:LYS:HD3	1.97	0.46
29:4:14:LYS:O	29:4:21:PHE:HB3	2.16	0.46
32:a:230:G:O2'	32:a:231:U:H5'	2.16	0.46
32:a:366:A:O2'	32:a:394:G:N2	2.49	0.46
32:a:563:A:H2'	32:a:567:G:C8	2.50	0.46
32:a:692:U:H2'	32:a:694:A:OP2	2.16	0.46
32:a:1101:A:O2'	32:a:1102:A:OP2	2.33	0.46
32:a:1147:C:N4	40:j:85:ASP:H	2.14	0.46
32:a:1149:C:C1'	40:j:31:ARG:HG2	2.45	0.46
32:a:1235:U:O2'	43:m:54:THR:N	2.48	0.46
32:a:1410:A:H2'	32:a:1411:C:C6	2.50	0.46
32:a:1430:A:H2'	32:a:1431:A:O4'	2.15	0.46
33:c:46:LEU:CD2	33:c:75:VAL:HG13	2.44	0.46
33:c:131:ARG:HB3	33:c:131:ARG:CZ	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:e:25:LYS:C	35:e:25:LYS:HE2	2.41	0.46
35:e:84:VAL:HG21	35:e:142:GLY:O	2.15	0.46
37:g:139:ASP:HA	37:g:142:ARG:HH12	1.81	0.46
38:h:31:LEU:O	38:h:35:ILE:HG13	2.15	0.46
38:h:65:PHE:CD2	38:h:66:GLN:HG3	2.51	0.46
39:i:71:ILE:O	39:i:72:SER:C	2.59	0.46
41:k:12:ARG:N	41:k:12:ARG:HD2	2.30	0.46
41:k:121:ARG:HG3	41:k:121:ARG:HH11	1.79	0.46
46:p:39:PHE:HE2	46:p:70:ARG:HH21	1.63	0.46
53:v:33:U:O2	53:v:35:A:C8	2.69	0.46
2:B:55:G:H2'	2:B:56:A:C8	2.51	0.46
2:B:64:A:N6	2:B:91:A:H61	2.14	0.46
2:B:215:G:H4'	2:B:216:A:OP1	2.16	0.46
2:B:246:C:C2'	2:B:247:G:H5'	2.45	0.46
2:B:443:A:H2	2:B:1245:G:N3	2.13	0.46
2:B:570:G:O2'	2:B:571:U:H5'	2.14	0.46
2:B:770:G:P	28:3:11:LYS:HD3	2.56	0.46
2:B:904:G:H2'	2:B:905:A:H8	1.80	0.46
2:B:1433:A:H2'	2:B:1434:A:O4'	2.15	0.46
2:B:2331:G:H2'	2:B:2332:C:H6	1.79	0.46
2:B:2623:G:N2	26:1:18:HIS:NE2	2.63	0.46
4:C:49:THR:O	4:C:50:THR:HB	2.15	0.46
4:C:157:ALA:C	4:C:159:THR:H	2.23	0.46
5:D:184:ARG:O	5:D:184:ARG:HG3	2.14	0.46
7:F:127:TYR:HH	43:m:100:ARG:HH12	1.57	0.46
9:H:29:PHE:N	9:H:32:PRO:CG	2.79	0.46
9:H:32:PRO:C	9:H:34:GLY:H	2.21	0.46
13:M:31:PHE:HE2	13:M:110:GLU:HG2	1.81	0.46
13:M:36:VAL:CG1	13:M:125:PRO:HD2	2.45	0.46
13:M:73:ILE:HD13	13:M:90:GLU:OE2	2.15	0.46
16:P:24:THR:O	16:P:26:GLU:N	2.49	0.46
28:3:30:VAL:HA	28:3:33:ARG:HD2	1.96	0.46
31:6:116:MET:SD	31:6:124:MET:HB2	2.56	0.46
32:a:88:U:O2'	32:a:89:U:C6	2.68	0.46
32:a:109:A:H4'	32:a:110:C:OP2	2.14	0.46
32:a:299:G:H2'	32:a:300:A:C8	2.51	0.46
32:a:437:U:H5'	34:d:151:GLN:NE2	2.18	0.46
32:a:538:G:OP2	42:l:111:GLN:CB	2.64	0.46
32:a:649:A:H2'	32:a:650:G:O4'	2.14	0.46
32:a:982:U:H4'	32:a:983:A:O4'	2.16	0.46
32:a:1121:U:C4	40:j:88:MET:O	2.68	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1272:G:H2'	32:a:1273:C:C6	2.50	0.46
32:a:1527:U:O2'	32:a:1528:U:H5'	2.15	0.46
33:c:90:VAL:HG21	33:c:98:ALA:HB3	1.97	0.46
33:c:120:THR:HA	33:c:123:LEU:HD12	1.96	0.46
35:e:40:ASP:O	35:e:42:ASN:N	2.45	0.46
35:e:108:GLY:N	35:e:110:MET:SD	2.89	0.46
36:f:5:GLU:HG3	36:f:63:ASN:OD1	2.15	0.46
36:f:42:TRP:CZ2	36:f:61:LEU:HD23	2.51	0.46
38:h:40:LYS:HA	38:h:45:ILE:HG13	1.97	0.46
38:h:51:GLU:O	38:h:56:PRO:HA	2.16	0.46
42:l:50:LYS:HE2	42:l:50:LYS:N	2.30	0.46
49:s:37:SER:O	49:s:69:LYS:HG2	2.15	0.46
2:B:137:U:H2'	2:B:138:U:O4'	2.15	0.46
2:B:621:A:H2'	2:B:622:G:O4'	2.15	0.46
2:B:968:C:H4'	24:Y:16:LEU:HD23	1.98	0.46
2:B:1173:U:O2	2:B:1177:G:C2	2.69	0.46
2:B:1190:G:OP1	12:L:41:ARG:CD	2.64	0.46
2:B:1256:G:H21	6:E:77:ILE:CG2	2.29	0.46
2:B:1480:C:H2'	2:B:1481:U:C6	2.50	0.46
2:B:2226:C:H2'	2:B:2227:A:O4'	2.16	0.46
2:B:2250:G:H8	2:B:2250:G:O5'	1.98	0.46
2:B:2354:C:O3'	22:W:30:VAL:HG13	2.16	0.46
2:B:2776:A:H4'	2:B:2777:G:H5"	1.97	0.46
2:B:2877:G:H2'	2:B:2878:U:C6	2.51	0.46
7:F:67:THR:O	7:F:83:PRO:HA	2.15	0.46
7:F:73:VAL:O	53:v:56:C:C2	2.69	0.46
9:H:89:LYS:C	9:H:90:LEU:HD12	2.40	0.46
11:K:58:LEU:CB	11:K:89:ASN:HD21	2.28	0.46
11:K:63:VAL:HB	11:K:83:ALA:HB1	1.98	0.46
12:L:13:LYS:CG	12:L:14:LYS:H	2.28	0.46
12:L:64:PHE:CE1	29:4:24:LYS:HB2	2.50	0.46
19:S:27:LYS:HD2	19:S:27:LYS:N	2.23	0.46
20:T:35:ALA:O	20:T:81:LYS:HD3	2.15	0.46
22:W:28:GLU:CB	22:W:30:VAL:HG23	2.41	0.46
22:W:74:LYS:HB3	22:W:75:ASN:H	1.51	0.46
25:Z:59:ARG:HG3	25:Z:62:LYS:HG3	1.97	0.46
31:6:54:ILE:HG21	31:6:70:THR:CG2	2.45	0.46
31:6:79:LEU:CD1	31:6:131:THR:OG1	2.64	0.46
32:a:426:U:H4'	34:d:38:GLY:O	2.14	0.46
32:a:552:U:H2'	32:a:553:A:C8	2.50	0.46
32:a:695:A:OP1	41:k:53:GLY:HA3	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:746:A:H2'	32:a:747:A:H8	1.80	0.46
32:a:950:U:H2'	32:a:951:G:C8	2.50	0.46
32:a:1085:U:H3'	32:a:1086:U:C5	2.51	0.46
32:a:1121:U:H2'	32:a:1122:U:O4'	2.15	0.46
32:a:1125:U:C3'	40:j:76:ILE:CA	2.93	0.46
32:a:1128:C:OP1	40:j:31:ARG:O	2.33	0.46
32:a:1150:A:N6	40:j:90:LEU:HG	2.31	0.46
32:a:1278:G:H5"	44:n:93:PRO:N	2.24	0.46
32:a:1308:U:H5'	43:m:27:THR:O	2.09	0.46
37:g:110:ARG:HH12	37:g:122:GLU:N	2.13	0.46
37:g:125:ASP:HB3	37:g:130:LYS:CB	2.27	0.46
37:g:150:PHE:HE1	41:k:55:ARG:HE	1.64	0.46
50:t:17:ARG:HD2	50:t:17:ARG:C	2.40	0.46
1:A:10:G:H2'	1:A:11:C:O4'	2.16	0.46
1:A:54:G:O2'	1:A:55:U:H5'	2.16	0.46
1:A:63:C:H2'	1:A:64:G:C8	2.49	0.46
2:B:188:G:OP1	25:Z:11:GLU:HA	2.16	0.46
2:B:198:C:O2'	2:B:199:A:H5"	2.16	0.46
2:B:702:U:H2'	2:B:703:U:C6	2.51	0.46
2:B:1409:U:O2'	2:B:1410:G:H5'	2.16	0.46
2:B:1541:C:H2'	2:B:1542:U:O4'	2.16	0.46
2:B:1739:A:H2'	2:B:1740:G:O4'	2.16	0.46
2:B:1774:C:H2'	2:B:1774:C:O2	2.16	0.46
2:B:2443:C:H2'	2:B:2444:G:C8	2.50	0.46
2:B:2811:G:H5'	5:D:62:LYS:HD2	1.98	0.46
2:B:2886:A:C2	2:B:2887:A:N7	2.84	0.46
3:V:80:HIS:CD2	3:V:82:TYR:H	2.23	0.46
4:C:140:VAL:CG2	4:C:141:HIS:H	2.28	0.46
4:C:160:TYR:HA	4:C:193:GLU:CG	2.45	0.46
4:C:244:VAL:O	4:C:245:THR:C	2.58	0.46
5:D:4:LEU:O	5:D:5:VAL:HG13	2.16	0.46
5:D:30:GLU:CD	5:D:30:GLU:N	2.74	0.46
5:D:150:GLN:O	5:D:151:THR:HG22	2.15	0.46
6:E:148:ILE:H	6:E:183:PHE:HB3	1.81	0.46
9:H:1:MET:HA	9:H:21:VAL:O	2.15	0.46
10:J:7:LYS:CE	10:J:48:VAL:HB	2.45	0.46
11:K:62:VAL:HA	11:K:83:ALA:O	2.15	0.46
12:L:78:ARG:HB2	12:L:79:LEU:H	1.33	0.46
12:L:127:VAL:HB	12:L:128:THR:H	1.32	0.46
13:M:3:GLN:HE22	13:M:5:LYS:HB2	1.81	0.46
14:N:114:GLU:O	14:N:115:LEU:HB3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:76:LYS:HB2	15:O:106:LEU:HD13	1.97	0.46
16:P:31:VAL:HA	16:P:81:ASP:HB3	1.97	0.46
16:P:59:THR:HG23	16:P:76:HIS:CE1	2.51	0.46
20:T:15:HIS:O	20:T:16:VAL:C	2.58	0.46
26:1:28:SER:O	26:1:29:VAL:HB	2.16	0.46
29:4:57:VAL:HG13	29:4:58:ILE:N	2.31	0.46
32:a:471:U:H2'	32:a:472:U:H6	1.80	0.46
32:a:491:G:H2'	32:a:492:C:C6	2.51	0.46
32:a:662:U:O2'	32:a:836:G:H5"	2.15	0.46
32:a:841:C:H6	32:a:843:U:OP1	1.99	0.46
32:a:949:A:O4'	43:m:37:GLY:N	2.48	0.46
32:a:1085:U:H3'	32:a:1086:U:H5	1.80	0.46
32:a:1230:C:OP1	53:v:30:G:C4'	2.63	0.46
32:a:1231:G:H2'	32:a:1232:U:H6	1.80	0.46
32:a:1244:G:H2'	32:a:1245:C:H6	1.81	0.46
32:a:1252:A:H2'	32:a:1253:G:H5"	1.98	0.46
32:a:1259:C:C5	44:n:76:PHE:CE1	3.03	0.46
32:a:1279:G:H5"	40:j:41:PRO:HD3	1.96	0.46
32:a:1306:A:C1'	43:m:33:LEU:CG	2.92	0.46
32:a:1310:G:N7	43:m:62:PHE:CZ	2.84	0.46
32:a:1332:A:N6	43:m:18:LEU:HD23	2.29	0.46
32:a:1379:G:C6	37:g:2:ARG:O	2.69	0.46
32:a:1458:G:O3'	50:t:22:SER:HA	2.14	0.46
33:c:14:VAL:HG23	33:c:15:LYS:HG2	1.98	0.46
33:c:71:ARG:O	33:c:75:VAL:HG23	2.15	0.46
33:c:131:ARG:HB3	33:c:131:ARG:NH1	2.31	0.46
44:n:10:VAL:HG12	44:n:11:LYS:NZ	2.31	0.46
52:u:34:ARG:HD2	52:u:34:ARG:C	2.41	0.46
1:A:54:G:H2'	1:A:55:U:H6	1.79	0.46
2:B:988:A:H4'	2:B:1155:A:N1	2.31	0.46
2:B:995:C:O2	10:J:3:THR:HG23	2.16	0.46
2:B:1255:U:C2'	6:E:67:ARG:HB3	2.40	0.46
2:B:1537:G:H2'	2:B:1538:G:C4'	2.46	0.46
2:B:1971:U:H1'	4:C:238:ASN:HD22	1.81	0.46
2:B:2299:U:H2'	2:B:2300:C:C6	2.50	0.46
2:B:2751:G:N2	8:G:1:SER:HB3	2.31	0.46
2:B:2788:C:H2'	2:B:2789:C:C6	2.50	0.46
3:V:81:PRO:HB2	3:V:82:TYR:HD2	1.81	0.46
4:C:53:ILE:CD1	4:C:218:THR:HG23	2.45	0.46
4:C:128:THR:HA	4:C:190:THR:CA	2.43	0.46
4:C:229:HIS:ND1	4:C:230:PRO:CD	2.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:178:VAL:O	5:D:179:ARG:HG3	2.15	0.46
6:E:7:ASP:C	6:E:9:GLN:H	2.24	0.46
7:F:70:ARG:HA	7:F:80:GLN:HE21	1.80	0.46
7:F:89:THR:C	7:F:90:LEU:HD12	2.41	0.46
7:F:175:PRO:O	43:m:102:LYS:HB2	2.15	0.46
9:H:15:LEU:CB	9:H:51:ARG:HD2	2.44	0.46
9:H:130:VAL:HG21	9:H:144:VAL:HG23	1.98	0.46
10:J:100:VAL:HG22	10:J:101:ILE:N	2.27	0.46
11:K:119:ALA:N	11:K:120:PRO:HD3	2.31	0.46
12:L:77:ILE:HG21	12:L:92:LEU:HD13	1.98	0.46
12:L:78:ARG:CZ	12:L:110:VAL:HG11	2.46	0.46
15:O:67:ASN:CA	15:O:71:ALA:HB3	2.41	0.46
16:P:13:LYS:HZ2	16:P:15:ASP:HB2	1.80	0.46
16:P:13:LYS:CE	16:P:77:SER:HB3	2.46	0.46
17:Q:93:ILE:CG2	17:Q:94:LEU:HD13	2.40	0.46
17:Q:102:LYS:H	17:Q:102:LYS:CD	2.29	0.46
20:T:15:HIS:HB2	20:T:31:VAL:HB	1.98	0.46
22:W:16:GLU:O	22:W:16:GLU:HG3	2.14	0.46
25:Z:65:ASN:O	25:Z:69:SER:HB2	2.16	0.46
26:1:37:HIS:HB3	26:1:38:LEU:H	1.57	0.46
27:2:9:LYS:HD2	27:2:9:LYS:H	1.81	0.46
28:3:42:LEU:HG	28:3:43:THR:N	2.31	0.46
31:6:12:VAL:HG23	31:6:41:PHE:CE2	2.51	0.46
32:a:244:U:O4	32:a:906:A:H1'	2.16	0.46
32:a:586:C:C2'	32:a:587:G:H5'	2.46	0.46
32:a:1220:G:OP1	49:s:38:THR:HG21	2.16	0.46
32:a:1276:G:C2	44:n:95:LEU:HD12	2.50	0.46
32:a:1320:C:C5	49:s:68:HIS:HD2	2.34	0.46
32:a:1320:C:H2'	32:a:1321:U:O4'	2.16	0.46
32:a:1375:A:OP2	37:g:9:ARG:HB3	2.15	0.46
32:a:1410:A:H2'	32:a:1411:C:H6	1.81	0.46
32:a:1446:A:C2'	32:a:1447:A:H5"	2.46	0.46
33:c:17:TRP:C	33:c:19:SER:H	2.24	0.46
34:d:32:LYS:HB3	34:d:35:GLN:HE21	1.81	0.46
34:d:36:ALA:C	34:d:38:GLY:H	2.24	0.46
34:d:81:LEU:HD11	34:d:92:LEU:HD21	1.97	0.46
34:d:100:VAL:CG1	34:d:104:MET:HE3	2.45	0.46
36:f:45:ARG:HG2	36:f:46:GLN:N	2.31	0.46
41:k:52:ARG:HD2	41:k:53:GLY:H	1.80	0.46
45:o:11:VAL:HA	45:o:26:VAL:HG13	1.98	0.46
46:p:26:ASN:ND2	46:p:31:ARG:HB3	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:s:61:VAL:HA	49:s:65:MET:SD	2.56	0.46
50:t:23:ARG:HB2	50:t:65:LEU:HD11	1.98	0.46
51:7:158:ASP:O	51:7:181:PRO:HD2	2.15	0.46
1:A:114:C:H2'	1:A:115:A:H8	1.80	0.46
2:B:144:A:O2'	2:B:145:C:H5'	2.15	0.46
2:B:341:C:O2'	2:B:342:A:H5'	2.16	0.46
2:B:711:G:H2'	2:B:712:G:O4'	2.15	0.46
2:B:1112:G:O2'	2:B:1113:U:H5'	2.16	0.46
2:B:1189:A:H2'	2:B:1190:G:O4'	2.15	0.46
2:B:1606:C:H5"	2:B:1607:C:OP1	2.15	0.46
2:B:1733:G:H2'	2:B:1734:G:C8	2.51	0.46
2:B:1979:U:C2'	2:B:1980:G:H5'	2.46	0.46
2:B:2750:A:H3'	8:G:3:VAL:HG22	1.98	0.46
4:C:42:ARG:CG	4:C:43:ASN:N	2.73	0.46
4:C:220:ARG:HA	4:C:220:ARG:CZ	2.45	0.46
6:E:97:ASN:N	6:E:97:ASN:ND2	2.61	0.46
7:F:175:PRO:CB	43:m:102:LYS:CB	2.87	0.46
10:J:124:VAL:O	10:J:125:TYR:HB2	2.16	0.46
10:J:124:VAL:HG12	10:J:125:TYR:O	2.16	0.46
12:L:92:LEU:HD21	12:L:96:LYS:NZ	2.30	0.46
12:L:116:VAL:HG12	12:L:117:THR:HG23	1.96	0.46
13:M:62:LYS:HB2	13:M:104:GLU:HB2	1.97	0.46
13:M:96:ILE:HD13	13:M:96:ILE:C	2.41	0.46
13:M:96:ILE:HD13	13:M:97:GLN:N	2.30	0.46
13:M:114:ARG:HH21	13:M:125:PRO:HA	1.81	0.46
14:N:87:PHE:HB2	14:N:94:TYR:OH	2.16	0.46
17:Q:53:LYS:H	17:Q:53:LYS:HD2	1.80	0.46
17:Q:93:ILE:C	17:Q:95:ALA:H	2.23	0.46
18:R:42:ALA:C	18:R:54:VAL:HA	2.41	0.46
20:T:26:LYS:HD2	20:T:27:SER:HB2	1.97	0.46
21:U:25:LYS:HA	21:U:35:VAL:N	2.31	0.46
26:1:27:LEU:O	26:1:36:LYS:HB3	2.16	0.46
32:a:123:U:OP1	32:a:312:C:H5'	2.16	0.46
32:a:489:C:H2'	32:a:490:C:C6	2.51	0.46
32:a:767:A:H2'	32:a:768:A:C8	2.50	0.46
32:a:828:U:H2'	32:a:829:G:O5'	2.16	0.46
32:a:927:G:O2'	32:a:928:G:H5'	2.16	0.46
32:a:950:U:H2'	32:a:951:G:H8	1.81	0.46
32:a:1016:A:C2'	44:n:44:VAL:CG1	2.46	0.46
32:a:1080:A:O3'	35:e:20:VAL:CG1	2.64	0.46
32:a:1130:A:O5'	40:j:82:LYS:CE	2.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1256:A:O4'	32:a:1278:G:N2	2.49	0.46
32:a:1283:U:N1	44:n:88:MET:HE3	2.29	0.46
32:a:1306:A:C5'	43:m:32:ILE:CG1	2.87	0.46
32:a:1333:A:P	43:m:12:LYS:CG	3.04	0.46
32:a:1346:A:N1	37:g:9:ARG:HD3	2.29	0.46
33:c:24:ASN:O	33:c:26:LYS:N	2.49	0.46
33:c:41:TYR:HA	33:c:44:LYS:HD3	1.98	0.46
33:c:63:ILE:CB	40:j:66:GLU:CG	2.94	0.46
33:c:99:GLN:O	40:j:49:PHE:O	2.14	0.46
33:c:101:ASN:O	40:j:65:TYR:HE1	1.98	0.46
35:e:152:VAL:HG21	38:h:98:LEU:HD23	1.98	0.46
39:i:15:ALA:O	39:i:66:VAL:HA	2.16	0.46
44:n:60:ARG:HE	44:n:62:ARG:CZ	2.28	0.46
45:o:27:GLN:O	45:o:31:LEU:HD23	2.16	0.46
50:t:74:HIS:O	50:t:78:LEU:HB2	2.16	0.46
1:A:26:C:H2'	1:A:27:C:C6	2.50	0.46
2:B:199:A:N6	2:B:2433:A:H2'	2.31	0.46
2:B:264:C:C2'	2:B:265:A:H5"	2.46	0.46
2:B:514:A:O2'	2:B:515:A:H5'	2.16	0.46
2:B:581:C:H2'	2:B:582:A:H8	1.81	0.46
2:B:780:G:H21	2:B:783:A:H62	1.64	0.46
2:B:834:G:H4'	12:L:59:ARG:HH22	1.81	0.46
2:B:872:U:H1'	13:M:68:PHE:CZ	2.51	0.46
2:B:1114:C:H2'	2:B:1115:G:C8	2.50	0.46
2:B:1275:A:H2	2:B:1645:G:H21	1.64	0.46
2:B:1410:G:H2'	2:B:1411:U:H6	1.80	0.46
2:B:1511:G:H2'	2:B:1512:C:H6	1.81	0.46
2:B:1517:G:O2'	2:B:1518:C:H5'	2.14	0.46
2:B:1854:A:H2'	2:B:1855:U:O4'	2.16	0.46
2:B:2227:A:O3'	4:C:258:SER:HA	2.16	0.46
2:B:2230:G:H1'	25:Z:30:HIS:HD2	1.79	0.46
2:B:2567:G:H2'	2:B:2568:U:C6	2.51	0.46
2:B:2747:G:H2'	2:B:2748:A:C8	2.51	0.46
3:V:44:HIS:O	3:V:46:LYS:N	2.49	0.46
4:C:206:LYS:O	4:C:207:ALA:C	2.58	0.46
4:C:230:PRO:O	4:C:231:HIS:HB3	2.15	0.46
4:C:245:THR:O	4:C:246:PRO:C	2.59	0.46
6:E:147:LEU:HB3	6:E:183:PHE:CD2	2.50	0.46
6:E:149:ILE:HG13	6:E:149:ILE:O	2.15	0.46
6:E:191:ASP:C	6:E:193:VAL:H	2.22	0.46
7:F:74:ALA:CB	53:v:56:C:O3'	2.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:H:66:ASN:C	9:H:68:ARG:H	2.23	0.46
9:H:128:HIS:CG	9:H:144:VAL:HB	2.51	0.46
10:J:81:ILE:C	10:J:83:GLY:N	2.73	0.46
10:J:128:ASN:CG	10:J:129:GLU:N	2.73	0.46
11:K:23:LYS:HG3	11:K:24:VAL:H	1.81	0.46
12:L:6:LEU:HD22	12:L:6:LEU:N	2.31	0.46
12:L:85:VAL:CG1	12:L:86:GLU:HG2	2.45	0.46
13:M:67:VAL:HG13	13:M:67:VAL:O	2.15	0.46
13:M:71:LYS:HD3	13:M:92:TRP:C	2.41	0.46
13:M:124:LEU:N	13:M:124:LEU:HD23	2.31	0.46
15:O:76:LYS:CG	15:O:110:ALA:HB2	2.46	0.46
17:Q:92:LYS:C	17:Q:92:LYS:HD3	2.41	0.46
17:Q:97:ILE:HD13	17:Q:100:PHE:HZ	1.79	0.46
21:U:81:ARG:HA	21:U:81:ARG:HH11	1.80	0.46
25:Z:15:SER:HB2	25:Z:25:ARG:HH12	1.81	0.46
28:3:13:ASN:O	28:3:16:HIS:N	2.49	0.46
29:4:27:ASN:HB3	29:4:28:LEU:H	1.26	0.46
30:5:14:CYS:SG	30:5:27:CYS:SG	3.14	0.46
32:a:434:U:O2	32:a:434:U:H2'	2.14	0.46
32:a:522:C:H41	42:l:49:ARG:NH2	2.14	0.46
32:a:968:A:H5'	32:a:968:A:N3	2.31	0.46
32:a:1056:U:O2'	32:a:1057:G:H5'	2.16	0.46
32:a:1150:A:H5"	40:j:27:GLU:OE1	2.14	0.46
32:a:1306:A:C3'	43:m:33:LEU:CG	2.92	0.46
32:a:1318:A:H5'	49:s:63:ASP:O	2.17	0.46
34:d:117:VAL:HG12	34:d:130:ASN:CA	2.45	0.46
35:e:89:THR:HG21	35:e:134:ASN:HD21	1.81	0.46
36:f:70:VAL:HA	36:f:73:GLU:HG3	1.96	0.46
38:h:64:TYR:CB	38:h:69:ALA:HA	2.44	0.46
39:i:34:LEU:HD11	39:i:47:VAL:CG2	2.36	0.46
42:l:49:ARG:HH12	42:l:88:ASP:CB	2.29	0.46
42:l:58:ASN:ND2	42:l:58:ASN:N	2.64	0.46
42:l:119:LYS:HG3	42:l:119:LYS:O	2.16	0.46
45:o:24:THR:HB	45:o:69:LEU:HD21	1.98	0.46
51:7:174:GLU:O	51:7:178:LEU:HD23	2.16	0.46
53:v:5:G:C4	53:v:69:G:N2	2.84	0.46
2:B:48:G:H4'	2:B:52:A:O4'	2.16	0.45
2:B:129:C:H2'	2:B:130:C:C6	2.51	0.45
2:B:704:G:O2'	2:B:727:A:N6	2.49	0.45
2:B:936:A:H2'	2:B:937:C:H6	1.81	0.45
2:B:967:U:H2'	2:B:968:C:H6	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1203:U:O2'	12:L:14:LYS:HE2	2.16	0.45
2:B:1515:A:H5'	2:B:1557:C:C5'	2.45	0.45
2:B:1735:A:H2'	2:B:1736:U:C6	2.52	0.45
2:B:1796:U:O2'	4:C:251:THR:HA	2.16	0.45
2:B:1804:C:O2'	2:B:1805:A:H5'	2.15	0.45
2:B:2152:G:H2'	2:B:2153:C:H6	1.81	0.45
2:B:2220:U:O2'	2:B:2221:G:H5'	2.15	0.45
2:B:2633:G:H2'	2:B:2634:A:O4'	2.17	0.45
2:B:2771:C:H2'	2:B:2772:C:H6	1.81	0.45
2:B:2896:C:H2'	2:B:2897:U:H6	1.81	0.45
4:C:207:ALA:HA	4:C:211:ARG:HB2	1.98	0.45
5:D:20:VAL:HG23	5:D:21:SER:H	1.81	0.45
6:E:128:ALA:O	6:E:157:LEU:HB2	2.15	0.45
7:F:4:HIS:HB2	7:F:96:TRP:CD1	2.51	0.45
7:F:107:VAL:HG12	7:F:113:PHE:CE1	2.47	0.45
7:F:111:ARG:CD	43:m:108:ARG:NH2	2.77	0.45
8:G:94:ARG:HH12	8:G:127:GLN:CD	2.24	0.45
9:H:103:VAL:HG21	9:H:110:VAL:HG13	1.97	0.45
10:J:128:ASN:CG	10:J:129:GLU:H	2.22	0.45
12:L:78:ARG:HG2	12:L:99:ASN:CB	2.35	0.45
16:P:59:THR:HG1	16:P:76:HIS:CG	2.34	0.45
16:P:105:LYS:HB2	32:a:1432:G:OP1	2.16	0.45
20:T:30:ILE:CG2	20:T:32:LEU:HD13	2.45	0.45
21:U:10:VAL:O	21:U:11:ILE:HD13	2.15	0.45
21:U:23:LYS:H	21:U:36:GLU:HG3	1.81	0.45
21:U:46:LYS:O	21:U:47:PRO:C	2.59	0.45
32:a:155:A:H2'	32:a:156:C:O4'	2.16	0.45
32:a:167:A:O2'	32:a:168:G:H5'	2.15	0.45
32:a:736:C:H2'	32:a:737:C:H6	1.82	0.45
32:a:1017:U:C5'	44:n:30:ILE:H	2.14	0.45
32:a:1125:U:OP2	40:j:6:ILE:HB	2.06	0.45
32:a:1237:C:H4'	32:a:1334:G:N2	2.31	0.45
32:a:1280:A:N6	40:j:29:ALA:CA	2.78	0.45
33:c:90:VAL:HA	33:c:93:ILE:HG21	1.97	0.45
33:c:100:ILE:HB	40:j:63:ASP:N	2.04	0.45
33:c:131:ARG:HH22	33:c:135:ARG:NH1	2.14	0.45
34:d:25:ARG:HD3	34:d:26:ALA:N	2.31	0.45
37:g:35:LYS:O	37:g:39:GLU:HG2	2.16	0.45
37:g:102:TRP:N	37:g:102:TRP:CD1	2.83	0.45
37:g:130:LYS:N	37:g:134:VAL:HG11	2.31	0.45
52:u:5:VAL:HG22	52:u:19:LYS:NZ	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:v:50:U:C2	53:v:51:U:C5	3.04	0.45
2:B:12:U:O2	2:B:2626:C:H4'	2.17	0.45
2:B:24:G:O2'	2:B:25:U:H5'	2.16	0.45
2:B:28:A:H1'	2:B:513:A:C2	2.52	0.45
2:B:144:A:H2'	2:B:145:C:O4'	2.15	0.45
2:B:729:G:H4'	2:B:763:G:H5'	1.98	0.45
2:B:729:G:H4'	2:B:763:G:C5'	2.46	0.45
2:B:744:U:OP1	5:D:136:ASN:O	2.35	0.45
2:B:954:G:P	13:M:17:ASN:HB2	2.56	0.45
2:B:1212:G:O2'	2:B:1236:G:N2	2.46	0.45
2:B:1275:A:N3	2:B:1275:A:C3'	2.75	0.45
2:B:1313:U:H2'	2:B:1313:U:O2	2.16	0.45
2:B:1704:C:O2'	2:B:1705:A:H5'	2.16	0.45
2:B:1864:U:O2'	2:B:1865:U:H5'	2.17	0.45
2:B:2393:U:O2'	2:B:2394:C:H5'	2.16	0.45
2:B:2438:U:O2'	2:B:2439:A:H5"	2.15	0.45
2:B:2733:A:C8	2:B:2733:A:H3'	2.51	0.45
2:B:2868:A:H2'	2:B:2869:G:C8	2.51	0.45
3:V:2:PHE:HB2	3:V:61:LEU:HD22	1.97	0.45
4:C:10:PRO:CD	4:C:23:LEU:HD11	2.46	0.45
4:C:84:PRO:O	4:C:86:ARG:N	2.40	0.45
4:C:204:LEU:HD12	4:C:211:ARG:HD3	1.97	0.45
5:D:13:ARG:O	5:D:15:PHE:N	2.49	0.45
5:D:15:PHE:HB3	5:D:18:ASP:CB	2.45	0.45
5:D:187:LEU:C	5:D:188:LEU:HD12	2.41	0.45
6:E:87:ALA:O	6:E:88:ARG:HG3	2.16	0.45
6:E:120:VAL:HG12	6:E:121:VAL:HG23	1.99	0.45
8:G:29:ASN:N	8:G:29:ASN:ND2	2.61	0.45
8:G:40:VAL:HG22	8:G:53:PRO:HA	1.98	0.45
9:H:89:LYS:HZ3	9:H:90:LEU:H	1.64	0.45
12:L:95:LEU:C	12:L:96:LYS:HD3	2.41	0.45
14:N:65:LEU:HD12	14:N:68:ALA:HB3	1.96	0.45
14:N:65:LEU:HD23	14:N:69:ARG:HG3	1.99	0.45
14:N:99:LYS:HE2	26:1:39:ARG:O	2.16	0.45
14:N:112:TYR:HE2	26:1:53:VAL:HG22	1.80	0.45
16:P:13:LYS:NZ	16:P:15:ASP:HB2	2.31	0.45
16:P:33:GLU:HB3	16:P:34:GLY:H	1.55	0.45
17:Q:57:ARG:HA	17:Q:60:TRP:CE3	2.46	0.45
19:S:3:THR:CG2	19:S:107:VAL:HG23	2.47	0.45
21:U:70:ALA:O	21:U:71:ILE:C	2.59	0.45
23:X:55:THR:HG22	23:X:59:GLU:CD	2.40	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:4:11:LYS:C	29:4:12:ARG:HG3	2.41	0.45
29:4:27:ASN:OD1	29:4:28:LEU:N	2.49	0.45
29:4:38:LYS:C	29:4:40:LYS:H	2.24	0.45
30:5:3:VAL:HG11	30:5:35:GLN:HG2	1.98	0.45
31:6:12:VAL:HG23	31:6:41:PHE:CZ	2.50	0.45
32:a:448:A:H2'	32:a:449:G:C8	2.51	0.45
32:a:627:G:H2'	32:a:628:G:C8	2.51	0.45
32:a:628:G:H2'	32:a:629:A:C8	2.51	0.45
32:a:740:U:O2'	45:o:51:SER:CB	2.64	0.45
32:a:778:G:O2'	32:a:779:C:H5'	2.16	0.45
32:a:1124:G:H5"	40:j:6:ILE:HG23	1.37	0.45
32:a:1256:A:H1'	44:n:75:LYS:HD2	1.53	0.45
32:a:1301:U:H3	43:m:8:ILE:HD13	0.29	0.45
32:a:1304:G:C3'	43:m:52:ILE:HG13	2.41	0.45
32:a:1304:G:C5	43:m:8:ILE:HA	2.52	0.45
32:a:1305:G:N2	43:m:9:PRO:HG3	2.31	0.45
32:a:1332:A:N3	43:m:15:VAL:C	2.71	0.45
32:a:1357:A:C5'	44:n:67:GLY:N	2.78	0.45
32:a:1391:U:H2'	32:a:1392:G:H8	1.80	0.45
33:c:33:ASP:O	33:c:37:LYS:HE2	2.16	0.45
33:c:84:GLU:N	40:j:59:LYS:C	2.63	0.45
35:e:155:LYS:HG2	38:h:70:VAL:HG22	1.98	0.45
38:h:111:THR:HG23	38:h:114:ALA:CB	2.44	0.45
39:i:79:ARG:O	39:i:83:THR:HG22	2.16	0.45
44:n:25:GLU:O	44:n:29:ILE:HG13	2.16	0.45
1:A:74:U:H2'	1:A:75:G:C8	2.51	0.45
2:B:139:U:C4	20:T:1:MET:HB2	2.50	0.45
2:B:141:G:C6	20:T:1:MET:HE1	2.51	0.45
2:B:993:G:HO2'	18:R:93:PHE:HE2	1.59	0.45
2:B:1017:G:H2'	2:B:1018:U:C6	2.52	0.45
2:B:1081:U:O2'	2:B:1082:U:H5'	2.16	0.45
2:B:1843:C:H5"	4:C:252:LYS:HZ3	1.80	0.45
2:B:2316:G:H2'	2:B:2317:A:H8	1.81	0.45
2:B:2553:G:H2'	2:B:2554:U:H4'	1.99	0.45
2:B:2617:U:O2'	2:B:2618:G:H5'	2.15	0.45
2:B:2693:G:O2'	2:B:2694:G:H5'	2.16	0.45
3:V:33:GLY:C	3:V:35:GLU:H	2.25	0.45
4:C:251:THR:O	4:C:252:LYS:HB2	2.15	0.45
5:D:141:ARG:HH11	5:D:141:ARG:CG	2.29	0.45
7:F:107:VAL:HB	7:F:108:PRO:CD	2.46	0.45
7:F:133:GLU:CG	7:F:134:GLN:H	2.25	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:F:172:PHE:CD1	7:F:173:ASP:N	2.84	0.45
8:G:130:ILE:HG21	8:G:147:LEU:HD13	1.97	0.45
10:J:81:ILE:CG1	10:J:82:GLY:N	2.80	0.45
14:N:103:ARG:HB2	14:N:110:MET:SD	2.57	0.45
14:N:114:GLU:HG2	14:N:115:LEU:N	2.25	0.45
17:Q:34:ALA:O	17:Q:38:VAL:HG12	2.16	0.45
18:R:18:GLN:CD	18:R:18:GLN:N	2.74	0.45
19:S:27:LYS:H	19:S:27:LYS:CD	2.22	0.45
19:S:103:ILE:HG23	19:S:104:THR:H	1.80	0.45
21:U:101:THR:C	21:U:102:ILE:HG13	2.41	0.45
23:X:9:LYS:HE3	23:X:11:VAL:HG13	1.97	0.45
25:Z:6:HIS:H	25:Z:51:VAL:HG13	1.82	0.45
25:Z:30:HIS:O	25:Z:48:GLN:NE2	2.49	0.45
28:3:12:ARG:O	28:3:18:PHE:CG	2.70	0.45
32:a:389:A:H2'	32:a:389:A:N3	2.30	0.45
32:a:601:G:H2'	32:a:602:A:C8	2.51	0.45
32:a:1113:C:H2'	32:a:1114:C:H6	1.81	0.45
32:a:1236:A:H2	43:m:45:SER:N	2.03	0.45
32:a:1281:C:C5	40:j:38:GLY:HA3	2.49	0.45
32:a:1291:U:H4'	39:i:40:ARG:O	2.15	0.45
32:a:1315:U:H3'	32:a:1316:G:C8	2.51	0.45
32:a:1331:G:O4'	43:m:24:VAL:HG22	2.17	0.45
33:c:57:GLU:HB2	33:c:64:ARG:CB	2.45	0.45
33:c:126:ARG:HH22	33:c:190:THR:CG2	2.28	0.45
33:c:171:ARG:NH1	33:c:173:PRO:HG3	2.31	0.45
34:d:170:LEU:HD12	34:d:170:LEU:O	2.15	0.45
39:i:10:ARG:HA	39:i:77:ALA:HB1	1.98	0.45
39:i:58:GLU:H	39:i:58:GLU:HG2	1.39	0.45
43:m:75:SER:O	43:m:78:ARG:HB3	2.16	0.45
44:n:45:LEU:O	44:n:48:GLN:HB3	2.16	0.45
51:7:9:LEU:HD22	51:7:11:ALA:N	2.24	0.45
1:A:100:G:H5"	2:B:915:C:O2'	2.15	0.45
2:B:285:G:O2'	2:B:286:U:H5'	2.16	0.45
2:B:425:G:H2'	2:B:426:C:H6	1.82	0.45
2:B:650:C:O3'	29:4:16:THR:HB	2.16	0.45
2:B:711:G:O2'	2:B:712:G:H5'	2.16	0.45
2:B:850:U:H2'	2:B:851:C:C6	2.51	0.45
2:B:1064:C:C4'	31:6:90:GLY:HA2	2.45	0.45
2:B:1184:U:H2'	2:B:1185:G:C8	2.51	0.45
2:B:1300:G:H5'	2:B:1301:A:N3	2.31	0.45
2:B:1946:U:H2'	2:B:1947:C:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2305:U:O4	7:F:37:MET:HA	2.16	0.45
2:B:2461:A:H2'	2:B:2462:C:H6	1.78	0.45
2:B:2742:G:O2'	2:B:2743:U:H5'	2.17	0.45
4:C:21:PRO:HG2	4:C:202:ARG:HH11	1.81	0.45
4:C:87:SER:OG	4:C:200:MET:SD	2.74	0.45
4:C:179:GLU:CD	4:C:266:ILE:HA	2.41	0.45
6:E:177:PRO:HA	6:E:180:LEU:HD12	1.97	0.45
6:E:178:VAL:HG23	6:E:179:SER:N	2.31	0.45
7:F:109:ARG:HG2	43:m:106:ARG:HA	1.03	0.45
8:G:58:ALA:C	8:G:60:GLY:H	2.25	0.45
8:G:90:GLY:HA3	8:G:93:TYR:CD2	2.51	0.45
8:G:97:VAL:HG11	8:G:122:ALA:O	2.16	0.45
10:J:49:ASP:O	10:J:50:THR:HB	2.14	0.45
12:L:19:LEU:N	12:L:19:LEU:HD22	2.30	0.45
12:L:76:GLU:HA	12:L:109:LYS:O	2.17	0.45
13:M:31:PHE:HA	13:M:128:THR:CG2	2.47	0.45
14:N:113:ILE:CG2	14:N:114:GLU:N	2.79	0.45
15:O:68:LYS:C	15:O:70:ALA:N	2.72	0.45
15:O:108:ASP:O	15:O:112:GLU:CD	2.59	0.45
16:P:108:ARG:CD	32:a:1463:U:OP1	2.64	0.45
17:Q:47:ARG:HH22	17:Q:50:ARG:CG	2.29	0.45
18:R:58:VAL:HG13	18:R:59:ILE:HG12	1.98	0.45
20:T:93:LEU:H	20:T:93:LEU:CD2	2.26	0.45
31:6:83:ALA:CA	31:6:100:ILE:HD11	2.46	0.45
32:a:301:G:H2'	32:a:302:G:C8	2.50	0.45
32:a:373:A:H1'	32:a:481:G:H1'	1.99	0.45
32:a:652:U:H1'	32:a:653:U:C5	2.52	0.45
32:a:1015:G:P	44:n:40:ARG:CZ	3.04	0.45
32:a:1255:G:N3	44:n:83:VAL:HG12	2.32	0.45
32:a:1282:C:C1'	44:n:97:LYS:H	2.30	0.45
32:a:1305:G:C2	43:m:21:ILE:CD1	2.99	0.45
32:a:1330:U:C4	43:m:64:VAL:HG22	2.51	0.45
32:a:1425:U:H2'	32:a:1426:G:H8	1.81	0.45
34:d:54:LEU:C	34:d:54:LEU:HD13	2.41	0.45
34:d:64:TYR:CD1	34:d:64:TYR:N	2.84	0.45
38:h:29:SER:HB3	38:h:32:LYS:CG	2.46	0.45
40:j:73:LEU:CD1	40:j:75:ASP:HB3	2.47	0.45
42:l:98:ARG:CB	42:l:116:TYR:HA	2.46	0.45
44:n:74:ARG:HD3	44:n:74:ARG:C	2.41	0.45
47:q:19:SER:O	47:q:20:ILE:HG23	2.16	0.45
47:q:66:LEU:HD11	47:q:73:THR:HG22	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:r:31:TYR:CG	48:r:54:LEU:HD21	2.52	0.45
50:t:70:LYS:HA	50:t:73:ARG:CZ	2.47	0.45
51:7:33:ALA:HA	51:7:38:HIS:CA	2.39	0.45
51:7:102:ASN:OD1	51:7:105:THR:HG22	2.16	0.45
51:7:116:LEU:HD22	51:7:140:LEU:HG	1.99	0.45
51:7:119:GLN:HA	51:7:124:THR:HG23	1.97	0.45
2:B:144:A:H8	2:B:144:A:OP2	2.00	0.45
2:B:527:C:C5'	2:B:2779:U:H3	2.29	0.45
2:B:533:G:H5'	17:Q:23:TYR:CD1	2.52	0.45
2:B:1394:U:O2'	2:B:1395:A:H5'	2.16	0.45
2:B:1396:U:O2	2:B:1396:U:O4'	2.34	0.45
2:B:1568:G:H5'	4:C:60:ALA:HB3	1.97	0.45
2:B:2014:A:OP1	19:S:95:ARG:NE	2.48	0.45
2:B:2183:A:H2'	2:B:2184:A:C8	2.52	0.45
2:B:2750:A:H3'	8:G:3:VAL:CG2	2.47	0.45
2:B:2876:G:H4'	16:P:2:ASN:HA	1.98	0.45
4:C:46:GLY:O	4:C:47:ARG:CB	2.64	0.45
4:C:219:VAL:O	4:C:220:ARG:NE	2.48	0.45
5:D:60:VAL:HB	5:D:63:PRO:CG	2.47	0.45
5:D:120:GLY:H	5:D:123:LYS:HB2	1.82	0.45
7:F:2:LYS:O	7:F:3:LEU:CB	2.64	0.45
7:F:134:GLN:CB	43:m:107:THR:N	2.79	0.45
7:F:134:GLN:CG	43:m:107:THR:HG1	2.06	0.45
8:G:17:LYS:HD2	8:G:24:THR:HG22	1.98	0.45
9:H:5:LEU:O	9:H:6:LEU:HB3	2.16	0.45
10:J:43:GLU:O	10:J:45:THR:N	2.48	0.45
10:J:66:GLY:C	10:J:68:LYS:H	2.25	0.45
10:J:92:MET:O	10:J:95:ARG:HG3	2.17	0.45
10:J:120:ARG:O	10:J:122:LEU:N	2.37	0.45
11:K:108:ARG:HE	16:P:36:LYS:HB2	1.81	0.45
12:L:21:ARG:HB3	12:L:21:ARG:CZ	2.47	0.45
15:O:16:ARG:HA	15:O:16:ARG:HE	1.82	0.45
16:P:93:LYS:CB	16:P:96:LEU:HD12	2.47	0.45
17:Q:16:ILE:HD12	17:Q:17:LEU:H	1.77	0.45
17:Q:21:LYS:HD2	17:Q:23:TYR:HE1	1.81	0.45
18:R:41:ILE:O	18:R:54:VAL:HA	2.17	0.45
22:W:36:ILE:HD12	22:W:70:VAL:CG2	2.46	0.45
25:Z:3:LYS:HA	25:Z:47:LYS:HA	1.99	0.45
31:6:37:PHE:CZ	31:6:58:ILE:HD11	2.52	0.45
32:a:87:C:C2	32:a:88:U:H1'	2.51	0.45
32:a:284:C:H2'	32:a:285:C:H6	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:647:C:O2'	32:a:648:A:H5'	2.16	0.45
32:a:1010:U:H2'	32:a:1011:C:C6	2.51	0.45
32:a:1096:C:H2'	32:a:1097:C:H6	1.82	0.45
32:a:1126:U:O2'	32:a:1280:A:H2'	2.17	0.45
32:a:1145:A:C1'	40:j:85:ASP:OD2	2.64	0.45
32:a:1217:C:H6	44:n:50:LEU:H	1.65	0.45
32:a:1236:A:N9	43:m:47:LEU:CB	2.75	0.45
33:c:81:GLU:HA	40:j:59:LYS:HG2	1.98	0.45
33:c:84:GLU:H	40:j:59:LYS:HA	1.81	0.45
33:c:131:ARG:HH22	33:c:135:ARG:CZ	2.30	0.45
45:o:6:ALA:O	45:o:10:ILE:HG22	2.16	0.45
46:p:3:THR:HG22	46:p:66:THR:HB	1.98	0.45
2:B:18:U:O2	2:B:554:U:H5"	2.16	0.45
2:B:1254:A:H2'	6:E:69:ARG:NH1	2.32	0.45
2:B:1353:A:H2'	2:B:1354:A:C8	2.52	0.45
2:B:1745:A:H2'	2:B:1746:A:C8	2.51	0.45
2:B:1826:G:H2'	2:B:1827:U:H6	1.81	0.45
2:B:2071:A:H2'	2:B:2072:C:C6	2.51	0.45
2:B:2093:G:H2'	2:B:2094:A:H8	1.82	0.45
2:B:2147:A:C5'	2:B:2148:G:H5'	2.44	0.45
2:B:2263:C:H2'	2:B:2264:C:C6	2.52	0.45
2:B:2489:U:O2'	2:B:2490:G:H5'	2.16	0.45
2:B:2572:A:C8	5:D:150:GLN:O	2.70	0.45
4:C:242:HIS:N	4:C:242:HIS:HD1	2.15	0.45
5:D:2:ILE:HG13	5:D:3:GLY:N	2.23	0.45
6:E:117:ARG:HA	6:E:188:MET:SD	2.56	0.45
7:F:110:ILE:HG22	7:F:111:ARG:N	2.32	0.45
9:H:28:ASN:O	9:H:29:PHE:HB2	2.17	0.45
11:K:108:ARG:HG3	11:K:108:ARG:O	2.17	0.45
12:L:63:LYS:CG	29:4:11:LYS:HZ2	2.29	0.45
12:L:91:ASP:CB	12:L:123:ARG:HD2	2.47	0.45
13:M:42:THR:O	13:M:43:ALA:HB3	2.16	0.45
13:M:84:LYS:H	13:M:84:LYS:HZ2	1.65	0.45
16:P:92:ARG:NE	16:P:110:LYS:HB3	2.32	0.45
17:Q:92:LYS:O	17:Q:93:ILE:HG22	2.16	0.45
18:R:1:MET:CA	18:R:46:GLU:HB2	2.39	0.45
19:S:38:TYR:CZ	26:1:37:HIS:HA	2.52	0.45
19:S:48:LYS:O	19:S:52:GLU:HG3	2.16	0.45
20:T:16:VAL:O	20:T:16:VAL:HG22	2.17	0.45
20:T:57:VAL:HG12	20:T:58:VAL:N	2.32	0.45
21:U:84:PHE:HA	21:U:94:PHE:HD1	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:W:74:LYS:O	22:W:75:ASN:CB	2.64	0.45
23:X:24:GLU:HG3	23:X:43:LEU:HD11	1.97	0.45
26:1:43:THR:O	26:1:44:ALA:C	2.59	0.45
31:6:35:MET:SD	31:6:35:MET:C	3.00	0.45
32:a:22:G:H2'	32:a:23:C:C6	2.52	0.45
32:a:26:A:H61	32:a:558:G:H1'	1.81	0.45
32:a:232:G:H2'	32:a:233:C:O4'	2.17	0.45
32:a:234:C:H2'	32:a:235:C:C6	2.52	0.45
32:a:295:C:H2'	32:a:296:U:C6	2.52	0.45
32:a:473:U:C2	32:a:474:G:N7	2.85	0.45
32:a:1110:A:H2'	32:a:1111:A:H5'	1.99	0.45
32:a:1129:C:C5	40:j:33:GLY:HA2	2.35	0.45
32:a:1347:G:O6	39:i:108:ARG:NH1	2.39	0.45
32:a:1348:U:H2'	32:a:1349:A:C8	2.51	0.45
33:c:112:ALA:HB2	33:c:182:ASP:O	2.16	0.45
34:d:29:THR:OG1	34:d:30:LYS:HD3	2.17	0.45
36:f:7:VAL:HG23	36:f:60:VAL:O	2.17	0.45
36:f:51:ILE:HG23	36:f:51:ILE:O	2.17	0.45
39:i:23:GLY:N	39:i:60:LEU:HA	2.24	0.45
40:j:18:ILE:HD12	40:j:72:ARG:HG3	1.97	0.45
41:k:22:ILE:HD13	41:k:95:THR:CG2	2.46	0.45
41:k:60:PHE:HA	41:k:63:GLN:CD	2.42	0.45
41:k:88:PRO:HA	41:k:92:ARG:CD	2.47	0.45
51:7:147:LEU:O	51:7:151:LYS:HG3	2.17	0.45
2:B:550:C:O2	2:B:550:C:H2'	2.16	0.45
2:B:656:G:H2'	2:B:657:U:C6	2.52	0.45
2:B:710:U:H2'	2:B:711:G:H8	1.82	0.45
2:B:760:G:H4'	2:B:1776:G:OP1	2.17	0.45
2:B:765:C:H2'	2:B:766:U:H6	1.82	0.45
2:B:873:C:H2'	2:B:874:G:H8	1.82	0.45
2:B:959:A:O2'	2:B:960:A:H5'	2.15	0.45
2:B:1049:C:O2'	2:B:1050:A:H5'	2.16	0.45
2:B:1195:G:N3	2:B:1226:A:H2	2.14	0.45
2:B:1196:C:H2'	2:B:1197:G:H8	1.82	0.45
2:B:1456:G:O2'	2:B:1457:U:H5'	2.17	0.45
2:B:1733:G:H2'	2:B:1734:G:H8	1.82	0.45
2:B:1790:C:H4'	4:C:207:ALA:CB	2.45	0.45
2:B:1948:G:N3	32:a:1418:A:C2	2.84	0.45
2:B:2025:C:H2'	2:B:2026:U:H6	1.79	0.45
2:B:2099:U:H2'	2:B:2100:G:H8	1.81	0.45
2:B:2618:G:N2	5:D:155:VAL:HG21	2.22	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2619:C:H2'	2:B:2620:C:C6	2.52	0.45
2:B:2759:G:H4'	8:G:34:ARG:HH22	1.81	0.45
2:B:2811:G:O2'	2:B:2812:G:H5'	2.16	0.45
4:C:53:ILE:CG1	4:C:218:THR:HG23	2.47	0.45
4:C:79:ARG:HG3	4:C:79:ARG:HH11	1.82	0.45
5:D:110:THR:HG22	5:D:171:THR:CA	2.44	0.45
5:D:170:VAL:CG1	5:D:194:PRO:HG2	2.46	0.45
6:E:113:VAL:C	6:E:115:GLN:H	2.24	0.45
7:F:73:VAL:HG13	53:v:56:C:C6	2.35	0.45
9:H:4:ILE:H	9:H:37:VAL:CB	2.25	0.45
11:K:99:ILE:CG2	11:K:119:ALA:HB2	2.46	0.45
14:N:37:THR:HB	14:N:39:PRO:HD2	1.99	0.45
15:O:9:ARG:HA	15:O:12:THR:CG2	2.45	0.45
15:O:21:LEU:O	15:O:42:PRO:HB3	2.17	0.45
16:P:77:SER:H	16:P:78:PRO:HD2	1.81	0.45
16:P:94:ALA:C	16:P:96:LEU:H	2.23	0.45
17:Q:107:ALA:O	18:R:52:PRO:HG3	2.17	0.45
18:R:18:GLN:HE21	18:R:99:THR:CB	2.29	0.45
22:W:39:GLN:HA	22:W:68:PHE:CA	2.43	0.45
22:W:44:PHE:O	22:W:76:ARG:CA	2.62	0.45
24:Y:18:LYS:O	24:Y:21:ALA:HB3	2.17	0.45
24:Y:47:ILE:HG23	24:Y:54:VAL:HG11	1.98	0.45
29:4:16:THR:C	29:4:18:LYS:N	2.74	0.45
29:4:59:ALA:O	29:4:60:CYS:HB2	2.17	0.45
32:a:123:U:H5"	32:a:311:C:O2'	2.16	0.45
32:a:325:A:H2'	32:a:326:G:O4'	2.16	0.45
32:a:1029:U:H5"	32:a:1030:U:C5	2.46	0.45
32:a:1125:U:C6	40:j:76:ILE:HG12	2.52	0.45
32:a:1191:A:OP1	33:c:2:GLN:HG3	2.17	0.45
32:a:1237:C:OP1	43:m:1:ALA:CB	2.65	0.45
32:a:1279:G:C2	44:n:92:ILE:N	2.84	0.45
32:a:1306:A:N6	32:a:1331:G:H1'	2.32	0.45
32:a:1331:G:O5'	43:m:22:TYR:HA	2.15	0.45
32:a:1337:G:N1	43:m:46:GLU:HA	2.32	0.45
33:c:83:VAL:CA	40:j:62:ARG:N	2.80	0.45
33:c:100:ILE:HD12	40:j:53:ILE:N	2.30	0.45
34:d:152:SER:O	34:d:155:LYS:HG3	2.17	0.45
36:f:79:ARG:HH21	36:f:87:SER:HB2	1.81	0.45
39:i:48:ARG:HA	39:i:51:LEU:HD13	1.99	0.45
42:l:80:LEU:HD13	42:l:101:LEU:HD11	1.99	0.45
44:n:63:CYS:HB2	44:n:79:SER:OG	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:s:18:VAL:HG13	49:s:19:GLU:N	2.32	0.45
1:A:48:U:H2'	1:A:49:C:H6	1.80	0.45
2:B:392:U:O2'	2:B:393:C:H5'	2.17	0.45
2:B:977:G:C2'	2:B:978:G:H5'	2.47	0.45
2:B:1081:U:H4'	31:6:123:ALA:HB1	1.99	0.45
2:B:1438:U:H5'	2:B:1516:G:O2'	2.17	0.45
2:B:1534:U:O2'	2:B:1535:A:H8	2.00	0.45
2:B:1724:G:H2'	2:B:1725:U:C6	2.50	0.45
2:B:1959:G:H4'	32:a:1418:A:O4'	2.16	0.45
2:B:2063:C:O2	2:B:2450:A:N1	2.49	0.45
2:B:2306:C:H42	7:F:38:GLY:N	2.15	0.45
2:B:2379:G:H2'	2:B:2380:C:H6	1.82	0.45
2:B:2677:G:H2'	2:B:2678:C:C6	2.51	0.45
2:B:2799:A:H4'	2:B:2800:A:C8	2.52	0.45
4:C:78:GLU:HB3	4:C:92:LEU:HD23	1.98	0.45
5:D:138:LEU:O	5:D:142:VAL:HG22	2.16	0.45
5:D:172:VAL:O	5:D:173:GLN:HB2	2.16	0.45
7:F:103:ILE:HA	7:F:107:VAL:CG2	2.47	0.45
8:G:51:PHE:CD2	8:G:64:ALA:HA	2.51	0.45
9:H:14:SER:C	9:H:16:GLY:N	2.74	0.45
9:H:41:LYS:N	9:H:41:LYS:CD	2.78	0.45
9:H:116:ARG:O	9:H:117:LEU:HG	2.16	0.45
14:N:41:ALA:C	14:N:43:GLU:N	2.75	0.45
15:O:20:GLU:HB3	15:O:23:ALA:HB2	1.96	0.45
15:O:55:GLU:HB2	15:O:61:GLN:HA	1.99	0.45
15:O:84:GLU:OE1	15:O:85:LYS:HG3	2.17	0.45
18:R:22:LEU:O	18:R:96:VAL:HG13	2.16	0.45
20:T:68:LYS:C	20:T:68:LYS:HD3	2.41	0.45
21:U:64:ILE:HD13	21:U:65:GLN:H	1.81	0.45
21:U:92:VAL:O	21:U:93:ARG:C	2.60	0.45
29:4:19:GLY:O	29:4:20:GLY:C	2.60	0.45
31:6:92:PRO:O	31:6:93:ASN:HB2	2.16	0.45
32:a:68:G:H5'	32:a:171:A:O2'	2.17	0.45
32:a:186:C:H5'	50:t:72:ALA:C	2.41	0.45
32:a:384:G:H2'	32:a:385:C:H6	1.80	0.45
32:a:512:U:H2'	32:a:513:C:C6	2.51	0.45
32:a:834:U:H2'	32:a:835:U:C6	2.52	0.45
32:a:890:G:O2'	32:a:906:A:N6	2.49	0.45
32:a:948:C:OP2	43:m:39:ALA:CA	2.62	0.45
32:a:1281:C:O2	40:j:37:ARG:CB	2.64	0.45
32:a:1328:C:C2'	43:m:71:GLU:OE2	2.60	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1333:A:OP2	43:m:17:ALA:HB2	2.11	0.45
32:a:1505:G:H5"	32:a:1506:U:O5'	2.17	0.45
33:c:5:HIS:O	33:c:9:ILE:HG22	2.16	0.45
33:c:72:PRO:HG2	33:c:73:GLY:H	1.81	0.45
34:d:75:TYR:CE1	34:d:203:TYR:HB3	2.51	0.45
34:d:104:MET:SD	34:d:179:GLY:HA3	2.57	0.45
34:d:160:LEU:HD22	34:d:161:ALA:N	2.31	0.45
35:e:57:ALA:O	35:e:60:GLN:HB2	2.16	0.45
35:e:114:LEU:CD2	35:e:119:VAL:HG21	2.47	0.45
38:h:98:LEU:H	38:h:98:LEU:HD12	1.82	0.45
2:B:154:U:H2'	2:B:155:A:H8	1.81	0.45
2:B:222:A:N1	2:B:233:A:H5"	2.32	0.45
2:B:226:A:H2'	2:B:227:A:C8	2.52	0.45
2:B:522:A:H2'	2:B:523:C:C6	2.52	0.45
2:B:871:U:H2'	2:B:872:U:C6	2.51	0.45
2:B:1076:C:H4'	31:6:94:LYS:HZ2	1.79	0.45
2:B:1259:G:O2'	2:B:1260:A:H5'	2.17	0.45
2:B:1341:G:H5'	20:T:61:LEU:HD22	1.99	0.45
2:B:1750:G:O2'	2:B:2860:A:H2	2.00	0.45
2:B:2468:A:H2'	2:B:2476:A:C6	2.52	0.45
2:B:2643:G:H2'	2:B:2644:G:O4'	2.16	0.45
2:B:2812:G:H2'	2:B:2813:A:O4'	2.17	0.45
4:C:28:PRO:HD2	4:C:79:ARG:HH22	1.81	0.45
4:C:209:ALA:C	4:C:213:ARG:HD2	2.42	0.45
4:C:253:GLY:C	4:C:254:LYS:NZ	2.75	0.45
5:D:172:VAL:HG23	5:D:173:GLN:N	2.32	0.45
6:E:198:GLU:C	6:E:200:LEU:N	2.69	0.45
7:F:3:LEU:HA	7:F:6:TYR:CD1	2.51	0.45
7:F:173:ASP:C	7:F:175:PRO:HD2	2.42	0.45
8:G:35:THR:C	8:G:36:LEU:HD12	2.41	0.45
8:G:71:LEU:HA	8:G:74:MET:CG	2.46	0.45
9:H:6:LEU:HD12	9:H:15:LEU:CA	2.47	0.45
11:K:98:ARG:NH2	32:a:339:C:OP1	2.50	0.45
12:L:14:LYS:HB3	12:L:14:LYS:HZ2	1.82	0.45
13:M:11:LYS:C	13:M:12:MET:SD	3.00	0.45
13:M:24:THR:HG23	13:M:25:ASP:OD1	2.16	0.45
18:R:60:LYS:HD2	18:R:60:LYS:HA	1.79	0.45
20:T:57:VAL:HG12	20:T:58:VAL:H	1.82	0.45
20:T:60:THR:HG22	20:T:83:ALA:CB	2.47	0.45
22:W:48:ALA:HA	22:W:54:ARG:HA	1.98	0.45
23:X:46:VAL:HG13	23:X:47:ARG:N	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:4:11:LYS:HG2	29:4:12:ARG:CG	2.39	0.45
32:a:140:U:H2'	32:a:141:G:H8	1.82	0.45
32:a:143:A:H2	32:a:220:G:H22	1.65	0.45
32:a:336:A:O2'	32:a:337:G:H5'	2.17	0.45
32:a:394:G:H2'	32:a:395:C:H6	1.82	0.45
32:a:471:U:H2'	32:a:472:U:C6	2.52	0.45
32:a:766:A:H2	32:a:1525:G:N3	2.15	0.45
32:a:792:A:H1'	32:a:794:A:N7	2.31	0.45
32:a:812:G:H4'	32:a:812:G:OP1	2.16	0.45
32:a:913:A:H1'	32:a:914:A:O4'	2.17	0.45
32:a:988:G:C4	44:n:46:LYS:CG	2.99	0.45
32:a:1080:A:H4'	35:e:20:VAL:HG13	1.99	0.45
32:a:1220:G:C5	49:s:4:LEU:CB	2.90	0.45
32:a:1235:U:H3	43:m:47:LEU:CB	2.29	0.45
32:a:1239:A:H2'	37:g:114:SER:CB	2.47	0.45
32:a:1278:G:OP1	44:n:90:GLY:HA3	2.17	0.45
32:a:1280:A:C6	40:j:30:LYS:CB	3.00	0.45
32:a:1330:U:OP2	43:m:65:GLU:CA	2.65	0.45
32:a:1515:G:O2'	32:a:1516:G:H5'	2.17	0.45
34:d:1:ALA:O	34:d:67:LEU:HD21	2.16	0.45
34:d:117:VAL:HG22	34:d:122:ILE:HG13	1.97	0.45
39:i:38:PHE:O	39:i:39:GLY:C	2.59	0.45
41:k:88:PRO:HD3	52:u:28:LEU:HD13	1.98	0.45
44:n:20:PHE:CG	44:n:24:ALA:HB2	2.51	0.45
47:q:7:LEU:C	47:q:9:GLY:H	2.24	0.45
51:7:113:LEU:CG	51:7:143:LEU:HB3	2.47	0.45
2:B:231:A:H3'	2:B:232:G:C8	2.52	0.45
2:B:310:A:OP1	21:U:15:GLY:HA2	2.17	0.45
2:B:633:A:H2'	2:B:634:C:H5'	1.98	0.45
2:B:908:C:O2'	2:B:909:A:H5'	2.16	0.45
2:B:962:G:H21	2:B:2250:G:H1	1.65	0.45
2:B:1032:A:OP1	30:5:8:LYS:HB3	2.17	0.45
2:B:1038:G:H2'	2:B:1039:A:H8	1.80	0.45
2:B:1272:A:N7	2:B:1618:A:H1'	2.32	0.45
2:B:1347:A:H2'	2:B:1348:C:O4'	2.17	0.45
2:B:1525:A:H2'	2:B:1526:C:C6	2.52	0.45
2:B:2180:U:H2'	2:B:2181:U:C5	2.52	0.45
2:B:2307:G:H4'	2:B:2311:A:N6	2.29	0.45
2:B:2443:C:H2'	2:B:2444:G:H8	1.81	0.45
2:B:2467:C:C1'	13:M:118:LYS:HG2	2.47	0.45
2:B:2576:G:P	5:D:149:ASN:HB2	2.57	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2747:G:O6	2:B:2755:C:H5"	2.17	0.45
2:B:2772:C:H5"	5:D:171:THR:HG21	1.99	0.45
3:V:89:ILE:HD13	3:V:91:PHE:CE1	2.52	0.45
4:C:32:LEU:HA	4:C:81:GLU:OE1	2.17	0.45
4:C:198:GLU:C	4:C:200:MET:H	2.24	0.45
6:E:113:VAL:HG13	6:E:114:ARG:H	1.82	0.45
6:E:151:GLY:O	6:E:153:LEU:HD12	2.18	0.45
7:F:56:LEU:HD13	7:F:86:CYS:HB3	1.98	0.45
7:F:129:MET:HG2	43:m:104:ASN:OD1	2.17	0.45
8:G:22:VAL:HG23	8:G:33:THR:HG23	2.00	0.45
8:G:126:THR:C	8:G:128:THR:N	2.75	0.45
9:H:65:ALA:O	9:H:138:VAL:HG21	2.17	0.45
11:K:25:LEU:O	11:K:30:ARG:HG3	2.17	0.45
11:K:64:ARG:H	11:K:83:ALA:CB	2.14	0.45
12:L:51:GLU:O	12:L:51:GLU:HG3	2.15	0.45
13:M:21:ALA:C	13:M:96:ILE:HG13	2.42	0.45
13:M:71:LYS:HG2	13:M:92:TRP:O	2.17	0.45
18:R:41:ILE:O	18:R:41:ILE:HD12	2.17	0.45
20:T:64:LYS:CB	20:T:77:ARG:HD3	2.39	0.45
22:W:47:GLY:HA2	22:W:67:LYS:HZ3	1.80	0.45
23:X:11:VAL:O	23:X:11:VAL:HG22	2.17	0.45
25:Z:4:ASP:O	25:Z:5:ILE:C	2.59	0.45
31:6:96:LYS:HG3	31:6:138:VAL:HG23	1.99	0.45
32:a:34:C:H2'	32:a:35:G:H8	1.79	0.45
32:a:669:G:O2'	32:a:670:G:H5'	2.18	0.45
32:a:803:G:H2'	32:a:804:U:H6	1.82	0.45
32:a:982:U:H1'	44:n:52:ARG:HH11	1.81	0.45
32:a:989:U:C2	44:n:43:ALA:CA	2.40	0.45
32:a:1051:C:H2'	32:a:1052:U:H6	1.82	0.45
32:a:1190:G:OP1	33:c:4:VAL:N	2.50	0.45
32:a:1232:U:P	39:i:127:SER:H	2.37	0.45
32:a:1300:G:O2'	32:a:1301:U:P	2.75	0.45
32:a:1462:C:H2'	32:a:1463:U:C6	2.52	0.45
32:a:1526:G:OP2	52:u:38:GLU:HB3	2.17	0.45
33:c:64:ARG:HG3	40:j:49:PHE:HB2	1.65	0.45
33:c:82:ASP:HA	40:j:58:ASN:HB3	1.99	0.45
37:g:47:GLU:C	37:g:49:LEU:N	2.75	0.45
37:g:71:THR:O	37:g:72:VAL:HG13	2.17	0.45
38:h:46:GLU:HA	38:h:63:LYS:HZ3	1.81	0.45
39:i:51:LEU:HD12	39:i:51:LEU:N	2.32	0.45
42:l:34:THR:HG21	42:l:53:ARG:CZ	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:n:5:MET:C	44:n:7:ALA:H	2.24	0.45
45:o:87:ARG:C	45:o:88:ARG:HG2	2.41	0.45
48:r:20:ILE:HG23	48:r:53:GLN:NE2	2.32	0.45
51:7:56:LEU:O	51:7:59:ILE:HG13	2.16	0.45
51:7:119:GLN:O	51:7:125:PHE:HB3	2.17	0.45
1:A:24:G:N7	1:A:56:G:H2'	2.32	0.44
2:B:26:G:H1'	2:B:514:A:H61	1.80	0.44
2:B:274:C:H2'	2:B:275:C:C6	2.51	0.44
2:B:359:G:O2'	2:B:360:U:H5'	2.17	0.44
2:B:490:C:H4'	2:B:491:G:OP2	2.17	0.44
2:B:822:G:H2'	2:B:823:C:C6	2.52	0.44
2:B:843:G:H2'	2:B:844:A:C8	2.52	0.44
2:B:1328:A:H2'	2:B:1330:C:C4	2.52	0.44
2:B:1561:C:H2'	2:B:1562:U:C6	2.52	0.44
2:B:1671:U:H2'	2:B:1673:G:OP2	2.17	0.44
2:B:2105:U:H2'	2:B:2106:U:C6	2.51	0.44
2:B:2319:G:H3'	2:B:2319:G:N3	2.32	0.44
2:B:2885:G:H2'	2:B:2886:A:O4'	2.17	0.44
4:C:50:THR:O	4:C:51:ARG:C	2.59	0.44
4:C:71:ASP:HB3	4:C:72:GLY:H	1.38	0.44
4:C:155:ARG:O	4:C:155:ARG:NE	2.50	0.44
7:F:116:LEU:CD2	43:m:103:THR:CB	2.90	0.44
7:F:165:GLY:HA2	7:F:168:LEU:CG	2.46	0.44
8:G:108:PHE:CE1	8:G:151:ARG:HD2	2.52	0.44
8:G:136:ASP:OD1	8:G:138:GLN:HB3	2.17	0.44
12:L:71:ALA:O	12:L:72:ALA:C	2.59	0.44
12:L:92:LEU:CG	12:L:96:LYS:HZ3	2.29	0.44
12:L:96:LYS:HE3	12:L:96:LYS:HB2	1.79	0.44
14:N:4:ARG:CG	14:N:5:LYS:N	2.80	0.44
16:P:36:LYS:HD3	16:P:37:LYS:H	1.82	0.44
20:T:63:VAL:CG1	20:T:80:TRP:HB2	2.46	0.44
21:U:84:PHE:CA	21:U:94:PHE:HD1	2.30	0.44
24:Y:22:THR:O	24:Y:26:LEU:N	2.50	0.44
25:Z:66:ILE:O	25:Z:68:GLY:N	2.50	0.44
32:a:238:A:C3'	32:a:239:U:H5"	2.47	0.44
32:a:454:G:O2'	32:a:455:G:H5'	2.17	0.44
32:a:674:G:H2'	32:a:675:A:C8	2.49	0.44
32:a:820:U:H4'	32:a:821:G:OP2	2.16	0.44
32:a:967:C:O3'	39:i:129:ARG:HD2	2.16	0.44
32:a:980:C:OP2	49:s:5:LYS:CA	2.49	0.44
32:a:1280:A:C6	40:j:30:LYS:N	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1305:G:H22	43:m:20:SER:HB3	1.81	0.44
32:a:1306:A:O2'	43:m:15:VAL:HG22	2.17	0.44
32:a:1314:C:H2'	32:a:1315:U:H6	1.81	0.44
32:a:1334:G:C2	43:m:10:ASP:CA	2.98	0.44
32:a:1336:C:C6	43:m:45:SER:OG	2.69	0.44
33:c:40:GLN:CD	33:c:44:LYS:HD2	2.42	0.44
36:f:9:MET:HE1	48:r:64:LEU:CA	2.46	0.44
39:i:40:ARG:HA	39:i:44:ARG:HH21	1.80	0.44
39:i:66:VAL:CG2	39:i:74:GLN:HG3	2.47	0.44
40:j:81:GLU:O	40:j:85:ASP:HB2	2.17	0.44
41:k:70:ALA:HA	41:k:74:LYS:HD3	1.99	0.44
46:p:7:ALA:HB1	46:p:29:ASN:CB	2.45	0.44
50:t:10:ALA:O	50:t:13:SER:HB3	2.17	0.44
50:t:49:ALA:O	50:t:52:GLU:HB3	2.16	0.44
51:7:21:TYR:O	51:7:22:TRP:O	2.34	0.44
51:7:120:SER:HA	51:7:125:PHE:CB	2.44	0.44
2:B:118:A:H5'	2:B:119:A:C8	2.45	0.44
2:B:129:C:H2'	2:B:130:C:H6	1.81	0.44
2:B:140:C:OP2	2:B:140:C:H6	2.00	0.44
2:B:170:U:O2'	2:B:171:U:H5'	2.16	0.44
2:B:743:A:C2'	2:B:744:U:H5'	2.46	0.44
2:B:1062:G:H2'	2:B:1063:G:H8	1.81	0.44
2:B:1179:G:O2'	2:B:1180:U:H5'	2.18	0.44
2:B:1552:A:C2'	2:B:1553:A:H5'	2.47	0.44
2:B:1710:G:H2'	2:B:1711:A:C8	2.51	0.44
2:B:1824:G:OP1	4:C:52:HIS:CE1	2.70	0.44
2:B:2133:G:N3	2:B:2133:G:C2'	2.80	0.44
2:B:2247:A:H2'	2:B:2248:C:H6	1.83	0.44
2:B:2348:U:O2'	2:B:2349:G:H5'	2.16	0.44
2:B:2576:G:OP2	5:D:149:ASN:HB2	2.17	0.44
2:B:2647:U:O2'	2:B:2648:G:H5'	2.17	0.44
2:B:2675:A:N1	2:B:2732:G:O6	2.49	0.44
2:B:2848:G:N9	16:P:96:LEU:HD23	2.32	0.44
3:V:4:ILE:O	3:V:63:ILE:HA	2.16	0.44
3:V:84:PRO:HG3	13:M:127:LYS:NZ	2.33	0.44
4:C:57:HIS:HB3	4:C:58:LYS:H	1.63	0.44
4:C:65:ASP:OD2	4:C:101:ARG:HB3	2.17	0.44
5:D:154:LYS:HZ2	5:D:156:PHE:CA	2.06	0.44
7:F:7:TYR:OH	7:F:29:ARG:HA	2.17	0.44
7:F:103:ILE:HA	7:F:107:VAL:HG21	1.98	0.44
8:G:89:VAL:HB	8:G:160:GLY:H	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:H:55:GLU:C	9:H:57:LYS:H	2.23	0.44
10:J:20:ALA:C	10:J:22:GLY:H	2.24	0.44
10:J:130:HIS:HB3	10:J:131:ASN:H	1.60	0.44
11:K:9:ASN:ND2	11:K:9:ASN:H	2.15	0.44
12:L:72:ALA:HB3	12:L:106:GLU:OE2	2.17	0.44
14:N:67:PHE:HD2	14:N:73:ASN:HD21	1.65	0.44
15:O:76:LYS:NZ	15:O:79:ALA:HB3	2.32	0.44
18:R:14:VAL:HG12	18:R:15:SER:N	2.31	0.44
18:R:40:MET:O	18:R:41:ILE:C	2.60	0.44
19:S:8:ARG:HH12	19:S:79:GLY:HA2	1.82	0.44
19:S:76:VAL:HG12	19:S:103:ILE:HA	1.97	0.44
20:T:45:ALA:O	20:T:48:GLN:HB3	2.17	0.44
26:1:3:GLN:N	26:1:3:GLN:CD	2.76	0.44
26:1:45:ASP:HB3	26:1:54:ILE:O	2.17	0.44
27:2:5:ARG:HB3	27:2:5:ARG:HH11	1.82	0.44
28:3:13:ASN:OD1	28:3:18:PHE:HB3	2.16	0.44
30:5:27:CYS:C	30:5:29:ALA:N	2.73	0.44
31:6:29:GLN:HE21	31:6:29:GLN:HA	1.83	0.44
31:6:62:ALA:C	31:6:64:ARG:H	2.24	0.44
32:a:105:G:OP2	50:t:12:GLN:OE1	2.35	0.44
32:a:397:A:H5’	32:a:398:U:OP1	2.18	0.44
32:a:1008:U:H2’	32:a:1009:U:C4’	2.47	0.44
32:a:1013:G:H4’	49:s:16:LYS:HD3	1.98	0.44
32:a:1017:U:C4	44:n:34:ASN:OD1	2.67	0.44
32:a:1123:U:H5	40:j:88:MET:CB	2.30	0.44
32:a:1239:A:H1’	32:a:1241:G:C5	2.52	0.44
32:a:1262:C:N1	44:n:100:TRP:N	2.30	0.44
32:a:1301:U:C3’	43:m:7:ASN:HA	2.47	0.44
32:a:1318:A:O4’	49:s:66:VAL:CB	2.65	0.44
32:a:1332:A:O5’	43:m:17:ALA:C	2.59	0.44
32:a:1335:U:C2’	43:m:11:HIS:CE1	2.84	0.44
34:d:113:ALA:O	34:d:117:VAL:HG23	2.16	0.44
35:e:49:TYR:HE2	35:e:133:ILE:HG12	1.83	0.44
43:m:13:HIS:HB2	43:m:16:ILE:HG22	1.97	0.44
51:7:31:PHE:CD1	51:7:41:ASN:HA	2.53	0.44
51:7:167:HIS:C	51:7:169:HIS:H	2.25	0.44
1:A:76:G:H2’	1:A:77:U:H6	1.82	0.44
2:B:67:U:C4	2:B:68:G:N7	2.86	0.44
2:B:175:G:H2’	2:B:176:A:C8	2.52	0.44
2:B:622:G:H2’	2:B:623:C:H6	1.82	0.44
2:B:670:A:P	12:L:47:ARG:HD3	2.57	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:957:C:OP1	13:M:76:LYS:HG2	2.18	0.44
2:B:1567:G:H5"	4:C:84:PRO:HG3	1.99	0.44
2:B:1664:A:H1'	2:B:2726:A:N1	2.32	0.44
2:B:1764:C:H2'	2:B:1765:U:C6	2.52	0.44
2:B:1881:C:H2'	2:B:1882:U:O4'	2.16	0.44
2:B:2182:U:H2'	2:B:2183:A:C8	2.53	0.44
2:B:2673:G:H2'	2:B:2674:G:H8	1.81	0.44
2:B:2714:G:O2'	2:B:2715:C:H5'	2.17	0.44
3:V:26:PHE:HD2	3:V:44:HIS:HD1	1.65	0.44
4:C:63:ILE:HG21	4:C:90:ILE:CD1	2.46	0.44
4:C:207:ALA:O	4:C:208:GLY:C	2.59	0.44
4:C:258:SER:HB2	4:C:261:ARG:HH12	1.82	0.44
5:D:47:ALA:HB3	5:D:81:GLU:HB2	1.99	0.44
6:E:108:ILE:H	6:E:108:ILE:HD12	1.82	0.44
8:G:71:LEU:HA	8:G:74:MET:HG3	1.98	0.44
9:H:62:LEU:HG	9:H:137:GLU:HG2	1.99	0.44
9:H:142:VAL:HG12	9:H:143:ILE:H	1.83	0.44
11:K:23:LYS:HG3	11:K:24:VAL:N	2.32	0.44
11:K:47:ILE:HG22	11:K:49:ARG:N	2.32	0.44
11:K:107:LEU:C	11:K:109:SER:N	2.76	0.44
11:K:108:ARG:HH21	16:P:36:LYS:CB	2.29	0.44
12:L:40:SER:O	12:L:41:ARG:HB2	2.17	0.44
13:M:81:ARG:C	13:M:83:GLY:H	2.24	0.44
16:P:34:GLY:C	16:P:35:SER:O	2.57	0.44
16:P:62:LYS:HZ2	16:P:102:ARG:NH2	2.14	0.44
17:Q:16:ILE:CD1	17:Q:34:ALA:HB2	2.39	0.44
17:Q:34:ALA:C	17:Q:38:VAL:HG12	2.42	0.44
17:Q:40:LYS:HA	17:Q:43:GLN:HE21	1.82	0.44
19:S:90:LYS:N	19:S:90:LYS:CE	2.80	0.44
21:U:71:ILE:C	21:U:71:ILE:HD13	2.42	0.44
21:U:71:ILE:HG23	21:U:72:PHE:N	2.32	0.44
23:X:14:LEU:HD12	23:X:14:LEU:N	2.32	0.44
25:Z:3:LYS:HD2	25:Z:6:HIS:HB3	1.98	0.44
26:1:31:LYS:NZ	26:1:49:ARG:HA	2.32	0.44
32:a:22:G:O2'	32:a:23:C:H5'	2.16	0.44
32:a:191:G:H2'	32:a:192:A:H8	1.83	0.44
32:a:251:G:H4'	32:a:252:U:C5'	2.48	0.44
32:a:392:C:H2'	32:a:393:A:H8	1.82	0.44
32:a:945:G:N2	43:m:46:GLU:N	2.48	0.44
32:a:1016:A:H2'	44:n:44:VAL:HB	1.99	0.44
32:a:1125:U:H6	40:j:76:ILE:HG12	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1238:A:C8	32:a:1303:C:H1'	2.52	0.44
32:a:1246:A:H2'	32:a:1247:U:O4'	2.17	0.44
32:a:1306:A:C5	43:m:29:SER:CB	2.96	0.44
32:a:1325:C:O2'	32:a:1326:U:H5'	2.18	0.44
32:a:1386:G:O2'	32:a:1387:G:H5'	2.17	0.44
32:a:1404:C:H2'	32:a:1405:G:C8	2.52	0.44
32:a:1458:G:O2'	50:t:22:SER:OG	2.34	0.44
34:d:137:SER:CB	34:d:138:PRO:HD2	2.47	0.44
39:i:64:ILE:HD13	39:i:78:ILE:HG21	1.98	0.44
42:l:22:ALA:HB1	42:l:29:LYS:HG3	2.00	0.44
49:s:4:LEU:C	49:s:5:LYS:HE3	2.42	0.44
51:7:73:ARG:C	51:7:75:ALA:H	2.25	0.44
2:B:37:C:C2	6:E:46:GLN:OE1	2.70	0.44
2:B:65:U:H4'	20:T:70:HIS:CE1	2.53	0.44
2:B:103:A:H2'	2:B:104:A:O4'	2.17	0.44
2:B:390:U:H4'	2:B:391:A:H5'	2.00	0.44
2:B:463:G:O2'	2:B:465:G:N7	2.47	0.44
2:B:466:A:H2	2:B:795:C:O2	2.00	0.44
2:B:1386:C:H2'	2:B:1387:A:H8	1.82	0.44
2:B:1487:U:H2'	2:B:1488:C:C6	2.52	0.44
2:B:2249:U:H4'	2:B:2275:C:H5	1.82	0.44
2:B:2659:G:N2	2:B:2661:G:H5"	2.32	0.44
4:C:115:ILE:HA	4:C:126:GLY:HA3	1.99	0.44
6:E:4:VAL:HG13	6:E:5:LEU:N	2.33	0.44
6:E:146:VAL:O	6:E:147:LEU:CB	2.63	0.44
7:F:87:LYS:HB3	7:F:88:VAL:H	1.50	0.44
7:F:176:PHE:O	7:F:177:ARG:HB3	2.17	0.44
9:H:5:LEU:O	9:H:6:LEU:CB	2.65	0.44
10:J:102:GLU:HG3	10:J:124:VAL:HG11	1.99	0.44
13:M:97:GLN:H	13:M:98:PRO:CD	2.31	0.44
21:U:2:ALA:O	21:U:4:ILE:N	2.46	0.44
21:U:63:ALA:O	21:U:64:ILE:HG22	2.17	0.44
23:X:51:ALA:O	23:X:52:ARG:C	2.60	0.44
25:Z:41:HIS:CB	25:Z:42:PRO:HD2	2.27	0.44
30:5:11:CYS:SG	30:5:12:ARG:HD2	2.57	0.44
31:6:14:ALA:HA	31:6:45:THR:CG2	2.43	0.44
31:6:27:LEU:O	31:6:30:GLN:HB2	2.17	0.44
32:a:382:A:H2'	32:a:383:A:C8	2.51	0.44
32:a:429:U:H4'	32:a:430:A:O5'	2.16	0.44
32:a:687:A:C2	32:a:704:A:C5	3.05	0.44
32:a:1211:U:H1'	32:a:1213:A:C2	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1250:A:C5'	39:i:69:GLY:N	2.80	0.44
32:a:1337:G:H22	43:m:46:GLU:N	2.10	0.44
34:d:100:VAL:HA	34:d:103:ARG:HD2	1.99	0.44
35:e:16:ALA:O	35:e:34:ALA:HA	2.17	0.44
35:e:33:THR:O	35:e:58:ALA:HB1	2.17	0.44
36:f:45:ARG:C	36:f:56:LYS:HG2	2.42	0.44
39:i:25:GLY:HA3	39:i:57:VAL:O	2.16	0.44
41:k:15:VAL:O	41:k:16:SER:HB2	2.17	0.44
41:k:57:SER:O	41:k:58:THR:C	2.60	0.44
41:k:88:PRO:HD3	52:u:28:LEU:HD22	1.99	0.44
43:m:77:LYS:C	43:m:77:LYS:HD3	2.42	0.44
44:n:92:ILE:HG21	44:n:95:LEU:HD23	1.99	0.44
45:o:52:ARG:HG3	45:o:55:LEU:HD23	1.99	0.44
51:7:101:THR:HG23	51:7:102:ASN:N	2.32	0.44
51:7:132:GLU:HG3	51:7:136:ARG:HD2	1.99	0.44
51:7:134:LEU:HA	51:7:137:THR:OG1	2.18	0.44
53:v:72:C:N4	53:v:73:A:N6	2.65	0.44
1:A:102:G:O2'	1:A:103:U:H5'	2.17	0.44
2:B:49:A:OP1	2:B:51:G:H5'	2.17	0.44
2:B:100:U:H4'	21:U:90:LYS:HE2	2.00	0.44
2:B:246:C:H2'	2:B:247:G:H5'	1.99	0.44
2:B:465:G:H2'	2:B:466:A:C8	2.53	0.44
2:B:812:C:H2'	2:B:813:U:H6	1.81	0.44
2:B:1403:A:H2'	2:B:1404:C:C6	2.53	0.44
2:B:1710:G:H2'	2:B:1711:A:H8	1.81	0.44
2:B:1739:A:H2'	2:B:1740:G:H8	1.82	0.44
2:B:2628:C:O2'	2:B:2781:A:H2'	2.17	0.44
2:B:2674:G:H4'	11:K:30:ARG:CG	2.42	0.44
2:B:2722:G:O2'	2:B:2723:C:H5'	2.18	0.44
2:B:2893:A:H4'	2:B:2894:G:H5'	2.00	0.44
4:C:107:LYS:CB	4:C:194:VAL:HG11	2.27	0.44
4:C:225:ASN:H	4:C:226:PRO:HD3	1.82	0.44
4:C:255:LYS:HZ2	4:C:261:ARG:CZ	2.30	0.44
4:C:259:ASN:O	4:C:260:LYS:HB2	2.17	0.44
7:F:12:VAL:CG1	7:F:27:VAL:HG21	2.42	0.44
7:F:18:GLU:HA	7:F:18:GLU:OE2	2.17	0.44
7:F:105:ILE:HG23	43:m:113:LYS:HB2	1.77	0.44
7:F:107:VAL:HA	43:m:103:THR:HA	2.00	0.44
9:H:29:PHE:H	9:H:32:PRO:CD	2.31	0.44
9:H:39:ALA:CA	9:H:44:ILE:HG13	2.48	0.44
10:J:7:LYS:C	10:J:9:GLU:N	2.75	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:5:GLN:NE2	11:K:20:MET:HE1	2.32	0.44
12:L:85:VAL:O	12:L:85:VAL:HG13	2.15	0.44
13:M:15:GLY:O	13:M:16:ARG:HB3	2.18	0.44
13:M:71:LYS:HD3	13:M:92:TRP:H	1.81	0.44
16:P:102:ARG:H	16:P:102:ARG:HG3	1.35	0.44
16:P:108:ARG:NE	32:a:1463:U:OP1	2.50	0.44
20:T:66:LYS:HA	20:T:77:ARG:HA	2.00	0.44
21:U:5:ARG:O	21:U:8:ASP:HB2	2.18	0.44
29:4:24:LYS:HE2	29:4:25:HIS:O	2.18	0.44
30:5:23:ILE:O	30:5:24:ARG:O	2.36	0.44
31:6:7:TYR:CB	31:6:59:THR:HA	2.48	0.44
31:6:121:ILE:HA	31:6:124:MET:HG2	2.00	0.44
32:a:186:C:C5'	50:t:72:ALA:O	2.66	0.44
32:a:463:U:H5'	32:a:464:U:OP2	2.17	0.44
32:a:554:A:H2'	32:a:555:U:C6	2.53	0.44
32:a:1023:U:H2'	32:a:1024:G:H8	1.82	0.44
32:a:1082:A:O2'	32:a:1083:U:H5'	2.17	0.44
32:a:1144:G:C2'	40:j:80:THR:O	2.63	0.44
32:a:1283:U:H3	44:n:84:ARG:CA	2.30	0.44
32:a:1332:A:C5'	43:m:19:THR:OG1	2.66	0.44
33:c:63:ILE:HG21	40:j:66:GLU:OE2	2.15	0.44
33:c:98:ALA:CB	40:j:64:GLN:CD	2.88	0.44
33:c:112:ALA:HB1	33:c:199:VAL:CG2	2.47	0.44
34:d:18:LEU:HD22	34:d:63:ILE:HG12	2.00	0.44
36:f:7:VAL:HB	36:f:61:LEU:HD22	1.99	0.44
45:o:78:THR:HA	45:o:81:ILE:CG1	2.46	0.44
49:s:4:LEU:HD13	49:s:8:PRO:HA	1.99	0.44
49:s:39:ILE:CG2	49:s:65:MET:HB3	2.46	0.44
50:t:54:GLN:N	50:t:55:PRO:CD	2.80	0.44
1:A:78:A:C2	1:A:99:A:C4	3.06	0.44
2:B:106:C:H2'	2:B:107:G:H8	1.82	0.44
2:B:286:U:O2'	2:B:287:G:H5'	2.18	0.44
2:B:849:A:O2'	24:Y:20:LYS:HG2	2.18	0.44
2:B:870:U:O2'	13:M:8:LYS:HB3	2.18	0.44
2:B:971:G:H2'	2:B:972:A:O4'	2.18	0.44
2:B:1281:G:H2'	2:B:1282:U:O4'	2.18	0.44
2:B:2248:C:C2'	2:B:2249:U:H5'	2.47	0.44
2:B:2477:U:H4'	2:B:2479:U:O4	2.18	0.44
2:B:2663:G:H2'	2:B:2664:G:C8	2.53	0.44
2:B:2759:G:H4'	8:G:34:ARG:NH1	2.30	0.44
2:B:2795:C:O5'	2:B:2795:C:H6	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2889:C:H2'	2:B:2890:G:C8	2.52	0.44
4:C:53:ILE:HG21	4:C:218:THR:CG2	2.45	0.44
4:C:136:VAL:O	4:C:137:GLY:C	2.59	0.44
4:C:171:VAL:HA	4:C:183:VAL:O	2.17	0.44
5:D:17:GLU:HB2	16:P:80:VAL:CG2	2.44	0.44
6:E:49:ARG:HH11	6:E:49:ARG:CG	2.31	0.44
7:F:177:ARG:NE	7:F:178:LYS:N	2.66	0.44
10:J:25:LEU:HD23	10:J:64:VAL:HA	1.98	0.44
11:K:108:ARG:HD2	11:K:113:MET:HE3	2.00	0.44
12:L:74:THR:O	12:L:75:ALA:C	2.60	0.44
12:L:82:LEU:O	12:L:83:ALA:HB3	2.17	0.44
12:L:85:VAL:HG13	12:L:86:GLU:HG2	1.99	0.44
13:M:98:PRO:HG2	13:M:99:GLY:H	1.82	0.44
14:N:75:ILE:HG23	14:N:76:VAL:N	2.33	0.44
15:O:94:ARG:HG3	15:O:94:ARG:O	2.18	0.44
16:P:18:SER:OG	16:P:21:PRO:HD3	2.17	0.44
16:P:23:ASP:HB3	16:P:24:THR:H	1.45	0.44
18:R:2:TYR:N	18:R:46:GLU:HB2	2.30	0.44
18:R:4:VAL:O	18:R:4:VAL:HG13	2.16	0.44
19:S:32:ALA:HA	19:S:51:LEU:CD1	2.48	0.44
20:T:32:LEU:C	20:T:34:VAL:H	2.25	0.44
20:T:84:TYR:O	20:T:85:VAL:O	2.36	0.44
25:Z:44:PHE:CD1	25:Z:44:PHE:N	2.82	0.44
27:2:46:VAL:HG22	27:2:47:ILE:N	2.28	0.44
29:4:21:PHE:CD1	29:4:21:PHE:N	2.84	0.44
29:4:28:LEU:HB2	29:4:32:LEU:O	2.17	0.44
30:5:31:PRO:O	30:5:32:LYS:C	2.60	0.44
32:a:432:A:H2'	32:a:433:G:H5'	1.99	0.44
32:a:627:G:H2'	32:a:628:G:H8	1.83	0.44
32:a:682:G:O2'	32:a:683:G:H5'	2.17	0.44
32:a:777:A:H2'	32:a:778:G:C8	2.53	0.44
32:a:795:C:H2'	41:k:128:VAL:HG12	2.00	0.44
32:a:813:U:O2'	32:a:814:A:H5'	2.18	0.44
32:a:845:A:C5'	48:r:47:ARG:HH22	2.30	0.44
32:a:922:G:H2'	32:a:923:A:H8	1.75	0.44
32:a:1013:G:H5"	49:s:19:GLU:OE1	2.18	0.44
32:a:1016:A:H1'	44:n:45:LEU:N	2.26	0.44
32:a:1280:A:C6	40:j:30:LYS:HB3	2.52	0.44
32:a:1375:A:OP2	37:g:9:ARG:CB	2.65	0.44
33:c:71:ARG:HB3	33:c:74:ILE:CG2	2.47	0.44
33:c:113:LYS:HE2	33:c:117:ASP:CG	2.42	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:d:77:GLU:OE1	34:d:80:ARG:NH2	2.48	0.44
34:d:154:VAL:HG13	34:d:155:LYS:N	2.33	0.44
34:d:191:SER:O	34:d:192:ALA:CB	2.65	0.44
35:e:81:GLN:N	35:e:81:GLN:OE1	2.50	0.44
42:l:41:PRO:HG3	42:l:46:SER:O	2.18	0.44
43:m:44:ILE:CA	43:m:47:LEU:HD13	2.46	0.44
43:m:63:VAL:HB	43:m:68:LEU:HG	2.00	0.44
49:s:44:ILE:HA	49:s:61:VAL:CG1	2.48	0.44
2:B:6:A:O2'	2:B:7:G:H5'	2.18	0.44
2:B:221:A:H2'	2:B:266:G:N7	2.32	0.44
2:B:373:U:O2'	2:B:374:A:H5'	2.18	0.44
2:B:438:G:H2'	2:B:439:A:H8	1.82	0.44
