



## Full wwPDB EM Validation Report ⓘ

Jun 8, 2026 – 05:49 PM EDT

PDB ID : 9Q2T / pdb\_00009q2t  
EMDB ID : EMD-72175  
Title : NediV IRES in complex with Rabbit 80S ribosome with eEF2 and P site Ala-tRNA  
Authors : De, S.; Altomare, C.G.; Abaeva, I.S.; Dadhwal, P.; Garg, P.; Acosta-Reyes, F.; Brown, Z.P.; Pestova, T.V.; Hellen, C.U.T.; Frank, J.  
Deposited on : 2025-08-15  
Resolution : 4.10 Å(reported)

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

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>  
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

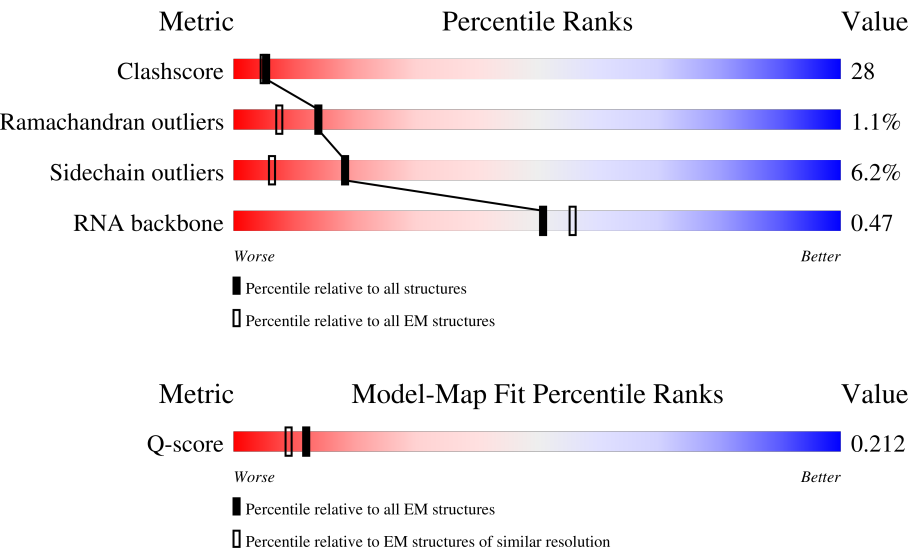
EMDB validation analysis : 0.0.1.dev132  
Mogul : 2022.3.0, CSD as543be (2022)  
MolProbity : 4-5-2 with Phenix2.0  
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)  
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)  
MapQ : 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 4.10 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	6458 ( 3.60 - 4.60 )

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 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	DD	228	<div><div>6%</div><div>60%</div><div>38%</div><div>.</div></div>
2	FF	191	<div><div>49%</div><div>47%</div><div>..</div></div>
3	KK	96	<div><div>51%</div><div>46%</div><div>.</div></div>





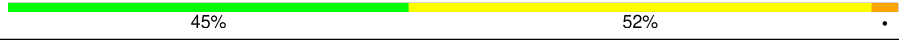

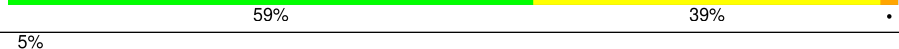
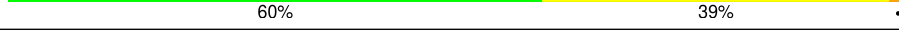
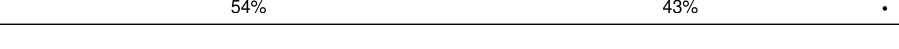
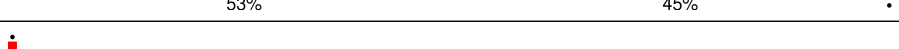
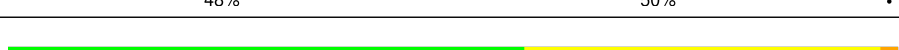
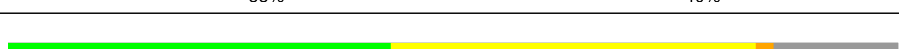
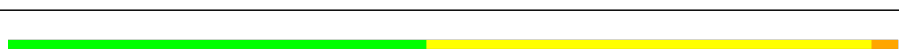
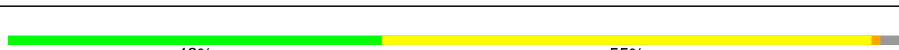
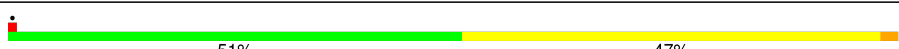





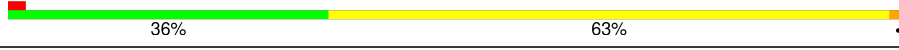
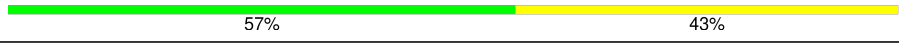



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Mol	Chain	Length	Quality of chain
4	MM	117	
5	PP	111	
6	QQ	142	
7	RR	132	
8	SS	144	
9	TT	141	
10	UU	100	
11	ZZ	75	
12	cc	62	
13	dd	55	
14	ff	68	
15	gg	313	
16	R	180	
17	W	121	
18	9	1697	
19	AA	217	
20	BB	213	
21	CC	221	
22	EE	262	
23	GG	237	
24	HH	189	
25	II	206	
26	JJ	185	
27	LL	151	
28	NN	149	



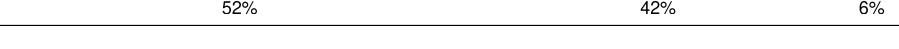

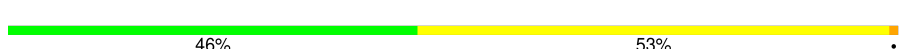


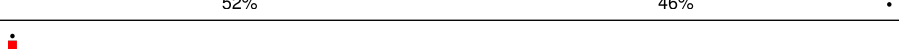
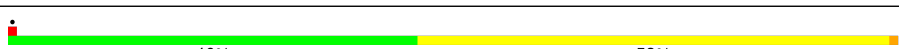

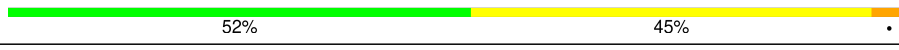
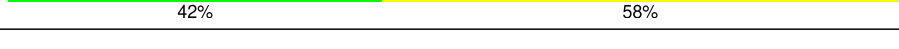

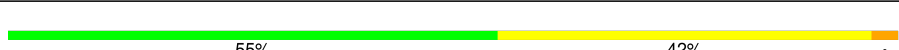


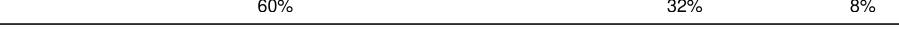







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Mol	Chain	Length	Quality of chain
29	OO	136	
30	VV	83	
31	WW	129	
32	XX	141	
33	YY	124	
34	aa	101	
35	bb	83	
36	ee	57	
37	A	248	
38	B	394	
39	C	362	
40	D	293	
41	E	251	
42	F	225	
43	G	240	
44	H	190	
45	I	213	
46	J	170	
47	L	210	
48	M	138	
49	N	203	
50	O	199	
51	P	153	
52	Q	187	
53	S	176	

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Mol	Chain	Length	Quality of chain
54	T	159	
55	U	99	
56	V	139	
57	X	118	
58	Y	134	
59	Z	135	
60	a	147	
61	b	116	
62	c	98	
63	d	107	
64	e	128	
65	f	109	
66	g	114	
67	h	122	
68	i	102	
69	j	86	
70	k	69	
71	l	50	
72	m	52	
73	n	25	
74	o	104	
75	p	91	
76	r	124	
77	s	196	
78	t	153	

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Mol	Chain	Length	Quality of chain
79	5	3543	<div><div></div><div>31%55%14%</div></div>
80	7	119	<div><div></div><div>30%64%6%</div></div>
81	8	156	<div><div></div><div>29%53%14%</div></div>
82	1	154	<div><div></div><div>36%62%</div></div>
83	PT	76	<div><div></div><div>5%51%42%</div></div>
84	EF	853	<div><div></div><div>12%55%30%</div></div>

## 2 Entry composition [i](#)

There are 86 unique types of molecules in this entry. The entry contains 231165 atoms, of which 7569 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 40S ribosomal protein S3.

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

- Molecule 2 is a protein called Small ribosomal subunit protein uS7.

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

- Molecule 3 is a protein called 40S ribosomal protein S10.

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

- Molecule 4 is a protein called 40S ribosomal protein S12.

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

- Molecule 5 is a protein called Small ribosomal subunit protein uS19.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	PP	111	Total	C	N	O	S	0	0
			921	585	171	158	7		

- Molecule 6 is a protein called Small ribosomal subunit protein uS9.

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

- Molecule 7 is a protein called 40S ribosomal protein S17.

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

- Molecule 8 is a protein called 40S ribosomal protein S18.

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

- Molecule 9 is a protein called Small ribosomal subunit protein eS19.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	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 10 is a protein called 40S ribosomal protein S20.

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

- Molecule 11 is a protein called 40S ribosomal protein S25.

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

- Molecule 12 is a protein called 40S ribosomal protein S28.

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

- Molecule 13 is a protein called 40S ribosomal protein S29.



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

- Molecule 14 is a protein called 40S ribosomal protein S27a.

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

- Molecule 15 is a protein called Receptor of activated protein C kinase 1.

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

- Molecule 16 is a protein called 60S ribosomal protein L19.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	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 17 is a protein called Large ribosomal subunit protein eL24.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	W	91	Total	C	N	O	S	0	0
			732	463	144	121	4		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
18	9	1697	Total	C	N	O	P	0	0
			36229	16171	6507	11855	1696		

- Molecule 19 is a protein called 40S\_SA\_C domain-containing protein.

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

- Molecule 20 is a protein called 40S ribosomal protein S3a.

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

- Molecule 21 is a protein called 40S ribosomal protein S2.

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

- Molecule 22 is a protein called 40S ribosomal protein S4.

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

- Molecule 23 is a protein called 40S ribosomal protein S6.

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

- Molecule 24 is a protein called Small ribosomal subunit protein eS7.

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

- Molecule 25 is a protein called 40S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	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 26 is a protein called 40S ribosomal protein S9.

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

- Molecule 27 is a protein called Small ribosomal subunit protein uS17.

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

- Molecule 28 is a protein called 40S ribosomal protein S13.

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

- Molecule 29 is a protein called Small ribosomal subunit protein uS11.

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

- Molecule 30 is a protein called eS21.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	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 31 is a protein called 40S ribosomal protein S15a.

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

- Molecule 32 is a protein called 40S ribosomal protein S23.

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

- Molecule 33 is a protein called 40S ribosomal protein S24.

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

- Molecule 34 is a protein called eS26.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	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 35 is a protein called 40S ribosomal protein S27.

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

- Molecule 36 is a protein called Small ribosomal subunit protein eS30.

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

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

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

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

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

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

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

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

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

- Molecule 41 is a protein called Large ribosomal subunit protein eL6.

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

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

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

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

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

There is a discrepancy between the modelled and reference sequences:

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

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

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

- Molecule 45 is a protein called Ribosomal protein L10.

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

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

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

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

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

There are 2 discrepancies between the modelled and reference sequences:

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

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

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

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

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

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

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

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

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

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

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

There are 12 discrepancies between the modelled and reference sequences:

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

- Molecule 53 is a protein called eL20.

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

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

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

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

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

There are 10 discrepancies between the modelled and reference sequences:

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

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

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

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

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

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

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



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

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

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

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

- Molecule 61 is a protein called Large ribosomal subunit protein eL29.

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

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

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

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

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

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

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

There are 7 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
e	3	ALA	SER	conflict	UNP G1TUN8
e	13	VAL	ILE	conflict	UNP G1TUN8
e	16	ARG	TRP	conflict	UNP G1TUN8
e	81	ASN	SER	conflict	UNP G1TUN8

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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 65 is a protein called Large ribosomal subunit protein eL33.

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

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

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

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

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

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

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

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

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

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

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

There is a discrepancy between the modelled and reference sequences:

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

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

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

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

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

- Molecule 73 is a protein called eL41.

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

- Molecule 74 is a protein called eL42.

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

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

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

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

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

- Molecule 77 is a protein called 60S acidic ribosomal protein P0.

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

- Molecule 78 is a protein called uL11.

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
79	5	3543	Total	C	N	O	P	0	0
			75952	33825	13893	24691	3543		

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

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

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

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

- Molecule 82 is a RNA chain called NediV IRES.

Mol	Chain	Residues	Atoms					AltConf	Trace
82	1	154	Total	C	N	O	P	0	0
			3261	1459	566	1082	154		

- Molecule 83 is a RNA chain called ala-tRNA.

Mol	Chain	Residues	Atoms						AltConf	Trace
83	PT	76	Total	C	H	N	O	P	0	0
			2445	722	823	290	534	76		

- Molecule 84 is a protein called Elongation factor 2.

Mol	Chain	Residues	Atoms						AltConf	Trace
84	EF	853	Total	C	H	N	O	S	0	0
			13405	4226	6746	1146	1243	44		

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

Mol	Chain	Residues	Atoms		AltConf
85	dd	1	Total	Zn	0
			1	1	
85	ff	1	Total	Zn	0
			1	1	
85	aa	1	Total	Zn	0
			1	1	
85	g	1	Total	Zn	0
			1	1	
85	j	1	Total	Zn	0
			1	1	
85	m	1	Total	Zn	0
			1	1	
85	o	1	Total	Zn	0
			1	1	
85	p	1	Total	Zn	0
			1	1	

- Molecule 86 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
86	aa	1	Total	Mg	0
			1	1	
86	B	1	Total	Mg	0
			1	1	
86	I	1	Total	Mg	0
			1	1	
86	P	1	Total	Mg	0
			1	1	
86	Q	1	Total	Mg	0
			1	1	
86	V	1	Total	Mg	0
			1	1	
86	a	2	Total	Mg	0
			2	2	
86	g	1	Total	Mg	0
			1	1	
86	j	1	Total	Mg	0
			1	1	

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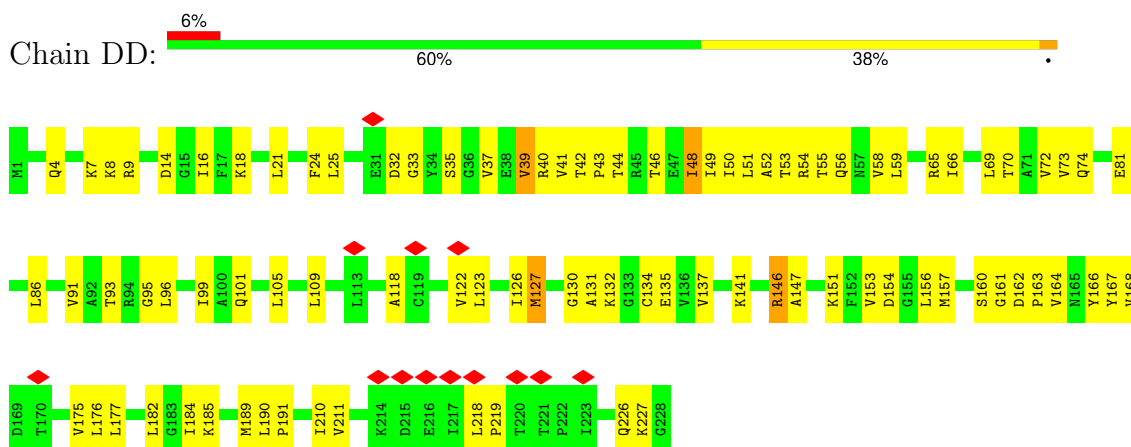
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Mol	Chain	Residues	Atoms		AltConf
86	5	185	Total 185	Mg 185	0
86	7	6	Total 6	Mg 6	0
86	8	5	Total 5	Mg 5	0

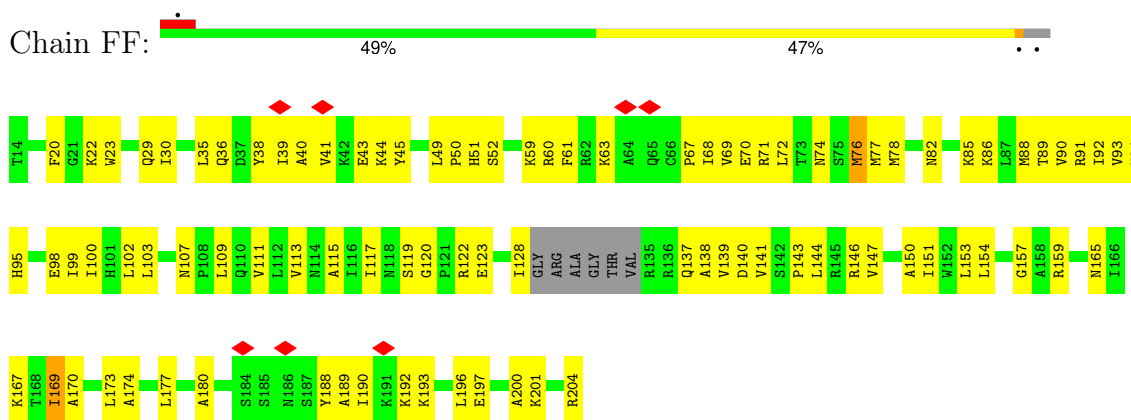
### 3 Residue-property plots

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

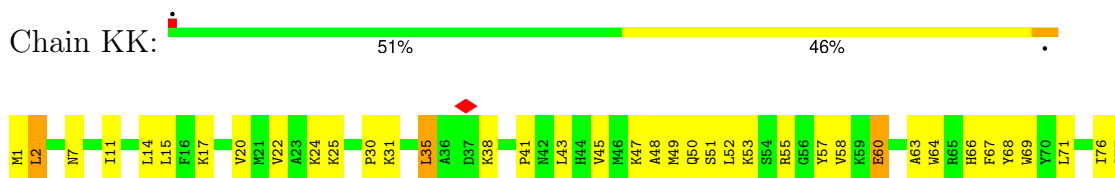
- Molecule 1: 40S ribosomal protein S3



- Molecule 2: Small ribosomal subunit protein uS7



- Molecule 3: 40S ribosomal protein S10





- Molecule 4: 40S ribosomal protein S12

Chain MM: 50% 47%



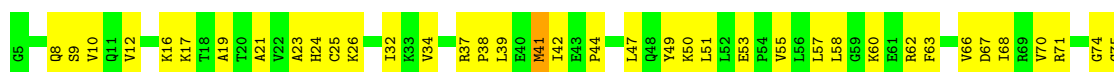
- Molecule 5: Small ribosomal subunit protein uS19

Chain PP: 6% 53% 41% 5%



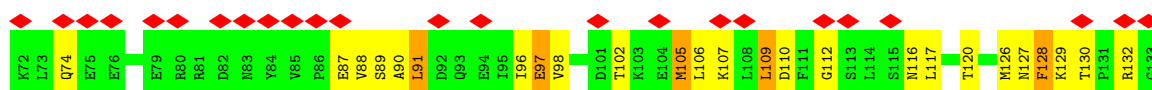
- Molecule 6: Small ribosomal subunit protein uS9

Chain QQ: 45% 54%



- Molecule 7: 40S ribosomal protein S17

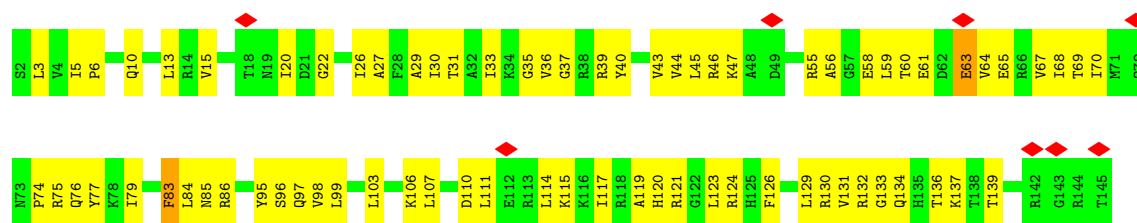
Chain RR: 23% 52% 43% 5%



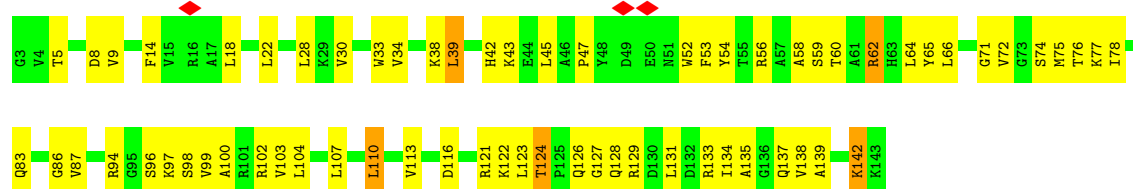
- Molecule 8: 40S ribosomal protein S18

Chain SS: 6% 49% 50%

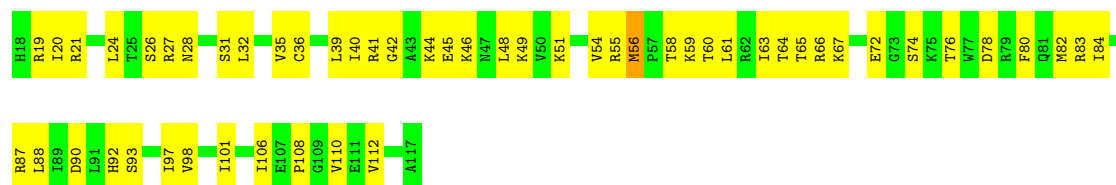




- Molecule 9: Small ribosomal subunit protein eS19



- Molecule 10: 40S ribosomal protein S20



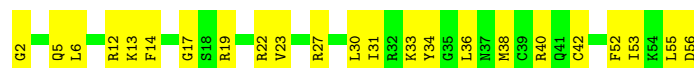
- Molecule 11: 40S ribosomal protein S25



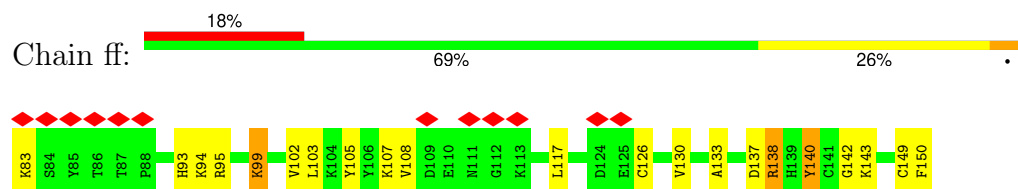
- Molecule 12: 40S ribosomal protein S28



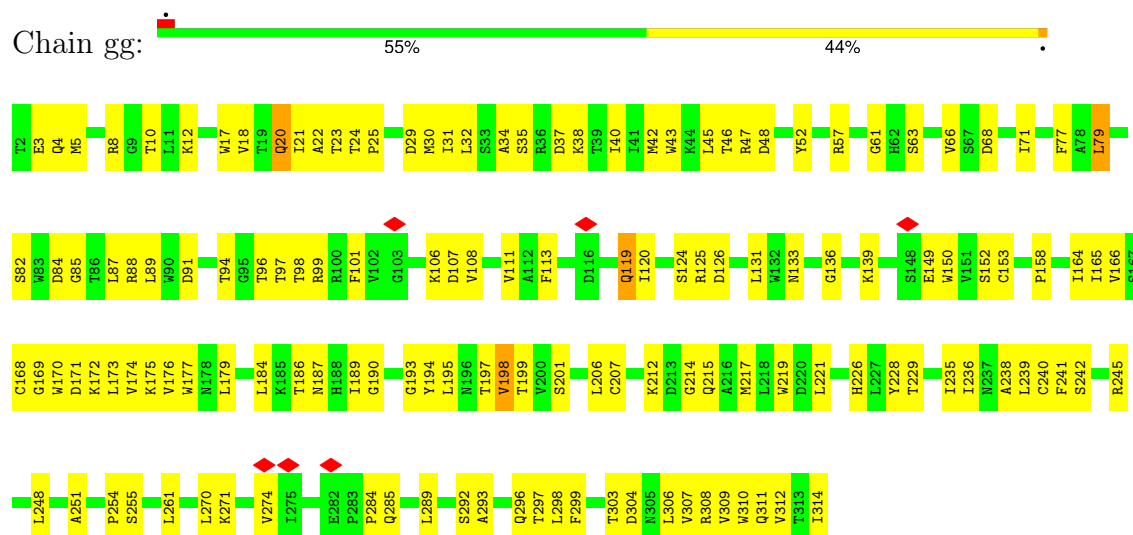
- Molecule 13: 40S ribosomal protein S29



- Molecule 14: 40S ribosomal protein S27a



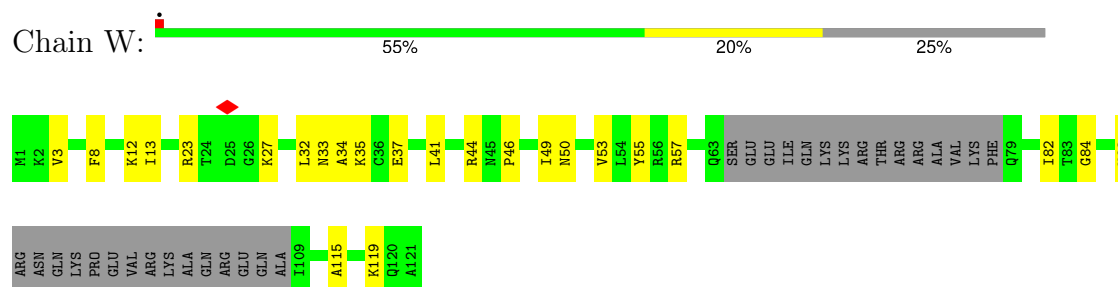
- Molecule 15: Receptor of activated protein C kinase 1



- Molecule 16: 60S ribosomal protein L19



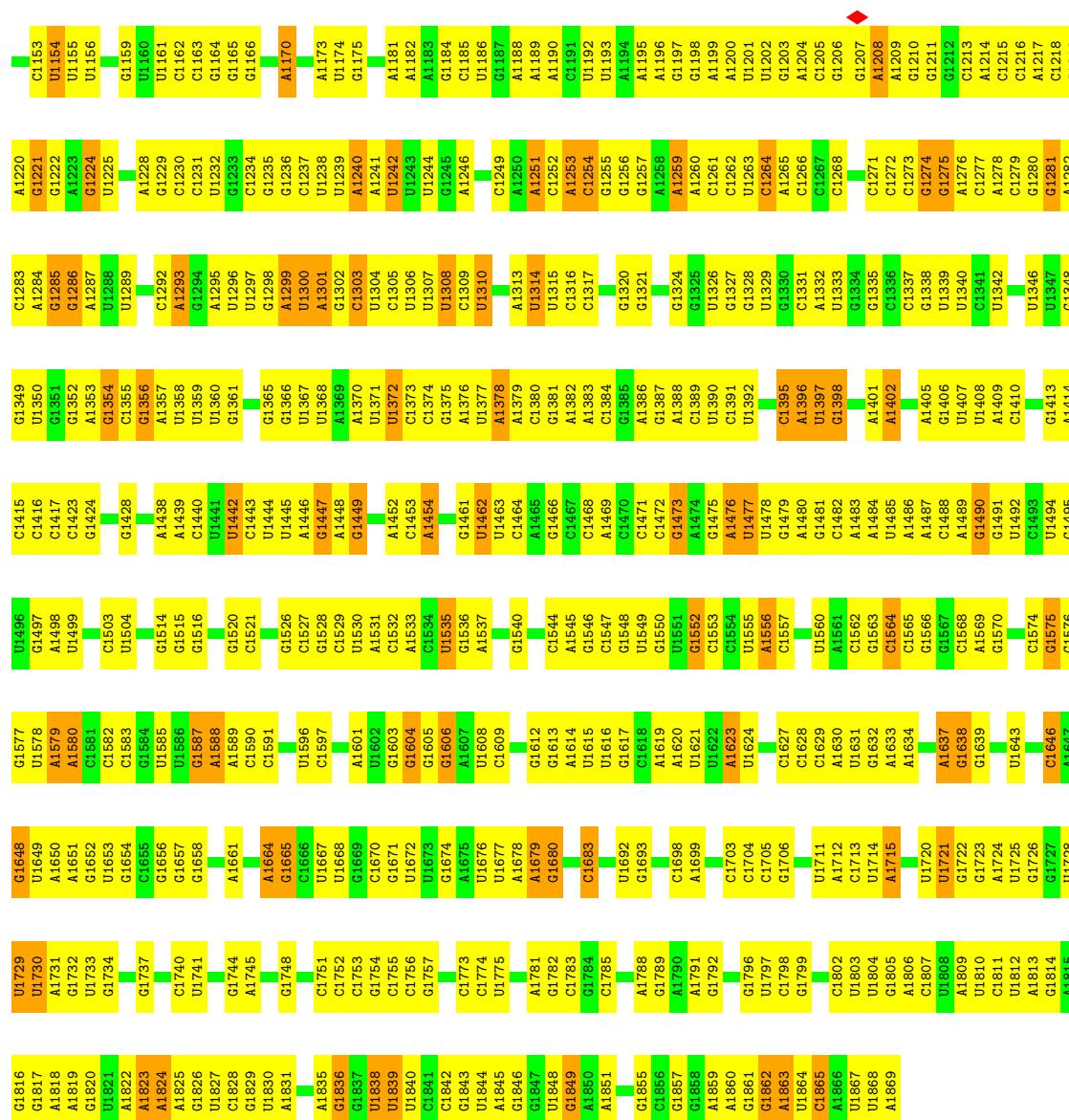
- Molecule 17: Large ribosomal subunit protein eL24



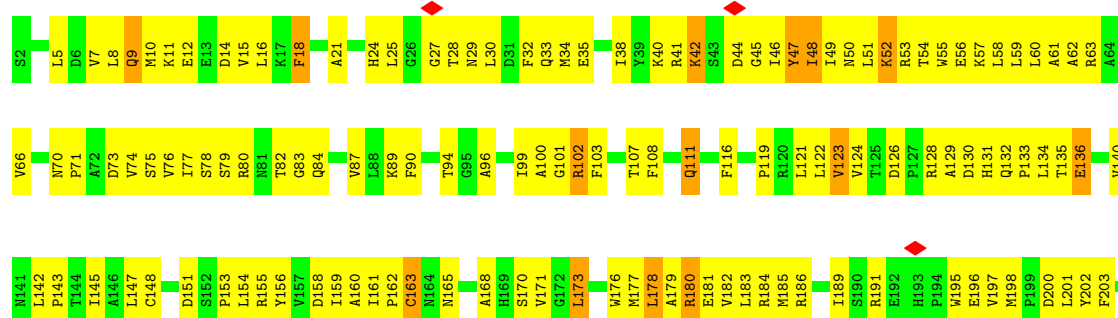
- Molecule 18: 18S rRNA

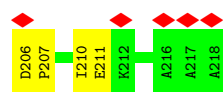
Response	Percentage
Yes	32%
No	56%
Don't know	11%



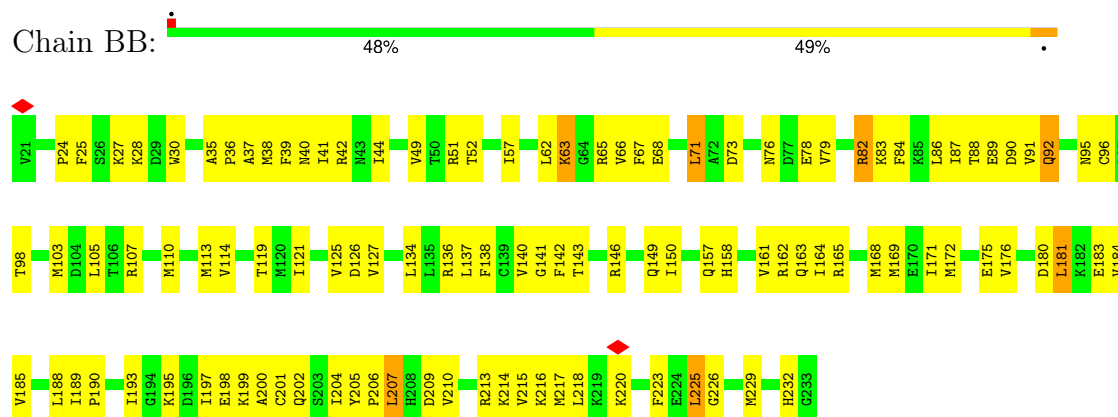


• Molecule 19: 40S\_SA\_C domain-containing protein





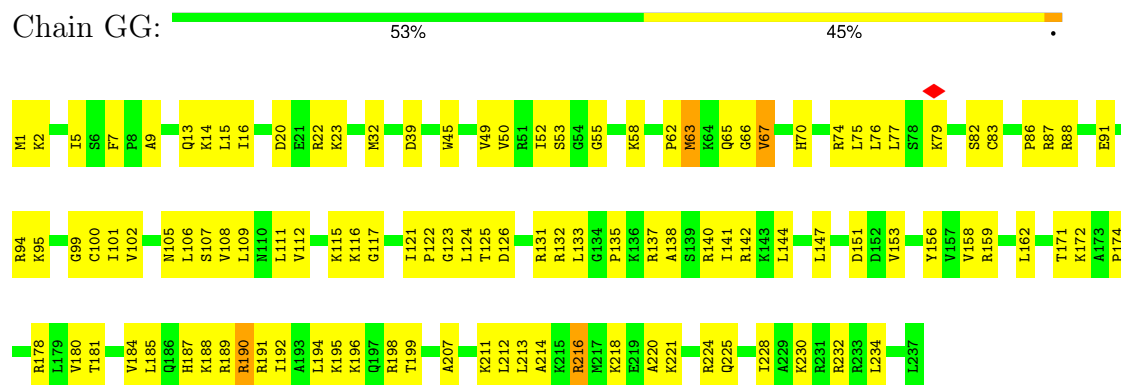
• Molecule 20: 40S ribosomal protein S3a



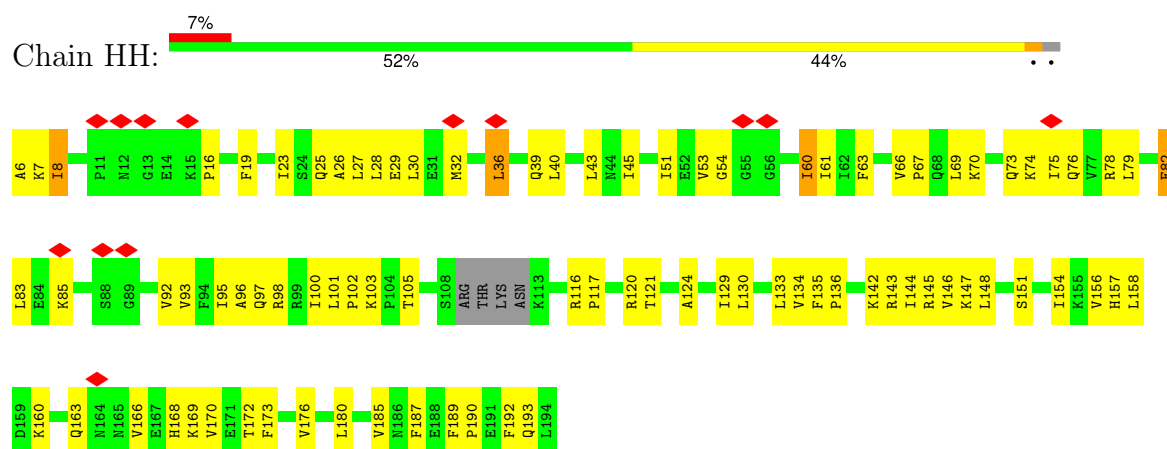
• Molecule 21: 40S ribosomal protein S2



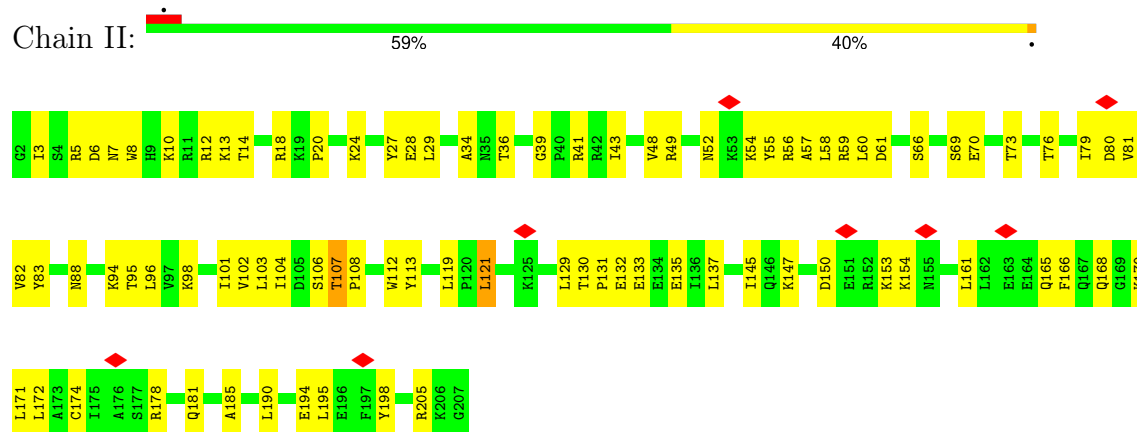
- Molecule 23: 40S ribosomal protein S6



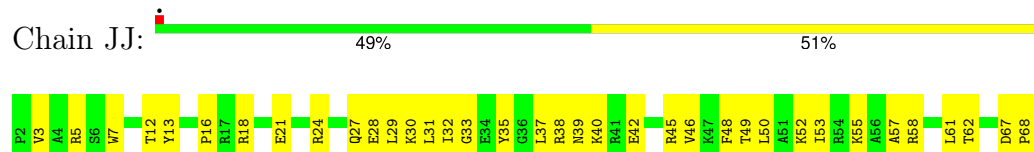
- Molecule 24: Small ribosomal subunit protein eS7

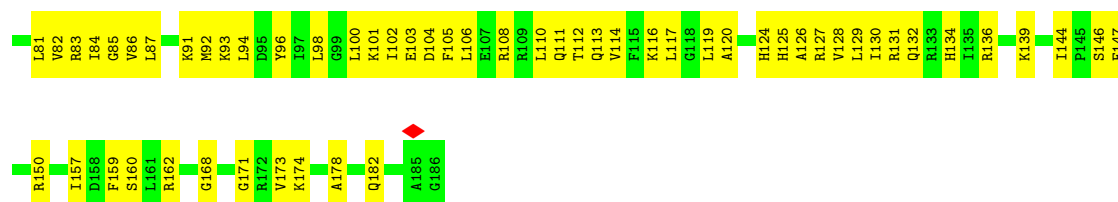


- Molecule 25: 40S ribosomal protein S8

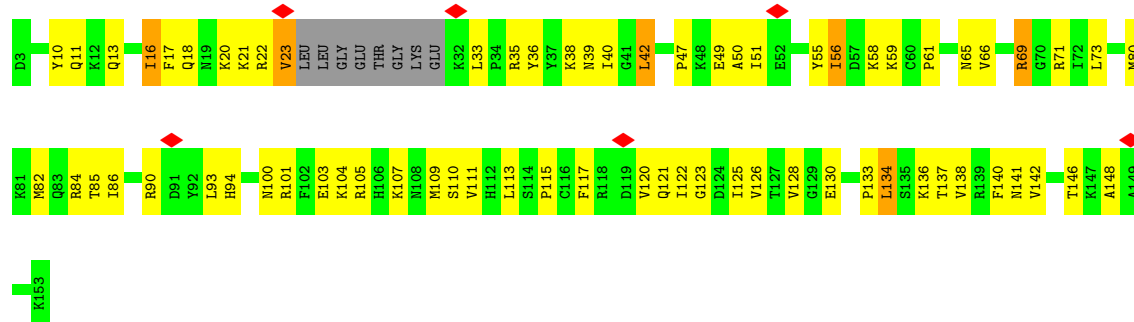


- Molecule 26: 40S ribosomal protein S9

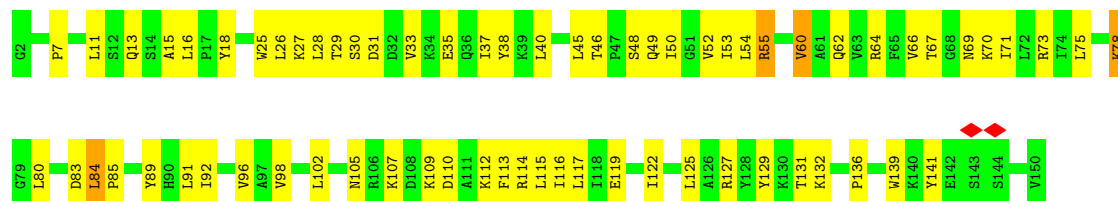




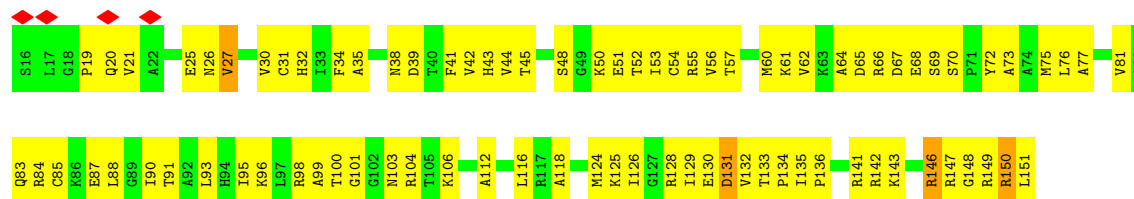
• Molecule 27: Small ribosomal subunit protein uS17



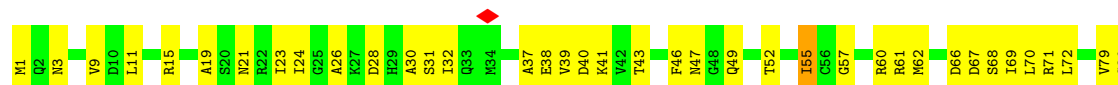
• Molecule 28: 40S ribosomal protein S13



• Molecule 29: Small ribosomal subunit protein uS11



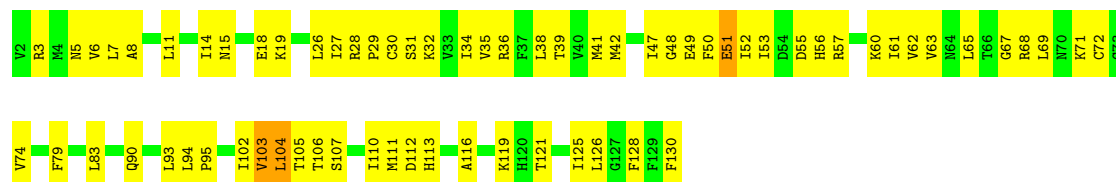
• Molecule 30: eS21





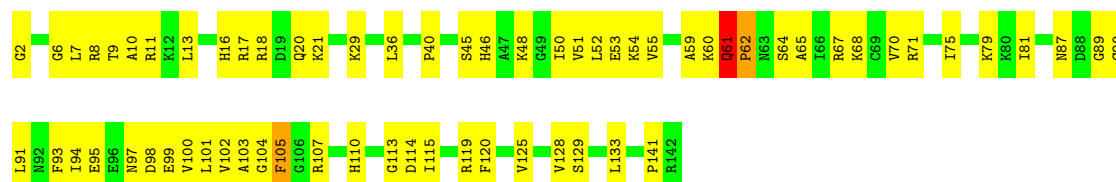
- Molecule 31: 40S ribosomal protein S15a

Chain WW: 47% 50%



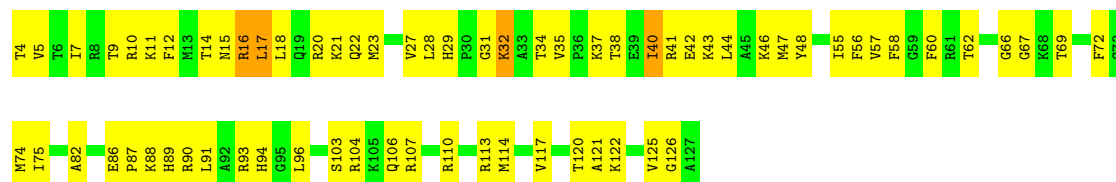
- Molecule 32: 40S ribosomal protein S23

Chain XX: 53% 45%



- Molecule 33: 40S ribosomal protein S24

Chain YY: 45% 52%



- Molecule 34: eS26

Chain aa: 56% 42%



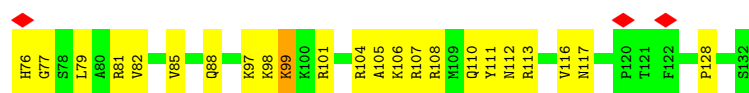
- Molecule 35: 40S ribosomal protein S27

Chain bb: 59% 39%

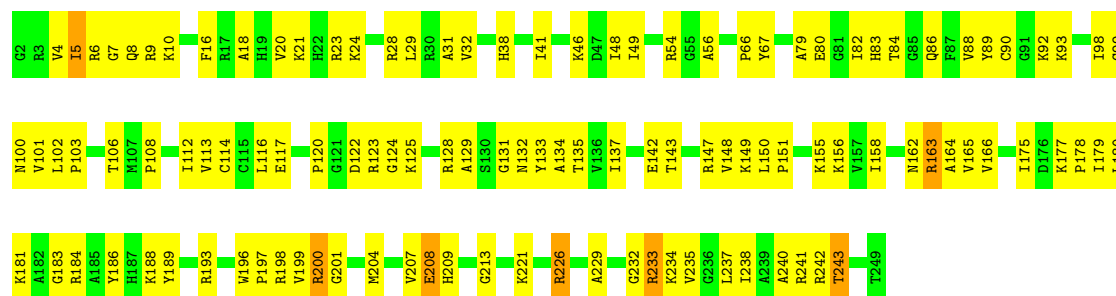




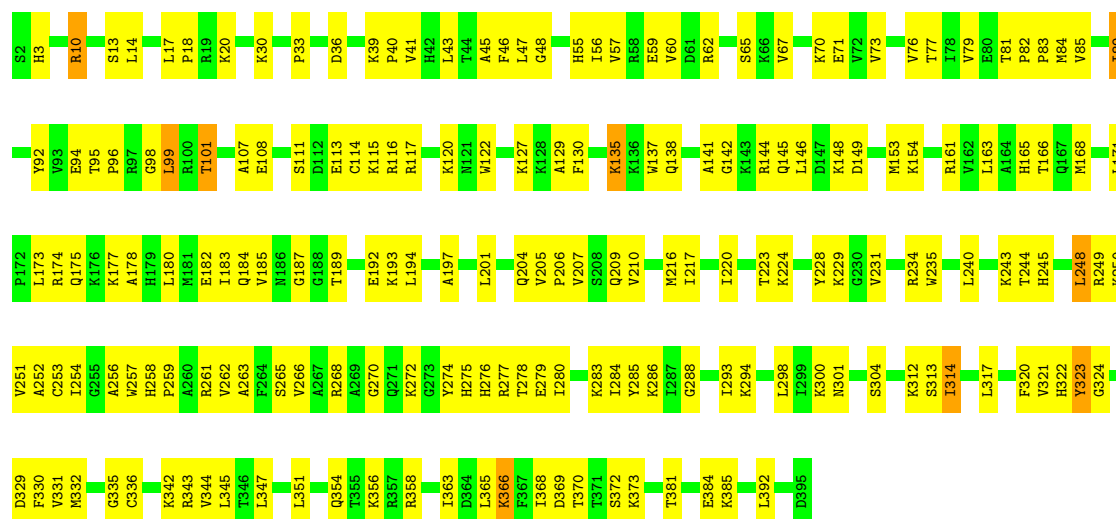
- Molecule 36: Small ribosomal subunit protein eS30



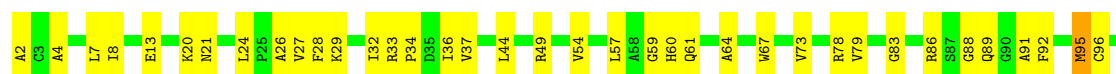
- Molecule 37: 60S ribosomal protein L8



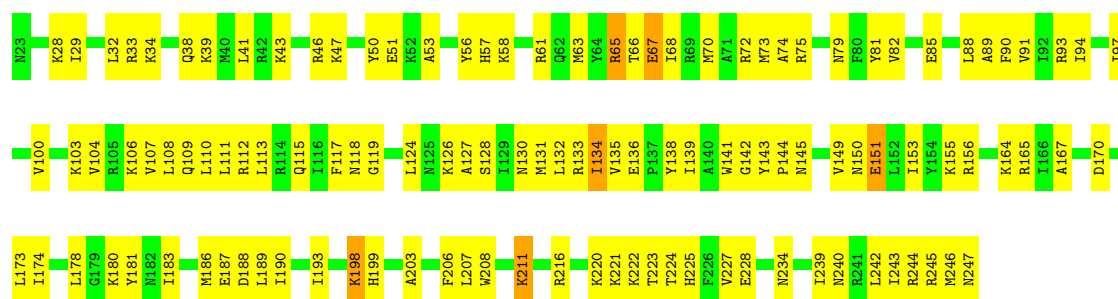
- Molecule 38: 60S ribosomal protein L3



- Molecule 39: 60S ribosomal protein L4

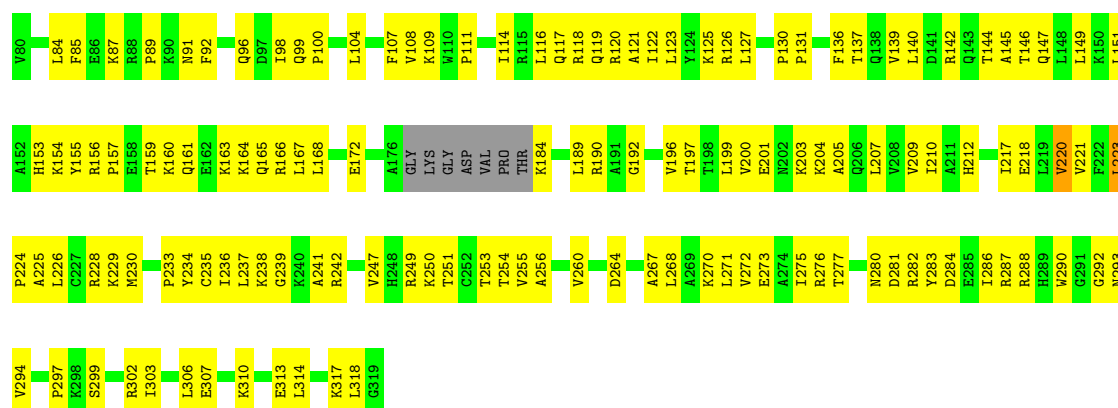






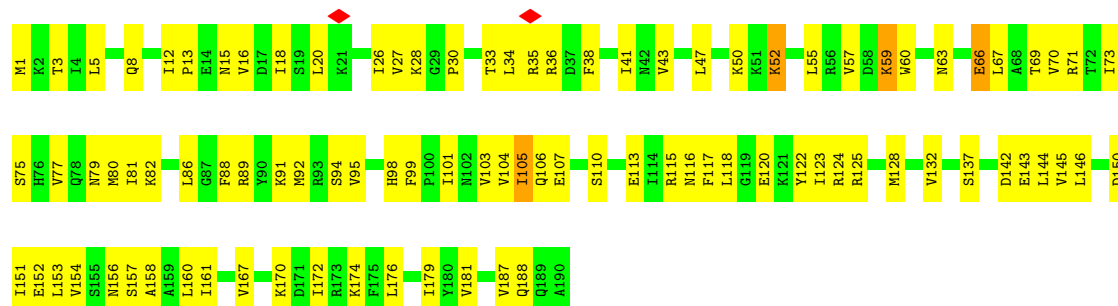
• Molecule 43: Large ribosomal subunit protein eL8

Chain G: 42% 55%



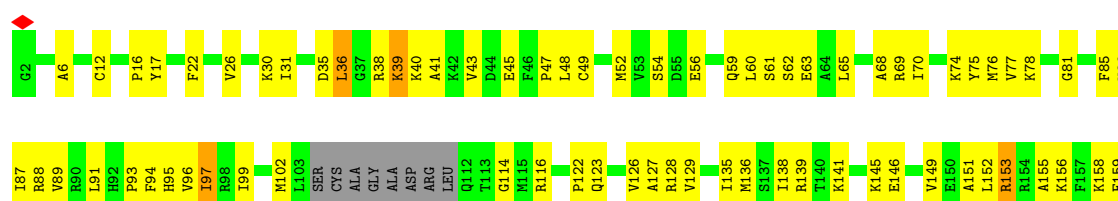
• Molecule 44: 60S ribosomal protein L9

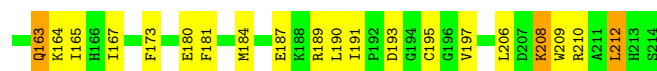
Chain H: 51% 47%



• Molecule 45: Ribosomal protein L10

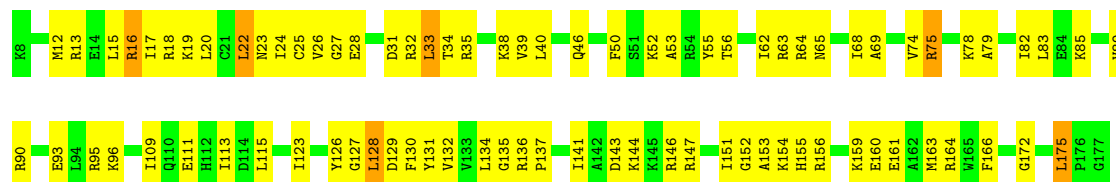
Chain I: 53% 40%





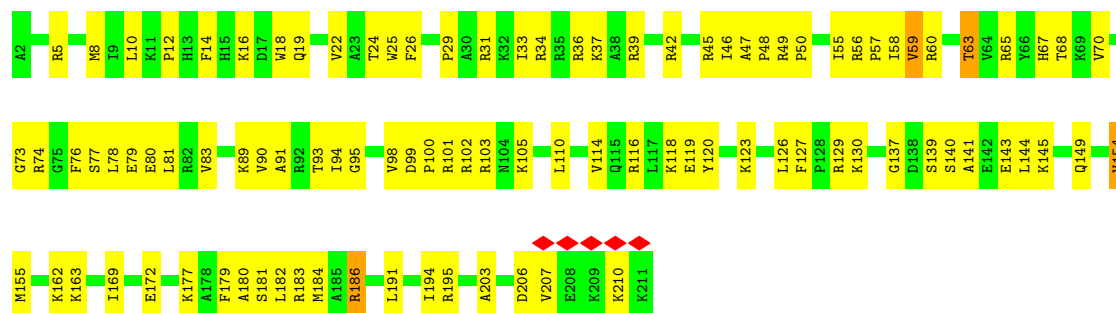
• Molecule 46: 60S ribosomal protein L11

Chain J: 52% 45%



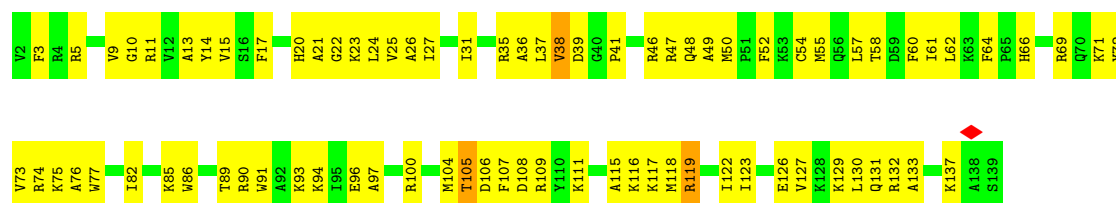
• Molecule 47: Large ribosomal subunit protein eL13

Chain L: 53% 45%



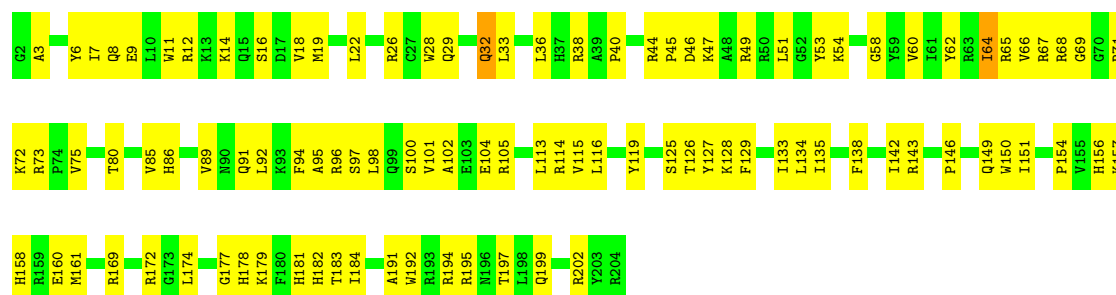
• Molecule 48: 60S ribosomal protein L14

Chain M: 42% 56%

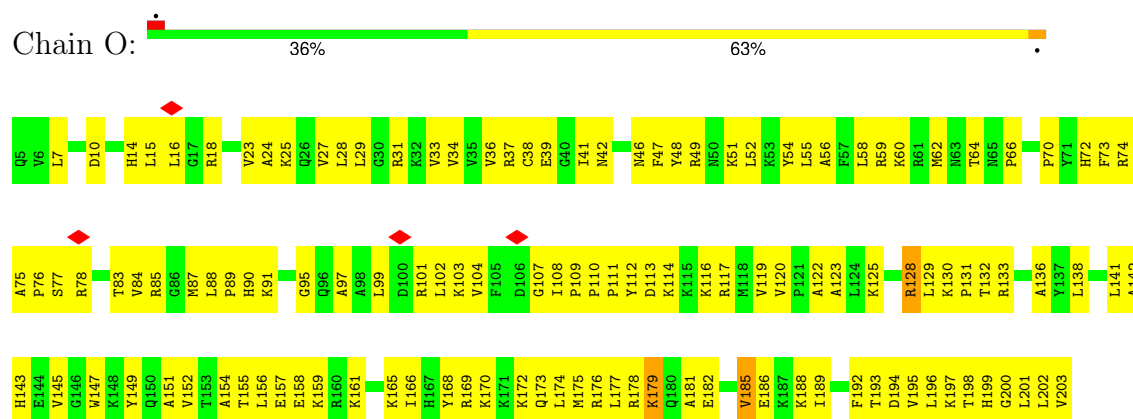


• Molecule 49: 60S ribosomal protein L15

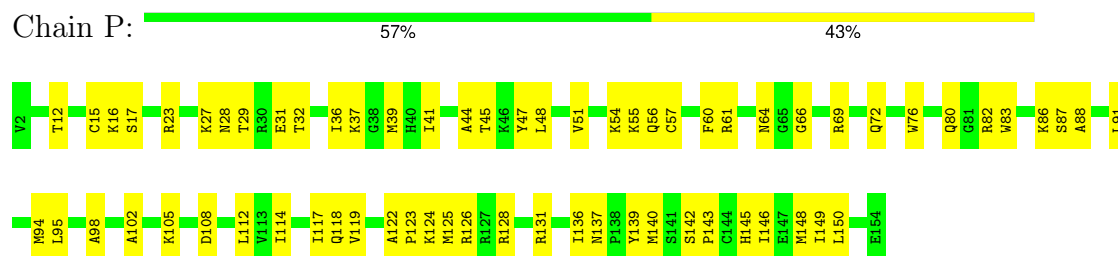
Chain N: 51% 48%



- Molecule 50: Large ribosomal subunit protein uL13



- Molecule 51: 60S ribosomal protein L17



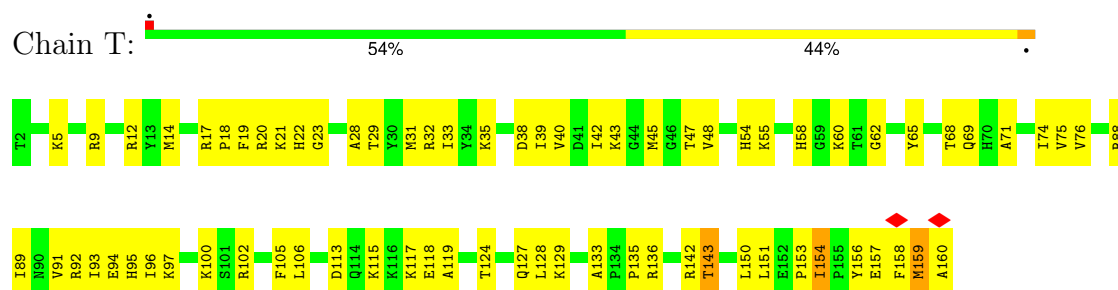
- Molecule 52: Large ribosomal subunit protein eL18



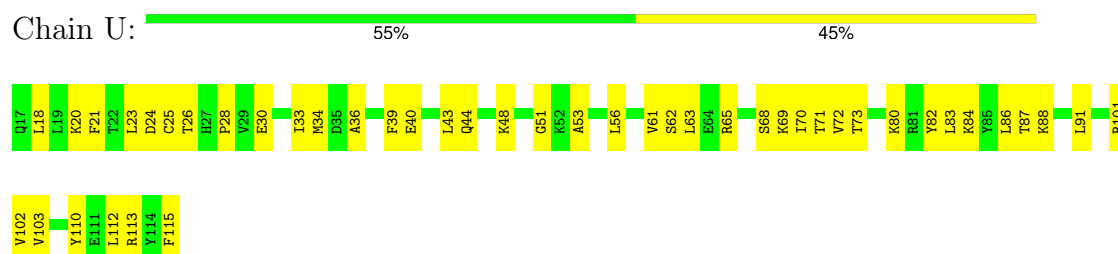
- Molecule 53: eL20



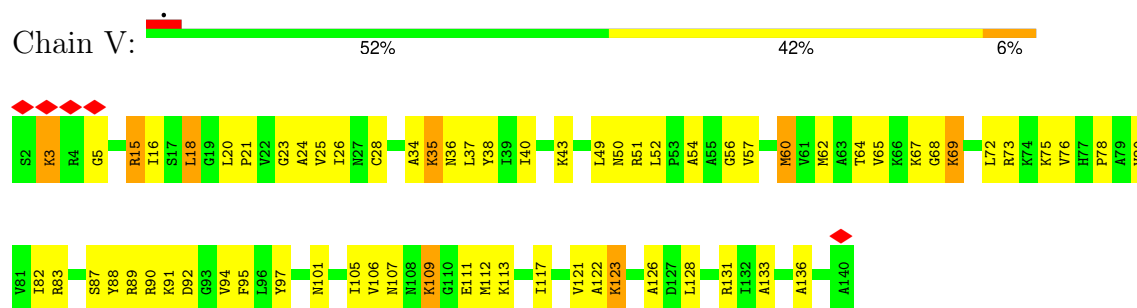
- Molecule 54: 60S ribosomal protein L21



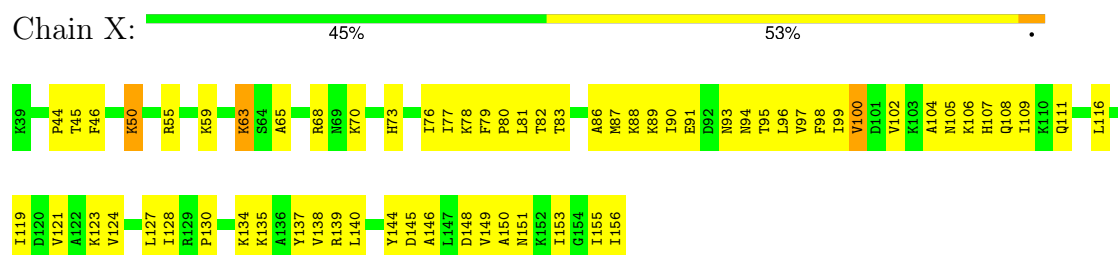
- Molecule 55: Large ribosomal subunit protein eL22



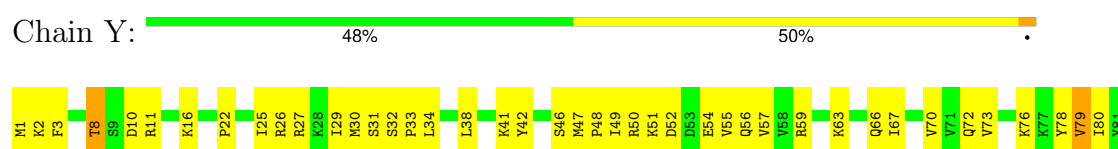
- Molecule 56: Large ribosomal subunit protein uL14



- Molecule 57: Large ribosomal subunit protein uL23



- Molecule 58: 60S ribosomal protein L26





- Molecule 59: 60S ribosomal protein L27

Chain Z: 46% 53%



- Molecule 60: 60S ribosomal protein L27a

Chain a: 51% 48%



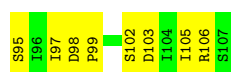
- Molecule 61: Large ribosomal subunit protein eL29

Chain b: 53% 37% 10%



- Molecule 62: 60S ribosomal protein L30

Chain c: 52% 46%

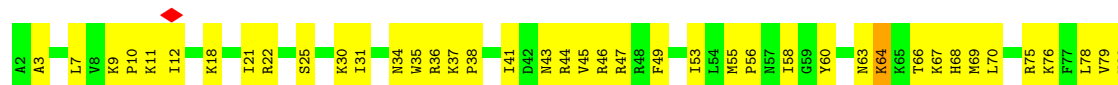


- Molecule 63: 60S ribosomal protein L31


Chain d: 50% 46%



- Molecule 64: Large ribosomal subunit protein eL32



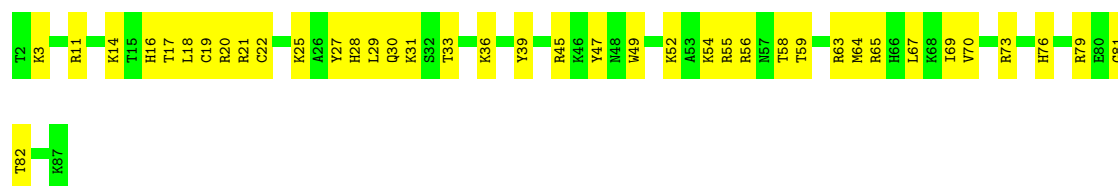


Chain i: 



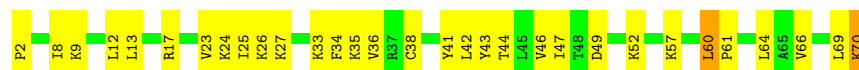
- Molecule 69: 60S ribosomal protein L37

Chain j: 



- Molecule 70: Large ribosomal subunit protein eL38

Chain k: 



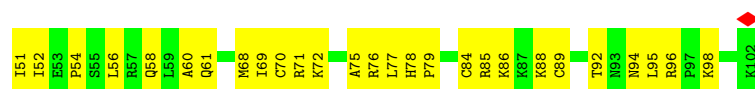
- Molecule 71: 60S ribosomal protein L39

Chain l: 



- Molecule 72: Large ribosomal subunit protein eL40

Chain m: 



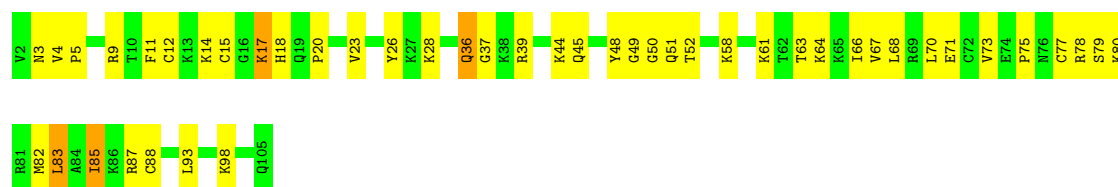
- Molecule 73: eL41

Chain n: 



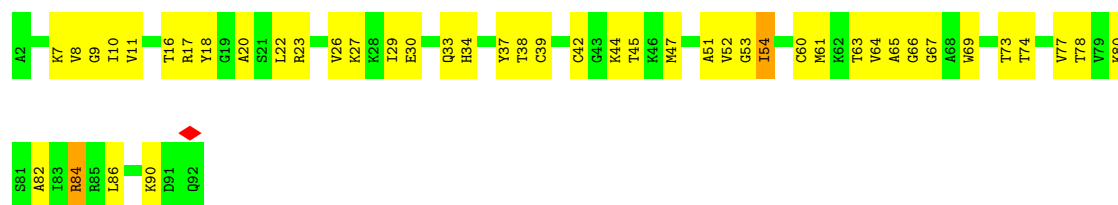
- Molecule 74: eL42

Chain o:  56% 40%



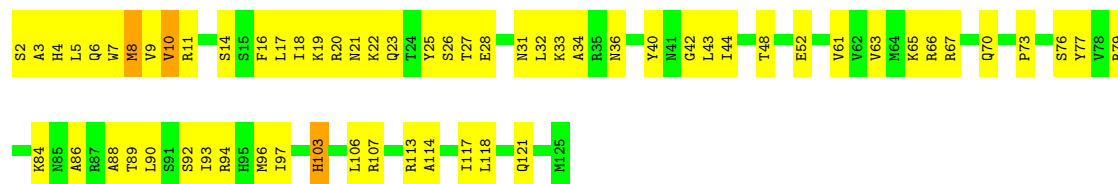
- Molecule 75: 60S ribosomal protein L37a

Chain p:  51% 47%




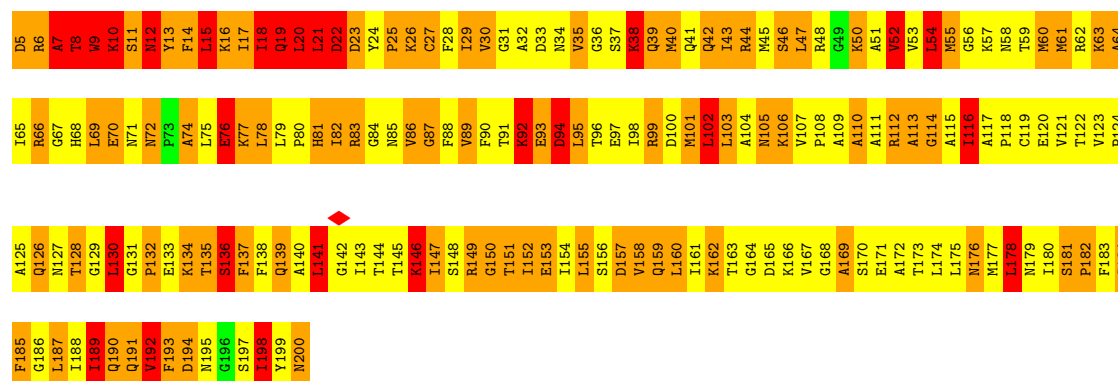
- Molecule 76: 60S ribosomal protein L28

Chain r:  50% 48%



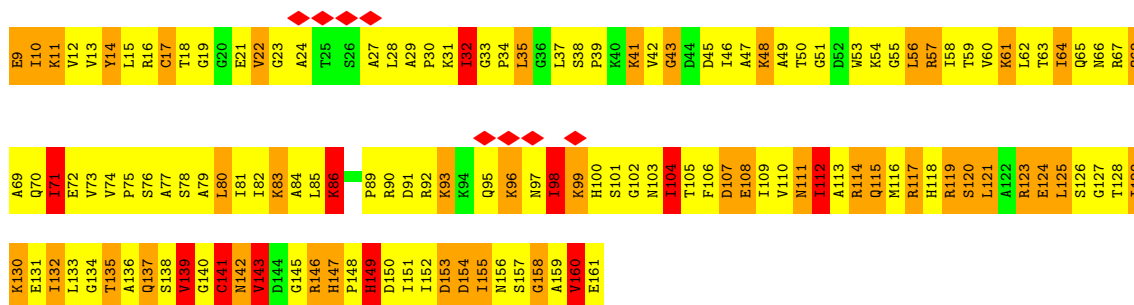
- Molecule 77: 60S acidic ribosomal protein P0

Chain s:  43% 42% 14%



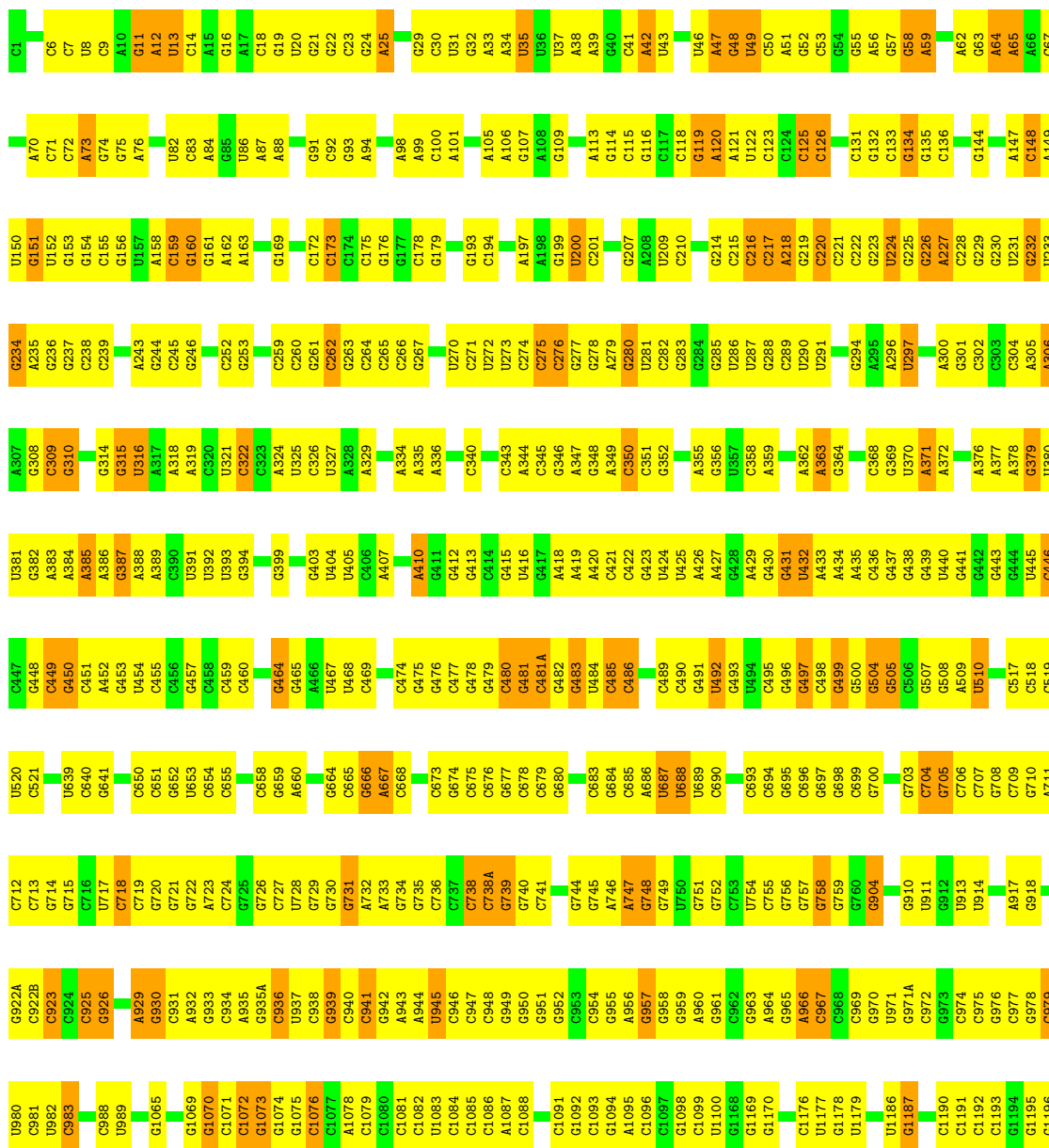
- Molecule 78: uL11

Chain t:  5% 8% 56% 29% 7%



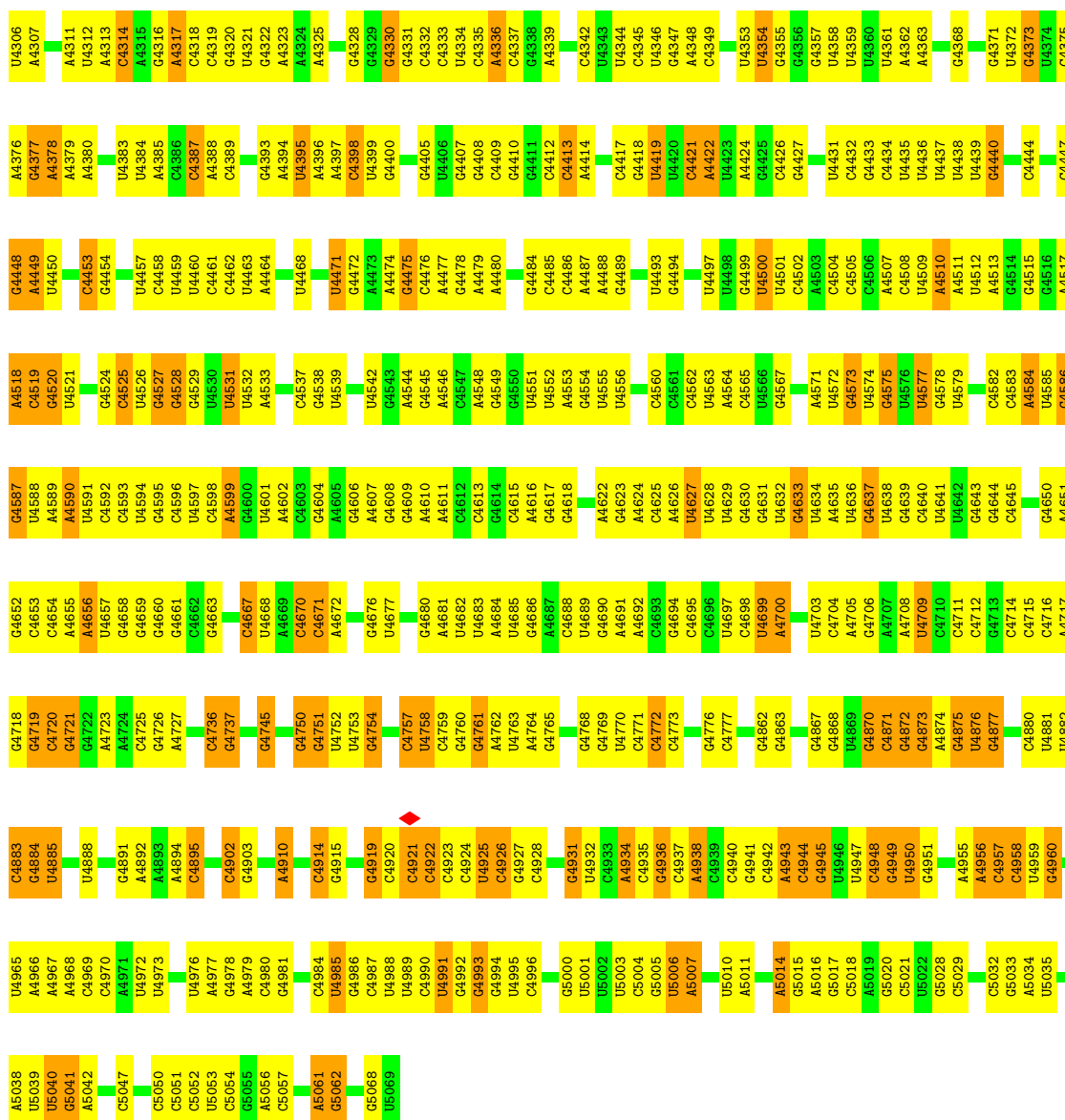
# Molecule 79: 28S rRNA

Chain 5:



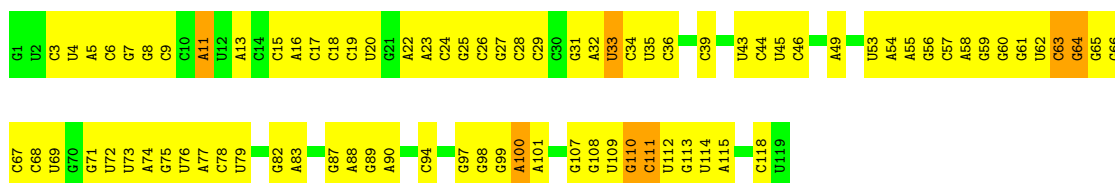
G2343	G2344	A2276	G2277	G2278	G2279	G2280	G2281	G2282	G2283	G2284	G2285	G2286	G2287	G2288	G2289	G2290	G2291	G2292	G2293	G2294	G2295	G2296	G2297	G2298	G2299	G2300	G2301	G2302	G2303	G2304	G2305	G2306	G2307	G2308	G2309	G2310	G2311	G2312	G2313	G2314	G2315	G2316	G2317	G2318	G2319	G2320	G2321	G2322	G2323	G2324	G2325	G2326	G2327	G2328	G2329	G2330	G2331	G2332	G2333	G2334	G2335	G2336	G2337	G2338	G2339	G2340	G2341	G2342	G2343	G2344	G2345	G2346	G2347	G2348	G2349	G2350	G2351	G2352	G2353	G2354	G2355	G2356	G2357	G2358	G2359	G2360	G2361	G2362	G2363	G2364	G2365	G2366	A2370	A2376	C2377	A2381	A2382	C2383	U2384	U2385	U2386	U2387	A2388	A2389	G2390	G2391	G2392	A2395	A2396	G2397	U2398	G2399	G2400	A2401	G2402	A2403	A2404	G2405	U2409	G2410	G2411	A2412	U2413																																																																																																																																																																																																																																																																																				
U1997	A1998	A1999	G2000	G2001	A2002	G2003	G2004	G2005	G2006	G2007	G2008	G2009	A1941	A1942	A1943	A1944	G1945	G1948	G1949	A1950	G1951	A2008	G2009	G2010	G2011	A2012	G2013	G2014	G2015	G2016	G2017	G2018	G2019	G2020	G2021	G2022	G2023	G2024	A2025	A2026	U2027	G2028	A2029	A2030	G2031	G2032	G2033	G2034	G2035	G2036	G2037	G2038	G2039	G2040	G2041	G2042	G2043	G2044	G2045	G2046	G2047	G2048	G2049	G2050	G2051	G2052	G2053	G2054	G2055	G2056	A2057	G2058	G2059	G2060	G2061	G2062	G2063	G2064	G2065	G2066	G2067	G2068	A2069																																																																																																																																																																																																																																																																																																																												
U2370	A2071	C2072	G2073	G2074	G2075	G2076	A2077	G2078	G2079	G2080	G2081	G2082	G2083	G2084	G2085	G2086	G2087	G2088	G2089	G2090	G2091	A2093	G2094	A2095	G2096	U2097	G2098	G2099	G2100	A2101	G2102	A2103	A2104	A2105	G2106	G2107	G2108	A2109	G2110	G2111	G2112	G2113	G2114	G2115	G2116	G2117	G2118	G2119	G2120	G2121	G2122	G2123	G2124	G2125	G2126	G2127	G2128	G2129	G2130	G2131	G2132	G2133	G2134	G2135	G2136	G2137	G2138	G2139	G2140	G2141	G2142	G2143	G2144	G2145	G2146	G2147	G2148	G2149	G2150	G2151	G2152	G2153	G2154	G2155	G2156	G2157	G2158	G2159	G2160	G2161	G2162	G2163	G2164	G2165	G2166	G2167	G2168	G2169	G2170	G2171	G2172	G2173	G2174	G2175	G2176	G2177	G2178	G2179	G2180	G2181	G2182	G2183	G2184	G2185	G2186	G2187	G2188	G2189	G2190	G2191	G2192	G2193	G2194	G2195	G2196	G2197	G2198	G2199	G2200	G2201	G2202	G2203	G2204	G2205	G2206	G2207	G2208	G2209	G2210	G2211	G2212	G2213	G2214	G2215	G2216	G2217	G2218	G2219	G2220	G2221	G2222	G2223	G2224	G2225	G2226	G2227	G2228	G2229	G2230	G2231	G2232	G2233	G2234	G2235	G2236	G2237	G2238	G2239	G2240	G2241	G2242	G2243	G2244	G2245	G2246	G2247	G2248	G2249	G2250	G2251	G2252	G2253	G2254	G2255	G2256	G2257	G2258	G2259	G2260	G2261	G2262	A2263	G2264	G2265	G2266	G2267	G2268	G2269	G2270	G2271	G2272	G2273	G2274	G2275																																																																																																																																																																																																			
C1789	U1790	A1791	A1792	A1793	A1794	A1795	A1796	A1797	A1798	A1799	A1800	A1801	A1802	A1803	A1804	A1805	A1806	A1807	A1808	A1809	A1810	A1811	A1812	A1813	A1814	A1815	A1816	A1817	A1818	A1819	A1820	A1821	A1822	A1823	A1824	A1825	A1826	A1827	A1828	A1829	A1830	A1831	A1832	A1833	A1834	A1835	A1836	A1837	A1838	A1839	A1840	A1841	A1842	A1843	A1844	A1845	A1846	A1847	A1848	A1849	A1850	A1851	A1852	A1853	A1854	A1855	A1856	A1857	A1858	A1859	A1860	A1861	A1862	A1863	A1864	A1865	A1866	A1867	A1868	A1869	A1870	A1871	A1872	A1873	A1874	A1875	A1876	A1877	A1878	A1879	A1880	A1881	A1882	A1883	A1884	A1885	A1886	A1887	A1888	A1889	A1890	A1891	A1892	A1893	A1894	A1895	A1896	A1897	A1898	A1899	A1900	A1901	A1902	A1903	A1904	A1905	A1906	A1907	A1908	A1909	A1910	A1911	A1912	A1913	A1914	A1915	A1916	A1917	A1918	A1919	A1920	A1921	A1922	A1923	A1924	A1925	A1926	A1927	A1928	A1929	A1930	A1931	A1932	A1933	A1934	A1935	A1936	A1937	A1938	A1939	A1940	A1941	A1942	A1943	A1944	A1945	A1946	A1947	A1948	A1949	A1950	A1951	A1952	A1953	A1954	A1955	A1956	A1957	A1958	A1959	A1960	A1961	A1962	A1963	A1964	A1965	A1966	A1967	A1968	A1969	A1970	A1971	A1972	A1973	A1974	A1975	A1976	A1977	A1978	A1979	A1980	A1981	A1982	A1983	A1984	A1985	A1986	A1987	A1988	A1989	A1990	A1991	A1992	A1993	A1994	A1995	A1996																																																																																																																																																																																																
U1726	U1727	U1728	U1729	U1730	U1731	U1732	U1733	U1734	U1735	U1736	U1737	U1738	U1739	U1740	U1741	U1742	U1743	U1744	U1745	U1746	U1747	U1748	U1749	U1750	U1751	U1752	U1753	U1754	U1755	U1756	U1757	U1758	U1759	U1760	U1761	U1762	U1763	U1764	U1765	U1766	U1767	U1768	U1769	U1770	U1771	U1772	U1773	U1774	U1775	U1776	U1777	U1778	U1779	U1780	U1781	U1782	U1783	U1784	U1785	U1786	U1787	U1788	U1789	U1790	U1791	U1792	U1793	U1794	U1795	U1796	U1797	U1798	U1799	U1800	U1801	U1802	U1803	U1804	U1805	U1806	U1807	U1808	U1809	U1810	U1811	U1812	U1813	U1814	U1815	U1816	U1817	U1818	U1819	U1820	U1821	U1822	U1823	U1824	U1825	U1826	U1827	U1828	U1829	U1830	U1831	U1832	U1833	U1834	U1835	U1836	U1837	U1838	U1839	U1840	U1841	U1842	U1843	U1844	U1845	U1846	U1847	U1848	U1849	U1850	U1851	U1852	U1853	U1854	U1855	U1856	U1857	U1858	U1859	U1860	U1861	U1862	U1863	U1864	U1865	U1866	U1867	U1868	U1869	U1870	U1871	U1872	U1873	U1874	U1875	U1876	U1877	U1878	U1879	U1880	U1881	U1882	U1883	U1884	U1885	U1886	U1887	U1888	U1889	U1890	U1891	U1892	U1893	U1894	U1895	U1896	U1897	U1898	U1899	U1900	U1901	U1902	U1903	U1904	U1905	U1906	U1907	U1908	U1909	U1910	U1911	U1912	U1913	U1914	U1915	U1916	U1917	U1918	U1919	U1920	U1921	U1922	U1923	U1924	U1925	U1926	U1927	U1928	U1929	U1930	U1931	U1932	U1933	U1934	U1935	U1936	U1937	U1938	U1939	U1940	U1941	U1942	U1943	U1944	U1945	U1946	U1947	U1948	U1949	U1950	U1951	U1952	U1953	U1954	U1955	U1956	U1957	U1958	U1959	U1960	U1961	U1962	U1963	U1964	U1965	U1966	U1967	U1968	U1969	U1970	U1971	U1972	U1973	U1974	U1975	U1976	U1977	U1978	U1979	U1980	U1981	U1982	U1983	U1984	U1985	U1986	U1987	U1988	U1989	U1990	U1991	U1992	U1993	U1994	U1995	U1996																																																																																																																																	
U1572	G1573	G1574	A1575	G1576	G1577	G1578	G1579	G1580	G1581	G1582	G1583	G1584	G1585	G1586	G1587	G1588	G1589	G1590	G1591	G1592	G1593	G1594	G1595	G1596	G1597	A1600	A1601	U1602	U1603	U1604	U1605	U1606	U1607	U1608	U1609	U1610	G1611	G1612	A1613	C1614	G1615	G1616	G1617	G1618	G1619	U1620	U1621	A1622	A1623	G1624	G1625	G1626	G1627	G1628	G1629	A1630	A1631	A1632	G1633	G1634	G1635	A1636	G1637	G1638	G1639	G1640	G1641	G1642	G1643	G1644	G1645	G1646	G1647	G1648	G1649	G1650	G1651	G1652	G1653	G1654	G1655	G1656	G1657	G1658	G1659	G1660	G1661	G1662	G1663	G1664	G1665	G1666	G1667	G1668	G1669	G1670	U1671	U1672	U1673	U1674	U1675	U1676	U1677	U1678	U1679	U1680	U1681	U1682	U1683	U1684	U1685	U1686	U1687	U1688	U1689	U1690	U1691	U1692	U1693	U1694	U1695	U1696	U1697	U1698	U1699	U1700	U1701	U1702	U1703	U1704	U1705	U1706	U1707	U1708	U1709	U1710	U1711	U1712	U1713	U1714	U1715	U1716	U1717	U1718	U1719	U1720	U1721	U1722	U1723	U1724	U1725	U1726	U1727	U1728	U1729	U1730	U1731	U1732	U1733	U1734	U1735	U1736	U1737	U1738	U1739	U1740	U1741	U1742	U1743	U1744	U1745	U1746	U1747	U1748	U1749	U1750	U1751	U1752	U1753	U1754	U1755	U1756	U1757	U1758	U1759	U1760	U1761	U1762	U1763	U1764	U1765	U1766	U1767	U1768	U1769	U1770	U1771	U1772	U1773	U1774	U1775	U1776	U1777	U1778	U1779	U1780	U1781	U1782	U1783	U1784	U1785	U1786	U1787	U1788	U1789	U1790	U1791	U1792	U1793	U1794	U1795	U1796	U1797	U1798	U1799	U1800	U1801	U1802	U1803	U1804	U1805	U1806	U1807	U1808	U1809	U1810	U1811	U1812	U1813	U1814	U1815	U1816	U1817	U1818	U1819	U1820	U1821	U1822	U1823	U1824	U1825	U1826	U1827	U1828	U1829	U1830	U1831	U1832	U1833	U1834	U1835	U1836	U1837	U1838	U1839	U1840	U1841	U1842	U1843	U1844	U1845	U1846	U1847	U1848	U1849	U1850	U1851	U1852	U1853	U1854	U1855	U1856	U1857	U1858	U1859	U1860	U1861	U1862	U1863	U1864	U1865	U1866	U1867	U1868	U1869	U1870	U1871	U1872	U1873	U1874	U1875	U1876	U1877	U1878	U1879	U1880	U1881	U1882	U1883	U1884	U1885	U1886	U1887	U1888	U1889	U1890	U1891	U1892	U1893	U1894	U1895	U1896	U1897	U1898	U1899	U1900	U1901	U1902	U1903	U1904	U1905	U1906	U1907	U1908	U1909	U1910	U1911	U1912	U1913	U1914	U1915	U1916	U1917	U1918	U1919	U1920	U1921	U1922	U1923	U1924	U1925	U1926	U1927	U1928	U1929	U1930	U1931	U1932	U1933	U1934	U1935	U1936	U1937	U1938	U1939	U1940	U1941	U1942	U1943	U1944	U1945	U1946	U1947	U1948	U1949	U1950	U1951	U1952	U1953	U1954	U1955	U1956	U1957	U1958	U1959	U1960	U1961	U1962	U1963	U1964	U1965	U1966	U1967	U1968	U1969	U1970	U1971	U1972	U1973





• Molecule 80: 5S rRNA

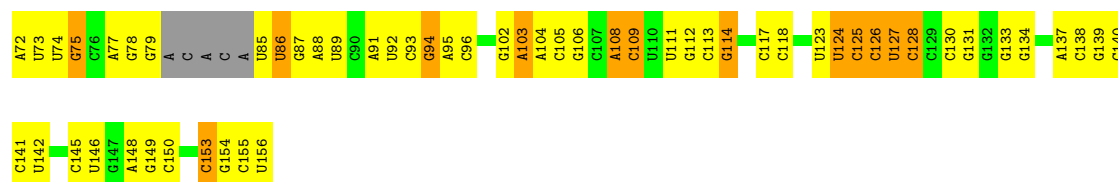
Chain 7: 30% 64% 6%



• Molecule 81: 5.8S rRNA

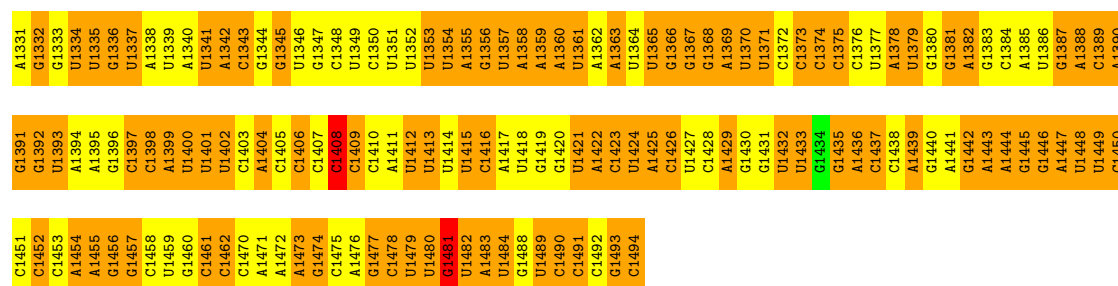
Chain 8: 29% 53% 14%





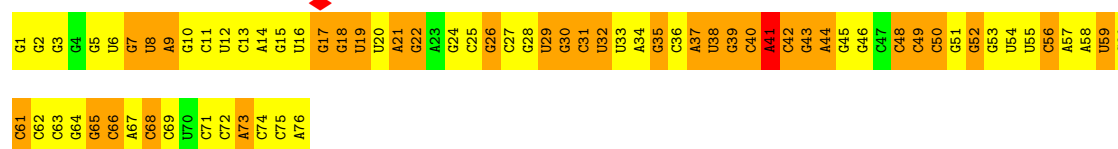
• Molecule 82: NediV IRES

Chain 1: 36% 62%



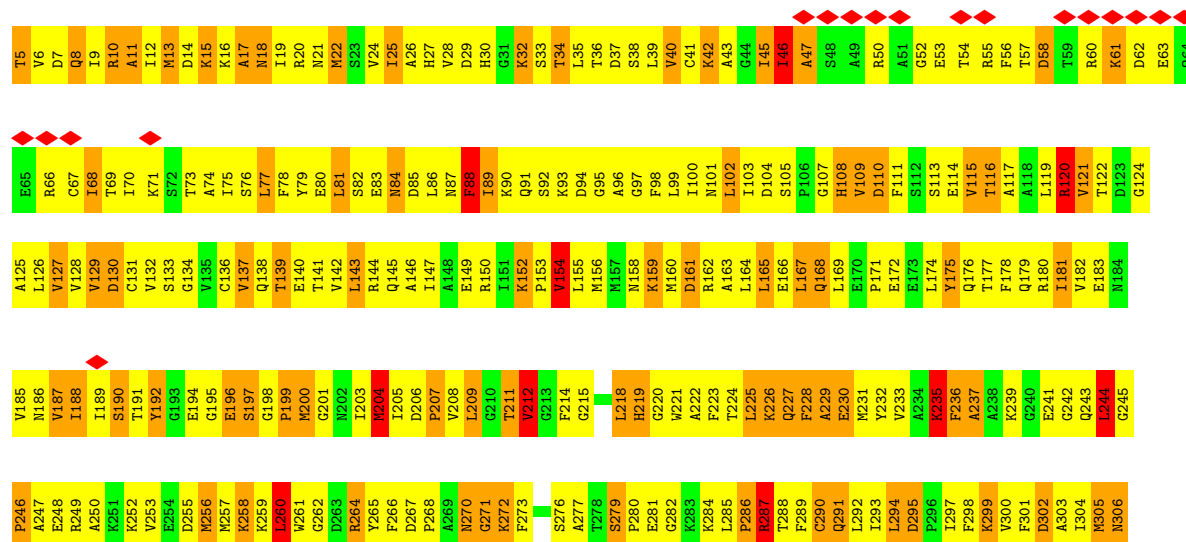
• Molecule 83: ala-tRNA

Chain PT: 5% 51% 42%



• Molecule 84: Elongation factor 2

Chain EF: 12% 55% 30%







## 4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	17367	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI POLARA 300	Depositor
Voltage (kV)	300	Depositor
Electron dose ( $e^-/\text{\AA}^2$ )	64	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	1.926	Depositor
Minimum map value	-0.872	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.105	Depositor
Recommended contour level	0.15	Depositor
Map size ( $\text{\AA}$ )	597.6, 597.6, 597.6	wwPDB
Map dimensions	360, 360, 360	wwPDB
Map angles ( $^\circ$ )	90.0, 90.0, 90.0	wwPDB
Pixel spacing ( $\text{\AA}$ )	1.66, 1.66, 1.66	Depositor

## 5 Model quality

### 5.1 Standard geometry

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# $ Z  > 5$	RMSZ	# $ Z  > 5$
1	DD	0.12	0/1796	0.31	0/2417
2	FF	0.10	0/1492	0.29	0/2005
3	KK	0.10	0/834	0.29	0/1125
4	MM	0.12	0/918	0.35	0/1233
5	PP	0.13	0/937	0.33	0/1250
6	QQ	0.10	0/1146	0.28	0/1534
7	RR	0.15	0/1082	0.42	0/1452
8	SS	0.11	0/1208	0.31	0/1618
9	TT	0.10	0/1115	0.33	0/1493
10	UU	0.11	0/805	0.31	0/1081
11	ZZ	0.10	0/604	0.27	0/810
12	cc	0.09	0/490	0.30	0/656
13	dd	0.12	0/470	0.36	0/623
14	ff	0.09	0/567	0.31	0/753
15	gg	0.10	0/2493	0.29	0/3394
16	R	0.09	0/1524	0.25	0/2013
17	W	0.10	0/743	0.26	0/984
18	9	0.10	0/40500	0.25	0/63092
19	AA	0.13	0/1747	0.38	1/2374 (0.0%)
20	BB	0.10	0/1756	0.27	0/2350
21	CC	0.11	0/1753	0.30	0/2369
22	EE	0.10	0/2118	0.30	0/2849
23	GG	0.10	0/1946	0.28	1/2590 (0.0%)
24	HH	0.10	0/1510	0.32	0/2022
25	II	0.10	0/1715	0.27	0/2287
26	JJ	0.10	0/1550	0.30	2/2069 (0.1%)
27	LL	0.10	0/1195	0.29	0/1597
28	NN	0.10	0/1226	0.27	0/1649
29	OO	0.10	0/1029	0.31	0/1380
30	VV	0.10	0/643	0.28	0/860
31	WW	0.12	0/1051	0.31	0/1406
32	XX	0.12	0/1116	0.34	0/1490

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
33	YY	0.09	0/1028	0.27	0/1366
34	aa	0.10	0/828	0.30	0/1109
35	bb	0.11	0/665	0.27	0/891
36	ee	0.09	0/462	0.27	0/607
37	A	0.13	0/1936	0.33	0/2596
38	B	0.10	0/3240	0.29	0/4339
39	C	0.10	0/2937	0.28	0/3946
40	D	0.11	0/2437	0.28	0/3264
41	E	0.11	0/1762	0.28	0/2362
42	F	0.10	0/1911	0.28	0/2549
43	G	0.10	0/1910	0.26	0/2569
44	H	0.12	0/1535	0.32	0/2063
45	I	0.12	0/1702	0.27	0/2272
46	J	0.10	0/1385	0.31	0/1852
47	L	0.10	0/1733	0.29	0/2316
48	M	0.12	0/1158	0.28	0/1547
49	N	0.10	0/1746	0.28	0/2338
50	O	0.12	0/1662	0.29	0/2222
51	P	0.09	0/1268	0.28	0/1700
52	Q	0.11	0/1539	0.29	0/2054
53	S	0.11	0/1501	0.31	0/2012
54	T	0.11	0/1326	0.29	0/1770
55	U	0.10	0/823	0.30	0/1104
56	V	0.11	0/1048	0.29	0/1402
57	X	0.09	0/984	0.24	0/1323
58	Y	0.09	0/1132	0.27	0/1504
59	Z	0.11	0/1130	0.28	0/1507
60	a	0.10	0/1191	0.28	0/1590
61	b	0.09	0/861	0.26	0/1138
62	c	0.10	0/771	0.26	0/1034
63	d	0.12	0/903	0.28	0/1216
64	e	0.09	0/1071	0.27	0/1429
65	f	0.12	0/895	0.29	0/1198
66	g	0.10	0/916	0.31	0/1220
67	h	0.09	0/1021	0.23	0/1348
68	i	0.11	0/841	0.30	0/1112
69	j	0.10	0/720	0.32	0/952
70	k	0.09	0/575	0.25	0/761
71	l	0.10	0/459	0.25	0/608
72	m	0.11	0/435	0.29	0/575
73	n	0.08	0/240	0.19	0/305
74	o	0.10	0/864	0.27	0/1140
75	p	0.08	0/718	0.26	0/953

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
76	r	0.10	0/1010	0.31	0/1354
77	s	0.69	0/1530	1.06	20/2064 (1.0%)
78	t	0.58	0/1174	0.99	8/1582 (0.5%)
79	5	0.12	8/84945 (0.0%)	0.26	0/132460
80	7	0.08	0/2836	0.19	0/4421
81	8	0.09	0/3581	0.23	0/5577
82	1	0.38	0/3639	0.76	2/5659 (0.0%)
83	PT	0.36	0/1811	0.72	2/2820 (0.1%)
84	EF	1.17	14/6767 (0.2%)	1.32	116/9139 (1.3%)
All	All	0.24	22/239641 (0.0%)	0.37	152/351064 (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
32	XX	0	1

All (22) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
84	EF	709	LEU	CA-C	-7.22	1.44	1.53
84	EF	708	THR	CA-C	-7.07	1.44	1.53
84	EF	595	SER	CA-C	-6.72	1.45	1.53
79	5	904	G	C1'-N9	-6.59	1.38	1.48
84	EF	836	ALA	C-O	-6.39	1.16	1.24
79	5	2097	U	C1'-N1	6.14	1.56	1.47
79	5	4876	U	C1'-N1	6.01	1.56	1.47
84	EF	706	ASP	CA-C	-5.76	1.45	1.52
84	EF	674	GLU	CA-C	-5.74	1.45	1.52
79	5	2107	C	C1'-N1	5.68	1.56	1.48
79	5	4914	C	C1'-N1	5.58	1.56	1.48
84	EF	730	TYR	CA-C	-5.57	1.46	1.52
79	5	148	C	C1'-N1	5.57	1.56	1.48
84	EF	110	ASP	CA-C	-5.50	1.45	1.52
84	EF	526	ARG	CA-C	-5.49	1.46	1.52
84	EF	597	ASN	N-CA	-5.49	1.39	1.46
84	EF	521	VAL	CA-C	-5.31	1.46	1.52
84	EF	545	ILE	CA-C	-5.22	1.46	1.52
79	5	1989	C	C1'-N1	5.21	1.56	1.48
84	EF	801	ARG	CA-C	-5.15	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
79	5	4136	C	C1'-N1	5.15	1.56	1.48
84	EF	600	ASN	N-CA	-5.01	1.39	1.46

All (152) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
84	EF	841	ARG	N-CA-C	-13.82	94.53	111.11
84	EF	617	ILE	N-CA-C	-13.04	97.32	110.62
84	EF	552	LEU	N-CA-C	-12.65	97.49	111.28
84	EF	371	LEU	N-CA-C	-11.42	98.60	112.54
84	EF	456	ARG	N-CA-C	-10.94	97.98	111.11
84	EF	386	LYS	N-CA-C	-10.55	99.78	111.28
84	EF	439	LYS	N-CA-C	-10.40	97.96	110.44
84	EF	334	PRO	N-CA-C	-9.97	100.20	113.65
77	s	20	LEU	N-CA-C	-9.82	99.18	111.75
84	EF	348	ASP	N-CA-C	-9.61	99.58	111.11
84	EF	620	GLY	N-CA-C	-9.51	103.38	114.69
84	EF	199	PRO	N-CA-C	-9.43	99.70	113.75
84	EF	559	LYS	N-CA-C	-9.30	101.12	111.07
84	EF	800	LEU	N-CA-C	-9.29	99.96	111.11
77	s	9	TRP	N-CA-C	-9.10	91.42	110.80
78	t	108	GLU	N-CA-C	-8.97	100.47	111.33
84	EF	40	VAL	N-CA-C	-8.79	101.42	111.00
78	t	107	ASP	N-CA-C	-8.58	101.13	111.69
84	EF	718	GLY	N-CA-C	-8.56	104.42	113.58
77	s	139	GLN	N-CA-C	-8.46	101.98	111.71
84	EF	490	HIS	N-CA-C	-8.36	98.11	110.06
83	PT	41	A	C1'-C2'-O2'	8.26	120.78	108.40
84	EF	355	THR	N-CA-C	-8.25	101.98	110.97
78	t	139	VAL	N-CA-C	-8.17	100.61	112.04
84	EF	805	GLY	N-CA-C	-8.06	102.48	114.90
84	EF	733	VAL	N-CA-C	-8.04	101.45	110.62
77	s	198	ILE	N-CA-C	-7.95	98.20	108.93
77	s	66	ARG	N-CA-C	-7.90	101.63	111.75
77	s	92	LYS	N-CA-C	-7.86	104.22	113.88
84	EF	851	ASP	N-CA-C	-7.83	102.74	111.28
84	EF	751	CYS	N-CA-C	-7.79	101.12	108.13
84	EF	759	ILE	N-CA-C	-7.72	101.81	110.62
84	EF	310	GLU	N-CA-C	-7.55	102.99	111.07
84	EF	850	LEU	N-CA-C	-7.51	104.00	113.01
84	EF	830	ARG	N-CA-C	-7.46	103.09	113.45
84	EF	753	GLU	N-CA-C	-7.42	102.20	111.11

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
84	EF	247	ALA	N-CA-C	-7.41	103.19	111.71
84	EF	674	GLU	N-CA-C	-7.40	102.23	111.11
84	EF	840	LYS	N-CA-C	-7.37	104.41	113.41
84	EF	181	ILE	N-CA-C	-7.36	102.23	110.62
84	EF	229	ALA	N-CA-C	-7.32	102.09	111.02
84	EF	175	TYR	N-CA-C	-7.31	102.34	111.11
84	EF	457	TYR	N-CA-C	-7.25	96.74	108.41
84	EF	719	GLY	N-CA-C	-7.25	103.74	113.24
78	t	32	ILE	N-CA-C	-7.22	102.78	113.39
84	EF	211	THR	N-CA-C	-7.09	103.60	111.82
84	EF	688	LYS	N-CA-C	-7.06	103.67	111.36
84	EF	542	GLY	N-CA-C	-7.05	105.99	115.36
84	EF	748	GLU	N-CA-C	-6.99	101.52	110.19
84	EF	524	LEU	N-CA-C	-6.99	103.66	111.28
84	EF	694	GLU	N-CA-C	-6.98	104.79	113.38
84	EF	440	GLU	N-CA-C	6.96	119.65	109.07
84	EF	450	THR	N-CA-C	-6.90	98.79	109.76
84	EF	521	VAL	CB-CA-C	-6.83	103.07	112.02
84	EF	84	ASN	N-CA-C	-6.70	104.21	112.38
84	EF	586	GLU	N-CA-C	-6.63	99.67	109.81
84	EF	61	LYS	N-CA-C	-6.63	104.13	111.82
77	s	12	ASN	N-CA-C	-6.57	96.80	110.80
78	t	153	ASP	N-CA-C	-6.55	104.06	111.07
84	EF	139	THR	N-CA-C	-6.55	104.14	111.28
84	EF	188	ILE	N-CA-C	-6.52	102.17	111.17
84	EF	227	GLN	N-CA-C	-6.51	104.10	111.07
84	EF	526	ARG	N-CA-C	-6.50	103.88	110.97
84	EF	342	ARG	N-CA-C	-6.45	103.53	111.33
84	EF	724	THR	N-CA-C	-6.42	104.37	111.82
84	EF	406	ASP	N-CA-C	-6.40	104.95	112.89
83	PT	41	A	C3'-C2'-O2'	6.37	120.26	110.70
84	EF	294	LEU	N-CA-C	6.37	120.91	111.04
84	EF	836	ALA	N-CA-C	-6.34	104.05	110.97
84	EF	775	GLN	N-CA-C	-6.32	102.86	110.44
84	EF	344	LEU	CA-C-N	-6.26	113.22	119.92
84	EF	344	LEU	C-N-CA	-6.26	113.22	119.92
84	EF	435	THR	N-CA-C	-6.25	99.39	109.58
84	EF	540	GLU	N-CA-C	-6.25	103.04	111.54
77	s	52	VAL	N-CA-C	6.20	117.52	108.53
84	EF	212	VAL	N-CA-CB	6.18	117.27	110.53
77	s	102	LEU	N-CA-C	-6.16	104.67	111.82
84	EF	291	GLN	N-CA-C	-6.15	105.62	112.57

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
84	EF	565	HIS	N-CA-C	-6.04	104.76	111.71
84	EF	383	MET	N-CA-C	-6.04	104.77	111.71
84	EF	88	PHE	N-CA-C	-6.00	104.06	111.75
84	EF	204	MET	N-CA-C	6.00	118.04	110.24
84	EF	508	ALA	N-CA-C	-5.96	101.66	110.48
77	s	135	THR	N-CA-C	-5.94	106.38	113.21
84	EF	161	ASP	N-CA-C	-5.91	104.92	111.71
84	EF	693	CYS	N-CA-C	-5.90	98.24	110.80
84	EF	495	ARG	N-CA-C	-5.89	101.69	110.23
84	EF	720	GLN	N-CA-C	-5.87	106.35	112.93
84	EF	219	HIS	N-CA-C	-5.84	104.99	111.71
84	EF	558	LEU	N-CA-C	-5.80	105.09	111.82
77	s	18	ILE	N-CA-C	-5.77	97.34	109.34
84	EF	708	THR	N-CA-C	-5.77	100.63	108.24
77	s	150	GLY	N-CA-C	-5.75	99.55	113.18
84	EF	143	LEU	N-CA-C	-5.75	104.21	111.11
78	t	112	ILE	N-CA-C	-5.75	104.73	110.30
84	EF	120	ARG	N-CA-C	-5.75	105.10	111.71
84	EF	624	ALA	N-CA-C	-5.74	104.39	111.33
84	EF	326	GLU	N-CA-C	-5.73	105.12	111.71
84	EF	196	GLU	N-CA-C	-5.71	103.78	111.54
78	t	43	GLY	N-CA-C	-5.68	105.92	112.73
84	EF	448	GLN	N-CA-C	-5.67	104.46	111.33
84	EF	543	GLU	N-CA-C	-5.65	99.92	108.67
77	s	178	LEU	N-CA-C	-5.63	107.00	112.97
84	EF	370	GLU	N-CA-C	-5.61	106.20	113.16
84	EF	192	TYR	N-CA-C	-5.61	100.67	109.25
77	s	136	SER	N-CA-C	-5.60	104.58	111.75
78	t	149	HIS	N-CA-C	-5.57	105.29	111.36
84	EF	41	CYS	N-CA-C	-5.56	104.91	110.97
84	EF	34	THR	N-CA-C	-5.55	105.31	111.36
23	GG	67	VAL	N-CA-C	-5.54	108.45	113.71
84	EF	132	VAL	N-CA-C	5.52	116.29	110.72
84	EF	796	PHE	N-CA-C	-5.50	105.19	111.07
84	EF	725	ALA	N-CA-C	-5.48	104.95	111.69
19	AA	42	LYS	CB-CA-C	-5.47	110.28	116.63
84	EF	405	SER	N-CA-C	-5.43	105.92	112.54
77	s	131	GLY	N-CA-C	-5.43	101.27	112.34
84	EF	10	ARG	N-CA-C	-5.43	105.76	112.38
77	s	87	GLY	N-CA-C	5.41	117.89	110.69
84	EF	731	ALA	N-CA-C	-5.41	105.49	111.71
77	s	11	SER	N-CA-C	-5.41	105.55	111.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
84	EF	287	ARG	N-CA-C	5.40	116.19	108.74
84	EF	209	LEU	N-CA-C	-5.34	105.10	111.03
84	EF	68	ILE	CB-CA-C	-5.32	103.91	111.40
84	EF	641	TRP	N-CA-C	-5.29	99.52	110.80
84	EF	528	ALA	N-CA-C	-5.29	105.60	111.36
84	EF	212	VAL	N-CA-C	-5.27	101.94	108.89
84	EF	627	GLU	N-CA-C	-5.24	102.44	110.30
26	JJ	168	GLY	CA-C-N	5.22	128.62	120.68
26	JJ	168	GLY	C-N-CA	5.22	128.62	120.68
82	1	1481	G	C4'-C3'-O3'	-5.22	105.17	113.00
84	EF	134	GLY	N-CA-C	-5.21	108.28	114.48
84	EF	109	VAL	N-CA-C	-5.20	105.32	110.62
77	s	22	ASP	N-CA-C	-5.19	105.24	112.45
84	EF	622	VAL	CB-CA-C	-5.17	104.02	112.03
84	EF	480	VAL	N-CA-C	5.16	116.10	107.18
84	EF	492	HIS	N-CA-C	-5.13	101.28	109.07
84	EF	534	VAL	N-CA-C	5.12	119.98	109.34
84	EF	783	VAL	N-CA-C	-5.10	102.27	109.21
84	EF	11	ALA	N-CA-C	-5.09	104.67	111.24
82	1	1408	C	C2'-C3'-O3'	5.08	117.13	109.50
77	s	7	ALA	N-CA-C	-5.08	99.98	110.80
84	EF	385	ILE	N-CA-C	-5.08	104.63	111.44
84	EF	588	ASN	N-CA-C	-5.06	105.68	111.14
84	EF	333	LYS	CA-C-N	-5.05	113.72	119.28
84	EF	333	LYS	C-N-CA	-5.05	113.72	119.28
84	EF	130	ASP	N-CA-C	-5.05	103.16	110.64
84	EF	491	ALA	N-CA-C	5.05	117.99	110.52
77	s	64	ALA	N-CA-C	-5.04	106.96	113.01
84	EF	454	MET	N-CA-C	-5.03	105.93	111.71
84	EF	767	ARG	N-CA-C	-5.03	104.96	111.74
84	EF	727	ARG	N-CA-C	-5.02	105.25	111.33
84	EF	616	ASP	N-CA-C	-5.02	105.47	112.45

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
32	XX	61	GLN	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	DD	1768	0	1866	93	0
2	FF	1471	0	1522	91	0
3	KK	810	0	836	36	0
4	MM	908	0	939	64	0
5	PP	921	0	964	61	0
6	QQ	1128	0	1195	71	0
7	RR	1068	0	1121	92	0
8	SS	1190	0	1249	71	0
9	TT	1097	0	1132	64	0
10	UU	795	0	862	62	0
11	ZZ	598	0	656	25	0
12	cc	488	0	514	34	0
13	dd	459	0	448	24	0
14	ff	555	0	563	27	0
15	gg	2436	0	2393	121	0
16	R	1508	0	1664	101	0
17	W	732	0	769	19	0
18	9	36229	0	18309	1043	0
19	AA	1710	0	1708	183	0
20	BB	1729	0	1803	110	0
21	CC	1716	0	1806	121	0
22	EE	2076	0	2177	108	0
23	GG	1923	0	2089	108	0
24	HH	1488	0	1582	82	0
25	II	1686	0	1772	76	0
26	JJ	1525	0	1640	95	0
27	LL	1175	0	1249	75	0
28	NN	1202	0	1289	66	0
29	OO	1016	0	1039	84	0
30	VV	636	0	637	41	0
31	WW	1034	0	1080	79	0
32	XX	1098	0	1167	70	0
33	YY	1011	0	1083	66	0
34	aa	814	0	863	52	0
35	bb	651	0	672	30	0
36	ee	457	0	502	30	0
37	A	1898	0	1993	133	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
38	B	3172	0	3310	171	0
39	C	2883	0	3053	181	0
40	D	2391	0	2424	124	0
41	E	1729	0	1887	102	0
42	F	1875	0	1995	134	0
43	G	1879	0	2027	122	0
44	H	1516	0	1597	100	0
45	I	1664	0	1712	90	0
46	J	1362	0	1399	68	0
47	L	1702	0	1820	93	0
48	M	1137	0	1211	83	0
49	N	1701	0	1749	115	0
50	O	1630	0	1778	126	0
51	P	1242	0	1274	61	0
52	Q	1515	0	1634	110	0
53	S	1462	0	1508	89	0
54	T	1298	0	1366	66	0
55	U	809	0	833	40	0
56	V	1034	0	1097	60	0
57	X	967	0	1040	63	0
58	Y	1115	0	1205	65	0
59	Z	1107	0	1182	69	0
60	a	1162	0	1209	73	0
61	b	848	0	920	45	0
62	c	761	0	794	45	0
63	d	888	0	930	46	0
64	e	1053	0	1147	66	0
65	f	876	0	912	57	0
66	g	906	0	998	52	0
67	h	1013	0	1147	69	0
68	i	830	0	916	51	0
69	j	705	0	737	44	0
70	k	569	0	637	25	0
71	l	447	0	480	29	0
72	m	429	0	465	21	0
73	n	239	0	289	8	0
74	o	851	0	920	39	0
75	p	708	0	756	46	0
76	r	994	0	1051	58	0
77	s	1507	0	1549	945	0
78	t	1160	0	1216	593	0
79	5	75952	0	38383	2251	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
80	7	2538	0	1286	75	0
81	8	3208	0	1629	108	0
82	1	3261	0	1653	455	0
83	PT	1622	823	823	131	0
84	EF	6659	6746	6745	1218	0
85	aa	1	0	0	0	0
85	dd	1	0	0	0	0
85	ff	1	0	0	0	0
85	g	1	0	0	0	0
85	j	1	0	0	0	0
85	m	1	0	0	0	0
85	o	1	0	0	0	0
85	p	1	0	0	0	0
86	5	185	0	0	0	0
86	7	6	0	0	0	0
86	8	5	0	0	0	0
86	B	1	0	0	0	0
86	I	1	0	0	0	0
86	P	1	0	0	0	0
86	Q	1	0	0	0	0
86	V	1	0	0	0	0
86	a	2	0	0	0	0
86	aa	1	0	0	0	0
86	g	1	0	0	0	0
86	j	1	0	0	0	0
All	All	223596	7569	167846	11022	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 28.

