



## Full wwPDB EM Validation Report ⓘ

Jun 8, 2026 – 05:49 PM EDT

PDB ID : 9Q2O / pdb\_00009q2o  
EMDB ID : EMD-72170  
Title : NediV IRES in complex with Rabbit 80S ribosome with A site Ala-tRNA  
Authors : De, S.; Altomare, C.G.; Abaeva, I.S.; Dadhwal, P.; Garg, P.; Acosta-Reyes, F.; Brown, Z.P.; Pestova, T.V.; Hellen, C.U.T.; Frank, J.  
Deposited on : 2025-08-15  
Resolution : 4.10 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](mailto: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>.

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

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

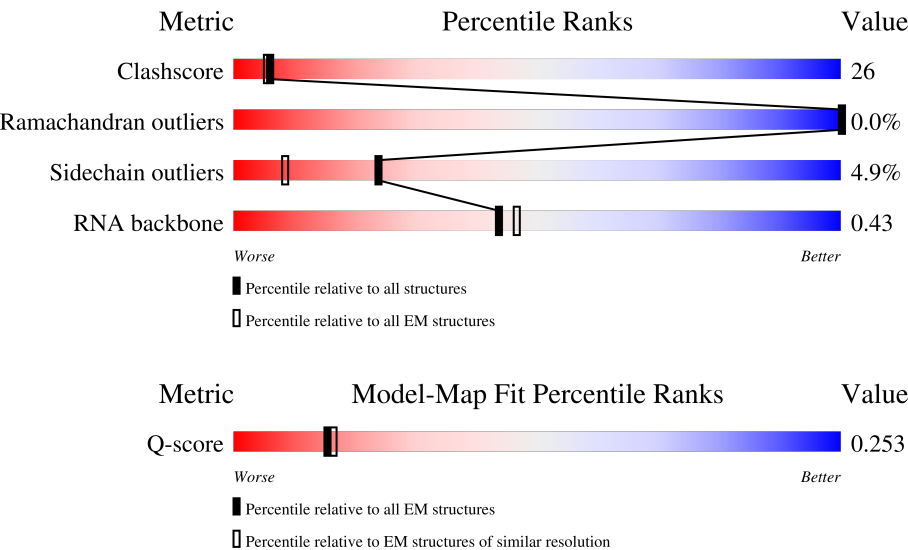


# 1 Overall quality at a glance i

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

The reported resolution of this entry is 4.10 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	6458 ( 3.60 - 4.60 )



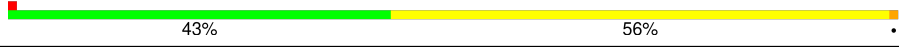
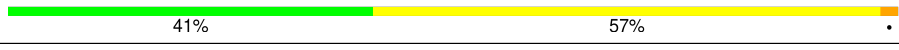
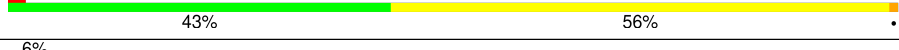


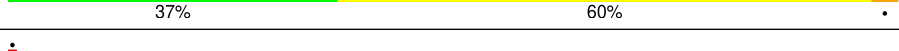
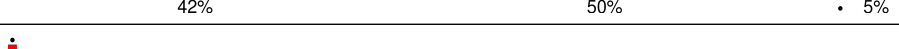
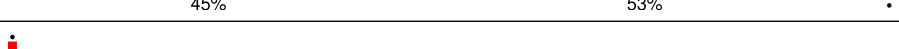
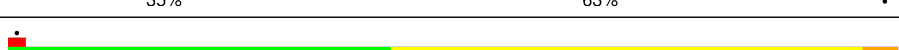
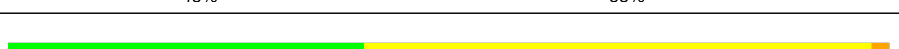
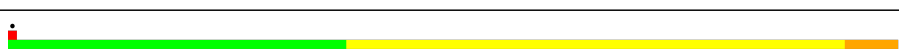
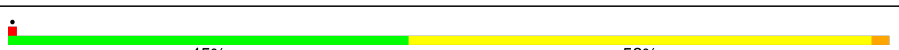
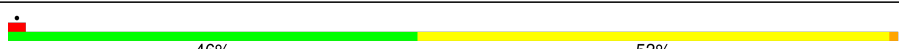





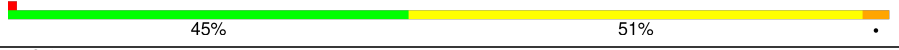

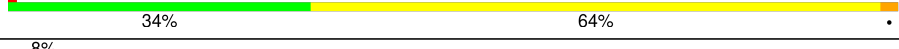


The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment 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	R	180	<div><div></div><div>42%</div><div>55%</div><div></div></div>
2	W	106	<div><div>11%</div><div>56%</div><div>42%</div><div></div></div>
3	9	1773	<div><div>25%</div><div>57%</div><div>13%</div><div></div></div>

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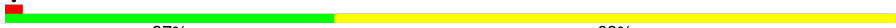








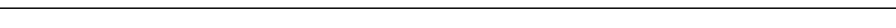











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Mol	Chain	Length	Quality of chain
4	AA	217	
5	BB	213	
6	CC	221	
7	EE	262	
8	GG	237	
9	HH	189	
10	II	206	
11	JJ	185	
12	LL	151	
13	NN	149	
14	OO	136	
15	VV	83	
16	WW	129	
17	XX	141	
18	YY	124	
19	aa	101	
20	bb	83	
21	ee	57	
22	DD	228	
23	FF	191	
24	KK	96	
25	MM	117	
26	PP	129	
27	QQ	142	
28	RR	132	

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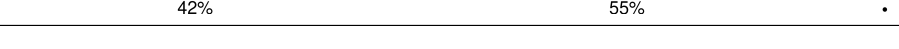
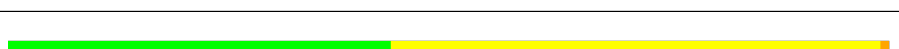



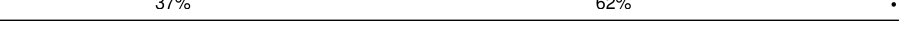


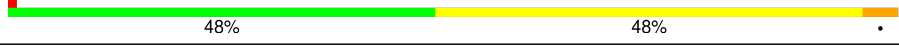
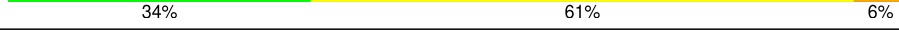

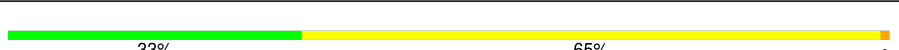


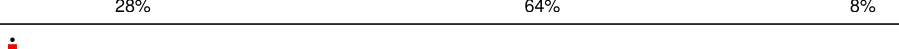
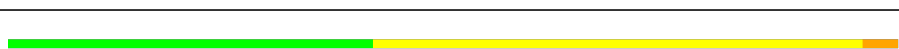






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Mol	Chain	Length	Quality of chain
29	SS	144	
30	TT	141	
31	UU	100	
32	ZZ	75	
33	cc	62	
34	dd	55	
35	ff	68	
36	gg	313	
37	A	248	
38	B	394	
39	C	362	
40	D	293	
41	E	216	
42	F	225	
43	G	240	
44	H	190	
45	I	213	
46	J	170	
47	L	210	
48	M	138	
49	N	203	
50	O	199	
51	P	153	
52	Q	187	
53	S	176	

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Mol	Chain	Length	Quality of chain
54	T	159	
55	U	99	
56	V	139	
57	X	118	
58	Y	134	
59	Z	135	
60	a	147	
61	b	104	
62	c	98	
63	d	107	
64	e	128	
65	f	109	
66	g	114	
67	h	122	
68	i	102	
69	j	86	
70	k	69	
71	l	50	
72	m	52	
73	n	25	
74	o	104	
75	p	91	
76	r	124	
77	s	87	
78	t	133	

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Mol	Chain	Length	Quality of chain
79	5	3543	<div><div></div><div>27%</div><div>57%</div><div>16%</div></div>
80	7	119	<div><div></div><div>30%</div><div>60%</div><div>10%</div></div>
81	8	156	<div><div></div><div>15%</div><div>61%</div><div>21%</div><div></div><div></div></div>
82	AT	76	<div><div></div><div>7%</div><div>51%</div><div>46%</div><div></div><div></div></div>
83	1	166	<div><div></div><div></div><div>32%</div><div>66%</div><div></div><div></div></div>



## 2 Entry composition

There are 85 unique types of molecules in this entry. The entry contains 219061 atoms, of which 2574 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called 60S ribosomal protein L19.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	R	180	Total	C	N	O	S	0	0
			1508	933	328	238	9		

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
R	38	ARG	HIS	conflict	UNP G1TYL6
R	151	ARG	HIS	conflict	UNP G1TYL6

- Molecule 2 is a protein called uL24.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	W	106	Total	C	N	O	S	0	0
			860	538	174	144	4		

- Molecule 3 is a RNA chain called 18S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	9	1697	Total	C	N	O	P	0	0
			36229	16171	6506	11856	1696		

- Molecule 4 is a protein called 40S\_SA\_C domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	AA	217	Total	C	N	O	S	0	0
			1710	1086	300	316	8		

- Molecule 5 is a protein called 40S ribosomal protein S3a.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	BB	213	Total	C	N	O	S	0	0
			1729	1098	309	308	14		



- Molecule 6 is a protein called 40S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	CC	221	Total	C	N	O	S	0	0
			1716	1111	295	301	9		

- Molecule 7 is a protein called 40S ribosomal protein S4.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	EE	262	Total	C	N	O	S	0	0
			2076	1324	386	358	8		

- Molecule 8 is a protein called 40S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	GG	237	Total	C	N	O	S	0	0
			1923	1200	387	329	7		

- Molecule 9 is a protein called Small ribosomal subunit protein eS7.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	HH	185	Total	C	N	O	S	0	0
			1488	952	271	264	1		

- Molecule 10 is a protein called 40S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	II	206	Total	C	N	O	S	0	0
			1686	1058	332	291	5		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
II	47	ARG	GLY	conflict	UNP G1TJW1

- Molecule 11 is a protein called 40S ribosomal protein S9.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	JJ	185	Total	C	N	O	S	0	0
			1525	969	306	248	2		

- Molecule 12 is a protein called Small ribosomal subunit protein uS17.



Mol	Chain	Residues	Atoms					AltConf	Trace
12	LL	143	Total	C	N	O	S	0	0
			1175	749	222	198	6		

- Molecule 13 is a protein called 40S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	NN	149	Total	C	N	O	S	0	0
			1202	770	228	203	1		

- Molecule 14 is a protein called Small ribosomal subunit protein uS11.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	OO	136	Total	C	N	O	S	0	0
			1016	621	199	190	6		

- Molecule 15 is a protein called eS21.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	VV	83	Total	C	N	O	S	0	0
			636	393	117	121	5		

There are 7 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
VV	3	ASN	SER	conflict	UNP G1TM82
VV	4	ASP	ASN	conflict	UNP G1TM82
VV	33	GLN	PRO	conflict	UNP G1TM82
VV	50	PHE	SER	conflict	UNP G1TM82
VV	75	ALA	SER	conflict	UNP G1TM82
VV	76	ASP	HIS	conflict	UNP G1TM82
VV	81	LYS	GLN	conflict	UNP G1TM82

- Molecule 16 is a protein called 40S ribosomal protein S15a.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	WW	129	Total	C	N	O	S	0	0
			1034	659	193	176	6		

- Molecule 17 is a protein called 40S ribosomal protein S23.



Mol	Chain	Residues	Atoms					AltConf	Trace
17	XX	141	Total	C	N	O	S	0	0
			1098	693	219	183	3		

- Molecule 18 is a protein called 40S ribosomal protein S24.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	YY	124	Total	C	N	O	S	0	0
			1011	640	198	168	5		

- Molecule 19 is a protein called eS26.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	aa	101	Total	C	N	O	S	0	0
			814	507	170	132	5		

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
aa	28	ARG	CYS	conflict	UNP G1TFE8
aa	56	ALA	VAL	conflict	UNP G1TFE8

- Molecule 20 is a protein called 40S ribosomal protein S27.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	bb	83	Total	C	N	O	S	0	0
			651	408	121	115	7		

- Molecule 21 is a protein called Small ribosomal subunit protein eS30.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	ee	57	Total	C	N	O	S	0	0
			457	282	101	73	1		

- Molecule 22 is a protein called 40S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	DD	228	Total	C	N	O	S	0	0
			1768	1126	318	316	8		

- Molecule 23 is a protein called Small ribosomal subunit protein uS7.



Mol	Chain	Residues	Atoms					AltConf	Trace
23	FF	185	Total	C	N	O	S	0	0
			1471	921	277	266	7		

- Molecule 24 is a protein called 40S ribosomal protein S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	KK	96	Total	C	N	O	S	0	0
			810	530	143	131	6		

- Molecule 25 is a protein called 40S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	MM	117	Total	C	N	O	S	0	0
			908	570	161	169	8		

- Molecule 26 is a protein called Small ribosomal subunit protein uS19.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	PP	129	Total	C	N	O	S	0	0
			1058	670	201	180	7		

- Molecule 27 is a protein called Small ribosomal subunit protein uS9.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	QQ	142	Total	C	N	O	S	0	0
			1128	717	213	195	3		

- Molecule 28 is a protein called 40S ribosomal protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	RR	132	Total	C	N	O	S	0	0
			1068	670	199	195	4		

- Molecule 29 is a protein called 40S ribosomal protein S18.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	SS	144	Total	C	N	O	S	0	0
			1190	746	241	202	1		

- Molecule 30 is a protein called Small ribosomal subunit protein eS19.



Mol	Chain	Residues	Atoms					AltConf	Trace
30	TT	141	Total	C	N	O	S	0	0
			1097	688	211	195	3		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
TT	119	GLY	TRP	conflict	UNP G1TN62

- Molecule 31 is a protein called 40S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	UU	100	Total	C	N	O	S	0	0
			795	498	152	141	4		

- Molecule 32 is a protein called 40S ribosomal protein S25.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	ZZ	75	Total	C	N	O	S	0	0
			598	382	111	104	1		

- Molecule 33 is a protein called 40S ribosomal protein S28.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	cc	62	Total	C	N	O	S	0	0
			488	297	97	92	2		

- Molecule 34 is a protein called 40S ribosomal protein S29.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	dd	55	Total	C	N	O	S	0	0
			459	286	94	74	5		

- Molecule 35 is a protein called 40S ribosomal protein S27a.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	ff	68	Total	C	N	O	S	0	0
			555	351	103	94	7		

- Molecule 36 is a protein called Receptor of activated protein C kinase 1.



Mol	Chain	Residues	Atoms					AltConf	Trace
36	gg	313	Total	C	N	O	S	0	0
			2436	1535	424	465	12		

- Molecule 37 is a protein called 60S ribosomal protein L8.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	A	248	Total	C	N	O	S	0	0
			1898	1189	389	314	6		

- Molecule 38 is a protein called 60S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	B	394	Total	C	N	O	S	0	0
			3172	2020	597	542	13		

- Molecule 39 is a protein called 60S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	C	362	Total	C	N	O	S	0	0
			2883	1812	577	480	14		

- Molecule 40 is a protein called 60S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	D	293	Total	C	N	O	S	0	0
			2391	1512	438	427	14		

- Molecule 41 is a protein called 60S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	E	216	Total	C	N	O	S	0	0
			1729	1115	329	282	3		

- Molecule 42 is a protein called 60S ribosomal protein L7.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	F	225	Total	C	N	O	S	0	0
			1875	1205	358	303	9		

- Molecule 43 is a protein called Large ribosomal subunit protein eL8.



Mol	Chain	Residues	Atoms					AltConf	Trace
43	G	233	Total	C	N	O	S	0	0
			1879	1199	361	315	4		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
G	244	GLY	CYS	conflict	UNP G1STW0

- Molecule 44 is a protein called 60S ribosomal protein L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	H	190	Total	C	N	O	S	0	0
			1516	954	284	272	6		

- Molecule 45 is a protein called Ribosomal protein L10.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	I	205	Total	C	N	O	S	0	0
			1664	1056	321	274	13		

- Molecule 46 is a protein called 60S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	J	170	Total	C	N	O	S	0	0
			1362	861	254	241	6		

- Molecule 47 is a protein called Large ribosomal subunit protein eL13.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	L	210	Total	C	N	O	S	0	0
			1702	1065	354	279	4		

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
L	74	ARG	HIS	conflict	UNP G1TKB3
L	190	ARG	HIS	conflict	UNP G1TKB3

- Molecule 48 is a protein called 60S ribosomal protein L14.



Mol	Chain	Residues	Atoms					AltConf	Trace
48	M	138	Total	C	N	O	S	0	0
			1137	727	221	182	7		

- Molecule 49 is a protein called 60S ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	N	203	Total	C	N	O	S	0	0
			1701	1072	359	266	4		

- Molecule 50 is a protein called Large ribosomal subunit protein uL13.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	O	199	Total	C	N	O	S	0	0
			1630	1051	319	255	5		

- Molecule 51 is a protein called 60S ribosomal protein L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	P	153	Total	C	N	O	S	0	0
			1242	777	241	215	9		

- Molecule 52 is a protein called Large ribosomal subunit protein eL18.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	Q	187	Total	C	N	O	S	0	0
			1515	946	315	250	4		

There are 12 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
Q	4	ASP	ASN	conflict	UNP G1TFE0
Q	14	ARG	TRP	conflict	UNP G1TFE0
Q	53	MET	LEU	conflict	UNP G1TFE0
Q	58	ARG	TRP	conflict	UNP G1TFE0
Q	75	ARG	GLN	conflict	UNP G1TFE0
Q	80	ALA	PRO	conflict	UNP G1TFE0
Q	86	VAL	ILE	conflict	UNP G1TFE0
Q	104	ARG	HIS	conflict	UNP G1TFE0
Q	110	ARG	CYS	conflict	UNP G1TFE0
Q	137	VAL	GLY	conflict	UNP G1TFE0
Q	157	GLY	ARG	conflict	UNP G1TFE0
Q	181	ARG	TRP	conflict	UNP G1TFE0



- Molecule 53 is a protein called eL20.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	S	176	Total	C	N	O	S	0	0
			1462	930	285	236	11		

- Molecule 54 is a protein called 60S ribosomal protein L21.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	T	159	Total	C	N	O	S	0	0
			1298	823	252	217	6		

- Molecule 55 is a protein called Large ribosomal subunit protein eL22.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	U	99	Total	C	N	O	S	0	0
			809	519	141	147	2		

There are 10 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
U	18	LEU	VAL	conflict	UNP G1TSG1
U	32	GLY	ARG	conflict	UNP G1TSG1
U	36	ALA	GLU	conflict	UNP G1TSG1
U	39	PHE	SER	conflict	UNP G1TSG1
U	54	GLY	ARG	conflict	UNP G1TSG1
U	60	VAL	ALA	conflict	UNP G1TSG1
U	62	SER	THR	conflict	UNP G1TSG1
U	63	LEU	ILE	conflict	UNP G1TSG1
U	97	ARG	HIS	conflict	UNP G1TSG1
U	106	THR	SER	conflict	UNP G1TSG1

- Molecule 56 is a protein called Large ribosomal subunit protein uL14.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	V	139	Total	C	N	O	S	0	0
			1034	648	199	182	5		

- Molecule 57 is a protein called Large ribosomal subunit protein uL23.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	X	118	Total	C	N	O	S	0	0
			967	618	181	167	1		



- Molecule 58 is a protein called 60S ribosomal protein L26.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	Y	134	Total	C	N	O	S	0	0
			1115	700	226	186	3		

- Molecule 59 is a protein called 60S ribosomal protein L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	Z	135	Total	C	N	O	S	0	0
			1107	714	208	182	3		

- Molecule 60 is a protein called 60S ribosomal protein L27a.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	a	147	Total	C	N	O	S	0	0
			1162	734	239	185	4		

- Molecule 61 is a protein called eL29.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	b	104	Total	C	N	O	S	0	0
			848	527	189	129	3		

- Molecule 62 is a protein called 60S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
62	c	98	Total	C	N	O	S	0	0
			761	481	134	140	6		

- Molecule 63 is a protein called 60S ribosomal protein L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	d	107	Total	C	N	O	S	0	0
			888	560	171	155	2		

- Molecule 64 is a protein called Large ribosomal subunit protein eL32.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	e	128	Total	C	N	O	S	0	0
			1053	667	216	165	5		

There are 7 discrepancies between the modelled and reference sequences:



Chain	Residue	Modelled	Actual	Comment	Reference
e	3	ALA	SER	conflict	UNP G1TUN8
e	13	VAL	ILE	conflict	UNP G1TUN8
e	16	ARG	TRP	conflict	UNP G1TUN8
e	81	ASN	SER	conflict	UNP G1TUN8
e	98	GLU	LYS	conflict	UNP G1TUN8
e	108	ARG	CYS	conflict	UNP G1TUN8
e	115	ALA	VAL	conflict	UNP G1TUN8

- Molecule 65 is a protein called Large ribosomal subunit protein eL33.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	f	109	Total	C	N	O	S	0	0
			876	555	174	143	4		

- Molecule 66 is a protein called 60S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	g	114	Total	C	N	O	S	0	0
			906	566	187	147	6		

- Molecule 67 is a protein called 60S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	h	122	Total	C	N	O	S	0	0
			1013	640	204	168	1		

- Molecule 68 is a protein called 60S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
68	i	102	Total	C	N	O	S	0	0
			830	520	176	129	5		

- Molecule 69 is a protein called 60S ribosomal protein L37.

Mol	Chain	Residues	Atoms					AltConf	Trace
69	j	86	Total	C	N	O	S	0	0
			705	434	155	111	5		

- Molecule 70 is a protein called Large ribosomal subunit protein eL38.



Mol	Chain	Residues	Atoms					AltConf	Trace
70	k	69	Total	C	N	O	S	0	0
			569	366	103	99	1		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
k	24	LYS	ASN	conflict	UNP G1U001

- Molecule 71 is a protein called 60S ribosomal protein L39.

Mol	Chain	Residues	Atoms					AltConf	Trace
71	l	50	Total	C	N	O	S	0	0
			447	286	96	64	1		

- Molecule 72 is a protein called Large ribosomal subunit protein eL40.

Mol	Chain	Residues	Atoms					AltConf	Trace
72	m	52	Total	C	N	O	S	0	0
			429	266	90	67	6		

- Molecule 73 is a protein called eL41.

Mol	Chain	Residues	Atoms					AltConf	Trace
73	n	25	Total	C	N	O	S	0	0
			239	145	64	27	3		

- Molecule 74 is a protein called eL42.

Mol	Chain	Residues	Atoms					AltConf	Trace
74	o	104	Total	C	N	O	S	0	0
			851	533	174	138	6		

- Molecule 75 is a protein called 60S ribosomal protein L37a.

Mol	Chain	Residues	Atoms					AltConf	Trace
75	p	91	Total	C	N	O	S	0	0
			708	445	136	120	7		

- Molecule 76 is a protein called 60S ribosomal protein L28.



Mol	Chain	Residues	Atoms					AltConf	Trace
76	r	124	Total	C	N	O	S	0	0
			994	616	205	167	6		

- Molecule 77 is a protein called Large ribosomal subunit protein uL10.

Mol	Chain	Residues	Atoms					AltConf	Trace
77	s	87	Total	C	N	O	S	0	0
			695	444	128	117	6		

- Molecule 78 is a protein called uL11.

Mol	Chain	Residues	Atoms					AltConf	Trace
78	t	133	Total	C	N	O	S	0	0
			993	619	182	189	3		

- Molecule 79 is a RNA chain called 28S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
79	5	3543	Total	C	N	O	P	0	0
			75955	33826	13895	24691	3543		

- Molecule 80 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
80	7	119	Total	C	N	O	P	0	0
			2538	1132	454	834	118		

- Molecule 81 is a RNA chain called 5.8S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
81	8	151	Total	C	N	O	P	0	0
			3208	1432	564	1062	150		

- Molecule 82 is a RNA chain called Ala-tRNA.

Mol	Chain	Residues	Atoms						AltConf	Trace
82	AT	76	Total	C	H	N	O	P	0	0
			2413	722	792	290	533	76		

- Molecule 83 is a RNA chain called NediV IRES.



Mol	Chain	Residues	Atoms						AltConf	Trace
83	1	166	Total	C	H	N	O	P	0	0
			5305	1577	1782	619	1161	166		

- Molecule 84 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
84	9	1	Total	Mg	0
			1	1	
84	I	1	Total	Mg	0
			1	1	
84	L	1	Total	Mg	0
			1	1	
84	P	1	Total	Mg	0
			1	1	
84	V	1	Total	Mg	0
			1	1	
84	X	1	Total	Mg	0
			1	1	
84	a	2	Total	Mg	0
			2	2	
84	e	1	Total	Mg	0
			1	1	
84	g	1	Total	Mg	0
			1	1	
84	j	1	Total	Mg	0
			1	1	
84	5	184	Total	Mg	0
			184	184	
84	7	6	Total	Mg	0
			6	6	
84	8	5	Total	Mg	0
			5	5	

- Molecule 85 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
85	aa	1	Total	Zn	0
			1	1	
85	dd	1	Total	Zn	0
			1	1	
85	ff	1	Total	Zn	0
			1	1	
85	g	1	Total	Zn	0
			1	1	

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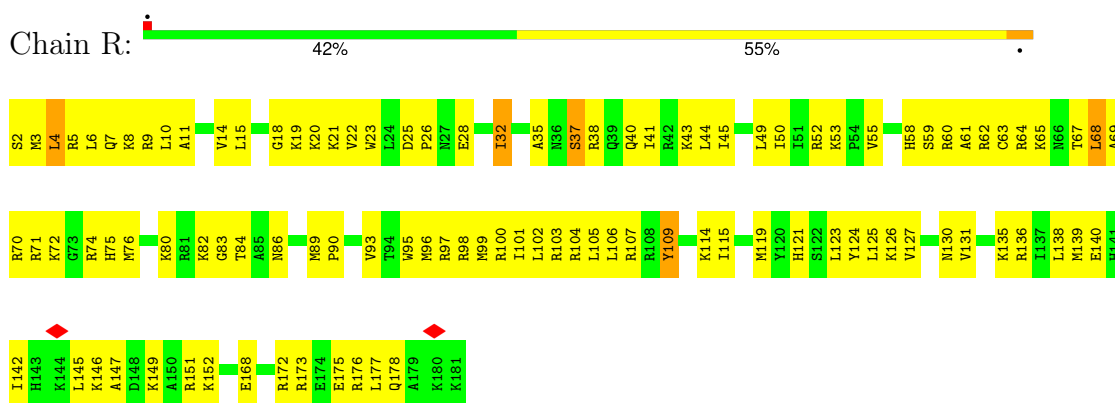
Mol	Chain	Residues	Atoms		AltConf
85	j	1	Total 1	Zn 1	0
85	m	1	Total 1	Zn 1	0
85	o	1	Total 1	Zn 1	0
85	p	1	Total 1	Zn 1	0



### 3 Residue-property plots

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

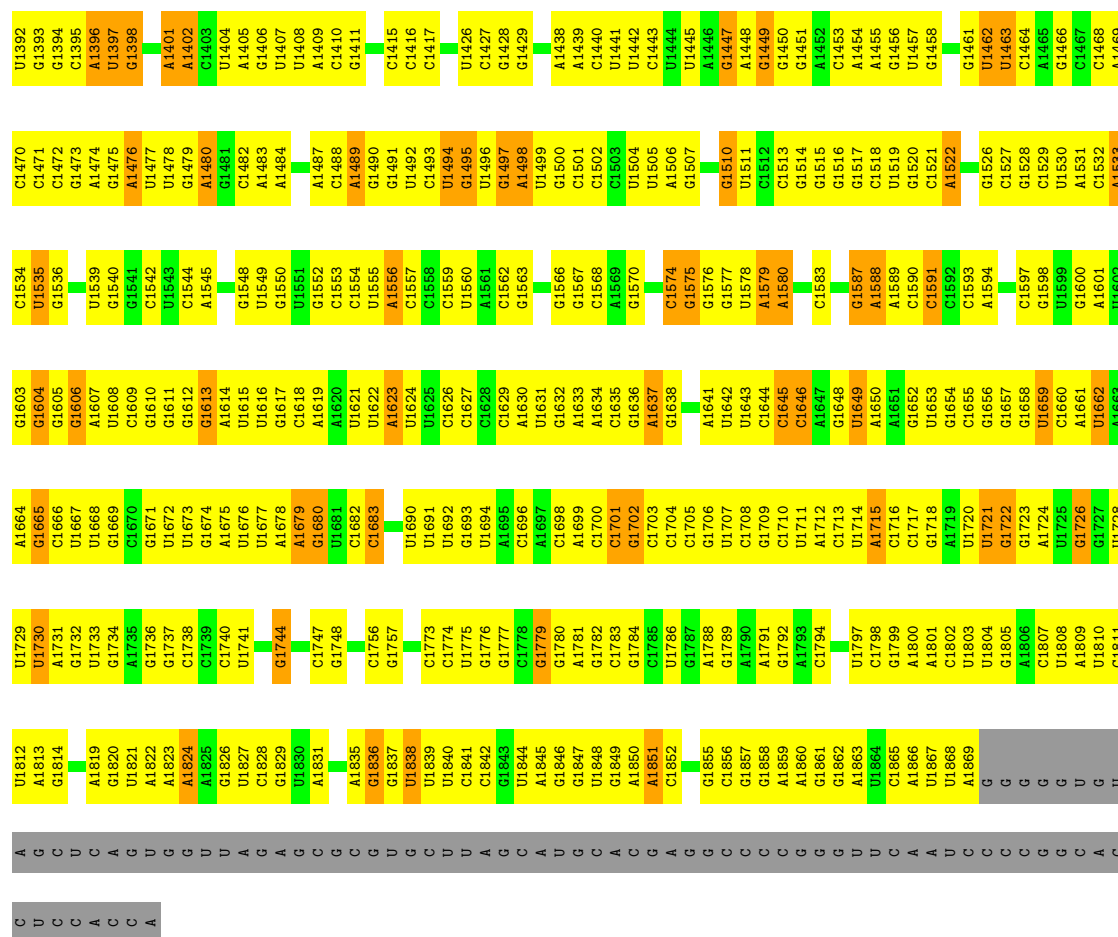
#### • Molecule 1: 60S ribosomal protein L19





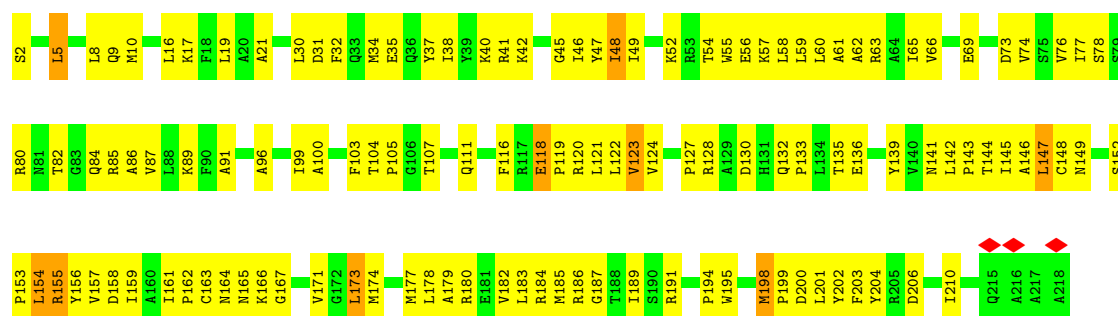
G1321	C1254	A1189	G985	G924	U844	U689	G626	U557	C491	A426	C353	U219
G1322	G1255	A1190	G986	G925	G845	U689	U627	G558	C492	U427	U354	U220
U1323	G1256	C1191	A987	A926	A987	G694	A987	G559	A493	U428	G355	A221
G1324	G1257	U1192	C988	C927	A847	G694	A628	A560	C429	C429	C356	U222
G1325	A1258	U1193	C989	G928	U848	C729	A629	A561	U495	C430	G374	C223
U1326	A1259	A1194	A990	G929	A849	C730	U630	U562	C496	C431	U375	A224
G1327	A1260	C1132	G991	C930	C850	G731	U631	G563	C497	G432	C362	G225
C1328	U1055	A1133	A992	C931	C851	U732	G635	U566	C498	A433	A363	G289
U1329	U1056	A1196	G993	G932	G852	U733	G636	U567	A500	A434	A364	U290
G1330	A1058	C1135	G993	G933	C853	C734	U637	C568	A501	G438	U367	G291
C1331	U1059	U1136	A996	G934	C853	C735	U638	C569	C501	A440	C368	A292
A1332	U1060	U1137	A997	G935	U857	C736	G639	A569	C502	A449	C369	C293
U1333	A1062	A1138	A998	G936	A858	G736	A640	C570	G506	C441	G370	A299
C1337	C1063	C1139	G999	C937	C859	G752	A641	U571	G507	C442	A371	U300
G1338	U1064	G1140	C1000	A938	G860	G754	U642	U572	A508	U443	U372	G307
U1339	G1065	G1141	A1001	U939	A643	G754	A643	U573	A509	G444	G373	A301
G1340	U1066	U1142	U1002	U940	G644	G754	G644	A574	G510	A445	G374	A302
C1341	C1067	A1143	U1003	C941	C867	G758	C645	A575	G510	G446	U376	C303
U1342	U1068	U1144	U1004	G942	G868	G759	G646	A576	G513	A447	A376	G304
C1343	U1069	A1145	G1005	U943	A869	C790	U647	C579	G514	A448	G377	U305
U1344	A1070	C1146	C1006	A944	A870	C791	A648	U580	G515	A449	U378	C306
C1349	C1075	C1147	C1007	U945	U871	C792	U649	U581	A516	A450	C379	G307
U1350	G1076	A1148	A1008	U946	A872	G793	A650	U582	C517	G451	G380	G308
G1351	U1077	U1149	U1009	G947	G873	G796	U651	A583	G518	A452	C381	C309
C1352	C1078	A1150	G1010	U948	G874	C797	A653	A584	A519	C453	C382	G310
A1353	A1080	C1151	A1011	C949	A875	C797	A654	C585	A520	U454	G383	C311
G1354	U1081	U1152	U1012	C950	C876	G798	A655	C586	A521	A455	U384	G312
U1355	C1082	C1153	G1013	C951	C877	G799	A656	C587	A522	C456	G385	A313
C1356	A1083	U1154	U1014	G952	G878	G799	G656	C588	A523	C457	U314	U314
A1357	U1084	U1155	U1015	C953	G878	C803	U657	C589	U524	A458	C386	C315
U1358	U1085	U1156	U1016	U954	C884	U804	U658	A590	A525	A459	C387	G316
C1359	C1086	U1157	U1017	A955	U885	U805	G659	A591	C527	A460	C317	G317
U1360	U1087	G1158	U1018	G956	A886	U806	C660	C592	A528	U461	A318	C319
G1361	U1088	U1159	C1019	A957	U887	G807	U661	G599	A529	C462	G397	G320
U1364	U1089	U1160	U1020	G958	U888	A808	G662	A599	A530	A465	C399	G329
C1367	U1090	A1161	U1021	U959	U889	A809	U663	G601	A531	G466	C400	G330
U1368	U1091	C1162	U1022	U960	U890	A810	U664	G602	C532	A467	A401	G333
A1369	U1092	U1163	A1023	G961	C891	A811	U665	C603	A533	A468	C402	C334
U1370	U1093	U1164	U1024	U962	G895	A812	U666	A604	U538	A469	G403	G335
C1371	C1094	U1165	U1025	U965	U896	U815	U667	A605	C539	G470	G404	A336
G1372	U1095	U1166	C1026	U966	U896	A816	A669	U606	C540	G471	G405	C337
C1373	U1096	U1167	A1027	U967	G901	G817	A670	U607	U540	C472	G407	C338
U1374	U1097	C1168	U1028	U968	G902	A818	A671	C608	U541	A473	A408	A339
G1375	U1098	U1169	U1029	U969	G907	G819	A672	G611	U542	G474	C409	C340
A1376	U1099	U1170	A1030	U970	A908	U820	C674	G612	C543	A475	G410	C341
U1377	U1100	U1171	C1031	G971	G909	U822	C675	G613	A544	G476	A415	A343
C1378	U1101	U1172	U1032	U972	G910	U823	C676	G614	A545	A477	U416	A344
U1379	C1102	U1173	A1033	U973	G911	C824	C677	G615	G546	G478	C417	U345
G1380	U1113	U1174	A1034	C974	C912	A825	U678	C616	C547	C479	A418	C346
C1381	U1114	U1175	A1035	G975	C913	A826	A679	G617	C548	C480	G419	G347
U1382	U1115	U1176	G1037	G976	A913	A827	U681	C618	C549	C481	G420	A348
A1383	C1116	C1117	U1038	C977	A914	U827	U682	C619	C550	C482	G421	A349
C1384	U1117	U1118	C1039	U978	G915	A830	G683	G620	U551	C483	U422	C350
U1385	U1119	A1119	G1040	C979	A919	G831	G684	C621	U552	A484	U423	G351
G1386	U1120	U1120	U1041	U980	A920	G832	A685	C622	U553	A485	C424	A352
C1387	U1121	G1121	U1042	A981	A921	C833	U686	G623	A554	A486	G425	
A1388	U1122	U1122	U1043	G982	A922	C834	U687	G624	A555	U487		
C1391	C1123	C1123	U1046	C984	G923		U688					





• Molecule 4: 40S\_SA\_C domain-containing protein

Chain AA: 42% 53%

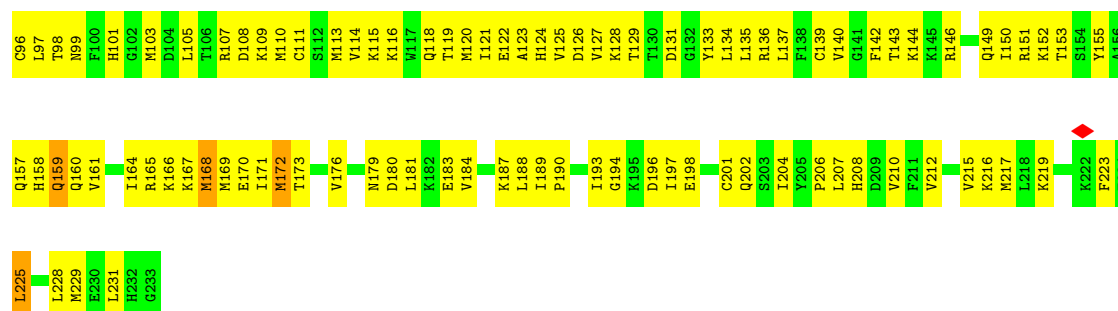


• Molecule 5: 40S ribosomal protein S3a

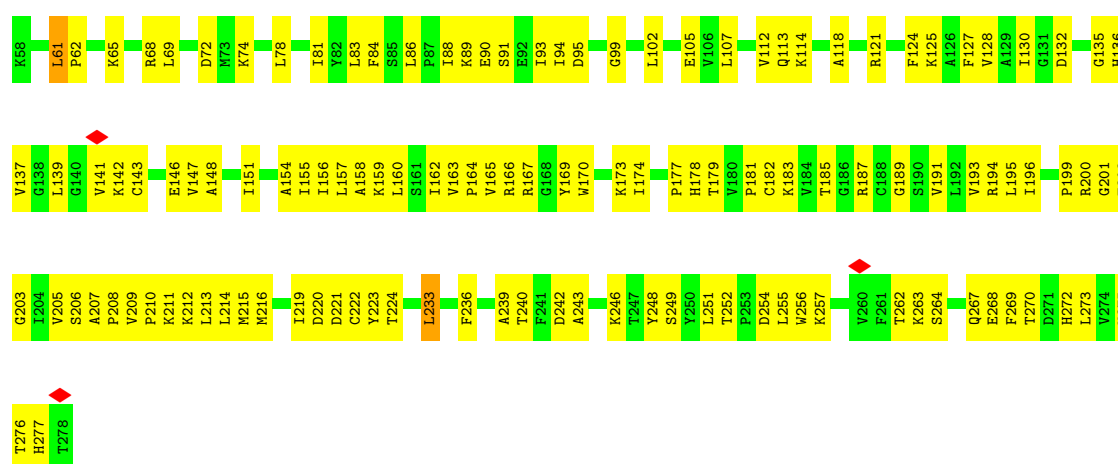
Chain BB: 39% 59%







• Molecule 6: 40S ribosomal protein S2



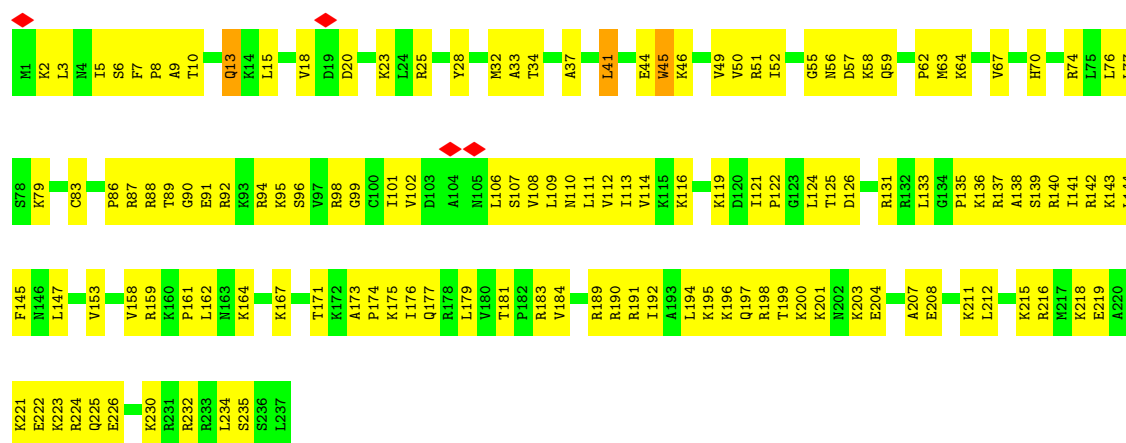
• Molecule 7: 40S ribosomal protein S4



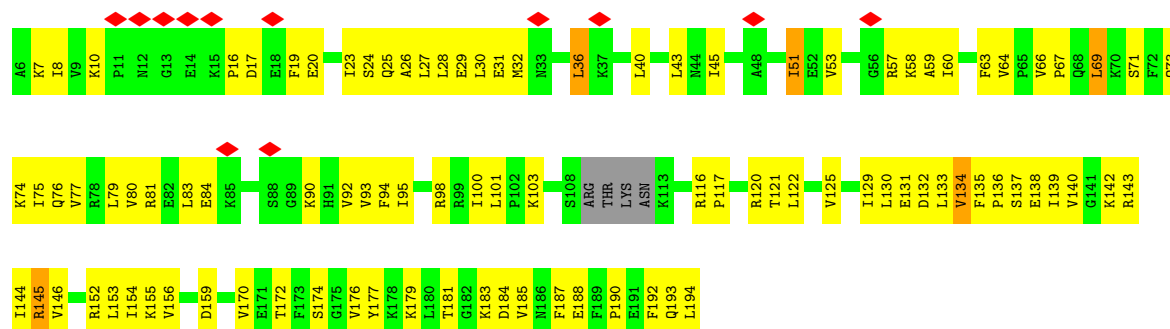
• Molecule 8: 40S ribosomal protein S6



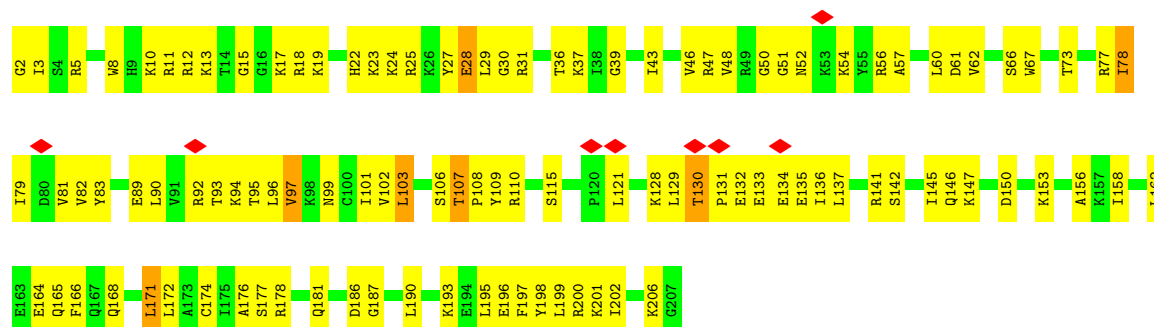




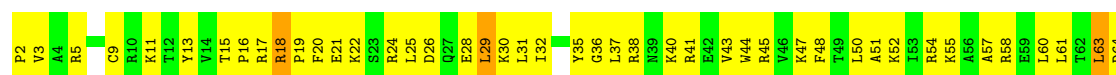
• Molecule 9: Small ribosomal subunit protein eS7



• Molecule 10: 40S ribosomal protein S8

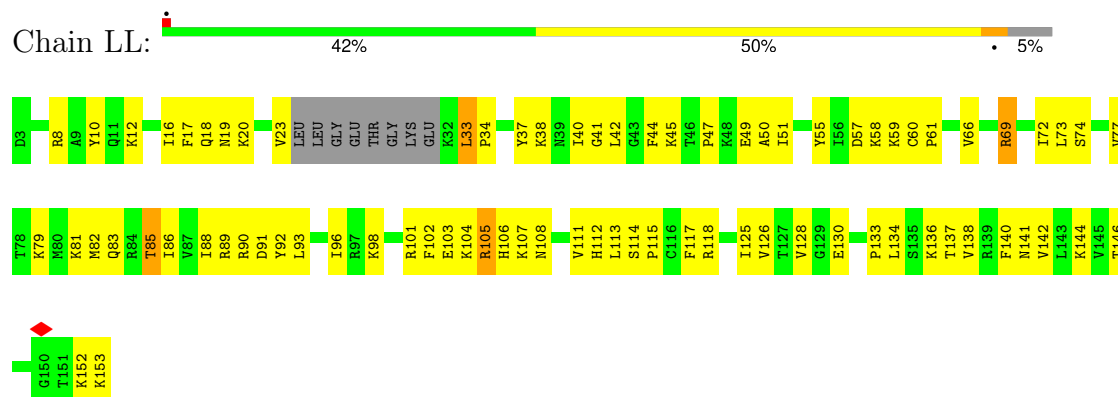


• Molecule 11: 40S ribosomal protein S9

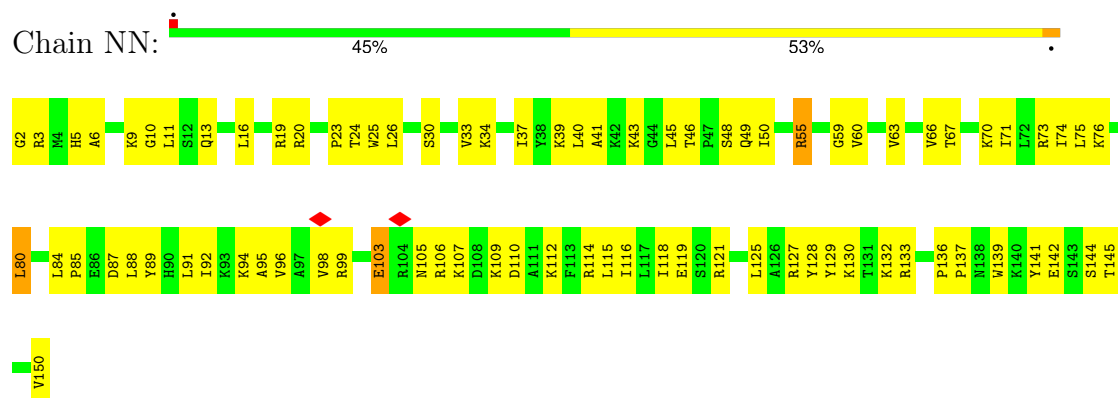




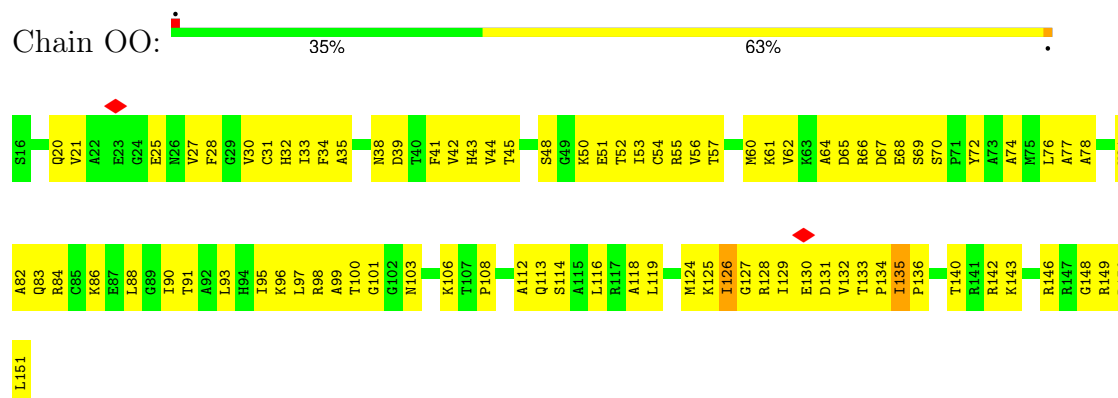
- Molecule 12: Small ribosomal subunit protein uS17



- Molecule 13: 40S ribosomal protein S13

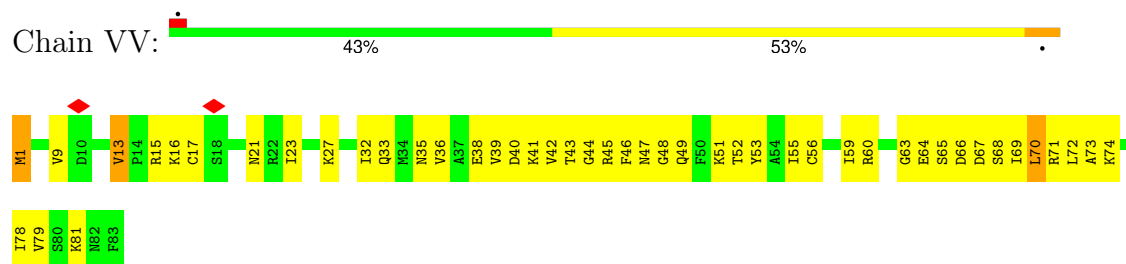


- Molecule 14: Small ribosomal subunit protein uS11



- Molecule 15: eS21

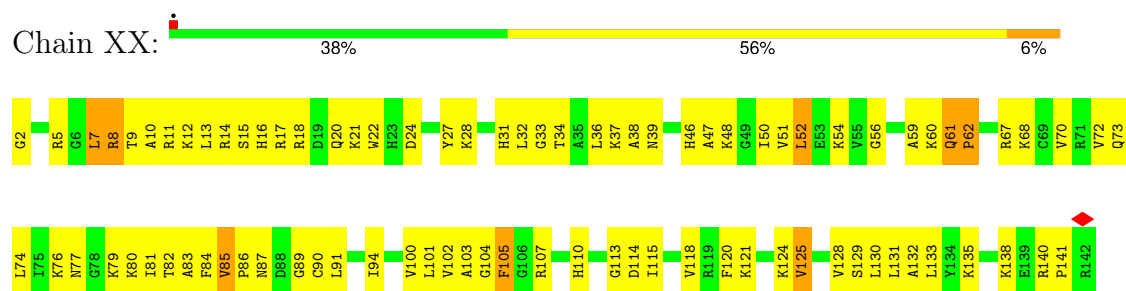




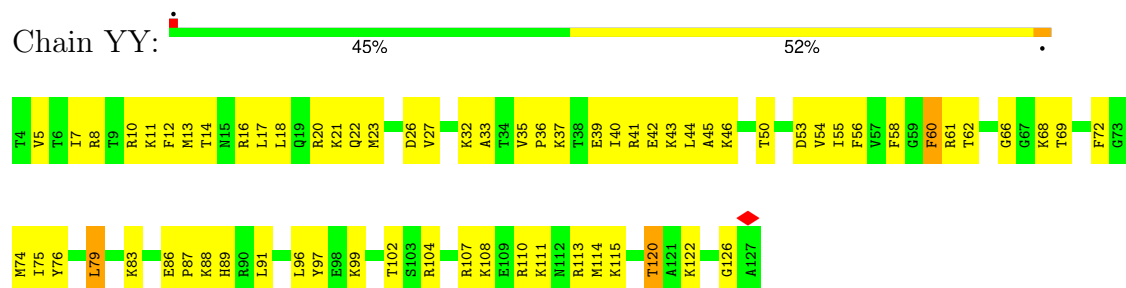
- Molecule 16: 40S ribosomal protein S15a



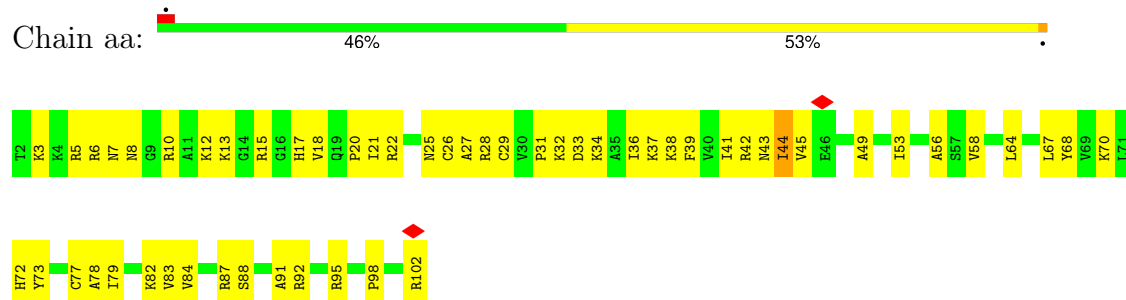
- Molecule 17: 40S ribosomal protein S23



- Molecule 18: 40S ribosomal protein S24



- Molecule 19: eS26





- Molecule 20: 40S ribosomal protein S27

Chain bb: 



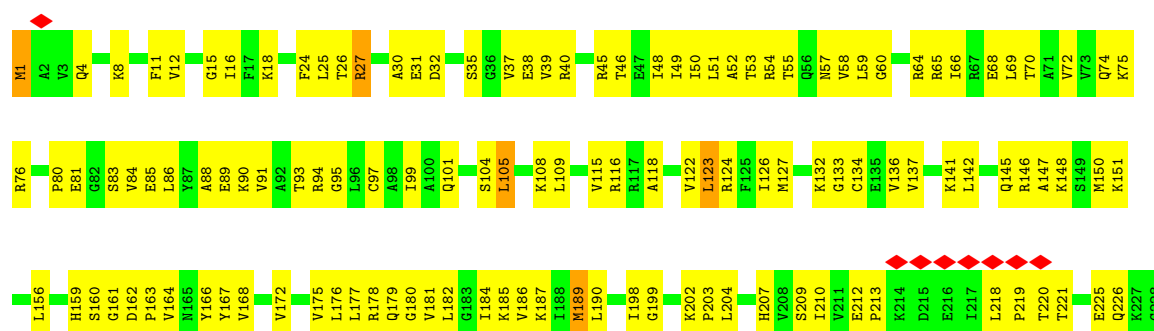
- Molecule 21: Small ribosomal subunit protein eS30

Chain ee: 



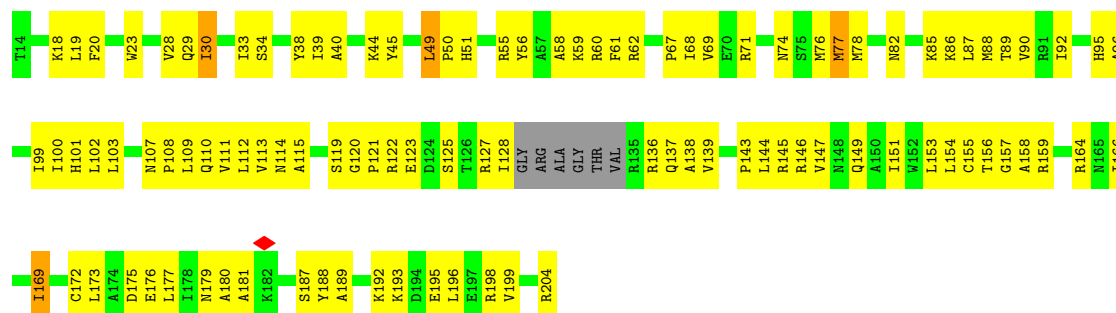
- Molecule 22: 40S ribosomal protein S3

Chain DD: 



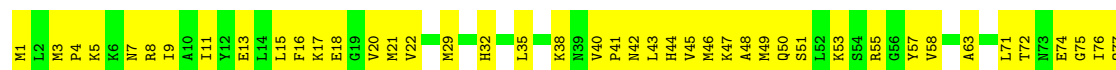
- Molecule 23: Small ribosomal subunit protein uS7

Chain FF: 



- Molecule 24: 40S ribosomal protein S10

Chain KK: 

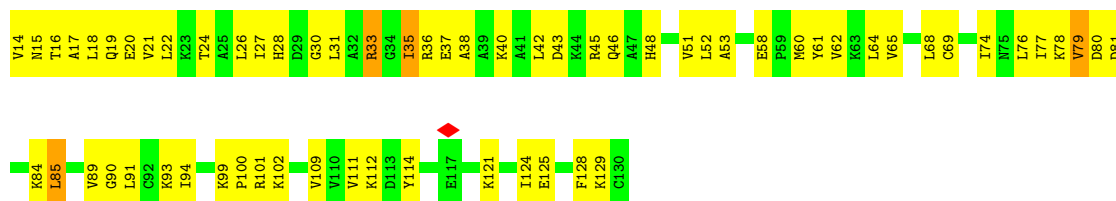






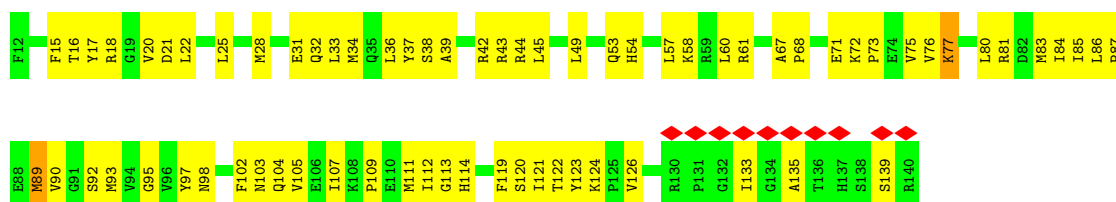
- Molecule 25: 40S ribosomal protein S12

Chain MM: 45% 51%



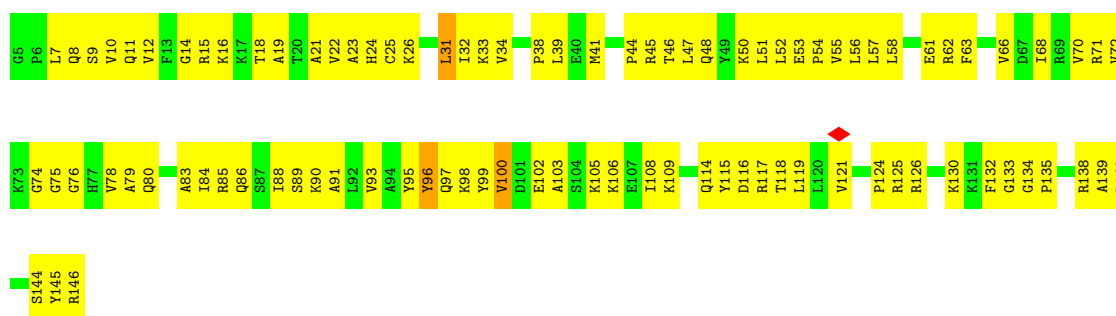
- Molecule 26: Small ribosomal subunit protein uS19

Chain PP: 8% 46% 53%



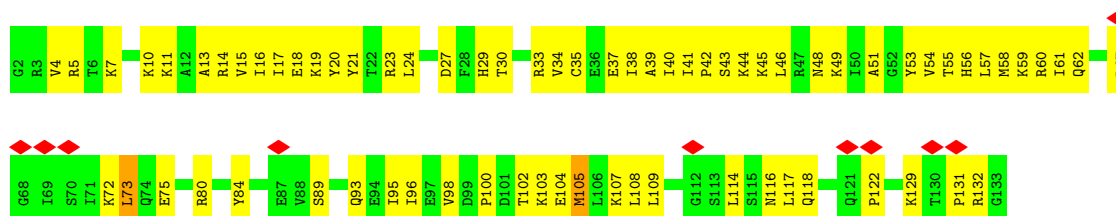
- Molecule 27: Small ribosomal subunit protein uS9

Chain QQ: 34% 64%



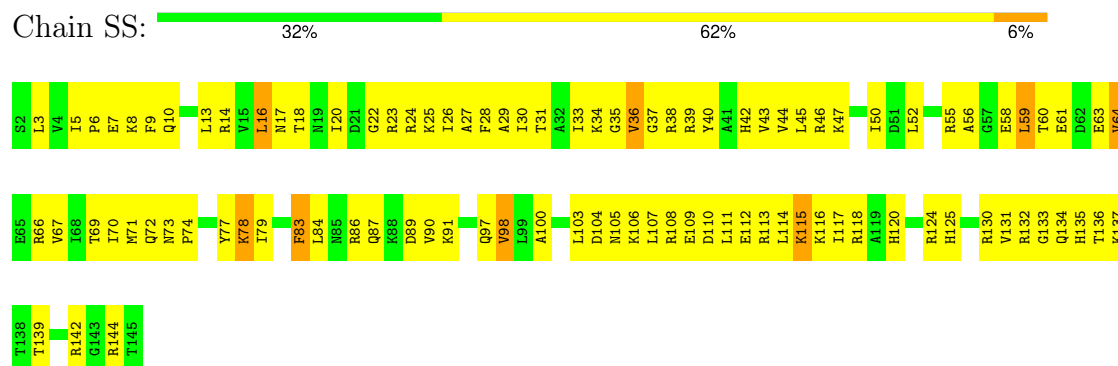
- Molecule 28: 40S ribosomal protein S17

Chain RR: 8% 45% 53%

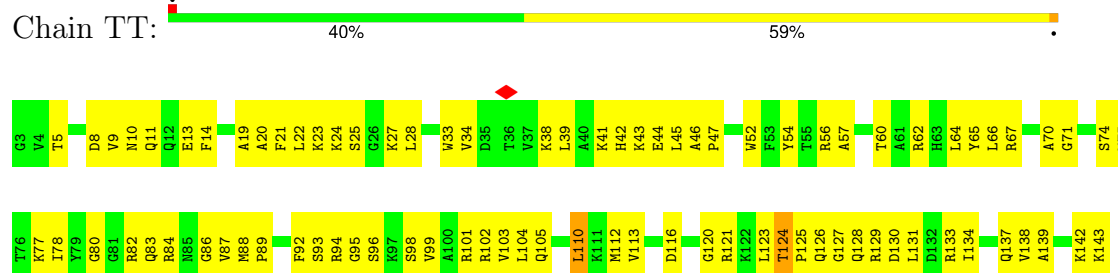




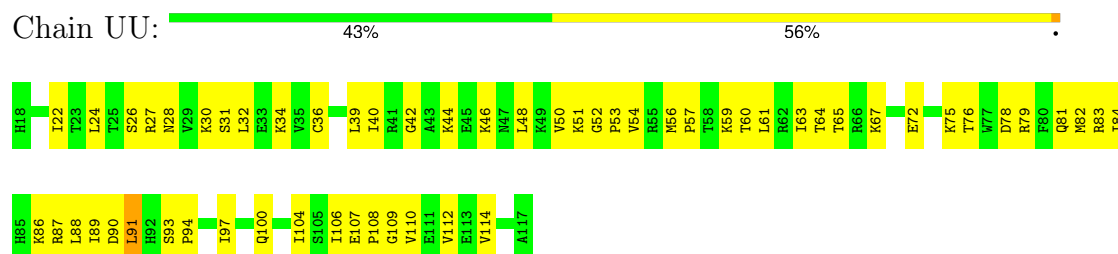
- Molecule 29: 40S ribosomal protein S18



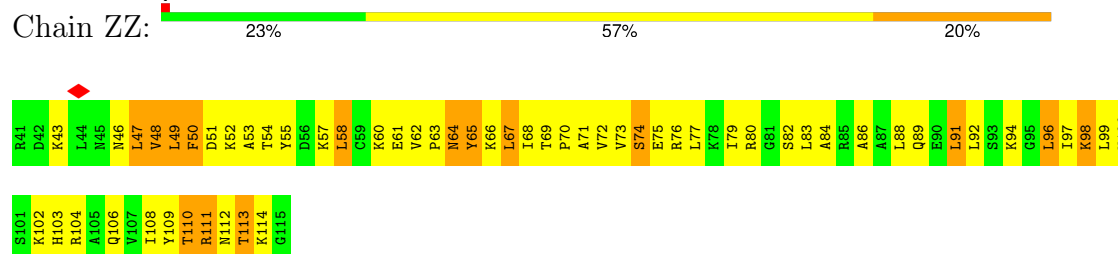
- Molecule 30: Small ribosomal subunit protein eS19



- Molecule 31: 40S ribosomal protein S20



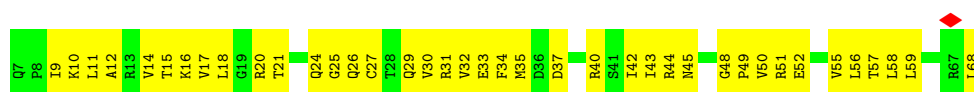
- Molecule 32: 40S ribosomal protein S25



- Molecule 33: 40S ribosomal protein S28







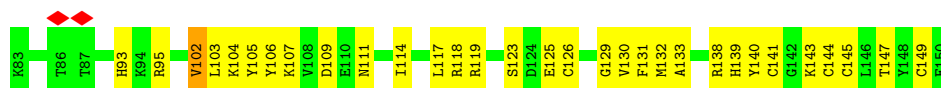
- Molecule 34: 40S ribosomal protein S29

Chain dd: 51% 47%



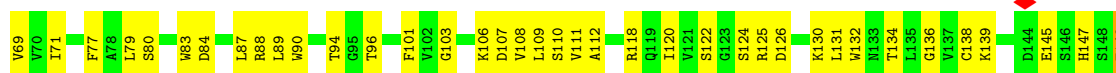
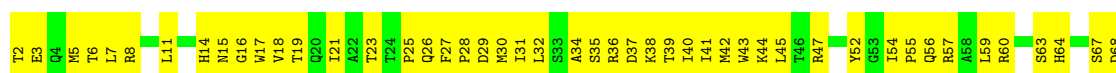
- Molecule 35: 40S ribosomal protein S27a

Chain ff: 54% 44%



- Molecule 36: Receptor of activated protein C kinase 1

Chain gg: 46% 53%

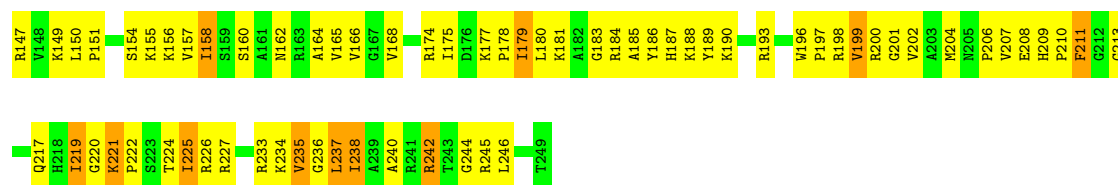


- Molecule 37: 60S ribosomal protein L8

Chain A: 38% 55% 7%

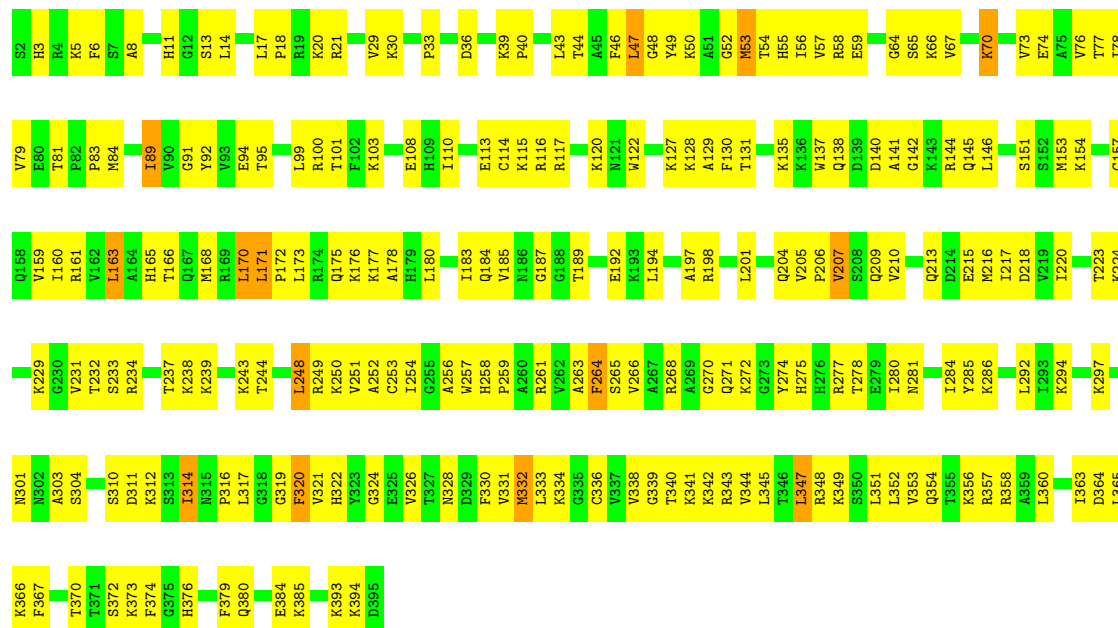






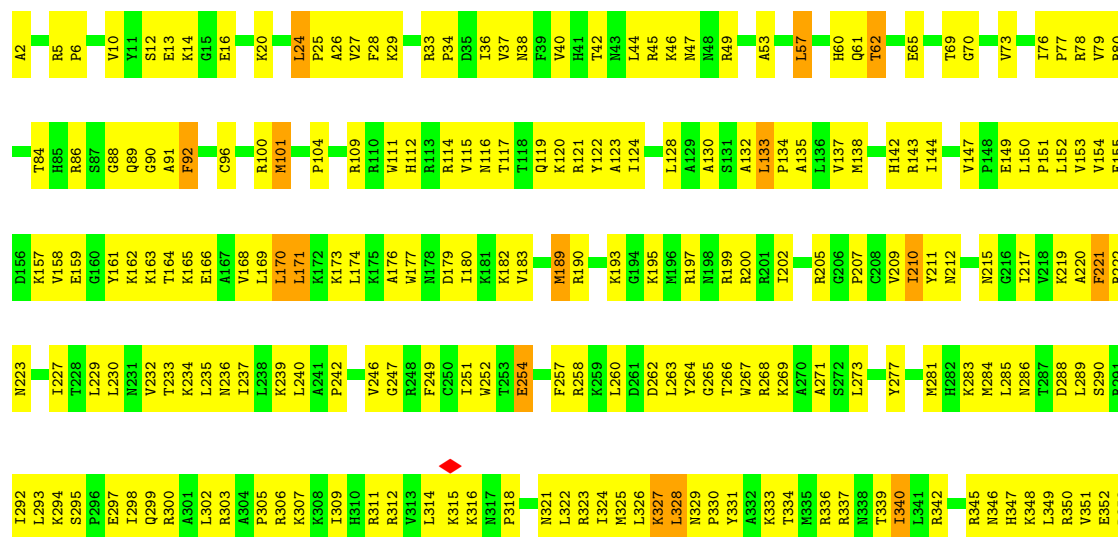
• Molecule 38: 60S ribosomal protein L3

Chain B: 44% 53%



• Molecule 39: 60S ribosomal protein L4

Chain C: 40% 56%

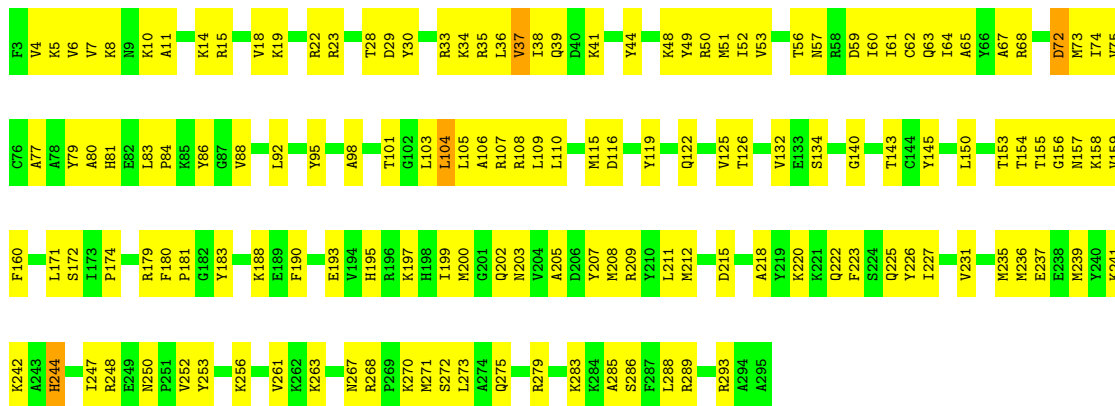






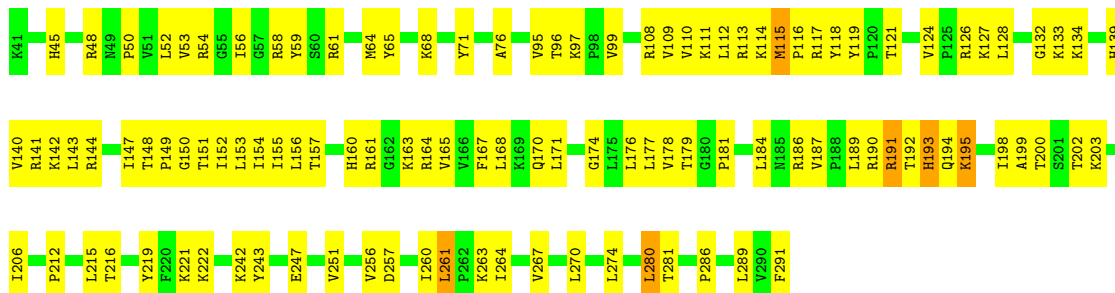
• Molecule 40: 60S ribosomal protein L5

Chain D: 50% 48%



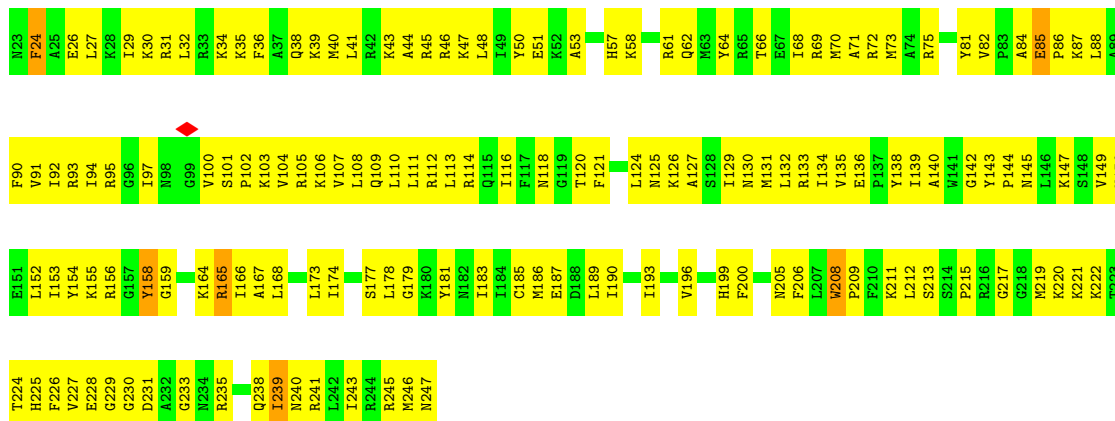
• Molecule 41: 60S ribosomal protein L6

Chain E: 49% 49%



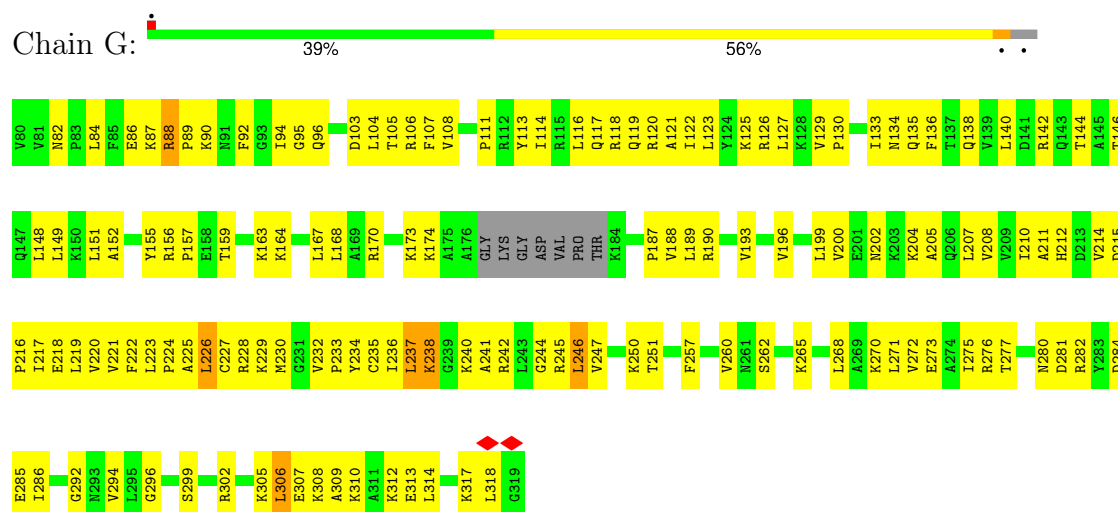
• Molecule 42: 60S ribosomal protein L7

Chain F: 33% 64%

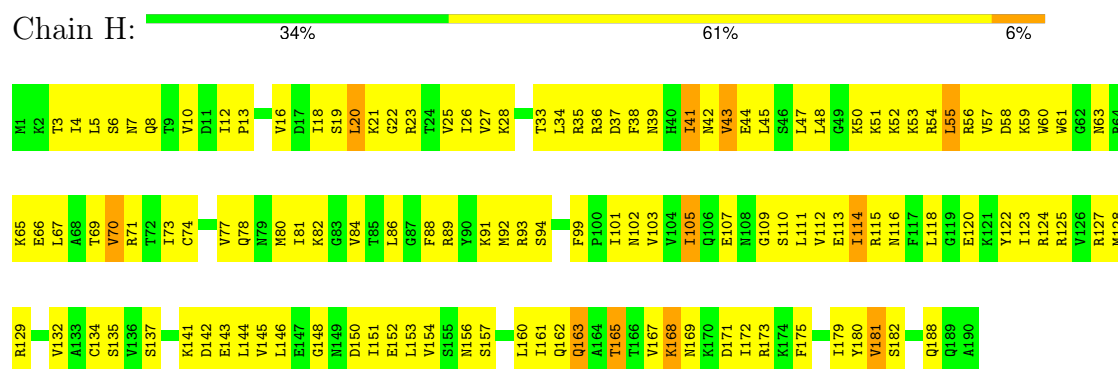




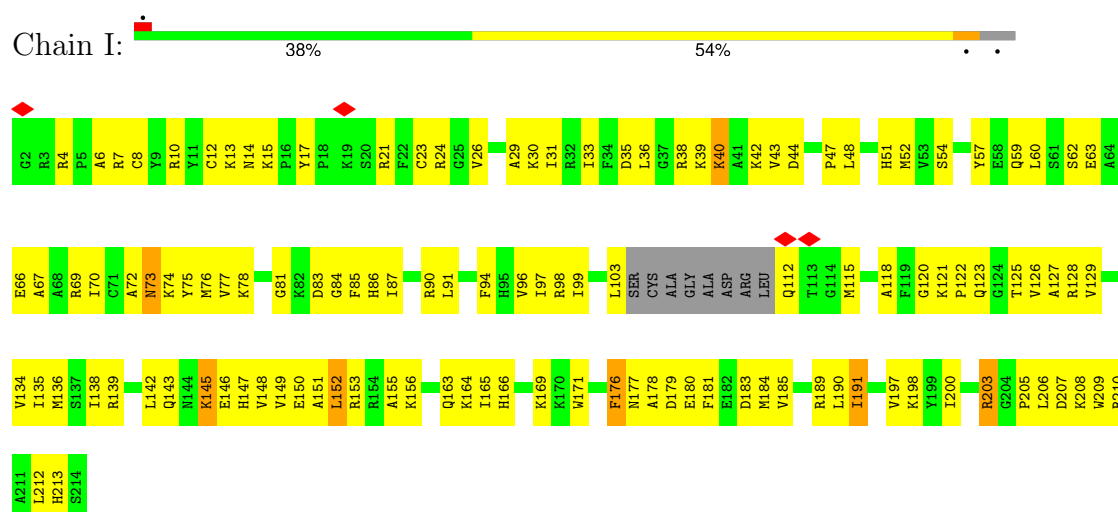
- Molecule 43: Large ribosomal subunit protein eL8



- Molecule 44: 60S ribosomal protein L9



- Molecule 45: Ribosomal protein L10



- Molecule 46: 60S ribosomal protein L11





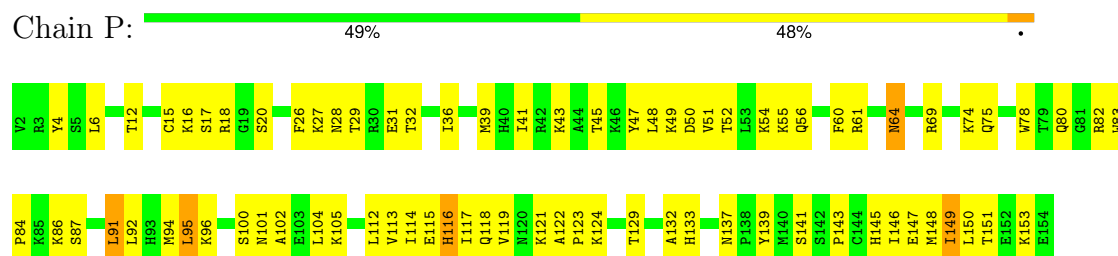




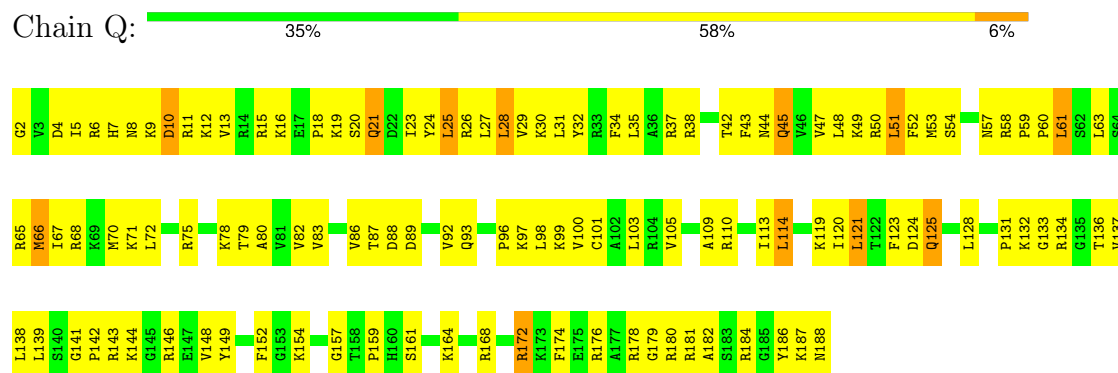
- Molecule 50: Large ribosomal subunit protein uL13



- Molecule 51: 60S ribosomal protein L17



- Molecule 52: Large ribosomal subunit protein eL18

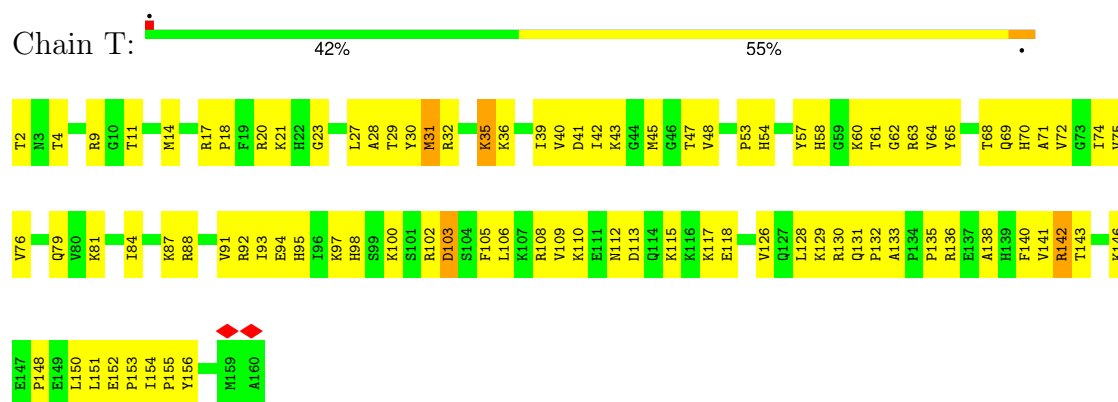


- Molecule 53: eL20

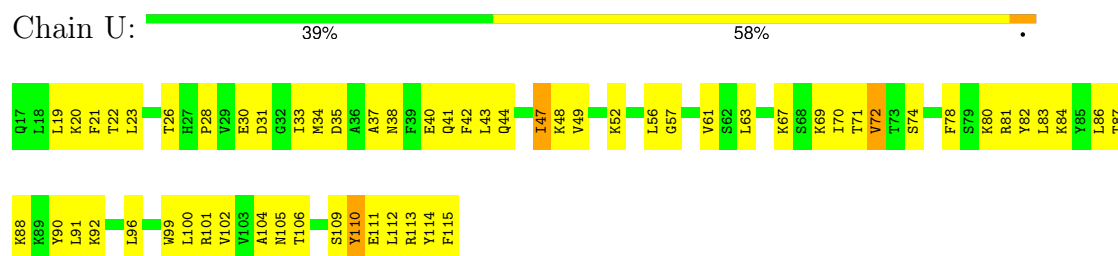




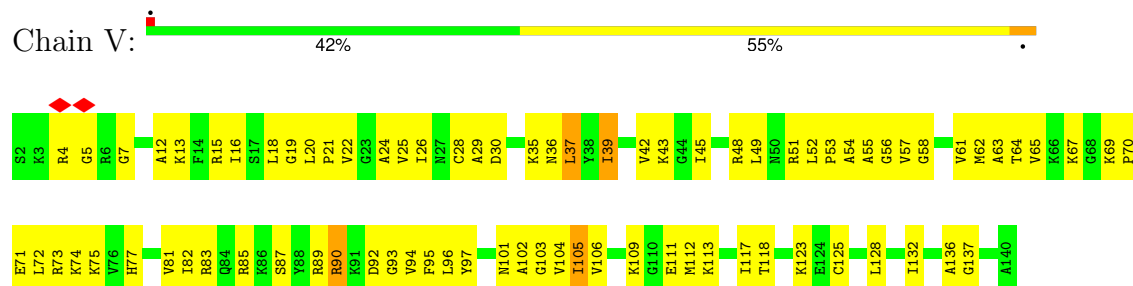
- Molecule 54: 60S ribosomal protein L21



- Molecule 55: Large ribosomal subunit protein eL22



- Molecule 56: Large ribosomal subunit protein uL14



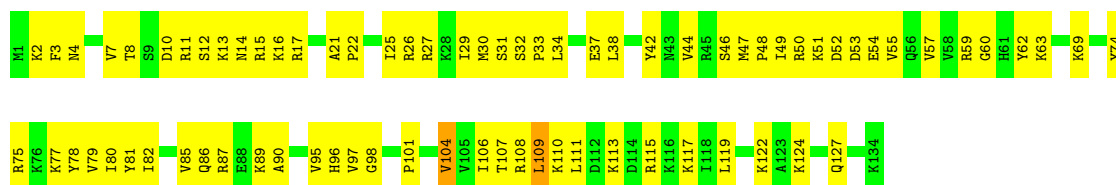
- Molecule 57: Large ribosomal subunit protein uL23



- Molecule 58: 60S ribosomal protein L26

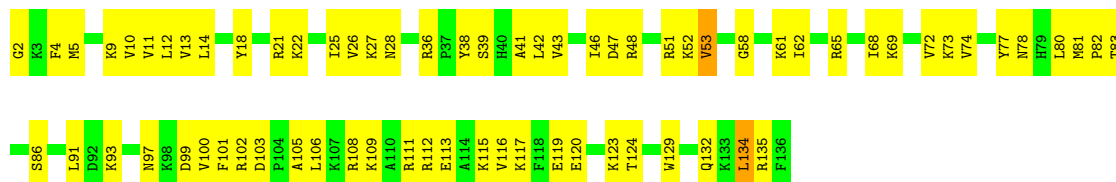






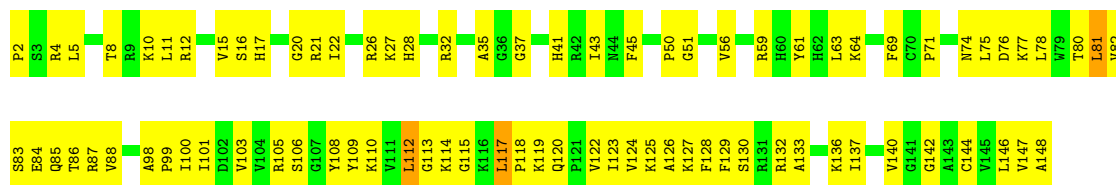
- Molecule 59: 60S ribosomal protein L27

Chain Z: 48% 50% .



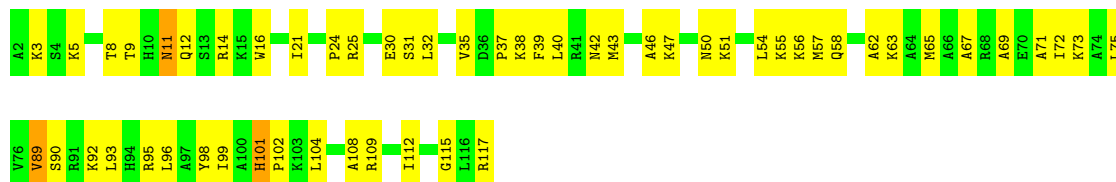
- Molecule 60: 60S ribosomal protein L27a

Chain a: 44% 54% .



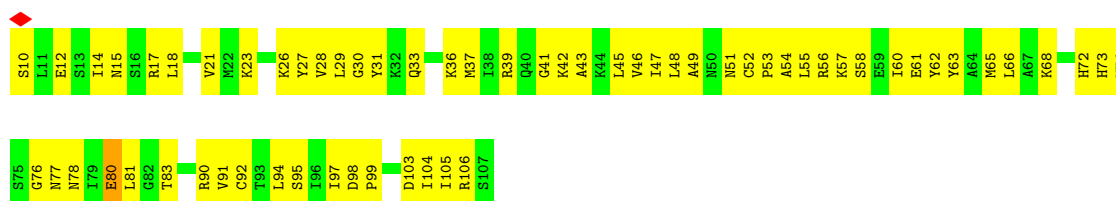
- Molecule 61: eL29

Chain b: 47% 50% .



- Molecule 62: 60S ribosomal protein L30

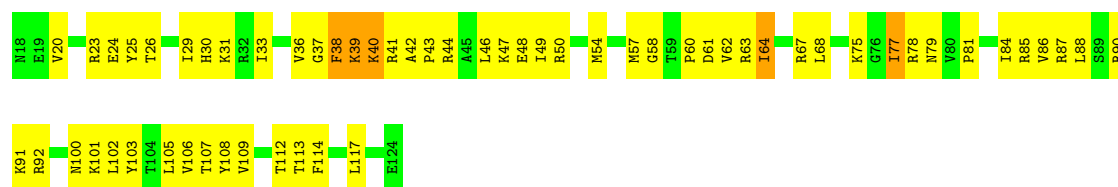
Chain c: 37% 62% .



- Molecule 63: 60S ribosomal protein L31

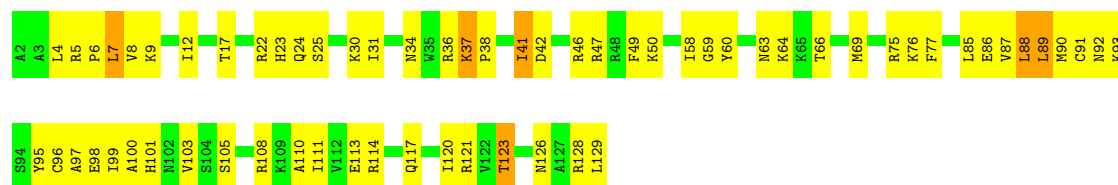


Chain d: 



- Molecule 64: Large ribosomal subunit protein eL32

Chain e: 



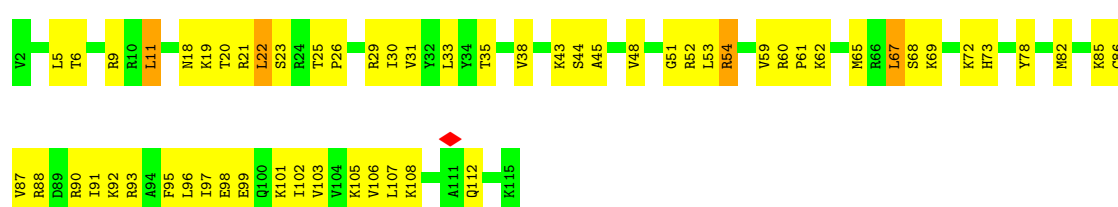
- Molecule 65: Large ribosomal subunit protein eL33

Chain f: 



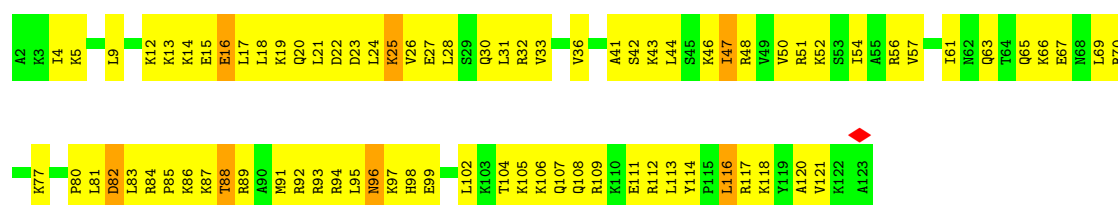
- Molecule 66: 60S ribosomal protein L34

Chain g: 



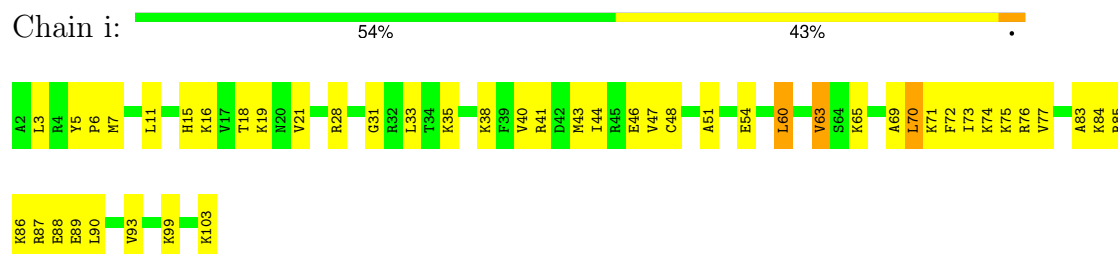
- Molecule 67: 60S ribosomal protein L35

Chain h: 

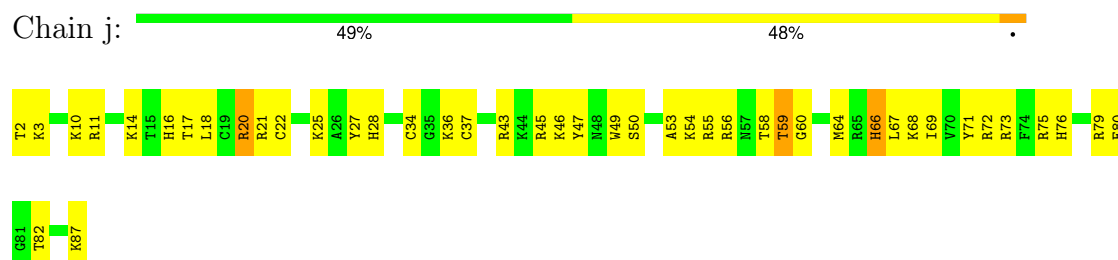




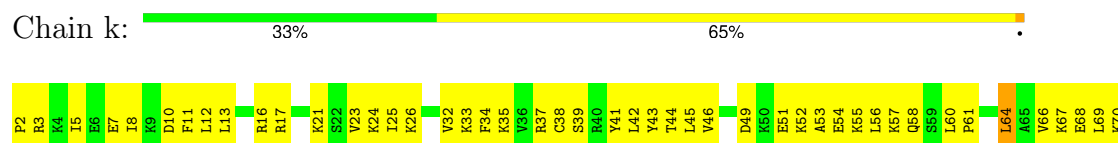
- Molecule 68: 60S ribosomal protein L36



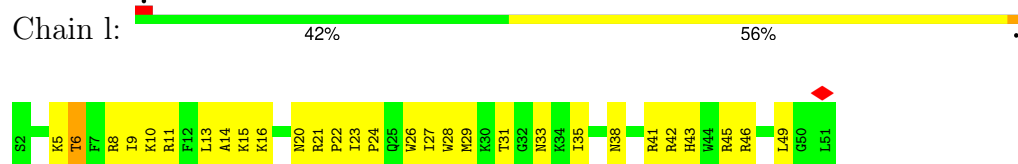
- Molecule 69: 60S ribosomal protein L37



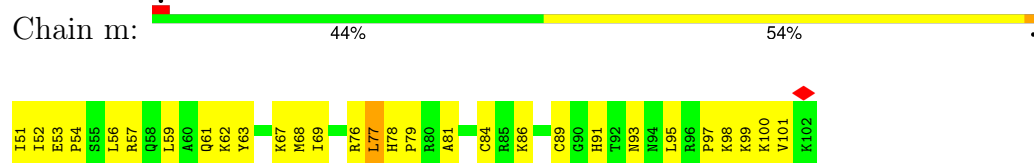
- Molecule 70: Large ribosomal subunit protein eL38



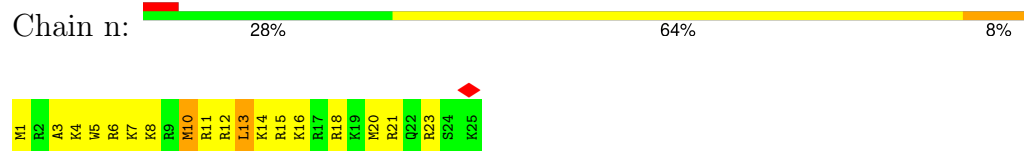
- Molecule 71: 60S ribosomal protein L39



- Molecule 72: Large ribosomal subunit protein eL40

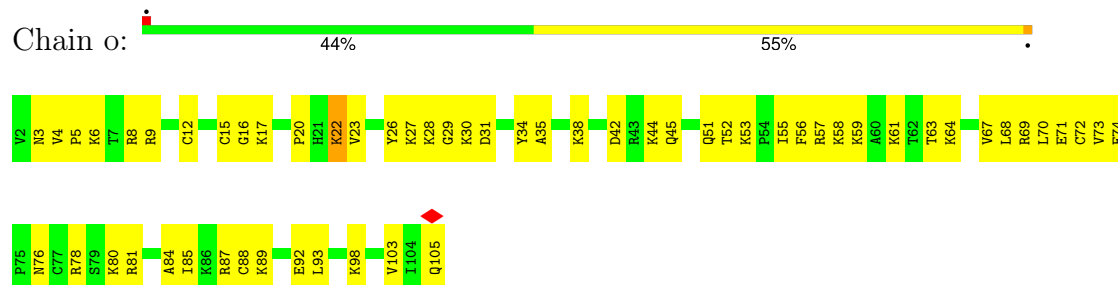


- Molecule 73: eL41





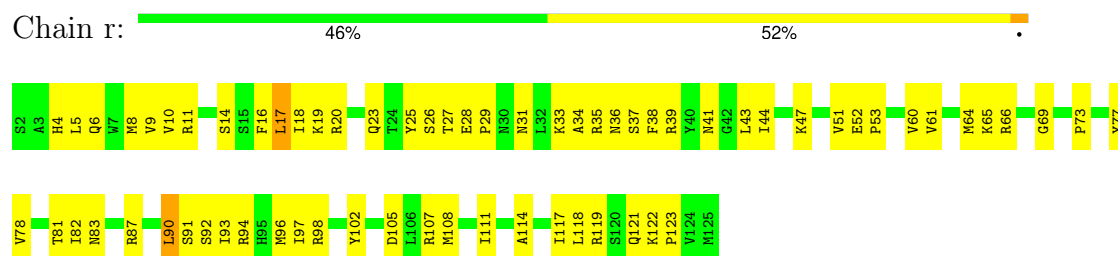
- Molecule 74: eL42



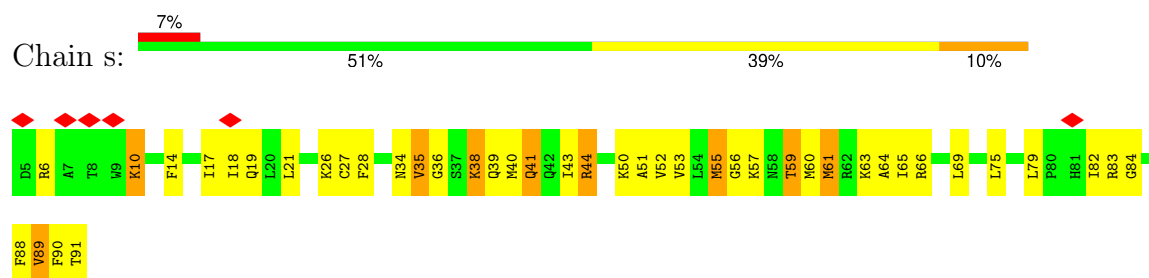
- Molecule 75: 60S ribosomal protein L37a



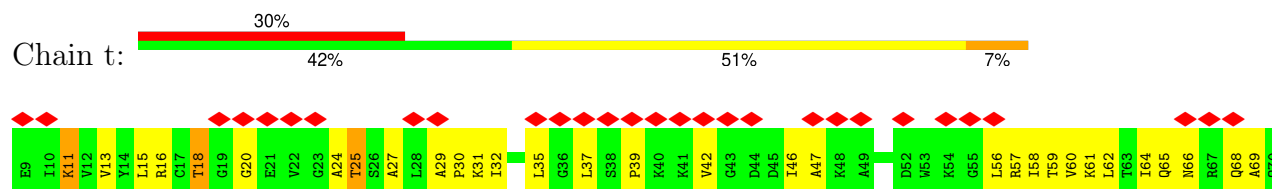
- Molecule 76: 60S ribosomal protein L28



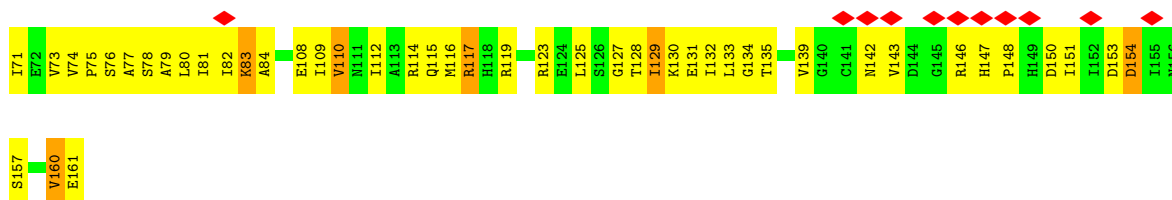
- Molecule 77: Large ribosomal subunit protein uL10



- Molecule 78: uL11

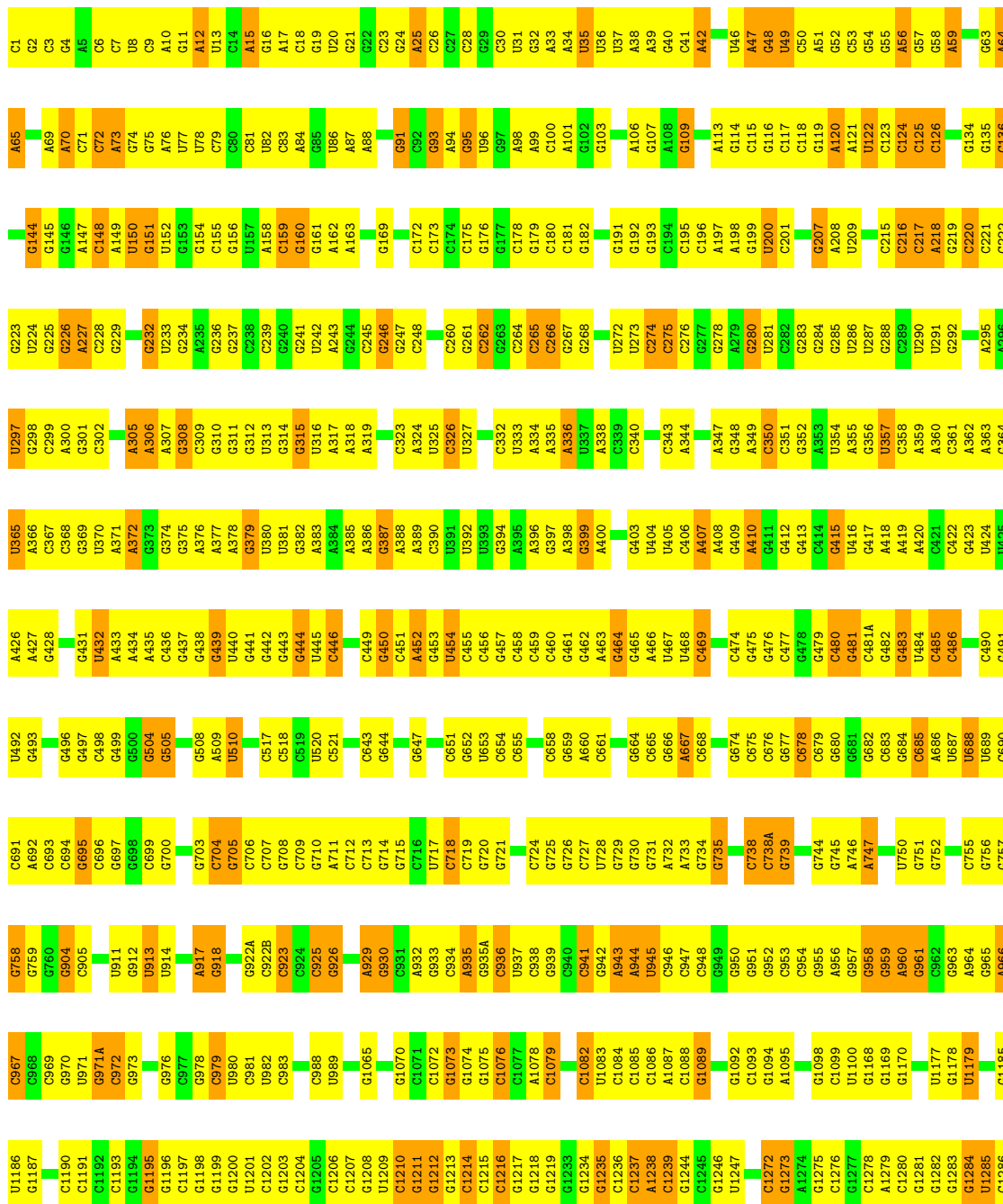






# Molecule 79: 28S rRNA

Chain 5: 27% 57% 16%



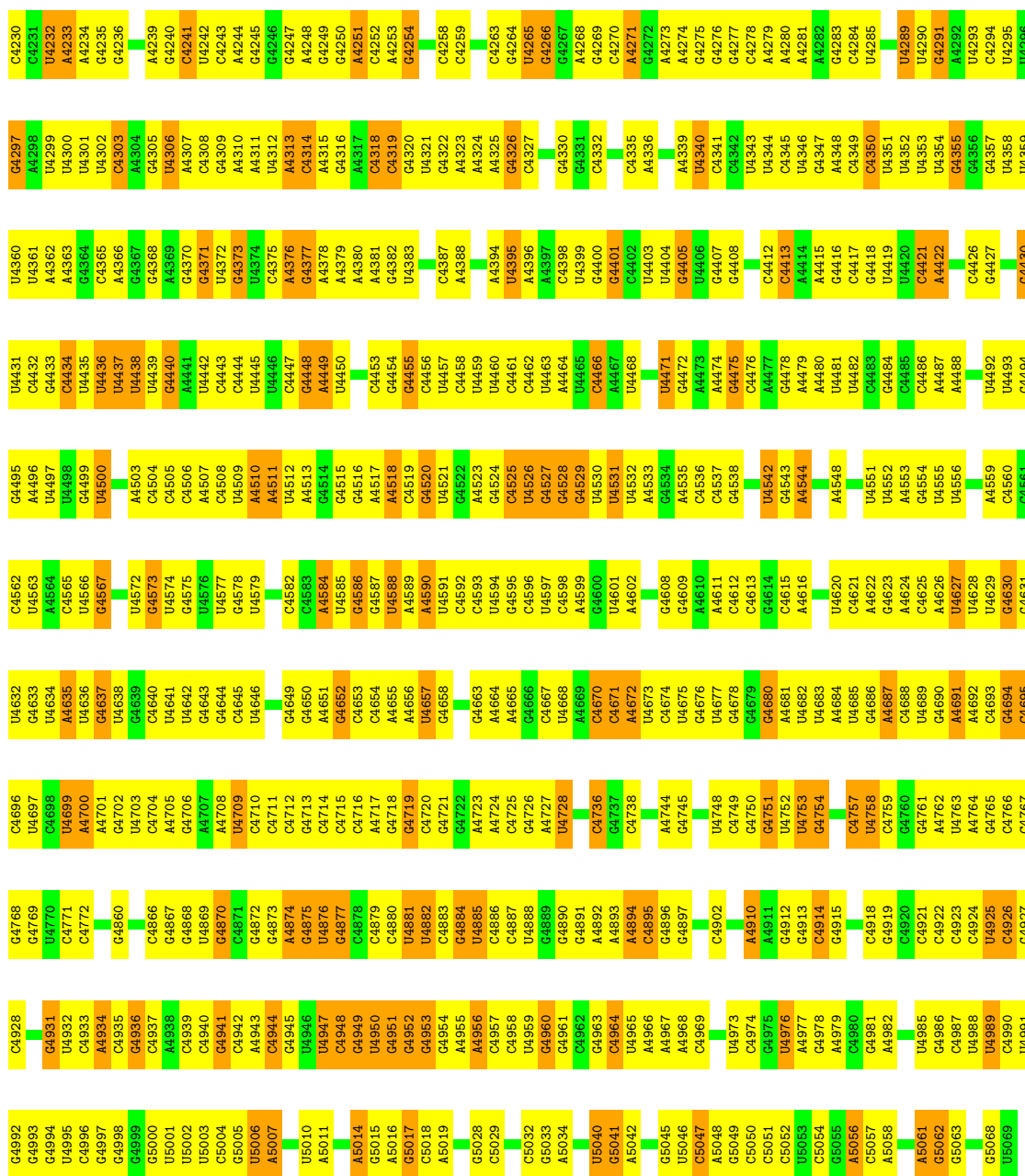


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G2306	U2306	U2097	C2036	G1973	C1911	U1845	C1763	G1689	U1620	C1552	C1485	G1418	G1349	G1289
A2307	G2098	G2098	C2037	U1974	G1912	G1846	U1764	C1690	A1621	A1553	G1488	G1420	G1350	G1290
G2308	G2099	G2099	U2038	G1975	C1913	G1847	C1765	G1691	A1622	A1554	G1489	A1430	G1351	G1291
G2309	G2099	G2100	U2039	G1976	C1914	G1848	C1766	G1694	U1622	A1555	G1490	G1421	G1352	G1292
G2310	A2040	A2101	A2040	C1977	C1915	U1849	A1767	C1694	A1623	G1556	U1494	G1422	G1353	G1293
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G2314	U2044	A2105	U2044	G1981	G1919	G1853	C1791	G1696	G1627	A1558	G1498	G1424	G1357	U1297
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G2317	A2047	G2108	A2047	A1984	G1922	C1856	A1794	U1726	A1631	A1565	A1500	C1430	G1360	G1300
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G2323	G2053	G1989	C1928	G1989	C1928	G1866	G1800	G1732	A1637	U1572	G1506	U1437	U1371	C1306
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A2341	A2071	G2005	A2071	G2005	G1945	G1884	G1818	C1755	C1662	G1592	A1525	A1459	A1391	A1323
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G2351	C2080	U2015	C2080	U2015	C1957	A1893	C1827	A1765	U1671	A1600	A1533	C1473	G1400	A1333
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G2354	C2083	A2017	G2354	A2017	U1959	A1896	G1831	U1767	C1675	C1536	U1537	C1402	G1402	G1336
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G2357	G2086	U2020	G2357	U2020	A1962	U1898	U1834	A1770	C1678	G1605	U1539	C1475	C1405	U1339
G2358	C2087	G2021	G2358	G2021	C1963	G1899	G1835	U1771	C1679	G1606	G1540	C1476	G1406	G1340
U2359	A2088	C2022	U2359	C2022	A1964	C1900	G1836	C1772	U1679	C1607	C1541	C1477	G1406A	G1340
G2360	G2089	G2023	G2360	G2023	G1965	G1904	A1837	U1773	G1680	G1608	U1609	G1478	G1407	G1341
G2361	U2090	G2024	G2361	G2024	C1966	G1905	A1838	U1773	G1681	G1609	U1609	G1479	G1408	A1342
U2362	C2091	A2025	U2362	A2025	A1967	U1906	U1839	A1776	U1683	G1612	G1544	C1479	A1343	A1343
G2363	G2092	A2026	G2363	A2026	G1968	U1907	G1840	C1777	A1684	A1613	G1545	C1480	G1411A	A1344
G2364	A2300	U2027	G2364	U2027	G1969	A1907	C1841	C1778	G1685	C1614	G1546	C1481	G1411B	A1345
G2365	C2094	C2028	G2365	C2028	A1970	A1908	G1842	A1780	C1686	G1615	U1547	G1482	G1412	C1346

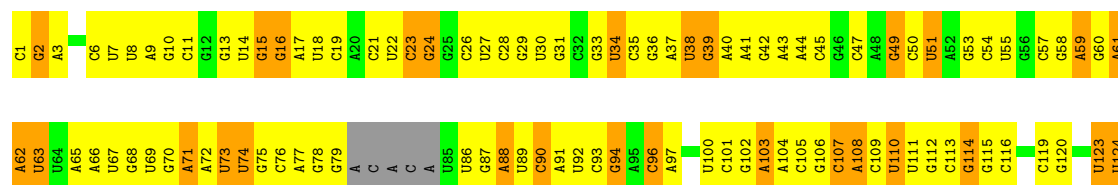


U4163	G4065	U3894	A3817	C3749	G3686	C3618	G2848	U2782	G2720	G2650	U2575	C2505	G2435	A2366
C4194	U4066	G3895	U3818	G3750	A3887	G3619	G2851	A2783	G2721	C2651	G2576	G2506	U2436	A2370
C4166	U4067	G3886	G3819	G3751	U3688	G3622	U2852	C2784	G2722	C2652	G2577	U2508	C2437	
	U4068	C3887	G3820	C3752	G3689		G2851	C2785	U2723	C2653	G2578	C2509	C2441	C2373
G4169	U4069	G3888	A3821	G3753	U3690	A3624	G2855	C2786	G2724	C2654	G2579	G2510	U2442	G24374
A4170	U4070	G3889	U3822	G3754	G3691	C3624	C2856	A2787	A2725	C2655	G2580	A2511	G2443	A2375
C4171	U4071	A3890	G3823	G3755	A3692	G3625	A2857	U2788	G2726	U2656	A2581	A2512	U2444	A2376
A4172	A4072	A3891	A3824		U3693	G3626	A2858	G2789	G2727	G2657	A2582	A2513	C2377	A2377
C4173	A3825	G3892	G3825	U3758	U3694	G3627	U2859	A2790	U2728	G2658	C2583	A2514	U2445	G2378
U4174	C3826	A3893	C3826	A3760	G3695	A3628	G2860	G2793	U2729		G2586	G2515	U2446	
		A3894		C3761	C3696	A3629	C2861	C2794	U2730	G2662	U2587	G2516	U2447	A2381
C4177	C3833	G3895	C3834	U3762	U3697		G2862	C2795	G2731	G2663	A2588	A2517	U2448	A2382
A4178	C3835	A3763	C3633	A3763	G3698		G2863	G2796	C2733	G2664	C2589	G2518	U2449	C2383
G4179	A3836		A3634	U3764	A3702		A2864	C2797	U2734		G2590	U2519	U2450	U2384
A4180	G3703	G3703	A3635	G3765	G3703			C2798	U2735	G2668	G2594	G2521	U2451	A2385
U4181	C3837	U3704	A3636	A3766	U3704			A2799	G2736	C2669	C2595	G2522	U2452	G2386
A4182	U3838	G3705	G3637	C3767	G3705			U2803	C2737	C2670	G2596		G2455	G2387
G4183	G3839	G3706	G3638		C3706			C2804	C2738	C2671	U2597	U2525	G2456	A2388
C4184	U3840		U3639	U3772	U3707			A2807	U2740	G2672	G2597	U2526	G2457	A2389
A4185	C3841	U3773	C3841	G3773	C3708			G2808	U2741	A2674	G2599	A2527	G2458	G2390
G4186	G3842	A3774	C3843	A3775	U3709			G2809	G2742	A2675	G2600	G2528	G2459	G2391
A4187	U3843	G3776	U3844	A3776	G3710			G2810	A2743	A2676	A2601	A2529	G2460	G2392
U4188	A3845	G3777	A3643	G3777	A3711			G2811	A2744	A2677		U2530	G2461	G2393
C4189	C3846	G3778	U3644	U3778	A3712			A2812	A2745	G2677			G2462	G2394
U4190	C3847		U3645		U3713			A2813	A2746		G2605		G2463	A2395
A4191	U3848	C3781	A3646		U3714			C2814	U2747	C2682	G2606	C2533	G2464	A2396
C4192	A3849	U3715	A3647		U3715			A2815	G2748	C2683	G2607	C2534	G2465	
U4193	C3850	A3762	C3716	G3782	C3716			G2816	C2749	C2684	G2608	G2535	G2466	G2399
A4194	U3851	A3763	A3649	A3763	A3717			G2817	G2750	C2685	G2609	A2536	G2400	G2399
G4195	A3852	G3784	C3650	A3765	A3718			C2818	G2751	G2686	G2610	U2537	A2401	A2401
	U3853	A3785	A3651		A3719			G2819	G2752	U2687		U2538	G2470	G2402
C4199	C3854	U3786	A3652		G3720			G2820	G2753	G2688	A2472	G2539	A2472	A2403
G4200	C3855	G3787	A3653		U3721			U2821	G2754	C2690	G2473	G2541	G2474	A2404
A4201	A3856	C3788	G3722	C3788	U2891			G2822	G2755	U2691	G2475	G2542	G2476	G2405
U4202	G3857	C3789	A3723	C3789	G2892			G2823	A2757	U2692	G2476	A2543	G2476	U2409
A4203		U3790	A3724		U2893			G2823	G2758	G2693	A2477	G2544	A2477	C2410
	A3860	C3791	G3725		A2894			U2826	G2759	G2694	G2478	U2545	G2478	C2411
U4208	A3861		A3726		A2895			G2827	G2760	G2695	G2479	G2546	G2479	A2412
G4209	A3862	C3794	A3727		G2896			U2828	U2761	A2696	G2480	G2547	G2480	U2413
U4210		A3795	A3728		G2897			G2829	G2762			G2548	G2483	G2414
A4211	A3929	U3796	U3729		G2898			G2830	U2763	G2700	G2484	G2549	U2415	U2415
A4212	G3930	C3797	U3730		G2899			G2831	A2764	G2701	U2625		U2416	U2416
C4213	A3867	U3798	C3731		G2898			A2832	G2765	C2702	U2626		U2485	A2417
A4214	G3868	A3799	A3732		G2899			G2833	A2766	G2703		G2552	G2486	
C4215	C3869	G3800	A3733		G3000			G2834	U2632	C2704	G2487	A2553	G2486	
G4216	C3870	U3801	U3734		A3668			A2835	G2769	G2705	G2488	U2554	G2488	A2420
A4217	A3871	U3802	U3735		G3669			G2836	G2770	G2706	G2489	G2555	G2489	G2421
C4218	A3872	A3803	A3736		C3670			U2837	G2771	U2707	U2490	G2556	G2422	C2422
U4219	G3873	G3804	A3737		G3671			G2838	G2772	U2708	G2491	G2557	U2423	G2423
A4220	G3874	U3805	G3738		C3672			G2839	G2773		G2562		C2492	G2424
C4221	G3875	G3806	C3739		C3673			A2840	G2774	G2711	G2563	U2554	U2425	U2425
G4222	A3876	A3807	G3740		U3677			G2841	G2775	G2712	G2498	G2564	U2426	U2426
C4223	A3877	C3808	G3743		G3678			U2842	G2776	G2713	G2499	G2565	A2427	G2427
A4224	C3878	G3809	G3744		U3679			G2843	G2777	G2714	U2500		A2428	A2428
G4225	A3879	C3810	U3745		A3680			A2844	G2778	G2715	G2571	U2570	U2500	A2429
C4226	G3880		U3746		C3683			A2845	G2779	G2716	C2572	G2501	G2501	C2430
U4227	C3881	U3814	A3746		G3684			G2846	G2780	G2717	G2502	G2502	G2502	G2433
A4228	G3882	G3815	U3616		U3616			G2847	G2781	G2718	G2503	G2503	G2503	G2434
U4229	U3883	A3816	A3748		C3685						G2649	G2574	G2504	

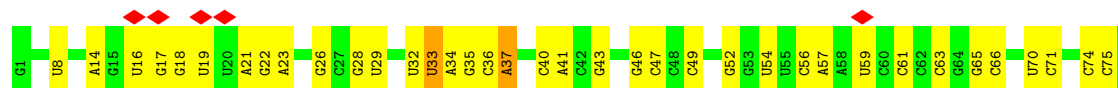




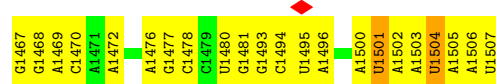
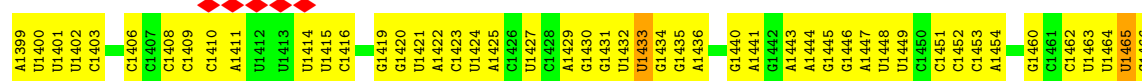
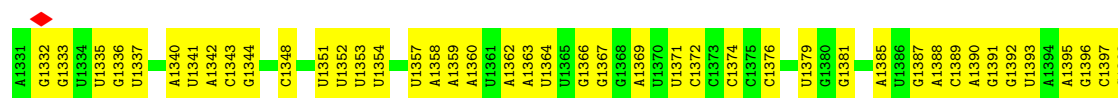
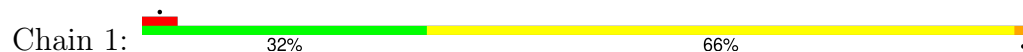




• Molecule 82: Ala-tRNA



• Molecule 83: NediV IRES





## 4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	23922	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI POLARA 300	Depositor
Voltage (kV)	300	Depositor
Electron dose ( $e^-/\text{\AA}^2$ )	64	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	2.293	Depositor
Minimum map value	-0.912	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.079	Depositor
Recommended contour level	0.193	Depositor
Map size ( $\text{\AA}$ )	849.92, 849.92, 849.92	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles ( $^\circ$ )	90.0, 90.0, 90.0	wwPDB
Pixel spacing ( $\text{\AA}$ )	1.66, 1.66, 1.66	Depositor



## 5 Model quality

### 5.1 Standard geometry

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

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	R	0.10	0/1524	0.26	0/2013
2	W	0.12	0/873	0.35	0/1158
3	9	0.12	0/40500	0.26	0/63092
4	AA	0.09	0/1747	0.25	0/2374
5	BB	0.08	0/1756	0.24	0/2350
6	CC	0.09	0/1753	0.27	0/2369
7	EE	0.09	0/2118	0.28	0/2849
8	GG	0.07	0/1946	0.22	0/2590
9	HH	0.09	0/1510	0.23	0/2022
10	II	0.10	0/1715	0.28	0/2287
11	JJ	0.10	0/1550	0.27	0/2069
12	LL	0.09	0/1195	0.27	0/1597
13	NN	0.08	0/1226	0.23	0/1649
14	OO	0.09	0/1029	0.24	0/1380
15	VV	0.09	0/643	0.25	0/860
16	WW	0.09	0/1051	0.25	0/1406
17	XX	0.14	0/1116	0.38	0/1490
18	YY	0.08	0/1028	0.26	0/1366
19	aa	0.09	0/828	0.28	0/1109
20	bb	0.11	0/665	0.26	0/891
21	ee	0.09	0/462	0.25	0/607
22	DD	0.11	0/1796	0.31	0/2417
23	FF	0.11	0/1492	0.31	0/2005
24	KK	0.08	0/834	0.24	0/1125
25	MM	0.11	0/918	0.30	0/1233
26	PP	0.09	0/1079	0.25	0/1441
27	QQ	0.10	0/1146	0.26	0/1534
28	RR	0.08	0/1082	0.23	0/1452
29	SS	0.12	0/1208	0.34	0/1618
30	TT	0.09	0/1115	0.25	0/1493
31	UU	0.08	0/805	0.25	0/1081
32	ZZ	0.18	0/604	0.65	0/810



Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
33	cc	0.08	0/490	0.24	0/656
34	dd	0.09	0/470	0.29	0/623
35	ff	0.08	0/567	0.23	0/753
36	gg	0.09	0/2493	0.27	0/3394
37	A	0.11	0/1936	0.31	0/2596
38	B	0.11	0/3240	0.31	0/4339
39	C	0.11	0/2937	0.30	0/3946
40	D	0.11	0/2437	0.29	0/3264
41	E	0.10	0/1762	0.29	0/2362
42	F	0.13	0/1911	0.35	0/2549
43	G	0.11	0/1910	0.26	0/2569
44	H	0.12	0/1535	0.32	0/2063
45	I	0.11	0/1702	0.28	0/2272
46	J	0.10	0/1385	0.29	0/1852
47	L	0.11	0/1733	0.29	0/2316
48	M	0.11	0/1158	0.29	0/1547
49	N	0.11	0/1746	0.29	0/2338
50	O	0.13	0/1662	0.32	0/2222
51	P	0.11	0/1268	0.31	0/1700
52	Q	0.10	0/1539	0.30	0/2054
53	S	0.11	0/1501	0.29	0/2012
54	T	0.11	0/1326	0.30	0/1770
55	U	0.13	0/823	0.35	0/1104
56	V	0.11	0/1048	0.28	0/1402
57	X	0.11	0/984	0.28	0/1323
58	Y	0.11	0/1132	0.27	0/1504
59	Z	0.10	0/1130	0.27	0/1507
60	a	0.10	0/1191	0.28	0/1590
61	b	0.09	0/861	0.25	0/1138
62	c	0.12	0/771	0.30	0/1034
63	d	0.12	0/903	0.30	0/1216
64	e	0.11	0/1071	0.32	0/1429
65	f	0.11	0/895	0.35	0/1198
66	g	0.10	0/916	0.26	0/1220
67	h	0.11	0/1021	0.27	0/1348
68	i	0.11	0/841	0.29	0/1112
69	j	0.11	0/720	0.32	0/952
70	k	0.12	0/575	0.30	0/761
71	l	0.10	0/459	0.30	0/608
72	m	0.12	0/435	0.34	0/575
73	n	0.14	0/240	0.28	0/305
74	o	0.10	0/864	0.26	0/1140
75	p	0.11	0/718	0.30	0/953



Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
76	r	0.12	0/1010	0.35	0/1354
77	s	0.20	0/707	0.55	0/947
78	t	0.15	0/1003	0.41	0/1354
79	5	0.13	7/84949 (0.0%)	0.27	0/132467
80	7	0.11	0/2836	0.23	0/4421
81	8	0.11	0/3581	0.26	0/5577
82	AT	0.27	1/1810 (0.1%)	0.48	0/2820
83	1	0.27	0/3936	0.57	2/6125 (0.0%)
All	All	0.12	8/232452 (0.0%)	0.29	2/341418 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
17	XX	0	1
38	B	0	1
65	f	0	1
All	All	0	3

All (8) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
79	5	904	G	C1'-N9	-6.66	1.38	1.48
82	AT	32	U	C1'-N1	6.38	1.58	1.48
79	5	2097	U	C1'-N1	6.36	1.56	1.47
79	5	4876	U	C1'-N1	5.96	1.56	1.47
79	5	2107	C	C1'-N1	5.92	1.57	1.48
79	5	148	C	C1'-N1	5.70	1.56	1.48
79	5	4914	C	C1'-N1	5.57	1.56	1.48
79	5	4136	C	C1'-N1	5.06	1.56	1.48

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
83	1	1433	U	P-O3'-C3'	6.01	129.21	120.20
83	1	1433	U	C4'-C3'-O3'	5.60	117.80	109.40

There are no chirality outliers.

All (3) planarity outliers are listed below:



Mol	Chain	Res	Type	Group
38	B	258	HIS	Peptide
17	XX	61	GLN	Peptide
65	f	106	TYR	Peptide

## 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	R	1508	0	1664	110	0
2	W	860	0	903	51	0
3	9	36229	0	18308	1270	0
4	AA	1710	0	1708	142	0
5	BB	1729	0	1803	160	0
6	CC	1716	0	1806	137	0
7	EE	2076	0	2177	179	0
8	GG	1923	0	2089	145	0
9	HH	1488	0	1582	108	0
10	II	1686	0	1772	115	0
11	JJ	1525	0	1640	140	0
12	LL	1175	0	1249	89	0
13	NN	1202	0	1289	82	0
14	OO	1016	0	1039	109	0
15	VV	636	0	637	58	0
16	WW	1034	0	1080	95	0
17	XX	1098	0	1167	93	0
18	YY	1011	0	1083	77	0
19	aa	814	0	863	71	0
20	bb	651	0	672	31	0
21	ee	457	0	502	41	0
22	DD	1768	0	1866	128	0
23	FF	1471	0	1522	123	0
24	KK	810	0	836	58	0
25	MM	908	0	939	78	0
26	PP	1058	0	1104	89	0
27	QQ	1128	0	1195	105	0
28	RR	1068	0	1121	91	0
29	SS	1190	0	1249	125	0
30	TT	1097	0	1132	98	0
31	UU	795	0	862	67	0

*Continued on next page...*



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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
32	ZZ	598	0	656	79	0
33	cc	488	0	514	52	0
34	dd	459	0	448	32	0
35	ff	555	0	564	44	0
36	gg	2436	0	2393	170	0
37	A	1898	0	1993	199	0
38	B	3172	0	3310	258	0
39	C	2883	0	3053	256	0
40	D	2391	0	2424	161	0
41	E	1729	0	1887	132	0
42	F	1875	0	1995	183	0
43	G	1879	0	2027	151	0
44	H	1516	0	1597	133	0
45	I	1664	0	1712	139	0
46	J	1362	0	1399	100	0
47	L	1702	0	1820	116	0
48	M	1137	0	1211	117	0
49	N	1701	0	1749	161	0
50	O	1630	0	1778	138	0
51	P	1242	0	1274	85	0
52	Q	1515	0	1634	144	0
53	S	1462	0	1508	115	0
54	T	1298	0	1366	116	0
55	U	809	0	833	65	0
56	V	1034	0	1097	97	0
57	X	967	0	1040	75	0
58	Y	1115	0	1205	88	0
59	Z	1107	0	1182	76	0
60	a	1162	0	1209	97	0
61	b	848	0	920	61	0
62	c	761	0	794	72	0
63	d	888	0	930	74	0
64	e	1053	0	1147	79	0
65	f	876	0	912	66	0
66	g	906	0	998	69	0
67	h	1013	0	1147	96	0
68	i	830	0	916	44	0
69	j	705	0	737	52	0
70	k	569	0	637	52	0
71	l	447	0	480	28	0
72	m	429	0	465	25	0
73	n	239	0	289	26	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
74	o	851	0	920	67	0
75	p	708	0	756	66	0
76	r	994	0	1051	70	0
77	s	695	0	727	56	0
78	t	993	0	1034	99	0
79	5	75955	0	38377	2542	0
80	7	2538	0	1286	80	0
81	8	3208	0	1629	151	0
82	AT	1621	792	823	6	0
83	1	3523	1782	1783	5	0
84	5	184	0	0	0	0
84	7	6	0	0	0	0
84	8	5	0	0	0	0
84	9	1	0	0	0	0
84	I	1	0	0	0	0
84	L	1	0	0	0	0
84	P	1	0	0	0	0
84	V	1	0	0	0	0
84	X	1	0	0	0	0
84	a	2	0	0	0	0
84	e	1	0	0	0	0
84	g	1	0	0	0	0
84	j	1	0	0	0	0
85	aa	1	0	0	0	0
85	dd	1	0	0	0	0
85	ff	1	0	0	0	0
85	g	1	0	0	0	0
85	j	1	0	0	0	0
85	m	1	0	0	0	0
85	o	1	0	0	0	0
85	p	1	0	0	0	0
All	All	216487	2574	160495	9922	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 26.