2:B:545:U:H2'	2:B:547:A:P	2.58	0.44
2:B:720:U:H2'	2:B:721:A:H8	1.77	0.44
2:B:948:C:H2'	2:B:949:G:C8	2.52	0.44
2:B:1177:G:H2'	2:B:1178:C:H6	1.76	0.44
2:B:1511:G:H2'	2:B:1512:C:C6	2.53	0.44
2:B:1708:C:H2'	2:B:1709:U:C6	2.52	0.44
2:B:1716:U:H2'	2:B:1717:A:H8	1.81	0.44
2:B:2320:U:H3'	2:B:2321:U:C5'	2.48	0.44
2:B:2340:A:H2'	2:B:2341:G:H8	1.83	0.44
2:B:2547:A:H2'	2:B:2548:U:H6	1.83	0.44
2:B:2720:U:H2'	2:B:2721:A:C8	2.53	0.44
2:B:2751:G:H5"	8:G:2:ARG:O	2.18	0.44
5:D:205:PRO:O	5:D:206:ALA:HB2	2.17	0.44
6:E:141:MET:HG3	6:E:143:LEU:HD13	2.00	0.44
6:E:154:ASP:OD1	6:E:156:ASN:HB2	2.18	0.44
7:F:15:LEU:HD22	7:F:28:PRO:HG3	1.99	0.44
7:F:135:ILE:O	7:F:136:ILE:HB	2.17	0.44
8:G:20:GLY:O	8:G:21:GLN:C	2.60	0.44
8:G:26:LYS:HG2	8:G:31:GLU:CD	2.42	0.44
11:K:10:VAL:HG13	11:K:19:VAL:HG21	1.99	0.44
12:L:63:LYS:HB2	29:4:11:LYS:HZ2	1.81	0.44
13:M:1:MET:HG2	13:M:64:TRP:CD1	2.53	0.44
19:S:9:HIS:HB3	19:S:10:ALA:H	1.50	0.44
21:U:60:LYS:HD2	21:U:60:LYS:HA	1.81	0.44
22:W:42:THR:HB	22:W:66:VAL:H	1.81	0.44
28:3:22:MET:SD	28:3:28:ARG:HG3	2.58	0.44
32:a:113:G:O4'	32:a:354:G:H4'	2.18	0.44
32:a:138:G:O2'	32:a:139:A:H5'	2.17	0.44
32:a:501:C:O2'	32:a:502:A:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:771:G:H2'	32:a:772:U:C6	2.53	0.44
32:a:845:A:O3'	48:r:47:ARG:NH2	2.51	0.44
32:a:984:C:C4	49:s:5:LYS:HD2	2.50	0.44
32:a:1019:A:N6	44:n:34:ASN:HB3	2.33	0.44
32:a:1218:C:C6	44:n:48:GLN:HG3	2.40	0.44
32:a:1254:A:H61	32:a:1283:U:H3	1.66	0.44
32:a:1280:A:C5	40:j:30:LYS:CB	3.01	0.44
32:a:1306:A:O2'	43:m:33:LEU:HB2	2.14	0.44
32:a:1380:U:N3	37:g:2:ARG:NE	2.66	0.44
32:a:1435:G:H2'	32:a:1436:U:H6	1.81	0.44
33:c:19:SER:HB2	33:c:39:ARG:HH22	1.82	0.44
33:c:40:GLN:O	33:c:44:LYS:HG3	2.18	0.44
33:c:176:THR:O	33:c:179:ALA:HB3	2.17	0.44
34:d:2:ARG:NH1	34:d:114:ARG:HD2	2.32	0.44
34:d:99:ASN:ND2	34:d:110:ARG:NE	2.64	0.44
37:g:55:LYS:HE2	37:g:57:GLU:OE1	2.18	0.44
41:k:69:CYS:O	41:k:71:ASP:N	2.51	0.44
41:k:112:VAL:HA	48:r:72:ARG:HD3	2.00	0.44
46:p:12:LYS:C	46:p:14:ARG:N	2.75	0.44
46:p:44:SER:O	46:p:45:GLU:C	2.60	0.44
47:q:26:ARG:HH21	47:q:39:ARG:NH2	2.15	0.44
48:r:46:THR:CG2	48:r:51:GLN:HB2	2.43	0.44
2:B:1:G:H2'	2:B:2:G:H8	1.83	0.44
2:B:69:C:O2'	2:B:70:G:H5'	2.17	0.44
2:B:84:A:OP2	21:U:91:LYS:HD3	2.18	0.44
2:B:102:U:H4'	2:B:103:A:OP2	2.14	0.44
2:B:132:G:H2'	2:B:133:U:C6	2.53	0.44
2:B:458:G:H1'	2:B:459:U:H5	1.82	0.44
2:B:540:C:H2'	2:B:541:A:C8	2.53	0.44
2:B:673:C:O2'	2:B:674:G:H5'	2.17	0.44
2:B:729:G:H2'	2:B:1775:U:H1'	1.98	0.44
2:B:968:C:O2'	24:Y:16:LEU:HD23	2.18	0.44
2:B:1131:G:C4'	10:J:85:LYS:HZ1	2.31	0.44
2:B:1463:C:H2'	2:B:1464:G:C8	2.53	0.44
2:B:1750:G:O2'	2:B:1751:U:H5'	2.17	0.44
2:B:1958:C:O2'	2:B:1959:G:H5'	2.18	0.44
2:B:2223:G:C2'	2:B:2224:G:H5'	2.47	0.44
2:B:2581:G:H2'	2:B:2581:G:N3	2.33	0.44
2:B:2772:C:H2'	2:B:2773:C:H6	1.82	0.44
2:B:2893:A:H4'	2:B:2894:G:O5'	2.18	0.44
3:V:4:ILE:N	3:V:62:THR:O	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:145:MET:O	4:C:184:GLU:HG3	2.18	0.44
6:E:68:ALA:O	6:E:69:ARG:HB3	2.18	0.44
6:E:117:ARG:HA	6:E:188:MET:CE	2.48	0.44
7:F:131:VAL:HG11	43:m:104:ASN:CA	2.48	0.44
8:G:114:HIS:HB2	8:G:150:TYR:HE2	1.83	0.44
10:J:24:THR:O	10:J:25:LEU:HD22	2.17	0.44
10:J:98:GLU:O	10:J:100:VAL:N	2.51	0.44
10:J:132:HIS:C	10:J:134:ALA:N	2.72	0.44
12:L:38:GLN:N	12:L:41:ARG:NH1	2.64	0.44
12:L:38:GLN:HA	12:L:41:ARG:CZ	2.47	0.44
14:N:38:LEU:HG	14:N:109:PRO:HB2	1.99	0.44
15:O:1:MET:CG	15:O:3:LYS:HE3	2.47	0.44
19:S:29:VAL:CG2	19:S:69:LEU:HB3	2.48	0.44
20:T:48:GLN:CG	20:T:49:LYS:N	2.81	0.44
20:T:64:LYS:HD3	20:T:79:ASP:HA	2.00	0.44
21:U:62:ALA:O	21:U:63:ALA:C	2.60	0.44
21:U:76:THR:O	21:U:77:GLY:C	2.60	0.44
22:W:44:PHE:H	22:W:76:ARG:HG3	1.83	0.44
24:Y:31:ILE:C	24:Y:33:HIS:H	2.26	0.44
28:3:34:ARG:NE	28:3:42:LEU:HD13	2.26	0.44
32:a:601:G:H2'	32:a:602:A:H8	1.83	0.44
32:a:661:G:O2'	32:a:662:U:H5'	2.18	0.44
32:a:990:C:C6	44:n:43:ALA:HA	2.52	0.44
32:a:1016:A:C5	44:n:40:ARG:HB3	2.52	0.44
32:a:1017:U:O4'	44:n:44:VAL:HG11	2.17	0.44
32:a:1255:G:P	44:n:65:GLN:CD	2.91	0.44
32:a:1256:A:O2'	32:a:1257:A:H5"	2.18	0.44
32:a:1278:G:C2'	44:n:93:PRO:HD2	2.41	0.44
32:a:1298:U:C5	37:g:112:ASP:O	2.60	0.44
32:a:1307:U:O2	43:m:25:GLY:N	2.50	0.44
32:a:1458:G:H2'	32:a:1459:G:H8	1.83	0.44
37:g:29:LEU:HD12	37:g:104:VAL:CG1	2.48	0.44
40:j:89:ARG:CZ	40:j:89:ARG:HA	2.47	0.44
41:k:62:ALA:O	41:k:65:ALA:HB3	2.18	0.44
46:p:12:LYS:O	46:p:14:ARG:HG3	2.17	0.44
50:t:20:ASN:O	50:t:65:LEU:HD21	2.18	0.44
51:7:59:ILE:CD1	51:7:66:ILE:HD11	2.48	0.44
51:7:164:ASP:OD2	51:7:203:ASP:HB2	2.18	0.44
51:7:165:ALA:CB	51:7:186:VAL:HG12	2.48	0.44
52:u:34:ARG:NH1	52:u:39:LYS:HE3	2.33	0.44
1:A:50:A:H5"	15:O:68:LYS:CD	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:28:A:N6	2:B:512:G:O2'	2.51	0.44
2:B:39:G:O2'	2:B:40:U:H5'	2.18	0.44
2:B:357:C:H2'	2:B:358:U:C6	2.53	0.44
2:B:481:G:OP2	21:U:43:LYS:HG3	2.18	0.44
2:B:995:C:C4	10:J:2:LYS:HB3	2.53	0.44
2:B:1079:C:C2	2:B:1080:A:C8	3.06	0.44
2:B:1315:C:H2'	2:B:1316:U:C6	2.53	0.44
2:B:1783:A:H5'	2:B:2608:G:H4'	1.99	0.44
2:B:1801:A:H5'	2:B:2203:U:O2'	2.18	0.44
2:B:2243:U:O2	2:B:2434:A:C2	2.71	0.44
2:B:2290:G:H2'	2:B:2291:U:C6	2.53	0.44
2:B:2423:U:H3	22:W:1:ALA:HB2	1.83	0.44
3:V:30:ILE:O	3:V:37:PRO:HA	2.17	0.44
6:E:117:ARG:H	6:E:118:LEU:HD23	1.82	0.44
7:F:108:PRO:CB	43:m:101:THR:CB	2.87	0.44
8:G:57:TYR:OH	8:G:59:ASP:HB2	2.18	0.44
8:G:84:LYS:HA	8:G:84:LYS:NZ	2.33	0.44
9:H:47:PHE:CD1	9:H:47:PHE:O	2.71	0.44
9:H:72:ILE:HG23	9:H:72:ILE:O	2.18	0.44
12:L:84:LYS:C	12:L:86:GLU:HG3	2.43	0.44
12:L:103:ILE:HD11	12:L:105:ILE:HD13	1.99	0.44
12:L:109:LYS:H	12:L:126:ARG:HB3	1.82	0.44
14:N:33:ILE:HG22	14:N:113:ILE:O	2.18	0.44
15:O:8:ILE:CG2	15:O:9:ARG:N	2.77	0.44
17:Q:22:GLY:HA2	17:Q:28:SER:HB3	1.99	0.44
18:R:7:SER:CB	18:R:21:ARG:HH22	2.30	0.44
19:S:80:PRO:O	19:S:100:THR:HG22	2.18	0.44
21:U:73:ASN:CG	21:U:96:LYS:HD3	2.43	0.44
22:W:35:ILE:CG2	22:W:36:ILE:H	2.15	0.44
24:Y:50:VAL:C	24:Y:53:MET:HB2	2.43	0.44
25:Z:62:LYS:C	25:Z:64:PHE:H	2.26	0.44
27:2:26:LYS:HD3	27:2:29:LYS:CD	2.48	0.44
31:6:14:ALA:CB	31:6:50:LYS:HA	2.47	0.44
32:a:119:A:H4'	32:a:120:A:O4'	2.17	0.44
32:a:191:G:H2'	32:a:192:A:C8	2.52	0.44
32:a:261:U:H2'	32:a:263:A:OP2	2.18	0.44
32:a:1007:U:H2'	32:a:1008:U:C6	2.52	0.44
32:a:1111:A:C2	33:c:176:THR:HA	2.49	0.44
32:a:1240:U:N1	37:g:31:VAL:HG12	2.33	0.44
32:a:1332:A:P	43:m:17:ALA:O	2.76	0.44
33:c:22:PHE:CE1	40:j:18:ILE:HG21	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:c:86:LEU:HD11	40:j:53:ILE:HB	1.57	0.44
35:e:36:THR:O	35:e:48:GLY:N	2.51	0.44
36:f:38:ARG:HH21	36:f:96:VAL:HG11	1.81	0.44
38:h:46:GLU:HB2	38:h:61:THR:OG1	2.18	0.44
39:i:51:LEU:C	39:i:56:MET:HG2	2.43	0.44
42:l:43:LYS:N	42:l:44:PRO:CD	2.80	0.44
43:m:10:ASP:HA	43:m:44:ILE:HD11	1.98	0.44
46:p:18:GLN:NE2	46:p:35:ARG:HH11	2.16	0.44
46:p:43:ALA:H	46:p:46:LYS:HD2	1.81	0.44
47:q:20:ILE:CD1	47:q:45:VAL:HB	2.47	0.44
50:t:66:ILE:HG23	50:t:70:LYS:CD	2.48	0.44
51:7:67:LEU:HD23	51:7:160:LEU:CG	2.48	0.44
53:v:61:C:H2'	53:v:62:C:H6	1.82	0.44
1:A:27:C:H3'	1:A:28:C:C6	2.53	0.43
2:B:508:A:N3	2:B:508:A:O4'	2.51	0.43
2:B:1022:G:N2	2:B:1142:A:C2	2.81	0.43
2:B:1054:A:H2'	2:B:1055:G:C8	2.50	0.43
2:B:1112:G:H5'	8:G:2:ARG:NE	2.28	0.43
2:B:1250:G:H5'	17:Q:3:VAL:CG1	2.48	0.43
2:B:1278:C:OP1	14:N:36:THR:HB	2.18	0.43
2:B:1289:C:H2'	2:B:1290:C:H6	1.83	0.43
2:B:1541:C:O2'	2:B:1542:U:H5'	2.18	0.43
2:B:2258:C:O2'	2:B:2427:C:OP2	2.20	0.43
2:B:2708:G:O2'	2:B:2709:G:H5'	2.18	0.43
2:B:2811:G:C5'	5:D:62:LYS:HD2	2.48	0.43
3:V:54:ALA:O	3:V:57:TYR:N	2.50	0.43
4:C:183:VAL:O	4:C:184:GLU:C	2.61	0.43
5:D:16:THR:HG23	5:D:17:GLU:N	2.21	0.43
5:D:117:GLY:N	5:D:165:MET:HB3	2.32	0.43
8:G:21:GLN:HG2	8:G:38:ASP:HA	2.00	0.43
8:G:155:PRO:HB2	8:G:172:GLU:HG3	2.00	0.43
9:H:6:LEU:HA	9:H:15:LEU:HA	2.00	0.43
10:J:60:ASP:OD1	10:J:97:PRO:HG2	2.18	0.43
11:K:63:VAL:HG21	11:K:85:VAL:HG21	2.00	0.43
13:M:31:PHE:CD2	13:M:109:PRO:HB2	2.53	0.43
13:M:117:PHE:O	13:M:120:ALA:HB3	2.18	0.43
13:M:126:ILE:O	13:M:127:LYS:HB2	2.18	0.43
14:N:14:SER:HA	14:N:17:ARG:HB2	2.00	0.43
16:P:62:LYS:HE2	16:P:74:GLN:NE2	2.30	0.43
18:R:6:GLN:HG3	18:R:7:SER:H	1.83	0.43
18:R:42:ALA:C	18:R:44:GLY:H	2.22	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:6:ARG:HG3	20:T:10:VAL:HG13	1.99	0.43
20:T:61:LEU:CD1	20:T:62:VAL:H	2.25	0.43
22:W:44:PHE:HB3	22:W:76:ARG:HG3	1.99	0.43
31:6:14:ALA:CA	31:6:45:THR:HG21	2.42	0.43
32:a:394:G:H2'	32:a:395:C:C6	2.53	0.43
32:a:397:A:H3'	32:a:397:A:N3	2.32	0.43
32:a:969:A:H2'	32:a:970:C:O2	2.18	0.43
32:a:1055:A:HO2'	33:c:160:GLU:CG	2.25	0.43
32:a:1112:C:N4	33:c:175:HIS:O	2.50	0.43
32:a:1127:G:OP2	40:j:35:GLN:CB	2.57	0.43
32:a:1197:A:P	32:a:1197:A:H3'	2.57	0.43
32:a:1234:C:O3'	43:m:50:GLY:HA2	2.18	0.43
32:a:1486:G:H2'	32:a:1487:G:C8	2.53	0.43
33:c:39:ARG:HH21	33:c:56:ILE:HD12	1.83	0.43
35:e:17:VAL:HB	35:e:34:ALA:HB2	2.00	0.43
40:j:42:LEU:HB2	40:j:71:LEU:HD13	1.99	0.43
41:k:41:LEU:C	41:k:73:VAL:HG13	2.43	0.43
43:m:21:ILE:C	43:m:23:GLY:H	2.25	0.43
46:p:34:GLU:CD	46:p:56:ARG:HD3	2.42	0.43
46:p:70:ARG:O	46:p:74:LEU:HG	2.18	0.43
47:q:80:LYS:HE3	47:q:80:LYS:H	1.82	0.43
49:s:62:THR:OG1	49:s:65:MET:HE3	2.18	0.43
51:7:67:LEU:HD23	51:7:160:LEU:HG	1.99	0.43
2:B:38:A:O4'	6:E:46:GLN:CG	2.52	0.43
2:B:1704:C:H2'	2:B:1705:A:C8	2.53	0.43
2:B:1791:A:C4'	4:C:207:ALA:H	2.30	0.43
2:B:1814:G:C4'	4:C:51:ARG:HD2	2.48	0.43
2:B:1826:G:H2'	2:B:1827:U:C6	2.53	0.43
2:B:2038:G:H2'	2:B:2039:U:O4'	2.18	0.43
2:B:2082:A:O2'	2:B:2083:G:H5'	2.18	0.43
2:B:2291:U:H5"	2:B:2380:C:H1'	1.98	0.43
2:B:2723:C:H2'	2:B:2724:U:O4'	2.19	0.43
2:B:2845:U:O3'	16:P:54:LEU:HG	2.18	0.43
3:V:80:HIS:HB3	3:V:83:LYS:O	2.17	0.43
4:C:170:TYR:HB3	4:C:185:ALA:HB3	2.00	0.43
5:D:88:GLU:CG	5:D:89:GLU:N	2.80	0.43
5:D:115:GLY:HA2	5:D:165:MET:CE	2.48	0.43
5:D:116:LYS:HG3	14:N:3:HIS:CE1	2.53	0.43
5:D:152:PRO:C	5:D:153:GLY:O	2.59	0.43
6:E:66:GLY:O	6:E:67:ARG:C	2.60	0.43
7:F:73:VAL:CG1	53:v:56:C:C6	2.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:F:106:ALA:HB3	7:F:136:ILE:HG23	1.92	0.43
8:G:32:LEU:HD11	8:G:74:MET:SD	2.59	0.43
11:K:5:GLN:O	11:K:6:THR:HB	2.17	0.43
13:M:65:ILE:CG2	13:M:101:VAL:HA	2.44	0.43
15:O:45:SER:C	15:O:47:VAL:H	2.26	0.43
16:P:24:THR:HG21	16:P:111:GLU:CG	2.37	0.43
16:P:93:LYS:HD2	16:P:96:LEU:HD12	1.99	0.43
17:Q:16:ILE:C	17:Q:18:LYS:N	2.75	0.43
25:Z:66:ILE:O	25:Z:69:SER:O	2.35	0.43
32:a:82:G:C6	32:a:88:U:O2	2.71	0.43
32:a:224:U:H2'	32:a:225:C:H6	1.83	0.43
32:a:323:U:H2'	32:a:324:G:O4'	2.18	0.43
32:a:383:A:H2'	32:a:384:G:O4'	2.18	0.43
32:a:411:A:OP2	34:d:25:ARG:NH2	2.47	0.43
32:a:437:U:C4'	34:d:151:GLN:NE2	2.80	0.43
32:a:562:U:H1'	42:l:11:ARG:HB3	1.99	0.43
32:a:878:A:H2'	32:a:879:C:C6	2.53	0.43
32:a:967:C:H4'	39:i:129:ARG:CB	2.38	0.43
32:a:1148:U:C4	40:j:83:THR:CB	3.01	0.43
32:a:1150:A:N6	40:j:87:LEU:N	2.59	0.43
32:a:1241:G:H21	43:m:2:ARG:NH2	2.16	0.43
32:a:1291:U:O2'	32:a:1292:G:H5'	2.18	0.43
33:c:63:ILE:C	40:j:48:ARG:C	2.85	0.43
33:c:73:GLY:O	40:j:55:PRO:CA	2.66	0.43
33:c:146:LYS:HG3	33:c:202:PHE:CD2	2.51	0.43
34:d:14:GLU:OE2	34:d:58:GLN:HG3	2.18	0.43
34:d:125:ASN:HA	34:d:141:VAL:HG23	2.00	0.43
34:d:169:TRP:CE2	34:d:185:PRO:HB3	2.54	0.43
35:e:106:ALA:HB1	35:e:110:MET:HB2	1.99	0.43
41:k:121:ARG:NE	52:u:37:TYR:OH	2.51	0.43
42:l:106:VAL:CG1	42:l:116:TYR:HB3	2.47	0.43
46:p:7:ALA:O	46:p:17:TYR:HA	2.18	0.43
46:p:20:VAL:HG22	46:p:21:VAL:H	1.82	0.43
49:s:31:ARG:NH2	49:s:55:GLN:HE22	2.16	0.43
50:t:19:HIS:O	50:t:23:ARG:HG2	2.19	0.43
51:7:101:THR:HG22	51:7:174:GLU:OE1	2.18	0.43
51:7:163:ILE:CG2	51:7:164:ASP:N	2.64	0.43
2:B:68:G:H3'	2:B:69:C:H6	1.83	0.43
2:B:284:U:H2'	2:B:285:G:C8	2.53	0.43
2:B:337:C:OP1	21:U:81:ARG:NH2	2.51	0.43
2:B:664:G:O2'	2:B:665:U:H5'	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1007:C:H5”	10:J:37:ARG:HH21	1.82	0.43
2:B:1616:A:H4’	2:B:1617:C:OP2	2.17	0.43
2:B:1623:G:O2’	2:B:1624:U:H5’	2.18	0.43
2:B:2047:C:H2’	2:B:2048:G:H8	1.84	0.43
2:B:2263:C:H4’	2:B:2329:U:H4’	2.01	0.43
2:B:2291:U:H2’	2:B:2292:U:H6	1.81	0.43
2:B:2313:C:O2’	2:B:2314:A:H5’	2.19	0.43
2:B:2393:U:OP1	29:4:29:ARG:NE	2.51	0.43
2:B:2575:C:H4’	5:D:148:GLN:CA	2.48	0.43
2:B:2683:C:H2’	2:B:2684:U:H6	1.83	0.43
2:B:2700:A:H2’	2:B:2701:U:C6	2.52	0.43
2:B:2805:C:O2’	2:B:2806:C:H5’	2.18	0.43
3:V:2:PHE:O	3:V:3:THR:HG23	2.18	0.43
4:C:231:HIS:CD2	4:C:242:HIS:HB3	2.53	0.43
5:D:52:THR:N	5:D:75:ALA:HB1	2.33	0.43
6:E:23:PHE:O	6:E:24:ASN:C	2.62	0.43
6:E:149:ILE:HA	6:E:168:ASP:O	2.18	0.43
7:F:70:ARG:CA	7:F:80:GLN:HE21	2.31	0.43
9:H:82:SER:O	9:H:90:LEU:HD23	2.18	0.43
11:K:98:ARG:HH22	32:a:339:C:P	2.40	0.43
14:N:9:GLN:HE21	14:N:9:GLN:HB2	1.64	0.43
19:S:6:LYS:CA	19:S:104:THR:HA	2.48	0.43
19:S:88:ARG:HB3	19:S:89:ALA:H	1.50	0.43
21:U:6:ARG:O	21:U:8:ASP:N	2.51	0.43
21:U:27:VAL:HA	21:U:32:LYS:C	2.43	0.43
23:X:21:LEU:HD12	23:X:21:LEU:HA	1.80	0.43
24:Y:16:LEU:CB	24:Y:17:PRO:CD	2.88	0.43
27:2:26:LYS:HD3	27:2:29:LYS:CG	2.49	0.43
29:4:13:PHE:O	29:4:13:PHE:CG	2.68	0.43
29:4:42:HIS:ND1	29:4:42:HIS:C	2.77	0.43
32:a:26:A:N6	32:a:558:G:H1’	2.33	0.43
32:a:41:G:H2’	32:a:42:G:H8	1.83	0.43
32:a:939:G:C4’	37:g:101:ARG:NH2	2.81	0.43
32:a:1011:C:N3	44:n:33:VAL:CG1	2.78	0.43
32:a:1013:G:N1	44:n:32:ASP:C	2.76	0.43
32:a:1121:U:C5	40:j:89:ARG:CZ	3.01	0.43
32:a:1146:A:H3’	40:j:85:ASP:HB2	2.00	0.43
32:a:1230:C:H2’	32:a:1231:G:H8	1.81	0.43
32:a:1235:U:H3	43:m:47:LEU:HB3	1.82	0.43
32:a:1307:U:C2	43:m:28:ARG:HB3	2.53	0.43
32:a:1350:A:H2’	32:a:1351:U:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1386:G:H2'	32:a:1387:G:H8	1.83	0.43
32:a:1438:G:C2'	32:a:1439:G:H5'	2.47	0.43
33:c:13:ILE:HG22	33:c:14:VAL:HG13	2.01	0.43
33:c:64:ARG:O	40:j:65:TYR:CD1	2.67	0.43
33:c:139:ASN:C	33:c:141:MET:N	2.76	0.43
34:d:190:LEU:O	34:d:192:ALA:N	2.51	0.43
39:i:24:ASN:C	39:i:26:LYS:H	2.26	0.43
43:m:78:ARG:HE	43:m:79:LEU:HG	1.82	0.43
49:s:68:HIS:NE2	49:s:72:GLU:HG3	2.33	0.43
1:A:15:A:H1'	1:A:109:A:N7	2.33	0.43
1:A:105:G:O2'	1:A:106:G:H5'	2.19	0.43
2:B:397:U:OP1	25:Z:29:GLY:HA2	2.18	0.43
2:B:559:G:H2'	2:B:560:C:O4'	2.18	0.43
2:B:570:G:C2'	2:B:571:U:H5'	2.48	0.43
2:B:576:U:H2'	2:B:577:G:C8	2.53	0.43
2:B:919:U:O5'	2:B:919:U:H6	2.02	0.43
2:B:1162:G:H4'	18:R:23:GLU:HG2	2.01	0.43
2:B:1585:C:H2'	2:B:1586:A:O4'	2.17	0.43
2:B:1593:A:H2'	2:B:1594:U:H6	1.83	0.43
2:B:1675:C:O2	5:D:134:HIS:CG	2.71	0.43
2:B:1820:U:C4	4:C:158:GLY:HA3	2.52	0.43
2:B:2286:G:H2'	2:B:2287:A:OP2	2.17	0.43
4:C:4:LYS:HB2	32:a:807:A:O2'	2.19	0.43
4:C:141:HIS:ND1	4:C:142:ASN:N	2.64	0.43
5:D:84:LEU:O	5:D:84:LEU:HD12	2.19	0.43
5:D:144:GLY:O	5:D:145:SER:HB2	2.18	0.43
6:E:189:THR:HB	6:E:190:ALA:H	1.61	0.43
8:G:89:VAL:O	8:G:160:GLY:N	2.51	0.43
9:H:5:LEU:C	9:H:7:ASP:H	2.26	0.43
10:J:58:ASN:HA	10:J:126:ALA:CA	2.44	0.43
12:L:53:GLY:O	12:L:54:GLN:C	2.61	0.43
13:M:1:MET:HA	13:M:65:ILE:O	2.19	0.43
15:O:15:ARG:HH12	15:O:17:LYS:HD3	1.83	0.43
15:O:86:GLY:O	15:O:89:ASP:HB2	2.18	0.43
16:P:47:ILE:HG23	16:P:63:ILE:CB	2.49	0.43
17:Q:5:ARG:O	17:Q:9:ALA:HB2	2.18	0.43
18:R:58:VAL:HG22	18:R:59:ILE:H	1.83	0.43
18:R:88:GLY:O	18:R:89:HIS:HB2	2.17	0.43
20:T:50:LEU:C	20:T:52:GLU:N	2.75	0.43
21:U:46:LYS:HE2	21:U:54:PRO:O	2.19	0.43
23:X:21:LEU:O	23:X:47:ARG:NH1	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Z:3:LYS:CG	25:Z:8:LYS:HA	2.44	0.43
28:3:34:ARG:HG3	28:3:34:ARG:NH1	2.33	0.43
28:3:42:LEU:HD12	28:3:43:THR:H	1.83	0.43
31:6:92:PRO:C	31:6:94:LYS:H	2.27	0.43
32:a:25:C:H2'	32:a:26:A:C8	2.53	0.43
32:a:210:C:H4'	32:a:211:G:H5"	2.01	0.43
32:a:242:G:H2'	32:a:243:A:H5"	2.01	0.43
32:a:390:U:H5'	46:p:28:ARG:HD3	2.01	0.43
32:a:709:U:H2'	32:a:710:G:H8	1.83	0.43
32:a:1018:G:OP2	44:n:30:ILE:CD1	2.64	0.43
32:a:1114:C:H2'	32:a:1115:U:O4'	2.19	0.43
32:a:1152:A:C8	40:j:92:LEU:CB	3.02	0.43
32:a:1281:C:C4	40:j:38:GLY:HA3	2.53	0.43
32:a:1389:C:H2'	32:a:1390:U:C6	2.54	0.43
35:e:89:THR:HG22	35:e:90:GLY:N	2.33	0.43
36:f:10:VAL:CG1	36:f:83:ALA:HB1	2.48	0.43
39:i:20:ILE:HA	39:i:61:ASP:O	2.19	0.43
41:k:28:ASN:HD21	41:k:30:ILE:HG23	1.83	0.43
43:m:14:ALA:HB1	43:m:33:LEU:HD11	1.99	0.43
43:m:79:LEU:HD22	43:m:86:ARG:NH2	2.34	0.43
46:p:42:ILE:CG2	46:p:43:ALA:H	2.20	0.43
49:s:12:LEU:CD2	49:s:15:LEU:HD23	2.49	0.43
49:s:20:LYS:O	49:s:20:LYS:HD2	2.18	0.43
51:7:18:GLN:HG2	51:7:189:ASN:CG	2.44	0.43
2:B:36:G:C2	2:B:37:C:C2	3.07	0.43
2:B:319:G:H2'	2:B:320:A:O4'	2.18	0.43
2:B:500:G:N2	2:B:502:A:H3'	2.34	0.43
2:B:910:A:H2	2:B:2264:C:O2	2.01	0.43
2:B:1239:G:H2'	2:B:1240:U:C6	2.53	0.43
2:B:1513:U:O2'	2:B:1514:G:H5'	2.18	0.43
2:B:2028:U:H2'	2:B:2029:G:O4'	2.19	0.43
2:B:2200:C:O2	2:B:2226:C:N4	2.51	0.43
2:B:2691:C:H2'	2:B:2692:G:H8	1.84	0.43
3:V:66:ASP:C	3:V:68:LYS:H	2.25	0.43
5:D:23:PRO:HA	5:D:190:LYS:N	2.33	0.43
5:D:36:GLN:HA	5:D:46:ARG:CZ	2.49	0.43
5:D:167:ASN:ND2	5:D:167:ASN:N	2.65	0.43
8:G:93:TYR:N	8:G:93:TYR:CD1	2.84	0.43
9:H:38:PRO:O	9:H:43:ASN:ND2	2.51	0.43
9:H:128:HIS:HB3	9:H:144:VAL:CB	2.42	0.43
12:L:91:ASP:OD1	12:L:92:LEU:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:20:GLU:O	15:O:21:LEU:C	2.61	0.43
16:P:22:GLY:O	16:P:90:ALA:O	2.37	0.43
16:P:27:VAL:HG22	16:P:28:LYS:O	2.18	0.43
16:P:31:VAL:HB	16:P:43:GLU:O	2.17	0.43
18:R:85:LYS:HG3	18:R:85:LYS:O	2.19	0.43
19:S:1:MET:HB3	19:S:4:ILE:HG12	1.99	0.43
19:S:33:LEU:HD12	19:S:37:THR:HB	1.99	0.43
21:U:42:LYS:O	21:U:43:LYS:HB3	2.17	0.43
25:Z:59:ARG:O	25:Z:60:PHE:CG	2.71	0.43
26:1:26:SER:CB	26:1:38:LEU:HD12	2.46	0.43
27:2:49:LYS:HG2	27:2:50:GLU:O	2.18	0.43
32:a:284:C:H2'	32:a:285:C:C6	2.53	0.43
32:a:376:G:H4'	46:p:5:ARG:NH1	2.32	0.43
32:a:415:A:O4'	32:a:415:A:N3	2.52	0.43
32:a:553:A:H4'	42:l:26:CYS:O	2.17	0.43
32:a:982:U:C2'	44:n:58:ARG:HH21	2.30	0.43
32:a:1052:U:H5'	32:a:1053:G:OP2	2.19	0.43
32:a:1099:G:H2'	32:a:1100:C:O4'	2.19	0.43
32:a:1125:U:OP2	40:j:76:ILE:CD1	2.67	0.43
32:a:1226:C:H4'	32:a:1227:A:OP1	2.18	0.43
32:a:1235:U:C2'	43:m:54:THR:H	2.31	0.43
32:a:1280:A:H5"	40:j:39:PRO:HB3	1.40	0.43
32:a:1402:C:H2'	32:a:1403:C:O4'	2.19	0.43
34:d:145:ARG:C	34:d:147:LYS:N	2.76	0.43
35:e:109:ALA:O	35:e:113:VAL:HG13	2.18	0.43
37:g:117:LEU:C	37:g:119:LEU:N	2.75	0.43
38:h:11:THR:HG23	38:h:14:ARG:NH1	2.33	0.43
39:i:32:ARG:HG2	39:i:32:ARG:HH11	1.84	0.43
39:i:52:GLU:C	39:i:54:VAL:N	2.75	0.43
40:j:15:HIS:CD2	40:j:19:ASP:HB2	2.52	0.43
42:l:56:LEU:HB3	42:l:58:ASN:HD21	1.83	0.43
42:l:71:HIS:CG	42:l:72:ASN:N	2.86	0.43
42:l:101:LEU:HB3	42:l:102:ASP:H	1.61	0.43
43:m:56:ARG:C	43:m:59:VAL:HG12	2.44	0.43
46:p:46:LYS:HD3	46:p:46:LYS:N	2.19	0.43
49:s:48:ILE:HG22	49:s:49:ALA:N	2.33	0.43
51:7:104:LYS:H	51:7:104:LYS:HG3	1.62	0.43
1:A:14:U:H5"	1:A:71:C:O4'	2.18	0.43
2:B:18:U:O2'	2:B:19:A:H5'	2.18	0.43
2:B:138:U:H2'	2:B:140:C:C2	2.53	0.43
2:B:224:U:H2'	2:B:225:C:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:409:G:O2'	2:B:410:G:H5'	2.18	0.43
2:B:438:G:H2'	2:B:439:A:C8	2.54	0.43
2:B:476:G:N2	2:B:478:A:H3'	2.33	0.43
2:B:557:C:H2'	2:B:558:U:H6	1.84	0.43
2:B:1241:A:H2'	2:B:1242:U:C5'	2.48	0.43
2:B:2236:U:O2'	2:B:2237:G:H5'	2.18	0.43
4:C:70:LYS:HG2	4:C:71:ASP:N	2.32	0.43
4:C:78:GLU:H	4:C:93:VAL:H	1.66	0.43
4:C:196:ASN:O	4:C:199:HIS:HB2	2.18	0.43
4:C:222:THR:O	4:C:224:MET:N	2.52	0.43
5:D:4:LEU:O	5:D:4:LEU:HG	2.17	0.43
5:D:16:THR:OG1	16:P:80:VAL:HB	2.19	0.43
5:D:128:ARG:HH11	5:D:144:GLY:HA2	1.83	0.43
6:E:88:ARG:HA	6:E:89:PRO:HD3	1.71	0.43
7:F:105:ILE:HG22	43:m:109:LYS:NZ	2.33	0.43
7:F:113:PHE:C	43:m:99:GLN:N	2.70	0.43
9:H:87:GLU:HG3	36:f:24:ARG:NH2	2.32	0.43
11:K:23:LYS:CG	11:K:24:VAL:H	2.31	0.43
12:L:67:THR:O	12:L:68:SER:HB2	2.18	0.43
13:M:21:ALA:O	13:M:96:ILE:HG13	2.18	0.43
13:M:70:ASP:C	13:M:71:LYS:HG3	2.44	0.43
14:N:89:SER:O	14:N:91:ALA:N	2.52	0.43
25:Z:30:HIS:O	25:Z:31:ASP:HB3	2.19	0.43
25:Z:58:ASP:O	25:Z:59:ARG:HD3	2.18	0.43
27:2:53:ILE:HD13	27:2:54:LYS:H	1.81	0.43
30:5:22:VAL:HG11	30:5:36:ARG:NE	2.34	0.43
31:6:140:GLU:OE1	31:6:140:GLU:HA	2.17	0.43
32:a:93:U:H2'	32:a:95:C:C5	2.54	0.43
32:a:224:U:H2'	32:a:225:C:C6	2.54	0.43
32:a:238:A:H3'	32:a:239:U:H5"	2.00	0.43
32:a:442:G:H2'	32:a:443:C:C6	2.53	0.43
32:a:473:U:C2	32:a:474:G:C8	3.07	0.43
32:a:611:C:H2'	32:a:612:C:H6	1.84	0.43
32:a:844:G:H2'	32:a:845:A:H5"	2.00	0.43
32:a:982:U:O3'	44:n:52:ARG:NH1	2.51	0.43
32:a:1014:A:H4'	49:s:40:PHE:CD2	2.53	0.43
32:a:1262:C:N1	44:n:100:TRP:CE3	2.54	0.43
32:a:1519:A:H3'	32:a:1520:C:C5'	2.49	0.43
33:c:166:TRP:HB3	33:c:167:TYR:H	1.49	0.43
34:d:89:LEU:O	34:d:92:LEU:HB2	2.18	0.43
34:d:100:VAL:HA	34:d:103:ARG:CD	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:d:109:THR:HG23	34:d:112:GLU:H	1.82	0.43
34:d:163:GLN:N	34:d:163:GLN:OE1	2.52	0.43
35:e:105:ILE:HD12	35:e:123:LEU:HB3	2.00	0.43
36:f:46:GLN:HE21	36:f:46:GLN:HB2	1.51	0.43
39:i:9:GLY:HA2	39:i:80:HIS:CD2	2.53	0.43
39:i:57:VAL:C	39:i:59:LYS:H	2.25	0.43
39:i:82:ILE:HG22	39:i:86:LEU:HD21	2.01	0.43
40:j:6:ILE:HG12	40:j:102:LEU:CD1	2.45	0.43
40:j:7:ARG:O	40:j:8:ILE:HD13	2.18	0.43
42:l:41:PRO:HD3	42:l:47:ALA:O	2.19	0.43
46:p:75:ILE:O	46:p:78:VAL:HG12	2.19	0.43
51:7:110:ILE:O	51:7:113:LEU:HB3	2.18	0.43
2:B:26:G:OP2	19:S:80:PRO:HG3	2.19	0.43
2:B:137:U:H6	2:B:137:U:O5'	2.01	0.43
2:B:264:C:O2'	2:B:265:A:H5"	2.19	0.43
2:B:597:G:H4'	12:L:21:ARG:HD2	1.99	0.43
2:B:878:A:OP1	2:B:899:A:N6	2.47	0.43
2:B:904:G:H2'	2:B:905:A:C8	2.54	0.43
2:B:1076:C:O2'	2:B:1077:A:H5'	2.19	0.43
2:B:1205:A:C4'	2:B:1206:G:OP2	2.67	0.43
2:B:1228:G:H2'	2:B:1229:C:C6	2.53	0.43
2:B:1745:A:H2'	2:B:1746:A:H8	1.82	0.43
2:B:2526:G:H2'	2:B:2527:C:H6	1.81	0.43
2:B:2650:U:H2'	2:B:2651:C:H6	1.81	0.43
2:B:2716:C:O2'	2:B:2717:C:H5'	2.18	0.43
2:B:2732:G:H5'	2:B:2733:A:O4'	2.18	0.43
4:C:19:VAL:CG1	4:C:20:ASN:H	2.18	0.43
4:C:27:LYS:N	4:C:28:PRO:HD3	2.32	0.43
4:C:87:SER:HG	4:C:200:MET:CG	2.31	0.43
4:C:171:VAL:C	4:C:172:THR:HG1	2.25	0.43
6:E:1:MET:HG3	6:E:2:GLU:N	2.33	0.43
6:E:83:VAL:O	6:E:83:VAL:HG13	2.19	0.43
6:E:97:ASN:N	6:E:97:ASN:HD22	2.16	0.43
7:F:109:ARG:N	43:m:105:ALA:HB1	2.29	0.43
8:G:94:ARG:HH11	8:G:94:ARG:CB	2.31	0.43
9:H:11:ASN:O	9:H:13:GLY:N	2.47	0.43
9:H:54:LEU:O	9:H:57:LYS:HD2	2.18	0.43
10:J:11:VAL:HG22	10:J:12:LYS:N	2.32	0.43
10:J:63:ALA:C	10:J:64:VAL:HG23	2.44	0.43
10:J:68:LYS:HA	10:J:71:ASP:OD1	2.18	0.43
10:J:101:ILE:HG23	10:J:102:GLU:OE1	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:102:PRO:HA	11:K:121:GLU:CB	2.46	0.43
12:L:84:LYS:HA	12:L:84:LYS:CE	2.49	0.43
13:M:36:VAL:CA	13:M:97:GLN:HG2	2.45	0.43
14:N:34:ILE:O	14:N:36:THR:HG22	2.18	0.43
14:N:78:LYS:O	14:N:82:GLU:HB2	2.19	0.43
15:O:115:LEU:HD22	15:O:117:PHE:CZ	2.54	0.43
16:P:61:ARG:HB2	16:P:61:ARG:NH1	2.34	0.43
16:P:62:LYS:NZ	16:P:102:ARG:HH22	2.17	0.43
17:Q:8:ILE:O	17:Q:9:ALA:C	2.62	0.43
18:R:2:TYR:HB2	18:R:44:GLY:O	2.19	0.43
18:R:4:VAL:HG11	18:R:42:ALA:N	2.34	0.43
18:R:51:VAL:O	18:R:52:PRO:C	2.61	0.43
20:T:55:VAL:HG13	20:T:86:THR:O	2.18	0.43
21:U:40:LEU:O	21:U:42:LYS:HD2	2.18	0.43
23:X:14:LEU:HD22	23:X:57:LEU:HD22	1.99	0.43
30:5:14:CYS:SG	30:5:25:VAL:O	2.77	0.43
31:6:32:VAL:CG2	31:6:60:VAL:HG21	2.46	0.43
32:a:22:G:H2'	32:a:23:C:H6	1.83	0.43
32:a:71:A:N1	32:a:99:C:H1'	2.33	0.43
32:a:375:U:OP1	46:p:70:ARG:HB2	2.19	0.43
32:a:402:G:H2'	32:a:403:C:H6	1.84	0.43
32:a:473:U:N3	32:a:474:G:N7	2.67	0.43
32:a:488:C:H2'	32:a:489:C:H6	1.84	0.43
32:a:538:G:H2'	32:a:539:A:C8	2.54	0.43
32:a:818:G:O2'	32:a:819:A:H5"	2.19	0.43
32:a:839:C:O2'	32:a:840:C:H5'	2.19	0.43
32:a:920:U:O2'	32:a:921:U:H5'	2.19	0.43
32:a:1065:U:H1'	32:a:1066:C:OP2	2.19	0.43
32:a:1153:G:C2	40:j:91:ASP:CG	2.78	0.43
32:a:1153:G:N9	40:j:91:ASP:O	2.51	0.43
32:a:1331:G:N1	43:m:4:ALA:HB2	2.32	0.43
33:c:21:TRP:CE3	40:j:68:ARG:HD3	2.53	0.43
33:c:88:LYS:C	33:c:88:LYS:HD3	2.44	0.43
33:c:130:ARG:HH21	35:e:56:PRO:HG3	1.84	0.43
34:d:12:ARG:HG3	34:d:33:ILE:HA	2.00	0.43
35:e:30:PHE:CD1	35:e:30:PHE:N	2.87	0.43
36:f:68:GLN:O	36:f:71:ILE:HG13	2.19	0.43
38:h:35:ILE:O	38:h:39:LEU:HD12	2.18	0.43
42:l:52:CYS:SG	42:l:66:ILE:HD11	2.57	0.43
42:l:56:LEU:HB2	42:l:60:PHE:O	2.19	0.43
42:l:117:GLY:O	42:l:118:VAL:HG13	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:n:20:PHE:HA	44:n:24:ALA:CB	2.47	0.43
45:o:15:GLY:C	45:o:17:ASP:H	2.26	0.43
45:o:70:LYS:HZ1	45:o:74:VAL:HA	1.83	0.43
47:q:45:VAL:HG13	47:q:60:ILE:CG2	2.48	0.43
47:q:62:GLU:HG3	47:q:72:TRP:CH2	2.53	0.43
49:s:28:LYS:HD3	49:s:28:LYS:H	1.84	0.43
49:s:62:THR:HG22	49:s:63:ASP:N	2.33	0.43
2:B:381:G:O2'	2:B:382:A:H5'	2.19	0.43
2:B:558:U:H5'	10:J:114:LEU:HD22	2.00	0.43
2:B:1068:G:C6	2:B:1069:A:N6	2.87	0.43
2:B:1348:C:H2'	2:B:1349:C:H5'	2.00	0.43
2:B:1561:C:H2'	2:B:1562:U:H6	1.84	0.43
2:B:2040:G:H2'	2:B:2041:U:O4'	2.19	0.43
2:B:2297:A:N6	2:B:2319:G:C5'	2.81	0.43
2:B:2531:A:H5'	8:G:156:TYR:CE1	2.54	0.43
2:B:2806:C:H2'	2:B:2807:U:O4'	2.18	0.43
3:V:16:ALA:O	3:V:19:ARG:HB2	2.19	0.43
4:C:21:PRO:C	4:C:202:ARG:HD2	2.44	0.43
4:C:137:GLY:C	4:C:139:THR:H	2.26	0.43
5:D:98:VAL:HA	5:D:101:PHE:HE1	1.80	0.43
5:D:108:ASP:HB2	5:D:173:GLN:HA	2.01	0.43
6:E:170:ARG:O	6:E:172:ALA:N	2.52	0.43
7:F:41:GLU:OE1	7:F:45:ASP:HA	2.18	0.43
7:F:67:THR:OG1	7:F:85:GLY:HA3	2.19	0.43
10:J:85:LYS:HA	10:J:85:LYS:HD3	1.78	0.43
10:J:138:GLN:O	10:J:139:VAL:HG13	2.19	0.43
12:L:59:ARG:HE	29:4:54:LEU:HD12	1.81	0.43
15:O:45:SER:C	15:O:47:VAL:N	2.75	0.43
17:Q:58:GLN:O	17:Q:62:ALA:HB2	2.18	0.43
19:S:28:LYS:HD3	19:S:29:VAL:H	1.83	0.43
19:S:102:HIS:HB2	19:S:103:ILE:H	1.50	0.43
21:U:49:PRO:O	21:U:49:PRO:HG2	2.17	0.43
24:Y:50:VAL:CA	24:Y:53:MET:HB2	2.48	0.43
29:4:44:ARG:HB3	29:4:45:PRO:CD	2.43	0.43
31:6:46:ASP:HA	31:6:50:LYS:CG	2.49	0.43
31:6:78:LEU:O	31:6:81:LYS:HG3	2.19	0.43
32:a:95:C:O2	32:a:95:C:C2'	2.67	0.43
32:a:382:A:O2'	32:a:383:A:H5'	2.19	0.43
32:a:539:A:H2'	32:a:540:G:H8	1.78	0.43
32:a:740:U:O2'	32:a:741:G:H5'	2.19	0.43
32:a:924:C:H2'	32:a:925:G:H8	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1033:G:H3'	32:a:1034:G:H5"	2.01	0.43
32:a:1081:A:OP2	35:e:20:VAL:HG11	2.19	0.43
32:a:1122:U:H3	40:j:90:LEU:CA	2.31	0.43
32:a:1122:U:C5	40:j:89:ARG:CZ	3.01	0.43
32:a:1127:G:H2'	40:j:34:ALA:HB3	2.00	0.43
32:a:1262:C:H2'	32:a:1263:C:O4'	2.19	0.43
32:a:1302:C:H3'	43:m:6:ILE:HA	1.29	0.43
32:a:1452:C:H5'	32:a:1453:G:N9	2.34	0.43
35:e:56:PRO:O	35:e:59:ILE:HG22	2.19	0.43
39:i:86:LEU:HD13	39:i:86:LEU:N	2.34	0.43
40:j:30:LYS:HG3	40:j:36:VAL:HB	2.01	0.43
46:p:21:VAL:HG21	46:p:60:TRP:CD1	2.53	0.43
48:r:64:LEU:C	48:r:66:LEU:N	2.74	0.43
49:s:16:LYS:HA	49:s:19:GLU:OE1	2.19	0.43
51:7:27:LYS:C	51:7:29:PHE:N	2.77	0.43
51:7:80:LYS:HB3	51:7:90:PHE:CE1	2.54	0.43
51:7:123:GLY:C	51:7:125:PHE:H	2.27	0.43
51:7:206:ILE:C	51:7:206:ILE:HD13	2.43	0.43
1:A:27:C:H5'	15:O:34:HIS:HE1	1.83	0.43
2:B:86:G:OP2	21:U:28:LEU:HB3	2.19	0.43
2:B:263:G:O2'	2:B:429:A:N3	2.52	0.43
2:B:535:G:H21	17:Q:52:ARG:HH22	1.67	0.43
2:B:635:C:O2'	2:B:639:U:H5"	2.19	0.43
2:B:654:A:H2'	2:B:655:A:C5'	2.39	0.43
2:B:1425:G:H2'	2:B:1426:G:C8	2.54	0.43
2:B:1668:A:N3	2:B:1670:C:C4	2.87	0.43
2:B:1791:A:N6	2:B:1828:G:H1'	2.34	0.43
2:B:1973:G:H2'	2:B:1974:C:H6	1.80	0.43
2:B:2239:G:H5'	4:C:246:PRO:CG	2.49	0.43
2:B:2370:G:H2'	2:B:2371:G:O4'	2.18	0.43
2:B:2458:G:H8	2:B:2459:A:H62	1.67	0.43
2:B:2751:G:C5'	8:G:3:VAL:HG13	2.48	0.43
2:B:2787:C:H2'	2:B:2788:C:C6	2.53	0.43
2:B:2801:G:H2'	2:B:2802:G:C8	2.54	0.43
4:C:23:LEU:HD12	4:C:23:LEU:O	2.18	0.43
4:C:166:ARG:NE	36:f:82:ASP:OD1	2.52	0.43
6:E:49:ARG:C	6:E:51:GLU:H	2.27	0.43
6:E:108:ILE:HD12	6:E:108:ILE:N	2.33	0.43
6:E:173:THR:HA	6:E:201:ALA:O	2.18	0.43
8:G:5:LYS:HA	8:G:5:LYS:HD2	1.71	0.43
8:G:117:PRO:O	8:G:118:ALA:C	2.61	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:82:LEU:HA	12:L:86:GLU:OE1	2.19	0.43
12:L:85:VAL:HG21	12:L:98:ALA:CB	2.48	0.43
13:M:42:THR:C	13:M:44:ARG:N	2.76	0.43
13:M:71:LYS:NZ	13:M:91:TYR:HD2	2.17	0.43
13:M:82:MET:HB2	13:M:84:LYS:HD3	2.01	0.43
14:N:70:THR:HG21	14:N:75:ILE:CG2	2.44	0.43
14:N:114:GLU:OE1	26:1:52:LYS:NZ	2.51	0.43
19:S:6:LYS:HA	19:S:104:THR:H	1.84	0.43
19:S:34:ASP:HA	19:S:38:TYR:CD2	2.53	0.43
19:S:86:MET:SD	19:S:96:ILE:HD11	2.59	0.43
20:T:34:VAL:HG13	20:T:43:ILE:HD11	2.01	0.43
23:X:6:LEU:O	23:X:8:GLU:N	2.50	0.43
23:X:27:ASN:O	23:X:28:LEU:C	2.62	0.43
25:Z:32:LEU:C	25:Z:33:ASN:OD1	2.62	0.43
25:Z:55:GLY:HA2	25:Z:63:ARG:CG	2.45	0.43
26:1:35:GLU:CG	26:1:36:LYS:N	2.81	0.43
27:2:49:LYS:N	27:2:49:LYS:HD2	2.33	0.43
32:a:93:U:H2'	32:a:95:C:H5	1.83	0.43
32:a:177:G:N3	32:a:177:G:O4'	2.51	0.43
32:a:186:C:H4'	50:t:76:ALA:H	1.82	0.43
32:a:203:G:N2	32:a:205:A:H61	2.16	0.43
32:a:439:U:C4'	34:d:120:LYS:HZ2	2.02	0.43
32:a:598:U:H2'	32:a:599:C:C6	2.53	0.43
32:a:599:C:O2'	32:a:600:A:H5'	2.19	0.43
32:a:1014:A:H5"	49:s:19:GLU:CG	2.48	0.43
32:a:1019:A:N7	44:n:35:ALA:HA	1.99	0.43
32:a:1148:U:O4	40:j:83:THR:C	2.62	0.43
32:a:1148:U:H5	40:j:86:ALA:HB2	1.84	0.43
32:a:1157:A:H4'	32:a:1158:C:O5'	2.19	0.43
32:a:1379:G:O6	37:g:2:ARG:O	2.37	0.43
33:c:22:PHE:HE1	40:j:18:ILE:HG21	1.84	0.43
33:c:93:ILE:HG21	40:j:64:GLN:HE22	1.82	0.43
34:d:36:ALA:C	34:d:38:GLY:N	2.76	0.43
35:e:70:MET:HB3	35:e:71:ILE:H	1.65	0.43
35:e:114:LEU:HD13	35:e:122:VAL:HG21	2.01	0.43
38:h:24:VAL:HG13	38:h:60:LEU:HB2	2.00	0.43
42:l:14:LYS:NZ	42:l:17:LYS:HE2	2.34	0.43
42:l:58:ASN:H	42:l:58:ASN:HD22	1.67	0.43
42:l:98:ARG:HA	42:l:98:ARG:NE	2.29	0.43
51:7:128:LEU:CG	51:7:132:GLU:HG2	2.46	0.43
53:v:6:G:O2'	53:v:7:A:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:v:18:G:N2	53:v:57:G:H2'	2.34	0.43
2:B:265:A:H2'	2:B:266:G:O4'	2.19	0.43
2:B:408:G:O2'	2:B:409:G:H5'	2.19	0.43
2:B:832:U:OP1	12:L:44:GLY:HA3	2.19	0.43
2:B:1159:U:H2'	2:B:1160:G:C8	2.53	0.43
2:B:1260:A:H2'	2:B:1261:C:C6	2.54	0.43
2:B:1373:A:OP1	2:B:2213:U:O4	2.35	0.43
2:B:1824:G:H2'	2:B:1825:U:C6	2.54	0.43
2:B:2103:C:H3'	2:B:2104:C:O4'	2.19	0.43
2:B:2277:G:N7	22:W:8:SER:O	2.52	0.43
2:B:2485:G:H1'	13:M:118:LYS:HZ3	1.82	0.43
2:B:2899:A:H2'	2:B:2900:A:H8	1.84	0.43
4:C:107:LYS:HG3	4:C:108:GLY:N	2.34	0.43
4:C:237:ARG:HE	4:C:237:ARG:C	2.27	0.43
5:D:117:GLY:O	5:D:118:PHE:C	2.60	0.43
5:D:128:ARG:NH2	5:D:130:GLN:HG3	2.34	0.43
6:E:44:ARG:CG	6:E:45:ALA:H	2.28	0.43
7:F:52:ALA:HA	7:F:148:VAL:CG1	2.49	0.43
7:F:56:LEU:HA	7:F:59:ILE:CG2	2.48	0.43
8:G:99:GLY:C	8:G:101:VAL:H	2.27	0.43
9:H:1:MET:H1	9:H:23:ALA:HB2	1.83	0.43
9:H:27:ARG:CB	9:H:27:ARG:HH11	2.31	0.43
9:H:81:ALA:HA	9:H:147:VAL:H	1.83	0.43
10:J:38:GLY:HA2	10:J:41:LYS:HB3	2.01	0.43
12:L:55:MET:O	12:L:56:PRO:O	2.36	0.43
12:L:82:LEU:HD12	12:L:90:VAL:CG1	2.49	0.43
13:M:11:LYS:O	13:M:12:MET:C	2.62	0.43
13:M:17:ASN:ND2	13:M:18:ARG:NH2	2.67	0.43
13:M:29:GLY:H	13:M:102:LEU:HG	1.84	0.43
15:O:24:THR:HG22	15:O:41:ALA:HA	2.00	0.43
15:O:55:GLU:HA	15:O:62:LEU:HB2	2.01	0.43
15:O:87:ILE:CG1	15:O:88:LYS:H	2.31	0.43
17:Q:63:ARG:HB3	17:Q:63:ARG:CZ	2.48	0.43
20:T:62:VAL:O	20:T:63:VAL:CG1	2.67	0.43
21:U:27:VAL:O	21:U:28:LEU:HG	2.19	0.43
22:W:74:LYS:O	22:W:75:ASN:CG	2.61	0.43
25:Z:15:SER:O	25:Z:21:VAL:HB	2.19	0.43
32:a:144:G:H2'	32:a:145:G:O4'	2.19	0.43
32:a:947:G:N2	43:m:51:GLN:O	2.52	0.43
32:a:984:C:H41	49:s:5:LYS:HB3	1.83	0.43
32:a:1050:G:C2'	32:a:1051:C:H5'	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1057:G:H2'	32:a:1058:G:O4'	2.19	0.43
32:a:1082:A:P	35:e:22:LYS:HE3	2.59	0.43
32:a:1306:A:P	43:m:55:LEU:HA	2.56	0.43
32:a:1358:U:C1'	44:n:69:PRO:HD3	2.49	0.43
32:a:1375:A:OP1	37:g:11:ILE:CG1	2.67	0.43
33:c:40:GLN:OE1	33:c:44:LYS:HD2	2.19	0.43
33:c:58:ARG:HH11	40:j:68:ARG:HE	1.67	0.43
33:c:64:ARG:HB3	40:j:65:TYR:HB3	1.46	0.43
33:c:90:VAL:HG21	40:j:64:GLN:HG2	1.08	0.43
34:d:169:TRP:CB	34:d:183:ARG:HH21	2.32	0.43
37:g:29:LEU:HD21	37:g:41:ILE:CG2	2.48	0.43
39:i:3:ASN:HB3	39:i:4:GLN:H	1.54	0.43
39:i:25:GLY:HA2	39:i:60:LEU:O	2.19	0.43
39:i:56:MET:CA	39:i:59:LYS:HZ2	2.27	0.43
42:l:4:ASN:O	42:l:8:ARG:HG2	2.19	0.43
45:o:46:LYS:HB2	45:o:46:LYS:HE3	1.89	0.43
50:t:57:VAL:O	50:t:61:ALA:HB2	2.19	0.43
51:7:71:THR:HG22	51:7:94:ARG:HH21	1.84	0.43
51:7:81:ASP:O	51:7:85:SER:HB2	2.19	0.43
1:A:78:A:H61	1:A:98:G:H1'	1.83	0.42
2:B:76:C:OP1	23:X:48:ARG:NH1	2.52	0.42
2:B:203:A:H2'	2:B:204:A:H8	1.84	0.42
2:B:391:A:H1'	2:B:411:G:O4'	2.19	0.42
2:B:480:A:N3	2:B:499:U:O2'	2.51	0.42
2:B:526:A:N3	2:B:2044:C:H1'	2.34	0.42
2:B:701:G:O2'	2:B:702:U:H5'	2.18	0.42
2:B:920:A:H2'	2:B:921:C:H6	1.83	0.42
2:B:994:C:OP1	17:Q:49:ARG:HG2	2.19	0.42
2:B:1079:C:O2'	31:6:133:ARG:CZ	2.66	0.42
2:B:1100:C:H2'	2:B:1101:U:H6	1.83	0.42
2:B:1196:C:H2'	2:B:1197:G:C8	2.53	0.42
2:B:1459:G:C2'	2:B:1460:U:H5'	2.47	0.42
2:B:1506:U:H2'	2:B:1507:C:H6	1.84	0.42
2:B:1717:A:H2'	2:B:1718:G:O4'	2.19	0.42
2:B:1789:A:H2'	2:B:1790:C:H6	1.84	0.42
2:B:1813:G:N2	4:C:51:ARG:HG2	2.27	0.42
2:B:2038:G:H2'	2:B:2039:U:C6	2.54	0.42
2:B:2265:U:H3'	2:B:2266:A:H5"	2.01	0.42
2:B:2485:G:H1'	13:M:118:LYS:NZ	2.34	0.42
2:B:2642:G:O2'	2:B:2643:G:H5'	2.18	0.42
2:B:2751:G:N3	2:B:2751:G:H5'	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2893:A:H4'	2:B:2894:G:C5'	2.48	0.42
3:V:35:GLU:HB2	3:V:93:ARG:NH1	2.33	0.42
4:C:198:GLU:C	4:C:200:MET:N	2.77	0.42
4:C:253:GLY:O	4:C:254:LYS:HG3	2.19	0.42
5:D:62:LYS:HG2	5:D:63:PRO:HD2	1.96	0.42
6:E:132:LYS:HD3	6:E:133:LEU:HD23	2.00	0.42
7:F:133:GLU:HG3	7:F:134:GLN:N	2.32	0.42
8:G:40:VAL:HG11	8:G:63:GLN:NE2	2.34	0.42
8:G:151:ARG:O	8:G:152:ARG:C	2.61	0.42
10:J:41:LYS:NZ	10:J:43:GLU:O	2.52	0.42
11:K:114:LYS:O	11:K:118:LEU:HD12	2.19	0.42
12:L:13:LYS:C	12:L:15:ALA:N	2.77	0.42
12:L:57:LEU:HD13	12:L:58:TYR:CE1	2.54	0.42
12:L:67:THR:HG23	12:L:68:SER:N	2.25	0.42
12:L:78:ARG:HD3	12:L:81:ASP:HB2	2.00	0.42
15:O:21:LEU:C	15:O:23:ALA:N	2.76	0.42
15:O:68:LYS:C	15:O:70:ALA:H	2.25	0.42
16:P:54:LEU:HB3	16:P:55:HIS:H	1.47	0.42
17:Q:52:ARG:NH1	17:Q:55:GLN:HE21	2.17	0.42
19:S:5:ALA:C	19:S:6:LYS:HG2	2.43	0.42
22:W:21:GLY:HA3	22:W:32:ALA:HA	2.01	0.42
29:4:9:ALA:O	29:4:13:PHE:HB3	2.19	0.42
29:4:15:LYS:NZ	29:4:59:ALA:HB1	2.34	0.42
29:4:27:ASN:OD1	29:4:28:LEU:HD23	2.19	0.42
31:6:89:SER:C	31:6:91:LYS:H	2.27	0.42
32:a:31:G:H2'	32:a:48:C:C5	2.53	0.42
32:a:114:U:O2'	32:a:115:G:H5'	2.19	0.42
32:a:175:C:H2'	32:a:176:C:H6	1.83	0.42
32:a:478:A:H2'	32:a:479:U:O4'	2.19	0.42
32:a:893:C:H2'	32:a:894:G:H8	1.83	0.42
32:a:1016:A:C1'	44:n:45:LEU:HB2	2.49	0.42
32:a:1118:U:OP1	39:i:10:ARG:NH1	2.53	0.42
32:a:1252:A:H2'	32:a:1253:G:C5'	2.49	0.42
32:a:1304:G:C2'	43:m:3:ILE:HG12	2.35	0.42
32:a:1304:G:C2'	43:m:52:ILE:CD1	1.90	0.42
32:a:1305:G:C6	43:m:2:ARG:O	2.72	0.42
33:c:79:LYS:HD3	40:j:56:HIS:CG	2.45	0.42
33:c:135:ARG:C	33:c:137:VAL:N	2.77	0.42
33:c:185:THR:O	33:c:186:SER:HB2	2.19	0.42
34:d:54:LEU:HA	34:d:202:LEU:HD22	2.00	0.42
34:d:87:GLU:O	34:d:88:ASN:C	2.62	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:d:151:GLN:HB3	34:d:154:VAL:CG1	2.49	0.42
34:d:169:TRP:O	34:d:182:LYS:HB3	2.19	0.42
35:e:137:ARG:HG2	35:e:137:ARG:H	1.72	0.42
39:i:21:LYS:O	39:i:60:LEU:HB2	2.19	0.42
43:m:84:CYS:SG	43:m:86:ARG:HB3	2.59	0.42
44:n:79:SER:O	44:n:80:ARG:C	2.62	0.42
48:r:49:LYS:HA	48:r:52:ARG:HD2	2.00	0.42
49:s:4:LEU:HD13	49:s:9:PHE:N	2.13	0.42
49:s:57:VAL:HG21	49:s:74:ALA:HB2	2.01	0.42
53:v:61:C:H2'	53:v:62:C:C6	2.54	0.42
2:B:7:G:H1'	10:J:135:GLN:NE2	2.32	0.42
2:B:100:U:H4'	21:U:90:LYS:HD3	2.01	0.42
2:B:786:C:O2'	2:B:787:C:H5'	2.19	0.42
2:B:1149:G:H2'	2:B:1150:C:C6	2.54	0.42
2:B:1657:U:OP1	5:D:139:SER:O	2.36	0.42
2:B:1662:U:O2	2:B:2687:U:H4'	2.18	0.42
2:B:1987:A:H2'	2:B:1988:G:C8	2.54	0.42
2:B:2528:U:P	30:5:31:PRO:HG2	2.59	0.42
2:B:2768:U:H2'	2:B:2769:U:O4'	2.18	0.42
3:V:44:HIS:CE1	3:V:85:LYS:HB2	2.55	0.42
4:C:130:PRO:HA	4:C:187:CYS:O	2.19	0.42
4:C:160:TYR:HA	4:C:193:GLU:HG2	2.00	0.42
4:C:209:ALA:HA	4:C:213:ARG:NE	2.33	0.42
4:C:253:GLY:C	4:C:254:LYS:HZ3	2.28	0.42
5:D:1:MET:HB2	5:D:84:LEU:HD22	2.01	0.42
5:D:31:ALA:O	5:D:32:ASN:ND2	2.51	0.42
5:D:187:LEU:O	5:D:188:LEU:HD12	2.20	0.42
6:E:127:GLU:OE1	6:E:130:LYS:HG3	2.19	0.42
7:F:108:PRO:HA	43:m:101:THR:CA	2.49	0.42
7:F:109:ARG:N	43:m:109:LYS:HB3	2.25	0.42
7:F:170:ALA:HA	7:F:173:ASP:OD2	2.18	0.42
8:G:35:THR:O	8:G:36:LEU:HD12	2.18	0.42
8:G:102:ILE:CG2	8:G:114:HIS:HB3	2.49	0.42
9:H:7:ASP:OD2	9:H:54:LEU:HD12	2.19	0.42
9:H:19:VAL:HG12	9:H:20:ASN:N	2.33	0.42
10:J:102:GLU:HG2	10:J:103:ILE:H	1.83	0.42
10:J:114:LEU:O	10:J:117:ALA:HB3	2.18	0.42
10:J:118:MET:O	10:J:119:PHE:C	2.61	0.42
11:K:24:VAL:HA	11:K:39:ILE:CD1	2.50	0.42
11:K:87:LEU:HA	11:K:94:PRO:HA	2.00	0.42
14:N:34:ILE:HD13	14:N:34:ILE:H	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:98:LEU:HB2	14:N:112:TYR:HE1	1.81	0.42
14:N:99:LYS:HE3	26:1:39:ARG:HH12	1.84	0.42
15:O:76:LYS:O	15:O:77:ALA:C	2.62	0.42
15:O:114:GLY:O	15:O:115:LEU:C	2.61	0.42
18:R:82:HIS:O	18:R:82:HIS:ND1	2.52	0.42
20:T:15:HIS:CG	20:T:31:VAL:HG11	2.54	0.42
21:U:9:GLU:CG	21:U:23:LYS:HB3	2.49	0.42
22:W:31:LEU:O	22:W:66:VAL:HB	2.19	0.42
22:W:37:VAL:O	22:W:38:ARG:C	2.61	0.42
25:Z:62:LYS:C	25:Z:64:PHE:N	2.77	0.42
27:2:8:ILE:HG21	27:2:27:ARG:NH2	2.34	0.42
27:2:9:LYS:HG2	29:4:34:LYS:HZ3	1.83	0.42
27:2:35:LEU:O	27:2:35:LEU:HG	2.20	0.42
29:4:44:ARG:CB	29:4:45:PRO:CD	2.97	0.42
31:6:23:VAL:CG2	31:6:24:GLY:H	2.31	0.42
32:a:376:G:OP1	46:p:5:ARG:HB3	2.18	0.42
32:a:796:C:O2'	32:a:797:C:H5'	2.19	0.42
32:a:847:G:H2'	32:a:848:C:C6	2.54	0.42
32:a:970:C:C5	32:a:1231:G:H1'	2.54	0.42
32:a:980:C:H2'	44:n:58:ARG:CA	2.45	0.42
32:a:985:C:H2'	32:a:986:U:H6	1.82	0.42
32:a:1014:A:H2	32:a:1219:A:H1'	1.83	0.42
32:a:1308:U:O5'	43:m:27:THR:C	2.59	0.42
32:a:1356:G:H2'	32:a:1357:A:C8	2.54	0.42
37:g:13:PRO:HA	37:g:23:ALA:HB2	2.00	0.42
39:i:64:ILE:HD13	39:i:78:ILE:CG2	2.49	0.42
41:k:22:ILE:HD13	41:k:95:THR:HG21	2.01	0.42
43:m:58:GLU:HA	43:m:61:LYS:CE	2.50	0.42
47:q:12:VAL:HG13	47:q:21:VAL:HB	2.01	0.42
47:q:23:ALA:C	47:q:24:ILE:HD12	2.44	0.42
51:7:53:LEU:HD12	51:7:219:THR:CG2	2.49	0.42
52:u:5:VAL:HG13	52:u:15:LEU:HD23	2.00	0.42
52:u:20:ARG:O	52:u:20:ARG:HG2	2.20	0.42
52:u:40:PRO:HG2	52:u:41:THR:N	2.27	0.42
1:A:30:C:O2	1:A:30:C:H2'	2.18	0.42
2:B:527:C:H5"	2:B:2779:U:N3	2.33	0.42
2:B:607:U:O4	2:B:620:G:H5"	2.19	0.42
2:B:686:U:O4	28:3:12:ARG:HG3	2.19	0.42
2:B:687:C:H2'	2:B:688:U:O4'	2.19	0.42
2:B:858:G:N2	2:B:2269:G:OP2	2.52	0.42
2:B:1131:G:C1'	10:J:85:LYS:HZ1	2.31	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1902:C:H2'	2:B:1903:G:H5'	2.00	0.42
2:B:1922:G:H2'	2:B:1923:U:O4'	2.19	0.42
2:B:1987:A:H2'	2:B:1988:G:H8	1.84	0.42
2:B:2022:U:O2'	2:B:2617:U:H5'	2.19	0.42
2:B:2270:A:N6	2:B:2271:G:C2	2.87	0.42
2:B:2355:G:O3'	22:W:20:LEU:HD22	2.18	0.42
2:B:2445:G:O2'	2:B:2446:G:H5'	2.19	0.42
2:B:2630:G:H2'	2:B:2631:G:H8	1.84	0.42
2:B:2645:G:H4'	2:B:2646:C:OP2	2.19	0.42
3:V:82:TYR:HB2	13:M:36:VAL:HG12	2.01	0.42
4:C:67:LYS:O	4:C:68:ARG:CB	2.67	0.42
4:C:141:HIS:CG	4:C:142:ASN:H	2.34	0.42
4:C:153:LEU:CD1	4:C:161:VAL:HG23	2.49	0.42
4:C:226:PRO:O	4:C:227:VAL:HG23	2.19	0.42
6:E:6:LYS:HZ1	6:E:119:ILE:N	2.17	0.42
6:E:176:ASP:CG	6:E:177:PRO:HD2	2.44	0.42
6:E:189:THR:O	6:E:190:ALA:HB3	2.20	0.42
7:F:135:ILE:HG23	7:F:136:ILE:N	2.33	0.42
11:K:17:ARG:HB3	11:K:18:ARG:H	1.31	0.42
12:L:34:GLY:O	12:L:35:HIS:C	2.62	0.42
12:L:95:LEU:H	12:L:95:LEU:CD1	2.27	0.42
13:M:82:MET:HB2	13:M:84:LYS:CD	2.49	0.42
13:M:108:VAL:HG23	13:M:112:LEU:CD1	2.40	0.42
14:N:72:ASP:CB	14:N:74:GLU:HG3	2.49	0.42
14:N:112:TYR:CE2	26:1:53:VAL:HG22	2.54	0.42
15:O:64:TYR:HD2	15:O:64:TYR:HA	1.64	0.42
16:P:2:ASN:C	16:P:3:ILE:HG13	2.44	0.42
16:P:52:ARG:HG3	16:P:54:LEU:HD12	2.00	0.42
18:R:42:ALA:HA	18:R:54:VAL:CG2	2.46	0.42
18:R:90:ARG:NH1	18:R:91:GLN:N	2.62	0.42
20:T:30:ILE:HG23	20:T:32:LEU:HD13	2.01	0.42
23:X:42:LEU:C	23:X:45:GLN:HE21	2.27	0.42
23:X:44:LYS:O	23:X:48:ARG:HD2	2.20	0.42
24:Y:37:ARG:NH1	24:Y:37:ARG:HG3	2.34	0.42
26:1:26:SER:OG	26:1:27:LEU:N	2.52	0.42
30:5:25:VAL:HG23	30:5:35:GLN:HB2	2.01	0.42
31:6:17:ALA:O	31:6:18:ASN:CB	2.67	0.42
32:a:489:C:H2'	32:a:490:C:H6	1.84	0.42
32:a:644:U:O2'	32:a:645:G:H5'	2.19	0.42
32:a:878:A:C5'	38:h:80:PRO:HG2	2.49	0.42
32:a:1149:C:C3'	40:j:28:THR:CG2	2.96	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1218:C:H5	44:n:49:THR:N	2.17	0.42
32:a:1301:U:N3	43:m:8:ILE:HD13	0.94	0.42
32:a:1330:U:C3'	43:m:23:GLY:CA	2.91	0.42
32:a:1359:C:OP1	44:n:9:GLU:HB2	2.20	0.42
32:a:1380:U:H3	37:g:2:ARG:CZ	2.32	0.42
33:c:77:GLY:N	40:j:54:SER:OG	2.52	0.42
33:c:90:VAL:HA	33:c:93:ILE:CG2	2.48	0.42
34:d:49:ASP:O	34:d:52:VAL:HG22	2.19	0.42
34:d:132:ALA:C	34:d:134:TYR:H	2.27	0.42
35:e:145:ASN:O	35:e:146:MET:C	2.62	0.42
38:h:49:LYS:CG	38:h:50:VAL:H	2.27	0.42
39:i:12:LYS:N	39:i:109:GLN:HE22	2.07	0.42
40:j:16:ARG:C	40:j:17:LEU:HD22	2.44	0.42
41:k:126:ARG:O	52:u:33:ARG:CZ	2.66	0.42
47:q:50:ASN:C	47:q:52:CYS:H	2.27	0.42
49:s:64:GLU:O	49:s:66:VAL:HG23	2.20	0.42
2:B:161:A:H8	2:B:161:A:O5'	2.02	0.42
2:B:372:G:O2'	2:B:373:U:P	2.77	0.42
2:B:372:G:N2	2:B:400:G:H2'	2.34	0.42
2:B:388:G:N7	2:B:390:U:H2'	2.34	0.42
2:B:426:C:O2'	2:B:427:U:H5'	2.20	0.42
2:B:558:U:O2'	2:B:559:G:H5'	2.19	0.42
2:B:657:U:H2'	2:B:658:U:H6	1.83	0.42
2:B:743:A:H4'	5:D:136:ASN:HD22	1.84	0.42
2:B:972:A:OP2	2:B:974:G:H5"	2.20	0.42
2:B:1161:C:O2'	18:R:22:LEU:HD13	2.19	0.42
2:B:1566:A:N1	4:C:213:ARG:NH2	2.67	0.42
2:B:1736:U:H2'	2:B:1737:G:C8	2.54	0.42
4:C:211:ARG:O	4:C:212:TRP:C	2.62	0.42
5:D:67:HIS:NE2	5:D:72:GLY:N	2.67	0.42
6:E:35:TYR:CD2	6:E:178:VAL:HG21	2.54	0.42
6:E:144:GLU:HG3	6:E:145:ASP:H	1.84	0.42
10:J:57:LEU:HD12	10:J:128:ASN:CA	2.48	0.42
12:L:110:VAL:O	12:L:126:ARG:NH2	2.53	0.42
14:N:1:MET:CG	14:N:2:ARG:H	2.32	0.42
14:N:32:GLU:HA	14:N:115:LEU:CD2	2.47	0.42
14:N:116:VAL:C	14:N:118:ARG:H	2.27	0.42
15:O:8:ILE:HG22	15:O:10:ARG:CG	2.40	0.42
16:P:60:VAL:C	16:P:61:ARG:HG3	2.44	0.42
17:Q:47:ARG:NE	17:Q:47:ARG:HA	2.26	0.42
18:R:31:GLU:HB3	18:R:32:THR:H	1.61	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:Y:4:ILE:HG12	24:Y:5:LYS:HG3	2.01	0.42
28:3:21:ARG:CB	28:3:31:LEU:HD21	2.49	0.42
31:6:75:ALA:HB2	31:6:112:LYS:HE2	2.01	0.42
32:a:41:G:H2'	32:a:42:G:C8	2.54	0.42
32:a:130:A:H5'	47:q:64:ARG:HD3	2.01	0.42
32:a:237:G:H2'	32:a:238:A:H8	1.84	0.42
32:a:321:A:H2'	32:a:322:C:H6	1.84	0.42
32:a:484:G:H4'	32:a:485:U:H5'	2.02	0.42
32:a:978:A:O2'	49:s:2:ARG:CB	2.67	0.42
32:a:1239:A:H3'	37:g:115:MET:HB3	2.01	0.42
32:a:1256:A:O3'	44:n:74:ARG:O	2.37	0.42
32:a:1279:G:N7	44:n:91:GLU:OE1	2.53	0.42
32:a:1286:U:C2	32:a:1286:U:OP1	2.72	0.42
33:c:102:ILE:C	33:c:102:ILE:HD12	2.44	0.42
34:d:147:LYS:HE3	34:d:147:LYS:N	2.34	0.42
37:g:115:MET:CE	37:g:119:LEU:HB2	2.50	0.42
37:g:148:LYS:HA	37:g:151:ALA:HB3	2.00	0.42
39:i:4:GLN:HE21	39:i:21:LYS:HE3	1.84	0.42
41:k:26:PHE:HE1	41:k:88:PRO:HG2	1.85	0.42
41:k:88:PRO:CD	52:u:28:LEU:HD22	2.49	0.42
42:l:38:THR:HA	42:l:49:ARG:O	2.19	0.42
43:m:103:THR:O	43:m:104:ASN:C	2.61	0.42
46:p:22:ALA:HB2	46:p:32:PHE:HB3	2.01	0.42
46:p:67:ILE:CD1	46:p:72:ALA:HA	2.49	0.42
47:q:30:HIS:H	47:q:35:LYS:H	1.66	0.42
49:s:29:PRO:HB3	49:s:47:THR:HB	2.01	0.42
52:u:3:ILE:HG23	52:u:19:LYS:HE3	2.01	0.42
53:v:26:A:C4	53:v:27:G:C8	3.08	0.42
2:B:84:A:H2'	21:U:5:ARG:HD2	2.00	0.42
2:B:338:G:C2	2:B:339:U:H1'	2.55	0.42
2:B:820:A:H2'	2:B:821:A:O4'	2.19	0.42
2:B:956:G:C1'	13:M:81:ARG:HH22	2.33	0.42
2:B:1082:U:N3	2:B:1086:A:C2	2.84	0.42
2:B:1304:A:O2'	2:B:1305:C:H5'	2.20	0.42
2:B:1428:C:H2'	2:B:1569:A:OP2	2.19	0.42
2:B:1588:G:H2'	2:B:1589:U:C6	2.54	0.42
2:B:1799:G:N7	4:C:178:GLY:HA3	2.34	0.42
2:B:1843:C:H2'	2:B:1844:C:H6	1.84	0.42
2:B:2047:C:H2'	2:B:2048:G:C8	2.55	0.42
2:B:2251:G:OP2	2:B:2251:G:H8	2.02	0.42
3:V:75:GLN:HG2	13:M:136:MET:HG2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:55:LYS:HB2	5:D:55:LYS:NZ	2.34	0.42
5:D:109:VAL:HG22	5:D:203:VAL:HG22	2.00	0.42
5:D:115:GLY:HA2	5:D:165:MET:CG	2.41	0.42
8:G:122:ALA:O	8:G:123:GLU:HG3	2.19	0.42
9:H:15:LEU:O	9:H:47:PHE:CD1	2.72	0.42
11:K:34:GLY:O	11:K:35:VAL:C	2.62	0.42
11:K:61:VAL:HG23	11:K:84:CYS:O	2.19	0.42
12:L:90:VAL:HG11	12:L:120:VAL:HG23	2.01	0.42
12:L:117:THR:OG1	12:L:118:THR:N	2.45	0.42
13:M:13:HIS:O	13:M:14:LYS:HD2	2.20	0.42
13:M:87:GLY:C	13:M:88:ASN:HD22	2.27	0.42
16:P:64:SER:OG	16:P:71:ARG:NH1	2.52	0.42
18:R:18:GLN:CB	18:R:99:THR:HA	2.48	0.42
18:R:78:ARG:CD	18:R:87:GLN:HG2	2.50	0.42
19:S:28:LYS:HB3	19:S:71:VAL:CB	2.49	0.42
24:Y:20:LYS:HG3	24:Y:24:LEU:HD12	2.01	0.42
25:Z:17:SER:OG	25:Z:18:CYS:N	2.53	0.42
28:3:9:VAL:O	28:3:10:LEU:C	2.61	0.42
32:a:622:A:H2'	32:a:623:C:H5'	2.02	0.42
32:a:818:G:C3'	32:a:819:A:H5"	2.50	0.42
32:a:914:A:O2'	32:a:915:A:H5'	2.19	0.42
32:a:1013:G:H5"	49:s:19:GLU:HB2	2.01	0.42
32:a:1147:C:H1'	40:j:82:LYS:HG2	1.22	0.42
32:a:1261:A:H2'	32:a:1262:C:O4'	2.20	0.42
32:a:1279:G:H5'	40:j:40:ILE:HA	2.01	0.42
32:a:1324:A:H2'	32:a:1325:C:O4'	2.19	0.42
36:f:11:HIS:CG	36:f:12:PRO:HD2	2.54	0.42
37:g:150:PHE:CZ	41:k:55:ARG:CG	3.00	0.42
39:i:56:MET:O	39:i:58:GLU:N	2.52	0.42
41:k:57:SER:O	41:k:90:PRO:HG2	2.19	0.42
42:l:34:THR:HB	42:l:53:ARG:HB2	2.01	0.42
47:q:67:SER:HB2	47:q:70:LYS:HB3	2.02	0.42
51:7:9:LEU:CD1	51:7:11:ALA:HB3	2.50	0.42
52:u:52:VAL:HG13	52:u:53:LYS:N	2.34	0.42
2:B:939:G:O2'	2:B:940:G:H5'	2.20	0.42
2:B:952:G:C6	2:B:966:G:C6	3.07	0.42
2:B:1151:A:H2'	2:B:1152:C:C6	2.53	0.42
2:B:1153:C:H5'	17:Q:75:TYR:HE1	1.85	0.42
2:B:1407:G:H2'	2:B:1408:G:H8	1.84	0.42
2:B:1439:A:N1	2:B:1552:A:N7	2.68	0.42
2:B:2053:G:C2'	2:B:2054:A:H5'	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2293:G:H2'	2:B:2294:G:O4'	2.19	0.42
2:B:2660:A:H2'	2:B:2661:G:O4'	2.20	0.42
2:B:2682:A:O2'	2:B:2683:C:H5'	2.20	0.42
3:V:85:LYS:C	3:V:86:LEU:HD12	2.44	0.42
4:C:51:ARG:O	4:C:51:ARG:NE	2.53	0.42
4:C:144:GLU:HG2	4:C:150:GLY:HA2	2.00	0.42
6:E:149:ILE:HG23	6:E:183:PHE:CG	2.55	0.42
6:E:161:ALA:O	6:E:162:ARG:HD2	2.19	0.42
7:F:116:LEU:CA	43:m:100:ARG:NE	2.75	0.42
9:H:57:LYS:N	9:H:57:LYS:HD2	2.34	0.42
12:L:35:HIS:O	12:L:35:HIS:ND1	2.52	0.42
13:M:12:MET:O	13:M:13:HIS:HB2	2.20	0.42
13:M:43:ALA:C	13:M:45:GLN:H	2.26	0.42
13:M:109:PRO:N	13:M:112:LEU:HD13	2.35	0.42
15:O:88:LYS:C	15:O:90:VAL:H	2.27	0.42
17:Q:89:ILE:O	17:Q:90:ASP:C	2.61	0.42
21:U:43:LYS:NZ	21:U:45:GLN:HG2	2.34	0.42
21:U:78:LYS:CG	21:U:96:LYS:HE3	2.49	0.42
25:Z:9:TYR:CE1	25:Z:11:GLU:HB2	2.54	0.42
26:1:29:VAL:CB	26:1:36:LYS:HD2	2.49	0.42
27:2:31:GLU:HB3	27:2:32:LYS:CE	2.49	0.42
27:2:36:LYS:HD2	27:2:36:LYS:N	2.35	0.42
32:a:29:U:H5'	32:a:296:U:OP1	2.20	0.42
32:a:113:G:H21	32:a:353:A:H8	1.68	0.42
32:a:787:A:O2'	32:a:788:U:H5'	2.20	0.42
32:a:1015:G:O5'	44:n:40:ARG:CZ	2.67	0.42
32:a:1145:A:C1'	40:j:85:ASP:OD1	2.66	0.42
32:a:1147:C:H5	40:j:85:ASP:HB2	1.85	0.42
32:a:1181:G:O4'	32:a:1181:G:P	2.78	0.42
32:a:1238:A:H2	32:a:1241:G:H1'	1.83	0.42
32:a:1253:G:N2	44:n:84:ARG:HD3	2.34	0.42
32:a:1273:C:H2'	32:a:1274:A:O4'	2.20	0.42
32:a:1300:G:O2'	32:a:1301:U:O5'	2.37	0.42
32:a:1470:U:O2'	32:a:1471:U:H5'	2.20	0.42
33:c:65:VAL:HG21	40:j:64:GLN:C	1.09	0.42
33:c:160:GLU:HG2	33:c:160:GLU:O	2.19	0.42
33:c:205:GLU:HB2	33:c:206:ILE:H	1.52	0.42
35:e:37:VAL:HA	35:e:47:PHE:HA	2.01	0.42
35:e:155:LYS:CE	38:h:70:VAL:HG13	2.45	0.42
37:g:44:SER:C	37:g:48:THR:HG23	2.45	0.42
39:i:66:VAL:HG21	39:i:74:GLN:HG3	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:j:5:ARG:HG3	40:j:79:PRO:HD3	2.01	0.42
45:o:2:LEU:HD13	45:o:7:THR:HG23	2.02	0.42
46:p:1:MET:H3	46:p:24:SER:HB3	1.83	0.42
48:r:60:ARG:HA	48:r:63:TYR:CD1	2.55	0.42
51:7:61:SER:HB3	51:7:223:GLY:O	2.20	0.42
52:u:5:VAL:CG2	52:u:19:LYS:HZ1	2.33	0.42
53:v:37:A:H2'	53:v:38:A:H5'	2.02	0.42
2:B:69:C:H2'	2:B:70:G:C8	2.55	0.42
2:B:503:A:H5"	2:B:504:A:H3'	2.01	0.42
2:B:633:A:H2'	2:B:634:C:C5'	2.49	0.42
2:B:684:G:OP1	28:3:16:HIS:ND1	2.53	0.42
2:B:709:U:H2'	2:B:710:U:H6	1.85	0.42
2:B:1050:A:H2'	2:B:1051:G:O4'	2.18	0.42
2:B:1097:U:H2'	2:B:1098:A:C5'	2.49	0.42
2:B:1183:U:C2	2:B:1184:U:C5	3.08	0.42
2:B:1426:G:H8	2:B:1426:G:OP2	2.01	0.42
2:B:1446:C:O2'	2:B:1447:C:H5'	2.19	0.42
2:B:1912:A:C5	32:a:1408:A:H1'	2.55	0.42
2:B:2209:G:H2'	2:B:2210:U:C5	2.54	0.42
2:B:2285:C:N4	27:2:24:LYS:NZ	2.67	0.42
2:B:2373:G:H2'	2:B:2374:C:H6	1.84	0.42
2:B:2523:G:O2'	2:B:2524:G:H5'	2.20	0.42
2:B:2615:U:O2'	26:1:6:LYS:HD2	2.19	0.42
2:B:2648:G:H2'	2:B:2649:C:H6	1.84	0.42
2:B:2848:G:C8	16:P:96:LEU:HD23	2.54	0.42
3:V:2:PHE:CG	3:V:61:LEU:HD22	2.54	0.42
4:C:156:SER:O	4:C:159:THR:N	2.52	0.42
5:D:13:ARG:O	5:D:14:ILE:C	2.62	0.42
5:D:142:VAL:CB	5:D:143:PRO:CD	2.98	0.42
7:F:18:GLU:O	7:F:19:PHE:HB3	2.20	0.42
8:G:37:ASN:HB3	8:G:63:GLN:NE2	2.35	0.42
8:G:94:ARG:NH1	8:G:127:GLN:HB2	2.34	0.42
8:G:121:THR:HG23	8:G:133:LYS:O	2.19	0.42
9:H:9:VAL:O	9:H:9:VAL:HG12	2.19	0.42
12:L:30:THR:CB	12:L:36:LYS:HB2	2.44	0.42
14:N:29:VAL:HG12	14:N:78:LYS:HG2	2.02	0.42
16:P:105:LYS:HB2	16:P:106:ALA:H	1.59	0.42
17:Q:68:ALA:HB2	17:Q:105:PHE:CZ	2.54	0.42
19:S:72:THR:O	19:S:73:LYS:HG2	2.18	0.42
20:T:56:GLU:HB3	20:T:57:VAL:HG23	2.02	0.42
25:Z:49:ARG:HH21	25:Z:53:THR:HG21	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:1:29:VAL:HG21	26:1:41:HIS:HA	2.02	0.42
26:1:32:THR:C	26:1:34:GLY:H	2.27	0.42
31:6:56:VAL:CG2	31:6:68:PHE:HB2	2.50	0.42
32:a:202:G:H1'	32:a:468:A:H8	1.85	0.42
32:a:432:A:C2'	32:a:433:G:H5'	2.49	0.42
32:a:761:G:H2'	32:a:762:U:C6	2.55	0.42
32:a:861:G:H2'	32:a:862:C:C6	2.55	0.42
32:a:875:U:O2'	38:h:14:ARG:HD2	2.18	0.42
32:a:1113:C:H2'	32:a:1114:C:C6	2.55	0.42
32:a:1279:G:C6	44:n:92:ILE:HG13	2.40	0.42
32:a:1454:G:H2'	32:a:1455:G:O4'	2.19	0.42
33:c:24:ASN:O	33:c:25:THR:C	2.62	0.42
33:c:39:ARG:NH2	33:c:56:ILE:HD12	2.35	0.42
33:c:56:ILE:HG22	40:j:66:GLU:HG2	2.00	0.42
33:c:67:ILE:CD1	40:j:53:ILE:HG23	2.50	0.42
33:c:87:ARG:NE	40:j:62:ARG:NE	2.59	0.42
34:d:84:ASN:ND2	34:d:86:GLY:N	2.67	0.42
37:g:46:LEU:O	37:g:46:LEU:HD13	2.20	0.42
37:g:47:GLU:C	37:g:49:LEU:H	2.25	0.42
37:g:94:ARG:NH1	37:g:98:LEU:HD21	2.34	0.42
39:i:119:LYS:C	39:i:121:ARG:H	2.28	0.42
41:k:81:LEU:O	41:k:106:ILE:HA	2.19	0.42
42:l:21:PRO:HD2	42:l:94:TYR:OH	2.20	0.42
48:r:64:LEU:HB3	48:r:66:LEU:HG	2.02	0.42
51:7:58:LYS:HD3	51:7:62:ARG:NH2	2.34	0.42
52:u:11:PHE:O	52:u:11:PHE:HD1	2.02	0.42
52:u:29:ALA:HB1	52:u:32:ARG:NH2	2.10	0.42
1:A:92:C:H2'	1:A:93:C:C6	2.55	0.42
2:B:279:A:H2'	2:B:280:U:H5'	2.01	0.42
2:B:329:G:H1	21:U:16:LYS:CD	2.31	0.42
2:B:535:G:O2'	17:Q:52:ARG:HD3	2.19	0.42
2:B:536:G:H4'	17:Q:56:PHE:HZ	1.84	0.42
2:B:544:C:H2'	2:B:545:U:C2	2.54	0.42
2:B:689:A:H2'	2:B:690:G:H8	1.84	0.42
2:B:764:A:N1	2:B:1789:A:O2'	2.48	0.42
2:B:1439:A:N7	2:B:1440:U:C2	2.88	0.42
2:B:1727:C:H2'	2:B:1728:C:H6	1.81	0.42
2:B:1747:U:H2'	2:B:1748:C:H6	1.85	0.42
2:B:1824:G:H2'	2:B:1825:U:H6	1.84	0.42
2:B:2050:C:H2'	2:B:2051:A:C8	2.55	0.42
2:B:2307:G:O2'	2:B:2311:A:N6	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2576:G:H22	5:D:149:ASN:HD21	1.61	0.42
2:B:2653:U:H2'	2:B:2654:A:C8	2.54	0.42
2:B:2737:G:H2'	2:B:2738:A:C8	2.54	0.42
2:B:2771:C:O2'	5:D:173:GLN:NE2	2.53	0.42
2:B:2780:G:C2	10:J:120:ARG:HG3	2.55	0.42
2:B:2845:U:H4'	16:P:54:LEU:CD2	2.50	0.42
3:V:42:LEU:HD12	3:V:47:VAL:HG11	2.01	0.42
5:D:36:GLN:C	5:D:36:GLN:CD	2.88	0.42
6:E:193:VAL:HG12	6:E:194:LYS:N	2.34	0.42
7:F:110:ILE:CD1	43:m:105:ALA:HA	2.48	0.42
11:K:23:LYS:HA	11:K:23:LYS:HD2	1.88	0.42
11:K:24:VAL:HG22	11:K:39:ILE:HD12	2.01	0.42
12:L:33:ARG:HH11	12:L:34:GLY:HA3	1.85	0.42
12:L:56:PRO:O	12:L:57:LEU:C	2.62	0.42
13:M:73:ILE:CD1	13:M:92:TRP:N	2.82	0.42
14:N:1:MET:SD	14:N:2:ARG:HB2	2.60	0.42
14:N:29:VAL:HG13	14:N:83:LEU:HD13	2.02	0.42
14:N:49:GLU:O	14:N:52:ILE:HB	2.20	0.42
15:O:56:LYS:HE3	15:O:57:ALA:CA	2.50	0.42
16:P:32:VAL:HG22	16:P:40:GLN:HE21	1.85	0.42
19:S:9:HIS:C	19:S:11:ARG:H	2.27	0.42
20:T:68:LYS:HE2	20:T:68:LYS:HB2	1.81	0.42
24:Y:22:THR:OG1	24:Y:23:LEU:N	2.51	0.42
31:6:135:MET:HE2	31:6:137:LEU:HD11	2.02	0.42
32:a:177:G:C5'	50:t:59:ARG:NH2	2.78	0.42
32:a:390:U:H5"	46:p:28:ARG:NH1	2.35	0.42
32:a:474:G:H2'	32:a:475:C:H6	1.83	0.42
32:a:1072:G:H2'	32:a:1073:U:H6	1.84	0.42
32:a:1202:U:H2'	32:a:1203:C:H5'	2.02	0.42
32:a:1255:G:OP2	44:n:65:GLN:HG2	2.08	0.42
32:a:1359:C:H4'	44:n:60:ARG:HB2	1.54	0.42
37:g:87:PRO:HB2	37:g:144:ALA:CB	2.50	0.42
39:i:61:ASP:C	39:i:62:LEU:HD22	2.45	0.42
39:i:62:LEU:HD22	39:i:62:LEU:N	2.35	0.42
42:l:49:ARG:C	42:l:50:LYS:HE2	2.45	0.42
47:q:28:VAL:HG13	47:q:28:VAL:O	2.19	0.42
48:r:27:THR:O	48:r:28:LEU:HD12	2.20	0.42
50:t:4:LYS:HD2	50:t:5:SER:H	1.80	0.42