All (11022) 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)
77:s:130:LEU:HD21	77:s:132:PRO:CG	1.18	1.63
77:s:101:MET:CE	77:s:102:LEU:HD22	1.36	1.52
77:s:130:LEU:CD2	77:s:132:PRO:HG3	1.07	1.51
77:s:18:ILE:C	77:s:21:LEU:HB2	1.10	1.49
77:s:18:ILE:CA	77:s:21:LEU:HG	1.35	1.49
77:s:18:ILE:CA	77:s:21:LEU:CG	1.80	1.49
77:s:110:ALA:CB	77:s:182:PRO:N	1.74	1.48
78:t:137:GLN:HB2	78:t:142:ASN:ND2	1.26	1.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:s:18:ILE:CB	77:s:21:LEU:HG	1.38	1.46
77:s:101:MET:SD	77:s:102:LEU:CD2	2.04	1.44
77:s:18:ILE:C	77:s:21:LEU:CB	1.89	1.44
77:s:110:ALA:CB	77:s:181:SER:C	1.89	1.43
77:s:18:ILE:CA	77:s:21:LEU:CB	1.96	1.43
77:s:18:ILE:HA	77:s:21:LEU:CG	0.94	1.42
77:s:101:MET:SD	77:s:102:LEU:HD23	1.60	1.42
77:s:18:ILE:CA	77:s:21:LEU:HB2	1.51	1.41
78:t:137:GLN:CB	78:t:142:ASN:HD22	1.31	1.39
77:s:116:ILE:CA	77:s:166:LYS:HA	1.53	1.38
77:s:110:ALA:HB2	77:s:182:PRO:CA	0.96	1.38
77:s:116:ILE:HA	77:s:166:LYS:CA	1.56	1.35
77:s:101:MET:CE	77:s:102:LEU:CD2	2.01	1.35
77:s:18:ILE:HA	77:s:21:LEU:CB	1.56	1.34
77:s:121:VAL:HG22	77:s:183:PHE:CZ	1.63	1.33
77:s:117:ALA:CB	77:s:161:ILE:HG21	1.56	1.32
77:s:18:ILE:HA	77:s:21:LEU:CD2	1.57	1.32
77:s:110:ALA:HB2	77:s:182:PRO:N	1.26	1.32
78:t:119:ARG:CZ	78:t:119:ARG:HA	1.59	1.31
77:s:7:ALA:N	77:s:10:LYS:HE3	1.42	1.29
78:t:118:HIS:CD2	78:t:119:ARG:HD2	1.67	1.27
77:s:148:SER:O	77:s:151:THR:C	1.79	1.24
77:s:110:ALA:CB	77:s:182:PRO:CA	1.89	1.21
77:s:11:SER:O	77:s:12:ASN:C	1.84	1.20
77:s:18:ILE:O	77:s:21:LEU:CB	1.90	1.19
77:s:110:ALA:HB3	77:s:181:SER:O	1.40	1.19
82:l:1338:A:H4'	82:l:1345:G:H4'	1.24	1.19
77:s:45:MET:SD	77:s:48:ARG:NE	2.17	1.18
77:s:8:THR:O	77:s:9:TRP:C	1.83	1.18
77:s:11:SER:O	77:s:13:TYR:N	1.77	1.17
77:s:27:CYS:HA	77:s:90:PHE:HA	1.22	1.17
77:s:18:ILE:O	77:s:21:LEU:HB3	1.43	1.17
78:t:114:ARG:HH22	78:t:160:VAL:CG1	1.59	1.16
77:s:28:PHE:HA	77:s:192:VAL:HG12	1.20	1.15
78:t:106:PHE:HB2	78:t:143:VAL:HG21	1.21	1.15
77:s:145:THR:HA	77:s:154:ILE:HG23	1.28	1.15
78:t:114:ARG:NH2	78:t:160:VAL:CG1	2.09	1.15
77:s:117:ALA:HB2	77:s:161:ILE:CG2	1.76	1.15
78:t:15:LEU:HB3	78:t:28:LEU:HD22	1.20	1.15
77:s:143:ILE:HG12	77:s:160:LEU:HD21	1.29	1.14
77:s:7:ALA:N	77:s:10:LYS:CE	2.12	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:t:28:LEU:HD12	78:t:43:GLY:HA2	1.25	1.12
77:s:145:THR:O	77:s:146:LYS:O	1.67	1.12
78:t:64:ILE:HA	78:t:69:ALA:HA	1.32	1.11
77:s:159:GLN:HG2	77:s:162:LYS:HG3	1.13	1.11
79:5:759:G:O6	79:5:904:G:O6	1.68	1.11
77:s:14:PHE:O	77:s:17:ILE:CG2	1.98	1.11
78:t:125:LEU:HD21	78:t:160:VAL:HB	1.18	1.10
78:t:117:ARG:HA	78:t:128:THR:HG21	1.30	1.10
77:s:148:SER:N	77:s:153:GLU:O	1.77	1.10
78:t:16:ARG:CA	78:t:59:THR:HA	1.81	1.10
78:t:119:ARG:HA	78:t:119:ARG:NH1	1.65	1.10
82:1:1456:G:OP1	82:1:1483:A:P	2.10	1.09
78:t:114:ARG:NH2	78:t:160:VAL:HG13	1.68	1.09
77:s:110:ALA:HB1	77:s:183:PHE:CE2	1.78	1.09
77:s:47:LEU:HB2	77:s:50:LYS:HB2	1.29	1.09
78:t:114:ARG:HH22	78:t:160:VAL:HG13	0.96	1.09
77:s:18:ILE:CG1	77:s:21:LEU:HG	1.83	1.08
78:t:118:HIS:CD2	78:t:119:ARG:CD	2.34	1.08
77:s:28:PHE:HB2	77:s:89:VAL:HB	1.17	1.08
77:s:110:ALA:HB2	77:s:182:PRO:HA	1.10	1.07
77:s:110:ALA:HB1	77:s:182:PRO:N	1.66	1.07
77:s:26:LYS:HB2	77:s:194:ASP:HB3	1.10	1.07
78:t:16:ARG:HA	78:t:59:THR:HA	1.33	1.07
78:t:118:HIS:HD2	78:t:119:ARG:CD	1.66	1.07
77:s:121:VAL:CG2	77:s:183:PHE:CZ	2.38	1.07
78:t:103:ASN:HB3	78:t:143:VAL:HA	1.11	1.07
77:s:50:LYS:HD3	77:s:98:ILE:HA	1.32	1.07
84:EF:412:ALA:HB3	84:EF:472:LEU:HD13	1.36	1.07
78:t:17:CYS:HB2	78:t:46:ILE:HG22	1.37	1.06
78:t:37:LEU:HD11	78:t:41:LYS:HD2	1.08	1.06
78:t:85:LEU:HD21	78:t:104:ILE:HA	1.26	1.06
77:s:8:THR:C	77:s:10:LYS:N	2.02	1.06
77:s:18:ILE:HB	77:s:71:ASN:HD22	1.12	1.06
77:s:32:ALA:HA	77:s:187:LEU:HA	1.07	1.06
77:s:9:TRP:O	77:s:12:ASN:HB3	1.56	1.05
77:s:137:PHE:HA	77:s:140:ALA:HB3	1.38	1.05
78:t:50:THR:HA	78:t:53:TRP:HD1	1.14	1.05
79:5:169:G:N2	79:5:267:G:N1	2.05	1.05
84:EF:74:ALA:HB3	84:EF:454:MET:HE1	1.39	1.05
78:t:131:GLU:HB2	79:5:1973:G:H1'	1.05	1.04
77:s:122:THR:HG22	77:s:159:GLN:HA	1.39	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:1:1489:U:H2'	82:1:1490:C:C6	1.92	1.04
77:s:130:LEU:CD2	77:s:132:PRO:CG	1.91	1.04
77:s:195:ASN:ND2	77:s:199:TYR:OH	1.90	1.04
79:5:169:G:N2	79:5:267:G:C6	2.26	1.04
77:s:57:LYS:HB3	77:s:60:MET:CB	1.87	1.04
77:s:124:PRO:HA	77:s:157:ASP:CA	1.88	1.04
77:s:189:ILE:O	77:s:190:GLN:HB3	1.57	1.03
77:s:28:PHE:CB	77:s:89:VAL:HB	1.87	1.03
77:s:124:PRO:HA	77:s:157:ASP:HA	1.37	1.03
78:t:53:TRP:HB3	78:t:56:LEU:HB2	1.41	1.03
77:s:30:VAL:HB	77:s:189:ILE:HA	1.37	1.03
82:1:1473:A:H3'	82:1:1474:G:H8	1.20	1.03
77:s:21:LEU:HD21	77:s:68:HIS:HB2	1.38	1.02
77:s:27:CYS:CA	77:s:90:PHE:HA	1.89	1.02
77:s:6:ARG:HG3	77:s:7:ALA:H	1.25	1.02
77:s:193:PHE:CD2	77:s:198:ILE:HG13	1.94	1.02
78:t:73:VAL:HG12	78:t:75:PRO:HD3	1.42	1.02
77:s:149:ARG:C	77:s:151:THR:H	1.66	1.02
77:s:21:LEU:HD21	77:s:68:HIS:CB	1.50	1.01
82:1:1479:U:H2'	82:1:1480:U:H4'	1.42	1.01
77:s:22:ASP:O	77:s:24:TYR:N	1.94	1.01
77:s:117:ALA:CB	77:s:161:ILE:CG2	2.33	1.01
78:t:50:THR:HA	78:t:53:TRP:CD1	1.96	1.01
78:t:64:ILE:HA	78:t:69:ALA:CA	1.90	1.01
78:t:130:LYS:HD2	78:t:154:ASP:HB2	1.39	1.01
77:s:25:PRO:HG3	77:s:92:LYS:HG3	1.40	1.01
78:t:118:HIS:HD2	78:t:119:ARG:HD2	1.00	1.01
82:1:1456:G:OP1	82:1:1483:A:OP1	1.76	1.01
1:DD:51:LEU:HG	1:DD:91:VAL:HG22	1.42	1.00
77:s:32:ALA:CA	77:s:187:LEU:HA	1.90	1.00
77:s:35:VAL:HB	77:s:39:GLN:HG2	1.44	1.00
77:s:57:LYS:HB2	79:5:2020:U:H5'	1.41	1.00
77:s:26:LYS:HG2	77:s:91:THR:HG23	1.41	1.00
77:s:57:LYS:HB3	77:s:60:MET:HB2	1.39	1.00
79:5:2845:A:H61	79:5:3843:C:N4	1.59	1.00
82:1:1448:U:H3'	82:1:1449:U:H5'	1.43	1.00
78:t:109:ILE:HA	78:t:112:ILE:HB	1.38	0.99
77:s:14:PHE:O	77:s:17:ILE:HG22	1.62	0.99
77:s:121:VAL:HG21	77:s:161:ILE:HD12	1.44	0.99
77:s:11:SER:C	77:s:13:TYR:N	2.13	0.99
82:1:1458:C:H2'	82:1:1459:U:C6	1.97	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:s:110:ALA:HB3	77:s:181:SER:C	1.73	0.99
77:s:28:PHE:HA	77:s:192:VAL:CG1	1.91	0.99
78:t:105:THR:HB	78:t:108:GLU:HG3	1.43	0.99
78:t:117:ARG:HD2	78:t:125:LEU:HA	1.46	0.98
78:t:119:ARG:NH1	78:t:119:ARG:CA	2.13	0.98
77:s:101:MET:HE1	77:s:102:LEU:HD22	1.00	0.98
77:s:130:LEU:HD23	77:s:132:PRO:HD3	1.42	0.98
33:YY:117:VAL:HG21	33:YY:125:VAL:HG21	1.45	0.97
77:s:32:ALA:HA	77:s:187:LEU:CA	1.94	0.97
77:s:148:SER:O	77:s:152:ILE:N	1.96	0.97
78:t:35:LEU:HD22	78:t:64:ILE:HG13	1.44	0.97
41:E:189:LEU:HD21	41:E:256:VAL:HG21	1.44	0.97
77:s:145:THR:O	77:s:146:LYS:C	2.06	0.97
41:E:61:ARG:HD3	79:5:1237:C:H1'	1.43	0.97
44:H:103:VAL:HG11	44:H:144:LEU:HD21	1.46	0.97
82:1:1455:A:H2'	82:1:1456:G:C5	1.98	0.97
77:s:129:GLY:HA3	77:s:151:THR:HA	1.42	0.97
77:s:130:LEU:CD2	77:s:132:PRO:CD	2.43	0.97
77:s:120:GLU:O	77:s:183:PHE:HE1	1.47	0.97
77:s:9:TRP:NE1	79:5:1998:A:H4'	1.80	0.96
78:t:81:ILE:HG21	78:t:139:VAL:HG11	1.44	0.96
78:t:119:ARG:CZ	78:t:119:ARG:CA	2.40	0.96
38:B:20:LYS:HD3	79:5:4717:A:H4'	1.48	0.96
64:e:85:LEU:HD11	64:e:111:ILE:HG23	1.48	0.96
78:t:137:GLN:HB3	78:t:142:ASN:HD22	1.30	0.96
79:5:1550:G:H1	79:5:1578:U:H3	0.96	0.96
31:WW:52:ILE:HG22	31:WW:61:ILE:HG12	1.47	0.96
77:s:8:THR:O	77:s:10:LYS:N	1.96	0.96
78:t:81:ILE:HG23	78:t:104:ILE:HD11	1.46	0.96
49:N:125:SER:HB3	79:5:3937:C:H1'	1.46	0.95
32:XX:107:ARG:HB3	32:XX:110:HIS:HB3	1.47	0.95
79:5:2845:A:N6	79:5:3843:C:H42	1.65	0.95
77:s:121:VAL:HB	77:s:161:ILE:HB	1.47	0.95
82:1:1445:G:H2'	82:1:1447:A:C2	2.00	0.95
78:t:28:LEU:HD13	78:t:46:ILE:HD12	1.47	0.95
77:s:11:SER:O	77:s:13:TYR:C	2.10	0.95
37:A:101:VAL:HB	37:A:165:VAL:HG12	1.48	0.95
77:s:130:LEU:HD11	77:s:132:PRO:HB3	1.49	0.95
78:t:116:MET:HG3	78:t:132:ILE:HG21	1.47	0.95
82:1:1489:U:H2'	82:1:1490:C:H6	1.31	0.95
28:NN:136:PRO:HG2	28:NN:139:TRP:HB2	1.49	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:s:68:HIS:HA	77:s:71:ASN:HB2	1.49	0.95
77:s:125:ALA:HA	77:s:154:ILE:CG2	1.96	0.95
78:t:131:GLU:HB2	79:5:1973:G:C1'	1.97	0.94
18:9:655:A:H4'	18:9:656:G:H3'	1.47	0.94
78:t:137:GLN:CG	78:t:147:HIS:HB3	1.98	0.94
82:1:1410:C:H2'	82:1:1411:A:H8	1.32	0.94
29:OO:101:GLY:HA3	29:OO:134:PRO:HG2	1.46	0.94
77:s:191:GLN:HA	77:s:200:ASN:C	1.93	0.94
77:s:55:MET:HB3	79:5:1998:A:C6	2.02	0.94
82:1:1457:G:H2'	82:1:1458:C:C6	2.02	0.94
38:B:324:GLY:HA2	79:5:5051:C:H4'	1.49	0.94
53:S:34:ALA:HB1	53:S:39:VAL:HG23	1.48	0.94
77:s:62:ARG:HE	77:s:82:ILE:HB	1.31	0.94
77:s:77:LYS:NZ	77:s:78:LEU:H	1.66	0.94
78:t:15:LEU:HD11	78:t:31:LYS:HB2	1.50	0.94
77:s:7:ALA:H	77:s:10:LYS:HE3	0.97	0.94
77:s:41:GLN:HG3	77:s:44:ARG:HD2	1.48	0.94
77:s:121:VAL:HG22	77:s:183:PHE:CE1	2.01	0.94
37:A:180:LEU:HD21	75:p:26:VAL:HG21	1.50	0.94
77:s:84:GLY:C	79:5:2021:G:H4'	1.93	0.94
20:BB:66:VAL:HG22	20:BB:87:ILE:HG22	1.50	0.93
77:s:118:PRO:HB2	77:s:183:PHE:HB3	1.48	0.93
1:DD:177:LEU:HD13	1:DD:182:LEU:HD13	1.49	0.93
43:G:203:LYS:HE2	43:G:230:MET:HG3	1.50	0.93
53:S:95:ARG:HD2	53:S:113:MET:HE2	1.49	0.93
78:t:46:ILE:HG12	78:t:60:VAL:HB	1.49	0.93
84:EF:160:MET:HE2	84:EF:164:LEU:HD11	1.50	0.93
51:P:114:ILE:HD11	51:P:117:ILE:HB	1.50	0.93
77:s:56:GLY:HA2	79:5:1998:A:C4	2.03	0.93
77:s:59:THR:HA	77:s:62:ARG:CD	1.98	0.93
77:s:18:ILE:CB	77:s:71:ASN:HD22	1.80	0.93
78:t:106:PHE:CB	78:t:143:VAL:HG21	1.98	0.93
78:t:131:GLU:CB	79:5:1973:G:H1'	1.97	0.93
2:FF:141:VAL:HG12	12:cc:47:LYS:HB2	1.49	0.93
32:XX:46:HIS:HB3	32:XX:101:LEU:HD11	1.48	0.93
45:I:153:ARG:HA	45:I:156:LYS:HE2	1.49	0.93
77:s:52:VAL:HG12	77:s:89:VAL:HA	1.49	0.93
77:s:77:LYS:HZ2	77:s:78:LEU:H	1.15	0.93
78:t:114:ARG:NH2	78:t:160:VAL:HG11	1.80	0.93
77:s:181:SER:OG	77:s:183:PHE:HE2	1.51	0.92
19:AA:5:LEU:HG	30:VV:41:LYS:HA	1.49	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:WW:11:LEU:HD12	31:WW:74:VAL:HB	1.49	0.92
79:5:1802:A:H5''	79:5:1803:G:H5'	1.48	0.92
82:1:1422:A:H2'	82:1:1435:G:H2'	1.50	0.92
77:s:173:THR:HA	77:s:176:ASN:ND2	1.84	0.92
78:t:137:GLN:HE21	78:t:142:ASN:ND2	1.67	0.92
24:HH:69:LEU:HG	24:HH:96:ALA:HB2	1.51	0.92
78:t:153:ASP:HA	78:t:157:SER:HB2	1.52	0.92
77:s:6:ARG:HG3	77:s:7:ALA:N	1.83	0.92
77:s:21:LEU:CD2	77:s:68:HIS:HB2	1.99	0.92
79:5:4949:G:H4'	79:5:4950:U:H5'	1.52	0.92
19:AA:25:LEU:HG	19:AA:46:ILE:HG21	1.52	0.92
27:LL:80:MET:HE2	27:LL:122:ILE:HG23	1.51	0.92
77:s:130:LEU:HD23	77:s:132:PRO:CD	1.99	0.92
54:T:39:ILE:HD12	54:T:102:ARG:HB2	1.52	0.91
64:e:90:MET:HG2	76:r:33:LYS:HG2	1.51	0.91
78:t:117:ARG:HH21	78:t:128:THR:HG23	1.33	0.91
77:s:77:LYS:NZ	77:s:78:LEU:HG	1.85	0.91
77:s:126:GLN:N	77:s:154:ILE:HB	1.85	0.91
79:5:4471:U:H3	79:5:4484:G:H1	1.17	0.91
63:d:36:VAL:HG11	63:d:44:ARG:HG2	1.52	0.91
77:s:47:LEU:HD13	77:s:50:LYS:HD2	1.51	0.91
5:PP:56:LEU:HD13	5:PP:78:THR:HG21	1.52	0.91
77:s:18:ILE:HB	77:s:21:LEU:HG	1.52	0.91
77:s:45:MET:HA	77:s:48:ARG:HE	1.36	0.91
30:VV:21:ASN:HB3	31:WW:67:GLY:HA3	1.53	0.91
41:E:156:LEU:HD11	41:E:198:ILE:HG13	1.53	0.91
39:C:312:ARG:HB3	79:5:2274:C:H5'	1.53	0.91
82:1:1493:G:H2'	82:1:1493:G:N3	1.84	0.90
78:t:24:ALA:H	78:t:92:ARG:HE	1.19	0.90
77:s:110:ALA:CB	77:s:181:SER:O	2.05	0.90
78:t:97:ASN:HA	78:t:99:LYS:HE3	1.52	0.90
78:t:129:ILE:HA	78:t:132:ILE:HG22	1.52	0.90
54:T:75:VAL:HG22	54:T:88:ARG:HB3	1.52	0.90
78:t:32:ILE:HD13	78:t:39:PRO:HA	1.51	0.90
77:s:50:LYS:NZ	77:s:102:LEU:HD23	1.86	0.90
77:s:50:LYS:HG2	77:s:98:ILE:HG12	1.53	0.90
45:I:35:ASP:HB3	45:I:88:ARG:HD2	1.54	0.90
84:EF:25:ILE:HD13	84:EF:127:VAL:HG13	1.52	0.90
23:GG:58:LYS:HA	23:GG:107:SER:HB2	1.53	0.90
78:t:16:ARG:HB2	78:t:59:THR:CG2	2.02	0.90
82:1:1472:A:H3'	82:1:1473:A:H8	1.36	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:1:1431:G:H2'	82:1:1432:U:C6	2.05	0.90
77:s:22:ASP:O	77:s:23:ASP:C	2.14	0.89
20:BB:134:LEU:HD22	20:BB:218:LEU:HD12	1.54	0.89
77:s:78:LEU:HA	77:s:81:HIS:CE1	2.07	0.89
7:RR:105:MET:HE2	30:VV:83:PHE:HA	1.53	0.89
77:s:26:LYS:HB2	77:s:194:ASP:CB	2.01	0.89
77:s:50:LYS:HD3	77:s:98:ILE:CA	2.02	0.89
78:t:64:ILE:HG23	78:t:68:GLN:HA	1.54	0.89
78:t:103:ASN:CB	78:t:143:VAL:HA	2.01	0.89
82:1:1473:A:H3'	82:1:1474:G:C8	2.07	0.89
1:DD:70:THR:HG22	1:DD:86:LEU:HD13	1.53	0.89
77:s:135:THR:CB	77:s:138:PHE:HB2	2.02	0.89
29:OO:45:THR:HG22	29:OO:52:THR:HA	1.55	0.89
40:D:36:LEU:HD23	79:5:4325:A:H1'	1.55	0.89
77:s:101:MET:HE2	77:s:102:LEU:CD2	2.00	0.89
77:s:121:VAL:CG2	77:s:183:PHE:CE1	2.55	0.89
77:s:135:THR:HB	77:s:139:GLN:H	1.36	0.89
78:t:56:LEU:HD11	78:t:82:ILE:HB	1.53	0.89
82:1:1393:U:H2'	82:1:1394:A:C8	2.08	0.89
77:s:47:LEU:HB2	77:s:50:LYS:CB	2.01	0.89
77:s:62:ARG:HA	77:s:65:ILE:HD12	1.53	0.89
15:gg:254:PRO:HA	15:gg:285:GLN:HA	1.55	0.89
38:B:317:LEU:HB2	38:B:372:SER:HB2	1.54	0.89
77:s:125:ALA:HA	77:s:154:ILE:HG22	1.54	0.89
77:s:193:PHE:HD2	77:s:198:ILE:HG13	1.32	0.89
77:s:62:ARG:NE	77:s:82:ILE:HB	1.89	0.89
46:J:27:GLY:HA2	46:J:68:ILE:HG23	1.53	0.88
50:O:119:VAL:HG11	53:S:171:ARG:HG2	1.54	0.88
78:t:109:ILE:CA	78:t:112:ILE:HB	2.03	0.88
79:5:2845:A:H61	79:5:3843:C:H42	0.89	0.88
82:1:1456:G:H2'	82:1:1457:G:C8	2.08	0.88
15:gg:212:LYS:HA	15:gg:235:ILE:HG13	1.55	0.88
77:s:172:ALA:HA	77:s:175:LEU:HD12	1.55	0.88
78:t:105:THR:HB	78:t:108:GLU:CG	2.04	0.88
82:1:1353:U:H3'	82:1:1354:U:H4'	1.55	0.88
76:r:28:GLU:HB2	76:r:31:ASN:HB2	1.55	0.88
76:r:63:VAL:HG22	76:r:79:ARG:HG2	1.56	0.88
77:s:72:ASN:ND2	77:s:74:ALA:HB3	1.89	0.88
33:YY:10:ARG:HG2	33:YY:11:LYS:HG3	1.52	0.88
79:5:1757:U:H2'	79:5:1758:G:H8	1.38	0.88
20:BB:136:ARG:HB2	20:BB:218:LEU:HD11	1.54	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:t:125:LEU:HD22	78:t:161:GLU:HB2	1.53	0.88
78:t:137:GLN:HB3	78:t:147:HIS:HB3	1.55	0.88
77:s:18:ILE:CG1	77:s:21:LEU:CG	2.50	0.88
77:s:143:ILE:HA	77:s:158:VAL:HB	1.53	0.88
84:EF:143:LEU:HD13	84:EF:188:ILE:HD13	1.52	0.88
84:EF:189:ILE:HD13	84:EF:204:MET:HA	1.56	0.88
40:D:83:LEU:HB3	40:D:88:VAL:HB	1.55	0.88
15:gg:10:THR:HG22	15:gg:308:ARG:HG2	1.55	0.88
77:s:27:CYS:HA	77:s:90:PHE:CA	2.02	0.87
82:1:1471:A:C2	82:1:1472:A:H1'	2.09	0.87
77:s:120:GLU:O	77:s:183:PHE:CE1	2.26	0.87
77:s:21:LEU:CD2	77:s:68:HIS:CB	2.41	0.87
77:s:146:LYS:HB2	77:s:155:LEU:HD13	1.55	0.87
78:t:81:ILE:HD13	78:t:136:ALA:HA	1.54	0.87
18:9:1825:A:H1'	82:1:1493:G:C2	2.09	0.87
25:II:119:LEU:HD11	25:II:153:LYS:HG3	1.56	0.87
44:H:12:ILE:HG21	44:H:18:ILE:HD13	1.57	0.87
24:HH:117:PRO:HG2	24:HH:120:ARG:HD3	1.53	0.87
77:s:57:LYS:HA	79:5:2020:U:C4'	2.04	0.87
77:s:124:PRO:CA	77:s:157:ASP:HA	2.04	0.87
18:9:1706:G:H5'	73:n:1:MET:HB2	1.55	0.87
77:s:51:ALA:CB	77:s:91:THR:HB	2.05	0.87
77:s:147:ILE:HG22	77:s:149:ARG:HB2	1.54	0.87
8:SS:22:GLY:HA2	8:SS:56:ALA:HB3	1.57	0.87
77:s:110:ALA:HB1	77:s:181:SER:C	1.89	0.87
77:s:143:ILE:HD11	77:s:160:LEU:HD11	1.57	0.87
77:s:159:GLN:CG	77:s:162:LYS:HG3	2.02	0.87
82:1:1458:C:H2'	82:1:1459:U:C5	2.10	0.87
67:h:66:LYS:HD3	81:8:96:C:H5''	1.54	0.86
77:s:57:LYS:HA	79:5:2020:U:H4'	1.57	0.86
78:t:53:TRP:HB3	78:t:56:LEU:CB	2.05	0.86
78:t:85:LEU:CD2	78:t:104:ILE:HA	2.05	0.86
2:FF:39:ILE:HG23	2:FF:68:ILE:HG21	1.56	0.86
18:9:65:C:H4'	23:GG:172:LYS:HE2	1.55	0.86
12:cc:17:VAL:HA	12:cc:30:VAL:HG13	1.56	0.86
42:F:135:VAL:HG23	42:F:139:ILE:HD13	1.55	0.86
78:t:137:GLN:CB	78:t:147:HIS:HB3	2.05	0.86
84:EF:205:ILE:HD12	84:EF:212:VAL:HG12	1.57	0.86
46:J:89:VAL:HG21	46:J:115:LEU:HD23	1.56	0.86
82:1:1394:A:H2'	82:1:1395:A:C8	2.10	0.86
7:RR:97:GLU:HB2	7:RR:120:THR:HB	1.56	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:s:148:SER:O	77:s:151:THR:O	1.92	0.86
77:s:200:ASN:C	77:s:200:ASN:OD1	2.18	0.86
21:CC:70:VAL:HG11	21:CC:93:ILE:HG23	1.58	0.86
39:C:323:ARG:HB2	79:5:1281:G:H5'	1.57	0.86
44:H:41:ILE:HG12	44:H:73:ILE:HD11	1.58	0.86
78:t:19:GLY:HA2	78:t:50:THR:HB	1.56	0.86
79:5:3697:U:H5''	79:5:3698:G:H5'	1.57	0.86
78:t:28:LEU:CD1	78:t:43:GLY:HA2	2.03	0.86
84:EF:77:LEU:HG	84:EF:102:LEU:HD21	1.58	0.86
27:LL:101:ARG:HB2	32:XX:10:ALA:HB2	1.56	0.86
36:ee:77:GLY:HA2	36:ee:81:ARG:HD2	1.56	0.86
78:t:56:LEU:HB3	78:t:58:ILE:HD11	1.58	0.86
78:t:137:GLN:CB	78:t:142:ASN:ND2	2.05	0.86
3:KK:91:PRO:HD2	3:KK:94:LEU:HD13	1.58	0.85
18:9:681:U:H4'	32:XX:9:THR:HG22	1.56	0.85
32:XX:94:ILE:HG12	32:XX:125:VAL:HG21	1.56	0.85
77:s:29:ILE:HG23	77:s:88:PHE:HB3	1.56	0.85
77:s:130:LEU:HD23	77:s:132:PRO:HG3	1.55	0.85
11:ZZ:79:ILE:HB	11:ZZ:83:LEU:HD12	1.57	0.85
12:cc:30:VAL:HG21	12:cc:50:VAL:HG11	1.56	0.85
20:BB:86:LEU:HB3	20:BB:98:THR:HB	1.56	0.85
82:1:1398:C:H3'	82:1:1399:A:H5''	1.56	0.85
82:1:1410:C:H2'	82:1:1411:A:C8	2.11	0.85
19:AA:184:ARG:HG3	19:AA:189:ILE:HB	1.57	0.85
48:M:118:MET:HE3	48:M:122:ILE:HD11	1.56	0.85
84:EF:66:ARG:HD3	84:EF:70:ILE:HD11	1.57	0.85
7:RR:91:LEU:HD13	19:AA:180:ARG:HG2	1.57	0.85
41:E:153:LEU:HD22	41:E:199:ALA:HA	1.57	0.85
51:P:36:ILE:HD12	51:P:48:LEU:HD21	1.59	0.85
77:s:135:THR:HA	77:s:138:PHE:HB2	1.57	0.85
77:s:137:PHE:CA	77:s:140:ALA:HB3	2.06	0.85
84:EF:520:LEU:HD13	84:EF:566:ALA:HB3	1.57	0.85
1:DD:59:LEU:HA	1:DD:66:ILE:HG13	1.58	0.85
38:B:13:SER:HB2	79:5:4622:A:H4'	1.58	0.85
67:h:80:PRO:HD2	67:h:83:LEU:HD12	1.57	0.85
77:s:56:GLY:HA2	79:5:1998:A:C1'	2.07	0.85
77:s:61:MET:O	77:s:65:ILE:HG13	1.77	0.85
82:1:1360:A:C2	82:1:1442:G:H4'	2.10	0.85
31:WW:18:GLU:HG3	31:WW:69:LEU:HD23	1.57	0.85
39:C:149:GLU:HG2	39:C:151:PRO:HD2	1.59	0.85
78:t:133:LEU:HD22	78:t:150:ASP:HB3	1.56	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:t:152:ILE:HA	78:t:155:ILE:HD12	1.57	0.85
42:F:85:GLU:HB2	54:T:135:PRO:HB3	1.59	0.85
77:s:27:CYS:HB2	77:s:90:PHE:CG	2.12	0.85
79:5:1757:U:H2'	79:5:1758:G:C8	2.10	0.85
18:9:1218:C:H1'	18:9:1683:C:H42	1.42	0.84
77:s:118:PRO:HB2	77:s:183:PHE:CB	2.07	0.84
37:A:117:GLU:HB2	37:A:162:ASN:HB2	1.59	0.84
77:s:143:ILE:CG1	77:s:160:LEU:HD21	2.07	0.84
78:t:37:LEU:CD1	78:t:41:LYS:HD2	2.02	0.84
29:OO:106:LYS:HD3	29:OO:135:ILE:HG12	1.59	0.84
77:s:77:LYS:NZ	77:s:78:LEU:N	2.24	0.84
82:1:1348:C:H2'	82:1:1349:U:C6	2.11	0.84
1:DD:21:LEU:HD21	1:DD:48:ILE:HD12	1.58	0.84
12:cc:18:LEU:HD11	12:cc:43:ILE:HD13	1.59	0.84
41:E:52:LEU:HD23	41:E:58:ARG:HG2	1.60	0.84
57:X:100:VAL:HG11	57:X:109:ILE:HG12	1.60	0.84
77:s:125:ALA:HA	77:s:154:ILE:CB	2.07	0.84
77:s:145:THR:HA	77:s:154:ILE:CG2	2.06	0.84
48:M:91:TRP:HA	48:M:94:LYS:HE2	1.58	0.84
64:e:3:ALA:HB1	64:e:121:ARG:HH12	1.42	0.84
78:t:37:LEU:HD11	78:t:41:LYS:CD	2.01	0.84
78:t:105:THR:O	78:t:108:GLU:HB2	1.77	0.84
78:t:137:GLN:HG2	78:t:147:HIS:HB3	1.60	0.84
1:DD:50:ILE:HD11	1:DD:86:LEU:HD23	1.57	0.84
77:s:18:ILE:HG12	77:s:21:LEU:CG	2.08	0.84
77:s:50:LYS:CG	77:s:98:ILE:HG12	2.08	0.84
77:s:65:ILE:HB	77:s:79:LEU:HD21	1.58	0.84
77:s:121:VAL:HG22	77:s:183:PHE:HZ	1.06	0.84
77:s:167:VAL:HG12	77:s:168:GLY:N	1.91	0.84
78:t:64:ILE:HG12	78:t:69:ALA:HB2	1.60	0.84
38:B:107:ALA:HB2	38:B:201:LEU:HD11	1.60	0.84
43:G:233:PRO:HG2	43:G:272:VAL:HG13	1.60	0.84
84:EF:185:VAL:HA	84:EF:188:ILE:HD12	1.60	0.84
59:Z:25:ILE:HA	59:Z:43:VAL:HG12	1.58	0.83
77:s:22:ASP:O	77:s:24:TYR:O	1.96	0.83
77:s:68:HIS:HA	77:s:71:ASN:CB	2.08	0.83
77:s:124:PRO:HG3	77:s:157:ASP:HB3	1.57	0.83
77:s:126:GLN:H	77:s:154:ILE:HB	1.40	0.83
84:EF:222:ALA:HB3	84:EF:346:ALA:CB	2.08	0.83
11:ZZ:92:LEU:HD11	11:ZZ:99:LEU:HD12	1.59	0.83
78:t:109:ILE:HD12	78:t:133:LEU:HD23	1.60	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:t:116:MET:SD	78:t:132:ILE:HG13	2.17	0.83
18:9:377:G:H5'	25:II:98:LYS:HB3	1.59	0.83
77:s:145:THR:HA	77:s:155:LEU:H	1.43	0.83
78:t:137:GLN:HB2	78:t:142:ASN:HD21	1.42	0.83
39:C:96:CYS:HA	79:5:2352:U:H1'	1.59	0.83
40:D:223:PHE:HB3	40:D:226:TYR:HB2	1.58	0.83
45:I:30:LYS:HD3	45:I:63:GLU:HG2	1.61	0.83
77:s:72:ASN:HD22	77:s:74:ALA:HB3	1.42	0.83
79:5:1976:G:H2'	79:5:1977:C:H1'	1.61	0.83
40:D:205:ALA:HB1	40:D:233:PRO:HB3	1.61	0.83
77:s:18:ILE:HA	77:s:21:LEU:HD23	1.61	0.83
78:t:100:HIS:HB2	78:t:139:VAL:O	1.79	0.83
48:M:27:ILE:HA	48:M:38:VAL:HG13	1.60	0.83
51:P:94:MET:HE1	51:P:146:ILE:HB	1.60	0.83
77:s:27:CYS:CB	77:s:90:PHE:HA	2.08	0.83
77:s:146:LYS:H	77:s:155:LEU:HB2	1.41	0.83
78:t:14:TYR:CE1	78:t:61:LYS:HB3	2.14	0.83
78:t:106:PHE:HE2	78:t:159:ALA:HB1	1.44	0.83
20:BB:113:MET:HE3	20:BB:209:ASP:HB3	1.61	0.83
24:HH:53:VAL:HG21	24:HH:172:THR:HA	1.59	0.83
38:B:261:ARG:HB2	50:O:64:THR:HG21	1.60	0.83
77:s:129:GLY:H	77:s:152:ILE:HG13	1.44	0.83
78:t:16:ARG:HD3	78:t:57:ARG:HB2	1.59	0.83
78:t:64:ILE:CA	78:t:69:ALA:HA	2.08	0.83
77:s:84:GLY:HA2	79:5:2021:G:O3'	1.79	0.83
20:BB:103:MET:HE1	20:BB:188:LEU:HD22	1.61	0.82
78:t:123:ARG:HB3	78:t:127:GLY:HA3	1.60	0.82
79:5:4872:G:H4'	79:5:4873:G:H5'	1.60	0.82
83:PT:37:A:C2'	83:PT:38:U:H5'	2.09	0.82
7:RR:61:ILE:HD13	7:RR:71:ILE:HD11	1.61	0.82
18:9:957:A:H3'	18:9:958:G:H21	1.43	0.82
22:EE:137:PRO:HB2	22:EE:150:PRO:HD2	1.61	0.82
77:s:101:MET:SD	77:s:102:LEU:HD21	2.17	0.82
78:t:153:ASP:HA	78:t:157:SER:CB	2.08	0.82
8:SS:6:PRO:HG2	8:SS:58:GLU:HG3	1.62	0.82
77:s:26:LYS:CG	77:s:91:THR:HG23	2.09	0.82
78:t:15:LEU:HB3	78:t:28:LEU:CD2	2.08	0.82
82:1:1455:A:H2	82:1:1481:G:H21	1.27	0.82
43:G:139:VAL:HG11	43:G:238:LYS:HG3	1.60	0.82
67:h:112:ARG:HG2	79:5:173:C:H1'	1.60	0.82
77:s:56:GLY:HA2	79:5:1998:A:N9	1.95	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:1:1367:G:H2'	82:1:1368:G:C8	2.14	0.82
60:a:117:LEU:HD12	60:a:118:PRO:HD2	1.59	0.82
77:s:117:ALA:HB2	77:s:161:ILE:HG21	0.84	0.82
7:RR:88:VAL:HB	19:AA:196:GLU:H	1.45	0.82
35:bb:36:LYS:HB3	35:bb:43:ILE:HG12	1.61	0.82
7:RR:96:ILE:HD13	19:AA:16:LEU:H	1.45	0.82
66:g:50:PRO:HG3	75:p:61:MET:HE3	1.60	0.82
77:s:129:GLY:CA	77:s:151:THR:HA	2.10	0.82
78:t:81:ILE:CG2	78:t:104:ILE:HD11	2.09	0.82
19:AA:10:MET:HE1	19:AA:51:LEU:HB3	1.61	0.82
77:s:11:SER:HB2	77:s:14:PHE:HB2	1.62	0.82
58:Y:82:ILE:HD12	58:Y:85:VAL:HG21	1.62	0.82
76:r:3:ALA:HA	76:r:6:GLN:HE21	1.45	0.82
77:s:21:LEU:HD12	77:s:22:ASP:OD2	1.80	0.82
77:s:175:LEU:CA	77:s:180:ILE:HB	2.08	0.82
77:s:180:ILE:O	77:s:181:SER:CB	2.28	0.82
22:EE:43:PRO:HG2	22:EE:46:ILE:HD12	1.62	0.82
77:s:17:ILE:O	77:s:19:GLN:CG	2.26	0.82
77:s:28:PHE:HB2	77:s:89:VAL:CB	2.07	0.82
7:RR:130:THR:H	19:AA:28:THR:HG23	1.45	0.81
78:t:91:ASP:HB2	78:t:93:LYS:HE2	1.62	0.81
77:s:51:ALA:CB	77:s:89:VAL:HG12	2.09	0.81
77:s:128:THR:HG22	77:s:130:LEU:H	1.45	0.81
19:AA:10:MET:HE2	19:AA:15:VAL:HG22	1.61	0.81
25:II:69:SER:HB2	27:LL:21:LYS:HG3	1.62	0.81
33:YY:114:MET:HG2	33:YY:122:LYS:HB3	1.62	0.81
58:Y:11:ARG:HG3	79:5:229:G:H5'	1.61	0.81
77:s:124:PRO:HA	77:s:157:ASP:N	1.94	0.81
78:t:100:HIS:O	78:t:140:GLY:HA3	1.79	0.81
78:t:116:MET:HE2	78:t:132:ILE:HB	1.61	0.81
82:1:1387:G:N2	82:1:1389:C:H5'	1.95	0.81
84:EF:401:MET:HE3	84:EF:481:LYS:HA	1.62	0.81
18:9:96:C:H1'	18:9:474:G:H5'	1.63	0.81
66:g:21:ARG:HH11	66:g:35:THR:HG22	1.45	0.81
77:s:57:LYS:CB	79:5:2020:U:H5'	2.09	0.81
84:EF:762:VAL:HG11	84:EF:800:LEU:HD23	1.63	0.81
21:CC:128:VAL:HG11	21:CC:155:ILE:HG12	1.62	0.81
45:I:12:CYS:HB3	45:I:128:ARG:HH21	1.43	0.81
84:EF:321:ILE:HD12	84:EF:323:LEU:HD21	1.63	0.81
18:9:1657:G:H1	18:9:1667:U:H3	1.28	0.81
22:EE:105:THR:HG23	22:EE:106:LYS:HD2	1.62	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:LL:113:LEU:HD23	27:LL:142:VAL:HG21	1.62	0.81
31:WW:111:MET:HE1	31:WW:119:LYS:HD2	1.61	0.81
48:M:97:ALA:HB2	50:O:203:VAL:HB	1.63	0.81
77:s:25:PRO:CG	77:s:92:LYS:HG3	2.11	0.81
77:s:77:LYS:NZ	77:s:198:ILE:HD11	1.96	0.81
78:t:16:ARG:HA	78:t:59:THR:CA	2.11	0.81
82:1:1479:U:H2'	82:1:1480:U:C4'	2.11	0.81
18:9:1825:A:H1'	82:1:1493:G:N1	1.96	0.81
64:e:7:LEU:HB2	64:e:93:LYS:HB3	1.62	0.81
77:s:146:LYS:HA	77:s:146:LYS:HZ2	1.45	0.81
82:1:1439:A:H3'	82:1:1440:G:H8	1.45	0.81
18:9:671:A:H4'	18:9:672:A:H5''	1.63	0.81
45:I:87:ILE:HG12	45:I:138:ILE:HG12	1.63	0.81
76:r:10:VAL:HG12	76:r:14:SER:HB3	1.59	0.81
77:s:41:GLN:HG3	77:s:44:ARG:HH11	1.46	0.81
77:s:116:ILE:HG22	77:s:166:LYS:HE2	1.60	0.81
13:dd:2:GLY:HA2	18:9:1301:A:H4'	1.63	0.80
16:R:90:PRO:HG2	16:R:93:VAL:HB	1.63	0.80
52:Q:50:ARG:HA	52:Q:53:MET:HE2	1.63	0.80
78:t:112:ILE:HG22	78:t:129:ILE:HG23	1.63	0.80
84:EF:205:ILE:CD1	84:EF:212:VAL:HG12	2.11	0.80
84:EF:411:TYR:CE2	84:EF:458:VAL:HG21	2.17	0.80
1:DD:163:PRO:O	1:DD:167:TYR:HB2	1.81	0.80
50:O:130:LYS:HG3	50:O:131:PRO:HD2	1.60	0.80
50:O:196:LEU:HB3	50:O:202:LEU:HD13	1.63	0.80
77:s:175:LEU:HB3	77:s:180:ILE:HB	1.63	0.80
78:t:109:ILE:HD13	78:t:112:ILE:CD1	2.11	0.80
78:t:132:ILE:O	78:t:135:THR:HG23	1.82	0.80
16:R:44:LEU:HD22	16:R:49:LEU:HD12	1.62	0.80
18:9:454:U:H4'	23:GG:76:LEU:HD21	1.63	0.80
77:s:6:ARG:CG	77:s:7:ALA:H	1.90	0.80
78:t:106:PHE:CE2	78:t:159:ALA:HB1	2.16	0.80
78:t:103:ASN:HB3	78:t:143:VAL:CA	2.04	0.80
79:5:4888:U:H3	79:5:4931:G:H1	1.29	0.80
4:MM:40:LYS:HE3	14:ff:130:VAL:HG22	1.64	0.80
77:s:167:VAL:CG1	77:s:168:GLY:H	1.95	0.80
79:5:1766:A:H5''	79:5:1766:A:H8	1.46	0.80
82:1:1456:G:OP1	82:1:1483:A:OP2	2.00	0.80
82:1:1455:A:C4	82:1:1480:U:H2'	2.16	0.80
79:5:505:G:H1	79:5:653:U:H3	1.30	0.80
79:5:3781:C:H5'	79:5:3821:A:H4'	1.61	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:s:145:THR:C	77:s:146:LYS:O	2.24	0.80
83:PT:41:A:H2'	83:PT:42:C:O4'	1.82	0.80
15:gg:214:GLY:HA2	15:gg:236:ILE:HG13	1.63	0.80
77:s:45:MET:SD	77:s:48:ARG:CD	2.69	0.80
84:EF:421:VAL:HG23	84:EF:425:LEU:HD23	1.63	0.80
45:I:76:MET:HE3	45:I:151:ALA:HB2	1.62	0.80
78:t:11:LYS:HG2	78:t:64:ILE:H	1.47	0.80
78:t:16:ARG:HD3	78:t:57:ARG:CB	2.11	0.80
78:t:56:LEU:HD12	78:t:79:ALA:HA	1.65	0.80
77:s:57:LYS:HB3	77:s:60:MET:HB3	1.64	0.79
77:s:68:HIS:HA	77:s:71:ASN:CG	2.06	0.79
29:OO:34:PHE:HB3	29:OO:41:PHE:HB2	1.63	0.79
48:M:104:MET:HE2	50:O:199:HIS:HB3	1.64	0.79
50:O:77:SER:HB2	50:O:104:VAL:HG12	1.63	0.79
78:t:35:LEU:CD2	78:t:64:ILE:HG13	2.11	0.79
78:t:152:ILE:HA	78:t:155:ILE:CD1	2.12	0.79
82:1:1471:A:H2'	82:1:1472:A:O4'	1.81	0.79
2:FF:51:HIS:HB3	6:QQ:50:LYS:HE3	1.65	0.79
43:G:210:ILE:HG12	43:G:254:THR:HG22	1.64	0.79
77:s:125:ALA:HA	77:s:154:ILE:HB	1.63	0.79
77:s:200:ASN:OD1	77:s:200:ASN:O	2.01	0.79
84:EF:760:TYR:CE1	84:EF:770:VAL:HG21	2.18	0.79
18:9:1079:C:H4'	18:9:1182:A:H61	1.47	0.79
78:t:38:SER:HB3	78:t:41:LYS:HB3	1.64	0.79
3:KK:93:THR:HG23	3:KK:94:LEU:HD12	1.65	0.79
77:s:50:LYS:CD	77:s:98:ILE:HA	2.09	0.79
78:t:106:PHE:H	78:t:143:VAL:HG11	1.48	0.79
20:BB:146:ARG:HB2	20:BB:149:GLN:HB2	1.64	0.79
24:HH:7:LYS:HE3	24:HH:28:LEU:HD23	1.62	0.79
37:A:21:LYS:HG2	79:5:1541:C:H5''	1.64	0.79
77:s:143:ILE:HA	77:s:158:VAL:CB	2.13	0.79
77:s:145:THR:CA	77:s:154:ILE:HG23	2.09	0.79
19:AA:145:ILE:HG23	19:AA:159:ILE:HG23	1.63	0.79
77:s:62:ARG:HG2	77:s:82:ILE:HG21	1.64	0.79
84:EF:42:LYS:HG3	84:EF:351:LEU:HD11	1.65	0.79
84:EF:451:ILE:HG23	84:EF:471:GLY:C	2.08	0.79
78:t:104:ILE:HD12	78:t:141:CYS:HB2	1.65	0.79
82:1:1455:A:N3	82:1:1480:U:H2'	1.98	0.79
44:H:41:ILE:HD11	44:H:69:THR:HB	1.63	0.79
55:U:40:GLU:HG3	55:U:63:LEU:HD22	1.61	0.79
82:1:1493:G:H3'	82:1:1494:C:H6	1.45	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:EF:511:ALA:HB2	84:EF:520:LEU:HD23	1.65	0.79
1:DD:40:ARG:HG2	10:UU:108:PRO:HG3	1.65	0.79
6:QQ:74:GLY:HA2	18:9:1545:A:H4'	1.64	0.79
31:WW:104:LEU:HB3	31:WW:125:ILE:HA	1.63	0.79
77:s:98:ILE:HG22	77:s:102:LEU:HD11	1.64	0.79
77:s:167:VAL:CG1	77:s:168:GLY:N	2.46	0.79
34:aa:12:LYS:HA	34:aa:15:ARG:HH21	1.48	0.78
77:s:83:ARG:CZ	79:5:2022:C:H5''	2.11	0.78
27:LL:59:LYS:HD3	27:LL:134:LEU:HB3	1.65	0.78
37:A:147:ARG:HH21	37:A:155:LYS:HE3	1.47	0.78
52:Q:33:ARG:HG2	52:Q:48:LEU:HD21	1.65	0.78
78:t:112:ILE:HA	78:t:115:GLN:NE2	1.98	0.78
79:5:483:G:H3'	79:5:484:U:H2'	1.66	0.78
82:1:1457:G:H2'	82:1:1458:C:H6	1.47	0.78
84:EF:662:LEU:HD22	84:EF:683:PHE:HB2	1.63	0.78
10:UU:55:ARG:HG3	10:UU:87:ARG:HD2	1.66	0.78
19:AA:143:PRO:HA	30:VV:32:ILE:HD13	1.64	0.78
78:t:137:GLN:HE22	78:t:146:ARG:HD3	1.48	0.78
39:C:195:LYS:HE2	79:5:2333:G:H5''	1.65	0.78
42:F:93:ARG:HE	42:F:108:LEU:HD13	1.48	0.78
78:t:85:LEU:HD21	78:t:104:ILE:HG13	1.66	0.78
41:E:152:ILE:HD11	41:E:270:LEU:HD11	1.65	0.78
77:s:28:PHE:H	77:s:89:VAL:C	1.91	0.78
77:s:56:GLY:HA2	79:5:1998:A:H1'	1.64	0.78
77:s:121:VAL:HB	77:s:161:ILE:CB	2.13	0.78
69:j:18:LEU:HD23	69:j:25:LYS:HB2	1.64	0.78
77:s:123:VAL:HG23	77:s:160:LEU:HG	1.64	0.78
78:t:35:LEU:HD22	78:t:64:ILE:CG1	2.12	0.78
78:t:46:ILE:HG23	78:t:60:VAL:HB	1.63	0.78
79:5:717:U:H3	79:5:951:G:H1	1.31	0.78
79:5:1764:G:N7	79:5:1766:A:H5'	1.98	0.78
80:7:74:A:H61	80:7:100:A:H3'	1.46	0.78
10:UU:20:ILE:HD12	10:UU:98:VAL:HG21	1.66	0.78
66:g:61:PRO:HA	66:g:64:LEU:HD13	1.66	0.78
77:s:77:LYS:HZ3	77:s:78:LEU:N	1.82	0.78
77:s:135:THR:HA	77:s:138:PHE:CB	2.14	0.78
78:t:16:ARG:HB2	78:t:59:THR:HG22	1.64	0.78
82:1:1411:A:H61	82:1:1418:U:H3	1.31	0.78
24:HH:60:ILE:HG23	24:HH:92:VAL:HA	1.65	0.78
47:L:36:ARG:HH22	79:5:1364:U:H5''	1.46	0.78
51:P:16:LYS:HG2	51:P:149:ILE:HG12	1.64	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:s:29:ILE:HA	77:s:88:PHE:HA	1.66	0.78
77:s:52:VAL:O	77:s:89:VAL:HG13	1.83	0.78
77:s:62:ARG:HA	77:s:65:ILE:CD1	2.13	0.78
79:5:33:A:H3'	79:5:47:A:H61	1.47	0.78
84:EF:265:TYR:CD1	84:EF:292:LEU:HD11	2.18	0.78
18:9:562:U:H3	18:9:587:A:H62	1.31	0.78
77:s:13:TYR:O	77:s:14:PHE:C	2.24	0.78
77:s:52:VAL:HB	77:s:90:PHE:N	1.99	0.78
77:s:146:LYS:CA	77:s:155:LEU:HD22	2.13	0.78
84:EF:592:LEU:HD12	84:EF:603:TYR:CE2	2.19	0.78
1:DD:8:LYS:HE2	10:UU:59:LYS:HD3	1.66	0.78
47:L:59:VAL:HG22	79:5:74:G:H5''	1.64	0.78
57:X:95:THR:HG22	57:X:139:ARG:HA	1.66	0.78
77:s:15:LEU:O	77:s:17:ILE:HG22	1.83	0.78
77:s:18:ILE:CG2	77:s:71:ASN:ND2	2.47	0.78
84:EF:428:ARG:CZ	84:EF:444:LEU:HD22	2.14	0.78
10:UU:24:LEU:HD22	10:UU:112:VAL:HG22	1.63	0.77
18:9:1283:C:H4'	18:9:1286:G:H4'	1.66	0.77
69:j:21:ARG:HE	69:j:39:TYR:HA	1.47	0.77
78:t:28:LEU:C	78:t:32:ILE:HD12	2.09	0.77
82:1:1376:C:H2'	82:1:1377:U:C6	2.18	0.77
84:EF:115:VAL:HG13	84:EF:142:VAL:HG23	1.64	0.77
84:EF:752:PRO:HG2	84:EF:755:VAL:HG13	1.67	0.77
19:AA:156:TYR:HB3	30:VV:60:ARG:HH21	1.47	0.77
24:HH:101:LEU:HD13	24:HH:120:ARG:HG2	1.66	0.77
51:P:36:ILE:HD11	51:P:44:ALA:HB1	1.64	0.77
56:V:65:VAL:HG21	56:V:72:LEU:HB3	1.65	0.77
77:s:95:LEU:HD13	77:s:199:TYR:CE2	2.20	0.77
77:s:135:THR:HB	77:s:139:GLN:N	1.98	0.77
78:t:49:ALA:HB3	78:t:60:VAL:HG21	1.66	0.77
44:H:146:LEU:HD11	44:H:161:ILE:HD11	1.66	0.77
72:m:68:MET:HG2	72:m:79:PRO:HA	1.67	0.77
84:EF:79:TYR:CE1	84:EF:351:LEU:HD22	2.20	0.77
41:E:98:PRO:HA	41:E:107:THR:HG22	1.65	0.77
78:t:15:LEU:HD13	78:t:28:LEU:HB3	1.64	0.77
78:t:135:THR:HA	78:t:138:SER:OG	1.85	0.77
77:s:57:LYS:HA	79:5:2020:U:O3'	1.83	0.77
77:s:96:THR:HG23	77:s:97:GLU:H	1.48	0.77
29:OO:30:VAL:HG21	29:OO:96:LYS:HE3	1.67	0.77
40:D:37:VAL:HG23	40:D:50:ARG:HD2	1.65	0.77
42:F:91:VAL:HG13	42:F:141:TRP:HB3	1.66	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:I:91:LEU:HD12	45:I:135:ILE:HG23	1.65	0.77
55:U:23:LEU:HD11	55:U:83:LEU:HD21	1.64	0.77
77:s:52:VAL:H	77:s:89:VAL:HG12	1.48	0.77
77:s:116:ILE:HD12	77:s:164:GLY:HA2	1.67	0.77
77:s:122:THR:HG22	77:s:159:GLN:CA	2.14	0.77
78:t:13:VAL:HG12	78:t:62:LEU:O	1.85	0.77
26:JJ:70:ARG:HH21	26:JJ:94:LEU:HD11	1.49	0.77
38:B:95:THR:HG22	79:5:4910:A:H4'	1.66	0.77
78:t:49:ALA:HB1	78:t:73:VAL:HG21	1.66	0.77
79:5:1764:G:H2'	79:5:1767:A:H62	1.49	0.77
83:PT:40:C:H5''	83:PT:41:A:OP2	1.84	0.77
84:EF:288:THR:HA	84:EF:292:LEU:HD13	1.66	0.77
84:EF:664:ASP:C	84:EF:665:ILE:HD13	2.10	0.77
40:D:67:ALA:HA	40:D:72:ASP:HA	1.67	0.77
46:J:52:LYS:HD3	46:J:65:ASN:HA	1.66	0.77
77:s:84:GLY:O	79:5:2021:G:H4'	1.85	0.76
82:1:1363:A:OP2	82:1:1368:G:H5''	1.85	0.76
82:1:1453:C:H2'	82:1:1454:A:N6	1.99	0.76
16:R:35:ALA:HB1	16:R:40:GLN:HB3	1.67	0.76
18:9:1144:A:H5'	18:9:1355:C:H41	1.50	0.76
84:EF:662:LEU:HD13	84:EF:683:PHE:CD1	2.21	0.76
66:g:62:LYS:HD2	79:5:2517:A:H5'	1.66	0.76
77:s:102:LEU:HD23	77:s:102:LEU:N	1.99	0.76
77:s:117:ALA:HB3	77:s:161:ILE:CG2	2.12	0.76
5:PP:52:LYS:HG2	5:PP:80:LEU:HD11	1.66	0.76
6:QQ:96:TYR:HA	6:QQ:100:VAL:HG22	1.67	0.76
27:LL:93:LEU:HD21	32:XX:8:ARG:HH21	1.48	0.76
62:c:33:GLN:HA	62:c:36:LYS:HE2	1.67	0.76
78:t:28:LEU:HD13	78:t:46:ILE:CD1	2.14	0.76
78:t:104:ILE:HD12	78:t:141:CYS:CB	2.15	0.76
21:CC:81:ILE:HG23	21:CC:86:LEU:HB2	1.68	0.76
59:Z:26:VAL:HG12	59:Z:91:LEU:HD13	1.68	0.76
78:t:13:VAL:CG1	78:t:62:LEU:HB2	2.15	0.76
82:1:1390:A:N7	82:1:1394:A:H1'	2.00	0.76
84:EF:632:ALA:HA	84:EF:646:ALA:HB1	1.67	0.76
7:RR:89:SER:H	19:AA:195:TRP:HB3	1.50	0.76
77:s:135:THR:CA	77:s:138:PHE:HB2	2.14	0.76
84:EF:520:LEU:HD21	84:EF:570:ILE:HG22	1.66	0.76
34:aa:45:VAL:HG23	34:aa:50:VAL:HB	1.68	0.76
77:s:11:SER:CB	77:s:14:PHE:HB2	2.15	0.76
78:t:11:LYS:HE3	78:t:13:VAL:CG1	2.15	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:2573:A:H62	79:5:2761:U:H3	1.31	0.76
18:9:1259:A:H1'	18:9:1264:C:H42	1.50	0.76
77:s:121:VAL:CB	77:s:161:ILE:HB	2.15	0.76
78:t:129:ILE:HA	78:t:132:ILE:CG2	2.15	0.76
24:HH:8:ILE:HD12	24:HH:16:PRO:HB3	1.67	0.76
40:D:216:GLU:HG3	40:D:220:LYS:HE3	1.66	0.76
41:E:179:THR:HG21	41:E:256:VAL:HG11	1.68	0.76
53:S:35:PRO:HD2	53:S:39:VAL:HG21	1.67	0.76
79:5:989:U:H3	79:5:1065:G:H1	1.33	0.76
84:EF:762:VAL:CG1	84:EF:800:LEU:HD23	2.16	0.76
49:N:157:LYS:HD2	79:5:56:A:H4'	1.68	0.76
77:s:17:ILE:O	77:s:19:GLN:HG2	1.67	0.76
78:t:106:PHE:HA	78:t:109:ILE:CG1	2.15	0.76
6:QQ:34:VAL:HG22	6:QQ:70:VAL:HB	1.67	0.75
18:9:1737:G:H1	18:9:1797:U:H3	1.31	0.75
39:C:7:LEU:HG	39:C:21:ASN:HB3	1.69	0.75
47:L:63:THR:HG23	47:L:65:ARG:H	1.49	0.75
76:r:19:LYS:HB2	79:5:2337:C:H4'	1.68	0.75
77:s:149:ARG:HD2	84:EF:204:MET:HE1	1.68	0.75
84:EF:636:ALA:HB3	84:EF:643:VAL:HG23	1.68	0.75
19:AA:77:ILE:HG12	19:AA:99:ILE:HD12	1.68	0.75
39:C:144:ILE:HD13	76:r:73:PRO:HG2	1.66	0.75
52:Q:147:GLU:HG3	52:Q:150:ARG:HD2	1.67	0.75
60:a:71:PRO:HG2	60:a:108:TYR:HA	1.67	0.75
77:s:192:VAL:HB	77:s:199:TYR:HB2	1.67	0.75
78:t:64:ILE:HG23	78:t:68:GLN:CA	2.15	0.75
79:5:4699:U:H1'	79:5:4700:A:H5''	1.66	0.75
84:EF:372:LEU:HD12	84:EF:494:MET:SD	2.26	0.75
84:EF:592:LEU:HD11	84:EF:601:ARG:HD3	1.68	0.75
26:JJ:40:LYS:HD3	36:ee:107:ARG:HH21	1.51	0.75
77:s:123:VAL:HB	77:s:143:ILE:HG23	1.67	0.75
78:t:24:ALA:H	78:t:92:ARG:NE	1.84	0.75
82:1:1385:A:H2'	82:1:1386:U:C6	2.21	0.75
82:1:1479:U:C2'	82:1:1480:U:H4'	2.16	0.75
19:AA:30:LEU:HD21	19:AA:35:GLU:HG2	1.68	0.75
77:s:142:GLY:C	77:s:158:VAL:HG11	2.11	0.75
78:t:109:ILE:HA	78:t:112:ILE:CB	2.15	0.75
78:t:125:LEU:CD2	78:t:160:VAL:HB	2.08	0.75
79:5:1769:G:H3'	79:5:1770:A:C8	2.21	0.75
39:C:302:LEU:HD22	52:Q:38:ARG:HB3	1.68	0.75
50:O:125:LYS:HG3	50:O:129:LEU:HD22	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:s:58:ASN:OD1	79:5:2021:G:H5'	1.87	0.75
78:t:15:LEU:HD21	78:t:31:LYS:CG	2.17	0.75
79:5:158:A:H4'	79:5:159:C:H5''	1.69	0.75
2:FF:35:LEU:HD21	2:FF:146:ARG:HD2	1.67	0.75
18:9:561:A:H5'	26:JJ:171:GLY:HA3	1.69	0.75
18:9:612:U:H3	18:9:629:A:H62	1.33	0.75
48:M:82:ILE:HA	48:M:85:LYS:HZ3	1.51	0.75
78:t:32:ILE:HD13	78:t:39:PRO:CA	2.16	0.75
78:t:35:LEU:HD13	78:t:64:ILE:HD11	1.68	0.75
5:PP:34:MET:HG3	5:PP:42:ARG:HA	1.69	0.75
43:G:199:LEU:HD13	43:G:205:ALA:HB2	1.67	0.75
84:EF:222:ALA:HB3	84:EF:346:ALA:HB2	1.67	0.75
20:BB:105:LEU:HD23	20:BB:213:ARG:HA	1.69	0.74
38:B:220:ILE:HG12	38:B:278:THR:HG23	1.69	0.74
77:s:180:ILE:O	77:s:181:SER:HB2	1.85	0.74
78:t:15:LEU:HD21	78:t:31:LYS:HG3	1.67	0.74
78:t:46:ILE:HA	78:t:60:VAL:HG11	1.69	0.74
78:t:61:LYS:HG3	78:t:72:GLU:HG2	1.69	0.74
78:t:130:LYS:HZ1	78:t:151:ILE:HA	1.49	0.74
83:PT:43:G:C2'	83:PT:44:A:H5'	2.17	0.74
26:JJ:136:ARG:HD2	26:JJ:139:LYS:HA	1.69	0.74
36:ee:85:VAL:HA	36:ee:88:GLN:HG2	1.68	0.74
39:C:79:VAL:HG21	39:C:86:ARG:HG2	1.67	0.74
41:E:160:HIS:HB3	41:E:163:LYS:HD2	1.69	0.74
53:S:127:MET:HA	54:T:153:PRO:HD2	1.68	0.74
31:WW:7:LEU:HD23	31:WW:34:ILE:HG12	1.68	0.74
77:s:99:ARG:HH12	77:s:103:LEU:HD22	1.51	0.74
77:s:102:LEU:HA	77:s:105:ASN:ND2	2.02	0.74
21:CC:103:LYS:HD2	21:CC:133:TYR:HE1	1.52	0.74
42:F:47:LYS:HA	79:5:1237:C:H5	1.51	0.74
42:F:126:LYS:HB2	54:T:133:ALA:HB3	1.69	0.74
77:s:111:ALA:O	77:s:183:PHE:CE2	2.39	0.74
79:5:1758:G:N2	79:5:1775:A:H1'	2.03	0.74
82:1:1406:C:H4'	82:1:1420:G:H2'	1.68	0.74
24:HH:143:ARG:HD2	31:WW:53:ILE:HG12	1.69	0.74
77:s:25:PRO:HD3	77:s:92:LYS:CD	2.16	0.74
77:s:121:VAL:HG12	77:s:160:LEU:HB2	1.68	0.74
77:s:128:THR:HB	77:s:152:ILE:HD12	1.68	0.74
78:t:81:ILE:CD1	78:t:136:ALA:HA	2.15	0.74
26:JJ:102:ILE:HG22	26:JJ:106:LEU:HD13	1.69	0.74
77:s:51:ALA:HB2	77:s:98:ILE:HD13	1.68	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:3944:G:H1	79:5:4069:U:H3	1.36	0.74
18:9:486:A:H1'	18:9:513:G:H22	1.52	0.74
18:9:924:G:H1	18:9:1018:U:H3	1.32	0.74
22:EE:45:ILE:HG12	22:EE:49:ARG:HH21	1.51	0.74
77:s:14:PHE:O	77:s:17:ILE:CB	2.35	0.74
78:t:116:MET:HG3	78:t:132:ILE:CG2	2.17	0.74
82:1:1345:G:H1	82:1:1386:U:H3	1.34	0.74
84:EF:520:LEU:HD22	84:EF:568:ILE:HB	1.70	0.74
84:EF:731:ALA:HB1	84:EF:854:LEU:HD12	1.69	0.74
77:s:26:LYS:HG2	77:s:91:THR:CG2	2.18	0.74
82:1:1479:U:C5	82:1:1480:U:H1'	2.22	0.74
56:V:18:LEU:HD13	56:V:54:ALA:HB3	1.70	0.74
68:i:33:LEU:HD11	68:i:38:LYS:HB2	1.68	0.74
77:s:51:ALA:HB3	77:s:89:VAL:HG12	1.68	0.74
26:JJ:127:ARG:HD3	36:ee:104:ARG:HD3	1.68	0.74
77:s:11:SER:O	77:s:13:TYR:CA	2.36	0.74
78:t:107:ASP:HA	78:t:110:VAL:HG23	1.70	0.74
78:t:114:ARG:HH21	78:t:160:VAL:HG11	1.51	0.74
79:5:667:A:H5'	79:5:668:C:H5	1.53	0.74
2:FF:50:PRO:HB3	2:FF:69:VAL:HG12	1.68	0.73
9:TT:18:LEU:HD13	9:TT:134:ILE:HD13	1.70	0.73
29:OO:116:LEU:HD22	34:aa:53:ILE:HD11	1.70	0.73
20:BB:165:ARG:HG2	20:BB:169:MET:HE3	1.69	0.73
40:D:146:LEU:HD12	79:5:4323:A:H2	1.52	0.73
78:t:106:PHE:O	78:t:109:ILE:HB	1.88	0.73
78:t:117:ARG:HD2	78:t:125:LEU:CA	2.19	0.73
79:5:2092:G:C4	79:5:2097:U:H5	2.06	0.73
84:EF:381:ALA:HB2	84:EF:488:PHE:CZ	2.24	0.73
30:VV:40:ASP:HB2	30:VV:47:ASN:HD21	1.53	0.73
77:s:6:ARG:O	77:s:8:THR:OG1	2.05	0.73
82:1:1437:C:H2'	82:1:1438:C:C6	2.23	0.73
84:EF:156:MET:HE3	84:EF:353:MET:HE2	1.69	0.73
2:FF:49:LEU:HD13	2:FF:50:PRO:HD2	1.70	0.73
8:SS:15:VAL:HG22	8:SS:68:ILE:HD11	1.70	0.73
17:W:82:ILE:HD12	23:GG:144:LEU:HD13	1.68	0.73
45:I:191:ILE:HD11	45:I:212:LEU:HD11	1.70	0.73
3:KK:58:VAL:HG21	3:KK:69:TRP:HB3	1.70	0.73
4:MM:52:LEU:HD21	4:MM:62:VAL:HG23	1.70	0.73
18:9:502:C:H5'	22:EE:66:MET:HE2	1.68	0.73
20:BB:195:LYS:HG3	20:BB:199:LYS:HE3	1.70	0.73
48:M:69:ARG:HH21	79:5:738(A):C:H4'	1.53	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:O:34:VAL:HG22	50:O:103:LYS:HB3	1.69	0.73
69:j:21:ARG:HG3	81:8:102:G:H4'	1.69	0.73
77:s:18:ILE:CB	77:s:21:LEU:CG	2.33	0.73
77:s:20:LEU:HD21	77:s:90:PHE:CE1	2.23	0.73
77:s:135:THR:HB	77:s:138:PHE:HB2	1.70	0.73
77:s:137:PHE:HA	77:s:140:ALA:CB	2.16	0.73
82:1:1360:A:C8	82:1:1444:A:H1'	2.23	0.73
82:1:1395:A:H2'	82:1:1396:G:C8	2.24	0.73
84:EF:313:ALA:HA	84:EF:316:ILE:HD12	1.68	0.73
32:XX:128:VAL:HG21	32:XX:141:PRO:HD3	1.69	0.73
77:s:52:VAL:HG21	77:s:90:PHE:HB2	1.70	0.73
77:s:99:ARG:HG2	77:s:99:ARG:HH11	1.51	0.73
78:t:38:SER:HB3	78:t:41:LYS:CB	2.18	0.73
78:t:149:HIS:HA	78:t:152:ILE:CD1	2.19	0.73
79:5:1990:A:H3'	79:5:1991:A:H5''	1.69	0.73
84:EF:222:ALA:O	84:EF:346:ALA:HB2	1.88	0.73
20:BB:217:MET:HE2	20:BB:220:LYS:HG2	1.70	0.73
38:B:117:ARG:HD2	38:B:180:LEU:HD13	1.71	0.73
45:I:76:MET:HG3	45:I:87:ILE:HD11	1.71	0.73
51:P:29:THR:HG22	51:P:119:VAL:HG21	1.69	0.73
77:s:27:CYS:HB2	77:s:90:PHE:HA	1.70	0.73
77:s:57:LYS:CA	79:5:2020:U:H4'	2.18	0.73
77:s:94:ASP:OD1	77:s:96:THR:HG22	1.88	0.73
84:EF:12:ILE:HG21	84:EF:99:LEU:HD13	1.71	0.73
19:AA:66:VAL:HG21	19:AA:185:MET:HB2	1.70	0.73
20:BB:65:ARG:HH12	29:OO:51:GLU:HB2	1.53	0.73
77:s:123:VAL:HB	77:s:143:ILE:CG2	2.18	0.73
77:s:125:ALA:HB2	77:s:155:LEU:C	2.14	0.73
77:s:171:GLU:O	77:s:174:LEU:HG	1.89	0.73
12:cc:29:GLN:HE22	12:cc:67:ARG:HA	1.54	0.73
31:WW:111:MET:HE3	31:WW:116:ALA:HA	1.69	0.73
49:N:184:ILE:HG23	49:N:194:ARG:HH22	1.54	0.73
77:s:25:PRO:CG	77:s:92:LYS:HA	2.18	0.73
77:s:130:LEU:HD21	77:s:132:PRO:CB	2.15	0.73
77:s:130:LEU:CD1	77:s:132:PRO:HB3	2.19	0.73
78:t:13:VAL:HG21	78:t:31:LYS:HB3	1.71	0.73
82:1:1345:G:H1'	82:1:1390:A:H2	1.54	0.73
84:EF:420:LEU:HD12	84:EF:421:VAL:N	2.04	0.73
77:s:81:HIS:CD2	77:s:198:ILE:HG21	2.23	0.73
78:t:17:CYS:CB	78:t:46:ILE:HG22	2.15	0.73
82:1:1331:A:C8	82:1:1416:C:H1'	2.24	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:1:1339:U:H3	82:1:1392:G:H1	1.33	0.73
58:Y:22:PRO:HD2	58:Y:25:ILE:HD12	1.71	0.72
78:t:137:GLN:HE21	78:t:142:ASN:HD21	1.35	0.72
12:cc:31:ARG:HG2	12:cc:43:ILE:HG12	1.69	0.72
15:gg:289:LEU:HD12	15:gg:298:LEU:HD21	1.68	0.72
23:GG:106:LEU:HD13	23:GG:109:LEU:HD21	1.72	0.72
29:OO:26:ASN:HB3	29:OO:91:THR:HB	1.70	0.72
50:O:130:LYS:HB3	50:O:133:ARG:HG2	1.70	0.72
56:V:60:MET:HE1	56:V:78:PRO:HB3	1.71	0.72
77:s:128:THR:HG21	77:s:130:LEU:HD22	1.71	0.72
78:t:61:LYS:CG	78:t:72:GLU:HG2	2.18	0.72
79:5:58:G:H4'	79:5:59:A:H4'	1.71	0.72
83:PT:65:G:H2'	83:PT:66:C:H5'	1.70	0.72
84:EF:421:VAL:CG2	84:EF:425:LEU:HD23	2.19	0.72
38:B:189:THR:HG23	38:B:192:GLU:H	1.54	0.72
56:V:82:ILE:HD13	56:V:121:VAL:HG22	1.69	0.72
67:h:4:ILE:HD12	67:h:53:SER:HB2	1.70	0.72
77:s:19:GLN:N	77:s:21:LEU:HB2	2.00	0.72
77:s:30:VAL:CB	77:s:189:ILE:HA	2.16	0.72
77:s:57:LYS:CB	77:s:60:MET:HB2	2.18	0.72
77:s:58:ASN:HB2	79:5:2021:G:H5''	1.71	0.72
77:s:77:LYS:HZ2	77:s:78:LEU:HG	1.51	0.72
78:t:105:THR:HG22	78:t:107:ASP:H	1.53	0.72
84:EF:617:ILE:HG23	84:EF:652:PHE:CZ	2.24	0.72
84:EF:734:LEU:HB3	84:EF:850:LEU:HD22	1.71	0.72
29:OO:75:MET:HG3	29:OO:118:ALA:HB2	1.70	0.72
46:J:141:ILE:HA	46:J:144:LYS:HE2	1.70	0.72
77:s:126:GLN:CB	77:s:154:ILE:HD13	2.18	0.72
77:s:146:LYS:HA	77:s:155:LEU:HD22	1.70	0.72
77:s:189:ILE:HG13	77:s:190:GLN:H	1.54	0.72
78:t:125:LEU:CD2	78:t:161:GLU:HB2	2.20	0.72
78:t:129:ILE:CA	78:t:132:ILE:HG22	2.19	0.72
2:FF:78:MET:HE3	18:9:1222:G:H5''	1.72	0.72
17:W:8:PHE:HZ	17:W:49:ILE:HD12	1.55	0.72
23:GG:67:VAL:HG11	23:GG:99:GLY:HA2	1.70	0.72
50:O:89:PRO:HD3	79:5:1914:C:H4'	1.69	0.72
78:t:64:ILE:HA	78:t:69:ALA:N	2.04	0.72
82:1:1359:A:N7	82:1:1373:C:H2'	2.05	0.72
40:D:40:ASP:HB3	54:T:69:GLN:HA	1.71	0.72
52:Q:67:ILE:HD13	52:Q:98:LEU:HD11	1.71	0.72
77:s:192:VAL:HG23	77:s:199:TYR:CB	2.20	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:t:117:ARG:CA	78:t:128:THR:HG21	2.16	0.72
27:LL:90:ARG:HD3	27:LL:109:MET:HE3	1.72	0.72
77:s:130:LEU:CD2	77:s:132:PRO:HD3	2.13	0.72
21:CC:251:LEU:HD23	30:VV:23:ILE:HG23	1.71	0.72
27:LL:18:GLN:HB2	27:LL:33:LEU:HD22	1.71	0.72
37:A:80:GLU:HG3	75:p:66:GLY:HA2	1.72	0.72
58:Y:8:THR:HG23	58:Y:10:ASP:H	1.53	0.72
74:o:44:LYS:HE2	74:o:52:THR:HB	1.70	0.72
77:s:52:VAL:H	77:s:89:VAL:CG1	2.03	0.72
1:DD:109:LEU:HD12	1:DD:184:ILE:HD11	1.72	0.72
1:DD:151:LYS:HE2	1:DD:153:VAL:HG21	1.71	0.72
19:AA:33:GLN:HB3	19:AA:154:LEU:HD12	1.72	0.72
38:B:229:LYS:HG3	38:B:272:LYS:HD3	1.71	0.72
71:l:16:LYS:HG3	71:l:49:LEU:HD21	1.72	0.72
77:s:102:LEU:HA	77:s:105:ASN:CG	2.14	0.72
5:PP:39:ALA:HA	5:PP:42:ARG:HG3	1.70	0.72
16:R:70:ARG:HE	16:R:75:HIS:HB2	1.53	0.72
23:GG:159:ARG:HB2	23:GG:171:THR:HG22	1.72	0.72
37:A:20:VAL:HG12	37:A:23:ARG:HD2	1.72	0.72
77:s:57:LYS:HG2	77:s:60:MET:H	1.55	0.72
77:s:112:ARG:HA	77:s:167:VAL:HG21	1.71	0.72
82:1:1425:A:N3	82:1:1437:C:H5	1.88	0.72
82:1:1493:G:H3'	82:1:1494:C:C6	2.24	0.72
84:EF:573:SER:O	84:EF:574:ASP:C	2.32	0.72
30:VV:62:MET:HE1	35:bb:3:LEU:HD11	1.71	0.71
42:F:115:GLN:HG3	52:Q:3:VAL:HG13	1.71	0.71
61:b:5:LYS:HE2	61:b:8:THR:HB	1.72	0.71
77:s:18:ILE:HG12	77:s:21:LEU:HD12	1.70	0.71
18:9:1016:U:H4'	28:NN:16:LEU:HD23	1.72	0.71
42:F:133:ARG:HA	42:F:136:GLU:HG3	1.72	0.71
77:s:124:PRO:HA	77:s:156:SER:C	2.14	0.71
77:s:175:LEU:CB	77:s:180:ILE:HB	2.19	0.71
77:s:192:VAL:HG23	77:s:199:TYR:HB3	1.72	0.71
78:t:117:ARG:HA	78:t:128:THR:CG2	2.16	0.71
79:5:25:A:H61	79:5:58:G:H1	1.39	0.71
82:1:1439:A:H5'	82:1:1440:G:N7	2.05	0.71
84:EF:635:LEU:HD22	84:EF:641:TRP:CD1	2.24	0.71
2:FF:49:LEU:HD23	6:QQ:49:TYR:HB2	1.71	0.71
26:JJ:110:LEU:HB2	26:JJ:147:PHE:HB3	1.73	0.71
32:XX:100:VAL:HG12	32:XX:125:VAL:HA	1.72	0.71
56:V:15:ARG:HB3	79:5:4618:G:H5''	1.70	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:956:A:H1'	79:5:2076:G:H5''	1.70	0.71
84:EF:154:VAL:HB	84:EF:353:MET:HE1	1.69	0.71
84:EF:163:ALA:HB1	84:EF:167:LEU:HD23	1.72	0.71
19:AA:61:ALA:HB1	19:AA:145:ILE:HD13	1.72	0.71
34:aa:12:LYS:HG3	34:aa:15:ARG:HB2	1.72	0.71
51:P:122:ALA:HB3	51:P:143:PRO:HG2	1.71	0.71
77:s:45:MET:HA	77:s:48:ARG:NE	2.04	0.71
78:t:11:LYS:CG	78:t:64:ILE:H	2.03	0.71
78:t:37:LEU:HD12	78:t:42:VAL:CG2	2.21	0.71
78:t:152:ILE:HA	78:t:155:ILE:CG1	2.21	0.71
82:1:1335:U:H3	82:1:1395:A:H61	1.39	0.71
84:EF:77:LEU:N	84:EF:77:LEU:HD23	2.06	0.71
6:QQ:44:PRO:HD2	6:QQ:81:ILE:HD11	1.72	0.71
39:C:190:ARG:HB2	39:C:202:ILE:HG23	1.72	0.71
42:F:178:LEU:HD21	42:F:203:ALA:HA	1.71	0.71
77:s:77:LYS:HZ3	77:s:198:ILE:HD11	1.54	0.71
77:s:129:GLY:H	77:s:152:ILE:CG1	2.02	0.71
84:EF:81:LEU:HD22	84:EF:98:PHE:CE2	2.26	0.71
33:YY:27:VAL:HG11	33:YY:35:VAL:HG21	1.71	0.71
77:s:86:VAL:HG12	77:s:87:GLY:H	1.56	0.71
82:1:1353:U:C3'	82:1:1354:U:H4'	2.21	0.71
22:EE:100:ARG:HD2	22:EE:102:ILE:HD11	1.73	0.71
77:s:129:GLY:N	77:s:152:ILE:HG13	2.05	0.71
84:EF:357:HIS:O	84:EF:358:LEU:HD22	1.91	0.71
84:EF:609:PHE:CE1	84:EF:617:ILE:HD11	2.26	0.71
84:EF:649:ILE:HG12	84:EF:661:ILE:HD12	1.71	0.71
54:T:18:PRO:HB2	54:T:21:LYS:HD2	1.72	0.71
59:Z:42:LEU:HG	59:Z:74:VAL:HG22	1.73	0.71
68:i:58:MET:HE1	68:i:94:LEU:HB2	1.73	0.71
84:EF:692:LEU:HD11	84:EF:740:LEU:HD21	1.72	0.71
15:gg:165:ILE:HG13	15:gg:177:TRP:HB2	1.72	0.71
39:C:292:ILE:HG23	52:Q:128:LEU:HD21	1.73	0.71
43:G:140:LEU:HD21	43:G:144:THR:HG22	1.72	0.71
77:s:68:HIS:CA	77:s:71:ASN:HB2	2.21	0.71
77:s:126:GLN:HB3	77:s:154:ILE:HD13	1.72	0.71
82:1:1450:C:H2'	82:1:1451:C:O4'	1.90	0.71
84:EF:89:ILE:HG22	84:EF:356:ILE:HD13	1.73	0.71
16:R:45:ILE:HG12	16:R:50:ILE:HD11	1.70	0.71
18:9:520:A:H5''	26:JJ:12:THR:HG23	1.73	0.71
38:B:59:GLU:HG2	38:B:366:LYS:HE2	1.73	0.71
43:G:116:LEU:HD21	49:N:29:GLN:HG3	1.73	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:f:33:VAL:HG23	65:f:38:GLU:HB2	1.73	0.71
77:s:14:PHE:O	77:s:17:ILE:HB	1.91	0.71
77:s:25:PRO:HD3	77:s:92:LYS:CG	2.20	0.71
77:s:130:LEU:CG	77:s:132:PRO:CG	2.69	0.71
78:t:53:TRP:CG	78:t:58:ILE:HD13	2.26	0.71
82:l:1429:A:H3'	82:l:1430:G:H8	1.56	0.71
18:9:12:U:H1'	18:9:1356:G:H1'	1.73	0.70
37:A:128:ARG:HG3	79:5:3681:G:H2'	1.71	0.70
44:H:47:LEU:HD13	44:H:55:LEU:HB2	1.71	0.70
52:Q:110:ARG:HG3	52:Q:120:ILE:HD12	1.73	0.70
70:k:60:LEU:HD13	70:k:61:PRO:HD2	1.72	0.70
77:s:175:LEU:HA	77:s:180:ILE:HB	1.73	0.70
78:t:129:ILE:O	78:t:132:ILE:HG22	1.91	0.70
79:5:4099:G:H22	79:5:4109:G:H22	1.37	0.70
82:l:1360:A:H1'	82:l:1443:A:C8	2.25	0.70
84:EF:597:ASN:O	84:EF:598:LYS:C	2.31	0.70
37:A:234:LYS:HG2	37:A:238:ILE:HD12	1.73	0.70
55:U:113:ARG:HH22	79:5:2703:G:H5''	1.56	0.70
65:f:69:VAL:HG11	79:5:4944:C:H1'	1.72	0.70
84:EF:21:ASN:HB3	84:EF:122:THR:HG22	1.73	0.70
15:gg:207:CYS:HB2	15:gg:221:LEU:HD11	1.74	0.70
20:BB:121:ILE:HG12	20:BB:161:VAL:HG13	1.73	0.70
29:OO:65:ASP:HA	29:OO:68:GLU:HG3	1.73	0.70
52:Q:42:THR:HB	79:5:1428:U:H5'	1.72	0.70
77:s:101:MET:CE	77:s:102:LEU:HD23	1.96	0.70
77:s:173:THR:HA	77:s:176:ASN:HD21	1.54	0.70
78:t:109:ILE:HD13	78:t:112:ILE:HD13	1.71	0.70
82:l:1439:A:H3'	82:l:1440:G:C8	2.27	0.70
19:AA:54:THR:HA	19:AA:162:PRO:HD2	1.74	0.70
23:GG:121:ILE:HD12	23:GG:122:PRO:HD2	1.72	0.70
35:bb:2:PRO:HG2	35:bb:5:LYS:HE3	1.72	0.70
56:V:117:ILE:HD12	56:V:136:ALA:HB2	1.74	0.70
64:e:99:ILE:HD13	64:e:108:ARG:HG2	1.74	0.70
77:s:149:ARG:C	77:s:151:THR:N	2.35	0.70
78:t:28:LEU:HD12	78:t:43:GLY:CA	2.13	0.70
84:EF:36:THR:O	84:EF:40:VAL:HG23	1.91	0.70
5:PP:122:THR:HG21	18:9:1516:G:H4'	1.72	0.70
28:NN:84:LEU:HD13	28:NN:89:TYR:HB2	1.72	0.70
40:D:271:MET:HE2	40:D:275:GLN:HB3	1.73	0.70
43:G:136:PHE:HA	43:G:236:ILE:HD13	1.73	0.70
55:U:44:GLN:HG3	55:U:56:LEU:HD11	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:1:1369:A:H2	82:1:1450:C:H42	1.37	0.70
18:9:642:U:H4'	18:9:644:G:H4'	1.71	0.70
19:AA:79:SER:HA	19:AA:101:GLY:HA2	1.72	0.70
19:AA:82:THR:HG23	19:AA:168:ALA:HA	1.74	0.70
50:O:60:LYS:HE2	79:5:2046:G:H5'	1.73	0.70
77:s:102:LEU:HD23	77:s:102:LEU:H	1.53	0.70
79:5:759:G:C6	79:5:904:G:O6	2.43	0.70
84:EF:25:ILE:HD13	84:EF:127:VAL:CG1	2.21	0.70
26:JJ:50:LEU:HD13	26:JJ:102:ILE:HG12	1.73	0.70
38:B:33:PRO:HA	38:B:351:LEU:HD13	1.71	0.70
49:N:8:GLN:HE22	79:5:278:G:H5''	1.57	0.70
49:N:53:TYR:HB2	49:N:133:ILE:HD13	1.74	0.70
63:d:50:ARG:HG2	63:d:54:MET:HE3	1.73	0.70
77:s:47:LEU:HB3	77:s:50:LYS:HE3	1.73	0.70
79:5:1593:A:H4'	79:5:2839:U:H4'	1.73	0.70
79:5:1766:A:H5''	79:5:1766:A:C8	2.27	0.70
79:5:2349:A:H5''	79:5:2350:U:H5''	1.73	0.70
84:EF:822:GLY:O	84:EF:823:ASP:C	2.34	0.70
2:FF:74:ASN:HA	2:FF:77:MET:HE2	1.73	0.70
11:ZZ:73:VAL:HG12	11:ZZ:79:ILE:HD11	1.74	0.70
40:D:56:THR:HG21	80:7:26:C:H5''	1.73	0.70
77:s:8:THR:C	77:s:10:LYS:H	2.00	0.70
77:s:81:HIS:HD2	77:s:198:ILE:HG21	1.56	0.70
77:s:112:ARG:CA	77:s:167:VAL:HG21	2.21	0.70
77:s:146:LYS:H	77:s:155:LEU:CB	2.05	0.70
84:EF:303:ALA:HB2	84:EF:311:GLU:CD	2.17	0.70
10:UU:24:LEU:HD11	10:UU:39:LEU:HD12	1.73	0.70
18:9:1562:C:H2'	18:9:1563:G:H8	1.56	0.70
45:I:190:LEU:HB3	45:I:197:VAL:HG21	1.72	0.70
53:S:67:VAL:HA	79:5:729:G:H1	1.57	0.70
56:V:3:LYS:HG3	56:V:128:LEU:HD11	1.72	0.70
69:j:82:THR:HB	81:8:94:G:H21	1.56	0.70
72:m:71:ARG:HE	72:m:96:ARG:HD3	1.55	0.70
78:t:112:ILE:HG23	78:t:132:ILE:HD12	1.74	0.70
82:1:1494:C:H41	84:EF:714:ILE:HA	1.55	0.70
10:UU:26:SER:HB2	10:UU:32:LEU:HD13	1.72	0.70
16:R:8:LYS:HD3	16:R:19:LYS:HB2	1.72	0.70
28:NN:26:LEU:HD12	28:NN:28:LEU:HD13	1.72	0.70
56:V:82:ILE:HG22	56:V:83:ARG:HG3	1.74	0.70
77:s:193:PHE:CG	77:s:198:ILE:HA	2.27	0.70
82:1:1390:A:H4'	82:1:1391:G:H5''	1.74	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:EF:429:ILE:HD12	84:EF:443:TYR:HB2	1.74	0.70
18:9:560:A:H5'	26:JJ:174:LYS:HB2	1.73	0.69
23:GG:52:ILE:HD11	23:GG:102:VAL:HG21	1.74	0.69
84:EF:99:LEU:HD23	84:EF:100:ILE:N	2.06	0.69
84:EF:233:VAL:HG21	84:EF:253:VAL:HG13	1.74	0.69
6:QQ:139:ALA:HB2	18:9:1650:A:H5''	1.72	0.69
42:F:178:LEU:HD23	42:F:183:ILE:HD12	1.74	0.69
77:s:110:ALA:CB	77:s:183:PHE:CE2	2.59	0.69
78:t:33:GLY:N	78:t:34:PRO:HD2	2.06	0.69
84:EF:155:LEU:CD2	84:EF:185:VAL:HG21	2.23	0.69
84:EF:287:ARG:HD3	84:EF:288:THR:HG22	1.72	0.69
8:SS:20:ILE:HD11	8:SS:33:ILE:HD11	1.74	0.69
77:s:35:VAL:HB	77:s:39:GLN:CG	2.19	0.69
81:8:1:C:H2'	81:8:2:G:H5'	1.74	0.69
1:DD:135:GLU:HG3	1:DD:153:VAL:HG22	1.73	0.69
8:SS:15:VAL:HG13	8:SS:68:ILE:HG12	1.75	0.69
18:9:318:A:H3'	18:9:319:C:H5''	1.73	0.69
20:BB:225:LEU:HB3	43:G:317:LYS:HD2	1.75	0.69
21:CC:187:ARG:HD2	21:CC:192:LEU:HD13	1.73	0.69
37:A:98:ILE:HD11	75:p:80:LYS:HA	1.73	0.69
42:F:103:LYS:HE3	42:F:134:ILE:HD11	1.74	0.69
55:U:25:CYS:HB2	55:U:28:PRO:HG2	1.74	0.69
77:s:127:ASN:HA	77:s:152:ILE:O	1.92	0.69
78:t:17:CYS:HB2	78:t:46:ILE:CG2	2.21	0.69
82:1:1460:G:H3'	82:1:1461:C:C6	2.28	0.69
84:EF:811:GLN:HE22	84:EF:813:VAL:HB	1.57	0.69
15:gg:119:GLN:HE21	15:gg:131:LEU:HD21	1.57	0.69
18:9:161:U:H1'	23:GG:87:ARG:HH12	1.56	0.69
19:AA:8:LEU:HD11	30:VV:39:VAL:HG11	1.73	0.69
33:YY:7:ILE:HD12	33:YY:43:LYS:HD3	1.73	0.69
60:a:102:ASP:HB3	60:a:105:ARG:HB3	1.74	0.69
83:PT:37:A:H2'	83:PT:38:U:H5'	1.73	0.69
7:RR:88:VAL:HG23	19:AA:197:VAL:HG23	1.73	0.69
77:s:18:ILE:CA	77:s:21:LEU:HD23	2.17	0.69
77:s:24:TYR:HA	77:s:92:LYS:CE	2.22	0.69
77:s:148:SER:O	77:s:152:ILE:CA	2.40	0.69
77:s:20:LEU:HD11	77:s:90:PHE:CD1	2.28	0.69
84:EF:206:ASP:C	84:EF:212:VAL:HG13	2.18	0.69
9:TT:96:SER:HB3	9:TT:99:VAL:HG22	1.75	0.69
24:HH:157:HIS:HB3	24:HH:190:PRO:HD3	1.75	0.69
30:VV:38:GLU:HG2	30:VV:49:GLN:HE21	1.56	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:C:37:VAL:HG11	39:C:246:VAL:HG22	1.75	0.69
43:G:111:PRO:HD2	43:G:114:ILE:HD12	1.75	0.69
43:G:207:LEU:HD11	43:G:275:ILE:HD12	1.73	0.69
48:M:38:VAL:HG21	48:M:50:MET:HE2	1.73	0.69
77:s:83:ARG:NH1	79:5:2022:C:H5''	2.08	0.69
78:t:147:HIS:N	78:t:148:PRO:HD2	2.08	0.69
79:5:1939:A:H5'	79:5:1940:G:H4'	1.75	0.69
79:5:2409:U:H4'	79:5:2428:A:H4'	1.75	0.69
82:1:1338:A:H2'	82:1:1339:U:C6	2.27	0.69
82:1:1494:C:N4	84:EF:714:ILE:HA	2.06	0.69
84:EF:68:ILE:HD12	84:EF:108:HIS:NE2	2.08	0.69
84:EF:154:VAL:HG12	84:EF:353:MET:SD	2.33	0.69
84:EF:776:VAL:HG22	84:EF:783:VAL:HG23	1.73	0.69
22:EE:122:LYS:HG2	22:EE:164:LEU:HD11	1.73	0.69
46:J:20:LEU:HD13	46:J:132:VAL:HG22	1.74	0.69
65:f:7:CYS:HB2	65:f:103:VAL:HG23	1.74	0.69
77:s:18:ILE:HG12	77:s:21:LEU:CD1	2.23	0.69
77:s:56:GLY:CA	77:s:61:MET:HE1	2.23	0.69
77:s:128:THR:CG2	77:s:130:LEU:HD22	2.23	0.69
78:t:50:THR:CA	78:t:53:TRP:HD1	1.98	0.69
78:t:109:ILE:C	78:t:112:ILE:HB	2.17	0.69
78:t:146:ARG:HH11	78:t:146:ARG:HG2	1.58	0.69
82:1:1392:G:H1'	82:1:1393:U:OP2	1.93	0.69
38:B:254:ILE:HB	79:5:3898:G:H5'	1.75	0.69
42:F:97:ILE:HG12	52:Q:4:ASP:HB3	1.73	0.69
42:F:178:LEU:HB3	42:F:183:ILE:HB	1.75	0.69
71:l:43:HIS:HB3	71:l:46:ARG:HD2	1.75	0.69
77:s:18:ILE:HB	77:s:71:ASN:ND2	1.98	0.69
77:s:20:LEU:O	77:s:23:ASP:HB3	1.92	0.69
82:1:1374:C:H3'	82:1:1375:C:C6	2.27	0.69
6:QQ:19:ALA:HB2	6:QQ:75:GLY:HA3	1.75	0.68
13:dd:53:ILE:HG23	13:dd:55:LEU:HG	1.74	0.68
38:B:240:LEU:HB3	38:B:244:THR:HG21	1.75	0.68
47:L:120:TYR:HB2	47:L:155:MET:HE1	1.74	0.68
53:S:69:GLU:HG2	53:S:101:THR:HG22	1.75	0.68
72:m:92:THR:HG22	72:m:94:ASN:H	1.58	0.68
77:s:123:VAL:CG2	77:s:160:LEU:HG	2.22	0.68
78:t:21:GLU:HB3	78:t:54:LYS:C	2.17	0.68
82:1:1352:U:H3'	82:1:1379:U:O4	1.93	0.68
82:1:1371:U:H2'	82:1:1372:C:C6	2.28	0.68
82:1:1373:C:OP1	82:1:1374:C:OP1	2.11	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:BB:207:LEU:HD13	20:BB:210:VAL:HG21	1.74	0.68
41:E:64:MET:HA	41:E:64:MET:HE3	1.74	0.68
67:h:28:LEU:HD11	67:h:51:ARG:HG2	1.76	0.68
77:s:98:ILE:O	77:s:102:LEU:CD2	2.42	0.68
78:t:11:LYS:HE2	78:t:35:LEU:HD11	1.73	0.68
82:1:1494:C:H41	84:EF:714:ILE:CA	2.06	0.68
15:gg:164:ILE:HG23	15:gg:176:VAL:HG13	1.73	0.68
38:B:161:ARG:HG2	38:B:184:GLN:HA	1.76	0.68
82:1:1365:U:H5	82:1:1367:G:N7	1.91	0.68
83:PT:40:C:H5'	83:PT:41:A:P	2.33	0.68
84:EF:79:TYR:OH	84:EF:100:ILE:HD11	1.94	0.68
8:SS:5:ILE:HG12	11:ZZ:49:LEU:HB2	1.76	0.68
20:BB:49:VAL:HG21	20:BB:62:LEU:HD13	1.76	0.68
22:EE:199:GLU:HB3	22:EE:207:VAL:HG12	1.76	0.68
29:OO:72:TYR:CE2	82:1:1484:U:H3'	2.28	0.68
84:EF:161:ASP:HA	84:EF:164:LEU:HD12	1.75	0.68
84:EF:394:LEU:HD22	84:EF:427:VAL:HG11	1.74	0.68
3:KK:2:LEU:HA	18:9:1314:U:H2'	1.76	0.68
9:TT:113:VAL:HG12	9:TT:123:LEU:HD12	1.75	0.68
19:AA:50:ASN:HD22	19:AA:53:ARG:H	1.42	0.68
24:HH:63:PHE:HB3	24:HH:97:GLN:HB2	1.74	0.68
28:NN:30:SER:HB2	28:NN:67:THR:HG22	1.75	0.68
37:A:237:LEU:HB3	37:A:240:ALA:HB2	1.75	0.68
39:C:163:LYS:HB2	39:C:166:GLU:HG3	1.75	0.68
40:D:29:ASP:HB2	40:D:150:LEU:HD21	1.73	0.68
49:N:154:PRO:HA	49:N:157:LYS:HE3	1.73	0.68
63:d:32:ARG:HB3	63:d:48:GLU:HG2	1.74	0.68
68:i:33:LEU:HD21	68:i:38:LYS:HB2	1.75	0.68
77:s:52:VAL:HB	77:s:89:VAL:C	2.18	0.68
77:s:130:LEU:CG	77:s:132:PRO:HG3	2.15	0.68
78:t:16:ARG:N	78:t:59:THR:HA	2.09	0.68
84:EF:412:ALA:CB	84:EF:472:LEU:HD13	2.18	0.68
18:9:170:A:H5'	23:GG:137:ARG:HB2	1.75	0.68
20:BB:125:VAL:HB	20:BB:172:MET:HE2	1.75	0.68
22:EE:222:LEU:HD23	22:EE:225:ILE:HD12	1.76	0.68
77:s:30:VAL:HB	77:s:189:ILE:CD1	2.24	0.68
77:s:135:THR:HA	77:s:138:PHE:CG	2.29	0.68
77:s:149:ARG:HG2	77:s:150:GLY:H	1.59	0.68
84:EF:79:TYR:CG	84:EF:351:LEU:HD13	2.28	0.68
84:EF:155:LEU:HD22	84:EF:185:VAL:HG21	1.76	0.68
84:EF:205:ILE:HG22	84:EF:211:THR:CG2	2.24	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:DD:132:LYS:HG3	1:DD:156:LEU:HB3	1.75	0.68
2:FF:35:LEU:HD22	2:FF:147:VAL:HG23	1.75	0.68
17:W:82:ILE:HG23	23:GG:131:ARG:HD2	1.75	0.68
50:O:84:VAL:HG11	50:O:102:LEU:HD22	1.75	0.68
78:t:54:LYS:HG2	78:t:89:PRO:HG3	1.74	0.68
22:EE:183:VAL:HG13	22:EE:220:THR:HG21	1.74	0.68
26:JJ:83:ARG:HH11	26:JJ:150:ARG:HE	1.40	0.68
26:JJ:114:VAL:HB	26:JJ:126:ALA:HB1	1.76	0.68
33:YY:55:ILE:HG12	33:YY:75:ILE:HG12	1.76	0.68
76:r:36:ASN:HD22	79:5:2267:U:H1'	1.58	0.68
77:s:72:ASN:HD22	77:s:74:ALA:CB	2.06	0.68
77:s:121:VAL:CG2	77:s:161:ILE:HB	2.24	0.68
77:s:189:ILE:CG1	77:s:190:GLN:H	2.07	0.68
82:1:1422:A:H3'	82:1:1423:C:H5'	1.76	0.68
82:1:1456:G:H5''	82:1:1456:G:N3	2.08	0.68
84:EF:836:ALA:O	84:EF:837:GLU:C	2.37	0.68
77:s:56:GLY:CA	79:5:1998:A:C4	2.76	0.68
79:5:2588:C:H5''	79:5:2589:C:H5''	1.76	0.68
82:1:1455:A:O2'	82:1:1481:G:H4'	1.92	0.68
84:EF:328:LYS:O	84:EF:329:ASP:C	2.37	0.68
4:MM:26:LEU:HD23	4:MM:31:LEU:HD21	1.75	0.68
23:GG:79:LYS:HB2	23:GG:86:PRO:HG3	1.76	0.68
58:Y:66:GLN:HB3	58:Y:84:ARG:HH21	1.59	0.68
77:s:123:VAL:C	77:s:157:ASP:HA	2.19	0.68
77:s:145:THR:HG22	77:s:154:ILE:HG23	1.76	0.68
78:t:81:ILE:CG2	78:t:139:VAL:HG11	2.22	0.68
79:5:1749:A:H2'	79:5:1750:G:C8	2.28	0.68
82:1:1423:C:H2'	82:1:1436:A:OP2	1.94	0.68
84:EF:425:LEU:HB3	84:EF:447:ILE:HD12	1.75	0.68
21:CC:273:LEU:HA	21:CC:276:THR:HG22	1.76	0.67
55:U:28:PRO:HB2	55:U:34:MET:HG2	1.76	0.67
77:s:146:LYS:HA	77:s:146:LYS:NZ	2.09	0.67
78:t:147:HIS:HA	78:t:150:ASP:CG	2.19	0.67
79:5:1329:G:H2'	79:5:3865:A:H5'	1.75	0.67
84:EF:205:ILE:HG22	84:EF:211:THR:HG21	1.76	0.67
84:EF:577:VAL:HG23	84:EF:790:VAL:HG12	1.76	0.67
84:EF:617:ILE:HG21	84:EF:659:PRO:HA	1.76	0.67
18:9:2:A:H3'	21:CC:205:VAL:HG11	1.75	0.67
21:CC:261:PHE:HB2	30:VV:52:THR:HG21	1.75	0.67
53:S:1:MET:HE2	53:S:43:ARG:HG3	1.76	0.67
66:g:97:ILE:HG22	66:g:101:LYS:HE3	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:s:57:LYS:O	77:s:60:MET:HB3	1.94	0.67
83:PT:71:C:O2'	83:PT:72:C:H5'	1.93	0.67
84:EF:127:VAL:O	84:EF:155:LEU:HD12	1.93	0.67