All (9922) 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)
79:5:759:G:O6	79:5:904:G:O6	1.66	1.13
79:5:169:G:N2	79:5:267:G:C6	2.28	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:XX:46:HIS:HB3	17:XX:101:LEU:HD11	1.43	1.00
79:5:2845:A:H61	79:5:3843:C:H42	0.99	0.98
79:5:1750:G:H1	79:5:1780:A:H61	0.98	0.97
56:V:39:ILE:HD12	56:V:63:ALA:HB2	1.47	0.97
47:L:150:LEU:HD23	47:L:154:VAL:HG12	1.45	0.97
79:5:169:G:N2	79:5:267:G:N1	2.12	0.97
79:5:4471:U:H3	79:5:4484:G:H1	1.12	0.96
22:DD:168:VAL:HG22	22:DD:189:MET:HB3	1.47	0.96
38:B:317:LEU:HB2	38:B:372:SER:HB2	1.48	0.96
6:CC:135:GLY:HA2	6:CC:165:VAL:HG12	1.47	0.96
79:5:1970:A:H5''	79:5:1971:C:H5'	1.48	0.96
9:HH:144:ILE:HD11	9:HH:152:ARG:HB2	1.45	0.96
79:5:4344:U:H3	79:5:4368:G:H1	1.12	0.95
3:9:1206:G:H1	3:9:1692:U:H3	1.13	0.95
58:Y:54:GLU:HB2	58:Y:108:ARG:HB2	1.47	0.95
12:LL:101:ARG:HB2	17:XX:10:ALA:HB2	1.46	0.95
38:B:217:ILE:HD11	38:B:347:LEU:HB3	1.48	0.95
79:5:2845:A:H61	79:5:3843:C:N4	1.63	0.95
79:5:982:U:H3	79:5:1273:G:H1	1.15	0.95
79:5:281:U:H3	79:5:306:A:N6	1.65	0.94
79:5:3918:G:H1	79:5:4383:U:H3	0.97	0.94
79:5:717:U:H3	79:5:951:G:H1	0.96	0.94
14:OO:98:ARG:HB3	14:OO:132:VAL:HG23	1.50	0.93
52:Q:99:LYS:HB3	52:Q:119:LYS:HE2	1.49	0.93
64:e:7:LEU:HB2	64:e:93:LYS:HB3	1.50	0.93
37:A:45:VAL:HG22	37:A:61:VAL:HG22	1.50	0.93
8:GG:200:LYS:HA	8:GG:203:LYS:HE2	1.46	0.93
37:A:112:ILE:HD11	37:A:133:TYR:HB2	1.47	0.93
79:5:25:A:H61	79:5:58:G:H1	1.10	0.93
79:5:989:U:H3	79:5:1065:G:H1	0.93	0.92
79:5:3944:G:H1	79:5:4069:U:H3	1.02	0.92
79:5:4949:G:H4'	79:5:4950:U:H5'	1.49	0.92
3:9:1324:G:H1	3:9:1504:U:H3	1.03	0.92
4:AA:17:LYS:HB3	4:AA:173:LEU:HD11	1.51	0.92
6:CC:157:LEU:HD13	6:CC:160:LEU:HD21	1.51	0.92
46:J:22:LEU:HB2	46:J:128:LEU:HD21	1.52	0.92
3:9:561:A:H5'	11:JJ:171:GLY:HA3	1.52	0.92
3:9:1656:G:H1	3:9:1668:U:H3	0.93	0.92
63:d:36:VAL:HG21	63:d:44:ARG:HG3	1.51	0.92
44:H:20:LEU:HD21	44:H:47:LEU:HB2	1.52	0.92
2:W:1:MET:HE3	2:W:15:PRO:HD3	1.52	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:442:C:H42	3:9:449:A:H62	1.00	0.92
79:5:3695:U:H3	79:5:3820:G:H1	0.96	0.92
37:A:150:LEU:HD11	37:A:156:LYS:HG2	1.51	0.91
3:9:1737:G:H1	3:9:1797:U:H3	0.97	0.91
79:5:2587:A:H5'	79:5:2770:C:H5'	1.49	0.91
29:SS:6:PRO:HG2	29:SS:58:GLU:HG3	1.53	0.91
44:H:23:ARG:HD3	44:H:39:ASN:HA	1.53	0.91
44:H:94:SER:HB3	44:H:142:ASP:HB3	1.52	0.91
79:5:2309:G:H1	79:5:2329:U:H3	1.09	0.91
5:BB:165:ARG:HA	5:BB:168:MET:HE3	1.50	0.91
27:QQ:19:ALA:HB2	27:QQ:75:GLY:HA3	1.53	0.91
36:gg:16:GLY:HA3	36:gg:36:ARG:HB2	1.51	0.91
77:s:57:LYS:HD3	79:5:2020:U:H5'	1.51	0.91
79:5:2845:A:N6	79:5:3843:C:H42	1.67	0.91
2:W:1:MET:HE2	2:W:3:VAL:HG22	1.53	0.91
3:9:581:U:H4'	18:YY:66:GLY:HA3	1.52	0.91
33:cc:27:CYS:HB2	33:cc:45:ASN:HB2	1.52	0.90
50:O:7:LEU:HB2	50:O:33:VAL:HG23	1.53	0.90
78:t:77:ALA:HB1	78:t:132:ILE:HG22	1.53	0.90
27:QQ:23:ALA:HA	27:QQ:70:VAL:HG22	1.53	0.90
79:5:1996:C:H42	79:5:2000:G:N2	1.69	0.90
7:EE:128:LYS:HA	7:EE:156:VAL:HG12	1.54	0.90
12:LL:58:LYS:HE3	12:LL:59:LYS:HE3	1.50	0.90
36:gg:120:ILE:HB	36:gg:132:TRP:HB2	1.53	0.90
39:C:328:LEU:HD12	42:F:186:MET:HE2	1.52	0.90
38:B:20:LYS:HB3	79:5:4567:G:H5'	1.53	0.90
29:SS:34:LYS:HG2	29:SS:103:LEU:HD23	1.54	0.90
54:T:75:VAL:HG22	54:T:88:ARG:HB3	1.54	0.90
17:XX:68:LYS:HG3	21:ee:79:LEU:HG	1.54	0.89
38:B:13:SER:HB2	79:5:4622:A:H4'	1.50	0.89
18:YY:55:ILE:HG12	18:YY:75:ILE:HG22	1.53	0.89
27:QQ:31:LEU:HD11	27:QQ:33:LYS:HE3	1.55	0.89
79:5:2557:G:H1	79:5:2570:U:H3	0.91	0.89
3:9:1373:C:H4'	28:RR:10:LYS:HE3	1.51	0.89
38:B:229:LYS:HA	79:5:2836:A:H4'	1.51	0.89
62:c:33:GLN:HA	62:c:36:LYS:HE2	1.54	0.89
79:5:4492:U:H5''	79:5:4493:U:H5'	1.54	0.89
3:9:1101:U:H3	3:9:1131:G:H1	1.20	0.89
79:5:1802:A:H5''	79:5:1803:G:H5'	1.53	0.89
26:PP:98:ASN:HB3	26:PP:122:THR:HA	1.53	0.89
48:M:7:VAL:HA	48:M:11:ARG:HD2	1.53	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:A:133:TYR:HB3	37:A:168:VAL:HG13	1.53	0.89
42:F:93:ARG:HA	42:F:139:ILE:HG22	1.54	0.89
79:5:1750:G:H1	79:5:1780:A:N6	1.69	0.89
3:9:1494:U:H4'	3:9:1495:G:H5''	1.53	0.89
17:XX:52:LEU:HD21	17:XX:80:LYS:HE3	1.55	0.89
14:OO:106:LYS:HD2	14:OO:135:ILE:HD13	1.55	0.88
43:G:214:VAL:HG22	43:G:216:PRO:HD2	1.53	0.88
37:A:46:LYS:HE2	37:A:60:LYS:HB3	1.54	0.88
3:9:612:U:H3	3:9:629:A:H62	0.92	0.88
16:WW:53:ILE:HG13	20:bb:24:LEU:HD11	1.56	0.88
27:QQ:34:VAL:HG12	27:QQ:70:VAL:HB	1.56	0.88
66:g:5:LEU:HD22	66:g:30:ILE:HG22	1.55	0.88
79:5:261:G:C6	79:5:262:C:N4	2.42	0.88
23:FF:87:LEU:HD22	27:QQ:47:LEU:HD21	1.55	0.88
45:I:36:LEU:HG	45:I:87:ILE:HD13	1.54	0.88
79:5:2620:G:H1	79:5:2636:U:H3	0.88	0.88
40:D:65:ALA:HB2	40:D:74:ILE:HD13	1.55	0.88
45:I:74:LYS:HD2	45:I:78:LYS:HE3	1.54	0.88
72:m:68:MET:HG2	72:m:79:PRO:HA	1.53	0.88
11:JJ:38:ARG:HA	21:ee:104:ARG:HB2	1.54	0.88
32:ZZ:79:ILE:HD12	32:ZZ:84:ALA:HA	1.55	0.88
25:MM:58:GLU:HB3	25:MM:61:TYR:HB3	1.54	0.88
38:B:285:TYR:HB2	38:B:332:MET:HE1	1.55	0.88
39:C:237:ILE:HD13	39:C:240:LEU:HD21	1.54	0.88
64:e:7:LEU:HD13	64:e:8:VAL:HG13	1.56	0.88
77:s:75:LEU:HD13	77:s:79:LEU:HD21	1.55	0.88
22:DD:141:LYS:HE3	22:DD:179:GLN:HG3	1.54	0.87
29:SS:136:THR:HA	29:SS:139:THR:HG22	1.55	0.87
37:A:224:THR:HG21	79:5:3705:G:H21	1.39	0.87
38:B:261:ARG:HB3	50:O:64:THR:HG21	1.55	0.87
22:DD:76:ARG:HB2	24:KK:22:VAL:HG21	1.55	0.87
37:A:83:HIS:HB2	75:p:62:LYS:HE2	1.56	0.87
5:BB:86:LEU:HB3	5:BB:98:THR:HB	1.55	0.87
19:aa:44:ILE:HD11	19:aa:64:LEU:HB3	1.56	0.87
25:MM:22:LEU:HD11	25:MM:89:VAL:HA	1.57	0.87
52:Q:144:LYS:HD3	79:5:1460:C:H5''	1.56	0.87
23:FF:34:SER:HA	33:cc:55:VAL:HB	1.57	0.86
38:B:238:LYS:HE3	79:5:4457:U:H4'	1.55	0.86
72:m:67:LYS:HE3	72:m:98:LYS:HE3	1.54	0.86
3:9:1048:G:H21	3:9:1070:A:H62	1.22	0.86
8:GG:137:ARG:HB3	8:GG:140:ARG:HB2	1.56	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:1351:G:H1	3:9:1360:U:H3	0.86	0.86
44:H:114:ILE:HD11	44:H:124:ARG:HB2	1.56	0.86
25:MM:53:ALA:HA	25:MM:79:VAL:HG12	1.57	0.86
74:o:20:PRO:HG2	74:o:73:VAL:HG21	1.55	0.86
78:t:46:ILE:HA	78:t:71:ILE:HG21	1.56	0.86
78:t:129:ILE:HD12	78:t:160:VAL:HG13	1.56	0.86
18:YY:20:ARG:HD3	18:YY:74:MET:HG3	1.58	0.86
38:B:232:THR:HA	38:B:237:THR:HG22	1.57	0.86
11:JJ:63:LEU:HD12	11:JJ:70:ARG:HB2	1.58	0.86
53:S:122:HIS:HB2	80:7:94:C:H4'	1.57	0.86
68:i:99:LYS:HG3	68:i:103:LYS:HE2	1.57	0.86
59:Z:25:ILE:HA	59:Z:43:VAL:HG12	1.58	0.85
79:5:169:G:H21	79:5:267:G:H1	1.21	0.85
14:OO:101:GLY:HA3	14:OO:134:PRO:HG2	1.57	0.85
79:5:1503:A:H4'	79:5:1504:G:H5'	1.58	0.85
37:A:224:THR:HG22	37:A:237:LEU:HD12	1.56	0.85
62:c:28:VAL:HG21	62:c:37:MET:HG3	1.57	0.85
4:AA:60:LEU:HD13	4:AA:63:ARG:HD3	1.58	0.85
4:AA:122:LEU:HD11	4:AA:142:LEU:HD13	1.57	0.85
36:gg:177:TRP:HA	36:gg:184:LEU:HA	1.57	0.85
37:A:207:VAL:HG12	79:5:3919:C:H4'	1.58	0.85
59:Z:27:LYS:HE2	59:Z:93:LYS:HD3	1.57	0.85
37:A:237:LEU:HD21	37:A:240:ALA:HB2	1.59	0.85
15:VV:73:ALA:HB1	15:VV:78:ILE:HB	1.57	0.85
31:UU:22:ILE:HD11	31:UU:89:ILE:HB	1.56	0.85
26:PP:60:LEU:HD22	26:PP:89:MET:HE3	1.59	0.85
36:gg:206:LEU:HD11	36:gg:261:LEU:HD21	1.57	0.85
36:gg:212:LYS:HA	36:gg:235:ILE:HG23	1.58	0.84
7:EE:46:ILE:HA	7:EE:50:ASN:HD22	1.40	0.84
38:B:8:ALA:HB2	56:V:49:LEU:HD23	1.56	0.84
79:5:505:G:H1	79:5:653:U:H3	1.23	0.84
79:5:1550:G:H1	79:5:1578:U:H3	0.86	0.84
36:gg:68:ASP:HB3	36:gg:111:VAL:HG12	1.59	0.84
79:5:4210:U:H3	79:5:4222:G:H1	1.23	0.84
67:h:80:PRO:HD2	67:h:83:LEU:HD12	1.59	0.84
78:t:32:ILE:HD12	78:t:42:VAL:HG11	1.57	0.84
17:XX:54:LYS:HG3	17:XX:70:VAL:HG22	1.59	0.84
19:aa:53:ILE:HD13	19:aa:64:LEU:HD21	1.60	0.84
56:V:35:LYS:HB2	56:V:67:LYS:HG3	1.58	0.84
60:a:59:ARG:HH21	79:5:88:A:H3'	1.43	0.84
79:5:1996:C:N4	79:5:2000:G:H22	1.74	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:BB:105:LEU:HD23	5:BB:110:MET:HE3	1.58	0.83
23:FF:155:CYS:HB3	23:FF:159:ARG:HH21	1.43	0.83
42:F:43:LYS:HG2	42:F:46:ARG:HH21	1.42	0.83
79:5:3697:U:H5''	79:5:3698:G:H5'	1.57	0.83
44:H:92:MET:HE2	44:H:161:ILE:HG13	1.58	0.83
31:UU:79:ARG:HG3	34:dd:54:LYS:HE2	1.60	0.83
22:DD:72:VAL:HG22	24:KK:20:VAL:HG21	1.58	0.83
39:C:326:LEU:HD13	39:C:330:PRO:HA	1.61	0.83
52:Q:11:ARG:HB2	79:5:2081:C:H4'	1.60	0.83
3:9:442:C:N4	3:9:449:A:H62	1.76	0.83
7:EE:152:PRO:HD3	8:GG:212:LEU:HD21	1.60	0.83
8:GG:63:MET:HG3	8:GG:98:ARG:HB3	1.60	0.83
75:p:3:LYS:HE2	75:p:6:LYS:HA	1.59	0.83
79:5:3692:A:N6	79:5:3823:G:H21	1.76	0.83
3:9:454:U:H4'	8:GG:76:LEU:HD21	1.60	0.83
7:EE:182:MET:HE1	7:EE:190:GLY:HA2	1.60	0.83
38:B:301:ASN:HB3	38:B:311:ASP:HA	1.60	0.83
79:5:3692:A:H62	79:5:3823:G:N2	1.75	0.83
74:o:23:VAL:HB	74:o:68:LEU:HD21	1.59	0.83
69:j:59:THR:HG23	81:8:41:A:H4'	1.61	0.83
70:k:26:LYS:HE2	79:5:2696:A:H5'	1.60	0.83
78:t:133:LEU:HD13	78:t:150:ASP:HB3	1.59	0.83
12:LL:77:VAL:HA	12:LL:88:ILE:HG22	1.58	0.83
44:H:12:ILE:HD12	44:H:13:PRO:HD2	1.58	0.83
38:B:115:LYS:HE3	38:B:129:ALA:HB3	1.59	0.82
50:O:10:ASP:HB2	50:O:117:ARG:HG3	1.61	0.82
55:U:80:LYS:HE2	79:5:2620:G:H3'	1.58	0.82
68:i:6:PRO:HB3	68:i:16:LYS:HE3	1.61	0.82
76:r:108:MET:HE1	79:5:2263:A:H5''	1.59	0.82
3:9:681:U:H4'	17:XX:9:THR:HG22	1.60	0.82
15:VV:21:ASN:HB3	16:WW:67:GLY:HA3	1.59	0.82
48:M:52:PHE:HA	48:M:55:MET:HE1	1.59	0.82
79:5:25:A:N6	79:5:58:G:H1	1.76	0.82
37:A:225:ILE:HD11	37:A:238:ILE:HG22	1.61	0.82
78:t:123:ARG:HB3	78:t:127:GLY:HA3	1.61	0.82
9:HH:101:LEU:HB2	9:HH:120:ARG:HB3	1.60	0.82
4:AA:143:PRO:HA	15:VV:32:ILE:HD11	1.61	0.82
24:KK:15:LEU:HG	24:KK:71:LEU:HD22	1.62	0.82
48:M:11:ARG:HD3	48:M:57:LEU:HD21	1.61	0.82
10:II:101:ILE:HD12	10:II:190:LEU:HD21	1.62	0.82
18:YY:10:ARG:HG2	18:YY:11:LYS:HG3	1.59	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:D:223:PHE:HB3	40:D:226:TYR:HB2	1.60	0.82
6:CC:201:GLY:HA3	11:JJ:98:LEU:HD21	1.62	0.82
14:OO:30:VAL:HG21	14:OO:96:LYS:HE3	1.61	0.82
18:YY:62:THR:HA	18:YY:69:THR:HG22	1.59	0.82
49:N:64:ILE:HD11	49:N:130:PHE:HB2	1.59	0.82
14:OO:33:ILE:HD12	14:OO:42:VAL:HG22	1.61	0.82
67:h:31:LEU:HD22	67:h:43:LYS:HB3	1.62	0.82
36:gg:131:LEU:HD12	36:gg:139:LYS:HB3	1.62	0.82
41:E:168:LEU:HD11	41:E:179:THR:HB	1.61	0.82
78:t:60:VAL:HG22	78:t:73:VAL:HG13	1.62	0.82
79:5:424:U:H3	81:8:10:G:H1	1.28	0.82
3:9:146:G:H1	3:9:173:A:H61	1.27	0.82
37:A:101:VAL:HB	37:A:165:VAL:HG12	1.62	0.82
48:M:16:SER:HB2	48:M:56:GLN:HG3	1.61	0.82
52:Q:63:LEU:HD12	52:Q:92:VAL:HG21	1.62	0.82
53:S:83:ARG:HD2	54:T:156:TYR:HB2	1.62	0.82
64:e:77:PHE:HB2	64:e:97:ALA:HA	1.61	0.82
3:9:1590:C:H1'	3:9:1652:G:H21	1.45	0.81
22:DD:70:THR:HG22	22:DD:86:LEU:HD13	1.61	0.81
3:9:17:C:H5'	3:9:1166:G:H5'	1.63	0.81
19:aa:5:ARG:HG2	19:aa:8:ASN:HA	1.62	0.81
38:B:57:VAL:HG22	38:B:73:VAL:HG12	1.61	0.81
41:E:156:LEU:HD11	65:f:106:TYR:HB3	1.62	0.81
43:G:214:VAL:HG21	43:G:219:LEU:HD11	1.63	0.81
60:a:148:ALA:HB2	68:i:6:PRO:HB2	1.60	0.81
24:KK:5:LYS:HA	24:KK:8:ARG:HE	1.46	0.81
47:L:46:ILE:HB	47:L:49:ARG:HB2	1.60	0.81
70:k:68:GLU:HB3	70:k:70:LYS:HE2	1.62	0.81
79:5:1996:C:H42	79:5:2000:G:H22	1.22	0.81
79:5:4888:U:H3	79:5:4931:G:H1	1.27	0.81
56:V:69:LYS:HB3	56:V:72:LEU:HG	1.60	0.81
78:t:64:ILE:HG23	78:t:69:ALA:HB2	1.61	0.81
79:5:418:A:H62	81:8:16:G:H21	1.25	0.81
28:RR:41:ILE:HD11	28:RR:46:LEU:HB2	1.61	0.81
56:V:85:ARG:HD3	79:5:2846:G:H4'	1.63	0.81
28:RR:56:HIS:HA	28:RR:59:LYS:HE2	1.63	0.81
79:5:4531:U:H4'	79:5:4532:U:H5'	1.63	0.81
49:N:35:ALA:HA	49:N:65:ARG:HE	1.45	0.81
67:h:81:LEU:HD13	81:8:38:U:H5'	1.61	0.81
41:E:181:PRO:HG2	41:E:184:LEU:HD12	1.61	0.81
3:9:1274:G:H5''	24:KK:47:LYS:HE3	1.62	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AA:121:LEU:HD21	4:AA:145:ILE:HG12	1.64	0.80
38:B:6:PHE:HB2	56:V:49:LEU:HD11	1.63	0.80
38:B:373:LYS:HD2	79:5:4627:U:H4'	1.63	0.80
42:F:29:ILE:HD12	42:F:32:LEU:HD21	1.63	0.80
42:F:73:MET:HE2	79:5:1089:G:H1'	1.63	0.80
44:H:71:ARG:HG2	79:5:4691:A:H4'	1.63	0.80
2:W:93:LYS:HE2	8:GG:147:LEU:HD23	1.61	0.80
15:VV:69:ILE:HD12	15:VV:72:LEU:HD12	1.64	0.80
25:MM:90:GLY:HA3	25:MM:93:LYS:HE2	1.64	0.80
15:VV:38:GLU:HG2	15:VV:49:GLN:HE21	1.45	0.80
22:DD:59:LEU:HA	22:DD:66:ILE:HG13	1.61	0.80
4:AA:8:LEU:HD11	15:VV:39:VAL:HG11	1.62	0.80
38:B:243:LYS:HB3	79:5:4526:U:H5'	1.64	0.80
7:EE:126:VAL:HG21	7:EE:139:LEU:HD22	1.61	0.80
25:MM:26:LEU:HD23	25:MM:31:LEU:HD21	1.63	0.80
44:H:132:VAL:HG12	44:H:148:GLY:HA3	1.61	0.80
10:II:107:THR:HG23	10:II:108:PRO:HD3	1.64	0.80
12:LL:88:ILE:HG21	12:LL:126:VAL:HG11	1.64	0.80
13:NN:103:GLU:HA	13:NN:106:ARG:HE	1.46	0.80
42:F:166:ILE:HD13	42:F:173:LEU:HD22	1.61	0.80
48:M:27:ILE:HA	48:M:38:VAL:HG23	1.62	0.80
37:A:117:GLU:HB2	37:A:162:ASN:HB3	1.63	0.80
48:M:11:ARG:HG2	48:M:57:LEU:HD11	1.61	0.80
37:A:134:ALA:HA	37:A:149:LYS:HE3	1.64	0.80
16:WW:7:LEU:HD23	16:WW:34:ILE:HG12	1.63	0.80
59:Z:51:ARG:HB2	59:Z:65:ARG:HD2	1.63	0.80
79:5:3842:C:H3'	79:5:3843:C:H2'	1.61	0.80
29:SS:5:ILE:HG12	32:ZZ:49:LEU:HB2	1.64	0.80
38:B:216:MET:HG3	38:B:354:GLN:HG2	1.63	0.80
3:9:146:G:H1	3:9:173:A:N6	1.79	0.79
37:A:107:MET:HE1	37:A:136:VAL:HB	1.62	0.79
56:V:89:ARG:HD2	56:V:93:GLY:HA2	1.63	0.79
62:c:29:LEU:HD23	62:c:94:LEU:HD23	1.64	0.79
5:BB:38:MET:HE2	5:BB:231:LEU:HD11	1.61	0.79
9:HH:142:LYS:HB3	9:HH:154:ILE:HD11	1.63	0.79
40:D:270:LYS:HD3	80:7:60:G:H5'	1.63	0.79
54:T:60:LYS:HE2	79:5:1799:G:H4'	1.63	0.79
75:p:48:LYS:HE2	75:p:56:HIS:HB3	1.64	0.79
26:PP:72:LYS:HB3	26:PP:93:MET:HE1	1.62	0.79
38:B:263:ALA:HB2	50:O:64:THR:HA	1.63	0.79
54:T:39:ILE:HA	54:T:63:ARG:HH22	1.46	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:X:109:ILE:HD11	57:X:124:VAL:HG11	1.63	0.79
3:9:386:C:H1'	10:II:5:ARG:HD2	1.62	0.79
22:DD:177:LEU:HD21	22:DD:182:LEU:HD13	1.64	0.79
38:B:168:MET:HE2	38:B:171:LEU:HD12	1.62	0.79
3:9:612:U:H3	3:9:629:A:N6	1.77	0.79
45:I:62:SER:HA	45:I:65:LEU:HD12	1.63	0.79
17:XX:51:VAL:HG21	17:XX:94:ILE:HD11	1.63	0.79
22:DD:148:LYS:HB3	22:DD:150:MET:HE1	1.65	0.79
59:Z:14:LEU:HB3	66:g:88:ARG:HD2	1.62	0.79
2:W:22:ALA:HB2	56:V:96:LEU:HD21	1.64	0.79
44:H:26:ILE:HG22	44:H:35:ARG:HG2	1.64	0.79
56:V:30:ASP:HB3	56:V:104:VAL:HG12	1.63	0.79
79:5:980:U:H3	79:5:1275:G:H1	0.85	0.79
1:R:99:MET:HE3	1:R:100:ARG:HG3	1.65	0.79
52:Q:27:LEU:HB2	76:r:8:MET:HE1	1.64	0.79
53:S:9:GLU:HG3	53:S:67:VAL:HG13	1.65	0.79
6:CC:65:LYS:HG2	6:CC:273:LEU:HD13	1.65	0.79
41:E:191:ARG:HH11	79:5:4941:G:H5'	1.48	0.79
10:II:81:VAL:HG22	10:II:102:VAL:HG12	1.62	0.79
29:SS:39:ARG:HD3	30:TT:45:LEU:HA	1.62	0.79
58:Y:52:ASP:HB2	58:Y:110:LYS:HG3	1.64	0.79
79:5:169:G:N2	79:5:267:G:O6	2.13	0.79
5:BB:97:LEU:HD23	5:BB:228:LEU:HG	1.64	0.78
32:ZZ:57:LYS:HD2	32:ZZ:60:LYS:HD2	1.62	0.78
38:B:324:GLY:HA2	79:5:5051:C:H4'	1.64	0.78
4:AA:42:LYS:HG3	4:AA:48:ILE:HD11	1.65	0.78
16:WW:50:PHE:HB3	16:WW:63:VAL:HG13	1.65	0.78
31:UU:26:SER:HB3	31:UU:32:LEU:HB2	1.65	0.78
40:D:5:LYS:HD2	79:5:1778:C:H5''	1.65	0.78
40:D:225:GLN:HG2	80:7:49:A:H5''	1.64	0.78
53:S:101:THR:HG23	53:S:104:GLY:H	1.48	0.78
64:e:90:MET:HG3	76:r:33:LYS:HA	1.65	0.78
9:HH:101:LEU:HD22	9:HH:120:ARG:HG2	1.65	0.78
54:T:29:THR:HA	54:T:32:ARG:HD2	1.63	0.78
60:a:101:ILE:HD11	60:a:124:VAL:HG13	1.65	0.78
79:5:418:A:N6	81:8:16:G:H21	1.79	0.78
3:9:523:A:H5'	11:JJ:38:ARG:HH21	1.48	0.78
3:9:957:A:H3'	3:9:958:G:H21	1.48	0.78
4:AA:8:LEU:HB3	4:AA:59:LEU:HD11	1.66	0.78
8:GG:58:LYS:HA	8:GG:107:SER:HB3	1.66	0.78
29:SS:45:LEU:HG	29:SS:50:ILE:HB	1.64	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:J:56:THR:HG23	46:J:63:ARG:HA	1.66	0.78
61:b:90:SER:HB3	61:b:93:LEU:HD13	1.66	0.78
1:R:72:LYS:HG3	1:R:74:ARG:HG2	1.64	0.78
4:AA:89:LYS:HE2	4:AA:201:LEU:HD11	1.64	0.78
78:t:117:ARG:HG3	78:t:125:LEU:HD12	1.65	0.78
52:Q:121:LEU:HA	52:Q:125:GLN:HE21	1.46	0.78
59:Z:103:ASP:HB3	59:Z:106:LEU:HB2	1.63	0.78
13:NN:33:VAL:HG21	13:NN:66:VAL:HG11	1.64	0.78
3:9:1598:G:H5''	32:ZZ:80:ARG:HH21	1.48	0.78
22:DD:15:GLY:HA3	34:dd:50:ILE:HG23	1.65	0.78
45:I:39:LYS:HD2	45:I:40:LYS:HE2	1.66	0.78
3:9:161:U:H1'	8:GG:87:ARG:HH12	1.49	0.77
3:9:1451:G:H21	3:9:1474:A:H61	1.31	0.77
23:FF:153:LEU:HB3	23:FF:189:ALA:HA	1.65	0.77
45:I:48:LEU:HD22	45:I:142:LEU:HA	1.65	0.77
3:9:655:A:H4'	3:9:656:G:H3'	1.64	0.77
7:EE:62:LYS:HD3	7:EE:80:ILE:HD13	1.67	0.77
29:SS:22:GLY:HA2	29:SS:56:ALA:HB3	1.65	0.77
36:gg:87:LEU:HB2	36:gg:101:PHE:HB2	1.64	0.77
47:L:25:TRP:HE1	49:N:199:GLN:HB3	1.49	0.77
79:5:2000:G:H1'	79:5:2017:A:H61	1.50	0.77
3:9:1488:C:H3'	3:9:1489:A:H4'	1.66	0.77
26:PP:44:ARG:HH21	26:PP:45:LEU:HD23	1.50	0.77
38:B:56:ILE:HD11	38:B:365:LEU:HD12	1.65	0.77
39:C:96:CYS:HA	79:5:2352:U:H1'	1.66	0.77
45:I:152:LEU:HD11	45:I:165:ILE:HD12	1.66	0.77
79:5:1100:U:H3	79:5:1195:G:H1	1.29	0.77
3:9:383:G:H21	12:LL:133:PRO:HG3	1.48	0.77
37:A:244:GLY:HA3	79:5:3746:A:H5''	1.64	0.77
42:F:215:PRO:HA	42:F:246:MET:HA	1.66	0.77
67:h:86:LYS:HE3	81:8:38:U:H1'	1.65	0.77
76:r:51:VAL:HG12	76:r:117:ILE:HD12	1.66	0.77
3:9:1726:G:H1	3:9:1808:U:H3	1.30	0.77
6:CC:183:LYS:H	16:WW:95:PRO:HB3	1.50	0.77
46:J:151:ILE:HD11	46:J:156:ARG:HG3	1.65	0.77
46:J:111:GLU:HB2	46:J:125:ILE:HD11	1.65	0.77
56:V:73:ARG:HG2	56:V:74:LYS:HG2	1.65	0.77
63:d:46:LEU:HD21	79:5:2373:C:H5'	1.67	0.77
23:FF:166:ILE:HG13	32:ZZ:71:ALA:HB1	1.67	0.77
36:gg:5:MET:HE1	36:gg:312:VAL:HG22	1.67	0.77
43:G:114:ILE:HA	43:G:117:GLN:HE21	1.49	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
68:i:40:VAL:HA	68:i:43:MET:HE3	1.66	0.77
79:5:3720:G:H1	79:5:3733:A:H2	1.30	0.77
2:W:20:ARG:HB3	56:V:96:LEU:HD23	1.66	0.77
8:GG:52:ILE:HD11	8:GG:102:VAL:HG21	1.65	0.77
10:II:165:GLN:HE21	10:II:171:LEU:HD12	1.49	0.77
38:B:50:LYS:HE3	38:B:341:LYS:HD3	1.64	0.77
53:S:67:VAL:HA	79:5:729:G:H1	1.49	0.77
78:t:56:LEU:HD12	78:t:82:ILE:HD12	1.66	0.77
36:gg:122:SER:HA	36:gg:154:VAL:HG21	1.67	0.77
37:A:236:GLY:HA2	79:5:3688:U:H4'	1.66	0.77
53:S:7:LEU:HD23	53:S:107:THR:HG22	1.66	0.77
9:HH:8:ILE:HG12	9:HH:16:PRO:HB3	1.67	0.76
31:UU:60:THR:HG22	31:UU:83:ARG:HG2	1.66	0.76
75:p:44:LYS:HB3	75:p:46:LYS:HD3	1.65	0.76
5:BB:92:GLN:HE22	5:BB:97:LEU:HD22	1.50	0.76
39:C:263:LEU:HD23	39:C:273:LEU:HD13	1.65	0.76
48:M:37:LEU:HD11	48:M:47:ARG:HD2	1.67	0.76
49:N:172:ARG:HD2	49:N:174:LEU:HD23	1.67	0.76
52:Q:79:THR:HB	52:Q:136:THR:HG22	1.66	0.76
10:II:8:TRP:HA	10:II:18:ARG:HD2	1.66	0.76
10:II:177:SER:HB3	10:II:186:ASP:HB2	1.65	0.76
60:a:75:LEU:HD22	60:a:113:GLY:HA2	1.67	0.76
70:k:17:ARG:HH12	79:5:2773:G:H5'	1.49	0.76
64:e:22:ARG:HD2	64:e:36:ARG:HB2	1.67	0.76
39:C:316:LYS:HG2	79:5:715:G:H5''	1.66	0.76
59:Z:12:LEU:HD12	66:g:92:LYS:HZ1	1.49	0.76
13:NN:34:LYS:HE3	13:NN:67:THR:HB	1.68	0.76
39:C:312:ARG:HG2	79:5:2274:C:H5'	1.67	0.76
40:D:7:VAL:HG13	40:D:8:LYS:HE3	1.66	0.76
40:D:110:LEU:HD13	40:D:116:ASP:HA	1.67	0.76
44:H:38:PHE:HB3	44:H:41:ILE:HD11	1.67	0.76
44:H:91:LYS:HE3	44:H:145:VAL:HG22	1.67	0.76
79:5:3692:A:H62	79:5:3823:G:H21	1.30	0.76
3:9:384:U:H3'	3:9:386:C:H41	1.50	0.76
13:NN:24:THR:HG23	20:bb:84:HIS:HB2	1.68	0.76
44:H:34:LEU:HB2	44:H:80:MET:HE3	1.68	0.76
47:L:169:ILE:HG12	60:a:123:ILE:HD11	1.68	0.76
51:P:18:ARG:HA	51:P:94:MET:HE1	1.68	0.76
3:9:1587:G:H5''	30:TT:77:LYS:HE2	1.67	0.76
42:F:225:HIS:HB3	42:F:228:GLU:HG2	1.67	0.76
79:5:4400:G:H2'	79:5:4401:G:H5''	1.68	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:BB:103:MET:HB3	5:BB:215:VAL:HB	1.68	0.76
14:OO:44:VAL:HG12	14:OO:53:ILE:HD12	1.67	0.76
42:F:94:ILE:HD13	42:F:140:ALA:HB2	1.68	0.76
17:XX:89:GLY:HA2	21:ee:82:VAL:HG12	1.67	0.75
3:9:442:C:H42	3:9:449:A:N6	1.82	0.75
14:OO:34:PHE:HB3	14:OO:41:PHE:HB2	1.66	0.75
53:S:82:LEU:HB2	53:S:124:ILE:HD11	1.68	0.75
5:BB:169:MET:HA	5:BB:172:MET:HE3	1.68	0.75
27:QQ:12:VAL:HG12	27:QQ:90:LYS:HZ3	1.51	0.75
42:F:103:LYS:HE3	42:F:134:ILE:HD13	1.66	0.75
57:X:68:ARG:HH22	81:8:97:A:H4'	1.50	0.75
3:9:1645:C:H4'	27:QQ:138:ARG:HD2	1.68	0.75
5:BB:121:ILE:HD12	5:BB:207:LEU:HD11	1.68	0.75
25:MM:18:LEU:HD23	25:MM:124:ILE:HD13	1.68	0.75
56:V:117:ILE:HD11	56:V:137:GLY:H	1.50	0.75
78:t:46:ILE:HD11	78:t:62:LEU:HD21	1.67	0.75
79:5:2528:G:H4'	79:5:2783:A:H4'	1.69	0.75
29:SS:63:GLU:HB2	29:SS:66:ARG:HH21	1.52	0.75
37:A:201:GLY:HA2	37:A:204:MET:HG2	1.68	0.75
38:B:76:VAL:HG22	38:B:334:LYS:HA	1.68	0.75
38:B:317:LEU:HB3	79:5:5001:U:H4'	1.69	0.75
13:NN:16:LEU:HB3	13:NN:20:ARG:HH22	1.50	0.75
54:T:100:LYS:HE3	79:5:1730:U:H5''	1.68	0.75
66:g:6:THR:HG23	79:5:2400:G:H21	1.52	0.75
74:o:9:ARG:HA	74:o:20:PRO:HA	1.69	0.75
3:9:1545:A:H4'	27:QQ:74:GLY:HA2	1.67	0.75
5:BB:63:LYS:HE3	5:BB:90:ASP:HA	1.68	0.75
8:GG:159:ARG:HG3	8:GG:173:ALA:HB2	1.68	0.75
52:Q:60:PRO:HG3	79:5:1353:G:H22	1.51	0.75
56:V:48:ARG:HD2	79:5:4620:U:H4'	1.69	0.75
79:5:1387:A:H4'	79:5:1388:A:H5'	1.69	0.75
11:JJ:65:GLU:HA	11:JJ:70:ARG:HH12	1.50	0.75
45:I:97:ILE:HD11	45:I:126:VAL:HB	1.68	0.75
46:J:141:ILE:HG23	46:J:144:LYS:HE2	1.67	0.75
71:l:6:THR:HG23	71:l:9:ILE:HG12	1.68	0.75
16:WW:51:GLU:HG3	20:bb:8:LEU:HD22	1.69	0.75
19:aa:20:PRO:HA	19:aa:31:PRO:HA	1.67	0.75
11:JJ:127:ARG:HG3	11:JJ:145:PRO:HG3	1.68	0.74
26:PP:58:LYS:HG3	26:PP:61:ARG:HH21	1.52	0.74
31:UU:54:VAL:HB	31:UU:88:LEU:HG	1.69	0.74
53:S:1:MET:HE1	53:S:34:ALA:HA	1.68	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
68:i:33:LEU:HD22	68:i:38:LYS:HB3	1.69	0.74
79:5:2609:G:H1	79:5:2730:U:H3	1.32	0.74
43:G:148:LEU:HD23	43:G:151:LEU:HD21	1.69	0.74
49:N:98:LEU:HD22	49:N:128:LYS:HD2	1.69	0.74
53:S:27:LEU:HG	54:T:148:PRO:HB3	1.69	0.74
3:9:1587:G:H21	30:TT:77:LYS:HD3	1.51	0.74
52:Q:70:MET:HE1	52:Q:78:LYS:HB2	1.69	0.74
67:h:89:ARG:HA	67:h:92:ARG:HB2	1.69	0.74
79:5:2093:A:H4'	79:5:2094:C:H5'	1.67	0.74
79:5:3845:A:H4'	79:5:4668:U:H4'	1.69	0.74
79:5:4761:G:H2'	79:5:4762:A:H8	1.52	0.74
3:9:1244:U:H3	3:9:1255:G:H1	1.35	0.74
5:BB:152:LYS:HB2	28:RR:132:ARG:HG3	1.67	0.74
6:CC:191:VAL:HG11	6:CC:236:PHE:HA	1.69	0.74
10:II:43:ILE:HG12	10:II:57:ALA:HA	1.69	0.74
36:gg:3:GLU:HB3	36:gg:314:ILE:HB	1.69	0.74
1:R:6:LEU:HA	1:R:9:ARG:HD3	1.67	0.74
10:II:17:LYS:HZ3	10:II:19:LYS:HA	1.51	0.74
19:aa:12:LYS:HD3	19:aa:18:VAL:HG13	1.68	0.74
23:FF:40:ALA:HB1	23:FF:45:TYR:HB3	1.68	0.74
40:D:197:LYS:HD2	40:D:202:GLN:HG3	1.68	0.74
3:9:291:G:H21	12:LL:41:GLY:HA3	1.51	0.74
21:ee:107:ARG:HB3	21:ee:108:ARG:HH21	1.51	0.74
30:TT:22:LEU:HD22	30:TT:28:LEU:HD21	1.69	0.74
57:X:86:ALA:HB1	57:X:97:VAL:HG21	1.68	0.74
64:e:99:ILE:HG12	64:e:108:ARG:HG2	1.68	0.74
69:j:64:MET:HB3	69:j:68:LYS:HG2	1.69	0.74
79:5:169:G:N2	79:5:267:G:H1	1.79	0.74
3:9:642:U:H4'	3:9:644:G:H4'	1.68	0.74
3:9:860:G:H1'	16:WW:107:SER:HB2	1.69	0.74
8:GG:176:ILE:HG22	8:GG:179:LEU:HB2	1.66	0.74
31:UU:53:PRO:HA	31:UU:89:ILE:HG12	1.69	0.74
42:F:186:MET:HA	42:F:189:LEU:HD12	1.68	0.74
47:L:77:SER:HB3	47:L:80:GLU:HG3	1.70	0.74
49:N:172:ARG:HH21	49:N:187:SER:HB2	1.51	0.74
50:O:16:LEU:HB2	50:O:43:ILE:HD12	1.70	0.74
79:5:3783:A:H4'	79:5:3784:A:H5''	1.69	0.74
3:9:988:C:H5''	5:BB:116:LYS:HA	1.69	0.74
8:GG:63:MET:HG2	8:GG:98:ARG:HH11	1.53	0.74
9:HH:130:LEU:HD21	9:HH:156:VAL:HG21	1.70	0.74
41:E:189:LEU:HD21	41:E:256:VAL:HG21	1.68	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:1866:A:H5'	19:aa:95:ARG:HB2	1.69	0.74
8:GG:159:ARG:HG2	8:GG:171:THR:HG22	1.68	0.74
19:aa:12:LYS:HA	19:aa:15:ARG:HH21	1.53	0.74
37:A:233:ARG:HG3	79:5:4184:G:H5'	1.69	0.74
48:M:126:GLU:HG3	50:O:181:ALA:HB1	1.69	0.74
77:s:10:LYS:HE2	77:s:60:MET:HE2	1.69	0.74
49:N:60:VAL:HG21	81:8:141:C:H5''	1.70	0.74
52:Q:50:ARG:HA	52:Q:53:MET:HE3	1.70	0.74
59:Z:100:VAL:HG13	59:Z:106:LEU:HB3	1.70	0.73
65:f:30:ILE:HD11	65:f:33:VAL:HB	1.70	0.73
3:9:1166:G:H1	3:9:1193:U:H3	1.35	0.73
13:NN:34:LYS:HG2	13:NN:74:ILE:HD13	1.70	0.73
61:b:5:LYS:HE2	61:b:8:THR:HB	1.70	0.73
68:i:73:ILE:HD11	68:i:86:LYS:HB2	1.70	0.73
31:UU:50:VAL:HG22	31:UU:91:LEU:HD21	1.68	0.73
42:F:227:VAL:HA	53:S:39:VAL:HG12	1.71	0.73
49:N:16:SER:O	49:N:20:ARG:HB2	1.87	0.73
3:9:552:G:H4'	21:ee:112:ASN:HB3	1.70	0.73
7:EE:246:LEU:HD12	7:EE:250:GLU:HG2	1.70	0.73
78:t:116:MET:HE1	79:5:1973:G:H4'	1.70	0.73
79:5:759:G:C6	79:5:904:G:O6	2.42	0.73
2:W:19:ARG:HH22	2:W:37:GLU:HB2	1.54	0.73
3:9:1143:A:H4'	3:9:1356:G:H22	1.52	0.73
23:FF:39:ILE:HG23	23:FF:68:ILE:HG13	1.70	0.73
27:QQ:32:ILE:HG22	27:QQ:39:LEU:HD21	1.70	0.73
42:F:235:ARG:HB2	42:F:238:GLN:HB2	1.70	0.73
50:O:37:ARG:HD3	50:O:108:ILE:HD11	1.69	0.73
61:b:57:MET:HE2	79:5:1812:C:H4'	1.69	0.73
52:Q:86:VAL:HB	52:Q:105:VAL:HG22	1.71	0.73
79:5:417:G:H22	81:8:16:G:H1'	1.52	0.73
29:SS:59:LEU:HD11	29:SS:64:VAL:HG12	1.69	0.73
32:ZZ:91:LEU:HD13	32:ZZ:94:LYS:HD2	1.71	0.73
42:F:219:MET:HG2	42:F:222:LYS:HE3	1.71	0.73
79:5:3782:C:H42	79:5:3809:G:H2'	1.54	0.73
3:9:439:A:H4'	3:9:1799:G:H4'	1.71	0.73
42:F:155:LYS:HG2	42:F:156:ARG:HE	1.51	0.73
44:H:19:SER:HB2	44:H:26:ILE:HD11	1.70	0.73
48:M:16:SER:H	48:M:55:MET:HA	1.54	0.73
49:N:51:LEU:HD13	49:N:117:ASN:HB3	1.70	0.73
53:S:23:ARG:HD2	53:S:24:THR:HG22	1.69	0.73
79:5:158:A:H4'	79:5:159:C:H5''	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:PP:93:MET:HG2	26:PP:104:GLN:HE21	1.54	0.73
37:A:111:THR:HG22	75:p:86:LEU:HG	1.70	0.73
38:B:21:ARG:HG3	38:B:271:GLN:HG2	1.70	0.73
44:H:44:GLU:HB2	44:H:58:ASP:HB2	1.70	0.73
44:H:105:ILE:HB	44:H:109:GLY:HA2	1.70	0.73
65:f:45:LYS:HA	65:f:107:PRO:HG2	1.69	0.73
23:FF:33:ILE:HG23	33:cc:55:VAL:HG11	1.71	0.73
38:B:213:GLN:HE22	38:B:286:LYS:HA	1.53	0.73
42:F:235:ARG:HG3	42:F:239:ILE:HG23	1.71	0.73
23:FF:82:ASN:HA	23:FF:85:LYS:HD2	1.71	0.72
42:F:118:ASN:HD21	42:F:211:LYS:HD2	1.54	0.72
51:P:116:HIS:HB3	51:P:149:ILE:HD11	1.71	0.72
3:9:551:U:H2'	3:9:552:G:H8	1.53	0.72
7:EE:151:ASP:HB3	7:EE:154:ILE:HG13	1.71	0.72
31:UU:107:GLU:HG2	31:UU:109:GLY:H	1.53	0.72
38:B:175:GLN:HE22	38:B:177:LYS:HB3	1.54	0.72
58:Y:8:THR:HG22	58:Y:10:ASP:H	1.54	0.72
62:c:80:GLU:HA	62:c:83:THR:HG22	1.71	0.72
66:g:26:PRO:HD2	79:5:2521:G:H4'	1.70	0.72
77:s:26:LYS:HD2	77:s:91:THR:HG23	1.69	0.72
7:EE:246:LEU:HD21	7:EE:251:GLU:HB3	1.71	0.72
24:KK:93:THR:HG23	24:KK:94:LEU:HD12	1.71	0.72
38:B:250:LYS:HE2	79:5:3897:G:H5'	1.71	0.72
78:t:75:PRO:HB2	78:t:80:LEU:HD11	1.69	0.72
23:FF:59:LYS:HB3	23:FF:62:ARG:HB2	1.70	0.72
27:QQ:85:ARG:HH11	27:QQ:119:LEU:HD13	1.54	0.72
49:N:153:LYS:HG3	49:N:155:VAL:HG12	1.70	0.72
63:d:64:ILE:HA	63:d:106:VAL:HB	1.71	0.72
79:5:4699:U:H1'	79:5:4700:A:H5''	1.70	0.72
1:R:60:ARG:HD2	1:R:63:CYS:HB2	1.71	0.72
3:9:1284:A:H4'	3:9:1286:G:H5'	1.70	0.72
8:GG:135:PRO:HG2	8:GG:141:ILE:HG12	1.70	0.72
26:PP:16:THR:HG22	26:PP:21:ASP:HA	1.72	0.72
26:PP:80:LEU:HD13	26:PP:83:MET:HE3	1.70	0.72
54:T:53:PRO:HD3	54:T:91:VAL:HG13	1.71	0.72
78:t:84:ALA:HB2	78:t:108:GLU:HG2	1.70	0.72
7:EE:87:MET:HE2	7:EE:236:ILE:HD13	1.70	0.72
9:HH:57:ARG:HH12	9:HH:59:ALA:HB2	1.53	0.72
18:YY:91:LEU:HB3	18:YY:96:LEU:HD11	1.69	0.72
19:aa:88:SER:H	19:aa:91:ALA:HB3	1.54	0.72
37:A:140:ASN:HB2	37:A:145:LYS:HB3	1.72	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:P:16:LYS:HD2	79:5:400:A:H5''	1.70	0.72
70:k:24:LYS:HE2	70:k:67:LYS:HD3	1.71	0.72
79:5:281:U:H3	79:5:306:A:H62	0.80	0.72
79:5:308:G:H8	79:5:310:G:H1'	1.54	0.72
9:HH:7:LYS:HE3	9:HH:28:LEU:HD23	1.71	0.72
9:HH:130:LEU:HD23	9:HH:142:LYS:HE2	1.72	0.72
15:VV:16:LYS:HA	15:VV:23:ILE:HA	1.72	0.72
29:SS:26:ILE:HG12	29:SS:56:ALA:HA	1.70	0.72
58:Y:3:PHE:HB2	79:5:243:A:H5''	1.71	0.72
2:W:56:ARG:HH22	79:5:5041:G:H5''	1.54	0.72
7:EE:92:ILE:HD11	7:EE:97:GLU:HB2	1.70	0.72
30:TT:96:SER:HB2	30:TT:99:VAL:HG22	1.72	0.72
74:o:98:LYS:HE3	79:5:4233:A:H4'	1.72	0.72
42:F:72:ARG:HG2	42:F:75:ARG:HH22	1.53	0.72
60:a:82:VAL:HG21	60:a:101:ILE:HG22	1.70	0.72
3:9:952:G:H21	14:OO:52:THR:HG21	1.55	0.71
8:GG:181:THR:HG22	8:GG:184:VAL:HG23	1.70	0.71
29:SS:136:THR:HB	29:SS:144:ARG:HH12	1.54	0.71
38:B:175:GLN:HG2	79:5:4985:U:H4'	1.70	0.71
74:o:17:LYS:HE3	79:5:4318:C:H5'	1.72	0.71
79:5:2409:U:H4'	79:5:2428:A:H4'	1.70	0.71
3:9:440:G:H5''	10:II:2:GLY:HA2	1.73	0.71
27:QQ:34:VAL:HG11	27:QQ:84:ILE:HD12	1.69	0.71
41:E:167:PHE:HA	41:E:178:VAL:HG23	1.72	0.71
1:R:41:ILE:HD13	1:R:44:LEU:HD12	1.70	0.71
6:CC:272:HIS:HA	6:CC:275:LYS:HE2	1.71	0.71
11:JJ:114:VAL:HG12	11:JJ:120:ALA:HB2	1.72	0.71
25:MM:90:GLY:HA2	25:MM:93:LYS:HG3	1.72	0.71
29:SS:84:LEU:HD22	29:SS:97:GLN:HB2	1.73	0.71
39:C:345:ARG:HA	39:C:348:LYS:HE3	1.71	0.71
79:5:3634:G:H21	79:5:3636:C:H5'	1.56	0.71
4:AA:59:LEU:HD23	4:AA:63:ARG:HD2	1.72	0.71
17:XX:32:LEU:HD13	17:XX:34:THR:HG23	1.72	0.71
23:FF:40:ALA:HB3	23:FF:67:PRO:HA	1.71	0.71
3:9:458:A:H61	3:9:471:G:H1	1.38	0.71
4:AA:54:THR:HG23	4:AA:161:ILE:HD11	1.71	0.71
40:D:63:GLN:HB3	40:D:74:ILE:HD12	1.73	0.71
50:O:8:VAL:HG23	50:O:117:ARG:HA	1.71	0.71
62:c:29:LEU:HD22	62:c:91:VAL:HG11	1.71	0.71
8:GG:215:LYS:HA	8:GG:218:LYS:HD3	1.72	0.71
36:gg:29:ASP:HA	36:gg:45:LEU:HD12	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:E:155:ILE:HD13	41:E:192:THR:HG21	1.73	0.71
42:F:217:GLY:HA3	42:F:245:ARG:HH21	1.54	0.71
50:O:122:ALA:HB2	53:S:162:GLN:HB2	1.72	0.71
59:Z:21:ARG:HD2	59:Z:47:ASP:HA	1.73	0.71
64:e:87:VAL:HG13	64:e:88:LEU:HD13	1.71	0.71
3:9:1216:C:H5''	3:9:1217:A:H5''	1.72	0.71
8:GG:70:HIS:HB3	8:GG:101:ILE:HB	1.73	0.71
17:XX:11:ARG:HA	17:XX:14:ARG:HG2	1.70	0.71
39:C:284:MET:HE1	52:Q:124:ASP:HB3	1.71	0.71
49:N:73:ARG:HB3	49:N:89:VAL:HG23	1.72	0.71
37:A:147:ARG:HH12	37:A:157:VAL:HA	1.55	0.71
44:H:41:ILE:HD13	44:H:43:VAL:HG22	1.72	0.71
47:L:191:LEU:HB3	47:L:194:ILE:HD11	1.73	0.71
59:Z:112:ARG:HH12	79:5:2556:G:H1'	1.55	0.71
63:d:26:THR:HG22	63:d:85:ARG:HD2	1.71	0.71
79:5:3790:U:H4'	79:5:3791:C:H3'	1.73	0.71
16:WW:47:ILE:HD11	16:WW:65:LEU:HA	1.73	0.71
36:gg:207:CYS:HB2	36:gg:221:LEU:HD11	1.71	0.71
60:a:11:LEU:HD21	60:a:17:HIS:HA	1.73	0.71
73:n:13:LEU:HD13	73:n:16:LYS:HD2	1.73	0.71
3:9:1296:U:H3	3:9:1303:C:H41	1.39	0.71
3:9:1337:C:H4'	31:UU:67:LYS:HG3	1.71	0.71
4:AA:16:LEU:HD21	28:RR:114:LEU:HD21	1.72	0.71
7:EE:48:LEU:HD22	7:EE:61:VAL:HG22	1.72	0.71
50:O:114:LYS:HB2	50:O:115:LYS:HZ1	1.55	0.71
51:P:86:LYS:HE3	79:5:3857:G:H4'	1.72	0.71
3:9:975:G:H21	14:OO:50:LYS:HA	1.56	0.70
40:D:60:ILE:HD13	40:D:98:ALA:HB2	1.73	0.70
52:Q:164:LYS:HZ3	79:5:1497:A:H1'	1.56	0.70
4:AA:84:GLN:HB3	4:AA:100:ALA:HB1	1.73	0.70
36:gg:206:LEU:HD12	36:gg:218:LEU:HG	1.72	0.70
65:f:72:GLY:HA3	65:f:88:PHE:HD1	1.55	0.70
3:9:519:A:H5''	11:JJ:11:LYS:HE3	1.71	0.70
3:9:1706:G:H5'	73:n:1:MET:HB2	1.73	0.70
36:gg:266:ILE:HD11	36:gg:269:GLU:HG3	1.74	0.70
38:B:265:SER:HB2	79:5:4459:U:H4'	1.74	0.70
45:I:98:ARG:HB3	45:I:120:GLY:HA3	1.71	0.70
57:X:153:ILE:HD11	57:X:155:ILE:HB	1.72	0.70
37:A:95:GLN:HB3	75:p:87:LYS:HZ3	1.57	0.70
39:C:78:ARG:HA	39:C:90:GLY:HA2	1.71	0.70
45:I:12:CYS:HB3	45:I:128:ARG:HH21	1.55	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:M:35:ARG:HH22	79:5:1923:A:H4'	1.56	0.70
62:c:26:LYS:HE2	62:c:98:ASP:HB2	1.71	0.70
38:B:58:ARG:HA	38:B:366:LYS:HD3	1.73	0.70
39:C:25:PRO:HG2	39:C:260:LEU:HD11	1.73	0.70
77:s:38:LYS:HB2	79:5:1971:C:H4'	1.73	0.70
3:9:1722:G:H1	3:9:1812:U:H3	1.40	0.70
24:KK:1:MET:HE1	24:KK:44:HIS:HA	1.72	0.70
26:PP:133:ILE:HG23	26:PP:139:SER:HB2	1.73	0.70
35:ff:107:LYS:HG2	35:ff:117:LEU:HD21	1.73	0.70
45:I:42:LYS:HE2	45:I:44:ASP:HB2	1.74	0.70
46:J:10:ASN:HB3	46:J:13:ARG:HG3	1.74	0.70
55:U:80:LYS:HA	55:U:83:LEU:HD13	1.73	0.70
61:b:117:ARG:HE	79:5:1273:G:H5''	1.56	0.70
68:i:60:LEU:HD12	68:i:69:ALA:HB2	1.73	0.70
79:5:2007:G:H3'	79:5:2008:U:H5''	1.71	0.70
9:HH:53:VAL:HG21	9:HH:57:ARG:HH11	1.56	0.70
41:E:167:PHE:HE1	41:E:176:LEU:HB2	1.56	0.70
59:Z:53:VAL:HG21	59:Z:62:ILE:HG12	1.72	0.70
30:TT:65:TYR:HA	30:TT:123:LEU:HD22	1.74	0.70
42:F:101:SER:HB3	42:F:104:VAL:HG12	1.72	0.70
54:T:75:VAL:HA	54:T:88:ARG:HA	1.72	0.70
2:W:82:ILE:HG23	8:GG:131:ARG:HD2	1.73	0.70
36:gg:254:PRO:HA	36:gg:285:GLN:HA	1.74	0.70
40:D:33:ARG:HA	40:D:36:LEU:HD12	1.74	0.70
53:S:154:LEU:HD11	53:S:157:ARG:HG2	1.72	0.70
59:Z:48:ARG:HH22	79:5:2575:U:H3'	1.57	0.70
73:n:15:ARG:HD3	73:n:18:ARG:HH12	1.57	0.70
79:5:381:U:H4'	79:5:415:G:H5'	1.73	0.70
3:9:933:G:H1'	3:9:1001:A:H5'	1.73	0.70
7:EE:100:ARG:HH21	7:EE:118:GLU:HG2	1.56	0.70
36:gg:32:LEU:HB3	36:gg:71:ILE:HD11	1.74	0.70
37:A:108:PRO:HG2	75:p:86:LEU:HD11	1.74	0.70
50:O:92:THR:HG23	50:O:95:GLY:H	1.56	0.70
80:7:112:U:H2'	80:7:113:G:H8	1.56	0.70
52:Q:132:LYS:HE2	52:Q:134:ARG:HB2	1.73	0.69
60:a:81:LEU:HD12	60:a:82:VAL:HG23	1.74	0.69
3:9:103:A:H5'	10:II:12:ARG:HH12	1.57	0.69
6:CC:255:LEU:HD22	15:VV:1:MET:HE2	1.74	0.69
25:MM:80:ASP:HB2	25:MM:84:LYS:HD3	1.73	0.69
44:H:128:MET:HE1	44:H:146:LEU:HD22	1.74	0.69
77:s:65:ILE:HG23	77:s:79:LEU:HD22	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:t:109:ILE:HD12	78:t:143:VAL:HG21	1.73	0.69
79:5:3781:C:H5'	79:5:3821:A:H4'	1.74	0.69
36:gg:214:GLY:HA2	36:gg:236:ILE:HG13	1.73	0.69
37:A:135:THR:HG22	37:A:149:LYS:HE2	1.74	0.69
38:B:83:PRO:HB3	38:B:204:GLN:HE21	1.57	0.69
42:F:178:LEU:HB3	42:F:183:ILE:HD12	1.74	0.69
3:9:934:G:H1	3:9:1008:A:H2	1.40	0.69
3:9:1534:C:H4'	3:9:1535:U:H5''	1.73	0.69
11:JJ:47:LYS:HD2	11:JJ:50:LEU:HD21	1.73	0.69
36:gg:165:ILE:HG13	36:gg:177:TRP:HB2	1.74	0.69
37:A:18:ALA:HB2	79:5:3677:U:H5''	1.75	0.69
38:B:117:ARG:HD2	38:B:177:LYS:HD3	1.75	0.69
56:V:105:ILE:HD11	56:V:113:LYS:HB2	1.75	0.69
56:V:117:ILE:HG12	56:V:136:ALA:HA	1.73	0.69
21:ee:110:GLN:HG2	21:ee:114:ARG:HH21	1.57	0.69
30:TT:42:HIS:HB2	30:TT:83:GLN:HA	1.74	0.69
44:H:111:LEU:HD12	44:H:127:ARG:HH21	1.58	0.69
48:M:89:THR:HG22	48:M:91:TRP:H	1.56	0.69
3:9:448:A:H4'	3:9:449:A:H5'	1.73	0.69
48:M:39:ASP:HB2	48:M:47:ARG:HD3	1.74	0.69
55:U:61:VAL:HG12	55:U:74:SER:HB2	1.74	0.69
77:s:59:THR:HG21	79:5:1961:G:H5''	1.75	0.69
78:t:13:VAL:HG21	78:t:31:LYS:HD3	1.73	0.69
79:5:2749:C:H2'	79:5:2750:G:H8	1.58	0.69
3:9:811:A:H1'	7:EE:39:ARG:HH22	1.58	0.69
7:EE:48:LEU:HD13	7:EE:61:VAL:HG13	1.75	0.69
7:EE:112:HIS:HB2	7:EE:239:PRO:HG3	1.73	0.69
10:II:22:HIS:HE1	10:II:25:ARG:HD2	1.57	0.69
12:LL:134:LEU:HD13	12:LL:138:VAL:HG12	1.75	0.69
29:SS:114:LEU:HD12	29:SS:117:ILE:HD11	1.74	0.69
43:G:142:ARG:HH22	81:8:154:G:H5''	1.58	0.69
60:a:71:PRO:HG2	60:a:108:TYR:HA	1.74	0.69
22:DD:190:LEU:HB3	22:DD:199:GLY:HA2	1.73	0.69
50:O:118:MET:HG3	53:S:167:PHE:HB3	1.73	0.69
60:a:112:LEU:HD22	60:a:130:SER:HB2	1.74	0.69
79:5:2622:G:H4'	79:5:2701:U:H4'	1.74	0.69
1:R:119:MET:HE3	1:R:145:LEU:HD13	1.75	0.69
36:gg:254:PRO:HB2	36:gg:271:LYS:HZ3	1.56	0.69
60:a:32:ARG:HD2	79:5:37:U:H4'	1.75	0.69
79:5:5040:U:H1'	79:5:5042:A:H1'	1.73	0.69
47:L:78:LEU:HD11	47:L:100:PRO:HB3	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S:84:TYR:HB3	53:S:124:ILE:HD13	1.73	0.68
79:5:418:A:H4'	79:5:2311:C:H5'	1.75	0.68
35:ff:126:CYS:HB2	35:ff:130:VAL:HB	1.75	0.68
36:gg:284:PRO:HB3	36:gg:304:ASP:HB3	1.74	0.68
56:V:65:VAL:HG11	56:V:72:LEU:HB3	1.74	0.68
3:9:822:U:H3	3:9:826:A:H62	1.41	0.68
3:9:1791:A:H1'	8:GG:67:VAL:HA	1.75	0.68
79:5:1329:G:H2'	79:5:3865:A:H5'	1.76	0.68
19:aa:12:LYS:HG3	19:aa:15:ARG:HB2	1.76	0.68
63:d:58:GLY:H	63:d:90:ARG:HH21	1.41	0.68
79:5:4396:A:N6	79:5:4447:C:C2	2.62	0.68
1:R:18:GLY:HA3	79:5:2822:G:H5''	1.73	0.68
3:9:1700:C:H4'	3:9:1701:C:H5''	1.75	0.68
5:BB:81:PHE:HD1	5:BB:105:LEU:HD11	1.57	0.68
36:gg:77:PHE:HB3	36:gg:89:LEU:HD11	1.74	0.68
41:E:154:ILE:HD11	41:E:198:ILE:HD13	1.75	0.68
3:9:1293:A:H1'	35:ff:138:ARG:HH22	1.59	0.68
3:9:1562:C:H4'	30:TT:120:GLY:H	1.59	0.68
11:JJ:55:LYS:HG2	11:JJ:58:ARG:HH21	1.58	0.68
27:QQ:58:LEU:HB3	27:QQ:62:ARG:HG3	1.75	0.68
37:A:137:ILE:HD11	37:A:149:LYS:HB3	1.74	0.68
47:L:63:THR:HG23	47:L:65:ARG:H	1.59	0.68
74:o:4:VAL:HG23	74:o:93:LEU:HD23	1.76	0.68
79:5:4757:C:H4'	79:5:4758:U:H5'	1.75	0.68
6:CC:69:LEU:HG	6:CC:273:LEU:HD21	1.75	0.68
6:CC:209:VAL:HG11	6:CC:233:LEU:HD21	1.74	0.68
14:OO:35:ALA:HB2	14:OO:112:ALA:HB2	1.76	0.68
14:OO:148:GLY:HA2	19:aa:27:ALA:HB3	1.74	0.68
38:B:47:LEU:HD12	38:B:166:THR:HG21	1.75	0.68
48:M:5:ARG:HE	48:M:59:ASP:HB3	1.58	0.68
53:S:35:PRO:HG2	53:S:39:VAL:HG21	1.76	0.68
60:a:98:ALA:HB1	60:a:122:VAL:HA	1.76	0.68
4:AA:161:ILE:HD12	4:AA:162:PRO:HD2	1.76	0.68
7:EE:137:PRO:HB2	7:EE:150:PRO:HD2	1.75	0.68
38:B:205:VAL:HG13	38:B:209:GLN:HE21	1.57	0.68
38:B:357:ARG:HA	38:B:360:LEU:HB2	1.76	0.68
40:D:29:ASP:HB2	40:D:150:LEU:HD21	1.76	0.68
40:D:222:GLN:HE22	80:7:47:G:H21	1.41	0.68
51:P:118:GLN:HE22	79:5:423:G:H1'	1.59	0.68
56:V:22:VAL:HG11	56:V:53:PRO:HD2	1.76	0.68
81:8:1:C:H2'	81:8:2:G:H5'	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:WW:52:ILE:HG12	16:WW:61:ILE:HG12	1.74	0.68
24:KK:3:MET:HE1	24:KK:44:HIS:HB3	1.74	0.68
31:UU:46:LYS:HZ3	31:UU:97:ILE:HG23	1.59	0.68
34:dd:36:LEU:HG	34:dd:38:MET:HB3	1.74	0.68
37:A:3:ARG:HH22	79:5:1626:G:H3'	1.58	0.68
49:N:116:LEU:HB3	49:N:133:ILE:HG23	1.76	0.68
58:Y:53:ASP:HB3	58:Y:106:ILE:HD13	1.76	0.68
5:BB:146:ARG:HB2	5:BB:149:GLN:HB2	1.76	0.68
39:C:163:LYS:HB3	39:C:166:GLU:HG2	1.74	0.68
43:G:250:LYS:HZ1	79:5:6:C:H4'	1.59	0.68
48:M:69:ARG:HH21	79:5:738(A):C:H4'	1.59	0.68
52:Q:178:ARG:H	60:a:51:GLY:HA2	1.59	0.68
78:t:80:LEU:HD23	78:t:83:LYS:HE3	1.74	0.68
79:5:418:A:H2'	79:5:419:A:H8	1.58	0.68
79:5:5002:U:H3	79:5:5045:G:H1	1.40	0.68
19:aa:3:LYS:HE2	19:aa:6:ARG:HA	1.76	0.67
23:FF:49:LEU:HD23	23:FF:51:HIS:H	1.59	0.67
37:A:59:ALA:HB2	37:A:78:ALA:HA	1.76	0.67
49:N:14:LYS:HA	49:N:19:MET:HG3	1.77	0.67
53:S:3:ALA:HB1	53:S:7:LEU:HD21	1.76	0.67
69:j:64:MET:HA	69:j:67:LEU:HD21	1.76	0.67
71:l:5:LYS:HB3	71:l:9:ILE:HD11	1.74	0.67
72:m:53:GLU:HB3	72:m:56:LEU:HD23	1.76	0.67
79:5:2007:G:H22	79:5:2011:C:H3'	1.59	0.67
24:KK:38:LYS:HG3	24:KK:40:VAL:HG13	1.76	0.67
37:A:39:GLY:HA2	37:A:93:LYS:HG2	1.74	0.67
37:A:48:ILE:HD13	75:p:65:ALA:HB2	1.76	0.67
38:B:47:LEU:HD11	38:B:344:VAL:HG23	1.76	0.67
43:G:202:ASN:HB3	43:G:204:LYS:HG2	1.76	0.67
45:I:91:LEU:HD23	45:I:135:ILE:HG23	1.77	0.67
53:S:45:TRP:HE1	53:S:61:ILE:HD11	1.59	0.67
79:5:2573:A:H62	79:5:2761:U:H3	1.39	0.67
19:aa:73:TYR:HB3	19:aa:78:ALA:HB2	1.76	0.67
23:FF:28:VAL:HG13	23:FF:110:GLN:HA	1.77	0.67
26:PP:98:ASN:HD21	26:PP:120:SER:HB2	1.58	0.67
37:A:96:LEU:HD23	75:p:87:LYS:HD3	1.75	0.67
38:B:254:ILE:HG23	38:B:266:VAL:HG11	1.76	0.67
38:B:65:SER:HB3	79:5:4616:A:H5''	1.75	0.67
53:S:98:ARG:HB2	53:S:142:VAL:HG13	1.77	0.67
8:GG:67:VAL:HG21	8:GG:99:GLY:HA2	1.74	0.67
26:PP:28:MET:HE2	26:PP:32:GLN:HB2	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:J:15:LEU:HD13	46:J:136:ARG:HG3	1.76	0.67
65:f:5:LEU:HD23	79:5:4945:G:H1	1.59	0.67
74:o:45:GLN:HE22	74:o:51:GLN:HA	1.58	0.67
4:AA:148:CYS:HB2	4:AA:152:SER:HB2	1.75	0.67
19:aa:21:ILE:HG12	19:aa:32:LYS:HB2	1.76	0.67
43:G:219:LEU:HA	49:N:7:ILE:HD11	1.77	0.67
53:S:34:ALA:HB1	53:S:39:VAL:HG23	1.76	0.67
62:c:43:ALA:HA	62:c:97:ILE:HA	1.76	0.67
67:h:44:LEU:HD11	81:8:49:G:H1'	1.76	0.67
70:k:7:GLU:HG3	70:k:10:ASP:H	1.59	0.67
79:5:418:A:H62	81:8:16:G:N2	1.92	0.67
23:FF:55:ARG:HH21	23:FF:58:ALA:HB2	1.60	0.67
45:I:203:ARG:HH12	80:7:64:G:H5'	1.60	0.67
58:Y:122:LYS:HE2	79:5:195:C:H4'	1.77	0.67
79:5:1636:U:H5''	79:5:1637:A:H5'	1.74	0.67
17:XX:91:LEU:HA	17:XX:94:ILE:HG22	1.76	0.67
23:FF:50:PRO:HB3	23:FF:69:VAL:HG12	1.75	0.67
41:E:212:PRO:HG2	41:E:215:LEU:HD22	1.77	0.67
42:F:164:LYS:HD3	79:5:2083:C:H1'	1.76	0.67
56:V:48:ARG:H	56:V:51:ARG:HB3	1.60	0.67
70:k:37:ARG:HE	70:k:42:LEU:HD11	1.59	0.67
1:R:32:ILE:HG12	1:R:50:ILE:HD11	1.76	0.67
23:FF:51:HIS:HA	23:FF:86:LYS:HE2	1.75	0.67
40:D:53:VAL:HG11	40:D:159:VAL:HA	1.75	0.67
57:X:96:LEU:HB3	57:X:138:VAL:HG13	1.75	0.67
59:Z:48:ARG:HB3	59:Z:69:LYS:HB3	1.76	0.67
74:o:70:LEU:HD21	74:o:81:ARG:HG2	1.76	0.67
79:5:2588:C:H5''	79:5:2589:C:H5''	1.76	0.67
22:DD:209:SER:HB3	28:RR:40:ILE:HD11	1.75	0.67
70:k:24:LYS:HG3	70:k:35:LYS:HD2	1.77	0.67
79:5:751:G:H3'	79:5:752:G:H8	1.60	0.67
3:9:439:A:H5'	3:9:1800:A:H5'	1.77	0.66
3:9:448:A:H61	10:II:29:LEU:HD13	1.60	0.66
16:WW:111:MET:HG3	16:WW:115:GLU:HB3	1.77	0.66
24:KK:5:LYS:HE3	24:KK:9:ILE:HD11	1.76	0.66
37:A:21:LYS:HG2	79:5:1541:C:H5''	1.77	0.66
40:D:267:ASN:HD21	80:7:59:G:H1'	1.59	0.66
43:G:133:ILE:HD13	43:G:217:ILE:HG21	1.77	0.66
44:H:50:LYS:HD2	79:5:759:G:H5'	1.78	0.66
46:J:135:GLY:HA2	46:J:157:ILE:HD11	1.76	0.66
52:Q:15:ARG:HG3	79:5:1691:G:H5'	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:V:39:ILE:HD11	56:V:61:VAL:HG22	1.77	0.66
63:d:85:ARG:HB3	63:d:109:VAL:HB	1.76	0.66
10:II:106:SER:HB3	10:II:171:LEU:HD21	1.78	0.66
13:NN:45:LEU:HD11	13:NN:49:GLN:HB3	1.76	0.66
31:UU:94:PRO:HD2	31:UU:97:ILE:HD12	1.76	0.66
39:C:302:LEU:HD11	52:Q:38:ARG:HD2	1.77	0.66
49:N:7:ILE:HD13	49:N:10:LEU:HD21	1.76	0.66
54:T:17:ARG:HH12	79:5:4277:G:H5''	1.60	0.66
75:p:18:TYR:HA	79:5:3635:A:H61	1.60	0.66
9:HH:51:ILE:HG21	9:HH:179:LYS:HG2	1.77	0.66
36:gg:17:TRP:HB3	36:gg:303:THR:HA	1.77	0.66
41:E:96:THR:HG22	41:E:109:VAL:HG22	1.78	0.66
43:G:262:SER:HA	43:G:265:LYS:HD2	1.77	0.66
50:O:84:VAL:HG11	50:O:102:LEU:HD23	1.77	0.66
11:JJ:38:ARG:HD3	21:ee:104:ARG:HB2	1.76	0.66
37:A:40:TYR:HB3	37:A:94:ALA:HB2	1.77	0.66
53:S:83:ARG:HB3	53:S:127:MET:HE1	1.77	0.66
65:f:92:LEU:HD22	65:f:93:PRO:HD2	1.77	0.66
79:5:2673:G:H5''	79:5:2674:A:H3'	1.77	0.66
18:YY:114:MET:HE1	18:YY:126:GLY:HA3	1.77	0.66
22:DD:8:LYS:HE2	31:UU:59:LYS:HD3	1.78	0.66
25:MM:40:LYS:HE2	35:ff:130:VAL:HA	1.77	0.66
38:B:100:ARG:HD2	79:5:4723:A:H4'	1.78	0.66
39:C:316:LYS:HB2	39:C:324:ILE:HG13	1.78	0.66
45:I:205:PRO:HG2	45:I:208:LYS:HD3	1.78	0.66
49:N:98:LEU:HA	49:N:101:VAL:HG22	1.76	0.66
57:X:76:ILE:HD12	57:X:77:ILE:HG23	1.76	0.66
4:AA:145:ILE:HG23	4:AA:159:ILE:HD11	1.78	0.66
11:JJ:84:ILE:HD12	11:JJ:148:ILE:HD13	1.78	0.66
22:DD:93:THR:HG21	22:DD:198:ILE:HG22	1.76	0.66
31:UU:53:PRO:HB3	31:UU:89:ILE:HD11	1.78	0.66
38:B:3:HIS:HD2	79:5:4515:G:H3'	1.60	0.66
41:E:124:VAL:HG12	64:e:7:LEU:HD11	1.77	0.66
71:l:45:ARG:HH21	79:5:2796:G:H5'	1.61	0.66
29:SS:14:ARG:HD3	29:SS:17:ASN:HA	1.76	0.66
29:SS:39:ARG:HH21	30:TT:38:LYS:HB2	1.61	0.66
38:B:140:ASP:HB3	38:B:144:ARG:HH21	1.61	0.66
41:E:115:MET:HE1	76:r:87:ARG:HG3	1.76	0.66
50:O:16:LEU:HD12	79:5:2052:G:H5''	1.77	0.66
56:V:42:VAL:HG12	56:V:53:PRO:HB3	1.78	0.66
5:BB:136:ARG:HB3	5:BB:216:LYS:HB3	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:SS:28:PHE:HA	29:SS:31:THR:HG23	1.76	0.66
37:A:3:ARG:HH12	79:5:1626:G:H5''	1.61	0.66
38:B:117:ARG:HA	38:B:177:LYS:HD3	1.78	0.66
40:D:38:ILE:HD13	54:T:30:TYR:HB3	1.76	0.66
41:E:99:VAL:HG21	41:E:108:ARG:HD3	1.77	0.66
47:L:9:ILE:HD12	52:Q:168:ARG:HD2	1.78	0.66
54:T:39:ILE:HD13	54:T:102:ARG:HG2	1.77	0.66
3:9:928:G:H21	20:bb:68:GLY:HA2	1.59	0.66
8:GG:10:THR:HG21	8:GG:125:THR:HA	1.78	0.66
24:KK:77:GLN:HA	24:KK:80:ARG:HD2	1.77	0.66
36:gg:87:LEU:HD21	36:gg:108:VAL:HG11	1.77	0.66
36:gg:298:LEU:HB2	36:gg:310:TRP:HB2	1.78	0.66
50:O:121:PRO:HA	50:O:124:LEU:HD12	1.78	0.66
60:a:75:LEU:HA	60:a:78:LEU:HB2	1.76	0.66
61:b:32:LEU:HD23	79:5:1464:C:H5'	1.78	0.66
64:e:4:LEU:HB2	64:e:121:ARG:HB2	1.76	0.66
67:h:28:LEU:HB3	67:h:50:VAL:HG11	1.77	0.66
68:i:51:ALA:HB3	68:i:54:GLU:HG2	1.78	0.66
79:5:2777:G:H5''	79:5:2778:G:H5'	1.78	0.66
3:9:101:U:H3'	3:9:408:A:H61	1.59	0.65
3:9:968:U:H1'	3:9:972:A:H1'	1.78	0.65
26:PP:39:ALA:HA	26:PP:42:ARG:HD3	1.77	0.65
3:9:1844:U:H3	3:9:1855:G:H1	1.43	0.65
33:cc:12:ALA:HB1	33:cc:32:VAL:HB	1.78	0.65
37:A:118:GLU:HB3	37:A:126:LEU:HD21	1.78	0.65
37:A:200:ARG:HH12	79:5:3650:C:H5''	1.61	0.65
4:AA:89:LYS:HG2	4:AA:201:LEU:HG	1.77	0.65
21:ee:105:ALA:HA	21:ee:108:ARG:HG2	1.76	0.65
22:DD:204:LEU:HB2	22:DD:207:HIS:HB3	1.77	0.65
32:ZZ:94:LYS:HG3	32:ZZ:96:LEU:HB2	1.79	0.65
33:cc:31:ARG:HH11	33:cc:43:ILE:HG13	1.61	0.65
49:N:135:ILE:HD12	49:N:142:ILE:HG21	1.78	0.65
53:S:29:ARG:HB2	54:T:148:PRO:HB2	1.77	0.65
3:9:28:U:H3	3:9:646:G:H1	1.45	0.65
3:9:428:U:H4'	11:JJ:2:PRO:HG3	1.77	0.65
6:CC:177:PRO:HD3	15:VV:9:VAL:HG21	1.78	0.65
7:EE:207:VAL:HA	7:EE:221:ARG:HE	1.62	0.65
79:5:2420:A:H5''	79:5:2421:G:H5''	1.76	0.65
3:9:834:C:H3'	18:YY:8:ARG:HH22	1.61	0.65
8:GG:50:VAL:HG21	8:GG:111:LEU:HB3	1.76	0.65
29:SS:39:ARG:HG3	29:SS:83:PHE:HZ	1.61	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:C:207:PRO:HG2	39:C:227:ILE:HG22	1.79	0.65
44:H:27:VAL:HB	44:H:80:MET:HE2	1.78	0.65
1:R:68:LEU:HD12	1:R:71:ARG:HD2	1.79	0.65
13:NN:70:LYS:HD2	13:NN:73:ARG:H	1.61	0.65
31:UU:32:LEU:HD21	31:UU:87:ARG:HG2	1.78	0.65
41:E:261:LEU:HD13	41:E:264:ILE:HD11	1.77	0.65
42:F:227:VAL:HG13	53:S:39:VAL:HA	1.78	0.65
52:Q:49:LYS:HE3	79:5:2084:C:H41	1.61	0.65
75:p:59:SER:HA	79:5:2652:G:H1	1.61	0.65
79:5:31:U:H3	79:5:51:A:H61	1.43	0.65
8:GG:18:VAL:HG13	8:GG:23:LYS:HD2	1.78	0.65
36:gg:79:LEU:HD11	36:gg:87:LEU:HD12	1.78	0.65
43:G:250:LYS:HE2	79:5:6:C:H5'	1.77	0.65
48:M:91:TRP:HA	48:M:94:LYS:HE2	1.77	0.65
52:Q:182:ALA:HB2	52:Q:187:LYS:HG2	1.77	0.65
5:BB:150:ILE:HG23	28:RR:131:PRO:HA	1.79	0.65
36:gg:40:ILE:HB	36:gg:59:LEU:HB2	1.79	0.65
38:B:44:THR:HA	38:B:349:LYS:HD2	1.79	0.65
38:B:357:ARG:HH12	79:5:4615:C:H5''	1.61	0.65
3:9:1263:U:H1'	34:dd:16:GLN:HE22	1.62	0.65
4:AA:147:LEU:HD21	4:AA:163:CYS:HB3	1.79	0.65
39:C:44:LEU:HD12	79:5:1373:A:H5''	1.78	0.65
52:Q:43:PHE:HD2	52:Q:133:GLY:HA3	1.61	0.65
57:X:73:HIS:HB2	57:X:112:ALA:HB2	1.79	0.65
67:h:22:ASP:HA	67:h:25:LYS:HG2	1.78	0.65
77:s:69:LEU:HD23	77:s:75:LEU:HD12	1.78	0.65
5:BB:168:MET:HB3	5:BB:197:ILE:HG23	1.77	0.65
47:L:128:PRO:HD3	47:L:144:LEU:HD11	1.79	0.65
54:T:18:PRO:HG2	54:T:21:LYS:HG3	1.77	0.65
62:c:14:ILE:HD13	62:c:17:ARG:HH12	1.60	0.65
65:f:102:ARG:HB3	65:f:104:MET:HE1	1.79	0.65
71:l:38:ASN:HB3	71:l:41:ARG:HG3	1.78	0.65
74:o:26:TYR:HB3	74:o:67:VAL:HB	1.77	0.65
78:t:15:LEU:HD21	78:t:31:LYS:HE3	1.78	0.65
7:EE:94:LYS:HB3	18:YY:16:ARG:HD3	1.80	0.64
11:JJ:47:LYS:HE2	11:JJ:50:LEU:HD11	1.77	0.64
22:DD:132:LYS:HD3	22:DD:156:LEU:HB3	1.79	0.64
27:QQ:9:SER:HB3	27:QQ:26:LYS:HZ2	1.61	0.64
29:SS:74:PRO:HA	29:SS:79:ILE:HD12	1.79	0.64
41:E:61:ARG:HD3	79:5:1237:C:H1'	1.80	0.64
44:H:180:TYR:HB2	72:m:59:LEU:HD21	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:a:127:LYS:HG2	60:a:147:VAL:HG13	1.78	0.64
76:r:6:GLN:HA	76:r:9:VAL:HG12	1.80	0.64
8:GG:122:PRO:HA	8:GG:126:ASP:HB2	1.79	0.64
35:ff:118:ARG:HD2	35:ff:131:PHE:HE2	1.62	0.64
42:F:177:SER:HB2	42:F:178:LEU:HD12	1.77	0.64
56:V:87:SER:HA	56:V:97:TYR:HB3	1.79	0.64
79:5:2092:G:N2	79:5:2097:U:O4	2.30	0.64
79:5:2543:A:H2'	79:5:2546:G:H21	1.61	0.64
3:9:122:G:H21	7:EE:146:THR:HG21	1.62	0.64
3:9:612:U:O4	3:9:629:A:N7	2.30	0.64
14:OO:129:ILE:HD12	19:aa:64:LEU:HD22	1.78	0.64
38:B:239:LYS:HZ2	38:B:249:ARG:HG2	1.62	0.64
44:H:86:LEU:HD22	44:H:188:GLN:HG3	1.79	0.64
7:EE:55:ALA:HB3	7:EE:61:VAL:HG22	1.80	0.64
23:FF:99:ILE:HG23	32:ZZ:67:LEU:HG	1.80	0.64
25:MM:60:MET:HB3	35:ff:103:LEU:HD11	1.77	0.64
29:SS:124:ARG:HB2	29:SS:131:VAL:HG23	1.79	0.64
33:cc:30:VAL:HG21	33:cc:50:VAL:HG11	1.80	0.64
49:N:66:VAL:HG21	49:N:102:ALA:HB2	1.77	0.64
50:O:120:VAL:HG22	50:O:123:ALA:H	1.62	0.64
3:9:149:A:N7	3:9:169:U:O2	2.31	0.64
3:9:1313:A:H5''	24:KK:8:ARG:HH22	1.61	0.64
6:CC:137:VAL:HG12	6:CC:216:MET:HG3	1.79	0.64
36:gg:149:GLU:HB2	36:gg:171:ASP:HB3	1.79	0.64
45:I:115:MET:HE1	79:5:4442:U:H5'	1.80	0.64
57:X:102:VAL:HA	57:X:134:LYS:HE3	1.78	0.64
61:b:3:LYS:HG2	79:5:4194:U:H5''	1.80	0.64
64:e:63:ASN:HB3	64:e:66:THR:HG22	1.80	0.64
74:o:12:CYS:HB3	74:o:15:CYS:HB2	1.79	0.64
5:BB:79:VAL:HG23	5:BB:82:ARG:HB2	1.80	0.64
9:HH:170:VAL:HG13	9:HH:187:PHE:HB2	1.80	0.64
14:OO:31:CYS:HB3	14:OO:44:VAL:HG22	1.79	0.64
22:DD:218:LEU:HD12	22:DD:219:PRO:HD2	1.79	0.64
25:MM:89:VAL:HG11	25:MM:109:VAL:HG21	1.78	0.64
38:B:53:MET:HB3	38:B:77:THR:HG22	1.78	0.64
38:B:99:LEU:HG	79:5:4582:C:H4'	1.79	0.64
39:C:281:MET:HG2	52:Q:110:ARG:HH12	1.63	0.64
39:C:297:GLU:HA	39:C:300:ARG:HE	1.63	0.64
43:G:223:LEU:HA	43:G:226:LEU:HD23	1.80	0.64
63:d:23:ARG:HH22	79:5:5058:A:H5'	1.62	0.64
75:p:22:LEU:HD11	79:5:3693:U:H5'	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:1048:G:N2	3:9:1070:A:H62	1.93	0.64
5:BB:113:MET:HE3	5:BB:142:PHE:HE2	1.62	0.64
10:II:36:THR:HG23	10:II:96:LEU:HB2	1.79	0.64
26:PP:85:ILE:HG21	26:PP:111:MET:HB3	1.79	0.64
38:B:356:LYS:HE3	38:B:358:ARG:HE	1.62	0.64
48:M:12:VAL:HB	48:M:60:PHE:HB2	1.78	0.64
53:S:97:TYR:HB3	53:S:108:GLN:HE21	1.62	0.64
74:o:3:ASN:HB3	74:o:92:GLU:HG3	1.79	0.64
79:5:280:G:H22	79:5:305:A:H3'	1.63	0.64
79:5:1591:U:H3	79:5:4555:U:H5''	1.61	0.64
3:9:1232:U:H3	3:9:1526:G:H1	1.45	0.64
14:OO:124:MET:HE1	14:OO:126:ILE:HA	1.79	0.64
29:SS:70:ILE:HA	29:SS:77:TYR:HD2	1.61	0.64
47:L:190:ARG:HH22	79:5:4351:U:H5''	1.62	0.64
74:o:57:ARG:HH12	79:5:3924:C:H4'	1.61	0.64
76:r:61:VAL:HG12	76:r:81:THR:HA	1.80	0.64
79:5:4896:G:H2'	79:5:4897:G:H8	1.63	0.64
10:II:82:VAL:HG22	10:II:202:ILE:HD13	1.80	0.64
11:JJ:31:LEU:HD12	11:JJ:35:TYR:HE2	1.61	0.64
11:JJ:77:LEU:HD12	11:JJ:97:ILE:HD13	1.80	0.64
26:PP:53:GLN:HG2	26:PP:83:MET:HE1	1.80	0.64
33:cc:21:THR:HG22	33:cc:68:LEU:HD13	1.80	0.64
50:O:85:ARG:HB2	50:O:99:LEU:HD11	1.80	0.64
53:S:47:PHE:HE2	54:T:151:LEU:HD22	1.63	0.64
3:9:889:U:H2'	3:9:890:U:H5''	1.79	0.64
3:9:1603:G:H22	29:SS:24:ARG:HD3	1.63	0.64
10:II:83:TYR:HB3	10:II:101:ILE:HB	1.79	0.64
25:MM:52:LEU:HD13	25:MM:65:VAL:HG11	1.79	0.64
59:Z:46:ILE:HD13	59:Z:68:ILE:HG23	1.80	0.64
3:9:1472:C:O2	3:9:1476:A:N6	2.31	0.63
3:9:1539:U:H5''	30:TT:43:LYS:HE3	1.79	0.63
38:B:17:LEU:HG	38:B:18:PRO:HD3	1.79	0.63
44:H:105:ILE:HG22	44:H:112:VAL:HG22	1.79	0.63
61:b:37:PRO:HA	61:b:40:LEU:HG	1.81	0.63
74:o:57:ARG:HH21	79:5:4379:A:H1'	1.64	0.63
79:5:746:A:N1	79:5:918:G:O6	2.31	0.63
3:9:1669:G:H5''	27:QQ:130:LYS:HB3	1.80	0.63
4:AA:198:MET:HE3	28:RR:89:SER:HA	1.80	0.63
22:DD:190:LEU:HD23	22:DD:199:GLY:HA2	1.79	0.63
39:C:306:ARG:HH22	79:5:2099:C:H3'	1.64	0.63
45:I:87:ILE:HG13	45:I:138:ILE:HD13	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:J:27:GLY:HA2	46:J:68:ILE:HG23	1.79	0.63
51:P:119:VAL:HG13	51:P:146:ILE:HD11	1.81	0.63
60:a:37:GLY:HA2	60:a:45:PHE:HE2	1.63	0.63
71:l:21:ARG:HH21	81:8:51:U:H4'	1.62	0.63
4:AA:60:LEU:HA	4:AA:63:ARG:HD3	1.80	0.63
4:AA:147:LEU:HD23	4:AA:161:ILE:HG23	1.79	0.63
5:BB:167:LYS:HZ3	5:BB:201:CYS:HA	1.63	0.63
17:XX:83:ALA:HA	17:XX:120:PHE:HB2	1.79	0.63
32:ZZ:63:PRO:HB3	32:ZZ:96:LEU:HD22	1.78	0.63
46:J:40:LEU:HD22	46:J:70:VAL:HG13	1.80	0.63
49:N:64:ILE:HD13	49:N:102:ALA:HB1	1.80	0.63
1:R:103:ARG:HE	1:R:107:ARG:HH12	1.45	0.63
9:HH:117:PRO:HG2	9:HH:120:ARG:HD3	1.79	0.63
30:TT:25:SER:HB3	30:TT:27:LYS:HD2	1.80	0.63
39:C:62:THR:HG21	39:C:91:ALA:HB1	1.80	0.63
72:m:84:CYS:HB3	72:m:91:HIS:HA	1.81	0.63
79:5:1874:A:H4'	79:5:4217:G:H22	1.63	0.63
3:9:934:G:O6	3:9:1008:A:N1	2.31	0.63
15:VV:74:LYS:HZ1	15:VV:81:LYS:HA	1.64	0.63
40:D:256:LYS:HD2	80:7:117:G:H5'	1.79	0.63
40:D:270:LYS:HB2	80:7:60:G:H4'	1.80	0.63
51:P:132:ALA:HB3	79:5:1596:U:H4'	1.79	0.63
62:c:47:ILE:HD13	62:c:94:LEU:HD12	1.81	0.63
66:g:108:LYS:HE2	66:g:112:GLN:HE21	1.64	0.63
3:9:560:A:H5'	11:JJ:174:LYS:HB2	1.81	0.63
7:EE:48:LEU:HD22	7:EE:61:VAL:HG13	1.81	0.63
25:MM:42:LEU:HD23	25:MM:68:LEU:HB3	1.79	0.63
27:QQ:117:ARG:HH11	27:QQ:121:VAL:HG21	1.62	0.63
34:dd:42:CYS:HA	34:dd:45:GLN:HE21	1.63	0.63
38:B:224:LYS:HA	38:B:343:ARG:HH12	1.63	0.63
42:F:97:ILE:HG12	52:Q:2:GLY:HA2	1.80	0.63
43:G:116:LEU:HD21	49:N:29:GLN:HG3	1.80	0.63
43:G:130:PRO:HB2	49:N:18:VAL:HG22	1.79	0.63
48:M:119:ARG:HD3	48:M:123:ILE:HD13	1.79	0.63
49:N:121:VAL:HG21	49:N:131:GLU:HG2	1.80	0.63
50:O:89:PRO:HD3	79:5:1914:C:H4'	1.79	0.63
54:T:27:LEU:HA	54:T:30:TYR:HD2	1.64	0.63
74:o:38:LYS:HE3	79:5:4343:U:H5''	1.80	0.63
3:9:929:G:H21	3:9:1104:G:H4'	1.63	0.63
5:BB:71:LEU:HD22	5:BB:84:PHE:HE2	1.62	0.63
7:EE:191:ARG:HD3	7:EE:245:ARG:HB2	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:N:115:VAL:HA	49:N:134:LEU:HD12	1.80	0.63
3:9:953:C:H5''	5:BB:24:PRO:HG3	1.80	0.63
22:DD:213:PRO:HD2	28:RR:19:LYS:HD2	1.80	0.63
43:G:136:PHE:HA	43:G:236:ILE:HD13	1.79	0.63
47:L:169:ILE:HD13	60:a:142:GLY:HA2	1.80	0.63
54:T:4:THR:HG23	54:T:9:ARG:HG3	1.81	0.63
3:9:126:G:H2'	8:GG:199:THR:HG21	1.80	0.63
17:XX:24:ASP:HB2	17:XX:27:TYR:HB3	1.81	0.63
22:DD:51:LEU:HG	22:DD:91:VAL:HG22	1.81	0.63
23:FF:146:ARG:HH22	33:cc:57:THR:HB	1.64	0.63
43:G:148:LEU:HD21	43:G:271:LEU:HD11	1.80	0.63
50:O:46:ASN:HB3	50:O:49:ARG:HG2	1.80	0.63
79:5:63:G:H22	79:5:333:U:H2'	1.63	0.63
3:9:873:G:H1	12:LL:153:LYS:HA	1.64	0.62
12:LL:93:LEU:HD11	12:LL:102:PHE:HD2	1.64	0.62
48:M:118:MET:HE3	48:M:119:ARG:HB2	1.81	0.62
52:Q:105:VAL:HB	52:Q:110:ARG:HH21	1.64	0.62
55:U:40:GLU:HG3	55:U:63:LEU:HD21	1.81	0.62
79:5:1301:C:H2'	79:5:1302:U:H5'	1.79	0.62
9:HH:116:ARG:HH21	9:HH:121:THR:HA	1.64	0.62
40:D:34:LYS:O	40:D:38:ILE:HB	1.99	0.62
50:O:185:VAL:HG22	50:O:188:LYS:HE3	1.80	0.62
57:X:81:LEU:HD11	57:X:99:ILE:HD11	1.81	0.62
64:e:126:ASN:HB2	64:e:129:LEU:HD11	1.80	0.62
79:5:982:U:O2	79:5:1273:G:N2	2.31	0.62
8:GG:2:LYS:HB2	8:GG:108:VAL:HG12	1.80	0.62
38:B:393:LYS:HD2	79:5:5042:A:H5'	1.80	0.62
49:N:36:LEU:HD23	49:N:64:ILE:HG22	1.80	0.62
49:N:65:ARG:HB3	49:N:127:TYR:HE1	1.64	0.62
52:Q:57:ASN:HB3	52:Q:143:ARG:HH21	1.63	0.62
71:l:10:LYS:HD2	79:5:2781:G:H5''	1.81	0.62
3:9:1079:C:H4'	3:9:1182:A:H61	1.63	0.62
6:CC:163:VAL:HG12	15:VV:27:LYS:HD3	1.81	0.62
7:EE:152:PRO:HG2	8:GG:216:ARG:HG3	1.80	0.62
11:JJ:61:LEU:HD23	11:JJ:94:LEU:HD12	1.82	0.62
60:a:103:VAL:HG21	60:a:126:ALA:HB2	1.81	0.62
69:j:25:LYS:HZ3	79:5:370:U:H4'	1.63	0.62
71:l:8:ARG:HH12	81:8:110:U:H3'	1.65	0.62
79:5:1358:G:N7	79:5:1377:G:O6	2.33	0.62
41:E:165:VAL:HG12	41:E:178:VAL:HG22	1.79	0.62
42:F:107:VAL:HG21	42:F:134:ILE:HD11	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:d:75:LYS:HD2	79:5:4653:C:H5''	1.82	0.62
3:9:400:C:H4'	3:9:401:A:H5'	1.81	0.62
19:aa:31:PRO:HG2	19:aa:34:LYS:HB3	1.81	0.62
30:TT:27:LYS:HE2	30:TT:110:LEU:HD13	1.80	0.62
44:H:34:LEU:HD12	44:H:80:MET:HG3	1.82	0.62
74:o:6:LYS:HD3	74:o:93:LEU:HD11	1.80	0.62
3:9:886:A:H3'	3:9:887:U:H5''	1.82	0.62
35:ff:130:VAL:HG21	35:ff:143:LYS:HZ1	1.65	0.62
39:C:28:PHE:HD1	39:C:132:ALA:HB2	1.65	0.62
49:N:3:ALA:HA	49:N:6:TYR:HD2	1.64	0.62
58:Y:89:LYS:HD3	58:Y:95:VAL:HG21	1.82	0.62
3:9:1451:G:N2	3:9:1474:A:H61	1.98	0.62
14:OO:103:ASN:HB2	14:OO:142:ARG:HB3	1.80	0.62
14:OO:125:LYS:HA	19:aa:56:ALA:HB1	1.80	0.62
17:XX:101:LEU:HB3	17:XX:124:LYS:HB2	1.81	0.62
25:MM:81:ASP:HB3	25:MM:84:LYS:HG2	1.82	0.62
39:C:323:ARG:HG2	79:5:1281:G:H5'	1.82	0.62
58:Y:30:MET:HE1	58:Y:78:TYR:HA	1.81	0.62
63:d:38:PHE:HA	63:d:41:ARG:HD2	1.82	0.62
3:9:164:A:H5'	8:GG:83:CYS:H	1.65	0.62
3:9:1112:U:O2	3:9:1121:G:O6	2.18	0.62
72:m:93:ASN:HD21	79:5:1946:G:H5''	1.65	0.62
79:5:2701:U:H3	79:5:2715:G:H1	1.47	0.62
79:5:4087:G:H4'	79:5:4088:C:H5	1.64	0.62
3:9:660:C:H5''	17:XX:2:GLY:HA3	1.80	0.62
6:CC:213:LEU:HD21	6:CC:240:THR:HG21	1.81	0.62
11:JJ:32:ILE:HG21	21:ee:107:ARG:HG2	1.80	0.62
17:XX:85:VAL:HG23	17:XX:130:LEU:HD21	1.81	0.62
56:V:82:ILE:HD11	56:V:102:ALA:HB3	1.82	0.62
56:V:82:ILE:HD12	56:V:83:ARG:HG3	1.82	0.62
69:j:82:THR:HB	81:8:94:G:H21	1.64	0.62
79:5:2395:A:N6	79:5:2820:C:O2	2.32	0.62
3:9:1757:G:O6	3:9:1775:U:O2	2.18	0.61
4:AA:16:LEU:HD22	28:RR:116:ASN:HD21	1.64	0.61
5:BB:128:LYS:HE3	5:BB:134:LEU:HD23	1.82	0.61
7:EE:160:ILE:HD13	7:EE:172:PHE:HB3	1.81	0.61
7:EE:219:ALA:HB1	7:EE:221:ARG:HH22	1.64	0.61
8:GG:161:PRO:HA	8:GG:171:THR:HG23	1.81	0.61
12:LL:59:LYS:HB3	12:LL:134:LEU:HD23	1.80	0.61
39:C:349:LEU:HB3	39:C:353:ARG:HH21	1.64	0.61
42:F:186:MET:HE3	42:F:186:MET:H	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:X:64:SER:HB2	67:h:69:LEU:HD11	1.81	0.61
79:5:1332:C:H2'	79:5:1333:A:H8	1.64	0.61
79:5:2888:G:H5'	79:5:3618:C:H2'	1.82	0.61
3:9:1396:A:N7	3:9:1449:G:O6	2.32	0.61
7:EE:72:ILE:HD11	7:EE:77:ARG:HB2	1.80	0.61
56:V:43:LYS:HA	79:5:4508:C:H4'	1.82	0.61
3:9:804:U:O2	3:9:859:G:O6	2.18	0.61
3:9:821:G:H22	11:JJ:148:ILE:HD11	1.65	0.61
3:9:1398:G:O6	3:9:1448:A:N1	2.33	0.61
22:DD:202:LYS:HD2	22:DD:203:PRO:HD2	1.82	0.61
37:A:234:LYS:HD3	79:5:3666:C:H5''	1.81	0.61
52:Q:49:LYS:HE3	79:5:2084:C:N4	2.14	0.61
79:5:314:G:H4'	79:5:315:G:H21	1.64	0.61
79:5:4496:A:H61	79:5:4504:C:H42	1.46	0.61
79:5:5062:G:H2'	79:5:5063:G:H8	1.65	0.61
1:R:176:ARG:HH22	3:9:909:G:H5'	1.64	0.61
3:9:171:A:H5'	8:GG:177:GLN:HG2	1.81	0.61
4:AA:2:SER:HB2	4:AA:59:LEU:HD22	1.82	0.61
4:AA:5:LEU:HD12	4:AA:8:LEU:H	1.66	0.61
4:AA:145:ILE:HD13	4:AA:159:ILE:HG12	1.82	0.61
7:EE:9:LEU:HD21	7:EE:14:ALA:HA	1.81	0.61
16:WW:40:VAL:HB	16:WW:41:MET:HE3	1.82	0.61
28:RR:103:LYS:HE3	28:RR:107:LYS:HE3	1.81	0.61
37:A:116:LEU:HA	37:A:164:ALA:HB2	1.83	0.61
37:A:185:ALA:HA	37:A:188:LYS:HG2	1.83	0.61
49:N:185:GLY:HA2	79:5:78:U:H5''	1.81	0.61
50:O:25:LYS:HD3	79:5:1913:C:H5''	1.83	0.61
61:b:46:ALA:HB2	79:5:1814:C:H1'	1.82	0.61
79:5:1358:G:O6	79:5:1377:G:N1	2.33	0.61
79:5:1939:A:H5'	79:5:1940:G:H4'	1.81	0.61
79:5:3868:G:H22	79:5:3900:G:H1'	1.64	0.61
17:XX:72:VAL:HG12	17:XX:81:ILE:HB	1.81	0.61
22:DD:142:LEU:HD11	22:DD:182:LEU:HD21	1.82	0.61
28:RR:100:PRO:HG2	28:RR:122:PRO:HD3	1.82	0.61
38:B:286:LYS:HB2	38:B:365:LEU:HD21	1.83	0.61
1:R:101:ILE:HD13	1:R:104:ARG:HH12	1.65	0.61
3:9:110:U:O2	3:9:351:G:N2	2.32	0.61
39:C:171:LEU:HD12	39:C:177:TRP:HE3	1.66	0.61
40:D:156:GLY:HA2	40:D:181:PRO:HD3	1.83	0.61
62:c:28:VAL:HG13	62:c:33:GLN:HB3	1.82	0.61
79:5:3648:A:H1'	79:5:3785:A:H61	1.66	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:7:74:A:H61	80:7:100:A:H3'	1.64	0.61
5:BB:137:LEU:HD13	5:BB:172:MET:HB2	1.82	0.61
29:SS:34:LYS:HB3	29:SS:100:ALA:HA	1.82	0.61
31:UU:26:SER:HB2	31:UU:110:VAL:HG22	1.81	0.61
45:I:36:LEU:HD22	45:I:69:ARG:HH21	1.65	0.61
49:N:50:ARG:HA	79:5:113:A:H1'	1.82	0.61
64:e:108:ARG:HD2	64:e:128:ARG:HG2	1.83	0.61
37:A:82:ILE:HD13	37:A:99:GLY:HA3	1.82	0.61
37:A:101:VAL:HA	37:A:165:VAL:HA	1.83	0.61
66:g:19:LYS:HE2	66:g:19:LYS:HA	1.83	0.61
79:5:64:A:H1'	79:5:76:A:H1'	1.81	0.61
3:9:345:U:H5''	7:EE:37:LYS:HD3	1.82	0.61
3:9:1451:G:H21	3:9:1474:A:N6	1.99	0.61
11:JJ:114:VAL:HG13	11:JJ:119:LEU:HG	1.81	0.61
19:aa:5:ARG:HB3	19:aa:8:ASN:HD22	1.64	0.61
29:SS:132:ARG:HB2	29:SS:134:GLN:HE22	1.66	0.61
43:G:235:CYS:HB3	43:G:275:ILE:HD13	1.83	0.61
78:t:39:PRO:HA	78:t:42:VAL:HG12	1.83	0.61
3:9:1560:U:O2	3:9:1575:G:O6	2.19	0.61
9:HH:95:ILE:HD11	9:HH:133:LEU:HD21	1.82	0.61
12:LL:85:THR:HG22	12:LL:112:HIS:HA	1.83	0.61
33:cc:14:VAL:HG12	33:cc:52:GLU:HA	1.83	0.61
42:F:87:LYS:HB3	42:F:196:VAL:HG11	1.83	0.61
47:L:55:ILE:HB	47:L:116:ARG:HH12	1.65	0.61
61:b:11:ASN:HD21	61:b:14:ARG:HD2	1.65	0.61
79:5:2309:G:O6	79:5:2329:U:O4	2.19	0.61
7:EE:252:ARG:HH22	11:JJ:72:PHE:HA	1.65	0.60
9:HH:40:LEU:HD12	9:HH:43:LEU:HD12	1.83	0.60
12:LL:82:MET:HE3	12:LL:83:GLN:H	1.66	0.60
22:DD:16:ILE:HD11	34:dd:36:LEU:HD12	1.83	0.60
38:B:50:LYS:HB2	38:B:345:LEU:HD21	1.83	0.60
74:o:35:ALA:HB3	74:o:38:LYS:HD3	1.82	0.60
79:5:3766:A:H2'	79:5:3767:C:H5'	1.83	0.60
79:5:5005:G:H22	79:5:5041:G:H1'	1.65	0.60
36:gg:67:SER:HB3	36:gg:83:TRP:HE1	1.66	0.60
43:G:129:VAL:HG12	43:G:134:ASN:HB2	1.84	0.60
51:P:16:LYS:HB3	51:P:149:ILE:HG22	1.83	0.60
55:U:44:GLN:HE21	55:U:63:LEU:HD23	1.65	0.60
79:5:2017:A:H5''	79:5:2018:C:H5	1.65	0.60
7:EE:44:LEU:HD11	7:EE:82:TYR:HB3	1.83	0.60
29:SS:24:ARG:HE	29:SS:25:LYS:H	1.48	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:UU:22:ILE:HG22	31:UU:114:VAL:HG22	1.83	0.60
38:B:338:VAL:HG13	79:5:4624:A:H4'	1.82	0.60
46:J:15:LEU:HB3	46:J:134:LEU:HD11	1.82	0.60
53:S:13:VAL:HG22	53:S:63:TYR:HB3	1.83	0.60
3:9:293:C:H5''	12:LL:38:LYS:HD3	1.83	0.60
8:GG:58:LYS:HE3	8:GG:59:GLN:HE22	1.66	0.60
26:PP:89:MET:HE2	26:PP:92:SER:HB3	1.82	0.60
43:G:233:PRO:HA	43:G:280:ASN:HD21	1.65	0.60
45:I:24:ARG:HH12	79:5:4224:A:H4'	1.67	0.60
5:BB:62:LEU:HD12	5:BB:65:ARG:HG3	1.84	0.60
11:JJ:69:ARG:HE	11:JJ:73:GLU:HG3	1.67	0.60
25:MM:31:LEU:HB2	25:MM:111:VAL:HG12	1.82	0.60
46:J:63:ARG:HB2	46:J:66:GLU:HG3	1.84	0.60
54:T:11:THR:HA	54:T:14:MET:HG2	1.84	0.60
79:5:1970:A:H61	79:5:2016:C:H5''	1.67	0.60
3:9:35:C:H5''	3:9:579:C:H5''	1.83	0.60
3:9:1259:A:H1'	3:9:1264:C:H42	1.66	0.60
3:9:1748:G:H1	3:9:1786:U:H3	1.49	0.60
30:TT:116:ASP:H	30:TT:121:ARG:HA	1.65	0.60
31:UU:63:ILE:HD11	34:dd:34:TYR:HE2	1.66	0.60
42:F:165:ARG:HH12	79:5:2275:G:H5'	1.66	0.60
60:a:119:LYS:HA	60:a:140:VAL:HG23	1.83	0.60
62:c:48:LEU:HD13	62:c:60:ILE:HD11	1.83	0.60
3:9:1398:G:H1	3:9:1448:A:H2	1.48	0.60
12:LL:59:LYS:HD3	12:LL:134:LEU:HB3	1.84	0.60
38:B:110:ILE:HG21	38:B:115:LYS:HD3	1.83	0.60
39:C:164:THR:HG21	79:5:223:G:H2'	1.84	0.60
41:E:153:LEU:HD23	41:E:167:PHE:HB2	1.83	0.60
58:Y:10:ASP:HB3	58:Y:13:LYS:HD3	1.82	0.60
79:5:1964:A:H3'	79:5:1965:G:H8	1.67	0.60
79:5:1965:G:H4'	79:5:4695:C:H1'	1.83	0.60
3:9:826:A:H3'	3:9:827:A:H5''	1.83	0.60
50:O:14:HIS:HB3	50:O:19:LEU:HD23	1.84	0.60
51:P:48:LEU:HD11	51:P:92:LEU:HD13	1.82	0.60
63:d:30:HIS:HA	63:d:33:ILE:HG22	1.83	0.60
79:5:2362:U:H2'	79:5:2363:A:H8	1.66	0.60
3:9:191:A:H3'	3:9:192:C:H5''	1.83	0.60
25:MM:42:LEU:HG	25:MM:74:ILE:HD13	1.84	0.60
41:E:160:HIS:HB3	41:E:163:LYS:HD2	1.83	0.60
44:H:107:GLU:HG2	44:H:110:SER:HB2	1.84	0.60
44:H:167:VAL:HB	44:H:172:ILE:HD13	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:X:73:HIS:HA	57:X:76:ILE:HG12	1.83	0.60
24:KK:91:PRO:HD2	24:KK:94:LEU:HD13	1.82	0.60
25:MM:52:LEU:HD21	25:MM:62:VAL:HG23	1.84	0.60
52:Q:30:LYS:HE3	79:5:2088:A:H61	1.67	0.60
57:X:140:LEU:HD21	57:X:149:VAL:HG21	1.84	0.60
64:e:6:PRO:HD2	64:e:9:LYS:HD2	1.84	0.60
67:h:9:LEU:HA	67:h:12:LYS:HE2	1.82	0.60
79:5:261:G:O6	79:5:262:C:N4	2.34	0.60
79:5:2664:G:H4'	79:5:2677:G:H4'	1.83	0.60
2:W:84:GLY:HA3	8:GG:158:VAL:HG13	1.84	0.59
22:DD:90:LYS:HE2	22:DD:94:ARG:HH22	1.66	0.59
23:FF:121:PRO:HA	23:FF:193:LYS:HG2	1.83	0.59
71:l:16:LYS:HD2	71:l:42:ARG:HE	1.67	0.59
79:5:517:C:H2'	79:5:518:C:C6	2.36	0.59
79:5:1323:A:H61	79:5:3875:G:H21	1.49	0.59
3:9:1276:A:H62	3:9:1321:G:H21	1.50	0.59
6:CC:167:ARG:HB3	6:CC:177:PRO:HB2	1.84	0.59
42:F:46:ARG:HH12	42:F:47:LYS:HG3	1.67	0.59
42:F:212:LEU:HG	42:F:246:MET:HG2	1.84	0.59
51:P:18:ARG:HG3	79:5:399:G:H4'	1.84	0.59
51:P:69:ARG:HH12	79:5:3893:C:H1'	1.67	0.59
5:BB:123:ALA:HB2	5:BB:168:MET:HE1	1.84	0.59
17:XX:59:ALA:HB1	17:XX:114:ASP:HB3	1.84	0.59
36:gg:109:LEU:HD11	36:gg:150:TRP:HB3	1.84	0.59
37:A:237:LEU:HD11	37:A:240:ALA:HB3	1.84	0.59
40:D:174:PRO:HB2	79:5:4324:A:H4'	1.83	0.59
45:I:206:LEU:H	80:7:63:C:H5''	1.68	0.59
74:o:31:ASP:HB2	74:o:38:LYS:HE2	1.84	0.59
1:R:23:TRP:HB2	1:R:53:LYS:HG3	1.83	0.59
28:RR:10:LYS:HB3	28:RR:14:ARG:HH12	1.67	0.59
35:ff:132:MET:HE3	35:ff:139:HIS:HB3	1.84	0.59
38:B:216:MET:HE1	38:B:281:ASN:HA	1.84	0.59
53:S:80:ILE:HD12	53:S:129:VAL:HG22	1.84	0.59
6:CC:273:LEU:HA	6:CC:276:THR:HG22	1.84	0.59
38:B:43:LEU:HD12	38:B:183:ILE:HG22	1.84	0.59
39:C:124:ILE:HB	39:C:237:ILE:HD11	1.84	0.59
39:C:162:LYS:HA	39:C:220:ALA:HB2	1.83	0.59
40:D:119:TYR:HE1	40:D:134:SER:HA	1.66	0.59
42:F:179:GLY:HA3	79:5:2102:G:H1	1.67	0.59
53:S:15:ARG:HH12	53:S:18:PRO:HG3	1.67	0.59
71:l:26:TRP:HA	71:l:29:MET:HE1	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:759:G:O6	79:5:904:G:C6	2.49	0.59
79:5:1857:C:H2'	79:5:1858:A:H8	1.68	0.59
3:9:815:U:H2'	3:9:816:A:H8	1.67	0.59
3:9:936:G:H5''	13:NN:107:LYS:HD3	1.84	0.59
22:DD:1:MET:HE2	22:DD:4:GLN:HA	1.84	0.59
29:SS:14:ARG:HH11	29:SS:17:ASN:H	1.49	0.59
36:gg:170:TRP:HA	36:gg:194:TYR:HB2	1.84	0.59
37:A:20:VAL:HG13	37:A:23:ARG:HH11	1.67	0.59
43:G:111:PRO:HD2	43:G:114:ILE:HD12	1.84	0.59
64:e:59:GLY:HA2	79:5:1899:G:H21	1.67	0.59
3:9:1271:C:H42	3:9:1511:U:H3	1.51	0.59
5:BB:121:ILE:HD13	5:BB:164:ILE:HG21	1.83	0.59
37:A:94:ALA:HB3	37:A:102:LEU:HD21	1.82	0.59
38:B:220:ILE:HG13	38:B:278:THR:HG23	1.83	0.59
39:C:330:PRO:HB2	79:5:1237:C:H42	1.67	0.59
49:N:179:LYS:HG2	79:5:298:G:H5'	1.85	0.59
79:5:3641:U:H5''	79:5:3642:A:H5''	1.83	0.59
6:CC:107:LEU:HD12	6:CC:127:PHE:HB3	1.85	0.59
9:HH:76:GLN:HE22	9:HH:94:PHE:HB2	1.66	0.59
11:JJ:29:LEU:HD11	21:ee:114:ARG:HH22	1.68	0.59
23:FF:76:MET:HA	23:FF:159:ARG:HH22	1.68	0.59
26:PP:68:PRO:HB2	26:PP:71:GLU:HB3	1.83	0.59
39:C:10:VAL:HG13	39:C:153:VAL:HG12	1.83	0.59
41:E:153:LEU:HD13	41:E:199:ALA:HA	1.84	0.59
43:G:241:ALA:HA	43:G:251:THR:HG22	1.84	0.59
5:BB:144:LYS:HE2	5:BB:206:PRO:HB2	1.85	0.59
16:WW:90:GLN:HB2	16:WW:94:LEU:HD12	1.83	0.59
22:DD:46:THR:HB	22:DD:84:VAL:HG12	1.84	0.59
30:TT:113:VAL:HG23	30:TT:123:LEU:HA	1.82	0.59
38:B:33:PRO:HG3	38:B:351:LEU:HD13	1.84	0.59
39:C:124:ILE:HD11	39:C:235:LEU:HD22	1.85	0.59
43:G:87:LYS:HG2	43:G:89:PRO:HD3	1.84	0.59
76:r:90:LEU:HD12	76:r:111:ILE:HG23	1.84	0.59
79:5:195:C:H2'	79:5:196:C:H6	1.68	0.59
79:5:5006:U:H4'	79:5:5007:A:H5'	1.85	0.59
3:9:614:C:H4'	3:9:615:C:H5''	1.85	0.59
7:EE:64:ILE:HG13	18:YY:17:LEU:HD12	1.85	0.59
36:gg:238:ALA:HB2	36:gg:288:SER:HA	1.84	0.59
46:J:141:ILE:HA	46:J:144:LYS:HE2	1.85	0.59
49:N:105:ARG:HH12	79:5:2460:A:H5''	1.66	0.59
52:Q:45:GLN:HA	52:Q:48:LEU:HG	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:d:75:LYS:HE3	63:d:79:ASN:HB2	1.85	0.59
3:9:885:U:O2	3:9:901:G:O6	2.20	0.58
18:YY:35:VAL:HG23	18:YY:40:ILE:HD11	1.84	0.58
22:DD:38:GLU:HG2	22:DD:49:ILE:HB	1.84	0.58
25:MM:99:LYS:HD2	25:MM:100:PRO:HD2	1.84	0.58
39:C:34:PRO:HD2	52:Q:23:ILE:HD13	1.84	0.58
50:O:51:LYS:HD2	50:O:52:LEU:HD12	1.85	0.58
61:b:38:LYS:HD2	79:5:1816:C:H4'	1.85	0.58
63:d:86:VAL:HG23	63:d:106:VAL:HG13	1.85	0.58
1:R:123:LEU:HD21	1:R:142:ILE:HG12	1.85	0.58
3:9:126:G:H8	8:GG:199:THR:HG21	1.68	0.58
3:9:350:C:H2'	3:9:351:G:H8	1.68	0.58
9:HH:58:LYS:HA	9:HH:58:LYS:HE2	1.86	0.58
23:FF:195:GLU:HG2	23:FF:198:ARG:HH21	1.67	0.58
47:L:81:LEU:HD13	47:L:88:LYS:HA	1.84	0.58
49:N:190:ALA:HA	49:N:193:ARG:HE	1.68	0.58
53:S:118:ARG:HE	79:5:2035:C:H5'	1.68	0.58
56:V:90:ARG:HH22	56:V:123:LYS:HE3	1.66	0.58
64:e:49:PHE:HE1	79:5:1883:G:H5'	1.67	0.58
67:h:91:MET:HA	67:h:94:ARG:HB3	1.85	0.58
4:AA:147:LEU:HA	4:AA:161:ILE:HG23	1.83	0.58
16:WW:42:MET:HE1	16:WW:49:GLU:HA	1.85	0.58
23:FF:49:LEU:HG	23:FF:50:PRO:HD2	1.85	0.58
38:B:198:ARG:HA	38:B:201:LEU:HG	1.85	0.58
49:N:138:PHE:HA	49:N:143:ARG:HH22	1.69	0.58
56:V:16:ILE:HG22	56:V:18:LEU:HD23	1.85	0.58
77:s:61:MET:HB3	77:s:82:ILE:HD13	1.86	0.58
2:W:44:ARG:HD2	79:5:3615:G:H1'	1.85	0.58
14:OO:95:ILE:HG21	14:OO:129:ILE:HG12	1.86	0.58
16:WW:50:PHE:HB2	16:WW:63:VAL:HG22	1.84	0.58
16:WW:105:THR:HB	16:WW:110:ILE:HG22	1.84	0.58
29:SS:20:ILE:HG23	29:SS:29:ALA:HB1	1.86	0.58
37:A:219:ILE:HD11	79:5:3749:C:H5''	1.86	0.58
49:N:54:LYS:HG3	79:5:152:U:H5''	1.83	0.58
53:S:82:LEU:HD12	53:S:93:MET:HB2	1.86	0.58
77:s:14:PHE:HE1	77:s:63:LYS:HB3	1.66	0.58
78:t:74:VAL:HG13	78:t:119:ARG:HH21	1.68	0.58
79:5:1526:G:H2'	79:5:1527:A:H8	1.68	0.58
79:5:1918:U:O2	79:5:2064:G:O6	2.21	0.58
80:7:27:G:H2'	80:7:28:C:H6	1.69	0.58
3:9:353:C:H4'	12:LL:73:LEU:HD21	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:BB:72:ALA:HB3	14:OO:128:ARG:HH12	1.68	0.58
7:EE:160:ILE:HG12	7:EE:169:ILE:HG22	1.85	0.58
25:MM:35:ILE:HD12	25:MM:61:TYR:HE1	1.68	0.58
32:ZZ:51:ASP:HB3	32:ZZ:54:THR:HG23	1.84	0.58
32:ZZ:68:ILE:HB	32:ZZ:73:VAL:HG23	1.86	0.58
36:gg:18:VAL:HB	36:gg:301:GLY:HA3	1.85	0.58
38:B:110:ILE:HD11	38:B:114:CYS:HB3	1.85	0.58
39:C:12:SER:HA	39:C:155:GLU:HG2	1.85	0.58
60:a:125:LYS:HE2	60:a:147:VAL:HB	1.85	0.58
63:d:87:ARG:HB3	63:d:107:THR:HB	1.85	0.58
79:5:929:A:H3'	79:5:930:G:H5'	1.84	0.58
79:5:1780:A:H3'	79:5:1781:U:H5''	1.85	0.58
3:9:1085:C:H4'	3:9:1086:G:H2'	1.84	0.58
3:9:1218:C:H2'	3:9:1219:C:H6	1.68	0.58
3:9:1737:G:O6	3:9:1797:U:O4	2.20	0.58
5:BB:189:ILE:HB	5:BB:190:PRO:HD3	1.86	0.58
37:A:193:ARG:HH12	79:5:3685:C:H5''	1.67	0.58
38:B:54:THR:HG22	38:B:78:ILE:HD11	1.84	0.58
40:D:235:MET:O	40:D:239:MET:HB2	2.03	0.58
49:N:44:ARG:HD3	49:N:47:LYS:HD3	1.86	0.58
55:U:22:THR:HG22	55:U:71:THR:HA	1.84	0.58
62:c:99:PRO:HG2	62:c:105:ILE:HD13	1.85	0.58
64:e:77:PHE:HE2	64:e:95:TYR:HB3	1.68	0.58
79:5:3723:A:H2'	79:5:3724:A:H8	1.68	0.58
3:9:527:C:H2'	3:9:528:A:H8	1.67	0.58
3:9:1190:A:H5''	17:XX:38:ALA:HB2	1.84	0.58
8:GG:102:VAL:HG13	8:GG:106:LEU:HD12	1.85	0.58
10:II:174:CYS:HB2	10:II:190:LEU:HD11	1.85	0.58
11:JJ:164:PRO:HB3	11:JJ:170:PRO:HA	1.86	0.58
14:OO:119:LEU:HD21	14:OO:124:MET:HE2	1.84	0.58
40:D:22:ARG:HB3	40:D:28:THR:HB	1.86	0.58
42:F:222:LYS:HE2	79:5:1907:A:H5''	1.84	0.58
68:i:41:ARG:HE	79:5:308:G:H21	1.50	0.58
74:o:69:ARG:HH22	74:o:71:GLU:HB2	1.68	0.58
78:t:37:LEU:HD21	78:t:69:ALA:H	1.68	0.58
78:t:130:LYS:HD3	79:5:1995:G:H5'	1.85	0.58
3:9:443:U:H3	3:9:447:A:H62	1.51	0.58
5:BB:65:ARG:HH21	14:OO:48:SER:HB3	1.69	0.58
32:ZZ:65:TYR:H	32:ZZ:112:ASN:HB2	1.69	0.58
38:B:76:VAL:HG11	38:B:332:MET:HE2	1.84	0.58
4:AA:76:VAL:HG13	4:AA:123:VAL:HB	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:HH:177:TYR:HB3	9:HH:185:VAL:HG21	1.85	0.58
21:ee:85:VAL:HA	21:ee:88:GLN:HG2	1.85	0.58
27:QQ:7:LEU:HD23	27:QQ:9:SER:H	1.69	0.58
40:D:188:LYS:HA	40:D:188:LYS:HE2	1.84	0.58
43:G:140:LEU:HD21	43:G:144:THR:HG22	1.86	0.58
46:J:26:VAL:HG23	46:J:28:GLU:H	1.69	0.58
53:S:48:VAL:HG12	53:S:54:MET:HB3	1.86	0.58
9:HH:83:LEU:HB3	9:HH:92:VAL:HG21	1.86	0.58
40:D:19:LYS:HD3	40:D:23:ARG:HG2	1.86	0.58
42:F:126:LYS:HB2	54:T:133:ALA:HB3	1.85	0.58
53:S:168:THR:HG23	79:5:4875:G:H3'	1.84	0.58
54:T:35:LYS:HE3	54:T:36:LYS:H	1.68	0.58
3:9:1166:G:N2	3:9:1193:U:O2	2.32	0.57
9:HH:8:ILE:HA	9:HH:45:ILE:HG23	1.86	0.57
17:XX:77:ASN:HB3	17:XX:79:LYS:HE3	1.85	0.57
22:DD:40:ARG:HA	31:UU:108:PRO:HG3	1.85	0.57
36:gg:173:LEU:HD23	36:gg:189:ILE:HG22	1.86	0.57
37:A:46:LYS:HE2	37:A:60:LYS:HE3	1.86	0.57
38:B:59:GLU:HB3	38:B:366:LYS:HZ3	1.69	0.57
42:F:48:LEU:HD12	61:b:96:LEU:HD22	1.86	0.57
43:G:190:ARG:HG3	43:G:199:LEU:HD22	1.86	0.57
58:Y:21:ALA:HB1	58:Y:25:ILE:HG23	1.85	0.57
63:d:46:LEU:HD12	63:d:49:ILE:HD11	1.85	0.57
67:h:99:GLU:HA	67:h:102:LEU:HG	1.85	0.57
69:j:22:CYS:HB3	69:j:37:CYS:HB3	1.85	0.57
79:5:4396:A:N6	79:5:4447:C:O2	2.37	0.57
7:EE:26:VAL:HG22	11:JJ:3:VAL:HA	1.86	0.57
8:GG:121:ILE:HD12	8:GG:122:PRO:HD2	1.86	0.57
24:KK:71:LEU:HD11	24:KK:75:GLY:HA3	1.86	0.57
28:RR:93:GLN:HB2	28:RR:96:ILE:HG12	1.85	0.57
45:I:36:LEU:HD11	45:I:73:ASN:HB2	1.86	0.57
48:M:14:TYR:HD1	48:M:24:LEU:HD13	1.69	0.57
50:O:188:LYS:HD2	50:O:189:ILE:HD13	1.87	0.57
63:d:112:THR:HG23	63:d:113:THR:HG23	1.86	0.57
79:5:1348:U:H2'	79:5:1349:G:H8	1.69	0.57
79:5:3870:C:H2'	79:5:3871:A:H8	1.68	0.57
7:EE:11:ARG:H	7:EE:27:PHE:HA	1.69	0.57
39:C:315:LYS:HD2	42:F:167:ALA:HB1	1.86	0.57
44:H:102:ASN:HB2	44:H:115:ARG:HB2	1.86	0.57
47:L:78:LEU:HD22	47:L:88:LYS:HD3	1.85	0.57
50:O:19:LEU:HB3	50:O:80:PHE:HZ	1.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:Z:4:PHE:HE2	62:c:39:ARG:HA	1.69	0.57
63:d:92:ARG:HB3	63:d:101:LYS:HZ1	1.68	0.57
3:9:1574:C:H3'	3:9:1575:G:H5''	1.87	0.57
23:FF:100:ILE:HD11	23:FF:177:LEU:HD12	1.86	0.57
42:F:30:LYS:HE2	79:5:1438:U:H2'	1.86	0.57
43:G:260:VAL:HG11	43:G:268:LEU:HD13	1.87	0.57
44:H:57:VAL:HG11	44:H:73:ILE:HD11	1.86	0.57
47:L:81:LEU:HD11	47:L:98:VAL:HG22	1.86	0.57
49:N:162:ARG:HB2	49:N:164:LEU:HD22	1.87	0.57
60:a:21:ARG:HH21	79:5:1317:U:H4'	1.69	0.57
69:j:27:TYR:HA	69:j:34:CYS:HA	1.84	0.57
79:5:4748:U:H2'	79:5:4749:C:C6	2.38	0.57
80:7:7:G:H1	80:7:112:U:H3	1.52	0.57
4:AA:65:ILE:HD12	4:AA:182:VAL:HG11	1.85	0.57
4:AA:69:GLU:HB3	6:CC:270:THR:HG21	1.86	0.57
12:LL:79:LYS:HE3	12:LL:81:LYS:H	1.68	0.57
36:gg:32:LEU:HD11	36:gg:40:ILE:HG22	1.86	0.57
42:F:110:LEU:HD13	79:5:1840:G:H1'	1.86	0.57
50:O:94:ARG:HE	79:5:1309:C:H5'	1.69	0.57
79:5:3911:C:H1'	79:5:4395:U:H3	1.70	0.57
3:9:1608:U:H5''	29:SS:130:ARG:HD2	1.85	0.57
10:II:142:SER:HB3	10:II:145:ILE:HG13	1.87	0.57
25:MM:35:ILE:HD11	35:ff:102:VAL:HB	1.86	0.57
29:SS:69:THR:HA	29:SS:72:GLN:HG2	1.86	0.57
37:A:104:VAL:HG21	37:A:146:THR:HG21	1.87	0.57
40:D:107:ARG:HD2	40:D:110:LEU:HD21	1.86	0.57
46:J:85:LYS:HD2	46:J:115:LEU:HA	1.85	0.57
49:N:13:LYS:HZ2	49:N:15:GLN:HB2	1.70	0.57
59:Z:14:LEU:HD11	59:Z:81:MET:HB2	1.87	0.57
73:n:18:ARG:HA	73:n:21:ARG:HG2	1.87	0.57
79:5:483:G:H5''	79:5:484:U:H2'	1.86	0.57
79:5:2007:G:H1	79:5:2011:C:H5''	1.69	0.57
79:5:2028:C:H2'	79:5:2029:A:H8	1.69	0.57
33:cc:11:LEU:HD23	33:cc:57:THR:HA	1.87	0.57
39:C:318:PRO:HB3	39:C:325:MET:HA	1.86	0.57
48:M:101:LYS:HA	48:M:104:MET:HG2	1.86	0.57
62:c:90:ARG:HH12	75:p:44:LYS:HG3	1.70	0.57
79:5:63:G:H1	79:5:333:U:H3'	1.70	0.57
3:9:398:A:H5''	3:9:400:C:H5'	1.85	0.57
3:9:486:A:H1'	3:9:513:G:H22	1.70	0.57
3:9:1271:C:H4'	3:9:1303:C:H5''	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:GG:147:LEU:HD12	8:GG:153:VAL:HG13	1.86	0.57
10:II:62:VAL:HG12	10:II:77:ARG:HD3	1.87	0.57
21:ee:101:ARG:HE	21:ee:105:ALA:HB3	1.69	0.57
30:TT:83:GLN:HB2	30:TT:93:SER:HB2	1.86	0.57
36:gg:42:MET:HE3	36:gg:56:GLN:HB3	1.86	0.57
38:B:171:LEU:HD22	38:B:172:PRO:HD2	1.87	0.57
42:F:106:LYS:HE2	42:F:110:LEU:HD21	1.84	0.57
69:j:55:ARG:HA	69:j:58:THR:HG23	1.87	0.57
79:5:1593:A:H5''	79:5:2839:U:H5''	1.85	0.57
79:5:4448:G:H5''	79:5:4449:A:H5'	1.87	0.57
3:9:1016:U:H4'	13:NN:16:LEU:HD23	1.86	0.57
3:9:1130:G:H2'	3:9:1131:G:H8	1.69	0.57
7:EE:31:PRO:HG3	7:EE:43:PRO:HG3	1.86	0.57
23:FF:125:SER:HB3	23:FF:136:ARG:HH21	1.70	0.57
38:B:14:LEU:HD13	79:5:4588:U:H4'	1.85	0.57
44:H:74:CYS:HA	44:H:77:VAL:HG12	1.87	0.57
50:O:74:ARG:HG3	50:O:145:VAL:HG13	1.86	0.57
55:U:106:THR:H	55:U:109:SER:HB3	1.70	0.57
56:V:42:VAL:HG13	56:V:45:ILE:HG21	1.87	0.57
79:5:2637:U:H2'	79:5:2719:C:H5	1.70	0.57
3:9:1172:U:H5''	73:n:10:MET:HE3	1.87	0.57
3:9:1304:U:H5''	35:ff:93:HIS:HB2	1.87	0.57
16:WW:36:ARG:HB3	16:WW:110:ILE:HD11	1.87	0.57
39:C:24:LEU:HD22	39:C:25:PRO:HD2	1.86	0.57
42:F:227:VAL:HG13	53:S:39:VAL:HG12	1.86	0.57
46:J:95:ARG:HH11	46:J:177:GLY:HA3	1.70	0.57
62:c:29:LEU:HD22	62:c:91:VAL:HG21	1.86	0.57
70:k:24:LYS:HB3	70:k:67:LYS:HG3	1.87	0.57
78:t:127:GLY:HA2	78:t:130:LYS:HD2	1.87	0.57
14:OO:95:ILE:HG23	14:OO:129:ILE:HA	1.86	0.56
42:F:29:ILE:HD12	42:F:32:LEU:HD11	1.85	0.56
45:I:38:ARG:HB2	45:I:83:ASP:HB2	1.87	0.56
45:I:59:GLN:HB3	45:I:126:VAL:HG21	1.87	0.56
46:J:15:LEU:HG	46:J:134:LEU:HD11	1.87	0.56
49:N:104:GLU:HA	49:N:160:GLU:HG2	1.87	0.56
50:O:128:ARG:HD3	50:O:129:LEU:HD22	1.87	0.56
57:X:108:GLN:HG2	81:8:131:G:H5''	1.87	0.56
60:a:4:ARG:HD2	60:a:5:LEU:HD13	1.86	0.56
62:c:29:LEU:HD13	62:c:91:VAL:HG21	1.85	0.56
63:d:90:ARG:HD3	63:d:102:LEU:HD22	1.86	0.56
75:p:73:THR:HG23	75:p:76:ALA:H	1.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:r:97:ILE:HD13	76:r:107:ARG:HA	1.87	0.56
79:5:2055:G:H5'	79:5:2056:G:H5''	1.85	0.56
3:9:434:G:H5''	10:II:23:LYS:HE2	1.87	0.56
11:JJ:113:GLN:HA	11:JJ:116:LYS:HG2	1.86	0.56
12:LL:101:ARG:HA	17:XX:7:LEU:HD22	1.86	0.56
22:DD:55:THR:HA	22:DD:58:VAL:HG22	1.87	0.56
30:TT:124:THR:HG23	30:TT:126:GLN:H	1.69	0.56
40:D:261:VAL:HG12	40:D:263:LYS:H	1.70	0.56
43:G:96:GLN:HE22	79:5:4117:U:H5'	1.70	0.56
65:f:99:HIS:HD2	79:5:4751:G:H5'	1.68	0.56
1:R:99:MET:HE2	79:5:2667:C:H5''	1.85	0.56
3:9:941:C:H5''	5:BB:136:ARG:HH12	1.70	0.56
5:BB:110:MET:HE2	5:BB:110:MET:HA	1.87	0.56
7:EE:20:LEU:HD21	7:EE:46:ILE:HD13	1.87	0.56
9:HH:7:LYS:HG3	9:HH:28:LEU:HD21	1.87	0.56
