



## Full wwPDB EM Validation Report ⓘ

Jun 8, 2026 – 06:17 PM EDT

PDB ID : 9Q2M / pdb\_00009q2m  
EMDB ID : EMD-72168  
Title : Rabbit ribosomal 80S elongation complex with eEF2, partial P site Ala-tRNA, E site Ala-tRNA on NediV ORF  
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 : 3.30 Å(reported)

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

We welcome your comments at [validation@mail.wwpdb.org](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  
Mogul : 2022.3.0, CSD as543be (2022)  
MolProbity : 4-5-2 with Phenix2.0  
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)  
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)  
MapQ : 1.9.13  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.49

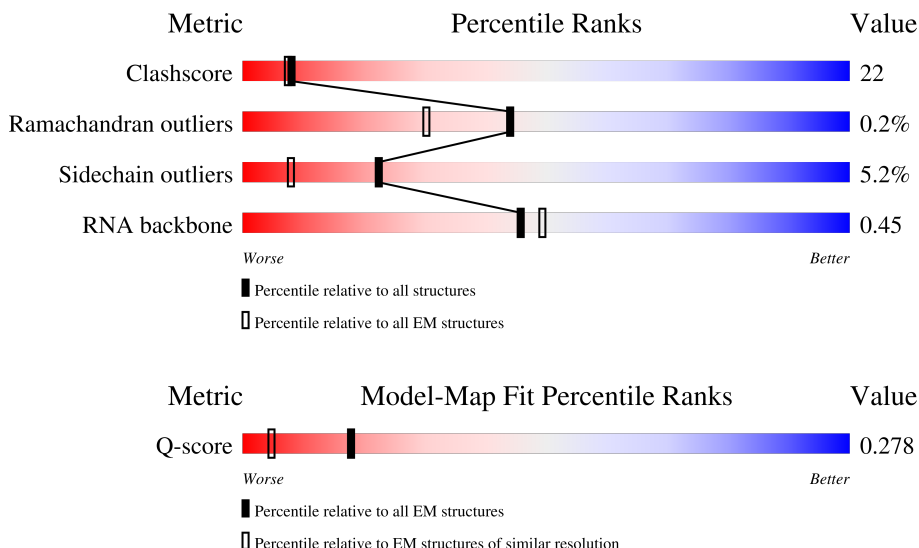
# 1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

*ELECTRON MICROSCOPY*

The reported resolution of this entry is 3.30 Å.

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



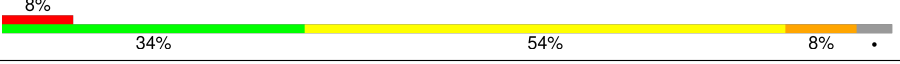


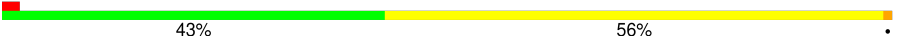
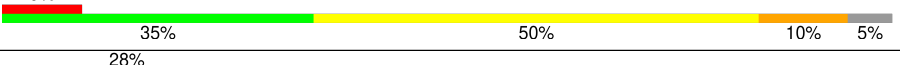


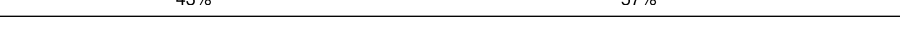

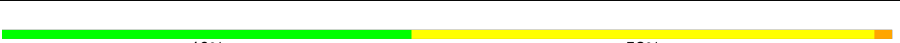
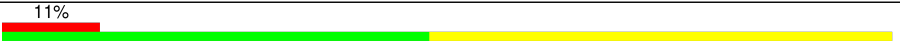
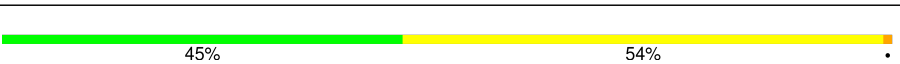


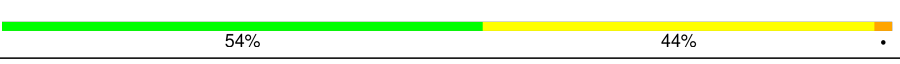



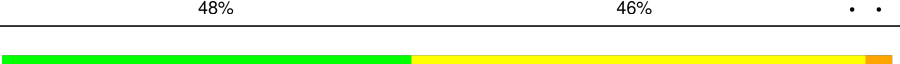
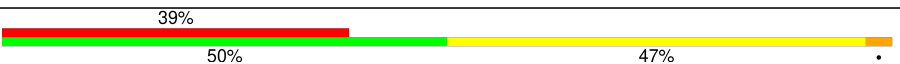





Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	15087 ( 2.80 - 3.80 )

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

Mol	Chain	Length	Quality of chain
1	R	180	 48% 49%
2	W	106	 20% 38% 41%
3	9	1670	 28% 59% 14%



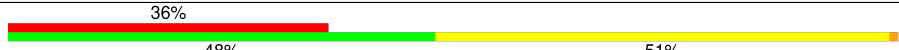
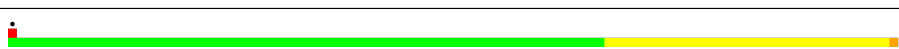

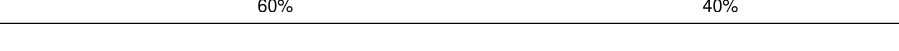
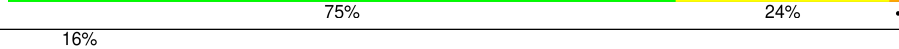

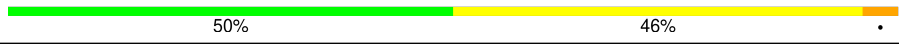




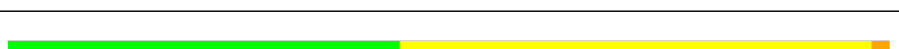

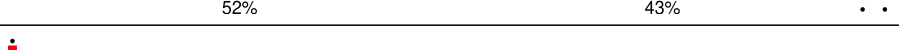


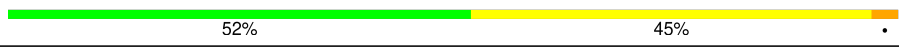



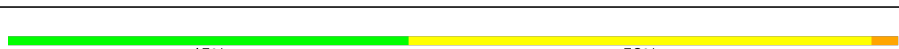

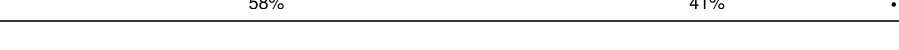
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Mol	Chain	Length	Quality of chain
4	AA	217	
5	BB	213	
6	CC	221	
7	EE	262	
8	GG	237	
9	HH	189	
10	II	206	
11	JJ	185	
12	LL	151	
13	NN	149	
14	OO	136	
15	VV	83	
16	WW	129	
17	XX	141	
18	YY	124	
19	aa	101	
20	bb	83	
21	ee	57	
22	DD	228	
23	FF	191	
24	KK	96	
25	MM	117	
26	PP	115	
27	QQ	141	
28	RR	132	




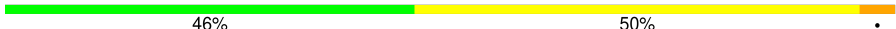


















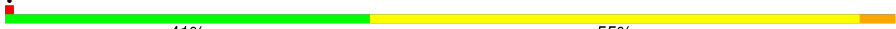


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Mol	Chain	Length	Quality of chain
29	SS	144	
30	TT	141	
31	UU	100	
32	ZZ	75	
33	cc	62	
34	dd	55	
35	ff	68	
36	A	248	
37	B	394	
38	C	362	
39	D	293	
40	E	216	
41	F	225	
42	G	240	
43	H	190	
44	I	213	
45	J	170	
46	L	210	
47	M	138	
48	N	203	
49	O	199	
50	P	153	
51	Q	187	
52	S	176	
53	T	159	



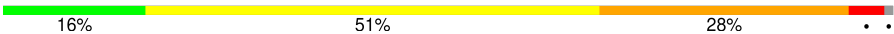
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Mol	Chain	Length	Quality of chain
54	U	99	
55	V	139	
56	X	118	
57	Y	134	
58	Z	135	
59	a	147	
60	b	104	
61	c	98	
62	d	107	
63	e	128	
64	f	109	
65	g	114	
66	h	122	
67	i	102	
68	j	86	
69	k	69	
70	l	50	
71	m	52	
72	n	25	
73	o	104	
74	p	91	
75	r	124	
76	s	196	
77	t	153	
78	5	3543	

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Mol	Chain	Length	Quality of chain
79	7	119	 41% 55% .
80	8	156	 25% 60% 12% .
81	EF	855	 84% 13% ..
82	1	11	 27% 36% 36%
83	PT	11	 18% 82%
84	ET	76	 16% 51% 28% ..

## 2 Entry composition

There are 86 unique types of molecules in this entry. The entry contains 223342 atoms, of which 6717 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	63	Total	C	N	O	S	0	0
			528	337	103	85	3		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
3	9	1670	Total	C	N	O	P	0	0
			35655	15916	6405	11665	1669		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
4	AA	209	Total	C	N	O	S	0	0
			1650	1051	290	301	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	226	Total	C	N	O	S	0	0
			1831	1144	365	315	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	115	Total	C	N	O	S	0	0
			956	610	176	163	7		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
27	QQ	141	Total	C	N	O	S	0	0
			1116	711	209	193	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 60S ribosomal protein L8.

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

- Molecule 37 is a protein called 60S ribosomal protein L3.

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

- Molecule 38 is a protein called 60S ribosomal protein L4.

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

- Molecule 39 is a protein called 60S ribosomal protein L5.

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

- Molecule 40 is a protein called 60S ribosomal protein L6.

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

- Molecule 41 is a protein called 60S ribosomal protein L7.

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

- Molecule 42 is a protein called Large ribosomal subunit protein eL8.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	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 43 is a protein called 60S ribosomal protein L9.

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

- Molecule 44 is a protein called Ribosomal protein L10.

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

- Molecule 45 is a protein called 60S ribosomal protein L11.

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

- Molecule 46 is a protein called Large ribosomal subunit protein eL13.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	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 47 is a protein called 60S ribosomal protein L14.

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

- Molecule 48 is a protein called 60S ribosomal protein L15.

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

- Molecule 49 is a protein called Large ribosomal subunit protein uL13.

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

- Molecule 50 is a protein called 60S ribosomal protein L17.

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

- Molecule 51 is a protein called Large ribosomal subunit protein eL18.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	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 52 is a protein called eL20.

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

- Molecule 53 is a protein called 60S ribosomal protein L21.

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

- Molecule 54 is a protein called Large ribosomal subunit protein eL22.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	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 55 is a protein called Large ribosomal subunit protein uL14.

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

- Molecule 56 is a protein called Large ribosomal subunit protein uL23.

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

- Molecule 57 is a protein called 60S ribosomal protein L26.

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



- Molecule 58 is a protein called 60S ribosomal protein L27.

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

- Molecule 59 is a protein called 60S ribosomal protein L27a.

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

- Molecule 60 is a protein called eL29.

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

- Molecule 61 is a protein called 60S ribosomal protein L30.

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

- Molecule 62 is a protein called 60S ribosomal protein L31.

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

- Molecule 63 is a protein called Large ribosomal subunit protein eL32.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	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

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Chain	Residue	Modelled	Actual	Comment	Reference
e	98	GLU	LYS	conflict	UNP G1TUN8
e	108	ARG	CYS	conflict	UNP G1TUN8
e	115	ALA	VAL	conflict	UNP G1TUN8

- Molecule 64 is a protein called Large ribosomal subunit protein eL33.

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

- Molecule 65 is a protein called 60S ribosomal protein L34.

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

- Molecule 66 is a protein called 60S ribosomal protein L35.

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

- Molecule 67 is a protein called 60S ribosomal protein L36.

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

- Molecule 68 is a protein called 60S ribosomal protein L37.

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

- Molecule 69 is a protein called Large ribosomal subunit protein eL38.

Mol	Chain	Residues	Atoms					AltConf	Trace
69	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 70 is a protein called 60S ribosomal protein L39.

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

- Molecule 71 is a protein called Large ribosomal subunit protein eL40.

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

- Molecule 72 is a protein called eL41.

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

- Molecule 73 is a protein called eL42.

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

- Molecule 74 is a protein called 60S ribosomal protein L37a.

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

- Molecule 75 is a protein called 60S ribosomal protein L28.

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

- Molecule 76 is a protein called 60S acidic ribosomal protein P0.

Mol	Chain	Residues	Atoms					AltConf	Trace
76	s	196	Total	C	N	O	S	0	0
			1507	959	263	276	9		

- Molecule 77 is a protein called uL11.

Mol	Chain	Residues	Atoms					AltConf	Trace
77	t	153	Total	C	N	O	S	0	0
			1160	722	218	217	3		

- Molecule 78 is a RNA chain called 28S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
78	5	3512	Total	C	N	O	P	0	0
			75293	33533	13777	24471	3512		

- Molecule 79 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
79	7	119	Total	C	N	O	P	0	0
			2538	1132	454	834	118		

- Molecule 80 is a RNA chain called 5.8S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
80	8	151	Total	C	N	O	P	0	0
			3208	1432	564	1062	150		

- Molecule 81 is a protein called Elongation factor 2.

Mol	Chain	Residues	Atoms						AltConf	Trace
81	EF	835	Total	C	H	N	O	S	0	0
			13123	4144	6607	1117	1211	44		

- Molecule 82 is a RNA chain called NediV ORF.

Mol	Chain	Residues	Atoms						AltConf	Trace
82	1	11	Total	C	H	N	O	P	0	0
			339	103	110	39	76	11		

- Molecule 83 is a RNA chain called P site Ala-tRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
83	PT	11	Total	C	N	O	P	0	0
			233	104	40	78	11		

- Molecule 84 is a RNA chain called E site Ala-tRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
84	ET	75	Total	C	N	O	P	0	0
			1595	712	285	524	74		

- Molecule 85 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
85	aa	1	Total	Mg	0
			1	1	
85	A	1	Total	Mg	0
			1	1	
85	P	1	Total	Mg	0
			1	1	
85	V	1	Total	Mg	0
			1	1	
85	g	1	Total	Mg	0
			1	1	
85	5	190	Total	Mg	0
			190	190	
85	7	6	Total	Mg	0
			6	6	
85	8	4	Total	Mg	0
			4	4	
85	EF	1	Total	Mg	0
			1	1	

- Molecule 86 is ZINC ION (CCD ID: ZN) (formula: Zn).

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

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

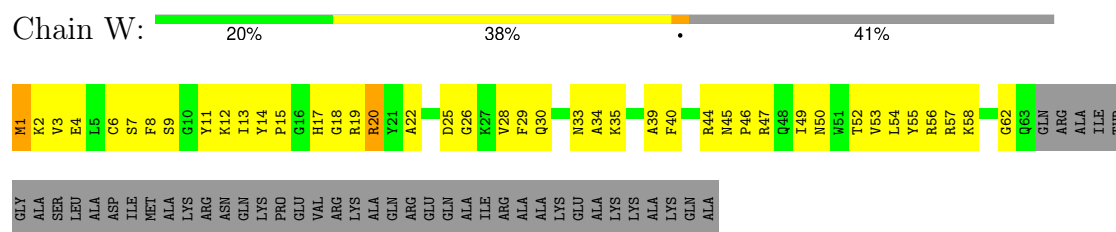
### 3 Residue-property plots [i](#)

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

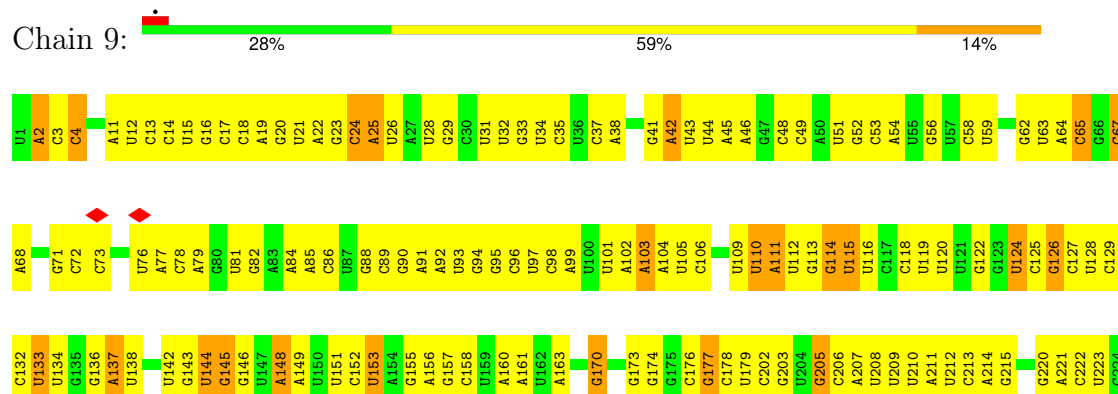
#### • Molecule 1: 60S ribosomal protein L19

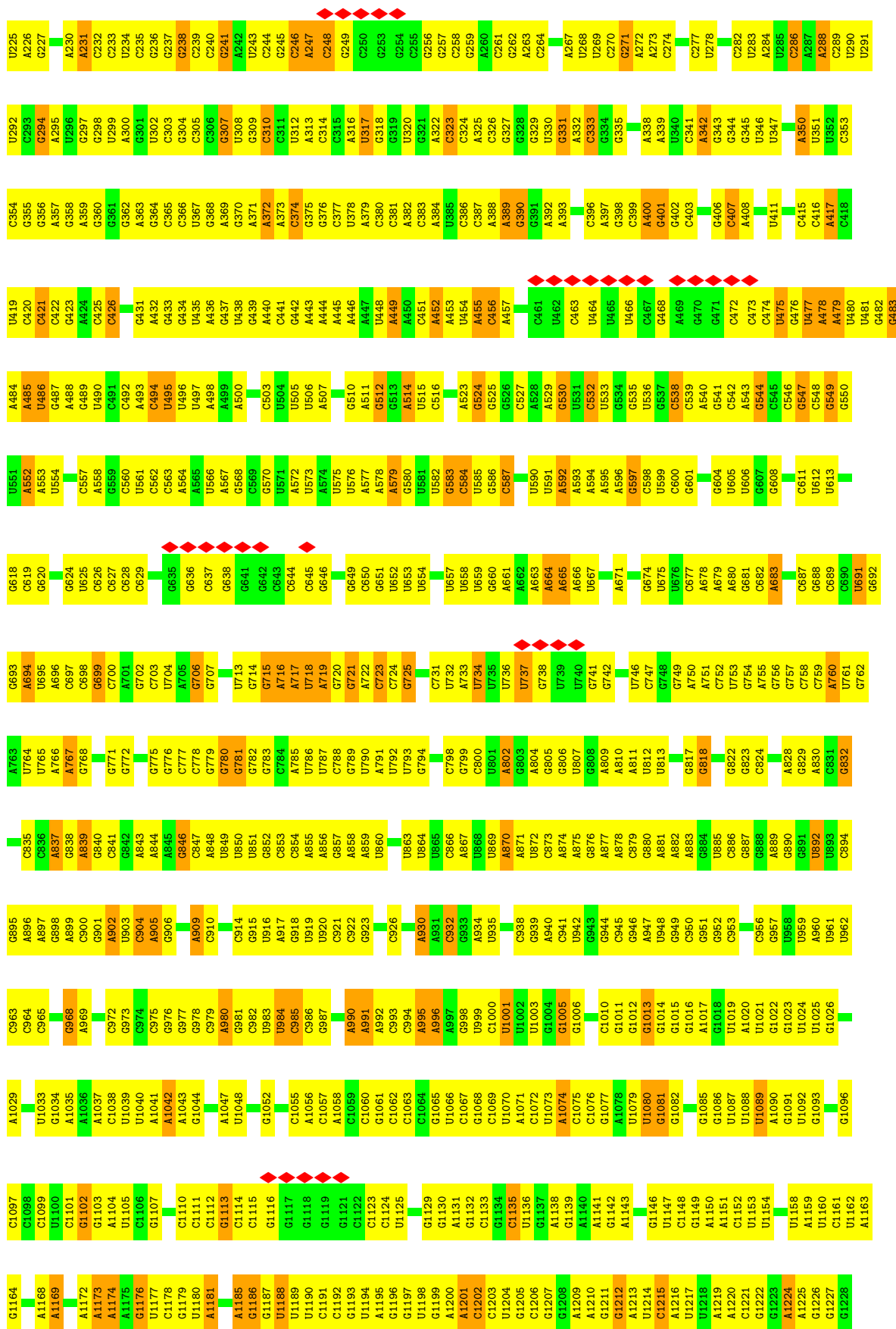


#### • Molecule 2: uL24

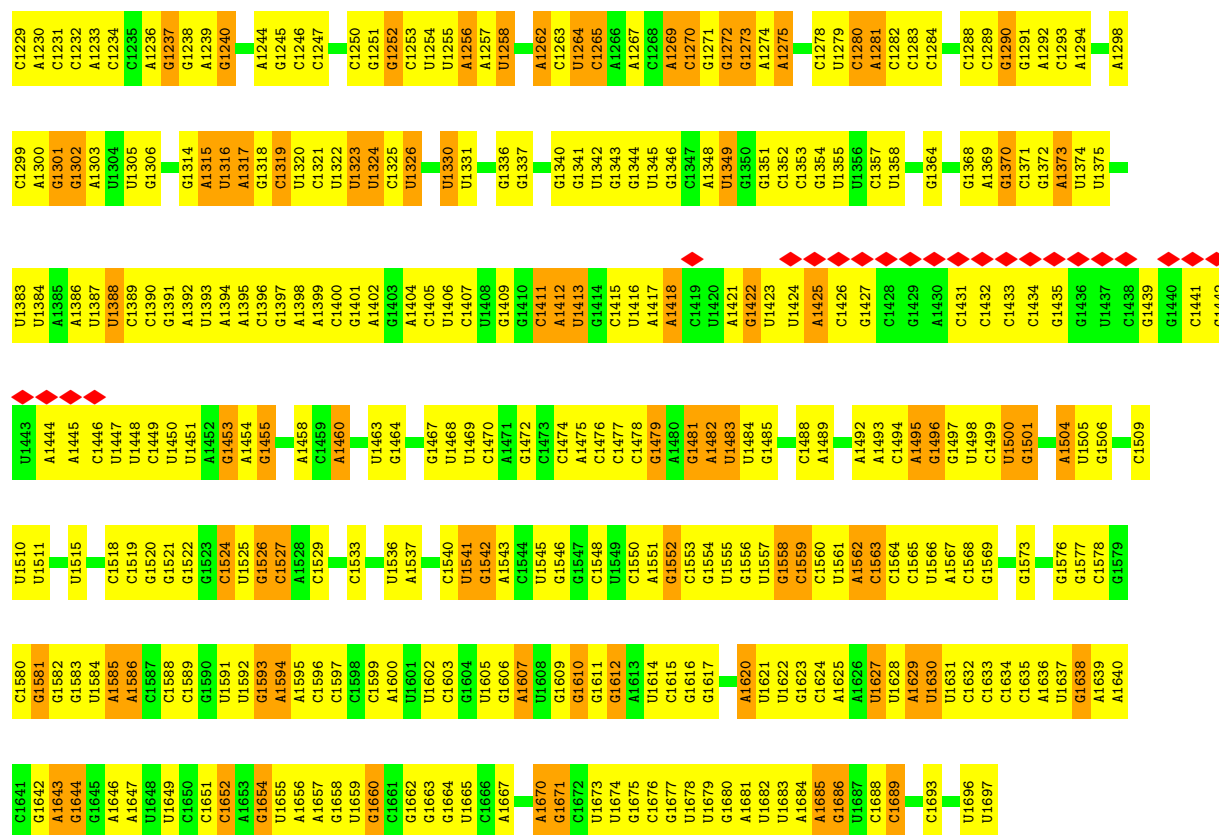


#### • Molecule 3: 18S rRNA

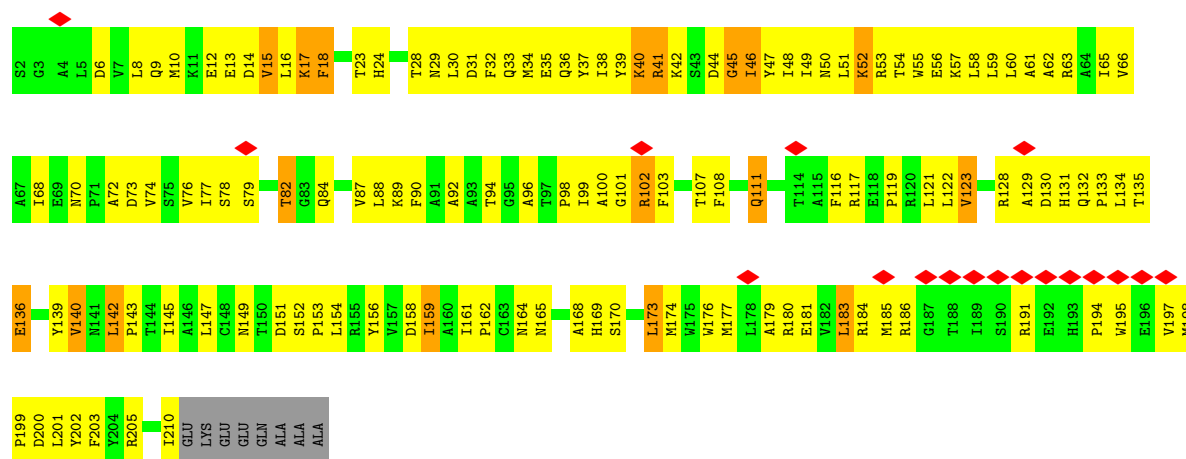




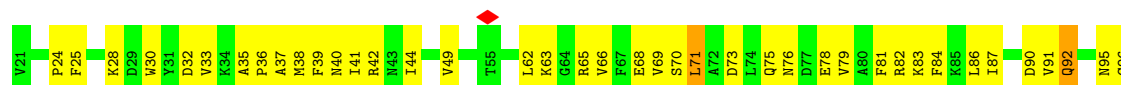


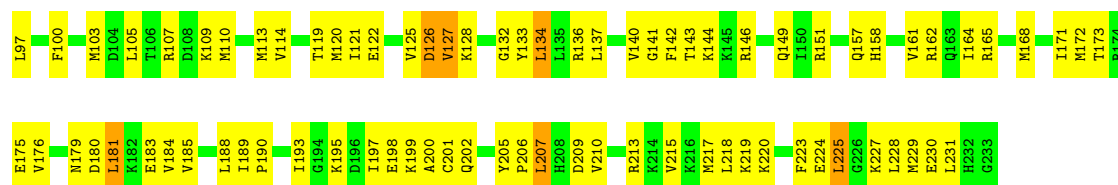


• Molecule 4: 40S\_SA\_C domain-containing protein

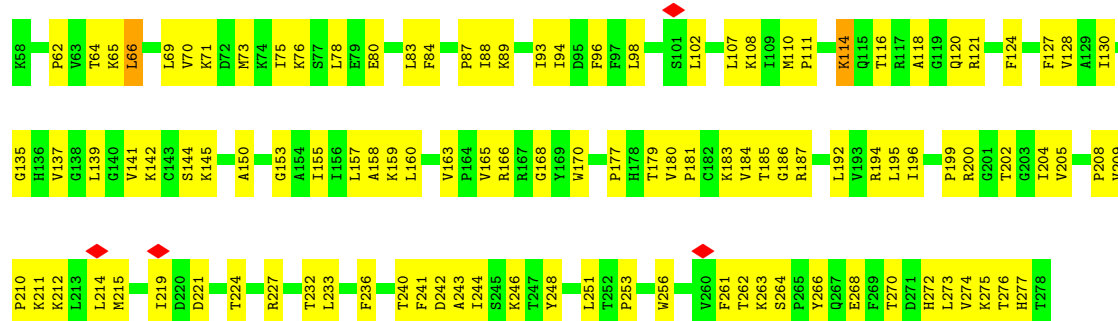


• Molecule 5: 40S ribosomal protein S3a

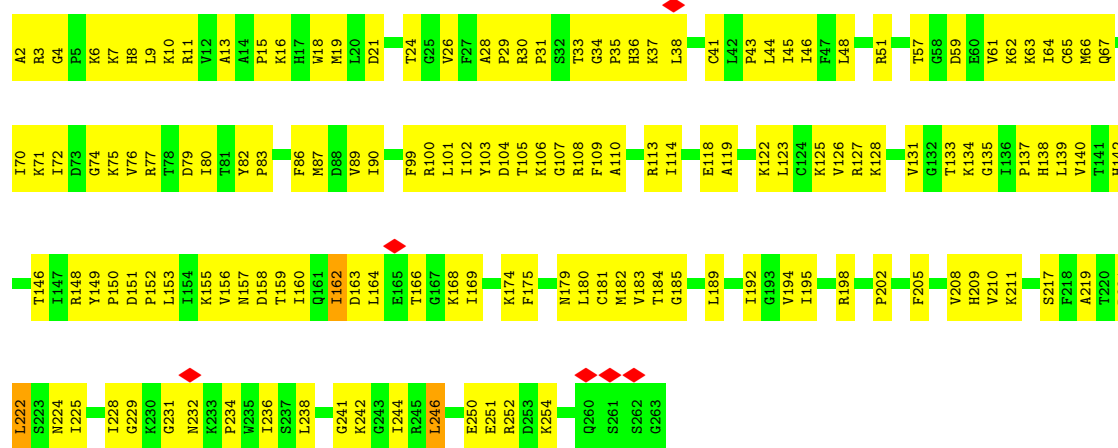




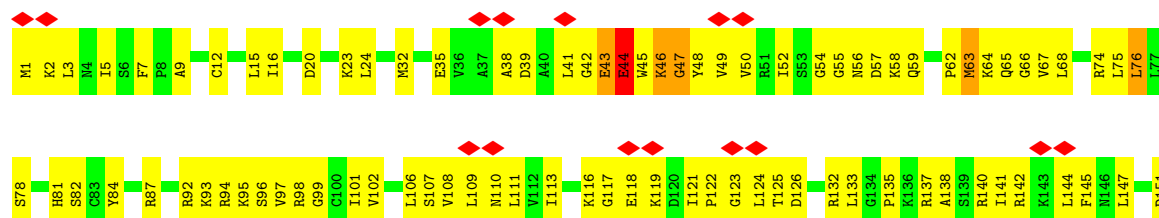
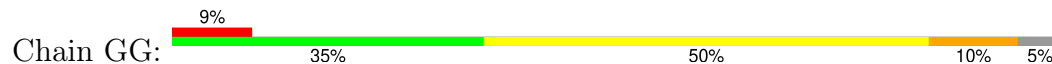
• Molecule 6: 40S ribosomal protein S2

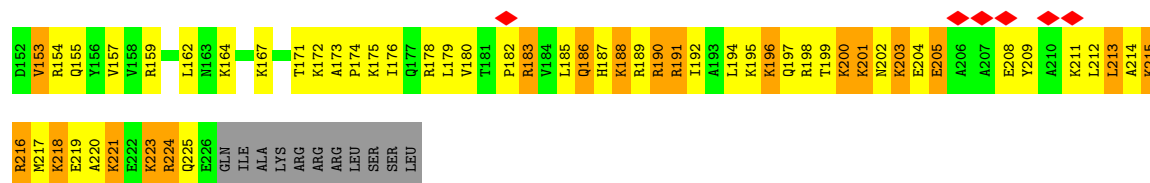


• Molecule 7: 40S ribosomal protein S4

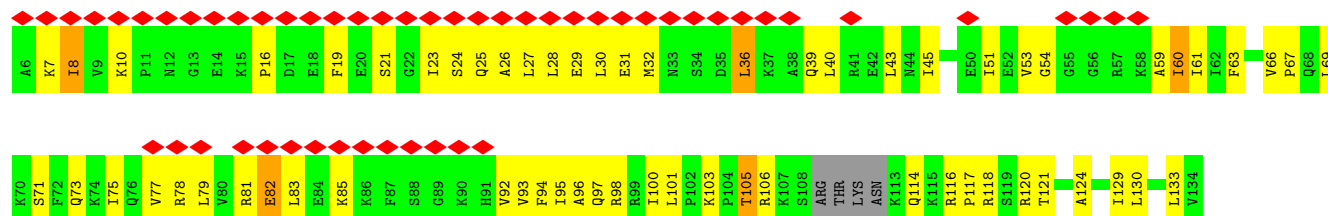


• Molecule 8: 40S ribosomal protein S6

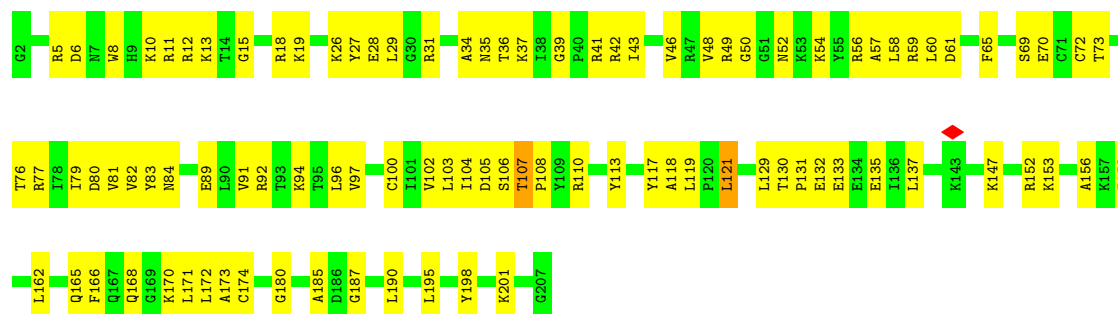




- Molecule 9: Small ribosomal subunit protein eS7




- Molecule 10: 40S ribosomal protein S8

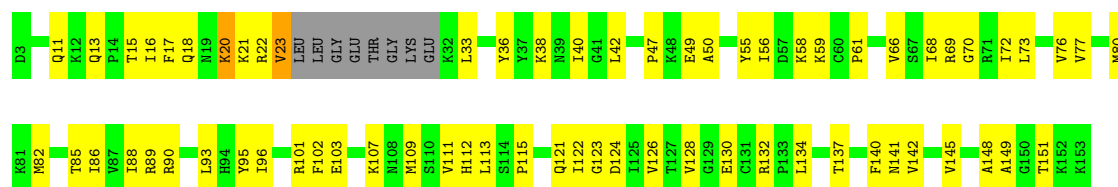


- Molecule 11: 40S ribosomal protein S9



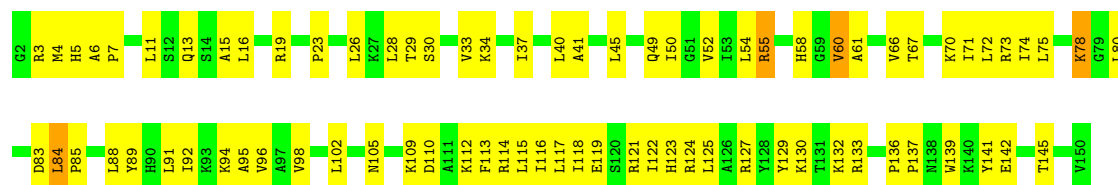
- Molecule 12: Small ribosomal subunit protein uS17

Chain LL: 



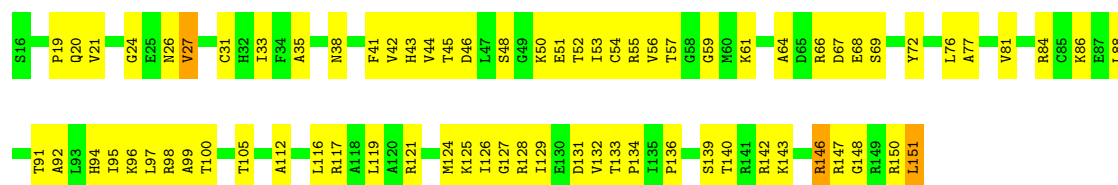
- Molecule 13: 40S ribosomal protein S13

Chain NN: 



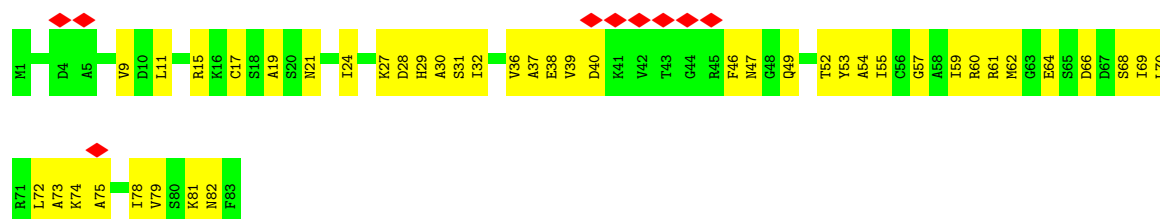
- Molecule 14: Small ribosomal subunit protein uS11

Chain OO: 



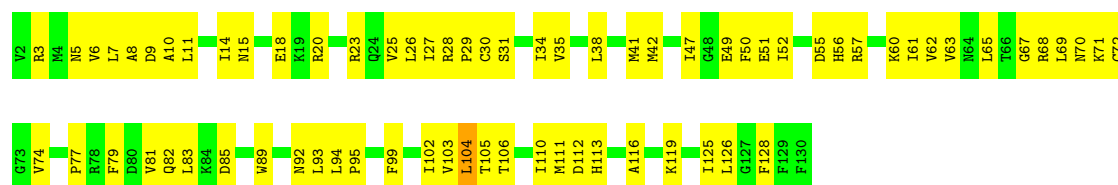
- Molecule 15: eS21

Chain VV: 

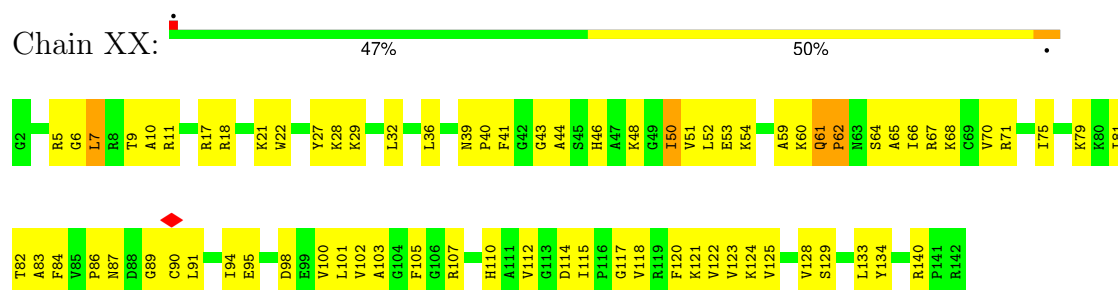


- Molecule 16: 40S ribosomal protein S15a

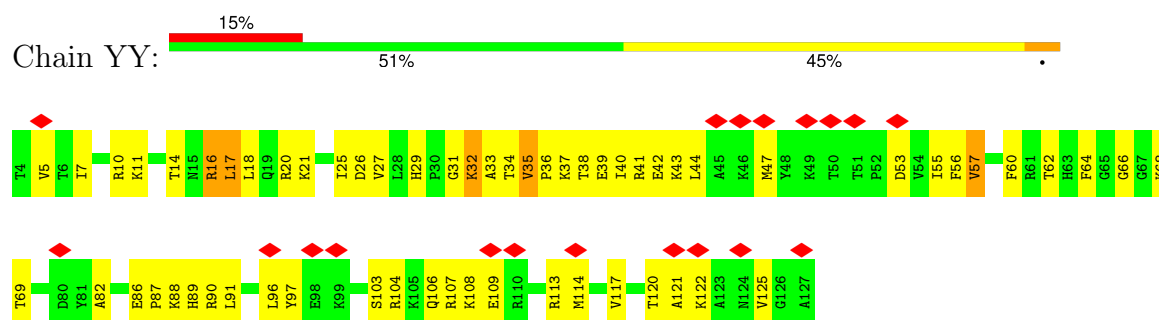
Chain WW: 



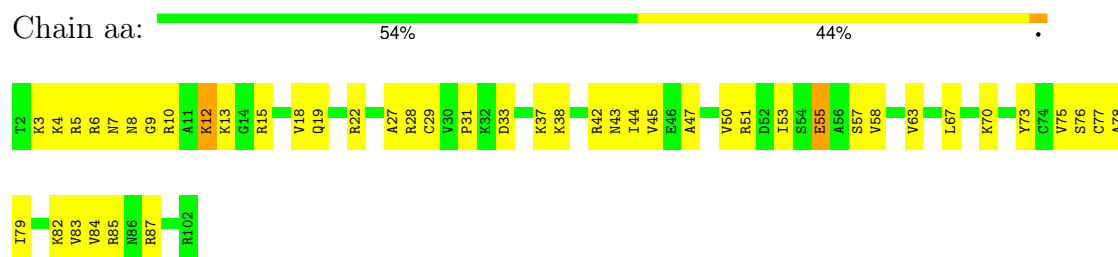
- Molecule 17: 40S ribosomal protein S23



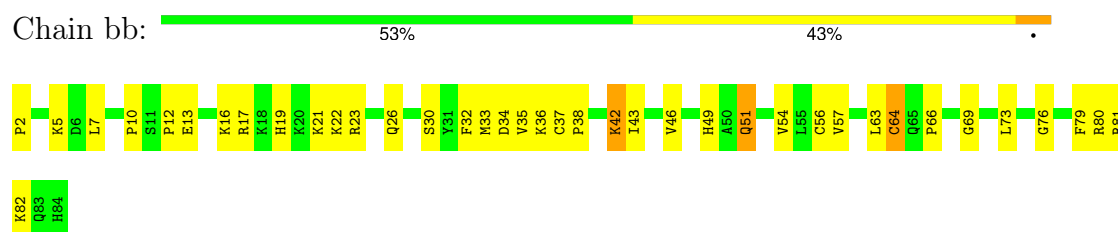
- Molecule 18: 40S ribosomal protein S24



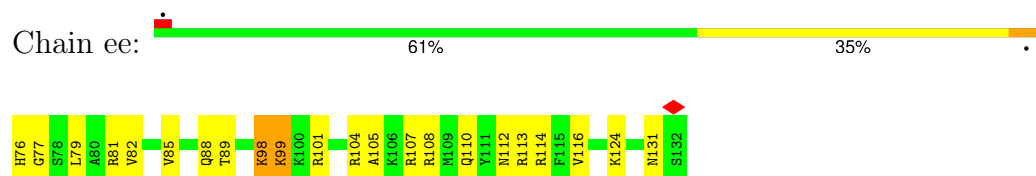
- Molecule 19: eS26



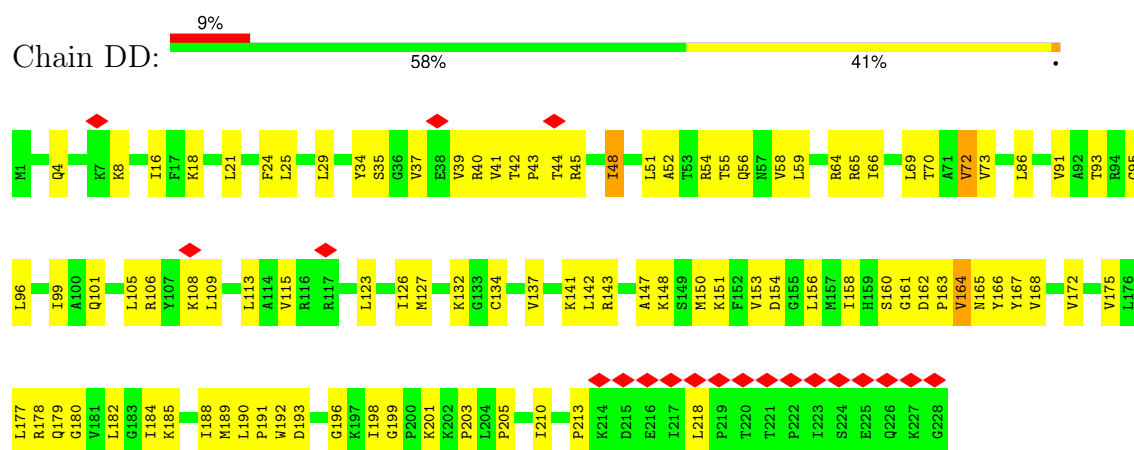
- Molecule 20: 40S ribosomal protein S27



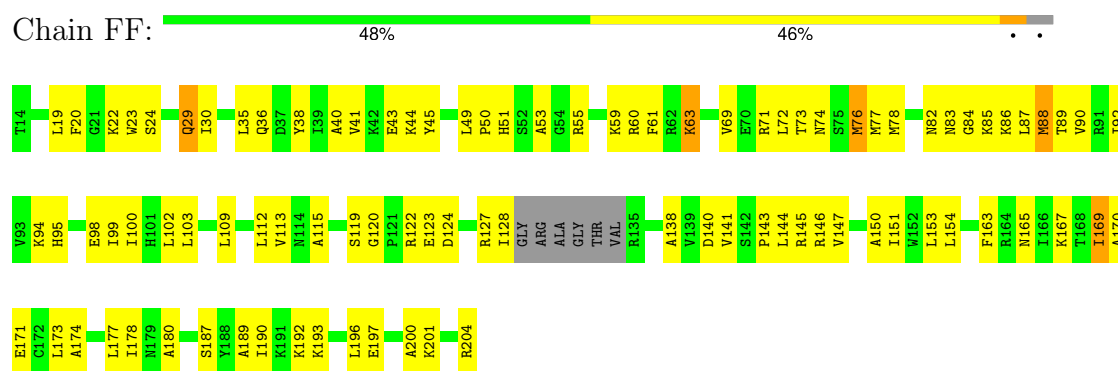
- Molecule 21: Small ribosomal subunit protein eS30



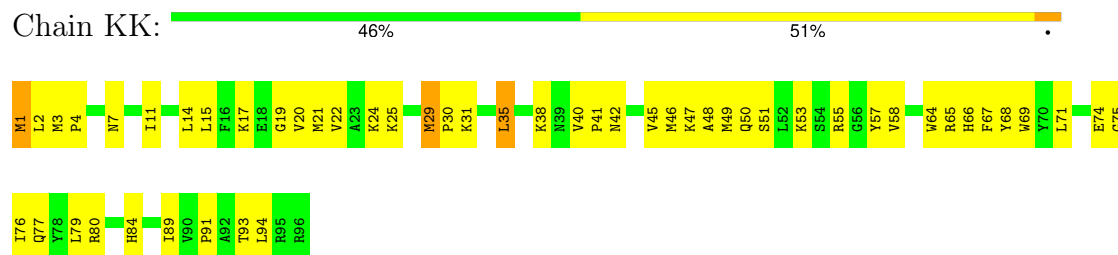
- Molecule 22: 40S ribosomal protein S3



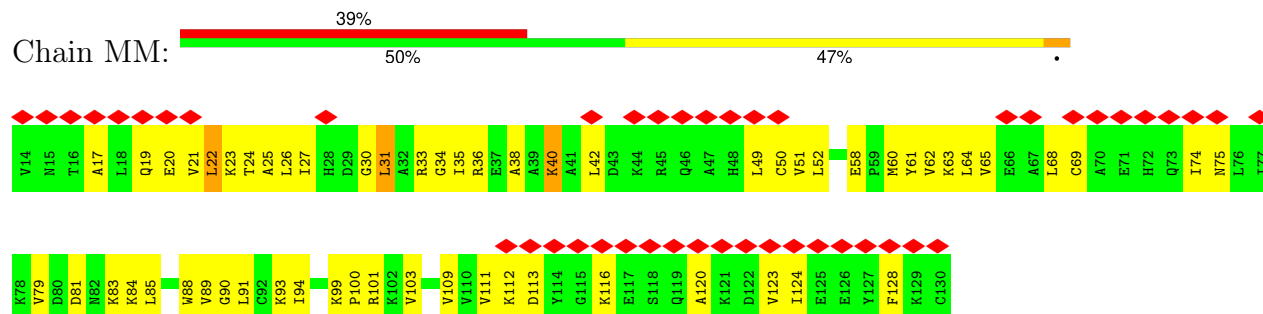
• Molecule 23: Small ribosomal subunit protein uS7



• Molecule 24: 40S ribosomal protein S10

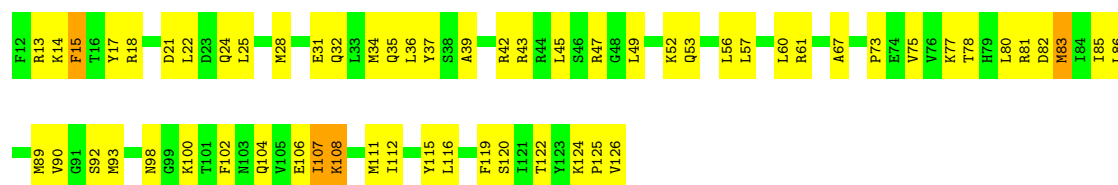


• Molecule 25: 40S ribosomal protein S12



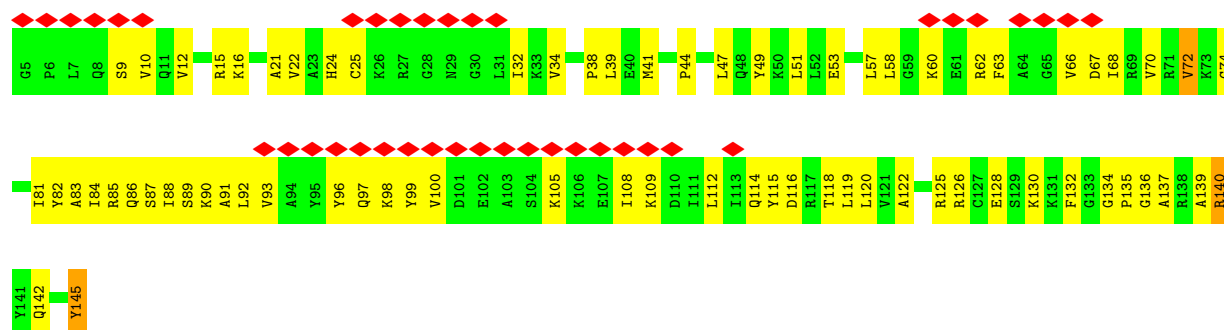
• Molecule 26: Small ribosomal subunit protein uS19

Chain PP: 




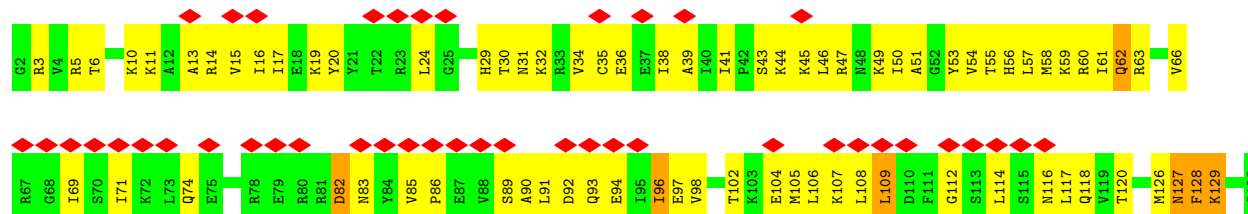
• Molecule 27: Small ribosomal subunit protein uS9

Chain QQ: 




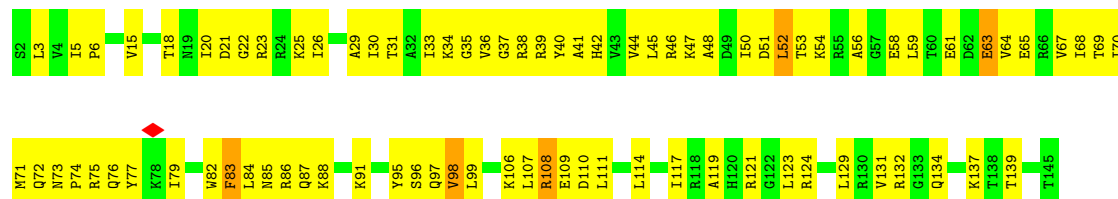
• Molecule 28: 40S ribosomal protein S17

Chain RR: 



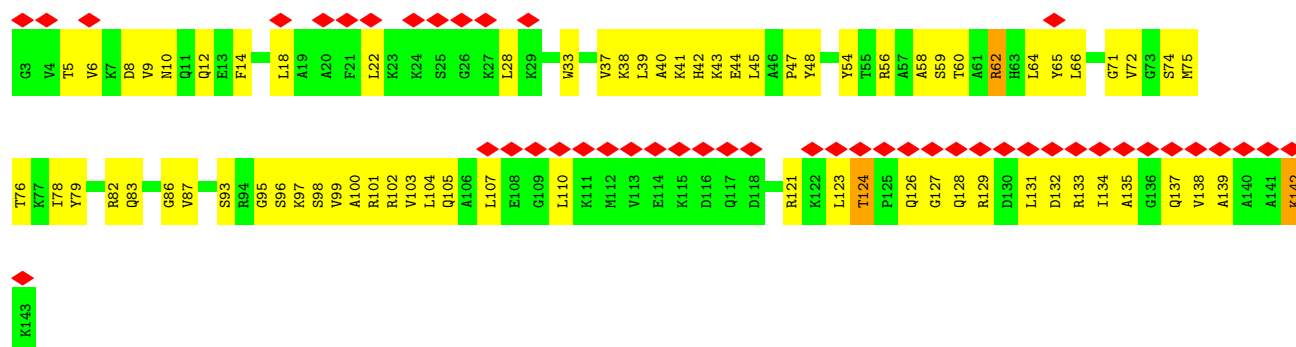
• Molecule 29: 40S ribosomal protein S18

Chain SS: 

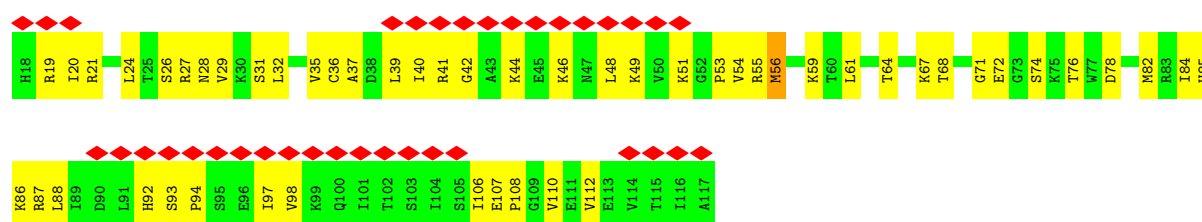


• Molecule 30: Small ribosomal subunit protein eS19

Chain TT: 



- Molecule 31: 40S ribosomal protein S20



- Molecule 32: 40S ribosomal protein S25



- Molecule 33: 40S ribosomal protein S28



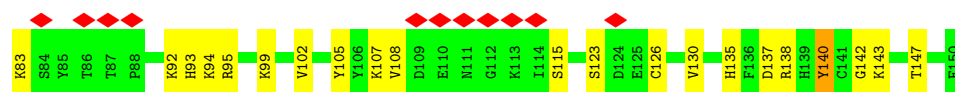
- Molecule 34: 40S ribosomal protein S29



- Molecule 35: 40S ribosomal protein S27a







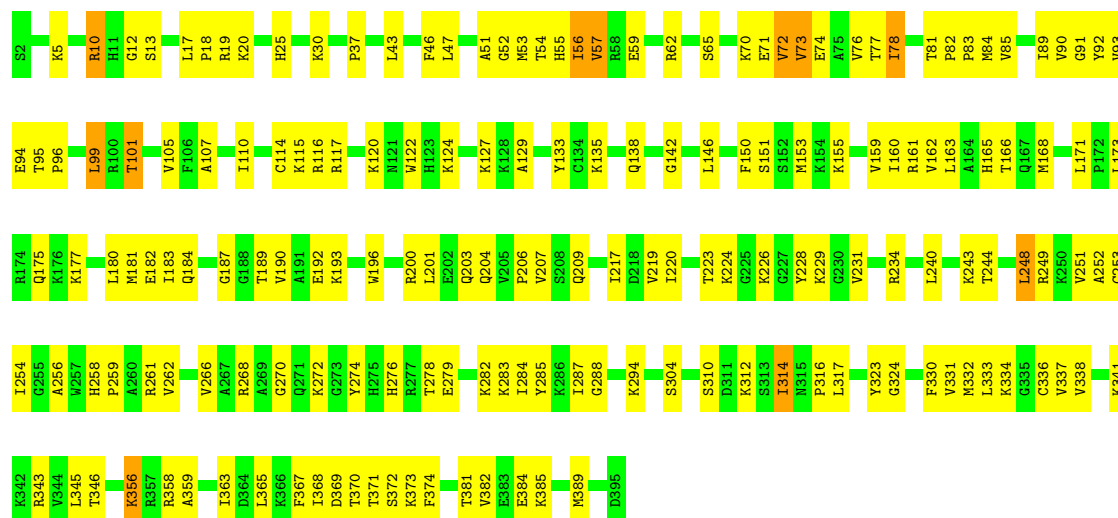
• Molecule 36: 60S ribosomal protein L8

Chain A: 50% 46%



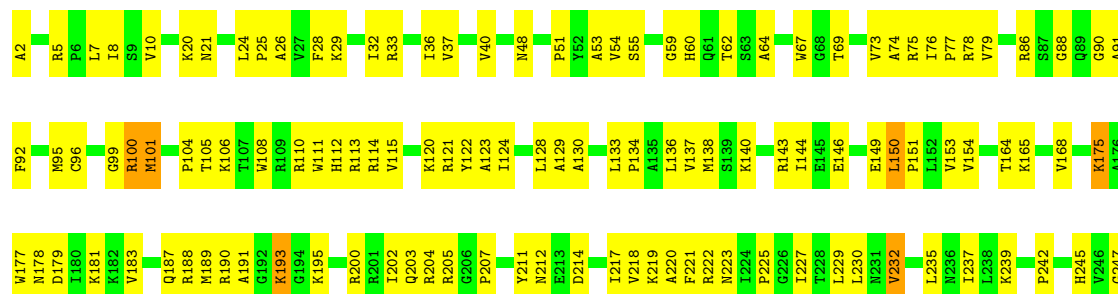
• Molecule 37: 60S ribosomal protein L3

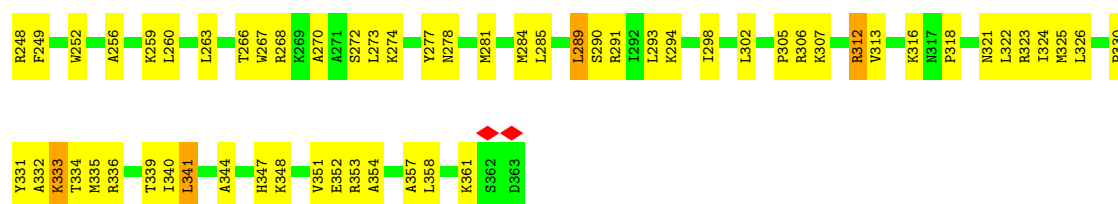
Chain B: 56% 42%



• Molecule 38: 60S ribosomal protein L4

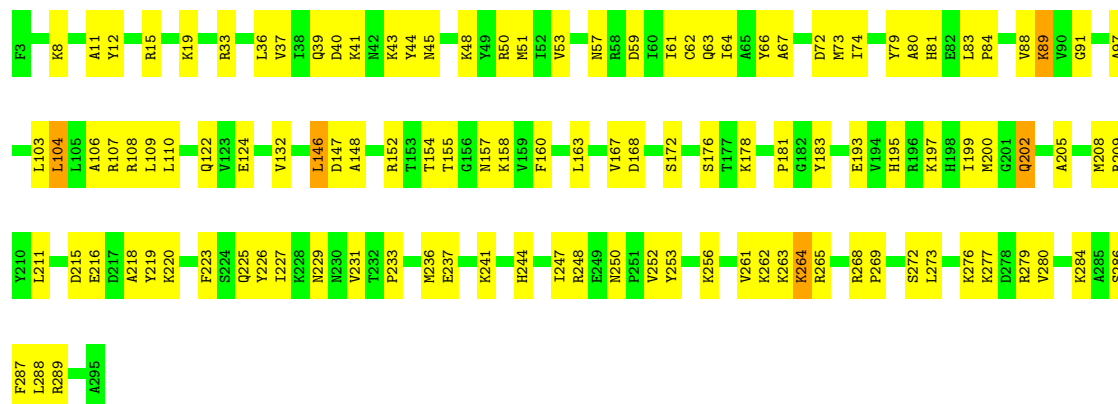
Chain C: 51% 47%





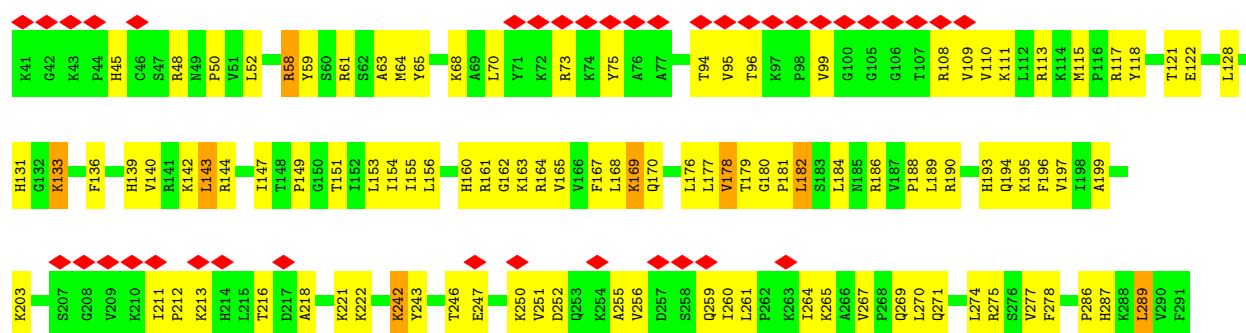
• Molecule 39: 60S ribosomal protein L5

Chain D: 61% 38% .



• Molecule 40: 60S ribosomal protein L6

Chain E: 18% 51% 45% .

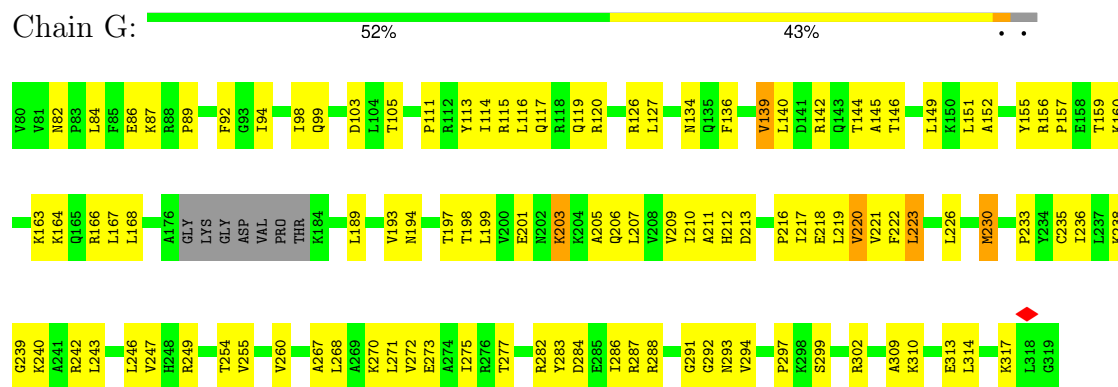


• Molecule 41: 60S ribosomal protein L7

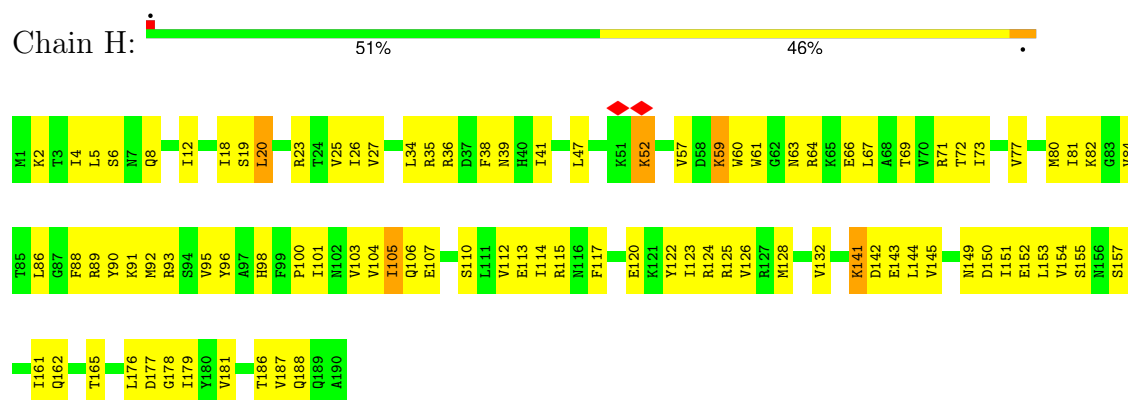
Chain F: 44% 53% .



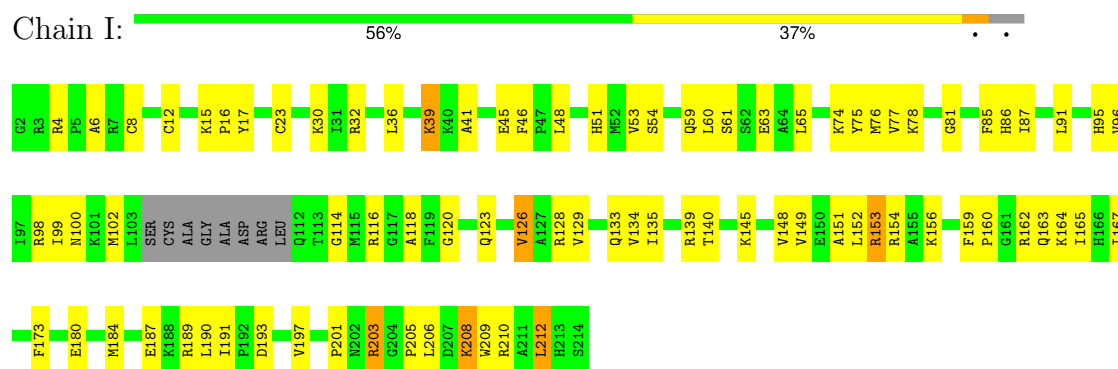
- Molecule 42: Large ribosomal subunit protein eL8



- Molecule 43: 60S ribosomal protein L9



- Molecule 44: Ribosomal protein L10



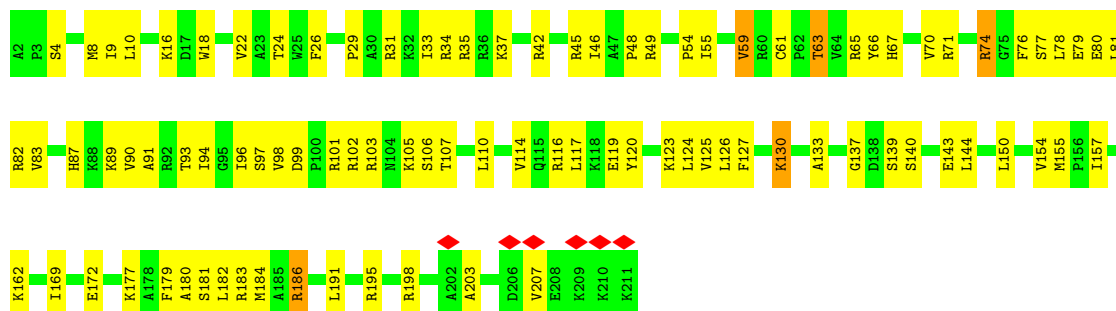
- Molecule 45: 60S ribosomal protein L11





- Molecule 46: Large ribosomal subunit protein eL13

Chain L: 56% 42%



- Molecule 47: 60S ribosomal protein L14

Chain M: 50% 46%



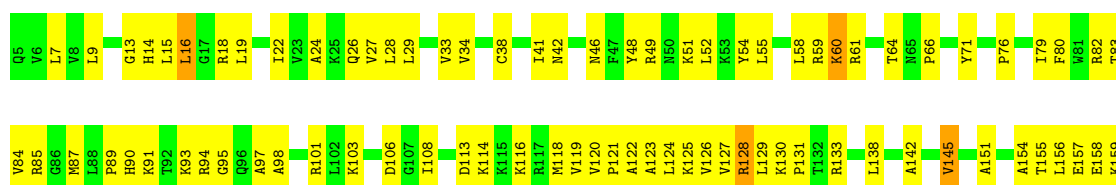
- Molecule 48: 60S ribosomal protein L15

Chain N: 54% 45%



- Molecule 49: Large ribosomal subunit protein uL13

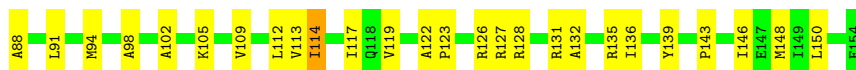
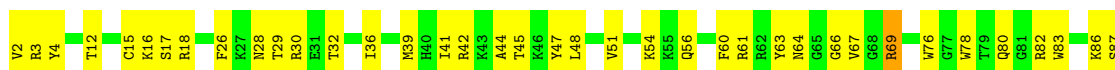
Chain O: 45% 52%





• Molecule 50: 60S ribosomal protein L17

Chain P: 58% 41%



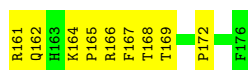
• Molecule 51: Large ribosomal subunit protein eL18

Chain Q: 56% 42%



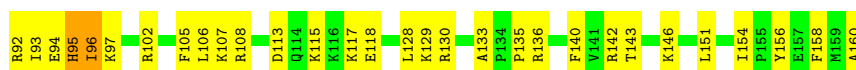
• Molecule 52: eL20

Chain S: 52% 47%

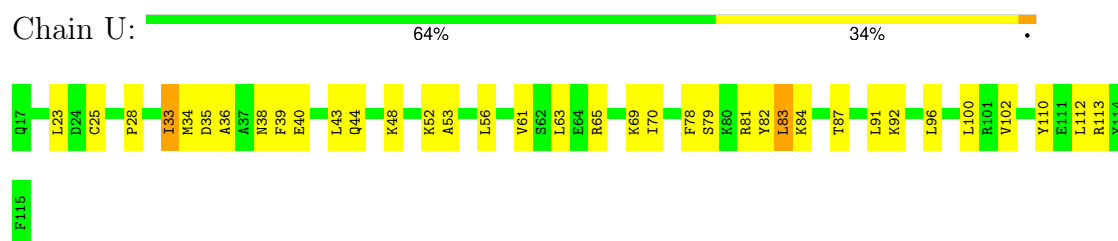


• Molecule 53: 60S ribosomal protein L21

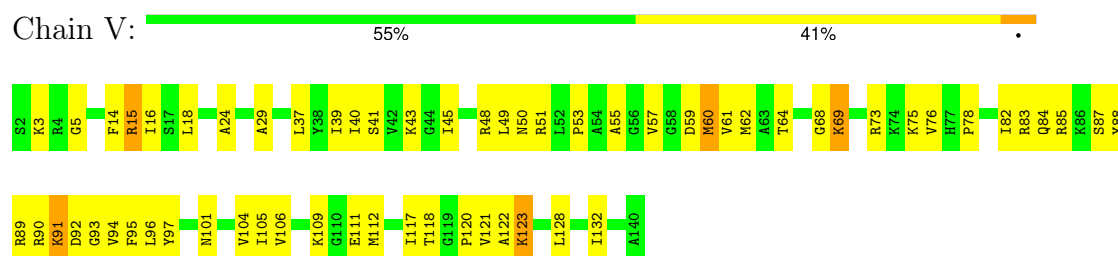
Chain T: 57% 40%



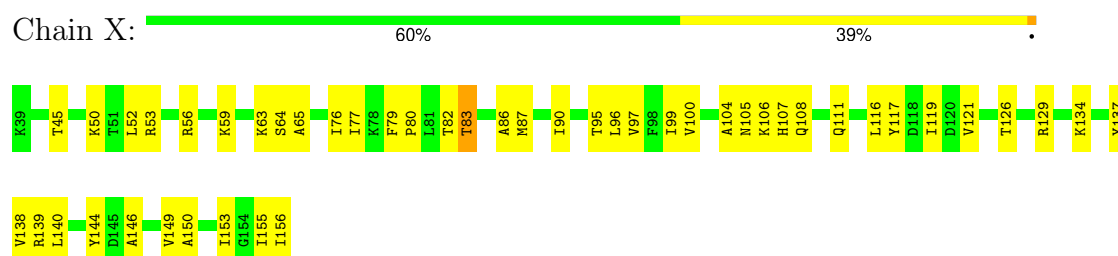
- Molecule 54: Large ribosomal subunit protein eL22



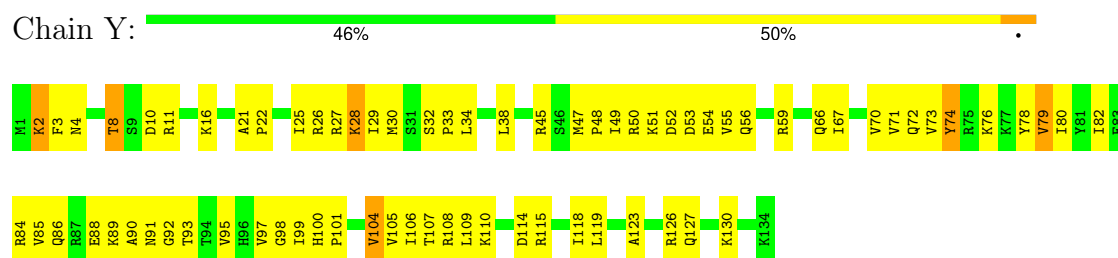
- Molecule 55: Large ribosomal subunit protein uL14



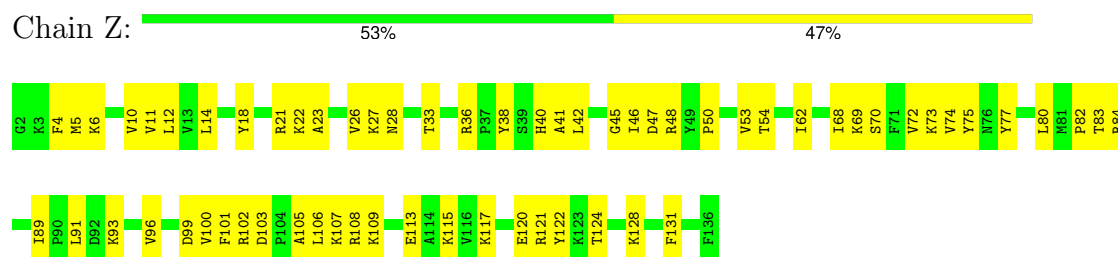
- Molecule 56: Large ribosomal subunit protein uL23



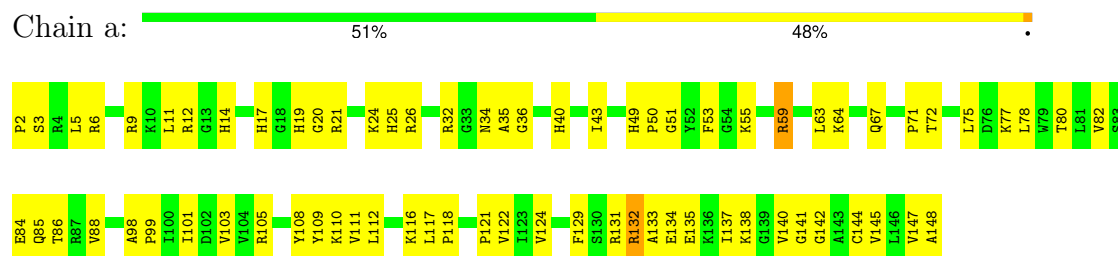
- Molecule 57: 60S ribosomal protein L26



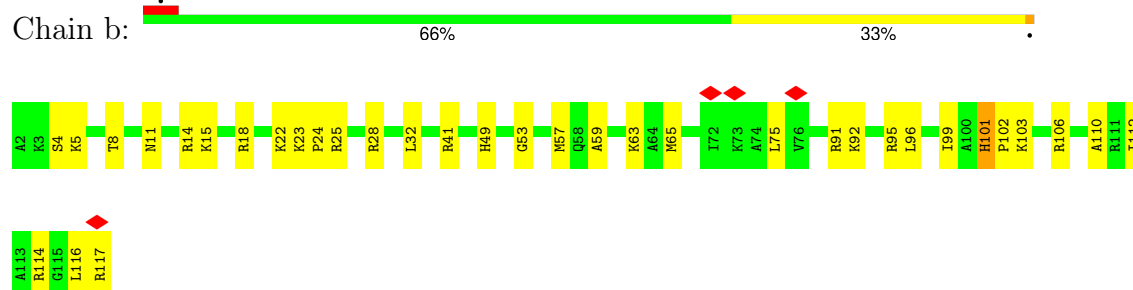
- Molecule 58: 60S ribosomal protein L27



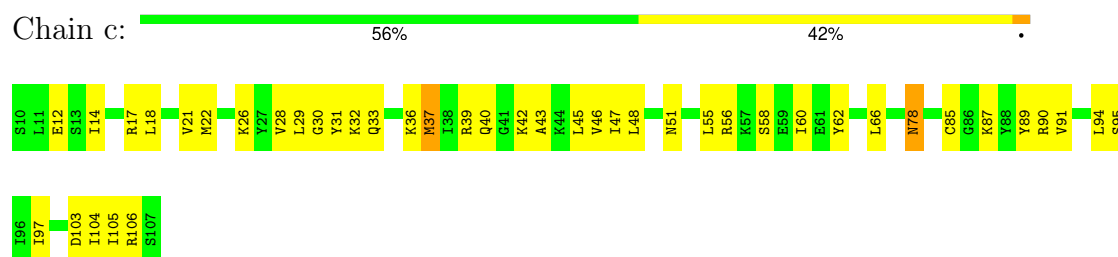
- Molecule 59: 60S ribosomal protein L27a



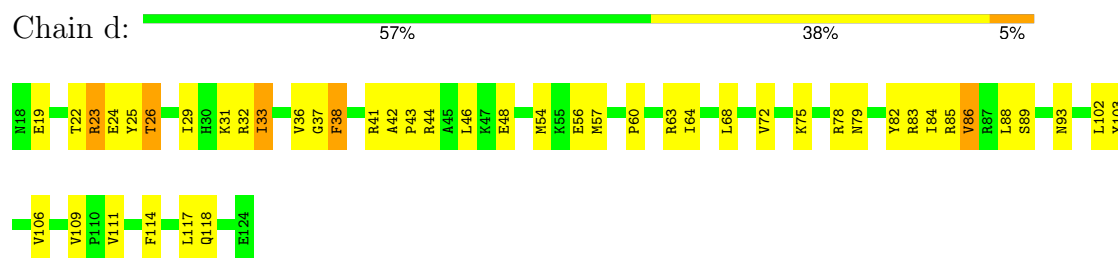
- Molecule 60: eL29



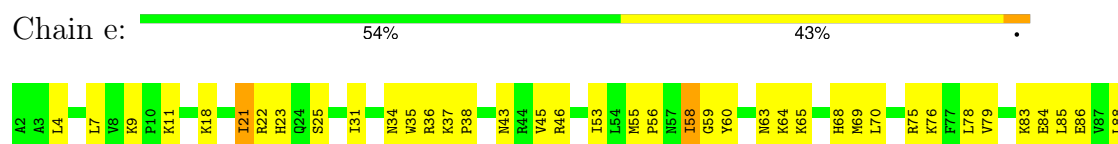
- Molecule 61: 60S ribosomal protein L30

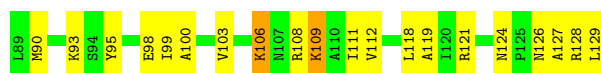


- Molecule 62: 60S ribosomal protein L31



- Molecule 63: Large ribosomal subunit protein eL32





- Molecule 64: Large ribosomal subunit protein eL33

Chain f: 61% 38%



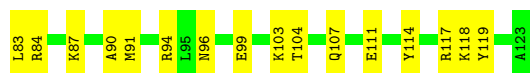
- Molecule 65: 60S ribosomal protein L34

Chain g: 57% 39%



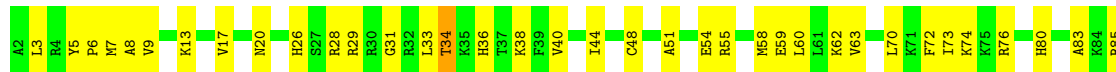
- Molecule 66: 60S ribosomal protein L35

Chain h: 54% 46%



- Molecule 67: 60S ribosomal protein L36

Chain i: 61% 37%



- Molecule 68: 60S ribosomal protein L37

Chain j: 53% 45%





- Molecule 69: Large ribosomal subunit protein eL38

Chain k: 57% 39% .



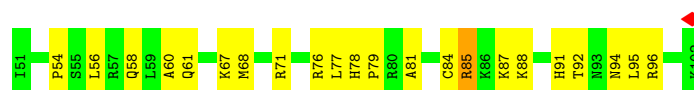
- Molecule 70: 60S ribosomal protein L39

Chain l: 52% 46% .



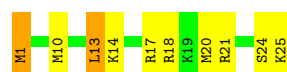
- Molecule 71: Large ribosomal subunit protein eL40

Chain m: 58% 40% .



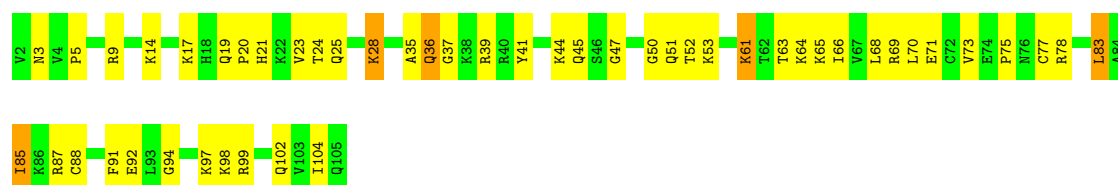
- Molecule 72: eL41

Chain n: 60% 32% 8% .



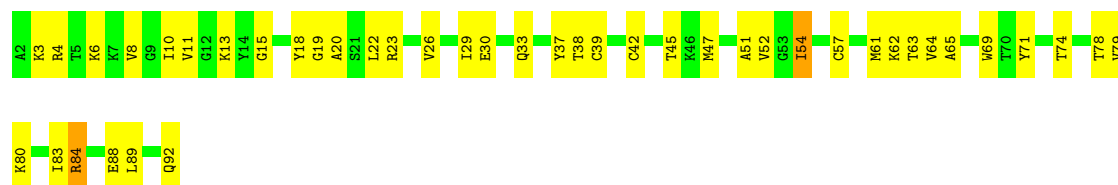
- Molecule 73: eL42

Chain o: 53% 42% 5% .

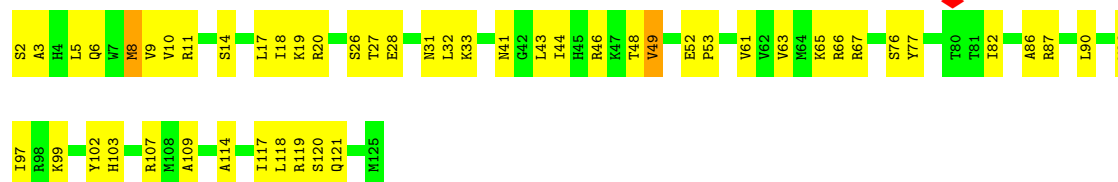


- Molecule 74: 60S ribosomal protein L37a

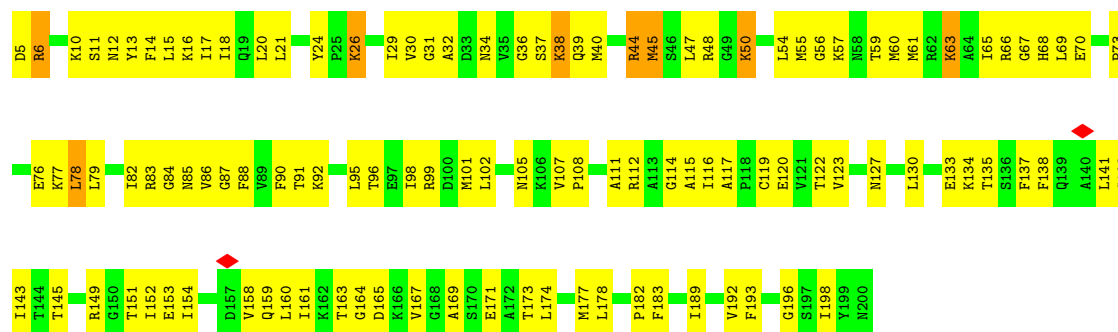
Chain p: 53% 45% .



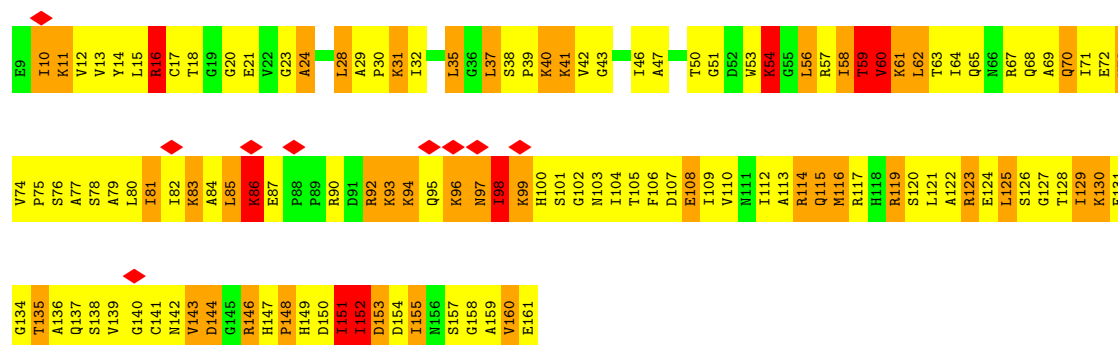
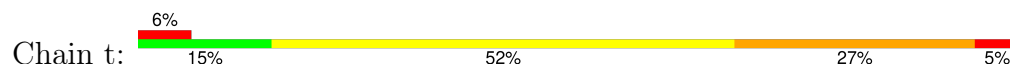
- Molecule 75: 60S ribosomal protein L28



- Molecule 76: 60S acidic ribosomal protein P0



- Molecule 77: uL11



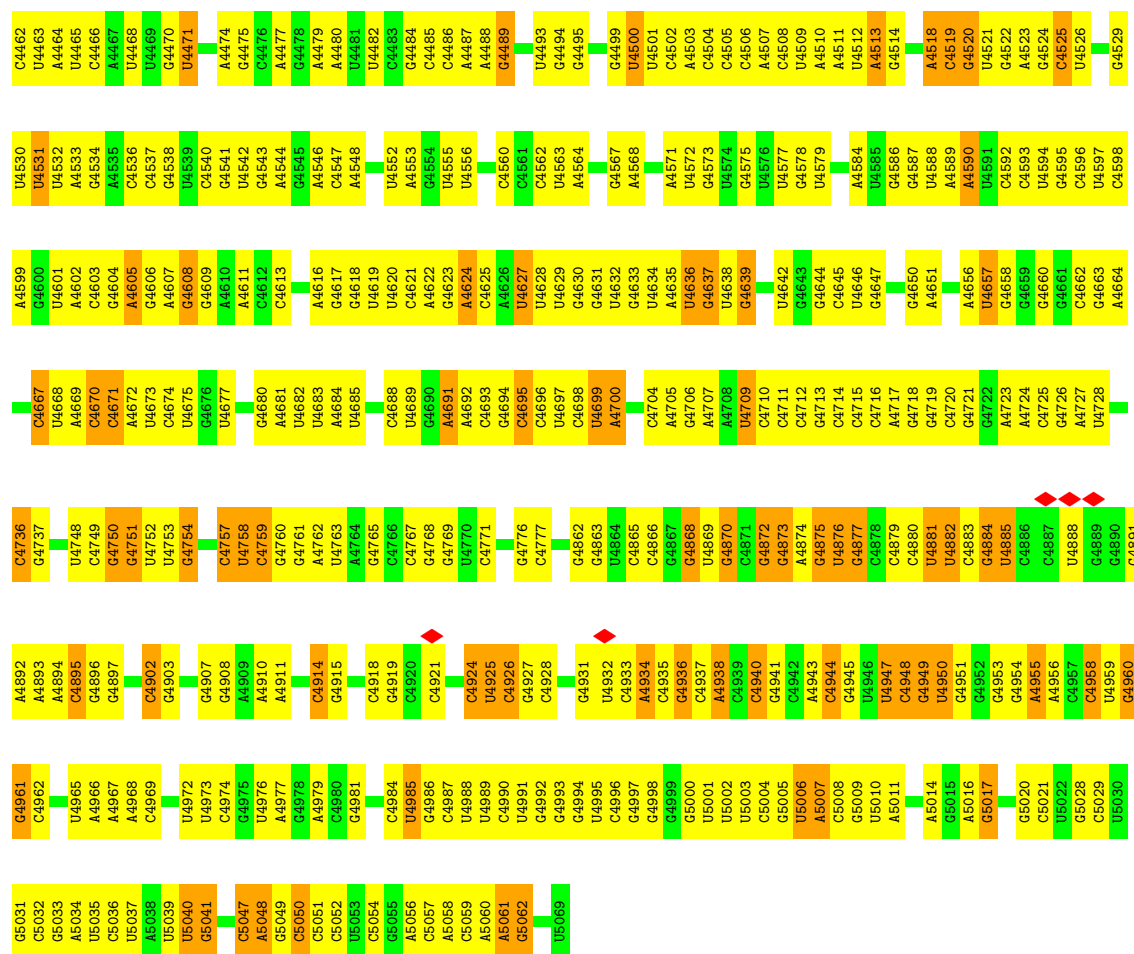
- Molecule 78: 28S rRNA



G1351	G1282	U1186	C979	C922	C712	C640	C449	A385	A306	G232	U150	U68	C1
G1352	G1283	G1187	U980	G522A	C713	G647	G450	A386	A307	U233	G151	A69	C6
G1353	G1284	C981	C922B	C922B	G714	G648	C451	A387	G308	G234	C155	A70	C7
G1354	U1285	G1188	C923	C923	G715	G649	A452	A388	G309	C238	G156	A73	C8
G1355	C1286	G1189	C924	C924	G716	A649	G453	A389	G310	C239	U157	A74	C9
G1356	U1287	C1190	C	C925	G717	C650	U454	C390	G311	G240	A158	A75	A10
G1357	G1288	C1191	C	G926	C718	C651	C455	C391	G312	G241	C159	A76	G11
G1358	G1289	G1192	C	G927	C719	G652	C456	A392	U391	G242	G160	U77	G12
G1359	G1291	G1193	C	C928	G720	U653	C457	A393	G314	A243	A161	U78	U13
G1360	G1292	G1194	C	A929	G721	C654	C458	U392	G315	G244	G162	C14	C14
G1361	G1293	G1195	C	G930	G722	C655	C459	G394	U316	G245	A163	C15	A15
G1362	G1294	C1197	U	G931	G723	C656	C460	A395	A317	C246	G164	C81	
G1363	G1295	G1198	C	A932	G724	C657		A396	A318	G247	U82	U82	C18
G1364	G1296	G1199	G	G933	G725	C658	G464	G397	A319	G248	C83	C83	C19
G1365	U1297	G1200	G	C934	G726	G659	G465	A398	C320	C249	G169	A84	U20
G1366	C1298	G1201	G	A935	G727	G660	A466	G399	C321	C250	C172	G85	U21
G1367	G1299	G1202	C	G936A	G728	G661	U467	U404	C322	G251	C173	U86	G22
G1368	G1300	G1203	G	C936	G729	C662	U468	U405	C323	G252	G177	A87	G23
G1369	G1301	G1204	G	C937	G730	C663	C469	C406	A324	C253	C178	A88	C24
G1370	G1302	G1205	G	G938	G731	C664	A470	A408	U325	G254	G179	G91	A25
G1371	A1303	G1206	C	C939	G732	C665	A471	G411	C326	G255	G180	C92	C26
G1372	C1304	C1207	C	C940	G733	C666	A472	G412	C327	G256	C181	G93	C27
G1373	C1305	G1208	G	C941	G734	C667	A473	G413	U333	C257	A98	G98	C28
G1374	G1306	U1209	C	G942	G735	C668	C474	G414	A334	G258	A99	A99	G29
G1375	G1307	G1210	C	A943	G736	C669	G475	G415	A335	G259	C100	C100	C30
G1376	C1308	G1211	C	U944	G737	C670	G476	G416	A336	C260	G192	G104	U31
G1377	C1309	G1212	C	U945	G738	C671	G477	G417	A337	G261	G193	A105	A33
G1378	G1310	G1213	C	C946	C738A	C672	C478	A418	C340	G262	G194	A106	U35
G1379	G1311	G1214	C	C947	G739	C673	C479	A419	A344	U272	G195	A107	U36
G1380	G1312	G1215	C	C948	G740	C674	G480	A420	C345	U273	G196	A108	U37
G1381	G1313	G1216	C	C949	G741	C675	G481	G421	G346	C274	G197	G109	A38
G1382	C1314	G1217	C	G950	G742	C676	G482	G422	G347	C275	C201	C110	A39
G1383	G1315	G1218	C	G951	G743	C677	G483	G423	A348	C276	C205	G114	G40
G1384	G1316	G1219	C	G952	G744	C678	G484	U424	A349	G277	G206	C41	C41
G1385	G1317	G1220	C	G953	G745	C679	G485	U425	A355	G278	G207	C115	A42
G1386	U1318	G1221	C	G954	G746	C680	G486	U426	G356	G279	A208	G116	U43
G1387	G1319	G1222	C	C955	G747	C681	G487	A427	G357	U281	U209	C117	
G1388	G1320	G1223	C	C956	G748	C682	G488	G428	U357	G282	G214	G118	U46
G1389	G1321	G1224	C	A956	G749	C683	G489	U429	A360	G283	C215	A47	A47
G1390	G1322	G1225	C	G957	G750	C684	C490	G430	G363	G284	C216	U49	U49
G1391	G1323	G1226	C	G958	G751	C685	C491	G431	A364	G285	C217	C124	
G1392	G1324	G1227	C	G959	G752	C686	C492	U432	G365	G286	G125	C125	G52
G1393	G1325	G1228	C	A960	G753	C687	C493	A433	U366	U287	C126	C126	C53
G1394	C1326	G1229	C	C961	G754	C688	G494	A434	U367	G288	G127	G127	G54
G1395	G1327	G1230	C	C962	G755	C689	G495	A435	A368	C289	C128	C128	G55
G1396	A1328	G1231	C	G963	G756	C690	G496	C436	C367	C290	C129	C129	A56
G1397	C1329	G1232	C	A964	G757	C691	G497	C437	C368	C291	C222	G57	G57
G1398	G1330	G1233	C	G965	G758	C692	C498	G438	G369	G292	G223	G134	G58
G1399	C1331	G1234	C	C966	G759	C693	G499	A439	U370	U283	U224	G135	A59
G1400	C1332	G1235	C	C967	G760	C694	G500	A440	A371	G294	G225	C136	A60
G1401	C1333	G1236	C	C968	G761	C695	G501	A441	A372	C295	G226	G137	
G1402	A1334	G1237	C	C969	G762	C696	G502	C442	G379	C301	G227	G146	G63
G1403	G1335	G1238	C	G970	G763	C697	G503	C443	U380	G302	G228	G147	A64
G1404	G1336	G1239	C	U971	G764	C698	G504	C444	U381	G303	G229	A148	A65
G1405	C1337	G1240	C	G972	G765	C699	G505	C445	U382	G304	G230	C148	A66
G1406	C1338	G1241	C	G973	G766	C700	G506	C446	G382	A305	U231	A149	C67
G1407	C1339	G1242	C	G974	G767	C701	G507	C447					
G1408	U1340	G1243	C	C975	G768	C702	G508	U440					
G1409	C1341	G1244	C	G976	G769	C703	G509	G444					
G1410	A1342	G1245	C	G977	G770	C704	U510	U445					
G1411	G1343	G1246	C	G978	G771	C705	C517	U446					
G1412	C1344	G1247	C	G979	G772	C706	C518	C446					
G1413	G1345	G1248	C	G980	G773	C707	C519	G447					
G1414	C1346	G1249	C	G981	G774	C708	U520	G448					
G1415	G1347	G1250	C	G982	G775	C709	C521						
G1416	C1348	G1251	C	G983	G776	G710	U639						
G1417	G1349	G1252	C	G984	G777	A711							
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G1422		G1257	C	G989	G782								
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G1427		G1262	C	G994	G787								
G1428		G1263	C	G995	G788								
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G1430		G1265	C	G997	G790								
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G1434		G1269	C	G1001	G794								
G1435		G1270	C	G1002	G795								
G1436		G1271	C	G1003	G796								
G1437		G1272	C	G1004	G797								
G1438		G1273	C	G1005	G798								
G1439		G1274	C	G1006	G799								
G1440		G1275	C	G1007	G800								
G1441		G1276	C	G1008	G801								
G1442		G1277	C	G1009	G802								
G1443		G1278	C	G1010	G803								
G1444		G1279	C	G1011	G804								
G1445		G1280	C	G1012	G805								
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G1449		G1284	C	G1016	G809								
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G1453		G1288	C	G1020	G813								
G1454		G1289	C	G1021	G814								
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G1458		G1293	C	G1025	G818								
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G1462		G1297	C	G1029	G822								
G1463		G1298	C	G1030	G823								
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G1467		G1302	C	G1034	G827								
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G1470		G1305	C	G1037	G830								
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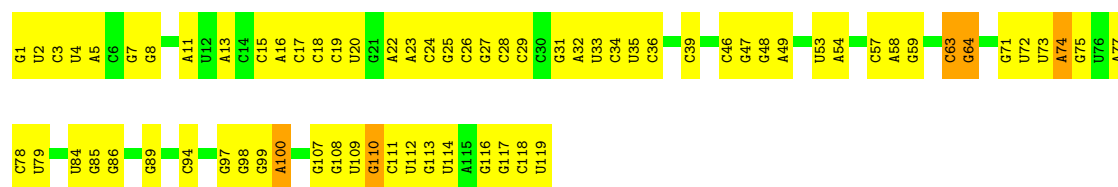
G2439	G2440	C2441	G2444	G2445	G2446	G2447	A2448	A2449	A2453	G2457	C2458	G2459	G2460	G2461	C2465	G2466	U2467	G2468	C2469	C2470	G2471	A2472	A2473	G2474	G2475	G2476	A2477	G2478	G2479	G2480	G2481	A2484	U2485	G2486	G2487	G2488	G2489	U2490	C2491	G2492	U2494	G2502	G2503	G2504	G2505	G2506	A2507	U2508	C2509	A2513	U2592																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
G2357	G2358	U2359	U2362	A2363	G2364	G2365	A2366	A2370	C2373	A2374	A2375	A2376	G2377	G2378	A2381	A2382	C2383	G2386	G2387	A2388	G2391	C2392	G2393	A2395	A2396	G2402	G2406	G2407	C2410	A2412	U2413	U2414	U2415	G2416	A2417	A2418	U2419	A2420	G2421	C2422	A2423	G2424	U2425	U2426	G2433	G2434	G2435	G2436																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
G2082	C2083	G2084	G2085	G2086	C2087	A2088	G2089	U2090	C2091	G2092	A2093	C2094	A2095	U2096	C2097	G2098	C2099	G2100	A2101	G2102	A2103	A2104	A2105	G2106	U2107	G2108	A2109	G	U	U	G	C2128	G2129	C2130	C2131	C2132	C2133	C2134	C2135	G2136	C2139	G2140	C2141	C2142	C2143	C2144	C2145	C2146	C2147	C2148	C2149	C2150	C2151	C2152	C2153	C2154	C2155	C2156	C2157	C2158	C2159	C2160	C2161	C2162	C2163	C2164	C2165	C2166	C2167	C2168	C2169	C2170	C2171	C2172	C2173	C2174	C2175	C2176	C2177	C2178	C2179	C2180	C2181	C2182	C2183	C2184	C2185	C2186	C2187	C2188	C2189	C2190	C2191	C2192	C2193	C2194	C2195	C2196	C2197	C2198	C2199	C2200	C2201	C2202	C2203	C2204	C2205	C2206	C2207	C2208	C2209	C2210	C2211	C2212	C2213	C2214	C2215	C2216	C2217	C2218	C2219	C2220	C2221	C2222	C2223	C2224	C2225	C2226	C2227	C2228	C2229	C2230	C2231	C2232	C2233	C2234	C2235	C2236	C2237	C2238	C2239	C2240	C2241	C2242	C2243	C2244	C2245	C2246	C2247	C2248	C2249	C2250	C2251	C2252	C2253	C2254	C2255	C2256	C2257	C2258	C2259	C2260	C2261	C2262	C2263	C2264	C2265	C2266	C2267	C2268	C2269	C2270	C2271	C2272	C2273	C2274	C2275	C2276	C2277	C2278	C2279	C2280	C2281	C2282	C2283	C2284	C2285																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
G2286	C2289	C2290	G2291	C2292	U2293	G2294	C2295	G2296	C2297	U2298	G2299	A2300	G2301	U2305	G2306	A2307	A2308	C2309	C2310	C2311	U2312	C2313	G2314	C2315	G2316	C2319	G2320	C2321	C2322	C2323	C2324	C2325	G2326	C2327	C2328	C2329	C2330	C2331	U2332	A2333	U2334	G2335	C2336	A2341	C2342	G2343	U2344	G2345	C2348	A2349	C2350	C2351	U2352	G2353	C2354	U2355	C2356	C2357	C2358	C2359	C2360	C2361	C2362	C2363	C2364	C2365	C2366	C2367	C2368	C2369	C2370	C2371	C2372	C2373	C2374	C2375	C2376	C2377	C2378	C2379	C2380	C2381	C2382	C2383	C2384	C2385	C2386	C2387	C2388	C2389	C2390	C2391	C2392	C2393	C2394	C2395	C2396	C2397	C2398	C2399	C2400	C2401	C2402	C2403	C2404	C2405	C2406	C2407	C2408	C2409	C2410	C2411	C2412	C2413	C2414	C2415	C2416	C2417	C2418	C2419	C2420	C2421	C2422	C2423	C2424	C2425	C2426	C2427	C2428	C2429	C2430	C2431	C2432	C2433	C2434	C2435	C2436	C2437	C2438	C2439	C2440	C2441	C2442	C2443	C2444	C2445	C2446	C2447	C2448	C2449	C2450	C2451	C2452	C2453	C2454	C2455	C2456	C2457	C2458	C2459	C2460	C2461	C2462	C2463	C2464	C2465	C2466	C2467	C2468	C2469	C2470	C2471	C2472	C2473	C2474	C2475	C2476	C2477	C2478	C2479	C2480	C2481	C2482	C2483	C2484	C2485	C2486	C2487	C2488	C2489	C2490	C2491	C2492	C2493	C2494	C2495	C2496	C2497	C2498	C2499	C2500	C2501	C2502	C2503	C2504	C2505	C2506	C2507	C2508	C2509	C2510	C2511	C2512	C2513	C2514	C2515	C2516	C2517	C2518	C2519	C2520	C2521	C2522	C2523	C2524	C2525	C2526	C2527	C2528	C2529	C2530	C2531	C2532	C2533	C2534	C2535	C2536	C2537	C2538	C2539	C2540	C2541	C2542	C2543	C2544	C2545	C2546	C2547	C2548	C2549	C2550	C2551	C2552	C2553	C2554	C2555	C2556	C2557	C2558	C2559	C2560	C2561	C2562	C2563	C2564	C2565	C2566	C2567	C2568	C2569	C2570	C2571	C2572	C2573	C2574	C2575	C2576	C2577	C2578	C2579	C2580	C2581	C2582	C2583	C2584	C2585	C2586	C2587	C2588	C2589	C2590	C2591	C2592	C2593	C2594	C2595	C2596	C2597	C2598	C2599	C2600	C2601	C2602	C2603	C2604	C2605	C2606	C2607	C2608	C2609	C2610	C2611	C2612	C2613	C2614	C2615	C2616	C2617	C2618	C2619	C2620	C2621	C2622	C2623	C2624	C2625	C2626	C2627	C2628	C2629	C2630	C2631	C2632	C2633	C2634	C2635	C2636	C2637	C2638	C2639	C2640	C2641	C2642	C2643	C2644	C2645	C2646	C2647	C2648	C2649	C2650	C2651	C2652	C2653	C2654	C2655	C2656	C2657	C2658	C2659	C2660	C2661	C2662	C2663	C2664	C2665	C2666	C2667	C2668	C2669	C2670	C2671	C2672	C2673	C2674	C2675	C2676	C2677	C2678	C2679	C2680	C2681	C2682	C2683	C2684	C2685	C2686	C2687	C2688	C2689	C2690	C2691	C2692	C2693	C2694	C2695	C2696	C2697	C2698	C2699	C2700	C2701	C2702	C2703	C2704	C2705	C2706	C2707	C2708	C2709	C2710	C2711	C2712	C2713	C2714	C2715	C2716	C2717	C2718	C2719	C2720	C2721	C2722	C2723	C2724	C2725	C2726	C2727	C2728	C2729	C2730	C2731	C2732	C2733	C2734	C2735	C2736	C2737	C2738	C2739	C2740	C2741	C2742	C2743	C2744	C2745	C2746	C2747	C2748	C2749	C2750	C2751	C2752	C2753	C2754	C2755	C2756	C2757	C2758	C2759	C2760	C2761	C2762	C2763	C2764	C2765	C2766	C2767	C2768	C2769	C2770	C2771	C2772	C2773	C2774	C2775	C2776	C2777	C2778	C2779	C2780	C2781	C2782	C2783	C2784	C2785	C2786	C2787	C2788	C2789	C2790	C2791	C2792	C2793	C2794	C2795	C2796	C2797	C2798	C2799	C2800	C2801	C2802	C2803	C2804	C2805	C2806	C2807	C2808	C2809	C2810	C2811	C2812	C2813	C2814	C2815	C2816	C2817	C2818	C2819	C2820	C2821	C2822	C2823	C2824	C2825	C2826	C2827	C2828	C2829	C2830	C2831	C2832	C2833	C2834	C2835	C2836	C2837	C2838	C2839	C2840	C2841	C2842	C2843	C2844	C2845	C2846	C2847	C2848	C2849	C2850	C2851	C2852	C2853	C2854	C2855	C2856	C2857	C2858	C2859	C2860	C2861	C2862	C2863	C2864	C2865	C2866	C2867	C2868	C2869	C2870	C2871	C2872	C2873	C2874	C2875	C2876	C2877	C2878	C2879	C2880	C2881	C2882	C2883	C2884	C2885	C2886	C2887	C2888	C2889	C2890	C2891	C2892	C2893	C2894	C2895	C2896	C2897	C2898	C2899	C2900	C2901	C2902	C2903	C2904	C2905	C2906	C2907	C2908	C2909	C2910	C2911	C2912	C2913	C2914	C2915	C2916	C2917	C2918	C2919	C2920	C2921	C2922	C2923	C2924	C2925	C2926	C2927	C2928	C2929	C2930	C2931	C2932	C2933	C2934	C2935	C2936	C2937	C2938	C2939	C2940	C2941	C2942	C2943	C2944	C2945	C2946	C2947	C2948	C2949	C2950	C2951	C2952	C2953	C2954	C2955	C2956	C2957	C2958	C2959	C2960	C2961	C2962	C2963	C2964	C2965	C2966	C2967	C2968	C2969	C2970	C2971	C2972	C2973	C2974	C2975	C2976	C2977	C2978	C2979	C2980	C2981	C2982	C2983	C2984	C2985	C2986	C2987	C2988	C2989	C2990	C2991	C2992	C2993	C2994	C2995	C2996	C2997	C2998	C2999	C3000	C3001	C3002	C3003	C3004	C3005	C3006	C3007	C3008	C3009	C3010	C3011	C3012	C3013	C3014	C3015	C3016	C3017	C3018	C3019	C3020	C3021	C3022	C3023	C3024	C3025	C3026	C3027	C3028	C3029	C3030	C3031	C3032	C3033	C3034	C3035	C3036	C3037	C3038	C3039	C3040	C3041	C3042	C3043	C3044	C3045	C3046	C3047	C3048	C3049	C3050	C3051	C3052	C3053	C3054	C3055	C3056	C3057	C3058	C3059	C3060	C3061	C3062	C3063	C3064	C3065	C3066	C3067	C3068	C3069	C3070	C3071	C3072	C3073	C3074	C3075	C3076	C3077	C3078	C3079	C3080	C3081	C3082	C3083	C3084	C3085	C3086	C3087	C3088	C3089	C3090	C3091	C3092	C3093	C3094	C3095	C3096	C3097	C3098	C3099	C3100	C3101	C3102	C3103	C3104	C3105	C3106	C3107	C3108	C3109	C3110	C3111	C3112	C3113	C3114	C3115	C3116	C3117	C3118	C3119	C3120	C3121	C3122	C3123	C3124	C3125	C3126	C3127	C3128	C3129	C3130	C3131	C3132	C3133	C3134	C3135	C3136	C3137	C3138	C3139	C3140	C3141	C3142	C3143	C3144	C3145	C3146	C3147	C3148	C3149	C3150	C3151	C3152	C3153	C3154	C3155	C3156	C3157	C3158	C3159	C3160	C3161	C3162	C3163	C3164	C3165	C3166	C3167	C3168	C3169	C3170	C3171	C3172	C3173	C3174	C3175	C3176	C3177	C3178	C3179	C3180	C3181	C3182	C3183	C3184	C3185	C3186	C3187	C3188	C3189	C3190	C3191	C3192	C3193	C3194	C3195	C3196	C3197	C3198	C3199	C3200	C3201	C3202	C3203	C3204	C3205	C3206	C3207	C3208	C3209	C3210	C3211	C3212	C3213	C3214	C3215	C3216	C3217	C3218	C3219	C3220	C3221	C3222	C3223	C3224	C3225	C3226	C3227	C3228	C3229	C3230	C3231	C3232	C3233	C3234	C32></

WORLDWIDE  
**PDB**  
PROTEIN DATA BANK

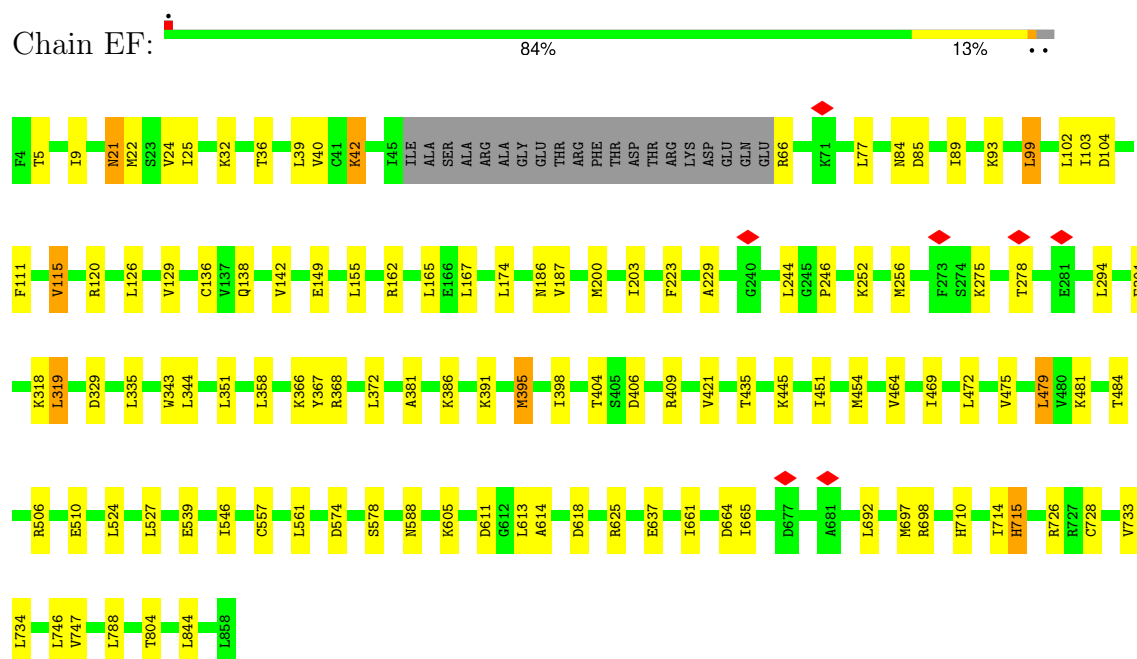


### • Molecule 79: 5S rRNA

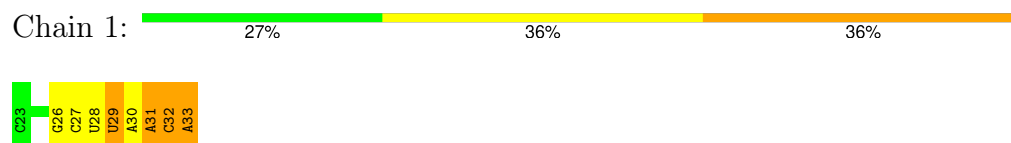
Chain 7: 41% 55%



- Molecule 81: Elongation factor 2



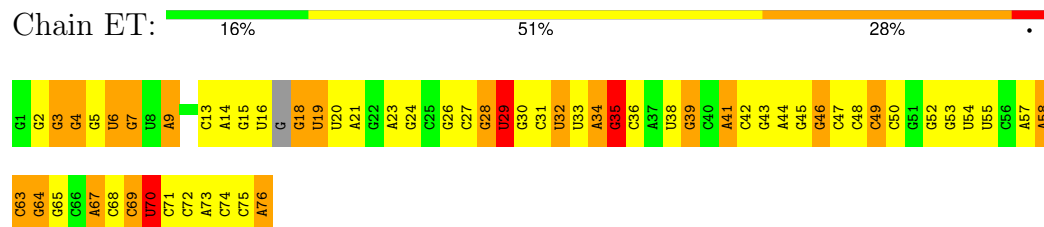
- Molecule 82: NediV ORF



- Molecule 83: P site Ala-tRNA



- Molecule 84: E site Ala-tRNA



## 4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	34773	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)	3500	Depositor
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.648	Depositor
Minimum map value	-0.225	Depositor
Average map value	0.029	Depositor
Map value standard deviation	0.060	Depositor
Recommended contour level	0.05	Depositor
Map size ( $\text{\AA}$ )	298.8, 298.8, 298.8	wwPDB
Map dimensions	360, 360, 360	wwPDB
Map angles ( $^\circ$ )	90.0, 90.0, 90.0	wwPDB
Pixel spacing ( $\text{\AA}$ )	0.83, 0.83, 0.83	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, DDE

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	0.14	0/1524	0.30	0/2013
2	W	0.16	0/541	0.37	0/720
3	9	0.12	0/39860	0.27	0/62094
4	AA	0.15	0/1687	0.37	1/2294 (0.0%)
5	BB	0.11	0/1756	0.29	0/2350
6	CC	0.11	0/1753	0.28	0/2369
7	EE	0.11	0/2118	0.27	0/2849
8	GG	0.25	0/1854	0.50	2/2469 (0.1%)
9	HH	0.13	0/1510	0.24	0/2022
10	II	0.11	0/1715	0.27	0/2287
11	JJ	0.09	0/1550	0.25	0/2069
12	LL	0.11	0/1195	0.28	0/1597
13	NN	0.11	0/1226	0.24	0/1649
14	OO	0.10	0/1029	0.26	0/1380
15	VV	0.09	0/643	0.23	0/860
16	WW	0.12	0/1051	0.29	0/1406
17	XX	0.14	0/1116	0.31	0/1490
18	YY	0.10	0/1028	0.25	0/1366
19	aa	0.12	0/828	0.29	0/1109
20	bb	0.10	0/665	0.26	0/891
21	ee	0.09	0/462	0.26	0/607
22	DD	0.11	0/1796	0.30	0/2417
23	FF	0.10	0/1492	0.27	0/2005
24	KK	0.11	0/834	0.28	0/1125
25	MM	0.13	0/918	0.32	0/1233
26	PP	0.11	0/974	0.29	0/1301
27	QQ	0.09	0/1134	0.24	0/1520
28	RR	0.13	0/1082	0.35	0/1452
29	SS	0.10	0/1208	0.28	0/1618
30	TT	0.09	0/1115	0.25	0/1493
31	UU	0.10	0/805	0.28	0/1081
32	ZZ	0.10	0/604	0.26	0/810

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
33	cc	0.09	0/490	0.25	0/656
34	dd	0.09	0/470	0.25	0/623
35	ff	0.10	0/567	0.26	0/753
36	A	0.16	0/1936	0.32	0/2596
37	B	0.14	0/3240	0.32	0/4339
38	C	0.13	0/2937	0.30	0/3946
39	D	0.12	0/2437	0.27	0/3264
40	E	0.10	0/1762	0.25	0/2362
41	F	0.13	0/1911	0.31	0/2549
42	G	0.12	0/1910	0.27	0/2569
43	H	0.13	0/1535	0.29	0/2063
44	I	0.13	0/1702	0.25	0/2272
45	J	0.12	0/1385	0.29	0/1852
46	L	0.13	0/1733	0.28	0/2316
47	M	0.12	0/1158	0.27	0/1547
48	N	0.15	0/1746	0.30	0/2338
49	O	0.15	0/1662	0.30	0/2222
50	P	0.14	0/1268	0.32	0/1700
51	Q	0.15	0/1539	0.31	0/2054
52	S	0.13	0/1501	0.29	0/2012
53	T	0.14	0/1326	0.27	0/1770
54	U	0.11	0/823	0.28	0/1104
55	V	0.13	0/1048	0.29	0/1402
56	X	0.12	0/984	0.27	0/1323
57	Y	0.12	0/1132	0.26	0/1504
58	Z	0.13	0/1130	0.30	0/1507
59	a	0.15	0/1191	0.30	0/1590
60	b	0.12	0/861	0.28	0/1138
61	c	0.11	0/771	0.25	0/1034
62	d	0.14	0/903	0.28	0/1216
63	e	0.15	0/1071	0.32	0/1429
64	f	0.15	0/895	0.34	0/1198
65	g	0.13	0/916	0.29	0/1220
66	h	0.12	0/1021	0.26	0/1348
67	i	0.12	0/841	0.28	0/1112
68	j	0.16	0/720	0.32	0/952
69	k	0.12	0/575	0.28	0/761
70	l	0.14	0/459	0.27	0/608
71	m	0.11	0/435	0.28	0/575
72	n	0.12	0/240	0.21	0/305
73	o	0.13	0/864	0.28	0/1140
74	p	0.13	0/718	0.29	0/953
75	r	0.12	0/1010	0.28	0/1354

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
76	s	0.14	0/1530	0.32	0/2064
77	t	0.51	0/1174	0.92	10/1582 (0.6%)
78	5	0.16	10/84212 (0.0%)	0.29	0/131319
79	7	0.12	0/2836	0.23	0/4421
80	8	0.14	0/3581	0.27	0/5577
81	EF	0.32	1/6623 (0.0%)	0.60	1/8943 (0.0%)
82	1	0.62	2/254 (0.8%)	0.32	0/392
83	PT	0.42	0/259	0.76	0/401
84	ET	0.76	16/1780 (0.9%)	0.50	0/2771
All	All	0.17	29/232145 (0.0%)	0.31	14/339992 (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
28	RR	0	2
37	B	0	1
64	f	0	1
81	EF	0	1
All	All	0	6

All (29) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
84	ET	39	G	C1'-N9	-7.44	1.36	1.48
84	ET	2	G	C1'-N9	-7.38	1.36	1.48
84	ET	4	G	C1'-N9	-7.26	1.37	1.48
84	ET	64	G	C1'-N9	-7.23	1.37	1.48
84	ET	3	G	C1'-N9	-7.18	1.37	1.48
84	ET	35	G	C1'-N9	-7.16	1.37	1.48
84	ET	28	G	C1'-N9	-7.00	1.37	1.48
78	5	904	G	C1'-N9	-6.85	1.37	1.48
84	ET	18	G	C1'-N9	-6.83	1.36	1.47
78	5	2107	U	C1'-N1	6.38	1.58	1.48
81	EF	104	ASP	C-N	6.01	1.44	1.33
84	ET	41	A	C1'-N9	-6.00	1.39	1.48
78	5	4876	U	C1'-N1	5.99	1.56	1.47
82	1	29	U	C1'-N1	5.82	1.57	1.48
78	5	2097	U	C1'-N1	5.71	1.56	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
84	ET	67	A	C1'-N9	-5.60	1.39	1.48
82	1	32	C	C1'-N1	5.52	1.56	1.48
84	ET	29	U	C1'-N1	5.51	1.56	1.48
78	5	4914	C	C1'-N1	5.50	1.56	1.48
84	ET	38	U	C1'-N1	5.49	1.56	1.48
78	5	1989	C	C1'-N1	5.47	1.56	1.48
84	ET	19	U	C1'-N1	5.45	1.55	1.47
78	5	262	C	C1'-N1	5.42	1.56	1.48
84	ET	6	U	C1'-N1	5.33	1.55	1.47
78	5	148	C	C1'-N1	5.29	1.56	1.48
78	5	4136	C	C1'-N1	5.19	1.56	1.48
84	ET	59	U	C1'-N1	5.15	1.56	1.48
78	5	518	C	C1'-N1	5.13	1.56	1.48
84	ET	70	U	C1'-N1	5.06	1.56	1.48

All (14) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	GG	44	GLU	N-CA-C	-8.52	102.15	112.54
8	GG	47	GLY	N-CA-C	-7.63	104.50	115.64
77	t	83	LYS	N-CA-C	-7.10	103.58	111.82
77	t	144	ASP	N-CA-C	-6.22	103.09	111.54
77	t	151	ILE	N-CA-C	-6.16	104.28	111.00
77	t	60	VAL	N-CA-C	5.97	121.76	109.34
77	t	108	GLU	N-CA-C	-5.76	105.01	111.28
77	t	148	PRO	N-CA-C	-5.70	104.55	113.78
4	AA	45	GLY	N-CA-C	5.51	126.25	113.18
81	EF	367	TYR	CA-CB-CG	5.38	123.59	113.90
77	t	152	ILE	N-CA-C	-5.35	104.52	110.62
77	t	140	GLY	N-CA-C	-5.19	107.50	114.25
77	t	60	VAL	CB-CA-C	-5.18	102.80	111.29
77	t	85	LEU	N-CA-C	-5.03	106.99	113.02

There are no chirality outliers.