52:u:22:CYS:O	52:u:23:GLU:HG2	2.20	0.42
1:A:92:C:H2'	1:A:93:C:H6	1.85	0.42
2:B:83:A:H2'	2:B:84:A:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:181:A:O2'	2:B:182:A:H5'	2.19	0.42
2:B:265:A:N6	2:B:427:U:O2'	2.52	0.42
2:B:309:A:N3	2:B:329:G:O2'	2.52	0.42
2:B:374:A:H61	2:B:400:G:H1'	1.84	0.42
2:B:428:A:H2'	2:B:429:A:O4'	2.19	0.42
2:B:834:G:O2'	2:B:835:C:H5'	2.20	0.42
2:B:953:G:H2'	2:B:954:G:H8	1.84	0.42
2:B:1556:C:H2'	2:B:1557:C:C6	2.55	0.42
2:B:1784:A:H4'	2:B:1785:A:O5'	2.20	0.42
2:B:1818:U:H5"	4:C:155:ARG:CB	2.50	0.42
2:B:2329:U:H2'	2:B:2330:G:H8	1.84	0.42
2:B:2527:C:H1'	30:5:1:MET:HA	2.02	0.42
2:B:2659:G:C2	2:B:2661:G:H5"	2.55	0.42
2:B:2678:C:O2'	2:B:2679:A:H5'	2.20	0.42
7:F:115:GLY:HA2	43:m:102:LYS:HG2	1.31	0.42
7:F:121:PHE:CE2	7:F:166:ARG:N	2.87	0.42
8:G:51:PHE:HE2	8:G:63:GLN:NE2	2.18	0.42
10:J:25:LEU:HD12	10:J:62:VAL:CB	2.49	0.42
10:J:58:ASN:O	10:J:59:ALA:HB3	2.20	0.42
11:K:47:ILE:O	11:K:48:PRO:C	2.60	0.42
13:M:133:LYS:O	13:M:134:THR:C	2.59	0.42
14:N:10:LEU:O	14:N:12:ARG:N	2.53	0.42
14:N:97:ILE:HD12	14:N:113:ILE:HG12	2.02	0.42
16:P:27:VAL:HG22	16:P:28:LYS:N	2.34	0.42
16:P:38:ARG:HA	16:P:38:ARG:HD2	1.77	0.42
18:R:7:SER:HB2	18:R:21:ARG:HH22	1.83	0.42
18:R:33:VAL:HB	18:R:35:PHE:CE2	2.54	0.42
19:S:28:LYS:HB3	19:S:71:VAL:HG21	2.01	0.42
19:S:70:LYS:O	19:S:71:VAL:CB	2.65	0.42
20:T:29:THR:HB	20:T:85:VAL:O	2.20	0.42
21:U:15:GLY:HA2	21:U:18:LYS:HE2	2.02	0.42
21:U:70:ALA:HB3	21:U:77:GLY:O	2.20	0.42
23:X:45:GLN:NE2	23:X:45:GLN:N	2.68	0.42
27:2:10:LEU:HA	27:2:10:LEU:HD12	1.84	0.42
29:4:14:LYS:C	29:4:21:PHE:HB3	2.45	0.42
29:4:25:HIS:HB3	29:4:26:ALA:H	1.57	0.42
32:a:5:U:H1'	32:a:6:G:N1	2.35	0.42
32:a:179:A:H2'	32:a:180:U:H6	1.83	0.42
32:a:237:G:H2'	32:a:238:A:C8	2.54	0.42
32:a:411:A:C4	32:a:413:G:H1'	2.55	0.42
32:a:697:U:H2'	32:a:698:G:H5'	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:988:G:H2'	44:n:42:ASN:HB3	1.09	0.42
32:a:1126:U:H5'	40:j:77:VAL:HG22	0.45	0.42
32:a:1145:A:C4'	40:j:85:ASP:OD2	2.68	0.42
32:a:1149:C:N1	40:j:28:THR:HB	2.35	0.42
32:a:1302:C:C3'	43:m:6:ILE:CG2	2.90	0.42
32:a:1390:U:H2'	32:a:1391:U:H6	1.84	0.42
33:c:63:ILE:HA	40:j:66:GLU:HA	1.88	0.42
36:f:38:ARG:CB	36:f:63:ASN:HB2	2.43	0.42
36:f:88:MET:HE2	36:f:89:VAL:N	2.33	0.42
37:g:97:ALA:O	37:g:98:LEU:C	2.63	0.42
40:j:9:ARG:C	40:j:10:LEU:HD12	2.44	0.42
42:l:6:LEU:O	42:l:10:PRO:HG3	2.19	0.42
44:n:73:LEU:O	44:n:75:LYS:N	2.52	0.42
46:p:25:ARG:HD3	46:p:25:ARG:N	2.34	0.42
46:p:42:ILE:CB	46:p:46:LYS:HD2	2.42	0.42
51:7:116:LEU:HD13	51:7:140:LEU:HD23	2.02	0.42
52:u:5:VAL:O	52:u:6:ARG:HB2	2.19	0.42
1:A:83:G:H2'	1:A:84:G:O4'	2.20	0.42
2:B:36:G:H4'	2:B:451:U:N3	2.35	0.42
2:B:213:A:H2'	2:B:214:G:C8	2.55	0.42
2:B:1081:U:O2'	31:6:118:GLY:HA2	2.20	0.42
2:B:1857:G:HO2'	2:B:1858:A:H8	1.63	0.42
2:B:2140:G:H2'	2:B:2141:G:C8	2.54	0.42
2:B:2265:U:H3'	2:B:2266:A:C5'	2.50	0.42
2:B:2798:U:H1'	2:B:2800:A:N6	2.35	0.42
4:C:42:ARG:NH1	4:C:44:ASN:OD1	2.52	0.42
4:C:77:VAL:HG23	4:C:115:ILE:CD1	2.48	0.42
4:C:99:GLU:HG3	4:C:100:ARG:N	2.35	0.42
4:C:145:MET:HE1	4:C:152:GLN:NE2	2.35	0.42
4:C:251:THR:HG22	4:C:252:LYS:N	2.34	0.42
6:E:120:VAL:HG12	6:E:121:VAL:N	2.34	0.42
6:E:128:ALA:O	6:E:157:LEU:HD22	2.20	0.42
7:F:55:ASP:CG	7:F:148:VAL:HG11	2.44	0.42
7:F:103:ILE:HG13	7:F:104:THR:N	2.34	0.42
7:F:140:ILE:HG22	7:F:141:ASP:N	2.35	0.42
9:H:67:ALA:O	9:H:71:LYS:N	2.46	0.42
10:J:90:GLU:OE1	10:J:90:GLU:C	2.63	0.42
11:K:25:LEU:C	11:K:27:GLY:N	2.77	0.42
16:P:36:LYS:O	16:P:37:LYS:C	2.62	0.42
17:Q:59:LEU:CG	17:Q:63:ARG:HH21	2.32	0.42
18:R:5:PHE:HD1	18:R:40:MET:CB	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:16:GLU:O	18:R:18:GLN:N	2.51	0.42
19:S:12:SER:OG	19:S:16:LYS:NZ	2.53	0.42
19:S:103:ILE:HG13	19:S:105:VAL:HG23	2.01	0.42
21:U:78:LYS:HE2	21:U:96:LYS:HE3	2.02	0.42
21:U:90:LYS:CG	21:U:91:LYS:H	2.32	0.42
22:W:47:GLY:H	22:W:67:LYS:NZ	2.18	0.42
23:X:30:MET:CG	23:X:31:GLN:N	2.77	0.42
27:2:46:VAL:O	27:2:47:ILE:HG12	2.20	0.42
30:5:24:ARG:HD3	30:5:26:ILE:HG23	2.01	0.42
31:6:15:GLY:O	31:6:16:MET:HB2	2.19	0.42
32:a:415:A:N1	32:a:428:G:O6	2.53	0.42
32:a:512:U:O2'	32:a:513:C:H5'	2.19	0.42
32:a:542:G:O2'	32:a:543:U:H5'	2.20	0.42
32:a:605:U:H2'	32:a:606:G:C8	2.55	0.42
32:a:861:G:O2'	32:a:862:C:H5'	2.20	0.42
32:a:923:A:H2'	32:a:924:C:C6	2.54	0.42
32:a:976:G:OP2	32:a:1358:U:O2'	2.38	0.42
32:a:1112:C:C4	33:c:177:LEU:CG	2.77	0.42
32:a:1220:G:O5'	49:s:8:PRO:C	2.62	0.42
32:a:1304:G:C8	43:m:3:ILE:HG13	2.55	0.42
32:a:1305:G:C4'	43:m:52:ILE:O	2.68	0.42
32:a:1357:A:H5"	44:n:67:GLY:N	2.14	0.42
33:c:41:TYR:HA	33:c:44:LYS:CD	2.49	0.42
33:c:54:ILE:O	33:c:54:ILE:HG12	2.19	0.42
33:c:111:ASP:OD2	33:c:114:LEU:HG	2.19	0.42
39:i:33:SER:C	39:i:35:GLU:H	2.27	0.42
39:i:66:VAL:HG22	39:i:67:LYS:N	2.34	0.42
42:l:8:ARG:CZ	42:l:9:LYS:HE3	2.49	0.42
42:l:8:ARG:CG	42:l:9:LYS:H	2.21	0.42
49:s:35:ARG:HB3	49:s:71:GLY:HA2	2.02	0.42
49:s:62:THR:N	49:s:65:MET:HE3	2.35	0.42
53:v:60:U:H5"	53:v:61:C:H5	1.83	0.42
2:B:247:G:OP2	2:B:249:C:N4	2.53	0.41
2:B:686:U:H1'	28:3:6:GLN:O	2.19	0.41
2:B:1000:A:H1'	24:Y:10:ARG:HH12	1.85	0.41
2:B:1115:G:H2'	2:B:1116:G:H8	1.84	0.41
2:B:1132:U:H6	10:J:85:LYS:NZ	2.18	0.41
2:B:1268:A:H2'	2:B:1269:A:O4'	2.19	0.41
2:B:1792:G:O2'	2:B:1793:C:H5'	2.19	0.41
2:B:2092:U:H4'	2:B:2093:G:O5'	2.20	0.41
2:B:2304:G:H1'	7:F:152:ASP:OD1	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2637:U:C2'	2:B:2638:G:H5'	2.50	0.41
5:D:154:LYS:CD	5:D:157:LYS:H	2.32	0.41
5:D:187:LEU:HD23	5:D:187:LEU:C	2.44	0.41
6:E:38:GLY:C	6:E:40:ARG:N	2.78	0.41
6:E:177:PRO:O	6:E:178:VAL:C	2.62	0.41
8:G:33:THR:CG2	8:G:34:ARG:N	2.82	0.41
8:G:42:VAL:HG23	8:G:43:LYS:N	2.35	0.41
8:G:89:VAL:HG12	8:G:159:LYS:HA	2.01	0.41
8:G:162:ARG:HA	8:G:166:GLU:OE1	2.20	0.41
9:H:66:ASN:C	9:H:68:ARG:N	2.78	0.41
9:H:89:LYS:HB3	9:H:90:LEU:H	1.71	0.41
10:J:11:VAL:CG1	10:J:12:LYS:H	2.10	0.41
10:J:136:GLN:HE21	10:J:136:GLN:HB2	1.64	0.41
11:K:87:LEU:CA	11:K:95:ILE:HG22	2.49	0.41
12:L:63:LYS:O	12:L:63:LYS:HG2	2.20	0.41
12:L:92:LEU:HD23	12:L:92:LEU:C	2.44	0.41
13:M:73:ILE:HD11	13:M:92:TRP:CB	2.46	0.41
17:Q:56:PHE:HD1	17:Q:56:PHE:HA	1.77	0.41
19:S:10:ALA:O	19:S:11:ARG:CB	2.62	0.41
20:T:25:GLU:CG	20:T:26:LYS:H	2.33	0.41
22:W:44:PHE:C	22:W:44:PHE:HD1	2.27	0.41
23:X:18:LEU:H	23:X:18:LEU:HD12	1.84	0.41
26:1:28:SER:O	26:1:29:VAL:CB	2.68	0.41
31:6:135:MET:HE2	31:6:137:LEU:CD1	2.50	0.41
32:a:162:A:H2'	32:a:163:C:O4'	2.20	0.41
32:a:557:G:H2'	32:a:558:G:O4'	2.20	0.41
32:a:585:G:O2'	32:a:586:C:H5'	2.20	0.41
32:a:692:U:C5	41:k:27:ASN:ND2	2.82	0.41
32:a:709:U:H2'	32:a:710:G:C8	2.54	0.41
32:a:730:G:O2'	32:a:766:A:H5'	2.20	0.41
32:a:812:G:HO2'	32:a:813:U:H6	1.55	0.41
32:a:821:G:H2'	32:a:822:U:C6	2.55	0.41
32:a:861:G:H2'	32:a:862:C:H6	1.84	0.41
32:a:1037:C:H2'	32:a:1038:C:C6	2.55	0.41
32:a:1098:C:H2'	32:a:1099:G:O4'	2.20	0.41
32:a:1146:A:O5'	40:j:85:ASP:CG	2.53	0.41
32:a:1261:A:H1'	44:n:98:ALA:N	2.34	0.41
32:a:1282:C:C1'	44:n:97:LYS:N	2.83	0.41
32:a:1320:C:C4'	49:s:72:GLU:OE1	2.43	0.41
32:a:1330:U:OP2	43:m:65:GLU:HA	2.19	0.41
32:a:1334:G:OP2	43:m:12:LYS:CD	2.59	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1337:G:C2	43:m:46:GLU:CA	3.03	0.41
33:c:172:VAL:HG11	33:c:200:TRP:HB3	2.02	0.41
39:i:51:LEU:HD21	39:i:62:LEU:HG	2.01	0.41
42:l:56:LEU:HD11	42:l:81:ILE:CD1	2.42	0.41
44:n:51:PRO:CB	44:n:54:SER:HB3	2.48	0.41
45:o:34:GLN:HG2	45:o:58:MET:HE1	2.00	0.41
51:7:162:VAL:CG1	51:7:184:ALA:HB2	2.46	0.41
53:v:66:U:H2'	53:v:67:C:O4'	2.20	0.41
1:A:3:C:H2'	1:A:4:C:O4'	2.20	0.41
2:B:64:A:O2'	20:T:69:ARG:HB3	2.20	0.41
2:B:126:A:O5'	28:3:19:ARG:HG2	2.20	0.41
2:B:305:C:H2'	2:B:306:U:C6	2.55	0.41
2:B:670:A:OP1	12:L:47:ARG:HD3	2.20	0.41
2:B:849:A:H2'	2:B:850:U:C6	2.55	0.41
2:B:1112:G:H4'	8:G:2:ARG:CG	2.37	0.41
2:B:1683:U:O2'	2:B:1684:G:H5'	2.19	0.41
2:B:1867:G:O2'	2:B:1868:C:H5'	2.20	0.41
2:B:1959:G:O4'	32:a:1418:A:H1'	2.20	0.41
2:B:2080:A:H2'	2:B:2081:U:C6	2.55	0.41
2:B:2146:C:H1'	2:B:2147:A:H1'	2.02	0.41
2:B:2373:G:O2'	2:B:2374:C:H5'	2.20	0.41
2:B:2415:G:H5"	12:L:66:PHE:H	1.84	0.41
4:C:159:THR:O	4:C:160:TYR:HD2	2.02	0.41
4:C:228:ASP:OD1	4:C:228:ASP:N	2.53	0.41
5:D:26:VAL:O	5:D:27:ILE:C	2.62	0.41
5:D:159:LYS:C	5:D:159:LYS:HD3	2.46	0.41
6:E:119:ILE:HG23	6:E:189:THR:C	2.45	0.41
6:E:148:ILE:HB	6:E:185:LYS:O	2.20	0.41
7:F:135:ILE:CG2	7:F:136:ILE:N	2.83	0.41
8:G:40:VAL:HB	8:G:63:GLN:HE22	1.86	0.41
10:J:1:MET:HG2	18:R:14:VAL:CG2	2.50	0.41
10:J:34:ARG:CB	10:J:39:LYS:HD2	2.49	0.41
10:J:63:ALA:CA	10:J:69:ARG:HD2	2.48	0.41
10:J:118:MET:O	10:J:121:LYS:HB2	2.20	0.41
11:K:99:ILE:HD12	11:K:99:ILE:N	2.34	0.41
13:M:9:PHE:C	13:M:10:ARG:NE	2.78	0.41
13:M:71:LYS:HZ3	13:M:91:TYR:HD2	1.68	0.41
13:M:109:PRO:O	13:M:110:GLU:C	2.64	0.41
16:P:26:GLU:CD	16:P:46:VAL:HG13	2.45	0.41
16:P:56:SER:OG	16:P:57:ALA:N	2.53	0.41
16:P:57:ALA:C	16:P:59:THR:N	2.78	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:93:LYS:NZ	16:P:97:TYR:CZ	2.86	0.41
17:Q:91:ARG:O	17:Q:94:LEU:HD21	2.20	0.41
18:R:97:LYS:HD2	18:R:97:LYS:HA	1.86	0.41
19:S:1:MET:HB3	19:S:4:ILE:CG1	2.50	0.41
20:T:6:ARG:O	20:T:8:LEU:N	2.53	0.41
20:T:64:LYS:HB3	20:T:77:ARG:NH1	2.35	0.41
22:W:36:ILE:O	22:W:37:VAL:HB	2.20	0.41
24:Y:28:LEU:HD12	24:Y:28:LEU:N	2.36	0.41
25:Z:5:ILE:HD12	25:Z:5:ILE:N	2.32	0.41
27:2:7:LYS:O	27:2:7:LYS:HG3	2.20	0.41
31:6:138:VAL:CG1	31:6:139:VAL:N	2.83	0.41
32:a:437:U:C4’	34:d:151:GLN:HE22	2.32	0.41
32:a:493:A:N3	32:a:493:A:O4’	2.52	0.41
32:a:612:C:H2’	32:a:613:C:C6	2.55	0.41
32:a:680:C:H2’	32:a:681:A:H8	1.85	0.41
32:a:893:C:H2’	32:a:894:G:C8	2.55	0.41
32:a:1057:G:O2’	32:a:1058:G:H5’	2.20	0.41
32:a:1217:C:H1’	44:n:44:VAL:O	2.19	0.41
32:a:1281:C:N4	40:j:40:ILE:CG2	2.74	0.41
32:a:1307:U:H1’	43:m:25:GLY:O	2.19	0.41
32:a:1517:G:H2’	32:a:1518:A:C8	2.55	0.41
33:c:181:ILE:HG22	33:c:182:ASP:N	2.35	0.41
34:d:99:ASN:HB3	34:d:103:ARG:HH21	1.85	0.41
34:d:159:GLU:HG3	34:d:160:LEU:HD13	2.01	0.41
35:e:35:LEU:HD12	35:e:133:ILE:HA	2.01	0.41
38:h:69:ALA:HB3	38:h:72:GLU:OE2	2.19	0.41
39:i:17:ARG:HE	39:i:65:THR:HB	1.85	0.41
51:7:79:VAL:HG11	51:7:92:ASN:HB3	2.01	0.41
2:B:37:C:H4’	2:B:451:U:P	2.60	0.41
2:B:90:U:O4	2:B:91:A:N6	2.53	0.41
2:B:321:U:OP2	6:E:131:THR:HG22	2.21	0.41
2:B:444:C:H5”	6:E:44:ARG:HH11	1.82	0.41
2:B:477:A:H2’	2:B:478:A:O4’	2.20	0.41
2:B:527:C:H5”	2:B:2779:U:H3	1.86	0.41
2:B:817:C:O2	2:B:839:U:H4’	2.20	0.41
2:B:839:U:H1’	2:B:1191:G:H1’	2.02	0.41
2:B:1001:A:H2’	2:B:1002:G:O4’	2.21	0.41
2:B:1107:G:H2’	2:B:1108:U:C6	2.55	0.41
2:B:1420:A:N3	2:B:2211:A:N7	2.68	0.41
2:B:1485:U:O2’	2:B:1486:U:H5’	2.20	0.41
2:B:1746:A:O2’	2:B:1747:U:H5’	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2143:C:H2'	2:B:2144:G:O4'	2.20	0.41
2:B:2185:U:H2'	2:B:2186:G:C8	2.54	0.41
2:B:2230:G:H2'	2:B:2231:U:C6	2.56	0.41
2:B:2331:G:H21	2:B:2336:A:H8	1.67	0.41
2:B:2354:C:H4'	22:W:30:VAL:CG1	2.45	0.41
2:B:2651:C:O2'	2:B:2652:C:H5'	2.20	0.41
2:B:2718:G:H5"	16:P:100:ARG:HD2	2.02	0.41
2:B:2849:U:O4	2:B:2867:G:C8	2.73	0.41
5:D:23:PRO:HG2	5:D:178:VAL:HG21	2.02	0.41
5:D:62:LYS:CD	5:D:62:LYS:N	2.78	0.41
7:F:79:ARG:HD3	53:v:56:C:H5	1.77	0.41
7:F:172:PHE:O	7:F:174:PHE:N	2.53	0.41
7:F:173:ASP:OD1	7:F:173:ASP:N	2.52	0.41
8:G:169:ARG:C	8:G:171:LYS:N	2.77	0.41
9:H:26:ALA:O	9:H:27:ARG:C	2.63	0.41
9:H:30:LEU:CD1	9:H:35:LYS:HD3	2.49	0.41
10:J:56:VAL:C	10:J:57:LEU:HD22	2.46	0.41
12:L:63:LYS:HB2	29:4:11:LYS:HZ1	1.86	0.41
12:L:78:ARG:C	12:L:80:SER:H	2.28	0.41
14:N:13:ASN:O	14:N:17:ARG:N	2.48	0.41
14:N:55:ALA:O	14:N:56:LYS:C	2.63	0.41
16:P:56:SER:O	16:P:58:PHE:HD2	2.02	0.41
16:P:92:ARG:NH2	16:P:110:LYS:HB3	2.34	0.41
18:R:78:ARG:CG	18:R:87:GLN:HA	2.49	0.41
20:T:64:LYS:HD3	20:T:64:LYS:HA	1.87	0.41
21:U:2:ALA:C	21:U:4:ILE:N	2.78	0.41
22:W:47:GLY:O	22:W:54:ARG:HA	2.20	0.41
26:1:4:GLN:O	26:1:6:LYS:HE2	2.20	0.41
29:4:7:ARG:HH21	29:4:11:LYS:NZ	2.08	0.41
31:6:74:PRO:HD2	31:6:77:VAL:HG21	2.01	0.41
32:a:65:A:N7	32:a:381:C:C4	2.89	0.41
32:a:421:U:H5'	32:a:422:C:C5	2.55	0.41
32:a:462:G:H2'	32:a:463:U:C6	2.55	0.41
32:a:635:A:O2'	32:a:636:U:H5'	2.21	0.41
32:a:975:A:N7	44:n:2:LYS:HD3	2.35	0.41
32:a:1335:U:C1'	43:m:11:HIS:CE1	3.01	0.41
32:a:1437:A:H2'	32:a:1438:G:H8	1.86	0.41
33:c:65:VAL:HB	40:j:63:ASP:C	2.45	0.41
39:i:26:LYS:H	39:i:26:LYS:HG2	1.56	0.41
40:j:73:LEU:O	40:j:74:VAL:HB	2.21	0.41
42:l:9:LYS:HG3	42:l:9:LYS:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:n:20:PHE:HA	44:n:24:ALA:H	1.85	0.41
51:7:121:GLN:NE2	51:7:122:ASP:HB2	2.35	0.41
52:u:28:LEU:C	52:u:30:GLU:N	2.76	0.41
52:u:36:PHE:C	52:u:40:PRO:HD3	2.44	0.41
1:A:75:G:N1	1:A:102:G:N2	2.67	0.41
2:B:286:U:H2'	2:B:287:G:C8	2.55	0.41
2:B:562:U:H2'	2:B:572:A:O4'	2.20	0.41
2:B:661:A:O2'	12:L:23:ILE:HA	2.20	0.41
2:B:846:U:O2	2:B:846:U:H2'	2.20	0.41
2:B:912:C:H2'	2:B:913:U:C6	2.54	0.41
2:B:963:U:H2'	2:B:964:C:C6	2.54	0.41
2:B:1257:C:H5'	6:E:78:TRP:CH2	2.55	0.41
2:B:1541:C:H2'	2:B:1542:U:H6	1.85	0.41
2:B:1655:A:H2	2:B:2049:G:O3'	2.03	0.41
2:B:1695:G:H2'	2:B:1696:G:O4'	2.21	0.41
2:B:1812:U:H2'	2:B:1813:G:C8	2.56	0.41
2:B:1851:U:H2'	2:B:1852:U:C6	2.55	0.41
2:B:1909:C:H2'	2:B:1910:G:C8	2.55	0.41
2:B:2089:C:C2	2:B:2090:A:C8	3.09	0.41
2:B:2578:G:N3	5:D:145:SER:HB3	2.34	0.41
2:B:2590:A:H2'	2:B:2591:C:H6	1.83	0.41
2:B:2705:A:H2'	2:B:2706:A:O4'	2.20	0.41
4:C:140:VAL:HG22	4:C:161:VAL:O	2.20	0.41
5:D:83:ARG:HG2	5:D:83:ARG:NH1	2.35	0.41
5:D:103:ASP:O	5:D:104:VAL:HB	2.21	0.41
5:D:181:ASP:OD2	5:D:186:LEU:HD23	2.21	0.41
7:F:107:VAL:O	43:m:103:THR:C	2.63	0.41
11:K:119:ALA:O	11:K:121:GLU:N	2.53	0.41
12:L:96:LYS:HE3	12:L:100:ILE:HG13	2.02	0.41
13:M:45:GLN:NE2	13:M:119:LEU:O	2.54	0.41
13:M:100:LYS:O	13:M:101:VAL:HG13	2.20	0.41
15:O:17:LYS:NZ	22:W:77:LYS:HE3	2.35	0.41
17:Q:78:PHE:CE2	17:Q:82:LEU:HD11	2.56	0.41
17:Q:103:VAL:HG23	17:Q:104:ALA:N	2.35	0.41
20:T:11:LEU:HD23	20:T:46:ALA:HB1	2.03	0.41
20:T:60:THR:HA	20:T:83:ALA:HA	2.01	0.41
20:T:88:LYS:HG2	20:T:89:GLU:CD	2.46	0.41
21:U:11:ILE:HB	21:U:69:VAL:CG1	2.51	0.41
27:2:41:VAL:O	27:2:42:VAL:HG23	2.21	0.41
31:6:32:VAL:HG13	31:6:66:PHE:CD2	2.55	0.41
32:a:28:A:H2'	32:a:29:U:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:56:U:H6	32:a:56:U:O5'	2.04	0.41
32:a:195:A:O3'	50:t:63:LYS:CE	2.68	0.41
32:a:254:G:OP1	47:q:68:LYS:HB3	2.21	0.41
32:a:255:G:H2'	32:a:256:U:H6	1.84	0.41
32:a:438:U:H2'	32:a:494:G:O6	2.21	0.41
32:a:666:G:H5'	32:a:726:C:H1'	2.02	0.41
32:a:714:G:H2'	32:a:715:A:C8	2.56	0.41
32:a:1108:G:P	33:c:174:LEU:CD1	3.08	0.41
32:a:1122:U:N3	40:j:88:MET:CA	2.42	0.41
32:a:1221:G:O4'	49:s:4:LEU:HG	2.14	0.41
32:a:1239:A:C2'	37:g:114:SER:HB2	2.50	0.41
32:a:1269:A:H1'	32:a:1326:U:O4'	2.20	0.41
32:a:1358:U:H4'	44:n:62:ARG:HD3	1.86	0.41
33:c:122:GLN:O	33:c:127:VAL:HG22	2.20	0.41
34:d:54:LEU:HA	34:d:57:LYS:HB3	2.01	0.41
39:i:52:GLU:N	39:i:56:MET:HG2	2.35	0.41
39:i:85:ALA:O	39:i:88:GLU:HB2	2.20	0.41
44:n:73:LEU:O	44:n:74:ARG:C	2.64	0.41
51:7:187:ASP:H	51:7:190:SER:HB2	1.85	0.41
1:A:75:G:H5"	3:V:12:GLN:OE1	2.19	0.41
2:B:32:C:H2'	2:B:33:C:H5"	2.03	0.41
2:B:64:A:H1'	20:T:69:ARG:HE	1.85	0.41
2:B:85:G:H5'	21:U:29:SER:H	1.86	0.41
2:B:406:G:H2'	2:B:407:G:H8	1.84	0.41
2:B:710:U:H2'	2:B:711:G:C8	2.56	0.41
2:B:729:G:H8	2:B:764:A:OP1	2.03	0.41
2:B:981:A:H3'	2:B:982:C:C5'	2.50	0.41
2:B:1056:G:N2	2:B:1104:C:N4	2.68	0.41
2:B:1140:C:OP1	10:J:64:VAL:HG13	2.20	0.41
2:B:1821:A:H2'	2:B:1822:C:H6	1.83	0.41
2:B:1901:A:H1'	4:C:250:GLN:NE2	2.35	0.41
2:B:2081:U:H5"	25:Z:23:LYS:HD2	2.02	0.41
2:B:2306:C:OP1	2:B:2307:G:H8	2.04	0.41
4:C:62:ARG:C	4:C:63:ILE:HG12	2.46	0.41
5:D:106:LYS:O	5:D:206:ALA:HB2	2.21	0.41
5:D:120:GLY:N	5:D:123:LYS:HB2	2.35	0.41
5:D:131:ASP:CG	5:D:134:HIS:NE2	2.78	0.41
6:E:73:ILE:C	6:E:75:SER:N	2.61	0.41
7:F:7:TYR:CA	7:F:11:VAL:HB	2.42	0.41
7:F:35:LEU:HA	7:F:153:ILE:CA	2.49	0.41
7:F:131:VAL:HG13	43:m:104:ASN:HB3	1.79	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:H:6:LEU:H	9:H:16:GLY:CA	2.34	0.41
10:J:64:VAL:HB	10:J:68:LYS:HB2	2.03	0.41
11:K:32:TYR:HB3	11:K:67:LYS:NZ	2.36	0.41
12:L:55:MET:O	12:L:59:ARG:HG2	2.20	0.41
13:M:36:VAL:HG11	13:M:125:PRO:HD2	2.03	0.41
13:M:63:ILE:HA	13:M:102:LEU:O	2.20	0.41
13:M:71:LYS:HG2	13:M:93:VAL:HA	2.02	0.41
16:P:22:GLY:O	16:P:91:VAL:HA	2.20	0.41
17:Q:80:ASN:HD22	17:Q:80:ASN:HA	1.52	0.41
18:R:41:ILE:HD12	18:R:43:ASN:H	1.85	0.41
19:S:29:VAL:HG21	19:S:69:LEU:HB3	2.03	0.41
20:T:34:VAL:HG11	20:T:43:ILE:HD11	2.03	0.41
21:U:5:ARG:CG	21:U:6:ARG:N	2.83	0.41
21:U:12:VAL:CG1	21:U:18:LYS:H	2.31	0.41
21:U:84:PHE:HB3	21:U:92:VAL:O	2.20	0.41
22:W:5:ALA:O	22:W:6:GLY:C	2.63	0.41
26:1:29:VAL:HG23	26:1:36:LYS:HZ2	1.81	0.41
26:1:47:TYR:HA	26:1:52:LYS:HB2	2.03	0.41
28:3:12:ARG:C	28:3:16:HIS:O	2.64	0.41
28:3:26:ASN:HA	28:3:29:GLN:HB2	2.03	0.41
30:5:12:ARG:N	30:5:12:ARG:HD2	2.34	0.41
30:5:27:CYS:SG	30:5:33:HIS:NE2	2.93	0.41
31:6:62:ALA:C	31:6:64:ARG:N	2.78	0.41
32:a:36:C:O2'	32:a:37:U:H5'	2.20	0.41
32:a:103:U:OP2	50:t:8:LYS:HD2	2.20	0.41
32:a:178:C:O2'	32:a:179:A:H5'	2.21	0.41
32:a:192:A:O2'	32:a:193:C:H5'	2.20	0.41
32:a:373:A:C1'	32:a:481:G:H1'	2.50	0.41
32:a:812:G:OP1	32:a:812:G:C4'	2.68	0.41
32:a:896:C:O2'	32:a:897:C:H5'	2.20	0.41
32:a:999:C:O2'	32:a:1000:A:H5'	2.20	0.41
32:a:1016:A:N7	44:n:40:ARG:HB3	2.35	0.41
32:a:1016:A:N1	44:n:42:ASN:CA	2.63	0.41
32:a:1121:U:O2'	32:a:1122:U:H5'	2.20	0.41
32:a:1150:A:N3	40:j:25:ILE:CG1	2.77	0.41
32:a:1151:A:C5'	40:j:21:ALA:O	2.63	0.41
32:a:1238:A:N7	32:a:1303:C:H1'	2.35	0.41
32:a:1299:A:N6	32:a:1302:C:H5	2.17	0.41
32:a:1332:A:OP2	43:m:9:PRO:HB3	2.19	0.41
32:a:1359:C:OP1	44:n:60:ARG:NE	2.54	0.41
32:a:1361:G:H2'	32:a:1362:A:C5'	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:d:36:ALA:O	34:d:38:GLY:N	2.53	0.41
34:d:138:PRO:C	34:d:140:ASP:H	2.29	0.41
37:g:26:VAL:O	37:g:30:MET:N	2.53	0.41
39:i:10:ARG:HA	39:i:77:ALA:CB	2.50	0.41
39:i:11:ARG:NH1	39:i:106:ASP:OD1	2.53	0.41
39:i:20:ILE:HD12	39:i:20:ILE:N	2.35	0.41
41:k:33:ILE:HG13	41:k:73:VAL:HG21	2.01	0.41
45:o:70:LYS:NZ	45:o:74:VAL:HA	2.36	0.41
46:p:45:GLU:C	46:p:47:GLU:H	2.28	0.41
47:q:26:ARG:NH2	47:q:28:VAL:HG11	2.36	0.41
51:7:45:THR:HA	51:7:48:MET:CG	2.50	0.41
52:u:40:PRO:CG	52:u:41:THR:H	2.29	0.41
2:B:30:G:O2'	2:B:31:C:H5'	2.21	0.41
2:B:567:U:H2'	2:B:568:U:O4'	2.20	0.41
2:B:756:A:H2'	2:B:757:G:O4'	2.20	0.41
2:B:1030:C:O2'	2:B:1031:G:H5'	2.21	0.41
2:B:1287:A:OP1	14:N:104:ALA:HB3	2.20	0.41
2:B:1314:C:O2	2:B:1314:C:H2'	2.21	0.41
2:B:1322:A:C2'	2:B:1323:C:H5'	2.50	0.41
2:B:1408:G:O2'	2:B:1409:U:H5'	2.21	0.41
2:B:1685:C:H2'	2:B:1686:C:H6	1.85	0.41
2:B:1948:G:H1'	32:a:1418:A:C2	2.55	0.41
2:B:2305:U:O2	7:F:132:ARG:HG2	2.21	0.41
2:B:2389:G:H5"	2:B:2390:U:O4'	2.20	0.41
2:B:2584:U:O5'	2:B:2584:U:H6	2.04	0.41
2:B:2683:C:O3'	16:P:59:THR:HG21	2.20	0.41
2:B:2845:U:H2'	2:B:2846:G:C8	2.56	0.41
3:V:6:ALA:C	3:V:65:VAL:HG12	2.46	0.41
3:V:83:LYS:O	3:V:85:LYS:N	2.53	0.41
4:C:135:PRO:HG2	36:f:80:PHE:CD1	2.54	0.41
5:D:13:ARG:O	5:D:21:SER:OG	2.38	0.41
5:D:13:ARG:HB2	5:D:21:SER:CB	2.50	0.41
5:D:148:GLN:N	5:D:148:GLN:CD	2.78	0.41
6:E:40:ARG:HD2	6:E:43:THR:OG1	2.20	0.41
7:F:18:GLU:C	7:F:20:ASN:H	2.29	0.41
7:F:165:GLY:HA2	7:F:168:LEU:CD2	2.51	0.41
8:G:30:GLY:C	8:G:31:GLU:HG3	2.44	0.41
8:G:76:ILE:O	8:G:80:GLU:HB2	2.20	0.41
8:G:121:THR:O	8:G:133:LYS:HD3	2.21	0.41
9:H:7:ASP:O	9:H:8:LYS:C	2.63	0.41
12:L:29:LYS:HZ2	12:L:31:GLY:HA3	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:124:GLY:C	12:L:126:ARG:HG3	2.46	0.41
13:M:10:ARG:HB2	13:M:11:LYS:HE3	2.02	0.41
13:M:133:LYS:O	13:M:133:LYS:HD2	2.21	0.41
14:N:34:ILE:N	14:N:34:ILE:CD1	2.81	0.41
14:N:57:THR:CB	14:N:61:ALA:HB3	2.51	0.41
15:O:21:LEU:O	15:O:22:GLY:C	2.64	0.41
15:O:21:LEU:O	15:O:23:ALA:N	2.53	0.41
16:P:38:ARG:HG3	16:P:38:ARG:HH11	1.85	0.41
17:Q:12:ARG:O	17:Q:15:LYS:HB3	2.21	0.41
17:Q:78:PHE:CZ	17:Q:82:LEU:HD11	2.56	0.41
18:R:5:PHE:N	18:R:12:HIS:HB3	2.35	0.41
23:X:29:ARG:O	23:X:29:ARG:HG2	2.21	0.41
24:Y:15:ARG:N	24:Y:15:ARG:NE	2.58	0.41
25:Z:2:LYS:C	25:Z:4:ASP:N	2.75	0.41
28:3:10:LEU:O	28:3:10:LEU:HD23	2.21	0.41
31:6:78:LEU:HA	31:6:81:LYS:HG2	2.03	0.41
31:6:132:ALA:HA	31:6:135:MET:HG2	2.02	0.41
32:a:154:U:H2'	32:a:155:A:C8	2.56	0.41
32:a:186:C:H2'	32:a:187:G:O4'	2.21	0.41
32:a:236:A:H2'	32:a:237:G:H8	1.85	0.41
32:a:328:C:H4'	32:a:329:A:H5"	2.02	0.41
32:a:499:A:H4'	32:a:500:G:H5'	2.03	0.41
32:a:502:A:O2'	32:a:503:C:H5'	2.20	0.41
32:a:547:A:H4'	32:a:548:G:O5'	2.21	0.41
32:a:796:C:OP1	41:k:127:ARG:N	2.53	0.41
32:a:847:G:H2'	32:a:848:C:H6	1.86	0.41
32:a:1153:G:C6	40:j:92:LEU:CD1	2.71	0.41
32:a:1153:G:O4'	40:j:92:LEU:HA	2.21	0.41
32:a:1220:G:O6	49:s:6:LYS:C	2.63	0.41
32:a:1221:G:C5	49:s:5:LYS:CE	2.96	0.41
32:a:1255:G:O2'	44:n:76:PHE:CD1	2.73	0.41
32:a:1330:U:C2'	43:m:24:VAL:C	2.91	0.41
37:g:62:GLU:O	37:g:66:GLU:HG3	2.21	0.41
38:h:75:GLN:O	38:h:126:CYS:HB2	2.21	0.41
41:k:95:THR:HG23	41:k:96:ILE:HG13	2.02	0.41
44:n:81:ILE:HD12	44:n:82:LYS:N	2.36	0.41
47:q:3:LYS:HD2	47:q:3:LYS:O	2.21	0.41
51:7:131:LYS:O	51:7:134:LEU:HB2	2.21	0.41
51:7:175:ALA:C	51:7:177:ASN:N	2.79	0.41
53:v:23:A:H2'	53:v:24:G:H8	1.85	0.41
2:B:23:G:O2'	2:B:24:G:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:197:A:N6	2:B:2430:A:H2'	2.36	0.41
2:B:322:A:H5'	2:B:340:A:O4'	2.20	0.41
2:B:399:U:OP2	25:Z:49:ARG:NH1	2.54	0.41
2:B:443:A:C2	2:B:1245:G:N3	2.88	0.41
2:B:506:G:H4'	2:B:509:C:O2	2.21	0.41
2:B:560:C:H3'	2:B:561:G:C8	2.55	0.41
2:B:1009:A:N3	2:B:1153:C:O2'	2.48	0.41
2:B:1313:U:O2	2:B:1313:U:C2'	2.67	0.41
2:B:1315:C:H2'	2:B:1316:U:H6	1.85	0.41
2:B:1441:G:O2'	2:B:1442:U:H5'	2.21	0.41
2:B:2544:G:H2'	2:B:2545:G:H8	1.85	0.41
2:B:2634:A:H2'	2:B:2635:A:H8	1.86	0.41
3:V:72:VAL:HB	3:V:73:LYS:H	1.67	0.41
3:V:80:HIS:HA	3:V:87:GLN:HE22	1.86	0.41
4:C:114:GLN:O	4:C:115:ILE:HB	2.20	0.41
4:C:254:LYS:HB2	4:C:254:LYS:HE2	1.87	0.41
5:D:3:GLY:HA3	5:D:49:GLN:HE22	1.86	0.41
5:D:13:ARG:HB2	5:D:21:SER:HB2	2.03	0.41
5:D:18:ASP:HB3	5:D:20:VAL:H	1.86	0.41
6:E:46:GLN:O	6:E:47:LYS:C	2.63	0.41
6:E:48:THR:O	6:E:49:ARG:O	2.38	0.41
6:E:188:MET:O	6:E:194:LYS:NZ	2.54	0.41
7:F:164:GLU:O	7:F:168:LEU:HD21	2.21	0.41
8:G:18:ILE:HA	8:G:23:ILE:HD13	2.01	0.41
8:G:124:CYS:HA	8:G:125:PRO:HD2	1.97	0.41
10:J:46:PRO:C	10:J:48:VAL:N	2.78	0.41
12:L:33:ARG:NH1	12:L:34:GLY:HA3	2.35	0.41
12:L:78:ARG:C	12:L:78:ARG:HH11	2.29	0.41
13:M:11:LYS:HE3	13:M:11:LYS:N	2.35	0.41
13:M:33:LEU:HD22	13:M:124:LEU:HG	2.02	0.41
15:O:16:ARG:HG3	15:O:20:GLU:CG	2.50	0.41
16:P:29:VAL:CG2	16:P:47:ILE:HD11	2.51	0.41
16:P:60:VAL:HB	16:P:61:ARG:H	1.23	0.41
17:Q:81:GLY:O	17:Q:82:LEU:C	2.63	0.41
20:T:73:ARG:O	20:T:74:ILE:HD13	2.20	0.41
27:2:8:ILE:HG21	27:2:27:ARG:HH21	1.85	0.41
32:a:113:G:H2'	32:a:114:U:C6	2.55	0.41
32:a:634:C:O2'	32:a:635:A:H5'	2.20	0.41
32:a:637:C:H2'	32:a:638:U:C6	2.56	0.41
32:a:1113:C:H4'	33:c:13:ILE:CG1	2.50	0.41
32:a:1122:U:H3	40:j:90:LEU:C	2.28	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1127:G:C5'	40:j:30:LYS:HZ3	2.06	0.41
32:a:1151:A:O4'	40:j:21:ALA:O	2.39	0.41
32:a:1217:C:C5	44:n:49:THR:HB	2.54	0.41
32:a:1271:A:H2'	32:a:1272:G:C8	2.55	0.41
32:a:1328:C:N4	43:m:62:PHE:CD1	2.73	0.41
32:a:1528:U:O5'	32:a:1528:U:H6	2.03	0.41
33:c:17:TRP:CZ2	40:j:16:ARG:HD3	2.54	0.41
33:c:87:ARG:NH2	40:j:52:LEU:HD11	2.31	0.41
35:e:143:LEU:O	35:e:146:MET:HB2	2.20	0.41
37:g:141:HIS:O	37:g:144:ALA:O	2.39	0.41
39:i:83:THR:HG23	39:i:84:ARG:N	2.35	0.41
41:k:115:ILE:CD1	48:r:72:ARG:NH2	2.75	0.41
44:n:5:MET:HE3	44:n:62:ARG:NH2	2.35	0.41
44:n:86:ALA:HB3	44:n:92:ILE:HD11	2.02	0.41
46:p:39:PHE:HE2	46:p:70:ARG:NH2	2.18	0.41
46:p:53:ASP:O	46:p:54:LEU:C	2.64	0.41
50:t:60:GLN:C	50:t:62:ALA:H	2.28	0.41
1:A:50:A:OP1	15:O:68:LYS:HG3	2.21	0.41
1:A:100:G:N2	2:B:863:A:O3'	2.50	0.41
2:B:26:G:C1'	2:B:515:A:H61	2.34	0.41
2:B:138:U:H5"	2:B:139:U:OP1	2.21	0.41
2:B:282:A:H2'	2:B:283:G:H8	1.82	0.41
2:B:678:C:H2'	2:B:679:C:H6	1.86	0.41
2:B:1019:U:OP1	2:B:1035:U:O2'	2.38	0.41
2:B:1330:C:H2'	2:B:1331:G:H8	1.86	0.41
2:B:1381:G:O2'	2:B:1382:G:H5'	2.21	0.41
2:B:1529:G:H2'	2:B:1530:G:H8	1.86	0.41
2:B:1989:G:H2'	2:B:1990:C:O4'	2.21	0.41
2:B:2033:A:H1'	2:B:2035:G:OP2	2.20	0.41
2:B:2291:U:OP1	2:B:2380:C:O2'	2.38	0.41
2:B:2420:C:N4	29:4:30:HIS:O	2.54	0.41
2:B:2745:C:H3'	2:B:2746:U:C6	2.56	0.41
2:B:2805:C:H2'	2:B:2806:C:H6	1.86	0.41
3:V:35:GLU:HG3	3:V:93:ARG:CD	2.46	0.41
4:C:154:ALA:C	4:C:156:SER:N	2.79	0.41
4:C:177:SER:C	4:C:179:GLU:H	2.27	0.41
4:C:236:GLY:C	4:C:237:ARG:HG3	2.46	0.41
4:C:247:TRP:O	4:C:247:TRP:CD1	2.74	0.41
4:C:247:TRP:CD1	4:C:247:TRP:C	2.98	0.41
4:C:264:LYS:O	4:C:266:ILE:HG23	2.21	0.41
6:E:141:MET:O	6:E:142:ALA:HB3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:153:LEU:HD11	6:E:201:ALA:C	2.45	0.41
6:E:163:ASN:OD1	6:E:166:LYS:N	2.53	0.41
6:E:169:VAL:C	6:E:171:ASP:N	2.76	0.41
7:F:31:GLU:HB3	7:F:32:LYS:H	1.62	0.41
7:F:35:LEU:HG	7:F:153:ILE:HG23	2.03	0.41
8:G:10:VAL:CG1	8:G:47:ASN:HA	2.50	0.41
8:G:49:LEU:HD12	8:G:49:LEU:N	2.36	0.41
8:G:148:ARG:HE	8:G:153:PRO:HD2	1.85	0.41
9:H:104:THR:C	9:H:106:ALA:H	2.27	0.41
10:J:9:GLU:O	10:J:10:THR:C	2.63	0.41
13:M:103:TYR:O	13:M:105:MET:N	2.54	0.41
15:O:30:ARG:O	15:O:31:THR:O	2.39	0.41
16:P:77:SER:CB	16:P:78:PRO:HD3	2.42	0.41
16:P:108:ARG:H	16:P:108:ARG:CD	2.14	0.41
17:Q:92:LYS:HD3	17:Q:92:LYS:N	2.34	0.41
17:Q:108:LEU:O	17:Q:108:LEU:HD13	2.21	0.41
18:R:43:ASN:OD1	18:R:56:GLY:HA3	2.20	0.41
18:R:101:ILE:HG22	18:R:102:SER:H	1.86	0.41
20:T:10:VAL:CG2	20:T:46:ALA:HB2	2.51	0.41
21:U:43:LYS:HZ3	21:U:45:GLN:N	2.19	0.41
21:U:65:GLN:C	21:U:67:SER:N	2.76	0.41
22:W:28:GLU:N	22:W:61:LYS:HB2	2.25	0.41
22:W:44:PHE:O	22:W:44:PHE:HD1	2.04	0.41
22:W:66:VAL:CG1	22:W:67:LYS:N	2.81	0.41
30:5:33:HIS:H	30:5:33:HIS:HD2	1.66	0.41
32:a:291:U:O2'	32:a:292:G:H5'	2.21	0.41
32:a:358:U:H2'	32:a:359:G:C8	2.55	0.41
32:a:374:A:H5"	32:a:452:A:N1	2.36	0.41
32:a:691:G:H2'	32:a:692:U:C6	2.55	0.41
32:a:768:A:H4'	32:a:1523:G:N2	2.35	0.41
32:a:949:A:P	43:m:37:GLY:N	2.94	0.41
32:a:957:U:O2	32:a:959:A:H8	2.03	0.41
32:a:1084:G:H2'	32:a:1085:U:C5	2.56	0.41
32:a:1146:A:H3'	40:j:85:ASP:CB	2.51	0.41
32:a:1259:C:C4'	44:n:80:ARG:HA	2.47	0.41
32:a:1457:G:H2'	32:a:1458:G:H8	1.86	0.41
33:c:63:ILE:HB	40:j:66:GLU:HG2	2.02	0.41
35:e:71:ILE:HG12	35:e:72:ASN:H	1.86	0.41
36:f:7:VAL:HA	36:f:60:VAL:O	2.20	0.41
36:f:74:LEU:HG	36:f:78:PHE:CD1	2.55	0.41
37:g:101:ARG:HB3	37:g:105:GLU:OE2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:i:9:GLY:O	39:i:16:ALA:HB3	2.20	0.41
39:i:126:PHE:O	39:i:128:LYS:N	2.54	0.41
40:j:92:LEU:HD22	40:j:92:LEU:N	2.34	0.41
41:k:81:LEU:CD2	41:k:104:PHE:HB3	2.50	0.41
41:k:85:VAL:O	41:k:111:ASP:HA	2.20	0.41
42:l:83:GLY:HA2	42:l:94:TYR:CD1	2.52	0.41
45:o:5:GLU:O	45:o:9:LYS:HB2	2.20	0.41
45:o:52:ARG:O	45:o:55:LEU:HB3	2.21	0.41
46:p:6:LEU:HD21	46:p:74:LEU:HD11	2.02	0.41
49:s:35:ARG:C	49:s:37:SER:H	2.29	0.41
50:t:58:ASP:HA	50:t:61:ALA:HB3	2.03	0.41
51:7:116:LEU:CD1	51:7:139:GLU:HB3	2.44	0.41
53:v:52:G:C2	53:v:63:G:C6	3.09	0.41
2:B:30:G:H2'	2:B:31:C:C6	2.56	0.41
2:B:118:A:H1'	2:B:178:G:O4'	2.20	0.41
2:B:205:G:HO2'	2:B:206:U:P	2.44	0.41
2:B:325:G:H2'	2:B:326:G:H8	1.85	0.41
2:B:458:G:H22	2:B:469:G:H2'	1.84	0.41
2:B:515:A:H2'	2:B:516:C:O4'	2.20	0.41
2:B:526:A:N6	2:B:2626:C:C4'	2.84	0.41
2:B:535:G:N3	17:Q:52:ARG:NH1	2.69	0.41
2:B:663:G:C5'	12:L:25:SER:HB2	2.35	0.41
2:B:670:A:H3'	12:L:47:ARG:HD3	2.02	0.41
2:B:693:A:H2'	2:B:694:U:C6	2.56	0.41
2:B:863:A:O2'	2:B:864:G:H5'	2.21	0.41
2:B:911:A:C6	13:M:13:HIS:HB3	2.56	0.41
2:B:947:A:O2'	2:B:984:A:H2	2.04	0.41
2:B:985:C:H2'	2:B:986:C:H6	1.86	0.41
2:B:1064:C:H2'	2:B:1065:U:O4'	2.20	0.41
2:B:1110:G:N2	2:B:1111:A:N6	2.69	0.41
2:B:1139:G:H5'	10:J:104:ALA:HB1	2.02	0.41
2:B:1201:U:H2'	2:B:1202:G:H8	1.86	0.41
2:B:1291:C:O2'	2:B:1292:G:H5'	2.20	0.41
2:B:1370:C:H2'	2:B:1371:G:O4'	2.21	0.41
2:B:1524:G:O2'	2:B:1525:A:H5'	2.21	0.41
2:B:1544:A:H2'	2:B:1545:A:C8	2.55	0.41
2:B:1589:U:H2'	2:B:1590:A:C8	2.56	0.41
2:B:1607:C:N4	2:B:1622:G:OP2	2.54	0.41
2:B:1636:U:O2'	2:B:1637:A:H5'	2.20	0.41
2:B:1820:U:H4'	2:B:1821:A:OP2	2.21	0.41
2:B:1936:A:N6	2:B:1963:U:N3	2.66	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2262:U:H2'	2:B:2263:C:C6	2.52	0.41
2:B:2466:C:O2'	2:B:2467:C:H5'	2.21	0.41
2:B:2478:A:O2'	2:B:2536:G:N2	2.51	0.41
2:B:2515:C:H2'	2:B:2516:A:H8	1.85	0.41
2:B:2602:A:HO2'	53:v:74:C:P	2.41	0.41
2:B:2653:U:H3'	2:B:2654:A:H2'	2.02	0.41
3:V:79:ARG:CZ	3:V:86:LEU:HD11	2.50	0.41
4:C:3:VAL:HG12	4:C:4:LYS:N	2.31	0.41
4:C:113:ASP:O	4:C:115:ILE:HD12	2.21	0.41
4:C:116:GLN:OE1	4:C:122:ALA:HB3	2.21	0.41
4:C:152:GLN:HB3	4:C:153:LEU:H	1.59	0.41
4:C:161:VAL:H	4:C:193:GLU:CD	2.29	0.41
4:C:163:ILE:C	4:C:164:VAL:HG23	2.45	0.41
5:D:1:MET:HB2	5:D:1:MET:HE2	1.87	0.41
5:D:2:ILE:HG22	5:D:204:LYS:CE	2.51	0.41
5:D:103:ASP:C	5:D:105:LYS:H	2.28	0.41
5:D:170:VAL:O	5:D:171:THR:HB	2.20	0.41
6:E:40:ARG:HD2	6:E:43:THR:HG1	1.86	0.41
6:E:106:LYS:C	6:E:108:ILE:N	2.77	0.41
6:E:148:ILE:N	6:E:183:PHE:HB3	2.36	0.41
7:F:21:TYR:HB2	7:F:22:ASN:H	1.58	0.41
7:F:34:THR:HA	7:F:89:THR:HA	2.03	0.41
7:F:74:ALA:N	53:v:56:C:O3'	2.28	0.41
7:F:150:GLY:O	7:F:151:LEU:HD12	2.20	0.41
8:G:18:ILE:HA	8:G:23:ILE:CD1	2.50	0.41
9:H:56:ALA:HB3	9:H:57:LYS:HZ2	1.83	0.41
10:J:30:THR:C	10:J:32:LEU:H	2.28	0.41
10:J:128:ASN:ND2	10:J:129:GLU:H	2.19	0.41
10:J:132:HIS:C	10:J:134:ALA:H	2.28	0.41
11:K:9:ASN:O	11:K:84:CYS:HB2	2.20	0.41
11:K:23:LYS:HE3	11:K:24:VAL:O	2.21	0.41
11:K:98:ARG:HD2	11:K:98:ARG:N	2.35	0.41
12:L:82:LEU:O	12:L:83:ALA:CB	2.69	0.41
13:M:1:MET:H3	13:M:68:PHE:HE1	1.69	0.41
13:M:5:LYS:HG3	13:M:91:TYR:HB2	2.03	0.41
13:M:38:ARG:HG3	13:M:38:ARG:NH1	2.36	0.41
13:M:41:LEU:O	13:M:92:TRP:HA	2.21	0.41
13:M:42:THR:C	13:M:44:ARG:H	2.28	0.41
13:M:74:THR:C	13:M:75:GLU:HG3	2.46	0.41
15:O:17:LYS:HE3	15:O:43:ASN:CB	2.44	0.41
16:P:38:ARG:CG	16:P:39:LEU:N	2.81	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:93:LYS:HB2	16:P:96:LEU:HD12	2.02	0.41
17:Q:35:PHE:C	17:Q:39:ILE:HB	2.46	0.41
18:R:35:PHE:H	18:R:64:VAL:HG22	1.85	0.41
18:R:97:LYS:O	18:R:98:ILE:CB	2.69	0.41
19:S:2:GLU:OE1	19:S:107:VAL:O	2.39	0.41
19:S:13:SER:OG	19:S:16:LYS:HB2	2.20	0.41
19:S:86:MET:HB3	19:S:94:ASP:HB3	2.03	0.41
20:T:1:MET:C	20:T:3:ARG:H	2.28	0.41
22:W:48:ALA:O	22:W:49:ASN:ND2	2.54	0.41
25:Z:35:ASP:O	25:Z:42:PRO:HB3	2.21	0.41
26:1:12:ARG:C	26:1:14:MET:N	2.74	0.41
29:4:35:LYS:O	29:4:36:ALA:HB3	2.20	0.41
31:6:18:ASN:N	31:6:19:PRO:CD	2.82	0.41
32:a:60:A:H1’	32:a:61:G:O4’	2.20	0.41
32:a:152:A:N6	32:a:170:U:C2	2.88	0.41
32:a:194:C:H1’	50:t:58:ASP:HB3	2.02	0.41
32:a:250:A:H1’	32:a:252:U:C5	2.55	0.41
32:a:343:U:H2’	32:a:345:C:C5	2.55	0.41
32:a:374:A:H2’	32:a:375:U:C6	2.55	0.41
32:a:495:A:H4’	32:a:496:A:O5’	2.21	0.41
32:a:738:C:H2’	32:a:739:C:C6	2.56	0.41
32:a:784:A:H2’	32:a:785:G:C8	2.54	0.41
32:a:811:C:O2’	32:a:901:A:N1	2.48	0.41
32:a:841:C:H3’	32:a:843:U:P	2.61	0.41
32:a:947:G:C2’	43:m:38:ILE:O	2.65	0.41
32:a:974:A:O4’	44:n:5:MET:SD	2.79	0.41
32:a:981:U:OP1	44:n:53:ASP:C	2.64	0.41
32:a:988:G:C2	44:n:42:ASN:O	2.74	0.41
32:a:1067:A:H1’	32:a:1068:G:C8	2.55	0.41
32:a:1109:C:OP1	33:c:175:HIS:NE2	2.54	0.41
32:a:1148:U:H3’	40:j:31:ARG:NE	2.34	0.41
32:a:1151:A:N1	40:j:87:LEU:O	2.54	0.41
32:a:1231:G:H2’	32:a:1232:U:C6	2.55	0.41
32:a:1237:C:C2’	43:m:10:ASP:OD2	2.68	0.41
32:a:1283:U:N3	44:n:84:ARG:HG3	2.35	0.41
32:a:1304:G:HO2’	43:m:52:ILE:HD13	1.23	0.41
32:a:1322:C:O2	32:a:1322:C:O4’	2.38	0.41
32:a:1333:A:N3	43:m:14:ALA:CB	2.84	0.41
32:a:1372:U:OP1	39:i:73:GLY:CA	2.67	0.41
32:a:1480:A:O2’	32:a:1481:U:H5’	2.21	0.41
32:a:1487:G:O2’	32:a:1488:G:H5’	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:d:26:ALA:O	34:d:27:ILE:O	2.39	0.41
34:d:158:LEU:N	34:d:158:LEU:HD23	2.36	0.41
34:d:196:GLU:HA	34:d:199:ILE:CD1	2.51	0.41
35:e:35:LEU:CD1	35:e:133:ILE:HA	2.50	0.41
35:e:55:VAL:N	35:e:56:PRO:CD	2.84	0.41
35:e:95:MET:CE	35:e:114:LEU:HD11	2.51	0.41
36:f:40:GLU:CD	36:f:42:TRP:HE1	2.28	0.41
39:i:41:GLU:H	39:i:44:ARG:CZ	2.34	0.41
39:i:64:ILE:HG22	39:i:65:THR:H	1.85	0.41
39:i:98:ARG:HA	39:i:103:VAL:HG22	2.02	0.41
39:i:126:PHE:O	39:i:127:SER:C	2.64	0.41
40:j:6:ILE:HA	40:j:102:LEU:CD2	2.51	0.41
41:k:22:ILE:HA	41:k:31:VAL:HG22	2.03	0.41
42:l:23:LEU:C	42:l:25:ALA:N	2.77	0.41
42:l:30:ARG:HB3	42:l:57:THR:CG2	2.50	0.41
45:o:52:ARG:HA	45:o:55:LEU:HB3	2.03	0.41
47:q:11:VAL:CA	47:q:22:VAL:HG22	2.44	0.41
47:q:57:VAL:N	47:q:79:GLU:HB3	2.35	0.41
49:s:51:HIS:C	49:s:53:GLY:H	2.28	0.41
51:7:121:GLN:HB3	51:7:121:GLN:HE21	1.63	0.41
51:7:205:ALA:O	51:7:209:VAL:HG22	2.20	0.41
52:u:24:LYS:O	52:u:26:GLY:N	2.53	0.41
52:u:40:PRO:C	52:u:42:THR:H	2.29	0.41
53:v:5:G:N3	53:v:69:G:N2	2.68	0.41
2:B:15:G:H2'	2:B:16:C:C6	2.54	0.41
2:B:223:A:N1	2:B:407:G:O2'	2.53	0.41
2:B:440:C:H2'	2:B:441:U:C6	2.55	0.41
2:B:1105:U:H2'	2:B:1106:G:H8	1.85	0.41
2:B:1206:G:H2'	2:B:1207:C:H6	1.85	0.41
2:B:2232:C:P	25:Z:25:ARG:HH21	2.44	0.41
2:B:2347:C:OP1	2:B:2347:C:H4'	2.21	0.41
2:B:2520:C:C6	2:B:2567:G:H1'	2.56	0.41
4:C:222:THR:HG21	4:C:224:MET:HE1	2.03	0.41
7:F:90:LEU:HD23	7:F:94:ARG:HG2	2.03	0.41
7:F:97:GLU:C	7:F:99:PHE:N	2.79	0.41
8:G:51:PHE:CE2	8:G:63:GLN:NE2	2.89	0.41
11:K:7:MET:HE1	11:K:20:MET:CB	2.48	0.41
13:M:96:ILE:HD13	13:M:97:GLN:CG	2.51	0.41
14:N:118:ARG:HH22	26:1:49:ARG:HB3	1.86	0.41
15:O:94:ARG:O	15:O:96:GLY:N	2.54	0.41
17:Q:97:ILE:HA	17:Q:100:PHE:CE2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:81:SER:OG	19:S:97:LEU:HB3	2.21	0.41
20:T:33:LYS:O	20:T:34:VAL:C	2.64	0.41
21:U:22:GLY:HA2	21:U:36:GLU:HB2	2.01	0.41
22:W:66:VAL:CG1	22:W:67:LYS:H	2.21	0.41
23:X:59:GLU:C	23:X:61:ALA:N	2.79	0.41
24:Y:6:ILE:HD13	24:Y:6:ILE:H	1.85	0.41
24:Y:9:THR:HG23	24:Y:10:ARG:H	1.86	0.41
25:Z:37:CYS:O	25:Z:38:SER:C	2.64	0.41
29:4:11:LYS:NZ	29:4:11:LYS:HB2	2.35	0.41
29:4:23:HIS:H	29:4:23:HIS:HD2	1.67	0.41
31:6:21:PRO:CB	31:6:22:PRO:HD3	2.46	0.41
32:a:335:C:H4'	32:a:1434:A:H5'	2.03	0.41
32:a:425:G:O2'	32:a:426:U:H5'	2.21	0.41
32:a:946:A:C1'	43:m:46:GLU:HB3	2.40	0.41
32:a:975:A:N9	44:n:1:ALA:N	2.55	0.41
32:a:1036:A:N3	32:a:1036:A:H2'	2.36	0.41
32:a:1301:U:H5'	43:m:7:ASN:ND2	2.36	0.41
32:a:1318:A:H5"	49:s:64:GLU:OE2	2.21	0.41
32:a:1331:G:H1'	43:m:18:LEU:O	2.20	0.41
32:a:1529:G:OP2	32:a:1529:G:H3'	2.20	0.41
33:c:77:GLY:HA2	40:j:58:ASN:HB2	1.98	0.41
34:d:160:LEU:HA	34:d:163:GLN:OE1	2.21	0.41
37:g:138:GLU:HA	37:g:141:HIS:HB2	2.02	0.41
40:j:33:GLY:HA3	40:j:83:THR:OG1	2.16	0.41
40:j:71:LEU:HD12	40:j:71:LEU:N	2.27	0.41
49:s:31:ARG:HG2	49:s:31:ARG:HH11	1.86	0.41
51:7:94:ARG:H	51:7:94:ARG:HG2	1.50	0.41
1:A:42:C:C5	7:F:65:LEU:HD22	2.56	0.40
2:B:84:A:H3'	21:U:5:ARG:CG	2.49	0.40
2:B:439:A:H2'	2:B:440:C:O4'	2.21	0.40
2:B:475:C:H4'	2:B:510:C:H5'	2.03	0.40
2:B:1059:G:O2'	31:6:112:LYS:HE2	2.21	0.40
2:B:1131:G:C1'	2:B:1133:A:H62	2.26	0.40
2:B:1206:G:H2'	2:B:1207:C:C6	2.56	0.40
2:B:1236:G:O2'	2:B:1237:A:O5'	2.40	0.40
2:B:1558:C:H4'	2:B:1559:U:H5"	2.03	0.40
2:B:1663:G:O2'	2:B:2686:G:H4'	2.21	0.40
2:B:1913:A:C2	32:a:1409:C:O2	2.75	0.40
2:B:2420:C:H41	29:4:30:HIS:CA	2.34	0.40
2:B:2492:U:O2'	2:B:2493:U:H5'	2.21	0.40
2:B:2520:C:O2'	2:B:2521:C:H5'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2575:C:H1'	5:D:147:GLY:O	2.21	0.40
2:B:2602:A:N6	53:v:74:C:C4	2.89	0.40
2:B:2682:A:C2	5:D:22:ILE:HD11	2.56	0.40
2:B:2733:A:C8	2:B:2733:A:C3'	3.04	0.40
4:C:66:PHE:HB3	4:C:67:LYS:H	1.66	0.40
4:C:116:GLN:O	4:C:127:ASN:HB3	2.20	0.40
4:C:130:PRO:HA	4:C:188:ARG:HA	2.01	0.40
4:C:224:MET:HE3	4:C:232:GLY:HA2	2.03	0.40
5:D:5:VAL:O	5:D:200:ASP:O	2.40	0.40
5:D:20:VAL:HG23	5:D:21:SER:N	2.36	0.40
5:D:37:VAL:HB	5:D:42:ASN:ND2	2.36	0.40
5:D:135:GLY:C	5:D:137:SER:H	2.27	0.40
7:F:32:LYS:HD2	7:F:89:THR:HB	2.04	0.40
7:F:132:ARG:HD3	7:F:132:ARG:C	2.46	0.40
8:G:5:LYS:HE3	8:G:69:ALA:CA	2.51	0.40
8:G:16:VAL:HG12	8:G:17:LYS:N	2.35	0.40
8:G:21:GLN:O	8:G:36:LEU:HD13	2.21	0.40
8:G:57:TYR:CZ	8:G:59:ASP:HB2	2.56	0.40
9:H:87:GLU:CG	36:f:24:ARG:HH21	2.31	0.40
10:J:39:LYS:HA	10:J:39:LYS:HE2	2.02	0.40
12:L:41:ARG:N	12:L:41:ARG:HD3	2.37	0.40
12:L:101:ILE:HD12	12:L:101:ILE:HA	1.88	0.40
15:O:16:ARG:CG	15:O:20:GLU:HG3	2.48	0.40
15:O:54:VAL:O	15:O:55:GLU:C	2.64	0.40
16:P:1:SER:O	16:P:2:ASN:C	2.63	0.40
17:Q:30:VAL:HG12	17:Q:32:ARG:N	2.20	0.40
17:Q:50:ARG:O	17:Q:53:LYS:HD3	2.21	0.40
17:Q:61:ILE:O	17:Q:65:ASN:HB3	2.21	0.40
17:Q:85:ALA:HB2	17:Q:88:GLU:HB2	2.03	0.40
20:T:17:SER:OG	20:T:18:GLU:N	2.54	0.40
20:T:36:LYS:O	20:T:81:LYS:HD2	2.21	0.40
20:T:51:PHE:C	20:T:52:GLU:HG3	2.46	0.40
20:T:70:HIS:ND1	20:T:74:ILE:HB	2.35	0.40
21:U:13:LEU:O	21:U:15:GLY:N	2.49	0.40
25:Z:5:ILE:CG2	25:Z:63:ARG:HE	2.34	0.40
29:4:22:LYS:O	29:4:23:HIS:O	2.39	0.40
30:5:20:ASP:OD2	30:5:20:ASP:C	2.65	0.40
32:a:567:G:H2'	32:a:568:G:O4'	2.22	0.40
32:a:591:U:H2'	32:a:592:G:C8	2.54	0.40
32:a:657:U:O2'	32:a:658:C:H5'	2.21	0.40
32:a:711:G:H2'	32:a:712:A:C8	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:974:A:OP1	32:a:974:A:H8	2.04	0.40
32:a:1074:G:O2'	32:a:1075:U:H5'	2.21	0.40
32:a:1128:C:P	40:j:34:ALA:O	2.79	0.40
32:a:1258:G:O5'	44:n:75:LYS:HB3	2.20	0.40
32:a:1331:G:N7	43:m:64:VAL:HG12	2.32	0.40
33:c:4:VAL:HG21	33:c:9:ILE:HD13	2.02	0.40
33:c:65:VAL:CG1	40:j:64:GLN:O	2.64	0.40
33:c:155:ARG:NH1	33:c:192:TYR:HB2	2.36	0.40
34:d:99:ASN:CB	34:d:103:ARG:HH21	2.34	0.40
35:e:40:ASP:C	35:e:42:ASN:N	2.79	0.40
35:e:51:LYS:O	35:e:52:ALA:HB2	2.21	0.40
35:e:101:GLY:H	35:e:121:ASN:ND2	2.15	0.40
35:e:155:LYS:CG	38:h:70:VAL:HG22	2.51	0.40
37:g:73:GLU:OE2	37:g:90:VAL:HG12	2.21	0.40
37:g:109:LYS:N	37:g:109:LYS:HD2	2.36	0.40
42:l:79:ILE:C	42:l:79:ILE:HD12	2.46	0.40
42:l:120:ARG:HA	42:l:121:PRO:HD2	1.87	0.40
47:q:26:ARG:HE	47:q:39:ARG:HH12	1.67	0.40
47:q:30:HIS:N	47:q:35:LYS:H	2.19	0.40
51:7:9:LEU:H	51:7:9:LEU:CD1	2.33	0.40
51:7:15:PHE:HD1	51:7:16:GLY:N	2.19	0.40
51:7:56:LEU:HA	51:7:59:ILE:CG1	2.51	0.40
2:B:142:A:N3	20:T:2:ILE:HD13	2.35	0.40
2:B:301:G:H5'	2:B:334:C:O2'	2.21	0.40
2:B:503:A:H5"	2:B:504:A:H5'	2.04	0.40
2:B:841:G:O2'	2:B:842:U:H5'	2.22	0.40
2:B:873:C:OP1	13:M:1:MET:HG3	2.21	0.40
2:B:1019:U:O2'	2:B:1021:A:C2	2.69	0.40
2:B:1043:C:O2'	2:B:1044:C:H5'	2.21	0.40
2:B:1278:C:H2'	2:B:1279:G:H8	1.86	0.40
2:B:1446:C:H2'	2:B:1447:C:C6	2.55	0.40
2:B:1820:U:H3	4:C:197:ALA:HA	1.85	0.40
2:B:1847:A:H4'	2:B:1848:A:H8	1.83	0.40
2:B:2052:A:H4'	5:D:148:GLN:CB	2.51	0.40
2:B:2335:A:P	15:O:9:ARG:HG3	2.61	0.40
2:B:2354:C:O2'	22:W:31:LEU:CB	2.69	0.40
2:B:2514:U:H2'	2:B:2515:C:C6	2.56	0.40
2:B:2604:U:O2'	2:B:2605:U:H5'	2.20	0.40
2:B:2636:C:H4'	5:D:80:TRP:CE3	2.57	0.40
2:B:2821:A:H2'	2:B:2822:G:H8	1.86	0.40
2:B:2822:G:OP1	5:D:166:GLY:HA2	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:V:79:ARG:NH1	3:V:86:LEU:HD11	2.35	0.40
4:C:95:TYR:HB2	4:C:99:GLU:HB3	2.03	0.40
5:D:46:ARG:HD2	5:D:80:TRP:CE2	2.56	0.40
5:D:61:THR:HB	5:D:62:LYS:HE3	2.03	0.40
5:D:120:GLY:H	5:D:123:LYS:CB	2.35	0.40
5:D:130:GLN:HG2	5:D:138:LEU:HD12	2.03	0.40
7:F:113:PHE:CG	43:m:95:PRO:CG	2.86	0.40
7:F:134:GLN:HB2	43:m:106:ARG:HB2	1.95	0.40
8:G:26:LYS:HG2	8:G:31:GLU:HG2	2.03	0.40
8:G:169:ARG:C	8:G:171:LYS:H	2.29	0.40
9:H:26:ALA:HA	9:H:30:LEU:CB	2.51	0.40
10:J:103:ILE:HD11	10:J:124:VAL:HG21	2.04	0.40
11:K:10:VAL:HG13	11:K:19:VAL:CG2	2.52	0.40
11:K:108:ARG:HG3	11:K:108:ARG:NH1	2.35	0.40
12:L:38:GLN:O	12:L:41:ARG:HD3	2.22	0.40
12:L:78:ARG:C	12:L:78:ARG:NH1	2.80	0.40
12:L:78:ARG:NH1	12:L:110:VAL:HG11	2.36	0.40
12:L:122:VAL:O	12:L:141:LYS:HB3	2.21	0.40
13:M:89:VAL:O	13:M:89:VAL:HG13	2.22	0.40
14:N:21:PHE:CZ	14:N:43:GLU:HG2	2.57	0.40
18:R:53:PHE:CG	18:R:54:VAL:HB	2.57	0.40
22:W:40:ARG:CZ	22:W:68:PHE:O	2.69	0.40
22:W:65:LYS:HB3	22:W:65:LYS:HE3	1.87	0.40
24:Y:29:ARG:O	24:Y:30:ARG:HB2	2.20	0.40
25:Z:12:ILE:O	25:Z:12:ILE:HD12	2.22	0.40
27:2:26:LYS:HD3	27:2:29:LYS:HD3	2.03	0.40
27:2:31:GLU:CG	27:2:32:LYS:H	2.20	0.40
31:6:100:ILE:HG22	31:6:101:SER:O	2.20	0.40
32:a:233:C:O2'	32:a:234:C:H5'	2.20	0.40
32:a:386:C:C2'	32:a:387:U:H5'	2.52	0.40
32:a:426:U:O2'	32:a:427:U:H5'	2.22	0.40
32:a:635:A:H2'	32:a:636:U:C6	2.56	0.40
32:a:640:A:O2'	32:a:641:U:H5'	2.22	0.40
32:a:645:G:O2'	32:a:646:G:H5'	2.22	0.40
32:a:781:A:H2'	32:a:782:A:C5'	2.46	0.40
32:a:1017:U:C4'	44:n:44:VAL:CG1	2.88	0.40
32:a:1082:A:H2'	32:a:1083:U:C6	2.56	0.40
32:a:1127:G:N3	40:j:30:LYS:HA	2.36	0.40
32:a:1218:C:C3'	44:n:48:GLN:HG2	2.39	0.40
32:a:1320:C:P	49:s:68:HIS:NE2	2.94	0.40
32:a:1330:U:C5	43:m:64:VAL:CG2	3.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1334:G:C2'	43:m:43:LYS:C	2.93	0.40
32:a:1347:G:N2	32:a:1373:G:H2'	2.36	0.40
33:c:62:SER:HG	40:j:47:GLU:CA	2.14	0.40
33:c:148:ILE:HA	33:c:200:TRP:O	2.20	0.40
33:c:154:GLY:CA	33:c:163:ARG:H	2.35	0.40
36:f:29:ILE:HD13	36:f:64:VAL:CG1	2.51	0.40
36:f:44:ARG:HA	36:f:57:ALA:O	2.20	0.40
36:f:62:MET:O	36:f:63:ASN:HB2	2.21	0.40
37:g:53:SER:OG	37:g:54:GLY:N	2.54	0.40
37:g:119:LEU:HD13	37:g:119:LEU:C	2.46	0.40
39:i:83:THR:HA	39:i:86:LEU:CD2	2.51	0.40
39:i:118:ARG:HH12	39:i:122:ARG:HE	1.67	0.40
41:k:84:MET:HE2	41:k:110:THR:OG1	2.21	0.40
42:l:46:SER:O	42:l:47:ALA:HB3	2.22	0.40
44:n:68:ARG:HH11	44:n:70:HIS:HB2	1.85	0.40
45:o:25:GLU:HA	45:o:80:LEU:CD1	2.52	0.40
46:p:76:LYS:HA	46:p:76:LYS:HD2	1.86	0.40
47:q:10:ARG:CZ	47:q:56:ASP:N	2.84	0.40
47:q:17:GLU:C	47:q:19:SER:N	2.77	0.40
52:u:26:GLY:O	52:u:30:GLU:N	2.53	0.40
53:v:50:U:C2	53:v:51:U:C6	3.09	0.40
1:A:76:G:H2'	1:A:77:U:C6	2.56	0.40
2:B:241:A:H8	2:B:241:A:OP1	2.03	0.40
2:B:588:U:O4	2:B:670:A:H1'	2.22	0.40
2:B:606:U:H4'	2:B:658:U:H4'	2.03	0.40
2:B:696:G:O2'	2:B:697:G:H5'	2.22	0.40
2:B:944:C:O2	2:B:944:C:H2'	2.21	0.40
2:B:1399:C:H2'	2:B:1400:U:H6	1.87	0.40
2:B:1403:A:H2'	2:B:1404:C:H6	1.86	0.40
2:B:2278:A:H62	22:W:10:ARG:HG2	1.85	0.40
2:B:2385:C:H2'	2:B:2386:A:C8	2.56	0.40
2:B:2484:G:P	13:M:44:ARG:HD2	2.61	0.40
2:B:2864:G:H2'	2:B:2865:U:C6	2.56	0.40
2:B:2875:C:H2'	2:B:2876:G:H8	1.86	0.40
3:V:62:THR:HG22	3:V:71:LYS:HG2	2.02	0.40
4:C:78:GLU:HB2	4:C:92:LEU:HB3	2.04	0.40
4:C:141:HIS:O	4:C:153:LEU:HD21	2.21	0.40
4:C:197:ALA:C	4:C:199:HIS:N	2.79	0.40
4:C:245:THR:C	4:C:247:TRP:N	2.78	0.40
5:D:12:THR:CG2	5:D:22:ILE:HD12	2.51	0.40
5:D:37:VAL:HG12	5:D:38:LYS:NZ	2.34	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:16:GLU:HB3	6:E:196:VAL:HA	2.04	0.40
7:F:3:LEU:HD23	7:F:3:LEU:C	2.46	0.40
7:F:3:LEU:HD23	7:F:3:LEU:O	2.21	0.40
7:F:16:MET:HE1	7:F:22:ASN:CA	2.51	0.40
7:F:133:GLU:CD	7:F:147:ARG:HD3	2.45	0.40
8:G:52:GLY:HA2	8:G:53:PRO:HD3	1.89	0.40
8:G:148:ARG:NE	8:G:153:PRO:HD2	2.37	0.40
8:G:149:ALA:HA	8:G:152:ARG:NH1	2.37	0.40
9:H:125:THR:HA	9:H:146:VAL:CB	2.46	0.40
10:J:20:ALA:C	10:J:22:GLY:N	2.79	0.40
11:K:23:LYS:CG	11:K:24:VAL:N	2.85	0.40
11:K:76:VAL:HG12	11:K:77:ILE:N	2.36	0.40
11:K:105:ARG:HG2	11:K:106:GLU:CD	2.47	0.40
12:L:72:ALA:H	12:L:106:GLU:CD	2.29	0.40
17:Q:99:VAL:HG23	17:Q:100:PHE:HD1	1.87	0.40
17:Q:111:LYS:CG	18:R:52:PRO:HB3	2.52	0.40
17:Q:116:LEU:O	17:Q:117:ALA:C	2.63	0.40
20:T:59:ASN:C	20:T:60:THR:HG23	2.46	0.40
20:T:71:GLY:O	20:T:72:GLN:HG3	2.22	0.40
24:Y:4:ILE:O	24:Y:4:ILE:HG23	2.22	0.40
25:Z:15:SER:HB3	25:Z:23:LYS:CD	2.51	0.40
25:Z:49:ARG:C	25:Z:51:VAL:N	2.69	0.40
26:1:28:SER:HB2	26:1:32:THR:O	2.22	0.40
32:a:167:A:H2'	32:a:168:G:H8	1.86	0.40
32:a:601:G:O2'	32:a:602:A:H5'	2.22	0.40
32:a:754:C:H3'	32:a:754:C:O2	2.21	0.40
32:a:1113:C:H4'	33:c:13:ILE:HG12	2.04	0.40
32:a:1125:U:O4	40:j:25:ILE:HG22	2.19	0.40
32:a:1126:U:O2'	40:j:30:LYS:NZ	2.55	0.40
32:a:1298:U:O2'	37:g:118:ARG:NH2	2.55	0.40
32:a:1306:A:H4'	43:m:33:LEU:CA	2.51	0.40
32:a:1329:A:H5"	43:m:69:ARG:H	1.38	0.40
32:a:1338:G:H22	53:v:41:C:C1'	2.34	0.40
32:a:1358:U:H6	44:n:68:ARG:CA	2.20	0.40
32:a:1521:C:H2'	32:a:1522:U:C6	2.56	0.40
32:a:1521:C:H2'	32:a:1522:U:H6	1.87	0.40
33:c:70:ALA:CB	33:c:108:PRO:HB3	2.52	0.40
33:c:86:LEU:HD12	40:j:53:ILE:H	1.87	0.40
33:c:192:TYR:O	33:c:192:TYR:HD1	2.04	0.40
34:d:106:PHE:N	34:d:106:PHE:CD1	2.88	0.40
34:d:187:ARG:HG3	34:d:187:ARG:HH11	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:e:43:GLY:HA2	35:e:75:LEU:HD12	2.03	0.40
35:e:131:ASN:ND2	35:e:134:ASN:N	2.69	0.40
36:f:3:HIS:HB2	36:f:92:THR:OG1	2.21	0.40
36:f:7:VAL:HG13	36:f:7:VAL:O	2.21	0.40
37:g:112:ASP:H	37:g:118:ARG:HD3	1.86	0.40
38:h:40:LYS:HD2	38:h:48:PHE:CE1	2.56	0.40
42:l:80:LEU:HD13	42:l:101:LEU:CD1	2.51	0.40
46:p:68:SER:HB3	46:p:71:VAL:CG1	2.49	0.40
50:t:53:MET:SD	50:t:57:VAL:HG21	2.60	0.40
51:7:10:LYS:C	51:7:12:GLY:N	2.79	0.40
51:7:91:VAL:HG11	51:7:95:TRP:CD1	2.57	0.40
2:B:19:A:OP1	17:Q:20:ALA:O	2.40	0.40
2:B:127:A:H5"	2:B:128:C:C6	2.55	0.40
2:B:583:G:H2'	2:B:584:C:H6	1.85	0.40
2:B:688:U:O2'	2:B:689:A:H5'	2.21	0.40
2:B:995:C:H6	2:B:995:C:H5'	1.87	0.40
2:B:1322:A:H2'	2:B:1323:C:H5'	2.03	0.40
2:B:1537:G:H2'	2:B:1538:G:O4'	2.21	0.40
2:B:1566:A:C6	4:C:213:ARG:CZ	3.04	0.40
2:B:1726:C:H2'	2:B:1727:C:C6	2.57	0.40
2:B:1760:C:H2'	2:B:1761:C:O4'	2.22	0.40
2:B:2098:U:O2'	2:B:2099:U:H5'	2.21	0.40
2:B:2545:G:N3	2:B:2565:A:H2	2.19	0.40
2:B:2782:G:O2'	2:B:2783:U:H5'	2.21	0.40
4:C:10:PRO:CG	4:C:23:LEU:HD11	2.51	0.40
7:F:116:LEU:HD23	43:m:102:LYS:CB	2.15	0.40
8:G:42:VAL:HA	8:G:51:PHE:HA	2.02	0.40
9:H:8:LYS:HB2	9:H:8:LYS:HE2	1.91	0.40
9:H:73:ASN:C	9:H:75:LEU:H	2.29	0.40
10:J:38:GLY:HA3	10:J:41:LYS:HE2	2.04	0.40
10:J:99:ARG:NH1	10:J:99:ARG:HB3	2.36	0.40
11:K:114:LYS:HA	11:K:114:LYS:HD2	1.96	0.40
12:L:112:LEU:HD22	12:L:130:GLY:HA3	2.03	0.40
14:N:37:THR:OG1	14:N:40:LYS:HD2	2.22	0.40
15:O:115:LEU:HD13	15:O:117:PHE:CZ	2.57	0.40
16:P:50:ARG:HD2	16:P:62:LYS:HB2	2.03	0.40
17:Q:20:ALA:O	17:Q:21:LYS:C	2.64	0.40
17:Q:101:ASP:O	17:Q:104:ALA:HB3	2.22	0.40
17:Q:102:LYS:HG2	17:Q:103:VAL:N	2.36	0.40
18:R:33:VAL:O	18:R:33:VAL:HG12	2.22	0.40
19:S:31:GLN:C	19:S:33:LEU:H	2.29	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:13:LEU:HG	21:U:69:VAL:CG2	2.49	0.40
21:U:35:VAL:CG1	21:U:36:GLU:H	2.28	0.40
21:U:95:PHE:CD1	21:U:102:ILE:HD12	2.56	0.40
22:W:31:LEU:CD1	22:W:66:VAL:HG23	2.51	0.40
22:W:31:LEU:HD13	22:W:66:VAL:CG2	2.51	0.40
25:Z:33:ASN:HA	25:Z:45:THR:O	2.21	0.40
27:2:11:VAL:HG13	27:2:12:SER:N	2.37	0.40
32:a:70:U:H1'	32:a:71:A:N7	2.36	0.40
32:a:193:C:O3'	50:t:55:PRO:HA	2.21	0.40
32:a:367:U:OP1	32:a:395:C:H1'	2.21	0.40
32:a:648:A:H2'	32:a:649:A:C8	2.56	0.40
32:a:711:G:H2'	32:a:712:A:H8	1.85	0.40
32:a:737:C:H2'	32:a:738:C:H6	1.86	0.40
32:a:812:G:O2'	32:a:813:U:H6	2.04	0.40
32:a:945:G:N1	32:a:1337:G:C2	2.89	0.40
32:a:957:U:H2'	32:a:959:A:OP2	2.21	0.40
32:a:980:C:H2'	32:a:981:U:H5'	2.03	0.40
32:a:1013:G:C4'	49:s:16:LYS:HD3	2.51	0.40
32:a:1016:A:H3'	44:n:31:SER:H	1.86	0.40
32:a:1262:C:H1'	44:n:99:SER:CA	2.52	0.40
32:a:1337:G:H5"	32:a:1338:G:OP1	2.21	0.40
32:a:1401:G:H2'	32:a:1402:C:O4'	2.21	0.40
32:a:1453:G:N2	32:a:1454:G:C8	2.90	0.40
32:a:1463:U:H2'	32:a:1464:U:H6	1.86	0.40
32:a:1468:A:O2'	32:a:1469:C:H5'	2.20	0.40
32:a:1499:A:H2'	32:a:1500:A:H8	1.87	0.40
33:c:65:VAL:HG22	40:j:65:TYR:HA	1.97	0.40
37:g:23:ALA:C	37:g:25:PHE:N	2.79	0.40
37:g:29:LEU:HD12	37:g:104:VAL:HG13	2.04	0.40
39:i:29:ILE:HD11	39:i:37:TYR:HB3	2.03	0.40
39:i:93:LEU:HD12	39:i:93:LEU:C	2.46	0.40
40:j:93:ALA:HB1	40:j:96:VAL:HG23	2.04	0.40
45:o:17:ASP:HB2	45:o:18:ALA:H	1.59	0.40
46:p:60:TRP:C	46:p:65:ALA:HB3	2.47	0.40
47:q:76:ARG:HE	47:q:78:VAL:HG22	1.85	0.40
51:7:42:LEU:O	51:7:46:VAL:HG12	2.20	0.40
51:7:96:LEU:N	51:7:99:MET:HE3	2.36	0.40
51:7:202:ASN:HD21	51:7:204:ASP:HB3	1.86	0.40
52:u:3:ILE:CG1	52:u:19:LYS:HG2	2.47	0.40
53:v:72:C:H2'	53:v:73:A:C8	2.56	0.40
2:B:89:A:O2'	2:B:90:U:H5'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:189:G:P	25:Z:12:ILE:HG21	2.61	0.40
2:B:359:G:C2'	2:B:360:U:H5'	2.51	0.40
2:B:445:C:H2'	2:B:446:G:O4'	2.22	0.40
2:B:468:G:H5"	6:E:55:SER:O	2.22	0.40
2:B:619:G:H2'	2:B:620:G:H5"	2.04	0.40
2:B:764:A:OP1	4:C:209:ALA:HB2	2.22	0.40
2:B:978:G:C4	2:B:979:A:N7	2.90	0.40
2:B:1231:U:H2'	2:B:1232:G:C8	2.56	0.40
2:B:1341:G:H2'	2:B:1397:U:O2'	2.21	0.40
2:B:1396:U:O2	2:B:1396:U:H5'	2.22	0.40
2:B:1498:C:H2'	2:B:1499:C:C6	2.57	0.40
2:B:1667:G:OP1	11:K:6:THR:HA	2.22	0.40
2:B:2527:C:H1'	30:5:1:MET:CA	2.52	0.40
2:B:2530:A:N6	8:G:155:PRO:HG3	2.37	0.40
2:B:2737:G:H2'	2:B:2738:A:O4'	2.21	0.40
2:B:2755:C:O5'	2:B:2755:C:H6	2.05	0.40
2:B:2784:U:O2'	2:B:2785:C:H5'	2.20	0.40
2:B:2884:U:H2'	2:B:2885:G:H8	1.86	0.40
4:C:16:VAL:C	4:C:18:VAL:HG23	2.47	0.40
4:C:161:VAL:HG11	4:C:173:LEU:HD22	2.04	0.40
5:D:13:ARG:NH2	16:P:12:MET:SD	2.95	0.40
5:D:46:ARG:HG3	5:D:47:ALA:N	2.37	0.40
5:D:159:LYS:HB2	5:D:159:LYS:HE2	1.91	0.40
6:E:16:GLU:HG2	6:E:196:VAL:HG13	2.04	0.40
6:E:35:TYR:C	6:E:37:ALA:H	2.30	0.40
6:E:117:ARG:HA	6:E:188:MET:HE1	2.04	0.40
7:F:24:VAL:HA	7:F:27:VAL:HG23	2.02	0.40
8:G:97:VAL:CG2	8:G:124:CYS:H	2.35	0.40
8:G:153:PRO:HG3	8:G:160:GLY:CA	2.51	0.40
10:J:100:VAL:H	10:J:103:ILE:CG1	2.34	0.40
11:K:35:VAL:HG23	11:K:36:GLY:N	2.27	0.40
12:L:29:LYS:O	12:L:36:LYS:NZ	2.54	0.40
12:L:133:ALA:HA	12:L:136:GLU:HG2	2.03	0.40
16:P:29:VAL:HG23	16:P:47:ILE:HD11	2.03	0.40
16:P:52:ARG:HH11	16:P:54:LEU:HB3	1.85	0.40
16:P:91:VAL:HB	16:P:113:LEU:HB3	2.03	0.40
21:U:92:VAL:O	21:U:92:VAL:HG13	2.21	0.40
22:W:54:ARG:C	22:W:55:ASP:O	2.59	0.40
25:Z:3:LYS:O	25:Z:4:ASP:C	2.64	0.40
26:1:16:ARG:O	26:1:19:ASP:HB2	2.21	0.40
26:1:49:ARG:O	26:1:49:ARG:HG2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:2:40:PRO:HD2	27:2:44:GLN:O	2.22	0.40
29:4:15:LYS:C	29:4:16:THR:O	2.63	0.40
31:6:79:LEU:HB3	31:6:137:LEU:HD12	2.03	0.40
32:a:223:A:H2'	32:a:224:U:C6	2.57	0.40
32:a:628:G:O2'	32:a:629:A:H5'	2.22	0.40
32:a:659:U:O2'	32:a:660:C:H5'	2.21	0.40
32:a:959:A:H2'	32:a:960:U:O4'	2.21	0.40
32:a:980:C:OP1	49:s:6:LYS:HD3	2.22	0.40
32:a:1304:G:O3'	43:m:52:ILE:CD1	2.70	0.40
32:a:1309:G:O2'	32:a:1310:G:H5'	2.22	0.40
32:a:1432:G:H1'	32:a:1468:A:N6	2.36	0.40
33:c:54:ILE:O	33:c:54:ILE:HG23	2.22	0.40
33:c:62:SER:HB2	40:j:48:ARG:C	2.45	0.40
34:d:58:GLN:O	34:d:62:ARG:HG2	2.22	0.40
35:e:131:ASN:ND2	35:e:134:ASN:H	2.19	0.40
37:g:114:SER:O	37:g:118:ARG:HG3	2.21	0.40
38:h:110:MET:HB3	38:h:114:ALA:HB3	2.03	0.40
39:i:24:ASN:O	39:i:61:ASP:HB2	2.21	0.40
39:i:49:GLN:HB3	39:i:50:PRO:CD	2.51	0.40
39:i:51:LEU:CB	39:i:56:MET:HG2	2.50	0.40
40:j:40:ILE:CG1	40:j:73:LEU:HB3	2.46	0.40
42:l:113:ARG:HD3	42:l:121:PRO:HD3	2.02	0.40
44:n:75:LYS:HG3	44:n:76:PHE:CE2	2.57	0.40
47:q:10:ARG:NE	47:q:56:ASP:O	2.55	0.40
51:7:42:LEU:HA	51:7:45:THR:OG1	2.21	0.40
51:7:61:SER:HA	51:7:224:ARG:CA	2.42	0.40
52:u:33:ARG:CZ	52:u:34:ARG:HG3	2.51	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
3	V	92/94 (98%)	62 (67%)	22 (24%)	8 (9%)	0 10
4	C	265/267 (99%)	103 (39%)	82 (31%)	80 (30%)	0 0
5	D	207/209 (99%)	90 (44%)	69 (33%)	48 (23%)	0 1
6	E	199/201 (99%)	98 (49%)	60 (30%)	41 (21%)	0 1
7	F	176/178 (99%)	95 (54%)	48 (27%)	33 (19%)	0 2
8	G	174/176 (99%)	118 (68%)	39 (22%)	17 (10%)	0 8
9	H	147/149 (99%)	88 (60%)	46 (31%)	13 (9%)	0 10
10	J	138/140 (99%)	68 (49%)	41 (30%)	29 (21%)	0 1
11	K	119/121 (98%)	71 (60%)	32 (27%)	16 (13%)	0 3
12	L	142/144 (99%)	60 (42%)	40 (28%)	42 (30%)	0 0
13	M	134/136 (98%)	69 (52%)	37 (28%)	28 (21%)	0 1
14	N	125/127 (98%)	73 (58%)	35 (28%)	17 (14%)	0 3
15	O	115/117 (98%)	64 (56%)	26 (23%)	25 (22%)	0 1
16	P	112/114 (98%)	39 (35%)	36 (32%)	37 (33%)	0 0
17	Q	115/117 (98%)	81 (70%)	23 (20%)	11 (10%)	0 8
18	R	101/103 (98%)	43 (43%)	32 (32%)	26 (26%)	0 1
19	S	108/110 (98%)	63 (58%)	27 (25%)	18 (17%)	0 2
20	T	97/99 (98%)	42 (43%)	40 (41%)	15 (16%)	0 2
21	U	100/102 (98%)	33 (33%)	46 (46%)	21 (21%)	0 1
22	W	82/84 (98%)	29 (35%)	26 (32%)	27 (33%)	0 0
23	X	61/63 (97%)	28 (46%)	21 (34%)	12 (20%)	0 1
24	Y	56/58 (97%)	29 (52%)	17 (30%)	10 (18%)	0 2
25	Z	68/70 (97%)	29 (43%)	26 (38%)	13 (19%)	0 2
26	1	54/56 (96%)	30 (56%)	15 (28%)	9 (17%)	0 2
27	2	52/54 (96%)	19 (36%)	23 (44%)	10 (19%)	0 2
28	3	44/46 (96%)	23 (52%)	14 (32%)	7 (16%)	0 2
29	4	62/64 (97%)	30 (48%)	25 (40%)	7 (11%)	0 5
30	5	36/38 (95%)	18 (50%)	9 (25%)	9 (25%)	0 1
31	6	139/141 (99%)	124 (89%)	11 (8%)	4 (3%)	3 26
33	c	204/206 (99%)	135 (66%)	49 (24%)	20 (10%)	0 8
34	d	203/205 (99%)	130 (64%)	55 (27%)	18 (9%)	0 10
35	e	148/150 (99%)	107 (72%)	34 (23%)	7 (5%)	2 19