10:II:153:LYS:HA	10:II:156:ALA:HB3	1.88	0.56
15:VV:74:LYS:HA	15:VV:79:VAL:HG12	1.88	0.56
23:FF:20:PHE:HZ	23:FF:50:PRO:HD3	1.70	0.56
25:MM:60:MET:HE3	35:ff:103:LEU:HD12	1.87	0.56
27:QQ:103:ALA:HA	27:QQ:106:LYS:HD2	1.86	0.56
28:RR:17:ILE:HD11	28:RR:54:VAL:HA	1.86	0.56
29:SS:10:GLN:HB2	29:SS:13:LEU:HD21	1.87	0.56
37:A:47:ASP:HA	37:A:84:THR:HG22	1.86	0.56
39:C:34:PRO:HA	39:C:37:VAL:HB	1.87	0.56
47:L:63:THR:O	47:L:67:HIS:HB3	2.06	0.56
47:L:88:LYS:HB2	47:L:98:VAL:HG11	1.87	0.56
49:N:140:LYS:HZ1	49:N:141:ALA:HB2	1.71	0.56
50:O:26:GLN:HA	50:O:29:LEU:HG	1.88	0.56
63:d:75:LYS:HG2	63:d:79:ASN:HB2	1.88	0.56
71:l:11:ARG:HD2	81:8:45:C:H4'	1.88	0.56
78:t:130:LYS:HB2	78:t:151:ILE:HD12	1.86	0.56
79:5:2685:C:H3'	79:5:2686:G:H5''	1.87	0.56
79:5:2835:A:H2'	79:5:2836:A:H8	1.70	0.56
79:5:3932:U:H2'	79:5:3933:G:H8	1.70	0.56
79:5:4951:G:H2'	79:5:4952:G:C8	2.40	0.56
1:R:173:ARG:HG2	1:R:176:ARG:HH21	1.70	0.56
3:9:385:G:H3'	12:LL:136:LYS:HB2	1.87	0.56
3:9:1139:C:H1'	16:WW:20:ARG:HH21	1.70	0.56
3:9:1643:U:H5''	27:QQ:145:TYR:HE2	1.70	0.56
6:CC:183:LYS:HG3	16:WW:95:PRO:HA	1.87	0.56
7:EE:211:LYS:HE2	7:EE:215:GLY:HA2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:VV:32:ILE:HB	15:VV:60:ARG:HH11	1.70	0.56
38:B:170:LEU:HB2	38:B:328:ASN:HD21	1.70	0.56
39:C:257:PHE:HA	39:C:260:LEU:HD23	1.87	0.56
47:L:57:PRO:HG3	47:L:76:PHE:HA	1.87	0.56
48:M:11:ARG:HH12	48:M:59:ASP:HA	1.69	0.56
49:N:83:LYS:HG3	49:N:84:PRO:HD2	1.87	0.56
76:r:52:GLU:HG2	76:r:53:PRO:HD2	1.87	0.56
79:5:1885:G:H21	79:5:1908:A:H1'	1.70	0.56
79:5:4274:A:H2'	79:5:4275:G:H8	1.71	0.56
3:9:1229:G:H5''	29:SS:142:ARG:HD3	1.86	0.56
29:SS:26:ILE:HD11	29:SS:59:LEU:HB3	1.88	0.56
49:N:120:TRP:HE1	49:N:123:GLU:HB2	1.71	0.56
54:T:53:PRO:HB3	54:T:91:VAL:HG22	1.88	0.56
79:5:261:G:C6	79:5:262:C:C4	2.93	0.56
79:5:1593:A:H4'	79:5:2839:U:H4'	1.86	0.56
79:5:4235:G:H1	79:5:4289:U:H3	1.53	0.56
3:9:1542:C:H4'	30:TT:11:GLN:HB2	1.87	0.56
6:CC:166:ARG:HD3	6:CC:181:PRO:HG3	1.87	0.56
9:HH:140:VAL:HG13	9:HH:194:LEU:HD21	1.87	0.56
20:bb:35:VAL:HG22	20:bb:79:PHE:HB2	1.88	0.56
27:QQ:9:SER:HB2	27:QQ:24:HIS:HE1	1.69	0.56
57:X:54:LEU:HD22	57:X:55:ARG:H	1.70	0.56
57:X:64:SER:HB2	67:h:69:LEU:HD21	1.86	0.56
79:5:364:G:H1'	79:5:365:U:H5	1.70	0.56
79:5:2897:G:H2'	79:5:2898:G:H8	1.70	0.56
3:9:1656:G:O6	3:9:1668:U:O4	2.23	0.56
17:XX:107:ARG:HB3	17:XX:110:HIS:HB2	1.87	0.56
37:A:5:ILE:HD12	37:A:8:GLN:H	1.70	0.56
38:B:229:LYS:HD3	79:5:2836:A:H5''	1.87	0.56
38:B:244:THR:HG21	38:B:248:LEU:HB3	1.85	0.56
52:Q:157:GLY:HA2	60:a:50:PRO:HG3	1.88	0.56
53:S:14:GLY:HA2	53:S:62:VAL:HG23	1.87	0.56
55:U:67:LYS:H	55:U:67:LYS:HD3	1.71	0.56
57:X:68:ARG:HH12	81:8:97:A:H5''	1.71	0.56
58:Y:11:ARG:HG3	79:5:229:G:H5''	1.88	0.56
79:5:1209:U:H3'	79:5:1210:C:H5''	1.87	0.56
79:5:2624:G:H2'	79:5:2625:U:H6	1.70	0.56
79:5:4493:U:H2'	79:5:4494:G:H8	1.71	0.56
79:5:4499:G:H2'	79:5:4500:U:H4'	1.86	0.56
1:R:86:ASN:HB2	1:R:90:PRO:HA	1.88	0.56
3:9:1450:G:H5''	28:RR:33:ARG:HH22	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:A:145:LYS:HZ1	37:A:157:VAL:HG13	1.71	0.56
40:D:220:LYS:HA	40:D:227:ILE:HD12	1.87	0.56
72:m:77:LEU:HD22	72:m:78:HIS:H	1.70	0.56
3:9:223:C:H2'	3:9:224:A:C8	2.41	0.56
3:9:806:U:H2'	3:9:807:G:H8	1.70	0.56
5:BB:127:VAL:HG21	5:BB:176:VAL:HB	1.88	0.56
38:B:153:MET:O	38:B:157:CYS:HB2	2.05	0.56
44:H:25:VAL:HG12	44:H:36:ARG:HH12	1.70	0.56
50:O:130:LYS:HE2	50:O:133:ARG:HE	1.69	0.56
50:O:196:LEU:HB3	50:O:202:LEU:HD23	1.88	0.56
63:d:68:LEU:HG	63:d:106:VAL:HG12	1.88	0.56
79:5:2412:A:H2'	79:5:2413:U:C6	2.41	0.56
79:5:4753:U:H4'	79:5:4754:G:H5'	1.88	0.56
3:9:1479:G:H2'	3:9:1480:A:O4'	2.06	0.56
7:EE:105:THR:HG23	7:EE:106:LYS:HD2	1.87	0.56
11:JJ:109:ARG:HH12	11:JJ:111:GLN:HB3	1.70	0.56
16:WW:23:ARG:H	16:WW:23:ARG:HD3	1.71	0.56
28:RR:114:LEU:HD23	28:RR:117:LEU:HG	1.88	0.56
43:G:244:GLY:HA3	43:G:251:THR:HA	1.88	0.56
44:H:137:SER:HB3	44:H:145:VAL:HG23	1.88	0.56
76:r:82:ILE:HG22	79:5:679:C:H5''	1.88	0.56
76:r:97:ILE:HG21	76:r:107:ARG:HA	1.88	0.56
79:5:33:A:H3'	79:5:47:A:H61	1.70	0.56
79:5:734:G:H2'	79:5:735:G:H8	1.70	0.56
3:9:1355:C:N4	6:CC:189:GLY:HA3	2.21	0.55
7:EE:199:GLU:HB3	7:EE:207:VAL:HG13	1.88	0.55
14:OO:20:GLN:HG2	14:OO:27:VAL:HG13	1.87	0.55
27:QQ:44:PRO:HG2	27:QQ:47:LEU:HD23	1.89	0.55
44:H:59:LYS:HE3	44:H:66:GLU:HB3	1.86	0.55
54:T:28:ALA:HA	54:T:31:MET:HG3	1.88	0.55
58:Y:15:ARG:HH12	81:8:22:U:H5''	1.71	0.55
65:f:11:PHE:HE2	65:f:97:ILE:HG13	1.71	0.55
76:r:16:PHE:HD1	76:r:27:THR:HG23	1.71	0.55
79:5:1378:C:H4'	79:5:1379:C:H5'	1.88	0.55
79:5:4886:C:H42	79:5:4933:C:H42	1.54	0.55
3:9:444:G:H3'	10:II:47:ARG:HH22	1.71	0.55
3:9:962:A:H5''	14:OO:66:ARG:HB3	1.87	0.55
3:9:1650:A:H5''	27:QQ:139:ALA:HB2	1.87	0.55
3:9:1781:A:H2'	3:9:1782:G:C8	2.41	0.55
3:9:1804:U:H2'	3:9:1805:G:H8	1.71	0.55
5:BB:143:THR:HA	5:BB:207:LEU:HD22	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:NN:23:PRO:HG2	13:NN:26:LEU:HB2	1.89	0.55
32:ZZ:68:ILE:HA	32:ZZ:72:VAL:HG11	1.87	0.55
43:G:210:ILE:HG12	43:G:223:LEU:HD23	1.88	0.55
45:I:43:VAL:HG11	45:I:197:VAL:HG23	1.87	0.55
45:I:91:LEU:HD23	45:I:135:ILE:HA	1.88	0.55
46:J:33:LEU:HD13	46:J:67:LYS:HG2	1.87	0.55
48:M:25:VAL:HG22	48:M:38:VAL:HG22	1.88	0.55
57:X:90:ILE:HG13	57:X:95:THR:O	2.06	0.55
78:t:20:GLY:HA2	78:t:47:ALA:HB1	1.87	0.55
79:5:1075:G:C2'	79:5:1076:C:H5'	2.37	0.55
79:5:4523:A:H5''	79:5:4524:G:H5'	1.87	0.55
80:7:28:C:H2'	80:7:29:C:H5'	1.88	0.55
81:8:8:U:H2'	81:8:9:A:H8	1.71	0.55
3:9:128:U:H3'	3:9:129:C:C6	2.42	0.55
3:9:1235:G:H21	26:PP:135:ALA:HA	1.71	0.55
3:9:1453:C:H4'	28:RR:48:ASN:HB3	1.88	0.55
14:OO:45:THR:HG22	14:OO:52:THR:HG22	1.87	0.55
17:XX:61:GLN:HB3	17:XX:62:PRO:HD2	1.89	0.55
21:ee:106:LYS:HG2	21:ee:107:ARG:HH12	1.72	0.55
39:C:150:LEU:HB3	39:C:151:PRO:HD3	1.86	0.55
45:I:152:LEU:HD21	45:I:165:ILE:HG13	1.88	0.55
50:O:15:LEU:HG	50:O:128:ARG:HD2	1.88	0.55
66:g:62:LYS:HB3	79:5:2517:A:H5'	1.88	0.55
79:5:228:C:H2'	79:5:229:G:H8	1.70	0.55
3:9:1530:U:H4'	30:TT:84:ARG:HH22	1.71	0.55
4:AA:121:LEU:HD22	4:AA:122:LEU:H	1.72	0.55
5:BB:57:ILE:HG22	5:BB:59:SER:H	1.71	0.55
6:CC:81:ILE:HG21	6:CC:88:ILE:HD11	1.88	0.55
7:EE:35:PRO:HD2	7:EE:83:PRO:HG2	1.87	0.55
7:EE:71:LYS:HE3	7:EE:76:VAL:HB	1.88	0.55
11:JJ:32:ILE:HG12	11:JJ:43:VAL:HG21	1.88	0.55
13:NN:11:LEU:HD12	13:NN:13:GLN:HE22	1.72	0.55
22:DD:76:ARG:HG3	24:KK:22:VAL:HG11	1.88	0.55
23:FF:103:LEU:HA	32:ZZ:66:LYS:HZ1	1.71	0.55
37:A:180:LEU:HD11	75:p:14:TYR:HE2	1.71	0.55
37:A:209:HIS:HE1	37:A:235:VAL:HG11	1.71	0.55
40:D:4:VAL:HG21	79:5:4247:G:H5'	1.87	0.55
40:D:41:LYS:HG3	54:T:93:ILE:HG12	1.87	0.55
40:D:95:TYR:HA	40:D:158:LYS:HG2	1.87	0.55
42:F:102:PRO:HA	42:F:105:ARG:HG2	1.88	0.55
49:N:114:ARG:HD2	49:N:137:PRO:HB3	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:c:17:ARG:HE	62:c:104:ILE:HD12	1.70	0.55
62:c:48:LEU:HD23	62:c:73:HIS:HA	1.88	0.55
79:5:1739:G:H2'	79:5:1740:C:C6	2.42	0.55
79:5:3944:G:N2	79:5:4069:U:O2	2.33	0.55
79:5:4866:C:H2'	79:5:4867:G:C8	2.42	0.55
3:9:20:G:H2'	3:9:21:U:H5'	1.89	0.55
3:9:41:G:H5''	3:9:485:A:H2'	1.88	0.55
16:WW:84:LYS:H	16:WW:84:LYS:HD3	1.71	0.55
21:ee:102:THR:HA	21:ee:106:LYS:HB2	1.89	0.55
42:F:48:LEU:HD11	61:b:96:LEU:O	2.06	0.55
48:M:15:VAL:HA	48:M:55:MET:HB2	1.87	0.55
48:M:119:ARG:HH21	50:O:189:ILE:HG23	1.71	0.55
49:N:114:ARG:HD3	49:N:157:LYS:HB3	1.89	0.55
70:k:49:ASP:HB3	70:k:52:LYS:HD3	1.89	0.55
81:8:137:A:H2'	81:8:138:C:C6	2.41	0.55
3:9:1231:C:H42	3:9:1527:C:H42	1.55	0.55
30:TT:112:MET:HE1	30:TT:126:GLN:HG2	1.88	0.55
42:F:26:GLU:HG2	42:F:27:LEU:HD22	1.89	0.55
42:F:87:LYS:HB3	42:F:196:VAL:HG21	1.89	0.55
48:M:50:MET:HE1	48:M:55:MET:HE2	1.88	0.55
50:O:130:LYS:HB2	50:O:133:ARG:HG2	1.88	0.55
53:S:164:LYS:HB3	53:S:165:PRO:HD3	1.88	0.55
54:T:87:LYS:HE3	54:T:88:ARG:H	1.72	0.55
78:t:24:ALA:HB3	79:5:1982:G:O4'	2.07	0.55
79:5:1318:C:H42	79:5:1322:A:H8	1.54	0.55
79:5:1403:G:H2'	79:5:1404:G:H8	1.72	0.55
79:5:1733:G:N3	79:5:4214:A:H2'	2.21	0.55
79:5:2811:G:H22	79:5:2813:A:H3'	1.72	0.55
79:5:4493:U:H2'	79:5:4494:G:C8	2.42	0.55
3:9:77:A:H1'	8:GG:176:ILE:HG13	1.87	0.55
3:9:680:G:H1	3:9:1025:U:H3	1.54	0.55
7:EE:55:ALA:HB1	7:EE:60:GLU:HB2	1.87	0.55
7:EE:66:MET:HB3	7:EE:78:THR:HB	1.88	0.55
9:HH:190:PRO:HB2	9:HH:193:GLN:HE21	1.72	0.55
24:KK:15:LEU:HD23	24:KK:79:LEU:HD11	1.88	0.55
37:A:188:LYS:HA	79:5:2740:U:H5''	1.88	0.55
41:E:117:ARG:HD3	76:r:87:ARG:HH22	1.72	0.55
43:G:138:GLN:HE22	43:G:282:ARG:HD3	1.72	0.55
48:M:19:PRO:HB2	79:5:936:C:H2'	1.87	0.55
67:h:88:THR:HG23	67:h:91:MET:HG3	1.87	0.55
79:5:31:U:H2'	79:5:32:G:O4'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:989:U:O2	79:5:1065:G:N2	2.34	0.55
79:5:2662:G:H2'	79:5:2663:G:H8	1.72	0.55
80:7:110:G:H2'	80:7:111:C:C6	2.41	0.55
3:9:147:A:H61	3:9:171:A:H62	1.55	0.55
22:DD:66:ILE:HD11	22:DD:88:ALA:HB2	1.89	0.55
34:dd:20:SER:HB3	34:dd:27:ARG:HE	1.70	0.55
42:F:26:GLU:HA	42:F:29:ILE:HG22	1.89	0.55
42:F:224:THR:HG22	80:7:83:A:H1'	1.88	0.55
43:G:87:LYS:HG3	79:5:4128:A:H2	1.72	0.55
46:J:56:THR:HA	46:J:63:ARG:HA	1.89	0.55
46:J:109:ILE:HD11	46:J:128:LEU:H	1.70	0.55
50:O:14:HIS:HB2	50:O:41:ILE:HD13	1.88	0.55
54:T:17:ARG:HH22	79:5:4277:G:H5''	1.71	0.55
61:b:55:LYS:H	61:b:55:LYS:HD3	1.70	0.55
62:c:28:VAL:HG11	62:c:37:MET:HG2	1.87	0.55
64:e:100:ALA:HB3	64:e:103:VAL:HG23	1.89	0.55
79:5:195:C:H2'	79:5:196:C:C6	2.42	0.55
79:5:2520:C:H2'	79:5:2521:G:H8	1.72	0.55
79:5:4263:C:H2'	79:5:4264:G:O4'	2.07	0.55
1:R:125:LEU:HB3	79:5:1558:A:H5''	1.88	0.55
3:9:1048:G:H21	3:9:1070:A:N6	1.99	0.55
5:BB:150:ILE:HD13	28:RR:129:LYS:HB2	1.88	0.55
10:II:37:LYS:HB3	10:II:94:LYS:HE2	1.88	0.55
54:T:45:MET:HE3	54:T:48:VAL:HG12	1.88	0.55
78:t:64:ILE:HG12	78:t:69:ALA:HB1	1.89	0.55
79:5:273:U:H2'	79:5:274:C:C6	2.42	0.55
79:5:1538:U:H2'	79:5:1539:G:H8	1.72	0.55
3:9:85:A:H2'	3:9:86:C:C6	2.42	0.55
3:9:1617:G:N2	3:9:1619:A:H3'	2.22	0.55
4:AA:128:ARG:HH12	4:AA:152:SER:HA	1.72	0.55
4:AA:184:ARG:HG3	4:AA:189:ILE:HG23	1.88	0.55
6:CC:136:HIS:HB3	6:CC:162:ILE:HD11	1.89	0.55
11:JJ:32:ILE:HA	11:JJ:37:LEU:HD23	1.89	0.55
39:C:79:VAL:HB	39:C:88:GLY:H	1.72	0.55
41:E:152:ILE:HD13	41:E:274:LEU:HD11	1.89	0.55
45:I:30:LYS:H	45:I:30:LYS:HD3	1.71	0.55
52:Q:75:ARG:HB3	52:Q:78:LYS:HG3	1.89	0.55
57:X:127:LEU:HB3	79:5:2437:C:H5'	1.89	0.55
70:k:42:LEU:HD22	79:5:2536:A:H5'	1.88	0.55
79:5:65:A:H61	79:5:75:G:H1'	1.72	0.55
79:5:3893:C:H2'	79:5:3894:A:C8	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:1:U:H5'	11:JJ:55:LYS:HE3	1.88	0.54
3:9:517:C:H2'	3:9:518:G:O4'	2.06	0.54
3:9:788:G:H2'	3:9:789:G:H8	1.71	0.54
3:9:1095:U:H3	3:9:1149:A:H61	1.53	0.54
8:GG:18:VAL:HG11	8:GG:23:LYS:HB2	1.90	0.54
10:II:95:THR:HG22	10:II:97:VAL:HG22	1.89	0.54
18:YY:14:THR:HA	18:YY:21:LYS:HD2	1.88	0.54
31:UU:24:LEU:HB3	31:UU:32:LEU:HD11	1.89	0.54
36:gg:106:LYS:HB3	36:gg:125:ARG:HB2	1.89	0.54
38:B:357:ARG:HH22	79:5:4615:C:H5''	1.72	0.54
41:E:143:LEU:HA	41:E:194:GLN:HE22	1.72	0.54
49:N:194:ARG:HH21	79:5:79:C:H3'	1.72	0.54
51:P:49:LYS:HA	51:P:52:THR:HG22	1.90	0.54
78:t:11:LYS:HZ2	78:t:35:LEU:HD21	1.72	0.54
79:5:654:C:H2'	79:5:655:C:C6	2.42	0.54
79:5:922(B):C:H3'	79:5:923:C:H5''	1.89	0.54
79:5:980:U:O4	79:5:1275:G:O6	2.25	0.54
79:5:1911:C:H2'	79:5:1918:U:C6	2.42	0.54
79:5:2757:A:H2'	79:5:2758:G:C4	2.41	0.54
3:9:971:G:H4'	3:9:972:A:H5'	1.89	0.54
3:9:1113:A:H2'	3:9:1114:U:C6	2.42	0.54
7:EE:66:MET:HA	7:EE:78:THR:HG22	1.88	0.54
8:GG:7:PHE:HD2	8:GG:10:THR:H	1.53	0.54
26:PP:73:PRO:HG2	26:PP:92:SER:HA	1.87	0.54
38:B:29:VAL:HA	38:B:348:ARG:HH21	1.73	0.54
39:C:263:LEU:HA	39:C:273:LEU:HD13	1.89	0.54
44:H:47:LEU:HD13	44:H:55:LEU:HD23	1.88	0.54
54:T:71:ALA:HB3	79:5:4313:A:H4'	1.88	0.54
63:d:75:LYS:HE2	79:5:4653:C:H5''	1.90	0.54
67:h:25:LYS:HA	67:h:28:LEU:HG	1.89	0.54
79:5:1580:C:H2'	79:5:1581:G:O4'	2.08	0.54
79:5:2671:C:H2'	79:5:2672:C:C6	2.42	0.54
79:5:3920:U:H2'	79:5:3921:U:C6	2.42	0.54
8:GG:116:LYS:HE2	8:GG:125:THR:HG21	1.89	0.54
9:HH:60:ILE:HG12	9:HH:90:LYS:HE2	1.88	0.54
12:LL:79:LYS:HE3	12:LL:81:LYS:N	2.23	0.54
13:NN:89:TYR:HE1	13:NN:150:VAL:HG23	1.72	0.54
22:DD:45:ARG:HA	22:DD:45:ARG:HH11	1.72	0.54
27:QQ:12:VAL:HG11	27:QQ:90:LYS:HG2	1.89	0.54
37:A:174:ARG:HD2	75:p:52:VAL:HG11	1.89	0.54
38:B:89:ILE:HG21	38:B:197:ALA:HB1	1.87	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:E:149:PRO:HA	41:E:167:PHE:HD2	1.73	0.54
70:k:23:VAL:HG12	70:k:64:LEU:HD12	1.88	0.54
79:5:160:G:H2'	79:5:161:G:H8	1.71	0.54
79:5:2092:G:C2	79:5:2097:U:O4	2.61	0.54
79:5:2749:C:H2'	79:5:2750:G:C8	2.42	0.54
79:5:3703:G:H2'	79:5:3704:U:C6	2.43	0.54
79:5:4088:C:H2'	79:5:4089:G:H8	1.72	0.54
79:5:4135:G:H2'	79:5:4136:C:C6	2.43	0.54
3:9:1096:G:H1	3:9:1136:U:H3	1.55	0.54
3:9:1232:U:H2'	3:9:1233:G:H8	1.73	0.54
4:AA:5:LEU:HD12	4:AA:8:LEU:HG	1.88	0.54
4:AA:31:ASP:HB3	4:AA:34:MET:SD	2.48	0.54
6:CC:127:PHE:HE1	6:CC:141:VAL:HG13	1.72	0.54
7:EE:207:VAL:HG23	7:EE:221:ARG:HH21	1.72	0.54
30:TT:22:LEU:HD13	30:TT:28:LEU:HD21	1.89	0.54
37:A:240:ALA:CB	79:5:3658:C:H4'	2.37	0.54
38:B:163:LEU:HD11	38:B:180:LEU:HD12	1.88	0.54
38:B:292:LEU:HD11	38:B:294:LYS:HZ2	1.72	0.54
40:D:231:VAL:HG12	40:D:236:MET:HE1	1.88	0.54
41:E:143:LEU:HD21	41:E:170:GLN:HG2	1.89	0.54
45:I:26:VAL:HA	45:I:122:PRO:HB2	1.89	0.54
52:Q:113:ILE:HD13	52:Q:120:ILE:HG23	1.89	0.54
71:l:23:ILE:HG12	71:l:38:ASN:HB2	1.90	0.54
79:5:1332:C:H2'	79:5:1333:A:C8	2.42	0.54
79:5:1468:C:H2'	79:5:1469:C:C6	2.42	0.54
79:5:3637:U:H2'	79:5:3638:G:H5'	1.88	0.54
1:R:126:LYS:HG2	1:R:131:VAL:HG21	1.90	0.54
3:9:1673:U:H5''	27:QQ:78:VAL:HB	1.90	0.54
3:9:1798:C:H2'	3:9:1799:G:O4'	2.06	0.54
5:BB:25:PHE:HA	5:BB:28:LYS:HG3	1.89	0.54
5:BB:166:LYS:HA	5:BB:169:MET:HG2	1.90	0.54
7:EE:95:THR:HG23	18:YY:16:ARG:HG2	1.89	0.54
7:EE:222:LEU:HD13	7:EE:225:ILE:HD12	1.88	0.54
9:HH:174:SER:HA	9:HH:185:VAL:HB	1.88	0.54
15:VV:64:GLU:HG3	15:VV:67:ASP:HB3	1.88	0.54
32:ZZ:64:ASN:HA	32:ZZ:112:ASN:HB2	1.88	0.54
38:B:316:PRO:HB2	38:B:372:SER:HA	1.90	0.54
40:D:33:ARG:HH11	54:T:27:LEU:HD12	1.71	0.54
40:D:44:TYR:HE1	54:T:35:LYS:HD2	1.72	0.54
44:H:92:MET:HG2	44:H:161:ILE:HD12	1.90	0.54
46:J:128:LEU:HD22	46:J:129:ASP:H	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:M:13:ALA:HB2	48:M:57:LEU:HD12	1.88	0.54
62:c:54:ALA:HA	62:c:57:LYS:HE3	1.88	0.54
79:5:318:A:H2'	79:5:319:A:C8	2.43	0.54
79:5:1550:G:O6	79:5:1578:U:O4	2.25	0.54
79:5:1645:C:H2'	79:5:1646:A:C8	2.43	0.54
79:5:2486:G:H2'	79:5:2487:G:C8	2.43	0.54
79:5:4434:C:H2'	79:5:4435:U:C6	2.42	0.54
81:8:36:G:H4'	81:8:40:A:H5'	1.90	0.54
1:R:126:LYS:HD3	1:R:131:VAL:HG11	1.88	0.54
3:9:694:G:H1	3:9:732:U:H3	1.54	0.54
3:9:1228:A:H2'	3:9:1229:G:H8	1.73	0.54
22:DD:105:LEU:HD23	22:DD:122:VAL:HG21	1.89	0.54
41:E:179:THR:HG21	41:E:189:LEU:HD22	1.90	0.54
55:U:43:LEU:HD11	55:U:63:LEU:HD22	1.89	0.54
55:U:101:ARG:HH21	55:U:113:ARG:HH11	1.55	0.54
63:d:105:LEU:HD22	63:d:106:VAL:H	1.72	0.54
78:t:15:LEU:HD12	78:t:62:LEU:HD22	1.89	0.54
79:5:4458:C:H2'	79:5:4459:U:C6	2.42	0.54
79:5:4725:C:H2'	79:5:4726:G:H8	1.72	0.54
3:9:29:G:H4'	17:XX:129:SER:HB3	1.89	0.54
3:9:652:U:H2'	3:9:653:A:C8	2.42	0.54
3:9:988:C:H1'	5:BB:120:MET:HG3	1.88	0.54
8:GG:7:PHE:HE2	8:GG:9:ALA:HB3	1.71	0.54
27:QQ:32:ILE:HG21	27:QQ:39:LEU:HD11	1.90	0.54
29:SS:64:VAL:HA	29:SS:67:VAL:HG12	1.89	0.54
31:UU:56:MET:SD	31:UU:57:PRO:HD2	2.48	0.54
36:gg:176:VAL:HB	36:gg:186:THR:HG23	1.89	0.54
40:D:200:MET:HG3	40:D:202:GLN:HG2	1.90	0.54
41:E:281:THR:HA	65:f:4:ARG:HH12	1.72	0.54
42:F:53:ALA:HA	42:F:187:GLU:OE2	2.08	0.54
48:M:96:GLU:HA	48:M:99:GLU:HG3	1.89	0.54
56:V:89:ARG:HH21	79:5:4673:U:H5'	1.72	0.54
76:r:122:LYS:HD2	76:r:123:PRO:HD2	1.90	0.54
79:5:416:U:H2'	79:5:417:G:H5'	1.90	0.54
79:5:2810:U:O2'	79:5:4643:G:H4'	2.08	0.54
3:9:105:U:H2'	3:9:106:C:O4'	2.08	0.54
3:9:1405:A:H2'	3:9:1406:G:O4'	2.08	0.54
3:9:1609:C:H2'	3:9:1610:G:C8	2.43	0.54
3:9:1626:C:H2'	3:9:1627:C:C6	2.42	0.54
5:BB:197:ILE:HB	5:BB:210:VAL:HG11	1.89	0.54
7:EE:62:LYS:HA	7:EE:80:ILE:HG21	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:FF:143:PRO:HD3	33:cc:56:LEU:HD13	1.90	0.54
32:ZZ:50:PHE:HB3	32:ZZ:55:TYR:HB2	1.90	0.54
39:C:266:THR:HG23	39:C:268:ARG:H	1.72	0.54
41:E:154:ILE:HD11	41:E:198:ILE:HB	1.88	0.54
42:F:222:LYS:HA	42:F:231:ASP:OD1	2.08	0.54
67:h:63:GLN:HA	67:h:66:LYS:HZ2	1.73	0.54
76:r:94:ARG:HD3	76:r:98:ARG:HH21	1.72	0.54
79:5:318:A:H2'	79:5:319:A:H8	1.73	0.54
79:5:954:C:H2'	79:5:955:G:C8	2.43	0.54
80:7:107:G:H2'	80:7:108:G:C8	2.43	0.54
81:8:8:U:H2'	81:8:9:A:C8	2.43	0.54
1:R:99:MET:CE	79:5:2667:C:H5''	2.38	0.54
2:W:48:GLN:HG3	79:5:3615:G:H5'	1.89	0.54
3:9:618:C:H2'	3:9:619:A:O4'	2.08	0.54
3:9:1447:G:H2'	3:9:1448:A:C8	2.43	0.54
3:9:1863:A:H1'	19:aa:79:ILE:HD13	1.89	0.54
12:LL:112:HIS:HB2	12:LL:138:VAL:HG11	1.89	0.54
14:OO:61:LYS:HG3	14:OO:76:LEU:HB2	1.89	0.54
28:RR:17:ILE:HG12	28:RR:24:LEU:HD22	1.88	0.54
31:UU:36:CYS:HA	31:UU:39:LEU:HG	1.90	0.54
38:B:53:MET:HB3	38:B:77:THR:HA	1.90	0.54
45:I:24:ARG:HH22	79:5:4224:A:H5''	1.71	0.54
47:L:147:ALA:HB1	67:h:120:ALA:HB3	1.88	0.54
51:P:115:GLU:HG2	51:P:149:ILE:HD13	1.90	0.54
61:b:12:GLN:HE22	79:5:1671:U:H1'	1.73	0.54
65:f:33:VAL:HG23	65:f:38:GLU:HB2	1.89	0.54
65:f:56:ASN:HA	65:f:66:LYS:HD3	1.90	0.54
79:5:325:U:H2'	79:5:326:C:C6	2.43	0.54
79:5:1621:A:H2'	79:5:1622:U:C6	2.43	0.54
79:5:2624:G:H2'	79:5:2625:U:C6	2.43	0.54
79:5:4277:G:H2'	79:5:4278:C:C6	2.43	0.54
79:5:4593:C:H2'	79:5:4594:U:H6	1.73	0.54
79:5:4627:U:H2'	79:5:4628:U:C6	2.43	0.54
3:9:433:A:H2'	3:9:434:G:C8	2.43	0.54
3:9:587:A:H5''	3:9:592:C:H41	1.72	0.54
3:9:1820:G:H2'	3:9:1821:U:C6	2.42	0.54
4:AA:21:ALA:HB2	4:AA:173:LEU:HD13	1.89	0.54
7:EE:73:ASP:HB3	7:EE:164:LEU:HD12	1.90	0.54
7:EE:80:ILE:HG13	7:EE:81:THR:HG23	1.90	0.54
10:II:106:SER:HB2	10:II:166:PHE:HE1	1.71	0.54
17:XX:140:ARG:HD2	17:XX:141:PRO:HD2	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:FF:138:ALA:HB3	23:FF:204:ARG:HB3	1.90	0.54
40:D:104:LEU:HD23	40:D:247:ILE:HD12	1.89	0.54
41:E:141:ARG:HD2	41:E:174:GLY:HA3	1.90	0.54
42:F:94:ILE:HG12	42:F:139:ILE:HA	1.89	0.54
49:N:115:VAL:HG11	49:N:160:GLU:HB3	1.90	0.54
56:V:48:ARG:CZ	79:5:4620:U:H5'	2.38	0.54
66:g:43:LYS:HB3	66:g:52:ARG:HD3	1.89	0.54
79:5:451:C:O2'	79:5:1293:G:H2'	2.08	0.54
79:5:726:G:H2'	79:5:727:C:C6	2.43	0.54
79:5:1795:A:H2'	79:5:1796:U:O4'	2.08	0.54
79:5:2505:C:H1'	79:5:2506:G:C8	2.43	0.54
79:5:4592:C:H2'	79:5:4593:C:C6	2.43	0.54
3:9:1657:G:H2'	3:9:1658:G:H8	1.73	0.53
3:9:1733:U:H2'	3:9:1734:G:O4'	2.08	0.53
5:BB:71:LEU:HB3	5:BB:82:ARG:HB3	1.90	0.53
5:BB:120:MET:HG2	5:BB:142:PHE:CE1	2.44	0.53
10:II:196:GLU:HA	10:II:199:LEU:HD21	1.89	0.53
12:LL:18:GLN:HG3	12:LL:33:LEU:HD23	1.89	0.53
16:WW:82:GLN:H	16:WW:85:ASP:HB3	1.72	0.53
20:bb:19:HIS:O	20:bb:23:ARG:HG3	2.08	0.53
25:MM:40:LYS:HZ3	35:ff:130:VAL:HG22	1.73	0.53
25:MM:43:ASP:HB2	35:ff:129:GLY:HA2	1.90	0.53
25:MM:68:LEU:HD12	35:ff:114:ILE:HG21	1.90	0.53
32:ZZ:70:PRO:HB3	32:ZZ:84:ALA:HB1	1.89	0.53
39:C:290:SER:O	39:C:294:LYS:HG2	2.07	0.53
39:C:329:ASN:HD21	39:C:331:TYR:HB3	1.73	0.53
41:E:99:VAL:HG21	41:E:108:ARG:HB2	1.90	0.53
43:G:276:ARG:HG3	43:G:280:ASN:HB2	1.89	0.53
44:H:27:VAL:HG12	44:H:84:VAL:HG21	1.89	0.53
56:V:85:ARG:HG2	56:V:101:ASN:HD21	1.73	0.53
57:X:96:LEU:HD22	57:X:97:VAL:H	1.73	0.53
67:h:104:THR:HG23	67:h:107:GLN:H	1.73	0.53
79:5:18:C:H2'	79:5:19:G:C8	2.44	0.53
79:5:676:C:H2'	79:5:677:G:O4'	2.08	0.53
79:5:1336:G:H2'	79:5:2346:C:H42	1.73	0.53
79:5:4989:U:C5	79:5:4991:U:H4'	2.43	0.53
80:7:77:A:H2'	80:7:78:C:O4'	2.08	0.53
81:8:14:U:H2'	81:8:15:G:H5'	1.89	0.53
3:9:1025:U:H2'	3:9:1026:C:O4'	2.09	0.53
3:9:1192:U:H2'	3:9:1193:U:C6	2.44	0.53
4:AA:164:ASN:HD21	4:AA:166:LYS:HG2	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CC:207:ALA:HB3	6:CC:210:PRO:HD2	1.89	0.53
7:EE:139:LEU:HD11	7:EE:154:ILE:HG21	1.89	0.53
10:II:60:LEU:HD22	10:II:61:ASP:H	1.72	0.53
13:NN:63:VAL:HG13	13:NN:70:LYS:HA	1.90	0.53
17:XX:32:LEU:HD13	17:XX:34:THR:CG2	2.38	0.53
30:TT:39:LEU:HD23	30:TT:39:LEU:H	1.73	0.53
31:UU:64:THR:HA	31:UU:78:ASP:O	2.09	0.53
39:C:303:ARG:HH12	39:C:306:ARG:HG2	1.73	0.53
40:D:34:LYS:HB3	54:T:27:LEU:HD22	1.90	0.53
40:D:153:THR:HB	40:D:160:PHE:CE2	2.44	0.53
43:G:216:PRO:HG2	43:G:219:LEU:HD21	1.90	0.53
44:H:57:VAL:HG21	44:H:70:VAL:HG23	1.89	0.53
45:I:176:PHE:HE1	45:I:184:MET:HE3	1.73	0.53
46:J:100:SER:O	46:J:159:LYS:HG2	2.09	0.53
48:M:93:LYS:O	48:M:96:GLU:HG2	2.09	0.53
64:e:89:LEU:HD12	64:e:90:MET:HG2	1.90	0.53
66:g:93:ARG:HD2	79:5:4122:G:H5'	1.89	0.53
67:h:42:SER:HA	81:8:78:G:O2'	2.08	0.53
79:5:1794:A:H5''	79:5:4214:A:H61	1.72	0.53
79:5:2414:G:H2'	79:5:2415:U:C6	2.43	0.53
79:5:3717:A:O2'	79:5:4179:G:H5'	2.09	0.53
79:5:4459:U:H2'	79:5:4460:U:C6	2.43	0.53
79:5:4704:C:H2'	79:5:4705:A:C8	2.44	0.53
79:5:4896:G:H2'	79:5:4897:G:C8	2.44	0.53
3:9:11:A:H5'	6:CC:113:GLN:HG3	1.91	0.53
3:9:371:A:OP2	10:II:10:LYS:HB2	2.09	0.53
3:9:1129:G:H5''	20:bb:22:LYS:HE3	1.90	0.53
3:9:1333:U:O5'	22:DD:147:ALA:HB2	2.08	0.53
4:AA:187:GLY:HA2	15:VV:45:ARG:HH21	1.73	0.53
14:OO:127:GLY:HA2	19:aa:58:VAL:HG23	1.90	0.53
32:ZZ:65:TYR:O	32:ZZ:111:ARG:HG2	2.09	0.53
37:A:82:ILE:HG22	75:p:65:ALA:HB3	1.90	0.53
38:B:95:THR:HG22	38:B:99:LEU:HA	1.91	0.53
39:C:137:VAL:HG21	39:C:150:LEU:HD11	1.90	0.53
42:F:30:LYS:HZ3	79:5:1438:U:H5''	1.73	0.53
42:F:40:MET:HA	42:F:43:LYS:HE3	1.90	0.53
45:I:146:GLU:HA	45:I:149:VAL:HG12	1.90	0.53
50:O:7:LEU:HD21	50:O:31:ARG:HD3	1.90	0.53
53:S:16:CYS:HA	53:S:59:GLY:HA2	1.90	0.53
78:t:32:ILE:HG23	78:t:64:ILE:HG21	1.91	0.53
79:5:370:U:H2'	79:5:371:A:C4	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:1190:C:H2'	79:5:1191:C:C6	2.43	0.53
3:9:106:C:OP1	3:9:432:G:H5'	2.08	0.53
3:9:384:U:H2'	3:9:385:G:H5'	1.89	0.53
3:9:528:A:H2'	3:9:529:A:H8	1.73	0.53
3:9:1310:U:H4'	35:ff:143:LYS:HD3	1.90	0.53
3:9:1496:U:H2'	3:9:1498:A:H5'	1.89	0.53
4:AA:147:LEU:HD13	4:AA:165:ASN:HD22	1.73	0.53
23:FF:86:LYS:HA	23:FF:89:THR:HG22	1.90	0.53
23:FF:156:THR:HA	23:FF:159:ARG:HG2	1.89	0.53
24:KK:72:THR:O	24:KK:76:ILE:HG12	2.08	0.53
29:SS:47:LYS:HB3	29:SS:78:LYS:HE2	1.90	0.53
29:SS:104:ASP:O	29:SS:108:ARG:HG2	2.09	0.53
37:A:116:LEU:HD22	37:A:117:GLU:H	1.73	0.53
38:B:84:MET:HB2	38:B:205:VAL:HB	1.89	0.53
40:D:106:ALA:O	40:D:109:LEU:HG	2.08	0.53
40:D:157:ASN:HB3	40:D:160:PHE:HD2	1.73	0.53
42:F:208:TRP:CD1	42:F:209:PRO:HD2	2.43	0.53
44:H:18:ILE:HD12	44:H:27:VAL:HG22	1.89	0.53
52:Q:179:GLY:HA3	60:a:50:PRO:HB2	1.89	0.53
56:V:57:VAL:HG12	56:V:125:CYS:HB2	1.90	0.53
72:m:51:ILE:HG23	72:m:52:ILE:HG22	1.90	0.53
78:t:32:ILE:HG23	78:t:64:ILE:HD13	1.91	0.53
78:t:127:GLY:O	78:t:130:LYS:HG2	2.08	0.53
79:5:1535:C:H42	79:5:1636:U:H4'	1.73	0.53
79:5:1544:G:H2'	79:5:1545:G:C8	2.44	0.53
79:5:1824:G:H2'	79:5:1825:A:C8	2.43	0.53
79:5:2001:G:C5	79:5:2003:G:H1'	2.43	0.53
79:5:3759:A:N6	79:5:3765:G:H1'	2.24	0.53
79:5:3927:U:H2'	79:5:3928:A:H8	1.73	0.53
82:AT:33:U:H3	82:AT:37:A:H62	1.54	0.53
1:R:69:ALA:HA	1:R:72:LYS:HG2	1.90	0.53
1:R:103:ARG:HA	1:R:106:LEU:HG	1.91	0.53
3:9:1407:U:H2'	3:9:1408:U:C6	2.44	0.53
3:9:1516:G:H4'	26:PP:122:THR:HG21	1.89	0.53
3:9:1539:U:H5''	30:TT:43:LYS:CE	2.38	0.53
3:9:1587:G:H1	30:TT:74:SER:HB3	1.74	0.53
3:9:1826:G:H4'	79:5:3760:A:N7	2.24	0.53
11:JJ:48:PHE:O	11:JJ:52:LYS:HG2	2.09	0.53
23:FF:67:PRO:O	23:FF:71:ARG:HG3	2.08	0.53
24:KK:1:MET:HE2	24:KK:47:LYS:HD2	1.89	0.53
28:RR:58:MET:HA	28:RR:61:ILE:HD12	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:A:189:TYR:CG	37:A:196:TRP:HB2	2.43	0.53
38:B:20:LYS:HD3	79:5:4717:A:H4'	1.89	0.53
40:D:18:VAL:HG21	80:7:11:A:O4'	2.08	0.53
48:M:91:TRP:CZ2	79:5:4870:G:H2'	2.43	0.53
51:P:123:PRO:HD3	51:P:145:HIS:HE2	1.73	0.53
53:S:51:LEU:HD22	54:T:151:LEU:HD21	1.91	0.53
66:g:78:TYR:HB3	66:g:82:MET:HB3	1.90	0.53
79:5:937:U:H2'	79:5:938:C:C6	2.43	0.53
79:5:4894:A:H5''	79:5:4895:C:C6	2.44	0.53
79:5:4991:U:H2'	79:5:4992:G:C8	2.44	0.53
80:7:11:A:H2'	80:7:12:U:H5''	1.89	0.53
1:R:6:LEU:HD23	1:R:6:LEU:H	1.73	0.53
3:9:615:C:H2'	3:9:616:A:O4'	2.09	0.53
3:9:974:C:H2'	3:9:975:G:C8	2.44	0.53
3:9:1093:A:H2'	3:9:1094:C:C6	2.43	0.53
3:9:1277:C:H2'	3:9:1278:A:H8	1.73	0.53
4:AA:66:VAL:HG21	4:AA:185:MET:HG2	1.89	0.53
11:JJ:32:ILE:HG22	21:ee:108:ARG:HH22	1.73	0.53
22:DD:185:LYS:HB3	22:DD:187:LYS:HE2	1.90	0.53
25:MM:69:CYS:O	25:MM:74:ILE:HB	2.09	0.53
36:gg:5:MET:HB2	36:gg:270:LEU:HD21	1.91	0.53
37:A:10:LYS:HA	37:A:16:PHE:HD2	1.74	0.53
39:C:6:PRO:HB3	79:5:668:C:H1'	1.90	0.53
39:C:33:ARG:HG3	39:C:122:TYR:OH	2.08	0.53
45:I:98:ARG:HB3	45:I:120:GLY:CA	2.39	0.53
56:V:92:ASP:OD1	56:V:94:VAL:HG12	2.09	0.53
62:c:90:ARG:NH1	75:p:44:LYS:HG3	2.23	0.53
79:5:160:G:H2'	79:5:161:G:C8	2.44	0.53
79:5:758:G:H2'	79:5:759:G:O4'	2.09	0.53
79:5:1535:C:H2'	79:5:1536:U:O4'	2.09	0.53
79:5:2386:U:H2'	79:5:2387:G:H8	1.74	0.53
79:5:2676:A:H2'	79:5:2677:G:O4'	2.09	0.53
79:5:3833:C:H2'	79:5:3834:C:C6	2.43	0.53
79:5:4208:U:H2'	79:5:4209:G:C8	2.44	0.53
79:5:4405:G:H1	79:5:4439:U:H3	1.57	0.53
81:8:148:A:H2'	81:8:149:G:C8	2.43	0.53
3:9:910:G:H2'	3:9:911:C:C6	2.44	0.53
3:9:1367:U:H2'	3:9:1368:U:C6	2.44	0.53
27:QQ:134:GLY:HA3	27:QQ:140:ARG:HA	1.91	0.53
39:C:116:ASN:HB2	39:C:119:GLN:HG2	1.91	0.53
39:C:189:MET:HE1	79:5:2334:C:H5	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:E:176:LEU:HD23	41:E:194:GLN:HG2	1.89	0.53
52:Q:80:ALA:HB3	52:Q:100:VAL:HG12	1.90	0.53
53:S:16:CYS:CA	53:S:54:MET:HE1	2.38	0.53
57:X:131:ASP:O	71:l:14:ALA:HB1	2.09	0.53
69:j:56:ARG:HA	69:j:56:ARG:HH11	1.74	0.53
70:k:16:ARG:NH2	70:k:61:PRO:HD3	2.24	0.53
79:5:677:G:H2'	79:5:678:C:C6	2.44	0.53
79:5:1345:A:H2'	79:5:1346:C:C6	2.44	0.53
79:5:1411(A):G:H2'	79:5:1411(B):C:C6	2.43	0.53
79:5:2037:C:H2'	79:5:2038:U:C6	2.44	0.53
79:5:4967:A:H2'	79:5:4968:A:H8	1.73	0.53
81:8:67:U:H2'	81:8:68:G:H8	1.74	0.53
3:9:599:A:H2'	3:9:606:G:H21	1.73	0.53
3:9:812:A:H4'	7:EE:16:LYS:HD2	1.89	0.53
3:9:1217:A:H2'	3:9:1218:C:C6	2.43	0.53
10:II:141:ARG:NH1	10:II:141:ARG:HA	2.24	0.53
13:NN:136:PRO:HG2	13:NN:139:TRP:HB2	1.90	0.53
14:OO:78:ALA:HB3	14:OO:118:ALA:HB3	1.91	0.53
18:YY:17:LEU:H	18:YY:17:LEU:HD23	1.74	0.53
38:B:223:THR:HG23	79:5:4624:A:H5'	1.91	0.53
39:C:116:ASN:HB2	39:C:119:GLN:CG	2.39	0.53
39:C:309:ILE:HD13	39:C:311:ARG:HE	1.73	0.53
45:I:72:ALA:HB2	45:I:155:ALA:HB2	1.90	0.53
45:I:184:MET:CG	45:I:190:LEU:HD13	2.39	0.53
46:J:131:TYR:CE2	79:5:4250:G:H1'	2.44	0.53
47:L:189:ALA:HA	68:i:11:LEU:HD11	1.91	0.53
51:P:119:VAL:HG22	51:P:146:ILE:HD12	1.91	0.53
53:S:13:VAL:HG12	53:S:29:ARG:HA	1.89	0.53
58:Y:44:VAL:HG11	58:Y:47:MET:HE2	1.91	0.53
59:Z:2:GLY:HA2	62:c:41:GLY:HA3	1.91	0.53
66:g:95:PHE:O	66:g:98:GLU:HG3	2.09	0.53
69:j:75:ARG:HH22	79:5:344:A:H5'	1.72	0.53
71:l:21:ARG:HD2	71:l:22:PRO:O	2.09	0.53
79:5:1461:C:H2'	79:5:1462:A:C8	2.43	0.53
79:5:2049:G:H2'	79:5:2050:G:C8	2.44	0.53
79:5:3848:U:H2'	79:5:3849:A:C8	2.44	0.53
79:5:4244:A:H2'	79:5:4245:G:O4'	2.09	0.53
79:5:4274:A:H2'	79:5:4275:G:C8	2.43	0.53
79:5:4319:C:H2'	79:5:4320:G:C8	2.44	0.53
79:5:4503:A:H2'	79:5:4504:C:C6	2.43	0.53
79:5:4691:A:H2'	79:5:4692:A:O4'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:569:A:H2'	3:9:570:C:O4'	2.08	0.53
3:9:1204:A:H2'	3:9:1205:C:C6	2.44	0.53
3:9:1289:U:OP2	35:ff:95:ARG:HD2	2.09	0.53
17:XX:15:SER:HA	17:XX:18:ARG:HG3	1.90	0.53
17:XX:28:LYS:HA	17:XX:31:HIS:CE1	2.44	0.53
28:RR:114:LEU:HB3	28:RR:117:LEU:HG	1.91	0.53
39:C:318:PRO:O	39:C:325:MET:HB2	2.09	0.53
49:N:72:LYS:HE3	79:5:3670:C:O2'	2.09	0.53
49:N:189:ARG:O	49:N:193:ARG:HG2	2.09	0.53
51:P:45:THR:HA	51:P:48:LEU:CD2	2.39	0.53
56:V:112:MET:HB3	56:V:132:ILE:HD11	1.90	0.53
67:h:80:PRO:O	67:h:84:ARG:HG3	2.08	0.53
69:j:69:ILE:HA	69:j:72:ARG:HG2	1.91	0.53
69:j:71:TYR:O	69:j:75:ARG:HG2	2.09	0.53
78:t:81:ILE:HD11	78:t:132:ILE:HB	1.89	0.53
78:t:147:HIS:HB3	78:t:148:PRO:HD3	1.90	0.53
79:5:53:C:H2'	79:5:54:G:C8	2.44	0.53
79:5:1328:G:H4'	79:5:2350:U:O4'	2.09	0.53
79:5:1613:A:O2'	79:5:1614:C:H5''	2.08	0.53
79:5:2376:A:H2'	79:5:2377:C:C6	2.44	0.53
79:5:2861:C:H2'	79:5:2862:G:O4'	2.09	0.53
79:5:3917:A:H2'	79:5:3918:G:H8	1.74	0.53
79:5:3944:G:H2'	79:5:3945:A:H8	1.73	0.53
3:9:99:A:H61	3:9:433:A:H1'	1.74	0.53
3:9:483:C:H5'	17:XX:48:LYS:HG2	1.90	0.53
3:9:955:A:N3	3:9:956:G:H1'	2.24	0.53
3:9:988:C:H2'	3:9:989:C:C5	2.44	0.53
4:AA:55:TRP:HA	4:AA:58:LEU:HD21	1.90	0.53
5:BB:82:ARG:HA	5:BB:105:LEU:HD12	1.90	0.53
5:BB:157:GLN:HB3	5:BB:160:GLN:HG3	1.91	0.53
21:ee:112:ASN:HA	21:ee:116:VAL:HG12	1.91	0.53
22:DD:27:ARG:CZ	24:KK:63:ALA:HB2	2.39	0.53
22:DD:163:PRO:HA	22:DD:166:TYR:CE2	2.43	0.53
22:DD:177:LEU:HD23	22:DD:177:LEU:H	1.74	0.53
28:RR:95:ILE:HG23	28:RR:118:GLN:HB2	1.90	0.53
29:SS:105:ASN:O	29:SS:109:GLU:HG2	2.08	0.53
36:gg:25:PRO:HA	36:gg:293:ALA:HB1	1.91	0.53
38:B:224:LYS:HE2	38:B:339:GLY:O	2.09	0.53
39:C:44:LEU:HA	39:C:47:ASN:HD22	1.74	0.53
39:C:165:LYS:NZ	79:5:222:C:H3'	2.24	0.53
41:E:152:ILE:CG2	41:E:202:THR:HB	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:E:216:THR:H	41:E:219:TYR:HB3	1.74	0.53
43:G:136:PHE:HB3	43:G:212:HIS:HB2	1.90	0.53
45:I:76:MET:HG3	45:I:85:PHE:CE2	2.44	0.53
50:O:38:CYS:HB3	50:O:106:ASP:OD1	2.09	0.53
59:Z:11:VAL:HG11	59:Z:80:LEU:HB3	1.90	0.53
73:n:11:ARG:O	73:n:15:ARG:HG2	2.09	0.53
79:5:58:G:H4'	79:5:59:A:H4'	1.91	0.53
79:5:228:C:H2'	79:5:229:G:C8	2.43	0.53
79:5:232:G:O4'	79:5:383:A:H1'	2.08	0.53
79:5:385:A:H4'	79:5:386:A:H5'	1.91	0.53
79:5:2328:G:H2'	79:5:2329:U:C6	2.44	0.53
79:5:2641:A:H2'	79:5:2642:A:O4'	2.08	0.53
79:5:3796:U:H2'	79:5:3797:C:C6	2.44	0.53
3:9:352:U:H2'	3:9:353:C:C6	2.45	0.52
3:9:566:U:H2'	3:9:567:C:O4'	2.09	0.52
3:9:616:A:H1'	21:ee:85:VAL:CG2	2.38	0.52
3:9:805:U:H2'	3:9:806:U:C6	2.44	0.52
3:9:907:G:H2'	3:9:908:A:C8	2.45	0.52
3:9:959:G:H2'	3:9:960:U:C6	2.44	0.52
3:9:980:A:H2'	3:9:981:A:C8	2.44	0.52
3:9:1066:U:OP2	14:OO:143:LYS:HD2	2.09	0.52
3:9:1468:C:H2'	3:9:1469:A:C8	2.44	0.52
3:9:1539:U:H4'	30:TT:47:PRO:HA	1.91	0.52
3:9:1593:C:H2'	3:9:1594:A:C8	2.44	0.52
3:9:1744:G:H1'	3:9:1789:G:H22	1.74	0.52
14:OO:48:SER:HB2	14:OO:51:GLU:OE2	2.10	0.52
19:aa:12:LYS:HG3	19:aa:15:ARG:HE	1.73	0.52
20:bb:36:LYS:HB2	20:bb:43:ILE:HG13	1.91	0.52
22:DD:202:LYS:HE2	28:RR:42:PRO:HB2	1.91	0.52
26:PP:38:SER:O	26:PP:42:ARG:HG3	2.09	0.52
38:B:176:LYS:HB2	79:5:4986:G:H5''	1.91	0.52
42:F:147:LYS:HD2	79:5:942:G:H3'	1.90	0.52
45:I:145:LYS:HA	45:I:148:VAL:HG22	1.89	0.52
49:N:13:LYS:NZ	49:N:15:GLN:HB2	2.24	0.52
51:P:31:GLU:HG3	51:P:60:PHE:CD2	2.45	0.52
52:Q:15:ARG:CG	79:5:1691:G:H5'	2.40	0.52
52:Q:28:LEU:O	52:Q:31:LEU:HG	2.08	0.52
53:S:32:ILE:HD11	53:S:43:ARG:HB2	1.90	0.52
58:Y:82:ILE:HB	58:Y:85:VAL:HB	1.91	0.52
59:Z:4:PHE:HE1	59:Z:82:PRO:HG3	1.74	0.52
61:b:56:LYS:HB3	61:b:57:MET:HE3	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:c:58:SER:OG	66:g:96:LEU:HD13	2.08	0.52
66:g:25:THR:OG1	66:g:29:ARG:HG2	2.09	0.52
67:h:66:LYS:HD2	81:8:96:C:H4'	1.91	0.52
67:h:87:LYS:CD	69:j:80:GLU:HG3	2.39	0.52
68:i:60:LEU:HD11	68:i:65:LYS:HB2	1.91	0.52
74:o:5:PRO:HD3	79:5:4232:U:C2	2.44	0.52
78:t:18:THR:HA	78:t:57:ARG:HA	1.91	0.52
79:5:25:A:N1	79:5:58:G:N2	2.57	0.52
79:5:1790:U:O2'	79:5:1791:U:H5'	2.08	0.52
79:5:2284:G:H2'	79:5:2285:A:H8	1.74	0.52
79:5:2335:C:H2'	79:5:2336:G:H8	1.74	0.52
79:5:3598:C:H2'	79:5:3599:A:C8	2.44	0.52
79:5:3659:G:H2'	79:5:3660:C:C6	2.44	0.52
79:5:3835:C:H2'	79:5:3836:A:C8	2.44	0.52
3:9:876:C:H2'	3:9:877:C:C6	2.44	0.52
3:9:1381:G:H2'	3:9:1382:A:O4'	2.09	0.52
5:BB:111:CYS:HA	5:BB:114:VAL:HG12	1.91	0.52
7:EE:18:TRP:HB3	7:EE:20:LEU:HG	1.91	0.52
8:GG:219:GLU:O	8:GG:223:LYS:HG2	2.10	0.52
14:OO:72:TYR:CZ	14:OO:76:LEU:HD11	2.44	0.52
15:VV:66:ASP:HA	15:VV:69:ILE:HG22	1.91	0.52
18:YY:13:MET:HG2	18:YY:22:GLN:HE21	1.75	0.52
18:YY:79:LEU:HD13	18:YY:83:LYS:HE2	1.91	0.52
29:SS:20:ILE:CD1	29:SS:33:ILE:HD11	2.39	0.52
41:E:161:ARG:HD2	79:5:4945:G:C2	2.44	0.52
46:J:22:LEU:HA	46:J:129:ASP:O	2.09	0.52
48:M:119:ARG:NH2	50:O:189:ILE:HG23	2.24	0.52
50:O:66:PRO:HB2	79:5:4586:G:H4'	1.90	0.52
51:P:124:LYS:HD2	51:P:141:SER:O	2.10	0.52
60:a:21:ARG:HG3	79:5:1318:C:OP1	2.08	0.52
60:a:63:LEU:HD22	60:a:64:LYS:H	1.73	0.52
62:c:103:ASP:OD1	62:c:106:ARG:HB2	2.09	0.52
63:d:60:PRO:HD2	63:d:100:ASN:OD1	2.09	0.52
64:e:49:PHE:CE1	79:5:1883:G:H5'	2.44	0.52
66:g:43:LYS:HE2	79:5:2597:G:H5''	1.90	0.52
68:i:35:LYS:O	68:i:38:LYS:HG3	2.08	0.52
69:j:72:ARG:HA	69:j:75:ARG:HG2	1.91	0.52
74:o:52:THR:HG23	74:o:53:LYS:HG3	1.91	0.52
78:t:117:ARG:HG3	78:t:125:LEU:CD1	2.38	0.52
79:5:1477:C:H2'	79:5:1478:C:C6	2.45	0.52
79:5:1538:U:H2'	79:5:1539:G:C8	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:1806:G:H2'	79:5:1807:C:C6	2.44	0.52
79:5:2404:A:H2'	79:5:2405:G:O4'	2.09	0.52
79:5:2459:G:H2'	79:5:2461:G:OP2	2.10	0.52
79:5:2489:C:H4'	79:5:2490:U:H5	1.74	0.52
79:5:2654:C:H2'	79:5:2655:C:C6	2.43	0.52
79:5:4319:C:H2'	79:5:4320:G:H8	1.73	0.52
79:5:4417:C:H2'	79:5:4418:G:O4'	2.09	0.52
79:5:4439:U:H3'	79:5:4440:G:H5''	1.90	0.52
79:5:4584:A:H2'	79:5:4585:U:O4'	2.09	0.52
79:5:4597:U:H2'	79:5:4598:C:O4'	2.08	0.52
79:5:4925:U:H4'	79:5:4926:C:C5'	2.39	0.52
80:7:11:A:O2'	80:7:13:A:H2'	2.10	0.52
80:7:16:A:H2'	80:7:17:C:C6	2.45	0.52
80:7:24:C:H2'	80:7:25:G:O4'	2.08	0.52
2:W:82:ILE:HG12	8:GG:131:ARG:HE	1.74	0.52
3:9:46:A:H4'	3:9:47:G:H5''	1.91	0.52
3:9:218:U:H2'	3:9:219:U:C6	2.45	0.52
3:9:318:A:H3'	3:9:319:C:H5''	1.91	0.52
3:9:1131:G:H2'	3:9:1132:C:C6	2.44	0.52
3:9:1196:A:H2'	3:9:1197:G:O4'	2.09	0.52
3:9:1206:G:N2	3:9:1692:U:O2	2.33	0.52
3:9:1228:A:H2'	3:9:1229:G:C8	2.44	0.52
3:9:1232:U:H2'	3:9:1233:G:C8	2.44	0.52
3:9:1447:G:H2'	3:9:1448:A:H8	1.74	0.52
5:BB:65:ARG:NH1	5:BB:65:ARG:HA	2.24	0.52
5:BB:176:VAL:HA	5:BB:184:VAL:HG11	1.92	0.52
17:XX:14:ARG:O	17:XX:18:ARG:HG2	2.08	0.52
17:XX:22:TRP:O	17:XX:28:LYS:HD3	2.10	0.52
17:XX:87:ASN:HB3	17:XX:90:CYS:SG	2.48	0.52
28:RR:102:THR:HA	28:RR:105:MET:SD	2.50	0.52
37:A:117:GLU:HG2	37:A:124:GLY:H	1.74	0.52
39:C:133:LEU:HD12	39:C:135:ALA:HB3	1.90	0.52
42:F:221:LYS:HB2	42:F:230:GLY:HA2	1.91	0.52
44:H:101:ILE:HG21	44:H:179:ILE:HD11	1.91	0.52
49:N:3:ALA:O	49:N:7:ILE:HG12	2.10	0.52
49:N:84:PRO:HA	49:N:87:HIS:HD1	1.75	0.52
54:T:63:ARG:O	54:T:75:VAL:HG23	2.09	0.52
60:a:129:PHE:CZ	60:a:144:CYS:HB3	2.44	0.52
74:o:61:LYS:HD2	79:5:4372:U:OP2	2.09	0.52
79:5:738:C:H5''	79:5:739:G:H4'	1.90	0.52
79:5:1218:G:H2'	79:5:1219:G:C8	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:1554:A:H61	79:5:1573:G:H1'	1.74	0.52
79:5:2689:C:H2'	79:5:2690:C:C6	2.44	0.52
79:5:4080:C:H2'	79:5:4081:G:C8	2.44	0.52
3:9:197:U:H2'	3:9:198:U:C6	2.44	0.52
3:9:552:G:H4'	21:ee:112:ASN:CB	2.39	0.52
3:9:792:C:H2'	3:9:793:G:H8	1.73	0.52
3:9:871:U:H3'	3:9:872:A:H4'	1.92	0.52
3:9:979:C:H2'	3:9:980:A:C8	2.45	0.52
3:9:1526:G:H2'	3:9:1527:C:C6	2.44	0.52
3:9:1773:C:H2'	3:9:1774:C:C6	2.45	0.52
4:AA:121:LEU:HD23	4:AA:143:PRO:HB2	1.91	0.52
6:CC:84:PHE:HB2	6:CC:86:LEU:HG	1.89	0.52
10:II:39:GLY:O	10:II:61:ASP:HB3	2.09	0.52
14:OO:99:ALA:N	14:OO:133:THR:HG22	2.24	0.52
15:VV:55:ILE:HD11	15:VV:69:ILE:HB	1.91	0.52
23:FF:49:LEU:HD21	23:FF:90:VAL:CG1	2.40	0.52
25:MM:121:LYS:O	25:MM:125:GLU:HG2	2.10	0.52
38:B:67:VAL:HA	38:B:70:LYS:CE	2.40	0.52
39:C:266:THR:HG22	39:C:269:LYS:HB3	1.92	0.52
42:F:38:GLN:HA	42:F:41:LEU:HG	1.90	0.52
43:G:224:PRO:HB3	43:G:234:TYR:CE2	2.44	0.52
44:H:168:LYS:HG2	44:H:169:ASN:ND2	2.24	0.52
47:L:26:PHE:HA	49:N:202:ARG:HD2	1.90	0.52
52:Q:83:VAL:O	52:Q:103:LEU:HD13	2.09	0.52
52:Q:148:VAL:HG13	79:5:1346:C:H5''	1.91	0.52
56:V:69:LYS:H	56:V:72:LEU:HD12	1.74	0.52
62:c:52:CYS:SG	62:c:57:LYS:HE2	2.49	0.52
69:j:72:ARG:NH1	69:j:73:ARG:HG2	2.24	0.52
74:o:17:LYS:HA	79:5:4318:C:H4'	1.90	0.52
77:s:17:ILE:HD11	77:s:21:LEU:HD11	1.90	0.52
78:t:35:LEU:HD23	78:t:64:ILE:HB	1.91	0.52
79:5:436:C:H2'	79:5:437:G:C8	2.45	0.52
79:5:1334:A:H5'	81:8:17:A:O2'	2.09	0.52
79:5:1526:G:H2'	79:5:1527:A:C8	2.45	0.52
79:5:1961:G:H1'	79:5:2025:A:H61	1.75	0.52
79:5:2607:C:H2'	79:5:2608:G:C8	2.45	0.52
79:5:4082:G:H2'	79:5:4083:U:C6	2.45	0.52
79:5:4675:U:H2'	79:5:4676:G:C8	2.44	0.52
79:5:4704:C:H2'	79:5:4705:A:H8	1.75	0.52
79:5:4940:C:H5'	79:5:4941:G:H5''	1.91	0.52
1:R:61:ALA:O	1:R:65:LYS:HG2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:223:C:H2'	3:9:224:A:H8	1.73	0.52
3:9:527:C:H2'	3:9:528:A:C8	2.44	0.52
3:9:1017:U:H2'	3:9:1018:U:C6	2.45	0.52
3:9:1308:U:O2'	35:ff:133:ALA:HB1	2.09	0.52
8:GG:44:GLU:HA	8:GG:119:LYS:NZ	2.25	0.52
9:HH:140:VAL:HG22	9:HH:194:LEU:HG	1.91	0.52
11:JJ:169:ARG:HG2	11:JJ:170:PRO:HD2	1.90	0.52
14:OO:39:ASP:N	14:OO:69:SER:HB2	2.24	0.52
14:OO:113:GLN:OE1	19:aa:45:VAL:HG23	2.10	0.52
14:OO:127:GLY:HA2	19:aa:58:VAL:CG2	2.40	0.52
23:FF:49:LEU:HD21	23:FF:90:VAL:HG11	1.92	0.52
26:PP:86:LEU:O	26:PP:90:VAL:HG23	2.09	0.52
30:TT:56:ARG:HH22	30:TT:99:VAL:HB	1.73	0.52
38:B:252:ALA:HB1	79:5:4524:G:N1	2.24	0.52
39:C:284:MET:HB3	52:Q:24:TYR:HD1	1.75	0.52
39:C:346:ASN:HA	39:C:349:LEU:HD12	1.91	0.52
46:J:51:SER:HB2	46:J:71:HIS:HE1	1.74	0.52
47:L:50:PRO:HG3	67:h:121:VAL:HG22	1.92	0.52
50:O:33:VAL:HG13	50:O:102:LEU:HD13	1.91	0.52
50:O:84:VAL:HG11	50:O:102:LEU:CD2	2.39	0.52
51:P:4:TYR:CZ	51:P:16:LYS:HD3	2.45	0.52
59:Z:10:VAL:O	59:Z:83:THR:HG22	2.10	0.52
59:Z:11:VAL:HG21	59:Z:25:ILE:HD11	1.92	0.52
76:r:19:LYS:HB2	79:5:2289:C:N4	2.25	0.52
76:r:28:GLU:HG2	76:r:29:PRO:HD2	1.92	0.52
79:5:50:C:H2'	79:5:51:A:O4'	2.09	0.52
79:5:221:C:H2'	79:5:222:C:C6	2.44	0.52
79:5:713:C:H2'	79:5:714:G:H8	1.74	0.52
79:5:1073:G:H2'	79:5:1074:G:C8	2.44	0.52
79:5:1278:C:H2'	79:5:1279:A:O4'	2.08	0.52
79:5:1356:U:H2'	79:5:1357:C:C6	2.44	0.52
79:5:2662:G:H2'	79:5:2663:G:C8	2.45	0.52
79:5:3684:G:H2'	79:5:3685:C:C6	2.44	0.52
79:5:3695:U:O4	79:5:3820:G:O6	2.27	0.52
79:5:3920:U:H2'	79:5:3921:U:H6	1.74	0.52
79:5:4421:C:O2'	79:5:4422:A:H5'	2.10	0.52
81:8:69:U:H2'	81:8:70:G:O4'	2.10	0.52
3:9:562:U:H2'	3:9:563:G:C8	2.45	0.52
3:9:616:A:H4'	21:ee:81:ARG:NH2	2.25	0.52
3:9:796:G:H2'	3:9:797:C:C6	2.45	0.52
3:9:805:U:H4'	16:WW:120:HIS:CD2	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:1029:G:H21	79:5:1563:A:H61	1.57	0.52
3:9:1127:C:H2'	3:9:1128:C:C6	2.45	0.52
3:9:1258:A:N7	3:9:1659:U:H2'	2.25	0.52
5:BB:165:ARG:O	5:BB:169:MET:HG2	2.10	0.52
11:JJ:85:GLY:HA3	11:JJ:108:ARG:NH1	2.25	0.52
13:NN:30:SER:HA	13:NN:67:THR:HG22	1.92	0.52
23:FF:122:ARG:HH22	33:cc:9:ILE:HD13	1.74	0.52
37:A:211:PHE:HE1	37:A:221:LYS:HG2	1.74	0.52
38:B:321:VAL:HG22	38:B:374:PHE:HB2	1.92	0.52
42:F:158:TYR:CG	42:F:165:ARG:HD2	2.44	0.52
43:G:217:ILE:O	43:G:221:VAL:HG13	2.09	0.52
47:L:87:HIS:CD2	47:L:89:LYS:HG2	2.45	0.52
47:L:99:ASP:OD2	47:L:102:ARG:HG3	2.09	0.52
47:L:103:ARG:CZ	79:5:325:U:H5''	2.38	0.52
50:O:93:LYS:HE3	50:O:94:ARG:NH1	2.25	0.52
52:Q:63:LEU:HB2	52:Q:88:ASP:HA	1.91	0.52
55:U:33:ILE:HG13	55:U:34:MET:HE3	1.91	0.52
55:U:47:ILE:CD1	55:U:56:LEU:HA	2.40	0.52
58:Y:15:ARG:HH22	81:8:22:U:H5''	1.73	0.52
59:Z:46:ILE:HD11	59:Z:48:ARG:O	2.10	0.52
60:a:28:HIS:CE1	60:a:32:ARG:HG2	2.45	0.52
60:a:117:LEU:HD22	60:a:118:PRO:HD2	1.91	0.52
79:5:287:U:H2'	79:5:288:G:C8	2.45	0.52
79:5:432:U:H3	79:5:3887:C:H42	1.56	0.52
79:5:1321:G:H2'	79:5:3876:A:N7	2.25	0.52
79:5:1783:C:H2'	79:5:1784:U:C6	2.45	0.52
79:5:2411:C:H2'	79:5:2412:A:H8	1.74	0.52
79:5:2748:C:H2'	79:5:2749:C:C6	2.44	0.52
79:5:2758:G:H2'	79:5:2759:G:C4	2.45	0.52
79:5:2807:A:C2'	79:5:2808:G:H5'	2.40	0.52
79:5:3720:G:O6	79:5:3733:A:N1	2.43	0.52
79:5:3802:U:H2'	79:5:4497:U:O2'	2.10	0.52
79:5:4186:A:H2'	79:5:4187:G:C8	2.44	0.52
79:5:4526:U:H2'	79:5:4527:G:C8	2.45	0.52
3:9:3:C:H4'	6:CC:206:SER:HA	1.91	0.52
3:9:222:U:H5''	12:LL:17:PHE:CG	2.44	0.52
3:9:425:G:H4'	3:9:427:U:H3	1.75	0.52
3:9:928:G:H2'	3:9:929:G:C8	2.44	0.52
3:9:1244:U:O2	3:9:1255:G:N2	2.34	0.52
3:9:1705:C:H2'	3:9:1706:G:C8	2.44	0.52
3:9:1867:U:C4	19:aa:84:VAL:HG12	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AA:142:LEU:HD23	4:AA:143:PRO:HD2	1.91	0.52
10:II:172:LEU:HD22	10:II:195:LEU:HD12	1.92	0.52
12:LL:16:ILE:HG12	12:LL:34:PRO:HG2	1.92	0.52
12:LL:144:LYS:HE3	12:LL:146:THR:HG22	1.91	0.52
22:DD:35:SER:HB2	22:DD:91:VAL:HG21	1.92	0.52
26:PP:25:LEU:HB3	26:PP:87:PRO:HG3	1.92	0.52
27:QQ:76:GLY:H	27:QQ:79:ALA:HB3	1.75	0.52
28:RR:35:CYS:HA	28:RR:38:ILE:HD11	1.91	0.52
38:B:65:SER:HA	79:5:4616:A:H4'	1.91	0.52
39:C:49:ARG:HD3	79:5:349:A:C5	2.45	0.52
39:C:318:PRO:HG2	42:F:154:TYR:HD1	1.74	0.52
40:D:39:GLN:HG2	40:D:48:LYS:HB2	1.91	0.52
45:I:31:ILE:HG12	45:I:66:GLU:HG2	1.92	0.52
46:J:33:LEU:HD13	46:J:67:LYS:HE3	1.91	0.52
48:M:11:ARG:HA	48:M:61:ILE:HA	1.91	0.52
48:M:13:ALA:HA	48:M:58:THR:HG23	1.92	0.52
49:N:24:ARG:NH2	79:5:3938:G:H5''	2.24	0.52
49:N:74:PRO:HB3	79:5:3670:C:C2	2.45	0.52
63:d:75:LYS:CD	79:5:4653:C:H5''	2.40	0.52
67:h:66:LYS:CD	81:8:96:C:H4'	2.40	0.52
74:o:72:CYS:HB2	74:o:78:ARG:HA	1.90	0.52
77:s:17:ILE:HG12	77:s:64:ALA:HB1	1.90	0.52
79:5:162:A:H2'	79:5:163:A:H8	1.74	0.52
79:5:355:A:H2'	79:5:356:G:O4'	2.10	0.52
79:5:728:U:H3'	79:5:729:G:H3'	1.90	0.52
79:5:911:U:H2'	79:5:912:G:O4'	2.10	0.52
79:5:1494:U:H2'	79:5:1495:G:C8	2.45	0.52
79:5:1669:A:H1'	79:5:1852:U:O2'	2.10	0.52
79:5:1762:C:H2'	79:5:1763:C:C6	2.45	0.52
79:5:4412:C:O2'	79:5:4413:C:H5'	2.10	0.52
79:5:4453:C:H2'	79:5:4454:G:O4'	2.09	0.52
79:5:4680:G:H2'	79:5:4681:A:C8	2.45	0.52
80:7:107:G:H2'	80:7:108:G:H8	1.74	0.52
81:8:7:U:H2'	81:8:8:U:C6	2.44	0.52
81:8:68:G:H2'	81:8:69:U:O4'	2.10	0.52
81:8:107:C:H2'	81:8:108:A:C8	2.44	0.52
3:9:345:U:H5''	7:EE:37:LYS:CD	2.39	0.52
3:9:929:G:N2	3:9:1104:G:H4'	2.25	0.52
3:9:1172:U:O2	3:9:1188:A:N7	2.43	0.52
3:9:1779:G:H2'	3:9:1780:G:C8	2.45	0.52
4:AA:76:VAL:HG22	4:AA:123:VAL:HG21	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AA:121:LEU:HD23	4:AA:143:PRO:HG2	1.92	0.52
8:GG:221:LYS:O	8:GG:224:ARG:HG3	2.10	0.52
9:HH:25:GLN:O	9:HH:29:GLU:HG2	2.10	0.52
12:LL:47:PRO:HG2	12:LL:50:ALA:CB	2.40	0.52
23:FF:49:LEU:HD13	27:QQ:50:LYS:NZ	2.25	0.52
32:ZZ:57:LYS:HG3	32:ZZ:61:GLU:OE1	2.09	0.52
36:gg:164:ILE:HG23	36:gg:176:VAL:HG13	1.92	0.52
38:B:52:GLY:HA3	38:B:320:PHE:CZ	2.45	0.52
39:C:290:SER:O	39:C:293:LEU:HG	2.09	0.52
40:D:108:ARG:CZ	40:D:253:TYR:HB2	2.39	0.52
40:D:250:ASN:OD1	40:D:252:VAL:HG12	2.10	0.52
40:D:279:ARG:HG2	40:D:283:LYS:HE3	1.92	0.52
42:F:189:LEU:O	42:F:193:ILE:HG12	2.09	0.52
44:H:69:THR:HG22	79:5:4700:A:H2	1.75	0.52
45:I:59:GLN:HB3	45:I:126:VAL:CG2	2.39	0.52
46:J:98:ASN:HA	79:5:4250:G:H5'	1.92	0.52
46:J:141:ILE:HA	46:J:144:LYS:HG2	1.91	0.52
49:N:163:GLY:HA2	49:N:168:GLY:HA3	1.92	0.52
51:P:74:LYS:HE3	79:5:4982:A:OP1	2.10	0.52
56:V:5:GLY:O	79:5:4595:G:H5''	2.10	0.52
62:c:55:LEU:HD11	66:g:93:ARG:HG3	1.92	0.52
63:d:37:GLY:HA3	63:d:40:LYS:HD3	1.92	0.52
69:j:67:LEU:HD23	69:j:67:LEU:H	1.74	0.52
69:j:87:LYS:HG3	81:8:67:U:H5''	1.91	0.52
78:t:110:VAL:HG13	78:t:161:GLU:CB	2.40	0.52
79:5:416:U:H4'	79:5:2330:G:H4'	1.91	0.52
79:5:2598:A:H2'	79:5:2599:G:O4'	2.09	0.52
79:5:4415:A:H2'	79:5:4416:G:O4'	2.10	0.52
1:R:98:ARG:NH2	1:R:102:LEU:HD21	2.25	0.52
2:W:43:LYS:NZ	79:5:3616:U:H2'	2.25	0.52
3:9:159:A:H2	3:9:468:A:H1'	1.75	0.52
3:9:792:C:H2'	3:9:793:G:C8	2.45	0.52
3:9:987:A:C4	5:BB:120:MET:HE1	2.45	0.52
3:9:1132:C:H2'	3:9:1133:A:O4'	2.10	0.52
3:9:1355:C:H3'	3:9:1356:G:C8	2.45	0.52
3:9:1497:G:H5''	3:9:1499:U:OP2	2.09	0.52
4:AA:82:THR:HA	4:AA:204:TYR:CG	2.45	0.52
4:AA:119:PRO:O	4:AA:142:LEU:HD21	2.10	0.52
5:BB:179:ASN:OD1	5:BB:184:VAL:HG13	2.09	0.52
10:II:17:LYS:NZ	10:II:19:LYS:HD2	2.25	0.52
18:YY:56:PHE:HB2	18:YY:74:MET:SD	2.50	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:aa:26:CYS:HB3	19:aa:28:ARG:NH1	2.25	0.52
20:bb:35:VAL:HG22	20:bb:79:PHE:CB	2.40	0.52
26:PP:75:VAL:HG22	26:PP:93:MET:HB2	1.92	0.52
32:ZZ:67:LEU:HD22	32:ZZ:110:THR:HA	1.90	0.52
36:gg:17:TRP:CB	36:gg:303:THR:HA	2.40	0.52
36:gg:35:SER:HB3	36:gg:37:ASP:OD1	2.10	0.52
37:A:48:ILE:HD11	37:A:82:ILE:HG23	1.90	0.52
39:C:89:GLN:HE21	79:5:2353:U:H4'	1.74	0.52
41:E:150:GLY:HA2	41:E:206:ILE:HD12	1.91	0.52
42:F:103:LYS:CE	42:F:134:ILE:HD13	2.40	0.52
42:F:131:MET:O	42:F:134:ILE:HG13	2.10	0.52
43:G:146:THR:HA	43:G:149:LEU:HG	1.92	0.52
47:L:125:VAL:HG13	47:L:143:GLU:HG2	1.91	0.52
49:N:181:HIS:CD2	79:5:99:A:H4'	2.44	0.52
55:U:47:ILE:HD11	55:U:56:LEU:HD23	1.91	0.52
57:X:139:ARG:HH12	79:5:2533:C:H5''	1.75	0.52
57:X:151:ASN:HD22	57:X:156:ILE:HG13	1.75	0.52
60:a:27:LYS:H	60:a:27:LYS:HD3	1.74	0.52
71:l:46:ARG:HH22	79:5:2795:A:H4'	1.74	0.52
76:r:18:ILE:HD11	76:r:20:ARG:HH21	1.73	0.52
78:t:131:GLU:O	78:t:135:THR:HG23	2.09	0.52
79:5:664:G:H2'	79:5:665:C:C6	2.45	0.52
79:5:1338:G:H4'	79:5:1339:U:C6	2.44	0.52
79:5:2013:A:H2'	79:5:2014:C:O4'	2.09	0.52
79:5:2381:A:H1'	79:5:2383:C:P	2.49	0.52
79:5:2477:A:H2'	79:5:2478:C:C6	2.45	0.52
79:5:2610:G:H2'	79:5:2611:A:H8	1.74	0.52
79:5:2656:U:O2'	79:5:2657:G:H5'	2.09	0.52
79:5:2871:A:H2'	79:5:2872:C:O4'	2.09	0.52
80:7:33:U:H2'	80:7:34:C:C6	2.45	0.52
3:9:680:G:H2'	3:9:681:U:C6	2.45	0.52
3:9:849:A:H2'	3:9:850:C:C6	2.45	0.52
3:9:887:U:O2'	3:9:888:U:H5''	2.10	0.52
3:9:1545:A:C2	3:9:1671:G:H1'	2.45	0.52
5:BB:184:VAL:O	5:BB:188:LEU:HG	2.10	0.52
9:HH:155:LYS:HE3	9:HH:188:GLU:OE2	2.09	0.52
11:JJ:114:VAL:HB	11:JJ:126:ALA:HB1	1.92	0.52
12:LL:61:PRO:HB3	12:LL:141:ASN:ND2	2.25	0.52
14:OO:148:GLY:CA	19:aa:27:ALA:HB3	2.40	0.52
15:VV:74:LYS:NZ	15:VV:81:LYS:HD3	2.25	0.52
16:WW:83:LEU:HD23	16:WW:83:LEU:H	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:aa:44:ILE:HD12	19:aa:45:VAL:HG12	1.92	0.52
37:A:137:ILE:HB	37:A:155:LYS:HE3	1.90	0.52
38:B:264:PHE:CZ	50:O:65:ASN:HA	2.45	0.52
39:C:205:ARG:HG2	79:5:2297:G:H5'	1.92	0.52
39:C:289:LEU:HD12	39:C:293:LEU:HD23	1.92	0.52
39:C:318:PRO:HG3	39:C:324:ILE:HG22	1.92	0.52
44:H:44:GLU:HG2	79:5:4764:A:N3	2.25	0.52
46:J:23:ASN:HB3	46:J:71:HIS:HB3	1.92	0.52
50:O:60:LYS:HD2	79:5:2046:G:C4	2.44	0.52
50:O:120:VAL:O	50:O:124:LEU:HG	2.10	0.52
53:S:16:CYS:HA	53:S:54:MET:HE1	1.92	0.52
57:X:106:LYS:HE2	57:X:126:THR:HG23	1.91	0.52
58:Y:80:ILE:HD13	58:Y:101:PRO:HG3	1.92	0.52
64:e:58:ILE:HG13	79:5:1664:U:H5''	1.92	0.52
66:g:67:LEU:HD13	66:g:68:SER:O	2.10	0.52
67:h:56:ARG:HG2	81:8:65:A:H5'	1.91	0.52
78:t:109:ILE:HA	78:t:112:ILE:HD12	1.92	0.52
79:5:41:C:O2'	79:5:42:A:H5'	2.10	0.52
79:5:301:G:H2'	79:5:302:C:C6	2.44	0.52
79:5:1557:C:H2'	79:5:1558:A:C8	2.45	0.52
79:5:2355:G:H2'	79:5:2356:U:C6	2.45	0.52
79:5:2786:C:H4'	79:5:2787:A:C4	2.45	0.52
79:5:4297:G:H1	79:5:4313:A:H2	1.51	0.52
79:5:4507:A:H2'	79:5:4508:C:C6	2.45	0.52
80:7:82:G:H2'	80:7:83:A:C8	2.45	0.52
1:R:101:ILE:HD13	1:R:104:ARG:NH1	2.24	0.51
3:9:15:U:H2'	3:9:16:G:O4'	2.10	0.51
3:9:942:G:H2'	3:9:943:U:C6	2.45	0.51
3:9:1161:U:P	17:XX:12:LYS:HE3	2.50	0.51
3:9:1471:C:H2'	3:9:1472:C:O4'	2.10	0.51
3:9:1611:G:H4'	29:SS:86:ARG:NH1	2.25	0.51
3:9:1711:U:H2'	3:9:1712:A:C8	2.45	0.51
6:CC:182:CYS:HB3	16:WW:99:PHE:CZ	2.45	0.51
6:CC:196:ILE:HB	6:CC:223:TYR:HB2	1.92	0.51
9:HH:40:LEU:HA	9:HH:43:LEU:HG	1.93	0.51
9:HH:98:ARG:HB2	9:HH:125:VAL:HG13	1.92	0.51
19:aa:7:ASN:HB3	19:aa:13:LYS:NZ	2.25	0.51
22:DD:146:ARG:HG2	22:DD:148:LYS:NZ	2.25	0.51
24:KK:77:GLN:O	24:KK:80:ARG:HG2	2.10	0.51
25:MM:42:LEU:CD2	25:MM:68:LEU:HB3	2.40	0.51
28:RR:41:ILE:HG12	28:RR:43:SER:H	1.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:SS:113:ARG:O	29:SS:117:ILE:HG23	2.09	0.51
30:TT:110:LEU:HD12	30:TT:112:MET:CG	2.40	0.51
31:UU:107:GLU:OE2	31:UU:110:VAL:HG23	2.10	0.51
37:A:71:LYS:HB2	79:5:2595:C:OP1	2.10	0.51
43:G:242:ARG:NH2	81:8:154:G:H5'	2.25	0.51
44:H:92:MET:HE3	44:H:179:ILE:HG22	1.92	0.51
45:I:99:ILE:CG2	45:I:123:GLN:HB2	2.40	0.51
57:X:51:THR:HG22	79:5:2475:G:O6	2.11	0.51
64:e:50:LYS:HE3	79:5:1311:G:H4'	1.90	0.51
66:g:90:ARG:CD	79:5:4122:G:H4'	2.40	0.51
67:h:69:LEU:HD23	67:h:83:LEU:HD21	1.92	0.51
67:h:77:LYS:HD2	79:5:136:C:O2'	2.10	0.51
69:j:18:LEU:HA	69:j:25:LYS:HA	1.92	0.51
70:k:3:ARG:O	70:k:43:TYR:HA	2.10	0.51
78:t:110:VAL:HG13	78:t:161:GLU:HB2	1.93	0.51
79:5:710:G:H2'	79:5:711:A:C8	2.45	0.51
79:5:971(A):G:H4'	79:5:972:C:C5'	2.40	0.51
79:5:1617:G:H1'	79:5:2513:A:H62	1.73	0.51
79:5:2555:G:H2'	79:5:2556:G:H8	1.75	0.51
79:5:2577:C:H2'	79:5:2578:G:C8	2.45	0.51
79:5:4172:A:H2'	79:5:4173:G:H5'	1.91	0.51
79:5:4347:G:H2'	79:5:4348:A:C8	2.44	0.51
79:5:4475:G:OP2	79:5:4476:C:H5''	2.10	0.51
1:R:32:ILE:CG1	1:R:50:ILE:HD11	2.40	0.51
3:9:644:G:H2'	3:9:645:C:C6	2.46	0.51
3:9:1487:A:H1'	6:CC:118:ALA:HB1	1.92	0.51
3:9:1788:A:H2'	3:9:1789:G:O4'	2.10	0.51
6:CC:72:ASP:OD2	6:CC:74:LYS:HD2	2.10	0.51
7:EE:45:ILE:HG12	7:EE:80:ILE:HB	1.93	0.51
7:EE:141:THR:OG1	7:EE:145:ARG:HB3	2.10	0.51
8:GG:102:VAL:HG13	8:GG:106:LEU:CD1	2.40	0.51
10:II:132:GLU:HG2	10:II:135:GLU:HB3	1.92	0.51
11:JJ:136:ARG:HE	11:JJ:139:LYS:HA	1.75	0.51
14:OO:90:ILE:HG21	14:OO:93:LEU:HD11	1.91	0.51
14:OO:142:ARG:HH21	19:aa:27:ALA:HA	1.74	0.51
27:QQ:10:VAL:HB	27:QQ:25:CYS:HB2	1.93	0.51
30:TT:127:GLY:O	30:TT:131:LEU:HG	2.11	0.51
33:cc:31:ARG:HD3	33:cc:43:ILE:HG12	1.91	0.51
37:A:21:LYS:HG2	79:5:1541:C:C5'	2.39	0.51
38:B:176:LYS:HD2	79:5:4986:G:H5''	1.92	0.51
39:C:137:VAL:HG21	39:C:150:LEU:HD21	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:E:149:PRO:O	41:E:203:LYS:HE3	2.11	0.51
42:F:222:LYS:CE	79:5:1907:A:H5''	2.40	0.51
43:G:309:ALA:HA	43:G:312:LYS:HE3	1.92	0.51
44:H:92:MET:HG3	44:H:179:ILE:HG22	1.92	0.51
44:H:175:PHE:HZ	79:5:4478:G:H5'	1.74	0.51
47:L:88:LYS:O	47:L:92:ARG:HG3	2.10	0.51
53:S:111:ARG:HD2	79:5:2061:U:O2	2.11	0.51
55:U:87:THR:CG2	55:U:102:VAL:HG21	2.40	0.51
58:Y:86:GLN:HA	58:Y:97:VAL:H	1.76	0.51
59:Z:2:GLY:CA	62:c:41:GLY:HA3	2.41	0.51
62:c:28:VAL:CG1	62:c:33:GLN:HB3	2.40	0.51
63:d:36:VAL:HG13	63:d:41:ARG:HG3	1.91	0.51
64:e:99:ILE:HG12	64:e:108:ARG:CG	2.40	0.51
64:e:105:SER:HA	64:e:108:ARG:HB2	1.92	0.51
66:g:26:PRO:CD	79:5:2521:G:H4'	2.39	0.51
75:p:4:ARG:HD2	79:5:1554:A:OP2	2.10	0.51
77:s:38:LYS:CD	79:5:1972:G:H5'	2.41	0.51
79:5:434:A:H2'	79:5:435:A:O4'	2.11	0.51
79:5:651:C:H2'	79:5:652:G:C8	2.44	0.51
79:5:1098:G:H2'	79:5:1099:C:C6	2.46	0.51
79:5:1185:G:H2'	79:5:1186:U:C6	2.45	0.51
79:5:1388:A:H2'	79:5:1389:U:C6	2.46	0.51
79:5:1411:C:H2'	79:5:1411(A):G:C8	2.44	0.51
79:5:1583:A:H2'	79:5:1584:G:O4'	2.10	0.51
79:5:3658:C:H2'	79:5:3659:G:C8	2.45	0.51
79:5:3723:A:H2'	79:5:3724:A:C8	2.44	0.51
79:5:3880:G:H2'	79:5:3881:G:C8	2.45	0.51
79:5:4887:C:H42	79:5:4932:U:H3	1.58	0.51
81:8:147:G:H2'	81:8:148:A:C8	2.45	0.51
3:9:687:C:O2'	9:HH:103:LYS:HE2	2.10	0.51
3:9:1067:C:H3'	3:9:1068:G:H8	1.74	0.51
3:9:1478:U:H2'	3:9:1479:G:C8	2.46	0.51
3:9:1609:C:H2'	3:9:1610:G:H8	1.75	0.51
4:AA:19:LEU:HD13	28:RR:98:VAL:HG11	1.92	0.51
4:AA:76:VAL:HG22	4:AA:123:VAL:CG2	2.41	0.51
6:CC:112:VAL:HB	6:CC:114:LYS:NZ	2.25	0.51
8:GG:5:ILE:O	8:GG:124:LEU:HD21	2.10	0.51
9:HH:36:LEU:HD22	9:HH:75:ILE:HD11	1.92	0.51
17:XX:50:ILE:HG22	17:XX:73:GLN:O	2.09	0.51
27:QQ:116:ASP:HB3	27:QQ:119:LEU:HD23	1.93	0.51
29:SS:67:VAL:O	29:SS:71:MET:HG2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:TT:70:ALA:HB1	30:TT:74:SER:HB2	1.92	0.51
37:A:116:LEU:HD23	37:A:164:ALA:HB2	1.91	0.51
39:C:316:LYS:O	39:C:324:ILE:HG21	2.10	0.51
40:D:10:LYS:O	40:D:14:LYS:HD3	2.08	0.51
41:E:114:LYS:HG2	79:5:459:C:OP1	2.10	0.51
43:G:133:ILE:HD13	43:G:217:ILE:CG2	2.40	0.51
43:G:226:LEU:O	43:G:230:MET:HG2	2.10	0.51
44:H:51:LYS:HE2	44:H:53:LYS:HD3	1.93	0.51
45:I:52:MET:SD	45:I:135:ILE:HB	2.50	0.51
48:M:89:THR:HG22	48:M:91:TRP:N	2.25	0.51
51:P:16:LYS:HB3	51:P:149:ILE:CG2	2.39	0.51
53:S:147:ASP:HB3	53:S:150:ILE:CD1	2.40	0.51
54:T:17:ARG:HD3	54:T:47:THR:HG23	1.92	0.51
57:X:119:ILE:HG23	57:X:144:TYR:CD2	2.45	0.51
58:Y:38:LEU:HD11	58:Y:107:THR:O	2.11	0.51
64:e:87:VAL:HG23	76:r:34:ALA:HB1	1.92	0.51
65:f:49:TYR:HB2	65:f:101:ILE:HD13	1.91	0.51
73:n:4:LYS:HE3	73:n:5:TRP:CH2	2.45	0.51
78:t:18:THR:HB	78:t:57:ARG:HA	1.93	0.51
79:5:162:A:H2'	79:5:163:A:C8	2.46	0.51
79:5:1208:G:H2'	79:5:1209:U:C6	2.45	0.51
79:5:1594:C:H2'	79:5:1595:G:O4'	2.09	0.51
79:5:1995:G:H2'	79:5:1996:C:C6	2.45	0.51
79:5:2385:U:H2'	79:5:2386:U:C6	2.46	0.51
79:5:3762:U:H2'	79:5:3763:A:O4'	2.10	0.51
79:5:4340:U:H2'	79:5:4341:C:O4'	2.10	0.51
80:7:31:G:O2'	80:7:32:A:H5'	2.11	0.51
3:9:305:U:H5''	3:9:306:C:C5	2.45	0.51
3:9:528:A:H2'	3:9:529:A:C8	2.46	0.51
3:9:1004:U:H2'	3:9:1005:G:H8	1.76	0.51
3:9:1122:A:H5'	5:BB:204:ILE:O	2.11	0.51
3:9:1819:A:P	73:n:13:LEU:HD11	2.50	0.51
7:EE:64:ILE:HD12	18:YY:17:LEU:HB2	1.93	0.51
11:JJ:135:ILE:HG22	11:JJ:159:PHE:HA	1.92	0.51
12:LL:77:VAL:HG13	12:LL:86:ILE:HG23	1.93	0.51
13:NN:46:THR:O	13:NN:50:ILE:HG13	2.10	0.51
13:NN:110:ASP:O	13:NN:114:ARG:HG2	2.10	0.51
23:FF:122:ARG:HG2	33:cc:59:LEU:CD2	2.40	0.51
29:SS:61:GLU:O	29:SS:64:VAL:HG22	2.11	0.51
33:cc:31:ARG:HD2	33:cc:42:ILE:O	2.11	0.51
36:gg:83:TRP:HA	36:gg:107:ASP:OD1	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:A:179:ILE:HG13	79:5:3653:A:H5''	1.92	0.51
43:G:103:ASP:OD1	43:G:105:THR:HG23	2.10	0.51
48:M:127:VAL:HG22	50:O:178:ARG:HA	1.92	0.51
50:O:109:PRO:HG2	50:O:112:TYR:HD2	1.75	0.51
52:Q:79:THR:HA	52:Q:99:LYS:HG3	1.92	0.51
56:V:36:ASN:OD1	56:V:67:LYS:HG2	2.11	0.51
59:Z:73:LYS:NZ	79:5:2580:U:H5''	2.25	0.51
60:a:2:PRO:HB2	60:a:5:LEU:HD23	1.92	0.51
63:d:23:ARG:HG3	63:d:25:TYR:CE2	2.45	0.51
63:d:29:ILE:HD11	63:d:84:ILE:CG1	2.41	0.51
67:h:109:ARG:HD3	67:h:112:ARG:HH21	1.75	0.51
68:i:72:PHE:O	68:i:75:LYS:HG3	2.10	0.51
69:j:71:TYR:OH	79:5:343:C:H1'	2.10	0.51
79:5:216:C:H5''	79:5:219:G:O2'	2.10	0.51
79:5:744:G:H2'	79:5:745:G:C8	2.45	0.51
79:5:1444:G:H21	79:5:2110:G:H1	1.58	0.51
79:5:2005:G:C2'	79:5:2006:U:H5'	2.40	0.51
79:5:2870:A:H2'	79:5:2871:A:C8	2.45	0.51
79:5:4435:U:H2'	79:5:4436:U:C2	2.46	0.51
79:5:4456:C:H2'	79:5:4457:U:H5'	1.93	0.51
79:5:4650:G:H2'	79:5:4651:A:O4'	2.09	0.51
80:7:3:C:H2'	80:7:4:U:C6	2.45	0.51
80:7:11:A:C2'	80:7:12:U:H5''	2.40	0.51
3:9:120:U:H1'	7:EE:33:THR:O	2.10	0.51
3:9:378:U:O2'	3:9:379:C:H5'	2.11	0.51
3:9:830:A:H61	3:9:844:U:H3	1.57	0.51
3:9:1259:A:H2'	3:9:1260:A:H5''	1.92	0.51
4:AA:66:VAL:HG21	4:AA:185:MET:CG	2.40	0.51
6:CC:185:THR:OG1	6:CC:194:ARG:HG3	2.11	0.51
10:II:61:ASP:HA	10:II:78:ILE:HD11	1.91	0.51
18:YY:12:PHE:HA	18:YY:23:MET:SD	2.50	0.51
23:FF:145:ARG:O	23:FF:149:GLN:HG2	2.11	0.51
25:MM:35:ILE:HD12	25:MM:61:TYR:CE1	2.46	0.51
28:RR:23:ARG:NH2	36:gg:194:TYR:HB3	2.26	0.51
29:SS:111:LEU:O	29:SS:115:LYS:HG2	2.11	0.51
38:B:53:MET:HA	38:B:77:THR:HA	1.92	0.51
40:D:29:ASP:HB2	40:D:150:LEU:CD2	2.41	0.51
46:J:66:GLU:O	46:J:68:ILE:HG13	2.10	0.51
46:J:141:ILE:HG12	46:J:144:LYS:NZ	2.25	0.51
48:M:24:LEU:HB2	48:M:43:THR:HG21	1.90	0.51
56:V:51:ARG:HH12	79:5:3842:C:H4'	1.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:Z:42:LEU:HD11	59:Z:72:VAL:CG2	2.40	0.51
59:Z:102:ARG:HH12	59:Z:106:LEU:HD22	1.75	0.51
64:e:12:ILE:HG23	64:e:66:THR:OG1	2.11	0.51
64:e:22:ARG:HD2	64:e:36:ARG:CB	2.39	0.51
66:g:11:LEU:HD12	66:g:18:ASN:HB2	1.92	0.51
66:g:69:LYS:HA	66:g:72:LYS:HE2	1.93	0.51
67:h:17:LEU:HB3	67:h:61:ILE:HD11	1.92	0.51
67:h:48:ARG:O	67:h:52:LYS:HG2	2.11	0.51
78:t:37:LEU:HD22	78:t:69:ALA:HB3	1.93	0.51
79:5:1550:G:H2'	79:5:1551:C:C6	2.46	0.51
79:5:1552:G:H21	79:5:1575:A:H62	1.58	0.51
79:5:1848:C:H2'	79:5:1849:U:O4'	2.10	0.51
79:5:2011:C:H2'	79:5:2012:A:O4'	2.11	0.51
79:5:2350:U:H5''	79:5:2351:C:H5''	1.93	0.51
79:5:3781:C:H2'	79:5:3782:C:C6	2.46	0.51
79:5:3873:G:H2'	79:5:3874:G:C8	2.45	0.51
3:9:443:U:H1'	8:GG:89:THR:O	2.11	0.51
3:9:563:G:H5'	11:JJ:133:ARG:NH2	2.25	0.51
3:9:582:U:H2'	3:9:583:A:H5''	1.92	0.51
3:9:1426:U:H2'	3:9:1427:C:C6	2.46	0.51
3:9:1803:U:H2'	3:9:1804:U:C6	2.45	0.51
5:BB:144:LYS:CE	5:BB:206:PRO:HB2	2.41	0.51
9:HH:10:LYS:HZ1	9:HH:16:PRO:HB3	1.75	0.51
10:II:36:THR:HB	10:II:57:ALA:O	2.11	0.51
11:JJ:113:GLN:NE2	11:JJ:116:LYS:HD3	2.26	0.51
12:LL:103:GLU:HA	17:XX:8:ARG:NH1	2.26	0.51
13:NN:41:ALA:CB	13:NN:75:LEU:HD11	2.41	0.51
15:VV:74:LYS:HZ2	15:VV:81:LYS:HD3	1.75	0.51
16:WW:39:THR:O	16:WW:43:LYS:HG2	2.10	0.51
18:YY:18:LEU:HD13	18:YY:20:ARG:NH2	2.26	0.51
22:DD:133:GLY:HA3	22:DD:156:LEU:O	2.11	0.51
22:DD:226:GLN:HG3	36:gg:186:THR:HB	1.92	0.51
23:FF:103:LEU:HA	32:ZZ:66:LYS:NZ	2.26	0.51
32:ZZ:100:VAL:O	32:ZZ:108:ILE:HB	2.10	0.51
38:B:11:HIS:CE1	38:B:237:THR:HA	2.46	0.51
43:G:170:ARG:O	43:G:173:LYS:HG3	2.10	0.51
43:G:199:LEU:CD1	43:G:205:ALA:HB2	2.40	0.51
47:L:10:LEU:HD22	47:L:11:LYS:H	1.75	0.51
48:M:24:LEU:HD21	48:M:86:TRP:CD1	2.45	0.51
48:M:36:ALA:HB2	48:M:52:PHE:CZ	2.44	0.51
52:Q:86:VAL:HB	52:Q:105:VAL:HG13	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S:162:GLN:HE22	79:5:1919:G:H4'	1.76	0.51
62:c:45:LEU:HD11	62:c:72:HIS:HB3	1.92	0.51
64:e:5:ARG:HG3	79:5:454:U:O2'	2.11	0.51
76:r:97:ILE:CD1	76:r:107:ARG:HA	2.41	0.51
78:t:147:HIS:O	78:t:151:ILE:HG12	2.10	0.51
79:5:964:A:H2'	79:5:965:G:O4'	2.11	0.51
79:5:1307:A:H2'	79:5:1308:C:O4'	2.10	0.51
79:5:1478:C:H2'	79:5:1479:G:C8	2.46	0.51
79:5:1646:A:H2'	79:5:1647:U:C6	2.46	0.51
79:5:1661:C:H5''	79:5:2345:G:O2'	2.10	0.51
79:5:1881:C:H5'	79:5:2281:U:C1'	2.41	0.51
79:5:4624:A:H2'	79:5:4625:C:C6	2.46	0.51
79:5:4637:G:H2'	79:5:4638:U:C6	2.45	0.51
79:5:4642:U:H2'	79:5:4643:G:H8	1.76	0.51
79:5:5004:C:H2'	79:5:5005:G:O4'	2.10	0.51
82:AT:36:C:N3	83:1:1501:U:O4	2.44	0.51
1:R:102:LEU:HD13	1:R:127:VAL:HG12	1.93	0.51
1:R:102:LEU:HD22	1:R:138:LEU:HD22	1.92	0.51
3:9:65:C:C6	8:GG:174:PRO:HB3	2.45	0.51
3:9:211:G:H2'	3:9:212:C:C6	2.46	0.51
3:9:458:A:N6	3:9:471:G:H1	2.05	0.51
3:9:479:C:H2'	3:9:480:G:H8	1.75	0.51
3:9:587:A:H1'	3:9:590:A:C2'	2.40	0.51
3:9:616:A:H1'	21:ee:85:VAL:HG21	1.93	0.51
3:9:1019:C:OP1	13:NN:70:LYS:HD3	2.10	0.51
3:9:1542:C:OP1	30:TT:62:ARG:HD3	2.09	0.51
4:AA:52:LYS:O	4:AA:56:GLU:HG2	2.09	0.51
4:AA:198:MET:HG2	4:AA:199:PRO:HD2	1.92	0.51
5:BB:125:VAL:HG21	5:BB:173:THR:HG22	1.92	0.51
5:BB:157:GLN:O	5:BB:161:VAL:HG23	2.11	0.51
6:CC:69:LEU:HD11	6:CC:273:LEU:HD11	1.93	0.51
8:GG:138:ALA:O	8:GG:142:ARG:HG3	2.10	0.51
9:HH:31:GLU:CA	9:HH:40:LEU:HD23	2.40	0.51
10:II:202:ILE:O	10:II:206:LYS:HG2	2.10	0.51
12:LL:49:GLU:HG3	12:LL:118:ARG:CZ	2.41	0.51
14:OO:99:ALA:H	14:OO:133:THR:HG22	1.76	0.51
23:FF:99:ILE:HD11	32:ZZ:108:ILE:HD12	1.93	0.51
28:RR:14:ARG:O	28:RR:18:GLU:HG2	2.11	0.51
30:TT:125:PRO:HA	30:TT:128:GLN:HG3	1.91	0.51
32:ZZ:50:PHE:CE2	32:ZZ:58:LEU:HD13	2.45	0.51
39:C:13:GLU:OE2	39:C:155:GLU:HB2	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:I:17:TYR:O	45:I:96:VAL:HG12	2.09	0.51
45:I:86:HIS:HB3	45:I:139:ARG:CG	2.41	0.51
47:L:32:LYS:HE2	79:5:1361:G:OP2	2.10	0.51
52:Q:152:PHE:CE2	79:5:1847:C:H4'	2.46	0.51
53:S:113:MET:HE2	53:S:124:ILE:HG21	1.93	0.51
53:S:115:ALA:HB1	79:5:1925:G:N3	2.26	0.51
56:V:13:LYS:HE3	56:V:128:LEU:HD22	1.92	0.51
57:X:127:LEU:HG	57:X:135:LYS:O	2.11	0.51
68:i:15:HIS:HB3	79:5:72:C:O4'	2.10	0.51
76:r:26:SER:HB2	76:r:36:ASN:ND2	2.26	0.51
79:5:56:A:H2'	79:5:57:G:C8	2.46	0.51
79:5:115:C:H2'	79:5:116:G:O4'	2.11	0.51
79:5:483:G:H5''	79:5:484:U:C2'	2.41	0.51
79:5:1513:U:H2'	79:5:1514:U:C6	2.45	0.51
79:5:1789:C:H2'	79:5:1790:U:O4'	2.10	0.51
79:5:2701:U:O2	79:5:2715:G:N2	2.41	0.51
79:5:2817:C:H4'	79:5:4655:A:O2'	2.11	0.51
79:5:4418:G:O6	79:5:4421:C:H2'	2.11	0.51
79:5:4991:U:H2'	79:5:4992:G:H8	1.76	0.51
1:R:3:MET:HE1	79:5:2385:U:C5'	2.40	0.51
1:R:26:PRO:HB3	79:5:2386:U:O2'	2.11	0.51
3:9:27:A:H2'	3:9:28:U:H6	1.75	0.51
3:9:540:U:H2'	3:9:542:U:OP2	2.11	0.51
3:9:1495:G:H2'	3:9:1496:U:C6	2.46	0.51
4:AA:136:GLU:HA	4:AA:139:TYR:CE2	2.46	0.51
9:HH:40:LEU:CD1	9:HH:43:LEU:HD12	2.41	0.51
10:II:12:ARG:HD2	10:II:18:ARG:NH1	2.26	0.51
10:II:89:GLU:O	10:II:93:THR:HG22	2.10	0.51
11:JJ:26:ASP:O	11:JJ:30:LYS:HG2	2.10	0.51
19:aa:39:PHE:HD1	19:aa:41:ILE:HD11	1.75	0.51
22:DD:80:PRO:HB2	22:DD:83:SER:HB2	1.91	0.51
29:SS:7:GLU:O	29:SS:8:LYS:HG3	2.11	0.51
36:gg:296:GLN:NE2	36:gg:312:VAL:HB	2.26	0.51
37:A:96:LEU:HD11	75:p:86:LEU:HD12	1.93	0.51
38:B:57:VAL:HB	38:B:367:PHE:HB3	1.92	0.51
38:B:393:LYS:HB3	38:B:394:LYS:HE2	1.93	0.51
39:C:86:ARG:HD2	39:C:89:GLN:OE1	2.11	0.51
47:L:57:PRO:HB3	47:L:76:PHE:CE2	2.46	0.51
49:N:68:ARG:HD3	49:N:125:SER:O	2.11	0.51
49:N:158:HIS:CD2	79:5:55:G:H4'	2.46	0.51
51:P:83:TRP:O	79:5:3856:A:H5''	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:P:117:ILE:HD13	51:P:148:MET:HB3	1.92	0.51
54:T:36:LYS:HA	54:T:64:VAL:HG12	1.91	0.51
54:T:68:THR:HG21	79:5:4313:A:O2'	2.10	0.51
56:V:26:ILE:HG13	56:V:37:LEU:HD23	1.93	0.51
63:d:114:PHE:HA	63:d:117:LEU:HD23	1.93	0.51
64:e:76:LYS:NZ	79:5:2324:C:H1'	2.26	0.51
70:k:38:CYS:HB2	70:k:41:TYR:O	2.11	0.51
73:n:13:LEU:HA	73:n:16:LYS:HE3	1.92	0.51
74:o:88:CYS:HA	79:5:4230:C:OP2	2.11	0.51
78:t:76:SER:HB2	79:5:1974:U:OP2	2.11	0.51
79:5:312:G:H1	79:5:325:U:H3	1.59	0.51
79:5:674:G:H2'	79:5:675:C:C6	2.46	0.51
79:5:685:C:H2'	79:5:686:A:C2	2.46	0.51
79:5:1976:G:H2'	79:5:1977:C:C6	2.45	0.51
79:5:2455:G:H1'	79:5:2471:G:C5	2.46	0.51
79:5:4649:G:H2'	79:5:4650:G:O4'	2.11	0.51
3:9:106:C:H2'	3:9:107:A:H8	1.75	0.51
3:9:169:U:H5''	8:GG:135:PRO:HA	1.93	0.51
3:9:218:U:H2'	3:9:219:U:H6	1.75	0.51
3:9:514:U:H2'	3:9:515:G:O4'	2.10	0.51
3:9:815:U:H2'	3:9:816:A:C8	2.46	0.51
3:9:926:A:H2'	3:9:927:C:H6	1.75	0.51
3:9:1093:A:H2'	3:9:1094:C:H6	1.76	0.51
7:EE:115:THR:HG23	7:EE:118:GLU:H	1.75	0.51
7:EE:185:GLY:H	7:EE:189:LEU:HD13	1.75	0.51
11:JJ:57:ALA:O	11:JJ:61:LEU:HG	2.11	0.51
12:LL:112:HIS:CG	12:LL:134:LEU:HD22	2.46	0.51
17:XX:24:ASP:O	17:XX:28:LYS:HG2	2.11	0.51
22:DD:49:ILE:HG23	22:DD:89:GLU:OE1	2.11	0.51
25:MM:35:ILE:HG12	35:ff:102:VAL:HG21	1.92	0.51
25:MM:40:LYS:NZ	35:ff:130:VAL:HG22	2.26	0.51
27:QQ:68:ILE:HG21	27:QQ:88:ILE:HG22	1.92	0.51
30:TT:44:GLU:OE2	30:TT:45:LEU:HD22	2.11	0.51
32:ZZ:74:SER:HA	32:ZZ:79:ILE:H	1.75	0.51
36:gg:67:SER:HB3	36:gg:83:TRP:NE1	2.23	0.51
37:A:174:ARG:HB3	79:5:3683:C:O2	2.11	0.51
38:B:189:THR:HG23	38:B:192:GLU:H	1.75	0.51
38:B:224:LYS:HG2	38:B:340:THR:HB	1.93	0.51
41:E:156:LEU:O	41:E:161:ARG:HG3	2.10	0.51
43:G:148:LEU:O	43:G:151:LEU:HG	2.11	0.51
45:I:86:HIS:O	45:I:138:ILE:HD12	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:N:27:CYS:SG	49:N:124:ASP:HB3	2.51	0.51
49:N:96:ARG:HA	49:N:171:SER:OG	2.11	0.51
54:T:100:LYS:HA	54:T:103:ASP:OD1	2.11	0.51
59:Z:58:GLY:O	59:Z:62:ILE:HG13	2.10	0.51
62:c:21:VAL:HG21	62:c:104:ILE:HB	1.93	0.51
65:f:46:ARG:HD2	65:f:71:TRP:HE3	1.76	0.51
65:f:65:ASN:HB2	65:f:67:THR:HG22	1.92	0.51
66:g:43:LYS:CE	79:5:2597:G:H5''	2.41	0.51
74:o:9:ARG:HB3	79:5:4290:U:OP1	2.10	0.51
75:p:51:ALA:H	75:p:54:ILE:HG23	1.75	0.51
77:s:53:VAL:HA	77:s:88:PHE:O	2.11	0.51
78:t:109:ILE:CD1	78:t:143:VAL:HG21	2.39	0.51
79:5:323:C:H1'	79:5:4355:G:N2	2.25	0.51
79:5:374:G:H2'	79:5:375:G:O4'	2.11	0.51
79:5:689:U:H2'	79:5:690:C:C6	2.46	0.51
79:5:1177:U:H2'	79:5:1178:G:C8	2.46	0.51
79:5:2088:A:H5''	79:5:2089:G:H3'	1.92	0.51
79:5:2362:U:H2'	79:5:2363:A:C8	2.46	0.51
79:5:2443:G:H2'	79:5:2444:U:O4'	2.11	0.51
79:5:2622:G:C4'	79:5:2701:U:H4'	2.40	0.51
79:5:4953:G:H2'	79:5:4954:G:C8	2.46	0.51
2:W:20:ARG:HG3	56:V:94:VAL:HG21	1.92	0.51
3:9:5:U:O2'	3:9:602:G:H4'	2.11	0.51
3:9:339:A:H2'	3:9:340:C:H5	1.75	0.51
3:9:521:A:H2'	3:9:522:A:O4'	2.11	0.51
3:9:824:C:H2'	3:9:825:A:O4'	2.11	0.51
3:9:857:U:H2'	3:9:858:A:C8	2.46	0.51
3:9:976:G:H2'	3:9:977:C:C6	2.45	0.51
3:9:1223:A:H3'	3:9:1224:G:H5''	1.93	0.51
3:9:1567:G:H2'	3:9:1568:C:O4'	2.11	0.51
3:9:1857:G:H3'	14:OO:146:ARG:NH2	2.26	0.51
7:EE:64:ILE:HG21	18:YY:17:LEU:HD13	1.93	0.51
19:aa:87:ARG:HD3	19:aa:92:ARG:HA	1.93	0.51
24:KK:29:MET:HB3	24:KK:42:ASN:HB3	1.91	0.51
27:QQ:97:GLN:OE1	27:QQ:105:LYS:HG3	2.11	0.51
30:TT:14:PHE:HE2	30:TT:62:ARG:HD2	1.76	0.51
36:gg:31:ILE:HG21	36:gg:299:PHE:CE2	2.46	0.51
38:B:92:TYR:CE1	38:B:101:THR:HG22	2.46	0.51
38:B:238:LYS:NZ	79:5:4458:C:H5'	2.26	0.51
39:C:168:VAL:HG13	39:C:177:TRP:CZ3	2.46	0.51
39:C:283:LYS:HG3	52:Q:103:LEU:O	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:C:346:ASN:HB2	79:5:724:C:H4'	1.92	0.51
40:D:106:ALA:HB1	40:D:171:LEU:HD23	1.92	0.51
41:E:61:ARG:HD2	79:5:978:G:OP1	2.11	0.51
43:G:126:ARG:HD3	43:G:294:VAL:O	2.10	0.51
47:L:47:ALA:O	47:L:149:GLN:HB2	2.11	0.51
47:L:125:VAL:HG12	47:L:144:LEU:HD23	1.94	0.51
53:S:30:MET:HE3	53:S:47:PHE:CE2	2.45	0.51
55:U:19:LEU:HD23	55:U:19:LEU:H	1.75	0.51
59:Z:14:LEU:HD11	59:Z:81:MET:CB	2.41	0.51
60:a:125:LYS:HE2	60:a:147:VAL:CB	2.40	0.51
60:a:132:ARG:NH2	79:5:1468:C:H5''	2.26	0.51
69:j:17:THR:HG22	69:j:27:TYR:O	2.11	0.51
69:j:20:ARG:HH12	69:j:21:ARG:HB2	1.76	0.51
77:s:38:LYS:HE3	79:5:1972:G:H5'	1.93	0.51
78:t:142:ASN:HB3	78:t:146:ARG:NH2	2.26	0.51
79:5:26:C:H1'	79:5:338:A:C2	2.46	0.51
79:5:1555:G:H1	79:5:1572:U:H3	1.58	0.51
79:5:1739:G:H1'	79:5:1742:A:N6	2.26	0.51
79:5:2293:U:H2'	79:5:2294:G:C8	2.46	0.51
79:5:2444:U:O2'	81:8:112:G:H4'	2.11	0.51
79:5:4070:U:H2'	79:5:4071:U:C6	2.46	0.51
79:5:4344:U:H2'	79:5:4345:C:C6	2.46	0.51
79:5:4468:U:O2'	79:5:4592:C:H5''	2.11	0.51
79:5:4768:G:H2'	79:5:4769:G:C8	2.46	0.51
79:5:5005:G:H1'	79:5:5042:A:N6	2.26	0.51
81:8:66:A:H2'	81:8:67:U:C6	2.46	0.51
3:9:17:C:H2'	3:9:18:C:H6	1.75	0.50
3:9:27:A:H2'	3:9:28:U:C6	2.47	0.50
3:9:89:C:H2'	3:9:90:G:H8	1.76	0.50
3:9:316:G:H2'	3:9:317:C:C6	2.46	0.50
3:9:349:A:H2'	3:9:350:C:C6	2.46	0.50
3:9:816:A:H2'	3:9:817:G:O4'	2.12	0.50
3:9:889:U:C2'	3:9:890:U:H5''	2.41	0.50
3:9:926:A:H2'	3:9:927:C:C6	2.46	0.50
3:9:1402:A:H3'	3:9:1405:A:H62	1.76	0.50
3:9:1410:C:H2'	3:9:1411:G:C8	2.47	0.50
3:9:1542:C:H5''	30:TT:62:ARG:NH1	2.25	0.50
3:9:1644:C:H4'	27:QQ:140:ARG:CD	2.40	0.50
3:9:1696:C:H5''	3:9:1703:C:H4'	1.92	0.50
3:9:1797:U:H2'	3:9:1798:C:C6	2.46	0.50
3:9:1868:U:O4	19:aa:98:PRO:HG2	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:BB:225:LEU:HD11	5:BB:229:MET:HE2	1.91	0.50
8:GG:221:LYS:O	8:GG:225:GLN:HG3	2.12	0.50
12:LL:102:PHE:CD1	17:XX:7:LEU:HD13	2.45	0.50
18:YY:26:ASP:OD2	18:YY:68:LYS:HE3	2.10	0.50
19:aa:44:ILE:HD12	19:aa:45:VAL:H	1.76	0.50
22:DD:177:LEU:HG	22:DD:180:GLY:H	1.75	0.50
26:PP:75:VAL:HG22	26:PP:93:MET:CB	2.41	0.50
27:QQ:62:ARG:HD2	27:QQ:96:TYR:HE2	1.76	0.50
27:QQ:72:VAL:HG21	27:QQ:84:ILE:HD11	1.92	0.50
28:RR:57:LEU:O	28:RR:61:ILE:HG13	2.11	0.50
31:UU:22:ILE:HG13	31:UU:89:ILE:O	2.11	0.50
36:gg:270:LEU:HD22	36:gg:310:TRP:CZ3	2.46	0.50
37:A:94:ALA:HB3	37:A:102:LEU:CD2	2.41	0.50
38:B:46:PHE:CE2	38:B:207:VAL:HG12	2.46	0.50
38:B:77:THR:HG23	38:B:336:CYS:HA	1.93	0.50
39:C:305:PRO:HB3	52:Q:38:ARG:NH2	2.25	0.50
41:E:45:HIS:O	79:5:980:U:H4'	2.11	0.50
42:F:35:LYS:O	42:F:39:LYS:HG2	2.12	0.50
42:F:144:PRO:HA	42:F:239:ILE:HD13	1.92	0.50
44:H:70:VAL:O	44:H:73:ILE:HG13	2.10	0.50
45:I:54:SER:HB3	45:I:129:VAL:HG21	1.93	0.50
45:I:97:ILE:HD11	45:I:126:VAL:CB	2.41	0.50
45:I:103:LEU:HD11	45:I:112:GLN:N	2.26	0.50
46:J:50:PHE:CG	46:J:67:LYS:HD2	2.46	0.50
47:L:59:VAL:HB	79:5:74:G:C5'	2.41	0.50
48:M:11:ARG:O	48:M:27:ILE:HG22	2.12	0.50
50:O:140:ARG:O	50:O:144:GLU:HG2	2.11	0.50
52:Q:7:HIS:HA	52:Q:10:ASP:OD2	2.11	0.50
56:V:85:ARG:CD	79:5:2846:G:H4'	2.38	0.50
56:V:104:VAL:HG21	56:V:132:ILE:HD12	1.93	0.50
58:Y:32:SER:OG	58:Y:49:ILE:HD11	2.10	0.50
58:Y:33:PRO:HD3	79:5:239:C:H5'	1.93	0.50
59:Z:25:ILE:HG12	59:Z:43:VAL:HG12	1.93	0.50
62:c:49:ALA:HB1	62:c:77:ASN:HA	1.93	0.50
67:h:87:LYS:HD2	69:j:80:GLU:HG3	1.93	0.50
70:k:26:LYS:HB2	70:k:35:LYS:HE2	1.93	0.50
74:o:34:TYR:OH	79:5:3729:U:H5''	2.11	0.50
76:r:16:PHE:HA	76:r:27:THR:HG22	1.92	0.50
79:5:178:C:H2'	79:5:179:G:C8	2.46	0.50
79:5:745:G:H2'	79:5:746:A:C8	2.46	0.50
79:5:1440:U:H2'	79:5:1441:C:C5	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:1550:G:H2'	79:5:1551:C:H6	1.76	0.50
79:5:2008:U:H1'	79:5:2010:A:C5'	2.40	0.50
79:5:2571:C:H2'	79:5:2572:C:C6	2.46	0.50
79:5:2841:G:H3'	79:5:2842:G:H5''	1.92	0.50
79:5:3730:U:H2'	79:5:3731:C:C6	2.46	0.50
79:5:3821:A:H2'	79:5:3822:U:O4'	2.11	0.50
79:5:3917:A:O2'	79:5:3918:G:H5'	2.10	0.50
79:5:4213:A:H5''	79:5:4214:A:H5'	1.92	0.50
79:5:5002:U:O2	79:5:5045:G:N2	2.35	0.50
81:8:75:G:H2'	81:8:76:C:C6	2.45	0.50
1:R:96:MET:O	1:R:99:MET:HG3	2.10	0.50
1:R:109:TYR:HB3	1:R:115:ILE:CD1	2.40	0.50
3:9:350:C:H2'	3:9:351:G:C8	2.46	0.50
3:9:729:C:H2'	3:9:730:C:C6	2.46	0.50
3:9:810:A:C5'	3:9:811:A:H5'	2.42	0.50
3:9:1588:A:H2'	3:9:1589:A:C8	2.47	0.50
3:9:1740:C:H42	3:9:1794:C:H42	1.59	0.50
7:EE:72:ILE:CG2	7:EE:90:ILE:HG12	2.41	0.50
8:GG:25:ARG:HA	8:GG:28:TYR:CD2	2.46	0.50
9:HH:152:ARG:NH2	9:HH:154:ILE:HB	2.26	0.50
11:JJ:32:ILE:HG22	21:ee:108:ARG:NH2	2.26	0.50
12:LL:152:LYS:HZ3	13:NN:133:ARG:HH12	1.60	0.50
13:NN:75:LEU:CD1	13:NN:80:LEU:HB3	2.41	0.50
16:WW:34:ILE:O	16:WW:38:LEU:HG	2.10	0.50
17:XX:52:LEU:HD11	17:XX:80:LYS:NZ	2.26	0.50
19:aa:45:VAL:HG21	19:aa:49:ALA:HB3	1.92	0.50
22:DD:51:LEU:CD1	22:DD:91:VAL:HG22	2.42	0.50
22:DD:76:ARG:CG	24:KK:22:VAL:HG11	2.41	0.50
22:DD:210:ILE:HG12	28:RR:39:ALA:CB	2.41	0.50
23:FF:108:PRO:HA	23:FF:111:VAL:CG2	2.41	0.50
26:PP:22:LEU:HD22	26:PP:109:PRO:HG3	1.92	0.50
27:QQ:21:ALA:HB1	27:QQ:70:VAL:HG11	1.92	0.50
33:cc:17:VAL:HG22	33:cc:30:VAL:HG22	1.93	0.50
34:dd:31:ILE:HD11	34:dd:40:ARG:HB3	1.94	0.50
37:A:39:GLY:HA2	37:A:93:LYS:HE2	1.92	0.50
38:B:66:LYS:H	38:B:66:LYS:HD3	1.75	0.50
38:B:117:ARG:CZ	79:5:4579:U:H5''	2.42	0.50
39:C:298:ILE:HD13	52:Q:131:PRO:HG3	1.92	0.50
39:C:327:LYS:NZ	79:5:976:G:H4'	2.26	0.50
41:E:181:PRO:HB2	41:E:184:LEU:HG	1.92	0.50
41:E:263:LYS:O	41:E:267:VAL:HG12	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:F:29:ILE:HA	42:F:32:LEU:CD2	2.41	0.50
42:F:29:ILE:O	42:F:32:LEU:HG	2.11	0.50
47:L:3:PRO:HD2	60:a:41:HIS:CE1	2.46	0.50
48:M:74:ARG:O	48:M:78:GLU:HG2	2.11	0.50
51:P:118:GLN:NE2	79:5:423:G:H1'	2.27	0.50
56:V:42:VAL:HG11	56:V:54:ALA:O	2.11	0.50
58:Y:57:VAL:HG13	58:Y:63:LYS:HA	1.92	0.50
61:b:102:PRO:HA	61:b:109:ARG:HH12	1.76	0.50
64:e:114:ARG:HD2	64:e:117:GLN:OE1	2.11	0.50
67:h:85:PRO:HB2	67:h:87:LYS:CE	2.41	0.50
79:5:1087:A:H2'	79:5:1088:C:C6	2.46	0.50
79:5:1323:A:N6	79:5:3875:G:H21	2.10	0.50
79:5:2386:U:H2'	79:5:2387:G:C8	2.46	0.50
79:5:2730:U:H2'	79:5:2731:C:C6	2.46	0.50
79:5:3707:U:H2'	79:5:3708:C:H6	1.77	0.50
79:5:3932:U:H2'	79:5:3933:G:C8	2.46	0.50
79:5:4067:U:H2'	79:5:4068:U:C6	2.46	0.50
79:5:4460:U:H2'	79:5:4461:C:C6	2.46	0.50
79:5:4947:U:H2'	79:5:4948:C:H5'	1.93	0.50
80:7:27:G:H2'	80:7:28:C:C6	2.45	0.50
2:W:14:TYR:OH	38:B:380:GLN:HG2	2.12	0.50
3:9:17:C:H2'	3:9:18:C:C6	2.46	0.50
3:9:20:G:H4'	3:9:620:G:C6	2.45	0.50
3:9:526:A:H2'	3:9:527:C:C6	2.46	0.50
3:9:1004:U:H2'	3:9:1005:G:C8	2.46	0.50
3:9:1064:C:H5'	14:OO:151:LEU:HD11	1.94	0.50
3:9:1174:U:H2'	3:9:1175:G:C8	2.46	0.50
3:9:1248:U:H2'	3:9:1249:C:C6	2.46	0.50
3:9:1373:C:H2'	3:9:1374:C:C6	2.45	0.50
3:9:1528:G:H2'	3:9:1529:C:C6	2.46	0.50
7:EE:98:ASN:HB2	7:EE:114:ILE:O	2.11	0.50
8:GG:23:LYS:HB3	8:GG:41:LEU:CD2	2.41	0.50
11:JJ:63:LEU:HD13	11:JJ:64:ASP:O	2.12	0.50
15:VV:32:ILE:CG2	15:VV:60:ARG:HD2	2.41	0.50
18:YY:32:LYS:HD3	18:YY:33:ALA:H	1.77	0.50
26:PP:49:LEU:HB2	26:PP:54:HIS:NE2	2.25	0.50
26:PP:84:ILE:HD11	26:PP:113:GLY:HA2	1.92	0.50
27:QQ:54:PRO:HG3	27:QQ:88:ILE:HD11	1.92	0.50
36:gg:25:PRO:HA	36:gg:293:ALA:CB	2.41	0.50
36:gg:197:THR:HG21	36:gg:238:ALA:HA	1.93	0.50
39:C:84:THR:HG23	39:C:86:ARG:H	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:C:334:THR:HG21	42:F:50:TYR:OH	2.11	0.50
42:F:212:LEU:HB3	42:F:246:MET:HE2	1.93	0.50
50:O:7:LEU:HD12	50:O:118:MET:CE	2.42	0.50
50:O:34:VAL:HG11	50:O:112:TYR:CE1	2.46	0.50
51:P:32:THR:O	51:P:36:ILE:HG22	2.12	0.50
51:P:39:MET:SD	51:P:43:LYS:HD3	2.51	0.50
55:U:40:GLU:HA	55:U:43:LEU:CD2	2.40	0.50
63:d:64:ILE:HD11	79:5:2373:C:H4'	1.94	0.50
64:e:69:MET:HE2	64:e:75:ARG:NH1	2.26	0.50
65:f:27:LEU:HB3	65:f:83:MET:CE	2.42	0.50
69:j:11:ARG:HG3	79:5:1534:A:O2'	2.12	0.50
69:j:55:ARG:HA	69:j:58:THR:CG2	2.41	0.50
74:o:35:ALA:HB3	74:o:38:LYS:CD	2.40	0.50
77:s:36:GLY:HA2	79:5:1969:G:O3'	2.11	0.50
79:5:155:C:H2'	79:5:156:G:O4'	2.11	0.50
79:5:757:G:O2'	79:5:758:G:H5'	2.11	0.50
79:5:1564:A:H2'	79:5:1565:A:O4'	2.09	0.50
79:5:2553:A:H1'	79:5:2554:U:C6	2.46	0.50
79:5:2669:C:H2'	79:5:2670:C:O4'	2.12	0.50
79:5:2857:A:H2'	79:5:2858:A:O4'	2.11	0.50
79:5:3774:A:H2'	79:5:3775:A:C4	2.46	0.50
79:5:4717:A:H2'	79:5:4718:G:O4'	2.11	0.50
81:8:28:C:H2'	81:8:29:G:C8	2.46	0.50
1:R:6:LEU:O	1:R:10:LEU:HG	2.12	0.50
1:R:125:LEU:HB3	79:5:1558:A:C5'	2.41	0.50
3:9:84:A:H2'	3:9:85:A:O4'	2.12	0.50
3:9:160:U:O2'	3:9:161:U:H3'	2.11	0.50
3:9:941:C:H2'	3:9:942:G:H8	1.76	0.50
3:9:1032:C:H2'	3:9:1033:G:O4'	2.12	0.50
3:9:1144:A:H2'	3:9:1145:A:C8	2.46	0.50
3:9:1146:C:H2'	3:9:1147:C:C6	2.47	0.50
3:9:1539:U:H5'	30:TT:45:LEU:HD21	1.94	0.50
3:9:1622:U:O4	26:PP:122:THR:HG23	2.11	0.50
3:9:1722:G:H2'	3:9:1723:G:C8	2.46	0.50
4:AA:91:ALA:HB1	4:AA:96:ALA:O	2.11	0.50
6:CC:243:ALA:HA	6:CC:246:LYS:NZ	2.26	0.50
7:EE:129:ILE:HA	7:EE:138:HIS:O	2.10	0.50
7:EE:252:ARG:NH2	11:JJ:72:PHE:HA	2.26	0.50
10:II:36:THR:CG2	10:II:96:LEU:HB2	2.41	0.50
15:VV:59:ILE:HG22	15:VV:65:SER:HA	1.92	0.50
18:YY:27:VAL:HG11	18:YY:35:VAL:CG2	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:YY:42:GLU:O	18:YY:46:LYS:HG2	2.12	0.50
23:FF:39:ILE:HA	23:FF:68:ILE:HD11	1.93	0.50
26:PP:90:VAL:HA	26:PP:107:ILE:HG13	1.92	0.50
27:QQ:133:GLY:O	27:QQ:140:ARG:HB2	2.11	0.50
29:SS:72:GLN:HG3	29:SS:73:ASN:OD1	2.11	0.50
36:gg:112:ALA:HB2	36:gg:154:VAL:O	2.11	0.50
36:gg:118:ARG:HD2	36:gg:134:THR:CG2	2.42	0.50
38:B:99:LEU:CD2	79:5:4582:C:H4'	2.41	0.50
38:B:189:THR:O	38:B:192:GLU:HG3	2.12	0.50
38:B:229:LYS:HB3	38:B:233:SER:OG	2.11	0.50
38:B:364:ASP:HB3	38:B:366:LYS:NZ	2.26	0.50
43:G:216:PRO:HG2	43:G:219:LEU:CD2	2.40	0.50
43:G:296:GLY:HA2	79:5:4162:C:C5	2.46	0.50
48:M:110:TYR:CE1	48:M:114:LYS:HE2	2.47	0.50
49:N:150:TRP:CE3	49:N:151:ILE:HG13	2.46	0.50
50:O:15:LEU:HD21	50:O:125:LYS:HA	1.93	0.50
50:O:15:LEU:HB2	50:O:18:ARG:HB2	1.92	0.50
50:O:93:LYS:HZ3	79:5:1308:C:H4'	1.76	0.50
51:P:41:ILE:O	51:P:45:THR:HG23	2.10	0.50
53:S:94:TYR:HE2	53:S:138:ARG:HD3	1.77	0.50
56:V:69:LYS:NZ	56:V:71:GLU:HB3	2.25	0.50
59:Z:53:VAL:CG2	59:Z:62:ILE:HG12	2.40	0.50
60:a:103:VAL:HG12	60:a:108:TYR:O	2.11	0.50
61:b:25:ARG:NH2	79:5:1844:G:H4'	2.26	0.50
62:c:31:TYR:CE1	62:c:56:ARG:HB3	2.46	0.50
67:h:105:LYS:HD3	79:5:154:G:H4'	1.94	0.50
74:o:28:LYS:HE2	79:5:4344:U:H1'	1.92	0.50
78:t:109:ILE:HG23	78:t:132:ILE:HD12	1.93	0.50
79:5:106:A:H2'	79:5:107:G:O4'	2.12	0.50
79:5:290:U:H2'	79:5:291:U:C6	2.46	0.50
79:5:717:U:O2	79:5:951:G:N2	2.32	0.50
79:5:971(A):G:H4'	79:5:972:C:H5'	1.93	0.50
79:5:1073:G:H2'	79:5:1074:G:H8	1.77	0.50
79:5:1864:G:H2'	79:5:1865:G:O4'	2.10	0.50
79:5:2330:G:H2'	79:5:2331:G:C4	2.46	0.50
79:5:2350:U:C5'	79:5:2351:C:H5''	2.42	0.50