All (6) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
37	B	258	HIS	Peptide
81	EF	21	ASN	Peptide
28	RR	127	ASN	Peptide
28	RR	129	LYS	Peptide
17	XX	61	GLN	Peptide

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Mol	Chain	Res	Type	Group
64	f	106	TYR	Peptide

## 5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	R	1508	0	1664	88	0
2	W	528	0	541	53	0
3	9	35655	0	18015	1209	0
4	AA	1650	0	1654	196	0
5	BB	1729	0	1803	128	0
6	CC	1716	0	1806	102	0
7	EE	2076	0	2177	159	0
8	GG	1831	0	1978	223	0
9	HH	1488	0	1582	85	0
10	II	1686	0	1772	96	0
11	JJ	1525	0	1640	115	0
12	LL	1175	0	1249	66	0
13	NN	1202	0	1289	93	0
14	OO	1016	0	1039	82	0
15	VV	636	0	637	46	0
16	WW	1034	0	1080	84	0
17	XX	1098	0	1167	82	0
18	YY	1011	0	1083	64	0
19	aa	814	0	863	56	0
20	bb	651	0	672	35	0
21	ee	457	0	502	32	0
22	DD	1768	0	1866	105	0
23	FF	1471	0	1522	109	0
24	KK	810	0	836	50	0
25	MM	908	0	939	58	0
26	PP	956	0	1002	66	0
27	QQ	1116	0	1182	75	0
28	RR	1068	0	1121	123	0
29	SS	1190	0	1249	94	0
30	TT	1097	0	1132	81	0
31	UU	795	0	862	52	0
32	ZZ	598	0	656	29	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
33	cc	488	0	514	30	0
34	dd	459	0	448	19	0
35	ff	555	0	563	21	0
36	A	1898	0	1993	137	0
37	B	3172	0	3310	190	0
38	C	2883	0	3053	163	0
39	D	2391	0	2424	110	0
40	E	1729	0	1887	112	0
41	F	1875	0	1995	120	0
42	G	1879	0	2027	99	0
43	H	1516	0	1597	94	0
44	I	1664	0	1712	95	0
45	J	1362	0	1399	73	0
46	L	1702	0	1820	95	0
47	M	1137	0	1211	72	0
48	N	1701	0	1749	95	0
49	O	1630	0	1778	109	0
50	P	1242	0	1274	58	0
51	Q	1515	0	1634	91	0
52	S	1462	0	1508	92	0
53	T	1298	0	1366	76	0
54	U	809	0	833	33	0
55	V	1034	0	1097	64	0
56	X	967	0	1040	40	0
57	Y	1115	0	1205	77	0
58	Z	1107	0	1182	55	0
59	a	1162	0	1209	85	0
60	b	848	0	920	32	0
61	c	761	0	794	44	0
62	d	888	0	930	40	0
63	e	1053	0	1147	51	0
64	f	876	0	912	34	0
65	g	906	0	998	52	0
66	h	1013	0	1147	52	0
67	i	830	0	916	48	0
68	j	705	0	737	47	0
69	k	569	0	637	35	0
70	l	447	0	480	28	0
71	m	429	0	465	23	0
72	n	239	0	289	19	0
73	o	851	0	920	44	0
74	p	708	0	756	50	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
75	r	994	0	1051	49	0
76	s	1507	0	1564	142	0
77	t	1160	0	1215	272	0
78	5	75293	0	38042	2167	0
79	7	2538	0	1286	72	0
80	8	3208	0	1629	115	0
81	EF	6516	6607	6604	38	0
82	1	229	110	120	12	0
83	PT	233	0	119	80	0
84	ET	1595	0	810	79	0
85	5	190	0	0	0	0
85	7	6	0	0	0	0
85	8	4	0	0	0	0
85	A	1	0	0	0	0
85	EF	1	0	0	0	0
85	P	1	0	0	0	0
85	V	1	0	0	0	0
85	aa	1	0	0	0	0
85	g	1	0	0	0	0
86	aa	1	0	0	0	0
86	dd	1	0	0	0	0
86	ff	1	0	0	0	0
86	g	1	0	0	0	0
86	j	1	0	0	0	0
86	m	1	0	0	0	0
86	o	1	0	0	0	0
86	p	1	0	0	0	0
All	All	216625	6717	162896	8355	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 22.

All (8355) 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)
8:GG:221:LYS:CA	8:GG:224:ARG:HH12	1.11	1.57
8:GG:221:LYS:HA	8:GG:224:ARG:CZ	1.47	1.40
77:t:92:ARG:NH1	77:t:93:LYS:HD3	1.47	1.28
77:t:154:ASP:HA	77:t:158:GLY:CA	1.67	1.25
8:GG:221:LYS:HA	8:GG:224:ARG:NH1	0.93	1.23
8:GG:221:LYS:CA	8:GG:224:ARG:NH1	1.78	1.22