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
36	f	98/100 (98%)	69 (70%)	23 (24%)	6 (6%)	1 15
37	g	148/150 (99%)	102 (69%)	38 (26%)	8 (5%)	1 17
38	h	127/129 (98%)	105 (83%)	19 (15%)	3 (2%)	4 29
39	i	125/127 (98%)	87 (70%)	27 (22%)	11 (9%)	0 10
40	j	96/98 (98%)	63 (66%)	21 (22%)	12 (12%)	0 4
41	k	115/117 (98%)	75 (65%)	27 (24%)	13 (11%)	0 5
42	l	121/123 (98%)	74 (61%)	30 (25%)	17 (14%)	0 3
43	m	112/114 (98%)	87 (78%)	14 (12%)	11 (10%)	0 8
44	n	92/100 (92%)	59 (64%)	24 (26%)	9 (10%)	0 8
45	o	86/88 (98%)	66 (77%)	18 (21%)	2 (2%)	5 30
46	p	80/82 (98%)	59 (74%)	17 (21%)	4 (5%)	1 18
47	q	78/80 (98%)	48 (62%)	26 (33%)	4 (5%)	1 17
48	r	53/55 (96%)	27 (51%)	19 (36%)	7 (13%)	0 3
49	s	77/79 (98%)	57 (74%)	14 (18%)	6 (8%)	1 12
50	t	83/85 (98%)	69 (83%)	8 (10%)	6 (7%)	1 13
51	7	216/218 (99%)	145 (67%)	53 (24%)	18 (8%)	0 10
52	u	49/51 (96%)	22 (45%)	12 (24%)	15 (31%)	0 0
All	All	5631/5735 (98%)	3305 (59%)	1496 (27%)	830 (15%)	0 3