79:5:2457:G:H4'	79:5:2470:C:N4	2.26	0.50
79:5:3896:C:H2'	79:5:3897:G:C4	2.47	0.50
79:5:4153:C:H2'	79:5:4154:G:C8	2.46	0.50
79:5:4372:U:H5'	79:5:4373:G:H5'	1.94	0.50
81:8:73:U:H2'	81:8:74:U:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:8:140:C:H2'	81:8:141:C:C6	2.47	0.50
2:W:49:ILE:HG22	2:W:52:THR:HG23	1.92	0.50
3:9:12:U:H1'	3:9:1357:A:N3	2.25	0.50
3:9:84:A:H4'	18:YY:120:THR:HA	1.94	0.50
3:9:155:G:O2'	3:9:156:G:H5'	2.12	0.50
3:9:158:A:H2'	3:9:159:A:O4'	2.12	0.50
3:9:345:U:H2'	3:9:346:C:C6	2.46	0.50
3:9:509:G:H2'	3:9:510:G:H8	1.76	0.50
3:9:523:A:H2'	3:9:524:U:O4'	2.11	0.50
3:9:636:C:H2'	3:9:637:U:C6	2.47	0.50
3:9:658:U:H1'	17:XX:17:ARG:HH11	1.76	0.50
3:9:1286:G:O6	25:MM:37:GLU:HG3	2.12	0.50
3:9:1376:A:H2'	3:9:1377:U:O4'	2.10	0.50
3:9:1644:C:H4'	27:QQ:140:ARG:HD2	1.93	0.50
4:AA:127:PRO:HD2	4:AA:152:SER:HB3	1.93	0.50
5:BB:101:HIS:O	5:BB:217:MET:HB2	2.11	0.50
7:EE:60:GLU:OE2	18:YY:87:PRO:HD3	2.12	0.50
7:EE:64:ILE:HD11	18:YY:18:LEU:CD2	2.41	0.50
7:EE:103:TYR:HB2	7:EE:182:MET:CE	2.41	0.50
8:GG:176:ILE:HB	8:GG:179:LEU:HD22	1.94	0.50
11:JJ:16:PRO:HG2	11:JJ:24:ARG:NH1	2.25	0.50
11:JJ:38:ARG:HD3	21:ee:104:ARG:CB	2.41	0.50
13:NN:37:ILE:HD11	13:NN:63:VAL:HG21	1.93	0.50
13:NN:70:LYS:HE3	13:NN:73:ARG:CZ	2.42	0.50
14:OO:125:LYS:NZ	19:aa:58:VAL:HG22	2.27	0.50
16:WW:6:VAL:HG13	16:WW:29:PRO:HG2	1.93	0.50
22:DD:50:ILE:HD11	22:DD:86:LEU:HD23	1.92	0.50
23:FF:49:LEU:HD13	27:QQ:50:LYS:HZ2	1.75	0.50
23:FF:123:GLU:HB2	23:FF:139:VAL:O	2.11	0.50
24:KK:3:MET:HG2	24:KK:8:ARG:HB3	1.93	0.50
26:PP:121:ILE:HD13	29:SS:120:HIS:HD2	1.75	0.50
27:QQ:10:VAL:HG21	27:QQ:95:TYR:HA	1.93	0.50
37:A:96:LEU:HD11	75:p:86:LEU:CD1	2.41	0.50
37:A:199:VAL:HA	79:5:3651:A:OP1	2.11	0.50
40:D:279:ARG:HG3	79:5:1177:U:O2'	2.12	0.50
40:D:289:ARG:O	40:D:293:ARG:HG2	2.12	0.50
43:G:127:LEU:HD11	79:5:4076:G:C2	2.46	0.50
43:G:155:TYR:HD2	43:G:189:LEU:HG	1.77	0.50
46:J:77:ALA:O	46:J:81:GLU:HG2	2.11	0.50
49:N:174:LEU:HA	49:N:183:THR:HG21	1.92	0.50
50:O:14:HIS:O	50:O:125:LYS:HB2	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:P:39:MET:O	51:P:114:ILE:HG22	2.11	0.50
51:P:84:PRO:HB2	51:P:87:SER:HB2	1.92	0.50
51:P:123:PRO:HG3	81:8:14:U:H4'	1.91	0.50
53:S:15:ARG:HH22	53:S:18:PRO:HG3	1.76	0.50
56:V:25:VAL:HG22	79:5:2848:G:OP1	2.11	0.50
59:Z:18:TYR:HB3	59:Z:21:ARG:HG3	1.93	0.50
61:b:37:PRO:HA	61:b:40:LEU:CD2	2.41	0.50
63:d:85:ARG:HG2	63:d:109:VAL:HG11	1.92	0.50
65:f:28:LEU:CD1	65:f:84:VAL:HG23	2.41	0.50
67:h:109:ARG:HA	67:h:112:ARG:HE	1.77	0.50
72:m:86:LYS:HB2	72:m:89:CYS:SG	2.51	0.50
75:p:18:TYR:O	75:p:22:LEU:HB2	2.11	0.50
78:t:29:ALA:HB3	78:t:30:PRO:HD3	1.92	0.50
78:t:130:LYS:HB2	78:t:151:ILE:CD1	2.42	0.50
79:5:381:U:H2'	79:5:382:G:O4'	2.11	0.50
79:5:746:A:O2'	79:5:747:A:H5'	2.12	0.50
79:5:1075:G:H2'	79:5:1076:C:H5'	1.94	0.50
79:5:2803:U:H2'	79:5:2804:C:C6	2.47	0.50
79:5:3729:U:H2'	79:5:3730:U:C6	2.46	0.50
79:5:3866:C:H2'	79:5:3867:A:O4'	2.10	0.50
79:5:4532:U:H2'	79:5:4533:A:O4'	2.12	0.50
2:W:19:ARG:HH21	2:W:31:PHE:HB3	1.76	0.50
3:9:453:C:H2'	3:9:454:U:C6	2.47	0.50
3:9:495:U:H2'	3:9:496:C:C6	2.47	0.50
3:9:648:A:H2'	3:9:649:U:C6	2.46	0.50
3:9:675:U:H2'	3:9:676:C:C6	2.47	0.50
3:9:941:C:H2'	3:9:942:G:C8	2.45	0.50
3:9:974:C:H2'	3:9:975:G:H8	1.76	0.50
3:9:984:C:H2'	3:9:985:G:C8	2.47	0.50
3:9:1320:G:H2'	3:9:1321:G:O4'	2.12	0.50
3:9:1562:C:H2'	3:9:1563:G:C8	2.47	0.50
3:9:1612:G:O2'	3:9:1613:G:H5'	2.12	0.50
3:9:1671:G:H2'	3:9:1672:U:C6	2.45	0.50
3:9:1781:A:H2'	3:9:1782:G:H8	1.76	0.50
4:AA:74:VAL:O	4:AA:96:ALA:HB1	2.11	0.50
6:CC:216:MET:HA	6:CC:216:MET:HE3	1.92	0.50
8:GG:45:TRP:HZ3	8:GG:121:ILE:HB	1.76	0.50
10:II:115:SER:HA	10:II:137:LEU:HD21	1.94	0.50
11:JJ:102:ILE:HA	11:JJ:105:PHE:HD2	1.77	0.50
11:JJ:136:ARG:HD2	11:JJ:139:LYS:HA	1.94	0.50
13:NN:23:PRO:HG2	13:NN:26:LEU:CB	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:aa:38:LYS:HD3	19:aa:83:VAL:HG11	1.93	0.50
21:ee:109:MET:HG2	21:ee:113:ARG:HH12	1.77	0.50
29:SS:20:ILE:HD11	29:SS:33:ILE:HD11	1.92	0.50
33:cc:20:ARG:HD2	33:cc:25:GLY:O	2.12	0.50
36:gg:286:CYS:SG	36:gg:300:ALA:HB1	2.52	0.50
37:A:5:ILE:CD1	37:A:8:GLN:HG2	2.42	0.50
38:B:175:GLN:CG	79:5:4985:U:H4'	2.39	0.50
40:D:22:ARG:HB2	40:D:30:TYR:CE2	2.47	0.50
43:G:86:GLU:HB2	43:G:88:ARG:CZ	2.42	0.50
47:L:204:GLU:HA	47:L:207:VAL:HG22	1.92	0.50
50:O:77:SER:HB2	50:O:104:VAL:HG13	1.93	0.50
50:O:116:LYS:HD3	53:S:169:THR:HB	1.92	0.50
59:Z:113:GLU:O	59:Z:117:LYS:HG2	2.12	0.50
60:a:8:THR:O	60:a:12:ARG:HG2	2.12	0.50
65:f:19:ARG:HD2	79:5:1885:G:OP1	2.12	0.50
76:r:92:SER:O	76:r:96:MET:HG2	2.11	0.50
76:r:118:LEU:HA	76:r:121:GLN:HG2	1.93	0.50
79:5:215:C:OP1	79:5:216:C:H5'	2.11	0.50
79:5:1534:A:H2'	79:5:1637:A:N1	2.26	0.50
79:5:1573:G:H2'	79:5:1574:G:C4	2.46	0.50
79:5:1806:G:H2'	79:5:1807:C:H6	1.77	0.50
79:5:2006:U:H2'	79:5:2007:G:O4'	2.11	0.50
79:5:2684:C:H2'	79:5:2685:C:C6	2.46	0.50
79:5:3944:G:H2'	79:5:3945:A:C8	2.46	0.50
79:5:4551:U:H2'	79:5:4552:U:C6	2.47	0.50
80:7:35:U:H2'	80:7:36:C:O4'	2.11	0.50
81:8:145:C:H2'	81:8:146:U:C6	2.46	0.50
1:R:15:LEU:HG	1:R:52:ARG:HH11	1.76	0.50
3:9:544:G:H2'	3:9:545:A:H8	1.77	0.50
3:9:846:G:H2'	7:EE:19:MET:HE2	1.92	0.50
3:9:1122:A:H1'	5:BB:146:ARG:HH11	1.75	0.50
3:9:1339:U:H2'	3:9:1340:U:C6	2.47	0.50
7:EE:214:ASN:ND2	7:EE:244:ILE:HD13	2.26	0.50
11:JJ:122:SER:H	11:JJ:125:HIS:HB3	1.77	0.50
12:LL:105:ARG:HD3	12:LL:106:HIS:N	2.27	0.50
12:LL:111:VAL:HG11	12:LL:128:VAL:CG1	2.42	0.50
13:NN:95:ALA:HB1	13:NN:99:ARG:HH12	1.77	0.50
24:KK:41:PRO:O	24:KK:45:VAL:HG23	2.11	0.50
24:KK:84:HIS:HB2	25:MM:27:ILE:HG23	1.92	0.50
26:PP:60:LEU:HD13	26:PP:89:MET:SD	2.52	0.50
29:SS:36:VAL:HG23	29:SS:40:TYR:HD2	1.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:A:202:VAL:CG2	79:5:3689:G:H5''	2.42	0.50
38:B:252:ALA:HB3	79:5:4457:U:O2'	2.12	0.50
39:C:73:VAL:HB	39:C:78:ARG:NH2	2.26	0.50
39:C:326:LEU:HD11	39:C:333:LYS:CB	2.42	0.50
40:D:35:ARG:HH12	79:5:4325:A:H2'	1.77	0.50
42:F:112:ARG:HH22	42:F:205:ASN:HA	1.75	0.50
43:G:155:TYR:OH	43:G:187:PRO:HB2	2.11	0.50
45:I:8:CYS:SG	79:5:4405:G:H5''	2.51	0.50
47:L:58:ILE:HB	47:L:70:VAL:HG21	1.94	0.50
50:O:65:ASN:ND2	50:O:68:ARG:HG3	2.26	0.50
51:P:15:CYS:SG	51:P:102:ALA:HB2	2.52	0.50
51:P:36:ILE:HG21	51:P:91:LEU:HD11	1.93	0.50
53:S:2:LYS:HD3	79:5:2062:C:OP1	2.11	0.50
53:S:107:THR:O	53:S:111:ARG:HG2	2.11	0.50
53:S:143:LYS:HA	53:S:146:HIS:CE1	2.47	0.50
54:T:142:ARG:HB3	54:T:142:ARG:HH11	1.77	0.50
59:Z:102:ARG:HH11	59:Z:103:ASP:HB2	1.77	0.50
60:a:71:PRO:HD2	60:a:109:TYR:CD2	2.47	0.50
60:a:74:ASN:OD1	60:a:112:LEU:HB3	2.12	0.50
65:f:56:ASN:HD21	65:f:64:PRO:HB2	1.77	0.50
66:g:67:LEU:HD12	66:g:72:LYS:HB3	1.92	0.50
70:k:34:PHE:CE2	70:k:56:LEU:HD23	2.47	0.50
75:p:36:LYS:HG2	75:p:45:THR:HG22	1.93	0.50
77:s:56:GLY:HA2	77:s:61:MET:SD	2.51	0.50
79:5:23:C:H2'	79:5:24:G:O4'	2.12	0.50
79:5:643:C:H2'	79:5:644:G:C8	2.46	0.50
79:5:981:C:H2'	79:5:982:U:C6	2.47	0.50
79:5:1389:U:H2'	79:5:1390:G:C8	2.47	0.50
79:5:1620:U:H2'	79:5:1621:A:C8	2.47	0.50
79:5:1942:A:H1'	79:5:4433:G:O5'	2.12	0.50
79:5:2411:C:H1'	79:5:2527:A:N3	2.27	0.50
79:5:2594:C:H2'	79:5:2595:C:C6	2.47	0.50
79:5:3799:A:C2	79:5:4506:C:H1'	2.46	0.50
79:5:5056:A:H2'	79:5:5057:C:C6	2.46	0.50
3:9:112:U:H5''	3:9:113:G:H2'	1.94	0.50
3:9:1256:G:O6	31:UU:65:THR:HG22	2.12	0.50
3:9:1303:C:H2'	3:9:1304:U:C6	2.47	0.50
3:9:1634:A:H2'	3:9:1635:C:O4'	2.11	0.50
3:9:1683:C:C4	33:cc:24:GLN:HG2	2.47	0.50
11:JJ:17:ARG:H	11:JJ:17:ARG:HD3	1.77	0.50
11:JJ:125:HIS:O	11:JJ:129:LEU:HG	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:JJ:137:VAL:HG13	11:JJ:157:ILE:HD13	1.94	0.50
18:YY:87:PRO:HB2	18:YY:89:HIS:CD2	2.47	0.50
22:DD:60:GLY:HA3	22:DD:65:ARG:HG3	1.94	0.50
23:FF:92:ILE:HD13	23:FF:169:ILE:HD13	1.92	0.50
23:FF:144:LEU:HD23	33:cc:49:PRO:CG	2.41	0.50
27:QQ:134:GLY:CA	27:QQ:140:ARG:HA	2.42	0.50
36:gg:172:LYS:HG2	36:gg:193:GLY:O	2.12	0.50
38:B:135:LYS:HA	38:B:138:GLN:NE2	2.27	0.50
40:D:140:GLY:O	79:5:1819:G:H4'	2.11	0.50
42:F:91:VAL:HG13	42:F:113:LEU:HD21	1.92	0.50
42:F:149:VAL:HA	42:F:152:LEU:HG	1.94	0.50
44:H:168:LYS:HD3	44:H:168:LYS:H	1.76	0.50
45:I:15:LYS:HG3	79:5:1863:U:OP1	2.12	0.50
46:J:33:LEU:HD11	46:J:67:LYS:O	2.12	0.50
46:J:143:ASP:O	80:7:43:U:H4'	2.11	0.50
47:L:147:ALA:HB1	67:h:120:ALA:CB	2.42	0.50
47:L:198:ARG:HH12	79:5:1485:C:H2'	1.77	0.50
48:M:35:ARG:CZ	48:M:51:PRO:HB3	2.40	0.50
49:N:115:VAL:HA	49:N:134:LEU:CD1	2.41	0.50
50:O:25:LYS:HD3	79:5:1913:C:C5'	2.41	0.50
53:S:98:ARG:HB2	53:S:142:VAL:CG1	2.41	0.50
55:U:63:LEU:HD12	55:U:71:THR:O	2.12	0.50
60:a:103:VAL:CG1	60:a:108:TYR:HB2	2.42	0.50
61:b:95:ARG:O	61:b:99:ILE:HG22	2.12	0.50
64:e:87:VAL:HG23	76:r:34:ALA:CB	2.41	0.50
67:h:47:ILE:CD1	81:8:49:G:H5'	2.42	0.50
67:h:98:HIS:O	67:h:102:LEU:HG	2.11	0.50
79:5:679:C:H2'	79:5:680:G:C8	2.46	0.50
79:5:1326:A:H2'	79:5:1327:C:C6	2.47	0.50
79:5:1328:G:H2'	79:5:1329:G:C8	2.46	0.50
79:5:1381:U:H5''	79:5:1382:G:C8	2.47	0.50
79:5:1431:C:H2'	79:5:1432:G:O4'	2.12	0.50
79:5:1463:C:H2'	79:5:1464:C:C6	2.47	0.50
79:5:1464:C:H2'	79:5:1465:G:O4'	2.12	0.50
79:5:1814:C:O3'	79:5:1815:G:H2'	2.11	0.50
79:5:2017:A:H3'	79:5:2018:C:C5	2.47	0.50
79:5:2283:G:H2'	79:5:2284:G:C8	2.46	0.50
79:5:2498:C:H2'	79:5:2499:C:C6	2.47	0.50
79:5:2813:A:H2'	79:5:2815:A:H8	1.77	0.50
79:5:3883:U:H2'	79:5:3884:U:C6	2.46	0.50
79:5:4173:G:H2'	79:5:4174:U:C6	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:4948:C:H3'	79:5:4949:G:H5''	1.94	0.50
80:7:1:G:H2'	80:7:2:U:O4'	2.11	0.50
81:8:108:A:H2'	81:8:109:C:O4'	2.11	0.50
3:9:54:A:H4'	3:9:507:G:OP1	2.11	0.50
3:9:509:G:H2'	3:9:510:G:C8	2.47	0.50
3:9:519:A:O2'	11:JJ:9:CYS:HB2	2.12	0.50
3:9:668:A:H5''	3:9:1198:G:H4'	1.94	0.50
3:9:688:U:H5	9:HH:103:LYS:H	1.60	0.50
3:9:931:C:H2'	3:9:932:G:C8	2.47	0.50
3:9:1173:A:O2'	3:9:1716:C:H4'	2.12	0.50
3:9:1186:U:H2'	3:9:1187:G:O4'	2.11	0.50
3:9:1616:U:H2'	3:9:1617:G:C8	2.47	0.50
3:9:1657:G:H2'	3:9:1658:G:C8	2.47	0.50
4:AA:37:TYR:HB3	4:AA:162:PRO:HG3	1.94	0.50
5:BB:113:MET:HE1	5:BB:140:VAL:HG11	1.94	0.50
5:BB:179:ASN:OD1	5:BB:183:GLU:HB2	2.12	0.50
7:EE:185:GLY:N	7:EE:189:LEU:HD13	2.27	0.50
7:EE:206:ASP:HB2	7:EE:222:LEU:HD23	1.93	0.50
9:HH:17:ASP:HB3	9:HH:20:GLU:HG3	1.94	0.50
13:NN:89:TYR:CE1	13:NN:150:VAL:HG23	2.47	0.50
14:OO:34:PHE:CZ	14:OO:100:THR:HA	2.47	0.50
16:WW:55:ASP:OD1	20:bb:25:VAL:HG13	2.12	0.50
17:XX:54:LYS:HZ1	17:XX:94:ILE:HG13	1.77	0.50
19:aa:10:ARG:HB2	19:aa:33:ASP:OD2	2.12	0.50
19:aa:12:LYS:CG	19:aa:15:ARG:HB2	2.41	0.50
23:FF:144:LEU:HD23	33:cc:49:PRO:HG2	1.92	0.50
27:QQ:16:LYS:NZ	27:QQ:83:ALA:HA	2.27	0.50
29:SS:16:LEU:O	29:SS:18:THR:HG23	2.11	0.50
38:B:77:THR:CG2	38:B:336:CYS:HA	2.41	0.50
39:C:70:GLY:HA2	79:5:3905:A:O3'	2.12	0.50
39:C:144:ILE:HG22	39:C:147:VAL:HB	1.93	0.50
39:C:171:LEU:HD12	39:C:177:TRP:CE3	2.47	0.50
40:D:63:GLN:HG2	40:D:77:ALA:CB	2.41	0.50
41:E:121:THR:HB	64:e:90:MET:O	2.12	0.50
42:F:30:LYS:NZ	79:5:1438:U:H5''	2.27	0.50
43:G:215:ASP:HB3	43:G:216:PRO:HD3	1.93	0.50
45:I:40:LYS:HA	45:I:40:LYS:NZ	2.26	0.50
45:I:191:ILE:CD1	45:I:198:LYS:HB3	2.41	0.50
47:L:182:LEU:O	47:L:186:ARG:HG3	2.12	0.50
49:N:73:ARG:NH2	49:N:92:LEU:HD21	2.27	0.50
50:O:48:TYR:O	50:O:51:LYS:HG3	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:O:79:ILE:HD11	50:O:138:LEU:HD21	1.94	0.50
51:P:12:THR:HA	51:P:105:LYS:HZ1	1.77	0.50
53:S:23:ARG:CD	53:S:24:THR:HG22	2.39	0.50
54:T:70:HIS:O	54:T:92:ARG:HG3	2.12	0.50
55:U:84:LYS:HG2	55:U:88:LYS:HE2	1.94	0.50
58:Y:12:SER:HA	58:Y:15:ARG:CD	2.41	0.50
61:b:54:LEU:O	61:b:58:GLN:HG2	2.12	0.50
61:b:102:PRO:HA	61:b:109:ARG:HH22	1.77	0.50
65:f:23:GLU:OE1	79:5:439:G:H1'	2.12	0.50
66:g:21:ARG:HH11	66:g:35:THR:HG22	1.77	0.50
66:g:23:SER:OG	66:g:33:LEU:HD23	2.12	0.50
66:g:45:ALA:HB1	79:5:2596:G:H4'	1.93	0.50
77:s:6:ARG:O	77:s:10:LYS:HD2	2.11	0.50
77:s:41:GLN:HE21	77:s:41:GLN:H	1.60	0.50
78:t:18:THR:CG2	78:t:57:ARG:HG3	2.42	0.50
79:5:307:A:H2'	79:5:308:G:N9	2.27	0.50
79:5:724:C:H2'	79:5:725:G:C8	2.46	0.50
79:5:956:A:H1'	79:5:2076:G:H5''	1.94	0.50
79:5:2056:G:O2'	79:5:2057:A:H3'	2.12	0.50
79:5:2411:C:H2'	79:5:2412:A:C8	2.47	0.50
79:5:3598:C:H2'	79:5:3599:A:H8	1.75	0.50
79:5:4689:U:H2'	79:5:4690:G:O4'	2.11	0.50
80:7:74:A:N1	80:7:100:A:H5'	2.27	0.50
81:8:23:C:H3'	81:8:24:G:H5'	1.94	0.50
3:9:77:A:H2	8:GG:175:LYS:HG3	1.76	0.49
3:9:293:C:H4'	12:LL:38:LYS:NZ	2.26	0.49
3:9:981:A:H2'	3:9:982:G:C8	2.47	0.49
3:9:991:G:O6	3:9:1134:G:H4'	2.12	0.49
3:9:1614:A:H2'	3:9:1615:U:C6	2.46	0.49
3:9:1856:C:H2'	3:9:1857:G:C8	2.47	0.49
4:AA:60:LEU:HD11	15:VV:78:ILE:CG2	2.42	0.49
6:CC:251:LEU:HB3	16:WW:70:ASN:OD1	2.12	0.49
6:CC:254:ASP:HB3	15:VV:1:MET:HE3	1.93	0.49
7:EE:10:LYS:HA	7:EE:27:PHE:HB3	1.94	0.49
7:EE:42:LEU:HD12	7:EE:109:PHE:CG	2.47	0.49
7:EE:237:SER:O	7:EE:238:LEU:HD13	2.12	0.49
9:HH:83:LEU:CD1	9:HH:92:VAL:HG11	2.42	0.49
11:JJ:111:GLN:HB2	11:JJ:145:PRO:HB2	1.92	0.49
13:NN:95:ALA:O	13:NN:99:ARG:HG2	2.12	0.49
17:XX:16:HIS:CE1	17:XX:20:GLN:HG3	2.47	0.49
18:YY:5:VAL:HB	18:YY:43:LYS:HZ3	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:bb:34:ASP:O	20:bb:43:ILE:HD11	2.11	0.49
22:DD:68:GLU:O	22:DD:72:VAL:HG23	2.12	0.49
23:FF:44:LYS:HE3	27:QQ:114:GLN:NE2	2.27	0.49
24:KK:84:HIS:CD2	25:MM:27:ILE:HG12	2.47	0.49
26:PP:105:VAL:HG22	29:SS:118:ARG:NH1	2.27	0.49
29:SS:98:VAL:HG11	29:SS:106:LYS:HD2	1.94	0.49
37:A:183:GLY:HA3	79:5:1613:A:H5''	1.93	0.49
37:A:202:VAL:HG23	79:5:3689:G:H5''	1.93	0.49
39:C:45:ARG:NH2	79:5:2295:C:H1'	2.27	0.49
39:C:345:ARG:O	39:C:348:LYS:HG2	2.12	0.49
41:E:193:HIS:CG	41:E:195:LYS:HE2	2.46	0.49
43:G:211:ALA:HB1	43:G:240:LYS:HB3	1.94	0.49
43:G:223:LEU:HB3	43:G:224:PRO:HD3	1.94	0.49
47:L:16:LYS:HE2	79:5:46:U:OP1	2.12	0.49
48:M:17:PHE:CZ	48:M:54:CYS:HA	2.47	0.49
53:S:53:LYS:HD3	80:7:75:G:C5	2.47	0.49
53:S:76:LYS:HB2	53:S:131:GLU:OE2	2.12	0.49
55:U:99:TRP:HB3	55:U:114:TYR:CE2	2.47	0.49
56:V:26:ILE:HG22	56:V:101:ASN:HB2	1.94	0.49
58:Y:26:ARG:HA	58:Y:29:ILE:HG12	1.94	0.49
58:Y:74:TYR:OH	81:8:74:U:H3'	2.12	0.49
58:Y:86:GLN:CB	58:Y:96:HIS:HA	2.42	0.49
59:Z:22:LYS:HE3	59:Z:134:LEU:HB2	1.93	0.49
60:a:2:PRO:HG3	79:5:1509:C:H5''	1.93	0.49
62:c:51:ASN:CG	62:c:77:ASN:HB2	2.37	0.49
68:i:60:LEU:CD1	68:i:65:LYS:HB2	2.42	0.49
75:p:15:GLY:HA2	79:5:2876:G:O2'	2.12	0.49
77:s:27:CYS:HB2	77:s:90:PHE:CE1	2.47	0.49
78:t:130:LYS:HZ3	78:t:151:ILE:HD12	1.77	0.49
79:5:1679:A:O2'	79:5:1680:G:H5'	2.12	0.49
79:5:3890:A:H2'	79:5:3891:A:O4'	2.12	0.49
3:9:367:U:C2'	3:9:368:U:H5''	2.42	0.49
3:9:394:G:H5'	12:LL:81:LYS:HD2	1.94	0.49
3:9:574:A:H4'	18:YY:89:HIS:HB2	1.94	0.49
3:9:806:U:H2'	3:9:807:G:C8	2.47	0.49
3:9:952:G:N2	14:OO:52:THR:HG21	2.25	0.49
3:9:1272:C:H2'	3:9:1273:C:C6	2.47	0.49
3:9:1277:C:H2'	3:9:1278:A:C8	2.47	0.49
3:9:1590:C:C4	3:9:1591:C:H1'	2.47	0.49
3:9:1633:A:H2'	3:9:1634:A:C8	2.47	0.49
3:9:1810:U:H2'	3:9:1811:C:C6	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CC:68:ARG:HA	6:CC:68:ARG:HH11	1.77	0.49
8:GG:6:SER:HA	8:GG:13:GLN:HB3	1.94	0.49
10:II:196:GLU:HA	10:II:199:LEU:CD2	2.42	0.49
11:JJ:13:TYR:HB3	11:JJ:45:ARG:HA	1.94	0.49
12:LL:17:PHE:CZ	12:LL:19:ASN:HB2	2.47	0.49
15:VV:68:SER:O	15:VV:72:LEU:HG	2.12	0.49
17:XX:33:GLY:O	17:XX:37:LYS:HG2	2.12	0.49
20:bb:36:LYS:HB2	20:bb:43:ILE:CG1	2.42	0.49
23:FF:92:ILE:CD1	23:FF:169:ILE:HD13	2.42	0.49
24:KK:84:HIS:CB	25:MM:27:ILE:HG23	2.42	0.49
29:SS:3:LEU:O	32:ZZ:50:PHE:HB2	2.12	0.49
29:SS:116:LYS:HE2	79:5:1765:A:N1	2.27	0.49
29:SS:124:ARG:HE	29:SS:131:VAL:HA	1.76	0.49
33:cc:14:VAL:HG23	33:cc:56:LEU:HD23	1.94	0.49
35:ff:140:TYR:OH	35:ff:145:CYS:HA	2.12	0.49
37:A:150:LEU:HD13	79:5:3661:G:C5	2.47	0.49
38:B:76:VAL:CG1	38:B:332:MET:HB2	2.43	0.49
38:B:157:CYS:HB3	38:B:160:ILE:HD11	1.93	0.49
40:D:211:LEU:HD12	40:D:223:PHE:HE2	1.77	0.49
41:E:179:THR:CB	41:E:189:LEU:HD13	2.43	0.49
44:H:150:ASP:OD1	44:H:153:LEU:HB2	2.12	0.49
48:M:15:VAL:CG2	48:M:21:ALA:HA	2.42	0.49
49:N:108:ARG:CZ	79:5:2461:G:H4'	2.42	0.49
49:N:132:VAL:HG13	49:N:134:LEU:HD21	1.93	0.49
54:T:92:ARG:HG2	54:T:94:GLU:OE1	2.12	0.49
56:V:18:LEU:HD22	56:V:56:GLY:N	2.27	0.49
58:Y:26:ARG:O	58:Y:29:ILE:HG13	2.13	0.49
63:d:86:VAL:CG2	63:d:106:VAL:HG13	2.42	0.49
74:o:80:LYS:NZ	79:5:4346:U:H5''	2.26	0.49
76:r:65:LYS:HD3	76:r:77:TYR:HE1	1.77	0.49
78:t:78:SER:O	78:t:82:ILE:HG12	2.11	0.49
79:5:1:C:H2'	79:5:2:G:C8	2.47	0.49
79:5:517:C:H2'	79:5:518:C:H6	1.76	0.49
79:5:750:U:H1'	79:5:917:A:C8	2.48	0.49
79:5:966:A:H5''	79:5:967:C:H2'	1.94	0.49
79:5:1468:C:H2'	79:5:1469:C:H6	1.76	0.49
79:5:1810:G:H2'	79:5:1811:G:C8	2.47	0.49
79:5:2446:C:H2'	79:5:2447:U:C6	2.47	0.49
79:5:2520:C:H2'	79:5:2521:G:C8	2.46	0.49
79:5:3632:C:H2'	79:5:3633:C:C6	2.47	0.49
79:5:3690:U:H2'	79:5:3691:G:O4'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:3732:A:H2'	79:5:3733:A:C8	2.46	0.49
79:5:3775:A:H3'	79:5:3776:G:H5''	1.94	0.49
79:5:4189:U:H2'	79:5:4190:U:C6	2.46	0.49
79:5:4486:C:H1'	79:5:4683:U:O2	2.12	0.49
1:R:43:LYS:HE3	79:5:2706:G:O6	2.11	0.49
3:9:74:G:H2'	3:9:75:G:H4'	1.94	0.49
3:9:447:A:H3'	10:II:25:ARG:NH2	2.27	0.49
3:9:572:U:H5''	18:YY:60:PHE:H	1.76	0.49
3:9:1007:C:H2'	3:9:1008:A:C8	2.48	0.49
3:9:1253:A:H4'	3:9:1254:C:C5'	2.41	0.49
3:9:1804:U:H2'	3:9:1805:G:C8	2.48	0.49
4:AA:32:PHE:HA	4:AA:35:GLU:OE2	2.12	0.49
5:BB:25:PHE:HA	5:BB:28:LYS:CG	2.42	0.49
6:CC:136:HIS:HB3	6:CC:162:ILE:CG1	2.42	0.49
6:CC:210:PRO:O	6:CC:213:LEU:HG	2.13	0.49
7:EE:140:VAL:HA	7:EE:145:ARG:O	2.12	0.49
9:HH:190:PRO:HG2	9:HH:194:LEU:O	2.12	0.49
10:II:129:LEU:HD22	10:II:134:GLU:HB2	1.94	0.49
11:JJ:60:LEU:HG	11:JJ:70:ARG:HG2	1.94	0.49
17:XX:129:SER:O	17:XX:133:LEU:HG	2.12	0.49
22:DD:210:ILE:HG12	28:RR:39:ALA:HB1	1.94	0.49
25:MM:21:VAL:HA	25:MM:24:THR:HG22	1.94	0.49
27:QQ:16:LYS:HZ2	27:QQ:83:ALA:HA	1.77	0.49
28:RR:58:MET:O	28:RR:62:GLN:HG2	2.12	0.49
38:B:268:ARG:NH2	79:5:3896:C:H1'	2.27	0.49
40:D:157:ASN:HB3	40:D:160:PHE:CD2	2.48	0.49
40:D:158:LYS:HE2	80:7:46:C:P	2.51	0.49
41:E:61:ARG:HD3	79:5:1237:C:C2	2.48	0.49
42:F:235:ARG:CG	42:F:239:ILE:HG23	2.39	0.49
45:I:40:LYS:HE3	79:5:1750:G:C5'	2.42	0.49
48:M:44:ARG:HG2	79:5:935:A:H1'	1.93	0.49
48:M:121:ARG:HA	48:M:124:LYS:NZ	2.26	0.49
48:M:122:ILE:HG21	50:O:188:LYS:NZ	2.27	0.49
50:O:16:LEU:HB2	50:O:43:ILE:CD1	2.39	0.49
50:O:79:ILE:CD1	50:O:138:LEU:HD21	2.41	0.49
50:O:142:ALA:O	50:O:145:VAL:HG12	2.11	0.49
51:P:27:LYS:HD2	79:5:2361:G:C8	2.47	0.49
52:Q:71:LYS:NZ	52:Q:96:PRO:HG2	2.26	0.49
52:Q:132:LYS:H	52:Q:132:LYS:HD3	1.78	0.49
53:S:140:PRO:HA	53:S:143:LYS:HB2	1.94	0.49
54:T:65:TYR:OH	54:T:88:ARG:HD3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:e:30:LYS:HE2	79:5:2347:A:H5'	1.94	0.49
79:5:123:C:H2'	79:5:124:C:H5''	1.94	0.49
79:5:1551:C:H2'	79:5:1552:G:O4'	2.12	0.49
79:5:1795:A:H5''	80:7:98:G:O2'	2.13	0.49
79:5:1865:G:H22	79:5:1867:A:H3'	1.78	0.49
79:5:2580:U:H2'	79:5:2581:A:O4'	2.12	0.49
79:5:2737:C:H2'	79:5:2738:C:C6	2.47	0.49
79:5:4591:U:H2'	79:5:4592:C:C6	2.47	0.49
79:5:4715:C:H2'	79:5:4716:C:C6	2.47	0.49
2:W:50:ASN:HA	2:W:55:TYR:CG	2.47	0.49
2:W:82:ILE:HG23	8:GG:131:ARG:CD	2.39	0.49
3:9:93:U:H2'	3:9:94:G:O4'	2.12	0.49
3:9:155:G:H2'	3:9:156:G:C8	2.46	0.49
3:9:404:G:H2'	3:9:405:G:C8	2.47	0.49
3:9:438:G:H2'	3:9:1800:A:H4'	1.95	0.49
3:9:544:G:H2'	3:9:545:A:C8	2.47	0.49
3:9:560:A:OP2	11:JJ:173:VAL:HG12	2.12	0.49
3:9:562:U:H2'	3:9:563:G:H8	1.77	0.49
3:9:1075:C:H2'	3:9:1076:G:C8	2.47	0.49
3:9:1130:G:H2'	3:9:1131:G:C8	2.47	0.49
3:9:1276:A:O2'	24:KK:51:SER:HA	2.12	0.49
3:9:1401:A:O2'	31:UU:54:VAL:HG22	2.12	0.49
3:9:1712:A:H2'	3:9:1713:C:C6	2.47	0.49
4:AA:59:LEU:CD2	4:AA:63:ARG:HD2	2.42	0.49
5:BB:131:ASP:OD2	5:BB:180:ASP:HB2	2.11	0.49
7:EE:31:PRO:HD2	7:EE:38:LEU:CD1	2.42	0.49
7:EE:94:LYS:CG	18:YY:16:ARG:HD3	2.42	0.49
7:EE:172:PHE:CZ	7:EE:174:LYS:HE3	2.47	0.49
7:EE:246:LEU:HD12	7:EE:250:GLU:CG	2.40	0.49
8:GG:64:LYS:HD3	8:GG:67:VAL:HG13	1.93	0.49
9:HH:64:VAL:HB	9:HH:69:LEU:HD21	1.95	0.49
11:JJ:28:GLU:O	11:JJ:32:ILE:HG13	2.13	0.49
16:WW:38:LEU:O	16:WW:42:MET:HG2	2.11	0.49
20:bb:36:LYS:HG3	20:bb:42:LYS:O	2.12	0.49
24:KK:53:LYS:HB2	24:KK:58:VAL:HG23	1.95	0.49
25:MM:40:LYS:HG2	35:ff:129:GLY:O	2.10	0.49
26:PP:68:PRO:HG2	26:PP:71:GLU:OE1	2.12	0.49
27:QQ:55:VAL:HA	27:QQ:63:PHE:CE2	2.48	0.49
27:QQ:146:ARG:HD3	83:1:1465:U:H5	1.76	0.49
30:TT:124:THR:HG23	30:TT:126:GLN:N	2.27	0.49
38:B:46:PHE:CD1	38:B:210:VAL:HG21	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:B:364:ASP:HB3	38:B:366:LYS:HZ2	1.77	0.49
39:C:84:THR:HG23	39:C:86:ARG:N	2.28	0.49
39:C:116:ASN:O	39:C:120:LYS:HG3	2.12	0.49
41:E:117:ARG:HB3	76:r:87:ARG:CZ	2.43	0.49
43:G:238:LYS:HE3	81:8:153:C:H4'	1.95	0.49
46:J:146:ARG:NH2	80:7:27:G:H4'	2.28	0.49
47:L:58:ILE:HG22	47:L:157:ILE:HD13	1.94	0.49
47:L:59:VAL:HG11	47:L:73:GLY:HA3	1.94	0.49
50:O:175:MET:HA	50:O:178:ARG:HG2	1.93	0.49
51:P:54:LYS:HA	51:P:83:TRP:CD1	2.47	0.49
53:S:2:LYS:NZ	79:5:2062:C:H4'	2.26	0.49
57:X:72:ASP:O	57:X:76:ILE:HG23	2.12	0.49
58:Y:75:ARG:HD3	81:8:73:U:OP1	2.12	0.49
62:c:17:ARG:HE	62:c:104:ILE:HA	1.78	0.49
69:j:66:HIS:O	69:j:69:ILE:HG13	2.12	0.49
78:t:130:LYS:HZ3	78:t:151:ILE:HG23	1.75	0.49
79:5:69:A:O2'	79:5:70:A:H5'	2.12	0.49
79:5:192:G:H2'	79:5:193:G:C8	2.47	0.49
79:5:335:A:H2'	79:5:336:A:C4	2.47	0.49
79:5:756:G:O2'	79:5:757:G:H5'	2.12	0.49
79:5:947:C:H2'	79:5:948:C:C6	2.47	0.49
79:5:1871:A:H1'	79:5:4195:G:O6	2.13	0.49
79:5:1916:G:H1'	79:5:2067:C:O2'	2.13	0.49
79:5:2098:G:H2'	79:5:2099:C:C6	2.47	0.49
79:5:2609:G:H2'	79:5:2610:G:H8	1.77	0.49
79:5:2657:G:H2'	79:5:2658:G:C8	2.47	0.49
79:5:2894:A:H2'	79:5:2895:A:C8	2.47	0.49
79:5:2897:G:H2'	79:5:2898:G:C8	2.47	0.49
79:5:3635:A:C5	79:5:3692:A:H1'	2.48	0.49
79:5:4479:A:H2'	79:5:4480:A:O4'	2.12	0.49
79:5:4992:G:H2'	79:5:4993:G:C8	2.47	0.49
3:9:24:C:H2'	3:9:25:A:C8	2.48	0.49
3:9:422:U:H2'	3:9:423:U:C6	2.47	0.49
3:9:520:A:H2'	3:9:521:A:C8	2.48	0.49
3:9:621:C:H2'	3:9:622:C:C6	2.48	0.49
3:9:666:U:O2'	3:9:1087:A:H2'	2.13	0.49
3:9:734:C:H2'	3:9:735:C:C6	2.48	0.49
3:9:1808:U:H2'	3:9:1809:A:C8	2.47	0.49
7:EE:183:VAL:HG13	7:EE:220:THR:HG21	1.94	0.49
7:EE:211:LYS:CE	7:EE:215:GLY:HA2	2.42	0.49
11:JJ:78:LEU:O	11:JJ:82:VAL:HG22	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:LL:61:PRO:HB3	12:LL:141:ASN:HD22	1.77	0.49
13:NN:37:ILE:HG23	13:NN:50:ILE:HG21	1.92	0.49
14:OO:113:GLN:HA	14:OO:116:LEU:HD21	1.94	0.49
16:WW:101:PHE:HA	16:WW:113:HIS:HE1	1.77	0.49
23:FF:119:SER:OG	23:FF:189:ALA:HB1	2.12	0.49
26:PP:28:MET:HE1	26:PP:33:LEU:HG	1.94	0.49
31:UU:51:LYS:HE3	31:UU:90:ASP:HB2	1.93	0.49
32:ZZ:50:PHE:CE2	32:ZZ:83:LEU:HD21	2.48	0.49
36:gg:168:CYS:HB2	36:gg:195:LEU:HD12	1.95	0.49
41:E:171:LEU:HG	41:E:177:LEU:HB2	1.94	0.49
42:F:61:ARG:HD3	79:5:944:A:OP2	2.12	0.49
44:H:19:SER:O	44:H:26:ILE:HG13	2.13	0.49
44:H:128:MET:SD	44:H:132:VAL:HG23	2.52	0.49
44:H:181:VAL:HG13	72:m:63:TYR:OH	2.12	0.49
47:L:191:LEU:HD22	47:L:194:ILE:HD11	1.94	0.49
48:M:122:ILE:HA	48:M:125:ASN:HD21	1.77	0.49
51:P:112:LEU:HA	51:P:151:THR:O	2.12	0.49
54:T:113:ASP:O	54:T:117:LYS:HE2	2.12	0.49
56:V:51:ARG:HH22	79:5:3842:C:H4'	1.77	0.49
56:V:70:PRO:HA	56:V:73:ARG:CZ	2.43	0.49
58:Y:12:SER:HA	58:Y:15:ARG:HD3	1.95	0.49
60:a:86:THR:HG22	79:5:510:U:C5'	2.42	0.49
60:a:117:LEU:HD13	60:a:118:PRO:HD2	1.94	0.49
62:c:10:SER:O	62:c:14:ILE:HG12	2.11	0.49
65:f:28:LEU:HD12	65:f:84:VAL:HG23	1.94	0.49
65:f:76:ARG:HD2	65:f:77:ALA:O	2.12	0.49
66:g:69:LYS:HE3	79:5:2750:G:H5''	1.93	0.49
67:h:24:LEU:HB2	67:h:54:ILE:HD11	1.94	0.49
72:m:59:LEU:HA	72:m:62:LYS:HG2	1.94	0.49
74:o:63:THR:HG23	74:o:87:ARG:CG	2.43	0.49
77:s:17:ILE:CB	77:s:64:ALA:HB1	2.42	0.49
78:t:127:GLY:HA2	78:t:130:LYS:CD	2.42	0.49
79:5:979:C:H2'	79:5:980:U:C6	2.47	0.49
79:5:1500:A:H5''	79:5:1501:C:H5'	1.95	0.49
79:5:1973:G:P	79:5:1974:U:H3'	2.51	0.49
79:5:2491:C:H2'	79:5:2492:C:C6	2.47	0.49
79:5:2734:U:H2'	79:5:2735:G:C8	2.47	0.49
81:8:123:U:H3'	81:8:124:U:C6	2.47	0.49
3:9:224:A:H2'	3:9:225:G:O4'	2.13	0.49
3:9:337:C:H2'	3:9:338:G:O4'	2.12	0.49
3:9:605:A:H1'	3:9:639:C:H1'	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:895:G:H2'	3:9:896:U:C6	2.47	0.49
3:9:945:U:H2'	3:9:946:U:C6	2.48	0.49
3:9:1229:G:H21	30:TT:87:VAL:HG21	1.77	0.49
3:9:1267:C:H2'	3:9:1268:C:C6	2.48	0.49
3:9:1416:C:H5''	30:TT:133:ARG:NH1	2.27	0.49
3:9:1544:C:H4'	27:QQ:80:GLN:OE1	2.12	0.49
6:CC:90:GLU:HB3	6:CC:93:ILE:HG13	1.94	0.49
7:EE:65:CYS:SG	7:EE:80:ILE:HG22	2.52	0.49
7:EE:137:PRO:HB2	7:EE:150:PRO:CD	2.40	0.49
7:EE:145:ARG:HE	7:EE:147:ILE:HB	1.78	0.49
9:HH:145:ARG:HG3	9:HH:155:LYS:CD	2.43	0.49
12:LL:58:LYS:HG3	12:LL:59:LYS:HG3	1.94	0.49
15:VV:60:ARG:HA	15:VV:65:SER:HB3	1.95	0.49
17:XX:54:LYS:HG2	17:XX:91:LEU:HD12	1.95	0.49
23:FF:128:ILE:HG12	23:FF:137:GLN:HB2	1.94	0.49
28:RR:30:THR:O	28:RR:34:VAL:HG23	2.12	0.49
28:RR:35:CYS:HA	28:RR:38:ILE:HG12	1.95	0.49
36:gg:38:LYS:HG3	36:gg:64:HIS:O	2.13	0.49
39:C:297:GLU:HG3	52:Q:128:LEU:HD22	1.95	0.49
40:D:181:PRO:HG2	40:D:195:HIS:HD2	1.78	0.49
41:E:113:ARG:NH1	79:5:459:C:H4'	2.27	0.49
45:I:7:ARG:HG3	45:I:10:ARG:NH2	2.28	0.49
46:J:19:LYS:HD3	46:J:75:ARG:NH1	2.28	0.49
47:L:77:SER:O	47:L:81:LEU:HG	2.13	0.49
51:P:45:THR:HA	51:P:48:LEU:HG	1.94	0.49
51:P:116:HIS:CB	51:P:149:ILE:HD11	2.41	0.49
52:Q:65:ARG:HH21	79:5:1459:A:H5''	1.78	0.49
52:Q:75:ARG:NH2	79:5:1456:C:H2'	2.28	0.49
53:S:166:ARG:HG2	53:S:167:PHE:CE2	2.47	0.49
54:T:53:PRO:HB3	54:T:91:VAL:CG2	2.42	0.49
55:U:99:TRP:O	55:U:114:TYR:HA	2.13	0.49
61:b:37:PRO:HG2	79:5:4315:A:H4'	1.93	0.49
62:c:17:ARG:HD2	62:c:103:ASP:C	2.37	0.49
63:d:41:ARG:HD3	63:d:78:ARG:O	2.12	0.49
65:f:35:ALA:O	65:f:39:THR:HG23	2.13	0.49
65:f:50:VAL:HG21	65:f:102:ARG:CZ	2.43	0.49
67:h:25:LYS:HA	67:h:28:LEU:CD2	2.42	0.49
69:j:14:LYS:HE3	69:j:16:HIS:N	2.28	0.49
71:l:24:PRO:HG2	71:l:27:ILE:HG12	1.94	0.49
75:p:11:VAL:HG21	75:p:23:ARG:HB3	1.94	0.49
76:r:47:LYS:NZ	76:r:102:TYR:HA	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:t:128:THR:HA	78:t:131:GLU:OE2	2.13	0.49
78:t:153:ASP:O	78:t:157:SER:HB2	2.13	0.49
79:5:480:C:H2'	79:5:481:G:C8	2.47	0.49
79:5:1246:G:H2'	79:5:1247:U:C6	2.47	0.49
79:5:1804:A:H5''	79:5:1805:A:H2'	1.93	0.49
79:5:2555:G:H2'	79:5:2556:G:C8	2.48	0.49
79:5:2817:C:H2'	79:5:2818:C:C6	2.47	0.49
79:5:3623:C:H2'	79:5:3624:A:O4'	2.12	0.49
79:5:4193:C:H2'	79:5:4194:U:O4'	2.13	0.49
79:5:4874:A:C5	79:5:4877:G:H4'	2.47	0.49
1:R:72:LYS:HE2	1:R:74:ARG:NH1	2.28	0.49
1:R:99:MET:HE1	79:5:2667:C:OP2	2.12	0.49
3:9:81:U:H2'	3:9:82:G:O4'	2.13	0.49
3:9:112:U:H2'	3:9:115:U:H5	1.78	0.49
3:9:491:C:OP2	18:YY:104:ARG:HB3	2.12	0.49
3:9:933:G:H2'	3:9:1000:C:O2	2.12	0.49
3:9:962:A:H5''	14:OO:66:ARG:CB	2.42	0.49
3:9:1019:C:H2'	3:9:1020:A:O4'	2.13	0.49
3:9:1139:C:H3'	3:9:1140:G:H8	1.77	0.49
3:9:1391:C:O4'	34:dd:55:LEU:HD11	2.12	0.49
3:9:1860:A:H3'	19:aa:8:ASN:ND2	2.27	0.49
5:BB:115:LYS:O	5:BB:118:GLN:HG2	2.12	0.49
5:BB:144:LYS:HB2	5:BB:208:HIS:N	2.27	0.49
7:EE:45:ILE:HD11	7:EE:80:ILE:HB	1.95	0.49
7:EE:230:LYS:H	7:EE:230:LYS:HD3	1.78	0.49
9:HH:81:ARG:NH1	9:HH:81:ARG:HA	2.27	0.49
10:II:164:GLU:O	10:II:168:GLN:HG2	2.13	0.49
13:NN:16:LEU:HB3	13:NN:20:ARG:NH2	2.25	0.49
19:aa:3:LYS:CE	19:aa:6:ARG:HA	2.43	0.49
22:DD:213:PRO:CD	28:RR:19:LYS:HD2	2.43	0.49
29:SS:39:ARG:HG3	29:SS:83:PHE:CZ	2.45	0.49
32:ZZ:68:ILE:HA	32:ZZ:72:VAL:CG1	2.43	0.49
37:A:178:PRO:HA	79:5:2739:C:H41	1.78	0.49
38:B:108:GLU:HB2	38:B:137:TRP:CG	2.48	0.49
39:C:86:ARG:HA	39:C:89:GLN:OE1	2.13	0.49
39:C:293:LEU:HD13	79:5:2088:A:O2'	2.12	0.49
45:I:171:TRP:HE3	45:I:178:ALA:HB1	1.77	0.49
48:M:90:ARG:HD3	79:5:4868:G:H5''	1.93	0.49
48:M:119:ARG:NH1	48:M:119:ARG:HA	2.28	0.49
48:M:126:GLU:CG	50:O:181:ALA:HB1	2.39	0.49
50:O:14:HIS:O	50:O:15:LEU:HD13	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:O:16:LEU:HD11	50:O:83:THR:HG21	1.95	0.49
51:P:83:TRP:CZ3	79:5:3855:C:H4'	2.48	0.49
55:U:40:GLU:O	55:U:43:LEU:HG	2.12	0.49
56:V:19:GLY:O	56:V:20:LEU:HD13	2.12	0.49
56:V:21:PRO:HD2	79:5:2847:G:H1'	1.93	0.49
57:X:150:ALA:O	57:X:153:ILE:HG13	2.13	0.49
65:f:46:ARG:HD2	65:f:71:TRP:CE3	2.47	0.49
72:m:57:ARG:O	72:m:61:GLN:HG2	2.13	0.49
79:5:343:C:H2'	79:5:344:A:C8	2.48	0.49
79:5:699:C:H2'	79:5:700:G:C8	2.48	0.49
79:5:960:A:H1'	79:5:1282:G:O6	2.12	0.49
79:5:1327:C:H2'	79:5:1328:G:C8	2.47	0.49
79:5:1461:C:H2'	79:5:1462:A:H8	1.75	0.49
79:5:1569:U:H2'	79:5:1570:G:C8	2.48	0.49
79:5:2672:C:H2'	79:5:2673:G:N2	2.28	0.49
79:5:4460:U:H3	79:5:4516:G:H1	1.60	0.49
79:5:4686:G:H3'	79:5:4687:A:H5''	1.94	0.49
3:9:128:U:H3'	3:9:129:C:H6	1.76	0.49
3:9:145:G:H2'	3:9:146:G:C8	2.48	0.49
3:9:873:G:N1	12:LL:153:LYS:HA	2.28	0.49
3:9:1011:A:H2'	3:9:1012:A:O4'	2.13	0.49
3:9:1017:U:H2'	3:9:1018:U:H6	1.76	0.49
3:9:1157:G:H2'	16:WW:75:ILE:HD13	1.94	0.49
3:9:1464:C:H4'	28:RR:60:ARG:NH2	2.28	0.49
3:9:1559:C:H2'	3:9:1560:U:O4'	2.12	0.49
3:9:1740:C:H2'	3:9:1741:U:C6	2.48	0.49
4:AA:185:MET:HA	4:AA:185:MET:HE3	1.94	0.49
7:EE:131:VAL:CG1	7:EE:135:GLY:HA2	2.43	0.49
7:EE:250:GLU:O	7:EE:254:LYS:HG2	2.12	0.49
8:GG:50:VAL:CG2	8:GG:111:LEU:HB3	2.42	0.49
8:GG:230:LYS:O	8:GG:234:LEU:HG	2.13	0.49
9:HH:7:LYS:NZ	9:HH:40:LEU:HG	2.27	0.49
9:HH:28:LEU:O	9:HH:32:MET:HG2	2.13	0.49
9:HH:77:VAL:O	9:HH:81:ARG:HG2	2.12	0.49
11:JJ:110:LEU:O	11:JJ:114:VAL:HG23	2.13	0.49
13:NN:2:GLY:HA2	13:NN:9:LYS:HG2	1.94	0.49
15:VV:67:ASP:O	15:VV:71:ARG:HG2	2.13	0.49
27:QQ:12:VAL:HB	27:QQ:91:ALA:HA	1.95	0.49
27:QQ:117:ARG:NH1	27:QQ:121:VAL:HG21	2.27	0.49
29:SS:5:ILE:HG13	32:ZZ:50:PHE:O	2.12	0.49
38:B:30:LYS:HG3	79:5:4716:C:OP2	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:B:168:MET:HE1	38:B:175:GLN:O	2.13	0.49
39:C:114:ARG:O	79:5:1507:C:H4'	2.13	0.49
39:C:142:HIS:HB3	39:C:144:ILE:HD11	1.94	0.49
40:D:200:MET:CG	40:D:202:GLN:HG2	2.43	0.49
41:E:143:LEU:HB3	41:E:147:ILE:HD11	1.95	0.49
43:G:157:PRO:HG3	43:G:247:VAL:HG12	1.94	0.49
43:G:223:LEU:O	43:G:226:LEU:HD23	2.12	0.49
46:J:12:MET:HE1	80:7:54:A:C2	2.48	0.49
46:J:111:GLU:OE2	46:J:113:ILE:HG22	2.13	0.49
48:M:90:ARG:NH1	79:5:4868:G:H4'	2.28	0.49
48:M:122:ILE:HA	48:M:125:ASN:ND2	2.28	0.49
49:N:179:LYS:HD3	79:5:298:G:OP1	2.13	0.49
54:T:29:THR:HA	54:T:32:ARG:CD	2.41	0.49
65:f:5:LEU:HD23	79:5:4945:G:N1	2.26	0.49
66:g:9:ARG:NE	79:5:2441:C:H4'	2.27	0.49
66:g:90:ARG:HD2	79:5:4122:G:H4'	1.94	0.49
67:h:28:LEU:HB3	67:h:50:VAL:CG1	2.41	0.49
69:j:82:THR:O	81:8:94:G:H1'	2.12	0.49
75:p:8:VAL:HG23	75:p:11:VAL:HG23	1.95	0.49
76:r:107:ARG:O	76:r:111:ILE:HG13	2.13	0.49
78:t:115:GLN:O	78:t:119:ARG:HG2	2.12	0.49
79:5:319:A:H1'	79:5:3726:A:N3	2.28	0.49
79:5:326:C:H2'	79:5:327:U:C6	2.47	0.49
79:5:377:A:H2'	79:5:378:A:O4'	2.12	0.49
79:5:734:G:O2'	79:5:735:G:H5'	2.13	0.49
79:5:755:C:H2'	79:5:756:G:H8	1.78	0.49
79:5:1344:C:H2'	79:5:1345:A:C8	2.48	0.49
79:5:1514:U:H2'	79:5:1515:A:C8	2.47	0.49
79:5:1688:G:H2'	79:5:1689:G:C8	2.47	0.49
79:5:2308:A:H2'	79:5:2309:G:H5'	1.94	0.49
79:5:2525:U:H2'	79:5:2527:A:OP2	2.13	0.49
79:5:2683:C:H2'	79:5:2684:C:C6	2.47	0.49
79:5:3652:A:H2'	79:5:3653:A:C5	2.47	0.49
79:5:4297:G:O6	79:5:4313:A:N1	2.46	0.49
79:5:4918:C:H2'	79:5:4919:G:C8	2.47	0.49
81:8:92:U:H2'	81:8:93:C:O4'	2.12	0.49
3:9:115:U:H2'	3:9:116:U:C6	2.47	0.49
3:9:220:U:H2'	3:9:221:A:C8	2.47	0.49
3:9:1047:C:H2'	3:9:1048:G:O4'	2.13	0.49
3:9:1207:G:OP2	3:9:1208:A:H5''	2.13	0.49
3:9:1487:A:H2'	3:9:1488:C:C6	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:1526:G:H4'	27:QQ:144:SER:OG	2.12	0.49
4:AA:30:LEU:HB2	4:AA:47:TYR:CZ	2.48	0.49
4:AA:89:LYS:HE2	4:AA:201:LEU:CD1	2.40	0.49
6:CC:185:THR:HG23	6:CC:193:VAL:O	2.13	0.49
7:EE:207:VAL:HG23	7:EE:221:ARG:NH2	2.27	0.49
8:GG:79:LYS:HB2	8:GG:86:PRO:HG3	1.95	0.49
10:II:11:ARG:HD3	10:II:15:GLY:O	2.13	0.49
10:II:48:VAL:CG2	10:II:52:ASN:HB2	2.43	0.49
13:NN:30:SER:CA	13:NN:67:THR:HG22	2.42	0.49
14:OO:126:ILE:O	19:aa:58:VAL:HG23	2.13	0.49
16:WW:105:THR:CB	16:WW:110:ILE:HG22	2.43	0.49
17:XX:105:PHE:CE1	17:XX:121:LYS:HB3	2.47	0.49
25:MM:14:VAL:O	25:MM:18:LEU:HG	2.13	0.49
27:QQ:98:LYS:HE3	27:QQ:99:TYR:CZ	2.48	0.49
28:RR:23:ARG:NH1	36:gg:170:TRP:HB3	2.27	0.49
31:UU:24:LEU:CD2	31:UU:112:VAL:HG22	2.43	0.49
33:cc:44:ARG:NH1	33:cc:58:LEU:HD22	2.27	0.49
34:dd:21:CYS:HB3	34:dd:25:SER:N	2.28	0.49
35:ff:102:VAL:HA	35:ff:105:TYR:CD2	2.48	0.49
36:gg:145:GLU:OE2	36:gg:184:LEU:HD21	2.13	0.49
37:A:3:ARG:NH1	79:5:1626:G:H5''	2.26	0.49
37:A:4:VAL:HG13	37:A:8:GLN:HG3	1.95	0.49
37:A:193:ARG:HD2	79:5:3686:G:OP1	2.12	0.49
38:B:376:HIS:HB2	79:5:5003:U:OP1	2.12	0.49
39:C:46:LYS:NZ	79:5:2341:A:H5'	2.28	0.49
39:C:135:ALA:HB1	76:r:44:ILE:HG22	1.95	0.49
40:D:36:LEU:HD23	40:D:145:TYR:HE2	1.77	0.49
40:D:273:LEU:HD21	80:7:107:G:H5''	1.95	0.49
41:E:181:PRO:HG3	41:E:260:ILE:CD1	2.43	0.49
42:F:155:LYS:HD3	42:F:247:ASN:HD21	1.78	0.49
43:G:170:ARG:HG2	43:G:174:LYS:NZ	2.28	0.49
43:G:208:VAL:HB	43:G:234:TYR:HA	1.94	0.49
46:J:20:LEU:HD22	46:J:131:TYR:O	2.12	0.49
49:N:87:HIS:NE2	79:5:4186:A:H1'	2.28	0.49
49:N:152:THR:OG1	67:h:95:LEU:HD11	2.12	0.49
50:O:35:VAL:CG1	50:O:104:VAL:HA	2.43	0.49
52:Q:184:ARG:NH1	60:a:56:VAL:HG22	2.28	0.49
53:S:15:ARG:HE	54:T:141:VAL:HG11	1.78	0.49
56:V:117:ILE:CG1	56:V:136:ALA:HA	2.41	0.49
58:Y:16:LYS:HE3	81:8:24:G:OP2	2.13	0.49
58:Y:53:ASP:HB3	58:Y:106:ILE:CD1	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:a:75:LEU:HG	60:a:117:LEU:HD23	1.95	0.49
62:c:47:ILE:CG2	62:c:74:TYR:HB2	2.43	0.49
64:e:22:ARG:NE	64:e:31:ILE:HG23	2.27	0.49
64:e:99:ILE:HD11	64:e:103:VAL:HG11	1.94	0.49
65:f:27:LEU:HB3	65:f:83:MET:HE2	1.94	0.49
67:h:13:LYS:O	67:h:16:GLU:HG3	2.13	0.49
74:o:34:TYR:HB3	79:5:295:A:H2	1.78	0.49
75:p:38:THR:HG22	75:p:45:THR:OG1	2.12	0.49
79:5:18:C:H2'	79:5:19:G:H8	1.76	0.49
79:5:35:U:H5'	79:5:36:U:H5	1.78	0.49
79:5:379:G:O2'	79:5:380:U:H5'	2.12	0.49
79:5:679:C:H2'	79:5:680:G:H8	1.76	0.49
79:5:947:C:H2'	79:5:948:C:H6	1.78	0.49
79:5:1383:G:H2'	79:5:1384:C:C6	2.48	0.49
79:5:1520:C:H2'	79:5:1521:C:C6	2.48	0.49
79:5:2304:U:H4'	79:5:2305:U:H5''	1.95	0.49
79:5:3728:A:H2'	79:5:3729:U:H5'	1.93	0.49
79:5:3917:A:H2'	79:5:3918:G:C8	2.48	0.49
79:5:4186:A:H2'	79:5:4187:G:H8	1.78	0.49
79:5:4239:A:H2'	79:5:4240:G:C8	2.47	0.49
79:5:4486:C:H2'	79:5:4487:A:O4'	2.13	0.49
79:5:4963:G:H3'	79:5:4964:C:H5''	1.94	0.49
81:8:47:C:H1'	81:8:61:A:H2'	1.94	0.49
1:R:86:ASN:HA	1:R:89:MET:O	2.13	0.49
1:R:135:LYS:O	1:R:139:MET:HG2	2.13	0.49
3:9:112:U:H4'	3:9:113:G:H3'	1.95	0.49
3:9:128:U:H5'	3:9:215:G:H5'	1.94	0.49
3:9:211:G:H2'	3:9:212:C:H6	1.78	0.49
3:9:355:G:H2'	3:9:356:C:H5'	1.95	0.49
3:9:561:A:H2'	3:9:562:U:C6	2.48	0.49
3:9:677:G:H2'	3:9:678:U:C5	2.48	0.49
3:9:1401:A:H2'	3:9:1402:A:C8	2.48	0.49
3:9:1521:C:H2'	29:SS:136:THR:OG1	2.13	0.49
3:9:1532:C:OP1	3:9:1533:A:H1'	2.13	0.49
5:BB:65:ARG:HD3	14:OO:50:LYS:HE3	1.94	0.49
5:BB:157:GLN:NE2	5:BB:159:GLN:HG2	2.27	0.49
6:CC:210:PRO:HD3	6:CC:236:PHE:CE2	2.48	0.49
8:GG:161:PRO:CA	8:GG:171:THR:HG23	2.42	0.49
9:HH:153:LEU:HA	9:HH:184:ASP:OD1	2.13	0.49
12:LL:128:VAL:HG12	12:LL:142:VAL:HG22	1.95	0.49
16:WW:26:LEU:HB3	16:WW:62:VAL:HG22	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DD:95:GLY:HA2	22:DD:101:GLN:NE2	2.28	0.49
23:FF:95:HIS:O	23:FF:99:ILE:HG13	2.12	0.49
23:FF:192:LYS:O	23:FF:196:LEU:HG	2.13	0.49
27:QQ:93:VAL:HA	27:QQ:105:LYS:NZ	2.28	0.49
28:RR:23:ARG:HH12	36:gg:170:TRP:HB3	1.78	0.49
31:UU:59:LYS:HB2	31:UU:84:ILE:CG2	2.43	0.49
41:E:190:ARG:NH1	79:5:4941:G:H4'	2.28	0.49
42:F:31:ARG:HA	42:F:34:LYS:HZ3	1.76	0.49
42:F:126:LYS:O	42:F:129:ILE:HG13	2.13	0.49
42:F:131:MET:O	42:F:135:VAL:HG23	2.11	0.49
43:G:107:PHE:O	79:5:4085:A:H2'	2.12	0.49
45:I:90:ARG:CZ	79:5:1783:C:H4'	2.43	0.49
58:Y:10:ASP:CB	58:Y:13:LYS:HD3	2.43	0.49
60:a:103:VAL:CG2	60:a:126:ALA:HB2	2.43	0.49
70:k:35:LYS:HE3	70:k:69:LEU:CD2	2.42	0.49
70:k:51:GLU:O	70:k:55:LYS:HG2	2.13	0.49
79:5:53:C:H2'	79:5:54:G:H8	1.77	0.49
79:5:950:G:H2'	79:5:951:G:H8	1.78	0.49
79:5:1961:G:H2'	79:5:2024:G:N1	2.27	0.49
79:5:2610:G:H2'	79:5:2611:A:C8	2.47	0.49
79:5:3794:C:H2'	79:5:3795:A:C8	2.48	0.49
79:5:3855:C:H2'	79:5:3856:A:H8	1.78	0.49
79:5:4684:A:H2'	79:5:4685:U:O4'	2.13	0.49
79:5:4749:C:H2'	79:5:4750:G:C5	2.47	0.49
81:8:6:C:H2'	81:8:7:U:C6	2.48	0.49
1:R:37:SER:OG	1:R:40:GLN:HB2	2.13	0.48
3:9:1094:C:H2'	3:9:1095:U:C6	2.48	0.48
3:9:1398:G:H4'	36:gg:88:ARG:HH22	1.78	0.48
3:9:1554:C:H2'	3:9:1555:U:C6	2.48	0.48
3:9:1709:G:H2'	3:9:1710:C:C6	2.48	0.48
3:9:1811:C:H2'	3:9:1812:U:C6	2.48	0.48
5:BB:176:VAL:HA	5:BB:184:VAL:CG1	2.43	0.48
7:EE:136:ILE:HD12	7:EE:149:TYR:CE2	2.48	0.48
8:GG:88:ARG:HB3	8:GG:91:GLU:HB3	1.94	0.48
11:JJ:3:VAL:HG23	11:JJ:5:ARG:HG3	1.94	0.48
11:JJ:119:LEU:HD23	11:JJ:119:LEU:H	1.76	0.48
11:JJ:142:VAL:HG11	11:JJ:147:PHE:CD2	2.48	0.48
14:OO:142:ARG:NH2	19:aa:22:ARG:HB3	2.27	0.48
18:YY:14:THR:HA	18:YY:21:LYS:CD	2.43	0.48
24:KK:46:MET:O	24:KK:50:GLN:HG2	2.12	0.48
24:KK:51:SER:O	24:KK:55:ARG:HG2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RR:55:THR:O	28:RR:59:LYS:HG3	2.13	0.48
30:TT:112:MET:CE	30:TT:126:GLN:HG2	2.42	0.48
35:ff:133:ALA:HB3	35:ff:140:TYR:O	2.13	0.48
36:gg:7:LEU:CD2	36:gg:308:ARG:HD3	2.43	0.48
38:B:256:ALA:HB1	79:5:4518:A:OP1	2.12	0.48
39:C:318:PRO:O	39:C:325:MET:HE2	2.13	0.48
40:D:53:VAL:CB	40:D:159:VAL:HG13	2.43	0.48
40:D:183:TYR:HD1	40:D:190:PHE:HB2	1.78	0.48
41:E:189:LEU:HD21	41:E:256:VAL:CG2	2.42	0.48
42:F:72:ARG:CZ	79:5:727:C:H5''	2.43	0.48
42:F:86:PRO:HG3	42:F:143:TYR:CG	2.48	0.48
42:F:103:LYS:O	42:F:107:VAL:HG12	2.12	0.48
43:G:155:TYR:CD2	43:G:189:LEU:HG	2.48	0.48
43:G:207:LEU:HD21	43:G:275:ILE:HD12	1.93	0.48
44:H:91:LYS:HB3	44:H:143:GLU:OE2	2.12	0.48
45:I:87:ILE:HG13	45:I:138:ILE:CD1	2.43	0.48
46:J:15:LEU:CG	46:J:134:LEU:HD11	2.43	0.48
49:N:37:HIS:NE2	49:N:63:ARG:HD2	2.28	0.48
52:Q:31:LEU:O	52:Q:35:LEU:HG	2.12	0.48
52:Q:54:SER:HB2	79:5:1349:G:P	2.53	0.48
53:S:97:TYR:HB3	53:S:108:GLN:NE2	2.28	0.48
57:X:91:GLU:OE2	57:X:147:LEU:HD13	2.13	0.48
57:X:94:ASN:O	57:X:140:LEU:HB2	2.13	0.48
58:Y:30:MET:CE	58:Y:78:TYR:HA	2.43	0.48
58:Y:79:VAL:CG1	58:Y:98:GLY:HA3	2.43	0.48
59:Z:10:VAL:HG23	59:Z:86:SER:HA	1.95	0.48
59:Z:73:LYS:HZ2	79:5:2580:U:H5''	1.78	0.48
59:Z:109:LYS:O	59:Z:112:ARG:HG3	2.13	0.48
64:e:38:PRO:HG2	64:e:46:ARG:HB2	1.95	0.48
79:5:1403:G:H2'	79:5:1404:G:C8	2.48	0.48
79:5:2881:A:C2	79:5:3628:G:H5''	2.47	0.48
79:5:3685:C:H2'	79:5:3686:G:C8	2.48	0.48
79:5:4341:C:H42	79:5:4371:G:H1	1.61	0.48
80:7:98:G:H2'	80:7:99:G:O4'	2.12	0.48
3:9:92:A:H61	3:9:444:G:H1'	1.78	0.48
3:9:526:A:H5'	21:ee:104:ARG:HH12	1.78	0.48
3:9:642:U:H5''	11:JJ:41:ARG:HH12	1.78	0.48
3:9:928:G:H2'	3:9:929:G:H8	1.78	0.48
3:9:1096:G:H2'	3:9:1097:G:C8	2.48	0.48
3:9:1103:C:H2'	3:9:1104:G:C8	2.47	0.48
4:AA:80:ARG:O	4:AA:84:GLN:HG3	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:GG:5:ILE:HG22	8:GG:113:ILE:HD11	1.95	0.48
10:II:29:LEU:HD21	10:II:31:ARG:HH12	1.78	0.48
13:NN:39:LYS:O	13:NN:43:LYS:HG2	2.13	0.48
13:NN:41:ALA:HB2	13:NN:50:ILE:HD11	1.94	0.48
16:WW:86:LEU:HD11	16:WW:113:HIS:HB2	1.95	0.48
18:YY:114:MET:HG3	18:YY:122:LYS:HB3	1.95	0.48
26:PP:33:LEU:HD22	26:PP:37:TYR:OH	2.13	0.48
37:A:200:ARG:NH1	79:5:3650:C:H5''	2.28	0.48
37:A:207:VAL:HG21	79:5:1633:G:C6	2.47	0.48
38:B:81:THR:HB	38:B:207:VAL:HG11	1.94	0.48
38:B:103:LYS:O	38:B:153:MET:HE1	2.13	0.48
38:B:253:CYS:SG	79:5:4521:U:H1'	2.53	0.48
38:B:356:LYS:HG3	38:B:358:ARG:H	1.77	0.48
39:C:20:LYS:HE2	39:C:258:ARG:HH21	1.78	0.48
39:C:34:PRO:HG2	76:r:9:VAL:HG23	1.94	0.48
39:C:45:ARG:NH1	79:5:2340:C:H1'	2.28	0.48
39:C:163:LYS:HB3	39:C:166:GLU:CG	2.43	0.48
40:D:33:ARG:O	40:D:37:VAL:HG23	2.12	0.48
40:D:67:ALA:HA	40:D:72:ASP:HA	1.95	0.48
40:D:273:LEU:HB2	80:7:108:G:OP1	2.13	0.48
41:E:127:LYS:HG3	79:5:958:G:N2	2.28	0.48
41:E:160:HIS:ND1	41:E:187:VAL:HG22	2.27	0.48
45:I:142:LEU:HD12	45:I:143:GLN:HG3	1.95	0.48
46:J:153:ALA:HB2	80:7:17:C:OP1	2.13	0.48
49:N:96:ARG:HB3	49:N:100:SER:OG	2.13	0.48
54:T:35:LYS:HE3	54:T:35:LYS:HA	1.95	0.48
55:U:101:ARG:HB3	55:U:115:PHE:CZ	2.48	0.48
56:V:82:ILE:HG13	56:V:103:GLY:HA2	1.93	0.48
59:Z:42:LEU:HD13	59:Z:74:VAL:HG22	1.95	0.48
63:d:38:PHE:CD2	63:d:78:ARG:HD2	2.47	0.48
69:j:3:LYS:HG2	79:5:3643:A:N7	2.28	0.48
69:j:72:ARG:HA	69:j:75:ARG:CG	2.42	0.48
74:o:31:ASP:HB2	74:o:38:LYS:CE	2.43	0.48
77:s:84:GLY:C	79:5:2021:G:H4'	2.38	0.48
77:s:84:GLY:HA2	79:5:2021:G:O2'	2.13	0.48
78:t:117:ARG:HD2	78:t:125:LEU:N	2.29	0.48
79:5:643:C:H2'	79:5:644:G:H8	1.78	0.48
79:5:1305:C:H2'	79:5:1306:C:C6	2.48	0.48
79:5:1405:C:H2'	79:5:1406:G:C8	2.47	0.48
79:5:4601:U:H2'	79:5:4602:A:H8	1.78	0.48
79:5:4752:U:H2'	79:5:4947:U:O4	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:5061:A:H3'	79:5:5062:G:H5'	1.95	0.48
1:R:100:ARG:O	1:R:103:ARG:HG3	2.12	0.48
1:R:173:ARG:HG2	1:R:176:ARG:NH2	2.28	0.48
3:9:67:C:N4	8:GG:164:LYS:HG2	2.28	0.48
3:9:612:U:H2'	3:9:613:G:O4'	2.13	0.48
3:9:1035:A:H2'	3:9:1036:A:O4'	2.13	0.48
3:9:1143:A:H4'	3:9:1356:G:N2	2.26	0.48
3:9:1239:U:H5'	26:PP:124:LYS:HE2	1.95	0.48
3:9:1253:A:H4'	3:9:1254:C:H5''	1.94	0.48
3:9:1646:C:H2'	3:9:1678:A:H61	1.77	0.48
3:9:1716:C:H2'	3:9:1717:C:C6	2.48	0.48
5:BB:62:LEU:HD12	5:BB:65:ARG:CG	2.43	0.48
5:BB:119:THR:HB	5:BB:143:THR:HG23	1.95	0.48
6:CC:157:LEU:HA	6:CC:160:LEU:HD21	1.93	0.48
7:EE:11:ARG:N	7:EE:27:PHE:HA	2.28	0.48
8:GG:191:ARG:O	8:GG:195:LYS:HG3	2.12	0.48
9:HH:69:LEU:HD12	9:HH:73:GLN:NE2	2.28	0.48
10:II:142:SER:O	10:II:146:GLN:HG3	2.13	0.48
11:JJ:51:ALA:HB1	11:JJ:55:LYS:NZ	2.28	0.48
11:JJ:135:ILE:O	11:JJ:141:VAL:HG13	2.13	0.48
13:NN:142:GLU:HB3	13:NN:145:THR:OG1	2.13	0.48
17:XX:60:LYS:HG3	17:XX:114:ASP:O	2.13	0.48
27:QQ:52:LEU:O	27:QQ:56:LEU:HG	2.13	0.48
28:RR:103:LYS:O	28:RR:107:LYS:HG2	2.13	0.48
31:UU:28:ASN:HB3	31:UU:31:SER:OG	2.12	0.48
31:UU:91:LEU:HD12	31:UU:93:SER:HB2	1.95	0.48
32:ZZ:62:VAL:HA	32:ZZ:65:TYR:CD2	2.48	0.48
36:gg:202:PRO:HD3	36:gg:241:PHE:HB2	1.95	0.48
37:A:88:VAL:HG13	37:A:99:GLY:O	2.12	0.48
37:A:104:VAL:CG2	37:A:146:THR:HG21	2.43	0.48
39:C:230:LEU:HD11	39:C:239:LYS:CD	2.43	0.48
39:C:303:ARG:NH2	79:5:2086:G:H5''	2.28	0.48
40:D:104:LEU:HD11	40:D:108:ARG:NH2	2.28	0.48
40:D:183:TYR:HA	40:D:190:PHE:HA	1.94	0.48
44:H:20:LEU:O	44:H:21:LYS:HD3	2.14	0.48
44:H:128:MET:CE	44:H:134:CYS:HB2	2.43	0.48
47:L:125:VAL:HG22	47:L:143:GLU:OE2	2.12	0.48
54:T:129:LYS:HZ2	54:T:131:GLN:HA	1.79	0.48
55:U:42:PHE:CE2	55:U:90:TYR:HB2	2.49	0.48
59:Z:26:VAL:CG1	59:Z:42:LEU:HG	2.43	0.48
63:d:64:ILE:HG22	63:d:106:VAL:HG21	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:e:85:LEU:HD23	64:e:114:ARG:HB3	1.95	0.48
75:p:22:LEU:HD11	79:5:3693:U:C5'	2.43	0.48
76:r:60:VAL:O	76:r:82:ILE:HG13	2.14	0.48
79:5:261:G:C4	79:5:262:C:C5	3.01	0.48
79:5:963:G:H2'	79:5:964:A:C8	2.48	0.48
79:5:1284:G:O2'	79:5:1285:U:H5''	2.13	0.48
79:5:1294:A:H1'	79:5:1295:C:N3	2.28	0.48
79:5:1971:C:H2'	79:5:1972:G:C8	2.49	0.48
79:5:2582:A:N3	79:5:2654:C:H1'	2.27	0.48
79:5:2609:G:H2'	79:5:2610:G:C8	2.48	0.48
79:5:3861:A:H2'	79:5:3862:A:H8	1.78	0.48
79:5:4608:G:H2'	79:5:4609:G:O4'	2.13	0.48
79:5:5018:C:H2'	79:5:5019:A:C8	2.49	0.48
80:7:118:C:H2'	80:7:119:U:C6	2.49	0.48
1:R:10:LEU:HD22	1:R:38:ARG:NE	2.29	0.48
1:R:61:ALA:HB2	79:5:2633:U:H5''	1.95	0.48
3:9:373:G:H2'	3:9:374:G:H8	1.79	0.48
3:9:380:G:H5''	10:II:31:ARG:NH2	2.28	0.48
3:9:386:C:H2'	3:9:387:C:C6	2.48	0.48
3:9:869:A:H1'	3:9:915:G:C8	2.48	0.48
3:9:1164:G:O2'	3:9:1165:G:H5'	2.13	0.48
3:9:1225:U:H2'	3:9:1226:G:O4'	2.13	0.48
3:9:1260:A:H61	3:9:1617:G:H1'	1.78	0.48
3:9:1299:A:H2'	3:9:1301:A:C5'	2.43	0.48
3:9:1351:G:N2	3:9:1360:U:O2	2.38	0.48
3:9:1678:A:OP1	23:FF:145:ARG:HD3	2.13	0.48
3:9:1703:C:H2'	3:9:1704:C:O4'	2.13	0.48
3:9:1716:C:H2'	3:9:1717:C:H6	1.78	0.48
3:9:1813:A:H2'	3:9:1814:G:O4'	2.14	0.48
3:9:1845:A:H2'	3:9:1846:G:C8	2.49	0.48
5:BB:133:TYR:CD2	5:BB:181:LEU:HG	2.49	0.48
6:CC:256:TRP:CG	16:WW:68:ARG:HD2	2.48	0.48
8:GG:204:GLU:O	8:GG:208:GLU:HG2	2.13	0.48
9:HH:145:ARG:HG3	9:HH:155:LYS:HD2	1.96	0.48
10:II:82:VAL:CG2	10:II:202:ILE:HD13	2.43	0.48
17:XX:90:CYS:HB3	17:XX:130:LEU:HD11	1.95	0.48
23:FF:123:GLU:OE2	33:cc:59:LEU:HD12	2.14	0.48
29:SS:44:VAL:HG11	29:SS:71:MET:SD	2.53	0.48
31:UU:60:THR:HA	31:UU:82:MET:O	2.12	0.48
31:UU:61:LEU:O	31:UU:81:GLN:HA	2.14	0.48
32:ZZ:66:LYS:HD2	32:ZZ:66:LYS:HA	1.68	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:A:202:VAL:HG12	37:A:217:GLN:OE1	2.13	0.48
38:B:285:TYR:O	38:B:363:ILE:HD11	2.12	0.48
39:C:2:ALA:N	39:C:29:LYS:HD2	2.29	0.48
43:G:142:ARG:HH12	81:8:154:G:H5''	1.79	0.48
45:I:35:ASP:OD1	79:5:1749:A:H4'	2.14	0.48
48:M:118:MET:HE1	48:M:119:ARG:NH2	2.29	0.48
49:N:140:LYS:NZ	79:5:124:C:H4'	2.29	0.48
63:d:68:LEU:HD13	63:d:108:TYR:HB2	1.96	0.48
74:o:3:ASN:O	79:5:4232:U:H2'	2.12	0.48
79:5:192:G:H2'	79:5:193:G:H8	1.77	0.48
79:5:1196:G:H2'	79:5:1197:C:C6	2.48	0.48
79:5:2358:G:H2'	79:5:2359:U:O4'	2.13	0.48
79:5:2488:C:H3'	79:5:2490:U:O4	2.14	0.48
79:5:2625:U:H2'	79:5:2626:U:O4'	2.13	0.48
79:5:4088:C:H2'	79:5:4089:G:C8	2.48	0.48
79:5:4460:U:H2'	79:5:4461:C:H6	1.79	0.48
79:5:4692:A:OP1	79:5:4694:G:H5''	2.13	0.48
79:5:4713:G:H2'	79:5:4714:C:O4'	2.13	0.48
79:5:4767:C:O2'	79:5:4768:G:H5'	2.13	0.48
81:8:15:G:H2'	81:8:16:G:C2	2.48	0.48
1:R:40:GLN:O	1:R:44:LEU:HG	2.14	0.48
1:R:95:TRP:CE3	79:5:1572:U:H4'	2.48	0.48
3:9:149:A:N7	3:9:169:U:C2	2.82	0.48
3:9:556:U:H2'	3:9:557:U:C6	2.49	0.48
3:9:958:G:H2'	3:9:959:G:O4'	2.13	0.48
3:9:1263:U:H1'	34:dd:16:GLN:NE2	2.27	0.48
4:AA:111:GLN:HG3	4:AA:116:PHE:CZ	2.47	0.48
10:II:79:ILE:HB	10:II:103:LEU:CD1	2.43	0.48
12:LL:18:GLN:NE2	12:LL:33:LEU:HA	2.29	0.48
14:OO:38:ASN:O	14:OO:68:GLU:HB2	2.13	0.48
29:SS:28:PHE:CD2	29:SS:38:ARG:HG2	2.48	0.48
35:ff:104:LYS:O	35:ff:117:LEU:HD12	2.13	0.48
36:gg:11:LEU:HB3	36:gg:307:VAL:HB	1.95	0.48
36:gg:237:ASN:HB3	36:gg:287:THR:HA	1.94	0.48
37:A:108:PRO:CG	75:p:86:LEU:HD11	2.42	0.48
38:B:223:THR:CG2	79:5:4624:A:H5'	2.44	0.48
39:C:86:ARG:HG2	79:5:375:G:O3'	2.13	0.48
43:G:104:LEU:HD11	79:5:4086:G:N3	2.28	0.48
43:G:210:ILE:HG12	43:G:223:LEU:CD2	2.43	0.48
44:H:18:ILE:CD1	44:H:27:VAL:HG22	2.43	0.48
45:I:60:LEU:HD23	45:I:60:LEU:H	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:I:77:VAL:HA	45:I:81:GLY:O	2.14	0.48
50:O:20:ALA:HB1	50:O:87:MET:HG3	1.94	0.48
50:O:66:PRO:CB	79:5:4586:G:H4'	2.44	0.48
52:Q:66:MET:O	52:Q:70:MET:HG2	2.14	0.48
52:Q:132:LYS:CE	52:Q:134:ARG:HB2	2.43	0.48
54:T:62:GLY:N	54:T:76:VAL:HG12	2.29	0.48
54:T:128:LEU:HD22	79:5:1834:U:C6	2.48	0.48
56:V:24:ALA:HB2	79:5:2847:G:O2'	2.13	0.48
56:V:89:ARG:HB2	56:V:95:PHE:CD2	2.49	0.48
61:b:57:MET:CE	79:5:1812:C:H4'	2.40	0.48
63:d:29:ILE:HD11	63:d:84:ILE:HG13	1.95	0.48
63:d:75:LYS:CE	79:5:4653:C:H5''	2.43	0.48
65:f:45:LYS:O	65:f:74:VAL:HG12	2.13	0.48
66:g:88:ARG:O	66:g:92:LYS:HG2	2.12	0.48
67:h:66:LYS:HD2	81:8:96:C:OP1	2.13	0.48
67:h:80:PRO:HB2	67:h:82:ASP:OD1	2.13	0.48
75:p:29:ILE:HD11	75:p:69:TRP:CD1	2.49	0.48
77:s:17:ILE:CG1	77:s:64:ALA:HB1	2.43	0.48
79:5:147:A:H2'	79:5:148:C:O4'	2.13	0.48
79:5:223:G:H4'	79:5:225:G:C8	2.48	0.48
79:5:710:G:H2'	79:5:711:A:H8	1.79	0.48
79:5:713:C:H2'	79:5:714:G:C8	2.47	0.48
79:5:1528:U:H2'	79:5:1529:G:C8	2.49	0.48
79:5:1917:A:N3	79:5:2067:C:H1'	2.29	0.48
79:5:1973:G:OP2	79:5:1974:U:H3'	2.13	0.48
79:5:2079:G:H2'	79:5:2080:U:C6	2.48	0.48
79:5:2363:A:H2'	79:5:2364:G:O4'	2.14	0.48
79:5:2540:C:H2'	79:5:2541:G:C8	2.48	0.48
79:5:2692:U:H2'	79:5:2693:G:O4'	2.14	0.48
79:5:3597:G:H5''	79:5:3598:C:H5	1.79	0.48
79:5:3711:A:H1'	79:5:3713:U:OP2	2.13	0.48
79:5:3853:U:H1'	79:5:4979:A:O2'	2.13	0.48
79:5:4071:U:H2'	79:5:4072:C:C6	2.49	0.48
79:5:4448:G:H5''	79:5:4449:A:C5'	2.44	0.48
79:5:4593:C:H2'	79:5:4594:U:C6	2.47	0.48
80:7:68:C:H2'	80:7:69:U:O4'	2.14	0.48
3:9:26:U:H2'	3:9:27:A:C8	2.48	0.48
3:9:433:A:H5''	10:II:22:HIS:CD2	2.49	0.48
3:9:603:C:H5'	11:JJ:18:ARG:HH21	1.79	0.48
3:9:659:G:HO2'	3:9:662:G:H1'	1.79	0.48
3:9:803:C:H2'	3:9:804:U:O4'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:1152:U:OP1	3:9:1153:C:H5'	2.14	0.48
3:9:1164:G:H3'	3:9:1165:G:H21	1.79	0.48
3:9:1209:A:H5''	19:aa:82:LYS:HE2	1.95	0.48
3:9:1354:G:H5'	3:9:1355:C:OP2	2.14	0.48
3:9:1406:G:H21	3:9:1443:C:H42	1.61	0.48
3:9:1630:A:H4'	29:SS:35:GLY:O	2.14	0.48
3:9:1665:G:N7	30:TT:88:MET:HE1	2.29	0.48
5:BB:127:VAL:HG13	5:BB:176:VAL:HG11	1.95	0.48
7:EE:70:ILE:O	7:EE:76:VAL:HA	2.13	0.48
9:HH:31:GLU:HB2	9:HH:40:LEU:HD23	1.94	0.48
9:HH:100:ILE:HD11	9:HH:122:LEU:CD1	2.43	0.48
9:HH:144:ILE:CG2	16:WW:52:ILE:HB	2.43	0.48
14:OO:113:GLN:HA	14:OO:116:LEU:CD2	2.44	0.48
14:OO:125:LYS:HG2	19:aa:56:ALA:O	2.14	0.48
16:WW:6:VAL:HG12	16:WW:34:ILE:CD1	2.44	0.48
22:DD:175:VAL:O	22:DD:181:VAL:HA	2.14	0.48
23:FF:102:LEU:HD22	32:ZZ:110:THR:HG21	1.96	0.48
23:FF:145:ARG:NH1	33:cc:48:GLY:HA2	2.29	0.48
26:PP:60:LEU:HD13	26:PP:89:MET:HG3	1.96	0.48
29:SS:55:ARG:HH22	32:ZZ:82:SER:HB3	1.79	0.48
31:UU:50:VAL:HA	31:UU:91:LEU:HD22	1.95	0.48
31:UU:67:LYS:HB3	31:UU:78:ASP:OD1	2.13	0.48
37:A:222:PRO:HG3	79:5:3749:C:H1'	1.96	0.48
40:D:39:GLN:CG	40:D:48:LYS:HB2	2.44	0.48
40:D:154:THR:HA	40:D:179:ARG:NH1	2.29	0.48
40:D:193:GLU:OE2	40:D:197:LYS:HE2	2.13	0.48
40:D:231:VAL:HG13	40:D:235:MET:SD	2.54	0.48
40:D:272:SER:OG	40:D:275:GLN:HG3	2.14	0.48
41:E:64:MET:O	41:E:68:LYS:HG3	2.14	0.48
42:F:235:ARG:HD3	42:F:238:GLN:C	2.39	0.48
44:H:22:GLY:O	44:H:45:LEU:HD12	2.12	0.48
45:I:177:ASN:OD1	45:I:180:GLU:HB2	2.13	0.48
46:J:17:ILE:HG12	46:J:83:LEU:CD2	2.44	0.48
46:J:29:SER:HA	46:J:33:LEU:CD1	2.43	0.48
46:J:111:GLU:HA	46:J:126:TYR:O	2.13	0.48
51:P:129:THR:HG22	51:P:137:ASN:O	2.13	0.48
52:Q:42:THR:O	52:Q:45:GLN:HG2	2.13	0.48
52:Q:59:PRO:HG2	52:Q:141:GLY:HA3	1.96	0.48
52:Q:110:ARG:O	52:Q:113:ILE:HG13	2.14	0.48
53:S:3:ALA:CB	53:S:7:LEU:HD21	2.43	0.48
56:V:22:VAL:HG13	56:V:53:PRO:O	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:V:57:VAL:HA	56:V:81:VAL:HB	1.96	0.48
61:b:37:PRO:HA	61:b:40:LEU:CG	2.43	0.48
62:c:58:SER:O	62:c:61:GLU:HG3	2.13	0.48
67:h:27:GLU:O	67:h:31:LEU:HG	2.14	0.48
67:h:32:ARG:O	67:h:36:VAL:HG13	2.14	0.48
77:s:40:MET:HE2	79:5:1997:U:O2'	2.13	0.48
78:t:35:LEU:O	78:t:66:ASN:HA	2.12	0.48
79:5:319:A:H1'	79:5:3726:A:C2	2.48	0.48
79:5:1177:U:H2'	79:5:1178:G:H8	1.77	0.48
79:5:1297:U:H2'	79:5:1298:C:C6	2.48	0.48
79:5:2038:U:H2'	79:5:2039:G:O4'	2.14	0.48
79:5:2266:C:H5'	79:5:2270:G:N3	2.28	0.48
79:5:3727:A:H2'	79:5:3728:A:C8	2.48	0.48
79:5:3851:U:H2'	79:5:3852:A:O4'	2.14	0.48
79:5:3867:A:H2'	79:5:3868:G:C8	2.47	0.48
79:5:4421:C:H3'	79:5:4421:C:OP2	2.13	0.48
79:5:4708:A:N3	79:5:4709:U:H5'	2.29	0.48
81:8:33:G:H5''	81:8:34:U:OP1	2.14	0.48
81:8:70:G:H1'	81:8:88:A:N6	2.29	0.48
81:8:112:G:H2'	81:8:113:C:O4'	2.13	0.48
3:9:857:U:H4'	7:EE:201:HIS:NE2	2.28	0.48
3:9:913:A:N3	9:HH:66:VAL:HG11	2.29	0.48
3:9:1690:U:H2'	3:9:1691:U:C6	2.49	0.48
3:9:1706:G:H1'	3:9:1851:A:C1'	2.43	0.48
3:9:1728:U:H2'	3:9:1729:U:O4'	2.13	0.48
4:AA:84:GLN:CB	4:AA:100:ALA:HB1	2.41	0.48
5:BB:60:ASP:HA	5:BB:63:LYS:HG2	1.95	0.48
7:EE:11:ARG:HE	7:EE:28:ALA:HB2	1.79	0.48
7:EE:188:ASN:ND2	7:EE:218:PHE:HB2	2.29	0.48
8:GG:212:LEU:HA	8:GG:215:LYS:NZ	2.29	0.48
11:JJ:24:ARG:HH12	11:JJ:44:TRP:HZ2	1.61	0.48
12:LL:69:ARG:O	12:LL:130:GLU:HB3	2.14	0.48
12:LL:91:ASP:HA	12:LL:104:LYS:NZ	2.28	0.48
13:NN:33:VAL:O	13:NN:37:ILE:HG13	2.13	0.48
16:WW:26:LEU:HD23	20:bb:7:LEU:HD13	1.96	0.48
16:WW:46:TYR:CD2	16:WW:69:LEU:HD23	2.49	0.48
17:XX:132:ALA:HB1	17:XX:138:LYS:HD3	1.95	0.48
18:YY:86:GLU:OE1	18:YY:87:PRO:HD2	2.13	0.48
23:FF:20:PHE:HB3	23:FF:23:TRP:HB2	1.95	0.48
25:MM:51:VAL:CG1	25:MM:109:VAL:HB	2.44	0.48
26:PP:49:LEU:HB3	26:PP:53:GLN:HB2	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:ff:138:ARG:HE	35:ff:147:THR:HG23	1.78	0.48
36:gg:168:CYS:HB2	36:gg:195:LEU:CD1	2.43	0.48
37:A:101:VAL:HB	37:A:165:VAL:CG1	2.40	0.48
37:A:188:LYS:HB3	79:5:2739:C:O2'	2.12	0.48
39:C:37:VAL:HG11	39:C:246:VAL:CG1	2.44	0.48
39:C:86:ARG:HB2	79:5:376:A:O2'	2.13	0.48
39:C:235:LEU:H	39:C:235:LEU:HD12	1.78	0.48
40:D:211:LEU:HD12	40:D:223:PHE:CE2	2.48	0.48
47:L:108:GLU:OE2	68:i:18:THR:HG22	2.13	0.48
48:M:56:GLN:HB3	79:5:4870:G:N7	2.28	0.48
49:N:16:SER:O	49:N:20:ARG:CB	2.59	0.48
49:N:101:VAL:HA	49:N:104:GLU:HG3	1.95	0.48
50:O:36:VAL:HG22	50:O:108:ILE:HG13	1.95	0.48
50:O:196:LEU:HD13	50:O:202:LEU:HD21	1.96	0.48
52:Q:68:ARG:O	52:Q:72:LEU:HD13	2.14	0.48
53:S:53:LYS:HA	80:7:75:G:C8	2.49	0.48
55:U:28:PRO:HA	55:U:31:ASP:OD2	2.13	0.48
56:V:90:ARG:NH2	56:V:123:LYS:HE3	2.28	0.48
58:Y:87:ARG:HB3	58:Y:97:VAL:HG21	1.96	0.48
76:r:4:HIS:O	76:r:8:MET:HG2	2.14	0.48
77:s:28:PHE:HB2	77:s:89:VAL:HG23	1.96	0.48
77:s:55:MET:HG2	79:5:1998:A:N9	2.29	0.48
78:t:117:ARG:HA	78:t:117:ARG:CZ	2.43	0.48
79:5:1311:G:H2'	79:5:1312:A:O4'	2.12	0.48
79:5:1588:U:H5''	79:5:3646:A:OP1	2.14	0.48
79:5:1599:A:H2'	79:5:1600:A:H5''	1.96	0.48
79:5:2775:C:H2'	79:5:2776:G:C8	2.49	0.48
79:5:3844:U:H2'	79:5:3845:A:H8	1.79	0.48
79:5:3925:U:H2'	79:5:3926:C:O4'	2.13	0.48
79:5:4504:C:H2'	79:5:4505:C:C6	2.49	0.48
79:5:4635:A:H5'	79:5:4664:A:N6	2.29	0.48
1:R:124:TYR:HA	1:R:127:VAL:HG22	1.96	0.48
3:9:34:U:H2'	3:9:35:C:C6	2.48	0.48
3:9:163:U:H4'	8:GG:83:CYS:HA	1.95	0.48
3:9:404:G:H2'	3:9:405:G:H8	1.79	0.48
3:9:445:A:H2'	3:9:446:G:O4'	2.13	0.48
3:9:1325:G:H1'	3:9:1510:G:H5''	1.95	0.48
3:9:1776:G:H2'	3:9:1777:G:C8	2.49	0.48
5:BB:79:VAL:CG2	5:BB:82:ARG:HB2	2.44	0.48
6:CC:91:SER:OG	6:CC:156:ILE:HG23	2.14	0.48
8:GG:189:ARG:HA	8:GG:192:ILE:HD11	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:HH:60:ILE:HD11	9:HH:90:LYS:NZ	2.29	0.48
17:XX:100:VAL:HG12	17:XX:125:VAL:HA	1.95	0.48
22:DD:172:VAL:HA	22:DD:184:ILE:O	2.14	0.48
23:FF:145:ARG:HG3	33:cc:48:GLY:HA3	1.95	0.48
24:KK:58:VAL:HG12	24:KK:71:LEU:HD13	1.95	0.48
25:MM:46:GLN:OE1	25:MM:112:LYS:HE2	2.13	0.48
26:PP:17:TYR:HB3	26:PP:25:LEU:HD11	1.94	0.48
27:QQ:47:LEU:HA	27:QQ:50:LYS:NZ	2.28	0.48
31:UU:26:SER:CB	31:UU:110:VAL:HG22	2.43	0.48
36:gg:7:LEU:HA	36:gg:309:VAL:O	2.13	0.48
37:A:47:ASP:HA	37:A:84:THR:CG2	2.44	0.48
41:E:152:ILE:HG23	41:E:200:THR:OG1	2.14	0.48
43:G:104:LEU:HD11	79:5:4086:G:C4	2.48	0.48
45:I:176:PHE:CE1	45:I:184:MET:HE3	2.49	0.48
47:L:167:ARG:NH1	47:L:167:ARG:HA	2.28	0.48
49:N:159:ARG:HG2	49:N:164:LEU:HB2	1.96	0.48
50:O:19:LEU:HB3	50:O:80:PHE:CZ	2.48	0.48
50:O:93:LYS:HE2	79:5:1308:C:H5'	1.95	0.48
57:X:139:ARG:NH1	79:5:2533:C:H5''	2.28	0.48
59:Z:135:ARG:HA	59:Z:135:ARG:HH11	1.78	0.48
61:b:9:THR:HA	61:b:12:GLN:HG2	1.96	0.48
69:j:79:ARG:HD2	81:8:94:G:C4	2.49	0.48
79:5:1865:G:N2	79:5:1867:A:H3'	2.29	0.48
79:5:3872:A:H2'	79:5:3873:G:C8	2.49	0.48
79:5:3916:G:H2'	79:5:3917:A:C8	2.49	0.48
79:5:4289:U:H1'	79:5:4320:G:O2'	2.14	0.48
79:5:4499:G:H1'	79:5:4528:G:N3	2.29	0.48
79:5:4517:A:H5''	79:5:4518:A:H5''	1.94	0.48
81:8:103:A:O5'	81:8:104:A:H5''	2.13	0.48
3:9:493:A:H4'	18:YY:89:HIS:CD2	2.49	0.48
3:9:852:G:H3'	3:9:853:C:O2	2.13	0.48
3:9:1482:C:H2'	3:9:1483:A:O4'	2.13	0.48
3:9:1665:G:OP2	30:TT:89:PRO:HD2	2.14	0.48
4:AA:61:ALA:O	4:AA:65:ILE:HG13	2.14	0.48
4:AA:111:GLN:NE2	6:CC:89:LYS:HD3	2.28	0.48
5:BB:146:ARG:H	5:BB:149:GLN:HE21	1.62	0.48
8:GG:121:ILE:CD1	8:GG:122:PRO:HD2	2.44	0.48
8:GG:197:GLN:O	8:GG:201:LYS:HG2	2.13	0.48
9:HH:27:LEU:HD11	9:HH:79:LEU:HD11	1.94	0.48
14:OO:35:ALA:HB3	14:OO:108:PRO:HB3	1.95	0.48
14:OO:45:THR:CG2	14:OO:52:THR:HG22	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:OO:72:TYR:O	14:OO:76:LEU:HG	2.14	0.48
14:OO:142:ARG:NH2	19:aa:27:ALA:HA	2.29	0.48
17:XX:36:LEU:HA	17:XX:39:ASN:HD21	1.79	0.48
23:FF:18:LYS:NZ	23:FF:44:LYS:HD3	2.28	0.48
23:FF:44:LYS:HE3	27:QQ:114:GLN:HE22	1.78	0.48
25:MM:17:ALA:C	25:MM:124:ILE:HD11	2.39	0.48
26:PP:89:MET:O	26:PP:107:ILE:HD11	2.13	0.48
27:QQ:9:SER:HB3	27:QQ:26:LYS:NZ	2.27	0.48
27:QQ:102:GLU:HA	27:QQ:105:LYS:HG2	1.95	0.48
36:gg:59:LEU:HD12	36:gg:90:TRP:CE3	2.49	0.48
37:A:207:VAL:HG21	79:5:1633:G:C5	2.49	0.48
39:C:323:ARG:HG2	79:5:1281:G:C5'	2.43	0.48
39:C:326:LEU:HD11	39:C:333:LYS:HB3	1.96	0.48
42:F:24:PHE:HB3	79:5:966:A:OP2	2.13	0.48
42:F:68:ILE:HG22	42:F:72:ARG:HD2	1.94	0.48
43:G:193:VAL:HG13	79:5:150:U:OP2	2.14	0.48
45:I:67:ALA:O	45:I:70:ILE:HG13	2.14	0.48
45:I:171:TRP:HB2	45:I:178:ALA:HA	1.95	0.48
46:J:20:LEU:HB2	46:J:79:ALA:HB1	1.95	0.48
47:L:69:LYS:HD3	47:L:159:ASN:HD22	1.78	0.48
50:O:19:LEU:HA	50:O:22:ILE:HG22	1.95	0.48
53:S:47:PHE:O	53:S:51:LEU:HD23	2.14	0.48
55:U:43:LEU:HD11	55:U:63:LEU:CD2	2.44	0.48
56:V:106:VAL:HG22	56:V:112:MET:HA	1.96	0.48
59:Z:26:VAL:HA	59:Z:91:LEU:CD1	2.44	0.48
63:d:47:LYS:HA	63:d:50:ARG:NH1	2.29	0.48
65:f:56:ASN:HB2	65:f:66:LYS:HE3	1.96	0.48
67:h:86:LYS:HD3	81:8:38:U:H6	1.79	0.48
68:i:60:LEU:HD22	68:i:63:VAL:CG1	2.44	0.48
70:k:34:PHE:O	70:k:44:THR:HA	2.14	0.48
72:m:78:HIS:CD2	72:m:79:PRO:HD2	2.49	0.48
79:5:122:U:H2'	79:5:123:C:H6	1.79	0.48
79:5:970:G:H2'	79:5:971:U:O4'	2.13	0.48
79:5:1411:C:H2'	79:5:1411(A):G:H8	1.79	0.48
79:5:1873:A:O5'	79:5:4219:A:H1'	2.14	0.48
79:5:3648:A:H1'	79:5:3785:A:N6	2.29	0.48
79:5:3651:A:O2'	79:5:3652:A:H5'	2.13	0.48
79:5:4098:A:H2'	79:5:4099:G:C8	2.48	0.48
79:5:4400:G:C2'	79:5:4401:G:H5''	2.42	0.48
79:5:4480:A:H2'	79:5:4481:U:O4'	2.14	0.48
79:5:4744:A:H2'	79:5:4745:G:O4'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:4968:A:H2'	79:5:4969:C:H6	1.79	0.48
79:5:5032:C:H2'	79:5:5033:G:O4'	2.13	0.48
80:7:66:G:O6	80:7:109:U:C2	2.66	0.48
80:7:75:G:H1'	80:7:76:U:H5	1.79	0.48
81:8:33:G:H4'	81:8:34:U:C5	2.49	0.48
1:R:62:ARG:HD2	79:5:4645:C:OP2	2.14	0.48
3:9:175:A:H2'	3:9:176:U:C6	2.48	0.48
3:9:1821:U:H2'	3:9:1822:A:C8	2.49	0.48
4:AA:158:ASP:HB3	15:VV:32:ILE:HD13	1.96	0.48
6:CC:136:HIS:HA	6:CC:163:VAL:O	2.14	0.48
8:GG:32:MET:HE1	8:GG:63:MET:O	2.13	0.48
9:HH:146:VAL:HA	9:HH:152:ARG:HA	1.95	0.48
10:II:99:ASN:HA	10:II:174:CYS:SG	2.54	0.48
11:JJ:63:LEU:HD22	11:JJ:64:ASP:H	1.79	0.48
23:FF:74:ASN:HD21	23:FF:86:LYS:HE3	1.79	0.48
23:FF:114:ASN:HB2	23:FF:181:ALA:HB1	1.95	0.48
27:QQ:96:TYR:HB3	27:QQ:105:LYS:HD3	1.95	0.48
29:SS:40:TYR:HA	29:SS:43:VAL:HG12	1.95	0.48
32:ZZ:66:LYS:O	32:ZZ:68:ILE:HG23	2.14	0.48
39:C:12:SER:HA	39:C:155:GLU:CG	2.43	0.48
40:D:51:MET:CE	40:D:62:CYS:HB2	2.43	0.48
41:E:127:LYS:HE3	79:5:958:G:N1	2.29	0.48
41:E:286:PRO:HD2	65:f:42:TYR:OH	2.14	0.48
42:F:93:ARG:HB2	42:F:113:LEU:HD12	1.95	0.48
43:G:225:ALA:O	43:G:229:LYS:HG2	2.14	0.48
43:G:238:LYS:CE	81:8:153:C:H4'	2.44	0.48
45:I:184:MET:HG3	45:I:190:LEU:HD13	1.95	0.48
45:I:205:PRO:HG2	45:I:208:LYS:HB2	1.96	0.48
46:J:15:LEU:HB3	46:J:134:LEU:HD21	1.96	0.48
46:J:15:LEU:CD1	46:J:136:ARG:HG3	2.42	0.48
47:L:162:LYS:HD3	79:5:644:G:OP1	2.14	0.48
48:M:81:ASP:O	48:M:85:LYS:HG2	2.13	0.48
50:O:179:LYS:HG2	50:O:183:LYS:NZ	2.29	0.48
52:Q:142:PRO:HA	79:5:1459:A:O3'	2.14	0.48
55:U:105:ASN:HB3	55:U:109:SER:OG	2.14	0.48
60:a:28:HIS:ND1	60:a:32:ARG:HG2	2.29	0.48
63:d:39:LYS:NZ	63:d:77:ILE:HD12	2.29	0.48
64:e:90:MET:CG	76:r:33:LYS:HA	2.40	0.48
66:g:6:THR:HG23	79:5:2400:G:N2	2.24	0.48
66:g:6:THR:HG21	79:5:2401:A:H1'	1.96	0.48
68:i:73:ILE:HD11	68:i:86:LYS:CB	2.41	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:p:47:MET:HE2	75:p:71:TYR:CE1	2.49	0.48
78:t:84:ALA:CB	78:t:108:GLU:HG2	2.42	0.48
79:5:361:C:N3	79:5:378:A:H2'	2.28	0.48
79:5:404:U:H2'	79:5:405:U:O4'	2.14	0.48
79:5:694:C:H2'	79:5:695:G:C8	2.49	0.48
79:5:1588:U:C4	79:5:1607:C:H1'	2.49	0.48
79:5:1887:G:H2'	79:5:1890:G:O6	2.14	0.48
79:5:2018:C:H2'	79:5:2019:C:C6	2.49	0.48
79:5:2376:A:H2'	79:5:2377:C:H6	1.79	0.48
79:5:2413:U:H2'	79:5:2414:G:C8	2.49	0.48
79:5:2499:C:H2'	79:5:2500:U:O4'	2.14	0.48
79:5:2515:G:H4'	79:5:2600:A:OP1	2.13	0.48
79:5:2557:G:O6	79:5:2570:U:O4	2.31	0.48
79:5:2589:C:H2'	79:5:2590:G:O4'	2.13	0.48
79:5:2856:C:H2'	79:5:2857:A:O4'	2.13	0.48
81:8:127:U:H2'	81:8:128:C:H5''	1.96	0.48
3:9:75:G:H21	3:9:77:A:H5''	1.79	0.47
3:9:89:C:H2'	3:9:90:G:C8	2.49	0.47
3:9:160:U:C4	3:9:468:A:H4'	2.48	0.47
3:9:316:G:H2'	3:9:317:C:H6	1.78	0.47
3:9:657:U:H5''	3:9:659:G:N7	2.29	0.47
3:9:1139:C:H2'	3:9:1140:G:O4'	2.14	0.47
3:9:1607:A:H2'	3:9:1608:U:O4'	2.14	0.47
3:9:1623:A:OP2	29:SS:133:GLY:HA3	2.14	0.47
8:GG:79:LYS:CB	8:GG:86:PRO:HG3	2.44	0.47
8:GG:207:ALA:O	8:GG:211:LYS:HG2	2.14	0.47
9:HH:66:VAL:HB	9:HH:67:PRO:HD3	1.94	0.47
9:HH:159:ASP:OD2	9:HH:194:LEU:HD12	2.14	0.47
11:JJ:124:HIS:O	11:JJ:128:VAL:HG23	2.15	0.47
12:LL:111:VAL:HG22	12:LL:140:PHE:HB2	1.96	0.47
17:XX:15:SER:HA	17:XX:18:ARG:CG	2.43	0.47
17:XX:84:PHE:CE2	17:XX:86:PRO:HA	2.49	0.47
22:DD:64:ARG:NH2	24:KK:72:THR:HA	2.29	0.47
22:DD:209:SER:O	28:RR:40:ILE:HG13	2.13	0.47
24:KK:13:GLU:O	24:KK:17:LYS:HG2	2.13	0.47
26:PP:133:ILE:HD12	82:AT:40:C:H4'	1.94	0.47
27:QQ:62:ARG:HE	27:QQ:108:ILE:HD11	1.79	0.47
29:SS:23:ARG:NH1	32:ZZ:80:ARG:HG2	2.28	0.47
36:gg:21:ILE:CG2	36:gg:31:ILE:HD11	2.43	0.47
37:A:140:ASN:CB	37:A:145:LYS:HB3	2.43	0.47
39:C:101:MET:CE	39:C:104:PRO:HA	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:C:349:LEU:HD23	39:C:352:GLU:OE2	2.14	0.47
41:E:154:ILE:HD11	41:E:198:ILE:CD1	2.44	0.47
42:F:91:VAL:HG23	42:F:139:ILE:HD13	1.96	0.47
43:G:238:LYS:NZ	81:8:153:C:H4'	2.27	0.47
44:H:27:VAL:CB	44:H:80:MET:HE2	2.41	0.47
44:H:47:LEU:HG	44:H:52:LYS:HE3	1.95	0.47
45:I:47:PRO:HB3	45:I:171:TRP:CH2	2.49	0.47
45:I:52:MET:HB3	45:I:152:LEU:CD1	2.44	0.47
47:L:106:SER:HB2	47:L:109:SER:OG	2.14	0.47
48:M:132:ARG:HA	48:M:135:LEU:HG	1.96	0.47
49:N:13:LYS:HE3	49:N:16:SER:H	1.78	0.47
50:O:44:SER:HB2	50:O:129:LEU:HD11	1.96	0.47
52:Q:179:GLY:O	52:Q:187:LYS:HA	2.14	0.47
55:U:37:ALA:O	55:U:41:GLN:HG2	2.13	0.47
55:U:101:ARG:HE	55:U:113:ARG:HD2	1.78	0.47
58:Y:17:ARG:NH2	58:Y:25:ILE:HG21	2.29	0.47
60:a:74:ASN:HA	60:a:112:LEU:O	2.14	0.47
61:b:56:LYS:HB3	61:b:57:MET:CE	2.44	0.47
64:e:37:LYS:HD3	79:5:1662:C:OP1	2.13	0.47
66:g:65:MET:HE1	79:5:2748:C:O2'	2.13	0.47
67:h:63:GLN:HA	67:h:66:LYS:HE3	1.96	0.47
71:l:21:ARG:NH1	71:l:24:PRO:HD3	2.29	0.47
71:l:28:TRP:HA	71:l:33:ASN:OD1	2.13	0.47
74:o:17:LYS:CE	79:5:4318:C:H5'	2.43	0.47
77:s:44:ARG:HD2	79:5:1996:C:H4'	1.96	0.47
79:5:107:G:H4'	79:5:335:A:H2	1.79	0.47
79:5:1211:G:H2'	79:5:1212:G:C8	2.49	0.47
79:5:1323:A:H61	79:5:3875:G:N2	2.11	0.47
79:5:1779:U:H2'	79:5:1780:A:C8	2.48	0.47
79:5:1823:G:H2'	79:5:1824:G:C8	2.49	0.47
79:5:1990:A:H3'	79:5:1991:A:H5''	1.96	0.47
79:5:2456:G:H2'	79:5:2457:G:C8	2.48	0.47
79:5:2779:C:H2'	79:5:2780:C:C6	2.48	0.47
79:5:4130:C:H2'	79:5:4131:G:C8	2.49	0.47
1:R:70:ARG:HG3	1:R:76:MET:SD	2.54	0.47
3:9:85:A:H2'	3:9:86:C:H6	1.78	0.47
3:9:300:U:H2'	3:9:301:A:C8	2.50	0.47
3:9:354:U:OP1	12:LL:107:LYS:HE3	2.14	0.47
3:9:429:C:H4'	7:EE:12:VAL:HB	1.96	0.47
3:9:953:C:H5''	5:BB:24:PRO:CG	2.44	0.47
3:9:1171:G:H1'	3:9:1172:U:H5	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:1556:A:N7	34:dd:13:LYS:HB2	2.29	0.47
6:CC:105:GLU:O	6:CC:128:VAL:HG13	2.13	0.47
7:EE:47:PHE:O	7:EE:51:ARG:HB3	2.13	0.47
9:HH:26:ALA:O	9:HH:30:LEU:HG	2.14	0.47
12:LL:111:VAL:HG11	12:LL:128:VAL:HG11	1.96	0.47
13:NN:85:PRO:HG2	13:NN:129:TYR:CE2	2.49	0.47
13:NN:130:LYS:CE	13:NN:137:PRO:HA	2.44	0.47
21:ee:98:LYS:HD3	21:ee:99:LYS:H	1.79	0.47
26:PP:111:MET:HG3	26:PP:119:PHE:CZ	2.49	0.47
27:QQ:72:VAL:CG2	27:QQ:84:ILE:HD11	2.44	0.47
29:SS:50:ILE:HD11	29:SS:66:ARG:HH12	1.79	0.47
33:cc:12:ALA:HB2	33:cc:34:PHE:CE1	2.49	0.47
33:cc:14:VAL:HG22	33:cc:30:VAL:HG11	1.96	0.47
37:A:245:ARG:NH1	37:A:245:ARG:HA	2.28	0.47
38:B:270:GLY:HA3	79:5:4566:U:O2'	2.14	0.47
39:C:46:LYS:HZ1	79:5:2341:A:H5'	1.79	0.47
39:C:73:VAL:HB	39:C:78:ARG:HH21	1.79	0.47
41:E:117:ARG:HD3	76:r:87:ARG:NH2	2.29	0.47
41:E:222:LYS:HE3	79:5:4940:C:H3'	1.95	0.47
41:E:270:LEU:HD13	41:E:274:LEU:HD23	1.94	0.47
42:F:91:VAL:CG1	42:F:113:LEU:HD21	2.44	0.47
42:F:149:VAL:HA	42:F:152:LEU:CD2	2.43	0.47
44:H:28:LYS:HD3	44:H:33:THR:OG1	2.14	0.47
44:H:61:TRP:HE1	48:M:33:GLN:HG3	1.78	0.47
47:L:182:LEU:HD21	60:a:146:LEU:HG	1.96	0.47
50:O:127:VAL:HG21	53:S:159:LEU:HB3	1.95	0.47
52:Q:50:ARG:O	52:Q:53:MET:HG2	2.14	0.47
52:Q:132:LYS:HE3	52:Q:134:ARG:CZ	2.44	0.47
57:X:85:SER:HA	57:X:88:LYS:HG2	1.95	0.47
66:g:20:THR:HA	66:g:35:THR:H	1.79	0.47
67:h:26:VAL:O	67:h:30:GLN:HG2	2.15	0.47
68:i:40:VAL:O	68:i:43:MET:HG2	2.14	0.47
76:r:20:ARG:NH2	79:5:2336:G:H1'	2.30	0.47
79:5:222:C:H2'	79:5:223:G:O4'	2.14	0.47
79:5:427:A:H2'	79:5:428:G:C8	2.49	0.47
79:5:1214:C:OP1	79:5:1216:C:H5''	2.14	0.47
79:5:1372:A:H2'	79:5:1373:A:O4'	2.13	0.47
79:5:1804:A:H5''	79:5:1805:A:C2'	2.44	0.47
79:5:4192:A:H2'	79:5:4193:C:C6	2.49	0.47
79:5:4507:A:H2'	79:5:4508:C:H6	1.79	0.47
81:8:90:C:H2'	81:8:91:A:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:8:130:C:H2'	81:8:131:G:C8	2.49	0.47
3:9:498:C:H2'	3:9:499:G:C8	2.49	0.47
3:9:656:G:N2	3:9:663:C:H5''	2.29	0.47
3:9:1251:A:H2'	3:9:1252:C:O4'	2.14	0.47
3:9:1337:C:H5''	31:UU:67:LYS:NZ	2.28	0.47
4:AA:167:GLY:O	4:AA:171:VAL:HG22	2.14	0.47
5:BB:122:GLU:HA	5:BB:139:CYS:O	2.14	0.47
9:HH:36:LEU:HD22	9:HH:75:ILE:CD1	2.45	0.47
10:II:29:LEU:HD12	10:II:30:GLY:H	1.79	0.47
11:JJ:80:ARG:O	11:JJ:84:ILE:HG12	2.15	0.47
11:JJ:94:LEU:HD23	11:JJ:94:LEU:H	1.79	0.47
14:OO:62:VAL:HG11	14:OO:67:ASP:OD2	2.14	0.47
16:WW:106:THR:HG22	16:WW:122:GLY:O	2.14	0.47
22:DD:65:ARG:O	22:DD:69:LEU:HG	2.15	0.47
24:KK:4:PRO:O	24:KK:8:ARG:HG2	2.14	0.47
27:QQ:53:GLU:O	27:QQ:57:LEU:HG	2.14	0.47
27:QQ:96:TYR:O	27:QQ:100:VAL:HG12	2.15	0.47
28:RR:37:GLU:OE2	28:RR:38:ILE:HG23	2.14	0.47
29:SS:20:ILE:CG2	29:SS:29:ALA:HB1	2.43	0.47
29:SS:86:ARG:HH11	29:SS:89:ASP:HA	1.78	0.47
30:TT:71:GLY:O	30:TT:75:MET:HG2	2.14	0.47
30:TT:134:ILE:O	30:TT:138:VAL:HG23	2.15	0.47
36:gg:39:THR:HG22	36:gg:60:ARG:CG	2.44	0.47
36:gg:164:ILE:CG2	36:gg:176:VAL:HG13	2.44	0.47
39:C:159:GLU:O	39:C:215:ASN:HB3	2.14	0.47
39:C:339:THR:HA	39:C:342:ARG:HB3	1.96	0.47
41:E:149:PRO:HA	41:E:167:PHE:CD2	2.49	0.47
42:F:32:LEU:CD1	79:5:1272:C:H1'	2.45	0.47
43:G:227:CYS:HB3	43:G:232:VAL:O	2.14	0.47
43:G:277:THR:HA	43:G:281:ASP:OD2	2.14	0.47
45:I:63:GLU:HB3	79:5:4430:G:C5'	2.45	0.47
46:J:101:ASP:HA	46:J:159:LYS:CG	2.44	0.47
49:N:51:LEU:HD22	49:N:117:ASN:ND2	2.30	0.47
49:N:178:HIS:HA	49:N:181:HIS:NE2	2.30	0.47
50:O:102:LEU:O	50:O:103:LYS:HD2	2.14	0.47
50:O:119:VAL:CG1	50:O:124:LEU:HD21	2.44	0.47
54:T:40:VAL:O	54:T:61:THR:HG23	2.13	0.47
54:T:43:LYS:HG3	54:T:58:HIS:HE1	1.79	0.47
56:V:42:VAL:HG12	56:V:53:PRO:CB	2.44	0.47
57:X:111:GLN:O	57:X:114:LYS:HG3	2.15	0.47
58:Y:46:SER:HB3	79:5:239:C:H5''	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:Z:97:ASN:HB3	59:Z:100:VAL:HG23	1.96	0.47
61:b:98:TYR:CE1	61:b:104:LEU:HD12	2.48	0.47
63:d:46:LEU:HG	63:d:50:ARG:HH21	1.79	0.47
65:f:94:ALA:HA	65:f:97:ILE:HD13	1.96	0.47
69:j:10:LYS:HZ2	79:5:1535:C:H5''	1.78	0.47
77:s:59:THR:HG21	79:5:1961:G:C5'	2.42	0.47
79:5:311:G:O2'	79:5:312:G:H5'	2.15	0.47
79:5:476:G:H2'	79:5:477:C:C6	2.50	0.47
79:5:945:U:O2'	79:5:946:C:H5''	2.14	0.47
79:5:1677:U:H4'	79:5:1680:G:C2	2.49	0.47
79:5:1819:G:H2'	79:5:1820:C:C6	2.49	0.47
79:5:1991:A:H2'	79:5:1992:U:O4'	2.13	0.47
79:5:2537:A:H2'	79:5:2538:U:O4'	2.14	0.47
79:5:2543:A:H2'	79:5:2546:G:N2	2.27	0.47
79:5:2636:U:H2'	79:5:2637:U:C6	2.49	0.47
79:5:3752:C:O3'	79:5:3776:G:H1'	2.14	0.47
79:5:4495:G:H2'	79:5:4496:A:H8	1.78	0.47
1:R:168:GLU:O	1:R:172:ARG:HG2	2.15	0.47
3:9:147:A:H3'	3:9:148:U:H6	1.78	0.47
3:9:604:A:OP1	11:JJ:22:LYS:HE2	2.14	0.47
3:9:676:C:H2'	3:9:677:G:O4'	2.14	0.47
3:9:885:U:H1'	3:9:902:G:N2	2.30	0.47
3:9:1155:U:H5''	6:CC:194:ARG:HH21	1.79	0.47
3:9:1337:C:H5''	31:UU:67:LYS:HZ3	1.80	0.47
3:9:1360:U:H3'	3:9:1361:G:C8	2.50	0.47
3:9:1712:A:H2'	3:9:1713:C:H6	1.80	0.47
3:9:1737:G:H2'	3:9:1738:C:C6	2.49	0.47
3:9:1859:A:H2'	3:9:1860:A:C8	2.49	0.47
4:AA:82:THR:O	4:AA:204:TYR:HB2	2.14	0.47
8:GG:190:ARG:O	8:GG:194:LEU:HG	2.15	0.47
12:LL:125:ILE:HB	12:LL:146:THR:OG1	2.15	0.47
15:VV:32:ILE:CG2	15:VV:55:ILE:HB	2.44	0.47
15:VV:69:ILE:CD1	15:VV:72:LEU:HD12	2.40	0.47
16:WW:47:ILE:CD1	16:WW:65:LEU:HA	2.43	0.47
18:YY:88:LYS:HB3	18:YY:97:TYR:CE2	2.48	0.47
20:bb:37:CYS:SG	20:bb:63:LEU:HG	2.54	0.47
22:DD:1:MET:HG2	22:DD:4:GLN:HA	1.95	0.47
22:DD:40:ARG:HA	31:UU:108:PRO:CG	2.45	0.47
23:FF:154:LEU:O	23:FF:176:GLU:HG2	2.14	0.47
26:PP:53:GLN:CG	26:PP:83:MET:HE1	2.43	0.47
28:RR:7:LYS:O	28:RR:11:LYS:HG3	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:ZZ:86:ALA:O	32:ZZ:89:GLN:HG3	2.14	0.47
37:A:5:ILE:HG13	37:A:8:GLN:HG2	1.96	0.47
37:A:29:LEU:N	37:A:123:ARG:HB3	2.29	0.47
38:B:76:VAL:HG11	38:B:332:MET:CE	2.44	0.47
38:B:171:LEU:HD21	38:B:173:LEU:HG	1.96	0.47
39:C:137:VAL:HA	39:C:247:GLY:O	2.14	0.47
40:D:145:TYR:CE2	79:5:4325:A:H1'	2.49	0.47
43:G:245:ARG:CZ	43:G:245:ARG:HA	2.43	0.47
45:I:75:TYR:CE2	45:I:150:GLU:HG3	2.50	0.47
45:I:121:LYS:HG3	45:I:122:PRO:HD2	1.96	0.47
48:M:91:TRP:HA	48:M:94:LYS:CE	2.43	0.47
49:N:105:ARG:NH1	79:5:2460:A:H5''	2.29	0.47
58:Y:113:LYS:O	58:Y:117:LYS:HG2	2.14	0.47
59:Z:4:PHE:CE2	62:c:39:ARG:HA	2.49	0.47
61:b:69:ALA:HA	61:b:72:ILE:HG12	1.97	0.47
74:o:57:ARG:NH2	79:5:4379:A:H1'	2.28	0.47
75:p:57:CYS:HB3	75:p:60:CYS:HB3	1.96	0.47
76:r:23:GLN:HB3	76:r:25:TYR:HE2	1.79	0.47
76:r:108:MET:HE1	79:5:2263:A:C5'	2.37	0.47
77:s:69:LEU:CD2	77:s:75:LEU:HD12	2.43	0.47
78:t:134:GLY:HA2	78:t:147:HIS:CD2	2.49	0.47
79:5:1168:G:H2'	79:5:1169:G:H8	1.78	0.47
79:5:1411(B):C:H2'	79:5:1411(C):C:C6	2.49	0.47
79:5:1577:G:H1'	79:5:1613:A:OP1	2.14	0.47
79:5:1597:G:O6	79:5:1600:A:H5'	2.14	0.47
79:5:1614:C:H2'	79:5:1615:C:C6	2.50	0.47
79:5:1885:G:N2	79:5:1908:A:H1'	2.29	0.47
79:5:2691:U:H2'	79:5:2692:U:C5	2.50	0.47
79:5:3777:G:H3'	79:5:3777:G:OP2	2.14	0.47
79:5:3936:A:H2'	79:5:3937:C:C6	2.48	0.47
79:5:4716:C:H2'	79:5:4717:A:C8	2.49	0.47
3:9:96:C:H1'	3:9:474:G:H5'	1.96	0.47
3:9:373:G:H2'	3:9:374:G:C8	2.49	0.47
3:9:810:A:O5'	3:9:811:A:H5'	2.14	0.47
3:9:1265:A:H4'	3:9:1327:G:OP2	2.15	0.47
3:9:1309:C:H5''	35:ff:105:TYR:OH	2.15	0.47
3:9:1729:U:O2'	3:9:1730:U:H5'	2.14	0.47
4:AA:62:ALA:O	4:AA:66:VAL:HG23	2.15	0.47
4:AA:200:ASP:HA	4:AA:203:PHE:CD2	2.50	0.47
5:BB:90:ASP:HB2	5:BB:223:PHE:CZ	2.50	0.47
6:CC:130:ILE:CD1	6:CC:155:ILE:HG23	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CC:174:ILE:HD12	6:CC:200:ARG:HH11	1.79	0.47
7:EE:151:ASP:HB3	7:EE:154:ILE:CG1	2.41	0.47
8:GG:215:LYS:HA	8:GG:218:LYS:CD	2.42	0.47
10:II:62:VAL:HG12	10:II:77:ARG:CD	2.44	0.47
10:II:90:LEU:HD12	10:II:95:THR:CB	2.44	0.47
15:VV:70:LEU:HD22	15:VV:71:ARG:NH2	2.29	0.47
16:WW:104:LEU:HD23	16:WW:113:HIS:HB3	1.97	0.47
17:XX:46:HIS:CD2	17:XX:103:ALA:HB2	2.49	0.47
19:aa:5:ARG:HB3	19:aa:8:ASN:ND2	2.28	0.47
23:FF:77:MET:HB2	23:FF:82:ASN:O	2.15	0.47
24:KK:83:LEU:HB2	24:KK:85:LEU:HG	1.95	0.47
25:MM:26:LEU:HD23	25:MM:31:LEU:CD2	2.41	0.47
26:PP:44:ARG:HH21	26:PP:45:LEU:HA	1.79	0.47
27:QQ:21:ALA:HB1	27:QQ:70:VAL:CG1	2.44	0.47
28:RR:56:HIS:HA	28:RR:59:LYS:CE	2.41	0.47
29:SS:86:ARG:NH1	29:SS:89:ASP:HA	2.30	0.47
32:ZZ:98:LYS:HG2	32:ZZ:110:THR:HB	1.94	0.47
36:gg:188:HIS:HB3	36:gg:219:TRP:CE2	2.49	0.47
36:gg:217:MET:HA	36:gg:229:THR:HA	1.97	0.47
37:A:43:GLY:O	37:A:87:PHE:HA	2.13	0.47
37:A:200:ARG:HD3	37:A:200:ARG:H	1.79	0.47
38:B:64:GLY:HA3	79:5:4615:C:O2'	2.14	0.47
38:B:117:ARG:HA	38:B:177:LYS:CD	2.43	0.47
38:B:171:LEU:HD11	38:B:173:LEU:HG	1.97	0.47
39:C:33:ARG:HH12	79:5:1350:C:H5''	1.79	0.47
39:C:284:MET:HE2	39:C:286:ASN:C	2.39	0.47
41:E:139:HIS:CE1	79:5:712:C:H1'	2.49	0.47
44:H:27:VAL:CG2	44:H:80:MET:HE2	2.44	0.47
47:L:184:MET:HE2	47:L:184:MET:HA	1.97	0.47
49:N:45:PRO:O	49:N:49:ARG:HG3	2.15	0.47
50:O:18:ARG:HB3	50:O:123:ALA:CB	2.44	0.47
51:P:15:CYS:SG	51:P:150:LEU:HB2	2.54	0.47
51:P:26:PHE:CE1	51:P:119:VAL:HG12	2.50	0.47
51:P:83:TRP:HZ3	79:5:3855:C:H4'	1.78	0.47
51:P:139:TYR:OH	79:5:2421:G:H1'	2.15	0.47
52:Q:67:ILE:O	52:Q:71:LYS:HG2	2.14	0.47
53:S:1:MET:HE1	53:S:35:PRO:HD3	1.96	0.47
54:T:79:GLN:HA	54:T:84:ILE:HG12	1.97	0.47
55:U:87:THR:HG23	55:U:102:VAL:HG21	1.97	0.47
57:X:145:ASP:HB2	57:X:148:ASP:HB2	1.96	0.47
58:Y:25:ILE:O	58:Y:29:ILE:HG23	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:o:6:LYS:CD	74:o:93:LEU:HD11	2.45	0.47
74:o:34:TYR:CZ	79:5:3729:U:H5''	2.50	0.47
77:s:26:LYS:HG2	77:s:91:THR:O	2.14	0.47
79:5:63:G:N2	79:5:333:U:H2'	2.27	0.47
79:5:427:A:H2'	79:5:428:G:H8	1.80	0.47
79:5:479:G:H2'	79:5:480:C:C6	2.50	0.47
79:5:686:A:H1'	79:5:688:U:O4	2.14	0.47
79:5:1555:G:H21	79:5:2669:C:H5'	1.80	0.47
79:5:1591:U:N3	79:5:4555:U:H5''	2.28	0.47
79:5:1926:C:H2'	79:5:1927:U:C6	2.49	0.47
79:5:2422:C:H2'	79:5:2423:A:C8	2.49	0.47
79:5:2851:G:H2'	79:5:2852:U:O4'	2.15	0.47
79:5:3947:A:H2'	79:5:3948:C:C6	2.49	0.47
79:5:4630:G:O2'	79:5:4631:G:H5'	2.14	0.47
79:5:4994:G:H2'	79:5:4995:U:H6	1.79	0.47
1:R:82:LYS:HG3	79:5:2863:G:O2'	2.14	0.47
3:9:95:G:H21	3:9:474:G:H5'	1.79	0.47
3:9:399:C:H4'	17:XX:11:ARG:NH2	2.29	0.47
3:9:616:A:N6	3:9:625:G:H1'	2.30	0.47
3:9:913:A:H2'	9:HH:120:ARG:NH2	2.29	0.47
3:9:1136:U:H2'	3:9:1137:U:C6	2.50	0.47
3:9:1218:C:H2'	3:9:1219:C:C6	2.49	0.47
3:9:1374:C:H2'	3:9:1375:G:O4'	2.13	0.47
3:9:1665:G:C8	30:TT:88:MET:HE1	2.50	0.47
3:9:1673:U:H2'	3:9:1674:G:O4'	2.13	0.47
5:BB:183:GLU:O	5:BB:187:LYS:HG3	2.14	0.47
6:CC:251:LEU:HD11	6:CC:256:TRP:HE1	1.80	0.47
11:JJ:77:LEU:O	11:JJ:81:LEU:HG	2.15	0.47
11:JJ:155:LYS:HE3	11:JJ:156:HIS:CD2	2.49	0.47
13:NN:88:LEU:HD13	13:NN:125:LEU:HD23	1.96	0.47
14:OO:131:ASP:OD1	14:OO:133:THR:HG23	2.14	0.47
19:aa:37:LYS:HD2	19:aa:70:LYS:NZ	2.29	0.47
21:ee:91:LYS:HE3	21:ee:91:LYS:HB3	1.77	0.47
24:KK:3:MET:CG	24:KK:8:ARG:HB3	2.44	0.47
25:MM:18:LEU:HA	25:MM:21:VAL:HG12	1.96	0.47
29:SS:35:GLY:CA	29:SS:103:LEU:HD22	2.44	0.47
30:TT:13:GLU:HG3	30:TT:138:VAL:HG11	1.95	0.47
32:ZZ:47:LEU:CD1	32:ZZ:49:LEU:HD12	2.44	0.47
36:gg:173:LEU:CD1	36:gg:175:LYS:HG3	2.44	0.47
37:A:104:VAL:HG13	37:A:160:SER:HA	1.96	0.47
38:B:163:LEU:CD1	38:B:180:LEU:HD12	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:B:173:LEU:HD22	38:B:342:LYS:HD3	1.97	0.47
39:C:155:GLU:HA	39:C:254:GLU:OE1	2.14	0.47
39:C:257:PHE:HA	39:C:260:LEU:CD2	2.44	0.47
40:D:50:ARG:CZ	40:D:52:ILE:HD11	2.44	0.47
42:F:106:LYS:O	42:F:109:GLN:HG2	2.15	0.47
42:F:110:LEU:CD1	79:5:1840:G:H1'	2.44	0.47
42:F:220:LYS:NZ	42:F:229:GLY:HA2	2.30	0.47
43:G:87:LYS:HG3	79:5:4128:A:C2	2.48	0.47
43:G:117:GLN:HA	43:G:120:ARG:NH1	2.29	0.47
48:M:109:ARG:HA	48:M:112:VAL:HG22	1.96	0.47
52:Q:61:LEU:HD11	52:Q:66:MET:CB	2.45	0.47
52:Q:103:LEU:HD12	52:Q:123:PHE:CE1	2.49	0.47
54:T:108:ARG:NH2	54:T:130:ARG:HB2	2.29	0.47
57:X:90:ILE:CD1	57:X:97:VAL:HG13	2.44	0.47
58:Y:34:LEU:HA	58:Y:106:ILE:HG23	1.96	0.47
60:a:26:ARG:HD2	79:5:1655:C:C5	2.50	0.47
65:f:55:ASN:HB2	79:5:443:G:OP1	2.14	0.47