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:t:146:ARG:NH2	77:t:148:PRO:HG3	1.52	1.21
3:9:126:G:H5'	8:GG:199:THR:CG2	1.73	1.18
8:GG:221:LYS:N	8:GG:224:ARG:NH2	1.91	1.18
8:GG:221:LYS:CA	8:GG:224:ARG:HH22	1.58	1.16
8:GG:221:LYS:CA	8:GG:224:ARG:NH2	2.11	1.14
8:GG:224:ARG:HB2	8:GG:224:ARG:HH11	1.07	1.13
8:GG:221:LYS:N	8:GG:224:ARG:HH22	1.43	1.13
78:5:759:G:O6	78:5:904:G:O6	1.68	1.11
77:t:14:TYR:HA	77:t:61:LYS:HA	1.20	1.09
77:t:154:ASP:CA	77:t:158:GLY:HA2	1.83	1.08
8:GG:221:LYS:C	8:GG:224:ARG:HH12	1.60	1.08
77:t:137:GLN:HB2	77:t:147:HIS:HB2	1.38	1.05
77:t:137:GLN:HA	77:t:146:ARG:HB3	1.37	1.04
23:FF:141:VAL:HG12	33:cc:47:LYS:HB2	1.41	1.02
77:t:98:ILE:HG23	78:5:1978:C:H4'	1.40	1.02
78:5:169:G:N2	78:5:267:G:N1	2.10	1.00
77:t:146:ARG:NH2	77:t:148:PRO:CG	2.25	1.00
78:5:2007:G:N2	78:5:2012:A:H62	1.60	0.99
7:EE:152:PRO:HG2	8:GG:216:ARG:HG2	1.40	0.99
37:B:254:ILE:HG23	37:B:266:VAL:HG11	1.45	0.99
8:GG:106:LEU:HD13	8:GG:109:LEU:HD21	1.45	0.98
3:9:1102:G:N2	3:9:1141:A:H62	1.60	0.98
78:5:2007:G:H21	78:5:2012:A:N6	1.62	0.98
3:9:1368:G:H1	3:9:1375:U:H3	1.11	0.97
78:5:169:G:N2	78:5:267:G:C6	2.32	0.97
3:9:28:U:H3	3:9:570:G:H1	0.97	0.97
16:WW:52:ILE:HG22	16:WW:61:ILE:HG12	1.46	0.97
78:5:3692:A:N6	78:5:3823:G:H21	1.62	0.97
37:B:76:VAL:HG12	37:B:334:LYS:HA	1.44	0.97
76:s:141:LEU:HB3	76:s:160:LEU:HD22	1.45	0.97
1:R:44:LEU:HD22	1:R:49:LEU:HD12	1.46	0.96
1:R:101:ILE:HG13	78:5:2897:G:H5'	1.45	0.96
3:9:948:U:H3	3:9:978:G:H1	1.06	0.96
83:PT:39:G:H3'	83:PT:40:C:H6	1.30	0.96
39:D:223:PHE:HB3	39:D:226:TYR:HB2	1.47	0.96
47:M:104:MET:HE2	49:O:199:HIS:HB3	1.47	0.96
17:XX:107:ARG:HB3	17:XX:110:HIS:HB3	1.47	0.96
62:d:36:VAL:HG11	62:d:44:ARG:HG2	1.45	0.96
78:5:4421:C:N4	78:5:4475:G:H22	1.63	0.96
78:5:3692:A:H62	78:5:3823:G:H21	1.06	0.95
37:B:373:LYS:HD2	78:5:4627:U:H4'	1.47	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:G:139:VAL:HG11	42:G:238:LYS:HG3	1.47	0.95
77:t:147:HIS:HA	77:t:150:ASP:HB2	1.46	0.95
78:5:4421:C:H42	78:5:4475:G:H22	0.99	0.95
25:MM:58:GLU:HB3	25:MM:61:TYR:HB3	1.47	0.94
78:5:2845:A:H61	78:5:3843:C:H42	1.02	0.94
4:AA:15:VAL:HG21	28:RR:98:VAL:HG23	1.49	0.94
78:5:4421:C:H42	78:5:4475:G:N2	1.65	0.94
36:A:227:ARG:HB3	36:A:239:ALA:HB2	1.49	0.94
3:9:160:A:H5'	8:GG:137:ARG:HB2	1.50	0.94
29:SS:6:PRO:HG2	29:SS:58:GLU:HG3	1.50	0.93
84:ET:28:G:C6	84:ET:29:U:O4	2.21	0.93
77:t:101:SER:HA	77:t:141:CYS:HA	1.49	0.93
1:R:114:LYS:HG2	1:R:146:LYS:HE3	1.48	0.93
78:5:3692:A:H62	78:5:3823:G:N2	1.66	0.93
78:5:2573:A:H62	78:5:2761:U:H3	0.94	0.93
18:YY:10:ARG:HG2	18:YY:11:LYS:HG3	1.51	0.93
18:YY:117:VAL:HG21	18:YY:125:VAL:HG21	1.51	0.93
4:AA:177:MET:HG2	28:RR:91:LEU:HD11	1.51	0.92
63:e:85:LEU:HD11	63:e:111:ILE:HG23	1.51	0.92
8:GG:58:LYS:HA	8:GG:107:SER:HB2	1.51	0.92
23:FF:72:LEU:HD11	23:FF:154:LEU:HD11	1.50	0.92
4:AA:197:VAL:HA	28:RR:86:PRO:HD2	1.50	0.92
78:5:2573:A:N6	78:5:2761:U:H3	1.67	0.92
3:9:536:U:H3	3:9:553:A:N6	1.68	0.92
3:9:53:C:H4'	18:YY:108:LYS:HD3	1.52	0.92
3:9:1102:G:H21	3:9:1141:A:N6	1.68	0.92
53:T:39:ILE:HD12	53:T:102:ARG:HB2	1.51	0.92
77:t:37:LEU:HG	77:t:68:GLN:HA	1.48	0.92
7:EE:100:ARG:HB2	7:EE:114:ILE:HD13	1.52	0.91
8:GG:209:TYR:CE2	8:GG:213:LEU:HG	2.05	0.91
77:t:103:ASN:HA	77:t:143:VAL:HA	1.50	0.91
22:DD:21:LEU:HD21	22:DD:48:ILE:HD12	1.52	0.91
37:B:217:ILE:HD13	37:B:284:ILE:HD11	1.52	0.91
77:t:149:HIS:HA	77:t:152:ILE:HB	1.52	0.91
3:9:879:C:H5''	13:NN:109:LYS:HD2	1.50	0.91
77:t:15:LEU:HD13	77:t:28:LEU:HD22	1.51	0.91
3:9:1052:G:H1	3:9:1220:A:H61	1.19	0.91
3:9:1317:A:H4'	34:dd:2:GLY:HA2	1.51	0.91
36:A:178:PRO:HD2	74:p:26:VAL:HG22	1.51	0.91
55:V:15:ARG:HB3	78:5:4618:G:H5''	1.50	0.90
3:9:1551:A:H4'	27:QQ:74:GLY:HA2	1.54	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:S:83:ARG:HD2	53:T:156:TYR:HB2	1.53	0.90
61:c:48:LEU:HD21	61:c:60:ILE:HG21	1.53	0.90
29:SS:121:ARG:HA	29:SS:131:VAL:HG21	1.52	0.90
3:9:1255:U:H5''	26:PP:124:LYS:HD3	1.54	0.90
40:E:64:MET:HG3	40:E:68:LYS:HE3	1.53	0.90
37:B:117:ARG:HD2	37:B:180:LEU:HD13	1.51	0.89
37:B:317:LEU:HD22	37:B:382:VAL:HG23	1.53	0.89
77:t:154:ASP:HA	77:t:158:GLY:HA2	0.93	0.89
51:Q:50:ARG:HA	51:Q:53:MET:HE2	1.54	0.89
17:XX:91:LEU:HD21	21:ee:79:LEU:HD23	1.54	0.89
40:E:189:LEU:HD21	40:E:256:VAL:HG21	1.53	0.89
5:BB:136:ARG:HB2	5:BB:218:LEU:HD11	1.53	0.89
39:D:176:SER:HB3	78:5:4323:A:H4'	1.54	0.89
83:PT:38:U:H2'	83:PT:39:G:C8	2.08	0.89
8:GG:221:LYS:CA	8:GG:224:ARG:CZ	2.24	0.89
16:WW:105:THR:HB	16:WW:126:LEU:HD11	1.53	0.89
77:t:16:ARG:HA	77:t:59:THR:HA	1.53	0.89
83:PT:31:C:H2'	83:PT:32:U:H5'	1.54	0.89
44:I:153:ARG:HA	44:I:156:LYS:HE2	1.55	0.88
9:HH:117:PRO:HG2	9:HH:120:ARG:HD3	1.54	0.88
78:5:2845:A:H61	78:5:3843:C:N4	1.71	0.88
81:EF:174:LEU:HD23	81:EF:294:LEU:HD13	1.53	0.88
8:GG:1:MET:HE3	8:GG:106:LEU:HB2	1.55	0.88
75:r:28:GLU:HB2	75:r:31:ASN:HB2	1.55	0.88
78:5:2350:U:H5''	78:5:2351:C:H5''	1.54	0.88
3:9:1081:G:H1	3:9:1162:U:H3	1.21	0.88
45:J:27:GLY:HA2	45:J:68:ILE:HG23	1.54	0.88
3:9:1646:A:N3	84:ET:39:G:C6	2.41	0.88
5:BB:113:MET:HE3	5:BB:209:ASP:HB3	1.55	0.88
42:G:203:LYS:HE2	42:G:230:MET:HG3	1.56	0.88
39:D:200:MET:HE2	39:D:237:GLU:HG3	1.54	0.88
41:F:104:VAL:HG13	41:F:135:VAL:HG12	1.55	0.88
8:GG:224:ARG:HH11	8:GG:224:ARG:CB	1.86	0.88
32:ZZ:92:LEU:HD11	32:ZZ:99:LEU:HD12	1.56	0.87
44:I:91:LEU:HD12	44:I:135:ILE:HG23	1.56	0.87
46:L:124:LEU:HD21	66:h:119:TYR:HB2	1.53	0.87
3:9:1647:A:H1'	84:ET:32:U:H4'	1.54	0.87
28:RR:107:LYS:HA	28:RR:112:GLY:HA2	1.55	0.87
37:B:20:LYS:HD3	78:5:4717:A:H4'	1.56	0.87
45:J:15:LEU:HD21	45:J:134:LEU:HD13	1.57	0.87
63:e:7:LEU:HB2	63:e:93:LYS:HB3	1.57	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
68:j:20:ARG:HH12	80:8:109:C:H2'	1.40	0.87
77:t:146:ARG:HH21	77:t:148:PRO:HG3	1.37	0.87
3:9:1541:U:H4'	23:FF:88:MET:HE1	1.57	0.86
61:c:17:ARG:HB3	61:c:104:ILE:HB	1.55	0.86
2:W:2:LYS:HG3	37:B:71:GLU:HB2	1.56	0.86
26:PP:24:GLN:O	26:PP:28:MET:HB2	1.75	0.86
83:PT:38:U:H2'	83:PT:39:G:N7	1.89	0.86
2:W:39:ALA:HA	2:W:44:ARG:HH11	1.41	0.86
37:B:92:TYR:HB2	37:B:159:VAL:HB	1.55	0.86
8:GG:221:LYS:CB	8:GG:224:ARG:HH22	1.89	0.86
76:s:32:ALA:HB2	76:s:55:MET:HE2	1.56	0.86
3:9:799:G:H1'	14:OO:52:THR:HG22	1.56	0.86
16:WW:11:LEU:HD12	16:WW:74:VAL:HB	1.56	0.86
22:DD:70:THR:HG22	22:DD:86:LEU:HD13	1.55	0.86
59:a:24:LYS:HD3	59:a:26:ARG:HH21	1.41	0.85
66:h:4:ILE:HD12	66:h:53:SER:HB2	1.58	0.85
5:BB:35:ALA:HB2	5:BB:44:ILE:HD11	1.58	0.85
5:BB:110:MET:HE1	5:BB:140:VAL:HG11	1.58	0.85
78:5:1802:A:H5''	78:5:1803:G:H5'	1.56	0.85
2:W:20:ARG:HD2	55:V:96:LEU:HB2	1.56	0.85
4:AA:79:SER:HA	4:AA:101:GLY:HA2	1.58	0.85
24:KK:91:PRO:HD2	24:KK:94:LEU:HD13	1.59	0.85
36:A:94:ALA:HB3	36:A:102:LEU:HB3	1.57	0.85
43:H:18:ILE:HG22	43:H:27:VAL:HG13	1.56	0.85
3:9:1102:G:H21	3:9:1141:A:H62	0.86	0.85
20:bb:36:LYS:HB3	20:bb:43:ILE:HG12	1.59	0.85
57:Y:82:ILE:HD12	57:Y:85:VAL:HG21	1.58	0.85
78:5:4509:U:H2'	78:5:4510:A:H2'	1.57	0.85
3:9:103:A:H5'	10:II:12:ARG:HH12	1.42	0.84
3:9:1096:G:H1	3:9:1147:U:H3	0.85	0.84
50:P:94:MET:HE1	50:P:146:ILE:HB	1.59	0.84
58:Z:109:LYS:HE2	78:5:2556:G:H4'	1.60	0.84
41:F:97:ILE:HG12	51:Q:4:ASP:HB3	1.58	0.84
78:5:3781:C:H5'	78:5:3821:A:H4'	1.59	0.84
3:9:802:A:H62	3:9:818:G:N2	1.75	0.84
12:LL:80:MET:HE2	12:LL:122:ILE:HG23	1.59	0.84
28:RR:61:ILE:HD13	28:RR:71:ILE:HD11	1.57	0.84
78:5:505:G:H1	78:5:653:U:H3	1.21	0.84
76:s:36:GLY:HA2	78:5:1969:G:H4'	1.59	0.84
3:9:1662:G:H1	3:9:1674:U:H3	1.22	0.84
14:OO:45:THR:HG22	14:OO:52:THR:HA	1.57	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:t:60:VAL:HA	77:t:74:VAL:H	1.43	0.84
37:B:317:LEU:HD21	37:B:381:THR:HA	1.59	0.84
48:N:116:LEU:HD22	48:N:135:ILE:HD11	1.60	0.84
76:s:161:ILE:HD13	76:s:167:VAL:HG22	1.58	0.84
83:PT:32:U:H2'	83:PT:33:U:H6	1.43	0.84
3:9:399:C:H1'	3:9:431:G:H1'	1.60	0.83
3:9:536:U:H3	3:9:553:A:H62	0.85	0.83
49:O:61:ARG:HH21	49:O:66:PRO:HG3	1.43	0.83
78:5:2845:A:N6	78:5:3843:C:H42	1.76	0.83
4:AA:44:ASP:H	28:RR:127:ASN:HB3	1.43	0.83
8:GG:159:ARG:HB3	8:GG:173:ALA:HB2	1.58	0.83
29:SS:124:ARG:HD3	29:SS:131:VAL:HG23	1.60	0.83
5:BB:33:VAL:HA	5:BB:96:CYS:HB2	1.58	0.83
52:S:13:VAL:HG22	52:S:63:TYR:HB3	1.59	0.83
64:f:33:VAL:HG23	64:f:38:GLU:HB2	1.58	0.83
2:W:15:PRO:HB3	37:B:57:VAL:HG13	1.58	0.83
37:B:168:MET:HE1	37:B:173:LEU:HD22	1.60	0.83
41:F:91:VAL:HG13	41:F:141:TRP:HB3	1.59	0.83
16:WW:42:MET:HE2	16:WW:49:GLU:HA	1.59	0.83
49:O:108:ILE:HD11	49:O:113:ASP:HA	1.59	0.83
62:d:26:THR:HG23	78:5:4996:C:H4'	1.59	0.83
29:SS:18:THR:HG21	29:SS:33:ILE:HA	1.61	0.83
3:9:116:U:H3	3:9:271:G:H1	1.21	0.83
4:AA:84:GLN:HG3	4:AA:100:ALA:HB1	1.61	0.83
77:t:59:THR:HB	78:5:1975:G:C8	2.14	0.83
77:t:131:GLU:HB2	78:5:1973:G:H1'	1.59	0.83
8:GG:45:TRP:HA	8:GG:48:TYR:CD1	2.14	0.83
75:r:10:VAL:HG12	75:r:14:SER:HB3	1.61	0.83
83:PT:39:G:H3'	83:PT:40:C:C6	2.13	0.83
4:AA:32:PHE:HA	4:AA:35:GLU:HG3	1.59	0.82
3:9:1543:A:H1'	3:9:1610:G:H5''	1.60	0.82
4:AA:156:TYR:HB3	15:VV:60:ARG:HH21	1.44	0.82
70:l:16:LYS:HG3	70:l:49:LEU:HD21	1.59	0.82
43:H:103:VAL:HG11	43:H:144:LEU:HD21	1.61	0.82
83:PT:30:G:C2	83:PT:31:C:H1'	2.14	0.82
3:9:363:A:H4'	3:9:1149:G:H4'	1.61	0.82
15:VV:40:ASP:HB2	15:VV:47:ASN:HD21	1.44	0.82
52:S:34:ALA:HB1	52:S:39:VAL:HG23	1.59	0.82
75:r:18:ILE:HD11	75:r:20:ARG:HE	1.44	0.82
10:II:119:LEU:HD11	10:II:153:LYS:HG3	1.61	0.82
11:JJ:127:ARG:HD3	21:ee:104:ARG:HD3	1.59	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:A:234:LYS:HG2	36:A:238:ILE:HD12	1.61	0.82
37:B:261:ARG:HB2	49:O:64:THR:HG21	1.61	0.82
50:P:36:ILE:HD11	50:P:44:ALA:HB1	1.61	0.82
44:I:191:ILE:HD11	44:I:212:LEU:HD11	1.59	0.82
3:9:804:A:H3'	3:9:805:G:H21	1.45	0.82
19:aa:3:LYS:HE2	19:aa:6:ARG:HA	1.60	0.82
36:A:101:VAL:HB	36:A:165:VAL:HG12	1.59	0.82
66:h:28:LEU:HD12	66:h:54:ILE:HD12	1.60	0.82
7:EE:100:ARG:HD2	7:EE:102:ILE:HD11	1.60	0.82
38:C:78:ARG:HB3	38:C:88:GLY:HA2	1.62	0.82
61:c:17:ARG:HD3	61:c:104:ILE:HA	1.60	0.82
4:AA:12:GLU:HA	28:RR:96:ILE:HD12	1.59	0.82
36:A:177:LYS:HG3	74:p:26:VAL:HG13	1.62	0.82
3:9:126:G:H5''	8:GG:199:THR:HG21	1.62	0.81
57:Y:73:VAL:HG13	57:Y:80:ILE:HG22	1.60	0.81
73:o:44:LYS:HE2	73:o:52:THR:HB	1.59	0.81
57:Y:8:THR:HG23	57:Y:10:ASP:H	1.45	0.81
76:s:116:ILE:HB	76:s:164:GLY:HA2	1.62	0.81
5:BB:175:GLU:HG2	5:BB:193:ILE:HG12	1.63	0.81
8:GG:209:TYR:O	8:GG:213:LEU:CB	2.28	0.81
31:UU:24:LEU:HD22	31:UU:112:VAL:HG22	1.63	0.81
36:A:177:LYS:HB2	74:p:29:ILE:HG21	1.61	0.81
38:C:218:VAL:HA	38:C:229:LEU:HG	1.61	0.81
49:O:16:LEU:HD11	49:O:83:THR:HG21	1.61	0.81
77:t:81:ILE:HG12	77:t:104:ILE:HG21	1.62	0.81
78:5:1543:G:H1	78:5:1616:U:H3	1.25	0.81
37:B:220:ILE:HG12	37:B:278:THR:HG23	1.62	0.81
3:9:1494:C:H3'	3:9:1495:A:H4'	1.61	0.81
40:E:153:LEU:HD13	40:E:197:VAL:HG11	1.62	0.81
78:5:2007:G:H21	78:5:2012:A:H62	0.83	0.81
3:9:133:U:H4'	3:9:134:U:H5'	1.63	0.81
49:O:34:VAL:HG22	49:O:103:LYS:HB3	1.62	0.81
76:s:143:ILE:HD11	76:s:160:LEU:HD11	1.62	0.81
4:AA:173:LEU:HD11	4:AA:177:MET:HE3	1.62	0.81
44:I:54:SER:HB2	44:I:135:ILE:HD11	1.62	0.81
70:l:5:LYS:HB2	78:5:2781:G:H4'	1.62	0.81
76:s:29:ILE:HG23	76:s:86:VAL:HG13	1.61	0.81
78:5:2659:A:H62	78:5:2675:G:H21	1.28	0.81
78:5:2777:G:H5''	78:5:2778:G:H5'	1.62	0.81
14:OO:31:CYS:HB3	14:OO:44:VAL:HG22	1.62	0.80
76:s:45:MET:HE3	76:s:48:ARG:HH21	1.46	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:A:180:LEU:HD21	74:p:26:VAL:HG21	1.63	0.80
63:e:126:ASN:HB2	63:e:129:LEU:HD21	1.63	0.80
76:s:130:LEU:HD13	76:s:133:GLU:HG2	1.63	0.80
13:NN:13:GLN:HE21	20:bb:21:LYS:HE2	1.46	0.80
33:cc:31:ARG:HG2	33:cc:43:ILE:HG12	1.62	0.80
58:Z:53:VAL:HG21	58:Z:62:ILE:HG23	1.61	0.80
64:f:45:LYS:HA	64:f:107:PRO:HG2	1.62	0.80
74:p:51:ALA:HB3	74:p:54:ILE:HG23	1.62	0.80
37:B:51:ALA:HB3	37:B:78:ILE:HG22	1.61	0.80
77:t:137:GLN:HB2	77:t:147:HIS:CB	2.10	0.80
1:R:4:LEU:HD12	78:5:2386:U:H4'	1.62	0.80
5:BB:146:ARG:HB2	5:BB:149:GLN:HB2	1.64	0.80
22:DD:16:ILE:HD11	34:dd:36:LEU:HD23	1.64	0.80
3:9:222:C:H5''	12:LL:38:LYS:HD3	1.63	0.80
5:BB:105:LEU:HD23	5:BB:213:ARG:HA	1.64	0.80
77:t:20:GLY:CA	77:t:51:GLY:HA2	2.11	0.80
6:CC:204:ILE:HD13	6:CC:215:MET:HE2	1.64	0.79
9:HH:7:LYS:HE3	9:HH:28:LEU:HD23	1.64	0.79
38:C:323:ARG:HB2	78:5:1281:G:H5'	1.64	0.79
62:d:85:ARG:HG3	62:d:111:VAL:HG21	1.62	0.79
78:5:1436:C:H1'	78:5:2105:A:H2'	1.64	0.79
78:5:1939:A:H5'	78:5:1940:G:H4'	1.63	0.79
24:KK:15:LEU:HD13	24:KK:21:MET:HE3	1.62	0.79
57:Y:66:GLN:HB3	57:Y:84:ARG:HH21	1.47	0.79
37:B:107:ALA:HB2	37:B:201:LEU:HD11	1.63	0.79
77:t:58:ILE:HA	77:t:75:PRO:HB3	1.63	0.79
84:ET:3:G:H1	84:ET:70:U:H3	1.30	0.79
3:9:126:G:H5''	8:GG:199:THR:HG22	1.62	0.79
3:9:579:A:H4'	3:9:580:G:H3'	1.64	0.79
64:f:78:HIS:HB2	64:f:85:ARG:HG3	1.64	0.79
13:NN:130:LYS:HD2	13:NN:137:PRO:HA	1.65	0.79
14:OO:95:ILE:HD11	14:OO:126:ILE:HD12	1.64	0.79
13:NN:40:LEU:HD12	13:NN:50:ILE:HG23	1.65	0.79
16:WW:3:ARG:HD3	16:WW:6:VAL:HG22	1.65	0.79
54:U:48:LYS:HA	54:U:53:ALA:HA	1.63	0.79
8:GG:224:ARG:NH1	8:GG:224:ARG:HB2	1.92	0.79
9:HH:145:ARG:HH11	16:WW:51:GLU:HB3	1.47	0.79
13:NN:84:LEU:HD13	13:NN:89:TYR:HB2	1.64	0.79
76:s:135:THR:HG21	76:s:152:ILE:HG21	1.63	0.79
83:PT:32:U:H2'	83:PT:33:U:C6	2.18	0.79
3:9:894:C:H4'	14:OO:143:LYS:HA	1.64	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DD:106:ARG:HH11	22:DD:175:VAL:HA	1.47	0.78
40:E:181:PRO:HG2	40:E:184:LEU:HD12	1.65	0.78
3:9:601:G:H21	3:9:875:A:H62	1.25	0.78
7:EE:71:LYS:HE2	7:EE:74:GLY:HA2	1.63	0.78
16:WW:111:MET:HE3	16:WW:116:ALA:HA	1.63	0.78
23:FF:50:PRO:HB3	23:FF:69:VAL:HG12	1.66	0.78
43:H:12:ILE:HG21	43:H:18:ILE:HD13	1.65	0.78
77:t:14:TYR:CA	77:t:61:LYS:HA	2.10	0.78
77:t:105:THR:HG22	77:t:107:ASP:H	1.47	0.78
36:A:137:ILE:HD11	36:A:149:LYS:HB2	1.64	0.78
40:E:48:ARG:HB2	40:E:64:MET:HE1	1.65	0.78
77:t:13:VAL:HG21	77:t:31:LYS:HZ1	1.49	0.78
8:GG:209:TYR:O	8:GG:213:LEU:HB2	1.82	0.78
42:G:260:VAL:HG11	42:G:268:LEU:HG	1.65	0.78
76:s:122:THR:HG22	76:s:159:GLN:HG2	1.65	0.78
31:UU:94:PRO:HD2	31:UU:97:ILE:HD12	1.64	0.78
53:T:44:GLY:HA2	53:T:95:HIS:HB3	1.66	0.78
13:NN:30:SER:HB2	13:NN:67:THR:HG22	1.64	0.78
14:OO:26:ASN:HB3	14:OO:91:THR:HB	1.64	0.78
31:UU:20:ILE:HD12	31:UU:98:VAL:HG21	1.65	0.78
49:O:196:LEU:HB3	49:O:202:LEU:HD13	1.66	0.78
29:SS:22:GLY:HA2	29:SS:56:ALA:HB3	1.63	0.78
78:5:3697:U:H5''	78:5:3698:G:H5'	1.65	0.78
9:HH:60:ILE:HG23	9:HH:92:VAL:HA	1.66	0.78
39:D:205:ALA:HB1	39:D:233:PRO:HB3	1.64	0.78
8:GG:76:LEU:HD22	8:GG:92:ARG:HG2	1.64	0.77
83:PT:34:A:H2'	83:PT:35:G:O4'	1.84	0.77
76:s:114:GLY:H	76:s:167:VAL:HB	1.49	0.77
78:5:1965:G:H4'	78:5:4695:C:H1'	1.65	0.77
3:9:1264:U:H4'	27:QQ:145:TYR:HB3	1.66	0.77
37:B:65:SER:HB3	78:5:4616:A:H4'	1.63	0.77
59:a:75:LEU:HD22	59:a:78:LEU:HD22	1.66	0.77
83:PT:33:U:N3	83:PT:35:G:H3'	1.99	0.77
8:GG:39:ASP:HA	8:GG:46:LYS:HA	1.65	0.77
8:GG:212:LEU:HD12	8:GG:215:LYS:HD3	1.66	0.77
45:J:89:VAL:HG21	45:J:115:LEU:HD23	1.66	0.77
77:t:75:PRO:HG2	77:t:80:LEU:HG	1.66	0.77
4:AA:8:LEU:HD11	15:VV:39:VAL:HG11	1.66	0.77
5:BB:149:GLN:HE21	5:BB:151:ARG:HB3	1.49	0.77
18:YY:7:ILE:HD12	18:YY:43:LYS:HD3	1.65	0.77
44:I:208:LYS:HE2	44:I:212:LEU:HD23	1.67	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:5:5006:U:H4'	78:5:5007:A:H5'	1.66	0.77
41:F:183:ILE:HD11	41:F:192:GLU:HG2	1.65	0.77
47:M:69:ARG:HH21	78:5:738(A):C:H4'	1.49	0.77
77:t:92:ARG:HH11	77:t:93:LYS:HD3	1.47	0.77
83:PT:33:U:H3	83:PT:35:G:H3'	1.49	0.77
29:SS:45:LEU:HD22	29:SS:50:ILE:HG21	1.66	0.77
38:C:312:ARG:HB3	78:5:2274:C:H5'	1.67	0.77
77:t:60:VAL:HG22	77:t:73:VAL:HA	1.67	0.77
81:EF:9:ILE:HD11	81:EF:99:LEU:HD11	1.67	0.77
3:9:802:A:N6	3:9:818:G:H21	1.82	0.77
30:TT:18:LEU:HD13	30:TT:134:ILE:HD13	1.66	0.77
39:D:45:ASN:HB2	53:T:33:ILE:HG21	1.65	0.77
44:I:30:LYS:HD3	44:I:63:GLU:HG2	1.67	0.77
17:XX:46:HIS:HB3	17:XX:101:LEU:HD11	1.67	0.77
17:XX:68:LYS:HE2	21:ee:82:VAL:HG22	1.67	0.77
51:Q:67:ILE:HD12	51:Q:96:PRO:HD2	1.67	0.77
4:AA:147:LEU:HD13	4:AA:161:ILE:HB	1.67	0.76
12:LL:111:VAL:HG22	12:LL:140:PHE:HB2	1.66	0.76
55:V:82:ILE:HG23	55:V:121:VAL:HG13	1.67	0.76
76:s:37:SER:HA	76:s:40:MET:HE2	1.65	0.76
12:LL:58:LYS:HG3	12:LL:59:LYS:HG3	1.66	0.76
38:C:79:VAL:HG21	38:C:86:ARG:HG2	1.66	0.76
4:AA:52:LYS:HZ1	28:RR:106:LEU:HD23	1.49	0.76
5:BB:25:PHE:HA	5:BB:28:LYS:HG2	1.68	0.76
13:NN:91:LEU:HB3	13:NN:122:ILE:HG12	1.67	0.76
66:h:66:LYS:HG2	80:8:96:C:H5''	1.66	0.76
35:ff:130:VAL:HG21	35:ff:143:LYS:HZ1	1.48	0.76
3:9:1069:C:H4'	78:5:3763:A:H61	1.50	0.76
4:AA:143:PRO:HA	15:VV:32:ILE:HD13	1.68	0.76
25:MM:79:VAL:HG11	25:MM:85:LEU:HD12	1.68	0.76
3:9:370:G:H5''	10:II:49:ARG:HE	1.50	0.76
4:AA:12:GLU:HB2	28:RR:116:ASN:HB2	1.68	0.76
24:KK:93:THR:HG23	24:KK:94:LEU:HD12	1.67	0.76
4:AA:17:LYS:HD3	4:AA:173:LEU:HD21	1.65	0.76
9:HH:53:VAL:HG21	9:HH:172:THR:HA	1.65	0.76
26:PP:34:MET:HG3	26:PP:42:ARG:HA	1.67	0.76
77:t:138:SER:OG	78:5:1976:G:H1'	1.86	0.76
77:t:151:ILE:HG13	77:t:155:ILE:HG12	1.65	0.76
78:5:4888:U:H3	78:5:4931:G:H1	1.31	0.76
76:s:47:LEU:HD13	76:s:50:LYS:HD2	1.68	0.76
2:W:15:PRO:HG3	37:B:57:VAL:HG22	1.65	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:809:A:H5''	14:OO:66:ARG:HB3	1.68	0.76
37:B:175:GLN:HE21	78:5:4985:U:H4'	1.51	0.76
78:5:2475:G:H4'	78:5:2476:G:H5''	1.67	0.76
30:TT:39:LEU:HG	30:TT:56:ARG:HH21	1.50	0.76
49:O:22:ILE:HD13	49:O:120:VAL:HG11	1.67	0.76
54:U:100:LEU:HD13	54:U:112:LEU:HD13	1.67	0.76
43:H:89:ARG:HD3	43:H:91:LYS:HE3	1.67	0.75
56:X:95:THR:HG22	56:X:139:ARG:HA	1.68	0.75
78:5:2557:G:H1	78:5:2570:U:H3	0.82	0.75
83:PT:33:U:H2'	83:PT:35:G:N7	2.00	0.75
9:HH:8:ILE:HD12	9:HH:16:PRO:HB3	1.67	0.75
16:WW:6:VAL:HG12	16:WW:34:ILE:HD11	1.66	0.75
40:E:65:TYR:HA	40:E:68:LYS:HZ2	1.52	0.75
41:F:82:VAL:HG22	52:S:62:VAL:HG13	1.68	0.75
78:5:4869:U:H5''	78:5:4870:G:H5'	1.67	0.75
2:W:13:ILE:HD13	2:W:18:GLY:HA2	1.68	0.75
5:BB:217:MET:HE2	5:BB:220:LYS:HG2	1.67	0.75
8:GG:209:TYR:CZ	8:GG:213:LEU:HG	2.22	0.75
64:f:50:VAL:HG22	64:f:69:VAL:HG12	1.67	0.75
7:EE:64:ILE:HG23	18:YY:17:LEU:HD22	1.68	0.75
27:QQ:34:VAL:HG22	27:QQ:70:VAL:HB	1.68	0.75
78:5:2528:G:H4'	78:5:2783:A:H4'	1.68	0.75
3:9:269:U:H5''	7:EE:37:LYS:HG2	1.67	0.75
8:GG:121:ILE:HD12	8:GG:122:PRO:HD2	1.66	0.75
43:H:41:ILE:HG12	43:H:73:ILE:HD11	1.69	0.75
6:CC:204:ILE:HG21	6:CC:211:LYS:HA	1.69	0.75
59:a:72:THR:HG21	78:5:1396:G:H1	1.51	0.75
77:t:77:ALA:HB2	77:t:116:MET:SD	2.27	0.75
9:HH:69:LEU:HG	9:HH:96:ALA:HB2	1.69	0.75
26:PP:28:MET:HE2	26:PP:32:GLN:HG3	1.67	0.75
37:B:287:ILE:HG23	37:B:331:VAL:HG12	1.69	0.75
4:AA:46:ILE:HB	28:RR:129:LYS:HA	1.66	0.75
7:EE:36:HIS:HB2	7:EE:41:CYS:HB3	1.67	0.75
26:PP:98:ASN:HB3	26:PP:122:THR:HA	1.68	0.75
77:t:15:LEU:HD12	77:t:62:LEU:HD13	1.67	0.75
3:9:1646:A:N3	84:ET:39:G:O6	2.20	0.75
8:GG:2:LYS:HD3	8:GG:15:LEU:HD21	1.68	0.75
26:PP:56:LEU:HD13	26:PP:78:THR:HG21	1.67	0.75
1:R:109:TYR:HB3	1:R:115:ILE:HG12	1.69	0.74
3:9:1001:U:H1'	6:CC:194:ARG:HD2	1.69	0.74
10:II:12:ARG:HE	10:II:18:ARG:HG3	1.51	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:C:302:LEU:HD22	51:Q:38:ARG:HB3	1.69	0.74
76:s:143:ILE:HG13	76:s:160:LEU:HD21	1.69	0.74
5:BB:66:VAL:HG22	5:BB:87:ILE:HG22	1.69	0.74
23:FF:51:HIS:HD2	27:QQ:47:LEU:HD21	1.51	0.74
48:N:60:VAL:HG21	80:8:141:C:H5''	1.69	0.74
59:a:117:LEU:HD12	59:a:118:PRO:HD2	1.67	0.74
22:DD:95:GLY:HA2	22:DD:101:GLN:HE21	1.51	0.74
41:F:39:LYS:HG2	41:F:43:LYS:HE2	1.69	0.74
78:5:3736:A:H1'	78:5:3933:G:H5'	1.68	0.74
78:5:4753:U:H4'	78:5:4754:G:H5'	1.69	0.74
3:9:563:C:H5''	21:ee:114:ARG:HH21	1.52	0.74
43:H:107:GLU:HB2	43:H:110:SER:HB2	1.68	0.74
67:i:74:LYS:HE2	67:i:80:HIS:HB2	1.69	0.74
78:5:2659:A:H62	78:5:2675:G:N2	1.86	0.74
2:W:20:ARG:HG3	2:W:28:VAL:HG13	1.69	0.74
13:NN:91:LEU:HD12	13:NN:125:LEU:HD12	1.69	0.74
76:s:39:GLN:HA	76:s:107:VAL:HG21	1.70	0.74
78:5:381:U:H4'	78:5:415:G:H5'	1.70	0.74
4:AA:197:VAL:HG22	28:RR:85:VAL:HG13	1.70	0.74
5:BB:121:ILE:HD11	5:BB:161:VAL:HG22	1.68	0.74
36:A:117:GLU:HB2	36:A:162:ASN:HB2	1.68	0.74
8:GG:197:GLN:HA	8:GG:200:LYS:HD3	1.70	0.74
8:GG:217:MET:CE	8:GG:224:ARG:HH21	2.01	0.74
16:WW:104:LEU:HB3	16:WW:125:ILE:HA	1.69	0.74
36:A:48:ILE:HG22	74:p:54:ILE:HD12	1.70	0.74
36:A:90:CYS:HB3	36:A:101:VAL:HG13	1.68	0.74
37:B:52:GLY:HA2	37:B:341:LYS:HE3	1.69	0.74
47:M:12:VAL:HG12	47:M:24:LEU:HD22	1.69	0.74
62:d:85:ARG:HB3	62:d:109:VAL:HB	1.67	0.74
65:g:60:ARG:HG3	65:g:61:PRO:HD2	1.70	0.74
78:5:4630:G:H1	78:5:4668:U:H3	1.34	0.74
8:GG:221:LYS:HD2	8:GG:225:GLN:NE2	2.02	0.74
45:J:18:ARG:HG3	45:J:135:GLY:HA3	1.67	0.74
76:s:57:LYS:HD3	78:5:2020:U:H5'	1.68	0.74
77:t:92:ARG:NH1	77:t:93:LYS:CD	2.41	0.74
78:5:4454:G:H1	78:5:4526:U:H3	1.36	0.74
57:Y:22:PRO:HD2	57:Y:25:ILE:HD12	1.70	0.73
63:e:58:ILE:HG23	78:5:1899:G:H1'	1.70	0.73
5:BB:107:ARG:HD2	14:OO:131:ASP:HB2	1.70	0.73
7:EE:149:TYR:CD1	8:GG:209:TYR:HB2	2.23	0.73
26:PP:52:LYS:HD2	26:PP:80:LEU:HD21	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:C:146:GLU:HB3	38:C:175:LYS:HB3	1.69	0.73
45:J:141:ILE:HG23	45:J:144:LYS:HE2	1.70	0.73
47:M:119:ARG:HH11	47:M:123:ILE:HD11	1.53	0.73
60:b:5:LYS:HE2	60:b:8:THR:HB	1.70	0.73
67:i:33:LEU:HD11	67:i:38:LYS:HB2	1.69	0.73
69:k:57:LYS:HA	69:k:60:LEU:HD23	1.68	0.73
4:AA:23:THR:HG22	4:AA:170:SER:HB2	1.70	0.73
40:E:261:LEU:HD11	40:E:265:LYS:HE3	1.69	0.73
59:a:117:LEU:HD23	59:a:140:VAL:HG21	1.69	0.73
77:t:79:ALA:HA	77:t:82:ILE:HD12	1.70	0.73
10:II:89:GLU:HG2	10:II:92:ARG:HH21	1.53	0.73
31:UU:55:ARG:HG3	31:UU:87:ARG:HD2	1.69	0.73
77:t:134:GLY:HA3	78:5:1973:G:H21	1.52	0.73
21:ee:101:ARG:HH21	21:ee:105:ALA:HB1	1.54	0.73
27:QQ:21:ALA:HB2	27:QQ:72:VAL:HG13	1.70	0.73
42:G:111:PRO:HD2	42:G:114:ILE:HD12	1.70	0.73
3:9:879:C:H4'	13:NN:109:LYS:HB3	1.71	0.73
5:BB:65:ARG:HH12	14:OO:51:GLU:HB2	1.53	0.73
7:EE:180:LEU:HD23	7:EE:194:VAL:HG12	1.69	0.73
29:SS:15:VAL:HG13	29:SS:68:ILE:HG12	1.69	0.73
55:V:57:VAL:HG11	55:V:122:ALA:HB3	1.69	0.73
77:t:133:LEU:HB3	77:t:150:ASP:HB3	1.70	0.73
78:5:2093:A:H4'	78:5:2094:C:H5'	1.70	0.73
3:9:38:A:H5''	11:JJ:5:ARG:HB3	1.71	0.73
29:SS:5:ILE:HG12	32:ZZ:49:LEU:HB2	1.69	0.73
36:A:179:ILE:HG23	36:A:184:ARG:HB2	1.69	0.73
3:9:65:C:H4'	8:GG:172:LYS:HE2	1.71	0.73
14:OO:35:ALA:HB2	14:OO:112:ALA:HB2	1.71	0.73
23:FF:82:ASN:HA	23:FF:85:LYS:HD2	1.70	0.73
52:S:35:PRO:HD2	52:S:39:VAL:HG21	1.71	0.73
4:AA:66:VAL:HG21	4:AA:185:MET:HB2	1.70	0.73
49:O:130:LYS:HB3	49:O:133:ARG:HG2	1.69	0.73
76:s:34:ASN:H	78:5:1968:G:H4'	1.52	0.73
3:9:1052:G:H1	3:9:1220:A:N6	1.87	0.73
7:EE:152:PRO:HD2	8:GG:216:ARG:HH11	1.54	0.73
8:GG:50:VAL:HG21	8:GG:111:LEU:HB3	1.71	0.73
49:O:186:GLU:HA	49:O:189:ILE:HG12	1.71	0.73
83:PT:36:C:H2'	83:PT:37:A:C8	2.23	0.73
8:GG:39:ASP:HB3	8:GG:47:GLY:H	1.51	0.72
10:II:8:TRP:HA	10:II:18:ARG:HD2	1.71	0.72
77:t:129:ILE:HD12	77:t:160:VAL:HG21	1.70	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:EE:137:PRO:HB2	7:EE:150:PRO:HD2	1.71	0.72
16:WW:81:VAL:HG13	16:WW:85:ASP:HB2	1.70	0.72
25:MM:33:ARG:HH22	25:MM:89:VAL:HG21	1.53	0.72
42:G:163:LYS:HG2	42:G:166:ARG:HH12	1.55	0.72
65:g:8:ARG:HH22	78:5:2520:C:H5'	1.54	0.72
66:h:25:LYS:HD3	66:h:54:ILE:HD13	1.72	0.72
9:HH:63:PHE:HB3	9:HH:97:GLN:HB2	1.70	0.72
43:H:20:LEU:HB3	43:H:25:VAL:HG12	1.70	0.72
68:j:43:ARG:HG2	78:5:21:G:H5''	1.71	0.72
77:t:53:TRP:HE3	77:t:56:LEU:HB3	1.55	0.72
78:5:4944:C:H5'	78:5:4945:G:H5'	1.69	0.72
83:PT:35:G:H2'	83:PT:36:C:C5	2.24	0.72
7:EE:11:ARG:HA	7:EE:28:ALA:HB2	1.72	0.72
21:ee:98:LYS:HD3	21:ee:99:LYS:HD3	1.70	0.72
28:RR:17:ILE:HD11	28:RR:54:VAL:HA	1.70	0.72
47:M:118:MET:HE1	78:5:4891:G:H21	1.55	0.72
54:U:23:LEU:HD11	54:U:83:LEU:HD23	1.71	0.72
68:j:33:THR:HG22	68:j:40:PRO:HG2	1.69	0.72
10:II:106:SER:HB3	10:II:171:LEU:HG	1.70	0.72
40:E:179:THR:HG21	40:E:256:VAL:HG11	1.70	0.72
78:5:5005:G:H22	78:5:5041:G:H1'	1.54	0.72
41:F:178:LEU:HD21	41:F:203:ALA:HA	1.71	0.72
54:U:44:GLN:HG3	54:U:56:LEU:HD11	1.70	0.72
3:9:247:A:H3'	3:9:248:C:H5''	1.71	0.72
4:AA:82:THR:HG23	4:AA:168:ALA:HA	1.71	0.72
8:GG:221:LYS:CD	8:GG:225:GLN:NE2	2.53	0.72
30:TT:5:THR:HG23	30:TT:8:ASP:H	1.55	0.72
40:E:143:LEU:HA	40:E:194:GLN:HE22	1.53	0.72
42:G:114:ILE:HA	42:G:117:GLN:HE21	1.55	0.72
8:GG:220:ALA:C	8:GG:224:ARG:CZ	2.63	0.72
12:LL:59:LYS:HD3	12:LL:134:LEU:HB3	1.70	0.72
14:OO:92:ALA:HA	14:OO:125:LYS:HB2	1.71	0.72
3:9:876:G:H21	78:5:1563:A:N6	1.88	0.72
10:II:129:LEU:HG	10:II:132:GLU:H	1.55	0.72
58:Z:103:ASP:HB3	58:Z:106:LEU:HB2	1.70	0.72
76:s:30:VAL:HG12	76:s:189:ILE:HA	1.71	0.72
5:BB:71:LEU:HB2	5:BB:82:ARG:HB3	1.72	0.71
78:5:1990:A:H3'	78:5:1991:A:H5''	1.70	0.71
3:9:665:A:H4'	7:EE:16:LYS:HB2	1.73	0.71
4:AA:52:LYS:HB3	28:RR:105:MET:HE3	1.72	0.71
37:B:84:MET:HG2	37:B:166:THR:HA	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:I:116:ARG:HB3	78:5:4195:G:H5''	1.72	0.71
47:M:91:TRP:HA	47:M:94:LYS:HE2	1.70	0.71
27:QQ:38:PRO:HG2	27:QQ:41:MET:HG2	1.71	0.71
11:JJ:81:LEU:HD23	11:JJ:84:ILE:HD11	1.72	0.71
39:D:197:LYS:HD2	39:D:202:GLN:HG2	1.71	0.71
7:EE:152:PRO:HG2	8:GG:216:ARG:CG	2.19	0.71
26:PP:39:ALA:HA	26:PP:42:ARG:HG3	1.73	0.71
3:9:851:U:H2'	3:9:852:G:H8	1.55	0.71
17:XX:89:GLY:HA2	21:ee:82:VAL:HG12	1.72	0.71
26:PP:52:LYS:HG2	26:PP:80:LEU:HD11	1.71	0.71
26:PP:60:LEU:HD13	26:PP:89:MET:HG3	1.73	0.71
37:B:324:GLY:HA2	78:5:5051:C:H4'	1.71	0.71
78:5:4577:U:H3	78:5:4726:G:H1	1.38	0.71
3:9:1364:G:H4'	6:CC:145:LYS:HE3	1.73	0.71
17:XX:68:LYS:HG2	17:XX:91:LEU:HD22	1.73	0.71
31:UU:24:LEU:HD11	31:UU:39:LEU:HD12	1.72	0.71
77:t:16:ARG:HA	77:t:59:THR:CA	2.21	0.71
77:t:77:ALA:HB3	77:t:135:THR:HG21	1.72	0.71
9:HH:145:ARG:HA	16:WW:51:GLU:HB2	1.73	0.71
17:XX:124:LYS:HG2	17:XX:129:SER:HA	1.73	0.71
57:Y:11:ARG:HG3	78:5:229:G:H5''	1.71	0.71
74:p:52:VAL:HG21	78:5:2739:C:H4'	1.73	0.71
16:WW:26:LEU:HD13	16:WW:62:VAL:HG22	1.72	0.70
63:e:59:GLY:HA2	78:5:1899:G:H21	1.56	0.70
75:r:17:LEU:HD21	75:r:19:LYS:HE3	1.72	0.70
3:9:698:C:H5''	3:9:699:G:H5''	1.72	0.70
17:XX:94:ILE:HG12	17:XX:125:VAL:HG21	1.71	0.70
62:d:32:ARG:HB3	62:d:48:GLU:HG2	1.73	0.70
78:5:2631:U:H5''	78:5:2632:U:H5'	1.73	0.70
78:5:4151:G:H2'	78:5:4152:G:H8	1.55	0.70
78:5:4471:U:H3	78:5:4484:G:H1	1.39	0.70
12:LL:101:ARG:HB2	17:XX:10:ALA:HB2	1.73	0.70
38:C:33:ARG:HB3	38:C:36:ILE:HB	1.73	0.70
38:C:341:LEU:HD22	40:E:58:ARG:HH11	1.56	0.70
55:V:29:ALA:HB1	55:V:118:THR:HG23	1.73	0.70
77:t:68:GLN:HG2	77:t:70:GLN:HE22	1.55	0.70
83:PT:33:U:H3'	83:PT:35:G:OP2	1.90	0.70
4:AA:70:ASN:HD21	4:AA:72:ALA:HB3	1.56	0.70
12:LL:11:GLN:HB2	12:LL:56:ILE:HD12	1.73	0.70
48:N:68:ARG:HG3	48:N:128:LYS:HG3	1.73	0.70
49:O:130:LYS:HG3	49:O:131:PRO:HD2	1.72	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:m:77:LEU:HD11	71:m:84:CYS:HA	1.71	0.70
76:s:112:ARG:HB3	76:s:115:ALA:HB3	1.73	0.70
84:ET:70:U:H2'	84:ET:71:C:C6	2.26	0.70
16:WW:8:ALA:HA	16:WW:74:VAL:HG11	1.73	0.70
42:G:199:LEU:HD13	42:G:205:ALA:HB2	1.74	0.70
48:N:53:TYR:HB2	48:N:133:ILE:HD13	1.73	0.70
49:O:9:LEU:HD23	49:O:118:MET:HB2	1.72	0.70
55:V:45:ILE:HD12	55:V:53:PRO:HB3	1.73	0.70
57:Y:47:MET:HE3	57:Y:48:PRO:HD2	1.72	0.70
76:s:31:GLY:HA2	76:s:85:ASN:O	1.92	0.70
77:t:18:THR:HG21	77:t:23:GLY:HA3	1.71	0.70
84:ET:28:G:C5	84:ET:29:U:O4	2.45	0.70
17:XX:54:LYS:HG2	17:XX:70:VAL:HG22	1.73	0.70
71:m:92:THR:HG22	71:m:94:ASN:H	1.57	0.70
77:t:80:LEU:HB3	77:t:112:ILE:HG12	1.72	0.70
23:FF:55:ARG:HE	27:QQ:125:ARG:HD3	1.56	0.70
68:j:63:ARG:HH12	68:j:65:ARG:HD2	1.56	0.70
78:5:966:A:H4'	78:5:967:C:H5''	1.73	0.70
78:5:1446:C:H42	78:5:2108:G:H1	1.40	0.70
80:8:105:C:H4'	80:8:106:G:H5''	1.73	0.70
8:GG:38:ALA:HB3	8:GG:48:TYR:HB2	1.72	0.70
13:NN:54:LEU:HB3	13:NN:60:VAL:HG13	1.74	0.70
40:E:165:VAL:HG11	40:E:178:VAL:HG13	1.74	0.70
42:G:116:LEU:HD21	48:N:29:GLN:HG3	1.72	0.70
76:s:127:ASN:HB3	76:s:153:GLU:HG2	1.72	0.70
77:t:53:TRP:CD2	77:t:58:ILE:HG12	2.27	0.70
73:o:68:LEU:HD11	73:o:85:ILE:HD11	1.74	0.69
76:s:44:ARG:O	76:s:48:ARG:HB2	1.92	0.69
6:CC:187:ARG:HB3	6:CC:192:LEU:HD13	1.74	0.69
22:DD:213:PRO:HD3	28:RR:19:LYS:HD3	1.74	0.69
78:5:759:G:C6	78:5:904:G:O6	2.45	0.69
78:5:1084:C:H42	78:5:1213:G:H1	1.39	0.69
80:8:106:G:H4'	80:8:137:A:H5'	1.74	0.69
46:L:55:ILE:HG22	46:L:154:VAL:HG13	1.74	0.69
76:s:65:ILE:HD12	76:s:82:ILE:HD11	1.74	0.69
78:5:1996:C:H42	78:5:2000:G:H22	1.38	0.69
78:5:2489:C:H4'	78:5:2490:U:H5	1.56	0.69
53:T:48:VAL:HG21	53:T:94:GLU:HG2	1.73	0.69
77:t:135:THR:HA	78:5:1974:U:O4	1.92	0.69
83:PT:39:G:H2'	83:PT:40:C:O4'	1.92	0.69
9:HH:178:LYS:HD2	9:HH:182:GLY:HA2	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:H:120:GLU:HG2	78:5:4611:A:H2	1.57	0.69
51:Q:3:VAL:HG21	78:5:2277:C:H5''	1.75	0.69
52:S:122:HIS:HB2	79:7:94:C:H4'	1.74	0.69
14:OO:20:GLN:HB3	14:OO:27:VAL:HG23	1.73	0.69
18:YY:114:MET:HG2	18:YY:122:LYS:HB3	1.74	0.69
55:V:85:ARG:HG2	78:5:2846:G:H5''	1.74	0.69
56:X:56:ARG:HE	78:5:13:U:H1'	1.57	0.69
68:j:21:ARG:HG3	80:8:102:G:H4'	1.74	0.69
78:5:2742:G:H5''	78:5:2743:A:H5'	1.74	0.69
3:9:552:A:H61	22:DD:177:LEU:HD23	1.57	0.69
37:B:110:ILE:HG22	37:B:115:LYS:HG2	1.75	0.69
40:E:61:ARG:HD3	78:5:1237:C:H1'	1.75	0.69
45:J:35:ARG:HB3	45:J:123:ILE:HG23	1.74	0.69
66:h:81:LEU:HD13	80:8:38:U:H5'	1.75	0.69
83:PT:31:C:H2'	83:PT:32:U:C5'	2.21	0.69
2:W:35:LYS:HG3	78:5:4662:C:H4'	1.75	0.69
3:9:136:G:H1	3:9:163:A:H61	1.40	0.69
3:9:354:C:H2'	3:9:355:G:H8	1.58	0.69
19:aa:73:TYR:HB3	19:aa:78:ALA:HB2	1.74	0.69
26:PP:15:PHE:HE2	26:PP:22:LEU:HD13	1.58	0.69
39:D:67:ALA:HA	39:D:72:ASP:HA	1.75	0.69
67:i:33:LEU:HD11	67:i:38:LYS:HD2	1.74	0.69
78:5:3855:C:H2'	78:5:3856:A:H8	1.58	0.69
78:5:25:A:H61	78:5:58:G:H1	1.40	0.69
3:9:876:G:H21	78:5:1563:A:H61	1.41	0.69
8:GG:221:LYS:HB2	8:GG:224:ARG:HH22	1.55	0.69
13:NN:33:VAL:HG21	13:NN:66:VAL:HG11	1.74	0.69
28:RR:58:MET:HG3	28:RR:62:GLN:HE22	1.58	0.69
38:C:230:LEU:HD21	38:C:239:LYS:HD2	1.74	0.69
55:V:37:LEU:HD21	55:V:105:ILE:HD11	1.74	0.69
30:TT:65:TYR:HB2	30:TT:123:LEU:HD22	1.75	0.68
39:D:64:ILE:HD12	39:D:109:LEU:HD22	1.74	0.68
43:H:41:ILE:HG21	43:H:73:ILE:HD11	1.75	0.68
46:L:78:LEU:HD11	78:5:159:C:H1'	1.73	0.68
77:t:16:ARG:CA	77:t:59:THR:HA	2.23	0.68
78:5:119:G:H3'	78:5:120:A:H5''	1.74	0.68
16:WW:30:CYS:HB2	16:WW:61:ILE:HG13	1.75	0.68
37:B:189:THR:HG23	37:B:192:GLU:H	1.58	0.68
52:S:1:MET:HB3	52:S:121:ALA:HB1	1.73	0.68
55:V:49:LEU:HG	55:V:50:ASN:HD22	1.57	0.68
3:9:455:A:H3'	3:9:456:C:H5''	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:BB:125:VAL:HG12	5:BB:172:MET:HE2	1.75	0.68
13:NN:34:LYS:HG2	13:NN:74:ILE:HD13	1.75	0.68
43:H:86:LEU:HD22	43:H:188:GLN:HG3	1.75	0.68
3:9:307:G:H4'	12:LL:132:ARG:HH21	1.59	0.68
7:EE:44:LEU:HD22	7:EE:72:ILE:HD11	1.75	0.68
17:XX:100:VAL:HG12	17:XX:125:VAL:HA	1.75	0.68
77:t:109:ILE:HG22	77:t:129:ILE:HD13	1.75	0.68
36:A:112:ILE:HD13	36:A:135:THR:HG22	1.76	0.68
37:B:229:LYS:HA	78:5:2836:A:H4'	1.75	0.68
3:9:59:U:H1'	3:9:425:C:H5''	1.76	0.68
4:AA:15:VAL:HG12	28:RR:96:ILE:HG12	1.76	0.68
4:AA:145:ILE:HG23	4:AA:159:ILE:HG23	1.76	0.68
51:Q:78:LYS:HG2	51:Q:137:VAL:HG23	1.74	0.68
52:S:95:ARG:HE	52:S:113:MET:HE2	1.59	0.68
57:Y:49:ILE:HD13	57:Y:80:ILE:HG21	1.76	0.68
78:5:4896:G:H2'	78:5:4897:G:H8	1.57	0.68
3:9:1012:G:H4'	3:9:1013:G:H5''	1.75	0.68
8:GG:194:LEU:HA	8:GG:197:GLN:HB3	1.75	0.68
8:GG:221:LYS:N	8:GG:224:ARG:CZ	2.46	0.68
37:B:206:PRO:HG2	37:B:209:GLN:HG2	1.76	0.68
56:X:79:PHE:HB2	66:h:36:VAL:HG21	1.74	0.68
65:g:50:PRO:HB3	74:p:61:MET:HE3	1.76	0.68
73:o:20:PRO:HG2	73:o:73:VAL:HB	1.74	0.68
78:5:149:A:H4'	78:5:150:U:H5''	1.76	0.68
28:RR:17:ILE:HD12	28:RR:57:LEU:HD12	1.75	0.68
40:E:160:HIS:HB3	40:E:163:LYS:HD2	1.74	0.68
46:L:91:ALA:HA	46:L:94:ILE:HG12	1.75	0.68
67:i:51:ALA:HB3	67:i:54:GLU:HG3	1.74	0.68
78:5:169:G:N2	78:5:267:G:H1	1.89	0.68
26:PP:108:LYS:HG2	26:PP:111:MET:HG3	1.76	0.68
37:B:252:ALA:HB3	78:5:4457:U:H1'	1.76	0.68
48:N:44:ARG:HD2	48:N:121:VAL:HG12	1.76	0.68
51:Q:72:LEU:HD23	78:5:1457:G:H4'	1.76	0.68
65:g:56:VAL:HG13	65:g:72:LYS:HA	1.76	0.68
43:H:41:ILE:HD11	43:H:69:THR:HB	1.75	0.68
77:t:116:MET:SD	77:t:121:LEU:HD12	2.34	0.68
78:5:4699:U:H1'	78:5:4700:A:H5''	1.76	0.68
3:9:12:U:H5''	6:CC:110:MET:HE2	1.76	0.67
25:MM:19:GLN:HE22	25:MM:88:TRP:HB3	1.59	0.67
41:F:91:VAL:HG11	41:F:139:ILE:HD12	1.75	0.67
79:7:77:A:H62	79:7:99:G:H21	1.41	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:863:U:H1'	13:NN:61:ALA:HB1	1.75	0.67
3:9:1556:G:H3'	3:9:1585:A:H61	1.59	0.67
77:t:101:SER:CA	77:t:141:CYS:HA	2.22	0.67
4:AA:34:MET:HE1	4:AA:162:PRO:HB3	1.76	0.67
4:AA:88:LEU:HD12	4:AA:98:PRO:HB2	1.76	0.67
4:AA:119:PRO:HG2	4:AA:142:LEU:HD11	1.75	0.67
8:GG:221:LYS:HA	8:GG:224:ARG:NH2	1.85	0.67
39:D:146:LEU:HD12	78:5:4323:A:H2	1.60	0.67
53:T:75:VAL:HG22	53:T:88:ARG:HB3	1.75	0.67
8:GG:67:VAL:HG11	8:GG:99:GLY:HA2	1.75	0.67
39:D:226:TYR:HE2	39:D:236:MET:HE1	1.59	0.67
78:5:4531:U:H4'	78:5:4532:U:H5'	1.74	0.67
3:9:1646:A:C4	84:ET:39:G:N1	2.61	0.67
10:II:79:ILE:HG21	10:II:170:LYS:HZ2	1.59	0.67
77:t:128:THR:O	77:t:131:GLU:HG2	1.95	0.67
22:DD:59:LEU:HA	22:DD:66:ILE:HG13	1.74	0.67
3:9:1168:A:H2'	3:9:1169:A:H5''	1.76	0.67
4:AA:38:ILE:HG12	4:AA:47:TYR:HB3	1.77	0.67
14:OO:59:GLY:HA2	14:OO:68:GLU:HG2	1.76	0.67
36:A:96:LEU:HD13	74:p:83:ILE:HG23	1.77	0.67
43:H:71:ARG:HG2	78:5:4691:A:H4'	1.77	0.67
51:Q:50:ARG:HB3	51:Q:83:VAL:HG11	1.76	0.67
56:X:82:THR:HG21	66:h:37:THR:HG22	1.77	0.67
59:a:103:VAL:HG21	59:a:111:VAL:HG21	1.75	0.67
84:ET:70:U:H2'	84:ET:71:C:H6	1.57	0.67
3:9:1646:A:C1'	84:ET:39:G:N1	2.32	0.67
3:9:1680:G:H5''	23:FF:86:LYS:HB2	1.75	0.67
41:F:106:LYS:HA	41:F:109:GLN:HE21	1.60	0.67
78:5:4949:G:H4'	78:5:4950:U:H5'	1.77	0.67
2:W:47:ARG:HB3	2:W:58:LYS:HD2	1.76	0.67
7:EE:222:LEU:HA	7:EE:225:ILE:HD12	1.76	0.67
12:LL:85:THR:HA	12:LL:113:LEU:H	1.59	0.67
46:L:63:THR:HG23	46:L:65:ARG:H	1.60	0.67
1:R:57:VAL:HG23	78:5:4646:U:H5''	1.75	0.67
3:9:484:A:H5'	11:JJ:174:LYS:HB2	1.76	0.67
14:OO:56:VAL:HG13	14:OO:77:ALA:HB1	1.77	0.67
43:H:91:LYS:HG2	43:H:145:VAL:HG22	1.77	0.67
46:L:120:TYR:HB2	46:L:155:MET:HE1	1.76	0.67
4:AA:15:VAL:H	28:RR:96:ILE:HD11	1.61	0.66
7:EE:105:THR:HG23	7:EE:106:LYS:HD2	1.75	0.66
25:MM:22:LEU:HD11	25:MM:89:VAL:HG23	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:PP:98:ASN:HD21	26:PP:120:SER:HB2	1.58	0.66
41:F:103:LYS:HE3	41:F:134:ILE:HD11	1.74	0.66
48:N:50:ARG:HH11	78:5:278:G:H4'	1.60	0.66
5:BB:49:VAL:HG22	5:BB:65:ARG:HH21	1.60	0.66
8:GG:147:LEU:HD12	8:GG:153:VAL:HG13	1.77	0.66
26:PP:93:MET:HE1	26:PP:106:GLU:HB3	1.76	0.66
30:TT:9:VAL:HG21	30:TT:135:ALA:HB1	1.76	0.66
31:UU:48:LEU:HD22	31:UU:93:SER:HB2	1.78	0.66
78:5:2832:A:H2'	78:5:2833:A:H8	1.59	0.66
11:JJ:70:ARG:HH21	11:JJ:94:LEU:HD11	1.60	0.66
40:E:181:PRO:HB2	40:E:184:LEU:HB2	1.77	0.66
45:J:151:ILE:HD11	45:J:156:ARG:HG2	1.78	0.66
57:Y:86:GLN:HA	57:Y:97:VAL:HG23	1.77	0.66
58:Z:50:PRO:HB3	58:Z:68:ILE:HD11	1.78	0.66
81:EF:697:MET:HE1	81:EF:733:VAL:HG21	1.76	0.66
32:ZZ:79:ILE:HB	32:ZZ:83:LEU:HD12	1.77	0.66
42:G:217:ILE:HG13	42:G:221:VAL:HG23	1.76	0.66
55:V:106:VAL:HG22	55:V:112:MET:HG2	1.77	0.66
64:f:5:LEU:HD23	78:5:4945:G:H1	1.59	0.66
5:BB:113:MET:HE2	5:BB:142:PHE:HE2	1.61	0.66
3:9:1076:C:H4'	72:n:21:ARG:HD2	1.76	0.66
8:GG:220:ALA:C	8:GG:224:ARG:NH2	2.52	0.66
38:C:77:PRO:HB2	38:C:92:PHE:HB2	1.76	0.66
56:X:65:ALA:HB2	66:h:69:LEU:HD11	1.77	0.66
75:r:8:MET:HE2	75:r:11:ARG:HD2	1.77	0.66
3:9:781:G:H1	3:9:855:A:H2	1.40	0.66
12:LL:61:PRO:HA	12:LL:66:VAL:HG13	1.76	0.66
40:E:188:PRO:HG3	78:5:4938:A:H1'	1.78	0.66
51:Q:3:VAL:HG12	51:Q:5:ILE:HG13	1.76	0.66
7:EE:35:PRO:HD2	7:EE:83:PRO:HG2	1.77	0.66
21:ee:85:VAL:HA	21:ee:88:GLN:HG2	1.76	0.66
24:KK:58:VAL:HG21	24:KK:69:TRP:HB3	1.77	0.66
38:C:40:VAL:HG12	38:C:237:ILE:HG21	1.78	0.66
78:5:1970:A:H5''	78:5:1971:C:H5'	1.77	0.66
83:PT:35:G:H2'	83:PT:36:C:C6	2.31	0.66
3:9:245:G:H3'	8:GG:183:ARG:HH12	1.61	0.66
4:AA:12:GLU:HG3	28:RR:96:ILE:HB	1.77	0.66
53:T:62:GLY:HA3	53:T:76:VAL:HG12	1.78	0.66
57:Y:47:MET:HE1	57:Y:118:ILE:HG21	1.78	0.66
78:5:981:C:H42	78:5:1274:A:H61	1.41	0.66
5:BB:144:LYS:HB3	5:BB:206:PRO:HB2	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:EE:43:PRO:HG2	7:EE:46:ILE:HD12	1.78	0.66
40:E:59:TYR:HB3	40:E:63:ALA:HB3	1.77	0.66
46:L:8:MET:HG3	51:Q:166:TYR:HB3	1.77	0.66
55:V:39:ILE:HG23	55:V:61:VAL:HG21	1.77	0.66
59:a:19:HIS:HB3	59:a:25:HIS:HB2	1.78	0.66
83:PT:30:G:H3'	83:PT:31:C:C4'	2.26	0.66
3:9:759:C:H3'	3:9:760:A:H5''	1.78	0.65
3:9:788:C:H2'	3:9:789:G:H8	1.61	0.65
66:h:87:LYS:HD3	66:h:91:MET:HG2	1.77	0.65
69:k:26:LYS:HE2	78:5:2696:A:H5'	1.77	0.65
7:EE:64:ILE:HG12	18:YY:17:LEU:HD13	1.79	0.65
8:GG:52:ILE:HD11	8:GG:102:VAL:HG21	1.78	0.65
36:A:48:ILE:HB	74:p:63:THR:HG21	1.78	0.65
42:G:82:ASN:HD21	42:G:84:LEU:HB2	1.61	0.65
3:9:1568:C:H2'	3:9:1569:G:H8	1.62	0.65
3:9:1656:A:H5''	27:QQ:139:ALA:HB2	1.78	0.65
8:GG:198:ARG:HA	8:GG:201:LYS:HE3	1.78	0.65
37:B:17:LEU:HG	37:B:18:PRO:HD3	1.78	0.65
67:i:33:LEU:HD21	67:i:38:LYS:HB2	1.78	0.65
3:9:536:U:O4	3:9:553:A:N7	2.29	0.65
3:9:768:G:H1'	13:NN:11:LEU:HD21	1.77	0.65
40:E:176:LEU:HD11	40:E:194:GLN:HG2	1.78	0.65
43:H:103:VAL:HG22	43:H:114:ILE:HG12	1.78	0.65
77:t:131:GLU:HB2	78:5:1973:G:C1'	2.26	0.65
23:FF:30:ILE:HG21	23:FF:36:GLN:HA	1.76	0.65
44:I:140:THR:HG21	44:I:148:VAL:HG21	1.78	0.65
54:U:25:CYS:HB2	54:U:28:PRO:HG2	1.79	0.65
74:p:3:LYS:HE2	74:p:6:LYS:HA	1.79	0.65
76:s:135:THR:HA	76:s:138:PHE:HD1	1.62	0.65
78:5:3714:G:H4'	84:ET:4:G:O2'	1.96	0.65
78:5:4881:U:H4'	78:5:4882:U:H5'	1.77	0.65
3:9:829:G:H21	3:9:892:U:H1'	1.61	0.65
18:YY:41:ARG:HH21	18:YY:53:ASP:HA	1.62	0.65
75:r:17:LEU:HD21	75:r:19:LYS:HG3	1.77	0.65
4:AA:41:ARG:HA	28:RR:128:PHE:HB3	1.79	0.65
5:BB:62:LEU:HD12	5:BB:65:ARG:HD2	1.79	0.65
77:t:32:ILE:HA	77:t:35:LEU:HD22	1.77	0.65
3:9:566:U:H5''	11:JJ:41:ARG:HH12	1.62	0.65
43:H:101:ILE:HG23	43:H:114:ILE:HG23	1.77	0.65
47:M:25:VAL:HG22	47:M:38:VAL:HG22	1.78	0.65
52:S:13:VAL:HG12	52:S:29:ARG:HB2	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:a:21:ARG:HH11	78:5:2282:A:H5''	1.60	0.65
63:e:79:VAL:HG13	63:e:84:GLU:HB2	1.78	0.65
78:5:2660:A:H4'	78:5:2661:U:H3'	1.78	0.65
78:5:4757:C:H4'	78:5:4758:U:H5'	1.78	0.65
3:9:781:G:O6	3:9:855:A:N1	2.29	0.65
3:9:916:U:H5'	36:A:248:GLY:HA2	1.79	0.65
10:II:107:THR:HG22	10:II:110:ARG:HH21	1.62	0.65
77:t:59:THR:HG23	77:t:75:PRO:HA	1.79	0.65
77:t:137:GLN:HA	77:t:146:ARG:CB	2.22	0.65
78:5:1332:C:H2'	78:5:1333:A:H8	1.61	0.65
3:9:733:A:H3'	3:9:734:U:H5''	1.78	0.65
43:H:26:ILE:HG22	43:H:35:ARG:HG2	1.78	0.65
70:l:23:ILE:HG23	70:l:38:ASN:HB2	1.77	0.65
3:9:1246:C:H3'	29:SS:139:THR:HG21	1.78	0.64
3:9:1558:G:H3'	3:9:1559:C:H5''	1.80	0.64
19:aa:44:ILE:HD12	19:aa:45:VAL:HG22	1.78	0.64
30:TT:76:THR:HG21	30:TT:97:LYS:HG2	1.79	0.64
37:B:381:THR:HG23	37:B:384:GLU:H	1.62	0.64
44:I:16:PRO:HA	44:I:95:HIS:HD2	1.62	0.64
45:J:43:LEU:HB2	45:J:117:ILE:HD11	1.79	0.64
1:R:60:ARG:HD2	1:R:63:CYS:HB3	1.80	0.64
8:GG:154:ARG:HE	8:GG:179:LEU:HD21	1.61	0.64
30:TT:83:GLN:HB2	30:TT:93:SER:HB2	1.79	0.64
40:E:149:PRO:HA	40:E:167:PHE:HD2	1.61	0.64
64:f:76:ARG:HG3	64:f:85:ARG:HD2	1.79	0.64
77:t:16:ARG:HB2	78:5:1975:G:C2	2.32	0.64
78:5:1512:G:H5''	78:5:1850:A:H5'	1.78	0.64
3:9:1060:C:H1'	83:PT:34:A:H62	1.62	0.64
5:BB:97:LEU:HB3	5:BB:228:LEU:HD21	1.79	0.64
46:L:169:ILE:HD13	59:a:142:GLY:HA2	1.78	0.64
48:N:113:LEU:HD11	80:8:141:C:H5'	1.79	0.64
77:t:146:ARG:HH22	77:t:148:PRO:HG3	1.58	0.64
78:5:158:A:H4'	78:5:159:C:H5''	1.80	0.64
3:9:532:C:H1'	21:ee:131:ASN:HD21	1.61	0.64
3:9:1174:A:H61	21:ee:76:HIS:HB2	1.62	0.64
4:AA:28:THR:HA	4:AA:46:ILE:HD11	1.79	0.64
7:EE:31:PRO:HG3	7:EE:43:PRO:HG3	1.78	0.64
14:OO:116:LEU:HD22	19:aa:53:ILE:HD11	1.80	0.64
37:B:356:LYS:HB2	37:B:359:ALA:HB3	1.80	0.64
43:H:104:VAL:HG13	43:H:113:GLU:HB2	1.80	0.64
44:I:76:MET:HE2	44:I:76:MET:HA	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:S:159:LEU:HD23	52:S:162:GLN:HG2	1.80	0.64
77:t:20:GLY:HA3	77:t:51:GLY:HA2	1.78	0.64
83:PT:39:G:O2'	84:ET:36:C:H1'	1.96	0.64
3:9:1646:A:C2	84:ET:39:G:O6	2.50	0.64
39:D:208:MET:HE3	39:D:233:PRO:HG3	1.79	0.64
39:D:268:ARG:HH21	78:5:1176:C:H4'	1.62	0.64
3:9:320:U:H5'	10:II:13:LYS:HE3	1.79	0.64
3:9:601:G:N2	3:9:875:A:H62	1.95	0.64
3:9:959:U:O2	3:9:968:G:O6	2.16	0.64
3:9:1275:A:H1'	3:9:1280:C:H42	1.62	0.64
47:M:89:THR:HG22	47:M:91:TRP:H	1.63	0.64
51:Q:49:LYS:HD3	78:5:2084:C:N4	2.12	0.64
78:5:4630:G:N2	78:5:4668:U:O2	2.29	0.64
4:AA:10:MET:HE3	4:AA:55:TRP:HB2	1.80	0.64
7:EE:152:PRO:HD3	8:GG:212:LEU:HD21	1.79	0.64
9:HH:51:ILE:HD11	9:HH:176:VAL:HG22	1.79	0.64
37:B:20:LYS:HB3	78:5:4567:G:H5'	1.80	0.64
37:B:115:LYS:HE3	37:B:129:ALA:HB3	1.79	0.64
39:D:11:ALA:HB1	78:5:1743:A:H5'	1.79	0.64
52:S:16:CYS:HB2	52:S:54:MET:HE2	1.78	0.64
53:T:42:ILE:HD11	53:T:74:ILE:HD13	1.79	0.64
60:b:32:LEU:HD12	78:5:1464:C:H5''	1.79	0.64
8:GG:188:LYS:HA	8:GG:191:ARG:HG2	1.79	0.64
10:II:81:VAL:HA	10:II:102:VAL:HG12	1.78	0.64
1:R:45:ILE:HG12	1:R:50:ILE:HG13	1.79	0.64
9:HH:8:ILE:HD11	9:HH:10:LYS:HG3	1.80	0.64
40:E:167:PHE:HE1	40:E:176:LEU:HB3	1.63	0.64
47:M:27:ILE:HD11	47:M:55:MET:HE1	1.77	0.64
59:a:85:GLN:HE21	78:5:510:U:H5'	1.63	0.64
3:9:1412:A:N7	3:9:1455:G:O6	2.31	0.64
16:WW:103:VAL:HA	16:WW:112:ASP:HA	1.80	0.64
23:FF:35:LEU:HD21	23:FF:146:ARG:HD2	1.80	0.64
37:B:13:SER:HB2	78:5:4622:A:H4'	1.80	0.64
37:B:85:VAL:HG22	37:B:204:GLN:HG2	1.80	0.64
82:1:28:U:N3	83:PT:35:G:N2	2.45	0.64
3:9:894:C:H5''	14:OO:143:LYS:HG3	1.80	0.63
3:9:1364:G:O6	3:9:1397:G:O6	2.16	0.63
5:BB:71:LEU:HD12	5:BB:82:ARG:HG2	1.79	0.63
5:BB:121:ILE:HG12	5:BB:161:VAL:HG13	1.80	0.63
8:GG:3:LEU:HD23	8:GG:109:LEU:HB2	1.81	0.63
10:II:97:VAL:HG23	10:II:100:CYS:HB2	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:LL:111:VAL:HG21	12:LL:128:VAL:HG11	1.81	0.63
36:A:101:VAL:HA	36:A:165:VAL:HA	1.80	0.63
36:A:224:THR:HG22	36:A:237:LEU:HD12	1.80	0.63
40:E:99:VAL:HG21	40:E:108:ARG:HD3	1.80	0.63
77:t:46:ILE:HG12	77:t:71:ILE:HG12	1.81	0.63
78:5:679:C:H2'	78:5:680:G:H8	1.62	0.63
2:W:44:ARG:HD3	2:W:49:ILE:HD11	1.80	0.63
3:9:860:U:H1'	3:9:951:G:H1'	1.80	0.63
3:9:1224:A:H2'	3:9:1225:A:H8	1.62	0.63
3:9:1320:U:H5'	35:ff:93:HIS:HB2	1.80	0.63
4:AA:77:ILE:HG12	4:AA:99:ILE:HB	1.80	0.63
7:EE:151:ASP:HA	8:GG:212:LEU:HD21	1.81	0.63
43:H:176:LEU:HD13	71:m:60:ALA:HB3	1.80	0.63
71:m:85:ARG:HH11	78:5:4698:C:H3'	1.61	0.63
6:CC:261:PHE:HB2	15:VV:52:THR:HG21	1.79	0.63
20:bb:35:VAL:HG22	20:bb:79:PHE:HB2	1.79	0.63
44:I:53:VAL:HG11	53:T:158:PHE:HZ	1.62	0.63
66:h:70:ARG:HA	66:h:83:LEU:HD13	1.79	0.63
76:s:83:ARG:HD2	78:5:2022:C:H5''	1.80	0.63
3:9:151:U:H1'	8:GG:87:ARG:HH12	1.64	0.63
7:EE:246:LEU:HD13	7:EE:251:GLU:HB2	1.78	0.63
8:GG:188:LYS:HE2	8:GG:191:ARG:HE	1.61	0.63
12:LL:96:ILE:HD13	17:XX:10:ALA:HB3	1.81	0.63
13:NN:26:LEU:HD12	13:NN:28:LEU:HD13	1.79	0.63
32:ZZ:74:SER:HA	32:ZZ:79:ILE:HG12	1.79	0.63
39:D:211:LEU:HB3	39:D:219:TYR:HB2	1.79	0.63
41:F:168:LEU:HB2	41:F:186:MET:HE1	1.80	0.63
3:9:948:U:H2'	3:9:949:G:H8	1.64	0.63
8:GG:3:LEU:HD22	8:GG:111:LEU:HD11	1.80	0.63
22:DD:51:LEU:HB3	22:DD:91:VAL:HG22	1.81	0.63
23:FF:73:THR:HG23	23:FF:89:THR:HG23	1.79	0.63
55:V:82:ILE:HG22	55:V:83:ARG:HG3	1.79	0.63
76:s:56:GLY:HA2	78:5:1998:A:H1'	1.80	0.63
3:9:657:U:O2	3:9:706:G:O6	2.17	0.63
4:AA:16:LEU:HB2	28:RR:96:ILE:HA	1.81	0.63
57:Y:80:ILE:HG23	57:Y:101:PRO:HG3	1.79	0.63
58:Z:26:VAL:HG12	58:Z:91:LEU:HD13	1.81	0.63
3:9:1541:U:H5'	23:FF:169:ILE:HB	1.80	0.63
5:BB:137:LEU:HG	5:BB:215:VAL:HG22	1.81	0.63
45:J:24:ILE:HG12	45:J:128:LEU:HA	1.81	0.63
48:N:120:TRP:HE1	48:N:123:GLU:HB3	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:1655:U:H2'	3:9:1656:A:H8	1.63	0.63
7:EE:89:VAL:HG11	7:EE:119:ALA:HB1	1.81	0.63
11:JJ:40:LYS:HD3	21:ee:107:ARG:HH21	1.64	0.63
54:U:40:GLU:HG3	54:U:63:LEU:HD22	1.79	0.63
69:k:24:LYS:HD2	69:k:35:LYS:HD3	1.80	0.63
78:5:1667:G:N2	78:5:2281:U:C4	2.66	0.63
4:AA:41:ARG:HB3	28:RR:128:PHE:HD1	1.64	0.63
8:GG:44:GLU:O	8:GG:119:LYS:HB2	1.98	0.63
17:XX:121:LYS:HE3	17:XX:123:VAL:HG22	1.80	0.63
18:YY:114:MET:HB3	18:YY:122:LYS:HD3	1.81	0.63
78:5:416:U:H2'	78:5:417:G:H5'	1.81	0.63
2:W:39:ALA:HA	2:W:44:ARG:HD2	1.80	0.62
8:GG:221:LYS:HD2	8:GG:225:GLN:CD	2.23	0.62
28:RR:24:LEU:HD13	28:RR:54:VAL:HG13	1.81	0.62
36:A:48:ILE:HD13	74:p:65:ALA:HB2	1.81	0.62
50:P:29:THR:HG22	50:P:119:VAL:HG21	1.80	0.62
73:o:3:ASN:HD21	73:o:94:GLY:HA2	1.64	0.62
78:5:980:U:H3	78:5:1275:G:H1	1.47	0.62
3:9:1418:A:H5'	31:UU:51:LYS:HE3	1.80	0.62
5:BB:137:LEU:HG	5:BB:215:VAL:HG13	1.81	0.62
25:MM:26:LEU:HD23	25:MM:31:LEU:HD21	1.81	0.62
61:c:29:LEU:HD23	61:c:94:LEU:HD13	1.81	0.62
67:i:58:MET:HE1	67:i:94:LEU:HB2	1.81	0.62
3:9:1651:C:H5'	27:QQ:139:ALA:HA	1.81	0.62
6:CC:177:PRO:HD3	15:VV:9:VAL:HG21	1.82	0.62
36:A:208:GLU:HG2	78:5:1629:G:H1	1.64	0.62
42:G:207:LEU:HD11	42:G:275:ILE:HD12	1.81	0.62
77:t:59:THR:HB	78:5:1975:G:N7	2.13	0.62
4:AA:38:ILE:HG21	4:AA:47:TYR:HD1	1.65	0.62
7:EE:133:THR:HG23	7:EE:134:LYS:HG3	1.81	0.62
37:B:19:ARG:HH21	37:B:234:ARG:HG3	1.63	0.62
43:H:101:ILE:HG22	43:H:103:VAL:HG23	1.80	0.62
78:5:1920:C:H3'	78:5:1921:C:H5''	1.80	0.62
26:PP:34:MET:HB2	26:PP:45:LEU:HD12	1.81	0.62
40:E:64:MET:HA	40:E:64:MET:HE3	1.81	0.62
51:Q:33:ARG:HG2	51:Q:48:LEU:HD21	1.81	0.62
55:V:109:LYS:HG3	55:V:111:GLU:HG3	1.80	0.62
76:s:138:PHE:HE2	76:s:178:LEU:HD11	1.64	0.62
78:5:2457:G:H21	78:5:3672:G:H21	1.47	0.62
3:9:1096:G:O6	3:9:1147:U:O4	2.18	0.62
3:9:1293:C:H2'	3:9:1294:A:H8	1.63	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:JJ:50:LEU:HG	11:JJ:105:PHE:HE2	1.64	0.62
23:FF:74:ASN:HA	23:FF:77:MET:HE2	1.82	0.62
26:PP:93:MET:HE2	26:PP:104:GLN:HE21	1.64	0.62
27:QQ:96:TYR:HA	27:QQ:100:VAL:HG22	1.80	0.62
36:A:244:GLY:HA3	78:5:3746:A:H5''	1.81	0.62
41:F:56:TYR:HD2	41:F:187:GLU:HG3	1.65	0.62
41:F:153:ILE:HG13	41:F:190:ILE:HG12	1.79	0.62
1:R:115:ILE:HB	1:R:119:MET:HE3	1.81	0.62
3:9:305:C:H5''	10:II:54:LYS:HE3	1.79	0.62
3:9:736:U:H2'	3:9:737:U:H5''	1.82	0.62
11:JJ:136:ARG:HH11	11:JJ:160:SER:HA	1.64	0.62
25:MM:63:LYS:HB3	35:ff:108:VAL:HG21	1.82	0.62
36:A:222:PRO:HG3	78:5:3749:C:H1'	1.80	0.62
42:G:140:LEU:HD21	42:G:144:THR:HG22	1.81	0.62
78:5:2638:G:H22	78:5:2697:A:H61	1.47	0.62
2:W:22:ALA:HB2	2:W:28:VAL:HG22	1.81	0.62
3:9:524:G:H2'	3:9:525:G:H8	1.64	0.62
3:9:843:A:H5'	13:NN:7:PRO:HG3	1.80	0.62
3:9:1326:U:H5'	35:ff:130:VAL:HG13	1.81	0.62
5:BB:188:LEU:HD21	5:BB:193:ILE:HD12	1.80	0.62
9:HH:144:ILE:HG12	9:HH:154:ILE:HG13	1.81	0.62
19:aa:12:LYS:HA	19:aa:15:ARG:HH21	1.64	0.62
20:bb:30:SER:HB3	20:bb:49:HIS:HD2	1.65	0.62
38:C:40:VAL:HG21	38:C:123:ALA:HB2	1.80	0.62
38:C:101:MET:HE1	38:C:104:PRO:HA	1.82	0.62
57:Y:55:VAL:HG13	57:Y:104:VAL:HG13	1.80	0.62
65:g:5:LEU:HD23	65:g:30:ILE:HG22	1.79	0.62
69:k:23:VAL:HB	69:k:64:LEU:HD21	1.81	0.62
77:t:32:ILE:HA	77:t:35:LEU:HB2	1.82	0.62
3:9:1404:A:H61	22:DD:161:GLY:HA2	1.64	0.62
11:JJ:86:VAL:HG11	11:JJ:100:LEU:HD21	1.81	0.62
3:9:126:G:H5''	8:GG:199:THR:HG23	1.78	0.62
3:9:1633:C:H5''	30:TT:41:LYS:HD2	1.81	0.62
16:WW:31:SER:H	16:WW:34:ILE:HD12	1.64	0.62
30:TT:62:ARG:HH11	30:TT:62:ARG:HB2	1.65	0.62
39:D:265:ARG:HG3	79:7:1:G:H4'	1.81	0.62
78:5:3610:A:H2'	78:5:3611:A:H8	1.64	0.62
83:PT:40:C:O2	83:PT:40:C:H2'	1.99	0.62
3:9:683:A:H61	3:9:691:U:H3	1.47	0.61
37:B:91:GLY:HA3	37:B:153:MET:HE3	1.82	0.61
53:T:129:LYS:HE3	78:5:1836:G:H4'	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:c:33:GLN:HA	61:c:36:LYS:HE2	1.82	0.61
67:i:60:LEU:HA	67:i:63:VAL:HG22	1.81	0.61
78:5:2088:A:H5''	78:5:2089:G:H3'	1.81	0.61
78:5:4274:A:H2'	78:5:4275:G:H8	1.64	0.61
3:9:1116:G:O6	3:9:1125:U:O2	2.17	0.61
23:FF:35:LEU:HD22	23:FF:147:VAL:HG23	1.82	0.61
23:FF:122:ARG:HD3	33:cc:59:LEU:HD21	1.82	0.61
28:RR:59:LYS:HB3	28:RR:63:ARG:HH12	1.65	0.61
37:B:161:ARG:HG2	37:B:184:GLN:HA	1.81	0.61
50:P:123:PRO:HG3	80:8:14:U:H4'	1.82	0.61
61:c:43:ALA:HA	61:c:97:ILE:HA	1.82	0.61
65:g:9:ARG:HE	78:5:2441:C:H4'	1.65	0.61
76:s:119:CYS:HA	76:s:163:THR:HG22	1.81	0.61
78:5:2573:A:N7	78:5:2761:U:O4	2.33	0.61
80:8:8:U:H2'	80:8:9:A:H8	1.63	0.61
6:CC:70:VAL:HG11	6:CC:93:ILE:HG23	1.82	0.61
6:CC:166:ARG:HG2	6:CC:181:PRO:HG3	1.81	0.61
15:VV:38:GLU:HG2	15:VV:49:GLN:HE21	1.65	0.61
53:T:28:ALA:HA	53:T:31:MET:HG2	1.81	0.61
78:5:2664:G:H4'	78:5:2677:G:H4'	1.81	0.61
1:R:110:ARG:HH21	1:R:111:GLU:HG2	1.64	0.61
7:EE:44:LEU:HD21	7:EE:70:ILE:HG21	1.81	0.61
10:II:132:GLU:HG2	10:II:135:GLU:HB3	1.80	0.61
12:LL:47:PRO:HG2	12:LL:50:ALA:HB2	1.83	0.61
13:NN:98:VAL:HB	13:NN:115:LEU:HD13	1.82	0.61
38:C:28:PHE:HA	38:C:129:ALA:HA	1.81	0.61
77:t:147:HIS:CE1	78:5:1994:C:H1'	2.36	0.61
83:PT:30:G:H5''	83:PT:31:C:O5'	2.00	0.61
83:PT:40:C:H4'	84:ET:35:G:O2'	2.00	0.61
84:ET:30:G:H2'	84:ET:31:C:C5	2.35	0.61
3:9:29:G:H4'	17:XX:129:SER:HB3	1.81	0.61
3:9:378:U:H4'	8:GG:76:LEU:HD11	1.81	0.61
3:9:1541:U:H5''	23:FF:92:ILE:HD11	1.82	0.61
29:SS:59:LEU:HD11	29:SS:64:VAL:HG12	1.82	0.61
44:I:184:MET:HA	44:I:187:GLU:HG2	1.82	0.61
53:T:45:MET:H	53:T:95:HIS:HD2	1.48	0.61
55:V:82:ILE:HG21	55:V:121:VAL:HG22	1.81	0.61
78:5:920:C:H2'	78:5:921:C:H6	1.66	0.61
3:9:125:C:C6	8:GG:198:ARG:HD3	2.36	0.61
38:C:74:ALA:H	38:C:78:ARG:HH21	1.49	0.61
44:I:98:ARG:HB3	44:I:120:GLY:HA3	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:M:12:VAL:HG11	47:M:24:LEU:HD13	1.82	0.61
77:t:138:SER:HB2	78:5:1976:G:N3	2.16	0.61
78:5:1361:G:H2'	78:5:1362:G:H8	1.65	0.61
3:9:1055:C:H5''	3:9:1062:C:H1'	1.82	0.61
10:II:36:THR:HG23	10:II:96:LEU:HB2	1.82	0.61
11:JJ:93:LYS:HB3	11:JJ:96:TYR:HD2	1.64	0.61
47:M:5:ARG:HB3	47:M:57:LEU:HD11	1.83	0.61
48:N:104:GLU:HA	48:N:160:GLU:HG3	1.83	0.61
3:9:1646:A:H1'	84:ET:39:G:N1	1.77	0.61
6:CC:62:PRO:HD3	6:CC:71:LYS:HD2	1.83	0.61
28:RR:16:ILE:HD13	28:RR:38:ILE:HD11	1.81	0.61
29:SS:114:LEU:HD23	29:SS:117:ILE:HD11	1.83	0.61
65:g:26:PRO:HD2	78:5:2521:G:H4'	1.83	0.61
72:n:20:MET:HA	72:n:20:MET:HE2	1.82	0.61
3:9:1060:C:H1'	83:PT:34:A:N6	2.16	0.61
39:D:39:GLN:HG2	39:D:48:LYS:HB2	1.83	0.61
42:G:136:PHE:HA	42:G:236:ILE:HD13	1.83	0.61
52:S:154:LEU:HB3	52:S:157:ARG:HD3	1.83	0.61
58:Z:26:VAL:HG21	58:Z:96:VAL:HG11	1.82	0.61
77:t:20:GLY:HA2	77:t:51:GLY:HA2	1.82	0.61
77:t:110:VAL:HA	77:t:129:ILE:HD11	1.82	0.61
4:AA:41:ARG:HH11	28:RR:126:MET:HG3	1.65	0.61
39:D:157:ASN:HB3	39:D:160:PHE:HD2	1.65	0.61
59:a:110:LYS:HG2	59:a:112:LEU:HD21	1.81	0.61
67:i:73:ILE:HD11	67:i:90:LEU:HD12	1.82	0.61
77:t:106:PHE:HA	77:t:109:ILE:HD12	1.81	0.61
78:5:2557:G:O6	78:5:2570:U:O4	2.18	0.61
3:9:557:C:H1'	21:ee:89:THR:HG21	1.82	0.60
3:9:1548:C:H5''	30:TT:62:ARG:HE	1.67	0.60
6:CC:273:LEU:HA	6:CC:276:THR:HG22	1.82	0.60
55:V:62:MET:HE3	55:V:76:VAL:HG12	1.82	0.60
78:5:759:G:O6	78:5:904:G:C6	2.49	0.60
78:5:1427:A:H4'	78:5:1694:C:H5'	1.83	0.60
78:5:2467:U:H4'	78:5:2468:U:H5'	1.83	0.60
3:9:122:G:H21	7:EE:146:THR:HG21	1.67	0.60
6:CC:127:PHE:HD1	6:CC:141:VAL:HG22	1.66	0.60
24:KK:15:LEU:HD22	24:KK:49:MET:HE1	1.83	0.60
31:UU:59:LYS:HB2	31:UU:84:ILE:HG23	1.83	0.60
42:G:233:PRO:HG2	42:G:272:VAL:HG13	1.83	0.60
77:t:126:SER:O	77:t:130:LYS:HG3	2.00	0.60
3:9:126:G:OP2	8:GG:195:LYS:HA	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:529:A:H1'	3:9:563:C:H1'	1.83	0.60
7:EE:160:ILE:HD12	7:EE:169:ILE:HG22	1.83	0.60
12:LL:126:VAL:HG23	12:LL:145:VAL:HG22	1.83	0.60
29:SS:47:LYS:HA	29:SS:47:LYS:HE2	1.83	0.60
39:D:36:LEU:HD23	78:5:4325:A:H1'	1.83	0.60
48:N:125:SER:HB3	78:5:3937:C:H1'	1.82	0.60
63:e:99:ILE:HG21	63:e:108:ARG:HG3	1.82	0.60
76:s:57:LYS:HB3	76:s:60:MET:HG2	1.83	0.60
78:5:4272:G:H3'	78:5:4273:A:H5''	1.84	0.60
81:EF:715:DDE:HAD2	83:PT:36:C:H1'	1.67	0.60
3:9:605:U:H4'	17:XX:9:THR:HG22	1.82	0.60
8:GG:2:LYS:HB3	8:GG:15:LEU:HD21	1.83	0.60
44:I:190:LEU:HB3	44:I:197:VAL:HG21	1.82	0.60
53:T:11:THR:HG22	53:T:14:MET:HE3	1.82	0.60
77:t:154:ASP:CA	77:t:158:GLY:CA	2.61	0.60
23:FF:50:PRO:HG2	23:FF:90:VAL:HG22	1.82	0.60
29:SS:121:ARG:HG3	29:SS:131:VAL:HG21	1.82	0.60
58:Z:11:VAL:HG11	58:Z:80:LEU:HD22	1.83	0.60
78:5:1794:A:H5''	78:5:4214:A:H61	1.66	0.60
78:5:4736:C:H2'	78:5:4737:G:H8	1.66	0.60
8:GG:220:ALA:O	8:GG:224:ARG:NH1	2.34	0.60
25:MM:64:LEU:HD22	35:ff:108:VAL:HB	1.84	0.60
36:A:84:THR:HG23	74:p:63:THR:HB	1.83	0.60
37:B:243:LYS:HE2	78:5:4526:U:H4'	1.83	0.60
43:H:115:ARG:HG2	43:H:123:ILE:HG22	1.83	0.60
83:PT:40:C:OP1	84:ET:36:C:H4'	2.01	0.60
18:YY:56:PHE:HE2	18:YY:82:ALA:HB1	1.67	0.60
57:Y:56:GLN:HG2	57:Y:67:ILE:HG12	1.84	0.60
77:t:53:TRP:CH2	77:t:75:PRO:HG3	2.36	0.60
3:9:976:G:H3'	3:9:977:G:H21	1.67	0.60
3:9:1019:U:O2	3:9:1035:A:N7	2.35	0.60
6:CC:202:THR:HB	6:CC:221:ASP:HB3	1.84	0.60
9:HH:31:GLU:HA	9:HH:40:LEU:HD12	1.82	0.60
18:YY:86:GLU:HB3	18:YY:91:LEU:HD21	1.84	0.60
42:G:201:GLU:HA	42:G:230:MET:HE2	1.83	0.60
56:X:83:THR:HG21	78:5:2434:G:H4'	1.82	0.60
77:t:97:ASN:O	77:t:98:ILE:C	2.43	0.60
3:9:721:G:H21	9:HH:114:GLN:HE22	1.50	0.60
76:s:54:LEU:HD21	76:s:90:PHE:HD2	1.66	0.60
78:5:679:C:H2'	78:5:680:G:C8	2.36	0.60
4:AA:78:SER:HB2	4:AA:87:VAL:HG11	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AA:102:ARG:HA	4:AA:102:ARG:HH11	1.67	0.59
24:KK:35:LEU:HD11	24:KK:38:LYS:HD3	1.84	0.59
37:B:160:ILE:HD12	37:B:193:LYS:HB3	1.83	0.59
39:D:15:ARG:HH11	78:5:1743:A:H1'	1.66	0.59
63:e:90:MET:HA	63:e:90:MET:HE3	1.83	0.59
70:l:43:HIS:HB3	70:l:46:ARG:HD2	1.82	0.59
2:W:19:ARG:HA	55:V:95:PHE:HB2	1.84	0.59
3:9:76:U:H5'	8:GG:155:GLN:HE21	1.66	0.59
3:9:1580:C:H3'	3:9:1581:G:H5''	1.84	0.59
4:AA:76:VAL:HG12	4:AA:87:VAL:HB	1.83	0.59
7:EE:45:ILE:HG13	7:EE:61:VAL:HG11	1.82	0.59
37:B:240:LEU:HB3	37:B:244:THR:HG21	1.83	0.59
62:d:33:ILE:HD11	62:d:41:ARG:HA	1.84	0.59
76:s:39:GLN:HG2	76:s:107:VAL:HB	1.84	0.59
77:t:38:SER:HB3	77:t:41:LYS:HB3	1.83	0.59
78:5:3728:A:H2'	78:5:3729:U:H5'	1.84	0.59
3:9:1664:G:H5''	34:dd:33:LYS:HB2	1.84	0.59
8:GG:194:LEU:O	8:GG:198:ARG:N	2.25	0.59
39:D:261:VAL:HG12	39:D:263:LYS:H	1.66	0.59
44:I:91:LEU:HD13	44:I:129:VAL:HG22	1.85	0.59
47:M:47:ARG:HH22	47:M:69:ARG:HA	1.67	0.59
4:AA:108:PHE:HD2	4:AA:136:GLU:HB3	1.66	0.59
6:CC:142:LYS:HG2	6:CC:153:GLY:HA3	1.85	0.59
6:CC:194:ARG:HG2	6:CC:196:ILE:HD11	1.84	0.59
37:B:92:TYR:HB3	37:B:99:LEU:HD22	1.83	0.59
71:m:67:LYS:HG3	71:m:76:ARG:HD3	1.85	0.59
78:5:4448:G:H5''	78:5:4449:A:H5'	1.85	0.59
16:WW:94:LEU:HD21	16:WW:102:ILE:HG13	1.84	0.59
39:D:155:THR:HB	79:7:36:C:H5'	1.85	0.59
44:I:205:PRO:HG2	44:I:208:LYS:HB2	1.84	0.59
47:M:116:LYS:HG2	49:O:196:LEU:HD21	1.84	0.59
51:Q:65:ARG:HA	51:Q:68:ARG:HG2	1.85	0.59
56:X:77:ILE:HD12	56:X:116:LEU:HD12	1.85	0.59
65:g:59:VAL:HG21	65:g:63:VAL:HG11	1.84	0.59
77:t:112:ILE:HA	77:t:115:GLN:CD	2.28	0.59
78:5:312:G:H1	78:5:325:U:H3	1.49	0.59
78:5:966:A:H5''	78:5:967:C:H6	1.67	0.59
3:9:1566:U:O2	3:9:1581:G:O6	2.20	0.59
4:AA:52:LYS:HZ3	28:RR:109:LEU:HD22	1.66	0.59
8:GG:46:LYS:H	8:GG:48:TYR:HD1	1.50	0.59
23:FF:92:ILE:HG21	23:FF:169:ILE:HG22	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:B:240:LEU:HB2	37:B:248:LEU:HA	1.83	0.59
40:E:118:TYR:HE1	75:r:119:ARG:HB2	1.66	0.59
40:E:147:ILE:HD13	40:E:176:LEU:HD11	1.82	0.59
51:Q:179:GLY:H	59:a:51:GLY:HA2	1.67	0.59
84:ET:5:G:C6	84:ET:6:U:C4	2.91	0.59
25:MM:49:LEU:HD23	25:MM:75:ASN:HB2	1.85	0.59
31:UU:26:SER:HB3	31:UU:32:LEU:HB2	1.84	0.59
47:M:90:ARG:HA	47:M:93:LYS:HE2	1.84	0.59
8:GG:209:TYR:O	8:GG:213:LEU:HB3	2.03	0.59
38:C:24:LEU:HD23	38:C:29:LYS:HE2	1.84	0.59
42:G:220:VAL:HG13	42:G:223:LEU:HD12	1.84	0.59
49:O:7:LEU:HB2	49:O:33:VAL:HG22	1.84	0.59
51:Q:70:MET:HE2	51:Q:98:LEU:HD22	1.83	0.59
66:h:21:LEU:HD11	66:h:25:LYS:HE3	1.85	0.59
3:9:263:A:H2'	3:9:264:C:H5	1.67	0.59
4:AA:46:ILE:O	28:RR:128:PHE:HB2	2.01	0.59
11:JJ:37:LEU:HD23	11:JJ:42:GLU:HB2	1.85	0.59
15:VV:36:VAL:HG11	15:VV:78:ILE:HG21	1.85	0.59
22:DD:158:ILE:HG13	22:DD:164:VAL:HG23	1.83	0.59
36:A:3:ARG:H	36:A:207:VAL:HG23	1.65	0.59
37:B:95:THR:HG22	78:5:4910:A:H4'	1.85	0.59
38:C:128:LEU:HD22	38:C:252:TRP:HH2	1.68	0.59
44:I:153:ARG:HH12	44:I:154:ARG:HG2	1.66	0.59
65:g:21:ARG:HH11	65:g:35:THR:HG22	1.67	0.59
77:t:131:GLU:HG3	78:5:1973:G:H4'	1.83	0.59
78:5:4630:G:H2'	78:5:4631:G:H8	1.67	0.59
78:5:4993:G:O6	78:5:5058:A:N1	2.36	0.59
3:9:1383:U:H2'	3:9:1384:U:C6	2.38	0.59
40:E:264:ILE:HA	40:E:270:LEU:HD23	1.85	0.59
74:p:20:ALA:HB2	78:5:2874:U:H1'	1.85	0.59
78:5:1625:G:H1	78:5:3918:G:H5''	1.67	0.59
3:9:1092:U:H2'	3:9:1093:G:O4'	2.03	0.58
6:CC:144:SER:HB3	6:CC:150:ALA:HB2	1.85	0.58
8:GG:121:ILE:HG13	8:GG:123:GLY:H	1.67	0.58
14:OO:41:PHE:HA	14:OO:57:THR:HG22	1.85	0.58
19:aa:44:ILE:HD12	19:aa:45:VAL:HG13	1.83	0.58
38:C:207:PRO:HB3	38:C:249:PHE:HD2	1.68	0.58
42:G:210:ILE:HG23	42:G:220:VAL:HG11	1.84	0.58
75:r:97:ILE:HD13	75:r:107:ARG:HA	1.85	0.58
75:r:118:LEU:HA	75:r:121:GLN:HG2	1.85	0.58
82:1:26:G:H22	83:PT:37:A:H1'	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:980:A:H4'	19:aa:13:LYS:HG3	1.85	0.58
5:BB:195:LYS:HG3	5:BB:199:LYS:HE3	1.83	0.58
8:GG:68:LEU:HD12	8:GG:101:ILE:HD11	1.85	0.58
39:D:104:LEU:HB2	39:D:247:ILE:HD13	1.85	0.58
48:N:141:ALA:HB2	78:5:124:C:H5'	1.85	0.58
49:O:116:LYS:HD3	52:S:169:THR:HG21	1.83	0.58
78:5:1338:G:H4'	78:5:1339:U:C6	2.38	0.58
78:5:2897:G:H2'	78:5:2898:G:H8	1.67	0.58
3:9:1251:G:O2'	83:PT:30:G:H4'	2.03	0.58
7:EE:179:ASN:HA	7:EE:231:GLY:H	1.67	0.58
7:EE:222:LEU:HD23	7:EE:225:ILE:HB	1.85	0.58
8:GG:159:ARG:HB2	8:GG:171:THR:HG22	1.86	0.58
17:XX:102:VAL:HG22	17:XX:122:VAL:HG22	1.84	0.58
22:DD:132:LYS:HG3	22:DD:156:LEU:HB3	1.85	0.58
28:RR:41:ILE:HD12	28:RR:47:ARG:HG3	1.85	0.58
36:A:116:LEU:HA	36:A:164:ALA:HB2	1.84	0.58
46:L:46:ILE:HG22	46:L:49:ARG:HH11	1.68	0.58
57:Y:59:ARG:HE	78:5:209:U:H4'	1.68	0.58
70:I:45:ARG:HH21	78:5:2796:G:H5'	1.68	0.58
78:5:3635:A:H2'	78:5:3636:C:H5'	1.85	0.58
78:5:4639:G:O6	78:5:4660:G:O6	2.21	0.58
1:R:102:LEU:HD12	1:R:127:VAL:HG13	1.85	0.58
3:9:618:G:H1	3:9:625:U:H3	1.50	0.58
3:9:877:A:H2'	3:9:878:A:H8	1.68	0.58
5:BB:201:CYS:HB2	5:BB:207:LEU:HD21	1.84	0.58
8:GG:122:PRO:HA	8:GG:126:ASP:HB2	1.84	0.58
17:XX:128:VAL:HG11	17:XX:133:LEU:HD21	1.84	0.58
39:D:284:LYS:HG2	44:I:206:LEU:HD11	1.84	0.58
44:I:184:MET:HE2	44:I:190:LEU:HG	1.85	0.58
49:O:196:LEU:HD23	49:O:202:LEU:HD11	1.85	0.58
61:c:28:VAL:HG21	61:c:37:MET:HG2	1.84	0.58
68:j:22:CYS:HB3	68:j:37:CYS:SG	2.42	0.58
76:s:26:LYS:HD2	76:s:95:LEU:HB3	1.85	0.58
83:PT:36:C:H2'	83:PT:37:A:H8	1.67	0.58
2:W:56:ARG:HH22	2:W:62:GLY:HA3	1.67	0.58
3:9:486:U:H2'	3:9:487:G:C8	2.39	0.58
27:QQ:58:LEU:HB3	27:QQ:62:ARG:HG3	1.84	0.58
77:t:32:ILE:HD13	77:t:42:VAL:HG21	1.85	0.58
78:5:1780:A:H3'	78:5:1781:U:H5''	1.85	0.58
29:SS:84:LEU:HD22	29:SS:97:GLN:HB2	1.85	0.58
53:T:35:LYS:HE3	78:5:1824:G:H5''	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:28:U:O4	3:9:570:G:O6	2.22	0.58
3:9:136:G:H2'	8:GG:140:ARG:HH22	1.67	0.58
11:JJ:144:ILE:HG22	11:JJ:146:SER:H	1.68	0.58
19:aa:45:VAL:HG11	19:aa:53:ILE:HD12	1.86	0.58
20:bb:56:CYS:HB2	20:bb:63:LEU:HD11	1.86	0.58
57:Y:16:LYS:HB2	80:8:23:C:H4'	1.86	0.58
73:o:36:GLN:HB2	78:5:4363:A:H5''	1.85	0.58
77:t:128:THR:O	77:t:132:ILE:HG13	2.04	0.58
78:5:4486:C:H2'	78:5:4487:A:O4'	2.03	0.58
14:OO:147:ARG:HB3	14:OO:150:ARG:HE	1.68	0.58
37:B:43:LEU:HD23	37:B:183:ILE:HG21	1.84	0.58
62:d:44:ARG:HA	62:d:44:ARG:HH11	1.68	0.58
77:t:85:LEU:O	77:t:86:LYS:C	2.47	0.58
78:5:717:U:H3	78:5:951:G:H1	1.51	0.58
78:5:4414:A:H2'	78:5:4422:A:N1	2.18	0.58
3:9:857:G:H2'	3:9:858:A:H8	1.69	0.58
3:9:948:U:H2'	3:9:949:G:C8	2.38	0.58
3:9:1104:A:H1'	8:GG:66:GLY:HA2	1.85	0.58
7:EE:192:ILE:HD13	7:EE:238:LEU:HD23	1.86	0.58
8:GG:39:ASP:HA	8:GG:45:TRP:O	2.04	0.58
18:YY:17:LEU:HD12	18:YY:18:LEU:HG	1.85	0.58
27:QQ:12:VAL:HG21	27:QQ:91:ALA:HA	1.86	0.58
64:f:45:LYS:HD3	64:f:107:PRO:HD2	1.84	0.58
78:5:1514:U:H2'	78:5:1515:A:C8	2.39	0.58
78:5:4274:A:H2'	78:5:4275:G:C8	2.39	0.58
78:5:4499:G:H2'	78:5:4500:U:H4'	1.86	0.58
3:9:12:U:H1'	3:9:1372:G:O2'	2.04	0.58
3:9:540:A:H1'	21:ee:85:VAL:HG23	1.85	0.58
3:9:853:C:H2'	3:9:854:C:C6	2.39	0.58
3:9:1545:U:H4'	30:TT:47:PRO:HA	1.85	0.58
5:BB:171:ILE:HD13	5:BB:197:ILE:HA	1.86	0.58
26:PP:85:ILE:HD13	26:PP:107:ILE:HG22	1.84	0.58
40:E:50:PRO:HG2	40:E:58:ARG:HG3	1.86	0.58
43:H:132:VAL:HG13	43:H:154:VAL:HG22	1.85	0.58
48:N:120:TRP:HZ2	48:N:123:GLU:HG2	1.69	0.58
78:5:324:A:H2'	78:5:325:U:C6	2.39	0.58
78:5:4872:G:H4'	78:5:4873:G:H5'	1.86	0.58
3:9:776:G:H2'	3:9:777:C:C6	2.39	0.57
3:9:1662:G:O6	3:9:1674:U:O4	2.22	0.57
11:JJ:108:ARG:HH12	11:JJ:151:LEU:HD13	1.68	0.57
78:5:1800:U:H2'	78:5:1801:A:C8	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:5:2592:U:H2'	78:5:2593:C:H5'	1.86	0.57
2:W:14:TYR:H	2:W:17:HIS:HB2	1.69	0.57
3:9:788:C:H2'	3:9:789:G:C8	2.40	0.57
3:9:1233:A:H2'	3:9:1234:C:C6	2.40	0.57
8:GG:221:LYS:HD3	8:GG:225:GLN:NE2	2.19	0.57
11:JJ:42:GLU:HA	11:JJ:45:ARG:HG2	1.87	0.57
41:F:28:LYS:HE2	41:F:32:LEU:HD21	1.84	0.57
62:d:118:GLN:HE22	78:5:4997:G:H1'	1.68	0.57
77:t:109:ILE:HA	77:t:112:ILE:HD12	1.86	0.57
78:5:2518:G:H1'	78:5:2539:C:H1'	1.85	0.57
78:5:3873:G:H2'	78:5:3874:G:C8	2.39	0.57
78:5:4519:C:H5''	78:5:4520:G:H5''	1.86	0.57
6:CC:65:LYS:HB3	6:CC:273:LEU:HD13	1.85	0.57
8:GG:192:ILE:HA	8:GG:195:LYS:HB2	1.85	0.57
11:JJ:135:ILE:HA	11:JJ:159:PHE:HA	1.84	0.57
30:TT:6:VAL:HG12	30:TT:135:ALA:HB2	1.86	0.57
46:L:150:LEU:HD23	46:L:154:VAL:HB	1.86	0.57
55:V:57:VAL:HG23	55:V:84:GLN:HE21	1.69	0.57
56:X:80:PRO:HG2	56:X:155:ILE:HG21	1.85	0.57
56:X:121:VAL:HG13	56:X:138:VAL:HG13	1.86	0.57
78:5:1330:A:H5''	78:5:3865:A:H5''	1.86	0.57
1:R:18:GLY:HA3	78:5:2822:G:H5''	1.86	0.57
7:EE:131:VAL:HG13	7:EE:135:GLY:HA2	1.87	0.57
8:GG:221:LYS:HB2	8:GG:224:ARG:NH2	2.19	0.57
16:WW:41:MET:HE3	16:WW:47:ILE:HD13	1.84	0.57
22:DD:168:VAL:HG12	22:DD:189:MET:HA	1.87	0.57
54:U:36:ALA:HB3	54:U:65:ARG:HH11	1.68	0.57
76:s:127:ASN:HA	76:s:153:GLU:HA	1.87	0.57
78:5:33:A:H3'	78:5:47:A:H61	1.70	0.57
78:5:1933:G:H2'	78:5:1934:A:C8	2.40	0.57
3:9:432:A:H3'	3:9:433:G:H8	1.69	0.57
3:9:505:U:H4'	18:YY:66:GLY:HA2	1.85	0.57
3:9:680:A:H5'	11:JJ:8:VAL:HG12	1.86	0.57
4:AA:41:ARG:HB2	28:RR:127:ASN:O	2.04	0.57
7:EE:125:LYS:HA	7:EE:159:THR:HG22	1.86	0.57
7:EE:149:TYR:CE2	8:GG:205:GLU:HB3	2.39	0.57
11:JJ:170:PRO:HB3	11:JJ:174:LYS:HD3	1.85	0.57
42:G:87:LYS:HG2	42:G:89:PRO:HD3	1.86	0.57
69:k:37:ARG:HH21	69:k:42:LEU:HB2	1.68	0.57
75:r:3:ALA:HA	75:r:6:GLN:HE21	1.69	0.57
78:5:2722:G:O2'	78:5:3603:G:H4'	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:864:U:H1'	13:NN:52:VAL:HG23	1.86	0.57
3:9:934:A:H5'	3:9:935:U:H5	1.69	0.57
22:DD:177:LEU:HD13	22:DD:182:LEU:HD13	1.85	0.57
40:E:140:VAL:HG13	40:E:142:LYS:HE3	1.86	0.57
45:J:147:ARG:HH22	79:7:57:C:H4'	1.69	0.57
49:O:14:HIS:HD2	49:O:19:LEU:HD13	1.70	0.57
58:Z:54:THR:HG21	78:5:4128:A:H5'	1.87	0.57
61:c:21:VAL:HG21	61:c:104:ILE:HG21	1.86	0.57
78:5:325:U:H2'	78:5:326:C:C6	2.39	0.57
78:5:2685:C:H3'	78:5:2686:G:H5''	1.86	0.57
78:5:3764:U:H3'	78:5:3765:G:H8	1.69	0.57
84:ET:5:G:C6	84:ET:6:U:O4	2.57	0.57
5:BB:36:PRO:HG3	5:BB:38:MET:HE2	1.85	0.57
6:CC:272:HIS:HA	6:CC:275:LYS:HE2	1.86	0.57
17:XX:107:ARG:HG3	17:XX:112:VAL:HG22	1.86	0.57
18:YY:14:THR:HG22	18:YY:21:LYS:HD2	1.87	0.57
36:A:179:ILE:HD12	36:A:184:ARG:HB3	1.86	0.57
37:B:317:LEU:HB3	78:5:5001:U:H4'	1.86	0.57
42:G:87:LYS:HE3	78:5:4128:A:H2	1.69	0.57
42:G:270:LYS:HE2	42:G:270:LYS:HA	1.87	0.57
49:O:14:HIS:HE1	49:O:119:VAL:HG13	1.70	0.57
78:5:3610:A:H2'	78:5:3611:A:C8	2.39	0.57
78:5:4415:A:H2'	78:5:4416:G:O4'	2.03	0.57
82:1:27:C:H42	83:PT:35:G:H1	1.53	0.57
5:BB:40:ASN:HB3	5:BB:75:GLN:HA	1.87	0.57
9:HH:144:ILE:HB	16:WW:52:ILE:HG13	1.86	0.57
23:FF:86:LYS:HA	23:FF:89:THR:HG22	1.87	0.57
45:J:55:TYR:HA	45:J:64:ARG:HB2	1.87	0.57
46:L:55:ILE:HG21	46:L:155:MET:HE2	1.87	0.57
77:t:92:ARG:HH12	77:t:93:LYS:HD3	1.58	0.57
77:t:109:ILE:HG23	77:t:132:ILE:HG21	1.84	0.57
78:5:4240:G:H2'	78:5:4241:C:C6	2.39	0.57
3:9:789:G:H2'	3:9:790:U:C6	2.40	0.57
3:9:1654:G:H5'	27:QQ:125:ARG:HB3	1.87	0.57
16:WW:18:GLU:HG3	16:WW:69:LEU:HD23	1.87	0.57
24:KK:35:LEU:HD12	24:KK:40:VAL:HG21	1.85	0.57
26:PP:18:ARG:HG3	26:PP:36:LEU:HG	1.87	0.57
28:RR:41:ILE:HD13	28:RR:47:ARG:HA	1.87	0.57
38:C:133:LEU:HD22	38:C:136:LEU:HD11	1.87	0.57
41:F:53:ALA:HA	41:F:187:GLU:HG2	1.85	0.57
45:J:35:ARG:HD2	45:J:123:ILE:HA	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:t:92:ARG:HD2	77:t:93:LYS:HG3	1.85	0.57
78:5:1725:U:H2'	78:5:1726:U:C6	2.40	0.57
78:5:4594:U:H2'	78:5:4595:G:H8	1.70	0.57
1:R:40:GLN:O	1:R:44:LEU:HG	2.05	0.57
3:9:445:A:H2'	3:9:446:A:O4'	2.05	0.57
3:9:1388:U:H2'	3:9:1389:C:C6	2.40	0.57
3:9:1568:C:H2'	3:9:1569:G:C8	2.40	0.57
12:LL:61:PRO:HB3	12:LL:68:ILE:HD11	1.86	0.57
14:OO:95:ILE:HB	14:OO:129:ILE:HG12	1.87	0.57
38:C:138:MET:HE2	75:r:43:LEU:HD11	1.87	0.57
42:G:201:GLU:HG3	42:G:226:LEU:HD21	1.87	0.57
45:J:109:ILE:HD11	45:J:128:LEU:HG	1.86	0.57
59:a:32:ARG:HD2	78:5:37:U:H4'	1.86	0.57
62:d:86:VAL:HG13	62:d:106:VAL:HG13	1.86	0.57
76:s:34:ASN:HA	78:5:1968:G:O3'	2.05	0.57
78:5:1306:C:H2'	78:5:1307:A:C8	2.40	0.57
78:5:3880:G:H2'	78:5:3881:G:C8	2.40	0.57
78:5:4099:G:H22	78:5:4109:G:H22	1.52	0.57
3:9:625:U:H2'	3:9:626:C:C6	2.39	0.56
8:GG:38:ALA:HB1	8:GG:45:TRP:HB3	1.86	0.56
8:GG:189:ARG:HA	8:GG:192:ILE:HG12	1.86	0.56
9:HH:61:ILE:HD11	9:HH:95:ILE:HB	1.86	0.56
13:NN:54:LEU:HA	13:NN:58:HIS:HD1	1.70	0.56
23:FF:115:ALA:HB1	23:FF:180:ALA:HB3	1.86	0.56
36:A:92:LYS:HG3	36:A:106:THR:HG21	1.86	0.56
47:M:57:LEU:HD23	47:M:57:LEU:H	1.70	0.56
61:c:37:MET:HG2	61:c:97:ILE:HD11	1.87	0.56
76:s:143:ILE:HG22	76:s:145:THR:HG23	1.87	0.56
78:5:337:U:H2'	78:5:338:A:H8	1.69	0.56
78:5:1445:U:H2'	78:5:1446:C:C6	2.40	0.56
78:5:3721:U:H2'	78:5:3722:G:H8	1.70	0.56
80:8:8:U:H2'	80:8:9:A:C8	2.40	0.56
4:AA:130:ASP:HB3	4:AA:133:PRO:HG2	1.86	0.56
23:FF:102:LEU:HD11	32:ZZ:100:VAL:HG21	1.85	0.56
44:I:129:VAL:HG11	44:I:135:ILE:HD11	1.86	0.56
45:J:32:ARG:HD2	45:J:35:ARG:HH21	1.70	0.56
78:5:273:U:H2'	78:5:274:C:C6	2.40	0.56
78:5:2492:C:H2'	78:5:2493:G:C8	2.40	0.56
78:5:3608:A:H2'	78:5:3609:G:H8	1.70	0.56
3:9:542:C:H2'	3:9:543:A:O4'	2.05	0.56
3:9:876:G:N2	78:5:1563:A:H61	2.03	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:1204:U:H2'	3:9:1205:G:H8	1.69	0.56
3:9:1567:A:H5'	3:9:1589:C:H4'	1.87	0.56
4:AA:23:THR:HA	4:AA:164:ASN:HB3	1.87	0.56
4:AA:28:THR:HA	4:AA:46:ILE:CD1	2.35	0.56
4:AA:45:GLY:H	28:RR:128:PHE:H	1.53	0.56
4:AA:46:ILE:CG1	28:RR:129:LYS:HG3	2.35	0.56
8:GG:191:ARG:HB3	8:GG:191:ARG:HH11	1.69	0.56
19:aa:47:ALA:HB3	33:cc:66:ARG:HG2	1.86	0.56
23:FF:165:ASN:HD22	23:FF:167:LYS:H	1.53	0.56
27:QQ:62:ARG:HD2	27:QQ:108:ILE:HD11	1.87	0.56
53:T:17:ARG:HH11	53:T:45:MET:HG3	1.70	0.56
54:U:63:LEU:HD21	54:U:70:ILE:HG23	1.88	0.56
61:c:45:LEU:HB2	61:c:105:ILE:HG22	1.88	0.56
69:k:23:VAL:HG12	69:k:64:LEU:HG	1.88	0.56
77:t:102:GLY:C	77:t:103:ASN:HD22	2.14	0.56
78:5:3608:A:H2'	78:5:3609:G:C8	2.40	0.56
78:5:3861:A:H2'	78:5:3862:A:H8	1.69	0.56
78:5:4239:A:H2'	78:5:4240:G:H8	1.70	0.56
79:7:74:A:H61	79:7:100:A:H3'	1.70	0.56
80:8:59:A:H4'	80:8:60:G:H3'	1.87	0.56
3:9:17:C:H2'	3:9:18:C:C6	2.40	0.56
3:9:1062:C:H2'	3:9:1063:C:O4'	2.06	0.56
3:9:1263:C:H3'	83:PT:33:U:OP1	2.05	0.56
3:9:1463:U:H2'	3:9:1464:G:C8	2.40	0.56
3:9:1603:C:H4'	3:9:1609:G:C6	2.40	0.56
4:AA:16:LEU:HD12	28:RR:93:GLN:HE22	1.69	0.56
10:II:13:LYS:HB2	12:LL:137:THR:HG21	1.86	0.56
11:JJ:111:GLN:HE21	11:JJ:123:ILE:HG22	1.70	0.56
76:s:18:ILE:HG13	76:s:68:HIS:HD2	1.71	0.56
78:5:4219:A:H2'	78:5:4220:A:C8	2.40	0.56
78:5:4313:A:H2'	78:5:4314:C:H5''	1.88	0.56
83:PT:30:G:H3'	83:PT:31:C:O4'	2.06	0.56
83:PT:36:C:C2'	83:PT:37:A:C8	2.88	0.56
83:PT:36:C:H3'	83:PT:37:A:C8	2.40	0.56
3:9:540:A:H61	3:9:549:G:H1'	1.71	0.56
30:TT:104:LEU:HD13	30:TT:121:ARG:HE	1.71	0.56
41:F:91:VAL:HG22	41:F:141:TRP:HB2	1.88	0.56
48:N:66:VAL:HG21	48:N:102:ALA:HB2	1.87	0.56
63:e:43:ASN:HD22	63:e:46:ARG:H	1.53	0.56
78:5:1565:A:C5	78:5:1566:C:H1'	2.41	0.56
78:5:2004:U:C2	78:5:2016:C:H1'	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:5:2015:U:H2'	78:5:2016:C:H6	1.70	0.56
3:9:240:C:H5''	3:9:241:G:H5'	1.87	0.56
3:9:713:U:H2'	3:9:714:G:C8	2.40	0.56
3:9:1021:U:H5''	72:n:21:ARG:HH12	1.71	0.56
3:9:1492:A:H2'	3:9:1493:A:C8	2.41	0.56
6:CC:183:LYS:HG2	6:CC:196:ILE:HG23	1.86	0.56
17:XX:41:PHE:HB3	17:XX:44:ALA:HB3	1.87	0.56
31:UU:32:LEU:HD21	31:UU:87:ARG:HG2	1.87	0.56
58:Z:27:LYS:HE2	58:Z:93:LYS:HD3	1.88	0.56
62:d:64:ILE:HG13	62:d:68:LEU:HD23	1.88	0.56
73:o:23:VAL:HG22	73:o:70:LEU:HG	1.88	0.56
77:t:90:ARG:HB3	77:t:94:LYS:HA	1.87	0.56
78:5:149:A:H5''	78:5:151:G:O4'	2.05	0.56
78:5:1468:C:H2'	78:5:1469:C:C6	2.41	0.56
78:5:3658:C:H2'	78:5:3659:G:C8	2.41	0.56
2:W:3:VAL:HG21	2:W:12:LYS:HE3	1.88	0.56
3:9:245:G:H3'	8:GG:183:ARG:HH22	1.69	0.56
3:9:291:U:H4'	3:9:295:A:C8	2.40	0.56
3:9:780:G:O2'	3:9:848:A:H5'	2.06	0.56
3:9:1070:U:H2'	3:9:1071:A:H8	1.70	0.56
3:9:1158:U:H2'	3:9:1159:A:C8	2.41	0.56
37:B:163:LEU:CD2	37:B:182:GLU:HG2	2.36	0.56
46:L:80:GLU:HG2	46:L:110:LEU:HD13	1.88	0.56
62:d:19:GLU:HB3	62:d:102:LEU:HD21	1.87	0.56
75:r:52:GLU:HB2	75:r:61:VAL:HG23	1.86	0.56
77:t:75:PRO:HG2	77:t:80:LEU:CG	2.34	0.56
78:5:1527:A:H2'	78:5:1528:U:C6	2.40	0.56
78:5:1874:A:H4'	78:5:4217:G:H22	1.69	0.56
78:5:4263:C:H2'	78:5:4264:G:O4'	2.05	0.56
3:9:114:G:O2'	3:9:115:U:H5''	2.06	0.56
3:9:126:G:OP2	8:GG:198:ARG:HD2	2.05	0.56
3:9:1147:U:H2'	3:9:1148:C:C6	2.41	0.56
4:AA:92:ALA:HB2	28:RR:82:ASP:HB3	1.88	0.56
14:OO:98:ARG:HB2	14:OO:132:VAL:HG23	1.88	0.56
59:a:21:ARG:HD2	78:5:2282:A:H4'	1.87	0.56
68:j:82:THR:HB	80:8:94:G:H21	1.70	0.56
77:t:138:SER:HB3	78:5:2002:A:C6	2.41	0.56
77:t:147:HIS:HE1	78:5:1994:C:H1'	1.69	0.56
78:5:1318:C:H2'	78:5:1319:U:O4'	2.06	0.56
78:5:2295:C:H2'	78:5:2296:G:H8	1.69	0.56
78:5:2885:A:H2'	78:5:2886:U:C6	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:838:G:C6	3:9:981:G:H4'	2.41	0.56
3:9:1065:G:H5'	72:n:1:MET:HG2	1.88	0.56
3:9:1637:U:H4'	29:SS:34:LYS:HE3	1.88	0.56
4:AA:90:PHE:HD1	4:AA:179:ALA:HB2	1.71	0.56
27:QQ:16:LYS:HG2	27:QQ:82:TYR:HB2	1.88	0.56
29:SS:39:ARG:HB3	29:SS:83:PHE:HZ	1.70	0.56
37:B:312:LYS:HD2	37:B:370:THR:HG21	1.88	0.56
38:C:144:ILE:HD11	38:C:150:LEU:HG	1.86	0.56
41:F:227:VAL:HA	52:S:39:VAL:HG12	1.88	0.56
78:5:41:C:O2'	78:5:42:A:H5'	2.05	0.56
78:5:1326:A:H2'	78:5:1327:C:C6	2.40	0.56
3:9:601:G:H21	3:9:875:A:N6	2.02	0.56
3:9:628:C:H2'	3:9:629:C:C6	2.40	0.56
3:9:1224:A:H2'	3:9:1225:A:C8	2.41	0.56
6:CC:102:LEU:HD11	6:CC:130:ILE:HG12	1.88	0.56
8:GG:121:ILE:HG23	8:GG:125:THR:H	1.71	0.56
22:DD:168:VAL:HG12	22:DD:189:MET:HG3	1.88	0.56
23:FF:72:LEU:HD13	23:FF:151:ILE:HG23	1.87	0.56
23:FF:138:ALA:HB3	23:FF:204:ARG:HB3	1.88	0.56
37:B:56:ILE:HG22	37:B:74:GLU:HB3	1.88	0.56
40:E:136:PHE:HA	40:E:139:HIS:ND1	2.21	0.56
40:E:193:HIS:HB3	40:E:196:PHE:HD2	1.71	0.56
41:F:126:LYS:HB2	53:T:133:ALA:HB3	1.87	0.56
52:S:32:ILE:HG21	52:S:40:ALA:HA	1.88	0.56
68:j:82:THR:O	80:8:94:G:H1'	2.06	0.56
77:t:16:ARG:HD2	77:t:59:THR:HG22	1.86	0.56
77:t:149:HIS:CA	77:t:152:ILE:HB	2.31	0.56
78:5:922(B):C:H3'	78:5:923:C:H5''	1.86	0.56
78:5:1991:A:H2'	78:5:1992:U:O4'	2.06	0.56
78:5:3848:U:H2'	78:5:3849:A:H8	1.71	0.56
79:7:4:U:H2'	79:7:5:A:C8	2.41	0.56
79:7:77:A:H2'	79:7:78:C:O4'	2.06	0.56
3:9:540:A:H1'	21:ee:85:VAL:CG2	2.36	0.55
3:9:1001:U:H5''	3:9:1003:U:O4'	2.07	0.55
10:II:27:TYR:HB3	10:II:49:ARG:HH12	1.71	0.55
28:RR:41:ILE:HG21	28:RR:47:ARG:HB2	1.87	0.55
29:SS:20:ILE:HG23	29:SS:29:ALA:HB1	1.88	0.55
35:ff:138:ARG:HD3	35:ff:147:THR:CG2	2.36	0.55
41:F:90:PHE:HB2	41:F:144:PRO:HG3	1.88	0.55
45:J:56:THR:HA	45:J:63:ARG:HA	1.88	0.55
47:M:25:VAL:HG21	47:M:38:VAL:HG13	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:P:127:ARG:HD2	78:5:2419:C:H5''	1.87	0.55
55:V:3:LYS:HG3	55:V:128:LEU:HD11	1.87	0.55
58:Z:89:ILE:HG23	58:Z:91:LEU:HG	1.87	0.55
64:f:48:ALA:HB2	64:f:71:TRP:CE3	2.41	0.55
78:5:304:C:H2'	78:5:305:A:O4'	2.06	0.55
78:5:922:C:H2'	78:5:922(A):G:H8	1.71	0.55
78:5:956:A:H62	78:5:1283:G:H1'	1.70	0.55
78:5:1445:U:H2'	78:5:1446:C:H6	1.71	0.55
78:5:1870:C:H2'	78:5:1871:A:H8	1.71	0.55
3:9:1463:U:H2'	3:9:1464:G:H8	1.71	0.55
3:9:1492:A:O2'	6:CC:118:ALA:HA	2.06	0.55
8:GG:5:ILE:HG12	8:GG:111:LEU:HD12	1.87	0.55
9:HH:36:LEU:HG	9:HH:75:ILE:HD11	1.87	0.55
13:NN:92:ILE:HG23	13:NN:141:TYR:HE1	1.71	0.55
16:WW:50:PHE:HB2	16:WW:63:VAL:HG22	1.88	0.55
22:DD:164:VAL:HG22	22:DD:168:VAL:HG22	1.88	0.55
36:A:9:ARG:HD2	78:5:1628:C:OP2	2.06	0.55
39:D:43:LYS:HE2	78:5:1817:U:H4'	1.89	0.55
41:F:131:MET:O	41:F:135:VAL:HG22	2.06	0.55
49:O:71:TYR:CE2	78:5:3887:C:H5'	2.41	0.55
73:o:9:ARG:HB3	78:5:4290:U:OP1	2.06	0.55
76:s:40:MET:O	76:s:44:ARG:HD3	2.06	0.55
76:s:142:GLY:HA3	76:s:158:VAL:HG11	1.87	0.55
77:t:126:SER:HA	77:t:160:VAL:HG12	1.88	0.55
78:5:2315:G:H2'	78:5:2316:G:O4'	2.06	0.55
78:5:2376:A:H2'	78:5:2377:C:C6	2.41	0.55
78:5:2841:G:H3'	78:5:2842:G:H5''	1.87	0.55
78:5:4992:G:H2'	78:5:4993:G:C8	2.41	0.55
5:BB:201:CYS:CB	5:BB:207:LEU:HD21	2.37	0.55
27:QQ:130:LYS:HA	27:QQ:137:ALA:HA	1.87	0.55
29:SS:20:ILE:HD11	29:SS:33:ILE:HD11	1.87	0.55
38:C:290:SER:O	38:C:294:LYS:HG2	2.06	0.55
77:t:58:ILE:HG22	77:t:60:VAL:HG23	1.88	0.55
78:5:2374:A:H2'	78:5:2375:A:H8	1.71	0.55
78:5:4080:C:H2'	78:5:4081:G:C8	2.41	0.55
79:7:2:U:H2'	79:7:3:C:C6	2.42	0.55
3:9:765:U:H2'	3:9:766:A:O4'	2.07	0.55
6:CC:88:ILE:HG21	6:CC:94:ILE:HD11	1.87	0.55
14:OO:136:PRO:HB2	14:OO:139:SER:HB2	1.89	0.55
16:WW:106:THR:OG1	16:WW:111:MET:HE2	2.06	0.55
22:DD:123:LEU:HA	22:DD:126:ILE:HD11	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RR:43:SER:HB3	28:RR:46:LEU:HB3	1.88	0.55
43:H:64:ARG:HA	43:H:67:LEU:HG	1.87	0.55
45:J:141:ILE:HA	45:J:144:LYS:HE2	1.88	0.55
54:U:78:PHE:HE2	54:U:83:LEU:HD13	1.71	0.55
68:j:25:LYS:O	78:5:371:A:H5''	2.07	0.55
77:t:135:THR:HB	78:5:1974:U:H5	1.71	0.55
77:t:147:HIS:O	77:t:148:PRO:C	2.49	0.55
78:5:519:C:H2'	78:5:520:U:C6	2.41	0.55
78:5:676:C:H2'	78:5:677:G:H8	1.70	0.55
78:5:939:G:H2'	78:5:940:C:C6	2.41	0.55
78:5:2381:A:H1'	78:5:2383:C:P	2.47	0.55
78:5:2832:A:H2'	78:5:2833:A:C8	2.40	0.55
78:5:3607:U:H2'	78:5:3608:A:C8	2.41	0.55
78:5:4319:C:H2'	78:5:4320:G:H8	1.70	0.55
84:ET:18:G:C2	84:ET:58:A:C8	2.94	0.55
3:9:114:G:HO2'	3:9:115:U:H5''	1.70	0.55
3:9:1148:C:H2'	3:9:1149:G:O4'	2.07	0.55
13:NN:113:PHE:O	13:NN:117:LEU:HG	2.06	0.55
36:A:98:ILE:HD11	74:p:80:LYS:HA	1.88	0.55
37:B:73:VAL:HG11	55:V:93:GLY:HA3	1.88	0.55
43:H:23:ARG:HG2	43:H:39:ASN:HA	1.88	0.55
44:I:91:LEU:HD11	44:I:129:VAL:HG13	1.87	0.55
47:M:52:PHE:HA	47:M:55:MET:HG2	1.89	0.55
51:Q:186:TYR:CD2	78:5:4307:A:H4'	2.41	0.55
77:t:77:ALA:O	77:t:81:ILE:HB	2.07	0.55
78:5:4507:A:H2'	78:5:4508:C:C6	2.41	0.55
83:PT:33:U:C2	83:PT:37:A:N6	2.75	0.55
3:9:31:U:H2'	3:9:32:U:H6	1.72	0.55
3:9:475:U:H2'	3:9:476:G:C8	2.41	0.55
6:CC:168:GLY:HA3	6:CC:181:PRO:HA	1.88	0.55
8:GG:220:ALA:O	8:GG:224:ARG:CZ	2.55	0.55
8:GG:221:LYS:CB	8:GG:224:ARG:NH2	2.60	0.55
9:HH:101:LEU:HD13	9:HH:120:ARG:HB3	1.89	0.55
10:II:117:TYR:CD1	10:II:152:ARG:HB3	2.42	0.55
17:XX:52:LEU:HD12	17:XX:53:GLU:HG2	1.89	0.55
37:B:252:ALA:CB	78:5:4457:U:H1'	2.36	0.55
58:Z:105:ALA:HA	58:Z:108:ARG:HE	1.72	0.55
76:s:145:THR:HG22	76:s:154:ILE:HG13	1.88	0.55
77:t:135:THR:HA	78:5:1974:U:C4	2.42	0.55
78:5:1669:A:H4'	78:5:1685:G:N2	2.21	0.55
78:5:1806:G:H2'	78:5:1807:C:C6	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:5:1824:G:H2'	78:5:1825:A:C8	2.42	0.55
78:5:1934:A:H2'	78:5:2048:U:O2	2.06	0.55
78:5:1942:A:H2'	78:5:1943:A:C8	2.41	0.55
78:5:2493:G:H2'	78:5:2494:U:C6	2.41	0.55
78:5:2748:C:H2'	78:5:2749:C:C6	2.41	0.55
78:5:2786:C:H5''	78:5:2787:A:C5'	2.36	0.55
78:5:2855:G:H1'	78:5:2857:A:N6	2.21	0.55
78:5:2864:A:H2'	78:5:2865:U:C6	2.42	0.55
3:9:377:C:H2'	3:9:378:U:C6	2.42	0.55
3:9:1039:U:H2'	3:9:1040:U:C6	2.41	0.55
4:AA:54:THR:OG1	4:AA:162:PRO:HG2	2.06	0.55
4:AA:176:TRP:HE1	4:AA:197:VAL:HB	1.71	0.55
6:CC:108:LYS:HB3	6:CC:233:LEU:HD23	1.88	0.55
18:YY:82:ALA:O	18:YY:86:GLU:CB	2.55	0.55
19:aa:53:ILE:O	19:aa:57:SER:HB3	2.07	0.55
22:DD:163:PRO:O	22:DD:167:TYR:HB2	2.07	0.55
24:KK:47:LYS:O	24:KK:50:GLN:HG3	2.07	0.55
28:RR:51:ALA:O	28:RR:55:THR:HG23	2.06	0.55
37:B:252:ALA:HB1	78:5:4524:G:C2	2.42	0.55
43:H:38:PHE:O	43:H:41:ILE:HG22	2.07	0.55
43:H:69:THR:HA	43:H:72:THR:HG22	1.89	0.55
43:H:113:GLU:OE1	43:H:125:ARG:HG2	2.07	0.55
46:L:93:THR:HG21	66:h:114:TYR:HB3	1.88	0.55
47:M:119:ARG:HH21	49:O:202:LEU:HD21	1.72	0.55
77:t:29:ALA:HA	77:t:39:PRO:HB2	1.88	0.55
78:5:23:C:H2'	78:5:24:G:O4'	2.07	0.55
78:5:4082:G:H2'	78:5:4083:U:C6	2.41	0.55
3:9:1195:A:H2'	3:9:1196:G:C8	2.42	0.55
3:9:1369:A:H2'	3:9:1370:G:O4'	2.07	0.55
4:AA:198:MET:H	28:RR:86:PRO:HG2	1.70	0.55
8:GG:38:ALA:HB3	8:GG:48:TYR:CB	2.37	0.55
9:HH:144:ILE:HB	16:WW:52:ILE:CG1	2.37	0.55
48:N:118:SER:HB3	48:N:132:VAL:HG22	1.89	0.55
50:P:36:ILE:HD12	50:P:48:LEU:HD21	1.88	0.55
59:a:9:ARG:HH22	78:5:2344:U:H2'	1.70	0.55
65:g:59:VAL:HG22	65:g:63:VAL:HG21	1.89	0.55
76:s:135:THR:HA	76:s:138:PHE:CD1	2.41	0.55
77:t:11:LYS:HG2	77:t:35:LEU:HD21	1.89	0.55
78:5:1356:U:H2'	78:5:1357:C:C6	2.42	0.55
78:5:2571:C:H2'	78:5:2572:C:C6	2.41	0.55
83:PT:34:A:O2'	83:PT:35:G:H5'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:ET:16:U:H4'	84:ET:18:G:P	2.46	0.55
3:9:688:G:H2'	3:9:689:C:H6	1.72	0.55
3:9:956:C:H3'	3:9:957:G:H8	1.72	0.55
3:9:1071:A:H2'	3:9:1072:C:C6	2.41	0.55
3:9:1352:C:H2'	3:9:1353:C:C6	2.42	0.55
4:AA:42:LYS:H	28:RR:128:PHE:HA	1.72	0.55
26:PP:53:GLN:HE21	26:PP:83:MET:HE2	1.72	0.55
37:B:316:PRO:HB2	37:B:372:SER:HA	1.87	0.55
38:C:2:ALA:N	38:C:29:LYS:HG3	2.22	0.55
39:D:132:VAL:HB	39:D:172:SER:HB2	1.87	0.55
41:F:93:ARG:HE	41:F:108:LEU:HD13	1.71	0.55
76:s:38:LYS:HA	76:s:38:LYS:HE3	1.89	0.55
77:t:77:ALA:H	78:5:1974:U:P	2.30	0.55
78:5:1789:C:H2'	78:5:1790:U:C6	2.42	0.55
78:5:4258:C:H2'	78:5:4259:C:C6	2.41	0.55
78:5:4501:U:H2'	78:5:4502:C:H5'	1.88	0.55
78:5:4605:A:H4'	81:EF:136:CYS:HB2	1.89	0.55
1:R:4:LEU:HB2	78:5:2386:U:C5'	2.37	0.55
1:R:115:ILE:CB	1:R:119:MET:HE3	2.37	0.55
3:9:605:U:H4'	17:XX:9:THR:CG2	2.37	0.55
3:9:1500:U:H4'	3:9:1501:G:H5''	1.89	0.55
3:9:1630:U:H2'	3:9:1631:U:H5'	1.89	0.55
4:AA:12:GLU:CG	28:RR:96:ILE:HB	2.37	0.55
8:GG:7:PHE:CE2	8:GG:9:ALA:HB3	2.42	0.55
25:MM:89:VAL:HG13	25:MM:91:LEU:HG	1.88	0.55
35:ff:107:LYS:HB2	35:ff:115:SER:HB3	1.89	0.55
38:C:318:PRO:O	38:C:325:MET:HB2	2.07	0.55
57:Y:76:LYS:HB2	80:8:74:U:OP2	2.07	0.55
58:Z:26:VAL:HG12	58:Z:91:LEU:HB3	1.89	0.55
76:s:84:GLY:O	78:5:2021:G:H4'	2.07	0.55
77:t:142:ASN:O	77:t:144:ASP:N	2.40	0.55
78:5:654:C:H2'	78:5:655:C:C6	2.42	0.55
78:5:733:A:H3'	78:5:734:G:H8	1.72	0.55
78:5:1500:A:H5''	78:5:1501:C:H5'	1.89	0.55
78:5:2486:G:H2'	78:5:2487:G:C8	2.42	0.55
3:9:538:C:C5	3:9:549:G:H3'	2.42	0.54
3:9:611:C:O2'	9:HH:103:LYS:HE2	2.08	0.54
4:AA:77:ILE:HG12	4:AA:99:ILE:HD12	1.87	0.54
4:AA:199:PRO:HD3	28:RR:90:ALA:HA	1.88	0.54
11:JJ:110:LEU:HD22	11:JJ:147:PHE:HB3	1.87	0.54
41:F:94:ILE:HD11	41:F:232:ALA:HB2	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:J:39:VAL:HG23	45:J:123:ILE:HG21	1.88	0.54
46:L:61:CYS:HB2	46:L:66:TYR:O	2.07	0.54
52:S:84:TYR:HE1	52:S:93:MET:HG3	1.72	0.54
76:s:171:GLU:HA	76:s:174:LEU:HG	1.89	0.54
77:t:17:CYS:SG	77:t:46:ILE:HG22	2.48	0.54
77:t:77:ALA:HA	77:t:80:LEU:HB2	1.88	0.54
78:5:1211:G:H2'	78:5:1212:G:C8	2.42	0.54
78:5:1969:G:H3'	78:5:1970:A:H8	1.71	0.54
78:5:4992:G:H2'	78:5:4993:G:H8	1.72	0.54
3:9:126:G:H21	3:9:170:G:H21	1.56	0.54
3:9:245:G:H3'	8:GG:183:ARG:NH1	2.22	0.54
3:9:579:A:H1'	3:9:582:U:OP1	2.07	0.54
3:9:1214:U:H3	19:aa:9:GLY:HA3	1.73	0.54
23:FF:138:ALA:HB1	23:FF:200:ALA:HB1	1.89	0.54
48:N:96:ARG:HD3	78:5:29:G:O2'	2.07	0.54
48:N:98:LEU:HD12	48:N:128:LYS:HD2	1.90	0.54
48:N:181:HIS:HB2	78:5:293:G:O6	2.07	0.54
53:T:108:ARG:HD2	53:T:130:ARG:HD2	1.89	0.54
54:U:113:ARG:HH22	78:5:2703:G:H5''	1.72	0.54
58:Z:10:VAL:O	58:Z:83:THR:HG22	2.06	0.54
73:o:9:ARG:HA	73:o:20:PRO:HA	1.90	0.54
74:p:22:LEU:O	74:p:26:VAL:HG23	2.07	0.54
78:5:64:A:H1'	78:5:76:A:H1'	1.88	0.54
78:5:195:C:H2'	78:5:196:C:C6	2.42	0.54
78:5:940:C:H2'	78:5:941:C:O4'	2.06	0.54
78:5:1075:G:C2'	78:5:1076:C:H5'	2.38	0.54
83:PT:37:A:H3'	83:PT:38:U:C5	2.42	0.54
3:9:35:C:H5''	3:9:503:C:H5''	1.88	0.54
4:AA:30:LEU:HD11	4:AA:35:GLU:HA	1.89	0.54
5:BB:181:LEU:HA	5:BB:184:VAL:HG22	1.88	0.54
8:GG:54:GLY:HA3	8:GG:63:MET:HG3	1.89	0.54
10:II:117:TYR:CD1	10:II:156:ALA:HB2	2.42	0.54
15:VV:82:ASN:HB3	28:RR:109:LEU:HD12	1.88	0.54
33:cc:14:VAL:HG22	33:cc:30:VAL:HG11	1.88	0.54
40:E:182:LEU:HD13	40:E:186:ARG:HD2	1.88	0.54
41:F:142:GLY:HA3	41:F:239:ILE:HB	1.88	0.54
52:S:9:GLU:HG2	52:S:33:PHE:CE1	2.42	0.54
52:S:75:VAL:HA	52:S:100:LEU:HD23	1.88	0.54
63:e:98:GLU:HG3	63:e:124:ASN:OD1	2.08	0.54
67:i:74:LYS:HA	67:i:83:ALA:HB2	1.89	0.54
76:s:69:LEU:HD21	76:s:76:GLU:N	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:t:123:ARG:CG	77:t:127:GLY:HA3	2.36	0.54
78:5:1973:G:OP2	78:5:1974:U:H3'	2.07	0.54
78:5:3730:U:H2'	78:5:3731:C:C6	2.41	0.54
78:5:3768:U:H2'	78:5:3769:C:C6	2.42	0.54
3:9:403:C:H5'	81:EF:406:ASP:OD2	2.06	0.54
3:9:438:U:H2'	3:9:439:G:O4'	2.07	0.54
3:9:452:A:H2'	3:9:453:A:H8	1.71	0.54
3:9:658:U:H5''	16:WW:83:LEU:HD23	1.89	0.54
3:9:1159:A:H2'	3:9:1160:U:C6	2.43	0.54
4:AA:56:GLU:HG2	15:VV:79:VAL:HG13	1.89	0.54
18:YY:91:LEU:HB3	18:YY:96:LEU:HD11	1.90	0.54
29:SS:15:VAL:HG22	29:SS:68:ILE:HD11	1.89	0.54
37:B:288:GLY:HA3	37:B:330:PHE:CZ	2.43	0.54
40:E:153:LEU:HB3	40:E:197:VAL:HG13	1.88	0.54
41:F:56:TYR:HE2	41:F:188:ASP:HA	1.72	0.54
42:G:207:LEU:HB2	42:G:272:VAL:HG22	1.89	0.54
46:L:77:SER:O	46:L:81:LEU:HG	2.07	0.54
48:N:143:ARG:HB3	66:h:99:GLU:OE1	2.07	0.54
50:P:54:LYS:HA	50:P:83:TRP:CD1	2.42	0.54
53:T:6:GLY:HA3	78:5:4208:U:P	2.46	0.54
60:b:102:PRO:O	60:b:106:ARG:HG3	2.08	0.54
69:k:70:LYS:HA	69:k:70:LYS:HE3	1.89	0.54
77:t:128:THR:HA	77:t:131:GLU:CD	2.32	0.54
78:5:195:C:H2'	78:5:196:C:H6	1.72	0.54
78:5:648:G:H2'	78:5:649:A:H8	1.72	0.54
78:5:2776:G:H2'	78:5:2777:G:H8	1.72	0.54
78:5:3717:A:H2'	78:5:3718:A:C8	2.42	0.54
78:5:3768:U:H2'	78:5:3769:C:H6	1.73	0.54
78:5:3845:A:H2'	78:5:3846:C:C6	2.42	0.54
78:5:4637:G:H2'	78:5:4638:U:C6	2.41	0.54
78:5:4727:A:H2'	78:5:4728:U:O4'	2.07	0.54
3:9:1096:G:H2'	3:9:1097:C:C6	2.43	0.54
3:9:1292:A:O2'	24:KK:51:SER:HA	2.07	0.54
3:9:1300:A:N7	25:MM:91:LEU:HD13	2.23	0.54
3:9:1612:G:H22	3:9:1638:G:H1'	1.72	0.54
3:9:1634:C:H2'	3:9:1635:C:C6	2.42	0.54
9:HH:101:LEU:HD13	9:HH:120:ARG:HG2	1.89	0.54
14:OO:21:VAL:HG22	14:OO:24:GLY:H	1.72	0.54
20:bb:19:HIS:O	20:bb:23:ARG:HG3	2.07	0.54
22:DD:109:LEU:HD12	22:DD:184:ILE:HD11	1.88	0.54
29:SS:61:GLU:HA	29:SS:64:VAL:HG22	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:cc:9:ILE:HG23	33:cc:59:LEU:HD23	1.89	0.54
33:cc:44:ARG:HA	33:cc:65:ALA:HB2	1.89	0.54
56:X:119:ILE:HG13	56:X:144:TYR:CD2	2.43	0.54
78:5:1563:A:H2'	78:5:1564:A:C8	2.42	0.54
78:5:3861:A:H2'	78:5:3862:A:C8	2.42	0.54
78:5:4907:G:H2'	78:5:4908:G:H5'	1.90	0.54
3:9:941:C:H2'	3:9:942:U:C6	2.43	0.54
3:9:1221:C:H2'	3:9:1222:G:C8	2.43	0.54
3:9:1253:C:H2'	3:9:1254:U:O4'	2.07	0.54
3:9:1264:U:H5'	84:ET:34:A:H61	1.73	0.54
3:9:1588:C:H2'	3:9:1589:C:C6	2.43	0.54
3:9:1646:A:N9	84:ET:39:G:N1	2.56	0.54
13:NN:40:LEU:HB3	13:NN:50:ILE:HG12	1.89	0.54
13:NN:88:LEU:HB2	13:NN:129:TYR:HE2	1.70	0.54
41:F:47:LYS:HA	78:5:1237:C:H5	1.72	0.54
44:I:53:VAL:HG21	53:T:158:PHE:HE2	1.72	0.54
57:Y:106:ILE:HG21	57:Y:109:LEU:HD23	1.89	0.54
68:j:15:THR:HG23	78:5:1534:A:H8	1.72	0.54
70:l:27:ILE:HD12	70:l:30:LYS:HE3	1.89	0.54
77:t:112:ILE:HA	77:t:115:GLN:OE1	2.08	0.54
77:t:130:LYS:HG2	77:t:154:ASP:OD1	2.08	0.54
77:t:132:ILE:O	77:t:135:THR:HG23	2.08	0.54
78:5:307:A:O2'	78:5:308:G:H5'	2.08	0.54
78:5:471:A:N6	78:5:683:C:H42	2.05	0.54
78:5:726:G:H2'	78:5:727:C:C6	2.42	0.54
78:5:1395:U:O2	78:5:1469:C:H4'	2.08	0.54
78:5:1537:A:H2'	78:5:1538:U:C6	2.43	0.54
78:5:1912:G:H2'	78:5:1913:C:C6	2.43	0.54
78:5:2412:A:H2'	78:5:2413:U:C6	2.42	0.54
78:5:3934:G:H2'	78:5:3935:C:C6	2.43	0.54
78:5:4592:C:H2'	78:5:4593:C:C6	2.43	0.54
3:9:220:G:C2	12:LL:42:LEU:HB2	2.43	0.54
3:9:485:A:H5'	11:JJ:171:GLY:HA3	1.90	0.54
3:9:572:A:H2'	3:9:573:U:C6	2.42	0.54
3:9:1070:U:H2'	3:9:1071:A:C8	2.43	0.54
3:9:1247:C:H42	3:9:1533:C:H42	1.53	0.54
3:9:1336:G:H2'	3:9:1337:G:O4'	2.08	0.54
11:JJ:111:GLN:NE2	11:JJ:123:ILE:HG22	2.22	0.54
12:LL:86:ILE:HG12	12:LL:113:LEU:HB2	1.90	0.54
36:A:23:ARG:HA	36:A:52:PRO:HD2	1.90	0.54
58:Z:54:THR:CG2	78:5:4128:A:H5'	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:a:64:LYS:HD2	59:a:67:GLN:NE2	2.23	0.54
64:f:5:LEU:HD23	78:5:4945:G:N1	2.22	0.54
68:j:64:MET:HB3	68:j:67:LEU:HB3	1.89	0.54
70:l:40:LYS:HD2	80:8:53:G:H4'	1.88	0.54
70:l:44:TRP:CZ3	70:l:45:ARG:HD3	2.43	0.54
78:5:1093:C:H2'	78:5:1094:G:H8	1.73	0.54
78:5:1494:U:H2'	78:5:1495:G:C8	2.43	0.54
78:5:4944:C:H5'	78:5:4945:G:C5'	2.38	0.54
78:5:4968:A:H2'	78:5:4969:C:H6	1.72	0.54
1:R:84:THR:HA	78:5:2864:A:O3'	2.07	0.54
1:R:132:PHE:HD1	1:R:137:ILE:HG23	1.71	0.54
2:W:49:ILE:HG22	2:W:52:THR:HG23	1.89	0.54
3:9:37:C:H3'	3:9:38:A:H8	1.72	0.54
3:9:212:U:H5''	12:LL:17:PHE:CG	2.43	0.54
3:9:762:G:H5''	9:HH:120:ARG:HH12	1.72	0.54
3:9:854:C:H2'	3:9:855:A:C8	2.43	0.54
3:9:1129:G:H2'	3:9:1130:G:C8	2.43	0.54
3:9:1236:A:H4'	23:FF:145:ARG:NH2	2.22	0.54
26:PP:18:ARG:HB2	26:PP:36:LEU:HD11	1.88	0.54
37:B:92:TYR:HB3	37:B:99:LEU:CD2	2.38	0.54
38:C:334:THR:HG21	41:F:50:TYR:OH	2.07	0.54
39:D:158:LYS:HE2	79:7:46:C:P	2.48	0.54
40:E:169:LYS:HG2	40:E:177:LEU:HD23	1.88	0.54
43:H:103:VAL:HG13	43:H:112:VAL:HG13	1.89	0.54
49:O:193:THR:HG22	49:O:197:LYS:HE3	1.90	0.54
77:t:12:VAL:HG13	77:t:72:GLU:OE2	2.07	0.54
78:5:357:U:C4	80:8:25:G:H4'	2.42	0.54
78:5:930:G:H2'	78:5:931:C:C2	2.43	0.54
78:5:1794:A:H5''	78:5:4214:A:N6	2.23	0.54
78:5:2562:G:H22	78:5:2564:G:H3'	1.73	0.54
78:5:3781:C:H2'	78:5:3782:C:C6	2.43	0.54
78:5:4178:A:H2'	78:5:4179:G:C8	2.43	0.54
83:PT:37:A:C5	83:PT:38:U:C4	2.96	0.54
84:ET:68:C:C4	84:ET:69:C:C5	2.96	0.54
4:AA:41:ARG:HD3	28:RR:126:MET:HG3	1.90	0.54
7:EE:137:PRO:HB2	7:EE:150:PRO:CD	2.38	0.54
36:A:77:ILE:CD1	36:A:128:ARG:HB2	2.37	0.54
38:C:149:GLU:HG2	38:C:151:PRO:HD2	1.90	0.54
38:C:205:ARG:HG2	78:5:2297:G:H5'	1.90	0.54
39:D:83:LEU:HB3	39:D:88:VAL:HB	1.89	0.54
40:E:131:HIS:HB2	78:5:1281:G:C6	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:F:82:VAL:CG2	52:S:62:VAL:HG13	2.37	0.54
45:J:90:ARG:O	45:J:93:GLU:HG2	2.06	0.54
47:M:30:VAL:HG21	52:S:150:ILE:HD13	1.90	0.54
48:N:157:LYS:HD2	78:5:56:A:H4'	1.90	0.54
51:Q:119:LYS:HD3	51:Q:121:LEU:HD11	1.88	0.54
54:U:84:LYS:HB2	54:U:110:TYR:CZ	2.43	0.54
59:a:117:LEU:HB3	59:a:140:VAL:HG21	1.90	0.54
63:e:22:ARG:HB2	63:e:34:ASN:O	2.08	0.54
64:f:7:CYS:HB2	64:f:103:VAL:HG23	1.88	0.54
77:t:32:ILE:HD12	77:t:39:PRO:HA	1.88	0.54
78:5:710:G:H2'	78:5:711:A:C8	2.43	0.54
78:5:928:C:H2'	78:5:929:A:N3	2.23	0.54
78:5:966:A:H5''	78:5:967:C:C6	2.42	0.54
78:5:1479:G:H2'	78:5:1480:C:C6	2.42	0.54
78:5:1725:U:H2'	78:5:1726:U:H6	1.72	0.54
78:5:1848:C:H2'	78:5:1849:U:O4'	2.07	0.54
78:5:4287:G:H2'	78:5:4288:C:C6	2.43	0.54
78:5:4435:U:H2'	78:5:4436:U:C2	2.42	0.54
78:5:4650:G:H4'	78:5:5008:C:H4'	1.89	0.54
3:9:63:U:H2'	3:9:64:A:H5''	1.90	0.54
3:9:78:C:H1'	8:GG:175:LYS:HG3	1.89	0.54
3:9:213:C:H2'	3:9:214:A:C8	2.42	0.54
3:9:313:A:H2'	3:9:314:C:C6	2.43	0.54
3:9:444:A:H2'	3:9:445:A:C8	2.43	0.54
3:9:597:G:H2'	3:9:598:C:C6	2.42	0.54
3:9:906:G:N2	3:9:1179:G:H4'	2.23	0.54
3:9:1453:G:H2'	3:9:1454:A:C8	2.42	0.54
3:9:1527:C:OP1	29:SS:129:LEU:HD13	2.08	0.54
10:II:11:ARG:HD3	10:II:15:GLY:O	2.08	0.54
13:NN:88:LEU:HD22	13:NN:129:TYR:HD2	1.73	0.54
24:KK:29:MET:HB3	24:KK:42:ASN:HB3	1.89	0.54
38:C:211:TYR:O	38:C:232:VAL:HG22	2.08	0.54
41:F:107:VAL:HG21	41:F:134:ILE:HG21	1.90	0.54
47:M:40:GLY:HA3	47:M:45:VAL:HB	1.90	0.54
47:M:116:LYS:HE3	49:O:201:LEU:HD13	1.90	0.54
50:P:3:ARG:HD2	78:5:409:G:C8	2.44	0.54
68:j:69:ILE:HG13	68:j:73:ARG:HH12	1.72	0.54
69:k:35:LYS:HG2	69:k:44:THR:HG22	1.89	0.54
72:n:21:ARG:HE	72:n:25:LYS:HE3	1.73	0.54
77:t:73:VAL:HG12	77:t:75:PRO:HD3	1.90	0.54
77:t:123:ARG:HB2	77:t:127:GLY:HA3	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:5:1508:A:H2'	78:5:1509:C:C6	2.43	0.54
78:5:3920:U:H1'	78:5:4544:A:N3	2.23	0.54
78:5:4077:A:H62	78:5:4169:G:H21	1.56	0.54
78:5:4459:U:H2'	78:5:4460:U:C6	2.43	0.54
84:ET:64:G:H2'	84:ET:65:G:C8	2.43	0.54
3:9:828:A:H2'	3:9:829:G:C8	2.43	0.53
3:9:1177:U:H2'	3:9:1178:C:C6	2.43	0.53
3:9:1354:G:H2'	3:9:1355:U:C6	2.43	0.53
3:9:1431:C:O2'	30:TT:128:GLN:HG2	2.08	0.53
4:AA:14:ASP:HB3	4:AA:177:MET:CE	2.38	0.53
4:AA:42:LYS:N	28:RR:128:PHE:HA	2.23	0.53
7:EE:181:CYS:SG	7:EE:225:ILE:HG23	2.48	0.53
11:JJ:136:ARG:HD2	11:JJ:139:LYS:HA	1.90	0.53
13:NN:70:LYS:HE3	13:NN:73:ARG:HH12	1.73	0.53
16:WW:27:ILE:HG13	16:WW:61:ILE:HB	1.90	0.53
18:YY:86:GLU:OE2	18:YY:90:ARG:HD2	2.08	0.53
22:DD:105:LEU:HD23	22:DD:184:ILE:CG2	2.39	0.53
23:FF:40:ALA:HB1	23:FF:45:TYR:CG	2.43	0.53
27:QQ:96:TYR:HB3	27:QQ:105:LYS:HB2	1.90	0.53
29:SS:91:LYS:HE3	29:SS:109:GLU:HB3	1.90	0.53
36:A:60:LYS:HE2	36:A:75:LEU:HD21	1.89	0.53
39:D:216:GLU:HG3	39:D:220:LYS:HE3	1.90	0.53
42:G:157:PRO:HG3	42:G:247:VAL:HG12	1.90	0.53
42:G:217:ILE:HG13	42:G:221:VAL:CG2	2.38	0.53
43:H:71:ARG:HD3	78:5:4691:A:O3'	2.07	0.53
44:I:36:LEU:HD11	44:I:87:ILE:HD12	1.90	0.53
44:I:95:HIS:HB3	44:I:126:VAL:HG12	1.90	0.53
57:Y:50:ARG:HD3	57:Y:110:LYS:HB3	1.90	0.53
61:c:42:LYS:O	61:c:97:ILE:HG23	2.09	0.53
77:t:11:LYS:HB2	77:t:64:ILE:HB	1.90	0.53
77:t:53:TRP:CG	77:t:58:ILE:HG12	2.44	0.53
78:5:956:A:N6	78:5:1283:G:H1'	2.23	0.53
78:5:2607:C:H2'	78:5:2608:G:C8	2.43	0.53
78:5:3866:C:H2'	78:5:3867:A:O4'	2.09	0.53
78:5:4953:G:H2'	78:5:4954:G:C8	2.42	0.53
3:9:590:U:O2'	3:9:934:A:H2'	2.08	0.53
3:9:840:G:OP2	3:9:979:C:H1'	2.08	0.53
3:9:1536:U:H2'	3:9:1537:A:C8	2.43	0.53
4:AA:38:ILE:HG21	4:AA:47:TYR:CD1	2.43	0.53
5:BB:82:ARG:HD2	5:BB:103:MET:CG	2.38	0.53
8:GG:5:ILE:HD12	8:GG:16:ILE:HD13	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:NN:88:LEU:HD22	13:NN:129:TYR:CD2	2.43	0.53
36:A:8:GLN:HG2	78:5:3667:C:O3'	2.08	0.53
37:B:81:THR:OG1	37:B:207:VAL:HG21	2.08	0.53
37:B:160:ILE:HD11	37:B:190:VAL:HG13	1.89	0.53
39:D:41:LYS:HB2	53:T:68:THR:O	2.07	0.53
43:H:162:GLN:OE1	43:H:181:VAL:HG23	2.09	0.53
69:k:3:ARG:HB2	69:k:43:TYR:CD1	2.43	0.53
76:s:55:MET:SD	76:s:87:GLY:HA3	2.48	0.53
77:t:109:ILE:HG23	77:t:132:ILE:CG2	2.38	0.53
78:5:115:C:H2'	78:5:116:G:O4'	2.09	0.53
78:5:701:G:H2'	78:5:702:U:C6	2.43	0.53
78:5:1339:U:H2'	78:5:1340:C:C6	2.43	0.53
78:5:4479:A:H2'	78:5:4480:A:O4'	2.08	0.53
3:9:262:G:H2'	3:9:263:A:C8	2.43	0.53
3:9:369:A:H2'	3:9:370:G:O4'	2.08	0.53
3:9:901:G:H2'	3:9:902:A:H8	1.73	0.53
3:9:1302:G:OP1	35:f:99:LYS:HG3	2.09	0.53
3:9:1497:G:H2'	3:9:1498:U:C6	2.43	0.53
3:9:1563:C:H1'	3:9:1667:A:H4'	1.89	0.53
3:9:1647:A:C1'	84:ET:32:U:H4'	2.32	0.53
10:II:12:ARG:HG3	10:II:18:ARG:NH2	2.23	0.53
18:YY:14:THR:HB	18:YY:16:ARG:NH2	2.24	0.53
23:FF:49:LEU:CD2	27:QQ:49:TYR:HB2	2.38	0.53
24:KK:25:LYS:HB2	24:KK:67:PHE:HE1	1.74	0.53
30:TT:39:LEU:HG	30:TT:56:ARG:NH2	2.22	0.53
30:TT:42:HIS:HB2	30:TT:83:GLN:HA	1.91	0.53
39:D:273:LEU:HB2	79:7:108:G:OP1	2.08	0.53
41:F:242:LEU:HA	41:F:245:ARG:HD3	1.91	0.53
43:H:104:VAL:CG1	43:H:113:GLU:HB2	2.39	0.53
44:I:86:HIS:HB3	44:I:139:ARG:CG	2.37	0.53
49:O:166:ILE:HG12	49:O:169:ARG:HH12	1.73	0.53
52:S:15:ARG:HD3	52:S:27:LEU:HG	1.89	0.53
59:a:103:VAL:CG1	59:a:108:TYR:HB2	2.38	0.53
59:a:147:VAL:HA	67:i:6:PRO:HG2	1.91	0.53
68:j:49:TRP:CE3	78:5:1646:A:H1'	2.42	0.53
76:s:78:LEU:O	76:s:82:ILE:HG13	2.07	0.53
76:s:135:THR:HB	76:s:145:THR:OG1	2.09	0.53
77:t:74:VAL:HG13	77:t:119:ARG:HD2	1.90	0.53
78:5:975:C:H2'	78:5:976:G:O4'	2.08	0.53
78:5:1361:G:H2'	78:5:1362:G:C8	2.43	0.53
78:5:3944:G:H1	78:5:4069:U:H3	1.57	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:5:4130:C:H2'	78:5:4131:G:C8	2.43	0.53
78:5:4188:U:H2'	78:5:4189:U:C6	2.44	0.53
78:5:4417:C:H2'	78:5:4418:G:O4'	2.08	0.53
79:7:24:C:H2'	79:7:25:G:O4'	2.08	0.53
83:PT:39:G:C6	83:PT:40:C:C2	2.96	0.53
84:ET:5:G:O6	84:ET:6:U:O4	2.27	0.53
1:R:70:ARG:HD3	1:R:76:MET:HE2	1.90	0.53
3:9:407:C:O4'	17:XX:46:HIS:HB2	2.09	0.53
3:9:776:G:H2'	3:9:777:C:H6	1.72	0.53
3:9:991:A:H2'	3:9:992:A:C8	2.42	0.53
3:9:1172:A:H2'	3:9:1173:A:O4'	2.08	0.53
3:9:1368:G:O6	3:9:1375:U:O4	2.26	0.53
5:BB:198:GLU:HB2	5:BB:210:VAL:HG21	1.91	0.53
6:CC:135:GLY:O	6:CC:165:VAL:HG22	2.08	0.53
9:HH:95:ILE:HD11	9:HH:133:LEU:HD21	1.90	0.53
10:II:165:GLN:OE1	10:II:172:LEU:HD13	2.09	0.53
25:MM:49:LEU:HB3	25:MM:111:VAL:CG2	2.39	0.53
27:QQ:130:LYS:HA	27:QQ:137:ALA:CA	2.39	0.53
29:SS:39:ARG:HD3	30:TT:45:LEU:HA	1.90	0.53
38:C:110:ARG:HD3	48:N:204:ARG:HG3	1.90	0.53
39:D:152:ARG:HG3	39:D:154:THR:HG23	1.90	0.53
40:E:179:THR:OG1	40:E:189:LEU:HD23	2.08	0.53
43:H:93:ARG:CZ	71:m:56:LEU:HD21	2.38	0.53
47:M:58:THR:HG22	47:M:91:TRP:CZ3	2.44	0.53
52:S:67:VAL:HA	78:5:729:G:H1	1.72	0.53
66:h:14:LYS:O	66:h:18:LEU:HG	2.08	0.53
73:o:3:ASN:O	78:5:4232:U:H2'	2.08	0.53
76:s:130:LEU:HB3	76:s:133:GLU:OE1	2.08	0.53
76:s:143:ILE:CG1	76:s:160:LEU:HD21	2.38	0.53
77:t:106:PHE:O	77:t:109:ILE:HB	2.09	0.53
77:t:137:GLN:HG3	77:t:148:PRO:HD3	1.89	0.53
78:5:735:G:H2'	78:5:736:C:C6	2.43	0.53
78:5:1188:C:H2'	78:5:1189:G:H8	1.73	0.53
78:5:2780:C:H2'	78:5:2781:G:H8	1.72	0.53
78:5:4421:C:N3	78:5:4475:G:N1	2.52	0.53
78:5:4504:C:H2'	78:5:4505:C:C6	2.43	0.53
78:5:4510:A:N1	78:5:4592:C:H4'	2.23	0.53
80:8:40:A:H2'	80:8:41:A:C8	2.43	0.53
3:9:299:U:H2'	3:9:300:A:C8	2.43	0.53
3:9:386:C:H2'	3:9:387:C:O4'	2.07	0.53
3:9:1392:A:H2'	3:9:1393:U:O4'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:1495:A:O2'	83:PT:34:A:H1'	2.08	0.53
5:BB:120:MET:HE3	5:BB:140:VAL:CG2	2.39	0.53
7:EE:185:GLY:N	7:EE:189:LEU:HD13	2.24	0.53
9:HH:39:GLN:O	9:HH:43:LEU:HD13	2.09	0.53
10:II:84:ASN:HB3	10:II:91:VAL:HG23	1.89	0.53
13:NN:45:LEU:HB3	13:NN:50:ILE:HG13	1.90	0.53
16:WW:55:ASP:OD2	16:WW:57:ARG:HB2	2.08	0.53
20:bb:33:MET:HE1	20:bb:73:LEU:HD21	1.91	0.53
20:bb:36:LYS:HD3	20:bb:43:ILE:HD11	1.89	0.53
24:KK:49:MET:HA	24:KK:49:MET:HE2	1.90	0.53
25:MM:52:LEU:HD13	25:MM:65:VAL:HG11	1.91	0.53
42:G:247:VAL:HG21	42:G:249:ARG:NH1	2.24	0.53
43:H:92:MET:HB3	43:H:181:VAL:HA	1.91	0.53
50:P:44:ALA:O	50:P:48:LEU:HG	2.08	0.53
66:h:81:LEU:CD1	80:8:38:U:H5'	2.37	0.53
73:o:66:ILE:HG12	73:o:88:CYS:SG	2.49	0.53
78:5:222:C:H2'	78:5:223:G:O4'	2.08	0.53
78:5:751:G:H3'	78:5:752:G:H8	1.72	0.53
78:5:1477:C:H2'	78:5:1478:C:C6	2.43	0.53
78:5:1974:U:H1'	78:5:1976:G:OP2	2.08	0.53
78:5:2562:G:N2	78:5:2564:G:H3'	2.23	0.53
78:5:5028:G:H2'	78:5:5029:C:C6	2.44	0.53
80:8:32:C:H2'	80:8:33:G:O4'	2.09	0.53
3:9:21:U:H2'	3:9:22:A:C8	2.43	0.53
3:9:28:U:H2'	3:9:29:G:C8	2.44	0.53
3:9:93:U:O2'	7:EE:7:LYS:HB2	2.08	0.53
3:9:295:A:OP2	10:II:10:LYS:HB2	2.08	0.53
3:9:1186:G:H4'	3:9:1187:G:O4'	2.08	0.53
5:BB:107:ARG:HD2	14:OO:131:ASP:CB	2.38	0.53
10:II:60:LEU:HD23	10:II:185:ALA:HB2	1.91	0.53
11:JJ:119:LEU:HD23	11:JJ:119:LEU:H	1.74	0.53
14:OO:64:ALA:O	14:OO:68:GLU:HG3	2.09	0.53
29:SS:75:ARG:HH21	29:SS:95:TYR:HB2	1.73	0.53
42:G:136:PHE:HA	42:G:236:ILE:CD1	2.38	0.53
43:H:36:ARG:HD3	43:H:38:PHE:CZ	2.43	0.53
55:V:48:ARG:HB3	55:V:51:ARG:HD2	1.91	0.53
62:d:75:LYS:HD3	62:d:79:ASN:HB3	1.89	0.53
64:f:9:ALA:HB3	64:f:101:ILE:HG12	1.90	0.53
69:k:24:LYS:CG	69:k:35:LYS:HB2	2.39	0.53
78:5:125:C:H2'	78:5:126:C:C6	2.44	0.53
78:5:1188:C:H2'	78:5:1189:G:C8	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:5:4991:U:H2'	78:5:4992:G:C8	2.44	0.53
84:ET:7:G:C6	84:ET:67:A:C6	2.97	0.53
3:9:28:U:H2'	3:9:29:G:H8	1.73	0.53
3:9:31:U:H2'	3:9:32:U:C6	2.44	0.53
3:9:699:G:H3'	3:9:700:C:O2	2.09	0.53
3:9:986:C:H2'	3:9:987:G:O4'	2.09	0.53
3:9:1037:A:H2'	3:9:1038:C:O4'	2.09	0.53
11:JJ:81:LEU:HA	11:JJ:84:ILE:HG12	1.91	0.53
13:NN:45:LEU:HD23	13:NN:50:ILE:HA	1.91	0.53
16:WW:102:ILE:H	16:WW:113:HIS:HD2	1.54	0.53
17:XX:54:LYS:HD2	17:XX:91:LEU:HD11	1.90	0.53
22:DD:35:SER:CB	22:DD:91:VAL:HG21	2.38	0.53
37:B:47:LEU:HD23	37:B:166:THR:CG2	2.39	0.53
43:H:71:ARG:CG	78:5:4691:A:H4'	2.39	0.53
51:Q:152:PHE:CE1	78:5:1847:C:H4'	2.43	0.53
54:U:56:LEU:HB3	54:U:61:VAL:HG23	1.91	0.53
55:V:40:ILE:HG12	55:V:62:MET:O	2.08	0.53
59:a:124:VAL:HG21	59:a:137:ILE:HD13	1.90	0.53
76:s:85:ASN:HA	78:5:2021:G:H4'	1.89	0.53
76:s:123:VAL:HG21	76:s:143:ILE:HG12	1.90	0.53
78:5:257:C:H2'	78:5:258:G:C8	2.43	0.53
78:5:1504:G:H2'	78:5:1505:C:C6	2.43	0.53
78:5:1739:G:H2'	78:5:1740:C:C6	2.44	0.53
78:5:2420:A:H5''	78:5:2421:G:H5''	1.91	0.53
78:5:2422:C:H2'	78:5:2423:A:C8	2.44	0.53
78:5:2858:A:H2'	78:5:2859:G:O4'	2.08	0.53
78:5:4193:C:H2'	78:5:4194:U:O4'	2.08	0.53
78:5:4215:C:H2'	78:5:4216:G:O4'	2.09	0.53
78:5:4688:C:H2'	78:5:4689:U:C6	2.43	0.53
83:PT:39:G:N3	83:PT:40:C:H1'	2.23	0.53
1:R:81:ARG:HG2	1:R:88:ARG:CZ	2.39	0.53
3:9:870:A:H2'	3:9:871:A:C8	2.44	0.53
3:9:1021:U:H2'	3:9:1022:G:C8	2.44	0.53
4:AA:121:LEU:HD12	4:AA:143:PRO:O	2.09	0.53
25:MM:64:LEU:CD2	35:ff:108:VAL:HB	2.39	0.53
29:SS:20:ILE:CG2	29:SS:29:ALA:HB1	2.38	0.53
42:G:155:TYR:O	42:G:189:LEU:HG	2.08	0.53
49:O:114:LYS:HA	78:5:4758:U:C6	2.44	0.53
62:d:78:ARG:HG2	78:5:4636:U:C5	2.44	0.53
63:e:43:ASN:HD21	63:e:45:VAL:HB	1.73	0.53
65:g:26:PRO:HB3	78:5:2639:U:H1'	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:m:85:ARG:HD3	78:5:4699:U:OP2	2.09	0.53
78:5:207:G:H1'	78:5:232:G:N2	2.23	0.53
78:5:676:C:H2'	78:5:677:G:C8	2.44	0.53
78:5:912:G:O2'	78:5:913:U:H5'	2.09	0.53
78:5:3764:U:H3'	78:5:3765:G:C8	2.44	0.53
78:5:4879:C:H2'	78:5:4880:C:O2	2.08	0.53
3:9:627:C:H2'	3:9:628:C:C6	2.44	0.53
3:9:1072:C:H2'	3:9:1073:U:C6	2.43	0.53
3:9:1370:G:N2	3:9:1372:G:H3'	2.24	0.53
4:AA:41:ARG:N	4:AA:48:ILE:HD12	2.23	0.53
7:EE:123:LEU:CD2	7:EE:228:ILE:HA	2.39	0.53
8:GG:57:ASP:OD1	8:GG:98:ARG:HD2	2.09	0.53
13:NN:136:PRO:HG2	13:NN:139:TRP:HB2	1.90	0.53
16:WW:11:LEU:HD22	16:WW:72:CYS:SG	2.49	0.53
22:DD:151:LYS:HE2	22:DD:153:VAL:HG21	1.91	0.53
26:PP:80:LEU:O	26:PP:116:LEU:HD12	2.09	0.53
35:ff:126:CYS:HB2	35:ff:130:VAL:HB	1.90	0.53
39:D:33:ARG:HH21	79:7:7:G:H4'	1.74	0.53
44:I:51:HIS:HB3	44:I:134:VAL:HG13	1.91	0.53
48:N:14:LYS:HD2	78:5:280:G:C4	2.44	0.53
49:O:114:LYS:HG2	78:5:4758:U:C5	2.43	0.53
50:P:122:ALA:HB3	50:P:143:PRO:HG2	1.91	0.53
59:a:35:ALA:CB	78:5:38:A:H5''	2.39	0.53
78:5:1203:G:H2'	78:5:1204:C:O4'	2.08	0.53
78:5:1332:C:H2'	78:5:1333:A:C8	2.42	0.53
78:5:1857:C:H2'	78:5:1858:A:C8	2.44	0.53
78:5:4668:U:H2'	78:5:4669:A:C8	2.44	0.53
84:ET:30:G:H2'	84:ET:31:C:C6	2.44	0.53
3:9:105:U:H2'	3:9:106:C:O4'	2.09	0.53
3:9:464:U:H2'	3:9:466:U:OP2	2.08	0.53
3:9:898:G:H2'	3:9:899:A:H8	1.74	0.53
3:9:950:C:H2'	3:9:951:G:C8	2.44	0.53
3:9:960:A:H2'	3:9:961:U:C6	2.43	0.53
7:EE:19:MET:CE	7:EE:108:ARG:HD3	2.39	0.53
27:QQ:49:TYR:O	27:QQ:53:GLU:HG3	2.09	0.53
27:QQ:109:LYS:HG3	27:QQ:120:LEU:CD1	2.39	0.53
36:A:202:VAL:HG12	36:A:217:GLN:HG2	1.91	0.53
37:B:181:MET:HE1	37:B:346:THR:HG23	1.90	0.53
41:F:156:ARG:HD2	41:F:247:ASN:HD22	1.74	0.53
43:H:115:ARG:NH1	43:H:123:ILE:HG21	2.24	0.53
45:J:19:LYS:HB3	45:J:75:ARG:CZ	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:S:93:MET:HE1	52:S:117:HIS:NE2	2.24	0.53
52:S:107:THR:O	52:S:111:ARG:HG2	2.08	0.53
58:Z:11:VAL:HG11	58:Z:80:LEU:HB3	1.89	0.53
59:a:2:PRO:HD3	78:5:1509:C:H5''	1.89	0.53
59:a:21:ARG:HB2	78:5:1318:C:OP1	2.08	0.53
63:e:21:ILE:HD13	63:e:21:ILE:H	1.74	0.53
69:k:26:LYS:CE	78:5:2696:A:H5'	2.39	0.53
76:s:119:CYS:HB2	76:s:183:PHE:HZ	1.73	0.53
77:t:38:SER:O	77:t:42:VAL:HG23	2.09	0.53
78:5:911:U:H2'	78:5:912:G:O4'	2.09	0.53
78:5:1306:C:H2'	78:5:1307:A:H8	1.74	0.53
78:5:1569:U:H2'	78:5:1570:G:C8	2.44	0.53
78:5:2851:G:H2'	78:5:2852:U:O4'	2.09	0.53
78:5:3848:U:H2'	78:5:3849:A:C8	2.43	0.53
78:5:3883:U:H2'	78:5:3884:U:C6	2.44	0.53
78:5:3921:U:H2'	78:5:4183:G:N2	2.24	0.53
78:5:4098:A:H2'	78:5:4099:G:C8	2.44	0.53
78:5:4239:A:H2'	78:5:4240:G:C8	2.43	0.53
78:5:4477:A:H61	78:5:4607:A:H61	1.56	0.53
78:5:4499:G:C2	78:5:4500:U:H1'	2.44	0.53
1:R:109:TYR:CE1	1:R:114:LYS:HD2	2.44	0.52
3:9:354:C:H2'	3:9:355:G:C8	2.43	0.52
3:9:832:G:O2'	3:9:849:U:H5'	2.09	0.52
3:9:1256:A:C5	26:PP:100:LYS:HB2	2.43	0.52
5:BB:198:GLU:HG3	5:BB:207:LEU:CD1	2.39	0.52
8:GG:39:ASP:CA	8:GG:46:LYS:HA	2.35	0.52
12:LL:96:ILE:HD13	17:XX:10:ALA:CB	2.39	0.52
17:XX:91:LEU:HD23	21:ee:82:VAL:HG21	1.90	0.52
20:bb:34:ASP:HB3	20:bb:43:ILE:HG21	1.91	0.52
22:DD:35:SER:HB2	22:DD:91:VAL:HG21	1.91	0.52
40:E:186:ARG:NH2	78:5:4936:G:H3'	2.23	0.52
46:L:186:ARG:CZ	67:i:9:VAL:HG21	2.38	0.52
49:O:156:LEU:HD13	78:5:4910:A:C4	2.44	0.52
51:Q:72:LEU:HB2	51:Q:75:ARG:HD3	1.91	0.52
73:o:37:GLY:HA3	78:5:4342:C:O3'	2.08	0.52
73:o:65:LYS:HB2	78:5:4369:A:O3'	2.09	0.52
74:p:4:ARG:HD2	78:5:1554:A:OP2	2.09	0.52
74:p:42:CYS:HA	78:5:2674:A:N6	2.24	0.52
76:s:57:LYS:CD	78:5:2020:U:H5'	2.39	0.52
77:t:17:CYS:O	77:t:58:ILE:HD12	2.09	0.52
77:t:114:ARG:HH22	77:t:125:LEU:HD13	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:5:355:A:H2'	78:5:356:G:O4'	2.09	0.52
78:5:1795:A:H2'	78:5:1796:U:O4'	2.09	0.52
78:5:2284:G:H2'	78:5:2285:A:H8	1.72	0.52
78:5:3658:C:H2'	78:5:3659:G:H8	1.73	0.52
78:5:4153:C:H2'	78:5:4154:G:C8	2.44	0.52
78:5:4318:C:H3'	78:5:4319:C:H5''	1.92	0.52
78:5:4465:U:O4	78:5:4487:A:H2'	2.09	0.52
78:5:4881:U:C4'	78:5:4882:U:H5'	2.39	0.52
79:7:110:G:H2'	79:7:111:C:C6	2.43	0.52
3:9:128:U:H3'	3:9:129:C:C6	2.44	0.52
3:9:802:A:H62	3:9:818:G:H21	1.37	0.52
3:9:850:U:H2'	3:9:851:U:C6	2.44	0.52
3:9:979:C:H3'	3:9:980:A:H5''	1.91	0.52
3:9:1101:C:H2'	3:9:1102:G:O4'	2.10	0.52
3:9:1104:A:H2'	3:9:1105:U:O4'	2.09	0.52
5:BB:65:ARG:NH1	14:OO:51:GLU:HB2	2.24	0.52
8:GG:52:ILE:CD1	8:GG:102:VAL:HG21	2.39	0.52
9:HH:101:LEU:HB3	9:HH:116:ARG:HD2	1.90	0.52
11:JJ:35:TYR:CD2	11:JJ:106:LEU:HB3	2.44	0.52
14:OO:72:TYR:O	14:OO:76:LEU:HG	2.09	0.52
25:MM:49:LEU:HD22	25:MM:50:CYS:H	1.74	0.52
25:MM:83:LYS:HD2	25:MM:103:VAL:HG13	1.92	0.52
36:A:186:TYR:HB2	36:A:196:TRP:CZ3	2.44	0.52
39:D:108:ARG:CZ	39:D:253:TYR:HB2	2.39	0.52
39:D:286:SER:HA	39:D:289:ARG:HG2	1.90	0.52
46:L:139:SER:HB2	46:L:143:GLU:OE1	2.10	0.52
47:M:17:PHE:CE1	47:M:54:CYS:HA	2.44	0.52
47:M:41:PRO:HG3	47:M:73:VAL:HG12	1.90	0.52
47:M:119:ARG:HD3	47:M:123:ILE:CD1	2.38	0.52
51:Q:49:LYS:O	51:Q:53:MET:HG3	2.07	0.52
57:Y:126:ARG:CZ	78:5:197:A:H5''	2.39	0.52
63:e:108:ARG:NE	63:e:127:ALA:HB3	2.25	0.52
78:5:428:G:H2'	78:5:429:A:C8	2.43	0.52
78:5:1427:A:H1'	78:5:1694:C:OP1	2.10	0.52
78:5:1543:G:H2'	78:5:1544:G:C8	2.44	0.52
78:5:2391:G:H2'	78:5:2392:C:C6	2.44	0.52
78:5:2855:G:H1'	78:5:2857:A:H62	1.74	0.52
78:5:3716:C:H3'	78:5:3735:G:H22	1.74	0.52
78:5:5034:A:H2'	78:5:5035:U:O4'	2.09	0.52
79:7:63:C:H5'	79:7:64:G:H5''	1.90	0.52
80:8:19:C:H2'	80:8:20:A:C8	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:8:73:U:H2'	80:8:74:U:O4'	2.08	0.52
81:EF:200:MET:HE3	81:EF:203:ILE:HG21	1.91	0.52
83:PT:36:C:H3'	83:PT:37:A:H8	1.75	0.52
3:9:590:U:H5'	3:9:935:U:C4'	2.39	0.52
3:9:879:C:H2'	3:9:880:G:O4'	2.08	0.52
3:9:1262:A:H4'	3:9:1497:G:H4'	1.92	0.52
8:GG:55:GLY:O	8:GG:63:MET:HB3	2.09	0.52
13:NN:23:PRO:HG2	13:NN:26:LEU:HB2	1.90	0.52
14:OO:98:ARG:NH2	14:OO:134:PRO:HG3	2.24	0.52
16:WW:111:MET:HE1	16:WW:119:LYS:HD2	1.91	0.52
17:XX:82:THR:O	17:XX:118:VAL:HG13	2.09	0.52
18:YY:5:VAL:HG22	18:YY:29:HIS:HB3	1.91	0.52
19:aa:45:VAL:HG23	19:aa:50:VAL:HB	1.91	0.52
22:DD:164:VAL:HG22	22:DD:168:VAL:CG2	2.40	0.52
23:FF:103:LEU:HD23	23:FF:178:ILE:CD1	2.40	0.52
23:FF:151:ILE:HA	23:FF:154:LEU:CD2	2.40	0.52
30:TT:124:THR:HG23	30:TT:126:GLN:H	1.73	0.52
36:A:245:ARG:HD3	78:5:3747:A:C8	2.45	0.52
37:B:54:THR:HA	37:B:373:LYS:NZ	2.24	0.52
42:G:119:GLN:HG3	48:N:28:TRP:HH2	1.73	0.52
42:G:151:LEU:HD13	42:G:271:LEU:HD12	1.92	0.52
43:H:91:LYS:HB3	43:H:143:GLU:OE2	2.10	0.52
44:I:152:LEU:O	44:I:156:LYS:HG3	2.09	0.52
48:N:185:GLY:HA2	78:5:78:U:H5''	1.91	0.52
55:V:85:ARG:HD3	78:5:2846:G:O3'	2.10	0.52
69:k:36:VAL:CG1	69:k:43:TYR:HB2	2.39	0.52
78:5:2844:A:O2'	78:5:4631:G:H4'	2.08	0.52
78:5:2890:C:O2'	78:5:2891:U:H5'	2.09	0.52
78:5:3598:C:H2'	78:5:3599:A:H8	1.75	0.52
80:8:7:U:H2'	80:8:8:U:C6	2.44	0.52
3:9:660:G:H2'	3:9:661:A:C8	2.45	0.52
3:9:1432:C:H2'	3:9:1433:C:C6	2.45	0.52
3:9:1627:U:O2'	3:9:1628:U:H2'	2.10	0.52
8:GG:42:GLY:HA3	8:GG:45:TRP:HB2	1.92	0.52
10:II:27:TYR:HB3	10:II:49:ARG:NH1	2.24	0.52
10:II:79:ILE:HG12	10:II:170:LYS:HZ2	1.74	0.52
11:JJ:131:ARG:HH22	11:JJ:144:ILE:HG13	1.74	0.52
13:NN:91:LEU:HB3	13:NN:122:ILE:CG1	2.39	0.52
14:OO:100:THR:HB	14:OO:105:THR:O	2.09	0.52
18:YY:36:PRO:HG2	18:YY:39:GLU:HG3	1.90	0.52
25:MM:75:ASN:HB3	25:MM:128:PHE:CE1	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:QQ:25:CYS:SG	27:QQ:68:ILE:HG12	2.50	0.52
30:TT:124:THR:HG22	30:TT:127:GLY:H	1.73	0.52
37:B:77:THR:CG2	37:B:336:CYS:HA	2.40	0.52
37:B:268:ARG:NH2	78:5:3896:C:H1'	2.25	0.52
41:F:165:ARG:HD3	78:5:2276:A:OP1	2.09	0.52
44:I:6:ALA:HB3	78:5:4432:C:OP2	2.10	0.52
45:J:20:LEU:HG	45:J:22:LEU:HD21	1.91	0.52
47:M:82:ILE:HA	47:M:85:LYS:HZ3	1.74	0.52
55:V:82:ILE:HD13	55:V:121:VAL:HG22	1.91	0.52
78:5:147:A:H2'	78:5:148:C:O4'	2.09	0.52
78:5:504:G:H2'	78:5:505:G:C8	2.45	0.52
78:5:1317:U:H2'	78:5:1318:C:C6	2.44	0.52
78:5:2092:G:C4	78:5:2097:U:H5	2.27	0.52
78:5:2598:A:H2'	78:5:2599:G:O4'	2.09	0.52
78:5:2786:C:H5''	78:5:2787:A:H5'	1.92	0.52
78:5:2805:C:O2'	78:5:2806:A:H5'	2.09	0.52
78:5:4095:G:H1	78:5:4113:U:H3	1.58	0.52
78:5:4630:G:H2'	78:5:4631:G:C8	2.44	0.52
79:7:112:U:H2'	79:7:113:G:H8	1.73	0.52
83:PT:39:G:H2'	83:PT:40:C:C1'	2.39	0.52
1:R:106:LEU:HB3	1:R:120:TYR:CD1	2.45	0.52
3:9:926:C:H4'	3:9:1029:A:H61	1.75	0.52
3:9:1020:A:O2'	3:9:1075:C:H4'	2.09	0.52
3:9:1068:G:H2'	3:9:1069:C:C6	2.43	0.52
3:9:1299:C:O4'	3:9:1303:A:H5'	2.09	0.52
4:AA:16:LEU:HD23	28:RR:97:GLU:HG2	1.91	0.52
9:HH:163:GLN:HG3	9:HH:189:PHE:CE2	2.43	0.52
23:FF:201:LYS:HA	23:FF:204:ARG:HG2	1.90	0.52
25:MM:33:ARG:CZ	25:MM:91:LEU:HD21	2.40	0.52
31:UU:61:LEU:HD22	34:dd:34:TYR:CE1	2.45	0.52
33:cc:11:LEU:O	33:cc:35:MET:HG2	2.10	0.52
49:O:108:ILE:HD13	49:O:160:ARG:NE	2.24	0.52
49:O:179:LYS:HA	49:O:179:LYS:HE3	1.92	0.52
52:S:8:ARG:O	52:S:33:PHE:HA	2.09	0.52
52:S:9:GLU:HB3	52:S:67:VAL:CG1	2.40	0.52
58:Z:99:ASP:O	58:Z:102:ARG:HG2	2.09	0.52
59:a:103:VAL:HG12	59:a:108:TYR:O	2.10	0.52
59:a:132:ARG:H	59:a:132:ARG:HD2	1.74	0.52
71:m:67:LYS:HE3	71:m:76:ARG:HD3	1.91	0.52
73:o:21:HIS:HA	73:o:71:GLU:O	2.09	0.52
74:p:15:GLY:HA2	78:5:2876:G:O2'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:s:47:LEU:HB3	76:s:50:LYS:CG	2.40	0.52
77:t:72:GLU:O	77:t:74:VAL:HG23	2.10	0.52
78:5:1098:G:H2'	78:5:1099:C:C6	2.44	0.52
78:5:2776:G:H2'	78:5:2777:G:C8	2.45	0.52
78:5:4128:A:H61	78:5:4156:G:H1'	1.75	0.52
78:5:4434:C:H2'	78:5:4435:U:C6	2.44	0.52
78:5:4597:U:H2'	78:5:4598:C:O4'	2.09	0.52
78:5:4918:C:H2'	78:5:4919:G:C8	2.45	0.52
80:8:69:U:H2'	80:8:70:G:O4'	2.09	0.52
80:8:140:C:H2'	80:8:141:C:C6	2.44	0.52
1:R:101:ILE:HG21	78:5:2897:G:OP2	2.08	0.52
3:9:24:C:H2'	3:9:25:A:C8	2.45	0.52
3:9:369:A:O2'	10:II:50:GLY:HA2	2.10	0.52
3:9:402:G:H5''	81:EF:409:ARG:NH1	2.24	0.52
3:9:496:U:H2'	3:9:497:U:O4'	2.09	0.52
3:9:1019:U:H4'	72:n:10:MET:HE2	1.90	0.52
3:9:1636:A:H4'	29:SS:35:GLY:O	2.09	0.52
4:AA:46:ILE:HG13	28:RR:129:LYS:HG3	1.92	0.52
5:BB:202:GLN:OE1	5:BB:206:PRO:HA	2.09	0.52
7:EE:10:LYS:HB2	7:EE:13:ALA:HB3	1.90	0.52
8:GG:147:LEU:HB3	8:GG:151:ASP:OD1	2.09	0.52
11:JJ:131:ARG:NH2	11:JJ:144:ILE:HA	2.24	0.52
20:bb:42:LYS:CE	20:bb:57:VAL:HG21	2.39	0.52
24:KK:2:LEU:HD23	24:KK:2:LEU:H	1.74	0.52
28:RR:36:GLU:HB2	28:RR:47:ARG:HD2	1.92	0.52
36:A:79:ALA:HB3	36:A:82:ILE:HD13	1.91	0.52
37:B:59:GLU:OE2	37:B:71:GLU:HG2	2.09	0.52
38:C:64:ALA:HB2	38:C:91:ALA:HB3	1.92	0.52
48:N:138:PHE:CE1	78:5:18:C:H4'	2.44	0.52
50:P:87:SER:O	50:P:91:LEU:HG	2.09	0.52
59:a:3:SER:HA	59:a:6:ARG:HH11	1.74	0.52
70:l:25:GLN:HA	70:l:28:TRP:HE1	1.75	0.52
76:s:57:LYS:HA	78:5:2020:U:H4'	1.91	0.52
77:t:12:VAL:HA	77:t:63:THR:HA	1.90	0.52
77:t:35:LEU:HD23	77:t:64:ILE:HG21	1.92	0.52
78:5:311:G:O2'	78:5:312:G:H5'	2.10	0.52
78:5:366:A:H2'	78:5:367:C:O4'	2.10	0.52
78:5:710:G:H2'	78:5:711:A:H8	1.75	0.52
78:5:920:C:H2'	78:5:921:C:C6	2.45	0.52
78:5:2537:A:H2'	78:5:2538:U:O4'	2.10	0.52
3:9:232:C:H2'	3:9:233:C:O4'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:310:C:O2'	10:II:5:ARG:HA	2.09	0.52
3:9:1033:U:H2'	3:9:1034:G:O4'	2.10	0.52
3:9:1123:C:H2'	3:9:1124:C:C6	2.45	0.52
3:9:1169:A:H4'	72:n:13:LEU:HD11	1.91	0.52
3:9:1203:C:H2'	3:9:1204:U:C6	2.44	0.52
6:CC:209:VAL:HG11	6:CC:233:LEU:HD11	1.91	0.52
7:EE:149:TYR:HD1	8:GG:209:TYR:CD1	2.28	0.52
8:GG:39:ASP:CB	8:GG:46:LYS:HA	2.39	0.52
21:ee:77:GLY:HA2	21:ee:81:ARG:HD2	1.90	0.52
30:TT:40:ALA:HB2	30:TT:95:GLY:HA2	1.92	0.52
31:UU:46:LYS:NZ	31:UU:97:ILE:HG23	2.25	0.52
37:B:175:GLN:HA	78:5:4986:G:H5'	1.92	0.52
41:F:40:MET:HE1	60:b:116:LEU:HD12	1.92	0.52
42:G:126:ARG:HD3	42:G:294:VAL:O	2.10	0.52
48:N:6:TYR:CD1	67:i:40:VAL:HG13	2.45	0.52
49:O:26:GLN:HG3	52:S:167:PHE:HZ	1.75	0.52
50:P:128:ARG:HB2	50:P:136:ILE:HG23	1.91	0.52
58:Z:5:MET:HG2	58:Z:77:TYR:CE1	2.45	0.52
60:b:91:ARG:HD2	78:5:1214:C:N3	2.25	0.52
67:i:72:PHE:O	67:i:76:ARG:HG2	2.10	0.52
75:r:49:VAL:HG22	75:r:102:TYR:CE2	2.45	0.52
78:5:19:G:O2'	78:5:20:U:H5'	2.10	0.52
78:5:31:U:H2'	78:5:32:G:O4'	2.09	0.52
78:5:258:G:H2'	78:5:259:C:C6	2.45	0.52
78:5:731:G:H2'	78:5:732:A:C8	2.44	0.52
78:5:1593:A:H5''	78:5:2839:U:H5''	1.92	0.52
78:5:1779:U:H2'	78:5:1780:A:C8	2.44	0.52
78:5:3832:U:H2'	78:5:3833:C:C6	2.45	0.52
78:5:3910:C:H2'	78:5:3911:C:C6	2.45	0.52
78:5:4302:U:C2'	78:5:4303:C:H5'	2.40	0.52
78:5:4336:A:H5'	78:5:4337:C:O4'	2.10	0.52
78:5:4716:C:H2'	78:5:4717:A:C8	2.45	0.52
84:ET:43:G:H2'	84:ET:44:A:C8	2.45	0.52
3:9:65:C:C6	8:GG:174:PRO:HB3	2.45	0.52
3:9:92:A:H5'	3:9:93:U:C5	2.45	0.52
3:9:208:U:H2'	3:9:209:U:C6	2.44	0.52
3:9:837:A:OP1	19:aa:37:LYS:HE3	2.10	0.52
3:9:903:U:O2'	3:9:904:C:H5'	2.09	0.52
3:9:1020:A:OP1	72:n:14:LYS:HG2	2.10	0.52
3:9:1096:G:H2'	3:9:1097:C:H6	1.75	0.52
3:9:1293:C:H5''	24:KK:55:ARG:HH11	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:1620:A:H2'	3:9:1621:U:C6	2.44	0.52
3:9:1622:U:H2'	3:9:1623:G:C8	2.45	0.52
4:AA:158:ASP:OD2	15:VV:32:ILE:HG21	2.08	0.52
4:AA:197:VAL:CG2	28:RR:85:VAL:HG13	2.38	0.52
5:BB:119:THR:HB	5:BB:143:THR:HG23	1.92	0.52
5:BB:227:LYS:O	5:BB:231:LEU:HG	2.10	0.52
8:GG:137:ARG:HD2	8:GG:178:ARG:NH2	2.25	0.52
10:II:190:LEU:HG	10:II:198:TYR:CD2	2.44	0.52
24:KK:35:LEU:HD12	24:KK:40:VAL:CG2	2.39	0.52
28:RR:98:VAL:HG22	28:RR:102:THR:OG1	2.10	0.52
42:G:223:LEU:CD1	42:G:254:THR:HG21	2.39	0.52
48:N:113:LEU:HD22	48:N:136:ASP:HA	1.92	0.52
49:O:38:CYS:HB2	49:O:106:ASP:OD1	2.09	0.52
49:O:173:GLN:HA	49:O:176:ARG:HE	1.75	0.52
50:P:69:ARG:HB2	50:P:69:ARG:HH11	1.75	0.52
54:U:28:PRO:HB2	54:U:34:MET:HG2	1.90	0.52
74:p:62:LYS:HG3	78:5:4121:G:O6	2.09	0.52
77:t:103:ASN:ND2	77:t:144:ASP:H	2.07	0.52
77:t:133:LEU:HB2	77:t:147:HIS:CD2	2.45	0.52
78:5:18:C:H2'	78:5:19:G:H8	1.74	0.52
78:5:1557:C:H2'	78:5:1558:A:C8	2.44	0.52
78:5:1733:G:N3	78:5:4214:A:H2'	2.25	0.52
78:5:2622:G:C4'	78:5:2701:U:H4'	2.40	0.52
78:5:4080:C:H2'	78:5:4081:G:H8	1.74	0.52
78:5:4892:A:O2'	78:5:4893:A:H5'	2.09	0.52
81:EF:77:LEU:O	81:EF:99:LEU:HD13	2.10	0.52
84:ET:45:G:H3'	84:ET:46:G:H5''	1.92	0.52
3:9:524:G:H2'	3:9:525:G:C8	2.42	0.52
3:9:658:U:H2'	3:9:659:U:C6	2.45	0.52
3:9:791:A:H1'	14:OO:136:PRO:HB3	1.92	0.52
3:9:1061:G:H2'	3:9:1062:C:C6	2.45	0.52
3:9:1577:G:H2'	3:9:1578:C:C6	2.44	0.52
4:AA:6:ASP:HA	4:AA:9:GLN:HB2	1.91	0.52
4:AA:34:MET:SD	4:AA:154:LEU:HD11	2.50	0.52
7:EE:9:LEU:HB2	7:EE:30:ARG:HB2	1.92	0.52
13:NN:88:LEU:HD13	13:NN:125:LEU:HB3	1.92	0.52
23:FF:92:ILE:HD13	23:FF:169:ILE:CG2	2.39	0.52
25:MM:42:LEU:CD2	25:MM:68:LEU:HB3	2.39	0.52
26:PP:49:LEU:HD12	26:PP:53:GLN:NE2	2.24	0.52
28:RR:13:ALA:HB3	28:RR:53:TYR:HD2	1.75	0.52
30:TT:18:LEU:HB3	30:TT:58:ALA:HB1	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:B:254:ILE:HD11	78:5:3897:G:H4'	1.92	0.52
38:C:285:LEU:HD12	51:Q:125:GLN:NE2	2.25	0.52
38:C:339:THR:O	38:C:340:ILE:HD13	2.10	0.52
39:D:15:ARG:NH1	78:5:1743:A:H1'	2.25	0.52
46:L:126:LEU:HD23	46:L:137:GLY:O	2.09	0.52
51:Q:54:SER:HB2	78:5:1349:G:OP2	2.09	0.52
51:Q:181:ARG:NH2	78:5:1391:A:H5'	2.25	0.52
53:T:113:ASP:O	53:T:117:LYS:HE2	2.10	0.52
63:e:60:TYR:CE1	78:5:1900:C:H4'	2.44	0.52
67:i:73:ILE:HG21	67:i:86:LYS:HB3	1.90	0.52
78:5:18:C:H2'	78:5:19:G:C8	2.44	0.52
78:5:1333:A:H2'	78:5:1334:A:C8	2.44	0.52
78:5:1513:U:H2'	78:5:1514:U:C6	2.44	0.52
78:5:1806:G:H2'	78:5:1807:C:H6	1.75	0.52
78:5:2377:C:H2'	78:5:2378:G:O4'	2.10	0.52
78:5:2580:U:H2'	78:5:2581:A:C4	2.44	0.52
78:5:3936:A:H2'	78:5:3937:C:C6	2.44	0.52
79:7:77:A:H62	79:7:99:G:N2	2.07	0.52
3:9:148:A:H2'	3:9:149:A:O4'	2.10	0.52
3:9:426:C:OP1	7:EE:66:MET:HE2	2.10	0.52
7:EE:157:ASN:O	7:EE:175:PHE:HB2	2.10	0.52
7:EE:185:GLY:H	7:EE:189:LEU:HD13	1.75	0.52
11:JJ:169:ARG:HG3	11:JJ:170:PRO:HD2	1.92	0.52
17:XX:59:ALA:HB3	17:XX:64:SER:HA	1.92	0.52
22:DD:137:VAL:HG22	22:DD:151:LYS:HG3	1.91	0.52
24:KK:19:GLY:HA3	24:KK:93:THR:CG2	2.40	0.52
29:SS:85:ASN:OD1	29:SS:98:VAL:HG23	2.10	0.52
36:A:118:GLU:HB3	36:A:126:LEU:HD11	1.92	0.52
37:B:101:THR:HG23	78:5:4723:A:O2'	2.10	0.52
38:C:77:PRO:CB	38:C:92:PHE:HB2	2.40	0.52
40:E:270:LEU:O	40:E:274:LEU:HG	2.09	0.52
43:H:122:TYR:HB2	78:5:4613:C:O4'	2.10	0.52
44:I:76:MET:HE3	44:I:151:ALA:HB2	1.92	0.52
55:V:49:LEU:HD12	78:5:4494:G:OP1	2.10	0.52
57:Y:11:ARG:HD2	78:5:229:G:OP1	2.10	0.52
61:c:33:GLN:HA	61:c:36:LYS:CE	2.40	0.52
62:d:22:THR:HG22	62:d:89:SER:HB2	1.92	0.52
62:d:33:ILE:HD11	62:d:41:ARG:CA	2.40	0.52
65:g:24:ARG:NH2	65:g:30:ILE:HD11	2.25	0.52
68:j:48:ASN:HA	68:j:54:LYS:HE3	1.92	0.52
73:o:45:GLN:HE22	73:o:51:GLN:HA	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:s:44:ARG:HB3	76:s:48:ARG:NH2	2.25	0.52
78:5:727:C:H2'	78:5:728:U:C6	2.45	0.52
78:5:758:G:H2'	78:5:759:G:O4'	2.10	0.52
78:5:1334:A:H4'	80:8:18:U:OP1	2.10	0.52
78:5:2851:G:OP1	78:5:4495:G:H5'	2.09	0.52
78:5:4500:U:H2'	78:5:4501:U:C6	2.45	0.52
78:5:4650:G:H2'	78:5:4651:A:O4'	2.10	0.52
78:5:4691:A:H2'	78:5:4692:A:O4'	2.10	0.52
1:R:60:ARG:HB3	1:R:64:ARG:NH1	2.24	0.51
3:9:371:A:H4'	7:EE:3:ARG:HB3	1.92	0.51
3:9:425:C:H2'	3:9:426:C:H5''	1.92	0.51
3:9:486:U:H4'	11:JJ:132:GLN:O	2.10	0.51
3:9:580:G:H5'	3:9:586:G:N2	2.25	0.51
3:9:598:C:H2'	3:9:599:U:C6	2.45	0.51
3:9:680:A:OP1	11:JJ:10:ARG:HG2	2.10	0.51
3:9:1192:C:H2'	3:9:1193:G:H8	1.74	0.51
3:9:1215:C:H5'	3:9:1216:A:C8	2.45	0.51
3:9:1434:C:H2'	3:9:1435:G:O4'	2.10	0.51
3:9:1631:U:H2'	3:9:1632:C:C6	2.46	0.51
4:AA:88:LEU:HG	28:RR:82:ASP:OD2	2.11	0.51
5:BB:120:MET:HE3	5:BB:140:VAL:HG23	1.92	0.51
6:CC:183:LYS:HE2	6:CC:196:ILE:HG23	1.92	0.51
8:GG:64:LYS:HB2	8:GG:97:VAL:HG21	1.93	0.51
10:II:27:TYR:CD1	10:II:28:GLU:HG3	2.45	0.51
13:NN:23:PRO:HG2	13:NN:26:LEU:CB	2.40	0.51
15:VV:38:GLU:HG2	15:VV:49:GLN:NE2	2.25	0.51
17:XX:48:LYS:O	17:XX:75:ILE:HG12	2.09	0.51
23:FF:35:LEU:HD22	23:FF:147:VAL:CG2	2.40	0.51
23:FF:102:LEU:CD1	32:ZZ:100:VAL:HG21	2.40	0.51
31:UU:28:ASN:HB3	31:UU:31:SER:OG	2.10	0.51
36:A:148:VAL:HG21	36:A:158:ILE:HD12	1.91	0.51
39:D:146:LEU:HD12	78:5:4323:A:C2	2.43	0.51
41:F:97:ILE:CG1	51:Q:4:ASP:HB3	2.36	0.51
43:H:34:LEU:HD21	43:H:149:ASN:HB3	1.92	0.51
44:I:208:LYS:HE2	44:I:212:LEU:CD2	2.39	0.51
45:J:17:ILE:HG12	45:J:134:LEU:CD2	2.40	0.51
48:N:68:ARG:HB2	48:N:126:THR:C	2.35	0.51
49:O:18:ARG:HB3	49:O:123:ALA:HB2	1.92	0.51
51:Q:154:LYS:HE2	51:Q:158:THR:HG21	1.91	0.51
52:S:166:ARG:HG2	52:S:167:PHE:CD2	2.44	0.51
57:Y:56:GLN:CG	57:Y:67:ILE:HG12	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:h:87:LYS:HD3	66:h:91:MET:CG	2.38	0.51
68:j:21:ARG:CG	80:8:102:G:H4'	2.40	0.51
68:j:73:ARG:HG2	80:8:94:G:OP1	2.11	0.51
78:5:307:A:H3'	78:5:308:G:H21	1.75	0.51
78:5:489:C:H2'	78:5:490:C:C6	2.45	0.51
78:5:1554:A:N6	78:5:1573:G:H1'	2.26	0.51
78:5:1687:U:H2'	78:5:1688:G:C8	2.44	0.51
78:5:2050:G:H2'	78:5:2051:C:C6	2.45	0.51
78:5:2330:G:H2'	78:5:2331:G:N3	2.25	0.51
78:5:2668:G:H5''	78:5:2669:C:OP2	2.10	0.51
78:5:4346:U:O2'	78:5:4347:G:H5'	2.10	0.51
78:5:4961:G:H2'	78:5:4962:C:C6	2.45	0.51
80:8:93:C:O2'	80:8:94:G:H2'	2.09	0.51
1:R:106:LEU:HD21	1:R:123:LEU:HB3	1.91	0.51
1:R:173:ARG:O	1:R:177:LEU:HG	2.10	0.51
3:9:96:C:H2'	3:9:97:U:C6	2.45	0.51
3:9:1474:C:H2'	3:9:1475:A:C8	2.45	0.51
3:9:1541:U:O4	23:FF:76:MET:HE2	2.09	0.51
4:AA:131:HIS:O	4:AA:135:THR:HG23	2.10	0.51
5:BB:198:GLU:HG3	5:BB:207:LEU:HD13	1.93	0.51
9:HH:95:ILE:HD11	9:HH:133:LEU:CD2	2.40	0.51
11:JJ:115:PHE:CG	11:JJ:123:ILE:HG13	2.46	0.51
18:YY:17:LEU:CD1	18:YY:18:LEU:HG	2.39	0.51
22:DD:25:LEU:HD22	22:DD:37:VAL:HG11	1.91	0.51
23:FF:20:PHE:CZ	23:FF:50:PRO:HD3	2.44	0.51
24:KK:77:GLN:HA	24:KK:80:ARG:CD	2.41	0.51
27:QQ:38:PRO:CD	30:TT:8:ASP:HA	2.41	0.51
29:SS:71:MET:HE2	29:SS:99:LEU:HG	1.91	0.51
36:A:83:HIS:CE1	36:A:86:GLN:HB2	2.45	0.51
38:C:322:LEU:O	38:C:326:LEU:HG	2.09	0.51
39:D:67:ALA:HA	39:D:72:ASP:HB3	1.91	0.51
40:E:133:LYS:HD3	78:5:1284:G:H4'	1.92	0.51
42:G:212:HIS:ND1	42:G:238:LYS:HA	2.24	0.51
44:I:12:CYS:HA	44:I:59:GLN:OE1	2.09	0.51
47:M:123:ILE:HD13	49:O:182:GLU:HG2	1.91	0.51
50:P:32:THR:OG1	50:P:91:LEU:HD21	2.10	0.51
51:Q:53:MET:HG2	78:5:1692:C:OP1	2.10	0.51
53:T:65:TYR:OH	53:T:88:ARG:HD3	2.10	0.51
55:V:106:VAL:CG2	55:V:112:MET:HG2	2.40	0.51
58:Z:14:LEU:HD21	65:g:92:LYS:HE3	1.92	0.51
59:a:110:LYS:HD3	78:5:1396:G:O6	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:a:121:PRO:HA	59:a:141:GLY:O	2.09	0.51
62:d:93:ASN:HA	62:d:103:TYR:HE1	1.74	0.51
65:g:59:VAL:HG13	65:g:60:ARG:O	2.10	0.51
71:m:77:LEU:CD1	71:m:84:CYS:HA	2.38	0.51
74:p:84:ARG:O	74:p:88:GLU:HG2	2.10	0.51
77:t:151:ILE:O	77:t:152:ILE:C	2.53	0.51
78:5:215:C:H2'	78:5:220:C:O4'	2.10	0.51
78:5:1745:G:H2'	78:5:1746:A:O4'	2.09	0.51
78:5:2293:U:H2'	78:5:2294:G:C8	2.44	0.51
78:5:3598:C:H2'	78:5:3599:A:C8	2.45	0.51
78:5:4321:U:H2'	78:5:4322:G:C8	2.45	0.51
78:5:4453:C:H2'	78:5:4454:G:O4'	2.10	0.51
79:7:2:U:H2'	79:7:3:C:H6	1.76	0.51
1:R:41:ILE:O	1:R:45:ILE:HG13	2.10	0.51
3:9:658:U:H2'	3:9:659:U:H6	1.75	0.51
3:9:1305:U:OP2	35:ff:95:ARG:HD2	2.09	0.51
3:9:1320:U:C5'	35:ff:93:HIS:HB2	2.40	0.51
4:AA:88:LEU:HD12	4:AA:98:PRO:CB	2.39	0.51
7:EE:87:MET:HE1	7:EE:236:ILE:HD13	1.92	0.51
7:EE:106:LYS:HD3	7:EE:108:ARG:NH1	2.25	0.51
10:II:117:TYR:HD1	10:II:152:ARG:HB3	1.74	0.51
14:OO:125:LYS:HB3	19:aa:58:VAL:HG23	1.91	0.51
24:KK:14:LEU:HA	24:KK:17:LYS:HG2	1.92	0.51
26:PP:75:VAL:HG22	26:PP:93:MET:CB	2.41	0.51
31:UU:19:ARG:HG3	31:UU:92:HIS:CD2	2.46	0.51
32:ZZ:74:SER:HA	32:ZZ:79:ILE:CG1	2.39	0.51
37:B:231:VAL:HG21	37:B:251:VAL:HG22	1.91	0.51
38:C:190:ARG:O	38:C:195:LYS:HE3	2.11	0.51
39:D:193:GLU:OE2	39:D:197:LYS:HE2	2.10	0.51
42:G:284:ASP:O	42:G:288:ARG:HG2	2.10	0.51
45:J:29:SER:HA	45:J:33:LEU:CD1	2.40	0.51
47:M:46:ARG:O	47:M:48:GLN:HG2	2.10	0.51
48:N:100:SER:HA	48:N:103:GLU:OE1	2.10	0.51
49:O:34:VAL:HA	49:O:103:LYS:O	2.10	0.51
51:Q:119:LYS:HG2	51:Q:121:LEU:HG	1.93	0.51
58:Z:21:ARG:HD2	58:Z:46:ILE:O	2.11	0.51
62:d:54:MET:HE2	62:d:60:PRO:O	2.11	0.51
65:g:62:LYS:HG2	65:g:65:MET:HE2	1.91	0.51
76:s:57:LYS:HE3	78:5:2020:U:OP1	2.10	0.51
77:t:16:ARG:HB2	78:5:1975:G:N1	2.26	0.51
77:t:112:ILE:HG22	77:t:116:MET:HG3	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:5:160:G:H2'	78:5:161:G:H8	1.75	0.51
78:5:756:G:O2'	78:5:757:G:H5'	2.10	0.51
78:5:1616:U:H2'	78:5:1617:G:H8	1.76	0.51
78:5:1643:A:H2'	78:5:1644:C:C6	2.46	0.51
78:5:2276:A:H2'	78:5:2277:C:C6	2.45	0.51
78:5:3739:C:O2'	84:ET:71:C:H5''	2.11	0.51
80:8:155:C:H2'	80:8:156:U:C6	2.45	0.51
1:R:78:ILE:HG22	78:5:2887:U:O2	2.11	0.51
1:R:134:ASN:ND2	1:R:136:ARG:HB3	2.26	0.51
3:9:338:A:H2'	3:9:339:A:C8	2.45	0.51
3:9:356:G:H2'	3:9:357:A:C8	2.45	0.51
3:9:420:C:H5'	7:EE:29:PRO:HA	1.92	0.51
3:9:524:G:OP2	3:9:554:U:H2'	2.10	0.51
3:9:723:C:H2'	3:9:724:C:C6	2.45	0.51
3:9:778:C:H2'	3:9:779:G:C8	2.46	0.51
3:9:790:U:O2'	14:OO:136:PRO:HA	2.10	0.51
3:9:829:G:N2	3:9:892:U:H1'	2.25	0.51
3:9:1560:C:H2'	3:9:1561:U:C5	2.46	0.51
3:9:1685:A:OP2	23:FF:60:ARG:HG3	2.10	0.51
4:AA:49:ILE:HG22	4:AA:50:ASN:O	2.10	0.51
6:CC:195:LEU:HD23	6:CC:224:THR:HG22	1.92	0.51
8:GG:20:ASP:O	8:GG:24:LEU:HG	2.10	0.51
8:GG:147:LEU:CD1	8:GG:153:VAL:HG13	2.40	0.51
13:NN:52:VAL:HG13	13:NN:55:ARG:NH1	2.25	0.51
16:WW:38:LEU:HD23	16:WW:41:MET:CE	2.41	0.51
20:bb:35:VAL:HG22	20:bb:79:PHE:CB	2.40	0.51
29:SS:3:LEU:HD12	32:ZZ:50:PHE:CE2	2.45	0.51
31:UU:59:LYS:HB2	31:UU:84:ILE:CG2	2.40	0.51
36:A:31:ALA:HB2	36:A:123:ARG:NH2	2.24	0.51
37:B:196:TRP:CH2	37:B:200:ARG:HG3	2.45	0.51
40:E:99:VAL:CG2	40:E:108:ARG:HD3	2.40	0.51
40:E:188:PRO:HB3	78:5:4938:A:C8	2.45	0.51
43:H:63:ASN:O	43:H:67:LEU:HG	2.11	0.51
43:H:176:LEU:HB3	71:m:60:ALA:HB1	1.93	0.51
50:P:64:ASN:ND2	78:5:3892:U:H4'	2.25	0.51
51:Q:86:VAL:O	51:Q:106:THR:HG23	2.11	0.51
57:Y:28:LYS:HD3	78:5:241:G:OP1	2.11	0.51
58:Z:41:ALA:HB2	58:Z:77:TYR:HE1	1.75	0.51
76:s:161:ILE:HG23	76:s:165:ASP:HB3	1.92	0.51
77:t:60:VAL:HA	77:t:74:VAL:N	2.19	0.51
78:5:7:C:H2'	78:5:8:U:C6	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:5:223:G:H4'	78:5:225:G:C8	2.46	0.51
78:5:499:G:O2'	78:5:500:G:H5'	2.11	0.51
78:5:740:G:H2'	78:5:741:C:C6	2.45	0.51
78:5:1323:A:H2'	78:5:1324:A:O4'	2.10	0.51
78:5:1922:G:C2'	78:5:1923:A:H5'	2.41	0.51
78:5:2727:C:H2'	78:5:2728:U:C6	2.45	0.51
78:5:2775:C:H2'	78:5:2776:G:C8	2.45	0.51
80:8:70:G:H1'	80:8:88:A:N6	2.26	0.51
1:R:19:LYS:HG2	78:5:2823:G:OP1	2.11	0.51
3:9:67:C:C5	8:GG:162:LEU:HB3	2.46	0.51
3:9:101:U:H5''	10:II:19:LYS:HZ3	1.76	0.51
3:9:209:U:H2'	3:9:210:U:C6	2.44	0.51
3:9:627:C:H2'	3:9:628:C:H6	1.75	0.51
3:9:764:U:H2'	3:9:765:U:C6	2.46	0.51
3:9:806:G:H2'	3:9:807:U:C6	2.46	0.51
3:9:857:G:H2'	3:9:858:A:C8	2.46	0.51
3:9:1142:G:H2'	3:9:1143:A:H8	1.76	0.51
4:AA:29:ASN:HB2	4:AA:151:ASP:OD1	2.10	0.51
4:AA:57:LYS:HD2	4:AA:159:ILE:CD1	2.40	0.51
8:GG:84:TYR:CE1	8:GG:93:LYS:HB3	2.46	0.51
9:HH:8:ILE:HA	9:HH:45:ILE:O	2.11	0.51
9:HH:83:LEU:CD1	9:HH:92:VAL:HG21	2.40	0.51
11:JJ:135:ILE:HG22	11:JJ:159:PHE:HA	1.92	0.51
17:XX:68:LYS:CG	17:XX:91:LEU:HD22	2.38	0.51
22:DD:40:ARG:HG2	31:UU:108:PRO:HG3	1.93	0.51
22:DD:95:GLY:HA2	22:DD:101:GLN:NE2	2.24	0.51
23:FF:151:ILE:O	23:FF:154:LEU:HG	2.10	0.51
28:RR:58:MET:HG3	28:RR:62:GLN:NE2	2.25	0.51
37:B:279:GLU:CG	37:B:282:LYS:HD3	2.40	0.51
38:C:256:ALA:O	38:C:260:LEU:HG	2.10	0.51
45:J:152:GLY:O	45:J:156:ARG:HG3	2.10	0.51
51:Q:79:THR:CG2	51:Q:136:THR:HG22	2.41	0.51
65:g:11:LEU:HD22	65:g:18:ASN:CB	2.41	0.51
69:k:9:LYS:O	69:k:13:LEU:HG	2.11	0.51
77:t:74:VAL:HG13	77:t:119:ARG:HG3	1.91	0.51
78:5:962:C:O4'	78:5:973:G:H5''	2.10	0.51
78:5:969:C:H5''	78:5:2259:G:H1	1.76	0.51
78:5:1643:A:H2'	78:5:1644:C:H6	1.76	0.51
78:5:2757:A:H2'	78:5:2758:G:C8	2.46	0.51
79:7:35:U:H2'	79:7:36:C:O4'	2.10	0.51
3:9:23:G:H2'	3:9:24:C:O4'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:304:G:H1'	10:II:5:ARG:CZ	2.41	0.51
3:9:984:U:O2'	3:9:985:C:H3'	2.11	0.51
3:9:1066:U:H2'	3:9:1067:C:O4'	2.11	0.51
3:9:1239:A:H2'	3:9:1240:G:O4'	2.11	0.51
3:9:1299:C:H2'	3:9:1300:A:H5''	1.92	0.51
3:9:1426:C:H2'	3:9:1427:G:H8	1.75	0.51
3:9:1634:C:H2'	3:9:1635:C:H6	1.75	0.51
4:AA:66:VAL:HG21	4:AA:185:MET:CB	2.39	0.51
7:EE:198:ARG:HD3	7:EE:208:VAL:HG22	1.93	0.51
9:HH:96:ALA:HB3	9:HH:98:ARG:NH1	2.26	0.51
11:JJ:85:GLY:HA3	11:JJ:108:ARG:NH1	2.25	0.51
13:NN:30:SER:CB	13:NN:67:THR:HG22	2.37	0.51
16:WW:31:SER:N	16:WW:34:ILE:HD12	2.25	0.51
22:DD:163:PRO:HA	22:DD:166:TYR:CE2	2.46	0.51
23:FF:19:LEU:HD12	23:FF:24:SER:HA	1.92	0.51
23:FF:193:LYS:HE2	23:FF:197:GLU:OE2	2.11	0.51
35:ff:123:SER:HB3	35:ff:126:CYS:SG	2.51	0.51
37:B:57:VAL:CG2	37:B:367:PHE:HB3	2.41	0.51
41:F:240:ASN:O	41:F:244:ARG:HG2	2.11	0.51
42:G:217:ILE:O	42:G:221:VAL:HG23	2.11	0.51
42:G:267:ALA:O	42:G:271:LEU:HG	2.11	0.51
45:J:101:ASP:HA	45:J:159:LYS:HB2	1.93	0.51
46:L:120:TYR:CE2	46:L:124:LEU:HD12	2.45	0.51
57:Y:3:PHE:HB2	78:5:243:A:H5''	1.93	0.51
70:l:15:LYS:HD3	80:8:45:C:P	2.51	0.51
70:l:22:PRO:HB3	70:l:41:ARG:HH11	1.76	0.51
78:5:738:C:H5''	78:5:739:G:H4'	1.91	0.51
78:5:1855:G:H2'	78:5:1856:C:C6	2.45	0.51
78:5:2358:G:H2'	78:5:2359:U:O4'	2.09	0.51
78:5:2633:U:H2'	78:5:2634:C:C6	2.46	0.51
78:5:3703:G:H2'	78:5:3704:U:C6	2.45	0.51
78:5:3709:U:H2'	78:5:3710:G:C8	2.46	0.51
78:5:3729:U:H2'	78:5:3730:U:C6	2.45	0.51
1:R:4:LEU:HB2	78:5:2386:U:H5''	1.93	0.51
1:R:110:ARG:HA	1:R:115:ILE:O	2.11	0.51
3:9:475:U:H2'	3:9:476:G:H8	1.76	0.51
3:9:566:U:H5''	11:JJ:41:ARG:NH1	2.24	0.51
3:9:566:U:OP2	11:JJ:39:ASN:HB2	2.11	0.51
3:9:660:G:O2'	7:EE:219:ALA:HB3	2.11	0.51
3:9:1624:C:C4	34:dd:11:PRO:HG2	2.46	0.51
4:AA:37:TYR:O	4:AA:49:ILE:HA	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:BB:86:LEU:CD2	5:BB:100:PHE:HA	2.41	0.51
5:BB:171:ILE:CD1	5:BB:197:ILE:HA	2.41	0.51
9:HH:130:LEU:HD23	9:HH:142:LYS:NZ	2.26	0.51
14:OO:99:ALA:H	14:OO:133:THR:HG22	1.76	0.51
15:VV:30:ALA:O	15:VV:60:ARG:HD3	2.11	0.51
17:XX:62:PRO:HD3	82:1:31:A:OP1	2.11	0.51
29:SS:46:ARG:NH1	29:SS:46:ARG:HA	2.26	0.51
30:TT:5:THR:O	30:TT:9:VAL:HG23	2.11	0.51
36:A:186:TYR:CZ	36:A:190:LYS:HD2	2.45	0.51
37:B:231:VAL:HG21	37:B:251:VAL:CG2	2.40	0.51
37:B:243:LYS:HE3	78:5:1591:U:OP2	2.10	0.51
38:C:73:VAL:HB	38:C:78:ARG:NH2	2.26	0.51
39:D:51:MET:HG2	39:D:64:ILE:HG12	1.91	0.51
41:F:85:GLU:HB2	53:T:135:PRO:HB3	1.93	0.51
42:G:145:ALA:O	42:G:149:LEU:HG	2.09	0.51
43:H:92:MET:SD	43:H:161:ILE:HD11	2.51	0.51
44:I:102:MET:HE1	44:I:114:GLY:O	2.10	0.51
44:I:206:LEU:HD12	44:I:209:TRP:HB3	1.93	0.51
50:P:41:ILE:O	50:P:45:THR:HG23	2.11	0.51
55:V:57:VAL:HG23	55:V:84:GLN:NE2	2.24	0.51
55:V:78:PRO:HB2	55:V:106:VAL:O	2.11	0.51
55:V:90:ARG:HB2	55:V:92:ASP:OD1	2.11	0.51
68:j:20:ARG:HB2	80:8:101:C:O2'	2.10	0.51
69:k:7:GLU:HB2	69:k:10:ASP:CB	2.40	0.51
71:m:85:ARG:NH1	78:5:4698:C:H3'	2.25	0.51
73:o:28:LYS:HD2	78:5:4344:U:H1'	1.92	0.51
76:s:26:LYS:NZ	76:s:91:THR:HG23	2.25	0.51
76:s:54:LEU:HD21	76:s:90:PHE:CD2	2.44	0.51
77:t:106:PHE:CE2	77:t:159:ALA:HB3	2.46	0.51
78:5:2775:C:H2'	78:5:2776:G:H8	1.76	0.51
78:5:2897:G:H2'	78:5:2898:G:C8	2.45	0.51
78:5:3708:C:H2'	78:5:3709:U:O2	2.11	0.51
78:5:4621:C:O2'	78:5:4622:A:H5'	2.11	0.51
79:7:23:A:H2'	79:7:24:C:C6	2.46	0.51
84:ET:54:U:H2'	84:ET:55:U:O4'	2.11	0.51
3:9:92:A:H61	3:9:368:G:H1'	1.76	0.51
3:9:583:G:H5'	3:9:585:U:O4	2.11	0.51
3:9:994:C:OP1	19:aa:6:ARG:HD2	2.11	0.51
3:9:1594:A:H2'	3:9:1595:A:H8	1.76	0.51
5:BB:119:THR:HB	5:BB:143:THR:CG2	2.41	0.51
6:CC:153:GLY:O	6:CC:157:LEU:HG	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:EE:10:LYS:HB2	7:EE:13:ALA:CB	2.41	0.51
14:OO:33:ILE:O	14:OO:97:LEU:HD12	2.10	0.51
18:YY:40:ILE:CG2	18:YY:57:VAL:HG21	2.41	0.51
18:YY:86:GLU:OE1	18:YY:87:PRO:HD2	2.11	0.51
29:SS:114:LEU:HA	29:SS:117:ILE:HG12	1.92	0.51
36:A:70:LYS:HD2	36:A:72:ARG:HH12	1.76	0.51
36:A:83:HIS:HB3	74:p:64:VAL:HG22	1.93	0.51
36:A:226:ARG:HG3	78:5:3706:C:H5''	1.93	0.51
37:B:56:ILE:HD11	37:B:368:ILE:HG12	1.93	0.51
37:B:356:LYS:HB2	37:B:359:ALA:CB	2.41	0.51
40:E:286:PRO:HB2	64:f:41:PHE:CE2	2.45	0.51
41:F:133:ARG:HA	41:F:136:GLU:HG3	1.93	0.51
45:J:19:LYS:HD3	45:J:75:ARG:NH1	2.26	0.51
51:Q:144:LYS:HG3	51:Q:149:TYR:CG	2.45	0.51
52:S:154:LEU:HD13	52:S:157:ARG:NH1	2.25	0.51
60:b:41:ARG:HD2	78:5:1492:G:O2'	2.11	0.51
61:c:28:VAL:HB	61:c:95:SER:OG	2.09	0.51
65:g:24:ARG:HH12	78:5:2612:G:H5''	1.75	0.51
76:s:78:LEU:HB2	76:s:193:PHE:CZ	2.46	0.51
76:s:173:THR:O	76:s:177:MET:HG2	2.11	0.51
78:5:960:A:C2	78:5:1282:G:H2'	2.46	0.51
78:5:1307:A:H2'	78:5:1308:C:C6	2.45	0.51
78:5:1941:A:O2'	78:5:1942:A:H5'	2.11	0.51
78:5:1961:G:H1'	78:5:2025:A:H61	1.76	0.51
78:5:2093:A:H4'	78:5:2094:C:C5'	2.40	0.51
78:5:4684:A:H2'	78:5:4685:U:O4'	2.11	0.51
78:5:4862:G:H2'	78:5:4863:G:C8	2.45	0.51
78:5:4925:U:H4'	78:5:4926:C:C5'	2.41	0.51
78:5:4935:C:H2'	78:5:4936:G:C8	2.46	0.51
79:7:31:G:O2'	79:7:32:A:H5'	2.10	0.51
79:7:72:U:H2'	79:7:73:U:O4'	2.11	0.51
81:EF:747:VAL:HG22	81:EF:788:LEU:HD23	1.91	0.51
3:9:101:U:H5''	10:II:19:LYS:NZ	2.26	0.51
3:9:368:G:N2	3:9:370:G:H3'	2.26	0.51
3:9:444:A:H5''	11:JJ:12:THR:HG23	1.93	0.51
3:9:505:U:H2'	3:9:506:U:O4'	2.10	0.51
3:9:782:G:H2'	3:9:783:G:C8	2.46	0.51
3:9:1426:C:H2'	3:9:1427:G:C8	2.46	0.51
3:9:1449:C:H5''	27:QQ:15:ARG:NH2	2.25	0.51
3:9:1566:U:H4'	3:9:1589:C:O2'	2.10	0.51
4:AA:200:ASP:HA	4:AA:203:PHE:CD2	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:NN:54:LEU:HB3	13:NN:60:VAL:CG1	2.41	0.51
16:WW:27:ILE:CG1	16:WW:61:ILE:HB	2.40	0.51
17:XX:54:LYS:HD2	17:XX:91:LEU:CD1	2.41	0.51
18:YY:26:ASP:OD2	18:YY:68:LYS:HE3	2.11	0.51
22:DD:72:VAL:HG23	24:KK:20:VAL:HG21	1.91	0.51
22:DD:123:LEU:HG	22:DD:134:CYS:SG	2.51	0.51
25:MM:33:ARG:HH21	25:MM:91:LEU:HD11	1.76	0.51
29:SS:38:ARG:HE	30:TT:45:LEU:HD21	1.76	0.51
36:A:6:ARG:O	36:A:10:LYS:HG3	2.11	0.51
36:A:224:THR:CG2	36:A:237:LEU:HD12	2.41	0.51
38:C:59:GLY:HA2	38:C:99:GLY:HA2	1.93	0.51
38:C:232:VAL:HG11	38:C:256:ALA:HB1	1.93	0.51
39:D:67:ALA:HA	39:D:72:ASP:CA	2.39	0.51
39:D:272:SER:O	39:D:276:LYS:HG3	2.11	0.51
43:H:105:ILE:H	43:H:105:ILE:HD13	1.76	0.51
45:J:28:GLU:O	45:J:33:LEU:HG	2.10	0.51
48:N:107:GLY:HA3	48:N:160:GLU:OE2	2.10	0.51
50:P:132:ALA:O	50:P:135:ARG:HG3	2.11	0.51
68:j:64:MET:SD	68:j:67:LEU:HD23	2.50	0.51
69:k:36:VAL:HG13	69:k:43:TYR:HB2	1.93	0.51
75:r:6:GLN:O	75:r:10:VAL:HG23	2.10	0.51
78:5:125:C:H2'	78:5:126:C:H6	1.76	0.51
78:5:720:G:O2'	78:5:721:G:H5'	2.11	0.51
78:5:1866:U:H2'	78:5:1867:A:O4'	2.10	0.51
78:5:2752:G:H2'	78:5:2753:G:O4'	2.11	0.51
78:5:4366:A:H2'	78:5:4367:G:C8	2.45	0.51
78:5:4546:A:H2'	78:5:4547:C:C6	2.46	0.51
78:5:4601:U:H5''	81:EF:162:ARG:NH2	2.25	0.51
78:5:4711:C:H2'	78:5:4712:C:C6	2.46	0.51
1:R:72:LYS:HB3	1:R:74:ARG:CZ	2.41	0.51
2:W:1:MET:HB3	37:B:57:VAL:CB	2.41	0.51
3:9:407:C:H5''	17:XX:48:LYS:HG3	1.92	0.51
3:9:415:C:OP2	18:YY:104:ARG:HB3	2.11	0.51
3:9:736:U:C2'	3:9:737:U:H5''	2.41	0.51
3:9:1010:C:H2'	3:9:1011:G:C8	2.46	0.51
3:9:1021:U:H2'	3:9:1022:G:H8	1.75	0.51
3:9:1195:A:H2'	3:9:1196:G:H8	1.75	0.51
3:9:1300:A:N6	25:MM:91:LEU:HD22	2.26	0.51
3:9:1496:G:H5''	83:PT:34:A:H5'	1.93	0.51
5:BB:38:MET:HE3	5:BB:39:PHE:HE1	1.76	0.51
5:BB:70:SER:HB2	14:OO:128:ARG:HD2	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:GG:76:LEU:HD12	8:GG:94:ARG:NH2	2.26	0.51
9:HH:36:LEU:HD23	9:HH:40:LEU:HG	1.92	0.51
10:II:79:ILE:HG22	10:II:103:LEU:O	2.11	0.51
14:OO:46:ASP:OD1	14:OO:51:GLU:HB3	2.11	0.51
14:OO:148:GLY:HA2	19:aa:27:ALA:HB3	1.93	0.51
16:WW:8:ALA:CB	16:WW:74:VAL:HG11	2.41	0.51
16:WW:28:ARG:HB2	16:WW:29:PRO:HD3	1.93	0.51
18:YY:44:LEU:HB3	18:YY:55:ILE:HD13	1.93	0.51
22:DD:48:ILE:HG23	22:DD:86:LEU:HG	1.93	0.51
23:FF:204:ARG:HB2	33:cc:63:ARG:NH1	2.26	0.51
26:PP:86:LEU:O	26:PP:90:VAL:HG23	2.11	0.51
28:RR:24:LEU:HD13	28:RR:54:VAL:CG1	2.41	0.51
31:UU:67:LYS:HG2	31:UU:78:ASP:CG	2.36	0.51
33:cc:31:ARG:HD3	33:cc:42:ILE:O	2.10	0.51
36:A:188:LYS:O	36:A:192:LYS:HE2	2.12	0.51
37:B:105:VAL:HG11	37:B:150:PHE:CE1	2.46	0.51
37:B:256:ALA:HB3	37:B:259:PRO:CD	2.41	0.51
37:B:332:MET:HE1	37:B:365:LEU:HD11	1.93	0.51
39:D:33:ARG:CZ	39:D:37:VAL:HG21	2.41	0.51
43:H:117:PHE:HB3	43:H:124:ARG:HH21	1.76	0.51
47:M:91:TRP:CZ2	78:5:4870:G:H2'	2.46	0.51
51:Q:81:VAL:O	51:Q:138:LEU:HD23	2.10	0.51
58:Z:26:VAL:HG21	58:Z:42:LEU:HD22	1.92	0.51
59:a:20:GLY:HA2	78:5:2282:A:O2'	2.11	0.51
62:d:23:ARG:HD3	62:d:57:MET:HE2	1.93	0.51
62:d:23:ARG:HG3	62:d:25:TYR:CE2	2.45	0.51
65:g:8:ARG:HB3	78:5:2530:U:C5	2.46	0.51
73:o:99:ARG:HB2	73:o:102:GLN:HG3	1.92	0.51
74:p:11:VAL:HG11	74:p:23:ARG:O	2.11	0.51
76:s:78:LEU:HB2	76:s:193:PHE:CE2	2.45	0.51
78:5:162:A:H2'	78:5:163:A:H8	1.76	0.51
78:5:335:A:H2'	78:5:336:A:C4	2.46	0.51
78:5:2382:A:H2'	78:5:2383:C:C6	2.46	0.51
78:5:3783:A:H4'	78:5:3784:A:H5''	1.92	0.51
78:5:4884:G:H2'	78:5:4885:U:C6	2.46	0.51
78:5:4968:A:H2'	78:5:4969:C:C6	2.45	0.51
84:ET:41:A:H2'	84:ET:42:C:C6	2.46	0.51
84:ET:60:C:H2'	84:ET:61:C:H5	1.76	0.51
1:R:83:GLY:O	78:5:2864:A:H4'	2.11	0.50
3:9:379:A:H2	3:9:1150:A:H1'	1.76	0.50
3:9:475:U:O2'	21:ee:116:VAL:HG21	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:772:G:H22	3:9:864:U:H3	1.59	0.50
3:9:1582:G:H2'	3:9:1583:G:C8	2.47	0.50
3:9:1597:C:O2'	23:FF:87:LEU:HD12	2.11	0.50
4:AA:14:ASP:HB3	4:AA:177:MET:HE2	1.93	0.50
6:CC:87:PRO:HB3	15:VV:29:HIS:NE2	2.26	0.50
7:EE:26:VAL:HG21	11:JJ:2:PRO:O	2.11	0.50
7:EE:246:LEU:CD1	7:EE:251:GLU:HB2	2.41	0.50
8:GG:20:ASP:OD2	8:GG:23:LYS:HG3	2.10	0.50
9:HH:43:LEU:HD11	9:HH:71:SER:OG	2.11	0.50
11:JJ:84:ILE:HG13	11:JJ:86:VAL:H	1.76	0.50
19:aa:12:LYS:HA	19:aa:15:ARG:NH2	2.26	0.50
22:DD:213:PRO:HB3	28:RR:20:TYR:CE1	2.46	0.50
26:PP:21:ASP:O	26:PP:25:LEU:HG	2.10	0.50
29:SS:21:ASP:OD2	29:SS:23:ARG:HB2	2.11	0.50
34:dd:38:MET:CE	34:dd:42:CYS:HB3	2.41	0.50
37:B:120:LYS:HE3	78:5:4578:G:H5''	1.93	0.50
38:C:232:VAL:CG1	38:C:256:ALA:HB1	2.41	0.50
38:C:289:LEU:O	38:C:293:LEU:HG	2.11	0.50
38:C:322:LEU:HD23	38:C:336:ARG:NH1	2.27	0.50
41:F:66:THR:O	41:F:70:MET:HG2	2.10	0.50
43:H:20:LEU:HD23	43:H:25:VAL:HG12	1.93	0.50
44:I:76:MET:HG3	44:I:87:ILE:HD11	1.93	0.50
44:I:99:ILE:CG2	44:I:123:GLN:HB2	2.41	0.50
45:J:31:ASP:HA	45:J:34:THR:HG22	1.93	0.50
45:J:119:TYR:HE1	45:J:125:ILE:HG23	1.77	0.50
48:N:158:HIS:HB3	48:N:161:MET:CG	2.41	0.50
52:S:1:MET:O	52:S:121:ALA:HB3	2.11	0.50
58:Z:101:PHE:HA	58:Z:107:LYS:HD2	1.92	0.50
69:k:7:GLU:HB2	69:k:10:ASP:HB2	1.92	0.50
78:5:1580:C:H2'	78:5:1581:G:O4'	2.11	0.50
78:5:2617:G:H2'	78:5:2618:G:O4'	2.11	0.50
78:5:2722:G:H2'	78:5:2723:U:O4'	2.11	0.50
78:5:3882:C:H2'	78:5:3883:U:C6	2.45	0.50
78:5:4135:G:H2'	78:5:4136:C:C6	2.45	0.50
78:5:4421:C:O2'	78:5:4422:A:H5'	2.11	0.50
78:5:4462:C:O2'	78:5:4463:U:H5'	2.10	0.50
78:5:4523:A:H5''	78:5:4524:G:H5'	1.94	0.50
3:9:463:C:H2'	3:9:464:U:C6	2.46	0.50
4:AA:17:LYS:HD2	28:RR:91:LEU:HD23	1.93	0.50
7:EE:64:ILE:HG22	7:EE:70:ILE:HD11	1.93	0.50
8:GG:74:ARG:HA	8:GG:96:SER:HA	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:II:129:LEU:CD1	10:II:131:PRO:HD2	2.41	0.50
12:LL:73:LEU:HB3	12:LL:90:ARG:NH1	2.26	0.50
12:LL:86:ILE:HD13	12:LL:113:LEU:HG	1.93	0.50
18:YY:41:ARG:NH2	18:YY:53:ASP:HA	2.25	0.50
27:QQ:25:CYS:HB3	27:QQ:66:VAL:HG13	1.94	0.50
36:A:177:LYS:HB3	74:p:69:TRP:CZ2	2.46	0.50
37:B:5:LYS:NZ	78:5:4455:G:H5''	2.26	0.50
37:B:46:PHE:HE2	37:B:81:THR:HB	1.77	0.50
37:B:53:MET:O	37:B:373:LYS:HE3	2.11	0.50
37:B:114:CYS:HB2	37:B:165:HIS:CG	2.46	0.50
39:D:273:LEU:HD21	79:7:107:G:OP1	2.12	0.50
40:E:117:ARG:HD3	75:r:87:ARG:NH2	2.25	0.50
47:M:125:ASN:O	47:M:129:LYS:HG3	2.11	0.50
51:Q:143:ARG:HB2	78:5:1459:A:O2'	2.12	0.50
52:S:13:VAL:HG12	52:S:29:ARG:CB	2.42	0.50
65:g:24:ARG:CZ	65:g:30:ILE:HD11	2.41	0.50
73:o:3:ASN:HB3	78:5:4232:U:H3'	1.91	0.50
76:s:127:ASN:CB	76:s:153:GLU:HG2	2.38	0.50
78:5:99:A:H2'	78:5:100:C:O2	2.12	0.50
78:5:161:G:H2'	78:5:162:A:H8	1.76	0.50
78:5:216:C:H5''	78:5:219:G:O2'	2.11	0.50
78:5:323:C:H1'	78:5:4355:G:N2	2.26	0.50
78:5:1284:G:O2'	78:5:1285:U:H5''	2.11	0.50
78:5:1855:G:H2'	78:5:1856:C:H6	1.75	0.50
84:ET:32:U:H2'	84:ET:33:U:C5	2.46	0.50
3:9:132:C:H4'	3:9:133:U:C6	2.47	0.50
3:9:399:C:H2'	3:9:400:A:H5''	1.93	0.50
3:9:498:A:H4'	18:YY:89:HIS:CB	2.41	0.50
3:9:778:C:H5''	5:BB:157:GLN:HE21	1.76	0.50
4:AA:30:LEU:HD21	4:AA:35:GLU:HA	1.93	0.50
6:CC:210:PRO:O	6:CC:214:LEU:HG	2.12	0.50
7:EE:64:ILE:CG2	18:YY:17:LEU:HD22	2.40	0.50
8:GG:217:MET:HE3	8:GG:224:ARG:HH21	1.74	0.50
9:HH:170:VAL:HG13	9:HH:187:PHE:CD2	2.46	0.50
10:II:36:THR:CG2	10:II:96:LEU:HB2	2.41	0.50
10:II:60:LEU:HB3	10:II:96:LEU:CD1	2.41	0.50
13:NN:60:VAL:HG23	13:NN:66:VAL:HG21	1.93	0.50
26:PP:83:MET:SD	26:PP:89:MET:HE1	2.51	0.50
37:B:46:PHE:CZ	37:B:207:VAL:HG22	2.47	0.50
40:E:122:GLU:HB3	63:e:7:LEU:HD22	1.93	0.50
41:F:115:GLN:CG	51:Q:3:VAL:HG22	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:F:184:ILE:HG12	41:F:188:ASP:OD2	2.11	0.50
42:G:160:LYS:HG3	42:G:164:LYS:HE3	1.93	0.50
42:G:299:SER:HA	42:G:302:ARG:NH1	2.27	0.50
43:H:47:LEU:CG	43:H:52:LYS:HG3	2.41	0.50
43:H:89:ARG:CD	43:H:91:LYS:HE3	2.39	0.50
44:I:6:ALA:HB2	78:5:4431:U:P	2.51	0.50
46:L:55:ILE:HB	46:L:116:ARG:HH12	1.76	0.50
52:S:60:GLU:HB3	53:T:136:ARG:NH1	2.26	0.50
56:X:121:VAL:CG1	56:X:138:VAL:HG13	2.42	0.50
57:Y:100:HIS:CG	78:5:231:U:H4'	2.45	0.50
59:a:71:PRO:HD2	59:a:109:TYR:CD2	2.47	0.50
76:s:18:ILE:HG13	76:s:68:HIS:CD2	2.47	0.50
77:t:11:LYS:HE3	77:t:35:LEU:HG	1.94	0.50
77:t:63:THR:O	77:t:70:GLN:HG2	2.11	0.50
77:t:93:LYS:O	77:t:94:LYS:C	2.54	0.50
78:5:520:U:H2'	78:5:521:C:C6	2.47	0.50
78:5:1074:G:H2'	78:5:1075:G:C8	2.46	0.50
78:5:3724:A:H2'	78:5:3725:G:O4'	2.10	0.50
78:5:4503:A:H2'	78:5:4504:C:C6	2.46	0.50
78:5:4862:G:H2'	78:5:4863:G:H8	1.76	0.50
78:5:5056:A:H2'	78:5:5057:C:C6	2.46	0.50
79:7:48:G:H2'	79:7:49:A:C8	2.45	0.50
79:7:99:G:C2'	79:7:100:A:H5''	2.42	0.50
80:8:106:G:H2'	80:8:107:C:C5	2.47	0.50
84:ET:64:G:H2'	84:ET:65:G:H8	1.75	0.50
1:R:63:CYS:O	1:R:67:THR:HG23	2.12	0.50
2:W:39:ALA:CB	2:W:44:ARG:HD2	2.42	0.50
3:9:798:C:H1'	14:OO:50:LYS:HD3	1.93	0.50
3:9:867:A:H1'	3:9:869:U:O4	2.12	0.50
3:9:1011:G:H3'	3:9:1012:G:H21	1.77	0.50
3:9:1602:U:H2'	3:9:1603:C:O4'	2.12	0.50
5:BB:224:GLU:HB2	5:BB:227:LYS:HB3	1.93	0.50
6:CC:256:TRP:CE2	16:WW:68:ARG:HB3	2.47	0.50
6:CC:256:TRP:CD2	16:WW:68:ARG:HD3	2.47	0.50
9:HH:83:LEU:HB2	9:HH:92:VAL:HG11	1.94	0.50
11:JJ:35:TYR:HD2	11:JJ:112:THR:HG21	1.76	0.50
11:JJ:48:PHE:CZ	11:JJ:52:LYS:HE3	2.47	0.50
13:NN:3:ARG:HB2	13:NN:6:ALA:O	2.11	0.50
22:DD:45:ARG:HA	22:DD:45:ARG:HH11	1.76	0.50
22:DD:161:GLY:O	22:DD:164:VAL:HG12	2.12	0.50
31:UU:27:ARG:HE	31:UU:82:MET:HE3	1.74	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:dd:38:MET:HE2	34:dd:42:CYS:HB3	1.92	0.50
36:A:226:ARG:HG3	78:5:3706:C:O5'	2.12	0.50
37:B:20:LYS:HE3	78:5:4568:A:OP2	2.11	0.50
38:C:95:MET:HE2	38:C:96:CYS:SG	2.51	0.50
38:C:274:LYS:HE3	78:5:1375:C:OP1	2.12	0.50
39:D:57:ASN:HD21	79:7:27:G:H3'	1.76	0.50
42:G:82:ASN:ND2	42:G:84:LEU:HB2	2.26	0.50
42:G:115:ARG:O	42:G:119:GLN:HG2	2.10	0.50
46:L:103:ARG:CZ	78:5:325:U:H5''	2.41	0.50
48:N:176:LYS:NZ	78:5:63:G:H5''	2.27	0.50
52:S:9:GLU:HB3	52:S:67:VAL:HG13	1.93	0.50
67:i:28:ARG:HH21	78:5:325:U:H3'	1.76	0.50
76:s:192:VAL:O	76:s:198:ILE:HA	2.11	0.50
77:t:28:LEU:O	77:t:32:ILE:HG13	2.10	0.50
77:t:101:SER:HA	77:t:141:CYS:CA	2.31	0.50
78:5:53:C:H2'	78:5:54:G:C8	2.47	0.50
78:5:1302:U:H2'	78:5:1303:A:O4'	2.11	0.50
78:5:1392:A:H2'	78:5:1393:G:C8	2.46	0.50
78:5:1545:G:H2'	78:5:1546:C:C6	2.46	0.50
78:5:2079:G:H2'	78:5:2080:U:C6	2.45	0.50
78:5:3696:C:H2'	78:5:3697:U:O4'	2.12	0.50
78:5:3717:A:H2'	78:5:3718:A:H8	1.74	0.50
78:5:4319:C:H2'	78:5:4320:G:C8	2.46	0.50
83:PT:32:U:H3	83:PT:37:A:N6	2.08	0.50
1:R:158:GLN:HB3	1:R:162:ARG:NH1	2.27	0.50
2:W:7:SER:HB2	2:W:29:PHE:HB3	1.92	0.50
3:9:112:U:H2'	3:9:115:U:C5	2.47	0.50
3:9:269:U:OP1	7:EE:37:LYS:HE2	2.12	0.50
3:9:299:U:H2'	3:9:300:A:H8	1.77	0.50
3:9:1584:U:H3'	3:9:1585:A:H5'	1.94	0.50
3:9:1674:U:O2'	31:UU:64:THR:HG21	2.11	0.50
8:GG:102:VAL:HG13	8:GG:106:LEU:CD1	2.42	0.50
14:OO:95:ILE:HD13	14:OO:116:LEU:HD21	1.94	0.50
14:OO:99:ALA:N	14:OO:133:THR:HG22	2.27	0.50
24:KK:35:LEU:CD1	24:KK:38:LYS:HB2	2.42	0.50
29:SS:20:ILE:HD11	29:SS:33:ILE:CD1	2.42	0.50
30:TT:127:GLY:O	30:TT:131:LEU:HD23	2.12	0.50
31:UU:49:LYS:HD3	31:UU:92:HIS:ND1	2.26	0.50
32:ZZ:70:PRO:HD3	32:ZZ:107:VAL:HG23	1.93	0.50
35:ff:140:TYR:HB2	35:ff:147:THR:HA	1.94	0.50
36:A:226:ARG:HG3	78:5:3706:C:C5'	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:B:116:ARG:HG2	37:B:122:TRP:CD2	2.46	0.50
41:F:178:LEU:CD2	41:F:203:ALA:HA	2.40	0.50
42:G:114:ILE:HA	42:G:117:GLN:HG2	1.92	0.50
42:G:206:GLN:O	42:G:233:PRO:HD2	2.11	0.50
43:H:128:MET:HG3	43:H:157:SER:HB2	1.93	0.50
44:I:60:LEU:CD2	44:I:160:PRO:HD2	2.41	0.50
44:I:75:TYR:HD2	44:I:151:ALA:HB2	1.77	0.50
48:N:98:LEU:HG	78:5:301:G:OP1	2.10	0.50
48:N:161:MET:HE2	78:5:54:G:O2'	2.11	0.50
49:O:128:ARG:O	49:O:129:LEU:HD12	2.12	0.50
52:S:114:GLY:O	78:5:2060:G:H1'	2.12	0.50
56:X:96:LEU:CD1	56:X:140:LEU:HD11	2.41	0.50
56:X:105:ASN:H	56:X:108:GLN:HE21	1.58	0.50
56:X:106:LYS:HG3	78:5:2779:C:OP1	2.12	0.50
60:b:112:ILE:O	60:b:116:LEU:HG	2.11	0.50
67:i:73:ILE:HG22	67:i:83:ALA:HA	1.94	0.50
77:t:50:THR:HG21	77:t:58:ILE:HD13	1.94	0.50
78:5:2374:A:H2'	78:5:2375:A:C8	2.45	0.50
78:5:2684:C:H2'	78:5:2685:C:C6	2.46	0.50
78:5:2861:C:H2'	78:5:2862:G:O4'	2.11	0.50
78:5:2871:A:H2'	78:5:2872:C:O4'	2.12	0.50
78:5:4934:A:H2'	78:5:4935:C:C6	2.47	0.50
78:5:4986:G:H2'	78:5:4987:C:C6	2.46	0.50
84:ET:9:A:H5''	84:ET:46:G:O3'	2.11	0.50
84:ET:28:G:N2	84:ET:43:G:C5	2.79	0.50
84:ET:58:A:H1'	84:ET:60:C:C5	2.46	0.50
1:R:23:TRP:HB3	1:R:51:ILE:O	2.12	0.50
3:9:106:C:OP1	3:9:356:G:H5'	2.11	0.50
3:9:485:A:H2'	3:9:486:U:C6	2.46	0.50
3:9:495:U:OP1	18:YY:37:LYS:HG3	2.11	0.50
3:9:1065:G:C5'	72:n:1:MET:HG2	2.40	0.50
3:9:1421:A:H2'	3:9:1422:G:O4'	2.11	0.50
3:9:1681:A:O2'	23:FF:74:ASN:HB3	2.12	0.50
4:AA:13:GLU:HG2	28:RR:93:GLN:H	1.75	0.50
4:AA:17:LYS:HD3	4:AA:173:LEU:CD2	2.40	0.50
4:AA:55:TRP:CZ2	4:AA:59:LEU:HD21	2.46	0.50
11:JJ:35:TYR:CD1	11:JJ:106:LEU:HD23	2.47	0.50
18:YY:87:PRO:O	18:YY:91:LEU:HG	2.12	0.50
21:ee:112:ASN:HA	21:ee:116:VAL:HG12	1.93	0.50
22:DD:164:VAL:O	22:DD:168:VAL:HG22	2.12	0.50
23:FF:44:LYS:HE3	27:QQ:114:GLN:O	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:PP:90:VAL:HG21	26:PP:112:ILE:HG12	1.93	0.50
27:QQ:44:PRO:HD2	27:QQ:81:ILE:HD11	1.93	0.50
27:QQ:97:GLN:HB2	27:QQ:105:LYS:HG3	1.94	0.50
29:SS:63:GLU:O	29:SS:67:VAL:HG23	2.11	0.50
29:SS:107:LEU:O	29:SS:111:LEU:HG	2.11	0.50
36:A:28:ARG:NH2	78:5:4082:G:H5''	2.27	0.50
37:B:223:THR:HG21	78:5:4624:A:H5'	1.94	0.50
41:F:95:ARG:NH2	41:F:223:THR:HA	2.26	0.50
41:F:218:GLY:HA2	78:5:1906:U:H5'	1.93	0.50
42:G:119:GLN:HG3	48:N:28:TRP:CH2	2.47	0.50
46:L:31:ARG:HA	46:L:34:ARG:NH1	2.26	0.50
47:M:126:GLU:HA	47:M:129:LYS:HE2	1.94	0.50
48:N:75:VAL:HG11	48:N:80:THR:OG1	2.11	0.50
48:N:137:PRO:HG2	48:N:138:PHE:CD1	2.47	0.50
53:T:14:MET:CE	53:T:55:LYS:HB2	2.42	0.50
58:Z:28:ASN:HB2	58:Z:77:TYR:OH	2.11	0.50
68:j:72:ARG:HH11	80:8:93:C:H3'	1.77	0.50
77:t:134:GLY:HA2	77:t:147:HIS:CG	2.46	0.50
77:t:135:THR:HA	78:5:1974:U:C5	2.46	0.50
78:5:954:C:O2'	78:5:955:G:H5'	2.12	0.50
78:5:1093:C:H2'	78:5:1094:G:C8	2.47	0.50
78:5:1338:G:H4'	78:5:1339:U:H6	1.76	0.50
78:5:1461:C:H2'	78:5:1462:A:C8	2.46	0.50
78:5:1879:C:H2'	78:5:1880:G:O4'	2.11	0.50
78:5:2272:C:O2'	78:5:2273:G:H5'	2.11	0.50
78:5:3721:U:H2'	78:5:3722:G:C8	2.47	0.50
78:5:3832:U:H2'	78:5:3833:C:H6	1.75	0.50
78:5:3927:U:H2'	78:5:3928:A:C8	2.47	0.50
78:5:4351:U:H2'	78:5:4352:U:C6	2.46	0.50
78:5:4578:G:H2'	78:5:4579:U:H6	1.75	0.50
79:7:33:U:H2'	79:7:34:C:C6	2.46	0.50
3:9:13:C:H5''	6:CC:232:THR:HG21	1.92	0.50
3:9:257:G:H3'	8:GG:190:ARG:NH2	2.25	0.50
3:9:1088:U:O2'	3:9:1089:U:H5'	2.12	0.50
3:9:1225:A:H5''	19:aa:82:LYS:HD3	1.94	0.50
4:AA:52:LYS:HE2	28:RR:109:LEU:HD22	1.94	0.50
4:AA:173:LEU:CD1	4:AA:177:MET:HE3	2.38	0.50
6:CC:187:ARG:HB3	6:CC:192:LEU:CD1	2.42	0.50
9:HH:51:ILE:HG21	9:HH:179:LYS:HG2	1.92	0.50
9:HH:66:VAL:HB	9:HH:67:PRO:HD3	1.93	0.50
10:II:165:GLN:HB3	10:II:171:LEU:HD23	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:NN:55:ARG:HH22	20:bb:51:GLN:HE22	1.59	0.50
14:OO:98:ARG:HH21	14:OO:134:PRO:HG3	1.77	0.50
16:WW:15:ASN:ND2	16:WW:71:LYS:HG3	2.27	0.50
22:DD:191:PRO:O	22:DD:199:GLY:HA3	2.11	0.50
23:FF:72:LEU:CD1	23:FF:151:ILE:HG23	2.41	0.50
27:QQ:25:CYS:HA	27:QQ:67:ASP:O	2.11	0.50
27:QQ:58:LEU:CD2	27:QQ:108:ILE:HG23	2.41	0.50
28:RR:98:VAL:HG12	28:RR:118:GLN:O	2.11	0.50
37:B:177:LYS:HD2	78:5:4985:U:OP1	2.11	0.50
38:C:120:LYS:HD2	78:5:1374:G:OP1	2.12	0.50
38:C:211:TYR:CE2	38:C:214:ASP:HB2	2.46	0.50
40:E:96:THR:HG22	40:E:109:VAL:HG22	1.94	0.50
43:H:101:ILE:HG12	43:H:117:PHE:HD1	1.76	0.50
57:Y:74:TYR:HB3	57:Y:79:VAL:HG12	1.93	0.50
63:e:4:LEU:HD23	63:e:121:ARG:HA	1.93	0.50
65:g:103:VAL:O	65:g:107:LEU:HG	2.12	0.50
73:o:50:GLY:HA3	78:5:3925:U:O2'	2.12	0.50
75:r:63:VAL:CG1	75:r:77:TYR:HB3	2.42	0.50
76:s:67:GLY:O	76:s:70:GLU:HG2	2.12	0.50
77:t:137:GLN:CD	78:5:1993:C:H1'	2.37	0.50
78:5:58:G:H4'	78:5:59:A:H4'	1.94	0.50
78:5:464:G:H2'	78:5:465:G:C8	2.47	0.50
78:5:1786:A:H2'	78:5:1789:C:C5	2.47	0.50
78:5:1870:C:H2'	78:5:1871:A:C8	2.47	0.50
78:5:4151:G:H2'	78:5:4152:G:C8	2.43	0.50
78:5:4448:G:H5''	78:5:4449:A:C5'	2.41	0.50
78:5:4924:C:H2'	78:5:4925:U:C2	2.47	0.50
79:7:58:A:H2'	79:7:59:G:C8	2.46	0.50
3:9:88:G:H2'	3:9:89:C:C6	2.46	0.50
3:9:563:C:H5''	21:ee:114:ARG:NH2	2.23	0.50
3:9:1214:U:N3	19:aa:9:GLY:HA3	2.27	0.50
3:9:1594:A:H2'	3:9:1595:A:C8	2.47	0.50
6:CC:183:LYS:HD3	6:CC:194:ARG:NH2	2.27	0.50
9:HH:157:HIS:HB3	9:HH:190:PRO:HG3	1.93	0.50
14:OO:125:LYS:HB3	19:aa:58:VAL:CG2	2.42	0.50
16:WW:105:THR:H	16:WW:126:LEU:HG	1.76	0.50
22:DD:51:LEU:HB3	22:DD:91:VAL:CG2	2.42	0.50
27:QQ:116:ASP:HB3	27:QQ:119:LEU:CD2	2.42	0.50
31:UU:48:LEU:HD22	31:UU:93:SER:CB	2.42	0.50
32:ZZ:50:PHE:CZ	32:ZZ:58:LEU:HD13	2.47	0.50
37:B:135:LYS:HA	37:B:138:GLN:NE2	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:C:204:ARG:HG3	78:5:2298:U:P	2.52	0.50
41:F:101:SER:HB3	41:F:104:VAL:HG23	1.94	0.50
45:J:153:ALA:HA	45:J:156:ARG:CZ	2.41	0.50
47:M:82:ILE:HD13	47:M:85:LYS:NZ	2.27	0.50
48:N:94:PHE:HE2	48:N:96:ARG:HB2	1.77	0.50
49:O:192:PHE:HA	49:O:195:VAL:HG22	1.93	0.50
50:P:15:CYS:SG	50:P:102:ALA:HB2	2.52	0.50
51:Q:49:LYS:HD3	78:5:2084:C:H41	1.77	0.50
52:S:70:LYS:O	78:5:733:A:H4'	2.12	0.50
55:V:68:GLY:N	55:V:73:ARG:HD2	2.26	0.50
59:a:103:VAL:HG21	59:a:111:VAL:CG2	2.42	0.50
62:d:88:LEU:HD12	62:d:106:VAL:HG22	1.93	0.50
76:s:6:ARG:O	76:s:10:LYS:HG3	2.12	0.50
76:s:11:SER:O	76:s:15:LEU:HG	2.10	0.50
76:s:26:LYS:HZ3	76:s:91:THR:HG23	1.77	0.50
78:5:55:G:H2'	78:5:56:A:C8	2.46	0.50
78:5:1278:C:H2'	78:5:1279:A:O4'	2.12	0.50
78:5:1311:G:H2'	78:5:1312:A:O4'	2.12	0.50
78:5:1859:C:H2'	78:5:1860:U:O4'	2.12	0.50
78:5:5000:G:H2'	78:5:5001:U:O4'	2.12	0.50
80:8:106:G:C4'	80:8:136:U:H2'	2.42	0.50
84:ET:23:A:H2'	84:ET:24:G:C8	2.47	0.50
1:R:102:LEU:HB2	1:R:127:VAL:HG11	1.93	0.50
2:W:8:PHE:O	2:W:54:LEU:HD13	2.11	0.50
3:9:863:U:H4'	13:NN:16:LEU:HD23	1.94	0.50
4:AA:111:GLN:CG	6:CC:89:LYS:HD3	2.41	0.50
4:AA:130:ASP:O	4:AA:134:LEU:HG	2.11	0.50
5:BB:134:LEU:HD12	5:BB:219:LYS:HD2	1.92	0.50
6:CC:236:PHE:O	6:CC:240:THR:HG22	2.12	0.50
7:EE:192:ILE:HD12	7:EE:242:LYS:C	2.37	0.50
11:JJ:37:LEU:HG	11:JJ:42:GLU:OE1	2.12	0.50
14:OO:53:ILE:HG23	14:OO:88:LEU:CD2	2.42	0.50
16:WW:5:ASN:HB3	16:WW:8:ALA:HB3	1.93	0.50
16:WW:25:VAL:HG11	16:WW:65:LEU:HD11	1.93	0.50
30:TT:62:ARG:O	30:TT:66:LEU:HG	2.12	0.50
36:A:65:ASP:HB3	36:A:68:ARG:O	2.12	0.50
40:E:267:VAL:HB	40:E:270:LEU:HB2	1.94	0.50
41:F:48:LEU:HD11	41:F:52:LYS:HE2	1.92	0.50
41:F:57:HIS:HB2	78:5:943:A:C2	2.47	0.50
42:G:282:ARG:O	42:G:286:ILE:HG13	2.12	0.50
49:O:181:ALA:O	49:O:185:VAL:HG23	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:P:139:TYR:CE1	78:5:3859:G:H4'	2.47	0.50
51:Q:50:ARG:HB2	51:Q:83:VAL:HG21	1.94	0.50
52:S:15:ARG:HH12	52:S:18:PRO:HG3	1.76	0.50
60:b:5:LYS:HG3	78:5:1873:A:OP2	2.12	0.50
73:o:53:LYS:HD2	84:ET:75:C:O2	2.12	0.50
78:5:974:C:H2'	78:5:975:C:C6	2.47	0.50
78:5:1388:A:H2'	78:5:1389:U:C6	2.46	0.50
78:5:1427:A:C4'	78:5:1694:C:H5'	2.42	0.50
78:5:1604:G:H2'	78:5:1605:G:C8	2.46	0.50
78:5:1629:G:H2'	78:5:1631:A:N7	2.27	0.50
78:5:2421:G:OP2	78:5:2828:U:H1'	2.12	0.50
78:5:2580:U:O2	78:5:2655:C:H4'	2.12	0.50
78:5:3714:G:H2'	78:5:3715:U:H6	1.77	0.50
79:7:16:A:H2'	79:7:17:C:C6	2.47	0.50
80:8:106:G:O4'	80:8:136:U:H2'	2.12	0.50
83:PT:37:A:C4	83:PT:38:U:C5	3.00	0.50
84:ET:18:G:N2	84:ET:58:A:C8	2.80	0.50
84:ET:28:G:N2	84:ET:43:G:C4	2.79	0.50
1:R:98:ARG:O	1:R:102:LEU:HG	2.11	0.49
3:9:1251:G:H2'	3:9:1252:G:O4'	2.12	0.49
3:9:1449:C:H5''	27:QQ:15:ARG:HH22	1.77	0.49
3:9:1607:A:H61	3:9:1642:G:H5'	1.77	0.49
3:9:1612:G:N2	3:9:1638:G:H1'	2.27	0.49
3:9:1635:C:H4'	29:SS:83:PHE:CD1	2.47	0.49
3:9:1656:A:OP1	27:QQ:136:GLY:HA3	2.11	0.49
3:9:1683:U:OP1	23:FF:63:LYS:HD3	2.12	0.49
4:AA:15:VAL:HG22	4:AA:51:LEU:HD13	1.94	0.49
4:AA:103:PHE:CD2	4:AA:132:GLN:HB3	2.47	0.49
4:AA:205:ARG:HH21	4:AA:210:ILE:HA	1.76	0.49
5:BB:92:GLN:HB2	5:BB:97:LEU:HD11	1.92	0.49
5:BB:92:GLN:HB2	5:BB:97:LEU:CD1	2.42	0.49
5:BB:103:MET:HE1	5:BB:188:LEU:HD22	1.93	0.49
6:CC:184:VAL:CG2	6:CC:195:LEU:HB2	2.42	0.49
7:EE:26:VAL:HG11	11:JJ:2:PRO:HB3	1.93	0.49
7:EE:184:THR:HA	7:EE:189:LEU:HD13	1.94	0.49
11:JJ:86:VAL:HG12	11:JJ:100:LEU:HD11	1.94	0.49
13:NN:83:ASP:OD1	13:NN:84:LEU:HG	2.12	0.49
19:aa:38:LYS:HD3	19:aa:83:VAL:CG1	2.42	0.49
25:MM:60:MET:HG2	25:MM:64:LEU:HD23	1.93	0.49
26:PP:43:ARG:HH12	26:PP:47:ARG:HD2	1.77	0.49
36:A:163:ARG:HB2	36:A:163:ARG:HH11	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:A:181:LYS:HB3	74:p:18:TYR:OH	2.12	0.49
36:A:226:ARG:HD3	36:A:226:ARG:H	1.77	0.49
37:B:168:MET:HE2	37:B:175:GLN:HG3	1.93	0.49
37:B:253:CYS:SG	78:5:4521:U:H1'	2.52	0.49
38:C:73:VAL:HB	38:C:78:ARG:HH21	1.77	0.49
43:H:98:HIS:O	81:EF:167:LEU:HD13	2.12	0.49
46:L:76:PHE:HB2	46:L:81:LEU:HD21	1.94	0.49
47:M:60:PHE:CE2	47:M:85:LYS:HE2	2.47	0.49
52:S:111:ARG:HD2	78:5:2061:U:O2	2.12	0.49
61:c:29:LEU:CD2	61:c:94:LEU:HD13	2.41	0.49
65:g:11:LEU:HD22	65:g:18:ASN:HB2	1.94	0.49
67:i:31:GLY:HA3	78:5:310:G:C4	2.46	0.49
69:k:36:VAL:O	69:k:42:LEU:HD12	2.11	0.49
73:o:63:THR:O	73:o:64:LYS:HD3	2.12	0.49
73:o:98:LYS:CE	78:5:4233:A:H4'	2.42	0.49
76:s:21:LEU:HD23	76:s:90:PHE:HE1	1.77	0.49
76:s:57:LYS:HB3	76:s:60:MET:SD	2.52	0.49
78:5:391:U:H2'	78:5:392:U:C6	2.46	0.49
78:5:667:A:H5'	78:5:668:C:H5	1.77	0.49
78:5:1317:U:H2'	78:5:1318:C:H6	1.77	0.49
78:5:1538:U:H2'	78:5:1539:G:H8	1.76	0.49
78:5:1670:G:O2'	78:5:1853:G:H4'	2.10	0.49
78:5:4750:G:H2'	78:5:4751:G:C8	2.47	0.49
79:7:19:C:H2'	79:7:20:U:C6	2.47	0.49
83:PT:30:G:C4	83:PT:31:C:H1'	2.47	0.49
1:R:141:HIS:O	1:R:145:LEU:HG	2.13	0.49
2:W:15:PRO:HB2	37:B:73:VAL:HB	1.94	0.49
3:9:666:A:H2'	3:9:667:U:O4'	2.12	0.49
3:9:754:G:H2'	3:9:755:A:C8	2.47	0.49
3:9:1215:C:H1'	19:aa:7:ASN:OD1	2.12	0.49
3:9:1477:C:H2'	3:9:1478:C:O4'	2.12	0.49
3:9:1577:G:H2'	3:9:1578:C:H6	1.76	0.49
3:9:1646:A:N7	84:ET:31:C:H2'	2.27	0.49
4:AA:74:VAL:O	4:AA:96:ALA:HB1	2.13	0.49
12:LL:11:GLN:CB	12:LL:56:ILE:HD12	2.40	0.49
13:NN:110:ASP:O	13:NN:114:ARG:HG2	2.12	0.49
17:XX:51:VAL:HG13	17:XX:70:VAL:CG1	2.42	0.49
17:XX:52:LEU:HG	17:XX:71:ARG:O	2.12	0.49
27:QQ:132:PHE:CE1	31:UU:76:THR:HA	2.47	0.49
29:SS:108:ARG:NH2	45:J:121:PRO:HA	2.28	0.49
38:C:32:ILE:O	51:Q:23:ILE:HD11	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:I:15:LYS:HG3	78:5:1863:U:OP1	2.11	0.49
44:I:99:ILE:HG21	44:I:123:GLN:HB2	1.94	0.49
44:I:116:ARG:HA	78:5:4195:G:N2	2.26	0.49
44:I:187:GLU:OE2	44:I:189:ARG:HD2	2.11	0.49
45:J:136:ARG:HG2	45:J:137:PRO:HD2	1.95	0.49
48:N:179:LYS:HE2	78:5:297:U:O3'	2.11	0.49
49:O:29:LEU:HB3	64:f:10:ILE:HG21	1.93	0.49
51:Q:142:PRO:HA	78:5:1459:A:O3'	2.11	0.49
53:T:70:HIS:O	53:T:93:ILE:HG13	2.12	0.49
55:V:24:ALA:HB2	78:5:2847:G:O2'	2.11	0.49
57:Y:30:MET:O	57:Y:49:ILE:HG22	2.11	0.49
77:t:125:LEU:HG	77:t:126:SER:N	2.24	0.49
77:t:150:ASP:O	77:t:153:ASP:HB3	2.12	0.49
78:5:1382:G:H2'	78:5:1383:G:H8	1.77	0.49
78:5:1444:G:H2'	78:5:1445:U:C5	2.47	0.49
78:5:2080:U:H2'	78:5:2081:C:C6	2.47	0.49
78:5:2807:A:H2'	78:5:2808:G:H8	1.77	0.49
78:5:4226:G:O2'	78:5:4227:U:H5'	2.13	0.49
3:9:95:G:H5'	3:9:432:A:O2'	2.12	0.49
3:9:901:G:H2'	3:9:902:A:C8	2.46	0.49
3:9:1388:U:H5''	3:9:1402:A:C2	2.47	0.49
3:9:1552:G:H1'	3:9:1676:C:O2'	2.13	0.49
4:AA:30:LEU:CD2	4:AA:35:GLU:HG2	2.42	0.49
6:CC:261:PHE:HE2	15:VV:54:ALA:HB2	1.77	0.49
9:HH:155:LYS:HB3	9:HH:188:GLU:OE1	2.12	0.49
12:LL:70:GLY:HA3	12:LL:130:GLU:OE1	2.12	0.49
13:NN:78:LYS:HE3	13:NN:80:LEU:HD23	1.94	0.49
17:XX:50:ILE:HA	17:XX:98:ASP:O	2.13	0.49
20:bb:38:PRO:HD3	20:bb:76:GLY:O	2.11	0.49
29:SS:98:VAL:O	29:SS:99:LEU:HD13	2.11	0.49
34:dd:19:ARG:CD	34:dd:32:ARG:HD3	2.43	0.49
37:B:317:LEU:CB	78:5:5001:U:H4'	2.42	0.49
40:E:113:ARG:HG3	78:5:458:C:O2'	2.12	0.49
40:E:160:HIS:HA	40:E:163:LYS:HZ3	1.76	0.49
48:N:53:TYR:HB2	48:N:133:ILE:CD1	2.40	0.49
49:O:15:LEU:HD21	49:O:129:LEU:HD13	1.93	0.49
50:P:36:ILE:CD1	50:P:44:ALA:HB1	2.38	0.49
58:Z:113:GLU:O	58:Z:117:LYS:HG2	2.13	0.49
76:s:48:ARG:CZ	77:t:123:ARG:HH22	2.24	0.49
76:s:135:THR:CG2	76:s:152:ILE:HD13	2.42	0.49
77:t:84:ALA:HB1	77:t:108:GLU:OE1	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:5:654:C:H2'	78:5:655:C:H6	1.77	0.49
78:5:1094:G:O2'	78:5:1095:A:H5'	2.12	0.49
78:5:1375:C:O2'	78:5:1376:C:H5'	2.12	0.49
78:5:1571:G:H2'	78:5:1572:U:C6	2.48	0.49
78:5:1926:C:H2'	78:5:1927:U:C6	2.48	0.49
78:5:1969:G:H3'	78:5:1970:A:C8	2.46	0.49
78:5:2373:C:H2'	78:5:2374:A:C8	2.46	0.49
78:5:2386:U:H2'	78:5:2387:G:H8	1.76	0.49
78:5:4699:U:C1'	78:5:4700:A:H5''	2.42	0.49
78:5:5009:G:H2'	78:5:5010:U:O4'	2.12	0.49
80:8:130:C:H2'	80:8:131:G:C8	2.47	0.49
2:W:7:SER:CB	2:W:29:PHE:HB3	2.42	0.49
3:9:120:U:O2	7:EE:34:GLY:HA2	2.13	0.49
3:9:665:A:O3'	7:EE:16:LYS:HD2	2.12	0.49
8:GG:159:ARG:HD3	8:GG:171:THR:HG21	1.94	0.49
13:NN:45:LEU:HB3	13:NN:50:ILE:CG1	2.42	0.49
17:XX:53:GLU:HG2	17:XX:71:ARG:HB2	1.94	0.49
21:ee:79:LEU:H	21:ee:79:LEU:HD12	1.76	0.49
23:FF:78:MET:HA	23:FF:83:ASN:HD21	1.77	0.49
28:RR:24:LEU:HD22	28:RR:31:ASN:HB2	1.94	0.49
29:SS:110:ASP:O	29:SS:114:LEU:HG	2.12	0.49
37:B:56:ILE:CD1	37:B:368:ILE:HG12	2.43	0.49
38:C:326:LEU:HD13	78:5:977:C:H4'	1.92	0.49
40:E:73:ARG:HG2	40:E:75:TYR:CE2	2.47	0.49
42:G:86:GLU:HB2	58:Z:128:LYS:NZ	2.27	0.49
42:G:201:GLU:OE2	42:G:226:LEU:HD11	2.11	0.49
46:L:29:PRO:O	46:L:33:ILE:HG13	2.12	0.49
49:O:27:VAL:HG12	49:O:98:ALA:HB1	1.92	0.49
51:Q:70:MET:HG3	51:Q:98:LEU:HD13	1.93	0.49
51:Q:88:ASP:HB2	51:Q:109:ALA:N	2.27	0.49
52:S:93:MET:HE2	78:5:1952:G:H1'	1.94	0.49
55:V:40:ILE:HB	78:5:3799:A:C2	2.47	0.49
58:Z:4:PHE:CE2	61:c:39:ARG:HA	2.47	0.49
60:b:14:ARG:HG2	60:b:18:ARG:NH1	2.27	0.49
61:c:103:ASP:OD1	61:c:106:ARG:HD2	2.12	0.49
63:e:37:LYS:HE2	78:5:1663:C:P	2.52	0.49
68:j:52:LYS:HE3	78:5:364:G:O6	2.12	0.49
71:m:71:ARG:NE	71:m:96:ARG:HB3	2.28	0.49
76:s:77:LYS:HD3	76:s:196:GLY:CA	2.42	0.49
77:t:60:VAL:CA	77:t:74:VAL:H	2.22	0.49
77:t:146:ARG:NH2	77:t:148:PRO:HG2	2.25	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:5:180:C:H2'	78:5:181:C:C6	2.48	0.49
78:5:321:U:H2'	78:5:322:C:C6	2.46	0.49
78:5:922(A):G:H2'	78:5:922(B):C:C6	2.46	0.49
78:5:1090:G:H2'	78:5:1091:C:C6	2.48	0.49
78:5:2045:G:OP2	78:5:4461:C:H4'	2.11	0.49
78:5:2810:U:H2'	78:5:2811:G:O4'	2.12	0.49
78:5:3835:C:H2'	78:5:3836:A:C8	2.47	0.49
78:5:4288:C:H2'	78:5:4289:U:C6	2.47	0.49
78:5:4433:G:H2'	78:5:4434:C:C6	2.47	0.49
83:PT:30:G:N3	83:PT:31:C:H1'	2.27	0.49
3:9:142:U:H2'	3:9:143:G:C8	2.47	0.49
3:9:160:A:H2'	3:9:161:A:C8	2.48	0.49
3:9:209:U:H2'	3:9:210:U:H6	1.77	0.49
3:9:482:G:H2'	3:9:483:G:C8	2.48	0.49
3:9:688:G:H2'	3:9:689:C:C6	2.47	0.49
3:9:1073:U:H2'	3:9:1074:A:C8	2.48	0.49
3:9:1131:A:H2'	3:9:1132:G:C8	2.47	0.49
3:9:1504:A:H2'	3:9:1505:U:O4'	2.12	0.49
4:AA:38:ILE:HA	4:AA:48:ILE:O	2.12	0.49
5:BB:71:LEU:HD13	5:BB:78:GLU:HG2	1.95	0.49
5:BB:127:VAL:HG21	5:BB:176:VAL:HB	1.95	0.49
8:GG:137:ARG:HD2	8:GG:178:ARG:CZ	2.42	0.49
9:HH:69:LEU:O	9:HH:73:GLN:HG2	2.13	0.49
11:JJ:93:LYS:HB3	11:JJ:96:TYR:CD2	2.47	0.49
13:NN:113:PHE:CE2	13:NN:117:LEU:HD11	2.48	0.49
14:OO:96:LYS:HD3	14:OO:132:VAL:HG11	1.94	0.49
14:OO:146:ARG:HH11	19:aa:29:CYS:HB2	1.77	0.49
17:XX:40:PRO:HB2	17:XX:81:ILE:HD11	1.92	0.49
22:DD:167:TYR:OH	22:DD:192:TRP:HB2	2.12	0.49
25:MM:94:ILE:O	25:MM:100:PRO:HA	2.12	0.49
26:PP:13:ARG:HD3	26:PP:13:ARG:H	1.77	0.49
28:RR:5:ARG:HG2	28:RR:53:TYR:CD1	2.48	0.49
37:B:107:ALA:HB2	37:B:201:LEU:CD1	2.38	0.49
37:B:288:GLY:HA3	37:B:330:PHE:CE1	2.47	0.49
40:E:65:TYR:CE1	40:E:70:LEU:HB2	2.48	0.49
41:F:133:ARG:HD3	79:7:97:G:O4'	2.12	0.49
43:H:120:GLU:HG2	78:5:4611:A:C2	2.43	0.49
47:M:119:ARG:HD3	47:M:123:ILE:HD11	1.93	0.49
48:N:14:LYS:HD2	78:5:280:G:C5	2.47	0.49
53:T:8:ARG:NH1	53:T:52:MET:HE1	2.27	0.49
62:d:31:LYS:HA	78:5:5048:A:N3	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
68:j:33:THR:HA	68:j:40:PRO:CD	2.43	0.49
69:k:61:PRO:HG2	69:k:64:LEU:CB	2.43	0.49
77:t:61:LYS:HZ3	77:t:72:GLU:HG3	1.77	0.49
77:t:106:PHE:O	77:t:110:VAL:HG23	2.12	0.49
77:t:117:ARG:HG2	77:t:128:THR:HG21	1.93	0.49
77:t:134:GLY:CA	78:5:1973:G:H21	2.21	0.49
78:5:260:C:H2'	78:5:261:G:C8	2.48	0.49
78:5:741:C:H2'	78:5:742:G:O4'	2.12	0.49
78:5:1748:U:H2'	78:5:1749:A:C8	2.47	0.49
78:5:2889:G:H2'	78:5:2890:C:C6	2.48	0.49
78:5:4189:U:H2'	78:5:4190:U:C6	2.48	0.49
78:5:4426:C:H2'	78:5:4427:G:O4'	2.12	0.49
82:1:26:G:N2	83:PT:37:A:H1'	2.28	0.49
3:9:624:G:H2'	3:9:625:U:C6	2.47	0.49
3:9:1099:C:O3'	10:II:58:LEU:HD13	2.13	0.49
3:9:1349:U:O5'	22:DD:147:ALA:HB2	2.13	0.49
5:BB:38:MET:HE1	5:BB:100:PHE:HB2	1.94	0.49
12:LL:47:PRO:HG2	12:LL:50:ALA:CB	2.43	0.49
16:WW:105:THR:HB	16:WW:110:ILE:HG12	1.94	0.49
18:YY:113:ARG:O	18:YY:117:VAL:HG23	2.13	0.49
25:MM:42:LEU:HD23	25:MM:68:LEU:HB3	1.93	0.49
29:SS:70:ILE:HA	29:SS:77:TYR:CD2	2.48	0.49
29:SS:75:ARG:NH2	29:SS:95:TYR:HB2	2.28	0.49
37:B:374:PHE:O	78:5:5002:U:H4'	2.12	0.49
39:D:33:ARG:HH11	53:T:27:LEU:HD13	1.77	0.49
39:D:81:HIS:O	39:D:84:PRO:HD2	2.12	0.49
44:I:190:LEU:HB3	44:I:197:VAL:CG2	2.42	0.49
52:S:1:MET:HB3	52:S:121:ALA:CB	2.43	0.49
52:S:43:ARG:NH2	52:S:122:HIS:HA	2.28	0.49
55:V:112:MET:SD	55:V:132:ILE:HG12	2.53	0.49
58:Z:74:VAL:HG23	58:Z:101:PHE:CZ	2.47	0.49
59:a:99:PRO:HD2	59:a:121:PRO:O	2.12	0.49
61:c:78:ASN:OD1	61:c:90:ARG:HB2	2.12	0.49
62:d:93:ASN:HA	62:d:103:TYR:CE1	2.47	0.49
63:e:58:ILE:HG12	78:5:2278:G:N2	2.27	0.49
74:p:37:TYR:O	74:p:47:MET:HB2	2.12	0.49
78:5:87:A:H2'	78:5:88:A:O4'	2.12	0.49
78:5:700:G:H2'	78:5:701:G:C8	2.48	0.49
78:5:746:A:O2'	78:5:747:A:H5'	2.12	0.49
78:5:1217:G:H2'	78:5:1218:G:H8	1.78	0.49
78:5:4508:C:H2'	78:5:4509:U:C6	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:5:5028:G:H2'	78:5:5029:C:H6	1.77	0.49
80:8:128:C:H2'	80:8:129:C:H5'	1.94	0.49
1:R:119:MET:HB2	1:R:149:LYS:HZ1	1.78	0.49
1:R:121:HIS:O	1:R:125:LEU:HG	2.12	0.49
3:9:227:G:OP1	7:EE:134:LYS:HA	2.13	0.49
3:9:866:C:H2'	3:9:867:A:O4'	2.13	0.49
3:9:882:A:H2'	3:9:883:A:O4'	2.13	0.49
3:9:1015:G:H2'	3:9:1016:G:O4'	2.13	0.49
3:9:1233:A:H2'	3:9:1234:C:H6	1.78	0.49
3:9:1561:U:O4	34:dd:19:ARG:HA	2.13	0.49
3:9:1639:A:H2'	3:9:1640:A:C8	2.48	0.49
5:BB:158:HIS:O	5:BB:162:ARG:HG3	2.12	0.49
7:EE:31:PRO:HD2	7:EE:38:LEU:CD1	2.43	0.49
7:EE:62:LYS:HD2	7:EE:65:CYS:SG	2.52	0.49
10:II:158:ILE:HD11	10:II:162:LEU:HB3	1.93	0.49
11:JJ:42:GLU:HG2	11:JJ:45:ARG:NH1	2.27	0.49
11:JJ:125:HIS:O	11:JJ:129:LEU:HG	2.13	0.49
13:NN:26:LEU:CD1	13:NN:28:LEU:HD13	2.43	0.49
14:OO:116:LEU:HA	14:OO:119:LEU:CD2	2.43	0.49
22:DD:18:LYS:HE2	22:DD:39:VAL:CG1	2.43	0.49
24:KK:77:GLN:O	24:KK:80:ARG:HG2	2.12	0.49
30:TT:42:HIS:NE2	30:TT:43:LYS:HE3	2.28	0.49
38:C:113:ARG:HG3	78:5:1508:A:OP1	2.12	0.49
41:F:102:PRO:HG3	78:5:1877:G:OP1	2.12	0.49
42:G:198:THR:HG22	78:5:116:G:OP1	2.13	0.49
45:J:20:LEU:HD11	45:J:130:PHE:HB3	1.94	0.49
46:L:59:VAL:HG13	78:5:74:G:H5'	1.94	0.49
48:N:38:ARG:HD2	80:8:141:C:OP1	2.12	0.49
48:N:50:ARG:NH1	78:5:278:G:H4'	2.27	0.49
49:O:55:LEU:O	49:O:59:ARG:HG3	2.12	0.49
52:S:7:LEU:O	52:S:103:ALA:HB1	2.13	0.49
56:X:139:ARG:NH1	78:5:2533:C:H5''	2.27	0.49
57:Y:80:ILE:HD11	57:Y:104:VAL:HG21	1.95	0.49
63:e:108:ARG:HE	63:e:127:ALA:HB3	1.77	0.49
69:k:3:ARG:HB2	69:k:43:TYR:HD1	1.78	0.49
76:s:34:ASN:N	78:5:1968:G:H4'	2.24	0.49
78:5:1190:C:H2'	78:5:1191:C:C6	2.48	0.49
78:5:1440:U:H2'	78:5:1441:C:H5	1.77	0.49
78:5:1443:A:H2'	78:5:1444:G:O4'	2.12	0.49
78:5:1783:C:H2'	78:5:1784:U:C6	2.47	0.49
78:5:1804:A:H5''	78:5:1805:A:C2'	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:5:2366:A:H1'	78:5:3850:C:O2'	2.12	0.49
78:5:3633:C:H2'	78:5:3634:G:C8	2.47	0.49
78:5:4894:A:H5''	78:5:4895:C:C6	2.48	0.49
80:8:40:A:H2'	80:8:41:A:H8	1.78	0.49
80:8:63:U:O2'	80:8:64:U:H5'	2.13	0.49
1:R:23:TRP:O	1:R:24:LEU:HD23	2.13	0.49
3:9:104:A:OP1	10:II:12:ARG:HG2	2.12	0.49
3:9:297:G:O2'	3:9:298:G:H5'	2.13	0.49
3:9:478:A:O3'	3:9:479:A:H3'	2.12	0.49
3:9:1077:G:H4'	72:n:24:SER:OG	2.12	0.49
3:9:1290:G:C5'	24:KK:1:MET:HG2	2.43	0.49
3:9:1525:U:H3'	3:9:1526:G:C8	2.48	0.49
4:AA:195:TRP:O	28:RR:89:SER:HB2	2.12	0.49
6:CC:163:VAL:HG12	15:VV:27:LYS:HE2	1.93	0.49
6:CC:170:TRP:HB2	6:CC:179:THR:HG21	1.94	0.49
12:LL:96:ILE:HD11	12:LL:103:GLU:CD	2.37	0.49
16:WW:8:ALA:CA	16:WW:74:VAL:HG11	2.40	0.49
29:SS:36:VAL:HG23	29:SS:40:TYR:HB3	1.94	0.49
29:SS:53:THR:HG22	30:TT:48:TYR:OH	2.13	0.49
31:UU:35:VAL:HG21	31:UU:110:VAL:HG21	1.95	0.49
36:A:112:ILE:HG13	74:p:79:VAL:HG22	1.95	0.49
36:A:117:GLU:HG2	36:A:124:GLY:HA2	1.93	0.49
36:A:117:GLU:HG3	36:A:163:ARG:O	2.13	0.49
42:G:219:LEU:HA	48:N:7:ILE:HD11	1.94	0.49
44:I:54:SER:HB2	44:I:135:ILE:CD1	2.38	0.49
44:I:201:PRO:HG3	44:I:203:ARG:NH1	2.28	0.49
45:J:53:ALA:HB2	45:J:68:ILE:CD1	2.43	0.49
46:L:8:MET:CG	51:Q:166:TYR:HB3	2.40	0.49
46:L:182:LEU:HD23	67:i:7:MET:CE	2.43	0.49
47:M:15:VAL:HG12	47:M:21:ALA:HA	1.95	0.49
47:M:72:TYR:CE1	78:5:918:G:H5'	2.47	0.49
48:N:8:GLN:O	48:N:12:ARG:HG3	2.13	0.49
48:N:16:SER:CB	67:i:48:CYS:HB2	2.42	0.49
48:N:154:PRO:CB	48:N:157:LYS:HE3	2.43	0.49
49:O:142:ALA:O	49:O:145:VAL:HG12	2.13	0.49
50:P:67:VAL:HG13	50:P:82:ARG:HE	1.77	0.49
55:V:55:ALA:HB1	55:V:59:ASP:CB	2.43	0.49
70:l:38:ASN:HB3	70:l:41:ARG:CG	2.43	0.49
71:m:87:LYS:HG3	71:m:91:HIS:NE2	2.28	0.49
76:s:36:GLY:HA2	78:5:1969:G:C4'	2.37	0.49
78:5:260:C:H2'	78:5:261:G:H8	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:5:307:A:H3'	78:5:308:G:N2	2.27	0.49
78:5:423:G:H2'	78:5:424:U:C6	2.47	0.49
78:5:1878:G:H2'	78:5:1879:C:C6	2.47	0.49
78:5:2376:A:H2'	78:5:2377:C:H6	1.78	0.49
78:5:2434:G:H2'	78:5:2435:G:O4'	2.13	0.49
78:5:2622:G:H5'	78:5:2701:U:H4'	1.95	0.49
78:5:3893:C:H2'	78:5:3894:A:C8	2.48	0.49
78:5:4375:C:H5'	78:5:4377:G:H5'	1.94	0.49
78:5:4424:A:H1'	78:5:4474:A:O2'	2.13	0.49
78:5:4948:C:H2'	78:5:4949:G:C2	2.48	0.49
78:5:5001:U:H2'	78:5:5002:U:O4'	2.12	0.49
80:8:139:G:H2'	80:8:140:C:O4'	2.13	0.49
81:EF:381:ALA:HB2	81:EF:395:MET:HE2	1.94	0.49
84:ET:68:C:N4	84:ET:69:C:H41	2.10	0.49
1:R:38:ARG:O	1:R:42:ARG:HG3	2.12	0.49
2:W:20:ARG:O	55:V:96:LEU:HA	2.13	0.49
3:9:76:U:H5''	8:GG:155:GLN:HG2	1.93	0.49
3:9:89:C:O2	3:9:423:G:H4'	2.13	0.49
3:9:225:U:H2'	3:9:226:A:O4'	2.13	0.49
3:9:649:G:H2'	3:9:650:C:C6	2.48	0.49
3:9:1023:G:H2'	3:9:1024:U:O4'	2.13	0.49
3:9:1226:G:H2'	3:9:1227:G:H8	1.77	0.49
3:9:1330:U:H5''	3:9:1331:U:O2	2.13	0.49
3:9:1654:G:H22	3:9:1680:G:H3'	1.77	0.49
9:HH:121:THR:HG23	9:HH:124:ALA:H	1.78	0.49
10:II:83:TYR:CE1	10:II:201:LYS:HB3	2.48	0.49
11:JJ:48:PHE:CE2	11:JJ:52:LYS:HE3	2.48	0.49
15:VV:24:ILE:HG23	15:VV:28:ASP:HB3	1.94	0.49
15:VV:55:ILE:HD11	15:VV:69:ILE:HG13	1.94	0.49
16:WW:81:VAL:HG12	16:WW:82:GLN:O	2.13	0.49
21:ee:110:GLN:HA	21:ee:113:ARG:HG2	1.95	0.49
28:RR:38:ILE:HD12	28:RR:39:ALA:HB2	1.94	0.49
28:RR:66:VAL:HB	28:RR:69:ILE:HG22	1.95	0.49
37:B:122:TRP:CE2	37:B:127:LYS:HE3	2.48	0.49
47:M:119:ARG:NH1	47:M:123:ILE:HD11	2.24	0.49
48:N:6:TYR:CE1	67:i:40:VAL:HG13	2.48	0.49
48:N:6:TYR:CZ	67:i:40:VAL:HG22	2.47	0.49
51:Q:144:LYS:HG3	51:Q:149:TYR:CD1	2.47	0.49
58:Z:12:LEU:HD23	58:Z:22:LYS:HG2	1.94	0.49
58:Z:26:VAL:CG1	58:Z:91:LEU:HD13	2.42	0.49
58:Z:46:ILE:HA	58:Z:70:SER:HA	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:f:104:MET:O	64:f:105:LEU:HD23	2.12	0.49
78:5:314:G:H5''	78:5:315:G:C5'	2.43	0.49
78:5:699:C:H2'	78:5:700:G:C8	2.47	0.49
78:5:947:C:H2'	78:5:948:C:C6	2.48	0.49
78:5:1186:U:H2'	78:5:1187:G:N3	2.28	0.49
78:5:1608:G:H2'	78:5:1609:U:C6	2.47	0.49
78:5:2382:A:H61	78:5:2830:G:H1'	1.78	0.49
78:5:2717:G:H2'	78:5:2718:U:O4'	2.13	0.49
78:5:3734:U:H2'	78:5:3735:G:O4'	2.13	0.49
78:5:4594:U:H2'	78:5:4595:G:C8	2.48	0.49
79:7:46:C:H2'	79:7:47:G:C8	2.48	0.49
79:7:98:G:H2'	79:7:99:G:O4'	2.13	0.49
80:8:9:A:O2'	80:8:10:G:H5'	2.13	0.49
3:9:262:G:H2'	3:9:263:A:H8	1.76	0.49
3:9:592:A:H4'	3:9:1044:G:O2'	2.13	0.49
3:9:941:C:H2'	3:9:942:U:H6	1.76	0.49
3:9:1540:C:OP1	23:FF:163:PHE:HA	2.13	0.49
3:9:1637:U:H5''	29:SS:34:LYS:HG3	1.95	0.49
4:AA:79:SER:OG	4:AA:129:ALA:HB1	2.13	0.49
7:EE:99:PHE:CD1	7:EE:113:ARG:HG2	2.47	0.49
15:VV:32:ILE:HD12	15:VV:60:ARG:HD2	1.94	0.49
17:XX:51:VAL:HG13	17:XX:70:VAL:HG11	1.94	0.49
24:KK:58:VAL:CG2	24:KK:69:TRP:HB3	2.43	0.49
36:A:132:ASN:OD1	78:5:3682:A:H5''	2.13	0.49
37:B:30:LYS:HG3	78:5:4716:C:OP2	2.13	0.49
37:B:82:PRO:HG3	37:B:171:LEU:HD21	1.95	0.49
38:C:230:LEU:HD21	38:C:239:LYS:CD	2.42	0.49
39:D:284:LYS:HD2	44:I:209:TRP:CE2	2.48	0.49
41:F:181:TYR:HB3	41:F:199:HIS:CD2	2.48	0.49
47:M:25:VAL:HG21	47:M:45:VAL:HG11	1.94	0.49
50:P:131:ARG:HH21	78:5:1596:U:H2'	1.77	0.49
51:Q:101:CYS:HA	51:Q:121:LEU:O	2.12	0.49
52:S:33:PHE:CE2	52:S:126:ILE:HG21	2.47	0.49
57:Y:56:GLN:HB2	57:Y:105:VAL:HG13	1.94	0.49
59:a:43:ILE:HG23	78:5:4304:A:N1	2.27	0.49
60:b:65:MET:HE2	78:5:1829:G:O2'	2.12	0.49
63:e:126:ASN:CB	63:e:129:LEU:HD21	2.39	0.49
66:h:70:ARG:HB3	66:h:83:LEU:HD22	1.94	0.49
77:t:11:LYS:O	77:t:12:VAL:C	2.56	0.49
77:t:81:ILE:CG1	77:t:104:ILE:HG21	2.39	0.49
78:5:207:G:H1'	78:5:232:G:H22	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:5:1358:G:H2'	78:5:1360:G:O6	2.13	0.49
78:5:1569:U:H2'	78:5:1570:G:H8	1.78	0.49
78:5:1904:G:O2'	78:5:1905:U:H5'	2.12	0.49
78:5:3845:A:H2'	78:5:3846:C:H6	1.78	0.49
78:5:4208:U:H2'	78:5:4209:G:H8	1.77	0.49
3:9:417:A:H4'	18:YY:89:HIS:CD2	2.48	0.48
3:9:917:A:H2'	3:9:918:G:O4'	2.12	0.48
3:9:969:A:H4'	5:BB:205:TYR:CD2	2.48	0.48
3:9:1021:U:H5''	72:n:21:ARG:NH1	2.28	0.48
3:9:1087:U:H2'	3:9:1088:U:O4'	2.13	0.48
3:9:1176:G:H2'	3:9:1177:U:C6	2.48	0.48
3:9:1293:C:H2'	3:9:1294:A:C8	2.44	0.48
3:9:1324:U:H2'	3:9:1325:C:C6	2.48	0.48
3:9:1546:G:P	30:TT:47:PRO:HG3	2.52	0.48
4:AA:33:GLN:HB3	4:AA:154:LEU:HD12	1.94	0.48
4:AA:52:LYS:CB	28:RR:105:MET:HE3	2.40	0.48
7:EE:222:LEU:HA	7:EE:225:ILE:CD1	2.41	0.48
8:GG:200:LYS:O	8:GG:203:LYS:HD3	2.13	0.48
11:JJ:101:LYS:HG2	11:JJ:104:ASP:OD2	2.12	0.48
14:OO:116:LEU:O	14:OO:119:LEU:HG	2.12	0.48
17:XX:53:GLU:OE2	17:XX:71:ARG:HG3	2.13	0.48
23:FF:53:ALA:HB2	27:QQ:118:THR:HG21	1.94	0.48
27:QQ:10:VAL:HG22	27:QQ:98:LYS:NZ	2.28	0.48
29:SS:68:ILE:O	29:SS:72:GLN:HG2	2.13	0.48
30:TT:59:SER:HA	30:TT:62:ARG:HG2	1.95	0.48
40:E:117:ARG:HD2	78:5:691:C:OP1	2.12	0.48
40:E:216:THR:HG23	40:E:218:ALA:H	1.76	0.48
41:F:29:ILE:O	41:F:33:ARG:HG3	2.13	0.48
41:F:131:MET:O	41:F:134:ILE:HG22	2.13	0.48
43:H:150:ASP:OD1	43:H:152:GLU:HB2	2.13	0.48
44:I:145:LYS:HE3	44:I:167:ILE:CD1	2.43	0.48
46:L:99:ASP:OD2	46:L:102:ARG:HG3	2.13	0.48
48:N:58:GLY:HA3	48:N:142:ILE:HD11	1.95	0.48
49:O:79:ILE:O	49:O:83:THR:HG22	2.13	0.48
50:P:61:ARG:HG2	50:P:78:TRP:CE2	2.48	0.48
52:S:84:TYR:OH	52:S:93:MET:HE3	2.14	0.48
64:f:96:ALA:HA	64:f:99:HIS:CD2	2.49	0.48
65:g:78:TYR:HA	78:5:2751:G:O2'	2.12	0.48
75:r:6:GLN:HG3	75:r:44:ILE:HG23	1.95	0.48
75:r:52:GLU:HB2	75:r:61:VAL:CG2	2.42	0.48
75:r:82:ILE:HG12	78:5:679:C:H5''	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:s:57:LYS:HB3	76:s:60:MET:CG	2.42	0.48
76:s:112:ARG:HG2	76:s:115:ALA:HB2	1.94	0.48
77:t:92:ARG:HB3	77:t:92:ARG:CZ	2.43	0.48
78:5:337:U:H2'	78:5:338:A:C8	2.47	0.48
78:5:731:G:H2'	78:5:732:A:H8	1.76	0.48
78:5:1732:C:H2'	78:5:1733:G:C8	2.48	0.48
78:5:1802:A:C5'	78:5:1803:G:H5'	2.36	0.48
78:5:2095:A:H2'	78:5:2096:G:C8	2.48	0.48
78:5:2284:G:H2'	78:5:2285:A:C8	2.48	0.48
78:5:2362:U:H2'	78:5:2363:A:H8	1.77	0.48
78:5:2594:C:H2'	78:5:2595:C:C6	2.48	0.48
78:5:3697:U:H1'	78:5:3819:G:N2	2.28	0.48
78:5:3863:C:H4'	78:5:3903:A:H4'	1.93	0.48
78:5:4232:U:H4'	78:5:4233:A:O5'	2.11	0.48
78:5:4258:C:H2'	78:5:4259:C:H6	1.77	0.48
79:7:99:G:H2'	79:7:100:A:H5''	1.95	0.48
83:PT:31:C:H2'	83:PT:31:C:O2	2.13	0.48
3:9:383:C:H2'	3:9:384:A:C8	2.48	0.48
3:9:402:G:H5''	81:EF:409:ARG:HH12	1.78	0.48
3:9:1055:C:O2'	3:9:1056:A:H5'	2.12	0.48
3:9:1065:G:O2'	3:9:1066:U:H5'	2.13	0.48
3:9:1151:A:H2'	3:9:1152:C:C6	2.48	0.48
3:9:1344:G:H2'	3:9:1345:U:C6	2.49	0.48
8:GG:1:MET:HE2	8:GG:109:LEU:HD11	1.94	0.48
8:GG:46:LYS:N	8:GG:48:TYR:HD1	2.11	0.48
16:WW:77:PRO:HD2	16:WW:79:PHE:CZ	2.48	0.48
18:YY:29:HIS:CE1	18:YY:34:THR:HA	2.48	0.48
30:TT:64:LEU:HD22	30:TT:121:ARG:O	2.13	0.48
30:TT:139:ALA:HA	30:TT:142:LYS:HG2	1.95	0.48
36:A:112:ILE:HB	74:p:79:VAL:HG13	1.94	0.48
36:A:124:GLY:O	36:A:125:LYS:HD2	2.13	0.48
40:E:162:GLY:C	40:E:277:VAL:HG23	2.37	0.48
40:E:286:PRO:HA	40:E:289:LEU:CD2	2.43	0.48
49:O:60:LYS:HE2	78:5:2046:G:N3	2.28	0.48
50:P:123:PRO:HG3	80:8:14:U:C5'	2.42	0.48
51:Q:54:SER:O	51:Q:58:ARG:HG2	2.13	0.48
60:b:117:ARG:NH2	78:5:1272:C:H5''	2.27	0.48
74:p:47:MET:CE	74:p:57:CYS:HB2	2.43	0.48
76:s:99:ARG:HD2	76:s:189:ILE:HD13	1.94	0.48
78:5:81:C:H2'	78:5:82:U:O4'	2.13	0.48
78:5:4673:U:H2'	78:5:4674:C:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:7:71:G:H2'	79:7:72:U:O4'	2.13	0.48
80:8:130:C:H2'	80:8:131:G:H8	1.78	0.48
2:W:39:ALA:CA	2:W:44:ARG:HD2	2.43	0.48
2:W:62:GLY:HA2	37:B:389:MET:O	2.14	0.48
3:9:4:C:H1'	11:JJ:18:ARG:HH21	1.77	0.48
3:9:12:U:H2'	3:9:13:C:H6	1.78	0.48
3:9:34:U:H4'	3:9:488:A:H4'	1.95	0.48
3:9:245:G:H3'	8:GG:183:ARG:NH2	2.28	0.48
3:9:486:U:H2'	3:9:487:G:H8	1.76	0.48
3:9:619:C:H2'	3:9:620:G:C8	2.48	0.48
3:9:755:A:H2'	3:9:756:G:O4'	2.13	0.48
3:9:1250:C:N4	29:SS:137:LYS:HE2	2.27	0.48
5:BB:181:LEU:HD23	5:BB:184:VAL:CG2	2.43	0.48
7:EE:45:ILE:CG1	7:EE:61:VAL:HG11	2.43	0.48
9:HH:61:ILE:HD13	9:HH:93:VAL:HG13	1.96	0.48
11:JJ:38:ARG:HB2	11:JJ:127:ARG:NH2	2.28	0.48
14:OO:64:ALA:HB3	14:OO:67:ASP:OD1	2.13	0.48
20:bb:36:LYS:HD3	20:bb:43:ILE:CD1	2.43	0.48
23:FF:94:LYS:O	23:FF:98:GLU:HG2	2.13	0.48
26:PP:83:MET:O	26:PP:115:TYR:HA	2.13	0.48
29:SS:73:ASN:HB3	29:SS:76:GLN:NE2	2.28	0.48
29:SS:124:ARG:HD3	29:SS:131:VAL:HA	1.95	0.48
36:A:226:ARG:N	78:5:3706:C:H5''	2.28	0.48
37:B:53:MET:SD	37:B:77:THR:HG22	2.53	0.48
40:E:111:LYS:HE2	78:5:2259:G:O2'	2.13	0.48
41:F:242:LEU:HD23	41:F:246:MET:HG3	1.95	0.48
42:G:134:ASN:ND2	42:G:291:GLY:HA3	2.27	0.48
44:I:16:PRO:HA	44:I:95:HIS:CD2	2.45	0.48
53:T:53:PRO:HB3	53:T:91:VAL:HG21	1.94	0.48
57:Y:50:ARG:HB2	57:Y:115:ARG:HH22	1.78	0.48
58:Z:115:LYS:NZ	78:5:2573:A:H4'	2.29	0.48
70:l:25:GLN:HA	70:l:28:TRP:NE1	2.28	0.48
76:s:98:ILE:O	76:s:102:LEU:HG	2.14	0.48
77:t:61:LYS:HE2	77:t:72:GLU:HG3	1.93	0.48
77:t:124:GLU:O	77:t:125:LEU:C	2.57	0.48
77:t:129:ILE:O	77:t:130:LYS:C	2.57	0.48
78:5:178:C:H2'	78:5:179:G:C8	2.48	0.48
78:5:419:A:N6	80:8:15:G:H1'	2.28	0.48
78:5:1331:C:H2'	78:5:1332:C:C6	2.49	0.48
78:5:1551:C:H2'	78:5:1552:G:O4'	2.13	0.48
78:5:1663:C:O2'	78:5:1664:U:H5'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:5:2038:U:H2'	78:5:2039:G:O4'	2.13	0.48
78:5:3774:A:H2'	78:5:3775:A:C2	2.47	0.48
78:5:3819:G:H2'	78:5:3820:G:H8	1.77	0.48
78:5:4099:G:H1	78:5:4109:G:H1	1.60	0.48
78:5:4188:U:H2'	78:5:4189:U:H6	1.78	0.48
78:5:4761:G:H2'	78:5:4762:A:C8	2.49	0.48
80:8:10:G:H2'	80:8:11:C:C6	2.48	0.48
3:9:505:U:O2'	18:YY:33:ALA:HA	2.13	0.48
3:9:746:U:H2'	3:9:747:C:O4'	2.14	0.48
3:9:1213:A:H1'	19:aa:79:ILE:HD12	1.94	0.48
3:9:1460:A:C8	28:RR:3:ARG:HD3	2.48	0.48
3:9:1656:A:H3'	3:9:1657:A:H8	1.78	0.48
4:AA:16:LEU:HD12	28:RR:93:GLN:NE2	2.28	0.48
4:AA:44:ASP:N	28:RR:127:ASN:HB3	2.22	0.48
5:BB:171:ILE:HD11	5:BB:200:ALA:HB3	1.96	0.48
6:CC:170:TRP:CZ3	6:CC:199:PRO:HB3	2.48	0.48
6:CC:204:ILE:HD11	6:CC:219:ILE:O	2.13	0.48
9:HH:95:ILE:HD13	9:HH:129:ILE:HG23	1.96	0.48
10:II:80:ASP:OD1	10:II:94:LYS:HE2	2.13	0.48
13:NN:33:VAL:O	13:NN:37:ILE:HG13	2.13	0.48
15:VV:73:ALA:HB1	15:VV:78:ILE:HB	1.96	0.48
22:DD:64:ARG:CZ	24:KK:94:LEU:HG	2.43	0.48
22:DD:175:VAL:HG22	22:DD:177:LEU:HD12	1.96	0.48
23:FF:92:ILE:HG23	23:FF:170:ALA:HB2	1.95	0.48
23:FF:153:LEU:HB3	23:FF:189:ALA:HA	1.96	0.48
29:SS:3:LEU:HB3	32:ZZ:50:PHE:HD2	1.77	0.48
38:C:263:LEU:CD2	38:C:273:LEU:HD22	2.44	0.48
40:E:287:HIS:ND1	64:f:38:GLU:HB3	2.27	0.48
41:F:91:VAL:CG1	41:F:139:ILE:HD12	2.41	0.48
42:G:189:LEU:HD13	42:G:255:VAL:HG11	1.95	0.48
44:I:4:ARG:CZ	78:5:4405:G:H4'	2.44	0.48
46:L:61:CYS:O	46:L:67:HIS:HA	2.13	0.48
46:L:61:CYS:SG	46:L:71:ARG:HG2	2.53	0.48
46:L:180:ALA:O	46:L:184:MET:HG2	2.12	0.48
49:O:167:HIS:HA	49:O:170:LYS:HD3	1.95	0.48
51:Q:61:LEU:CD2	51:Q:65:ARG:HB3	2.43	0.48
56:X:83:THR:O	56:X:87:MET:HG2	2.13	0.48
56:X:95:THR:O	56:X:96:LEU:HD23	2.13	0.48
58:Z:26:VAL:CG2	58:Z:42:LEU:HD22	2.43	0.48
58:Z:103:ASP:OD2	58:Z:106:LEU:HD13	2.13	0.48
59:a:43:ILE:HD12	78:5:1682:A:H2	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:e:79:VAL:HG11	63:e:85:LEU:CD2	2.43	0.48
64:f:39:THR:O	64:f:43:LEU:HG	2.13	0.48
73:o:3:ASN:HA	73:o:92:GLU:HG3	1.95	0.48
73:o:47:GLY:HA3	78:5:289:C:OP2	2.13	0.48
77:t:135:THR:CB	78:5:1974:U:H5	2.26	0.48
77:t:139:VAL:HG12	77:t:141:CYS:H	1.77	0.48
78:5:1901:C:H2'	78:5:1902:G:C8	2.47	0.48
78:5:1962:A:H5'	78:5:1963:C:OP2	2.13	0.48
78:5:1984:A:H2'	78:5:2011:C:OP1	2.13	0.48
78:5:2758:G:H2'	78:5:2759:G:C5	2.49	0.48
78:5:3927:U:H2'	78:5:3928:A:H8	1.78	0.48
78:5:4075:U:H2'	78:5:4169:G:H1	1.79	0.48
78:5:4208:U:H2'	78:5:4209:G:C8	2.48	0.48
78:5:4308:C:H2'	78:5:4309:G:O4'	2.13	0.48
3:9:77:A:H1'	8:GG:176:ILE:HG13	1.94	0.48
3:9:92:A:H5'	3:9:93:U:H5	1.78	0.48
3:9:155:G:O2'	3:9:156:A:H5'	2.13	0.48
3:9:222:C:H4'	12:LL:38:LYS:NZ	2.29	0.48
3:9:802:A:N6	3:9:818:G:N2	2.43	0.48
3:9:934:A:H5'	3:9:935:U:C5	2.47	0.48
3:9:1213:A:C8	19:aa:79:ILE:HD12	2.49	0.48
3:9:1678:U:H2'	3:9:1679:U:C6	2.48	0.48
8:GG:76:LEU:HB2	8:GG:94:ARG:NH1	2.28	0.48
9:HH:163:GLN:HA	9:HH:166:VAL:HG12	1.95	0.48
11:JJ:132:GLN:HB2	11:JJ:134:HIS:CD2	2.49	0.48
13:NN:123:HIS:CE1	78:5:1563:A:H4'	2.49	0.48
14:OO:131:ASP:OD2	19:aa:67:LEU:HD13	2.12	0.48
23:FF:61:PHE:CZ	33:cc:51:ARG:HB3	2.48	0.48
23:FF:100:ILE:HG13	23:FF:174:ALA:HB1	1.95	0.48
23:FF:151:ILE:HA	23:FF:154:LEU:HD23	1.95	0.48
34:dd:39:CYS:SG	34:dd:42:CYS:HB2	2.53	0.48
36:A:48:ILE:CG2	74:p:54:ILE:HD12	2.42	0.48
38:C:74:ALA:HB2	78:5:2352:U:OP1	2.13	0.48
43:H:128:MET:HE1	43:H:161:ILE:HG21	1.96	0.48
48:N:51:LEU:HD12	48:N:119:TYR:HD2	1.78	0.48
52:S:36:ASN:OD1	52:S:39:VAL:HG22	2.13	0.48
52:S:72:PRO:O	52:S:100:LEU:HB3	2.13	0.48
57:Y:80:ILE:HG12	57:Y:99:ILE:O	2.13	0.48
78:5:160:G:H2'	78:5:161:G:C8	2.48	0.48
78:5:312:G:H2'	78:5:313:U:C6	2.49	0.48
78:5:962:C:H5'	78:5:973:G:O3'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:5:1169:G:O2'	78:5:1170:G:H5'	2.13	0.48
78:5:2081:C:H2'	78:5:2082:G:C8	2.49	0.48
78:5:2325:C:H2'	78:5:2326:G:H5'	1.95	0.48
78:5:3804:G:H2'	78:5:3805:U:C6	2.48	0.48
78:5:3870:C:H2'	78:5:3871:A:H8	1.78	0.48
78:5:4241:C:O2'	78:5:4242:U:H5'	2.14	0.48
78:5:4353:U:H5''	78:5:4354:U:C1'	2.43	0.48
78:5:4403:U:H2'	78:5:4404:U:C6	2.48	0.48
78:5:4470:G:H2'	78:5:4471:U:O4'	2.13	0.48
78:5:4619:U:H2'	78:5:4620:U:C6	2.49	0.48
78:5:4986:G:H2'	78:5:4987:C:H6	1.77	0.48
79:7:58:A:H2'	79:7:59:G:H8	1.77	0.48
83:PT:34:A:C2'	83:PT:35:G:H5'	2.44	0.48
3:9:644:C:H2'	3:9:645:C:C6	2.48	0.48
3:9:650:C:H2'	3:9:651:G:C8	2.48	0.48
3:9:863:U:H4'	13:NN:16:LEU:CD2	2.44	0.48
3:9:1179:G:O2'	3:9:1180:U:H5'	2.14	0.48
3:9:1290:G:OP1	24:KK:1:MET:HA	2.13	0.48
3:9:1675:G:C8	27:QQ:130:LYS:HE3	2.49	0.48
7:EE:103:TYR:HA	7:EE:109:PHE:HA	1.94	0.48
10:II:113:TYR:CE2	10:II:121:LEU:HD23	2.49	0.48
13:NN:45:LEU:HG	13:NN:49:GLN:HB2	1.95	0.48
17:XX:40:PRO:HA	17:XX:79:LYS:HD2	1.95	0.48
17:XX:65:ALA:HB3	17:XX:67:ARG:NH1	2.29	0.48
31:UU:26:SER:CB	31:UU:32:LEU:HB2	2.43	0.48
37:B:18:PRO:HA	78:5:4567:G:OP1	2.13	0.48
39:D:208:MET:HE3	39:D:233:PRO:CG	2.42	0.48
42:G:235:CYS:HB3	42:G:275:ILE:CG2	2.43	0.48
44:I:145:LYS:O	44:I:149:VAL:HG23	2.13	0.48
48:N:133:ILE:O	48:N:134:LEU:HD23	2.13	0.48
51:Q:105:VAL:HB	51:Q:110:ARG:NH2	2.28	0.48
57:Y:51:LYS:HE3	57:Y:71:VAL:O	2.14	0.48
76:s:57:LYS:HE3	78:5:2020:U:P	2.54	0.48
76:s:130:LEU:O	76:s:151:THR:HA	2.13	0.48
78:5:385:A:O2'	78:5:387:G:H5'	2.13	0.48
78:5:436:C:H2'	78:5:437:G:H8	1.79	0.48
78:5:1196:G:H2'	78:5:1197:C:C6	2.48	0.48
78:5:1238:A:H2'	78:5:1239:C:C5	2.49	0.48
78:5:1499:C:H2'	78:5:1500:A:O4'	2.14	0.48
78:5:1543:G:H2'	78:5:1544:G:H8	1.77	0.48
78:5:1965:G:H2'	78:5:1966:C:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:5:2784:C:H2'	78:5:2785:C:C6	2.49	0.48
78:5:2895:A:H2'	78:5:2896:G:O4'	2.13	0.48
78:5:3599:A:H2'	78:5:3600:G:C8	2.49	0.48
78:5:3714:G:H2'	78:5:3715:U:C6	2.48	0.48
78:5:4587:G:H2'	78:5:4588:U:C6	2.49	0.48
1:R:19:LYS:HA	1:R:22:VAL:HG23	1.94	0.48
1:R:55:VAL:HG21	78:5:2635:U:H4'	1.96	0.48
1:R:166:THR:HG21	3:9:719:A:O2'	2.14	0.48
1:R:170:ARG:O	1:R:174:GLU:HG2	2.14	0.48
3:9:431:G:H5'	3:9:433:G:O6	2.14	0.48
3:9:566:U:P	11:JJ:39:ASN:HB2	2.54	0.48
3:9:793:U:H2'	3:9:794:G:H8	1.78	0.48
3:9:898:G:H2'	3:9:899:A:C8	2.49	0.48
3:9:1019:U:H4'	72:n:10:MET:CE	2.43	0.48
3:9:1142:G:H2'	3:9:1143:A:C8	2.48	0.48
3:9:1185:A:N6	19:aa:79:ILE:HG22	2.28	0.48
3:9:1217:U:C4	19:aa:84:VAL:HG12	2.49	0.48
3:9:1441:C:H2'	3:9:1442:G:C8	2.48	0.48
3:9:1584:U:O2'	22:DD:4:GLN:HG2	2.13	0.48
4:AA:92:ALA:HB1	28:RR:83:ASN:OD1	2.14	0.48
6:CC:73:MET:HG2	6:CC:96:PHE:CZ	2.49	0.48
8:GG:145:PHE:HB2	8:GG:147:LEU:HG	1.95	0.48
22:DD:115:VAL:HG21	22:DD:142:LEU:HD23	1.96	0.48
35:ff:102:VAL:HA	35:ff:105:TYR:CD2	2.48	0.48
36:A:24:LYS:HE3	36:A:49:ILE:CD1	2.44	0.48
37:B:105:VAL:HG11	37:B:150:PHE:HE1	1.78	0.48
37:B:175:GLN:NE2	78:5:4985:U:H4'	2.25	0.48
37:B:285:TYR:CZ	37:B:334:LYS:HB2	2.49	0.48
38:C:101:MET:HG2	78:5:2343:G:C2	2.49	0.48
41:F:39:LYS:O	41:F:43:LYS:HG3	2.14	0.48
42:G:313:GLU:O	42:G:317:LYS:HG2	2.13	0.48
43:H:92:MET:HE2	43:H:179:ILE:HG22	1.96	0.48
44:I:61:SER:O	44:I:65:LEU:HG	2.13	0.48
46:L:102:ARG:HG2	78:5:75:G:C8	2.49	0.48
49:O:48:TYR:O	49:O:52:LEU:HD13	2.13	0.48
52:S:113:MET:HB3	52:S:119:ALA:HB3	1.95	0.48
57:Y:100:HIS:CD2	78:5:231:U:H4'	2.48	0.48
57:Y:114:ASP:O	57:Y:118:ILE:HG13	2.14	0.48
62:d:22:THR:HG22	62:d:89:SER:CB	2.43	0.48
62:d:42:ALA:HB3	62:d:43:PRO:HD3	1.95	0.48
68:j:11:ARG:HB3	78:5:1534:A:N3	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:t:137:GLN:HG3	77:t:148:PRO:CD	2.44	0.48
78:5:155:C:H2'	78:5:156:G:O4'	2.14	0.48
78:5:1431:C:H2'	78:5:1432:G:O4'	2.14	0.48
78:5:1459:A:H2'	78:5:1460:C:O4'	2.14	0.48
78:5:1754:U:H2'	78:5:1755:C:O4'	2.14	0.48
78:5:2028:C:H2'	78:5:2029:A:H8	1.77	0.48
78:5:2363:A:H2'	78:5:2364:G:O4'	2.13	0.48
78:5:2622:G:C5'	78:5:2701:U:H4'	2.44	0.48
78:5:2624:G:H2'	78:5:2625:U:C6	2.48	0.48
78:5:2641:A:H2'	78:5:2642:A:O4'	2.14	0.48
78:5:3621:A:C8	78:5:4642:U:H1'	2.49	0.48
78:5:4757:C:C4'	78:5:4758:U:H5'	2.43	0.48
79:7:28:C:H2'	79:7:29:C:H5'	1.96	0.48
3:9:256:G:N7	8:GG:189:ARG:NE	2.60	0.48
3:9:1552:G:H2'	3:9:1553:C:C6	2.49	0.48
4:AA:30:LEU:HD22	4:AA:38:ILE:HD13	1.96	0.48
4:AA:149:ASN:HB2	4:AA:165:ASN:ND2	2.29	0.48
4:AA:197:VAL:HG13	4:AA:201:LEU:HD23	1.95	0.48
6:CC:130:ILE:HG22	6:CC:158:ALA:HB1	1.96	0.48
8:GG:116:LYS:HD3	8:GG:117:GLY:O	2.13	0.48
11:JJ:56:ALA:O	11:JJ:60:LEU:HG	2.13	0.48
15:VV:30:ALA:HB3	15:VV:57:GLY:HA3	1.96	0.48
15:VV:55:ILE:HG22	15:VV:60:ARG:HG3	1.95	0.48
16:WW:3:ARG:CD	16:WW:6:VAL:HG22	2.40	0.48
18:YY:62:THR:HA	18:YY:69:THR:HG22	1.94	0.48
22:DD:123:LEU:HD21	22:DD:154:ASP:CG	2.38	0.48
23:FF:87:LEU:HD22	27:QQ:47:LEU:HD13	1.94	0.48
23:FF:102:LEU:HD13	32:ZZ:110:THR:CG2	2.43	0.48
28:RR:17:ILE:HG12	28:RR:24:LEU:CD1	2.44	0.48
28:RR:61:ILE:HG23	28:RR:74:GLN:NE2	2.29	0.48
29:SS:51:ASP:OD2	29:SS:54:LYS:HG3	2.13	0.48
38:C:51:PRO:HB3	38:C:111:TRP:NE1	2.28	0.48
38:C:212:ASN:HA	38:C:232:VAL:CG2	2.44	0.48
39:D:103:LEU:O	39:D:107:ARG:HG2	2.14	0.48
41:F:235:ARG:HB2	41:F:238:GLN:HB2	1.95	0.48
44:I:60:LEU:CD1	44:I:135:ILE:HD13	2.43	0.48
49:O:18:ARG:NH1	78:5:2053:C:H4'	2.28	0.48
49:O:191:LYS:O	49:O:195:VAL:HG13	2.14	0.48
59:a:134:GLU:O	59:a:138:LYS:HG2	2.13	0.48
63:e:69:MET:HA	63:e:75:ARG:HD3	1.96	0.48
63:e:118:LEU:HD23	75:r:120:SER:HB2	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:l:13:LEU:HD22	78:5:2407:G:H2'	1.96	0.48
76:s:47:LEU:HB3	76:s:50:LYS:HG3	1.94	0.48
77:t:17:CYS:C	77:t:58:ILE:HD12	2.39	0.48
77:t:31:LYS:O	77:t:35:LEU:HD13	2.14	0.48
77:t:100:HIS:CD2	78:5:1978:C:H5'	2.49	0.48
77:t:120:SER:C	77:t:121:LEU:HD23	2.39	0.48
78:5:84:A:OP1	78:5:86:U:H1'	2.13	0.48
78:5:205:C:H1'	78:5:2305:U:H5	1.78	0.48
78:5:1509:C:H2'	78:5:1510:G:C8	2.49	0.48
78:5:1514:U:H2'	78:5:1515:A:H8	1.78	0.48
78:5:1564:A:H2'	78:5:1565:A:C8	2.49	0.48
78:5:2811:G:N2	78:5:2813:A:H3'	2.29	0.48
78:5:4168:G:H2'	78:5:4169:G:O4'	2.14	0.48
83:PT:36:C:C2'	83:PT:37:A:H8	2.25	0.48
2:W:33:ASN:OD1	2:W:35:LYS:HB3	2.13	0.48
3:9:392:A:H2'	3:9:393:A:C8	2.49	0.48
3:9:760:A:H2'	9:HH:120:ARG:HH21	1.79	0.48
3:9:1072:C:H2'	3:9:1073:U:H6	1.79	0.48
4:AA:103:PHE:HD2	4:AA:132:GLN:HB3	1.78	0.48
7:EE:123:LEU:HD12	7:EE:160:ILE:O	2.14	0.48
8:GG:50:VAL:CG2	8:GG:111:LEU:HB3	2.43	0.48
9:HH:153:LEU:HD21	9:HH:186:ASN:CG	2.39	0.48
10:II:119:LEU:CD1	10:II:153:LYS:HG3	2.38	0.48
12:LL:77:VAL:HG12	12:LL:122:ILE:HA	1.95	0.48
12:LL:111:VAL:HG13	12:LL:140:PHE:C	2.39	0.48
16:WW:7:LEU:O	16:WW:11:LEU:HG	2.12	0.48
17:XX:21:LYS:HG2	17:XX:27:TYR:CD2	2.49	0.48
22:DD:96:LEU:HA	22:DD:188:ILE:HG21	1.95	0.48
23:FF:76:MET:HA	23:FF:76:MET:HE3	1.95	0.48
25:MM:61:TYR:O	25:MM:65:VAL:HG12	2.14	0.48
27:QQ:32:ILE:CG2	27:QQ:39:LEU:HD11	2.44	0.48
29:SS:119:ALA:O	29:SS:123:LEU:HG	2.14	0.48
32:ZZ:73:VAL:HG12	32:ZZ:79:ILE:HD11	1.95	0.48
38:C:75:ARG:O	38:C:76:ILE:HD13	2.14	0.48
38:C:193:LYS:H	78:5:2294:G:H5''	1.78	0.48
38:C:321:ASN:HB3	38:C:324:ILE:HB	1.95	0.48
40:E:265:LYS:HD3	78:5:4932:U:OP1	2.13	0.48
47:M:8:GLU:HG2	52:S:150:ILE:O	2.14	0.48
51:Q:22:ASP:OD1	51:Q:25:LEU:HB3	2.14	0.48
53:T:27:LEU:HD12	79:7:8:G:OP1	2.13	0.48
54:U:84:LYS:HA	54:U:87:THR:HG22	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:a:134:GLU:HG3	59:a:144:CYS:SG	2.53	0.48
60:b:59:ALA:O	60:b:63:LYS:HG2	2.13	0.48
62:d:64:ILE:CG1	62:d:68:LEU:HD23	2.44	0.48
64:f:50:VAL:HG22	64:f:69:VAL:CG1	2.41	0.48
76:s:84:GLY:O	76:s:86:VAL:HG23	2.14	0.48
77:t:127:GLY:O	77:t:128:THR:C	2.57	0.48
78:5:318:A:H2'	78:5:319:A:H8	1.78	0.48
78:5:1857:C:H2'	78:5:1858:A:H8	1.79	0.48
78:5:2446:C:H2'	78:5:2447:U:C6	2.48	0.48
78:5:2879:A:OP1	78:5:2881:A:H1'	2.14	0.48
78:5:2892:C:O2'	78:5:2893:U:H5'	2.14	0.48
78:5:4190:U:H5''	78:5:4191:G:H5''	1.96	0.48
84:ET:4:G:C6	84:ET:5:G:C5	3.02	0.48
2:W:52:THR:O	2:W:56:ARG:HG3	2.13	0.48
3:9:15:U:H2'	3:9:16:G:O4'	2.14	0.48
3:9:214:A:H61	3:9:226:A:H61	1.62	0.48
3:9:231:A:H1'	10:II:73:THR:CG2	2.44	0.48
3:9:269:U:H2'	3:9:270:C:C6	2.49	0.48
3:9:400:A:H2'	3:9:401:G:O4'	2.14	0.48
3:9:1079:U:H5''	3:9:1080:U:OP2	2.13	0.48
4:AA:136:GLU:O	4:AA:140:VAL:HG23	2.14	0.48
5:BB:41:ILE:HD12	5:BB:73:ASP:O	2.14	0.48
5:BB:109:LYS:HE3	5:BB:113:MET:SD	2.53	0.48
7:EE:155:LYS:HD2	7:EE:174:LYS:HE3	1.95	0.48
10:II:97:VAL:CG2	10:II:100:CYS:HB2	2.44	0.48
12:LL:82:MET:HE2	12:LL:85:THR:HG21	1.96	0.48
16:WW:23:ARG:HA	16:WW:23:ARG:HD2	1.70	0.48
16:WW:38:LEU:HA	16:WW:41:MET:CE	2.44	0.48
19:aa:37:LYS:HD2	19:aa:70:LYS:NZ	2.29	0.48
22:DD:66:ILE:O	22:DD:70:THR:HG23	2.13	0.48
25:MM:69:CYS:O	25:MM:74:ILE:HB	2.13	0.48
30:TT:22:LEU:HB3	30:TT:28:LEU:HD11	1.96	0.48
30:TT:72:VAL:HG22	30:TT:104:LEU:HD12	1.96	0.48
36:A:28:ARG:HH21	78:5:4082:G:H5''	1.78	0.48
36:A:102:LEU:HD12	36:A:106:THR:OG1	2.13	0.48
37:B:168:MET:HE3	37:B:173:LEU:HB2	1.96	0.48
40:E:182:LEU:CD1	40:E:186:ARG:HD2	2.44	0.48
43:H:96:TYR:CE1	43:H:100:PRO:HG3	2.48	0.48
46:L:16:LYS:HE2	78:5:46:U:OP1	2.13	0.48
53:T:142:ARG:HB3	53:T:142:ARG:HH11	1.79	0.48
57:Y:53:ASP:OD1	57:Y:110:LYS:HB2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:a:63:LEU:CD1	78:5:87:A:H4'	2.44	0.48
60:b:15:LYS:O	78:5:1686:C:H5''	2.14	0.48
62:d:29:ILE:HD11	62:d:84:ILE:HG21	1.96	0.48
63:e:90:MET:HG2	75:r:33:LYS:HA	1.95	0.48
63:e:106:LYS:HA	63:e:109:LYS:NZ	2.29	0.48
73:o:68:LEU:CD1	73:o:85:ILE:HD11	2.43	0.48
77:t:32:ILE:HG12	77:t:64:ILE:HD13	1.95	0.48
77:t:87:GLU:HG3	77:t:100:HIS:HE1	1.78	0.48
77:t:104:ILE:H	77:t:143:VAL:HG22	1.79	0.48
78:5:1088:C:H2'	78:5:1089:G:C8	2.48	0.48
78:5:1395:U:O2'	78:5:1469:C:H5''	2.14	0.48
78:5:1461:C:H2'	78:5:1462:A:H8	1.79	0.48
78:5:1544:G:O2'	78:5:1545:G:H5'	2.14	0.48
78:5:2691:U:H2'	78:5:2692:U:C5	2.49	0.48
78:5:2766:A:H2'	78:5:2767:U:O4'	2.14	0.48
78:5:3911:C:H1'	78:5:4395:U:H3	1.78	0.48
78:5:3922:G:H2'	78:5:4542:U:O4	2.14	0.48
2:W:8:PHE:CD2	2:W:40:PHE:HB2	2.49	0.47
2:W:11:TYR:CE1	2:W:53:VAL:HG23	2.49	0.47
2:W:26:GLY:HA2	55:V:120:PRO:HG3	1.95	0.47
3:9:29:G:H4'	17:XX:129:SER:CB	2.44	0.47
3:9:273:A:H2'	3:9:274:C:C6	2.48	0.47
3:9:652:U:H2'	3:9:653:U:O4'	2.13	0.47
3:9:976:G:O2'	3:9:977:G:H5'	2.14	0.47
3:9:1043:A:H2'	3:9:1044:G:O4'	2.14	0.47
3:9:1453:G:H2'	3:9:1454:A:H8	1.79	0.47
3:9:1659:U:H2'	3:9:1660:G:C8	2.49	0.47
4:AA:30:LEU:HD21	4:AA:35:GLU:HG2	1.96	0.47
7:EE:151:ASP:OD2	7:EE:153:LEU:HB2	2.13	0.47
8:GG:46:LYS:CE	8:GG:118:GLU:HB3	2.44	0.47
9:HH:27:LEU:HD13	9:HH:45:ILE:HD13	1.95	0.47
9:HH:160:LYS:HG3	9:HH:163:GLN:OE1	2.13	0.47
11:JJ:93:LYS:HE3	11:JJ:95:ASP:OD2	2.13	0.47
14:OO:92:ALA:CA	14:OO:125:LYS:HB2	2.43	0.47
23:FF:119:SER:OG	23:FF:189:ALA:HB1	2.14	0.47
26:PP:34:MET:HE2	26:PP:45:LEU:HB2	1.96	0.47
29:SS:25:LYS:HE2	29:SS:52:LEU:O	2.14	0.47
30:TT:56:ARG:HH22	30:TT:99:VAL:HB	1.79	0.47
30:TT:74:SER:O	30:TT:78:ILE:HG22	2.13	0.47
37:B:94:GLU:OE1	37:B:99:LEU:HG	2.14	0.47
40:E:118:TYR:HB3	78:5:457:G:O5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:E:128:LEU:HD12	78:5:957:G:C2	2.48	0.47
41:F:133:ARG:HD3	79:7:97:G:C4'	2.44	0.47
44:I:8:CYS:SG	78:5:4405:G:H5''	2.53	0.47
46:L:125:VAL:HG13	46:L:139:SER:HB3	1.96	0.47
47:M:93:LYS:HB3	49:O:203:VAL:HG11	1.95	0.47
49:O:89:PRO:HD3	78:5:1914:C:H4'	1.95	0.47
49:O:193:THR:CG2	49:O:197:LYS:HE3	2.42	0.47
52:S:132:ILE:CG2	52:S:136:LYS:HB2	2.44	0.47
53:T:105:PHE:CE1	78:5:1802:A:H4'	2.49	0.47
58:Z:10:VAL:HB	58:Z:83:THR:CG2	2.44	0.47
59:a:86:THR:HG22	78:5:510:U:H5''	1.95	0.47
63:e:58:ILE:HG12	78:5:2278:G:H21	1.79	0.47
73:o:63:THR:CG2	73:o:87:ARG:HB3	2.44	0.47
76:s:24:TYR:HD1	76:s:92:LYS:HB2	1.79	0.47
76:s:120:GLU:HG3	76:s:163:THR:HG23	1.96	0.47
77:t:13:VAL:O	77:t:62:LEU:HB2	2.13	0.47
77:t:138:SER:OG	77:t:139:VAL:N	2.46	0.47
78:5:648:G:H2'	78:5:649:A:C8	2.48	0.47
78:5:1344:C:H2'	78:5:1345:A:C8	2.49	0.47
78:5:1381:U:H5'	78:5:1382:G:OP2	2.13	0.47
78:5:1906:U:O2'	78:5:1907:A:H5'	2.13	0.47
78:5:2274:C:H2'	78:5:2275:G:C8	2.49	0.47
78:5:4300:U:H2'	78:5:4301:U:C6	2.49	0.47
78:5:4578:G:H2'	78:5:4579:U:C6	2.49	0.47
81:EF:85:ASP:HB2	81:EF:89:ILE:HD11	1.94	0.47
81:EF:129:VAL:HG12	81:EF:155:LEU:HD11	1.96	0.47
1:R:92:LYS:O	1:R:96:MET:HG3	2.14	0.47
2:W:14:TYR:HB3	2:W:15:PRO:HD2	1.96	0.47
3:9:202:C:H2'	3:9:203:G:C8	2.49	0.47
3:9:220:G:N3	12:LL:42:LEU:HB2	2.29	0.47
3:9:492:C:H2'	3:9:493:A:H5'	1.96	0.47
3:9:1158:U:H2'	3:9:1159:A:H8	1.78	0.47
4:AA:74:VAL:HB	4:AA:96:ALA:HB2	1.96	0.47
4:AA:116:PHE:CE2	6:CC:64:THR:HG22	2.48	0.47
5:BB:181:LEU:HD22	5:BB:185:VAL:HG23	1.96	0.47
6:CC:73:MET:HG2	6:CC:96:PHE:HZ	1.79	0.47
6:CC:142:LYS:HE3	6:CC:153:GLY:HA3	1.95	0.47
6:CC:200:ARG:O	11:JJ:98:LEU:HD13	2.14	0.47
6:CC:263:LYS:HD3	6:CC:268:GLU:OE1	2.14	0.47
8:GG:48:TYR:CE2	8:GG:116:LYS:HA	2.49	0.47
14:OO:96:LYS:HB3	14:OO:132:VAL:HG11	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:FF:102:LEU:HD22	32:ZZ:110:THR:HG21	1.95	0.47
23:FF:123:GLU:HB3	23:FF:140:ASP:OD1	2.13	0.47
24:KK:19:GLY:HA3	24:KK:93:THR:HG22	1.96	0.47
24:KK:64:TRP:CD2	34:dd:23:VAL:HG22	2.49	0.47
31:UU:24:LEU:HB2	31:UU:32:LEU:HD11	1.95	0.47
36:A:148:VAL:CG2	36:A:158:ILE:HD12	2.44	0.47
36:A:179:ILE:HG12	78:5:2739:C:C4	2.49	0.47
36:A:201:GLY:HA2	36:A:204:MET:HG3	1.96	0.47
37:B:10:ARG:NH1	37:B:10:ARG:HB2	2.29	0.47
37:B:12:GLY:CA	78:5:4622:A:H5''	2.44	0.47
37:B:53:MET:HB2	78:5:4627:U:H5'	1.95	0.47
38:C:204:ARG:HG3	78:5:2298:U:OP2	2.14	0.47
40:E:261:LEU:CD1	40:E:265:LYS:HE3	2.43	0.47
42:G:199:LEU:CD1	42:G:205:ALA:HB2	2.44	0.47
44:I:51:HIS:HB3	44:I:134:VAL:CG1	2.43	0.47
44:I:77:VAL:HA	44:I:81:GLY:O	2.13	0.47
45:J:32:ARG:HA	45:J:126:TYR:OH	2.14	0.47
45:J:128:LEU:HD11	45:J:130:PHE:CZ	2.49	0.47
48:N:89:VAL:CG1	78:5:3928:A:H5'	2.44	0.47
55:V:106:VAL:HG22	55:V:112:MET:HA	1.95	0.47
57:Y:54:GLU:OE1	57:Y:108:ARG:HB3	2.14	0.47
57:Y:90:ALA:O	78:5:389:A:H1'	2.14	0.47
58:Z:12:LEU:CD2	58:Z:22:LYS:HG2	2.43	0.47
75:r:96:MET:HE3	78:5:678:C:C1'	2.45	0.47
76:s:174:LEU:O	76:s:178:LEU:HG	2.13	0.47
78:5:381:U:H2'	78:5:382:G:O4'	2.13	0.47
78:5:2729:C:H2'	78:5:2730:U:O4'	2.15	0.47
78:5:3597:G:O2'	78:5:3598:C:H5'	2.14	0.47
78:5:3801:U:H2'	78:5:3803:A:N7	2.29	0.47
78:5:4925:U:H4'	78:5:4926:C:O5'	2.13	0.47
79:7:74:A:N1	79:7:100:A:H5'	2.29	0.47
81:EF:21:ASN:HB3	81:EF:469:ILE:HD11	1.95	0.47
81:EF:39:LEU:HD22	81:EF:351:LEU:HD21	1.96	0.47
3:9:12:U:H2'	3:9:13:C:C6	2.49	0.47
3:9:407:C:H2'	3:9:408:A:O4'	2.14	0.47
3:9:716:A:H5'	3:9:721:G:H4'	1.96	0.47
3:9:881:A:H2'	3:9:882:A:O4'	2.14	0.47
3:9:1210:A:H3'	19:aa:8:ASN:OD1	2.14	0.47
3:9:1288:C:H2'	3:9:1289:C:C6	2.48	0.47
3:9:1658:G:H2'	3:9:1659:U:O4'	2.14	0.47
7:EE:128:LYS:HA	7:EE:156:VAL:HG13	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:GG:38:ALA:CB	8:GG:45:TRP:HB3	2.44	0.47
10:II:35:ASN:O	10:II:37:LYS:HE3	2.15	0.47
10:II:48:VAL:CG2	10:II:52:ASN:HB2	2.43	0.47
13:NN:124:ARG:HG2	13:NN:127:ARG:NH2	2.30	0.47
22:DD:70:THR:HG22	22:DD:86:LEU:HB2	1.96	0.47
28:RR:53:TYR:O	28:RR:57:LEU:HG	2.14	0.47
31:UU:54:VAL:HB	31:UU:88:LEU:HG	1.95	0.47
38:C:153:VAL:HA	38:C:252:TRP:O	2.14	0.47
38:C:305:PRO:HB3	51:Q:38:ARG:NH2	2.29	0.47
39:D:208:MET:HG3	39:D:219:TYR:CE1	2.49	0.47
41:F:147:LYS:HD2	78:5:942:G:H3'	1.96	0.47
42:G:213:ASP:OD2	42:G:240:LYS:HG2	2.13	0.47
43:H:115:ARG:HG2	43:H:123:ILE:CG2	2.45	0.47
46:L:79:GLU:O	46:L:83:VAL:HG23	2.14	0.47
49:O:97:ALA:O	49:O:101:ARG:HG3	2.14	0.47