All (830) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	C	21	PRO
4	C	22	GLU
4	C	28	PRO
4	C	29	PHE
4	C	31	PRO
4	C	32	LEU
4	C	47	ARG
4	C	63	ILE
4	C	64	VAL
4	C	67	LYS
4	C	68	ARG
4	C	97	ASP
4	C	103	ILE
4	C	111	ALA

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Mol	Chain	Res	Type
4	C	114	GLN
4	C	124	LYS
4	C	125	PRO
4	C	135	PRO
4	C	141	HIS
4	C	149	LYS
4	C	156	SER
4	C	176	ARG
4	C	209	ALA
4	C	226	PRO
4	C	227	VAL
4	C	239	PHE
4	C	246	PRO
4	C	258	SER
4	C	266	ILE
5	D	9	VAL
5	D	14	ILE
5	D	18	ASP
5	D	23	PRO
5	D	27	ILE
5	D	30	GLU
5	D	33	ARG
5	D	42	ASN
5	D	59	ARG
5	D	84	LEU
5	D	92	VAL
5	D	102	ALA
5	D	114	LYS
5	D	128	ARG
5	D	130	GLN
5	D	139	SER
5	D	141	ARG
5	D	154	LYS
5	D	170	VAL
6	E	4	VAL
6	E	37	ALA
6	E	44	ARG
6	E	46	GLN
6	E	49	ARG
6	E	59	PRO
6	E	84	THR
6	E	86	ALA