65:f:78:HIS:HB2	65:f:85:ARG:HG3	1.96	0.47
67:h:88:THR:HA	81:8:36:G:OP1	2.14	0.47
74:o:16:GLY:O	74:o:17:LYS:HD2	2.14	0.47
74:o:57:ARG:NH2	79:5:4380:A:H5'	2.29	0.47
76:r:66:ARG:HG3	76:r:69:GLY:H	1.79	0.47
77:s:63:LYS:HA	77:s:66:ARG:HH11	1.79	0.47
77:s:75:LEU:HD12	77:s:79:LEU:HD11	1.96	0.47
79:5:40:G:H2'	79:5:41:C:O4'	2.14	0.47
79:5:207:G:H2'	79:5:208:A:C8	2.50	0.47
79:5:354:U:C4	79:5:1334:A:H1'	2.50	0.47
79:5:368:C:H2'	79:5:369:G:C8	2.49	0.47
79:5:372:A:N3	79:5:1531:U:H1'	2.29	0.47
79:5:419:A:H2'	79:5:420:A:C8	2.50	0.47
79:5:460:C:H2'	79:5:461:G:H8	1.80	0.47
79:5:1488:G:H2'	79:5:1489:G:C8	2.50	0.47
79:5:1687:U:H2'	79:5:1688:G:C8	2.49	0.47
79:5:1769:G:H2'	79:5:1770:A:C8	2.49	0.47
79:5:3736:A:H61	79:5:4179:G:H1'	1.79	0.47
79:5:3861:A:H2'	79:5:3862:A:C8	2.49	0.47
1:R:11:ALA:HA	1:R:14:VAL:HG22	1.95	0.47
2:W:5:LEU:HD21	2:W:12:LYS:HD3	1.96	0.47
3:9:23:G:H2'	3:9:24:C:O4'	2.15	0.47
3:9:367:U:H2'	3:9:368:U:H5''	1.96	0.47
3:9:834:C:H3'	18:YY:8:ARG:NH2	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:949:G:H2'	3:9:950:C:C6	2.50	0.47
3:9:1094:C:H2'	3:9:1095:U:H6	1.78	0.47
3:9:1143:A:H5''	3:9:1355:C:H41	1.79	0.47
3:9:1170:A:N1	3:9:1188:A:H5''	2.30	0.47
3:9:1267:C:H2'	3:9:1268:C:H6	1.80	0.47
3:9:1297:U:O3'	3:9:1298:G:H2'	2.15	0.47
3:9:1338:G:H2'	3:9:1339:U:C6	2.50	0.47
3:9:1391:C:H2'	3:9:1392:U:C6	2.49	0.47
3:9:1453:C:H5'	28:RR:49:LYS:HZ2	1.80	0.47
3:9:1598:G:H3'	32:ZZ:80:ARG:NE	2.30	0.47
3:9:1643:U:H2'	3:9:1644:C:C6	2.49	0.47
3:9:1657:G:O2'	3:9:1658:G:H5'	2.14	0.47
3:9:1717:C:H2'	3:9:1718:G:O4'	2.13	0.47
4:AA:42:LYS:HG3	4:AA:48:ILE:CD1	2.40	0.47
5:BB:47:THR:HG21	5:BB:62:LEU:HD11	1.96	0.47
5:BB:57:ILE:HB	5:BB:60:ASP:OD1	2.15	0.47
5:BB:119:THR:HB	5:BB:143:THR:CG2	2.45	0.47
5:BB:146:ARG:NH1	5:BB:206:PRO:HG3	2.29	0.47
6:CC:146:GLU:OE2	22:DD:116:ARG:HD2	2.14	0.47
6:CC:163:VAL:HG12	15:VV:27:LYS:CE	2.45	0.47
6:CC:246:LYS:HA	6:CC:249:SER:HB3	1.97	0.47
8:GG:37:ALA:HA	8:GG:49:VAL:HA	1.97	0.47
10:II:153:LYS:HA	10:II:156:ALA:CB	2.45	0.47
11:JJ:47:LYS:HA	11:JJ:50:LEU:HD21	1.95	0.47
11:JJ:129:LEU:HA	11:JJ:134:HIS:CD2	2.50	0.47
12:LL:59:LYS:HD3	12:LL:134:LEU:HD23	1.97	0.47
17:XX:81:ILE:HG23	17:XX:120:PHE:CD2	2.50	0.47
18:YY:16:ARG:HD2	18:YY:17:LEU:N	2.30	0.47
19:aa:12:LYS:HD3	19:aa:18:VAL:CG1	2.43	0.47
20:bb:36:LYS:HB2	20:bb:43:ILE:CB	2.44	0.47
23:FF:55:ARG:NH1	27:QQ:125:ARG:HD3	2.30	0.47
23:FF:61:PHE:CZ	33:cc:51:ARG:HB3	2.50	0.47
23:FF:61:PHE:CE1	33:cc:51:ARG:HD2	2.50	0.47
23:FF:107:ASN:HD21	23:FF:109:LEU:HD13	1.78	0.47
25:MM:33:ARG:HD3	25:MM:91:LEU:HD11	1.97	0.47
27:QQ:102:GLU:OE1	36:gg:55:PRO:HB2	2.15	0.47
27:QQ:135:PRO:HD2	27:QQ:140:ARG:HA	1.97	0.47
28:RR:21:TYR:CE2	28:RR:73:LEU:HD21	2.49	0.47
34:dd:38:MET:HE2	34:dd:42:CYS:HB3	1.97	0.47
36:gg:106:LYS:HD2	36:gg:126:ASP:N	2.30	0.47
36:gg:260:ASP:HB3	36:gg:263:GLY:O	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:A:89:TYR:HB2	37:A:100:ASN:OD1	2.14	0.47
37:A:145:LYS:CE	37:A:157:VAL:HG13	2.45	0.47
37:A:211:PHE:CE1	37:A:219:ILE:HB	2.50	0.47
38:B:56:ILE:HG22	38:B:74:GLU:O	2.14	0.47
38:B:151:SER:HA	38:B:154:LYS:HD2	1.97	0.47
38:B:216:MET:CE	38:B:281:ASN:HA	2.43	0.47
39:C:79:VAL:HB	39:C:88:GLY:N	2.30	0.47
39:C:350:ARG:HA	39:C:353:ARG:HG2	1.97	0.47
40:D:44:TYR:CE1	54:T:35:LYS:HD2	2.49	0.47
40:D:273:LEU:CD2	80:7:107:G:H5''	2.44	0.47
41:E:64:MET:HG2	41:E:68:LYS:NZ	2.29	0.47
41:E:128:LEU:HD12	79:5:960:A:C5	2.49	0.47
42:F:150:ASN:O	42:F:153:ILE:HG13	2.14	0.47
43:G:129:VAL:HG13	43:G:133:ILE:HG23	1.97	0.47
45:I:4:ARG:HD2	45:I:8:CYS:SG	2.54	0.47
45:I:76:MET:HG3	45:I:85:PHE:CD2	2.49	0.47
46:J:108:GLY:HA3	79:5:4251:A:H5''	1.97	0.47
47:L:203:ALA:HA	47:L:206:ASP:OD2	2.14	0.47
49:N:138:PHE:CD2	79:5:18:C:H4'	2.49	0.47
50:O:128:ARG:CZ	79:5:2054:U:H5''	2.44	0.47
51:P:45:THR:O	51:P:48:LEU:HG	2.14	0.47
51:P:60:PHE:CE1	51:P:82:ARG:HB2	2.50	0.47
51:P:94:MET:HE3	51:P:148:MET:SD	2.54	0.47
52:Q:20:SER:HB3	79:5:1349:G:H5''	1.97	0.47
52:Q:42:THR:HA	52:Q:45:GLN:NE2	2.30	0.47
52:Q:113:ILE:CD1	52:Q:114:LEU:HD22	2.44	0.47
52:Q:159:PRO:HA	52:Q:188:ASN:OXT	2.14	0.47
53:S:2:LYS:HZ3	79:5:2062:C:H4'	1.80	0.47
64:e:60:TYR:CE1	79:5:1900:C:H4'	2.50	0.47
64:e:114:ARG:HA	64:e:117:GLN:HG2	1.96	0.47
66:g:6:THR:CG2	79:5:2401:A:H1'	2.44	0.47
67:h:12:LYS:HB3	67:h:16:GLU:CD	2.39	0.47
67:h:23:ASP:O	67:h:27:GLU:HG2	2.15	0.47
70:k:24:LYS:HE2	70:k:67:LYS:HZ2	1.79	0.47
70:k:45:LEU:HD23	70:k:56:LEU:HD21	1.96	0.47
73:n:3:ALA:HA	73:n:6:ARG:NH1	2.30	0.47
74:o:56:PHE:CZ	79:5:4371:G:H4'	2.50	0.47
79:5:370:U:H2'	79:5:371:A:N9	2.30	0.47
79:5:443:G:H2'	79:5:444:G:C8	2.50	0.47
79:5:485:C:H2'	79:5:486:C:C6	2.49	0.47
79:5:675:C:H2'	79:5:676:C:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:942:G:H4'	79:5:944:A:C6	2.50	0.47
79:5:1084:C:H2'	79:5:1085:C:C6	2.50	0.47
79:5:1323:A:H2'	79:5:1324:A:O4'	2.15	0.47
79:5:1402:C:H2'	79:5:1403:G:C8	2.49	0.47
79:5:1503:A:H1'	79:5:1504:G:C8	2.50	0.47
79:5:1524:A:H61	79:5:1651:G:H1	1.62	0.47
79:5:1553:A:H2'	79:5:1554:A:C8	2.50	0.47
79:5:1554:A:N6	79:5:1573:G:H1'	2.28	0.47
79:5:1627:G:H2'	79:5:1628:C:O4'	2.13	0.47
79:5:2284:G:H2'	79:5:2285:A:C8	2.49	0.47
79:5:2382:A:H61	79:5:2830:G:H1'	1.78	0.47
79:5:2455:G:H1'	79:5:2471:G:C4	2.50	0.47
79:5:2746:A:H2'	79:5:2747:U:O4'	2.15	0.47
79:5:3696:C:H2'	79:5:3697:U:O4'	2.15	0.47
79:5:3758:U:H2'	79:5:3765:G:H22	1.80	0.47
79:5:4114:C:H2'	79:5:4115:G:H5'	1.96	0.47
79:5:4239:A:H2'	79:5:4240:G:H8	1.79	0.47
79:5:4426:C:H2'	79:5:4427:G:O4'	2.15	0.47
79:5:4633:G:O3'	79:5:4634:U:H3'	2.14	0.47
79:5:4879:C:H2'	79:5:4880:C:O2	2.15	0.47
79:5:4884:G:H2'	79:5:4885:U:O4'	2.15	0.47
81:8:40:A:H2'	81:8:41:A:C8	2.50	0.47
81:8:70:G:H1'	81:8:88:A:H61	1.78	0.47
81:8:89:U:H2'	81:8:90:C:C6	2.50	0.47
81:8:142:U:H2'	81:8:143:G:O4'	2.15	0.47
2:W:16:GLY:HA3	38:B:55:HIS:CD2	2.49	0.47
3:9:333:G:H2'	3:9:334:C:H6	1.80	0.47
3:9:398:A:H4'	3:9:400:C:C5	2.50	0.47
3:9:572:U:H4'	18:YY:61:ARG:HH12	1.79	0.47
3:9:648:A:H2'	3:9:649:U:H6	1.80	0.47
6:CC:61:LEU:HD22	6:CC:62:PRO:HD2	1.97	0.47
6:CC:147:VAL:O	6:CC:151:ILE:HG22	2.14	0.47
7:EE:35:PRO:HG2	7:EE:36:HIS:HD2	1.78	0.47
8:GG:74:ARG:NH1	8:GG:96:SER:HB2	2.29	0.47
9:HH:146:VAL:HG12	9:HH:152:ARG:HB3	1.96	0.47
11:JJ:29:LEU:HD12	21:ee:114:ARG:HH12	1.79	0.47
11:JJ:136:ARG:NE	11:JJ:139:LYS:HA	2.30	0.47
16:WW:53:ILE:HD11	20:bb:8:LEU:CD1	2.45	0.47
20:bb:34:ASP:OD1	20:bb:43:ILE:HG12	2.15	0.47
23:FF:51:HIS:HA	23:FF:86:LYS:CE	2.42	0.47
28:RR:35:CYS:HA	28:RR:38:ILE:CG1	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:TT:104:LEU:HB3	30:TT:121:ARG:NH1	2.29	0.47
31:UU:51:LYS:HZ3	31:UU:54:VAL:HG23	1.79	0.47
32:ZZ:75:GLU:CD	32:ZZ:76:ARG:HG3	2.40	0.47
37:A:5:ILE:HG22	37:A:208:GLU:O	2.14	0.47
39:C:27:VAL:HG21	39:C:260:LEU:HD13	1.97	0.47
39:C:60:HIS:HA	39:C:92:PHE:CE1	2.49	0.47
40:D:119:TYR:CE1	40:D:134:SER:HA	2.48	0.47
42:F:142:GLY:HA3	42:F:239:ILE:HG12	1.96	0.47
43:G:233:PRO:HG2	43:G:272:VAL:CG2	2.44	0.47
44:H:8:GLN:O	44:H:57:VAL:HG22	2.15	0.47
44:H:12:ILE:HD13	44:H:81:ILE:HD13	1.96	0.47
44:H:128:MET:HE1	44:H:134:CYS:HB2	1.96	0.47
45:I:52:MET:CG	45:I:136:MET:HB3	2.44	0.47
45:I:156:LYS:HG2	45:I:163:GLN:HE21	1.79	0.47
45:I:164:LYS:NZ	45:I:166:HIS:HB2	2.30	0.47
47:L:127:PHE:CD2	47:L:144:LEU:HD22	2.50	0.47
49:N:8:GLN:O	49:N:12:ARG:HG3	2.14	0.47
50:O:176:ARG:HD3	79:5:4769:G:O5'	2.14	0.47
52:Q:99:LYS:HD3	52:Q:119:LYS:HE2	1.97	0.47
55:U:44:GLN:NE2	55:U:63:LEU:HD23	2.29	0.47
55:U:113:ARG:HH12	79:5:2702:C:H5''	1.79	0.47
57:X:48:ARG:NH2	79:5:2473:A:H3'	2.29	0.47
58:Y:81:TYR:O	58:Y:82:ILE:HD13	2.15	0.47
60:a:78:LEU:CD2	60:a:81:LEU:HD21	2.45	0.47
61:b:51:LYS:HZ1	79:5:1400:G:H4'	1.80	0.47
65:f:78:HIS:CE1	79:5:2067:C:H5''	2.49	0.47
66:g:38:VAL:HG21	79:5:2731:C:H5''	1.96	0.47
67:h:63:GLN:HA	67:h:66:LYS:CE	2.45	0.47
67:h:96:ASN:O	67:h:99:GLU:HG2	2.15	0.47
71:l:15:LYS:HD3	81:8:45:C:P	2.54	0.47
75:p:24:LYS:HA	75:p:27:LYS:HD3	1.97	0.47
77:s:59:THR:HG23	79:5:1961:G:H8	1.80	0.47
78:t:60:VAL:HG13	78:t:73:VAL:HG22	1.96	0.47
79:5:443:G:H2'	79:5:444:G:H8	1.80	0.47
79:5:1355:G:H2'	79:5:1356:U:C6	2.50	0.47
79:5:1440:U:H2'	79:5:1441:C:H5	1.80	0.47
79:5:1608:G:H2'	79:5:1609:U:C6	2.49	0.47
79:5:1825:A:H2'	79:5:1826:G:C8	2.50	0.47
79:5:1840:G:H2'	79:5:1841:C:C6	2.50	0.47
79:5:1845:U:H2'	79:5:1846:G:H8	1.80	0.47
79:5:1876:U:H2'	79:5:1877:G:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:2479:G:H2'	79:5:2480:G:H8	1.80	0.47
79:5:2771:G:H2'	79:5:2772:C:O4'	2.15	0.47
79:5:4955:A:H2'	79:5:4956:A:N9	2.30	0.47
79:5:5014:A:H2'	79:5:5015:G:O4'	2.15	0.47
1:R:8:LYS:HE3	1:R:19:LYS:O	2.15	0.47
2:W:34:ALA:HB3	79:5:4663:G:OP1	2.15	0.47
3:9:89:C:O2	3:9:499:G:H4'	2.14	0.47
3:9:421:G:OP1	12:LL:98:LYS:HA	2.14	0.47
3:9:443:U:O4'	8:GG:90:GLY:HA3	2.15	0.47
3:9:811:A:H1'	7:EE:39:ARG:NH2	2.26	0.47
3:9:1332:A:H4'	22:DD:145:GLN:OE1	2.15	0.47
3:9:1375:G:H2'	3:9:1376:A:C8	2.49	0.47
3:9:1457:U:H2'	3:9:1458:G:H8	1.80	0.47
3:9:1720:U:H5''	3:9:1721:U:OP2	2.15	0.47
3:9:1829:G:H1'	3:9:1850:A:C2	2.50	0.47
3:9:1838:U:C2	14:OO:150:ARG:HG3	2.50	0.47
5:BB:65:ARG:HB3	14:OO:48:SER:OG	2.14	0.47
5:BB:135:LEU:HD12	5:BB:176:VAL:CG1	2.45	0.47
5:BB:135:LEU:HD12	5:BB:176:VAL:HG11	1.97	0.47
7:EE:145:ARG:HH21	7:EE:147:ILE:HB	1.80	0.47
8:GG:33:ALA:HA	8:GG:51:ARG:HD2	1.97	0.47
8:GG:110:ASN:O	8:GG:111:LEU:HD13	2.14	0.47
13:NN:40:LEU:HB3	13:NN:45:LEU:CD2	2.45	0.47
13:NN:128:TYR:O	13:NN:132:LYS:HG2	2.15	0.47
16:WW:105:THR:HB	16:WW:126:LEU:HD21	1.97	0.47
26:PP:75:VAL:HA	26:PP:93:MET:O	2.15	0.47
30:TT:120:GLY:O	30:TT:121:ARG:HD3	2.15	0.47
32:ZZ:70:PRO:HD3	32:ZZ:109:TYR:CE1	2.50	0.47
35:ff:141:CYS:SG	35:ff:144:CYS:HB3	2.53	0.47
36:gg:15:ASN:HB2	36:gg:37:ASP:HB3	1.97	0.47
36:gg:31:ILE:HG23	36:gg:43:TRP:HB2	1.97	0.47
36:gg:124:SER:H	36:gg:151:VAL:HB	1.78	0.47
36:gg:241:PHE:CE2	36:gg:248:LEU:HD13	2.50	0.47
37:A:83:HIS:CE1	37:A:86:GLN:HB2	2.50	0.47
37:A:209:HIS:ND1	37:A:210:PRO:HD2	2.28	0.47
37:A:213:GLY:HA3	79:5:4544:A:H5''	1.97	0.47
38:B:110:ILE:HD11	38:B:114:CYS:SG	2.55	0.47
38:B:161:ARG:HG2	38:B:184:GLN:OE1	2.15	0.47
38:B:229:LYS:HD3	79:5:2836:A:C5'	2.44	0.47
39:C:290:SER:HA	39:C:293:LEU:CD2	2.45	0.47
39:C:321:ASN:OD1	39:C:324:ILE:HG12	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:D:203:ASN:HB2	80:7:34:C:O2	2.14	0.47
41:E:118:TYR:CE1	76:r:119:ARG:HD3	2.50	0.47
42:F:86:PRO:O	42:F:124:LEU:HD13	2.15	0.47
43:G:223:LEU:HA	43:G:226:LEU:CD2	2.45	0.47
44:H:102:ASN:O	44:H:114:ILE:HA	2.15	0.47
44:H:103:VAL:HG11	44:H:144:LEU:HD11	1.96	0.47
45:I:23:CYS:SG	45:I:96:VAL:HG11	2.55	0.47
47:L:69:LYS:HD3	47:L:159:ASN:ND2	2.30	0.47
49:N:108:ARG:NH2	79:5:2461:G:H4'	2.30	0.47
49:N:145:ASN:O	49:N:149:GLN:HB3	2.14	0.47
50:O:54:TYR:O	50:O:58:LEU:HG	2.15	0.47
52:Q:34:PHE:CE1	52:Q:38:ARG:HG3	2.50	0.47
52:Q:71:LYS:CE	52:Q:96:PRO:HG2	2.45	0.47
52:Q:154:LYS:NZ	52:Q:161:SER:HB3	2.29	0.47
54:T:39:ILE:HG13	54:T:63:ARG:NH2	2.30	0.47
67:h:5:LYS:O	67:h:9:LEU:HG	2.15	0.47
67:h:116:LEU:HD22	67:h:117:ARG:H	1.80	0.47
75:p:49:ARG:HH21	75:p:52:VAL:HG23	1.80	0.47
76:r:93:ILE:CD1	76:r:111:ILE:HG12	2.44	0.47
79:5:520:U:H2'	79:5:521:C:C6	2.50	0.47
79:5:520:U:H2'	79:5:521:C:H6	1.80	0.47
79:5:1479:G:H2'	79:5:1480:C:C6	2.50	0.47
79:5:1908:A:H2'	79:5:1909:G:O4'	2.15	0.47
79:5:1976:G:H2'	79:5:1977:C:N1	2.30	0.47
79:5:2080:U:H2'	79:5:2081:C:C6	2.49	0.47
79:5:2474:G:C4	79:5:2502:G:N2	2.82	0.47
79:5:3658:C:H2'	79:5:3659:G:H8	1.79	0.47
79:5:4074:C:O2'	79:5:4075:U:H5'	2.15	0.47
79:5:4251:A:H2'	79:5:4252:C:O4'	2.15	0.47
79:5:4474:A:H2'	79:5:4476:C:O5'	2.15	0.47
79:5:4597:U:H3	79:5:4613:C:H42	1.62	0.47
79:5:4708:A:C2	79:5:4709:U:H5'	2.49	0.47
79:5:4725:C:H2'	79:5:4726:G:C8	2.50	0.47
80:7:71:G:H2'	80:7:72:U:O4'	2.14	0.47
81:8:57:C:H2'	81:8:58:G:C8	2.50	0.47
1:R:20:LYS:HB2	79:5:2823:G:OP2	2.15	0.47
1:R:121:HIS:O	1:R:125:LEU:HG	2.15	0.47
3:9:96:C:H2'	3:9:97:U:C6	2.50	0.47
3:9:114:G:O2'	3:9:115:U:H5''	2.14	0.47
3:9:124:U:H5'	3:9:125:C:OP2	2.14	0.47
3:9:426:A:H2'	3:9:427:U:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:557:U:O2'	3:9:558:G:H5'	2.14	0.47
3:9:1101:U:O2	3:9:1131:G:N2	2.33	0.47
3:9:1222:G:H2'	3:9:1223:A:C8	2.50	0.47
3:9:1283:C:C4'	3:9:1287:A:H5'	2.44	0.47
3:9:1407:U:H4'	27:QQ:71:ARG:CZ	2.45	0.47
3:9:1605:G:H1'	3:9:1634:A:H61	1.80	0.47
3:9:1666:C:H2'	3:9:1667:U:O4'	2.15	0.47
3:9:1692:U:H5''	19:aa:92:ARG:HH12	1.78	0.47
5:BB:198:GLU:O	5:BB:202:GLN:HG2	2.15	0.47
7:EE:42:LEU:HD12	7:EE:109:PHE:CD1	2.50	0.47
7:EE:199:GLU:O	7:EE:206:ASP:HB3	2.14	0.47
7:EE:242:LYS:HG3	7:EE:244:ILE:HG13	1.97	0.47
12:LL:57:ASP:HB3	12:LL:60:CYS:HB2	1.97	0.47
12:LL:101:ARG:HA	17:XX:7:LEU:CD2	2.45	0.47
14:OO:150:ARG:O	14:OO:151:LEU:HD13	2.14	0.47
18:YY:91:LEU:HB3	18:YY:96:LEU:CD1	2.41	0.47
24:KK:15:LEU:HD13	24:KK:21:MET:HE1	1.96	0.47
26:PP:84:ILE:HD12	26:PP:114:HIS:O	2.14	0.47
27:QQ:48:GLN:OE1	27:QQ:51:LEU:HD12	2.14	0.47
28:RR:27:ASP:HB3	28:RR:30:THR:OG1	2.14	0.47
28:RR:45:LYS:O	28:RR:49:LYS:HG2	2.16	0.47
29:SS:30:ILE:HG22	29:SS:36:VAL:HG21	1.97	0.47
29:SS:47:LYS:HD2	29:SS:78:LYS:HG2	1.95	0.47
29:SS:59:LEU:CD1	29:SS:64:VAL:HG12	2.40	0.47
31:UU:22:ILE:HG22	31:UU:114:VAL:CG2	2.44	0.47
32:ZZ:113:THR:O	32:ZZ:114:LYS:HD2	2.14	0.47
33:cc:16:LYS:HA	33:cc:52:GLU:CD	2.40	0.47
37:A:135:THR:HG22	37:A:149:LYS:CE	2.42	0.47
38:B:231:VAL:HG21	38:B:251:VAL:H	1.80	0.47
39:C:13:GLU:OE2	39:C:157:LYS:HB3	2.15	0.47
39:C:210:ILE:HD11	39:C:232:VAL:HG12	1.96	0.47
40:D:103:LEU:O	40:D:107:ARG:HG2	2.15	0.47
44:H:180:TYR:HB3	72:m:63:TYR:HD2	1.80	0.47
47:L:191:LEU:O	47:L:194:ILE:HG13	2.15	0.47
50:O:130:LYS:HD3	79:5:2055:G:P	2.55	0.47
53:S:60:GLU:HB3	54:T:136:ARG:NH2	2.30	0.47
53:S:92:ASN:ND2	54:T:155:PRO:HB2	2.29	0.47
54:T:129:LYS:NZ	54:T:131:GLN:HA	2.30	0.47
55:U:87:THR:O	55:U:91:LEU:HG	2.15	0.47
58:Y:86:GLN:HB2	58:Y:95:VAL:O	2.15	0.47
59:Z:103:ASP:OD2	59:Z:106:LEU:HD13	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:c:62:TYR:HA	62:c:65:MET:HG3	1.97	0.47
79:5:48:G:H4'	79:5:49:U:O5'	2.15	0.47
79:5:307:A:H2'	79:5:308:G:C4	2.50	0.47
79:5:418:A:H2'	79:5:419:A:C8	2.43	0.47
79:5:692:A:H2'	79:5:693:C:C6	2.50	0.47
79:5:1074:G:H2'	79:5:1075:G:C8	2.50	0.47
79:5:1604:G:H2'	79:5:1605:G:C8	2.50	0.47
79:5:1726:U:H2'	79:5:1727:U:C6	2.50	0.47
79:5:1792:U:H3'	79:5:1793:A:H8	1.80	0.47
79:5:1857:C:H2'	79:5:1858:A:C8	2.49	0.47
79:5:1970:A:H2'	79:5:2016:C:N4	2.30	0.47
79:5:2783:A:H2'	79:5:2784:C:O4'	2.15	0.47
79:5:4219:A:H2'	79:5:4220:A:C8	2.49	0.47
79:5:4310:A:H2'	79:5:4311:A:O4'	2.15	0.47
79:5:4640:C:H2'	79:5:4641:U:C6	2.50	0.47
79:5:4705:A:H2'	79:5:4706:G:O4'	2.15	0.47
79:5:4994:G:H2'	79:5:4995:U:C6	2.50	0.47
81:8:10:G:H2'	81:8:11:C:C6	2.50	0.47
81:8:67:U:H2'	81:8:68:G:C8	2.50	0.47
81:8:138:C:H2'	81:8:139:G:C8	2.49	0.47
1:R:64:ARG:O	1:R:68:LEU:HD22	2.15	0.46
3:9:106:C:H2'	3:9:107:A:C8	2.50	0.46
3:9:402:C:H2'	3:9:403:G:C8	2.50	0.46
3:9:567:C:O2'	3:9:568:C:H5''	2.15	0.46
3:9:572:U:H2'	3:9:573:U:O4'	2.15	0.46
3:9:1018:U:H1'	13:NN:48:SER:OG	2.15	0.46
4:AA:141:ASN:OD1	6:CC:86:LEU:HA	2.15	0.46
4:AA:149:ASN:ND2	4:AA:164:ASN:HA	2.31	0.46
5:BB:65:ARG:NH2	14:OO:48:SER:HB3	2.30	0.46
5:BB:166:LYS:HA	5:BB:169:MET:CG	2.45	0.46
7:EE:64:ILE:HD11	18:YY:18:LEU:HD23	1.96	0.46
8:GG:139:SER:O	8:GG:143:LYS:HG2	2.14	0.46
9:HH:142:LYS:HB2	16:WW:54:ASP:OD2	2.15	0.46
9:HH:181:THR:O	9:HH:183:LYS:HE2	2.15	0.46
12:LL:88:ILE:O	12:LL:108:ASN:HB2	2.15	0.46
16:WW:28:ARG:HB2	16:WW:29:PRO:HD3	1.96	0.46
16:WW:36:ARG:HE	16:WW:110:ILE:HG13	1.79	0.46
17:XX:73:GLN:HA	17:XX:79:LYS:O	2.15	0.46
25:MM:15:ASN:O	25:MM:19:GLN:HG2	2.15	0.46
25:MM:31:LEU:HD23	25:MM:31:LEU:H	1.80	0.46
26:PP:49:LEU:HB2	26:PP:54:HIS:CE1	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:TT:41:LYS:HG2	30:TT:94:ARG:NH1	2.30	0.46
33:cc:16:LYS:O	33:cc:30:VAL:HG13	2.14	0.46
36:gg:106:LYS:HZ2	36:gg:126:ASP:HB3	1.80	0.46
36:gg:246:TYR:CD2	36:gg:261:LEU:HB3	2.50	0.46
37:A:118:GLU:HA	37:A:158:ILE:CG2	2.45	0.46
37:A:200:ARG:HD3	79:5:3651:A:OP1	2.15	0.46
38:B:303:ALA:CB	38:B:312:LYS:HE2	2.44	0.46
38:B:379:PHE:CE2	38:B:385:LYS:HG3	2.49	0.46
39:C:237:ILE:HA	39:C:240:LEU:HG	1.97	0.46
40:D:34:LYS:HB3	54:T:27:LEU:CD2	2.44	0.46
40:D:68:ARG:CG	40:D:73:MET:HE2	2.45	0.46
41:E:140:VAL:CG1	41:E:142:LYS:HE3	2.45	0.46
41:E:264:ILE:HB	41:E:270:LEU:HD12	1.97	0.46
42:F:111:LEU:O	42:F:120:THR:HG21	2.15	0.46
43:G:210:ILE:CD1	43:G:224:PRO:HG3	2.45	0.46
44:H:120:GLU:OE2	44:H:122:TYR:HB3	2.15	0.46
45:I:86:HIS:ND1	45:I:139:ARG:HD3	2.29	0.46
45:I:150:GLU:HB2	45:I:153:ARG:HH21	1.79	0.46
46:J:80:GLU:HA	46:J:83:LEU:HG	1.97	0.46
46:J:146:ARG:NH1	46:J:147:ARG:HD3	2.30	0.46
48:M:15:VAL:HG11	48:M:20:HIS:O	2.14	0.46
48:M:20:HIS:CE1	48:M:23:LYS:HD2	2.50	0.46
48:M:41:PRO:HB2	48:M:74:ARG:CZ	2.45	0.46
48:M:100:ARG:O	48:M:104:MET:HG2	2.16	0.46
49:N:158:HIS:HB3	49:N:161:MET:SD	2.55	0.46
49:N:190:ALA:HA	49:N:193:ARG:NE	2.29	0.46
49:N:204:ARG:HD2	79:5:1342:A:OP1	2.15	0.46
51:P:50:ASP:OD1	51:P:55:LYS:HB2	2.14	0.46
52:Q:18:PRO:HD3	52:Q:52:PHE:CE1	2.50	0.46
52:Q:78:LYS:HZ1	79:5:1430:C:H5'	1.79	0.46
52:Q:80:ALA:HA	52:Q:137:VAL:O	2.15	0.46
54:T:61:THR:HB	79:5:1800:U:H4'	1.98	0.46
54:T:126:VAL:HG13	54:T:128:LEU:CD1	2.45	0.46
55:U:21:PHE:HE2	55:U:78:PHE:HB3	1.80	0.46
55:U:91:LEU:HD22	55:U:96:LEU:HB2	1.95	0.46
55:U:105:ASN:HB2	55:U:111:GLU:HG2	1.97	0.46
56:V:62:MET:HE1	79:5:4508:C:H5'	1.97	0.46
57:X:106:LYS:O	57:X:109:ILE:HG13	2.15	0.46
57:X:128:ILE:HD12	79:5:2781:G:P	2.55	0.46
60:a:77:LYS:O	60:a:80:THR:HG22	2.15	0.46
61:b:32:LEU:HD23	79:5:1464:C:C5'	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:e:31:ILE:HD11	79:5:2347:A:N1	2.29	0.46
69:j:49:TRP:CD1	79:5:1646:A:H1'	2.50	0.46
75:p:26:VAL:HA	75:p:29:ILE:HG22	1.98	0.46
78:t:16:ARG:HD3	79:5:1975:G:H1'	1.96	0.46
79:5:99:A:H2'	79:5:100:C:O2	2.14	0.46
79:5:149:A:H4'	79:5:150:U:H5''	1.97	0.46
79:5:659:G:O2'	79:5:660:A:H5'	2.15	0.46
79:5:1450:C:H2'	79:5:1451:G:O4'	2.15	0.46
79:5:2004:U:O2	79:5:2016:C:H1'	2.16	0.46
79:5:2309:G:H2'	79:5:2310:C:O4'	2.16	0.46
79:5:2813:A:H2'	79:5:2815:A:C8	2.50	0.46
79:5:3662:A:H4'	79:5:3663:A:C5'	2.46	0.46
79:5:3820:G:H2'	79:5:3821:A:C8	2.50	0.46
3:9:846:G:OP1	7:EE:106:LYS:HE2	2.15	0.46
3:9:925:G:H5'	13:NN:91:LEU:HD21	1.98	0.46
3:9:1438:A:H2'	3:9:1439:A:C8	2.49	0.46
3:9:1702:G:H2'	3:9:1703:C:O4'	2.15	0.46
3:9:1706:G:H1'	3:9:1851:A:H1'	1.98	0.46
3:9:1791:A:H2'	3:9:1792:G:O4'	2.15	0.46
4:AA:121:LEU:HA	4:AA:143:PRO:HG2	1.98	0.46
5:BB:53:GLN:O	5:BB:56:LYS:HG2	2.16	0.46
6:CC:68:ARG:HG3	6:CC:277:HIS:ND1	2.30	0.46
8:GG:145:PHE:HB3	8:GG:147:LEU:HG	1.96	0.46
9:HH:134:VAL:CG2	9:HH:137:SER:HB2	2.45	0.46
10:II:25:ARG:O	10:II:28:GLU:HG3	2.15	0.46
14:OO:146:ARG:HG3	19:aa:29:CYS:HB2	1.96	0.46
16:WW:90:GLN:HB2	16:WW:94:LEU:CD1	2.46	0.46
17:XX:140:ARG:HH11	17:XX:141:PRO:HD2	1.79	0.46
18:YY:36:PRO:HG2	18:YY:39:GLU:HG3	1.97	0.46
18:YY:110:ARG:HA	18:YY:113:ARG:HH21	1.80	0.46
19:aa:87:ARG:HB3	19:aa:91:ALA:CB	2.45	0.46
24:KK:11:ILE:HG23	24:KK:49:MET:HE2	1.96	0.46
29:SS:24:ARG:HH21	29:SS:25:LYS:HG3	1.79	0.46
36:gg:63:SER:HB2	36:gg:84:ASP:CB	2.45	0.46
38:B:66:LYS:HD2	56:V:12:ALA:H	1.79	0.46
38:B:92:TYR:HB2	38:B:159:VAL:O	2.16	0.46
39:C:6:PRO:HB3	79:5:668:C:C1'	2.43	0.46
39:C:20:LYS:HE2	39:C:258:ARG:NH2	2.30	0.46
39:C:189:MET:HE1	79:5:2334:C:C5	2.51	0.46
43:G:104:LEU:H	57:X:41:ARG:HD2	1.80	0.46
46:J:109:ILE:HG13	46:J:128:LEU:O	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:M:11:ARG:NH1	48:M:59:ASP:HA	2.30	0.46
49:N:68:ARG:NH1	79:5:302:C:H5''	2.30	0.46
51:P:17:SER:HA	79:5:400:A:H5'	1.96	0.46
52:Q:146:ARG:HB2	52:Q:149:TYR:HD2	1.80	0.46
52:Q:181:ARG:C	52:Q:187:LYS:HB3	2.40	0.46
54:T:84:ILE:O	61:b:24:PRO:HD3	2.15	0.46
54:T:106:LEU:HA	54:T:109:VAL:HG12	1.98	0.46
55:U:35:ASP:HB3	55:U:38:ASN:CB	2.45	0.46
56:V:20:LEU:HB2	56:V:55:ALA:O	2.15	0.46
60:a:117:LEU:HD13	60:a:118:PRO:CD	2.45	0.46
63:d:31:LYS:HE2	63:d:31:LYS:HB2	1.70	0.46
72:m:53:GLU:CD	72:m:54:PRO:HD2	2.40	0.46
75:p:10:ILE:O	75:p:13:LYS:HG2	2.16	0.46
76:r:90:LEU:HD12	76:r:111:ILE:CG2	2.45	0.46
78:t:60:VAL:CG1	78:t:73:VAL:HG22	2.44	0.46
79:5:149:A:P	79:5:151:G:H5'	2.56	0.46
79:5:450:G:H1	79:5:1297:U:H3	1.62	0.46
79:5:1722:C:H2'	79:5:1723:A:C8	2.50	0.46
79:5:1738:A:H4'	80:7:101:A:C2	2.50	0.46
79:5:2005:G:N1	79:5:2015:U:H1'	2.30	0.46
79:5:2374:A:H2'	79:5:2375:A:C8	2.49	0.46
79:5:3717:A:H1'	79:5:4179:G:O4'	2.15	0.46
79:5:4323:A:H2'	79:5:4324:A:N9	2.29	0.46
79:5:4399:U:H2'	79:5:4400:G:O4'	2.14	0.46
79:5:4653:C:H2'	79:5:4654:C:C6	2.51	0.46
81:8:91:A:H2'	81:8:92:U:C6	2.50	0.46
1:R:19:LYS:HA	1:R:22:VAL:HG23	1.96	0.46
1:R:55:VAL:HG23	79:5:2821:U:H5''	1.97	0.46
3:9:397:G:C1'	3:9:401:A:H1'	2.45	0.46
3:9:465:A:H4'	3:9:466:G:O5'	2.14	0.46
3:9:658:U:H5'	3:9:659:G:C8	2.50	0.46
3:9:1067:C:H2'	3:9:1068:G:O4'	2.16	0.46
3:9:1303:C:H2'	3:9:1304:U:H6	1.80	0.46
6:CC:193:VAL:HG12	6:CC:239:ALA:HB1	1.97	0.46
8:GG:6:SER:CB	8:GG:13:GLN:HB3	2.45	0.46
9:HH:130:LEU:HG	9:HH:139:ILE:HD11	1.98	0.46
11:JJ:47:LYS:HD2	11:JJ:102:ILE:HD13	1.97	0.46
15:VV:74:LYS:HD2	15:VV:79:VAL:CG1	2.45	0.46
18:YY:45:ALA:HB1	18:YY:50:THR:O	2.15	0.46
22:DD:124:ARG:HH21	22:DD:127:MET:HG3	1.80	0.46
22:DD:209:SER:HB3	28:RR:40:ILE:CD1	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:QQ:11:GLN:HG2	27:QQ:24:HIS:ND1	2.31	0.46
30:TT:45:LEU:HG	30:TT:46:ALA:O	2.15	0.46
31:UU:31:SER:HB2	31:UU:107:GLU:OE2	2.16	0.46
31:UU:54:VAL:HB	31:UU:88:LEU:CG	2.41	0.46
37:A:84:THR:O	75:p:62:LYS:HE3	2.14	0.46
37:A:122:ASP:OD2	37:A:125:LYS:HB2	2.15	0.46
37:A:234:LYS:HD2	79:5:3666:C:O3'	2.16	0.46
38:B:91:GLY:HA2	38:B:160:ILE:CD1	2.46	0.46
38:B:380:GLN:HB2	38:B:384:GLU:OE1	2.15	0.46
41:E:52:LEU:CD2	41:E:58:ARG:HA	2.45	0.46
41:E:113:ARG:CZ	79:5:459:C:H4'	2.45	0.46
42:F:173:LEU:H	42:F:173:LEU:HD12	1.81	0.46
43:G:116:LEU:HA	43:G:119:GLN:OE1	2.15	0.46
43:G:200:VAL:HG12	43:G:230:MET:SD	2.55	0.46
45:I:43:VAL:HG11	45:I:197:VAL:CG2	2.45	0.46
49:N:3:ALA:HA	49:N:6:TYR:CD2	2.48	0.46
51:P:6:LEU:HD21	81:8:10:G:H21	1.81	0.46
51:P:64:ASN:HB2	51:P:80:GLN:OE1	2.14	0.46
52:Q:34:PHE:HA	52:Q:37:ARG:CD	2.45	0.46
52:Q:178:ARG:HD2	52:Q:184:ARG:HB3	1.97	0.46
53:S:127:MET:HB3	54:T:153:PRO:HB2	1.97	0.46
53:S:154:LEU:HD11	53:S:157:ARG:CG	2.44	0.46
60:a:78:LEU:HD22	60:a:81:LEU:HD21	1.98	0.46
60:a:114:LYS:HG3	79:5:1397:A:C8	2.51	0.46
62:c:53:PRO:HB2	62:c:56:ARG:HG3	1.97	0.46
64:e:17:THR:HG21	79:5:1301:C:O2'	2.16	0.46
67:h:14:LYS:HD3	67:h:14:LYS:H	1.79	0.46
67:h:14:LYS:O	67:h:18:LEU:HG	2.16	0.46
69:j:2:THR:CG2	79:5:3642:A:H1'	2.45	0.46
71:l:43:HIS:ND1	71:l:46:ARG:HG2	2.30	0.46
75:p:22:LEU:O	75:p:25:MET:HG3	2.16	0.46
79:5:460:C:H2'	79:5:461:G:C8	2.50	0.46
79:5:1338:G:H4'	79:5:1339:U:C5	2.50	0.46
79:5:1504:G:H2'	79:5:1505:C:C6	2.51	0.46
79:5:1505:C:H2'	79:5:1506:G:H8	1.80	0.46
79:5:1563:A:H2'	79:5:1564:A:C8	2.50	0.46
79:5:1922:G:C2'	79:5:1923:A:H5'	2.46	0.46
79:5:2041:A:O2'	79:5:2042:A:H5''	2.15	0.46
79:5:2277:C:H2'	79:5:2278:G:C8	2.50	0.46
79:5:2341:A:O2'	79:5:2342:G:H5'	2.15	0.46
79:5:2673:G:H4'	79:5:2674:A:H5''	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:2886:U:H2'	79:5:2887:U:C6	2.50	0.46
79:5:3901:A:C2	79:5:4450:U:H5'	2.51	0.46
79:5:4232:U:H4'	79:5:4233:A:O5'	2.14	0.46
79:5:4269:G:H2'	79:5:4270:C:C6	2.50	0.46
79:5:4343:U:O2'	79:5:4344:U:H5'	2.15	0.46
79:5:4526:U:H2'	79:5:4527:G:N9	2.31	0.46
1:R:35:ALA:HB2	1:R:44:LEU:HD11	1.97	0.46
3:9:97:U:O2'	3:9:98:C:H5'	2.14	0.46
3:9:1014:G:O2'	3:9:1015:U:H5'	2.15	0.46
3:9:1652:G:H2'	3:9:1653:U:O4'	2.14	0.46
3:9:1668:U:O2'	31:UU:64:THR:HG21	2.15	0.46
5:BB:52:THR:HG23	5:BB:57:ILE:HD13	1.97	0.46
6:CC:163:VAL:HA	15:VV:27:LYS:HZ1	1.81	0.46
8:GG:34:THR:O	8:GG:51:ARG:HA	2.15	0.46
9:HH:117:PRO:HG2	9:HH:120:ARG:HB2	1.98	0.46
11:JJ:29:LEU:HD23	11:JJ:32:ILE:HD12	1.96	0.46
12:LL:77:VAL:HG13	12:LL:86:ILE:CG2	2.45	0.46
12:LL:117:PHE:HE2	12:LL:142:VAL:HG12	1.80	0.46
14:OO:82:ALA:O	14:OO:86:LYS:HD3	2.14	0.46
22:DD:126:ILE:HD11	22:DD:134:CYS:SG	2.55	0.46
28:RR:105:MET:O	28:RR:109:LEU:HG	2.16	0.46
29:SS:124:ARG:CB	29:SS:131:VAL:HG23	2.46	0.46
36:gg:3:GLU:CB	36:gg:314:ILE:HB	2.43	0.46
36:gg:42:MET:HG2	36:gg:57:ARG:HB2	1.97	0.46
36:gg:120:ILE:O	36:gg:131:LEU:HD22	2.15	0.46
37:A:40:TYR:CB	37:A:94:ALA:HB2	2.44	0.46
37:A:42:LYS:HD2	37:A:87:PHE:CE2	2.50	0.46
37:A:225:ILE:HD11	37:A:238:ILE:HA	1.96	0.46
38:B:99:LEU:CG	79:5:4582:C:H4'	2.43	0.46
38:B:338:VAL:CG1	79:5:4624:A:H4'	2.44	0.46
45:I:75:TYR:HD2	45:I:151:ALA:HB2	1.81	0.46
47:L:186:ARG:CZ	79:5:1394:G:H5'	2.45	0.46
50:O:110:PRO:HA	50:O:113:ASP:OD2	2.16	0.46
57:X:48:ARG:CD	79:5:2472:A:H1'	2.45	0.46
57:X:73:HIS:HA	57:X:76:ILE:CG1	2.45	0.46
58:Y:3:PHE:CD2	79:5:243:A:H4'	2.51	0.46
58:Y:12:SER:O	58:Y:15:ARG:HG2	2.15	0.46
60:a:99:PRO:HG2	60:a:122:VAL:HG23	1.98	0.46
65:f:92:LEU:HD22	65:f:93:PRO:CD	2.44	0.46
69:j:60:GLY:HA2	69:j:64:MET:SD	2.55	0.46
70:k:49:ASP:CB	70:k:52:LYS:HD3	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:o:59:LYS:NZ	79:5:4371:G:H5''	2.30	0.46
79:5:161:G:H2'	79:5:162:A:H8	1.81	0.46
79:5:347:A:H2'	79:5:348:G:C8	2.50	0.46
79:5:1393:G:H21	79:5:4351:U:H5'	1.80	0.46
79:5:1455:G:H2'	79:5:1456:C:C6	2.51	0.46
79:5:1472:C:H2'	79:5:1473:U:C6	2.50	0.46
79:5:1683:U:H2'	79:5:1684:A:H8	1.80	0.46
79:5:2020:U:C2'	79:5:2021:G:H5'	2.45	0.46
79:5:2264:C:H2'	79:5:2265:G:O4'	2.15	0.46
79:5:2413:U:H2'	79:5:2414:G:H8	1.79	0.46
79:5:2765:A:H2'	79:5:2766:A:C8	2.51	0.46
79:5:3802:U:O2'	79:5:3803:A:H5'	2.15	0.46
79:5:3814:U:H2'	79:5:3815:G:C8	2.51	0.46
79:5:4226:G:O2'	79:5:4227:U:H5'	2.15	0.46
79:5:4993:G:H1	79:5:5058:A:H2	1.62	0.46
81:8:40:A:H2'	81:8:41:A:H8	1.81	0.46
3:9:150:A:H2'	3:9:151:C:H5'	1.95	0.46
3:9:333:G:H2'	3:9:334:C:C6	2.51	0.46
3:9:519:A:H5''	11:JJ:11:LYS:CE	2.42	0.46
3:9:979:C:H2'	3:9:980:A:H8	1.79	0.46
3:9:1273:C:O2'	3:9:1275:G:H5''	2.14	0.46
3:9:1576:G:H2'	3:9:1577:G:C8	2.50	0.46
3:9:1616:U:H1'	3:9:1662:U:O4'	2.15	0.46
3:9:1631:U:O3'	29:SS:34:LYS:HE3	2.16	0.46
3:9:1679:A:OP2	23:FF:60:ARG:HG3	2.16	0.46
6:CC:170:TRP:HB2	6:CC:179:THR:HG21	1.97	0.46
7:EE:45:ILE:HD13	7:EE:61:VAL:CG1	2.45	0.46
7:EE:45:ILE:CG1	7:EE:80:ILE:HB	2.46	0.46
7:EE:172:PHE:CE2	7:EE:174:LYS:HE3	2.50	0.46
8:GG:147:LEU:CD1	8:GG:153:VAL:HG13	2.45	0.46
11:JJ:114:VAL:HA	11:JJ:119:LEU:HD21	1.98	0.46
17:XX:91:LEU:HD13	17:XX:94:ILE:HG21	1.98	0.46
19:aa:41:ILE:HG12	19:aa:68:TYR:CD2	2.51	0.46
22:DD:132:LYS:HB3	22:DD:189:MET:SD	2.55	0.46
26:PP:22:LEU:HD22	26:PP:109:PRO:CG	2.45	0.46
29:SS:70:ILE:HA	29:SS:77:TYR:CD2	2.46	0.46
30:TT:133:ARG:O	30:TT:137:GLN:HG3	2.15	0.46
32:ZZ:46:ASN:HB2	32:ZZ:79:ILE:C	2.41	0.46
36:gg:103:GLY:O	36:gg:130:LYS:HE3	2.15	0.46
36:gg:110:SER:CB	36:gg:153:CYS:HA	2.44	0.46
36:gg:149:GLU:OE1	36:gg:170:TRP:HB2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:B:224:LYS:HE3	79:5:4626:A:P	2.55	0.46
41:E:165:VAL:CG1	41:E:178:VAL:HG22	2.46	0.46
41:E:200:THR:HA	41:E:291:PHE:OXT	2.15	0.46
45:I:40:LYS:HZ1	79:5:1750:G:H4'	1.81	0.46
46:J:166:PHE:CE2	46:J:172:GLY:HA3	2.50	0.46
47:L:161:PHE:CE1	60:a:105:ARG:HB2	2.51	0.46
49:N:96:ARG:HH22	79:5:2460:A:H1'	1.81	0.46
49:N:203:TYR:HB2	79:5:1359:G:H4'	1.97	0.46
51:P:47:TYR:O	51:P:51:VAL:HG23	2.16	0.46
53:S:51:LEU:HD21	54:T:151:LEU:HD11	1.97	0.46
53:S:80:ILE:CD1	53:S:129:VAL:HG13	2.46	0.46
55:U:31:ASP:OD1	55:U:33:ILE:HG12	2.16	0.46
55:U:63:LEU:HD11	55:U:70:ILE:HD11	1.98	0.46
57:X:45:THR:HG22	79:5:4085:A:OP1	2.15	0.46
58:Y:51:LYS:HE3	81:8:71:A:O3'	2.15	0.46
62:c:12:GLU:HA	62:c:15:ASN:OD1	2.16	0.46
68:i:33:LEU:CD2	68:i:38:LYS:HB3	2.43	0.46
74:o:64:LYS:HE3	79:5:4370:G:H5''	1.97	0.46
79:5:175:C:H2'	79:5:176:G:C8	2.51	0.46
79:5:1452:A:H2'	79:5:1453:G:O4'	2.15	0.46
79:5:1950:U:H2'	79:5:1951:G:O4'	2.16	0.46
79:5:2272:C:O2'	79:5:2273:G:H5'	2.15	0.46
79:5:2562:G:H22	79:5:2564:G:H3'	1.81	0.46
79:5:2730:U:H2'	79:5:2731:C:H6	1.81	0.46
79:5:3690:U:H5''	79:5:3819:G:OP2	2.15	0.46
79:5:3794:C:H2'	79:5:3795:A:H8	1.80	0.46
79:5:4326:G:H2'	79:5:4327:C:C6	2.51	0.46
79:5:4339:A:C2'	79:5:4340:U:H5'	2.46	0.46
79:5:4537:C:H2'	79:5:4538:G:C8	2.51	0.46
79:5:4578:G:H2'	79:5:4579:U:H6	1.80	0.46
79:5:4637:G:H2'	79:5:4638:U:H6	1.80	0.46
82:AT:36:C:N3	83:1:1501:U:C4	2.84	0.46
1:R:75:HIS:CE1	79:5:2889:G:H5''	2.51	0.46
1:R:102:LEU:HD13	1:R:127:VAL:CG1	2.46	0.46
3:9:616:A:H4'	21:ee:81:ARG:CZ	2.46	0.46
3:9:616:A:N3	21:ee:85:VAL:HG21	2.30	0.46
3:9:680:G:H2'	3:9:681:U:H6	1.80	0.46
3:9:922:A:O2'	16:WW:2:VAL:HG22	2.16	0.46
3:9:1189:A:H2'	3:9:1190:A:C8	2.51	0.46
3:9:1236:G:H2'	3:9:1237:C:C6	2.50	0.46
3:9:1316:C:H2'	3:9:1317:C:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:1397:U:O4	27:QQ:12:VAL:HA	2.16	0.46
3:9:1470:C:H2'	3:9:1471:C:C6	2.50	0.46
3:9:1618:C:C5	34:dd:11:PRO:HG2	2.50	0.46
6:CC:157:LEU:HA	6:CC:160:LEU:CD2	2.46	0.46
6:CC:255:LEU:CD2	15:VV:1:MET:HE2	2.45	0.46
10:II:193:LYS:HA	10:II:196:GLU:HG2	1.96	0.46
11:JJ:29:LEU:HD22	11:JJ:32:ILE:HB	1.97	0.46
11:JJ:161:LEU:HD12	11:JJ:162:ARG:H	1.81	0.46
13:NN:85:PRO:HG2	13:NN:129:TYR:CZ	2.50	0.46
14:OO:54:CYS:SG	14:OO:81:VAL:HG23	2.56	0.46
16:WW:105:THR:HG22	16:WW:126:LEU:HD21	1.96	0.46
17:XX:50:ILE:CG2	17:XX:73:GLN:HB3	2.45	0.46
26:PP:31:GLU:O	26:PP:34:MET:HG3	2.16	0.46
29:SS:111:LEU:O	29:SS:115:LYS:HE3	2.16	0.46
31:UU:30:LYS:O	31:UU:34:LYS:HG2	2.15	0.46
31:UU:46:LYS:HD2	31:UU:100:GLN:HE22	1.80	0.46
32:ZZ:68:ILE:HB	32:ZZ:73:VAL:CG2	2.45	0.46
36:gg:270:LEU:HD13	36:gg:310:TRP:CD2	2.51	0.46
37:A:181:LYS:HG3	37:A:184:ARG:H	1.81	0.46
38:B:29:VAL:HG13	38:B:348:ARG:CZ	2.45	0.46
38:B:165:HIS:HB3	38:B:180:LEU:CD1	2.45	0.46
38:B:310:SER:HB3	38:B:312:LYS:HD2	1.97	0.46
39:C:76:ILE:O	39:C:78:ARG:HG3	2.16	0.46
39:C:232:VAL:HG23	39:C:233:THR:HG23	1.98	0.46
39:C:266:THR:HG23	39:C:268:ARG:N	2.31	0.46
39:C:303:ARG:HH22	79:5:2086:G:H5''	1.80	0.46
39:C:309:ILE:HD13	39:C:311:ARG:NE	2.30	0.46
40:D:7:VAL:HG11	79:5:4263:C:O2'	2.16	0.46
42:F:57:HIS:CE1	79:5:943:A:H1'	2.50	0.46
43:G:189:LEU:HD12	43:G:246:LEU:HD12	1.97	0.46
43:G:218:GLU:O	43:G:221:VAL:HG22	2.16	0.46
45:I:57:TYR:HA	45:I:129:VAL:O	2.15	0.46
46:J:102:THR:O	46:J:157:ILE:HB	2.16	0.46
47:L:5:ARG:HD3	79:5:1849:U:P	2.56	0.46
47:L:189:ALA:HA	68:i:11:LEU:CD1	2.46	0.46
49:N:97:SER:O	49:N:101:VAL:HG13	2.16	0.46
49:N:121:VAL:HG22	49:N:130:PHE:HA	1.98	0.46
52:Q:6:ARG:HD2	52:Q:8:ASN:H	1.80	0.46
52:Q:72:LEU:HG	79:5:1457:G:OP1	2.16	0.46
52:Q:174:PHE:O	52:Q:176:ARG:HG2	2.16	0.46
53:S:93:MET:HG3	79:5:1952:G:O2'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:U:102:VAL:HG22	55:U:112:LEU:CD2	2.46	0.46
65:f:49:TYR:CZ	65:f:96:ALA:HB2	2.51	0.46
67:h:41:ALA:HA	67:h:44:LEU:HB3	1.97	0.46
70:k:55:LYS:O	70:k:58:GLN:HG3	2.15	0.46
73:n:8:LYS:O	73:n:12:ARG:HG2	2.15	0.46
74:o:22:LYS:HZ2	74:o:73:VAL:HA	1.80	0.46
74:o:34:TYR:HB3	79:5:295:A:C2	2.51	0.46
75:p:28:LYS:O	75:p:31:ILE:HG13	2.15	0.46
76:r:26:SER:HB3	76:r:31:ASN:ND2	2.30	0.46
76:r:64:MET:HE1	76:r:102:TYR:CG	2.49	0.46
78:t:128:THR:HA	78:t:131:GLU:HG2	1.98	0.46
79:5:246:G:O2'	79:5:247:G:H5'	2.16	0.46
79:5:283:G:H2'	79:5:284:G:H8	1.80	0.46
79:5:285:G:H2'	79:5:286:U:O4'	2.15	0.46
79:5:324:A:H2'	79:5:325:U:C6	2.50	0.46
79:5:1093:C:H2'	79:5:1094:G:C8	2.50	0.46
79:5:1290:G:H2'	79:5:1291:G:C8	2.51	0.46
79:5:1351:G:H2'	79:5:1352:C:C6	2.51	0.46
79:5:1494:U:H2'	79:5:1495:G:H8	1.80	0.46
79:5:1771:U:H2'	79:5:1772:C:C5	2.51	0.46
79:5:1812:C:H2'	79:5:1813:U:C6	2.50	0.46
79:5:2007:G:N2	79:5:2011:C:H3'	2.28	0.46
79:5:2028:C:H2'	79:5:2029:A:C8	2.50	0.46
79:5:2081:C:H2'	79:5:2082:G:C8	2.50	0.46
79:5:2562:G:N2	79:5:2564:G:H3'	2.29	0.46
79:5:3714:G:H2'	79:5:3715:U:H6	1.81	0.46
79:5:4318:C:H3'	79:5:4319:C:H5''	1.97	0.46
81:8:106:G:H4'	81:8:137:A:H5'	1.98	0.46
3:9:448:A:N6	10:II:29:LEU:HD13	2.29	0.46
3:9:507:G:H5'	3:9:509:G:O6	2.16	0.46
3:9:659:G:H5''	3:9:660:C:OP1	2.16	0.46
3:9:866:U:H2'	3:9:867:G:C5	2.51	0.46
3:9:944:A:C1'	14:OO:136:PRO:HB3	2.45	0.46
3:9:1491:G:H2'	3:9:1492:U:C6	2.51	0.46
3:9:1518:C:P	3:9:1519:U:H2'	2.56	0.46
3:9:1539:U:C5'	30:TT:45:LEU:HD21	2.45	0.46
5:BB:146:ARG:HD3	5:BB:206:PRO:HG3	1.98	0.46
6:CC:99:GLY:HA2	6:CC:102:LEU:CD2	2.45	0.46
7:EE:41:CYS:HA	7:EE:85:GLY:HA2	1.97	0.46
7:EE:122:LYS:HG2	7:EE:164:LEU:HD21	1.98	0.46
8:GG:70:HIS:HB3	8:GG:101:ILE:CB	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:HH:116:ARG:NH2	9:HH:121:THR:HA	2.28	0.46
11:JJ:136:ARG:HB3	11:JJ:141:VAL:HG22	1.97	0.46
14:OO:27:VAL:HG23	14:OO:91:THR:H	1.80	0.46
16:WW:47:ILE:HD11	16:WW:65:LEU:CD2	2.46	0.46
17:XX:18:ARG:O	17:XX:21:LYS:HG2	2.16	0.46
17:XX:67:ARG:NH1	17:XX:67:ARG:HA	2.30	0.46
21:ee:81:ARG:HH21	21:ee:84:LYS:HB3	1.80	0.46
22:DD:225:GLU:OE2	36:gg:189:ILE:HG23	2.14	0.46
25:MM:76:LEU:HD13	25:MM:78:LYS:HZ1	1.81	0.46
29:SS:130:ARG:HG2	29:SS:144:ARG:NH2	2.30	0.46
40:D:268:ARG:HD3	40:D:268:ARG:H	1.80	0.46
40:D:283:LYS:HB3	45:I:206:LEU:HD21	1.98	0.46
41:E:289:LEU:HB2	48:M:109:ARG:NH2	2.31	0.46
42:F:95:ARG:O	42:F:116:ILE:HD13	2.16	0.46
45:I:164:LYS:HZ2	45:I:166:HIS:HB2	1.80	0.46
47:L:33:ILE:O	47:L:37:LYS:HG2	2.15	0.46
47:L:197:LYS:N	47:L:197:LYS:HE3	2.30	0.46
48:M:20:HIS:NE2	48:M:45:VAL:HG22	2.30	0.46
48:M:90:ARG:O	48:M:94:LYS:HG2	2.16	0.46
48:M:100:ARG:NH1	50:O:198:THR:HA	2.31	0.46
58:Y:55:VAL:CG2	58:Y:104:VAL:HG13	2.45	0.46
66:g:90:ARG:NE	79:5:4122:G:H4'	2.30	0.46
69:j:3:LYS:HE3	79:5:3642:A:C8	2.51	0.46
73:n:18:ARG:O	73:n:21:ARG:HG2	2.16	0.46
75:p:22:LEU:HD12	75:p:22:LEU:H	1.80	0.46
79:5:274:C:H2'	79:5:275:C:C6	2.50	0.46
79:5:1195:G:H2'	79:5:1196:G:C8	2.51	0.46
79:5:1533:A:N1	79:5:1636:U:H1'	2.30	0.46
79:5:2479:G:H2'	79:5:2480:G:C8	2.50	0.46
79:5:2890:C:O2'	79:5:2891:U:H5'	2.15	0.46
79:5:2893:U:H2'	79:5:2894:A:C8	2.50	0.46
79:5:3718:A:H2'	79:5:3719:A:O4'	2.16	0.46
79:5:4313:A:H2'	79:5:4314:C:O4'	2.16	0.46
81:8:133:G:O2'	81:8:134:G:H5'	2.15	0.46
1:R:97:ARG:O	1:R:101:ILE:HG12	2.16	0.46
3:9:460:A:O2'	3:9:461:U:H5'	2.16	0.46
3:9:479:C:H2'	3:9:480:G:C8	2.51	0.46
3:9:521:A:O2'	11:JJ:144:ILE:HG12	2.16	0.46
3:9:943:U:O2'	14:OO:136:PRO:HA	2.16	0.46
3:9:1416:C:H2'	3:9:1417:C:C6	2.50	0.46
3:9:1501:C:H2'	3:9:1502:C:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:1649:U:H2'	3:9:1650:A:H8	1.81	0.46
5:BB:172:MET:HB3	5:BB:193:ILE:HD11	1.98	0.46
6:CC:195:LEU:HD12	6:CC:222:CYS:SG	2.56	0.46
6:CC:273:LEU:HD22	6:CC:277:HIS:HE1	1.80	0.46
7:EE:94:LYS:CB	18:YY:16:ARG:HD3	2.45	0.46
7:EE:200:ARG:HA	7:EE:206:ASP:OD2	2.16	0.46
8:GG:3:LEU:HB3	8:GG:5:ILE:HD11	1.98	0.46
13:NN:3:ARG:CB	13:NN:6:ALA:HB3	2.45	0.46
13:NN:92:ILE:HG13	13:NN:141:TYR:HE1	1.81	0.46
15:VV:32:ILE:HB	15:VV:60:ARG:HD2	1.96	0.46
17:XX:18:ARG:HB3	17:XX:18:ARG:HH11	1.81	0.46
17:XX:56:GLY:HA3	21:ee:79:LEU:HD11	1.98	0.46
19:aa:42:ARG:HG2	19:aa:43:ASN:O	2.15	0.46
28:RR:10:LYS:HD3	28:RR:53:TYR:CE2	2.51	0.46
28:RR:23:ARG:HH22	36:gg:194:TYR:HB3	1.81	0.46
28:RR:35:CYS:HA	28:RR:38:ILE:CD1	2.46	0.46
29:SS:39:ARG:NH1	30:TT:46:ALA:HB2	2.30	0.46
29:SS:110:ASP:HA	29:SS:113:ARG:HE	1.80	0.46
30:TT:33:TRP:CH2	30:TT:102:ARG:HG2	2.51	0.46
32:ZZ:88:LEU:O	32:ZZ:92:LEU:HG	2.15	0.46
33:cc:10:LYS:HD3	33:cc:40:ARG:NH2	2.30	0.46
37:A:145:LYS:NZ	37:A:157:VAL:HG13	2.31	0.46
37:A:237:LEU:HD11	37:A:240:ALA:CB	2.46	0.46
39:C:40:VAL:HG21	39:C:123:ALA:CB	2.46	0.46
39:C:354:ALA:O	39:C:358:LEU:HG	2.16	0.46
40:D:68:ARG:HB2	40:D:73:MET:HE2	1.96	0.46
41:E:61:ARG:CD	79:5:1237:C:H1'	2.45	0.46
41:E:222:LYS:HG2	79:5:4940:C:C6	2.51	0.46
42:F:84:ALA:N	54:T:138:ALA:HB2	2.30	0.46
42:F:136:GLU:OE2	42:F:233:GLY:HA2	2.16	0.46
42:F:227:VAL:HG11	53:S:42:SER:CB	2.45	0.46
43:G:312:LYS:HE3	43:G:312:LYS:HB3	1.75	0.46
50:O:80:PHE:HA	50:O:83:THR:HG22	1.97	0.46
50:O:82:ARG:NH2	79:5:3886:G:H5''	2.30	0.46
50:O:89:PRO:O	50:O:95:GLY:HA3	2.15	0.46
52:Q:182:ALA:N	52:Q:187:LYS:HB3	2.31	0.46
53:S:147:ASP:HB3	53:S:150:ILE:HD11	1.98	0.46
56:V:51:ARG:HA	56:V:51:ARG:CZ	2.45	0.46
59:Z:108:ARG:HA	59:Z:111:ARG:NH1	2.31	0.46
60:a:11:LEU:HD21	60:a:17:HIS:CA	2.42	0.46
61:b:71:ALA:O	61:b:75:LEU:HG	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:e:5:ARG:NH1	64:e:9:LYS:HE3	2.30	0.46
73:n:23:ARG:HH22	79:5:3806:G:H5''	1.80	0.46
79:5:317:A:C2	79:5:4361:U:H1'	2.50	0.46
79:5:380:U:O2'	79:5:381:U:H5''	2.15	0.46
79:5:397:G:C5	79:5:398:A:H1'	2.51	0.46
79:5:456:C:H2'	79:5:457:G:C8	2.50	0.46
79:5:483:G:H3'	79:5:484:U:H2'	1.98	0.46
79:5:922(A):G:H2'	79:5:922(B):C:C6	2.51	0.46
79:5:1578:U:H2'	79:5:1579:C:C6	2.51	0.46
79:5:1670:G:O2'	79:5:1853:G:H4'	2.15	0.46
79:5:1685:G:H2'	79:5:1686:C:C6	2.51	0.46
79:5:1748:U:H2'	79:5:1749:A:C8	2.51	0.46
79:5:2002:A:H4'	79:5:2003:G:O5'	2.16	0.46
79:5:2007:G:H22	79:5:2011:C:H5''	1.81	0.46
79:5:2471:G:O2'	79:5:2472:A:H3'	2.15	0.46
79:5:3836:A:H2'	79:5:3837:C:O4'	2.15	0.46
79:5:3848:U:H2'	79:5:3849:A:H8	1.81	0.46
79:5:3918:G:O6	79:5:4383:U:O4	2.34	0.46
79:5:5010:U:H2'	79:5:5011:A:C8	2.50	0.46
81:8:139:G:H2'	81:8:140:C:O4'	2.15	0.46
81:8:147:G:H2'	81:8:148:A:H8	1.80	0.46
1:R:175:GLU:HA	1:R:178:GLN:HG2	1.97	0.46
3:9:344:U:H2'	3:9:345:U:C6	2.51	0.46
3:9:375:U:P	12:LL:58:LYS:HE2	2.56	0.46
3:9:493:A:H2'	3:9:494:C:H5'	1.98	0.46
3:9:870:A:H5''	3:9:872:A:O4'	2.16	0.46
3:9:1033:G:OP1	13:NN:109:LYS:HE2	2.15	0.46
3:9:1301:A:P	34:dd:6:LEU:HD21	2.56	0.46
5:BB:60:ASP:HA	5:BB:63:LYS:CG	2.46	0.46
6:CC:65:LYS:HE2	6:CC:273:LEU:HD13	1.97	0.46
6:CC:125:LYS:HG2	6:CC:143:CYS:HB2	1.97	0.46
6:CC:251:LEU:HD22	6:CC:252:THR:H	1.80	0.46
7:EE:31:PRO:HD2	7:EE:38:LEU:HD11	1.98	0.46
8:GG:7:PHE:CE2	8:GG:9:ALA:HB3	2.50	0.46
22:DD:74:GLN:OE1	22:DD:81:GLU:HA	2.15	0.46
22:DD:136:VAL:HA	22:DD:185:LYS:O	2.16	0.46
24:KK:91:PRO:CD	24:KK:94:LEU:HD13	2.46	0.46
27:QQ:61:GLU:OE2	27:QQ:62:ARG:HG2	2.16	0.46
27:QQ:105:LYS:O	27:QQ:109:LYS:HG2	2.16	0.46
29:SS:28:PHE:HA	29:SS:31:THR:CG2	2.44	0.46
32:ZZ:111:ARG:NH1	32:ZZ:111:ARG:HB3	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:gg:43:TRP:CZ3	36:gg:55:PRO:HD3	2.51	0.46
37:A:62:VAL:HG23	37:A:73:THR:HG22	1.97	0.46
37:A:193:ARG:NH1	79:5:3685:C:H5''	2.31	0.46
38:B:213:GLN:NE2	38:B:286:LYS:HA	2.25	0.46
39:C:24:LEU:HD22	39:C:25:PRO:CD	2.45	0.46
39:C:26:ALA:HB1	39:C:267:TRP:CZ3	2.51	0.46
40:D:107:ARG:HA	40:D:110:LEU:HG	1.98	0.46
41:E:108:ARG:HH21	79:5:469:C:H42	1.63	0.46
41:E:222:LYS:HA	79:5:4940:C:C2	2.51	0.46
47:L:18:TRP:CD1	49:N:198:LEU:HD23	2.50	0.46
48:M:4:ARG:NH1	48:M:4:ARG:HB2	2.31	0.46
48:M:132:ARG:NH2	79:5:4895:C:H1'	2.30	0.46
49:N:14:LYS:HA	49:N:19:MET:CG	2.44	0.46
50:O:95:GLY:O	50:O:99:LEU:HD23	2.16	0.46
51:P:119:VAL:HA	51:P:146:ILE:HD13	1.97	0.46
52:Q:184:ARG:CZ	60:a:56:VAL:HG22	2.46	0.46
54:T:20:ARG:O	54:T:21:LYS:HD3	2.15	0.46
54:T:128:LEU:HD13	79:5:1834:U:C5	2.50	0.46
55:U:23:LEU:HD11	55:U:70:ILE:HG22	1.98	0.46
58:Y:16:LYS:HD2	81:8:23:C:O4'	2.16	0.46
58:Y:52:ASP:HB2	58:Y:110:LYS:CG	2.41	0.46
60:a:2:PRO:HG2	79:5:1509:C:O3'	2.16	0.46
62:c:78:ASN:HD22	62:c:92:CYS:HB3	1.80	0.46
65:f:14:TYR:CE2	65:f:23:GLU:HA	2.51	0.46
67:h:67:GLU:HA	67:h:70:ARG:HG2	1.98	0.46
69:j:11:ARG:HG2	79:5:1534:A:N3	2.31	0.46
73:n:18:ARG:HA	73:n:21:ARG:CD	2.46	0.46
78:t:125:LEU:HG	78:t:160:VAL:HG12	1.98	0.46
79:5:158:A:H5''	79:5:159:C:C6	2.50	0.46
79:5:1632:A:H5''	79:5:4535:A:OP1	2.16	0.46
79:5:2640:G:H2'	79:5:2641:A:C8	2.51	0.46
79:5:3650:C:H2'	79:5:3651:A:C8	2.51	0.46
79:5:3805:U:H2'	79:5:3806:G:C8	2.51	0.46
79:5:4241:C:O2'	79:5:4242:U:H5'	2.15	0.46
79:5:4503:A:H2'	79:5:4504:C:H6	1.81	0.46
79:5:4642:U:H2'	79:5:4643:G:C8	2.51	0.46
1:R:59:SER:OG	79:5:2633:U:H4'	2.16	0.46
3:9:428:U:H1'	11:JJ:2:PRO:HA	1.97	0.46
3:9:735:C:H2'	3:9:736:C:C6	2.51	0.46
3:9:870:A:N7	3:9:915:G:H2'	2.30	0.46
3:9:913:A:N6	9:HH:125:VAL:HG22	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:1135:C:H2'	3:9:1136:U:C6	2.51	0.46
3:9:1747:C:H2'	3:9:1748:G:O4'	2.16	0.46
4:AA:55:TRP:HA	4:AA:58:LEU:CD2	2.46	0.46
4:AA:154:LEU:HD11	15:VV:66:ASP:OD1	2.16	0.46
5:BB:88:THR:CG2	5:BB:96:CYS:HB3	2.46	0.46
7:EE:11:ARG:NH1	7:EE:20:LEU:HB3	2.31	0.46
8:GG:77:LEU:HD12	8:GG:95:LYS:HD3	1.98	0.46
9:HH:19:PHE:O	9:HH:23:ILE:HG12	2.16	0.46
10:II:92:ARG:HG2	79:5:5017:G:OP1	2.16	0.46
11:JJ:132:GLN:HA	11:JJ:133:ARG:NH2	2.31	0.46
13:NN:9:LYS:HE2	13:NN:9:LYS:HB3	1.79	0.46
18:YY:5:VAL:HB	18:YY:43:LYS:NZ	2.30	0.46
28:RR:21:TYR:CE1	28:RR:58:MET:HE2	2.51	0.46
30:TT:34:VAL:HG13	30:TT:52:TRP:CE2	2.51	0.46
30:TT:42:HIS:HB2	30:TT:83:GLN:CA	2.45	0.46
30:TT:142:LYS:HE3	30:TT:143:LYS:HE3	1.98	0.46
31:UU:48:LEU:O	31:UU:50:VAL:HG23	2.15	0.46
35:ff:119:ARG:O	35:ff:132:MET:HB3	2.15	0.46
37:A:137:ILE:HD12	37:A:155:LYS:HD3	1.97	0.46
37:A:179:ILE:HG23	79:5:2739:C:C4	2.51	0.46
38:B:49:TYR:O	38:B:79:VAL:HG23	2.16	0.46
38:B:103:LYS:HB2	38:B:153:MET:HE2	1.98	0.46
39:C:158:VAL:HA	39:C:161:TYR:CD2	2.51	0.46
39:C:179:ASP:O	39:C:183:VAL:HG23	2.16	0.46
39:C:236:ASN:ND2	39:C:239:LYS:HE2	2.31	0.46
39:C:314:LEU:HD11	79:5:1283:G:N3	2.30	0.46
40:D:132:VAL:HB	40:D:172:SER:HB3	1.97	0.46
41:E:48:ARG:NH1	79:5:980:U:H5''	2.31	0.46
42:F:30:LYS:O	42:F:34:LYS:HG2	2.16	0.46
43:G:95:GLY:HA3	79:5:4117:U:C2	2.51	0.46
43:G:148:LEU:HA	43:G:151:LEU:CD2	2.46	0.46
45:I:31:ILE:HG12	45:I:66:GLU:CD	2.41	0.46
48:M:20:HIS:CD2	48:M:45:VAL:HG13	2.51	0.46
49:N:29:GLN:HA	49:N:32:GLN:OE1	2.16	0.46
76:r:23:GLN:HB3	76:r:25:TYR:CE2	2.51	0.46
77:s:39:GLN:HG2	77:s:43:ILE:HG13	1.97	0.46
77:s:83:ARG:HH11	79:5:2022:C:H5''	1.81	0.46
78:t:75:PRO:HD2	78:t:119:ARG:NH2	2.31	0.46
79:5:427:A:O2'	79:5:428:G:H5'	2.16	0.46
79:5:651:C:H2'	79:5:652:G:H8	1.80	0.46
79:5:1605:G:H2'	79:5:1606:U:O4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:2391:G:H2'	79:5:2392:C:C6	2.50	0.46
79:5:2809:G:O2'	79:5:4644:G:H5''	2.15	0.46
79:5:2832:A:H2'	79:5:2833:A:H8	1.81	0.46
79:5:2835:A:H2'	79:5:2836:A:C8	2.51	0.46
79:5:3872:A:H2'	79:5:3873:G:H8	1.80	0.46
79:5:4181:U:H2'	79:5:4182:G:O4'	2.16	0.46
79:5:4302:U:H2'	79:5:4303:C:O4'	2.15	0.46
79:5:4701:A:H2'	79:5:4702:G:O4'	2.16	0.46
79:5:4892:A:O2'	79:5:4893:A:H5'	2.16	0.46
79:5:4925:U:H4'	79:5:4926:C:O5'	2.16	0.46
3:9:42:A:O2'	3:9:43:U:H5'	2.16	0.45
3:9:152:U:H2'	3:9:153:G:C8	2.51	0.45
3:9:179:C:H3'	3:9:180:G:H8	1.81	0.45
3:9:517:C:OP1	3:9:517:C:H3'	2.16	0.45
3:9:572:U:H4'	18:YY:61:ARG:NH1	2.31	0.45
3:9:616:A:H61	3:9:625:G:H1'	1.80	0.45
3:9:884:C:H2'	3:9:885:U:O4'	2.16	0.45
3:9:940:U:H3	3:9:1002:U:H3	1.63	0.45
3:9:1022:U:H1'	13:NN:128:TYR:CE2	2.50	0.45
3:9:1157:G:O2'	16:WW:75:ILE:HA	2.17	0.45
3:9:1397:U:O4'	3:9:1442:U:H5'	2.16	0.45
3:9:1513:C:H5''	34:dd:10:HIS:HB2	1.98	0.45
3:9:1703:C:H3'	3:9:1704:C:H6	1.80	0.45
5:BB:124:HIS:HA	5:BB:137:LEU:O	2.16	0.45
11:JJ:36:GLY:HA2	21:ee:108:ARG:NH1	2.29	0.45
11:JJ:77:LEU:HA	11:JJ:80:ARG:NE	2.31	0.45
12:LL:40:ILE:HD11	12:LL:44:PHE:HB3	1.98	0.45
14:OO:64:ALA:HB3	14:OO:67:ASP:OD1	2.16	0.45
14:OO:103:ASN:ND2	14:OO:142:ARG:HA	2.31	0.45
23:FF:122:ARG:HH12	33:cc:9:ILE:HD13	1.81	0.45
32:ZZ:62:VAL:HB	32:ZZ:63:PRO:HD3	1.98	0.45
33:cc:12:ALA:HB2	33:cc:34:PHE:CD1	2.52	0.45
36:gg:6:THR:O	36:gg:310:TRP:HA	2.17	0.45
36:gg:122:SER:CA	36:gg:154:VAL:HG21	2.42	0.45
37:A:22:HIS:NE2	79:5:2743:A:H4'	2.31	0.45
37:A:124:GLY:O	37:A:125:LYS:HD2	2.15	0.45
39:C:29:LYS:HA	79:5:667:A:N1	2.31	0.45
40:D:11:ALA:HB1	79:5:1743:A:H5'	1.98	0.45
45:I:30:LYS:NZ	45:I:63:GLU:HG3	2.31	0.45
45:I:205:PRO:CG	45:I:208:LYS:HD3	2.46	0.45
46:J:22:LEU:HG	46:J:72:CYS:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:M:127:VAL:HG13	50:O:177:LEU:CD1	2.46	0.45
49:N:54:LYS:CG	49:N:56:LYS:HE3	2.45	0.45
49:N:195:ARG:HD3	79:5:98:A:OP1	2.16	0.45
50:O:14:HIS:CE1	50:O:119:VAL:HG13	2.50	0.45
50:O:180:GLN:HA	50:O:183:LYS:HE2	1.98	0.45
52:Q:54:SER:O	52:Q:58:ARG:HG2	2.15	0.45
52:Q:82:VAL:HG12	52:Q:139:LEU:O	2.16	0.45
52:Q:93:GLN:HG3	60:a:87:ARG:NH1	2.31	0.45
59:Z:28:ASN:HA	59:Z:41:ALA:CB	2.46	0.45
60:a:113:GLY:N	60:a:133:ALA:HB2	2.31	0.45
65:f:30:ILE:O	65:f:33:VAL:HG12	2.15	0.45
67:h:61:ILE:O	67:h:65:GLN:HG2	2.16	0.45
69:j:66:HIS:ND1	69:j:69:ILE:HD11	2.30	0.45
76:r:5:LEU:HA	76:r:8:MET:CE	2.47	0.45
78:t:35:LEU:HD23	78:t:64:ILE:CG2	2.47	0.45
79:5:261:G:C5	79:5:262:C:C5	3.05	0.45
79:5:433:A:H2'	79:5:434:A:O4'	2.16	0.45
79:5:490:C:H2'	79:5:491:G:C8	2.50	0.45
79:5:1169:G:O2'	79:5:1170:G:H5'	2.16	0.45
79:5:1508:A:H2'	79:5:1509:C:C6	2.51	0.45
79:5:1669:A:H4'	79:5:1685:G:H21	1.81	0.45
79:5:1730:U:H2'	79:5:1731:C:C6	2.52	0.45
79:5:1976:G:C2	79:5:2002:A:H2'	2.51	0.45
79:5:1988:G:H2'	79:5:1989:G:C8	2.52	0.45
79:5:2259:G:H5'	79:5:2260:C:OP2	2.16	0.45
79:5:2451:A:H2'	79:5:2452:G:O4'	2.16	0.45
79:5:2521:G:H2'	79:5:2522:G:C8	2.50	0.45
79:5:3665:G:H2'	79:5:3666:C:C6	2.51	0.45
79:5:3871:A:H2'	79:5:3872:A:C8	2.51	0.45
79:5:3895:G:C2'	79:5:3896:C:H5'	2.45	0.45
79:5:4710:C:H2'	79:5:4711:C:C6	2.51	0.45
79:5:4881:U:H5'	79:5:4882:U:H5'	1.97	0.45
1:R:60:ARG:O	1:R:64:ARG:HG3	2.17	0.45
3:9:443:U:H2'	3:9:444:G:O4'	2.16	0.45
3:9:496:C:H5'	7:EE:29:PRO:HB3	1.97	0.45
3:9:581:U:H2'	3:9:582:U:O4'	2.17	0.45
3:9:1144:A:H2'	3:9:1145:A:H8	1.81	0.45
3:9:1146:C:H2'	3:9:1147:C:H6	1.80	0.45
3:9:1159:G:OP1	17:XX:5:ARG:HB2	2.17	0.45
3:9:1162:C:H2'	3:9:1163:C:C6	2.52	0.45
3:9:1630:A:H5''	29:SS:37:GLY:H	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AA:2:SER:HB2	4:AA:59:LEU:HD13	1.98	0.45
4:AA:5:LEU:HD22	15:VV:41:LYS:NZ	2.32	0.45
4:AA:145:ILE:HA	4:AA:159:ILE:CG1	2.46	0.45
4:AA:173:LEU:O	4:AA:177:MET:HG3	2.16	0.45
5:BB:129:THR:HG22	5:BB:176:VAL:O	2.17	0.45
6:CC:201:GLY:HA3	11:JJ:98:LEU:HD11	1.99	0.45
7:EE:87:MET:HE3	7:EE:123:LEU:HB3	1.99	0.45
8:GG:56:ASN:HD21	8:GG:62:PRO:HG3	1.82	0.45
9:HH:60:ILE:CG1	9:HH:90:LYS:HE2	2.46	0.45
10:II:106:SER:HB2	10:II:166:PHE:CE1	2.50	0.45
11:JJ:107:GLU:OE2	11:JJ:116:LYS:HD2	2.16	0.45
14:OO:95:ILE:HD11	14:OO:97:LEU:CD2	2.46	0.45
14:OO:96:LYS:HE2	14:OO:130:GLU:OE2	2.15	0.45
14:OO:126:ILE:HD11	19:aa:53:ILE:O	2.15	0.45
23:FF:158:ALA:CB	23:FF:173:LEU:HD23	2.46	0.45
29:SS:35:GLY:HA2	29:SS:103:LEU:HD22	1.97	0.45
29:SS:66:ARG:O	29:SS:70:ILE:HG13	2.15	0.45
30:TT:21:PHE:CD2	30:TT:134:ILE:HD11	2.51	0.45
30:TT:110:LEU:HD12	30:TT:112:MET:HG2	1.97	0.45
37:A:5:ILE:HG21	37:A:210:PRO:HD3	1.97	0.45
37:A:209:HIS:CE1	37:A:235:VAL:HG11	2.50	0.45
38:B:116:ARG:O	38:B:177:LYS:HE2	2.16	0.45
38:B:189:THR:HG22	38:B:192:GLU:HG2	1.99	0.45
38:B:257:TRP:CD1	79:5:3899:G:H5''	2.51	0.45
39:C:33:ARG:HB3	39:C:36:ILE:CG1	2.47	0.45
39:C:134:PRO:O	39:C:138:MET:HG2	2.16	0.45
39:C:159:GLU:OE1	39:C:217:ILE:HG21	2.16	0.45
39:C:211:TYR:O	39:C:232:VAL:HG13	2.15	0.45
39:C:306:ARG:HH22	79:5:2099:C:H5''	1.81	0.45
40:D:53:VAL:HB	40:D:159:VAL:HG13	1.97	0.45
40:D:106:ALA:HA	40:D:109:LEU:CD2	2.46	0.45
40:D:271:MET:HB2	40:D:275:GLN:NE2	2.31	0.45
42:F:66:THR:HG22	42:F:69:ARG:HH21	1.82	0.45
43:G:104:LEU:HB2	57:X:41:ARG:HE	1.81	0.45
43:G:121:ALA:O	43:G:125:LYS:HG3	2.17	0.45
43:G:308:LYS:HE3	43:G:308:LYS:HB3	1.82	0.45
47:L:125:VAL:CG1	47:L:143:GLU:HG2	2.46	0.45
47:L:197:LYS:HD3	79:5:4358:U:H4'	1.97	0.45
49:N:189:ARG:HD3	79:5:28:C:OP2	2.16	0.45
51:P:69:ARG:HD2	79:5:4981:G:H1'	1.98	0.45
52:Q:13:VAL:HG23	79:5:1691:G:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:Q:179:GLY:H	60:a:51:GLY:HA2	1.82	0.45
54:T:81:LYS:HA	61:b:16:TRP:CZ2	2.51	0.45
54:T:87:LYS:HE3	54:T:88:ARG:N	2.31	0.45
54:T:105:PHE:CZ	79:5:1802:A:H4'	2.51	0.45
59:Z:61:LYS:O	59:Z:65:ARG:HG2	2.16	0.45
60:a:81:LEU:HD22	60:a:106:SER:CB	2.46	0.45
60:a:110:LYS:CB	60:a:128:PHE:HB2	2.47	0.45
61:b:38:LYS:CG	79:5:1816:C:H4'	2.47	0.45
65:f:6:TRP:HB2	65:f:103:VAL:O	2.16	0.45
79:5:299:C:H2'	79:5:300:A:C8	2.50	0.45
79:5:1781:U:H2'	79:5:1782:U:O4'	2.16	0.45
79:5:2465:C:H2'	79:5:2466:G:O4'	2.17	0.45
79:5:2573:A:N7	79:5:2761:U:O4	2.49	0.45
79:5:2638:G:C6	79:5:2718:U:H2'	2.51	0.45
79:5:2735:G:H2'	79:5:2736:G:H8	1.81	0.45
79:5:3778:U:O2	79:5:3816:A:N7	2.49	0.45
79:5:4466:C:O2'	79:5:4511:A:H4'	2.17	0.45
79:5:4529:G:H2'	79:5:4530:U:C6	2.51	0.45
1:R:93:VAL:O	1:R:96:MET:HG3	2.16	0.45
3:9:289:G:H2'	3:9:290:U:C6	2.51	0.45
3:9:345:U:H1'	7:EE:33:THR:OG1	2.17	0.45
3:9:599:A:H2'	3:9:606:G:N2	2.31	0.45
3:9:1031:A:H2'	3:9:1032:C:C6	2.52	0.45
3:9:1219:C:H3'	3:9:1220:A:H8	1.80	0.45
3:9:1264:C:H4'	3:9:1265:A:C5'	2.46	0.45
3:9:1349:G:H2'	3:9:1350:U:C6	2.51	0.45
3:9:1358:U:H2'	3:9:1359:U:C6	2.51	0.45
6:CC:203:GLY:C	6:CC:221:ASP:HA	2.41	0.45
9:HH:63:PHE:HA	9:HH:95:ILE:O	2.16	0.45
10:II:133:GLU:OE1	10:II:136:ILE:HD11	2.16	0.45
10:II:158:ILE:HD11	10:II:162:LEU:HB3	1.98	0.45
13:NN:55:ARG:NH1	13:NN:55:ARG:HB3	2.31	0.45
13:NN:59:GLY:HA2	20:bb:32:PHE:CE1	2.51	0.45
13:NN:94:LYS:O	13:NN:98:VAL:HG23	2.15	0.45
13:NN:112:LYS:O	13:NN:116:ILE:HG13	2.16	0.45
14:OO:56:VAL:HG13	14:OO:77:ALA:HB1	1.98	0.45
22:DD:118:ALA:O	22:DD:122:VAL:HG23	2.15	0.45
22:DD:220:THR:HG23	22:DD:221:THR:HG23	1.98	0.45
26:PP:44:ARG:NH2	26:PP:45:LEU:HA	2.31	0.45
30:TT:94:ARG:HG2	30:TT:95:GLY:O	2.16	0.45
31:UU:60:THR:CG2	31:UU:83:ARG:HG2	2.42	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:cc:37:ASP:HB3	33:cc:40:ARG:NH1	2.32	0.45
36:gg:63:SER:HB2	36:gg:84:ASP:HB3	1.97	0.45
36:gg:218:LEU:HD23	36:gg:228:TYR:CE1	2.50	0.45
37:A:245:ARG:HH11	37:A:246:LEU:H	1.65	0.45
38:B:78:ILE:HG13	38:B:332:MET:HB3	1.98	0.45
38:B:220:ILE:CG1	38:B:278:THR:HG23	2.47	0.45
39:C:297:GLU:HA	39:C:300:ARG:NE	2.30	0.45
40:D:270:LYS:HE2	40:D:270:LYS:HB3	1.74	0.45
41:E:76:ALA:CB	61:b:117:ARG:HG2	2.47	0.45
41:E:148:THR:O	41:E:151:THR:HG22	2.17	0.45
44:H:168:LYS:HG2	44:H:169:ASN:HD22	1.81	0.45
45:I:152:LEU:HD21	45:I:165:ILE:CG1	2.45	0.45
51:P:94:MET:CE	51:P:147:GLU:HA	2.46	0.45
53:S:121:ALA:HA	53:S:124:ILE:HG22	1.99	0.45
54:T:71:ALA:CB	79:5:4313:A:H4'	2.46	0.45
55:U:80:LYS:HD2	55:U:81:ARG:N	2.31	0.45
56:V:51:ARG:HA	56:V:51:ARG:NH1	2.32	0.45
58:Y:8:THR:HG23	79:5:347:A:P	2.56	0.45
62:c:23:LYS:HE3	62:c:23:LYS:HB3	1.76	0.45
63:d:42:ALA:HB3	63:d:43:PRO:HD3	1.97	0.45
68:i:31:GLY:HA3	79:5:310:G:C5	2.51	0.45
78:t:80:LEU:CD1	78:t:112:ILE:HG12	2.46	0.45
79:5:114:G:H2'	79:5:115:C:H5'	1.98	0.45
79:5:385:A:H1'	79:5:387:G:H5''	1.98	0.45
79:5:1674:C:O2'	79:5:1675:C:H5'	2.17	0.45
79:5:2104:A:OP1	79:5:2104:A:H3'	2.16	0.45
79:5:2373:C:H2'	79:5:2374:A:C8	2.51	0.45
79:5:2410:C:P	79:5:2428:A:H5'	2.57	0.45
79:5:2528:G:C4'	79:5:2783:A:H4'	2.43	0.45
79:5:3611:A:H1'	79:5:5016:A:O2'	2.16	0.45
79:5:3714:G:H2'	79:5:3715:U:C6	2.51	0.45
79:5:3781:C:C5'	79:5:3821:A:H4'	2.43	0.45
79:5:3926:C:H2'	79:5:3927:U:C6	2.52	0.45
79:5:3934:G:H2'	79:5:3935:C:C6	2.50	0.45
79:5:4188:U:H2'	79:5:4189:U:C6	2.52	0.45
79:5:4371:G:H2'	79:5:4371:G:OP2	2.17	0.45
79:5:4622:A:O2'	79:5:4623:G:H5'	2.16	0.45
79:5:4745:G:H22	79:5:4956:A:H2	1.63	0.45
79:5:4881:U:H4'	79:5:4882:U:C6	2.51	0.45
80:7:75:G:N2	80:7:99:G:H2'	2.31	0.45
2:W:6:CYS:SG	2:W:31:PHE:HA	2.56	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:2:A:H3'	6:CC:205:VAL:HG11	1.98	0.45
3:9:120:U:O2	7:EE:34:GLY:HA2	2.16	0.45
3:9:341:C:H2'	3:9:342:C:C6	2.50	0.45
3:9:921:G:H3'	16:WW:28:ARG:NH2	2.32	0.45
3:9:1047:C:H4'	14:OO:142:ARG:O	2.16	0.45
3:9:1483:A:C4'	22:DD:160:SER:HB3	2.47	0.45
3:9:1516:G:H4'	26:PP:122:THR:CG2	2.47	0.45
3:9:1630:A:O2'	3:9:1631:U:H5'	2.16	0.45
5:BB:91:VAL:HG13	5:BB:95:ASN:O	2.16	0.45
7:EE:191:ARG:HH11	7:EE:245:ARG:HG2	1.82	0.45
9:HH:192:PHE:CD1	20:bb:12:PRO:HB3	2.51	0.45
13:NN:3:ARG:HB2	13:NN:6:ALA:O	2.17	0.45
14:OO:96:LYS:HB3	14:OO:132:VAL:HG21	1.97	0.45
14:OO:125:LYS:HZ2	19:aa:58:VAL:HG22	1.81	0.45
18:YY:18:LEU:HD13	18:YY:20:ARG:CZ	2.47	0.45
22:DD:35:SER:CB	22:DD:91:VAL:HG21	2.46	0.45
22:DD:35:SER:O	22:DD:99:ILE:HD11	2.16	0.45
23:FF:28:VAL:HG21	23:FF:109:LEU:HB2	1.98	0.45
26:PP:77:LYS:HB2	26:PP:102:PHE:CD1	2.51	0.45
34:dd:23:VAL:HB	34:dd:42:CYS:SG	2.57	0.45
37:A:211:PHE:CE1	37:A:221:LYS:HG2	2.52	0.45
38:B:43:LEU:HB3	38:B:183:ILE:HG21	1.99	0.45
38:B:224:LYS:HE3	79:5:4625:C:O3'	2.17	0.45
38:B:265:SER:CB	79:5:4459:U:H4'	2.45	0.45
40:D:223:PHE:HB3	40:D:226:TYR:CB	2.39	0.45
40:D:286:SER:OG	79:5:1179:U:H5''	2.16	0.45
41:E:154:ILE:CG1	41:E:198:ILE:HB	2.45	0.45
41:E:179:THR:HG21	41:E:189:LEU:HD13	1.97	0.45
42:F:126:LYS:CB	54:T:133:ALA:HB3	2.45	0.45
42:F:133:ARG:HD2	80:7:96:U:O2'	2.16	0.45
42:F:211:LYS:O	79:5:2073:C:H5''	2.17	0.45
44:H:132:VAL:HG12	44:H:148:GLY:CA	2.41	0.45
45:I:66:GLU:OE1	45:I:69:ARG:HD3	2.16	0.45
45:I:94:PHE:CD2	79:5:1785:C:H1'	2.51	0.45
47:L:87:HIS:HB3	47:L:90:VAL:CG2	2.46	0.45
47:L:102:ARG:HG2	79:5:75:G:C8	2.52	0.45
56:V:64:THR:HG23	56:V:75:LYS:O	2.17	0.45
57:X:61:PRO:HG2	67:h:80:PRO:HG3	1.98	0.45
58:Y:34:LEU:HA	58:Y:106:ILE:CG2	2.47	0.45
58:Y:77:LYS:HE3	71:l:31:THR:HG22	1.97	0.45
59:Z:5:MET:HE1	62:c:39:ARG:NH1	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:Z:46:ILE:HD13	59:Z:68:ILE:CG2	2.44	0.45
66:g:102:ILE:O	66:g:106:VAL:HG23	2.16	0.45
66:g:103:VAL:O	66:g:107:LEU:HG	2.16	0.45
67:h:46:LYS:O	67:h:50:VAL:HG23	2.16	0.45
67:h:106:LYS:HE3	79:5:156:G:OP2	2.16	0.45
68:i:60:LEU:O	68:i:63:VAL:HG12	2.16	0.45
69:j:75:ARG:NH2	79:5:344:A:H5'	2.31	0.45
70:k:60:LEU:HD23	70:k:66:VAL:HG22	1.97	0.45
74:o:58:LYS:HE3	79:5:4380:A:OP1	2.16	0.45
75:p:20:ALA:O	75:p:24:LYS:HG2	2.16	0.45
76:r:91:SER:HA	76:r:94:ARG:NH1	2.32	0.45
78:t:32:ILE:HD13	78:t:42:VAL:HG21	1.98	0.45
78:t:77:ALA:O	78:t:81:ILE:HG13	2.17	0.45
78:t:80:LEU:CD2	78:t:83:LYS:HE3	2.43	0.45
78:t:80:LEU:HA	78:t:83:LYS:HG2	1.98	0.45
79:5:312:G:H2'	79:5:313:U:C6	2.51	0.45
79:5:755:C:H2'	79:5:756:G:C8	2.51	0.45
79:5:1358:G:O6	79:5:1377:G:C2	2.70	0.45
79:5:1524:A:O2'	79:5:4388:A:H1'	2.17	0.45
79:5:1882:U:H4'	79:5:1883:G:O4'	2.16	0.45
79:5:1922:G:H2'	79:5:1923:A:H5'	1.97	0.45
79:5:2005:G:C2	79:5:2015:U:H1'	2.51	0.45
79:5:4365:C:H2'	79:5:4366:A:C8	2.51	0.45
3:9:34:U:H2'	3:9:35:C:H6	1.82	0.45
3:9:166:A:O2'	8:GG:8:PRO:HA	2.16	0.45
3:9:394:G:C5'	12:LL:81:LYS:HD2	2.47	0.45
3:9:496:C:OP1	7:EE:45:ILE:HG21	2.17	0.45
3:9:608:C:H1'	21:ee:131:ASN:HD21	1.81	0.45
3:9:1051:G:O2'	3:9:1052:A:H5'	2.17	0.45
3:9:1293:A:H1'	35:ff:138:ARG:NH2	2.29	0.45
3:9:1714:U:H2'	3:9:1715:A:C8	2.52	0.45
3:9:1797:U:H2'	3:9:1798:C:H6	1.82	0.45
4:AA:178:LEU:O	4:AA:182:VAL:HG22	2.17	0.45
5:BB:25:PHE:HZ	14:OO:53:ILE:HA	1.80	0.45
5:BB:126:ASP:HA	5:BB:135:LEU:O	2.17	0.45
5:BB:194:GLY:HA2	5:BB:210:VAL:HG12	1.97	0.45
6:CC:95:ASP:OD1	6:CC:102:LEU:HD21	2.16	0.45
6:CC:256:TRP:HB3	16:WW:68:ARG:NH1	2.32	0.45
9:HH:69:LEU:O	9:HH:73:GLN:HG2	2.16	0.45
12:LL:45:LYS:HE2	12:LL:45:LYS:HB2	1.84	0.45
22:DD:175:VAL:HG12	22:DD:182:LEU:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:KK:91:PRO:CG	24:KK:94:LEU:HD13	2.47	0.45
27:QQ:16:LYS:HD2	27:QQ:83:ALA:N	2.31	0.45
29:SS:91:LYS:HE3	29:SS:109:GLU:HB3	1.98	0.45
33:cc:12:ALA:O	33:cc:56:LEU:HB2	2.16	0.45
36:gg:153:CYS:HB3	36:gg:168:CYS:SG	2.56	0.45
37:A:31:ALA:HB2	37:A:123:ARG:NH2	2.31	0.45
37:A:114:CYS:HB2	37:A:127:ALA:O	2.17	0.45
39:C:44:LEU:HD13	39:C:47:ASN:HD22	1.81	0.45
39:C:302:LEU:CD1	52:Q:38:ARG:HB3	2.47	0.45
39:C:306:ARG:HG3	79:5:2086:G:H4'	1.98	0.45
40:D:207:TYR:CZ	40:D:211:LEU:HD11	2.52	0.45
41:E:160:HIS:CB	41:E:163:LYS:HD2	2.46	0.45
42:F:114:ARG:CZ	52:Q:5:ILE:HG23	2.46	0.45
43:G:235:CYS:HB3	43:G:275:ILE:CG2	2.46	0.45
45:I:31:ILE:HG12	45:I:66:GLU:CG	2.46	0.45
45:I:33:ILE:HD11	45:I:35:ASP:O	2.16	0.45
46:J:41:GLU:OE2	46:J:42:GLN:HG3	2.17	0.45
48:M:96:GLU:HA	48:M:99:GLU:CG	2.46	0.45
49:N:44:ARG:HB3	49:N:47:LYS:HB2	1.98	0.45
50:O:93:LYS:HE2	79:5:1308:C:H4'	1.99	0.45
51:P:39:MET:C	51:P:113:VAL:HG13	2.41	0.45
51:P:86:LYS:CE	79:5:3857:G:H4'	2.43	0.45
55:U:80:LYS:HG3	79:5:2620:G:P	2.57	0.45
56:V:89:ARG:HG2	56:V:90:ARG:O	2.16	0.45
59:Z:115:LYS:NZ	79:5:2573:A:H4'	2.32	0.45
59:Z:129:TRP:O	59:Z:132:GLN:HG3	2.16	0.45
61:b:108:ALA:O	61:b:112:ILE:HG12	2.17	0.45
63:d:39:LYS:HA	63:d:77:ILE:HG21	1.97	0.45
63:d:63:ARG:HD3	63:d:103:TYR:CD2	2.52	0.45
64:e:31:ILE:HD11	79:5:2347:A:C2	2.52	0.45
64:e:60:TYR:CZ	79:5:1900:C:H4'	2.50	0.45
65:f:4:ARG:HG3	65:f:6:TRP:CZ3	2.52	0.45
69:j:69:ILE:O	69:j:72:ARG:HG3	2.17	0.45
70:k:8:ILE:O	70:k:12:LEU:HD23	2.17	0.45
72:m:69:ILE:CD1	72:m:76:ARG:HA	2.47	0.45
75:p:23:ARG:HA	75:p:26:VAL:HG22	1.97	0.45
76:r:10:VAL:HG22	76:r:14:SER:HB2	1.97	0.45
77:s:56:GLY:HA2	77:s:61:MET:HE2	1.98	0.45
78:t:35:LEU:HD23	78:t:64:ILE:CB	2.46	0.45
79:5:324:A:O2'	79:5:325:U:H5'	2.17	0.45
79:5:392:U:H3	79:5:399:G:H1	1.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:1555:G:O6	79:5:1572:U:O4	2.35	0.45
79:5:1821:G:H5'	79:5:1822:U:OP1	2.17	0.45
79:5:2048:U:H5''	79:5:2050:G:P	2.56	0.45
79:5:2277:C:O2'	79:5:2278:G:H5'	2.17	0.45
79:5:2323:C:O2'	79:5:2324:C:H5'	2.16	0.45
79:5:2702:C:O2'	79:5:2703:G:H5'	2.16	0.45
79:5:2728:U:H2'	79:5:2729:C:C6	2.52	0.45
79:5:4318:C:H2'	79:5:4319:C:O4'	2.16	0.45
81:8:23:C:H3'	81:8:24:G:C5'	2.47	0.45
3:9:409:C:H2'	3:9:410:G:C8	2.52	0.45
3:9:440:G:H5''	10:II:2:GLY:CA	2.45	0.45
3:9:582:U:H1'	18:YY:33:ALA:HB2	1.98	0.45
3:9:791:C:H2'	3:9:792:C:C6	2.51	0.45
3:9:1140:G:O2'	3:9:1141:G:H5'	2.16	0.45
3:9:1393:G:H2'	3:9:1394:G:C8	2.52	0.45
3:9:1521:C:H5'	26:PP:126:VAL:CG2	2.47	0.45
3:9:1631:U:H5''	29:SS:34:LYS:HG3	1.98	0.45
5:BB:143:THR:HA	5:BB:207:LEU:CD2	2.47	0.45
6:CC:210:PRO:O	6:CC:214:LEU:HD23	2.16	0.45
8:GG:122:PRO:HA	8:GG:126:ASP:CB	2.46	0.45
10:II:147:LYS:HA	10:II:150:ASP:OD2	2.16	0.45
10:II:176:ALA:H	10:II:187:GLY:HA2	1.81	0.45
11:JJ:31:LEU:HD12	11:JJ:35:TYR:CE2	2.47	0.45
12:LL:10:TYR:CE2	12:LL:12:LYS:HB3	2.52	0.45
12:LL:55:TYR:CD2	12:LL:115:PRO:HG2	2.52	0.45
13:NN:5:HIS:HB2	13:NN:121:ARG:NH1	2.32	0.45
29:SS:9:PHE:CZ	32:ZZ:49:LEU:HD11	2.51	0.45
37:A:21:LYS:HE2	79:5:2448:G:H4'	1.97	0.45
37:A:177:LYS:HD3	75:p:69:TRP:CZ2	2.51	0.45
37:A:206:PRO:HB3	37:A:213:GLY:HA3	1.97	0.45
38:B:142:GLY:HA2	38:B:145:GLN:HG2	1.99	0.45
38:B:324:GLY:HA2	79:5:5051:C:C4'	2.41	0.45
39:C:153:VAL:HA	39:C:252:TRP:O	2.16	0.45
40:D:286:SER:HA	40:D:289:ARG:HG2	1.99	0.45
42:F:212:LEU:HD12	42:F:213:SER:H	1.80	0.45
45:I:205:PRO:HB2	45:I:207:ASP:OD1	2.16	0.45
48:M:65:PRO:HD2	48:M:68:ALA:HB2	1.98	0.45
49:N:140:LYS:HZ3	79:5:124:C:H4'	1.80	0.45
50:O:176:ARG:HH11	79:5:4769:G:H5'	1.82	0.45
52:Q:110:ARG:HD2	52:Q:120:ILE:HG12	1.99	0.45
54:T:75:VAL:HA	54:T:88:ARG:CA	2.45	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:X:106:LYS:HG3	79:5:2779:C:OP1	2.16	0.45
57:X:108:GLN:O	57:X:111:GLN:HG3	2.17	0.45
59:Z:68:ILE:HG12	59:Z:119:GLU:HG2	1.99	0.45
65:f:14:TYR:O	65:f:27:LEU:HD23	2.16	0.45
65:f:54:LYS:CE	79:5:443:G:H5'	2.46	0.45
67:h:99:GLU:HA	67:h:102:LEU:CG	2.46	0.45
69:j:64:MET:SD	69:j:67:LEU:HD11	2.57	0.45
71:l:43:HIS:CG	71:l:46:ARG:HG2	2.51	0.45
79:5:125:C:H2'	79:5:126:C:C6	2.52	0.45
79:5:727:C:H2'	79:5:728:U:C6	2.52	0.45
79:5:1358:G:O2'	79:5:1359:G:H2'	2.17	0.45
79:5:2093:A:H4'	79:5:2094:C:C5'	2.42	0.45
79:5:4968:A:H2'	79:5:4969:C:C6	2.52	0.45
2:W:14:TYR:CZ	38:B:380:GLN:HG2	2.52	0.45
3:9:146:G:N2	3:9:173:A:N1	2.59	0.45
3:9:381:C:H5'	10:II:54:LYS:HE3	1.98	0.45
3:9:526:A:H2'	3:9:527:C:H6	1.82	0.45
3:9:538:U:H2'	3:9:539:C:O4'	2.16	0.45
3:9:585:C:H2'	3:9:586:G:H5'	1.99	0.45
3:9:1003:U:H2'	3:9:1004:U:C6	2.52	0.45
3:9:1230:C:O2'	3:9:1231:C:H5'	2.16	0.45
3:9:1296:U:H2'	3:9:1297:U:O4'	2.17	0.45
3:9:1549:U:H2'	3:9:1550:G:C8	2.52	0.45
3:9:1604:G:H2'	3:9:1605:G:H5'	1.99	0.45
4:AA:85:ARG:HD3	4:AA:203:PHE:O	2.16	0.45
4:AA:206:ASP:O	4:AA:210:ILE:HG13	2.16	0.45
6:CC:139:LEU:O	6:CC:158:ALA:HA	2.17	0.45
7:EE:9:LEU:HD12	7:EE:38:LEU:HD21	1.98	0.45
7:EE:77:ARG:HG3	7:EE:79:ASP:H	1.80	0.45
9:HH:131:GLU:OE1	9:HH:139:ILE:HG13	2.17	0.45
11:JJ:18:ARG:NH2	11:JJ:20:PHE:HB2	2.31	0.45
13:NN:71:ILE:O	13:NN:75:LEU:HD23	2.16	0.45
13:NN:127:ARG:HA	13:NN:130:LYS:HG2	1.97	0.45
16:WW:111:MET:HG3	16:WW:115:GLU:OE1	2.16	0.45
20:bb:12:PRO:HA	20:bb:15:GLU:OE2	2.16	0.45
21:ee:102:THR:CA	21:ee:106:LYS:HB2	2.47	0.45
22:DD:123:LEU:O	22:DD:126:ILE:HG13	2.16	0.45
27:QQ:45:ARG:O	27:QQ:48:GLN:HB2	2.17	0.45
36:gg:298:LEU:O	36:gg:309:VAL:HA	2.17	0.45
37:A:10:LYS:HA	37:A:16:PHE:CD2	2.50	0.45
37:A:137:ILE:CD1	37:A:149:LYS:HB3	2.43	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:B:142:GLY:O	38:B:146:LEU:HD23	2.17	0.45
38:B:170:LEU:H	38:B:170:LEU:HD22	1.82	0.45
38:B:215:GLU:O	38:B:284:ILE:HG22	2.16	0.45
38:B:234:ARG:HA	38:B:272:LYS:NZ	2.31	0.45
38:B:316:PRO:HG2	38:B:319:GLY:O	2.17	0.45
39:C:86:ARG:NH1	39:C:89:GLN:HB3	2.31	0.45
39:C:169:LEU:HD11	39:C:173:LYS:HE2	1.98	0.45
40:D:63:GLN:HG2	40:D:77:ALA:HB2	1.98	0.45
40:D:143:THR:HG23	40:D:172:SER:O	2.16	0.45
42:F:92:ILE:HA	42:F:118:ASN:O	2.17	0.45
42:F:107:VAL:HG11	42:F:134:ILE:CD1	2.47	0.45
42:F:108:LEU:CD2	42:F:135:VAL:HG11	2.47	0.45
42:F:179:GLY:HA3	79:5:2102:G:N1	2.29	0.45
43:G:207:LEU:HD22	43:G:208:VAL:H	1.82	0.45
44:H:6:SER:OG	44:H:59:LYS:HB3	2.17	0.45
45:I:198:LYS:HE2	79:5:1781:U:O5'	2.17	0.45
46:J:38:LYS:O	46:J:41:GLU:HG3	2.17	0.45
46:J:39:VAL:HG11	46:J:112:HIS:CD2	2.52	0.45
47:L:65:ARG:HG3	60:a:69:PHE:CD2	2.52	0.45
48:M:116:LYS:HE2	48:M:120:ASN:ND2	2.32	0.45
50:O:15:LEU:HD11	50:O:129:LEU:CD2	2.47	0.45
51:P:61:ARG:HD3	81:8:3:A:O3'	2.17	0.45
52:Q:21:GLN:HA	52:Q:26:ARG:NH2	2.32	0.45
53:S:128:LYS:HB2	54:T:152:GLU:OE2	2.16	0.45
54:T:28:ALA:HA	54:T:31:MET:CG	2.47	0.45
57:X:128:ILE:HD12	79:5:2781:G:OP1	2.16	0.45
59:Z:102:ARG:NH1	59:Z:103:ASP:HB2	2.31	0.45
60:a:137:ILE:HA	60:a:140:VAL:HG12	1.99	0.45
61:b:115:GLY:HA2	79:5:1244:G:C6	2.52	0.45
63:d:75:LYS:HE3	63:d:79:ASN:OD1	2.16	0.45
65:f:11:PHE:HE1	65:f:26:ALA:HB1	1.82	0.45
74:o:57:ARG:CZ	79:5:4380:A:H5'	2.47	0.45
79:5:81:C:H2'	79:5:82:U:O4'	2.16	0.45
79:5:306:A:H2'	79:5:307:A:C8	2.51	0.45
79:5:438:G:C2'	79:5:439:G:H5'	2.46	0.45
79:5:706:C:H2'	79:5:707:C:C6	2.51	0.45
79:5:1395:U:H2'	79:5:1396:G:O4'	2.16	0.45
79:5:1565:A:H3'	79:5:1566:C:O4'	2.16	0.45
79:5:1575:A:O2'	79:5:1576:G:H5'	2.17	0.45
79:5:1929:A:C8	79:5:2036:C:H4'	2.51	0.45
79:5:1964:A:H5'	79:5:1965:G:OP2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:2283:G:H2'	79:5:2284:G:H8	1.82	0.45
79:5:2552:G:O5'	79:5:2553:A:H5''	2.16	0.45
79:5:3640:U:H2'	79:5:3641:U:C6	2.52	0.45
79:5:3785:A:O2'	79:5:3786:U:H5'	2.16	0.45
79:5:4890:G:H2'	79:5:4891:G:H8	1.82	0.45
81:8:66:A:H2'	81:8:67:U:H6	1.82	0.45
3:9:65:C:N4	8:GG:136:LYS:HB2	2.32	0.45
3:9:100:U:H3'	3:9:101:U:H6	1.82	0.45
3:9:218:U:O2'	3:9:219:U:H5'	2.16	0.45
3:9:946:U:H2'	3:9:947:G:C8	2.51	0.45
3:9:993:G:O6	19:aa:15:ARG:HG2	2.17	0.45
3:9:1120:U:H3'	3:9:1121:G:H5''	1.99	0.45
3:9:1234:C:N4	29:SS:137:LYS:HE2	2.32	0.45
3:9:1600:G:C4'	32:ZZ:43:LYS:HD3	2.47	0.45
4:AA:154:LEU:HD22	15:VV:63:GLY:C	2.41	0.45
4:AA:164:ASN:ND2	4:AA:166:LYS:HG2	2.31	0.45
5:BB:43:ASN:O	5:BB:44:ILE:HD13	2.17	0.45
5:BB:44:ILE:HD12	5:BB:74:LEU:HD23	1.98	0.45
7:EE:118:GLU:HA	7:EE:121:TYR:HE1	1.81	0.45
8:GG:222:GLU:O	8:GG:226:GLU:HG2	2.17	0.45
10:II:106:SER:CB	10:II:171:LEU:HD21	2.46	0.45
11:JJ:21:GLU:O	11:JJ:25:LEU:HG	2.15	0.45
11:JJ:78:LEU:HD21	11:JJ:97:ILE:HD11	1.99	0.45
15:VV:40:ASP:O	15:VV:44:GLY:HA2	2.17	0.45
16:WW:41:MET:HE2	16:WW:129:PHE:CD1	2.52	0.45
18:YY:102:THR:HG23	18:YY:107:ARG:HE	1.81	0.45
22:DD:35:SER:C	22:DD:99:ILE:HD11	2.42	0.45
23:FF:110:GLN:HE21	23:FF:113:VAL:HB	1.82	0.45
25:MM:68:LEU:HD12	35:ff:114:ILE:CG2	2.45	0.45
27:QQ:96:TYR:C	27:QQ:105:LYS:HD3	2.42	0.45
37:A:5:ILE:O	37:A:9:ARG:HG3	2.16	0.45
37:A:36:GLU:HA	37:A:91:GLY:HA2	1.99	0.45
37:A:105:GLY:HA2	37:A:139:HIS:HE2	1.81	0.45
38:B:370:THR:H	38:B:380:GLN:HE22	1.64	0.45
39:C:193:LYS:HB2	79:5:2294:G:OP1	2.16	0.45
40:D:153:THR:HB	40:D:160:PHE:HE2	1.81	0.45
40:D:285:ALA:HA	40:D:288:LEU:HG	1.98	0.45
41:E:116:PRO:HB3	79:5:457:G:O2'	2.17	0.45
41:E:243:TYR:CD2	79:5:4939:C:H5'	2.52	0.45
42:F:145:ASN:HB2	42:F:240:ASN:ND2	2.32	0.45
43:G:135:GLN:HB2	43:G:286:ILE:HG21	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:H:10:VAL:CG2	44:H:74:CYS:HB2	2.47	0.45
46:J:19:LYS:HB2	46:J:75:ARG:NH2	2.31	0.45
49:N:98:LEU:CD2	49:N:128:LYS:HD2	2.44	0.45
50:O:61:ARG:HD2	50:O:62:MET:O	2.16	0.45
52:Q:8:ASN:O	52:Q:9:LYS:HD2	2.16	0.45
52:Q:12:LYS:HG2	52:Q:16:LYS:HZ1	1.81	0.45
53:S:127:MET:HA	54:T:153:PRO:HG2	1.99	0.45
56:V:74:LYS:HD3	79:5:3799:A:OP2	2.16	0.45
57:X:83:THR:HG21	79:5:2434:G:O3'	2.16	0.45
58:Y:124:LYS:HA	58:Y:127:GLN:NE2	2.32	0.45
59:Z:120:GLU:O	59:Z:124:THR:HG23	2.16	0.45
61:b:47:LYS:HA	61:b:50:ASN:OD1	2.17	0.45
62:c:14:ILE:HA	62:c:17:ARG:HH12	1.82	0.45
62:c:77:ASN:O	62:c:80:GLU:HG2	2.17	0.45
64:e:75:ARG:O	64:e:96:CYS:HB3	2.17	0.45
77:s:38:LYS:CB	79:5:1971:C:H4'	2.45	0.45
78:t:65:GLN:HB2	78:t:68:GLN:O	2.17	0.45
79:5:77:U:H2'	79:5:78:U:O4'	2.17	0.45
79:5:99:A:O2'	79:5:100:C:H5'	2.17	0.45
79:5:144:G:H2'	79:5:145:G:C8	2.52	0.45
79:5:366:A:H2'	79:5:367:C:O4'	2.17	0.45
79:5:1786:A:H2'	79:5:1789:C:C5	2.52	0.45
79:5:2378:G:H1'	79:5:2425:U:O2	2.17	0.45
79:5:2722:G:H2'	79:5:2723:U:O4'	2.17	0.45
79:5:3678:G:H4'	79:5:3679:U:H3'	1.99	0.45
79:5:4270:C:H5''	79:5:4271:A:H5'	1.98	0.45
79:5:4344:U:H2'	79:5:4345:C:H6	1.80	0.45
79:5:4670:C:O3'	79:5:4671:C:H3'	2.17	0.45
79:5:4736:C:H4'	79:5:5068:G:C5	2.52	0.45
80:7:61:G:H2'	80:7:62:U:C6	2.51	0.45
2:W:116:LYS:HG2	3:9:329:G:N7	2.32	0.45
3:9:219:U:O2'	3:9:220:U:H5'	2.17	0.45
3:9:455:A:C2	3:9:1800:A:H1'	2.52	0.45
3:9:457:C:H2'	3:9:458:A:C8	2.52	0.45
3:9:600:G:H2'	3:9:601:G:C8	2.52	0.45
3:9:1220:A:H1'	3:9:1677:U:O2'	2.16	0.45
3:9:1301:A:O2'	3:9:1302:G:H5'	2.17	0.45
3:9:1542:C:H4'	30:TT:11:GLN:CB	2.47	0.45
3:9:1594:A:H62	32:ZZ:104:ARG:HE	1.65	0.45
5:BB:65:ARG:HE	14:OO:48:SER:HB3	1.82	0.45
5:BB:153:THR:HB	5:BB:155:TYR:CD2	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CC:187:ARG:NH2	6:CC:189:GLY:HA2	2.31	0.45
9:HH:36:LEU:HD22	9:HH:75:ILE:HG13	1.98	0.45
22:DD:31:GLU:HG2	22:DD:32:ASP:OD1	2.17	0.45
24:KK:71:LEU:HD21	24:KK:79:LEU:HD12	1.99	0.45
26:PP:53:GLN:CB	26:PP:83:MET:HE1	2.46	0.45
26:PP:72:LYS:CB	26:PP:93:MET:HE1	2.41	0.45
30:TT:65:TYR:HA	30:TT:123:LEU:CD2	2.46	0.45
31:UU:67:LYS:HA	34:dd:44:ARG:HD2	1.99	0.45
36:gg:173:LEU:HD23	36:gg:189:ILE:CG2	2.47	0.45
37:A:234:LYS:CD	79:5:3666:C:H5'	2.47	0.45
38:B:78:ILE:HG23	38:B:330:PHE:CD2	2.52	0.45
38:B:207:VAL:HA	38:B:210:VAL:HG22	1.99	0.45
38:B:231:VAL:CG2	38:B:250:LYS:HA	2.47	0.45
40:D:39:GLN:HG2	40:D:48:LYS:HD2	1.98	0.45
40:D:50:ARG:HG3	40:D:52:ILE:HG13	1.99	0.45
40:D:83:LEU:HB3	40:D:88:VAL:HB	1.99	0.45
40:D:225:GLN:HG2	80:7:49:A:C5'	2.42	0.45
43:G:86:GLU:HB2	43:G:88:ARG:NH1	2.32	0.45
44:H:88:PHE:CZ	44:H:151:ILE:HB	2.51	0.45
47:L:161:PHE:CD2	60:a:105:ARG:HD2	2.51	0.45
48:M:125:ASN:O	48:M:129:LYS:HG3	2.17	0.45
49:N:119:TYR:CE1	49:N:131:GLU:HB2	2.52	0.45
55:U:83:LEU:HA	55:U:86:LEU:HG	1.99	0.45
57:X:96:LEU:HB3	57:X:138:VAL:CG1	2.44	0.45
58:Y:50:ARG:HH21	81:8:71:A:H2'	1.81	0.45
59:Z:51:ARG:CB	59:Z:65:ARG:HD2	2.40	0.45
59:Z:103:ASP:CG	59:Z:106:LEU:HD13	2.42	0.45
60:a:37:GLY:HA2	60:a:45:PHE:CE2	2.47	0.45
63:d:75:LYS:CG	63:d:79:ASN:HB2	2.47	0.45
64:e:64:LYS:HG2	79:5:2078:C:OP1	2.17	0.45
64:e:98:GLU:OE1	64:e:123:THR:HG22	2.16	0.45
66:g:22:LEU:HD11	66:g:30:ILE:HD12	1.98	0.45
67:h:109:ARG:HD3	67:h:112:ARG:NH2	2.32	0.45
68:i:43:MET:O	68:i:47:VAL:HG23	2.16	0.45
70:k:57:LYS:HA	70:k:60:LEU:HD13	1.97	0.45
70:k:68:GLU:HB3	70:k:70:LYS:CE	2.40	0.45
71:l:20:ASN:ND2	71:l:42:ARG:HB3	2.32	0.45
73:n:1:MET:SD	73:n:6:ARG:HB2	2.57	0.45
75:p:47:MET:HE2	75:p:71:TYR:HE1	1.81	0.45
76:r:97:ILE:HG21	76:r:107:ARG:CA	2.47	0.45
79:5:65:A:N6	79:5:75:G:H1'	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:281:U:N3	79:5:306:A:N6	2.41	0.45
79:5:476:G:H2'	79:5:477:C:H6	1.80	0.45
79:5:963:G:H2'	79:5:964:A:H8	1.82	0.45
79:5:979:C:H42	79:5:1276:C:H42	1.65	0.45
79:5:981:C:H2'	79:5:982:U:H6	1.80	0.45
79:5:1093:C:H2'	79:5:1094:G:H8	1.82	0.45
79:5:1735:U:H1'	79:5:4213:A:H5''	1.99	0.45
79:5:1813:U:H2'	79:5:1814:C:C6	2.52	0.45
79:5:2355:G:H2'	79:5:2356:U:H6	1.81	0.45
79:5:2611:A:C5'	79:5:2688:G:H4'	2.47	0.45
79:5:2836:A:C2	79:5:3895:G:H4'	2.52	0.45
79:5:2855:G:H1'	79:5:2857:A:N6	2.32	0.45
79:5:3764:U:H2'	79:5:3765:G:O4'	2.16	0.45
79:5:4258:C:H2'	79:5:4259:C:H6	1.80	0.45
79:5:4403:U:O2'	79:5:4404:U:H5'	2.16	0.45
79:5:4478:G:H2'	79:5:4479:A:C8	2.52	0.45
1:R:32:ILE:CD1	1:R:44:LEU:HD13	2.47	0.45
1:R:60:ARG:HB3	1:R:64:ARG:NH1	2.31	0.45
1:R:83:GLY:O	79:5:2864:A:H4'	2.17	0.45
2:W:90:ILE:HD13	8:GG:144:LEU:O	2.17	0.45
3:9:922:A:H2'	3:9:923:G:O4'	2.16	0.45
3:9:1159:G:H2'	3:9:1160:U:C6	2.52	0.45
3:9:1349:G:H2'	3:9:1350:U:H6	1.82	0.45
3:9:1453:C:C4'	28:RR:48:ASN:HB3	2.47	0.45
3:9:1529:C:H2'	3:9:1530:U:C6	2.52	0.45
4:AA:59:LEU:O	4:AA:63:ARG:HG3	2.17	0.45
4:AA:124:VAL:HG13	4:AA:146:ALA:HA	1.98	0.45
4:AA:184:ARG:HB3	4:AA:191:ARG:HG2	1.98	0.45
7:EE:60:GLU:O	7:EE:64:ILE:HG12	2.17	0.45
11:JJ:65:GLU:HG3	11:JJ:66:LYS:H	1.82	0.45
16:WW:27:ILE:HG13	16:WW:29:PRO:HD2	1.99	0.45
16:WW:40:VAL:HB	16:WW:41:MET:CE	2.46	0.45
17:XX:82:THR:O	17:XX:118:VAL:HG13	2.17	0.45
22:DD:8:LYS:CE	31:UU:59:LYS:HD3	2.45	0.45
22:DD:45:ARG:HD2	22:DD:85:GLU:HG2	1.99	0.45
28:RR:104:GLU:O	28:RR:108:LEU:HG	2.17	0.45
30:TT:33:TRP:HH2	30:TT:102:ARG:HG2	1.82	0.45
30:TT:101:ARG:O	30:TT:105:GLN:HG3	2.17	0.45
36:gg:14:HIS:CE1	36:gg:41:ILE:HB	2.52	0.45
36:gg:194:TYR:CE1	36:gg:212:LYS:HB2	2.52	0.45
37:A:186:TYR:HB2	37:A:196:TRP:CZ3	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:B:20:LYS:CE	79:5:4717:A:H4'	2.47	0.45
38:B:206:PRO:HD2	38:B:209:GLN:NE2	2.32	0.45
38:B:250:LYS:NZ	79:5:3896:C:H4'	2.32	0.45
38:B:314:ILE:CD1	38:B:326:VAL:HB	2.47	0.45
39:C:2:ALA:HB3	39:C:29:LYS:NZ	2.32	0.45
39:C:143:ARG:HE	39:C:182:LYS:HD2	1.81	0.45
39:C:288:ASP:O	39:C:292:ILE:HG12	2.17	0.45
39:C:349:LEU:HA	39:C:352:GLU:OE2	2.17	0.45
41:E:152:ILE:HG22	41:E:202:THR:O	2.16	0.45
42:F:149:VAL:HA	42:F:152:LEU:HD21	1.98	0.45
42:F:181:TYR:HB3	42:F:199:HIS:CE1	2.52	0.45
43:G:270:LYS:O	43:G:273:GLU:HG3	2.17	0.45
46:J:89:VAL:HG13	46:J:114:ASP:OD2	2.17	0.45
46:J:147:ARG:HH22	80:7:57:C:H4'	1.81	0.45
46:J:164:ARG:O	46:J:168:GLN:HG2	2.16	0.45
47:L:79:GLU:O	47:L:83:VAL:HG23	2.17	0.45
47:L:103:ARG:HB2	47:L:105:LYS:HZ3	1.82	0.45
50:O:155:THR:HA	50:O:158:GLU:HG3	1.99	0.45
53:S:67:VAL:HA	79:5:729:G:N1	2.27	0.45
54:T:36:LYS:HA	54:T:64:VAL:CG1	2.47	0.45
55:U:35:ASP:HB3	55:U:38:ASN:HB3	1.99	0.45
58:Y:30:MET:O	58:Y:48:PRO:HA	2.16	0.45
58:Y:109:LEU:HB3	58:Y:111:LEU:CD2	2.47	0.45
60:a:118:PRO:HB2	60:a:120:GLN:OE1	2.17	0.45
61:b:37:PRO:O	61:b:40:LEU:HG	2.17	0.45
64:e:9:LYS:HB2	64:e:9:LYS:HE2	1.75	0.45
65:f:46:ARG:HD3	65:f:72:GLY:O	2.17	0.45
66:g:78:TYR:HA	79:5:2751:G:O2'	2.17	0.45
67:h:4:ILE:HD11	67:h:56:ARG:HE	1.82	0.45
77:s:10:LYS:CE	77:s:60:MET:HE2	2.41	0.45
79:5:217:C:H4'	79:5:218:A:O5'	2.17	0.45
79:5:362:A:N3	81:8:53:G:H1'	2.32	0.45
79:5:403:G:O2'	79:5:404:U:H5'	2.17	0.45
79:5:904:G:H2'	79:5:905:C:H6	1.82	0.45
79:5:2340:C:H2'	79:5:2341:A:C8	2.52	0.45
79:5:2544:G:H2'	79:5:2545:U:O4'	2.16	0.45
79:5:4242:U:O4	79:5:4280:A:H4'	2.17	0.45
79:5:4300:U:H2'	79:5:4301:U:C6	2.51	0.45
79:5:4360:U:H2'	79:5:4361:U:H5'	1.99	0.45
2:W:27:LYS:HE3	2:W:27:LYS:HB3	1.84	0.44
3:9:343:A:O2'	7:EE:140:VAL:HG11	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:355:G:C2'	3:9:356:C:H5'	2.47	0.44
3:9:640:A:H2'	3:9:641:A:C8	2.51	0.44
3:9:825:A:H2'	3:9:826:A:C8	2.52	0.44
3:9:866:U:H2'	3:9:867:G:C4	2.52	0.44
3:9:936:G:H5''	13:NN:107:LYS:CD	2.46	0.44
3:9:941:C:H5''	5:BB:136:ARG:NH1	2.32	0.44
3:9:1396:A:N7	3:9:1449:G:C6	2.85	0.44
3:9:1674:G:H5''	23:FF:86:LYS:HB3	2.00	0.44
3:9:1809:A:H2'	3:9:1810:U:C6	2.52	0.44
4:AA:135:THR:HA	4:AA:156:TYR:CD2	2.52	0.44
4:AA:145:ILE:CD1	4:AA:159:ILE:HG12	2.47	0.44
5:BB:65:ARG:HA	5:BB:65:ARG:CZ	2.46	0.44
5:BB:82:ARG:HA	5:BB:105:LEU:CD1	2.46	0.44
5:BB:134:LEU:HD12	5:BB:219:LYS:HZ3	1.82	0.44
6:CC:169:TYR:HB2	6:CC:173:LYS:HG2	1.99	0.44
7:EE:125:LYS:HE3	7:EE:159:THR:HB	1.99	0.44
7:EE:208:VAL:HG21	7:EE:222:LEU:HD11	1.98	0.44
8:GG:7:PHE:N	8:GG:124:LEU:HD23	2.32	0.44
8:GG:7:PHE:HB3	8:GG:10:THR:OG1	2.16	0.44
8:GG:194:LEU:O	8:GG:198:ARG:HG3	2.17	0.44
9:HH:139:ILE:HG23	9:HH:156:VAL:HG13	1.98	0.44
9:HH:142:LYS:O	9:HH:143:ARG:HD3	2.16	0.44
11:JJ:111:GLN:CD	11:JJ:127:ARG:HB2	2.41	0.44
15:VV:43:THR:HB	15:VV:45:ARG:HG2	1.98	0.44
16:WW:103:VAL:HG12	16:WW:126:LEU:HD23	2.00	0.44
19:aa:73:TYR:HD2	19:aa:78:ALA:HA	1.82	0.44
22:DD:53:THR:HB	22:DD:94:ARG:CZ	2.47	0.44
25:MM:79:VAL:HG22	25:MM:84:LYS:NZ	2.33	0.44
25:MM:125:GLU:O	25:MM:129:LYS:HG2	2.16	0.44
28:RR:33:ARG:HH21	36:gg:64:HIS:HE1	1.63	0.44
33:cc:17:VAL:HA	33:cc:30:VAL:HG22	1.99	0.44
37:A:150:LEU:HD12	37:A:154:SER:OG	2.17	0.44
38:B:114:CYS:SG	38:B:180:LEU:HD21	2.57	0.44
38:B:250:LYS:HD2	79:5:3897:G:OP1	2.17	0.44
39:C:78:ARG:HA	39:C:90:GLY:CA	2.42	0.44
39:C:121:ARG:HA	39:C:124:ILE:HG22	1.99	0.44
39:C:164:THR:HG22	39:C:220:ALA:O	2.17	0.44
40:D:226:TYR:HE2	80:7:48:G:H5'	1.82	0.44
42:F:196:VAL:HG12	42:F:200:PHE:CE2	2.52	0.44
43:G:170:ARG:O	43:G:174:LYS:HG3	2.18	0.44
43:G:219:LEU:HD12	43:G:220:VAL:HG22	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:H:111:LEU:HD22	44:H:113:GLU:OE2	2.17	0.44
44:H:171:ASP:OD1	44:H:173:ARG:HG2	2.17	0.44
45:I:38:ARG:NH2	45:I:84:GLY:HA2	2.31	0.44
45:I:43:VAL:HA	45:I:139:ARG:NH2	2.32	0.44
45:I:52:MET:HG2	45:I:136:MET:HB3	2.00	0.44
45:I:60:LEU:HD11	45:I:65:LEU:HD21	2.00	0.44
47:L:114:VAL:O	47:L:118:LYS:HG2	2.18	0.44
48:M:6:PHE:CE1	53:S:151:LYS:HG2	2.53	0.44
49:N:68:ARG:CZ	79:5:302:C:H5''	2.47	0.44
49:N:120:TRP:HA	49:N:130:PHE:HD1	1.81	0.44
49:N:133:ILE:O	49:N:134:LEU:HD13	2.16	0.44
52:Q:152:PHE:CZ	79:5:1847:C:H4'	2.52	0.44
58:Y:52:ASP:HA	58:Y:69:LYS:HE3	1.99	0.44
63:d:33:ILE:HD11	63:d:41:ARG:CB	2.47	0.44
68:i:86:LYS:O	68:i:89:GLU:HG3	2.17	0.44
69:j:72:ARG:HH12	69:j:73:ARG:HG2	1.81	0.44
70:k:2:PRO:HB2	79:5:2692:U:O2	2.16	0.44
70:k:24:LYS:HA	70:k:67:LYS:O	2.17	0.44
71:l:6:THR:O	71:l:9:ILE:HG13	2.17	0.44
73:n:1:MET:HB3	73:n:6:ARG:NH2	2.32	0.44
74:o:44:LYS:HD3	74:o:52:THR:OG1	2.17	0.44
75:p:17:ARG:HG3	75:p:18:TYR:CD2	2.53	0.44
79:5:35:U:H5'	79:5:36:U:C5	2.52	0.44
79:5:120:A:H4'	79:5:121:A:H5''	1.99	0.44
79:5:1512:G:H4'	79:5:1850:A:OP1	2.17	0.44
79:5:2316:G:O2'	79:5:2317:C:H5'	2.17	0.44
79:5:2521:G:H2'	79:5:2522:G:H8	1.81	0.44
79:5:2700:G:H2'	79:5:2701:U:C6	2.52	0.44
79:5:2807:A:O2'	79:5:2808:G:H5'	2.17	0.44
79:5:2888:G:H2'	79:5:2889:G:C8	2.52	0.44
79:5:3727:A:H2'	79:5:3728:A:H8	1.81	0.44
79:5:3734:U:H2'	79:5:3735:G:O4'	2.16	0.44
79:5:3916:G:H2'	79:5:3917:A:H8	1.81	0.44
79:5:4951:G:H2'	79:5:4952:G:H8	1.80	0.44
2:W:5:LEU:HD23	2:W:12:LYS:HA	1.99	0.44
2:W:106:GLU:HA	2:W:109:ILE:HG22	1.99	0.44
3:9:334:C:H2'	3:9:335:G:O4'	2.18	0.44
3:9:675:U:H2'	3:9:676:C:H6	1.83	0.44
3:9:729:C:H2'	3:9:730:C:H6	1.83	0.44
3:9:1246:A:H1'	31:UU:72:GLU:OE2	2.16	0.44