51:Q:20:SER:OG	51:Q:25:LEU:HD23	2.14	0.47
54:U:44:GLN:HG3	54:U:56:LEU:HD21	1.96	0.47
54:U:87:THR:O	54:U:91:LEU:HG	2.15	0.47
57:Y:3:PHE:CD2	78:5:243:A:H4'	2.49	0.47
59:a:132:ARG:NH1	78:5:1468:C:H5''	2.28	0.47
60:b:49:HIS:O	78:5:1813:U:H4'	2.13	0.47
75:r:8:MET:HE2	75:r:8:MET:HA	1.96	0.47
77:t:15:LEU:O	77:t:16:ARG:C	2.57	0.47
78:5:1170:G:H2'	78:5:1171:G:C8	2.50	0.47
78:5:1309:C:H2'	78:5:1310:C:C6	2.49	0.47
78:5:1370:G:H4'	78:5:1371:A:O5'	2.14	0.47
78:5:1688:G:H2'	78:5:1689:G:C8	2.50	0.47
78:5:2029:A:H2'	78:5:2030:A:C8	2.50	0.47
78:5:2459:G:H2'	78:5:2461:G:OP2	2.15	0.47
78:5:2622:G:H4'	78:5:2701:U:H4'	1.96	0.47
78:5:3759:A:N6	78:5:3765:G:H1'	2.28	0.47
3:9:94:G:H5'	7:EE:8:HIS:HB2	1.96	0.47
3:9:267:A:O2'	7:EE:140:VAL:HG11	2.14	0.47
3:9:316:A:O2'	3:9:317:U:H5'	2.14	0.47
3:9:663:A:H5''	3:9:664:A:OP2	2.14	0.47
3:9:671:A:H5''	11:JJ:76:ALA:CB	2.44	0.47
3:9:1256:A:C4	26:PP:100:LYS:HD2	2.50	0.47
3:9:1450:U:H2'	3:9:1451:U:N1	2.28	0.47
5:BB:125:VAL:CG1	5:BB:172:MET:HE2	2.41	0.47
14:OO:136:PRO:CB	14:OO:139:SER:HB2	2.43	0.47
18:YY:121:ALA:O	18:YY:125:VAL:HG23	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:aa:18:VAL:CG2	19:aa:31:PRO:HB3	2.44	0.47
22:DD:35:SER:O	22:DD:99:ILE:HD11	2.14	0.47
25:MM:42:LEU:HG	25:MM:74:ILE:HD13	1.97	0.47
28:RR:16:ILE:CD1	28:RR:38:ILE:HD11	2.43	0.47
28:RR:32:LYS:HD2	28:RR:47:ARG:NH2	2.30	0.47
28:RR:56:HIS:O	28:RR:60:ARG:HG3	2.14	0.47
30:TT:42:HIS:CD2	30:TT:43:LYS:HE3	2.49	0.47
36:A:122:ASP:OD2	36:A:125:LYS:HD3	2.14	0.47
37:B:85:VAL:HB	37:B:165:HIS:NE2	2.30	0.47
37:B:114:CYS:SG	37:B:180:LEU:HD11	2.54	0.47
38:C:263:LEU:HD23	38:C:273:LEU:HD13	1.96	0.47
39:D:178:LYS:HG3	39:D:183:TYR:CE2	2.49	0.47
41:F:216:ARG:HD3	78:5:718:C:OP1	2.14	0.47
45:J:34:THR:O	45:J:38:LYS:HG3	2.15	0.47
50:P:2:VAL:HG21	50:P:18:ARG:NH1	2.29	0.47
50:P:39:MET:O	50:P:113:VAL:HG13	2.14	0.47
53:T:48:VAL:HG21	53:T:94:GLU:CG	2.43	0.47
53:T:115:LYS:HA	53:T:118:GLU:HG3	1.96	0.47
57:Y:34:LEU:HD23	57:Y:38:LEU:HB3	1.96	0.47
59:a:24:LYS:HB2	59:a:26:ARG:HE	1.79	0.47
60:b:11:ASN:ND2	60:b:15:LYS:HG3	2.29	0.47
61:c:17:ARG:NH1	61:c:103:ASP:HB3	2.30	0.47
64:f:69:VAL:HG11	78:5:4944:C:H1'	1.96	0.47
68:j:36:LYS:HD3	78:5:372:A:OP1	2.14	0.47
69:k:8:ILE:O	69:k:12:LEU:HG	2.15	0.47
69:k:35:LYS:HB3	69:k:42:LEU:HD11	1.97	0.47
70:l:40:LYS:HE2	78:5:365:U:O2'	2.15	0.47
77:t:53:TRP:HE3	77:t:56:LEU:CB	2.25	0.47
78:5:36:U:O2'	78:5:37:U:H5'	2.15	0.47
78:5:464:G:H2'	78:5:465:G:H8	1.79	0.47
78:5:956:A:H1'	78:5:2076:G:H5''	1.95	0.47
78:5:2031:C:H2'	78:5:2032:U:O4'	2.13	0.47
78:5:2297:G:H2'	78:5:2298:U:O4'	2.15	0.47
78:5:2624:G:H2'	78:5:2625:U:H6	1.80	0.47
78:5:4954:G:H2'	78:5:4955:A:C8	2.48	0.47
82:1:28:U:N3	83:PT:35:G:C2	2.83	0.47
83:PT:37:A:C6	83:PT:38:U:C4	3.01	0.47
3:9:2:A:H3'	6:CC:205:VAL:HG11	1.96	0.47
3:9:389:A:H4'	3:9:390:G:O5'	2.14	0.47
3:9:583:G:H5''	3:9:584:C:OP1	2.15	0.47
3:9:894:C:H2'	3:9:895:G:O4'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:985:C:O2'	15:VV:61:ARG:HD3	2.14	0.47
3:9:1204:U:H2'	3:9:1205:G:C8	2.49	0.47
3:9:1206:C:OP2	14:OO:146:ARG:HB2	2.13	0.47
3:9:1479:G:N2	3:9:1481:G:H5''	2.30	0.47
4:AA:205:ARG:NE	4:AA:210:ILE:HG12	2.30	0.47
5:BB:227:LYS:HE3	5:BB:231:LEU:HD21	1.95	0.47
7:EE:131:VAL:CG1	7:EE:135:GLY:HA2	2.43	0.47
11:JJ:16:PRO:HG2	11:JJ:24:ARG:NH1	2.28	0.47
11:JJ:108:ARG:HH22	11:JJ:151:LEU:HA	1.80	0.47
12:LL:13:GLN:OE1	12:LL:36:TYR:HB3	2.15	0.47
13:NN:37:ILE:HG12	13:NN:54:LEU:HD11	1.96	0.47
15:VV:75:ALA:HA	15:VV:81:LYS:NZ	2.29	0.47
20:bb:46:VAL:HG11	20:bb:64:CYS:SG	2.55	0.47
22:DD:59:LEU:HA	22:DD:66:ILE:CG1	2.42	0.47
22:DD:163:PRO:HA	22:DD:166:TYR:CZ	2.50	0.47
23:FF:78:MET:O	23:FF:82:ASN:HB2	2.14	0.47
27:QQ:38:PRO:HG2	27:QQ:41:MET:CG	2.43	0.47
33:cc:44:ARG:HA	33:cc:65:ALA:CB	2.43	0.47
37:B:5:LYS:HZ2	78:5:4455:G:H5''	1.79	0.47
37:B:93:VAL:O	37:B:99:LEU:HD23	2.14	0.47
41:F:28:LYS:O	41:F:32:LEU:HG	2.14	0.47
45:J:120:ASP:OD2	45:J:123:ILE:HG13	2.15	0.47
49:O:54:TYR:CD1	49:O:145:VAL:HG21	2.49	0.47
50:P:42:ARG:HH21	50:P:109:VAL:HG12	1.79	0.47
53:T:28:ALA:HA	53:T:31:MET:CG	2.44	0.47
57:Y:26:ARG:HG2	57:Y:78:TYR:OH	2.14	0.47
59:a:2:PRO:HG2	59:a:5:LEU:HD12	1.95	0.47
63:e:108:ARG:O	63:e:112:VAL:HG23	2.14	0.47
64:f:14:TYR:CD2	64:f:23:GLU:HA	2.49	0.47
65:g:59:VAL:CG1	65:g:63:VAL:HB	2.45	0.47
66:h:96:ASN:HB2	66:h:99:GLU:HG3	1.96	0.47
67:i:31:GLY:HA3	78:5:310:G:C5	2.49	0.47
78:5:163:A:H2'	78:5:164:G:H8	1.80	0.47
78:5:267:G:H2'	78:5:268:G:H8	1.79	0.47
78:5:705:G:H2'	78:5:706:C:C6	2.49	0.47
78:5:750:U:H1'	78:5:917:A:C8	2.49	0.47
78:5:1901:C:H2'	78:5:1902:G:H8	1.78	0.47
78:5:2312:U:O2	78:5:2326:G:O6	2.32	0.47
78:5:2413:U:H2'	78:5:2414:G:C8	2.49	0.47
78:5:2552:G:H3'	78:5:2553:A:C5'	2.45	0.47
78:5:2553:A:H1'	78:5:2554:U:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:5:2728:U:H2'	78:5:2729:C:C6	2.48	0.47
78:5:4330:G:H2'	78:5:4331:G:C8	2.50	0.47
3:9:304:G:H5''	10:II:31:ARG:NH2	2.29	0.47
3:9:694:A:OP1	7:EE:19:MET:HE2	2.15	0.47
3:9:776:G:N2	3:9:951:G:H4'	2.30	0.47
3:9:1013:G:O2'	3:9:1014:G:H5'	2.15	0.47
3:9:1181:A:H1'	3:9:1202:C:OP1	2.14	0.47
3:9:1202:C:O2'	3:9:1203:C:H5'	2.15	0.47
3:9:1257:A:H2'	3:9:1258:U:H4'	1.95	0.47
3:9:1290:G:O4'	24:KK:47:LYS:HE2	2.15	0.47
3:9:1458:A:H61	3:9:1479:G:H21	1.61	0.47
3:9:1614:U:H2'	3:9:1615:C:O4'	2.15	0.47
4:AA:40:LYS:HD3	4:AA:40:LYS:HA	1.58	0.47
4:AA:107:THR:O	4:AA:116:PHE:HA	2.15	0.47
6:CC:208:PRO:O	6:CC:212:LYS:HG3	2.14	0.47
7:EE:221:ARG:O	7:EE:225:ILE:HG13	2.15	0.47
8:GG:7:PHE:N	8:GG:124:LEU:HD23	2.30	0.47
8:GG:46:LYS:CE	8:GG:119:LYS:HG2	2.45	0.47
8:GG:138:ALA:O	8:GG:142:ARG:HG3	2.15	0.47
8:GG:224:ARG:HH11	8:GG:224:ARG:CG	2.27	0.47
22:DD:141:LYS:HE3	22:DD:179:GLN:HG3	1.96	0.47
25:MM:52:LEU:CD1	25:MM:65:VAL:HG11	2.45	0.47
36:A:45:VAL:HG12	36:A:84:THR:HA	1.96	0.47
37:B:142:GLY:O	37:B:146:LEU:HD23	2.13	0.47
39:D:39:GLN:OE1	39:D:43:LYS:HG3	2.15	0.47
41:F:73:MET:HE1	78:5:1088:C:O2	2.15	0.47
48:N:94:PHE:CE2	48:N:96:ARG:HB2	2.49	0.47
51:Q:14:ARG:HH12	51:Q:16:LYS:HZ3	1.63	0.47
56:X:153:ILE:HG13	56:X:155:ILE:HG12	1.96	0.47
57:Y:25:ILE:O	57:Y:29:ILE:HG13	2.13	0.47
66:h:40:ALA:O	66:h:44:LEU:HG	2.15	0.47
73:o:53:LYS:HD2	84:ET:75:C:H1'	1.96	0.47
75:r:46:ARG:NH2	75:r:67:ARG:HD3	2.29	0.47
76:s:143:ILE:CD1	76:s:160:LEU:HD11	2.41	0.47
76:s:167:VAL:HA	76:s:171:GLU:OE2	2.13	0.47
78:5:492:U:H4'	78:5:493:G:OP2	2.15	0.47
78:5:709:C:O2'	78:5:710:G:H5'	2.15	0.47
78:5:1662:C:H2'	78:5:1663:C:C6	2.50	0.47
78:5:1778:C:O2'	78:5:1779:U:H5'	2.15	0.47
78:5:1845:U:O2'	78:5:1846:G:H5'	2.14	0.47
78:5:2659:A:N6	78:5:2675:G:H21	2.04	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:5:3640:U:H2'	78:5:3641:U:C5	2.50	0.47
83:PT:38:U:C2'	83:PT:39:G:C8	2.92	0.47
1:R:44:LEU:HB3	1:R:49:LEU:HB2	1.97	0.47
1:R:70:ARG:HH11	1:R:76:MET:HE2	1.79	0.47
1:R:84:THR:O	1:R:88:ARG:HG3	2.14	0.47
3:9:234:U:H1'	10:II:43:ILE:HD12	1.97	0.47
3:9:356:G:H2'	3:9:357:A:H8	1.79	0.47
3:9:449:A:O3'	21:ee:105:ALA:HB2	2.15	0.47
3:9:577:A:H2'	3:9:578:A:O4'	2.15	0.47
3:9:677:C:H2'	3:9:678:A:O4'	2.14	0.47
3:9:793:U:H2'	3:9:794:G:C8	2.50	0.47
3:9:830:A:N3	14:OO:140:THR:HG22	2.30	0.47
3:9:839:A:H5'	3:9:979:C:O2	2.15	0.47
3:9:1138:A:H2'	3:9:1139:G:O4'	2.14	0.47
3:9:1188:U:O2'	3:9:1189:U:H5'	2.14	0.47
3:9:1405:C:O2'	22:DD:163:PRO:HD3	2.14	0.47
3:9:1485:G:H4'	27:QQ:128:GLU:OE2	2.15	0.47
3:9:1680:G:O4'	23:FF:84:GLY:HA2	2.14	0.47
4:AA:39:TYR:HB2	4:AA:50:ASN:HD21	1.79	0.47
7:EE:70:ILE:O	7:EE:76:VAL:HG13	2.14	0.47
7:EE:86:PHE:CD2	7:EE:87:MET:HG2	2.49	0.47
10:II:37:LYS:O	10:II:59:ARG:HA	2.15	0.47
11:JJ:102:ILE:O	11:JJ:106:LEU:HD13	2.15	0.47
13:NN:95:ALA:HB2	13:NN:118:ILE:HG22	1.97	0.47
13:NN:102:LEU:HD12	13:NN:105:ASN:O	2.15	0.47
13:NN:115:LEU:O	13:NN:119:GLU:HG2	2.14	0.47
14:OO:117:ARG:HH22	33:cc:63:ARG:HG2	1.78	0.47
14:OO:142:ARG:HB3	19:aa:22:ARG:CZ	2.45	0.47
15:VV:37:ALA:HB1	15:VV:46:PHE:CD1	2.50	0.47
16:WW:105:THR:HG22	16:WW:126:LEU:HD21	1.95	0.47
20:bb:33:MET:CE	20:bb:73:LEU:HD21	2.45	0.47
22:DD:158:ILE:HG13	22:DD:164:VAL:CG2	2.44	0.47
23:FF:22:LYS:HE3	23:FF:23:TRP:CH2	2.50	0.47
23:FF:92:ILE:HG23	23:FF:170:ALA:CA	2.45	0.47
26:PP:75:VAL:HG22	26:PP:93:MET:HB2	1.97	0.47
26:PP:92:SER:O	26:PP:107:ILE:HG12	2.14	0.47
27:QQ:51:LEU:HD21	27:QQ:81:ILE:HG23	1.96	0.47
36:A:67:TYR:HB3	78:5:4086:G:C6	2.49	0.47
37:B:46:PHE:CE2	37:B:81:THR:HB	2.50	0.47
38:C:10:VAL:HG22	38:C:153:VAL:HG11	1.97	0.47
38:C:100:ARG:HB3	38:C:100:ARG:NH1	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:C:266:THR:HG23	38:C:268:ARG:H	1.79	0.47
40:E:155:ILE:HG23	40:E:160:HIS:O	2.14	0.47
41:F:89:ALA:HA	41:F:144:PRO:HD2	1.96	0.47
41:F:134:ILE:HG23	41:F:135:VAL:HG13	1.97	0.47
41:F:229:GLY:HA3	52:S:2:LYS:HG2	1.97	0.47
42:G:140:LEU:HD11	42:G:144:THR:CG2	2.45	0.47
42:G:233:PRO:HG2	42:G:272:VAL:CG1	2.45	0.47
43:H:47:LEU:HG	43:H:52:LYS:HG3	1.97	0.47
45:J:15:LEU:HD22	45:J:165:TRP:CD2	2.49	0.47
45:J:23:ASN:OD1	45:J:129:ASP:HB3	2.15	0.47
45:J:85:LYS:O	45:J:89:VAL:HG23	2.15	0.47
46:L:42:ARG:HA	46:L:45:ARG:NH1	2.30	0.47
46:L:127:PHE:CD2	66:h:118:LYS:HG2	2.50	0.47
48:N:65:ARG:HD3	48:N:127:TYR:CE1	2.49	0.47
48:N:84:PRO:HA	48:N:87:HIS:CE1	2.50	0.47
48:N:113:LEU:CD2	48:N:136:ASP:HA	2.45	0.47
48:N:125:SER:HB2	78:5:3936:A:H2	1.80	0.47
49:O:51:LYS:O	49:O:55:LEU:HG	2.15	0.47
50:P:64:ASN:HB2	50:P:80:GLN:NE2	2.29	0.47
52:S:154:LEU:CB	52:S:157:ARG:HD3	2.44	0.47
53:T:11:THR:HG22	53:T:14:MET:CE	2.44	0.47
53:T:33:ILE:HD13	53:T:33:ILE:H	1.79	0.47
53:T:54:HIS:CD2	78:5:4301:U:H4'	2.50	0.47
53:T:128:LEU:HG	78:5:1834:U:C5	2.49	0.47
54:U:40:GLU:HG3	54:U:63:LEU:CD2	2.44	0.47
55:V:39:ILE:HG23	55:V:61:VAL:CG2	2.43	0.47
58:Z:26:VAL:HG21	58:Z:96:VAL:CG1	2.44	0.47
60:b:28:ARG:HH21	78:5:1805:A:H5'	1.80	0.47
60:b:57:MET:HE2	78:5:1811:G:H21	1.80	0.47
61:c:58:SER:HB2	65:g:96:LEU:HD13	1.97	0.47
62:d:68:LEU:O	62:d:72:VAL:HG23	2.15	0.47
63:e:75:ARG:HB2	63:e:95:TYR:CD2	2.49	0.47
65:g:62:LYS:HD2	78:5:2517:A:O4'	2.14	0.47
65:g:63:VAL:HG13	65:g:66:ARG:NH1	2.29	0.47
66:h:21:LEU:O	66:h:25:LYS:HG2	2.15	0.47
68:j:5:THR:HA	68:j:8:PHE:CD2	2.49	0.47
69:k:60:LEU:CD1	69:k:61:PRO:HD2	2.44	0.47
74:p:64:VAL:HG11	74:p:71:TYR:OH	2.14	0.47
77:t:15:LEU:HB2	77:t:62:LEU:HD13	1.96	0.47
77:t:98:ILE:CG2	78:5:1978:C:H4'	2.28	0.47
78:5:419:A:H2'	78:5:420:A:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:5:444:G:H2'	78:5:445:U:C6	2.49	0.47
78:5:1558:A:H2'	78:5:1559:G:H8	1.79	0.47
78:5:2682:G:H2'	78:5:2683:C:C6	2.49	0.47
78:5:2894:A:H2'	78:5:2895:A:C8	2.49	0.47
78:5:3775:A:H2'	78:5:3776:G:H4'	1.95	0.47
78:5:3804:G:H2'	78:5:3805:U:H6	1.79	0.47
78:5:4181:U:H2'	78:5:4182:G:O4'	2.14	0.47
78:5:4236:G:H4'	78:5:4328:G:O2'	2.14	0.47
78:5:4285:U:H2'	78:5:4286:C:O4'	2.14	0.47
78:5:4489:G:H1'	78:5:4709:U:H5''	1.96	0.47
78:5:4705:A:H2'	78:5:4706:G:O4'	2.13	0.47
78:5:4762:A:O2'	78:5:4763:U:H5'	2.15	0.47
79:7:15:C:H2'	79:7:16:A:H8	1.79	0.47
80:8:89:U:H2'	80:8:90:C:C6	2.49	0.47
80:8:113:C:H3'	80:8:114:G:H5''	1.95	0.47
3:9:359:A:H3'	3:9:374:C:H5	1.80	0.47
3:9:765:U:H3'	3:9:766:A:C8	2.50	0.47
3:9:1226:G:H2'	3:9:1227:G:C8	2.50	0.47
3:9:1348:A:H3'	3:9:1349:U:H5''	1.97	0.47
4:AA:52:LYS:NZ	28:RR:106:LEU:HD23	2.25	0.47
4:AA:55:TRP:O	4:AA:59:LEU:HG	2.14	0.47
4:AA:77:ILE:CD1	4:AA:99:ILE:HD12	2.44	0.47
5:BB:188:LEU:CD2	5:BB:193:ILE:HD12	2.43	0.47
6:CC:66:LEU:HB2	6:CC:266:TYR:OH	2.15	0.47
10:II:106:SER:HB2	10:II:166:PHE:CD1	2.50	0.47
16:WW:26:LEU:HD12	16:WW:61:ILE:O	2.15	0.47
18:YY:27:VAL:O	18:YY:68:LYS:HA	2.14	0.47
19:aa:10:ARG:HB2	19:aa:33:ASP:OD2	2.15	0.47
36:A:89:TYR:HB2	36:A:100:ASN:OD1	2.14	0.47
37:B:228:TYR:CE1	37:B:270:GLY:HA2	2.50	0.47
37:B:249:ARG:HG3	78:5:2838:G:OP1	2.15	0.47
38:C:137:VAL:HG21	38:C:150:LEU:HD21	1.97	0.47
39:D:66:TYR:OH	39:D:73:MET:HE3	2.15	0.47
41:F:58:LYS:HG3	41:F:61:ARG:NH2	2.30	0.47
44:I:74:LYS:HG3	44:I:78:LYS:HE3	1.97	0.47
45:J:83:LEU:O	45:J:87:LEU:HG	2.15	0.47
46:L:31:ARG:O	46:L:35:ARG:HD3	2.15	0.47
47:M:23:LYS:HE2	47:M:44:ARG:HH21	1.79	0.47
48:N:115:VAL:HG22	48:N:134:LEU:CD2	2.44	0.47
49:O:194:ASP:O	49:O:198:THR:HG23	2.14	0.47
50:P:12:THR:HA	50:P:105:LYS:NZ	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:Q:110:ARG:O	51:Q:114:LEU:HG	2.15	0.47
52:S:45:TRP:NE1	52:S:56:LYS:HG3	2.30	0.47
53:T:69:GLN:HB2	78:5:4314:C:OP1	2.14	0.47
55:V:14:PHE:CD2	55:V:91:LYS:HG3	2.50	0.47
59:a:11:LEU:HD13	59:a:17:HIS:C	2.40	0.47
66:h:47:ILE:O	66:h:51:ARG:HG3	2.15	0.47
76:s:63:LYS:O	76:s:63:LYS:HD3	2.15	0.47
77:t:103:ASN:O	77:t:104:ILE:C	2.57	0.47
78:5:224:U:O2	78:5:244:G:H4'	2.14	0.47
78:5:319:A:O2'	78:5:320:C:H5'	2.14	0.47
78:5:489:C:H2'	78:5:490:C:H6	1.80	0.47
78:5:949:G:O2'	78:5:950:G:H5'	2.15	0.47
78:5:1333:A:H2'	78:5:1334:A:H8	1.80	0.47
78:5:1394:G:H2'	78:5:1395:U:O4'	2.15	0.47
78:5:2759:G:H2'	78:5:2760:G:C4	2.50	0.47
78:5:3748:A:H2'	78:5:3749:C:C6	2.50	0.47
78:5:3769:C:H2'	78:5:3770:U:O4'	2.15	0.47
78:5:4958:C:H2'	78:5:4959:U:N1	2.30	0.47
84:ET:27:C:H2'	84:ET:28:G:O4'	2.15	0.47
1:R:83:GLY:C	78:5:2864:A:H4'	2.40	0.47
3:9:88:G:H2'	3:9:89:C:H6	1.80	0.47
3:9:367:U:H2'	3:9:368:G:O4'	2.14	0.47
3:9:548:C:H5'	82:1:33:A:P	2.55	0.47
3:9:889:A:H2'	3:9:890:G:O4'	2.15	0.47
3:9:930:A:H5''	3:9:932:C:N4	2.29	0.47
3:9:1299:C:C2'	3:9:1300:A:H5''	2.45	0.47
3:9:1488:C:H2'	3:9:1489:A:O4'	2.15	0.47
4:AA:36:GLN:HG3	4:AA:37:TYR:CE1	2.49	0.47
4:AA:37:TYR:CE1	4:AA:53:ARG:HD2	2.50	0.47
8:GG:56:ASN:HD21	8:GG:62:PRO:HG3	1.80	0.47
8:GG:176:ILE:HG22	8:GG:179:LEU:HB2	1.96	0.47
8:GG:198:ARG:HA	8:GG:201:LYS:CE	2.43	0.47
9:HH:145:ARG:NH1	16:WW:51:GLU:HB3	2.25	0.47
10:II:133:GLU:O	10:II:137:LEU:HG	2.15	0.47
11:JJ:27:GLN:O	11:JJ:31:LEU:HG	2.15	0.47
13:NN:70:LYS:HB3	13:NN:70:LYS:HE2	1.62	0.47
16:WW:18:GLU:OE2	16:WW:69:LEU:HB3	2.15	0.47
22:DD:24:PHE:CZ	22:DD:72:VAL:HG11	2.50	0.47
23:FF:20:PHE:HD2	23:FF:23:TRP:HD1	1.63	0.47
24:KK:25:LYS:HG3	24:KK:46:MET:HE1	1.97	0.47
30:TT:71:GLY:O	30:TT:75:MET:HG2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:B:96:PRO:HD3	49:O:156:LEU:CD1	2.44	0.47
37:B:279:GLU:HG3	37:B:282:LYS:HD3	1.96	0.47
39:D:268:ARG:HD3	39:D:269:PRO:O	2.14	0.47
41:F:56:TYR:CE2	41:F:188:ASP:HA	2.50	0.47
44:I:6:ALA:HB2	78:5:4431:U:OP1	2.15	0.47
44:I:180:GLU:O	44:I:184:MET:HG3	2.15	0.47
46:L:9:ILE:HB	59:a:49:HIS:CE1	2.50	0.47
49:O:13:GLY:O	49:O:124:LEU:HD12	2.14	0.47
51:Q:53:MET:SD	78:5:1692:C:H5''	2.55	0.47
54:U:44:GLN:HA	54:U:56:LEU:HD21	1.96	0.47
56:X:146:ALA:HA	56:X:149:VAL:HG12	1.97	0.47
63:e:83:LYS:HE2	75:r:27:THR:HB	1.97	0.47
65:g:56:VAL:HA	65:g:71:LYS:O	2.15	0.47
69:k:24:LYS:HG2	69:k:35:LYS:HB2	1.96	0.47
71:m:88:LYS:NZ	78:5:4485:C:H4'	2.30	0.47
76:s:169:ALA:O	76:s:173:THR:HG23	2.15	0.47
77:t:20:GLY:CA	77:t:51:GLY:CA	2.88	0.47
77:t:41:LYS:HG3	77:t:42:VAL:N	2.30	0.47
77:t:147:HIS:N	77:t:148:PRO:HD2	2.29	0.47
78:5:83:C:H3'	78:5:84:A:H8	1.79	0.47
78:5:84:A:N1	78:5:98:A:H5''	2.30	0.47
78:5:254:G:H2'	78:5:255:C:C6	2.50	0.47
78:5:326:C:H2'	78:5:327:U:C6	2.50	0.47
78:5:1770:A:H2'	78:5:1771:U:O4'	2.15	0.47
78:5:1853:G:H5''	78:5:1854:G:C5'	2.44	0.47
78:5:1957:U:O2'	78:5:1958:A:H5''	2.15	0.47
78:5:2375:A:H2'	78:5:2376:A:H8	1.79	0.47
78:5:2489:C:H4'	78:5:2490:U:C5	2.45	0.47
78:5:4170:A:H4'	78:5:4171:C:O5'	2.15	0.47
78:5:4310:A:H2'	78:5:4311:A:O4'	2.15	0.47
78:5:4519:C:H5''	78:5:4520:G:C5'	2.45	0.47
78:5:4542:U:O2'	78:5:4543:G:H5'	2.14	0.47
78:5:4563:U:H2'	78:5:4564:A:C8	2.49	0.47
82:1:27:C:N3	83:PT:35:G:N2	2.60	0.47
84:ET:7:G:C6	84:ET:67:A:N1	2.83	0.47
3:9:12:U:H5''	6:CC:110:MET:CE	2.44	0.47
3:9:17:C:H4'	3:9:1013:G:C8	2.50	0.47
3:9:272:A:H2'	3:9:273:A:C8	2.50	0.47
3:9:302:U:H2'	3:9:303:C:C6	2.50	0.47
3:9:420:C:C2'	3:9:421:C:H5'	2.45	0.47
3:9:1225:A:N3	19:aa:85:ARG:HD3	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:1279:U:H2'	3:9:1280:C:C5	2.50	0.47
3:9:1684:A:H2'	3:9:1685:A:C2	2.50	0.47
4:AA:130:ASP:C	4:AA:133:PRO:HD2	2.40	0.47
5:BB:175:GLU:HG2	5:BB:193:ILE:CG1	2.38	0.47
6:CC:192:LEU:HB3	6:CC:227:ARG:HB3	1.95	0.47
22:DD:175:VAL:HG13	22:DD:182:LEU:HB2	1.97	0.47
25:MM:62:VAL:HA	25:MM:65:VAL:HG12	1.97	0.47
36:A:66:PRO:HG2	36:A:67:TYR:CE2	2.50	0.47
37:B:76:VAL:HG21	37:B:332:MET:SD	2.55	0.47
43:H:19:SER:O	43:H:26:ILE:HG13	2.14	0.47
50:P:47:TYR:HA	50:P:56:GLN:OE1	2.14	0.47
54:U:39:PHE:CE2	54:U:43:LEU:HD11	2.50	0.47
58:Z:103:ASP:CG	58:Z:106:LEU:HD13	2.40	0.47
59:a:116:LYS:HG3	78:5:1419:G:N1	2.30	0.47
61:c:45:LEU:HD12	61:c:46:VAL:H	1.79	0.47
66:h:5:LYS:HB2	66:h:8:ASP:OD2	2.15	0.47
70:l:38:ASN:HB3	70:l:41:ARG:HG3	1.97	0.47
73:o:98:LYS:HE2	78:5:4233:A:H4'	1.96	0.47
74:p:29:ILE:O	74:p:33:GLN:HG2	2.15	0.47
75:r:48:THR:H	75:r:65:LYS:HB3	1.80	0.47
76:s:61:MET:HE3	76:s:88:PHE:CZ	2.50	0.47
77:t:151:ILE:CG1	78:5:1994:C:H4'	2.45	0.47
78:5:192:G:O2'	78:5:193:G:H5'	2.15	0.47
78:5:324:A:O2'	78:5:325:U:H5'	2.15	0.47
78:5:385:A:H1'	78:5:387:G:H5''	1.97	0.47
78:5:485:C:H2'	78:5:486:C:C6	2.49	0.47
78:5:929:A:H3'	78:5:930:G:H8	1.80	0.47
78:5:970:G:H2'	78:5:971:U:O4'	2.15	0.47
78:5:1208:G:O2'	78:5:1209:U:H5'	2.15	0.47
78:5:1839:U:H2'	78:5:1840:G:O4'	2.15	0.47
78:5:2089:G:H4'	78:5:2090:U:O5'	2.15	0.47
78:5:3766:A:H3'	78:5:3767:C:H6	1.79	0.47
78:5:3788:C:H3'	78:5:3789:C:C5	2.50	0.47
78:5:4273:A:H2'	78:5:4274:A:C8	2.50	0.47
78:5:4680:G:O2'	78:5:4681:A:H5'	2.15	0.47
78:5:4710:C:H2'	78:5:4711:C:C6	2.50	0.47
80:8:124:U:H4'	80:8:125:C:O5'	2.15	0.47
81:EF:115:VAL:HG21	81:EF:142:VAL:HG12	1.95	0.47
3:9:331:G:C2	17:XX:36:LEU:HD23	2.51	0.46
3:9:548:C:H5'	82:1:33:A:OP1	2.15	0.46
3:9:914:C:H2'	3:9:915:G:O4'	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:1025:U:H2'	3:9:1026:G:C8	2.50	0.46
3:9:1281:A:H4'	3:9:1343:G:OP2	2.15	0.46
3:9:1551:A:H2'	3:9:1552:G:C8	2.50	0.46
3:9:1673:U:H2'	3:9:1674:U:C6	2.50	0.46
4:AA:56:GLU:CG	15:VV:79:VAL:HG13	2.45	0.46
7:EE:15:PRO:HD2	7:EE:18:TRP:CZ3	2.50	0.46
7:EE:127:ARG:HH21	7:EE:142:HIS:HB2	1.80	0.46
10:II:36:THR:HB	10:II:57:ALA:O	2.14	0.46
10:II:103:LEU:HD13	10:II:170:LYS:HD3	1.97	0.46
11:JJ:111:GLN:NE2	11:JJ:127:ARG:HB2	2.30	0.46
11:JJ:135:ILE:O	11:JJ:141:VAL:HG13	2.14	0.46
15:VV:21:ASN:HB3	16:WW:67:GLY:HA3	1.97	0.46
18:YY:35:VAL:HG23	18:YY:40:ILE:HD11	1.96	0.46
24:KK:22:VAL:HG12	24:KK:68:TYR:HD1	1.80	0.46
30:TT:83:GLN:HB2	30:TT:93:SER:CB	2.44	0.46
30:TT:96:SER:OG	30:TT:99:VAL:HG22	2.16	0.46
37:B:37:PRO:HA	37:B:187:GLY:O	2.15	0.46
38:C:316:LYS:HB2	38:C:324:ILE:HG13	1.96	0.46
41:F:189:LEU:O	41:F:193:ILE:HG12	2.15	0.46
45:J:112:HIS:HB3	45:J:126:TYR:O	2.14	0.46
46:L:55:ILE:HD13	46:L:120:TYR:CG	2.51	0.46
48:N:45:PRO:O	48:N:49:ARG:HG3	2.15	0.46
51:Q:79:THR:HG22	51:Q:135:GLY:O	2.15	0.46
53:T:54:HIS:NE2	78:5:4301:U:H4'	2.30	0.46
56:X:119:ILE:CD1	56:X:140:LEU:HD13	2.45	0.46
59:a:59:ARG:NH1	59:a:59:ARG:HB2	2.30	0.46
68:j:3:LYS:HG2	78:5:3643:A:N7	2.30	0.46
70:l:38:ASN:O	70:l:41:ARG:HG3	2.15	0.46
75:r:66:ARG:HG2	75:r:76:SER:O	2.15	0.46
76:s:37:SER:OG	78:5:1970:A:H5'	2.15	0.46
78:5:162:A:H2'	78:5:163:A:C8	2.49	0.46
78:5:346:G:H2'	78:5:347:A:C8	2.50	0.46
78:5:419:A:H61	80:8:15:G:H1'	1.79	0.46
78:5:483:G:H5''	78:5:484:U:H2'	1.97	0.46
78:5:961:G:H21	78:5:973:G:H5'	1.79	0.46
78:5:1373:A:O2'	78:5:1374:G:H5'	2.15	0.46
78:5:1683:U:H2'	78:5:1684:A:C8	2.50	0.46
78:5:2307:A:H2'	78:5:2308:A:C8	2.50	0.46
78:5:3730:U:H2'	78:5:3731:C:H6	1.79	0.46
78:5:5004:C:H2'	78:5:5005:G:O4'	2.15	0.46
80:8:106:G:C4'	80:8:137:A:H5'	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:R:57:VAL:CG2	78:5:4646:U:H5''	2.44	0.46
1:R:136:ARG:O	1:R:140:GLU:HG3	2.15	0.46
3:9:230:A:H2'	3:9:231:A:O4'	2.15	0.46
3:9:1169:A:O5'	72:n:13:LEU:HD21	2.14	0.46
3:9:1612:G:H5''	30:TT:86:GLY:HA2	1.98	0.46
3:9:1643:A:H4'	3:9:1644:G:O5'	2.14	0.46
3:9:1646:A:H1'	84:ET:39:G:C6	2.47	0.46
4:AA:30:LEU:HD13	4:AA:38:ILE:HD11	1.97	0.46
6:CC:183:LYS:HG2	6:CC:196:ILE:HD12	1.96	0.46
8:GG:3:LEU:CD2	8:GG:109:LEU:HB2	2.44	0.46
11:JJ:45:ARG:O	11:JJ:49:THR:HG23	2.14	0.46
12:LL:76:VAL:HG12	12:LL:89:ARG:O	2.15	0.46
16:WW:50:PHE:HB3	16:WW:63:VAL:HG13	1.97	0.46
22:DD:143:ARG:NH2	22:DD:148:LYS:HE3	2.29	0.46
23:FF:19:LEU:CD1	23:FF:24:SER:HA	2.44	0.46
24:KK:53:LYS:HG3	24:KK:58:VAL:O	2.15	0.46
29:SS:15:VAL:HB	29:SS:33:ILE:HD11	1.96	0.46
37:B:20:LYS:HB2	78:5:4568:A:P	2.55	0.46
37:B:343:ARG:HH22	78:5:4977:A:H5'	1.80	0.46
38:C:77:PRO:O	38:C:90:GLY:HA2	2.16	0.46
39:D:33:ARG:HD2	53:T:27:LEU:CD1	2.45	0.46
41:F:181:TYR:CZ	41:F:202:GLU:HG2	2.50	0.46
44:I:8:CYS:HB3	78:5:1866:U:O4'	2.15	0.46
48:N:137:PRO:HG2	48:N:138:PHE:CE1	2.51	0.46
49:O:18:ARG:HB3	49:O:123:ALA:CB	2.44	0.46
51:Q:78:LYS:HD2	51:Q:135:GLY:HA2	1.97	0.46
51:Q:178:ARG:HB2	59:a:53:PHE:O	2.15	0.46
52:S:41:LYS:HB3	52:S:61:ILE:HD12	1.97	0.46
56:X:76:ILE:HD11	56:X:104:ALA:HB1	1.97	0.46
58:Z:73:LYS:HB3	58:Z:75:TYR:CE2	2.51	0.46
63:e:35:TRP:CZ2	63:e:56:PRO:HD2	2.51	0.46
78:5:346:G:H2'	78:5:347:A:H8	1.80	0.46
78:5:449:C:H4'	78:5:450:G:OP2	2.15	0.46
78:5:1355:G:H2'	78:5:1356:U:C6	2.50	0.46
78:5:1804:A:H4'	78:5:1805:A:O5'	2.15	0.46
78:5:2619:G:O6	78:5:2637:U:O2	2.33	0.46
78:5:3867:A:H2'	78:5:3868:G:C8	2.50	0.46
78:5:4074:C:O2'	78:5:4075:U:H5'	2.15	0.46
78:5:4146:G:H2'	78:5:4147:G:H8	1.81	0.46
78:5:4259:C:O2'	78:5:4260:U:H5'	2.16	0.46
78:5:4529:G:H2'	78:5:4530:U:O4'	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:EF:39:LEU:HD22	81:EF:351:LEU:CD2	2.45	0.46
3:9:37:C:H2'	3:9:38:A:O4'	2.16	0.46
3:9:101:U:H2'	3:9:102:A:H5'	1.98	0.46
3:9:345:G:O2'	3:9:346:U:H5'	2.15	0.46
3:9:363:A:H2'	3:9:364:G:C8	2.50	0.46
3:9:775:G:H2'	3:9:776:G:C8	2.50	0.46
3:9:791:A:C1'	14:OO:136:PRO:HB3	2.44	0.46
3:9:1431:C:H1'	30:TT:128:GLN:NE2	2.30	0.46
3:9:1636:A:O2'	3:9:1637:U:H5'	2.15	0.46
11:JJ:67:ASP:OD1	11:JJ:68:PRO:HD2	2.15	0.46
15:VV:82:ASN:OD1	28:RR:109:LEU:HD12	2.15	0.46
16:WW:38:LEU:HD23	16:WW:41:MET:HE1	1.96	0.46
20:bb:34:ASP:HB2	20:bb:80:ARG:HG3	1.97	0.46
22:DD:123:LEU:HA	22:DD:126:ILE:CD1	2.45	0.46
23:FF:41:VAL:CG2	23:FF:109:LEU:HD23	2.46	0.46
23:FF:95:HIS:O	23:FF:99:ILE:HG13	2.16	0.46
27:QQ:134:GLY:HA3	27:QQ:140:ARG:HA	1.98	0.46
29:SS:26:ILE:HG13	29:SS:54:LYS:O	2.15	0.46
29:SS:38:ARG:NE	30:TT:45:LEU:HD21	2.31	0.46
36:A:183:GLY:HA2	78:5:1613:A:H5''	1.96	0.46
36:A:199:VAL:HG22	78:5:3651:A:H5'	1.96	0.46
38:C:48:ASN:HB2	78:5:1370:G:OP2	2.15	0.46
38:C:112:HIS:C	38:C:113:ARG:HD2	2.40	0.46
38:C:122:TYR:HE2	78:5:1351:G:H5''	1.80	0.46
40:E:45:HIS:O	78:5:980:U:H4'	2.16	0.46
42:G:92:PHE:HB3	42:G:99:GLN:HE22	1.80	0.46
47:M:23:LYS:HD3	47:M:43:THR:O	2.15	0.46
50:P:36:ILE:O	50:P:114:ILE:HD13	2.16	0.46
54:U:39:PHE:O	54:U:43:LEU:HG	2.15	0.46
55:V:106:VAL:HG13	55:V:111:GLU:C	2.41	0.46
62:d:114:PHE:C	62:d:117:LEU:HD23	2.41	0.46
63:e:99:ILE:HG12	63:e:111:ILE:HG21	1.98	0.46
66:h:22:ASP:O	66:h:26:VAL:HG23	2.15	0.46
67:i:85:ARG:NH2	78:5:310:G:H5''	2.30	0.46
70:l:14:ALA:O	70:l:18:LYS:HG3	2.15	0.46
72:n:14:LYS:O	72:n:18:ARG:HG3	2.15	0.46
77:t:61:LYS:CE	77:t:72:GLU:HG3	2.46	0.46
77:t:113:ALA:HA	77:t:116:MET:HB2	1.95	0.46
78:5:161:G:H2'	78:5:162:A:C8	2.50	0.46
78:5:423:G:H2'	78:5:424:U:H6	1.80	0.46
78:5:928:C:H5''	78:5:929:A:OP1	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:5:1591:U:H3	78:5:4555:U:H5''	1.79	0.46
78:5:1742:A:H2'	78:5:1743:A:H8	1.81	0.46
78:5:2682:G:H2'	78:5:2683:C:H6	1.80	0.46
78:5:3795:A:H2'	78:5:3796:U:C6	2.50	0.46
78:5:3877:A:C5	78:5:4444:C:H1'	2.50	0.46
78:5:4346:U:H2'	78:5:4347:G:C8	2.50	0.46
78:5:4518:A:H4'	78:5:4519:C:H5'	1.98	0.46
78:5:4753:U:H4'	78:5:4754:G:C5'	2.41	0.46
78:5:5020:G:H2'	78:5:5021:C:C6	2.50	0.46
80:8:74:U:C2'	80:8:75:G:H5''	2.45	0.46
1:R:109:TYR:HB3	1:R:115:ILE:CG1	2.44	0.46
3:9:144:U:H2'	3:9:145:G:O4'	2.16	0.46
3:9:244:C:H41	8:GG:187:HIS:HB3	1.80	0.46
3:9:800:C:H5''	5:BB:24:PRO:HG3	1.97	0.46
3:9:1197:G:H2'	3:9:1198:U:C6	2.51	0.46
3:9:1546:G:OP1	30:TT:39:LEU:HD22	2.16	0.46
3:9:1596:C:H5'	30:TT:82:ARG:HD2	1.97	0.46
4:AA:58:LEU:HD12	4:AA:174:MET:HE1	1.98	0.46
7:EE:59:ASP:O	7:EE:63:LYS:HG3	2.16	0.46
7:EE:184:THR:HA	7:EE:189:LEU:CD1	2.46	0.46
8:GG:217:MET:HE3	8:GG:217:MET:O	2.15	0.46
8:GG:221:LYS:HE3	8:GG:221:LYS:HB3	1.54	0.46
12:LL:151:THR:HG22	13:NN:133:ARG:NH1	2.29	0.46
15:VV:57:GLY:O	15:VV:61:ARG:HG2	2.15	0.46
36:A:225:ILE:HD11	36:A:233:ARG:HD3	1.96	0.46
37:B:115:LYS:CE	37:B:129:ALA:HB3	2.46	0.46
40:E:94:THR:HB	40:E:109:VAL:CG1	2.45	0.46
40:E:156:LEU:O	40:E:161:ARG:HG2	2.16	0.46
43:H:6:SER:OG	43:H:59:LYS:HB3	2.16	0.46
43:H:176:LEU:HB3	71:m:60:ALA:CB	2.45	0.46
47:M:6:PHE:CD2	52:S:151:LYS:HE2	2.51	0.46
52:S:6:THR:HA	52:S:107:THR:HG21	1.98	0.46
52:S:93:MET:HG2	78:5:1952:G:O2'	2.15	0.46
57:Y:98:GLY:O	57:Y:99:ILE:HD13	2.15	0.46
58:Z:23:ALA:HA	58:Z:45:GLY:HA2	1.98	0.46
65:g:26:PRO:HB3	78:5:2639:U:O2	2.16	0.46
69:k:23:VAL:CG1	69:k:66:VAL:HG22	2.45	0.46
71:m:78:HIS:CE1	71:m:81:ALA:HB2	2.50	0.46
73:o:75:PRO:O	73:o:78:ARG:HG3	2.15	0.46
76:s:63:LYS:HG3	78:5:1960:A:H5'	1.97	0.46
77:t:10:ILE:HG23	77:t:63:THR:HG23	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:t:151:ILE:O	77:t:155:ILE:N	2.41	0.46
78:5:248:C:O2'	78:5:249:C:H5'	2.16	0.46
78:5:1727:U:O2'	78:5:1728:U:H5'	2.15	0.46
78:5:1942:A:N6	78:5:2039:G:H2'	2.31	0.46
78:5:2074:C:O2'	78:5:2075:G:H5'	2.16	0.46
78:5:4067:U:H2'	78:5:4068:U:C6	2.50	0.46
78:5:5051:C:H2'	78:5:5052:C:C6	2.50	0.46
82:1:27:C:N4	83:PT:35:G:H1	2.12	0.46
1:R:4:LEU:HD21	1:R:33:ALA:HB2	1.97	0.46
1:R:106:LEU:HB3	1:R:120:TYR:HD1	1.80	0.46
2:W:50:ASN:HA	2:W:55:TYR:CG	2.50	0.46
3:9:476:G:O2'	3:9:477:U:H5'	2.16	0.46
3:9:590:U:H2'	3:9:591:U:C6	2.50	0.46
3:9:840:G:H2'	3:9:841:C:C6	2.51	0.46
3:9:1495:A:H3'	83:PT:34:A:C8	2.51	0.46
6:CC:242:ASP:O	6:CC:246:LYS:HG3	2.16	0.46
8:GG:1:MET:HE2	8:GG:109:LEU:CD1	2.46	0.46
8:GG:164:LYS:HE3	8:GG:167:LYS:HG3	1.97	0.46
11:JJ:162:ARG:HH21	18:YY:31:GLY:HA2	1.81	0.46
15:VV:68:SER:O	15:VV:72:LEU:HG	2.16	0.46
18:YY:37:LYS:HG2	18:YY:60:PHE:CE1	2.50	0.46
18:YY:86:GLU:CD	18:YY:87:PRO:HD2	2.41	0.46
19:aa:38:LYS:HD3	19:aa:83:VAL:HG11	1.98	0.46
25:MM:89:VAL:CG1	25:MM:91:LEU:HG	2.44	0.46
30:TT:124:THR:HG23	30:TT:126:GLN:N	2.30	0.46
31:UU:24:LEU:HD13	31:UU:35:VAL:HG12	1.98	0.46
33:cc:9:ILE:CG2	33:cc:59:LEU:HD23	2.45	0.46
36:A:199:VAL:HG22	78:5:3651:A:C5'	2.46	0.46
37:B:369:ASP:OD1	37:B:371:THR:HG22	2.15	0.46
46:L:76:PHE:CD1	46:L:117:LEU:HD21	2.49	0.46
47:M:10:GLY:HA2	47:M:64:PHE:CE1	2.51	0.46
48:N:125:SER:HB2	78:5:3936:A:C2	2.51	0.46
57:Y:33:PRO:HD2	57:Y:104:VAL:O	2.15	0.46
57:Y:53:ASP:O	57:Y:70:VAL:HG23	2.15	0.46
62:d:36:VAL:CG2	62:d:41:ARG:HG2	2.45	0.46
64:f:18:LEU:HB2	78:5:1916:G:H1	1.81	0.46
66:h:60:VAL:O	66:h:64:THR:HG23	2.15	0.46
66:h:73:TYR:CD1	66:h:80:PRO:HD3	2.50	0.46
68:j:70:VAL:HG22	68:j:73:ARG:NH2	2.30	0.46
78:5:1438:U:H1'	78:5:1440:U:OP2	2.16	0.46
78:5:2386:U:H2'	78:5:2387:G:C8	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:5:2505:C:H1'	78:5:2506:G:C8	2.50	0.46
78:5:4289:U:H4'	78:5:4320:G:H4'	1.98	0.46
78:5:4366:A:H2'	78:5:4367:G:H8	1.80	0.46
78:5:4418:G:O6	78:5:4421:C:H2'	2.14	0.46
80:8:112:G:H2'	80:8:113:C:O4'	2.16	0.46
81:EF:42:LYS:NZ	81:EF:351:LEU:HD12	2.30	0.46
83:PT:35:G:C2	83:PT:36:C:C4	3.03	0.46
1:R:13:SER:HB3	1:R:38:ARG:HH12	1.80	0.46
3:9:310:C:H4'	10:II:6:ASP:O	2.14	0.46
3:9:540:A:N6	3:9:549:G:H1'	2.31	0.46
3:9:724:C:H3'	3:9:725:G:H5''	1.98	0.46
3:9:1213:A:H1'	19:aa:79:ILE:CD1	2.45	0.46
3:9:1541:U:C6	23:FF:169:ILE:HG21	2.51	0.46
4:AA:108:PHE:CE2	4:AA:122:LEU:HD21	2.51	0.46
7:EE:126:VAL:HG23	7:EE:156:VAL:O	2.15	0.46
9:HH:28:LEU:O	9:HH:32:MET:HG2	2.16	0.46
9:HH:136:PRO:HB3	9:HH:162:GLN:HG2	1.96	0.46
12:LL:82:MET:HE2	12:LL:85:THR:CG2	2.46	0.46
16:WW:61:ILE:HG22	16:WW:63:VAL:HG23	1.98	0.46
17:XX:84:PHE:CE2	17:XX:86:PRO:HA	2.50	0.46
18:YY:82:ALA:O	18:YY:86:GLU:HB3	2.15	0.46
22:DD:109:LEU:CD2	22:DD:115:VAL:HG22	2.45	0.46
24:KK:24:LYS:HB2	24:KK:66:HIS:CE1	2.50	0.46
27:QQ:12:VAL:CG2	27:QQ:91:ALA:HA	2.46	0.46
27:QQ:98:LYS:HE3	27:QQ:99:TYR:CZ	2.51	0.46
31:UU:27:ARG:NE	31:UU:82:MET:HE3	2.31	0.46
32:ZZ:87:ALA:O	32:ZZ:91:LEU:HG	2.15	0.46
36:A:55:GLY:HA3	36:A:174:ARG:NE	2.31	0.46
36:A:103:PRO:HG2	36:A:106:THR:HG23	1.98	0.46
38:C:2:ALA:HB3	38:C:29:LYS:HZ2	1.81	0.46
38:C:40:VAL:CG1	38:C:237:ILE:HG21	2.45	0.46
39:D:193:GLU:O	39:D:197:LYS:HG2	2.16	0.46
39:D:284:LYS:O	39:D:288:LEU:HG	2.15	0.46
40:E:161:ARG:CZ	78:5:4945:G:H1'	2.46	0.46
41:F:24:PHE:HB3	78:5:966:A:OP2	2.15	0.46
41:F:95:ARG:HH21	41:F:223:THR:HA	1.80	0.46
46:L:83:VAL:HG12	46:L:114:VAL:HG11	1.97	0.46
46:L:103:ARG:NH1	78:5:325:U:H5''	2.30	0.46
49:O:108:ILE:HG21	49:O:160:ARG:HD3	1.97	0.46
49:O:166:ILE:HA	49:O:169:ARG:NH1	2.31	0.46
50:P:51:VAL:HA	50:P:56:GLN:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:T:19:PHE:CE2	53:T:20:ARG:HG3	2.51	0.46
55:V:89:ARG:HA	55:V:95:PHE:HA	1.96	0.46
57:Y:115:ARG:O	57:Y:119:LEU:HD13	2.16	0.46
73:o:66:ILE:HD11	73:o:85:ILE:HD12	1.96	0.46
77:t:135:THR:HB	78:5:1974:U:C5	2.50	0.46
78:5:2842:G:H2'	78:5:2843:U:O4'	2.15	0.46
78:5:4459:U:H2'	78:5:4460:U:H6	1.81	0.46
78:5:4563:U:H2'	78:5:4564:A:H8	1.80	0.46
78:5:4621:C:H2'	78:5:4622:A:H8	1.81	0.46
78:5:5010:U:H2'	78:5:5011:A:C8	2.50	0.46
3:9:206:C:H2'	3:9:207:A:H5'	1.98	0.46
3:9:940:A:H2'	3:9:941:C:H6	1.80	0.46
3:9:1020:A:H2'	3:9:1021:U:O4'	2.16	0.46
3:9:1147:U:H2'	3:9:1148:C:H6	1.79	0.46
3:9:1210:A:OP1	19:aa:8:ASN:HB2	2.15	0.46
3:9:1251:G:H4'	83:PT:31:C:OP2	2.15	0.46
3:9:1417:A:H5'	3:9:1418:A:OP1	2.16	0.46
4:AA:68:ILE:HG21	4:AA:74:VAL:HG22	1.98	0.46
5:BB:38:MET:HE3	5:BB:39:PHE:CE1	2.51	0.46
5:BB:133:TYR:CG	5:BB:181:LEU:HD12	2.50	0.46
6:CC:65:LYS:O	6:CC:69:LEU:HG	2.15	0.46
6:CC:84:PHE:CZ	6:CC:262:THR:HG23	2.50	0.46
6:CC:179:THR:HG23	6:CC:180:VAL:O	2.16	0.46
6:CC:180:VAL:HG22	6:CC:219:ILE:HD13	1.98	0.46
11:JJ:101:LYS:HE2	11:JJ:103:GLU:OE1	2.16	0.46
13:NN:37:ILE:HG23	13:NN:50:ILE:HG21	1.98	0.46
14:OO:142:ARG:HB3	19:aa:22:ARG:NH1	2.31	0.46
16:WW:77:PRO:HD3	17:XX:5:ARG:O	2.16	0.46
20:bb:2:PRO:HG2	20:bb:5:LYS:HE3	1.98	0.46
22:DD:106:ARG:NH1	22:DD:175:VAL:HA	2.24	0.46
22:DD:192:TRP:CE2	22:DD:203:PRO:HB3	2.51	0.46
25:MM:42:LEU:HG	25:MM:74:ILE:CD1	2.46	0.46
26:PP:107:ILE:HA	26:PP:111:MET:SD	2.55	0.46
27:QQ:89:SER:OG	27:QQ:112:LEU:HD13	2.15	0.46
32:ZZ:99:LEU:HG	32:ZZ:109:TYR:CE1	2.51	0.46
33:cc:46:VAL:HG11	33:cc:56:LEU:HD21	1.98	0.46
36:A:21:LYS:HE3	78:5:2448:G:O2'	2.15	0.46
37:B:285:TYR:OH	37:B:334:LYS:HD2	2.16	0.46
38:C:146:GLU:CB	38:C:175:LYS:HB3	2.42	0.46
40:E:48:ARG:HD2	40:E:64:MET:CE	2.45	0.46
40:E:50:PRO:HG2	40:E:58:ARG:CG	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:F:39:LYS:HE2	41:F:43:LYS:CE	2.44	0.46
43:H:86:LEU:HD12	43:H:186:THR:HG21	1.98	0.46
43:H:126:VAL:HG11	43:H:161:ILE:HG22	1.97	0.46
53:T:14:MET:HE1	53:T:55:LYS:HB2	1.98	0.46
54:U:65:ARG:HG3	54:U:70:ILE:HG13	1.98	0.46
57:Y:30:MET:SD	57:Y:78:TYR:HA	2.56	0.46
57:Y:126:ARG:NE	78:5:197:A:H5''	2.31	0.46
59:a:86:THR:HG22	78:5:510:U:C5'	2.45	0.46
59:a:110:LYS:HG2	59:a:112:LEU:CD2	2.44	0.46
63:e:70:LEU:HD21	63:e:76:LYS:HG3	1.96	0.46
70:l:15:LYS:HE3	70:l:19:GLN:NE2	2.30	0.46
71:m:68:MET:HG2	71:m:79:PRO:HA	1.98	0.46
76:s:37:SER:CA	76:s:40:MET:HE2	2.43	0.46
78:5:53:C:H2'	78:5:54:G:H8	1.80	0.46
78:5:316:U:OP1	78:5:316:U:H3'	2.15	0.46
78:5:943:A:H4'	78:5:945:U:OP2	2.16	0.46
78:5:981:C:H2'	78:5:982:U:C6	2.51	0.46
78:5:1850:A:H2'	78:5:1851:G:C8	2.51	0.46
78:5:1867:A:H2'	78:5:1868:A:C8	2.51	0.46
78:5:2543:A:H2	78:5:2773:G:H1	1.64	0.46
78:5:2779:C:H2'	78:5:2780:C:C6	2.50	0.46
78:5:2793:G:C5'	78:5:2794:C:H5''	2.45	0.46
78:5:3612:C:H2'	78:5:3613:U:C6	2.51	0.46
78:5:3700:C:O2'	78:5:3774:A:H1'	2.15	0.46
78:5:3917:A:H2'	78:5:3918:G:H8	1.81	0.46
78:5:3924:C:O2'	78:5:3925:U:H5'	2.15	0.46
78:5:4353:U:H5''	78:5:4354:U:H1'	1.98	0.46
78:5:4935:C:H2'	78:5:4936:G:H8	1.78	0.46
80:8:6:C:O2'	80:8:7:U:H5'	2.15	0.46
80:8:120:G:H2'	80:8:121:G:C8	2.51	0.46
81:EF:527:LEU:HG	81:EF:561:LEU:HD13	1.98	0.46
3:9:11:A:O2'	3:9:12:U:H5'	2.16	0.46
3:9:540:A:N3	21:ee:85:VAL:HG21	2.30	0.46
3:9:619:C:H2'	3:9:620:G:H8	1.81	0.46
3:9:807:U:H2'	3:9:809:A:OP2	2.16	0.46
3:9:822:G:H2'	3:9:823:G:C8	2.50	0.46
3:9:1131:A:H2'	3:9:1132:G:H8	1.81	0.46
3:9:1271:G:OP1	3:9:1272:G:H1'	2.16	0.46
3:9:1573:G:C1'	30:TT:37:VAL:HG23	2.46	0.46
3:9:1599:C:H2'	3:9:1600:A:H8	1.81	0.46
4:AA:38:ILE:HG23	4:AA:48:ILE:H	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AA:82:THR:CG2	4:AA:168:ALA:HA	2.43	0.46
7:EE:107:GLY:HA2	7:EE:189:LEU:HG	1.97	0.46
8:GG:7:PHE:HD1	8:GG:113:ILE:HD12	1.81	0.46
10:II:8:TRP:HA	10:II:18:ARG:CD	2.45	0.46
12:LL:103:GLU:OE1	17:XX:11:ARG:HB3	2.14	0.46
16:WW:56:HIS:O	16:WW:57:ARG:HG3	2.16	0.46
22:DD:115:VAL:HG11	22:DD:142:LEU:CD2	2.46	0.46
23:FF:38:TYR:CE2	23:FF:143:PRO:HG2	2.51	0.46
23:FF:173:LEU:O	23:FF:177:LEU:HG	2.15	0.46
36:A:242:ARG:O	78:5:3658:C:H5''	2.16	0.46
38:C:140:LYS:NZ	38:C:245:HIS:HB2	2.30	0.46
42:G:211:ALA:HB2	42:G:243:LEU:HD23	1.96	0.46
49:O:18:ARG:HH11	78:5:2053:C:H4'	1.81	0.46
49:O:154:ALA:O	49:O:158:GLU:HG2	2.16	0.46
51:Q:72:LEU:CD2	78:5:1457:G:H4'	2.45	0.46
51:Q:132:LYS:NZ	78:5:1449:C:H5''	2.31	0.46
54:U:78:PHE:CE2	54:U:83:LEU:HD13	2.50	0.46
57:Y:38:LEU:HD11	57:Y:107:THR:C	2.40	0.46
63:e:18:LYS:HD2	78:5:438:G:OP1	2.16	0.46
63:e:58:ILE:HD12	78:5:2319:C:N4	2.31	0.46
65:g:5:LEU:HD21	65:g:22:LEU:CD1	2.46	0.46
66:h:32:ARG:O	66:h:36:VAL:HG23	2.16	0.46
77:t:122:ALA:HB3	77:t:131:GLU:CD	2.41	0.46
77:t:123:ARG:CB	77:t:127:GLY:HA3	2.46	0.46
78:5:27:C:H4'	78:5:60:A:N3	2.31	0.46
78:5:1398:A:C2	78:5:1399:G:H1'	2.51	0.46
78:5:1594:C:O2'	78:5:1597:G:H1'	2.15	0.46
78:5:1971:C:C4	78:5:2000:G:H2'	2.51	0.46
78:5:4530:U:H3'	78:5:4531:U:H2'	1.96	0.46
78:5:4724:A:H2'	78:5:4725:C:O4'	2.16	0.46
78:5:4760:G:H2'	78:5:4761:G:O4'	2.16	0.46
3:9:53:C:C5'	18:YY:108:LYS:HB3	2.46	0.46
3:9:258:C:H5	8:GG:190:ARG:NH2	2.13	0.46
3:9:346:U:H2'	3:9:347:U:C6	2.50	0.46
3:9:1244:A:H2'	3:9:1245:G:H8	1.81	0.46
3:9:1322:U:H2'	3:9:1323:U:C6	2.50	0.46
3:9:1674:U:H5''	27:QQ:132:PHE:HB3	1.96	0.46
5:BB:44:ILE:HG21	5:BB:69:VAL:HG21	1.97	0.46
8:GG:216:ARG:HA	8:GG:219:GLU:HB2	1.98	0.46
9:HH:168:HIS:HE1	9:HH:169:LYS:HE3	1.81	0.46
10:II:39:GLY:O	10:II:61:ASP:HB3	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:LL:72:ILE:O	12:LL:73:LEU:HD23	2.15	0.46
13:NN:34:LYS:HE2	13:NN:74:ILE:CD1	2.45	0.46
14:OO:54:CYS:HB2	14:OO:84:ARG:HG2	1.97	0.46
16:WW:50:PHE:CB	16:WW:63:VAL:HG22	2.46	0.46
17:XX:60:LYS:HG3	17:XX:114:ASP:O	2.15	0.46
17:XX:83:ALA:HA	17:XX:120:PHE:O	2.16	0.46
22:DD:196:GLY:HA3	22:DD:201:LYS:HG2	1.98	0.46
23:FF:59:LYS:HG2	23:FF:60:ARG:H	1.81	0.46
23:FF:119:SER:HA	23:FF:190:ILE:HD13	1.98	0.46
28:RR:16:ILE:HG21	28:RR:35:CYS:SG	2.56	0.46
32:ZZ:62:VAL:HB	32:ZZ:63:PRO:HD3	1.97	0.46
37:B:73:VAL:CG1	55:V:93:GLY:HA3	2.45	0.46
37:B:83:PRO:HB3	37:B:206:PRO:HA	1.96	0.46
38:C:104:PRO:O	38:C:106:LYS:HD2	2.15	0.46
41:F:121:PHE:HE1	41:F:144:PRO:HG3	1.81	0.46
41:F:225:HIS:NE2	41:F:233:GLY:HA3	2.31	0.46
46:L:42:ARG:O	46:L:46:ILE:HG12	2.16	0.46
51:Q:67:ILE:O	51:Q:71:LYS:HG2	2.16	0.46
52:S:95:ARG:HD3	52:S:97:TYR:OH	2.16	0.46
52:S:119:ALA:HB3	52:S:124:ILE:HD11	1.98	0.46
55:V:43:LYS:HA	78:5:4508:C:H4'	1.97	0.46
62:d:33:ILE:HG13	62:d:44:ARG:HG3	1.96	0.46
65:g:25:THR:CG2	78:5:2521:G:H5''	2.46	0.46
65:g:54:ARG:HB2	78:5:2583:C:OP1	2.16	0.46
67:i:58:MET:HE1	67:i:94:LEU:CB	2.46	0.46
74:p:79:VAL:O	74:p:83:ILE:HG12	2.16	0.46
77:t:60:VAL:CG2	77:t:73:VAL:HA	2.43	0.46
78:5:199:G:H3'	78:5:238:C:OP2	2.16	0.46
78:5:379:G:O2'	78:5:380:U:H5'	2.15	0.46
78:5:429:A:O2'	78:5:430:G:H5'	2.16	0.46
78:5:483:G:H3'	78:5:484:U:H2'	1.98	0.46
78:5:1527:A:H2'	78:5:1528:U:H6	1.81	0.46
78:5:1662:C:H2'	78:5:1663:C:H6	1.80	0.46
78:5:1747:U:H2'	78:5:1748:U:C6	2.51	0.46
78:5:2041:A:C2'	78:5:2042:A:H5''	2.46	0.46
78:5:2308:A:H2'	78:5:2309:G:O4'	2.16	0.46
78:5:3648:A:H1'	78:5:3785:A:N6	2.31	0.46
78:5:3785:A:O2'	78:5:3786:U:H5'	2.15	0.46
78:5:4435:U:H2'	78:5:4436:U:N1	2.31	0.46
78:5:4445:U:H2'	78:5:4446:U:C6	2.51	0.46
78:5:4592:C:H2'	78:5:4593:C:H6	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:5:4608:G:H3'	78:5:4609:G:H8	1.81	0.46
78:5:4902:C:H2'	78:5:4903:G:C8	2.51	0.46
83:PT:39:G:C5	83:PT:40:C:C2	3.03	0.46
3:9:304:G:H5''	10:II:31:ARG:HH21	1.80	0.46
3:9:370:G:H5''	10:II:49:ARG:NE	2.24	0.46
3:9:846:G:H2'	3:9:847:C:C6	2.51	0.46
3:9:1423:U:H2'	3:9:1424:U:C6	2.51	0.46
3:9:1432:C:OP1	30:TT:129:ARG:HG3	2.15	0.46
3:9:1583:G:H1'	3:9:1588:C:C2	2.51	0.46
3:9:1684:A:H2'	3:9:1685:A:N3	2.31	0.46
4:AA:31:ASP:OD2	4:AA:153:PRO:HA	2.16	0.46
4:AA:122:LEU:HD13	4:AA:142:LEU:HD22	1.97	0.46
5:BB:128:LYS:HE3	5:BB:132:GLY:HA2	1.97	0.46
5:BB:164:ILE:CG2	5:BB:168:MET:HE3	2.46	0.46
7:EE:125:LYS:CB	7:EE:159:THR:HG22	2.45	0.46
7:EE:153:LEU:HD13	8:GG:216:ARG:HH12	1.81	0.46
7:EE:163:ASP:HB3	7:EE:166:THR:HG22	1.97	0.46
7:EE:250:GLU:CG	7:EE:254:LYS:HE3	2.46	0.46
10:II:65:PHE:HA	10:II:187:GLY:O	2.16	0.46
12:LL:59:LYS:HD3	12:LL:134:LEU:CB	2.44	0.46
12:LL:77:VAL:CG1	12:LL:122:ILE:HA	2.46	0.46
17:XX:40:PRO:HA	17:XX:79:LYS:NZ	2.30	0.46
17:XX:94:ILE:HG12	17:XX:125:VAL:CG2	2.42	0.46
18:YY:56:PHE:CE2	18:YY:82:ALA:HB1	2.48	0.46
19:aa:42:ARG:HG2	19:aa:43:ASN:O	2.16	0.46
26:PP:67:ALA:HB2	26:PP:73:PRO:HA	1.96	0.46
30:TT:98:SER:O	30:TT:102:ARG:HD3	2.16	0.46
31:UU:21:ARG:HH21	31:UU:88:LEU:HD22	1.81	0.46
32:ZZ:61:GLU:HB3	32:ZZ:65:TYR:CZ	2.51	0.46
36:A:101:VAL:HB	36:A:165:VAL:CG1	2.38	0.46
38:C:298:ILE:O	38:C:302:LEU:HG	2.14	0.46
39:D:41:LYS:HE2	39:D:41:LYS:HA	1.98	0.46
42:G:103:ASP:OD1	42:G:105:THR:HG23	2.15	0.46
42:G:297:PRO:HG3	78:5:4162:C:O2'	2.16	0.46
44:I:208:LYS:HA	44:I:208:LYS:HE3	1.97	0.46
45:J:37:ALA:HB2	45:J:50:PHE:HE1	1.81	0.46
47:M:11:ARG:HG3	47:M:60:PHE:O	2.15	0.46
48:N:85:VAL:HG23	78:5:43:U:OP1	2.16	0.46
48:N:115:VAL:HG22	48:N:134:LEU:HD22	1.98	0.46
48:N:176:LYS:HZ1	78:5:63:G:H5''	1.81	0.46
49:O:89:PRO:O	49:O:95:GLY:HA3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:Q:50:ARG:HG2	51:Q:53:MET:HE2	1.98	0.46
52:S:161:ARG:HB3	78:5:1921:C:O4'	2.16	0.46
53:T:102:ARG:O	53:T:106:LEU:HG	2.15	0.46
54:U:84:LYS:HB2	54:U:110:TYR:OH	2.16	0.46
55:V:68:GLY:H	55:V:73:ARG:HD2	1.81	0.46
56:X:96:LEU:HG	56:X:140:LEU:HD11	1.98	0.46
69:k:23:VAL:HG13	69:k:66:VAL:HA	1.98	0.46
75:r:46:ARG:HH22	75:r:67:ARG:HD3	1.81	0.46
77:t:32:ILE:HG22	77:t:37:LEU:O	2.16	0.46
77:t:104:ILE:N	77:t:143:VAL:HG22	2.32	0.46
77:t:126:SER:HA	77:t:160:VAL:CG1	2.46	0.46
77:t:151:ILE:CG1	77:t:155:ILE:HG12	2.41	0.46
78:5:314:G:H5''	78:5:315:G:O5'	2.16	0.46
78:5:738:C:OP1	78:5:739:G:H4'	2.16	0.46
78:5:1853:G:H5''	78:5:1854:G:H5''	1.98	0.46
78:5:2648:G:H2'	78:5:2649:G:H8	1.81	0.46
78:5:2727:C:H2'	78:5:2728:U:H6	1.81	0.46
78:5:4562:C:H2'	78:5:4563:U:C6	2.51	0.46
79:7:4:U:H2'	79:7:5:A:H8	1.80	0.46
79:7:116:G:H2'	79:7:117:G:O4'	2.15	0.46
80:8:92:U:H2'	80:8:93:C:O4'	2.15	0.46
80:8:120:G:H2'	80:8:121:G:H8	1.79	0.46
83:PT:36:C:C3'	83:PT:37:A:H8	2.29	0.46
3:9:357:A:H2'	3:9:358:G:C8	2.52	0.45
3:9:692:G:H2'	3:9:693:G:O4'	2.16	0.45
3:9:1278:C:H2'	3:9:1279:U:O4'	2.16	0.45
3:9:1432:C:H5'	30:TT:132:ASP:HB3	1.98	0.45
3:9:1493:A:H2'	3:9:1494:C:C6	2.51	0.45
5:BB:68:GLU:OE2	5:BB:83:LYS:HE2	2.16	0.45
6:CC:102:LEU:CD1	6:CC:130:ILE:HG12	2.46	0.45
7:EE:194:VAL:O	7:EE:210:VAL:HG13	2.16	0.45
9:HH:26:ALA:O	9:HH:30:LEU:HG	2.16	0.45
10:II:92:ARG:HG3	78:5:5017:G:P	2.56	0.45
12:LL:126:VAL:CG2	12:LL:145:VAL:HG22	2.45	0.45
18:YY:82:ALA:O	18:YY:86:GLU:HB2	2.16	0.45
22:DD:16:ILE:HG21	34:dd:22:ARG:CZ	2.46	0.45
22:DD:40:ARG:HG2	31:UU:108:PRO:CG	2.45	0.45
22:DD:93:THR:OG1	22:DD:96:LEU:HD13	2.17	0.45
23:FF:165:ASN:HD22	23:FF:167:LYS:HB2	1.80	0.45
24:KK:3:MET:HE1	24:KK:48:ALA:N	2.31	0.45
32:ZZ:50:PHE:CE2	32:ZZ:87:ALA:HB2	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:B:46:PHE:CE2	37:B:207:VAL:HG22	2.51	0.45
37:B:324:GLY:HA2	78:5:5051:C:C4'	2.44	0.45
38:C:133:LEU:HD22	38:C:136:LEU:CD1	2.46	0.45
42:G:207:LEU:HD12	42:G:272:VAL:HG22	1.98	0.45
43:H:88:PHE:CE2	43:H:151:ILE:HB	2.51	0.45
44:I:39:LYS:H	44:I:39:LYS:HD3	1.81	0.45
45:J:19:LYS:HD3	45:J:75:ARG:HH12	1.82	0.45
46:L:91:ALA:HB3	46:L:98:VAL:HG21	1.97	0.45
47:M:126:GLU:O	47:M:130:LEU:HD13	2.16	0.45
51:Q:18:PRO:HD3	51:Q:52:PHE:CD1	2.51	0.45
51:Q:146:ARG:HA	78:5:1504:G:OP1	2.16	0.45
52:S:30:MET:HE3	53:T:151:LEU:O	2.16	0.45
57:Y:89:LYS:HB3	57:Y:91:ASN:OD1	2.15	0.45
59:a:84:GLU:O	59:a:88:VAL:HG23	2.16	0.45
63:e:70:LEU:HD21	63:e:76:LYS:CG	2.45	0.45
64:f:56:ASN:O	78:5:1297:U:H5'	2.16	0.45
68:j:76:HIS:HB3	68:j:79:ARG:NH2	2.31	0.45
76:s:16:LYS:O	76:s:20:LEU:HG	2.16	0.45
76:s:63:LYS:CG	78:5:1960:A:H5'	2.46	0.45
77:t:90:ARG:HB3	77:t:94:LYS:HG3	1.99	0.45
77:t:92:ARG:HH11	77:t:93:LYS:H	1.64	0.45
78:5:221:C:H2'	78:5:222:C:C6	2.51	0.45
78:5:673:C:H2'	78:5:674:G:C8	2.51	0.45
78:5:1771:U:H2'	78:5:1772:C:C6	2.51	0.45
78:5:2049:G:H2'	78:5:2050:G:C8	2.52	0.45
78:5:2575:U:H5''	78:5:2576:G:OP1	2.15	0.45
78:5:2768:C:H5'	78:5:2769:U:OP1	2.17	0.45
83:PT:37:A:H3'	83:PT:38:U:H5	1.81	0.45
84:ET:32:U:H2'	84:ET:33:U:C6	2.51	0.45
1:R:63:CYS:SG	78:5:2809:G:H4'	2.55	0.45
2:W:20:ARG:CD	55:V:96:LEU:HD13	2.46	0.45
2:W:45:ASN:ND2	2:W:47:ARG:HB2	2.31	0.45
3:9:126:G:C5'	8:GG:199:THR:CG2	2.68	0.45
3:9:132:C:H4'	3:9:133:U:H6	1.81	0.45
3:9:233:C:H3'	3:9:234:U:OP1	2.16	0.45
3:9:350:A:H2'	3:9:351:U:O4'	2.17	0.45
3:9:909:A:H2'	3:9:910:C:C6	2.52	0.45
3:9:952:G:O3'	20:bb:69:GLY:HA3	2.15	0.45
3:9:1212:G:N1	19:aa:75:VAL:HB	2.32	0.45
3:9:1229:C:H2'	3:9:1230:A:H8	1.81	0.45
3:9:1290:G:C4'	24:KK:47:LYS:HE2	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:1582:G:H2'	3:9:1583:G:H8	1.80	0.45
3:9:1679:U:H2'	3:9:1680:G:O4'	2.16	0.45
5:BB:71:LEU:HD13	5:BB:78:GLU:CG	2.47	0.45
6:CC:185:THR:OG1	6:CC:192:LEU:HD11	2.16	0.45
7:EE:125:LYS:CA	7:EE:159:THR:HG22	2.45	0.45
12:LL:113:LEU:HD23	12:LL:142:VAL:HG21	1.97	0.45
22:DD:24:PHE:CD2	22:DD:25:LEU:HD12	2.52	0.45
22:DD:162:ASP:HB3	22:DD:163:PRO:HD3	1.98	0.45
31:UU:67:LYS:CE	31:UU:76:THR:HB	2.46	0.45
36:A:96:LEU:CD1	74:p:83:ILE:HG23	2.44	0.45
36:A:226:ARG:HH12	36:A:229:ALA:HB2	1.81	0.45
36:A:234:LYS:CG	36:A:238:ILE:HD12	2.40	0.45
36:A:237:LEU:HB3	36:A:240:ALA:HB2	1.97	0.45
37:B:90:VAL:CG1	37:B:161:ARG:HB2	2.46	0.45
39:D:106:ALA:O	39:D:110:LEU:HD13	2.16	0.45
39:D:256:LYS:HD2	79:7:117:G:H5'	1.99	0.45
40:E:118:TYR:CE1	75:r:119:ARG:HB2	2.49	0.45
40:E:154:ILE:HG22	40:E:156:LEU:HD21	1.98	0.45
40:E:170:GLN:OE1	40:E:176:LEU:HD23	2.17	0.45
41:F:106:LYS:HA	41:F:109:GLN:NE2	2.30	0.45
43:H:165:THR:HG21	43:H:179:ILE:HG13	1.97	0.45
47:M:25:VAL:CG2	47:M:45:VAL:HG11	2.47	0.45
48:N:44:ARG:HH11	48:N:47:LYS:HB2	1.81	0.45
51:Q:72:LEU:CB	51:Q:75:ARG:HD3	2.46	0.45
56:X:64:SER:HB2	66:h:69:LEU:HD13	1.98	0.45
63:e:100:ALA:HB3	63:e:103:VAL:HG23	1.98	0.45
65:g:5:LEU:HD21	65:g:22:LEU:HD12	1.98	0.45
76:s:40:MET:HE1	78:5:1998:A:H62	1.81	0.45
76:s:48:ARG:NH2	77:t:123:ARG:HH12	2.14	0.45
76:s:111:ALA:HB2	76:s:182:PRO:HD2	1.98	0.45
77:t:131:GLU:C	78:5:1973:G:HO2'	2.25	0.45
78:5:947:C:O2'	78:5:948:C:H5'	2.16	0.45
78:5:964:A:H2'	78:5:965:G:O4'	2.15	0.45
78:5:3737:A:H2'	78:5:3738:G:O4'	2.17	0.45
78:5:3870:C:H2'	78:5:3871:A:C8	2.52	0.45
78:5:3877:A:O2'	78:5:4401:G:H1'	2.16	0.45
78:5:3912:U:O2'	78:5:3913:G:H5'	2.16	0.45
83:PT:34:A:C4	83:PT:35:G:C8	3.04	0.45
83:PT:36:C:C5	83:PT:37:A:C5	3.04	0.45
83:PT:40:C:O2	83:PT:40:C:C2'	2.64	0.45
3:9:89:C:O2'	3:9:423:G:H5''	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:124:U:H5'	3:9:125:C:OP2	2.16	0.45
3:9:546:C:C5	3:9:547:G:H1'	2.51	0.45
3:9:757:G:H2'	3:9:758:C:C6	2.51	0.45
3:9:1189:U:H2'	3:9:1190:U:C6	2.52	0.45
3:9:1192:C:H2'	3:9:1193:G:C8	2.50	0.45
3:9:1217:U:O2'	19:aa:38:LYS:HG2	2.15	0.45
3:9:1317:A:H2'	3:9:1319:C:O2	2.17	0.45
3:9:1616:G:H2'	3:9:1617:G:C8	2.51	0.45
3:9:1649:U:O2'	27:QQ:142:GLN:HA	2.16	0.45
3:9:1696:U:H2'	3:9:1697:U:C6	2.51	0.45
5:BB:30:TRP:HB2	14:OO:19:PRO:HG3	1.97	0.45
5:BB:66:VAL:O	14:OO:48:SER:HA	2.16	0.45
5:BB:91:VAL:HG13	5:BB:95:ASN:O	2.15	0.45
7:EE:158:ASP:CG	7:EE:174:LYS:HA	2.41	0.45
10:II:42:ARG:HD2	10:II:58:LEU:HB2	1.98	0.45
11:JJ:136:ARG:CD	11:JJ:139:LYS:HA	2.46	0.45
11:JJ:136:ARG:HE	11:JJ:139:LYS:HA	1.81	0.45
17:XX:90:CYS:O	17:XX:94:ILE:HG13	2.17	0.45
18:YY:7:ILE:CD1	18:YY:43:LYS:HD3	2.41	0.45
20:bb:37:CYS:HB2	20:bb:38:PRO:HD2	1.98	0.45
20:bb:51:GLN:C	20:bb:66:PRO:HB3	2.41	0.45
22:DD:163:PRO:HG2	22:DD:205:PRO:HG2	1.98	0.45
35:ff:137:ASP:CG	35:ff:138:ARG:HG3	2.42	0.45
37:B:283:LYS:HE3	37:B:363:ILE:HD13	1.98	0.45
38:C:7:LEU:HD11	38:C:21:ASN:HB3	1.98	0.45
38:C:136:LEU:HD22	75:r:9:VAL:HG11	1.97	0.45
40:E:110:VAL:HG11	78:5:688:U:H5''	1.97	0.45
40:E:193:HIS:CD2	40:E:195:LYS:HB2	2.51	0.45
41:F:242:LEU:HA	41:F:245:ARG:CD	2.46	0.45
43:H:86:LEU:CB	43:H:186:THR:HB	2.47	0.45
44:I:91:LEU:HD21	44:I:133:GLN:NE2	2.32	0.45
49:O:42:ASN:ND2	49:O:125:LYS:HD3	2.31	0.45
50:P:29:THR:HG22	50:P:119:VAL:CG2	2.45	0.45
50:P:88:ALA:O	50:P:91:LEU:HD12	2.15	0.45
51:Q:88:ASP:HB3	78:5:1354:A:OP1	2.16	0.45
52:S:47:PHE:O	52:S:51:LEU:HG	2.15	0.45
53:T:115:LYS:HA	53:T:118:GLU:CG	2.45	0.45
59:a:24:LYS:H	59:a:24:LYS:HD2	1.81	0.45
59:a:36:GLY:HA3	59:a:40:HIS:CE1	2.51	0.45
59:a:43:ILE:HD12	78:5:1682:A:C2	2.50	0.45
68:j:3:LYS:HG2	78:5:3643:A:C5	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:s:85:ASN:HA	78:5:2021:G:C4'	2.46	0.45
77:t:11:LYS:HB2	77:t:11:LYS:HE2	1.66	0.45
77:t:29:ALA:HB3	77:t:30:PRO:HD3	1.97	0.45
77:t:78:SER:OG	78:5:1976:G:H4'	2.16	0.45
78:5:917:A:H2'	78:5:918:G:O4'	2.16	0.45
78:5:1658:G:H2'	78:5:1659:U:O4'	2.16	0.45
78:5:3658:C:O2'	78:5:3659:G:H5'	2.16	0.45
78:5:3855:C:O2'	78:5:3856:A:H5'	2.16	0.45
78:5:4175:G:O2'	78:5:4176:C:H5'	2.16	0.45
78:5:4973:U:H2'	78:5:4974:C:O4'	2.16	0.45
79:7:27:G:H2'	79:7:28:C:C6	2.51	0.45
3:9:67:C:C6	8:GG:164:LYS:HE2	2.51	0.45
3:9:210:U:H2'	3:9:211:A:C8	2.51	0.45
3:9:575:U:H2'	3:9:576:U:C6	2.51	0.45
3:9:1101:C:C2'	3:9:1102:G:H5'	2.46	0.45
3:9:1301:G:OP2	25:MM:34:GLY:HA2	2.17	0.45
3:9:1664:G:H5'	34:dd:33:LYS:HD2	1.98	0.45
4:AA:30:LEU:HG	4:AA:35:GLU:HG2	1.97	0.45
10:II:46:VAL:HG21	10:II:56:ARG:NH1	2.31	0.45
10:II:69:SER:HB2	12:LL:21:LYS:HG3	1.99	0.45
14:OO:35:ALA:CB	14:OO:112:ALA:HB2	2.43	0.45
14:OO:43:HIS:CD2	14:OO:55:ARG:HB2	2.51	0.45
16:WW:5:ASN:ND2	16:WW:8:ALA:HB2	2.31	0.45
20:bb:36:LYS:HD3	20:bb:43:ILE:HG12	1.97	0.45
23:FF:41:VAL:HG22	23:FF:109:LEU:HD23	1.98	0.45
23:FF:120:GLY:HA2	23:FF:150:ALA:HB2	1.97	0.45
23:FF:143:PRO:O	23:FF:147:VAL:HG23	2.16	0.45
24:KK:71:LEU:HD11	24:KK:75:GLY:HA3	1.99	0.45
36:A:22:HIS:HB3	36:A:52:PRO:HG2	1.98	0.45
36:A:158:ILE:HG22	36:A:162:ASN:HD21	1.81	0.45
39:D:215:ASP:OD1	39:D:218:ALA:HB3	2.16	0.45
42:G:160:LYS:O	42:G:164:LYS:HG3	2.15	0.45
42:G:235:CYS:HB3	42:G:275:ILE:HG23	1.98	0.45
44:I:23:CYS:SG	44:I:96:VAL:HG21	2.57	0.45
46:L:26:PHE:HA	48:N:202:ARG:HD2	1.97	0.45
50:P:17:SER:OG	50:P:98:ALA:HB2	2.17	0.45
58:Z:36:ARG:HB3	58:Z:38:TYR:CZ	2.51	0.45
60:b:92:LYS:HG3	78:5:1214:C:C5	2.51	0.45
67:i:58:MET:HE3	67:i:94:LEU:HD13	1.97	0.45
75:r:49:VAL:HG22	75:r:102:TYR:HE2	1.82	0.45
76:s:14:PHE:HE1	76:s:60:MET:HB2	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:t:35:LEU:HD23	77:t:64:ILE:CG2	2.47	0.45
77:t:122:ALA:HB3	77:t:131:GLU:OE2	2.17	0.45
77:t:131:GLU:C	78:5:1973:G:O2'	2.60	0.45
78:5:22:G:H2'	78:5:23:C:C6	2.52	0.45
78:5:106:A:H2'	78:5:107:G:O4'	2.15	0.45
78:5:711:A:H2'	78:5:712:C:C6	2.52	0.45
78:5:1342:A:H2'	78:5:1343:A:C8	2.52	0.45
78:5:1444:G:H2'	78:5:1445:U:H5	1.80	0.45
78:5:1602:U:H4'	78:5:2799:G:H4'	1.97	0.45
78:5:1771:U:H2'	78:5:1772:C:C5	2.52	0.45
78:5:3871:A:H2'	78:5:3872:A:C8	2.52	0.45
78:5:4131:G:O2'	78:5:4132:C:H5'	2.17	0.45
78:5:4247:G:O2'	78:5:4248:A:H5'	2.16	0.45
78:5:4540:C:H2'	78:5:4541:G:C8	2.52	0.45
78:5:4608:G:H2'	78:5:4609:G:O4'	2.16	0.45
78:5:4874:A:C5	78:5:4877:G:H4'	2.51	0.45
80:8:54:C:H2'	80:8:55:U:O4'	2.16	0.45
80:8:67:U:O2'	80:8:68:G:H5'	2.16	0.45
80:8:142:U:H2'	80:8:143:G:O4'	2.16	0.45
81:EF:714:ILE:HG22	82:1:29:U:C5	2.51	0.45
83:PT:33:U:N3	83:PT:37:A:N6	2.65	0.45
84:ET:4:G:C6	84:ET:5:G:C6	3.04	0.45
3:9:234:U:H1'	10:II:43:ILE:CD1	2.46	0.45
3:9:362:G:O2'	3:9:1150:A:H5''	2.16	0.45
3:9:717:A:H4'	3:9:718:U:O5'	2.16	0.45
3:9:750:A:H2'	3:9:751:A:C8	2.51	0.45
3:9:752:C:H2'	3:9:753:U:O4'	2.17	0.45
3:9:805:G:H2'	3:9:806:G:O4'	2.15	0.45
3:9:870:A:H2'	3:9:871:A:H8	1.79	0.45
3:9:1372:G:H2'	3:9:1373:A:C5	2.52	0.45
5:BB:49:VAL:HG22	5:BB:65:ARG:NH2	2.30	0.45
6:CC:127:PHE:CD1	6:CC:141:VAL:HG22	2.48	0.45
7:EE:252:ARG:HH22	11:JJ:75:ASN:HB2	1.82	0.45
9:HH:147:LYS:HD2	9:HH:151:SER:OG	2.16	0.45
11:JJ:81:LEU:CD2	11:JJ:84:ILE:HD11	2.43	0.45
13:NN:37:ILE:HG22	13:NN:75:LEU:HD11	1.99	0.45
14:OO:95:ILE:CD1	14:OO:116:LEU:HD21	2.47	0.45
14:OO:147:ARG:HA	19:aa:28:ARG:HD2	1.98	0.45
15:VV:62:MET:HE3	15:VV:64:GLU:HB2	1.98	0.45
23:FF:140:ASP:OD2	33:cc:58:LEU:HA	2.16	0.45
29:SS:22:GLY:HA2	29:SS:56:ALA:CB	2.41	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:SS:31:THR:HG22	29:SS:37:GLY:C	2.41	0.45
30:TT:56:ARG:HD2	30:TT:79:TYR:CD2	2.52	0.45
31:UU:26:SER:HB2	31:UU:110:VAL:HG22	1.98	0.45
36:A:77:ILE:HD12	36:A:128:ARG:HB2	1.98	0.45
36:A:103:PRO:HG2	36:A:106:THR:CG2	2.47	0.45
37:B:65:SER:CB	78:5:4616:A:H4'	2.39	0.45
38:C:62:THR:OG1	38:C:91:ALA:HB1	2.15	0.45
38:C:331:TYR:O	38:C:335:MET:HG3	2.16	0.45
39:D:223:PHE:HB3	39:D:226:TYR:CB	2.34	0.45
40:E:143:LEU:HA	40:E:194:GLN:NE2	2.27	0.45
40:E:260:ILE:O	40:E:264:ILE:HG12	2.17	0.45
41:F:103:LYS:O	41:F:107:VAL:HG23	2.17	0.45
44:I:152:LEU:HD13	44:I:165:ILE:HG23	1.98	0.45
44:I:205:PRO:HG2	44:I:208:LYS:CB	2.45	0.45
46:L:46:ILE:HG22	46:L:49:ARG:NH1	2.30	0.45
46:L:76:PHE:CG	46:L:117:LEU:HD21	2.52	0.45
49:O:54:TYR:O	49:O:58:LEU:HG	2.17	0.45
49:O:59:ARG:O	49:O:61:ARG:HG2	2.17	0.45
52:S:82:LEU:HD12	52:S:124:ILE:HG23	1.97	0.45
57:Y:21:ALA:HB1	57:Y:25:ILE:CG2	2.45	0.45
57:Y:22:PRO:O	57:Y:26:ARG:HG3	2.16	0.45
60:b:101:HIS:CE1	60:b:103:LYS:HB2	2.51	0.45
74:p:19:GLY:HA2	78:5:3692:A:H2	1.81	0.45
78:5:38:A:O5'	78:5:39:A:H4'	2.16	0.45
78:5:1835:G:H5'	78:5:1836:G:C4	2.52	0.45
78:5:2270:G:H2'	78:5:2271:C:C6	2.51	0.45
78:5:2311:C:H2'	78:5:2312:U:C6	2.51	0.45
78:5:2447:U:H2'	78:5:2448:G:H8	1.81	0.45
78:5:4474:A:H5'	78:5:4475:G:OP1	2.16	0.45
78:5:4524:G:H2'	78:5:4525:C:C6	2.52	0.45
79:7:78:C:H2'	79:7:79:U:O4'	2.16	0.45
2:W:15:PRO:HG3	37:B:57:VAL:CG2	2.43	0.45
3:9:442:G:O2'	3:9:443:A:H5'	2.17	0.45
3:9:1254:U:O2'	3:9:1255:U:H5'	2.17	0.45
3:9:1401:G:OP1	22:DD:158:ILE:HB	2.17	0.45
5:BB:71:LEU:HD12	5:BB:82:ARG:CG	2.45	0.45
5:BB:176:VAL:HA	5:BB:184:VAL:CG1	2.47	0.45
5:BB:189:ILE:HB	5:BB:190:PRO:HD3	1.99	0.45
6:CC:76:LYS:HE2	6:CC:80:GLU:OE2	2.16	0.45
6:CC:253:PRO:HA	6:CC:256:TRP:CE2	2.51	0.45
7:EE:126:VAL:HG22	7:EE:158:ASP:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:HH:146:VAL:O	16:WW:49:GLU:HB2	2.17	0.45
26:PP:17:TYR:CD2	26:PP:18:ARG:HG2	2.52	0.45
27:QQ:57:LEU:HD11	27:QQ:115:TYR:CG	2.52	0.45
31:UU:55:ARG:HG3	31:UU:87:ARG:CD	2.43	0.45
37:B:25:HIS:CG	78:5:4984:C:H4'	2.51	0.45
40:E:153:LEU:HB3	40:E:197:VAL:CG1	2.47	0.45
40:E:193:HIS:CD2	78:5:710:G:H4'	2.52	0.45
41:F:49:ILE:HG23	41:F:185:CYS:SG	2.56	0.45
41:F:66:THR:HG23	41:F:67:GLU:OE1	2.16	0.45
41:F:112:ARG:O	41:F:113:LEU:HD23	2.17	0.45
46:L:169:ILE:CD1	59:a:142:GLY:HA2	2.46	0.45
48:N:11:TRP:HZ3	48:N:23:LEU:HD21	1.81	0.45
50:P:30:ARG:HD2	50:P:63:TYR:HE2	1.81	0.45
50:P:41:ILE:HG22	50:P:112:LEU:O	2.17	0.45
55:V:112:MET:SD	55:V:117:ILE:HD11	2.57	0.45
62:d:32:ARG:CB	62:d:48:GLU:HG2	2.45	0.45
67:i:70:LEU:HB2	67:i:87:ARG:NH1	2.32	0.45
74:p:51:ALA:HB3	74:p:54:ILE:CG2	2.39	0.45
76:s:37:SER:HB3	78:5:1969:G:O2'	2.17	0.45
78:5:274:C:H2'	78:5:275:C:C6	2.51	0.45
78:5:318:A:O2'	78:5:319:A:H5'	2.17	0.45
78:5:426:A:O2'	78:5:427:A:H5'	2.17	0.45
78:5:428:G:H2'	78:5:429:A:H8	1.80	0.45
78:5:966:A:H4'	78:5:967:C:C5'	2.45	0.45
78:5:1411(C):C:H2'	78:5:1412:G:C8	2.52	0.45
78:5:1447:C:H2'	78:5:1448:G:O4'	2.16	0.45
78:5:1603:C:H2'	78:5:1604:G:H8	1.81	0.45
78:5:2264:C:H2'	78:5:2265:G:O4'	2.17	0.45
78:5:2420:A:P	78:5:2421:G:H5''	2.57	0.45
78:5:2811:G:H22	78:5:2813:A:H3'	1.80	0.45
78:5:3652:A:H2'	78:5:3653:A:C5	2.51	0.45
78:5:4298:A:O2'	78:5:4299:U:H5'	2.17	0.45
80:8:62:A:H4'	80:8:63:U:O5'	2.17	0.45
80:8:141:C:H2'	80:8:142:U:C6	2.52	0.45
84:ET:44:A:O2'	84:ET:45:G:H5'	2.16	0.45
3:9:85:A:H2'	3:9:86:C:C6	2.51	0.45
3:9:96:C:H2'	3:9:97:U:H6	1.82	0.45
3:9:234:U:H4'	10:II:41:ARG:NH1	2.32	0.45
3:9:696:A:H2'	3:9:697:C:C6	2.52	0.45
3:9:823:G:H2'	3:9:824:C:C6	2.51	0.45
3:9:1052:G:H4'	3:9:1213:A:OP1	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:1090:A:O2'	3:9:1091:G:H5'	2.17	0.45
3:9:1153:U:H2'	3:9:1154:U:C6	2.52	0.45
3:9:1453:G:OP1	31:UU:29:VAL:HG13	2.17	0.45
5:BB:122:GLU:O	5:BB:165:ARG:HG3	2.17	0.45
8:GG:12:CYS:SG	8:GG:124:LEU:HA	2.57	0.45
8:GG:84:TYR:HD1	8:GG:95:LYS:HD2	1.82	0.45
9:HH:168:HIS:CE1	9:HH:169:LYS:HG3	2.52	0.45
11:JJ:124:HIS:O	11:JJ:128:VAL:HG23	2.17	0.45
12:LL:93:LEU:HA	12:LL:103:GLU:O	2.16	0.45
14:OO:42:VAL:CG1	14:OO:81:VAL:HG21	2.47	0.45
15:VV:24:ILE:HD13	15:VV:31:SER:OG	2.17	0.45
22:DD:42:THR:HB	22:DD:43:PRO:HD2	1.99	0.45
29:SS:39:ARG:HB3	29:SS:83:PHE:CZ	2.49	0.45
30:TT:38:LYS:NZ	30:TT:41:LYS:HA	2.32	0.45
36:A:32:VAL:HG12	36:A:163:ARG:CZ	2.46	0.45
36:A:84:THR:CG2	74:p:63:THR:HB	2.47	0.45
37:B:51:ALA:HA	37:B:323:TYR:CD1	2.52	0.45
38:C:212:ASN:HA	38:C:232:VAL:HG22	1.99	0.45
42:G:194:ASN:O	42:G:198:THR:HG23	2.16	0.45
45:J:49:VAL:HB	45:J:71:HIS:NE2	2.32	0.45
50:P:12:THR:HA	50:P:105:LYS:HZ1	1.81	0.45
50:P:67:VAL:HB	50:P:80:GLN:HE21	1.82	0.45
51:Q:82:VAL:HG22	51:Q:139:LEU:HB2	1.98	0.45
54:U:83:LEU:O	54:U:87:THR:HG22	2.16	0.45
57:Y:59:ARG:HD2	78:5:200:U:C5	2.51	0.45
59:a:129:PHE:CE2	59:a:144:CYS:HB3	2.52	0.45
59:a:131:ARG:HH21	59:a:132:ARG:HH21	1.64	0.45
65:g:102:ILE:O	65:g:106:VAL:HG23	2.16	0.45
67:i:36:HIS:O	67:i:40:VAL:HG23	2.17	0.45
69:k:25:ILE:HG12	69:k:34:PHE:CD2	2.52	0.45
73:o:5:PRO:HD3	78:5:4232:U:C2	2.52	0.45
73:o:14:LYS:HE2	73:o:77:CYS:SG	2.56	0.45
73:o:41:TYR:CE1	84:ET:75:C:O4'	2.70	0.45
75:r:41:ASN:OD1	75:r:44:ILE:HG13	2.17	0.45
75:r:99:LYS:HD3	78:5:677:G:C5'	2.46	0.45
77:t:138:SER:O	77:t:139:VAL:C	2.59	0.45
78:5:286:U:H2'	78:5:287:U:C6	2.52	0.45
78:5:959:G:OP2	78:5:959:G:H2'	2.17	0.45
78:5:1526:G:H2'	78:5:1527:A:H8	1.81	0.45
78:5:1801:A:O2'	78:5:1802:A:H5'	2.16	0.45
78:5:2092:G:C2	78:5:2097:U:C5	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:5:2743:A:H2'	78:5:2744:A:C8	2.51	0.45
78:5:3703:G:H2'	78:5:3704:U:H6	1.82	0.45
78:5:4351:U:H2'	78:5:4352:U:H6	1.81	0.45
80:8:97:A:H2'	80:8:98:C:O4'	2.16	0.45
1:R:3:MET:O	1:R:4:LEU:HD23	2.17	0.45
1:R:99:MET:HA	1:R:99:MET:HE3	1.98	0.45
1:R:102:LEU:HD22	1:R:138:LEU:CD1	2.46	0.45
3:9:17:C:H2'	3:9:18:C:H6	1.80	0.45
3:9:84:A:H2'	3:9:85:A:O4'	2.16	0.45
3:9:106:C:H5''	3:9:355:G:O2'	2.17	0.45
3:9:378:U:H4'	8:GG:76:LEU:CD1	2.46	0.45
3:9:560:C:H2'	3:9:561:U:C6	2.52	0.45
3:9:604:G:O2'	3:9:605:U:H5'	2.16	0.45
3:9:714:G:H2'	3:9:715:G:C8	2.52	0.45
3:9:741:G:H2'	3:9:742:G:H8	1.82	0.45
3:9:771:G:H2'	3:9:772:G:C8	2.51	0.45
3:9:864:U:H5'	13:NN:55:ARG:HG2	1.98	0.45
5:BB:180:ASP:OD1	5:BB:183:GLU:HG3	2.16	0.45
7:EE:175:PHE:CE1	7:EE:222:LEU:HD21	2.52	0.45
8:GG:201:LYS:HA	8:GG:204:GLU:CD	2.42	0.45
9:HH:83:LEU:HD13	9:HH:92:VAL:HG21	1.98	0.45
17:XX:22:TRP:O	17:XX:28:LYS:HD2	2.17	0.45
17:XX:102:VAL:CG2	17:XX:122:VAL:HG22	2.46	0.45
22:DD:210:ILE:HD12	28:RR:15:VAL:HB	1.98	0.45
25:MM:81:ASP:OD2	25:MM:83:LYS:HB3	2.17	0.45
26:PP:98:ASN:ND2	26:PP:120:SER:HB2	2.30	0.45
27:QQ:130:LYS:HD2	27:QQ:135:PRO:O	2.17	0.45
39:D:277:LYS:HA	39:D:280:VAL:HG22	1.99	0.45
41:F:91:VAL:HG22	41:F:141:TRP:CB	2.47	0.45
41:F:180:LYS:HE3	41:F:181:TYR:CZ	2.52	0.45
42:G:152:ALA:O	42:G:156:ARG:HG3	2.16	0.45
43:H:95:VAL:O	43:H:177:ASP:HA	2.17	0.45
44:I:61:SER:HA	44:I:126:VAL:HG23	1.99	0.45
44:I:159:PHE:HB2	44:I:163:GLN:HE22	1.82	0.45
45:J:17:ILE:HD12	45:J:80:GLU:OE1	2.17	0.45
46:L:63:THR:HG23	46:L:65:ARG:N	2.31	0.45
48:N:138:PHE:CD1	78:5:18:C:H4'	2.51	0.45
50:P:60:PHE:HE2	50:P:82:ARG:HD2	1.82	0.45
51:Q:144:LYS:HA	51:Q:149:TYR:CE2	2.51	0.45
54:U:33:ILE:HD12	54:U:96:LEU:HD21	1.99	0.45
57:Y:27:ARG:CZ	80:8:70:G:H5''	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:Z:100:VAL:HG13	58:Z:106:LEU:HB3	1.98	0.45
59:a:35:ALA:HB1	78:5:38:A:H5''	1.99	0.45
67:i:74:LYS:HE2	67:i:80:HIS:CB	2.43	0.45
68:j:75:ARG:HH12	78:5:344:A:H5'	1.82	0.45
70:l:27:ILE:HG12	80:8:52:A:N6	2.32	0.45
75:r:8:MET:CE	75:r:11:ARG:HD2	2.46	0.45
77:t:106:PHE:CZ	77:t:159:ALA:HB3	2.51	0.45
78:5:1441:C:H2'	78:5:1442:C:C6	2.52	0.45
78:5:1442:C:H2'	78:5:1443:A:C8	2.51	0.45
78:5:1867:A:H2'	78:5:1868:A:H8	1.81	0.45
78:5:2422:C:H5''	78:5:3857:G:H21	1.81	0.45
78:5:2507:A:H2'	78:5:2508:U:H5'	1.98	0.45
78:5:2542:G:H2'	78:5:2543:A:O4'	2.16	0.45
78:5:3657:U:C2'	78:5:3658:C:H5'	2.47	0.45
78:5:3803:A:H2'	78:5:3804:G:H5'	1.98	0.45
78:5:4428:A:H2'	78:5:4429:C:O4'	2.16	0.45
78:5:4587:G:H2'	78:5:4588:U:H6	1.82	0.45
78:5:4589:A:N3	78:5:4590:A:H1'	2.32	0.45
78:5:4604:G:N2	78:5:4606:G:H5''	2.32	0.45
81:EF:22:MET:O	81:EF:103:ILE:HD12	2.17	0.45
83:PT:37:A:H2'	83:PT:38:U:C6	2.51	0.45
3:9:65:C:H4'	8:GG:172:LYS:CE	2.43	0.45
3:9:353:C:H2'	3:9:354:C:C6	2.52	0.45
3:9:944:G:O2'	3:9:945:C:H5'	2.17	0.45
3:9:1159:A:H2'	3:9:1160:U:H6	1.80	0.45
3:9:1274:A:N7	3:9:1665:U:H2'	2.31	0.45
3:9:1556:G:H3'	3:9:1585:A:N6	2.29	0.45
3:9:1564:C:H2'	3:9:1565:C:C6	2.52	0.45
4:AA:12:GLU:CA	28:RR:96:ILE:HD12	2.40	0.45
4:AA:99:ILE:HG12	4:AA:117:ARG:HH12	1.82	0.45
5:BB:79:VAL:HB	5:BB:81:PHE:CE2	2.52	0.45
9:HH:78:ARG:HG3	9:HH:82:GLU:OE2	2.17	0.45
13:NN:94:LYS:O	13:NN:98:VAL:HG23	2.17	0.45
13:NN:98:VAL:CB	13:NN:115:LEU:HD13	2.46	0.45
26:PP:77:LYS:HB3	26:PP:102:PHE:CD2	2.52	0.45
33:cc:30:VAL:HG21	33:cc:50:VAL:HG11	1.99	0.45
37:B:248:LEU:HD12	37:B:249:ARG:HG3	1.99	0.45
38:C:54:VAL:HG21	38:C:101:MET:CE	2.46	0.45
38:C:270:ALA:HA	38:C:278:ASN:OD1	2.17	0.45
39:D:220:LYS:HG2	39:D:227:ILE:CD1	2.47	0.45
42:G:239:GLY:O	42:G:242:ARG:HG3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:M:40:GLY:CA	47:M:45:VAL:HB	2.46	0.45
57:Y:89:LYS:HE2	57:Y:95:VAL:HG21	1.98	0.45
60:b:57:MET:HE2	78:5:1812:C:H1'	1.98	0.45
63:e:78:LEU:CD1	78:5:2324:C:H4'	2.47	0.45
65:g:15:THR:O	65:g:19:LYS:HE3	2.16	0.45
66:h:48:ARG:HB2	80:8:49:G:OP1	2.17	0.45
70:l:49:LEU:HB2	78:5:2407:G:OP1	2.17	0.45
74:p:10:ILE:HG21	74:p:30:GLU:HB3	1.99	0.45
75:r:97:ILE:HB	75:r:107:ARG:HG3	1.99	0.45
77:t:11:LYS:N	77:t:64:ILE:O	2.50	0.45
78:5:1526:G:H2'	78:5:1527:A:C8	2.51	0.45
78:5:1593:A:H4'	78:5:2839:U:H4'	1.98	0.45
78:5:2021:G:H2'	78:5:2022:C:C6	2.52	0.45
78:5:2277:C:O2'	78:5:2278:G:H5'	2.17	0.45
78:5:4759:C:H2'	78:5:4760:G:C8	2.51	0.45
80:8:138:C:H2'	80:8:139:G:C8	2.52	0.45
84:ET:53:G:O2'	84:ET:54:U:H5'	2.17	0.45
84:ET:57:A:H2'	84:ET:58:A:H5''	1.99	0.45
1:R:23:TRP:HB2	1:R:53:LYS:CG	2.47	0.45
3:9:421:C:O2'	3:9:422:C:H5'	2.17	0.45
3:9:452:A:H5'	11:JJ:121:LYS:NZ	2.32	0.45
3:9:731:C:H2'	3:9:732:U:O4'	2.16	0.45
3:9:1605:U:H4'	3:9:1606:G:H5''	1.99	0.45
3:9:1689:C:C5	33:cc:24:GLN:HA	2.52	0.45
4:AA:14:ASP:OD1	28:RR:91:LEU:HD22	2.16	0.45
4:AA:41:ARG:HB2	28:RR:127:ASN:C	2.42	0.45
6:CC:73:MET:HE2	6:CC:96:PHE:CE1	2.52	0.45
6:CC:89:LYS:O	6:CC:160:LEU:HD11	2.17	0.45
6:CC:195:LEU:CD2	6:CC:224:THR:HG22	2.47	0.45
7:EE:148:ARG:HE	8:GG:205:GLU:CD	2.24	0.45
7:EE:222:LEU:HD23	7:EE:225:ILE:HD12	1.99	0.45
8:GG:55:GLY:HA3	8:GG:108:VAL:O	2.17	0.45
11:JJ:111:GLN:CD	11:JJ:127:ARG:HB2	2.42	0.45
22:DD:56:GLN:O	22:DD:59:LEU:HG	2.17	0.45
22:DD:105:LEU:HD23	22:DD:184:ILE:HG23	1.99	0.45
26:PP:57:LEU:O	26:PP:61:ARG:HG3	2.17	0.45
28:RR:104:GLU:O	28:RR:108:LEU:HG	2.16	0.45
29:SS:42:HIS:O	29:SS:46:ARG:HG2	2.16	0.45
29:SS:65:GLU:O	29:SS:69:THR:HG23	2.17	0.45
30:TT:42:HIS:HB3	30:TT:93:SER:CB	2.46	0.45
31:UU:40:ILE:O	31:UU:44:LYS:HD3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:UU:53:PRO:HG2	31:UU:55:ARG:NH1	2.32	0.45
36:A:5:ILE:HD11	36:A:8:GLN:HG3	1.97	0.45
36:A:175:ILE:H	36:A:175:ILE:HG13	1.68	0.45
37:B:55:HIS:HB2	37:B:369:ASP:HB2	1.98	0.45
37:B:85:VAL:HB	37:B:165:HIS:CD2	2.52	0.45
37:B:223:THR:HA	37:B:338:VAL:HG22	1.99	0.45
38:C:33:ARG:O	38:C:37:VAL:HG23	2.17	0.45
38:C:60:HIS:HA	38:C:92:PHE:HE1	1.82	0.45
39:D:8:LYS:HA	39:D:12:TYR:CD2	2.52	0.45
40:E:118:TYR:CE1	75:r:119:ARG:HD3	2.52	0.45
41:F:174:ILE:HD11	41:F:186:MET:SD	2.57	0.45
42:G:140:LEU:HD11	42:G:144:THR:HG21	1.98	0.45
42:G:218:GLU:O	48:N:7:ILE:HG12	2.16	0.45
42:G:219:LEU:HD23	48:N:7:ILE:HD13	1.97	0.45
43:H:12:ILE:HG22	43:H:81:ILE:HD13	1.98	0.45
43:H:47:LEU:HD11	43:H:52:LYS:HG3	1.98	0.45
43:H:88:PHE:CD2	43:H:151:ILE:HB	2.52	0.45
44:I:46:PHE:HB2	44:I:139:ARG:NH2	2.32	0.45
44:I:53:VAL:HG11	53:T:158:PHE:CZ	2.48	0.45
46:L:127:PHE:HB2	66:h:118:LYS:HB3	1.99	0.45
46:L:198:ARG:HH12	78:5:1485:C:H2'	1.81	0.45
49:O:192:PHE:O	49:O:196:LEU:HD13	2.15	0.45
50:P:126:ARG:O	50:P:127:ARG:HG3	2.17	0.45
51:Q:50:ARG:CB	51:Q:83:VAL:HG21	2.47	0.45
51:Q:178:ARG:H	59:a:51:GLY:HA2	1.81	0.45
60:b:4:SER:HB2	78:5:1855:G:OP1	2.17	0.45
61:c:62:TYR:CE2	61:c:66:LEU:HD11	2.52	0.45
63:e:38:PRO:HD2	63:e:55:MET:HE3	1.99	0.45
76:s:5:ASP:HB2	76:s:6:ARG:NH2	2.32	0.45
78:5:445:U:H2'	78:5:446:C:C1'	2.46	0.45
78:5:738(A):C:H3'	78:5:739:G:H5''	1.97	0.45
78:5:1202:C:O2'	78:5:1203:G:H5'	2.17	0.45
78:5:1340:C:O2'	78:5:1341:U:H5'	2.17	0.45
78:5:1628:C:H2'	78:5:1629:G:C8	2.52	0.45
78:5:1692:C:O2'	78:5:1693:U:H5'	2.17	0.45
78:5:3926:C:H2'	78:5:3927:U:C6	2.52	0.45
78:5:3945:A:H2'	78:5:3946:G:C8	2.52	0.45
78:5:4311:A:O2'	78:5:4312:U:H5'	2.17	0.45
78:5:4357:G:O2'	78:5:4358:U:H5'	2.16	0.45
80:8:47:C:H1'	80:8:61:A:H2'	1.99	0.45
1:R:79:GLY:O	78:5:3619:G:H4'	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:98:C:O2'	3:9:333:C:H5''	2.17	0.44
3:9:284:A:C2	3:9:286:C:H2'	2.52	0.44
3:9:420:C:OP1	7:EE:29:PRO:HG3	2.17	0.44
3:9:445:A:O2'	11:JJ:144:ILE:HG12	2.16	0.44
3:9:576:U:H2'	3:9:577:A:C8	2.52	0.44
3:9:680:A:P	11:JJ:10:ARG:HG2	2.57	0.44
3:9:822:G:H2'	3:9:823:G:H8	1.83	0.44
3:9:843:A:H2'	3:9:844:A:C8	2.52	0.44
3:9:1163:A:H2'	3:9:1164:G:O4'	2.16	0.44
3:9:1627:U:HO2'	3:9:1628:U:H2'	1.82	0.44
5:BB:68:GLU:CD	5:BB:83:LYS:HE2	2.42	0.44
6:CC:65:LYS:HB3	6:CC:273:LEU:CD1	2.47	0.44
8:GG:121:ILE:CD1	8:GG:122:PRO:HD2	2.43	0.44
8:GG:221:LYS:H	8:GG:224:ARG:HH22	1.49	0.44
16:WW:41:MET:HE3	16:WW:47:ILE:CD1	2.47	0.44
17:XX:129:SER:O	17:XX:133:LEU:HG	2.16	0.44
25:MM:81:ASP:HB3	25:MM:84:LYS:CG	2.47	0.44
26:PP:49:LEU:HD12	26:PP:53:GLN:HE22	1.82	0.44
28:RR:45:LYS:HG2	28:RR:49:LYS:HE3	1.98	0.44
30:TT:22:LEU:HD13	30:TT:28:LEU:HD11	1.99	0.44
36:A:126:LEU:HD23	78:5:3661:G:H21	1.82	0.44
37:B:43:LEU:HD23	37:B:183:ILE:HD13	2.00	0.44
37:B:116:ARG:HA	37:B:122:TRP:CE3	2.52	0.44
37:B:284:ILE:HG12	37:B:333:LEU:CD1	2.47	0.44
38:C:114:ARG:O	78:5:1507:C:H4'	2.17	0.44
39:D:40:ASP:HB2	39:D:43:LYS:HG2	2.00	0.44
39:D:273:LEU:CD2	79:7:107:G:H5''	2.47	0.44
39:D:273:LEU:HD22	79:7:108:G:P	2.58	0.44
40:E:271:GLN:O	40:E:275:ARG:HG3	2.17	0.44
41:F:106:LYS:HA	41:F:109:GLN:HG2	1.97	0.44
41:F:229:GLY:HA3	52:S:2:LYS:NZ	2.32	0.44
45:J:46:GLN:HB2	79:7:39:C:O2'	2.18	0.44
46:L:49:ARG:HG2	66:h:119:TYR:CE1	2.53	0.44
47:M:72:TYR:CZ	78:5:918:G:H5'	2.52	0.44
49:O:14:HIS:CE1	49:O:119:VAL:HG13	2.50	0.44
49:O:173:GLN:O	49:O:177:LEU:HG	2.17	0.44
61:c:17:ARG:HB2	61:c:104:ILE:HD13	1.99	0.44
64:f:36:ARG:O	64:f:39:THR:HG22	2.17	0.44
75:r:2:SER:O	75:r:6:GLN:HG2	2.16	0.44
76:s:45:MET:HE2	76:s:45:MET:HA	1.98	0.44
77:t:15:LEU:O	77:t:17:CYS:N	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:5:288:G:H2'	78:5:289:C:C6	2.52	0.44
78:5:1669:A:H1'	78:5:1852:U:O2'	2.17	0.44
78:5:1769:G:H2'	78:5:1770:A:C8	2.52	0.44
78:5:2259:G:H5'	78:5:2260:C:OP2	2.17	0.44
78:5:2491:C:H2'	78:5:2492:C:C6	2.52	0.44
78:5:2596:G:H2'	78:5:2597:G:H8	1.81	0.44
78:5:2611:A:O5'	78:5:2688:G:H4'	2.17	0.44
78:5:3635:A:C2'	78:5:3636:C:H5'	2.46	0.44
78:5:3921:U:H1'	78:5:4543:G:H21	1.82	0.44
78:5:4217:G:H2'	78:5:4218:U:O4'	2.16	0.44
78:5:4461:C:O2'	78:5:4462:C:H5'	2.17	0.44
78:5:4776:G:H2'	78:5:4777:C:H6	1.81	0.44
78:5:5003:U:H2'	78:5:5004:C:C6	2.52	0.44
3:9:382:A:H2'	3:9:383:C:C6	2.52	0.44
3:9:390:G:H1'	8:GG:59:GLN:HG2	1.99	0.44
3:9:590:U:H4'	3:9:934:A:O2'	2.17	0.44
3:9:597:G:H2'	3:9:598:C:H6	1.80	0.44
3:9:940:A:H2'	3:9:941:C:C6	2.53	0.44
3:9:1111:C:H2'	3:9:1112:C:O4'	2.17	0.44
3:9:1364:G:H4'	6:CC:145:LYS:CE	2.46	0.44
5:BB:225:LEU:CD2	5:BB:229:MET:HE2	2.46	0.44
6:CC:83:LEU:HD12	15:VV:15:ARG:HG3	1.99	0.44
7:EE:125:LYS:HB2	7:EE:159:THR:HG22	1.99	0.44
7:EE:149:TYR:CE1	8:GG:209:TYR:HB2	2.52	0.44
9:HH:77:VAL:O	9:HH:81:ARG:HG3	2.18	0.44
11:JJ:123:ILE:H	11:JJ:123:ILE:HD12	1.82	0.44
22:DD:162:ASP:HA	22:DD:165:ASN:ND2	2.31	0.44
23:FF:43:GLU:HB3	23:FF:44:LYS:H	1.57	0.44
25:MM:38:ALA:O	25:MM:42:LEU:HD13	2.17	0.44
28:RR:10:LYS:HB3	28:RR:14:ARG:NH1	2.32	0.44
29:SS:41:ALA:O	29:SS:45:LEU:HG	2.17	0.44
36:A:104:VAL:HG13	36:A:136:VAL:HG21	1.98	0.44
37:B:95:THR:CG2	78:5:4910:A:H4'	2.48	0.44
38:C:218:VAL:HG22	38:C:229:LEU:HG	1.99	0.44
38:C:232:VAL:O	38:C:235:LEU:HG	2.17	0.44
40:E:160:HIS:HA	40:E:163:LYS:NZ	2.31	0.44
41:F:155:LYS:HB3	41:F:247:ASN:HD21	1.80	0.44
42:G:197:THR:HG21	42:G:222:PHE:CZ	2.52	0.44
42:G:216:PRO:HG3	78:5:150:U:O2	2.17	0.44
44:I:60:LEU:HD12	44:I:135:ILE:HD13	1.99	0.44
44:I:74:LYS:HG2	78:5:4415:A:H5''	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:J:25:CYS:HA	45:J:69:ALA:HB2	1.99	0.44
46:L:101:ARG:CZ	78:5:76:A:H5'	2.47	0.44
48:N:18:VAL:O	48:N:22:LEU:HG	2.16	0.44
52:S:13:VAL:HA	52:S:28:TYR:O	2.18	0.44
53:T:142:ARG:HB3	53:T:142:ARG:NH1	2.32	0.44
55:V:16:ILE:HB	55:V:88:TYR:HB2	1.98	0.44
55:V:87:SER:HB2	55:V:97:TYR:HB3	1.98	0.44
56:X:52:LEU:HD22	56:X:53:ARG:N	2.32	0.44
56:X:86:ALA:O	56:X:90:ILE:HG13	2.17	0.44
57:Y:88:GLU:OE2	57:Y:92:GLY:HA2	2.17	0.44
68:j:25:LYS:HE2	78:5:370:U:O2'	2.17	0.44
68:j:70:VAL:HG22	68:j:73:ARG:HH22	1.82	0.44
70:l:15:LYS:HD2	80:8:45:C:H3'	2.00	0.44
74:p:8:VAL:HG11	78:5:2875:C:H5''	1.99	0.44
75:r:53:PRO:HD3	75:r:117:ILE:HD12	1.98	0.44
75:r:86:ALA:O	75:r:90:LEU:HD13	2.16	0.44
76:s:66:ARG:HE	76:s:79:LEU:HD13	1.82	0.44
76:s:141:LEU:HD12	76:s:160:LEU:HB3	1.98	0.44
76:s:143:ILE:CG2	76:s:154:ILE:HG12	2.46	0.44
78:5:207:G:H2'	78:5:208:A:C8	2.52	0.44
78:5:281:U:H2'	78:5:282:C:H6	1.82	0.44
78:5:979:C:H2'	78:5:980:U:H6	1.82	0.44
78:5:1093:C:O2'	78:5:1094:G:H5'	2.17	0.44
78:5:1468:C:H2'	78:5:1469:C:H6	1.83	0.44
78:5:2026:A:H2'	78:5:2027:U:H6	1.83	0.44
78:5:2083:C:OP1	78:5:2084:C:H5''	2.17	0.44
78:5:2323:C:O2'	78:5:2324:C:H5'	2.17	0.44
78:5:2412:A:H2'	78:5:2413:U:H6	1.80	0.44
78:5:2474:G:H3'	78:5:2474:G:OP1	2.16	0.44
78:5:2594:C:H2'	78:5:2595:C:H6	1.82	0.44
78:5:5061:A:H3'	78:5:5062:G:H5'	1.99	0.44
79:7:3:C:OP1	79:7:58:A:H4'	2.18	0.44
3:9:369:A:H4'	10:II:50:GLY:C	2.42	0.44
3:9:703:C:H2'	3:9:704:U:O4'	2.18	0.44
3:9:1225:A:H1'	19:aa:85:ARG:HG3	2.00	0.44
3:9:1548:C:H5''	30:TT:62:ARG:NE	2.31	0.44
3:9:1561:U:H5'	3:9:1562:A:C8	2.51	0.44
3:9:1562:A:N7	34:dd:13:LYS:HA	2.33	0.44
10:II:82:VAL:HG21	10:II:103:LEU:HG	2.00	0.44
11:JJ:127:ARG:HD3	21:ee:104:ARG:CD	2.40	0.44
13:NN:50:ILE:O	13:NN:54:LEU:HG	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:VV:37:ALA:HB1	15:VV:46:PHE:HD1	1.83	0.44
15:VV:73:ALA:HB1	15:VV:79:VAL:HG23	1.98	0.44
18:YY:18:LEU:HD13	18:YY:20:ARG:CZ	2.47	0.44
27:QQ:86:GLN:HG2	27:QQ:90:LYS:NZ	2.32	0.44
28:RR:6:THR:O	28:RR:10:LYS:HG3	2.18	0.44
28:RR:106:LEU:HD13	28:RR:117:LEU:CD1	2.47	0.44
32:ZZ:65:TYR:O	32:ZZ:111:ARG:HB2	2.18	0.44
38:C:128:LEU:HD22	38:C:252:TRP:CH2	2.51	0.44
38:C:330:PRO:HG2	41:F:50:TYR:HA	1.99	0.44
39:D:33:ARG:NH2	79:7:7:G:H4'	2.32	0.44
39:D:163:LEU:O	39:D:167:VAL:HG23	2.18	0.44
49:O:58:LEU:HD11	49:O:145:VAL:HG22	1.99	0.44
49:O:114:LYS:O	78:5:4757:C:H5''	2.17	0.44
57:Y:22:PRO:HG2	57:Y:25:ILE:HG13	1.99	0.44
58:Z:121:ARG:HB3	58:Z:131:PHE:HZ	1.82	0.44
59:a:2:PRO:HB3	78:5:2341:A:OP2	2.17	0.44
59:a:59:ARG:HB2	59:a:59:ARG:HH11	1.82	0.44
59:a:117:LEU:CD1	59:a:118:PRO:HD2	2.40	0.44
67:i:8:ALA:O	67:i:13:LYS:HB2	2.16	0.44
77:t:58:ILE:CG2	77:t:75:PRO:HB3	2.47	0.44
77:t:60:VAL:HG13	77:t:72:GLU:O	2.16	0.44
77:t:104:ILE:HD12	77:t:143:VAL:CG2	2.47	0.44
77:t:117:ARG:HA	77:t:117:ARG:NE	2.33	0.44
78:5:396:A:H2'	78:5:397:G:C8	2.52	0.44
78:5:694:C:H2'	78:5:695:G:C8	2.52	0.44
78:5:1349:G:H2'	78:5:1350:C:H6	1.82	0.44
78:5:1749:A:H2'	78:5:1750:G:C8	2.53	0.44
78:5:1879:C:H5''	78:5:1882:U:O2'	2.17	0.44
78:5:2029:A:O2'	78:5:2030:A:H5'	2.17	0.44
78:5:2362:U:H2'	78:5:2363:A:C8	2.51	0.44
78:5:2439:G:O4'	78:5:2777:G:H2'	2.18	0.44
78:5:2589:C:H2'	78:5:2590:G:O4'	2.17	0.44
78:5:2608:G:H2'	78:5:2609:G:H8	1.81	0.44
78:5:3901:A:C2	78:5:4450:U:H5'	2.53	0.44
78:5:4635:A:H5'	78:5:4664:A:N6	2.32	0.44
78:5:4960:G:H2'	78:5:4961:G:C8	2.52	0.44
79:7:11:A:O2'	79:7:13:A:H2'	2.18	0.44
80:8:121:G:H2'	80:8:122:G:H5'	1.99	0.44
81:EF:229:ALA:HA	81:EF:256:MET:HE2	1.99	0.44
1:R:64:ARG:O	1:R:68:LEU:HG	2.18	0.44
3:9:132:C:H1'	8:GG:180:VAL:HG11	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:137:A:H2'	3:9:138:U:O4'	2.16	0.44
3:9:248:C:OP1	3:9:248:C:H4'	2.18	0.44
3:9:359:A:H3'	3:9:374:C:C5	2.53	0.44
3:9:1005:G:O2'	3:9:1006:G:H5'	2.17	0.44
3:9:1047:A:H2'	3:9:1048:U:C6	2.53	0.44
3:9:1300:A:C6	25:MM:91:LEU:HD22	2.53	0.44
3:9:1396:C:H2'	3:9:1397:G:C8	2.53	0.44
3:9:1413:U:O4	27:QQ:12:VAL:HG13	2.18	0.44
3:9:1599:C:H2'	3:9:1600:A:C8	2.52	0.44
4:AA:176:TRP:HZ3	4:AA:180:ARG:HD3	1.82	0.44
4:AA:199:PRO:HD3	28:RR:90:ALA:CA	2.48	0.44
5:BB:171:ILE:HD11	5:BB:200:ALA:CB	2.47	0.44
6:CC:75:ILE:HG13	6:CC:80:GLU:OE1	2.18	0.44
6:CC:270:THR:O	6:CC:274:VAL:HG13	2.18	0.44
8:GG:192:ILE:O	8:GG:196:LYS:HG3	2.18	0.44
11:JJ:149:VAL:HG11	11:JJ:157:ILE:HD11	1.99	0.44
14:OO:56:VAL:HG21	14:OO:61:LYS:NZ	2.32	0.44
17:XX:100:VAL:HB	17:XX:124:LYS:O	2.17	0.44
18:YY:109:GLU:HG2	18:YY:113:ARG:CZ	2.47	0.44
22:DD:34:TYR:OH	22:DD:37:VAL:HG13	2.17	0.44
22:DD:55:THR:HA	22:DD:58:VAL:HG22	1.99	0.44
23:FF:92:ILE:HD13	23:FF:169:ILE:HG21	1.98	0.44
24:KK:41:PRO:O	24:KK:45:VAL:HG23	2.16	0.44
25:MM:25:ALA:HB3	25:MM:31:LEU:HD23	1.99	0.44
28:RR:114:LEU:HB2	28:RR:117:LEU:HG	2.00	0.44
29:SS:87:GLN:HB3	29:SS:95:TYR:HD1	1.81	0.44
36:A:5:ILE:CD1	36:A:232:GLY:HA2	2.48	0.44
36:A:198:ARG:O	78:5:3651:A:H5''	2.17	0.44
38:C:24:LEU:HD23	38:C:29:LYS:CE	2.46	0.44
38:C:195:LYS:HA	38:C:200:ARG:HA	2.00	0.44
40:E:61:ARG:HD3	78:5:1237:C:O2	2.18	0.44
41:F:74:ALA:HB2	53:T:140:PHE:CE2	2.53	0.44
44:I:139:ARG:HD2	44:I:173:PHE:CD2	2.52	0.44
46:L:81:LEU:HD11	46:L:98:VAL:HG13	2.00	0.44
51:Q:156:PRO:HD3	51:Q:163:THR:CG2	2.48	0.44
52:S:82:LEU:HD13	52:S:82:LEU:HA	1.85	0.44
61:c:18:LEU:O	61:c:22:MET:HG2	2.17	0.44
61:c:31:TYR:HB2	61:c:56:ARG:HH21	1.82	0.44
61:c:78:ASN:HB2	61:c:91:VAL:O	2.17	0.44
63:e:25:SER:HA	63:e:31:ILE:HB	1.99	0.44
63:e:78:LEU:HD11	78:5:2324:C:H4'	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:h:14:LYS:HE2	66:h:14:LYS:HB3	1.85	0.44
68:j:2:THR:HG22	78:5:1602:U:OP1	2.17	0.44
68:j:48:ASN:HA	68:j:54:LYS:CE	2.47	0.44
77:t:64:ILE:HG23	77:t:69:ALA:HB2	2.00	0.44
77:t:123:ARG:HG3	77:t:127:GLY:HA3	2.00	0.44
78:5:56:A:H2'	78:5:57:G:C8	2.52	0.44
78:5:422:C:O2'	78:5:423:G:H5'	2.17	0.44
78:5:480:C:H2'	78:5:481:G:C8	2.52	0.44
78:5:1688:G:H2'	78:5:1689:G:H8	1.81	0.44
78:5:2037:C:O2'	78:5:2038:U:H5'	2.17	0.44
78:5:2055:G:H5'	78:5:2056:G:H5''	2.00	0.44
78:5:2075:G:H2'	78:5:2076:G:H8	1.82	0.44
78:5:3612:C:O2'	78:5:3613:U:H5'	2.17	0.44
78:5:4349:C:H3'	78:5:4350:C:H5'	1.99	0.44
78:5:4493:U:O2'	78:5:4494:G:H5'	2.17	0.44
78:5:4546:A:H2'	78:5:4547:C:H6	1.83	0.44
79:7:46:C:H2'	79:7:47:G:H8	1.81	0.44
84:ET:26:G:H1	84:ET:44:A:H61	1.65	0.44
1:R:21:LYS:CE	1:R:55:VAL:HA	2.48	0.44
3:9:213:C:H2'	3:9:214:A:H8	1.81	0.44
3:9:444:A:H2'	3:9:445:A:H8	1.83	0.44
3:9:678:A:H2'	3:9:679:A:C8	2.52	0.44
3:9:905:A:H61	3:9:1179:G:H5''	1.83	0.44
3:9:1633:C:O2'	3:9:1634:C:H5'	2.17	0.44
5:BB:71:LEU:HG	5:BB:84:PHE:HE2	1.81	0.44
5:BB:113:MET:HB3	5:BB:142:PHE:CE2	2.53	0.44
5:BB:121:ILE:CG1	5:BB:161:VAL:HG13	2.46	0.44
7:EE:250:GLU:HG2	7:EE:254:LYS:HE3	2.00	0.44
9:HH:168:HIS:ND1	9:HH:169:LYS:HG3	2.33	0.44
11:JJ:16:PRO:HG2	11:JJ:24:ARG:CZ	2.46	0.44
12:LL:112:HIS:HB3	12:LL:141:ASN:ND2	2.33	0.44
13:NN:5:HIS:HB2	13:NN:121:ARG:NH1	2.32	0.44
13:NN:114:ARG:O	13:NN:118:ILE:HG13	2.18	0.44
22:DD:105:LEU:HD23	22:DD:184:ILE:HG21	1.99	0.44
26:PP:77:LYS:HB3	26:PP:102:PHE:CE2	2.52	0.44
28:RR:41:ILE:HG21	28:RR:47:ARG:CA	2.48	0.44
28:RR:106:LEU:HD13	28:RR:117:LEU:HD13	2.00	0.44
29:SS:108:ARG:HH22	45:J:121:PRO:HA	1.82	0.44
32:ZZ:100:VAL:HB	32:ZZ:108:ILE:HG22	2.00	0.44
36:A:79:ALA:HB3	36:A:82:ILE:CD1	2.46	0.44
36:A:92:LYS:HA	36:A:103:PRO:HD2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:A:92:LYS:HA	36:A:103:PRO:CD	2.48	0.44
37:B:89:ILE:HD12	37:B:153:MET:HE1	1.99	0.44
39:D:33:ARG:NE	39:D:37:VAL:HG21	2.33	0.44
39:D:89:LYS:HB3	39:D:229:ASN:OD1	2.17	0.44
40:E:115:MET:HE1	78:5:2261:G:OP1	2.18	0.44
40:E:151:THR:HB	40:E:203:LYS:HG2	1.99	0.44
40:E:153:LEU:HD23	40:E:199:ALA:HA	1.98	0.44
42:G:127:LEU:O	42:G:292:GLY:HA3	2.18	0.44
42:G:142:ARG:O	42:G:146:THR:HG23	2.18	0.44
42:G:211:ALA:HB2	42:G:243:LEU:CD2	2.47	0.44
46:L:4:SER:OG	78:5:1513:U:H4'	2.18	0.44
47:M:51:PRO:HG2	47:M:54:CYS:SG	2.58	0.44
51:Q:156:PRO:HD3	51:Q:163:THR:HG21	2.00	0.44
52:S:83:ARG:HB2	52:S:127:MET:CE	2.48	0.44
53:T:6:GLY:HA3	78:5:4208:U:OP1	2.18	0.44
53:T:28:ALA:HA	53:T:31:MET:SD	2.58	0.44
56:X:76:ILE:HG12	56:X:100:VAL:HG13	2.00	0.44
56:X:90:ILE:HG12	56:X:95:THR:O	2.18	0.44
61:c:36:LYS:O	61:c:40:GLN:HG2	2.18	0.44
67:i:55:ARG:O	67:i:59:GLU:HG3	2.17	0.44
68:j:36:LYS:CD	78:5:372:A:H5''	2.48	0.44
76:s:69:LEU:HD23	76:s:73:PRO:HA	1.99	0.44
76:s:122:THR:HG22	76:s:159:GLN:CG	2.42	0.44
77:t:20:GLY:HA2	77:t:47:ALA:O	2.18	0.44
77:t:53:TRP:CZ2	77:t:75:PRO:HG3	2.52	0.44
78:5:69:A:O2'	78:5:70:A:H5'	2.18	0.44
78:5:425:U:O2'	78:5:426:A:H5'	2.18	0.44
78:5:726:G:O2'	78:5:727:C:H5'	2.17	0.44
78:5:922:C:H2'	78:5:922(A):G:C8	2.50	0.44
78:5:1198:G:H2'	78:5:1199:G:C8	2.53	0.44
78:5:1342:A:O2'	78:5:1343:A:H5'	2.17	0.44
78:5:1599:A:H2'	78:5:1600:A:H5''	1.99	0.44
78:5:2423:A:H2'	78:5:2424:G:O4'	2.17	0.44
78:5:4571:A:H2'	78:5:4572:U:C6	2.52	0.44
78:5:4604:G:H2'	78:5:4606:G:OP2	2.17	0.44
78:5:5059:C:H2'	78:5:5060:A:O4'	2.18	0.44
80:8:19:C:O2'	80:8:20:A:H5'	2.17	0.44
80:8:90:C:H2'	80:8:91:A:C8	2.53	0.44
83:PT:33:U:H2'	83:PT:33:U:O2	2.16	0.44
84:ET:18:G:H21	84:ET:58:A:H5'	1.82	0.44
1:R:154:LEU:O	1:R:158:GLN:HG3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:W:25:ASP:C	55:V:120:PRO:HD3	2.43	0.44
3:9:124:U:OP1	8:GG:201:LYS:HD2	2.18	0.44
3:9:263:A:H2'	3:9:264:C:C5	2.49	0.44
3:9:362:G:C8	3:9:1150:A:H4'	2.53	0.44
3:9:792:U:H2'	3:9:793:U:C6	2.53	0.44
3:9:950:C:H2'	3:9:951:G:H8	1.82	0.44
3:9:1342:U:H4'	3:9:1343:G:H5''	1.98	0.44
3:9:1352:C:H2'	3:9:1353:C:H6	1.81	0.44
3:9:1446:C:O2'	3:9:1447:U:H5'	2.18	0.44
3:9:1603:C:H4'	3:9:1609:G:C5	2.53	0.44
4:AA:29:ASN:H	4:AA:151:ASP:HB2	1.83	0.44
4:AA:181:GLU:HG3	4:AA:185:MET:HE3	2.00	0.44
4:AA:183:LEU:HD12	4:AA:195:TRP:CZ2	2.53	0.44
5:BB:32:ASP:HB3	5:BB:95:ASN:OD1	2.18	0.44
5:BB:110:MET:O	5:BB:114:VAL:HG23	2.17	0.44
7:EE:79:ASP:HB3	7:EE:82:TYR:HB2	1.99	0.44
7:EE:183:VAL:HA	7:EE:224:ASN:O	2.17	0.44
10:II:118:ALA:O	10:II:119:LEU:HD23	2.18	0.44
11:JJ:140:GLN:NE2	18:YY:64:PHE:HB3	2.32	0.44
13:NN:40:LEU:CB	13:NN:50:ILE:HG12	2.48	0.44
14:OO:147:ARG:O	19:aa:28:ARG:HD3	2.17	0.44
17:XX:66:ILE:HB	21:ee:77:GLY:O	2.18	0.44
18:YY:27:VAL:HB	18:YY:69:THR:OG1	2.17	0.44
18:YY:104:ARG:HA	18:YY:107:ARG:CZ	2.47	0.44
20:bb:54:VAL:HB	20:bb:64:CYS:HB2	2.00	0.44
21:ee:85:VAL:HA	21:ee:88:GLN:CG	2.45	0.44
23:FF:124:ASP:OD1	23:FF:196:LEU:HD22	2.18	0.44
24:KK:7:ASN:O	24:KK:11:ILE:HG12	2.17	0.44
24:KK:24:LYS:HG3	24:KK:65:ARG:O	2.17	0.44
28:RR:29:HIS:HA	28:RR:32:LYS:HE2	2.00	0.44
28:RR:59:LYS:HB3	28:RR:63:ARG:NH1	2.31	0.44
29:SS:86:ARG:CZ	29:SS:106:LYS:HB3	2.48	0.44
36:A:196:TRP:HB3	36:A:197:PRO:HD3	1.99	0.44
37:B:382:VAL:HG13	78:5:5001:U:OP1	2.17	0.44
38:C:32:ILE:HD12	38:C:130:ALA:HB2	1.99	0.44
38:C:205:ARG:CG	78:5:2297:G:H5'	2.47	0.44
39:D:148:ALA:HB2	78:5:4323:A:N1	2.32	0.44
41:F:47:LYS:O	41:F:51:GLU:HG2	2.18	0.44
42:G:219:LEU:HD23	48:N:7:ILE:CD1	2.48	0.44
43:H:4:ILE:HA	43:H:61:TRP:CZ3	2.52	0.44
45:J:56:THR:HG23	45:J:62:ILE:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:L:172:GLU:CD	67:i:3:LEU:HD23	2.42	0.44
47:M:123:ILE:CD1	49:O:182:GLU:HG2	2.48	0.44
50:P:4:TYR:CE2	50:P:16:LYS:HD3	2.53	0.44
50:P:69:ARG:NH1	78:5:4981:G:H1'	2.33	0.44
51:Q:175:GLU:HB3	59:a:50:PRO:O	2.18	0.44
53:T:70:HIS:O	53:T:92:ARG:HG3	2.18	0.44
57:Y:54:GLU:HB3	57:Y:67:ILE:CG2	2.47	0.44
59:a:105:ARG:HD3	78:5:509:A:C6	2.53	0.44
61:c:48:LEU:HD11	61:c:60:ILE:CG2	2.48	0.44
64:f:7:CYS:HB2	64:f:103:VAL:CG2	2.48	0.44
64:f:15:LYS:HE3	78:5:2068:C:OP1	2.18	0.44
67:i:8:ALA:C	67:i:13:LYS:HB2	2.42	0.44
78:5:448:G:O5'	78:5:449:C:H5''	2.18	0.44
78:5:518:C:O2'	78:5:519:C:H5'	2.18	0.44
78:5:1632:A:H4'	78:5:4534:G:H4'	2.00	0.44
78:5:1720:C:H2'	78:5:1721:G:O4'	2.17	0.44
78:5:1738:A:O2'	78:5:1739:G:H5'	2.18	0.44
78:5:1931:C:N4	78:5:2040:A:H1'	2.32	0.44
78:5:2295:C:H2'	78:5:2296:G:C8	2.50	0.44
78:5:2573:A:N6	78:5:2761:U:N3	2.42	0.44
78:5:3761:C:O2'	78:5:3762:U:H5'	2.17	0.44
78:5:3847:C:O2'	78:5:3848:U:H5'	2.17	0.44
78:5:4238:G:O2'	78:5:4239:A:H5'	2.18	0.44
78:5:4997:G:O2'	78:5:4998:G:H5'	2.17	0.44
1:R:16:ARG:NE	78:5:2699:C:H5''	2.33	0.44
3:9:176:C:H2'	3:9:177:G:C8	2.53	0.44
3:9:645:C:H2'	3:9:646:G:H8	1.83	0.44
3:9:856:A:O2'	3:9:857:G:H5'	2.17	0.44
3:9:1399:A:O2'	3:9:1400:C:H5'	2.17	0.44
3:9:1655:U:H2'	3:9:1656:A:C8	2.47	0.44
6:CC:184:VAL:HG22	6:CC:195:LEU:HB2	1.99	0.44
7:EE:138:HIS:O	7:EE:139:LEU:HD23	2.17	0.44
8:GG:35:GLU:HB3	8:GG:49:VAL:CG1	2.47	0.44
8:GG:122:PRO:HA	8:GG:126:ASP:CB	2.48	0.44
11:JJ:26:ASP:OD1	11:JJ:30:LYS:HE3	2.18	0.44
11:JJ:49:THR:O	11:JJ:53:ILE:HG13	2.18	0.44
11:JJ:58:ARG:O	11:JJ:62:THR:HG23	2.17	0.44
11:JJ:86:VAL:CG1	11:JJ:100:LEU:HD11	2.48	0.44
12:LL:59:LYS:HB3	12:LL:134:LEU:HG	1.98	0.44
12:LL:123:GLY:O	12:LL:148:ALA:HB2	2.17	0.44
15:VV:74:LYS:HD2	15:VV:81:LYS:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:WW:3:ARG:HG3	16:WW:9:ASP:OD2	2.18	0.44
16:WW:93:LEU:HD21	16:WW:128:PHE:CD1	2.52	0.44
17:XX:100:VAL:CG1	17:XX:125:VAL:HG13	2.48	0.44
18:YY:7:ILE:HG23	18:YY:25:ILE:HG23	2.00	0.44
22:DD:108:LYS:HD3	22:DD:113:LEU:HD23	1.99	0.44
24:KK:14:LEU:HD22	24:KK:35:LEU:HD23	2.00	0.44
26:PP:37:TYR:OH	26:PP:45:LEU:HD11	2.18	0.44
36:A:189:TYR:HB2	36:A:196:TRP:HB2	1.98	0.44
38:C:73:VAL:HG23	38:C:75:ARG:H	1.83	0.44
38:C:325:MET:HG3	38:C:332:ALA:CB	2.48	0.44
38:C:344:ALA:O	38:C:348:LYS:HG2	2.16	0.44
39:D:73:MET:HA	79:7:114:U:H1'	2.00	0.44
40:E:133:LYS:HD3	78:5:1284:G:C4'	2.47	0.44
45:J:53:ALA:HA	78:5:4258:C:OP1	2.18	0.44
46:L:74:ARG:O	46:L:97:SER:HB3	2.18	0.44
46:L:125:VAL:HG13	46:L:139:SER:CB	2.48	0.44
46:L:203:ALA:O	46:L:207:VAL:HG23	2.18	0.44
47:M:37:LEU:HD12	47:M:47:ARG:HD2	2.00	0.44
49:O:122:ALA:O	49:O:128:ARG:HD2	2.18	0.44
51:Q:71:LYS:CE	51:Q:96:PRO:HG2	2.48	0.44
52:S:97:TYR:CZ	52:S:109:CYS:HA	2.52	0.44
53:T:50:LYS:HB3	78:5:4313:A:OP1	2.17	0.44
55:V:48:ARG:CB	55:V:51:ARG:HD2	2.48	0.44
56:X:80:PRO:O	66:h:36:VAL:HG11	2.18	0.44
57:Y:2:LYS:HA	78:5:242:U:O2'	2.18	0.44
58:Z:84:ARG:HG2	61:c:62:TYR:OH	2.18	0.44
60:b:110:ALA:O	60:b:114:ARG:HG3	2.17	0.44
71:m:78:HIS:HB2	71:m:79:PRO:HD2	2.00	0.44
76:s:77:LYS:HD3	76:s:196:GLY:HA3	2.00	0.44
76:s:134:LYS:H	76:s:134:LYS:HD2	1.83	0.44
77:t:53:TRP:CE3	77:t:58:ILE:HG12	2.52	0.44
77:t:80:LEU:HD13	77:t:112:ILE:HG23	2.00	0.44
78:5:2535:G:H2'	78:5:2536:A:C8	2.53	0.44
78:5:2540:C:H2'	78:5:2541:G:C8	2.53	0.44
78:5:2783:A:H2'	78:5:2784:C:O4'	2.18	0.44
78:5:4210:U:H2'	78:5:4211:C:C6	2.52	0.44
78:5:4386:C:H4'	78:5:4533:A:H4'	1.98	0.44
80:8:1:C:H2'	80:8:2:G:H5'	1.99	0.44
1:R:77:GLY:O	1:R:81:ARG:HD3	2.18	0.44
1:R:102:LEU:O	1:R:106:LEU:HD13	2.18	0.44
1:R:168:GLU:O	1:R:172:ARG:HG2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:303:C:H2'	3:9:304:G:O4'	2.17	0.44
3:9:885:U:O2'	3:9:886:C:H5'	2.18	0.44
3:9:1001:U:H1'	6:CC:194:ARG:CD	2.44	0.44
3:9:1055:C:C5'	3:9:1062:C:H1'	2.48	0.44
3:9:1424:U:H2'	3:9:1425:A:C8	2.53	0.44
3:9:1586:A:C8	31:UU:56:MET:HE3	2.53	0.44
3:9:1623:G:N2	3:9:1625:A:H3'	2.33	0.44
5:BB:127:VAL:O	5:BB:134:LEU:HD23	2.18	0.44
6:CC:166:ARG:CG	6:CC:181:PRO:HG3	2.46	0.44
6:CC:183:LYS:HG3	16:WW:95:PRO:O	2.17	0.44
8:GG:78:SER:H	8:GG:81:HIS:CG	2.36	0.44
8:GG:186:GLN:O	8:GG:190:ARG:HG2	2.18	0.44
10:II:107:THR:OG1	10:II:108:PRO:HD3	2.18	0.44
11:JJ:93:LYS:O	11:JJ:97:ILE:HG13	2.17	0.44
17:XX:95:GLU:HB2	17:XX:98:ASP:OD2	2.17	0.44
18:YY:103:SER:OG	18:YY:106:GLN:HB2	2.18	0.44
24:KK:91:PRO:CD	24:KK:94:LEU:HD13	2.39	0.44
25:MM:25:ALA:CB	25:MM:31:LEU:HD23	2.47	0.44
28:RR:93:GLN:HG2	28:RR:94:GLU:H	1.83	0.44
30:TT:38:LYS:HD2	30:TT:43:LYS:O	2.17	0.44
30:TT:133:ARG:O	30:TT:137:GLN:HG3	2.18	0.44
33:cc:31:ARG:HG2	33:cc:43:ILE:CG1	2.41	0.44
36:A:225:ILE:CD1	36:A:233:ARG:HD3	2.48	0.44
37:B:120:LYS:HE2	78:5:4578:G:H4'	2.00	0.44
38:C:55:SER:HB3	80:8:27:U:OP1	2.18	0.44
38:C:179:ASP:O	38:C:183:VAL:HG23	2.18	0.44
38:C:312:ARG:HD2	38:C:313:VAL:O	2.18	0.44
38:C:347:HIS:O	38:C:351:VAL:HG23	2.18	0.44
41:F:135:VAL:O	41:F:139:ILE:HG12	2.18	0.44
46:L:87:HIS:HB3	46:L:90:VAL:HG23	1.99	0.44
49:O:176:ARG:HD3	78:5:4769:G:H5'	2.00	0.44
50:P:28:ASN:O	50:P:32:THR:HG22	2.17	0.44
52:S:33:PHE:CE1	52:S:106:VAL:HG21	2.53	0.44
69:k:54:GLU:O	69:k:58:GLN:HG3	2.17	0.44
73:o:24:THR:HG23	73:o:69:ARG:HB3	1.99	0.44
73:o:97:LYS:HG3	78:5:4233:A:OP1	2.18	0.44
76:s:14:PHE:CE1	76:s:60:MET:HB2	2.53	0.44
77:t:15:LEU:HD12	77:t:62:LEU:HD22	1.98	0.44
77:t:37:LEU:HD22	77:t:38:SER:H	1.83	0.44
77:t:129:ILE:CD1	77:t:160:VAL:HG21	2.45	0.44
77:t:146:ARG:HB2	77:t:148:PRO:HD2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:t:151:ILE:C	77:t:153:ASP:N	2.73	0.44
78:5:63:G:H22	78:5:333:U:H2'	1.82	0.44
78:5:106:A:O2'	78:5:335:A:H1'	2.18	0.44
78:5:703:G:H2'	78:5:704:C:H4'	2.00	0.44
78:5:963:G:H2'	78:5:964:A:C8	2.53	0.44
78:5:1455:G:H2'	78:5:1456:C:C6	2.52	0.44
78:5:1586:G:O2'	78:5:1587:G:H5'	2.18	0.44
78:5:1645:C:H2'	78:5:1646:A:C8	2.53	0.44
78:5:1953:U:H2'	78:5:1954:U:C6	2.52	0.44
78:5:2326:G:H2'	78:5:2327:G:O4'	2.17	0.44
78:5:2671:C:H2'	78:5:2672:C:C6	2.52	0.44
78:5:4088:C:H4'	78:5:4166:G:OP1	2.18	0.44
78:5:4291:G:H5''	78:5:4293:U:C5	2.53	0.44
78:5:4342:C:O2'	78:5:4343:U:H5'	2.17	0.44
78:5:4348:A:O2'	78:5:4349:C:H5''	2.18	0.44
78:5:4458:C:H2'	78:5:4459:U:C6	2.52	0.44
78:5:4637:G:H2'	78:5:4638:U:H6	1.82	0.44
78:5:4682:U:O2'	78:5:4683:U:H5'	2.18	0.44
78:5:4723:A:H2'	78:5:4724:A:C8	2.53	0.44
78:5:4767:C:O2'	78:5:4768:G:H5'	2.18	0.44
84:ET:62:C:H2'	84:ET:63:C:N1	2.33	0.44
2:W:35:LYS:HD2	78:5:5004:C:OP1	2.18	0.44
3:9:34:U:H2'	3:9:35:C:C6	2.52	0.44
3:9:78:C:O2'	8:GG:175:LYS:HD2	2.17	0.44
3:9:357:A:O2'	3:9:358:G:H5'	2.18	0.44
3:9:484:A:OP1	11:JJ:174:LYS:HA	2.18	0.44
3:9:539:C:O2'	3:9:540:A:H5'	2.17	0.44
3:9:732:U:H1'	3:9:749:G:N2	2.33	0.44
3:9:764:U:H6	9:HH:118:ARG:HG3	1.83	0.44
3:9:945:C:H2'	3:9:946:G:C8	2.53	0.44
3:9:949:G:O2'	3:9:950:C:H5'	2.18	0.44
3:9:980:A:P	19:aa:13:LYS:HB3	2.58	0.44
3:9:1186:G:OP1	3:9:1189:U:H4'	2.18	0.44
3:9:1405:C:O2'	22:DD:162:ASP:HB3	2.18	0.44
3:9:1509:C:O2'	3:9:1510:U:H5'	2.17	0.44
3:9:1518:C:O2'	34:dd:7:TYR:HA	2.18	0.44
4:AA:38:ILE:CG1	4:AA:47:TYR:HB3	2.45	0.44
4:AA:40:LYS:O	4:AA:48:ILE:HB	2.17	0.44
5:BB:90:ASP:HB2	5:BB:223:PHE:CZ	2.53	0.44
6:CC:200:ARG:HA	6:CC:221:ASP:OD2	2.18	0.44
7:EE:89:VAL:CG1	7:EE:119:ALA:HB1	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:GG:32:MET:SD	8:GG:65:GLN:HB2	2.58	0.44
11:JJ:149:VAL:CG1	11:JJ:157:ILE:HD11	2.48	0.44
12:LL:85:THR:HA	12:LL:113:LEU:N	2.29	0.44
15:VV:17:CYS:SG	15:VV:59:ILE:HD12	2.58	0.44
16:WW:42:MET:CE	16:WW:49:GLU:HA	2.40	0.44
17:XX:46:HIS:ND1	17:XX:103:ALA:HB2	2.33	0.44
27:QQ:38:PRO:HD2	30:TT:8:ASP:HA	1.98	0.44
29:SS:121:ARG:HG3	29:SS:131:VAL:CG2	2.48	0.44
30:TT:28:LEU:HD12	30:TT:54:TYR:CD2	2.53	0.44
37:B:57:VAL:HG23	37:B:367:PHE:HB3	1.99	0.44
38:C:120:LYS:O	38:C:124:ILE:HG13	2.18	0.44
38:C:326:LEU:HD22	38:C:333:LYS:HB2	2.00	0.44
39:D:205:ALA:O	39:D:209:ARG:HG3	2.18	0.44
39:D:237:GLU:HG2	39:D:241:LYS:HE3	2.00	0.44
41:F:181:TYR:HB3	41:F:199:HIS:CG	2.52	0.44
49:O:60:LYS:HE3	78:5:2046:G:OP1	2.17	0.44
50:P:114:ILE:HA	50:P:150:LEU:CD2	2.48	0.44
52:S:13:VAL:CG2	52:S:63:TYR:HB3	2.38	0.44
52:S:33:PHE:HE2	52:S:126:ILE:HG21	1.83	0.44
53:T:19:PHE:CD2	78:5:1791:U:H4'	2.52	0.44
56:X:82:THR:HG22	56:X:155:ILE:HB	2.00	0.44
59:a:145:VAL:HG13	67:i:5:TYR:CE2	2.53	0.44
70:l:45:ARG:NH2	78:5:2796:G:H5'	2.32	0.44
74:p:47:MET:HE2	74:p:57:CYS:HB2	1.99	0.44
75:r:53:PRO:HD3	75:r:117:ILE:CD1	2.47	0.44
77:t:90:ARG:HE	77:t:98:ILE:HD12	1.82	0.44
78:5:25:A:N6	78:5:58:G:H1	2.11	0.44
78:5:68:U:H2'	78:5:69:A:O4'	2.18	0.44
78:5:240:G:C4	78:5:241:G:H1'	2.52	0.44
78:5:1440:U:H2'	78:5:1441:C:C5	2.53	0.44
78:5:1844:G:H2'	78:5:1845:U:O4'	2.17	0.44
78:5:2624:G:H1	78:5:2632:U:H3	1.66	0.44
78:5:3644:U:O2'	78:5:4555:U:H5'	2.18	0.44
78:5:4128:A:N6	78:5:4156:G:H1'	2.32	0.44
78:5:4486:C:H1'	78:5:4683:U:O2	2.17	0.44
78:5:4602:A:H2'	78:5:4603:C:O4'	2.17	0.44
78:5:4616:A:H2'	78:5:4617:G:O4'	2.18	0.44
78:5:4748:U:H2'	78:5:4749:C:C6	2.53	0.44
78:5:5016:A:H61	78:5:5033:G:H21	1.66	0.44
84:ET:23:A:H2'	84:ET:24:G:H8	1.83	0.44
3:9:20:G:H4'	3:9:544:G:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:94:G:OP1	7:EE:6:LYS:HE3	2.18	0.43
3:9:244:C:N4	8:GG:187:HIS:CG	2.86	0.43
3:9:590:U:H4'	3:9:934:A:C2'	2.48	0.43
3:9:664:A:H2'	3:9:665:A:H8	1.83	0.43
3:9:677:C:H5'	11:JJ:147:PHE:CE1	2.53	0.43
3:9:1069:C:H4'	78:5:3763:A:N6	2.26	0.43
3:9:1253:C:O2	26:PP:126:VAL:HG21	2.18	0.43
3:9:1280:C:H4'	3:9:1281:A:O5'	2.18	0.43
3:9:1524:C:OP1	3:9:1525:U:H2'	2.17	0.43
7:EE:45:ILE:CB	7:EE:61:VAL:HG11	2.48	0.43
9:HH:101:LEU:HD13	9:HH:120:ARG:CG	2.48	0.43
10:II:79:ILE:HG12	10:II:170:LYS:NZ	2.32	0.43
11:JJ:110:LEU:HB2	11:JJ:147:PHE:O	2.18	0.43
12:LL:20:LYS:NZ	12:LL:22:ARG:HG2	2.32	0.43
12:LL:101:ARG:HD2	17:XX:6:GLY:O	2.18	0.43
13:NN:29:THR:O	13:NN:33:VAL:HG23	2.18	0.43
13:NN:85:PRO:HG2	13:NN:129:TYR:CE2	2.53	0.43
17:XX:102:VAL:CG1	17:XX:120:PHE:HB3	2.48	0.43
17:XX:107:ARG:CG	17:XX:112:VAL:HG22	2.47	0.43
23:FF:200:ALA:O	23:FF:204:ARG:HB3	2.18	0.43
25:MM:36:ARG:HG3	25:MM:40:LYS:NZ	2.33	0.43
26:PP:43:ARG:NH1	26:PP:47:ARG:HD2	2.33	0.43
28:RR:30:THR:O	28:RR:34:VAL:HG23	2.17	0.43
29:SS:3:LEU:HB3	32:ZZ:50:PHE:CD2	2.53	0.43
30:TT:18:LEU:O	30:TT:22:LEU:HG	2.17	0.43
30:TT:103:VAL:O	30:TT:107:LEU:HG	2.18	0.43
36:A:202:VAL:HG21	78:5:3689:G:H5''	2.00	0.43
38:C:134:PRO:HA	38:C:150:LEU:HD12	2.00	0.43
38:C:221:PHE:HB3	38:C:227:ILE:HG21	1.99	0.43
39:D:226:TYR:CD2	39:D:231:VAL:HB	2.53	0.43
39:D:287:PHE:CE1	44:I:210:ARG:HB3	2.53	0.43
40:E:48:ARG:HD2	40:E:64:MET:HE2	2.00	0.43
40:E:164:ARG:NH1	40:E:278:PHE:HB2	2.33	0.43
42:G:140:LEU:HD11	42:G:144:THR:HB	2.00	0.43
44:I:17:TYR:HD2	44:I:96:VAL:HB	1.82	0.43
49:O:130:LYS:HE2	49:O:130:LYS:HB2	1.87	0.43
51:Q:71:LYS:HE3	51:Q:96:PRO:HG2	2.00	0.43
60:b:41:ARG:NH1	78:5:1492:G:H4'	2.33	0.43
68:j:21:ARG:HE	68:j:39:TYR:HA	1.82	0.43
71:m:76:ARG:O	71:m:77:LEU:HD23	2.18	0.43
77:t:153:ASP:O	77:t:154:ASP:C	2.61	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:5:1174:G:O2'	78:5:1175:A:H5'	2.18	0.43
78:5:1206:C:O2'	78:5:1207:C:H5'	2.18	0.43
78:5:1406(B):C:H2'	78:5:1406(C):G:C8	2.53	0.43
78:5:1663:C:H4'	78:5:2320:G:H21	1.83	0.43
78:5:2081:C:H2'	78:5:2082:G:H8	1.83	0.43
78:5:2292:C:O2'	78:5:2293:U:H5'	2.18	0.43
78:5:2413:U:H2'	78:5:2414:G:H8	1.82	0.43
78:5:2480:G:H2'	78:5:2481:G:H8	1.83	0.43
78:5:2793:G:H5''	78:5:2794:C:H5''	2.00	0.43
78:5:3789:C:H2'	78:5:3790:U:C5	2.52	0.43
78:5:4513:A:O2'	78:5:4514:G:H5'	2.18	0.43
78:5:4868:G:O2'	78:5:4869:U:H5'	2.18	0.43
78:5:4879:C:O2'	78:5:4880:C:H5'	2.18	0.43
80:8:91:A:O2'	80:8:92:U:H5'	2.18	0.43
81:EF:36:THR:O	81:EF:40:VAL:HG23	2.18	0.43
2:W:4:GLU:O	2:W:13:ILE:HB	2.17	0.43
2:W:45:ASN:HD21	2:W:47:ARG:HB2	1.83	0.43
3:9:77:A:H4'	8:GG:157:VAL:HG11	1.99	0.43
3:9:290:U:H4'	10:II:15:GLY:O	2.18	0.43
3:9:788:C:H5''	5:BB:136:ARG:NH1	2.33	0.43
3:9:1238:G:H4'	3:9:1681:A:H2	1.82	0.43
3:9:1265:C:H5'	27:QQ:145:TYR:CD1	2.54	0.43
3:9:1275:A:H1'	3:9:1280:C:N4	2.30	0.43
3:9:1357:C:OP2	3:9:1693:C:H5''	2.18	0.43
3:9:1526:G:H21	26:PP:126:VAL:HG11	1.83	0.43
4:AA:45:GLY:HA3	28:RR:129:LYS:HE3	2.00	0.43
7:EE:162:ILE:HG22	7:EE:168:LYS:C	2.43	0.43
8:GG:188:LYS:HA	8:GG:191:ARG:NE	2.33	0.43
8:GG:221:LYS:C	8:GG:224:ARG:NH1	2.41	0.43
20:bb:32:PHE:O	20:bb:82:LYS:HG2	2.18	0.43
23:FF:192:LYS:O	23:FF:196:LEU:HG	2.18	0.43
27:QQ:63:PHE:CZ	27:QQ:92:LEU:HD22	2.53	0.43
33:cc:9:ILE:HG23	33:cc:59:LEU:HA	2.00	0.43
37:B:310:SER:OG	37:B:312:LYS:HG2	2.17	0.43
39:D:61:ILE:HG12	39:D:79:TYR:CD2	2.53	0.43
39:D:67:ALA:HA	39:D:72:ASP:CB	2.48	0.43
45:J:43:LEU:CB	45:J:117:ILE:HD11	2.47	0.43
45:J:51:SER:O	45:J:67:LYS:HA	2.18	0.43
45:J:53:ALA:HB3	45:J:63:ARG:O	2.18	0.43
46:L:9:ILE:HD11	59:a:34:ASN:CG	2.43	0.43
48:N:89:VAL:HG13	78:5:3928:A:H5'	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:O:22:ILE:O	49:O:26:GLN:HG2	2.17	0.43
49:O:103:LYS:HE3	49:O:103:LYS:HB2	1.88	0.43
52:S:111:ARG:NH1	78:5:2062:C:H1'	2.33	0.43
55:V:5:GLY:O	78:5:4595:G:H5''	2.18	0.43
56:X:80:PRO:HB2	56:X:155:ILE:HD13	1.98	0.43
58:Z:14:LEU:HG	65:g:88:ARG:HB2	1.99	0.43
59:a:77:LYS:HB2	59:a:80:THR:HG21	2.00	0.43
61:c:17:ARG:O	61:c:21:VAL:HG23	2.17	0.43
62:d:37:GLY:O	62:d:41:ARG:HG3	2.17	0.43
63:e:88:LEU:HD22	63:e:95:TYR:HB2	2.00	0.43
68:j:21:ARG:HH21	68:j:39:TYR:HA	1.82	0.43
75:r:26:SER:OG	75:r:28:GLU:HG3	2.17	0.43
75:r:97:ILE:CD1	75:r:107:ARG:HA	2.48	0.43
75:r:114:ALA:O	75:r:118:LEU:HD13	2.18	0.43
76:s:24:TYR:CD1	76:s:92:LYS:HB2	2.53	0.43
76:s:78:LEU:O	76:s:78:LEU:HD13	2.18	0.43
77:t:122:ALA:HB2	78:5:1972:G:O2'	2.17	0.43
77:t:132:ILE:HA	77:t:135:THR:HG23	1.99	0.43
78:5:158:A:C4'	78:5:159:C:H5''	2.48	0.43
78:5:272:U:H2'	78:5:273:U:C6	2.52	0.43
78:5:315:G:H3'	78:5:315:G:OP2	2.18	0.43
78:5:927:G:H2'	78:5:928:C:C6	2.53	0.43
78:5:1666:C:H2'	78:5:1667:G:O4'	2.19	0.43
78:5:1920:C:O2'	78:5:1922:G:H5''	2.18	0.43
78:5:2279:A:H2'	78:5:2280:G:O4'	2.18	0.43
78:5:2444:U:O2'	80:8:112:G:H4'	2.17	0.43
78:5:2706:G:H3'	78:5:2707:U:C5'	2.49	0.43
78:5:3641:U:H5''	78:5:3642:A:H5''	1.99	0.43
78:5:4159:C:H2'	78:5:4160:C:C6	2.53	0.43
78:5:4201:G:O2'	78:5:4202:U:H5'	2.18	0.43
78:5:4408:G:H2'	78:5:4409:C:C6	2.54	0.43
78:5:4967:A:H2'	78:5:4968:A:H8	1.83	0.43
79:7:3:C:O2'	79:7:4:U:H5'	2.18	0.43
81:EF:614:ALA:HB1	81:EF:698:ARG:HH11	1.83	0.43
83:PT:39:G:C8	83:PT:40:C:C6	3.06	0.43
84:ET:49:C:OP1	84:ET:49:C:H3'	2.17	0.43
3:9:95:G:O2'	3:9:96:C:H5'	2.18	0.43
3:9:342:A:H3'	3:9:343:G:H8	1.84	0.43
3:9:611:C:H1'	9:HH:116:ARG:HH22	1.82	0.43
3:9:986:C:H41	3:9:996:A:H62	1.65	0.43
3:9:998:G:O2'	3:9:999:U:H5'	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:1674:U:H5''	27:QQ:132:PHE:CB	2.48	0.43
5:BB:71:LEU:HG	5:BB:84:PHE:CE2	2.53	0.43
5:BB:125:VAL:HG21	5:BB:173:THR:CG2	2.48	0.43
6:CC:66:LEU:O	6:CC:70:VAL:HG23	2.18	0.43
6:CC:155:ILE:CG2	6:CC:159:LYS:HE3	2.49	0.43
7:EE:35:PRO:HG2	7:EE:36:HIS:HD2	1.83	0.43
20:bb:51:GLN:HE21	20:bb:51:GLN:HB3	1.47	0.43
23:FF:92:ILE:HG23	23:FF:170:ALA:HA	2.00	0.43
29:SS:84:LEU:HD13	29:SS:96:SER:CA	2.48	0.43
29:SS:86:ARG:NH1	29:SS:106:LYS:HB3	2.33	0.43
36:A:66:PRO:HG2	36:A:67:TYR:CD2	2.53	0.43
37:B:385:LYS:HD3	78:5:5001:U:OP1	2.18	0.43
38:C:181:LYS:HG2	78:5:2300:A:H2	1.83	0.43
38:C:207:PRO:HG2	38:C:227:ILE:HD11	1.99	0.43
39:D:63:GLN:HE22	79:7:5:A:H1'	1.83	0.43
40:E:61:ARG:CD	78:5:1237:C:H1'	2.46	0.43
41:F:218:GLY:CA	78:5:1906:U:H5'	2.49	0.43
45:J:144:LYS:HE3	45:J:147:ARG:O	2.18	0.43
46:L:179:PHE:O	46:L:183:ARG:HG2	2.19	0.43
49:O:121:PRO:HD2	52:S:166:ARG:O	2.18	0.43
52:S:140:PRO:HA	52:S:143:LYS:HB2	1.99	0.43
61:c:62:TYR:O	61:c:66:LEU:HG	2.18	0.43
63:e:4:LEU:HG	63:e:119:ALA:O	2.17	0.43
65:g:76:ARG:HD2	65:g:77:ALA:O	2.17	0.43
67:i:33:LEU:HD22	67:i:34:THR:N	2.33	0.43
76:s:47:LEU:HB3	76:s:50:LYS:HD2	2.00	0.43
78:5:275:C:H2'	78:5:276:C:N1	2.33	0.43
78:5:432:U:H4'	78:5:433:A:H5''	1.99	0.43
78:5:929:A:H3'	78:5:930:G:C8	2.53	0.43
78:5:1362:G:H2'	78:5:1363:C:C6	2.53	0.43
78:5:1394:G:N2	78:5:1470:G:H5'	2.33	0.43
78:5:1597:G:O6	78:5:1600:A:H5'	2.18	0.43
78:5:2001:G:H5''	78:5:2002:A:OP2	2.18	0.43
78:5:2095:A:O2'	78:5:2096:G:H5'	2.19	0.43
78:5:3748:A:H2'	78:5:3749:C:H6	1.82	0.43
78:5:3774:A:H2'	78:5:3775:A:N3	2.33	0.43
78:5:3934:G:H2'	78:5:3935:C:H6	1.81	0.43
78:5:4358:U:O2'	78:5:4359:U:H5'	2.19	0.43
78:5:4631:G:H2'	78:5:4632:U:C6	2.53	0.43
80:8:123:U:H2'	80:8:124:U:H5'	2.00	0.43
3:9:18:C:O2'	3:9:19:A:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:91:A:H5''	3:9:93:U:C6	2.53	0.43
3:9:422:C:H5''	7:EE:7:LYS:HD3	2.01	0.43
3:9:1168:A:C2'	3:9:1169:A:H5''	2.46	0.43
3:9:1169:A:P	72:n:13:LEU:HD21	2.58	0.43
3:9:1283:C:O2'	3:9:1284:C:H5'	2.17	0.43
3:9:1386:A:H2'	3:9:1388:U:H5'	2.00	0.43
3:9:1615:C:P	29:SS:132:ARG:HB2	2.58	0.43
3:9:1632:C:H2'	3:9:1633:C:H6	1.83	0.43
4:AA:169:HIS:HA	4:AA:203:PHE:CD1	2.53	0.43
5:BB:40:ASN:CG	5:BB:76:ASN:HB2	2.44	0.43
5:BB:92:GLN:H	5:BB:97:LEU:HD13	1.82	0.43
5:BB:134:LEU:CD1	5:BB:219:LYS:HD2	2.49	0.43
6:CC:209:VAL:HG11	6:CC:233:LEU:CD1	2.49	0.43
7:EE:45:ILE:HA	7:EE:61:VAL:HG11	2.00	0.43
8:GG:46:LYS:HE3	8:GG:118:GLU:HB3	2.00	0.43
8:GG:220:ALA:C	8:GG:224:ARG:NH1	2.74	0.43
9:HH:178:LYS:HD2	9:HH:182:GLY:CA	2.47	0.43
10:II:56:ARG:HA	10:II:180:GLY:O	2.17	0.43
16:WW:104:LEU:HD12	16:WW:104:LEU:O	2.18	0.43
21:ee:98:LYS:CD	21:ee:99:LYS:HD3	2.44	0.43
22:DD:69:LEU:O	22:DD:73:VAL:HG23	2.19	0.43
24:KK:25:LYS:HB2	24:KK:67:PHE:CE1	2.51	0.43
24:KK:75:GLY:O	24:KK:79:LEU:HG	2.18	0.43
25:MM:35:ILE:HG13	35:ff:102:VAL:HG11	2.00	0.43
29:SS:70:ILE:HG12	29:SS:77:TYR:CD1	2.54	0.43
34:dd:19:ARG:HD3	34:dd:32:ARG:HD3	1.99	0.43
36:A:231:ALA:HA	78:5:3667:C:OP1	2.18	0.43
38:C:8:ILE:HG23	38:C:149:GLU:CD	2.43	0.43
39:D:91:GLY:O	39:D:97:ALA:HB2	2.18	0.43
40:E:167:PHE:CZ	40:E:176:LEU:HD22	2.53	0.43
40:E:221:LYS:HD3	40:E:222:LYS:N	2.33	0.43
41:F:64:TYR:CE2	41:F:68:ILE:HD11	2.54	0.43
41:F:212:LEU:CB	41:F:246:MET:HE3	2.48	0.43
42:G:218:GLU:OE2	48:N:22:LEU:HD13	2.18	0.43
45:J:159:LYS:O	45:J:163:MET:HG3	2.18	0.43
48:N:114:ARG:HD3	48:N:156:HIS:O	2.18	0.43
52:S:162:GLN:H	52:S:162:GLN:HG3	1.67	0.43
58:Z:100:VAL:HG12	58:Z:107:LYS:HA	2.00	0.43
58:Z:122:TYR:HB2	58:Z:131:PHE:CE1	2.53	0.43
59:a:99:PRO:HG2	59:a:122:VAL:HG12	2.01	0.43
60:b:25:ARG:HA	60:b:25:ARG:HD2	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:c:32:LYS:O	61:c:36:LYS:HG3	2.18	0.43
65:g:2:VAL:HG21	78:5:2807:A:C4'	2.48	0.43
65:g:9:ARG:HG3	65:g:34:TYR:CZ	2.52	0.43
66:h:90:ALA:O	66:h:94:ARG:HG3	2.17	0.43
78:5:83:C:O5'	78:5:84:A:H2'	2.17	0.43
78:5:321:U:H2'	78:5:322:C:H6	1.82	0.43
78:5:948:C:O2'	78:5:949:G:H5'	2.18	0.43
78:5:1441:C:H2'	78:5:1442:C:H6	1.83	0.43
78:5:1533:A:N1	78:5:1636:U:H1'	2.32	0.43
78:5:1779:U:H2'	78:5:1780:A:H8	1.82	0.43
78:5:2083:C:H5''	78:5:2084:C:OP2	2.19	0.43
78:5:2703:G:H2'	78:5:2704:C:C6	2.53	0.43
78:5:2719:C:O2'	78:5:2720:C:H5'	2.19	0.43
78:5:2856:C:H2'	78:5:2857:A:O4'	2.19	0.43
78:5:3706:C:H2'	78:5:3707:U:C6	2.53	0.43
78:5:3845:A:H4'	78:5:4668:U:O2'	2.18	0.43
78:5:4991:U:H2'	78:5:4992:G:H8	1.81	0.43
80:8:56:G:H2'	80:8:57:C:O4'	2.18	0.43
81:EF:421:VAL:HG12	81:EF:464:VAL:HG22	1.99	0.43
2:W:1:MET:HB3	37:B:57:VAL:HG11	2.00	0.43
3:9:268:U:H2'	3:9:269:U:C6	2.53	0.43
3:9:788:C:H5''	5:BB:136:ARG:HH12	1.84	0.43
3:9:810:A:H2'	3:9:811:A:O4'	2.18	0.43
3:9:1091:G:H2'	3:9:1092:U:O4'	2.18	0.43
3:9:1215:C:H5'	3:9:1216:A:N7	2.34	0.43
3:9:1271:G:H5'	31:UU:71:GLY:HA2	2.00	0.43
3:9:1319:C:H2'	3:9:1320:U:C6	2.53	0.43
3:9:1496:G:H5''	83:PT:34:A:C5'	2.48	0.43
3:9:1519:C:H2'	3:9:1520:G:C8	2.53	0.43
5:BB:71:LEU:HD12	5:BB:82:ARG:CB	2.48	0.43
7:EE:179:ASN:HA	7:EE:231:GLY:N	2.32	0.43
7:EE:195:ILE:HG23	7:EE:208:VAL:CG1	2.48	0.43
8:GG:64:LYS:HD3	8:GG:65:GLN:H	1.84	0.43
8:GG:64:LYS:NZ	8:GG:82:SER:HB3	2.34	0.43
8:GG:164:LYS:HE3	8:GG:167:LYS:CG	2.49	0.43
8:GG:189:ARG:HA	8:GG:192:ILE:CG1	2.48	0.43
8:GG:223:LYS:HB2	8:GG:223:LYS:HE3	1.75	0.43
10:II:165:GLN:HB3	10:II:170:LYS:O	2.18	0.43
11:JJ:113:GLN:O	11:JJ:117:LEU:HD13	2.18	0.43
13:NN:41:ALA:HB1	13:NN:80:LEU:HD12	2.01	0.43
14:OO:125:LYS:HA	14:OO:125:LYS:HD3	1.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:VV:55:ILE:HD11	15:VV:69:ILE:CG1	2.47	0.43
16:WW:31:SER:O	16:WW:35:VAL:HG23	2.18	0.43
18:YY:38:THR:O	18:YY:42:GLU:HG3	2.18	0.43
25:MM:64:LEU:O	25:MM:68:LEU:HD13	2.18	0.43
26:PP:17:TYR:HB3	26:PP:25:LEU:HD11	2.00	0.43
27:QQ:9:SER:HB2	27:QQ:24:HIS:HE1	1.83	0.43
29:SS:50:ILE:HD11	29:SS:67:VAL:HG22	2.01	0.43
38:C:5:ARG:HA	38:C:29:LYS:HE3	1.99	0.43
41:F:165:ARG:O	78:5:2275:G:H4'	2.18	0.43
46:L:48:PRO:HG3	66:h:118:LYS:HE3	2.00	0.43
47:M:82:ILE:HD13	47:M:85:LYS:HZ1	1.82	0.43
47:M:105:THR:HG22	47:M:106:ASP:H	1.84	0.43
49:O:121:PRO:HD3	52:S:168:THR:HG22	2.01	0.43
49:O:175:MET:HE3	78:5:4873:G:H1'	2.00	0.43
50:P:148:MET:HE2	50:P:150:LEU:HD21	2.01	0.43
53:T:130:ARG:NH2	78:5:1728:U:H1'	2.33	0.43
57:Y:50:ARG:HD3	57:Y:110:LYS:CB	2.48	0.43
65:g:108:LYS:HE2	65:g:112:GLN:HE21	1.84	0.43
68:j:19:CYS:CA	68:j:27:TYR:HB2	2.49	0.43
68:j:63:ARG:NH1	68:j:65:ARG:HB3	2.34	0.43
69:k:3:ARG:HA	69:k:3:ARG:HD3	1.78	0.43
69:k:24:LYS:CD	69:k:35:LYS:HD3	2.48	0.43
70:l:24:PRO:HG2	70:l:27:ILE:CG2	2.49	0.43
77:t:60:VAL:HG12	77:t:61:LYS:O	2.18	0.43
77:t:81:ILE:HD13	77:t:136:ALA:HB2	2.01	0.43
78:5:35:U:H5'	78:5:36:U:OP2	2.19	0.43
78:5:437:G:O2'	78:5:438:G:H5'	2.18	0.43
78:5:665:C:H5''	78:5:666:G:O5'	2.18	0.43
78:5:1377:G:H21	78:5:1380:G:H5''	1.83	0.43
78:5:1383:G:H2'	78:5:1384:C:C6	2.53	0.43
78:5:1687:U:H2'	78:5:1688:G:H8	1.82	0.43
78:5:1923:A:O2'	78:5:1924:C:H5'	2.18	0.43
78:5:2341:A:O2'	78:5:2342:G:H5'	2.18	0.43
78:5:2605:G:O2'	78:5:2606:G:H5'	2.18	0.43
78:5:2645:G:O2'	78:5:2646:C:H5'	2.18	0.43
78:5:2779:C:H1'	80:8:112:G:OP1	2.17	0.43
78:5:4149:C:H2'	78:5:4150:G:C8	2.54	0.43
78:5:4185:G:O2'	78:5:4186:A:H5'	2.18	0.43
78:5:4696:C:H2'	78:5:4697:U:C6	2.53	0.43
78:5:5032:C:H2'	78:5:5033:G:O4'	2.19	0.43
1:R:164:SER:O	1:R:168:GLU:HG2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:145:G:O6	3:9:153:U:O2	2.36	0.43
3:9:511:A:O2'	3:9:514:A:H1'	2.18	0.43
3:9:829:G:H2'	3:9:830:A:H8	1.84	0.43
3:9:1264:U:H5'	84:ET:34:A:N6	2.33	0.43
3:9:1321:C:H2'	3:9:1322:U:C6	2.54	0.43
3:9:1423:U:H2'	3:9:1424:U:H6	1.84	0.43
3:9:1482:A:H4'	3:9:1483:U:OP2	2.19	0.43
3:9:1663:G:O2'	3:9:1664:G:H5'	2.18	0.43
6:CC:111:PRO:HB3	6:CC:124:PHE:CD2	2.54	0.43
7:EE:48:LEU:HD21	7:EE:64:ILE:HG21	1.99	0.43
7:EE:86:PHE:CE2	7:EE:87:MET:HG2	2.54	0.43
7:EE:123:LEU:HD12	7:EE:160:ILE:C	2.44	0.43
8:GG:182:PRO:HA	8:GG:185:LEU:HG	2.01	0.43
8:GG:188:LYS:HE3	8:GG:188:LYS:HB2	1.49	0.43
10:II:34:ALA:HB2	10:II:56:ARG:HG3	2.00	0.43
10:II:76:THR:HG21	10:II:105:ASP:O	2.19	0.43
11:JJ:170:PRO:CB	11:JJ:174:LYS:HD3	2.48	0.43
14:OO:96:LYS:HB3	14:OO:132:VAL:CG1	2.49	0.43
16:WW:95:PRO:HB2	16:WW:99:PHE:CZ	2.53	0.43
36:A:114:CYS:O	36:A:165:VAL:HG22	2.18	0.43
37:B:5:LYS:HB3	37:B:5:LYS:HE2	1.79	0.43
37:B:62:ARG:NH2	37:B:358:ARG:HG3	2.34	0.43
37:B:224:LYS:HA	37:B:343:ARG:HH12	1.83	0.43
37:B:314:ILE:HG12	37:B:330:PHE:CE1	2.54	0.43
38:C:53:ALA:HA	38:C:105:THR:OG1	2.18	0.43
38:C:79:VAL:HG21	38:C:86:ARG:CG	2.43	0.43
38:C:137:VAL:HG11	38:C:144:ILE:HD12	2.00	0.43
38:C:242:PRO:HG3	38:C:248:ARG:HD2	2.00	0.43
38:C:313:VAL:HG13	41:F:169:THR:HG21	2.00	0.43
39:D:43:LYS:HD2	78:5:1817:U:O2'	2.19	0.43
39:D:59:ASP:CG	39:D:80:ALA:HB3	2.43	0.43
40:E:50:PRO:HG2	40:E:58:ARG:CB	2.49	0.43
40:E:50:PRO:O	40:E:58:ARG:HB2	2.18	0.43
42:G:117:GLN:HA	42:G:120:ARG:NH1	2.34	0.43
45:J:141:ILE:O	45:J:144:LYS:HG2	2.19	0.43
46:L:140:SER:O	46:L:144:LEU:HG	2.18	0.43
49:O:87:MET:HG2	78:5:2051:C:O2	2.19	0.43
50:P:47:TYR:O	50:P:51:VAL:HG23	2.19	0.43
56:X:87:MET:HE2	56:X:156:ILE:OXT	2.19	0.43
56:X:97:VAL:HG22	56:X:137:TYR:CD1	2.54	0.43
58:Z:77:TYR:HB3	61:c:39:ARG:CD	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:d:24:GLU:OE1	62:d:109:VAL:HG21	2.18	0.43
65:g:8:ARG:HB3	78:5:2530:U:H5	1.81	0.43
68:j:23:GLY:HA3	80:8:43:A:O2'	2.19	0.43
72:n:13:LEU:HD12	72:n:17:ARG:NH2	2.34	0.43
78:5:310:G:O2'	78:5:311:G:H5'	2.19	0.43
78:5:418:A:H2'	78:5:419:A:C8	2.53	0.43
78:5:1418:C:H3'	78:5:1419:G:H5''	2.00	0.43
78:5:1722:C:O2'	78:5:1723:A:H5'	2.18	0.43
78:5:1783:C:H2'	78:5:1784:U:H6	1.82	0.43
78:5:2293:U:H2'	78:5:2294:G:H8	1.84	0.43
78:5:2478:C:H2'	78:5:2479:G:O4'	2.19	0.43
78:5:3660:C:H4'	78:5:3664:G:O2'	2.18	0.43
78:5:3790:U:O4'	78:5:3792:G:H5'	2.18	0.43
78:5:4088:C:O2'	78:5:4089:G:H5'	2.19	0.43
78:5:4555:U:O2'	78:5:4556:U:H5'	2.19	0.43
80:8:132:G:O2'	80:8:133:G:H5'	2.18	0.43
2:W:20:ARG:HB2	2:W:30:GLN:OE1	2.17	0.43
3:9:65:C:C2	8:GG:133:LEU:HD23	2.54	0.43
3:9:160:A:OP1	8:GG:140:ARG:HD2	2.18	0.43
3:9:363:A:H4'	3:9:1149:G:C4'	2.41	0.43
3:9:583:G:H2'	3:9:587:C:C6	2.53	0.43
3:9:702:G:O2'	3:9:703:C:H5'	2.19	0.43
3:9:781:G:C6	3:9:855:A:N1	2.87	0.43
3:9:822:G:H21	14:OO:50:LYS:HA	1.83	0.43
3:9:1161:C:O2'	3:9:1162:U:H5'	2.19	0.43
3:9:1652:C:H2'	3:9:1684:A:N1	2.33	0.43
4:AA:194:PRO:HB3	28:RR:92:ASP:OD2	2.19	0.43
6:CC:111:PRO:HB3	6:CC:124:PHE:CE2	2.54	0.43
7:EE:182:MET:HG3	7:EE:184:THR:HG23	2.01	0.43
8:GG:43:GLU:H	8:GG:45:TRP:HE3	1.66	0.43
8:GG:135:PRO:HB2	8:GG:141:ILE:HG12	1.99	0.43
12:LL:18:GLN:HE21	12:LL:33:LEU:HD13	1.84	0.43
16:WW:105:THR:CG2	16:WW:126:LEU:HD21	2.49	0.43
16:WW:111:MET:SD	16:WW:119:LYS:HD2	2.58	0.43
23:FF:78:MET:HA	23:FF:83:ASN:ND2	2.33	0.43
27:QQ:32:ILE:HD11	27:QQ:63:PHE:CD1	2.53	0.43
29:SS:30:ILE:HB	29:SS:41:ALA:HB2	2.00	0.43
30:TT:60:THR:O	30:TT:64:LEU:HG	2.19	0.43
30:TT:101:ARG:O	30:TT:105:GLN:HG3	2.18	0.43
36:A:207:VAL:HG11	78:5:1633:G:O6	2.18	0.43
37:B:217:ILE:HD11	37:B:333:LEU:HD21	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:D:45:ASN:CB	53:T:33:ILE:HG21	2.43	0.43
39:D:244:HIS:O	39:D:248:ARG:HG2	2.18	0.43
40:E:216:THR:HG23	40:E:218:ALA:N	2.33	0.43
41:F:104:VAL:O	41:F:108:LEU:HG	2.18	0.43
41:F:165:ARG:HB2	41:F:208:TRP:CH2	2.54	0.43
43:H:64:ARG:HA	43:H:67:LEU:CG	2.48	0.43
46:L:54:PRO:HB2	46:L:97:SER:N	2.34	0.43
46:L:150:LEU:HD23	46:L:154:VAL:CB	2.49	0.43
51:Q:143:ARG:HA	51:Q:143:ARG:HD2	1.83	0.43
55:V:94:VAL:HG12	55:V:95:PHE:O	2.19	0.43
58:Z:120:GLU:O	58:Z:124:THR:HG23	2.19	0.43
59:a:117:LEU:HD23	59:a:140:VAL:CG2	2.46	0.43
62:d:88:LEU:CD1	62:d:106:VAL:HG22	2.49	0.43
64:f:58:VAL:HG13	78:5:1297:U:H4'	1.99	0.43
66:h:28:LEU:O	66:h:32:ARG:HG3	2.18	0.43
74:p:8:VAL:HG22	78:5:2876:G:OP1	2.18	0.43
75:r:82:ILE:HG12	78:5:679:C:C5'	2.48	0.43
77:t:96:LYS:H	77:t:96:LYS:HD3	1.83	0.43
78:5:161:G:O2'	78:5:162:A:H5'	2.18	0.43
78:5:214:G:H2'	78:5:215:C:C6	2.54	0.43
78:5:404:U:H2'	78:5:405:U:O4'	2.18	0.43
78:5:431:G:H2'	78:5:3888:G:N3	2.34	0.43
78:5:952:G:H2'	78:5:953:C:C6	2.54	0.43
78:5:1416:G:O2'	78:5:1417:C:H5'	2.18	0.43
78:5:1500:A:H5''	78:5:1501:C:C5'	2.48	0.43
78:5:1509:C:H2'	78:5:1510:G:H8	1.82	0.43
78:5:1554:A:H61	78:5:1573:G:H1'	1.83	0.43
78:5:2395:A:O2'	78:5:2806:A:H1'	2.19	0.43
78:5:2502:G:O2'	78:5:2503:G:H4'	2.18	0.43
78:5:2570:U:H2'	78:5:2571:C:C6	2.54	0.43
78:5:2583:C:O2'	78:5:2584:G:H5'	2.19	0.43
78:5:2691:U:H2'	78:5:2692:U:C6	2.54	0.43
78:5:2748:C:H2'	78:5:2749:C:H6	1.82	0.43
78:5:2847:G:C2'	78:5:2848:G:H5'	2.48	0.43
78:5:3625:G:H4'	78:5:3626:G:OP1	2.18	0.43
78:5:3690:U:H2'	78:5:3691:G:O4'	2.19	0.43
78:5:3707:U:O2'	78:5:3708:C:H5'	2.19	0.43
78:5:3814:U:H5'	78:5:4538:G:H4'	2.00	0.43
78:5:3910:C:H2'	78:5:3911:C:H6	1.81	0.43
79:7:107:G:O2'	79:7:108:G:H5'	2.18	0.43
84:ET:16:U:O3'	84:ET:18:G:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:ET:43:G:O2'	84:ET:44:A:H5'	2.18	0.43
2:W:1:MET:HB3	37:B:57:VAL:HB	1.99	0.43
2:W:20:ARG:HA	2:W:30:GLN:HA	2.00	0.43
3:9:65:C:C5	8:GG:174:PRO:HB3	2.52	0.43
3:9:93:U:OP1	7:EE:2:ALA:HB1	2.19	0.43
3:9:245:G:H2'	3:9:246:C:C6	2.54	0.43
3:9:277:C:O2'	3:9:278:U:H5'	2.19	0.43
3:9:335:G:H21	3:9:664:A:H61	1.67	0.43
3:9:535:G:O2'	3:9:536:U:H5'	2.18	0.43
3:9:590:U:H5'	3:9:935:U:H5'	1.99	0.43
3:9:695:U:O2'	3:9:696:A:H5'	2.19	0.43
3:9:851:U:H2'	3:9:852:G:C8	2.43	0.43
3:9:894:C:C4'	14:OO:143:LYS:HA	2.42	0.43
3:9:944:G:H2'	3:9:945:C:H6	1.84	0.43
3:9:982:C:H2'	3:9:983:U:O4'	2.18	0.43
3:9:1146:G:O2'	3:9:1147:U:H5'	2.18	0.43
3:9:1300:A:C5	25:MM:91:LEU:HD13	2.54	0.43
3:9:1467:G:H2'	3:9:1470:C:H41	1.82	0.43
3:9:1625:A:OP1	26:PP:47:ARG:HD3	2.18	0.43
4:AA:10:MET:HE3	4:AA:55:TRP:CG	2.54	0.43
4:AA:145:ILE:HG12	4:AA:159:ILE:CG2	2.49	0.43
7:EE:104:ASP:HB2	7:EE:110:ALA:HB2	2.00	0.43
7:EE:175:PHE:CZ	7:EE:222:LEU:HD21	2.54	0.43
9:HH:140:VAL:HG22	13:NN:19:ARG:HH11	1.84	0.43
11:JJ:178:ALA:O	11:JJ:182:GLN:HG2	2.19	0.43
16:WW:28:ARG:O	16:WW:60:LYS:HA	2.19	0.43
16:WW:77:PRO:HG3	17:XX:7:LEU:HB2	2.00	0.43
19:aa:4:LYS:HE2	19:aa:5:ARG:HH12	1.84	0.43
22:DD:52:ALA:CB	22:DD:58:VAL:HG11	2.47	0.43
22:DD:123:LEU:HD21	22:DD:154:ASP:OD2	2.18	0.43
22:DD:151:LYS:HE2	22:DD:153:VAL:CG2	2.48	0.43
28:RR:5:ARG:HB2	28:RR:10:LYS:HE2	2.00	0.43
31:UU:42:GLY:O	31:UU:46:LYS:HG3	2.19	0.43
38:C:144:ILE:CD1	38:C:150:LEU:HG	2.49	0.43
38:C:164:THR:HG22	38:C:220:ALA:O	2.18	0.43
38:C:191:ALA:HB2	78:5:2334:C:C4	2.54	0.43
38:C:272:SER:OG	38:C:273:LEU:HD12	2.19	0.43
40:E:190:ARG:NH1	78:5:4941:G:H4'	2.34	0.43
43:H:73:ILE:O	43:H:77:VAL:HG23	2.19	0.43
45:J:20:LEU:HG	45:J:22:LEU:CD2	2.48	0.43
46:L:106:SER:HB3	67:i:17:VAL:HG11	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:N:8:GLN:HB2	48:N:46:ASP:OD2	2.19	0.43
48:N:19:MET:O	48:N:23:LEU:HG	2.19	0.43
51:Q:88:ASP:HB2	51:Q:109:ALA:HB2	2.01	0.43
56:X:155:ILE:HG23	66:h:33:VAL:HG13	2.01	0.43
57:Y:59:ARG:HD2	78:5:200:U:C4	2.54	0.43
60:b:65:MET:HE1	78:5:1830:G:H4'	2.00	0.43
61:c:14:ILE:O	61:c:18:LEU:HG	2.19	0.43
66:h:27:GLU:O	66:h:31:LEU:HG	2.18	0.43
67:i:26:HIS:O	67:i:29:ARG:HG2	2.18	0.43
68:j:52:LYS:O	68:j:56:ARG:HG3	2.19	0.43
73:o:19:GLN:HB3	73:o:20:PRO:HD2	2.01	0.43
77:t:14:TYR:HB3	78:5:1975:G:O6	2.18	0.43
78:5:128:C:H2'	78:5:129:C:C6	2.53	0.43
78:5:1508:A:H2'	78:5:1509:C:H6	1.80	0.43
78:5:1741:G:H3'	78:5:1742:A:C5'	2.49	0.43
78:5:2309:G:H1	78:5:2329:U:H3	1.67	0.43
78:5:2355:G:O2'	78:5:2356:U:H5'	2.19	0.43
78:5:2375:A:O2'	78:5:2376:A:H5'	2.19	0.43
78:5:2387:G:O2'	78:5:2388:A:H5'	2.19	0.43
78:5:4161:G:H5'	78:5:4162:C:OP1	2.19	0.43
78:5:4269:G:H2'	78:5:4270:C:C6	2.53	0.43
78:5:4667:C:H2'	78:5:4668:U:O4'	2.19	0.43
78:5:4948:C:H2'	78:5:4949:G:N2	2.34	0.43
80:8:68:G:H2'	80:8:69:U:O4'	2.19	0.43
2:W:13:ILE:HD12	2:W:30:GLN:HB3	2.00	0.43
3:9:48:C:H2'	3:9:49:C:O4'	2.19	0.43
3:9:81:U:H2'	3:9:82:G:O4'	2.18	0.43
3:9:371:A:H1'	3:9:373:A:O4'	2.18	0.43
3:9:886:C:O2'	3:9:887:G:H5'	2.18	0.43
3:9:1039:U:OP1	17:XX:117:GLY:HA2	2.19	0.43
3:9:1162:U:H2'	3:9:1163:A:H8	1.84	0.43
3:9:1398:A:O2'	3:9:1399:A:H5'	2.19	0.43
3:9:1567:A:H2'	3:9:1568:C:H5'	2.01	0.43
3:9:1636:A:H5''	29:SS:37:GLY:N	2.33	0.43
3:9:1643:A:H5'	3:9:1644:G:C2	2.54	0.43
4:AA:32:PHE:HA	4:AA:35:GLU:CG	2.40	0.43
4:AA:70:ASN:HB3	4:AA:73:ASP:OD2	2.19	0.43
4:AA:77:ILE:CG1	4:AA:99:ILE:HD12	2.48	0.43
4:AA:111:GLN:HE21	4:AA:111:GLN:HB2	1.63	0.43
4:AA:158:ASP:O	15:VV:66:ASP:HA	2.19	0.43
7:EE:100:ARG:HH12	7:EE:122:LYS:HA	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:EE:250:GLU:O	7:EE:254:LYS:HG3	2.19	0.43
8:GG:135:PRO:HG2	8:GG:144:LEU:HD22	2.00	0.43
9:HH:135:PHE:HB3	9:HH:136:PRO:HD3	2.01	0.43
11:JJ:136:ARG:NE	11:JJ:139:LYS:HA	2.34	0.43
12:LL:15:THR:HG21	12:LL:36:TYR:CD1	2.54	0.43
13:NN:142:GLU:HB3	13:NN:145:THR:OG1	2.19	0.43
14:OO:94:HIS:HD2	14:OO:127:GLY:HA3	1.83	0.43
14:OO:117:ARG:O	14:OO:121:ARG:HG3	2.19	0.43
18:YY:29:HIS:HB2	18:YY:32:LYS:HD3	2.01	0.43
21:ee:98:LYS:HD3	21:ee:99:LYS:N	2.34	0.43
23:FF:30:ILE:HG21	23:FF:36:GLN:CA	2.45	0.43
23:FF:140:ASP:O	33:cc:46:VAL:HA	2.18	0.43
25:MM:113:ASP:HB3	25:MM:116:LYS:HG2	1.99	0.43
36:A:113:VAL:HG22	36:A:134:ALA:O	2.19	0.43
36:A:189:TYR:CB	36:A:196:TRP:HB2	2.49	0.43
36:A:222:PRO:HA	78:5:3749:C:O4'	2.19	0.43
36:A:224:THR:HG21	36:A:243:THR:HG21	1.99	0.43
37:B:279:GLU:HG2	37:B:282:LYS:HD3	2.01	0.43
37:B:317:LEU:HD21	37:B:381:THR:CA	2.39	0.43
38:C:33:ARG:HG3	38:C:122:TYR:CZ	2.54	0.43
41:F:51:GLU:HG3	60:b:96:LEU:CD1	2.49	0.43
41:F:215:PRO:HG3	41:F:219:MET:SD	2.59	0.43
44:I:86:HIS:HB3	44:I:139:ARG:HG3	1.99	0.43
45:J:16:ARG:HB3	45:J:16:ARG:NH1	2.34	0.43
45:J:52:LYS:HD3	45:J:65:ASN:HA	2.01	0.43
46:L:124:LEU:HD23	46:L:125:VAL:N	2.33	0.43
47:M:90:ARG:HA	47:M:93:LYS:CE	2.47	0.43
49:O:46:ASN:CG	49:O:49:ARG:HG2	2.44	0.43
49:O:118:MET:HE1	52:S:169:THR:OG1	2.19	0.43
49:O:151:ALA:O	49:O:155:THR:HG23	2.19	0.43
50:P:114:ILE:HD11	50:P:117:ILE:HB	2.00	0.43
51:Q:101:CYS:SG	51:Q:121:LEU:HB2	2.58	0.43
51:Q:179:GLY:O	51:Q:187:LYS:HA	2.19	0.43
53:T:89:ILE:HG22	78:5:4300:U:C5'	2.49	0.43
54:U:23:LEU:HG	54:U:110:TYR:HB2	2.00	0.43
57:Y:52:ASP:HB2	57:Y:110:LYS:HG3	2.01	0.43
65:g:25:THR:HB	65:g:26:PRO:HD2	2.01	0.43
70:l:13:LEU:HB3	78:5:2407:G:O2'	2.18	0.43
73:o:61:LYS:HB3	73:o:61:LYS:HE3	1.71	0.43
75:r:19:LYS:HB3	78:5:2289:C:C4	2.54	0.43
76:s:6:ARG:HB3	76:s:6:ARG:NH1	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:s:149:ARG:CZ	76:s:149:ARG:HA	2.49	0.43
77:t:134:GLY:HA2	77:t:147:HIS:ND1	2.34	0.43
78:5:114:G:H2'	78:5:115:C:H5'	1.99	0.43
78:5:397:G:C5	78:5:398:A:H1'	2.54	0.43
78:5:455:C:H2'	78:5:456:C:C6	2.54	0.43
78:5:715:G:O2'	78:5:716:C:H5'	2.19	0.43
78:5:1345:A:H2'	78:5:1346:C:C6	2.53	0.43
78:5:1786:A:H2'	78:5:1789:C:H5	1.83	0.43
78:5:1861:U:H2'	78:5:1862:U:O4'	2.19	0.43
78:5:2381:A:H1'	78:5:2383:C:OP1	2.17	0.43
78:5:2406:G:H2'	78:5:2407:G:H5'	2.01	0.43
78:5:2488:C:H3'	78:5:2490:U:O4	2.18	0.43
78:5:3659:G:H2'	78:5:3660:C:C6	2.54	0.43
78:5:3938:G:H4'	78:5:3939:G:O5'	2.19	0.43
80:8:57:C:H4'	80:8:63:U:C4	2.54	0.43
3:9:426:C:P	7:EE:66:MET:HE2	2.59	0.43
3:9:605:U:O2'	3:9:606:U:H5'	2.19	0.43
3:9:785:A:O2'	3:9:786:U:H5'	2.19	0.43
3:9:1234:C:H1'	3:9:1689:C:H42	1.84	0.43
3:9:1278:C:H3'	3:9:1279:U:C6	2.54	0.43
3:9:1553:C:H1'	3:9:1676:C:H4'	2.01	0.43
3:9:1556:G:H5''	3:9:1557:U:OP1	2.19	0.43
3:9:1636:A:H5''	29:SS:37:GLY:H	1.84	0.43
4:AA:201:LEU:HD22	28:RR:86:PRO:HD3	2.00	0.43
5:BB:179:ASN:ND2	5:BB:183:GLU:HB2	2.34	0.43
7:EE:99:PHE:CE1	7:EE:113:ARG:HG2	2.54	0.43
8:GG:43:GLU:N	8:GG:45:TRP:HE3	2.17	0.43
9:HH:139:ILE:HG23	9:HH:156:VAL:HG13	2.01	0.43
16:WW:111:MET:HE3	16:WW:116:ALA:CA	2.43	0.43
25:MM:49:LEU:HD23	25:MM:75:ASN:CB	2.49	0.43
25:MM:58:GLU:O	25:MM:62:VAL:HG12	2.18	0.43
25:MM:90:GLY:CA	25:MM:93:LYS:HG3	2.48	0.43
28:RR:53:TYR:CE2	28:RR:57:LEU:HD11	2.54	0.43
29:SS:26:ILE:HD12	29:SS:51:ASP:O	2.19	0.43
36:A:226:ARG:NH1	36:A:226:ARG:HB2	2.34	0.43
37:B:54:THR:HA	37:B:373:LYS:HZ1	1.84	0.43
37:B:276:HIS:O	78:5:4716:C:H5''	2.18	0.43
39:D:53:VAL:HG22	39:D:62:CYS:SG	2.58	0.43
40:E:211:ILE:HD12	40:E:212:PRO:HD2	2.01	0.43
42:G:299:SER:HA	42:G:302:ARG:HH12	1.84	0.43
43:H:12:ILE:HG22	43:H:81:ILE:CD1	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:H:150:ASP:OD2	43:H:153:LEU:HG	2.19	0.43
45:J:25:CYS:HA	45:J:69:ALA:CB	2.48	0.43
47:M:30:VAL:CG2	52:S:150:ILE:HD13	2.49	0.43
47:M:53:LYS:HE2	47:M:53:LYS:HB3	1.86	0.43
48:N:84:PRO:HA	48:N:87:HIS:ND1	2.34	0.43
48:N:146:PRO:O	48:N:149:GLN:HG2	2.19	0.43
54:U:35:ASP:OD1	54:U:38:ASN:HB3	2.18	0.43
56:X:45:THR:HG22	78:5:4085:A:P	2.59	0.43
57:Y:4:ASN:HB2	78:5:243:A:OP1	2.19	0.43
57:Y:11:ARG:HH11	78:5:229:G:H5''	1.83	0.43
57:Y:33:PRO:HD3	78:5:238:C:O2'	2.18	0.43
59:a:12:ARG:HD3	59:a:12:ARG:HA	1.84	0.43
61:c:30:GLY:HA3	78:5:2675:G:C6	2.54	0.43
62:d:46:LEU:CD1	62:d:64:ILE:HD13	2.48	0.43
68:j:25:LYS:NZ	78:5:370:U:H4'	2.34	0.43
75:r:5:LEU:O	75:r:9:VAL:HG23	2.19	0.43
77:t:29:ALA:HA	77:t:39:PRO:CB	2.48	0.43
77:t:110:VAL:O	77:t:114:ARG:NE	2.52	0.43
77:t:147:HIS:CE1	77:t:151:ILE:HG12	2.53	0.43
78:5:391:U:H2'	78:5:392:U:H6	1.83	0.43
78:5:455:C:O2'	78:5:456:C:H5'	2.19	0.43
78:5:517:C:H2'	78:5:518:C:C6	2.54	0.43
78:5:664:G:O2'	78:5:665:C:H5'	2.19	0.43
78:5:1176:C:H2'	78:5:1177:U:C6	2.54	0.43
78:5:1609:U:H2'	78:5:1610:C:O4'	2.19	0.43
78:5:3652:A:H5''	78:5:3653:A:OP1	2.19	0.43
78:5:3835:C:H2'	78:5:3836:A:H8	1.83	0.43
78:5:3916:G:H2'	78:5:3917:A:H8	1.83	0.43
78:5:4302:U:H2'	78:5:4303:C:H5'	2.00	0.43
78:5:4552:U:H2'	78:5:4553:A:C8	2.54	0.43
78:5:4948:C:H3'	78:5:4949:G:H5''	2.00	0.43
81:EF:22:MET:HB3	81:EF:358:LEU:HD13	2.01	0.43
1:R:106:LEU:CD2	1:R:123:LEU:HB3	2.48	0.42
3:9:54:A:N6	3:9:375:G:H1'	2.34	0.42
3:9:85:A:H2'	3:9:86:C:H6	1.84	0.42
3:9:92:A:O2'	7:EE:4:GLY:HA3	2.18	0.42
3:9:136:G:H1	3:9:163:A:N6	2.11	0.42
3:9:307:G:H2'	3:9:308:U:C6	2.54	0.42
3:9:307:G:H3'	3:9:307:G:OP2	2.19	0.42
3:9:365:C:H2'	3:9:366:C:C6	2.54	0.42
3:9:407:C:H5'	17:XX:101:LEU:CD1	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:1019:U:H5''	72:n:14:LYS:HD2	2.00	0.42
3:9:1071:A:H2'	3:9:1072:C:H6	1.84	0.42
3:9:1593:G:N1	30:TT:74:SER:HB3	2.34	0.42
3:9:1611:G:H1'	3:9:1640:A:H61	1.83	0.42
4:AA:45:GLY:N	28:RR:129:LYS:HB2	2.34	0.42
4:AA:62:ALA:O	4:AA:66:VAL:HG23	2.19	0.42
11:JJ:94:LEU:HA	11:JJ:97:ILE:HD12	2.00	0.42
12:LL:80:MET:HE1	12:LL:121:GLN:HA	2.00	0.42
12:LL:132:ARG:O	12:LL:134:LEU:HD22	2.18	0.42
17:XX:29:LYS:HE2	17:XX:29:LYS:HB3	1.89	0.42
22:DD:56:GLN:HA	22:DD:59:LEU:CD2	2.49	0.42
23:FF:187:SER:HB3	23:FF:190:ILE:HG12	2.00	0.42
27:QQ:62:ARG:CD	27:QQ:108:ILE:HD11	2.49	0.42
27:QQ:86:GLN:HE22	27:QQ:122:ALA:HB2	1.84	0.42
29:SS:67:VAL:O	29:SS:71:MET:HG3	2.19	0.42
29:SS:91:LYS:HE3	29:SS:109:GLU:OE1	2.18	0.42
32:ZZ:100:VAL:HB	32:ZZ:108:ILE:CG2	2.49	0.42
33:cc:29:GLN:HE22	33:cc:67:ARG:HA	1.84	0.42
35:ff:140:TYR:CE2	35:ff:142:GLY:HA2	2.53	0.42
39:D:264:LYS:HE3	39:D:264:LYS:HB2	1.88	0.42
40:E:246:THR:O	40:E:250:LYS:HG3	2.19	0.42
41:F:45:ARG:NH1	78:5:2102:G:H5'	2.33	0.42
42:G:156:ARG:HG2	42:G:246:LEU:HB3	2.01	0.42
43:H:86:LEU:HB3	43:H:188:GLN:O	2.19	0.42
43:H:96:TYR:CG	43:H:100:PRO:HA	2.53	0.42
44:I:36:LEU:CD1	44:I:87:ILE:HB	2.49	0.42
44:I:100:ASN:CG	44:I:118:ALA:HB1	2.44	0.42
46:L:186:ARG:NH2	78:5:1394:G:H5'	2.34	0.42
50:P:61:ARG:NH2	50:P:76:TRP:HB3	2.34	0.42
51:Q:23:ILE:O	51:Q:27:LEU:HG	2.19	0.42
53:T:146:LYS:HD2	53:T:146:LYS:O	2.19	0.42
55:V:14:PHE:CE2	55:V:91:LYS:HG3	2.53	0.42
57:Y:56:GLN:HB2	57:Y:105:VAL:CG1	2.49	0.42
57:Y:89:LYS:HE3	57:Y:93:THR:OG1	2.19	0.42
63:e:106:LYS:HA	63:e:109:LYS:HZ3	1.84	0.42
66:h:107:GLN:O	66:h:111:GLU:HG3	2.18	0.42
73:o:36:GLN:HG2	73:o:39:ARG:NH2	2.34	0.42
77:t:98:ILE:O	77:t:98:ILE:HG12	2.19	0.42
78:5:393:U:H2'	78:5:394:G:O4'	2.19	0.42
78:5:427:A:O2'	78:5:428:G:H5'	2.19	0.42
78:5:740:G:H2'	78:5:741:C:H6	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:5:957:G:C2	78:5:1283:G:H2'	2.54	0.42
78:5:1090:G:H2'	78:5:1091:C:H6	1.83	0.42
78:5:1238:A:H2'	78:5:1239:C:H5	1.84	0.42
78:5:1406:G:H2'	78:5:1406(A):G:C8	2.54	0.42
78:5:1954:U:O2'	78:5:1955:G:H5'	2.20	0.42
78:5:2061:U:H3'	78:5:2062:C:H5''	2.00	0.42
78:5:2330:G:H2'	78:5:2331:G:C4	2.54	0.42
78:5:2448:G:H2'	78:5:2449:A:C8	2.54	0.42
78:5:2581:A:H1'	78:5:2654:C:O2'	2.18	0.42
78:5:3908:A:H2'	78:5:3909:C:H5'	2.00	0.42
78:5:4289:U:H2'	78:5:4290:U:C6	2.53	0.42
78:5:4382:G:O2'	78:5:4383:U:H5'	2.18	0.42
80:8:115:G:O2'	80:8:116:C:H5'	2.19	0.42
84:ET:43:G:H2'	84:ET:44:A:H8	1.83	0.42
1:R:66:ASN:O	1:R:70:ARG:HG3	2.19	0.42
1:R:102:LEU:HD22	1:R:138:LEU:HD13	2.00	0.42
2:W:17:HIS:HA	78:5:4628:U:O2'	2.19	0.42
3:9:128:U:H3'	3:9:129:C:H6	1.82	0.42
3:9:379:A:C2	3:9:1150:A:H1'	2.54	0.42
3:9:493:A:H2'	3:9:494:C:O4'	2.19	0.42
3:9:832:G:H3'	3:9:848:A:O2'	2.19	0.42
3:9:896:A:H5'	3:9:897:A:OP2	2.20	0.42
3:9:1258:U:O2'	3:9:1524:C:H4'	2.20	0.42
4:AA:45:GLY:CA	28:RR:129:LYS:HB2	2.49	0.42
5:BB:90:ASP:O	5:BB:97:LEU:HB2	2.19	0.42
7:EE:9:LEU:HD22	7:EE:30:ARG:HA	2.00	0.42
10:II:132:GLU:CG	10:II:135:GLU:HB3	2.46	0.42
11:JJ:13:TYR:HB2	11:JJ:44:TRP:HB3	2.02	0.42
24:KK:71:LEU:HD21	24:KK:79:LEU:HD12	2.01	0.42
25:MM:22:LEU:O	25:MM:26:LEU:HG	2.19	0.42
27:QQ:21:ALA:HB1	27:QQ:84:ILE:HG22	2.01	0.42
30:TT:98:SER:HA	30:TT:101:ARG:NH2	2.33	0.42
32:ZZ:92:LEU:CD1	32:ZZ:99:LEU:HD12	2.39	0.42
36:A:181:LYS:HB3	74:p:18:TYR:CE1	2.54	0.42
37:B:56:ILE:CG1	37:B:365:LEU:HD22	2.49	0.42
37:B:168:MET:HG2	37:B:177:LYS:O	2.19	0.42
38:C:189:MET:SD	38:C:195:LYS:HD3	2.59	0.42
38:C:306:ARG:HH21	78:5:2086:G:H5''	1.83	0.42
42:G:98:ILE:HG21	78:5:4125:C:H4'	2.00	0.42
47:M:27:ILE:HD11	47:M:55:MET:CE	2.46	0.42
47:M:117:LYS:HE2	78:5:4881:U:OP2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:O:58:LEU:HD11	49:O:145:VAL:CG2	2.49	0.42
51:Q:138:LEU:O	51:Q:139:LEU:HD23	2.18	0.42
52:S:115:ALA:HB1	78:5:1925:G:N3	2.34	0.42
54:U:33:ILE:HD12	54:U:96:LEU:CD2	2.49	0.42
59:a:35:ALA:HB2	78:5:38:A:H5''	2.01	0.42
62:d:38:PHE:HD1	62:d:38:PHE:HA	1.69	0.42
64:f:17:GLY:HA2	78:5:1916:G:N2	2.35	0.42
70:l:23:ILE:HG22	80:8:52:A:N3	2.34	0.42
77:t:96:LYS:NZ	77:t:97:ASN:HB2	2.34	0.42
78:5:326:C:O2'	78:5:327:U:H5'	2.19	0.42
78:5:947:C:H2'	78:5:948:C:H6	1.85	0.42
78:5:1513:U:H2'	78:5:1514:U:H6	1.84	0.42
78:5:1575:A:O2'	78:5:1576:G:H5'	2.18	0.42
78:5:2573:A:H2'	78:5:2574:G:C8	2.53	0.42
78:5:3631:U:O4'	78:5:3805:U:H5''	2.18	0.42
78:5:3916:G:H2'	78:5:3917:A:C8	2.53	0.42
78:5:4083:U:O2	78:5:4085:A:H1'	2.18	0.42
78:5:4362:A:O2'	78:5:4363:A:H5'	2.18	0.42
78:5:4375:C:C5'	78:5:4377:G:H5'	2.49	0.42
78:5:5006:U:H4'	78:5:5007:A:C5'	2.44	0.42
78:5:5056:A:H2'	78:5:5057:C:H6	1.83	0.42
81:EF:111:PHE:O	81:EF:115:VAL:HG13	2.19	0.42
84:ET:28:G:H2'	84:ET:29:U:C6	2.52	0.42
2:W:53:VAL:O	2:W:57:ARG:HD3	2.18	0.42
3:9:1282:C:H2'	3:9:1283:C:C6	2.54	0.42
3:9:1521:G:H2'	3:9:1522:G:O4'	2.18	0.42
5:BB:105:LEU:HD23	5:BB:213:ARG:CA	2.44	0.42
7:EE:241:GLY:O	7:EE:244:ILE:HG13	2.19	0.42
9:HH:19:PHE:CE2	9:HH:23:ILE:HD11	2.54	0.42
9:HH:53:VAL:HG22	9:HH:54:GLY:H	1.84	0.42
11:JJ:19:PRO:HG2	11:JJ:20:PHE:CD2	2.54	0.42
11:JJ:136:ARG:HB2	11:JJ:140:GLN:C	2.44	0.42
12:LL:55:TYR:CD2	12:LL:115:PRO:HG2	2.54	0.42
13:NN:15:ALA:HA	20:bb:26:GLN:OE1	2.18	0.42
16:WW:6:VAL:HG13	16:WW:29:PRO:HG2	2.01	0.42
20:bb:36:LYS:HD3	20:bb:43:ILE:CG1	2.49	0.42
23:FF:76:MET:HB3	23:FF:89:THR:OG1	2.19	0.42
26:PP:18:ARG:HH21	26:PP:37:TYR:HA	1.85	0.42
31:UU:29:VAL:HG22	31:UU:85:HIS:NE2	2.35	0.42
32:ZZ:58:LEU:HG	32:ZZ:62:VAL:HG21	2.01	0.42
35:ff:135:HIS:HB2	35:ff:138:ARG:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:A:34:PHE:CE1	78:5:4087:G:H2'	2.55	0.42
36:A:183:GLY:CA	78:5:1613:A:H5''	2.50	0.42
37:B:53:MET:HB2	78:5:4627:U:C5'	2.48	0.42
37:B:70:LYS:O	37:B:72:VAL:HG13	2.20	0.42
37:B:193:LYS:HE3	37:B:193:LYS:HB2	1.84	0.42
38:C:121:ARG:NH1	38:C:277:TYR:HB2	2.34	0.42
39:D:280:VAL:O	39:D:284:LYS:HG3	2.18	0.42
40:E:269:GLN:OE1	47:M:111:LYS:HG2	2.19	0.42
41:F:47:LYS:HA	78:5:1237:C:C5	2.52	0.42
42:G:247:VAL:HG23	42:G:249:ARG:HG3	2.01	0.42
42:G:297:PRO:HD3	78:5:4162:C:C6	2.53	0.42
43:H:90:TYR:CZ	43:H:155:SER:HB3	2.54	0.42
44:I:41:ALA:HB1	44:I:45:GLU:OE2	2.19	0.42
45:J:37:ALA:HB2	45:J:50:PHE:CE1	2.54	0.42
45:J:53:ALA:HB2	45:J:68:ILE:HD12	2.00	0.42
46:L:55:ILE:HD12	46:L:116:ARG:NH1	2.34	0.42
46:L:70:VAL:HG12	46:L:157:ILE:HG21	2.01	0.42
49:O:108:ILE:HG22	49:O:157:GLU:OE2	2.18	0.42
51:Q:90:VAL:HG22	78:5:1502:G:O6	2.19	0.42
51:Q:148:VAL:HG12	51:Q:152:PHE:CE1	2.54	0.42
53:T:19:PHE:CZ	53:T:20:ARG:HG3	2.54	0.42
53:T:50:LYS:HB3	53:T:50:LYS:HE2	1.67	0.42
53:T:158:PHE:CE2	53:T:160:ALA:HB3	2.54	0.42
54:U:48:LYS:HG3	54:U:52:LYS:C	2.44	0.42
55:V:64:THR:HG23	55:V:75:LYS:O	2.19	0.42
55:V:82:ILE:HD12	55:V:104:VAL:HG13	2.01	0.42
55:V:91:LYS:HA	55:V:91:LYS:HE3	2.01	0.42
60:b:8:THR:HA	78:5:1874:A:OP1	2.19	0.42
64:f:8:LYS:HD2	64:f:31:GLU:OE1	2.20	0.42
66:h:81:LEU:HB3	80:8:38:U:O4'	2.19	0.42
73:o:63:THR:HG21	73:o:87:ARG:HB3	2.01	0.42
76:s:61:MET:HE1	76:s:86:VAL:HG12	2.00	0.42
77:t:31:LYS:H	77:t:31:LYS:HG3	1.54	0.42
78:5:703:G:C2'	78:5:704:C:H4'	2.49	0.42
78:5:735:G:H2'	78:5:736:C:H6	1.82	0.42
78:5:1804:A:H5''	78:5:1805:A:H3'	2.00	0.42
78:5:1837:A:O2'	78:5:1838:A:H5'	2.18	0.42
78:5:2465:C:H2'	78:5:2466:G:O4'	2.19	0.42
78:5:3628:G:O2'	78:5:3629:A:H5'	2.19	0.42
78:5:3650:C:H2'	78:5:3651:A:C8	2.54	0.42
78:5:4408:G:O2'	78:5:4409:C:H5'	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:5:4596:C:O2'	78:5:4597:U:H5'	2.19	0.42
78:5:4704:C:H2'	78:5:4705:A:H8	1.85	0.42
79:7:27:G:H2'	79:7:28:C:H6	1.84	0.42
80:8:137:A:H2'	80:8:138:C:C6	2.54	0.42
81:EF:120:ARG:CZ	81:EF:372:LEU:HD13	2.48	0.42
81:EF:398:ILE:HD12	81:EF:479:LEU:HD22	2.01	0.42
83:PT:31:C:C2	83:PT:32:U:C6	3.08	0.42
1:R:138:LEU:O	1:R:142:ILE:HG13	2.19	0.42
3:9:380:C:H2'	3:9:381:C:C6	2.55	0.42
3:9:419:U:H2'	3:9:420:C:C6	2.55	0.42
3:9:448:U:H5''	3:9:449:A:O4'	2.19	0.42
3:9:899:A:H2'	3:9:900:C:O4'	2.19	0.42
3:9:938:C:H2'	3:9:939:G:O4'	2.20	0.42
3:9:1047:A:H2'	3:9:1048:U:H6	1.84	0.42
4:AA:70:ASN:ND2	4:AA:72:ALA:HB3	2.28	0.42
5:BB:90:ASP:HB3	5:BB:228:LEU:CD2	2.49	0.42
7:EE:90:ILE:CD1	7:EE:101:LEU:HD11	2.49	0.42
9:HH:25:GLN:O	9:HH:29:GLU:HG3	2.19	0.42
9:HH:59:ALA:HB2	9:HH:172:THR:HG23	2.01	0.42
9:HH:82:GLU:HG3	9:HH:85:LYS:HE2	2.01	0.42
17:XX:17:ARG:HA	17:XX:17:ARG:NH1	2.34	0.42
25:MM:26:LEU:CD2	25:MM:31:LEU:HD21	2.46	0.42
28:RR:11:LYS:O	28:RR:15:VAL:HG23	2.20	0.42
29:SS:46:ARG:HA	29:SS:46:ARG:CZ	2.48	0.42
35:ff:130:VAL:HG11	35:ff:143:LYS:NZ	2.35	0.42
36:A:35:ALA:HA	42:G:94:ILE:HD13	2.01	0.42
37:B:151:SER:O	37:B:155:LYS:HG3	2.19	0.42
37:B:304:SER:HB2	37:B:310:SER:O	2.19	0.42
38:C:26:ALA:HB1	38:C:267:TRP:CZ3	2.55	0.42
38:C:67:TRP:CE3	38:C:73:VAL:HG11	2.54	0.42
39:D:51:MET:HE1	39:D:53:VAL:CG2	2.49	0.42
39:D:250:ASN:OD1	39:D:252:VAL:HG12	2.18	0.42
40:E:167:PHE:CE1	40:E:176:LEU:HD22	2.55	0.42
41:F:165:ARG:HB2	41:F:208:TRP:CZ2	2.55	0.42
43:H:89:ARG:HH21	43:H:187:VAL:HA	1.84	0.42
44:I:36:LEU:CD1	44:I:87:ILE:HD12	2.49	0.42
48:N:40:PRO:HG3	78:5:8:U:H5''	2.02	0.42
49:O:42:ASN:HD21	49:O:125:LYS:HD3	1.84	0.42
49:O:186:GLU:HA	49:O:189:ILE:CG1	2.46	0.42
54:U:79:SER:HB3	54:U:82:TYR:HB2	2.01	0.42
55:V:90:ARG:CZ	55:V:123:LYS:HG2	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:Y:45:ARG:HG3	78:5:239:C:OP1	2.19	0.42
59:a:75:LEU:HG	59:a:112:LEU:O	2.19	0.42
62:d:64:ILE:O	78:5:2374:A:H5'	2.19	0.42
64:f:59:THR:HA	78:5:4944:C:N4	2.33	0.42
66:h:79:LYS:HE2	66:h:79:LYS:HB3	1.76	0.42
67:i:59:GLU:O	67:i:63:VAL:HG13	2.19	0.42
70:l:23:ILE:CD1	70:l:37:TYR:HA	2.49	0.42
73:o:88:CYS:HA	78:5:4230:C:OP2	2.18	0.42
74:p:39:CYS:HB3	74:p:42:CYS:SG	2.59	0.42
74:p:74:THR:O	74:p:78:THR:HG23	2.18	0.42
77:t:51:GLY:O	77:t:54:LYS:HD2	2.19	0.42
77:t:99:LYS:HA	77:t:99:LYS:HD3	1.73	0.42
77:t:119:ARG:HD3	77:t:119:ARG:HA	1.64	0.42
78:5:714:G:O2'	78:5:715:G:H5'	2.19	0.42
78:5:1176:C:H2'	78:5:1177:U:H6	1.84	0.42
78:5:1800:U:H2'	78:5:1801:A:H8	1.82	0.42
78:5:2391:G:H2'	78:5:2392:C:H6	1.83	0.42
78:5:2555:G:O2'	78:5:2556:G:H5'	2.19	0.42
78:5:2596:G:H2'	78:5:2597:G:C8	2.53	0.42
78:5:2597:G:O2'	78:5:2598:A:H5'	2.20	0.42
78:5:2648:G:H2'	78:5:2649:G:C8	2.55	0.42
78:5:3618:C:H5'	78:5:3619:G:OP1	2.19	0.42
78:5:4153:C:H2'	78:5:4154:G:H8	1.85	0.42
78:5:4269:G:O2'	78:5:4270:C:H5'	2.19	0.42
80:8:89:U:H2'	80:8:90:C:H6	1.84	0.42
2:W:8:PHE:CD2	2:W:46:PRO:HG3	2.55	0.42
3:9:67:C:O2	8:GG:167:LYS:HE2	2.19	0.42
3:9:214:A:H2'	3:9:215:G:O4'	2.20	0.42
3:9:399:C:H5'	3:9:432:A:OP2	2.19	0.42
3:9:451:C:H2'	3:9:452:A:H8	1.84	0.42
3:9:451:C:H2'	3:9:452:A:C8	2.54	0.42
3:9:835:C:P	19:aa:70:LYS:HE3	2.58	0.42
3:9:859:A:H2'	3:9:860:U:C6	2.54	0.42
3:9:993:C:H2'	3:9:994:C:C6	2.54	0.42
3:9:1370:G:H22	3:9:1372:G:H3'	1.84	0.42
3:9:1371:C:H2'	3:9:1372:G:O4'	2.19	0.42
4:AA:16:LEU:H	28:RR:96:ILE:HG12	1.83	0.42
4:AA:16:LEU:N	28:RR:96:ILE:HG12	2.34	0.42
4:AA:205:ARG:HB2	4:AA:210:ILE:HD11	2.01	0.42
7:EE:202:PRO:HB2	12:LL:42:LEU:HD12	2.02	0.42
8:GG:208:GLU:HA	8:GG:211:LYS:HD2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:HH:82:GLU:O	9:HH:85:LYS:HG2	2.20	0.42
13:NN:45:LEU:HD23	13:NN:50:ILE:CG1	2.49	0.42
21:ee:112:ASN:O	21:ee:116:VAL:HG12	2.19	0.42
22:DD:70:THR:HG22	22:DD:86:LEU:CD1	2.38	0.42
23:FF:38:TYR:CD1	23:FF:144:LEU:HD13	2.54	0.42
37:B:254:ILE:HD13	37:B:268:ARG:HH12	1.84	0.42
38:C:190:ARG:HB2	38:C:202:ILE:HG23	2.01	0.42
40:E:247:GLU:O	40:E:251:VAL:HG23	2.19	0.42
41:F:75:ARG:NH2	78:5:728:U:H5''	2.35	0.42
41:F:145:ASN:O	41:F:149:VAL:HG23	2.19	0.42
42:G:113:TYR:O	42:G:117:GLN:HG2	2.20	0.42
42:G:310:LYS:O	42:G:314:LEU:HG	2.19	0.42
44:I:153:ARG:NH1	44:I:154:ARG:HG2	2.34	0.42
45:J:94:LEU:HD12	45:J:166:PHE:CE2	2.55	0.42
47:M:130:LEU:HD22	49:O:181:ALA:HB2	2.01	0.42
48:N:204:ARG:HD2	78:5:1342:A:OP1	2.19	0.42
49:O:85:ARG:HG2	49:O:90:HIS:HB3	2.02	0.42
49:O:124:LEU:HG	49:O:126:VAL:HG12	2.01	0.42
53:T:40:VAL:HG13	53:T:97:LYS:O	2.20	0.42
56:X:107:HIS:CD2	78:5:2778:G:H4'	2.54	0.42
60:b:103:LYS:HE2	78:5:2104:A:N1	2.35	0.42
64:f:49:TYR:HD1	64:f:101:ILE:HG22	1.84	0.42
68:j:69:ILE:O	68:j:73:ARG:HG3	2.19	0.42
68:j:74:PHE:HB2	68:j:78:PHE:CZ	2.54	0.42
78:5:163:A:H2'	78:5:164:G:C8	2.53	0.42
78:5:257:C:H2'	78:5:258:G:H8	1.84	0.42
78:5:1835:G:H5'	78:5:1836:G:N3	2.33	0.42
78:5:1975:G:H4'	78:5:1985:G:OP2	2.20	0.42
78:5:2080:U:O2'	78:5:2081:C:H5'	2.20	0.42
78:5:2414:G:H2'	78:5:2415:U:C6	2.54	0.42
78:5:2734:U:H2'	78:5:2735:G:C8	2.55	0.42
78:5:4291:G:H5''	78:5:4293:U:C6	2.55	0.42
78:5:4622:A:O2'	78:5:4623:G:H5'	2.18	0.42
80:8:7:U:O2'	80:8:8:U:H5'	2.20	0.42
80:8:96:C:H2'	80:8:97:A:O4'	2.19	0.42
80:8:133:G:O2'	80:8:134:G:H5'	2.18	0.42
1:R:59:SER:HB2	78:5:4647:G:H4'	2.01	0.42
2:W:20:ARG:HB3	55:V:95:PHE:O	2.19	0.42
3:9:94:G:H4'	7:EE:8:HIS:CG	2.55	0.42
3:9:278:U:P	12:LL:107:LYS:HD2	2.59	0.42
3:9:871:A:O2'	3:9:872:U:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:1081:G:H2'	3:9:1082:G:C8	2.54	0.42
3:9:1141:A:H5''	8:GG:75:LEU:HD13	2.01	0.42
3:9:1201:A:H5''	3:9:1202:C:C6	2.55	0.42
3:9:1562:A:C5	34:dd:13:LYS:HA	2.55	0.42
6:CC:98:LEU:O	6:CC:102:LEU:HB2	2.19	0.42
10:II:107:THR:HG22	10:II:110:ARG:NH2	2.32	0.42
15:VV:53:TYR:CE1	15:VV:72:LEU:HB3	2.54	0.42
16:WW:10:ALA:O	16:WW:14:ILE:HG23	2.18	0.42
17:XX:22:TRP:HZ3	17:XX:32:LEU:HG	1.84	0.42
20:bb:7:LEU:O	20:bb:10:PRO:HD3	2.19	0.42
23:FF:99:ILE:HD12	23:FF:171:GLU:HA	2.00	0.42
30:TT:43:LYS:HA	30:TT:43:LYS:HE2	2.02	0.42
39:D:122:GLN:HB3	39:D:168:ASP:CG	2.44	0.42
41:F:93:ARG:HH22	41:F:97:ILE:HA	1.84	0.42
41:F:183:ILE:HA	41:F:188:ASP:HB3	2.01	0.42
53:T:62:GLY:CA	53:T:76:VAL:HG12	2.48	0.42
54:U:48:LYS:HB2	54:U:53:ALA:HB2	2.01	0.42
56:X:126:THR:HB	56:X:134:LYS:HD3	2.01	0.42
57:Y:32:SER:HB2	57:Y:104:VAL:O	2.20	0.42
57:Y:50:ARG:HB2	57:Y:115:ARG:NH2	2.35	0.42
58:Z:48:ARG:HB3	58:Z:69:LYS:HB3	2.01	0.42
59:a:116:LYS:HG3	78:5:1419:G:C6	2.55	0.42
66:h:29:SER:O	66:h:33:VAL:HG23	2.20	0.42
69:k:61:PRO:HG2	69:k:64:LEU:HB2	2.02	0.42
71:m:54:PRO:O	71:m:58:GLN:HG2	2.19	0.42
76:s:107:VAL:HG13	76:s:108:PRO:HD2	2.01	0.42
77:t:13:VAL:O	77:t:15:LEU:HG	2.20	0.42
78:5:456:C:H2'	78:5:457:G:C8	2.55	0.42
78:5:1558:A:H2'	78:5:1559:G:C8	2.55	0.42
78:5:1565:A:H3'	78:5:1566:C:O4'	2.19	0.42
78:5:1575:A:H2'	78:5:1576:G:O4'	2.19	0.42
78:5:1615:C:H2'	78:5:1616:U:C6	2.54	0.42
78:5:1967:A:O2'	78:5:1968:G:H5'	2.19	0.42
78:5:2029:A:H2'	78:5:2030:A:H8	1.84	0.42
78:5:3819:G:H2'	78:5:3820:G:C8	2.54	0.42
80:8:27:U:O2'	80:8:28:C:H5'	2.20	0.42
80:8:70:G:H1'	80:8:88:A:H61	1.84	0.42
80:8:153:C:H2'	80:8:154:G:C8	2.55	0.42
1:R:101:ILE:HD13	1:R:101:ILE:O	2.20	0.42
3:9:90:G:H2'	3:9:91:A:O4'	2.19	0.42
3:9:368:G:O6	10:II:26:LYS:HE3	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:401:G:H2'	3:9:402:G:H8	1.83	0.42
3:9:486:U:H1'	11:JJ:132:GLN:CG	2.50	0.42
3:9:1020:A:H2'	3:9:1021:U:C6	2.55	0.42
3:9:1401:G:H5''	22:DD:160:SER:OG	2.20	0.42
3:9:1422:G:H2'	3:9:1423:U:C6	2.55	0.42
3:9:1519:C:H2'	3:9:1520:G:H8	1.85	0.42
3:9:1555:U:H2'	3:9:1556:G:O4'	2.19	0.42
3:9:1603:C:H4'	3:9:1609:G:O6	2.20	0.42
3:9:1685:A:H4'	3:9:1686:G:O5'	2.19	0.42
4:AA:15:VAL:HA	4:AA:18:PHE:HB2	2.01	0.42
7:EE:62:LYS:HD3	7:EE:80:ILE:HD13	2.01	0.42
7:EE:100:ARG:HH21	7:EE:118:GLU:HG2	1.85	0.42
7:EE:209:HIS:ND1	7:EE:219:ALA:HB2	2.35	0.42
12:LL:88:ILE:HD11	12:LL:109:MET:CG	2.50	0.42
19:aa:44:ILE:CD1	19:aa:45:VAL:HG22	2.48	0.42
20:bb:12:PRO:O	20:bb:16:LYS:HG2	2.20	0.42
20:bb:51:GLN:O	20:bb:66:PRO:HB3	2.20	0.42
22:DD:96:LEU:HD23	22:DD:190:LEU:HG	2.02	0.42
23:FF:38:TYR:HE2	23:FF:143:PRO:HG2	1.85	0.42
30:TT:62:ARG:NH2	30:TT:66:LEU:HD11	2.34	0.42
36:A:22:HIS:C	36:A:52:PRO:HG2	2.44	0.42
37:B:47:LEU:HD12	37:B:345:LEU:O	2.20	0.42
42:G:207:LEU:HD12	42:G:272:VAL:CG2	2.50	0.42
49:O:93:LYS:HA	49:O:93:LYS:HD3	1.81	0.42
50:P:18:ARG:HG3	78:5:399:G:H4'	2.00	0.42
55:V:41:SER:O	55:V:61:VAL:HG23	2.18	0.42
57:Y:38:LEU:HD11	57:Y:107:THR:O	2.20	0.42
58:Z:4:PHE:HE1	58:Z:82:PRO:HG3	1.83	0.42
61:c:28:VAL:HB	61:c:95:SER:HG	1.82	0.42
62:d:109:VAL:HG12	62:d:111:VAL:HG23	2.01	0.42
66:h:103:LYS:HE2	66:h:103:LYS:HA	2.00	0.42
76:s:21:LEU:HD23	76:s:90:PHE:CE1	2.55	0.42
76:s:48:ARG:NH1	78:5:1996:C:H4'	2.34	0.42
77:t:12:VAL:HA	77:t:62:LEU:O	2.19	0.42
78:5:12:A:H4'	78:5:13:U:OP1	2.19	0.42
78:5:348:G:H3'	78:5:349:A:H5''	2.01	0.42
78:5:1922:G:O2'	78:5:1923:A:H5'	2.19	0.42
78:5:1953:U:O2'	78:5:1954:U:H5'	2.19	0.42
78:5:1981:G:C2'	78:5:1982:G:H5'	2.50	0.42
78:5:2026:A:H2'	78:5:2027:U:C6	2.55	0.42
78:5:2066:C:H2'	78:5:2067:C:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:5:2299:G:H5''	78:5:2300:A:OP2	2.20	0.42
78:5:2306:G:H1'	78:5:2332:A:N6	2.35	0.42
78:5:2478:C:H2'	78:5:2479:G:C8	2.54	0.42
78:5:2480:G:H2'	78:5:2481:G:C8	2.55	0.42
81:EF:524:LEU:HD21	81:EF:546:ILE:HD11	2.02	0.42
1:R:96:MET:HE2	1:R:100:ARG:NH2	2.35	0.42
3:9:42:A:O2'	3:9:43:U:H5'	2.19	0.42
3:9:118:C:H2'	3:9:119:U:H5'	2.01	0.42
3:9:257:G:H2'	3:9:258:C:C6	2.54	0.42
3:9:258:C:H5	8:GG:190:ARG:HH21	1.68	0.42
3:9:1191:C:O2'	3:9:1192:C:H5'	2.20	0.42
3:9:1282:C:H2'	3:9:1283:C:H6	1.85	0.42
3:9:1315:A:O2'	3:9:1316:U:H3'	2.19	0.42
3:9:1521:G:O3'	26:PP:81:ARG:HD3	2.20	0.42
4:AA:24:HIS:O	4:AA:48:ILE:HG23	2.20	0.42
4:AA:41:ARG:HB3	28:RR:128:PHE:CD1	2.49	0.42
4:AA:52:LYS:CE	28:RR:109:LEU:HD22	2.49	0.42
4:AA:94:THR:HG23	4:AA:186:ARG:HH12	1.84	0.42
5:BB:164:ILE:O	5:BB:168:MET:HG3	2.20	0.42
7:EE:180:LEU:HD11	7:EE:234:PRO:HD3	2.02	0.42
7:EE:183:VAL:O	7:EE:189:LEU:HA	2.20	0.42
8:GG:132:ARG:HB3	8:GG:133:LEU:HD12	2.02	0.42
8:GG:221:LYS:CD	8:GG:225:GLN:HE22	2.33	0.42
9:HH:147:LYS:HB2	9:HH:149:ASP:OD1	2.19	0.42
17:XX:39:ASN:HD22	17:XX:43:GLY:H	1.68	0.42
17:XX:46:HIS:CB	17:XX:101:LEU:HD11	2.45	0.42
18:YY:87:PRO:HB2	18:YY:89:HIS:CD2	2.55	0.42
23:FF:140:ASP:O	33:cc:46:VAL:HG13	2.19	0.42
28:RR:57:LEU:O	28:RR:61:ILE:HG13	2.19	0.42
30:TT:65:TYR:CE1	30:TT:128:GLN:HG3	2.54	0.42
33:cc:15:THR:HG22	33:cc:31:ARG:O	2.20	0.42
38:C:138:MET:HE2	38:C:138:MET:HB3	1.89	0.42
38:C:203:GLN:OE1	38:C:225:PRO:HB2	2.19	0.42
40:E:153:LEU:CD2	40:E:199:ALA:HA	2.49	0.42
41:F:157:GLY:O	41:F:168:LEU:HG	2.19	0.42
43:H:141:LYS:HE2	43:H:142:ASP:OD2	2.20	0.42
44:I:4:ARG:NE	78:5:4405:G:H4'	2.35	0.42
47:M:94:LYS:HD2	78:5:4872:G:N7	2.35	0.42
49:O:162:GLU:O	49:O:166:ILE:HG13	2.20	0.42
50:P:36:ILE:O	50:P:114:ILE:HG21	2.19	0.42
51:Q:70:MET:HE1	51:Q:78:LYS:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:e:23:HIS:HA	63:e:53:ILE:HD12	2.02	0.42
64:f:83:MET:HE2	64:f:83:MET:HB2	1.87	0.42
66:h:20:GLN:O	66:h:24:LEU:HG	2.19	0.42
67:i:7:MET:O	67:i:13:LYS:HA	2.19	0.42
69:k:35:LYS:CG	69:k:44:THR:HG22	2.50	0.42
76:s:59:THR:HB	78:5:1961:G:C8	2.55	0.42
77:t:62:LEU:HG	77:t:71:ILE:HA	2.01	0.42
77:t:68:GLN:HG2	77:t:70:GLN:NE2	2.30	0.42
77:t:137:GLN:OE1	78:5:1993:C:H1'	2.18	0.42
78:5:8:U:H2'	78:5:9:C:O4'	2.20	0.42
78:5:418:A:C2	80:8:17:A:H1'	2.55	0.42
78:5:1756:U:H2'	78:5:1757:U:C6	2.54	0.42
78:5:2285:A:O2'	78:5:2286:G:H5'	2.20	0.42
78:5:2602:G:O4'	78:5:2742:G:H2'	2.20	0.42
78:5:4246:G:H2'	78:5:4247:G:H8	1.84	0.42
78:5:4670:C:O3'	78:5:4671:C:H3'	2.19	0.42
83:PT:37:A:C5	83:PT:38:U:C5	3.08	0.42
84:ET:68:C:C4	84:ET:69:C:H5	2.37	0.42
84:ET:73:A:O2'	84:ET:74:C:H5'	2.20	0.42
1:R:158:GLN:HB3	1:R:162:ARG:HH12	1.84	0.42
3:9:20:G:H2'	3:9:21:U:H5'	2.02	0.42
3:9:145:G:H2'	3:9:146:G:C8	2.55	0.42
3:9:372:A:H62	10:II:29:LEU:HD13	1.85	0.42
3:9:484:A:OP2	11:JJ:173:VAL:HG12	2.20	0.42
3:9:523:A:H2'	3:9:530:G:H21	1.85	0.42
3:9:854:C:O2'	3:9:855:A:H5'	2.20	0.42
3:9:1041:A:H4'	3:9:1042:A:O5'	2.20	0.42
3:9:1209:A:P	19:aa:10:ARG:HH12	2.43	0.42
3:9:1215:C:OP1	19:aa:87:ARG:HD3	2.20	0.42
3:9:1216:A:H2'	3:9:1217:U:C6	2.55	0.42
3:9:1245:G:H21	30:TT:87:VAL:HG23	1.85	0.42
3:9:1254:U:O4'	26:PP:126:VAL:HG23	2.20	0.42
3:9:1255:U:H2'	3:9:1257:A:OP2	2.19	0.42
3:9:1256:A:N7	26:PP:100:LYS:HB2	2.35	0.42
3:9:1389:C:H2'	3:9:1390:C:C6	2.55	0.42
3:9:1680:G:H5''	23:FF:86:LYS:CB	2.46	0.42
4:AA:42:LYS:HE2	4:AA:48:ILE:HD11	2.02	0.42
5:BB:230:GLU:OE1	78:5:4099:G:H4'	2.20	0.42
7:EE:35:PRO:HG2	7:EE:36:HIS:CD2	2.54	0.42
7:EE:44:LEU:HD22	7:EE:72:ILE:CD1	2.46	0.42
8:GG:195:LYS:O	8:GG:199:THR:HG23	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:GG:214:ALA:O	8:GG:218:LYS:HG3	2.20	0.42
10:II:190:LEU:HG	10:II:198:TYR:CE2	2.54	0.42
18:YY:14:THR:HG22	18:YY:21:LYS:CD	2.49	0.42
19:aa:45:VAL:HB	19:aa:50:VAL:N	2.35	0.42
22:DD:34:TYR:CE1	22:DD:37:VAL:HG13	2.55	0.42
25:MM:21:VAL:HG21	25:MM:124:ILE:HD12	2.01	0.42
25:MM:51:VAL:CG1	25:MM:109:VAL:HB	2.49	0.42
26:PP:108:LYS:CD	26:PP:111:MET:HE3	2.50	0.42
29:SS:48:ALA:HB2	29:SS:70:ILE:CD1	2.50	0.42
29:SS:132:ARG:HB3	29:SS:134:GLN:CD	2.45	0.42
35:ff:92:LYS:HD3	35:ff:93:HIS:H	1.85	0.42
38:C:106:LYS:HG2	38:C:108:TRP:CZ2	2.55	0.42
38:C:218:VAL:HG13	38:C:229:LEU:HG	2.01	0.42
39:D:41:LYS:CG	53:T:93:ILE:HD11	2.50	0.42
39:D:286:SER:HA	39:D:289:ARG:CD	2.50	0.42
42:G:216:PRO:HG2	42:G:219:LEU:HD12	2.02	0.42
43:H:36:ARG:HD2	43:H:80:MET:HE2	2.01	0.42
46:L:83:VAL:HG11	46:L:114:VAL:HG21	2.00	0.42
46:L:107:THR:OG1	67:i:20:ASN:HB3	2.19	0.42
49:O:90:HIS:CE1	49:O:91:LYS:HE3	2.54	0.42
50:P:39:MET:O	50:P:114:ILE:HG22	2.19	0.42
53:T:53:PRO:HB3	53:T:91:VAL:CG2	2.49	0.42
60:b:101:HIS:HE1	60:b:103:LYS:HB2	1.85	0.42
65:g:66:ARG:HH11	65:g:66:ARG:HB2	1.85	0.42
65:g:66:ARG:NH2	78:5:2518:G:H5'	2.35	0.42
76:s:13:TYR:O	76:s:17:ILE:HG22	2.20	0.42
78:5:439:G:H2'	78:5:440:U:O4'	2.20	0.42
78:5:954:C:H2'	78:5:955:G:C8	2.54	0.42
78:5:1341:U:O2'	78:5:1342:A:H5'	2.20	0.42
78:5:2292:C:H2'	78:5:2293:U:C6	2.55	0.42
78:5:3759:A:H62	78:5:3764:U:H3	1.67	0.42
78:5:3766:A:H3'	78:5:3767:C:C6	2.55	0.42
78:5:4361:U:O2'	78:5:4362:A:H5'	2.19	0.42
78:5:4455:G:O2'	78:5:4456:C:H5'	2.20	0.42
78:5:4597:U:H3	78:5:4613:C:H42	1.67	0.42
78:5:4948:C:H3'	78:5:4949:G:C5'	2.50	0.42
78:5:4972:U:H2'	78:5:4973:U:C6	2.55	0.42
78:5:4994:G:H2'	78:5:4995:U:H6	1.85	0.42
80:8:43:A:O2'	80:8:44:A:H5'	2.19	0.42
80:8:65:A:H2'	80:8:66:A:H8	1.84	0.42
82:1:28:U:C2	83:PT:35:G:N2	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:ET:9:A:H1'	84:ET:45:G:N3	2.35	0.42
3:9:1269:A:H4'	3:9:1270:C:C5'	2.50	0.42
3:9:1275:A:H2'	3:9:1524:C:N4	2.35	0.42
3:9:1346:G:O6	3:9:1499:C:H5'	2.20	0.42
3:9:1386:A:H2'	3:9:1388:U:C5'	2.50	0.42
3:9:1395:A:O2'	3:9:1396:C:H5'	2.19	0.42
4:AA:184:ARG:HB3	4:AA:191:ARG:CZ	2.50	0.42
5:BB:181:LEU:HA	5:BB:184:VAL:CG2	2.50	0.42
6:CC:107:LEU:HB3	6:CC:233:LEU:HD21	2.01	0.42
6:CC:276:THR:HG23	6:CC:277:HIS:ND1	2.35	0.42
8:GG:218:LYS:HG3	8:GG:218:LYS:H	1.57	0.42
11:JJ:54:ARG:O	11:JJ:58:ARG:HG3	2.19	0.42
17:XX:87:ASN:HB3	17:XX:134:TYR:CD1	2.55	0.42
21:ee:85:VAL:O	21:ee:89:THR:HG23	2.20	0.42
22:DD:8:LYS:HE3	31:UU:59:LYS:HD3	2.02	0.42
22:DD:175:VAL:CG1	22:DD:182:LEU:HB2	2.49	0.42
26:PP:34:MET:HB2	26:PP:45:LEU:CD1	2.49	0.42
27:QQ:25:CYS:HB3	27:QQ:66:VAL:CG1	2.50	0.42
27:QQ:38:PRO:HG3	30:TT:8:ASP:OD1	2.20	0.42
30:TT:14:PHE:CE1	30:TT:134:ILE:HG13	2.54	0.42
31:UU:31:SER:HB2	31:UU:107:GLU:OE2	2.20	0.42
31:UU:36:CYS:O	31:UU:40:ILE:HG13	2.20	0.42
38:C:219:LYS:HG3	38:C:222:ARG:HH12	1.85	0.42
42:G:152:ALA:HB1	42:G:246:LEU:HD13	2.02	0.42
43:H:19:SER:OG	43:H:26:ILE:HD11	2.20	0.42
43:H:86:LEU:HB2	43:H:186:THR:HB	2.02	0.42
43:H:132:VAL:CG1	43:H:154:VAL:HG22	2.50	0.42
46:L:24:THR:HB	46:L:26:PHE:CD2	2.55	0.42
46:L:126:LEU:HD11	66:h:117:ARG:HB3	2.02	0.42
49:O:24:ALA:O	49:O:28:LEU:HG	2.20	0.42
50:P:123:PRO:HG3	80:8:14:U:H5'	2.01	0.42
51:Q:17:GLU:HB2	51:Q:18:PRO:HD2	2.02	0.42
52:S:30:MET:CG	53:T:151:LEU:HB2	2.50	0.42
52:S:159:LEU:HD13	52:S:172:PRO:CB	2.50	0.42
53:T:40:VAL:CG1	53:T:96:ILE:HG23	2.50	0.42
53:T:52:MET:HG2	53:T:95:HIS:CD2	2.55	0.42
55:V:3:LYS:CG	55:V:128:LEU:HD11	2.50	0.42
55:V:60:MET:HE1	55:V:78:PRO:CB	2.50	0.42
57:Y:45:ARG:HD3	78:5:198:A:OP2	2.20	0.42
59:a:72:THR:HG21	78:5:1396:G:N1	2.27	0.42
63:e:37:LYS:HE2	78:5:1663:C:OP2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:g:99:GLU:O	65:g:103:VAL:HG23	2.20	0.42
67:i:54:GLU:O	67:i:58:MET:HG2	2.20	0.42
76:s:102:LEU:HA	76:s:105:ASN:OD1	2.19	0.42
77:t:90:ARG:HB3	77:t:94:LYS:CG	2.49	0.42
77:t:98:ILE:O	77:t:100:HIS:HD2	2.03	0.42
77:t:116:MET:HE3	77:t:116:MET:HB3	1.67	0.42
77:t:121:LEU:HD22	78:5:1973:G:OP1	2.20	0.42
78:5:67:C:O2'	78:5:68:U:H5'	2.19	0.42
78:5:245:C:H4'	78:5:246:G:O5'	2.20	0.42
78:5:283:G:H2'	78:5:284:G:H8	1.84	0.42
78:5:421:C:O2'	78:5:422:C:H5'	2.20	0.42
78:5:1170:G:O2'	78:5:1171:G:H5'	2.20	0.42
78:5:1392:A:H2'	78:5:1393:G:H8	1.85	0.42
78:5:1464:C:H2'	78:5:1465:G:O4'	2.20	0.42
78:5:1824:G:H2'	78:5:1825:A:H8	1.85	0.42
78:5:1873:A:H2'	78:5:1874:A:H8	1.85	0.42
78:5:2065:G:H2'	78:5:2066:C:C6	2.55	0.42
78:5:2800:G:O2'	78:5:2801:U:H5'	2.20	0.42
78:5:3740:G:H2'	78:5:3741:C:H5'	2.02	0.42
78:5:4081:G:O2'	78:5:4082:G:H5'	2.20	0.42
78:5:4409:C:O2'	78:5:4410:G:H5'	2.20	0.42
78:5:4536:C:H2'	78:5:4537:C:H6	1.85	0.42
80:8:74:U:H2'	80:8:75:G:H5''	2.00	0.42
81:EF:697:MET:HE1	81:EF:733:VAL:CG2	2.45	0.42
3:9:156:A:O2'	3:9:157:G:H5'	2.20	0.41
3:9:325:A:H3'	3:9:326:C:C6	2.55	0.41
3:9:329:G:H2'	3:9:330:U:C6	2.55	0.41
3:9:437:G:O2'	3:9:438:U:H5'	2.20	0.41
3:9:812:U:H2'	3:9:813:U:H5'	2.02	0.41
3:9:1129:G:H2'	3:9:1130:G:H8	1.85	0.41
3:9:1340:G:O2'	3:9:1341:G:H5'	2.20	0.41
3:9:1510:U:H2'	3:9:1511:U:O4'	2.20	0.41
3:9:1682:U:H2'	3:9:1683:U:O4'	2.20	0.41
4:AA:197:VAL:CG1	4:AA:201:LEU:HD23	2.50	0.41
5:BB:168:MET:HG2	5:BB:197:ILE:CG2	2.50	0.41
6:CC:84:PHE:CZ	6:CC:264:SER:HA	2.55	0.41
6:CC:142:LYS:HE3	6:CC:153:GLY:CA	2.50	0.41
8:GG:20:ASP:HB3	8:GG:23:LYS:HB2	2.01	0.41
8:GG:192:ILE:HA	8:GG:195:LYS:HD2	2.00	0.41
12:LL:95:TYR:HB2	12:LL:102:PHE:CE2	2.55	0.41
13:NN:54:LEU:HD23	13:NN:58:HIS:ND1	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:VV:19:ALA:HB2	15:VV:68:SER:HB2	2.02	0.41
16:WW:11:LEU:HA	16:WW:14:ILE:HG12	2.02	0.41
23:FF:123:GLU:CD	33:cc:59:LEU:HD12	2.44	0.41
25:MM:22:LEU:HD11	25:MM:89:VAL:HA	2.02	0.41
25:MM:30:GLY:O	25:MM:112:LYS:HB3	2.20	0.41
26:PP:31:GLU:O	26:PP:35:GLN:HG3	2.20	0.41
36:A:65:ASP:OD2	36:A:68:ARG:HB2	2.20	0.41
36:A:116:LEU:CD2	36:A:148:VAL:HG11	2.51	0.41
37:B:316:PRO:HA	37:B:370:THR:O	2.20	0.41
38:C:69:THR:OG1	78:5:3906:A:H5''	2.20	0.41
38:C:168:VAL:HG13	38:C:177:TRP:CZ3	2.56	0.41
40:E:162:GLY:O	40:E:277:VAL:HG23	2.20	0.41
40:E:252:ASP:O	40:E:256:VAL:HG23	2.20	0.41
42:G:220:VAL:HG13	42:G:223:LEU:CD1	2.50	0.41
43:H:71:ARG:HE	78:5:4691:A:H5'	1.85	0.41
44:I:12:CYS:HB3	44:I:128:ARG:HH21	1.85	0.41
44:I:91:LEU:HD12	44:I:135:ILE:CG2	2.40	0.41
45:J:166:PHE:CE2	45:J:172:GLY:HA3	2.54	0.41
46:L:181:SER:O	67:i:7:MET:HE1	2.20	0.41
50:P:66:GLY:HA2	78:5:3893:C:H5''	2.02	0.41
51:Q:65:ARG:O	51:Q:69:LYS:HD3	2.19	0.41
51:Q:145:GLY:O	78:5:1503:A:H3'	2.20	0.41
51:Q:148:VAL:HG11	78:5:1346:C:H5''	2.02	0.41
56:X:99:ILE:HD11	56:X:129:ARG:HH11	1.85	0.41
58:Z:68:ILE:O	58:Z:115:LYS:HG3	2.20	0.41
59:a:98:ALA:HB1	59:a:122:VAL:CA	2.49	0.41
59:a:133:ALA:O	59:a:137:ILE:HG13	2.20	0.41
63:e:59:GLY:HA2	78:5:1899:G:N2	2.30	0.41
64:f:11:PHE:CE1	64:f:92:LEU:HD12	2.55	0.41
65:g:9:ARG:NE	78:5:2441:C:H4'	2.32	0.41
69:k:61:PRO:HG2	69:k:64:LEU:HB3	2.02	0.41
73:o:25:GLN:HB3	73:o:91:PHE:HE2	1.84	0.41
73:o:70:LEU:HD13	73:o:83:LEU:HB2	2.02	0.41
76:s:65:ILE:CD1	76:s:82:ILE:HD11	2.48	0.41
76:s:123:VAL:HG21	76:s:143:ILE:CD1	2.50	0.41
77:t:11:LYS:CB	77:t:64:ILE:HB	2.50	0.41
77:t:59:THR:HG23	77:t:76:SER:N	2.35	0.41
77:t:116:MET:HE3	77:t:121:LEU:HB2	2.01	0.41
77:t:146:ARG:O	77:t:149:HIS:N	2.53	0.41
78:5:258:G:H2'	78:5:259:C:H6	1.84	0.41
78:5:650:C:H2'	78:5:651:C:H6	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:5:659:G:O2'	78:5:660:A:H5'	2.20	0.41
78:5:911:U:H3'	78:5:912:G:C8	2.55	0.41
78:5:1822:U:H2'	78:5:1823:G:H8	1.85	0.41
78:5:1840:G:O2'	78:5:1841:C:H5'	2.19	0.41
78:5:2088:A:C5'	78:5:2089:G:H3'	2.50	0.41
78:5:3714:G:O2'	78:5:3715:U:H5'	2.19	0.41
78:5:3846:C:H1'	78:5:4632:U:O2'	2.20	0.41
78:5:3933:G:H2'	78:5:3934:G:C8	2.54	0.41
78:5:4218:U:H5''	78:5:4219:A:OP1	2.20	0.41
78:5:4412:C:O2'	78:5:4413:C:H5'	2.20	0.41
78:5:4994:G:H2'	78:5:4995:U:C6	2.55	0.41
3:9:37:C:H3'	3:9:38:A:C8	2.54	0.41
3:9:489:G:H2'	3:9:490:U:O4'	2.20	0.41
3:9:772:G:H1	3:9:864:U:H3	1.68	0.41
3:9:775:G:H2'	3:9:776:G:H8	1.84	0.41
3:9:922:C:H2'	3:9:923:G:C8	2.56	0.41
3:9:995:A:H4'	3:9:996:A:O5'	2.19	0.41
3:9:1196:G:O2'	3:9:1197:G:H5'	2.20	0.41
3:9:1254:U:H2'	3:9:1255:U:O4'	2.20	0.41
3:9:1593:G:H3'	3:9:1594:A:C5'	2.51	0.41
3:9:1616:G:H2'	3:9:1617:G:H8	1.84	0.41
3:9:1627:U:O4	26:PP:82:ASP:HB3	2.19	0.41
4:AA:116:PHE:HE2	6:CC:64:THR:HG22	1.85	0.41
4:AA:123:VAL:HG13	4:AA:145:ILE:HB	2.02	0.41
5:BB:92:GLN:HG3	5:BB:229:MET:HE1	2.02	0.41
6:CC:248:TYR:OH	15:VV:11:LEU:HG	2.20	0.41
10:II:60:LEU:HB3	10:II:96:LEU:HD12	2.01	0.41
12:LL:77:VAL:HG23	12:LL:124:ASP:O	2.21	0.41
12:LL:80:MET:HE2	12:LL:122:ILE:CG2	2.41	0.41
14:OO:72:TYR:CE2	14:OO:76:LEU:HD11	2.55	0.41
14:OO:86:LYS:HD3	14:OO:124:MET:SD	2.60	0.41
23:FF:72:LEU:HD23	23:FF:112:LEU:HD11	2.02	0.41
23:FF:102:LEU:HD13	32:ZZ:110:THR:HG21	2.02	0.41
25:MM:17:ALA:O	25:MM:21:VAL:HG23	2.20	0.41
26:PP:36:LEU:O	29:SS:88:LYS:HD3	2.20	0.41
29:SS:23:ARG:CB	32:ZZ:48:VAL:HG21	2.50	0.41
30:TT:42:HIS:HB3	30:TT:93:SER:HB3	2.02	0.41
31:UU:94:PRO:CD	31:UU:97:ILE:HD12	2.43	0.41
36:A:150:LEU:HD13	78:5:3661:G:C4	2.55	0.41
37:B:10:ARG:HB2	37:B:10:ARG:HH11	1.85	0.41
37:B:133:TYR:HB2	78:5:4726:G:H5''	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:D:158:LYS:HE2	79:7:46:C:OP1	2.20	0.41
39:D:195:HIS:O	39:D:199:ILE:HG13	2.19	0.41
40:E:193:HIS:NE2	78:5:710:G:H4'	2.34	0.41
45:J:109:ILE:HD11	45:J:128:LEU:CD2	2.50	0.41
47:M:108:ASP:HB3	49:O:199:HIS:CD2	2.55	0.41
51:Q:43:PHE:O	51:Q:47:VAL:HG23	2.20	0.41
52:S:12:VAL:HG13	52:S:61:ILE:HG23	2.02	0.41
52:S:28:TYR:CG	53:T:151:LEU:HD11	2.55	0.41
53:T:34:TYR:HE2	53:T:93:ILE:HG23	1.84	0.41
58:Z:50:PRO:HB3	58:Z:68:ILE:CD1	2.49	0.41
61:c:103:ASP:CG	61:c:106:ARG:HB2	2.45	0.41
63:e:68:HIS:O	63:e:75:ARG:HD2	2.20	0.41
66:h:65:GLN:O	66:h:69:LEU:HG	2.21	0.41
76:s:123:VAL:HG21	76:s:143:ILE:CG1	2.50	0.41
78:5:52:G:O2'	78:5:53:C:H5'	2.20	0.41
78:5:217:C:H4'	78:5:218:A:C5'	2.50	0.41
78:5:368:C:H2'	78:5:369:G:C8	2.55	0.41
78:5:431:G:H2'	78:5:3888:G:C2	2.55	0.41
78:5:433:A:H2'	78:5:434:A:O4'	2.19	0.41
78:5:754:U:O2'	78:5:755:C:H5'	2.19	0.41
78:5:934:C:H1'	78:5:935(A):G:H5''	2.01	0.41
78:5:1177:U:H2'	78:5:1178:G:C8	2.55	0.41
78:5:1211:G:H2'	78:5:1212:G:H8	1.84	0.41
78:5:1299:G:O2'	78:5:1300:G:H5'	2.19	0.41
78:5:1732:C:O2'	78:5:1733:G:H5'	2.20	0.41
78:5:1813:U:O2'	78:5:1814:C:H5'	2.20	0.41
78:5:1858:A:O2'	78:5:1859:C:H5'	2.19	0.41
78:5:2077:C:O2'	78:5:2078:C:H5'	2.20	0.41
78:5:2546:G:H4'	78:5:2547:G:OP1	2.20	0.41
78:5:2602:G:H2'	78:5:2603:C:C6	2.54	0.41
78:5:3781:C:C5'	78:5:3821:A:H4'	2.41	0.41
78:5:3877:A:H1'	78:5:4401:G:O2'	2.19	0.41
78:5:4261:C:O2'	78:5:4262:C:H5'	2.20	0.41
78:5:4345:C:O2'	78:5:4346:U:H5'	2.19	0.41
78:5:4371:G:C8	84:ET:76:A:N6	2.88	0.41
78:5:4460:U:H2'	78:5:4461:C:C6	2.55	0.41
78:5:4712:C:O2'	78:5:4713:G:H5'	2.20	0.41
78:5:4736:C:H2'	78:5:4737:G:C8	2.51	0.41
80:8:66:A:O2'	80:8:67:U:H5'	2.19	0.41
81:EF:24:VAL:HG12	81:EF:126:LEU:HB3	2.02	0.41
81:EF:223:PHE:HB3	81:EF:344:LEU:HD13	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:PT:36:C:C3'	83:PT:37:A:C8	3.03	0.41
1:R:114:LYS:HD3	78:5:3597:G:C4	2.55	0.41
1:R:114:LYS:HE3	78:5:3597:G:H5'	2.02	0.41
3:9:11:A:H2	3:9:1373:A:H1'	1.85	0.41
3:9:400:A:H3'	3:9:401:G:H8	1.85	0.41
3:9:489:G:N2	3:9:510:G:H1'	2.36	0.41
3:9:800:C:H5''	5:BB:24:PRO:CG	2.50	0.41
3:9:858:A:H5''	13:NN:6:ALA:HB1	2.02	0.41
3:9:898:G:O2'	3:9:899:A:H5'	2.19	0.41
3:9:944:G:H2'	3:9:945:C:C6	2.56	0.41
3:9:976:G:H3'	3:9:977:G:N2	2.35	0.41
3:9:1188:U:H5'	14:OO:151:LEU:OXT	2.19	0.41
3:9:1213:A:N7	19:aa:76:SER:HA	2.35	0.41
3:9:1542:G:H2'	3:9:1543:A:C8	2.55	0.41
3:9:1627:U:H5'	26:PP:115:TYR:CD2	2.55	0.41
3:9:1636:A:H4'	29:SS:35:GLY:C	2.46	0.41
3:9:1643:A:H5'	3:9:1644:G:N3	2.34	0.41
4:AA:59:LEU:O	4:AA:63:ARG:HG3	2.20	0.41
4:AA:130:ASP:HB3	4:AA:133:PRO:CG	2.50	0.41
4:AA:173:LEU:O	4:AA:177:MET:HG3	2.20	0.41
5:BB:136:ARG:O	5:BB:215:VAL:HA	2.19	0.41
6:CC:253:PRO:HA	6:CC:256:TRP:CD1	2.56	0.41
7:EE:86:PHE:CE2	7:EE:87:MET:HE2	2.55	0.41
10:II:70:GLU:HB2	10:II:72:CYS:SG	2.60	0.41
10:II:106:SER:HB3	10:II:171:LEU:CG	2.45	0.41
11:JJ:120:ALA:CB	11:JJ:126:ALA:HB2	2.50	0.41
11:JJ:124:HIS:NE2	21:ee:108:ARG:HD2	2.35	0.41
13:NN:98:VAL:CG1	13:NN:115:LEU:HD13	2.51	0.41
15:VV:82:ASN:HB3	28:RR:109:LEU:CD1	2.50	0.41
17:XX:40:PRO:CB	17:XX:81:ILE:HD11	2.50	0.41
29:SS:45:LEU:HD22	29:SS:50:ILE:CG2	2.42	0.41
31:UU:67:LYS:HE3	31:UU:76:THR:HB	2.03	0.41
36:A:221:LYS:HE3	36:A:221:LYS:HB3	1.94	0.41
38:C:10:VAL:HG22	38:C:153:VAL:CG1	2.49	0.41
38:C:101:MET:CE	38:C:104:PRO:HA	2.47	0.41
39:D:37:VAL:HG13	39:D:67:ALA:HB3	2.02	0.41
39:D:225:GLN:OE1	79:7:49:A:H5''	2.19	0.41
41:F:165:ARG:HD2	41:F:208:TRP:CE2	2.55	0.41
43:H:36:ARG:HB2	43:H:80:MET:SD	2.59	0.41
46:L:110:LEU:O	46:L:114:VAL:HG23	2.20	0.41
53:T:107:LYS:HE3	53:T:107:LYS:HB3	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:Y:123:ALA:O	57:Y:127:GLN:HG3	2.20	0.41
59:a:131:ARG:O	59:a:135:GLU:HG3	2.20	0.41
60:b:53:GLY:HA3	78:5:1812:C:O2'	2.20	0.41
63:e:63:ASN:ND2	63:e:65:LYS:HB2	2.34	0.41
64:f:18:LEU:HD13	78:5:1916:G:O6	2.20	0.41
67:i:58:MET:O	67:i:62:LYS:HG3	2.19	0.41
77:t:137:GLN:O	77:t:138:SER:C	2.64	0.41
77:t:143:VAL:O	77:t:149:HIS:CD2	2.74	0.41
78:5:694:C:O2'	78:5:695:G:H5'	2.19	0.41
78:5:732:A:H2'	78:5:733:A:O4'	2.19	0.41
78:5:945:U:O2'	78:5:946:C:H5''	2.20	0.41
78:5:1473:U:O2'	78:5:1474:C:H5'	2.20	0.41
78:5:1569:U:O2'	78:5:1570:G:H5'	2.21	0.41
78:5:1633:G:H4'	78:5:1634:A:O5'	2.20	0.41
78:5:2312:U:H5''	78:5:2313:A:OP1	2.20	0.41
78:5:2465:C:O2'	78:5:2466:G:H5'	2.21	0.41
78:5:3733:A:H2'	78:5:3734:U:O4'	2.20	0.41
78:5:4093:G:H2'	78:5:4094:G:H8	1.85	0.41
78:5:4875:G:O5'	78:5:4877:G:H1'	2.21	0.41
79:7:110:G:H2'	79:7:111:C:H6	1.83	0.41
80:8:10:G:H2'	80:8:11:C:H6	1.85	0.41
84:ET:14:A:H2'	84:ET:15:G:H5'	2.01	0.41
3:9:364:G:H2'	3:9:365:C:C6	2.56	0.41
3:9:419:U:H2'	3:9:420:C:H6	1.84	0.41
3:9:789:G:H2'	3:9:790:U:H6	1.82	0.41
3:9:854:C:OP1	61:c:12:GLU:HG3	2.20	0.41
3:9:1011:G:H2'	3:9:1012:G:N3	2.34	0.41
3:9:1135:C:H2'	3:9:1136:U:O4'	2.21	0.41
3:9:1216:A:N1	19:aa:87:ARG:HD2	2.35	0.41
3:9:1306:G:N2	3:9:1326:U:H1'	2.35	0.41
3:9:1518:C:HO2'	34:dd:7:TYR:HA	1.86	0.41
4:AA:177:MET:HE2	28:RR:91:LEU:HD21	2.03	0.41
5:BB:35:ALA:HB1	5:BB:36:PRO:HD2	2.03	0.41
5:BB:37:ALA:HB2	5:BB:42:ARG:NH2	2.35	0.41
7:EE:122:LYS:HG2	7:EE:164:LEU:HD11	2.02	0.41
8:GG:78:SER:HB2	8:GG:92:ARG:HG3	2.03	0.41
8:GG:221:LYS:N	8:GG:224:ARG:NH1	2.55	0.41
9:HH:21:SER:O	9:HH:25:GLN:HG3	2.21	0.41
9:HH:63:PHE:HA	9:HH:95:ILE:O	2.20	0.41
11:JJ:15:THR:HG22	11:JJ:44:TRP:CZ3	2.55	0.41
11:JJ:126:ALA:O	11:JJ:130:ILE:HG13	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:NN:91:LEU:O	13:NN:122:ILE:HD11	2.19	0.41
13:NN:98:VAL:HG21	13:NN:118:ILE:HD12	2.03	0.41
14:OO:148:GLY:O	14:OO:150:ARG:HG2	2.21	0.41
16:WW:105:THR:HA	16:WW:110:ILE:HA	2.03	0.41
20:bb:33:MET:HG2	20:bb:46:VAL:O	2.19	0.41
25:MM:120:ALA:HA	25:MM:123:VAL:HG12	2.03	0.41
26:PP:28:MET:HE2	26:PP:32:GLN:CG	2.44	0.41
27:QQ:70:VAL:HG12	27:QQ:72:VAL:HG22	2.02	0.41
27:QQ:86:GLN:OE1	27:QQ:122:ALA:HB2	2.19	0.41
28:RR:97:GLU:HB2	28:RR:120:THR:HB	2.01	0.41
29:SS:64:VAL:O	29:SS:68:ILE:HG13	2.21	0.41
36:A:28:ARG:HH21	36:A:123:ARG:HD2	1.85	0.41
36:A:28:ARG:HB3	36:A:123:ARG:HD3	2.03	0.41
36:A:112:ILE:HG23	36:A:133:TYR:CD1	2.56	0.41
36:A:145:LYS:HD3	36:A:157:VAL:HG11	2.03	0.41
37:B:274:TYR:CE1	78:5:4977:A:H4'	2.54	0.41
37:B:287:ILE:HG23	37:B:331:VAL:CG1	2.47	0.41
38:C:137:VAL:HA	38:C:247:GLY:O	2.20	0.41
38:C:168:VAL:HG13	38:C:177:TRP:CH2	2.56	0.41
39:D:74:ILE:HG12	79:7:114:U:O2	2.19	0.41
40:E:161:ARG:NH2	78:5:4945:G:H1'	2.35	0.41
40:E:165:VAL:HG13	40:E:180:GLY:N	2.35	0.41
42:G:209:VAL:HG22	42:G:235:CYS:SG	2.60	0.41
43:H:162:GLN:HG3	43:H:179:ILE:O	2.19	0.41
46:L:10:LEU:HD23	46:L:10:LEU:H	1.85	0.41
48:N:195:ARG:HD3	78:5:98:A:OP1	2.21	0.41
50:P:26:PHE:CE1	50:P:119:VAL:HG12	2.56	0.41
65:g:24:ARG:HD3	78:5:2638:G:H4'	2.02	0.41
70:l:47:THR:HG22	70:l:49:LEU:H	1.84	0.41
74:p:84:ARG:NH1	74:p:84:ARG:HB3	2.36	0.41
76:s:12:ASN:ND2	76:s:16:LYS:HE3	2.36	0.41
77:t:92:ARG:NH1	77:t:92:ARG:HB3	2.36	0.41
77:t:129:ILE:O	77:t:133:LEU:HG	2.20	0.41
77:t:136:ALA:O	77:t:139:VAL:HB	2.19	0.41
77:t:139:VAL:HA	78:5:1976:G:O2'	2.20	0.41
78:5:406:C:H2'	78:5:407:A:H5'	2.02	0.41
78:5:1426:G:H5'	78:5:1427:A:OP1	2.20	0.41
78:5:1573:G:H5'	78:5:2668:G:H1'	2.02	0.41
78:5:2420:A:C5'	78:5:2421:G:H5''	2.51	0.41
78:5:2484:A:H5''	78:5:2485:U:OP2	2.20	0.41
78:5:2508:U:O2'	78:5:2509:C:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:5:2629:C:H2'	78:5:2630:U:O4'	2.20	0.41
78:5:2706:G:H3'	78:5:2707:U:H5''	2.01	0.41
78:5:3715:U:H2'	78:5:3716:C:O4'	2.21	0.41
78:5:3868:G:H22	78:5:3900:G:H1'	1.85	0.41
78:5:4191:G:H2'	78:5:4192:A:C8	2.56	0.41
78:5:4385:A:H4'	78:5:4386:C:H5''	2.03	0.41
78:5:4725:C:H2'	78:5:4726:G:C8	2.55	0.41
78:5:5036:C:O2'	78:5:5037:U:H5'	2.21	0.41
78:5:5047:C:O2'	78:5:5050:C:H5'	2.20	0.41
80:8:57:C:H4'	80:8:63:U:C5	2.56	0.41
1:R:69:ALA:O	1:R:74:ARG:HG2	2.20	0.41
3:9:205:G:H2'	3:9:206:C:C6	2.55	0.41
3:9:283:U:H3	3:9:327:G:H1	1.67	0.41
3:9:599:U:O2'	3:9:600:C:H5'	2.20	0.41
3:9:754:G:H2'	3:9:755:A:H8	1.84	0.41
3:9:1193:G:O2'	3:9:1194:U:H5'	2.20	0.41
3:9:1415:C:O2'	3:9:1416:U:H5'	2.21	0.41
3:9:1584:U:H5''	3:9:1585:A:O4'	2.20	0.41
3:9:1606:G:H5'	3:9:1607:A:OP1	2.20	0.41
3:9:1685:A:OP1	33:cc:49:PRO:HB3	2.20	0.41
4:AA:94:THR:HG23	4:AA:186:ARG:NH1	2.35	0.41
4:AA:199:PRO:HB3	28:RR:90:ALA:HB1	2.03	0.41
5:BB:141:GLY:HA2	5:BB:209:ASP:O	2.21	0.41
7:EE:45:ILE:HG22	7:EE:80:ILE:O	2.20	0.41
12:LL:50:ALA:HA	12:LL:55:TYR:CE1	2.55	0.41
13:NN:5:HIS:HB2	13:NN:121:ARG:HH12	1.85	0.41
16:WW:89:TRP:HA	16:WW:92:ASN:OD1	2.20	0.41
17:XX:125:VAL:HG12	17:XX:140:ARG:HH12	1.85	0.41
23:FF:38:TYR:CE1	23:FF:144:LEU:HB2	2.55	0.41
23:FF:86:LYS:HA	23:FF:89:THR:CG2	2.49	0.41
28:RR:45:LYS:O	28:RR:49:LYS:HG3	2.20	0.41
28:RR:66:VAL:HB	28:RR:69:ILE:CG2	2.50	0.41
29:SS:40:TYR:O	29:SS:44:VAL:HG23	2.20	0.41
32:ZZ:58:LEU:HD12	32:ZZ:77:LEU:CD1	2.51	0.41
37:B:101:THR:HG21	78:5:4723:A:N3	2.35	0.41
37:B:168:MET:SD	37:B:171:LEU:HD12	2.60	0.41
37:B:229:LYS:HA	37:B:229:LYS:HD3	1.95	0.41
38:C:143:ARG:HG2	38:C:178:ASN:CB	2.50	0.41
38:C:146:GLU:HG3	38:C:178:ASN:HD21	1.85	0.41
38:C:164:THR:HG21	38:C:223:ASN:HB3	2.02	0.41
39:D:44:TYR:CG	78:5:1824:G:H4'	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:F:153:ILE:HG21	41:F:190:ILE:HD11	2.02	0.41
41:F:227:VAL:HG13	52:S:39:VAL:HG12	2.02	0.41
42:G:309:ALA:O	42:G:313:GLU:HG3	2.21	0.41
43:H:103:VAL:HG13	43:H:112:VAL:CG1	2.51	0.41
44:I:32:ARG:NH1	44:I:32:ARG:HB2	2.36	0.41
44:I:86:HIS:HB3	44:I:139:ARG:HG2	2.03	0.41
46:L:18:TRP:O	46:L:22:VAL:HG23	2.20	0.41
46:L:130:LYS:HD2	46:L:133:ALA:HB3	2.02	0.41
46:L:177:LYS:HA	59:a:134:GLU:OE2	2.21	0.41
49:O:128:ARG:HH11	49:O:128:ARG:HB3	1.85	0.41
53:T:29:THR:HA	53:T:32:ARG:HD2	2.01	0.41
65:g:4:ARG:HB3	78:5:2805:C:O2	2.21	0.41
73:o:35:ALA:HB1	78:5:4343:U:OP1	2.20	0.41
76:s:101:MET:HE3	76:s:101:MET:HA	2.02	0.41
77:t:42:VAL:O	77:t:46:ILE:HG13	2.20	0.41
77:t:65:GLN:HB2	77:t:68:GLN:O	2.20	0.41
77:t:147:HIS:HA	77:t:150:ASP:CB	2.33	0.41
78:5:285:G:H2'	78:5:286:U:O4'	2.21	0.41
78:5:1330:A:O2'	78:5:1331:C:H5'	2.21	0.41
78:5:1695:U:O2'	78:5:1696:C:H5'	2.21	0.41
78:5:1825:A:H2'	78:5:1826:G:C8	2.56	0.41
78:5:1875:C:O2'	78:5:1876:U:H5'	2.21	0.41
78:5:3647:A:O2'	78:5:3648:A:H2'	2.20	0.41
78:5:3899:G:O2'	78:5:3900:G:H5'	2.21	0.41
78:5:3903:A:O2'	78:5:3904:G:H5'	2.20	0.41
78:5:4075:U:O3'	78:5:4076:G:H2'	2.20	0.41
78:5:4195:G:C8	78:5:4442:U:H5''	2.55	0.41
78:5:4959:U:H3'	78:5:4960:G:H5''	2.02	0.41
79:7:108:G:O2'	79:7:109:U:H5'	2.19	0.41
80:8:44:A:O2'	80:8:45:C:H5'	2.21	0.41
84:ET:49:C:N4	84:ET:50:C:N4	2.68	0.41
84:ET:63:C:H2'	84:ET:64:G:H5'	2.02	0.41
3:9:854:C:H2'	3:9:855:A:H8	1.85	0.41
3:9:1354:G:H4'	31:UU:74:SER:CB	2.51	0.41
3:9:1649:U:O2'	27:QQ:142:GLN:HG3	2.20	0.41
4:AA:12:GLU:CB	28:RR:116:ASN:HB2	2.42	0.41
4:AA:128:ARG:NH1	4:AA:152:SER:HA	2.36	0.41
5:BB:126:ASP:OD2	5:BB:218:LEU:HD12	2.20	0.41
5:BB:144:LYS:HB2	5:BB:207:LEU:CA	2.50	0.41
6:CC:183:LYS:HE2	6:CC:196:ILE:CG2	2.50	0.41
8:GG:201:LYS:HE3	8:GG:201:LYS:HB3	1.81	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:II:12:ARG:HG3	10:II:18:ARG:CZ	2.51	0.41
13:NN:52:VAL:O	13:NN:55:ARG:HG3	2.20	0.41
13:NN:92:ILE:O	13:NN:96:VAL:HG23	2.21	0.41
13:NN:112:LYS:O	13:NN:116:ILE:HG13	2.20	0.41
13:NN:124:ARG:HA	13:NN:127:ARG:HE	1.85	0.41
15:VV:62:MET:HE3	15:VV:64:GLU:CG	2.51	0.41
24:KK:42:ASN:O	24:KK:46:MET:HG3	2.21	0.41
24:KK:57:TYR:CD1	24:KK:74:GLU:HG3	2.55	0.41
26:PP:53:GLN:O	26:PP:57:LEU:HD13	2.19	0.41
26:PP:90:VAL:HG13	26:PP:107:ILE:O	2.20	0.41
28:RR:50:ILE:O	28:RR:54:VAL:HG23	2.21	0.41
29:SS:132:ARG:HB3	29:SS:134:GLN:OE1	2.21	0.41
32:ZZ:63:PRO:O	32:ZZ:111:ARG:HG3	2.20	0.41
37:B:226:LYS:HD2	37:B:272:LYS:HG2	2.03	0.41
38:C:55:SER:HB3	80:8:26:C:O3'	2.21	0.41
38:C:188:ARG:HG3	78:5:2301:G:O6	2.20	0.41
40:E:95:VAL:O	40:E:110:VAL:HG22	2.20	0.41
40:E:128:LEU:HD12	78:5:957:G:N2	2.35	0.41
40:E:164:ARG:HH12	40:E:278:PHE:HB2	1.86	0.41
40:E:168:LEU:HD11	40:E:179:THR:HB	2.02	0.41
41:F:107:VAL:HG21	41:F:134:ILE:CG2	2.49	0.41
41:F:128:SER:O	41:F:132:LEU:HG	2.20	0.41
42:G:163:LYS:O	42:G:167:LEU:HG	2.20	0.41
45:J:35:ARG:HD2	45:J:123:ILE:O	2.20	0.41
46:L:31:ARG:HA	46:L:34:ARG:HH12	1.86	0.41
47:M:11:ARG:NH1	47:M:59:ASP:HA	2.36	0.41
48:N:57:GLN:NE2	78:5:146:G:H21	2.18	0.41
51:Q:72:LEU:HG	78:5:1457:G:OP1	2.21	0.41
57:Y:91:ASN:HA	78:5:389:A:O2'	2.21	0.41
57:Y:91:ASN:HA	78:5:389:A:H1'	2.02	0.41
59:a:11:LEU:HA	59:a:14:HIS:CD2	2.55	0.41
59:a:55:LYS:HE2	78:5:92:C:C2	2.55	0.41
60:b:95:ARG:O	60:b:99:ILE:HG13	2.21	0.41
61:c:103:ASP:OD2	61:c:106:ARG:HB2	2.20	0.41
62:d:63:ARG:HD3	62:d:103:TYR:CD2	2.55	0.41
63:e:36:ARG:HH22	78:5:2322:G:P	2.43	0.41
76:s:114:GLY:N	76:s:167:VAL:HB	2.27	0.41
77:t:24:ALA:HB3	78:5:1981:G:O2'	2.21	0.41
77:t:40:LYS:HZ2	77:t:40:LYS:HG2	1.74	0.41
77:t:154:ASP:N	77:t:158:GLY:HA2	2.33	0.41
78:5:979:C:H2'	78:5:980:U:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:5:1075:G:H2'	78:5:1076:C:H5'	2.02	0.41
78:5:1092:G:O2'	78:5:1093:C:H5'	2.20	0.41
78:5:1381:U:H6	78:5:1381:U:H2'	1.68	0.41
78:5:1537:A:H2'	78:5:1538:U:H6	1.84	0.41
78:5:1593:A:H2'	78:5:1594:C:O4'	2.20	0.41
78:5:1747:U:H2'	78:5:1748:U:H6	1.85	0.41
78:5:2266:C:H4'	78:5:2267:U:O5'	2.20	0.41
78:5:2639:U:H2'	78:5:2694:G:C6	2.56	0.41
78:5:2803:U:O2'	78:5:2804:C:H5'	2.21	0.41
78:5:3662:A:H4'	78:5:3663:A:O5'	2.20	0.41
78:5:3732:A:O2'	78:5:3733:A:H5'	2.21	0.41
78:5:4098:A:H2'	78:5:4099:G:H8	1.84	0.41
78:5:4333:C:O2'	78:5:4334:U:H5'	2.20	0.41
78:5:4984:C:H2'	78:5:4985:U:H5''	2.01	0.41
79:7:75:G:N2	79:7:99:G:H2'	2.35	0.41
3:9:365:C:H4'	3:9:1097:C:H5'	2.02	0.41
3:9:584:C:H2'	3:9:585:U:C6	2.55	0.41
3:9:759:C:H3'	3:9:760:A:C5'	2.49	0.41
3:9:871:A:OP1	13:NN:4:MET:HA	2.21	0.41
3:9:918:G:H2'	3:9:919:U:O4'	2.19	0.41
3:9:1236:A:H2'	3:9:1237:G:O4'	2.19	0.41
3:9:1264:U:O4'	84:ET:34:A:N6	2.53	0.41
3:9:1635:C:H2'	3:9:1636:A:O4'	2.20	0.41
4:AA:139:TYR:O	15:VV:29:HIS:HB3	2.21	0.41
7:EE:107:GLY:HA2	7:EE:189:LEU:HB3	2.03	0.41
10:II:61:ASP:O	10:II:77:ARG:HG3	2.21	0.41
10:II:165:GLN:OE1	10:II:195:LEU:HD11	2.21	0.41
11:JJ:172:ARG:O	11:JJ:176:LYS:HG3	2.20	0.41
12:LL:22:ARG:O	12:LL:23:VAL:HG22	2.20	0.41
16:WW:18:GLU:CD	16:WW:69:LEU:HB3	2.46	0.41
18:YY:40:ILE:O	18:YY:44:LEU:HD13	2.20	0.41
18:YY:96:LEU:HD12	18:YY:97:TYR:N	2.36	0.41
18:YY:114:MET:CG	18:YY:122:LYS:HB3	2.47	0.41
22:DD:56:GLN:HA	22:DD:59:LEU:HG	2.02	0.41
27:QQ:16:LYS:HB3	27:QQ:83:ALA:HB2	2.03	0.41
29:SS:74:PRO:CB	29:SS:79:ILE:HD12	2.50	0.41
30:TT:99:VAL:O	30:TT:103:VAL:HG23	2.20	0.41
33:cc:20:ARG:HA	33:cc:20:ARG:HD3	1.85	0.41
37:B:124:LYS:HB2	37:B:124:LYS:HE2	1.85	0.41
38:C:25:PRO:HD2	38:C:28:PHE:CD2	2.56	0.41
38:C:122:TYR:CE2	78:5:1351:G:H5''	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:C:266:THR:HG23	38:C:268:ARG:N	2.36	0.41
39:D:146:LEU:HD13	39:D:147:ASP:N	2.35	0.41
43:H:2:LYS:HD3	43:H:2:LYS:HA	1.93	0.41
44:I:85:PHE:HD2	44:I:87:ILE:HG13	1.86	0.41
46:L:105:LYS:HE2	46:L:105:LYS:HB3	1.90	0.41
46:L:126:LEU:HD21	66:h:117:ARG:CZ	2.51	0.41
47:M:120:ASN:ND2	78:5:4879:C:H5''	2.35	0.41
49:O:16:LEU:HD23	49:O:41:ILE:HG21	2.02	0.41
52:S:119:ALA:CB	52:S:124:ILE:HD11	2.51	0.41
54:U:102:VAL:HG22	54:U:112:LEU:CD2	2.51	0.41
55:V:82:ILE:CG2	55:V:121:VAL:HG22	2.50	0.41
58:Z:36:ARG:HB2	58:Z:40:HIS:CE1	2.56	0.41
59:a:63:LEU:HD12	78:5:87:A:H4'	2.03	0.41
61:c:26:LYS:HB3	61:c:26:LYS:HE2	1.83	0.41
65:g:68:SER:O	65:g:72:LYS:HG3	2.21	0.41
66:h:79:LYS:HG3	66:h:84:ARG:HG3	2.03	0.41
67:i:76:ARG:HA	67:i:76:ARG:HD2	1.94	0.41
68:j:66:HIS:O	68:j:70:VAL:HG23	2.20	0.41
73:o:102:GLN:O	73:o:104:ILE:HD12	2.21	0.41
75:r:32:LEU:H	75:r:32:LEU:HD23	1.86	0.41
76:s:45:MET:HE3	76:s:48:ARG:NH2	2.25	0.41
77:t:16:ARG:HD3	78:5:1975:G:C4	2.56	0.41
77:t:56:LEU:HD12	77:t:56:LEU:HA	1.60	0.41
78:5:360:A:C4	80:8:24:G:H1'	2.56	0.41
78:5:1079:C:O2'	78:5:1080:C:H5'	2.21	0.41
78:5:1354:A:H4'	78:5:1355:G:O5'	2.21	0.41
78:5:1374:G:O2'	78:5:1375:C:H5'	2.21	0.41
78:5:2028:C:O2'	78:5:2029:A:H5'	2.20	0.41
78:5:2271:C:O2'	78:5:2272:C:H5'	2.21	0.41
78:5:2779:C:H2'	78:5:2780:C:H6	1.84	0.41
78:5:3754:G:O2'	78:5:3755:G:H5'	2.20	0.41
78:5:4366:A:O2'	78:5:4367:G:H5'	2.21	0.41
78:5:4468:U:O2'	78:5:4592:C:H5''	2.19	0.41
78:5:4593:C:O2'	78:5:4594:U:H5'	2.21	0.41
78:5:4633:G:O3'	78:5:4634:U:H3'	2.20	0.41
78:5:5032:C:H2'	78:5:5033:G:C8	2.56	0.41
1:R:142:ILE:O	1:R:146:LYS:HG3	2.21	0.41
3:9:99:A:H61	3:9:357:A:H1'	1.85	0.41
3:9:212:U:O2'	3:9:213:C:H5'	2.21	0.41
3:9:288:A:H2'	3:9:289:C:C6	2.55	0.41
3:9:294:G:H4'	3:9:295:A:O5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:564:A:H5''	11:JJ:25:LEU:HD13	2.02	0.41
3:9:572:A:H2'	3:9:573:U:H6	1.86	0.41
3:9:920:U:O2'	3:9:921:C:H5'	2.21	0.41
3:9:952:G:O2'	3:9:953:C:H5'	2.21	0.41
3:9:972:C:H4'	28:RR:127:ASN:OD1	2.21	0.41
3:9:1113:G:O2'	3:9:1114:C:H5'	2.20	0.41
3:9:1351:G:OP1	22:DD:185:LYS:HE3	2.20	0.41
3:9:1418:A:H61	3:9:1450:U:H3	1.68	0.41
3:9:1670:A:H1'	3:9:1671:G:C5'	2.51	0.41
5:BB:110:MET:HE1	5:BB:140:VAL:CG1	2.39	0.41
6:CC:69:LEU:CD2	6:CC:273:LEU:HD21	2.51	0.41
6:CC:186:GLY:HA3	6:CC:243:ALA:HB2	2.02	0.41
6:CC:241:PHE:HA	6:CC:244:ILE:HG12	2.03	0.41
6:CC:251:LEU:HB3	16:WW:70:ASN:OD1	2.21	0.41
8:GG:142:ARG:NE	8:GG:153:VAL:HG21	2.35	0.41
9:HH:24:SER:O	9:HH:28:LEU:HG	2.21	0.41
13:NN:3:ARG:CB	13:NN:6:ALA:HB3	2.50	0.41
13:NN:30:SER:O	13:NN:34:LYS:HG3	2.21	0.41
13:NN:88:LEU:O	13:NN:92:ILE:HG13	2.20	0.41
16:WW:34:ILE:O	16:WW:38:LEU:HG	2.21	0.41
17:XX:121:LYS:HE3	17:XX:123:VAL:CG2	2.50	0.41
22:DD:54:ARG:O	22:DD:58:VAL:HG13	2.20	0.41
22:DD:167:TYR:O	22:DD:190:LEU:HB2	2.21	0.41
23:FF:72:LEU:CD2	23:FF:112:LEU:HD11	2.50	0.41
23:FF:122:ARG:CD	33:cc:59:LEU:HD21	2.50	0.41
23:FF:127:ARG:O	23:FF:128:ILE:HD13	2.21	0.41
24:KK:84:HIS:HB2	25:MM:27:ILE:HG23	2.03	0.41
25:MM:23:LYS:O	25:MM:27:ILE:HG13	2.20	0.41
27:QQ:63:PHE:CE1	27:QQ:92:LEU:HD22	2.55	0.41
31:UU:56:MET:HB2	31:UU:86:LYS:O	2.20	0.41
31:UU:68:THR:HG21	31:UU:72:GLU:O	2.21	0.41
36:A:48:ILE:HB	74:p:63:THR:CG2	2.47	0.41
36:A:90:CYS:HB3	36:A:101:VAL:CG1	2.44	0.41
38:C:353:ARG:HD3	78:5:930:G:OP1	2.20	0.41
39:D:197:LYS:HD2	39:D:202:GLN:CG	2.46	0.41
41:F:160:LYS:HA	41:F:164:LYS:O	2.20	0.41
41:F:180:LYS:N	78:5:2102:G:H22	2.18	0.41
46:L:96:ILE:O	46:L:98:VAL:HG23	2.20	0.41
46:L:119:GLU:OE2	46:L:123:LYS:HE3	2.21	0.41
47:M:97:ALA:HB2	49:O:203:VAL:HB	2.03	0.41
47:M:133:ALA:O	47:M:137:LYS:HG3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:N:9:GLU:HB3	67:i:44:ILE:HG12	2.03	0.41
48:N:81:TYR:OH	78:5:1625:G:H3'	2.21	0.41
48:N:121:VAL:HG21	48:N:131:GLU:HG2	2.01	0.41
50:P:61:ARG:HA	50:P:78:TRP:CZ2	2.55	0.41
52:S:35:PRO:HD2	52:S:39:VAL:CG2	2.47	0.41
56:X:150:ALA:HA	56:X:153:ILE:HG12	2.03	0.41
57:Y:66:GLN:HB3	57:Y:84:ARG:NH2	2.26	0.41
59:a:11:LEU:HA	59:a:14:HIS:HD2	1.85	0.41
59:a:32:ARG:HD3	78:5:1516:G:OP1	2.20	0.41
59:a:75:LEU:CD2	59:a:78:LEU:HD22	2.41	0.41
65:g:83:CYS:O	65:g:87:VAL:HG23	2.21	0.41
67:i:33:LEU:CD1	67:i:38:LYS:HD2	2.47	0.41
69:k:44:THR:OG1	78:5:2692:U:H4'	2.20	0.41
69:k:46:VAL:O	69:k:47:ILE:HD13	2.21	0.41
74:p:13:LYS:HA	78:5:1575:A:H2	1.85	0.41
76:s:135:THR:HG21	76:s:152:ILE:HD13	2.03	0.41
78:5:451:C:H5''	78:5:452:A:O5'	2.20	0.41
78:5:639:U:H2'	78:5:640:C:C6	2.56	0.41
78:5:651:C:H2'	78:5:652:G:C8	2.55	0.41
78:5:904:G:H2'	78:5:905:C:H6	1.86	0.41
78:5:1207:C:H2'	78:5:1208:G:C8	2.55	0.41
78:5:1557:C:H2'	78:5:1558:A:H8	1.85	0.41
78:5:1633:G:O2'	78:5:1634:A:H5''	2.20	0.41
78:5:1668:A:C2'	78:5:1669:A:H5'	2.50	0.41
78:5:1983:A:H4'	78:5:1984:A:H5''	2.02	0.41
78:5:2518:G:H1'	78:5:2539:C:C1'	2.50	0.41
78:5:2800:G:H2'	78:5:2801:U:C6	2.56	0.41
78:5:3846:C:O2'	78:5:3847:C:H5'	2.21	0.41
78:5:4122:G:O2'	78:5:4123:C:H5'	2.21	0.41
78:5:4130:C:H2'	78:5:4131:G:H8	1.86	0.41
78:5:4312:U:H2'	78:5:4313:A:C8	2.55	0.41
78:5:4714:C:H2'	78:5:4715:C:O4'	2.21	0.41
79:7:108:G:H2'	79:7:109:U:O4'	2.21	0.41
1:R:23:TRP:O	1:R:50:ILE:HB	2.21	0.41
1:R:166:THR:HG21	3:9:719:A:C3'	2.51	0.41
2:W:34:ALA:HB3	78:5:4663:G:OP1	2.20	0.41
3:9:238:G:H2'	3:9:239:C:C6	2.56	0.41
3:9:323:C:H4'	17:XX:11:ARG:NH1	2.36	0.41
3:9:417:A:H1'	3:9:498:A:C5'	2.51	0.41
3:9:539:C:H2'	3:9:540:A:O4'	2.21	0.41
3:9:562:C:H2'	3:9:563:C:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:760:A:C4	9:HH:66:VAL:HG21	2.55	0.41
3:9:760:A:H1'	9:HH:66:VAL:HG21	2.03	0.41
3:9:866:C:C5'	13:NN:72:LEU:HD23	2.51	0.41
3:9:872:U:H2'	3:9:873:C:O4'	2.20	0.41
3:9:972:C:C1'	28:RR:127:ASN:HD21	2.34	0.41
3:9:975:C:H5'	20:bb:17:ARG:O	2.21	0.41
3:9:1169:A:C4'	72:n:13:LEU:HD11	2.51	0.41
3:9:1207:G:H3'	14:OO:146:ARG:NH2	2.36	0.41
3:9:1418:A:C5'	31:UU:51:LYS:HE3	2.47	0.41
3:9:1484:U:H2'	3:9:1485:G:C8	2.56	0.41
3:9:1612:G:H5''	30:TT:86:GLY:CA	2.51	0.41
3:9:1614:U:H3	3:9:1637:U:H3	1.66	0.41
4:AA:51:LEU:H	28:RR:102:THR:CG2	2.34	0.41
4:AA:205:ARG:CZ	4:AA:210:ILE:HG12	2.51	0.41
5:BB:30:TRP:CB	14:OO:19:PRO:HG3	2.51	0.41
5:BB:195:LYS:O	5:BB:199:LYS:HG3	2.20	0.41
7:EE:86:PHE:CZ	7:EE:87:MET:HE2	2.56	0.41
7:EE:211:LYS:HA	7:EE:217:SER:HA	2.02	0.41
8:GG:45:TRP:HA	8:GG:48:TYR:CE1	2.52	0.41
8:GG:110:ASN:O	8:GG:111:LEU:HD23	2.20	0.41
9:HH:19:PHE:O	9:HH:23:ILE:HG13	2.21	0.41
9:HH:60:ILE:HG23	9:HH:92:VAL:CA	2.45	0.41
9:HH:69:LEU:CG	9:HH:96:ALA:HB2	2.46	0.41
12:LL:126:VAL:CG2	12:LL:142:VAL:HG13	2.51	0.41
13:NN:95:ALA:HB2	13:NN:118:ILE:CG2	2.51	0.41
14:OO:86:LYS:HA	14:OO:86:LYS:HD2	1.89	0.41
16:WW:69:LEU:HD11	16:WW:72:CYS:HB2	2.03	0.41
17:XX:17:ARG:HA	17:XX:17:ARG:HH11	1.86	0.41
17:XX:102:VAL:HG13	17:XX:121:LYS:O	2.20	0.41
19:aa:75:VAL:O	19:aa:79:ILE:HG13	2.21	0.41
22:DD:137:VAL:HG13	22:DD:150:MET:O	2.21	0.41
23:FF:29:GLN:HE21	23:FF:29:GLN:HB2	1.67	0.41
23:FF:92:ILE:CG2	23:FF:169:ILE:HG22	2.51	0.41
24:KK:71:LEU:CD2	24:KK:79:LEU:HD12	2.51	0.41
25:MM:20:GLU:O	25:MM:24:THR:HG23	2.21	0.41
26:PP:111:MET:HE2	26:PP:119:PHE:CD1	2.55	0.41
27:QQ:84:ILE:HA	27:QQ:87:SER:OG	2.20	0.41
27:QQ:93:VAL:O	27:QQ:105:LYS:HG3	2.20	0.41
30:TT:134:ILE:O	30:TT:138:VAL:HG23	2.20	0.41
33:cc:14:VAL:HG13	33:cc:30:VAL:CG1	2.51	0.41
37:B:47:LEU:HD23	37:B:166:THR:HG23	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:B:223:THR:O	37:B:274:TYR:HA	2.21	0.41
37:B:285:TYR:CD1	37:B:363:ILE:HG12	2.56	0.41
38:C:2:ALA:HB2	78:5:667:A:C8	2.56	0.41
38:C:218:VAL:CA	38:C:229:LEU:HG	2.41	0.41
38:C:259:LYS:O	38:C:263:LEU:HG	2.21	0.41
38:C:284:MET:HE2	51:Q:28:LEU:CD2	2.51	0.41
39:D:63:GLN:NE2	79:7:5:A:HI'	2.35	0.41
40:E:154:ILE:HG22	40:E:156:LEU:CD2	2.51	0.41
40:E:169:LYS:CG	40:E:177:LEU:HD23	2.51	0.41
40:E:255:ALA:O	40:E:259:GLN:HG3	2.21	0.41
41:F:85:GLU:HB2	53:T:135:PRO:CB	2.51	0.41
41:F:87:LYS:HB3	41:F:196:VAL:HG21	2.03	0.41
41:F:94:ILE:O	41:F:116:ILE:HD11	2.21	0.41
42:G:163:LYS:HA	42:G:166:ARG:NH1	2.35	0.41
42:G:273:GLU:O	42:G:277:THR:HG23	2.21	0.41
43:H:8:GLN:HB3	43:H:57:VAL:CG1	2.51	0.41
43:H:34:LEU:HG	43:H:84:VAL:HG22	2.01	0.41
43:H:176:LEU:HD11	71:m:61:GLN:HE21	1.85	0.41
44:I:74:LYS:O	44:I:78:LYS:HG3	2.21	0.41
45:J:20:LEU:HD12	45:J:131:TYR:O	2.21	0.41
46:L:87:HIS:CE1	46:L:89:LYS:HB2	2.55	0.41
46:L:172:GLU:OE2	67:i:3:LEU:HD23	2.20	0.41
47:M:14:TYR:OH	47:M:22:GLY:HA2	2.21	0.41
47:M:52:PHE:HA	47:M:55:MET:CG	2.50	0.41
48:N:73:ARG:HB2	48:N:92:LEU:HD12	2.03	0.41
48:N:95:ALA:HB2	78:5:31:U:OP1	2.21	0.41
49:O:142:ALA:HA	49:O:145:VAL:HG12	2.03	0.41
50:P:17:SER:OG	50:P:148:MET:HG3	2.20	0.41
51:Q:72:LEU:HB3	78:5:1456:C:O2'	2.21	0.41
51:Q:146:ARG:HA	78:5:1504:G:P	2.61	0.41
52:S:45:TRP:CE2	52:S:56:LYS:HG3	2.56	0.41
52:S:149:LYS:HB2	52:S:149:LYS:HE3	1.89	0.41
52:S:154:LEU:HD13	52:S:157:ARG:HD3	2.02	0.41
53:T:12:ARG:HH22	78:5:1789:C:H5'	1.86	0.41
55:V:49:LEU:HG	55:V:50:ASN:ND2	2.29	0.41
56:X:79:PHE:CE2	56:X:99:ILE:HG13	2.55	0.41
57:Y:28:LYS:HE3	78:5:195:C:OP1	2.20	0.41
58:Z:18:TYR:CE1	58:Z:47:ASP:HB2	2.56	0.41
59:a:148:ALA:HA	67:i:8:ALA:HB2	2.03	0.41
61:c:22:MET:HE3	61:c:85:CYS:SG	2.60	0.41
61:c:87:LYS:HB3	61:c:89:TYR:CE2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:g:4:ARG:HD2	78:5:2805:C:O2	2.21	0.41
66:h:56:ARG:O	66:h:60:VAL:HG23	2.20	0.41
72:n:13:LEU:HA	72:n:13:LEU:HD22	1.78	0.41
76:s:77:LYS:HB2	76:s:193:PHE:HE1	1.86	0.41
76:s:84:GLY:C	78:5:2021:G:H4'	2.46	0.41
78:5:48:G:H1'	78:5:49:U:OP2	2.21	0.41
78:5:217:C:H4'	78:5:218:A:H5''	2.02	0.41
78:5:238:C:O2'	78:5:239:C:H5'	2.21	0.41
78:5:455:C:H2'	78:5:456:C:H6	1.86	0.41
78:5:459:C:O2'	78:5:460:C:H5'	2.21	0.41
78:5:698:G:O2'	78:5:699:C:H5'	2.21	0.41
78:5:751:G:C2	78:5:752:G:H1'	2.56	0.41
78:5:1099:C:H2'	78:5:1100:U:O4'	2.20	0.41
78:5:1304:C:H2'	78:5:1305:C:C6	2.56	0.41
78:5:1455:G:H4'	78:5:1456:C:OP1	2.21	0.41
78:5:1463:C:O2'	78:5:1464:C:H5'	2.21	0.41
78:5:1792:U:C2'	78:5:1793:A:H5'	2.51	0.41
78:5:1894:C:H4'	79:7:84:U:OP1	2.21	0.41
78:5:2027:U:O2'	78:5:2028:C:H5'	2.20	0.41
78:5:2061:U:H2'	78:5:2062:C:O4'	2.21	0.41
78:5:2264:C:O2'	78:5:2265:G:H5'	2.20	0.41
78:5:2375:A:H2'	78:5:2376:A:C8	2.56	0.41
78:5:2608:G:O2'	78:5:2609:G:H5'	2.20	0.41
78:5:2684:C:H2'	78:5:2685:C:H6	1.86	0.41
78:5:2885:A:H2'	78:5:2886:U:H6	1.85	0.41
78:5:3872:A:O2'	78:5:3873:G:H5'	2.21	0.41
78:5:4075:U:C2'	78:5:4169:G:H1	2.34	0.41
78:5:4111:U:O2'	78:5:4112:C:H5'	2.21	0.41
78:5:4313:A:C2'	78:5:4314:C:H5''	2.50	0.41
78:5:4320:G:H2'	78:5:4321:U:C6	2.56	0.41
78:5:4320:G:H2'	78:5:4321:U:O4'	2.20	0.41
78:5:4345:C:H2'	78:5:4346:U:C6	2.56	0.41
78:5:4407:G:H2'	78:5:4408:G:O4'	2.21	0.41
78:5:4438:U:H2'	78:5:4439:U:C6	2.56	0.41
78:5:4454:G:O6	78:5:4526:U:O4	2.38	0.41
78:5:4578:G:O2'	78:5:4579:U:H5'	2.20	0.41
78:5:4627:U:H2'	78:5:4628:U:C6	2.55	0.41
78:5:4717:A:H2'	78:5:4718:G:O4'	2.21	0.41
78:5:4865:C:O2'	78:5:4866:C:H5'	2.20	0.41
78:5:4869:U:C5'	78:5:4870:G:H5'	2.45	0.41
80:8:65:A:H2'	80:8:66:A:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:EF:527:LEU:HD13	81:EF:557:CYS:SG	2.61	0.41
83:PT:39:G:C4	83:PT:40:C:H1'	2.55	0.41
84:ET:52:G:H2'	84:ET:53:G:H8	1.85	0.41
3:9:34:U:H2'	3:9:35:C:H6	1.85	0.41
3:9:111:A:O2'	3:9:112:U:H5'	2.21	0.41
3:9:270:C:H4'	7:EE:30:ARG:HH12	1.86	0.41
3:9:282:C:OP1	17:XX:18:ARG:HD3	2.21	0.41
3:9:282:C:O2'	3:9:283:U:H5'	2.21	0.41
3:9:305:C:H5''	10:II:54:LYS:CE	2.47	0.41
3:9:445:A:OP1	11:JJ:45:ARG:HD3	2.21	0.41
3:9:1110:C:H2'	3:9:1111:C:H5'	2.03	0.41
3:9:1172:A:H2'	3:9:1173:A:H5''	2.03	0.41
3:9:1406:U:O2'	3:9:1407:C:H5'	2.20	0.41
3:9:1444:A:H2'	3:9:1445:A:C8	2.56	0.41
3:9:1449:C:H1'	27:QQ:22:VAL:HG21	2.02	0.41
3:9:1685:A:H5''	33:cc:20:ARG:NH2	2.36	0.41
4:AA:184:ARG:HD3	4:AA:191:ARG:NH1	2.36	0.41
6:CC:251:LEU:HD11	6:CC:256:TRP:HE1	1.86	0.41
7:EE:75:LYS:HB3	7:EE:77:ARG:NH1	2.36	0.41
11:JJ:120:ALA:HA	11:JJ:125:HIS:HD2	1.86	0.41
12:LL:101:ARG:CB	17:XX:10:ALA:HB2	2.45	0.41
13:NN:54:LEU:HA	13:NN:58:HIS:ND1	2.36	0.41
17:XX:59:ALA:HB3	17:XX:65:ALA:H	1.86	0.41
23:FF:20:PHE:CE1	23:FF:50:PRO:HD3	2.56	0.41
25:MM:52:LEU:HD21	25:MM:62:VAL:HG23	2.03	0.41
26:PP:124:LYS:HG3	26:PP:125:PRO:HD2	2.03	0.41
27:QQ:53:GLU:O	27:QQ:57:LEU:HG	2.21	0.41
27:QQ:68:ILE:HG21	27:QQ:88:ILE:HG22	2.02	0.41
30:TT:100:ALA:O	30:TT:104:LEU:HG	2.21	0.41
36:A:90:CYS:HA	36:A:101:VAL:O	2.21	0.41
37:B:53:MET:HE3	78:5:4625:C:O2'	2.21	0.41
39:D:44:TYR:HB2	78:5:1823:G:O2'	2.20	0.41
39:D:181:PRO:HG2	39:D:195:HIS:HD2	1.86	0.41
39:D:208:MET:HG3	39:D:219:TYR:HE1	1.84	0.41
39:D:279:ARG:HG3	78:5:1177:U:O2'	2.21	0.41
41:F:141:TRP:CE2	41:F:234:ASN:HB2	2.56	0.41
43:H:165:THR:HB	43:H:178:GLY:HA2	2.03	0.41
45:J:39:VAL:CG2	45:J:123:ILE:HG21	2.51	0.41
46:L:179:PHE:HE2	78:5:1488:G:H4'	1.85	0.41
47:M:58:THR:HG22	47:M:91:TRP:HZ3	1.83	0.41
48:N:147:ASP:OD1	66:h:104:THR:HG21	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:N:166:SER:O	48:N:170:LYS:HG3	2.21	0.41
49:O:76:PRO:HB3	49:O:138:LEU:HG	2.03	0.41
49:O:94:ARG:HD2	78:5:1309:C:H5''	2.02	0.41
52:S:76:LYS:HE3	52:S:78:PHE:CZ	2.56	0.41
68:j:36:LYS:HD3	78:5:372:A:H5''	2.02	0.41
69:k:69:LEU:HD22	69:k:69:LEU:HA	1.87	0.41
74:p:38:THR:HG22	74:p:45:THR:OG1	2.21	0.41
76:s:60:MET:HB3	78:5:1961:G:OP2	2.21	0.41
77:t:134:GLY:HA3	78:5:1973:G:N2	2.28	0.41
77:t:151:ILE:HG12	78:5:1994:C:H4'	2.01	0.41
78:5:11:G:H2'	78:5:12:A:O4'	2.21	0.41
78:5:177:G:H2'	78:5:178:C:C6	2.55	0.41
78:5:651:C:H2'	78:5:652:G:H8	1.85	0.41
78:5:689:U:H2'	78:5:690:C:C6	2.56	0.41
78:5:717:U:H2'	78:5:718:C:C6	2.56	0.41
78:5:959:G:N2	78:5:971(A):G:H1	2.18	0.41
78:5:1085:C:H2'	78:5:1086:C:O4'	2.21	0.41
78:5:1404:G:H2'	78:5:1405:C:C6	2.56	0.41
78:5:1526:G:O2'	78:5:1527:A:H5'	2.21	0.41
78:5:1577:G:C2	78:5:3637:U:H1'	2.55	0.41
78:5:2424:G:H5''	78:5:2425:U:OP1	2.21	0.41
78:5:3911:C:H1'	78:5:4395:U:O2	2.21	0.41
78:5:4657:U:H2'	78:5:4657:U:OP1	2.21	0.41
78:5:4947:U:H2'	78:5:4948:C:H5'	2.03	0.41
3:9:44:U:H2'	3:9:45:A:H8	1.85	0.40
3:9:92:A:N6	3:9:368:G:H1'	2.36	0.40
3:9:126:G:C5'	8:GG:199:THR:HG22	2.42	0.40
3:9:207:A:H2'	3:9:208:U:H5'	2.03	0.40
3:9:364:G:H2'	3:9:365:C:H6	1.86	0.40
3:9:506:U:H4'	18:YY:33:ALA:N	2.36	0.40
3:9:897:A:H2'	3:9:898:G:H5'	2.02	0.40
3:9:1409:G:O2'	27:QQ:126:ARG:HD2	2.21	0.40
3:9:1506:G:O4'	22:DD:180:GLY:HA2	2.21	0.40
3:9:1629:A:C5	29:SS:132:ARG:HG3	2.56	0.40
7:EE:57:THR:O	7:EE:61:VAL:HG23	2.21	0.40
7:EE:179:ASN:HB3	7:EE:229:GLY:O	2.21	0.40
13:NN:71:ILE:O	13:NN:75:LEU:HD13	2.21	0.40
29:SS:86:ARG:HD3	29:SS:86:ARG:HA	1.87	0.40
36:A:15:VAL:HG21	78:5:1628:C:H5''	2.03	0.40
36:A:202:VAL:CG1	36:A:217:GLN:HG2	2.51	0.40
38:C:101:MET:HG2	78:5:2343:G:N2	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:D:51:MET:HE3	39:D:146:LEU:HD23	2.01	0.40
40:E:121:THR:OG1	63:e:93:LYS:HD3	2.21	0.40
40:E:242:LYS:HD3	40:E:243:TYR:H	1.85	0.40
42:G:270:LYS:O	42:G:273:GLU:HG3	2.21	0.40
44:I:206:LEU:O	44:I:210:ARG:HG3	2.22	0.40
45:J:154:LYS:HE3	79:7:18:C:OP1	2.21	0.40
49:O:80:PHE:O	49:O:84:VAL:HG23	2.21	0.40
65:g:74:VAL:HG13	65:g:79:GLY:HA3	2.03	0.40
71:m:94:ASN:O	71:m:95:LEU:HD23	2.21	0.40
74:p:89:LEU:O	74:p:92:GLN:HG2	2.20	0.40
76:s:55:MET:HB2	78:5:1998:A:C5	2.56	0.40
76:s:137:PHE:O	76:s:141:LEU:HD23	2.22	0.40
77:t:77:ALA:HB3	78:5:1974:U:OP1	2.21	0.40
77:t:114:ARG:NH2	77:t:125:LEU:HD13	2.35	0.40
77:t:147:HIS:HD2	77:t:150:ASP:HB2	1.86	0.40
78:5:689:U:O2'	78:5:690:C:H5'	2.21	0.40
78:5:753:C:O2'	78:5:754:U:H5'	2.21	0.40
78:5:1086:C:O2'	78:5:1087:A:H5'	2.21	0.40
78:5:1504:G:O2'	78:5:1505:C:H5'	2.20	0.40
78:5:1553:A:H2'	78:5:1554:A:C8	2.56	0.40
78:5:1622:U:O2'	78:5:1627:G:H4'	2.21	0.40
78:5:1625:G:H4'	78:5:1626:G:O5'	2.21	0.40
78:5:2041:A:H2'	78:5:2042:A:H5''	2.03	0.40
78:5:2609:G:O2'	78:5:2610:G:H5'	2.20	0.40
78:5:3732:A:H2'	78:5:3733:A:C8	2.56	0.40
78:5:3762:U:H2'	78:5:3763:A:O4'	2.22	0.40
78:5:4168:G:C2'	78:5:4169:G:H5'	2.51	0.40
78:5:4593:C:H2'	78:5:4594:U:H6	1.85	0.40
78:5:4940:C:H5'	78:5:4941:G:H5''	2.03	0.40
79:7:25:G:O2'	79:7:26:C:H5'	2.21	0.40
83:PT:34:A:C6	83:PT:35:G:C5	3.09	0.40
83:PT:37:A:H3'	83:PT:38:U:C6	2.56	0.40
2:W:3:VAL:HG11	2:W:12:LYS:HE2	2.01	0.40
3:9:15:U:H1'	3:9:592:A:C4	2.56	0.40
3:9:52:G:H2'	3:9:53:C:O4'	2.21	0.40
3:9:109:U:H2'	3:9:110:U:C6	2.56	0.40
3:9:142:U:O2'	3:9:143:G:H5'	2.21	0.40
3:9:511:A:O2'	3:9:512:G:H5''	2.21	0.40
3:9:681:G:H2'	3:9:682:C:C6	2.56	0.40
3:9:990:A:H2'	3:9:991:A:C5	2.55	0.40
3:9:1273:G:H4'	3:9:1274:A:C5'	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:9:1289:C:H1'	3:9:1290:G:O2'	2.21	0.40
3:9:1357:C:H5''	3:9:1693:C:H4'	2.04	0.40
3:9:1475:A:H2'	3:9:1476:C:O4'	2.21	0.40
3:9:1592:U:H4'	3:9:1593:G:OP1	2.21	0.40
3:9:1593:G:H1	30:TT:74:SER:HB3	1.86	0.40
4:AA:28:THR:HA	4:AA:46:ILE:HG12	2.04	0.40
4:AA:61:ALA:O	4:AA:65:ILE:HG13	2.21	0.40
4:AA:177:MET:CG	28:RR:91:LEU:HD11	2.38	0.40
6:CC:114:LYS:HD3	6:CC:116:THR:HG23	2.03	0.40
6:CC:128:VAL:O	6:CC:139:LEU:HD22	2.21	0.40
19:aa:51:ARG:HD2	19:aa:55:GLU:OE1	2.21	0.40
22:DD:172:VAL:HG22	22:DD:185:LYS:HG2	2.03	0.40
23:FF:109:LEU:O	23:FF:113:VAL:HG23	2.22	0.40
24:KK:30:PRO:O	24:KK:31:LYS:HD3	2.21	0.40
24:KK:57:TYR:CE1	24:KK:74:GLU:HG3	2.57	0.40
26:PP:60:LEU:CD1	26:PP:89:MET:HG3	2.46	0.40
30:TT:33:TRP:CZ2	30:TT:102:ARG:HG2	2.56	0.40
30:TT:44:GLU:C	30:TT:45:LEU:HD12	2.47	0.40
31:UU:37:ALA:O	31:UU:41:ARG:HG3	2.22	0.40
36:A:209:HIS:CE1	36:A:235:VAL:HG11	2.56	0.40
37:B:219:VAL:HG11	37:B:337:VAL:HB	2.02	0.40
38:C:124:ILE:HD11	38:C:237:ILE:HD11	2.02	0.40
38:C:259:LYS:NZ	38:C:263:LEU:HD21	2.36	0.40
38:C:291:ARG:HB2	78:5:666:G:H21	1.85	0.40
38:C:348:LYS:O	38:C:352:GLU:HG3	2.21	0.40
43:H:5:LEU:HD13	43:H:60:TRP:CE2	2.57	0.40
43:H:12:ILE:HD13	43:H:18:ILE:CD1	2.52	0.40
43:H:122:TYR:CD1	78:5:4613:C:H4'	2.55	0.40
44:I:60:LEU:HD23	44:I:160:PRO:HD2	2.02	0.40
44:I:75:TYR:CD2	44:I:151:ALA:HB2	2.56	0.40
45:J:147:ARG:NH2	79:7:57:C:H4'	2.34	0.40
47:M:112:VAL:HG11	49:O:201:LEU:HD11	2.03	0.40
49:O:49:ARG:HH21	78:5:1929:A:H2'	1.86	0.40
51:Q:143:ARG:HB2	78:5:1460:C:H5'	2.03	0.40
53:T:92:ARG:HG2	53:T:94:GLU:OE1	2.21	0.40
58:Z:5:MET:O	58:Z:6:LYS:HD3	2.21	0.40
61:c:18:LEU:HD21	61:c:47:ILE:CD1	2.51	0.40
61:c:56:ARG:O	61:c:60:ILE:HG12	2.21	0.40
65:g:59:VAL:HG22	65:g:60:ARG:H	1.86	0.40
68:j:19:CYS:HA	68:j:27:TYR:HB2	2.02	0.40
76:s:117:ALA:O	76:s:163:THR:HA	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:t:12:VAL:HG22	77:t:63:THR:OG1	2.21	0.40
78:5:300:A:H2'	78:5:301:G:H8	1.86	0.40
78:5:483:G:H5''	78:5:484:U:C2'	2.51	0.40
78:5:919:C:O2'	78:5:920:C:H5'	2.21	0.40
78:5:923:C:OP1	78:5:923:C:H4'	2.21	0.40
78:5:951:G:O2'	78:5:952:G:H5'	2.22	0.40
78:5:1475:G:H2'	78:5:1476:C:C6	2.57	0.40
78:5:1505:C:O2'	78:5:1506:G:H5'	2.20	0.40
78:5:1594:C:H2'	78:5:1595:G:O4'	2.20	0.40
78:5:1942:A:H61	78:5:2039:G:H2'	1.86	0.40
78:5:2291:G:O2'	78:5:2292:C:H5'	2.20	0.40
78:5:2547:G:O2'	78:5:2548:C:H5'	2.22	0.40
78:5:2591:A:H2'	78:5:2592:U:C6	2.57	0.40
78:5:2771:G:H2'	78:5:2772:C:O4'	2.22	0.40
78:5:2844:A:H5'	78:5:2845:A:OP1	2.21	0.40
78:5:3632:C:O2'	78:5:3633:C:H5'	2.21	0.40
78:5:3662:A:H4'	78:5:3663:A:H5''	2.02	0.40
78:5:3685:C:H2'	78:5:3686:G:C8	2.56	0.40
78:5:3933:G:H2'	78:5:3934:G:H8	1.87	0.40
78:5:3947:A:H2'	78:5:3948:C:C6	2.56	0.40
78:5:4353:U:H5''	78:5:4354:U:O4'	2.21	0.40
78:5:4505:C:H2'	78:5:4506:C:H6	1.86	0.40
79:7:118:C:H2'	79:7:119:U:O4'	2.22	0.40
80:8:5:U:H2'	80:8:6:C:C6	2.56	0.40
3:9:102:A:H4'	3:9:104:A:C8	2.56	0.40
3:9:125:C:C5	8:GG:198:ARG:HD3	2.55	0.40
3:9:277:C:H5''	12:LL:109:MET:HE1	2.03	0.40
3:9:434:G:O2'	3:9:435:U:H5'	2.21	0.40
3:9:714:G:H4'	12:LL:149:ALA:HB1	2.03	0.40
3:9:767:A:OP1	16:WW:57:ARG:HD3	2.20	0.40
3:9:787:U:H2'	3:9:788:C:C6	2.56	0.40
3:9:1216:A:C6	19:aa:87:ARG:HD2	2.55	0.40
3:9:1238:G:H5''	23:FF:78:MET:HE3	2.03	0.40
3:9:1239:A:O2'	3:9:1657:A:H4'	2.21	0.40
3:9:1492:A:OP1	22:DD:151:LYS:HD3	2.21	0.40
3:9:1536:U:H2'	3:9:1537:A:H8	1.84	0.40
4:AA:63:ARG:HH21	15:VV:78:ILE:HD12	1.86	0.40
4:AA:84:GLN:CG	4:AA:100:ALA:HB1	2.42	0.40
4:AA:198:MET:H	28:RR:86:PRO:CG	2.35	0.40
5:BB:82:ARG:HD2	5:BB:103:MET:SD	2.61	0.40
5:BB:143:THR:HB	5:BB:205:TYR:HE1	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:EE:36:HIS:CB	7:EE:41:CYS:HB3	2.45	0.40
7:EE:48:LEU:HD21	7:EE:64:ILE:CD1	2.52	0.40
8:GG:76:LEU:HA	8:GG:94:ARG:HA	2.04	0.40
8:GG:188:LYS:O	8:GG:192:ILE:HG12	2.21	0.40
10:II:100:CYS:O	10:II:174:CYS:HA	2.21	0.40
10:II:103:LEU:HD13	10:II:170:LYS:CD	2.51	0.40
10:II:104:ILE:HD13	10:II:173:ALA:HB2	2.03	0.40
11:JJ:124:HIS:CD2	21:ee:108:ARG:HD2	2.56	0.40
13:NN:78:LYS:HE3	13:NN:78:LYS:HB3	1.91	0.40
17:XX:61:GLN:HB3	17:XX:62:PRO:HD2	2.03	0.40
18:YY:17:LEU:HD12	18:YY:18:LEU:N	2.36	0.40
22:DD:29:LEU:HD21	22:DD:65:ARG:HH12	1.86	0.40
22:DD:193:ASP:OD2	22:DD:198:ILE:HG22	2.21	0.40
27:QQ:58:LEU:HD22	27:QQ:108:ILE:HG23	2.02	0.40
31:UU:35:VAL:HG11	31:UU:110:VAL:HG11	2.02	0.40
36:A:54:ARG:CD	36:A:58:LEU:HD21	2.52	0.40
38:C:150:LEU:HB3	38:C:151:PRO:HD3	2.04	0.40
38:C:354:ALA:O	38:C:358:LEU:HG	2.22	0.40
39:D:19:LYS:HE3	78:5:4265:U:O4	2.21	0.40
39:D:37:VAL:HG22	39:D:50:ARG:HD2	2.02	0.40
41:F:132:LEU:HD13	41:F:141:TRP:CD2	2.56	0.40
42:G:114:ILE:HG12	80:8:149:G:HI'	2.04	0.40
42:G:283:TYR:CE2	42:G:287:ARG:HD2	2.55	0.40
44:I:53:VAL:HG22	44:I:134:VAL:HG22	2.03	0.40
44:I:162:ARG:NH2	52:S:88:SER:HB2	2.36	0.40
45:J:115:LEU:HD11	45:J:128:LEU:HD21	2.02	0.40
46:L:33:ILE:O	46:L:37:LYS:HG3	2.21	0.40
48:N:68:ARG:HD2	48:N:127:TYR:O	2.21	0.40
48:N:96:ARG:HB3	48:N:100:SER:OG	2.21	0.40
48:N:118:SER:CB	48:N:132:VAL:HG22	2.52	0.40
50:P:86:LYS:CG	78:5:3857:G:H5''	2.51	0.40
55:V:69:LYS:O	55:V:73:ARG:HG3	2.21	0.40
56:X:117:TYR:HB2	56:X:119:ILE:HG22	2.03	0.40
57:Y:16:LYS:HD2	80:8:24:G:P	2.61	0.40
62:d:82:TYR:C	62:d:83:ARG:HD2	2.46	0.40
66:h:5:LYS:O	66:h:9:LEU:HG	2.21	0.40
68:j:2:THR:HG23	78:5:3643:A:OP1	2.21	0.40
71:m:67:LYS:HB3	71:m:76:ARG:HG3	2.02	0.40
73:o:75:PRO:HA	73:o:78:ARG:CG	2.51	0.40
75:r:33:LYS:HE3	75:r:109:ALA:HB2	2.02	0.40
77:t:42:VAL:O	77:t:43:GLY:C	2.65	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:5:48:G:H4'	78:5:49:U:O5'	2.21	0.40
78:5:347:A:H2'	78:5:348:G:C8	2.57	0.40
78:5:466:A:O3'	78:5:467:U:H4'	2.22	0.40
78:5:1076:C:H2'	78:5:1077:C:O4'	2.21	0.40
78:5:1170:G:H2'	78:5:1171:G:H8	1.86	0.40
78:5:1217:G:H2'	78:5:1218:G:C8	2.55	0.40
78:5:1477:C:H2'	78:5:1478:C:H6	1.85	0.40
78:5:1504:G:H2'	78:5:1505:C:H6	1.84	0.40
78:5:1539:G:H1	78:5:1620:U:H3	1.69	0.40
78:5:1735:U:O2'	78:5:4213:A:H4'	2.21	0.40
78:5:1964:A:H3'	78:5:1965:G:H8	1.85	0.40
78:5:2092:G:N2	78:5:2097:U:O4	2.54	0.40
78:5:2292:C:H2'	78:5:2293:U:H6	1.86	0.40
78:5:2831:G:O2'	78:5:2832:A:H5'	2.20	0.40
78:5:4414:A:H2'	78:5:4422:A:C2	2.56	0.40
78:5:4674:C:O2'	78:5:4675:U:H5'	2.21	0.40
78:5:4932:U:H2'	78:5:4933:C:H5'	2.04	0.40
78:5:5039:U:C6	78:5:5040:U:H2'	2.57	0.40
80:8:66:A:H2'	80:8:67:U:H6	1.87	0.40
81:EF:319:LEU:HD21	81:EF:343:TRP:CE2	2.56	0.40
84:ET:29:U:O5'	84:ET:29:U:H6	2.04	0.40
1:R:107:ARG:O	1:R:111:GLU:HG3	2.21	0.40
2:W:6:CYS:SG	2:W:9:SER:HB2	2.61	0.40
2:W:20:ARG:HG2	55:V:96:LEU:HD13	2.03	0.40
3:9:34:U:H2'	3:9:35:C:O4'	2.22	0.40
3:9:871:A:H2'	3:9:872:U:C6	2.56	0.40
3:9:976:G:H5''	20:bb:22:LYS:CE	2.51	0.40
3:9:1025:U:H2'	3:9:1026:G:H8	1.86	0.40
3:9:1052:G:H4'	3:9:1213:A:P	2.61	0.40
3:9:1086:G:O2'	3:9:1087:U:H5'	2.21	0.40
3:9:1141:A:C5'	8:GG:75:LEU:HD13	2.50	0.40
3:9:1250:C:H41	29:SS:137:LYS:HE2	1.86	0.40
3:9:1344:G:H2'	3:9:1345:U:H6	1.85	0.40
3:9:1354:G:H2'	3:9:1355:U:H6	1.84	0.40
3:9:1390:C:H2'	3:9:1391:G:O4'	2.20	0.40
3:9:1400:C:H5''	22:DD:158:ILE:HG22	2.04	0.40
3:9:1637:U:C5'	29:SS:35:GLY:H	2.34	0.40
4:AA:46:ILE:CB	28:RR:129:LYS:HG3	2.51	0.40
4:AA:89:LYS:HB3	4:AA:202:TYR:CZ	2.56	0.40
4:AA:176:TRP:CD2	28:RR:90:ALA:HB3	2.56	0.40
5:BB:66:VAL:CG2	5:BB:87:ILE:HG22	2.45	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:EE:2:ALA:HB2	7:EE:6:LYS:NZ	2.37	0.40
7:EE:21:ASP:OD2	7:EE:24:THR:HG23	2.21	0.40
7:EE:148:ARG:HH22	8:GG:202:ASN:CG	2.29	0.40
7:EE:149:TYR:CD1	8:GG:209:TYR:CD1	3.08	0.40
8:GG:132:ARG:C	8:GG:133:LEU:HD12	2.46	0.40
11:JJ:86:VAL:HG21	11:JJ:105:PHE:CD1	2.55	0.40
11:JJ:108:ARG:HA	11:JJ:113:GLN:HE21	1.85	0.40
14:OO:38:ASN:C	14:OO:69:SER:HB2	2.46	0.40
18:YY:27:VAL:HG12	18:YY:29:HIS:HD2	1.85	0.40
22:DD:18:LYS:HE2	22:DD:39:VAL:HG13	2.04	0.40
22:DD:109:LEU:HD21	22:DD:115:VAL:HG22	2.03	0.40
24:KK:4:PRO:HG2	24:KK:7:ASN:ND2	2.36	0.40
30:TT:10:ASN:O	30:TT:14:PHE:HB2	2.20	0.40
31:UU:24:LEU:CD2	31:UU:112:VAL:HG13	2.52	0.40
37:B:47:LEU:HD12	37:B:47:LEU:HA	1.88	0.40
38:C:187:GLN:HG2	38:C:203:GLN:CB	2.52	0.40
40:E:286:PRO:HG2	64:f:7:CYS:SG	2.61	0.40
41:F:59:GLU:O	41:F:63:MET:HG3	2.21	0.40
41:F:239:ILE:O	41:F:243:ILE:HG13	2.21	0.40
44:I:91:LEU:CD1	44:I:135:ILE:HG12	2.50	0.40
44:I:159:PHE:HB2	44:I:163:GLN:NE2	2.36	0.40
44:I:193:ASP:OD1	78:5:1751:A:H1'	2.22	0.40
46:L:82:ARG:HE	46:L:82:ARG:HB2	1.70	0.40
46:L:191:LEU:O	46:L:195:ARG:HD3	2.21	0.40
48:N:99:GLN:O	48:N:103:GLU:HG3	2.20	0.40
49:O:193:THR:O	49:O:197:LYS:HG3	2.20	0.40
52:S:73:LEU:HD11	78:5:734:G:H4'	2.03	0.40
52:S:164:LYS:HB3	52:S:165:PRO:HD3	2.03	0.40
54:U:92:LYS:HG2	78:5:2626:U:C6	2.56	0.40
57:Y:86:GLN:CA	57:Y:97:VAL:HG23	2.48	0.40
59:a:78:LEU:HD11	59:a:101:ILE:HG21	2.03	0.40
60:b:23:LYS:HB3	60:b:24:PRO:HD2	2.03	0.40
67:i:31:GLY:O	78:5:308:G:H1'	2.21	0.40
74:p:18:TYR:O	74:p:22:LEU:HB2	2.21	0.40
76:s:14:PHE:O	76:s:18:ILE:HG22	2.22	0.40
77:t:17:CYS:HG	77:t:46:ILE:HG22	1.86	0.40
77:t:65:GLN:HG2	77:t:70:GLN:HE21	1.87	0.40
78:5:6:C:O2'	78:5:7:C:H5'	2.21	0.40
78:5:507:G:O2'	78:5:508:G:H5'	2.22	0.40
78:5:930:G:H4'	78:5:931:C:OP1	2.22	0.40
78:5:1082:C:H2'	78:5:1083:U:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:5:1602:U:O3'	78:5:2799:G:H4'	2.21	0.40
78:5:1632:A:H5''	78:5:4534:G:O3'	2.20	0.40
78:5:1978:C:H3'	78:5:1979:A:H5''	2.02	0.40
78:5:4510:A:OP1	78:5:4593:C:H4'	2.20	0.40
78:5:4644:G:O2'	78:5:4645:C:H5'	2.21	0.40
80:8:15:G:H2'	80:8:16:G:C4	2.57	0.40
80:8:19:C:H2'	80:8:20:A:H8	1.86	0.40
84:ET:30:G:C2	84:ET:31:C:C4	3.09	0.40
84:ET:52:G:O2'	84:ET:53:G:H5'	2.21	0.40
1:R:101:ILE:HG21	78:5:2897:G:P	2.62	0.40
3:9:77:A:H1'	8:GG:176:ILE:CG1	2.52	0.40
3:9:225:U:O2'	7:EE:131:VAL:HB	2.22	0.40
3:9:261:C:H2'	3:9:262:G:C8	2.56	0.40
3:9:270:C:O4'	7:EE:33:THR:HG22	2.22	0.40
3:9:298:G:H2'	3:9:299:U:C6	2.56	0.40
3:9:486:U:H1'	11:JJ:132:GLN:HG2	2.03	0.40
3:9:775:G:O2'	20:bb:66:PRO:HB2	2.21	0.40
3:9:782:G:H2'	3:9:783:G:H8	1.87	0.40
3:9:793:U:O2'	3:9:794:G:H5'	2.21	0.40
3:9:804:A:H3'	3:9:805:G:N2	2.23	0.40
3:9:1411:C:H4'	3:9:1412:A:OP1	2.21	0.40
3:9:1474:C:H2'	3:9:1475:A:H8	1.86	0.40
3:9:1573:G:O4'	30:TT:37:VAL:HG23	2.21	0.40
4:AA:28:THR:HA	4:AA:46:ILE:CG1	2.51	0.40
9:HH:79:LEU:HD22	9:HH:94:PHE:HZ	1.85	0.40
9:HH:105:THR:HG22	9:HH:106:ARG:H	1.87	0.40
11:JJ:74:GLY:O	11:JJ:78:LEU:HG	2.21	0.40
14:OO:77:ALA:O	14:OO:81:VAL:HG23	2.21	0.40
20:bb:13:GLU:O	20:bb:17:ARG:HG2	2.21	0.40
23:FF:174:ALA:O	23:FF:178:ILE:HG13	2.22	0.40
26:PP:24:GLN:O	26:PP:28:MET:CB	2.58	0.40
29:SS:82:TRP:HA	29:SS:87:GLN:OE1	2.22	0.40
34:dd:38:MET:HE2	34:dd:42:CYS:C	2.47	0.40
37:B:13:SER:CB	78:5:4622:A:H4'	2.50	0.40
37:B:56:ILE:CG2	37:B:74:GLU:HB3	2.51	0.40
38:C:357:ALA:O	38:C:361:LYS:HG3	2.21	0.40
41:F:53:ALA:CB	41:F:187:GLU:HG2	2.52	0.40
42:G:193:VAL:O	42:G:197:THR:HG23	2.21	0.40
45:J:141:ILE:HA	45:J:144:LYS:HG2	2.02	0.40
46:L:83:VAL:CG1	46:L:114:VAL:HG21	2.52	0.40
46:L:90:VAL:O	46:L:94:ILE:HG23	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:M:74:ARG:O	47:M:78:GLU:HG3	2.21	0.40
49:O:126:VAL:HG13	49:O:127:VAL:HG23	2.04	0.40
49:O:175:MET:HB3	78:5:4873:G:C2	2.56	0.40
51:Q:105:VAL:HB	51:Q:110:ARG:HH22	1.86	0.40
52:S:33:PHE:CD1	52:S:106:VAL:HG21	2.56	0.40
59:a:43:ILE:HG23	78:5:4304:A:C2	2.56	0.40
61:c:51:ASN:HD21	61:c:78:ASN:ND2	2.19	0.40
75:r:99:LYS:HD3	78:5:677:G:H5''	2.03	0.40
78:5:275:C:H4'	78:5:276:C:OP1	2.22	0.40
78:5:385:A:N3	78:5:387:G:H5''	2.36	0.40
78:5:475:G:O2'	78:5:476:G:H5'	2.21	0.40
78:5:727:C:O2'	78:5:728:U:H5'	2.22	0.40
78:5:1589:C:O2'	78:5:1590:C:H5'	2.22	0.40
78:5:1728:U:H2'	78:5:1729:A:O4'	2.21	0.40
78:5:1863:U:H1'	78:5:4220:A:N1	2.37	0.40
78:5:2018:C:O2'	78:5:2019:C:H5'	2.22	0.40
78:5:2548:C:H2'	78:5:2549:G:C8	2.57	0.40
78:5:2615:C:H2'	78:5:2616:C:H6	1.86	0.40
78:5:2625:U:H1'	78:5:4647:G:N7	2.37	0.40
78:5:2657:G:O2'	78:5:2658:G:H5'	2.22	0.40
78:5:3744:G:H2'	78:5:3745:U:O4'	2.21	0.40
78:5:3750:G:H2'	78:5:3751:G:C8	2.57	0.40
78:5:3826:C:C2'	78:5:3827:G:H5'	2.51	0.40
78:5:4236:G:O2'	78:5:4328:G:H1'	2.22	0.40
78:5:4717:A:O2'	78:5:4718:G:H5'	2.22	0.40
79:7:85:G:O2'	79:7:86:G:H5'	2.22	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	61/106 (58%)	58 (95%)	3 (5%)	0	100	100
4	AA	207/217 (95%)	198 (96%)	9 (4%)	0	100	100
5	BB	211/213 (99%)	200 (95%)	11 (5%)	0	100	100
6	CC	219/221 (99%)	216 (99%)	3 (1%)	0	100	100
7	EE	260/262 (99%)	251 (96%)	9 (4%)	0	100	100
8	GG	224/237 (94%)	220 (98%)	4 (2%)	0	100	100
9	HH	181/189 (96%)	177 (98%)	4 (2%)	0	100	100
10	II	204/206 (99%)	197 (97%)	7 (3%)	0	100	100
11	JJ	183/185 (99%)	181 (99%)	2 (1%)	0	100	100
12	LL	139/151 (92%)	134 (96%)	5 (4%)	0	100	100
13	NN	147/149 (99%)	145 (99%)	2 (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	49
18	YY	122/124 (98%)	122 (100%)	0	0	100	100
19	aa	99/101 (98%)	98 (99%)	1 (1%)	0	100	100
20	bb	81/83 (98%)	78 (96%)	3 (4%)	0	100	100
21	ee	55/57 (96%)	54 (98%)	1 (2%)	0	100	100
22	DD	226/228 (99%)	222 (98%)	3 (1%)	1 (0%)	30	60
23	FF	181/191 (95%)	176 (97%)	5 (3%)	0	100	100
24	KK	94/96 (98%)	92 (98%)	2 (2%)	0	100	100
25	MM	115/117 (98%)	107 (93%)	8 (7%)	0	100	100
26	PP	113/115 (98%)	108 (96%)	5 (4%)	0	100	100
27	QQ	139/141 (99%)	135 (97%)	4 (3%)	0	100	100
28	RR	130/132 (98%)	125 (96%)	5 (4%)	0	100	100
29	SS	142/144 (99%)	138 (97%)	4 (3%)	0	100	100
30	TT	139/141 (99%)	138 (99%)	1 (1%)	0	100	100
31	UU	98/100 (98%)	96 (98%)	2 (2%)	0	100	100
32	ZZ	73/75 (97%)	73 (100%)	0	0	100	100
33	cc	60/62 (97%)	56 (93%)	4 (7%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
34	dd	53/55 (96%)	53 (100%)	0	0	100	100
35	ff	66/68 (97%)	63 (96%)	3 (4%)	0	100	100
36	A	246/248 (99%)	230 (94%)	16 (6%)	0	100	100
37	B	392/394 (100%)	380 (97%)	12 (3%)	0	100	100
38	C	360/362 (99%)	350 (97%)	10 (3%)	0	100	100
39	D	291/293 (99%)	280 (96%)	11 (4%)	0	100	100
40	E	208/216 (96%)	206 (99%)	2 (1%)	0	100	100
41	F	223/225 (99%)	214 (96%)	8 (4%)	1 (0%)	30	60
42	G	229/240 (95%)	224 (98%)	5 (2%)	0	100	100
43	H	188/190 (99%)	185 (98%)	3 (2%)	0	100	100
44	I	201/213 (94%)	193 (96%)	8 (4%)	0	100	100
45	J	168/170 (99%)	164 (98%)	4 (2%)	0	100	100
46	L	208/210 (99%)	202 (97%)	6 (3%)	0	100	100
47	M	136/138 (99%)	126 (93%)	10 (7%)	0	100	100
48	N	201/203 (99%)	197 (98%)	4 (2%)	0	100	100
49	O	197/199 (99%)	192 (98%)	5 (2%)	0	100	100
50	P	151/153 (99%)	145 (96%)	6 (4%)	0	100	100
51	Q	185/187 (99%)	175 (95%)	10 (5%)	0	100	100
52	S	174/176 (99%)	170 (98%)	4 (2%)	0	100	100
53	T	157/159 (99%)	149 (95%)	8 (5%)	0	100	100
54	U	97/99 (98%)	96 (99%)	1 (1%)	0	100	100
55	V	137/139 (99%)	132 (96%)	5 (4%)	0	100	100
56	X	116/118 (98%)	111 (96%)	5 (4%)	0	100	100
57	Y	132/134 (98%)	128 (97%)	4 (3%)	0	100	100
58	Z	133/135 (98%)	128 (96%)	5 (4%)	0	100	100
59	a	145/147 (99%)	138 (95%)	7 (5%)	0	100	100
60	b	100/104 (96%)	98 (98%)	2 (2%)	0	100	100
61	c	96/98 (98%)	94 (98%)	2 (2%)	0	100	100
62	d	105/107 (98%)	98 (93%)	7 (7%)	0	100	100
63	e	126/128 (98%)	120 (95%)	6 (5%)	0	100	100
64	f	107/109 (98%)	104 (97%)	3 (3%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
65	g	112/114 (98%)	109 (97%)	3 (3%)	0	100	100
66	h	120/122 (98%)	118 (98%)	2 (2%)	0	100	100
67	i	100/102 (98%)	97 (97%)	3 (3%)	0	100	100
68	j	84/86 (98%)	80 (95%)	4 (5%)	0	100	100
69	k	67/69 (97%)	67 (100%)	0	0	100	100
70	l	48/50 (96%)	44 (92%)	4 (8%)	0	100	100
71	m	50/52 (96%)	49 (98%)	1 (2%)	0	100	100
72	n	23/25 (92%)	23 (100%)	0	0	100	100
73	o	102/104 (98%)	100 (98%)	2 (2%)	0	100	100
74	p	89/91 (98%)	86 (97%)	3 (3%)	0	100	100
75	r	122/124 (98%)	116 (95%)	6 (5%)	0	100	100
76	s	194/196 (99%)	183 (94%)	11 (6%)	0	100	100
77	t	151/153 (99%)	114 (76%)	24 (16%)	13 (9%)	0	4
81	EF	830/855 (97%)	762 (92%)	65 (8%)	3 (0%)	30	60
All	All	11982/12272 (98%)	11529 (96%)	434 (4%)	19 (0%)	44	71