84:EF:304:ILE:HG21	84:EF:336:LEU:HB2	1.74	0.67
84:EF:321:ILE:HD12	84:EF:323:LEU:CD2	2.23	0.67
32:XX:52:LEU:HD12	32:XX:53:GLU:HG2	1.75	0.67
46:J:55:TYR:HA	46:J:64:ARG:HB2	1.75	0.67
58:Y:109:LEU:HD22	58:Y:115:ARG:HH12	1.58	0.67
77:s:99:ARG:HG2	77:s:99:ARG:NH1	2.09	0.67
79:5:1756:U:H2'	79:5:1757:U:C6	2.29	0.67
82:1:1418:U:H2'	82:1:1419:G:H8	1.59	0.67
83:PT:17:G:OP2	83:PT:18:G:H5''	1.94	0.67
84:EF:596:PRO:CG	84:EF:720:GLN:HE21	2.06	0.67
18:9:929:G:H21	18:9:1104:G:H4'	1.58	0.67
18:9:1202:U:H5'	18:9:1358:U:H4'	1.76	0.67
33:YY:91:LEU:HD22	33:YY:96:LEU:HD21	1.76	0.67
44:H:120:GLU:HG2	79:5:4611:A:H2	1.59	0.67
77:s:58:ASN:O	77:s:61:MET:HG2	1.94	0.67
77:s:192:VAL:CB	77:s:199:TYR:HB2	2.24	0.67
78:t:32:ILE:HD11	78:t:42:VAL:HB	1.74	0.67
43:G:114:ILE:HA	43:G:117:GLN:HE21	1.60	0.67
43:G:151:LEU:HD13	43:G:271:LEU:HD12	1.76	0.67
61:b:3:LYS:HG2	79:5:4194:U:H5''	1.77	0.67
77:s:77:LYS:O	77:s:80:PRO:HD2	1.95	0.67
77:s:123:VAL:HG21	77:s:143:ILE:HD13	1.75	0.67
84:EF:775:GLN:O	84:EF:776:VAL:C	2.38	0.67
14:ff:107:LYS:HE2	14:ff:117:LEU:HD11	1.75	0.67
15:gg:248:LEU:HB2	15:gg:261:LEU:HD21	1.76	0.67
37:A:177:LYS:HB2	75:p:29:ILE:HG21	1.77	0.67
42:F:112:ARG:HD3	79:5:1840:G:H5''	1.76	0.67
58:Y:52:ASP:HB2	58:Y:110:LYS:HG3	1.76	0.67
59:Z:41:ALA:HB2	59:Z:77:TYR:HE1	1.59	0.67
83:PT:18:G:C4	83:PT:58:A:C2	2.82	0.67
4:MM:64:LEU:HD22	14:ff:108:VAL:HB	1.76	0.67
18:9:1:U:H1'	21:CC:205:VAL:HG22	1.77	0.67
18:9:925:G:H5''	28:NN:91:LEU:HD21	1.77	0.67
19:AA:62:ALA:HA	19:AA:182:VAL:HG12	1.77	0.67
20:BB:181:LEU:HA	20:BB:184:VAL:HG22	1.77	0.67
22:EE:180:LEU:HD21	22:EE:232:ASN:HA	1.75	0.67
28:NN:18:TYR:HE1	31:WW:55:ASP:HA	1.59	0.67
77:s:18:ILE:CG2	77:s:71:ASN:HD22	2.05	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:s:45:MET:SD	77:s:48:ARG:CZ	2.82	0.67
77:s:147:ILE:CG2	77:s:149:ARG:HB2	2.25	0.67
78:t:117:ARG:NH2	78:t:128:THR:HG23	2.09	0.67
78:t:146:ARG:HB3	78:t:148:PRO:HG2	1.75	0.67
79:5:279:A:H61	79:5:306:A:H3'	1.59	0.67
82:1:1470:C:H2'	82:1:1471:A:O4'	1.95	0.67
28:NN:91:LEU:HD12	28:NN:125:LEU:HD12	1.75	0.67
32:XX:68:LYS:HE2	36:ee:82:VAL:HG22	1.75	0.67
38:B:168:MET:HE1	38:B:173:LEU:HD22	1.77	0.67
77:s:10:LYS:HE2	77:s:10:LYS:HA	1.76	0.67
77:s:116:ILE:HG22	77:s:166:LYS:CE	2.25	0.67
78:t:13:VAL:HG22	78:t:31:LYS:HD3	1.75	0.67
78:t:149:HIS:HA	78:t:152:ILE:HG13	1.75	0.67
4:MM:42:LEU:HD23	4:MM:68:LEU:HB3	1.76	0.67
5:PP:60:LEU:HD13	5:PP:89:MET:HG3	1.77	0.67
34:aa:22:ARG:HH21	34:aa:27:ALA:HB1	1.60	0.67
48:M:5:ARG:HB3	48:M:57:LEU:HD11	1.75	0.67
54:T:40:VAL:HG11	54:T:96:ILE:HG23	1.77	0.67
70:k:26:LYS:HE2	79:5:2696:A:H5'	1.77	0.67
79:5:1769:G:H3'	79:5:1770:A:H8	1.58	0.67
3:KK:15:LEU:HD22	3:KK:49:MET:HE1	1.76	0.67
18:9:1154:U:H1'	21:CC:194:ARG:HD2	1.77	0.67
41:E:196:PHE:HD1	65:f:106:TYR:HB2	1.60	0.67
42:F:51:GLU:HG3	61:b:96:LEU:HD13	1.76	0.67
47:L:91:ALA:HA	47:L:94:ILE:HG12	1.76	0.67
71:l:11:ARG:HE	81:8:45:C:H4'	1.60	0.67
79:5:3868:G:H22	79:5:3900:G:H1'	1.60	0.67
84:EF:25:ILE:HD12	84:EF:25:ILE:N	2.10	0.67
84:EF:102:LEU:N	84:EF:102:LEU:HD23	2.10	0.67
84:EF:446:PRO:O	84:EF:447:ILE:C	2.35	0.67
34:aa:44:ILE:HD12	34:aa:45:VAL:HG22	1.77	0.66
38:B:381:THR:HG23	38:B:384:GLU:H	1.60	0.66
77:s:66:ARG:CZ	77:s:79:LEU:HD22	2.25	0.66
78:t:11:LYS:CE	78:t:35:LEU:HD21	2.24	0.66
78:t:91:ASP:HB2	78:t:93:LYS:CE	2.24	0.66
78:t:103:ASN:HA	78:t:142:ASN:C	2.20	0.66
79:5:4601:U:H2'	79:5:4602:A:H8	1.59	0.66
82:1:1450:C:H3'	82:1:1451:C:C6	2.30	0.66
42:F:222:LYS:HE3	79:5:1907:A:H4'	1.75	0.66
53:S:13:VAL:HG22	53:S:63:TYR:HB3	1.76	0.66
67:h:28:LEU:HD12	67:h:54:ILE:HD12	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:t:134:GLY:HA2	78:t:147:HIS:CG	2.31	0.66
79:5:73:A:H2'	79:5:74:G:H8	1.58	0.66
79:5:1593:A:H5''	79:5:2839:U:H5''	1.77	0.66
79:5:2093:A:H4'	79:5:2094:C:H5'	1.75	0.66
82:1:1418:U:H2'	82:1:1419:G:C8	2.30	0.66
16:R:18:GLY:HA3	79:5:2822:G:H5''	1.78	0.66
24:HH:93:VAL:HG21	24:HH:133:LEU:HD23	1.76	0.66
31:WW:3:ARG:HD3	31:WW:6:VAL:HG22	1.76	0.66
44:H:123:ILE:HD11	44:H:125:ARG:HH21	1.59	0.66
77:s:66:ARG:NH2	77:s:79:LEU:HD22	2.11	0.66
78:t:56:LEU:HD13	78:t:82:ILE:HD12	1.77	0.66
79:5:119:G:H3'	79:5:120:A:H5''	1.77	0.66
79:5:751:G:H3'	79:5:752:G:H8	1.60	0.66
84:EF:710:HIS:CG	84:EF:711:ALA:N	2.63	0.66
18:9:581:U:H4'	33:YY:66:GLY:HA2	1.76	0.66
29:OO:31:CYS:HB3	29:OO:44:VAL:HG22	1.77	0.66
38:B:373:LYS:HD2	79:5:4627:U:H4'	1.75	0.66
40:D:39:GLN:HG2	40:D:48:LYS:HB2	1.76	0.66
51:P:66:GLY:HA3	79:5:2362:U:H5''	1.77	0.66
57:X:65:ALA:HB2	67:h:69:LEU:HD11	1.78	0.66
77:s:17:ILE:HG23	77:s:18:ILE:H	1.61	0.66
77:s:141:LEU:HG	77:s:174:LEU:HD21	1.77	0.66
78:t:21:GLU:HB2	78:t:54:LYS:HG3	1.78	0.66
82:1:1453:C:H2'	82:1:1454:A:H62	1.61	0.66
83:PT:65:G:C2'	83:PT:66:C:H5'	2.25	0.66
84:EF:81:LEU:HD22	84:EF:98:PHE:CD2	2.29	0.66
84:EF:223:PHE:HB3	84:EF:344:LEU:HD21	1.78	0.66
84:EF:590:LEU:HD12	84:EF:591:CYS:H	1.60	0.66
39:C:32:ILE:HG22	39:C:34:PRO:HD3	1.78	0.66
71:l:23:ILE:HG23	71:l:38:ASN:HB2	1.76	0.66
77:s:18:ILE:CG1	77:s:21:LEU:CD1	2.72	0.66
79:5:1591:U:H3	79:5:4555:U:H5''	1.61	0.66
84:EF:650:TRP:CE2	84:EF:662:LEU:HD23	2.30	0.66
84:EF:652:PHE:CE2	84:EF:657:THR:HG23	2.31	0.66
18:9:889:U:H2'	18:9:890:U:H5''	1.76	0.66
38:B:85:VAL:HG22	38:B:204:GLN:HG2	1.78	0.66
44:H:86:LEU:HD22	44:H:188:GLN:HG3	1.76	0.66
60:a:81:LEU:HD22	60:a:106:SER:HB2	1.77	0.66
79:5:1977:C:H2'	79:5:1978:C:C5	2.31	0.66
82:1:1345:G:H2'	82:1:1346:U:C6	2.29	0.66
84:EF:25:ILE:HD11	84:EF:125:ALA:HB1	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:EF:650:TRP:CG	84:EF:662:LEU:HB3	2.30	0.66
62:c:29:LEU:HD23	62:c:94:LEU:HD13	1.77	0.66
77:s:11:SER:HA	77:s:14:PHE:HB2	1.75	0.66
79:5:420:A:H1'	79:5:1332:C:H1'	1.76	0.66
82:1:1477:G:H2'	82:1:1478:C:C6	2.31	0.66
83:PT:52:G:C2	83:PT:63:C:C2	2.84	0.66
84:EF:22:MET:CE	84:EF:100:ILE:HD13	2.26	0.66
18:9:912:C:H3'	18:9:913:A:H5''	1.77	0.66
40:D:52:ILE:HD13	80:7:6:C:H4'	1.77	0.66
42:F:227:VAL:HA	53:S:39:VAL:HG12	1.77	0.66
50:O:193:THR:HG23	50:O:202:LEU:HD23	1.77	0.66
77:s:83:ARG:O	77:s:86:VAL:HG23	1.96	0.66
77:s:110:ALA:HB2	77:s:181:SER:C	1.82	0.66
84:EF:800:LEU:O	84:EF:804:THR:HG23	1.96	0.66
7:RR:89:SER:HB2	19:AA:176:TRP:HE1	1.60	0.66
14:ff:130:VAL:HG21	14:ff:143:LYS:HZ1	1.60	0.66
16:R:70:ARG:HG3	16:R:76:MET:HE2	1.77	0.66
25:II:81:VAL:HA	25:II:102:VAL:HG12	1.78	0.66
36:ee:101:ARG:HE	36:ee:105:ALA:HB1	1.59	0.66
40:D:43:LYS:HB3	40:D:46:THR:HB	1.77	0.66
42:F:223:THR:HB	80:7:83:A:H4'	1.78	0.66
46:J:13:ARG:HA	46:J:136:ARG:HD3	1.77	0.66
48:M:39:ASP:HB2	48:M:47:ARG:HD3	1.78	0.66
78:t:49:ALA:HB3	78:t:60:VAL:CG2	2.25	0.66
78:t:64:ILE:HD13	78:t:69:ALA:H	1.60	0.66
84:EF:229:ALA:O	84:EF:233:VAL:HG13	1.96	0.66
84:EF:450:THR:HG21	84:EF:464:VAL:HG23	1.77	0.66
84:EF:617:ILE:HD13	84:EF:659:PRO:HA	1.76	0.66
15:gg:284:PRO:HB3	15:gg:304:ASP:HB3	1.78	0.66
52:Q:50:ARG:HH12	52:Q:140:SER:HB3	1.61	0.66
77:s:171:GLU:HG3	77:s:172:ALA:H	1.60	0.66
78:t:15:LEU:CB	78:t:28:LEU:HD22	2.14	0.66
84:EF:451:ILE:HD11	84:EF:453:MET:HE1	1.76	0.66
23:GG:181:THR:HG23	23:GG:184:VAL:H	1.61	0.65
52:Q:119:LYS:HD3	52:Q:121:LEU:HD21	1.77	0.65
77:s:37:SER:HB3	77:s:38:LYS:HE2	1.78	0.65
77:s:58:ASN:OD1	77:s:85:ASN:HA	1.96	0.65
77:s:124:PRO:CG	77:s:157:ASP:HB3	2.25	0.65
77:s:173:THR:CA	77:s:176:ASN:ND2	2.58	0.65
79:5:951:G:H2'	79:5:952:G:H8	1.60	0.65
84:EF:8:GLN:O	84:EF:11:ALA:HB3	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:EF:428:ARG:NH2	84:EF:444:LEU:HD13	2.10	0.65
84:EF:590:LEU:HD21	84:EF:603:TYR:HB3	1.79	0.65
84:EF:643:VAL:HG22	84:EF:647:ARG:NH1	2.11	0.65
4:MM:22:LEU:HD11	4:MM:89:VAL:HA	1.77	0.65
18:9:551:U:H2'	18:9:552:G:H8	1.61	0.65
22:EE:246:LEU:HD13	22:EE:251:GLU:HB2	1.79	0.65
25:II:129:LEU:HG	25:II:132:GLU:H	1.60	0.65
43:G:87:LYS:HG2	43:G:89:PRO:HD3	1.77	0.65
58:Y:73:VAL:HG13	58:Y:80:ILE:HG22	1.78	0.65
61:b:43:MET:HG2	61:b:47:LYS:HE3	1.77	0.65
77:s:47:LEU:HB2	77:s:50:LYS:CG	2.26	0.65
77:s:50:LYS:HD3	77:s:98:ILE:HG23	1.78	0.65
78:t:13:VAL:CG2	78:t:31:LYS:HB3	2.25	0.65
82:l:1401:U:H1'	82:l:1402:U:H5'	1.77	0.65
84:EF:389:ASP:HB2	84:EF:418:SER:HA	1.78	0.65
84:EF:558:LEU:HD23	84:EF:561:LEU:HD12	1.79	0.65
84:EF:604:MET:HE1	84:EF:729:LEU:HG	1.78	0.65
2:FF:20:PHE:HE1	2:FF:50:PRO:HD3	1.62	0.65
33:YY:82:ALA:O	33:YY:86:GLU:CB	2.44	0.65
78:t:15:LEU:HD22	78:t:28:LEU:HA	1.78	0.65
78:t:56:LEU:CD1	78:t:82:ILE:HD12	2.25	0.65
79:5:1533:A:H5''	79:5:1637:A:H62	1.59	0.65
84:EF:18:ASN:HD21	84:EF:98:PHE:HA	1.62	0.65
84:EF:42:LYS:CG	84:EF:351:LEU:HD11	2.26	0.65
84:EF:661:ILE:CG2	84:EF:663:THR:HG22	2.27	0.65
19:AA:30:LEU:HD13	19:AA:38:ILE:HD11	1.77	0.65
58:Y:57:VAL:HB	58:Y:63:LYS:HA	1.78	0.65
78:t:85:LEU:HA	78:t:86:LYS:NZ	2.11	0.65
78:t:117:ARG:CD	78:t:125:LEU:HA	2.25	0.65
78:t:125:LEU:CD1	78:t:129:ILE:HD11	2.26	0.65
84:EF:129:VAL:HG21	84:EF:181:ILE:HG23	1.79	0.65
84:EF:811:GLN:OE1	84:EF:813:VAL:HG12	1.97	0.65
7:RR:107:LYS:HA	7:RR:112:GLY:HA2	1.78	0.65
13:dd:17:GLY:HA2	13:dd:27:ARG:HG2	1.79	0.65
21:CC:213:LEU:HD22	21:CC:240:THR:HG23	1.77	0.65
24:HH:36:LEU:HG	24:HH:75:ILE:HD11	1.77	0.65
26:JJ:87:LEU:HD21	26:JJ:92:MET:HA	1.77	0.65
47:L:19:GLN:HA	47:L:22:VAL:HG23	1.77	0.65
60:a:24:LYS:HD3	60:a:26:ARG:HH21	1.60	0.65
64:e:87:VAL:HG13	76:r:34:ALA:HB1	1.77	0.65
77:s:38:LYS:HA	77:s:42:GLN:NE2	2.12	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:s:98:ILE:CG2	77:s:102:LEU:HD21	2.27	0.65
77:s:122:THR:CG2	77:s:159:GLN:HA	2.23	0.65
77:s:128:THR:O	77:s:151:THR:HG22	1.96	0.65
25:II:178:ARG:HD3	25:II:181:GLN:HG3	1.78	0.65
32:XX:68:LYS:HG2	32:XX:91:LEU:HD22	1.76	0.65
50:O:15:LEU:HB2	50:O:18:ARG:HB2	1.79	0.65
51:P:126:ARG:HA	51:P:140:MET:HA	1.79	0.65
59:Z:103:ASP:HB3	59:Z:106:LEU:HB2	1.78	0.65
72:m:72:LYS:HG2	72:m:89:CYS:HB2	1.77	0.65
82:1:1390:A:H4'	82:1:1391:G:C5'	2.26	0.65
82:1:1446:G:H2'	82:1:1447:A:H4'	1.77	0.65
84:EF:264:ARG:HG3	84:EF:277:ALA:HB2	1.78	0.65
31:WW:50:PHE:HB3	31:WW:63:VAL:HG13	1.79	0.65
45:I:184:MET:HA	45:I:187:GLU:HG2	1.79	0.65
52:Q:53:MET:HB3	52:Q:57:ASN:HB2	1.79	0.65
77:s:9:TRP:HE1	79:5:1998:A:H4'	1.59	0.65
77:s:55:MET:HB3	79:5:1998:A:C5	2.31	0.65
77:s:159:GLN:HG2	77:s:162:LYS:CG	2.08	0.65
77:s:160:LEU:HD11	77:s:174:LEU:HD11	1.76	0.65
78:t:37:LEU:HD12	78:t:42:VAL:HG23	1.77	0.65
79:5:31:U:H3	79:5:51:A:H61	1.44	0.65
79:5:1976:G:H2'	79:5:1977:C:C1'	2.26	0.65
84:EF:205:ILE:CG1	84:EF:212:VAL:HG12	2.27	0.65
84:EF:605:LYS:HB3	84:EF:705:HIS:CE1	2.31	0.65
9:TT:56:ARG:HH22	9:TT:99:VAL:HG21	1.61	0.65
46:J:22:LEU:HB3	46:J:128:LEU:HD13	1.78	0.65
72:m:77:LEU:HD11	72:m:84:CYS:HA	1.79	0.65
77:s:51:ALA:HB1	77:s:89:VAL:HG12	1.78	0.65
77:s:59:THR:HA	77:s:62:ARG:HD2	1.77	0.65
79:5:381:U:H4'	79:5:415:G:H5'	1.78	0.65
79:5:1977:C:H5''	79:5:1979:A:H62	1.62	0.65
82:1:1354:U:C2	82:1:1379:U:H5	2.15	0.65
82:1:1363:A:H4'	82:1:1368:G:OP1	1.97	0.65
82:1:1365:U:H6	82:1:1366:G:C8	2.15	0.65
82:1:1422:A:C2'	82:1:1435:G:H2'	2.26	0.65
84:EF:511:ALA:CB	84:EF:520:LEU:HD23	2.27	0.65
10:UU:80:PHE:HB3	13:dd:52:PHE:HB3	1.79	0.65
11:ZZ:74:SER:HA	11:ZZ:79:ILE:HG12	1.79	0.65
18:9:934:G:H1	18:9:1008:A:H2	1.45	0.65
43:G:251:THR:HG23	79:5:6:C:H4'	1.79	0.65
77:s:51:ALA:CA	77:s:91:THR:HB	2.27	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:2395:A:N6	79:5:2820:C:O2	2.29	0.65
82:1:1455:A:H4'	82:1:1481:G:O2'	1.97	0.65
84:EF:74:ALA:CB	84:EF:454:MET:HE1	2.21	0.65
84:EF:208:VAL:O	84:EF:257:MET:HE3	1.97	0.65
6:QQ:76:GLY:H	6:QQ:79:ALA:HB3	1.61	0.65
32:XX:61:GLN:HB3	32:XX:62:PRO:HD2	1.77	0.65
37:A:188:LYS:HA	79:5:2740:U:H5''	1.78	0.65
44:H:71:ARG:HG2	79:5:4691:A:H4'	1.78	0.65
49:N:116:LEU:HD22	49:N:135:ILE:HD11	1.78	0.65
78:t:16:ARG:HG3	78:t:58:ILE:N	2.12	0.65
78:t:97:ASN:O	78:t:98:ILE:HG22	1.97	0.65
78:t:106:PHE:CE2	78:t:159:ALA:CB	2.80	0.65
78:t:132:ILE:HA	78:t:135:THR:CG2	2.26	0.65
84:EF:206:ASP:CA	84:EF:212:VAL:HG13	2.27	0.65
84:EF:710:HIS:CD2	84:EF:715:DDE:HD2	2.32	0.65
1:DD:135:GLU:HB2	1:DD:153:VAL:HG13	1.79	0.64
10:UU:63:ILE:HG22	10:UU:65:THR:HG23	1.78	0.64
20:BB:125:VAL:HG21	20:BB:169:MET:HA	1.80	0.64
42:F:170:ASP:HB3	42:F:173:LEU:HD13	1.79	0.64
77:s:14:PHE:CZ	79:5:1960:A:H1'	2.32	0.64
77:s:20:LEU:HD11	77:s:90:PHE:CG	2.32	0.64
77:s:59:THR:HA	77:s:62:ARG:HD3	1.77	0.64
77:s:121:VAL:CG2	77:s:183:PHE:HZ	1.88	0.64
77:s:151:THR:O	77:s:152:ILE:C	2.39	0.64
82:1:1339:U:H4'	82:1:1344:G:H4'	1.79	0.64
82:1:1394:A:H2'	82:1:1395:A:H8	1.58	0.64
84:EF:416:VAL:HG21	84:EF:420:LEU:HA	1.79	0.64
29:OO:35:ALA:HB2	29:OO:112:ALA:HB2	1.77	0.64
52:Q:85:THR:HG22	52:Q:104:ARG:HB2	1.79	0.64
77:s:14:PHE:HZ	79:5:1960:A:H1'	1.62	0.64
77:s:126:GLN:O	77:s:148:SER:OG	2.16	0.64
78:t:11:LYS:HB3	78:t:64:ILE:N	2.12	0.64
78:t:46:ILE:O	78:t:60:VAL:HG21	1.97	0.64
84:EF:60:ARG:HD2	84:EF:71:LYS:HG2	1.80	0.64
84:EF:80:GLU:HG3	84:EF:97:GLY:HA2	1.79	0.64
84:EF:614:ALA:HB1	84:EF:698:ARG:NH2	2.12	0.64
14:ff:138:ARG:HB3	14:ff:149:CYS:HA	1.79	0.64
18:9:934:G:O6	18:9:1008:A:N1	2.31	0.64
22:EE:222:LEU:HA	22:EE:225:ILE:HD12	1.78	0.64
30:VV:55:ILE:HD11	30:VV:69:ILE:HG12	1.79	0.64
41:E:264:ILE:HA	41:E:270:LEU:HD23	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:s:98:ILE:HG23	77:s:102:LEU:HD21	1.79	0.64
77:s:130:LEU:CD2	77:s:152:ILE:HD11	2.27	0.64
79:5:1974:U:H4'	79:5:1975:G:OP1	1.95	0.64
84:EF:288:THR:O	84:EF:289:PHE:C	2.39	0.64
84:EF:377:PRO:O	84:EF:378:ASP:C	2.39	0.64
84:EF:759:ILE:CD1	84:EF:800:LEU:HD22	2.27	0.64
31:WW:105:THR:HB	31:WW:126:LEU:HD11	1.80	0.64
32:XX:51:VAL:HG22	32:XX:70:VAL:HG11	1.77	0.64
39:C:230:LEU:HD21	39:C:239:LYS:HD2	1.79	0.64
47:L:77:SER:HB3	47:L:80:GLU:HG3	1.79	0.64
49:N:36:LEU:HG	49:N:64:ILE:HG22	1.79	0.64
77:s:11:SER:CA	77:s:14:PHE:HB2	2.26	0.64
78:t:46:ILE:HG23	78:t:60:VAL:CB	2.27	0.64
78:t:146:ARG:HB3	78:t:148:PRO:HD2	1.79	0.64
79:5:2777:G:H5''	79:5:2778:G:H5'	1.79	0.64
84:EF:306:ASN:HD22	84:EF:306:ASN:N	1.93	0.64
19:AA:14:ASP:HB3	19:AA:177:MET:HE1	1.78	0.64
19:AA:42:LYS:HG3	19:AA:48:ILE:HD11	1.80	0.64
23:GG:2:LYS:HD3	23:GG:15:LEU:HD21	1.79	0.64
77:s:100:ASP:HA	77:s:103:LEU:HB3	1.79	0.64
79:5:1636:U:H5''	79:5:1637:A:H5'	1.79	0.64
32:XX:59:ALA:HB3	32:XX:64:SER:HA	1.80	0.64
78:t:109:ILE:HD13	78:t:112:ILE:HD12	1.78	0.64
79:5:3760:A:N6	84:EF:720:GLN:HE22	1.96	0.64
79:5:4589:A:H4'	79:5:4590:A:H4'	1.80	0.64
84:EF:178:PHE:O	84:EF:179:GLN:C	2.38	0.64
84:EF:400:LYS:O	84:EF:401:MET:HE2	1.97	0.64
15:gg:5:MET:HE1	15:gg:312:VAL:HG22	1.80	0.64
15:gg:173:LEU:HD22	15:gg:189:ILE:HG12	1.79	0.64
45:I:54:SER:HB2	45:I:135:ILE:HD11	1.79	0.64
45:I:76:MET:HE2	45:I:76:MET:HA	1.78	0.64
66:g:8:ARG:HH22	79:5:2520:C:H5'	1.63	0.64
74:o:36:GLN:HB2	79:5:4363:A:H5''	1.80	0.64
77:s:30:VAL:HB	77:s:189:ILE:HD13	1.79	0.64
77:s:102:LEU:HA	77:s:105:ASN:OD1	1.96	0.64
77:s:188:ILE:HG22	77:s:189:ILE:N	2.12	0.64
82:1:1365:U:H2'	82:1:1366:G:C8	2.33	0.64
82:1:1430:G:H2'	82:1:1431:G:C8	2.33	0.64
84:EF:291:GLN:C	84:EF:292:LEU:HD12	2.23	0.64
52:Q:60:PRO:HG3	79:5:1353:G:H22	1.63	0.64
64:e:90:MET:HA	64:e:90:MET:HE3	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:t:21:GLU:H	78:t:54:LYS:C	2.06	0.64
78:t:21:GLU:H	78:t:54:LYS:HA	1.63	0.64
78:t:137:GLN:HA	78:t:141:CYS:H	1.62	0.64
79:5:1977:C:H2'	79:5:1978:C:C6	2.33	0.64
82:1:1431:G:H1	82:1:1437:C:H42	1.45	0.64
82:1:1470:C:C2	82:1:1488:G:H5''	2.33	0.64
83:PT:10:G:C6	83:PT:26:G:C2	2.86	0.64
4:MM:19:GLN:HE22	4:MM:88:TRP:HB3	1.62	0.64
8:SS:59:LEU:HD11	8:SS:64:VAL:HG12	1.79	0.64
24:HH:170:VAL:HG13	24:HH:187:PHE:HB2	1.77	0.64
31:WW:41:MET:HE3	31:WW:47:ILE:HD13	1.79	0.64
36:ee:112:ASN:HA	36:ee:116:VAL:HG12	1.79	0.64
47:L:74:ARG:HD2	47:L:99:ASP:HB3	1.80	0.64
78:t:113:ALA:HA	78:t:129:ILE:HG12	1.80	0.64
83:PT:42:C:C2	83:PT:43:G:C8	2.86	0.64
84:EF:37:ASP:OD2	84:EF:54:THR:HG23	1.97	0.64
84:EF:424:GLY:O	84:EF:425:LEU:C	2.41	0.64
22:EE:175:PHE:HE1	22:EE:225:ILE:HG21	1.62	0.64
78:t:21:GLU:HB2	78:t:54:LYS:NZ	2.13	0.64
78:t:21:GLU:N	78:t:54:LYS:HD2	2.13	0.64
78:t:60:VAL:HG12	78:t:71:ILE:HD13	1.80	0.64
78:t:123:ARG:HH22	79:5:1996:C:H5''	1.62	0.64
82:1:1443:A:H1'	82:1:1444:A:C4	2.33	0.64
82:1:1455:A:C5'	82:1:1483:A:OP1	2.45	0.64
82:1:1460:G:H3'	82:1:1461:C:H6	1.62	0.64
84:EF:381:ALA:HB2	84:EF:488:PHE:CE2	2.32	0.64
4:MM:63:LYS:HB3	14:ff:108:VAL:HG21	1.79	0.63
18:9:1231:C:H42	18:9:1527:C:H42	1.46	0.63
29:OO:67:ASP:HB2	29:OO:70:SER:HB2	1.79	0.63
55:U:48:LYS:HA	55:U:53:ALA:HA	1.79	0.63
77:s:20:LEU:O	77:s:21:LEU:C	2.40	0.63
77:s:38:LYS:O	77:s:39:GLN:C	2.40	0.63
78:t:32:ILE:HA	78:t:35:LEU:HD12	1.79	0.63
79:5:3911:C:H1'	79:5:4395:U:H3	1.62	0.63
79:5:4607:A:H4'	84:EF:552:LEU:HD13	1.79	0.63
84:EF:174:LEU:HD12	84:EF:177:THR:HB	1.80	0.63
84:EF:420:LEU:HD13	84:EF:464:VAL:O	1.97	0.63
1:DD:131:ALA:HA	1:DD:191:PRO:HD3	1.80	0.63
17:W:23:ARG:HH21	17:W:27:LYS:HD2	1.62	0.63
55:U:56:LEU:HB3	55:U:61:VAL:HG23	1.80	0.63
56:V:49:LEU:HG	56:V:50:ASN:HD22	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:t:123:ARG:HH22	79:5:1996:C:C5'	2.11	0.63
79:5:3848:U:H2'	79:5:3849:A:H8	1.63	0.63
82:1:1338:A:C4'	82:1:1345:G:H4'	2.15	0.63
82:1:1359:A:H2'	82:1:1373:C:N4	2.12	0.63
82:1:1472:A:H2'	82:1:1473:A:O4'	1.98	0.63
84:EF:428:ARG:HA	84:EF:444:LEU:HD23	1.80	0.63
15:gg:149:GLU:HB2	15:gg:171:ASP:HB3	1.80	0.63
18:9:1396:A:N7	18:9:1449:G:O6	2.31	0.63
26:JJ:114:VAL:HG13	26:JJ:119:LEU:HD11	1.80	0.63
45:I:152:LEU:HD12	45:I:165:ILE:HG23	1.79	0.63
50:O:143:HIS:HA	50:O:147:TRP:HB3	1.79	0.63
57:X:127:LEU:HB3	79:5:2437:C:H5'	1.79	0.63
58:Y:31:SER:HA	58:Y:48:PRO:HA	1.81	0.63
77:s:130:LEU:C	77:s:132:PRO:HD3	2.24	0.63
79:5:4894:A:H5''	79:5:4895:C:H2'	1.81	0.63
18:9:1560:U:O2	18:9:1575:G:O6	2.17	0.63
44:H:115:ARG:HG2	44:H:123:ILE:HG22	1.79	0.63
59:Z:48:ARG:HB3	59:Z:69:LYS:HB3	1.79	0.63
63:d:26:THR:HG23	79:5:4996:C:H4'	1.80	0.63
77:s:14:PHE:O	77:s:17:ILE:HG21	1.98	0.63
77:s:29:ILE:HA	77:s:88:PHE:CB	2.29	0.63
77:s:125:ALA:CA	77:s:154:ILE:HB	2.29	0.63
77:s:181:SER:HG	77:s:183:PHE:HE2	0.71	0.63
78:t:123:ARG:HH12	79:5:1996:C:H5'	1.63	0.63
78:t:137:GLN:HB3	78:t:147:HIS:CB	2.28	0.63
79:5:4940:C:H5'	79:5:4941:G:H5''	1.80	0.63
82:1:1345:G:H1'	82:1:1390:A:C2	2.32	0.63
31:WW:94:LEU:HD21	31:WW:102:ILE:HG13	1.80	0.63
51:P:128:ARG:HB2	51:P:136:ILE:HG23	1.80	0.63
52:Q:154:LYS:HD3	52:Q:161:SER:HB3	1.80	0.63
77:s:141:LEU:HD11	77:s:171:GLU:HB3	1.80	0.63
77:s:193:PHE:HD1	77:s:193:PHE:C	2.06	0.63
82:1:1358:A:H1'	82:1:1360:A:H5''	1.81	0.63
82:1:1368:G:H22	82:1:1451:C:H2'	1.62	0.63
84:EF:26:ALA:HB2	84:EF:128:VAL:HG12	1.80	0.63
84:EF:167:LEU:O	84:EF:168:GLN:C	2.41	0.63
84:EF:280:PRO:O	84:EF:281:GLU:C	2.42	0.63
84:EF:592:LEU:HD12	84:EF:603:TYR:CZ	2.33	0.63
16:R:19:LYS:HA	16:R:22:VAL:HB	1.81	0.63
19:AA:122:LEU:HD11	19:AA:142:LEU:HD13	1.79	0.63
38:B:217:ILE:HD13	38:B:284:ILE:HD11	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:O:16:LEU:HD12	79:5:2052:G:H5''	1.80	0.63
50:O:120:VAL:HG12	50:O:123:ALA:H	1.63	0.63
71:l:27:ILE:HG12	81:8:52:A:H62	1.62	0.63
77:s:58:ASN:CG	77:s:85:ASN:HA	2.24	0.63
77:s:149:ARG:O	77:s:151:THR:N	2.30	0.63
78:t:46:ILE:HG23	78:t:60:VAL:CG2	2.28	0.63
82:1:1456:G:OP1	82:1:1482:U:C4'	2.47	0.63
84:EF:70:ILE:HD13	84:EF:108:HIS:NE2	2.14	0.63
5:PP:53:GLN:HB3	5:PP:83:MET:HE2	1.80	0.63
20:BB:137:LEU:HG	20:BB:215:VAL:HG22	1.79	0.63
23:GG:88:ARG:HB3	23:GG:91:GLU:HB2	1.79	0.63
31:WW:6:VAL:HG13	31:WW:29:PRO:HG2	1.81	0.63
37:A:178:PRO:HD2	75:p:26:VAL:HG22	1.79	0.63
40:D:157:ASN:HB3	40:D:160:PHE:HD2	1.64	0.63
77:s:110:ALA:CB	77:s:182:PRO:HA	1.91	0.63
77:s:146:LYS:N	77:s:155:LEU:N	2.47	0.63
82:1:1367:G:H2'	82:1:1368:G:H8	1.62	0.63
83:PT:43:G:H2'	83:PT:44:A:H5'	1.81	0.63
84:EF:129:VAL:O	84:EF:130:ASP:C	2.42	0.63
84:EF:596:PRO:HG3	84:EF:720:GLN:HE21	1.62	0.63
84:EF:838:THR:HA	84:EF:841:ARG:HB2	1.81	0.63
2:FF:139:VAL:HG11	12:cc:45:ASN:HB2	1.80	0.63
7:RR:17:ILE:HD11	7:RR:54:VAL:HA	1.79	0.63
7:RR:102:THR:HB	19:AA:52:LYS:HB2	1.79	0.63
28:NN:78:LYS:HE3	28:NN:80:LEU:HD23	1.81	0.63
38:B:243:LYS:HE2	79:5:4526:U:H4'	1.80	0.63
77:s:22:ASP:C	77:s:24:TYR:N	2.56	0.63
77:s:144:THR:H	77:s:158:VAL:CG2	2.11	0.63
77:s:145:THR:C	77:s:154:ILE:HA	2.24	0.63
77:s:146:LYS:HE3	77:s:147:ILE:H	1.64	0.63
82:1:1404:A:H2'	82:1:1405:C:C6	2.34	0.63
29:OO:146:ARG:HH11	34:aa:29:CYS:HB2	1.63	0.63
37:A:233:ARG:HG2	79:5:4184:G:H5'	1.81	0.63
46:J:35:ARG:HB3	46:J:123:ILE:HG23	1.81	0.63
48:M:119:ARG:HH11	48:M:123:ILE:HD11	1.62	0.63
77:s:117:ALA:HB3	77:s:161:ILE:HG22	1.81	0.63
78:t:29:ALA:N	78:t:30:PRO:HD2	2.14	0.63
78:t:65:GLN:CG	78:t:70:GLN:HE21	2.12	0.63
78:t:91:ASP:HB2	78:t:93:LYS:HG3	1.81	0.63
78:t:153:ASP:HA	78:t:157:SER:OG	1.99	0.63
79:5:3648:A:H1'	79:5:3785:A:H61	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:PT:50:C:C2	83:PT:65:G:C2	2.87	0.63
18:9:582:U:H2'	18:9:583:A:H5''	1.81	0.62
18:9:975:G:H21	29:OO:50:LYS:HA	1.63	0.62
29:OO:106:LYS:HE2	29:OO:136:PRO:HD2	1.81	0.62
45:I:26:VAL:HG22	45:I:122:PRO:HB3	1.80	0.62
77:s:29:ILE:H	77:s:192:VAL:HA	1.64	0.62
77:s:160:LEU:CG	77:s:175:LEU:HD21	2.29	0.62
78:t:104:ILE:O	78:t:143:VAL:HG22	1.99	0.62
79:5:4272:G:H3'	79:5:4273:A:H5''	1.80	0.62
82:1:1363:A:H3'	82:1:1364:U:C6	2.33	0.62
84:EF:189:ILE:HG21	84:EF:204:MET:CA	2.29	0.62
84:EF:228:PHE:CE2	84:EF:293:ILE:HG23	2.33	0.62
84:EF:507:VAL:CG2	84:EF:554:LEU:HD21	2.29	0.62
39:C:195:LYS:HA	39:C:200:ARG:HA	1.81	0.62
47:L:74:ARG:HG3	79:5:75:G:H3'	1.80	0.62
68:i:51:ALA:HB3	68:i:54:GLU:HG3	1.81	0.62
76:r:97:ILE:HD13	76:r:107:ARG:HA	1.81	0.62
77:s:15:LEU:O	77:s:17:ILE:CG2	2.46	0.62
77:s:42:GLN:N	77:s:42:GLN:HE21	1.97	0.62
78:t:125:LEU:HD22	78:t:161:GLU:CB	2.29	0.62
79:5:4396:A:N6	79:5:4447:C:O2	2.32	0.62
82:1:1472:A:H3'	82:1:1473:A:C8	2.27	0.62
3:KK:35:LEU:HD11	3:KK:38:LYS:HD3	1.80	0.62
6:QQ:9:SER:HB2	6:QQ:24:HIS:HE1	1.63	0.62
18:9:1228:A:H2'	18:9:1229:G:H8	1.64	0.62
20:BB:71:LEU:HG	20:BB:84:PHE:HE2	1.64	0.62
39:C:79:VAL:HB	39:C:88:GLY:H	1.64	0.62
43:G:225:ALA:HB3	68:i:43:MET:HE1	1.80	0.62
64:e:70:LEU:HD11	64:e:76:LYS:HG2	1.81	0.62
77:s:43:ILE:HD13	77:s:187:LEU:HD21	1.81	0.62
78:t:16:ARG:HA	78:t:58:ILE:O	1.99	0.62
78:t:115:GLN:C	78:t:118:HIS:HB3	2.24	0.62
84:EF:508:ALA:HB2	84:EF:575:PRO:HG3	1.81	0.62
78:t:46:ILE:CG1	78:t:60:VAL:HB	2.26	0.62
78:t:75:PRO:O	78:t:80:LEU:HD21	2.00	0.62
79:5:2638:G:H22	79:5:2697:A:H61	1.46	0.62
83:PT:2:G:O2'	83:PT:3:G:H5'	2.00	0.62
84:EF:235:LYS:O	84:EF:236:PHE:C	2.42	0.62
5:PP:53:GLN:HE21	5:PP:83:MET:HE2	1.64	0.62
19:AA:58:LEU:HD21	19:AA:178:LEU:HA	1.80	0.62
25:II:60:LEU:HD23	25:II:185:ALA:HB2	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:D:208:MET:HE3	40:D:233:PRO:HG3	1.82	0.62
44:H:36:ARG:HB2	44:H:80:MET:HE1	1.81	0.62
77:s:17:ILE:HG13	77:s:18:ILE:N	2.15	0.62
78:t:53:TRP:CB	78:t:56:LEU:HB2	2.24	0.62
78:t:130:LYS:CD	78:t:154:ASP:HB2	2.21	0.62
82:1:1470:C:C6	82:1:1488:G:H5''	2.34	0.62
84:EF:86:LEU:HD23	84:EF:87:ASN:N	2.13	0.62
84:EF:635:LEU:HD13	84:EF:646:ALA:HA	1.81	0.62
5:PP:34:MET:HE2	5:PP:45:LEU:HB3	1.82	0.62
15:gg:8:ARG:HB3	15:gg:309:VAL:HG23	1.81	0.62
18:9:1112:U:O2	18:9:1121:G:O6	2.18	0.62
21:CC:191:VAL:HG11	21:CC:236:PHE:HA	1.82	0.62
22:EE:45:ILE:HG13	22:EE:61:VAL:HG11	1.80	0.62
23:GG:1:MET:HE3	23:GG:106:LEU:HB2	1.81	0.62
38:B:17:LEU:HG	38:B:18:PRO:HD3	1.81	0.62
48:M:123:ILE:HD13	50:O:182:GLU:HG2	1.82	0.62
66:g:26:PRO:HA	79:5:2639:U:H1'	1.81	0.62
77:s:62:ARG:O	77:s:65:ILE:HB	1.99	0.62
77:s:129:GLY:CA	77:s:152:ILE:HG13	2.28	0.62
79:5:2492:C:H2'	79:5:2493:G:H8	1.64	0.62
84:EF:577:VAL:HG11	84:EF:791:ASN:CB	2.29	0.62
18:9:1260:A:H2'	18:9:1261:C:H5'	1.80	0.62
24:HH:145:ARG:HH11	31:WW:51:GLU:HB3	1.63	0.62
33:YY:91:LEU:HD13	33:YY:96:LEU:HD11	1.80	0.62
77:s:62:ARG:HA	77:s:65:ILE:CG1	2.30	0.62
82:1:1415:U:H1'	82:1:1416:C:C2	2.34	0.62
84:EF:82:SER:CB	84:EF:86:LEU:HD12	2.29	0.62
84:EF:694:GLU:O	84:EF:695:GLU:C	2.41	0.62
84:EF:745:TYR:CE1	84:EF:788:LEU:HB3	2.34	0.62
45:I:181:PHE:HE1	45:I:197:VAL:HG11	1.64	0.62
66:g:90:ARG:HG2	79:5:4122:G:H4'	1.82	0.62
77:s:25:PRO:HD3	77:s:92:LYS:HE2	1.80	0.62
78:t:64:ILE:HD13	78:t:69:ALA:N	2.14	0.62
78:t:130:LYS:NZ	78:t:154:ASP:HB3	2.15	0.62
79:5:1761:G:H3'	79:5:1762:C:C5	2.35	0.62
79:5:4638:U:H3	79:5:4661:G:H1	1.47	0.62
82:1:1359:A:N7	82:1:1374:C:H1'	2.15	0.62
82:1:1445:G:H2'	82:1:1447:A:H2	1.61	0.62
84:EF:189:ILE:HG21	84:EF:204:MET:N	2.14	0.62
42:F:126:LYS:HG3	79:5:1727:U:H4'	1.82	0.62
44:H:107:GLU:HB2	44:H:110:SER:HB2	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:s:116:ILE:HG13	77:s:165:ASP:O	1.99	0.62
77:s:125:ALA:HB2	77:s:155:LEU:O	2.00	0.62
79:5:1761:G:H3'	79:5:1762:C:H5	1.64	0.62
82:1:1341:U:H3	82:1:1391:G:P	2.23	0.62
82:1:1370:U:C2	82:1:1449:U:C4	2.88	0.62
84:EF:519:LYS:HE2	84:EF:566:ALA:HB1	1.82	0.62
84:EF:692:LEU:HD11	84:EF:740:LEU:CD2	2.30	0.62
5:PP:28:MET:HE2	5:PP:32:GLN:HG3	1.82	0.62
18:9:122:G:H21	22:EE:146:THR:HG21	1.63	0.62
39:C:133:LEU:HD22	39:C:136:LEU:HD11	1.80	0.62
62:c:42:LYS:HB3	62:c:97:ILE:HG23	1.81	0.62
77:s:51:ALA:HB3	77:s:89:VAL:CG1	2.30	0.62
78:t:130:LYS:NZ	78:t:151:ILE:HA	2.14	0.62
79:5:4957:C:H3'	79:5:4958:C:H5''	1.82	0.62
82:1:1331:A:C8	82:1:1415:U:H4'	2.33	0.62
82:1:1342:A:O3'	82:1:1343:C:H4'	1.99	0.62
82:1:1421:U:H2'	82:1:1422:A:N9	2.15	0.62
84:EF:125:ALA:HB3	84:EF:152:LYS:O	2.00	0.62
84:EF:215:GLY:HA3	84:EF:222:ALA:HB1	1.81	0.62
84:EF:398:ILE:HD12	84:EF:485:ILE:HD11	1.80	0.62
84:EF:590:LEU:HD11	84:EF:603:TYR:HB3	1.82	0.62
84:EF:627:GLU:O	84:EF:628:LEU:C	2.41	0.62
84:EF:649:ILE:HD11	84:EF:661:ILE:HG13	1.82	0.62
84:EF:760:TYR:O	84:EF:761:GLY:C	2.43	0.62
19:AA:76:VAL:HG12	19:AA:87:VAL:HB	1.81	0.61
48:M:89:THR:HG22	48:M:91:TRP:H	1.65	0.61
49:N:114:ARG:HD2	49:N:151:ILE:HG22	1.81	0.61
77:s:18:ILE:HG12	77:s:21:LEU:CB	2.30	0.61
77:s:57:LYS:CA	79:5:2020:U:H5'	2.30	0.61
78:t:60:VAL:CG1	78:t:71:ILE:HD13	2.30	0.61
78:t:102:GLY:H	78:t:141:CYS:HA	1.65	0.61
79:5:4174:U:H2'	79:5:4175:G:H8	1.64	0.61
82:1:1369:A:O2'	82:1:1451:C:H1'	2.00	0.61
82:1:1459:U:H2'	82:1:1460:G:O4'	1.99	0.61
11:ZZ:58:LEU:HG	11:ZZ:62:VAL:HG21	1.81	0.61
15:gg:18:VAL:HA	15:gg:35:SER:HA	1.80	0.61
18:9:528:A:H2'	18:9:529:A:H8	1.64	0.61
32:XX:91:LEU:HD23	36:ee:82:VAL:HG21	1.81	0.61
39:C:8:ILE:HG21	39:C:151:PRO:HB2	1.82	0.61
40:D:183:TYR:HA	40:D:190:PHE:HA	1.82	0.61
45:I:38:ARG:HG2	45:I:41:ALA:HB2	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:L:16:LYS:HG2	79:5:46:U:H5''	1.82	0.61
64:e:38:PRO:HD2	64:e:55:MET:HE3	1.81	0.61
82:1:1490:C:C2	82:1:1491:C:C5	2.88	0.61
84:EF:54:THR:HG22	84:EF:55:ARG:HG3	1.80	0.61
84:EF:628:LEU:HD11	84:EF:647:ARG:HA	1.82	0.61
5:PP:93:MET:HE1	5:PP:106:GLU:HB3	1.81	0.61
18:9:1352:G:H1	18:9:1359:U:H3	1.48	0.61
46:J:155:HIS:HB2	80:7:55:A:H4'	1.82	0.61
48:M:25:VAL:HG22	48:M:38:VAL:HG12	1.80	0.61
61:b:117:ARG:HE	79:5:1273:G:H5''	1.65	0.61
62:c:10:SER:HB2	62:c:13:SER:HB3	1.82	0.61
77:s:18:ILE:CG1	77:s:21:LEU:HD12	2.29	0.61
78:t:146:ARG:NE	78:t:146:ARG:HA	2.14	0.61
78:t:160:VAL:HG12	78:t:161:GLU:OE1	2.00	0.61
79:5:1759:G:H1	79:5:1773:U:H3	1.48	0.61
81:8:36:G:H4'	81:8:40:A:H5'	1.82	0.61
84:EF:744:ILE:HG12	84:EF:816:HIS:CE1	2.36	0.61
22:EE:48:LEU:HD23	22:EE:61:VAL:HG13	1.81	0.61
77:s:29:ILE:HA	77:s:88:PHE:CA	2.29	0.61
77:s:191:GLN:C	77:s:192:VAL:HG22	2.26	0.61
78:t:16:ARG:HB2	78:t:59:THR:HG23	1.83	0.61
79:5:3783:A:H4'	79:5:3784:A:H5''	1.81	0.61
84:EF:76:SER:C	84:EF:77:LEU:HD23	2.25	0.61
6:QQ:47:LEU:HD23	6:QQ:81:ILE:HG21	1.81	0.61
7:RR:117:LEU:HA	19:AA:12:GLU:HB3	1.82	0.61
24:HH:95:ILE:HD11	24:HH:133:LEU:HD21	1.81	0.61
26:JJ:37:LEU:HD23	26:JJ:42:GLU:HB2	1.82	0.61
29:OO:95:ILE:HD11	29:OO:126:ILE:HD12	1.83	0.61
65:f:36:ARG:HA	65:f:39:THR:HG22	1.83	0.61
77:s:6:ARG:HD2	77:s:10:LYS:NZ	2.15	0.61
77:s:18:ILE:HG12	77:s:21:LEU:HB3	1.81	0.61
77:s:52:VAL:CG1	77:s:89:VAL:HA	2.27	0.61
77:s:145:THR:CA	77:s:155:LEU:H	2.11	0.61
77:s:159:GLN:HG2	77:s:162:LYS:HE2	1.82	0.61
82:1:1363:A:H3'	82:1:1364:U:H6	1.65	0.61
82:1:1455:A:C2	82:1:1480:U:H5''	2.35	0.61
84:EF:675:ILE:HG22	84:EF:679:VAL:CG2	2.30	0.61
7:RR:117:LEU:HD21	19:AA:11:LYS:HA	1.81	0.61
31:WW:26:LEU:HD13	31:WW:62:VAL:HG22	1.81	0.61
46:J:159:LYS:HG2	46:J:163:MET:HE2	1.82	0.61
77:s:121:VAL:HG23	77:s:183:PHE:CE1	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:t:53:TRP:HE3	78:t:56:LEU:HG	1.66	0.61
78:t:56:LEU:HB3	78:t:58:ILE:CD1	2.27	0.61
82:1:1456:G:P	82:1:1483:A:OP2	2.58	0.61
84:EF:26:ALA:HB3	84:EF:32:LYS:CE	2.30	0.61
84:EF:147:ILE:HD12	84:EF:189:ILE:HA	1.82	0.61
84:EF:261:TRP:HA	84:EF:288:THR:HG21	1.81	0.61
84:EF:592:LEU:HD13	84:EF:857:LEU:N	2.14	0.61
39:C:24:LEU:HD23	39:C:29:LYS:HE2	1.82	0.61
41:E:261:LEU:HD11	41:E:265:LYS:HE3	1.82	0.61
52:Q:11:ARG:HG3	79:5:2081:C:H5''	1.81	0.61
77:s:160:LEU:CD1	77:s:174:LEU:HD11	2.31	0.61
78:t:37:LEU:C	78:t:37:LEU:HD13	2.25	0.61
78:t:67:ARG:HG3	78:t:68:GLN:CD	2.25	0.61
79:5:1779:U:H2'	79:5:1780:A:H8	1.66	0.61
82:1:1348:C:H2'	82:1:1349:U:H6	1.61	0.61
82:1:1461:C:H4'	82:1:1462:C:OP2	2.00	0.61
84:EF:675:ILE:HG22	84:EF:679:VAL:HG23	1.81	0.61
21:CC:180:VAL:HG22	21:CC:219:ILE:HD13	1.82	0.61
49:N:14:LYS:HE2	79:5:280:G:H5''	1.83	0.61
59:Z:11:VAL:HG11	59:Z:80:LEU:HB3	1.83	0.61
69:j:64:MET:HB3	69:j:67:LEU:HB3	1.82	0.61
77:s:13:TYR:CE2	77:s:60:MET:HG2	2.35	0.61
77:s:25:PRO:CD	77:s:92:LYS:HG3	2.31	0.61
77:s:67:GLY:O	77:s:70:GLU:HG3	2.01	0.61
77:s:129:GLY:HA2	77:s:152:ILE:H	1.65	0.61
79:5:1332:C:H2'	79:5:1333:A:H8	1.66	0.61
79:5:3790:U:H4'	79:5:3791:C:H3'	1.82	0.61
83:PT:2:G:C2'	83:PT:3:G:H5'	2.31	0.61
84:EF:200:MET:HA	84:EF:200:MET:HE3	1.82	0.61
84:EF:518:PRO:HA	84:EF:521:VAL:HB	1.83	0.61
84:EF:577:VAL:HG23	84:EF:790:VAL:CG1	2.31	0.61
84:EF:592:LEU:HD23	84:EF:592:LEU:C	2.26	0.61
17:W:13:ILE:HG12	17:W:32:LEU:HD13	1.81	0.61
20:BB:35:ALA:HB2	20:BB:44:ILE:HD11	1.83	0.61
41:E:171:LEU:HD21	41:E:177:LEU:HB2	1.83	0.61
46:J:136:ARG:HG2	46:J:137:PRO:HD2	1.82	0.61
49:N:169:ARG:HG3	49:N:174:LEU:HD11	1.81	0.61
55:U:103:VAL:HG21	55:U:113:ARG:HD3	1.83	0.61
63:d:19:GLU:HB3	63:d:102:LEU:HD21	1.81	0.61
74:o:45:GLN:HE22	74:o:51:GLN:HA	1.66	0.61
78:t:13:VAL:HG23	78:t:31:LYS:HE2	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:1:1455:A:H5''	82:1:1483:A:OP1	2.01	0.61
84:EF:33:SER:HB2	84:EF:55:ARG:CZ	2.31	0.61
84:EF:171:PRO:HB3	84:EF:294:LEU:HD13	1.82	0.61
84:EF:577:VAL:HG21	84:EF:791:ASN:HB3	1.83	0.61
77:s:101:MET:SD	77:s:102:LEU:HD22	2.07	0.61
78:t:11:LYS:O	78:t:63:THR:HA	2.01	0.61
82:1:1456:G:OP1	82:1:1482:U:H4'	2.00	0.61
84:EF:294:LEU:HD22	84:EF:298:PHE:CE2	2.36	0.61
84:EF:430:MET:HE1	84:EF:492:HIS:C	2.26	0.61
84:EF:475:VAL:HG22	84:EF:479:LEU:HD21	1.83	0.61
84:EF:662:LEU:HD21	84:EF:679:VAL:HG12	1.83	0.61
18:9:616:A:H1'	36:ee:85:VAL:HG23	1.83	0.60
26:JJ:136:ARG:HH11	26:JJ:160:SER:HA	1.66	0.60
29:OO:53:ILE:HG23	29:OO:88:LEU:HD22	1.83	0.60
76:r:17:LEU:HD21	76:r:19:LYS:HG3	1.83	0.60
77:s:46:SER:OG	77:s:47:LEU:N	2.33	0.60
77:s:193:PHE:C	77:s:193:PHE:CD1	2.77	0.60
79:5:1983:A:C2	79:5:1987:C:H5''	2.35	0.60
83:PT:38:U:O2'	83:PT:39:G:H5'	2.01	0.60
84:EF:70:ILE:HG23	84:EF:111:PHE:CE2	2.35	0.60
84:EF:161:ASP:O	84:EF:162:ARG:C	2.44	0.60
25:II:132:GLU:HG2	25:II:135:GLU:HB3	1.82	0.60
34:aa:30:VAL:HG21	34:aa:74:CYS:HB3	1.83	0.60
42:F:91:VAL:HG11	42:F:139:ILE:HD12	1.83	0.60
66:g:26:PRO:HD2	79:5:2521:G:H4'	1.83	0.60
77:s:25:PRO:HD3	77:s:92:LYS:HG3	1.82	0.60
77:s:57:LYS:HA	79:5:2020:U:C3'	2.30	0.60
78:t:84:ALA:HB1	78:t:108:GLU:HG2	1.83	0.60
82:1:1345:G:N2	82:1:1389:C:H42	1.98	0.60
82:1:1360:A:H8	82:1:1444:A:H1'	1.62	0.60
84:EF:222:ALA:C	84:EF:346:ALA:HB2	2.25	0.60
84:EF:260:LEU:CD2	84:EF:292:LEU:HD22	2.30	0.60
84:EF:294:LEU:O	84:EF:295:ASP:C	2.43	0.60
84:EF:388:CYS:O	84:EF:389:ASP:C	2.44	0.60
38:B:301:ASN:HB2	38:B:304:SER:HB2	1.82	0.60
77:s:47:LEU:CD1	77:s:50:LYS:HD2	2.29	0.60
77:s:124:PRO:HB3	77:s:157:ASP:OD1	2.02	0.60
78:t:97:ASN:HA	78:t:99:LYS:CE	2.28	0.60
78:t:115:GLN:HA	78:t:118:HIS:HB3	1.83	0.60
78:t:116:MET:CG	78:t:132:ILE:HG21	2.27	0.60
79:5:20:U:H3'	79:5:21:G:H8	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:5006:U:H4'	79:5:5007:A:H5'	1.81	0.60
82:1:1413:U:H2'	82:1:1414:U:H6	1.66	0.60
82:1:1456:G:P	82:1:1483:A:P	2.99	0.60
82:1:1474:G:H3'	82:1:1475:C:C6	2.35	0.60
84:EF:395:MET:HE2	84:EF:494:MET:HG3	1.82	0.60
84:EF:675:ILE:O	84:EF:679:VAL:HG23	2.01	0.60
9:TT:9:VAL:HG21	9:TT:135:ALA:HB1	1.83	0.60
18:9:386:C:H1'	25:II:5:ARG:HG2	1.83	0.60
38:B:163:LEU:HD23	38:B:182:GLU:HG2	1.81	0.60
41:E:188:PRO:HG3	79:5:4938:A:H1'	1.83	0.60
77:s:126:GLN:O	77:s:153:GLU:HA	2.00	0.60
78:t:123:ARG:NH1	79:5:1996:C:H5'	2.15	0.60
84:EF:22:MET:HE3	84:EF:100:ILE:HD13	1.84	0.60
84:EF:421:VAL:CB	84:EF:425:LEU:HD23	2.31	0.60
19:AA:57:LYS:HA	19:AA:159:ILE:HD11	1.82	0.60
35:bb:33:MET:HE1	35:bb:73:LEU:HD21	1.82	0.60
47:L:55:ILE:HB	47:L:116:ARG:HH12	1.66	0.60
49:N:73:ARG:HG2	49:N:75:VAL:HG13	1.83	0.60
53:S:154:LEU:HB3	53:S:157:ARG:HD3	1.82	0.60
77:s:160:LEU:HG	77:s:175:LEU:HD21	1.84	0.60
78:t:85:LEU:HD11	78:t:104:ILE:CD1	2.31	0.60
79:5:419:A:H61	81:8:15:G:H1'	1.67	0.60
79:5:1503:A:H4'	79:5:1504:G:H5'	1.83	0.60
79:5:1764:G:C5	79:5:1766:A:H5'	2.35	0.60
79:5:2386:U:H2'	79:5:2387:G:H8	1.65	0.60
82:1:1356:G:H2'	82:1:1357:U:C6	2.36	0.60
82:1:1437:C:H2'	82:1:1438:C:O4'	2.01	0.60
84:EF:74:ALA:C	84:EF:75:ILE:HD12	2.26	0.60
84:EF:86:LEU:HD23	84:EF:87:ASN:HB3	1.81	0.60
2:FF:139:VAL:HG23	12:cc:47:LYS:HG3	1.83	0.60
8:SS:27:ALA:HB2	8:SS:45:LEU:HD12	1.83	0.60
8:SS:39:ARG:HD3	9:TT:45:LEU:HA	1.81	0.60
10:UU:48:LEU:HD22	10:UU:93:SER:HB2	1.82	0.60
20:BB:71:LEU:HD12	20:BB:82:ARG:HB3	1.84	0.60
44:H:75:SER:HB3	79:5:4690:G:H5''	1.83	0.60
44:H:95:VAL:HG22	72:m:56:LEU:HB3	1.82	0.60
53:S:122:HIS:HB2	80:7:94:C:H4'	1.83	0.60
77:s:14:PHE:CE1	77:s:63:LYS:HE2	2.37	0.60
77:s:50:LYS:HD3	77:s:98:ILE:CB	2.30	0.60
79:5:1779:U:H2'	79:5:1780:A:C8	2.36	0.60
79:5:1978:C:C4	79:5:1979:A:H1'	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:4178:A:H2'	79:5:4179:G:H8	1.66	0.60
82:1:1384:C:H2'	82:1:1385:A:C8	2.36	0.60
82:1:1456:G:H4'	82:1:1483:A:H62	1.66	0.60
84:EF:85:ASP:HB3	84:EF:88:PHE:CB	2.32	0.60
84:EF:395:MET:SD	84:EF:488:PHE:CE1	2.94	0.60
84:EF:661:ILE:HG23	84:EF:663:THR:HG22	1.84	0.60
84:EF:748:GLU:HA	84:EF:785:LYS:HA	1.83	0.60
19:AA:71:PRO:HA	19:AA:74:VAL:HG23	1.82	0.60
27:LL:128:VAL:HB	27:LL:140:PHE:HB3	1.81	0.60
69:j:17:THR:HG22	69:j:27:TYR:HB3	1.84	0.60
77:s:137:PHE:C	77:s:140:ALA:HB3	2.26	0.60
77:s:161:ILE:HA	77:s:162:LYS:HE3	1.84	0.60
78:t:45:ASP:HB2	78:t:71:ILE:CD1	2.31	0.60
82:1:1355:A:N6	82:1:1377:U:H3	2.00	0.60
84:EF:401:MET:O	84:EF:402:VAL:HG13	2.02	0.60
84:EF:666:THR:HG22	84:EF:706:ASP:HA	1.82	0.60
21:CC:108:LYS:HB2	21:CC:233:LEU:HD23	1.82	0.60
38:B:43:LEU:HB2	38:B:210:VAL:HG22	1.84	0.60
44:H:26:ILE:HG22	44:H:35:ARG:HG2	1.84	0.60
45:I:184:MET:HE2	45:I:190:LEU:HG	1.83	0.60
74:o:26:TYR:HB3	74:o:67:VAL:HB	1.82	0.60
77:s:9:TRP:CD1	79:5:1998:A:H4'	2.37	0.60
77:s:99:ARG:NH1	77:s:103:LEU:HD22	2.16	0.60
77:s:102:LEU:HA	77:s:105:ASN:HD21	1.67	0.60
78:t:21:GLU:N	78:t:54:LYS:HA	2.17	0.60
78:t:103:ASN:O	78:t:104:ILE:C	2.45	0.60
78:t:149:HIS:HA	78:t:152:ILE:CG1	2.32	0.60
79:5:3913:G:H3'	79:5:3914:U:H4'	1.84	0.60
79:5:4736:C:H2'	79:5:4737:G:H8	1.67	0.60
82:1:1397:C:H2'	82:1:1398:C:O4'	2.01	0.60
82:1:1419:G:H2'	82:1:1420:G:C8	2.36	0.60
84:EF:576:VAL:O	84:EF:577:VAL:C	2.45	0.60
2:FF:153:LEU:HB3	2:FF:189:ALA:HA	1.83	0.60
10:UU:46:LYS:HD3	10:UU:97:ILE:HG23	1.84	0.60
18:9:656:G:H21	18:9:663:C:H5''	1.67	0.60
18:9:1656:G:H1	18:9:1668:U:H3	1.48	0.60
20:BB:107:ARG:HD2	29:OO:131:ASP:HB3	1.84	0.60
28:NN:60:VAL:HG23	28:NN:66:VAL:HG21	1.84	0.60
45:I:91:LEU:HD11	45:I:135:ILE:HG12	1.83	0.60
49:N:95:ALA:HB3	79:5:30:C:H5'	1.84	0.60
79:5:5005:G:H22	79:5:5041:G:H1'	1.67	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:1:1343:C:O2'	82:1:1344:G:H8	1.85	0.60
84:EF:641:TRP:CZ2	84:EF:645:GLU:HB3	2.35	0.60
22:EE:11:ARG:HA	22:EE:28:ALA:HB2	1.83	0.60
75:p:52:VAL:HG21	79:5:2739:C:H4'	1.83	0.60
77:s:99:ARG:HD3	77:s:100:ASP:OD1	2.02	0.60
77:s:162:LYS:H	77:s:165:ASP:HB3	1.65	0.60
78:t:104:ILE:HB	78:t:141:CYS:O	2.02	0.60
79:5:2841:G:H3'	79:5:2842:G:H5''	1.84	0.60
82:1:1378:A:C2	82:1:1379:U:H6	2.20	0.60
84:EF:198:GLY:O	84:EF:199:PRO:C	2.45	0.60
84:EF:503:PRO:HB2	84:EF:535:GLN:HB3	1.84	0.60
18:9:178:C:H2'	18:9:179:C:H6	1.66	0.59
18:9:1129:G:H3'	18:9:1130:G:H21	1.66	0.59
78:t:11:LYS:HE2	78:t:35:LEU:HD21	1.83	0.59
78:t:146:ARG:HB3	78:t:148:PRO:CG	2.32	0.59
79:5:1403:G:H2'	79:5:1404:G:H8	1.67	0.59
79:5:4414:A:H2'	79:5:4422:A:N1	2.17	0.59
82:1:1331:A:H4'	82:1:1332:G:O3'	2.01	0.59
84:EF:511:ALA:HB1	84:EF:568:ILE:HG21	1.84	0.59
7:RR:17:ILE:HA	7:RR:24:LEU:HD12	1.83	0.59
23:GG:147:LEU:HD12	23:GG:153:VAL:HG13	1.83	0.59
24:HH:144:ILE:HB	31:WW:52:ILE:HG13	1.84	0.59
32:XX:50:ILE:HG13	32:XX:75:ILE:HD11	1.83	0.59
60:a:32:ARG:HD2	79:5:37:U:H4'	1.82	0.59
65:f:8:LYS:HB3	65:f:100:ARG:HD2	1.84	0.59
77:s:193:PHE:CD2	77:s:198:ILE:HA	2.37	0.59
78:t:15:LEU:HB2	78:t:46:ILE:HD13	1.83	0.59
82:1:1347:G:H2'	82:1:1348:C:C6	2.36	0.59
82:1:1454:A:H3'	82:1:1454:A:N3	2.18	0.59
18:9:12:U:H5''	21:CC:110:MET:HE2	1.84	0.59
37:A:120:PRO:HA	37:A:162:ASN:HB3	1.85	0.59
39:C:197:ARG:HH12	79:5:350:C:H3'	1.66	0.59
40:D:65:ALA:HB2	40:D:74:ILE:HD13	1.84	0.59
42:F:225:HIS:HB3	42:F:228:GLU:HG2	1.83	0.59
43:G:241:ALA:HB2	79:5:6:C:H1'	1.84	0.59
77:s:38:LYS:C	77:s:42:GLN:HB2	2.27	0.59
78:t:32:ILE:HG12	78:t:42:VAL:HG21	1.85	0.59
84:EF:182:VAL:O	84:EF:183:GLU:C	2.45	0.59
84:EF:229:ALA:O	84:EF:230:GLU:C	2.45	0.59
1:DD:35:SER:HA	1:DD:99:ILE:HD11	1.83	0.59
15:gg:5:MET:HB2	15:gg:270:LEU:HD21	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:gg:63:SER:HB2	15:gg:84:ASP:HB3	1.83	0.59
18:9:1864:U:H5'	34:aa:79:ILE:HD11	1.85	0.59
32:XX:128:VAL:HG11	32:XX:133:LEU:HD21	1.84	0.59
40:D:211:LEU:HB3	40:D:219:TYR:HB2	1.84	0.59
50:O:51:LYS:HA	50:O:141:LEU:HD11	1.85	0.59
77:s:9:TRP:C	77:s:12:ASN:HB3	2.23	0.59
77:s:42:GLN:HE21	77:s:42:GLN:CA	2.16	0.59
78:t:10:ILE:HA	78:t:65:GLN:OE1	2.03	0.59
78:t:85:LEU:HA	78:t:86:LYS:HZ1	1.68	0.59
78:t:118:HIS:CD2	78:t:119:ARG:NE	2.71	0.59
84:EF:235:LYS:C	84:EF:237:ALA:N	2.56	0.59
84:EF:514:PRO:O	84:EF:515:ALA:C	2.44	0.59
84:EF:825:PHE:CD2	84:EF:847:ILE:HD11	2.37	0.59
18:9:126:G:H2'	23:GG:199:THR:HG21	1.85	0.59
18:9:1757:G:O6	18:9:1775:U:O2	2.20	0.59
22:EE:129:ILE:HG13	22:EE:139:LEU:HD23	1.85	0.59
23:GG:50:VAL:HG21	23:GG:111:LEU:HB3	1.83	0.59
43:G:163:LYS:HG2	43:G:166:ARG:HH12	1.68	0.59
47:L:25:TRP:HE1	49:N:199:GLN:HB3	1.67	0.59
50:O:116:LYS:HD3	53:S:169:THR:HG21	1.83	0.59
60:a:112:LEU:HD23	60:a:130:SER:HB2	1.83	0.59
63:d:33:ILE:HD11	63:d:41:ARG:HB3	1.84	0.59
77:s:45:MET:CA	77:s:48:ARG:HE	2.09	0.59
78:t:142:ASN:ND2	78:t:147:HIS:H	1.99	0.59
82:1:1430:G:N2	82:1:1439:A:C8	2.70	0.59
8:SS:47:LYS:HA	8:SS:47:LYS:HE2	1.84	0.59
18:9:968:U:H1'	18:9:972:A:H1'	1.84	0.59
22:EE:185:GLY:H	22:EE:189:LEU:HD13	1.66	0.59
31:WW:6:VAL:HG12	31:WW:34:ILE:HD11	1.84	0.59
39:C:205:ARG:HG2	79:5:2297:G:H5'	1.84	0.59
39:C:286:ASN:HB3	39:C:292:ILE:HD11	1.85	0.59
56:V:112:MET:HE1	56:V:117:ILE:HG12	1.83	0.59
77:s:17:ILE:HG12	77:s:64:ALA:HB1	1.84	0.59
77:s:28:PHE:CZ	77:s:95:LEU:HA	2.37	0.59
78:t:13:VAL:HG13	78:t:62:LEU:HD12	1.84	0.59
78:t:21:GLU:HB3	78:t:55:GLY:N	2.18	0.59
78:t:91:ASP:H	78:t:93:LYS:HZ1	1.50	0.59
79:5:2685:C:H3'	79:5:2686:G:H5''	1.83	0.59
82:1:1478:C:H5''	82:1:1480:U:C5	2.37	0.59
83:PT:58:A:C2	83:PT:61:C:C6	2.90	0.59
84:EF:181:ILE:O	84:EF:185:VAL:HG23	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:PP:18:ARG:HB2	5:PP:36:LEU:HD11	1.83	0.59
9:TT:22:LEU:HD13	9:TT:28:LEU:HD11	1.83	0.59
43:G:85:PHE:HE1	59:Z:53:VAL:HG22	1.68	0.59
84:EF:178:PHE:HA	84:EF:181:ILE:HD12	1.83	0.59
84:EF:429:ILE:HA	84:EF:485:ILE:HG23	1.83	0.59
84:EF:484:THR:HB	84:EF:493:ASN:HA	1.84	0.59
84:EF:527:LEU:HD23	84:EF:561:LEU:HD23	1.84	0.59
7:RR:41:ILE:HG21	7:RR:47:ARG:HB2	1.83	0.59
26:JJ:42:GLU:HA	26:JJ:45:ARG:HG2	1.85	0.59
48:M:108:ASP:HA	48:M:111:LYS:HE2	1.84	0.59
64:e:58:ILE:HB	79:5:1664:U:H5''	1.83	0.59
65:f:5:LEU:HD23	79:5:4945:G:H1	1.67	0.59
77:s:8:THR:O	77:s:9:TRP:O	2.18	0.59
77:s:38:LYS:O	77:s:42:GLN:HB2	2.03	0.59
77:s:78:LEU:HB3	77:s:198:ILE:HG12	1.85	0.59
78:t:42:VAL:HG13	78:t:62:LEU:CD2	2.33	0.59
78:t:54:LYS:HZ2	78:t:89:PRO:HB2	1.67	0.59
79:5:1526:G:H2'	79:5:1527:A:H8	1.66	0.59
79:5:2489:C:H4'	79:5:2490:U:H5	1.67	0.59
84:EF:362:VAL:O	84:EF:363:THR:C	2.46	0.59
84:EF:508:ALA:HA	84:EF:545:ILE:HA	1.85	0.59
84:EF:524:LEU:O	84:EF:528:ALA:N	2.36	0.59
5:PP:52:LYS:HE3	5:PP:80:LEU:HD21	1.84	0.59
6:QQ:23:ALA:HA	6:QQ:70:VAL:HG22	1.83	0.59
9:TT:74:SER:HB3	18:9:1587:G:H1	1.68	0.59
21:CC:177:PRO:HD3	30:VV:9:VAL:HG21	1.83	0.59
23:GG:49:VAL:HB	23:GG:115:LYS:HB3	1.84	0.59
29:OO:56:VAL:HG13	29:OO:77:ALA:HB1	1.85	0.59
32:XX:51:VAL:HG13	32:XX:70:VAL:HG13	1.83	0.59
39:C:164:THR:HG21	79:5:223:G:H2'	1.85	0.59
41:E:176:LEU:HD21	41:E:194:GLN:HG2	1.84	0.59
53:S:95:ARG:HB3	53:S:95:ARG:HH11	1.67	0.59
60:a:119:LYS:HA	60:a:140:VAL:HG13	1.85	0.59
77:s:9:TRP:O	77:s:10:LYS:C	2.46	0.59
77:s:17:ILE:O	77:s:21:LEU:HB2	2.02	0.59
78:t:11:LYS:HE3	78:t:13:VAL:HB	1.85	0.59
78:t:37:LEU:O	78:t:38:SER:C	2.45	0.59
78:t:47:ALA:HA	78:t:50:THR:OG1	2.03	0.59
78:t:105:THR:HG22	78:t:107:ASP:N	2.18	0.59
79:5:4925:U:H4'	79:5:4926:C:C5'	2.33	0.59
84:EF:17:ALA:HB1	84:EF:92:SER:HB2	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:EF:35:LEU:HD11	84:EF:128:VAL:HG11	1.85	0.59
15:gg:77:PHE:HB3	15:gg:89:LEU:HD11	1.85	0.59
20:BB:62:LEU:HD12	20:BB:65:ARG:HD2	1.85	0.59
34:aa:44:ILE:HD12	34:aa:45:VAL:HG13	1.85	0.59
63:d:85:ARG:HG3	63:d:111:VAL:HG21	1.84	0.59
77:s:77:LYS:NZ	77:s:78:LEU:CG	2.63	0.59
77:s:118:PRO:CG	77:s:185:PHE:HE2	2.16	0.59
81:8:85:U:H4'	81:8:86:U:H5''	1.84	0.59
82:1:1368:G:C2'	82:1:1369:A:H5'	2.33	0.59
84:EF:12:ILE:O	84:EF:13:MET:C	2.46	0.59
84:EF:79:TYR:CD2	84:EF:351:LEU:HD13	2.38	0.59
84:EF:265:TYR:CE1	84:EF:292:LEU:HD11	2.37	0.59
84:EF:641:TRP:O	84:EF:642:ASP:C	2.45	0.59
4:MM:60:MET:HG2	4:MM:64:LEU:HD23	1.83	0.58
6:QQ:12:VAL:HG21	6:QQ:91:ALA:HA	1.85	0.58
77:s:150:GLY:O	77:s:151:THR:HG23	2.03	0.58
77:s:193:PHE:HA	77:s:199:TYR:H	1.67	0.58
79:5:2660:A:H4'	79:5:2661:U:H3'	1.85	0.58
84:EF:590:LEU:HD22	84:EF:705:HIS:CD2	2.37	0.58
84:EF:840:LYS:O	84:EF:841:ARG:C	2.45	0.58
10:UU:51:LYS:HE3	18:9:1402:A:H5'	1.85	0.58
31:WW:18:GLU:HG2	31:WW:65:LEU:HD13	1.85	0.58
40:D:106:ALA:HB1	40:D:171:LEU:HD13	1.85	0.58
78:t:48:LYS:HA	78:t:48:LYS:CE	2.33	0.58
79:5:1918:U:O2	79:5:2064:G:O6	2.20	0.58
82:1:1447:A:H3'	82:1:1448:U:O4'	2.02	0.58
82:1:1479:U:C4	82:1:1480:U:H1'	2.37	0.58
84:EF:32:LYS:HB3	84:EF:35:LEU:HD12	1.84	0.58
84:EF:590:LEU:HD22	84:EF:705:HIS:HD2	1.68	0.58
4:MM:42:LEU:HG	4:MM:74:ILE:HD13	1.85	0.58
9:TT:62:ARG:HH11	9:TT:62:ARG:HB2	1.68	0.58
39:C:224:ILE:HG22	39:C:227:ILE:HD13	1.85	0.58
48:M:35:ARG:HD2	48:M:49:ALA:HB1	1.85	0.58
56:V:36:ASN:HB2	56:V:67:LYS:HG2	1.83	0.58
64:e:100:ALA:HB3	64:e:103:VAL:HG23	1.86	0.58
84:EF:140:GLU:HA	84:EF:143:LEU:HD12	1.84	0.58
84:EF:189:ILE:HG21	84:EF:204:MET:HA	1.83	0.58
84:EF:454:MET:HE3	84:EF:469:ILE:CG1	2.33	0.58
1:DD:32:ASP:HB3	1:DD:58:VAL:HG12	1.85	0.58
18:9:1208:A:H2'	18:9:1209:A:H8	1.68	0.58
18:9:1388:A:H2'	18:9:1389:C:H5'	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AA:21:ALA:HB1	19:AA:170:SER:HA	1.86	0.58
29:OO:95:ILE:HB	29:OO:129:ILE:HG12	1.86	0.58
31:WW:102:ILE:H	31:WW:113:HIS:HD2	1.51	0.58
32:XX:40:PRO:HB2	32:XX:81:ILE:HD11	1.84	0.58
40:D:273:LEU:HD21	80:7:107:G:H5''	1.84	0.58
50:O:76:PRO:HB3	50:O:138:LEU:HG	1.85	0.58
77:s:56:GLY:HA2	79:5:1998:A:N3	2.18	0.58
78:t:14:TYR:H	78:t:31:LYS:NZ	2.01	0.58
79:5:1981:G:H3'	79:5:1982:G:C8	2.37	0.58
83:PT:14:A:C6	83:PT:22:G:C5	2.91	0.58
84:EF:111:PHE:CZ	84:EF:552:LEU:HD23	2.38	0.58
84:EF:620:GLY:O	84:EF:621:GLU:C	2.45	0.58
84:EF:622:VAL:HB	84:EF:652:PHE:CE1	2.37	0.58
84:EF:710:HIS:CD2	84:EF:711:ALA:N	2.72	0.58
19:AA:173:LEU:HD11	19:AA:177:MET:HE3	1.86	0.58
54:T:48:VAL:HG21	54:T:94:GLU:HG2	1.84	0.58
58:Y:55:VAL:HG13	58:Y:104:VAL:HG13	1.85	0.58
77:s:11:SER:C	77:s:13:TYR:H	2.07	0.58
77:s:51:ALA:HA	77:s:91:THR:HB	1.84	0.58
77:s:55:MET:HE1	77:s:87:GLY:HA3	1.84	0.58
77:s:57:LYS:HG3	79:5:2021:G:P	2.42	0.58
77:s:96:THR:HG23	77:s:97:GLU:N	2.18	0.58
78:t:11:LYS:H	78:t:63:THR:CG2	2.17	0.58
78:t:118:HIS:CD2	78:t:119:ARG:NH1	2.72	0.58
79:5:2609:G:H1	79:5:2730:U:H3	1.50	0.58
82:1:1332:G:H2'	82:1:1333:G:C8	2.38	0.58
84:EF:221:TRP:CB	84:EF:340:MET:HB3	2.33	0.58
84:EF:454:MET:HE3	84:EF:469:ILE:HG13	1.84	0.58
6:QQ:58:LEU:HB3	6:QQ:62:ARG:HG3	1.84	0.58
6:QQ:97:GLN:HB2	6:QQ:105:LYS:HE3	1.85	0.58
15:gg:32:LEU:HB3	15:gg:71:ILE:HD11	1.85	0.58
19:AA:78:SER:HB2	19:AA:87:VAL:HG11	1.85	0.58
38:B:256:ALA:HB3	38:B:259:PRO:HD2	1.84	0.58
42:F:39:LYS:HG2	42:F:43:LYS:HE2	1.86	0.58
48:M:119:ARG:HD3	48:M:123:ILE:HD12	1.85	0.58
63:d:75:LYS:HB3	63:d:79:ASN:HB2	1.84	0.58
67:h:96:ASN:HB2	67:h:99:GLU:HG3	1.85	0.58
71:l:10:LYS:HD2	79:5:2781:G:H5''	1.84	0.58
77:s:119:CYS:HB2	77:s:183:PHE:HD1	1.67	0.58
77:s:145:THR:HB	77:s:154:ILE:HG13	1.84	0.58
84:EF:26:ALA:HB2	84:EF:128:VAL:CG1	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:EF:42:LYS:HG2	84:EF:351:LEU:HD21	1.86	0.58
84:EF:609:PHE:O	84:EF:610:PRO:C	2.43	0.58
84:EF:636:ALA:HB2	84:EF:641:TRP:O	2.02	0.58
84:EF:721:ILE:O	84:EF:722:ILE:C	2.45	0.58
84:EF:759:ILE:HD13	84:EF:800:LEU:HD22	1.84	0.58
4:MM:62:VAL:HA	4:MM:65:VAL:HG12	1.85	0.58
18:9:1531:A:H4'	18:9:1605:G:H5''	1.84	0.58
42:F:28:LYS:HE2	42:F:32:LEU:HD21	1.86	0.58
50:O:66:PRO:HG2	79:5:4587:G:H5''	1.86	0.58
62:c:81:LEU:HD22	62:c:91:VAL:HG13	1.85	0.58
71:l:47:THR:HG22	71:l:49:LEU:H	1.69	0.58
77:s:123:VAL:O	77:s:157:ASP:HA	2.04	0.58
79:5:654:C:H2'	79:5:655:C:H6	1.69	0.58
84:EF:261:TRP:CE2	84:EF:289:PHE:CE1	2.91	0.58
84:EF:302:ASP:O	84:EF:303:ALA:C	2.44	0.58
84:EF:577:VAL:CG2	84:EF:790:VAL:HG12	2.33	0.58
84:EF:695:GLU:O	84:EF:696:ASN:C	2.47	0.58
2:FF:102:LEU:HD22	11:ZZ:110:THR:HG21	1.84	0.58
4:MM:60:MET:HE3	14:ff:108:VAL:HG12	1.86	0.58
23:GG:14:LYS:HB3	23:GG:124:LEU:HD11	1.84	0.58
25:II:8:TRP:HA	25:II:18:ARG:HD2	1.86	0.58
32:XX:89:GLY:HA2	36:ee:82:VAL:HG12	1.85	0.58
47:L:48:PRO:HG2	47:L:49:ARG:HD2	1.86	0.58
60:a:34:ASN:HB2	79:5:94:A:H5''	1.86	0.58
77:s:78:LEU:HB3	77:s:198:ILE:CG1	2.34	0.58
77:s:149:ARG:HD2	84:EF:204:MET:CE	2.34	0.58
78:t:11:LYS:HB3	78:t:64:ILE:HB	1.84	0.58
78:t:90:ARG:NE	78:t:98:ILE:HG13	2.19	0.58
78:t:150:ASP:O	78:t:153:ASP:HB3	2.04	0.58
82:1:1334:U:H2'	82:1:1335:U:C6	2.39	0.58
82:1:1375:C:H2'	82:1:1376:C:O4'	2.03	0.58
84:EF:85:ASP:HB3	84:EF:88:PHE:HB2	1.85	0.58
84:EF:190:SER:O	84:EF:191:THR:C	2.45	0.58
84:EF:236:PHE:O	84:EF:237:ALA:C	2.45	0.58
84:EF:368:ARG:CA	84:EF:371:LEU:HB2	2.33	0.58
3:KK:53:LYS:HD3	3:KK:60:GLU:HB2	1.86	0.58
8:SS:75:ARG:HH21	8:SS:95:TYR:HB2	1.69	0.58
16:R:99:MET:HE1	16:R:128:LYS:HA	1.84	0.58
35:bb:35:VAL:HG22	35:bb:79:PHE:HB2	1.84	0.58
38:B:115:LYS:HE3	38:B:129:ALA:HB3	1.84	0.58
53:S:75:VAL:HA	53:S:100:LEU:HD23	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:Z:54:THR:HB	59:Z:57:MET:HE3	1.85	0.58
76:r:118:LEU:HA	76:r:121:GLN:HG2	1.86	0.58
77:s:5:ASP:OD1	77:s:6:ARG:N	2.37	0.58
77:s:13:TYR:CD2	77:s:60:MET:HG2	2.38	0.58
77:s:25:PRO:HD3	77:s:92:LYS:CE	2.33	0.58
78:t:32:ILE:CD1	78:t:39:PRO:HA	2.28	0.58
78:t:48:LYS:HA	78:t:48:LYS:NZ	2.19	0.58
79:5:419:A:N6	81:8:15:G:H1'	2.18	0.58
79:5:1753:G:H2'	79:5:1754:U:C2	2.38	0.58
82:1:1365:U:C5	82:1:1367:G:N7	2.70	0.58
82:1:1416:C:H2'	82:1:1417:A:O4'	2.03	0.58
82:1:1457:G:C2	82:1:1458:C:C4	2.91	0.58
84:EF:15:LYS:CB	84:EF:19:ILE:HD11	2.33	0.58
84:EF:480:VAL:HG12	84:EF:529:LYS:CD	2.33	0.58
84:EF:678:SER:O	84:EF:681:ALA:HB3	2.04	0.58
84:EF:731:ALA:HB1	84:EF:850:LEU:HD11	1.86	0.58
4:MM:35:ILE:HG13	14:f:102:VAL:HG21	1.86	0.58
23:GG:77:LEU:HD12	23:GG:95:LYS:HB2	1.86	0.58
45:I:97:ILE:HD13	45:I:126:VAL:HG11	1.85	0.58
57:X:83:THR:HG21	79:5:2434:G:H4'	1.86	0.58
77:s:26:LYS:CD	77:s:91:THR:HG23	2.33	0.58
77:s:171:GLU:O	77:s:175:LEU:HG	2.03	0.58
78:t:85:LEU:O	78:t:86:LYS:C	2.46	0.58
79:5:1590:C:H4'	79:5:2857:A:H5'	1.86	0.58
79:5:4584:A:H2'	79:5:4585:U:O4'	2.03	0.58
84:EF:6:VAL:HG12	84:EF:10:ARG:HD2	1.85	0.58
84:EF:233:VAL:HG12	84:EF:256:MET:HB3	1.84	0.58
84:EF:403:PRO:HA	84:EF:410:PHE:HA	1.86	0.58
84:EF:666:THR:HG21	84:EF:707:VAL:CG2	2.34	0.58
5:PP:34:MET:HB2	5:PP:45:LEU:HD12	1.86	0.57
7:RR:88:VAL:HG21	19:AA:196:GLU:HB3	1.86	0.57
7:RR:89:SER:HA	19:AA:197:VAL:HB	1.86	0.57
7:RR:105:MET:HB3	19:AA:52:LYS:HE2	1.84	0.57
18:9:531:A:H3'	18:9:532:C:H5''	1.86	0.57
18:9:1468:C:H2'	18:9:1469:A:H8	1.69	0.57
37:A:101:VAL:HA	37:A:165:VAL:HA	1.85	0.57
49:N:54:LYS:HG3	79:5:152:U:H5''	1.86	0.57
77:s:36:GLY:O	77:s:37:SER:C	2.46	0.57
78:t:46:ILE:HG12	78:t:60:VAL:CB	2.28	0.57
79:5:3700:C:O2'	79:5:3774:A:H1'	2.04	0.57
79:5:5040:U:H1'	79:5:5042:A:H1'	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:EF:89:ILE:HG22	84:EF:356:ILE:CD1	2.34	0.57
84:EF:425:LEU:HG	84:EF:427:VAL:HG13	1.85	0.57
84:EF:671:TYR:O	84:EF:672:LEU:C	2.45	0.57
84:EF:746:LEU:HG	84:EF:787:TYR:CD2	2.38	0.57
22:EE:55:ALA:HB1	22:EE:60:GLU:HB2	1.85	0.57
45:I:59:GLN:HE22	45:I:97:ILE:HD11	1.68	0.57
53:S:32:ILE:HG21	53:S:40:ALA:HA	1.85	0.57
64:e:46:ARG:HH21	79:5:2281:U:H5'	1.68	0.57
69:j:36:LYS:HA	69:j:45:ARG:HH21	1.68	0.57
77:s:28:PHE:CZ	77:s:98:ILE:HB	2.39	0.57
78:t:13:VAL:HG13	78:t:62:LEU:CD1	2.33	0.57
78:t:46:ILE:HD11	78:t:62:LEU:HD21	1.86	0.57
79:5:308:G:H1'	79:5:310:G:H1'	1.86	0.57
79:5:703:G:H2'	79:5:704:C:H4'	1.86	0.57
79:5:1794:A:H5''	79:5:4214:A:H61	1.68	0.57
83:PT:32:U:C5	83:PT:33:U:C5	2.92	0.57
84:EF:163:ALA:O	84:EF:164:LEU:C	2.46	0.57
84:EF:373:TYR:CG	84:EF:373:TYR:O	2.57	0.57
84:EF:422:SER:HA	84:EF:462:GLU:O	2.04	0.57
84:EF:642:ASP:O	84:EF:643:VAL:C	2.47	0.57
84:EF:680:VAL:O	84:EF:681:ALA:C	2.46	0.57
84:EF:763:LEU:O	84:EF:764:ASN:C	2.45	0.57
10:UU:46:LYS:HZ3	10:UU:97:ILE:HG23	1.69	0.57
18:9:191:A:H3'	18:9:192:C:H5''	1.85	0.57
24:HH:27:LEU:HD13	24:HH:45:ILE:HD13	1.86	0.57
30:VV:70:LEU:HD22	30:VV:79:VAL:HG21	1.85	0.57
33:YY:9:THR:HB	33:YY:23:MET:HG3	1.85	0.57
38:B:92:TYR:HB3	38:B:99:LEU:HD21	1.87	0.57
44:H:18:ILE:HG22	44:H:27:VAL:HG22	1.86	0.57
67:h:9:LEU:HA	67:h:12:LYS:HE2	1.86	0.57
77:s:40:MET:HE3	77:s:41:GLN:N	2.19	0.57
78:t:28:LEU:O	78:t:32:ILE:HD12	2.03	0.57
78:t:46:ILE:CG2	78:t:60:VAL:HB	2.32	0.57
78:t:105:THR:HG22	78:t:108:GLU:H	1.68	0.57
79:5:225:G:H5'	79:5:243:A:H1'	1.85	0.57
84:EF:343:TRP:CZ3	84:EF:344:LEU:HD22	2.38	0.57
84:EF:801:ARG:HG2	84:EF:808:ALA:HB3	1.86	0.57
84:EF:836:ALA:O	84:EF:840:LYS:N	2.32	0.57
18:9:126:G:H8	23:GG:199:THR:HG21	1.69	0.57
18:9:1614:A:H2'	18:9:1615:U:C6	2.40	0.57
29:OO:95:ILE:HD12	29:OO:129:ILE:HG12	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:s:20:LEU:HD21	77:s:90:PHE:CZ	2.38	0.57
77:s:99:ARG:NH1	77:s:100:ASP:HA	2.19	0.57
78:t:13:VAL:HG11	78:t:62:LEU:HB2	1.87	0.57
78:t:146:ARG:HG2	78:t:146:ARG:NH1	2.17	0.57
79:5:1984:A:C4	79:5:2011:C:H4'	2.40	0.57
83:PT:14:A:C6	83:PT:15:G:C4	2.93	0.57
84:EF:26:ALA:HB3	84:EF:32:LYS:CD	2.34	0.57
84:EF:523:GLY:HA2	84:EF:526:ARG:HD3	1.86	0.57
84:EF:804:THR:OG1	84:EF:808:ALA:HB2	2.05	0.57
1:DD:25:LEU:HD22	1:DD:37:VAL:HG11	1.86	0.57
7:RR:58:MET:HG3	7:RR:62:GLN:HE22	1.69	0.57
28:NN:45:LEU:HG	28:NN:49:GLN:HB2	1.86	0.57
39:C:315:LYS:HD2	42:F:167:ALA:HB1	1.87	0.57
42:F:93:ARG:HH22	42:F:97:ILE:HA	1.69	0.57
44:H:146:LEU:HD12	44:H:158:ALA:HB2	1.85	0.57
59:Z:51:ARG:HB2	59:Z:65:ARG:HD2	1.86	0.57
60:a:82:VAL:HG21	60:a:101:ILE:HG12	1.85	0.57
64:e:99:ILE:HG21	64:e:108:ARG:HG3	1.85	0.57
65:f:9:ALA:HB3	65:f:101:ILE:HG12	1.86	0.57
69:j:70:VAL:HG22	69:j:73:ARG:HH22	1.69	0.57
77:s:18:ILE:CA	77:s:21:LEU:CD2	2.44	0.57
77:s:124:PRO:N	77:s:157:ASP:HA	2.19	0.57
78:t:46:ILE:HD11	78:t:62:LEU:HD11	1.87	0.57
79:5:4592:C:H2'	79:5:4593:C:C6	2.40	0.57
84:EF:558:LEU:HA	84:EF:561:LEU:HD12	1.85	0.57
3:KK:83:LEU:HB2	3:KK:85:LEU:HG	1.85	0.57
18:9:1825:A:H1'	82:1:1493:G:C6	2.40	0.57
26:JJ:13:TYR:HB3	26:JJ:45:ARG:HB3	1.87	0.57
38:B:48:GLY:HA3	38:B:81:THR:HG22	1.87	0.57
38:B:84:MET:HE1	38:B:183:ILE:HD11	1.86	0.57
38:B:99:LEU:HB3	79:5:4582:C:H4'	1.85	0.57
58:Y:86:GLN:HB3	58:Y:96:HIS:HA	1.86	0.57
60:a:3:SER:HA	60:a:6:ARG:HH11	1.70	0.57
61:b:57:MET:HE2	79:5:1812:C:H1'	1.86	0.57
77:s:13:TYR:O	77:s:15:LEU:N	2.38	0.57
77:s:29:ILE:N	77:s:192:VAL:HA	2.20	0.57
79:5:1920:C:H3'	79:5:1921:C:H5''	1.87	0.57
82:1:1380:G:H2'	82:1:1381:G:C8	2.40	0.57
84:EF:227:GLN:CD	84:EF:349:ALA:HB2	2.29	0.57
84:EF:471:GLY:C	84:EF:472:LEU:HD12	2.30	0.57
84:EF:503:PRO:CB	84:EF:535:GLN:HB3	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:KK:71:LEU:HD21	3:KK:79:LEU:HD12	1.85	0.57
47:L:10:LEU:HG	47:L:12:PRO:HD3	1.86	0.57
58:Y:86:GLN:HA	58:Y:97:VAL:H	1.68	0.57
78:t:53:TRP:HZ3	78:t:79:ALA:C	2.12	0.57
78:t:152:ILE:HA	78:t:155:ILE:HG13	1.85	0.57
79:5:1848:C:H2'	79:5:1849:U:O4'	2.05	0.57
79:5:4757:C:H4'	79:5:4758:U:H5'	1.86	0.57
82:1:1356:G:H8	82:1:1356:G:O5'	1.88	0.57
82:1:1395:A:H2'	82:1:1396:G:H8	1.68	0.57
82:1:1477:G:H4'	82:1:1478:C:OP1	2.05	0.57
15:gg:152:SER:H	15:gg:169:GLY:HA2	1.70	0.57
18:9:921:G:H1'	28:NN:11:LEU:HD21	1.85	0.57
18:9:1711:U:H2'	18:9:1712:A:H8	1.70	0.57
33:YY:87:PRO:HG2	33:YY:90:ARG:HB2	1.87	0.57
38:B:117:ARG:HA	38:B:177:LYS:HD3	1.86	0.57
44:H:92:MET:HB3	44:H:181:VAL:HA	1.85	0.57
77:s:136:SER:O	77:s:140:ALA:HB2	2.05	0.57
77:s:185:PHE:N	77:s:185:PHE:CD1	2.71	0.57
78:t:17:CYS:HB3	78:t:50:THR:HG21	1.85	0.57
78:t:37:LEU:CD1	78:t:42:VAL:HG23	2.35	0.57
79:5:1554:A:N6	79:5:1573:G:H1'	2.19	0.57
83:PT:7:G:C2	83:PT:67:A:C2	2.93	0.57
84:EF:781:MET:HE2	84:EF:781:MET:N	2.19	0.57
18:9:24:C:H2'	18:9:25:A:C8	2.40	0.57
49:N:60:VAL:HG21	81:8:141:C:H5''	1.87	0.57
52:Q:179:GLY:H	60:a:51:GLY:HA2	1.69	0.57
77:s:17:ILE:HG23	77:s:18:ILE:N	2.19	0.57
77:s:144:THR:H	77:s:158:VAL:HG21	1.69	0.57
78:t:9:GLU:C	78:t:65:GLN:HA	2.30	0.57
78:t:14:TYR:CD1	78:t:61:LYS:HB3	2.40	0.57
78:t:130:LYS:HZ1	78:t:151:ILE:HG23	1.70	0.57
79:5:964:A:H2'	79:5:965:G:O4'	2.05	0.57
79:5:4992:G:H2'	79:5:4993:G:C8	2.40	0.57
81:8:108:A:H2'	81:8:109:C:O4'	2.05	0.57
82:1:1342:A:H1'	82:1:1343:C:O2'	2.05	0.57
84:EF:35:LEU:HD21	84:EF:158:ASN:CG	2.29	0.57
84:EF:430:MET:HE3	84:EF:434:TYR:CD2	2.39	0.57
84:EF:517:LEU:O	84:EF:521:VAL:HG23	2.05	0.57
84:EF:673:ASN:O	84:EF:674:GLU:C	2.46	0.57
2:FF:86:LYS:HB2	18:9:1674:G:H5''	1.86	0.57
18:9:493:A:H1'	18:9:574:A:H5'	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:9:1798:C:H2'	18:9:1799:G:O4'	2.05	0.57
25:II:106:SER:HB3	25:II:171:LEU:HG	1.86	0.57
32:XX:50:ILE:HG12	32:XX:99:GLU:HG2	1.86	0.57
33:YY:62:THR:HA	33:YY:69:THR:HG22	1.87	0.57
33:YY:82:ALA:O	33:YY:86:GLU:HB2	2.04	0.57
77:s:11:SER:C	77:s:15:LEU:HG	2.30	0.57
77:s:20:LEU:HD23	77:s:21:LEU:N	2.20	0.57
77:s:141:LEU:HB3	77:s:143:ILE:HG13	1.87	0.57
78:t:11:LYS:HE3	78:t:13:VAL:HG11	1.87	0.57
78:t:104:ILE:HG21	78:t:109:ILE:HD11	1.87	0.57
79:5:381:U:H2'	79:5:382:G:O4'	2.05	0.57
84:EF:17:ALA:HB1	84:EF:92:SER:CB	2.35	0.57
84:EF:136:CYS:HB2	84:EF:139:THR:HB	1.86	0.57
84:EF:174:LEU:O	84:EF:175:TYR:C	2.47	0.57
84:EF:270:ASN:O	84:EF:271:GLY:C	2.46	0.57
84:EF:288:THR:C	84:EF:290:CYS:N	2.60	0.57
84:EF:599:HIS:CD2	84:EF:715:DDE:CD2	2.88	0.57
18:9:876:C:H2'	18:9:877:C:H6	1.69	0.56
18:9:1101:U:H2'	18:9:1102:G:C8	2.40	0.56
43:G:116:LEU:HA	43:G:119:GLN:HG2	1.87	0.56
57:X:44:PRO:HB2	79:5:4085:A:H5'	1.86	0.56
77:s:135:THR:HA	77:s:138:PHE:CD2	2.40	0.56
79:5:1669:A:H4'	79:5:1685:G:H21	1.70	0.56
82:1:1346:U:H2'	82:1:1347:G:C8	2.40	0.56
84:EF:174:LEU:HD12	84:EF:177:THR:CB	2.34	0.56
84:EF:390:PRO:HA	84:EF:466:CYS:SG	2.45	0.56
84:EF:457:TYR:O	84:EF:458:VAL:C	2.45	0.56
20:BB:52:THR:HG23	20:BB:57:ILE:HA	1.86	0.56
32:XX:54:LYS:HD2	32:XX:91:LEU:HD11	1.88	0.56
37:A:6:ARG:HH12	37:A:198:ARG:HD3	1.70	0.56
37:A:48:ILE:HB	75:p:63:THR:HG21	1.88	0.56
56:V:80:VAL:HG23	56:V:106:VAL:HG21	1.86	0.56
77:s:125:ALA:C	77:s:154:ILE:HB	2.30	0.56
77:s:128:THR:H	77:s:151:THR:C	2.12	0.56
78:t:21:GLU:H	78:t:54:LYS:CA	2.17	0.56
78:t:65:GLN:HG2	78:t:70:GLN:HE21	1.70	0.56
78:t:104:ILE:O	78:t:105:THR:C	2.48	0.56
78:t:137:GLN:NE2	78:t:147:HIS:H	2.04	0.56
79:5:153:G:H2'	79:5:154:G:H8	1.70	0.56
79:5:679:C:H2'	79:5:680:G:C8	2.40	0.56
79:5:1667:G:N2	79:5:2281:U:C4	2.73	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:3880:G:H2'	79:5:3881:G:C8	2.41	0.56
81:8:15:G:H2'	81:8:16:G:C4	2.40	0.56
82:1:1424:U:C2	82:1:1436:A:H2'	2.39	0.56
82:1:1482:U:H5'	82:1:1483:A:C2	2.41	0.56
83:PT:34:A:H2'	83:PT:35:G:C8	2.40	0.56
84:EF:53:GLU:O	84:EF:54:THR:C	2.48	0.56
84:EF:84:ASN:HD22	84:EF:249:ARG:HG2	1.70	0.56
84:EF:176:GLN:O	84:EF:177:THR:C	2.46	0.56
84:EF:300:VAL:O	84:EF:301:PHE:C	2.48	0.56
84:EF:675:ILE:HD11	84:EF:709:LEU:HD11	1.85	0.56
7:RR:23:ARG:HA	15:gg:170:TRP:HZ3	1.71	0.56
16:R:61:ALA:HB2	79:5:2633:U:H5''	1.87	0.56
18:9:439:A:H4'	18:9:1799:G:H4'	1.87	0.56
18:9:1272:C:H2'	18:9:1273:C:C6	2.40	0.56
18:9:1365:G:H2'	18:9:1366:G:H8	1.71	0.56
19:AA:124:VAL:HG13	19:AA:130:ASP:HB2	1.88	0.56
22:EE:175:PHE:HZ	22:EE:208:VAL:HG21	1.70	0.56
28:NN:45:LEU:HD23	28:NN:50:ILE:HG12	1.87	0.56
31:WW:26:LEU:HD11	31:WW:60:LYS:HB3	1.87	0.56
38:B:231:VAL:HG23	38:B:235:TRP:HD1	1.69	0.56
50:O:47:PHE:HD1	50:O:136:ALA:HB1	1.69	0.56
59:Z:10:VAL:HG22	59:Z:24:VAL:HG22	1.87	0.56