3:9:1499:U:H4'	22:DD:176:LEU:HG	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:1533:A:OP2	23:FF:164:ARG:HD2	2.17	0.44
3:9:1646:C:H2'	3:9:1678:A:N1	2.32	0.44
3:9:1659:U:OP1	34:dd:32:ARG:HG2	2.17	0.44
3:9:1723:G:O2'	3:9:1724:A:H5'	2.17	0.44
4:AA:34:MET:HE2	4:AA:149:ASN:O	2.16	0.44
4:AA:144:THR:OG1	4:AA:157:VAL:HA	2.17	0.44
5:BB:169:MET:HA	5:BB:172:MET:CE	2.43	0.44
6:CC:84:PHE:CZ	6:CC:264:SER:HA	2.52	0.44
7:EE:151:ASP:HB3	7:EE:154:ILE:CD1	2.47	0.44
8:GG:192:ILE:O	8:GG:196:LYS:HG3	2.16	0.44
13:NN:84:LEU:CD1	13:NN:89:TYR:HB2	2.47	0.44
22:DD:51:LEU:CG	22:DD:91:VAL:HG22	2.47	0.44
22:DD:59:LEU:HA	22:DD:66:ILE:CG1	2.41	0.44
23:FF:92:ILE:HG21	23:FF:169:ILE:CG2	2.48	0.44
23:FF:195:GLU:O	23:FF:199:VAL:HG12	2.17	0.44
25:MM:38:ALA:O	25:MM:42:LEU:HD13	2.17	0.44
25:MM:43:ASP:CB	35:ff:129:GLY:HA2	2.47	0.44
26:PP:49:LEU:HD12	26:PP:49:LEU:H	1.83	0.44
26:PP:87:PRO:HD3	26:PP:112:ILE:HG23	1.99	0.44
26:PP:89:MET:CE	26:PP:92:SER:HB3	2.46	0.44
27:QQ:132:PHE:CE2	31:UU:76:THR:HA	2.53	0.44
32:ZZ:88:LEU:HD12	32:ZZ:109:TYR:CG	2.52	0.44
36:gg:8:ARG:HB3	36:gg:309:VAL:CG2	2.47	0.44
36:gg:79:LEU:CD2	36:gg:120:ILE:HD13	2.48	0.44
37:A:38:HIS:O	37:A:92:LYS:HE3	2.17	0.44
38:B:204:GLN:OE1	38:B:206:PRO:HD3	2.18	0.44
39:C:33:ARG:O	39:C:36:ILE:HG13	2.17	0.44
39:C:147:VAL:O	76:r:73:PRO:HG2	2.18	0.44
39:C:177:TRP:HA	39:C:180:ILE:HG22	1.99	0.44
40:D:122:GLN:HE21	40:D:126:THR:H	1.65	0.44
41:E:76:ALA:HB1	61:b:117:ARG:HG2	1.99	0.44
41:E:179:THR:OG1	41:E:189:LEU:HA	2.17	0.44
43:G:170:ARG:HG2	43:G:174:LYS:HE3	1.99	0.44
45:I:60:LEU:HD23	45:I:127:ALA:O	2.17	0.44
48:M:32:ASP:HA	53:S:145:PHE:HE2	1.82	0.44
48:M:132:ARG:HH22	79:5:4895:C:H1'	1.81	0.44
50:O:89:PRO:O	50:O:92:THR:HG22	2.18	0.44
54:T:42:ILE:HD11	54:T:74:ILE:HG21	2.00	0.44
54:T:92:ARG:HB3	54:T:95:HIS:CE1	2.53	0.44
60:a:76:ASP:OD2	60:a:114:LYS:HB3	2.17	0.44
64:e:22:ARG:HB2	64:e:34:ASN:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:f:19:ARG:HD3	79:5:1886:G:P	2.57	0.44
67:h:19:LYS:HA	67:h:22:ASP:OD2	2.17	0.44
67:h:63:GLN:HA	67:h:66:LYS:NZ	2.33	0.44
71:l:20:ASN:HD21	71:l:42:ARG:HB3	1.82	0.44
72:m:54:PRO:HA	72:m:57:ARG:NH1	2.33	0.44
77:s:10:LYS:HG2	79:5:1960:A:H1'	1.99	0.44
77:s:51:ALA:HA	77:s:90:PHE:O	2.17	0.44
78:t:27:ALA:O	78:t:30:PRO:HD2	2.18	0.44
79:5:122:U:H2'	79:5:123:C:C6	2.51	0.44
79:5:738:C:OP1	79:5:739:G:H4'	2.17	0.44
79:5:1085:C:H2'	79:5:1086:C:C6	2.52	0.44
79:5:1688:G:H2'	79:5:1689:G:H8	1.81	0.44
79:5:3599:A:H2'	79:5:3600:G:C8	2.52	0.44
79:5:3604:A:H2'	79:5:3605:C:N1	2.32	0.44
79:5:3733:A:H2'	79:5:3734:U:O4'	2.18	0.44
79:5:3801:U:H1'	79:5:4497:U:C4'	2.47	0.44
79:5:4180:G:H2'	79:5:4181:U:C6	2.52	0.44
79:5:4499:G:H2'	79:5:4500:U:C4'	2.47	0.44
79:5:4708:A:H3'	79:5:4709:U:C5'	2.46	0.44
79:5:4974:C:H1'	79:5:4985:U:O2	2.18	0.44
1:R:90:PRO:HG2	1:R:93:VAL:HG23	1.99	0.44
2:W:43:LYS:HD2	2:W:43:LYS:O	2.17	0.44
3:9:92:A:O2'	7:EE:4:GLY:HA3	2.17	0.44
3:9:439:A:H2'	3:9:440:G:C8	2.52	0.44
3:9:668:A:H4'	3:9:1197:G:O2'	2.17	0.44
3:9:679:A:H1'	3:9:1027:A:N6	2.32	0.44
3:9:1064:C:OP1	14:OO:149:ARG:HA	2.17	0.44
3:9:1383:A:O3'	22:DD:156:LEU:HD13	2.16	0.44
3:9:1439:A:H2'	3:9:1440:C:C6	2.53	0.44
3:9:1737:G:H2'	3:9:1738:C:H6	1.82	0.44
3:9:1801:A:H2'	3:9:1802:C:C6	2.52	0.44
3:9:1868:U:OP1	19:aa:38:LYS:HA	2.17	0.44
5:BB:172:MET:SD	5:BB:173:THR:HG23	2.57	0.44
8:GG:44:GLU:O	8:GG:119:LYS:HD2	2.17	0.44
11:JJ:86:VAL:HG13	11:JJ:104:ASP:CG	2.42	0.44
14:OO:83:GLN:HB3	14:OO:84:ARG:NH2	2.33	0.44
19:aa:43:ASN:HD21	19:aa:64:LEU:HD12	1.81	0.44
22:DD:26:THR:O	22:DD:30:ALA:HB2	2.17	0.44
23:FF:28:VAL:HG21	23:FF:109:LEU:CB	2.47	0.44
23:FF:122:ARG:HG2	33:cc:59:LEU:HG	1.99	0.44
23:FF:145:ARG:HG2	33:cc:49:PRO:HD2	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:MM:60:MET:HB3	35:ff:103:LEU:CD1	2.47	0.44
30:TT:96:SER:HB2	30:TT:99:VAL:CG2	2.45	0.44
30:TT:123:LEU:HD23	30:TT:123:LEU:H	1.82	0.44
31:UU:32:LEU:CD2	31:UU:87:ARG:HG2	2.47	0.44
33:cc:29:GLN:OE1	33:cc:43:ILE:HG22	2.17	0.44
36:gg:165:ILE:CG2	36:gg:179:LEU:HD21	2.47	0.44
36:gg:250:ALA:C	36:gg:289:LEU:HD21	2.43	0.44
39:C:303:ARG:HG2	52:Q:38:ARG:O	2.17	0.44
40:D:36:LEU:HD23	40:D:145:TYR:CE2	2.52	0.44
42:F:36:PHE:CD2	42:F:40:MET:HE1	2.52	0.44
42:F:108:LEU:HD21	42:F:135:VAL:HG11	2.00	0.44
42:F:145:ASN:O	42:F:149:VAL:HG12	2.17	0.44
42:F:212:LEU:HD11	42:F:247:ASN:HA	1.99	0.44
43:G:222:PHE:HZ	49:N:3:ALA:HB1	1.81	0.44
44:H:47:LEU:HG	44:H:52:LYS:CE	2.47	0.44
44:H:63:ASN:O	44:H:67:LEU:HD23	2.17	0.44
45:I:8:CYS:HB3	79:5:1866:U:C4'	2.47	0.44
45:I:147:HIS:O	45:I:150:GLU:HG2	2.17	0.44
46:J:20:LEU:HB3	46:J:74:VAL:HG13	1.98	0.44
47:L:31:ARG:HA	47:L:34:ARG:NH1	2.32	0.44
51:P:18:ARG:CA	51:P:94:MET:HE1	2.43	0.44
52:Q:181:ARG:NH1	60:a:56:VAL:HG11	2.32	0.44
54:T:106:LEU:O	54:T:110:LYS:HG2	2.18	0.44
55:U:20:LYS:HE2	55:U:22:THR:CG2	2.47	0.44
60:a:85:GLN:HE22	79:5:508:G:H21	1.64	0.44
61:b:39:PHE:O	61:b:43:MET:HG2	2.16	0.44
62:c:99:PRO:HB3	62:c:104:ILE:HG22	1.99	0.44
65:f:33:VAL:HG21	65:f:39:THR:HG22	1.97	0.44
65:f:48:ALA:HB2	65:f:71:TRP:CZ3	2.52	0.44
66:g:22:LEU:HD11	66:g:30:ILE:HG23	2.00	0.44
70:k:32:VAL:HG11	70:k:53:ALA:HB1	1.98	0.44
74:o:74:GLU:HG2	74:o:76:ASN:H	1.83	0.44
76:r:35:ARG:HD2	76:r:37:SER:HB2	1.98	0.44
76:r:38:PHE:HA	76:r:41:ASN:ND2	2.31	0.44
76:r:93:ILE:O	76:r:97:ILE:HG13	2.17	0.44
79:5:709:C:H1'	79:5:4942:C:C5	2.52	0.44
79:5:714:G:O2'	79:5:715:G:H5'	2.17	0.44
79:5:732:A:H2'	79:5:733:A:O4'	2.17	0.44
79:5:1285:U:H2'	79:5:1286:C:C6	2.52	0.44
79:5:1881:C:H5'	79:5:2281:U:H1'	2.00	0.44
79:5:2366:A:H1'	79:5:3850:C:O2'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:2393:C:H2'	79:5:2394:G:H5'	1.99	0.44
79:5:2614:C:O3'	79:5:2808:G:H5''	2.18	0.44
79:5:3708:C:H2'	79:5:3709:U:O2	2.18	0.44
79:5:4253:A:H5'	79:5:4254:G:C8	2.52	0.44
79:5:4922:C:H2'	79:5:4923:C:C6	2.52	0.44
81:8:42:G:H2'	81:8:43:A:H8	1.82	0.44
81:8:54:C:H2'	81:8:55:U:O4'	2.17	0.44
81:8:137:A:OP1	81:8:137:A:H3'	2.17	0.44
2:W:42:SER:O	2:W:43:LYS:HE3	2.18	0.44
3:9:378:U:C2'	3:9:379:C:H5'	2.48	0.44
3:9:430:C:H2'	3:9:431:G:C8	2.52	0.44
3:9:445:A:H4'	10:II:50:GLY:C	2.43	0.44
3:9:520:A:OP1	11:JJ:11:LYS:HA	2.18	0.44
3:9:1010:G:H2'	3:9:1011:A:C8	2.52	0.44
3:9:1327:G:H2'	3:9:1328:G:C8	2.53	0.44
3:9:1328:G:H2'	3:9:1329:U:O4'	2.17	0.44
3:9:1445:U:H1'	3:9:1580:A:N6	2.32	0.44
3:9:1679:A:C2	23:FF:60:ARG:HA	2.52	0.44
3:9:1858:G:H2'	3:9:1859:A:C8	2.53	0.44
4:AA:173:LEU:HD23	4:AA:174:MET:SD	2.57	0.44
5:BB:35:ALA:HB2	5:BB:44:ILE:HD11	1.98	0.44
5:BB:206:PRO:O	5:BB:207:LEU:HD23	2.16	0.44
6:CC:195:LEU:HD23	6:CC:243:ALA:HB1	2.00	0.44
7:EE:45:ILE:CD1	7:EE:80:ILE:HB	2.48	0.44
10:II:31:ARG:CD	10:II:46:VAL:HG11	2.47	0.44
10:II:37:LYS:HB3	10:II:94:LYS:CE	2.48	0.44
14:OO:96:LYS:HB3	14:OO:132:VAL:HG11	1.99	0.44
18:YY:83:LYS:HA	18:YY:91:LEU:CD1	2.48	0.44
23:FF:76:MET:HE2	23:FF:169:ILE:CG2	2.48	0.44
25:MM:16:THR:O	25:MM:20:GLU:HG2	2.17	0.44
25:MM:64:LEU:HD21	35:ff:106:TYR:HD2	1.82	0.44
28:RR:73:LEU:HD23	28:RR:73:LEU:H	1.83	0.44
29:SS:74:PRO:CA	29:SS:79:ILE:HD12	2.46	0.44
31:UU:40:ILE:O	31:UU:44:LYS:HD3	2.18	0.44
31:UU:79:ARG:HE	34:dd:54:LYS:HE2	1.82	0.44
36:gg:42:MET:CG	36:gg:57:ARG:HB2	2.47	0.44
36:gg:255:SER:HB3	36:gg:271:LYS:HD3	1.98	0.44
38:B:47:LEU:HD13	38:B:48:GLY:N	2.32	0.44
38:B:252:ALA:HB3	79:5:4457:U:H1'	1.99	0.44
38:B:314:ILE:HG21	38:B:330:PHE:CZ	2.52	0.44
42:F:100:VAL:CG2	42:F:105:ARG:HB3	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:F:221:LYS:HD3	42:F:229:GLY:O	2.17	0.44
43:G:84:LEU:O	43:G:86:GLU:HG2	2.17	0.44
44:H:16:VAL:HG13	44:H:28:LYS:O	2.18	0.44
44:H:41:ILE:HD12	44:H:42:ASN:N	2.33	0.44
44:H:165:THR:HG21	44:H:179:ILE:H	1.82	0.44
44:H:180:TYR:HB3	72:m:63:TYR:CD2	2.53	0.44
47:L:63:THR:HG23	47:L:65:ARG:N	2.30	0.44
48:M:44:ARG:CG	79:5:935:A:H1'	2.47	0.44
49:N:53:TYR:HB2	49:N:133:ILE:HG12	1.99	0.44
49:N:78:GLY:HA3	79:5:3928:A:O2'	2.18	0.44
49:N:156:HIS:CE1	79:5:332:C:H5''	2.53	0.44
50:O:172:LYS:HG3	79:5:4873:G:H22	1.83	0.44
53:S:30:MET:HE3	53:S:47:PHE:CZ	2.52	0.44
53:S:69:GLU:HG2	53:S:72:PRO:HA	1.99	0.44
53:S:94:TYR:HB3	79:5:1953:U:OP1	2.18	0.44
53:S:164:LYS:HB3	53:S:164:LYS:HE3	1.75	0.44
57:X:81:LEU:CD1	57:X:135:LYS:HE2	2.48	0.44
60:a:127:LYS:HG2	60:a:147:VAL:O	2.18	0.44
63:d:33:ILE:O	63:d:36:VAL:HG12	2.17	0.44
64:e:108:ARG:HD2	64:e:128:ARG:CG	2.48	0.44
64:e:108:ARG:O	64:e:111:ILE:HG13	2.17	0.44
72:m:53:GLU:CB	72:m:56:LEU:HD23	2.47	0.44
74:o:57:ARG:NH1	79:5:3924:C:H4'	2.29	0.44
75:p:29:ILE:HD11	75:p:69:TRP:CG	2.52	0.44
78:t:35:LEU:HD23	78:t:64:ILE:HG21	1.98	0.44
78:t:80:LEU:HB2	78:t:112:ILE:HG12	1.99	0.44
79:5:3:C:H2'	79:5:4:G:C8	2.52	0.44
79:5:307:A:H2'	79:5:308:G:C8	2.52	0.44
79:5:364:G:N2	79:5:375:G:H2'	2.33	0.44
79:5:1198:G:H2'	79:5:1199:G:C8	2.52	0.44
79:5:1343:A:H2'	79:5:1344:C:C6	2.52	0.44
79:5:1427:A:O4'	79:5:1694:C:H5'	2.18	0.44
79:5:1750:G:N2	79:5:1780:A:N1	2.59	0.44
79:5:2385:U:H2'	79:5:2386:U:H6	1.83	0.44
79:5:2745:A:H2'	79:5:2746:A:C8	2.52	0.44
79:5:3607:U:H2'	79:5:3608:A:C8	2.52	0.44
79:5:4191:G:H2'	79:5:4192:A:C8	2.53	0.44
79:5:4527:G:H1'	79:5:4528:G:N7	2.32	0.44
79:5:4703:U:O2'	79:5:4704:C:H5'	2.18	0.44
80:7:66:G:O6	80:7:109:U:O2	2.35	0.44
3:9:159:A:O2'	3:9:160:U:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:443:U:H3'	3:9:444:G:H8	1.83	0.44
3:9:1139:C:H1'	16:WW:20:ARG:NH2	2.31	0.44
3:9:1597:C:H5''	29:SS:24:ARG:HH22	1.82	0.44
3:9:1617:G:O6	26:PP:43:ARG:HD3	2.17	0.44
4:AA:41:ARG:CZ	4:AA:45:GLY:HA2	2.48	0.44
5:BB:125:VAL:O	5:BB:136:ARG:HA	2.17	0.44
6:CC:130:ILE:HD11	6:CC:155:ILE:HG12	1.99	0.44
6:CC:163:VAL:HG12	15:VV:27:LYS:CD	2.47	0.44
13:NN:130:LYS:HE3	13:NN:136:PRO:O	2.18	0.44
15:VV:40:ASP:HB2	15:VV:47:ASN:HD21	1.82	0.44
18:YY:111:LYS:O	18:YY:115:LYS:HG2	2.17	0.44
22:DD:18:LYS:HD2	34:dd:50:ILE:O	2.17	0.44
22:DD:137:VAL:HG13	22:DD:150:MET:O	2.17	0.44
25:MM:76:LEU:HD13	25:MM:78:LYS:NZ	2.32	0.44
28:RR:93:GLN:HB2	28:RR:96:ILE:CG1	2.47	0.44
32:ZZ:57:LYS:HE2	32:ZZ:61:GLU:OE2	2.18	0.44
37:A:109:GLU:OE2	37:A:139:HIS:HB2	2.17	0.44
38:B:44:THR:O	38:B:349:LYS:HG3	2.17	0.44
38:B:76:VAL:HG13	38:B:333:LEU:O	2.18	0.44
39:C:109:ARG:HD2	39:C:111:TRP:CZ3	2.53	0.44
39:C:207:PRO:HB3	39:C:249:PHE:CD2	2.53	0.44
39:C:306:ARG:NH2	79:5:2099:C:H5''	2.33	0.44
39:C:337:ARG:NH2	79:5:1235:G:H5''	2.32	0.44
40:D:41:LYS:HD2	54:T:93:ILE:HG12	1.99	0.44
41:E:53:VAL:HG12	41:E:56:ILE:HD11	1.99	0.44
41:E:176:LEU:HD23	41:E:194:GLN:CG	2.47	0.44
42:F:220:LYS:HE2	42:F:229:GLY:C	2.42	0.44
46:J:16:ARG:HE	46:J:17:ILE:H	1.64	0.44
46:J:35:ARG:CG	46:J:123:ILE:HA	2.47	0.44
47:L:129:ARG:HG2	67:h:117:ARG:CZ	2.47	0.44
48:M:23:LYS:HD3	48:M:43:THR:O	2.17	0.44
49:N:21:PHE:O	49:N:25:VAL:HG12	2.18	0.44
49:N:103:GLU:HB3	49:N:160:GLU:HB2	2.00	0.44
51:P:121:LYS:HE3	79:5:422:C:O2'	2.18	0.44
52:Q:25:LEU:O	52:Q:29:VAL:HG12	2.18	0.44
53:S:29:ARG:HH22	54:T:150:LEU:HB2	1.81	0.44
53:S:116:ARG:O	79:5:2034:G:H1'	2.16	0.44
54:T:54:HIS:HB3	54:T:57:TYR:CE2	2.52	0.44
56:V:74:LYS:NZ	79:5:3798:U:H5''	2.32	0.44
58:Y:22:PRO:HB2	81:8:90:C:O2'	2.18	0.44
58:Y:109:LEU:HB3	58:Y:111:LEU:HD22	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:a:22:ILE:HD12	79:5:1319:U:OP1	2.17	0.44
62:c:90:ARG:HH22	75:p:44:LYS:HA	1.83	0.44
74:o:22:LYS:HD3	74:o:71:GLU:CG	2.47	0.44
79:5:7:C:H2'	79:5:8:U:C6	2.53	0.44
79:5:11:G:H2'	79:5:12:A:O4'	2.18	0.44
79:5:364:G:H22	79:5:375:G:H2'	1.83	0.44
79:5:408:A:H4'	79:5:409:G:H3'	1.98	0.44
79:5:504:G:H2'	79:5:505:G:C8	2.53	0.44
79:5:959:G:H4'	79:5:960:A:O5'	2.17	0.44
79:5:1203:G:H2'	79:5:1204:C:O4'	2.18	0.44
79:5:1339:U:H2'	79:5:1340:C:C6	2.52	0.44
79:5:1343:A:O2'	79:5:1344:C:H5'	2.18	0.44
79:5:2095:A:H2'	79:5:2096:G:C8	2.53	0.44
79:5:2895:A:O2'	79:5:2896:G:H5'	2.17	0.44
79:5:3633:C:H2'	79:5:3634:G:C8	2.53	0.44
79:5:3744:G:H2'	79:5:3745:U:O4'	2.18	0.44
81:8:124:U:H4'	81:8:125:C:O5'	2.17	0.44
1:R:44:LEU:CD2	1:R:49:LEU:HD12	2.48	0.44
2:W:60:LYS:HB2	2:W:60:LYS:HE2	1.73	0.44
3:9:64:A:H2	3:9:83:A:H62	1.64	0.44
3:9:439:A:H4'	3:9:1799:G:C4'	2.46	0.44
3:9:523:A:H5'	11:JJ:38:ARG:NH2	2.26	0.44
3:9:540:U:H1'	3:9:544:G:O6	2.18	0.44
3:9:804:U:H4'	16:WW:122:GLY:C	2.43	0.44
3:9:989:C:H1'	19:aa:32:LYS:HZ1	1.83	0.44
3:9:1188:A:H2'	3:9:1189:A:O4'	2.17	0.44
3:9:1254:C:H4'	31:UU:75:LYS:HE3	1.99	0.44
3:9:1288:U:OP1	3:9:1316:C:H1'	2.17	0.44
3:9:1371:U:H4'	3:9:1372:U:H5	1.82	0.44
3:9:1378:A:C4	4:AA:105:PRO:HB2	2.53	0.44
3:9:1563:G:H5''	30:TT:121:ARG:HE	1.82	0.44
3:9:1836:G:H4'	3:9:1837:G:N9	2.33	0.44
6:CC:124:PHE:O	6:CC:143:CYS:HA	2.18	0.44
6:CC:257:LYS:HE2	15:VV:1:MET:HE1	2.00	0.44
9:HH:129:ILE:HA	9:HH:132:ASP:OD2	2.17	0.44
9:HH:177:TYR:CZ	9:HH:181:THR:HG21	2.53	0.44
11:JJ:35:TYR:HB2	11:JJ:37:LEU:CD2	2.47	0.44
11:JJ:136:ARG:CD	11:JJ:139:LYS:HA	2.48	0.44
13:NN:87:ASP:O	13:NN:91:LEU:HG	2.18	0.44
13:NN:96:VAL:HG22	13:NN:146:ALA:HB1	1.99	0.44
15:VV:74:LYS:NZ	15:VV:81:LYS:HA	2.30	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:YY:36:PRO:O	18:YY:40:ILE:HG13	2.18	0.44
18:YY:41:ARG:HH21	18:YY:53:ASP:HA	1.82	0.44
19:aa:25:ASN:HB3	19:aa:77:CYS:SG	2.56	0.44
20:bb:51:GLN:C	20:bb:66:PRO:HB3	2.43	0.44
24:KK:43:LEU:HA	24:KK:46:MET:SD	2.58	0.44
26:PP:81:ARG:HD2	26:PP:97:TYR:O	2.18	0.44
29:SS:86:ARG:HD2	29:SS:89:ASP:HB2	1.98	0.44
30:TT:57:ALA:HA	30:TT:103:VAL:HG11	1.99	0.44
34:dd:21:CYS:HB3	34:dd:25:SER:H	1.82	0.44
36:gg:31:ILE:CG2	36:gg:43:TRP:HB2	2.47	0.44
39:C:242:PRO:HB2	79:5:2297:G:H4'	1.99	0.44
39:C:312:ARG:CG	79:5:2274:C:H5'	2.44	0.44
39:C:322:LEU:O	39:C:326:LEU:HD23	2.18	0.44
40:D:10:LYS:HB3	40:D:14:LYS:NZ	2.33	0.44
40:D:59:ASP:OD1	40:D:80:ALA:HB3	2.18	0.44
42:F:71:ALA:O	42:F:75:ARG:HG3	2.18	0.44
42:F:239:ILE:HD12	42:F:240:ASN:H	1.82	0.44
43:G:207:LEU:HD21	43:G:275:ILE:CD1	2.48	0.44
44:H:7:ASN:HB2	44:H:56:ARG:HD3	2.00	0.44
45:I:66:GLU:HA	45:I:69:ARG:HG2	1.99	0.44
46:J:15:LEU:CB	46:J:134:LEU:HD11	2.48	0.44
47:L:39:ARG:NH2	79:5:1362:G:H5''	2.33	0.44
49:N:7:ILE:HA	49:N:10:LEU:CD2	2.47	0.44
49:N:121:VAL:HG11	49:N:131:GLU:HG2	1.99	0.44
50:O:174:LEU:HA	50:O:177:LEU:HG	1.99	0.44
52:Q:50:ARG:CB	52:Q:83:VAL:HG21	2.48	0.44
58:Y:4:ASN:OD1	58:Y:7:VAL:HG23	2.17	0.44
59:Z:99:ASP:O	59:Z:102:ARG:HG3	2.18	0.44
61:b:31:SER:CA	79:5:1463:C:H5''	2.48	0.44
64:e:87:VAL:HG13	64:e:88:LEU:CD1	2.45	0.44
66:g:44:SER:HA	66:g:53:LEU:HD21	1.98	0.44
67:h:89:ARG:HH22	81:8:37:A:H2	1.64	0.44
68:i:73:ILE:O	68:i:77:VAL:HG22	2.17	0.44
70:k:41:TYR:HB2	70:k:43:TYR:CZ	2.52	0.44
71:l:9:ILE:O	71:l:13:LEU:HG	2.17	0.44
72:m:99:LYS:HG3	79:5:4474:A:H5'	2.00	0.44
74:o:84:ALA:O	74:o:85:ILE:HD13	2.18	0.44
75:p:60:CYS:SG	75:p:62:LYS:HB2	2.58	0.44
76:r:8:MET:HA	76:r:11:ARG:HD2	1.99	0.44
77:s:59:THR:HB	77:s:60:MET:HE3	1.98	0.44
79:5:1667:G:N2	79:5:2281:U:C4	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:1850:A:H2'	79:5:1851:G:C8	2.52	0.44
79:5:1895:G:H2'	79:5:1896:A:O4'	2.18	0.44
79:5:2639:U:H2'	79:5:2694:G:H1	1.83	0.44
79:5:2793:G:C5'	79:5:2794:C:H5''	2.47	0.44
79:5:3853:U:H2'	79:5:3854:C:C6	2.53	0.44
79:5:3876:A:C2	79:5:4445:U:H5''	2.52	0.44
79:5:4631:G:O2'	79:5:4632:U:H5'	2.18	0.44
79:5:4710:C:H2'	79:5:4711:C:H6	1.83	0.44
79:5:4749:C:H2'	79:5:4750:G:C4	2.53	0.44
79:5:4948:C:H2'	79:5:4949:G:N2	2.33	0.44
81:8:49:G:H2'	81:8:50:C:C6	2.53	0.44
81:8:57:C:H4'	81:8:63:U:C4	2.52	0.44
81:8:153:C:H2'	81:8:154:G:C8	2.51	0.44
1:R:145:LEU:O	1:R:149:LYS:HG3	2.17	0.44
2:W:5:LEU:CD2	2:W:12:LYS:HD3	2.48	0.44
3:9:43:U:H2'	3:9:44:U:H5	1.83	0.44
3:9:67:C:C5	8:GG:162:LEU:HB3	2.52	0.44
3:9:90:G:H2'	3:9:91:A:O4'	2.18	0.44
3:9:166:A:H5'	8:GG:112:VAL:CG2	2.48	0.44
3:9:457:C:H2'	3:9:458:A:H8	1.83	0.44
3:9:492:C:OP2	18:YY:104:ARG:HB2	2.17	0.44
3:9:1021:U:H4'	3:9:1022:U:O4'	2.18	0.44
3:9:1461:G:H3'	3:9:1463:U:H3	1.83	0.44
4:AA:63:ARG:HB2	15:VV:36:VAL:HG23	1.99	0.44
4:AA:78:SER:HB2	4:AA:87:VAL:HG11	1.98	0.44
7:EE:59:ASP:O	7:EE:63:LYS:HG3	2.18	0.44
8:GG:44:GLU:HA	8:GG:119:LYS:HZ2	1.82	0.44
10:II:81:VAL:HG22	10:II:102:VAL:CG1	2.40	0.44
12:LL:61:PRO:HA	12:LL:66:VAL:CG2	2.48	0.44
13:NN:114:ARG:O	13:NN:118:ILE:HG13	2.17	0.44
26:PP:119:PHE:HA	29:SS:118:ARG:O	2.17	0.44
27:QQ:14:GLY:HA2	27:QQ:15:ARG:NH1	2.33	0.44
27:QQ:106:LYS:CE	36:gg:55:PRO:HG2	2.48	0.44
29:SS:5:ILE:HB	32:ZZ:52:LYS:NZ	2.33	0.44
33:cc:17:VAL:HG22	33:cc:30:VAL:CG2	2.48	0.44
36:gg:47:ARG:HG2	36:gg:52:TYR:CE1	2.53	0.44
37:A:92:LYS:HE3	37:A:92:LYS:HB3	1.77	0.44
39:C:239:LYS:HE3	79:5:1370:G:O6	2.18	0.44
39:C:347:HIS:O	39:C:351:VAL:HG23	2.16	0.44
41:E:221:LYS:HD3	41:E:222:LYS:N	2.32	0.44
42:F:158:TYR:HD1	42:F:158:TYR:HA	1.73	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:F:241:ARG:O	42:F:245:ARG:HG2	2.17	0.44
44:H:48:LEU:HG	44:H:54:ARG:HD3	1.99	0.44
45:I:85:PHE:CE1	45:I:87:ILE:HD11	2.52	0.44
46:J:51:SER:HB2	46:J:71:HIS:CE1	2.53	0.44
47:L:29:PRO:O	47:L:33:ILE:HG12	2.18	0.44
47:L:178:ALA:HB1	60:a:146:LEU:HD21	1.99	0.44
48:M:5:ARG:HB3	48:M:57:LEU:HD23	2.00	0.44
49:N:54:LYS:HG2	49:N:56:LYS:HE3	1.99	0.44
49:N:58:GLY:O	49:N:135:ILE:HD13	2.17	0.44
52:Q:89:ASP:O	52:Q:92:VAL:HG22	2.17	0.44
55:U:63:LEU:HD13	55:U:72:VAL:HB	1.99	0.44
56:V:69:LYS:HB3	56:V:72:LEU:CG	2.41	0.44
56:V:89:ARG:HD3	56:V:95:PHE:CE1	2.52	0.44
60:a:83:SER:OG	60:a:86:THR:HG23	2.18	0.44
61:b:117:ARG:NH1	79:5:1272:C:H5''	2.33	0.44
63:d:50:ARG:HG2	63:d:62:VAL:HB	2.00	0.44
64:e:5:ARG:HH22	79:5:703:G:H4'	1.83	0.44
67:h:82:ASP:HA	67:h:86:LYS:HZ1	1.82	0.44
69:j:75:ARG:HH12	79:5:344:A:H5'	1.83	0.44
77:s:55:MET:HB2	77:s:55:MET:HE2	1.50	0.44
79:5:93:G:H2'	79:5:94:A:C8	2.53	0.44
79:5:705:G:H2'	79:5:706:C:C6	2.53	0.44
79:5:709:C:O2'	79:5:710:G:H5'	2.17	0.44
79:5:1237:C:H5'	79:5:1238:A:OP1	2.18	0.44
79:5:1305:C:H2'	79:5:1306:C:H6	1.81	0.44
79:5:1541:C:H2'	79:5:1542:U:C6	2.53	0.44
79:5:1942:A:H2'	79:5:1943:A:C8	2.52	0.44
79:5:2020:U:O2'	79:5:2021:G:H5'	2.17	0.44
79:5:2317:C:H2'	79:5:2318:G:C8	2.53	0.44
79:5:2518:G:H1'	79:5:2539:C:H1'	2.00	0.44
79:5:2534:C:O2'	79:5:2535:G:H5'	2.18	0.44
79:5:3787:G:H1'	79:5:3789:C:N4	2.32	0.44
79:5:3870:C:H2'	79:5:3871:A:C8	2.49	0.44
79:5:4201:G:O2'	79:5:4202:U:H5'	2.17	0.44
79:5:4442:U:H2'	79:5:4443:C:O4'	2.18	0.44
79:5:4757:C:C4'	79:5:4758:U:H5'	2.46	0.44
1:R:82:LYS:HE3	79:5:2863:G:H1'	2.00	0.44
1:R:136:ARG:O	1:R:140:GLU:HG3	2.17	0.44
2:W:26:GLY:O	2:W:27:LYS:HG2	2.18	0.44
3:9:53:C:H4'	18:YY:108:LYS:HD3	2.00	0.44
3:9:354:U:H5''	12:LL:92:TYR:CE2	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:468:A:H2'	3:9:469:A:C8	2.52	0.44
3:9:590:A:H5'	3:9:591:U:OP1	2.18	0.44
3:9:658:U:H1'	17:XX:17:ARG:NH1	2.33	0.44
3:9:1259:A:H1'	3:9:1264:C:N4	2.33	0.44
3:9:1286:G:O6	25:MM:36:ARG:HB3	2.17	0.44
3:9:1330:G:H4'	3:9:1331:C:H5''	2.00	0.44
4:AA:124:VAL:HG23	4:AA:130:ASP:HB3	1.99	0.44
5:BB:202:GLN:OE1	5:BB:206:PRO:HA	2.18	0.44
7:EE:65:CYS:HA	7:EE:70:ILE:HD12	1.99	0.44
8:GG:76:LEU:HG	8:GG:94:ARG:CZ	2.47	0.44
8:GG:221:LYS:HA	8:GG:224:ARG:HD3	1.99	0.44
9:HH:31:GLU:HA	9:HH:40:LEU:HD23	2.00	0.44
11:JJ:84:ILE:CD1	11:JJ:148:ILE:HD13	2.47	0.44
14:OO:67:ASP:HB2	14:OO:70:SER:HB2	2.00	0.44
16:WW:23:ARG:NH2	20:bb:5:LYS:HB3	2.32	0.44
24:KK:7:ASN:CG	24:KK:40:VAL:HG12	2.43	0.44
26:PP:111:MET:HE1	29:SS:117:ILE:HG22	1.99	0.44
30:TT:34:VAL:HG13	30:TT:52:TRP:CZ2	2.52	0.44
33:cc:21:THR:HG22	33:cc:68:LEU:CD1	2.48	0.44
36:gg:109:LEU:HD12	36:gg:151:VAL:C	2.42	0.44
38:B:284:ILE:HA	38:B:333:LEU:HD13	2.00	0.44
38:B:356:LYS:HG3	38:B:358:ARG:HG2	2.00	0.44
39:C:284:MET:HE3	39:C:285:LEU:N	2.33	0.44
40:D:86:TYR:CE1	40:D:247:ILE:HD13	2.53	0.44
42:F:66:THR:O	42:F:70:MET:HG2	2.17	0.44
42:F:211:LYS:HE3	79:5:2073:C:OP1	2.18	0.44
44:H:4:ILE:HG12	53:S:144:GLN:HG3	2.00	0.44
44:H:65:LYS:O	44:H:69:THR:HG23	2.18	0.44
44:H:111:LEU:HD12	44:H:127:ARG:NH2	2.28	0.44
44:H:162:GLN:CD	44:H:180:TYR:HA	2.42	0.44
46:J:96:LYS:HD3	46:J:174:ILE:HD11	1.99	0.44
48:M:3:PHE:CE2	53:S:155:PRO:HA	2.53	0.44
48:M:100:ARG:HD3	50:O:198:THR:O	2.18	0.44
50:O:127:VAL:HG23	53:S:159:LEU:H	1.83	0.44
51:P:92:LEU:HD12	51:P:95:LEU:HD22	1.99	0.44
51:P:132:ALA:CB	79:5:1596:U:H4'	2.47	0.44
54:T:4:THR:CG2	54:T:9:ARG:HG3	2.46	0.44
54:T:54:HIS:NE2	79:5:4301:U:H4'	2.32	0.44
55:U:101:ARG:HD3	55:U:115:PHE:CE1	2.53	0.44
58:Y:4:ASN:HB3	58:Y:7:VAL:HG23	2.00	0.44
58:Y:21:ALA:HB1	58:Y:25:ILE:CG2	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:f:59:THR:HA	79:5:4944:C:H41	1.82	0.44
65:f:74:VAL:HG23	65:f:85:ARG:O	2.18	0.44
73:n:23:ARG:NH2	79:5:3806:G:H5''	2.32	0.44
79:5:23:C:H3'	79:5:24:G:H8	1.83	0.44
79:5:281:U:O4	79:5:306:A:N7	2.50	0.44
79:5:314:G:H5''	79:5:315:G:O5'	2.18	0.44
79:5:462:G:H2'	79:5:463:A:C8	2.52	0.44
79:5:474:C:H2'	79:5:475:G:C8	2.52	0.44
79:5:711:A:H2'	79:5:712:C:C6	2.52	0.44
79:5:904:G:H2'	79:5:905:C:C6	2.53	0.44
79:5:952:G:H2'	79:5:953:C:C6	2.53	0.44
79:5:1456:C:H5'	79:5:1457:G:OP2	2.18	0.44
79:5:1463:C:H2'	79:5:1464:C:H6	1.82	0.44
79:5:1617:G:H1'	79:5:2513:A:N6	2.32	0.44
79:5:1810:G:H2'	79:5:1811:G:H8	1.82	0.44
79:5:2094:C:H3'	79:5:2095:A:H5'	1.99	0.44
79:5:4071:U:H2'	79:5:4072:C:H6	1.83	0.44
79:5:4083:U:O2	79:5:4085:A:H1'	2.17	0.44
79:5:4270:C:H1'	79:5:4283:G:H5'	2.00	0.44
79:5:4309:G:H2'	79:5:4310:A:C8	2.53	0.44
79:5:4321:U:H2'	79:5:4322:G:C8	2.52	0.44
2:W:90:ILE:HG12	8:GG:145:PHE:CD1	2.53	0.44
3:9:46:A:H4'	3:9:47:G:C5'	2.48	0.44
3:9:375:U:H2'	3:9:376:A:C8	2.53	0.44
3:9:932:G:OP1	5:BB:158:HIS:HB3	2.18	0.44
3:9:940:U:O2'	3:9:941:C:H5'	2.18	0.44
3:9:965:U:H2'	3:9:966:U:O4'	2.18	0.44
3:9:1242:U:H1'	3:9:1517:G:O2'	2.17	0.44
3:9:1301:A:H2'	3:9:1303:C:O2	2.18	0.44
3:9:1370:A:C2	3:9:1372:U:H5'	2.53	0.44
3:9:1440:C:O2'	3:9:1441:U:H5'	2.18	0.44
3:9:1606:G:H5''	30:TT:86:GLY:C	2.43	0.44
4:AA:42:LYS:HB2	4:AA:46:ILE:O	2.18	0.44
4:AA:107:THR:O	4:AA:116:PHE:HA	2.18	0.44
4:AA:127:PRO:HB2	4:AA:153:PRO:HD2	1.98	0.44
5:BB:71:LEU:HD21	5:BB:189:ILE:HG23	1.99	0.44
5:BB:157:GLN:HE21	5:BB:160:GLN:HG3	1.83	0.44
5:BB:171:ILE:HG23	5:BB:196:ASP:OD2	2.18	0.44
6:CC:178:HIS:CE1	6:CC:200:ARG:HG2	2.53	0.44
7:EE:122:LYS:HE2	7:EE:164:LEU:HD11	2.00	0.44
10:II:129:LEU:HD21	10:II:134:GLU:OE1	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:LL:37:TYR:CE1	12:LL:51:ILE:HG23	2.53	0.44
14:OO:21:VAL:HG12	14:OO:25:GLU:HG3	2.00	0.44
14:OO:43:HIS:CD2	14:OO:55:ARG:HD3	2.53	0.44
18:YY:54:VAL:HB	18:YY:76:TYR:HB2	2.00	0.44
21:ee:110:GLN:HG2	21:ee:114:ARG:HE	1.82	0.44
23:FF:179:ASN:HB3	23:FF:187:SER:HB2	1.99	0.44
26:PP:53:GLN:HA	26:PP:83:MET:HE1	2.00	0.44
27:QQ:102:GLU:HG2	27:QQ:106:LYS:HE3	2.00	0.44
32:ZZ:94:LYS:HD3	32:ZZ:96:LEU:HD12	1.99	0.44
36:gg:118:ARG:HD2	36:gg:134:THR:HG23	2.00	0.44
37:A:31:ALA:HB2	37:A:123:ARG:CZ	2.47	0.44
38:B:224:LYS:NZ	38:B:340:THR:HA	2.33	0.44
38:B:239:LYS:HZ3	38:B:249:ARG:HA	1.83	0.44
38:B:249:ARG:NH1	38:B:249:ARG:HB3	2.33	0.44
38:B:352:LEU:HD22	38:B:353:VAL:H	1.83	0.44
39:C:33:ARG:HB3	39:C:36:ILE:HG13	2.00	0.44
39:C:60:HIS:NE2	39:C:100:ARG:HD3	2.33	0.44
39:C:230:LEU:HD11	39:C:239:LYS:HD2	1.99	0.44
40:D:107:ARG:HD3	40:D:248:ARG:HH11	1.83	0.44
43:G:127:LEU:HD11	79:5:4076:G:N1	2.33	0.44
43:G:157:PRO:HA	43:G:188:VAL:CG2	2.48	0.44
43:G:164:LYS:O	43:G:168:LEU:HG	2.18	0.44
43:G:299:SER:HA	43:G:302:ARG:NH1	2.32	0.44
45:I:29:ALA:HB2	45:I:125:THR:HG21	1.99	0.44
48:M:71:LYS:O	48:M:75:LYS:HG3	2.18	0.44
49:N:39:ALA:HA	49:N:63:ARG:HH12	1.82	0.44
52:Q:101:CYS:HA	52:Q:121:LEU:O	2.18	0.44
55:U:47:ILE:HD13	55:U:56:LEU:HA	1.98	0.44
57:X:74:TYR:CE2	67:h:25:LYS:HD3	2.52	0.44
58:Y:37:GLU:OE2	58:Y:38:LEU:HG	2.18	0.44
58:Y:124:LYS:HA	58:Y:127:GLN:HG2	2.00	0.44
62:c:104:ILE:HG23	62:c:105:ILE:HG23	2.00	0.44
64:e:23:HIS:O	64:e:31:ILE:HG21	2.16	0.44
64:e:85:LEU:HD12	64:e:88:LEU:HD23	2.00	0.44
65:f:11:PHE:CD2	65:f:97:ILE:HA	2.53	0.44
65:f:19:ARG:CZ	79:5:1885:G:H5''	2.48	0.44
66:g:97:ILE:HG22	66:g:101:LYS:HE3	2.00	0.44
67:h:99:GLU:HA	67:h:102:LEU:CD1	2.48	0.44
67:h:108:GLN:O	67:h:111:GLU:HG3	2.18	0.44
73:n:7:LYS:HA	73:n:10:MET:HG3	1.99	0.44
75:p:59:SER:HA	79:5:2652:G:H22	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:r:97:ILE:HB	76:r:107:ARG:HG3	1.99	0.44
77:s:28:PHE:HB2	77:s:89:VAL:CG2	2.48	0.44
78:t:75:PRO:HB2	78:t:80:LEU:CD1	2.42	0.44
78:t:114:ARG:HH21	78:t:161:GLU:HG3	1.81	0.44
78:t:123:ARG:CB	78:t:127:GLY:HA3	2.39	0.44
79:5:70:A:H4'	79:5:71:C:O4'	2.17	0.44
79:5:1213:G:C4	79:5:1216:C:H5'	2.53	0.44
79:5:1441:C:H2'	79:5:1442:C:C6	2.52	0.44
79:5:1670:G:H5'	79:5:1671:U:O5'	2.18	0.44
79:5:1800:U:H2'	79:5:1801:A:C8	2.53	0.44
79:5:1984:A:OP2	79:5:1985:G:H5''	2.17	0.44
79:5:1996:C:N4	79:5:2000:G:N2	2.42	0.44
79:5:2052:G:H2'	79:5:2053:C:C6	2.52	0.44
79:5:2458:C:H2'	79:5:2459:G:C8	2.53	0.44
79:5:2879:A:OP1	79:5:2881:A:H1'	2.18	0.44
79:5:3658:C:O2'	79:5:3659:G:H5'	2.17	0.44
79:5:3709:U:H2'	79:5:3710:G:O4'	2.18	0.44
79:5:4881:U:H4'	79:5:4882:U:H6	1.82	0.44
80:7:72:U:H2'	80:7:73:U:O4'	2.18	0.44
81:8:30:U:H2'	81:8:31:G:C8	2.53	0.44
1:R:21:LYS:CE	1:R:55:VAL:HA	2.48	0.43
3:9:166:A:H5'	8:GG:112:VAL:HG21	2.00	0.43
3:9:681:U:H2'	3:9:682:U:C6	2.52	0.43
3:9:949:G:H2'	3:9:950:C:H6	1.82	0.43
3:9:1068:G:H2'	3:9:1069:U:H5	1.83	0.43
3:9:1326:U:H5'	3:9:1494:U:P	2.58	0.43
3:9:1587:G:O2'	30:TT:78:ILE:HA	2.18	0.43
3:9:1605:G:H1'	3:9:1634:A:N6	2.33	0.43
6:CC:74:LYS:HZ3	6:CC:272:HIS:HB3	1.83	0.43
6:CC:166:ARG:HB2	6:CC:248:TYR:CE1	2.53	0.43
7:EE:107:GLY:HA2	7:EE:189:LEU:HG	1.99	0.43
7:EE:163:ASP:HB3	7:EE:166:THR:HG22	1.99	0.43
8:GG:23:LYS:HB3	8:GG:41:LEU:HD22	1.98	0.43
8:GG:76:LEU:HD23	8:GG:94:ARG:HB2	2.00	0.43
13:NN:34:LYS:HG3	13:NN:67:THR:HG21	2.00	0.43
17:XX:51:VAL:HG21	17:XX:94:ILE:CD1	2.41	0.43
19:aa:36:ILE:O	19:aa:72:HIS:HA	2.18	0.43
22:DD:24:PHE:CZ	22:DD:72:VAL:HG11	2.53	0.43
22:DD:146:ARG:HG2	22:DD:148:LYS:HZ3	1.81	0.43
25:MM:22:LEU:O	25:MM:26:LEU:HG	2.17	0.43
26:PP:18:ARG:HH11	29:SS:90:VAL:HA	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:QQ:22:VAL:HG11	27:QQ:71:ARG:NH2	2.33	0.43
33:cc:16:LYS:HE3	33:cc:31:ARG:CB	2.47	0.43
35:ff:123:SER:HB3	35:ff:126:CYS:SG	2.58	0.43
36:gg:26:GLN:O	36:gg:28:PRO:HD3	2.18	0.43
36:gg:39:THR:HG22	36:gg:60:ARG:CB	2.48	0.43
36:gg:106:LYS:HD2	36:gg:125:ARG:C	2.43	0.43
37:A:147:ARG:NH1	37:A:147:ARG:HA	2.33	0.43
38:B:91:GLY:HA2	38:B:160:ILE:HD13	2.00	0.43
38:B:256:ALA:HB3	38:B:259:PRO:CD	2.47	0.43
39:C:115:VAL:CG1	39:C:120:LYS:HE3	2.48	0.43
39:C:170:LEU:O	39:C:174:LEU:HG	2.18	0.43
39:C:284:MET:HB3	52:Q:24:TYR:CD1	2.53	0.43
42:F:43:LYS:HE3	42:F:43:LYS:HB3	1.70	0.43
42:F:178:LEU:HD11	42:F:206:PHE:CD2	2.53	0.43
43:G:140:LEU:HD21	43:G:144:THR:CG2	2.48	0.43
44:H:93:ARG:HA	44:H:143:GLU:HA	2.00	0.43
47:L:87:HIS:HD2	47:L:89:LYS:HG2	1.83	0.43
48:M:90:ARG:HA	48:M:93:LYS:CE	2.47	0.43
50:O:60:LYS:HE3	50:O:60:LYS:HB2	1.83	0.43
52:Q:61:LEU:HD11	52:Q:66:MET:HB3	2.00	0.43
53:S:9:GLU:HG3	53:S:67:VAL:CG1	2.44	0.43
54:T:39:ILE:HD13	54:T:102:ARG:CG	2.46	0.43
55:U:92:LYS:HG2	79:5:2626:U:C6	2.53	0.43
57:X:50:LYS:HE3	79:5:2475:G:C2	2.53	0.43
60:a:148:ALA:CB	68:i:15:HIS:HA	2.49	0.43
61:b:51:LYS:NZ	79:5:1400:G:H4'	2.32	0.43
62:c:33:GLN:O	62:c:37:MET:HG2	2.18	0.43
79:5:7:C:O2'	79:5:8:U:H5'	2.18	0.43
79:5:223:G:H4'	79:5:225:G:N7	2.33	0.43
79:5:272:U:H2'	79:5:273:U:C6	2.52	0.43
79:5:287:U:H4'	79:5:4177:C:H5'	1.99	0.43
79:5:405:U:H1'	79:5:410:A:H61	1.83	0.43
79:5:426:A:O2'	79:5:427:A:H5'	2.18	0.43
79:5:1406:G:O2'	79:5:1406(A):G:H5'	2.18	0.43
79:5:1884:C:O2'	79:5:1885:G:H5'	2.18	0.43
79:5:1892:A:H5''	79:5:1893:C:H5	1.83	0.43
79:5:2422:C:H4'	79:5:3857:G:O2'	2.18	0.43
79:5:2487:G:O6	79:5:2489:C:H1'	2.17	0.43
79:5:2489:C:H4'	79:5:2490:U:C5	2.53	0.43
79:5:2715:G:H2'	79:5:2716:C:C6	2.53	0.43
79:5:2844:A:O2'	79:5:4631:G:H4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:4134:C:O2'	79:5:4135:G:H5'	2.17	0.43
79:5:4284:C:O2'	79:5:4285:U:H5'	2.17	0.43
79:5:4589:A:H4'	79:5:4590:A:H4'	2.00	0.43
80:7:19:C:H2'	80:7:20:U:C6	2.52	0.43
1:R:84:THR:HA	79:5:2864:A:O3'	2.18	0.43
3:9:146:G:N1	3:9:173:A:N6	2.44	0.43
3:9:501:C:H2'	3:9:502:C:H5''	2.00	0.43
3:9:642:U:H5''	11:JJ:41:ARG:NH1	2.33	0.43
3:9:668:A:H5''	3:9:1198:G:C4'	2.47	0.43
3:9:812:A:H4'	7:EE:16:LYS:CD	2.48	0.43
3:9:819:G:H2'	3:9:820:U:C6	2.52	0.43
3:9:957:A:O2'	3:9:958:G:H5'	2.18	0.43
3:9:983:A:N3	14:OO:140:THR:HG22	2.33	0.43
3:9:1031:A:H2'	3:9:1032:C:H6	1.83	0.43
3:9:1100:A:O2'	3:9:1101:U:H5'	2.18	0.43
3:9:1320:G:H3'	3:9:1321:G:H8	1.84	0.43
3:9:1461:G:H2'	3:9:1463:U:O2	2.17	0.43
3:9:1676:U:H2'	3:9:1677:U:C6	2.53	0.43
3:9:1679:A:H4'	3:9:1680:G:O5'	2.18	0.43
3:9:1703:C:H3'	3:9:1704:C:C6	2.52	0.43
3:9:1856:C:H2'	3:9:1857:G:H8	1.83	0.43
4:AA:103:PHE:CD2	4:AA:133:PRO:HG3	2.53	0.43
4:AA:118:GLU:CD	6:CC:65:LYS:HB2	2.43	0.43
4:AA:200:ASP:HA	4:AA:203:PHE:CG	2.53	0.43
6:CC:169:TYR:CB	6:CC:173:LYS:HG2	2.47	0.43
10:II:165:GLN:NE2	10:II:171:LEU:HD12	2.26	0.43
11:JJ:32:ILE:CG2	21:ee:107:ARG:HG2	2.45	0.43
11:JJ:102:ILE:HA	11:JJ:105:PHE:CD2	2.53	0.43
12:LL:47:PRO:HG2	12:LL:50:ALA:HB2	2.00	0.43
12:LL:92:TYR:CE2	12:LL:105:ARG:HB3	2.53	0.43
13:NN:142:GLU:HG3	13:NN:144:SER:H	1.83	0.43
16:WW:90:GLN:HB2	16:WW:94:LEU:CG	2.47	0.43
23:FF:112:LEU:HD11	23:FF:177:LEU:HD13	1.99	0.43
23:FF:115:ALA:HB1	23:FF:180:ALA:HB3	1.99	0.43
25:MM:80:ASP:HB2	25:MM:84:LYS:CD	2.44	0.43
29:SS:60:THR:O	29:SS:63:GLU:HG2	2.19	0.43
30:TT:5:THR:O	30:TT:9:VAL:HG23	2.18	0.43
37:A:58:LEU:HD11	37:A:75:LEU:HD12	1.99	0.43
37:A:202:VAL:HG21	79:5:3690:U:P	2.58	0.43
38:B:5:LYS:HD3	79:5:4455:G:OP1	2.18	0.43
38:B:56:ILE:CD1	38:B:365:LEU:HD12	2.42	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:B:340:THR:H	38:B:343:ARG:HD2	1.83	0.43
39:C:209:VAL:HG22	39:C:251:ILE:HB	2.00	0.43
39:C:361:LYS:HE3	39:C:361:LYS:HB3	1.68	0.43
40:D:153:THR:HG21	79:5:4323:A:N1	2.33	0.43
41:E:154:ILE:HG13	41:E:198:ILE:H	1.83	0.43
41:E:168:LEU:HD21	41:E:179:THR:O	2.19	0.43
42:F:114:ARG:HE	52:Q:4:ASP:H	1.65	0.43
42:F:140:ALA:HB1	42:F:235:ARG:NH1	2.33	0.43
43:G:307:GLU:HA	43:G:310:LYS:NZ	2.33	0.43
46:J:94:LEU:HG	46:J:95:ARG:H	1.82	0.43
49:N:7:ILE:HA	49:N:10:LEU:HD21	1.99	0.43
49:N:11:TRP:CH2	49:N:44:ARG:HA	2.53	0.43
49:N:44:ARG:HD2	49:N:119:TYR:CD1	2.53	0.43
51:P:16:LYS:CD	79:5:400:A:H5'	2.42	0.43
51:P:96:LYS:HE3	51:P:96:LYS:HB3	1.73	0.43
52:Q:24:TYR:O	52:Q:28:LEU:HD22	2.19	0.43
52:Q:53:MET:HB2	52:Q:57:ASN:HB2	2.00	0.43
52:Q:180:ARG:CZ	60:a:50:PRO:HG2	2.47	0.43
53:S:29:ARG:NH2	54:T:150:LEU:HB2	2.33	0.43
54:T:23:GLY:HA2	79:5:4279:A:OP1	2.18	0.43
54:T:27:LEU:O	54:T:31:MET:HG3	2.19	0.43
58:Y:59:ARG:HA	58:Y:63:LYS:CD	2.49	0.43
59:Z:12:LEU:HD12	66:g:92:LYS:NZ	2.28	0.43
61:b:90:SER:HB3	61:b:93:LEU:CD1	2.44	0.43
62:c:27:TYR:CD2	62:c:29:LEU:HG	2.54	0.43
63:d:23:ARG:HG2	63:d:88:LEU:O	2.18	0.43
64:e:22:ARG:HD3	64:e:34:ASN:O	2.18	0.43
66:g:85:LYS:H	66:g:85:LYS:HD3	1.83	0.43
67:h:81:LEU:HD23	67:h:84:ARG:HD2	1.99	0.43
69:j:47:TYR:O	69:j:54:LYS:HE3	2.18	0.43
70:k:5:ILE:HG21	70:k:11:PHE:HD1	1.82	0.43
74:o:103:VAL:HG12	74:o:105:GLN:OE1	2.18	0.43
75:p:84:ARG:O	75:p:88:GLU:HG2	2.17	0.43
78:t:11:LYS:HE2	78:t:13:VAL:HB	2.00	0.43
79:5:1444:G:H2'	79:5:1445:U:C5	2.52	0.43
79:5:1883:G:O6	79:5:1897:A:H1'	2.19	0.43
79:5:1898:C:N3	79:5:2279:A:H1'	2.32	0.43
79:5:2078:C:H2'	79:5:2079:G:C8	2.53	0.43
79:5:2348:G:O2'	79:5:2349:A:H5'	2.18	0.43
79:5:2409:U:H2'	79:5:2790:U:C2	2.52	0.43
79:5:2423:A:H2'	79:5:2424:G:O4'	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:2622:G:H5'	79:5:2701:U:O2'	2.17	0.43
79:5:2672:C:O2'	79:5:2676:A:H5''	2.18	0.43
79:5:3662:A:H4'	79:5:3663:A:H5''	2.00	0.43
79:5:4258:C:H2'	79:5:4259:C:C6	2.53	0.43
79:5:4631:G:H2'	79:5:4632:U:C6	2.53	0.43
80:7:8:G:H2'	80:7:9:C:C6	2.53	0.43
81:8:42:G:H2'	81:8:43:A:C8	2.53	0.43
1:R:2:SER:O	1:R:4:LEU:HD22	2.18	0.43
1:R:38:ARG:NH1	79:5:2525:U:H3'	2.33	0.43
2:W:5:LEU:HD22	2:W:10:GLY:O	2.18	0.43
3:9:39:A:H2'	3:9:40:A:O4'	2.17	0.43
3:9:546:G:H2'	3:9:547:G:O4'	2.18	0.43
3:9:619:A:C2	17:XX:113:GLY:HA3	2.52	0.43
3:9:1102:G:O2'	3:9:1103:C:H5'	2.18	0.43
3:9:1173:A:H2'	3:9:1174:U:C6	2.53	0.43
3:9:1181:A:H2'	3:9:1182:A:O4'	2.18	0.43
3:9:1310:U:H2'	3:9:1311:C:C6	2.54	0.43
3:9:1539:U:H2'	3:9:1540:G:C8	2.53	0.43
3:9:1650:A:H4'	27:QQ:138:ARG:HH21	1.82	0.43
3:9:1674:G:H5''	23:FF:86:LYS:CB	2.48	0.43
3:9:1706:G:O2'	3:9:1707:U:H5'	2.18	0.43
5:BB:152:LYS:N	28:RR:132:ARG:HD2	2.33	0.43
6:CC:254:ASP:O	6:CC:257:LYS:HE2	2.18	0.43
8:GG:51:ARG:HB2	8:GG:114:VAL:HG21	2.00	0.43
11:JJ:138:ARG:HG2	11:JJ:156:HIS:CG	2.53	0.43
12:LL:18:GLN:CG	12:LL:33:LEU:HD23	2.48	0.43
12:LL:89:ARG:HA	12:LL:108:ASN:CB	2.48	0.43
17:XX:18:ARG:HB3	17:XX:18:ARG:NH1	2.34	0.43
17:XX:47:ALA:HB1	17:XX:76:LYS:NZ	2.33	0.43
23:FF:71:ARG:NH1	23:FF:147:VAL:HG11	2.33	0.43
24:KK:71:LEU:CD1	24:KK:75:GLY:HA3	2.49	0.43
24:KK:74:GLU:HA	24:KK:77:GLN:HG3	1.99	0.43
26:PP:95:GLY:HA2	26:PP:103:ASN:O	2.18	0.43
26:PP:111:MET:HA	26:PP:111:MET:HE3	1.99	0.43
28:RR:72:LYS:O	28:RR:75:GLU:HG3	2.17	0.43
31:UU:42:GLY:O	31:UU:46:LYS:HG3	2.17	0.43
34:dd:38:MET:HE2	34:dd:42:CYS:C	2.43	0.43
35:ff:107:LYS:CG	35:ff:117:LEU:HD21	2.45	0.43
35:ff:125:GLU:OE1	35:ff:143:LYS:HE2	2.18	0.43
36:gg:147:HIS:CD2	36:gg:175:LYS:HD2	2.54	0.43
36:gg:173:LEU:HD22	36:gg:174:VAL:N	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:A:22:HIS:NE2	79:5:2742:G:H5''	2.33	0.43
37:A:136:VAL:HG13	37:A:147:ARG:O	2.18	0.43
38:B:43:LEU:CD1	38:B:185:VAL:HG22	2.49	0.43
38:B:249:ARG:HB3	38:B:249:ARG:HH11	1.82	0.43
39:C:42:THR:O	39:C:46:LYS:HG2	2.19	0.43
39:C:152:LEU:HD23	39:C:174:LEU:HD13	1.99	0.43
39:C:350:ARG:O	39:C:353:ARG:HG2	2.19	0.43
41:E:96:THR:HA	41:E:109:VAL:HA	1.99	0.43
41:E:111:LYS:HE2	79:5:2259:G:O2'	2.18	0.43
42:F:45:ARG:NH1	79:5:2102:G:H5'	2.33	0.43
42:F:155:LYS:HD3	42:F:247:ASN:ND2	2.33	0.43
44:H:41:ILE:CD1	44:H:43:VAL:HG22	2.47	0.43
44:H:120:GLU:OE2	79:5:4612:C:H1'	2.18	0.43
46:J:35:ARG:O	46:J:39:VAL:HG23	2.18	0.43
46:J:161:GLU:HA	46:J:164:ARG:NE	2.32	0.43
49:N:73:ARG:CB	49:N:89:VAL:HG23	2.46	0.43
50:O:7:LEU:HD22	50:O:31:ARG:HH11	1.84	0.43
50:O:83:THR:O	50:O:87:MET:HG2	2.18	0.43
50:O:156:LEU:O	50:O:159:LYS:HG3	2.18	0.43
52:Q:97:LYS:O	52:Q:98:LEU:HD13	2.18	0.43
53:S:8:ARG:HG2	53:S:66:GLN:NE2	2.32	0.43
53:S:168:THR:HA	79:5:4875:G:O2'	2.19	0.43
54:T:17:ARG:NH1	79:5:4277:G:H5''	2.32	0.43
54:T:39:ILE:HG13	54:T:63:ARG:HH22	1.83	0.43
59:Z:10:VAL:HB	59:Z:83:THR:CG2	2.49	0.43
61:b:92:LYS:HD2	79:5:1214:C:C6	2.53	0.43
66:g:105:LYS:HB3	66:g:105:LYS:HE3	1.78	0.43
67:h:20:GLN:O	67:h:24:LEU:HG	2.19	0.43
68:i:70:LEU:HD23	68:i:71:LYS:HG2	2.00	0.43
69:j:10:LYS:NZ	79:5:1535:C:H5''	2.33	0.43
69:j:43:ARG:HG2	79:5:21:G:H5''	2.00	0.43
71:l:24:PRO:HG2	71:l:27:ILE:CG1	2.49	0.43
75:p:38:THR:HA	75:p:45:THR:HA	2.00	0.43
76:r:17:LEU:HD23	76:r:36:ASN:OD1	2.18	0.43
79:5:267:G:H2'	79:5:268:G:H8	1.83	0.43
79:5:366:A:H62	79:5:375:G:H21	1.66	0.43
79:5:406:C:H2'	79:5:407:A:H5'	2.00	0.43
79:5:925:C:O5'	79:5:926:G:H5'	2.18	0.43
79:5:1653:A:H5''	79:5:1654:G:OP1	2.19	0.43
79:5:2360:A:N1	79:5:3860:A:H5''	2.33	0.43
79:5:2648:G:H2'	79:5:2649:G:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:2691:U:H2'	79:5:2692:U:C6	2.53	0.43
79:5:2872:C:H2'	79:5:2873:U:O4'	2.18	0.43
79:5:2890:C:H1'	79:5:5034:A:H1'	2.00	0.43
79:5:3668:C:H2'	79:5:3669:G:C8	2.52	0.43
79:5:4291:G:H5''	79:5:4293:U:C6	2.53	0.43
79:5:4311:A:O2'	79:5:4312:U:H5'	2.17	0.43
79:5:4407:G:H2'	79:5:4408:G:O4'	2.18	0.43
80:7:3:C:H2'	80:7:4:U:H6	1.83	0.43
81:8:29:G:O2'	81:8:30:U:H5'	2.18	0.43
2:W:44:ARG:CZ	79:5:3616:U:H5''	2.48	0.43
2:W:113:LYS:O	2:W:117:LYS:HG2	2.18	0.43
3:9:179:C:H3'	3:9:180:G:C8	2.53	0.43
3:9:383:G:N2	12:LL:133:PRO:HG3	2.25	0.43
3:9:929:G:H2'	3:9:930:C:O4'	2.17	0.43
3:9:959:G:O6	14:OO:65:ASP:HB3	2.18	0.43
3:9:1239:U:C5'	26:PP:124:LYS:HE2	2.48	0.43
3:9:1398:G:H4'	36:gg:88:ARG:NH2	2.34	0.43
3:9:1707:U:H2'	3:9:1708:C:O4'	2.18	0.43
4:AA:184:ARG:HH21	4:AA:194:PRO:HA	1.83	0.43
5:BB:168:MET:O	5:BB:172:MET:HG3	2.19	0.43
6:CC:142:LYS:HB3	6:CC:154:ALA:HB2	2.01	0.43
7:EE:14:ALA:HB1	7:EE:18:TRP:CE3	2.53	0.43
7:EE:206:ASP:O	7:EE:221:ARG:HD3	2.18	0.43
8:GG:189:ARG:HA	8:GG:192:ILE:HG12	2.00	0.43
9:HH:95:ILE:HD11	9:HH:133:LEU:CD2	2.46	0.43
10:II:94:LYS:H	10:II:94:LYS:HD3	1.83	0.43
10:II:132:GLU:CG	10:II:135:GLU:HB3	2.49	0.43
14:OO:34:PHE:HZ	14:OO:100:THR:HA	1.82	0.43
16:WW:82:GLN:N	16:WW:85:ASP:HB3	2.33	0.43
17:XX:104:GLY:O	17:XX:121:LYS:HE2	2.18	0.43
19:aa:21:ILE:HG21	19:aa:72:HIS:CE1	2.54	0.43
22:DD:109:LEU:HD22	22:DD:115:VAL:HG22	2.00	0.43
22:DD:151:LYS:O	22:DD:151:LYS:HD2	2.19	0.43
23:FF:96:ALA:O	23:FF:100:ILE:HG13	2.18	0.43
27:QQ:96:TYR:HB3	27:QQ:105:LYS:CD	2.49	0.43
32:ZZ:58:LEU:HD12	32:ZZ:62:VAL:HG21	1.99	0.43
37:A:117:GLU:HG2	37:A:124:GLY:N	2.32	0.43
37:A:146:THR:HB	37:A:158:ILE:HD12	2.00	0.43
37:A:196:TRP:HB3	37:A:197:PRO:HD3	2.01	0.43
37:A:207:VAL:HG11	79:5:1633:G:O6	2.18	0.43
38:B:122:TRP:NE1	38:B:127:LYS:HE3	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:B:261:ARG:HD2	79:5:3870:C:H4'	2.01	0.43
38:B:344:VAL:O	38:B:345:LEU:HD13	2.18	0.43
39:C:212:ASN:HA	39:C:232:VAL:CG1	2.48	0.43
40:D:193:GLU:O	40:D:197:LYS:HG2	2.18	0.43
41:E:154:ILE:CD1	41:E:156:LEU:HD23	2.48	0.43
42:F:100:VAL:HA	42:F:138:TYR:OH	2.18	0.43
43:G:114:ILE:HA	43:G:117:GLN:HG2	2.00	0.43
43:G:170:ARG:HG3	43:G:173:LYS:HE3	2.01	0.43
43:G:207:LEU:HD12	43:G:257:PHE:CE1	2.53	0.43
43:G:219:LEU:CD1	43:G:220:VAL:HG13	2.48	0.43
44:H:86:LEU:HB3	44:H:188:GLN:O	2.18	0.43
44:H:107:GLU:CG	44:H:110:SER:HB2	2.47	0.43
45:I:4:ARG:CZ	79:5:4405:G:H4'	2.48	0.43
47:L:10:LEU:HD12	47:L:12:PRO:HG3	1.99	0.43
47:L:89:LYS:O	47:L:93:THR:HG23	2.18	0.43
48:M:31:ILE:HG22	53:S:75:VAL:CG2	2.49	0.43
50:O:41:ILE:CG2	50:O:138:LEU:HD23	2.48	0.43
52:Q:66:MET:HB3	52:Q:66:MET:HE3	1.93	0.43
52:Q:120:ILE:O	52:Q:121:LEU:HD13	2.18	0.43
53:S:67:VAL:HG23	79:5:729:G:O6	2.19	0.43
56:V:28:CYS:SG	56:V:37:LEU:HD11	2.59	0.43
56:V:29:ALA:HB1	56:V:118:THR:O	2.18	0.43
57:X:48:ARG:NH1	79:5:2473:A:H5''	2.33	0.43
57:X:87:MET:O	57:X:91:GLU:HG2	2.18	0.43
58:Y:2:LYS:NZ	79:5:242:U:H4'	2.34	0.43
58:Y:16:LYS:HD2	81:8:23:C:C1'	2.49	0.43
58:Y:57:VAL:CG1	58:Y:63:LYS:HA	2.48	0.43
63:d:50:ARG:HG2	63:d:62:VAL:CG1	2.48	0.43
63:d:54:MET:SD	63:d:60:PRO:HA	2.59	0.43
63:d:75:LYS:CD	63:d:79:ASN:HB2	2.48	0.43
65:f:23:GLU:CD	79:5:439:G:H1'	2.43	0.43
66:g:54:ARG:HH12	79:5:2583:C:H4'	1.82	0.43
68:i:76:ARG:NH2	79:5:305:A:H4'	2.33	0.43
70:k:12:LEU:O	70:k:16:ARG:HG2	2.19	0.43
74:o:70:LEU:CD2	74:o:81:ARG:HG2	2.46	0.43
76:r:17:LEU:HD23	76:r:36:ASN:CG	2.44	0.43
79:5:191:G:O2'	79:5:192:G:H5'	2.18	0.43
79:5:215:C:H2'	79:5:220:C:O4'	2.19	0.43
79:5:653:U:H2'	79:5:654:C:C6	2.53	0.43
79:5:1519:C:H2'	79:5:1520:C:C6	2.53	0.43
79:5:1654:G:O2'	79:5:1655:C:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:1920:C:O2'	79:5:1922:G:H5''	2.19	0.43
79:5:1999:A:H2'	79:5:2000:G:C8	2.53	0.43
79:5:4223:C:H2'	79:5:4224:A:C8	2.54	0.43
79:5:4553:A:H2'	79:5:4554:G:O4'	2.17	0.43
79:5:4578:G:H2'	79:5:4579:U:C6	2.54	0.43
79:5:4711:C:H2'	79:5:4712:C:H6	1.83	0.43
79:5:4890:G:H2'	79:5:4891:G:C8	2.53	0.43
81:8:36:G:O3'	81:8:39:G:H4'	2.19	0.43
1:R:21:LYS:HD3	79:5:2822:G:P	2.58	0.43
1:R:67:THR:O	1:R:71:ARG:HG3	2.18	0.43
1:R:173:ARG:O	1:R:177:LEU:HG	2.19	0.43
2:W:49:ILE:HA	2:W:49:ILE:HD13	1.81	0.43
3:9:379:C:H2'	3:9:380:G:O4'	2.18	0.43
3:9:380:G:H2'	3:9:382:C:OP2	2.18	0.43
3:9:496:C:O5'	7:EE:29:PRO:HG3	2.17	0.43
3:9:673:G:H2'	3:9:674:C:C6	2.54	0.43
3:9:935:G:H2'	3:9:936:G:H8	1.83	0.43
3:9:1034:A:H2'	3:9:1035:A:O4'	2.19	0.43
3:9:1462:U:H2'	3:9:1464:C:C4	2.54	0.43
3:9:1532:C:H5''	3:9:1533:A:O4'	2.19	0.43
3:9:1578:U:O2'	22:DD:4:GLN:HG2	2.18	0.43
3:9:1612:G:H5'	29:SS:87:GLN:O	2.17	0.43
3:9:1629:C:OP1	29:SS:39:ARG:HG2	2.18	0.43
3:9:1673:U:H5''	27:QQ:78:VAL:CG2	2.48	0.43
4:AA:122:LEU:HD12	4:AA:142:LEU:HD22	2.01	0.43
4:AA:147:LEU:HA	4:AA:161:ILE:CG2	2.49	0.43
6:CC:84:PHE:HB3	15:VV:33:GLN:NE2	2.34	0.43
6:CC:151:ILE:O	6:CC:155:ILE:HG13	2.19	0.43
6:CC:183:LYS:HA	6:CC:195:LEU:O	2.19	0.43
9:HH:51:ILE:HD12	9:HH:59:ALA:HB3	1.99	0.43
10:II:61:ASP:CG	10:II:62:VAL:HG13	2.43	0.43
11:JJ:24:ARG:O	11:JJ:28:GLU:HG2	2.18	0.43
11:JJ:154:GLN:O	11:JJ:157:ILE:HG12	2.19	0.43
12:LL:134:LEU:HD12	12:LL:134:LEU:H	1.84	0.43
22:DD:162:ASP:HB3	22:DD:163:PRO:HD3	2.01	0.43
25:MM:18:LEU:HD23	25:MM:124:ILE:CD1	2.43	0.43
26:PP:60:LEU:HD23	26:PP:76:VAL:CG2	2.49	0.43
30:TT:125:PRO:O	30:TT:129:ARG:HG2	2.17	0.43
36:gg:6:THR:HG22	36:gg:311:GLN:O	2.18	0.43
37:A:65:ASP:OD2	37:A:68:ARG:HB2	2.18	0.43
38:B:40:PRO:O	38:B:187:GLY:HA2	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:C:57:LEU:CD1	39:C:61:GLN:HB3	2.48	0.43
39:C:80:ARG:HD3	39:C:80:ARG:H	1.84	0.43
39:C:124:ILE:CB	39:C:237:ILE:HD11	2.46	0.43
39:C:234:LYS:NZ	79:5:1364:U:H2'	2.32	0.43
40:D:44:TYR:CD2	79:5:1824:G:H5'	2.53	0.43
40:D:57:ASN:ND2	80:7:27:G:H5''	2.33	0.43
40:D:81:HIS:O	40:D:84:PRO:HD2	2.18	0.43
40:D:155:THR:HA	40:D:179:ARG:O	2.18	0.43
41:E:50:PRO:HG2	41:E:58:ARG:HG2	2.00	0.43
41:E:115:MET:HE3	76:r:90:LEU:HD21	2.01	0.43
46:J:85:LYS:O	46:J:89:VAL:HG23	2.19	0.43
47:L:25:TRP:CB	49:N:201:HIS:HA	2.49	0.43
48:M:118:MET:HE3	48:M:119:ARG:CB	2.47	0.43
49:N:7:ILE:HA	49:N:10:LEU:HG	1.99	0.43
49:N:94:PHE:CE2	49:N:96:ARG:HB2	2.54	0.43
54:T:129:LYS:HZ3	79:5:1838:A:H5'	1.82	0.43
54:T:151:LEU:HD23	54:T:152:GLU:N	2.33	0.43
56:V:85:ARG:O	56:V:97:TYR:HB2	2.17	0.43
57:X:148:ASP:O	57:X:152:LYS:HG3	2.19	0.43
58:Y:42:TYR:CD2	58:Y:119:LEU:HD11	2.53	0.43
58:Y:57:VAL:HG22	58:Y:63:LYS:HA	2.00	0.43
60:a:98:ALA:HB3	60:a:123:ILE:CD1	2.49	0.43
60:a:124:VAL:HG12	60:a:129:PHE:HE1	1.83	0.43
66:g:51:GLY:HA3	79:5:2653:C:OP1	2.19	0.43
68:i:74:LYS:HA	68:i:83:ALA:HB2	2.01	0.43
73:n:13:LEU:O	73:n:16:LYS:HG2	2.19	0.43
74:o:27:LYS:NZ	74:o:29:GLY:HA2	2.33	0.43
75:p:36:LYS:HG3	75:p:47:MET:O	2.17	0.43
75:p:51:ALA:N	75:p:54:ILE:HG23	2.33	0.43
76:r:96:MET:HE2	76:r:96:MET:N	2.34	0.43
78:t:16:ARG:NH1	79:5:1975:G:H1'	2.33	0.43
79:5:94:A:C5	79:5:95:G:H1'	2.53	0.43
79:5:124:C:H2'	79:5:125:C:C6	2.54	0.43
79:5:226:G:H4'	79:5:227:A:O5'	2.19	0.43
79:5:1297:U:H2'	79:5:1298:C:H6	1.83	0.43
79:5:1299:G:O2'	79:5:1300:G:H5'	2.19	0.43
79:5:1383:G:H2'	79:5:1384:C:H6	1.82	0.43
79:5:3634:G:H2'	79:5:3635:A:O3'	2.18	0.43
79:5:3643:A:H3'	79:5:3643:A:OP2	2.17	0.43
79:5:3937:C:H3'	79:5:3938:G:H2'	2.00	0.43
81:8:21:C:O2'	81:8:22:U:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:8:113:C:H3'	81:8:114:G:H5''	2.00	0.43
1:R:4:LEU:HA	1:R:7:GLN:OE1	2.19	0.43
3:9:52:G:H2'	3:9:53:C:C6	2.53	0.43
3:9:52:G:H2'	3:9:53:C:H6	1.82	0.43
3:9:382:C:H5''	3:9:383:G:OP1	2.19	0.43
3:9:475:C:H1'	3:9:507:G:O2'	2.18	0.43
3:9:495:U:H2'	3:9:496:C:H6	1.81	0.43
3:9:686:U:P	16:WW:31:SER:HA	2.59	0.43
3:9:944:A:H1'	14:OO:136:PRO:HB3	2.01	0.43
3:9:1039:C:H2'	3:9:1040:G:H8	1.84	0.43
3:9:1046:U:H2'	3:9:1047:C:O4'	2.19	0.43
3:9:1219:C:H1'	33:cc:26:GLN:NE2	2.34	0.43
3:9:1587:G:C6	30:TT:67:ARG:HD2	2.54	0.43
3:9:1613:G:H3'	26:PP:39:ALA:HB2	1.99	0.43
3:9:1845:A:H2'	3:9:1846:G:H8	1.83	0.43
4:AA:40:LYS:O	4:AA:48:ILE:HD12	2.18	0.43
7:EE:219:ALA:HB1	7:EE:221:ARG:NH2	2.31	0.43
9:HH:71:SER:HA	9:HH:74:LYS:NZ	2.33	0.43
11:JJ:19:PRO:O	11:JJ:25:LEU:HD21	2.18	0.43
12:LL:61:PRO:HD2	12:LL:114:SER:HB2	2.00	0.43
15:VV:36:VAL:HG13	15:VV:51:LYS:HB3	2.00	0.43
17:XX:85:VAL:HG21	17:XX:90:CYS:HB2	2.00	0.43
22:DD:75:LYS:HE3	24:KK:18:GLU:HG2	2.00	0.43
24:KK:16:PHE:CE1	24:KK:80:ARG:HB3	2.53	0.43
29:SS:84:LEU:CD2	29:SS:97:GLN:HB2	2.46	0.43
29:SS:115:LYS:NZ	29:SS:125:HIS:HB2	2.33	0.43
36:gg:94:THR:OG1	36:gg:96:THR:HG22	2.19	0.43
37:A:42:LYS:HD2	37:A:87:PHE:CD2	2.53	0.43
37:A:101:VAL:O	37:A:102:LEU:HD23	2.19	0.43
38:B:59:GLU:HB3	38:B:366:LYS:NZ	2.33	0.43
38:B:303:ALA:HB3	38:B:312:LYS:HE2	2.00	0.43
39:C:312:ARG:CZ	79:5:2274:C:H4'	2.48	0.43
41:E:140:VAL:HG13	41:E:142:LYS:HE3	2.00	0.43
42:F:126:LYS:HG3	79:5:1727:U:H4'	1.99	0.43
43:G:116:LEU:HD11	49:N:29:GLN:NE2	2.33	0.43
43:G:123:LEU:HD12	43:G:127:LEU:HD23	2.00	0.43
48:M:15:VAL:HG13	48:M:22:GLY:N	2.34	0.43
48:M:37:LEU:HD21	48:M:47:ARG:HG3	2.00	0.43
48:M:52:PHE:CA	48:M:55:MET:HE1	2.41	0.43
50:O:20:ALA:HB1	50:O:87:MET:CG	2.48	0.43
54:T:18:PRO:HG2	54:T:21:LYS:CG	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:T:146:LYS:HD2	54:T:146:LYS:O	2.19	0.43
55:U:21:PHE:CE2	55:U:78:PHE:HB3	2.53	0.43
57:X:119:ILE:HD12	57:X:144:TYR:CG	2.54	0.43
57:X:141:ALA:HB3	57:X:144:TYR:CD2	2.53	0.43
62:c:48:LEU:CD2	62:c:73:HIS:HA	2.49	0.43
62:c:91:VAL:HG22	79:5:2673:G:O2'	2.19	0.43
62:c:94:LEU:HD22	62:c:95:SER:N	2.33	0.43
63:d:64:ILE:CD1	79:5:2373:C:H4'	2.49	0.43
65:f:20:ASN:HA	79:5:1310:C:O2'	2.18	0.43
65:f:28:LEU:HD12	65:f:84:VAL:O	2.18	0.43
68:i:84:LYS:HG3	68:i:87:ARG:HH21	1.83	0.43
70:k:25:ILE:O	70:k:69:LEU:HB3	2.19	0.43
70:k:42:LEU:HD21	79:5:2536:A:OP1	2.19	0.43
70:k:45:LEU:HD23	70:k:56:LEU:CD2	2.48	0.43
70:k:54:GLU:HA	70:k:57:LYS:HG2	1.99	0.43
77:s:65:ILE:HD11	77:s:82:ILE:HD11	2.01	0.43
79:5:1371:A:O2'	79:5:1372:A:H5'	2.18	0.43
79:5:1840:G:H2'	79:5:1841:C:H6	1.84	0.43
79:5:2364:G:H2'	79:5:2365:C:C6	2.54	0.43
79:5:2381:A:H1'	79:5:2383:C:OP1	2.19	0.43
79:5:2648:G:H2'	79:5:2649:G:H8	1.83	0.43
79:5:4555:U:O2'	79:5:4556:U:H5'	2.17	0.43
79:5:4977:A:H2'	79:5:4978:G:C8	2.54	0.43
1:R:19:LYS:HA	1:R:22:VAL:CG2	2.48	0.43
3:9:113:G:O2'	12:LL:69:ARG:HD2	2.18	0.43
3:9:115:U:H2'	3:9:116:U:H6	1.82	0.43
3:9:212:C:H2'	3:9:213:G:C8	2.54	0.43
3:9:626:G:H1	3:9:1824:A:H2	1.66	0.43
3:9:951:C:H1'	14:OO:50:LYS:HD3	2.00	0.43
3:9:1014:G:H2'	3:9:1015:U:C6	2.54	0.43
3:9:1102:G:OP1	5:BB:151:ARG:HD3	2.18	0.43
3:9:1372:U:H1'	28:RR:4:VAL:HG11	2.01	0.43
3:9:1496:U:H2'	3:9:1498:A:C5'	2.49	0.43
3:9:1780:G:H2'	3:9:1781:A:C8	2.54	0.43
4:AA:16:LEU:CD2	28:RR:114:LEU:HD21	2.45	0.43
4:AA:85:ARG:HH21	4:AA:201:LEU:HD12	1.84	0.43
6:CC:94:ILE:HG12	6:CC:159:LYS:O	2.17	0.43
8:GG:215:LYS:HD2	8:GG:216:ARG:HH22	1.83	0.43
11:JJ:136:ARG:HE	11:JJ:139:LYS:HD3	1.83	0.43
12:LL:105:ARG:HD3	12:LL:106:HIS:H	1.84	0.43
15:VV:15:ARG:NH1	15:VV:33:GLN:HG2	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:WW:71:LYS:HB3	16:WW:130:PHE:CZ	2.54	0.43
17:XX:100:VAL:HG12	17:XX:125:VAL:CB	2.48	0.43
17:XX:132:ALA:CB	17:XX:138:LYS:HD3	2.48	0.43
18:YY:20:ARG:O	18:YY:21:LYS:HD3	2.19	0.43
22:DD:168:VAL:HA	22:DD:189:MET:HA	2.00	0.43
23:FF:172:CYS:HA	23:FF:175:ASP:OD2	2.18	0.43
26:PP:15:PHE:HE1	29:SS:91:LYS:HA	1.84	0.43
27:QQ:90:LYS:HA	27:QQ:93:VAL:HG23	1.99	0.43
32:ZZ:70:PRO:O	32:ZZ:74:SER:HB3	2.18	0.43
33:cc:12:ALA:CB	33:cc:32:VAL:HB	2.46	0.43
38:B:66:LYS:HD2	56:V:12:ALA:N	2.34	0.43
38:B:356:LYS:HE3	38:B:358:ARG:NE	2.32	0.43
39:C:264:TYR:O	39:C:271:ALA:HB2	2.19	0.43
40:D:15:ARG:NE	79:5:4265:U:H3'	2.34	0.43
40:D:38:ILE:CD1	54:T:30:TYR:HB3	2.47	0.43
40:D:285:ALA:HA	40:D:288:LEU:CD2	2.48	0.43
41:E:117:ARG:HG2	79:5:458:C:OP1	2.19	0.43
41:E:186:ARG:NH2	79:5:4936:G:H3'	2.34	0.43
42:F:153:ILE:HG12	42:F:190:ILE:HG21	2.01	0.43
42:F:220:LYS:HE2	42:F:230:GLY:N	2.34	0.43
42:F:235:ARG:CB	42:F:238:GLN:HB2	2.43	0.43
44:H:59:LYS:HE3	44:H:66:GLU:CG	2.49	0.43
45:I:31:ILE:HD11	45:I:62:SER:O	2.18	0.43
45:I:31:ILE:HD11	45:I:65:LEU:HB2	2.00	0.43
45:I:180:GLU:HA	45:I:183:ASP:OD2	2.19	0.43
45:I:184:MET:HG2	45:I:190:LEU:HD13	2.01	0.43
46:J:54:ARG:HG2	46:J:55:TYR:CD2	2.54	0.43
47:L:94:ILE:HD11	47:L:96:ILE:HD12	2.01	0.43
49:N:172:ARG:NH2	49:N:187:SER:HB2	2.25	0.43
50:O:112:TYR:HA	50:O:115:LYS:HD3	2.00	0.43
56:V:4:ARG:HA	79:5:4594:U:O3'	2.19	0.43
56:V:48:ARG:NE	79:5:4620:U:H5''	2.33	0.43
59:Z:21:ARG:CD	59:Z:47:ASP:HA	2.45	0.43
60:a:76:ASP:HB3	60:a:115:GLY:HA3	2.00	0.43
61:b:31:SER:HA	79:5:1463:C:H5''	1.99	0.43
63:d:67:ARG:HA	63:d:67:ARG:NH1	2.34	0.43
64:e:4:LEU:CB	64:e:121:ARG:HB2	2.45	0.43
65:f:73:LYS:NZ	79:5:952:G:H5''	2.33	0.43
68:i:28:ARG:NH2	79:5:325:U:H3'	2.33	0.43
69:j:36:LYS:HA	69:j:45:ARG:HH21	1.84	0.43
73:n:10:MET:O	73:n:14:LYS:HG3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:o:55:ILE:HD12	74:o:57:ARG:HG3	1.99	0.43
78:t:77:ALA:HB3	79:5:1973:G:O3'	2.18	0.43
78:t:114:ARG:HE	78:t:161:GLU:HB3	1.83	0.43
79:5:158:A:C4'	79:5:159:C:H5''	2.46	0.43
79:5:464:G:H2'	79:5:465:G:C8	2.54	0.43
79:5:464:G:H2'	79:5:465:G:H8	1.83	0.43
79:5:717:U:H2'	79:5:718:C:C6	2.54	0.43
79:5:1474:C:H2'	79:5:1475:G:C8	2.52	0.43
79:5:1736:A:H2'	79:5:1737:A:O4'	2.18	0.43
79:5:1875:C:H2'	79:5:1876:U:O4'	2.19	0.43
79:5:1904:G:O2'	79:5:1905:U:H5'	2.19	0.43
79:5:1933:G:H2'	79:5:1934:A:C8	2.54	0.43
79:5:2478:C:H2'	79:5:2479:G:C8	2.53	0.43
79:5:3665:G:H2'	79:5:3666:C:H6	1.84	0.43
79:5:3732:A:H2'	79:5:3733:A:H8	1.84	0.43
79:5:3855:C:O2'	79:5:3856:A:H5'	2.19	0.43
79:5:4191:G:H2'	79:5:4192:A:H8	1.84	0.43
79:5:4247:G:O2'	79:5:4248:A:H5'	2.18	0.43
79:5:4371:G:H1'	79:5:4372:U:C6	2.53	0.43
79:5:4438:U:H2'	79:5:4439:U:C6	2.53	0.43
79:5:4520:G:H2'	79:5:4521:U:C6	2.54	0.43
79:5:5045:G:H2'	79:5:5046:U:O4'	2.19	0.43
79:5:5056:A:H2'	79:5:5057:C:H6	1.82	0.43
80:7:80:U:H2'	80:7:81:G:O4'	2.18	0.43
1:R:28:GLU:O	1:R:32:ILE:HB	2.19	0.43
3:9:459:C:H2'	3:9:460:A:C8	2.53	0.43
3:9:1063:C:H4'	14:OO:150:ARG:HE	1.84	0.43
3:9:1353:A:H2'	3:9:1354:G:O4'	2.18	0.43
3:9:1859:A:O2'	3:9:1860:A:H5'	2.18	0.43
5:BB:32:ASP:HB3	5:BB:95:ASN:OD1	2.19	0.43
5:BB:44:ILE:HG21	5:BB:69:VAL:HG21	2.00	0.43
5:BB:109:LYS:NZ	5:BB:113:MET:HB2	2.34	0.43
7:EE:68:ARG:HA	7:EE:76:VAL:HG21	2.00	0.43
7:EE:183:VAL:HA	7:EE:224:ASN:O	2.18	0.43
9:HH:172:THR:O	9:HH:176:VAL:HG23	2.19	0.43
10:II:190:LEU:C	10:II:195:LEU:HB2	2.44	0.43
10:II:198:TYR:O	10:II:202:ILE:HG13	2.19	0.43
11:JJ:31:LEU:HD11	11:JJ:103:GLU:HG3	2.00	0.43
11:JJ:43:VAL:O	11:JJ:47:LYS:HG2	2.19	0.43
13:NN:92:ILE:O	13:NN:96:VAL:HG23	2.18	0.43
16:WW:44:HIS:HB2	16:WW:46:TYR:HD1	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:WW:111:MET:CG	16:WW:115:GLU:HB3	2.47	0.43
20:bb:8:LEU:HG	20:bb:9:HIS:CE1	2.53	0.43
20:bb:36:LYS:HB2	20:bb:43:ILE:HB	2.00	0.43
23:FF:40:ALA:CB	23:FF:45:TYR:HB3	2.42	0.43
23:FF:40:ALA:CB	23:FF:67:PRO:HA	2.44	0.43
26:PP:44:ARG:NH1	26:PP:49:LEU:HG	2.34	0.43
29:SS:23:ARG:HH12	32:ZZ:80:ARG:HG2	1.83	0.43
29:SS:116:LYS:HE2	79:5:1765:A:C2	2.53	0.43
30:TT:60:THR:O	30:TT:64:LEU:HG	2.19	0.43
30:TT:139:ALA:O	30:TT:142:LYS:HG3	2.19	0.43
36:gg:18:VAL:HG11	36:gg:21:ILE:HG12	2.01	0.43
36:gg:23:THR:HG22	36:gg:31:ILE:HD13	2.01	0.43
37:A:219:ILE:HD12	37:A:220:GLY:N	2.33	0.43
38:B:113:GLU:CB	38:B:178:ALA:HB2	2.48	0.43
38:B:122:TRP:CE2	38:B:127:LYS:HE3	2.54	0.43
39:C:307:LYS:NZ	79:5:2087:C:H5''	2.33	0.43
40:D:41:LYS:HE2	40:D:41:LYS:HA	2.01	0.43
40:D:62:CYS:SG	40:D:101:THR:HG22	2.59	0.43
40:D:67:ALA:HA	40:D:72:ASP:HB3	1.99	0.43
40:D:285:ALA:HA	40:D:288:LEU:HD21	2.01	0.43
43:G:156:ARG:HG2	43:G:246:LEU:CD2	2.48	0.43
44:H:16:VAL:HG11	44:H:27:VAL:HG13	1.99	0.43
45:I:8:CYS:HB3	79:5:1866:U:H4'	2.01	0.43
48:M:35:ARG:NH2	79:5:1923:A:H4'	2.29	0.43
50:O:15:LEU:HD21	50:O:128:ARG:HB3	2.01	0.43
50:O:156:LEU:HD23	79:5:4910:A:C4	2.53	0.43
51:P:82:ARG:HB3	79:5:3856:A:OP1	2.19	0.43
51:P:133:HIS:HA	79:5:1600:A:O4'	2.19	0.43
52:Q:47:VAL:O	52:Q:51:LEU:HD22	2.18	0.43
55:U:23:LEU:O	55:U:69:LYS:HG3	2.19	0.43
56:V:48:ARG:HD2	79:5:4620:U:C4'	2.45	0.43
58:Y:50:ARG:HD2	58:Y:50:ARG:HA	1.83	0.43
61:b:38:LYS:CD	79:5:1816:C:H4'	2.49	0.43
63:d:47:LYS:HG2	63:d:50:ARG:HH22	1.83	0.43
66:g:69:LYS:HD3	79:5:2769:U:N3	2.33	0.43
79:5:180:C:H2'	79:5:181:C:C6	2.53	0.43
79:5:394:G:N2	79:5:396:A:H3'	2.34	0.43
79:5:912:G:O2'	79:5:913:U:H5'	2.18	0.43
79:5:1643:A:H2'	79:5:1644:C:H6	1.84	0.43
79:5:1797:G:O2'	79:5:1798:G:H5'	2.19	0.43
79:5:1957:U:O2'	79:5:1958:A:H5''	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:4215:C:H2'	79:5:4216:G:O4'	2.18	0.43
79:5:4289:U:H2'	79:5:4290:U:C6	2.54	0.43
79:5:4523:A:H2'	79:5:4559:A:N7	2.33	0.43
79:5:4651:A:H2'	79:5:4652:G:O4'	2.18	0.43
79:5:4699:U:C1'	79:5:4700:A:H5''	2.43	0.43
79:5:4723:A:H2'	79:5:4724:A:C8	2.54	0.43
79:5:4881:U:H4'	79:5:4882:U:H5'	2.00	0.43
81:8:43:A:O2'	81:8:44:A:H5'	2.19	0.43
3:9:302:A:H1'	10:II:73:THR:OG1	2.19	0.43
3:9:492:C:H41	3:9:506:G:H3'	1.83	0.43
3:9:611:G:H2'	3:9:612:U:C6	2.53	0.43
3:9:686:U:H2'	3:9:687:C:O2	2.18	0.43
3:9:924:G:H21	13:NN:87:ASP:HB3	1.84	0.43
3:9:1193:U:H5''	17:XX:60:LYS:NZ	2.34	0.43
3:9:1406:G:H2'	3:9:1407:U:C6	2.54	0.43
3:9:1461:G:H2'	3:9:1464:C:H41	1.84	0.43
3:9:1627:C:H4'	30:TT:41:LYS:HB2	2.01	0.43
3:9:1842:C:OP1	73:n:3:ALA:HB3	2.19	0.43
4:AA:2:SER:CB	4:AA:59:LEU:HD13	2.49	0.43
5:BB:44:ILE:CG2	5:BB:69:VAL:HG21	2.48	0.43
6:CC:208:PRO:O	6:CC:212:LYS:HG2	2.19	0.43
7:EE:47:PHE:HA	7:EE:51:ARG:HB3	2.01	0.43
9:HH:101:LEU:HD13	9:HH:120:ARG:HG2	2.01	0.43
9:HH:139:ILE:HG23	9:HH:156:VAL:CG1	2.49	0.43
22:DD:190:LEU:HB3	22:DD:199:GLY:CA	2.46	0.43
23:FF:179:ASN:CB	23:FF:187:SER:HB2	2.49	0.43
25:MM:58:GLU:O	25:MM:62:VAL:HG12	2.18	0.43
28:RR:27:ASP:OD2	28:RR:30:THR:HG23	2.19	0.43
29:SS:14:ARG:HG2	29:SS:18:THR:O	2.19	0.43
29:SS:114:LEU:O	29:SS:117:ILE:HG12	2.19	0.43
29:SS:120:HIS:O	29:SS:124:ARG:HG3	2.18	0.43
30:TT:65:TYR:HD2	30:TT:66:LEU:HD22	1.82	0.43
32:ZZ:51:ASP:HB3	32:ZZ:54:THR:CG2	2.48	0.43
34:dd:5:GLN:O	34:dd:6:LEU:HD13	2.19	0.43
36:gg:42:MET:CE	36:gg:56:GLN:HB3	2.49	0.43
36:gg:110:SER:HB2	36:gg:153:CYS:HA	2.01	0.43
36:gg:251:ALA:HB1	36:gg:286:CYS:O	2.19	0.43
37:A:97:ASN:O	37:A:166:VAL:HB	2.18	0.43
37:A:179:ILE:CG1	79:5:3653:A:H5''	2.49	0.43
37:A:200:ARG:HH22	79:5:3650:C:H5''	1.84	0.43
38:B:20:LYS:CD	79:5:4717:A:H4'	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:C:207:PRO:HG2	39:C:227:ILE:CG2	2.48	0.43
40:D:14:LYS:HZ2	80:7:66:G:H5'	1.83	0.43
40:D:156:GLY:HA2	40:D:181:PRO:CD	2.49	0.43
41:E:286:PRO:HA	41:E:289:LEU:CD2	2.49	0.43
42:F:90:PHE:HB2	42:F:144:PRO:HG3	2.00	0.43
42:F:121:PHE:CZ	42:F:149:VAL:HG23	2.53	0.43
42:F:140:ALA:HB1	42:F:235:ARG:HH12	1.84	0.43
43:G:237:LEU:HD22	43:G:238:LYS:N	2.34	0.43
45:I:98:ARG:HD2	79:5:1865:G:OP1	2.18	0.43
46:J:136:ARG:HB3	46:J:155:HIS:CE1	2.54	0.43
48:M:122:ILE:HG21	50:O:188:LYS:HZ1	1.84	0.43
49:N:98:LEU:CD1	79:5:301:G:H5''	2.48	0.43
50:O:17:GLY:HA3	79:5:2053:C:H5'	2.01	0.43
50:O:18:ARG:HH11	79:5:2053:C:H4'	1.84	0.43
50:O:37:ARG:HG3	50:O:39:GLU:OE2	2.19	0.43
52:Q:138:LEU:HD23	52:Q:138:LEU:H	1.84	0.43
53:S:164:LYS:HE3	53:S:165:PRO:HD3	2.00	0.43
59:Z:36:ARG:HG2	59:Z:38:TYR:OH	2.19	0.43
61:b:3:LYS:CG	79:5:4194:U:H5''	2.47	0.43
64:e:24:GLN:NE2	79:5:1315:C:H4'	2.33	0.43
64:e:36:ARG:HD2	79:5:1661:C:OP2	2.19	0.43
68:i:74:LYS:HE3	79:5:3727:A:H4'	2.00	0.43
70:k:24:LYS:CG	70:k:35:LYS:HD2	2.47	0.43
77:s:35:VAL:HG21	77:s:39:GLN:NE2	2.33	0.43
79:5:49:U:O2'	79:5:50:C:H5'	2.19	0.43
79:5:198:A:O2'	79:5:221:C:H1'	2.18	0.43
79:5:408:A:H4'	79:5:409:G:H5''	2.00	0.43
79:5:1207:C:H2'	79:5:1208:G:C8	2.54	0.43
79:5:1392:A:H2'	79:5:1393:G:C8	2.54	0.43
79:5:1654:G:N3	79:5:1680:G:H1'	2.34	0.43
79:5:2609:G:O2'	79:5:2610:G:H5'	2.18	0.43
79:5:3801:U:H1'	79:5:4497:U:H4'	2.01	0.43
79:5:3853:U:H5''	79:5:3894:A:H4'	2.00	0.43
79:5:4235:G:O2'	79:5:4236:G:H5'	2.18	0.43
79:5:4934:A:H2'	79:5:4935:C:C6	2.54	0.43
79:5:4992:G:H2'	79:5:4993:G:H8	1.83	0.43
79:5:4993:G:O6	79:5:5058:A:N1	2.52	0.43
81:8:155:C:H2'	81:8:156:U:C6	2.54	0.43
1:R:75:HIS:O	1:R:76:MET:HE3	2.18	0.43
3:9:386:C:H2'	3:9:387:C:H6	1.84	0.43
3:9:558:G:H2'	3:9:559:G:C8	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:603:C:H1'	3:9:604:A:N7	2.34	0.43
3:9:641:A:H2'	3:9:642:U:C6	2.53	0.43
3:9:671:A:H4'	3:9:672:A:H5''	2.01	0.43
3:9:1174:U:H2'	3:9:1175:G:H8	1.83	0.43
3:9:1215:C:C5	3:9:1645:C:H3'	2.54	0.43
3:9:1493:C:H5''	3:9:1495:G:OP1	2.18	0.43
3:9:1589:A:H5''	30:TT:82:ARG:NH1	2.33	0.43
3:9:1630:A:H5''	29:SS:37:GLY:N	2.33	0.43
3:9:1731:A:H2'	3:9:1732:G:H8	1.84	0.43
5:BB:65:ARG:CD	14:OO:50:LYS:HE3	2.49	0.43
5:BB:110:MET:O	5:BB:114:VAL:HG12	2.18	0.43
6:CC:90:GLU:OE1	6:CC:93:ILE:HG13	2.19	0.43
6:CC:199:PRO:HG2	6:CC:202:THR:OG1	2.18	0.43
7:EE:44:LEU:HD12	7:EE:79:ASP:O	2.19	0.43
7:EE:181:CYS:HB2	7:EE:195:ILE:HG13	2.01	0.43
9:HH:134:VAL:HG21	9:HH:137:SER:HB2	2.00	0.43
11:JJ:81:LEU:HB3	11:JJ:87:LEU:HB3	2.01	0.43
11:JJ:135:ILE:HA	11:JJ:160:SER:H	1.84	0.43
13:NN:70:LYS:HE3	13:NN:73:ARG:HB2	2.00	0.43
13:NN:75:LEU:HD12	13:NN:80:LEU:HB3	2.00	0.43
14:OO:95:ILE:CG2	14:OO:129:ILE:HA	2.49	0.43
23:FF:120:GLY:HA3	23:FF:146:ARG:HG2	2.01	0.43
23:FF:143:PRO:HD3	33:cc:56:LEU:CD1	2.49	0.43
24:KK:1:MET:SD	24:KK:47:LYS:HD2	2.59	0.43
24:KK:77:GLN:HA	24:KK:80:ARG:CD	2.46	0.43
26:PP:67:ALA:HB2	26:PP:73:PRO:HB3	2.01	0.43
28:RR:16:ILE:HD11	28:RR:39:ALA:HB2	2.01	0.43
30:TT:20:ALA:O	30:TT:24:LYS:HG3	2.19	0.43
30:TT:110:LEU:HD12	30:TT:112:MET:HG3	2.00	0.43
31:UU:64:THR:HG22	31:UU:79:ARG:HA	2.01	0.43
32:ZZ:110:THR:HG22	32:ZZ:111:ARG:H	1.84	0.43
33:cc:16:LYS:HA	33:cc:52:GLU:OE2	2.19	0.43
36:gg:39:THR:HG22	36:gg:60:ARG:HB2	2.01	0.43
36:gg:52:TYR:CE2	36:gg:309:VAL:HG11	2.53	0.43
38:B:46:PHE:CZ	38:B:207:VAL:HG12	2.53	0.43
38:B:165:HIS:HB3	38:B:180:LEU:HD13	2.01	0.43
38:B:321:VAL:HG12	38:B:322:HIS:ND1	2.34	0.43
38:B:393:LYS:HD2	79:5:5042:A:C5'	2.46	0.43
39:C:339:THR:HA	39:C:342:ARG:HE	1.84	0.43
40:D:56:THR:OG1	80:7:26:C:H5''	2.19	0.43
44:H:3:THR:OG1	44:H:67:LEU:HD21	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:H:12:ILE:HD11	44:H:16:VAL:HB	2.01	0.43
44:H:92:MET:HB3	44:H:144:LEU:HB2	2.00	0.43
45:I:99:ILE:HB	45:I:123:GLN:OE1	2.18	0.43
45:I:164:LYS:HD2	45:I:165:ILE:N	2.34	0.43
45:I:206:LEU:O	45:I:210:ARG:HG3	2.19	0.43
46:J:153:ALA:HA	46:J:156:ARG:HE	1.83	0.43
47:L:42:ARG:O	47:L:46:ILE:HG13	2.19	0.43
48:M:27:ILE:CD1	48:M:36:ALA:HB1	2.49	0.43
49:N:101:VAL:HA	49:N:104:GLU:CG	2.49	0.43
49:N:150:TRP:CZ3	49:N:151:ILE:HG13	2.54	0.43
50:O:74:ARG:HD3	79:5:4585:U:OP1	2.19	0.43
51:P:17:SER:HB3	51:P:101:ASN:ND2	2.33	0.43
52:Q:113:ILE:CD1	52:Q:120:ILE:HG23	2.48	0.43
53:S:17:LEU:HD11	54:T:136:ARG:NH1	2.34	0.43
56:V:85:ARG:HG2	56:V:101:ASN:ND2	2.34	0.43
56:V:96:LEU:HD22	56:V:97:TYR:N	2.34	0.43
58:Y:26:ARG:HA	58:Y:29:ILE:CG1	2.49	0.43
58:Y:54:GLU:O	58:Y:106:ILE:HD12	2.19	0.43
59:Z:72:VAL:HG22	59:Z:101:PHE:CZ	2.54	0.43
60:a:129:PHE:HE2	60:a:146:LEU:HD13	1.83	0.43
62:c:76:GLY:HA3	62:c:80:GLU:HG3	2.00	0.43
64:e:47:ARG:HH12	79:5:1882:U:H3'	1.82	0.43
66:g:93:ARG:HD2	79:5:4122:G:O4'	2.18	0.43
66:g:97:ILE:O	66:g:101:LYS:HG3	2.18	0.43
67:h:47:ILE:HD12	67:h:48:ARG:N	2.34	0.43
68:i:85:ARG:HG2	68:i:88:GLU:OE2	2.19	0.43
69:j:76:HIS:CD2	69:j:79:ARG:HG2	2.53	0.43
70:k:55:LYS:HA	70:k:58:GLN:CG	2.49	0.43
73:n:15:ARG:HD3	73:n:18:ARG:HH22	1.83	0.43
74:o:53:LYS:HE2	79:5:91:G:O5'	2.19	0.43
77:s:59:THR:HG22	79:5:1960:A:C5'	2.48	0.43
77:s:65:ILE:O	77:s:69:LEU:HG	2.19	0.43
79:5:46:U:H3'	79:5:47:A:H8	1.84	0.43
79:5:388:A:H1'	79:5:403:G:N2	2.34	0.43
79:5:1082:C:H2'	79:5:1083:U:O4'	2.19	0.43
79:5:1557:C:H2'	79:5:1558:A:H8	1.83	0.43
79:5:1695:U:H2'	79:5:1696:C:C6	2.54	0.43
79:5:1756:U:H2'	79:5:1757:U:C6	2.53	0.43
79:5:2672:C:O3'	79:5:2675:G:H5'	2.19	0.43
79:5:3820:G:H2'	79:5:3821:A:H8	1.83	0.43
79:5:3844:U:H2'	79:5:3845:A:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:4199:C:H2'	79:5:4200:G:O4'	2.19	0.43
79:5:4348:A:O2'	79:5:4350:C:H5'	2.19	0.43
79:5:4868:G:O2'	79:5:4869:U:H5'	2.19	0.43
81:8:13:G:H2'	81:8:14:U:H5	1.84	0.43
81:8:106:G:C4'	81:8:136:U:H2'	2.49	0.43
1:R:45:ILE:HG12	1:R:50:ILE:HB	2.01	0.42
3:9:155:G:P	8:GG:15:LEU:HD21	2.58	0.42
3:9:422:U:H2'	3:9:423:U:H6	1.83	0.42
3:9:666:U:H2'	3:9:667:U:C6	2.54	0.42
3:9:924:G:H2'	3:9:925:G:O4'	2.19	0.42
3:9:1264:C:H4'	3:9:1265:A:O5'	2.19	0.42
3:9:1304:U:H5'	35:ff:93:HIS:N	2.34	0.42
3:9:1324:G:O6	3:9:1504:U:O4	2.37	0.42
3:9:1527:C:H5'	27:QQ:144:SER:HB2	2.01	0.42
3:9:1645:C:H4'	27:QQ:138:ARG:CD	2.43	0.42
3:9:1722:G:H2'	3:9:1723:G:H8	1.82	0.42
4:AA:65:ILE:HG22	4:AA:186:ARG:NH2	2.33	0.42
5:BB:157:GLN:HB3	5:BB:160:GLN:CG	2.49	0.42
5:BB:157:GLN:NE2	5:BB:160:GLN:HG3	2.33	0.42
7:EE:18:TRP:CH2	7:EE:31:PRO:HD3	2.54	0.42
7:EE:112:HIS:CB	7:EE:239:PRO:HG3	2.45	0.42
9:HH:145:ARG:HG2	16:WW:51:GLU:OE1	2.19	0.42
10:II:199:LEU:HD12	10:II:200:ARG:N	2.34	0.42
12:LL:47:PRO:HG2	12:LL:50:ALA:HB3	2.01	0.42
13:NN:2:GLY:N	13:NN:9:LYS:HG2	2.34	0.42
16:WW:11:LEU:HD21	16:WW:37:PHE:CE2	2.54	0.42
17:XX:100:VAL:HG12	17:XX:125:VAL:HG23	2.00	0.42
23:FF:38:TYR:CE1	23:FF:144:LEU:HB2	2.54	0.42
25:MM:31:LEU:HB2	25:MM:111:VAL:HA	2.01	0.42
27:QQ:109:LYS:HA	27:QQ:109:LYS:HD3	1.77	0.42
29:SS:136:THR:HA	29:SS:139:THR:CG2	2.39	0.42
30:TT:27:LYS:CE	30:TT:110:LEU:HD13	2.46	0.42
34:dd:31:ILE:CD1	34:dd:40:ARG:HB3	2.49	0.42
36:gg:2:THR:O	36:gg:314:ILE:HG13	2.19	0.42
36:gg:109:LEU:HB2	36:gg:151:VAL:O	2.18	0.42
38:B:8:ALA:HB2	56:V:49:LEU:CD2	2.41	0.42
38:B:154:LYS:HG2	38:B:194:LEU:HD21	2.00	0.42
39:C:149:GLU:CD	39:C:151:PRO:HD2	2.44	0.42
40:D:49:TYR:HB3	40:D:64:ILE:CG2	2.49	0.42
41:E:193:HIS:CE1	79:5:710:G:H4'	2.53	0.42
43:G:92:PHE:HD2	79:5:4157:A:H5'	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:G:136:PHE:HD1	43:G:236:ILE:HD13	1.84	0.42
45:I:51:HIS:CD2	45:I:134:VAL:HG21	2.54	0.42
45:I:189:ARG:NH1	45:I:189:ARG:HA	2.34	0.42
50:O:71:TYR:CE2	79:5:3887:C:H5'	2.54	0.42
51:P:61:ARG:HA	51:P:78:TRP:CZ2	2.53	0.42
52:Q:182:ALA:HB2	52:Q:187:LYS:CG	2.45	0.42
55:U:48:LYS:HB3	55:U:82:TYR:OH	2.18	0.42
63:d:61:ASP:OD2	63:d:103:TYR:HB2	2.19	0.42
63:d:68:LEU:HG	63:d:106:VAL:CG1	2.50	0.42
64:e:99:ILE:HD11	64:e:103:VAL:CB	2.48	0.42
67:h:25:LYS:O	67:h:28:LEU:HG	2.19	0.42
74:o:63:THR:HB	74:o:89:LYS:HD3	2.01	0.42
79:5:988:C:O2'	79:5:989:U:H5'	2.19	0.42
79:5:1087:A:H2'	79:5:1088:C:H6	1.84	0.42
79:5:1370:G:H4'	79:5:1371:A:O5'	2.19	0.42
79:5:2052:G:H2'	79:5:2053:C:H6	1.84	0.42
79:5:2420:A:C5'	79:5:2421:G:H5''	2.48	0.42
79:5:2601:A:C5	79:5:2743:A:H5''	2.53	0.42
79:5:3597:G:O2'	79:5:3598:C:H5'	2.19	0.42
79:5:3695:U:O2	79:5:3820:G:N2	2.40	0.42
79:5:3833:C:H2'	79:5:3834:C:H6	1.84	0.42
79:5:4542:U:H3'	79:5:4543:G:C8	2.54	0.42
79:5:4651:A:H3'	79:5:4652:G:H5''	2.01	0.42
79:5:4727:A:H2'	79:5:4728:U:O4'	2.19	0.42
80:7:48:G:H2'	80:7:49:A:C8	2.54	0.42
3:9:461:U:H2'	3:9:462:C:C6	2.54	0.42
3:9:1404:U:C5	31:UU:88:LEU:HD13	2.53	0.42
3:9:1637:A:H2'	3:9:1637:A:OP2	2.19	0.42
4:AA:49:ILE:HG21	4:AA:162:PRO:HB2	2.01	0.42
4:AA:147:LEU:CD1	4:AA:165:ASN:HB3	2.49	0.42
5:BB:97:LEU:HB3	5:BB:228:LEU:HD11	2.01	0.42
7:EE:159:THR:CG2	7:EE:227:VAL:HG23	2.48	0.42
9:HH:135:PHE:HB3	9:HH:136:PRO:HD3	2.01	0.42
13:NN:2:GLY:CA	13:NN:9:LYS:HG2	2.50	0.42
13:NN:25:TRP:CE2	20:bb:82:LYS:HD3	2.54	0.42
14:OO:41:PHE:HA	14:OO:57:THR:HG22	2.01	0.42
14:OO:74:ALA:HB3	14:OO:114:SER:OG	2.19	0.42
14:OO:142:ARG:CZ	19:aa:22:ARG:HB3	2.48	0.42
22:DD:209:SER:HB3	28:RR:40:ILE:CG1	2.49	0.42
23:FF:86:LYS:HA	23:FF:89:THR:CG2	2.49	0.42
25:MM:79:VAL:HG21	25:MM:85:LEU:HB2	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:TT:28:LEU:HD22	30:TT:54:TYR:CD1	2.55	0.42
30:TT:38:LYS:HD2	30:TT:43:LYS:HB3	2.02	0.42
37:A:69:PHE:O	37:A:70:LYS:HD3	2.20	0.42
37:A:181:LYS:HD2	79:5:1577:G:C8	2.54	0.42
38:B:50:LYS:HB2	38:B:345:LEU:CD2	2.49	0.42
38:B:348:ARG:HH11	38:B:351:LEU:HD21	1.85	0.42
38:B:393:LYS:HD3	38:B:394:LYS:NZ	2.34	0.42
39:C:171:LEU:HD22	39:C:176:ALA:HB3	2.01	0.42
42:F:48:LEU:HD11	61:b:96:LEU:C	2.44	0.42
42:F:185:CYS:SG	42:F:187:GLU:HB3	2.59	0.42
44:H:173:ARG:NE	72:m:101:VAL:HB	2.34	0.42
45:I:12:CYS:HA	45:I:59:GLN:HE22	1.83	0.42
45:I:13:LYS:HE3	45:I:14:ASN:OD1	2.19	0.42
45:I:189:ARG:HA	45:I:189:ARG:HH11	1.84	0.42
46:J:36:ALA:O	46:J:40:LEU:HD13	2.19	0.42
47:L:25:TRP:HB2	49:N:200:LEU:O	2.19	0.42
47:L:110:LEU:O	47:L:114:VAL:HG23	2.19	0.42
48:M:34:ASN:HD22	48:M:35:ARG:HH11	1.68	0.42
49:N:13:LYS:HG2	68:i:48:CYS:SG	2.59	0.42
49:N:83:LYS:HB2	79:5:34:A:OP1	2.20	0.42
49:N:174:LEU:HA	49:N:183:THR:OG1	2.19	0.42
51:P:132:ALA:HA	79:5:1597:G:N7	2.34	0.42
52:Q:12:LYS:HE2	52:Q:16:LYS:CE	2.49	0.42
52:Q:157:GLY:CA	60:a:50:PRO:HG3	2.49	0.42
54:T:88:ARG:H	54:T:88:ARG:HG3	1.62	0.42
54:T:112:ASN:OD1	54:T:128:LEU:HG	2.19	0.42
55:U:49:VAL:CG1	55:U:57:GLY:HA3	2.49	0.42
56:V:109:LYS:NZ	56:V:111:GLU:HB2	2.34	0.42
59:Z:112:ARG:O	59:Z:116:VAL:HG23	2.20	0.42
62:c:62:TYR:O	62:c:66:LEU:HG	2.19	0.42
62:c:81:LEU:HD22	62:c:91:VAL:O	2.19	0.42
65:f:72:GLY:HA3	65:f:88:PHE:CD1	2.45	0.42
69:j:16:HIS:HA	69:j:28:HIS:HA	2.01	0.42
69:j:21:ARG:HD3	81:8:102:G:H4'	2.00	0.42
75:p:49:ARG:HB2	75:p:55:TRP:CH2	2.54	0.42
76:r:26:SER:HB3	76:r:31:ASN:HD22	1.85	0.42
76:r:38:PHE:HA	76:r:41:ASN:HD21	1.82	0.42
76:r:114:ALA:O	76:r:118:LEU:HD23	2.19	0.42
79:5:441:G:H2'	79:5:442:G:C8	2.54	0.42
79:5:465:G:O2'	79:5:466:A:H5'	2.19	0.42
79:5:479:G:H2'	79:5:480:C:H6	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:1078:A:H3'	79:5:1079:C:C5'	2.49	0.42
79:5:1200:G:O2'	79:5:1201:U:H5'	2.19	0.42
79:5:1322:A:H1'	79:5:1324:A:OP2	2.20	0.42
79:5:1394:G:H2'	79:5:1395:U:O4'	2.18	0.42
79:5:1441:C:H2'	79:5:1442:C:H6	1.84	0.42
79:5:1572:U:H2'	79:5:1573:G:H5'	2.00	0.42
79:5:1845:U:H2'	79:5:1846:G:C8	2.55	0.42
79:5:2258:C:H3'	79:5:2259:G:H5''	2.01	0.42
79:5:2308:A:C2'	79:5:2309:G:H5'	2.49	0.42
79:5:2682:G:H2'	79:5:2683:C:C6	2.55	0.42
79:5:3743:G:H2'	79:5:3744:G:C8	2.54	0.42
79:5:3893:C:H2'	79:5:3894:A:H8	1.83	0.42
79:5:4430:G:H2'	79:5:4431:U:O4'	2.19	0.42
80:7:112:U:H2'	80:7:113:G:C8	2.46	0.42
81:8:44:A:H2'	81:8:45:C:C6	2.54	0.42
1:R:37:SER:HA	79:5:2526:C:OP2	2.19	0.42
1:R:103:ARG:HA	1:R:106:LEU:CG	2.49	0.42
3:9:126:G:OP2	8:GG:195:LYS:HG2	2.19	0.42
3:9:160:U:H3'	3:9:161:U:H5''	2.01	0.42
3:9:927:C:H2'	3:9:928:G:C8	2.54	0.42
3:9:1045:U:H2'	3:9:1046:U:O4'	2.18	0.42
3:9:1083:A:H62	3:9:1841:C:H1'	1.84	0.42
3:9:1504:U:H2'	3:9:1505:U:C6	2.54	0.42
3:9:1631:U:H2'	3:9:1632:G:H5'	2.02	0.42
5:BB:31:TYR:HD1	5:BB:94:LYS:HA	1.83	0.42
5:BB:152:LYS:H	28:RR:132:ARG:HD2	1.85	0.42
6:CC:65:LYS:HE2	6:CC:273:LEU:CD1	2.49	0.42
6:CC:182:CYS:HB3	16:WW:99:PHE:CE1	2.54	0.42
9:HH:60:ILE:O	9:HH:93:VAL:HG12	2.19	0.42
10:II:43:ILE:HG23	10:II:56:ARG:C	2.44	0.42
12:LL:20:LYS:HD3	12:LL:20:LYS:HA	1.85	0.42
16:WW:105:THR:O	16:WW:123:GLY:HA3	2.19	0.42
19:aa:87:ARG:HB3	19:aa:91:ALA:HB3	2.01	0.42
21:ee:85:VAL:O	21:ee:89:THR:HG23	2.19	0.42
23:FF:127:ARG:HH11	23:FF:128:ILE:H	1.65	0.42
25:MM:61:TYR:O	25:MM:65:VAL:HG12	2.18	0.42
26:PP:87:PRO:HB3	26:PP:112:ILE:CD1	2.49	0.42
28:RR:24:LEU:HD23	28:RR:58:MET:HE3	2.01	0.42
29:SS:60:THR:HG23	29:SS:63:GLU:HG2	2.01	0.42
37:A:174:ARG:CD	75:p:52:VAL:HG11	2.49	0.42
37:A:181:LYS:HE2	37:A:184:ARG:HG2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:B:254:ILE:HD11	79:5:3897:G:H4'	2.00	0.42
38:B:286:LYS:HB2	38:B:365:LEU:CD2	2.48	0.42
39:C:34:PRO:HG2	76:r:9:VAL:CG2	2.50	0.42
39:C:190:ARG:NE	39:C:199:ARG:HB3	2.34	0.42
39:C:197:ARG:HH12	79:5:350:C:H3'	1.84	0.42
39:C:284:MET:HE1	52:Q:124:ASP:CB	2.43	0.42
41:E:61:ARG:HD3	79:5:1237:C:O2	2.19	0.42
41:E:97:LYS:HE3	41:E:110:VAL:HG21	2.01	0.42
41:E:152:ILE:HD11	41:E:164:ARG:HB3	2.01	0.42
41:E:155:ILE:HD13	41:E:192:THR:CG2	2.46	0.42
43:G:119:GLN:HG3	49:N:28:TRP:CH2	2.54	0.42
43:G:282:ARG:HA	43:G:285:GLU:OE1	2.20	0.42
44:H:129:ARG:HH21	79:5:4704:C:H4'	1.84	0.42
45:I:115:MET:HE3	45:I:115:MET:HB3	1.96	0.42
45:I:115:MET:HA	45:I:118:ALA:HB2	2.01	0.42
45:I:206:LEU:N	80:7:63:C:H5''	2.32	0.42
45:I:209:TRP:HA	45:I:212:LEU:HG	2.01	0.42
46:J:141:ILE:O	46:J:148:THR:HA	2.20	0.42
47:L:62:PRO:HB3	79:5:73:A:N3	2.35	0.42
48:M:103:LYS:HE3	48:M:103:LYS:HB3	1.67	0.42
48:M:106:ASP:HA	48:M:109:ARG:NH1	2.34	0.42
49:N:161:MET:HE2	49:N:161:MET:HB2	1.82	0.42
54:T:41:ASP:OD1	54:T:97:LYS:HB3	2.18	0.42
57:X:86:ALA:O	57:X:90:ILE:HD13	2.19	0.42
57:X:90:ILE:HG13	57:X:96:LEU:HA	1.99	0.42
57:X:102:VAL:HG12	57:X:134:LYS:HB2	2.00	0.42
57:X:123:LYS:HG2	57:X:139:ARG:HB3	2.01	0.42
58:Y:59:ARG:HA	58:Y:63:LYS:HD3	2.01	0.42
59:Z:25:ILE:HG12	59:Z:43:VAL:CG1	2.50	0.42
59:Z:58:GLY:HA2	79:5:4149:C:OP2	2.18	0.42
59:Z:119:GLU:O	59:Z:123:LYS:HG3	2.19	0.42
62:c:99:PRO:HB3	62:c:104:ILE:CG2	2.49	0.42
63:d:77:ILE:HD11	79:5:2370:A:C2	2.55	0.42
67:h:47:ILE:O	67:h:51:ARG:HG3	2.19	0.42
76:r:96:MET:HE1	79:5:677:G:O3'	2.18	0.42
78:t:13:VAL:HG12	78:t:62:LEU:HB2	2.01	0.42
79:5:121:A:H5'	79:5:122:U:OP2	2.19	0.42
79:5:192:G:O2'	79:5:193:G:H5'	2.20	0.42
79:5:261:G:N1	79:5:262:C:C4	2.87	0.42
79:5:287:U:H2'	79:5:288:G:H8	1.83	0.42
79:5:385:A:O2'	79:5:387:G:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:956:A:O2'	79:5:2076:G:H5''	2.20	0.42
79:5:961:G:H21	79:5:973:G:H5'	1.84	0.42
79:5:1345:A:H2'	79:5:1346:C:H6	1.83	0.42
79:5:1476:C:H2'	79:5:1477:C:O4'	2.19	0.42
79:5:1608:G:H2'	79:5:1609:U:H6	1.84	0.42
79:5:1663:C:O2'	79:5:1664:U:H5'	2.20	0.42
79:5:2748:C:H2'	79:5:2749:C:H6	1.83	0.42
79:5:3938:G:H4'	79:5:3939:G:O5'	2.20	0.42
79:5:4405:G:C2	79:5:4440:G:H1'	2.54	0.42
79:5:4565:C:O2'	79:5:4566:U:H5'	2.19	0.42
79:5:4696:C:H2'	79:5:4697:U:C6	2.54	0.42
81:8:6:C:O2'	81:8:7:U:H5'	2.19	0.42
81:8:18:U:H2'	81:8:19:C:C6	2.54	0.42
3:9:103:A:H5'	10:II:12:ARG:HH22	1.84	0.42
3:9:167:G:H2'	3:9:168:C:O4'	2.19	0.42
3:9:191:A:P	10:II:142:SER:HB2	2.59	0.42
3:9:1025:U:H1'	3:9:1160:U:O2'	2.20	0.42
3:9:1063:C:O3'	14:OO:150:ARG:HG2	2.20	0.42
3:9:1164:G:H2'	3:9:1165:G:N3	2.34	0.42
3:9:1285:G:H5''	25:MM:61:TYR:CZ	2.55	0.42
3:9:1373:C:H2'	3:9:1374:C:H6	1.84	0.42
3:9:1470:C:H2'	3:9:1471:C:H6	1.84	0.42
3:9:1578:U:H5''	3:9:1579:A:O4'	2.20	0.42
5:BB:142:PHE:O	5:BB:207:LEU:HD22	2.20	0.42
8:GG:55:GLY:H	8:GG:63:MET:HE1	1.84	0.42
9:HH:130:LEU:CD2	9:HH:142:LYS:HE2	2.46	0.42
10:II:197:PHE:O	10:II:200:ARG:HG2	2.19	0.42
11:JJ:18:ARG:CZ	11:JJ:20:PHE:HB2	2.49	0.42
11:JJ:47:LYS:HA	11:JJ:50:LEU:CD2	2.49	0.42
14:OO:32:HIS:HB3	14:OO:98:ARG:HH12	1.84	0.42
16:WW:28:ARG:HA	16:WW:60:LYS:HG2	2.01	0.42
17:XX:74:LEU:HD11	17:XX:77:ASN:OD1	2.19	0.42
18:YY:7:ILE:HD12	18:YY:43:LYS:HG2	2.00	0.42
18:YY:99:LYS:HD2	18:YY:99:LYS:HA	1.88	0.42
22:DD:39:VAL:HG22	22:DD:48:ILE:HG13	2.00	0.42
23:FF:40:ALA:H	23:FF:68:ILE:HG12	1.84	0.42
23:FF:157:GLY:HA3	23:FF:176:GLU:OE2	2.19	0.42
25:MM:30:GLY:O	25:MM:112:LYS:HG2	2.20	0.42
25:MM:45:ARG:HD2	25:MM:45:ARG:HA	1.85	0.42
26:PP:60:LEU:HD13	26:PP:89:MET:CG	2.50	0.42
27:QQ:116:ASP:HB3	27:QQ:119:LEU:CD2	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:ZZ:53:ALA:O	32:ZZ:57:LYS:HB2	2.20	0.42
36:gg:67:SER:HB3	36:gg:83:TRP:CD1	2.55	0.42
36:gg:106:LYS:CB	36:gg:125:ARG:HB2	2.49	0.42
37:A:48:ILE:HB	75:p:63:THR:HG22	2.00	0.42
37:A:108:PRO:O	37:A:111:THR:HG23	2.19	0.42
37:A:227:ARG:NH2	79:5:3665:G:H5''	2.34	0.42
39:C:5:ARG:NH2	39:C:25:PRO:HA	2.34	0.42
39:C:158:VAL:HG22	39:C:217:ILE:HD13	2.01	0.42
39:C:171:LEU:CD2	39:C:176:ALA:HB3	2.49	0.42
39:C:210:ILE:HD11	39:C:232:VAL:CG1	2.49	0.42
41:E:54:ARG:HD3	79:5:1280:C:C5	2.54	0.42
42:F:64:TYR:CZ	42:F:68:ILE:HD11	2.54	0.42
43:G:90:LYS:HE3	79:5:4127:A:C2	2.54	0.42
47:L:59:VAL:HB	79:5:74:G:H5''	2.01	0.42
47:L:89:LYS:HD2	67:h:114:TYR:CE2	2.55	0.42
48:M:15:VAL:HG22	48:M:21:ALA:HA	2.00	0.42
49:N:116:LEU:HD12	49:N:133:ILE:HG21	2.01	0.42
50:O:37:ARG:HD3	50:O:108:ILE:CD1	2.43	0.42
52:Q:159:PRO:HD3	52:Q:186:TYR:OH	2.19	0.42
58:Y:89:LYS:HD3	58:Y:95:VAL:CG2	2.47	0.42
59:Z:42:LEU:HD13	59:Z:74:VAL:CG2	2.50	0.42
59:Z:52:LYS:NZ	79:5:2754:G:H5''	2.35	0.42
66:g:62:LYS:NZ	79:5:2516:G:H4'	2.34	0.42
77:s:57:LYS:HA	79:5:2020:U:O3'	2.19	0.42
79:5:6:C:H3'	79:5:7:C:C5	2.54	0.42
79:5:65:A:N1	79:5:76:A:H5''	2.34	0.42
79:5:1195:G:H2'	79:5:1196:G:H8	1.83	0.42
79:5:1495:G:O2'	79:5:1496:G:H5'	2.20	0.42
79:5:1942:A:N6	79:5:2039:G:H2'	2.34	0.42
79:5:1968:G:H2'	79:5:1969:G:C8	2.55	0.42
79:5:2083:C:OP1	79:5:2084:C:H5''	2.19	0.42
79:5:2382:A:H2'	79:5:2383:C:C6	2.54	0.42
79:5:2484:A:H5''	79:5:2485:U:OP2	2.19	0.42
79:5:2611:A:O5'	79:5:2688:G:H4'	2.19	0.42
79:5:2632:U:H2'	79:5:2633:U:C5	2.54	0.42
79:5:3738:G:H2'	79:5:3739:C:C6	2.54	0.42
79:5:3750:G:H2'	79:5:3751:G:C8	2.55	0.42
79:5:4682:U:O2'	79:5:4683:U:H5'	2.19	0.42
81:8:72:A:H1'	81:8:88:A:N3	2.34	0.42
81:8:106:G:O4'	81:8:136:U:H2'	2.18	0.42
2:W:31:PHE:CE2	2:W:37:GLU:HA	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:54:A:O3'	3:9:506:G:H4'	2.19	0.42
3:9:143:U:OP2	3:9:143:U:H3'	2.20	0.42
3:9:176:U:H2'	3:9:177:G:O4'	2.20	0.42
3:9:339:A:H2'	3:9:340:C:C5	2.54	0.42
3:9:381:C:OP1	10:II:48:VAL:HB	2.20	0.42
3:9:496:C:H5'	7:EE:29:PRO:CB	2.50	0.42
3:9:497:C:H2'	3:9:498:C:C6	2.54	0.42
3:9:873:G:H22	12:LL:153:LYS:HD3	1.84	0.42
3:9:1253:A:H1'	3:9:1666:C:O2'	2.19	0.42
3:9:1426:U:H2'	3:9:1427:C:H6	1.84	0.42
3:9:1672:U:H2'	3:9:1673:U:C6	2.54	0.42
5:BB:180:ASP:O	5:BB:184:VAL:HG22	2.20	0.42
6:CC:114:LYS:HB2	6:CC:121:ARG:HD3	2.01	0.42
8:GG:32:MET:HA	8:GG:52:ILE:HG23	2.02	0.42
11:JJ:113:GLN:O	11:JJ:117:LEU:HD23	2.18	0.42
15:VV:32:ILE:HG22	15:VV:55:ILE:HB	2.01	0.42
16:WW:3:ARG:HD3	16:WW:6:VAL:HA	2.01	0.42
22:DD:97:CYS:O	22:DD:101:GLN:HG2	2.20	0.42
23:FF:88:MET:O	23:FF:92:ILE:HG13	2.19	0.42
26:PP:121:ILE:HD13	29:SS:120:HIS:CD2	2.54	0.42
36:gg:64:HIS:HB3	36:gg:83:TRP:HB2	2.00	0.42
37:A:90:CYS:HB3	37:A:101:VAL:HG13	2.00	0.42
38:B:128:LYS:CE	38:B:131:THR:HG21	2.49	0.42
38:B:338:VAL:HG22	79:5:4624:A:O2'	2.20	0.42
39:C:77:PRO:O	39:C:90:GLY:HA2	2.20	0.42
39:C:349:LEU:HB3	39:C:353:ARG:NH2	2.30	0.42
40:D:95:TYR:HE2	40:D:199:ILE:HG12	1.84	0.42
40:D:107:ARG:HD3	40:D:248:ARG:NH1	2.34	0.42
42:F:104:VAL:HA	42:F:107:VAL:HG12	2.00	0.42
42:F:215:PRO:HG3	42:F:219:MET:HE1	2.02	0.42
43:G:196:VAL:O	43:G:199:LEU:HG	2.19	0.42
43:G:212:HIS:CE1	43:G:238:LYS:HA	2.54	0.42
44:H:123:ILE:HB	44:H:125:ARG:HE	1.83	0.42
45:I:147:HIS:HA	45:I:150:GLU:OE2	2.20	0.42
47:L:52:ALA:CB	47:L:153:PRO:HA	2.48	0.42
49:N:159:ARG:NH1	49:N:164:LEU:HB3	2.35	0.42
52:Q:148:VAL:HG12	52:Q:152:PHE:CE2	2.54	0.42
55:U:47:ILE:HD11	55:U:56:LEU:HA	2.02	0.42
57:X:99:ILE:HD13	57:X:135:LYS:HA	2.02	0.42
60:a:98:ALA:HB3	60:a:123:ILE:HD12	2.01	0.42
61:b:62:ALA:O	61:b:65:MET:HG3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:f:29:LYS:HB2	65:f:83:MET:SD	2.59	0.42
65:f:45:LYS:CD	65:f:107:PRO:HD2	2.50	0.42
66:g:99:GLU:O	66:g:103:VAL:HG23	2.20	0.42
67:h:81:LEU:HB3	81:8:38:U:O4'	2.20	0.42
70:k:57:LYS:O	70:k:60:LEU:HD13	2.19	0.42
72:m:77:LEU:CD1	72:m:81:ALA:HB3	2.50	0.42
77:s:34:ASN:HB2	79:5:1968:G:O3'	2.20	0.42
78:t:58:ILE:HD13	78:t:79:ALA:HB3	2.01	0.42
78:t:80:LEU:HA	78:t:83:LYS:CG	2.49	0.42
79:5:86:U:H2'	79:5:87:A:C8	2.55	0.42
79:5:100:C:H2'	79:5:101:A:O4'	2.19	0.42
79:5:675:C:H2'	79:5:676:C:H6	1.84	0.42
79:5:729:G:N3	79:5:729:G:H5'	2.35	0.42
79:5:954:C:O2'	79:5:955:G:H5'	2.18	0.42
79:5:1168:G:H2'	79:5:1169:G:C8	2.54	0.42
79:5:1202:C:H2'	79:5:1203:G:C8	2.54	0.42
79:5:1739:G:H1'	79:5:1742:A:H62	1.83	0.42
79:5:1801:A:O2'	79:5:1802:A:H5'	2.19	0.42
79:5:2092:G:C2	79:5:2097:U:C5	3.07	0.42
79:5:2717:G:H2'	79:5:2718:U:O4'	2.19	0.42
79:5:3911:C:H1'	79:5:4395:U:O2	2.19	0.42