All (19) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
17	XX	62	PRO
77	t	60	VAL
77	t	98	ILE
77	t	143	VAL
77	t	24	ALA
77	t	86	LYS
77	t	157	SER
77	t	16	ARG
77	t	73	VAL
77	t	146	ARG
77	t	153	ASP
77	t	54	LYS
77	t	59	THR
77	t	97	ASN
81	EF	479	LEU
81	EF	578	SER
81	EF	611	ASP
22	DD	44	THR

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Mol	Chain	Res	Type
41	F	196	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%)	146 (92%)	13 (8%)	10	35
2	W	55/86 (64%)	53 (96%)	2 (4%)	31	58
4	AA	175/181 (97%)	157 (90%)	18 (10%)	7	25
5	BB	194/194 (100%)	185 (95%)	9 (5%)	24	53
6	CC	187/187 (100%)	181 (97%)	6 (3%)	34	60
7	EE	224/224 (100%)	217 (97%)	7 (3%)	35	60
8	GG	197/207 (95%)	173 (88%)	24 (12%)	5	19
9	HH	165/169 (98%)	159 (96%)	6 (4%)	31	58
10	II	178/178 (100%)	173 (97%)	5 (3%)	38	62
11	JJ	161/161 (100%)	160 (99%)	1 (1%)	78	81
12	LL	130/136 (96%)	124 (95%)	6 (5%)	24	53
13	NN	130/130 (100%)	125 (96%)	5 (4%)	29	57
14	OO	106/106 (100%)	103 (97%)	3 (3%)	38	62
15	VV	67/67 (100%)	66 (98%)	1 (2%)	57	72
16	WW	112/112 (100%)	110 (98%)	2 (2%)	51	70
17	XX	113/113 (100%)	109 (96%)	4 (4%)	32	58
18	YY	107/107 (100%)	99 (92%)	8 (8%)	12	38
19	aa	88/88 (100%)	83 (94%)	5 (6%)	18	47
20	bb	75/75 (100%)	71 (95%)	4 (5%)	20	49
21	ee	47/47 (100%)	44 (94%)	3 (6%)	16	44
22	DD	190/190 (100%)	183 (96%)	7 (4%)	30	58
23	FF	158/161 (98%)	152 (96%)	6 (4%)	29	57
24	KK	87/87 (100%)	82 (94%)	5 (6%)	18	47