59:Z:105:ALA:HA	59:Z:108:ARG:HE	1.69	0.56
62:c:29:LEU:HD22	62:c:91:VAL:HG21	1.87	0.56
77:s:24:TYR:HA	77:s:92:LYS:HE2	1.87	0.56
77:s:68:HIS:HA	77:s:71:ASN:ND2	2.19	0.56
77:s:86:VAL:HG12	77:s:87:GLY:N	2.21	0.56
77:s:108:PRO:HA	77:s:184:SER:HB2	1.87	0.56
77:s:171:GLU:HG3	77:s:172:ALA:N	2.20	0.56
78:t:137:GLN:HG2	78:t:147:HIS:CB	2.31	0.56
79:5:1073:G:H2'	79:5:1074:G:H8	1.70	0.56
79:5:1500:A:H5''	79:5:1501:C:H5'	1.87	0.56
79:5:4493:U:H2'	79:5:4494:G:H8	1.68	0.56
82:1:1333:G:H2'	82:1:1334:U:H6	1.70	0.56
82:1:1408:C:H4'	82:1:1409:C:OP1	2.04	0.56
82:1:1472:A:H2'	82:1:1473:A:C1'	2.35	0.56
83:PT:12:U:C2	83:PT:24:G:C2	2.93	0.56
83:PT:31:C:C6	83:PT:32:U:C5	2.93	0.56
84:EF:26:ALA:HA	84:EF:139:THR:HG23	1.88	0.56
84:EF:45:ILE:HD12	84:EF:456:ARG:NH1	2.19	0.56
84:EF:158:ASN:O	84:EF:159:LYS:C	2.47	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:EF:230:GLU:O	84:EF:233:VAL:HG22	2.05	0.56
84:EF:362:VAL:HG22	84:EF:388:CYS:CB	2.36	0.56
84:EF:454:MET:N	84:EF:454:MET:HE2	2.20	0.56
84:EF:641:TRP:CD1	84:EF:646:ALA:HA	2.40	0.56
84:EF:650:TRP:CZ2	84:EF:662:LEU:HD23	2.41	0.56
84:EF:663:THR:OG1	84:EF:665:ILE:HD11	2.04	0.56
84:EF:749:ILE:HA	84:EF:810:PRO:HA	1.88	0.56
8:SS:85:ASN:HD21	8:SS:98:VAL:HB	1.69	0.56
18:9:302:A:H1'	25:II:73:THR:CG2	2.36	0.56
18:9:1711:U:H2'	18:9:1712:A:C8	2.41	0.56
21:CC:102:LEU:HD11	21:CC:130:ILE:HG12	1.87	0.56
24:HH:70:LYS:HG2	24:HH:74:LYS:HE3	1.88	0.56
46:J:141:ILE:HG23	46:J:144:LYS:HE2	1.87	0.56
76:r:32:LEU:HD23	76:r:32:LEU:H	1.71	0.56
77:s:27:CYS:SG	77:s:88:PHE:HB2	2.46	0.56
77:s:35:VAL:HA	77:s:39:GLN:OE1	2.06	0.56
77:s:178:LEU:HD12	77:s:180:ILE:CG1	2.36	0.56
78:t:104:ILE:H	78:t:141:CYS:C	2.13	0.56
79:5:160:G:H2'	79:5:161:G:H8	1.70	0.56
79:5:1771:U:H2'	79:5:1772:C:O4'	2.05	0.56
79:5:4527:G:H1'	79:5:4528:G:N7	2.21	0.56
82:1:1345:G:H8	82:1:1345:G:O5'	1.87	0.56
82:1:1365:U:H2'	82:1:1366:G:N7	2.20	0.56
84:EF:226:LYS:HG2	84:EF:257:MET:HE1	1.87	0.56
18:9:17:C:H2'	18:9:18:C:H6	1.70	0.56
18:9:1605:G:H1'	18:9:1634:A:H61	1.70	0.56
22:EE:42:LEU:HD22	22:EE:47:PHE:HB2	1.86	0.56
37:A:79:ALA:HB3	37:A:82:ILE:HD13	1.86	0.56
38:B:223:THR:HB	38:B:275:HIS:H	1.71	0.56
44:H:34:LEU:HB2	44:H:80:MET:HG3	1.88	0.56
52:Q:71:LYS:HE3	52:Q:96:PRO:HG2	1.88	0.56
77:s:27:CYS:HB2	77:s:90:PHE:CD1	2.40	0.56
77:s:98:ILE:O	77:s:102:LEU:HG	2.06	0.56
79:5:1569:U:H2'	79:5:1570:G:C8	2.41	0.56
79:5:1981:G:N1	79:5:2009:A:O2'	2.39	0.56
79:5:1981:G:H22	79:5:2009:A:H1'	1.70	0.56
79:5:2518:G:H1'	79:5:2539:C:H1'	1.88	0.56
83:PT:56:C:C2	83:PT:57:A:C8	2.93	0.56
84:EF:368:ARG:HA	84:EF:371:LEU:HD13	1.88	0.56
84:EF:843:GLY:O	84:EF:844:LEU:C	2.49	0.56
4:MM:33:ARG:HH22	4:MM:89:VAL:HG11	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:9:302:A:H1'	25:II:73:THR:HG23	1.87	0.56
18:9:1032:C:H5''	28:NN:109:LYS:HD2	1.86	0.56
22:EE:163:ASP:HB3	22:EE:166:THR:HG22	1.87	0.56
42:F:220:LYS:HE2	42:F:220:LYS:HA	1.88	0.56
46:J:146:ARG:HG2	46:J:147:ARG:HG3	1.88	0.56
49:N:85:VAL:HA	74:o:49:GLY:HA2	1.86	0.56
53:S:13:VAL:HG12	53:S:29:ARG:HB2	1.86	0.56
77:s:145:THR:HG22	77:s:154:ILE:CG2	2.35	0.56
78:t:111:ASN:HA	78:t:114:ARG:CG	2.36	0.56
78:t:111:ASN:HA	78:t:114:ARG:HG2	1.86	0.56
84:EF:175:TYR:C	84:EF:175:TYR:CD1	2.84	0.56
84:EF:632:ALA:CA	84:EF:646:ALA:HB1	2.35	0.56
84:EF:649:ILE:HD11	84:EF:661:ILE:HG21	1.87	0.56
15:gg:3:GLU:HB3	15:gg:314:ILE:HB	1.87	0.56
18:9:164:A:H3'	18:9:165:G:H21	1.71	0.56
19:AA:102:ARG:HA	19:AA:102:ARG:HH11	1.70	0.56
31:WW:62:VAL:HB	35:bb:8:LEU:HD21	1.88	0.56
44:H:89:ARG:HD3	44:H:91:LYS:HE3	1.88	0.56
61:b:46:ALA:HB2	79:5:1814:C:H1'	1.87	0.56
70:k:24:LYS:HG2	70:k:35:LYS:HB2	1.88	0.56
74:o:44:LYS:HG2	74:o:52:THR:HG21	1.87	0.56
77:s:30:VAL:CG1	77:s:189:ILE:HD13	2.36	0.56
77:s:41:GLN:HA	77:s:44:ARG:HB2	1.88	0.56
77:s:41:GLN:CG	77:s:44:ARG:HH11	2.16	0.56
77:s:109:ALA:HB3	77:s:184:SER:HA	1.87	0.56
77:s:122:THR:HA	77:s:160:LEU:H	1.71	0.56
77:s:146:LYS:HA	77:s:146:LYS:CE	2.35	0.56
78:t:14:TYR:CZ	78:t:61:LYS:HD2	2.41	0.56
79:5:1580:C:H2'	79:5:1581:G:O4'	2.06	0.56
79:5:2671:C:H2'	79:5:2672:C:C6	2.40	0.56
82:1:1493:G:C2	82:1:1494:C:H1'	2.40	0.56
84:EF:22:MET:HG3	84:EF:100:ILE:HG21	1.88	0.56
84:EF:440:GLU:O	84:EF:442:LEU:HD22	2.06	0.56
9:TT:42:HIS:HB2	9:TT:83:GLN:HA	1.88	0.56
18:9:551:U:H2'	18:9:552:G:C8	2.40	0.56
18:9:928:G:H2'	18:9:929:G:C8	2.41	0.56
18:9:981:A:H2'	18:9:982:G:C8	2.41	0.56
39:C:83:GLY:H	79:5:368:C:H1'	1.71	0.56
50:O:192:PHE:HA	50:O:195:VAL:HG22	1.88	0.56
59:Z:77:TYR:HB3	62:c:39:ARG:HD2	1.88	0.56
59:Z:97:ASN:HB3	59:Z:100:VAL:HG23	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:f:43:LEU:HD22	65:f:76:ARG:HA	1.88	0.56
75:p:20:ALA:HB2	79:5:2874:U:H1'	1.88	0.56
77:s:143:ILE:HA	77:s:158:VAL:CG1	2.36	0.56
81:8:92:U:H2'	81:8:93:C:O4'	2.06	0.56
82:1:1355:A:H61	82:1:1377:U:H3	1.54	0.56
82:1:1494:C:H41	84:EF:714:ILE:HG13	1.70	0.56
84:EF:34:THR:HG21	84:EF:218:LEU:HD12	1.88	0.56
84:EF:587:SER:CB	84:EF:605:LYS:HG2	2.36	0.56
84:EF:732:SER:O	84:EF:735:THR:HG22	2.06	0.56
2:FF:35:LEU:HD11	2:FF:146:ARG:HD2	1.87	0.56
5:PP:93:MET:HE2	5:PP:104:GLN:HE21	1.70	0.56
8:SS:84:LEU:HD22	8:SS:97:GLN:HB2	1.88	0.56
9:TT:65:TYR:HB2	9:TT:123:LEU:HD22	1.87	0.56
16:R:102:LEU:HD22	16:R:138:LEU:HD12	1.88	0.56
16:R:105:LEU:HG	16:R:135:LYS:HG3	1.88	0.56
18:9:1144:A:H2'	18:9:1145:A:C8	2.41	0.56
18:9:1324:G:H1	18:9:1504:U:H3	1.52	0.56
39:C:290:SER:O	39:C:294:LYS:HG2	2.05	0.56
54:T:14:MET:HE1	54:T:55:LYS:HB2	1.86	0.56
56:V:82:ILE:HG21	56:V:121:VAL:HG22	1.88	0.56
77:s:25:PRO:HD2	77:s:91:THR:O	2.06	0.56
77:s:26:LYS:HE2	77:s:94:ASP:HA	1.88	0.56
77:s:52:VAL:HB	77:s:90:PHE:O	2.06	0.56
79:5:1758:G:C5	79:5:1775:A:C2	2.93	0.56
79:5:1763:C:H3'	79:5:1764:G:N3	2.21	0.56
79:5:2861:C:H2'	79:5:2862:G:O4'	2.06	0.56
84:EF:261:TRP:CZ2	84:EF:289:PHE:CZ	2.93	0.56
84:EF:421:VAL:HB	84:EF:425:LEU:HD23	1.86	0.56
84:EF:613:LEU:HD12	84:EF:616:ASP:HB3	1.88	0.56
84:EF:649:ILE:HG23	84:EF:650:TRP:H	1.71	0.56
18:9:805:U:H5''	31:WW:83:LEU:HD23	1.87	0.56
18:9:1574:C:H3'	18:9:1575:G:H5''	1.88	0.56
38:B:280:ILE:HD11	79:5:4676:G:H4'	1.88	0.56
77:s:116:ILE:HD12	77:s:164:GLY:CA	2.36	0.56
77:s:119:CYS:SG	77:s:183:PHE:HA	2.46	0.56
78:t:130:LYS:CE	78:t:151:ILE:HG23	2.36	0.56
79:5:1984:A:H2'	79:5:2011:C:OP1	2.06	0.56
83:PT:30:G:N2	83:PT:41:A:C4	2.74	0.56
84:EF:539:GLU:O	84:EF:540:GLU:C	2.48	0.56
84:EF:756:VAL:HG21	84:EF:782:PHE:CG	2.41	0.56
84:EF:756:VAL:O	84:EF:757:GLY:C	2.49	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:9:303:C:H2'	18:9:304:C:O4'	2.07	0.55
18:9:582:U:C2'	18:9:583:A:H5''	2.36	0.55
18:9:1320:G:H2'	18:9:1321:G:O4'	2.06	0.55
25:II:36:THR:HG23	25:II:96:LEU:HB2	1.88	0.55
31:WW:105:THR:HB	31:WW:110:ILE:HG12	1.87	0.55
39:C:28:PHE:HD1	39:C:132:ALA:HB2	1.71	0.55
57:X:78:LYS:HD2	57:X:99:ILE:HG22	1.86	0.55
60:a:86:THR:HG22	79:5:510:U:H5''	1.88	0.55
63:d:44:ARG:HA	63:d:44:ARG:HH11	1.71	0.55
65:f:54:LYS:HD3	79:5:443:G:H5''	1.86	0.55
77:s:56:GLY:N	77:s:61:MET:HE1	2.21	0.55
78:t:24:ALA:N	78:t:92:ARG:HE	1.95	0.55
78:t:109:ILE:HA	78:t:112:ILE:HD12	1.88	0.55
79:5:1534:A:H2'	79:5:1637:A:N1	2.21	0.55
82:1:1334:U:H3	82:1:1396:G:H1	1.51	0.55
82:1:1358:A:C1'	82:1:1360:A:H5''	2.36	0.55
82:1:1456:G:P	82:1:1483:A:OP1	2.64	0.55
83:PT:10:G:C2	83:PT:11:C:C2	2.93	0.55
84:EF:398:ILE:CG2	84:EF:401:MET:HE1	2.37	0.55
18:9:521:A:H2'	18:9:522:A:O4'	2.06	0.55
18:9:804:U:O2	18:9:859:G:O6	2.25	0.55
18:9:807:G:H2'	18:9:808:A:C8	2.41	0.55
18:9:1139:C:H3'	18:9:1140:G:H8	1.70	0.55
23:GG:5:ILE:HD12	23:GG:16:ILE:HD13	1.87	0.55
42:F:126:LYS:HE2	42:F:130:ASN:HD21	1.71	0.55
53:S:43:ARG:HH22	53:S:122:HIS:HA	1.70	0.55
77:s:77:LYS:CE	77:s:198:ILE:HD11	2.35	0.55
77:s:174:LEU:HA	77:s:177:MET:HB2	1.87	0.55
78:t:16:ARG:CB	78:t:59:THR:HA	2.34	0.55
79:5:1984:A:O2'	79:5:2011:C:H5'	2.06	0.55
79:5:3652:A:H2'	79:5:3653:A:C5	2.40	0.55
82:1:1331:A:H8	82:1:1416:C:C1'	2.18	0.55
82:1:1394:A:C2'	82:1:1395:A:C8	2.87	0.55
84:EF:449:ARG:HG2	84:EF:451:ILE:HG22	1.88	0.55
84:EF:713:ALA:HA	84:EF:716:ARG:CZ	2.36	0.55
84:EF:747:VAL:HG23	84:EF:812:CYS:N	2.21	0.55
18:9:517:C:H2'	18:9:518:G:O4'	2.06	0.55
18:9:1562:C:H2'	18:9:1563:G:C8	2.40	0.55
22:EE:160:ILE:HD12	22:EE:169:ILE:HG22	1.88	0.55
25:II:190:LEU:HG	25:II:198:TYR:HD2	1.71	0.55
39:C:95:MET:HB2	79:5:1335:G:H21	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:E:50:PRO:HG2	41:E:58:ARG:HB2	1.88	0.55
41:E:64:MET:HG3	41:E:68:LYS:HE3	1.87	0.55
43:G:190:ARG:HB2	43:G:256:ALA:HB3	1.88	0.55
53:S:164:LYS:HB3	53:S:165:PRO:HD3	1.89	0.55
60:a:35:ALA:HB2	79:5:38:A:H5'	1.88	0.55
77:s:11:SER:O	77:s:14:PHE:N	2.37	0.55
77:s:50:LYS:CD	77:s:98:ILE:HG23	2.35	0.55
77:s:115:ALA:O	77:s:116:ILE:C	2.47	0.55
77:s:129:GLY:HA2	77:s:152:ILE:HG13	1.88	0.55
78:t:13:VAL:CG2	78:t:31:LYS:HD3	2.36	0.55
78:t:21:GLU:HB2	78:t:54:LYS:HZ2	1.71	0.55
79:5:4453:C:H2'	79:5:4454:G:O4'	2.06	0.55
80:7:24:C:H2'	80:7:25:G:O4'	2.06	0.55
82:1:1387:G:H22	82:1:1389:C:H5'	1.67	0.55
82:1:1393:U:H2'	82:1:1394:A:H8	1.64	0.55
84:EF:60:ARG:NH1	84:EF:70:ILE:HG21	2.22	0.55
84:EF:229:ALA:C	84:EF:233:VAL:HG13	2.31	0.55
84:EF:632:ALA:HB1	84:EF:647:ARG:HD2	1.89	0.55
16:R:96:MET:HG2	79:5:2667:C:O4'	2.06	0.55
16:R:105:LEU:HD21	16:R:139:MET:HE2	1.88	0.55
23:GG:2:LYS:HB3	23:GG:15:LEU:HD21	1.87	0.55
42:F:153:ILE:HG13	42:F:190:ILE:HG12	1.89	0.55
51:P:44:ALA:O	51:P:48:LEU:HG	2.06	0.55
59:Z:54:THR:HG21	79:5:4128:A:H5'	1.88	0.55
77:s:85:ASN:N	79:5:2021:G:H4'	2.21	0.55
77:s:191:GLN:HG3	77:s:192:VAL:H	1.71	0.55
79:5:2844:A:O2'	79:5:4631:G:H4'	2.06	0.55
79:5:4493:U:H2'	79:5:4494:G:C8	2.42	0.55
82:1:1372:C:C3'	82:1:1373:C:H4'	2.37	0.55
82:1:1479:U:C6	82:1:1480:U:H1'	2.41	0.55
84:EF:89:ILE:HG21	84:EF:355:THR:CG2	2.36	0.55
84:EF:508:ALA:HB3	84:EF:573:SER:O	2.07	0.55
2:FF:165:ASN:HD22	2:FF:167:LYS:HB2	1.72	0.55
6:QQ:62:ARG:HD2	6:QQ:108:ILE:HD11	1.88	0.55
6:QQ:97:GLN:HB2	6:QQ:105:LYS:HG3	1.87	0.55
10:UU:59:LYS:HB2	10:UU:84:ILE:HG23	1.89	0.55
14:ff:130:VAL:HG13	18:9:1310:U:H5'	1.88	0.55
18:9:81:U:H2'	18:9:82:G:O4'	2.07	0.55
18:9:120:U:H1'	22:EE:33:THR:O	2.07	0.55
18:9:612:U:O4	18:9:629:A:N7	2.40	0.55
18:9:1004:U:H2'	18:9:1005:G:H8	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:9:1860:A:H3'	34:aa:8:ASN:HB3	1.88	0.55
21:CC:125:LYS:HE2	21:CC:141:VAL:CG1	2.37	0.55
50:O:173:GLN:HA	50:O:176:ARG:HE	1.71	0.55
51:P:114:ILE:HA	51:P:150:LEU:HD23	1.87	0.55
62:c:28:VAL:HG21	62:c:37:MET:HG2	1.89	0.55
68:i:37:THR:HB	68:i:41:ARG:HH21	1.72	0.55
68:i:60:LEU:HA	68:i:63:VAL:HG22	1.88	0.55
70:k:35:LYS:HG2	70:k:44:THR:HG22	1.89	0.55
77:s:28:PHE:HE2	77:s:99:ARG:CA	2.19	0.55
77:s:50:LYS:HD3	77:s:98:ILE:CG2	2.37	0.55
77:s:193:PHE:CB	77:s:198:ILE:HA	2.37	0.55
78:t:75:PRO:HB2	78:t:80:LEU:HD23	1.88	0.55
79:5:56:A:H2'	79:5:57:G:C8	2.41	0.55
79:5:58:G:C4'	79:5:59:A:H4'	2.37	0.55
79:5:1761:G:H22	79:5:1772:C:H1'	1.72	0.55
79:5:4448:G:H5''	79:5:4449:A:H5'	1.88	0.55
79:5:4594:U:H2'	79:5:4595:G:H8	1.71	0.55
80:7:110:G:H2'	80:7:111:C:C6	2.42	0.55
84:EF:373:TYR:HB3	84:EF:495:ARG:HA	1.88	0.55
84:EF:502:SER:O	84:EF:549:ALA:HB2	2.06	0.55
84:EF:566:ALA:HB1	84:EF:568:ILE:HG12	1.89	0.55
84:EF:684:GLN:O	84:EF:685:TRP:C	2.50	0.55
84:EF:846:GLU:O	84:EF:847:ILE:C	2.49	0.55
5:PP:34:MET:HA	5:PP:37:TYR:CE1	2.42	0.55
15:gg:87:LEU:HD21	15:gg:108:VAL:HG11	1.89	0.55
18:9:85:A:H2'	18:9:86:C:C6	2.41	0.55
18:9:222:U:H5''	27:LL:17:PHE:CG	2.42	0.55
18:9:1277:C:H2'	18:9:1278:A:H8	1.71	0.55
21:CC:204:ILE:HG23	21:CC:214:LEU:HD12	1.88	0.55
23:GG:52:ILE:CD1	23:GG:102:VAL:HG21	2.37	0.55
42:F:142:GLY:HA3	42:F:239:ILE:HB	1.89	0.55
45:I:36:LEU:HD12	45:I:87:ILE:HB	1.89	0.55
48:M:116:LYS:HG2	50:O:196:LEU:HD21	1.88	0.55
49:N:6:TYR:HA	68:i:44:ILE:HD11	1.88	0.55
55:U:63:LEU:HD21	55:U:70:ILE:HG23	1.87	0.55
57:X:79:PHE:HB2	67:h:36:VAL:HG21	1.87	0.55
64:e:58:ILE:HD11	79:5:2079:G:O4'	2.07	0.55
77:s:24:TYR:HB3	77:s:25:PRO:CD	2.37	0.55
77:s:81:HIS:ND1	77:s:81:HIS:N	2.54	0.55
77:s:167:VAL:HG13	77:s:172:ALA:HB2	1.87	0.55
78:t:53:TRP:CZ3	78:t:79:ALA:C	2.84	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:t:104:ILE:CG2	78:t:109:ILE:HD11	2.35	0.55
78:t:108:GLU:HA	78:t:111:ASN:HD21	1.72	0.55
79:5:4173:G:H2'	79:5:4174:U:C6	2.42	0.55
80:7:23:A:H2'	80:7:24:C:C6	2.42	0.55
82:1:1474:G:C6	82:1:1475:C:C2	2.95	0.55
84:EF:143:LEU:CD1	84:EF:188:ILE:HD13	2.32	0.55
84:EF:187:VAL:HG12	84:EF:191:THR:OG1	2.07	0.55
84:EF:232:TYR:CE2	84:EF:293:ILE:HD13	2.42	0.55
84:EF:674:GLU:HG3	84:EF:675:ILE:HD13	1.88	0.55
84:EF:712:ASP:O	84:EF:713:ALA:HB3	2.07	0.55
84:EF:824:PRO:HB2	84:EF:835:VAL:HG21	1.89	0.55
2:FF:82:ASN:OD1	18:9:1535:U:H1'	2.05	0.55
7:RR:88:VAL:HG12	19:AA:195:TRP:CD1	2.41	0.55
15:gg:5:MET:HE1	15:gg:312:VAL:HG13	1.89	0.55
15:gg:42:MET:HB3	15:gg:57:ARG:HB2	1.88	0.55
18:9:311:C:H5''	18:9:312:G:H5'	1.89	0.55
18:9:581:U:H2'	18:9:582:U:O4'	2.07	0.55
18:9:815:U:H2'	18:9:816:A:H8	1.72	0.55
18:9:1531:A:H2'	18:9:1532:C:C6	2.42	0.55
21:CC:192:LEU:HB3	21:CC:227:ARG:HB3	1.88	0.55
28:NN:70:LYS:HE3	28:NN:73:ARG:HH12	1.72	0.55
37:A:117:GLU:HG2	37:A:124:GLY:N	2.22	0.55
39:C:312:ARG:HH21	79:5:1283:G:H1	1.55	0.55
44:H:104:VAL:CG1	44:H:113:GLU:HB2	2.37	0.55
51:P:148:MET:HE2	51:P:150:LEU:HD21	1.87	0.55
55:U:20:LYS:HE3	55:U:71:THR:HG21	1.89	0.55
77:s:75:LEU:O	77:s:76:GLU:HB3	2.06	0.55
77:s:116:ILE:O	77:s:117:ALA:C	2.49	0.55
77:s:130:LEU:HD23	77:s:132:PRO:CG	2.07	0.55
78:t:106:PHE:HA	78:t:109:ILE:HG13	1.88	0.55
78:t:115:GLN:CA	78:t:118:HIS:HB3	2.37	0.55
78:t:118:HIS:CD2	78:t:119:ARG:CZ	2.90	0.55
79:5:319:A:H1'	79:5:3726:A:N3	2.21	0.55
79:5:2420:A:H5''	79:5:2421:G:H5''	1.89	0.55
79:5:4948:C:H2'	79:5:4949:G:N2	2.22	0.55
82:1:1344:G:N2	82:1:1345:G:N3	2.55	0.55
84:EF:326:GLU:HG3	84:EF:335:LEU:HD12	1.89	0.55
84:EF:362:VAL:HG22	84:EF:388:CYS:HB3	1.89	0.55
84:EF:766:LYS:HB3	84:EF:788:LEU:HD21	1.89	0.55
84:EF:795:GLY:O	84:EF:798:ALA:HB3	2.07	0.55
7:RR:51:ALA:O	7:RR:55:THR:HG23	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:9:1367:U:H2'	18:9:1368:U:C6	2.42	0.55
18:9:1838:U:O2	29:OO:150:ARG:HD2	2.07	0.55
21:CC:184:VAL:HG11	21:CC:247:THR:HG22	1.88	0.55
26:JJ:32:ILE:HD11	26:JJ:40:LYS:HD2	1.88	0.55
38:B:154:LYS:HB2	38:B:194:LEU:HD23	1.89	0.55
47:L:48:PRO:HG3	67:h:118:LYS:HG3	1.88	0.55
48:M:91:TRP:CZ2	79:5:4870:G:H2'	2.41	0.55
51:P:86:LYS:HG2	79:5:3857:G:H5''	1.88	0.55
78:t:104:ILE:HD13	78:t:136:ALA:CA	2.36	0.55
78:t:107:ASP:HA	78:t:110:VAL:CG2	2.36	0.55
79:5:304:C:H2'	79:5:305:A:O4'	2.06	0.55
79:5:3822:U:H3'	79:5:3823:G:H8	1.71	0.55
83:PT:15:G:N2	83:PT:59:U:C2	2.75	0.55
83:PT:50:C:O2'	83:PT:51:G:H5'	2.06	0.55
83:PT:51:G:C2	83:PT:52:G:C8	2.94	0.55
84:EF:480:VAL:HG12	84:EF:529:LYS:HD3	1.87	0.55
1:DD:41:VAL:HA	1:DD:46:THR:HG23	1.88	0.55
16:R:60:ARG:HD2	16:R:63:CYS:HB3	1.88	0.55
18:9:170:A:OP1	23:GG:140:ARG:HD2	2.07	0.55
18:9:688:U:H5	24:HH:102:PRO:HA	1.72	0.55
19:AA:24:HIS:HB3	19:AA:51:LEU:HD11	1.89	0.55
20:BB:127:VAL:HG13	20:BB:176:VAL:HG11	1.89	0.55
59:Z:11:VAL:HG11	59:Z:80:LEU:HD22	1.89	0.55
77:s:26:LYS:HE2	77:s:94:ASP:CA	2.37	0.55
77:s:26:LYS:HD3	77:s:95:LEU:HB3	1.88	0.55
77:s:66:ARG:NH1	77:s:79:LEU:HD13	2.22	0.55
78:t:57:ARG:C	78:t:58:ILE:HD12	2.32	0.55
79:5:1879:C:H2'	79:5:1880:G:O4'	2.07	0.55
79:5:1917:A:N3	79:5:2067:C:H1'	2.22	0.55
79:5:3727:A:H2'	79:5:3728:A:C8	2.42	0.55
79:5:4597:U:H2'	79:5:4598:C:O4'	2.07	0.55
82:1:1411:A:N6	82:1:1418:U:H3	2.00	0.55
83:PT:59:U:C4	83:PT:60:C:C4	2.95	0.55
9:TT:124:THR:HG22	9:TT:127:GLY:H	1.71	0.55
18:9:1712:A:H2'	18:9:1713:C:C6	2.41	0.55
22:EE:125:LYS:HA	22:EE:159:THR:HG22	1.89	0.55
32:XX:68:LYS:CG	32:XX:91:LEU:HD22	2.37	0.55
37:A:183:GLY:HA2	79:5:1613:A:H5''	1.89	0.55
54:T:12:ARG:HG3	79:5:4276:G:H5'	1.89	0.55
60:a:103:VAL:HG21	60:a:111:VAL:HG21	1.89	0.55
77:s:13:TYR:HD1	77:s:16:LYS:CE	2.20	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:s:20:LEU:HB2	77:s:24:TYR:HE1	1.71	0.55
77:s:45:MET:O	77:s:48:ARG:HB2	2.07	0.55
78:t:37:LEU:CA	78:t:67:ARG:HH12	2.19	0.55
78:t:129:ILE:C	78:t:132:ILE:HG22	2.31	0.55
78:t:132:ILE:C	78:t:135:THR:HG23	2.32	0.55
79:5:2081:C:H2'	79:5:2082:G:C8	2.42	0.55
79:5:4919:G:H2'	79:5:4920:C:C6	2.42	0.55
82:1:1337:U:H2'	82:1:1338:A:H8	1.72	0.55
82:1:1421:U:H2'	82:1:1422:A:C8	2.41	0.55
84:EF:79:TYR:CD1	84:EF:351:LEU:HD13	2.42	0.55
84:EF:420:LEU:HB2	84:EF:464:VAL:HG12	1.88	0.55
6:QQ:86:GLN:HG2	6:QQ:90:LYS:HZ2	1.71	0.54
7:RR:66:VAL:HB	7:RR:69:ILE:HG22	1.89	0.54
18:9:653:A:H2'	18:9:654:A:O4'	2.06	0.54
18:9:876:C:H2'	18:9:877:C:C6	2.42	0.54
18:9:1035:A:H4'	18:9:1857:G:H4'	1.88	0.54
36:ee:113:ARG:HA	36:ee:117:ASN:HD22	1.72	0.54
40:D:208:MET:HG3	40:D:219:TYR:HE1	1.72	0.54
43:G:229:LYS:HD3	68:i:43:MET:HG2	1.88	0.54
48:M:90:ARG:HA	48:M:93:LYS:HE2	1.90	0.54
49:N:44:ARG:HB3	49:N:47:LYS:HB2	1.90	0.54
78:t:108:GLU:HA	78:t:111:ASN:ND2	2.21	0.54
78:t:113:ALA:HB3	78:t:114:ARG:NH2	2.21	0.54
79:5:939:G:H2'	79:5:940:C:C6	2.42	0.54
79:5:1075:G:C2'	79:5:1076:C:H5'	2.37	0.54
79:5:1733:G:N3	79:5:4214:A:H2'	2.22	0.54
82:1:1333:G:H2'	82:1:1334:U:C6	2.42	0.54
82:1:1376:C:H2'	82:1:1377:U:H6	1.67	0.54
84:EF:107:GLY:O	84:EF:108:HIS:C	2.49	0.54
84:EF:313:ALA:O	84:EF:314:LYS:C	2.50	0.54
84:EF:480:VAL:O	84:EF:482:THR:HG22	2.06	0.54
3:KK:15:LEU:HG	3:KK:71:LEU:HD22	1.89	0.54
5:PP:89:MET:HG2	5:PP:107:ILE:HD12	1.88	0.54
8:SS:139:THR:HG21	18:9:1230:C:H3'	1.88	0.54
18:9:816:A:H2'	18:9:817:G:O4'	2.08	0.54
18:9:1405:A:H2'	18:9:1406:G:O4'	2.07	0.54
26:JJ:144:ILE:HG22	26:JJ:146:SER:H	1.73	0.54
33:YY:22:GLN:HB2	33:YY:72:PHE:HZ	1.71	0.54
38:B:89:ILE:HG21	38:B:197:ALA:HB1	1.88	0.54
44:H:117:PHE:HB3	44:H:124:ARG:HH21	1.72	0.54
45:I:193:ASP:OD1	79:5:1751:A:H1'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:T:62:GLY:HA3	54:T:76:VAL:HG12	1.87	0.54
59:Z:99:ASP:O	59:Z:102:ARG:HG2	2.07	0.54
64:e:41:ILE:HG12	79:5:1317:U:OP2	2.07	0.54
67:h:103:LYS:HE2	67:h:103:LYS:HA	1.88	0.54
77:s:59:THR:HA	77:s:62:ARG:CG	2.37	0.54
77:s:133:GLU:HB3	77:s:138:PHE:CE2	2.42	0.54
77:s:194:ASP:O	77:s:199:TYR:HE1	1.90	0.54
78:t:56:LEU:CD1	78:t:82:ILE:HB	2.33	0.54
79:5:519:C:H2'	79:5:520:U:C6	2.42	0.54
79:5:1440:U:H2'	79:5:1441:C:C5	2.43	0.54
79:5:1941:A:C2	79:5:4434:C:H5'	2.42	0.54
84:EF:629:LYS:O	84:EF:630:GLN:C	2.46	0.54
84:EF:673:ASN:HA	84:EF:676:LYS:HB2	1.89	0.54
5:PP:49:LEU:HD12	5:PP:53:GLN:HE22	1.71	0.54
16:R:77:GLY:O	16:R:81:ARG:HD3	2.07	0.54
18:9:952:G:H2'	18:9:953:C:C6	2.42	0.54
21:CC:146:GLU:HG3	21:CC:149:THR:HB	1.88	0.54
21:CC:272:HIS:HA	21:CC:275:LYS:HE2	1.88	0.54
22:EE:45:ILE:HA	22:EE:61:VAL:HG11	1.88	0.54
33:YY:82:ALA:O	33:YY:86:GLU:HB3	2.06	0.54
38:B:231:VAL:HG11	38:B:251:VAL:HG23	1.89	0.54
39:C:319:LEU:HD11	42:F:151:GLU:HG3	1.89	0.54
43:G:126:ARG:HD3	43:G:294:VAL:O	2.08	0.54
46:J:12:MET:HE3	46:J:137:PRO:HB2	1.89	0.54
60:a:75:LEU:HG	60:a:113:GLY:HA2	1.88	0.54
69:j:19:CYS:HB3	69:j:22:CYS:SG	2.47	0.54
77:s:28:PHE:HZ	77:s:95:LEU:HA	1.72	0.54
77:s:65:ILE:C	77:s:67:GLY:N	2.61	0.54
79:5:1739:G:H2'	79:5:1740:C:C6	2.43	0.54
79:5:3695:U:H3	79:5:3820:G:H1	1.56	0.54
82:1:1372:C:H3'	82:1:1373:C:H4'	1.89	0.54
82:1:1448:U:H3'	82:1:1449:U:C5'	2.29	0.54
84:EF:125:ALA:O	84:EF:154:VAL:HG23	2.06	0.54
84:EF:643:VAL:HG13	84:EF:647:ARG:CZ	2.36	0.54
2:FF:144:LEU:HD23	12:cc:49:PRO:HG2	1.89	0.54
9:TT:104:LEU:HD13	9:TT:121:ARG:HE	1.73	0.54
17:W:34:ALA:HB3	79:5:4663:G:OP1	2.08	0.54
18:9:539:C:H2'	18:9:540:U:C6	2.42	0.54
18:9:562:U:H3	18:9:587:A:N6	2.03	0.54
18:9:1824:A:H5''	32:XX:61:GLN:HG2	1.89	0.54
26:JJ:35:TYR:HD1	26:JJ:112:THR:HG21	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:LL:101:ARG:HD2	32:XX:6:GLY:O	2.06	0.54
48:M:119:ARG:HD3	48:M:123:ILE:CD1	2.37	0.54
60:a:24:LYS:HB2	60:a:26:ARG:HE	1.73	0.54
65:f:78:HIS:HB2	65:f:85:ARG:HG3	1.89	0.54
71:l:40:LYS:HD2	81:8:53:G:H4'	1.89	0.54
77:s:44:ARG:O	77:s:48:ARG:HA	2.07	0.54
77:s:124:PRO:CA	77:s:157:ASP:CA	2.69	0.54
77:s:154:ILE:HG22	77:s:155:LEU:N	2.22	0.54
78:t:123:ARG:HH11	78:t:123:ARG:HA	1.72	0.54
79:5:301:G:H2'	79:5:302:C:C6	2.43	0.54
79:5:4510:A:N1	79:5:4592:C:H4'	2.23	0.54
79:5:4736:C:H2'	79:5:4737:G:C8	2.42	0.54
84:EF:108:HIS:CB	84:EF:111:PHE:CD2	2.91	0.54
84:EF:374:GLU:HG3	84:EF:395:MET:HE2	1.88	0.54
84:EF:424:GLY:N	84:EF:447:ILE:HB	2.22	0.54
18:9:467:G:H2'	18:9:468:A:H8	1.73	0.54
18:9:1047:C:H2'	18:9:1048:G:O4'	2.08	0.54
18:9:1213:C:H2'	18:9:1214:A:H8	1.73	0.54
22:EE:185:GLY:N	22:EE:189:LEU:HD13	2.23	0.54
23:GG:7:PHE:CE2	23:GG:9:ALA:HB3	2.42	0.54
24:HH:192:PHE:HD1	24:HH:193:GLN:HG2	1.72	0.54
25:II:119:LEU:HD21	25:II:153:LYS:HD2	1.90	0.54
39:C:232:VAL:HB	39:C:263:LEU:HD11	1.90	0.54
43:G:217:ILE:O	43:G:221:VAL:HG23	2.08	0.54
44:H:41:ILE:HG21	44:H:73:ILE:HD11	1.89	0.54
45:I:16:PRO:HA	45:I:95:HIS:CD2	2.43	0.54
54:T:129:LYS:HE3	79:5:1836:G:H4'	1.90	0.54
56:V:43:LYS:HA	79:5:4508:C:H4'	1.89	0.54
59:Z:9:LYS:O	59:Z:25:ILE:HG13	2.08	0.54
62:c:18:LEU:O	62:c:22:MET:HG2	2.07	0.54
62:c:28:VAL:HB	62:c:95:SER:OG	2.08	0.54
76:r:7:TRP:HB2	76:r:44:ILE:HD13	1.89	0.54
79:5:215:C:H2'	79:5:220:C:O4'	2.07	0.54
79:5:1332:C:H2'	79:5:1333:A:C8	2.42	0.54
82:1:1479:U:H3'	82:1:1480:U:O4'	2.07	0.54
84:EF:82:SER:HB3	84:EF:86:LEU:HD12	1.89	0.54
84:EF:205:ILE:HG13	84:EF:212:VAL:HG12	1.88	0.54
15:gg:63:SER:HB2	15:gg:84:ASP:CB	2.37	0.54
16:R:129:GLY:HA3	79:5:1558:A:H1'	1.90	0.54
18:9:520:A:H1'	18:9:826:A:H1'	1.89	0.54
18:9:1137:U:O2'	18:9:1138:C:H3'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:9:1650:A:H2'	18:9:1651:A:O4'	2.08	0.54
19:AA:108:PHE:HD2	19:AA:136:GLU:HB3	1.72	0.54
25:II:39:GLY:O	25:II:61:ASP:HB3	2.08	0.54
39:C:205:ARG:CG	79:5:2297:G:H5'	2.38	0.54
50:O:15:LEU:HD11	50:O:128:ARG:HB2	1.88	0.54
56:V:126:ALA:HB1	56:V:133:ALA:HB2	1.89	0.54
77:s:128:THR:CB	77:s:152:ILE:HD12	2.38	0.54
79:5:160:G:H2'	79:5:161:G:C8	2.43	0.54
79:5:1338:G:H4'	79:5:1339:U:C6	2.42	0.54
79:5:2624:G:H2'	79:5:2625:U:H6	1.72	0.54
79:5:4186:A:H2'	79:5:4187:G:H8	1.73	0.54
81:8:137:A:H2'	81:8:138:C:C6	2.42	0.54
84:EF:12:ILE:HG23	84:EF:15:LYS:HG2	1.89	0.54
84:EF:60:ARG:HH11	84:EF:70:ILE:HG21	1.71	0.54
84:EF:233:VAL:HG23	84:EF:249:ARG:NH1	2.23	0.54
84:EF:484:THR:HG23	84:EF:494:MET:HE3	1.89	0.54
84:EF:654:PRO:O	84:EF:655:ASP:C	2.50	0.54
7:RR:98:VAL:HG23	19:AA:15:VAL:HG21	1.89	0.54
9:TT:76:THR:HG21	9:TT:97:LYS:HG2	1.88	0.54
18:9:433:A:H2'	18:9:434:G:C8	2.42	0.54
18:9:453:C:C2'	18:9:454:U:H5'	2.37	0.54
18:9:1444:U:H2'	18:9:1445:U:N1	2.23	0.54
18:9:1447:G:H2'	18:9:1448:A:C8	2.43	0.54
21:CC:67:GLY:HA2	21:CC:93:ILE:HD11	1.88	0.54
38:B:56:ILE:HG12	38:B:365:LEU:HD22	1.89	0.54
45:I:208:LYS:HA	45:I:208:LYS:HE3	1.89	0.54
77:s:17:ILE:HG13	77:s:18:ILE:H	1.72	0.54
77:s:50:LYS:NZ	77:s:102:LEU:CD2	2.57	0.54
77:s:130:LEU:HD23	77:s:152:ILE:HD11	1.89	0.54
77:s:174:LEU:O	77:s:177:MET:HB2	2.08	0.54
78:t:10:ILE:HG23	78:t:63:THR:HG23	1.88	0.54
78:t:15:LEU:HB2	78:t:46:ILE:CD1	2.37	0.54
78:t:106:PHE:HB2	78:t:143:VAL:CG2	2.14	0.54
79:5:41:C:O2'	79:5:42:A:H5'	2.07	0.54
79:5:726:G:H2'	79:5:727:C:C6	2.43	0.54
79:5:1654:G:N3	79:5:1680:G:H1'	2.23	0.54
79:5:2264:C:O2'	79:5:2265:G:H5'	2.08	0.54
79:5:2897:G:H2'	79:5:2898:G:H8	1.70	0.54
79:5:3790:U:O4'	79:5:3792:G:H5'	2.07	0.54
82:1:1359:A:H2'	82:1:1373:C:C4	2.42	0.54
83:PT:7:G:C6	83:PT:49:C:N4	2.75	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:PT:10:G:C6	83:PT:11:C:C4	2.95	0.54
84:EF:390:PRO:HA	84:EF:466:CYS:CB	2.37	0.54
84:EF:475:VAL:HG22	84:EF:479:LEU:CD2	2.38	0.54
84:EF:508:ALA:HB1	84:EF:543:GLU:CD	2.33	0.54
84:EF:641:TRP:CH2	84:EF:663:THR:HG21	2.43	0.54
84:EF:649:ILE:CG1	84:EF:661:ILE:HD12	2.37	0.54
18:9:211:G:H2'	18:9:212:C:C6	2.42	0.54
18:9:475:C:H3'	18:9:476:A:H5''	1.89	0.54
26:JJ:114:VAL:HG12	26:JJ:120:ALA:HB2	1.90	0.54
31:WW:53:ILE:HD12	35:bb:24:LEU:HD11	1.90	0.54
40:D:270:LYS:HB2	80:7:60:G:H5''	1.89	0.54
44:H:128:MET:HE3	44:H:161:ILE:HD13	1.89	0.54
45:I:91:LEU:HD13	45:I:129:VAL:HG22	1.90	0.54
59:Z:12:LEU:CD2	59:Z:22:LYS:HG2	2.38	0.54
59:Z:42:LEU:HD12	59:Z:98:LYS:HG2	1.88	0.54
60:a:121:PRO:HA	60:a:141:GLY:O	2.07	0.54
76:r:17:LEU:HD21	76:r:19:LYS:HE3	1.89	0.54
77:s:51:ALA:HB1	77:s:89:VAL:O	2.08	0.54
77:s:118:PRO:HB2	77:s:183:PHE:HB2	1.90	0.54
77:s:135:THR:CB	77:s:139:GLN:H	2.14	0.54
77:s:173:THR:HA	77:s:176:ASN:HD22	1.66	0.54
78:t:16:ARG:HG3	78:t:58:ILE:C	2.33	0.54
78:t:146:ARG:HB3	78:t:148:PRO:CD	2.38	0.54
79:5:2094:C:H3'	79:5:2095:A:H5'	1.90	0.54
79:5:4193:C:H2'	79:5:4194:U:O4'	2.08	0.54
79:5:5034:A:H2'	79:5:5035:U:O4'	2.07	0.54
83:PT:43:G:C2	83:PT:44:A:C8	2.96	0.54
84:EF:39:LEU:HD23	84:EF:77:LEU:CD1	2.38	0.54
84:EF:682:GLY:O	84:EF:683:PHE:C	2.50	0.54
4:MM:83:LYS:HD2	4:MM:103:VAL:HG13	1.89	0.54
10:UU:21:ARG:HH21	10:UU:88:LEU:HD22	1.73	0.54
11:ZZ:92:LEU:HD12	11:ZZ:109:TYR:HE1	1.72	0.54
18:9:92:A:H61	18:9:444:G:H1'	1.73	0.54
18:9:666:U:O2'	18:9:1087:A:H2'	2.08	0.54
18:9:907:G:H2'	18:9:908:A:C8	2.43	0.54
18:9:1487:A:H2'	18:9:1488:C:C6	2.42	0.54
19:AA:147:LEU:HD12	19:AA:163:CYS:SG	2.48	0.54
22:EE:157:ASN:O	22:EE:175:PHE:HB2	2.08	0.54
29:OO:35:ALA:CB	29:OO:112:ALA:HB2	2.38	0.54
35:bb:35:VAL:HG22	35:bb:79:PHE:CB	2.38	0.54
40:D:39:GLN:CG	40:D:48:LYS:HB2	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S:13:VAL:CG2	53:S:63:TYR:HB3	2.37	0.54
53:S:111:ARG:HD2	79:5:2061:U:O2	2.07	0.54
67:h:90:ALA:O	67:h:94:ARG:HG3	2.08	0.54
74:o:3:ASN:O	79:5:4232:U:H2'	2.07	0.54
77:s:68:HIS:CE1	77:s:72:ASN:HD21	2.26	0.54
77:s:84:GLY:CA	79:5:2021:G:O3'	2.53	0.54
78:t:123:ARG:CD	78:t:124:GLU:H	2.21	0.54
79:5:282:C:H2'	79:5:283:G:O4'	2.08	0.54
79:5:1307:A:H2'	79:5:1308:C:C6	2.43	0.54
79:5:1984:A:N9	79:5:2011:C:H4'	2.22	0.54
79:5:2810:U:O2'	79:5:4643:G:H4'	2.08	0.54
79:5:3866:C:H2'	79:5:3867:A:O4'	2.08	0.54
82:1:1401:U:O2	82:1:1402:U:H2'	2.07	0.54
83:PT:37:A:C3'	83:PT:38:U:H5'	2.38	0.54
84:EF:198:GLY:C	84:EF:200:MET:N	2.63	0.54
84:EF:455:GLY:O	84:EF:456:ARG:C	2.50	0.54
84:EF:507:VAL:HG23	84:EF:554:LEU:HD21	1.90	0.54
84:EF:543:GLU:O	84:EF:545:ILE:N	2.40	0.54
4:MM:49:LEU:HB3	4:MM:111:VAL:CG2	2.38	0.54
12:cc:66:ARG:HD3	34:aa:47:ALA:HB3	1.89	0.54
18:9:21:U:H2'	18:9:22:A:C8	2.42	0.54
18:9:1416:C:H2'	18:9:1417:C:C6	2.43	0.54
18:9:1863:A:H1'	34:aa:79:ILE:HD12	1.90	0.54
21:CC:142:LYS:HG2	21:CC:153:GLY:HA3	1.89	0.54
24:HH:145:ARG:HA	31:WW:51:GLU:HB2	1.89	0.54
24:HH:168:HIS:HE1	24:HH:169:LYS:HE3	1.72	0.54
31:WW:27:ILE:CG1	31:WW:61:ILE:HB	2.38	0.54
32:XX:52:LEU:HG	32:XX:71:ARG:O	2.08	0.54
37:A:29:LEU:H	37:A:123:ARG:HB3	1.73	0.54
40:D:226:TYR:HE2	40:D:236:MET:HE1	1.73	0.54
43:G:130:PRO:HB2	49:N:18:VAL:HG22	1.90	0.54
52:Q:53:MET:HB3	52:Q:57:ASN:CB	2.38	0.54
64:e:98:GLU:HG3	64:e:124:ASN:OD1	2.08	0.54
79:5:1073:G:H2'	79:5:1074:G:C8	2.42	0.54
79:5:1751:A:C6	79:5:1752:G:C6	2.96	0.54
79:5:1780:A:H3'	79:5:1781:U:H5''	1.89	0.54
79:5:2386:U:H2'	79:5:2387:G:C8	2.43	0.54
79:5:3845:A:H2'	79:5:3846:C:C6	2.43	0.54
79:5:4244:A:H2'	79:5:4245:G:O4'	2.08	0.54
79:5:4507:A:H2'	79:5:4508:C:C6	2.42	0.54
82:1:1425:A:H2	82:1:1436:A:C8	2.26	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:PT:43:G:O2'	83:PT:44:A:H5'	2.06	0.54
84:EF:228:PHE:CD2	84:EF:293:ILE:HG23	2.43	0.54
84:EF:758:GLY:O	84:EF:759:ILE:C	2.47	0.54
84:EF:759:ILE:HD11	84:EF:804:THR:CG2	2.38	0.54
84:EF:847:ILE:O	84:EF:848:PRO:C	2.50	0.54
9:TT:5:THR:HG23	9:TT:8:ASP:H	1.73	0.53
9:TT:124:THR:HG23	9:TT:126:GLN:H	1.73	0.53
16:R:4:LEU:HD21	16:R:33:ALA:HB2	1.90	0.53
18:9:1373:C:H2'	18:9:1374:C:C6	2.43	0.53
22:EE:139:LEU:HG	22:EE:150:PRO:HG3	1.90	0.53
23:GG:39:ASP:HA	23:GG:45:TRP:O	2.08	0.53
39:C:266:THR:HG22	39:C:269:LYS:HB3	1.91	0.53
40:D:19:LYS:HD3	40:D:23:ARG:HG2	1.89	0.53
40:D:89:LYS:HA	40:D:89:LYS:HE3	1.90	0.53
42:F:131:MET:O	42:F:135:VAL:HG22	2.08	0.53
46:J:143:ASP:OD2	80:7:43:U:H5'	2.08	0.53
48:M:31:ILE:HD12	48:M:35:ARG:HG2	1.89	0.53
68:i:30:ARG:HD2	79:5:277:G:C5	2.43	0.53
78:t:9:GLU:HB2	78:t:66:ASN:HA	1.90	0.53
78:t:16:ARG:NH1	78:t:57:ARG:HD3	2.23	0.53
78:t:130:LYS:HE2	78:t:151:ILE:HG23	1.89	0.53
79:5:385:A:H1'	79:5:387:G:H5''	1.91	0.53
79:5:1514:U:H2'	79:5:1515:A:C8	2.43	0.53
79:5:1795:A:H2'	79:5:1796:U:O4'	2.08	0.53
79:5:4186:A:H2'	79:5:4187:G:C8	2.42	0.53
81:8:148:A:H2'	81:8:149:G:C8	2.43	0.53
82:1:1455:A:C4'	82:1:1481:G:O2'	2.57	0.53
82:1:1493:G:C3'	82:1:1494:C:C6	2.92	0.53
83:PT:5:G:C2	83:PT:69:C:C2	2.96	0.53
84:EF:28:VAL:HG13	84:EF:29:ASP:N	2.23	0.53
84:EF:175:TYR:CD2	84:EF:289:PHE:CZ	2.96	0.53
84:EF:421:VAL:HG23	84:EF:425:LEU:HB3	1.90	0.53
84:EF:755:VAL:HG21	84:EF:804:THR:HB	1.90	0.53
1:DD:16:ILE:HD11	13:dd:36:LEU:HD23	1.89	0.53
1:DD:164:VAL:O	1:DD:168:VAL:HG22	2.08	0.53
5:PP:13:ARG:HD3	5:PP:13:ARG:H	1.73	0.53
6:QQ:51:LEU:HD21	6:QQ:81:ILE:HG23	1.90	0.53
18:9:942:G:H2'	18:9:943:U:C6	2.43	0.53
18:9:1773:C:H2'	18:9:1774:C:C6	2.43	0.53
21:CC:226:ALA:HB1	21:CC:230:THR:HG21	1.90	0.53
31:WW:106:THR:OG1	31:WW:111:MET:HE2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:bb:19:HIS:O	35:bb:23:ARG:HG3	2.08	0.53
48:M:117:LYS:HE2	79:5:4881:U:OP2	2.08	0.53
52:Q:154:LYS:HE2	52:Q:158:THR:CG2	2.38	0.53
53:S:83:ARG:HB2	53:S:127:MET:HE3	1.90	0.53
59:Z:89:ILE:HG23	59:Z:91:LEU:HG	1.88	0.53
60:a:16:SER:HG	60:a:21:ARG:HB3	1.72	0.53
63:d:70:LYS:HE2	79:5:2389:A:H5'	1.90	0.53
64:e:66:THR:HA	64:e:69:MET:HE3	1.90	0.53
65:f:41:PHE:HE1	65:f:110:ILE:HD11	1.73	0.53
77:s:50:LYS:HA	77:s:93:GLU:OE2	2.07	0.53
78:t:77:ALA:HA	78:t:80:LEU:HD11	1.90	0.53
78:t:104:ILE:HG21	78:t:136:ALA:HB1	1.89	0.53
79:5:287:U:H2'	79:5:288:G:H8	1.73	0.53
79:5:922(B):C:H3'	79:5:923:C:H5''	1.90	0.53
79:5:1911:C:H2'	79:5:1918:U:C6	2.43	0.53
79:5:1986:U:H2'	79:5:2007:G:O6	2.08	0.53
79:5:2486:G:H2'	79:5:2487:G:C8	2.43	0.53
79:5:3848:U:H2'	79:5:3849:A:C8	2.43	0.53
79:5:4419:U:H1'	84:EF:765:ARG:HD2	1.90	0.53
83:PT:51:G:H2'	83:PT:52:G:H5''	1.90	0.53
84:EF:87:ASN:C	84:EF:89:ILE:N	2.65	0.53
84:EF:156:MET:CE	84:EF:353:MET:HE2	2.38	0.53
84:EF:221:TRP:HB3	84:EF:340:MET:CB	2.38	0.53
84:EF:636:ALA:CB	84:EF:643:VAL:HG23	2.38	0.53
84:EF:753:GLU:O	84:EF:754:GLN:C	2.51	0.53
1:DD:52:ALA:O	1:DD:91:VAL:HG23	2.08	0.53
5:PP:86:LEU:O	5:PP:90:VAL:HG23	2.09	0.53
5:PP:100:LYS:HB2	18:9:1240:A:N7	2.23	0.53
15:gg:29:ASP:HA	15:gg:45:LEU:HD12	1.90	0.53
15:gg:124:SER:HB3	15:gg:126:ASP:OD1	2.08	0.53
15:gg:175:LYS:HE3	15:gg:187:ASN:HD21	1.73	0.53
18:9:651:U:H2'	18:9:652:U:C6	2.43	0.53
19:AA:185:MET:HE2	30:VV:39:VAL:HG21	1.90	0.53
20:BB:88:THR:HG22	20:BB:96:CYS:HB3	1.90	0.53
24:HH:154:ILE:HB	24:HH:185:VAL:HG22	1.90	0.53
25:II:190:LEU:HG	25:II:198:TYR:CD2	2.44	0.53
28:NN:45:LEU:HD21	28:NN:53:ILE:HD12	1.90	0.53
45:I:86:HIS:HB3	45:I:139:ARG:CG	2.38	0.53
45:I:152:LEU:O	45:I:156:LYS:HG3	2.08	0.53
56:V:57:VAL:HG11	56:V:122:ALA:HB3	1.90	0.53
63:d:25:TYR:O	63:d:85:ARG:HD3	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:e:108:ARG:HD2	64:e:128:ARG:HD3	1.90	0.53
77:s:25:PRO:CD	77:s:26:LYS:H	2.21	0.53
77:s:130:LEU:HG	77:s:132:PRO:N	2.23	0.53
77:s:145:THR:HA	77:s:155:LEU:N	2.20	0.53
77:s:167:VAL:HG13	77:s:168:GLY:H	1.71	0.53
79:5:979:C:H2'	79:5:980:U:C6	2.43	0.53
79:5:1621:A:H2'	79:5:1622:U:C6	2.44	0.53
79:5:3684:G:H2'	79:5:3685:C:C6	2.43	0.53
79:5:4704:C:H2'	79:5:4705:A:C8	2.43	0.53
79:5:4714:C:H2'	79:5:4715:C:O4'	2.08	0.53
80:7:74:A:N1	80:7:100:A:H5'	2.23	0.53
80:7:77:A:H2'	80:7:78:C:O4'	2.08	0.53
81:8:73:U:H2'	81:8:74:U:O4'	2.09	0.53
82:1:1400:U:H2'	82:1:1401:U:H2'	1.90	0.53
84:EF:505:VAL:HG11	84:EF:551:GLU:HG3	1.90	0.53
8:SS:15:VAL:HB	8:SS:33:ILE:HD11	1.89	0.53
17:W:93:LYS:HD3	23:GG:156:TYR:HE2	1.73	0.53
20:BB:92:GLN:HG3	20:BB:229:MET:HE1	1.90	0.53
23:GG:50:VAL:CG2	23:GG:111:LEU:HB3	2.38	0.53
34:aa:45:VAL:HB	34:aa:49:ALA:HB3	1.89	0.53
38:B:207:VAL:HG11	38:B:331:VAL:HG11	1.90	0.53
50:O:114:LYS:HA	79:5:4758:U:C6	2.43	0.53
51:P:87:SER:O	51:P:91:LEU:HG	2.08	0.53
77:s:192:VAL:CG2	77:s:199:TYR:HB2	2.38	0.53
78:t:11:LYS:HE3	78:t:13:VAL:CB	2.37	0.53
78:t:11:LYS:H	78:t:63:THR:HG23	1.73	0.53
79:5:287:U:H2'	79:5:288:G:C8	2.43	0.53
79:5:756:G:O2'	79:5:757:G:H5'	2.09	0.53
79:5:1191:C:H2'	79:5:1192:C:C6	2.43	0.53
79:5:1336:G:H2'	79:5:2346:C:H42	1.73	0.53
79:5:1553:A:H2'	79:5:1554:A:C8	2.44	0.53
79:5:1649:U:H4'	79:5:1650:A:H3'	1.90	0.53
79:5:1942:A:H2'	79:5:1943:A:C8	2.44	0.53
79:5:1981:G:H2'	79:5:1981:G:N3	2.22	0.53
79:5:3659:G:H2'	79:5:3660:C:C6	2.44	0.53
79:5:4967:A:H2'	79:5:4968:A:H8	1.72	0.53
80:7:23:A:C2	80:7:118:C:H1'	2.44	0.53
82:1:1368:G:N2	82:1:1451:C:H2'	2.23	0.53
82:1:1370:U:C2	82:1:1450:C:C2	2.97	0.53
82:1:1455:A:C2'	82:1:1456:G:C5	2.84	0.53
82:1:1477:G:C3'	82:1:1478:C:H6	2.20	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:EF:15:LYS:O	84:EF:16:LYS:C	2.52	0.53
84:EF:155:LEU:HB2	84:EF:205:ILE:HD13	1.90	0.53
84:EF:265:TYR:CE2	84:EF:291:GLN:HG2	2.43	0.53
84:EF:317:GLU:O	84:EF:318:LYS:C	2.52	0.53
84:EF:363:THR:HG22	84:EF:367:TYR:HE2	1.72	0.53
84:EF:762:VAL:CG1	84:EF:803:ASN:HD21	2.21	0.53
1:DD:176:LEU:HD21	18:9:1499:U:H5''	1.91	0.53
7:RR:87:GLU:HG2	7:RR:88:VAL:HG13	1.91	0.53
9:TT:104:LEU:HB3	9:TT:121:ARG:HE	1.74	0.53
18:9:520:A:C1'	18:9:826:A:H1'	2.39	0.53
18:9:1192:U:H2'	18:9:1193:U:C6	2.43	0.53
18:9:1358:U:OP2	21:CC:114:LYS:HG2	2.08	0.53
18:9:1797:U:H2'	18:9:1798:C:C6	2.44	0.53
18:9:1809:A:H2'	18:9:1810:U:C6	2.44	0.53
18:9:1842:C:OP1	73:n:3:ALA:HB3	2.08	0.53
20:BB:119:THR:HB	20:BB:143:THR:HG21	1.91	0.53
20:BB:141:GLY:HA2	20:BB:209:ASP:O	2.08	0.53
33:YY:27:VAL:HG11	33:YY:35:VAL:CG2	2.38	0.53
42:F:51:GLU:HG3	61:b:96:LEU:CD1	2.38	0.53
45:I:6:ALA:HB3	79:5:4432:C:OP2	2.08	0.53
54:T:17:ARG:HD2	54:T:47:THR:HG23	1.90	0.53
65:f:70:ILE:HG22	65:f:88:PHE:HD2	1.72	0.53
74:o:98:LYS:CE	79:5:4233:A:H4'	2.39	0.53
78:t:11:LYS:HD3	78:t:35:LEU:HD21	1.90	0.53
78:t:42:VAL:HA	78:t:45:ASP:OD2	2.08	0.53
79:5:945:U:O2'	79:5:946:C:H5''	2.08	0.53
79:5:1573:G:H2'	79:5:1574:G:C4	2.43	0.53
79:5:1762:C:N3	79:5:1770:A:C2	2.77	0.53
79:5:4274:A:H2'	79:5:4275:G:C8	2.44	0.53
79:5:4417:C:H2'	79:5:4418:G:O4'	2.09	0.53
80:7:33:U:H2'	80:7:34:C:C6	2.43	0.53
82:1:1378:A:N1	82:1:1379:U:H6	2.06	0.53
84:EF:137:VAL:HG13	84:EF:138:GLN:N	2.23	0.53
84:EF:271:GLY:O	84:EF:272:LYS:C	2.52	0.53
84:EF:303:ALA:HB2	84:EF:311:GLU:OE1	2.08	0.53
84:EF:598:LYS:O	84:EF:599:HIS:ND1	2.42	0.53
4:MM:51:VAL:CG1	4:MM:109:VAL:HB	2.38	0.53
7:RR:16:ILE:HG22	7:RR:24:LEU:HD11	1.90	0.53
12:cc:31:ARG:HG2	12:cc:43:ILE:CG1	2.37	0.53
18:9:1032:C:H2'	18:9:1033:G:O4'	2.09	0.53
18:9:1733:U:H2'	18:9:1734:G:O4'	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:EE:100:ARG:HB2	22:EE:114:ILE:HD13	1.90	0.53
22:EE:131:VAL:HG13	22:EE:135:GLY:HA2	1.89	0.53
31:WW:79:PHE:O	31:WW:125:ILE:HG22	2.09	0.53
35:bb:2:PRO:CG	35:bb:5:LYS:HE3	2.39	0.53
38:B:248:LEU:HD12	38:B:249:ARG:HG3	1.89	0.53
44:H:122:TYR:HB2	79:5:4613:C:O4'	2.08	0.53
47:L:78:LEU:HD11	79:5:159:C:H1'	1.90	0.53
52:Q:152:PHE:CZ	79:5:1847:C:H4'	2.44	0.53
59:Z:10:VAL:O	59:Z:83:THR:HG22	2.08	0.53
77:s:18:ILE:HG22	77:s:71:ASN:ND2	2.22	0.53
77:s:149:ARG:HE	77:s:150:GLY:N	2.07	0.53
77:s:167:VAL:HG12	77:s:168:GLY:H	1.57	0.53
77:s:169:ALA:O	77:s:173:THR:HG23	2.08	0.53
79:5:1284:G:O2'	79:5:1285:U:H5''	2.08	0.53
79:5:1378:C:H4'	79:5:1379:C:H5'	1.91	0.53
79:5:1545:G:H2'	79:5:1546:C:C6	2.43	0.53
79:5:2749:C:H2'	79:5:2750:G:H8	1.73	0.53
79:5:3893:C:H2'	79:5:3894:A:C8	2.44	0.53
79:5:4277:G:H2'	79:5:4278:C:C6	2.44	0.53
82:1:1454:A:C2	82:1:1455:A:C4	2.97	0.53
82:1:1455:A:H2'	82:1:1456:G:C6	2.41	0.53
84:EF:207:PRO:HA	84:EF:212:VAL:HG22	1.90	0.53
9:TT:18:LEU:HB3	9:TT:58:ALA:HB1	1.91	0.53
15:gg:168:CYS:HB2	15:gg:195:LEU:HD13	1.91	0.53
15:gg:270:LEU:HD13	15:gg:310:TRP:CD2	2.44	0.53
18:9:1703:C:H2'	18:9:1704:C:O4'	2.08	0.53
19:AA:52:LYS:NZ	19:AA:53:ARG:HG3	2.24	0.53
20:BB:73:ASP:HB2	29:OO:128:ARG:HH12	1.72	0.53
20:BB:113:MET:HE2	20:BB:142:PHE:HE1	1.72	0.53
21:CC:130:ILE:HD13	21:CC:159:LYS:HG2	1.90	0.53
24:HH:144:ILE:HB	31:WW:52:ILE:CG1	2.38	0.53
28:NN:52:VAL:HG13	28:NN:55:ARG:NH1	2.23	0.53
31:WW:11:LEU:HD22	31:WW:72:CYS:SG	2.49	0.53
31:WW:55:ASP:OD2	31:WW:57:ARG:HB2	2.08	0.53
39:C:64:ALA:HB2	39:C:91:ALA:HB3	1.91	0.53
39:C:180:ILE:HD11	39:C:227:ILE:HD11	1.90	0.53
41:E:193:HIS:HB3	41:E:196:PHE:HD2	1.74	0.53
44:H:132:VAL:HG22	44:H:154:VAL:HG22	1.90	0.53
45:I:187:GLU:OE2	45:I:189:ARG:HD2	2.08	0.53
47:L:127:PHE:CD2	47:L:144:LEU:HD22	2.44	0.53
57:X:127:LEU:HD21	57:X:137:TYR:HE2	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:s:28:PHE:CE1	77:s:91:THR:HG21	2.44	0.53
77:s:78:LEU:HD23	77:s:193:PHE:CD2	2.43	0.53
77:s:175:LEU:HB3	77:s:180:ILE:CB	2.35	0.53
79:5:477:C:H2'	79:5:478:G:C8	2.44	0.53
79:5:3640:U:H2'	79:5:3641:U:C5	2.43	0.53
79:5:3703:G:H2'	79:5:3704:U:C6	2.44	0.53
79:5:3734:U:H2'	79:5:3735:G:O4'	2.09	0.53
79:5:3893:C:H2'	79:5:3894:A:H8	1.73	0.53
79:5:4074:C:H2'	79:5:4075:U:C6	2.44	0.53
79:5:4260:U:H2'	79:5:4261:C:C6	2.44	0.53
82:1:1331:A:C8	82:1:1416:C:C1'	2.92	0.53
82:1:1350:C:N4	82:1:1380:G:O6	2.41	0.53
84:EF:9:ILE:HD12	84:EF:12:ILE:HB	1.91	0.53
1:DD:132:LYS:HG2	1:DD:156:LEU:HD23	1.91	0.53
3:KK:49:MET:HA	3:KK:49:MET:HE2	1.89	0.53
4:MM:21:VAL:HG21	4:MM:124:ILE:HD12	1.89	0.53
6:QQ:51:LEU:CD2	6:QQ:81:ILE:HG23	2.38	0.53
10:UU:19:ARG:HG3	10:UU:92:HIS:CD2	2.44	0.53
18:9:562:U:O4	18:9:587:A:N7	2.41	0.53
18:9:562:U:H2'	18:9:563:G:C8	2.44	0.53
18:9:886:A:C3'	18:9:887:U:H5''	2.39	0.53
18:9:1113:A:H2'	18:9:1114:U:C6	2.43	0.53
18:9:1228:A:H2'	18:9:1229:G:C8	2.42	0.53
18:9:1822:A:H2'	18:9:1823:A:O4'	2.09	0.53
19:AA:94:THR:HG22	19:AA:186:ARG:HH22	1.73	0.53
20:BB:63:LYS:HE3	20:BB:90:ASP:HA	1.91	0.53
20:BB:168:MET:HG2	20:BB:197:ILE:CG2	2.39	0.53
21:CC:69:LEU:HG	21:CC:273:LEU:HD21	1.89	0.53
38:B:231:VAL:HG21	38:B:251:VAL:HG23	1.91	0.53
39:C:101:MET:CE	39:C:104:PRO:HA	2.39	0.53
39:C:193:LYS:H	79:5:2294:G:H5''	1.73	0.53
40:D:52:ILE:HA	40:D:147:ASP:HB3	1.90	0.53
50:O:62:MET:HE2	50:O:64:THR:OG1	2.09	0.53
51:P:69:ARG:HD3	79:5:4980:C:O2	2.09	0.53
60:a:35:ALA:CB	79:5:38:A:H5''	2.39	0.53
61:b:117:ARG:CZ	79:5:1272:C:H5''	2.39	0.53
67:h:98:HIS:O	67:h:102:LEU:HG	2.09	0.53
70:k:24:LYS:HD2	70:k:35:LYS:HD3	1.91	0.53
77:s:26:LYS:HE2	77:s:94:ASP:C	2.33	0.53
78:t:15:LEU:HD11	78:t:31:LYS:CB	2.29	0.53
78:t:61:LYS:C	78:t:62:LEU:HG	2.34	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:t:106:PHE:C	78:t:109:ILE:HB	2.34	0.53
79:5:653:U:H2'	79:5:654:C:C6	2.43	0.53
79:5:1916:G:H1'	79:5:2067:C:O2'	2.08	0.53
79:5:1971:C:C4	79:5:2000:G:H2'	2.44	0.53
79:5:1995:G:H2'	79:5:1996:C:C6	2.43	0.53
79:5:2641:A:H2'	79:5:2642:A:O4'	2.08	0.53
79:5:4210:U:H2'	79:5:4211:C:C6	2.43	0.53
82:1:1331:A:N7	82:1:1415:U:H4'	2.23	0.53
82:1:1416:C:H2'	82:1:1417:A:H8	1.74	0.53
82:1:1473:A:C8	82:1:1473:A:H5''	2.43	0.53
84:EF:367:TYR:CD1	84:EF:368:ARG:HG3	2.43	0.53
84:EF:836:ALA:O	84:EF:838:THR:N	2.42	0.53
1:DD:147:ALA:HB2	18:9:1333:U:O5'	2.09	0.53
3:KK:51:SER:HA	18:9:1276:A:O2'	2.09	0.53
39:C:161:TYR:HE2	39:C:170:LEU:HD22	1.72	0.53
53:S:107:THR:O	53:S:111:ARG:HG2	2.09	0.53
54:T:71:ALA:CB	79:5:4313:A:H4'	2.39	0.53
75:p:7:LYS:NZ	79:5:2875:C:H2'	2.23	0.53
75:p:11:VAL:HG11	75:p:23:ARG:O	2.08	0.53
76:r:18:ILE:HD11	76:r:20:ARG:HE	1.74	0.53
77:s:163:THR:C	77:s:165:ASP:H	2.17	0.53
77:s:172:ALA:HA	77:s:175:LEU:CD1	2.32	0.53
77:s:192:VAL:CG2	77:s:199:TYR:CB	2.86	0.53
78:t:129:ILE:O	78:t:130:LYS:C	2.52	0.53
79:5:504:G:H2'	79:5:505:G:C8	2.44	0.53
79:5:3598:C:H2'	79:5:3599:A:C8	2.44	0.53
79:5:3760:A:H62	84:EF:720:GLN:HE22	1.55	0.53
82:1:1367:G:N2	82:1:1452:C:O2	2.41	0.53
82:1:1454:A:C2	82:1:1455:A:N3	2.77	0.53
84:EF:249:ARG:O	84:EF:250:ALA:C	2.48	0.53
84:EF:331:GLU:HA	84:EF:335:LEU:HD22	1.90	0.53
84:EF:448:GLN:HB2	84:EF:473:VAL:HB	1.91	0.53
18:9:59:U:H1'	18:9:501:C:H5''	1.90	0.53
18:9:146:G:H1	18:9:173:A:H61	1.55	0.53
18:9:600:G:OP2	18:9:631:U:H5''	2.09	0.53
18:9:889:U:C2'	18:9:890:U:H5''	2.39	0.53
18:9:1374:C:H2'	18:9:1375:G:O4'	2.09	0.53
20:BB:138:PHE:HD2	20:BB:214:LYS:HB3	1.73	0.53
28:NN:84:LEU:CD1	28:NN:89:TYR:HB2	2.39	0.53
49:N:64:ILE:HD11	49:N:66:VAL:HG22	1.90	0.53
52:Q:50:ARG:HB2	52:Q:83:VAL:HG21	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:c:48:LEU:HD21	62:c:60:ILE:HG21	1.89	0.53
63:d:88:LEU:CD1	63:d:106:VAL:HG22	2.39	0.53
64:e:99:ILE:HG21	64:e:108:ARG:CG	2.39	0.53
77:s:8:THR:O	77:s:10:LYS:CA	2.57	0.53
77:s:135:THR:CG2	77:s:138:PHE:HB2	2.38	0.53
78:t:54:LYS:NZ	78:t:89:PRO:HB2	2.23	0.53
78:t:100:HIS:C	78:t:140:GLY:HA3	2.33	0.53
79:5:31:U:H2'	79:5:32:G:O4'	2.09	0.53
79:5:1594:C:H2'	79:5:1595:G:O4'	2.08	0.53
79:5:1677:U:H4'	79:5:1680:G:N1	2.24	0.53
79:5:1754:U:H2'	79:5:1756:U:H5	1.74	0.53
79:5:1789:C:H2'	79:5:1790:U:C6	2.43	0.53
79:5:2050:G:H2'	79:5:2051:C:C6	2.45	0.53
79:5:2093:A:H4'	79:5:2094:C:C5'	2.39	0.53
79:5:5000:G:H2'	79:5:5001:U:O4'	2.09	0.53
82:1:1482:U:H4'	82:1:1483:A:OP2	2.09	0.53
83:PT:67:A:C6	83:PT:68:C:C5	2.97	0.53
84:EF:46:ILE:HG22	84:EF:47:ALA:N	2.23	0.53
84:EF:142:VAL:HA	84:EF:145:GLN:HB2	1.91	0.53
84:EF:165:LEU:HD23	84:EF:305:MET:HE3	1.89	0.53
84:EF:229:ALA:O	84:EF:233:VAL:N	2.39	0.53
84:EF:461:ILE:O	84:EF:462:GLU:C	2.51	0.53
2:FF:30:ILE:HG21	2:FF:36:GLN:HA	1.92	0.52
6:QQ:71:ARG:CZ	18:9:1407:U:H4'	2.40	0.52
9:TT:139:ALA:HA	9:TT:142:LYS:HG2	1.91	0.52
10:UU:59:LYS:HB2	10:UU:84:ILE:CG2	2.39	0.52
16:R:23:TRP:HB2	16:R:53:LYS:HG3	1.90	0.52
18:9:1208:A:H2'	18:9:1209:A:C8	2.43	0.52
25:II:8:TRP:CE3	25:II:20:PRO:HB3	2.44	0.52
33:YY:113:ARG:O	33:YY:117:VAL:HG23	2.08	0.52
38:B:101:THR:HG23	79:5:4723:A:O2'	2.09	0.52
39:C:209:VAL:HB	39:C:229:LEU:HD13	1.91	0.52
41:E:121:THR:HB	64:e:90:MET:O	2.09	0.52
41:E:188:PRO:HB3	79:5:4938:A:C8	2.44	0.52
50:O:166:ILE:HG12	50:O:169:ARG:HH12	1.74	0.52
76:r:52:GLU:HB2	76:r:61:VAL:HG23	1.91	0.52
77:s:9:TRP:HA	77:s:12:ASN:HD22	1.74	0.52
77:s:33:ASP:O	77:s:34:ASN:C	2.50	0.52
77:s:118:PRO:HG2	77:s:183:PHE:HB2	1.89	0.52
78:t:14:TYR:H	78:t:31:LYS:HZ3	1.56	0.52
78:t:16:ARG:CB	78:t:59:THR:HG22	2.36	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:t:41:LYS:HD3	78:t:45:ASP:OD2	2.09	0.52
79:5:1190:C:H2'	79:5:1191:C:C6	2.43	0.52
79:5:1317:U:H2'	79:5:1318:C:C6	2.44	0.52
79:5:1443:A:H2'	79:5:1444:G:O4'	2.07	0.52
79:5:1493:G:H2'	79:5:1494:U:O4'	2.10	0.52
79:5:1535:C:H2'	79:5:1536:U:O4'	2.08	0.52
79:5:1763:C:H5''	79:5:1764:G:N2	2.24	0.52
79:5:3708:C:H2'	79:5:3709:U:O2	2.09	0.52
82:1:1363:A:C8	82:1:1363:A:H5''	2.44	0.52
83:PT:39:G:H2'	83:PT:40:C:H5'	1.91	0.52
84:EF:287:ARG:C	84:EF:290:CYS:HB2	2.33	0.52
84:EF:507:VAL:HG21	84:EF:554:LEU:HD21	1.90	0.52
84:EF:520:LEU:HD22	84:EF:568:ILE:CB	2.39	0.52
84:EF:787:TYR:CD2	84:EF:816:HIS:ND1	2.75	0.52
2:FF:115:ALA:HB1	2:FF:180:ALA:HB3	1.90	0.52
3:KK:14:LEU:HA	3:KK:17:LYS:HG2	1.90	0.52
7:RR:105:MET:CB	19:AA:52:LYS:HE2	2.39	0.52
8:SS:130:ARG:HD2	18:9:1608:U:H5''	1.91	0.52
18:9:1713:C:H2'	18:9:1714:U:C6	2.45	0.52
19:AA:54:THR:OG1	19:AA:162:PRO:HG2	2.09	0.52
19:AA:65:ILE:HD12	19:AA:182:VAL:HG11	1.90	0.52
19:AA:189:ILE:HG23	19:AA:195:TRP:CZ2	2.44	0.52
20:BB:73:ASP:HB2	29:OO:128:ARG:NH1	2.24	0.52
38:B:10:ARG:NH2	38:B:265:SER:HB2	2.24	0.52
38:B:252:ALA:HB1	79:5:4524:G:C2	2.44	0.52
39:C:256:ALA:O	39:C:260:LEU:HG	2.09	0.52
39:C:292:ILE:HG23	52:Q:128:LEU:CD2	2.39	0.52
43:G:212:HIS:ND1	43:G:238:LYS:HA	2.23	0.52
44:H:28:LYS:HB3	44:H:33:THR:HG22	1.91	0.52
44:H:128:MET:HE1	44:H:161:ILE:HG21	1.91	0.52
49:N:179:LYS:HB3	79:5:297:U:O3'	2.09	0.52
53:S:154:LEU:HD13	53:S:157:ARG:NH1	2.24	0.52
54:T:28:ALA:HA	54:T:31:MET:HG2	1.91	0.52
54:T:158:PHE:CZ	54:T:160:ALA:HB3	2.44	0.52
56:V:21:PRO:HD2	79:5:2847:G:H1'	1.91	0.52
62:c:29:LEU:CD2	62:c:94:LEU:HD13	2.39	0.52
67:h:66:LYS:HE2	67:h:70:ARG:HH21	1.74	0.52
68:i:74:LYS:HA	68:i:83:ALA:HB2	1.90	0.52
74:o:12:CYS:HB3	74:o:15:CYS:HB2	1.91	0.52
77:s:75:LEU:C	77:s:75:LEU:HD12	2.34	0.52
77:s:191:GLN:HA	77:s:200:ASN:O	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:t:104:ILE:HD12	78:t:141:CYS:HB3	1.89	0.52
79:5:175:C:H2'	79:5:176:G:C8	2.45	0.52
79:5:1309:C:H2'	79:5:1310:C:C6	2.43	0.52
79:5:2283:G:H2'	79:5:2284:G:H8	1.74	0.52
79:5:2601:A:N6	79:5:2743:A:H3'	2.24	0.52
79:5:4475:G:OP2	79:5:4476:C:H5''	2.10	0.52
79:5:4479:A:H2'	79:5:4480:A:O4'	2.09	0.52
79:5:5028:G:H2'	79:5:5029:C:C6	2.45	0.52
81:8:7:U:H2'	81:8:8:U:C6	2.44	0.52
82:1:1335:U:H3	82:1:1395:A:N6	2.04	0.52
82:1:1341:U:O2'	82:1:1342:A:H2'	2.09	0.52
84:EF:265:TYR:CZ	84:EF:273:PHE:CZ	2.96	0.52
84:EF:363:THR:HG22	84:EF:367:TYR:CE2	2.45	0.52
8:SS:124:ARG:HD3	8:SS:131:VAL:HG23	1.92	0.52
16:R:40:GLN:O	16:R:44:LEU:HG	2.09	0.52
16:R:135:LYS:HG2	16:R:139:MET:HE3	1.92	0.52
18:9:89:C:O2	18:9:499:G:H4'	2.09	0.52
18:9:467:G:H2'	18:9:468:A:C8	2.45	0.52
18:9:1452:A:H61	18:9:1473:G:H21	1.56	0.52
18:9:1857:G:OP2	29:OO:146:ARG:HG3	2.09	0.52
23:GG:20:ASP:OD2	23:GG:23:LYS:HG3	2.09	0.52
23:GG:147:LEU:CD1	23:GG:153:VAL:HG13	2.39	0.52
28:NN:40:LEU:HD12	28:NN:50:ILE:HG23	1.91	0.52
39:C:127:ALA:HA	39:C:246:VAL:CG1	2.39	0.52
42:F:90:PHE:H	42:F:144:PRO:HD3	1.73	0.52
44:H:71:ARG:CG	79:5:4691:A:H4'	2.38	0.52
51:P:83:TRP:O	79:5:3856:A:H5''	2.09	0.52
56:V:49:LEU:HD12	79:5:4494:G:OP1	2.09	0.52
61:b:32:LEU:CD1	79:5:1464:C:H5''	2.39	0.52
63:d:41:ARG:HB2	63:d:77:ILE:O	2.09	0.52
69:j:39:TYR:HE1	81:8:102:G:H5''	1.73	0.52
77:s:19:GLN:O	77:s:23:ASP:HB2	2.09	0.52
79:5:664:G:H2'	79:5:665:C:C6	2.44	0.52
79:5:1311:G:H2'	79:5:1312:A:O4'	2.09	0.52
79:5:1806:G:H2'	79:5:1807:C:C6	2.44	0.52
79:5:1824:G:H2'	79:5:1825:A:C8	2.45	0.52
79:5:3718:A:H2'	79:5:3719:A:O4'	2.09	0.52
79:5:4684:A:H2'	79:5:4685:U:O4'	2.09	0.52
81:8:30:U:H2'	81:8:31:G:C8	2.45	0.52
82:1:1451:C:H5''	82:1:1452:C:OP1	2.10	0.52
83:PT:31:C:C5	83:PT:32:U:C5	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:EF:524:LEU:CD1	84:EF:544:HIS:HB3	2.39	0.52
84:EF:596:PRO:HG2	84:EF:720:GLN:HE21	1.74	0.52
84:EF:610:PRO:HD2	84:EF:613:LEU:HD23	1.91	0.52
84:EF:631:ARG:NH2	84:EF:649:ILE:HG23	2.24	0.52
1:DD:105:LEU:HD23	1:DD:184:ILE:CG2	2.40	0.52
2:FF:88:MET:HE1	18:9:1535:U:H4'	1.90	0.52
4:MM:49:LEU:HD22	4:MM:50:CYS:H	1.73	0.52
5:PP:60:LEU:HD23	5:PP:76:VAL:HG21	1.89	0.52
8:SS:84:LEU:HA	8:SS:97:GLN:OE1	2.09	0.52
10:UU:48:LEU:HD22	10:UU:93:SER:CB	2.40	0.52
18:9:12:U:H5''	21:CC:110:MET:CE	2.39	0.52
21:CC:62:PRO:HD3	21:CC:71:LYS:HD2	1.92	0.52
21:CC:69:LEU:HD11	21:CC:273:LEU:HD11	1.91	0.52
24:HH:101:LEU:HB3	24:HH:116:ARG:HD2	1.91	0.52
35:bb:13:GLU:O	35:bb:17:ARG:HG2	2.09	0.52
39:C:187:GLN:HG2	39:C:203:GLN:HB3	1.91	0.52
44:H:113:GLU:OE1	44:H:125:ARG:HG2	2.09	0.52
48:M:5:ARG:HB3	48:M:57:LEU:CD1	2.39	0.52
48:M:14:TYR:CZ	48:M:22:GLY:HA2	2.45	0.52
59:Z:38:TYR:CE2	59:Z:40:HIS:HB3	2.44	0.52
75:p:42:CYS:HA	79:5:2674:A:N6	2.24	0.52
78:t:31:LYS:C	78:t:34:PRO:HD2	2.34	0.52
78:t:146:ARG:O	78:t:149:HIS:HB3	2.10	0.52
79:5:426:A:H2'	79:5:427:A:C8	2.45	0.52
79:5:1770:A:C6	79:5:1771:U:C4	2.97	0.52
79:5:1806:G:H2'	79:5:1807:C:H6	1.74	0.52
79:5:2376:A:H2'	79:5:2377:C:C6	2.44	0.52
79:5:2443:G:H2'	79:5:2444:U:O4'	2.09	0.52
79:5:2598:A:H2'	79:5:2599:G:O4'	2.09	0.52
79:5:3851:U:H2'	79:5:3852:A:O4'	2.10	0.52
79:5:4263:C:H2'	79:5:4264:G:O4'	2.09	0.52
83:PT:52:G:H5''	83:PT:52:G:H8	1.74	0.52
84:EF:228:PHE:CD1	84:EF:232:TYR:CE2	2.97	0.52
84:EF:484:THR:HG23	84:EF:494:MET:CE	2.40	0.52
1:DD:162:ASP:HB3	18:9:1389:C:O2'	2.10	0.52
5:PP:15:PHE:HE1	5:PP:22:LEU:HB2	1.74	0.52
18:9:154:U:H3'	18:9:155:G:H5''	1.90	0.52
18:9:1036:A:H4'	18:9:1855:G:N2	2.24	0.52
18:9:1154:U:H5''	18:9:1156:U:O4'	2.10	0.52
19:AA:60:LEU:HD13	19:AA:159:ILE:HD13	1.90	0.52
26:JJ:35:TYR:CD1	26:JJ:106:LEU:HB3	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:NN:62:GLN:HE21	28:NN:64:ARG:HH12	1.58	0.52
35:bb:74:THR:HB	35:bb:77:CYS:SG	2.49	0.52
38:B:224:LYS:HA	38:B:343:ARG:HH12	1.74	0.52
38:B:234:ARG:HH21	38:B:235:TRP:HE1	1.58	0.52
41:E:45:HIS:O	79:5:980:U:H4'	2.09	0.52
45:I:36:LEU:CD1	45:I:87:ILE:HB	2.40	0.52
46:J:166:PHE:CE2	46:J:172:GLY:HA3	2.45	0.52
49:N:138:PHE:CE1	79:5:18:C:H4'	2.44	0.52
53:S:2:LYS:HD3	79:5:2062:C:OP1	2.10	0.52
53:S:143:LYS:HA	53:S:146:HIS:CE1	2.45	0.52
62:c:20:LEU:HG	62:c:102:SER:HB2	1.91	0.52
66:g:59:VAL:HG11	66:g:67:LEU:HD11	1.92	0.52
70:k:24:LYS:CG	70:k:35:LYS:HB2	2.39	0.52
77:s:17:ILE:CG1	77:s:64:ALA:HB1	2.39	0.52
77:s:83:ARG:HD3	77:s:84:GLY:H	1.75	0.52
77:s:117:ALA:HB2	77:s:161:ILE:HD13	1.91	0.52
77:s:146:LYS:HB2	77:s:155:LEU:HA	1.90	0.52
79:5:480:C:H2'	79:5:481:G:C8	2.45	0.52
79:5:676:C:H2'	79:5:677:G:C8	2.44	0.52
79:5:1345:A:H2'	79:5:1346:C:C6	2.44	0.52
79:5:1471:U:H2'	79:5:1472:C:C6	2.44	0.52
79:5:1695:U:H2'	79:5:1696:C:C6	2.45	0.52
79:5:1765:A:H3'	79:5:1766:A:H5''	1.92	0.52
79:5:1961:G:H2'	79:5:2024:G:N2	2.25	0.52
79:5:2382:A:H2'	79:5:2383:C:C6	2.43	0.52
79:5:2879:A:OP1	79:5:2881:A:H1'	2.10	0.52
79:5:4153:C:H2'	79:5:4154:G:C8	2.44	0.52
79:5:4460:U:H2'	79:5:4461:C:C6	2.45	0.52
79:5:4717:A:H2'	79:5:4718:G:O4'	2.09	0.52
81:8:41:A:H2'	81:8:42:G:O4'	2.10	0.52
82:1:1455:A:C2	82:1:1480:U:C5'	2.93	0.52
84:EF:590:LEU:HD12	84:EF:591:CYS:N	2.23	0.52
84:EF:793:SER:O	84:EF:794:PHE:CG	2.62	0.52
8:SS:35:GLY:O	18:9:1630:A:H4'	2.09	0.52
8:SS:39:ARG:HB3	8:SS:83:PHE:CZ	2.44	0.52
18:9:1093:A:H2'	18:9:1094:C:H6	1.74	0.52
18:9:1865:C:H1'	34:aa:7:ASN:OD1	2.09	0.52
22:EE:29:PRO:HG2	22:EE:46:ILE:CG1	2.39	0.52
22:EE:55:ALA:HB2	22:EE:64:ILE:HD12	1.91	0.52
22:EE:123:LEU:HD12	22:EE:160:ILE:O	2.10	0.52
22:EE:181:CYS:SG	22:EE:225:ILE:HG23	2.50	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:HH:66:VAL:HB	24:HH:67:PRO:HD3	1.91	0.52
33:YY:14:THR:HG22	33:YY:21:LYS:HD2	1.92	0.52
37:A:114:CYS:O	37:A:165:VAL:HG22	2.09	0.52
37:A:128:ARG:HD3	79:5:3681:G:OP2	2.09	0.52
38:B:3:HIS:HD2	79:5:4515:G:H3'	1.75	0.52
38:B:223:THR:CG2	79:5:4624:A:H5'	2.39	0.52
40:D:108:ARG:CZ	40:D:253:TYR:HB2	2.39	0.52
43:G:92:PHE:CD1	43:G:100:PRO:HD3	2.45	0.52
43:G:116:LEU:HD12	49:N:32:GLN:HB3	1.90	0.52
49:N:68:ARG:HG3	49:N:128:LYS:HG3	1.92	0.52
52:Q:30:LYS:HE2	79:5:2269:C:OP1	2.09	0.52
52:Q:54:SER:O	52:Q:58:ARG:HG2	2.09	0.52
59:Z:7:PRO:HA	59:Z:25:ILE:HB	1.91	0.52
67:h:81:LEU:HD23	67:h:84:ARG:HD2	1.92	0.52
74:o:68:LEU:HB2	74:o:83:LEU:HB3	1.92	0.52
77:s:100:ASP:CA	77:s:103:LEU:HB3	2.40	0.52
77:s:141:LEU:HD11	77:s:171:GLU:CB	2.39	0.52
79:5:705:G:H2'	79:5:706:C:C6	2.44	0.52
79:5:1329:G:C2'	79:5:3865:A:H5'	2.40	0.52
79:5:1526:G:H2'	79:5:1527:A:C8	2.42	0.52
79:5:1732:C:H2'	79:5:1733:G:C8	2.45	0.52
79:5:1976:G:C2'	79:5:1977:C:H1'	2.36	0.52
79:5:2029:A:H2'	79:5:2030:A:C8	2.45	0.52
79:5:4098:A:H2'	79:5:4099:G:C8	2.44	0.52
82:1:1372:C:N3	82:1:1447:A:H8	2.08	0.52
82:1:1472:A:C5	82:1:1473:A:C5	2.98	0.52
84:EF:12:ILE:HG21	84:EF:99:LEU:CD1	2.37	0.52
84:EF:43:ALA:HB3	84:EF:45:ILE:CG2	2.40	0.52
84:EF:517:LEU:HG	84:EF:518:PRO:N	2.24	0.52
84:EF:527:LEU:HD23	84:EF:561:LEU:CD2	2.39	0.52
84:EF:545:ILE:O	84:EF:546:ILE:HD13	2.10	0.52
84:EF:744:ILE:HG13	84:EF:745:TYR:N	2.23	0.52
7:RR:91:LEU:HB3	19:AA:180:ARG:CZ	2.40	0.52
10:UU:58:THR:HG22	18:9:1446:A:OP1	2.10	0.52
10:UU:61:LEU:HD22	13:dd:34:TYR:CE1	2.45	0.52
18:9:197:U:H2'	18:9:198:U:C6	2.45	0.52
18:9:569:A:H2'	18:9:570:C:H6	1.74	0.52
18:9:929:G:N2	18:9:1104:G:H4'	2.24	0.52
18:9:1004:U:H2'	18:9:1005:G:C8	2.45	0.52
18:9:1025:U:H2'	18:9:1026:C:O4'	2.09	0.52
18:9:1605:G:H1'	18:9:1634:A:N6	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:9:1657:G:O2'	18:9:1658:G:H5'	2.09	0.52
31:WW:8:ALA:CB	31:WW:74:VAL:HG11	2.40	0.52
39:C:133:LEU:HB2	39:C:136:LEU:HD12	1.92	0.52
39:C:292:ILE:O	39:C:298:ILE:HD12	2.10	0.52
42:F:66:THR:O	42:F:70:MET:HG2	2.10	0.52
42:F:79:ASN:HB3	54:T:142:ARG:HA	1.91	0.52
43:G:107:PHE:O	79:5:4085:A:H2'	2.10	0.52
43:G:201:GLU:HA	43:G:230:MET:HE2	1.91	0.52
45:I:56:GLU:HG2	80:7:90:A:H2	1.74	0.52
46:J:35:ARG:HD2	46:J:123:ILE:O	2.09	0.52
52:Q:132:LYS:NZ	79:5:1449:C:H5''	2.25	0.52
52:Q:180:ARG:NH1	60:a:50:PRO:HG2	2.25	0.52
57:X:108:GLN:HG2	81:8:131:G:H5''	1.90	0.52
61:b:63:LYS:HE2	61:b:63:LYS:HA	1.91	0.52
63:d:64:ILE:CG1	63:d:68:LEU:HD23	2.40	0.52
69:j:47:TYR:O	69:j:54:LYS:HE3	2.10	0.52
77:s:18:ILE:CG1	77:s:68:HIS:HD2	2.19	0.52
77:s:30:VAL:HG23	77:s:31:GLY:N	2.25	0.52
78:t:64:ILE:HA	78:t:68:GLN:C	2.34	0.52
78:t:130:LYS:HD2	78:t:154:ASP:CB	2.27	0.52
79:5:738:C:H5''	79:5:739:G:H4'	1.90	0.52
79:5:1331:C:H2'	79:5:1332:C:C6	2.45	0.52
79:5:1445:U:H2'	79:5:1446:C:C6	2.45	0.52
79:5:1455:G:H2'	79:5:1456:C:C6	2.45	0.52
79:5:2358:G:H2'	79:5:2359:U:O4'	2.10	0.52
79:5:2749:C:H2'	79:5:2750:G:C8	2.44	0.52
79:5:3920:U:H2'	79:5:3921:U:C6	2.44	0.52
79:5:4393:G:H1	79:5:4397:A:H62	1.56	0.52
79:5:4435:U:H2'	79:5:4436:U:C6	2.45	0.52
79:5:4716:C:H2'	79:5:4717:A:C8	2.45	0.52
80:7:28:C:H2'	80:7:29:C:H5'	1.91	0.52
80:7:74:A:OP1	80:7:76:U:H1'	2.10	0.52
82:1:1355:A:H8	82:1:1355:A:OP1	1.92	0.52
82:1:1368:G:H2'	82:1:1369:A:O4'	2.09	0.52
83:PT:21:A:C4	83:PT:48:C:C4	2.97	0.52
84:EF:378:ASP:N	84:EF:382:ALA:CB	2.73	0.52
6:QQ:125:ARG:HB3	18:9:1648:G:H5'	1.90	0.52
6:QQ:144:SER:OG	18:9:1526:G:H4'	2.10	0.52
7:RR:129:LYS:HD2	7:RR:132:ARG:NH2	2.25	0.52
13:dd:31:ILE:HD11	13:dd:40:ARG:HB3	1.92	0.52
14:ff:138:ARG:CB	14:ff:149:CYS:HA	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:9:52:G:H2'	18:9:53:C:C6	2.45	0.52
28:NN:110:ASP:O	28:NN:114:ARG:HG2	2.10	0.52
38:B:46:PHE:CD1	38:B:84:MET:HE2	2.45	0.52
39:C:67:TRP:CE3	39:C:73:VAL:HG11	2.45	0.52
42:F:131:MET:O	42:F:134:ILE:HG22	2.10	0.52
44:H:15:ASN:HD21	44:H:30:PRO:HG3	1.75	0.52
47:L:42:ARG:O	47:L:46:ILE:HG12	2.10	0.52
47:L:50:PRO:HG3	67:h:121:VAL:HG22	1.91	0.52
50:O:10:ASP:HB2	50:O:117:ARG:HG3	1.90	0.52
52:Q:186:TYR:CD2	79:5:4307:A:H4'	2.45	0.52
60:a:98:ALA:HB2	60:a:121:PRO:HB2	1.91	0.52
64:e:67:LYS:HG2	64:e:68:HIS:CD2	2.45	0.52
64:e:127:ALA:HB1	79:5:2326:G:OP1	2.10	0.52
67:h:87:LYS:HD3	67:h:91:MET:HG2	1.92	0.52
68:i:31:GLY:HA3	79:5:310:G:C4	2.44	0.52
71:l:21:ARG:HD3	81:8:52:A:O5'	2.10	0.52
77:s:20:LEU:HA	77:s:23:ASP:HB3	1.91	0.52
77:s:24:TYR:HB2	77:s:90:PHE:HD2	1.74	0.52
78:t:37:LEU:HB2	78:t:67:ARG:HH12	1.74	0.52
78:t:64:ILE:HG23	78:t:68:GLN:C	2.33	0.52
78:t:90:ARG:CZ	78:t:95:GLN:HB2	2.40	0.52
78:t:106:PHE:CZ	78:t:159:ALA:CB	2.92	0.52
78:t:147:HIS:ND1	78:t:148:PRO:HD3	2.25	0.52
79:5:232:G:O4'	79:5:383:A:H1'	2.10	0.52
79:5:377:A:H2'	79:5:378:A:O4'	2.09	0.52
79:5:2552:G:OP2	79:5:2553:A:H5''	2.10	0.52
79:5:4719:G:H2'	79:5:4721:G:C8	2.45	0.52
79:5:5004:C:H2'	79:5:5005:G:O4'	2.09	0.52
82:1:1470:C:N1	82:1:1488:G:H5''	2.24	0.52
84:EF:221:TRP:HB3	84:EF:340:MET:HB3	1.91	0.52
84:EF:753:GLU:HA	84:EF:756:VAL:HG23	1.91	0.52
84:EF:759:ILE:HD11	84:EF:804:THR:HG21	1.91	0.52
2:FF:40:ALA:HB1	2:FF:45:TYR:CG	2.45	0.52
16:R:18:GLY:O	16:R:22:VAL:HG23	2.09	0.52
18:9:1:U:H1'	21:CC:205:VAL:CG2	2.40	0.52
18:9:64:A:H2	18:9:83:A:H62	1.58	0.52
18:9:569:A:H2'	18:9:570:C:C6	2.44	0.52
18:9:1731:A:H2'	18:9:1732:G:C8	2.45	0.52
19:AA:184:ARG:NH2	19:AA:191:ARG:HA	2.25	0.52
28:NN:92:ILE:HG23	28:NN:141:TYR:HE1	1.75	0.52
31:WW:18:GLU:OE2	31:WW:65:LEU:HB3	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XX:97:ASN:HB2	84:EF:525:LYS:HE3	1.92	0.52
34:aa:10:ARG:HB2	34:aa:33:ASP:OD2	2.10	0.52
37:A:10:LYS:HA	37:A:16:PHE:CD2	2.45	0.52
38:B:56:ILE:CD1	38:B:368:ILE:HG12	2.40	0.52
38:B:56:ILE:CG1	38:B:365:LEU:HD22	2.40	0.52
40:D:33:ARG:NH1	40:D:37:VAL:HG11	2.25	0.52
47:L:182:LEU:HD23	68:i:7:MET:CE	2.40	0.52
48:M:47:ARG:HH22	48:M:69:ARG:HA	1.74	0.52
58:Y:1:MET:HE2	79:5:1368:A:N3	2.24	0.52
65:f:78:HIS:HD2	65:f:83:MET:HG2	1.74	0.52
71:l:44:TRP:CZ3	71:l:45:ARG:HD3	2.45	0.52
77:s:25:PRO:HD2	77:s:26:LYS:H	1.74	0.52
77:s:65:ILE:HD12	77:s:79:LEU:HD23	1.91	0.52
79:5:326:C:O2'	79:5:327:U:H5'	2.10	0.52
79:5:699:C:H2'	79:5:700:G:H8	1.75	0.52
79:5:1207:C:H2'	79:5:1208:G:H8	1.74	0.52
79:5:1389:U:H2'	79:5:1390:G:C8	2.45	0.52
79:5:1510:G:H2'	79:5:1511:U:C6	2.45	0.52
79:5:1513:U:H2'	79:5:1514:U:C6	2.45	0.52
79:5:2412:A:H2'	79:5:2413:U:C6	2.45	0.52
79:5:2836:A:C2	79:5:3895:G:H4'	2.45	0.52
81:8:93:C:O2'	81:8:94:G:H2'	2.09	0.52
84:EF:108:HIS:HB2	84:EF:111:PHE:CD2	2.45	0.52
84:EF:378:ASP:CA	84:EF:382:ALA:HB3	2.40	0.52
7:RR:102:THR:O	7:RR:106:LEU:HG	2.10	0.52
7:RR:106:LEU:HD13	19:AA:9:GLN:OE1	2.10	0.52
18:9:474:G:H2'	18:9:475:C:C6	2.45	0.52
18:9:675:U:H2'	18:9:676:C:C6	2.45	0.52
18:9:1531:A:H4'	18:9:1605:G:C5'	2.39	0.52
21:CC:178:HIS:CD2	21:CC:200:ARG:HG3	2.45	0.52
23:GG:228:ILE:HG22	23:GG:232:ARG:HH11	1.75	0.52
37:A:208:GLU:HG2	79:5:1629:G:H1	1.74	0.52
39:C:95:MET:HB2	79:5:1335:G:N2	2.25	0.52
39:C:116:ASN:O	39:C:120:LYS:HG3	2.10	0.52
40:D:273:LEU:CD2	80:7:107:G:H5''	2.40	0.52
42:F:34:LYS:HE3	79:5:1438:U:O4	2.10	0.52
50:O:54:TYR:CD1	50:O:145:VAL:HG21	2.45	0.52
53:S:92:ASN:HD21	54:T:156:TYR:H	1.56	0.52
64:e:126:ASN:HB2	64:e:129:LEU:HD21	1.92	0.52
68:i:28:ARG:HA	79:5:327:U:O4	2.10	0.52
69:j:63:ARG:HH12	69:j:65:ARG:HB3	1.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:s:120:GLU:OE2	77:s:162:LYS:HA	2.10	0.52
78:t:32:ILE:CD1	78:t:42:VAL:HB	2.39	0.52
79:5:214:G:H2'	79:5:215:C:C6	2.45	0.52
79:5:1177:U:H2'	79:5:1178:G:C8	2.45	0.52
79:5:1471:U:H2'	79:5:1472:C:H6	1.73	0.52
79:5:1933:G:H2'	79:5:1934:A:C8	2.45	0.52
79:5:2580:U:H2'	79:5:2581:A:C4	2.45	0.52
79:5:3721:U:H2'	79:5:3722:G:H8	1.74	0.52
79:5:4499:G:N2	79:5:4529:G:H1'	2.24	0.52
79:5:4519:C:H5''	79:5:4520:G:H5''	1.91	0.52
84:EF:297:ILE:HG22	84:EF:301:PHE:CE2	2.45	0.52
84:EF:450:THR:CG2	84:EF:464:VAL:HG23	2.39	0.52