79:5:5006:U:H4'	79:5:5007:A:C5'	2.48	0.42
80:7:95:C:H2'	80:7:96:U:O4'	2.19	0.42
81:8:88:A:H2'	81:8:89:U:O4'	2.18	0.42
1:R:23:TRP:CH2	1:R:25:ASP:HA	2.55	0.42
1:R:58:HIS:NE2	79:5:4645:C:H5''	2.35	0.42
3:9:483:C:H2'	3:9:484:A:O4'	2.19	0.42
3:9:600:G:H2'	3:9:601:G:H8	1.85	0.42
3:9:912:C:H3'	3:9:913:A:H5''	2.02	0.42
3:9:1012:A:H5''	13:NN:10:GLY:HA3	2.01	0.42
3:9:1065:G:O2'	3:9:1066:U:H5'	2.20	0.42
4:AA:128:ARG:NH1	4:AA:152:SER:HA	2.33	0.42
4:AA:177:MET:HA	4:AA:180:ARG:HG2	2.00	0.42
5:BB:78:GLU:HG3	5:BB:79:VAL:H	1.85	0.42
5:BB:79:VAL:HB	5:BB:81:PHE:CE2	2.54	0.42
5:BB:86:LEU:HA	5:BB:99:ASN:O	2.20	0.42
5:BB:120:MET:HG2	5:BB:142:PHE:HE1	1.85	0.42
5:BB:170:GLU:HA	5:BB:173:THR:OG1	2.19	0.42
6:CC:146:GLU:OE1	6:CC:148:ALA:HB3	2.20	0.42
7:EE:9:LEU:HD21	7:EE:14:ALA:CA	2.50	0.42
7:EE:138:HIS:CD2	7:EE:148:ARG:HB3	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:GG:122:PRO:O	8:GG:126:ASP:HB3	2.20	0.42
9:HH:143:ARG:HB2	9:HH:155:LYS:HB2	2.00	0.42
14:OO:88:LEU:HD12	14:OO:90:ILE:CD1	2.50	0.42
16:WW:20:ARG:HD2	16:WW:22:LYS:NZ	2.35	0.42
16:WW:25:VAL:CG2	16:WW:65:LEU:HD11	2.49	0.42
16:WW:105:THR:CB	16:WW:126:LEU:HD21	2.50	0.42
27:QQ:124:PRO:HA	27:QQ:126:ARG:HH12	1.84	0.42
28:RR:11:LYS:O	28:RR:15:VAL:HG12	2.20	0.42
28:RR:51:ALA:HA	28:RR:54:VAL:HG22	2.01	0.42
28:RR:105:MET:HE2	28:RR:105:MET:HB2	1.83	0.42
30:TT:98:SER:O	30:TT:102:ARG:HD3	2.18	0.42
32:ZZ:63:PRO:HB3	32:ZZ:96:LEU:HD13	2.01	0.42
32:ZZ:104:ARG:HB3	32:ZZ:104:ARG:NH1	2.34	0.42
34:dd:42:CYS:HA	34:dd:45:GLN:NE2	2.32	0.42
36:gg:172:LYS:HG2	36:gg:193:GLY:C	2.45	0.42
36:gg:178:ASN:HB3	36:gg:181:ASN:OD1	2.20	0.42
37:A:198:ARG:O	79:5:3651:A:H5''	2.19	0.42
38:B:81:THR:CG2	38:B:331:VAL:HG22	2.50	0.42
39:C:154:VAL:HG13	39:C:155:GLU:O	2.20	0.42
39:C:294:LYS:HA	39:C:299:GLN:HE21	1.85	0.42
40:D:83:LEU:HB2	40:D:84:PRO:HD3	2.01	0.42
40:D:215:ASP:OD1	40:D:218:ALA:HB3	2.20	0.42
41:E:126:ARG:HE	41:E:126:ARG:HB2	1.63	0.42
42:F:75:ARG:CZ	79:5:728:U:H5''	2.50	0.42
42:F:106:LYS:O	42:F:110:LEU:HD23	2.19	0.42
43:G:219:LEU:HD13	43:G:220:VAL:HG13	2.01	0.42
43:G:242:ARG:CZ	81:8:154:G:H5'	2.50	0.42
43:G:310:LYS:O	43:G:314:LEU:HG	2.19	0.42
46:J:161:GLU:HG3	46:J:164:ARG:NH2	2.34	0.42
47:L:55:ILE:HD13	47:L:120:TYR:CG	2.55	0.42
51:P:29:THR:HG21	51:P:146:ILE:HD11	2.01	0.42
51:P:122:ALA:HB3	51:P:143:PRO:HG2	2.01	0.42
52:Q:18:PRO:HD3	52:Q:52:PHE:CD1	2.55	0.42
52:Q:75:ARG:HH21	79:5:1456:C:H2'	1.85	0.42
53:S:7:LEU:HB2	53:S:107:THR:HG23	2.01	0.42
54:T:2:THR:HG22	79:5:4219:A:H5''	2.01	0.42
55:U:104:ALA:HB2	55:U:110:TYR:HE1	1.85	0.42
56:V:82:ILE:HG13	56:V:82:ILE:H	1.74	0.42
61:b:32:LEU:O	61:b:35:VAL:HG23	2.19	0.42
64:e:58:ILE:HD11	79:5:1663:C:O3'	2.20	0.42
66:g:11:LEU:HD23	79:5:2513:A:OP1	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:g:61:PRO:HD3	79:5:2598:A:O2'	2.19	0.42
67:h:25:LYS:HA	67:h:28:LEU:CG	2.49	0.42
70:k:52:LYS:HA	70:k:55:LYS:HG2	2.01	0.42
77:s:59:THR:HG22	79:5:1960:A:H5''	2.01	0.42
78:t:123:ARG:HA	78:t:123:ARG:HD2	1.74	0.42
79:5:82:U:H2'	79:5:83:C:O4'	2.20	0.42
79:5:358:C:H2'	79:5:359:A:C8	2.55	0.42
79:5:965:G:O2'	79:5:966:A:H5'	2.20	0.42
79:5:1381:U:H5'	79:5:1382:G:OP2	2.19	0.42
79:5:1422:G:O2'	79:5:1423:U:H5'	2.19	0.42
79:5:1818:G:H4'	79:5:1819:G:OP2	2.20	0.42
79:5:1870:C:H2'	79:5:1871:A:H8	1.85	0.42
79:5:2078:C:H2'	79:5:2079:G:H8	1.84	0.42
79:5:2267:U:C2	79:5:2270:G:H4'	2.55	0.42
79:5:2448:G:H2'	79:5:2449:A:C8	2.54	0.42
79:5:3645:U:O2'	79:5:4553:A:H1'	2.20	0.42
79:5:3664:G:O2'	79:5:3665:G:H5'	2.20	0.42
79:5:4212:A:H4'	79:5:4213:A:N3	2.34	0.42
80:7:7:G:O2'	80:7:8:G:H5'	2.20	0.42
1:R:80:LYS:HD2	79:5:2889:G:OP1	2.19	0.42
3:9:14:C:H2'	3:9:15:U:C6	2.55	0.42
3:9:39:A:H3'	3:9:40:A:H8	1.85	0.42
3:9:375:U:OP1	12:LL:58:LYS:HE2	2.19	0.42
3:9:418:A:H3'	3:9:419:G:H8	1.84	0.42
3:9:1018:U:H2'	3:9:1019:C:C5	2.54	0.42
3:9:1101:U:H2'	3:9:1102:G:C8	2.55	0.42
3:9:1232:U:OP2	29:SS:135:HIS:HB2	2.19	0.42
3:9:1718:G:N2	3:9:1814:G:H2'	2.34	0.42
3:9:1776:G:H2'	3:9:1777:G:H8	1.85	0.42
4:AA:60:LEU:HD11	15:VV:78:ILE:HG22	2.00	0.42
4:AA:121:LEU:HD23	4:AA:143:PRO:CG	2.49	0.42
6:CC:69:LEU:CG	6:CC:273:LEU:HD21	2.46	0.42
6:CC:83:LEU:HD13	15:VV:13:VAL:O	2.19	0.42
6:CC:84:PHE:CZ	6:CC:262:THR:HG23	2.54	0.42
6:CC:243:ALA:HA	6:CC:246:LYS:HZ1	1.83	0.42
8:GG:3:LEU:HD23	8:GG:18:VAL:HG23	2.02	0.42
8:GG:20:ASP:OD2	8:GG:23:LYS:HG3	2.20	0.42
8:GG:232:ARG:HD3	8:GG:235:SER:OG	2.19	0.42
9:HH:71:SER:O	9:HH:74:LYS:HG2	2.19	0.42
14:OO:43:HIS:CE1	14:OO:52:THR:HB	2.55	0.42
16:WW:42:MET:CE	16:WW:49:GLU:HA	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:XX:8:ARG:HA	17:XX:8:ARG:HD2	1.66	0.42
19:aa:39:PHE:HE1	19:aa:68:TYR:HD2	1.67	0.42
22:DD:132:LYS:HE3	22:DD:189:MET:CE	2.50	0.42
23:FF:102:LEU:HD13	32:ZZ:110:THR:CG2	2.49	0.42
26:PP:60:LEU:HD23	26:PP:76:VAL:HG21	2.02	0.42
27:QQ:38:PRO:HG3	30:TT:8:ASP:OD1	2.19	0.42
36:gg:44:LYS:HG2	36:gg:54:ILE:O	2.19	0.42
36:gg:52:TYR:CD2	36:gg:309:VAL:HG11	2.54	0.42
37:A:39:GLY:CA	37:A:93:LYS:HE2	2.49	0.42
37:A:46:LYS:CE	37:A:60:LYS:HE3	2.48	0.42
38:B:29:VAL:HG13	38:B:348:ARG:NE	2.34	0.42
39:C:24:LEU:HD13	39:C:25:PRO:O	2.19	0.42
39:C:138:MET:HE1	39:C:144:ILE:HB	2.01	0.42
39:C:221:PHE:HB3	39:C:229:LEU:HD21	2.01	0.42
40:D:209:ARG:HA	40:D:212:MET:HG3	2.01	0.42
40:D:279:ARG:CG	40:D:283:LYS:HE3	2.49	0.42
42:F:102:PRO:HA	42:F:105:ARG:NE	2.34	0.42
43:G:306:LEU:O	43:G:310:LYS:HG3	2.18	0.42
45:I:13:LYS:HD3	79:5:1867:A:OP1	2.20	0.42
45:I:169:LYS:NZ	45:I:179:ASP:HB3	2.35	0.42
46:J:34:THR:O	46:J:38:LYS:HG2	2.20	0.42
48:M:35:ARG:HA	48:M:51:PRO:HA	2.01	0.42
48:M:91:TRP:CD1	48:M:94:LYS:HE3	2.55	0.42
50:O:98:ALA:HA	50:O:101:ARG:NH1	2.35	0.42
52:Q:34:PHE:O	52:Q:37:ARG:HG2	2.19	0.42
55:U:84:LYS:HA	55:U:87:THR:HG22	2.00	0.42
56:V:7:GLY:HA2	79:5:4596:C:OP1	2.19	0.42
64:e:92:ASN:OD1	64:e:120:ILE:HG12	2.20	0.42
64:e:108:ARG:NH1	64:e:128:ARG:HD3	2.34	0.42
66:g:43:LYS:CB	66:g:52:ARG:HD3	2.49	0.42
67:h:112:ARG:CZ	67:h:113:LEU:HG	2.50	0.42
74:o:9:ARG:CA	74:o:20:PRO:HA	2.45	0.42
76:r:11:ARG:NH2	79:5:2269:C:H2'	2.35	0.42
77:s:75:LEU:CD1	77:s:79:LEU:HD11	2.50	0.42
78:t:18:THR:HB	78:t:57:ARG:HG3	2.02	0.42
78:t:135:THR:O	78:t:139:VAL:HG23	2.20	0.42
79:5:58:G:C4'	79:5:59:A:H4'	2.50	0.42
79:5:351:C:O2'	79:5:352:G:H5'	2.19	0.42
79:5:688:U:H2'	79:5:689:U:C6	2.55	0.42
79:5:2086:G:O2'	79:5:2087:C:H5'	2.20	0.42
79:5:2415:U:O2'	79:5:2416:G:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:2863:G:H2'	79:5:2864:A:C8	2.54	0.42
79:5:3632:C:H2'	79:5:3633:C:H6	1.84	0.42
79:5:3825:A:H2'	79:5:3826:C:O4'	2.20	0.42
79:5:3882:C:H2'	79:5:3883:U:C6	2.55	0.42
79:5:3920:U:H1'	79:5:4544:A:N3	2.34	0.42
79:5:4437:U:O2	79:5:4515:G:H4'	2.20	0.42
79:5:4933:C:H2'	79:5:4934:A:C8	2.55	0.42
81:8:49:G:H2'	81:8:50:C:H6	1.85	0.42
1:R:97:ARG:HH11	1:R:97:ARG:HA	1.85	0.42
3:9:11:A:O2'	3:9:12:U:H5'	2.19	0.42
3:9:109:U:H2'	3:9:110:U:C6	2.54	0.42
3:9:570:C:H42	3:9:580:U:H3	1.65	0.42
3:9:869:A:H1'	3:9:915:G:H8	1.83	0.42
3:9:999:G:C8	19:aa:17:HIS:HB3	2.55	0.42
3:9:1080:A:H5''	3:9:1184:G:O2'	2.20	0.42
3:9:1178:U:H2'	3:9:1179:G:O4'	2.20	0.42
3:9:1372:U:H2'	3:9:1373:C:C6	2.55	0.42
3:9:1457:U:H2'	3:9:1458:G:C8	2.55	0.42
3:9:1500:G:O2'	3:9:1501:C:H5'	2.20	0.42
3:9:1629:C:H4'	29:SS:83:PHE:CD1	2.55	0.42
3:9:1836:G:H4'	3:9:1837:G:C8	2.55	0.42
4:AA:77:ILE:HD13	4:AA:99:ILE:CG2	2.50	0.42
4:AA:104:THR:O	4:AA:107:THR:HG23	2.20	0.42
4:AA:146:ALA:O	4:AA:161:ILE:HG22	2.20	0.42
5:BB:107:ARG:HD2	14:OO:131:ASP:HB3	2.02	0.42
5:BB:150:ILE:CG2	28:RR:131:PRO:HA	2.47	0.42
6:CC:207:ALA:HB3	6:CC:210:PRO:CD	2.49	0.42
7:EE:221:ARG:O	7:EE:225:ILE:HG13	2.20	0.42
8:GG:70:HIS:HB3	8:GG:101:ILE:CG2	2.50	0.42
8:GG:212:LEU:O	8:GG:216:ARG:HG2	2.19	0.42
10:II:107:THR:CG2	10:II:108:PRO:HD3	2.44	0.42
11:JJ:13:TYR:HB3	11:JJ:45:ARG:CA	2.49	0.42
11:JJ:87:LEU:HG	11:JJ:96:TYR:CE2	2.54	0.42
12:LL:93:LEU:HD21	12:LL:102:PHE:CD2	2.54	0.42
16:WW:106:THR:HB	16:WW:121:THR:HG21	2.01	0.42
22:DD:190:LEU:CD2	22:DD:199:GLY:HA2	2.49	0.42
23:FF:99:ILE:HD11	32:ZZ:108:ILE:CD1	2.50	0.42
23:FF:108:PRO:HA	23:FF:111:VAL:HG23	2.01	0.42
23:FF:196:LEU:HA	23:FF:199:VAL:HG12	2.02	0.42
24:KK:15:LEU:HA	24:KK:21:MET:HE1	2.02	0.42
29:SS:47:LYS:HD2	29:SS:78:LYS:CG	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:SS:109:GLU:O	29:SS:112:GLU:HG3	2.18	0.42
32:ZZ:67:LEU:CD2	32:ZZ:110:THR:HG23	2.50	0.42
36:gg:8:ARG:HB3	36:gg:309:VAL:HG23	2.01	0.42
36:gg:38:LYS:HE2	36:gg:64:HIS:C	2.45	0.42
36:gg:184:LEU:HD13	36:gg:187:ASN:OD1	2.20	0.42
37:A:151:PRO:HG2	79:5:3661:G:O6	2.20	0.42
37:A:234:LYS:HB2	37:A:234:LYS:HE3	1.86	0.42
38:B:66:LYS:O	38:B:70:LYS:HE3	2.20	0.42
38:B:103:LYS:HA	79:5:4724:A:O2'	2.19	0.42
39:C:45:ARG:HH12	79:5:2340:C:H1'	1.84	0.42
39:C:112:HIS:HB2	49:N:202:ARG:O	2.19	0.42
39:C:133:LEU:HD13	39:C:134:PRO:HD2	2.01	0.42
40:D:155:THR:HG23	40:D:180:PHE:O	2.19	0.42
40:D:244:HIS:O	40:D:248:ARG:HG2	2.20	0.42
41:E:52:LEU:HD21	41:E:58:ARG:CD	2.49	0.42
44:H:53:LYS:HE3	44:H:54:ARG:NH2	2.34	0.42
44:H:162:GLN:OE1	44:H:180:TYR:HA	2.20	0.42
45:I:129:VAL:HG23	45:I:133:GLN:NE2	2.35	0.42
46:J:166:PHE:HE2	46:J:172:GLY:HA3	1.84	0.42
48:M:118:MET:HE3	48:M:119:ARG:N	2.35	0.42
50:O:121:PRO:HA	50:O:124:LEU:CD1	2.46	0.42
53:S:83:ARG:CB	53:S:127:MET:HE1	2.46	0.42
54:T:88:ARG:NH2	79:5:4299:U:H5'	2.35	0.42
57:X:90:ILE:HD12	57:X:95:THR:HG23	2.01	0.42
62:c:45:LEU:HD11	62:c:72:HIS:CB	2.49	0.42
65:f:91:ASN:HB2	79:5:440:U:H4'	2.02	0.42
67:h:22:ASP:O	67:h:25:LYS:HG3	2.20	0.42
69:j:59:THR:CG2	81:8:41:A:H4'	2.42	0.42
75:p:56:HIS:HA	75:p:62:LYS:O	2.19	0.42
78:t:25:THR:HG23	79:5:1982:G:O2'	2.19	0.42
79:5:198:A:H2'	79:5:237:G:O2'	2.18	0.42
79:5:452:A:H62	79:5:1293:G:H5''	1.85	0.42
79:5:496:G:O2'	79:5:497:G:H5'	2.18	0.42
79:5:724:C:H2'	79:5:725:G:H8	1.84	0.42
79:5:1983:A:H2'	79:5:1986:U:OP1	2.19	0.42
79:5:2060:G:O2'	79:5:2061:U:H5'	2.19	0.42
79:5:2089:G:H4'	79:5:2090:U:O5'	2.17	0.42
79:5:3706:C:H2'	79:5:3707:U:O4'	2.20	0.42
79:5:3788:C:H3'	79:5:3789:C:C5	2.55	0.42
79:5:3874:G:H2'	79:5:3875:G:O4'	2.20	0.42
79:5:3911:C:H1'	79:5:4395:U:N3	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:4510:A:N1	79:5:4592:C:H4'	2.34	0.42
79:5:4566:U:H2'	79:5:4567:G:O4'	2.19	0.42
1:R:41:ILE:O	1:R:45:ILE:HG13	2.20	0.42
1:R:138:LEU:HG	1:R:139:MET:HE2	2.01	0.42
2:W:19:ARG:CD	79:5:4629:U:H5''	2.49	0.42
3:9:26:U:H2'	3:9:27:A:H8	1.84	0.42
3:9:103:A:H5'	10:II:12:ARG:NH1	2.29	0.42
3:9:152:U:O2'	3:9:153:G:H5'	2.19	0.42
3:9:409:C:H2'	3:9:410:G:H8	1.85	0.42
3:9:432:G:O2'	3:9:433:A:H5'	2.20	0.42
3:9:560:A:OP1	11:JJ:174:LYS:HA	2.20	0.42
3:9:943:U:H2'	3:9:944:A:O4'	2.20	0.42
3:9:1142:G:N2	3:9:1144:A:H3'	2.34	0.42
3:9:1244:U:H2'	3:9:1245:G:H8	1.84	0.42
3:9:1388:A:N1	22:DD:161:GLY:HA2	2.35	0.42
3:9:1562:C:O2'	3:9:1563:G:H5'	2.19	0.42
3:9:1568:C:OP1	30:TT:96:SER:HB3	2.20	0.42
3:9:1611:G:H4'	29:SS:86:ARG:CZ	2.50	0.42
5:BB:35:ALA:HB2	5:BB:44:ILE:CG1	2.49	0.42
5:BB:115:LYS:HE2	5:BB:115:LYS:HB2	1.85	0.42
6:CC:62:PRO:HB2	6:CC:68:ARG:HD2	2.01	0.42
6:CC:251:LEU:HD22	6:CC:252:THR:N	2.35	0.42
7:EE:118:GLU:HA	7:EE:121:TYR:CE1	2.55	0.42
7:EE:138:HIS:NE2	7:EE:148:ARG:HB3	2.34	0.42
12:LL:72:ILE:HG23	12:LL:128:VAL:O	2.20	0.42
13:NN:26:LEU:HD21	13:NN:60:VAL:HG12	2.02	0.42
16:WW:47:ILE:HD11	16:WW:65:LEU:HD23	2.02	0.42
18:YY:37:LYS:O	18:YY:41:ARG:HG3	2.20	0.42
18:YY:114:MET:O	18:YY:122:LYS:HG2	2.20	0.42
19:aa:45:VAL:CG2	19:aa:49:ALA:HB3	2.50	0.42
22:DD:70:THR:HG22	22:DD:86:LEU:HB2	2.01	0.42
23:FF:151:ILE:HA	23:FF:154:LEU:CD2	2.50	0.42
25:MM:42:LEU:HG	25:MM:74:ILE:CD1	2.48	0.42
26:PP:121:ILE:HD11	26:PP:123:TYR:CE1	2.55	0.42
29:SS:23:ARG:NH1	32:ZZ:48:VAL:HG13	2.35	0.42
29:SS:98:VAL:CG1	29:SS:106:LYS:HD2	2.50	0.42
32:ZZ:92:LEU:HD21	32:ZZ:109:TYR:HE2	1.85	0.42
33:cc:18:LEU:HD12	33:cc:29:GLN:HB3	2.01	0.42
34:dd:33:LYS:HD2	34:dd:33:LYS:HA	1.84	0.42
36:gg:131:LEU:O	36:gg:138:CYS:HA	2.19	0.42
37:A:118:GLU:HA	37:A:158:ILE:HG21	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:A:225:ILE:HG21	37:A:233:ARG:O	2.19	0.42
38:B:36:ASP:OD2	38:B:39:LYS:HG3	2.20	0.42
39:C:25:PRO:CG	39:C:260:LEU:HD11	2.46	0.42
39:C:69:THR:HG21	79:5:3906:A:H2'	2.01	0.42
39:C:289:LEU:HD23	52:Q:27:LEU:HD21	2.02	0.42
39:C:312:ARG:NE	79:5:2274:C:H4'	2.35	0.42
44:H:47:LEU:CD1	44:H:55:LEU:HD23	2.50	0.42
44:H:111:LEU:HD23	44:H:112:VAL:N	2.35	0.42
46:J:113:ILE:HD13	46:J:119:TYR:HB2	2.02	0.42
48:M:34:ASN:O	48:M:35:ARG:HD2	2.20	0.42
50:O:35:VAL:HG13	50:O:104:VAL:HA	2.01	0.42
52:Q:63:LEU:HD23	52:Q:66:MET:HE1	2.02	0.42
58:Y:86:GLN:HB2	58:Y:96:HIS:HA	2.02	0.42
62:c:29:LEU:CD2	62:c:94:LEU:HD23	2.41	0.42
62:c:57:LYS:O	62:c:60:ILE:HG13	2.20	0.42
66:g:21:ARG:NH1	66:g:35:THR:HG22	2.34	0.42
66:g:26:PRO:HA	79:5:2639:U:H1'	2.01	0.42
68:i:3:LEU:HD12	68:i:5:TYR:CD1	2.54	0.42
70:k:24:LYS:CG	70:k:35:LYS:HB2	2.49	0.42
74:o:22:LYS:NZ	74:o:73:VAL:HA	2.34	0.42
79:5:8:U:H2'	79:5:9:C:C6	2.54	0.42
79:5:389:A:H3'	79:5:390:C:H6	1.85	0.42
79:5:508:G:O3'	79:5:509:A:H3'	2.20	0.42
79:5:703:G:H2'	79:5:704:C:H4'	2.02	0.42
79:5:720:G:O2'	79:5:721:G:H5'	2.19	0.42
79:5:1216:C:H2'	79:5:1217:G:C8	2.54	0.42
79:5:1328:G:H2'	79:5:1329:G:H8	1.85	0.42
79:5:1488:G:H2'	79:5:1489:G:H8	1.84	0.42
79:5:1574:G:H5''	79:5:2605:G:O2'	2.20	0.42
79:5:1866:U:H2'	79:5:1867:A:O4'	2.20	0.42
79:5:1918:U:O2'	79:5:1920:C:H5'	2.20	0.42
79:5:2295:C:H2'	79:5:2296:G:H8	1.83	0.42
79:5:2426:U:O2'	79:5:2427:G:H5'	2.19	0.42
79:5:2851:G:OP1	79:5:4495:G:H5'	2.20	0.42
79:5:2858:A:H2'	79:5:2859:G:O4'	2.20	0.42
79:5:2879:A:H5'	79:5:2881:A:O2'	2.20	0.42
79:5:4376:A:H5''	79:5:4377:G:O5'	2.20	0.42
79:5:4621:C:H2'	79:5:4622:A:H8	1.85	0.42
79:5:4632:U:H2'	79:5:4633:G:O4'	2.20	0.42
80:7:85:G:O2'	80:7:86:G:H5'	2.20	0.42
3:9:311:C:H5''	3:9:312:G:H5'	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:344:U:O2'	3:9:345:U:H5'	2.20	0.42
3:9:415:A:H2'	3:9:416:U:O4'	2.20	0.42
3:9:439:A:H2'	3:9:440:G:H8	1.85	0.42
3:9:605:A:H5''	21:ee:128:PRO:HD2	2.02	0.42
3:9:980:A:O2'	3:9:981:A:H5'	2.20	0.42
3:9:989:C:H1'	19:aa:32:LYS:NZ	2.35	0.42
3:9:1219:C:O2'	33:cc:26:GLN:HG3	2.20	0.42
3:9:1483:A:H4'	22:DD:160:SER:HB3	2.02	0.42
5:BB:71:LEU:CD2	5:BB:78:GLU:HG2	2.49	0.42
6:CC:163:VAL:HA	15:VV:27:LYS:NZ	2.34	0.42
6:CC:201:GLY:CA	11:JJ:98:LEU:HD11	2.49	0.42
6:CC:210:PRO:HD3	6:CC:236:PHE:HE2	1.85	0.42
7:EE:72:ILE:HG22	7:EE:90:ILE:HG12	2.02	0.42
9:HH:152:ARG:HH22	9:HH:154:ILE:HB	1.84	0.42
10:II:67:TRP:HB2	10:II:109:TYR:CZ	2.55	0.42
14:OO:119:LEU:HD11	14:OO:124:MET:HG3	2.02	0.42
15:VV:46:PHE:CE2	15:VV:48:GLY:HA2	2.54	0.42
17:XX:11:ARG:HA	17:XX:14:ARG:CG	2.47	0.42
18:YY:27:VAL:HG11	18:YY:35:VAL:HG21	2.02	0.42
22:DD:70:THR:HG22	22:DD:86:LEU:CD1	2.42	0.42
22:DD:101:GLN:HB2	22:DD:186:VAL:HG11	2.02	0.42
22:DD:132:LYS:CD	22:DD:156:LEU:HB3	2.49	0.42
26:PP:57:LEU:O	26:PP:61:ARG:HG3	2.19	0.42
33:cc:11:LEU:HB2	33:cc:35:MET:SD	2.60	0.42
35:ff:123:SER:HB2	35:ff:144:CYS:SG	2.60	0.42
36:gg:218:LEU:HD11	36:gg:241:PHE:HZ	1.83	0.42
37:A:4:VAL:HA	37:A:8:GLN:OE1	2.20	0.42
37:A:240:ALA:HB1	79:5:3658:C:H4'	2.02	0.42
39:C:165:LYS:HZ3	79:5:222:C:H3'	1.85	0.42
42:F:174:ILE:CD1	42:F:185:CYS:HA	2.50	0.42
42:F:178:LEU:HD11	42:F:206:PHE:CG	2.54	0.42
42:F:219:MET:HE3	42:F:219:MET:HB3	1.98	0.42
43:G:152:ALA:O	43:G:246:LEU:HD21	2.20	0.42
47:L:48:PRO:HG3	67:h:118:LYS:HE3	2.02	0.42
50:O:18:ARG:NH1	79:5:2053:C:H4'	2.35	0.42
50:O:183:LYS:HE2	50:O:183:LYS:HB2	1.79	0.42
51:P:69:ARG:NH1	79:5:3893:C:H1'	2.32	0.42
51:P:117:ILE:HD11	51:P:146:ILE:HG23	2.01	0.42
55:U:100:LEU:HA	55:U:113:ARG:O	2.20	0.42
56:V:51:ARG:NH1	79:5:3842:C:H4'	2.35	0.42
58:Y:2:LYS:HD2	58:Y:7:VAL:HG11	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:Z:12:LEU:HD22	59:Z:13:VAL:H	1.84	0.42
59:Z:105:ALA:O	59:Z:109:LYS:HG3	2.19	0.42
60:a:136:LYS:O	60:a:140:VAL:HG12	2.20	0.42
61:b:5:LYS:HG3	79:5:1873:A:OP2	2.20	0.42
63:d:90:ARG:O	63:d:91:LYS:HD3	2.20	0.42
65:f:9:ALA:O	65:f:100:ARG:HD3	2.20	0.42
66:g:5:LEU:HD21	66:g:31:VAL:C	2.45	0.42
66:g:93:ARG:CD	79:5:4122:G:H5'	2.50	0.42
70:k:21:LYS:HE3	70:k:37:ARG:O	2.20	0.42
70:k:39:SER:HB3	79:5:2773:G:OP1	2.20	0.42
78:t:130:LYS:HB3	78:t:154:ASP:OD2	2.20	0.42
79:5:436:C:H2'	79:5:437:G:H8	1.85	0.42
79:5:1665:C:O2'	79:5:1666:C:H5'	2.20	0.42
79:5:1877:G:H2'	79:5:1878:G:H8	1.84	0.42
79:5:2270:G:O2'	79:5:2271:C:H5'	2.20	0.42
79:5:2690:C:H2'	79:5:2691:U:O4'	2.20	0.42
79:5:3729:U:H2'	79:5:3730:U:H6	1.84	0.42
79:5:4080:C:H2'	79:5:4081:G:H8	1.84	0.42
79:5:4088:C:H4'	79:5:4166:G:OP1	2.20	0.42
79:5:4536:C:H2'	79:5:4537:C:C6	2.54	0.42
79:5:4657:U:H3'	79:5:4658:G:H5''	2.01	0.42
79:5:4768:G:H4'	79:5:4873:G:N1	2.34	0.42
81:8:130:C:H2'	81:8:131:G:H8	1.84	0.42
1:R:176:ARG:HH12	3:9:909:G:H4'	1.84	0.41
3:9:10:G:H21	6:CC:114:LYS:HD3	1.85	0.41
3:9:811:A:H2'	3:9:812:A:O4'	2.20	0.41
3:9:936:G:O2'	13:NN:105:ASN:HB3	2.20	0.41
3:9:998:A:N3	3:9:1033:G:H4'	2.35	0.41
3:9:1009:A:O2'	3:9:1010:G:H5'	2.19	0.41
3:9:1238:U:H2'	3:9:1239:U:O4'	2.20	0.41
3:9:1305:C:H2'	3:9:1306:U:C5	2.54	0.41
3:9:1504:U:O2'	3:9:1505:U:H5'	2.20	0.41
3:9:1600:G:H4'	32:ZZ:43:LYS:HD3	2.01	0.41
5:BB:88:THR:HA	5:BB:97:LEU:O	2.20	0.41
6:CC:209:VAL:HG11	6:CC:233:LEU:CD2	2.45	0.41
7:EE:123:LEU:CD2	7:EE:228:ILE:HA	2.50	0.41
9:HH:138:GLU:OE2	13:NN:19:ARG:HD3	2.20	0.41
10:II:110:ARG:HE	10:II:110:ARG:HB3	1.70	0.41
17:XX:128:VAL:HG21	17:XX:141:PRO:HD3	2.02	0.41
18:YY:45:ALA:HB2	18:YY:55:ILE:HD12	2.02	0.41
22:DD:163:PRO:O	22:DD:167:TYR:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DD:212:GLU:HG3	28:RR:19:LYS:NZ	2.35	0.41
23:FF:30:ILE:H	23:FF:30:ILE:HG13	1.59	0.41
24:KK:45:VAL:O	24:KK:49:MET:HG2	2.20	0.41
27:QQ:16:LYS:HZ3	27:QQ:86:GLN:HB3	1.85	0.41
27:QQ:22:VAL:O	27:QQ:70:VAL:HA	2.20	0.41
27:QQ:66:VAL:HG22	27:QQ:95:TYR:CE2	2.55	0.41
28:RR:7:LYS:H	28:RR:7:LYS:HD2	1.85	0.41
30:TT:65:TYR:HD1	30:TT:123:LEU:HD11	1.85	0.41
30:TT:70:ALA:HB1	30:TT:75:MET:HE3	2.01	0.41
31:UU:82:MET:HE3	34:dd:52:PHE:CE1	2.54	0.41
36:gg:31:ILE:HG21	36:gg:299:PHE:CZ	2.55	0.41
37:A:114:CYS:O	37:A:165:VAL:HG22	2.19	0.41
39:C:130:ALA:HB3	39:C:246:VAL:HB	2.01	0.41
40:D:53:VAL:CG1	40:D:159:VAL:HG22	2.50	0.41
41:E:53:VAL:H	41:E:56:ILE:HD11	1.84	0.41
42:F:81:TYR:HB2	54:T:140:PHE:CE2	2.54	0.41
42:F:179:GLY:HA2	42:F:183:ILE:O	2.20	0.41
42:F:183:ILE:HG21	42:F:189:LEU:CD2	2.50	0.41
43:G:103:ASP:CG	57:X:40:ILE:HG13	2.44	0.41
43:G:163:LYS:O	43:G:167:LEU:HG	2.20	0.41
43:G:229:LYS:HA	43:G:229:LYS:HD3	1.72	0.41
43:G:313:GLU:O	43:G:317:LYS:HG2	2.19	0.41
44:H:44:GLU:CB	44:H:58:ASP:HB2	2.45	0.41
44:H:89:ARG:HG3	44:H:145:VAL:HG13	2.01	0.41
44:H:105:ILE:HD12	44:H:135:SER:HA	2.01	0.41
48:M:27:ILE:HD11	48:M:36:ALA:HB1	2.01	0.41
49:N:51:LEU:HD13	49:N:117:ASN:CB	2.44	0.41
51:P:48:LEU:HD21	51:P:92:LEU:HD13	2.01	0.41
52:Q:61:LEU:O	52:Q:87:THR:HG22	2.21	0.41
52:Q:63:LEU:CD1	52:Q:92:VAL:HG21	2.43	0.41
52:Q:172:ARG:NH2	60:a:59:ARG:HD2	2.35	0.41
53:S:2:LYS:HE3	53:S:4:SER:HA	2.02	0.41
58:Y:75:ARG:H	58:Y:75:ARG:HD2	1.85	0.41
68:i:76:ARG:HG3	68:i:77:VAL:CG1	2.50	0.41
69:j:46:LYS:HD3	79:5:23:C:OP1	2.20	0.41
71:l:26:TRP:CA	71:l:29:MET:HE1	2.50	0.41
76:r:5:LEU:HA	76:r:8:MET:HE2	2.01	0.41
76:r:19:LYS:HE3	79:5:2337:C:O3'	2.20	0.41
79:5:199:G:O3'	79:5:200:U:H4'	2.18	0.41
79:5:260:C:H2'	79:5:261:G:C8	2.55	0.41
79:5:1936:C:H2'	79:5:1937:C:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:3689:G:H2'	79:5:3690:U:C6	2.55	0.41
79:5:3761:C:H2'	79:5:3762:U:O4'	2.20	0.41
79:5:4525:C:H2'	79:5:4526:U:C5	2.55	0.41
79:5:4766:C:O2'	79:5:4767:C:H5'	2.20	0.41
3:9:29:G:H4'	17:XX:129:SER:CB	2.48	0.41
3:9:35:C:H5''	3:9:579:C:C5'	2.50	0.41
3:9:64:A:OP1	8:GG:175:LYS:HD3	2.20	0.41
3:9:186:C:H2'	3:9:187:G:C8	2.56	0.41
3:9:502:C:OP2	7:EE:66:MET:HE1	2.20	0.41
3:9:1030:A:H5'	79:5:1565:A:H2	1.84	0.41
3:9:1062:A:H2'	3:9:1063:C:C6	2.54	0.41
3:9:1087:A:H5'	3:9:1088:U:C5	2.54	0.41
3:9:1209:A:H4'	19:aa:82:LYS:HE2	2.01	0.41
3:9:1331:C:H4'	3:9:1332:A:O5'	2.20	0.41
3:9:1352:G:O2'	3:9:1353:A:H5'	2.19	0.41
3:9:1375:G:OP1	28:RR:67:ARG:HD2	2.20	0.41
3:9:1654:G:H2'	3:9:1655:C:C6	2.56	0.41
3:9:1675:A:H5'	23:FF:56:TYR:OH	2.21	0.41
3:9:1839:U:O2'	3:9:1840:U:H5'	2.20	0.41
4:AA:136:GLU:HA	4:AA:139:TYR:CD2	2.55	0.41
6:CC:136:HIS:HB3	6:CC:162:ILE:CD1	2.50	0.41
6:CC:210:PRO:HA	6:CC:213:LEU:CD2	2.50	0.41
7:EE:49:ARG:HB3	7:EE:61:VAL:HG21	2.02	0.41
7:EE:65:CYS:HA	7:EE:70:ILE:CD1	2.50	0.41
10:II:103:LEU:HA	10:II:171:LEU:O	2.19	0.41
13:NN:115:LEU:O	13:NN:119:GLU:HG2	2.19	0.41
14:OO:32:HIS:HB3	14:OO:98:ARG:NH1	2.35	0.41
16:WW:31:SER:O	16:WW:35:VAL:HG22	2.20	0.41
16:WW:105:THR:CG2	16:WW:126:LEU:HD21	2.50	0.41
17:XX:128:VAL:HG11	17:XX:133:LEU:HD21	2.00	0.41
17:XX:131:LEU:O	17:XX:135:LYS:HD3	2.20	0.41
23:FF:101:HIS:HB2	23:FF:108:PRO:CG	2.50	0.41
23:FF:138:ALA:CB	23:FF:204:ARG:HB3	2.51	0.41
23:FF:157:GLY:HA3	23:FF:188:TYR:HB3	2.02	0.41
28:RR:80:ARG:NH1	28:RR:84:TYR:HB2	2.35	0.41
29:SS:42:HIS:O	29:SS:46:ARG:HG2	2.20	0.41
30:TT:99:VAL:O	30:TT:103:VAL:HG23	2.19	0.41
36:gg:64:HIS:ND1	36:gg:83:TRP:HB3	2.34	0.41
36:gg:101:PHE:CD1	36:gg:136:GLY:HA2	2.55	0.41
36:gg:118:ARG:HA	36:gg:134:THR:CG2	2.50	0.41
36:gg:174:VAL:HG22	36:gg:195:LEU:HD13	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:C:14:LYS:NZ	39:C:16:GLU:HB3	2.34	0.41
41:E:132:GLY:HA2	41:E:134:LYS:NZ	2.34	0.41
42:F:193:ILE:HD12	42:F:200:PHE:CE1	2.55	0.41
42:F:240:ASN:O	42:F:243:ILE:HG13	2.21	0.41
43:G:142:ARG:NH2	81:8:154:G:H5''	2.31	0.41
44:H:156:ASN:O	44:H:160:LEU:HG	2.19	0.41
45:I:6:ALA:HB3	79:5:4432:C:OP2	2.20	0.41
46:J:57:VAL:HB	46:J:62:ILE:CG1	2.50	0.41
47:L:92:ARG:NH2	79:5:109:G:H4'	2.35	0.41
47:L:145:LYS:HE3	47:L:145:LYS:HB3	1.73	0.41
49:N:86:HIS:CD2	79:5:33:A:H5'	2.55	0.41
49:N:114:ARG:CD	49:N:157:LYS:HB3	2.49	0.41
52:Q:113:ILE:HD12	52:Q:114:LEU:HD22	2.01	0.41
54:T:72:VAL:HG13	54:T:93:ILE:HD11	2.01	0.41
54:T:115:LYS:HA	54:T:118:GLU:CG	2.51	0.41
56:V:21:PRO:HG2	79:5:2847:G:H1'	2.02	0.41
56:V:21:PRO:CD	79:5:2847:G:H1'	2.50	0.41
59:Z:51:ARG:O	59:Z:65:ARG:HB3	2.20	0.41
68:i:19:LYS:HE3	68:i:19:LYS:HB3	1.93	0.41
68:i:89:GLU:O	68:i:93:VAL:HG13	2.20	0.41
70:k:26:LYS:HB2	70:k:69:LEU:HD23	2.02	0.41
72:m:76:ARG:CZ	79:5:4472:G:H5'	2.50	0.41
79:5:1329:G:C2'	79:5:3865:A:H5'	2.47	0.41
79:5:1398:A:H2'	79:5:1399:G:O4'	2.20	0.41
79:5:1565:A:H5''	79:5:1566:C:OP2	2.20	0.41
79:5:1934:A:H1'	79:5:2058:G:H4'	2.01	0.41
79:5:2077:C:O2'	79:5:2078:C:H5'	2.21	0.41
79:5:2266:C:H5'	79:5:2270:G:H21	1.85	0.41
79:5:2498:C:H2'	79:5:2499:C:H6	1.82	0.41
79:5:2507:A:H2'	79:5:2508:U:H5'	2.02	0.41
79:5:2779:C:H2'	79:5:2780:C:H6	1.83	0.41
79:5:3722:G:H2'	79:5:3723:A:H8	1.84	0.41
79:5:3871:A:H2'	79:5:3872:A:H8	1.85	0.41
79:5:4066:U:H2'	79:5:4067:U:C6	2.54	0.41
79:5:4075:U:H2'	79:5:4169:G:H1	1.85	0.41
79:5:4601:U:H2'	79:5:4602:A:C8	2.55	0.41
79:5:4611:A:H2'	79:5:4612:C:H6	1.85	0.41
79:5:4672:A:H2'	79:5:4673:U:O4'	2.20	0.41
80:7:108:G:O2'	80:7:109:U:H5'	2.19	0.41
81:8:145:C:H2'	81:8:146:U:H6	1.84	0.41
1:R:103:ARG:HA	1:R:106:LEU:CD2	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:381:C:H5''	10:II:54:LYS:CE	2.50	0.41
3:9:381:C:H5''	10:II:54:LYS:NZ	2.35	0.41
3:9:491:C:H2'	3:9:492:C:O4'	2.20	0.41
3:9:635:G:H5'	21:ee:92:VAL:O	2.20	0.41
3:9:653:A:H2'	3:9:654:A:O4'	2.19	0.41
3:9:734:C:H2'	3:9:735:C:H6	1.85	0.41
3:9:1006:C:O2'	3:9:1007:C:H5'	2.20	0.41
3:9:1105:G:O3'	20:bb:69:GLY:HA3	2.21	0.41
3:9:1379:A:O2'	4:AA:105:PRO:HG2	2.21	0.41
3:9:1514:G:O2'	3:9:1515:G:H5'	2.20	0.41
3:9:1562:C:H5''	30:TT:71:GLY:HA3	2.02	0.41
3:9:1807:C:O2'	3:9:1808:U:H5'	2.20	0.41
3:9:1827:U:H2'	3:9:1828:C:C6	2.55	0.41
3:9:1848:U:H2'	3:9:1850:A:OP2	2.20	0.41
4:AA:37:TYR:O	4:AA:49:ILE:HG23	2.20	0.41
5:BB:81:PHE:CD1	5:BB:105:LEU:HD11	2.47	0.41
7:EE:181:CYS:SG	7:EE:225:ILE:HG12	2.60	0.41
9:HH:25:GLN:HA	9:HH:28:LEU:HD12	2.01	0.41
9:HH:53:VAL:HG22	9:HH:57:ARG:O	2.19	0.41
9:HH:83:LEU:HD13	9:HH:92:VAL:HG11	2.02	0.41
10:II:201:LYS:HE2	12:LL:8:ARG:HA	2.03	0.41
14:OO:30:VAL:HG21	14:OO:96:LYS:CE	2.41	0.41
15:VV:17:CYS:HB2	15:VV:56:CYS:SG	2.60	0.41
16:WW:27:ILE:HG22	16:WW:61:ILE:O	2.20	0.41
22:DD:12:VAL:O	22:DD:16:ILE:HG13	2.20	0.41
22:DD:46:THR:HG22	22:DD:48:ILE:CD1	2.50	0.41
25:MM:85:LEU:HD11	25:MM:109:VAL:CG2	2.50	0.41
27:QQ:85:ARG:NH1	27:QQ:119:LEU:HA	2.36	0.41
29:SS:28:PHE:CE2	29:SS:38:ARG:HG2	2.55	0.41
31:UU:59:LYS:O	31:UU:84:ILE:HG22	2.20	0.41
32:ZZ:99:LEU:HD13	32:ZZ:109:TYR:CG	2.55	0.41
37:A:193:ARG:HH22	79:5:3685:C:H5''	1.86	0.41
38:B:17:LEU:CD2	79:5:4587:G:H1'	2.49	0.41
38:B:285:TYR:CZ	38:B:334:LYS:HB2	2.55	0.41
39:C:53:ALA:HB3	81:8:27:U:H4'	2.01	0.41
39:C:78:ARG:HB3	39:C:88:GLY:C	2.45	0.41
39:C:219:LYS:HG3	39:C:222:ARG:NH1	2.35	0.41
42:F:159:GLY:HA3	42:F:168:LEU:HD21	2.02	0.41
44:H:37:ASP:OD2	44:H:39:ASN:HB2	2.20	0.41
44:H:47:LEU:HB2	44:H:55:LEU:HD23	2.02	0.41
44:H:157:SER:HA	44:H:160:LEU:HD12	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:I:26:VAL:HG23	45:I:122:PRO:HB3	2.02	0.41
49:N:99:GLN:HG3	49:N:103:GLU:OE2	2.19	0.41
50:O:169:ARG:NE	79:5:4860:G:H5''	2.35	0.41
51:P:20:SER:OG	79:5:398:A:H5'	2.20	0.41
52:Q:44:ASN:HA	52:Q:47:VAL:HG22	2.02	0.41
53:S:82:LEU:O	53:S:93:MET:HE2	2.21	0.41
54:T:35:LYS:NZ	79:5:1824:G:H4'	2.36	0.41
55:U:47:ILE:HD12	55:U:47:ILE:O	2.19	0.41
56:V:28:CYS:SG	56:V:37:LEU:HD21	2.60	0.41
56:V:82:ILE:HD11	56:V:102:ALA:CB	2.48	0.41
57:X:112:ALA:O	57:X:116:LEU:HD23	2.20	0.41
58:Y:109:LEU:HD21	58:Y:115:ARG:NH1	2.35	0.41
62:c:17:ARG:NE	62:c:104:ILE:HA	2.35	0.41
62:c:54:ALA:O	62:c:57:LYS:HG2	2.20	0.41
62:c:68:LYS:HE2	62:c:68:LYS:HB2	1.95	0.41
64:e:22:ARG:HE	64:e:31:ILE:HG23	1.84	0.41
65:f:48:ALA:HB2	65:f:71:TRP:CE3	2.56	0.41
66:g:98:GLU:O	66:g:102:ILE:HG13	2.20	0.41
67:h:89:ARG:HG2	67:h:93:ARG:CD	2.50	0.41
67:h:91:MET:CB	67:h:94:ARG:HD3	2.50	0.41
70:k:42:LEU:HD13	79:5:2536:A:H5'	2.01	0.41
75:p:22:LEU:HA	75:p:25:MET:CG	2.51	0.41
79:5:1423:U:H2'	79:5:1424:G:C8	2.55	0.41
79:5:1594:C:O2'	79:5:1597:G:H1'	2.19	0.41
79:5:1996:C:N3	79:5:2000:G:N1	2.62	0.41
79:5:2047:A:C2	79:5:2050:G:H4'	2.55	0.41
79:5:2080:U:H2'	79:5:2081:C:H6	1.86	0.41
79:5:2571:C:H2'	79:5:2572:C:H6	1.85	0.41
79:5:2573:A:H2'	79:5:2574:G:O4'	2.20	0.41
79:5:2616:C:O2'	79:5:2617:G:H5'	2.20	0.41
79:5:2635:U:O2'	79:5:2636:U:H5'	2.21	0.41
79:5:2894:A:H2'	79:5:2895:A:H8	1.85	0.41
79:5:4382:G:O2'	79:5:4383:U:H5'	2.20	0.41
79:5:4459:U:H2'	79:5:4460:U:H6	1.84	0.41
79:5:4587:G:H5''	79:5:4588:U:OP2	2.20	0.41
79:5:4621:C:H2'	79:5:4622:A:C8	2.56	0.41
79:5:4670:C:H4'	79:5:4672:A:OP2	2.20	0.41
79:5:4869:U:H5''	79:5:4870:G:H5'	2.02	0.41
81:8:62:A:H4'	81:8:63:U:O5'	2.19	0.41
82:AT:36:C:C4	83:1:1501:U:O4	2.73	0.41
1:R:3:MET:HB3	1:R:5:ARG:CZ	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:W:49:ILE:CG2	2:W:52:THR:HG23	2.49	0.41
3:9:29:G:H2'	3:9:30:C:C6	2.54	0.41
3:9:102:A:OP1	10:II:19:LYS:HG3	2.19	0.41
3:9:348:A:H2'	3:9:349:A:O4'	2.20	0.41
3:9:562:U:H1'	11:JJ:132:GLN:OE1	2.21	0.41
3:9:681:U:O2'	3:9:682:U:H5'	2.21	0.41
3:9:921:G:C2	20:bb:22:LYS:HG2	2.56	0.41
3:9:945:U:O2'	3:9:946:U:H5'	2.21	0.41
3:9:1022:U:H1'	13:NN:128:TYR:CD2	2.55	0.41
3:9:1064:C:H5'	14:OO:151:LEU:CD1	2.51	0.41
3:9:1218:C:O2'	3:9:1219:C:H5'	2.21	0.41
3:9:1224:G:O2'	3:9:1225:U:H5'	2.20	0.41
3:9:1276:A:H62	3:9:1321:G:N2	2.17	0.41
3:9:1386:A:H2'	3:9:1387:G:O4'	2.20	0.41
3:9:1591:C:H5'	23:FF:88:MET:HE3	2.01	0.41
3:9:1657:G:H1	3:9:1667:U:H3	1.69	0.41
3:9:1847:G:O2'	3:9:1848:U:H5'	2.20	0.41
6:CC:157:LEU:HA	6:CC:160:LEU:HG	2.02	0.41
6:CC:206:SER:HB3	6:CC:224:THR:HG21	2.02	0.41
6:CC:263:LYS:HB3	6:CC:268:GLU:OE2	2.20	0.41
7:EE:179:ASN:HA	7:EE:231:GLY:H	1.84	0.41
7:EE:181:CYS:SG	7:EE:225:ILE:HG23	2.61	0.41
8:GG:57:ASP:OD1	8:GG:98:ARG:HD2	2.20	0.41
8:GG:164:LYS:HE3	8:GG:167:LYS:HB2	2.00	0.41
11:JJ:54:ARG:O	11:JJ:58:ARG:HG3	2.20	0.41
12:LL:50:ALA:HA	12:LL:55:TYR:HE1	1.85	0.41
22:DD:15:GLY:HA2	22:DD:18:LYS:HE3	2.01	0.41
23:FF:49:LEU:CG	23:FF:50:PRO:HD2	2.51	0.41
23:FF:71:ARG:HH11	23:FF:147:VAL:HG11	1.86	0.41
24:KK:32:HIS:CD2	24:KK:45:VAL:HG11	2.56	0.41
29:SS:31:THR:CG2	29:SS:38:ARG:HA	2.50	0.41
30:TT:70:ALA:HB1	30:TT:74:SER:CB	2.51	0.41
31:UU:24:LEU:O	31:UU:86:LYS:HG3	2.20	0.41
31:UU:56:MET:HE2	31:UU:88:LEU:HD22	2.03	0.41
32:ZZ:47:LEU:HD22	32:ZZ:47:LEU:HA	1.93	0.41
36:gg:18:VAL:HG13	36:gg:34:ALA:O	2.20	0.41
36:gg:41:ILE:CG2	36:gg:55:PRO:HB3	2.51	0.41
36:gg:292:SER:HB2	36:gg:297:THR:O	2.20	0.41
36:gg:304:ASP:OD2	36:gg:306:LEU:HD12	2.20	0.41
37:A:177:LYS:HB2	75:p:29:ILE:HG12	2.02	0.41
37:A:242:ARG:NH1	79:5:3745:U:H4'	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:B:117:ARG:CD	38:B:177:LYS:HD3	2.48	0.41
38:B:141:ALA:HA	38:B:144:ARG:HG2	2.02	0.41
38:B:171:LEU:HD11	38:B:173:LEU:CD1	2.51	0.41
38:B:218:ASP:HB3	38:B:280:ILE:HG22	2.02	0.41
38:B:243:LYS:HE2	38:B:243:LYS:HA	2.02	0.41
39:C:149:GLU:OE2	39:C:151:PRO:HD2	2.21	0.41
39:C:221:PHE:O	39:C:227:ILE:HD11	2.20	0.41
40:D:10:LYS:HB3	40:D:14:LYS:HZ3	1.85	0.41
42:F:58:LYS:O	42:F:62:GLN:HG2	2.19	0.41
42:F:125:ASN:HD22	54:T:132:PRO:HG2	1.85	0.41
44:H:93:ARG:HG3	44:H:182:SER:HB3	2.02	0.41
45:I:42:LYS:HE2	45:I:44:ASP:CB	2.45	0.41
45:I:52:MET:HB3	45:I:152:LEU:HD11	2.03	0.41
45:I:76:MET:CE	45:I:148:VAL:HA	2.50	0.41
45:I:91:LEU:HD21	45:I:135:ILE:HG12	2.01	0.41
46:J:78:LYS:HE2	46:J:82:ILE:HD11	2.02	0.41
46:J:78:LYS:O	46:J:82:ILE:HG12	2.20	0.41
47:L:57:PRO:HD3	47:L:76:PHE:CD1	2.56	0.41
49:N:7:ILE:O	49:N:10:LEU:HG	2.20	0.41
49:N:20:ARG:HH12	49:N:24:ARG:HB2	1.85	0.41
50:O:108:ILE:HD12	50:O:157:GLU:OE2	2.21	0.41
52:Q:78:LYS:NZ	79:5:1430:C:H5'	2.35	0.41
53:S:17:LEU:HD21	54:T:136:ARG:HH12	1.85	0.41
53:S:94:TYR:CE2	53:S:138:ARG:HD3	2.54	0.41
54:T:9:ARG:HG2	79:5:4209:G:OP2	2.21	0.41
55:U:113:ARG:HH12	79:5:2702:C:H4'	1.86	0.41
56:V:13:LYS:HD3	56:V:13:LYS:HA	1.72	0.41
56:V:58:GLY:O	56:V:128:LEU:HD11	2.21	0.41
56:V:69:LYS:HZ3	56:V:71:GLU:HB3	1.84	0.41
56:V:82:ILE:HG13	56:V:102:ALA:O	2.20	0.41
57:X:90:ILE:HD11	57:X:97:VAL:HG13	2.02	0.41
57:X:155:ILE:CD1	67:h:33:VAL:HG13	2.50	0.41
58:Y:2:LYS:HD3	58:Y:2:LYS:HA	1.82	0.41
58:Y:27:ARG:CZ	81:8:70:G:H5''	2.50	0.41
59:Z:81:MET:HE1	62:c:63:TYR:HE1	1.86	0.41
60:a:101:ILE:HD11	60:a:124:VAL:HA	2.02	0.41
61:b:63:LYS:NZ	61:b:67:ALA:HB2	2.36	0.41
67:h:67:GLU:OE1	67:h:70:ARG:HD2	2.21	0.41
70:k:39:SER:HB3	79:5:2773:G:H5''	2.02	0.41
70:k:55:LYS:HA	70:k:58:GLN:HG3	2.03	0.41
74:o:70:LEU:HD11	74:o:81:ARG:NH1	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:t:39:PRO:HA	78:t:42:VAL:CG1	2.50	0.41
79:5:951:G:H2'	79:5:952:G:H8	1.86	0.41
79:5:1418:C:H3'	79:5:1419:G:H5''	2.02	0.41
79:5:1438:U:O3'	79:5:1440:U:H5''	2.20	0.41
79:5:1541:C:H4'	79:5:2448:G:O2'	2.21	0.41
79:5:1613:A:N7	79:5:3638:G:H1'	2.35	0.41
79:5:1945:G:O2'	79:5:1946:G:H5'	2.20	0.41
79:5:1972:G:H2'	79:5:1973:G:O4'	2.21	0.41
79:5:2728:U:H2'	79:5:2729:C:H6	1.85	0.41
79:5:2816:G:H1'	79:5:3622:C:O2'	2.19	0.41
79:5:2888:G:H2'	79:5:2889:G:H8	1.86	0.41
79:5:3667:C:O2'	79:5:3668:C:H5'	2.20	0.41
79:5:3891:A:H2'	79:5:3892:U:O4'	2.20	0.41
79:5:3930:U:H2'	79:5:3931:C:C6	2.56	0.41
79:5:4315:A:H2'	79:5:4316:G:H8	1.85	0.41
79:5:4320:G:H2'	79:5:4321:U:O4'	2.20	0.41
79:5:4362:A:O2'	79:5:4363:A:H5'	2.19	0.41
79:5:4531:U:H4'	79:5:4532:U:C5'	2.42	0.41
79:5:4941:G:C2'	79:5:4942:C:H5'	2.50	0.41
79:5:5051:C:H2'	79:5:5052:C:C6	2.56	0.41
3:9:92:A:N6	3:9:444:G:H1'	2.35	0.41
3:9:96:C:H2'	3:9:97:U:H6	1.85	0.41
3:9:378:U:H2'	3:9:379:C:C6	2.56	0.41
3:9:380:G:H5''	10:II:31:ARG:HH21	1.86	0.41
3:9:687:C:H4'	9:HH:121:THR:HG21	2.02	0.41
3:9:871:U:H2'	3:9:873:G:OP1	2.20	0.41
3:9:1056:U:O2'	3:9:1057:C:H5'	2.20	0.41
3:9:1152:U:OP1	3:9:1153:C:H2'	2.20	0.41
3:9:1401:A:H4'	31:UU:52:GLY:HA3	2.02	0.41
4:AA:57:LYS:HD3	4:AA:57:LYS:HA	1.90	0.41
8:GG:76:LEU:HD13	8:GG:92:ARG:NH1	2.35	0.41
9:HH:101:LEU:HD13	9:HH:120:ARG:CG	2.51	0.41
10:II:24:LYS:HB3	10:II:28:GLU:OE2	2.20	0.41
10:II:66:SER:HA	10:II:73:THR:HG22	2.02	0.41
11:JJ:40:LYS:H	11:JJ:40:LYS:HD2	1.85	0.41
11:JJ:100:LEU:HD12	11:JJ:101:LYS:H	1.86	0.41
11:JJ:135:ILE:HA	11:JJ:160:SER:N	2.36	0.41
15:VV:35:ASN:OD1	15:VV:52:THR:HB	2.21	0.41
16:WW:26:LEU:CB	16:WW:62:VAL:HG22	2.51	0.41
17:XX:67:ARG:HB3	17:XX:84:PHE:CE1	2.56	0.41
22:DD:25:LEU:HD12	22:DD:37:VAL:HG11	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DD:146:ARG:HD3	83:1:1504:U:O2	2.21	0.41
23:FF:30:ILE:HD12	23:FF:30:ILE:O	2.20	0.41
23:FF:50:PRO:CB	23:FF:69:VAL:HG12	2.47	0.41
23:FF:78:MET:HE2	23:FF:78:MET:HB2	2.00	0.41
25:MM:28:HIS:HB3	25:MM:114:TYR:CD2	2.55	0.41
25:MM:30:GLY:C	25:MM:112:LYS:HG2	2.45	0.41
26:PP:44:ARG:NH2	26:PP:45:LEU:HD23	2.28	0.41
28:RR:20:TYR:CE2	28:RR:38:ILE:HB	2.55	0.41
29:SS:107:LEU:O	29:SS:111:LEU:HG	2.20	0.41
32:ZZ:99:LEU:HD13	32:ZZ:109:TYR:CD2	2.55	0.41
34:dd:36:LEU:CG	34:dd:38:MET:HB3	2.49	0.41
35:ff:102:VAL:HG13	35:ff:105:TYR:HD2	1.86	0.41
35:ff:109:ASP:OD2	35:ff:111:ASN:HB3	2.21	0.41
35:ff:130:VAL:HG11	35:ff:143:LYS:NZ	2.35	0.41
37:A:3:ARG:NH2	79:5:1626:G:H3'	2.32	0.41
38:B:223:THR:HB	38:B:275:HIS:H	1.85	0.41
38:B:223:THR:O	38:B:274:TYR:HA	2.20	0.41
38:B:324:GLY:HA2	79:5:5051:C:C5'	2.51	0.41
39:C:306:ARG:NH2	79:5:2099:C:H3'	2.31	0.41
39:C:327:LYS:HE3	79:5:976:G:O2'	2.21	0.41
40:D:59:ASP:CG	40:D:80:ALA:HB3	2.46	0.41
40:D:61:ILE:HG22	40:D:79:TYR:HD1	1.84	0.41
40:D:62:CYS:SG	40:D:105:LEU:HD22	2.60	0.41
40:D:68:ARG:CB	40:D:73:MET:HE2	2.51	0.41
40:D:200:MET:HE2	40:D:237:GLU:HG3	2.02	0.41
40:D:242:LYS:HE3	40:D:242:LYS:HB3	1.91	0.41
41:E:95:VAL:HB	41:E:112:LEU:HD11	2.03	0.41
41:E:118:TYR:HB3	79:5:457:G:H5'	2.03	0.41
41:E:280:LEU:HD11	65:f:6:TRP:N	2.35	0.41
42:F:34:LYS:NZ	79:5:2107:C:H1'	2.35	0.41
42:F:149:VAL:HA	42:F:152:LEU:CG	2.50	0.41
42:F:149:VAL:O	42:F:152:LEU:HG	2.21	0.41
43:G:130:PRO:HG3	49:N:18:VAL:HA	2.03	0.41
43:G:250:LYS:NZ	79:5:6:C:H4'	2.33	0.41
44:H:55:LEU:HD22	44:H:56:ARG:N	2.35	0.41
44:H:65:LYS:NZ	79:5:1949:U:H4'	2.35	0.41
44:H:71:ARG:CG	79:5:4691:A:H4'	2.41	0.41
44:H:152:GLU:OE2	79:5:4689:U:H1'	2.21	0.41
45:I:198:LYS:HE2	79:5:1781:U:H4'	2.03	0.41
46:J:19:LYS:HB2	46:J:75:ARG:CZ	2.51	0.41
47:L:48:PRO:HG3	67:h:118:LYS:CE	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:L:124:LEU:HD22	47:L:125:VAL:H	1.85	0.41
47:L:198:ARG:NH1	79:5:1485:C:H2'	2.35	0.41
49:N:11:TRP:CH2	49:N:44:ARG:HG2	2.56	0.41
49:N:84:PRO:HA	49:N:87:HIS:ND1	2.34	0.41
49:N:151:ILE:H	49:N:151:ILE:HD12	1.85	0.41
50:O:63:ASN:HD21	79:5:2044:U:H1'	1.85	0.41
50:O:197:LYS:HG2	50:O:203:VAL:HG23	2.01	0.41
51:P:61:ARG:HA	51:P:78:TRP:CE2	2.56	0.41
52:Q:21:GLN:HA	52:Q:26:ARG:HH22	1.85	0.41
53:S:35:PRO:CG	53:S:39:VAL:HG21	2.48	0.41
59:Z:9:LYS:HD2	59:Z:83:THR:O	2.20	0.41
60:a:35:ALA:HB1	79:5:38:A:H5''	2.02	0.41
61:b:69:ALA:O	61:b:73:LYS:HG2	2.21	0.41
63:d:24:GLU:HB2	63:d:85:ARG:HH21	1.86	0.41
66:g:43:LYS:C	66:g:53:LEU:HG	2.45	0.41
74:o:64:LYS:CE	79:5:4370:G:H5''	2.50	0.41
79:5:144:G:H2'	79:5:145:G:H8	1.84	0.41
79:5:1094:G:O2'	79:5:1095:A:H5'	2.20	0.41
79:5:1239:C:H1'	79:5:1244:G:H5'	2.02	0.41
79:5:1348:U:H2'	79:5:1349:G:C8	2.51	0.41
79:5:1445:U:H2'	79:5:1446:C:C6	2.55	0.41
79:5:1666:C:H2'	79:5:1667:G:O4'	2.20	0.41
79:5:1778:C:O2'	79:5:1779:U:H5'	2.21	0.41
79:5:2543:A:H2	79:5:2773:G:H1	1.68	0.41
79:5:2577:C:H2'	79:5:2578:G:H8	1.85	0.41
79:5:2605:G:O2'	79:5:2606:G:H5'	2.20	0.41
79:5:2808:G:O2'	79:5:2809:G:H5'	2.21	0.41
79:5:3628:G:O2'	79:5:3629:A:H5'	2.21	0.41
79:5:3706:C:H2'	79:5:3707:U:C6	2.56	0.41
79:5:3753:G:H5''	79:5:3776:G:O2'	2.19	0.41
79:5:4087:G:H4'	79:5:4088:C:C5	2.51	0.41
79:5:4210:U:O2	79:5:4222:G:N2	2.47	0.41
79:5:4223:C:H2'	79:5:4224:A:H8	1.86	0.41
1:R:32:ILE:HD12	1:R:44:LEU:HD22	2.02	0.41
1:R:119:MET:O	1:R:123:LEU:HD13	2.21	0.41
2:W:87:LEU:HD23	2:W:87:LEU:H	1.86	0.41
3:9:421:G:H5'	12:LL:98:LYS:HG3	2.03	0.41
3:9:1228:A:O2'	3:9:1229:G:H5'	2.19	0.41
3:9:1283:C:H2'	3:9:1284:A:C8	2.56	0.41
3:9:1310:U:H2'	3:9:1311:C:H6	1.84	0.41
3:9:1322:G:H2'	3:9:1323:U:C6	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:1488:C:HB3'	3:9:1489:A:C4'	2.43	0.41
3:9:1731:A:H2'	3:9:1732:G:C8	2.55	0.41
4:AA:9:GLN:HG3	4:AA:10:MET:H	1.84	0.41
4:AA:73:ASP:OD1	4:AA:120:ARG:HB2	2.20	0.41
4:AA:124:VAL:CG1	4:AA:146:ALA:HA	2.50	0.41
4:AA:132:GLN:HB3	4:AA:133:PRO:HD3	2.01	0.41
5:BB:25:PHE:CZ	14:OO:53:ILE:HA	2.55	0.41
5:BB:97:LEU:HB3	5:BB:228:LEU:HD21	2.02	0.41
5:BB:150:ILE:CD1	28:RR:129:LYS:HB2	2.50	0.41
7:EE:69:PHE:O	7:EE:92:ILE:HG22	2.20	0.41
8:GG:208:GLU:OE1	8:GG:211:LYS:HD3	2.20	0.41
10:II:13:LYS:CG	12:LL:137:THR:HG21	2.50	0.41
11:JJ:81:LEU:HB3	11:JJ:87:LEU:CB	2.51	0.41
11:JJ:178:ALA:O	11:JJ:182:GLN:HG2	2.21	0.41
12:LL:117:PHE:CE2	12:LL:142:VAL:HG12	2.56	0.41
14:OO:143:LYS:HE2	14:OO:143:LYS:HB3	1.97	0.41
15:VV:53:TYR:CE1	15:VV:72:LEU:HB3	2.56	0.41
16:WW:101:PHE:HB2	16:WW:129:PHE:CZ	2.55	0.41
18:YY:91:LEU:O	18:YY:96:LEU:HG	2.21	0.41
23:FF:59:LYS:CB	23:FF:62:ARG:HB2	2.46	0.41
24:KK:74:GLU:HA	24:KK:77:GLN:CG	2.51	0.41
25:MM:30:GLY:O	25:MM:112:LYS:HE3	2.21	0.41
27:QQ:8:GLN:HB3	27:QQ:99:TYR:CE2	2.54	0.41
29:SS:27:ALA:HB2	29:SS:52:LEU:CD2	2.50	0.41
35:ff:130:VAL:HG21	35:ff:143:LYS:NZ	2.35	0.41
36:gg:217:MET:HE2	36:gg:217:MET:HB2	1.77	0.41
37:A:61:VAL:HB	37:A:76:PHE:CD2	2.55	0.41
38:B:65:SER:HB3	79:5:4616:A:C5'	2.49	0.41
38:B:130:PHE:CD2	79:5:4726:G:H4'	2.55	0.41
39:C:158:VAL:O	39:C:217:ILE:HD13	2.20	0.41
40:D:64:ILE:CD1	40:D:109:LEU:HD22	2.50	0.41
40:D:110:LEU:CD1	40:D:116:ASP:HA	2.43	0.41
41:E:152:ILE:HG21	41:E:202:THR:HB	2.03	0.41
42:F:127:ALA:HA	42:F:130:ASN:ND2	2.35	0.41
42:F:130:ASN:ND2	79:5:1727:U:H5'	2.36	0.41
46:J:48:PRO:HB3	46:J:72:CYS:HB2	2.03	0.41
47:L:57:PRO:HB3	47:L:76:PHE:CD2	2.55	0.41
49:N:35:ALA:O	49:N:65:ARG:HB2	2.21	0.41
49:N:54:LYS:CG	79:5:152:U:H5''	2.50	0.41
49:N:159:ARG:HB3	49:N:164:LEU:HB2	2.03	0.41
51:P:6:LEU:HD21	81:8:10:G:N2	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:P:104:LEU:CD1	79:5:392:U:H1'	2.51	0.41
53:S:141:ALA:HA	53:S:144:GLN:HE22	1.85	0.41
55:U:105:ASN:HB2	55:U:111:GLU:CG	2.51	0.41
57:X:121:VAL:CG1	57:X:138:VAL:HG23	2.51	0.41
58:Y:106:ILE:HD11	58:Y:108:ARG:O	2.21	0.41
59:Z:36:ARG:HB3	59:Z:38:TYR:CE1	2.54	0.41
60:a:10:LYS:HE3	79:5:2287:G:O6	2.21	0.41
60:a:16:SER:HB2	79:5:2283:G:OP1	2.19	0.41
63:d:44:ARG:O	63:d:48:GLU:HG2	2.20	0.41
63:d:75:LYS:CE	63:d:79:ASN:HB2	2.50	0.41
64:e:110:ALA:O	64:e:113:GLU:HG3	2.20	0.41
65:f:36:ARG:HA	65:f:39:THR:OG1	2.20	0.41
66:g:54:ARG:NH1	79:5:2583:C:H4'	2.36	0.41
68:i:87:ARG:NH2	68:i:88:GLU:HB3	2.36	0.41
70:k:51:GLU:OE2	70:k:52:LYS:HG3	2.20	0.41
72:m:93:ASN:ND2	79:5:1946:G:H5''	2.33	0.41
75:p:80:LYS:HA	75:p:83:ILE:HG22	2.02	0.41
79:5:33:A:H2'	79:5:34:A:O4'	2.21	0.41
79:5:84:A:N1	79:5:98:A:H5''	2.36	0.41
79:5:106:A:H1'	79:5:336:A:N3	2.35	0.41
79:5:265:C:H4'	79:5:266:C:OP1	2.21	0.41
79:5:420:A:H1'	79:5:1332:C:H1'	2.03	0.41
79:5:1353:G:H4'	79:5:1355:G:O3'	2.20	0.41
79:5:1452:A:H3'	79:5:1453:G:H8	1.86	0.41
79:5:1575:A:H2'	79:5:1576:G:O4'	2.19	0.41
79:5:1601:A:H61	79:5:4555:U:H3	1.69	0.41
79:5:2374:A:H2'	79:5:2375:A:H8	1.85	0.41
79:5:2736:G:O2'	79:5:2737:C:H5'	2.21	0.41
79:5:3610:A:H2'	79:5:3611:A:H8	1.86	0.41
79:5:4220:A:H2'	79:5:4222:G:O5'	2.20	0.41
79:5:4320:G:H2'	79:5:4321:U:C6	2.55	0.41
79:5:4357:G:O2'	79:5:4358:U:H5'	2.20	0.41
79:5:4551:U:H2'	79:5:4552:U:H6	1.85	0.41
79:5:4959:U:H3'	79:5:4960:G:H5''	2.03	0.41
1:R:130:ASN:OD1	79:5:1571:G:H1'	2.20	0.41
1:R:149:LYS:O	1:R:152:LYS:HG3	2.20	0.41
2:W:1:MET:HG3	2:W:15:PRO:HG3	2.02	0.41
3:9:443:U:O4	3:9:447:A:N7	2.53	0.41
3:9:658:U:H5'	3:9:659:G:N7	2.35	0.41
3:9:810:A:H5''	3:9:811:A:OP2	2.20	0.41
3:9:937:C:H2'	3:9:938:A:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:1791:A:H5'	8:GG:64:LYS:HZ1	1.84	0.41
4:AA:10:MET:H	4:AA:10:MET:HG3	1.70	0.41
4:AA:147:LEU:HD11	4:AA:165:ASN:HB3	2.03	0.41
6:CC:206:SER:HB3	6:CC:224:THR:CG2	2.51	0.41
7:EE:211:LYS:NZ	7:EE:215:GLY:HA2	2.35	0.41
8:GG:63:MET:CG	8:GG:98:ARG:HD3	2.50	0.41
8:GG:76:LEU:N	8:GG:94:ARG:HD3	2.36	0.41
11:JJ:114:VAL:HG13	11:JJ:119:LEU:CG	2.50	0.41
13:NN:50:ILE:HB	13:NN:71:ILE:HD13	2.03	0.41
25:MM:20:GLU:O	25:MM:24:THR:HG22	2.21	0.41
26:PP:58:LYS:HG3	26:PP:61:ARG:NH2	2.29	0.41
27:QQ:86:GLN:HG3	27:QQ:119:LEU:O	2.21	0.41
28:RR:114:LEU:HD23	28:RR:117:LEU:CG	2.51	0.41
30:TT:124:THR:HG22	30:TT:127:GLY:H	1.85	0.41
31:UU:81:GLN:HE22	34:dd:55:LEU:H	1.69	0.41
36:gg:234:ASP:OD1	36:gg:252:THR:HB	2.21	0.41
37:A:225:ILE:HG13	37:A:237:LEU:O	2.21	0.41
38:B:154:LYS:HG2	38:B:194:LEU:HD11	2.02	0.41
39:C:327:LYS:NZ	39:C:327:LYS:HA	2.35	0.41
40:D:64:ILE:O	40:D:75:VAL:HG12	2.20	0.41
40:D:237:GLU:O	40:D:241:LYS:HG3	2.20	0.41
40:D:279:ARG:O	40:D:283:LYS:HG3	2.21	0.41
41:E:222:LYS:HE2	79:5:4940:C:C6	2.55	0.41
43:G:113:TYR:O	43:G:117:GLN:HG2	2.19	0.41
44:H:53:LYS:HE3	44:H:54:ARG:HH22	1.85	0.41
44:H:91:LYS:O	44:H:181:VAL:HG23	2.21	0.41
47:L:128:PRO:HD3	47:L:144:LEU:CD1	2.49	0.41
48:M:101:LYS:HA	48:M:104:MET:CG	2.50	0.41
49:N:34:SER:OG	49:N:37:HIS:HB3	2.21	0.41
60:a:71:PRO:CG	60:a:108:TYR:HA	2.46	0.41
61:b:51:LYS:O	61:b:54:LEU:HG	2.21	0.41
61:b:92:LYS:HE2	61:b:92:LYS:HB2	1.77	0.41
63:d:64:ILE:H	63:d:64:ILE:HG13	1.61	0.41
68:i:76:ARG:HG3	68:i:77:VAL:HG13	2.03	0.41
74:o:38:LYS:CE	79:5:4343:U:H5''	2.47	0.41
79:5:52:G:O2'	79:5:53:C:H5'	2.20	0.41
79:5:310:G:H2'	79:5:311:G:C8	2.55	0.41
79:5:323:C:H2'	79:5:324:A:C8	2.56	0.41
79:5:978:G:H22	79:5:1278:C:H42	1.68	0.41
79:5:1355:G:O2'	79:5:1356:U:H5'	2.21	0.41
79:5:1443:A:H2'	79:5:1444:G:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:1685:G:H2'	79:5:1686:C:H6	1.84	0.41
79:5:2081:C:H2'	79:5:2082:G:H8	1.86	0.41
79:5:2811:G:N2	79:5:2813:A:H3'	2.33	0.41
79:5:2855:G:H1'	79:5:2857:A:H62	1.86	0.41
79:5:4688:C:H2'	79:5:4689:U:C6	2.56	0.41
79:5:4973:U:H3	79:5:4985:U:H3	1.68	0.41
80:7:91:C:H2'	80:7:92:C:C6	2.56	0.41
2:W:20:ARG:CB	56:V:96:LEU:HD23	2.42	0.41
2:W:37:GLU:O	2:W:41:LEU:HD23	2.21	0.41
3:9:380:G:H4'	10:II:29:LEU:O	2.21	0.41
3:9:616:A:O2'	21:ee:85:VAL:HB	2.21	0.41
3:9:807:G:H2'	3:9:808:A:C8	2.56	0.41
3:9:1199:A:H2'	3:9:1200:A:O4'	2.20	0.41
3:9:1322:G:H2'	3:9:1323:U:H6	1.86	0.41
3:9:1324:G:H2'	3:9:1325:G:C8	2.55	0.41
3:9:1338:G:H2'	3:9:1339:U:H6	1.84	0.41
3:9:1367:U:H2'	3:9:1368:U:H6	1.84	0.41
3:9:1453:C:H5'	28:RR:49:LYS:NZ	2.36	0.41
4:AA:155:ARG:CZ	4:AA:155:ARG:HA	2.50	0.41
6:CC:164:PRO:HB2	6:CC:248:TYR:HE2	1.85	0.41
7:EE:180:LEU:HD23	7:EE:194:VAL:HG12	2.03	0.41
8:GG:52:ILE:HG13	8:GG:109:LEU:HD11	2.02	0.41
8:GG:56:ASN:ND2	8:GG:62:PRO:HG3	2.35	0.41
10:II:130:THR:OG1	10:II:131:PRO:HD3	2.21	0.41
20:bb:56:CYS:HB3	20:bb:60:SER:HB2	2.03	0.41
22:DD:11:PHE:HD2	31:UU:27:ARG:HH21	1.68	0.41
23:FF:44:LYS:HZ3	27:QQ:115:TYR:HD1	1.69	0.41
23:FF:100:ILE:CG2	23:FF:108:PRO:HB3	2.49	0.41
23:FF:149:GLN:O	23:FF:153:LEU:HG	2.21	0.41
24:KK:3:MET:HE3	24:KK:48:ALA:HB2	2.02	0.41
25:MM:33:ARG:HE	25:MM:33:ARG:HB3	1.64	0.41
26:PP:25:LEU:HD21	26:PP:36:LEU:CD2	2.51	0.41
27:QQ:89:SER:O	27:QQ:93:VAL:HG23	2.21	0.41
29:SS:44:VAL:HG13	29:SS:70:ILE:CG2	2.51	0.41
32:ZZ:43:LYS:HE2	32:ZZ:43:LYS:HB2	1.97	0.41
32:ZZ:46:ASN:OD1	32:ZZ:80:ARG:HD3	2.21	0.41
32:ZZ:66:LYS:HG3	32:ZZ:67:LEU:H	1.85	0.41
35:ff:138:ARG:HG3	35:ff:149:CYS:HA	2.02	0.41
36:gg:21:ILE:HG21	36:gg:299:PHE:HB3	2.02	0.41
36:gg:27:PHE:HB3	36:gg:30:MET:HB3	2.03	0.41
36:gg:184:LEU:HD12	36:gg:184:LEU:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:gg:297:THR:OG1	36:gg:311:GLN:HG2	2.21	0.41
37:A:96:LEU:HB3	37:A:102:LEU:HD12	2.03	0.41
38:B:352:LEU:HD21	79:5:4678:G:H5'	2.03	0.41
39:C:2:ALA:HB3	39:C:29:LYS:HZ2	1.85	0.41
39:C:336:ARG:O	39:C:340:ILE:HG12	2.21	0.41
40:D:15:ARG:HD3	79:5:4266:G:OP2	2.21	0.41
43:G:250:LYS:HE2	79:5:6:C:OP1	2.21	0.41
43:G:262:SER:HA	43:G:265:LYS:CD	2.47	0.41
44:H:5:LEU:HD13	44:H:60:TRP:CH2	2.56	0.41
44:H:99:PHE:HB3	44:H:116:ASN:OD1	2.21	0.41
45:I:29:ALA:CB	45:I:125:THR:HG21	2.51	0.41
45:I:129:VAL:HG23	45:I:133:GLN:HE21	1.85	0.41
46:J:141:ILE:HA	46:J:144:LYS:CD	2.50	0.41
46:J:161:GLU:HA	46:J:164:ARG:HG2	2.02	0.41
47:L:13:HIS:HA	79:5:96:U:OP1	2.21	0.41
47:L:126:LEU:HD23	47:L:137:GLY:O	2.21	0.41
49:N:120:TRP:HA	49:N:130:PHE:CD1	2.55	0.41
50:O:19:LEU:HD22	50:O:123:ALA:HB1	2.02	0.41
51:P:28:ASN:O	51:P:32:THR:HG22	2.19	0.41
51:P:36:ILE:O	51:P:114:ILE:HG21	2.21	0.41
52:Q:45:GLN:HA	52:Q:48:LEU:CG	2.49	0.41
55:U:26:THR:O	55:U:30:GLU:HG2	2.21	0.41
55:U:80:LYS:HE3	79:5:2620:G:OP2	2.20	0.41
58:Y:57:VAL:HG11	58:Y:62:TYR:O	2.21	0.41
59:Z:39:SER:HB2	59:Z:77:TYR:CD2	2.56	0.41
63:d:33:ILE:HD11	63:d:41:ARG:HB3	2.01	0.41
63:d:38:PHE:CG	63:d:78:ARG:HD2	2.56	0.41
64:e:41:ILE:H	64:e:41:ILE:HG13	1.58	0.41
64:e:42:ASP:HB2	79:5:1323:A:OP2	2.20	0.41
64:e:113:GLU:O	64:e:117:GLN:HG2	2.20	0.41
65:f:45:LYS:HD3	65:f:107:PRO:HD2	2.02	0.41
73:n:16:LYS:O	73:n:20:MET:HG2	2.21	0.41
77:s:44:ARG:HG2	78:t:123:ARG:HH12	1.86	0.41
77:s:61:MET:HE3	77:s:82:ILE:HD13	2.02	0.41
79:5:1411(C):C:H2'	79:5:1412:G:C8	2.56	0.41
79:5:1911:C:O2'	79:5:1918:U:H5'	2.20	0.41
79:5:2320:G:H5''	79:5:2321:G:OP1	2.20	0.41
79:5:3622:C:H2'	79:5:3623:C:C6	2.55	0.41
79:5:3781:C:H2'	79:5:3782:C:H6	1.86	0.41
79:5:3835:C:H2'	79:5:3836:A:H8	1.85	0.41
79:5:4075:U:O3'	79:5:4076:G:H2'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:4208:U:H2'	79:5:4209:G:H8	1.84	0.41
79:5:4719:G:OP2	79:5:4719:G:H3'	2.20	0.41
79:5:4997:G:O2'	79:5:4998:G:H5'	2.21	0.41
82:AT:33:U:O4	82:AT:37:A:N7	2.54	0.41
1:R:44:LEU:HD22	1:R:49:LEU:HD12	2.02	0.41
1:R:114:LYS:HB3	1:R:146:LYS:HE3	2.03	0.41
2:W:23:ARG:NH1	2:W:23:ARG:HB2	2.34	0.41
2:W:35:LYS:HD3	79:5:5004:C:OP1	2.21	0.41
2:W:110:ARG:NH1	2:W:114:GLU:HB2	2.36	0.41
3:9:62:G:H2'	3:9:63:U:O4'	2.21	0.41
3:9:77:A:H1'	8:GG:176:ILE:CG1	2.50	0.41
3:9:160:U:N3	3:9:468:A:H4'	2.35	0.41
3:9:170:A:OP1	8:GG:140:ARG:HD3	2.21	0.41
3:9:315:C:O2'	3:9:316:G:H5'	2.21	0.41
3:9:474:G:H2'	3:9:475:C:C6	2.56	0.41
3:9:574:A:H4'	18:YY:89:HIS:CB	2.51	0.41
3:9:826:A:H3'	3:9:827:A:C5'	2.48	0.41
3:9:831:G:H2'	3:9:832:G:H8	1.85	0.41
3:9:895:G:H2'	3:9:896:U:H6	1.86	0.41
3:9:928:G:O2'	20:bb:66:PRO:HB2	2.19	0.41
3:9:1189:A:H2'	3:9:1190:A:H8	1.85	0.41
3:9:1257:G:H4'	3:9:1258:A:H5'	2.01	0.41
3:9:1263:U:H2'	3:9:1264:C:C5	2.54	0.41
3:9:1456:G:O2'	3:9:1457:U:H5'	2.21	0.41
3:9:1484:A:H5''	22:DD:159:HIS:CD2	2.56	0.41
3:9:1505:U:H5''	3:9:1506:A:H5'	2.03	0.41
3:9:1522:A:OP2	29:SS:144:ARG:HD3	2.21	0.41
3:9:1532:C:O2'	3:9:1636:G:H5'	2.21	0.41
3:9:1693:G:H2'	3:9:1694:U:C6	2.55	0.41
4:AA:149:ASN:CG	4:AA:164:ASN:HA	2.46	0.41
4:AA:179:ALA:O	4:AA:183:LEU:HG	2.21	0.41
5:BB:125:VAL:HG21	5:BB:173:THR:CG2	2.50	0.41
5:BB:127:VAL:CG2	5:BB:176:VAL:HB	2.50	0.41
6:CC:74:LYS:HE2	6:CC:269:PHE:CD1	2.55	0.41
6:CC:84:PHE:HB3	15:VV:33:GLN:HE22	1.85	0.41
6:CC:132:ASP:OD1	6:CC:136:HIS:HB2	2.20	0.41
7:EE:37:LYS:HE2	7:EE:37:LYS:HB2	1.87	0.41
7:EE:191:ARG:HD3	7:EE:245:ARG:CB	2.49	0.41
7:EE:246:LEU:HD11	7:EE:251:GLU:HA	2.02	0.41
9:HH:36:LEU:HD22	9:HH:75:ILE:CG1	2.51	0.41
10:II:103:LEU:O	10:II:103:LEU:HD12	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:II:121:LEU:HD11	10:II:166:PHE:HE2	1.86	0.41
10:II:128:LYS:NZ	10:II:135:GLU:HB2	2.36	0.41
11:JJ:86:VAL:CG1	11:JJ:100:LEU:HD11	2.51	0.41
15:VV:45:ARG:HA	15:VV:45:ARG:NH1	2.36	0.41
16:WW:3:ARG:CD	16:WW:6:VAL:HG22	2.51	0.41
16:WW:35:VAL:O	16:WW:39:THR:HG23	2.20	0.41
16:WW:47:ILE:HD12	16:WW:47:ILE:HA	1.93	0.41
16:WW:77:PRO:HD3	17:XX:5:ARG:O	2.21	0.41
17:XX:67:ARG:HG3	17:XX:115:ILE:HG12	2.03	0.41
18:YY:16:ARG:H	18:YY:16:ARG:HG3	1.65	0.41
21:ee:109:MET:O	21:ee:113:ARG:HG2	2.21	0.41
22:DD:142:LEU:CD1	22:DD:182:LEU:HD21	2.51	0.41
22:DD:175:VAL:HG13	22:DD:177:LEU:CD2	2.51	0.41
24:KK:55:ARG:HG3	24:KK:57:TYR:CD2	2.56	0.41
26:PP:34:MET:HA	26:PP:45:LEU:HD12	2.03	0.41
26:PP:87:PRO:HD3	26:PP:112:ILE:CG2	2.50	0.41
28:RR:5:ARG:NE	28:RR:53:TYR:HB2	2.36	0.41
28:RR:17:ILE:HG12	28:RR:24:LEU:CD2	2.50	0.41
28:RR:29:HIS:O	28:RR:33:ARG:HD3	2.21	0.41
28:RR:53:TYR:O	28:RR:57:LEU:HG	2.19	0.41
30:TT:74:SER:O	30:TT:78:ILE:HG22	2.21	0.41
33:cc:15:THR:HG21	33:cc:33:GLU:HG3	2.03	0.41
34:dd:13:LYS:HD3	34:dd:14:PHE:HD1	1.86	0.41
36:gg:107:ASP:HB3	36:gg:125:ARG:HH11	1.85	0.41
36:gg:147:HIS:NE2	36:gg:175:LYS:HB2	2.36	0.41
36:gg:173:LEU:HD22	36:gg:174:VAL:H	1.86	0.41
37:A:38:HIS:HB2	43:G:94:ILE:HD11	2.03	0.41
38:B:67:VAL:HG12	38:B:70:LYS:NZ	2.36	0.41
38:B:113:GLU:HB2	38:B:178:ALA:HB2	2.02	0.41
39:C:13:GLU:HG2	39:C:161:TYR:OH	2.20	0.41
39:C:46:LYS:HD2	39:C:49:ARG:HH21	1.86	0.41
39:C:121:ARG:HB3	39:C:277:TYR:CZ	2.56	0.41
39:C:195:LYS:HG3	39:C:200:ARG:HG3	2.02	0.41
39:C:318:PRO:HG3	39:C:328:LEU:HD23	2.03	0.41
41:E:152:ILE:HD12	41:E:165:VAL:O	2.21	0.41
41:E:257:ASP:O	41:E:261:LEU:HD23	2.21	0.41
41:E:289:LEU:HD12	48:M:109:ARG:CZ	2.51	0.41
42:F:118:ASN:ND2	42:F:211:LYS:HD2	2.29	0.41
42:F:239:ILE:HD12	42:F:240:ASN:N	2.36	0.41
43:G:118:ARG:O	43:G:122:ILE:HG13	2.21	0.41
43:G:129:VAL:CG1	43:G:133:ILE:HG23	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:H:59:LYS:HE3	44:H:66:GLU:HG2	2.03	0.41
45:I:30:LYS:HE3	45:I:63:GLU:HG3	2.02	0.41
45:I:51:HIS:HD2	45:I:134:VAL:HG11	1.85	0.41
45:I:181:PHE:O	45:I:185:VAL:HG23	2.21	0.41
46:J:127:GLY:HA3	79:5:4251:A:C6	2.56	0.41
46:J:163:MET:SD	46:J:174:ILE:HG12	2.61	0.41
47:L:91:ALA:HA	47:L:94:ILE:CG1	2.51	0.41
48:M:37:LEU:CD1	48:M:47:ARG:HD2	2.45	0.41
49:N:59:TYR:CE2	49:N:135:ILE:HD11	2.55	0.41
49:N:65:ARG:HB3	49:N:127:TYR:CE1	2.49	0.41
49:N:150:TRP:O	49:N:153:LYS:HG2	2.21	0.41
49:N:159:ARG:NH2	49:N:165:THR:HA	2.36	0.41
50:O:26:GLN:HA	50:O:29:LEU:CG	2.51	0.41
50:O:51:LYS:O	50:O:55:LEU:HG	2.19	0.41
50:O:172:LYS:HD2	79:5:4768:G:O3'	2.20	0.41
51:P:51:VAL:HG22	51:P:56:GLN:O	2.21	0.41
52:Q:180:ARG:NH1	60:a:50:PRO:HG2	2.36	0.41
54:T:11:THR:HB	54:T:14:MET:HB2	2.02	0.41
54:T:39:ILE:HD13	54:T:102:ARG:HD3	2.02	0.41
54:T:75:VAL:CG2	54:T:88:ARG:HB3	2.37	0.41
55:U:80:LYS:HG3	79:5:2620:G:OP2	2.21	0.41
57:X:68:ARG:NH2	81:8:97:A:H4'	2.27	0.41
57:X:76:ILE:HD12	57:X:77:ILE:N	2.36	0.41
58:Y:10:ASP:CG	58:Y:13:LYS:HD3	2.46	0.41
58:Y:42:TYR:CG	58:Y:119:LEU:HD11	2.56	0.41
59:Z:11:VAL:CG1	59:Z:80:LEU:HD22	2.51	0.41
60:a:20:GLY:HA2	79:5:2282:A:O2'	2.20	0.41
60:a:35:ALA:CB	79:5:38:A:H5''	2.51	0.41
60:a:84:GLU:O	60:a:88:VAL:HG23	2.21	0.41
63:d:38:PHE:HA	63:d:38:PHE:HD1	1.75	0.41
63:d:68:LEU:HD21	63:d:107:THR:C	2.46	0.41
64:e:91:CYS:HB2	64:e:95:TYR:CD1	2.55	0.41
64:e:101:HIS:HB2	79:5:2325:C:H5''	2.03	0.41
66:g:22:LEU:HD22	66:g:22:LEU:HA	1.95	0.41
66:g:87:VAL:O	66:g:91:ILE:HG13	2.21	0.41
67:h:13:LYS:HD2	67:h:15:GLU:OE2	2.21	0.41
70:k:33:LYS:HG2	70:k:46:VAL:HG22	2.03	0.41
74:o:27:LYS:HE3	74:o:27:LYS:HB3	1.88	0.41
75:p:8:VAL:HG23	75:p:11:VAL:CG2	2.51	0.41
75:p:22:LEU:HA	75:p:25:MET:HG3	2.02	0.41
75:p:47:MET:HA	75:p:56:HIS:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:r:105:ASP:OD1	79:5:2090:U:H1'	2.21	0.41
79:5:290:U:H2'	79:5:291:U:H6	1.85	0.41
79:5:357:U:OP1	81:8:26:C:H4'	2.21	0.41
79:5:360:A:C4	81:8:24:G:H1'	2.56	0.41
79:5:923:C:OP1	79:5:923:C:H4'	2.21	0.41
79:5:941:C:O2'	79:5:942:G:H5'	2.21	0.41
79:5:1092:G:O2'	79:5:1093:C:H5'	2.20	0.41
79:5:1393:G:N3	79:5:4351:U:H4'	2.36	0.41
79:5:1427:A:H4'	79:5:1695:U:P	2.60	0.41
79:5:1469:C:H2'	79:5:1470:G:H8	1.86	0.41
79:5:1870:C:H2'	79:5:1871:A:C8	2.56	0.41
79:5:2071:A:H2'	79:5:2072:C:C6	2.56	0.41
79:5:2424:G:H5''	79:5:2425:U:OP1	2.21	0.41
79:5:2461:G:H2'	79:5:2462:C:C6	2.56	0.41
79:5:2509:C:H2'	79:5:2510:G:O4'	2.20	0.41
79:5:2780:C:H2'	79:5:2781:G:C8	2.56	0.41
79:5:3754:G:O2'	79:5:3755:G:H5'	2.21	0.41
79:5:4070:U:H2'	79:5:4071:U:H6	1.84	0.41
79:5:4210:U:H2'	79:5:4211:C:C6	2.56	0.41
79:5:4215:C:H3'	79:5:4216:G:H8	1.86	0.41
79:5:4352:U:H2'	79:5:4353:U:O4'	2.21	0.41
79:5:4435:U:H2'	79:5:4436:U:N1	2.35	0.41
79:5:4573:G:H2'	79:5:4574:U:H6	1.86	0.41
79:5:4640:C:H2'	79:5:4641:U:H6	1.86	0.41
79:5:4673:U:H2'	79:5:4674:C:C6	2.56	0.41
80:7:23:A:H2'	80:7:24:C:C6	2.55	0.41
81:8:59:A:H4'	81:8:60:G:H3'	2.01	0.41
81:8:123:U:H3'	81:8:124:U:H6	1.84	0.41
3:9:148:U:O2	3:9:170:A:N7	2.53	0.41
3:9:221:A:O2'	3:9:222:U:H5'	2.20	0.41
3:9:571:U:OP1	18:YY:37:LYS:HG3	2.20	0.41
3:9:581:U:O2'	18:YY:33:ALA:HA	2.20	0.41
3:9:651:U:H2'	3:9:652:U:C6	2.56	0.41
3:9:941:C:O2'	3:9:942:G:H5'	2.21	0.41
3:9:988:C:O4'	5:BB:120:MET:HE3	2.21	0.41
3:9:992:A:O2'	3:9:993:G:H5'	2.21	0.41
3:9:996:A:H2'	3:9:997:A:C8	2.55	0.41
3:9:1012:A:H5''	13:NN:10:GLY:CA	2.51	0.41
3:9:1023:A:O2'	16:WW:2:VAL:HG21	2.21	0.41
3:9:1378:A:H4'	3:9:1379:A:O5'	2.20	0.41
3:9:1397:U:C2	3:9:1442:U:H4'	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:1622:U:O4	26:PP:121:ILE:HD12	2.21	0.41
3:9:1826:G:O2'	3:9:1827:U:H5'	2.21	0.41
4:AA:198:MET:HE2	4:AA:199:PRO:HD2	2.02	0.41
5:BB:69:VAL:HG12	5:BB:73:ASP:HB2	2.03	0.41
7:EE:70:ILE:O	7:EE:71:LYS:HD3	2.21	0.41
7:EE:179:ASN:HA	7:EE:231:GLY:N	2.35	0.41
9:HH:24:SER:O	9:HH:28:LEU:HG	2.21	0.41
16:WW:50:PHE:CB	16:WW:63:VAL:HG22	2.51	0.41
16:WW:56:HIS:O	16:WW:57:ARG:HG3	2.21	0.41
18:YY:83:LYS:HD3	18:YY:96:LEU:HD13	2.02	0.41
22:DD:93:THR:CG2	22:DD:198:ILE:HG22	2.48	0.41
24:KK:1:MET:CE	24:KK:44:HIS:HA	2.44	0.41
24:KK:35:LEU:HD12	24:KK:40:VAL:HG21	2.03	0.41
25:MM:48:HIS:HE1	25:MM:112:LYS:HB2	1.86	0.41
25:MM:101:ARG:H	25:MM:101:ARG:HG3	1.70	0.41
26:PP:121:ILE:HD11	26:PP:123:TYR:CZ	2.56	0.41
27:QQ:46:THR:OG1	27:QQ:47:LEU:HD22	2.21	0.41
27:QQ:90:LYS:HE3	27:QQ:90:LYS:HB3	1.77	0.41
27:QQ:93:VAL:HA	27:QQ:105:LYS:HZ3	1.85	0.41
29:SS:5:ILE:HB	32:ZZ:52:LYS:HZ1	1.85	0.41
30:TT:130:ASP:HA	30:TT:133:ARG:HB2	2.02	0.41
37:A:131:GLY:HA3	79:5:3683:C:N3	2.36	0.41
39:C:38:ASN:O	39:C:42:THR:HG23	2.21	0.41
39:C:152:LEU:HB3	39:C:251:ILE:CD1	2.51	0.41
40:D:65:ALA:HA	40:D:73:MET:O	2.21	0.41
41:E:58:ARG:HG3	41:E:59:TYR:CD2	2.56	0.41
41:E:179:THR:CG2	41:E:189:LEU:HA	2.51	0.41
42:F:90:PHE:CZ	42:F:92:ILE:HD11	2.56	0.41
42:F:100:VAL:CG2	42:F:104:VAL:HG13	2.51	0.41
43:G:121:ALA:HB1	43:G:125:LYS:NZ	2.36	0.41
43:G:207:LEU:HD12	43:G:257:PHE:CD1	2.55	0.41
43:G:262:SER:O	43:G:265:LYS:HG3	2.20	0.41
44:H:61:TRP:HE1	48:M:33:GLN:CG	2.34	0.41
44:H:69:THR:HG22	79:5:4700:A:C2	2.56	0.41
44:H:129:ARG:CB	44:H:153:LEU:HD22	2.51	0.41
44:H:141:LYS:HE2	44:H:141:LYS:HB2	1.85	0.41
46:J:35:ARG:HG2	46:J:123:ILE:HA	2.02	0.41
48:M:23:LYS:NZ	48:M:44:ARG:HB3	2.36	0.41
49:N:67:ARG:HG2	79:5:2459:G:OP2	2.21	0.41
49:N:150:TRP:CD2	49:N:151:ILE:HG13	2.56	0.41
50:O:91:LYS:HD3	79:5:3887:C:N4	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:P:27:LYS:O	51:P:31:GLU:HG2	2.21	0.41
55:U:48:LYS:HA	55:U:52:LYS:O	2.21	0.41
57:X:84:GLU:HA	57:X:87:MET:HG2	2.02	0.41
58:Y:17:ARG:HH21	58:Y:25:ILE:HG21	1.85	0.41
60:a:100:ILE:CD1	60:a:123:ILE:HB	2.51	0.41
62:c:30:GLY:HA2	79:5:2673:G:O3'	2.21	0.41
62:c:62:TYR:CE2	62:c:66:LEU:HD11	2.56	0.41
64:e:25:SER:OG	64:e:31:ILE:HG22	2.21	0.41
68:i:19:LYS:HZ2	68:i:21:VAL:HA	1.86	0.41
76:r:47:LYS:HZ1	76:r:102:TYR:HA	1.84	0.41
78:t:27:ALA:HB1	78:t:30:PRO:HD2	2.03	0.41
79:5:660:A:H2'	79:5:661:C:C6	2.56	0.41
79:5:956:A:N6	79:5:1283:G:H1'	2.35	0.41
79:5:1824:G:H2'	79:5:1825:A:H8	1.85	0.41
79:5:2729:C:O2'	79:5:2730:U:H5'	2.21	0.41
79:5:2734:U:H2'	79:5:2735:G:H8	1.85	0.41
79:5:2856:C:H3'	79:5:2857:A:H8	1.86	0.41
79:5:3665:G:O2'	79:5:3666:C:H5'	2.20	0.41
79:5:4075:U:H3	79:5:4170:A:H62	1.69	0.41
79:5:4967:A:H2'	79:5:4968:A:C8	2.53	0.41
79:5:5000:G:H2'	79:5:5001:U:O4'	2.21	0.41
79:5:5002:U:H2'	79:5:5003:U:H6	1.86	0.41
1:R:138:LEU:O	1:R:142:ILE:HG13	2.21	0.40
2:W:45:ASN:OD1	2:W:47:ARG:HG2	2.21	0.40
3:9:17:C:H4'	3:9:1166:G:C8	2.55	0.40
3:9:126:G:P	8:GG:195:LYS:HG2	2.61	0.40
3:9:386:C:OP2	10:II:10:LYS:HD2	2.21	0.40
3:9:443:U:H3'	3:9:444:G:C8	2.55	0.40
3:9:445:A:H4'	10:II:51:GLY:N	2.36	0.40
3:9:477:G:O2'	3:9:478:G:H5'	2.21	0.40
3:9:688:U:C4	9:HH:122:LEU:HD11	2.56	0.40
3:9:732:U:H2'	3:9:733:C:C6	2.56	0.40
3:9:1043:G:H2'	3:9:1044:G:O4'	2.21	0.40
3:9:1293:A:H1'	35:ff:138:ARG:HH12	1.86	0.40
3:9:1516:G:O2'	3:9:1517:G:H5'	2.21	0.40
3:9:1828:C:H2'	3:9:1829:G:C8	2.56	0.40
4:AA:86:ALA:HB2	4:AA:202:TYR:O	2.21	0.40
5:BB:36:PRO:HD3	5:BB:98:THR:OG1	2.21	0.40
6:CC:72:ASP:OD1	6:CC:74:LYS:HB2	2.21	0.40
6:CC:267:GLN:O	6:CC:270:THR:HG22	2.21	0.40
7:EE:122:LYS:HE3	7:EE:124:CYS:SG	2.61	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:JJ:169:ARG:CG	11:JJ:170:PRO:HD2	2.50	0.40
13:NN:84:LEU:HD11	13:NN:89:TYR:HB2	2.03	0.40
16:WW:6:VAL:HG12	16:WW:34:ILE:HD11	2.03	0.40
18:YY:27:VAL:HG11	18:YY:35:VAL:HG22	2.02	0.40
18:YY:37:LYS:HA	18:YY:40:ILE:HD12	2.03	0.40
22:DD:52:ALA:CB	22:DD:58:VAL:HG11	2.50	0.40
22:DD:70:THR:CG2	22:DD:86:LEU:HB2	2.52	0.40
26:PP:98:ASN:ND2	26:PP:120:SER:HB2	2.30	0.40
28:RR:13:ALA:O	28:RR:17:ILE:HG13	2.21	0.40
29:SS:31:THR:HG22	29:SS:38:ARG:HA	2.02	0.40
30:TT:28:LEU:HD13	30:TT:54:TYR:HE1	1.86	0.40
32:ZZ:91:LEU:HD12	32:ZZ:97:ILE:HG23	2.03	0.40
32:ZZ:103:HIS:HB3	32:ZZ:106:GLN:HB3	2.03	0.40
36:gg:19:THR:H	36:gg:35:SER:HA	1.85	0.40
36:gg:228:TYR:CG	36:gg:264:LYS:HE2	2.55	0.40
37:A:20:VAL:HA	37:A:23:ARG:NH1	2.35	0.40
38:B:340:THR:HG21	79:5:4976:U:H1'	2.04	0.40
39:C:65:GLU:OE1	39:C:80:ARG:HD2	2.21	0.40
39:C:295:SER:O	39:C:299:GLN:HG2	2.21	0.40
40:D:7:VAL:CG1	40:D:8:LYS:HE3	2.44	0.40
40:D:285:ALA:O	40:D:288:LEU:HG	2.21	0.40
41:E:65:TYR:OH	41:E:71:TYR:HB3	2.21	0.40
41:E:126:ARG:HH22	79:5:971(A):G:N2	2.20	0.40
42:F:29:ILE:HA	42:F:32:LEU:HG	2.03	0.40
42:F:38:GLN:HA	42:F:41:LEU:CG	2.51	0.40
42:F:50:TYR:CE2	79:5:1237:C:H5''	2.56	0.40
42:F:93:ARG:HH22	42:F:97:ILE:HG22	1.87	0.40
42:F:124:LEU:HD23	54:T:135:PRO:HG3	2.02	0.40
42:F:226:PHE:HE2	53:S:38:VAL:HG21	1.86	0.40
43:G:82:ASN:OD1	43:G:84:LEU:HB2	2.21	0.40
43:G:260:VAL:CG1	43:G:268:LEU:HD13	2.50	0.40
43:G:314:LEU:O	43:G:318:LEU:HD23	2.21	0.40
44:H:34:LEU:CB	44:H:80:MET:HE3	2.43	0.40
44:H:48:LEU:H	44:H:48:LEU:HD23	1.86	0.40
44:H:92:MET:HE3	44:H:179:ILE:CG2	2.51	0.40
47:L:71:ARG:HD2	79:5:103:G:P	2.60	0.40
47:L:174:LYS:HB2	47:L:174:LYS:HE2	1.89	0.40
48:M:69:ARG:O	48:M:73:VAL:HG23	2.20	0.40
51:P:151:THR:HG21	51:P:153:LYS:HE3	2.03	0.40
53:S:96:GLU:OE1	53:S:139:ARG:HG2	2.21	0.40
53:S:113:MET:HE3	53:S:113:MET:HB3	1.79	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:V:74:LYS:HZ3	79:5:3798:U:H5''	1.86	0.40
57:X:111:GLN:HA	57:X:114:LYS:CG	2.51	0.40
61:b:92:LYS:HD2	79:5:1214:C:C5	2.56	0.40
63:d:20:VAL:HG13	63:d:91:LYS:HD3	2.02	0.40
63:d:57:MET:HE3	63:d:90:ARG:NH2	2.36	0.40
67:h:57:VAL:O	67:h:61:ILE:HG12	2.21	0.40
71:l:35:ILE:HG23	79:5:362:A:N6	2.36	0.40
74:o:8:ARG:NH1	74:o:8:ARG:HA	2.36	0.40
74:o:30:LYS:HD2	74:o:31:ASP:O	2.21	0.40
78:t:16:ARG:HD3	79:5:1975:G:C4	2.56	0.40
79:5:19:G:O2'	79:5:20:U:H5'	2.21	0.40
79:5:37:U:H2'	79:5:38:A:C8	2.56	0.40
79:5:241:G:H2'	79:5:242:U:O4'	2.21	0.40
79:5:474:C:H2'	79:5:475:G:H8	1.86	0.40
79:5:979:C:H2'	79:5:980:U:H6	1.86	0.40
79:5:1484:G:O2'	79:5:1485:C:H3'	2.21	0.40
79:5:1519:C:H2'	79:5:1520:C:H6	1.86	0.40
79:5:1524:A:HO2'	79:5:4388:A:H1'	1.86	0.40
79:5:1616:U:H2'	79:5:1617:G:H8	1.87	0.40
79:5:1762:C:H2'	79:5:1763:C:H6	1.86	0.40
79:5:2050:G:H2'	79:5:2051:C:O4'	2.21	0.40
79:5:2276:A:H2'	79:5:2277:C:C6	2.55	0.40
79:5:2429:A:H2'	79:5:2430:C:O4'	2.22	0.40
79:5:2614:C:H4'	79:5:2807:A:O3'	2.20	0.40
79:5:2719:C:O2'	79:5:2720:C:H5'	2.21	0.40
79:5:2733:C:H2'	79:5:2734:U:C6	2.56	0.40
79:5:3845:A:H2'	79:5:3846:C:C6	2.56	0.40
79:5:3891:A:H3'	79:5:3892:U:H5''	2.02	0.40
79:5:4306:U:H2'	79:5:4307:A:O4'	2.22	0.40
79:5:4592:C:H2'	79:5:4593:C:H6	1.86	0.40
79:5:4645:C:O2'	79:5:4646:U:H5'	2.22	0.40
79:5:5028:G:H2'	79:5:5029:C:C6	2.56	0.40
81:8:28:C:H2'	81:8:29:G:H8	1.86	0.40
1:R:38:ARG:HD3	79:5:2525:U:OP2	2.21	0.40
1:R:147:ALA:O	1:R:151:ARG:HG3	2.22	0.40
3:9:41:G:C5'	3:9:485:A:H2'	2.51	0.40
3:9:83:A:H2'	3:9:84:A:H5'	2.03	0.40
3:9:913:A:N6	9:HH:98:ARG:HD3	2.36	0.40
3:9:935:G:O2'	3:9:936:G:H5'	2.21	0.40
3:9:975:G:O2'	3:9:976:G:H5'	2.21	0.40
3:9:1139:C:H3'	3:9:1140:G:C8	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:1305:C:H2'	3:9:1306:U:C6	2.56	0.40
3:9:1641:A:H2'	3:9:1642:U:O4'	2.22	0.40
3:9:1690:U:H2'	3:9:1691:U:H6	1.85	0.40
3:9:1705:C:H2'	3:9:1706:G:H8	1.87	0.40
5:BB:121:ILE:HD13	5:BB:164:ILE:CG2	2.49	0.40
6:CC:68:ARG:HA	6:CC:68:ARG:NH1	2.36	0.40
6:CC:211:LYS:O	6:CC:215:MET:HG3	2.21	0.40
7:EE:44:LEU:CD1	7:EE:82:TYR:HB3	2.50	0.40
7:EE:191:ARG:NH1	7:EE:245:ARG:HG2	2.36	0.40
8:GG:6:SER:HB3	8:GG:13:GLN:HB3	2.03	0.40
9:HH:53:VAL:CG2	9:HH:57:ARG:HB3	2.51	0.40
10:II:172:LEU:HD13	10:II:195:LEU:HD11	2.03	0.40
12:LL:101:ARG:HB3	17:XX:7:LEU:O	2.21	0.40
12:LL:101:ARG:HG3	17:XX:13:LEU:HD21	2.03	0.40
13:NN:76:LYS:HE3	13:NN:76:LYS:HB3	1.82	0.40
22:DD:54:ARG:HD2	22:DD:57:ASN:OD1	2.20	0.40
23:FF:107:ASN:ND2	23:FF:109:LEU:HD13	2.36	0.40
27:QQ:41:MET:SD	30:TT:10:ASN:HA	2.61	0.40
29:SS:84:LEU:HA	29:SS:97:GLN:OE1	2.21	0.40
30:TT:42:HIS:HA	30:TT:83:GLN:HG3	2.03	0.40
36:gg:11:LEU:HD22	36:gg:299:PHE:HE2	1.86	0.40
36:gg:206:LEU:HD12	36:gg:218:LEU:CG	2.46	0.40
37:A:233:ARG:NH2	79:5:4182:G:H4'	2.37	0.40
38:B:5:LYS:HE3	38:B:6:PHE:CE2	2.56	0.40
39:C:117:THR:O	39:C:121:ARG:HG3	2.21	0.40
39:C:190:ARG:HE	39:C:199:ARG:HB3	1.87	0.40
39:C:257:PHE:O	39:C:260:LEU:HG	2.21	0.40
40:D:271:MET:HE1	80:7:61:G:H5'	2.04	0.40
41:E:116:PRO:HG2	41:E:119:TYR:CE1	2.57	0.40
43:G:114:ILE:O	43:G:118:ARG:HG3	2.21	0.40
44:H:113:GLU:HB2	44:H:115:ARG:HH12	1.85	0.40
46:J:13:ARG:O	46:J:136:ARG:HD3	2.21	0.40
47:L:42:ARG:HA	47:L:45:ARG:NH1	2.36	0.40
47:L:50:PRO:HG3	67:h:121:VAL:CG2	2.51	0.40
48:M:10:GLY:HA2	48:M:64:PHE:CZ	2.56	0.40
48:M:118:MET:HE3	48:M:119:ARG:CA	2.51	0.40
52:Q:105:VAL:HG12	52:Q:109:ALA:HB3	2.03	0.40
52:Q:114:LEU:HD13	52:Q:114:LEU:HA	1.87	0.40
53:S:49:SER:O	80:7:75:G:H5''	2.21	0.40
53:S:113:MET:SD	53:S:119:ALA:HB3	2.61	0.40
53:S:162:GLN:H	53:S:162:GLN:HG3	1.76	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:T:54:HIS:HB3	54:T:57:TYR:CD2	2.56	0.40
57:X:90:ILE:HD11	57:X:97:VAL:N	2.36	0.40
58:Y:90:ALA:O	79:5:389:A:H1'	2.21	0.40
58:Y:109:LEU:HD12	58:Y:111:LEU:HD22	2.02	0.40
59:Z:11:VAL:CG1	59:Z:80:LEU:HB3	2.51	0.40
61:b:101:HIS:ND1	61:b:102:PRO:HD2	2.36	0.40
63:d:29:ILE:HD13	63:d:81:PRO:O	2.22	0.40
64:e:41:ILE:HG13	79:5:1317:U:OP2	2.21	0.40
73:n:18:ARG:HA	73:n:21:ARG:CG	2.52	0.40
79:5:10:A:H1'	79:5:2472:A:N1	2.35	0.40
79:5:161:G:H2'	79:5:162:A:C8	2.56	0.40
79:5:1206:C:O2'	79:5:1207:C:H5'	2.21	0.40
79:5:1761:G:O2'	79:5:1762:C:H5'	2.21	0.40
79:5:1810:G:O2'	79:5:1811:G:H5'	2.21	0.40
79:5:1882:U:H5'	79:5:1898:C:H42	1.87	0.40
79:5:2282:A:H2'	79:5:2283:G:O4'	2.21	0.40
79:5:2607:C:H2'	79:5:2608:G:H8	1.85	0.40
79:5:2727:C:O2'	79:5:2728:U:H5'	2.22	0.40
79:5:2745:A:H2'	79:5:2746:A:H8	1.87	0.40
79:5:3730:U:H2'	79:5:3731:C:H6	1.84	0.40
79:5:4179:G:O2'	79:5:4180:G:H5'	2.22	0.40
79:5:4294:C:O2'	79:5:4295:U:H5'	2.22	0.40
79:5:4323:A:H2'	79:5:4324:A:C4	2.56	0.40
79:5:4667:C:H2'	79:5:4668:U:O4'	2.20	0.40
79:5:4692:A:H2'	79:5:4693:C:C5	2.56	0.40
79:5:4751:G:H2'	79:5:4752:U:O4'	2.21	0.40
79:5:4986:G:H2'	79:5:4987:C:C6	2.56	0.40
80:7:114:U:O2'	80:7:115:A:H5'	2.20	0.40
3:9:23:G:OP1	11:JJ:15:THR:HG21	2.21	0.40
3:9:67:C:C4	8:GG:164:LYS:HG2	2.55	0.40
3:9:379:C:H4'	10:II:31:ARG:O	2.21	0.40
3:9:520:A:H2'	3:9:521:A:H8	1.86	0.40
3:9:988:C:C1'	5:BB:120:MET:HE3	2.51	0.40
3:9:1132:C:O3'	19:aa:13:LYS:HB3	2.22	0.40
3:9:1173:A:H2'	3:9:1174:U:O4'	2.21	0.40
3:9:1229:G:H2'	3:9:1230:C:C6	2.55	0.40
3:9:1560:U:H4'	3:9:1583:C:O2'	2.21	0.40
3:9:1576:G:H2'	3:9:1577:G:H8	1.86	0.40
3:9:1736:G:O2'	3:9:1737:G:H5'	2.22	0.40
7:EE:122:LYS:CE	7:EE:164:LEU:HD11	2.51	0.40
8:GG:18:VAL:HG12	8:GG:20:ASP:H	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:GG:181:THR:HG23	8:GG:183:ARG:H	1.86	0.40
8:GG:212:LEU:HA	8:GG:215:LYS:HZ3	1.86	0.40
9:HH:80:VAL:O	9:HH:84:GLU:HG2	2.21	0.40
10:II:48:VAL:HG22	10:II:52:ASN:HB2	2.03	0.40
10:II:54:LYS:HD3	10:II:181:GLN:OE1	2.21	0.40
10:II:128:LYS:HA	10:II:128:LYS:HD2	1.78	0.40
11:JJ:110:LEU:HB2	11:JJ:147:PHE:O	2.22	0.40
12:LL:8:ARG:HD3	12:LL:8:ARG:H	1.86	0.40
17:XX:74:LEU:HD12	17:XX:76:LYS:HE2	2.03	0.40
17:XX:76:LYS:HE2	17:XX:76:LYS:HB2	1.84	0.40
18:YY:88:LYS:HB2	18:YY:88:LYS:HE2	1.84	0.40
22:DD:104:SER:O	22:DD:108:LYS:HG3	2.21	0.40
22:DD:178:ARG:HA	22:DD:178:ARG:HD2	1.94	0.40
25:MM:89:VAL:HG23	25:MM:91:LEU:HG	2.04	0.40
30:TT:80:GLY:HA3	30:TT:92:PHE:CZ	2.56	0.40
31:UU:36:CYS:HA	31:UU:39:LEU:CG	2.50	0.40
32:ZZ:70:PRO:CB	32:ZZ:84:ALA:HB1	2.51	0.40
36:gg:237:ASN:CB	36:gg:287:THR:HA	2.51	0.40
38:B:81:THR:HG21	38:B:331:VAL:HG22	2.02	0.40
38:B:120:LYS:HE3	79:5:4578:G:H5''	2.03	0.40
38:B:275:HIS:HB3	38:B:277:ARG:NH1	2.36	0.40
38:B:304:SER:HB2	38:B:310:SER:O	2.21	0.40
39:C:46:LYS:HD3	79:5:349:A:N6	2.37	0.40
39:C:223:ASN:OD1	79:5:225:G:H3'	2.21	0.40
40:D:205:ALA:HA	40:D:208:MET:HG3	2.03	0.40
41:E:96:THR:HG22	41:E:109:VAL:HG13	2.03	0.40
41:E:144:ARG:O	41:E:147:ILE:HG13	2.20	0.40
41:E:176:LEU:O	41:E:176:LEU:HD12	2.22	0.40
42:F:102:PRO:HG3	79:5:1877:G:OP1	2.20	0.40
42:F:222:LYS:HD3	79:5:1907:A:O3'	2.22	0.40
43:G:106:ARG:HA	81:8:150:C:N4	2.36	0.40
43:G:156:ARG:HG2	43:G:246:LEU:HD22	2.03	0.40
43:G:305:LYS:HE3	43:G:305:LYS:HB3	1.84	0.40
44:H:160:LEU:HA	44:H:163:GLN:OE1	2.21	0.40
46:J:24:ILE:HG21	46:J:36:ALA:HB1	2.02	0.40
46:J:113:ILE:HD12	46:J:113:ILE:HA	1.96	0.40
47:L:124:LEU:HD22	47:L:125:VAL:N	2.36	0.40
47:L:167:ARG:HA	47:L:167:ARG:HH11	1.85	0.40
48:M:46:ARG:O	48:M:48:GLN:HG3	2.21	0.40
49:N:128:LYS:HD3	49:N:130:PHE:HZ	1.86	0.40
49:N:135:ILE:HD12	49:N:142:ILE:CG2	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:O:128:ARG:NH2	79:5:2054:U:H5''	2.37	0.40
51:P:12:THR:HA	51:P:105:LYS:NZ	2.36	0.40
52:Q:99:LYS:HD3	52:Q:119:LYS:CE	2.50	0.40
58:Y:31:SER:O	79:5:239:C:H4'	2.21	0.40
63:d:24:GLU:HB3	63:d:85:ARG:HE	1.85	0.40
64:e:5:ARG:HH22	79:5:703:G:C4'	2.34	0.40
64:e:41:ILE:HD12	64:e:42:ASP:N	2.37	0.40
64:e:47:ARG:NH1	79:5:1882:U:H3'	2.36	0.40
66:g:67:LEU:CD1	66:g:72:LYS:HB3	2.51	0.40
68:i:85:ARG:HA	68:i:88:GLU:HG3	2.02	0.40
74:o:63:THR:HG23	74:o:87:ARG:HG2	2.04	0.40
77:s:17:ILE:HG21	77:s:64:ALA:HB1	2.03	0.40
77:s:52:VAL:O	77:s:89:VAL:HA	2.21	0.40
79:5:15:A:H2'	79:5:16:G:O4'	2.21	0.40
79:5:1331:C:H2'	79:5:1332:C:C6	2.56	0.40
79:5:1545:G:H2'	79:5:1546:C:C6	2.56	0.40
79:5:2436:U:O2	79:5:2782:U:H5''	2.22	0.40
79:5:2594:C:H2'	79:5:2595:C:H6	1.85	0.40
79:5:3763:A:H2'	79:5:3764:U:O4'	2.22	0.40
79:5:4508:C:H2'	79:5:4509:U:O4'	2.22	0.40
2:W:8:PHE:CE1	2:W:46:PRO:HG3	2.57	0.40
3:9:361:U:O4	3:9:1187:G:H1'	2.21	0.40
3:9:398:A:H2'	3:9:398:A:OP2	2.21	0.40
3:9:562:U:O2'	11:JJ:132:GLN:HG2	2.20	0.40
3:9:630:U:H2'	3:9:631:U:H5''	2.03	0.40
3:9:933:G:H21	3:9:1000:C:H3'	1.86	0.40
3:9:956:G:H4'	14:OO:60:MET:HE2	2.02	0.40
3:9:975:G:N2	14:OO:50:LYS:HG2	2.36	0.40
3:9:1123:C:O3'	5:BB:149:GLN:HG3	2.20	0.40
3:9:1183:A:H5'	73:n:11:ARG:NH2	2.36	0.40
3:9:1373:C:OP1	28:RR:7:LYS:HE3	2.22	0.40
3:9:1448:A:H2'	3:9:1449:G:O4'	2.21	0.40
3:9:1462:U:H3'	3:9:1463:U:O4'	2.21	0.40
3:9:1631:U:C2'	3:9:1632:G:H5'	2.51	0.40
3:9:1654:G:H2'	3:9:1655:C:H6	1.87	0.40
3:9:1730:U:H2'	3:9:1731:A:O4'	2.22	0.40
3:9:1819:A:OP1	73:n:13:LEU:HD11	2.21	0.40
4:AA:34:MET:O	4:AA:38:ILE:HG13	2.21	0.40
4:AA:55:TRP:HA	4:AA:58:LEU:CG	2.52	0.40
4:AA:122:LEU:HD11	4:AA:142:LEU:CD1	2.41	0.40
6:CC:78:LEU:HA	6:CC:81:ILE:HD12	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CC:137:VAL:C	6:CC:162:ILE:HD12	2.45	0.40
6:CC:276:THR:HG23	6:CC:277:HIS:ND1	2.36	0.40
10:II:17:LYS:HZ2	10:II:19:LYS:HD2	1.86	0.40
11:JJ:77:LEU:HA	11:JJ:80:ARG:HE	1.87	0.40
12:LL:74:SER:O	12:LL:90:ARG:HG2	2.22	0.40
14:OO:96:LYS:HD3	14:OO:132:VAL:HG11	2.03	0.40
17:XX:54:LYS:HE2	17:XX:94:ILE:HG23	2.03	0.40
17:XX:102:VAL:HG13	17:XX:121:LYS:O	2.22	0.40
19:aa:102:ARG:HH11	19:aa:102:ARG:HA	1.87	0.40
20:bb:50:ALA:O	20:bb:51:GLN:HG2	2.22	0.40
22:DD:25:LEU:HD12	22:DD:37:VAL:CG1	2.52	0.40
22:DD:54:ARG:HB3	22:DD:57:ASN:OD1	2.22	0.40
23:FF:122:ARG:HG2	33:cc:59:LEU:HD21	2.04	0.40
27:QQ:50:LYS:HE2	27:QQ:50:LYS:HB2	1.86	0.40
30:TT:19:ALA:O	30:TT:23:LYS:HG2	2.21	0.40
36:gg:69:VAL:HG23	36:gg:80:SER:HB3	2.03	0.40
36:gg:277:THR:OG1	36:gg:283:PRO:HA	2.21	0.40
37:A:5:ILE:HG13	37:A:5:ILE:H	1.70	0.40
37:A:140:ASN:HB3	37:A:142:GLU:OE2	2.22	0.40
37:A:245:ARG:HA	37:A:245:ARG:CZ	2.51	0.40
38:B:94:GLU:OE2	50:O:152:VAL:HB	2.22	0.40
38:B:110:ILE:HG13	38:B:115:LYS:HG2	2.04	0.40
38:B:238:LYS:HD2	79:5:4458:C:OP1	2.21	0.40
39:C:124:ILE:CA	39:C:237:ILE:HD11	2.52	0.40
40:D:33:ARG:NH2	80:7:7:G:H4'	2.37	0.40
41:E:247:GLU:O	41:E:251:VAL:HG23	2.21	0.40
44:H:78:GLN:O	44:H:82:LYS:HG2	2.21	0.40
44:H:146:LEU:HD11	44:H:161:ILE:HD13	2.03	0.40
44:H:150:ASP:O	44:H:154:VAL:HG23	2.21	0.40
45:I:38:ARG:HB2	45:I:83:ASP:CB	2.49	0.40
45:I:65:LEU:O	45:I:69:ARG:HG2	2.19	0.40
46:J:82:ILE:HG22	46:J:130:PHE:CE2	2.56	0.40
46:J:141:ILE:HA	46:J:144:LYS:CE	2.50	0.40
46:J:141:ILE:CG2	46:J:144:LYS:HE2	2.45	0.40
47:L:61:CYS:HB3	47:L:66:TYR:O	2.21	0.40
47:L:163:LYS:HB3	47:L:163:LYS:HE3	1.79	0.40
47:L:180:ALA:O	47:L:184:MET:HG2	2.21	0.40
48:M:107:PHE:CE2	48:M:111:LYS:HD3	2.57	0.40
52:Q:148:VAL:CG1	79:5:1346:C:H5''	2.51	0.40
53:S:37:HIS:O	53:S:41:LYS:HG2	2.21	0.40
55:U:83:LEU:O	55:U:87:THR:HG22	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:V:15:ARG:C	56:V:16:ILE:HD12	2.47	0.40
57:X:109:ILE:O	57:X:113:VAL:HG12	2.21	0.40
61:b:25:ARG:HH22	79:5:1844:G:H4'	1.86	0.40
62:c:29:LEU:CD2	62:c:91:VAL:HG11	2.47	0.40
63:d:46:LEU:HD21	79:5:2373:C:C5'	2.45	0.40
65:f:18:LEU:HD23	79:5:1916:G:O6	2.20	0.40
65:f:92:LEU:HD13	65:f:93:PRO:O	2.22	0.40
66:g:48:VAL:O	75:p:61:MET:HG2	2.21	0.40
66:g:62:LYS:HE3	66:g:62:LYS:HB2	1.92	0.40
67:h:47:ILE:H	67:h:47:ILE:HG13	1.54	0.40
74:o:22:LYS:HG2	74:o:71:GLU:HB3	2.02	0.40
75:p:79:VAL:O	75:p:83:ILE:HG22	2.21	0.40
79:5:247:G:O2'	79:5:248:C:H5'	2.22	0.40
79:5:1320:U:H2'	79:5:1321:G:O4'	2.22	0.40
79:5:1402:C:H2'	79:5:1403:G:H8	1.86	0.40
79:5:1590:C:H5''	79:5:1591:U:OP2	2.22	0.40
79:5:2073:C:O2'	79:5:2074:C:H5'	2.22	0.40
79:5:2295:C:H2'	79:5:2296:G:C8	2.56	0.40
79:5:2741:U:H4'	79:5:2742:G:O4'	2.21	0.40
79:5:3604:A:H2'	79:5:3605:C:C6	2.56	0.40
79:5:4275:G:H2'	79:5:4276:G:C8	2.56	0.40
79:5:4308:C:H2'	79:5:4309:G:O4'	2.21	0.40
79:5:4358:U:O2'	79:5:4359:U:H5'	2.22	0.40
79:5:4462:C:O2'	79:5:4463:U:H5'	2.21	0.40
79:5:4478:G:H2'	79:5:4479:A:H8	1.86	0.40
79:5:4562:C:H2'	79:5:4563:U:C6	2.55	0.40
79:5:4996:C:H2'	79:5:4997:G:O4'	2.22	0.40
81:8:115:G:O2'	81:8:116:C:H5'	2.22	0.40
81:8:132:G:O2'	81:8:133:G:H5'	2.21	0.40
1:R:70:ARG:NE	1:R:76:MET:HE1	2.36	0.40
3:9:37:C:H2'	3:9:38:A:O4'	2.21	0.40
3:9:299:A:O2'	3:9:300:U:H5'	2.21	0.40
3:9:573:U:H2'	3:9:575:A:OP2	2.22	0.40
3:9:1038:U:O2'	3:9:1039:C:H5'	2.21	0.40
3:9:1402:A:H3'	3:9:1405:A:N6	2.35	0.40
3:9:1464:C:H4'	28:RR:60:ARG:CZ	2.52	0.40
4:AA:180:ARG:HB3	4:AA:195:TRP:CE3	2.56	0.40
5:BB:108:ASP:HA	5:BB:111:CYS:SG	2.62	0.40
6:CC:179:THR:HA	6:CC:219:ILE:CD1	2.52	0.40
6:CC:242:ASP:O	6:CC:246:LYS:HG3	2.21	0.40
7:EE:54:TYR:CE1	18:YY:13:MET:HE2	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:EE:104:ASP:O	7:EE:190:GLY:HA3	2.21	0.40
8:GG:230:LYS:HE3	8:GG:230:LYS:HB3	1.86	0.40
10:II:31:ARG:HD2	10:II:46:VAL:HG11	2.03	0.40
12:LL:111:VAL:HG13	12:LL:140:PHE:C	2.46	0.40
16:WW:93:LEU:HD21	16:WW:128:PHE:CB	2.52	0.40
25:MM:77:ILE:HD11	25:MM:128:PHE:HE1	1.86	0.40
25:MM:101:ARG:HD2	25:MM:102:LYS:N	2.37	0.40
26:PP:20:VAL:HG12	26:PP:25:LEU:HG	2.03	0.40
26:PP:33:LEU:HD22	26:PP:37:TYR:CZ	2.57	0.40
26:PP:90:VAL:HA	26:PP:107:ILE:CD1	2.50	0.40
27:QQ:18:THR:OG1	27:QQ:75:GLY:HA2	2.21	0.40
27:QQ:135:PRO:HD2	27:QQ:139:ALA:O	2.21	0.40
28:RR:44:LYS:HD3	28:RR:44:LYS:HA	1.89	0.40
32:ZZ:50:PHE:CZ	32:ZZ:83:LEU:HD21	2.56	0.40
37:A:30:ARG:HD2	37:A:63:PHE:CD2	2.57	0.40
37:A:101:VAL:HG23	37:A:164:ALA:C	2.47	0.40
37:A:187:HIS:O	37:A:190:LYS:HB3	2.22	0.40
39:C:14:LYS:HB3	39:C:14:LYS:HE3	1.89	0.40
39:C:265:GLY:HA2	39:C:269:LYS:NZ	2.37	0.40
39:C:302:LEU:HD11	52:Q:38:ARG:CD	2.48	0.40
41:E:242:LYS:HE2	41:E:242:LYS:HB2	1.89	0.40
42:F:44:ALA:O	42:F:48:LEU:HD13	2.21	0.40
42:F:85:GLU:OE1	54:T:136:ARG:HG2	2.21	0.40
42:F:225:HIS:HB3	42:F:228:GLU:CG	2.45	0.40
43:G:127:LEU:O	43:G:292:GLY:HA3	2.21	0.40
46:J:28:GLU:O	46:J:33:LEU:HG	2.21	0.40
46:J:128:LEU:HD12	46:J:130:PHE:CE1	2.57	0.40
47:L:49:ARG:O	47:L:149:GLN:HG3	2.22	0.40
47:L:83:VAL:CG1	47:L:114:VAL:HG21	2.52	0.40
47:L:145:LYS:HD2	47:L:146:LEU:HD23	2.03	0.40
48:M:4:ARG:HB2	48:M:4:ARG:HH11	1.87	0.40
48:M:14:TYR:HE1	48:M:24:LEU:HD22	1.85	0.40
48:M:34:ASN:ND2	48:M:35:ARG:HD3	2.37	0.40
49:N:20:ARG:NH2	49:N:21:PHE:HA	2.36	0.40
49:N:121:VAL:HG11	49:N:131:GLU:CG	2.51	0.40
50:O:24:ALA:HA	50:O:88:LEU:HD21	2.04	0.40
51:P:114:ILE:HD11	51:P:116:HIS:O	2.22	0.40
52:Q:15:ARG:NH2	52:Q:54:SER:HB3	2.36	0.40
54:T:88:ARG:HD2	54:T:88:ARG:O	2.21	0.40
56:V:22:VAL:HG22	56:V:52:LEU:HD13	2.03	0.40
57:X:70:LYS:HB3	81:8:59:A:O2'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:Y:60:GLY:H	58:Y:63:LYS:HD3	1.86	0.40
60:a:132:ARG:O	60:a:136:LYS:HG2	2.22	0.40
61:b:89:VAL:HG23	61:b:90:SER:H	1.87	0.40
62:c:14:ILE:HA	62:c:17:ARG:NH1	2.36	0.40
62:c:45:LEU:HD13	62:c:46:VAL:N	2.35	0.40
62:c:53:PRO:HG2	62:c:56:ARG:HG3	2.04	0.40
63:d:63:ARG:HD3	63:d:103:TYR:HD2	1.86	0.40
64:e:85:LEU:HD23	64:e:114:ARG:HG2	2.04	0.40
67:h:44:LEU:CD1	81:8:49:G:H1'	2.47	0.40
68:i:40:VAL:O	68:i:44:ILE:HG12	2.22	0.40
69:j:50:SER:OG	69:j:53:ALA:HB3	2.21	0.40
70:k:16:ARG:HA	70:k:16:ARG:HD3	1.91	0.40
70:k:44:THR:OG1	79:5:2692:U:H4'	2.21	0.40
72:m:68:MET:HE1	72:m:97:PRO:HG3	2.04	0.40
79:5:297:U:H2'	79:5:298:G:O4'	2.21	0.40
79:5:445:U:H2'	79:5:446:C:C1'	2.52	0.40
79:5:459:C:O2'	79:5:460:C:H5'	2.21	0.40
79:5:665:C:H1'	79:5:668:C:C2	2.57	0.40
79:5:1392:A:H2	79:5:4351:U:H1'	1.87	0.40
79:5:1856:C:H2'	79:5:1857:C:C6	2.56	0.40
79:5:2375:A:O2'	79:5:2376:A:H5'	2.21	0.40
79:5:2421:G:H5'	79:5:2421:G:N3	2.36	0.40
79:5:2868:G:O2'	79:5:2869:U:H5'	2.21	0.40
79:5:3846:C:O2'	79:5:3847:C:H5'	2.21	0.40
79:5:3888:G:O2'	79:5:3889:G:H5'	2.22	0.40
79:5:4131:G:O2'	79:5:4132:C:H5'	2.22	0.40
79:5:4154:G:H2'	79:5:4155:C:C6	2.56	0.40
79:5:4190:U:O2	79:5:4381:A:H3'	2.22	0.40
79:5:4227:U:O2'	79:5:4228:G:H5'	2.22	0.40
79:5:4358:U:H2'	79:5:4359:U:C6	2.57	0.40
79:5:4362:A:H2'	79:5:4363:A:H8	1.86	0.40
79:5:4631:G:H2'	79:5:4632:U:H6	1.85	0.40
79:5:4655:A:OP1	79:5:4656:A:H5''	2.20	0.40
79:5:4665:A:H1'	79:5:5047:C:H42	1.85	0.40
79:5:4726:G:H2'	79:5:4727:A:C8	2.57	0.40
79:5:4762:A:O2'	79:5:4763:U:H5'	2.22	0.40
81:8:44:A:H2'	81:8:45:C:H6	1.86	0.40
81:8:100:U:H2'	81:8:101:C:C6	2.55	0.40
81:8:119:C:H2'	81:8:120:G:C8	2.56	0.40