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
25	MM	99/99 (100%)	94 (95%)	5 (5%)	21	50
26	PP	105/105 (100%)	100 (95%)	5 (5%)	23	52
27	QQ	116/116 (100%)	111 (96%)	5 (4%)	26	54
28	RR	119/119 (100%)	113 (95%)	6 (5%)	22	50
29	SS	125/125 (100%)	120 (96%)	5 (4%)	28	56
30	TT	111/111 (100%)	106 (96%)	5 (4%)	24	53
31	UU	92/92 (100%)	90 (98%)	2 (2%)	45	66
32	ZZ	66/66 (100%)	64 (97%)	2 (3%)	36	61
33	cc	55/55 (100%)	55 (100%)	0	100	100
34	dd	48/48 (100%)	47 (98%)	1 (2%)	47	67
35	ff	61/61 (100%)	58 (95%)	3 (5%)	22	51
36	A	190/190 (100%)	179 (94%)	11 (6%)	18	47
37	B	342/342 (100%)	327 (96%)	15 (4%)	25	54
38	C	302/302 (100%)	285 (94%)	17 (6%)	19	47
39	D	247/247 (100%)	240 (97%)	7 (3%)	38	62
40	E	190/190 (100%)	179 (94%)	11 (6%)	18	47
41	F	196/196 (100%)	185 (94%)	11 (6%)	19	47
42	G	200/205 (98%)	192 (96%)	8 (4%)	28	56
43	H	169/169 (100%)	161 (95%)	8 (5%)	23	52
44	I	175/180 (97%)	167 (95%)	8 (5%)	24	53
45	J	143/143 (100%)	135 (94%)	8 (6%)	19	47
46	L	175/175 (100%)	169 (97%)	6 (3%)	32	59
47	M	117/117 (100%)	110 (94%)	7 (6%)	17	46
48	N	171/171 (100%)	165 (96%)	6 (4%)	32	58
49	O	171/171 (100%)	163 (95%)	8 (5%)	23	52
50	P	134/134 (100%)	132 (98%)	2 (2%)	57	72
51	Q	164/164 (100%)	156 (95%)	8 (5%)	22	51
52	S	157/157 (100%)	151 (96%)	6 (4%)	29	57
53	T	139/139 (100%)	131 (94%)	8 (6%)	18	47
54	U	89/89 (100%)	85 (96%)	4 (4%)	24	53
55	V	106/106 (100%)	99 (93%)	7 (7%)	15	43