84:EF:718:GLY:O	84:EF:722:ILE:N	2.42	0.52
1:DD:175:VAL:HG13	1:DD:182:LEU:HB2	1.92	0.51
2:FF:35:LEU:HD22	2:FF:147:VAL:CG2	2.39	0.51
4:MM:52:LEU:HD21	4:MM:62:VAL:CG2	2.38	0.51
5:PP:20:VAL:HG21	5:PP:28:MET:HE1	1.92	0.51
5:PP:28:MET:HE2	5:PP:32:GLN:CG	2.40	0.51
12:cc:14:VAL:HG12	12:cc:52:GLU:HA	1.92	0.51
15:gg:21:ILE:CG2	15:gg:31:ILE:HD11	2.40	0.51
15:gg:23:THR:HG22	15:gg:31:ILE:HD13	1.93	0.51
18:9:17:C:H2'	18:9:18:C:C6	2.44	0.51
18:9:869:A:H5'	18:9:874:G:H4'	1.92	0.51
18:9:1132:C:H3'	18:9:1133:A:H5''	1.90	0.51
18:9:1365:G:H2'	18:9:1366:G:C8	2.45	0.51
20:BB:35:ALA:HA	20:BB:98:THR:OG1	2.10	0.51
24:HH:121:THR:HG23	24:HH:124:ALA:H	1.74	0.51
27:LL:47:PRO:HG2	27:LL:50:ALA:CB	2.40	0.51
37:A:31:ALA:HB2	37:A:123:ARG:NH2	2.25	0.51
37:A:124:GLY:O	37:A:125:LYS:HD2	2.09	0.51
39:C:322:LEU:O	39:C:326:LEU:HG	2.09	0.51
43:G:239:GLY:O	43:G:242:ARG:HG3	2.09	0.51
44:H:12:ILE:HG22	44:H:81:ILE:CD1	2.40	0.51
44:H:28:LYS:CB	44:H:33:THR:HG22	2.40	0.51
44:H:137:SER:HB3	44:H:145:VAL:HG23	1.92	0.51
49:N:85:VAL:HG23	79:5:43:U:OP1	2.09	0.51
49:N:181:HIS:CD2	79:5:99:A:H4'	2.45	0.51
51:P:131:ARG:HH21	79:5:1596:U:H2'	1.75	0.51
57:X:119:ILE:CD1	57:X:140:LEU:HD13	2.39	0.51
67:h:40:ALA:O	67:h:44:LEU:HG	2.09	0.51
74:o:37:GLY:HA3	79:5:4342:C:O3'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:o:44:LYS:CE	74:o:52:THR:HB	2.40	0.51
78:t:15:LEU:CB	78:t:46:ILE:HD13	2.40	0.51
79:5:7:C:H2'	79:5:8:U:C6	2.46	0.51
79:5:418:A:H4'	79:5:2311:C:H5'	1.91	0.51
79:5:922(A):G:H2'	79:5:922(B):C:C6	2.45	0.51
79:5:1504:G:H2'	79:5:1505:C:C6	2.45	0.51
79:5:2573:A:N7	79:5:2761:U:O4	2.43	0.51
79:5:2692:U:H2'	79:5:2693:G:O4'	2.10	0.51
79:5:2776:G:H2'	79:5:2777:G:C8	2.44	0.51
79:5:3883:U:H2'	79:5:3884:U:C6	2.46	0.51
84:EF:19:ILE:HG22	84:EF:20:ARG:N	2.25	0.51
84:EF:153:PRO:HG3	84:EF:203:ILE:HG22	1.92	0.51
84:EF:242:GLY:O	84:EF:243:GLN:C	2.53	0.51
84:EF:354:ILE:O	84:EF:358:LEU:HD23	2.10	0.51
84:EF:451:ILE:HD12	84:EF:458:VAL:HG11	1.93	0.51
84:EF:633:ARG:O	84:EF:634:TYR:C	2.53	0.51
14:ff:126:CYS:HB2	14:ff:130:VAL:HB	1.91	0.51
15:gg:3:GLU:CB	15:gg:314:ILE:HB	2.40	0.51
15:gg:101:PHE:CD1	15:gg:136:GLY:HA2	2.45	0.51
16:R:106:LEU:HB3	16:R:120:TYR:CE1	2.45	0.51
18:9:106:C:OP1	18:9:432:G:H5'	2.11	0.51
18:9:109:U:H2'	18:9:110:U:C6	2.45	0.51
18:9:374:G:H2'	18:9:375:U:C6	2.45	0.51
18:9:432:G:H2'	18:9:433:A:H8	1.75	0.51
18:9:540:U:H2'	18:9:542:U:OP2	2.09	0.51
18:9:668:A:H4'	18:9:1197:G:O2'	2.09	0.51
18:9:941:C:H2'	18:9:942:G:H8	1.75	0.51
18:9:941:C:H2'	18:9:942:G:C8	2.45	0.51
18:9:1093:A:H2'	18:9:1094:C:C6	2.45	0.51
19:AA:40:LYS:O	19:AA:48:ILE:HB	2.09	0.51
22:EE:222:LEU:HA	22:EE:225:ILE:CD1	2.40	0.51
32:XX:65:ALA:HB3	32:XX:67:ARG:NH1	2.25	0.51
35:bb:33:MET:CE	35:bb:73:LEU:HD21	2.40	0.51
42:F:91:VAL:HG22	42:F:141:TRP:HB2	1.91	0.51
43:G:223:LEU:CD1	43:G:254:THR:HG21	2.40	0.51
44:H:167:VAL:HG12	44:H:170:LYS:HB2	1.92	0.51
48:M:26:ALA:HB2	48:M:77:TRP:HZ3	1.75	0.51
59:Z:6:LYS:O	59:Z:25:ILE:HD12	2.10	0.51
60:a:103:VAL:HG21	60:a:126:ALA:HB2	1.91	0.51
64:e:22:ARG:CZ	64:e:31:ILE:HG23	2.40	0.51
65:f:7:CYS:HB2	65:f:103:VAL:CG2	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
68:i:33:LEU:HB2	79:5:308:G:H3'	1.91	0.51
78:t:106:PHE:HA	78:t:109:ILE:HB	1.92	0.51
79:5:155:C:H2'	79:5:156:G:O4'	2.10	0.51
79:5:740:G:H2'	79:5:741:C:C6	2.45	0.51
79:5:1559:G:H2'	79:5:1560:A:H8	1.74	0.51
79:5:1763:C:C4	79:5:1764:G:C5	2.98	0.51
79:5:1871:A:H1'	79:5:4195:G:O6	2.10	0.51
79:5:1942:A:H1'	79:5:4433:G:O5'	2.10	0.51
79:5:2491:C:H2'	79:5:2492:C:C6	2.45	0.51
79:5:2515:G:H4'	79:5:2600:A:OP1	2.10	0.51
79:5:2540:C:H2'	79:5:2541:G:H8	1.76	0.51
79:5:2648:G:H2'	79:5:2649:G:H8	1.74	0.51
79:5:2684:C:H2'	79:5:2685:C:C6	2.45	0.51
79:5:3599:A:H2'	79:5:3600:G:C8	2.45	0.51
79:5:4239:A:H2'	79:5:4240:G:H8	1.74	0.51
82:1:1493:G:N2	82:1:1494:C:H1'	2.25	0.51
84:EF:125:ALA:C	84:EF:154:VAL:HG23	2.35	0.51
84:EF:356:ILE:HG22	84:EF:357:HIS:H	1.75	0.51
84:EF:774:SER:N	84:EF:783:VAL:O	2.42	0.51
1:DD:163:PRO:HD3	18:9:1389:C:O2'	2.09	0.51
2:FF:76:MET:HE2	18:9:1535:U:O4	2.10	0.51
6:QQ:131:LYS:HE2	18:9:1480:A:O5'	2.11	0.51
10:UU:54:VAL:HB	10:UU:88:LEU:CD1	2.40	0.51
18:9:95:G:H5'	18:9:508:A:O2'	2.10	0.51
18:9:349:A:H2'	18:9:350:C:C6	2.45	0.51
18:9:922:A:H2'	18:9:923:G:O4'	2.10	0.51
18:9:1067:C:H3'	18:9:1068:G:H8	1.76	0.51
18:9:1628:C:H2'	18:9:1629:C:C6	2.45	0.51
20:BB:164:ILE:CG2	20:BB:168:MET:HE3	2.40	0.51
21:CC:213:LEU:HD22	21:CC:240:THR:CG2	2.40	0.51
23:GG:132:ARG:HB3	23:GG:133:LEU:HD12	1.92	0.51
25:II:34:ALA:HA	25:II:56:ARG:HD3	1.92	0.51
26:JJ:32:ILE:HG21	36:ee:107:ARG:HG2	1.91	0.51
29:OO:99:ALA:H	29:OO:133:THR:HG22	1.76	0.51
30:VV:37:ALA:HB1	30:VV:46:PHE:CD1	2.44	0.51
37:A:6:ARG:HD2	37:A:10:LYS:HE3	1.93	0.51
38:B:168:MET:SD	38:B:171:LEU:HD12	2.51	0.51
45:I:77:VAL:HA	45:I:81:GLY:O	2.10	0.51
49:N:179:LYS:HE2	79:5:297:U:O3'	2.10	0.51
52:Q:101:CYS:SG	52:Q:121:LEU:HB2	2.51	0.51
53:S:34:ALA:HB3	53:S:40:ALA:HB2	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:T:71:ALA:HB3	79:5:4313:A:H4'	1.93	0.51
54:T:157:GLU:OE1	54:T:159:MET:HE3	2.10	0.51
59:Z:46:ILE:HG22	59:Z:68:ILE:HG23	1.92	0.51
61:b:43:MET:CG	61:b:47:LYS:HE3	2.40	0.51
62:c:53:PRO:HG2	62:c:56:ARG:HG3	1.91	0.51
64:e:22:ARG:NH1	64:e:31:ILE:HD12	2.26	0.51
66:g:2:VAL:HG21	79:5:2807:A:H5'	1.93	0.51
72:m:85:ARG:HH11	79:5:4698:C:H3'	1.76	0.51
75:p:9:GLY:H	75:p:27:LYS:HE2	1.75	0.51
77:s:68:HIS:O	77:s:71:ASN:HB2	2.10	0.51
77:s:77:LYS:HD2	77:s:77:LYS:C	2.35	0.51
78:t:11:LYS:CD	78:t:35:LEU:HD21	2.40	0.51
78:t:15:LEU:CD1	78:t:31:LYS:HB2	2.33	0.51
78:t:61:LYS:HG2	78:t:72:GLU:O	2.11	0.51
78:t:104:ILE:HD13	78:t:136:ALA:HB1	1.92	0.51
78:t:118:HIS:CG	78:t:119:ARG:NH1	2.78	0.51
78:t:136:ALA:O	78:t:139:VAL:HG12	2.10	0.51
79:5:1296:G:O2'	79:5:1297:U:H5''	2.11	0.51
79:5:1738:A:H2'	79:5:1739:G:H8	1.76	0.51
79:5:2081:C:H2'	79:5:2082:G:H8	1.74	0.51
79:5:2363:A:H2'	79:5:2364:G:O4'	2.09	0.51
79:5:3787:G:H1'	79:5:3789:C:N4	2.26	0.51
79:5:4459:U:H2'	79:5:4460:U:C6	2.45	0.51
79:5:4691:A:H2'	79:5:4692:A:O4'	2.11	0.51
79:5:4984:C:H2'	79:5:4985:U:H5''	1.91	0.51
81:8:69:U:H2'	81:8:70:G:O4'	2.10	0.51
82:1:1337:U:H2'	82:1:1338:A:C8	2.46	0.51
82:1:1344:G:N2	82:1:1389:C:O2	2.43	0.51
82:1:1352:U:C2	82:1:1380:G:C2	2.98	0.51
82:1:1477:G:C2	82:1:1478:C:C2	2.98	0.51
84:EF:159:LYS:HG2	84:EF:218:LEU:HD13	1.90	0.51
84:EF:360:SER:O	84:EF:361:PRO:C	2.50	0.51
84:EF:692:LEU:HD12	84:EF:693:CYS:N	2.25	0.51
84:EF:834:VAL:O	84:EF:835:VAL:C	2.52	0.51
4:MM:79:VAL:HG11	4:MM:85:LEU:HD12	1.93	0.51
7:RR:90:ALA:HB2	19:AA:196:GLU:HA	1.93	0.51
7:RR:96:ILE:HD13	19:AA:16:LEU:N	2.21	0.51
8:SS:60:THR:O	8:SS:64:VAL:HG13	2.11	0.51
8:SS:98:VAL:O	8:SS:99:LEU:HD13	2.10	0.51
9:TT:74:SER:O	9:TT:78:ILE:HG22	2.11	0.51
15:gg:165:ILE:CG1	15:gg:177:TRP:HB2	2.38	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:R:99:MET:CE	16:R:128:LYS:HA	2.40	0.51
18:9:955:A:N3	18:9:956:G:H1'	2.25	0.51
22:EE:126:VAL:HG23	22:EE:156:VAL:O	2.11	0.51
26:JJ:78:LEU:HB3	26:JJ:92:MET:HB2	1.93	0.51
37:A:10:LYS:HG2	37:A:16:PHE:CD1	2.45	0.51
38:B:55:HIS:HB2	38:B:369:ASP:CB	2.40	0.51
38:B:95:THR:CG2	79:5:4910:A:H4'	2.39	0.51
41:E:133:LYS:HE2	79:5:1284:G:O4'	2.09	0.51
44:H:71:ARG:HD3	79:5:4691:A:O3'	2.11	0.51
46:J:74:VAL:HG11	46:J:78:LYS:HG3	1.91	0.51
56:V:5:GLY:O	79:5:4595:G:H5''	2.10	0.51
57:X:123:LYS:HG2	57:X:139:ARG:HB3	1.90	0.51
63:d:24:GLU:OE2	63:d:109:VAL:HG21	2.10	0.51
67:h:48:ARG:O	67:h:52:LYS:HG2	2.10	0.51
69:j:30:GLN:HG2	79:5:1620:U:P	2.51	0.51
72:m:70:CYS:HA	72:m:95:LEU:HD23	1.91	0.51
77:s:27:CYS:HB2	77:s:90:PHE:CA	2.41	0.51
77:s:59:THR:O	77:s:60:MET:C	2.54	0.51
78:t:16:ARG:HH11	78:t:57:ARG:HD3	1.76	0.51
78:t:127:GLY:O	78:t:130:LYS:HB2	2.10	0.51
78:t:137:GLN:NE2	78:t:146:ARG:HD3	2.22	0.51
79:5:50:C:H2'	79:5:51:A:O4'	2.09	0.51
79:5:86:U:H2'	79:5:87:A:C8	2.45	0.51
79:5:426:A:H2'	79:5:427:A:H8	1.75	0.51
79:5:1483:C:H1'	79:5:1484:G:C2	2.45	0.51
79:5:1508:A:H2'	79:5:1509:C:C6	2.46	0.51
79:5:1999:A:H5'	79:5:2019:C:H4'	1.92	0.51
79:5:2315:G:H2'	79:5:2316:G:O4'	2.11	0.51
79:5:2847:G:H2'	79:5:2848:G:H5'	1.92	0.51
79:5:2871:A:H2'	79:5:2872:C:O4'	2.11	0.51
79:5:3730:U:H2'	79:5:3731:C:C6	2.45	0.51
79:5:4178:A:H2'	79:5:4179:G:C8	2.45	0.51
79:5:4433:G:H2'	79:5:4434:C:C6	2.45	0.51
79:5:4525:C:H2'	79:5:4526:U:C6	2.46	0.51
82:1:1374:C:H3'	82:1:1375:C:H6	1.70	0.51
82:1:1375:C:H2'	82:1:1376:C:C6	2.45	0.51
84:EF:574:ASP:HB3	84:EF:794:PHE:CZ	2.45	0.51
84:EF:581:GLU:CD	84:EF:692:LEU:HG	2.36	0.51
84:EF:737:GLN:O	84:EF:738:PRO:C	2.51	0.51
84:EF:796:PHE:CE1	84:EF:800:LEU:HD21	2.45	0.51
1:DD:66:ILE:O	1:DD:70:THR:HG23	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:KK:63:ALA:HB3	3:KK:68:TYR:HE2	1.74	0.51
4:MM:49:LEU:HD23	4:MM:75:ASN:HB2	1.92	0.51
6:QQ:98:LYS:HE3	6:QQ:99:TYR:CZ	2.46	0.51
12:cc:20:ARG:HD3	12:cc:28:THR:HG22	1.93	0.51
15:gg:79:LEU:HD11	15:gg:120:ILE:HD13	1.91	0.51
15:gg:79:LEU:HB2	15:gg:113:PHE:CE2	2.45	0.51
16:R:23:TRP:HB2	16:R:53:LYS:CG	2.41	0.51
16:R:109:TYR:CE2	16:R:114:LYS:HD2	2.45	0.51
18:9:223:C:H2'	18:9:224:A:C8	2.45	0.51
18:9:660:C:H5''	32:XX:2:GLY:HA3	1.91	0.51
18:9:933:G:H2'	18:9:1000:C:O2	2.10	0.51
18:9:1442:U:H2'	18:9:1443:C:C6	2.46	0.51
20:BB:136:ARG:HE	20:BB:218:LEU:HD21	1.75	0.51
24:HH:83:LEU:CD1	24:HH:92:VAL:HG21	2.40	0.51
25:II:150:ASP:O	25:II:154:LYS:HG3	2.10	0.51
38:B:285:TYR:HB2	38:B:332:MET:HE3	1.92	0.51
40:D:286:SER:HA	40:D:289:ARG:HG2	1.92	0.51
41:E:48:ARG:HB3	41:E:64:MET:HE1	1.93	0.51
41:E:279:ALA:HB1	65:f:3:GLY:HA3	1.93	0.51
44:H:176:LEU:HB3	72:m:60:ALA:HB1	1.93	0.51
47:L:99:ASP:OD2	47:L:102:ARG:HG3	2.11	0.51
48:M:10:GLY:HA2	48:M:64:PHE:CZ	2.46	0.51
48:M:11:ARG:HB2	48:M:61:ILE:HG22	1.92	0.51
51:P:126:ARG:CB	51:P:140:MET:HG2	2.41	0.51
52:Q:26:ARG:O	52:Q:30:LYS:HG3	2.11	0.51
78:t:112:ILE:HG22	78:t:113:ALA:N	2.26	0.51
78:t:137:GLN:HG3	78:t:138:SER:N	2.25	0.51
79:5:73:A:H2'	79:5:74:G:C8	2.44	0.51
79:5:161:G:H2'	79:5:162:A:H8	1.75	0.51
79:5:496:G:C2'	79:5:497:G:H5'	2.41	0.51
79:5:1093:C:H2'	79:5:1094:G:H8	1.75	0.51
79:5:1098:G:H2'	79:5:1099:C:C6	2.45	0.51
79:5:1468:C:H2'	79:5:1469:C:C6	2.45	0.51
79:5:1876:U:H2'	79:5:1877:G:C8	2.46	0.51
79:5:2480:G:H2'	79:5:2481:G:H8	1.75	0.51
79:5:2758:G:H2'	79:5:2759:G:C5	2.45	0.51
82:1:1456:G:OP1	82:1:1482:U:O4'	2.28	0.51
82:1:1493:G:N3	82:1:1493:G:C2'	2.66	0.51
83:PT:58:A:N1	83:PT:61:C:C6	2.79	0.51
84:EF:178:PHE:O	84:EF:182:VAL:HG23	2.10	0.51
84:EF:394:LEU:HD22	84:EF:427:VAL:CG1	2.38	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:EF:718:GLY:HA2	84:EF:721:ILE:HD12	1.91	0.51
2:FF:92:ILE:HD13	2:FF:169:ILE:CG2	2.40	0.51
18:9:35:C:H5''	18:9:579:C:H5''	1.93	0.51
18:9:1398:G:O6	18:9:1448:A:N1	2.43	0.51
18:9:1781:A:H2'	18:9:1782:G:C8	2.45	0.51
19:AA:24:HIS:N	19:AA:51:LEU:HD21	2.26	0.51
22:EE:131:VAL:CG1	22:EE:135:GLY:HA2	2.41	0.51
39:C:57:LEU:O	39:C:61:GLN:HG3	2.11	0.51
41:E:186:ARG:NH2	79:5:4936:G:H3'	2.25	0.51
47:L:186:ARG:HH21	79:5:1394:G:H5'	1.75	0.51
52:Q:14:ARG:HH12	52:Q:16:LYS:HZ1	1.57	0.51
60:a:132:ARG:H	60:a:132:ARG:HD2	1.75	0.51
64:e:75:ARG:HB2	64:e:95:TYR:CD2	2.45	0.51
71:l:35:ILE:HG23	79:5:362:A:N6	2.26	0.51
77:s:62:ARG:HG2	77:s:82:ILE:CG2	2.38	0.51
78:t:11:LYS:CE	78:t:13:VAL:HB	2.41	0.51
79:5:147:A:H2'	79:5:148:C:O4'	2.11	0.51
79:5:709:C:H1'	79:5:4942:C:H5	1.76	0.51
79:5:710:G:H2'	79:5:711:A:C8	2.46	0.51
79:5:929:A:H3'	79:5:930:G:C8	2.46	0.51
79:5:1569:U:H2'	79:5:1570:G:H8	1.76	0.51
79:5:1588:U:C4	79:5:1607:C:H1'	2.45	0.51
79:5:2277:C:H2'	79:5:2278:G:C8	2.46	0.51
79:5:2299:G:H2'	79:5:2301:G:O4'	2.10	0.51
79:5:3736:A:O2'	79:5:3933:G:H5'	2.10	0.51
79:5:3826:C:H2'	79:5:3827:G:C8	2.46	0.51
79:5:4468:U:O2'	79:5:4592:C:H5''	2.10	0.51
79:5:4607:A:H5''	84:EF:66:ARG:NH2	2.26	0.51
81:8:126:C:H1'	81:8:127:U:C6	2.45	0.51
82:1:1384:C:H2'	82:1:1385:A:H8	1.75	0.51
83:PT:59:U:C2	83:PT:60:C:C6	2.98	0.51
84:EF:228:PHE:CD1	84:EF:231:MET:HE3	2.45	0.51
1:DD:226:GLN:HA	15:gg:186:THR:HA	1.91	0.51
4:MM:42:LEU:CD2	4:MM:68:LEU:HB3	2.40	0.51
16:R:102:LEU:HD12	16:R:127:VAL:HG13	1.91	0.51
18:9:145:G:H2'	18:9:146:G:C8	2.46	0.51
18:9:1043:G:H2'	18:9:1044:G:O4'	2.11	0.51
38:B:115:LYS:CE	38:B:129:ALA:HB3	2.41	0.51
38:B:168:MET:HE2	38:B:175:GLN:HG3	1.93	0.51
41:E:65:TYR:CE1	41:E:70:LEU:HB2	2.45	0.51
41:E:144:ARG:HD3	41:E:147:ILE:HD12	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:F:53:ALA:HA	42:F:187:GLU:HG2	1.91	0.51
46:J:153:ALA:HB2	80:7:17:C:OP1	2.11	0.51
52:Q:49:LYS:O	52:Q:53:MET:HG3	2.11	0.51
58:Y:76:LYS:HB2	81:8:74:U:OP2	2.10	0.51
62:c:33:GLN:HA	62:c:36:LYS:CE	2.40	0.51
63:d:23:ARG:HG3	63:d:25:TYR:CE2	2.46	0.51
77:s:147:ILE:C	77:s:149:ARG:H	2.18	0.51
78:t:27:ALA:HB1	78:t:30:PRO:HG3	1.91	0.51
78:t:97:ASN:CA	78:t:99:LYS:HE3	2.35	0.51
78:t:116:MET:HB3	78:t:128:THR:HB	1.92	0.51
79:5:175:C:H2'	79:5:176:G:H8	1.76	0.51
79:5:424:U:H3	81:8:10:G:H1	1.57	0.51
79:5:520:U:H2'	79:5:521:C:C6	2.46	0.51
79:5:676:C:H2'	79:5:677:G:H8	1.75	0.51
79:5:1328:G:H4'	79:5:2350:U:O4'	2.11	0.51
79:5:1411(C):C:H2'	79:5:1412:G:C8	2.46	0.51
79:5:1970:A:O2'	79:5:2000:G:H1'	2.11	0.51
79:5:2824:C:H2'	79:5:2825:A:C8	2.45	0.51
82:1:1359:A:H4'	82:1:1360:A:N1	2.25	0.51
84:EF:311:GLU:HA	84:EF:314:LYS:HB2	1.93	0.51
84:EF:401:MET:HE3	84:EF:481:LYS:CA	2.37	0.51
84:EF:472:LEU:HD22	84:EF:475:VAL:HG11	1.91	0.51
84:EF:506:ARG:NH2	84:EF:547:ALA:HB2	2.26	0.51
3:KK:22:VAL:HG12	3:KK:68:TYR:HD1	1.76	0.51
3:KK:47:LYS:HE2	18:9:1274:G:O4'	2.11	0.51
14:ff:107:LYS:HG3	14:ff:117:LEU:HD21	1.92	0.51
18:9:5:U:O2'	18:9:602:G:H4'	2.10	0.51
18:9:389:A:H2'	18:9:390:C:C6	2.46	0.51
18:9:675:U:H2'	18:9:676:C:H6	1.76	0.51
18:9:1468:C:H2'	18:9:1469:A:C8	2.46	0.51
18:9:1606:G:N2	18:9:1632:G:H1'	2.25	0.51
37:A:48:ILE:HB	75:p:63:THR:CG2	2.41	0.51
39:C:2:ALA:HB2	79:5:667:A:C8	2.46	0.51
39:C:239:LYS:HE3	79:5:1370:G:O6	2.11	0.51
39:C:345:ARG:O	39:C:349:LEU:HG	2.11	0.51
40:D:178:LYS:HG3	40:D:183:TYR:CE2	2.45	0.51
41:E:116:PRO:HB3	79:5:457:G:O2'	2.10	0.51
43:G:140:LEU:HD23	43:G:237:LEU:HD21	1.93	0.51
44:H:1:MET:HE3	53:S:141:ALA:HA	1.93	0.51
50:O:16:LEU:HD11	50:O:83:THR:HG21	1.92	0.51
50:O:179:LYS:HA	50:O:179:LYS:HE3	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:P:32:THR:OG1	51:P:91:LEU:HD21	2.10	0.51
52:Q:154:LYS:HE2	52:Q:158:THR:HG21	1.92	0.51
53:S:13:VAL:HG12	53:S:29:ARG:CB	2.41	0.51
55:U:84:LYS:HB2	55:U:110:TYR:CE2	2.46	0.51
61:b:65:MET:HE2	79:5:1829:G:O2'	2.10	0.51
61:b:91:ARG:HD2	79:5:1214:C:N3	2.26	0.51
65:f:75:THR:HA	79:5:952:G:H4'	1.92	0.51
67:h:25:LYS:HD3	67:h:54:ILE:HD13	1.93	0.51
69:j:49:TRP:CE3	79:5:1646:A:H1'	2.46	0.51
71:l:30:LYS:HG2	81:8:75:G:C8	2.46	0.51
76:r:84:LYS:HE2	76:r:88:ALA:HB1	1.92	0.51
77:s:57:LYS:HG2	77:s:60:MET:N	2.23	0.51
77:s:158:VAL:O	77:s:160:LEU:HD23	2.10	0.51
78:t:33:GLY:N	78:t:34:PRO:CD	2.73	0.51
78:t:113:ALA:CB	78:t:129:ILE:HG12	2.41	0.51
79:5:222:C:H2'	79:5:223:G:O4'	2.11	0.51
79:5:235:A:H1'	79:5:237:G:OP2	2.10	0.51
79:5:975:C:H2'	79:5:976:G:O4'	2.11	0.51
79:5:1537:A:H2'	79:5:1538:U:C6	2.46	0.51
79:5:1725:U:H2'	79:5:1726:U:C6	2.45	0.51
79:5:1977:C:H5''	79:5:1979:A:N7	2.25	0.51
79:5:4591:U:H2'	79:5:4592:C:C6	2.45	0.51
79:5:4653:C:H2'	79:5:4654:C:C6	2.45	0.51
79:5:4711:C:H2'	79:5:4712:C:C6	2.45	0.51
79:5:5014:A:H2'	79:5:5015:G:O4'	2.11	0.51
84:EF:18:ASN:ND2	84:EF:98:PHE:HA	2.25	0.51
84:EF:233:VAL:HG12	84:EF:256:MET:HE2	1.93	0.51
84:EF:643:VAL:HA	84:EF:646:ALA:HB3	1.93	0.51
84:EF:763:LEU:HD13	84:EF:770:VAL:HG22	1.93	0.51
5:PP:34:MET:HE2	5:PP:45:LEU:CB	2.41	0.51
5:PP:98:ASN:HD21	5:PP:120:SER:HB2	1.76	0.51
12:cc:11:LEU:O	12:cc:35:MET:HG2	2.10	0.51
15:gg:32:LEU:CB	15:gg:71:ILE:HD11	2.40	0.51
16:R:135:LYS:HD2	16:R:139:MET:HE3	1.92	0.51
18:9:448:A:H62	25:II:29:LEU:HD13	1.76	0.51
18:9:552:G:H4'	36:ee:112:ASN:HB3	1.93	0.51
18:9:978:G:H2'	18:9:979:C:C6	2.46	0.51
19:AA:126:ASP:HB3	19:AA:129:ALA:HB3	1.93	0.51
21:CC:166:ARG:HB2	21:CC:248:TYR:CD1	2.45	0.51
22:EE:21:ASP:OD2	22:EE:24:THR:HG23	2.11	0.51
22:EE:200:ARG:HG3	22:EE:206:ASP:OD2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:JJ:46:VAL:HG12	26:JJ:102:ILE:HG23	1.93	0.51
29:OO:106:LYS:NZ	29:OO:135:ILE:HG23	2.25	0.51
33:YY:56:PHE:HE2	33:YY:82:ALA:HB1	1.76	0.51
35:bb:36:LYS:HD3	35:bb:43:ILE:HD11	1.93	0.51
37:A:150:LEU:HD13	79:5:3661:G:C4	2.46	0.51
38:B:94:GLU:OE1	38:B:99:LEU:HG	2.11	0.51
40:D:4:VAL:HG11	79:5:4247:G:C5'	2.39	0.51
46:J:151:ILE:HD11	46:J:156:ARG:HG2	1.92	0.51
48:M:24:LEU:HD11	48:M:86:TRP:CD2	2.46	0.51
48:M:62:LEU:H	48:M:62:LEU:HD23	1.75	0.51
49:N:45:PRO:O	49:N:49:ARG:HG3	2.11	0.51
50:O:14:HIS:CE1	50:O:119:VAL:HG13	2.46	0.51
50:O:42:ASN:HD21	50:O:125:LYS:HB2	1.76	0.51
53:S:116:ARG:O	79:5:2034:G:H1'	2.11	0.51
58:Y:50:ARG:HB2	58:Y:115:ARG:NH2	2.26	0.51
59:Z:54:THR:CG2	79:5:4128:A:H5'	2.40	0.51
63:d:68:LEU:HA	63:d:108:TYR:HB2	1.93	0.51
70:k:13:LEU:O	70:k:17:ARG:HG3	2.10	0.51
77:s:18:ILE:N	77:s:21:LEU:HD23	2.25	0.51
77:s:108:PRO:HA	77:s:184:SER:CB	2.41	0.51
77:s:134:LYS:HE3	77:s:134:LYS:HA	1.93	0.51
77:s:141:LEU:HG	77:s:171:GLU:HA	1.93	0.51
77:s:145:THR:CG2	77:s:154:ILE:HG23	2.39	0.51
78:t:11:LYS:HG2	78:t:64:ILE:CG1	2.41	0.51
79:5:1081:C:H42	79:5:1218:G:H1	1.58	0.51
79:5:2745:A:H2'	79:5:2746:A:H8	1.76	0.51
79:5:4089:G:H2'	79:5:4090:G:C8	2.46	0.51
81:8:15:G:H2'	81:8:16:G:N3	2.25	0.51
84:EF:223:PHE:CD2	84:EF:344:LEU:HD21	2.46	0.51
84:EF:389:ASP:HB2	84:EF:418:SER:CB	2.41	0.51
84:EF:747:VAL:HB	84:EF:812:CYS:HA	1.91	0.51
84:EF:800:LEU:HD12	84:EF:810:PRO:HG3	1.93	0.51
5:PP:107:ILE:HA	5:PP:111:MET:SD	2.51	0.51
10:UU:49:LYS:HD3	10:UU:92:HIS:ND1	2.26	0.51
18:9:39:A:H2'	18:9:40:A:O4'	2.11	0.51
18:9:599:A:H2'	18:9:606:G:H21	1.75	0.51
18:9:1098:C:H2'	18:9:1099:G:C8	2.46	0.51
21:CC:204:ILE:HD13	21:CC:215:MET:HE2	1.93	0.51
21:CC:256:TRP:CD2	31:WW:68:ARG:HD3	2.46	0.51
22:EE:31:PRO:HD2	22:EE:38:LEU:HD11	1.92	0.51
31:WW:38:LEU:HD23	31:WW:41:MET:CE	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YY:58:PHE:HE1	33:YY:74:MET:HE1	1.76	0.51
37:A:5:ILE:O	37:A:9:ARG:HG3	2.11	0.51
38:B:65:SER:HB3	79:5:4616:A:H4'	1.93	0.51
38:B:257:TRP:CD1	79:5:3899:G:H5''	2.46	0.51
38:B:263:ALA:HB3	38:B:266:VAL:HG23	1.92	0.51
40:D:9:ASN:H	40:D:12:TYR:HB3	1.75	0.51
41:E:156:LEU:O	41:E:161:ARG:HG2	2.11	0.51
42:F:100:VAL:HA	42:F:138:TYR:OH	2.11	0.51
42:F:180:LYS:HE3	42:F:181:TYR:CZ	2.46	0.51
44:H:79:ASN:HB3	44:H:151:ILE:HG21	1.92	0.51
60:a:103:VAL:HG12	60:a:108:TYR:O	2.11	0.51
62:c:37:MET:HG2	62:c:97:ILE:HD11	1.92	0.51
65:f:96:ALA:HA	65:f:99:HIS:CD2	2.46	0.51
66:g:24:ARG:HD3	79:5:2638:G:H4'	1.93	0.51
76:r:33:LYS:HD2	76:r:40:TYR:CE2	2.46	0.51
78:t:54:LYS:HG2	78:t:89:PRO:CG	2.40	0.51
79:5:308:G:H8	79:5:310:G:H1'	1.75	0.51
79:5:308:G:C8	79:5:310:G:H1'	2.46	0.51
79:5:379:G:H2'	79:5:380:U:C6	2.46	0.51
79:5:423:G:H2'	79:5:424:U:C6	2.46	0.51
79:5:432:U:H4'	79:5:433:A:H5''	1.93	0.51
79:5:709:C:H1'	79:5:4942:C:C5	2.46	0.51
79:5:1866:U:H2'	79:5:1867:A:O4'	2.10	0.51
79:5:1895:G:H2'	79:5:1896:A:O4'	2.10	0.51
79:5:1984:A:C2'	79:5:2011:C:H5'	2.41	0.51
79:5:2682:G:H2'	79:5:2683:C:C6	2.46	0.51
79:5:4300:U:H2'	79:5:4301:U:C6	2.45	0.51
79:5:5020:G:H2'	79:5:5021:C:C6	2.45	0.51
82:1:1427:U:H2'	82:1:1428:C:C6	2.46	0.51
82:1:1455:A:H4'	82:1:1456:G:OP1	2.10	0.51
84:EF:350:LEU:O	84:EF:351:LEU:C	2.50	0.51
84:EF:520:LEU:CD1	84:EF:566:ALA:HB3	2.34	0.51
84:EF:524:LEU:HD23	84:EF:525:LYS:HG3	1.93	0.51
84:EF:743:PRO:HB2	84:EF:790:VAL:HG21	1.92	0.51
1:DD:127:MET:HE2	1:DD:154:ASP:OD2	2.10	0.50
1:DD:163:PRO:HA	1:DD:166:TYR:CE2	2.46	0.50
2:FF:92:ILE:HG21	2:FF:169:ILE:HG22	1.93	0.50
3:KK:41:PRO:O	3:KK:45:VAL:HG23	2.11	0.50
7:RR:116:ASN:CG	19:AA:11:LYS:HD2	2.37	0.50
9:TT:107:LEU:HA	9:TT:110:LEU:CD1	2.40	0.50
18:9:11:A:H5'	21:CC:113:GLN:OE1	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:9:453:C:O2'	18:9:454:U:H5'	2.11	0.50
18:9:497:C:H2'	18:9:498:C:C6	2.46	0.50
18:9:830:A:H61	18:9:844:U:H3	1.58	0.50
18:9:996:A:H5''	28:NN:7:PRO:HG3	1.93	0.50
18:9:1303:C:H2'	18:9:1304:U:C6	2.46	0.50
20:BB:119:THR:HB	20:BB:143:THR:CG2	2.41	0.50
25:II:81:VAL:HG22	25:II:102:VAL:HG12	1.92	0.50
28:NN:102:LEU:HD12	28:NN:105:ASN:O	2.11	0.50
37:A:213:GLY:HA3	79:5:4544:A:H5''	1.92	0.50
39:C:144:ILE:HG12	39:C:147:VAL:CG2	2.41	0.50
39:C:286:ASN:CB	39:C:292:ILE:HD11	2.40	0.50
39:C:289:LEU:O	39:C:293:LEU:HG	2.11	0.50
41:E:181:PRO:HG2	41:E:184:LEU:HD12	1.92	0.50
43:G:210:ILE:CG2	43:G:220:VAL:HG11	2.41	0.50
52:Q:78:LYS:HG2	52:Q:137:VAL:HG23	1.93	0.50
54:T:40:VAL:CG1	54:T:96:ILE:HG23	2.40	0.50
56:V:20:LEU:HD21	56:V:101:ASN:OD1	2.11	0.50
57:X:127:LEU:HD23	79:5:2437:C:O4'	2.10	0.50
64:e:68:HIS:H	79:5:2318:G:H5'	1.75	0.50
77:s:81:HIS:CD2	77:s:198:ILE:HG12	2.46	0.50
78:t:64:ILE:CA	78:t:69:ALA:CA	2.76	0.50
78:t:115:GLN:O	78:t:118:HIS:HB3	2.11	0.50
79:5:1619:G:H2'	79:5:1620:U:O4'	2.11	0.50
79:5:1760:G:C2	79:5:1761:G:C4	2.99	0.50
79:5:1879:C:H5''	79:5:1882:U:O2'	2.11	0.50
79:5:2413:U:H2'	79:5:2414:G:C8	2.46	0.50
79:5:2487:G:H4'	81:8:125:C:OP1	2.11	0.50
79:5:3748:A:H2'	79:5:3749:C:C6	2.46	0.50
82:1:1404:A:H2'	82:1:1405:C:H6	1.75	0.50
84:EF:52:GLY:O	84:EF:53:GLU:C	2.54	0.50
84:EF:85:ASP:O	84:EF:86:LEU:C	2.52	0.50
84:EF:367:TYR:CE1	84:EF:368:ARG:HD2	2.46	0.50
84:EF:394:LEU:HD23	84:EF:486:THR:HA	1.93	0.50
84:EF:423:THR:HB	84:EF:462:GLU:HA	1.91	0.50
3:KK:47:LYS:O	3:KK:50:GLN:HG3	2.11	0.50
5:PP:68:PRO:HG2	5:PP:71:GLU:OE1	2.11	0.50
6:QQ:116:ASP:HB3	6:QQ:119:LEU:CD2	2.41	0.50
6:QQ:142:GLN:HG3	18:9:1643:U:H1'	1.94	0.50
14:ff:95:ARG:HD2	18:9:1289:U:OP2	2.11	0.50
16:R:28:GLU:HG3	16:R:49:LEU:HD22	1.94	0.50
18:9:432:G:H2'	18:9:433:A:C8	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:9:920:A:OP1	31:WW:57:ARG:HD3	2.10	0.50
18:9:993:G:O6	34:aa:15:ARG:HG2	2.11	0.50
18:9:1017:U:H5'	28:NN:55:ARG:HG2	1.93	0.50
18:9:1059:G:N2	18:9:1829:G:H4'	2.26	0.50
18:9:1283:C:C2'	18:9:1284:A:H5''	2.41	0.50
18:9:1283:C:H2'	18:9:1284:A:H5''	1.92	0.50
18:9:1346:U:O2'	18:9:1485:U:H1'	2.10	0.50
18:9:1491:G:H2'	18:9:1492:U:C6	2.46	0.50
18:9:1839:U:H2'	18:9:1840:U:C6	2.46	0.50
20:BB:164:ILE:HG23	20:BB:201:CYS:SG	2.51	0.50
20:BB:226:GLY:H	43:G:317:LYS:HZ2	1.58	0.50
21:CC:85:SER:HA	30:VV:26:ALA:O	2.11	0.50
21:CC:107:LEU:HB2	21:CC:127:PHE:HB2	1.93	0.50
21:CC:200:ARG:O	26:JJ:98:LEU:HD13	2.12	0.50
22:EE:199:GLU:HB3	22:EE:207:VAL:CG1	2.40	0.50
33:YY:22:GLN:HB2	33:YY:72:PHE:CZ	2.45	0.50
37:A:183:GLY:CA	79:5:1613:A:H5''	2.41	0.50
38:B:47:LEU:HD23	38:B:166:THR:CG2	2.41	0.50
38:B:98:GLY:HA2	50:O:149:TYR:CE1	2.46	0.50
38:B:168:MET:HE3	38:B:173:LEU:HB2	1.92	0.50
43:G:119:GLN:HG3	49:N:28:TRP:CH2	2.46	0.50
57:X:50:LYS:HG3	79:5:2475:G:C6	2.46	0.50
59:Z:15:ALA:HB1	79:5:2581:A:H5''	1.93	0.50
62:c:47:ILE:HG12	62:c:72:HIS:HB3	1.93	0.50
64:e:79:VAL:HG11	64:e:85:LEU:CD2	2.41	0.50
77:s:9:TRP:O	77:s:12:ASN:CB	2.44	0.50
77:s:18:ILE:CB	77:s:68:HIS:HD2	2.20	0.50
77:s:77:LYS:HZ1	77:s:78:LEU:HG	1.72	0.50
77:s:102:LEU:C	77:s:104:ALA:N	2.67	0.50
77:s:138:PHE:HA	77:s:174:LEU:HD22	1.93	0.50
78:t:35:LEU:HD13	78:t:64:ILE:CD1	2.41	0.50
79:5:679:C:H2'	79:5:680:G:H8	1.75	0.50
79:5:1278:C:H2'	79:5:1279:A:O4'	2.11	0.50
79:5:2890:C:H42	79:5:3611:A:H61	1.60	0.50
79:5:4319:C:H2'	79:5:4320:G:H8	1.76	0.50
80:7:58:A:H2'	80:7:59:G:C8	2.46	0.50
82:1:1422:A:H8	82:1:1422:A:OP2	1.94	0.50
83:PT:21:A:C5	83:PT:48:C:C5	2.99	0.50
83:PT:30:G:N2	83:PT:41:A:C5	2.79	0.50
84:EF:27:HIS:HA	84:EF:138:GLN:HB2	1.94	0.50
84:EF:63:GLU:HG2	84:EF:70:ILE:N	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:EF:265:TYR:CD2	84:EF:291:GLN:HB3	2.46	0.50
2:FF:120:GLY:HA2	2:FF:150:ALA:HB2	1.92	0.50
9:TT:71:GLY:O	9:TT:75:MET:HG2	2.11	0.50
18:9:105:U:H2'	18:9:106:C:O4'	2.11	0.50
18:9:319:C:H2'	18:9:320:G:H8	1.76	0.50
18:9:574:A:H4'	33:YY:89:HIS:CG	2.46	0.50
18:9:958:G:H2'	18:9:959:G:O4'	2.12	0.50
18:9:1296:U:H2'	18:9:1297:U:O4'	2.11	0.50
18:9:1355:C:H2'	18:9:1356:G:C4	2.46	0.50
18:9:1471:C:H2'	18:9:1472:C:O4'	2.12	0.50
18:9:1811:C:H2'	18:9:1812:U:C6	2.47	0.50
21:CC:62:PRO:HG2	21:CC:68:ARG:HD2	1.94	0.50
21:CC:130:ILE:HG22	21:CC:158:ALA:HB1	1.93	0.50
21:CC:137:VAL:HG21	21:CC:244:ILE:HD12	1.93	0.50
32:XX:90:CYS:HA	32:XX:93:PHE:CD2	2.46	0.50
37:A:186:TYR:HB2	37:A:196:TRP:CZ3	2.47	0.50
38:B:231:VAL:HG23	38:B:235:TRP:CD1	2.46	0.50
39:C:152:LEU:HD21	39:C:174:LEU:HD13	1.94	0.50
39:C:230:LEU:HD21	39:C:239:LYS:CD	2.39	0.50
40:D:64:ILE:CD1	40:D:109:LEU:HD22	2.41	0.50
40:D:209:ARG:HE	40:D:233:PRO:HB2	1.75	0.50
43:G:153:HIS:HA	43:G:156:ARG:HG3	1.93	0.50
44:H:120:GLU:HG2	79:5:4611:A:C2	2.43	0.50
46:J:95:ARG:HG2	46:J:175:LEU:CD1	2.42	0.50
48:M:36:ALA:HB2	48:M:52:PHE:CZ	2.47	0.50
49:N:96:ARG:HD3	79:5:29:G:O2'	2.11	0.50
49:N:138:PHE:HE2	67:h:93:ARG:HG2	1.76	0.50
52:Q:88:ASP:HB3	79:5:1354:A:OP1	2.11	0.50
53:S:93:MET:HE1	53:S:117:HIS:CE1	2.47	0.50
54:T:40:VAL:HG13	54:T:97:LYS:O	2.12	0.50
56:V:89:ARG:HB2	56:V:95:PHE:CE2	2.45	0.50
57:X:44:PRO:HB2	79:5:4085:A:C5'	2.41	0.50
60:a:36:GLY:HA3	60:a:40:HIS:CE1	2.46	0.50
77:s:19:GLN:C	77:s:21:LEU:N	2.62	0.50
77:s:95:LEU:CD1	77:s:199:TYR:CE2	2.92	0.50
79:5:21:G:H1'	81:8:103:A:N3	2.26	0.50
79:5:48:G:H4'	79:5:49:U:O5'	2.12	0.50
79:5:288:G:H2'	79:5:289:C:C6	2.46	0.50
79:5:315:G:H3'	79:5:315:G:OP2	2.10	0.50
79:5:425:U:H2'	79:5:426:A:H8	1.76	0.50
79:5:659:G:O2'	79:5:660:A:H5'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:1817:U:H2'	79:5:1818:G:O4'	2.11	0.50
79:5:2648:G:H2'	79:5:2649:G:C8	2.47	0.50
79:5:4573:G:H2'	79:5:4574:U:C6	2.45	0.50
80:7:61:G:H2'	80:7:62:U:C6	2.46	0.50
80:7:113:G:H2'	80:7:114:U:C6	2.47	0.50
82:1:1377:U:H2'	82:1:1378:A:O4'	2.11	0.50
82:1:1481:G:C2'	82:1:1482:U:O5'	2.60	0.50
84:EF:144:ARG:O	84:EF:145:GLN:C	2.54	0.50
84:EF:164:LEU:HD21	84:EF:174:LEU:HD22	1.93	0.50
84:EF:165:LEU:O	84:EF:166:GLU:C	2.55	0.50
84:EF:200:MET:HE1	84:EF:367:TYR:CZ	2.47	0.50
84:EF:222:ALA:CB	84:EF:346:ALA:HB2	2.38	0.50
84:EF:590:LEU:HD13	84:EF:705:HIS:CD2	2.47	0.50
84:EF:610:PRO:O	84:EF:611:ASP:C	2.53	0.50
84:EF:740:LEU:HB2	84:EF:820:LEU:HD12	1.94	0.50
5:PP:108:LYS:H	5:PP:108:LYS:HD2	1.76	0.50
7:RR:49:LYS:NZ	18:9:1453:C:H5'	2.26	0.50
8:SS:37:GLY:N	18:9:1630:A:H5''	2.26	0.50
18:9:84:A:H2'	18:9:85:A:O4'	2.12	0.50
18:9:218:U:H2'	18:9:219:U:C6	2.46	0.50
18:9:1068:G:H2'	18:9:1069:U:C5	2.46	0.50
18:9:1070:A:H2'	18:9:1071:G:O4'	2.12	0.50
18:9:1339:U:H2'	18:9:1340:U:C6	2.47	0.50
18:9:1447:G:H2'	18:9:1448:A:H8	1.77	0.50
19:AA:184:ARG:CZ	19:AA:191:ARG:HA	2.41	0.50
23:GG:181:THR:O	23:GG:185:LEU:HG	2.11	0.50
25:II:129:LEU:CD1	25:II:131:PRO:HD2	2.41	0.50
32:XX:17:ARG:HA	32:XX:17:ARG:HH11	1.75	0.50
33:YY:27:VAL:HG12	33:YY:29:HIS:HD2	1.76	0.50
34:aa:38:LYS:HD3	34:aa:83:VAL:CG1	2.41	0.50
35:bb:42:LYS:CE	35:bb:57:VAL:HG21	2.41	0.50
44:H:115:ARG:NH1	44:H:123:ILE:HG21	2.26	0.50
45:I:48:LEU:HD22	45:I:49:CYS:H	1.77	0.50
49:N:38:ARG:HD2	81:8:141:C:OP1	2.12	0.50
53:S:48:VAL:HG12	53:S:54:MET:HB3	1.93	0.50
54:T:89:ILE:HG13	54:T:91:VAL:HG23	1.93	0.50
54:T:113:ASP:O	54:T:117:LYS:HE2	2.12	0.50
75:p:17:ARG:HB3	79:5:3635:A:H61	1.76	0.50
76:r:96:MET:HE3	79:5:678:C:H4'	1.92	0.50
77:s:29:ILE:O	77:s:191:GLN:HB3	2.10	0.50
77:s:57:LYS:HD2	77:s:60:MET:HB2	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:s:111:ALA:O	77:s:183:PHE:CD2	2.64	0.50
77:s:127:ASN:HB2	77:s:151:THR:O	2.12	0.50
77:s:140:ALA:C	77:s:142:GLY:H	2.20	0.50
77:s:170:SER:O	77:s:171:GLU:C	2.54	0.50
78:t:17:CYS:HB3	78:t:50:THR:OG1	2.11	0.50
78:t:85:LEU:HD21	78:t:104:ILE:CA	2.19	0.50
78:t:119:ARG:CA	78:t:119:ARG:NE	2.70	0.50
78:t:130:LYS:HZ3	78:t:154:ASP:HB3	1.76	0.50
79:5:23:C:H2'	79:5:24:G:O4'	2.12	0.50
79:5:1075:G:H2'	79:5:1076:C:H5'	1.94	0.50
79:5:1427:A:C4'	79:5:1694:C:H5'	2.41	0.50
79:5:2007:G:H21	79:5:2012:A:H62	1.58	0.50
79:5:4460:U:H2'	79:5:4461:C:H6	1.75	0.50
79:5:4538:G:H2'	79:5:4539:U:C6	2.47	0.50
79:5:4991:U:H2'	79:5:4992:G:C8	2.47	0.50
82:1:1366:G:O6	82:1:1454:A:N6	2.45	0.50
82:1:1382:A:H2'	82:1:1383:G:C8	2.46	0.50
84:EF:108:HIS:CG	84:EF:111:PHE:CD2	2.99	0.50
84:EF:154:VAL:HA	84:EF:211:THR:CG2	2.42	0.50
84:EF:373:TYR:N	84:EF:495:ARG:HB2	2.27	0.50
84:EF:759:ILE:HD12	84:EF:800:LEU:HD22	1.93	0.50
14:ff:102:VAL:HA	14:ff:105:TYR:CD2	2.47	0.50
15:gg:172:LYS:HG2	15:gg:193:GLY:O	2.11	0.50
16:R:168:GLU:O	16:R:172:ARG:HG2	2.12	0.50
18:9:65:C:C6	23:GG:174:PRO:HB3	2.46	0.50
18:9:298:G:OP1	22:EE:134:LYS:HA	2.12	0.50
18:9:502:C:O4'	22:EE:66:MET:HG2	2.10	0.50
18:9:852:G:H3'	18:9:853:C:O2	2.11	0.50
22:EE:57:THR:O	22:EE:61:VAL:HG23	2.11	0.50
22:EE:89:VAL:HG11	22:EE:119:ALA:HB1	1.92	0.50
23:GG:53:SER:O	23:GG:63:MET:HE3	2.12	0.50
24:HH:95:ILE:HD11	24:HH:133:LEU:CD2	2.41	0.50
29:OO:96:LYS:HD3	29:OO:132:VAL:HG11	1.94	0.50
29:OO:104:ARG:HA	29:OO:142:ARG:CZ	2.41	0.50
31:WW:28:ARG:HB2	31:WW:29:PRO:HD3	1.92	0.50
37:A:201:GLY:HA2	37:A:204:MET:SD	2.51	0.50
42:F:221:LYS:HD3	42:F:224:THR:CG2	2.41	0.50
43:G:130:PRO:CB	49:N:18:VAL:HG22	2.41	0.50
47:L:8:MET:CG	52:Q:166:TYR:HB3	2.42	0.50
49:N:73:ARG:HB2	49:N:92:LEU:CD1	2.41	0.50
49:N:95:ALA:CB	79:5:30:C:H5'	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:N:178:HIS:HA	49:N:181:HIS:NE2	2.27	0.50
52:Q:143:ARG:HB2	79:5:1459:A:O2'	2.11	0.50
53:S:126:ILE:O	54:T:153:PRO:HG2	2.12	0.50
66:g:41:ALA:O	66:g:52:ARG:HD3	2.11	0.50
69:j:17:THR:CG2	69:j:27:TYR:HB3	2.42	0.50
75:p:42:CYS:HB3	75:p:60:CYS:SG	2.51	0.50
77:s:154:ILE:CG2	77:s:155:LEU:N	2.74	0.50
78:t:56:LEU:HD11	78:t:82:ILE:CB	2.35	0.50
79:5:223:G:H4'	79:5:225:G:N7	2.26	0.50
79:5:2270:G:H2'	79:5:2271:C:C6	2.47	0.50
79:5:2521:G:H2'	79:5:2522:G:H8	1.77	0.50
79:5:2607:C:H2'	79:5:2608:G:C8	2.46	0.50
79:5:3911:C:H1'	79:5:4395:U:N3	2.27	0.50
79:5:4421:C:O2'	79:5:4422:A:H5'	2.11	0.50
79:5:4699:U:C1'	79:5:4700:A:H5''	2.38	0.50
79:5:4991:U:H2'	79:5:4992:G:H8	1.77	0.50
81:8:130:C:H2'	81:8:131:G:C8	2.46	0.50
82:1:1366:G:C2	82:1:1367:G:C5	2.99	0.50
84:EF:336:LEU:HA	84:EF:339:VAL:HB	1.94	0.50
84:EF:571:LYS:O	84:EF:572:LYS:C	2.52	0.50
84:EF:641:TRP:CE3	84:EF:701:ARG:CZ	2.95	0.50
2:FF:123:GLU:HB3	2:FF:140:ASP:OD1	2.12	0.50
8:SS:20:ILE:HD11	8:SS:33:ILE:CD1	2.40	0.50
17:W:50:ASN:HA	17:W:55:TYR:CG	2.46	0.50
18:9:90:G:H2'	18:9:91:A:O4'	2.12	0.50
18:9:1056:U:H2'	18:9:1057:C:O4'	2.12	0.50
18:9:1165:G:H4'	18:9:1166:G:H5''	1.93	0.50
19:AA:40:LYS:CB	19:AA:48:ILE:HD12	2.41	0.50
21:CC:84:PHE:CZ	21:CC:262:THR:HG23	2.47	0.50
25:II:76:THR:CG2	25:II:104:ILE:HB	2.42	0.50
26:JJ:93:LYS:HB3	26:JJ:96:TYR:CD2	2.46	0.50
31:WW:42:MET:CE	31:WW:49:GLU:HA	2.41	0.50
37:A:240:ALA:CB	79:5:3658:C:H4'	2.41	0.50
41:E:121:THR:OG1	64:e:93:LYS:HD3	2.12	0.50
41:E:127:LYS:HB2	79:5:958:G:C2	2.47	0.50
46:J:15:LEU:HD21	46:J:134:LEU:HB3	1.93	0.50
49:N:184:ILE:O	49:N:191:ALA:HB2	2.12	0.50
50:O:142:ALA:HA	50:O:145:VAL:HG12	1.94	0.50
51:P:15:CYS:SG	51:P:102:ALA:HB2	2.51	0.50
52:Q:56:THR:HB	52:Q:146:ARG:NH1	2.27	0.50
58:Y:16:LYS:HB2	81:8:23:C:H4'	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:Y:41:LYS:HE3	58:Y:42:TYR:CZ	2.47	0.50
60:a:28:HIS:CE1	60:a:32:ARG:HG2	2.47	0.50
63:d:88:LEU:HD12	63:d:106:VAL:HG22	1.93	0.50
64:e:79:VAL:HG21	64:e:97:ALA:HB1	1.93	0.50
67:h:80:PRO:O	67:h:84:ARG:HG3	2.12	0.50
77:s:28:PHE:HE2	77:s:99:ARG:N	2.10	0.50
77:s:116:ILE:H	77:s:166:LYS:CE	2.25	0.50
77:s:142:GLY:O	77:s:158:VAL:HG11	2.12	0.50
77:s:143:ILE:HG12	77:s:160:LEU:CD2	2.22	0.50
79:5:745:G:H2'	79:5:746:A:C8	2.46	0.50
79:5:970:G:H2'	79:5:971:U:O4'	2.12	0.50
79:5:1976:G:O3'	79:5:1977:C:H4'	2.11	0.50
79:5:4667:C:H2'	79:5:4668:U:O4'	2.12	0.50
80:7:16:A:H2'	80:7:17:C:C6	2.47	0.50
82:1:1450:C:H3'	82:1:1451:C:H6	1.75	0.50
83:PT:67:A:C2	83:PT:68:C:N1	2.80	0.50
84:EF:395:MET:HA	84:EF:395:MET:HE3	1.94	0.50
84:EF:787:TYR:HD2	84:EF:816:HIS:HD1	1.58	0.50
84:EF:800:LEU:O	84:EF:804:THR:N	2.43	0.50
8:SS:84:LEU:HD13	8:SS:96:SER:CA	2.42	0.50
18:9:52:G:H2'	18:9:53:C:H6	1.77	0.50
18:9:899:U:H2'	18:9:900:C:O4'	2.12	0.50
18:9:1387:G:H2'	18:9:1388:A:O4'	2.12	0.50
18:9:1423:C:H2'	18:9:1424:G:O4'	2.11	0.50
18:9:1454:A:N1	18:9:1476:A:H1'	2.27	0.50
25:II:36:THR:HB	25:II:57:ALA:O	2.11	0.50
26:JJ:81:LEU:HB3	26:JJ:87:LEU:HB3	1.93	0.50
37:A:189:TYR:CG	37:A:196:TRP:HB2	2.47	0.50
38:B:135:LYS:HA	38:B:138:GLN:NE2	2.27	0.50
41:E:111:LYS:HE2	79:5:2259:G:O2'	2.11	0.50
41:E:140:VAL:HG13	41:E:142:LYS:HE3	1.93	0.50
47:L:57:PRO:HB3	47:L:76:PHE:CD2	2.46	0.50
48:M:100:ARG:HD3	50:O:198:THR:O	2.12	0.50
53:S:30:MET:HE1	53:S:47:PHE:HB3	1.94	0.50
54:T:29:THR:HA	54:T:32:ARG:CD	2.41	0.50
54:T:54:HIS:NE2	79:5:4301:U:H4'	2.26	0.50
57:X:151:ASN:OD1	57:X:156:ILE:HD13	2.12	0.50
58:Y:47:MET:HE1	58:Y:118:ILE:HG21	1.93	0.50
58:Y:76:LYS:HE2	81:8:75:G:OP1	2.11	0.50
68:i:72:PHE:O	68:i:76:ARG:HG2	2.10	0.50
74:o:66:ILE:HG12	74:o:88:CYS:SG	2.51	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:s:47:LEU:O	77:s:50:LYS:HB2	2.12	0.50
78:t:70:GLN:O	78:t:71:ILE:C	2.54	0.50
78:t:103:ASN:HA	78:t:142:ASN:H	1.76	0.50
78:t:125:LEU:HD11	78:t:129:ILE:HD11	1.93	0.50
79:5:100:C:H2'	79:5:101:A:O4'	2.11	0.50
79:5:223:G:H4'	79:5:225:G:C8	2.47	0.50
79:5:1216:C:H2'	79:5:1217:G:O4'	2.12	0.50
79:5:1551:C:H2'	79:5:1552:G:O4'	2.12	0.50
79:5:1604:G:H2'	79:5:1605:G:C8	2.47	0.50
79:5:1617:G:H1'	79:5:2513:A:H62	1.76	0.50
79:5:1657:G:H2'	79:5:1658:G:C8	2.47	0.50
79:5:1763:C:H5''	79:5:1764:G:H21	1.75	0.50
79:5:2746:A:H2'	79:5:2747:U:O4'	2.12	0.50
79:5:2759:G:H2'	79:5:2760:G:C4	2.47	0.50
79:5:4753:U:H4'	79:5:4754:G:H5'	1.93	0.50
81:8:103:A:O5'	81:8:104:A:H5''	2.11	0.50
84:EF:15:LYS:HB3	84:EF:19:ILE:HD11	1.92	0.50
84:EF:373:TYR:O	84:EF:373:TYR:CD2	2.65	0.50
84:EF:631:ARG:HG2	84:EF:635:LEU:HD12	1.92	0.50
84:EF:654:PRO:HG2	84:EF:687:THR:HG21	1.94	0.50
2:FF:30:ILE:HG23	2:FF:117:ILE:HD11	1.92	0.50
5:PP:60:LEU:CD1	5:PP:89:MET:HG3	2.41	0.50
7:RR:127:ASN:H	19:AA:41:ARG:HB3	1.76	0.50
8:SS:22:GLY:O	8:SS:55:ARG:HB3	2.12	0.50
13:dd:38:MET:CE	13:dd:42:CYS:HB3	2.41	0.50
16:R:123:LEU:HD21	16:R:142:ILE:HG12	1.94	0.50
18:9:345:U:H2'	18:9:346:C:C6	2.46	0.50
18:9:688:U:H3'	24:HH:103:LYS:NZ	2.26	0.50
18:9:929:G:H2'	18:9:930:C:O4'	2.11	0.50
18:9:995:G:H2'	18:9:997:A:OP2	2.12	0.50
18:9:1131:G:H2'	18:9:1132:C:C6	2.47	0.50
18:9:1299:A:O2'	18:9:1300:U:H3'	2.11	0.50
18:9:1528:G:H2'	18:9:1529:C:C6	2.46	0.50
18:9:1865:C:O2	34:aa:92:ARG:HB3	2.11	0.50
19:AA:27:GLY:O	19:AA:47:TYR:HB2	2.11	0.50
19:AA:89:LYS:HB3	19:AA:202:TYR:CZ	2.45	0.50
20:BB:164:ILE:HG22	20:BB:168:MET:HE3	1.94	0.50
37:A:226:ARG:HD3	37:A:226:ARG:H	1.77	0.50
38:B:96:PRO:HD3	50:O:156:LEU:CD1	2.42	0.50
40:D:67:ALA:HA	40:D:72:ASP:CA	2.40	0.50
44:H:105:ILE:H	44:H:105:ILE:HD13	1.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:I:190:LEU:HB3	45:I:197:VAL:CG2	2.42	0.50
47:L:55:ILE:HG22	47:L:154:VAL:HG13	1.94	0.50
50:O:23:VAL:HG13	50:O:33:VAL:HG11	1.93	0.50
50:O:46:ASN:CG	50:O:49:ARG:HG2	2.37	0.50
62:c:32:LYS:HD2	79:5:2658:G:O6	2.12	0.50
64:e:41:ILE:HD12	79:5:1319:U:O4	2.11	0.50
67:h:106:LYS:HE3	79:5:156:G:OP2	2.12	0.50
68:i:41:ARG:HD3	79:5:308:G:H21	1.76	0.50
77:s:57:LYS:N	79:5:2020:U:H4'	2.26	0.50
77:s:149:ARG:HG2	77:s:150:GLY:N	2.27	0.50
78:t:45:ASP:HB2	78:t:71:ILE:HD12	1.93	0.50
78:t:113:ALA:CB	78:t:114:ARG:NH2	2.74	0.50
79:5:713:C:H2'	79:5:714:G:C8	2.46	0.50
79:5:1388:A:H2'	79:5:1389:U:C6	2.47	0.50
79:5:1975:G:H4'	79:5:1976:G:OP2	2.12	0.50
79:5:2397:G:O2'	79:5:2398:U:H3'	2.11	0.50
79:5:2404:A:H2'	79:5:2405:G:O4'	2.12	0.50
79:5:2557:G:H2'	79:5:2558:C:C6	2.47	0.50
79:5:2676:A:H2'	79:5:2677:G:O4'	2.12	0.50
79:5:2857:A:H2'	79:5:2858:A:O4'	2.12	0.50
79:5:3662:A:H4'	79:5:3663:A:H5''	1.93	0.50
79:5:3662:A:H5'	79:5:3664:G:O4'	2.11	0.50
79:5:4486:C:H1'	79:5:4683:U:O2	2.12	0.50
79:5:4627:U:H2'	79:5:4628:U:C6	2.46	0.50
79:5:4704:C:H2'	79:5:4705:A:H8	1.77	0.50
79:5:4862:G:H2'	79:5:4863:G:C8	2.47	0.50
79:5:4968:A:H2'	79:5:4969:C:C6	2.46	0.50
83:PT:71:C:C2'	83:PT:72:C:H5'	2.42	0.50
84:EF:199:PRO:CB	84:EF:367:TYR:HB2	2.42	0.50
84:EF:209:LEU:HD21	84:EF:211:THR:OG1	2.12	0.50
84:EF:452:LEU:HD11	84:EF:454:MET:HG2	1.94	0.50
84:EF:511:ALA:O	84:EF:512:LYS:C	2.54	0.50
84:EF:558:LEU:HD23	84:EF:561:LEU:CD1	2.41	0.50
84:EF:645:GLU:O	84:EF:646:ALA:C	2.55	0.50
1:DD:96:LEU:HD23	1:DD:190:LEU:HD23	1.93	0.50
8:SS:136:THR:OG1	18:9:1521:C:H2'	2.12	0.50
8:SS:137:LYS:HE2	18:9:1234:C:N4	2.27	0.50
15:gg:240:CYS:O	15:gg:248:LEU:HD12	2.12	0.50
18:9:339:A:H2'	18:9:340:C:C5	2.47	0.50
18:9:1120:U:H3'	18:9:1121:G:H5''	1.93	0.50
18:9:1462:U:H2'	18:9:1464:C:C4	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:9:1482:C:H2'	18:9:1483:A:O4'	2.12	0.50
18:9:1617:G:N2	18:9:1619:A:H3'	2.26	0.50
18:9:1804:U:H2'	18:9:1805:G:C8	2.47	0.50
18:9:1867:U:O4	34:aa:84:VAL:HG12	2.12	0.50
18:9:1868:U:O4	34:aa:98:PRO:HG2	2.12	0.50
20:BB:71:LEU:HD22	20:BB:78:GLU:HG2	1.93	0.50
24:HH:163:GLN:HG3	24:HH:189:PHE:CE1	2.47	0.50
25:II:82:VAL:HG21	25:II:103:LEU:HG	1.94	0.50
27:LL:13:GLN:HB2	27:LL:16:ILE:HD12	1.94	0.50
29:OO:100:THR:HG21	29:OO:104:ARG:HE	1.77	0.50
31:WW:7:LEU:O	31:WW:11:LEU:HG	2.12	0.50
31:WW:50:PHE:HB2	31:WW:63:VAL:HG22	1.94	0.50
32:XX:60:LYS:HG3	32:XX:114:ASP:O	2.12	0.50
37:A:132:ASN:OD1	79:5:3682:A:H5''	2.12	0.50
38:B:268:ARG:NH2	79:5:3896:C:H1'	2.26	0.50
38:B:317:LEU:HB3	79:5:5001:U:H4'	1.92	0.50
39:C:284:MET:HG2	52:Q:24:TYR:HD1	1.76	0.50
39:C:326:LEU:HD22	39:C:333:LYS:HB2	1.93	0.50
40:D:80:ALA:O	40:D:92:LEU:HD23	2.12	0.50
41:E:269:GLN:OE1	48:M:111:LYS:HG2	2.12	0.50
42:F:103:LYS:O	42:F:107:VAL:HG23	2.11	0.50
44:H:137:SER:HB3	44:H:145:VAL:CG2	2.42	0.50
49:N:192:TRP:CH2	79:5:49:U:H5'	2.47	0.50
55:U:36:ALA:HB1	55:U:65:ARG:HD2	1.93	0.50
55:U:56:LEU:HB3	55:U:61:VAL:CG2	2.41	0.50
56:V:82:ILE:HG23	56:V:121:VAL:HA	1.94	0.50
63:d:64:ILE:HG13	63:d:68:LEU:HD23	1.94	0.50
68:i:33:LEU:HD11	68:i:38:LYS:HD2	1.93	0.50
77:s:65:ILE:CB	77:s:79:LEU:HD21	2.35	0.50
77:s:191:GLN:HG3	77:s:192:VAL:N	2.27	0.50
79:5:125:C:H2'	79:5:126:C:H6	1.77	0.50
79:5:956:A:N6	79:5:1283:G:H1'	2.27	0.50
79:5:1683:U:H2'	79:5:1684:A:C8	2.47	0.50
79:5:1823:G:H2'	79:5:1824:G:C8	2.47	0.50
79:5:1968:G:H2'	79:5:1969:G:H8	1.77	0.50
79:5:2722:G:H2'	79:5:2723:U:O4'	2.12	0.50
79:5:3709:U:H2'	79:5:3710:G:C8	2.46	0.50
79:5:4153:C:H2'	79:5:4154:G:H8	1.77	0.50
79:5:4577:U:O2'	79:5:4968:A:H5'	2.12	0.50
82:1:1367:G:C6	82:1:1368:G:C6	3.00	0.50
82:1:1422:A:H2'	82:1:1435:G:C2'	2.32	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:EF:343:TRP:O	84:EF:344:LEU:C	2.54	0.50
84:EF:368:ARG:HB3	84:EF:371:LEU:CB	2.42	0.50
84:EF:484:THR:HG21	84:EF:494:MET:N	2.27	0.50
84:EF:780:PRO:O	84:EF:781:MET:C	2.54	0.50
2:FF:122:ARG:HD2	12:cc:59:LEU:HD21	1.94	0.49
8:SS:130:ARG:HB3	8:SS:134:GLN:OE1	2.12	0.49
9:TT:116:ASP:HB2	9:TT:122:LYS:HG2	1.94	0.49
10:UU:67:LYS:HG2	10:UU:78:ASP:CG	2.37	0.49
11:ZZ:74:SER:HA	11:ZZ:79:ILE:CG1	2.42	0.49
15:gg:107:ASP:HB2	15:gg:125:ARG:HH11	1.77	0.49
16:R:115:ILE:HB	16:R:119:MET:HE3	1.93	0.49
17:W:8:PHE:CD1	17:W:46:PRO:HG3	2.47	0.49
18:9:12:U:H2'	18:9:13:C:C6	2.47	0.49
18:9:1181:A:H2'	18:9:1182:A:C8	2.47	0.49
18:9:1217:A:H2'	18:9:1218:C:C6	2.47	0.49
18:9:1326:U:H5'	18:9:1494:U:OP2	2.12	0.49
18:9:1845:A:H2'	18:9:1846:G:C8	2.47	0.49
19:AA:73:ASP:HB2	19:AA:119:PRO:HA	1.94	0.49
20:BB:103:MET:SD	20:BB:188:LEU:HB3	2.52	0.49
21:CC:159:LYS:O	21:CC:162:ILE:HG12	2.10	0.49
23:GG:32:MET:SD	23:GG:65:GLN:HB2	2.52	0.49
26:JJ:27:GLN:O	26:JJ:31:LEU:HG	2.12	0.49
26:JJ:110:LEU:HD22	26:JJ:147:PHE:HB3	1.94	0.49
27:LL:111:VAL:HG11	27:LL:128:VAL:HG12	1.93	0.49
37:A:137:ILE:HD11	37:A:149:LYS:HB2	1.93	0.49
37:A:234:LYS:HD3	79:5:3666:C:H5''	1.94	0.49
39:C:285:LEU:HD12	52:Q:125:GLN:NE2	2.27	0.49
39:C:339:THR:O	39:C:340:ILE:HD13	2.12	0.49
40:D:208:MET:HE3	40:D:233:PRO:CG	2.42	0.49
40:D:223:PHE:HB3	40:D:226:TYR:CB	2.38	0.49
40:D:279:ARG:HG2	40:D:283:LYS:HE3	1.93	0.49
42:F:73:MET:HE1	79:5:1088:C:O2	2.12	0.49
42:F:240:ASN:O	42:F:244:ARG:HG2	2.12	0.49
44:H:71:ARG:HE	79:5:4691:A:H5'	1.76	0.49
44:H:88:PHE:CZ	44:H:151:ILE:HB	2.47	0.49
45:I:99:ILE:HB	45:I:123:GLN:OE1	2.12	0.49
49:N:114:ARG:HD3	49:N:156:HIS:O	2.12	0.49
50:O:89:PRO:O	50:O:95:GLY:HA3	2.11	0.49
54:T:105:PHE:CE1	79:5:1802:A:H4'	2.46	0.49
56:V:64:THR:HG23	56:V:75:LYS:O	2.12	0.49
58:Y:26:ARG:HG2	58:Y:78:TYR:OH	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:a:4:ARG:H	60:a:4:ARG:HD3	1.77	0.49
60:a:100:ILE:HG12	60:a:123:ILE:HB	1.94	0.49
62:c:48:LEU:HD11	62:c:60:ILE:CG2	2.42	0.49
64:e:124:ASN:HB2	64:e:127:ALA:HB2	1.94	0.49
66:g:63:VAL:O	66:g:67:LEU:HG	2.12	0.49
78:t:48:LYS:HD2	78:t:48:LYS:N	2.26	0.49
78:t:134:GLY:HA2	78:t:147:HIS:CD2	2.47	0.49
79:5:355:A:H2'	79:5:356:G:O4'	2.12	0.49
79:5:474:C:H2'	79:5:475:G:C8	2.47	0.49
79:5:746:A:O2'	79:5:747:A:H5'	2.11	0.49
79:5:1431:C:H2'	79:5:1432:G:O4'	2.12	0.49
79:5:1444:G:H2'	79:5:1445:U:C5	2.47	0.49
79:5:1976:G:H8	79:5:1976:G:OP1	1.94	0.49
79:5:2624:G:H2'	79:5:2625:U:C6	2.47	0.49
79:5:2881:A:C2	79:5:3628:G:H5''	2.47	0.49
79:5:4219:A:H2'	79:5:4220:A:C8	2.47	0.49
79:5:4226:G:O2'	79:5:4227:U:H5'	2.12	0.49
79:5:4594:U:H2'	79:5:4595:G:C8	2.47	0.49
82:1:1472:A:C3'	82:1:1473:A:H8	2.18	0.49
82:1:1473:A:C6	82:1:1474:G:C6	2.99	0.49
83:PT:18:G:C4	83:PT:58:A:N1	2.79	0.49
83:PT:42:C:N3	83:PT:43:G:C8	2.80	0.49
84:EF:155:LEU:HD21	84:EF:185:VAL:HG21	1.94	0.49
84:EF:256:MET:HE3	84:EF:260:LEU:HD12	1.93	0.49
84:EF:304:ILE:HD11	84:EF:339:VAL:HG11	1.94	0.49
84:EF:372:LEU:C	84:EF:495:ARG:HB2	2.37	0.49
84:EF:711:ALA:O	84:EF:712:ASP:C	2.54	0.49
4:MM:91:LEU:HD13	18:9:1284:A:N7	2.27	0.49
8:SS:63:GLU:O	8:SS:67:VAL:HG23	2.12	0.49
15:gg:194:TYR:HE1	15:gg:212:LYS:HD2	1.75	0.49
16:R:6:LEU:HD21	16:R:9:ARG:HH21	1.76	0.49
18:9:106:C:H2'	18:9:107:A:H8	1.76	0.49
18:9:392:A:O2'	18:9:393:U:H5'	2.12	0.49
18:9:680:G:H2'	18:9:681:U:C6	2.46	0.49
18:9:952:G:H1'	29:OO:52:THR:HG22	1.94	0.49
18:9:1017:U:H1'	28:NN:52:VAL:HG23	1.93	0.49
19:AA:57:LYS:HD2	19:AA:159:ILE:CD1	2.41	0.49
19:AA:121:LEU:HD12	19:AA:143:PRO:O	2.11	0.49
22:EE:86:PHE:CZ	22:EE:87:MET:HE2	2.48	0.49
23:GG:137:ARG:HD2	23:GG:178:ARG:NH2	2.26	0.49
25:II:113:TYR:CE2	25:II:121:LEU:HD23	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:B:285:TYR:CE1	38:B:363:ILE:HG12	2.47	0.49
38:B:301:ASN:HB2	38:B:304:SER:CB	2.40	0.49
39:C:302:LEU:HD23	52:Q:39:THR:HG22	1.93	0.49
41:E:152:ILE:O	41:E:153:LEU:HD23	2.12	0.49
42:F:47:LYS:O	42:F:51:GLU:HG2	2.12	0.49
42:F:79:ASN:HD22	54:T:143:THR:H	1.60	0.49
43:G:299:SER:HA	43:G:302:ARG:NH1	2.27	0.49
45:I:39:LYS:H	45:I:39:LYS:HD3	1.76	0.49
49:N:96:ARG:O	79:5:300:A:H4'	2.12	0.49
49:N:182:HIS:ND1	49:N:183:THR:HG23	2.28	0.49
51:P:66:GLY:HA3	79:5:2362:U:C5'	2.42	0.49
51:P:139:TYR:CZ	79:5:2421:G:H1'	2.47	0.49
53:S:15:ARG:HH12	53:S:18:PRO:HG3	1.75	0.49
59:Z:77:TYR:HB3	62:c:39:ARG:CD	2.42	0.49
72:m:77:LEU:CD1	72:m:84:CYS:HA	2.41	0.49
76:r:97:ILE:CD1	76:r:107:ARG:HA	2.41	0.49
77:s:20:LEU:HD11	77:s:90:PHE:HB2	1.94	0.49
77:s:100:ASP:HA	77:s:103:LEU:CD2	2.42	0.49
77:s:171:GLU:CG	77:s:172:ALA:N	2.75	0.49
79:5:83:C:H2'	79:5:99:A:N6	2.27	0.49
79:5:347:A:O2'	79:5:348:G:H5'	2.12	0.49
79:5:2293:U:H2'	79:5:2294:G:C8	2.47	0.49
79:5:2625:U:H2'	79:5:2626:U:O4'	2.12	0.49
79:5:2630:U:O2	79:5:2632:U:H1'	2.12	0.49
79:5:4232:U:H4'	79:5:4233:A:O5'	2.12	0.49
79:5:4592:C:H2'	79:5:4593:C:H6	1.77	0.49
82:1:1389:C:H4'	82:1:1394:A:H4'	1.94	0.49
82:1:1442:G:O2'	82:1:1443:A:H8	1.95	0.49
84:EF:311:GLU:O	84:EF:315:LEU:HD12	2.11	0.49
84:EF:362:VAL:HG12	84:EF:366:LYS:CD	2.42	0.49
2:FF:41:VAL:HB	2:FF:68:ILE:HG12	1.95	0.49
6:QQ:90:LYS:HD3	6:QQ:120:LEU:O	2.12	0.49
7:RR:56:HIS:HA	7:RR:59:LYS:HE2	1.94	0.49
8:SS:6:PRO:HD3	11:ZZ:49:LEU:HD13	1.93	0.49
18:9:294:U:O4	27:LL:65:ASN:HB2	2.12	0.49
18:9:1007:C:H2'	18:9:1008:A:C8	2.47	0.49
18:9:1568:C:H2'	18:9:1569:A:C8	2.47	0.49
18:9:1576:G:H2'	18:9:1577:G:C8	2.47	0.49
19:AA:130:ASP:O	19:AA:134:LEU:HG	2.11	0.49
21:CC:78:LEU:HD13	21:CC:82:TYR:CE2	2.47	0.49
22:EE:137:PRO:HB2	22:EE:150:PRO:CD	2.36	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:LL:80:MET:HA	27:LL:86:ILE:HG22	1.94	0.49
28:NN:83:ASP:OD1	28:NN:84:LEU:HG	2.11	0.49
32:XX:87:ASN:HB2	32:XX:90:CYS:SG	2.52	0.49
34:aa:38:LYS:HD3	34:aa:83:VAL:HG11	1.94	0.49
38:B:257:TRP:HB3	79:5:4518:A:OP2	2.12	0.49
38:B:321:VAL:HG12	38:B:322:HIS:ND1	2.26	0.49
39:C:212:ASN:HA	39:C:232:VAL:CG2	2.42	0.49
44:H:18:ILE:HG22	44:H:27:VAL:HG13	1.94	0.49
44:H:88:PHE:CE2	44:H:151:ILE:HB	2.47	0.49
44:H:115:ARG:HG2	44:H:123:ILE:CG2	2.42	0.49
45:I:94:PHE:HD2	79:5:1785:C:H1'	1.76	0.49
50:O:37:ARG:HG3	50:O:39:GLU:OE2	2.13	0.49
50:O:108:ILE:HD11	50:O:112:TYR:O	2.12	0.49
50:O:185:VAL:HG12	50:O:188:LYS:HG3	1.94	0.49
51:P:54:LYS:HA	51:P:83:TRP:CD1	2.46	0.49
74:o:61:LYS:HD2	79:5:4372:U:OP2	2.11	0.49
77:s:45:MET:SD	77:s:48:ARG:HD2	2.52	0.49
78:t:112:ILE:HG23	78:t:132:ILE:HG21	1.94	0.49
78:t:120:SER:C	78:t:121:LEU:HG	2.37	0.49
78:t:128:THR:O	78:t:131:GLU:HG2	2.12	0.49
79:5:1591:U:N3	79:5:4555:U:H5''	2.27	0.49
79:5:1748:U:H2'	79:5:1749:A:C8	2.47	0.49
79:5:1759:G:H2'	79:5:1760:G:O4'	2.11	0.49
79:5:1870:C:H2'	79:5:1871:A:C8	2.47	0.49
79:5:2521:G:H2'	79:5:2522:G:C8	2.48	0.49
79:5:2540:C:H2'	79:5:2541:G:C8	2.46	0.49
79:5:4189:U:H2'	79:5:4190:U:C6	2.47	0.49
79:5:4531:U:H4'	79:5:4532:U:H5'	1.94	0.49
79:5:4631:G:H2'	79:5:4632:U:C6	2.47	0.49
79:5:4948:C:H3'	79:5:4949:G:H5''	1.95	0.49
81:8:141:C:H2'	81:8:142:U:C6	2.47	0.49
82:1:1402:U:H4'	82:1:1404:A:H4'	1.94	0.49
84:EF:58:ASP:HB2	84:EF:63:GLU:HB3	1.94	0.49
84:EF:82:SER:HA	84:EF:86:LEU:CG	2.41	0.49
84:EF:126:LEU:HD12	84:EF:154:VAL:HB	1.95	0.49
84:EF:143:LEU:HB3	84:EF:188:ILE:HG21	1.94	0.49
84:EF:152:LYS:HG2	84:EF:358:LEU:HA	1.94	0.49
84:EF:321:ILE:HG21	84:EF:343:TRP:HB2	1.94	0.49
84:EF:518:PRO:O	84:EF:519:LYS:C	2.56	0.49
84:EF:592:LEU:HD11	84:EF:601:ARG:CD	2.41	0.49
84:EF:636:ALA:HB3	84:EF:643:VAL:CG2	2.41	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:EF:772:GLU:HB3	84:EF:785:LYS:HB2	1.94	0.49
2:FF:22:LYS:HE2	2:FF:98:GLU:OE2	2.13	0.49
4:MM:77:ILE:HG12	4:MM:128:PHE:HZ	1.77	0.49
9:TT:59:SER:HA	9:TT:62:ARG:HG2	1.95	0.49
9:TT:65:TYR:HE1	9:TT:128:GLN:HG3	1.77	0.49
10:UU:26:SER:HB3	10:UU:32:LEU:HD22	1.95	0.49
10:UU:60:THR:HG22	10:UU:83:ARG:HG2	1.94	0.49
15:gg:40:ILE:HD11	15:gg:66:VAL:HG11	1.93	0.49
18:9:92:A:O2'	22:EE:4:GLY:HA3	2.12	0.49
18:9:849:A:H2'	18:9:850:C:C6	2.46	0.49
18:9:962:A:H5''	29:OO:66:ARG:HB3	1.95	0.49
18:9:1353:A:H3'	18:9:1354:G:H5''	1.94	0.49
18:9:1597:C:H4'	18:9:1603:G:C6	2.46	0.49
23:GG:138:ALA:O	23:GG:142:ARG:HG3	2.12	0.49
31:WW:26:LEU:HD13	31:WW:62:VAL:CG2	2.42	0.49
38:B:81:THR:OG1	38:B:207:VAL:HG21	2.13	0.49
38:B:276:HIS:O	79:5:4716:C:H5''	2.13	0.49
40:D:268:ARG:HD3	40:D:269:PRO:O	2.12	0.49
42:F:58:LYS:HG3	42:F:61:ARG:NH2	2.28	0.49
49:N:38:ARG:HB2	49:N:62:TYR:CZ	2.47	0.49
49:N:146:PRO:HA	49:N:149:GLN:CD	2.38	0.49
51:P:94:MET:HG2	51:P:148:MET:SD	2.52	0.49
52:Q:72:LEU:HD23	79:5:1457:G:H4'	1.94	0.49
53:S:93:MET:HG2	79:5:1952:G:O2'	2.12	0.49
57:X:80:PRO:HG2	57:X:155:ILE:HG21	1.95	0.49
57:X:89:LYS:HD2	57:X:93:ASN:HD22	1.76	0.49
57:X:130:PRO:HG2	79:5:2435:G:C6	2.47	0.49
66:g:26:PRO:CA	79:5:2639:U:H1'	2.42	0.49
67:h:74:LYS:HE2	79:5:133:C:C5	2.47	0.49
77:s:5:ASP:N	77:s:8:THR:HG21	2.28	0.49
77:s:11:SER:O	77:s:15:LEU:HG	2.12	0.49
77:s:11:SER:HA	77:s:14:PHE:CB	2.43	0.49
77:s:55:MET:CE	77:s:87:GLY:HA3	2.42	0.49
77:s:57:LYS:HA	79:5:2020:U:C5'	2.42	0.49
77:s:65:ILE:CG2	77:s:76:GLU:HB2	2.43	0.49
79:5:448:G:H3'	79:5:449:C:H5''	1.94	0.49
79:5:477:C:H2'	79:5:478:G:H8	1.77	0.49
79:5:1976:G:H8	79:5:1976:G:P	2.35	0.49
79:5:1977:C:H5''	79:5:1979:A:N6	2.28	0.49
79:5:2095:A:H2'	79:5:2096:G:C8	2.48	0.49
79:5:3732:A:H2'	79:5:3733:A:C8	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:4126:C:H5''	79:5:4127:A:H5''	1.93	0.49
79:5:4637:G:H2'	79:5:4638:U:C6	2.47	0.49
84:EF:19:ILE:HG23	84:EF:99:LEU:HB3	1.92	0.49
84:EF:20:ARG:HG2	84:EF:358:LEU:HG	1.94	0.49
84:EF:45:ILE:HD11	84:EF:56:PHE:CD2	2.47	0.49
84:EF:393:PRO:HG2	84:EF:488:PHE:CE2	2.48	0.49
84:EF:654:PRO:HB2	84:EF:684:GLN:HA	1.94	0.49
1:DD:123:LEU:HG	1:DD:134:CYS:SG	2.53	0.49
5:PP:99:GLY:O	18:9:1268:C:H1'	2.13	0.49
16:R:19:LYS:HG2	79:5:2823:G:OP1	2.13	0.49
18:9:600:G:H2'	18:9:601:G:H8	1.78	0.49
18:9:886:A:H3'	18:9:887:U:H5''	1.93	0.49
18:9:941:C:H5''	20:BB:136:ARG:NH1	2.28	0.49
18:9:962:A:H5''	29:OO:66:ARG:CB	2.43	0.49
18:9:1170:A:N1	18:9:1188:A:H5''	2.27	0.49
19:AA:40:LYS:HB2	19:AA:48:ILE:HD12	1.95	0.49
19:AA:61:ALA:CB	19:AA:145:ILE:HD13	2.39	0.49
19:AA:63:ARG:HG2	19:AA:185:MET:HE1	1.93	0.49
19:AA:94:THR:HG23	19:AA:186:ARG:HH12	1.77	0.49
21:CC:66:LEU:HD11	21:CC:81:ILE:CD1	2.43	0.49
21:CC:158:ALA:O	21:CC:162:ILE:HG23	2.13	0.49
22:EE:152:PRO:HG2	23:GG:216:ARG:HG2	1.93	0.49
22:EE:163:ASP:OD1	22:EE:165:GLU:HG2	2.13	0.49
23:GG:13:GLN:HA	23:GG:124:LEU:HD23	1.94	0.49
29:OO:57:THR:OG1	29:OO:60:MET:HG3	2.12	0.49
33:YY:110:ARG:HH12	33:YY:126:GLY:HA3	1.78	0.49
37:A:28:ARG:HB3	37:A:123:ARG:HD3	1.94	0.49
37:A:90:CYS:HB3	37:A:101:VAL:HG13	1.93	0.49
38:B:252:ALA:HB3	79:5:4457:U:O2	2.12	0.49
40:D:270:LYS:HG3	80:7:61:G:P	2.53	0.49
47:L:55:ILE:HG21	47:L:155:MET:HE2	1.93	0.49
49:N:71:ARG:NH2	79:5:31:U:H4'	2.27	0.49
50:O:109:PRO:HG2	50:O:112:TYR:HD1	1.77	0.49
52:Q:79:THR:CG2	52:Q:136:THR:HG22	2.42	0.49
53:S:10:TYR:CE2	53:S:66:GLN:HB2	2.48	0.49
58:Y:30:MET:O	58:Y:49:ILE:HG22	2.12	0.49
58:Y:47:MET:HE1	58:Y:118:ILE:CG2	2.42	0.49
63:d:22:THR:HG22	63:d:89:SER:CB	2.43	0.49
67:h:14:LYS:O	67:h:18:LEU:HG	2.13	0.49
69:j:14:LYS:HA	79:5:1534:A:C5	2.48	0.49
77:s:77:LYS:C	77:s:79:LEU:H	2.20	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:s:119:CYS:HB2	77:s:183:PHE:CD1	2.46	0.49
77:s:152:ILE:O	77:s:154:ILE:HD12	2.12	0.49
78:t:11:LYS:CE	78:t:35:LEU:HD11	2.41	0.49
78:t:46:ILE:HA	78:t:60:VAL:CG1	2.42	0.49
78:t:91:ASP:CB	78:t:93:LYS:HE2	2.38	0.49
78:t:106:PHE:CZ	78:t:159:ALA:HB2	2.47	0.49
79:5:161:G:H2'	79:5:162:A:C8	2.47	0.49
79:5:2683:C:H2'	79:5:2684:C:C6	2.46	0.49
79:5:2785:C:H1'	79:5:2790:U:O2'	2.11	0.49
79:5:3891:A:H2'	79:5:3892:U:O4'	2.13	0.49
79:5:4208:U:H2'	79:5:4209:G:C8	2.46	0.49
79:5:4239:A:H2'	79:5:4240:G:C8	2.46	0.49
82:1:1392:G:H1'	82:1:1393:U:C6	2.47	0.49
83:PT:41:A:C6	83:PT:42:C:C4	3.01	0.49
83:PT:65:G:C2	83:PT:66:C:C6	3.01	0.49
84:EF:257:MET:O	84:EF:258:LYS:C	2.56	0.49
84:EF:394:LEU:HD23	84:EF:486:THR:CA	2.42	0.49
84:EF:577:VAL:HG11	84:EF:791:ASN:HA	1.94	0.49
84:EF:774:SER:O	84:EF:782:PHE:CD2	2.66	0.49
1:DD:95:GLY:HA2	1:DD:101:GLN:NE2	2.27	0.49
6:QQ:134:GLY:HA3	6:QQ:140:ARG:HA	1.95	0.49
7:RR:28:PHE:HA	7:RR:31:ASN:HD21	1.78	0.49
7:RR:91:LEU:HG	19:AA:14:ASP:OD1	2.12	0.49
9:TT:127:GLY:O	9:TT:131:LEU:HD23	2.13	0.49
11:ZZ:50:PHE:CZ	11:ZZ:58:LEU:HD13	2.48	0.49
15:gg:88:ARG:HD3	15:gg:97:THR:OG1	2.12	0.49
18:9:118:C:H2'	18:9:119:U:O4'	2.12	0.49
18:9:928:G:H21	35:bb:68:GLY:HA2	1.77	0.49
18:9:931:C:H2'	18:9:932:G:C8	2.47	0.49
18:9:959:G:H2'	18:9:960:U:C6	2.48	0.49
18:9:981:A:H2'	18:9:982:G:H8	1.77	0.49
18:9:1174:U:H2'	18:9:1175:G:H8	1.77	0.49
18:9:1196:A:H2'	18:9:1197:G:O4'	2.12	0.49
18:9:1316:C:H2'	18:9:1317:C:C6	2.48	0.49
19:AA:107:THR:O	19:AA:116:PHE:HA	2.12	0.49
19:AA:183:LEU:HB2	19:AA:189:ILE:HD11	1.94	0.49
20:BB:189:ILE:HB	20:BB:190:PRO:HD3	1.93	0.49
23:GG:102:VAL:HG11	23:GG:109:LEU:HD11	1.94	0.49
28:NN:25:TRP:CD2	35:bb:82:LYS:HD3	2.47	0.49
30:VV:19:ALA:HB2	30:VV:68:SER:HB2	1.93	0.49
30:VV:30:ALA:O	30:VV:60:ARG:HD3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:aa:31:PRO:HD2	34:aa:34:LYS:HB3	1.94	0.49
39:C:183:VAL:O	39:C:187:GLN:HG3	2.12	0.49
39:C:190:ARG:O	39:C:195:LYS:HE3	2.12	0.49
39:C:259:LYS:O	39:C:263:LEU:HG	2.13	0.49
40:D:52:ILE:HG12	40:D:147:ASP:HB3	1.94	0.49
40:D:250:ASN:OD1	40:D:252:VAL:HG12	2.13	0.49
42:F:85:GLU:HB2	54:T:135:PRO:CB	2.38	0.49
43:G:114:ILE:HA	43:G:117:GLN:NE2	2.26	0.49
43:G:313:GLU:O	43:G:317:LYS:HG2	2.13	0.49
45:I:116:ARG:HA	79:5:4195:G:N2	2.26	0.49
48:M:62:LEU:HD12	48:M:76:ALA:CB	2.42	0.49
52:Q:50:ARG:NH1	52:Q:140:SER:HB3	2.26	0.49
52:Q:138:LEU:HD13	79:5:1427:A:C2	2.48	0.49
54:T:18:PRO:CB	54:T:21:LYS:HD2	2.41	0.49
55:U:82:TYR:O	55:U:86:LEU:HG	2.12	0.49
56:V:90:ARG:NH1	56:V:123:LYS:HD3	2.27	0.49
56:V:92:ASP:OD1	56:V:94:VAL:HG22	2.12	0.49
57:X:119:ILE:HD13	57:X:140:LEU:HD13	1.93	0.49
77:s:20:LEU:HA	77:s:23:ASP:CB	2.42	0.49
77:s:30:VAL:CG2	77:s:189:ILE:HA	2.43	0.49
78:t:37:LEU:HD12	78:t:42:VAL:HG22	1.93	0.49
78:t:147:HIS:N	78:t:148:PRO:CD	2.74	0.49
79:5:1762:C:N3	79:5:1770:A:H2	2.10	0.49
79:5:2805:C:H2'	79:5:2806:A:C8	2.48	0.49
79:5:4316:G:H2'	79:5:4317:A:H5''	1.95	0.49
79:5:4504:C:H2'	79:5:4505:C:C6	2.47	0.49
82:1:1364:U:OP1	82:1:1367:G:H5''	2.13	0.49
82:1:1368:G:H2'	82:1:1369:A:H5'	1.94	0.49
84:EF:28:VAL:N	84:EF:107:GLY:HA3	2.27	0.49
84:EF:77:LEU:N	84:EF:77:LEU:CD2	2.74	0.49
84:EF:228:PHE:O	84:EF:229:ALA:C	2.55	0.49
84:EF:403:PRO:N	84:EF:410:PHE:HB3	2.28	0.49
84:EF:423:THR:HB	84:EF:462:GLU:CB	2.42	0.49
84:EF:436:PRO:CG	84:EF:492:HIS:CD2	2.96	0.49
84:EF:595:SER:O	84:EF:596:PRO:C	2.51	0.49
84:EF:617:ILE:HG23	84:EF:652:PHE:HZ	1.74	0.49
84:EF:625:ARG:O	84:EF:626:GLN:C	2.55	0.49
84:EF:641:TRP:CZ2	84:EF:649:ILE:HD12	2.47	0.49
84:EF:654:PRO:HD3	84:EF:660:ASN:HB2	1.95	0.49
84:EF:741:MET:HA	84:EF:819:ILE:HG22	1.95	0.49
84:EF:755:VAL:HG11	84:EF:804:THR:O	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:DD:40:ARG:HH12	1:DD:49:ILE:HD12	1.78	0.49
5:PP:85:ILE:HD13	5:PP:107:ILE:HG22	1.94	0.49
6:QQ:10:VAL:HG22	6:QQ:98:LYS:NZ	2.28	0.49
8:SS:70:ILE:HA	8:SS:77:TYR:CD2	2.48	0.49
12:cc:11:LEU:HD23	12:cc:57:THR:HA	1.92	0.49
18:9:34:U:H2'	18:9:35:C:C6	2.47	0.49
18:9:163:U:O3'	23:GG:83:CYS:HA	2.13	0.49
18:9:170:A:H2'	18:9:171:A:C8	2.48	0.49
23:GG:102:VAL:HG13	23:GG:106:LEU:CD1	2.42	0.49
34:aa:22:ARG:NH2	34:aa:27:ALA:HB1	2.27	0.49
37:A:234:LYS:CG	37:A:238:ILE:HD12	2.39	0.49
40:D:3:PHE:HE1	79:5:1754:U:H1'	1.77	0.49
43:G:119:GLN:HG3	49:N:28:TRP:HH2	1.78	0.49
43:G:209:VAL:HG22	43:G:235:CYS:SG	2.53	0.49
43:G:228:ARG:HG2	43:G:283:TYR:CD2	2.47	0.49
46:J:160:GLU:HA	46:J:163:MET:HE3	1.94	0.49
50:O:25:LYS:O	50:O:29:LEU:HG	2.13	0.49
50:O:110:PRO:HA	50:O:113:ASP:OD2	2.13	0.49
55:U:25:CYS:HB2	55:U:28:PRO:CG	2.43	0.49
56:V:112:MET:SD	56:V:117:ILE:HD11	2.53	0.49
63:d:24:GLU:HB3	63:d:85:ARG:NE	2.28	0.49
77:s:24:TYR:HB3	77:s:25:PRO:HD2	1.94	0.49
77:s:78:LEU:HA	77:s:81:HIS:ND1	2.27	0.49
77:s:135:THR:HG22	77:s:138:PHE:HB2	1.95	0.49
77:s:192:VAL:HG23	77:s:199:TYR:HB2	1.93	0.49
78:t:46:ILE:HG13	78:t:71:ILE:HD11	1.94	0.49
79:5:499:G:O2'	79:5:500:G:H5'	2.12	0.49
79:5:689:U:H2'	79:5:690:C:C6	2.47	0.49
79:5:3867:A:H2'	79:5:3868:G:C8	2.47	0.49
79:5:4378:A:O2'	79:5:4379:A:H2'	2.12	0.49
81:8:28:C:H2'	81:8:29:G:C8	2.48	0.49
83:PT:65:G:C6	83:PT:66:C:C5	3.00	0.49
84:EF:66:ARG:NH1	84:EF:552:LEU:HD21	2.28	0.49
84:EF:447:ILE:HG21	84:EF:450:THR:OG1	2.12	0.49
84:EF:641:TRP:CD2	84:EF:701:ARG:CZ	2.96	0.49
84:EF:800:LEU:O	84:EF:801:ARG:C	2.55	0.49
2:FF:51:HIS:HA	2:FF:86:LYS:HE2	1.94	0.49
7:RR:96:ILE:HG12	19:AA:16:LEU:HB2	1.95	0.49
8:SS:46:ARG:CZ	8:SS:46:ARG:HA	2.42	0.49
16:R:25:ASP:HB2	16:R:49:LEU:O	2.13	0.49
18:9:89:C:O2'	18:9:499:G:H5''	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:9:381:C:H5''	25:II:54:LYS:HE3	1.93	0.49
18:9:483:C:H5'	32:XX:48:LYS:HG3	1.95	0.49
18:9:647:U:H2'	18:9:648:A:C8	2.48	0.49
18:9:825:A:H2'	18:9:826:A:C8	2.48	0.49
18:9:1237:C:H2'	18:9:1238:U:O4'	2.12	0.49
18:9:1438:A:H2'	18:9:1439:A:C8	2.48	0.49
18:9:1667:U:H2'	18:9:1668:U:C6	2.48	0.49
20:BB:82:ARG:HD2	20:BB:103:MET:SD	2.52	0.49
29:OO:64:ALA:HB3	29:OO:67:ASP:OD1	2.12	0.49
29:OO:93:LEU:HD11	29:OO:124:MET:HE2	1.93	0.49
31:WW:42:MET:HE2	31:WW:48:GLY:O	2.13	0.49
33:YY:15:ASN:HB2	33:YY:20:ARG:HG2	1.95	0.49
39:C:49:ARG:HD3	79:5:349:A:C8	2.47	0.49
40:D:153:THR:HB	40:D:160:PHE:CZ	2.47	0.49
41:E:171:LEU:CD2	41:E:177:LEU:HB2	2.42	0.49
43:G:264:ASP:OD1	43:G:267:ALA:HB3	2.12	0.49
44:H:174:LYS:HG2	79:5:4477:A:O2'	2.13	0.49
46:J:56:THR:HA	46:J:63:ARG:HA	1.95	0.49
47:L:186:ARG:HB2	47:L:186:ARG:HH11	1.78	0.49
48:M:24:LEU:HD11	48:M:86:TRP:CG	2.48	0.49
65:f:22:ARG:HB3	65:f:24:HIS:NE2	2.28	0.49
68:i:73:ILE:HG22	68:i:83:ALA:HA	1.95	0.49
77:s:112:ARG:HE	77:s:113:ALA:HB2	1.78	0.49
77:s:178:LEU:HD12	77:s:180:ILE:HG12	1.95	0.49
78:t:16:ARG:HB2	78:t:59:THR:CA	2.42	0.49
79:5:1208:G:O2'	79:5:1209:U:H5'	2.13	0.49
79:5:1533:A:H5''	79:5:1637:A:N6	2.27	0.49
79:5:1763:C:N4	79:5:1767:A:OP2	2.46	0.49
79:5:2381:A:H1'	79:5:2383:C:P	2.53	0.49
79:5:2505:C:H1'	79:5:2506:G:C8	2.48	0.49
79:5:4509:U:H2'	79:5:4510:A:H2'	1.95	0.49
79:5:4553:A:H2'	79:5:4554:G:O4'	2.13	0.49
82:1:1429:A:H3'	82:1:1430:G:C8	2.40	0.49
82:1:1450:C:C4	82:1:1451:C:C4	3.01	0.49
84:EF:39:LEU:HD23	84:EF:77:LEU:HD12	1.95	0.49
84:EF:115:VAL:HG13	84:EF:142:VAL:CG2	2.40	0.49
84:EF:332:GLY:O	84:EF:333:LYS:CB	2.60	0.49
15:gg:296:GLN:NE2	15:gg:312:VAL:HB	2.28	0.49
18:9:642:U:P	26:JJ:39:ASN:HB2	2.53	0.49
18:9:953:C:H5''	20:BB:24:PRO:CG	2.43	0.49
18:9:1803:U:H2'	18:9:1804:U:C6	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AA:66:VAL:HG21	19:AA:185:MET:CB	2.41	0.49
22:EE:42:LEU:HD12	22:EE:109:PHE:CD2	2.47	0.49
22:EE:126:VAL:HG22	22:EE:158:ASP:O	2.13	0.49
25:II:27:TYR:HB3	25:II:49:ARG:NH1	2.28	0.49
26:JJ:28:GLU:HB3	26:JJ:40:LYS:HE3	1.94	0.49
27:LL:80:MET:HE1	27:LL:121:GLN:HA	1.95	0.49