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Mol	Chain	Res	Type
6	E	117	ARG
6	E	129	PRO
6	E	147	LEU
6	E	148	ILE
6	E	165	HIS
6	E	196	VAL
7	F	66	ILE
7	F	73	VAL
7	F	76	PHE
7	F	131	VAL
7	F	139	GLU
7	F	149	ARG
7	F	173	ASP
8	G	6	ALA
8	G	19	ASN
8	G	91	VAL
9	H	29	PHE
9	H	38	PRO
10	J	43	GLU
10	J	44	TYR
10	J	64	VAL
10	J	74	TYR
10	J	100	VAL
10	J	101	ILE
10	J	119	PHE
11	K	35	VAL
11	K	46	ALA
11	K	53	LYS
11	K	71	ARG
11	K	72	PRO
11	K	85	VAL
11	K	89	ASN
11	K	110	GLU
11	K	120	PRO
12	L	40	SER
12	L	56	PRO
12	L	62	PRO
12	L	68	SER
12	L	73	ILE
12	L	85	VAL
12	L	90	VAL
12	L	117	THR

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Mol	Chain	Res	Type
12	L	118	THR
12	L	119	PRO
12	L	120	VAL
12	L	126	ARG
12	L	127	VAL
12	L	141	LYS
13	M	4	PRO
13	M	14	LYS
13	M	69	PRO
13	M	77	PRO
13	M	80	VAL
13	M	98	PRO
13	M	109	PRO
14	N	37	THR
14	N	89	SER
14	N	94	TYR
14	N	107	ASN
14	N	113	ILE
14	N	116	VAL
15	O	37	ALA
15	O	42	PRO
15	O	54	VAL
16	P	17	PRO
16	P	23	ASP
16	P	24	THR
16	P	52	ARG
16	P	55	HIS
16	P	60	VAL
16	P	72	VAL
16	P	76	HIS
16	P	85	VAL
16	P	90	ALA
16	P	94	ALA
17	Q	34	ALA
17	Q	91	ARG
18	R	11	GLN
18	R	15	SER
18	R	17	GLY
18	R	24	LYS
18	R	47	VAL
18	R	59	ILE
18	R	74	ILE

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Mol	Chain	Res	Type
18	R	95	ASP
18	R	101	ILE
19	S	3	THR
19	S	6	LYS
19	S	67	ASP
19	S	96	ILE
19	S	103	ILE
20	T	5	GLU
20	T	34	VAL
21	U	24	VAL
21	U	54	PRO
21	U	63	ALA
21	U	71	ILE
21	U	92	VAL
22	W	11	ASN
22	W	16	GLU
22	W	18	LYS
22	W	32	ALA
22	W	44	PHE
22	W	66	VAL
22	W	75	ASN
22	W	81	ILE
23	X	7	ARG
23	X	9	LYS
23	X	33	ALA
24	Y	9	THR
24	Y	51	SER
25	Z	7	PRO
25	Z	8	LYS
25	Z	40	CYS
25	Z	58	ASP
25	Z	60	PHE
26	1	10	SER
26	1	29	VAL
26	1	35	GLU
27	2	46	VAL
28	3	4	THR
28	3	44	VAL
29	4	15	LYS
29	4	23	HIS
29	4	31	ILE
29	4	57	VAL

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Mol	Chain	Res	Type
29	4	60	CYS
30	5	5	ALA
30	5	22	VAL
30	5	24	ARG
30	5	29	ALA
31	6	18	ASN
33	c	2	GLN
33	c	91	ALA
33	c	153	SER
34	d	18	LEU
34	d	31	CYS
34	d	191	SER
36	f	92	THR
39	i	8	THR
39	i	43	ALA
40	j	57	VAL
41	k	56	LYS
41	k	126	ARG
42	l	10	PRO
42	l	23	LEU
43	m	6	ILE
43	m	14	ALA
44	n	52	ARG
51	7	19	THR
51	7	22	TRP
51	7	163	ILE
51	7	186	VAL
52	u	14	ALA
52	u	22	CYS
3	V	45	ASP
3	V	64	VAL
3	V	71	LYS
4	C	53	ILE
4	C	72	GLY
4	C	90	ILE
4	C	98	GLY
4	C	107	LYS
4	C	140	VAL
4	C	143	VAL
4	C	157	ALA
4	C	163	ILE
4	C	194	VAL

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Mol	Chain	Res	Type
4	C	196	ASN
4	C	208	GLY
4	C	255	LYS
5	D	2	ILE
5	D	34	VAL
5	D	104	VAL
5	D	129	THR
5	D	155	VAL
5	D	162	ALA
5	D	180	VAL
5	D	206	ALA
5	D	207	VAL
6	E	23	PHE
6	E	52	VAL
6	E	61	ARG
6	E	62	GLN
6	E	82	GLY
6	E	90	GLN
6	E	104	ALA
6	E	120	VAL
6	E	128	ALA
6	E	171	ASP
6	E	186	VAL
7	F	3	LEU
7	F	7	TYR
7	F	19	PHE
7	F	31	GLU
7	F	46	LYS
7	F	57	ALA
7	F	67	THR
7	F	75	GLY
7	F	122	ASP
7	F	136	ILE
7	F	148	VAL
7	F	150	GLY
7	F	153	ILE
7	F	162	ASP
7	F	176	PHE
8	G	25	ILE
8	G	151	ARG
8	G	159	LYS
8	G	166	GLU