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
56	X	106/106 (100%)	101 (95%)	5 (5%)	23	52
57	Y	124/124 (100%)	116 (94%)	8 (6%)	15	43
58	Z	117/117 (100%)	115 (98%)	2 (2%)	53	71
59	a	119/119 (100%)	116 (98%)	3 (2%)	42	64
60	b	84/84 (100%)	81 (96%)	3 (4%)	31	58
61	c	84/84 (100%)	81 (96%)	3 (4%)	31	58
62	d	98/98 (100%)	92 (94%)	6 (6%)	17	45
63	e	114/114 (100%)	105 (92%)	9 (8%)	11	36
64	f	88/88 (100%)	83 (94%)	5 (6%)	18	47
65	g	98/98 (100%)	92 (94%)	6 (6%)	17	45
66	h	109/109 (100%)	107 (98%)	2 (2%)	51	70
67	i	86/86 (100%)	84 (98%)	2 (2%)	44	66
68	j	73/73 (100%)	71 (97%)	2 (3%)	39	63
69	k	64/64 (100%)	60 (94%)	4 (6%)	16	44
70	l	47/47 (100%)	46 (98%)	1 (2%)	47	67
71	m	48/48 (100%)	47 (98%)	1 (2%)	47	67
72	n	24/24 (100%)	22 (92%)	2 (8%)	10	34
73	o	92/92 (100%)	86 (94%)	6 (6%)	15	43
74	p	74/74 (100%)	72 (97%)	2 (3%)	39	63
75	r	108/108 (100%)	105 (97%)	3 (3%)	38	62
76	s	164/164 (100%)	155 (94%)	9 (6%)	19	48
77	t	126/126 (100%)	82 (65%)	44 (35%)	0	1
81	EF	710/726 (98%)	650 (92%)	60 (8%)	10	33
All	All	10436/10522 (99%)	9893 (95%)	543 (5%)	22	49