27:LL:111:VAL:HG11	27:LL:128:VAL:CG1	2.42	0.49
28:NN:26:LEU:CD1	28:NN:28:LEU:HD13	2.42	0.49
29:OO:142:ARG:HB3	34:aa:22:ARG:CZ	2.42	0.49
33:YY:29:HIS:HB2	33:YY:32:LYS:HD3	1.95	0.49
34:aa:9:GLY:O	34:aa:34:LYS:HD2	2.13	0.49
36:ee:101:ARG:HH21	36:ee:105:ALA:HB1	1.77	0.49
40:D:208:MET:HG3	40:D:219:TYR:CE1	2.46	0.49
41:E:289:LEU:HD12	48:M:109:ARG:CZ	2.43	0.49
43:G:127:LEU:O	43:G:292:GLY:HA3	2.13	0.49
46:J:19:LYS:HB3	46:J:75:ARG:CZ	2.43	0.49
51:P:27:LYS:HD2	79:5:2361:G:C8	2.48	0.49
51:P:126:ARG:HB3	51:P:140:MET:HG2	1.94	0.49
59:Z:113:GLU:O	59:Z:117:LYS:HG2	2.13	0.49
65:f:94:ALA:HB3	79:5:1308:C:O2	2.13	0.49
68:i:73:ILE:O	68:i:77:VAL:HG12	2.13	0.49
77:s:106:LYS:O	77:s:107:VAL:C	2.56	0.49
77:s:146:LYS:HB2	77:s:155:LEU:CD1	2.37	0.49
78:t:104:ILE:O	78:t:143:VAL:HG13	2.13	0.49
78:t:130:LYS:HZ1	78:t:151:ILE:CA	2.20	0.49
79:5:158:A:H5'	79:5:159:C:H6	1.77	0.49
79:5:429:A:H2'	79:5:430:G:H8	1.78	0.49
79:5:951:G:H2'	79:5:952:G:C8	2.45	0.49
79:5:1531:U:H2'	79:5:1532:G:C8	2.47	0.49
79:5:1762:C:C4	79:5:1763:C:N4	2.81	0.49
79:5:2283:G:H2'	79:5:2284:G:C8	2.48	0.49
79:5:3717:A:H2'	79:5:3718:A:H8	1.77	0.49
79:5:3762:U:O2'	84:EF:844:LEU:HD13	2.13	0.49
79:5:4330:G:H2'	79:5:4331:G:C8	2.48	0.49
79:5:4418:G:O6	79:5:4421:C:H2'	2.13	0.49
80:7:5:A:H2'	80:7:6:C:C6	2.48	0.49
81:8:19:C:H2'	81:8:20:A:C8	2.47	0.49
82:1:1441:A:O2'	82:1:1442:G:H5'	2.13	0.49
84:EF:26:ALA:HB1	84:EF:30:HIS:CD2	2.48	0.49
84:EF:91:GLN:CD	84:EF:98:PHE:CZ	2.91	0.49
84:EF:244:LEU:HD12	84:EF:245:GLY:N	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:MM:64:LEU:CD2	14:ff:108:VAL:HB	2.41	0.49
5:PP:15:PHE:HE2	5:PP:17:TYR:HB2	1.78	0.49
6:QQ:32:ILE:HD11	6:QQ:63:PHE:CD1	2.48	0.49
6:QQ:38:PRO:HG2	6:QQ:41:MET:SD	2.53	0.49
16:R:147:ALA:O	16:R:151:ARG:HG3	2.13	0.49
18:9:483:C:H2'	18:9:484:A:O4'	2.13	0.49
18:9:666:U:H2'	18:9:667:U:C6	2.48	0.49
18:9:1010:G:H2'	18:9:1011:A:C8	2.47	0.49
18:9:1220:A:H2'	18:9:1221:G:O4'	2.12	0.49
18:9:1637:A:H4'	18:9:1638:G:O5'	2.11	0.49
18:9:1859:A:H2'	18:9:1860:A:C8	2.48	0.49
19:AA:74:VAL:O	19:AA:96:ALA:HB1	2.13	0.49
20:BB:36:PRO:HG3	20:BB:38:MET:HE2	1.94	0.49
21:CC:102:LEU:CD1	21:CC:130:ILE:HG12	2.43	0.49
22:EE:31:PRO:HD2	22:EE:38:LEU:CD1	2.42	0.49
23:GG:121:ILE:HG13	23:GG:123:GLY:H	1.77	0.49
23:GG:122:PRO:HA	23:GG:126:ASP:CB	2.42	0.49
24:HH:51:ILE:HD11	24:HH:176:VAL:HG22	1.94	0.49
24:HH:101:LEU:HD13	24:HH:120:ARG:CG	2.41	0.49
28:NN:38:TYR:CZ	28:NN:78:LYS:HG3	2.48	0.49
37:A:196:TRP:HB3	37:A:197:PRO:HD3	1.93	0.49
39:C:113:ARG:HG3	79:5:1508:A:OP1	2.13	0.49
39:C:169:LEU:HD11	39:C:173:LYS:HE2	1.95	0.49
40:D:211:LEU:HD12	40:D:223:PHE:HE2	1.78	0.49
40:D:272:SER:O	40:D:276:LYS:HG3	2.12	0.49
40:D:273:LEU:HB2	80:7:108:G:OP1	2.13	0.49
41:E:121:THR:HA	64:e:90:MET:HE2	1.95	0.49
43:G:250:LYS:HB3	79:5:6:C:H5''	1.95	0.49
48:M:82:ILE:HD13	48:M:85:LYS:NZ	2.27	0.49
49:N:8:GLN:HB2	49:N:46:ASP:OD2	2.12	0.49
51:P:17:SER:OG	51:P:98:ALA:HB2	2.13	0.49
52:Q:23:ILE:HG22	76:r:8:MET:HB3	1.95	0.49
70:k:36:VAL:O	70:k:42:LEU:HD12	2.12	0.49
76:r:6:GLN:O	76:r:10:VAL:HG23	2.12	0.49
76:r:97:ILE:HB	76:r:107:ARG:HG3	1.95	0.49
78:t:56:LEU:HD21	78:t:83:LYS:N	2.27	0.49
78:t:106:PHE:CE1	78:t:109:ILE:HG21	2.48	0.49
78:t:138:SER:C	78:t:140:GLY:N	2.69	0.49
79:5:153:G:H2'	79:5:154:G:C8	2.47	0.49
79:5:419:A:H2'	79:5:420:A:C8	2.47	0.49
79:5:963:G:H2'	79:5:964:A:C8	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:1499:C:H2'	79:5:1500:A:O4'	2.13	0.49
79:5:1864:G:H2'	79:5:1865:G:O4'	2.13	0.49
79:5:2092:G:C5	79:5:2097:U:H5	2.30	0.49
79:5:2328:G:H2'	79:5:2329:U:C6	2.48	0.49
79:5:2539:C:H2'	79:5:2540:C:C6	2.48	0.49
79:5:2717:G:H2'	79:5:2718:U:O4'	2.13	0.49
79:5:2758:G:H2'	79:5:2759:G:C4	2.48	0.49
79:5:3896:C:H2'	79:5:3897:G:C4	2.47	0.49
79:5:4201:G:O2'	79:5:4202:U:H5'	2.13	0.49
82:1:1366:G:O6	82:1:1481:G:N1	2.46	0.49
82:1:1378:A:C2	82:1:1379:U:H2'	2.48	0.49
82:1:1390:A:OP2	82:1:1393:U:H1'	2.13	0.49
83:PT:37:A:C5	83:PT:38:U:C4	3.01	0.49
84:EF:15:LYS:HB2	84:EF:19:ILE:HD11	1.95	0.49
84:EF:161:ASP:HB3	84:EF:219:HIS:CD2	2.48	0.49
84:EF:472:LEU:HD12	84:EF:472:LEU:N	2.28	0.49
84:EF:581:GLU:HG3	84:EF:695:GLU:HB2	1.94	0.49
2:FF:76:MET:HA	2:FF:76:MET:HE3	1.95	0.48
2:FF:85:LYS:O	2:FF:89:THR:HG22	2.13	0.48
3:KK:77:GLN:O	3:KK:80:ARG:HG2	2.13	0.48
5:PP:17:TYR:HB3	5:PP:25:LEU:HD11	1.95	0.48
5:PP:49:LEU:HD12	5:PP:53:GLN:NE2	2.28	0.48
7:RR:49:LYS:HE3	18:9:1454:A:P	2.52	0.48
7:RR:109:LEU:HD22	7:RR:110:ASP:H	1.78	0.48
13:dd:33:LYS:HE2	13:dd:34:TYR:CZ	2.48	0.48
15:gg:107:ASP:HB2	15:gg:125:ARG:HD2	1.95	0.48
16:R:99:MET:HG3	16:R:103:ARG:CZ	2.43	0.48
18:9:96:C:H2'	18:9:97:U:C6	2.48	0.48
18:9:108:G:H1'	18:9:853:C:H41	1.78	0.48
18:9:514:U:H2'	18:9:515:G:O4'	2.13	0.48
18:9:615:C:H2'	18:9:616:A:O4'	2.13	0.48
18:9:668:A:H5''	18:9:1198:G:C4'	2.43	0.48
18:9:931:C:H5''	20:BB:157:GLN:HE21	1.77	0.48
18:9:1010:G:H2'	18:9:1011:A:H8	1.77	0.48
18:9:1547:C:N3	18:9:1656:G:H1'	2.28	0.48
18:9:1565:C:H2'	18:9:1566:G:C8	2.48	0.48
19:AA:108:PHE:CE2	19:AA:122:LEU:HD21	2.48	0.48
20:BB:138:PHE:O	20:BB:213:ARG:HG3	2.12	0.48
25:II:76:THR:HG21	25:II:104:ILE:HB	1.94	0.48
29:OO:72:TYR:O	29:OO:76:LEU:HG	2.13	0.48
29:OO:146:ARG:HG2	34:aa:29:CYS:SG	2.52	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XX:17:ARG:HA	32:XX:17:ARG:NH1	2.28	0.48
38:B:163:LEU:CD2	38:B:182:GLU:HG2	2.43	0.48
39:C:302:LEU:HD22	52:Q:38:ARG:CB	2.41	0.48
39:C:321:ASN:OD1	39:C:324:ILE:HG12	2.13	0.48
40:D:216:GLU:CG	40:D:220:LYS:HE3	2.39	0.48
41:E:128:LEU:HD12	79:5:957:G:N3	2.27	0.48
41:E:158:GLY:O	41:E:161:ARG:HG3	2.13	0.48
42:F:153:ILE:CG2	42:F:186:MET:HE3	2.43	0.48
43:G:192:GLY:HA3	79:5:151:G:O6	2.12	0.48
46:J:23:ASN:OD1	46:J:129:ASP:HB3	2.13	0.48
48:M:97:ALA:CB	50:O:203:VAL:HB	2.40	0.48
50:O:181:ALA:O	50:O:185:VAL:HG23	2.12	0.48
52:Q:15:ARG:NH2	52:Q:54:SER:HB3	2.28	0.48
52:Q:60:PRO:HG3	79:5:1353:G:N2	2.26	0.48
57:X:77:ILE:HD12	57:X:116:LEU:HD12	1.95	0.48
64:e:47:ARG:HG3	64:e:49:PHE:CD2	2.47	0.48
65:f:76:ARG:HG3	65:f:85:ARG:HD2	1.93	0.48
66:g:6:THR:HG22	79:5:2400:G:H21	1.78	0.48
77:s:50:LYS:CD	77:s:102:LEU:HD21	2.43	0.48
77:s:122:THR:HA	77:s:159:GLN:HA	1.93	0.48
77:s:133:GLU:HB3	77:s:138:PHE:HE2	1.78	0.48
78:t:123:ARG:HH12	79:5:1996:C:C5'	2.25	0.48
78:t:126:SER:OG	78:t:130:LYS:HG3	2.13	0.48
79:5:221:C:H2'	79:5:222:C:C6	2.47	0.48
79:5:440:U:H2'	79:5:441:G:C8	2.48	0.48
79:5:650:C:H2'	79:5:651:C:C6	2.48	0.48
79:5:2083:C:OP1	79:5:2084:C:H5''	2.12	0.48
79:5:2528:G:H4'	79:5:2783:A:H4'	1.95	0.48
79:5:2779:C:H2'	79:5:2780:C:C6	2.48	0.48
79:5:2842:G:H2'	79:5:2843:U:C6	2.48	0.48
79:5:3922:G:H2'	79:5:4542:U:O4	2.13	0.48
79:5:4188:U:H2'	79:5:4189:U:C6	2.46	0.48
79:5:5061:A:H3'	79:5:5062:G:H5'	1.94	0.48
81:8:113:C:H3'	81:8:114:G:H5''	1.95	0.48
82:1:1339:U:H5'	82:1:1344:G:O3'	2.12	0.48
82:1:1391:G:H5'	82:1:1392:G:H21	1.78	0.48
82:1:1457:G:H2'	82:1:1458:C:C5	2.46	0.48
84:EF:451:ILE:CG1	84:EF:452:LEU:N	2.75	0.48
6:QQ:138:ARG:CG	18:9:1649:U:H4'	2.43	0.48
7:RR:27:ASP:OD2	7:RR:30:THR:HG23	2.12	0.48
9:TT:34:VAL:HG13	9:TT:52:TRP:CZ2	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:TT:98:SER:O	9:TT:102:ARG:HD3	2.13	0.48
15:gg:87:LEU:CD2	15:gg:108:VAL:HG11	2.43	0.48
18:9:13:C:H5''	21:CC:232:THR:HG21	1.96	0.48
18:9:379:C:H5''	25:II:56:ARG:HH21	1.78	0.48
18:9:530:U:H2'	18:9:531:A:C8	2.48	0.48
18:9:637:U:OP1	36:ee:97:LYS:HE2	2.14	0.48
18:9:809:A:H2'	18:9:810:A:O4'	2.12	0.48
18:9:1265:A:H4'	18:9:1327:G:P	2.53	0.48
22:EE:246:LEU:CD1	22:EE:251:GLU:HB2	2.43	0.48
24:HH:82:GLU:HG3	24:HH:85:LYS:HE2	1.95	0.48
24:HH:130:LEU:HD21	24:HH:156:VAL:HG21	1.94	0.48
30:VV:38:GLU:HG2	30:VV:49:GLN:NE2	2.26	0.48
33:YY:12:PHE:CE1	33:YY:21:LYS:HB3	2.48	0.48
38:B:30:LYS:HB2	79:5:4715:C:OP1	2.12	0.48
39:C:289:LEU:HG	76:r:4:HIS:CD2	2.48	0.48
40:D:22:ARG:HB3	40:D:28:THR:HB	1.95	0.48
47:L:24:THR:HB	47:L:26:PHE:CD2	2.48	0.48
47:L:77:SER:O	47:L:81:LEU:HG	2.12	0.48
47:L:169:ILE:CD1	60:a:142:GLY:HA2	2.42	0.48
49:N:6:TYR:CZ	68:i:40:VAL:HG22	2.48	0.48
52:Q:66:MET:O	52:Q:70:MET:HG2	2.14	0.48
55:U:44:GLN:HA	55:U:56:LEU:HD21	1.95	0.48
56:V:18:LEU:HD13	56:V:54:ALA:CB	2.42	0.48
60:a:60:HIS:O	79:5:88:A:H5'	2.13	0.48
67:h:42:SER:HA	81:8:78:G:O2'	2.13	0.48
72:m:85:ARG:HD3	79:5:4699:U:OP2	2.13	0.48
76:r:63:VAL:CG1	76:r:77:TYR:HB3	2.43	0.48
77:s:52:VAL:N	77:s:89:VAL:CG1	2.75	0.48
77:s:148:SER:HB3	77:s:151:THR:O	2.12	0.48
77:s:191:GLN:C	77:s:192:VAL:CG2	2.85	0.48
78:t:50:THR:HG22	78:t:58:ILE:HB	1.95	0.48
78:t:106:PHE:HA	78:t:109:ILE:CB	2.43	0.48
78:t:146:ARG:CB	78:t:148:PRO:HG2	2.41	0.48
79:5:70:A:H4'	79:5:71:C:N1	2.28	0.48
79:5:710:G:H2'	79:5:711:A:H8	1.78	0.48
79:5:1475:G:H2'	79:5:1476:C:C6	2.48	0.48
79:5:1942:A:N6	79:5:2039:G:H2'	2.28	0.48
79:5:4070:U:H2'	79:5:4071:U:C6	2.48	0.48
79:5:4383:U:H2'	79:5:4384:U:C6	2.48	0.48
79:5:4387:C:O2'	79:5:4388:A:H5'	2.13	0.48
82:1:1379:U:O3'	82:1:1380:G:C8	2.66	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:1:1430:G:H2'	82:1:1431:G:H8	1.78	0.48
82:1:1431:G:H8	82:1:1431:G:O5'	1.96	0.48
82:1:1453:C:H2'	82:1:1454:A:C6	2.48	0.48
83:PT:7:G:C6	83:PT:67:A:C6	3.01	0.48
84:EF:20:ARG:NH2	84:EF:79:TYR:OH	2.46	0.48
84:EF:78:PHE:CG	84:EF:79:TYR:N	2.80	0.48
84:EF:126:LEU:HD21	84:EF:156:MET:HG3	1.94	0.48
84:EF:303:ALA:HB2	84:EF:315:LEU:HD11	1.95	0.48
84:EF:536:CYS:SG	84:EF:546:ILE:HD12	2.53	0.48
6:QQ:55:VAL:HA	6:QQ:63:PHE:CE2	2.48	0.48
7:RR:126:MET:HA	19:AA:41:ARG:HD3	1.96	0.48
8:SS:20:ILE:CG2	8:SS:29:ALA:HB1	2.44	0.48
8:SS:36:VAL:HG23	8:SS:40:TYR:HD2	1.79	0.48
12:cc:9:ILE:HG21	12:cc:57:THR:HG22	1.95	0.48
15:gg:133:ASN:HD21	15:gg:139:LYS:HD3	1.78	0.48
15:gg:251:ALA:HB2	15:gg:289:LEU:HD22	1.94	0.48
18:9:162:C:H2'	18:9:163:U:O4'	2.12	0.48
18:9:845:G:H2'	18:9:846:G:O4'	2.13	0.48
18:9:1139:C:H3'	18:9:1140:G:C8	2.47	0.48
18:9:1390:U:H2'	18:9:1391:C:C6	2.48	0.48
18:9:1401:A:H2'	18:9:1402:A:C5	2.48	0.48
18:9:1860:A:OP1	34:aa:8:ASN:HB2	2.14	0.48
19:AA:42:LYS:HG3	19:AA:48:ILE:CD1	2.43	0.48
21:CC:209:VAL:HG21	21:CC:233:LEU:CD1	2.44	0.48
22:EE:62:LYS:HD2	22:EE:65:CYS:SG	2.52	0.48
24:HH:39:GLN:O	24:HH:43:LEU:HD13	2.13	0.48
26:JJ:61:LEU:HD12	26:JJ:94:LEU:HD12	1.95	0.48
33:YY:5:VAL:HG11	33:YY:35:VAL:HG11	1.95	0.48
35:bb:36:LYS:HD3	35:bb:43:ILE:CD1	2.43	0.48
42:F:165:ARG:HD2	42:F:208:TRP:NE1	2.28	0.48
45:I:26:VAL:HG22	45:I:122:PRO:CB	2.44	0.48
49:N:104:GLU:HG2	49:N:161:MET:SD	2.53	0.48
49:N:154:PRO:CA	49:N:157:LYS:HE3	2.41	0.48
50:O:114:LYS:HG2	79:5:4758:U:C5	2.48	0.48
51:P:108:ASP:O	51:P:112:LEU:HG	2.13	0.48
59:Z:24:VAL:HG21	59:Z:87:VAL:HB	1.95	0.48
60:a:21:ARG:HH21	79:5:1317:U:H5''	1.79	0.48
60:a:71:PRO:HD2	60:a:109:TYR:CD2	2.49	0.48
62:c:26:LYS:HD3	62:c:98:ASP:OD2	2.14	0.48
67:h:66:LYS:O	67:h:70:ARG:HG2	2.13	0.48
70:k:23:VAL:CG1	70:k:66:VAL:HG22	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:k:36:VAL:CG1	70:k:43:TYR:HB2	2.43	0.48
71:l:18:LYS:O	71:l:21:ARG:HG2	2.14	0.48
76:r:18:ILE:HD11	76:r:20:ARG:NE	2.28	0.48
77:s:26:LYS:HG3	77:s:194:ASP:OD1	2.13	0.48
77:s:79:LEU:O	77:s:82:ILE:HG12	2.12	0.48
78:t:106:PHE:CA	78:t:109:ILE:HB	2.43	0.48
79:5:2306:G:H1'	79:5:2332:A:H61	1.79	0.48
79:5:3796:U:H2'	79:5:3797:C:C6	2.47	0.48
79:5:3920:U:H1'	79:5:4544:A:N3	2.29	0.48
79:5:4088:C:H2'	79:5:4089:G:H8	1.79	0.48
80:7:108:G:H2'	80:7:109:U:C6	2.48	0.48
82:1:1411:A:C6	82:1:1419:G:C6	3.01	0.48
82:1:1474:G:H3'	82:1:1475:C:C5	2.48	0.48
84:EF:20:ARG:NH2	84:EF:355:THR:HA	2.28	0.48
84:EF:537:ILE:HD11	84:EF:545:ILE:HB	1.94	0.48
84:EF:586:GLU:HA	84:EF:608:PRO:HD3	1.93	0.48
84:EF:623:SER:HA	84:EF:652:PHE:CD2	2.48	0.48
84:EF:722:ILE:HB	84:EF:723:PRO:HD3	1.95	0.48
84:EF:752:PRO:HG2	84:EF:755:VAL:CG1	2.42	0.48
1:DD:8:LYS:CE	10:UU:59:LYS:HD3	2.41	0.48
6:QQ:16:LYS:HG2	6:QQ:82:TYR:HB2	1.96	0.48
7:RR:61:ILE:HG23	7:RR:74:GLN:NE2	2.28	0.48
7:RR:96:ILE:HB	19:AA:12:GLU:CA	2.43	0.48
7:RR:105:MET:CG	19:AA:52:LYS:HE2	2.43	0.48
18:9:1067:C:H2'	18:9:1068:G:O4'	2.13	0.48
18:9:1361:G:H1'	18:9:1379:A:N7	2.28	0.48
18:9:1383:A:H2'	18:9:1384:C:C6	2.48	0.48
20:BB:27:LYS:HA	20:BB:51:ARG:NH1	2.29	0.48
20:BB:71:LEU:HD12	20:BB:82:ARG:CB	2.43	0.48
25:II:83:TYR:HB3	25:II:101:ILE:HB	1.94	0.48
34:aa:67:LEU:HG	34:aa:69:VAL:HG23	1.95	0.48
38:B:116:ARG:O	38:B:177:LYS:HE2	2.13	0.48
38:B:276:HIS:HB3	79:5:4717:A:OP1	2.13	0.48
40:D:163:LEU:HD11	40:D:173:ILE:HG21	1.96	0.48
41:E:160:HIS:HB3	41:E:163:LYS:CD	2.39	0.48
43:G:283:TYR:CE2	43:G:287:ARG:HD2	2.49	0.48
46:J:18:ARG:HG3	46:J:135:GLY:HA3	1.94	0.48
46:J:31:ASP:HA	46:J:34:THR:HG22	1.94	0.48
48:M:129:LYS:HA	48:M:132:ARG:HG2	1.96	0.48
49:N:6:TYR:CE2	68:i:40:VAL:HG13	2.48	0.48
49:N:172:ARG:HD2	79:5:29:G:H5''	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:T:17:ARG:HB2	54:T:22:HIS:CE1	2.48	0.48
57:X:106:LYS:HG3	79:5:2779:C:OP1	2.12	0.48
58:Y:22:PRO:O	58:Y:26:ARG:HG3	2.13	0.48
59:Z:89:ILE:HD11	59:Z:117:LYS:HB3	1.95	0.48
59:Z:115:LYS:NZ	79:5:2573:A:H4'	2.28	0.48
60:a:86:THR:HG22	79:5:510:U:C5'	2.43	0.48
64:e:76:LYS:HD2	64:e:98:GLU:OE1	2.14	0.48
71:l:38:ASN:HB3	71:l:41:ARG:HG3	1.95	0.48
73:n:14:LYS:O	73:n:18:ARG:HG3	2.14	0.48
74:o:98:LYS:HE2	79:5:4233:A:H4'	1.95	0.48
77:s:99:ARG:HH12	77:s:103:LEU:CB	2.27	0.48
77:s:107:VAL:O	77:s:184:SER:HB2	2.13	0.48
78:t:134:GLY:N	78:t:147:HIS:CD2	2.81	0.48
78:t:151:ILE:O	78:t:155:ILE:HG13	2.13	0.48
79:5:309:C:H5''	79:5:310:G:H5'	1.94	0.48
79:5:1550:G:O6	79:5:1578:U:O4	2.32	0.48
79:5:1554:A:H61	79:5:1573:G:H1'	1.78	0.48
79:5:1565:A:C5	79:5:1566:C:H1'	2.47	0.48
79:5:1688:G:H2'	79:5:1689:G:C8	2.47	0.48
79:5:1760:G:H2'	79:5:1761:G:C8	2.48	0.48
79:5:2362:U:H2'	79:5:2363:A:H8	1.79	0.48
79:5:2631:U:H5''	79:5:2632:U:H5'	1.95	0.48
79:5:4474:A:H2'	79:5:4476:C:O5'	2.13	0.48
81:8:145:C:H2'	81:8:146:U:C6	2.49	0.48
81:8:155:C:H2'	81:8:156:U:C6	2.48	0.48
82:1:1413:U:H2'	82:1:1414:U:C6	2.48	0.48
83:PT:8:U:C5	83:PT:13:C:C5	3.01	0.48
83:PT:65:G:C6	83:PT:66:C:C4	3.00	0.48
84:EF:303:ALA:CB	84:EF:315:LEU:HD11	2.43	0.48
84:EF:451:ILE:HG23	84:EF:471:GLY:CA	2.44	0.48
84:EF:512:LYS:CE	84:EF:571:LYS:HB2	2.44	0.48
84:EF:558:LEU:CD1	84:EF:572:LYS:HE2	2.43	0.48
6:QQ:138:ARG:HG2	18:9:1649:U:H4'	1.96	0.48
9:TT:43:LYS:HA	9:TT:43:LYS:HE2	1.96	0.48
19:AA:148:CYS:O	19:AA:162:PRO:HA	2.13	0.48
22:EE:11:ARG:HB2	22:EE:27:PHE:O	2.13	0.48
24:HH:147:LYS:HD2	24:HH:151:SER:OG	2.13	0.48
25:II:79:ILE:HG22	25:II:103:LEU:O	2.13	0.48
26:JJ:125:HIS:O	26:JJ:129:LEU:HG	2.13	0.48
33:YY:7:ILE:CD1	33:YY:43:LYS:HD3	2.41	0.48
38:B:40:PRO:O	38:B:187:GLY:HA2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:B:168:MET:HE2	38:B:175:GLN:CG	2.44	0.48
38:B:231:VAL:HG21	38:B:251:VAL:CG2	2.43	0.48
40:D:175:HIS:HA	79:5:4323:A:O2'	2.13	0.48
42:F:165:ARG:O	79:5:2275:G:H4'	2.12	0.48
43:G:130:PRO:HA	43:G:290:TRP:CE3	2.48	0.48
45:I:97:ILE:HD13	45:I:126:VAL:CG1	2.43	0.48
47:L:163:LYS:HE2	79:5:509:A:H5'	1.96	0.48
48:M:108:ASP:HB3	50:O:199:HIS:CD2	2.48	0.48
49:N:98:LEU:HD12	49:N:128:LYS:CE	2.43	0.48
52:Q:50:ARG:CB	52:Q:83:VAL:HG21	2.44	0.48
64:e:31:ILE:HD11	79:5:2347:A:C4	2.49	0.48
69:j:31:LYS:O	69:j:33:THR:HG23	2.14	0.48
69:j:64:MET:SD	69:j:67:LEU:HD23	2.53	0.48
70:k:60:LEU:CD1	70:k:61:PRO:HD2	2.40	0.48
77:s:50:LYS:CE	77:s:98:ILE:HA	2.43	0.48
77:s:51:ALA:HB1	77:s:91:THR:HB	1.90	0.48
77:s:57:LYS:CB	77:s:60:MET:CB	2.75	0.48
79:5:451:C:O2'	79:5:1293:G:H2'	2.12	0.48
79:5:941:C:O2'	79:5:942:G:H5'	2.12	0.48
79:5:1323:A:H61	79:5:3875:G:H21	1.60	0.48
79:5:1427:A:H4'	79:5:1694:C:H5'	1.95	0.48
79:5:1597:G:O6	79:5:1600:A:H5'	2.13	0.48
79:5:1679:A:O2'	79:5:1680:G:H5'	2.13	0.48
79:5:1771:U:C4	79:5:1772:C:C4	3.01	0.48
79:5:1878:G:H2'	79:5:1879:C:C6	2.49	0.48
79:5:2897:G:H2'	79:5:2898:G:C8	2.49	0.48
79:5:4258:C:H2'	79:5:4259:C:C6	2.49	0.48
79:5:4405:G:C2	79:5:4440:G:H1'	2.49	0.48
79:5:4564:A:H2'	79:5:4565:C:C6	2.49	0.48
80:7:68:C:H2'	80:7:69:U:C6	2.49	0.48
82:1:1426:C:H42	82:1:1442:G:H1	1.59	0.48
83:PT:41:A:N6	83:PT:42:C:C4	2.82	0.48
83:PT:54:U:C4	83:PT:55:U:C4	3.01	0.48
84:EF:22:MET:HE2	84:EF:100:ILE:HD13	1.95	0.48
84:EF:292:LEU:O	84:EF:293:ILE:C	2.56	0.48
84:EF:527:LEU:HD22	84:EF:565:HIS:ND1	2.27	0.48
84:EF:614:ALA:HA	84:EF:617:ILE:HD12	1.94	0.48
84:EF:616:ASP:HA	84:EF:619:LYS:HB2	1.95	0.48
84:EF:712:ASP:CG	84:EF:714:ILE:HG22	2.39	0.48
1:DD:105:LEU:HD23	1:DD:184:ILE:HG21	1.95	0.48
2:FF:39:ILE:HG23	2:FF:68:ILE:HD13	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:FF:60:ARG:HA	18:9:1679:A:C2	2.48	0.48
12:cc:28:THR:O	12:cc:30:VAL:HG23	2.13	0.48
15:gg:199:THR:HG23	15:gg:241:PHE:CE2	2.49	0.48
18:9:112:U:H2'	18:9:115:U:C5	2.48	0.48
18:9:305:U:H4'	25:II:41:ARG:CZ	2.43	0.48
18:9:561:A:H2'	18:9:562:U:C6	2.48	0.48
18:9:619:A:N1	32:XX:113:GLY:HA3	2.28	0.48
18:9:910:G:H2'	18:9:911:C:C6	2.49	0.48
18:9:959:G:H1	29:OO:65:ASP:HB3	1.78	0.48
18:9:1009:A:O2'	28:NN:114:ARG:HG3	2.14	0.48
18:9:1039:C:H2'	18:9:1040:G:H8	1.79	0.48
19:AA:49:ILE:CG2	19:AA:162:PRO:HB2	2.42	0.48
19:AA:173:LEU:HD13	19:AA:177:MET:HG3	1.95	0.48
22:EE:86:PHE:CD2	22:EE:87:MET:HG2	2.48	0.48
22:EE:195:ILE:HG23	22:EE:208:VAL:CG1	2.44	0.48
32:XX:40:PRO:CB	32:XX:81:ILE:HD11	2.42	0.48
38:B:275:HIS:HB3	38:B:277:ARG:NH1	2.28	0.48
39:C:114:ARG:O	79:5:1507:C:H4'	2.14	0.48
39:C:315:LYS:HD2	42:F:167:ALA:CB	2.43	0.48
40:D:193:GLU:OE2	40:D:197:LYS:HE2	2.13	0.48
42:F:29:ILE:HG22	42:F:33:ARG:HE	1.77	0.48
45:I:60:LEU:HD11	45:I:135:ILE:HD13	1.95	0.48
45:I:75:TYR:HD2	45:I:151:ALA:HB2	1.78	0.48
45:I:95:HIS:CD2	45:I:128:ARG:HD2	2.48	0.48
50:O:55:LEU:O	50:O:59:ARG:HG3	2.14	0.48
50:O:168:TYR:O	50:O:172:LYS:HG3	2.13	0.48
51:P:60:PHE:HE2	51:P:82:ARG:HD2	1.78	0.48
52:Q:78:LYS:HD2	52:Q:135:GLY:HA2	1.95	0.48
53:S:7:LEU:O	53:S:103:ALA:HB1	2.14	0.48
54:T:115:LYS:HA	54:T:118:GLU:HG3	1.94	0.48
54:T:159:MET:HE2	54:T:159:MET:HA	1.95	0.48
57:X:95:THR:HG22	57:X:139:ARG:CA	2.42	0.48
60:a:70:CYS:HA	60:a:109:TYR:HD2	1.77	0.48
63:d:20:VAL:HA	63:d:90:ARG:O	2.14	0.48
66:g:5:LEU:HD21	66:g:22:LEU:CD1	2.44	0.48
67:h:88:THR:HB	81:8:35:C:OP1	2.14	0.48
70:k:9:LYS:O	70:k:13:LEU:HG	2.13	0.48
77:s:26:LYS:HG3	77:s:27:CYS:N	2.29	0.48
77:s:77:LYS:HZ3	77:s:78:LEU:CA	2.25	0.48
77:s:116:ILE:HG22	77:s:166:LYS:NZ	2.29	0.48
77:s:123:VAL:CG1	77:s:143:ILE:HG21	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:s:134:LYS:C	77:s:136:SER:H	2.20	0.48
77:s:143:ILE:HG22	77:s:145:THR:HG23	1.93	0.48
77:s:173:THR:CA	77:s:176:ASN:HD21	2.22	0.48
78:t:14:TYR:HA	78:t:61:LYS:HA	1.94	0.48
78:t:16:ARG:HD3	78:t:57:ARG:HB3	1.92	0.48
78:t:42:VAL:HG13	78:t:62:LEU:HD22	1.95	0.48
78:t:77:ALA:HA	78:t:80:LEU:CD1	2.42	0.48
78:t:104:ILE:N	78:t:141:CYS:HB3	2.29	0.48
78:t:140:GLY:O	78:t:141:CYS:HB2	2.14	0.48
79:5:158:A:H5''	79:5:159:C:C6	2.49	0.48
79:5:1452:A:H3'	79:5:1453:G:H8	1.78	0.48
79:5:1528:U:H2'	79:5:1529:G:C8	2.49	0.48
79:5:1557:C:H2'	79:5:1558:A:C8	2.48	0.48
79:5:1669:A:H1'	79:5:1852:U:O2'	2.13	0.48
79:5:1855:G:H2'	79:5:1856:C:C6	2.47	0.48
79:5:1921:C:H4'	79:5:1922:G:OP2	2.14	0.48
79:5:1977:C:N3	79:5:1990:A:N6	2.61	0.48
79:5:2465:C:H2'	79:5:2466:G:O4'	2.13	0.48
79:5:4705:A:H2'	79:5:4706:G:O4'	2.14	0.48
79:5:4884:G:H2'	79:5:4885:U:C6	2.49	0.48
82:1:1366:G:N1	82:1:1453:C:O2	2.46	0.48
82:1:1394:A:C2'	82:1:1395:A:H8	2.26	0.48
82:1:1412:U:H2'	82:1:1413:U:O4'	2.13	0.48
82:1:1493:G:H3'	82:1:1494:C:O4'	2.14	0.48
83:PT:51:G:C4	83:PT:64:G:C2	3.01	0.48
84:EF:89:ILE:CG2	84:EF:356:ILE:HD13	2.44	0.48
84:EF:223:PHE:HB3	84:EF:344:LEU:CD2	2.44	0.48
84:EF:300:VAL:HG22	84:EF:315:LEU:HD22	1.95	0.48
84:EF:509:VAL:CG1	84:EF:570:ILE:HB	2.44	0.48
84:EF:534:VAL:HG22	84:EF:535:GLN:N	2.28	0.48
8:SS:124:ARG:HB2	8:SS:131:VAL:HG23	1.96	0.48
10:UU:67:LYS:HE3	10:UU:76:THR:HB	1.94	0.48
15:gg:217:MET:HG2	15:gg:229:THR:OG1	2.14	0.48
16:R:60:ARG:O	16:R:64:ARG:HG3	2.13	0.48
18:9:85:A:H2'	18:9:86:C:H6	1.77	0.48
18:9:599:A:H2'	18:9:606:G:N2	2.29	0.48
18:9:682:U:O2'	18:9:1159:G:H4'	2.14	0.48
18:9:997:A:H2'	18:9:998:A:O4'	2.13	0.48
18:9:1019:C:H2'	18:9:1020:A:O4'	2.13	0.48
18:9:1148:A:H4'	18:9:1149:A:O4'	2.14	0.48
18:9:1825:A:N3	82:1:1493:G:N1	2.60	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AA:59:LEU:O	19:AA:63:ARG:HG3	2.14	0.48
20:BB:25:PHE:HA	20:BB:28:LYS:HG2	1.95	0.48
20:BB:68:GLU:OE2	20:BB:83:LYS:HE2	2.13	0.48
20:BB:91:VAL:HG13	20:BB:95:ASN:O	2.13	0.48
24:HH:157:HIS:HB3	24:HH:190:PRO:CD	2.43	0.48
26:JJ:45:ARG:O	26:JJ:49:THR:HG23	2.14	0.48
33:YY:121:ALA:O	33:YY:125:VAL:HG23	2.13	0.48
39:C:323:ARG:HG2	79:5:1280:C:H2'	1.96	0.48
40:D:84:PRO:HB3	40:D:89:LYS:CE	2.44	0.48
40:D:129:GLU:HB2	40:D:177:THR:HG21	1.95	0.48
40:D:226:TYR:CE2	40:D:236:MET:HE1	2.48	0.48
44:H:13:PRO:HG2	44:H:16:VAL:HG23	1.96	0.48
44:H:117:PHE:HB3	44:H:124:ARG:NH2	2.29	0.48
45:I:65:LEU:HD23	45:I:159:PHE:CZ	2.49	0.48
46:J:22:LEU:HD22	46:J:130:PHE:CD2	2.48	0.48
46:J:136:ARG:HD2	46:J:155:HIS:CE1	2.48	0.48
48:M:123:ILE:CD1	50:O:182:GLU:HG2	2.44	0.48
49:N:67:ARG:NH2	79:5:3672:G:H5''	2.28	0.48
50:O:193:THR:CG2	50:O:197:LYS:HE3	2.44	0.48
53:S:60:GLU:HB3	54:T:136:ARG:NH1	2.28	0.48
53:S:115:ALA:HB1	79:5:1925:G:N3	2.28	0.48
60:a:55:LYS:HD3	79:5:92:C:C2	2.48	0.48
60:a:84:GLU:O	60:a:88:VAL:HG23	2.14	0.48
61:b:92:LYS:HE3	79:5:1214:C:C5	2.49	0.48
62:c:58:SER:OG	66:g:96:LEU:HD13	2.14	0.48
63:d:42:ALA:HB3	63:d:43:PRO:HD3	1.96	0.48
63:d:114:PHE:C	63:d:117:LEU:HD23	2.39	0.48
65:f:78:HIS:O	65:f:83:MET:HB3	2.14	0.48
70:k:41:TYR:HB2	70:k:43:TYR:CZ	2.48	0.48
72:m:78:HIS:CE1	79:5:4697:U:H4'	2.49	0.48
77:s:30:VAL:CB	77:s:189:ILE:HD13	2.43	0.48
77:s:193:PHE:HD1	77:s:194:ASP:N	2.10	0.48
78:t:21:GLU:CB	78:t:54:LYS:HG3	2.42	0.48
78:t:37:LEU:HB2	78:t:68:GLN:HB3	1.94	0.48
78:t:75:PRO:HB2	78:t:79:ALA:HB3	1.96	0.48
78:t:104:ILE:H	78:t:142:ASN:N	2.11	0.48
79:5:149:A:P	79:5:151:G:H5'	2.54	0.48
79:5:318:A:H2'	79:5:319:A:H8	1.78	0.48
79:5:346:G:H2'	79:5:347:A:C8	2.49	0.48
79:5:434:A:H2'	79:5:435:A:O4'	2.13	0.48
79:5:483:G:H5''	79:5:484:U:O2'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:956:A:H62	79:5:1283:G:H1'	1.78	0.48
79:5:2104:A:OP1	79:5:2104:A:H3'	2.13	0.48
79:5:2463:G:H2'	79:5:2464:C:C6	2.48	0.48
79:5:2619:G:O6	79:5:2637:U:O2	2.32	0.48
80:7:63:C:H5'	80:7:64:G:H5''	1.95	0.48
81:8:8:U:H2'	81:8:9:A:C8	2.49	0.48
81:8:106:G:H4'	81:8:137:A:H5'	1.94	0.48
82:1:1334:U:H4'	82:1:1335:U:OP1	2.14	0.48
82:1:1371:U:H2'	82:1:1372:C:O4'	2.13	0.48
83:PT:67:A:C6	83:PT:68:C:C4	3.01	0.48
84:EF:7:ASP:HA	84:EF:10:ARG:HB2	1.96	0.48
84:EF:142:VAL:O	84:EF:143:LEU:C	2.55	0.48
84:EF:347:GLY:HA2	84:EF:350:LEU:HD12	1.95	0.48
84:EF:643:VAL:O	84:EF:644:ALA:C	2.56	0.48
84:EF:710:HIS:NE2	84:EF:715:DDE:HD2	2.28	0.48
4:MM:42:LEU:HG	4:MM:74:ILE:CD1	2.42	0.48
8:SS:121:ARG:HA	8:SS:131:VAL:HG21	1.96	0.48
9:TT:47:PRO:HG3	18:9:1540:G:OP1	2.13	0.48
9:TT:74:SER:HB3	18:9:1587:G:N1	2.29	0.48
16:R:10:LEU:HD21	79:5:2526:C:C5'	2.44	0.48
17:W:82:ILE:HG23	23:GG:131:ARG:CD	2.42	0.48
18:9:155:G:H4'	23:GG:15:LEU:CD1	2.44	0.48
18:9:483:C:C5'	32:XX:48:LYS:HG3	2.43	0.48
18:9:496:C:O2'	18:9:497:C:H5'	2.14	0.48
18:9:863:U:OP1	31:WW:32:LYS:HD2	2.14	0.48
18:9:943:U:O2'	29:OO:136:PRO:HA	2.13	0.48
18:9:991:G:C6	18:9:1134:G:H4'	2.48	0.48
19:AA:122:LEU:CD1	19:AA:142:LEU:HD13	2.43	0.48
20:BB:49:VAL:CG2	20:BB:62:LEU:HD13	2.41	0.48
20:BB:207:LEU:HD13	20:BB:210:VAL:CG2	2.41	0.48
21:CC:236:PHE:O	21:CC:240:THR:HG22	2.14	0.48
22:EE:95:THR:HG22	33:YY:16:ARG:HB2	1.94	0.48
25:II:27:TYR:CD1	25:II:28:GLU:HG3	2.48	0.48
29:OO:72:TYR:CE2	29:OO:76:LEU:HD11	2.49	0.48
29:OO:95:ILE:HB	29:OO:129:ILE:HG23	1.95	0.48
38:B:41:VAL:HG12	38:B:187:GLY:HA3	1.95	0.48
38:B:47:LEU:HD11	38:B:344:VAL:HG22	1.96	0.48
39:C:303:ARG:HG2	52:Q:38:ARG:O	2.14	0.48
43:G:157:PRO:HG3	43:G:247:VAL:HG12	1.96	0.48
43:G:220:VAL:HG13	43:G:223:LEU:HD12	1.96	0.48
44:H:117:PHE:CE2	44:H:118:LEU:HD23	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:M:15:VAL:HG23	48:M:23:LYS:O	2.14	0.48
52:Q:91:ARG:HB2	60:a:76:ASP:OD1	2.13	0.48
53:S:134:ALA:HA	53:S:137:CYS:SG	2.54	0.48
54:T:19:PHE:CE2	54:T:20:ARG:HG3	2.49	0.48
54:T:28:ALA:HA	54:T:31:MET:SD	2.54	0.48
55:U:23:LEU:HD21	55:U:83:LEU:HD11	1.95	0.48
65:f:28:LEU:O	65:f:84:VAL:HG12	2.14	0.48
65:f:50:VAL:HG22	65:f:69:VAL:HG12	1.96	0.48
67:h:9:LEU:HD13	67:h:57:VAL:HG22	1.96	0.48
67:h:88:THR:O	67:h:92:ARG:HG3	2.14	0.48
68:i:57:ALA:O	68:i:61:LEU:HG	2.14	0.48
77:s:51:ALA:HB2	77:s:91:THR:HB	1.91	0.48
77:s:112:ARG:C	77:s:167:VAL:HG21	2.39	0.48
79:5:115:C:H2'	79:5:116:G:O4'	2.14	0.48
79:5:370:U:HO2'	79:5:371:A:H5'	1.78	0.48
79:5:1196:G:H2'	79:5:1197:C:C6	2.47	0.48
79:5:1688:G:H2'	79:5:1689:G:H8	1.77	0.48
79:5:2410:C:P	79:5:2428:A:H5'	2.53	0.48
79:5:2550:G:H2'	79:5:2551:A:H8	1.78	0.48
79:5:2557:G:H2'	79:5:2558:C:H6	1.78	0.48
79:5:3650:C:H2'	79:5:3651:A:C8	2.48	0.48
79:5:3920:U:H2'	79:5:3921:U:H6	1.77	0.48
79:5:4957:C:H5''	79:5:4958:C:OP2	2.14	0.48
80:7:31:G:O2'	80:7:32:A:H5'	2.14	0.48
81:8:124:U:H4'	81:8:125:C:O5'	2.14	0.48
82:1:1335:U:O2	82:1:1396:G:C2	2.67	0.48
84:EF:111:PHE:N	84:EF:111:PHE:CD1	2.77	0.48
84:EF:159:LYS:CE	84:EF:218:LEU:HD13	2.44	0.48
84:EF:262:GLY:N	84:EF:288:THR:HG21	2.28	0.48
84:EF:306:ASN:N	84:EF:306:ASN:ND2	2.60	0.48
84:EF:451:ILE:HG23	84:EF:472:LEU:N	2.27	0.48
4:MM:69:CYS:O	4:MM:74:ILE:HB	2.14	0.48
6:QQ:128:GLU:OE2	18:9:1479:G:H4'	2.14	0.48
7:RR:66:VAL:HB	7:RR:69:ILE:CG2	2.43	0.48
8:SS:37:GLY:H	18:9:1630:A:H5''	1.79	0.48
12:cc:20:ARG:NH1	18:9:1680:G:H1'	2.29	0.48
13:dd:53:ILE:HD13	13:dd:55:LEU:HD21	1.96	0.48
15:gg:91:ASP:HB2	15:gg:98:THR:CG2	2.44	0.48
15:gg:197:THR:HG21	15:gg:238:ALA:HA	1.96	0.48
16:R:129:GLY:HA3	79:5:1558:A:C1'	2.44	0.48
18:9:29:G:H4'	32:XX:129:SER:HB3	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:9:574:A:H4'	33:YY:89:HIS:CB	2.43	0.48
18:9:643:A:H4'	18:9:644:G:H5'	1.96	0.48
18:9:1133:A:H4'	34:aa:13:LYS:HG3	1.96	0.48
18:9:1360:U:H3'	18:9:1361:G:C8	2.48	0.48
18:9:1628:C:H2'	18:9:1629:C:H6	1.79	0.48
18:9:1637:A:H5'	18:9:1638:G:C2	2.49	0.48
19:AA:176:TRP:HB2	19:AA:202:TYR:CG	2.48	0.48
23:GG:228:ILE:O	23:GG:232:ARG:HG3	2.13	0.48
24:HH:135:PHE:HB3	24:HH:136:PRO:HD3	1.94	0.48
28:NN:54:LEU:HB3	28:NN:60:VAL:CG1	2.43	0.48
33:YY:87:PRO:HG2	33:YY:90:ARG:CB	2.44	0.48
37:A:89:TYR:HB2	37:A:100:ASN:ND2	2.29	0.48
44:H:12:ILE:HG22	44:H:81:ILE:HD11	1.95	0.48
50:O:125:LYS:O	50:O:129:LEU:HB2	2.14	0.48
52:Q:67:ILE:HD12	52:Q:96:PRO:HD2	1.96	0.48
53:S:93:MET:SD	53:S:113:MET:HE1	2.54	0.48
53:S:154:LEU:CB	53:S:157:ARG:HD3	2.44	0.48
57:X:100:VAL:HG11	57:X:109:ILE:CG1	2.39	0.48
58:Y:109:LEU:HD22	58:Y:115:ARG:NH1	2.27	0.48
77:s:25:PRO:CD	77:s:92:LYS:HA	2.43	0.48
77:s:116:ILE:H	77:s:166:LYS:HZ3	1.62	0.48
77:s:118:PRO:CB	77:s:183:PHE:CB	2.87	0.48
77:s:189:ILE:HD12	77:s:191:GLN:H	1.79	0.48
78:t:120:SER:HA	78:t:128:THR:CG2	2.44	0.48
78:t:134:GLY:HA2	78:t:147:HIS:CE1	2.48	0.48
79:5:717:U:H2'	79:5:718:C:C6	2.48	0.48
79:5:1239:C:O2'	79:5:1244:G:H5'	2.14	0.48
79:5:1514:U:H2'	79:5:1515:A:H8	1.79	0.48
79:5:1643:A:H2'	79:5:1644:C:C6	2.48	0.48
79:5:1974:U:C2	79:5:2002:A:C8	3.02	0.48
79:5:2264:C:C2'	79:5:2265:G:H5'	2.44	0.48
79:5:2690:C:H2'	79:5:2691:U:C6	2.48	0.48
79:5:3748:A:H2'	79:5:3749:C:H6	1.78	0.48
79:5:4409:C:O2'	79:5:4410:G:H5'	2.14	0.48
79:5:4968:A:H2'	79:5:4969:C:H6	1.79	0.48
83:PT:28:G:C6	83:PT:29:U:C4	3.02	0.48
84:EF:76:SER:HA	84:EF:101:ASN:HA	1.95	0.48
84:EF:205:ILE:HB	84:EF:211:THR:HB	1.95	0.48
84:EF:207:PRO:CB	84:EF:261:TRP:CD1	2.97	0.48
84:EF:449:ARG:CZ	84:EF:460:PRO:HB3	2.44	0.48
84:EF:517:LEU:HB3	84:EF:518:PRO:HD3	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:EF:649:ILE:HD11	84:EF:661:ILE:CG2	2.43	0.48
84:EF:720:GLN:CD	84:EF:720:GLN:N	2.71	0.48
84:EF:745:TYR:HB2	84:EF:813:VAL:O	2.14	0.48
84:EF:746:LEU:HA	84:EF:787:TYR:HA	1.96	0.48
84:EF:776:VAL:CG2	84:EF:783:VAL:HG23	2.43	0.48
84:EF:799:ASP:HA	84:EF:802:SER:HB2	1.96	0.48
2:FF:49:LEU:CD1	2:FF:50:PRO:HD2	2.40	0.48
6:QQ:109:LYS:HG3	6:QQ:120:LEU:CD1	2.44	0.48
9:TT:5:THR:O	9:TT:9:VAL:HG23	2.14	0.48
10:UU:54:VAL:HB	10:UU:88:LEU:HD11	1.96	0.48
15:gg:255:SER:HB3	15:gg:271:LYS:HG2	1.96	0.48
18:9:626:G:H3'	18:9:627:U:H5'	1.96	0.48
18:9:975:G:N2	29:OO:50:LYS:HG2	2.29	0.48
18:9:1550:G:H3'	18:9:1579:A:H61	1.78	0.48
19:AA:55:TRP:O	19:AA:59:LEU:HG	2.13	0.48
20:BB:107:ARG:HD2	29:OO:131:ASP:CB	2.44	0.48
20:BB:143:THR:HB	20:BB:205:TYR:CE1	2.49	0.48
21:CC:173:LYS:O	30:VV:3:ASN:HB2	2.14	0.48
21:CC:180:VAL:O	21:CC:197:PRO:HB3	2.13	0.48
21:CC:270:THR:O	21:CC:274:VAL:HG13	2.14	0.48
37:A:102:LEU:HB2	37:A:103:PRO:HD2	1.96	0.48
39:C:89:GLN:CG	79:5:2353:U:H5''	2.44	0.48
40:D:273:LEU:HD13	80:7:108:G:OP2	2.14	0.48
42:F:181:TYR:HB3	42:F:199:HIS:CD2	2.49	0.48
47:L:126:LEU:HD23	47:L:137:GLY:O	2.14	0.48
49:N:51:LEU:HD11	49:N:119:TYR:HB3	1.96	0.48
52:Q:106:THR:HG21	79:5:1354:A:OP2	2.14	0.48
58:Y:31:SER:O	79:5:239:C:H4'	2.14	0.48
58:Y:90:ALA:O	79:5:389:A:H1'	2.14	0.48
59:Z:4:PHE:CE1	62:c:67:ALA:HB2	2.49	0.48
62:c:27:TYR:HB2	62:c:94:LEU:HD11	1.96	0.48
65:f:45:LYS:HE3	65:f:108:SER:HA	1.95	0.48
66:g:78:TYR:HA	79:5:2751:G:O2'	2.14	0.48
77:s:161:ILE:HA	77:s:165:ASP:OD2	2.14	0.48
78:t:14:TYR:CZ	78:t:61:LYS:HB3	2.49	0.48
79:5:105:A:H2'	79:5:106:A:O4'	2.14	0.48
79:5:1583:A:H2'	79:5:1584:G:O4'	2.14	0.48
79:5:1725:U:H2'	79:5:1726:U:H6	1.79	0.48
79:5:1998:A:H2'	79:5:2019:C:O2'	2.14	0.48
79:5:3633:C:H2'	79:5:3634:G:C8	2.49	0.48
79:5:3685:C:H2'	79:5:3686:G:C8	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:4458:C:H2'	79:5:4459:U:C6	2.48	0.48
79:5:4625:C:H2'	79:5:4626:A:N3	2.28	0.48
79:5:4977:A:H2'	79:5:4978:G:C8	2.49	0.48
79:5:4994:G:H2'	79:5:4995:U:H6	1.79	0.48
80:7:111:C:H2'	80:7:112:U:O4'	2.13	0.48
82:1:1416:C:H2'	82:1:1417:A:C8	2.48	0.48
82:1:1474:G:H2'	82:1:1474:G:N3	2.28	0.48
83:PT:17:G:OP1	83:PT:61:C:H5''	2.13	0.48
84:EF:25:ILE:HD12	84:EF:25:ILE:H	1.77	0.48
84:EF:304:ILE:HD13	84:EF:336:LEU:CD1	2.44	0.48
84:EF:304:ILE:HG23	84:EF:335:LEU:HD23	1.96	0.48
84:EF:348:ASP:CG	84:EF:352:GLN:HE22	2.21	0.48
84:EF:553:HIS:O	84:EF:554:LEU:C	2.55	0.48
84:EF:599:HIS:CD2	84:EF:715:DDE:HD2	2.49	0.48
84:EF:760:TYR:CD1	84:EF:770:VAL:HG21	2.48	0.48
1:DD:18:LYS:HE2	1:DD:39:VAL:CG1	2.44	0.47
2:FF:102:LEU:HD13	11:ZZ:110:THR:CG2	2.44	0.47
3:KK:77:GLN:HA	3:KK:80:ARG:CD	2.44	0.47
6:QQ:26:LYS:HB2	6:QQ:67:ASP:OD1	2.14	0.47
10:UU:26:SER:O	10:UU:84:ILE:HD12	2.13	0.47
10:UU:27:ARG:NE	10:UU:82:MET:HE3	2.28	0.47
18:9:28:U:H2'	18:9:29:G:H8	1.79	0.47
18:9:491:C:OP2	33:YY:104:ARG:HB3	2.14	0.47
18:9:1087:A:H5'	18:9:1088:U:H5	1.79	0.47
18:9:1141:G:H2'	18:9:1142:G:C8	2.49	0.47
18:9:1740:C:O3'	25:II:58:LEU:HD13	2.14	0.47
18:9:1753:C:H2'	18:9:1754:G:H8	1.79	0.47
19:AA:200:ASP:HA	19:AA:203:PHE:CD2	2.49	0.47
22:EE:45:ILE:HG13	22:EE:61:VAL:HG21	1.95	0.47
25:II:27:TYR:HB3	25:II:49:ARG:HH12	1.77	0.47
26:JJ:30:LYS:HA	36:ee:111:TYR:HE1	1.78	0.47
27:LL:66:VAL:HG21	27:LL:141:ASN:OD1	2.14	0.47
33:YY:86:GLU:OE1	33:YY:87:PRO:HD2	2.14	0.47
38:B:10:ARG:HH22	38:B:265:SER:HB2	1.78	0.47
38:B:206:PRO:HD2	38:B:209:GLN:HG3	1.96	0.47
38:B:223:THR:HG23	79:5:4624:A:H5'	1.96	0.47
39:C:28:PHE:CD1	39:C:132:ALA:HB2	2.48	0.47
39:C:211:TYR:O	39:C:232:VAL:HG22	2.13	0.47
40:D:15:ARG:HH11	79:5:1743:A:H1'	1.79	0.47
41:E:131:HIS:HB2	79:5:1281:G:C6	2.48	0.47
41:E:285:TYR:HE1	65:f:31:GLU:HG2	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:F:181:TYR:HB3	42:F:199:HIS:CG	2.49	0.47
43:G:116:LEU:HA	43:G:119:GLN:HE21	1.78	0.47
43:G:196:VAL:HA	43:G:199:LEU:HG	1.96	0.47
44:H:167:VAL:CG1	44:H:170:LYS:HB2	2.44	0.47
45:I:74:LYS:HG3	45:I:78:LYS:HE3	1.95	0.47
49:N:6:TYR:CD2	68:i:40:VAL:HG13	2.49	0.47
56:V:24:ALA:HB2	79:5:2847:G:O2'	2.14	0.47
58:Y:86:GLN:CB	58:Y:96:HIS:HA	2.43	0.47
68:i:36:HIS:O	68:i:40:VAL:HG23	2.14	0.47
69:j:70:VAL:HG22	69:j:73:ARG:NH2	2.29	0.47
71:l:14:ALA:O	71:l:18:LYS:HG3	2.14	0.47
72:m:69:ILE:HA	72:m:75:ALA:O	2.14	0.47
77:s:19:GLN:O	77:s:20:LEU:C	2.56	0.47
77:s:89:VAL:HG12	77:s:89:VAL:O	2.13	0.47
77:s:119:CYS:N	77:s:183:PHE:HB3	2.29	0.47
77:s:130:LEU:HG	77:s:132:PRO:CD	2.44	0.47
77:s:188:ILE:CG2	77:s:189:ILE:N	2.77	0.47
78:t:15:LEU:HD21	78:t:31:LYS:HB2	1.96	0.47
79:5:131:C:H2'	79:5:132:G:O4'	2.14	0.47
79:5:429:A:H2'	79:5:430:G:C8	2.49	0.47
79:5:1211:G:H2'	79:5:1212:G:C8	2.49	0.47
79:5:1352:C:H2'	79:5:1353:G:O4'	2.13	0.47
79:5:1552:G:H1'	79:5:1575:A:H61	1.79	0.47
79:5:1666:C:O2'	79:5:1688:G:H5''	2.14	0.47
79:5:1813:U:H2'	79:5:1814:C:C6	2.49	0.47
79:5:1922:G:C2'	79:5:1923:A:H5'	2.44	0.47
79:5:2451:A:H2'	79:5:2452:G:O4'	2.14	0.47
79:5:2488:C:H3'	79:5:2490:U:O4	2.14	0.47
79:5:2581:A:H1'	79:5:2654:C:O2'	2.14	0.47
79:5:2660:A:C4'	79:5:2661:U:H3'	2.44	0.47
79:5:2709:C:H3'	79:5:2710:C:H5''	1.96	0.47
79:5:3611:A:H1'	79:5:5016:A:O2'	2.14	0.47
79:5:3782:C:H2'	79:5:3783:A:H5''	1.95	0.47
81:8:32:C:H2'	81:8:33:G:O4'	2.15	0.47
82:1:1452:C:N3	82:1:1453:C:C2	2.82	0.47
84:EF:24:VAL:HG12	84:EF:104:ASP:HB2	1.96	0.47
84:EF:99:LEU:HD23	84:EF:100:ILE:H	1.78	0.47
84:EF:109:VAL:HG13	84:EF:110:ASP:N	2.29	0.47
84:EF:567:CYS:O	84:EF:568:ILE:C	2.57	0.47
84:EF:662:LEU:CD2	84:EF:679:VAL:HG12	2.44	0.47
84:EF:732:SER:O	84:EF:733:VAL:C	2.55	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:DD:56:GLN:HA	1:DD:59:LEU:HG	1.96	0.47
7:RR:29:HIS:O	7:RR:33:ARG:HD3	2.15	0.47
8:SS:74:PRO:HA	8:SS:79:ILE:HD12	1.96	0.47
11:ZZ:62:VAL:HB	11:ZZ:63:PRO:HD3	1.96	0.47
12:cc:49:PRO:HD3	18:9:1678:A:OP1	2.14	0.47
14:ff:107:LYS:CE	14:ff:117:LEU:HD11	2.42	0.47
15:gg:106:LYS:HD2	15:gg:126:ASP:HA	1.94	0.47
15:gg:153:CYS:HB3	15:gg:168:CYS:SG	2.54	0.47
16:R:84:THR:HA	79:5:2864:A:O3'	2.14	0.47
18:9:102:A:H4'	18:9:104:A:C8	2.50	0.47
18:9:367:U:C2'	18:9:368:U:H5''	2.44	0.47
18:9:399:C:H3'	18:9:400:C:H5'	1.95	0.47
18:9:496:C:OP1	22:EE:29:PRO:HG3	2.14	0.47
18:9:841:G:H2'	18:9:842:C:C6	2.49	0.47
18:9:1616:U:H2'	18:9:1617:G:C8	2.49	0.47
18:9:1731:A:H2'	18:9:1732:G:H8	1.80	0.47
18:9:1813:A:H2'	18:9:1814:G:O4'	2.14	0.47
19:AA:38:ILE:HD13	19:AA:47:TYR:CE1	2.49	0.47
22:EE:10:LYS:HB2	22:EE:13:ALA:CB	2.44	0.47
24:HH:19:PHE:CZ	24:HH:23:ILE:HD11	2.49	0.47
37:A:193:ARG:NH1	79:5:3685:C:H5''	2.29	0.47
38:B:259:PRO:HD3	79:5:4517:A:O2'	2.14	0.47
42:F:242:LEU:O	42:F:245:ARG:HG2	2.15	0.47
43:G:116:LEU:HD13	49:N:33:LEU:HD21	1.95	0.47
45:I:68:ALA:HB2	45:I:158:LYS:HB2	1.95	0.47
46:J:17:ILE:HG12	46:J:134:LEU:CD2	2.43	0.47
49:N:150:TRP:CZ3	49:N:151:ILE:HG12	2.49	0.47
78:t:18:THR:HG21	78:t:23:GLY:O	2.14	0.47
79:5:216:C:H5''	79:5:219:G:O2'	2.14	0.47
79:5:965:G:O2'	79:5:966:A:H5'	2.14	0.47
79:5:1932:A:H4'	79:5:2037:C:OP1	2.14	0.47
79:5:3639:U:H2'	79:5:3640:U:C6	2.49	0.47
79:5:4287:G:H2'	79:5:4288:C:C6	2.49	0.47
79:5:4302:U:C2'	79:5:4303:C:H5'	2.44	0.47
79:5:4426:C:H2'	79:5:4427:G:O4'	2.14	0.47
79:5:4500:U:H2'	79:5:4501:U:C6	2.49	0.47
79:5:4507:A:H2'	79:5:4508:C:H6	1.79	0.47
79:5:4992:G:H2'	79:5:4993:G:H8	1.79	0.47
83:PT:50:C:N3	83:PT:65:G:C2	2.82	0.47
84:EF:83:GLU:C	84:EF:85:ASP:N	2.70	0.47
84:EF:113:SER:O	84:EF:114:GLU:C	2.54	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:EF:174:LEU:HA	84:EF:177:THR:HB	1.96	0.47
84:EF:214:PHE:HB2	84:EF:223:PHE:CE1	2.49	0.47
84:EF:214:PHE:HB2	84:EF:223:PHE:CZ	2.49	0.47
84:EF:451:ILE:HG12	84:EF:471:GLY:HA3	1.97	0.47
84:EF:452:LEU:HD23	84:EF:459:GLU:CD	2.39	0.47
84:EF:662:LEU:O	84:EF:663:THR:C	2.58	0.47
84:EF:854:LEU:HD23	84:EF:856:LYS:HZ2	1.78	0.47
1:DD:185:LYS:HE3	18:9:1335:G:OP1	2.14	0.47
2:FF:144:LEU:HD23	12:cc:49:PRO:CG	2.43	0.47
4:MM:22:LEU:CD1	4:MM:89:VAL:HA	2.45	0.47
4:MM:64:LEU:HD13	4:MM:64:LEU:HA	1.78	0.47
4:MM:90:GLY:HA3	4:MM:93:LYS:HE2	1.95	0.47
9:TT:113:VAL:HA	9:TT:124:THR:H	1.79	0.47
16:R:44:LEU:HD22	16:R:49:LEU:CD1	2.39	0.47
16:R:173:ARG:O	16:R:177:LEU:HG	2.14	0.47
18:9:373:G:H4'	27:LL:85:THR:HG21	1.96	0.47
18:9:445:A:H2'	18:9:446:G:O4'	2.14	0.47
21:CC:263:LYS:HD3	21:CC:268:GLU:OE1	2.14	0.47
22:EE:118:GLU:HA	22:EE:121:TYR:CE1	2.48	0.47
27:LL:47:PRO:HG2	27:LL:50:ALA:HB2	1.95	0.47
29:OO:34:PHE:CB	29:OO:41:PHE:HB2	2.40	0.47
32:XX:54:LYS:HD2	32:XX:91:LEU:CD1	2.44	0.47
37:A:193:ARG:HD2	79:5:3686:G:OP1	2.14	0.47
38:B:47:LEU:HD12	38:B:345:LEU:O	2.14	0.47
39:C:54:VAL:HG21	39:C:101:MET:HE3	1.97	0.47
39:C:168:VAL:HG13	39:C:177:TRP:CZ3	2.50	0.47
41:E:161:ARG:NH2	79:5:4945:G:H1'	2.29	0.47
43:G:126:ARG:HA	43:G:294:VAL:O	2.14	0.47
43:G:277:THR:HA	43:G:281:ASP:OD2	2.14	0.47
44:H:12:ILE:HD12	44:H:13:PRO:O	2.13	0.47
44:H:63:ASN:O	44:H:67:LEU:HG	2.14	0.47
48:M:50:MET:HE3	48:M:55:MET:SD	2.54	0.47
49:N:16:SER:CB	68:i:48:CYS:HB2	2.44	0.47
49:N:40:PRO:HD3	79:5:9:C:OP1	2.13	0.47
49:N:44:ARG:HB2	49:N:119:TYR:CE2	2.49	0.47
50:O:173:GLN:HE22	50:O:177:LEU:HD11	1.79	0.47
55:U:25:CYS:HB3	55:U:112:LEU:HD12	1.94	0.47
56:V:18:LEU:HD22	56:V:54:ALA:O	2.13	0.47
58:Y:56:GLN:HG3	58:Y:67:ILE:HG12	1.96	0.47
58:Y:102:SER:HB2	79:5:238:C:O2	2.14	0.47
59:Z:28:ASN:HB2	59:Z:77:TYR:OH	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:e:81:ASN:HA	64:e:111:ILE:HD11	1.95	0.47
68:i:70:LEU:HD22	68:i:87:ARG:NH1	2.29	0.47
68:i:90:LEU:HA	68:i:93:VAL:HG22	1.95	0.47
77:s:83:ARG:O	77:s:84:GLY:C	2.57	0.47
77:s:95:LEU:O	77:s:96:THR:C	2.56	0.47
77:s:123:VAL:HB	77:s:143:ILE:HG21	1.95	0.47
78:t:38:SER:HB3	78:t:41:LYS:HB2	1.93	0.47
78:t:106:PHE:N	78:t:143:VAL:HG11	2.24	0.47
78:t:147:HIS:O	78:t:150:ASP:HB2	2.14	0.47
79:5:252:C:H2'	79:5:253:G:C8	2.49	0.47
79:5:1361:G:H2'	79:5:1362:G:H8	1.80	0.47
79:5:1754:U:H2'	79:5:1755:C:O2	2.13	0.47
79:5:1876:U:H2'	79:5:1877:G:H8	1.79	0.47
79:5:2893:U:H2'	79:5:2894:A:H8	1.80	0.47
79:5:3697:U:H1'	79:5:3819:G:N2	2.29	0.47
79:5:4260:U:H2'	79:5:4261:C:H6	1.78	0.47
79:5:4745:G:H22	79:5:4956:A:H2	1.62	0.47
79:5:4862:G:H2'	79:5:4863:G:H8	1.79	0.47
79:5:4874:A:C5	79:5:4877:G:H4'	2.49	0.47
81:8:66:A:H2'	81:8:67:U:C6	2.49	0.47
82:1:1343:C:O2'	82:1:1344:G:C8	2.62	0.47
82:1:1471:A:C2'	82:1:1472:A:H5'	2.45	0.47
83:PT:14:A:C5	83:PT:22:G:C6	3.02	0.47
84:EF:146:ALA:O	84:EF:147:ILE:C	2.56	0.47
84:EF:183:GLU:HA	84:EF:186:ASN:HD22	1.79	0.47
84:EF:249:ARG:HD2	84:EF:253:VAL:CG2	2.44	0.47
84:EF:385:ILE:CD1	84:EF:417:PHE:HB3	2.44	0.47
84:EF:502:SER:O	84:EF:503:PRO:C	2.57	0.47
84:EF:609:PHE:CZ	84:EF:661:ILE:HB	2.50	0.47
84:EF:617:ILE:HD13	84:EF:659:PRO:CA	2.42	0.47
84:EF:706:ASP:CG	84:EF:707:VAL:N	2.72	0.47
84:EF:755:VAL:HG11	84:EF:807:GLN:HE21	1.79	0.47
84:EF:801:ARG:CD	84:EF:808:ALA:HB3	2.44	0.47
5:PP:15:PHE:CE1	5:PP:22:LEU:HB2	2.50	0.47
15:gg:296:GLN:O	15:gg:312:VAL:HG23	2.14	0.47
18:9:501:C:H2'	18:9:502:C:H5''	1.95	0.47
18:9:688:U:C5	24:HH:102:PRO:HA	2.48	0.47
19:AA:29:ASN:HB2	19:AA:151:ASP:OD1	2.13	0.47
21:CC:209:VAL:HG21	21:CC:233:LEU:HD11	1.96	0.47
22:EE:192:ILE:HD12	22:EE:242:LYS:C	2.39	0.47
26:JJ:78:LEU:HD13	26:JJ:92:MET:O	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:OO:96:LYS:HA	29:OO:130:GLU:O	2.13	0.47
31:WW:6:VAL:HG12	31:WW:34:ILE:CD1	2.45	0.47
32:XX:9:THR:O	32:XX:13:LEU:HG	2.14	0.47
33:YY:17:LEU:HD13	33:YY:18:LEU:HG	1.95	0.47
34:aa:71:LEU:HD13	34:aa:73:TYR:OH	2.14	0.47
37:A:88:VAL:HG13	37:A:99:GLY:O	2.15	0.47
37:A:112:ILE:CD1	37:A:135:THR:HG22	2.45	0.47
39:C:137:VAL:HA	39:C:247:GLY:O	2.14	0.47
39:C:266:THR:HG23	39:C:268:ARG:H	1.78	0.47
40:D:152:ARG:HB3	80:7:44:C:O2'	2.14	0.47
41:E:150:GLY:O	41:E:204:ILE:HG12	2.13	0.47
43:G:117:GLN:HA	43:G:120:ARG:NH1	2.29	0.47
43:G:270:LYS:O	43:G:273:GLU:HG3	2.15	0.47
44:H:50:LYS:HB3	79:5:759:G:OP1	2.14	0.47
46:J:131:TYR:CE2	79:5:4260:U:H1'	2.49	0.47
47:L:81:LEU:HD11	47:L:98:VAL:HG22	1.95	0.47
53:S:160:ARG:HB2	79:5:1921:C:O2	2.14	0.47
57:X:127:LEU:HD11	57:X:135:LYS:HB3	1.96	0.47
57:X:153:ILE:HD11	57:X:155:ILE:HD11	1.96	0.47
61:b:110:ALA:O	61:b:114:ARG:HG3	2.14	0.47
65:f:102:ARG:HB2	65:f:104:MET:HE1	1.95	0.47
66:g:42:PRO:HG3	66:g:56:VAL:HG11	1.97	0.47
67:h:5:LYS:O	67:h:9:LEU:HG	2.13	0.47
71:l:11:ARG:NE	81:8:45:C:H4'	2.29	0.47
73:n:6:ARG:O	73:n:10:MET:HG2	2.14	0.47
75:p:38:THR:HG22	75:p:45:THR:OG1	2.14	0.47
78:t:11:LYS:CB	78:t:64:ILE:HB	2.45	0.47
78:t:157:SER:O	78:t:158:GLY:C	2.57	0.47
79:5:1169:G:O2'	79:5:1170:G:H5'	2.14	0.47
79:5:1441:C:H2'	79:5:1442:C:C6	2.49	0.47
79:5:1609:U:H2'	79:5:1610:C:C6	2.49	0.47
79:5:2049:G:H2'	79:5:2050:G:C8	2.49	0.47
79:5:2786:C:H4'	79:5:2787:A:C4	2.49	0.47
79:5:2823:G:H2'	79:5:2824:C:C6	2.49	0.47
79:5:3911:C:H2'	79:5:3912:U:C6	2.49	0.47
79:5:4130:C:H2'	79:5:4131:G:C8	2.49	0.47
79:5:4217:G:H2'	79:5:4218:U:O4'	2.14	0.47
79:5:4448:G:H5''	79:5:4449:A:C5'	2.44	0.47
79:5:4500:U:H2'	79:5:4501:U:C5	2.49	0.47
79:5:4532:U:H2'	79:5:4533:A:O4'	2.14	0.47
79:5:4736:C:O2'	79:5:4737:G:H5'	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:4902:C:H2'	79:5:4903:G:C8	2.49	0.47
79:5:5032:C:H2'	79:5:5033:G:O4'	2.14	0.47
82:1:1461:C:H6	82:1:1461:C:OP2	1.97	0.47
82:1:1494:C:N4	84:EF:714:ILE:O	2.47	0.47
83:PT:7:G:C6	83:PT:67:A:N1	2.82	0.47
84:EF:27:HIS:N	84:EF:139:THR:OG1	2.47	0.47
84:EF:103:ILE:HG23	84:EF:103:ILE:O	2.14	0.47
84:EF:108:HIS:CG	84:EF:111:PHE:CE2	3.02	0.47
84:EF:154:VAL:HA	84:EF:211:THR:HG23	1.97	0.47
84:EF:592:LEU:HD23	84:EF:593:SER:N	2.30	0.47
84:EF:662:LEU:HB2	84:EF:683:PHE:CG	2.49	0.47
84:EF:789:PRO:HG2	84:EF:792:GLU:HG3	1.97	0.47
1:DD:40:ARG:HG2	10:UU:108:PRO:CG	2.40	0.47
5:PP:121:ILE:HG22	8:SS:120:HIS:HD2	1.80	0.47
11:ZZ:58:LEU:HG	11:ZZ:62:VAL:CG2	2.43	0.47
15:gg:285:GLN:O	15:gg:303:THR:HG23	2.15	0.47
16:R:55:VAL:HG13	79:5:2821:U:H5''	1.95	0.47
16:R:82:LYS:NZ	79:5:2863:G:H1'	2.30	0.47
16:R:119:MET:HB2	16:R:149:LYS:HZ1	1.79	0.47
18:9:338:G:H2'	18:9:339:A:C8	2.50	0.47
18:9:354:U:P	27:LL:107:LYS:HD2	2.54	0.47
18:9:470:G:H2'	18:9:471:G:C8	2.49	0.47
18:9:1164:G:H3'	18:9:1165:G:H21	1.79	0.47
18:9:1633:A:H2'	18:9:1634:A:C8	2.50	0.47
18:9:1755:C:H2'	18:9:1756:C:O4'	2.14	0.47
20:BB:71:LEU:HG	20:BB:84:PHE:CE2	2.47	0.47
23:GG:116:LYS:HD3	23:GG:117:GLY:O	2.15	0.47
25:II:66:SER:HA	25:II:73:THR:HA	1.96	0.47
26:JJ:18:ARG:HD2	26:JJ:21:GLU:OE2	2.14	0.47
37:A:128:ARG:HG3	79:5:3681:G:C2'	2.44	0.47
38:B:79:VAL:HG12	38:B:81:THR:HG23	1.96	0.47
38:B:217:ILE:CD1	38:B:347:LEU:HD23	2.44	0.47
38:B:293:ILE:HG12	38:B:298:LEU:HB3	1.96	0.47
39:C:60:HIS:HA	39:C:92:PHE:HE1	1.77	0.47
41:E:285:TYR:CE1	65:f:31:GLU:HG2	2.50	0.47
41:E:286:PRO:HA	41:E:289:LEU:CD2	2.44	0.47
42:F:110:LEU:HD12	79:5:1725:U:H1'	1.97	0.47
42:F:178:LEU:HD11	42:F:206:PHE:HB2	1.96	0.47
43:G:270:LYS:HE2	43:G:270:LYS:HA	1.96	0.47
46:J:46:GLN:HB2	80:7:39:C:O2'	2.15	0.47
46:J:46:GLN:OE1	46:J:74:VAL:HG22	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:L:47:ALA:O	47:L:149:GLN:HG3	2.15	0.47
48:M:41:PRO:HB2	48:M:74:ARG:CZ	2.44	0.47
52:Q:154:LYS:HB3	52:Q:161:SER:HB2	1.95	0.47
54:T:42:ILE:HD11	54:T:74:ILE:HG21	1.97	0.47
57:X:83:THR:O	57:X:87:MET:HG2	2.15	0.47
62:c:44:LYS:HD2	62:c:99:PRO:HD3	1.96	0.47
71:l:12:PHE:O	71:l:16:LYS:HG2	2.14	0.47
76:r:18:ILE:CG2	76:r:25:TYR:HB2	2.45	0.47
77:s:99:ARG:HH12	77:s:103:LEU:CD2	2.22	0.47
77:s:100:ASP:C	77:s:103:LEU:HB3	2.40	0.47
78:t:37:LEU:CB	78:t:67:ARG:HH12	2.27	0.47
79:5:1074:G:H2'	79:5:1075:G:C8	2.49	0.47
79:5:1533:A:N1	79:5:1636:U:H1'	2.29	0.47
79:5:1965:G:H2'	79:5:1966:C:C6	2.50	0.47
79:5:2270:G:H2'	79:5:2271:C:H6	1.80	0.47
79:5:5020:G:H2'	79:5:5021:C:H6	1.78	0.47
82:1:1422:A:N3	82:1:1435:G:C8	2.83	0.47
82:1:1448:U:C3'	82:1:1449:U:H5'	2.29	0.47
84:EF:84:ASN:HD22	84:EF:249:ARG:CG	2.26	0.47
84:EF:144:ARG:O	84:EF:147:ILE:HG22	2.14	0.47
84:EF:174:LEU:HD21	84:EF:178:PHE:CZ	2.50	0.47
84:EF:372:LEU:O	84:EF:373:TYR:C	2.57	0.47
84:EF:654:PRO:HD2	84:EF:658:GLY:HA3	1.97	0.47
84:EF:750:GLN:C	84:EF:751:CYS:SG	2.98	0.47
1:DD:16:ILE:HG21	13:dd:22:ARG:CZ	2.44	0.47
5:PP:67:ALA:HB2	5:PP:73:PRO:HA	1.96	0.47
12:cc:24:GLN:HG2	18:9:1218:C:O2'	2.15	0.47
15:gg:35:SER:HB3	15:gg:37:ASP:OD1	2.14	0.47
16:R:21:LYS:HD3	79:5:2822:G:OP2	2.15	0.47
16:R:95:TRP:CD1	79:5:1572:U:H4'	2.50	0.47
18:9:20:G:H2'	18:9:21:U:H5'	1.96	0.47
18:9:44:U:O2	18:9:482:G:H1'	2.14	0.47
18:9:377:G:H5'	25:II:98:LYS:CB	2.38	0.47
18:9:1305:C:H2'	18:9:1306:U:C6	2.50	0.47
18:9:1745:A:H1'	23:GG:66:GLY:HA2	1.97	0.47
19:AA:130:ASP:C	19:AA:133:PRO:HD2	2.39	0.47
21:CC:183:LYS:HG3	31:WW:95:PRO:O	2.14	0.47
23:GG:187:HIS:O	23:GG:191:ARG:HG2	2.14	0.47
27:LL:82:MET:CB	27:LL:85:THR:HG23	2.45	0.47
29:OO:65:ASP:HA	29:OO:68:GLU:CG	2.43	0.47
37:A:113:VAL:HG12	37:A:166:VAL:HA	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:A:122:ASP:OD2	37:A:125:LYS:HD3	2.14	0.47
39:C:130:ALA:HB1	39:C:136:LEU:HD13	1.97	0.47
39:C:189:MET:SD	39:C:195:LYS:HD3	2.54	0.47
39:C:298:ILE:O	39:C:302:LEU:HG	2.14	0.47
40:D:225:GLN:OE1	80:7:49:A:H5''	2.14	0.47
41:E:139:HIS:CE1	79:5:712:C:H1'	2.49	0.47
42:F:56:TYR:HD2	42:F:187:GLU:HG3	1.79	0.47
42:F:65:ARG:NH1	42:F:68:ILE:HD12	2.30	0.47
43:G:253:THR:HG23	79:5:150:U:OP1	2.14	0.47
45:I:31:ILE:HG22	45:I:62:SER:HB2	1.96	0.47
49:N:65:ARG:HD3	49:N:127:TYR:CD1	2.49	0.47
49:N:73:ARG:HB2	49:N:92:LEU:HD12	1.95	0.47
52:Q:23:ILE:O	52:Q:27:LEU:HG	2.15	0.47
52:Q:167:VAL:HG12	52:Q:169:SER:H	1.79	0.47
54:T:45:MET:H	54:T:95:HIS:HD2	1.61	0.47
57:X:81:LEU:HD12	57:X:97:VAL:HG11	1.96	0.47
67:h:65:GLN:O	67:h:69:LEU:HG	2.14	0.47
75:p:53:GLY:HA2	75:p:67:GLY:O	2.13	0.47
77:s:56:GLY:CA	79:5:1998:A:N3	2.78	0.47
77:s:72:ASN:ND2	77:s:74:ALA:CB	2.69	0.47
77:s:79:LEU:O	77:s:80:PRO:C	2.57	0.47
78:t:37:LEU:HA	78:t:67:ARG:HH22	1.78	0.47
78:t:129:ILE:H	78:t:129:ILE:HG13	1.45	0.47
79:5:1416:G:H2'	79:5:1417:C:C6	2.49	0.47
79:5:1574:G:H5''	79:5:2605:G:O2'	2.14	0.47
79:5:1769:G:C5	79:5:1770:A:C5	3.02	0.47
79:5:1798:G:H4'	79:5:4215:C:C4	2.50	0.47
79:5:1875:C:H2'	79:5:1876:U:C6	2.50	0.47
79:5:1982:G:H21	79:5:2010:A:H5'	1.80	0.47
79:5:2587:A:H5''	79:5:2588:C:C5	2.50	0.47
79:5:3690:U:H2'	79:5:3691:G:O4'	2.13	0.47
79:5:3871:A:H2'	79:5:3872:A:C8	2.50	0.47
79:5:4680:G:H2'	79:5:4681:A:C8	2.50	0.47
79:5:4689:U:O4	79:5:4698:C:H4'	2.15	0.47
80:7:35:U:H2'	80:7:36:C:O4'	2.15	0.47
82:1:1336:G:H1'	82:1:1337:U:C4	2.50	0.47
82:1:1449:U:H5''	82:1:1450:C:OP2	2.14	0.47
84:EF:43:ALA:HB1	84:EF:77:LEU:HA	1.96	0.47
84:EF:86:LEU:HD23	84:EF:87:ASN:CB	2.44	0.47
84:EF:428:ARG:NE	84:EF:444:LEU:HD22	2.30	0.47
84:EF:577:VAL:CB	84:EF:790:VAL:HG12	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:EF:590:LEU:HD11	84:EF:603:TYR:C	2.38	0.47
84:EF:633:ARG:O	84:EF:637:GLU:N	2.48	0.47
84:EF:670:GLN:HB2	84:EF:671:TYR:CE2	2.50	0.47
84:EF:675:ILE:HD11	84:EF:709:LEU:HD21	1.97	0.47
84:EF:686:ALA:O	84:EF:687:THR:C	2.56	0.47
1:DD:24:PHE:CZ	1:DD:72:VAL:HG11	2.50	0.47
1:DD:151:LYS:HG2	1:DD:153:VAL:HG23	1.97	0.47
2:FF:59:LYS:HG2	2:FF:60:ARG:H	1.79	0.47
2:FF:138:ALA:HB1	2:FF:200:ALA:HB1	1.95	0.47
4:MM:35:ILE:HB	4:MM:61:TYR:OH	2.14	0.47
4:MM:75:ASN:HB3	4:MM:128:PHE:CE1	2.50	0.47
8:SS:39:ARG:HB3	8:SS:83:PHE:HZ	1.78	0.47
11:ZZ:92:LEU:CD1	11:ZZ:99:LEU:HD12	2.38	0.47
17:W:3:VAL:HG21	17:W:12:LYS:HE3	1.97	0.47
17:W:84:GLY:HA3	23:GG:158:VAL:HG13	1.97	0.47
18:9:26:U:H2'	18:9:27:A:C8	2.50	0.47
18:9:97:U:O2'	18:9:98:C:H5'	2.14	0.47
18:9:124:U:H5'	18:9:125:C:OP2	2.14	0.47
18:9:386:C:H5'	25:II:7:ASN:OD1	2.14	0.47
18:9:568:C:H2'	18:9:569:A:H5'	1.97	0.47
18:9:570:C:O2	33:YY:34:THR:HB	2.15	0.47
18:9:612:U:H2'	18:9:613:G:O4'	2.14	0.47
18:9:1229:G:H2'	18:9:1230:C:C6	2.50	0.47
18:9:1236:G:H2'	18:9:1237:C:C6	2.50	0.47
18:9:1328:G:H2'	18:9:1329:U:C6	2.50	0.47
18:9:1445:U:O2'	18:9:1446:A:H5'	2.14	0.47
18:9:1461:G:H2'	18:9:1464:C:H41	1.79	0.47
18:9:1867:U:C4	34:aa:84:VAL:HG12	2.49	0.47
19:AA:10:MET:HB2	19:AA:55:TRP:CD1	2.50	0.47
19:AA:111:GLN:HA	19:AA:116:PHE:CD1	2.50	0.47
22:EE:123:LEU:CD2	22:EE:228:ILE:HA	2.44	0.47
24:HH:96:ALA:HB3	24:HH:98:ARG:NH1	2.30	0.47
25:II:69:SER:O	27:LL:21:LYS:HE2	2.15	0.47
26:JJ:86:VAL:HG13	26:JJ:104:ASP:HB2	1.95	0.47
26:JJ:110:LEU:O	26:JJ:114:VAL:HG23	2.14	0.47
27:LL:55:TYR:CD2	27:LL:115:PRO:HG2	2.50	0.47
29:OO:90:ILE:HG21	29:OO:93:LEU:HD21	1.96	0.47
29:OO:125:LYS:HB3	34:aa:58:VAL:CG2	2.45	0.47
33:YY:40:ILE:CG2	33:YY:57:VAL:HG21	2.45	0.47
35:bb:67:THR:OG1	35:bb:71:ALA:HA	2.14	0.47
38:B:288:GLY:HA3	38:B:330:PHE:CE1	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:D:153:THR:HB	40:D:160:PHE:CE2	2.50	0.47
40:D:279:ARG:CG	40:D:283:LYS:HE3	2.45	0.47
44:H:170:LYS:HE2	79:5:4478:G:O3'	2.14	0.47
46:J:22:LEU:HB3	46:J:128:LEU:CD1	2.43	0.47
47:L:101:ARG:CZ	79:5:76:A:H5'	2.45	0.47
47:L:114:VAL:O	47:L:118:LYS:HG2	2.15	0.47
48:M:3:PHE:CE1	53:S:155:PRO:HA	2.49	0.47
48:M:115:ALA:HB1	50:O:192:PHE:HB3	1.96	0.47
49:N:96:ARG:HB3	49:N:100:SER:OG	2.15	0.47
50:O:36:VAL:HG22	50:O:107:GLY:O	2.15	0.47
52:Q:27:LEU:HD21	76:r:8:MET:HG3	1.97	0.47
52:Q:110:ARG:HG3	52:Q:120:ILE:CD1	2.42	0.47
54:T:65:TYR:CZ	54:T:88:ARG:HD3	2.50	0.47
56:V:40:ILE:HB	79:5:3799:A:C6	2.50	0.47
57:X:102:VAL:HA	57:X:134:LYS:HE3	1.97	0.47
60:a:22:ILE:HG23	79:5:1319:U:OP1	2.14	0.47
60:a:32:ARG:HD2	79:5:37:U:H5''	1.97	0.47
60:a:113:GLY:N	60:a:133:ALA:HB2	2.28	0.47
62:c:18:LEU:HD21	62:c:47:ILE:CD1	2.45	0.47
63:d:33:ILE:HD11	63:d:41:ARG:CB	2.44	0.47
64:e:45:VAL:HG13	64:e:53:ILE:O	2.14	0.47
64:e:104:SER:HB2	79:5:2303:C:H5''	1.96	0.47
65:f:88:PHE:CD2	65:f:92:LEU:HD21	2.50	0.47
68:i:82:ARG:HH12	79:5:283:G:H1'	1.79	0.47
69:j:21:ARG:CG	81:8:102:G:H4'	2.43	0.47
69:j:36:LYS:HD3	79:5:372:A:OP1	2.15	0.47
69:j:63:ARG:NH1	69:j:65:ARG:HB3	2.29	0.47
69:j:79:ARG:HD3	69:j:82:THR:OG1	2.14	0.47
72:m:72:LYS:CG	72:m:89:CYS:HB2	2.42	0.47
77:s:27:CYS:SG	77:s:28:PHE:N	2.88	0.47
77:s:30:VAL:HB	77:s:189:ILE:HD12	1.95	0.47
77:s:44:ARG:HG3	77:s:53:VAL:HB	1.96	0.47
77:s:130:LEU:CG	77:s:132:PRO:CD	2.93	0.47
77:s:161:ILE:HD13	77:s:167:VAL:HG22	1.97	0.47
77:s:176:ASN:O	77:s:177:MET:C	2.58	0.47
77:s:179:ASN:O	77:s:180:ILE:HD13	2.14	0.47
78:t:17:CYS:HB3	78:t:50:THR:CG2	2.45	0.47
78:t:124:GLU:O	78:t:125:LEU:C	2.57	0.47
78:t:129:ILE:O	78:t:133:LEU:HG	2.15	0.47
78:t:155:ILE:O	78:t:156:ASN:HB2	2.13	0.47
79:5:18:C:H2'	79:5:19:G:H8	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:20:U:H3'	79:5:21:G:C8	2.49	0.47
79:5:122:U:H2'	79:5:123:C:C6	2.50	0.47
79:5:210:C:O2	79:5:234:G:H3'	2.14	0.47
79:5:217:C:H4'	79:5:218:A:O5'	2.15	0.47
79:5:405:U:H1'	79:5:410:A:H61	1.80	0.47
79:5:474:C:H2'	79:5:475:G:H8	1.79	0.47
79:5:740:G:H2'	79:5:741:C:H6	1.79	0.47
79:5:977:C:O2'	79:5:978:G:H5'	2.15	0.47
79:5:1316:G:H2'	79:5:1317:U:C6	2.50	0.47
79:5:1418:C:H3'	79:5:1419:G:H5''	1.97	0.47
79:5:1571:G:H2'	79:5:1572:U:C6	2.49	0.47
79:5:1645:C:H2'	79:5:1646:A:C8	2.49	0.47
79:5:1686:C:H2'	79:5:1687:U:H5'	1.95	0.47
79:5:1772:C:C6	79:5:1772:C:H5''	2.50	0.47
79:5:1824:G:H2'	79:5:1825:A:H8	1.80	0.47
79:5:1825:A:H2'	79:5:1826:G:H8	1.79	0.47
79:5:1992:U:H5''	79:5:1993:C:OP1	2.15	0.47
79:5:2355:G:H2'	79:5:2356:U:C6	2.49	0.47
79:5:2391:G:H2'	79:5:2392:C:C6	2.49	0.47
79:5:2413:U:H2'	79:5:2414:G:H8	1.80	0.47
79:5:2478:C:H2'	79:5:2479:G:C8	2.50	0.47
79:5:2640:G:H2'	79:5:2641:A:C8	2.49	0.47
79:5:2775:C:H2'	79:5:2776:G:C8	2.48	0.47
79:5:2851:G:H2'	79:5:2852:U:O4'	2.15	0.47
79:5:3700:C:HO2'	79:5:3774:A:H1'	1.78	0.47
79:5:3710:G:H1'	79:5:3712:A:N6	2.30	0.47
79:5:4320:G:H2'	79:5:4321:U:C6	2.50	0.47
79:5:4760:G:H2'	79:5:4761:G:O4'	2.14	0.47
80:7:99:G:C2'	80:7:100:A:H5''	2.44	0.47
82:1:1347:G:H2'	82:1:1348:C:H6	1.80	0.47
82:1:1424:U:H2'	82:1:1425:A:O5'	2.14	0.47
82:1:1424:U:O2	82:1:1436:A:H2'	2.15	0.47
82:1:1440:G:H2'	82:1:1441:A:O4'	2.14	0.47
82:1:1452:C:H2'	82:1:1453:C:O4'	2.14	0.47
83:PT:14:A:C4	83:PT:22:G:C2	3.03	0.47
84:EF:22:MET:HG3	84:EF:100:ILE:CG2	2.44	0.47
84:EF:43:ALA:HB2	84:EF:77:LEU:HD22	1.97	0.47
84:EF:206:ASP:CB	84:EF:209:LEU:HB3	2.44	0.47
84:EF:297:ILE:CG2	84:EF:301:PHE:CE2	2.98	0.47
84:EF:306:ASN:HB2	84:EF:308:LYS:HE3	1.95	0.47
84:EF:362:VAL:O	84:EF:366:LYS:N	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:EF:524:LEU:HD13	84:EF:544:HIS:HB3	1.96	0.47
84:EF:660:ASN:HA	84:EF:700:VAL:H	1.80	0.47
84:EF:713:ALA:O	84:EF:714:ILE:C	2.57	0.47
84:EF:776:VAL:O	84:EF:777:ALA:C	2.56	0.47
1:DD:211:VAL:HG22	7:RR:38:ILE:O	2.15	0.47
2:FF:38:TYR:CD2	2:FF:144:LEU:HB2	2.49	0.47
4:MM:33:ARG:NH1	4:MM:91:LEU:HD21	2.30	0.47
8:SS:132:ARG:HB2	18:9:1609:C:OP2	2.15	0.47
10:UU:67:LYS:HG2	10:UU:78:ASP:OD2	2.15	0.47
16:R:38:ARG:O	16:R:42:ARG:HG3	2.15	0.47
18:9:422:U:H2'	18:9:423:U:C6	2.49	0.47
18:9:948:C:O2'	18:9:949:G:H5'	2.15	0.47
18:9:1164:G:H2'	18:9:1165:G:N3	2.29	0.47
19:AA:38:ILE:HG23	19:AA:48:ILE:O	2.15	0.47
19:AA:77:ILE:CG1	19:AA:99:ILE:HD12	2.41	0.47
21:CC:276:THR:HG23	21:CC:277:HIS:ND1	2.30	0.47
22:EE:14:ALA:HB1	22:EE:18:TRP:CE3	2.50	0.47
22:EE:136:ILE:HD12	22:EE:149:TYR:CE1	2.49	0.47
26:JJ:117:LEU:HD21	26:JJ:157:ILE:HB	1.96	0.47
27:LL:126:VAL:HG23	27:LL:142:VAL:HG13	1.97	0.47
33:YY:103:SER:OG	33:YY:106:GLN:HB2	2.15	0.47
40:D:211:LEU:HD12	40:D:223:PHE:CE2	2.50	0.47
40:D:264:LYS:HD2	40:D:266:TRP:CE2	2.50	0.47
41:E:265:LYS:HD3	79:5:4932:U:OP1	2.15	0.47
44:H:3:THR:OG1	44:H:67:LEU:HD11	2.14	0.47
44:H:176:LEU:HD11	72:m:61:GLN:NE2	2.30	0.47
47:L:5:ARG:HH12	79:5:1849:U:H3'	1.80	0.47
47:L:59:VAL:CG2	79:5:74:G:H5''	2.40	0.47
47:L:63:THR:O	47:L:67:HIS:HB3	2.14	0.47
47:L:169:ILE:HD13	60:a:142:GLY:HA2	1.97	0.47
50:O:170:LYS:O	50:O:174:LEU:HG	2.15	0.47
50:O:196:LEU:HD23	50:O:202:LEU:HD11	1.96	0.47
51:P:88:ALA:O	51:P:91:LEU:HD12	2.15	0.47
52:Q:31:LEU:O	52:Q:35:LEU:HG	2.15	0.47
55:U:101:ARG:HB2	55:U:115:PHE:CZ	2.50	0.47
57:X:82:THR:HG23	67:h:36:VAL:HG12	1.96	0.47
58:Y:80:ILE:HD11	58:Y:104:VAL:HG21	1.96	0.47
60:a:103:VAL:CG1	60:a:108:TYR:HB2	2.44	0.47
62:c:103:ASP:OD1	62:c:106:ARG:HB2	2.15	0.47
64:e:78:LEU:HD22	64:e:80:HIS:CE1	2.50	0.47
69:j:17:THR:HG21	69:j:29:LEU:HD21	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:s:68:HIS:C	77:s:71:ASN:HB2	2.39	0.47
77:s:99:ARG:O	77:s:103:LEU:HB3	2.15	0.47
77:s:129:GLY:N	77:s:151:THR:HA	2.30	0.47
78:t:15:LEU:HD13	78:t:28:LEU:CB	2.41	0.47
78:t:37:LEU:HA	78:t:67:ARG:HH12	1.79	0.47
78:t:142:ASN:O	78:t:143:VAL:C	2.57	0.47
79:5:162:A:H2'	79:5:163:A:H8	1.80	0.47
79:5:368:C:H2'	79:5:369:G:C8	2.49	0.47
79:5:699:C:H2'	79:5:700:G:C8	2.49	0.47
79:5:1276:C:H5''	79:5:1277:G:OP2	2.15	0.47
79:5:1588:U:H5'	79:5:3646:A:O2'	2.15	0.47
79:5:4457:U:H2'	79:5:4458:C:C6	2.50	0.47
80:7:11:A:H4'	80:7:13:A:C4	2.50	0.47
80:7:71:G:H2'	80:7:72:U:O4'	2.15	0.47
82:1:1442:G:O2'	82:1:1443:A:C8	2.68	0.47
82:1:1470:C:H2'	82:1:1471:A:H5'	1.97	0.47
82:1:1484:U:O5'	82:1:1484:U:H6	1.98	0.47
83:PT:51:G:C2	83:PT:64:G:C2	3.03	0.47
84:EF:195:GLY:O	84:EF:196:GLU:C	2.57	0.47
84:EF:399:SER:HA	84:EF:482:THR:HA	1.96	0.47
84:EF:512:LYS:HG2	84:EF:571:LYS:HB2	1.97	0.47
1:DD:54:ARG:O	1:DD:58:VAL:HG13	2.14	0.47
6:QQ:17:LYS:HB3	18:9:1672:U:OP1	2.15	0.47
6:QQ:25:CYS:HA	6:QQ:67:ASP:O	2.15	0.47
9:TT:39:LEU:HD13	9:TT:47:PRO:HG3	1.96	0.47
15:gg:24:THR:HG21	15:gg:30:MET:HE3	1.97	0.47
18:9:15:U:H2'	18:9:16:G:O4'	2.15	0.47
18:9:67:C:C5	23:GG:162:LEU:HB3	2.50	0.47
18:9:164:A:H3'	18:9:165:G:N2	2.28	0.47
18:9:383:G:H3'	18:9:383:G:OP2	2.14	0.47
18:9:600:G:OP2	18:9:630:U:H2'	2.15	0.47
18:9:905:C:H2'	18:9:906:U:O4'	2.15	0.47
18:9:1047:C:H1'	29:OO:141:ARG:HD3	1.96	0.47
18:9:1217:A:H2'	18:9:1218:C:H6	1.80	0.47
18:9:1486:A:H2'	18:9:1487:A:C8	2.50	0.47
20:BB:158:HIS:O	20:BB:162:ARG:HG3	2.15	0.47
22:EE:162:ILE:HG23	22:EE:169:ILE:HG22	1.97	0.47
26:JJ:178:ALA:O	26:JJ:182:GLN:HG2	2.15	0.47
31:WW:5:ASN:HB3	31:WW:8:ALA:HB3	1.97	0.47
33:YY:37:LYS:HG2	33:YY:60:PHE:CE2	2.50	0.47
37:A:226:ARG:HD2	79:5:3706:C:OP1	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:C:95:MET:HE1	79:5:1521:C:H4'	1.95	0.47
39:C:159:GLU:O	39:C:215:ASN:HB3	2.15	0.47
39:C:207:PRO:HB3	39:C:249:PHE:HD2	1.78	0.47
39:C:235:LEU:HD12	39:C:264:TYR:OH	2.14	0.47
44:H:98:HIS:CD2	79:5:4602:A:H5''	2.50	0.47
46:J:154:LYS:HE3	80:7:18:C:OP1	2.14	0.47
50:O:156:LEU:HB3	79:5:4910:A:C5	2.50	0.47
61:b:11:ASN:O	61:b:15:LYS:HG3	2.14	0.47
61:b:41:ARG:NH1	79:5:1492:G:H4'	2.30	0.47
69:j:69:ILE:O	69:j:73:ARG:HG3	2.14	0.47
74:o:67:VAL:HG11	74:o:82:MET:HG3	1.97	0.47
77:s:75:LEU:HD11	77:s:193:PHE:CZ	2.50	0.47
78:t:125:LEU:O	78:t:126:SER:C	2.57	0.47
79:5:25:A:N6	79:5:58:G:H1	2.08	0.47
79:5:64:A:H1'	79:5:76:A:H1'	1.97	0.47
79:5:99:A:H2'	79:5:100:C:O2	2.14	0.47
79:5:224:U:O2	79:5:244:G:H4'	2.15	0.47
79:5:1177:U:H2'	79:5:1178:G:H8	1.79	0.47
79:5:2098:G:O2'	79:5:2099:C:H5'	2.15	0.47
79:5:2528:G:H21	79:5:2529:A:H5''	1.79	0.47
79:5:2605:G:H2'	79:5:2606:G:H8	1.80	0.47
79:5:3630:A:O2'	79:5:3631:U:H5'	2.15	0.47
79:5:4622:A:O2'	79:5:4623:G:H5'	2.14	0.47
81:8:153:C:H2'	81:8:154:G:C8	2.50	0.47
82:1:1363:A:C8	82:1:1444:A:C6	3.03	0.47
82:1:1394:A:C5	82:1:1395:A:C5	3.03	0.47
82:1:1456:G:C5	82:1:1457:G:O6	2.67	0.47
83:PT:18:G:C6	83:PT:57:A:N6	2.83	0.47
83:PT:52:G:C2	83:PT:53:G:C4	3.03	0.47
84:EF:109:VAL:CG1	84:EF:110:ASP:N	2.78	0.47
84:EF:159:LYS:CG	84:EF:218:LEU:HD13	2.45	0.47
84:EF:389:ASP:HB2	84:EF:418:SER:CA	2.43	0.47
84:EF:568:ILE:HG22	84:EF:569:PRO:O	2.14	0.47
84:EF:583:VAL:C	84:EF:738:PRO:HA	2.40	0.47
4:MM:60:MET:HB3	14:ff:103:LEU:HD11	1.97	0.47
6:QQ:12:VAL:CG2	6:QQ:91:ALA:HA	2.45	0.47
9:TT:38:LYS:HD2	9:TT:43:LYS:O	2.15	0.47
15:gg:297:THR:HG23	15:gg:311:GLN:HG2	1.97	0.47
16:R:12:SER:HB2	16:R:22:VAL:HG21	1.96	0.47
18:9:560:A:OP2	26:JJ:173:VAL:HG12	2.15	0.47
18:9:636:C:H2'	18:9:637:U:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:9:980:A:H2'	18:9:981:A:C8	2.50	0.47
18:9:1139:C:H41	18:9:1149:A:H62	1.63	0.47