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Mol	Chain	Res	Type
9	H	8	LYS
9	H	41	LYS
10	J	4	PHE
10	J	6	ALA
10	J	50	THR
10	J	73	VAL
10	J	81	ILE
10	J	83	GLY
10	J	130	HIS
10	J	137	PRO
11	K	25	LEU
11	K	73	ASP
12	L	29	LYS
12	L	34	GLY
12	L	48	ARG
12	L	57	LEU
12	L	77	ILE
12	L	95	LEU
12	L	128	THR
12	L	140	GLY
13	M	11	LYS
13	M	36	VAL
13	M	58	LYS
13	M	86	LYS
13	M	104	GLU
14	N	5	LYS
14	N	8	ARG
14	N	11	ASN
14	N	90	ARG
14	N	112	TYR
15	O	9	ARG
15	O	21	LEU
15	O	28	VAL
15	O	32	PRO
15	O	47	VAL
15	O	49	VAL
15	O	63	LYS
15	O	95	SER
15	O	115	LEU
16	P	49	ILE
16	P	78	PRO
16	P	82	SER

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Mol	Chain	Res	Type
16	P	83	ILE
16	P	91	VAL
16	P	97	TYR
16	P	102	ARG
16	P	112	ARG
18	R	25	LEU
18	R	87	GLN
18	R	97	LYS
18	R	100	GLY
19	S	5	ALA
19	S	8	ARG
19	S	29	VAL
20	T	14	PRO
20	T	30	ILE
20	T	32	LEU
20	T	63	VAL
20	T	65	GLY
20	T	81	LYS
20	T	85	VAL
21	U	21	ARG
21	U	22	GLY
21	U	64	ILE
21	U	77	GLY
22	W	2	HIS
22	W	23	LYS
22	W	37	VAL
22	W	42	THR
22	W	47	GLY
22	W	49	ASN
22	W	50	VAL
22	W	52	CYS
22	W	63	ASP
22	W	65	LYS
22	W	67	LYS
22	W	68	PHE
22	W	72	GLY
23	X	16	THR
23	X	30	MET
23	X	40	SER
23	X	46	VAL
25	Z	4	ASP
25	Z	9	TYR

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Mol	Chain	Res	Type
25	Z	26	SER
25	Z	30	HIS
25	Z	32	LEU
25	Z	39	LYS
26	1	39	ARG
26	1	51	ARG
27	2	5	ARG
27	2	35	LEU
28	3	43	THR
29	4	16	THR
30	5	3	VAL
30	5	17	VAL
33	c	19	SER
33	c	25	THR
33	c	54	ILE
33	c	81	GLU
33	c	100	ILE
33	c	180	ASP
34	d	25	ARG
34	d	107	GLY
34	d	152	SER
34	d	172	VAL
34	d	192	ALA
35	e	20	VAL
35	e	128	GLY
36	f	62	MET
36	f	64	VAL
36	f	65	GLU
37	g	84	TYR
37	g	129	ASN
39	i	57	VAL
39	i	71	ILE
39	i	108	ARG
40	j	75	ASP
40	j	92	LEU
41	k	50	GLY
41	k	53	GLY
41	k	125	LYS
42	l	19	ASN
42	l	72	ASN
42	l	84	GLY
43	m	3	ILE

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Mol	Chain	Res	Type
43	m	66	GLY
43	m	104	ASN
44	n	51	PRO
44	n	61	ASN
45	o	73	ASP
46	p	79	ASN
47	q	6	THR
47	q	34	GLY
48	r	32	ILE
49	s	5	LYS
50	t	85	LEU
51	7	18	GLN
52	u	32	ARG
52	u	34	ARG
3	V	54	ALA
4	C	4	LYS
4	C	51	ARG
4	C	56	GLY
4	C	58	LYS
4	C	59	GLN
4	C	65	ASP
4	C	91	ALA
4	C	93	VAL
4	C	142	ASN
4	C	151	GLY
4	C	164	VAL
4	C	165	ALA
4	C	173	LEU
4	C	214	GLY
5	D	69	ALA
5	D	99	GLU
5	D	140	HIS
5	D	156	PHE
5	D	169	ARG
5	D	174	SER
5	D	185	ASN
5	D	190	LYS
5	D	193	VAL
5	D	205	PRO
6	E	54	GLY
6	E	68	ALA
6	E	69	ARG

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Mol	Chain	Res	Type
6	E	93	SER
6	E	127	GLU
6	E	191	ASP
7	F	10	GLU
7	F	14	LYS
7	F	81	GLY
7	F	83	PRO
7	F	87	LYS
7	F	114	ARG
8	G	45	ALA
8	G	127	GLN
9	H	20	ASN
9	H	37	VAL
9	H	127	GLU
10	J	46	PRO
10	J	121	LYS
10	J	127	GLY
10	J	138	GLN
11	K	3	GLN
11	K	121	GLU
12	L	27	LEU
12	L	64	PHE
12	L	82	LEU
12	L	84	LYS
12	L	91	ASP
12	L	94	THR
12	L	143	GLU
13	M	12	MET
13	M	72	PRO
13	M	81	ARG
13	M	97	GLN
13	M	105	MET
13	M	120	ALA
13	M	131	VAL
14	N	104	ALA
14	N	115	LEU
15	O	7	ARG
15	O	38	GLN
15	O	57	ALA
15	O	68	LYS
16	P	12	MET
16	P	25	VAL

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Mol	Chain	Res	Type
16	P	39	LEU
16	P	56	SER
16	P	81	ASP
16	P	105	LYS
17	Q	23	TYR
17	Q	26	ALA
17	Q	73	ILE
17	Q	88	GLU
17	Q	92	LYS
18	R	7	SER
18	R	10	LYS
18	R	29	THR
18	R	37	GLU
18	R	41	ILE
18	R	72	VAL
18	R	73	LYS
18	R	98	ILE
19	S	11	ARG
19	S	12	SER
19	S	104	THR
20	T	13	ALA
20	T	15	HIS
20	T	74	ILE
20	T	96	VAL
21	U	14	THR
21	U	35	VAL
21	U	39	ASN
21	U	59	GLU
21	U	60	LYS
21	U	72	PHE
22	W	5	ALA
22	W	77	LYS
23	X	4	LYS
23	X	28	LEU
24	Y	2	LYS
24	Y	10	ARG
24	Y	12	ALA
24	Y	14	GLY
24	Y	16	LEU
24	Y	57	GLU
27	2	16	THR
27	2	43	ARG

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Mol	Chain	Res	Type
27	2	47	ILE
29	4	26	ALA
31	6	23	VAL
33	c	59	PRO
33	c	78	LYS
33	c	136	ALA
34	d	27	ILE
34	d	28	ASP
34	d	43	ARG
34	d	151	GLN
34	d	177	MET
35	e	43	GLY
36	f	94	HIS
37	g	89	GLU
39	i	44	ARG
39	i	55	ASP
39	i	127	SER
40	j	62	ARG
40	j	93	ALA
41	k	70	ALA
41	k	77	GLY
41	k	91	GLY
42	l	13	ARG
42	l	60	PHE
42	l	122	LYS
43	m	7	ASN
43	m	22	TYR
43	m	65	GLU
43	m	98	GLY
44	n	21	ALA
44	n	74	ARG
44	n	80	ARG
47	q	5	ARG
48	r	21	ASP
48	r	71	ASP
50	t	59	ARG
51	7	20	ARG
51	7	76	SER
52	u	6	ARG
52	u	24	LYS
52	u	25	ALA
52	u	40	PRO

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Mol	Chain	Res	Type
4	C	61	TYR
4	C	66	PHE
4	C	224	MET
4	C	230	PRO
4	C	231	HIS
4	C	251	THR
4	C	265	PHE
5	D	73	VAL
5	D	125	TRP
5	D	201	LEU
6	E	39	ALA
6	E	53	THR
6	E	112	LEU
6	E	123	LYS
6	E	153	LEU
7	F	175	PRO
8	G	11	PRO
8	G	155	PRO
9	H	12	LEU
9	H	118	PRO
10	J	11	VAL
10	J	85	LYS
12	L	23	ILE
12	L	30	THR
12	L	33	ARG
12	L	35	HIS
12	L	136	GLU
13	M	3	GLN
13	M	21	ALA
13	M	59	ARG
13	M	70	ASP
13	M	71	LYS
13	M	127	LYS
14	N	20	MET
15	O	19	GLN
15	O	55	GLU
15	O	80	GLU
16	P	26	GLU
16	P	79	VAL
16	P	96	LEU
16	P	98	TYR
17	Q	21	LYS

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Mol	Chain	Res	Type
17	Q	24	TYR
18	R	21	ARG
18	R	55	ASP
19	S	13	SER
19	S	34	ASP
19	S	71	VAL
19	S	80	PRO
20	T	61	LEU
20	T	66	LYS
21	U	7	ASP
21	U	18	LYS
22	W	6	GLY
22	W	38	ARG
23	X	24	GLU
23	X	43	LEU
25	Z	42	PRO
26	1	53	VAL
27	2	21	THR
28	3	36	ALA
30	5	7	VAL
30	5	20	ASP
31	6	49	GLU
33	c	65	VAL
33	c	186	SER
34	d	29	THR
35	e	25	LYS
35	e	34	ALA
36	f	54	LEU
37	g	18	GLY
37	g	57	GLU
37	g	75	LYS
37	g	86	VAL
38	h	46	GLU
39	i	67	LYS
40	j	56	HIS
40	j	61	ALA
40	j	74	VAL
41	k	57	SER
41	k	108	ASN
42	l	14	LYS
42	l	15	VAL
42	l	47	ALA

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Mol	Chain	Res	Type
42	l	56	LEU
42	l	67	GLY
42	l	120	ARG
44	n	31	SER
44	n	94	GLY
46	p	42	ILE
47	q	69	THR
48	r	22	TYR
48	r	47	ARG
49	s	27	LYS
49	s	36	ARG
49	s	65	MET
51	7	11	ALA
51	7	41	ASN
51	7	88	GLN
51	7	200	PRO
52	u	26	GLY
52	u	33	ARG
52	u	36	PHE
52	u	37	TYR
52	u	41	THR
3	V	55	GLU
4	C	50	THR
4	C	85	ASN
4	C	115	ILE
4	C	218	THR
4	C	225	ASN
4	C	236	GLY
5	D	52	THR
5	D	95	SER
5	D	101	PHE
5	D	189	VAL
7	F	34	THR
7	F	36	ASN
7	F	88	VAL
8	G	42	VAL
9	H	75	LEU
10	J	72	LYS
10	J	97	PRO
10	J	132	HIS
12	L	83	ALA
12	L	92	LEU

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Mol	Chain	Res	Type
12	L	104	GLN
12	L	113	ALA
14	N	56	LYS
14	N	102	PHE
15	O	52	SER
15	O	90	VAL
16	P	3	ILE
16	P	19	PHE
16	P	59	THR
16	P	92	ARG
16	P	110	LYS
17	Q	93	ILE
18	R	77	PHE
19	S	28	LYS
19	S	69	LEU
19	S	99	ARG
21	U	56	GLY
21	U	84	PHE
23	X	35	GLY
24	Y	17	PRO
24	Y	53	MET
25	Z	66	ILE
26	1	5	ASN
28	3	8	SER
31	6	14	ALA
33	c	14	VAL
33	c	145	ALA
33	c	167	TYR
35	e	146	MET
39	i	122	ARG
40	j	36	VAL
41	k	127	ARG
42	l	42	LYS
42	l	121	PRO
43	m	105	ALA
45	o	17	ASP
48	r	20	ILE
49	s	8	PRO
50	t	5	SER
50	t	46	ALA
51	7	24	PRO
51	7	27	LYS

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Mol	Chain	Res	Type
51	7	87	ASP
51	7	94	ARG
4	C	14	HIS
4	C	17	LYS
4	C	30	ALA
4	C	155	ARG
4	C	223	ALA
5	D	175	LEU
6	E	24	ASN
6	E	199	MET
8	G	32	LEU
8	G	59	ASP
10	J	84	ILE
12	L	37	GLY
18	R	4	VAL
27	2	38	PHE
28	3	6	GLN
33	c	26	LYS
33	c	112	ALA
34	d	6	PRO
35	e	107	GLY
37	g	6	ILE
40	j	95	GLY
41	k	106	ILE
44	n	33	VAL
49	s	39	ILE
51	7	205	ALA
52	u	13	VAL
3	V	72	VAL
3	V	84	PRO
4	C	16	VAL
6	E	113	VAL
8	G	99	GLY
13	M	26	VAL
13	M	89	VAL
14	N	39	PRO
16	P	21	PRO
16	P	69	VAL
17	Q	89	ILE
28	3	9	VAL
33	c	90	VAL
34	d	63	ILE

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Mol	Chain	Res	Type
34	d	175	GLY
41	k	119	GLY
46	p	41	PRO
51	7	157	PRO
4	C	158	GLY
10	J	18	VAL
10	J	22	GLY
10	J	103	ILE
11	K	26	GLY
12	L	139	GLY
12	L	142	ILE
15	O	27	VAL
15	O	31	THR
22	W	35	ILE
27	2	30	PRO
30	5	25	VAL
46	p	49	GLY
50	t	3	ILE
4	C	46	GLY
4	C	108	GLY
4	C	171	VAL
4	C	217	PRO
5	D	98	VAL
7	F	39	VAL
9	H	34	GLY
9	H	95	GLY
10	J	66	GLY
11	K	115	ILE
13	M	37	GLY
15	O	87	ILE
21	U	4	ILE
34	d	37	PRO
38	h	71	VAL
40	j	41	PRO
40	j	96	VAL
42	l	62	VAL
43	m	23	GLY
50	t	41	GLY
52	u	52	VAL
5	D	203	VAL
6	E	76	PRO
6	E	175	ILE

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Mol	Chain	Res	Type
8	G	130	ILE
9	H	9	VAL
12	L	11	GLY
18	R	27	ILE
22	W	51	GLY
26	1	34	GLY
27	2	42	VAL
38	h	77	VAL
39	i	110	VAL
48	r	43	ILE
51	7	150	ILE
3	V	70	ILE
8	G	92	GLY
11	K	15	GLY
15	O	22	GLY
16	P	4	ILE
21	U	48	VAL
26	1	42	ILE

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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
3	V	78/78 (100%)	63 (81%)	15 (19%)	1 9
4	C	213/213 (100%)	137 (64%)	76 (36%)	0 1
5	D	164/164 (100%)	108 (66%)	56 (34%)	0 1
6	E	165/165 (100%)	116 (70%)	49 (30%)	0 2
7	F	149/149 (100%)	123 (83%)	26 (17%)	2 12
8	G	137/137 (100%)	106 (77%)	31 (23%)	1 5
9	H	114/114 (100%)	85 (75%)	29 (25%)	0 4
10	J	114/114 (100%)	84 (74%)	30 (26%)	0 3
11	K	102/102 (100%)	78 (76%)	24 (24%)	1 5
12	L	103/103 (100%)	57 (55%)	46 (45%)	0 0

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
13	M	109/109 (100%)	78 (72%)	31 (28%)	0 3
14	N	103/103 (100%)	80 (78%)	23 (22%)	1 6
15	O	87/87 (100%)	56 (64%)	31 (36%)	0 1
16	P	99/99 (100%)	76 (77%)	23 (23%)	1 5
17	Q	89/89 (100%)	67 (75%)	22 (25%)	1 4
18	R	84/84 (100%)	68 (81%)	16 (19%)	1 10
19	S	93/93 (100%)	72 (77%)	21 (23%)	1 5
20	T	83/83 (100%)	54 (65%)	29 (35%)	0 1
21	U	83/83 (100%)	62 (75%)	21 (25%)	0 4
22	W	62/62 (100%)	44 (71%)	18 (29%)	0 3
23	X	55/55 (100%)	36 (66%)	19 (34%)	0 1
24	Y	48/48 (100%)	37 (77%)	11 (23%)	1 5
25	Z	62/62 (100%)	43 (69%)	19 (31%)	0 2
26	1	47/47 (100%)	31 (66%)	16 (34%)	0 1
27	2	48/48 (100%)	30 (62%)	18 (38%)	0 1
28	3	38/38 (100%)	28 (74%)	10 (26%)	0 3
29	4	51/51 (100%)	34 (67%)	17 (33%)	0 2
30	5	34/34 (100%)	22 (65%)	12 (35%)	0 1
31	6	109/109 (100%)	106 (97%)	3 (3%)	38 59
33	c	170/170 (100%)	145 (85%)	25 (15%)	3 16
34	d	172/172 (100%)	137 (80%)	35 (20%)	1 8
35	e	113/113 (100%)	93 (82%)	20 (18%)	2 12
36	f	87/87 (100%)	68 (78%)	19 (22%)	1 6
37	g	123/123 (100%)	101 (82%)	22 (18%)	2 12
38	h	104/104 (100%)	87 (84%)	17 (16%)	2 14
39	i	105/105 (100%)	83 (79%)	22 (21%)	1 7
40	j	86/86 (100%)	70 (81%)	16 (19%)	1 11
41	k	90/90 (100%)	74 (82%)	16 (18%)	2 12
42	l	103/103 (100%)	89 (86%)	14 (14%)	3 18
43	m	92/92 (100%)	72 (78%)	20 (22%)	1 6
44	n	79/83 (95%)	66 (84%)	13 (16%)	2 13

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
45	o	76/76 (100%)	70 (92%)	6 (8%)	11 36
46	p	65/65 (100%)	54 (83%)	11 (17%)	2 13
47	q	74/74 (100%)	59 (80%)	15 (20%)	1 8
48	r	48/48 (100%)	42 (88%)	6 (12%)	4 20
49	s	70/70 (100%)	60 (86%)	10 (14%)	3 17
50	t	65/65 (100%)	57 (88%)	8 (12%)	4 20
51	7	180/180 (100%)	144 (80%)	36 (20%)	1 9
52	u	44/44 (100%)	36 (82%)	8 (18%)	2 11
All	All	4669/4673 (100%)	3588 (77%)	1081 (23%)	2 5

All (1081) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	V	3	THR
3	V	9	ARG
3	V	29	ILE
3	V	35	GLU
3	V	40	ILE
3	V	42	LEU
3	V	46	LYS
3	V	51	GLN
3	V	59	GLU
3	V	69	GLU
3	V	70	ILE
3	V	73	LYS
3	V	77	VAL
3	V	87	GLN
3	V	89	ILE
4	C	3	VAL
4	C	5	CYS
4	C	9	SER
4	C	10	PRO
4	C	13	ARG
4	C	14	HIS
4	C	17	LYS
4	C	22	GLU
4	C	23	LEU
4	C	27	LYS
4	C	28	PRO

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Mol	Chain	Res	Type
4	C	32	LEU
4	C	33	LEU
4	C	35	LYS
4	C	36	ASN
4	C	38	LYS
4	C	43	ASN
4	C	44	ASN
4	C	51	ARG
4	C	58	LYS
4	C	59	GLN
4	C	62	ARG
4	C	64	VAL
4	C	68	ARG
4	C	78	GLU
4	C	84	PRO
4	C	86	ARG
4	C	94	LEU
4	C	100	ARG
4	C	102	TYR
4	C	110	LYS
4	C	124	LYS
4	C	127	ASN
4	C	128	THR
4	C	129	LEU
4	C	131	MET
4	C	136	VAL
4	C	144	GLU
4	C	145	MET
4	C	152	GLN
4	C	155	ARG
4	C	162	GLN
4	C	171	VAL
4	C	172	THR
4	C	175	LEU
4	C	179	GLU
4	C	181	ARG
4	C	184	GLU
4	C	186	ASP
4	C	188	ARG
4	C	191	LEU
4	C	194	VAL
4	C	196	ASN

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Mol	Chain	Res	Type
4	C	199	HIS
4	C	201	LEU
4	C	203	VAL
4	C	206	LYS
4	C	213	ARG
4	C	216	ARG
4	C	218	THR
4	C	220	ARG
4	C	222	THR
4	C	224	MET
4	C	225	ASN
4	C	227	VAL
4	C	228	ASP
4	C	231	HIS
4	C	235	GLU
4	C	237	ARG
4	C	244	VAL
4	C	246	PRO
4	C	249	VAL
4	C	250	GLN
4	C	254	LYS
4	C	261	ARG
4	C	268	ARG
5	D	1	MET
5	D	4	LEU
5	D	8	LYS
5	D	20	VAL
5	D	21	SER
5	D	24	VAL
5	D	25	THR
5	D	26	VAL
5	D	28	GLU
5	D	30	GLU
5	D	34	VAL
5	D	35	THR
5	D	36	GLN
5	D	37	VAL
5	D	38	LYS
5	D	39	ASP
5	D	46	ARG
5	D	48	ILE
5	D	50	VAL

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Mol	Chain	Res	Type
5	D	56	LYS
5	D	59	ARG
5	D	62	LYS
5	D	64	GLU
5	D	67	HIS
5	D	70	LYS
5	D	84	LEU
5	D	86	GLU
5	D	89	GLU
5	D	96	ILE
5	D	99	GLU
5	D	105	LYS
5	D	107	VAL
5	D	113	SER
5	D	127	PHE
5	D	128	ARG
5	D	133	THR
5	D	138	LEU
5	D	142	VAL
5	D	148	GLN
5	D	150	GLN
5	D	151	THR
5	D	154	LYS
5	D	155	VAL
5	D	157	LYS
5	D	159	LYS
5	D	160	LYS
5	D	161	MET
5	D	164	GLN
5	D	165	MET
5	D	167	ASN
5	D	176	ASP
5	D	177	VAL
5	D	178	VAL
5	D	184	ARG
5	D	197	THR
5	D	207	VAL
6	E	2	GLU
6	E	4	VAL
6	E	5	LEU
6	E	10	SER
6	E	18	THR

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Mol	Chain	Res	Type
6	E	22	ASP
6	E	28	VAL
6	E	41	GLN
6	E	43	THR
6	E	44	ARG
6	E	46	GLN
6	E	47	LYS
6	E	49	ARG
6	E	55	SER
6	E	57	LYS
6	E	58	LYS
6	E	61	ARG
6	E	67	ARG
6	E	69	ARG
6	E	70	SER
6	E	74	LYS
6	E	78	TRP
6	E	88	ARG
6	E	97	ASN
6	E	98	LYS
6	E	106	LYS
6	E	107	SER
6	E	109	LEU
6	E	113	VAL
6	E	114	ARG
6	E	118	LEU
6	E	132	LYS
6	E	133	LEU
6	E	134	LEU
6	E	148	ILE
6	E	150	THR
6	E	152	GLU
6	E	155	GLU
6	E	157	LEU
6	E	159	LEU
6	E	164	LEU
6	E	169	VAL
6	E	179	SER
6	E	184	ASP
6	E	188	MET
6	E	189	THR
6	E	193	VAL

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Mol	Chain	Res	Type
6	E	197	GLU
6	E	200	LEU
7	F	5	ASP
7	F	9	ASP
7	F	10	GLU
7	F	14	LYS
7	F	16	MET
7	F	17	THR
7	F	21	TYR
7	F	37	MET
7	F	55	ASP
7	F	56	LEU
7	F	59	ILE
7	F	63	LYS
7	F	87	LYS
7	F	93	GLU
7	F	97	GLU
7	F	102	LEU
7	F	126	ASN
7	F	139	GLU
7	F	142	TYR
7	F	143	ASP
7	F	147	ARG
7	F	151	LEU
7	F	152	ASP
7	F	168	LEU
7	F	172	PHE
7	F	174	PHE
8	G	2	ARG
8	G	3	VAL
8	G	5	LYS
8	G	18	ILE
8	G	23	ILE
8	G	25	ILE
8	G	29	ASN
8	G	34	ARG
8	G	46	ASP
8	G	47	ASN
8	G	49	LEU
8	G	55	ASP
8	G	57	TYR
8	G	59	ASP

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Mol	Chain	Res	Type
8	G	70	LEU
8	G	72	ASN
8	G	80	GLU
8	G	84	LYS
8	G	86	LEU
8	G	94	ARG
8	G	98	LYS
8	G	110	HIS
8	G	121	THR
8	G	128	THR
8	G	133	LYS
8	G	143	VAL
8	G	146	ASP
8	G	150	TYR
8	G	151	ARG
8	G	152	ARG
8	G	176	LYS
9	H	1	MET
9	H	2	GLN
9	H	5	LEU
9	H	7	ASP
9	H	8	LYS
9	H	18	GLN
9	H	22	LYS
9	H	27	ARG
9	H	30	LEU
9	H	33	GLN
9	H	35	LYS
9	H	47	PHE
9	H	50	ARG
9	H	54	LEU
9	H	55	GLU
9	H	57	LYS
9	H	68	ARG
9	H	70	GLU
9	H	73	ASN
9	H	75	LEU
9	H	77	THR
9	H	89	LYS
9	H	96	THR
9	H	98	ASP
9	H	112	LYS

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Mol	Chain	Res	Type
9	H	124	THR
9	H	134	VAL
9	H	135	HIS
9	H	139	PHE
10	J	3	THR
10	J	12	LYS
10	J	15	TRP
10	J	21	THR
10	J	23	LYS
10	J	24	THR
10	J	25	LEU
10	J	28	LEU
10	J	31	GLU
10	J	34	ARG
10	J	35	ARG
10	J	36	LEU
10	J	39	LYS
10	J	58	ASN
10	J	61	LYS
10	J	64	VAL
10	J	68	LYS
10	J	69	ARG
10	J	70	THR
10	J	90	GLU
10	J	96	ARG
10	J	98	GLU
10	J	114	LEU
10	J	116	ARG
10	J	118	MET
10	J	122	LEU
10	J	130	HIS
10	J	132	HIS
10	J	136	GLN
10	J	139	VAL
11	K	4	GLU
11	K	9	ASN
11	K	17	ARG
11	K	19	VAL
11	K	20	MET
11	K	22	ILE
11	K	30	ARG
11	K	31	ARG

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Mol	Chain	Res	Type
11	K	32	TYR
11	K	41	ILE
11	K	54	LYS
11	K	58	LEU
11	K	62	VAL
11	K	71	ARG
11	K	86	LEU
11	K	87	LEU
11	K	93	GLN
11	K	95	ILE
11	K	107	LEU
11	K	108	ARG
11	K	109	SER
11	K	110	GLU
11	K	116	ILE
11	K	120	PRO
12	L	1	MET
12	L	2	ARG
12	L	7	SER
12	L	13	LYS
12	L	14	LYS
12	L	18	ARG
12	L	27	LEU
12	L	29	LYS
12	L	33	ARG
12	L	36	LYS
12	L	39	LYS
12	L	41	ARG
12	L	47	ARG
12	L	55	MET
12	L	56	PRO
12	L	57	LEU
12	L	59	ARG
12	L	61	LEU
12	L	70	LYS
12	L	74	THR
12	L	76	GLU
12	L	77	ILE
12	L	78	ARG
12	L	82	LEU
12	L	84	LYS
12	L	90	VAL

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Mol	Chain	Res	Type
12	L	91	ASP
12	L	92	LEU
12	L	96	LYS
12	L	103	ILE
12	L	104	GLN
12	L	105	ILE
12	L	106	GLU
12	L	107	PHE
12	L	110	VAL
12	L	111	ILE
12	L	112	LEU
12	L	115	GLU
12	L	116	VAL
12	L	118	THR
12	L	121	THR
12	L	122	VAL
12	L	126	ARG
12	L	127	VAL
12	L	141	LYS
12	L	143	GLU
13	M	1	MET
13	M	3	GLN
13	M	8	LYS
13	M	9	PHE
13	M	11	LYS
13	M	12	MET
13	M	14	LYS
13	M	18	ARG
13	M	22	GLN
13	M	33	LEU
13	M	36	VAL
13	M	45	GLN
13	M	54	THR
13	M	55	ARG
13	M	63	ILE
13	M	71	LYS
13	M	72	PRO
13	M	73	ILE
13	M	76	LYS
13	M	84	LYS
13	M	88	ASN
13	M	93	VAL

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Mol	Chain	Res	Type
13	M	96	ILE
13	M	100	LYS
13	M	105	MET
13	M	109	PRO
13	M	117	PHE
13	M	118	LYS
13	M	132	THR
13	M	133	LYS
13	M	136	MET
14	N	1	MET
14	N	3	HIS
14	N	9	GLN
14	N	10	LEU
14	N	11	ASN
14	N	13	ASN
14	N	21	PHE
14	N	33	ILE
14	N	34	ILE
14	N	35	LYS
14	N	39	PRO
14	N	48	VAL
14	N	57	THR
14	N	65	LEU
14	N	73	ASN
14	N	75	ILE
14	N	98	LEU
14	N	99	LYS
14	N	103	ARG
14	N	112	TYR
14	N	116	VAL
14	N	119	SER
14	N	120	GLU
15	O	1	MET
15	O	2	ASP
15	O	3	LYS
15	O	5	SER
15	O	9	ARG
15	O	10	ARG
15	O	13	ARG
15	O	21	LEU
15	O	25	ARG
15	O	29	HIS

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Mol	Chain	Res	Type
15	O	31	THR
15	O	32	PRO
15	O	34	HIS
15	O	35	ILE
15	O	38	GLN
15	O	40	ILE
15	O	56	LYS
15	O	60	GLU
15	O	62	LEU
15	O	64	TYR
15	O	67	ASN
15	O	68	LYS
15	O	74	VAL
15	O	84	GLU
15	O	85	LYS
15	O	87	ILE
15	O	93	ASP
15	O	97	PHE
15	O	98	GLN
15	O	112	GLU
15	O	116	GLN
16	P	2	ASN
16	P	11	GLN
16	P	12	MET
16	P	15	ASP
16	P	24	THR
16	P	32	VAL
16	P	38	ARG
16	P	42	PHE
16	P	46	VAL
16	P	47	ILE
16	P	50	ARG
16	P	52	ARG
16	P	55	HIS
16	P	56	SER
16	P	60	VAL
16	P	74	GLN
16	P	76	HIS
16	P	79	VAL
16	P	88	ARG
16	P	100	ARG
16	P	108	ARG

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Mol	Chain	Res	Type
16	P	111	GLU
16	P	113	LEU
17	Q	3	VAL
17	Q	10	ARG
17	Q	12	ARG
17	Q	21	LYS
17	Q	32	ARG
17	Q	36	GLN
17	Q	38	VAL
17	Q	39	ILE
17	Q	55	GLN
17	Q	65	ASN
17	Q	71	ASN
17	Q	80	ASN
17	Q	84	LYS
17	Q	87	VAL
17	Q	90	ASP
17	Q	91	ARG
17	Q	92	LYS
17	Q	94	LEU
17	Q	101	ASP
17	Q	102	LYS
17	Q	108	LEU
17	Q	113	LYS
18	R	12	HIS
18	R	13	ARG
18	R	16	GLU
18	R	18	GLN
18	R	23	GLU
18	R	25	LEU
18	R	40	MET
18	R	41	ILE
18	R	43	ASN
18	R	52	PRO
18	R	53	PHE
18	R	66	HIS
18	R	79	ARG
18	R	83	TYR
18	R	94	THR
18	R	95	ASP
19	S	3	THR
19	S	4	ILE

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Mol	Chain	Res	Type
19	S	6	LYS
19	S	9	HIS
19	S	13	SER
19	S	16	LYS
19	S	19	LEU
19	S	28	LYS
19	S	37	THR
19	S	59	GLU
19	S	60	HIS
19	S	67	ASP
19	S	69	LEU
19	S	80	PRO
19	S	84	ARG
19	S	88	ARG
19	S	90	LYS
19	S	94	ASP
19	S	95	ARG
19	S	102	HIS
19	S	110	ARG
20	T	1	MET
20	T	2	ILE
20	T	5	GLU
20	T	6	ARG
20	T	8	LEU
20	T	10	VAL
20	T	11	LEU
20	T	15	HIS
20	T	21	SER
20	T	25	GLU
20	T	26	LYS
20	T	28	ASN
20	T	30	ILE
20	T	31	VAL
20	T	36	LYS
20	T	44	LYS
20	T	47	VAL
20	T	48	GLN
20	T	52	GLU
20	T	60	THR
20	T	61	LEU
20	T	66	LYS
20	T	68	LYS

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Mol	Chain	Res	Type
20	T	69	ARG
20	T	79	ASP
20	T	85	VAL
20	T	89	GLU
20	T	91	GLN
20	T	94	ASP
21	U	3	LYS
21	U	13	LEU
21	U	33	VAL
21	U	38	ILE
21	U	43	LYS
21	U	48	VAL
21	U	59	GLU
21	U	61	GLU
21	U	64	ILE
21	U	66	VAL
21	U	68	ASN
21	U	71	ILE
21	U	72	PHE
21	U	80	ASP
21	U	81	ARG
21	U	85	ARG
21	U	88	ASP
21	U	90	LYS
21	U	93	ARG
21	U	95	PHE
21	U	100	GLU
22	W	2	HIS
22	W	8	SER
22	W	10	ARG
22	W	18	LYS
22	W	19	ARG
22	W	20	LEU
22	W	23	LYS
22	W	35	ILE
22	W	36	ILE
22	W	40	ARG
22	W	45	HIS
22	W	54	ARG
22	W	55	ASP
22	W	65	LYS
22	W	69	GLU

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Mol	Chain	Res	Type
22	W	76	ARG
22	W	81	ILE
22	W	84	GLU
23	X	2	LYS
23	X	5	GLU
23	X	7	ARG
23	X	8	GLU
23	X	12	GLU
23	X	14	LEU
23	X	15	ASN
23	X	17	GLU
23	X	18	LEU
23	X	34	SER
23	X	36	GLN
23	X	38	GLN
23	X	41	HIS
23	X	42	LEU
23	X	44	LYS
23	X	45	GLN
23	X	50	VAL
23	X	53	VAL
23	X	60	LYS
24	Y	6	ILE
24	Y	7	THR
24	Y	8	GLN
24	Y	9	THR
24	Y	10	ARG
24	Y	15	ARG
24	Y	16	LEU
24	Y	20	LYS
24	Y	31	ILE
24	Y	37	ARG
24	Y	39	ASP
25	Z	4	ASP
25	Z	6	HIS
25	Z	8	LYS
25	Z	12	ILE
25	Z	13	THR
25	Z	15	SER
25	Z	18	CYS
25	Z	24	ILE
25	Z	25	ARG

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Mol	Chain	Res	Type
25	Z	30	HIS
25	Z	32	LEU
25	Z	33	ASN
25	Z	35	ASP
25	Z	40	CYS
25	Z	49	ARG
25	Z	51	VAL
25	Z	58	ASP
25	Z	66	ILE
25	Z	70	LYS
26	1	3	GLN
26	1	4	GLN
26	1	5	ASN
26	1	11	LYS
26	1	12	ARG
26	1	14	MET
26	1	21	LEU
26	1	25	THR
26	1	27	LEU
26	1	29	VAL
26	1	32	THR
26	1	35	GLU
26	1	39	ARG
26	1	49	ARG
26	1	51	ARG
26	1	52	LYS
27	2	4	ILE
27	2	5	ARG
27	2	6	GLU
27	2	7	LYS
27	2	8	ILE
27	2	9	LYS
27	2	23	THR
27	2	24	LYS
27	2	32	LYS
27	2	33	LEU
27	2	34	GLU
27	2	36	LYS
27	2	42	VAL
27	2	44	GLN
27	2	47	ILE
27	2	49	LYS

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Mol	Chain	Res	Type
27	2	52	LYS
27	2	53	ILE
28	3	2	LYS
28	3	11	LYS
28	3	12	ARG
28	3	21	ARG
28	3	25	LYS
28	3	26	ASN
28	3	29	GLN
28	3	33	ARG
28	3	45	SER
28	3	46	LYS
29	4	3	ILE
29	4	4	LYS
29	4	6	VAL
29	4	12	ARG
29	4	18	LYS
29	4	21	PHE
29	4	25	HIS
29	4	28	LEU
29	4	29	ARG
29	4	32	LEU
29	4	35	LYS
29	4	37	THR
29	4	41	ARG
29	4	43	LEU
29	4	44	ARG
29	4	46	LYS
29	4	51	LYS
30	5	2	LYS
30	5	4	ARG
30	5	8	LYS
30	5	9	LYS
30	5	12	ARG
30	5	16	ILE
30	5	19	ARG
30	5	20	ASP
30	5	23	ILE
30	5	33	HIS
30	5	36	ARG
30	5	37	GLN
31	6	2	LYS

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Mol	Chain	Res	Type
31	6	33	ASN
31	6	141	ASP
33	c	14	VAL
33	c	20	THR
33	c	26	LYS
33	c	31	ASN
33	c	40	GLN
33	c	42	LEU
33	c	69	THR
33	c	100	ILE
33	c	102	ILE
33	c	113	LYS
33	c	141	MET
33	c	143	LEU
33	c	146	LYS
33	c	156	LEU
33	c	164	THR
33	c	165	GLU
33	c	166	TRP
33	c	174	LEU
33	c	176	THR
33	c	180	ASP
33	c	185	THR
33	c	189	HIS
33	c	190	THR
33	c	192	TYR
33	c	205	GLU
34	d	7	LYS
34	d	8	LEU
34	d	10	LEU
34	d	20	LEU
34	d	21	LYS
34	d	25	ARG
34	d	35	GLN
34	d	39	GLN
34	d	54	LEU
34	d	56	GLU
34	d	58	GLN
34	d	64	TYR
34	d	69	ARG
34	d	77	GLU
34	d	80	ARG

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Mol	Chain	Res	Type
34	d	85	THR
34	d	87	GLU
34	d	94	GLU
34	d	131	ILE
34	d	133	SER
34	d	137	SER
34	d	147	LYS
34	d	150	LYS
34	d	153	ARG
34	d	154	VAL
34	d	155	LYS
34	d	158	LEU
34	d	160	LEU
34	d	172	VAL
34	d	176	LYS
34	d	177	MET
34	d	183	ARG
34	d	186	GLU
34	d	189	ASP
34	d	194	ILE
35	e	11	GLN
35	e	23	THR
35	e	25	LYS
35	e	32	PHE
35	e	45	VAL
35	e	55	VAL
35	e	63	MET
35	e	68	ARG
35	e	81	GLN
35	e	92	ARG
35	e	102	THR
35	e	110	MET
35	e	119	VAL
35	e	122	VAL
35	e	123	LEU
35	e	125	LYS
35	e	139	THR
35	e	143	LEU
35	e	151	MET
35	e	158	LYS
36	f	37	HIS
36	f	38	ARG

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Mol	Chain	Res	Type
36	f	39	LEU
36	f	46	GLN
36	f	53	LYS
36	f	54	LEU
36	f	55	HIS
36	f	61	LEU
36	f	65	GLU
36	f	69	GLU
36	f	71	ILE
36	f	73	GLU
36	f	75	GLU
36	f	76	THR
36	f	78	PHE
36	f	84	VAL
36	f	87	SER
36	f	88	MET
36	f	92	THR
37	g	3	ARG
37	g	10	LYS
37	g	11	ILE
37	g	14	ASP
37	g	16	LYS
37	g	19	SER
37	g	21	LEU
37	g	22	LEU
37	g	26	VAL
37	g	29	LEU
37	g	42	VAL
37	g	46	LEU
37	g	52	ARG
37	g	68	VAL
37	g	72	VAL
37	g	74	VAL
37	g	84	TYR
37	g	89	GLU
37	g	94	ARG
37	g	112	ASP
37	g	114	SER
37	g	119	LEU
38	h	3	GLN
38	h	4	ASP
38	h	17	GLN

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Mol	Chain	Res	Type
38	h	25	THR
38	h	30	LYS
38	h	37	ASN
38	h	45	ILE
38	h	55	LYS
38	h	61	THR
38	h	74	ILE
38	h	76	ARG
38	h	82	LEU
38	h	83	ARG
38	h	93	LYS
38	h	111	THR
38	h	113	ARG
38	h	120	LEU
39	i	3	ASN
39	i	26	LYS
39	i	30	ASN
39	i	35	GLU
39	i	36	GLN
39	i	38	PHE
39	i	41	GLU
39	i	44	ARG
39	i	53	LEU
39	i	56	MET
39	i	58	GLU
39	i	59	LYS
39	i	60	LEU
39	i	61	ASP
39	i	84	ARG
39	i	86	LEU
39	i	87	MET
39	i	106	ASP
39	i	115	VAL
39	i	119	LYS
39	i	121	ARG
39	i	126	PHE
40	j	11	LYS
40	j	14	ASP
40	j	18	ILE
40	j	40	ILE
40	j	48	ARG
40	j	50	THR

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Mol	Chain	Res	Type
40	j	57	VAL
40	j	71	LEU
40	j	73	LEU
40	j	75	ASP
40	j	81	GLU
40	j	88	MET
40	j	89	ARG
40	j	92	LEU
40	j	98	VAL
40	j	102	LEU
41	k	33	ILE
41	k	36	ARG
41	k	52	ARG
41	k	56	LYS
41	k	58	THR
41	k	71	ASP
41	k	73	VAL
41	k	74	LYS
41	k	83	VAL
41	k	84	MET
41	k	85	VAL
41	k	92	ARG
41	k	99	LEU
41	k	107	THR
41	k	108	ASN
41	k	115	ILE
42	l	18	SER
42	l	20	VAL
42	l	28	GLN
42	l	30	ARG
42	l	33	CYS
42	l	35	ARG
42	l	38	THR
42	l	50	LYS
42	l	58	ASN
42	l	71	HIS
42	l	87	LYS
42	l	103	CYS
42	l	107	LYS
42	l	118	VAL
43	m	2	ARG
43	m	11	HIS

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Mol	Chain	Res	Type
43	m	18	LEU
43	m	27	THR
43	m	41	ASP
43	m	43	LYS
43	m	44	ILE
43	m	57	ASP
43	m	62	PHE
43	m	64	VAL
43	m	67	ASP
43	m	68	LEU
43	m	81	ASP
43	m	90	HIS
43	m	91	ARG
43	m	97	ARG
43	m	99	GLN
43	m	101	THR
43	m	102	LYS
43	m	106	ARG
44	n	11	LYS
44	n	15	LEU
44	n	27	LYS
44	n	41	TRP
44	n	45	LEU
44	n	47	LEU
44	n	50	LEU
44	n	53	ASP
44	n	59	GLN
44	n	65	GLN
44	n	73	LEU
44	n	74	ARG
44	n	81	ILE
45	o	7	THR
45	o	17	ASP
45	o	25	GLU
45	o	58	MET
45	o	64	LYS
45	o	70	LYS
46	p	4	ILE
46	p	5	ARG
46	p	19	VAL
46	p	26	ASN
46	p	29	ASN

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Mol	Chain	Res	Type
46	p	31	ARG
46	p	34	GLU
46	p	46	LYS
46	p	48	GLU
46	p	55	ASP
46	p	63	GLN
47	q	4	ILE
47	q	10	ARG
47	q	15	LYS
47	q	20	ILE
47	q	24	ILE
47	q	25	GLU
47	q	39	ARG
47	q	45	VAL
47	q	52	CYS
47	q	60	ILE
47	q	67	SER
47	q	74	LEU
47	q	76	ARG
47	q	78	VAL
47	q	80	LYS
48	r	20	ILE
48	r	30	ASN
48	r	43	ILE
48	r	52	ARG
48	r	54	LEU
48	r	65	SER
49	s	5	LYS
49	s	12	LEU
49	s	14	LEU
49	s	20	LYS
49	s	28	LYS
49	s	36	ARG
49	s	40	PHE
49	s	47	THR
49	s	72	GLU
49	s	73	PHE
50	t	14	GLU
50	t	26	MET
50	t	29	THR
50	t	34	VAL
50	t	59	ARG

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Mol	Chain	Res	Type
50	t	67	HIS
50	t	70	LYS
50	t	85	LEU
51	7	9	LEU
51	7	18	GLN
51	7	22	TRP
51	7	26	MET
51	7	36	LYS
51	7	38	HIS
51	7	40	ILE
51	7	46	VAL
51	7	48	MET
51	7	56	LEU
51	7	57	ASN
51	7	58	LYS
51	7	67	LEU
51	7	69	VAL
51	7	81	ASP
51	7	88	GLN
51	7	90	PHE
51	7	94	ARG
51	7	95	TRP
51	7	101	THR
51	7	116	LEU
51	7	121	GLN
51	7	122	ASP
51	7	125	PHE
51	7	127	LYS
51	7	128	LEU
51	7	145	ASN
51	7	158	ASP
51	7	162	VAL
51	7	185	ILE
51	7	188	THR
51	7	196	ASP
51	7	202	ASN
51	7	206	ILE
51	7	209	VAL
51	7	222	GLU
52	u	11	PHE
52	u	12	ASP
52	u	13	VAL

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Mol	Chain	Res	Type
52	u	16	ARG
52	u	17	ARG
52	u	28	LEU
52	u	33	ARG
52	u	44	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (177) such sidechains are listed below:

Mol	Chain	Res	Type
3	V	51	GLN
3	V	80	HIS
3	V	88	HIS
4	C	20	ASN
4	C	36	ASN
4	C	52	HIS
4	C	89	ASN
4	C	127	ASN
4	C	133	ASN
4	C	141	HIS
4	C	162	GLN
4	C	225	ASN
4	C	250	GLN
5	D	32	ASN
5	D	42	ASN
5	D	49	GLN
5	D	130	GLN
5	D	134	HIS
5	D	148	GLN
5	D	149	ASN
5	D	164	GLN
5	D	167	ASN
5	D	173	GLN
5	D	185	ASN
6	E	29	HIS
6	E	46	GLN
6	E	92	HIS
6	E	97	ASN
6	E	136	GLN
6	E	156	ASN
6	E	195	GLN
7	F	26	GLN
7	F	36	ASN

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Mol	Chain	Res	Type
7	F	80	GLN
7	F	126	ASN
8	G	19	ASN
8	G	21	GLN
8	G	29	ASN
8	G	63	GLN
8	G	142	GLN
9	H	2	GLN
9	H	11	ASN
9	H	43	ASN
9	H	73	ASN
9	H	145	ASN
10	J	77	HIS
10	J	80	HIS
10	J	131	ASN
10	J	135	GLN
10	J	136	GLN
11	K	5	GLN
11	K	9	ASN
11	K	13	ASN
11	K	82	ASN
11	K	88	ASN
12	L	38	GLN
12	L	54	GLN
12	L	99	ASN
13	M	3	GLN
13	M	17	ASN
13	M	22	GLN
14	N	9	GLN
14	N	13	ASN
14	N	73	ASN
14	N	81	ASN
15	O	19	GLN
15	O	38	GLN
15	O	67	ASN
15	O	98	GLN
15	O	104	GLN
16	P	2	ASN
16	P	40	GLN
16	P	74	GLN
17	Q	43	GLN
17	Q	51	GLN

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Mol	Chain	Res	Type
17	Q	55	GLN
17	Q	58	GLN
17	Q	80	ASN
18	R	18	GLN
18	R	86	GLN
18	R	87	GLN
19	S	9	HIS
19	S	57	ASN
20	T	28	ASN
20	T	59	ASN
21	U	39	ASN
21	U	45	GLN
21	U	65	GLN
21	U	68	ASN
22	W	56	HIS
23	X	25	GLN
23	X	31	GLN
23	X	36	GLN
23	X	38	GLN
23	X	45	GLN
24	Y	8	GLN
24	Y	19	HIS
25	Z	30	HIS
25	Z	65	ASN
26	1	3	GLN
26	1	4	GLN
27	2	25	ASN
29	4	23	HIS
30	5	13	ASN
30	5	35	GLN
31	6	11	GLN
31	6	29	GLN
31	6	30	GLN
31	6	33	ASN
31	6	93	ASN
33	c	2	GLN
33	c	5	HIS
33	c	40	GLN
33	c	68	HIS
33	c	122	GLN
33	c	139	ASN
33	c	184	ASN

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Mol	Chain	Res	Type
34	d	35	GLN
34	d	84	ASN
34	d	99	ASN
34	d	125	ASN
34	d	135	GLN
34	d	151	GLN
34	d	195	ASN
35	e	69	ASN
35	e	72	ASN
35	e	96	GLN
35	e	120	HIS
35	e	121	ASN
35	e	131	ASN
36	f	14	GLN
36	f	17	GLN
36	f	46	GLN
36	f	58	HIS
37	g	67	ASN
37	g	85	GLN
37	g	121	ASN
38	h	3	GLN
38	h	17	GLN
39	i	4	GLN
39	i	24	ASN
39	i	30	ASN
39	i	31	GLN
39	i	36	GLN
39	i	49	GLN
39	i	109	GLN
40	j	15	HIS
40	j	99	GLN
41	k	28	ASN
41	k	37	GLN
42	l	58	ASN
43	m	13	HIS
43	m	90	HIS
44	n	42	ASN
44	n	65	GLN
45	o	27	GLN
45	o	34	GLN
46	p	9	HIS
46	p	18	GLN

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Mol	Chain	Res	Type
46	p	29	ASN
48	r	53	GLN
49	s	42	ASN
49	s	51	HIS
49	s	55	GLN
49	s	56	HIS
49	s	68	HIS
50	t	20	ASN
50	t	60	GLN
50	t	69	ASN
51	7	23	ASN
51	7	35	ASN
51	7	108	GLN
51	7	119	GLN
51	7	121	GLN
51	7	145	ASN
51	7	167	HIS
51	7	202	ASN

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	116/117 (99%)	23 (19%)	0
2	B	2837/2841 (99%)	450 (15%)	18 (0%)
32	a	1529/1530 (99%)	279 (18%)	0
53	v	75/76 (98%)	15 (20%)	0
All	All	4557/4564 (99%)	767 (16%)	18 (0%)

All (767) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	11	C
1	A	12	C
1	A	13	G
1	A	14	U
1	A	15	A
1	A	16	G
1	A	25	U
1	A	26	C
1	A	28	C
1	A	29	A

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Mol	Chain	Res	Type
1	A	30	C
1	A	35	C
1	A	42	C
1	A	44	G
1	A	45	A
1	A	56	G
1	A	66	A
1	A	67	G
1	A	84	G
1	A	90	C
1	A	99	A
1	A	108	A
1	A	109	A
2	B	2	G
2	B	3	U
2	B	4	U
2	B	13	A
2	B	14	A
2	B	33	C
2	B	34	U
2	B	35	G
2	B	46	G
2	B	49	A
2	B	63	A
2	B	64	A
2	B	71	A
2	B	74	A
2	B	75	G
2	B	84	A
2	B	85	G
2	B	91	A
2	B	92	U
2	B	96	C
2	B	100	U
2	B	101	A
2	B	102	U
2	B	103	A
2	B	104	A
2	B	118	A
2	B	119	A
2	B	120	U
2	B	125	A