There are no symmetry-related clashes.



## 5.3 Torsion angles

### 5.3.1 Protein backbone

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	R	178/180 (99%)	174 (98%)	4 (2%)	0	100	100
2	W	102/106 (96%)	98 (96%)	4 (4%)	0	100	100
4	AA	215/217 (99%)	210 (98%)	5 (2%)	0	100	100
5	BB	211/213 (99%)	201 (95%)	10 (5%)	0	100	100
6	CC	219/221 (99%)	217 (99%)	2 (1%)	0	100	100
7	EE	260/262 (99%)	252 (97%)	8 (3%)	0	100	100
8	GG	235/237 (99%)	230 (98%)	5 (2%)	0	100	100
9	HH	181/189 (96%)	178 (98%)	3 (2%)	0	100	100
10	II	204/206 (99%)	194 (95%)	10 (5%)	0	100	100
11	JJ	183/185 (99%)	182 (100%)	1 (0%)	0	100	100
12	LL	139/151 (92%)	138 (99%)	1 (1%)	0	100	100
13	NN	147/149 (99%)	146 (99%)	1 (1%)	0	100	100
14	OO	134/136 (98%)	131 (98%)	3 (2%)	0	100	100
15	VV	81/83 (98%)	80 (99%)	1 (1%)	0	100	100
16	WW	127/129 (98%)	122 (96%)	5 (4%)	0	100	100
17	XX	139/141 (99%)	134 (96%)	4 (3%)	1 (1%)	18	55
18	YY	122/124 (98%)	120 (98%)	2 (2%)	0	100	100
19	aa	99/101 (98%)	95 (96%)	4 (4%)	0	100	100
20	bb	81/83 (98%)	78 (96%)	3 (4%)	0	100	100
21	ee	55/57 (96%)	53 (96%)	2 (4%)	0	100	100
22	DD	226/228 (99%)	222 (98%)	4 (2%)	0	100	100
23	FF	181/191 (95%)	177 (98%)	4 (2%)	0	100	100
24	KK	94/96 (98%)	93 (99%)	1 (1%)	0	100	100
25	MM	115/117 (98%)	108 (94%)	7 (6%)	0	100	100
26	PP	127/129 (98%)	121 (95%)	6 (5%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
27	QQ	140/142 (99%)	133 (95%)	7 (5%)	0	100	100
28	RR	130/132 (98%)	127 (98%)	3 (2%)	0	100	100
29	SS	142/144 (99%)	138 (97%)	4 (3%)	0	100	100
30	TT	139/141 (99%)	136 (98%)	3 (2%)	0	100	100
31	UU	98/100 (98%)	97 (99%)	1 (1%)	0	100	100
32	ZZ	73/75 (97%)	64 (88%)	9 (12%)	0	100	100
33	cc	60/62 (97%)	60 (100%)	0	0	100	100
34	dd	53/55 (96%)	52 (98%)	1 (2%)	0	100	100
35	ff	66/68 (97%)	64 (97%)	2 (3%)	0	100	100
36	gg	311/313 (99%)	300 (96%)	11 (4%)	0	100	100
37	A	246/248 (99%)	235 (96%)	11 (4%)	0	100	100
38	B	392/394 (100%)	381 (97%)	11 (3%)	0	100	100
39	C	360/362 (99%)	349 (97%)	11 (3%)	0	100	100
40	D	291/293 (99%)	283 (97%)	7 (2%)	1 (0%)	36	70
41	E	208/216 (96%)	201 (97%)	7 (3%)	0	100	100
42	F	223/225 (99%)	216 (97%)	7 (3%)	0	100	100
43	G	229/240 (95%)	225 (98%)	4 (2%)	0	100	100
44	H	188/190 (99%)	182 (97%)	6 (3%)	0	100	100
45	I	201/213 (94%)	194 (96%)	7 (4%)	0	100	100
46	J	168/170 (99%)	166 (99%)	2 (1%)	0	100	100
47	L	208/210 (99%)	203 (98%)	5 (2%)	0	100	100
48	M	136/138 (99%)	131 (96%)	5 (4%)	0	100	100
49	N	201/203 (99%)	197 (98%)	4 (2%)	0	100	100
50	O	197/199 (99%)	190 (96%)	7 (4%)	0	100	100
51	P	151/153 (99%)	148 (98%)	3 (2%)	0	100	100
52	Q	185/187 (99%)	177 (96%)	8 (4%)	0	100	100
53	S	174/176 (99%)	165 (95%)	9 (5%)	0	100	100
54	T	157/159 (99%)	151 (96%)	6 (4%)	0	100	100
55	U	97/99 (98%)	97 (100%)	0	0	100	100
56	V	137/139 (99%)	133 (97%)	4 (3%)	0	100	100
57	X	116/118 (98%)	113 (97%)	3 (3%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
58	Y	132/134 (98%)	130 (98%)	2 (2%)	0	100	100
59	Z	133/135 (98%)	125 (94%)	8 (6%)	0	100	100
60	a	145/147 (99%)	142 (98%)	3 (2%)	0	100	100
61	b	100/104 (96%)	98 (98%)	2 (2%)	0	100	100
62	c	96/98 (98%)	95 (99%)	1 (1%)	0	100	100
63	d	105/107 (98%)	97 (92%)	8 (8%)	0	100	100
64	e	126/128 (98%)	120 (95%)	6 (5%)	0	100	100
65	f	107/109 (98%)	101 (94%)	6 (6%)	0	100	100
66	g	112/114 (98%)	112 (100%)	0	0	100	100
67	h	120/122 (98%)	119 (99%)	1 (1%)	0	100	100
68	i	100/102 (98%)	97 (97%)	3 (3%)	0	100	100
69	j	84/86 (98%)	78 (93%)	6 (7%)	0	100	100
70	k	67/69 (97%)	67 (100%)	0	0	100	100
71	l	48/50 (96%)	47 (98%)	1 (2%)	0	100	100
72	m	50/52 (96%)	47 (94%)	3 (6%)	0	100	100
73	n	23/25 (92%)	23 (100%)	0	0	100	100
74	o	102/104 (98%)	99 (97%)	3 (3%)	0	100	100
75	p	89/91 (98%)	84 (94%)	5 (6%)	0	100	100
76	r	122/124 (98%)	119 (98%)	3 (2%)	0	100	100
77	s	85/87 (98%)	76 (89%)	9 (11%)	0	100	100
78	t	129/133 (97%)	117 (91%)	11 (8%)	1 (1%)	16	52
All	All	11407/11616 (98%)	11055 (97%)	349 (3%)	3 (0%)	100	100

All (3) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
17	XX	62	PRO
78	t	160	VAL
40	D	125	VAL

### 5.3.2 Protein sidechains ⓘ

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



entries.

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	R	159/159 (100%)	153 (96%)	6 (4%)	29	51
2	W	86/86 (100%)	83 (96%)	3 (4%)	32	54
4	AA	180/181 (99%)	171 (95%)	9 (5%)	22	45
5	BB	194/194 (100%)	189 (97%)	5 (3%)	40	61
6	CC	187/187 (100%)	184 (98%)	3 (2%)	55	69
7	EE	224/224 (100%)	217 (97%)	7 (3%)	35	56
8	GG	207/207 (100%)	202 (98%)	5 (2%)	43	63
9	HH	165/169 (98%)	160 (97%)	5 (3%)	36	57
10	II	178/178 (100%)	168 (94%)	10 (6%)	19	43
11	JJ	161/161 (100%)	155 (96%)	6 (4%)	30	52
12	LL	130/136 (96%)	122 (94%)	8 (6%)	16	41
13	NN	130/130 (100%)	127 (98%)	3 (2%)	44	64
14	OO	106/106 (100%)	103 (97%)	3 (3%)	38	59
15	VV	67/67 (100%)	63 (94%)	4 (6%)	17	42
16	WW	112/112 (100%)	108 (96%)	4 (4%)	31	53
17	XX	113/113 (100%)	107 (95%)	6 (5%)	20	44
18	YY	107/107 (100%)	101 (94%)	6 (6%)	19	43
19	aa	88/88 (100%)	86 (98%)	2 (2%)	44	64
20	bb	75/75 (100%)	73 (97%)	2 (3%)	39	60
21	ee	47/47 (100%)	47 (100%)	0	100	100
22	DD	190/190 (100%)	184 (97%)	6 (3%)	34	56
23	FF	158/161 (98%)	152 (96%)	6 (4%)	29	51
24	KK	87/87 (100%)	86 (99%)	1 (1%)	65	74
25	MM	99/99 (100%)	94 (95%)	5 (5%)	21	45
26	PP	115/115 (100%)	113 (98%)	2 (2%)	53	68
27	QQ	117/117 (100%)	113 (97%)	4 (3%)	32	55
28	RR	119/119 (100%)	117 (98%)	2 (2%)	53	68
29	SS	125/125 (100%)	117 (94%)	8 (6%)	16	40
30	TT	111/111 (100%)	109 (98%)	2 (2%)	51	67

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
31	UU	92/92 (100%)	89 (97%)	3 (3%)	33	55
32	ZZ	66/66 (100%)	48 (73%)	18 (27%)	0	3
33	cc	55/55 (100%)	55 (100%)	0	100	100
34	dd	48/48 (100%)	46 (96%)	2 (4%)	26	49
35	ff	61/61 (100%)	60 (98%)	1 (2%)	55	69
36	gg	272/272 (100%)	269 (99%)	3 (1%)	65	74
37	A	190/190 (100%)	168 (88%)	22 (12%)	5	21
38	B	342/342 (100%)	327 (96%)	15 (4%)	25	48
39	C	302/302 (100%)	284 (94%)	18 (6%)	17	42
40	D	247/247 (100%)	240 (97%)	7 (3%)	38	59
41	E	190/190 (100%)	182 (96%)	8 (4%)	26	49
42	F	196/196 (100%)	186 (95%)	10 (5%)	21	45
43	G	200/205 (98%)	190 (95%)	10 (5%)	22	45
44	H	169/169 (100%)	157 (93%)	12 (7%)	13	37
45	I	175/180 (97%)	165 (94%)	10 (6%)	18	43
46	J	143/143 (100%)	135 (94%)	8 (6%)	19	43
47	L	175/175 (100%)	167 (95%)	8 (5%)	24	47
48	M	117/117 (100%)	107 (92%)	10 (8%)	10	32
49	N	171/171 (100%)	157 (92%)	14 (8%)	10	33
50	O	171/171 (100%)	159 (93%)	12 (7%)	14	38
51	P	134/134 (100%)	127 (95%)	7 (5%)	21	45
52	Q	164/164 (100%)	150 (92%)	14 (8%)	10	32
53	S	157/157 (100%)	144 (92%)	13 (8%)	10	32
54	T	139/139 (100%)	131 (94%)	8 (6%)	18	42
55	U	89/89 (100%)	86 (97%)	3 (3%)	32	55
56	V	106/106 (100%)	101 (95%)	5 (5%)	23	47
57	X	106/106 (100%)	98 (92%)	8 (8%)	12	35
58	Y	124/124 (100%)	121 (98%)	3 (2%)	43	63
59	Z	117/117 (100%)	114 (97%)	3 (3%)	40	61
60	a	119/119 (100%)	113 (95%)	6 (5%)	22	45
61	b	84/84 (100%)	78 (93%)	6 (7%)	13	37

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
62	c	84/84 (100%)	81 (96%)	3 (4%)	31	53
63	d	98/98 (100%)	93 (95%)	5 (5%)	21	45
64	e	114/114 (100%)	107 (94%)	7 (6%)	17	41
65	f	88/88 (100%)	85 (97%)	3 (3%)	32	55
66	g	98/98 (100%)	90 (92%)	8 (8%)	10	33
67	h	109/109 (100%)	100 (92%)	9 (8%)	10	32
68	i	86/86 (100%)	80 (93%)	6 (7%)	14	38
69	j	73/73 (100%)	70 (96%)	3 (4%)	27	50
70	k	64/64 (100%)	62 (97%)	2 (3%)	35	56
71	l	47/47 (100%)	45 (96%)	2 (4%)	26	49
72	m	48/48 (100%)	45 (94%)	3 (6%)	16	40
73	n	24/24 (100%)	22 (92%)	2 (8%)	10	32
74	o	92/92 (100%)	90 (98%)	2 (2%)	45	64
75	p	74/74 (100%)	68 (92%)	6 (8%)	11	33
76	r	108/108 (100%)	102 (94%)	6 (6%)	19	43
77	s	75/75 (100%)	63 (84%)	12 (16%)	2	14
78	t	107/107 (100%)	97 (91%)	10 (9%)	8	28
All	All	9947/9971 (100%)	9458 (95%)	489 (5%)	24	46

All (489) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	R	4	LEU
1	R	32	ILE
1	R	37	SER
1	R	68	LEU
1	R	105	LEU
1	R	109	TYR
2	W	23	ARG
2	W	43	LYS
2	W	54	LEU
4	AA	5	LEU
4	AA	48	ILE
4	AA	118	GLU
4	AA	123	VAL
4	AA	147	LEU

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Mol	Chain	Res	Type
4	AA	154	LEU
4	AA	155	ARG
4	AA	173	LEU
4	AA	198	MET
5	BB	159	GLN
5	BB	168	MET
5	BB	172	MET
5	BB	212	VAL
5	BB	225	LEU
6	CC	61	LEU
6	CC	220	ASP
6	CC	233	LEU
7	EE	16	LYS
7	EE	23	LEU
7	EE	27	PHE
7	EE	72	ILE
7	EE	87	MET
7	EE	92	ILE
7	EE	207	VAL
8	GG	13	GLN
8	GG	41	LEU
8	GG	45	TRP
8	GG	46	LYS
8	GG	133	LEU
9	HH	36	LEU
9	HH	51	ILE
9	HH	69	LEU
9	HH	134	VAL
9	HH	145	ARG
10	II	3	ILE
10	II	27	TYR
10	II	28	GLU
10	II	78	ILE
10	II	97	VAL
10	II	103	LEU
10	II	107	THR
10	II	130	THR
10	II	171	LEU
10	II	178	ARG
11	JJ	18	ARG
11	JJ	29	LEU
11	JJ	63	LEU

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Mol	Chain	Res	Type
11	JJ	77	LEU
11	JJ	98	LEU
11	JJ	161	LEU
12	LL	23	VAL
12	LL	33	LEU
12	LL	42	LEU
12	LL	69	ARG
12	LL	85	THR
12	LL	96	ILE
12	LL	105	ARG
12	LL	113	LEU
13	NN	55	ARG
13	NN	80	LEU
13	NN	103	GLU
14	OO	28	PHE
14	OO	126	ILE
14	OO	135	ILE
15	VV	1	MET
15	VV	13	VAL
15	VV	42	VAL
15	VV	70	LEU
16	WW	5	ASN
16	WW	7	LEU
16	WW	41	MET
16	WW	86	LEU
17	XX	7	LEU
17	XX	8	ARG
17	XX	52	LEU
17	XX	85	VAL
17	XX	105	PHE
17	XX	125	VAL
18	YY	44	LEU
18	YY	58	PHE
18	YY	60	PHE
18	YY	72	PHE
18	YY	79	LEU
18	YY	120	THR
19	aa	44	ILE
19	aa	67	LEU
20	bb	51	GLN
20	bb	74	THR
22	DD	1	MET

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Mol	Chain	Res	Type
22	DD	27	ARG
22	DD	105	LEU
22	DD	123	LEU
22	DD	164	VAL
22	DD	189	MET
23	FF	19	LEU
23	FF	29	GLN
23	FF	30	ILE
23	FF	49	LEU
23	FF	77	MET
23	FF	169	ILE
24	KK	89	ILE
25	MM	33	ARG
25	MM	35	ILE
25	MM	79	VAL
25	MM	85	LEU
25	MM	94	ILE
26	PP	77	LYS
26	PP	89	MET
27	QQ	31	LEU
27	QQ	96	TYR
27	QQ	100	VAL
27	QQ	118	THR
28	RR	73	LEU
28	RR	105	MET
29	SS	16	LEU
29	SS	36	VAL
29	SS	59	LEU
29	SS	64	VAL
29	SS	78	LYS
29	SS	83	PHE
29	SS	98	VAL
29	SS	115	LYS
30	TT	110	LEU
30	TT	124	THR
31	UU	91	LEU
31	UU	104	ILE
31	UU	106	ILE
32	ZZ	47	LEU
32	ZZ	48	VAL
32	ZZ	49	LEU
32	ZZ	50	PHE

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Mol	Chain	Res	Type
32	ZZ	58	LEU
32	ZZ	64	ASN
32	ZZ	65	TYR
32	ZZ	67	LEU
32	ZZ	69	THR
32	ZZ	74	SER
32	ZZ	77	LEU
32	ZZ	91	LEU
32	ZZ	96	LEU
32	ZZ	98	LYS
32	ZZ	102	LYS
32	ZZ	110	THR
32	ZZ	111	ARG
32	ZZ	113	THR
34	dd	39	CYS
34	dd	55	LEU
35	ff	102	VAL
36	gg	149	GLU
36	gg	217	MET
36	gg	289	LEU
37	A	20	VAL
37	A	22	HIS
37	A	46	LYS
37	A	50	HIS
37	A	63	PHE
37	A	67	TYR
37	A	100	ASN
37	A	101	VAL
37	A	111	THR
37	A	158	ILE
37	A	175	ILE
37	A	179	ILE
37	A	199	VAL
37	A	211	PHE
37	A	219	ILE
37	A	221	LYS
37	A	225	ILE
37	A	226	ARG
37	A	235	VAL
37	A	237	LEU
37	A	238	ILE
37	A	242	ARG

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Mol	Chain	Res	Type
38	B	47	LEU
38	B	53	MET
38	B	70	LYS
38	B	89	ILE
38	B	163	LEU
38	B	170	LEU
38	B	171	LEU
38	B	207	VAL
38	B	248	LEU
38	B	264	PHE
38	B	297	LYS
38	B	314	ILE
38	B	320	PHE
38	B	332	MET
38	B	347	LEU
39	C	24	LEU
39	C	57	LEU
39	C	62	THR
39	C	92	PHE
39	C	101	MET
39	C	128	LEU
39	C	133	LEU
39	C	170	LEU
39	C	171	LEU
39	C	189	MET
39	C	202	ILE
39	C	210	ILE
39	C	221	PHE
39	C	254	GLU
39	C	262	ASP
39	C	327	LYS
39	C	328	LEU
39	C	340	ILE
40	D	6	VAL
40	D	37	VAL
40	D	72	ASP
40	D	92	LEU
40	D	104	LEU
40	D	115	MET
40	D	244	HIS
41	E	115	MET
41	E	133	LYS

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Mol	Chain	Res	Type
41	E	157	THR
41	E	191	ARG
41	E	193	HIS
41	E	195	LYS
41	E	261	LEU
41	E	280	LEU
42	F	24	PHE
42	F	51	GLU
42	F	82	VAL
42	F	85	GLU
42	F	88	LEU
42	F	132	LEU
42	F	158	TYR
42	F	165	ARG
42	F	208	TRP
42	F	239	ILE
43	G	88	ARG
43	G	108	VAL
43	G	159	THR
43	G	226	LEU
43	G	228	ARG
43	G	237	LEU
43	G	238	LYS
43	G	246	LEU
43	G	284	ASP
43	G	306	LEU
44	H	20	LEU
44	H	41	ILE
44	H	43	VAL
44	H	55	LEU
44	H	70	VAL
44	H	105	ILE
44	H	114	ILE
44	H	118	LEU
44	H	163	GLN
44	H	165	THR
44	H	168	LYS
44	H	181	VAL
45	I	21	ARG
45	I	40	LYS
45	I	73	ASN
45	I	145	LYS

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Mol	Chain	Res	Type
45	I	152	LEU
45	I	176	PHE
45	I	191	ILE
45	I	200	ILE
45	I	203	ARG
45	I	213	HIS
46	J	24	ILE
46	J	43	LEU
46	J	115	LEU
46	J	128	LEU
46	J	134	LEU
46	J	151	ILE
46	J	155	HIS
46	J	163	MET
47	L	9	ILE
47	L	10	LEU
47	L	46	ILE
47	L	63	THR
47	L	130	LYS
47	L	136	LYS
47	L	194	ILE
47	L	197	LYS
48	M	4	ARG
48	M	20	HIS
48	M	33	GLN
48	M	37	LEU
48	M	38	VAL
48	M	50	MET
48	M	55	MET
48	M	61	ILE
48	M	113	MET
48	M	123	ILE
49	N	21	PHE
49	N	22	LEU
49	N	23	LEU
49	N	33	LEU
49	N	47	LYS
49	N	64	ILE
49	N	87	HIS
49	N	116	LEU
49	N	127	TYR
49	N	135	ILE

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Mol	Chain	Res	Type
49	N	140	LYS
49	N	149	GLN
49	N	164	LEU
49	N	165	THR
50	O	9	LEU
50	O	19	LEU
50	O	26	GLN
50	O	60	LYS
50	O	63	ASN
50	O	115	LYS
50	O	120	VAL
50	O	152	VAL
50	O	156	LEU
50	O	180	GLN
50	O	183	LYS
50	O	186	GLU
51	P	64	ASN
51	P	75	GLN
51	P	91	LEU
51	P	95	LEU
51	P	100	SER
51	P	116	HIS
51	P	149	ILE
52	Q	10	ASP
52	Q	19	LYS
52	Q	21	GLN
52	Q	25	LEU
52	Q	28	LEU
52	Q	32	TYR
52	Q	45	GLN
52	Q	51	LEU
52	Q	61	LEU
52	Q	66	MET
52	Q	114	LEU
52	Q	121	LEU
52	Q	125	GLN
52	Q	172	ARG
53	S	24	THR
53	S	32	ILE
53	S	47	PHE
53	S	51	LEU
53	S	61	ILE

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Mol	Chain	Res	Type
53	S	67	VAL
53	S	68	PHE
53	S	76	LYS
53	S	91	HIS
53	S	93	MET
53	S	144	GLN
53	S	154	LEU
53	S	166	ARG
54	T	31	MET
54	T	35	LYS
54	T	69	GLN
54	T	98	HIS
54	T	103	ASP
54	T	142	ARG
54	T	143	THR
54	T	154	ILE
55	U	47	ILE
55	U	72	VAL
55	U	110	TYR
56	V	37	LEU
56	V	39	ILE
56	V	77	HIS
56	V	90	ARG
56	V	105	ILE
57	X	52	LEU
57	X	54	LEU
57	X	74	TYR
57	X	76	ILE
57	X	96	LEU
57	X	98	PHE
57	X	100	VAL
57	X	138	VAL
58	Y	14	ASN
58	Y	104	VAL
58	Y	109	LEU
59	Z	53	VAL
59	Z	78	ASN
59	Z	134	LEU
60	a	15	VAL
60	a	43	ILE
60	a	61	TYR
60	a	81	LEU

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Mol	Chain	Res	Type
60	a	112	LEU
60	a	117	LEU
61	b	11	ASN
61	b	21	ILE
61	b	30	GLU
61	b	42	ASN
61	b	89	VAL
61	b	101	HIS
62	c	18	LEU
62	c	42	LYS
62	c	80	GLU
63	d	38	PHE
63	d	39	LYS
63	d	40	LYS
63	d	64	ILE
63	d	77	ILE
64	e	7	LEU
64	e	37	LYS
64	e	41	ILE
64	e	86	GLU
64	e	88	LEU
64	e	89	LEU
64	e	123	THR
65	f	28	LEU
65	f	43	LEU
65	f	103	VAL
66	g	11	LEU
66	g	22	LEU
66	g	54	ARG
66	g	59	VAL
66	g	60	ARG
66	g	67	LEU
66	g	73	HIS
66	g	86	CYS
67	h	16	GLU
67	h	21	LEU
67	h	25	LYS
67	h	47	ILE
67	h	82	ASP
67	h	88	THR
67	h	96	ASN
67	h	97	LYS

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Mol	Chain	Res	Type
67	h	116	LEU
68	i	7	MET
68	i	46	GLU
68	i	60	LEU
68	i	63	VAL
68	i	70	LEU
68	i	90	LEU
69	j	20	ARG
69	j	59	THR
69	j	66	HIS
70	k	13	LEU
70	k	64	LEU
71	l	6	THR
71	l	49	LEU
72	m	77	LEU
72	m	95	LEU
72	m	100	LYS
73	n	10	MET
73	n	13	LEU
74	o	22	LYS
74	o	42	ASP
75	p	6	LYS
75	p	33	GLN
75	p	54	ILE
75	p	84	ARG
75	p	86	LEU
75	p	89	LEU
76	r	17	LEU
76	r	39	ARG
76	r	43	LEU
76	r	78	VAL
76	r	83	ASN
76	r	90	LEU
77	s	10	LYS
77	s	18	ILE
77	s	19	GLN
77	s	35	VAL
77	s	38	LYS
77	s	41	GLN
77	s	44	ARG
77	s	50	LYS
77	s	55	MET

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Mol	Chain	Res	Type
77	s	59	THR
77	s	61	MET
77	s	89	VAL
78	t	11	LYS
78	t	18	THR
78	t	25	THR
78	t	59	THR
78	t	61	LYS
78	t	83	LYS
78	t	110	VAL
78	t	117	ARG
78	t	129	ILE
78	t	154	ASP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (127) such sidechains are listed below:

Mol	Chain	Res	Type
2	W	63	GLN
4	AA	29	ASN
4	AA	165	ASN
4	AA	215	GLN
5	BB	147	ASN
5	BB	149	GLN
7	EE	36	HIS
7	EE	50	ASN
7	EE	214	ASN
8	GG	59	GLN
9	HH	76	GLN
9	HH	193	GLN
10	II	22	HIS
10	II	111	GLN
10	II	168	GLN
11	JJ	27	GLN
11	JJ	75	ASN
11	JJ	113	GLN
11	JJ	132	GLN
11	JJ	140	GLN
11	JJ	154	GLN
12	LL	11	GLN
12	LL	18	GLN
13	NN	13	GLN
13	NN	105	ASN

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Mol	Chain	Res	Type
13	NN	138	ASN
15	VV	29	HIS
15	VV	49	GLN
16	WW	92	ASN
16	WW	120	HIS
17	XX	63	ASN
17	XX	92	ASN
18	YY	22	GLN
19	aa	8	ASN
19	aa	86	ASN
20	bb	51	GLN
21	ee	110	GLN
22	DD	56	GLN
22	DD	101	GLN
23	FF	29	GLN
23	FF	36	GLN
24	KK	84	HIS
25	MM	119	GLN
26	PP	104	GLN
27	QQ	86	GLN
28	RR	48	ASN
28	RR	62	GLN
29	SS	72	GLN
30	TT	85	ASN
30	TT	117	GLN
31	UU	18	HIS
31	UU	81	GLN
31	UU	100	GLN
33	cc	7	GLN
34	dd	5	GLN
35	ff	111	ASN
36	gg	143	GLN
37	A	95	GLN
37	A	194	ASN
37	A	215	ASN
38	B	165	HIS
38	B	209	GLN
38	B	380	GLN
39	C	47	ASN
39	C	329	ASN
40	D	122	GLN
40	D	222	GLN

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Mol	Chain	Res	Type
40	D	230	ASN
40	D	267	ASN
40	D	275	GLN
41	E	193	HIS
41	E	194	GLN
41	E	287	HIS
42	F	130	ASN
42	F	150	ASN
42	F	205	ASN
43	G	99	GLN
43	G	259	GLN
43	G	280	ASN
43	G	293	ASN
44	H	156	ASN
44	H	169	ASN
45	I	51	HIS
45	I	133	GLN
45	I	163	GLN
46	J	71	HIS
47	L	149	GLN
47	L	159	ASN
48	M	33	GLN
48	M	34	ASN
48	M	120	ASN
50	O	42	ASN
51	P	56	GLN
52	Q	125	GLN
53	S	66	GLN
53	S	108	GLN
53	S	162	GLN
54	T	69	GLN
54	T	127	GLN
56	V	108	ASN
57	X	151	ASN
58	Y	96	HIS
60	a	85	GLN
61	b	11	ASN
61	b	60	ASN
62	c	51	ASN
63	d	30	HIS
64	e	80	HIS
64	e	81	ASN

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Mol	Chain	Res	Type
65	f	56	ASN
65	f	78	HIS
65	f	99	HIS
66	g	110	GLN
66	g	112	GLN
67	h	65	GLN
67	h	98	HIS
67	h	107	GLN
69	j	76	HIS
71	l	17	GLN
72	m	64	ASN
72	m	94	ASN
74	o	45	GLN
76	r	103	HIS
77	s	19	GLN
77	s	71	ASN
78	t	68	GLN
78	t	149	HIS

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
3	9	1683/1773 (94%)	370 (21%)	20 (1%)
79	5	3518/3543 (99%)	852 (24%)	59 (1%)
80	7	118/119 (99%)	17 (14%)	0
81	8	149/156 (95%)	41 (27%)	1 (0%)
82	AT	75/76 (98%)	34 (45%)	1 (1%)
83	1	165/166 (99%)	111 (67%)	7 (4%)
All	All	5708/5833 (97%)	1425 (24%)	88 (1%)

All (1425) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
3	9	2	A
3	9	3	C
3	9	4	C
3	9	25	A
3	9	33	G
3	9	41	G
3	9	42	A
3	9	46	A

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Mol	Chain	Res	Type
3	9	56	G
3	9	58	C
3	9	59	U
3	9	62	G
3	9	65	C
3	9	67	C
3	9	68	A
3	9	71	G
3	9	73	C
3	9	74	G
3	9	75	G
3	9	79	A
3	9	88	G
3	9	95	G
3	9	100	U
3	9	103	A
3	9	110	U
3	9	111	A
3	9	113	G
3	9	114	G
3	9	115	U
3	9	124	U
3	9	126	G
3	9	127	C
3	9	143	U
3	9	146	G
3	9	147	A
3	9	155	G
3	9	156	G
3	9	158	A
3	9	164	A
3	9	170	A
3	9	180	G
3	9	181	A
3	9	182	C
3	9	183	G
3	9	184	G
3	9	187	G
3	9	188	C
3	9	189	U
3	9	190	G
3	9	191	A

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Mol	Chain	Res	Type
3	9	192	C
3	9	215	G
3	9	291	G
3	9	292	A
3	9	303	C
3	9	305	U
3	9	306	C
3	9	307	G
3	9	308	G
3	9	309	G
3	9	312	G
3	9	314	U
3	9	318	A
3	9	319	C
3	9	320	G
3	9	330	G
3	9	347	G
3	9	351	G
3	9	356	C
3	9	362	C
3	9	364	A
3	9	368	U
3	9	370	G
3	9	371	A
3	9	379	C
3	9	383	G
3	9	385	G
3	9	386	C
3	9	398	A
3	9	399	C
3	9	400	C
3	9	407	G
3	9	408	A
3	9	409	C
3	9	417	C
3	9	418	A
3	9	426	A
3	9	438	G
3	9	448	A
3	9	450	C
3	9	451	G
3	9	465	A

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Mol	Chain	Res	Type
3	9	466	G
3	9	471	G
3	9	472	C
3	9	473	A
3	9	474	G
3	9	482	G
3	9	487	U
3	9	492	C
3	9	502	C
3	9	517	C
3	9	525	A
3	9	530	U
3	9	532	C
3	9	533	A
3	9	544	G
3	9	548	C
3	9	549	C
3	9	550	C
3	9	551	U
3	9	554	A
3	9	556	U
3	9	558	G
3	9	559	G
3	9	561	A
3	9	562	U
3	9	568	C
3	9	571	U
3	9	576	A
3	9	583	A
3	9	588	G
3	9	590	A
3	9	591	U
3	9	592	C
3	9	600	G
3	9	604	A
3	9	606	G
3	9	607	U
3	9	608	C
3	9	614	C
3	9	617	G
3	9	620	G
3	9	627	U

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Mol	Chain	Res	Type
3	9	628	A
3	9	643	A
3	9	644	G
3	9	659	G
3	9	660	C
3	9	666	U
3	9	668	A
3	9	669	A
3	9	670	A
3	9	671	A
3	9	672	A
3	9	673	G
3	9	684	G
3	9	689	U
3	9	752	G
3	9	753	C
3	9	754	G
3	9	799	U
3	9	811	A
3	9	821	G
3	9	822	U
3	9	827	A
3	9	830	A
3	9	834	C
3	9	844	U
3	9	845	G
3	9	847	A
3	9	859	G
3	9	860	G
3	9	867	G
3	9	868	G
3	9	869	A
3	9	870	A
3	9	871	U
3	9	872	A
3	9	873	G
3	9	874	G
3	9	875	A
3	9	878	G
3	9	887	U
3	9	890	U
3	9	891	G

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Mol	Chain	Res	Type
3	9	909	G
3	9	913	A
3	9	914	U
3	9	919	A
3	9	920	A
3	9	921	G
3	9	932	G
3	9	933	G
3	9	934	G
3	9	955	A
3	9	970	G
3	9	971	G
3	9	982	G
3	9	990	A
3	9	992	A
3	9	999	G
3	9	1023	A
3	9	1024	A
3	9	1045	U
3	9	1055	A
3	9	1056	U
3	9	1057	C
3	9	1058	A
3	9	1059	G
3	9	1062	A
3	9	1080	A
3	9	1083	A
3	9	1085	C
3	9	1086	G
3	9	1100	A
3	9	1115	U
3	9	1116	C
3	9	1117	C
3	9	1118	C
3	9	1121	G
3	9	1133	A
3	9	1138	C
3	9	1148	A
3	9	1149	A
3	9	1150	A
3	9	1153	C
3	9	1154	U

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Mol	Chain	Res	Type
3	9	1161	U
3	9	1166	G
3	9	1170	A
3	9	1183	A
3	9	1195	A
3	9	1203	G
3	9	1204	A
3	9	1207	G
3	9	1215	C
3	9	1221	G
3	9	1222	G
3	9	1224	G
3	9	1240	A
3	9	1242	U
3	9	1251	A
3	9	1253	A
3	9	1254	C
3	9	1256	G
3	9	1257	G
3	9	1259	A
3	9	1265	A
3	9	1274	G
3	9	1275	G
3	9	1282	A
3	9	1284	A
3	9	1285	G
3	9	1286	G
3	9	1287	A
3	9	1293	A
3	9	1294	G
3	9	1295	A
3	9	1298	G
3	9	1299	A
3	9	1301	A
3	9	1302	G
3	9	1303	C
3	9	1304	U
3	9	1307	U
3	9	1308	U
3	9	1309	C
3	9	1310	U
3	9	1312	G

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Mol	Chain	Res	Type
3	9	1314	U
3	9	1325	G
3	9	1333	U
3	9	1342	U
3	9	1354	G
3	9	1355	C
3	9	1357	A
3	9	1364	U
3	9	1371	U
3	9	1372	U
3	9	1378	A
3	9	1382	A
3	9	1395	C
3	9	1396	A
3	9	1397	U
3	9	1398	G
3	9	1401	A
3	9	1402	A
3	9	1409	A
3	9	1415	C
3	9	1428	G
3	9	1429	G
3	9	1447	G
3	9	1449	G
3	9	1454	A
3	9	1455	A
3	9	1462	U
3	9	1463	U
3	9	1466	G
3	9	1473	G
3	9	1475	G
3	9	1476	A
3	9	1477	U
3	9	1480	A
3	9	1489	A
3	9	1490	G
3	9	1494	U
3	9	1495	G
3	9	1497	G
3	9	1498	A
3	9	1507	G
3	9	1510	G

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Mol	Chain	Res	Type
3	9	1520	G
3	9	1522	A
3	9	1531	A
3	9	1533	A
3	9	1535	U
3	9	1536	G
3	9	1548	G
3	9	1552	G
3	9	1553	C
3	9	1556	A
3	9	1557	C
3	9	1566	G
3	9	1570	G
3	9	1574	C
3	9	1575	G
3	9	1579	A
3	9	1580	A
3	9	1587	G
3	9	1588	A
3	9	1591	C
3	9	1601	A
3	9	1604	G
3	9	1606	G
3	9	1613	G
3	9	1621	U
3	9	1623	A
3	9	1624	U
3	9	1637	A
3	9	1638	G
3	9	1645	C
3	9	1646	C
3	9	1648	G
3	9	1649	U
3	9	1659	U
3	9	1660	C
3	9	1661	A
3	9	1662	U
3	9	1665	G
3	9	1680	G
3	9	1682	C
3	9	1683	C
3	9	1698	C

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Mol	Chain	Res	Type
3	9	1699	A
3	9	1701	C
3	9	1702	G
3	9	1715	A
3	9	1721	U
3	9	1722	G
3	9	1726	G
3	9	1730	U
3	9	1744	G
3	9	1756	C
3	9	1779	G
3	9	1783	C
3	9	1784	G
3	9	1823	A
3	9	1824	A
3	9	1831	A
3	9	1835	A
3	9	1836	G
3	9	1838	U
3	9	1849	G
3	9	1851	A
3	9	1852	C
3	9	1861	G
3	9	1862	G
3	9	1865	C
3	9	1869	A
79	5	12	A
79	5	13	U
79	5	15	A
79	5	17	A
79	5	25	A
79	5	30	C
79	5	35	U
79	5	39	A
79	5	42	A
79	5	47	A
79	5	48	G
79	5	49	U
79	5	56	A
79	5	59	A
79	5	64	A
79	5	65	A

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Mol	Chain	Res	Type
79	5	70	A
79	5	72	C
79	5	73	A
79	5	91	G
79	5	93	G
79	5	95	G
79	5	109	G
79	5	117	C
79	5	118	C
79	5	119	G
79	5	120	A
79	5	122	U
79	5	124	C
79	5	126	C
79	5	134	G
79	5	135	G
79	5	136	C
79	5	144	G
79	5	150	U
79	5	151	G
79	5	159	C
79	5	160	G
79	5	172	C
79	5	173	C
79	5	182	G
79	5	197	A
79	5	200	U
79	5	201	C
79	5	207	G
79	5	209	U
79	5	216	C
79	5	218	A
79	5	220	C
79	5	224	U
79	5	227	A
79	5	232	G
79	5	233	U
79	5	234	G
79	5	236	G
79	5	246	G
79	5	262	C
79	5	264	C

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Mol	Chain	Res	Type
79	5	265	C
79	5	266	C
79	5	274	C
79	5	276	C
79	5	278	G
79	5	280	G
79	5	292	G
79	5	297	U
79	5	305	A
79	5	306	A
79	5	308	G
79	5	309	C
79	5	315	G
79	5	316	U
79	5	326	C
79	5	334	A
79	5	336	A
79	5	340	C
79	5	350	C
79	5	357	U
79	5	363	A
79	5	365	U
79	5	372	A
79	5	379	G
79	5	387	G
79	5	399	G
79	5	407	A
79	5	410	A
79	5	412	G
79	5	413	G
79	5	415	G
79	5	431	G
79	5	432	U
79	5	439	G
79	5	444	G
79	5	446	C
79	5	449	C
79	5	450	G
79	5	452	A
79	5	453	G
79	5	454	U
79	5	455	C

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Mol	Chain	Res	Type
79	5	464	G
79	5	467	U
79	5	468	U
79	5	469	C
79	5	481	G
79	5	481(A)	C
79	5	482	G
79	5	483	G
79	5	485	C
79	5	486	C
79	5	492	U
79	5	493	G
79	5	498	C
79	5	499	G
79	5	505	G
79	5	510	U
79	5	647	G
79	5	658	C
79	5	666	G
79	5	667	A
79	5	678	C
79	5	682	G
79	5	683	C
79	5	684	G
79	5	685	C
79	5	687	U
79	5	688	U
79	5	691	C
79	5	695	G
79	5	696	C
79	5	697	G
79	5	704	C
79	5	705	G
79	5	708	G
79	5	718	C
79	5	719	C
79	5	730	G
79	5	731	G
79	5	735	G
79	5	738	C
79	5	738(A)	C
79	5	739	G

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Mol	Chain	Res	Type
79	5	747	A
79	5	758	G
79	5	913	U
79	5	914	U
79	5	917	A
79	5	918	G
79	5	923	C
79	5	925	C
79	5	926	G
79	5	929	A
79	5	930	G
79	5	932	A
79	5	933	G
79	5	934	C
79	5	935	A
79	5	935(A)	G
79	5	936	C
79	5	939	G
79	5	941	C
79	5	943	A
79	5	944	A
79	5	945	U
79	5	957	G
79	5	958	G
79	5	959	G
79	5	960	A
79	5	961	G
79	5	966	A
79	5	967	C
79	5	969	C
79	5	972	C
79	5	979	C
79	5	983	C
79	5	1070	G
79	5	1072	C
79	5	1073	G
79	5	1076	C
79	5	1079	C
79	5	1082	C
79	5	1089	G
79	5	1179	U
79	5	1187	G

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Mol	Chain	Res	Type
79	5	1193	C
79	5	1195	G
79	5	1210	C
79	5	1211	G
79	5	1212	G
79	5	1214	C
79	5	1215	C
79	5	1216	C
79	5	1234	G
79	5	1235	G
79	5	1236	C
79	5	1237	C
79	5	1238	A
79	5	1239	C
79	5	1272	C
79	5	1273	G
79	5	1284	G
79	5	1285	U
79	5	1287	G
79	5	1288	G
79	5	1291	G
79	5	1292	C
79	5	1293	G
79	5	1294	A
79	5	1295	C
79	5	1296	G
79	5	1297	U
79	5	1301	C
79	5	1303	A
79	5	1304	C
79	5	1308	C
79	5	1314	C
79	5	1316	G
79	5	1325	C
79	5	1326	A
79	5	1328	G
79	5	1330	A
79	5	1333	A
79	5	1354	A
79	5	1358	G
79	5	1359	G
79	5	1370	G

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Mol	Chain	Res	Type
79	5	1371	A
79	5	1377	G
79	5	1380	G
79	5	1382	G
79	5	1387	A
79	5	1388	A
79	5	1394	G
79	5	1397	A
79	5	1398	A
79	5	1415	G
79	5	1419	G
79	5	1421	G
79	5	1433	A
79	5	1437	C
79	5	1438	U
79	5	1440	U
79	5	1441	C
79	5	1445	U
79	5	1446	C
79	5	1456	C
79	5	1457	G
79	5	1458	C
79	5	1465	G
79	5	1477	C
79	5	1478	C
79	5	1482	G
79	5	1483	C
79	5	1497	A
79	5	1498	G
79	5	1501	C
79	5	1502	G
79	5	1504	G
79	5	1516	G
79	5	1518	A
79	5	1523	A
79	5	1524	A
79	5	1534	A
79	5	1547	A
79	5	1553	A
79	5	1563	A
79	5	1564	A
79	5	1566	C

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Mol	Chain	Res	Type
79	5	1573	G
79	5	1574	G
79	5	1576	G
79	5	1578	U
79	5	1591	U
79	5	1596	U
79	5	1597	G
79	5	1602	U
79	5	1612	G
79	5	1613	A
79	5	1624	G
79	5	1625	G
79	5	1626	G
79	5	1631	A
79	5	1633	G
79	5	1634	A
79	5	1638	A
79	5	1641	G
79	5	1654	G
79	5	1661	C
79	5	1676	C
79	5	1680	G
79	5	1729	A
79	5	1731	C
79	5	1733	G
79	5	1734	G
79	5	1741	G
79	5	1742	A
79	5	1750	G
79	5	1754	U
79	5	1755	C
79	5	1756	U
79	5	1757	U
79	5	1761	G
79	5	1764	G
79	5	1768	C
79	5	1772	C
79	5	1773	U
79	5	1776	A
79	5	1780	A
79	5	1781	U
79	5	1785	C

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Mol	Chain	Res	Type
79	5	1787	A
79	5	1788	A
79	5	1791	U
79	5	1803	G
79	5	1804	A
79	5	1805	A
79	5	1815	G
79	5	1817	U
79	5	1819	G
79	5	1821	G
79	5	1822	U
79	5	1828	C
79	5	1830	G
79	5	1833	G
79	5	1834	U
79	5	1836	G
79	5	1837	A
79	5	1842	G
79	5	1854	G
79	5	1855	G
79	5	1869	G
79	5	1878	G
79	5	1882	U
79	5	1883	G
79	5	1888	A
79	5	1890	G
79	5	1897	A
79	5	1899	G
79	5	1910	G
79	5	1913	C
79	5	1916	G
79	5	1918	U
79	5	1920	C
79	5	1921	C
79	5	1922	G
79	5	1923	A
79	5	1925	G
79	5	1928	C
79	5	1929	A
79	5	1930	U
79	5	1931	C
79	5	1938	C

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Mol	Chain	Res	Type
79	5	1947	U
79	5	1948	G
79	5	1957	U
79	5	1961	G
79	5	1962	A
79	5	1964	A
79	5	1966	C
79	5	1967	A
79	5	1974	U
79	5	1975	G
79	5	1976	G
79	5	1977	C
79	5	1978	C
79	5	1982	G
79	5	1983	A
79	5	1984	A
79	5	1985	G
79	5	1986	U
79	5	1987	C
79	5	1991	A
79	5	1993	C
79	5	1997	U
79	5	1998	A
79	5	2001	G
79	5	2002	A
79	5	2003	G
79	5	2004	U
79	5	2005	G
79	5	2006	U
79	5	2008	U
79	5	2010	A
79	5	2011	C
79	5	2013	A
79	5	2014	C
79	5	2018	C
79	5	2021	G
79	5	2024	G
79	5	2025	A
79	5	2026	A
79	5	2047	A
79	5	2048	U
79	5	2055	G

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Mol	Chain	Res	Type
79	5	2056	G
79	5	2062	C
79	5	2069	A
79	5	2070	U
79	5	2071	A
79	5	2073	C
79	5	2084	C
79	5	2085	G
79	5	2089	G
79	5	2090	U
79	5	2092	G
79	5	2093	A
79	5	2094	C
79	5	2095	A
79	5	2097	U
79	5	2098	G
79	5	2100	G
79	5	2102	G
79	5	2103	A
79	5	2104	A
79	5	2106	G
79	5	2107	C
79	5	2108	G
79	5	2110	G
79	5	2112	G
79	5	2259	G
79	5	2260	C
79	5	2262	G
79	5	2264	C
79	5	2267	U
79	5	2268	A
79	5	2269	C
79	5	2270	G
79	5	2275	G
79	5	2279	A
79	5	2289	C
79	5	2300	A
79	5	2301	G
79	5	2306	G
79	5	2313	A
79	5	2314	G
79	5	2316	G

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Mol	Chain	Res	Type
79	5	2321	G
79	5	2331	G
79	5	2333	G
79	5	2342	G
79	5	2345	G
79	5	2348	G
79	5	2350	U
79	5	2351	C
79	5	2360	A
79	5	2382	A
79	5	2389	A
79	5	2390	G
79	5	2395	A
79	5	2396	A
79	5	2399	G
79	5	2402	G
79	5	2409	U
79	5	2417	A
79	5	2422	C
79	5	2425	U
79	5	2433	G
79	5	2442	G
79	5	2450	G
79	5	2462	C
79	5	2463	G
79	5	2471	G
79	5	2475	G
79	5	2483	G
79	5	2485	U
79	5	2488	C
79	5	2489	C
79	5	2490	U
79	5	2491	C
79	5	2503	G
79	5	2504	C
79	5	2505	C
79	5	2506	G
79	5	2507	A
79	5	2512	A
79	5	2513	A
79	5	2520	C
79	5	2529	A

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Mol	Chain	Res	Type
79	5	2530	U
79	5	2537	A
79	5	2544	G
79	5	2546	G
79	5	2547	G
79	5	2549	G
79	5	2553	A
79	5	2554	U
79	5	2570	U
79	5	2575	U
79	5	2576	G
79	5	2582	A
79	5	2583	C
79	5	2586	G
79	5	2589	C
79	5	2600	A
79	5	2601	A
79	5	2611	A
79	5	2638	G
79	5	2640	G
79	5	2649	G
79	5	2650	G
79	5	2656	U
79	5	2657	G
79	5	2662	G
79	5	2669	C
79	5	2676	A
79	5	2686	G
79	5	2687	U
79	5	2694	G
79	5	2695	A
79	5	2696	A
79	5	2705	G
79	5	2707	U
79	5	2708	U
79	5	2711	G
79	5	2712	G
79	5	2719	C
79	5	2721	G
79	5	2724	G
79	5	2725	A
79	5	2726	G

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Mol	Chain	Res	Type
79	5	2740	U
79	5	2742	G
79	5	2743	A
79	5	2753	G
79	5	2754	G
79	5	2758	G
79	5	2759	G
79	5	2760	G
79	5	2761	U
79	5	2763	U
79	5	2764	A
79	5	2772	C
79	5	2783	A
79	5	2787	A
79	5	2788	U
79	5	2790	U
79	5	2796	G
79	5	2798	A
79	5	2807	A
79	5	2808	G
79	5	2811	G
79	5	2814	C
79	5	2826	U
79	5	2827	G
79	5	2828	U
79	5	2833	A
79	5	2837	U
79	5	2842	G
79	5	2844	A
79	5	2845	A
79	5	2855	G
79	5	2897	G
79	5	2898	G
79	5	3598	C
79	5	3604	A
79	5	3605	C
79	5	3606	U
79	5	3615	G
79	5	3619	G
79	5	3625	G
79	5	3626	G
79	5	3635	A

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Mol	Chain	Res	Type
79	5	3636	C
79	5	3643	A
79	5	3644	U
79	5	3648	A
79	5	3651	A
79	5	3653	A
79	5	3662	A
79	5	3672	G
79	5	3673	C
79	5	3678	G
79	5	3679	U
79	5	3680	U
79	5	3692	A
79	5	3696	C
79	5	3702	A
79	5	3706	C
79	5	3709	U
79	5	3711	A
79	5	3712	A
79	5	3714	G
79	5	3740	G
79	5	3748	A
79	5	3753	G
79	5	3760	A
79	5	3761	C
79	5	3763	A
79	5	3772	U
79	5	3773	U
79	5	3774	A
79	5	3775	A
79	5	3776	G
79	5	3777	G
79	5	3778	U
79	5	3783	A
79	5	3784	A
79	5	3786	U
79	5	3787	G
79	5	3789	C
79	5	3798	U
79	5	3807	A
79	5	3808	C
79	5	3810	C

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Mol	Chain	Res	Type
79	5	3814	U
79	5	3817	A
79	5	3819	G
79	5	3839	G
79	5	3840	U
79	5	3843	C
79	5	3876	A
79	5	3877	A
79	5	3878	C
79	5	3879	G
79	5	3880	G
79	5	3889	G
79	5	3892	U
79	5	3896	C
79	5	3897	G
79	5	3898	G
79	5	3901	A
79	5	3905	A
79	5	3906	A
79	5	3907	G
79	5	3908	A
79	5	3909	C
79	5	3915	U
79	5	3917	A
79	5	3918	G
79	5	3926	C
79	5	3927	U
79	5	3938	G
79	5	3939	G
79	5	3942	A
79	5	3943	A
79	5	4069	U
79	5	4076	G
79	5	4077	A
79	5	4085	A
79	5	4086	G
79	5	4088	C
79	5	4119	C
79	5	4120	U
79	5	4121	G
79	5	4122	G
79	5	4125	C

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Mol	Chain	Res	Type
79	5	4127	A
79	5	4128	A
79	5	4155	C
79	5	4162	C
79	5	4163	U
79	5	4165	C
79	5	4166	G
79	5	4170	A
79	5	4171	C
79	5	4173	G
79	5	4183	G
79	5	4184	G
79	5	4191	G
79	5	4203	A
79	5	4222	G
79	5	4225	G
79	5	4228	G
79	5	4229	U
79	5	4232	U
79	5	4233	A
79	5	4234	A
79	5	4241	C
79	5	4243	C
79	5	4249	G
79	5	4251	A
79	5	4254	G
79	5	4265	U
79	5	4266	G
79	5	4268	A
79	5	4271	A
79	5	4273	A
79	5	4281	A
79	5	4289	U
79	5	4291	G
79	5	4297	G
79	5	4303	C
79	5	4305	G
79	5	4306	U
79	5	4313	A
79	5	4314	C
79	5	4318	C
79	5	4319	C

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Mol	Chain	Res	Type
79	5	4326	G
79	5	4330	G
79	5	4332	C
79	5	4335	C
79	5	4336	A
79	5	4340	U
79	5	4349	C
79	5	4350	C
79	5	4354	U
79	5	4355	G
79	5	4371	G
79	5	4373	G
79	5	4375	C
79	5	4376	A
79	5	4377	G
79	5	4378	A
79	5	4387	C
79	5	4394	A
79	5	4395	U
79	5	4398	C
79	5	4401	G
79	5	4405	G
79	5	4413	C
79	5	4419	U
79	5	4421	C
79	5	4422	A
79	5	4430	G
79	5	4434	C
79	5	4436	U
79	5	4437	U
79	5	4438	U
79	5	4440	G
79	5	4444	C
79	5	4448	G
79	5	4449	A
79	5	4455	G
79	5	4464	A
79	5	4466	C
79	5	4471	U
79	5	4475	G
79	5	4482	U
79	5	4488	A

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Mol	Chain	Res	Type
79	5	4500	U
79	5	4510	A
79	5	4511	A
79	5	4512	U
79	5	4513	A
79	5	4518	A
79	5	4519	C
79	5	4520	G
79	5	4525	C
79	5	4526	U
79	5	4527	G
79	5	4528	G
79	5	4529	G
79	5	4531	U
79	5	4544	A
79	5	4548	A
79	5	4560	C
79	5	4567	G
79	5	4572	U
79	5	4573	G
79	5	4575	G
79	5	4577	U
79	5	4584	A
79	5	4586	G
79	5	4588	U
79	5	4590	A
79	5	4599	A
79	5	4627	U
79	5	4630	G
79	5	4635	A
79	5	4636	U
79	5	4637	G
79	5	4652	G
79	5	4657	U
79	5	4670	C
79	5	4671	C
79	5	4672	A
79	5	4677	U
79	5	4680	G
79	5	4687	A
79	5	4691	A
79	5	4694	G

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Mol	Chain	Res	Type
79	5	4695	C
79	5	4700	A
79	5	4709	U
79	5	4719	G
79	5	4720	C
79	5	4721	G
79	5	4728	U
79	5	4736	C
79	5	4738	C
79	5	4751	G
79	5	4753	U
79	5	4754	G
79	5	4757	C
79	5	4758	U
79	5	4759	C
79	5	4765	G
79	5	4771	C
79	5	4772	C
79	5	4870	G
79	5	4872	G
79	5	4874	A
79	5	4875	G
79	5	4876	U
79	5	4877	G
79	5	4881	U
79	5	4882	U
79	5	4883	C
79	5	4885	U
79	5	4894	A
79	5	4895	C
79	5	4902	C
79	5	4910	A
79	5	4912	G
79	5	4913	G
79	5	4914	C
79	5	4915	G
79	5	4921	C
79	5	4924	C
79	5	4925	U
79	5	4926	C
79	5	4927	G
79	5	4928	C

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Mol	Chain	Res	Type
79	5	4931	G
79	5	4934	A
79	5	4937	C
79	5	4941	G
79	5	4943	A
79	5	4944	C
79	5	4947	U
79	5	4948	C
79	5	4949	G
79	5	4950	U
79	5	4951	G
79	5	4952	G
79	5	4953	G
79	5	4956	A
79	5	4957	C
79	5	4958	C
79	5	4960	G
79	5	4961	G
79	5	4964	C
79	5	4965	U
79	5	4966	A
79	5	4976	U
79	5	4988	U
79	5	4989	U
79	5	4990	C
79	5	5006	U
79	5	5007	A
79	5	5014	A
79	5	5017	G
79	5	5040	U
79	5	5041	G
79	5	5047	C
79	5	5048	A
79	5	5050	C
79	5	5054	C
79	5	5056	A
79	5	5061	A
79	5	5062	G
80	7	11	A
80	7	22	A
80	7	33	U
80	7	39	C

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Mol	Chain	Res	Type
80	7	53	U
80	7	54	A
80	7	60	G
80	7	63	C
80	7	64	G
80	7	66	G
80	7	74	A
80	7	85	G
80	7	89	G
80	7	97	G
80	7	100	A
80	7	110	G
80	7	111	C
81	8	2	G
81	8	15	G
81	8	16	G
81	8	23	C
81	8	24	G
81	8	34	U
81	8	35	C
81	8	38	U
81	8	39	G
81	8	49	G
81	8	51	U
81	8	59	A
81	8	61	A
81	8	62	A
81	8	63	U
81	8	71	A
81	8	73	U
81	8	74	U
81	8	77	A
81	8	79	G
81	8	86	U
81	8	87	G
81	8	88	A
81	8	90	C
81	8	94	G
81	8	96	C
81	8	103	A
81	8	105	C
81	8	107	C

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Mol	Chain	Res	Type
81	8	108	A
81	8	110	U
81	8	111	U
81	8	114	G
81	8	123	U
81	8	125	C
81	8	126	C
81	8	127	U
81	8	128	C
81	8	147	G
81	8	150	C
81	8	151	G
82	AT	8	U
82	AT	14	A
82	AT	16	U
82	AT	17	G
82	AT	18	G
82	AT	19	U
82	AT	21	A
82	AT	22	G
82	AT	23	A
82	AT	26	G
82	AT	28	G
82	AT	29	U
82	AT	33	U
82	AT	34	A
82	AT	35	G
82	AT	37	A
82	AT	41	A
82	AT	43	G
82	AT	46	G
82	AT	47	C
82	AT	49	C
82	AT	52	G
82	AT	54	U
82	AT	56	C
82	AT	57	A
82	AT	59	U
82	AT	61	C
82	AT	63	C
82	AT	65	G
82	AT	66	C

*Continued on next page...*



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Mol	Chain	Res	Type
82	AT	70	U
82	AT	71	C
82	AT	74	C
82	AT	75	C
83	1	1332	G
83	1	1333	G
83	1	1335	U
83	1	1336	G
83	1	1337	U
83	1	1340	A
83	1	1341	U
83	1	1342	A
83	1	1343	C
83	1	1344	G
83	1	1348	C
83	1	1351	U
83	1	1352	U
83	1	1353	U
83	1	1354	U
83	1	1357	U
83	1	1358	A
83	1	1359	A
83	1	1360	A
83	1	1362	A
83	1	1363	A
83	1	1364	U
83	1	1366	G
83	1	1367	G
83	1	1369	A
83	1	1371	U
83	1	1372	C
83	1	1374	C
83	1	1376	C
83	1	1379	U
83	1	1381	G
83	1	1385	A
83	1	1387	G
83	1	1388	A
83	1	1389	C
83	1	1390	A
83	1	1391	G
83	1	1392	G

*Continued on next page...*



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Mol	Chain	Res	Type
83	1	1393	U
83	1	1395	A
83	1	1396	G
83	1	1397	C
83	1	1398	C
83	1	1399	A
83	1	1400	U
83	1	1401	U
83	1	1402	U
83	1	1403	C
83	1	1406	C
83	1	1408	C
83	1	1409	C
83	1	1410	C
83	1	1411	A
83	1	1414	U
83	1	1415	U
83	1	1416	C
83	1	1419	G
83	1	1420	G
83	1	1421	U
83	1	1422	A
83	1	1423	C
83	1	1424	U
83	1	1425	A
83	1	1427	U
83	1	1429	A
83	1	1430	G
83	1	1431	G
83	1	1432	U
83	1	1433	U
83	1	1434	G
83	1	1435	G
83	1	1436	A
83	1	1441	A
83	1	1443	A
83	1	1444	A
83	1	1445	G
83	1	1446	G
83	1	1447	A
83	1	1448	U
83	1	1449	U

*Continued on next page...*



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Mol	Chain	Res	Type
83	1	1451	C
83	1	1452	C
83	1	1453	C
83	1	1454	A
83	1	1460	G
83	1	1462	C
83	1	1463	U
83	1	1464	U
83	1	1465	U
83	1	1466	G
83	1	1467	G
83	1	1468	G
83	1	1469	A
83	1	1470	C
83	1	1472	A
83	1	1476	A
83	1	1477	G
83	1	1478	C
83	1	1480	U
83	1	1481	G
83	1	1494	C
83	1	1495	U
83	1	1496	A
83	1	1500	A
83	1	1501	U
83	1	1502	A
83	1	1503	A
83	1	1504	U
83	1	1505	A
83	1	1506	A
83	1	1507	U

All (88) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
3	9	24	C
3	9	72	C
3	9	110	U
3	9	370	G
3	9	465	A
3	9	532	C
3	9	553	U

*Continued on next page...*



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Mol	Chain	Res	Type
3	9	555	A
3	9	561	A
3	9	688	U
3	9	752	G
3	9	870	A
3	9	1137	U
3	9	1253	A
3	9	1395	C
3	9	1396	A
3	9	1489	A
3	9	1637	A
3	9	1664	A
3	9	1679	A
79	5	12	A
79	5	48	G
79	5	125	C
79	5	217	C
79	5	226	G
79	5	245	C
79	5	275	C
79	5	308	G
79	5	449	C
79	5	480	C
79	5	485	C
79	5	492	U
79	5	504	G
79	5	696	C
79	5	935(A)	G
79	5	959	G
79	5	971(A)	G
79	5	1072	C
79	5	1211	G
79	5	1236	C
79	5	1238	A
79	5	1291	G
79	5	1329	G
79	5	1358	G
79	5	1370	G
79	5	1440	U
79	5	1445	U
79	5	1455	G
79	5	1477	C

*Continued on next page...*



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Mol	Chain	Res	Type
79	5	1633	G
79	5	1804	A
79	5	1818	G
79	5	2002	A
79	5	2025	A
79	5	2046	G
79	5	2068	C
79	5	2088	A
79	5	2089	G
79	5	2266	C
79	5	2474	G
79	5	2502	G
79	5	2506	G
79	5	2546	G
79	5	2639	U
79	5	2695	A
79	5	3625	G
79	5	3888	G
79	5	3904	G
79	5	4170	A
79	5	4232	U
79	5	4448	G
79	5	4542	U
79	5	4699	U
79	5	4719	G
79	5	4884	G
79	5	4925	U
79	5	4936	G
79	5	4947	U
79	5	5049	G
81	8	124	U
82	AT	56	C
83	1	1366	G
83	1	1392	G
83	1	1420	G
83	1	1433	U
83	1	1440	G
83	1	1467	G
83	1	1493	G



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

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

## 5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

Of 214 ligands modelled in this entry, 214 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

## 5.7 Other polymers [i](#)

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
79	5	30
3	9	20
41	E	3
2	W	1
61	b	1
83	1	1
78	t	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	5	2113:G	O3'	2258:C	P	42.79

*Continued on next page...*



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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	W	63:GLN	C	79:GLN	N	40.82
1	b	76:VAL	C	89:VAL	N	37.15
1	5	1252:C	O3'	1271:G	P	36.89
1	E	77:ALA	C	92:LEU	N	29.57
1	5	1219:G	O3'	1233:G	P	20.55
1	9	130:G	O3'	141:A	P	18.78
1	5	3948:C	O3'	4065:G	P	18.67
1	9	697:G	O3'	729:C	P	18.57
1	1	1481:G	O3'	1493:G	P	18.51
1	9	756:C	O3'	788:G	P	17.55
1	5	1406(C):G	O3'	1411:C	P	17.44
1	5	523:C	O3'	638:G	P	17.41
1	9	1761:U	O3'	1771:G	P	17.40
1	5	4101:C	O3'	4107:G	P	17.27
1	5	990:C	O3'	1064:G	P	17.25
1	5	4138:C	O3'	4146:G	P	17.09
1	9	323:C	O3'	329:G	P	16.40
1	5	4777:C	O3'	4859:C	P	16.23
1	9	834:C	O3'	841:G	P	15.99
1	9	1417:C	O3'	1423:C	P	14.98
1	5	1696:C	O3'	1720:C	P	14.78
1	5	760:G	O3'	904:G	P	14.24
1	5	5022:U	O3'	5028:G	P	13.88
1	5	2901:G	O3'	3597:G	P	13.40
1	5	1364:U	O3'	1368:A	P	13.12
1	5	182:G	O3'	189:G	P	13.05
1	5	4729:A	O3'	4735:G	P	10.58
1	5	1180:C	O3'	1183:C	P	9.17
1	9	225:G	O3'	287:U	P	8.49
1	9	736:C	O3'	743:U	P	7.82
1	9	689:U	O3'	690:G	P	6.48
1	E	224:LYS	C	242:LYS	N	6.42
1	5	512:U	O3'	515:C	P	6.35
1	9	745:C	O3'	749:U	P	6.28
1	5	1100:U	O3'	1168:G	P	5.55
1	E	100:GLY	C	105:GLY	N	5.38
1	t	84:ALA	C	105:THR	N	5.33
1	5	1239:C	O3'	1244:G	P	5.24
1	5	1957:U	O3'	1958:A	P	5.14
1	5	500:G	O3'	504:G	P	5.06
1	9	1432:U	O3'	1438:A	P	4.62
1	9	322:C	O3'	323:C	P	4.54

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	5	4740:G	O3'	4743:G	P	4.24
1	5	170:C	O3'	171:U	P	4.02
1	9	304:C	O3'	305:U	P	3.39
1	9	902:G	O3'	903:A	P	3.39
1	5	5020:G	O3'	5021:C	P	3.37
1	9	886:A	O3'	887:U	P	3.26
1	5	751:G	O3'	752:G	P	3.23
1	9	903:A	O3'	904:A	P	3.21
1	5	267:G	O3'	268:G	P	3.21
1	5	1438:U	O3'	1440:U	P	3.21
1	9	798:G	O3'	799:U	P	3.17
1	5	4899:G	O3'	4902:C	P	3.17
1	9	1203:G	O3'	1204:A	P	3.16
1	9	1691:U	O3'	1692:U	P	3.16



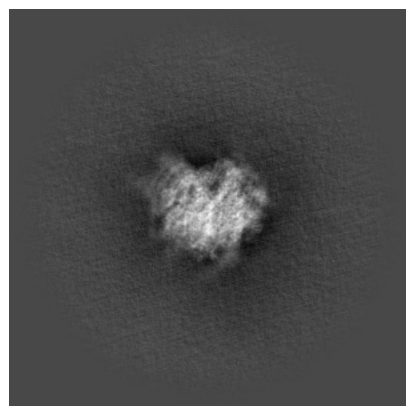
## 6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-72170. These allow visual inspection of the internal detail of the map and identification of artifacts.

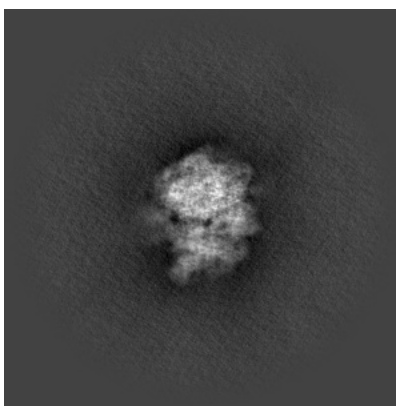
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

### 6.1 Orthogonal projections [i](#)

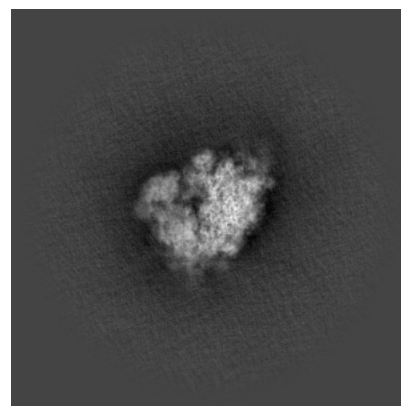
#### 6.1.1 Primary map



X

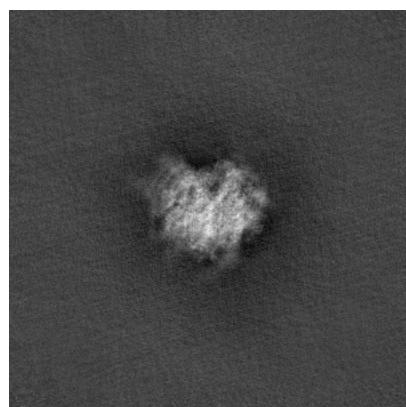


Y

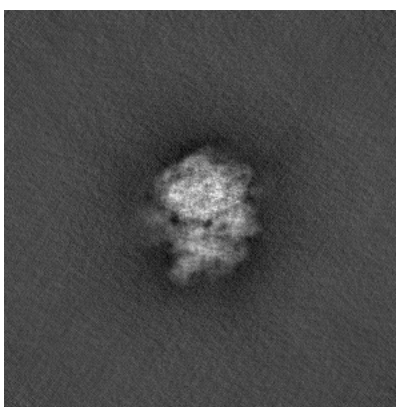


Z

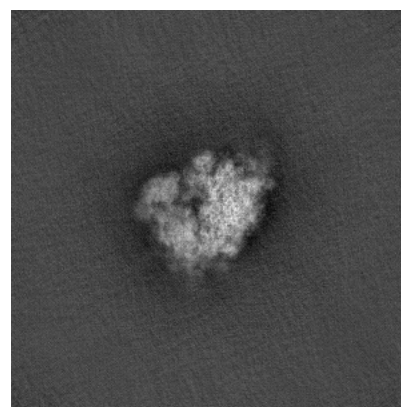
#### 6.1.2 Raw map



X



Y



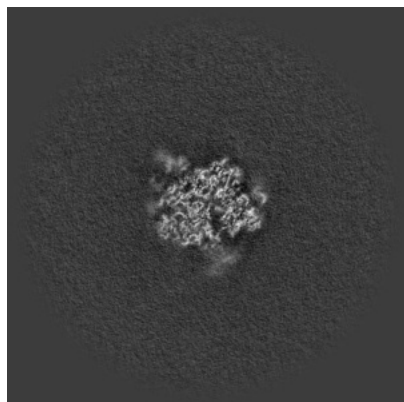
Z

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

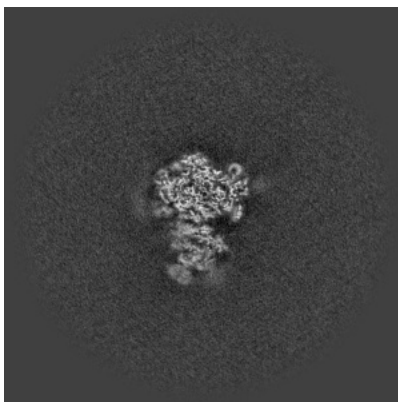


## 6.2 Central slices [i](#)

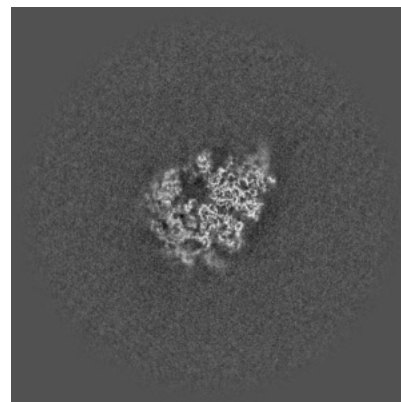
### 6.2.1 Primary map



X Index: 256

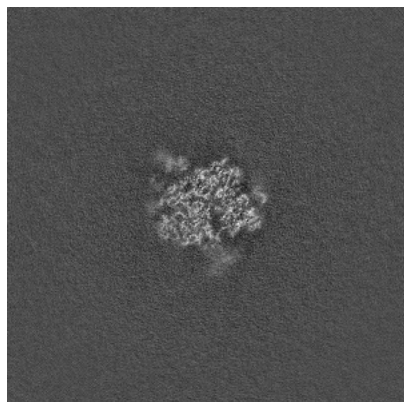


Y Index: 256

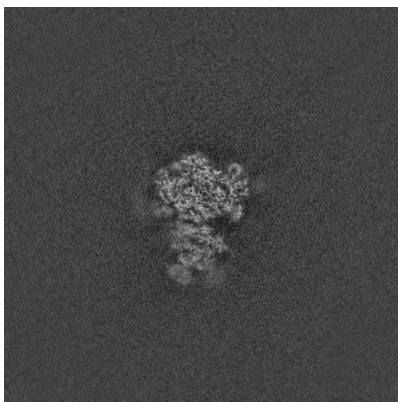


Z Index: 256

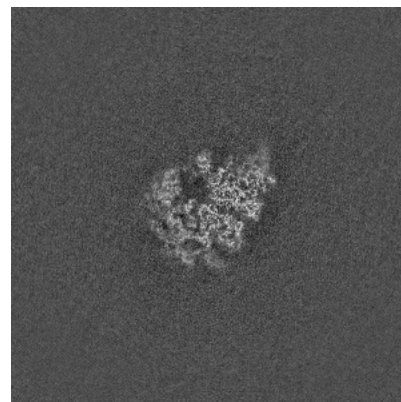
### 6.2.2 Raw map



X Index: 256



Y Index: 256



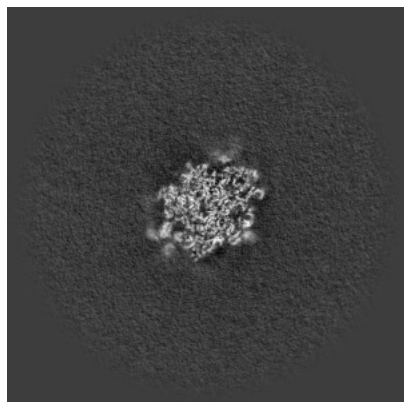
Z Index: 256

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

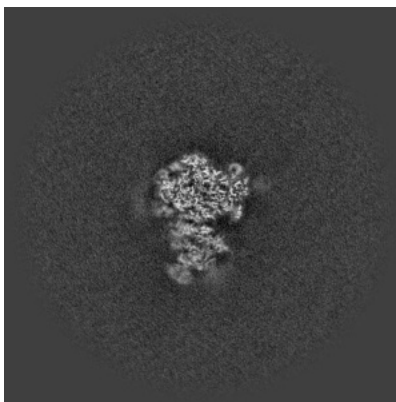


## 6.3 Largest variance slices [i](#)

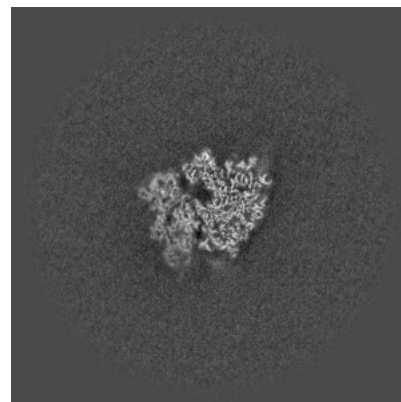
### 6.3.1 Primary map



X Index: 275

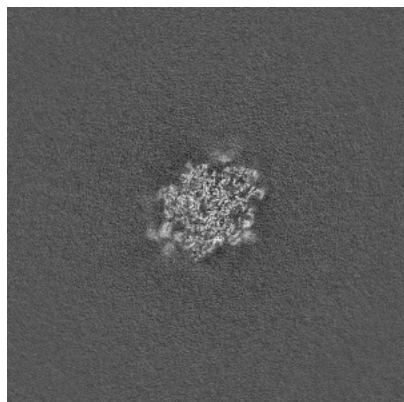


Y Index: 255

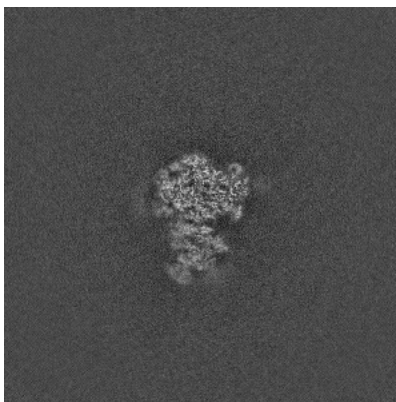


Z Index: 246

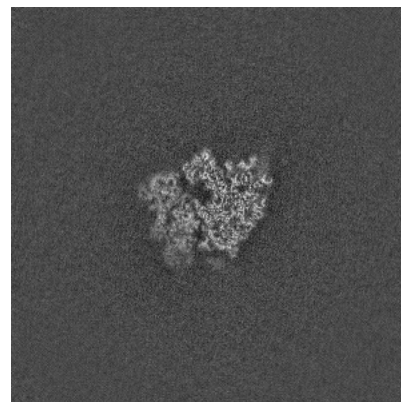
### 6.3.2 Raw map



X Index: 275



Y Index: 255



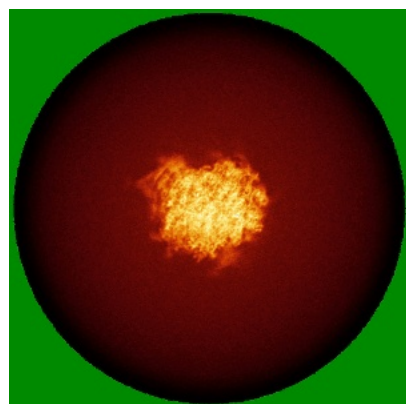
Z Index: 247

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

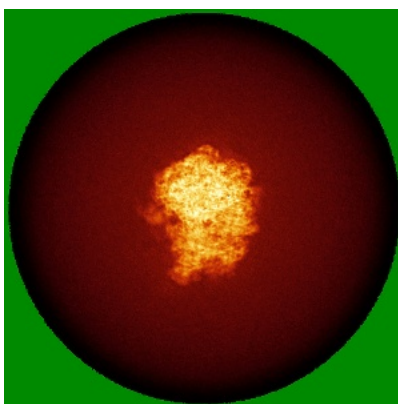


## 6.4 Orthogonal standard-deviation projections (False-color) [i](#)

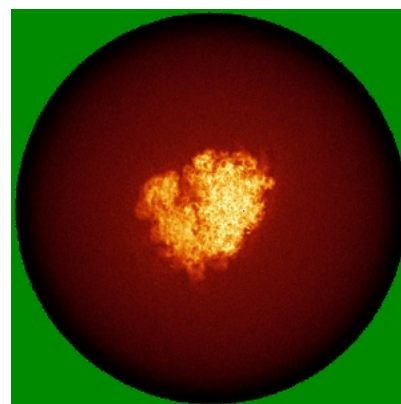
### 6.4.1 Primary map



X

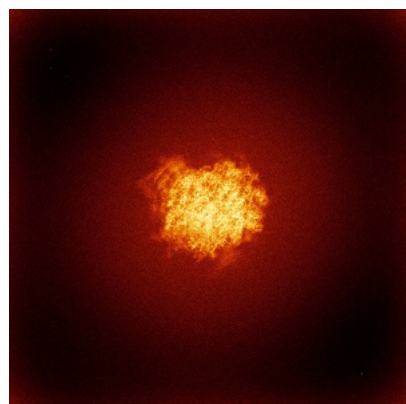


Y

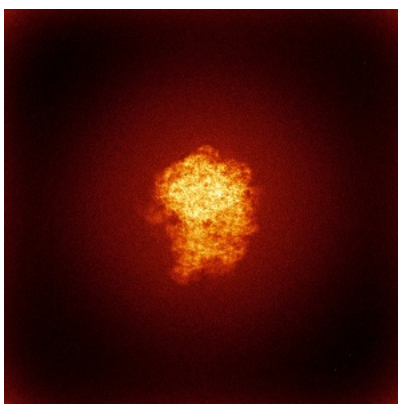


Z

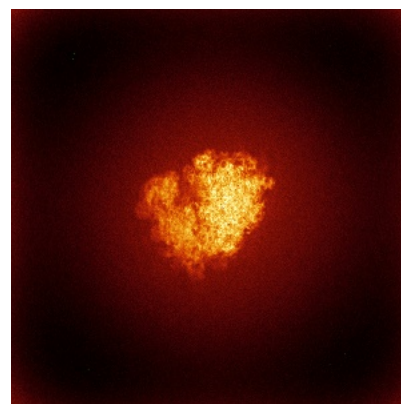
### 6.4.2 Raw map



X



Y



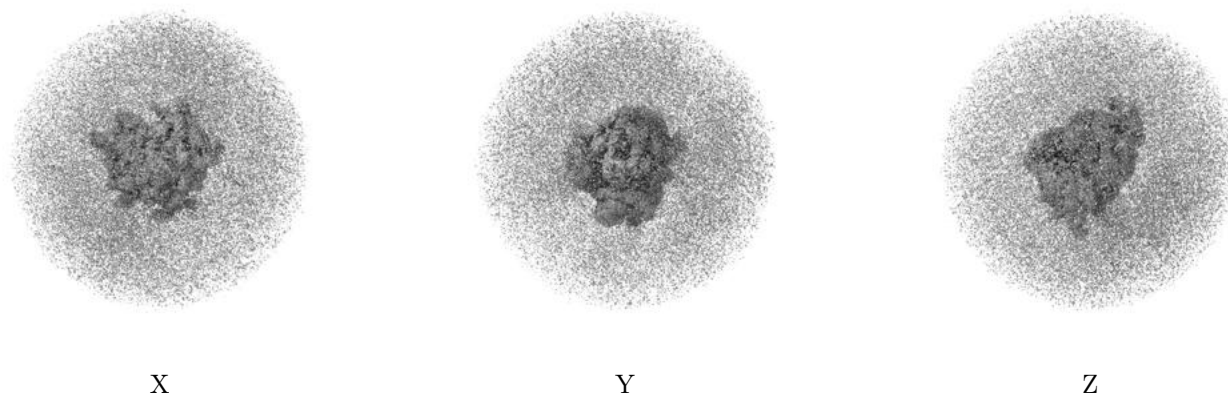
Z

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



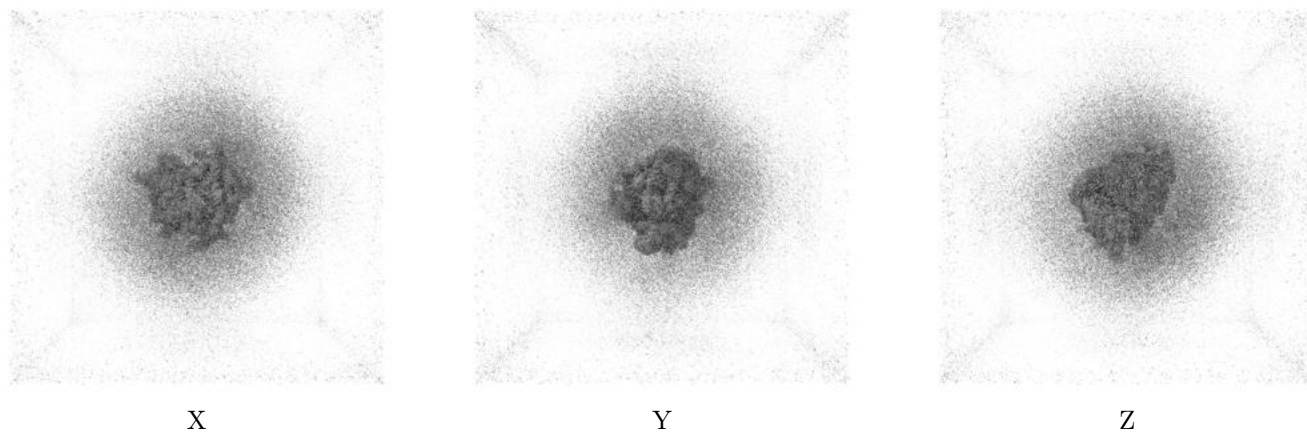
## 6.5 Orthogonal surface views [i](#)

### 6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.193. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

### 6.5.2 Raw map



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

## 6.6 Mask visualisation [i](#)

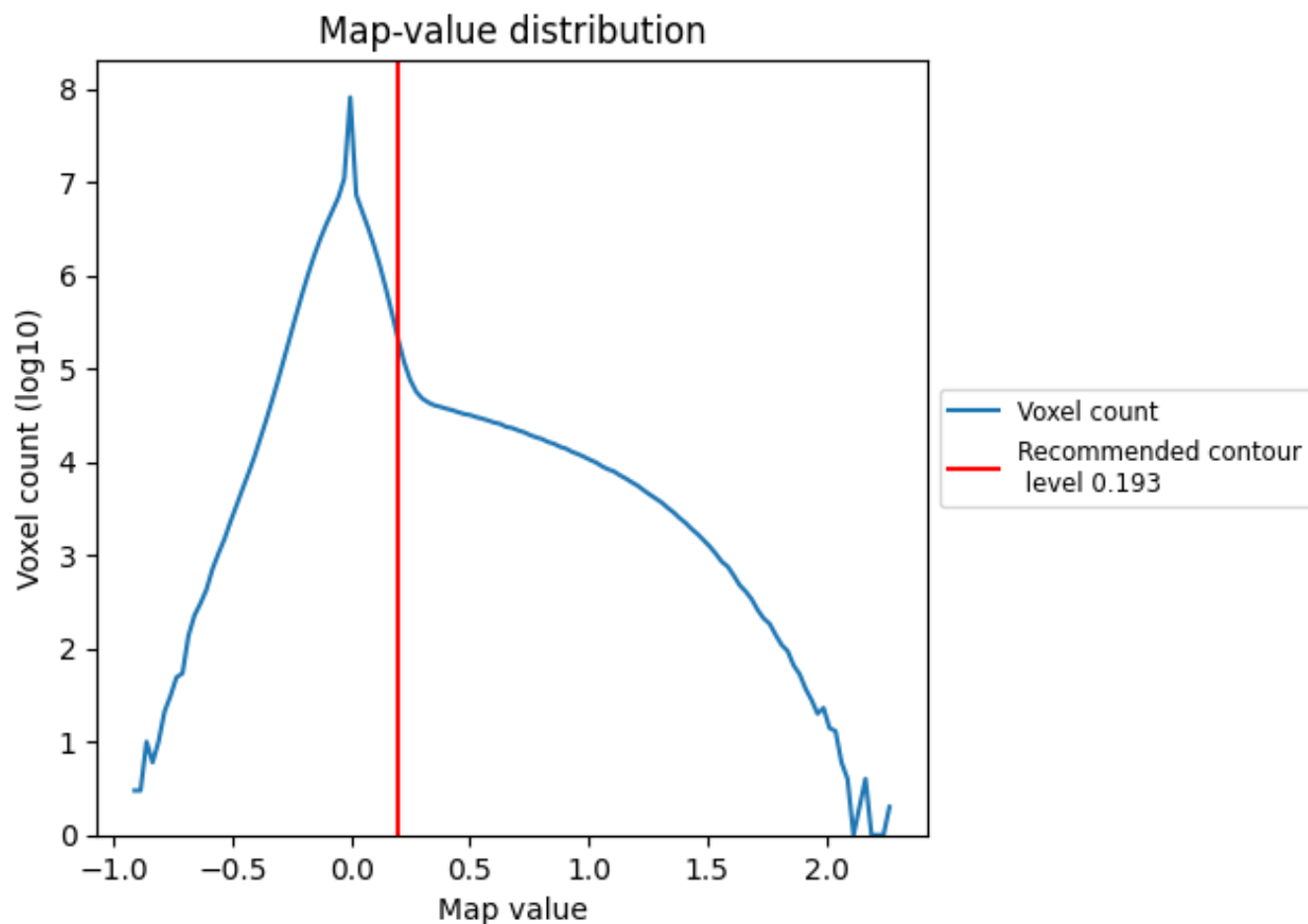
This section was not generated. No masks/segmentation were deposited.



## 7 Map analysis [i](#)

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

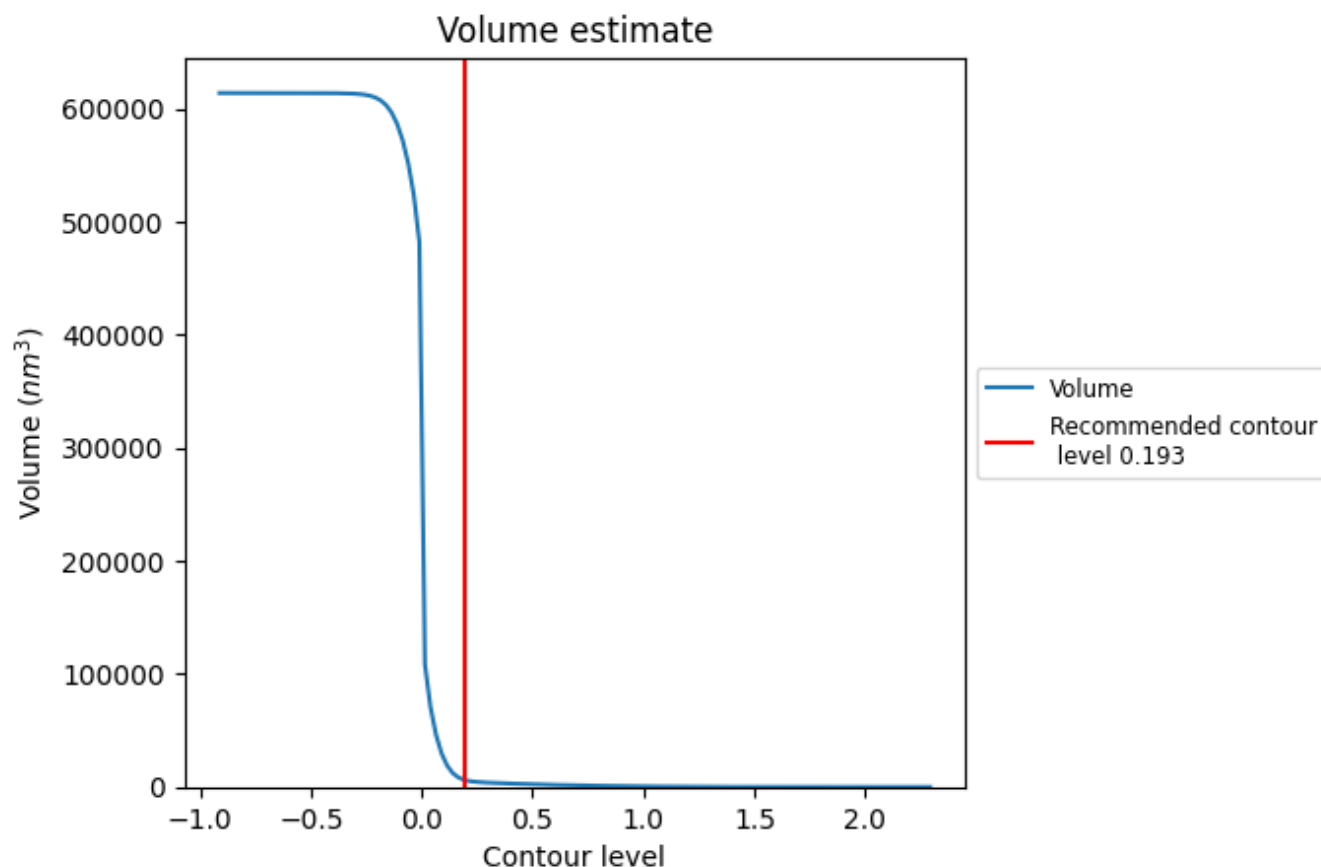
### 7.1 Map-value distribution [i](#)



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



## 7.2 Volume estimate [i](#)

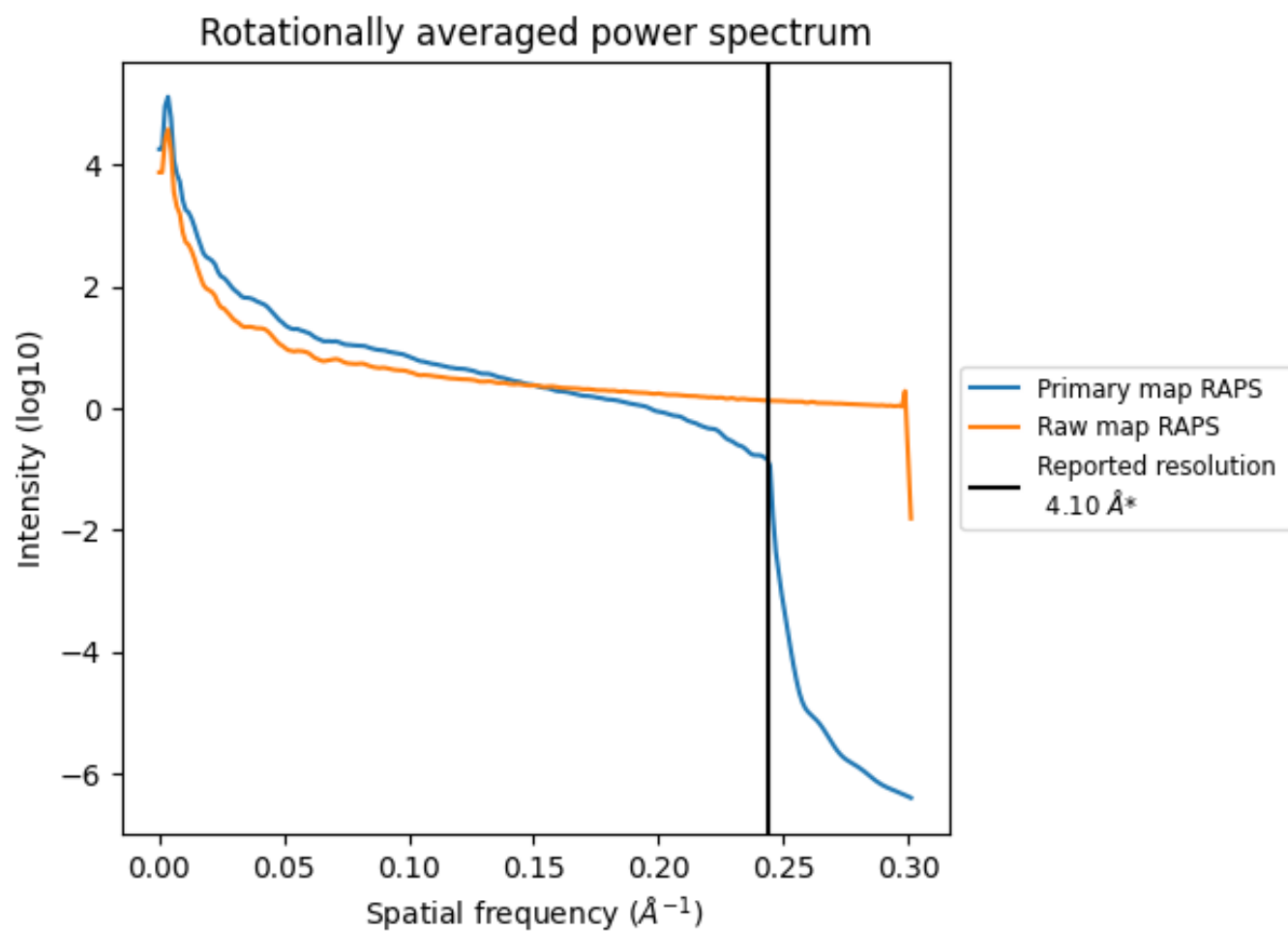


The volume at the recommended contour level is 6203 nm<sup>3</sup>; this corresponds to an approximate mass of 5603 kDa.

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



### 7.3 Rotationally averaged power spectrum ⓘ



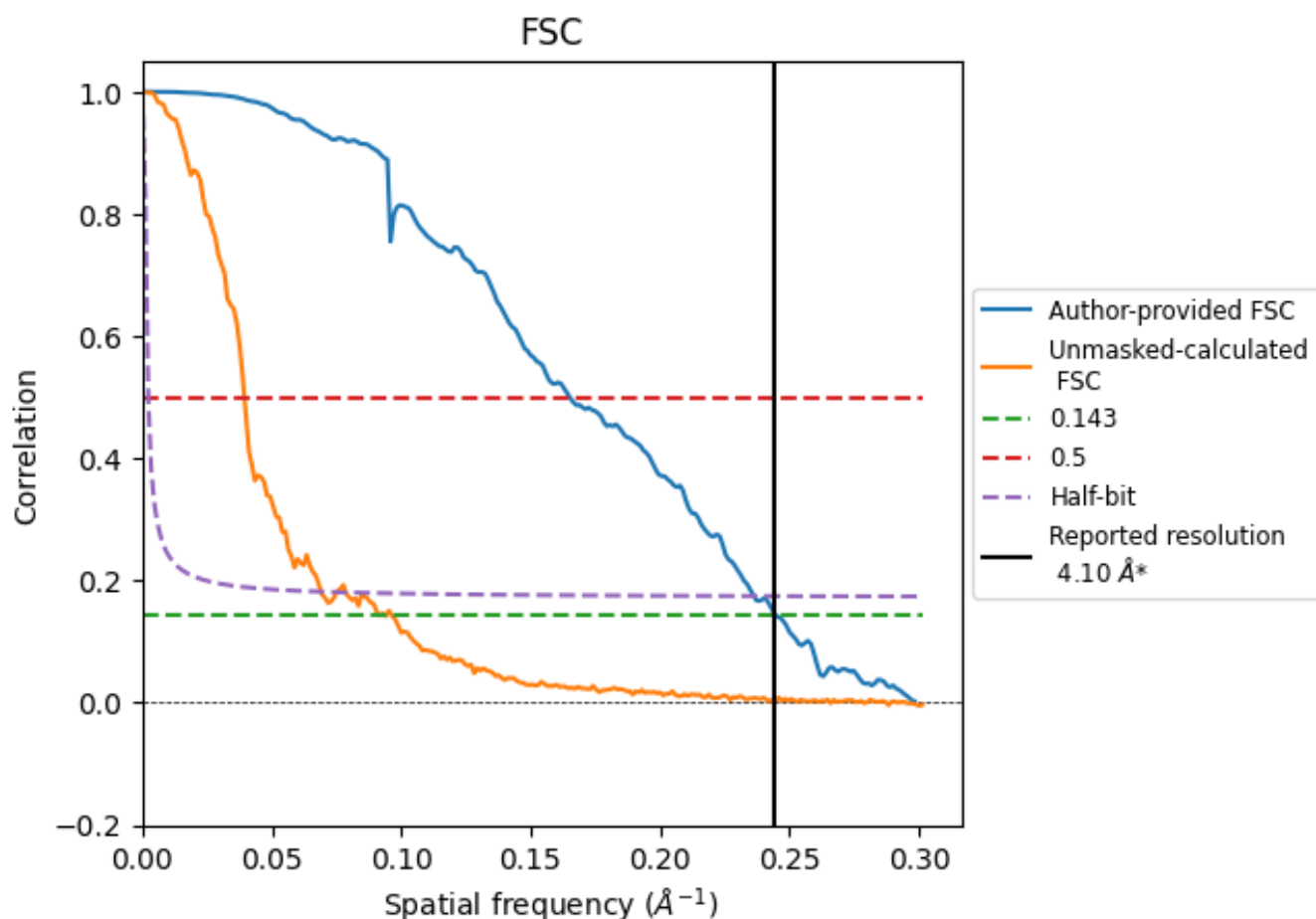
\*Reported resolution corresponds to spatial frequency of 0.244 Å<sup>-1</sup>



## 8 Fourier-Shell correlation [i](#)

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

### 8.1 FSC [i](#)



\*Reported resolution corresponds to spatial frequency of 0.244  $\text{\AA}^{-1}$



## 8.2 Resolution estimates [i](#)

Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.10	-	-
Author-provided FSC curve	4.08	6.06	4.24
Unmasked-calculated*	10.91	25.38	14.47

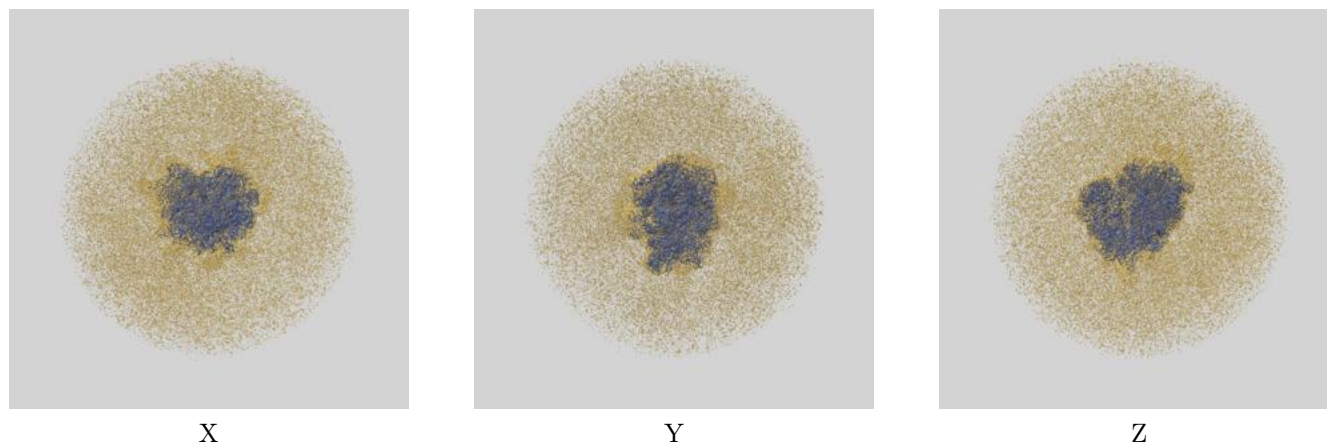
\*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 10.91 differs from the reported value 4.1 by more than 10 %



## 9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-72170 and PDB model 9Q2O. Per-residue inclusion information can be found in section 3 on page 23.

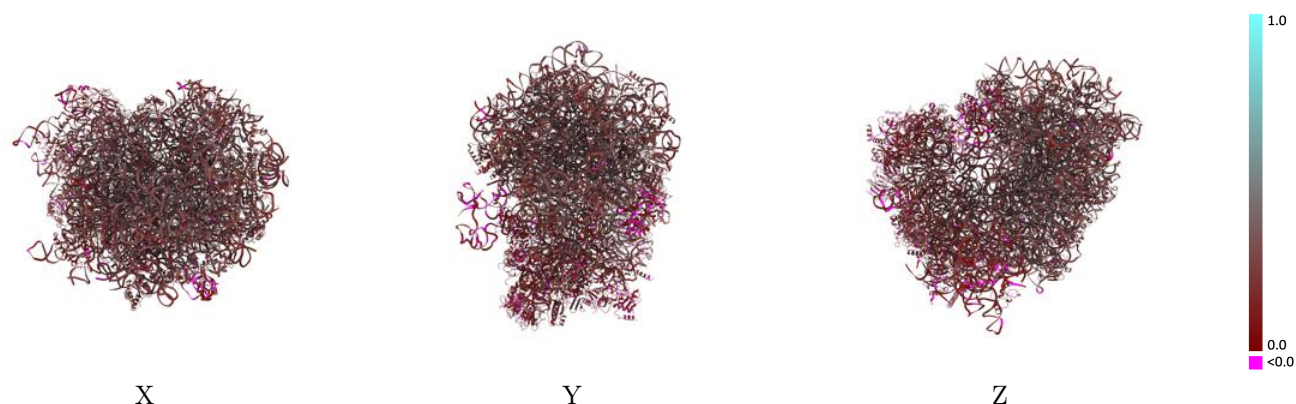
### 9.1 Map-model overlay [i](#)



The images above show the 3D surface view of the map at the recommended contour level 0.193 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

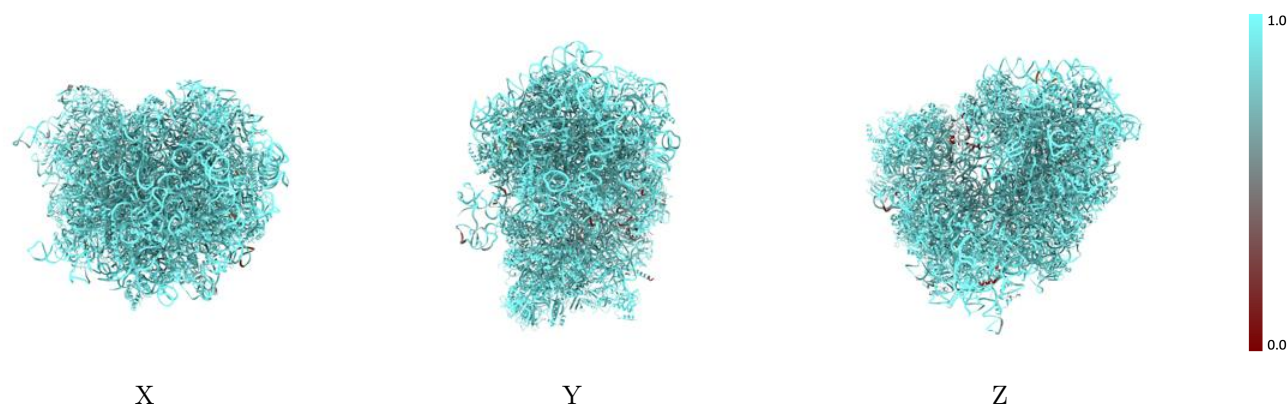


## 9.2 Q-score mapped to coordinate model [i](#)



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

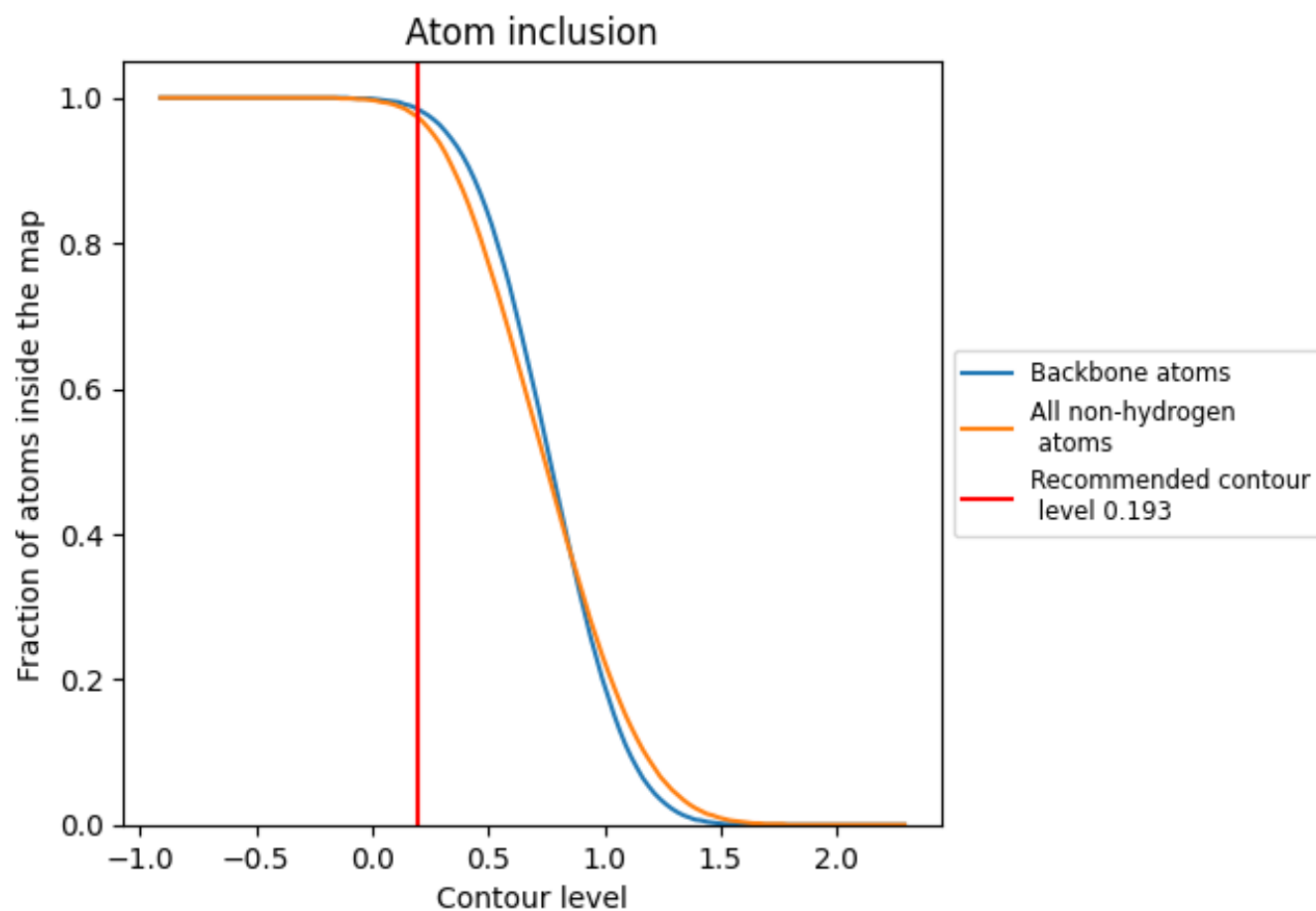
## 9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.193).



## 9.4 Atom inclusion [i](#)









































































At the recommended contour level, 98% of all backbone atoms, 97% 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 (0.193) and Q-score for the entire model and for each chain.





















































































Chain	Atom inclusion	Q-score
All	 0.9740	 0.2530
1	 0.8990	 0.1030
5	 0.9910	 0.2960
7	 0.9980	 0.3120
8	 0.9980	 0.2960
9	 0.9880	 0.2250
A	 0.9660	 0.2790
AA	 0.9540	 0.1940
AT	 0.8500	 0.1920
B	 0.9740	 0.3040
BB	 0.9780	 0.1610
C	 0.9680	 0.2920
CC	 0.9200	 0.2240
D	 0.9930	 0.2600
DD	 0.9330	 0.2160
E	 0.9800	 0.2900
EE	 0.9710	 0.2040
F	 0.9280	 0.2730
FF	 0.9690	 0.1620
G	 0.9690	 0.2510
GG	 0.9480	 0.1740
H	 0.9700	 0.2960
HH	 0.8890	 0.1770
I	 0.9340	 0.2930
II	 0.9320	 0.1830
J	 0.9690	 0.2490
JJ	 0.9670	 0.2000
KK	 0.9950	 0.1810
L	 0.9650	 0.2750
LL	 0.9590	 0.2250
M	 0.9780	 0.2910
MM	 0.9680	 0.1300
N	 0.9720	 0.2560
NN	 0.9580	 0.1920
O	 0.9420	 0.2880



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Chain	Atom inclusion	Q-score
OO	 0.9710	 0.1510
P	 0.9880	 0.2900
PP	 0.9330	 0.1630
Q	 0.9630	 0.2910
QQ	 0.9890	 0.1660
R	 0.9390	 0.1900
RR	 0.8560	 0.1610
S	 0.9650	 0.3010
SS	 0.9770	 0.1830
T	 0.9530	 0.2940
TT	 0.9600	 0.1610
U	 0.9940	 0.2500
UU	 0.9860	 0.2060
V	 0.9300	 0.2850
VV	 0.9240	 0.2010
W	 0.8420	 0.1960
WW	 0.9540	 0.2230
X	 0.9830	 0.2780
XX	 0.9490	 0.2380
Y	 0.9930	 0.2730
YY	 0.9830	 0.1900
Z	 0.9910	 0.2330
ZZ	 0.9660	 0.1920
a	 0.9790	 0.2920
aa	 0.9590	 0.1850
b	 0.9760	 0.2540
bb	 0.9720	 0.1820
c	 0.9560	 0.2410
cc	 0.9400	 0.1580
d	 0.9830	 0.2840
dd	 0.9960	 0.1780
e	 0.9770	 0.3140
ee	 0.8660	 0.1750
f	 0.9370	 0.3160
ff	 0.9630	 0.1420
g	 0.9690	 0.2590
gg	 0.9720	 0.1360
h	 0.9790	 0.2470
i	 0.9770	 0.2560
j	 0.9930	 0.2620
k	 0.9770	 0.2610
l	 0.9770	 0.2730

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Chain	Atom inclusion	Q-score
m	 0.9660	 0.2860
n	 0.9310	 0.2230
o	 0.9310	 0.2690
p	 0.9390	 0.2560
r	 0.9790	 0.3080
s	 0.8620	 0.1410
t	 0.6800	 0.0940