18:9:1174:U:H2'	18:9:1175:G:C8	2.49	0.47
18:9:1545:A:H2'	18:9:1546:G:C8	2.50	0.47
19:AA:75:SER:O	19:AA:123:VAL:HG23	2.14	0.47
21:CC:153:GLY:O	21:CC:157:LEU:HG	2.15	0.47
28:NN:46:THR:H	28:NN:49:GLN:HE21	1.62	0.47
33:YY:18:LEU:HD13	33:YY:20:ARG:NH2	2.30	0.47
33:YY:27:VAL:HB	33:YY:69:THR:OG1	2.15	0.47
41:E:73:ARG:HG2	41:E:75:TYR:CE2	2.50	0.47
42:F:156:ARG:NH2	79:5:2073:C:H4'	2.30	0.47
45:I:69:ARG:HH21	45:I:70:ILE:HG12	1.79	0.47
45:I:145:LYS:HE3	45:I:167:ILE:CD1	2.45	0.47
45:I:191:ILE:CD1	45:I:212:LEU:HD11	2.41	0.47
46:J:152:GLY:O	46:J:156:ARG:HG3	2.15	0.47
47:L:50:PRO:HG3	67:h:121:VAL:CG2	2.45	0.47
48:M:90:ARG:NH1	79:5:4868:G:H4'	2.30	0.47
50:O:172:LYS:HE3	79:5:4768:G:H5''	1.97	0.47
52:Q:20:SER:OG	52:Q:25:LEU:HD23	2.15	0.47
56:V:107:ASN:HD21	56:V:111:GLU:HB2	1.80	0.47
57:X:81:LEU:HD12	57:X:97:VAL:CG1	2.45	0.47
57:X:119:ILE:HG13	57:X:144:TYR:CD2	2.50	0.47
60:a:26:ARG:HG3	79:5:1655:C:OP2	2.15	0.47
62:c:17:ARG:HD3	62:c:103:ASP:O	2.15	0.47
62:c:62:TYR:O	62:c:66:LEU:HG	2.15	0.47
69:j:18:LEU:HA	69:j:25:LYS:HA	1.96	0.47
69:j:21:ARG:HD3	69:j:39:TYR:HD1	1.79	0.47
75:p:38:THR:HA	75:p:45:THR:HA	1.96	0.47
77:s:13:TYR:HD1	77:s:16:LYS:HE3	1.79	0.47
77:s:62:ARG:HA	77:s:65:ILE:HG13	1.97	0.47
78:t:16:ARG:CA	78:t:59:THR:CA	2.72	0.47
78:t:37:LEU:HD23	78:t:68:GLN:OE1	2.15	0.47
78:t:149:HIS:O	78:t:152:ILE:HB	2.15	0.47
79:5:22:G:H2'	79:5:23:C:C6	2.50	0.47
79:5:2007:G:H2'	79:5:2008:U:O4'	2.15	0.47
79:5:2702:C:O2'	79:5:2703:G:H5'	2.14	0.47
79:5:2893:U:H2'	79:5:2894:A:C8	2.50	0.47
79:5:3785:A:O2'	79:5:3786:U:H5'	2.15	0.47
79:5:4405:G:H1	79:5:4439:U:H3	1.63	0.47
83:PT:2:G:C2	83:PT:72:C:C2	3.03	0.47
83:PT:30:G:C2	83:PT:41:A:C5	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:PT:52:G:N1	83:PT:53:G:C5	2.83	0.47
84:EF:121:VAL:HG12	84:EF:122:THR:N	2.30	0.47
84:EF:286:PRO:HG2	84:EF:291:GLN:NE2	2.30	0.47
84:EF:368:ARG:HB3	84:EF:371:LEU:HD22	1.97	0.47
84:EF:389:ASP:CB	84:EF:418:SER:HA	2.44	0.47
84:EF:586:GLU:O	84:EF:587:SER:C	2.55	0.47
84:EF:726:ARG:O	84:EF:727:ARG:C	2.54	0.47
84:EF:742:GLU:CD	84:EF:818:GLN:HE21	2.23	0.47
84:EF:798:ALA:O	84:EF:801:ARG:HB2	2.15	0.47
20:BB:188:LEU:CD2	20:BB:193:ILE:HD12	2.45	0.46
22:EE:87:MET:O	22:EE:122:LYS:HD2	2.15	0.46
27:LL:13:GLN:HB2	27:LL:16:ILE:CD1	2.45	0.46
29:OO:20:GLN:HB3	29:OO:27:VAL:HG23	1.96	0.46
31:WW:111:MET:CE	31:WW:119:LYS:HD2	2.40	0.46
32:XX:53:GLU:HG2	32:XX:71:ARG:HB2	1.98	0.46
36:ee:98:LYS:HD3	36:ee:99:LYS:O	2.15	0.46
37:A:29:LEU:N	37:A:123:ARG:HB3	2.29	0.46
38:B:288:GLY:HA3	38:B:330:PHE:CZ	2.50	0.46
39:C:204:ARG:NH2	79:5:2298:U:H5''	2.29	0.46
41:E:76:ALA:HB2	61:b:117:ARG:O	2.14	0.46
42:F:28:LYS:O	42:F:32:LEU:HG	2.15	0.46
43:G:224:PRO:HB3	43:G:234:TYR:CE2	2.50	0.46
43:G:235:CYS:HB3	43:G:275:ILE:CG2	2.45	0.46
43:G:247:VAL:HG21	43:G:249:ARG:NH1	2.30	0.46
47:L:140:SER:O	47:L:144:LEU:HG	2.14	0.46
54:T:43:LYS:HG3	54:T:58:HIS:CE1	2.51	0.46
57:X:55:ARG:O	79:5:14:C:H4'	2.15	0.46
68:i:84:LYS:O	68:i:88:GLU:HG2	2.15	0.46
70:k:26:LYS:CE	79:5:2696:A:H5'	2.43	0.46
71:l:43:HIS:CB	71:l:46:ARG:HD2	2.43	0.46
74:o:14:LYS:HE2	74:o:77:CYS:SG	2.55	0.46
77:s:101:MET:HE2	77:s:102:LEU:CB	2.45	0.46
78:t:56:LEU:HD21	78:t:82:ILE:HB	1.96	0.46
78:t:81:ILE:HG21	78:t:139:VAL:CG1	2.30	0.46
79:5:654:C:H2'	79:5:655:C:C6	2.49	0.46
79:5:1273:G:H2'	79:5:1274:A:O4'	2.16	0.46
79:5:1322:A:H1'	79:5:1324:A:OP2	2.15	0.46
79:5:1804:A:H5''	79:5:1805:A:H2'	1.96	0.46
79:5:2340:C:H2'	79:5:2341:A:C8	2.50	0.46
79:5:2745:A:H2'	79:5:2746:A:C8	2.50	0.46
79:5:2752:G:H2'	79:5:2753:G:O4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:4972:U:H2'	79:5:4973:U:C6	2.49	0.46
81:8:29:G:O2'	81:8:30:U:H5'	2.15	0.46
81:8:44:A:H2'	81:8:45:C:C6	2.50	0.46
82:1:1331:A:H1'	82:1:1416:C:OP1	2.15	0.46
82:1:1411:A:C2	82:1:1412:U:C2	3.02	0.46
84:EF:60:ARG:HD3	84:EF:62:ASP:HB2	1.97	0.46
84:EF:82:SER:HA	84:EF:86:LEU:HG	1.97	0.46
84:EF:288:THR:HG23	84:EF:289:PHE:CE1	2.50	0.46
84:EF:374:GLU:HA	84:EF:494:MET:HA	1.96	0.46
84:EF:451:ILE:HD11	84:EF:453:MET:CE	2.44	0.46
7:RR:58:MET:HG3	7:RR:62:GLN:NE2	2.30	0.46
7:RR:98:VAL:HA	19:AA:15:VAL:HG11	1.96	0.46
7:RR:127:ASN:O	19:AA:41:ARG:HB3	2.15	0.46
13:dd:19:ARG:HG3	13:dd:30:LEU:CD1	2.46	0.46
15:gg:166:VAL:HG12	15:gg:198:VAL:HG11	1.97	0.46
15:gg:173:LEU:CD2	15:gg:189:ILE:HG12	2.44	0.46
18:9:96:C:H2'	18:9:97:U:H6	1.81	0.46
18:9:295:C:H2'	18:9:296:U:C6	2.50	0.46
18:9:381:C:H5''	25:II:54:LYS:CE	2.45	0.46
18:9:791:C:H2'	18:9:792:C:C6	2.50	0.46
19:AA:71:PRO:HA	19:AA:74:VAL:CG2	2.44	0.46
21:CC:203:GLY:O	21:CC:221:ASP:HA	2.16	0.46
21:CC:209:VAL:HG11	21:CC:233:LEU:HD11	1.97	0.46
23:GG:159:ARG:HD3	23:GG:171:THR:HG21	1.95	0.46
26:JJ:87:LEU:HD11	26:JJ:91:LYS:O	2.15	0.46
27:LL:11:GLN:C	27:LL:56:ILE:HD12	2.40	0.46
30:VV:30:ALA:HB3	30:VV:57:GLY:HA3	1.95	0.46
31:WW:6:VAL:HG11	31:WW:29:PRO:HB2	1.97	0.46
42:F:91:VAL:O	42:F:119:GLY:HA2	2.15	0.46
42:F:198:LYS:HA	42:F:198:LYS:HE3	1.96	0.46
46:J:53:ALA:HB2	46:J:68:ILE:CD1	2.45	0.46
46:J:151:ILE:HD12	46:J:155:HIS:HB3	1.97	0.46
50:O:54:TYR:O	50:O:58:LEU:HG	2.15	0.46
52:Q:61:LEU:HD11	52:Q:139:LEU:HB3	1.97	0.46
64:e:99:ILE:CD1	64:e:108:ARG:HG2	2.43	0.46
65:f:48:ALA:HB2	65:f:71:TRP:CZ3	2.50	0.46
66:g:24:ARG:O	79:5:2639:U:H4'	2.16	0.46
66:g:102:ILE:O	66:g:106:VAL:HG23	2.15	0.46
70:k:38:CYS:HB2	70:k:41:TYR:O	2.15	0.46
77:s:14:PHE:CE1	77:s:63:LYS:CE	2.97	0.46
77:s:26:LYS:CG	77:s:27:CYS:N	2.78	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:s:101:MET:HE2	77:s:102:LEU:CA	2.45	0.46
77:s:102:LEU:CD2	77:s:102:LEU:H	2.15	0.46
78:t:153:ASP:OD1	78:t:157:SER:HB2	2.15	0.46
79:5:62:A:H2'	79:5:63:G:C8	2.50	0.46
79:5:324:A:O2'	79:5:325:U:H5'	2.15	0.46
79:5:425:U:O2'	79:5:426:A:H5'	2.16	0.46
79:5:720:G:O2'	79:5:721:G:H5'	2.16	0.46
79:5:1218:G:H2'	79:5:1219:G:H8	1.80	0.46
79:5:1594:C:O2'	79:5:1597:G:H1'	2.15	0.46
79:5:1658:G:H2'	79:5:1659:U:O4'	2.14	0.46
79:5:2673:G:H5''	79:5:2675:G:O4'	2.15	0.46
79:5:2807:A:O2'	79:5:2808:G:H5'	2.16	0.46
79:5:3916:G:H2'	79:5:3917:A:C8	2.50	0.46
79:5:4284:C:O2'	79:5:4285:U:H5'	2.16	0.46
79:5:4615:C:O2'	79:5:4616:A:H5'	2.14	0.46
79:5:4635:A:H2	79:5:4663:G:H21	1.64	0.46
79:5:4640:C:H2'	79:5:4641:U:C6	2.49	0.46
79:5:4958:C:H2'	79:5:4959:U:N1	2.31	0.46
82:1:1413:U:H2'	82:1:1416:C:H41	1.80	0.46
84:EF:16:LYS:O	84:EF:17:ALA:HB2	2.15	0.46
84:EF:441:ASP:HA	84:EF:443:TYR:CE1	2.50	0.46
84:EF:634:TYR:HA	84:EF:637:GLU:HB2	1.97	0.46
5:PP:43:ARG:NH1	5:PP:47:ARG:HD2	2.31	0.46
5:PP:108:LYS:HD3	5:PP:111:MET:HE3	1.98	0.46
6:QQ:24:HIS:O	6:QQ:68:ILE:HA	2.14	0.46
6:QQ:142:GLN:HA	18:9:1643:U:O2'	2.14	0.46
7:RR:89:SER:N	19:AA:195:TRP:HB3	2.26	0.46
15:gg:106:LYS:HD2	15:gg:126:ASP:CA	2.45	0.46
15:gg:194:TYR:CE1	15:gg:212:LYS:HD2	2.50	0.46
16:R:106:LEU:HB3	16:R:120:TYR:HE1	1.80	0.46
18:9:13:C:H1'	18:9:1356:G:N2	2.30	0.46
18:9:126:G:C8	23:GG:199:THR:HG21	2.49	0.46
18:9:341:C:H2'	18:9:342:C:H6	1.80	0.46
18:9:476:A:H3'	18:9:477:G:H8	1.80	0.46
18:9:498:C:H2'	18:9:499:G:C8	2.50	0.46
18:9:508:A:H2'	18:9:509:G:H5'	1.98	0.46
18:9:644:G:H2'	18:9:645:C:H6	1.79	0.46
18:9:649:U:H2'	18:9:650:A:H8	1.80	0.46
18:9:677:G:H2'	18:9:678:U:C5	2.50	0.46
18:9:870:A:H3'	18:9:870:A:OP2	2.16	0.46
18:9:870:A:H4'	18:9:871:U:O5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:9:1201:U:H2'	18:9:1202:U:C6	2.50	0.46
18:9:1235:G:H2'	18:9:1236:G:O4'	2.14	0.46
18:9:1597:C:H4'	18:9:1603:G:O6	2.14	0.46
18:9:1729:U:H3	18:9:1805:G:H1	1.62	0.46
18:9:1788:A:H2'	18:9:1789:G:O4'	2.13	0.46
19:AA:82:THR:CG2	19:AA:168:ALA:HA	2.44	0.46
20:BB:82:ARG:NH1	20:BB:82:ARG:HB2	2.30	0.46
23:GG:58:LYS:HE2	23:GG:105:ASN:OD1	2.16	0.46
23:GG:194:LEU:O	23:GG:198:ARG:HG3	2.16	0.46
28:NN:54:LEU:HB3	28:NN:60:VAL:HG13	1.97	0.46
37:A:89:TYR:HB2	37:A:100:ASN:HD21	1.80	0.46
37:A:240:ALA:HB1	79:5:3658:C:H4'	1.98	0.46
38:B:114:CYS:SG	38:B:180:LEU:HD21	2.55	0.46
39:C:124:ILE:O	39:C:128:LEU:HG	2.15	0.46
39:C:316:LYS:HG2	79:5:715:G:H5''	1.97	0.46
39:C:343:GLN:HG2	79:5:724:C:H1'	1.98	0.46
40:D:14:LYS:HG2	80:7:67:C:OP1	2.16	0.46
43:G:241:ALA:HB2	79:5:6:C:C1'	2.44	0.46
44:H:36:ARG:HD3	44:H:38:PHE:CZ	2.50	0.46
45:I:30:LYS:CD	45:I:63:GLU:HG2	2.41	0.46
45:I:99:ILE:HG22	45:I:123:GLN:HB2	1.97	0.46
46:J:161:GLU:HA	46:J:164:ARG:HG2	1.98	0.46
56:V:28:CYS:HB3	56:V:34:ALA:O	2.15	0.46
56:V:109:LYS:H	56:V:109:LYS:HD2	1.80	0.46
58:Y:51:LYS:O	58:Y:70:VAL:HB	2.16	0.46
59:Z:89:ILE:HD11	59:Z:117:LYS:CB	2.45	0.46
59:Z:103:ASP:CG	59:Z:106:LEU:HD13	2.40	0.46
64:e:25:SER:HB3	64:e:31:ILE:HG22	1.97	0.46
71:l:10:LYS:CD	79:5:2781:G:H5''	2.46	0.46
76:r:26:SER:OG	76:r:28:GLU:HG3	2.16	0.46
77:s:161:ILE:HG23	77:s:165:ASP:OD2	2.15	0.46
77:s:193:PHE:CD2	77:s:198:ILE:CG1	2.84	0.46
78:t:112:ILE:HG23	78:t:116:MET:HG2	1.96	0.46
78:t:125:LEU:HD13	78:t:161:GLU:OE2	2.14	0.46
79:5:711:A:H2'	79:5:712:C:C6	2.51	0.46
79:5:1441:C:H2'	79:5:1442:C:H6	1.81	0.46
79:5:1984:A:H8	79:5:2011:C:OP1	1.98	0.46
79:5:2259:G:H5'	79:5:2260:C:OP2	2.15	0.46
79:5:3696:C:H2'	79:5:3697:U:O4'	2.16	0.46
79:5:3901:A:C2	79:5:4450:U:H5'	2.49	0.46
79:5:4578:G:O2'	79:5:4579:U:H5'	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:4934:A:H2'	79:5:4935:C:C6	2.50	0.46
82:1:1364:U:OP1	82:1:1367:G:H3'	2.15	0.46
82:1:1432:U:C2	82:1:1433:U:C5	3.03	0.46
82:1:1454:A:H61	82:1:1481:G:N2	2.13	0.46
83:PT:2:G:H2'	83:PT:3:G:H5'	1.97	0.46
83:PT:9:A:C5	83:PT:46:G:N1	2.84	0.46
83:PT:19:U:C6	83:PT:57:A:C2	3.03	0.46
83:PT:22:G:C8	83:PT:46:G:O6	2.68	0.46
83:PT:32:U:C4	83:PT:33:U:C4	3.04	0.46
83:PT:64:G:C2	83:PT:65:G:C8	3.04	0.46
84:EF:746:LEU:HG	84:EF:787:TYR:CE2	2.50	0.46
1:DD:4:GLN:HG2	18:9:1578:U:O2'	2.15	0.46
1:DD:162:ASP:HB3	1:DD:163:PRO:HD3	1.98	0.46
2:FF:139:VAL:CG2	12:cc:47:LYS:HG3	2.45	0.46
4:MM:38:ALA:O	4:MM:42:LEU:HD13	2.15	0.46
8:SS:114:LEU:HA	8:SS:117:ILE:HG12	1.96	0.46
15:gg:175:LYS:HE3	15:gg:187:ASN:ND2	2.30	0.46
17:W:82:ILE:CD1	23:GG:144:LEU:HD13	2.41	0.46
18:9:339:A:H2'	18:9:340:C:H5	1.78	0.46
18:9:465:A:H4'	18:9:466:G:O5'	2.14	0.46
18:9:1140:G:O2'	18:9:1141:G:H5'	2.16	0.46
19:AA:10:MET:HE3	19:AA:18:PHE:HD2	1.78	0.46
22:EE:47:PHE:O	22:EE:51:ARG:HB3	2.15	0.46
22:EE:212:ASP:HB3	22:EE:216:ASN:H	1.81	0.46
23:GG:100:CYS:SG	23:GG:101:ILE:HD12	2.55	0.46
25:II:178:ARG:HB2	25:II:181:GLN:HB2	1.97	0.46
26:JJ:5:ARG:HB2	26:JJ:7:TRP:CZ2	2.50	0.46
33:YY:86:GLU:OE2	33:YY:90:ARG:HD2	2.15	0.46
37:A:6:ARG:O	37:A:10:LYS:HG3	2.15	0.46
37:A:134:ALA:HB1	37:A:148:VAL:CG1	2.45	0.46
37:A:201:GLY:HA3	37:A:209:HIS:CE1	2.50	0.46
41:E:286:PRO:HB2	65:f:41:PHE:CE2	2.51	0.46
42:F:178:LEU:HD23	42:F:183:ILE:CD1	2.44	0.46
43:G:163:LYS:O	43:G:167:LEU:HG	2.16	0.46
46:J:19:LYS:HD3	46:J:75:ARG:HH22	1.80	0.46
46:J:53:ALA:HA	79:5:4258:C:OP1	2.15	0.46
48:M:52:PHE:HA	48:M:55:MET:CG	2.45	0.46
54:T:9:ARG:HG2	79:5:4209:G:OP2	2.15	0.46
54:T:89:ILE:HG22	79:5:4300:U:H5'	1.97	0.46
58:Y:3:PHE:CE2	79:5:243:A:H4'	2.51	0.46
59:Z:10:VAL:HB	59:Z:83:THR:CG2	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:Z:51:ARG:CB	59:Z:65:ARG:HD2	2.46	0.46
66:g:103:VAL:O	66:g:107:LEU:HG	2.16	0.46
67:h:81:LEU:CD1	81:8:38:U:H5'	2.45	0.46
69:j:27:TYR:HD2	69:j:29:LEU:HD23	1.80	0.46
75:p:39:CYS:SG	75:p:47:MET:HE2	2.55	0.46
76:r:17:LEU:CD2	76:r:19:LYS:HG3	2.45	0.46
76:r:66:ARG:HG2	76:r:76:SER:O	2.15	0.46
77:s:77:LYS:HZ3	77:s:78:LEU:CB	2.29	0.46
77:s:116:ILE:HG22	77:s:166:LYS:HZ3	1.81	0.46
77:s:116:ILE:HB	77:s:166:LYS:HG2	1.97	0.46
77:s:130:LEU:CG	77:s:132:PRO:CB	2.93	0.46
77:s:141:LEU:HG	77:s:160:LEU:HD13	1.97	0.46
77:s:188:ILE:HG22	77:s:189:ILE:H	1.77	0.46
78:t:95:GLN:HB3	78:t:98:ILE:HG13	1.96	0.46
79:5:1593:A:H2'	79:5:1594:C:O4'	2.16	0.46
79:5:2088:A:H5''	79:5:2089:G:H3'	1.98	0.46
79:5:2776:G:H2'	79:5:2777:G:H8	1.79	0.46
79:5:2830:G:H2'	79:5:2831:G:H8	1.79	0.46
79:5:3686:G:O2'	79:5:3687:A:H5'	2.16	0.46
79:5:3759:A:N6	79:5:3765:G:H1'	2.30	0.46
79:5:4321:U:H2'	79:5:4322:G:C8	2.51	0.46
79:5:4551:U:H2'	79:5:4552:U:C6	2.50	0.46
82:1:1349:U:H2'	82:1:1350:C:C6	2.50	0.46
82:1:1419:G:H2'	82:1:1420:G:H8	1.79	0.46
83:PT:19:U:C2	83:PT:57:A:N3	2.83	0.46
84:EF:200:MET:SD	84:EF:367:TYR:CE1	3.08	0.46
84:EF:301:PHE:O	84:EF:302:ASP:C	2.56	0.46
84:EF:424:GLY:CA	84:EF:447:ILE:HB	2.46	0.46
84:EF:519:LYS:CG	84:EF:520:LEU:N	2.79	0.46
84:EF:650:TRP:CD2	84:EF:662:LEU:HB3	2.51	0.46
84:EF:796:PHE:CD1	84:EF:796:PHE:C	2.93	0.46
1:DD:227:LYS:HE3	15:gg:184:LEU:HD11	1.97	0.46
6:QQ:84:ILE:O	6:QQ:88:ILE:HG12	2.16	0.46
8:SS:107:LEU:O	8:SS:111:LEU:HG	2.16	0.46
9:TT:33:TRP:HZ3	9:TT:99:VAL:HG12	1.80	0.46
10:UU:46:LYS:CE	10:UU:97:ILE:HG23	2.45	0.46
16:R:64:ARG:O	16:R:68:LEU:HG	2.16	0.46
18:9:632:C:H2'	18:9:633:C:C6	2.50	0.46
18:9:1101:U:H2'	18:9:1102:G:H8	1.81	0.46
19:AA:176:TRP:HB2	19:AA:202:TYR:CD1	2.50	0.46
20:BB:195:LYS:CG	20:BB:199:LYS:HE3	2.41	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:GG:55:GLY:HA3	23:GG:108:VAL:O	2.16	0.46
23:GG:121:ILE:HG23	23:GG:125:THR:H	1.79	0.46
23:GG:207:ALA:O	23:GG:211:LYS:HG3	2.16	0.46
24:HH:8:ILE:HA	24:HH:45:ILE:O	2.15	0.46
26:JJ:125:HIS:NE2	26:JJ:129:LEU:HD11	2.31	0.46
26:JJ:131:ARG:NH2	26:JJ:144:ILE:HA	2.30	0.46
29:OO:27:VAL:CG1	29:OO:90:ILE:HG13	2.45	0.46
39:C:78:ARG:HB3	39:C:88:GLY:HA2	1.98	0.46
40:D:119:TYR:CE1	40:D:141:ALA:HB2	2.51	0.46
42:F:79:ASN:HA	54:T:143:THR:HG22	1.97	0.46
43:G:210:ILE:HG12	43:G:254:THR:CG2	2.42	0.46
44:H:38:PHE:O	44:H:41:ILE:HG22	2.16	0.46
45:I:59:GLN:HB3	45:I:126:VAL:HG21	1.97	0.46
47:L:48:PRO:HG3	67:h:118:LYS:CG	2.45	0.46
50:O:38:CYS:HA	50:O:41:ILE:HG13	1.97	0.46
50:O:51:LYS:O	50:O:55:LEU:HG	2.15	0.46
50:O:178:ARG:O	50:O:182:GLU:HG3	2.15	0.46
53:S:43:ARG:NH2	53:S:122:HIS:HA	2.30	0.46
57:X:127:LEU:CD1	57:X:135:LYS:HB3	2.44	0.46
58:Y:80:ILE:HG12	58:Y:99:ILE:O	2.16	0.46
60:a:100:ILE:HD13	60:a:125:LYS:HE2	1.98	0.46
61:b:31:SER:HB3	79:5:1463:C:H5''	1.98	0.46
65:f:5:LEU:HD23	79:5:4945:G:N1	2.29	0.46
67:h:6:ALA:O	67:h:10:ARG:HG3	2.15	0.46
75:p:54:ILE:HG13	75:p:63:THR:HG23	1.97	0.46
79:5:1331:C:H2'	79:5:1332:C:H6	1.80	0.46
79:5:1625:G:H1	79:5:3918:G:H5''	1.81	0.46
79:5:1760:G:C2	79:5:1773:U:O2	2.68	0.46
79:5:1974:U:O4'	79:5:1976:G:H5'	2.15	0.46
79:5:1984:A:H2'	79:5:2011:C:H5'	1.98	0.46
79:5:2018:C:H2'	79:5:2019:C:C6	2.49	0.46
79:5:2323:C:O2'	79:5:2324:C:H5'	2.15	0.46
79:5:2766:A:H2'	79:5:2767:U:H5'	1.96	0.46
79:5:3782:C:C2'	79:5:3783:A:H5''	2.46	0.46
79:5:3835:C:H2'	79:5:3836:A:C8	2.50	0.46
79:5:4319:C:H2'	79:5:4320:G:C8	2.50	0.46
79:5:4688:C:H2'	79:5:4689:U:C6	2.50	0.46
80:7:15:C:H2'	80:7:16:A:H8	1.80	0.46
82:1:1358:A:N6	82:1:1427:U:O2	2.34	0.46
82:1:1457:G:C4	82:1:1458:C:C5	3.04	0.46
83:PT:14:A:C4	83:PT:15:G:C8	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:EF:13:MET:C	84:EF:465:PRO:HB3	2.41	0.46
84:EF:26:ALA:HB3	84:EF:32:LYS:HE3	1.97	0.46
84:EF:175:TYR:CD2	84:EF:289:PHE:CE1	3.03	0.46
84:EF:180:ARG:O	84:EF:181:ILE:C	2.58	0.46
84:EF:512:LYS:HB2	84:EF:569:PRO:HB2	1.98	0.46
84:EF:799:ASP:O	84:EF:800:LEU:C	2.53	0.46
1:DD:14:ASP:OD2	1:DD:18:LYS:HE3	2.15	0.46
2:FF:100:ILE:HG13	2:FF:174:ALA:HB1	1.96	0.46
9:TT:110:LEU:O	9:TT:110:LEU:HD13	2.16	0.46
10:UU:51:LYS:HE3	18:9:1402:A:C5'	2.45	0.46
14:ff:137:ASP:CG	14:ff:138:ARG:HG3	2.40	0.46
16:R:93:VAL:O	16:R:97:ARG:HG3	2.16	0.46
18:9:452:G:H2'	18:9:453:C:C6	2.50	0.46
18:9:621:C:H2'	18:9:622:C:C6	2.51	0.46
18:9:659:G:H5''	18:9:660:C:OP1	2.16	0.46
18:9:851:C:H5''	18:9:852:G:H5''	1.96	0.46
18:9:1105:G:O3'	35:bb:69:GLY:HA3	2.15	0.46
18:9:1249:C:OP1	18:9:1251:A:H5'	2.15	0.46
18:9:1646:C:H2'	18:9:1678:A:N1	2.30	0.46
21:CC:273:LEU:HA	21:CC:276:THR:CG2	2.43	0.46
22:EE:44:LEU:HB3	22:EE:80:ILE:O	2.15	0.46
22:EE:49:ARG:O	22:EE:53:LYS:HA	2.15	0.46
23:GG:62:PRO:HB2	23:GG:83:CYS:SG	2.55	0.46
26:JJ:48:PHE:CZ	26:JJ:52:LYS:HE3	2.51	0.46
27:LL:110:SER:O	27:LL:138:VAL:HG22	2.15	0.46
28:NN:45:LEU:HD23	28:NN:50:ILE:CG1	2.45	0.46
32:XX:17:ARG:O	32:XX:21:LYS:HG3	2.15	0.46
35:bb:30:SER:HB3	35:bb:49:HIS:HD2	1.81	0.46
38:B:10:ARG:NH1	38:B:10:ARG:HB2	2.31	0.46
39:C:144:ILE:HG12	39:C:147:VAL:HG21	1.97	0.46
40:D:18:VAL:HG21	80:7:11:A:O4'	2.16	0.46
41:E:97:LYS:HE3	41:E:110:VAL:HG21	1.97	0.46
42:F:142:GLY:HA3	42:F:239:ILE:CB	2.44	0.46
42:F:221:LYS:HB3	42:F:224:THR:OG1	2.16	0.46
45:I:43:VAL:HG12	45:I:195:CYS:O	2.16	0.46
45:I:206:LEU:O	45:I:210:ARG:HG3	2.16	0.46
47:L:49:ARG:O	47:L:149:GLN:HG2	2.15	0.46
50:O:173:GLN:O	50:O:177:LEU:HG	2.15	0.46
55:U:39:PHE:CZ	55:U:43:LEU:HD11	2.51	0.46
57:X:63:LYS:HD2	81:8:134:G:H5''	1.98	0.46
60:a:132:ARG:NH1	79:5:1468:C:H5''	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:b:49:HIS:O	79:5:1813:U:H4'	2.16	0.46
67:h:4:ILE:CG2	67:h:9:LEU:HD11	2.46	0.46
67:h:87:LYS:HD3	67:h:91:MET:CG	2.46	0.46
68:i:53:TYR:CE1	79:5:305:A:H5''	2.50	0.46
70:k:70:LYS:HA	70:k:70:LYS:HE3	1.98	0.46
77:s:27:CYS:O	77:s:192:VAL:HG12	2.16	0.46
78:t:48:LYS:HA	78:t:48:LYS:HZ1	1.79	0.46
79:5:275:C:H2'	79:5:276:C:C6	2.51	0.46
79:5:693:C:H2'	79:5:694:C:H6	1.80	0.46
79:5:949:G:O2'	79:5:950:G:H5'	2.15	0.46
79:5:1758:G:C6	79:5:1775:A:C2	3.04	0.46
79:5:1804:A:H5''	79:5:1805:A:C2'	2.45	0.46
79:5:1819:G:H3'	79:5:1820:C:C6	2.49	0.46
79:5:1968:G:H2'	79:5:1969:G:C8	2.49	0.46
79:5:2089:G:H4'	79:5:2090:U:O5'	2.15	0.46
79:5:2448:G:H2'	79:5:2449:A:C8	2.50	0.46
79:5:2622:G:C4'	79:5:2701:U:H4'	2.45	0.46
79:5:3706:C:H2'	79:5:3707:U:C6	2.51	0.46
79:5:3775:A:H3'	79:5:3776:G:H5''	1.96	0.46
81:8:70:G:H1'	81:8:88:A:N6	2.30	0.46
82:1:1358:A:N9	82:1:1360:A:H5''	2.29	0.46
82:1:1387:G:N1	82:1:1389:C:H2'	2.30	0.46
84:EF:9:ILE:HD12	84:EF:12:ILE:CB	2.46	0.46
84:EF:104:ASP:CG	84:EF:105:SER:N	2.74	0.46
84:EF:119:LEU:HD13	84:EF:146:ALA:HA	1.96	0.46
84:EF:162:ARG:NH1	84:EF:167:LEU:HD21	2.30	0.46
84:EF:538:ILE:HG12	84:EF:542:GLY:C	2.41	0.46
84:EF:602:LEU:HD12	84:EF:603:TYR:H	1.79	0.46
84:EF:752:PRO:HG2	84:EF:755:VAL:HG22	1.97	0.46
84:EF:801:ARG:O	84:EF:802:SER:C	2.57	0.46
84:EF:834:VAL:HA	84:EF:837:GLU:HB2	1.98	0.46
1:DD:56:GLN:HA	1:DD:59:LEU:CD2	2.45	0.46
2:FF:119:SER:HA	2:FF:190:ILE:HD13	1.96	0.46
4:MM:19:GLN:O	4:MM:23:LYS:HG3	2.16	0.46
6:QQ:39:LEU:HA	6:QQ:42:ILE:CD1	2.46	0.46
7:RR:30:THR:O	7:RR:34:VAL:HG23	2.16	0.46
14:ff:133:ALA:HB1	18:9:1308:U:O2'	2.14	0.46
16:R:92:LYS:O	16:R:96:MET:HG3	2.15	0.46
18:9:21:U:H2'	18:9:22:A:H8	1.81	0.46
18:9:367:U:H2'	18:9:368:U:H5''	1.98	0.46
18:9:528:A:H2'	18:9:529:A:C8	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:9:807:G:H2'	18:9:808:A:H8	1.81	0.46
18:9:1123:C:O3'	20:BB:149:GLN:HG3	2.16	0.46
18:9:1819:A:OP1	73:n:13:LEU:HD21	2.15	0.46
19:AA:165:ASN:HA	19:AA:171:VAL:HG22	1.98	0.46
19:AA:181:GLU:O	19:AA:185:MET:HG3	2.16	0.46
20:BB:25:PHE:HA	20:BB:28:LYS:CG	2.46	0.46
20:BB:185:VAL:O	20:BB:189:ILE:HG13	2.16	0.46
21:CC:187:ARG:HB3	21:CC:192:LEU:CD1	2.46	0.46
26:JJ:162:ARG:HH21	33:YY:31:GLY:HA2	1.81	0.46
28:NN:30:SER:CB	28:NN:67:THR:HG22	2.45	0.46
31:WW:107:SER:OG	31:WW:121:THR:HG21	2.15	0.46
37:A:200:ARG:HG3	79:5:3651:A:OP1	2.15	0.46
37:A:201:GLY:HA3	37:A:209:HIS:ND1	2.31	0.46
37:A:226:ARG:HH12	37:A:229:ALA:HB2	1.81	0.46
39:C:354:ALA:O	39:C:358:LEU:HG	2.16	0.46
40:D:146:LEU:HD11	40:D:159:VAL:CG1	2.44	0.46
42:F:66:THR:HG23	42:F:67:GLU:OE1	2.16	0.46
43:G:114:ILE:HA	43:G:117:GLN:HG2	1.97	0.46
46:J:109:ILE:HD13	46:J:115:LEU:HD21	1.97	0.46
47:L:55:ILE:HD13	47:L:120:TYR:CG	2.50	0.46
47:L:180:ALA:O	47:L:184:MET:HG2	2.16	0.46
49:N:58:GLY:HA3	49:N:142:ILE:CD1	2.45	0.46
49:N:172:ARG:CD	79:5:29:G:H5''	2.46	0.46
50:O:87:MET:HG2	79:5:2051:C:O2	2.15	0.46
50:O:156:LEU:HD13	79:5:4910:A:C4	2.50	0.46
51:P:123:PRO:HG3	81:8:14:U:C5'	2.45	0.46
52:Q:47:VAL:O	52:Q:51:LEU:HG	2.16	0.46
53:S:114:GLY:O	79:5:2060:G:H1'	2.16	0.46
53:S:143:LYS:HA	53:S:146:HIS:ND1	2.30	0.46
56:V:82:ILE:HD13	56:V:121:VAL:CG2	2.43	0.46
57:X:86:ALA:O	57:X:90:ILE:HG13	2.15	0.46
57:X:121:VAL:HG13	57:X:138:VAL:HG13	1.98	0.46
58:Y:56:GLN:HG2	58:Y:66:GLN:O	2.15	0.46
60:a:28:HIS:ND1	60:a:32:ARG:HG2	2.31	0.46
60:a:43:ILE:HD12	79:5:1682:A:C2	2.51	0.46
64:e:82:VAL:HG13	64:e:114:ARG:HG2	1.98	0.46
77:s:92:LYS:HB2	77:s:92:LYS:HE3	1.44	0.46
77:s:94:ASP:O	77:s:98:ILE:HD12	2.15	0.46
77:s:118:PRO:CB	77:s:183:PHE:HB3	2.33	0.46
77:s:160:LEU:CB	77:s:175:LEU:HD21	2.45	0.46
79:5:391:U:H2'	79:5:392:U:C6	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:727:C:H2'	79:5:728:U:C6	2.51	0.46
79:5:954:C:H2'	79:5:955:G:C8	2.51	0.46
79:5:1450:C:H2'	79:5:1451:G:O4'	2.15	0.46
79:5:1761:G:N1	79:5:1771:U:O2	2.46	0.46
79:5:1912:G:H2'	79:5:1913:C:C6	2.51	0.46
79:5:2457:G:H2'	79:5:2458:C:C6	2.51	0.46
79:5:2614:C:O2'	79:5:2808:G:H5''	2.16	0.46
79:5:2757:A:H2'	79:5:2758:G:C8	2.51	0.46
79:5:3598:C:H2'	79:5:3599:A:H8	1.81	0.46
79:5:3716:C:H3'	79:5:3735:G:H22	1.80	0.46
79:5:5056:A:H2'	79:5:5057:C:C6	2.50	0.46
80:7:114:U:H2'	80:7:115:A:C8	2.50	0.46
82:1:1334:U:H3'	82:1:1335:U:C5	2.51	0.46
84:EF:175:TYR:CD2	84:EF:287:ARG:NE	2.83	0.46
84:EF:187:VAL:HG13	84:EF:191:THR:HG23	1.96	0.46
84:EF:649:ILE:HA	84:EF:663:THR:HA	1.97	0.46
84:EF:710:HIS:CD2	84:EF:715:DDE:CD2	2.99	0.46
84:EF:752:PRO:CG	84:EF:755:VAL:HG13	2.41	0.46
84:EF:776:VAL:HB	84:EF:781:MET:HB2	1.98	0.46
1:DD:72:VAL:HG23	3:KK:20:VAL:HG11	1.97	0.46
9:TT:72:VAL:HG22	9:TT:104:LEU:HD12	1.96	0.46
15:gg:215:GLN:HB3	15:gg:229:THR:CG2	2.45	0.46
16:R:56:THR:CG2	79:5:2820:C:H5''	2.45	0.46
16:R:134:ASN:HD21	16:R:136:ARG:HB3	1.80	0.46
18:9:74:G:H2'	18:9:75:G:H4'	1.97	0.46
18:9:128:U:H3'	18:9:129:C:C6	2.51	0.46
18:9:656:G:N2	18:9:663:C:H5''	2.29	0.46
18:9:1154:U:H1'	21:CC:194:ARG:CD	2.44	0.46
20:BB:65:ARG:NH1	29:OO:51:GLU:HB2	2.28	0.46
21:CC:204:ILE:HG21	21:CC:211:LYS:HA	1.96	0.46
21:CC:230:THR:HB	21:CC:236:PHE:CE2	2.51	0.46
24:HH:26:ALA:O	24:HH:30:LEU:HG	2.16	0.46
25:II:36:THR:CG2	25:II:96:LEU:HB2	2.44	0.46
27:LL:100:ASN:O	27:LL:101:ARG:HD3	2.16	0.46
28:NN:115:LEU:O	28:NN:119:GLU:HG2	2.15	0.46
32:XX:105:PHE:HB2	32:XX:119:ARG:C	2.41	0.46
39:C:163:LYS:HB2	39:C:166:GLU:CG	2.45	0.46
40:D:103:LEU:O	40:D:107:ARG:HG2	2.16	0.46
42:F:113:LEU:HD22	42:F:118:ASN:O	2.15	0.46
44:H:91:LYS:HB3	44:H:143:GLU:OE2	2.16	0.46
47:L:95:GLY:HA3	67:h:119:TYR:OH	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:N:104:GLU:HA	49:N:160:GLU:CG	2.45	0.46
55:U:39:PHE:O	55:U:43:LEU:HG	2.16	0.46
59:Z:10:VAL:HB	59:Z:83:THR:HG21	1.97	0.46
67:h:13:LYS:O	67:h:17:LEU:HG	2.15	0.46
67:h:87:LYS:HD3	67:h:91:MET:SD	2.56	0.46
70:k:8:ILE:O	70:k:12:LEU:HG	2.16	0.46
77:s:35:VAL:HG23	77:s:39:GLN:HB3	1.98	0.46
77:s:98:ILE:O	77:s:102:LEU:CG	2.64	0.46
77:s:130:LEU:CG	77:s:132:PRO:HB3	2.45	0.46
77:s:159:GLN:CG	77:s:162:LYS:HE2	2.46	0.46
78:t:38:SER:O	78:t:42:VAL:HG23	2.15	0.46
78:t:107:ASP:O	78:t:108:GLU:C	2.58	0.46
78:t:116:MET:HE3	78:t:128:THR:HB	1.98	0.46
79:5:2636:U:H2'	79:5:2637:U:C6	2.50	0.46
79:5:2856:C:H2'	79:5:2857:A:O4'	2.16	0.46
79:5:3777:G:H3'	79:5:3777:G:OP2	2.16	0.46
79:5:3827:G:H3'	79:5:3828:A:H5''	1.96	0.46
79:5:4088:C:H2'	79:5:4089:G:C8	2.51	0.46
79:5:4238:G:O2'	79:5:4239:A:H5'	2.16	0.46
79:5:4372:U:H5'	79:5:4373:G:H5'	1.98	0.46
79:5:4631:G:H2'	79:5:4632:U:H6	1.81	0.46
79:5:4689:U:H2'	79:5:4690:G:O4'	2.16	0.46
79:5:4994:G:H2'	79:5:4995:U:C6	2.51	0.46
81:8:70:G:H1'	81:8:88:A:H61	1.80	0.46
82:1:1347:G:C2	82:1:1385:A:C2	3.03	0.46
82:1:1458:C:C2	82:1:1459:U:C4	3.03	0.46
84:EF:292:LEU:HD12	84:EF:292:LEU:N	2.31	0.46
6:QQ:8:GLN:O	6:QQ:26:LYS:HA	2.16	0.46
7:RR:31:ASN:OD1	7:RR:55:THR:HG22	2.16	0.46
8:SS:10:GLN:HG3	8:SS:13:LEU:HD21	1.97	0.46
9:TT:129:ARG:HG3	18:9:1416:C:OP1	2.16	0.46
10:UU:32:LEU:HD21	10:UU:87:ARG:HG2	1.97	0.46
15:gg:304:ASP:OD2	15:gg:306:LEU:HD12	2.16	0.46
18:9:527:C:H2'	18:9:528:A:C8	2.51	0.46
18:9:843:C:H2'	18:9:844:U:O4'	2.15	0.46
18:9:953:C:H5''	20:BB:24:PRO:HG3	1.97	0.46
18:9:1210:G:O2'	18:9:1211:G:H5'	2.16	0.46
18:9:1395:C:H2'	18:9:1396:A:N3	2.31	0.46
19:AA:10:MET:HB2	19:AA:55:TRP:CG	2.50	0.46
19:AA:32:PHE:HA	19:AA:35:GLU:HG3	1.98	0.46
20:BB:180:ASP:O	20:BB:184:VAL:HG13	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:B:45:ALA:O	38:B:183:ILE:HD13	2.16	0.46
38:B:77:THR:HG23	38:B:335:GLY:O	2.16	0.46
38:B:85:VAL:HB	38:B:165:HIS:NE2	2.31	0.46
38:B:253:CYS:SG	79:5:4521:U:H1'	2.56	0.46
39:C:54:VAL:HG23	39:C:105:THR:OG1	2.15	0.46
39:C:130:ALA:HB3	39:C:246:VAL:HG12	1.98	0.46
49:N:115:VAL:HG22	49:N:134:LEU:CD2	2.45	0.46
50:O:142:ALA:O	50:O:145:VAL:HG12	2.16	0.46
51:P:28:ASN:O	51:P:32:THR:HG22	2.16	0.46
51:P:37:LYS:O	51:P:114:ILE:HG23	2.16	0.46
52:Q:16:LYS:NZ	79:5:2084:C:H1'	2.31	0.46
56:V:87:SER:HA	56:V:97:TYR:HB3	1.97	0.46
59:Z:29:ILE:CG2	59:Z:32:GLY:HA2	2.45	0.46
59:Z:103:ASP:OD2	59:Z:106:LEU:HD13	2.16	0.46
60:a:24:LYS:HD3	60:a:26:ARG:NH2	2.28	0.46
64:e:70:LEU:HD21	64:e:76:LYS:HG3	1.96	0.46
65:f:79:GLY:HA2	79:5:2066:C:O2'	2.16	0.46
66:g:59:VAL:HG13	66:g:60:ARG:O	2.16	0.46
66:g:97:ILE:CG2	66:g:101:LYS:HE3	2.45	0.46
69:j:52:LYS:O	69:j:56:ARG:HG3	2.16	0.46
70:k:44:THR:OG1	79:5:2692:U:H4'	2.16	0.46
71:l:45:ARG:NH2	79:5:2796:G:H5'	2.30	0.46
77:s:5:ASP:OD2	77:s:8:THR:HG23	2.16	0.46
78:t:37:LEU:HD22	78:t:38:SER:H	1.81	0.46
78:t:45:ASP:CB	78:t:71:ILE:HD12	2.46	0.46
78:t:117:ARG:HH21	78:t:128:THR:CG2	2.16	0.46
78:t:140:GLY:O	78:t:141:CYS:CB	2.63	0.46
79:5:308:G:H4'	79:5:309:C:OP1	2.16	0.46
79:5:431:G:H1'	79:5:3889:G:O4'	2.16	0.46
79:5:1559:G:H2'	79:5:1560:A:C8	2.50	0.46
79:5:1904:G:O2'	79:5:1905:U:H5'	2.16	0.46
79:5:2842:G:O2'	79:5:2843:U:H5'	2.16	0.46
79:5:3934:G:H2'	79:5:3935:C:C6	2.50	0.46
79:5:4385:A:H5'	79:5:4387:C:OP2	2.15	0.46
79:5:4412:C:O2'	79:5:4413:C:H5'	2.16	0.46
79:5:4461:C:O2'	79:5:4462:C:H5'	2.16	0.46
79:5:4685:U:H2'	79:5:4686:G:C8	2.51	0.46
82:1:1459:U:H6	82:1:1459:U:O5'	1.99	0.46
83:PT:41:A:H2'	83:PT:42:C:C5'	2.46	0.46
84:EF:38:SER:HA	84:EF:50:ARG:CD	2.46	0.46
84:EF:86:LEU:CD2	84:EF:87:ASN:HB3	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:EF:136:CYS:O	84:EF:139:THR:N	2.49	0.46
84:EF:840:LYS:C	84:EF:842:LYS:N	2.63	0.46
3:KK:7:ASN:O	3:KK:11:ILE:HG12	2.16	0.46
4:MM:33:ARG:HB3	4:MM:109:VAL:HG13	1.98	0.46
10:UU:72:GLU:OE2	18:9:1246:A:H1'	2.15	0.46
18:9:12:U:C1'	18:9:1356:G:H1'	2.45	0.46
18:9:155:G:H2'	18:9:156:G:H8	1.81	0.46
18:9:167:G:H2'	18:9:168:C:O4'	2.16	0.46
18:9:896:U:H2'	18:9:897:U:C6	2.51	0.46
18:9:1133:A:P	34:aa:13:LYS:HB3	2.55	0.46
18:9:1713:C:H2'	18:9:1714:U:H6	1.80	0.46
21:CC:98:LEU:O	21:CC:102:LEU:HB2	2.15	0.46
23:GG:50:VAL:HG23	23:GG:112:VAL:C	2.41	0.46
25:II:106:SER:HB2	25:II:166:PHE:CD1	2.51	0.46
25:II:133:GLU:O	25:II:137:LEU:HG	2.16	0.46
25:II:165:GLN:HB3	25:II:171:LEU:HD23	1.98	0.46
36:ee:110:GLN:HA	36:ee:113:ARG:HG2	1.98	0.46
37:A:84:THR:HG23	75:p:63:THR:HB	1.98	0.46
38:B:56:ILE:HD11	38:B:368:ILE:HG12	1.98	0.46
38:B:111:SER:O	38:B:115:LYS:HG2	2.16	0.46
38:B:228:TYR:CE1	38:B:270:GLY:HA2	2.50	0.46
40:D:261:VAL:HG12	40:D:263:LYS:H	1.81	0.46
42:F:143:TYR:N	42:F:239:ILE:HG21	2.31	0.46
42:F:211:LYS:HB3	42:F:211:LYS:HZ3	1.81	0.46
43:G:147:GLN:HE21	43:G:271:LEU:HD21	1.80	0.46
44:H:150:ASP:O	44:H:154:VAL:HG23	2.16	0.46
45:I:17:TYR:HD2	45:I:96:VAL:HB	1.80	0.46
52:Q:97:LYS:O	52:Q:98:LEU:HD23	2.15	0.46
53:S:97:TYR:CZ	53:S:109:CYS:HA	2.50	0.46
54:T:92:ARG:HB3	54:T:95:HIS:CE1	2.51	0.46
55:U:48:LYS:HD3	55:U:51:GLY:HA2	1.97	0.46
57:X:80:PRO:HB2	57:X:155:ILE:HD13	1.98	0.46
57:X:128:ILE:HD12	79:5:2781:G:OP1	2.15	0.46
62:c:13:SER:O	62:c:17:ARG:HG3	2.16	0.46
77:s:32:ALA:CB	77:s:187:LEU:HA	2.45	0.46
77:s:39:GLN:NE2	77:s:186:GLY:HA3	2.31	0.46
77:s:65:ILE:O	77:s:69:LEU:HB2	2.15	0.46
78:t:32:ILE:HD11	78:t:42:VAL:CB	2.45	0.46
78:t:61:LYS:O	78:t:62:LEU:HG	2.16	0.46
78:t:106:PHE:CA	78:t:143:VAL:HG21	2.44	0.46
78:t:142:ASN:ND2	78:t:147:HIS:N	2.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:517:C:H2'	79:5:518:C:C6	2.51	0.46
79:5:1953:U:H2'	79:5:1954:U:C6	2.51	0.46
79:5:4274:A:H2'	79:5:4275:G:H8	1.81	0.46
79:5:4484:G:O2'	79:5:4485:C:H5'	2.15	0.46
79:5:4601:U:O2	79:5:4610:A:N7	2.49	0.46
79:5:4761:G:H2'	79:5:4762:A:C8	2.50	0.46
84:EF:28:VAL:HG23	84:EF:108:HIS:CG	2.50	0.46
84:EF:197:SER:HA	84:EF:201:GLY:HA2	1.98	0.46
84:EF:288:THR:HG23	84:EF:289:PHE:CD1	2.51	0.46
84:EF:301:PHE:C	84:EF:305:MET:SD	3.00	0.46
84:EF:311:GLU:O	84:EF:312:THR:C	2.59	0.46
84:EF:348:ASP:O	84:EF:349:ALA:C	2.58	0.46
84:EF:389:ASP:O	84:EF:419:GLY:N	2.44	0.46
84:EF:504:VAL:O	84:EF:506:ARG:N	2.49	0.46
84:EF:649:ILE:HD11	84:EF:661:ILE:CG1	2.46	0.46
84:EF:830:ARG:N	84:EF:831:PRO:HD2	2.31	0.46
84:EF:839:ARG:HE	84:EF:846:GLU:HA	1.81	0.46
1:DD:160:SER:HB3	18:9:1483:A:O2'	2.15	0.45
7:RR:109:LEU:HG	30:VV:80:SER:OG	2.16	0.45
8:SS:83:PHE:CD1	18:9:1629:C:H4'	2.51	0.45
16:R:83:GLY:C	79:5:2864:A:H4'	2.41	0.45
16:R:84:THR:O	16:R:88:ARG:HG3	2.15	0.45
18:9:12:U:H2'	18:9:13:C:H6	1.81	0.45
18:9:1097:G:O2'	18:9:1098:C:H5'	2.16	0.45
18:9:1173:A:H2'	18:9:1174:U:C6	2.52	0.45
18:9:1238:U:H2'	18:9:1239:U:O4'	2.16	0.45
18:9:1791:A:H2'	18:9:1792:G:O4'	2.16	0.45
18:9:1796:G:O2'	18:9:1797:U:H5'	2.16	0.45
18:9:1839:U:H2'	18:9:1840:U:H6	1.81	0.45
19:AA:70:ASN:HB3	19:AA:73:ASP:OD2	2.16	0.45
25:II:43:ILE:CG2	25:II:55:TYR:HB3	2.45	0.45
25:II:81:VAL:HG22	25:II:102:VAL:CG1	2.46	0.45
27:LL:82:MET:HE2	27:LL:85:THR:CG2	2.45	0.45
29:OO:148:GLY:O	29:OO:150:ARG:HG2	2.15	0.45
32:XX:110:HIS:C	32:XX:119:ARG:HG2	2.41	0.45
34:aa:50:VAL:HG23	34:aa:64:LEU:CD1	2.46	0.45
35:bb:51:GLN:C	35:bb:66:PRO:HB3	2.40	0.45
35:bb:65:GLN:O	35:bb:71:ALA:HB1	2.15	0.45
37:A:32:VAL:HG12	37:A:163:ARG:NE	2.31	0.45
39:C:153:VAL:HA	39:C:252:TRP:O	2.16	0.45
39:C:334:THR:HA	39:C:337:ARG:NH1	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:E:116:PRO:HG2	41:E:119:TYR:CZ	2.51	0.45
41:E:164:ARG:NH1	41:E:278:PHE:HB2	2.30	0.45
43:G:116:LEU:HA	43:G:119:GLN:NE2	2.31	0.45
46:J:109:ILE:HD12	46:J:111:GLU:O	2.15	0.45
47:L:39:ARG:NH2	79:5:1362:G:H5''	2.31	0.45
48:M:82:ILE:HD13	48:M:85:LYS:HZ1	1.81	0.45
50:O:60:LYS:HE2	79:5:2046:G:C5'	2.45	0.45
50:O:185:VAL:O	50:O:189:ILE:HG12	2.16	0.45
51:P:95:LEU:HD12	51:P:148:MET:SD	2.56	0.45
52:Q:93:GLN:HG3	60:a:87:ARG:NH1	2.31	0.45
55:U:40:GLU:HG3	55:U:63:LEU:CD2	2.41	0.45
56:V:88:TYR:HE2	56:V:90:ARG:HE	1.63	0.45
57:X:124:VAL:HG22	57:X:138:VAL:HG22	1.98	0.45
59:Z:42:LEU:HD11	59:Z:101:PHE:HE1	1.81	0.45
59:Z:50:PRO:HG3	59:Z:68:ILE:HD11	1.99	0.45
62:c:32:LYS:O	62:c:36:LYS:HG3	2.16	0.45
66:g:87:VAL:O	66:g:91:ILE:HG13	2.16	0.45
69:j:52:LYS:HE3	79:5:364:G:O6	2.16	0.45
74:o:71:GLU:HA	74:o:79:SER:O	2.16	0.45
76:r:16:PHE:HB3	76:r:27:THR:H	1.80	0.45
77:s:9:TRP:NE1	77:s:13:TYR:CG	2.84	0.45
77:s:47:LEU:CB	77:s:50:LYS:CD	2.95	0.45
78:t:37:LEU:HG	78:t:68:GLN:HB2	1.99	0.45
78:t:104:ILE:H	78:t:141:CYS:HB3	1.81	0.45
78:t:137:GLN:HG2	78:t:147:HIS:CG	2.51	0.45
78:t:147:HIS:HA	78:t:150:ASP:OD1	2.16	0.45
79:5:274:C:H2'	79:5:275:C:C6	2.51	0.45
79:5:1330:A:H2'	79:5:1331:C:C6	2.52	0.45
79:5:1759:G:N1	79:5:1774:C:C2	2.84	0.45
79:5:2266:C:H4'	79:5:2267:U:O5'	2.15	0.45
79:5:2562:G:N2	79:5:2564:G:H3'	2.30	0.45
79:5:3665:G:H2'	79:5:3666:C:H6	1.81	0.45
79:5:3766:A:H2'	79:5:3767:C:H5'	1.98	0.45
79:5:4089:G:H2'	79:5:4090:G:H8	1.80	0.45
79:5:4258:C:H2'	79:5:4259:C:H6	1.81	0.45
79:5:4407:G:H1	79:5:4435:U:H3	1.63	0.45
81:8:59:A:H5''	81:8:61:A:N9	2.31	0.45
82:1:1389:C:C4'	82:1:1394:A:H4'	2.46	0.45
84:EF:139:THR:HG22	84:EF:143:LEU:HG	1.99	0.45
84:EF:152:LYS:HD3	84:EF:359:PRO:HD3	1.97	0.45
84:EF:666:THR:HG21	84:EF:707:VAL:HG23	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:EF:672:LEU:O	84:EF:676:LYS:N	2.43	0.45
84:EF:752:PRO:O	84:EF:753:GLU:C	2.59	0.45
1:DD:105:LEU:O	1:DD:109:LEU:HG	2.16	0.45
2:FF:43:GLU:HB3	2:FF:44:LYS:H	1.62	0.45
2:FF:159:ARG:HE	18:9:1535:U:H3	1.64	0.45
6:QQ:49:TYR:O	6:QQ:53:GLU:HG3	2.15	0.45
7:RR:56:HIS:O	7:RR:60:ARG:HG3	2.16	0.45
9:TT:33:TRP:CZ3	9:TT:99:VAL:HG12	2.51	0.45
9:TT:65:TYR:CE1	9:TT:128:GLN:HG3	2.52	0.45
18:9:65:C:C2	23:GG:133:LEU:HD23	2.51	0.45
18:9:443:U:H2'	18:9:444:G:O4'	2.15	0.45
18:9:1563:G:H2'	18:9:1564:C:C6	2.51	0.45
18:9:1827:U:H2'	18:9:1828:C:C6	2.51	0.45
19:AA:54:THR:HG23	19:AA:161:ILE:HG22	1.98	0.45
21:CC:140:GLY:HA3	21:CC:154:ALA:O	2.16	0.45
21:CC:204:ILE:CG2	21:CC:214:LEU:HD12	2.46	0.45
26:JJ:42:GLU:HG2	26:JJ:45:ARG:NH1	2.31	0.45
29:OO:39:ASP:N	29:OO:69:SER:HB2	2.30	0.45
30:VV:24:ILE:HD13	30:VV:31:SER:CB	2.46	0.45
32:XX:95:GLU:HB2	32:XX:98:ASP:OD2	2.16	0.45
33:YY:86:GLU:CD	33:YY:87:PRO:HD2	2.41	0.45
37:A:150:LEU:HB3	37:A:151:PRO:HD2	1.97	0.45
39:C:331:TYR:O	39:C:335:MET:HG3	2.16	0.45
43:G:121:ALA:HB1	43:G:125:LYS:NZ	2.31	0.45
43:G:235:CYS:HB3	43:G:275:ILE:HG23	1.99	0.45
43:G:251:THR:CG2	79:5:6:C:H4'	2.46	0.45
51:P:64:ASN:ND2	79:5:3892:U:H4'	2.31	0.45
53:S:17:LEU:HG	53:S:58:SER:O	2.16	0.45
53:S:148:SER:HB2	79:5:748:G:O3'	2.17	0.45
54:T:92:ARG:HB3	54:T:95:HIS:ND1	2.30	0.45
55:U:18:LEU:HD11	55:U:73:THR:HG22	1.97	0.45
55:U:23:LEU:CD1	55:U:83:LEU:HD21	2.40	0.45
60:a:82:VAL:HG13	79:5:509:A:C4	2.51	0.45
64:e:43:ASN:HD22	64:e:46:ARG:H	1.64	0.45
64:e:64:LYS:HE3	79:5:2079:G:OP2	2.16	0.45
67:h:46:LYS:O	67:h:50:VAL:HG23	2.15	0.45
69:j:59:THR:HG23	79:5:23:C:H4'	1.98	0.45
71:l:23:ILE:HG22	81:8:52:A:C4	2.51	0.45
74:o:20:PRO:O	74:o:73:VAL:HG23	2.16	0.45
77:s:119:CYS:CA	77:s:183:PHE:HD1	2.28	0.45
77:s:134:LYS:N	77:s:134:LYS:HD2	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:s:169:ALA:O	77:s:170:SER:C	2.57	0.45
78:t:10:ILE:HG12	78:t:63:THR:CG2	2.45	0.45
78:t:11:LYS:HE2	78:t:35:LEU:CD1	2.43	0.45
79:5:125:C:H2'	79:5:126:C:C6	2.52	0.45
79:5:294:G:OP2	79:5:296:A:H4'	2.16	0.45
79:5:449:C:H4'	79:5:450:G:OP2	2.16	0.45
79:5:2474:G:H3'	79:5:2474:G:OP1	2.16	0.45
79:5:3938:G:H4'	79:5:3939:G:O5'	2.16	0.45
79:5:4317:A:H2'	79:5:4318:C:O4'	2.16	0.45
79:5:4375:C:H5'	79:5:4377:G:H5'	1.98	0.45
79:5:4537:C:H2'	79:5:4538:G:H8	1.81	0.45
79:5:4921:C:H3'	79:5:4921:C:OP2	2.16	0.45
84:EF:221:TRP:CG	84:EF:340:MET:HE3	2.51	0.45
84:EF:370:GLU:C	84:EF:373:TYR:H	2.24	0.45
84:EF:563:GLU:O	84:EF:565:HIS:N	2.49	0.45
84:EF:650:TRP:CD1	84:EF:651:CYS:HG	2.34	0.45
2:FF:122:ARG:CD	12:cc:59:LEU:HD21	2.46	0.45
6:QQ:12:VAL:HA	18:9:1397:U:O4	2.16	0.45
10:UU:24:LEU:HD11	10:UU:39:LEU:CD1	2.43	0.45
11:ZZ:58:LEU:HD12	11:ZZ:77:LEU:CD1	2.45	0.45
12:cc:44:ARG:HA	12:cc:65:ALA:CB	2.47	0.45
15:gg:165:ILE:HG23	15:gg:179:LEU:HD21	1.99	0.45
18:9:468:A:H2'	18:9:469:A:C8	2.51	0.45
18:9:1146:C:H2'	18:9:1147:C:C6	2.52	0.45
18:9:1205:C:H2'	18:9:1206:G:C8	2.51	0.45
18:9:1606:G:H22	18:9:1632:G:H1'	1.81	0.45
19:AA:7:VAL:CG1	19:AA:191:ARG:HD3	2.47	0.45
19:AA:11:LYS:O	19:AA:15:VAL:HG23	2.16	0.45
19:AA:77:ILE:HD13	19:AA:103:PHE:CD1	2.50	0.45
19:AA:90:PHE:CD1	19:AA:179:ALA:HB2	2.50	0.45
20:BB:198:GLU:HG3	20:BB:207:LEU:CD1	2.47	0.45
32:XX:40:PRO:HA	32:XX:79:LYS:HD2	1.98	0.45
32:XX:46:HIS:ND1	32:XX:103:ALA:HB2	2.31	0.45
38:B:41:VAL:HA	38:B:187:GLY:HA3	1.99	0.45
39:C:167:ALA:O	39:C:171:LEU:HG	2.15	0.45
39:C:284:MET:SD	39:C:287:THR:HA	2.56	0.45
39:C:318:PRO:O	39:C:325:MET:HB2	2.16	0.45
41:E:170:GLN:OE1	41:E:176:LEU:HD23	2.16	0.45
42:F:41:LEU:HD11	61:b:102:PRO:HB3	1.97	0.45
42:F:153:ILE:HG22	42:F:186:MET:HE3	1.98	0.45
42:F:164:LYS:HD3	79:5:2082:G:H21	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:F:242:LEU:HA	42:F:245:ARG:HG2	1.98	0.45
44:H:59:LYS:HE3	44:H:60:TRP:N	2.31	0.45
48:M:69:ARG:O	48:M:73:VAL:HG23	2.16	0.45
49:N:8:GLN:NE2	79:5:278:G:H5'	2.28	0.45
50:O:7:LEU:HD12	50:O:31:ARG:HG2	1.98	0.45
50:O:95:GLY:O	50:O:99:LEU:HG	2.14	0.45
50:O:166:ILE:HA	50:O:169:ARG:NH1	2.32	0.45
52:Q:57:ASN:HD22	52:Q:143:ARG:HH21	1.63	0.45
56:V:82:ILE:HG23	56:V:121:VAL:HG13	1.97	0.45
57:X:50:LYS:HE3	79:5:2475:G:C4	2.52	0.45
58:Y:47:MET:HE3	58:Y:48:PRO:HD2	1.96	0.45
58:Y:89:LYS:HB3	58:Y:91:ASN:OD1	2.16	0.45
59:Z:95:VAL:HG12	59:Z:110:ALA:HA	1.97	0.45
60:a:64:LYS:HD2	60:a:67:GLN:NE2	2.31	0.45
62:c:99:PRO:HG2	62:c:105:ILE:HD13	1.98	0.45
76:r:22:LYS:HE3	79:5:2289:C:O2'	2.16	0.45
77:s:24:TYR:HA	77:s:92:LYS:NZ	2.32	0.45
77:s:35:VAL:HG23	77:s:40:MET:N	2.32	0.45
77:s:77:LYS:C	77:s:79:LEU:N	2.73	0.45
77:s:100:ASP:O	77:s:103:LEU:HB3	2.17	0.45
77:s:114:GLY:HA2	77:s:167:VAL:C	2.42	0.45
78:t:11:LYS:HB3	78:t:64:ILE:CB	2.47	0.45
78:t:64:ILE:HG22	78:t:65:GLN:N	2.32	0.45
78:t:146:ARG:C	78:t:148:PRO:HD2	2.40	0.45
79:5:106:A:H2'	79:5:107:G:O4'	2.16	0.45
79:5:226:G:H4'	79:5:227:A:O5'	2.15	0.45
79:5:228:C:H2'	79:5:229:G:C8	2.51	0.45
79:5:423:G:H2'	79:5:424:U:H6	1.82	0.45
79:5:496:G:H2'	79:5:497:G:H5'	1.97	0.45
79:5:1495:G:O2'	79:5:1496:G:H5'	2.17	0.45
79:5:1857:C:H2'	79:5:1858:A:C8	2.51	0.45
79:5:3717:A:H2'	79:5:3718:A:C8	2.51	0.45
79:5:3802:U:O2'	79:5:3803:A:H5'	2.16	0.45
79:5:4199:C:H2'	79:5:4200:G:O4'	2.16	0.45
79:5:4239:A:O2'	79:5:4240:G:H5'	2.15	0.45
79:5:4587:G:H2'	79:5:4588:U:C6	2.51	0.45
79:5:4670:C:O3'	79:5:4671:C:H3'	2.15	0.45
79:5:4986:G:H2'	79:5:4987:C:C6	2.52	0.45
82:1:1345:G:O6	82:1:1385:A:N6	2.49	0.45
82:1:1411:A:C4	82:1:1419:G:C2	3.05	0.45
82:1:1473:A:C3'	82:1:1474:G:C8	2.92	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:EF:172:GLU:O	84:EF:175:TYR:HB3	2.16	0.45
84:EF:328:LYS:CD	84:EF:328:LYS:C	2.89	0.45
84:EF:368:ARG:C	84:EF:371:LEU:HB2	2.42	0.45
84:EF:730:TYR:O	84:EF:731:ALA:C	2.59	0.45
84:EF:744:ILE:HG21	84:EF:818:GLN:HB3	1.97	0.45
1:DD:55:THR:HA	1:DD:58:VAL:HG22	1.97	0.45
1:DD:95:GLY:O	1:DD:126:ILE:HG22	2.16	0.45
2:FF:86:LYS:HA	2:FF:89:THR:HG22	1.98	0.45
4:MM:40:LYS:HG3	4:MM:44:LYS:HE2	1.97	0.45
7:RR:98:VAL:O	7:RR:120:THR:HG22	2.15	0.45
9:TT:28:LEU:HD12	9:TT:54:TYR:CD2	2.50	0.45
13:dd:31:ILE:O	13:dd:36:LEU:HB2	2.16	0.45
15:gg:228:TYR:OH	15:gg:261:LEU:HD12	2.17	0.45
16:R:103:ARG:HD2	16:R:124:TYR:CE2	2.52	0.45
18:9:857:U:H4'	22:EE:201:HIS:NE2	2.31	0.45
18:9:917:U:H2'	18:9:918:U:C6	2.51	0.45
18:9:1204:A:N6	18:9:1693:G:H1	2.14	0.45
18:9:1652:G:H2'	18:9:1653:U:O4'	2.16	0.45
18:9:1806:A:H2'	18:9:1807:C:C6	2.52	0.45
21:CC:193:VAL:HG22	21:CC:236:PHE:HE1	1.82	0.45
22:EE:44:LEU:HD11	22:EE:70:ILE:HD13	1.97	0.45
22:EE:100:ARG:HG2	22:EE:102:ILE:HG13	1.98	0.45
27:LL:103:GLU:OE1	32:XX:11:ARG:HB3	2.16	0.45
28:NN:71:ILE:O	28:NN:75:LEU:HD13	2.17	0.45
32:XX:105:PHE:HB2	32:XX:119:ARG:O	2.15	0.45
34:aa:67:LEU:HG	34:aa:69:VAL:CG2	2.46	0.45
39:C:120:LYS:O	39:C:124:ILE:HG13	2.16	0.45
40:D:86:TYR:CE2	40:D:104:LEU:HD11	2.50	0.45
40:D:157:ASN:HB3	40:D:160:PHE:CD2	2.49	0.45
42:F:174:ILE:CG2	42:F:183:ILE:HG22	2.47	0.45
44:H:91:LYS:HB3	44:H:143:GLU:CD	2.42	0.45
47:L:58:ILE:HG23	47:L:70:VAL:CG1	2.45	0.45
48:M:108:ASP:HA	48:M:111:LYS:CE	2.45	0.45
49:N:66:VAL:HG21	49:N:102:ALA:HB2	1.98	0.45
49:N:72:LYS:HD2	79:5:3670:C:O2'	2.17	0.45
52:Q:43:PHE:CZ	52:Q:81:VAL:HG21	2.52	0.45
53:S:29:ARG:O	54:T:150:LEU:HA	2.16	0.45
53:S:132:ILE:HG22	53:S:136:LYS:HB2	1.99	0.45
53:S:169:THR:HB	79:5:4875:G:H2'	1.98	0.45
57:X:45:THR:HG22	79:5:4085:A:OP1	2.16	0.45
61:b:47:LYS:HA	61:b:50:ASN:ND2	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:d:68:LEU:O	63:d:72:VAL:HG23	2.16	0.45
71:l:35:ILE:HG12	79:5:362:A:N7	2.31	0.45
76:r:8:MET:HE2	76:r:11:ARG:HD2	1.97	0.45
77:s:40:MET:HE1	77:s:44:ARG:NH1	2.31	0.45
77:s:43:ILE:CD1	77:s:187:LEU:HD11	2.47	0.45
77:s:77:LYS:NZ	77:s:78:LEU:CB	2.80	0.45
77:s:109:ALA:O	77:s:110:ALA:HB3	2.16	0.45
77:s:114:GLY:HA2	77:s:167:VAL:HG12	1.97	0.45
78:t:11:LYS:HB3	78:t:64:ILE:CA	2.46	0.45
79:5:1093:C:H2'	79:5:1094:G:C8	2.51	0.45
79:5:1751:A:H3'	79:5:1752:G:H8	1.82	0.45
79:5:1764:G:H1'	79:5:1769:G:H22	1.81	0.45
79:5:1773:U:H2'	79:5:1774:C:C6	2.51	0.45
79:5:1918:U:O3'	79:5:1919:G:H3'	2.16	0.45
79:5:1973:G:H3'	79:5:1974:U:H3'	1.98	0.45
79:5:3692:A:H62	79:5:3823:G:H21	1.64	0.45
79:5:3813:A:H1'	79:5:4538:G:O2'	2.16	0.45
79:5:4630:G:O2'	79:5:4631:G:H5'	2.16	0.45
82:1:1430:G:C2	82:1:1431:G:C5	3.04	0.45
83:PT:72:C:H2'	83:PT:73:A:C8	2.51	0.45
84:EF:119:LEU:HD22	84:EF:146:ALA:HA	1.98	0.45
84:EF:395:MET:HE3	84:EF:494:MET:HE2	1.97	0.45
84:EF:400:LYS:C	84:EF:401:MET:HG2	2.42	0.45
84:EF:537:ILE:CG1	84:EF:545:ILE:HB	2.47	0.45
1:DD:168:VAL:HG12	1:DD:189:MET:CB	2.46	0.45
2:FF:20:PHE:CE1	2:FF:50:PRO:HD3	2.48	0.45
2:FF:40:ALA:O	2:FF:67:PRO:HA	2.16	0.45
7:RR:91:LEU:HB3	19:AA:180:ARG:NH1	2.32	0.45
7:RR:96:ILE:HB	19:AA:12:GLU:HB2	1.97	0.45
7:RR:128:PHE:CE1	19:AA:41:ARG:HG2	2.51	0.45
8:SS:121:ARG:HG3	8:SS:131:VAL:HG21	1.99	0.45
15:gg:150:TRP:HB2	15:gg:170:TRP:CD1	2.52	0.45
16:R:8:LYS:CD	16:R:19:LYS:HB2	2.44	0.45
18:9:430:C:H2'	18:9:431:G:C8	2.52	0.45
18:9:572:U:H2'	18:9:573:U:O4'	2.16	0.45
18:9:841:G:H2'	18:9:842:C:H6	1.80	0.45
18:9:1208:A:H4'	34:aa:82:LYS:HE2	1.99	0.45
18:9:1358:U:P	21:CC:114:LYS:HG2	2.57	0.45
18:9:1797:U:H2'	18:9:1798:C:H6	1.81	0.45
19:AA:158:ASP:O	30:VV:66:ASP:HA	2.16	0.45
21:CC:84:PHE:CZ	21:CC:264:SER:HA	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CC:207:ALA:HB3	21:CC:210:PRO:CG	2.47	0.45
23:GG:70:HIS:HB3	23:GG:101:ILE:CG2	2.47	0.45
23:GG:147:LEU:HB3	23:GG:151:ASP:OD1	2.16	0.45
24:HH:28:LEU:O	24:HH:32:MET:HG2	2.16	0.45
24:HH:143:ARG:NE	31:WW:53:ILE:HG23	2.32	0.45
27:LL:94:HIS:CB	27:LL:105:ARG:HD2	2.46	0.45
28:NN:29:THR:O	28:NN:33:VAL:HG23	2.17	0.45
37:A:5:ILE:CD1	37:A:232:GLY:HA2	2.46	0.45
37:A:54:ARG:HG2	37:A:56:ALA:H	1.82	0.45
38:B:245:HIS:H	79:5:4525:C:H4'	1.81	0.45
39:C:334:THR:HG22	39:C:337:ARG:HH12	1.81	0.45
40:D:29:ASP:HB2	40:D:150:LEU:CD2	2.43	0.45
42:F:91:VAL:HG22	42:F:141:TRP:CB	2.46	0.45
43:G:100:PRO:HB2	79:5:4157:A:C2	2.51	0.45
43:G:310:LYS:O	43:G:314:LEU:HG	2.16	0.45
44:H:16:VAL:HG12	44:H:18:ILE:HG23	1.99	0.45
45:I:59:GLN:HB3	45:I:126:VAL:CG2	2.45	0.45
47:L:103:ARG:NH2	79:5:325:U:H5''	2.32	0.45
49:N:66:VAL:CG2	49:N:102:ALA:HB2	2.46	0.45
52:Q:18:PRO:HG3	52:Q:29:VAL:HG21	1.98	0.45
52:Q:132:LYS:HZ1	79:5:1449:C:H5''	1.82	0.45
52:Q:175:GLU:O	52:Q:180:ARG:HD2	2.16	0.45
53:S:139:ARG:O	53:S:143:LYS:HG3	2.16	0.45
56:V:35:LYS:HE3	56:V:68:GLY:HA2	1.98	0.45
57:X:46:PHE:O	79:5:2472:A:H4'	2.17	0.45
58:Y:30:MET:HE1	58:Y:79:VAL:O	2.17	0.45
58:Y:54:GLU:OE1	58:Y:108:ARG:HB3	2.16	0.45
60:a:147:VAL:HA	68:i:6:PRO:HG2	1.99	0.45
63:d:22:THR:HG22	63:d:89:SER:HB3	1.97	0.45
65:f:8:LYS:HD3	65:f:100:ARG:NH1	2.32	0.45
68:i:43:MET:O	68:i:47:VAL:HG23	2.16	0.45
77:s:15:LEU:C	77:s:17:ILE:HG22	2.40	0.45
77:s:38:LYS:O	77:s:40:MET:N	2.49	0.45
77:s:121:VAL:O	77:s:159:GLN:HG3	2.16	0.45
77:s:128:THR:CG2	77:s:152:ILE:HD12	2.45	0.45
77:s:141:LEU:C	77:s:143:ILE:H	2.23	0.45
78:t:11:LYS:CB	78:t:64:ILE:N	2.80	0.45
78:t:78:SER:HB3	78:t:139:VAL:HG21	1.98	0.45
78:t:147:HIS:HE2	78:t:151:ILE:HD11	1.82	0.45
79:5:1403:G:H2'	79:5:1404:G:C8	2.49	0.45
79:5:1627:G:H2'	79:5:1628:C:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:1776:A:C6	79:5:1777:C:C2	3.04	0.45
79:5:1847:C:H2'	79:5:1848:C:C6	2.51	0.45
79:5:2355:G:H2'	79:5:2356:U:H6	1.80	0.45
79:5:2480:G:H2'	79:5:2481:G:C8	2.51	0.45
79:5:2624:G:O2'	79:5:2625:U:H5'	2.16	0.45
79:5:3607:U:H2'	79:5:3608:A:C8	2.52	0.45
79:5:3662:A:H4'	79:5:3663:A:C5'	2.47	0.45
79:5:4247:G:O2'	79:5:4248:A:H5'	2.16	0.45
79:5:4584:A:H3'	79:5:4584:A:OP2	2.16	0.45
79:5:4703:U:O2'	79:5:4704:C:H5'	2.16	0.45
82:1:1361:U:H2'	82:1:1443:A:H61	1.81	0.45
82:1:1372:C:H3'	82:1:1373:C:C4'	2.46	0.45
82:1:1455:A:H5'	82:1:1483:A:OP1	2.17	0.45
83:PT:41:A:C5	83:PT:42:C:C6	3.05	0.45
84:EF:109:VAL:HG21	84:EF:801:ARG:HH12	1.81	0.45
84:EF:207:PRO:CB	84:EF:225:LEU:CD1	2.95	0.45
84:EF:351:LEU:O	84:EF:355:THR:N	2.49	0.45
84:EF:436:PRO:HG3	84:EF:492:HIS:CD2	2.52	0.45
84:EF:587:SER:HA	84:EF:736:ALA:HB2	1.98	0.45
4:MM:65:VAL:HG21	4:MM:108:CYS:SG	2.56	0.45
5:PP:108:LYS:CD	5:PP:111:MET:HE3	2.47	0.45
7:RR:90:ALA:HB2	19:AA:196:GLU:CA	2.46	0.45
8:SS:64:VAL:O	8:SS:68:ILE:HG13	2.17	0.45
16:R:23:TRP:HB3	16:R:51:ILE:O	2.17	0.45
16:R:67:THR:O	16:R:71:ARG:HG3	2.15	0.45
16:R:135:LYS:CG	16:R:139:MET:HE3	2.46	0.45
16:R:141:HIS:O	16:R:145:LEU:HG	2.16	0.45
18:9:649:U:H1'	32:XX:45:SER:HB3	1.98	0.45
18:9:1009:A:O2'	18:9:1010:G:H5'	2.17	0.45
18:9:1263:U:H2'	18:9:1264:C:C5	2.52	0.45
18:9:1384:C:O2'	18:9:1484:A:H4'	2.17	0.45
18:9:1391:C:H2'	18:9:1392:U:O4'	2.16	0.45
18:9:1723:G:O2'	18:9:1724:A:H5'	2.17	0.45
18:9:1826:G:H4'	79:5:3760:A:C6	2.51	0.45
18:9:1842:C:O2'	18:9:1843:G:H5'	2.16	0.45
18:9:1867:U:O2'	34:aa:38:LYS:HG2	2.17	0.45
21:CC:170:TRP:CZ3	21:CC:199:PRO:HB3	2.52	0.45
21:CC:259:THR:HG21	30:VV:15:ARG:HA	1.97	0.45
23:GG:181:THR:HG22	23:GG:184:VAL:HG23	1.99	0.45
23:GG:190:ARG:O	23:GG:194:LEU:HG	2.16	0.45
29:OO:20:GLN:HG2	29:OO:27:VAL:HG23	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:aa:10:ARG:HA	34:aa:33:ASP:O	2.15	0.45
37:A:5:ILE:HD12	37:A:232:GLY:HA2	1.98	0.45
37:A:108:PRO:HD3	75:p:90:LYS:NZ	2.32	0.45
37:A:177:LYS:HD2	75:p:29:ILE:HG21	1.98	0.45
37:A:209:HIS:CE1	37:A:235:VAL:HG11	2.52	0.45
38:B:30:LYS:HB2	79:5:4715:C:P	2.56	0.45
41:E:73:ARG:HH21	79:5:983:C:H41	1.63	0.45
42:F:107:VAL:HG21	42:F:134:ILE:HG21	1.98	0.45
43:G:283:TYR:O	43:G:287:ARG:HG3	2.17	0.45
47:L:19:GLN:HE22	79:5:1518:A:H61	1.64	0.45
49:N:146:PRO:HA	49:N:149:GLN:HG2	1.99	0.45
51:P:61:ARG:HB3	81:8:4:C:H5'	1.99	0.45
51:P:124:LYS:HG2	51:P:142:SER:HA	1.98	0.45
58:Y:30:MET:SD	58:Y:78:TYR:HA	2.57	0.45
60:a:76:ASP:HB2	60:a:115:GLY:HA3	1.99	0.45
63:d:29:ILE:HD11	63:d:84:ILE:HG21	1.97	0.45
68:i:55:ARG:O	68:i:59:GLU:HG3	2.16	0.45
76:r:92:SER:O	76:r:96:MET:HG3	2.17	0.45
77:s:141:LEU:HG	77:s:160:LEU:CD1	2.46	0.45
78:t:121:LEU:HD13	79:5:1972:G:O2'	2.17	0.45
78:t:132:ILE:HA	78:t:135:THR:HG23	1.97	0.45
78:t:153:ASP:CA	78:t:157:SER:HB2	2.34	0.45
79:5:425:U:H2'	79:5:426:A:C8	2.51	0.45
79:5:703:G:C2'	79:5:704:C:H4'	2.47	0.45
79:5:1310:C:H2'	79:5:1311:G:O4'	2.17	0.45
79:5:1322:A:C2	79:5:1324:A:H2'	2.52	0.45
79:5:1605:G:H2'	79:5:1606:U:O4'	2.17	0.45
79:5:1667:G:N2	79:5:2282:A:N7	2.65	0.45
79:5:2457:G:H2'	79:5:2458:C:H6	1.82	0.45
79:5:3648:A:H1'	79:5:3785:A:N6	2.29	0.45
79:5:4270:C:H1'	79:5:4283:G:H5'	1.99	0.45
81:8:88:A:H2'	81:8:89:U:C6	2.52	0.45
82:1:1477:G:C3'	82:1:1478:C:C6	3.00	0.45
84:EF:30:HIS:HB2	84:EF:32:LYS:HD2	1.98	0.45
84:EF:46:ILE:CG1	84:EF:56:PHE:CE2	3.00	0.45
84:EF:175:TYR:HA	84:EF:289:PHE:CE2	2.51	0.45
84:EF:368:ARG:HA	84:EF:371:LEU:HB2	1.98	0.45
84:EF:488:PHE:HB3	84:EF:490:HIS:CE1	2.52	0.45
84:EF:527:LEU:HA	84:EF:530:SER:HB3	1.98	0.45
84:EF:551:GLU:C	84:EF:553:HIS:N	2.68	0.45
84:EF:580:ARG:C	84:EF:741:MET:HB2	2.42	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:DD:7:LYS:HG2	18:9:1579:A:OP2	2.17	0.45
2:FF:103:LEU:HB2	11:ZZ:67:LEU:HD11	1.99	0.45
2:FF:192:LYS:O	2:FF:196:LEU:HG	2.16	0.45
3:KK:64:TRP:CD2	13:dd:23:VAL:HG22	2.51	0.45
6:QQ:16:LYS:HG2	6:QQ:82:TYR:CB	2.46	0.45
8:SS:86:ARG:NH2	8:SS:106:LYS:HB3	2.30	0.45
8:SS:110:ASP:O	8:SS:114:LEU:HG	2.17	0.45
8:SS:119:ALA:O	8:SS:123:LEU:HG	2.15	0.45
9:TT:124:THR:HG23	9:TT:126:GLN:N	2.31	0.45
15:gg:299:PHE:CD1	15:gg:309:VAL:HG12	2.52	0.45
16:R:10:LEU:HB3	16:R:41:ILE:HD12	1.97	0.45
18:9:1018:U:H1'	28:NN:48:SER:OG	2.17	0.45
18:9:1390:U:H2'	18:9:1391:C:H6	1.81	0.45
21:CC:187:ARG:HB3	21:CC:192:LEU:HD12	1.99	0.45
23:GG:106:LEU:HD13	23:GG:109:LEU:CD2	2.45	0.45
23:GG:135:PRO:HB2	23:GG:141:ILE:HG12	1.98	0.45
25:II:48:VAL:CG2	25:II:52:ASN:HB2	2.47	0.45
25:II:69:SER:HB2	27:LL:21:LYS:CG	2.41	0.45
26:JJ:33:GLY:HA3	36:ee:111:TYR:CG	2.52	0.45
26:JJ:35:TYR:CD2	26:JJ:106:LEU:HD23	2.52	0.45
28:NN:18:TYR:CE1	31:WW:55:ASP:HA	2.46	0.45
29:OO:38:ASN:C	29:OO:69:SER:HB2	2.42	0.45
37:A:112:ILE:HD13	37:A:135:THR:HG22	1.98	0.45
37:A:226:ARG:N	79:5:3706:C:H5''	2.32	0.45
38:B:94:GLU:HG3	50:O:152:VAL:HG21	1.99	0.45
39:C:28:PHE:HA	39:C:129:ALA:HA	1.98	0.45
39:C:112:HIS:HB2	49:N:202:ARG:O	2.16	0.45
40:D:279:ARG:HG3	79:5:1177:U:O2'	2.17	0.45
41:E:211:ILE:HD12	41:E:212:PRO:HD2	1.98	0.45
41:E:263:LYS:O	41:E:267:VAL:HG23	2.17	0.45
43:G:118:ARG:O	43:G:122:ILE:HG13	2.17	0.45
44:H:36:ARG:HB2	44:H:80:MET:CE	2.46	0.45
48:M:71:LYS:O	48:M:75:LYS:HG3	2.17	0.45
48:M:118:MET:O	48:M:122:ILE:HG13	2.17	0.45
49:N:158:HIS:HB3	49:N:161:MET:HB2	1.99	0.45
52:Q:79:THR:HG22	52:Q:135:GLY:O	2.16	0.45
53:S:15:ARG:HD3	53:S:27:LEU:HD11	1.98	0.45
65:f:30:ILE:HB	65:f:33:VAL:CG1	2.47	0.45
72:m:51:ILE:HG23	72:m:52:ILE:HG22	1.99	0.45
74:o:75:PRO:O	74:o:78:ARG:HG3	2.17	0.45
77:s:32:ALA:HA	77:s:188:ILE:N	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:s:147:ILE:C	77:s:149:ARG:N	2.75	0.45
77:s:194:ASP:O	77:s:195:ASN:C	2.60	0.45
78:t:14:TYR:OH	78:t:61:LYS:HD2	2.16	0.45
79:5:280:G:N2	79:5:305:A:H2'	2.32	0.45
79:5:318:A:H2'	79:5:319:A:C8	2.52	0.45
79:5:1073:G:H22	79:5:1238:A:H2	1.64	0.45
79:5:1370:G:H4'	79:5:1371:A:O5'	2.17	0.45
79:5:1447:C:H2'	79:5:1448:G:O4'	2.17	0.45
79:5:1613:A:N7	79:5:3638:G:H1'	2.31	0.45
79:5:1821:G:H5'	79:5:1822:U:OP1	2.17	0.45
79:5:1874:A:H1'	79:5:4213:A:N7	2.32	0.45
79:5:2605:G:H2'	79:5:2606:G:C8	2.51	0.45
79:5:2853:C:H2'	79:5:2854:G:O4'	2.16	0.45
79:5:3795:A:H2'	79:5:3796:U:C6	2.52	0.45
79:5:4524:G:H2'	79:5:4525:C:C6	2.50	0.45
79:5:4562:C:H2'	79:5:4563:U:C6	2.52	0.45
79:5:4761:G:H2'	79:5:4762:A:H8	1.82	0.45
79:5:4948:C:OP2	79:5:4949:G:H3'	2.16	0.45
83:PT:1:G:N1	83:PT:2:G:C5	2.85	0.45
84:EF:20:ARG:CB	84:EF:100:ILE:HG23	2.47	0.45
84:EF:29:ASP:O	84:EF:30:HIS:C	2.57	0.45
84:EF:321:ILE:CG2	84:EF:343:TRP:HB2	2.46	0.45
84:EF:475:VAL:CG2	84:EF:479:LEU:HD21	2.47	0.45
84:EF:504:VAL:HG13	84:EF:505:VAL:N	2.32	0.45
1:DD:65:ARG:O	1:DD:69:LEU:HG	2.17	0.45
1:DD:69:LEU:O	1:DD:73:VAL:HG23	2.16	0.45
5:PP:122:THR:CG2	18:9:1516:G:H4'	2.43	0.45
8:SS:65:GLU:O	8:SS:69:THR:HG23	2.17	0.45
9:TT:18:LEU:O	9:TT:22:LEU:HG	2.15	0.45
9:TT:133:ARG:O	9:TT:137:GLN:HG3	2.16	0.45
10:UU:28:ASN:HB3	10:UU:31:SER:OG	2.17	0.45
18:9:10:G:H1'	21:CC:115:GLN:OE1	2.15	0.45
18:9:824:C:H2'	18:9:825:A:O4'	2.17	0.45
18:9:941:C:O2'	18:9:942:G:H5'	2.17	0.45
18:9:1251:A:H2'	18:9:1252:C:O4'	2.16	0.45
18:9:1273:C:O2'	18:9:1275:G:H5''	2.17	0.45
18:9:1277:C:H2'	18:9:1278:A:C8	2.49	0.45
18:9:1526:G:H2'	18:9:1527:C:C6	2.51	0.45
19:AA:57:LYS:CA	19:AA:159:ILE:HD11	2.46	0.45
19:AA:89:LYS:HG2	19:AA:201:LEU:HG	1.98	0.45
20:BB:164:ILE:O	20:BB:168:MET:HG3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CC:135:GLY:O	21:CC:165:VAL:HG22	2.16	0.45
22:EE:127:ARG:O	22:EE:156:VAL:HG13	2.16	0.45
22:EE:151:ASP:OD2	22:EE:153:LEU:HB2	2.16	0.45
23:GG:212:LEU:O	23:GG:216:ARG:HD2	2.16	0.45
25:II:165:GLN:OE1	25:II:195:LEU:HD11	2.17	0.45
26:JJ:110:LEU:CB	26:JJ:147:PHE:HB3	2.45	0.45
28:NN:113:PHE:CE2	28:NN:117:LEU:HD11	2.52	0.45
39:C:252:TRP:CZ3	39:C:260:LEU:HD11	2.51	0.45
40:D:106:ALA:CB	40:D:171:LEU:HD13	2.46	0.45
41:E:151:THR:HB	41:E:203:LYS:HG2	1.99	0.45
42:F:104:VAL:O	42:F:108:LEU:HG	2.17	0.45
42:F:165:ARG:HD2	42:F:208:TRP:CE2	2.52	0.45
44:H:5:LEU:HD13	44:H:60:TRP:CD2	2.52	0.45
45:I:94:PHE:CD2	79:5:1785:C:H1'	2.52	0.45
45:I:195:CYS:SG	79:5:1750:G:H1'	2.56	0.45
49:N:98:LEU:HD12	49:N:128:LYS:HD2	1.98	0.45
54:T:19:PHE:CD2	54:T:20:ARG:HG3	2.52	0.45
55:U:28:PRO:HB2	55:U:34:MET:CG	2.46	0.45
63:d:42:ALA:O	63:d:46:LEU:HD23	2.17	0.45
69:j:16:HIS:C	69:j:25:LYS:HE2	2.42	0.45
77:s:32:ALA:HA	77:s:188:ILE:H	1.82	0.45
77:s:44:ARG:HG3	77:s:53:VAL:CB	2.47	0.45
79:5:343:C:O2'	79:5:344:A:H5'	2.17	0.45
79:5:439:G:H2'	79:5:440:U:O4'	2.17	0.45
79:5:1760:G:N1	79:5:1773:U:C2	2.85	0.45
79:5:1982:G:H21	79:5:2010:A:P	2.39	0.45
79:5:1983:A:C4	79:5:2010:A:H5''	2.51	0.45
79:5:2317:C:H2'	79:5:2318:G:C8	2.52	0.45
79:5:2562:G:H22	79:5:2564:G:H3'	1.82	0.45
79:5:2744:A:H2'	79:5:2745:A:C8	2.51	0.45
79:5:3863:C:H2'	79:5:3864:C:C6	2.52	0.45
79:5:4943:A:H2'	79:5:4943:A:OP2	2.16	0.45
83:PT:25:C:C2	83:PT:26:G:C8	3.04	0.45
84:EF:46:ILE:HG13	84:EF:56:PHE:CE2	2.51	0.45
84:EF:95:GLY:O	84:EF:96:ALA:C	2.60	0.45
84:EF:159:LYS:O	84:EF:162:ARG:HB3	2.16	0.45
84:EF:280:PRO:C	84:EF:282:GLY:N	2.74	0.45
84:EF:394:LEU:HA	84:EF:418:SER:O	2.17	0.45
84:EF:507:VAL:HG13	84:EF:572:LYS:HG2	1.98	0.45
84:EF:565:HIS:O	84:EF:566:ALA:HB2	2.16	0.45
84:EF:580:ARG:HB2	84:EF:698:ARG:HB3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:EF:697:MET:HE1	84:EF:729:LEU:HD21	1.99	0.45
3:KK:84:HIS:CB	4:MM:27:ILE:HG23	2.47	0.45
4:MM:49:LEU:HD23	4:MM:75:ASN:CB	2.46	0.45
6:QQ:130:LYS:HA	6:QQ:137:ALA:HA	1.99	0.45
7:RR:105:MET:HE3	19:AA:52:LYS:HZ3	1.82	0.45
9:TT:134:ILE:O	9:TT:138:VAL:HG23	2.17	0.45
10:UU:42:GLY:O	10:UU:46:LYS:HG3	2.17	0.45
12:cc:21:THR:HG22	12:cc:68:LEU:HD13	1.99	0.45
15:gg:30:MET:CG	15:gg:42:MET:HE3	2.46	0.45
18:9:296:U:H2'	18:9:297:A:O4'	2.17	0.45
18:9:439:A:O2'	18:9:440:G:H5'	2.16	0.45
18:9:481:C:H2'	18:9:482:G:C1'	2.47	0.45
18:9:552:G:O2'	18:9:553:U:H5'	2.16	0.45
18:9:605:A:H5''	36:ee:128:PRO:HD2	1.99	0.45
18:9:960:U:H5''	29:OO:149:ARG:NH2	2.32	0.45
18:9:1189:A:H2'	18:9:1190:A:C8	2.52	0.45
18:9:1382:A:O2'	18:9:1383:A:H5'	2.16	0.45
18:9:1620:A:H1'	18:9:1624:U:OP2	2.17	0.45
19:AA:184:ARG:HG3	19:AA:189:ILE:CB	2.39	0.45
33:YY:9:THR:HG21	33:YY:48:TYR:OH	2.17	0.45
33:YY:91:LEU:HB3	33:YY:96:LEU:HD11	1.99	0.45
40:D:84:PRO:HB3	40:D:89:LYS:HE3	1.99	0.45
40:D:107:ARG:HD3	40:D:248:ARG:NH1	2.32	0.45
40:D:238:GLU:O	40:D:242:LYS:HG2	2.17	0.45
42:F:39:LYS:HE2	42:F:43:LYS:CE	2.47	0.45
45:I:22:PHE:CZ	79:5:1788:A:H2'	2.52	0.45
47:L:65:ARG:HG3	60:a:69:PHE:CD2	2.52	0.45
51:P:36:ILE:CD1	51:P:44:ALA:HB1	2.41	0.45
51:P:86:LYS:CG	79:5:3857:G:H5''	2.47	0.45
53:S:73:LEU:HD11	79:5:734:G:H4'	1.99	0.45
54:T:102:ARG:O	54:T:106:LEU:HG	2.16	0.45
58:Y:55:VAL:HG11	58:Y:104:VAL:HG22	1.99	0.45
59:Z:120:GLU:O	59:Z:124:THR:HG23	2.17	0.45
67:h:21:LEU:CD1	67:h:54:ILE:HG23	2.47	0.45
71:l:4:HIS:HB3	79:5:2512:A:C5	2.51	0.45
77:s:25:PRO:HD3	77:s:92:LYS:HD3	1.98	0.45
77:s:35:VAL:HG23	77:s:40:MET:H	1.81	0.45
77:s:135:THR:C	77:s:137:PHE:N	2.71	0.45
77:s:146:LYS:HD2	77:s:155:LEU:CD2	2.46	0.45
77:s:181:SER:OG	77:s:183:PHE:CE2	2.41	0.45
78:t:56:LEU:HD21	78:t:83:LYS:H	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:t:129:ILE:CD1	78:t:160:VAL:HG21	2.47	0.45
79:5:673:C:H2'	79:5:674:G:C8	2.51	0.45
79:5:1553:A:H2'	79:5:1554:A:H8	1.81	0.45
79:5:2768:C:H5'	79:5:2769:U:OP1	2.16	0.45
79:5:4087:G:H4'	79:5:4088:C:H5	1.82	0.45
79:5:4189:U:H2'	79:5:4190:U:H6	1.82	0.45
79:5:4986:G:H2'	79:5:4987:C:H6	1.82	0.45
82:1:1360:A:N1	82:1:1442:G:H4'	2.32	0.45
82:1:1360:A:H5'	82:1:1360:A:N3	2.32	0.45
82:1:1470:C:C5	82:1:1488:G:H5''	2.52	0.45
82:1:1474:G:H3'	82:1:1475:C:H6	1.79	0.45
84:EF:13:MET:HE1	84:EF:464:VAL:C	2.42	0.45
84:EF:13:MET:HE1	84:EF:464:VAL:O	2.17	0.45
84:EF:279:SER:HB2	84:EF:282:GLY:HA3	1.98	0.45
84:EF:364:ALA:HB1	84:EF:368:ARG:HD3	1.99	0.45
84:EF:501:VAL:HG23	84:EF:533:MET:SD	2.56	0.45
84:EF:512:LYS:CE	84:EF:512:LYS:HA	2.47	0.45
84:EF:568:ILE:O	84:EF:570:ILE:HG23	2.16	0.45
84:EF:650:TRP:O	84:EF:651:CYS:C	2.58	0.45
84:EF:662:LEU:HB2	84:EF:683:PHE:CD1	2.52	0.45
1:DD:168:VAL:HG12	1:DD:189:MET:HA	1.98	0.45
2:FF:157:GLY:HA3	2:FF:188:TYR:HB3	1.99	0.45
5:PP:18:ARG:HG3	5:PP:36:LEU:HG	1.99	0.45
5:PP:47:ARG:HD3	18:9:1619:A:OP1	2.17	0.45
9:TT:30:VAL:HG12	9:TT:53:PHE:CD2	2.52	0.45
9:TT:107:LEU:O	9:TT:113:VAL:HG22	2.16	0.45
18:9:86:C:H5'	18:9:149:A:O2'	2.17	0.45
18:9:112:U:H5''	18:9:113:G:H2'	1.99	0.45
18:9:960:U:H2'	18:9:962:A:OP2	2.17	0.45
18:9:1740:C:H2'	18:9:1741:U:C6	2.51	0.45
20:BB:40:ASN:ND2	20:BB:76:ASN:HB2	2.32	0.45
20:BB:165:ARG:O	20:BB:169:MET:HG3	2.16	0.45
23:GG:137:ARG:O	23:GG:141:ILE:HG13	2.18	0.45
24:HH:6:ALA:HA	24:HH:28:LEU:HD11	1.98	0.45
26:JJ:83:ARG:HD3	26:JJ:150:ARG:NE	2.32	0.45
26:JJ:86:VAL:HG21	26:JJ:105:PHE:CD1	2.52	0.45
29:OO:62:VAL:HG11	29:OO:67:ASP:OD2	2.17	0.45
31:WW:31:SER:O	31:WW:35:VAL:HG23	2.16	0.45
37:A:116:LEU:HD21	37:A:158:ILE:HD12	1.99	0.45
39:C:140:LYS:NZ	39:C:242:PRO:HG2	2.32	0.45
40:D:106:ALA:O	40:D:110:LEU:HD13	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:E:167:PHE:CE1	41:E:176:LEU:HD22	2.52	0.45
42:F:104:VAL:HG13	42:F:135:VAL:HG12	1.99	0.45
43:G:210:ILE:HD13	43:G:220:VAL:CG1	2.46	0.45
45:I:180:GLU:O	45:I:184:MET:HG3	2.16	0.45
50:O:24:ALA:HB1	50:O:88:LEU:CD2	2.46	0.45
51:P:47:TYR:O	51:P:51:VAL:HG23	2.17	0.45
52:Q:110:ARG:O	52:Q:114:LEU:HG	2.18	0.45
52:Q:152:PHE:CE1	79:5:1847:C:H4'	2.52	0.45
57:X:145:ASP:HB2	57:X:148:ASP:HB2	1.98	0.45
60:a:72:THR:HA	60:a:110:LYS:O	2.17	0.45
61:b:40:LEU:HD22	61:b:44:ARG:HD2	1.99	0.45
67:h:32:ARG:O	67:h:36:VAL:HG23	2.16	0.45
68:i:27:SER:HB2	79:5:159:C:P	2.56	0.45
69:j:28:HIS:ND1	69:j:31:LYS:HE2	2.32	0.45
74:o:9:ARG:O	79:5:4290:U:H5''	2.16	0.45
74:o:50:GLY:HA3	79:5:3925:U:O2'	2.17	0.45
75:p:73:THR:O	75:p:77:VAL:HG23	2.17	0.45
76:r:86:ALA:O	76:r:90:LEU:HD13	2.17	0.45
77:s:56:GLY:HA3	77:s:61:MET:HE1	1.96	0.45
77:s:105:ASN:O	77:s:106:LYS:HG3	2.17	0.45
78:t:106:PHE:O	78:t:110:VAL:HG23	2.17	0.45
78:t:125:LEU:HD22	78:t:161:GLU:CD	2.41	0.45
78:t:134:GLY:HA2	78:t:147:HIS:ND1	2.32	0.45
79:5:122:U:H2'	79:5:123:C:H6	1.82	0.45
79:5:262:C:H2'	79:5:263:G:H8	1.82	0.45
79:5:388:A:H1'	79:5:403:G:N2	2.32	0.45
79:5:429:A:O4'	79:5:1306:C:H4'	2.17	0.45
79:5:954:C:O2'	79:5:955:G:H5'	2.16	0.45
79:5:1741:G:H3'	79:5:1742:A:C5'	2.46	0.45
79:5:1978:C:N3	79:5:1979:A:H1'	2.32	0.45
79:5:3647:A:OP2	79:5:3829:G:H5'	2.17	0.45
79:5:3873:G:H2'	79:5:3874:G:C8	2.52	0.45
79:5:4082:G:H2'	79:5:4083:U:C6	2.51	0.45
79:5:4573:G:H2'	79:5:4574:U:H6	1.81	0.45
79:5:4633:G:O3'	79:5:4634:U:H3'	2.17	0.45
79:5:5010:U:H2'	79:5:5011:A:C8	2.51	0.45
80:7:56:G:H2'	80:7:57:C:O4'	2.17	0.45
81:8:137:A:OP1	81:8:137:A:H3'	2.17	0.45
82:1:1361:U:H6	82:1:1361:U:H3'	1.82	0.45