All (543) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	R	6	LEU
1	R	8	LYS
1	R	12	SER
1	R	29	THR
1	R	36	ASN
1	R	49	LEU

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Mol	Chain	Res	Type
1	R	50	ILE
1	R	74	ARG
1	R	82	LYS
1	R	89	MET
1	R	101	ILE
1	R	113	LYS
1	R	178	GLN
2	W	1	MET
2	W	20	ARG
4	AA	15	VAL
4	AA	17	LYS
4	AA	18	PHE
4	AA	40	LYS
4	AA	41	ARG
4	AA	46	ILE
4	AA	52	LYS
4	AA	60	LEU
4	AA	82	THR
4	AA	102	ARG
4	AA	111	GLN
4	AA	123	VAL
4	AA	136	GLU
4	AA	140	VAL
4	AA	142	LEU
4	AA	159	ILE
4	AA	173	LEU
4	AA	183	LEU
5	BB	63	LYS
5	BB	71	LEU
5	BB	92	GLN
5	BB	126	ASP
5	BB	127	VAL
5	BB	134	LEU
5	BB	181	LEU
5	BB	207	LEU
5	BB	225	LEU
6	CC	66	LEU
6	CC	78	LEU
6	CC	114	LYS
6	CC	120	GLN
6	CC	121	ARG
6	CC	137	VAL

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Mol	Chain	Res	Type
7	EE	51	ARG
7	EE	67	GLN
7	EE	162	ILE
7	EE	205	PHE
7	EE	222	LEU
7	EE	232	ASN
7	EE	246	LEU
8	GG	41	LEU
8	GG	43	GLU
8	GG	44	GLU
8	GG	46	LYS
8	GG	63	MET
8	GG	76	LEU
8	GG	153	VAL
8	GG	183	ARG
8	GG	186	GLN
8	GG	188	LYS
8	GG	190	ARG
8	GG	191	ARG
8	GG	196	LYS
8	GG	200	LYS
8	GG	201	LYS
8	GG	203	LYS
8	GG	205	GLU
8	GG	213	LEU
8	GG	215	LYS
8	GG	216	ARG
8	GG	218	LYS
8	GG	221	LYS
8	GG	223	LYS
8	GG	224	ARG
9	HH	8	ILE
9	HH	36	LEU
9	HH	60	ILE
9	HH	82	GLU
9	HH	100	ILE
9	HH	105	THR
10	II	107	THR
10	II	121	LEU
10	II	130	THR
10	II	147	LYS
10	II	168	GLN

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Mol	Chain	Res	Type
11	JJ	116	LYS
12	LL	16	ILE
12	LL	20	LYS
12	LL	23	VAL
12	LL	40	ILE
12	LL	49	GLU
12	LL	69	ARG
13	NN	55	ARG
13	NN	60	VAL
13	NN	78	LYS
13	NN	84	LEU
13	NN	132	LYS
14	OO	27	VAL
14	OO	146	ARG
14	OO	151	LEU
15	VV	70	LEU
16	WW	20	ARG
16	WW	104	LEU
17	XX	7	LEU
17	XX	50	ILE
17	XX	105	PHE
17	XX	115	ILE
18	YY	16	ARG
18	YY	17	LEU
18	YY	32	LYS
18	YY	35	VAL
18	YY	47	MET
18	YY	57	VAL
18	YY	88	LYS
18	YY	120	THR
19	aa	12	LYS
19	aa	19	GLN
19	aa	55	GLU
19	aa	63	VAL
19	aa	77	CYS
20	bb	42	LYS
20	bb	51	GLN
20	bb	64	CYS
20	bb	81	ARG
21	ee	98	LYS
21	ee	99	LYS
21	ee	124	LYS

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Mol	Chain	Res	Type
22	DD	41	VAL
22	DD	48	ILE
22	DD	72	VAL
22	DD	127	MET
22	DD	164	VAL
22	DD	178	ARG
22	DD	218	LEU
23	FF	29	GLN
23	FF	63	LYS
23	FF	71	ARG
23	FF	76	MET
23	FF	88	MET
23	FF	169	ILE
24	KK	1	MET
24	KK	29	MET
24	KK	35	LEU
24	KK	76	ILE
24	KK	89	ILE
25	MM	22	LEU
25	MM	31	LEU
25	MM	40	LYS
25	MM	99	LYS
25	MM	101	ARG
26	PP	14	LYS
26	PP	15	PHE
26	PP	83	MET
26	PP	107	ILE
26	PP	108	LYS
27	QQ	60	LYS
27	QQ	72	VAL
27	QQ	85	ARG
27	QQ	140	ARG
27	QQ	145	TYR
28	RR	44	LYS
28	RR	62	GLN
28	RR	82	ASP
28	RR	96	ILE
28	RR	109	LEU
28	RR	128	PHE
29	SS	52	LEU
29	SS	63	GLU
29	SS	83	PHE

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Mol	Chain	Res	Type
29	SS	98	VAL
29	SS	108	ARG
30	TT	12	GLN
30	TT	62	ARG
30	TT	110	LEU
30	TT	124	THR
30	TT	142	LYS
31	UU	56	MET
31	UU	106	ILE
32	ZZ	89	GLN
32	ZZ	92	LEU
34	dd	42	CYS
35	ff	83	LYS
35	ff	94	LYS
35	ff	140	TYR
36	A	5	ILE
36	A	100	ASN
36	A	101	VAL
36	A	163	ARG
36	A	200	ARG
36	A	207	VAL
36	A	221	LYS
36	A	226	ARG
36	A	233	ARG
36	A	242	ARG
36	A	243	THR
37	B	10	ARG
37	B	56	ILE
37	B	57	VAL
37	B	72	VAL
37	B	73	VAL
37	B	78	ILE
37	B	99	LEU
37	B	101	THR
37	B	162	VAL
37	B	203	GLN
37	B	248	LEU
37	B	262	VAL
37	B	294	LYS
37	B	314	ILE
37	B	356	LYS
38	C	20	LYS

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Mol	Chain	Res	Type
38	C	100	ARG
38	C	101	MET
38	C	115	VAL
38	C	150	LEU
38	C	154	VAL
38	C	165	LYS
38	C	175	LYS
38	C	193	LYS
38	C	217	ILE
38	C	232	VAL
38	C	281	MET
38	C	289	LEU
38	C	307	LYS
38	C	312	ARG
38	C	333	LYS
38	C	341	LEU
39	D	89	LYS
39	D	104	LEU
39	D	124	GLU
39	D	146	LEU
39	D	202	GLN
39	D	262	LYS
39	D	264	LYS
40	E	52	LEU
40	E	58	ARG
40	E	133	LYS
40	E	143	LEU
40	E	144	ARG
40	E	169	LYS
40	E	178	VAL
40	E	182	LEU
40	E	213	LYS
40	E	242	LYS
40	E	289	LEU
41	F	38	GLN
41	F	41	LEU
41	F	46	ARG
41	F	65	ARG
41	F	67	GLU
41	F	88	LEU
41	F	106	LYS
41	F	134	ILE

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Mol	Chain	Res	Type
41	F	151	GLU
41	F	198	LYS
41	F	235	ARG
42	G	139	VAL
42	G	159	THR
42	G	168	LEU
42	G	203	LYS
42	G	220	VAL
42	G	223	LEU
42	G	230	MET
42	G	293	ASN
43	H	20	LEU
43	H	52	LYS
43	H	59	LYS
43	H	66	GLU
43	H	82	LYS
43	H	105	ILE
43	H	106	GLN
43	H	141	LYS
44	I	39	LYS
44	I	48	LEU
44	I	126	VAL
44	I	153	ARG
44	I	164	LYS
44	I	203	ARG
44	I	208	LYS
44	I	212	LEU
45	J	16	ARG
45	J	28	GLU
45	J	81	GLU
45	J	83	LEU
45	J	96	LYS
45	J	113	ILE
45	J	125	ILE
45	J	128	LEU
46	L	59	VAL
46	L	63	THR
46	L	74	ARG
46	L	130	LYS
46	L	162	LYS
46	L	186	ARG
47	M	37	LEU

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Mol	Chain	Res	Type
47	M	38	VAL
47	M	56	GLN
47	M	96	GLU
47	M	105	THR
47	M	112	VAL
47	M	119	ARG
48	N	9	GLU
48	N	44	ARG
48	N	64	ILE
48	N	89	VAL
48	N	174	LEU
48	N	198	LEU
49	O	16	LEU
49	O	60	LYS
49	O	82	ARG
49	O	128	ARG
49	O	145	VAL
49	O	159	LYS
49	O	175	MET
49	O	179	LYS
50	P	69	ARG
50	P	114	ILE
51	Q	9	LYS
51	Q	31	LEU
51	Q	61	LEU
51	Q	91	ARG
51	Q	95	VAL
51	Q	115	LYS
51	Q	119	LYS
51	Q	138	LEU
52	S	9	GLU
52	S	17	LEU
52	S	24	THR
52	S	53	LYS
52	S	70	LYS
52	S	149	LYS
53	T	5	LYS
53	T	32	ARG
53	T	33	ILE
53	T	74	ILE
53	T	95	HIS
53	T	96	ILE

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Mol	Chain	Res	Type
53	T	143	THR
53	T	154	ILE
54	U	33	ILE
54	U	69	LYS
54	U	81	ARG
54	U	83	LEU
55	V	15	ARG
55	V	18	LEU
55	V	60	MET
55	V	69	LYS
55	V	91	LYS
55	V	101	ASN
55	V	123	LYS
56	X	50	LYS
56	X	59	LYS
56	X	63	LYS
56	X	83	THR
56	X	111	GLN
57	Y	2	LYS
57	Y	8	THR
57	Y	28	LYS
57	Y	72	GLN
57	Y	74	TYR
57	Y	79	VAL
57	Y	104	VAL
57	Y	130	LYS
58	Z	33	THR
58	Z	72	VAL
59	a	59	ARG
59	a	82	VAL
59	a	132	ARG
60	b	22	LYS
60	b	75	LEU
60	b	101	HIS
61	c	37	MET
61	c	55	LEU
61	c	78	ASN
62	d	23	ARG
62	d	26	THR
62	d	33	ILE
62	d	38	PHE
62	d	56	GLU

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Mol	Chain	Res	Type
62	d	86	VAL
63	e	9	LYS
63	e	11	LYS
63	e	21	ILE
63	e	58	ILE
63	e	64	LYS
63	e	86	GLU
63	e	106	LYS
63	e	109	LYS
63	e	128	ARG
64	f	33	VAL
64	f	52	LYS
64	f	73	LYS
64	f	84	VAL
64	f	101	ILE
65	g	5	LEU
65	g	15	THR
65	g	32	TYR
65	g	60	ARG
65	g	66	ARG
65	g	114	GLN
66	h	19	LYS
66	h	67	GLU
67	i	34	THR
67	i	86	LYS
68	j	20	ARG
68	j	58	THR
69	k	27	LYS
69	k	37	ARG
69	k	69	LEU
69	k	70	LYS
70	l	49	LEU
71	m	85	ARG
72	n	1	MET
72	n	13	LEU
73	o	17	LYS
73	o	28	LYS
73	o	36	GLN
73	o	61	LYS
73	o	83	LEU
73	o	85	ILE
74	p	54	ILE

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Mol	Chain	Res	Type
74	p	84	ARG
75	r	8	MET
75	r	49	VAL
75	r	103	HIS
76	s	6	ARG
76	s	26	LYS
76	s	38	LYS
76	s	44	ARG
76	s	45	MET
76	s	50	LYS
76	s	63	LYS
76	s	78	LEU
76	s	96	THR
77	t	10	ILE
77	t	11	LYS
77	t	16	ARG
77	t	21	GLU
77	t	28	LEU
77	t	31	LYS
77	t	35	LEU
77	t	37	LEU
77	t	40	LYS
77	t	41	LYS
77	t	54	LYS
77	t	56	LEU
77	t	57	ARG
77	t	58	ILE
77	t	59	THR
77	t	61	LYS
77	t	62	LEU
77	t	67	ARG
77	t	70	GLN
77	t	81	ILE
77	t	83	LYS
77	t	86	LYS
77	t	92	ARG
77	t	93	LYS
77	t	94	LYS
77	t	95	GLN
77	t	96	LYS
77	t	98	ILE
77	t	99	LYS

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Mol	Chain	Res	Type
77	t	114	ARG
77	t	115	GLN
77	t	116	MET
77	t	119	ARG
77	t	123	ARG
77	t	125	LEU
77	t	129	ILE
77	t	130	LYS
77	t	133	LEU
77	t	135	THR
77	t	151	ILE
77	t	152	ILE
77	t	155	ILE
77	t	160	VAL
77	t	161	GLU
81	EF	5	THR
81	EF	25	ILE
81	EF	32	LYS
81	EF	42	LYS
81	EF	66	ARG
81	EF	84	ASN
81	EF	93	LYS
81	EF	99	LEU
81	EF	102	LEU
81	EF	115	VAL
81	EF	138	GLN
81	EF	149	GLU
81	EF	165	LEU
81	EF	186	ASN
81	EF	187	VAL
81	EF	244	LEU
81	EF	246	PRO
81	EF	252	LYS
81	EF	275	LYS
81	EF	278	THR
81	EF	301	PHE
81	EF	318	LYS
81	EF	319	LEU
81	EF	329	ASP
81	EF	335	LEU
81	EF	366	LYS
81	EF	368	ARG

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Mol	Chain	Res	Type
81	EF	386	LYS
81	EF	391	LYS
81	EF	395	MET
81	EF	404	THR
81	EF	435	THR
81	EF	445	LYS
81	EF	451	ILE
81	EF	454	MET
81	EF	472	LEU
81	EF	475	VAL
81	EF	481	LYS
81	EF	484	THR
81	EF	506	ARG
81	EF	510	GLU
81	EF	539	GLU
81	EF	574	ASP
81	EF	588	ASN
81	EF	605	LYS
81	EF	613	LEU
81	EF	618	ASP
81	EF	625	ARG
81	EF	637	GLU
81	EF	661	ILE
81	EF	664	ASP
81	EF	665	ILE
81	EF	692	LEU
81	EF	710	HIS
81	EF	726	ARG
81	EF	728	CYS
81	EF	734	LEU
81	EF	746	LEU
81	EF	804	THR
81	EF	844	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (169) such sidechains are listed below:

Mol	Chain	Res	Type
1	R	40	GLN
1	R	58	HIS
1	R	158	GLN
2	W	48	GLN
2	W	63	GLN

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Mol	Chain	Res	Type
4	AA	29	ASN
4	AA	36	GLN
4	AA	50	ASN
4	AA	84	GLN
5	BB	92	GLN
5	BB	149	GLN
5	BB	163	GLN
5	BB	177	GLN
5	BB	179	ASN
6	CC	115	GLN
6	CC	120	GLN
7	EE	36	HIS
7	EE	138	HIS
7	EE	161	GLN
7	EE	201	HIS
7	EE	260	GLN
8	GG	155	GLN
8	GG	177	GLN
8	GG	186	GLN
8	GG	197	GLN
9	HH	168	HIS
9	HH	193	GLN
10	II	35	ASN
10	II	111	GLN
11	JJ	27	GLN
11	JJ	113	GLN
12	LL	18	GLN
13	NN	13	GLN
13	NN	49	GLN
13	NN	69	ASN
13	NN	90	HIS
14	OO	94	HIS
15	VV	21	ASN
15	VV	47	ASN
15	VV	49	GLN
16	WW	113	HIS
16	WW	120	HIS
17	XX	20	GLN
17	XX	61	GLN
18	YY	19	GLN
18	YY	63	HIS
18	YY	85	ASN

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Mol	Chain	Res	Type
20	bb	51	GLN
20	bb	65	GLN
21	ee	95	GLN
21	ee	131	ASN
22	DD	56	GLN
22	DD	101	GLN
22	DD	165	ASN
22	DD	226	GLN
23	FF	29	GLN
23	FF	65	GLN
23	FF	83	ASN
23	FF	137	GLN
23	FF	165	ASN
24	KK	42	ASN
24	KK	61	GLN
25	MM	19	GLN
25	MM	73	GLN
25	MM	119	GLN
26	PP	53	GLN
26	PP	104	GLN
27	QQ	97	GLN
27	QQ	114	GLN
28	RR	62	GLN
28	RR	93	GLN
29	SS	76	GLN
29	SS	105	ASN
30	TT	117	GLN
30	TT	126	GLN
32	ZZ	106	GLN
33	cc	7	GLN
34	dd	28	HIS
35	ff	93	HIS
36	A	139	HIS
36	A	217	GLN
37	B	25	HIS
37	B	109	HIS
37	B	123	HIS
37	B	167	GLN
37	B	175	GLN
37	B	179	HIS
37	B	204	GLN
38	C	38	ASN

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Mol	Chain	Res	Type
38	C	61	GLN
38	C	178	ASN
38	C	329	ASN
39	D	57	ASN
39	D	63	GLN
39	D	175	HIS
39	D	202	GLN
40	E	170	GLN
40	E	194	GLN
41	F	79	ASN
41	F	98	ASN
41	F	109	GLN
41	F	247	ASN
42	G	99	GLN
42	G	134	ASN
42	G	138	GLN
42	G	206	GLN
43	H	76	HIS
43	H	78	GLN
44	I	202	ASN
45	J	42	GLN
45	J	104	ASN
46	L	28	GLN
47	M	20	HIS
47	M	48	GLN
48	N	32	GLN
49	O	14	HIS
49	O	50	ASN
50	P	64	ASN
50	P	75	GLN
50	P	80	GLN
50	P	97	ASN
50	P	116	HIS
50	P	118	GLN
50	P	120	ASN
52	S	50	GLN
52	S	125	GLN
52	S	144	GLN
53	T	95	HIS
54	U	44	GLN
56	X	57	GLN
56	X	105	ASN

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Mol	Chain	Res	Type
56	X	108	GLN
59	a	17	HIS
59	a	25	HIS
59	a	28	HIS
59	a	67	GLN
59	a	85	GLN
60	b	58	GLN
60	b	60	ASN
61	c	19	GLN
61	c	33	GLN
61	c	78	ASN
62	d	118	GLN
63	e	43	ASN
65	g	14	ASN
65	g	110	GLN
66	h	65	GLN
66	h	108	GLN
67	i	20	ASN
67	i	36	HIS
68	j	16	HIS
68	j	76	HIS
73	o	25	GLN
73	o	102	GLN
74	p	56	HIS
75	r	6	GLN
75	r	95	HIS
76	s	19	GLN
76	s	34	ASN
76	s	68	HIS
76	s	127	ASN
77	t	70	GLN
77	t	100	HIS
77	t	103	ASN
77	t	111	ASN
77	t	118	HIS
77	t	147	HIS
81	EF	101	ASN
81	EF	179	GLN

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
3	9	1653/1670 (98%)	354 (21%)	19 (1%)
78	5	3488/3543 (98%)	747 (21%)	59 (1%)
79	7	118/119 (99%)	9 (7%)	0
80	8	149/156 (95%)	30 (20%)	1 (0%)
82	1	10/11 (90%)	4 (40%)	0
83	PT	10/11 (90%)	9 (90%)	0
84	ET	73/76 (96%)	21 (28%)	1 (1%)
All	All	5501/5586 (98%)	1174 (21%)	80 (1%)

All (1174) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
3	9	2	A
3	9	3	C
3	9	4	C
3	9	14	C
3	9	25	A
3	9	26	U
3	9	33	G
3	9	41	G
3	9	42	A
3	9	46	A
3	9	51	U
3	9	56	G
3	9	58	C
3	9	62	G
3	9	65	C
3	9	67	C
3	9	68	A
3	9	71	G
3	9	72	C
3	9	73	C
3	9	79	A
3	9	103	A
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	133	U
3	9	137	A

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Mol	Chain	Res	Type
3	9	144	U
3	9	145	G
3	9	148	A
3	9	152	C
3	9	153	U
3	9	158	C
3	9	170	G
3	9	173	G
3	9	174	G
3	9	177	G
3	9	178	C
3	9	179	U
3	9	205	G
3	9	221	A
3	9	223	U
3	9	231	A
3	9	235	C
3	9	236	G
3	9	237	G
3	9	238	G
3	9	241	G
3	9	243	U
3	9	246	C
3	9	247	A
3	9	248	C
3	9	249	G
3	9	259	G
3	9	271	G
3	9	286	C
3	9	288	A
3	9	292	U
3	9	294	G
3	9	307	G
3	9	309	G
3	9	310	C
3	9	312	U
3	9	318	G
3	9	322	A
3	9	323	C
3	9	324	C
3	9	331	G
3	9	332	A

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Mol	Chain	Res	Type
3	9	333	C
3	9	341	C
3	9	342	A
3	9	344	G
3	9	350	A
3	9	360	G
3	9	372	A
3	9	374	C
3	9	376	G
3	9	388	A
3	9	389	A
3	9	390	G
3	9	396	C
3	9	397	A
3	9	398	G
3	9	400	A
3	9	401	G
3	9	406	G
3	9	407	C
3	9	411	U
3	9	416	C
3	9	417	A
3	9	421	C
3	9	426	C
3	9	436	A
3	9	440	A
3	9	441	C
3	9	449	A
3	9	452	A
3	9	454	U
3	9	455	A
3	9	456	C
3	9	457	A
3	9	468	G
3	9	472	C
3	9	473	C
3	9	474	C
3	9	475	U
3	9	478	A
3	9	479	A
3	9	480	U
3	9	481	U

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Mol	Chain	Res	Type
3	9	483	G
3	9	486	U
3	9	494	C
3	9	495	U
3	9	500	A
3	9	507	A
3	9	512	G
3	9	514	A
3	9	515	U
3	9	516	C
3	9	524	G
3	9	527	C
3	9	530	G
3	9	532	C
3	9	533	U
3	9	538	C
3	9	541	G
3	9	544	G
3	9	547	G
3	9	549	G
3	9	550	G
3	9	552	A
3	9	558	A
3	9	567	A
3	9	568	G
3	9	579	A
3	9	583	G
3	9	584	C
3	9	587	C
3	9	592	A
3	9	593	A
3	9	594	A
3	9	595	A
3	9	596	A
3	9	597	G
3	9	608	G
3	9	613	U
3	9	636	G
3	9	637	C
3	9	638	G
3	9	654	U
3	9	664	A

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Mol	Chain	Res	Type
3	9	665	A
3	9	674	G
3	9	675	U
3	9	683	A
3	9	687	C
3	9	691	U
3	9	694	A
3	9	699	G
3	9	706	G
3	9	707	G
3	9	715	G
3	9	716	A
3	9	717	A
3	9	718	U
3	9	719	A
3	9	720	G
3	9	721	G
3	9	722	A
3	9	723	C
3	9	725	G
3	9	734	U
3	9	737	U
3	9	738	G
3	9	760	A
3	9	761	U
3	9	767	A
3	9	780	G
3	9	781	G
3	9	802	A
3	9	817	G
3	9	818	G
3	9	832	G
3	9	837	A
3	9	839	A
3	9	846	G
3	9	870	A
3	9	874	A
3	9	892	U
3	9	902	A
3	9	904	C
3	9	905	A
3	9	909	A

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Mol	Chain	Res	Type
3	9	930	A
3	9	932	C
3	9	947	A
3	9	962	U
3	9	963	C
3	9	964	C
3	9	965	C
3	9	968	G
3	9	973	G
3	9	980	A
3	9	985	C
3	9	990	A
3	9	991	A
3	9	995	A
3	9	996	A
3	9	1000	C
3	9	1001	U
3	9	1005	G
3	9	1013	G
3	9	1017	A
3	9	1042	A
3	9	1057	C
3	9	1058	A
3	9	1074	A
3	9	1080	U
3	9	1081	G
3	9	1085	G
3	9	1089	U
3	9	1102	G
3	9	1103	G
3	9	1107	G
3	9	1113	G
3	9	1115	C
3	9	1133	C
3	9	1135	C
3	9	1169	A
3	9	1173	A
3	9	1174	A
3	9	1176	G
3	9	1181	A
3	9	1185	A
3	9	1186	G

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Mol	Chain	Res	Type
3	9	1188	U
3	9	1199	G
3	9	1200	A
3	9	1201	A
3	9	1202	C
3	9	1211	G
3	9	1212	G
3	9	1215	C
3	9	1219	A
3	9	1224	A
3	9	1231	C
3	9	1232	C
3	9	1237	G
3	9	1240	G
3	9	1252	G
3	9	1256	A
3	9	1258	U
3	9	1262	A
3	9	1264	U
3	9	1265	C
3	9	1267	A
3	9	1269	A
3	9	1270	C
3	9	1272	G
3	9	1273	G
3	9	1275	A
3	9	1280	C
3	9	1281	A
3	9	1290	G
3	9	1291	G
3	9	1298	A
3	9	1301	G
3	9	1302	G
3	9	1314	G
3	9	1315	A
3	9	1316	U
3	9	1317	A
3	9	1318	G
3	9	1319	C
3	9	1323	U
3	9	1324	U
3	9	1326	U

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Mol	Chain	Res	Type
3	9	1330	U
3	9	1349	U
3	9	1358	U
3	9	1370	G
3	9	1373	A
3	9	1374	U
3	9	1387	U
3	9	1388	U
3	9	1394	A
3	9	1411	C
3	9	1412	A
3	9	1413	U
3	9	1418	A
3	9	1422	G
3	9	1425	A
3	9	1439	G
3	9	1448	U
3	9	1453	G
3	9	1455	G
3	9	1460	A
3	9	1468	U
3	9	1469	U
3	9	1472	G
3	9	1479	G
3	9	1481	G
3	9	1482	A
3	9	1483	U
3	9	1495	A
3	9	1496	G
3	9	1500	U
3	9	1501	G
3	9	1504	A
3	9	1515	U
3	9	1524	C
3	9	1526	G
3	9	1527	C
3	9	1529	C
3	9	1541	U
3	9	1542	G
3	9	1550	C
3	9	1552	G
3	9	1554	G

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Mol	Chain	Res	Type
3	9	1558	G
3	9	1559	C
3	9	1562	A
3	9	1563	C
3	9	1576	G
3	9	1581	G
3	9	1585	A
3	9	1586	A
3	9	1591	U
3	9	1593	G
3	9	1594	A
3	9	1607	A
3	9	1610	G
3	9	1612	G
3	9	1620	A
3	9	1627	U
3	9	1629	A
3	9	1630	U
3	9	1638	G
3	9	1643	A
3	9	1644	G
3	9	1652	C
3	9	1654	G
3	9	1660	G
3	9	1671	G
3	9	1677	G
3	9	1686	G
3	9	1688	C
3	9	1689	C
78	5	11	G
78	5	12	A
78	5	13	U
78	5	15	A
78	5	21	G
78	5	25	A
78	5	30	C
78	5	39	A
78	5	47	A
78	5	48	G
78	5	49	U
78	5	56	A
78	5	58	G

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Mol	Chain	Res	Type
78	5	59	A
78	5	64	A
78	5	65	A
78	5	73	A
78	5	91	G
78	5	93	G
78	5	98	A
78	5	104	G
78	5	109	G
78	5	110	C
78	5	117	C
78	5	118	C
78	5	119	G
78	5	120	A
78	5	126	C
78	5	134	G
78	5	135	G
78	5	136	C
78	5	137	G
78	5	150	U
78	5	151	G
78	5	157	U
78	5	159	C
78	5	160	G
78	5	172	C
78	5	173	C
78	5	197	A
78	5	200	U
78	5	201	C
78	5	207	G
78	5	209	U
78	5	216	C
78	5	218	A
78	5	220	C
78	5	224	U
78	5	226	G
78	5	227	A
78	5	233	U
78	5	234	G
78	5	241	G
78	5	246	G
78	5	262	C

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Mol	Chain	Res	Type
78	5	265	C
78	5	266	C
78	5	274	C
78	5	276	C
78	5	280	G
78	5	281	U
78	5	297	U
78	5	306	A
78	5	309	C
78	5	310	G
78	5	315	G
78	5	316	U
78	5	334	A
78	5	335	A
78	5	340	C
78	5	357	U
78	5	363	A
78	5	379	G
78	5	386	A
78	5	387	G
78	5	399	G
78	5	407	A
78	5	410	A
78	5	412	G
78	5	413	G
78	5	417	G
78	5	431	G
78	5	432	U
78	5	444	G
78	5	446	C
78	5	449	C
78	5	450	G
78	5	452	A
78	5	453	G
78	5	454	U
78	5	455	C
78	5	457	G
78	5	464	G
78	5	466	A
78	5	467	U
78	5	468	U
78	5	469	C

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Mol	Chain	Res	Type
78	5	481	G
78	5	481(A)	C
78	5	482	G
78	5	483	G
78	5	485	C
78	5	486	C
78	5	492	U
78	5	493	G
78	5	498	C
78	5	499	G
78	5	505	G
78	5	510	U
78	5	647	G
78	5	658	C
78	5	666	G
78	5	667	A
78	5	683	C
78	5	684	G
78	5	685	C
78	5	687	U
78	5	696	C
78	5	697	G
78	5	704	C
78	5	705	G
78	5	730	G
78	5	731	G
78	5	733	A
78	5	738	C
78	5	738(A)	C
78	5	739	G
78	5	744	G
78	5	747	A
78	5	749	G
78	5	758	G
78	5	913	U
78	5	914	U
78	5	917	A
78	5	918	G
78	5	923	C
78	5	925	C
78	5	926	G
78	5	928	C

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Mol	Chain	Res	Type
78	5	929	A
78	5	931	C
78	5	932	A
78	5	933	G
78	5	934	C
78	5	935(A)	G
78	5	936	C
78	5	939	G
78	5	941	C
78	5	942	G
78	5	943	A
78	5	944	A
78	5	945	U
78	5	957	G
78	5	959	G
78	5	960	A
78	5	961	G
78	5	962	C
78	5	967	C
78	5	969	C
78	5	972	C
78	5	979	C
78	5	1076	C
78	5	1179	U
78	5	1187	G
78	5	1193	C
78	5	1195	G
78	5	1211	G
78	5	1212	G
78	5	1214	C
78	5	1215	C
78	5	1216	C
78	5	1234	G
78	5	1235	G
78	5	1236	C
78	5	1237	C
78	5	1238	A
78	5	1239	C
78	5	1273	G
78	5	1276	C
78	5	1277	G
78	5	1281	G

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Mol	Chain	Res	Type
78	5	1284	G
78	5	1285	U
78	5	1287	G
78	5	1288	G
78	5	1291	G
78	5	1292	C
78	5	1293	G
78	5	1296	G
78	5	1301	C
78	5	1304	C
78	5	1314	C
78	5	1325	C
78	5	1326	A
78	5	1354	A
78	5	1358	G
78	5	1359	G
78	5	1370	G
78	5	1371	A
78	5	1377	G
78	5	1380	G
78	5	1381	U
78	5	1387	A
78	5	1394	G
78	5	1397	A
78	5	1398	A
78	5	1415	G
78	5	1419	G
78	5	1420	A
78	5	1421	G
78	5	1437	C
78	5	1438	U
78	5	1440	U
78	5	1441	C
78	5	1445	U
78	5	1446	C
78	5	1448	G
78	5	1456	C
78	5	1457	G
78	5	1458	C
78	5	1465	G
78	5	1477	C
78	5	1478	C

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Mol	Chain	Res	Type
78	5	1482	G
78	5	1483	C
78	5	1497	A
78	5	1498	G
78	5	1501	C
78	5	1502	G
78	5	1504	G
78	5	1516	G
78	5	1518	A
78	5	1523	A
78	5	1526	G
78	5	1534	A
78	5	1535	C
78	5	1547	A
78	5	1552	G
78	5	1553	A
78	5	1563	A
78	5	1564	A
78	5	1566	C
78	5	1573	G
78	5	1574	G
78	5	1578	U
78	5	1591	U
78	5	1596	U
78	5	1602	U
78	5	1612	G
78	5	1613	A
78	5	1624	G
78	5	1625	G
78	5	1626	G
78	5	1631	A
78	5	1633	G
78	5	1634	A
78	5	1638	A
78	5	1640	C
78	5	1641	G
78	5	1654	G
78	5	1661	C
78	5	1676	C
78	5	1680	G
78	5	1684	A
78	5	1691	G

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Mol	Chain	Res	Type
78	5	1729	A
78	5	1734	G
78	5	1741	G
78	5	1742	A
78	5	1750	G
78	5	1751	A
78	5	1752	G
78	5	1754	U
78	5	1755	C
78	5	1756	U
78	5	1761	G
78	5	1764	G
78	5	1772	C
78	5	1773	U
78	5	1776	A
78	5	1780	A
78	5	1781	U
78	5	1787	A
78	5	1788	A
78	5	1804	A
78	5	1805	A
78	5	1812	C
78	5	1815	G
78	5	1819	G
78	5	1821	G
78	5	1822	U
78	5	1828	C
78	5	1836	G
78	5	1837	A
78	5	1842	G
78	5	1855	G
78	5	1869	G
78	5	1881	C
78	5	1897	A
78	5	1899	G
78	5	1910	G
78	5	1916	G
78	5	1918	U
78	5	1920	C
78	5	1921	C
78	5	1922	G
78	5	1923	A

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Mol	Chain	Res	Type
78	5	1928	C
78	5	1931	C
78	5	1940	G
78	5	1948	G
78	5	1960	A
78	5	1961	G
78	5	1962	A
78	5	1964	A
78	5	1975	G
78	5	1977	C
78	5	1978	C
78	5	1979	A
78	5	1982	G
78	5	1984	A
78	5	1985	G
78	5	1987	C
78	5	1991	A
78	5	1997	U
78	5	2001	G
78	5	2002	A
78	5	2003	G
78	5	2004	U
78	5	2008	U
78	5	2011	C
78	5	2021	G
78	5	2024	G
78	5	2026	A
78	5	2047	A
78	5	2048	U
78	5	2055	G
78	5	2056	G
78	5	2062	C
78	5	2064	G
78	5	2069	A
78	5	2070	C
78	5	2084	C
78	5	2085	G
78	5	2089	G
78	5	2090	U
78	5	2092	G
78	5	2093	A
78	5	2094	C

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Mol	Chain	Res	Type
78	5	2095	A
78	5	2097	U
78	5	2098	G
78	5	2100	G
78	5	2102	G
78	5	2103	A
78	5	2104	A
78	5	2105	A
78	5	2106	G
78	5	2107	U
78	5	2108	G
78	5	2259	G
78	5	2260	C
78	5	2262	G
78	5	2267	U
78	5	2268	A
78	5	2269	C
78	5	2270	G
78	5	2274	C
78	5	2275	G
78	5	2289	C
78	5	2300	A
78	5	2301	G
78	5	2306	G
78	5	2313	A
78	5	2316	G
78	5	2322	G
78	5	2331	G
78	5	2333	G
78	5	2345	G
78	5	2348	G
78	5	2351	C
78	5	2370	A
78	5	2382	A
78	5	2395	A
78	5	2396	A
78	5	2402	G
78	5	2410	C
78	5	2416	G
78	5	2417	A
78	5	2418	A
78	5	2422	C

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Mol	Chain	Res	Type
78	5	2425	U
78	5	2426	U
78	5	2433	G
78	5	2441	C
78	5	2453	A
78	5	2469	C
78	5	2471	G
78	5	2472	A
78	5	2475	G
78	5	2476	G
78	5	2485	U
78	5	2488	C
78	5	2489	C
78	5	2490	U
78	5	2491	C
78	5	2503	G
78	5	2504	C
78	5	2505	C
78	5	2506	G
78	5	2513	A
78	5	2529	A
78	5	2530	U
78	5	2537	A
78	5	2544	G
78	5	2546	G
78	5	2547	G
78	5	2553	A
78	5	2554	U
78	5	2575	U
78	5	2583	C
78	5	2586	G
78	5	2587	A
78	5	2589	C
78	5	2601	A
78	5	2611	A
78	5	2618	G
78	5	2638	G
78	5	2649	G
78	5	2658	G
78	5	2661	U
78	5	2662	G
78	5	2669	C

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Mol	Chain	Res	Type
78	5	2675	G
78	5	2676	A
78	5	2686	G
78	5	2687	U
78	5	2695	A
78	5	2696	A
78	5	2704	C
78	5	2707	U
78	5	2708	U
78	5	2710	C
78	5	2711	G
78	5	2712	G
78	5	2715	G
78	5	2716	C
78	5	2724	G
78	5	2725	A
78	5	2726	G
78	5	2740	U
78	5	2753	G
78	5	2754	G
78	5	2759	G
78	5	2760	G
78	5	2761	U
78	5	2763	U
78	5	2764	A
78	5	2769	U
78	5	2772	C
78	5	2778	G
78	5	2787	A
78	5	2788	U
78	5	2789	A
78	5	2790	U
78	5	2796	G
78	5	2806	A
78	5	2814	C
78	5	2826	U
78	5	2827	G
78	5	2828	U
78	5	2833	A
78	5	2842	G
78	5	2844	A
78	5	2846	G

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Mol	Chain	Res	Type
78	5	2855	G
78	5	2856	C
78	5	2862	G
78	5	2898	G
78	5	3598	C
78	5	3604	A
78	5	3605	C
78	5	3614	G
78	5	3615	G
78	5	3625	G
78	5	3626	G
78	5	3635	A
78	5	3644	U
78	5	3646	A
78	5	3648	A
78	5	3653	A
78	5	3662	A
78	5	3664	G
78	5	3672	G
78	5	3673	C
78	5	3674	G
78	5	3683	C
78	5	3692	A
78	5	3696	C
78	5	3706	C
78	5	3709	U
78	5	3711	A
78	5	3712	A
78	5	3714	G
78	5	3729	U
78	5	3739	C
78	5	3740	G
78	5	3753	G
78	5	3759	A
78	5	3760	A
78	5	3773	U
78	5	3774	A
78	5	3775	A
78	5	3776	G
78	5	3777	G
78	5	3783	A
78	5	3784	A

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Mol	Chain	Res	Type
78	5	3786	U
78	5	3787	G
78	5	3789	C
78	5	3791	C
78	5	3798	U
78	5	3799	A
78	5	3802	U
78	5	3810	C
78	5	3812	C
78	5	3814	U
78	5	3817	A
78	5	3819	G
78	5	3839	G
78	5	3840	U
78	5	3877	A
78	5	3878	C
78	5	3879	G
78	5	3880	G
78	5	3889	G
78	5	3892	U
78	5	3897	G
78	5	3901	A
78	5	3905	A
78	5	3906	A
78	5	3907	G
78	5	3908	A
78	5	3915	U
78	5	3927	U
78	5	3938	G
78	5	3939	G
78	5	3943	A
78	5	4069	U
78	5	4076	G
78	5	4085	A
78	5	4086	G
78	5	4088	C
78	5	4119	C
78	5	4120	U
78	5	4122	G
78	5	4125	C
78	5	4127	A
78	5	4128	A

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Mol	Chain	Res	Type
78	5	4157	A
78	5	4162	C
78	5	4163	U
78	5	4166	G
78	5	4169	G
78	5	4170	A
78	5	4171	C
78	5	4173	G
78	5	4183	G
78	5	4184	G
78	5	4191	G
78	5	4203	A
78	5	4213	A
78	5	4222	G
78	5	4228	G
78	5	4229	U
78	5	4232	U
78	5	4233	A
78	5	4234	A
78	5	4241	C
78	5	4243	C
78	5	4249	G
78	5	4251	A
78	5	4254	G
78	5	4256	A
78	5	4266	G
78	5	4271	A
78	5	4273	A
78	5	4281	A
78	5	4289	U
78	5	4291	G
78	5	4297	G
78	5	4303	C
78	5	4305	G
78	5	4306	U
78	5	4313	A
78	5	4314	C
78	5	4319	C
78	5	4329	G
78	5	4330	G
78	5	4349	C
78	5	4354	U

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Mol	Chain	Res	Type
78	5	4355	G
78	5	4373	G
78	5	4376	A
78	5	4377	G
78	5	4378	A
78	5	4380	A
78	5	4387	C
78	5	4393	G
78	5	4394	A
78	5	4395	U
78	5	4398	C
78	5	4405	G
78	5	4413	C
78	5	4415	A
78	5	4419	U
78	5	4421	C
78	5	4422	A
78	5	4424	A
78	5	4430	G
78	5	4436	U
78	5	4437	U
78	5	4438	U
78	5	4444	C
78	5	4448	G
78	5	4449	A
78	5	4450	U
78	5	4453	C
78	5	4464	A
78	5	4466	C
78	5	4471	U
78	5	4482	U
78	5	4488	A
78	5	4489	G
78	5	4500	U
78	5	4511	A
78	5	4512	U
78	5	4513	A
78	5	4518	A
78	5	4519	C
78	5	4520	G
78	5	4522	G
78	5	4525	C

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Mol	Chain	Res	Type
78	5	4531	U
78	5	4548	A
78	5	4560	C
78	5	4573	G
78	5	4575	G
78	5	4584	A
78	5	4586	G
78	5	4590	A
78	5	4599	A
78	5	4605	A
78	5	4608	G
78	5	4624	A
78	5	4627	U
78	5	4629	U
78	5	4636	U
78	5	4637	G
78	5	4639	G
78	5	4656	A
78	5	4657	U
78	5	4658	G
78	5	4667	C
78	5	4670	C
78	5	4671	C
78	5	4672	A
78	5	4677	U
78	5	4691	A
78	5	4693	C
78	5	4694	G
78	5	4695	C
78	5	4700	A
78	5	4707	A
78	5	4709	U
78	5	4719	G
78	5	4720	C
78	5	4721	G
78	5	4736	C
78	5	4750	G
78	5	4751	G
78	5	4752	U
78	5	4754	G
78	5	4757	C
78	5	4758	U

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Mol	Chain	Res	Type
78	5	4759	C
78	5	4765	G
78	5	4771	C
78	5	4868	G
78	5	4870	G
78	5	4872	G
78	5	4873	G
78	5	4875	G
78	5	4876	U
78	5	4877	G
78	5	4881	U
78	5	4882	U
78	5	4883	C
78	5	4885	U
78	5	4895	C
78	5	4902	C
78	5	4911	A
78	5	4914	C
78	5	4915	G
78	5	4921	C
78	5	4924	C
78	5	4925	U
78	5	4926	C
78	5	4927	G
78	5	4928	C
78	5	4934	A
78	5	4937	C
78	5	4938	A
78	5	4940	C
78	5	4943	A
78	5	4944	C
78	5	4947	U
78	5	4948	C
78	5	4949	G
78	5	4950	U
78	5	4951	G
78	5	4955	A
78	5	4956	A
78	5	4958	C
78	5	4960	G
78	5	4961	G
78	5	4965	U

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Mol	Chain	Res	Type
78	5	4966	A
78	5	4976	U
78	5	4979	A
78	5	4985	U
78	5	4988	U
78	5	4989	U
78	5	4990	C
78	5	5006	U
78	5	5007	A
78	5	5014	A
78	5	5017	G
78	5	5031	G
78	5	5040	U
78	5	5041	G
78	5	5047	C
78	5	5048	A
78	5	5050	C
78	5	5054	C
78	5	5061	A
78	5	5062	G
79	7	22	A
79	7	53	U
79	7	54	A
79	7	63	C
79	7	64	G
79	7	74	A
79	7	89	G
79	7	100	A
79	7	110	G
80	8	2	G
80	8	15	G
80	8	16	G
80	8	23	C
80	8	34	U
80	8	35	C
80	8	38	U
80	8	39	G
80	8	59	A
80	8	61	A
80	8	62	A
80	8	63	U
80	8	71	A

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Mol	Chain	Res	Type
80	8	75	G
80	8	77	A
80	8	79	G
80	8	87	G
80	8	90	C
80	8	94	G
80	8	103	A
80	8	105	C
80	8	107	C
80	8	108	A
80	8	109	C
80	8	114	G
80	8	123	U
80	8	125	C
80	8	126	C
80	8	127	U
80	8	150	C
82	1	30	A
82	1	31	A
82	1	32	C
82	1	33	A
83	PT	31	C
83	PT	32	U
83	PT	33	U
83	PT	34	A
83	PT	35	G
83	PT	36	C
83	PT	37	A
83	PT	38	U
83	PT	40	C
84	ET	7	G
84	ET	9	A
84	ET	13	C
84	ET	19	U
84	ET	20	U
84	ET	21	A
84	ET	29	U
84	ET	32	U
84	ET	34	A
84	ET	35	G
84	ET	46	G
84	ET	47	C

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Mol	Chain	Res	Type
84	ET	48	C
84	ET	49	C
84	ET	58	A
84	ET	59	U
84	ET	63	C
84	ET	69	C
84	ET	70	U
84	ET	72	C
84	ET	76	A

All (80) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
3	9	24	C
3	9	110	U
3	9	317	U
3	9	389	A
3	9	456	C
3	9	477	U
3	9	479	A
3	9	485	A
3	9	612	U
3	9	636	G
3	9	717	A
3	9	719	A
3	9	984	U
3	9	1269	A
3	9	1411	C
3	9	1495	A
3	9	1643	A
3	9	1670	A
3	9	1685	A
78	5	12	A
78	5	48	G
78	5	125	C
78	5	217	C
78	5	226	G
78	5	245	C
78	5	275	C
78	5	385	A
78	5	406	C
78	5	449	C

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Mol	Chain	Res	Type
78	5	480	C
78	5	484	U
78	5	485	C
78	5	492	U
78	5	504	G
78	5	696	C
78	5	930	G
78	5	935(A)	G
78	5	959	G
78	5	971(A)	G
78	5	1211	G
78	5	1236	C
78	5	1238	A
78	5	1291	G
78	5	1358	G
78	5	1370	G
78	5	1440	U
78	5	1445	U
78	5	1455	G
78	5	1477	C
78	5	1633	G
78	5	1804	A
78	5	1818	G
78	5	1835	G
78	5	2046	G
78	5	2068	C
78	5	2088	A
78	5	2089	G
78	5	2266	C
78	5	2468	U
78	5	2474	G
78	5	2502	G
78	5	2546	G
78	5	2695	A
78	5	3625	G
78	5	3888	G
78	5	3904	G
78	5	4119	C
78	5	4170	A
78	5	4232	U
78	5	4448	G
78	5	4449	A

*Continued on next page...*

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Mol	Chain	Res	Type
78	5	4699	U
78	5	4719	G
78	5	4884	G
78	5	4925	U
78	5	4936	G
78	5	4947	U
78	5	5049	G
80	8	124	U
84	ET	19	U

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

1 non-standard protein/DNA/RNA residue is modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. 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  $|Z| > 2$  is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
81	DDE	EF	715	81	18,20,21	1.03	1 (5%)	17,28,30	1.08	1 (5%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
81	DDE	EF	715	81	-	5/20/21/23	0/1/1/1

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
81	EF	715	DDE	CD2-CG	2.68	1.41	1.36

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed( $^{\circ}$ )	Ideal( $^{\circ}$ )
81	EF	715	DDE	CAU-CBW-CBI	-3.36	104.65	111.22

There are no chirality outliers.

All (5) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
81	EF	715	DDE	CA-CB-CG-ND1
81	EF	715	DDE	OAG-CBI-CBW-CAU
81	EF	715	DDE	CA-CB-CG-CD2
81	EF	715	DDE	NAD-CBI-CBW-CAU
81	EF	715	DDE	CAT-CAU-CBW-CBI

There are no ring outliers.

1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
81	EF	715	DDE	1	0

## 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 ⓘ

The following chains have linkage breaks:

Mol	Chain	Number of breaks
78	5	26
3	9	20
40	E	3
60	b	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	9	1219:A	O3'	1220:A	P	46.96
1	b	76:VAL	C	89:VAL	N	37.07
1	E	77:ALA	C	92:LEU	N	30.34
1	5	1219:G	O3'	1233:G	P	22.45
1	9	1119:G	O3'	1121:G	P	19.74
1	9	638:G	O3'	641:G	P	19.31
1	9	130:G	O3'	131:A	P	19.04
1	9	250:C	O3'	253:G	P	18.95
1	9	621:G	O3'	622:C	P	18.60
1	5	3948:C	O3'	4065:G	P	18.22
1	5	523:C	O3'	638:G	P	17.67
1	5	4101:C	O3'	4107:G	P	17.26
1	5	1406(C):G	O3'	1411:C	P	17.24
1	5	4138:C	O3'	4146:G	P	16.82
1	9	1433:C	O3'	1434:C	P	16.72
1	5	4777:C	O3'	4859:C	P	16.69
1	9	687:C	O3'	688:G	P	16.00
1	5	1696:C	O3'	1720:C	P	15.71
1	9	179:U	O3'	202:C	P	14.94
1	9	1050:G	O3'	1051:U	P	14.82
1	5	760:G	O3'	904:G	P	14.31
1	5	5022:U	O3'	5028:G	P	13.68
1	5	2901:G	O3'	3597:G	P	13.31
1	5	182:G	O3'	189:G	P	13.15
1	5	1364:U	O3'	1368:A	P	13.13
1	5	4729:A	O3'	4735:G	P	10.22
1	5	512:U	O3'	515:C	P	8.93
1	5	1180:C	O3'	1183:C	P	8.90
1	9	629:C	O3'	630:U	P	7.57
1	E	224:LYS	C	242:LYS	N	7.33
1	9	632:C	O3'	633:U	P	6.71
1	9	215:G	O3'	216:U	P	6.49

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	9	613:U	O3'	614:G	P	6.36
1	E	100:GLY	C	105:GLY	N	5.30
1	5	1957:U	O3'	1958:A	P	5.12
1	5	500:G	O3'	504:G	P	4.84
1	9	1443:U	O3'	1444:A	P	4.80
1	5	4740:G	O3'	4743:G	P	4.78
1	5	1100:U	O3'	1168:G	P	4.05
1	9	651:G	O3'	652:U	P	3.84
1	5	170:C	O3'	171:U	P	3.63
1	9	233:C	O3'	234:U	P	3.46
1	5	1438:U	O3'	1440:U	P	3.37
1	9	750:A	O3'	751:A	P	3.19
1	9	733:A	O3'	734:U	P	3.16
1	9	749:G	O3'	750:A	P	3.15
1	5	267:G	O3'	268:G	P	3.14
1	5	4899:G	O3'	4902:C	P	3.14
1	5	5020:G	O3'	5021:C	P	3.14
1	5	751:G	O3'	752:G	P	3.13

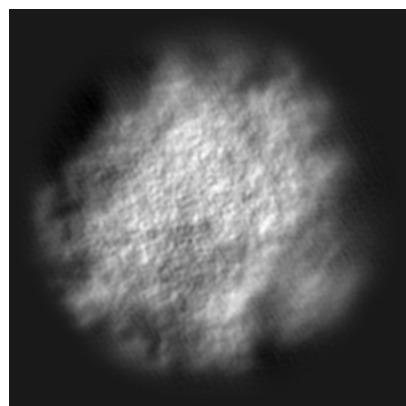
## 6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-72168. These allow visual inspection of the internal detail of the map and identification of artifacts.

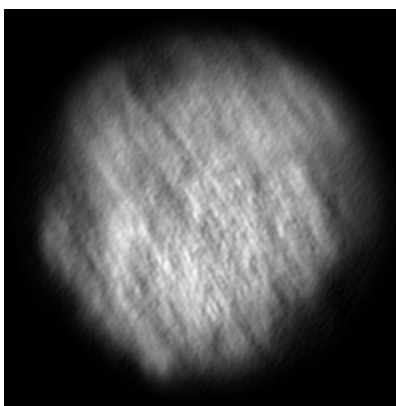
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

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

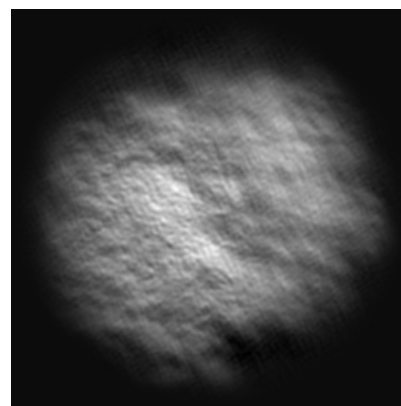
#### 6.1.1 Primary map



X

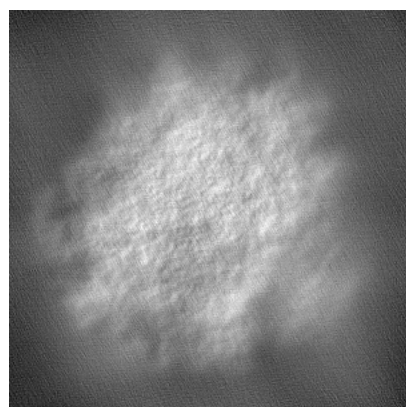


Y

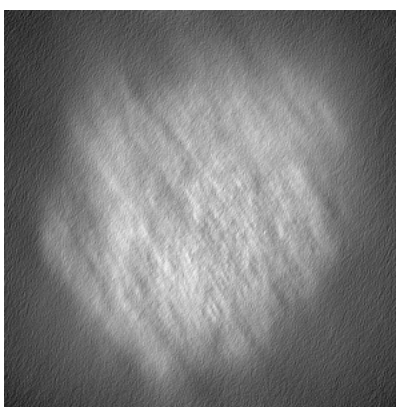


Z

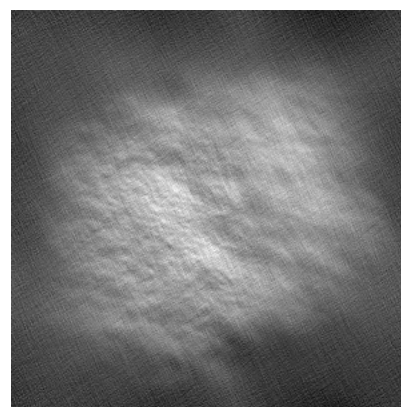
#### 6.1.2 Raw map



X



Y

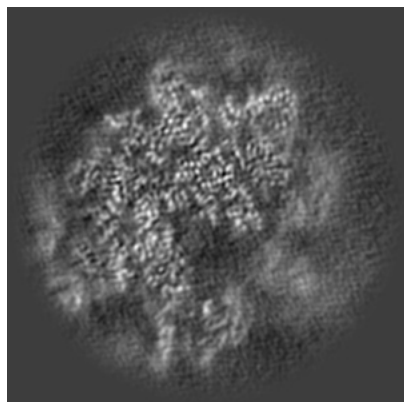


Z

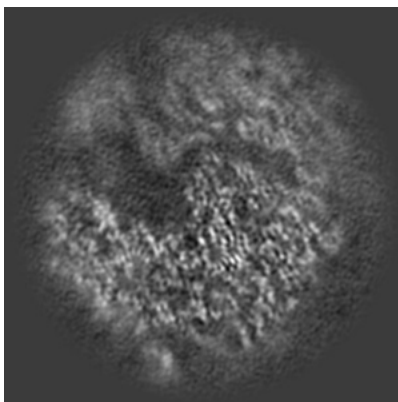
The images above show the map projected in three orthogonal directions.

## 6.2 Central slices [i](#)

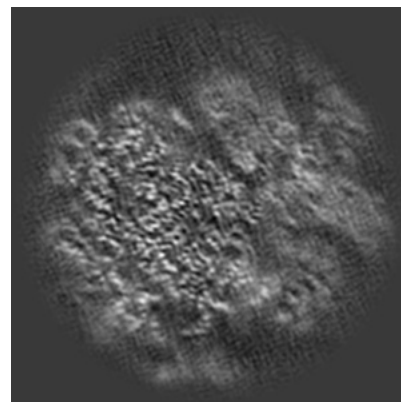
### 6.2.1 Primary map



X Index: 180

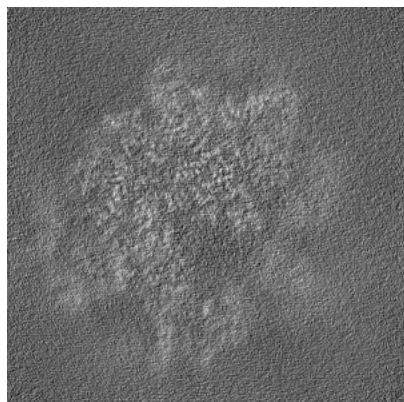


Y Index: 180

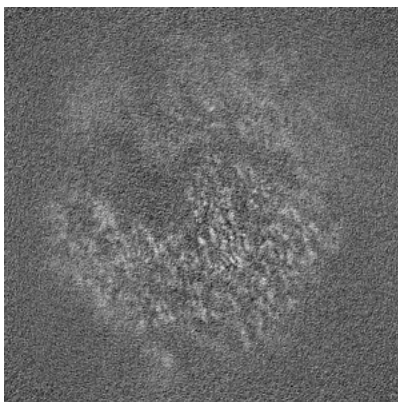


Z Index: 180

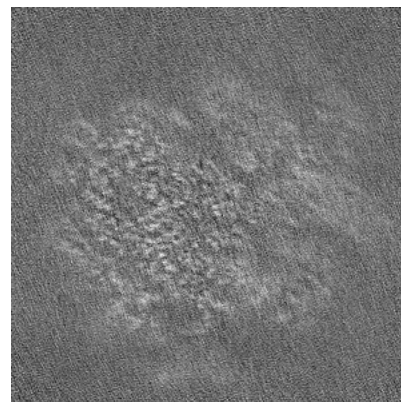
### 6.2.2 Raw map



X Index: 180



Y Index: 180



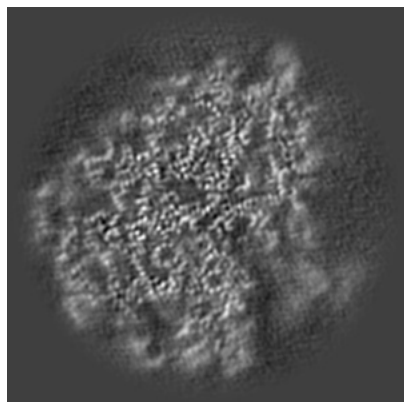
Z Index: 180

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

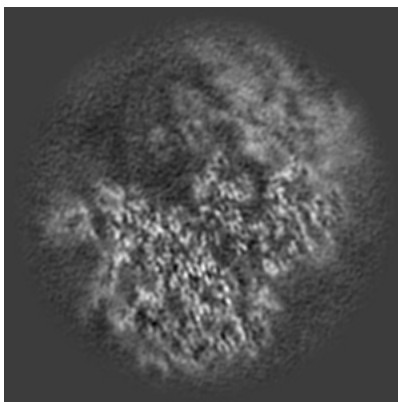


## 6.3 Largest variance slices [i](#)

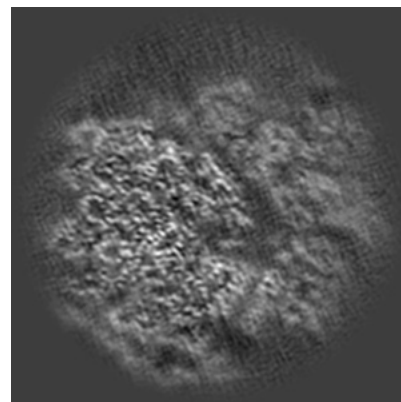
### 6.3.1 Primary map



X Index: 148

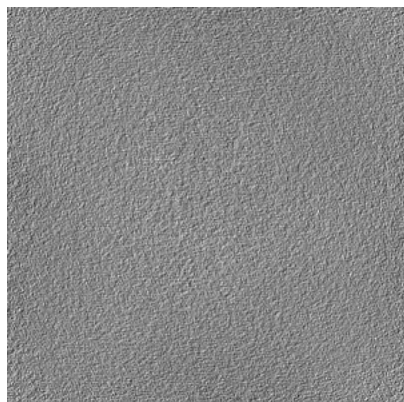


Y Index: 149

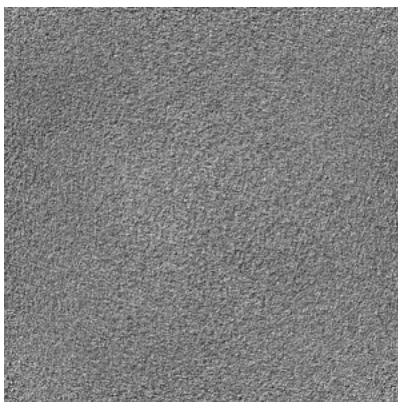


Z Index: 171

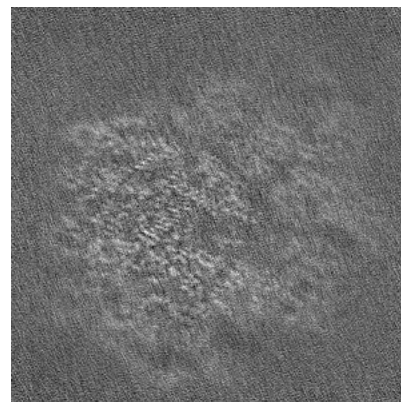
### 6.3.2 Raw map



X Index: 0



Y Index: 0



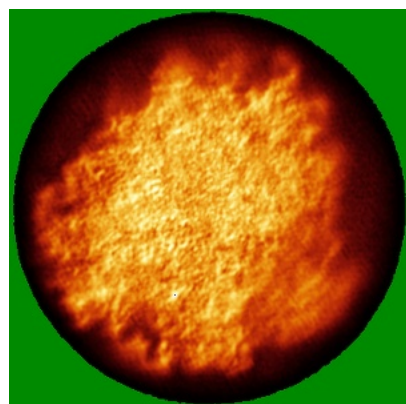
Z Index: 174

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

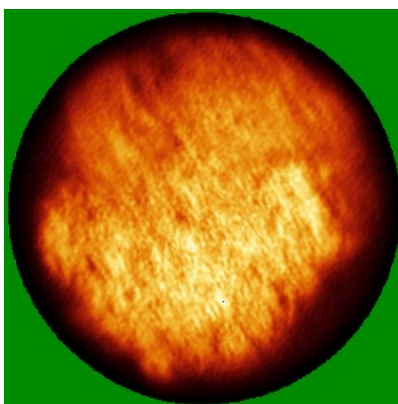


## 6.4 Orthogonal standard-deviation projections (False-color) [i](#)

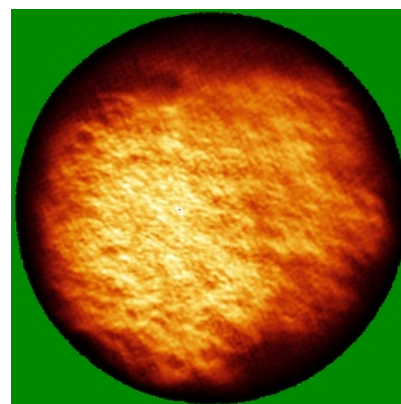
### 6.4.1 Primary map



X

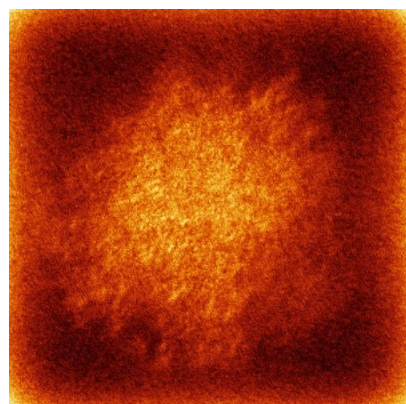


Y

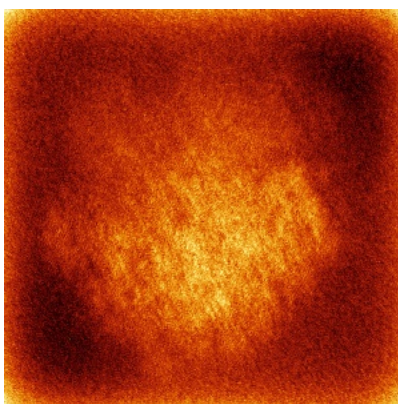


Z

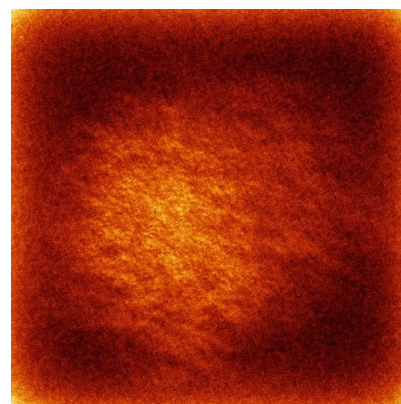
### 6.4.2 Raw map



X



Y

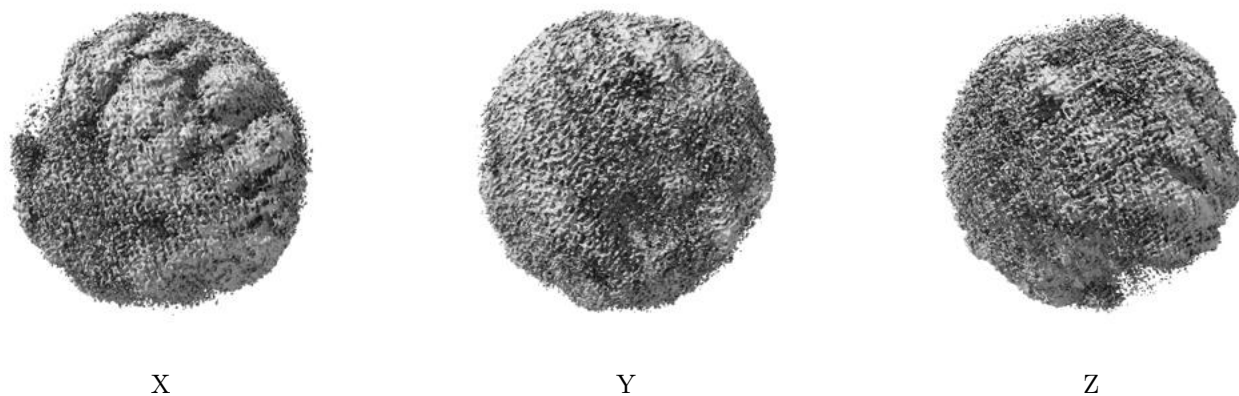


Z

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.

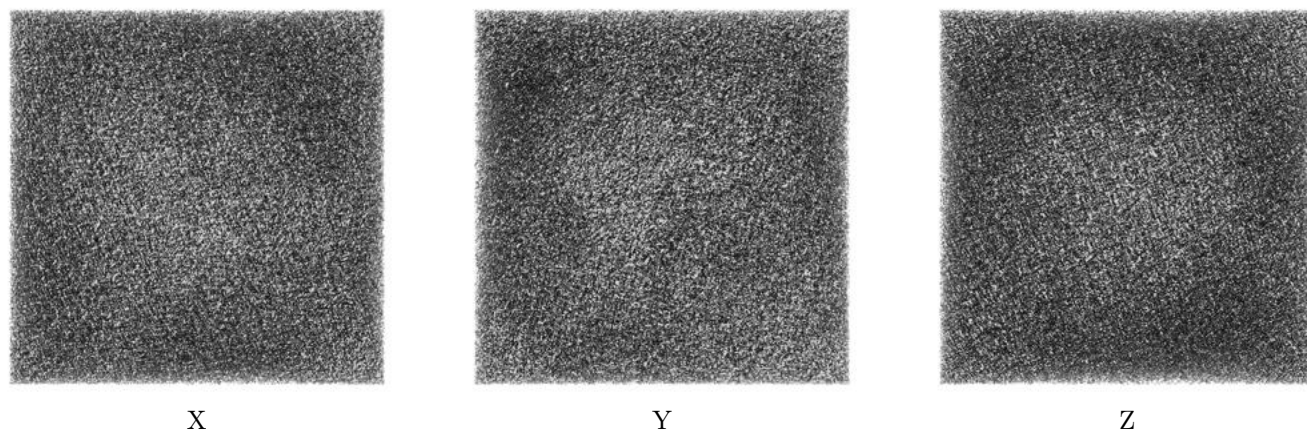
## 6.5 Orthogonal surface views [i](#)

### 6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.05. 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.

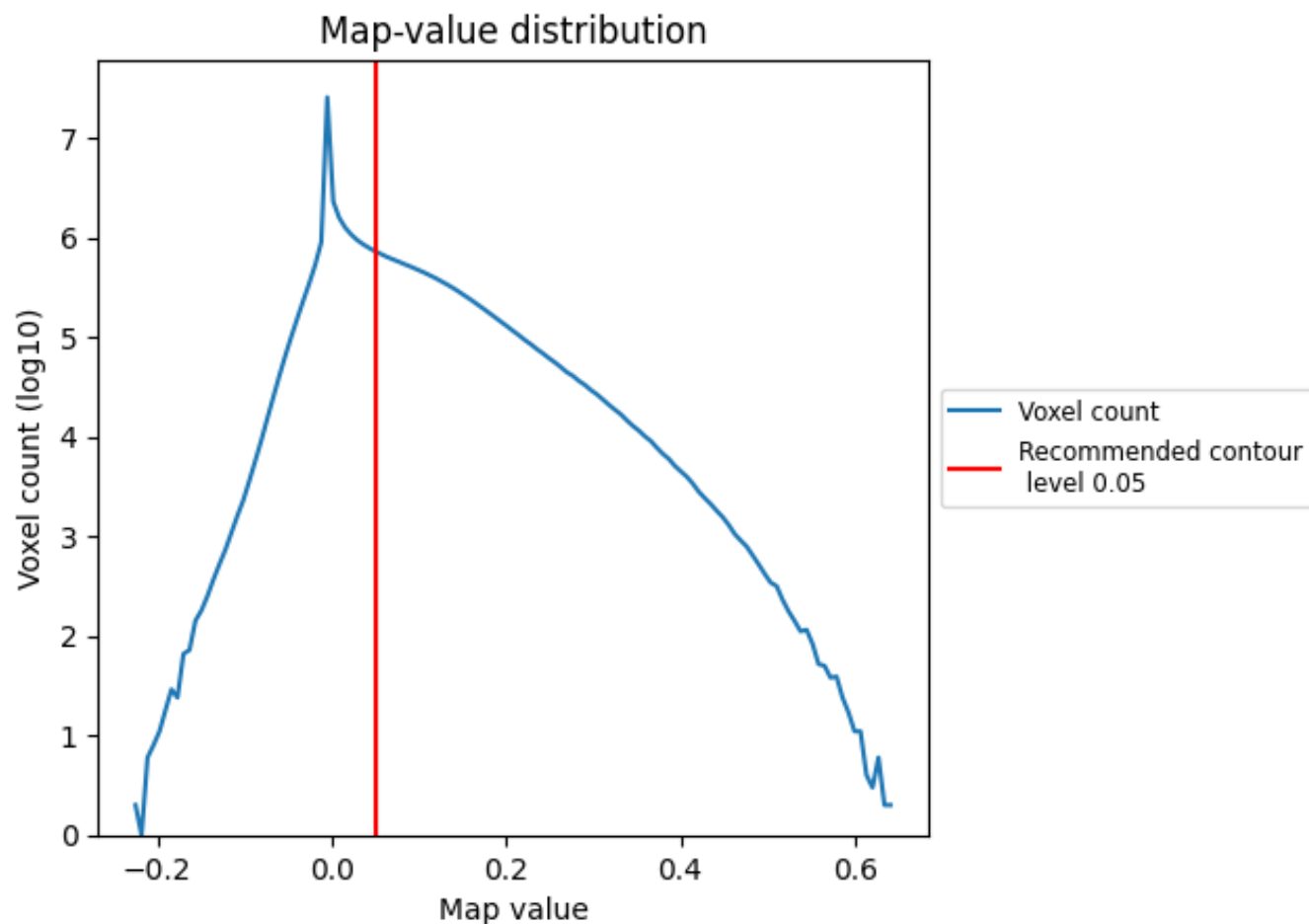
## 6.6 Mask visualisation [i](#)

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

## 7 Map analysis [i](#)

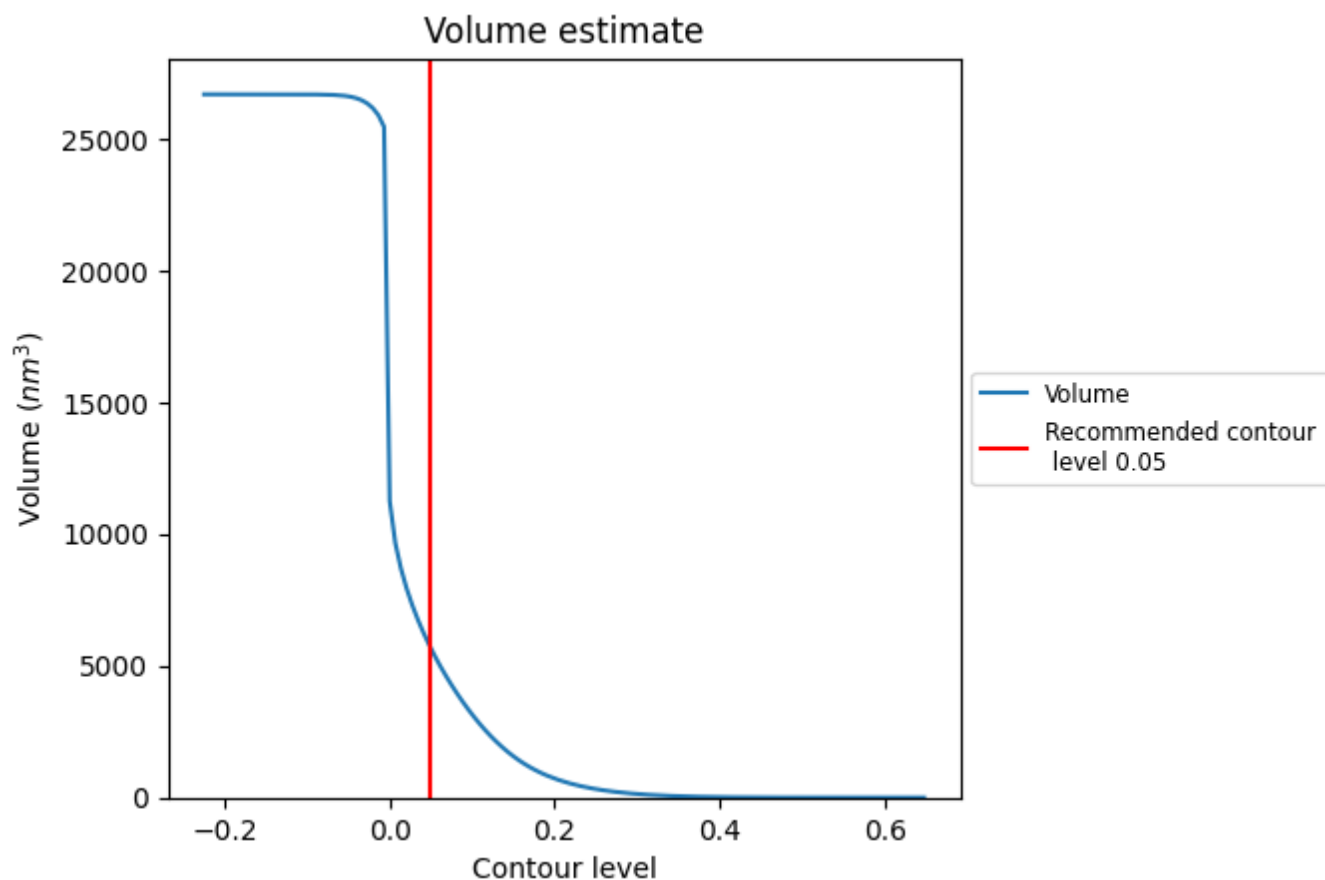
This section contains the results of statistical analysis of the map.

### 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.

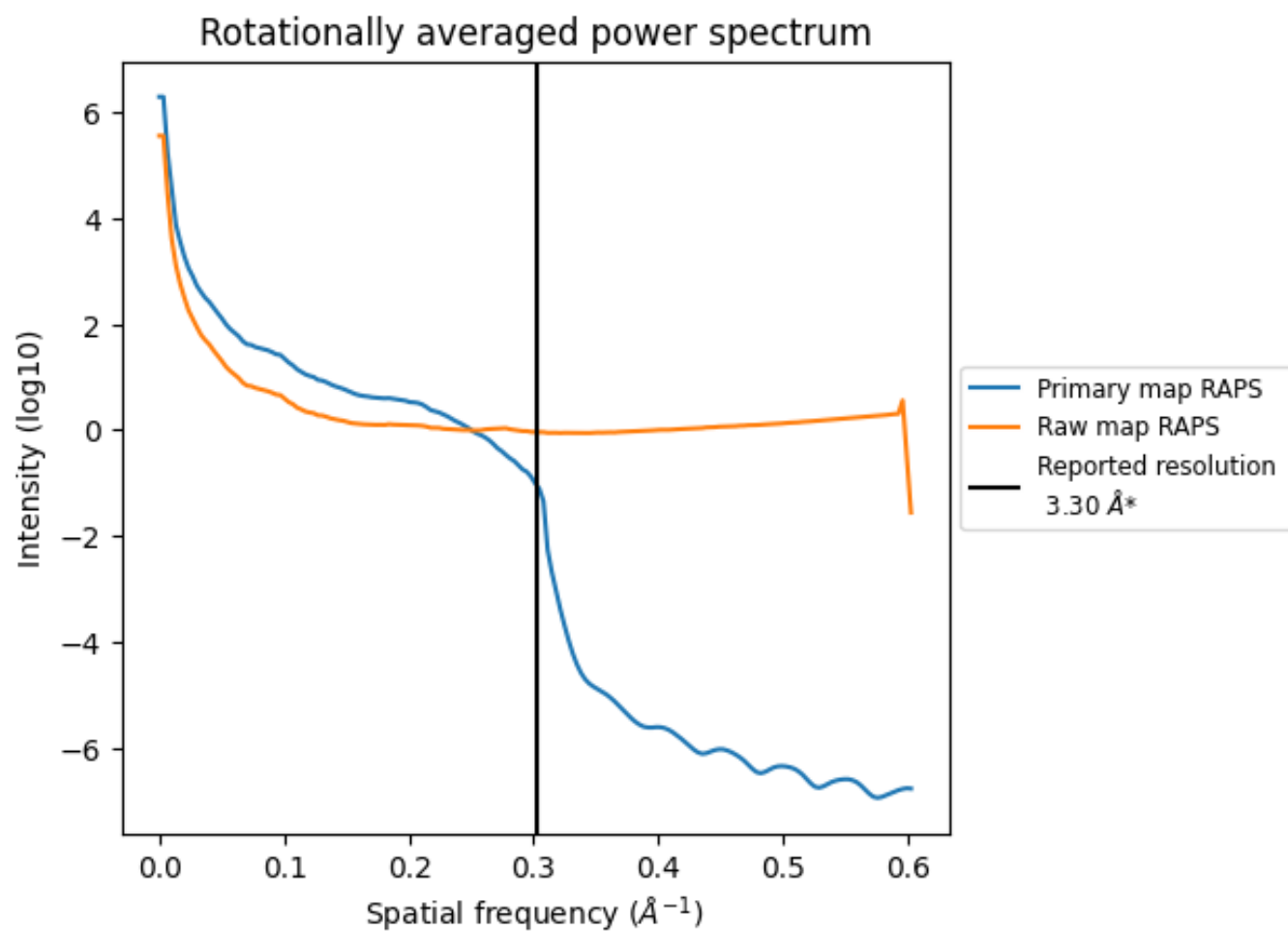
## 7.2 Volume estimate [i](#)



The volume at the recommended contour level is 5668  $\text{nm}^3$ ; this corresponds to an approximate mass of 5120 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 ⓘ

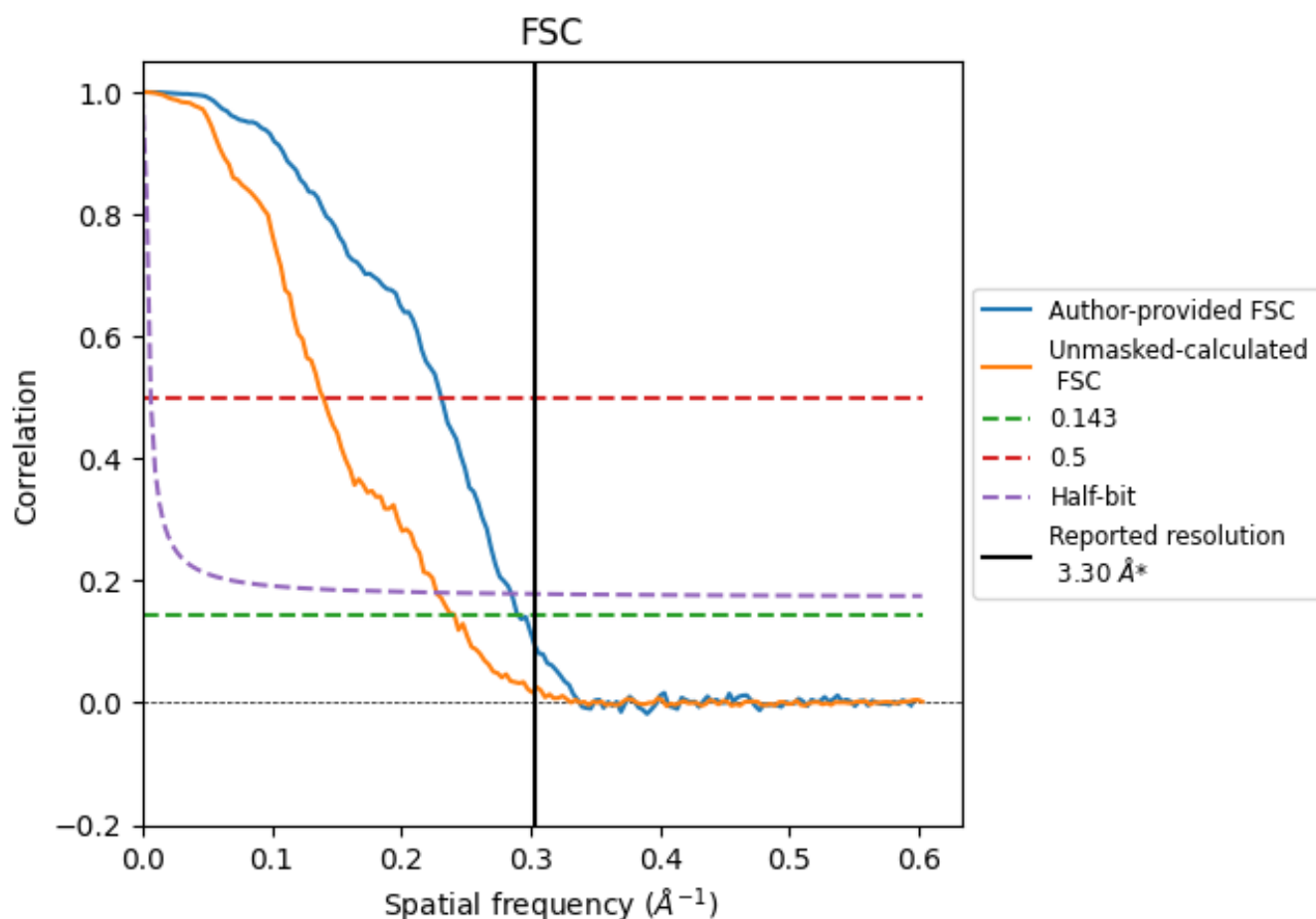


\*Reported resolution corresponds to spatial frequency of 0.303 Å<sup>-1</sup>

## 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 0.303  $\text{\AA}^{-1}$



## 8.2 Resolution estimates [i](#)

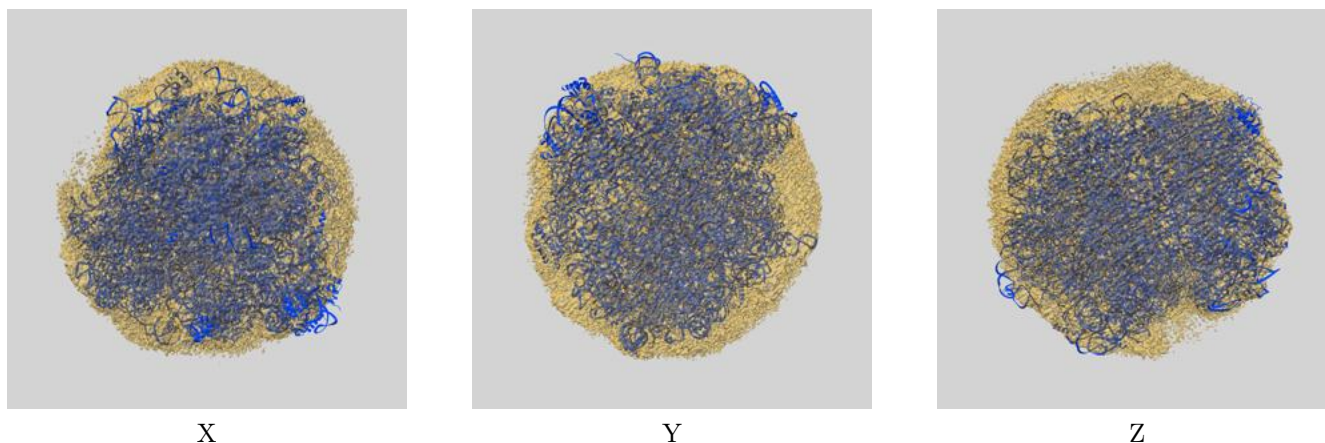
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.30	-	-
Author-provided FSC curve	3.44	4.33	3.51
Unmasked-calculated*	4.15	7.16	4.40

\*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 4.15 differs from the reported value 3.3 by more than 10 %

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

This section contains information regarding the fit between EMDB map EMD-72168 and PDB model 9Q2M. Per-residue inclusion information can be found in section [3](#) on page [23](#).

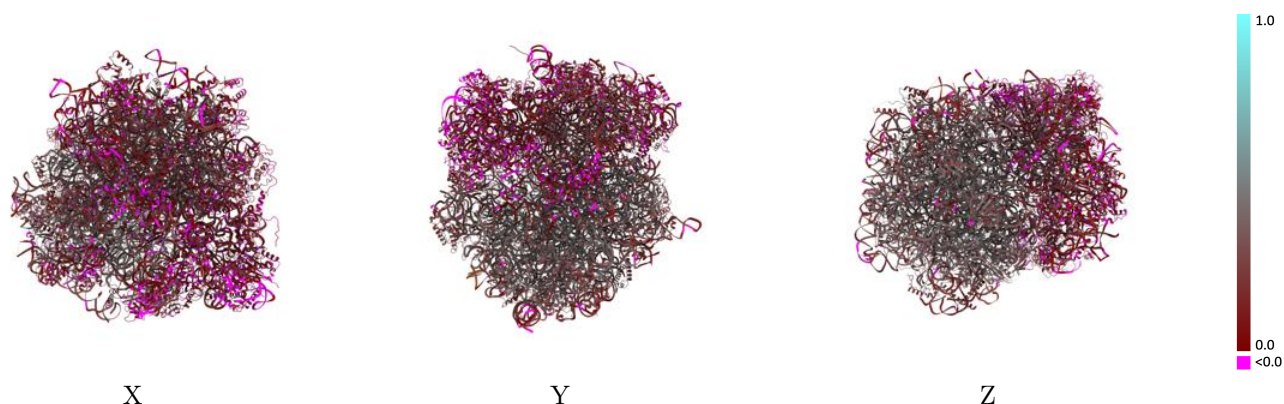
### 9.1 Map-model overlay [i](#)



The images above show the 3D surface view of the map at the recommended contour level 0.05 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.

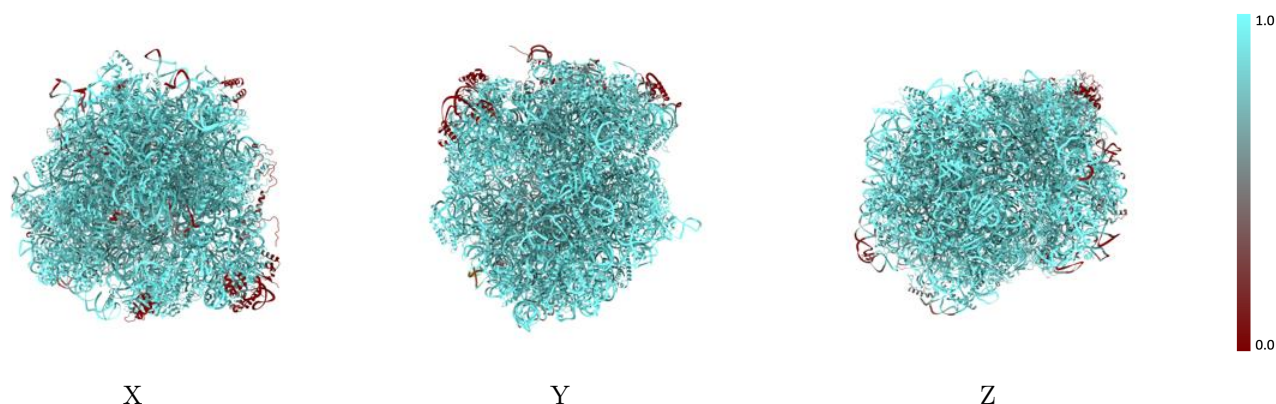


## 9.2 Q-score mapped to coordinate model [i](#)



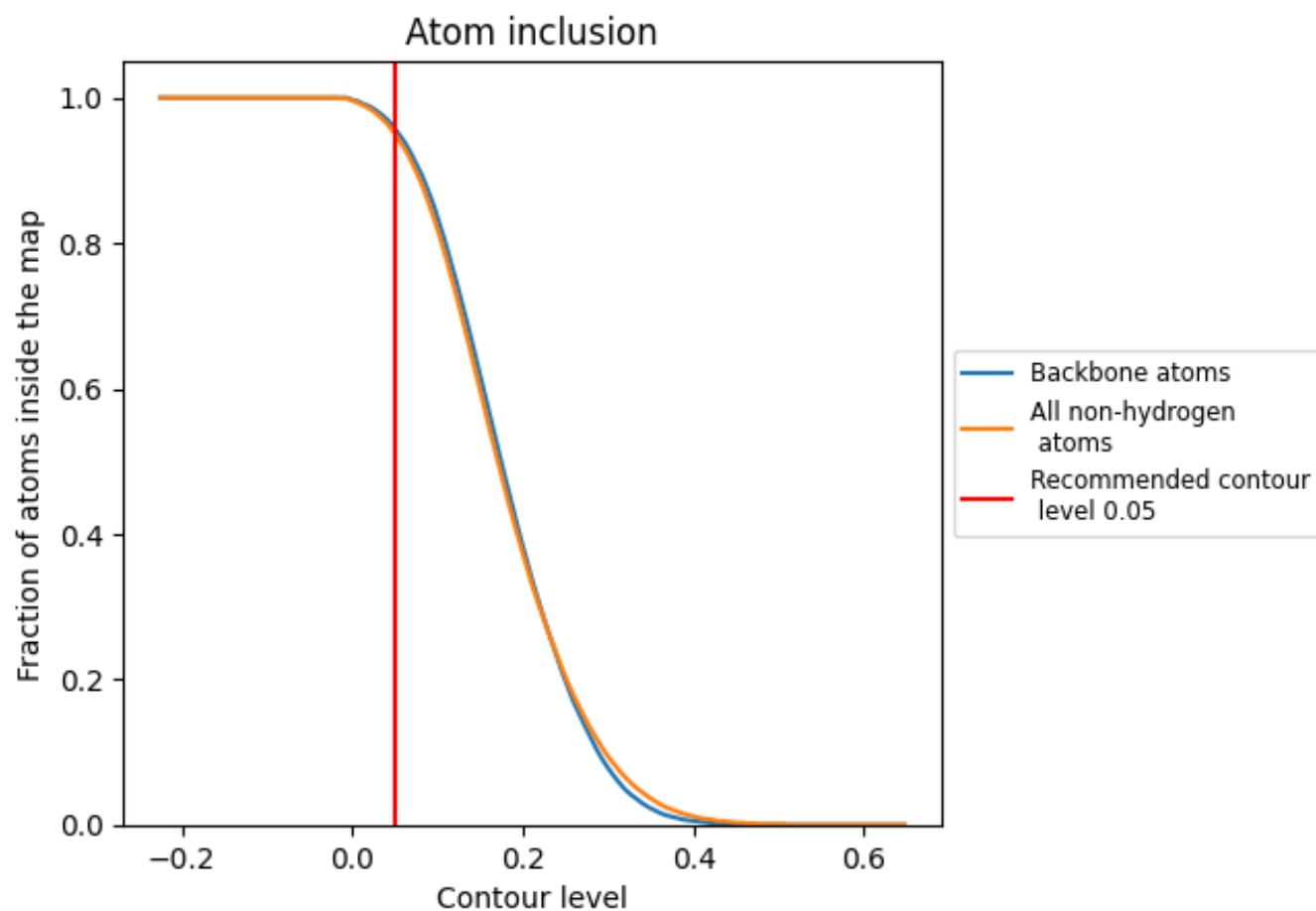
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.05).







































































## 9.4 Atom inclusion [i](#)



At the recommended contour level, 96% of all backbone atoms, 95% of all non-hydrogen atoms, are inside the map.

## 9.5 Map-model fit summary





















































































The table lists the average atom inclusion at the recommended contour level (0.05) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9510	 0.2780
1	 0.9430	 0.1730
5	 0.9790	 0.3520
7	 0.9920	 0.3590
8	 0.9950	 0.3710
9	 0.9450	 0.1810
A	 0.9680	 0.3900
AA	 0.8540	 0.1920
B	 0.9700	 0.3820
BB	 0.9760	 0.0870
C	 0.9680	 0.3730
CC	 0.9090	 0.1970
D	 0.9830	 0.3030
DD	 0.8770	 0.1030
E	 0.7700	 0.2930
EE	 0.9460	 0.1610
EF	 0.9390	 0.2080
ET	 0.9420	 0.0930
F	 0.9580	 0.3560
FF	 0.9880	 0.1000
G	 0.9740	 0.3170
GG	 0.8190	 0.1420
H	 0.9340	 0.3240
HH	 0.6760	 0.1420
I	 0.9670	 0.3520
II	 0.9810	 0.1700
J	 0.9570	 0.2690
JJ	 0.9320	 0.1260
KK	 0.9520	 0.0600
L	 0.9580	 0.3490
LL	 0.9810	 0.2480
M	 0.9690	 0.3240
MM	 0.5670	 0.0520
N	 0.9760	 0.3990
NN	 0.9730	 0.1570



















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Chain	Atom inclusion	Q-score
O	 0.9580	 0.3700
OO	 0.9760	 0.1390
P	 0.9810	 0.3960
PP	 0.9630	 0.1520
PT	 0.9490	 0.0930
Q	 0.9720	 0.3850
QQ	 0.7060	 0.1050
R	 0.9530	 0.1800
RR	 0.6030	 0.0970
S	 0.9680	 0.3700
SS	 0.9560	 0.1170
T	 0.9800	 0.3770
TT	 0.6630	 0.0940
U	 0.9850	 0.3120
UU	 0.5890	 0.0670
V	 0.9840	 0.3520
VV	 0.7880	 0.2030
W	 0.9290	 0.1080
WW	 0.9400	 0.2480
X	 0.9750	 0.3660
XX	 0.9330	 0.2070
Y	 0.9650	 0.3500
YY	 0.7850	 0.0730
Z	 0.9910	 0.3350
ZZ	 0.9910	 0.0980
a	 0.9900	 0.3910
aa	 0.9900	 0.2380
b	 0.9390	 0.2990
bb	 0.9830	 0.1560
c	 0.9990	 0.3380
cc	 0.9920	 0.0700
d	 0.9840	 0.4010
dd	 0.9910	 0.1640
e	 0.9820	 0.3950
ee	 0.9270	 0.1400
f	 0.9660	 0.3940
ff	 0.8230	 0.0960
g	 0.9780	 0.3680
h	 0.9600	 0.3200
i	 0.9900	 0.3450
j	 0.9790	 0.4160
k	 0.9710	 0.3150

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Chain	Atom inclusion	Q-score
l	 0.9720	 0.3660
m	 0.9760	 0.3410
n	 0.9730	 0.3070
o	 0.9630	 0.3450
p	 0.9620	 0.3590
r	 0.9350	 0.3420
s	 0.9280	 0.1750
t	 0.8480	 0.1390