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Mol	Chain	Res	Type
2	B	126	A
2	B	140	C
2	B	142	A
2	B	144	A
2	B	160	A
2	B	162	U
2	B	163	C
2	B	181	A
2	B	186	G
2	B	196	A
2	B	199	A
2	B	209	C
2	B	216	A
2	B	221	A
2	B	222	A
2	B	224	U
2	B	230	G
2	B	241	A
2	B	248	G
2	B	252	G
2	B	255	A
2	B	265	A
2	B	266	G
2	B	271	G
2	B	277	G
2	B	278	A
2	B	279	A
2	B	311	A
2	B	312	G
2	B	323	C
2	B	324	A
2	B	329	G
2	B	330	A
2	B	349	U
2	B	353	C
2	B	355	U
2	B	371	A
2	B	372	G
2	B	386	G
2	B	387	U
2	B	395	U
2	B	396	G

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Mol	Chain	Res	Type
2	B	397	U
2	B	405	U
2	B	411	G
2	B	423	A
2	B	424	G
2	B	435	C
2	B	444	C
2	B	451	U
2	B	455	C
2	B	457	A
2	B	479	A
2	B	480	A
2	B	481	G
2	B	491	G
2	B	498	G
2	B	504	A
2	B	505	A
2	B	508	A
2	B	509	C
2	B	512	G
2	B	518	G
2	B	527	C
2	B	530	G
2	B	532	A
2	B	533	G
2	B	544	C
2	B	545	U
2	B	546	U
2	B	547	A
2	B	548	G
2	B	555	G
2	B	563	A
2	B	572	A
2	B	573	U
2	B	575	A
2	B	588	U
2	B	603	A
2	B	613	A
2	B	614	A
2	B	615	U
2	B	616	A
2	B	627	A

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Mol	Chain	Res	Type
2	B	632	A
2	B	637	A
2	B	640	C
2	B	645	C
2	B	646	U
2	B	654	A
2	B	655	A
2	B	671	C
2	B	686	U
2	B	717	C
2	B	719	C
2	B	722	A
2	B	728	G
2	B	730	A
2	B	747	U
2	B	757	G
2	B	765	C
2	B	775	G
2	B	782	A
2	B	784	G
2	B	785	G
2	B	805	G
2	B	806	C
2	B	812	C
2	B	819	A
2	B	827	U
2	B	828	U
2	B	846	U
2	B	847	U
2	B	859	G
2	B	872	U
2	B	876	C
2	B	877	A
2	B	878	A
2	B	899	A
2	B	910	A
2	B	912	C
2	B	932	U
2	B	933	A
2	B	934	U
2	B	941	A
2	B	946	C

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Mol	Chain	Res	Type
2	B	955	U
2	B	961	C
2	B	973	A
2	B	974	G
2	B	983	A
2	B	985	C
2	B	989	G
2	B	991	C
2	B	993	G
2	B	995	C
2	B	996	A
2	B	1005	C
2	B	1012	U
2	B	1013	C
2	B	1019	U
2	B	1022	G
2	B	1025	G
2	B	1026	G
2	B	1033	U
2	B	1042	G
2	B	1046	A
2	B	1047	G
2	B	1070	A
2	B	1088	A
2	B	1090	A
2	B	1112	G
2	B	1122	G
2	B	1126	A
2	B	1132	U
2	B	1133	A
2	B	1134	A
2	B	1135	C
2	B	1136	G
2	B	1139	G
2	B	1142	A
2	B	1156	A
2	B	1157	G
2	B	1172	C
2	B	1174	U
2	B	1176	U
2	B	1179	G
2	B	1195	G

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Mol	Chain	Res	Type
2	B	1205	A
2	B	1206	G
2	B	1211	C
2	B	1212	G
2	B	1218	G
2	B	1237	A
2	B	1247	A
2	B	1248	G
2	B	1251	C
2	B	1253	A
2	B	1256	G
2	B	1266	G
2	B	1271	G
2	B	1272	A
2	B	1273	U
2	B	1275	A
2	B	1276	A
2	B	1301	A
2	B	1302	A
2	B	1312	U
2	B	1325	U
2	B	1330	C
2	B	1337	G
2	B	1341	G
2	B	1345	C
2	B	1352	U
2	B	1365	A
2	B	1368	G
2	B	1379	U
2	B	1383	A
2	B	1384	A
2	B	1396	U
2	B	1397	U
2	B	1416	G
2	B	1419	A
2	B	1420	A
2	B	1427	A
2	B	1428	C
2	B	1434	A
2	B	1450	G
2	B	1451	C
2	B	1453	A

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Mol	Chain	Res	Type
2	B	1454	C
2	B	1455	G
2	B	1459	G
2	B	1460	U
2	B	1461	C
2	B	1476	U
2	B	1477	A
2	B	1478	G
2	B	1482	G
2	B	1490	A
2	B	1493	C
2	B	1494	A
2	B	1504	A
2	B	1508	A
2	B	1509	A
2	B	1510	G
2	B	1524	G
2	B	1532	A
2	B	1535	A
2	B	1537	G
2	B	1538	G
2	B	1540	G
2	B	1552	A
2	B	1558	C
2	B	1559	U
2	B	1567	G
2	B	1569	A
2	B	1578	U
2	B	1583	A
2	B	1585	C
2	B	1608	A
2	B	1610	A
2	B	1613	G
2	B	1634	A
2	B	1635	A
2	B	1640	A
2	B	1647	U
2	B	1648	U
2	B	1649	G
2	B	1674	G
2	B	1700	A
2	B	1701	A

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Mol	Chain	Res	Type
2	B	1703	G
2	B	1706	C
2	B	1707	G
2	B	1713	A
2	B	1715	G
2	B	1716	U
2	B	1723	G
2	B	1729	U
2	B	1730	C
2	B	1731	G
2	B	1733	G
2	B	1738	G
2	B	1756	G
2	B	1758	U
2	B	1764	C
2	B	1773	A
2	B	1776	G
2	B	1781	U
2	B	1786	A
2	B	1791	A
2	B	1800	C
2	B	1801	A
2	B	1816	C
2	B	1829	A
2	B	1833	C
2	B	1870	C
2	B	1873	G
2	B	1876	A
2	B	1884	G
2	B	1906	G
2	B	1914	C
2	B	1927	A
2	B	1929	G
2	B	1930	G
2	B	1937	A
2	B	1938	A
2	B	1939	U
2	B	1940	U
2	B	1955	U
2	B	1967	C
2	B	1970	A
2	B	1971	U

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Mol	Chain	Res	Type
2	B	1972	G
2	B	1991	U
2	B	1993	U
2	B	1997	C
2	B	2022	U
2	B	2023	C
2	B	2031	A
2	B	2032	G
2	B	2033	A
2	B	2043	C
2	B	2052	A
2	B	2055	C
2	B	2056	G
2	B	2060	A
2	B	2061	G
2	B	2062	A
2	B	2069	G
2	B	2072	C
2	B	2095	A
2	B	2102	G
2	B	2104	C
2	B	2137	U
2	B	2140	G
2	B	2141	G
2	B	2144	G
2	B	2145	C
2	B	2147	A
2	B	2149	U
2	B	2181	U
2	B	2187	U
2	B	2192	U
2	B	2199	A
2	B	2204	G
2	B	2211	A
2	B	2212	A
2	B	2225	A
2	B	2226	C
2	B	2238	G
2	B	2239	G
2	B	2243	U
2	B	2259	U
2	B	2266	A

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Mol	Chain	Res	Type
2	B	2273	A
2	B	2276	G
2	B	2278	A
2	B	2283	C
2	B	2286	G
2	B	2297	A
2	B	2304	G
2	B	2305	U
2	B	2307	G
2	B	2310	C
2	B	2315	G
2	B	2318	G
2	B	2319	G
2	B	2320	U
2	B	2321	U
2	B	2322	A
2	B	2325	G
2	B	2333	A
2	B	2334	U
2	B	2336	A
2	B	2337	G
2	B	2347	C
2	B	2383	G
2	B	2385	C
2	B	2402	U
2	B	2406	A
2	B	2423	U
2	B	2424	C
2	B	2426	A
2	B	2429	G
2	B	2430	A
2	B	2434	A
2	B	2441	U
2	B	2448	A
2	B	2472	G
2	B	2476	A
2	B	2491	U
2	B	2502	G
2	B	2505	G
2	B	2506	U
2	B	2518	A
2	B	2529	G

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Mol	Chain	Res	Type
2	B	2535	G
2	B	2554	U
2	B	2566	A
2	B	2567	G
2	B	2573	C
2	B	2585	U
2	B	2586	U
2	B	2597	G
2	B	2602	A
2	B	2609	U
2	B	2610	C
2	B	2613	U
2	B	2621	G
2	B	2629	U
2	B	2654	A
2	B	2682	A
2	B	2689	U
2	B	2690	U
2	B	2714	G
2	B	2726	A
2	B	2739	U
2	B	2744	G
2	B	2748	A
2	B	2751	G
2	B	2752	C
2	B	2757	A
2	B	2765	A
2	B	2778	A
2	B	2791	G
2	B	2797	U
2	B	2800	A
2	B	2801	G
2	B	2808	G
2	B	2820	A
2	B	2821	A
2	B	2836	U
2	B	2850	A
2	B	2866	U
2	B	2867	G
2	B	2872	A
2	B	2873	A
2	B	2883	A

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Mol	Chain	Res	Type
2	B	2903	U
32	a	7	A
32	a	9	G
32	a	14	U
32	a	31	G
32	a	32	A
32	a	39	G
32	a	47	C
32	a	48	C
32	a	51	A
32	a	52	C
32	a	55	A
32	a	61	G
32	a	66	A
32	a	72	A
32	a	76	G
32	a	78	A
32	a	79	G
32	a	83	C
32	a	85	U
32	a	86	G
32	a	87	C
32	a	88	U
32	a	89	U
32	a	95	C
32	a	108	G
32	a	121	U
32	a	122	G
32	a	131	A
32	a	151	A
32	a	164	G
32	a	182	A
32	a	183	C
32	a	197	A
32	a	209	U
32	a	210	C
32	a	239	U
32	a	240	G
32	a	243	A
32	a	244	U
32	a	245	U
32	a	247	G

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Mol	Chain	Res	Type
32	a	250	A
32	a	251	G
32	a	253	A
32	a	257	G
32	a	258	G
32	a	266	G
32	a	267	C
32	a	280	C
32	a	289	G
32	a	316	C
32	a	324	G
32	a	328	C
32	a	329	A
32	a	330	C
32	a	332	G
32	a	345	C
32	a	352	C
32	a	354	G
32	a	367	U
32	a	372	C
32	a	373	A
32	a	381	C
32	a	382	A
32	a	397	A
32	a	398	U
32	a	406	G
32	a	408	A
32	a	411	A
32	a	412	A
32	a	414	A
32	a	415	A
32	a	421	U
32	a	422	C
32	a	424	G
32	a	429	U
32	a	430	A
32	a	434	U
32	a	435	A
32	a	438	U
32	a	459	A
32	a	461	A
32	a	462	G

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Mol	Chain	Res	Type
32	a	463	U
32	a	464	U
32	a	465	A
32	a	466	A
32	a	467	U
32	a	468	A
32	a	469	C
32	a	476	U
32	a	481	G
32	a	482	A
32	a	484	G
32	a	485	U
32	a	493	A
32	a	500	G
32	a	511	C
32	a	518	C
32	a	522	C
32	a	527	G
32	a	531	U
32	a	532	A
32	a	547	A
32	a	559	A
32	a	562	U
32	a	572	A
32	a	573	A
32	a	576	C
32	a	577	G
32	a	607	A
32	a	639	G
32	a	650	G
32	a	653	U
32	a	665	A
32	a	693	G
32	a	700	G
32	a	721	G
32	a	724	G
32	a	731	G
32	a	733	G
32	a	747	A
32	a	748	G
32	a	755	G
32	a	777	A

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Mol	Chain	Res	Type
32	a	781	A
32	a	782	A
32	a	793	U
32	a	794	A
32	a	812	G
32	a	815	A
32	a	817	C
32	a	818	G
32	a	819	A
32	a	828	U
32	a	829	G
32	a	841	C
32	a	842	U
32	a	843	U
32	a	844	G
32	a	845	A
32	a	902	G
32	a	914	A
32	a	926	G
32	a	927	G
32	a	931	C
32	a	934	C
32	a	935	A
32	a	960	U
32	a	961	U
32	a	966	G
32	a	968	A
32	a	969	A
32	a	971	G
32	a	974	A
32	a	976	G
32	a	977	A
32	a	983	A
32	a	991	U
32	a	992	U
32	a	993	G
32	a	1002	G
32	a	1004	A
32	a	1009	U
32	a	1022	A
32	a	1025	U
32	a	1026	G

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Mol	Chain	Res	Type
32	a	1030	U
32	a	1031	C
32	a	1034	G
32	a	1035	A
32	a	1043	G
32	a	1044	A
32	a	1045	C
32	a	1049	U
32	a	1050	G
32	a	1051	C
32	a	1053	G
32	a	1054	C
32	a	1055	A
32	a	1065	U
32	a	1066	C
32	a	1070	U
32	a	1094	G
32	a	1095	U
32	a	1101	A
32	a	1102	A
32	a	1108	G
32	a	1111	A
32	a	1112	C
32	a	1126	U
32	a	1130	A
32	a	1136	C
32	a	1137	C
32	a	1138	G
32	a	1139	G
32	a	1140	C
32	a	1158	C
32	a	1159	U
32	a	1168	U
32	a	1169	A
32	a	1174	G
32	a	1179	A
32	a	1181	G
32	a	1183	U
32	a	1196	A
32	a	1197	A
32	a	1201	A
32	a	1202	U

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Mol	Chain	Res	Type
32	a	1209	C
32	a	1212	U
32	a	1213	A
32	a	1214	C
32	a	1215	G
32	a	1225	A
32	a	1226	C
32	a	1227	A
32	a	1228	C
32	a	1238	A
32	a	1240	U
32	a	1241	G
32	a	1253	G
32	a	1256	A
32	a	1258	G
32	a	1261	A
32	a	1270	G
32	a	1278	G
32	a	1279	G
32	a	1280	A
32	a	1281	C
32	a	1285	A
32	a	1286	U
32	a	1287	A
32	a	1298	U
32	a	1300	G
32	a	1301	U
32	a	1305	G
32	a	1316	G
32	a	1317	C
32	a	1320	C
32	a	1322	C
32	a	1323	G
32	a	1336	C
32	a	1338	G
32	a	1346	A
32	a	1347	G
32	a	1353	G
32	a	1362	A
32	a	1363	A
32	a	1364	U
32	a	1378	C

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Mol	Chain	Res	Type
32	a	1379	G
32	a	1380	U
32	a	1381	U
32	a	1398	A
32	a	1403	C
32	a	1404	C
32	a	1409	C
32	a	1419	G
32	a	1432	G
32	a	1446	A
32	a	1447	A
32	a	1451	U
32	a	1452	C
32	a	1490	U
32	a	1493	A
32	a	1497	G
32	a	1499	A
32	a	1503	A
32	a	1506	U
32	a	1507	A
32	a	1517	G
32	a	1519	A
32	a	1520	C
32	a	1528	U
32	a	1529	G
32	a	1530	G
32	a	1533	C
32	a	1534	A
53	v	5	G
53	v	8	U
53	v	17	C
53	v	18	G
53	v	19	G
53	v	20	U
53	v	21	A
53	v	37	A
53	v	39	U
53	v	45	U
53	v	48	C
53	v	56	C
53	v	58	A
53	v	74	C

Continued on next page...

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Mol	Chain	Res	Type
53	v	76	A

All (18) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
2	B	63	A
2	B	102	U
2	B	162	U
2	B	529	A
2	B	670	A
2	B	858	G
2	B	1205	A
2	B	1210	G
2	B	1236	G
2	B	1250	G
2	B	1301	A
2	B	1913	A
2	B	2198	A
2	B	2258	C
2	B	2282	G
2	B	2336	A
2	B	2425	A
2	B	2756	U

5.4 Non-standard residues in protein, DNA, RNA chains

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

5.5 Carbohydrates

There are no oligosaccharides in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
2	B	3
52	u	2

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	B	2157:G	O3'	2179:C	P	42.86
1	B	2110:G	O3'	2133:G	P	29.82
1	B	878:A	O3'	898:C	P	11.30
1	u	25:ALA	C	26:GLY	N	1.16
1	u	15:LEU	C	16:ARG	N	0.99

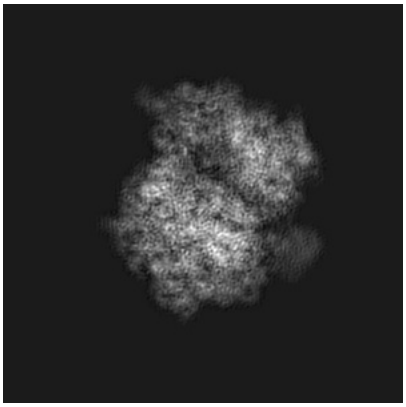
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-0661. These allow visual inspection of the internal detail of the map and identification of artifacts.

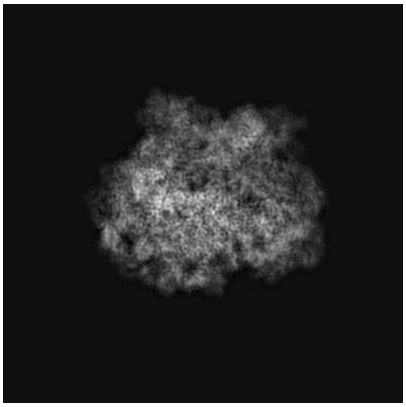
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

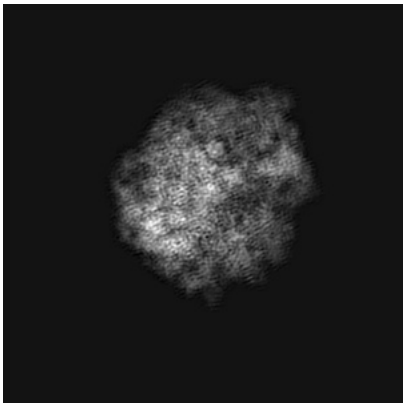
6.1.1 Primary map



X



Y

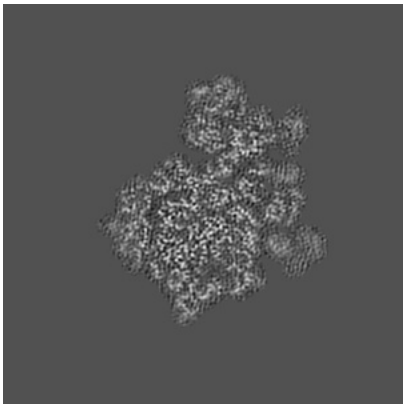


Z

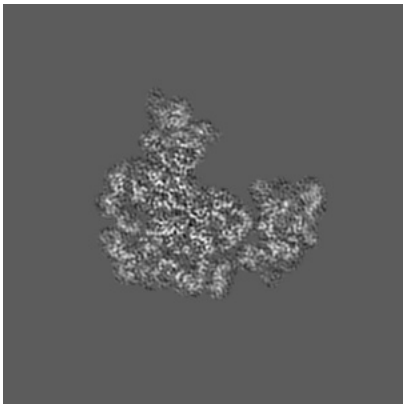
The images above show the map projected in three orthogonal directions.

6.2 Central slices

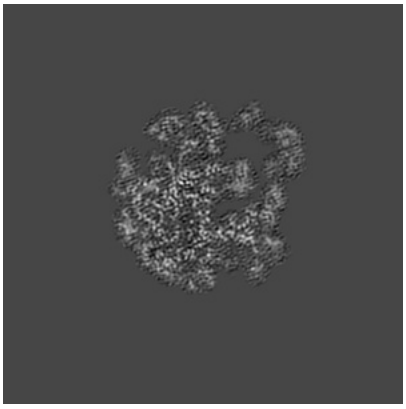
6.2.1 Primary map



X Index: 128



Y Index: 128

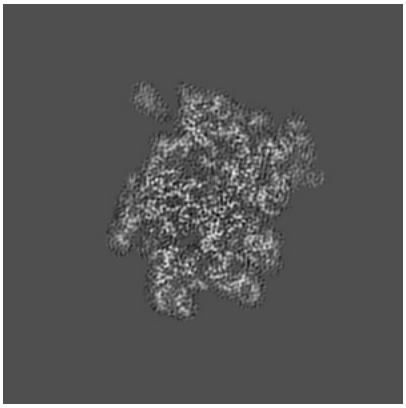


Z Index: 128

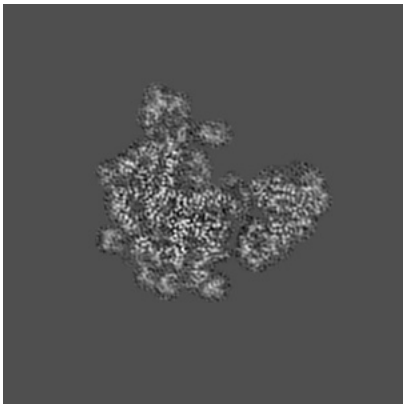
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

6.3.1 Primary map



X Index: 116



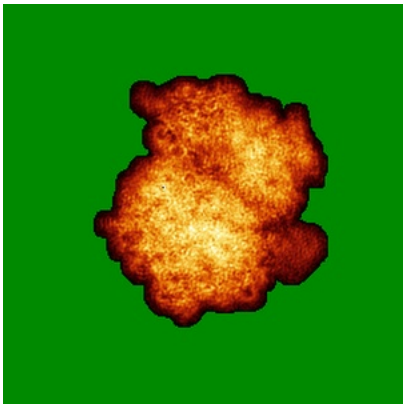
Y Index: 137

Z Index: 108

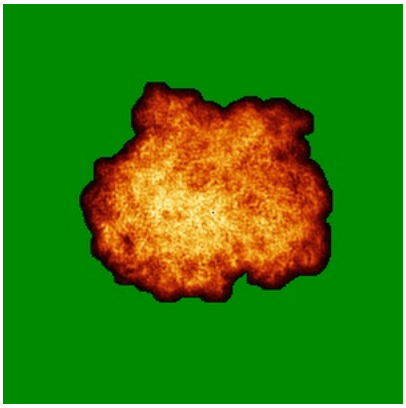
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) (i)

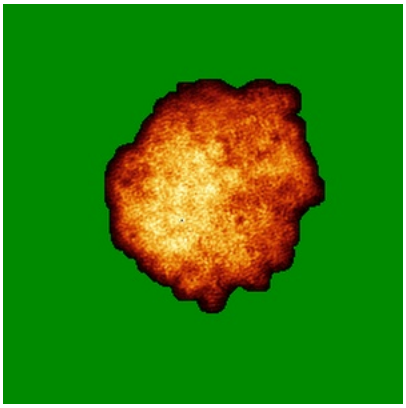
6.4.1 Primary map



X



Y

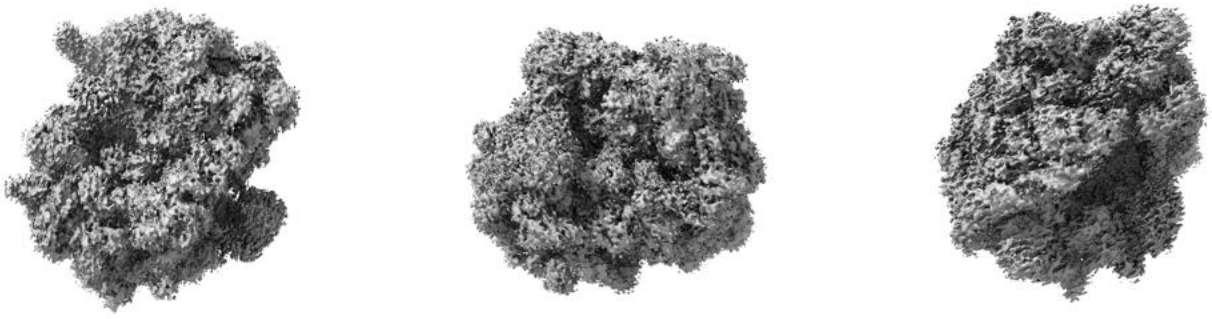


Z

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

6.5 Orthogonal surface views (i)

6.5.1 Primary map



X Y Z

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

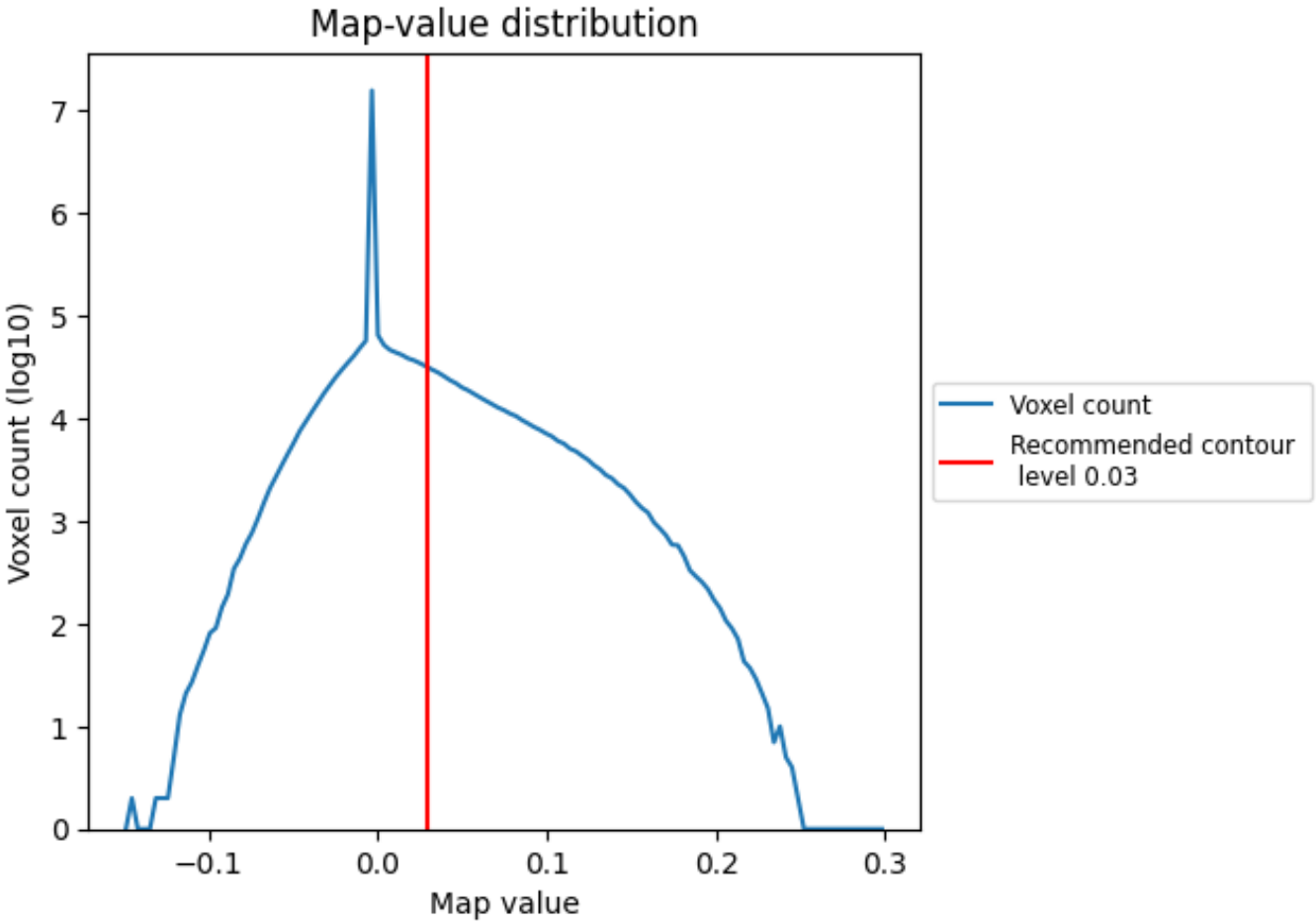
6.6 Mask visualisation (i)

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

7 Map analysis

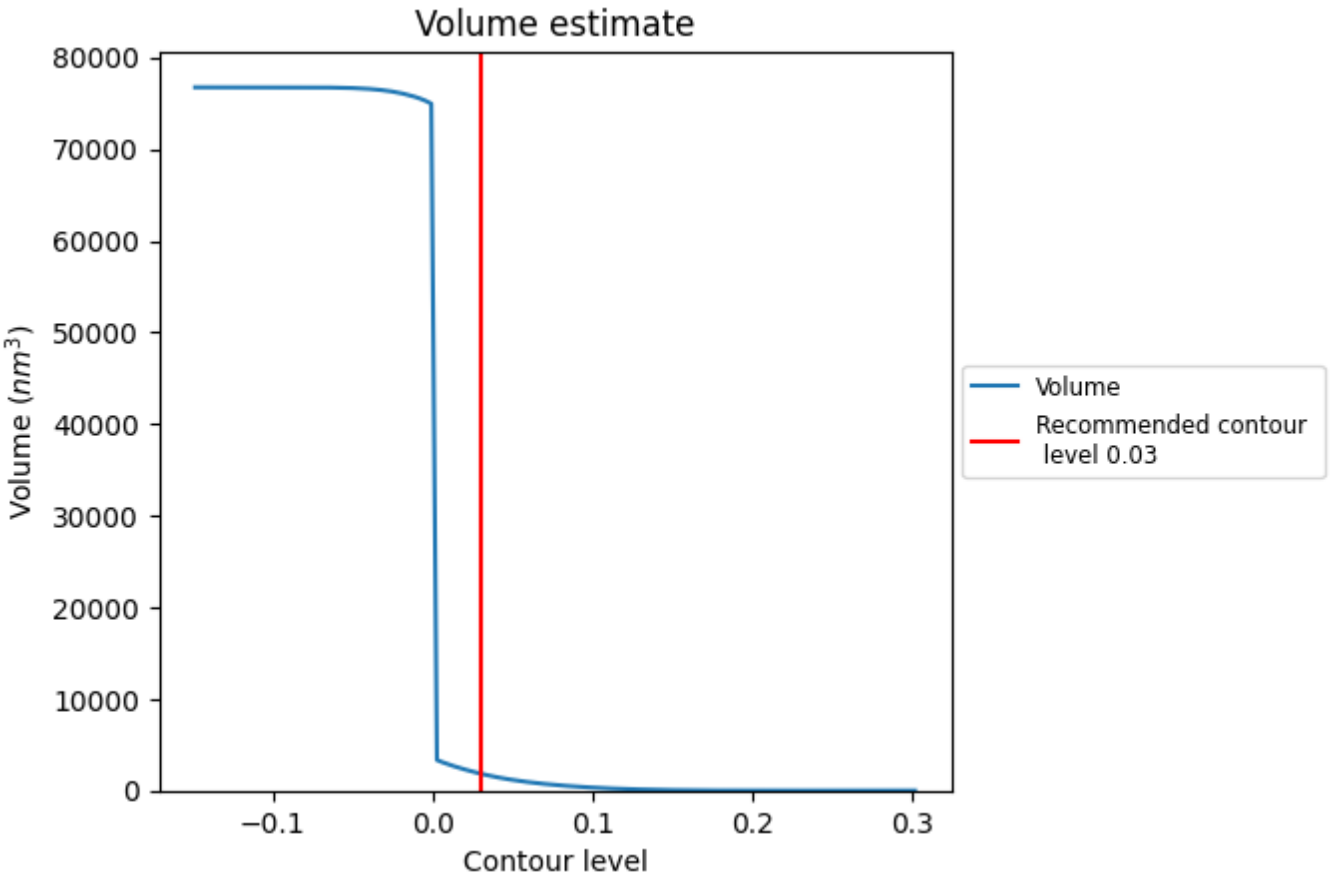
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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.

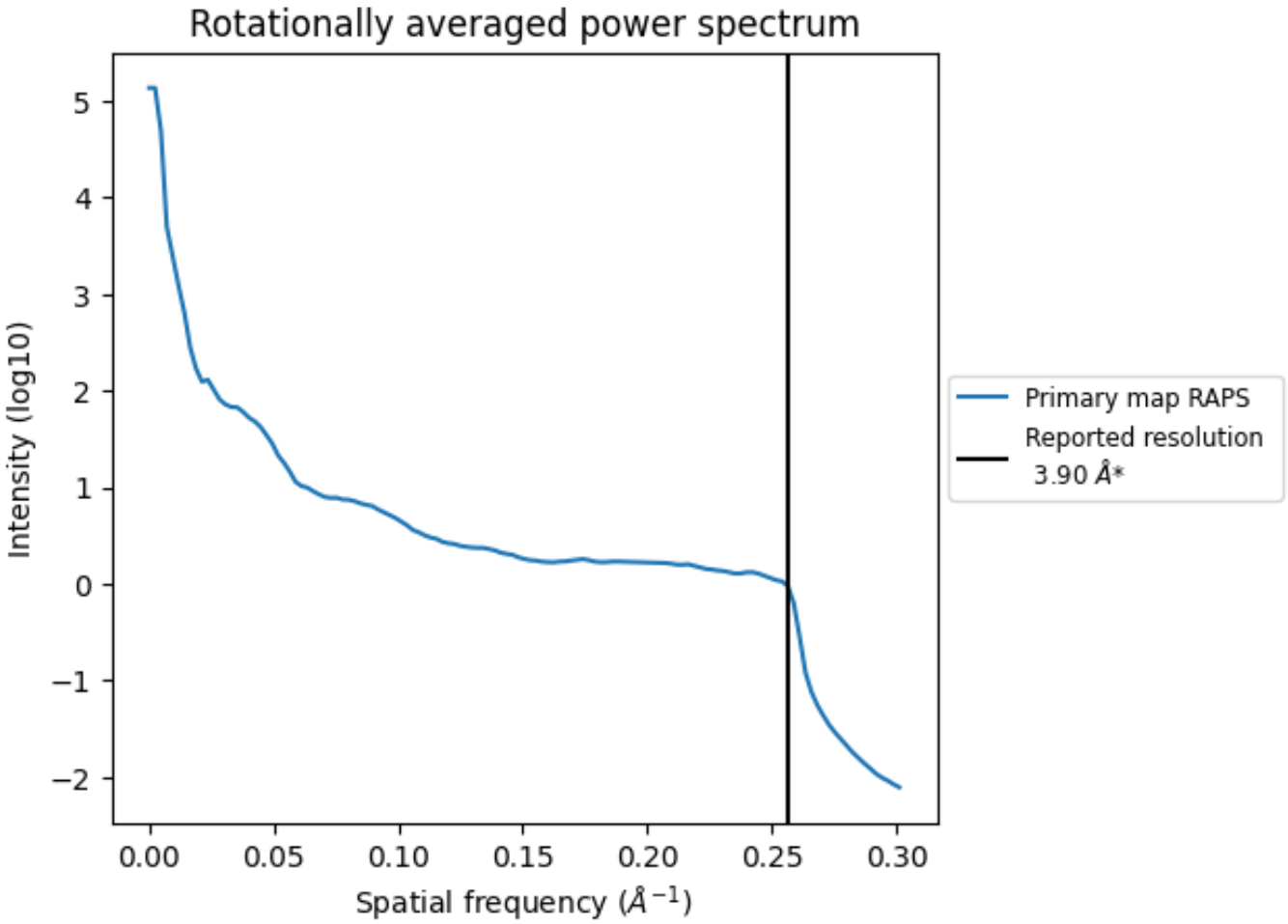
7.2 Volume estimate



The volume at the recommended contour level is 1845 nm^3; this corresponds to an approximate mass of 1667 kDa.

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

7.3 Rotationally averaged power spectrum (i)

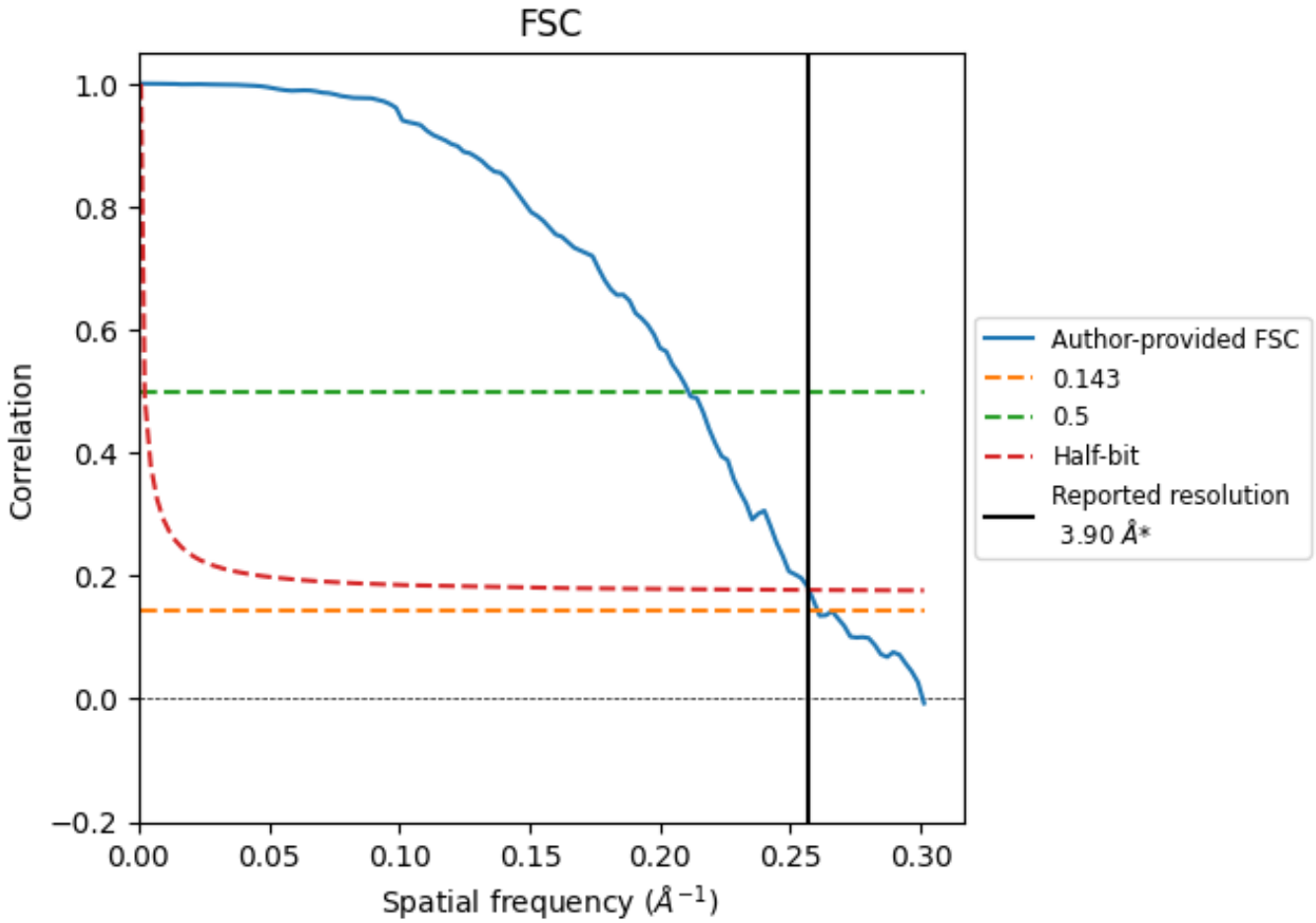


*Reported resolution corresponds to spatial frequency of 0.256 Å^{-1}

8 Fourier-Shell correlation

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



*Reported resolution corresponds to spatial frequency of 0.256 Å^{-1}

8.2 Resolution estimates (i)

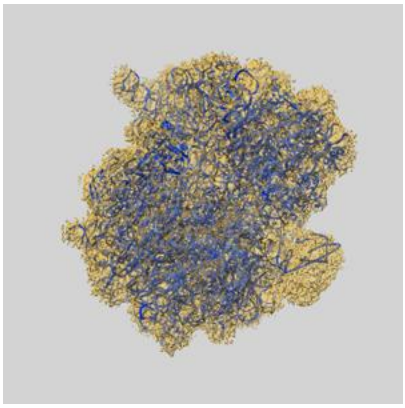
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.90	-	-
Author-provided FSC curve	3.84	4.74	3.89
Unmasked-calculated*	-	-	-

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps.

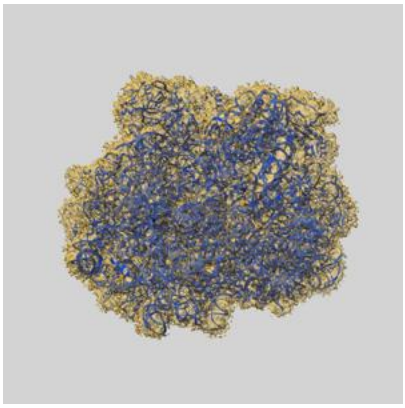
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-0661 and PDB model 6O9J. Per-residue inclusion information can be found in section 3 on page 13.

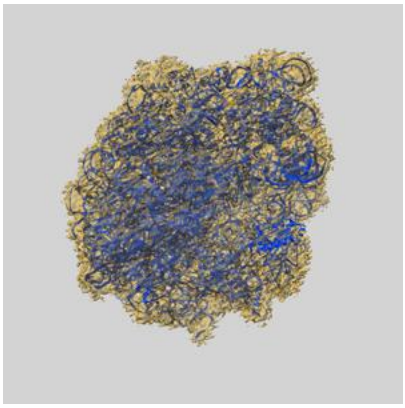
9.1 Map-model overlay



X



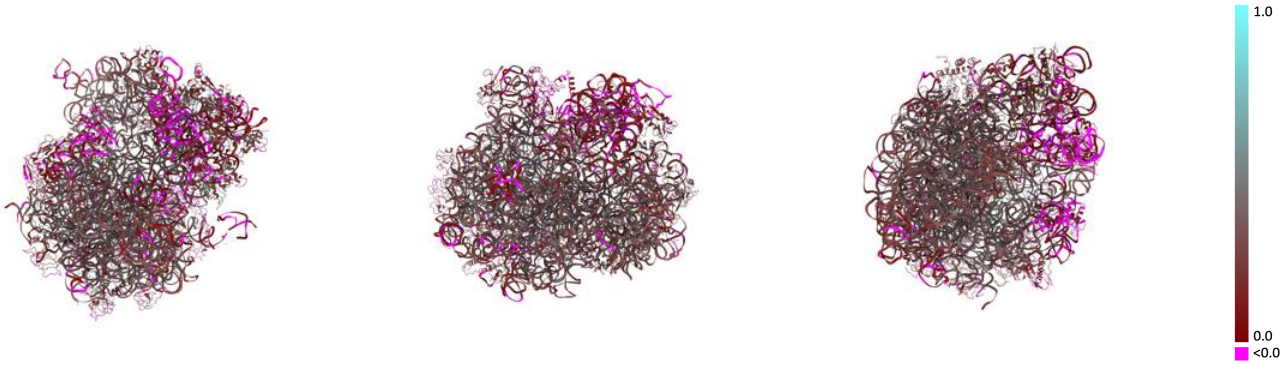
Y



Z

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

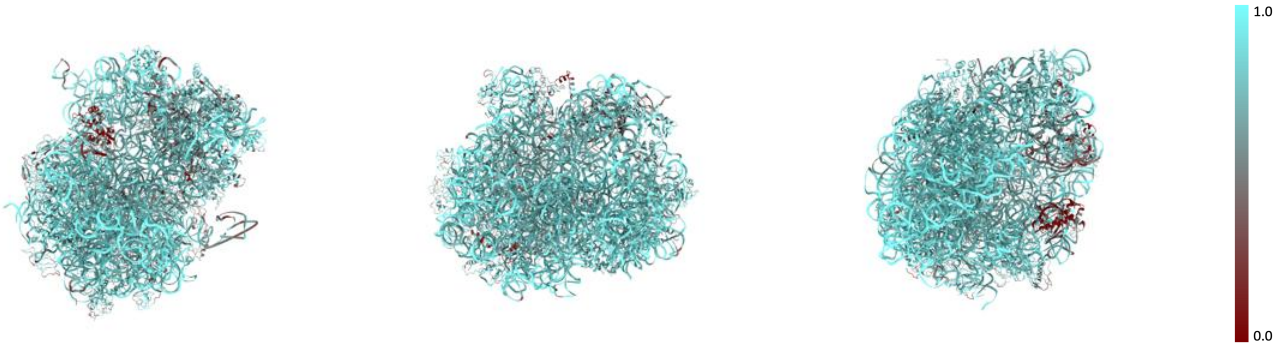
9.2 Q-score mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according 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.

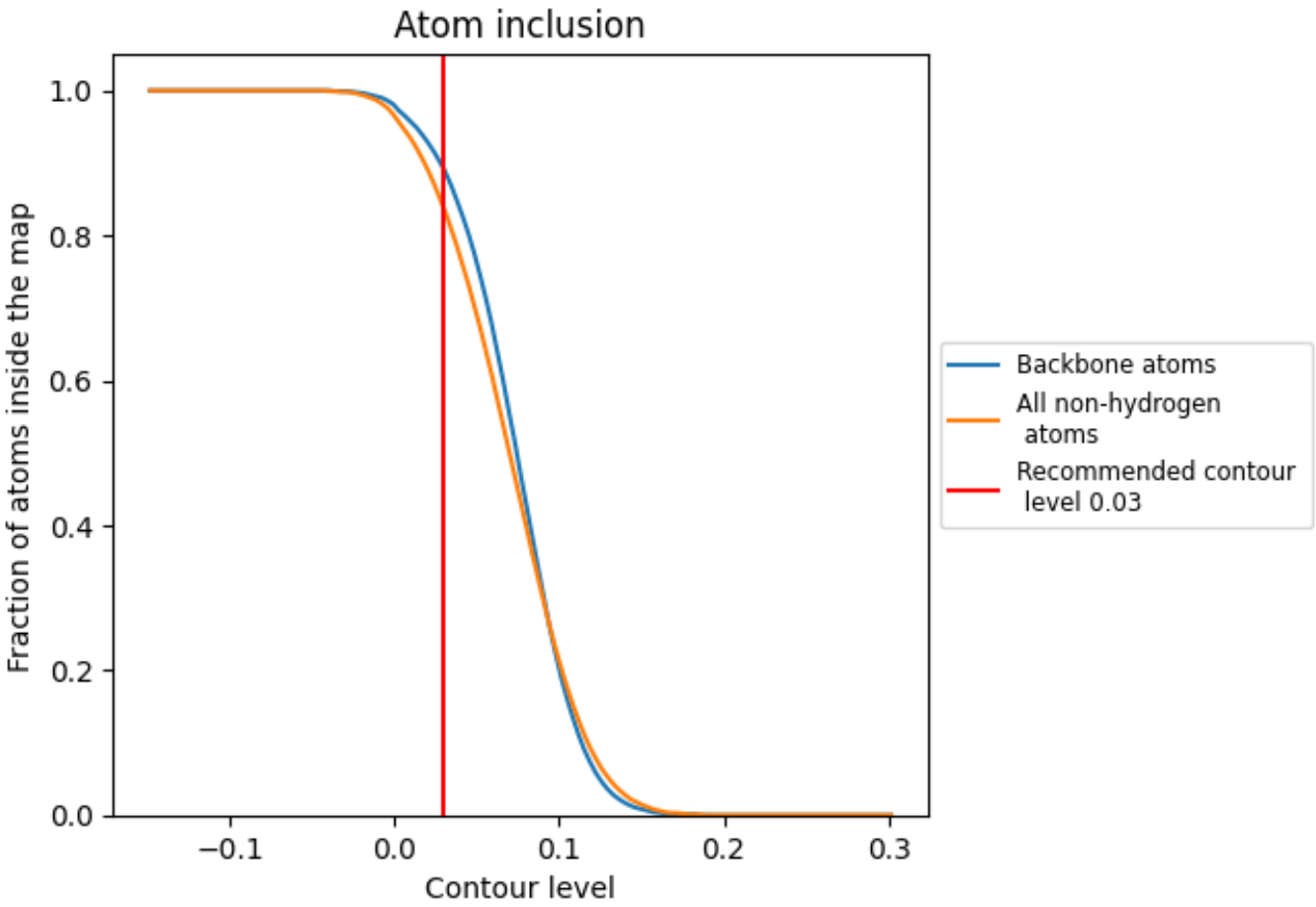
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

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

9.4 Atom inclusion (i)



At the recommended contour level, 89% of all backbone atoms, 84% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

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

Chain	Atom inclusion	Q-score
All	0.8370	0.2750
1	0.6170	0.1870
2	0.6050	0.1960
3	0.7010	0.2750
4	0.6290	0.2290
5	0.6850	0.1590
6	0.1850	-0.0110
7	0.7620	0.2650
A	0.9230	0.2570
B	0.9140	0.3270
C	0.7010	0.2810
D	0.7060	0.2420
E	0.6860	0.2150
F	0.6060	0.0750
G	0.6750	0.1580
H	0.4670	0.0970
J	0.7270	0.2490
K	0.7490	0.3210
L	0.6160	0.1750
M	0.6710	0.2220
N	0.7030	0.2540
O	0.6970	0.1820
P	0.6680	0.2130
Q	0.7790	0.2960
R	0.6810	0.2040
S	0.7320	0.2860
T	0.6810	0.2240
U	0.6700	0.1620
V	0.7780	0.2670
W	0.5920	0.1690
X	0.7000	0.1870
Y	0.7000	0.2310
Z	0.6880	0.2420
a	0.8790	0.2530
c	0.7900	0.3010

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Chain	Atom inclusion	Q-score
d	0.7890	0.2820
e	0.7930	0.3240
f	0.7960	0.3000
g	0.7410	0.2420
h	0.8050	0.3350
i	0.8190	0.2830
j	0.6220	0.0450
k	0.7760	0.2970
l	0.7390	0.3080
m	0.5480	0.0590
n	0.6530	0.0540
o	0.7770	0.2970
p	0.7730	0.3010
q	0.7560	0.2920
r	0.7890	0.3150
s	0.6070	0.0470
t	0.7860	0.2700
u	0.6920	0.2530
v	0.7810	0.2140