82:1:1383:G:H2'	82:1:1384:C:O4'	2.17	0.45
84:EF:178:PHE:O	84:EF:181:ILE:N	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:EF:313:ALA:O	84:EF:316:ILE:N	2.50	0.45
84:EF:390:PRO:C	84:EF:391:LYS:HD2	2.41	0.45
84:EF:397:TYR:CD1	84:EF:494:MET:HB2	2.52	0.45
84:EF:412:ALA:HB3	84:EF:472:LEU:CD1	2.24	0.45
84:EF:477:GLN:HB2	84:EF:478:PHE:CE1	2.52	0.45
84:EF:736:ALA:C	84:EF:738:PRO:CD	2.90	0.45
1:DD:35:SER:CA	1:DD:99:ILE:HD11	2.47	0.44
5:PP:90:VAL:HG13	5:PP:107:ILE:O	2.17	0.44
7:RR:53:TYR:CE2	7:RR:57:LEU:HD11	2.52	0.44
8:SS:121:ARG:HA	8:SS:131:VAL:CG2	2.47	0.44
9:TT:99:VAL:O	9:TT:103:VAL:HG23	2.17	0.44
14:ff:130:VAL:HG11	14:ff:143:LYS:NZ	2.32	0.44
16:R:56:THR:HG21	79:5:2820:C:OP1	2.16	0.44
18:9:510:G:O2'	18:9:511:U:H5'	2.17	0.44
18:9:587:A:O2'	18:9:590:A:H1'	2.17	0.44
18:9:821:G:H1'	18:9:824:C:OP1	2.18	0.44
18:9:857:U:H2'	18:9:858:A:C8	2.52	0.44
18:9:1372:U:H5''	18:9:1386:A:C2	2.52	0.44
18:9:1616:U:H3	18:9:1620:A:H2	1.65	0.44
21:CC:254:ASP:HB3	30:VV:1:MET:SD	2.58	0.44
23:GG:228:ILE:HG22	23:GG:232:ARG:NH1	2.32	0.44
26:JJ:86:VAL:HG21	26:JJ:105:PHE:CE1	2.52	0.44
27:LL:84:ARG:HH12	27:LL:115:PRO:HG3	1.83	0.44
38:B:385:LYS:HD3	79:5:5001:U:OP1	2.17	0.44
39:C:78:ARG:HB3	39:C:88:GLY:C	2.41	0.44
39:C:208:CYS:HB3	39:C:250:CYS:SG	2.57	0.44
42:F:57:HIS:HB2	79:5:943:A:C2	2.52	0.44
43:G:104:LEU:O	43:G:108:VAL:HG23	2.17	0.44
44:H:47:LEU:HG	44:H:52:LYS:HD2	1.98	0.44
45:I:99:ILE:CG2	45:I:123:GLN:HB2	2.46	0.44
45:I:191:ILE:C	45:I:197:VAL:HG23	2.41	0.44
46:J:111:GLU:HA	46:J:127:GLY:HA2	1.97	0.44
48:M:11:ARG:HG3	48:M:60:PHE:O	2.17	0.44
48:M:13:ALA:HA	48:M:58:THR:HG23	1.98	0.44
48:M:90:ARG:HA	48:M:93:LYS:CE	2.46	0.44
48:M:118:MET:HE1	79:5:4891:G:H21	1.82	0.44
50:O:151:ALA:O	50:O:155:THR:HG23	2.17	0.44
56:V:117:ILE:CD1	56:V:136:ALA:HB2	2.44	0.44
57:X:128:ILE:HD12	79:5:2781:G:P	2.57	0.44
58:Y:115:ARG:O	58:Y:119:LEU:HD13	2.18	0.44
61:b:102:PRO:O	61:b:106:ARG:HG3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:p:22:LEU:O	75:p:26:VAL:HG23	2.17	0.44
77:s:146:LYS:N	77:s:155:LEU:HD22	2.31	0.44
77:s:192:VAL:O	77:s:193:PHE:HB2	2.16	0.44
78:t:15:LEU:HD21	78:t:31:LYS:CB	2.46	0.44
78:t:96:LYS:HE3	78:t:96:LYS:HB2	1.79	0.44
79:5:1345:A:H2'	79:5:1346:C:H6	1.82	0.44
79:5:1416:G:H2'	79:5:1417:C:H6	1.83	0.44
79:5:1763:C:O5'	79:5:1763:C:H6	2.00	0.44
79:5:1861:U:H2'	79:5:1862:U:O4'	2.17	0.44
79:5:2083:C:H5''	79:5:2084:C:OP2	2.17	0.44
79:5:2719:C:O2'	79:5:2720:C:H5'	2.17	0.44
79:5:2775:C:H2'	79:5:2776:G:H8	1.82	0.44
79:5:3934:G:H2'	79:5:3935:C:H6	1.82	0.44
79:5:4222:G:O2'	79:5:4223:C:H5'	2.17	0.44
79:5:4478:G:H2'	79:5:4479:A:C8	2.52	0.44
79:5:4489:G:N3	79:5:4708:A:H2'	2.33	0.44
79:5:4616:A:H2'	79:5:4617:G:O4'	2.17	0.44
79:5:4650:G:H2'	79:5:4651:A:O4'	2.17	0.44
79:5:4656:A:OP1	79:5:4658:G:H4'	2.17	0.44
81:8:57:C:H2'	81:8:58:G:C8	2.52	0.44
82:1:1422:A:H3'	82:1:1423:C:C5'	2.44	0.44
83:PT:14:A:C6	83:PT:22:G:C6	3.05	0.44
84:EF:27:HIS:CD2	84:EF:138:GLN:HB2	2.52	0.44
84:EF:363:THR:O	84:EF:366:LYS:HB2	2.16	0.44
84:EF:527:LEU:HB2	84:EF:565:HIS:CE1	2.51	0.44
84:EF:597:ASN:HB3	84:EF:599:HIS:CD2	2.52	0.44
84:EF:615:GLU:O	84:EF:619:LYS:N	2.50	0.44
84:EF:671:TYR:CB	84:EF:674:GLU:HB3	2.47	0.44
84:EF:692:LEU:CD1	84:EF:740:LEU:HD21	2.45	0.44
84:EF:724:THR:O	84:EF:727:ARG:HG2	2.18	0.44
84:EF:745:TYR:HB2	84:EF:814:PHE:HA	1.99	0.44
2:FF:50:PRO:HG2	2:FF:90:VAL:HG22	1.99	0.44
2:FF:52:SER:HB3	2:FF:70:GLU:OE2	2.17	0.44
2:FF:61:PHE:CZ	12:cc:51:ARG:HB3	2.51	0.44
3:KK:58:VAL:CG2	3:KK:69:TRP:HB3	2.42	0.44
4:MM:18:LEU:N	4:MM:124:ILE:HD11	2.32	0.44
4:MM:30:GLY:O	4:MM:112:LYS:HB3	2.18	0.44
8:SS:85:ASN:ND2	8:SS:103:LEU:HD13	2.32	0.44
10:UU:54:VAL:HG22	18:9:1401:A:O2'	2.17	0.44
11:ZZ:84:ALA:O	11:ZZ:88:LEU:HG	2.17	0.44
15:gg:20:GLN:HG3	15:gg:68:ASP:OD1	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:gg:31:ILE:HG22	15:gg:43:TRP:HB2	2.00	0.44
15:gg:296:GLN:CD	15:gg:312:VAL:HB	2.42	0.44
16:R:37:SER:OG	16:R:40:GLN:HB2	2.18	0.44
18:9:42:A:O2'	18:9:43:U:H5'	2.16	0.44
18:9:673:G:H2'	18:9:674:C:C6	2.52	0.44
18:9:1213:C:H2'	18:9:1214:A:C8	2.52	0.44
18:9:1253:A:H4'	18:9:1254:C:O5'	2.16	0.44
19:AA:83:GLY:O	19:AA:87:VAL:HG13	2.17	0.44
20:BB:63:LYS:CE	20:BB:90:ASP:HA	2.47	0.44
20:BB:87:ILE:O	20:BB:98:THR:HA	2.17	0.44
20:BB:140:VAL:HG12	20:BB:213:ARG:HB3	1.98	0.44
21:CC:263:LYS:HE3	21:CC:267:GLN:HG2	2.00	0.44
22:EE:123:LEU:HD23	22:EE:226:PHE:HE1	1.83	0.44
23:GG:185:LEU:O	23:GG:189:ARG:HG3	2.17	0.44
24:HH:39:GLN:HB3	24:HH:75:ILE:HD12	1.98	0.44
27:LL:58:LYS:HG3	27:LL:59:LYS:HG3	1.98	0.44
28:NN:85:PRO:HG2	28:NN:129:TYR:CE2	2.52	0.44
29:OO:99:ALA:N	29:OO:133:THR:HG22	2.31	0.44
31:WW:90:GLN:HA	31:WW:102:ILE:CD1	2.47	0.44
32:XX:97:ASN:CB	84:EF:521:VAL:HG11	2.47	0.44
33:YY:41:ARG:HD2	33:YY:94:HIS:HE1	1.82	0.44
37:A:137:ILE:HD12	37:A:147:ARG:HG2	1.99	0.44
40:D:145:TYR:CD1	79:5:4325:A:H4'	2.52	0.44
41:E:196:PHE:HA	65:f:106:TYR:O	2.16	0.44
46:J:56:THR:HG23	46:J:62:ILE:O	2.17	0.44
47:L:182:LEU:HD21	60:a:146:LEU:HD13	1.99	0.44
50:O:192:PHE:O	50:O:196:LEU:HD13	2.17	0.44
55:U:39:PHE:CE2	55:U:43:LEU:HD11	2.52	0.44
56:V:105:ILE:HG21	56:V:113:LYS:HD3	1.99	0.44
61:b:44:ARG:HG2	79:5:1465:G:OP1	2.17	0.44
64:e:44:ARG:NH1	79:5:1313:C:H3'	2.31	0.44
71:l:4:HIS:HB3	79:5:2512:A:C6	2.52	0.44
74:o:11:PHE:HB2	74:o:18:HIS:CE1	2.52	0.44
77:s:52:VAL:HG13	77:s:54:LEU:CD2	2.47	0.44
77:s:56:GLY:N	79:5:1998:A:C4	2.85	0.44
77:s:65:ILE:O	77:s:66:ARG:C	2.59	0.44
77:s:116:ILE:H	77:s:166:LYS:NZ	2.15	0.44
77:s:135:THR:O	77:s:136:SER:C	2.57	0.44
77:s:143:ILE:HA	77:s:158:VAL:HG11	1.99	0.44
77:s:180:ILE:O	77:s:181:SER:HB3	2.12	0.44
78:t:80:LEU:HD13	78:t:115:GLN:NE2	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:t:116:MET:HG3	78:t:132:ILE:CB	2.47	0.44
79:5:47:A:OP1	79:5:49:U:H1'	2.17	0.44
79:5:193:G:O2'	79:5:194:C:H5'	2.17	0.44
79:5:1531:U:H2'	79:5:1532:G:H8	1.81	0.44
79:5:1767:A:C4	79:5:1769:G:C8	3.05	0.44
79:5:2341:A:O2'	79:5:2342:G:H5'	2.17	0.44
79:5:4188:U:H2'	79:5:4189:U:H6	1.82	0.44
79:5:4236:G:H4'	79:5:4328:G:O2'	2.17	0.44
79:5:4294:C:O2'	79:5:4295:U:H5'	2.16	0.44
79:5:4333:C:H2'	79:5:4334:U:C6	2.53	0.44
81:8:130:C:H2'	81:8:131:G:H8	1.81	0.44
84:EF:88:PHE:CD1	84:EF:88:PHE:C	2.95	0.44
84:EF:206:ASP:N	84:EF:212:VAL:HG13	2.32	0.44
84:EF:316:ILE:O	84:EF:316:ILE:HG22	2.18	0.44
84:EF:505:VAL:HG12	84:EF:554:LEU:HD22	1.99	0.44
84:EF:558:LEU:HA	84:EF:561:LEU:HB2	1.98	0.44
84:EF:602:LEU:C	84:EF:603:TYR:CD1	2.95	0.44
84:EF:744:ILE:HG13	84:EF:788:LEU:O	2.17	0.44
84:EF:772:GLU:O	84:EF:785:LYS:N	2.45	0.44
1:DD:93:THR:OG1	1:DD:96:LEU:HD13	2.17	0.44
2:FF:173:LEU:O	2:FF:177:LEU:HG	2.18	0.44
9:TT:87:VAL:HG23	18:9:1229:G:H21	1.82	0.44
10:UU:46:LYS:HD3	10:UU:101:ILE:HD11	2.00	0.44
12:cc:46:VAL:HB	12:cc:50:VAL:HG21	1.99	0.44
16:R:10:LEU:CB	16:R:41:ILE:HD12	2.48	0.44
18:9:179:C:H3'	18:9:180:G:H8	1.82	0.44
18:9:458:A:H2'	18:9:459:C:O4'	2.18	0.44
18:9:618:C:OP1	32:XX:87:ASN:HA	2.18	0.44
18:9:730:C:H2'	18:9:731:G:C8	2.53	0.44
18:9:1280:G:H2'	18:9:1281:G:C8	2.53	0.44
18:9:1438:A:H2'	18:9:1439:A:H8	1.82	0.44
21:CC:167:ARG:CG	21:CC:177:PRO:HB2	2.47	0.44
21:CC:210:PRO:O	21:CC:214:LEU:HG	2.17	0.44
22:EE:55:ALA:HB3	22:EE:61:VAL:HG22	1.98	0.44
22:EE:143:ASP:CG	22:EE:145:ARG:HD3	2.42	0.44
23:GG:221:LYS:O	23:GG:225:GLN:HG3	2.17	0.44
26:JJ:114:VAL:HG12	26:JJ:120:ALA:CB	2.46	0.44
28:NN:112:LYS:O	28:NN:116:ILE:HG13	2.18	0.44
29:OO:56:VAL:HG21	29:OO:61:LYS:NZ	2.32	0.44
31:WW:56:HIS:O	31:WW:57:ARG:HG3	2.17	0.44
33:YY:55:ILE:HG12	33:YY:75:ILE:CG1	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:A:24:LYS:HE3	37:A:49:ILE:CD1	2.47	0.44
38:B:92:TYR:HB3	38:B:99:LEU:CD2	2.47	0.44
38:B:283:LYS:CE	38:B:363:ILE:HD13	2.47	0.44
38:B:312:LYS:HD2	38:B:370:THR:OG1	2.18	0.44
39:C:330:PRO:HG2	42:F:50:TYR:HA	1.99	0.44
41:E:165:VAL:HG12	41:E:178:VAL:HG22	1.99	0.44
44:H:18:ILE:CG2	44:H:27:VAL:HG22	2.47	0.44
44:H:89:ARG:HE	44:H:187:VAL:HA	1.82	0.44
47:L:33:ILE:CG2	47:L:37:LYS:HE2	2.47	0.44
48:M:39:ASP:HB2	48:M:47:ARG:HA	1.99	0.44
48:M:116:LYS:NZ	50:O:201:LEU:HD13	2.32	0.44
49:N:69:GLY:HA3	79:5:4175:G:H4'	1.99	0.44
49:N:75:VAL:HG11	49:N:80:THR:OG1	2.18	0.44
51:P:16:LYS:HE2	51:P:149:ILE:HD13	1.98	0.44
52:Q:101:CYS:HA	52:Q:121:LEU:O	2.18	0.44
54:T:154:ILE:H	54:T:154:ILE:HG13	1.58	0.44
55:U:87:THR:HG23	55:U:102:VAL:HG21	2.00	0.44
56:V:109:LYS:HE3	56:V:109:LYS:HB3	1.78	0.44
64:e:60:TYR:CE1	79:5:1900:C:H4'	2.52	0.44
67:h:96:ASN:HB2	67:h:99:GLU:CG	2.46	0.44
78:t:82:ILE:CD1	78:t:100:HIS:HE1	2.30	0.44
78:t:148:PRO:O	78:t:152:ILE:HG13	2.17	0.44
79:5:385:A:O2'	79:5:387:G:H5'	2.16	0.44
79:5:726:G:H2'	79:5:727:C:H6	1.81	0.44
79:5:947:C:H2'	79:5:948:C:C6	2.53	0.44
79:5:1326:A:H2'	79:5:1327:C:C6	2.52	0.44
79:5:1643:A:H2'	79:5:1644:C:H6	1.82	0.44
79:5:1667:G:N2	79:5:2281:U:C5	2.85	0.44
79:5:1761:G:N3	79:5:1761:G:H2'	2.33	0.44
79:5:1837:A:O2'	79:5:1838:A:H5'	2.17	0.44
79:5:1974:U:C4	79:5:2002:A:C6	3.05	0.44
79:5:2366:A:C8	79:5:3851:U:H4'	2.52	0.44
79:5:2706:G:H3'	79:5:2707:U:C5'	2.48	0.44
79:5:3816:A:H2'	79:5:3819:G:H21	1.82	0.44
79:5:4762:A:H2'	79:5:4763:U:O4'	2.18	0.44
81:8:43:A:O2'	81:8:44:A:H5'	2.17	0.44
82:1:1430:G:O2'	82:1:1431:G:H5'	2.16	0.44
82:1:1477:G:C2'	82:1:1478:C:C6	2.99	0.44
84:EF:57:THR:HG22	84:EF:75:ILE:HG21	1.98	0.44
84:EF:88:PHE:CD2	84:EF:250:ALA:HB1	2.51	0.44
84:EF:256:MET:HE3	84:EF:260:LEU:CD1	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:EF:295:ASP:C	84:EF:299:LYS:HD2	2.42	0.44
84:EF:373:TYR:CE1	84:EF:375:GLY:HA2	2.52	0.44
84:EF:385:ILE:O	84:EF:386:LYS:C	2.60	0.44
84:EF:408:GLY:O	84:EF:410:PHE:N	2.50	0.44
84:EF:494:MET:O	84:EF:495:ARG:C	2.59	0.44
84:EF:592:LEU:HD22	84:EF:856:LYS:CA	2.48	0.44
84:EF:629:LYS:HA	84:EF:632:ALA:HB3	1.97	0.44
84:EF:640:GLU:O	84:EF:642:ASP:N	2.50	0.44
84:EF:678:SER:HA	84:EF:722:ILE:HG13	1.99	0.44
84:EF:687:THR:HA	84:EF:697:MET:HB2	1.99	0.44
84:EF:771:PHE:CB	84:EF:786:ALA:HA	2.46	0.44
1:DD:74:GLN:OE1	1:DD:81:GLU:HA	2.18	0.44
2:FF:88:MET:HE2	2:FF:91:ARG:NH2	2.33	0.44
5:PP:43:ARG:HH12	5:PP:47:ARG:HD2	1.81	0.44
6:QQ:25:CYS:HB3	6:QQ:66:VAL:HG13	1.99	0.44
6:QQ:47:LEU:HD22	6:QQ:81:ILE:HD12	2.00	0.44
7:RR:60:ARG:NH2	18:9:1464:C:H4'	2.32	0.44
8:SS:59:LEU:HD12	8:SS:63:GLU:OE1	2.18	0.44
8:SS:75:ARG:NH2	8:SS:95:TYR:HB2	2.33	0.44
10:UU:64:THR:HG21	18:9:1668:U:O2'	2.18	0.44
15:gg:22:ALA:O	15:gg:31:ILE:HD12	2.18	0.44
15:gg:206:LEU:HD23	15:gg:206:LEU:H	1.83	0.44
16:R:63:CYS:SG	79:5:2809:G:H5''	2.57	0.44
16:R:135:LYS:CD	16:R:139:MET:HE3	2.48	0.44
18:9:73:C:H5''	18:9:74:G:OP2	2.17	0.44
18:9:106:C:H5''	18:9:431:G:O2'	2.18	0.44
18:9:304:C:H3'	18:9:305:U:P	2.57	0.44
18:9:1139:C:H2'	18:9:1140:G:O4'	2.18	0.44
18:9:1406:G:H2'	18:9:1407:U:C6	2.53	0.44
19:AA:89:LYS:HB3	19:AA:202:TYR:CE2	2.53	0.44
19:AA:131:HIS:O	19:AA:135:THR:HG23	2.16	0.44
19:AA:145:ILE:HG12	19:AA:159:ILE:CG2	2.47	0.44
20:BB:71:LEU:HB3	20:BB:79:VAL:O	2.18	0.44
20:BB:168:MET:HG2	20:BB:197:ILE:HG21	1.98	0.44
20:BB:225:LEU:HD21	20:BB:229:MET:HE2	1.99	0.44
21:CC:146:GLU:HG3	21:CC:149:THR:CB	2.48	0.44
23:GG:76:LEU:HG	23:GG:94:ARG:NH1	2.33	0.44
23:GG:79:LYS:CB	23:GG:86:PRO:HG3	2.47	0.44
24:HH:83:LEU:HD12	24:HH:92:VAL:HG21	1.99	0.44
24:HH:148:LEU:HA	31:WW:42:MET:SD	2.57	0.44
25:II:48:VAL:HG11	25:II:54:LYS:HE3	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:II:107:THR:OG1	25:II:108:PRO:HD3	2.17	0.44
26:JJ:77:LEU:O	26:JJ:81:LEU:HG	2.16	0.44
27:LL:82:MET:HB3	27:LL:85:THR:HG23	1.99	0.44
38:B:14:LEU:HB3	79:5:4587:G:O2'	2.18	0.44
39:C:347:HIS:O	39:C:351:VAL:HG23	2.18	0.44
41:E:161:ARG:CZ	79:5:4945:G:H1'	2.47	0.44
45:I:86:HIS:HB3	45:I:139:ARG:HG3	1.98	0.44
46:J:35:ARG:O	46:J:39:VAL:HG23	2.18	0.44
48:M:62:LEU:HG	48:M:64:PHE:HE2	1.82	0.44
50:O:90:HIS:HB2	50:O:99:LEU:HD11	2.00	0.44
51:P:137:ASN:ND2	79:5:3861:A:H4'	2.33	0.44
52:Q:75:ARG:HA	52:Q:78:LYS:NZ	2.33	0.44
52:Q:143:ARG:NH2	79:5:1692:C:H4'	2.33	0.44
53:S:132:ILE:CG2	53:S:136:LYS:HB2	2.48	0.44
65:f:36:ARG:O	65:f:39:THR:HG22	2.18	0.44
66:g:95:PHE:O	66:g:99:GLU:HG2	2.18	0.44
69:j:76:HIS:HD2	69:j:79:ARG:HH22	1.65	0.44
70:k:57:LYS:HA	70:k:60:LEU:HD23	2.00	0.44
73:n:2:ARG:HB3	73:n:5:TRP:CD1	2.52	0.44
74:o:17:LYS:HE3	74:o:17:LYS:HB2	1.82	0.44
74:o:36:GLN:HG2	74:o:39:ARG:NH2	2.31	0.44
75:p:16:THR:HG22	79:5:2876:G:N7	2.32	0.44
76:r:52:GLU:HB2	76:r:61:VAL:CG2	2.48	0.44
76:r:114:ALA:O	76:r:118:LEU:HD13	2.17	0.44
77:s:98:ILE:O	77:s:102:LEU:HD21	2.15	0.44
77:s:162:LYS:N	77:s:165:ASP:HB3	2.32	0.44
78:t:37:LEU:HD22	78:t:38:SER:N	2.33	0.44
78:t:119:ARG:CD	78:t:119:ARG:N	2.79	0.44
78:t:126:SER:O	78:t:127:GLY:C	2.60	0.44
78:t:130:LYS:NZ	78:t:151:ILE:HG23	2.32	0.44
78:t:147:HIS:NE2	78:t:151:ILE:HD11	2.33	0.44
79:5:270:U:H2'	79:5:271:C:C6	2.53	0.44
79:5:1753:G:C2	79:5:1778:C:C2	3.05	0.44
79:5:1758:G:N7	79:5:1768:C:N4	2.64	0.44
79:5:1804:A:H4'	79:5:1805:A:O5'	2.17	0.44
79:5:4608:G:H2'	79:5:4609:G:O4'	2.17	0.44
79:5:4683:U:H2'	79:5:4684:A:C8	2.51	0.44
80:7:72:U:H2'	80:7:73:U:O4'	2.17	0.44
81:8:19:C:O2'	81:8:20:A:H5'	2.18	0.44
81:8:68:G:H2'	81:8:69:U:O4'	2.17	0.44
82:1:1332:G:H2'	82:1:1333:G:H8	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:1:1352:U:H2'	82:1:1353:U:OP1	2.17	0.44
82:1:1458:C:C2	82:1:1459:U:C5	3.05	0.44
83:PT:58:A:C6	83:PT:61:C:C2	3.04	0.44
83:PT:65:G:O2'	83:PT:66:C:H5'	2.18	0.44
84:EF:550:GLY:C	84:EF:553:HIS:HB3	2.42	0.44
84:EF:731:ALA:HB1	84:EF:854:LEU:CD1	2.43	0.44
84:EF:762:VAL:O	84:EF:763:LEU:C	2.59	0.44
1:DD:33:GLY:HA3	1:DD:53:THR:OG1	2.17	0.44
2:FF:204:ARG:HB2	12:cc:63:ARG:NH1	2.32	0.44
6:QQ:89:SER:OG	6:QQ:112:LEU:HD13	2.17	0.44
7:RR:25:GLY:O	7:RR:58:MET:HG2	2.16	0.44
15:gg:31:ILE:CG2	15:gg:43:TRP:HB2	2.47	0.44
15:gg:32:LEU:HD11	15:gg:40:ILE:HG22	2.00	0.44
15:gg:85:GLY:HA2	15:gg:108:VAL:HG23	2.00	0.44
15:gg:197:THR:HG21	15:gg:238:ALA:CA	2.48	0.44
15:gg:198:VAL:HG13	15:gg:207:CYS:SG	2.58	0.44
18:9:27:A:H2'	18:9:28:U:C6	2.53	0.44
18:9:291:G:N3	27:LL:42:LEU:HD13	2.33	0.44
18:9:385:G:H1'	18:9:387:C:OP2	2.18	0.44
18:9:1129:G:O2'	18:9:1130:G:H5'	2.18	0.44
18:9:1448:A:H2'	18:9:1449:G:O4'	2.18	0.44
18:9:1454:A:C2	18:9:1476:A:H1'	2.52	0.44
18:9:1825:A:C1'	82:1:1493:G:C2	2.91	0.44
19:AA:119:PRO:O	19:AA:142:LEU:HD21	2.17	0.44
21:CC:64:THR:HG21	21:CC:89:LYS:HB2	1.99	0.44
23:GG:220:ALA:O	23:GG:224:ARG:HG3	2.18	0.44
23:GG:230:LYS:O	23:GG:234:LEU:HG	2.18	0.44
25:II:82:VAL:CG2	25:II:103:LEU:HG	2.48	0.44
27:LL:69:ARG:O	27:LL:130:GLU:HB3	2.18	0.44
29:OO:64:ALA:O	29:OO:68:GLU:HG3	2.17	0.44
31:WW:103:VAL:HA	31:WW:112:ASP:HA	1.99	0.44
37:A:207:VAL:HG12	79:5:3919:C:H5''	2.00	0.44
38:B:82:PRO:HA	38:B:329:ASP:OD1	2.16	0.44
39:C:263:LEU:HD23	39:C:273:LEU:HD13	1.99	0.44
43:G:276:ARG:HG3	43:G:280:ASN:HB2	2.00	0.44
44:H:150:ASP:OD2	44:H:153:LEU:HG	2.18	0.44
45:I:85:PHE:HD2	45:I:87:ILE:HG13	1.83	0.44
46:J:74:VAL:C	46:J:79:ALA:HB2	2.43	0.44
46:J:141:ILE:HD11	80:7:55:A:C2	2.53	0.44
48:M:133:ALA:O	48:M:137:LYS:HG3	2.18	0.44
49:N:11:TRP:HA	49:N:19:MET:HE2	1.97	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:N:177:GLY:HA2	79:5:67:C:O3'	2.18	0.44
51:P:61:ARG:HH22	51:P:76:TRP:HB3	1.82	0.44
51:P:83:TRP:CZ3	79:5:3855:C:H4'	2.52	0.44
61:b:31:SER:HA	79:5:1463:C:O3'	2.16	0.44
61:b:101:HIS:NE2	61:b:103:LYS:HB2	2.31	0.44
66:g:4:ARG:HB3	79:5:2805:C:O2	2.18	0.44
70:k:46:VAL:O	70:k:47:ILE:HD13	2.17	0.44
74:o:9:ARG:HA	74:o:20:PRO:HA	1.98	0.44
77:s:192:VAL:CG2	77:s:199:TYR:HB3	2.46	0.44
78:t:13:VAL:HG23	78:t:31:LYS:CE	2.46	0.44
78:t:85:LEU:HD11	78:t:104:ILE:HD11	2.00	0.44
78:t:99:LYS:H	78:t:99:LYS:HG2	1.39	0.44
78:t:115:GLN:O	78:t:119:ARG:HD2	2.17	0.44
78:t:116:MET:SD	78:t:132:ILE:CG1	2.99	0.44
79:5:974:C:H2'	79:5:975:C:C6	2.52	0.44
79:5:1662:C:H2'	79:5:1663:C:C6	2.53	0.44
79:5:1747:U:H2'	79:5:1748:U:C6	2.52	0.44
79:5:1764:G:H8	79:5:1767:A:N7	2.15	0.44
79:5:1983:A:C6	79:5:1987:C:O4'	2.70	0.44
79:5:2028:C:H2'	79:5:2029:A:H8	1.83	0.44
79:5:2075:G:O2'	79:5:2076:G:H5'	2.18	0.44
79:5:2458:C:H2'	79:5:2459:G:O4'	2.18	0.44
79:5:2459:G:H2'	79:5:2461:G:OP2	2.18	0.44
79:5:4459:U:H2'	79:5:4460:U:H6	1.81	0.44
81:8:133:G:H2'	81:8:134:G:H8	1.83	0.44
82:1:1357:U:N3	82:1:1375:C:N3	2.61	0.44
82:1:1361:U:H3'	82:1:1361:U:C6	2.52	0.44
82:1:1422:A:C2	82:1:1435:G:C8	3.06	0.44
82:1:1478:C:O3'	82:1:1479:U:H6	2.01	0.44
84:EF:9:ILE:HA	84:EF:12:ILE:HG12	2.00	0.44
84:EF:109:VAL:HB	84:EF:138:GLN:CD	2.42	0.44
84:EF:124:GLY:HA3	84:EF:358:LEU:HD11	1.99	0.44
84:EF:477:GLN:N	84:EF:477:GLN:OE1	2.50	0.44
84:EF:551:GLU:O	84:EF:552:LEU:C	2.57	0.44
84:EF:558:LEU:CD2	84:EF:561:LEU:HD12	2.47	0.44
84:EF:662:LEU:HA	84:EF:702:PHE:HB2	2.00	0.44
84:EF:665:ILE:HD13	84:EF:665:ILE:N	2.32	0.44
2:FF:94:LYS:O	2:FF:98:GLU:HG2	2.18	0.44
3:KK:25:LYS:HB2	3:KK:67:PHE:HE1	1.83	0.44
8:SS:27:ALA:O	8:SS:31:THR:HG23	2.18	0.44
11:ZZ:66:LYS:O	11:ZZ:110:THR:HG22	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:cc:17:VAL:CA	12:cc:30:VAL:HG13	2.38	0.44
12:cc:44:ARG:HA	12:cc:65:ALA:HB3	2.00	0.44
13:dd:23:VAL:HB	13:dd:42:CYS:SG	2.57	0.44
15:gg:166:VAL:HG11	15:gg:207:CYS:SG	2.58	0.44
15:gg:219:TRP:CZ3	15:gg:226:HIS:HB2	2.53	0.44
18:9:374:G:O2'	18:9:375:U:H5'	2.18	0.44
18:9:1016:U:H5'	28:NN:15:ALA:O	2.18	0.44
18:9:1188:A:H2'	18:9:1189:A:O4'	2.18	0.44
18:9:1631:U:H2'	18:9:1632:G:H5'	1.99	0.44
19:AA:124:VAL:CG1	19:AA:130:ASP:HB2	2.47	0.44
23:GG:55:GLY:O	23:GG:63:MET:HB3	2.18	0.44
23:GG:77:LEU:HD12	23:GG:95:LYS:HD3	1.99	0.44
30:VV:55:ILE:CD1	30:VV:69:ILE:HG12	2.47	0.44
37:A:209:HIS:NE2	37:A:235:VAL:HG11	2.33	0.44
37:A:234:LYS:CD	79:5:3666:C:H5''	2.47	0.44
38:B:77:THR:CG2	38:B:336:CYS:HA	2.48	0.44
38:B:122:TRP:CE2	38:B:127:LYS:HE3	2.53	0.44
40:D:53:VAL:HB	40:D:159:VAL:HG13	1.98	0.44
41:E:143:LEU:HG	41:E:194:GLN:OE1	2.17	0.44
42:F:29:ILE:O	42:F:33:ARG:HG3	2.17	0.44
42:F:153:ILE:HG21	42:F:190:ILE:CG1	2.47	0.44
43:G:142:ARG:O	43:G:146:THR:HG23	2.18	0.44
44:H:99:PHE:HB3	44:H:116:ASN:ND2	2.32	0.44
47:L:8:MET:HG3	52:Q:166:TYR:HB3	2.00	0.44
47:L:14:PHE:HB2	79:5:1515:A:O2'	2.17	0.44
47:L:60:ARG:O	79:5:74:G:H5'	2.18	0.44
49:N:14:LYS:CE	79:5:280:G:H5''	2.47	0.44
51:P:55:LYS:HE2	51:P:55:LYS:HA	1.98	0.44
52:Q:138:LEU:HD13	79:5:1427:A:H2	1.82	0.44
55:U:63:LEU:HG	55:U:72:VAL:HG22	1.99	0.44
56:V:23:GLY:HA2	56:V:38:TYR:CZ	2.52	0.44
56:V:83:ARG:O	56:V:101:ASN:HA	2.17	0.44
62:c:55:LEU:HD22	66:g:96:LEU:HD12	2.00	0.44
64:e:69:MET:HA	64:e:75:ARG:HD3	2.00	0.44
75:p:16:THR:HG22	79:5:2876:G:C8	2.53	0.44
77:s:6:ARG:HD2	77:s:10:LYS:HE3	2.00	0.44
77:s:8:THR:C	77:s:10:LYS:HB2	2.34	0.44
77:s:47:LEU:HB3	77:s:50:LYS:CE	2.46	0.44
78:t:104:ILE:O	78:t:104:ILE:CG2	2.64	0.44
78:t:147:HIS:O	78:t:151:ILE:HG12	2.17	0.44
79:5:18:C:H2'	79:5:19:G:C8	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:87:A:H2'	79:5:88:A:O4'	2.17	0.44
79:5:199:G:H3'	79:5:238:C:OP2	2.17	0.44
79:5:294:G:H21	79:5:296:A:H5''	1.83	0.44
79:5:324:A:H2'	79:5:325:U:C6	2.52	0.44
79:5:346:G:H2'	79:5:347:A:H8	1.83	0.44
79:5:478:G:O2'	79:5:479:G:H5'	2.18	0.44
79:5:639:U:H2'	79:5:640:C:C6	2.52	0.44
79:5:694:C:O2'	79:5:695:G:H5'	2.16	0.44
79:5:1663:C:O2'	79:5:1664:U:H5'	2.18	0.44
79:5:2446:C:H2'	79:5:2447:U:C6	2.52	0.44
79:5:2637:U:O2'	79:5:2718:U:H4'	2.18	0.44
79:5:3868:G:N2	79:5:3900:G:H1'	2.30	0.44
79:5:3912:U:O2'	79:5:3913:G:H5'	2.17	0.44
79:5:4212:A:H4'	79:5:4213:A:N3	2.32	0.44
79:5:4508:C:H2'	79:5:4509:U:C6	2.53	0.44
82:1:1345:G:C2	82:1:1346:U:C2	3.05	0.44
82:1:1430:G:H1'	82:1:1439:A:N6	2.33	0.44
82:1:1457:G:C6	82:1:1458:C:N4	2.86	0.44
82:1:1458:C:N4	82:1:1477:G:H1	2.16	0.44
84:EF:378:ASP:N	84:EF:382:ALA:HB3	2.33	0.44
84:EF:587:SER:HB2	84:EF:605:LYS:HD3	1.99	0.44
84:EF:605:LYS:HB3	84:EF:705:HIS:NE2	2.31	0.44
84:EF:654:PRO:CD	84:EF:660:ASN:HB2	2.48	0.44
84:EF:836:ALA:C	84:EF:838:THR:N	2.74	0.44
1:DD:109:LEU:CD1	1:DD:184:ILE:HD11	2.45	0.44
1:DD:161:GLY:O	1:DD:164:VAL:HG12	2.17	0.44
1:DD:210:ILE:HD13	7:RR:16:ILE:HG13	1.99	0.44
2:FF:119:SER:OG	2:FF:189:ALA:HB1	2.18	0.44
3:KK:11:ILE:CD1	3:KK:45:VAL:HG22	2.48	0.44
3:KK:43:LEU:O	3:KK:47:LYS:HG2	2.17	0.44
8:SS:115:LYS:HE2	8:SS:126:PHE:HB2	1.98	0.44
15:gg:18:VAL:HG13	15:gg:34:ALA:O	2.18	0.44
15:gg:47:ARG:HG2	15:gg:52:TYR:CE1	2.53	0.44
18:9:34:U:H2'	18:9:35:C:H6	1.82	0.44
18:9:415:A:H2'	18:9:416:U:O4'	2.18	0.44
18:9:496:C:H5'	22:EE:29:PRO:HA	1.99	0.44
18:9:575:A:OP1	33:YY:93:ARG:HD3	2.18	0.44
18:9:648:A:H4'	32:XX:104:GLY:O	2.17	0.44
18:9:1608:U:H2'	18:9:1609:C:C6	2.53	0.44
20:BB:82:ARG:HG2	20:BB:84:PHE:CE2	2.53	0.44
21:CC:169:TYR:CD2	21:CC:173:LYS:HA	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:EE:80:ILE:HG13	22:EE:81:THR:HG23	2.00	0.44
24:HH:70:LYS:O	24:HH:74:LYS:HG3	2.17	0.44
27:LL:104:LYS:HE2	32:XX:8:ARG:NH2	2.32	0.44
34:aa:25:ASN:HB3	34:aa:77:CYS:SG	2.58	0.44
35:bb:40:CYS:SG	35:bb:42:LYS:HG2	2.57	0.44
37:A:18:ALA:HB2	79:5:3677:U:H5''	2.00	0.44
37:A:112:ILE:HG23	37:A:133:TYR:CD2	2.53	0.44
38:B:107:ALA:HB2	38:B:201:LEU:CD1	2.42	0.44
38:B:122:TRP:NE1	38:B:127:LYS:HE3	2.32	0.44
40:D:4:VAL:HG11	79:5:4247:G:H5''	1.98	0.44
40:D:181:PRO:HB2	40:D:198:HIS:CD2	2.53	0.44
40:D:208:MET:HE3	40:D:233:PRO:CD	2.47	0.44
41:E:97:LYS:HB3	79:5:687:U:O2'	2.18	0.44
43:G:137:THR:O	43:G:139:VAL:HG23	2.17	0.44
46:J:85:LYS:O	46:J:89:VAL:HG23	2.18	0.44
46:J:90:ARG:O	46:J:93:GLU:HG2	2.18	0.44
50:O:122:ALA:HA	53:S:162:GLN:OE1	2.18	0.44
52:Q:144:LYS:HE3	52:Q:149:TYR:CE1	2.52	0.44
56:V:82:ILE:CG2	56:V:121:VAL:HA	2.48	0.44
57:X:94:ASN:O	57:X:139:ARG:HD2	2.17	0.44
60:a:74:ASN:HA	60:a:112:LEU:O	2.17	0.44
61:b:5:LYS:HG3	79:5:1873:A:OP2	2.18	0.44
62:c:29:LEU:HD13	62:c:89:TYR:HE1	1.83	0.44
64:e:25:SER:HA	64:e:31:ILE:HB	2.00	0.44
64:e:101:HIS:HB2	79:5:2325:C:C5'	2.47	0.44
70:k:23:VAL:HB	70:k:64:LEU:HD21	2.00	0.44
76:r:5:LEU:O	76:r:9:VAL:HG23	2.18	0.44
77:s:120:GLU:C	77:s:183:PHE:HE1	2.22	0.44
78:t:149:HIS:HA	78:t:152:ILE:HD12	1.97	0.44
79:5:65:A:N1	79:5:76:A:H5''	2.32	0.44
79:5:214:G:H2'	79:5:215:C:H6	1.82	0.44
79:5:722:G:H2'	79:5:723:A:C8	2.53	0.44
79:5:738:C:OP1	79:5:739:G:H4'	2.18	0.44
79:5:1422:G:O2'	79:5:1423:U:H5'	2.18	0.44
79:5:1760:G:H3'	79:5:1761:G:H8	1.81	0.44
79:5:1768:C:H4'	79:5:1771:U:O4	2.18	0.44
79:5:1776:A:H3'	79:5:1777:C:C5	2.53	0.44
79:5:1980:U:H2'	79:5:1982:G:OP2	2.17	0.44
79:5:1981:G:H3'	79:5:1982:G:H8	1.81	0.44
79:5:2587:A:H3'	79:5:2588:C:C6	2.52	0.44
79:5:4311:A:O2'	79:5:4312:U:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:4708:A:H3'	79:5:4709:U:C5'	2.46	0.44
82:1:1407:C:OP2	82:1:1421:U:O3'	2.36	0.44
82:1:1494:C:N4	84:EF:714:ILE:CA	2.71	0.44
83:PT:7:G:C2	83:PT:49:C:C4	3.06	0.44
83:PT:14:A:C2	83:PT:15:G:H1'	2.53	0.44
83:PT:50:C:C2'	83:PT:51:G:H5'	2.47	0.44
83:PT:52:G:C4	83:PT:53:G:C8	3.06	0.44
84:EF:200:MET:HG2	84:EF:203:ILE:HG12	1.99	0.44
84:EF:207:PRO:HB2	84:EF:261:TRP:CD1	2.53	0.44
84:EF:333:LYS:O	84:EF:334:PRO:C	2.59	0.44
84:EF:394:LEU:HD12	84:EF:416:VAL:HG11	1.98	0.44
84:EF:437:GLY:C	84:EF:438:LYS:HG2	2.42	0.44
84:EF:749:ILE:N	84:EF:784:VAL:O	2.51	0.44
84:EF:755:VAL:O	84:EF:756:VAL:C	2.58	0.44
1:DD:168:VAL:HG12	1:DD:189:MET:HG3	2.00	0.44
7:RR:10:LYS:HB3	7:RR:14:ARG:NH1	2.33	0.44
13:dd:5:GLN:O	13:dd:6:LEU:HD12	2.17	0.44
15:gg:5:MET:SD	15:gg:312:VAL:HG22	2.58	0.44
16:R:126:LYS:O	16:R:131:VAL:HG23	2.18	0.44
18:9:353:C:O2'	18:9:354:U:H5'	2.17	0.44
18:9:398:A:H5''	18:9:400:C:O4'	2.18	0.44
18:9:476:A:H2'	18:9:477:G:O4'	2.18	0.44
18:9:566:U:H2'	18:9:567:C:O4'	2.17	0.44
18:9:1679:A:H4'	18:9:1680:G:O5'	2.16	0.44
18:9:1705:C:H2'	18:9:1706:G:C8	2.53	0.44
20:BB:225:LEU:CD2	20:BB:229:MET:HE2	2.48	0.44
21:CC:125:LYS:HE2	21:CC:141:VAL:HG12	1.98	0.44
24:HH:166:VAL:HG23	24:HH:173:PHE:HE2	1.83	0.44
25:II:41:ARG:HA	25:II:59:ARG:O	2.17	0.44
25:II:174:CYS:HB2	25:II:190:LEU:HD11	2.00	0.44
26:JJ:124:HIS:O	26:JJ:128:VAL:HG23	2.18	0.44
37:A:90:CYS:HB3	37:A:101:VAL:CG1	2.48	0.44
37:A:142:GLU:OE1	37:A:143:THR:HG23	2.18	0.44
37:A:199:VAL:O	37:A:204:MET:HE3	2.18	0.44
39:C:27:VAL:HG11	39:C:128:LEU:HD12	1.98	0.44
39:C:89:GLN:HG2	79:5:2353:U:H5''	2.00	0.44
39:C:179:ASP:O	39:C:183:VAL:HG23	2.17	0.44
39:C:322:LEU:HD23	39:C:336:ARG:NH1	2.33	0.44
41:E:59:TYR:HB3	41:E:63:ALA:HB3	2.00	0.44
41:E:261:LEU:CD1	41:E:265:LYS:HE3	2.46	0.44
42:F:72:ARG:NH2	79:5:727:C:H5''	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:F:72:ARG:HG2	42:F:75:ARG:HH22	1.83	0.44
42:F:75:ARG:NH2	79:5:728:U:H5'	2.33	0.44
42:F:106:LYS:HG2	42:F:109:GLN:HE21	1.83	0.44
42:F:180:LYS:HE3	42:F:181:TYR:CE2	2.53	0.44
44:H:66:GLU:OE2	50:O:132:THR:HG21	2.17	0.44
48:M:9:VAL:HG11	48:M:66:HIS:HA	1.99	0.44
49:N:94:PHE:HE2	49:N:96:ARG:HB2	1.83	0.44
51:P:119:VAL:HG22	51:P:146:ILE:HG23	2.00	0.44
52:Q:16:LYS:HZ3	79:5:2084:C:H1'	1.83	0.44
52:Q:154:LYS:HB3	52:Q:161:SER:CB	2.48	0.44
55:U:87:THR:O	55:U:91:LEU:HG	2.18	0.44
56:V:52:LEU:HD12	79:5:3842:C:H1'	1.99	0.44
57:X:80:PRO:HB3	57:X:98:PHE:CE1	2.53	0.44
61:b:40:LEU:O	61:b:44:ARG:HG3	2.18	0.44
61:b:95:ARG:O	61:b:99:ILE:HG13	2.17	0.44
62:c:23:LYS:HE2	62:c:23:LYS:HB3	1.91	0.44
65:f:18:LEU:HB2	79:5:1916:G:O6	2.18	0.44
66:g:10:ARG:HD3	79:5:2403:A:OP1	2.17	0.44
66:g:50:PRO:CG	75:p:61:MET:HE3	2.41	0.44
66:g:64:LEU:HB3	79:5:2749:C:H4'	1.99	0.44
67:h:22:ASP:O	67:h:26:VAL:HG23	2.17	0.44
67:h:60:VAL:O	67:h:64:THR:HG23	2.17	0.44
74:o:64:LYS:HE2	79:5:4371:G:OP1	2.17	0.44
76:r:96:MET:CE	79:5:678:C:H4'	2.48	0.44
77:s:47:LEU:CB	77:s:50:LYS:HD2	2.48	0.44
77:s:98:ILE:CG2	77:s:102:LEU:HD11	2.41	0.44
78:t:78:SER:O	78:t:82:ILE:HG13	2.17	0.44
78:t:104:ILE:O	78:t:104:ILE:HG22	2.17	0.44
79:5:1564:A:H2'	79:5:1565:A:O4'	2.17	0.44
79:5:2110:G:O2'	79:5:2111:U:H5'	2.17	0.44
79:5:2604:C:O2'	79:5:2605:G:H5'	2.18	0.44
79:5:2779:C:H2'	79:5:2780:C:H6	1.83	0.44
79:5:4585:U:H3'	79:5:4586:G:H8	1.83	0.44
81:8:44:A:H2'	81:8:45:C:H6	1.83	0.44
82:1:1421:U:H2'	82:1:1422:A:C4	2.53	0.44
82:1:1432:U:C4	82:1:1433:U:O4	2.70	0.44
83:PT:58:A:N6	83:PT:61:C:C2	2.85	0.44
83:PT:67:A:C2	83:PT:68:C:C2	3.06	0.44
84:EF:169:LEU:CD2	84:EF:174:LEU:HD13	2.48	0.44
84:EF:514:PRO:C	84:EF:516:ASP:N	2.75	0.44
84:EF:602:LEU:HD12	84:EF:706:ASP:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:EF:760:TYR:HA	84:EF:763:LEU:HD12	1.99	0.44
84:EF:763:LEU:O	84:EF:766:LYS:N	2.51	0.44
1:DD:96:LEU:HD11	1:DD:130:GLY:O	2.17	0.44
2:FF:30:ILE:HG13	2:FF:113:VAL:HG11	1.99	0.44
7:RR:41:ILE:HD13	7:RR:47:ARG:HA	2.00	0.44
9:TT:96:SER:HB3	9:TT:99:VAL:CG2	2.44	0.44
10:UU:67:LYS:HB3	18:9:1337:C:H4'	2.00	0.44
11:ZZ:50:PHE:CE2	11:ZZ:87:ALA:HB2	2.52	0.44
12:cc:9:ILE:HG23	12:cc:59:LEU:HA	2.00	0.44
15:gg:236:ILE:HG21	15:gg:239:LEU:HD21	1.99	0.44
16:R:136:ARG:O	16:R:140:GLU:HG3	2.18	0.44
18:9:80:G:O2'	18:9:81:U:H5'	2.17	0.44
18:9:158:A:H2'	18:9:159:A:C8	2.53	0.44
18:9:319:C:OP1	18:9:319:C:H4'	2.18	0.44
18:9:479:C:H2'	18:9:480:G:H8	1.83	0.44
18:9:554:A:O3'	18:9:555:A:H3'	2.18	0.44
18:9:869:A:H5'	18:9:874:G:O2'	2.18	0.44
18:9:987:A:H4'	34:aa:70:LYS:HD2	1.99	0.44
18:9:996:A:H2'	18:9:997:A:C8	2.52	0.44
18:9:1328:G:O2'	18:9:1329:U:H5'	2.17	0.44
18:9:1331:C:H4'	18:9:1332:A:O5'	2.18	0.44
18:9:1414:A:H2'	18:9:1415:C:C6	2.53	0.44
18:9:1712:A:H2'	18:9:1713:C:H6	1.82	0.44
18:9:1863:A:H1'	34:aa:79:ILE:CD1	2.48	0.44
19:AA:108:PHE:HB2	19:AA:136:GLU:HG3	2.00	0.44
20:BB:188:LEU:HD23	20:BB:193:ILE:HD12	2.00	0.44
27:LL:18:GLN:NE2	27:LL:33:LEU:HD13	2.32	0.44
31:WW:90:GLN:HA	31:WW:102:ILE:HD12	1.99	0.44
33:YY:91:LEU:HB3	33:YY:96:LEU:CD1	2.48	0.44
37:A:199:VAL:HG22	79:5:3651:A:H5'	2.00	0.44
40:D:284:LYS:O	40:D:288:LEU:HG	2.18	0.44
42:F:57:HIS:ND1	79:5:943:A:H1'	2.33	0.44
42:F:82:VAL:CG2	53:S:62:VAL:HG13	2.48	0.44
43:G:284:ASP:O	43:G:288:ARG:HG2	2.17	0.44
49:N:97:SER:O	49:N:101:VAL:HG23	2.18	0.44
50:O:97:ALA:O	50:O:101:ARG:HG3	2.17	0.44
52:Q:22:ASP:OD1	52:Q:25:LEU:HB3	2.18	0.44
56:V:36:ASN:O	56:V:37:LEU:HD23	2.18	0.44
64:e:18:LYS:HD2	79:5:438:G:OP1	2.18	0.44
65:f:54:LYS:HB3	79:5:443:G:H5''	2.00	0.44
66:g:11:LEU:HG	79:5:2513:A:OP1	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:g:69:LYS:HD3	79:5:2769:U:N3	2.33	0.44
71:l:15:LYS:HD3	81:8:45:C:P	2.58	0.44
74:o:63:THR:HG23	74:o:87:ARG:HB3	1.99	0.44
74:o:88:CYS:HA	79:5:4230:C:OP2	2.18	0.44
77:s:11:SER:HB2	77:s:15:LEU:HD21	2.00	0.44
77:s:119:CYS:CB	77:s:183:PHE:HD1	2.30	0.44
78:t:117:ARG:NH2	78:t:120:SER:HA	2.33	0.44
79:5:121:A:H5'	79:5:122:U:OP2	2.18	0.44
79:5:1722:C:O2'	79:5:1723:A:H5'	2.18	0.44
79:5:1769:G:C4	79:5:1770:A:C8	3.06	0.44
79:5:1769:G:C3'	79:5:1770:A:H8	2.26	0.44
79:5:1778:C:O2'	79:5:1779:U:H5'	2.18	0.44
79:5:2048:U:H5''	79:5:2050:G:P	2.58	0.44
79:5:2092:G:C2	79:5:2097:U:C5	3.06	0.44
79:5:2583:C:O2'	79:5:2584:G:H5'	2.18	0.44
79:5:2588:C:C5'	79:5:2589:C:H5''	2.47	0.44
79:5:3609:G:O2'	79:5:3610:A:H5'	2.18	0.44
79:5:3694:U:O2'	79:5:3695:U:H5'	2.18	0.44
79:5:4095:G:H2'	79:5:4096:C:C6	2.52	0.44
79:5:4486:C:H2'	79:5:4487:A:H5'	1.99	0.44
79:5:4537:C:H2'	79:5:4538:G:C8	2.53	0.44
79:5:4708:A:N3	79:5:4709:U:H5'	2.32	0.44
79:5:4726:G:O2'	79:5:4727:A:H5'	2.18	0.44
79:5:4772:C:H2'	79:5:4773:C:H5'	1.98	0.44
80:7:15:C:H2'	80:7:16:A:C8	2.53	0.44
82:1:1331:A:H8	82:1:1416:C:O4'	2.01	0.44
82:1:1378:A:C2	82:1:1379:U:C6	3.04	0.44
82:1:1388:A:O3'	82:1:1389:C:H3'	2.18	0.44
82:1:1470:C:N3	82:1:1471:A:H1'	2.33	0.44
83:PT:51:G:N3	83:PT:64:G:C2	2.86	0.44
84:EF:43:ALA:CB	84:EF:77:LEU:HA	2.48	0.44
84:EF:79:TYR:CZ	84:EF:351:LEU:HD22	2.53	0.44
84:EF:343:TRP:CE3	84:EF:344:LEU:CB	3.01	0.44
84:EF:447:ILE:O	84:EF:448:GLN:C	2.60	0.44
84:EF:507:VAL:HG22	84:EF:572:LYS:HG2	2.00	0.44
84:EF:520:LEU:HA	84:EF:566:ALA:HB2	1.99	0.44
84:EF:539:GLU:C	84:EF:541:SER:N	2.71	0.44
84:EF:731:ALA:HB2	84:EF:853:PHE:O	2.18	0.44
3:KK:30:PRO:O	3:KK:31:LYS:HD3	2.18	0.43
15:gg:94:THR:OG1	15:gg:96:THR:HG22	2.17	0.43
16:R:82:LYS:HZ1	79:5:2863:G:H1'	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:9:611:G:O2'	18:9:612:U:H5'	2.18	0.43
18:9:913:A:N3	24:HH:66:VAL:HG11	2.33	0.43
18:9:1370:A:N3	18:9:1372:U:H5'	2.33	0.43
18:9:1376:A:H2'	18:9:1377:U:O4'	2.19	0.43
18:9:1477:U:O2'	18:9:1478:U:H5''	2.18	0.43
18:9:1657:G:H2'	18:9:1658:G:H8	1.83	0.43
18:9:1817:G:H2'	18:9:1818:A:C8	2.53	0.43
20:BB:164:ILE:HG13	20:BB:204:ILE:HG21	1.99	0.43
22:EE:15:PRO:HD2	22:EE:18:TRP:CZ3	2.53	0.43
24:HH:130:LEU:O	24:HH:134:VAL:HG22	2.17	0.43
26:JJ:119:LEU:HB2	26:JJ:159:PHE:CE2	2.52	0.43
28:NN:127:ARG:O	28:NN:131:THR:HG23	2.18	0.43
32:XX:16:HIS:O	32:XX:20:GLN:HG2	2.18	0.43
38:B:142:GLY:O	38:B:146:LEU:HD23	2.17	0.43
38:B:240:LEU:CB	38:B:244:THR:HG21	2.45	0.43
38:B:283:LYS:HE3	38:B:363:ILE:HD13	2.00	0.43
40:D:8:LYS:HA	40:D:12:TYR:CD2	2.53	0.43
43:G:145:ALA:O	43:G:149:LEU:HG	2.18	0.43
45:I:61:SER:O	45:I:65:LEU:HG	2.17	0.43
46:J:115:LEU:HD11	46:J:130:PHE:HZ	1.82	0.43
47:L:79:GLU:O	47:L:83:VAL:HG23	2.18	0.43
47:L:129:ARG:HA	47:L:129:ARG:HE	1.82	0.43
49:N:91:GLN:HB2	74:o:48:TYR:OH	2.18	0.43
50:O:90:HIS:CB	50:O:99:LEU:HD11	2.48	0.43
53:S:37:HIS:O	53:S:41:LYS:HG3	2.17	0.43
53:S:175:PHE:CD1	79:5:4764:A:H5'	2.53	0.43
57:X:80:PRO:O	67:h:36:VAL:HG11	2.18	0.43
60:a:103:VAL:CG2	60:a:126:ALA:HB2	2.48	0.43
64:e:79:VAL:HG13	64:e:84:GLU:HB2	1.99	0.43
67:h:81:LEU:HD13	81:8:38:U:H5'	2.00	0.43
77:s:31:GLY:O	77:s:32:ALA:C	2.61	0.43
77:s:44:ARG:HA	77:s:53:VAL:HG21	2.00	0.43
77:s:118:PRO:CG	77:s:183:PHE:HB2	2.46	0.43
79:5:86:U:H2'	79:5:87:A:H8	1.81	0.43
79:5:272:U:O2'	79:5:273:U:H5'	2.18	0.43
79:5:316:U:OP1	79:5:316:U:H3'	2.17	0.43
79:5:507:G:O2'	79:5:508:G:H5'	2.18	0.43
79:5:929:A:H5'	79:5:930:G:OP2	2.17	0.43
79:5:1586:G:H2'	79:5:1587:G:C8	2.53	0.43
79:5:1766:A:C8	79:5:1766:A:C5'	3.00	0.43
79:5:1870:C:H2'	79:5:1871:A:H8	1.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:2594:C:H2'	79:5:2595:C:C6	2.52	0.43
79:5:2607:C:H2'	79:5:2608:G:H8	1.83	0.43
79:5:2781:G:O2'	79:5:2782:U:H5'	2.17	0.43
79:5:2830:G:H2'	79:5:2831:G:C8	2.53	0.43
79:5:4131:G:O2'	79:5:4132:C:H5'	2.18	0.43
79:5:4347:G:O2'	79:5:4348:A:H5'	2.18	0.43
79:5:4358:U:O2'	79:5:4359:U:H5'	2.18	0.43
79:5:4478:G:H2'	79:5:4479:A:H8	1.82	0.43
79:5:5038:A:H2'	79:5:5039:U:C6	2.53	0.43
80:7:27:G:H2'	80:7:28:C:C6	2.53	0.43
82:1:1373:C:H1'	82:1:1446:G:O6	2.18	0.43
82:1:1392:G:H1'	82:1:1393:U:C5	2.53	0.43
84:EF:77:LEU:CG	84:EF:102:LEU:HD21	2.37	0.43
84:EF:111:PHE:CZ	84:EF:556:ILE:HD13	2.52	0.43
84:EF:147:ILE:CD1	84:EF:189:ILE:HA	2.47	0.43
84:EF:262:GLY:H	84:EF:288:THR:HG21	1.83	0.43
84:EF:301:PHE:CD1	84:EF:336:LEU:HD21	2.53	0.43
84:EF:376:PRO:CD	84:EF:492:HIS:CE1	3.00	0.43
84:EF:538:ILE:HG13	84:EF:544:HIS:HA	2.00	0.43
84:EF:709:LEU:HD12	84:EF:716:ARG:NH1	2.33	0.43
3:KK:48:ALA:O	3:KK:52:LEU:HD23	2.18	0.43
4:MM:17:ALA:HA	4:MM:120:ALA:HB1	1.99	0.43
4:MM:58:GLU:HB3	4:MM:61:TYR:HB3	2.00	0.43
5:PP:17:TYR:CD2	5:PP:18:ARG:HG2	2.53	0.43
11:ZZ:87:ALA:O	11:ZZ:91:LEU:HG	2.18	0.43
15:gg:4:GLN:C	15:gg:5:MET:HE2	2.43	0.43
15:gg:23:THR:HG21	15:gg:292:SER:HA	1.99	0.43
15:gg:25:PRO:HA	15:gg:293:ALA:CB	2.47	0.43
15:gg:91:ASP:HB2	15:gg:98:THR:HG23	2.00	0.43
16:R:35:ALA:HA	16:R:40:GLN:HG2	1.99	0.43
18:9:112:U:H2'	18:9:115:U:H5	1.83	0.43
18:9:407:G:C2	32:XX:36:LEU:HD23	2.52	0.43
18:9:674:C:H2'	18:9:675:U:C6	2.53	0.43
18:9:732:U:H2'	18:9:733:C:C6	2.52	0.43
18:9:797:C:H2'	18:9:798:G:O4'	2.18	0.43
18:9:960:U:H1'	18:9:963:A:N7	2.33	0.43
18:9:1134:G:H2'	18:9:1135:C:C6	2.52	0.43
18:9:1162:C:H2'	18:9:1163:C:O4'	2.17	0.43
18:9:1264:C:H4'	18:9:1265:A:O5'	2.17	0.43
18:9:1271:C:OP1	18:9:1303:C:H1'	2.18	0.43
18:9:1283:C:O4'	18:9:1287:A:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:9:1596:U:H2'	18:9:1597:C:O4'	2.18	0.43
20:BB:165:ARG:CG	20:BB:169:MET:HE3	2.44	0.43
22:EE:100:ARG:CD	22:EE:102:ILE:HD11	2.44	0.43
25:II:13:LYS:HD3	27:LL:137:THR:HG21	2.00	0.43
27:LL:35:ARG:HD3	27:LL:51:ILE:O	2.17	0.43
29:OO:98:ARG:HA	29:OO:133:THR:HG22	2.00	0.43
30:VV:24:ILE:HG23	30:VV:28:ASP:HB3	2.00	0.43
33:YY:87:PRO:HB2	33:YY:89:HIS:CD2	2.53	0.43
38:B:108:GLU:HB2	38:B:137:TRP:CG	2.53	0.43
39:C:139:SER:HB3	76:r:10:VAL:HG11	2.01	0.43
40:D:270:LYS:HG3	80:7:61:G:OP1	2.18	0.43
42:F:89:ALA:HA	42:F:144:PRO:HD2	2.00	0.43
43:G:131:PRO:HD3	43:G:290:TRP:CE2	2.53	0.43
43:G:220:VAL:HG13	43:G:223:LEU:CD1	2.48	0.43
44:H:92:MET:CB	44:H:181:VAL:HA	2.48	0.43
44:H:156:ASN:O	44:H:160:LEU:HG	2.17	0.43
50:O:176:ARG:HD3	79:5:4769:G:H5'	1.99	0.43
51:P:51:VAL:HA	51:P:56:GLN:O	2.18	0.43
53:S:47:PHE:O	53:S:51:LEU:HG	2.18	0.43
54:T:93:ILE:H	54:T:93:ILE:HG13	1.68	0.43
54:T:127:GLN:NE2	54:T:129:LYS:HB2	2.34	0.43
55:U:25:CYS:CB	55:U:112:LEU:HD12	2.48	0.43
62:c:48:LEU:HD11	62:c:60:ILE:HG21	1.99	0.43
63:d:47:LYS:O	63:d:51:LYS:HG3	2.18	0.43
75:p:10:ILE:HG21	75:p:30:GLU:HB3	2.00	0.43
76:r:67:ARG:O	76:r:70:GLN:HG3	2.18	0.43
76:r:107:ARG:HB3	76:r:107:ARG:NH1	2.33	0.43
77:s:194:ASP:HB2	77:s:195:ASN:ND2	2.33	0.43
78:t:46:ILE:HG13	78:t:71:ILE:CD1	2.48	0.43
79:5:260:C:H2'	79:5:261:G:C8	2.53	0.43
79:5:321:U:H2'	79:5:322:C:C6	2.53	0.43
79:5:351:C:O2'	79:5:352:G:H5'	2.17	0.43
79:5:1632:A:N7	79:5:1634:A:H1'	2.34	0.43
79:5:1759:G:C2	79:5:1760:G:H1'	2.53	0.43
79:5:2055:G:H5'	79:5:2056:G:H5''	1.99	0.43
79:5:2292:C:O2'	79:5:2293:U:H5'	2.18	0.43
79:5:2308:A:H2'	79:5:2309:G:H5'	2.00	0.43
79:5:3915:U:H2'	79:5:3916:G:O4'	2.18	0.43
79:5:4098:A:H2'	79:5:4099:G:H8	1.83	0.43
79:5:4179:G:O2'	79:5:4180:G:H5'	2.18	0.43
80:7:58:A:H2'	80:7:59:G:H8	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:7:82:G:H2'	80:7:83:A:C8	2.53	0.43
82:1:1450:C:C5	82:1:1451:C:C4	3.05	0.43
83:PT:1:G:C2	83:PT:2:G:C4	3.06	0.43
83:PT:52:G:C8	83:PT:52:G:H5''	2.53	0.43
83:PT:68:C:H5''	83:PT:68:C:H6	1.82	0.43
84:EF:7:ASP:HA	84:EF:10:ARG:HD2	1.99	0.43
84:EF:144:ARG:HA	84:EF:147:ILE:HG22	2.01	0.43
84:EF:347:GLY:O	84:EF:348:ASP:C	2.59	0.43
84:EF:368:ARG:HB3	84:EF:371:LEU:HB2	1.99	0.43
84:EF:756:VAL:HG21	84:EF:782:PHE:CD1	2.53	0.43
1:DD:42:THR:HB	1:DD:43:PRO:HD2	2.00	0.43
4:MM:63:LYS:HB3	14:ff:108:VAL:CG2	2.48	0.43
5:PP:54:HIS:O	5:PP:58:LYS:HD3	2.19	0.43
18:9:373:G:O2'	18:9:374:G:H5'	2.18	0.43
18:9:526:A:H2'	18:9:527:C:C6	2.53	0.43
18:9:562:U:H1'	26:JJ:132:GLN:HG2	2.01	0.43
18:9:1135:C:H2'	18:9:1136:U:C6	2.53	0.43
27:LL:82:MET:HB2	27:LL:85:THR:O	2.17	0.43
28:NN:25:TRP:O	28:NN:27:LYS:HD3	2.17	0.43
30:VV:24:ILE:HD13	30:VV:31:SER:HB3	2.00	0.43
31:WW:34:ILE:O	31:WW:38:LEU:HG	2.17	0.43
37:A:116:LEU:HA	37:A:164:ALA:HB2	1.99	0.43
38:B:36:ASP:OD2	38:B:39:LYS:HG3	2.18	0.43
38:B:154:LYS:HB2	38:B:194:LEU:CD2	2.49	0.43
43:G:197:THR:HG21	49:N:3:ALA:HB2	1.98	0.43
44:H:16:VAL:HG21	44:H:81:ILE:HG23	2.00	0.43
47:L:177:LYS:HA	60:a:134:GLU:OE2	2.18	0.43
47:L:191:LEU:O	47:L:195:ARG:HD3	2.18	0.43
49:N:158:HIS:HB2	79:5:55:G:O2'	2.18	0.43
50:O:56:ALA:O	50:O:60:LYS:HG3	2.18	0.43
50:O:154:ALA:O	50:O:158:GLU:HG2	2.18	0.43
53:S:170:LYS:HD2	79:5:4871:C:H5	1.83	0.43
55:U:36:ALA:CB	55:U:65:ARG:HD2	2.49	0.43
57:X:150:ALA:HA	57:X:153:ILE:HG12	2.00	0.43
60:a:16:SER:OG	60:a:21:ARG:HB3	2.19	0.43
61:b:57:MET:HE2	79:5:1811:G:H21	1.83	0.43
61:b:112:ILE:O	61:b:116:LEU:HG	2.18	0.43
66:g:99:GLU:O	66:g:103:VAL:HG23	2.18	0.43
68:i:53:TYR:HB2	68:i:72:PHE:CE2	2.53	0.43
68:i:54:GLU:O	68:i:58:MET:HG2	2.18	0.43
72:m:86:LYS:HB3	72:m:88:LYS:HG2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:s:28:PHE:CE2	77:s:99:ARG:N	2.87	0.43
77:s:69:LEU:HD22	77:s:69:LEU:HA	1.58	0.43
77:s:121:VAL:HG23	77:s:183:PHE:HE1	1.83	0.43
78:t:16:ARG:NH1	78:t:57:ARG:HB2	2.33	0.43
78:t:61:LYS:HG3	78:t:72:GLU:CG	2.43	0.43
78:t:125:LEU:HG	78:t:129:ILE:HD11	1.99	0.43
79:5:34:A:H2'	79:5:35:U:H5''	2.00	0.43
79:5:418:A:O2'	79:5:419:A:H5'	2.18	0.43
79:5:436:C:H2'	79:5:437:G:H8	1.83	0.43
79:5:1476:C:H2'	79:5:1477:C:O4'	2.18	0.43
79:5:1874:A:H4'	79:5:4217:G:H22	1.82	0.43
79:5:2038:U:H2'	79:5:2039:G:O4'	2.18	0.43
79:5:2706:G:H21	79:5:2709:C:H5	1.66	0.43
79:5:4969:C:O2'	79:5:4970:C:H5'	2.18	0.43
79:5:5052:C:H2'	79:5:5053:U:O4'	2.18	0.43
81:8:10:G:H2'	81:8:11:C:C6	2.53	0.43
81:8:127:U:H2'	81:8:128:C:H5''	1.99	0.43
82:1:1396:G:C6	82:1:1397:C:C4	3.07	0.43
82:1:1424:U:C4	82:1:1425:A:C2	3.06	0.43
82:1:1437:C:H2'	82:1:1438:C:H6	1.76	0.43
83:PT:3:G:C2	83:PT:71:C:C2	3.07	0.43
84:EF:154:VAL:CB	84:EF:353:MET:HE1	2.44	0.43
84:EF:507:VAL:HG21	84:EF:554:LEU:HD11	2.00	0.43
84:EF:537:ILE:HG12	84:EF:545:ILE:HB	2.00	0.43
84:EF:641:TRP:CE2	84:EF:645:GLU:HB3	2.53	0.43
84:EF:677:ASP:CG	84:EF:678:SER:N	2.72	0.43
5:PP:39:ALA:HA	5:PP:42:ARG:CG	2.42	0.43
18:9:101:U:H2'	18:9:102:A:H5'	2.00	0.43
18:9:322:C:H3'	18:9:323:C:P	2.58	0.43
18:9:731:G:H2'	18:9:732:U:C6	2.53	0.43
18:9:815:U:H2'	18:9:816:A:C8	2.52	0.43
18:9:1129:G:H2'	18:9:1130:G:N3	2.32	0.43
18:9:1570:G:O3'	18:9:1615:U:H4'	2.19	0.43
18:9:1805:G:O2'	18:9:1806:A:H5'	2.17	0.43
19:AA:84:GLN:CG	19:AA:100:ALA:HB1	2.49	0.43
21:CC:155:ILE:O	21:CC:159:LYS:HG3	2.18	0.43
22:EE:205:PHE:HE2	22:EE:222:LEU:HB3	1.83	0.43
24:HH:61:ILE:HD11	24:HH:95:ILE:HB	1.99	0.43
24:HH:61:ILE:HD13	24:HH:93:VAL:HG13	2.00	0.43
24:HH:168:HIS:CE1	24:HH:169:LYS:HG3	2.54	0.43
30:VV:24:ILE:HD13	30:VV:31:SER:OG	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:A:9:ARG:HD2	79:5:1628:C:OP2	2.18	0.43
37:A:80:GLU:HA	75:p:65:ALA:O	2.19	0.43
39:C:32:ILE:HD12	39:C:130:ALA:HB2	2.01	0.43
39:C:164:THR:HG21	39:C:223:ASN:HB3	2.01	0.43
39:C:210:ILE:CG2	39:C:232:VAL:HG13	2.49	0.43
39:C:284:MET:HE2	52:Q:28:LEU:CD2	2.48	0.43
40:D:10:LYS:HE2	80:7:65:G:O3'	2.18	0.43
40:D:237:GLU:HG2	40:D:241:LYS:HE3	2.00	0.43
41:E:128:LEU:HD12	79:5:957:G:C2	2.53	0.43
41:E:189:LEU:HD12	41:E:253:GLN:HE21	1.82	0.43
42:F:91:VAL:CG1	42:F:139:ILE:HD12	2.48	0.43
43:G:131:PRO:HD3	43:G:290:TRP:CD2	2.54	0.43
43:G:168:LEU:O	43:G:172:GLU:HG2	2.19	0.43
43:G:297:PRO:HD3	79:5:4162:C:C6	2.54	0.43
46:J:53:ALA:HB3	46:J:63:ARG:O	2.18	0.43
49:N:68:ARG:HB2	49:N:126:THR:C	2.44	0.43
50:O:85:ARG:HG2	50:O:90:HIS:HB3	2.00	0.43
55:U:62:SER:OG	55:U:73:THR:HB	2.19	0.43
56:V:35:LYS:CE	56:V:68:GLY:HA2	2.48	0.43
56:V:62:MET:HE3	56:V:76:VAL:HG12	1.99	0.43
56:V:69:LYS:O	56:V:73:ARG:HG3	2.18	0.43
58:Y:88:GLU:OE2	58:Y:92:GLY:HA2	2.19	0.43
59:Z:53:VAL:HG21	59:Z:62:ILE:HG23	1.99	0.43
65:f:47:CYS:HB3	65:f:103:VAL:HG12	2.01	0.43
67:h:53:SER:O	67:h:57:VAL:HG23	2.19	0.43
68:i:33:LEU:HD22	68:i:34:THR:N	2.33	0.43
68:i:53:TYR:HB2	68:i:72:PHE:CZ	2.54	0.43
76:r:113:ARG:O	76:r:117:ILE:HG12	2.19	0.43
77:s:20:LEU:C	77:s:23:ASP:HB3	2.44	0.43
77:s:50:LYS:HD3	77:s:102:LEU:HD21	1.99	0.43
77:s:50:LYS:CB	77:s:98:ILE:HG12	2.48	0.43
77:s:124:PRO:O	77:s:154:ILE:HG21	2.18	0.43
78:t:123:ARG:HA	78:t:123:ARG:HD3	1.56	0.43
79:5:370:U:O2'	79:5:371:A:H5'	2.17	0.43
79:5:405:U:H1'	79:5:410:A:N6	2.32	0.43
79:5:948:C:O2'	79:5:949:G:H5'	2.19	0.43
79:5:1797:G:O2'	79:5:1798:G:H5'	2.17	0.43
79:5:2736:G:O2'	79:5:2737:C:H5'	2.18	0.43
79:5:3845:A:O3'	79:5:4668:U:H4'	2.18	0.43
82:1:1370:U:H1'	82:1:1449:U:C2	2.53	0.43
82:1:1455:A:H5'	82:1:1482:U:O2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:PT:21:A:N3	83:PT:22:G:N7	2.66	0.43
83:PT:51:G:C4	83:PT:64:G:N2	2.87	0.43
84:EF:161:ASP:HB2	84:EF:221:TRP:CZ2	2.53	0.43
84:EF:373:TYR:HB3	84:EF:495:ARG:CG	2.48	0.43
84:EF:428:ARG:N	84:EF:428:ARG:HD2	2.33	0.43
84:EF:479:LEU:HD13	84:EF:482:THR:O	2.17	0.43
84:EF:519:LYS:HD3	84:EF:568:ILE:HD11	2.00	0.43
84:EF:555:GLU:O	84:EF:556:ILE:C	2.60	0.43
84:EF:650:TRP:CD1	84:EF:662:LEU:HB3	2.53	0.43
1:DD:56:GLN:O	1:DD:59:LEU:HG	2.19	0.43
4:MM:81:ASP:HB3	4:MM:84:LYS:CG	2.48	0.43
9:TT:56:ARG:HH12	9:TT:99:VAL:HG23	1.83	0.43
9:TT:62:ARG:HB2	9:TT:62:ARG:NH1	2.33	0.43
9:TT:100:ALA:O	9:TT:104:LEU:HG	2.18	0.43
14:ff:138:ARG:HA	14:ff:150:PHE:CD1	2.54	0.43
18:9:147:A:H2'	18:9:148:U:O4'	2.18	0.43
18:9:452:G:H2'	18:9:453:C:H6	1.82	0.43
18:9:615:C:O3'	36:ee:77:GLY:HA3	2.18	0.43
18:9:796:G:H2'	18:9:797:C:C6	2.53	0.43
18:9:869:A:C4	18:9:915:G:H1'	2.54	0.43
18:9:921:G:C2	35:bb:22:LYS:HG2	2.53	0.43
18:9:923:G:O2'	18:9:1023:A:H5''	2.18	0.43
18:9:1155:U:O2	31:WW:71:LYS:HB2	2.18	0.43
18:9:1202:U:C5'	18:9:1358:U:H4'	2.46	0.43
18:9:1413:G:O2'	18:9:1414:A:H5'	2.19	0.43
18:9:1576:G:H2'	18:9:1577:G:H8	1.83	0.43
19:AA:18:PHE:HD1	19:AA:18:PHE:HA	1.74	0.43
24:HH:73:GLN:HA	24:HH:76:GLN:HB2	2.00	0.43
25:II:194:GLU:HG2	27:LL:10:TYR:CE2	2.53	0.43
26:JJ:49:THR:O	26:JJ:53:ILE:HG13	2.17	0.43
26:JJ:85:GLY:HA3	26:JJ:108:ARG:NH1	2.34	0.43
28:NN:45:LEU:CD2	28:NN:53:ILE:HD12	2.49	0.43
30:VV:67:ASP:O	30:VV:71:ARG:HG3	2.18	0.43
31:WW:93:LEU:HD21	31:WW:128:PHE:CD1	2.53	0.43
37:A:101:VAL:HG22	37:A:163:ARG:HB3	2.00	0.43
37:A:129:ALA:HB3	37:A:132:ASN:OD1	2.18	0.43
37:A:135:THR:OG1	37:A:149:LYS:HE2	2.18	0.43
38:B:130:PHE:CD2	79:5:4726:G:H4'	2.53	0.43
39:C:150:LEU:HD23	39:C:150:LEU:HA	1.84	0.43
40:D:223:PHE:O	40:D:227:ILE:HG13	2.18	0.43
43:G:282:ARG:O	43:G:286:ILE:HG13	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:G:306:LEU:O	43:G:310:LYS:HG3	2.18	0.43
44:H:172:ILE:HD11	72:m:98:LYS:NZ	2.33	0.43
47:L:29:PRO:O	47:L:33:ILE:HG13	2.19	0.43
47:L:194:ILE:HD12	47:L:194:ILE:H	1.84	0.43
48:M:20:HIS:HE1	79:5:936:C:H3'	1.83	0.43
52:Q:167:VAL:HG21	79:5:1497:A:N1	2.34	0.43
58:Y:11:ARG:HA	79:5:229:G:H5'	1.99	0.43
59:Z:21:ARG:HD2	59:Z:47:ASP:HA	2.01	0.43
61:b:42:ASN:HD21	79:5:1824:G:H21	1.66	0.43
62:c:38:ILE:HD11	62:c:46:VAL:HG21	2.00	0.43
62:c:62:TYR:CE2	62:c:66:LEU:HD11	2.53	0.43
63:d:53:ALA:CB	63:d:88:LEU:HD11	2.48	0.43
66:g:15:THR:O	66:g:19:LYS:HE3	2.19	0.43
66:g:93:ARG:NE	79:5:4121:G:H3'	2.33	0.43
68:i:36:HIS:HB3	79:5:276:C:OP2	2.18	0.43
71:l:45:ARG:HH21	79:5:2796:G:H5'	1.82	0.43
74:o:70:LEU:O	74:o:80:LYS:HA	2.19	0.43
77:s:81:HIS:NE2	77:s:198:ILE:HG12	2.34	0.43
77:s:142:GLY:O	77:s:158:VAL:HG21	2.19	0.43
77:s:172:ALA:O	77:s:176:ASN:ND2	2.52	0.43
78:t:109:ILE:HA	78:t:112:ILE:CD1	2.47	0.43
79:5:52:G:O2'	79:5:53:C:H5'	2.17	0.43
79:5:345:C:H2'	79:5:346:G:C8	2.53	0.43
79:5:424:U:O2'	79:5:425:U:H5'	2.19	0.43
79:5:433:A:H2'	79:5:434:A:O4'	2.19	0.43
79:5:459:C:O2'	79:5:460:C:H5'	2.18	0.43
79:5:732:A:H2'	79:5:733:A:O4'	2.18	0.43
79:5:1503:A:H1'	79:5:1504:G:C8	2.54	0.43
79:5:1766:A:H2'	79:5:1767:A:C8	2.53	0.43
79:5:1839:U:H2'	79:5:1840:G:C8	2.54	0.43
79:5:2509:C:H2'	79:5:2510:G:O4'	2.18	0.43
79:5:2587:A:H2'	79:5:2588:C:C2	2.54	0.43
79:5:2728:U:H2'	79:5:2729:C:H6	1.83	0.43
79:5:3651:A:O2'	79:5:3652:A:H5'	2.19	0.43
79:5:3720:G:H22	79:5:3733:A:H2	1.66	0.43
79:5:4593:C:H2'	79:5:4594:U:H6	1.83	0.43
79:5:4599:A:N1	79:5:4610:A:H5''	2.33	0.43
80:7:19:C:H2'	80:7:20:U:C6	2.53	0.43
82:1:1346:U:H2'	82:1:1347:G:H8	1.81	0.43
84:EF:144:ARG:CZ	84:EF:192:TYR:CD2	3.01	0.43
84:EF:239:LYS:HD2	84:EF:241:GLU:HB2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:EF:326:GLU:O	84:EF:327:ASP:C	2.62	0.43
84:EF:393:PRO:HB2	84:EF:488:PHE:CZ	2.53	0.43
84:EF:502:SER:O	84:EF:504:VAL:HG12	2.18	0.43
84:EF:543:GLU:O	84:EF:545:ILE:HD12	2.18	0.43
84:EF:577:VAL:HB	84:EF:790:VAL:HG12	2.00	0.43
84:EF:592:LEU:HD22	84:EF:856:LYS:N	2.32	0.43
84:EF:623:SER:O	84:EF:624:ALA:C	2.59	0.43
84:EF:643:VAL:HG22	84:EF:647:ARG:HH12	1.82	0.43
84:EF:756:VAL:HG21	84:EF:782:PHE:CD2	2.53	0.43
1:DD:147:ALA:HB2	18:9:1333:U:C5'	2.49	0.43
3:KK:71:LEU:HG	3:KK:76:ILE:HG12	2.01	0.43
4:MM:23:LYS:O	4:MM:27:ILE:HG13	2.18	0.43
7:RR:91:LEU:CD1	19:AA:177:MET:HG2	2.48	0.43
9:TT:18:LEU:HD13	9:TT:134:ILE:CD1	2.45	0.43
10:UU:41:ARG:O	10:UU:45:GLU:HG2	2.18	0.43
10:UU:54:VAL:HG22	18:9:1401:A:HO2'	1.84	0.43
14:ff:107:LYS:HG2	14:ff:117:LEU:HD11	2.00	0.43
16:R:115:ILE:CG2	16:R:119:MET:HE3	2.48	0.43
18:9:354:U:OP1	27:LL:107:LYS:HD2	2.19	0.43
18:9:1035:A:H2'	18:9:1036:A:O4'	2.19	0.43
18:9:1202:U:H2'	18:9:1203:G:H8	1.84	0.43
18:9:1262:C:H2'	18:9:1263:U:O4'	2.19	0.43
18:9:1560:U:H4'	18:9:1583:C:O2'	2.19	0.43
18:9:1664:A:H1'	18:9:1665:G:C5'	2.49	0.43
18:9:1843:G:H2'	18:9:1844:U:O4'	2.18	0.43
19:AA:184:ARG:CD	19:AA:191:ARG:HG2	2.48	0.43
22:EE:10:LYS:HB2	22:EE:13:ALA:HB3	1.99	0.43
22:EE:75:LYS:HB3	22:EE:77:ARG:NH1	2.33	0.43
23:GG:1:MET:HE2	23:GG:109:LEU:CD1	2.48	0.43
23:GG:224:ARG:O	23:GG:228:ILE:HG13	2.19	0.43
24:HH:79:LEU:O	24:HH:83:LEU:HG	2.18	0.43
26:JJ:42:GLU:O	26:JJ:46:VAL:HG23	2.19	0.43
26:JJ:58:ARG:O	26:JJ:62:THR:HG23	2.18	0.43
27:LL:16:ILE:CG2	27:LL:36:TYR:HB2	2.48	0.43
28:NN:52:VAL:O	28:NN:55:ARG:HG3	2.19	0.43
29:OO:83:GLN:O	29:OO:87:GLU:HG3	2.17	0.43
37:A:100:ASN:O	37:A:166:VAL:HG23	2.19	0.43
38:B:55:HIS:HB2	38:B:369:ASP:HB3	1.99	0.43
39:C:60:HIS:HA	39:C:92:PHE:CE1	2.53	0.43
39:C:305:PRO:HB3	52:Q:38:ARG:NH2	2.34	0.43
39:C:334:THR:HG21	42:F:50:TYR:OH	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:D:146:LEU:HD13	40:D:147:ASP:N	2.34	0.43
41:E:132:GLY:C	41:E:133:LYS:HD2	2.43	0.43
41:E:271:GLN:O	41:E:275:ARG:HG3	2.18	0.43
42:F:89:ALA:HB2	42:F:124:LEU:HD21	2.01	0.43
42:F:216:ARG:HD3	79:5:718:C:OP1	2.19	0.43
43:G:140:LEU:HD21	43:G:144:THR:CG2	2.46	0.43
43:G:140:LEU:HD11	43:G:144:THR:HG21	2.00	0.43
44:H:57:VAL:HG13	44:H:70:VAL:HG13	2.00	0.43
44:H:160:LEU:HD21	79:5:4704:C:O2'	2.18	0.43
47:L:18:TRP:O	47:L:22:VAL:HG23	2.19	0.43
48:M:46:ARG:O	48:M:48:GLN:HG2	2.18	0.43
49:N:68:ARG:HG2	79:5:302:C:OP1	2.17	0.43
49:N:184:ILE:HG23	49:N:194:ARG:NH2	2.29	0.43
50:O:108:ILE:CD1	50:O:113:ASP:HA	2.48	0.43
50:O:193:THR:HG23	50:O:202:LEU:CD2	2.44	0.43
52:Q:65:ARG:HA	52:Q:68:ARG:HG2	2.00	0.43
53:S:3:ALA:O	79:5:2062:C:H4'	2.19	0.43
57:X:139:ARG:HH12	79:5:2533:C:H5''	1.84	0.43
58:Y:102:SER:OG	79:5:231:U:H1'	2.19	0.43
58:Y:106:ILE:HG21	58:Y:109:LEU:HD23	2.01	0.43
60:a:73:VAL:CG1	60:a:111:VAL:HG22	2.49	0.43
60:a:134:GLU:O	60:a:138:LYS:HG2	2.19	0.43
63:d:24:GLU:HB3	63:d:85:ARG:CZ	2.48	0.43
63:d:54:MET:HE2	63:d:60:PRO:O	2.18	0.43
65:f:105:LEU:O	65:f:108:SER:HB3	2.19	0.43
75:p:51:ALA:HB3	75:p:54:ILE:CG2	2.49	0.43
77:s:20:LEU:HD12	77:s:24:TYR:CE1	2.54	0.43
77:s:121:VAL:CG2	77:s:183:PHE:HE1	2.23	0.43
78:t:19:GLY:HA2	78:t:51:GLY:H	1.84	0.43
78:t:29:ALA:N	78:t:30:PRO:CD	2.81	0.43
78:t:160:VAL:O	78:t:161:GLU:C	2.61	0.43
79:5:11:G:H2'	79:5:12:A:O4'	2.18	0.43
79:5:674:G:H2'	79:5:675:C:C6	2.54	0.43
79:5:1456:C:H5'	79:5:1457:G:OP2	2.18	0.43
79:5:1608:G:H2'	79:5:1609:U:C6	2.53	0.43
79:5:1769:G:C6	79:5:1770:A:C4	3.06	0.43
79:5:1825:A:H2'	79:5:1826:G:C8	2.52	0.43
79:5:2282:A:H2'	79:5:2283:G:H5'	1.99	0.43
79:5:2308:A:C2'	79:5:2309:G:H5'	2.48	0.43
79:5:2589:C:H2'	79:5:2590:G:O4'	2.18	0.43
79:5:2699:C:O2'	79:5:2700:G:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:2900:U:H2'	79:5:2901:G:C8	2.54	0.43
79:5:4776:G:H2'	79:5:4777:C:C6	2.52	0.43
82:1:1333:G:N2	82:1:1398:C:H1'	2.34	0.43
84:EF:11:ALA:O	84:EF:12:ILE:C	2.59	0.43
84:EF:507:VAL:HG11	84:EF:558:LEU:HD11	2.01	0.43
84:EF:579:TYR:CE1	84:EF:834:VAL:HG11	2.53	0.43
84:EF:623:SER:C	84:EF:625:ARG:N	2.73	0.43
84:EF:671:TYR:C	84:EF:673:ASN:N	2.70	0.43
84:EF:756:VAL:CG2	84:EF:782:PHE:CG	3.01	0.43
84:EF:767:ARG:CZ	84:EF:789:PRO:HG2	2.49	0.43
2:FF:169:ILE:HG21	18:9:1535:U:C6	2.54	0.43
4:MM:25:ALA:CB	4:MM:31:LEU:HD23	2.48	0.43
6:QQ:21:ALA:HA	6:QQ:71:ARG:O	2.18	0.43
7:RR:96:ILE:HG21	19:AA:15:VAL:HB	2.00	0.43
10:UU:46:LYS:CD	10:UU:97:ILE:HG23	2.48	0.43
14:ff:140:TYR:CE1	14:ff:142:GLY:HA2	2.54	0.43
15:gg:17:TRP:CB	15:gg:303:THR:HA	2.49	0.43
15:gg:21:ILE:HG22	15:gg:31:ILE:HD11	2.00	0.43
16:R:114:LYS:HB2	16:R:114:LYS:HE3	1.86	0.43
18:9:150:A:H2'	18:9:151:C:H5'	1.99	0.43
18:9:164:A:O2'	18:9:165:G:H5'	2.18	0.43
18:9:405:G:H2'	18:9:406:U:C6	2.53	0.43
18:9:1031:A:H4'	28:NN:112:LYS:HE2	1.99	0.43
18:9:1578:U:H5''	18:9:1579:A:O4'	2.18	0.43
18:9:1627:C:O2'	18:9:1628:C:H5'	2.18	0.43
18:9:1845:A:H2'	18:9:1846:G:H8	1.83	0.43
19:AA:30:LEU:CD2	19:AA:35:GLU:HG2	2.46	0.43
21:CC:66:LEU:O	21:CC:70:VAL:HG23	2.19	0.43
22:EE:35:PRO:HG2	22:EE:36:HIS:CD2	2.54	0.43
26:JJ:111:GLN:NE2	26:JJ:127:ARG:HB2	2.34	0.43
26:JJ:111:GLN:CD	26:JJ:127:ARG:HB2	2.43	0.43
31:WW:105:THR:HG22	31:WW:126:LEU:HG	2.01	0.43
40:D:65:ALA:HB2	40:D:74:ILE:CD1	2.47	0.43
41:E:64:MET:O	41:E:68:LYS:HG3	2.19	0.43
42:F:39:LYS:O	42:F:43:LYS:HG3	2.19	0.43
42:F:106:LYS:O	42:F:110:LEU:HG	2.18	0.43
42:F:115:GLN:HB2	42:F:118:ASN:HD21	1.83	0.43
44:H:152:GLU:OE2	79:5:4689:U:H1'	2.19	0.43
45:I:85:PHE:CD2	45:I:87:ILE:HG13	2.54	0.43
45:I:89:VAL:HG22	45:I:136:MET:HG2	2.01	0.43
46:J:16:ARG:HB3	46:J:16:ARG:NH1	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:J:32:ARG:HE	46:J:126:TYR:HE1	1.66	0.43
49:N:94:PHE:CE2	49:N:96:ARG:HB2	2.53	0.43
51:P:12:THR:HA	51:P:105:LYS:NZ	2.34	0.43
51:P:123:PRO:HD3	51:P:145:HIS:HE2	1.83	0.43
53:S:30:MET:HE1	53:S:47:PHE:CB	2.48	0.43
58:Y:54:GLU:HB2	58:Y:108:ARG:HB3	2.01	0.43
59:Z:115:LYS:HZ1	79:5:2573:A:H4'	1.82	0.43
60:a:21:ARG:NH2	79:5:1317:U:H5''	2.33	0.43
63:d:46:LEU:CD1	63:d:64:ILE:HD13	2.48	0.43
63:d:65:ASP:OD2	63:d:67:ARG:HB2	2.19	0.43
63:d:82:TYR:C	63:d:83:ARG:HD2	2.44	0.43
64:e:37:LYS:HE2	79:5:1663:C:OP2	2.19	0.43
64:e:44:ARG:CZ	79:5:1313:C:H3'	2.49	0.43
66:g:83:CYS:SG	66:g:86:CYS:HB2	2.59	0.43
67:h:109:ARG:O	67:h:113:LEU:HG	2.19	0.43
74:o:5:PRO:HD3	79:5:4232:U:C2	2.54	0.43
74:o:68:LEU:CD1	74:o:85:ILE:HD11	2.48	0.43
76:r:65:LYS:HB2	76:r:77:TYR:CE1	2.53	0.43
77:s:11:SER:HB2	77:s:15:LEU:CD2	2.47	0.43
77:s:146:LYS:H	77:s:155:LEU:N	2.15	0.43
77:s:148:SER:O	77:s:152:ILE:C	2.34	0.43
79:5:158:A:C4'	79:5:159:C:H5''	2.44	0.43
79:5:270:U:H2'	79:5:271:C:H6	1.84	0.43
79:5:294:G:O6	79:5:315:G:H1'	2.17	0.43
79:5:416:U:H4'	79:5:2330:G:H4'	2.01	0.43
79:5:1591:U:OP1	79:5:1592:G:H5'	2.19	0.43
79:5:1670:G:O2'	79:5:1853:G:H4'	2.18	0.43
79:5:2066:C:O2'	79:5:2067:C:H5'	2.19	0.43
79:5:4485:C:H2'	79:5:4486:C:C6	2.53	0.43
81:8:126:C:H4'	81:8:127:U:OP1	2.19	0.43
82:1:1339:U:C5'	82:1:1344:G:H4'	2.49	0.43
82:1:1354:U:H2'	82:1:1355:A:N7	2.33	0.43
84:EF:343:TRP:CE3	84:EF:344:LEU:HB2	2.53	0.43
84:EF:622:VAL:HG11	84:EF:652:PHE:CD1	2.53	0.43
84:EF:650:TRP:CD1	84:EF:651:CYS:N	2.87	0.43
84:EF:771:PHE:CD2	84:EF:785:LYS:HB3	2.53	0.43
84:EF:852:ASN:O	84:EF:853:PHE:C	2.59	0.43
2:FF:77:MET:HB2	2:FF:82:ASN:O	2.18	0.43
4:MM:81:ASP:OD2	4:MM:83:LYS:HB3	2.19	0.43
5:PP:24:GLN:O	5:PP:28:MET:HB2	2.18	0.43
6:QQ:130:LYS:HD2	6:QQ:135:PRO:O	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:RR:96:ILE:CG2	19:AA:15:VAL:HB	2.48	0.43
8:SS:59:LEU:HD12	8:SS:63:GLU:CD	2.44	0.43
14:ff:93:HIS:HB2	18:9:1304:U:C5'	2.49	0.43
15:gg:79:LEU:HD21	15:gg:87:LEU:HB3	2.00	0.43
18:9:5:U:H2'	18:9:6:G:H8	1.84	0.43
18:9:167:G:H21	23:GG:132:ARG:HG3	1.83	0.43
18:9:383:G:H2'	18:9:384:U:C6	2.53	0.43
18:9:1035:A:H4'	18:9:1857:G:C4'	2.49	0.43
18:9:1076:G:OP1	28:NN:107:LYS:HD3	2.18	0.43
18:9:1278:A:H2'	18:9:1279:C:C6	2.54	0.43
18:9:1407:U:H2'	18:9:1408:U:C6	2.54	0.43
18:9:1503:C:O2'	18:9:1504:U:H5'	2.18	0.43
18:9:1829:G:O2'	18:9:1830:U:H5'	2.19	0.43
20:BB:67:PHE:HE2	20:BB:88:THR:HG23	1.84	0.43
20:BB:180:ASP:OD1	20:BB:183:GLU:HG3	2.18	0.43
21:CC:185:THR:O	21:CC:246:LYS:HD3	2.18	0.43
22:EE:59:ASP:O	22:EE:63:LYS:HG3	2.19	0.43
23:GG:20:ASP:OD2	23:GG:22:ARG:HB2	2.19	0.43
23:GG:189:ARG:HA	23:GG:192:ILE:HG12	2.01	0.43
27:LL:94:HIS:HB2	27:LL:105:ARG:HD2	2.01	0.43
38:B:17:LEU:CG	38:B:18:PRO:HD3	2.47	0.43
38:B:229:LYS:HB2	38:B:272:LYS:HB2	2.00	0.43
39:C:281:MET:HE2	79:5:492:U:O4	2.19	0.43
45:I:159:PHE:HB2	45:I:163:GLN:NE2	2.33	0.43
48:M:26:ALA:HB2	48:M:77:TRP:CZ3	2.53	0.43
50:O:75:ALA:HB3	50:O:78:ARG:HG2	2.00	0.43
51:P:27:LYS:O	51:P:31:GLU:HG2	2.18	0.43
53:S:48:VAL:CG1	53:S:54:MET:HB3	2.47	0.43
58:Y:112:ASP:H	58:Y:115:ARG:HB2	1.83	0.43
64:e:47:ARG:HG3	64:e:49:PHE:HD2	1.83	0.43
66:g:100:GLN:O	66:g:104:VAL:HG23	2.19	0.43
75:p:18:TYR:O	75:p:22:LEU:HB2	2.18	0.43
77:s:191:GLN:O	77:s:192:VAL:HG22	2.18	0.43
78:t:85:LEU:C	78:t:86:LYS:HE2	2.44	0.43
78:t:129:ILE:HD13	78:t:160:VAL:HG21	2.01	0.43
79:5:65:A:N6	79:5:75:G:H1'	2.34	0.43
79:5:84:A:OP1	79:5:86:U:H1'	2.19	0.43
79:5:132:G:H2'	79:5:133:C:O4'	2.19	0.43
79:5:403:G:O2'	79:5:404:U:H5'	2.19	0.43
79:5:508:G:O3'	79:5:509:A:H3'	2.19	0.43
79:5:1092:G:O2'	79:5:1093:C:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:1176:C:O2'	79:5:1177:U:H5'	2.19	0.43
79:5:1764:G:H3'	79:5:1766:A:OP2	2.18	0.43
79:5:2395:A:O2'	79:5:2806:A:H1'	2.18	0.43
79:5:2793:G:C5'	79:5:2794:C:H5''	2.48	0.43
79:5:3721:U:H2'	79:5:3722:G:C8	2.52	0.43
79:5:3744:G:H2'	79:5:3745:U:C6	2.54	0.43
79:5:3840:U:H2'	79:5:3841:C:O4'	2.18	0.43
79:5:3924:C:O2'	79:5:3925:U:H5'	2.18	0.43
79:5:4458:C:H2'	79:5:4459:U:H6	1.83	0.43
79:5:4462:C:O2'	79:5:4463:U:H5'	2.19	0.43
79:5:4486:C:O2'	79:5:4683:U:H1'	2.19	0.43
82:1:1387:G:O5'	82:1:1387:G:H8	2.02	0.43
82:1:1414:U:H1'	82:1:1415:U:C2	2.53	0.43
82:1:1432:U:H2'	82:1:1433:U:C6	2.54	0.43
84:EF:78:PHE:HD1	84:EF:99:LEU:HD12	1.84	0.43
84:EF:136:CYS:O	84:EF:137:VAL:C	2.61	0.43
84:EF:159:LYS:HE2	84:EF:218:LEU:HD13	1.99	0.43
84:EF:162:ARG:C	84:EF:162:ARG:CD	2.91	0.43
84:EF:164:LEU:CD2	84:EF:174:LEU:HD22	2.48	0.43
84:EF:206:ASP:N	84:EF:209:LEU:HD23	2.33	0.43
84:EF:378:ASP:HA	84:EF:382:ALA:HB3	2.01	0.43
84:EF:527:LEU:HA	84:EF:530:SER:CB	2.49	0.43
4:MM:20:GLU:O	4:MM:24:THR:HG23	2.19	0.43
4:MM:49:LEU:HD22	4:MM:50:CYS:N	2.33	0.43
6:QQ:129:SER:HA	18:9:1670:C:OP2	2.19	0.43
7:RR:98:VAL:CG2	19:AA:15:VAL:HG21	2.48	0.43
10:UU:56:MET:HE3	18:9:1580:A:H8	1.82	0.43
15:gg:61:GLY:HA3	15:gg:88:ARG:HH12	1.83	0.43
18:9:644:G:H2'	18:9:645:C:C6	2.53	0.43
18:9:1051:G:O2'	18:9:1052:A:H5'	2.19	0.43
18:9:1657:G:H2'	18:9:1658:G:C8	2.53	0.43
18:9:1838:U:O2'	18:9:1839:U:H5'	2.19	0.43
19:AA:7:VAL:HG12	19:AA:191:ARG:HD3	1.99	0.43
19:AA:24:HIS:HB3	19:AA:51:LEU:CG	2.48	0.43
19:AA:185:MET:CE	30:VV:39:VAL:HG21	2.49	0.43
20:BB:40:ASN:CG	20:BB:76:ASN:HB2	2.43	0.43
23:GG:188:LYS:HA	23:GG:191:ARG:HG2	2.01	0.43
24:HH:157:HIS:HB3	24:HH:190:PRO:HG3	2.01	0.43
27:LL:117:PHE:HB3	27:LL:120:VAL:CG2	2.48	0.43
28:NN:13:GLN:HE21	35:bb:21:LYS:HE2	1.83	0.43
37:A:92:LYS:NZ	37:A:93:LYS:HE2	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:B:48:GLY:CA	38:B:81:THR:HG22	2.48	0.43
38:B:62:ARG:NH2	38:B:358:ARG:HG3	2.33	0.43
38:B:95:THR:HB	38:B:96:PRO:HD2	2.01	0.43
38:B:216:MET:HG3	38:B:354:GLN:HG2	2.01	0.43
40:D:35:ARG:O	79:5:4325:A:H2'	2.19	0.43
41:E:48:ARG:NH2	79:5:980:U:H5''	2.34	0.43
41:E:49:ASN:HA	41:E:67:ARG:NH1	2.34	0.43
41:E:216:THR:HG23	41:E:218:ALA:H	1.83	0.43
41:E:221:LYS:HD3	41:E:222:LYS:N	2.34	0.43
42:F:203:ALA:O	42:F:207:LEU:HG	2.18	0.43
42:F:239:ILE:O	42:F:243:ILE:HG13	2.19	0.43
45:I:93:PRO:HA	45:I:127:ALA:HB2	2.01	0.43
45:I:99:ILE:HB	45:I:123:GLN:HB2	2.00	0.43
46:J:20:LEU:HG	46:J:22:LEU:CD2	2.48	0.43
47:L:10:LEU:HD12	47:L:12:PRO:HG3	2.00	0.43
48:M:126:GLU:O	48:M:130:LEU:HD13	2.18	0.43
49:N:18:VAL:O	49:N:22:LEU:HG	2.19	0.43
49:N:65:ARG:HB2	49:N:129:PHE:CD1	2.53	0.43
50:O:73:PHE:HB3	50:O:78:ARG:HB3	2.01	0.43
52:Q:50:ARG:HG2	52:Q:53:MET:HE2	2.00	0.43
53:S:80:ILE:HG23	53:S:129:VAL:HG22	1.99	0.43
55:U:26:THR:HG22	55:U:68:SER:HB3	2.01	0.43
62:c:90:ARG:CZ	75:p:44:LYS:HG2	2.49	0.43
67:h:21:LEU:O	67:h:25:LYS:HG2	2.19	0.43
70:k:25:ILE:HG12	70:k:34:PHE:CD1	2.54	0.43
77:s:88:PHE:C	77:s:89:VAL:HG23	2.44	0.43
77:s:171:GLU:HA	77:s:174:LEU:HD21	2.01	0.43
77:s:189:ILE:CG1	77:s:190:GLN:N	2.73	0.43
78:t:11:LYS:HD2	78:t:12:VAL:O	2.19	0.43
78:t:117:ARG:HE	78:t:128:THR:HG23	1.84	0.43
78:t:134:GLY:CA	78:t:147:HIS:CD2	3.01	0.43
79:5:475:G:O2'	79:5:476:G:H5'	2.19	0.43
79:5:483:G:H5''	79:5:484:U:C2'	2.49	0.43
79:5:489:C:H2'	79:5:490:C:C6	2.54	0.43
79:5:1095:A:O2'	79:5:1096:C:H5'	2.18	0.43
79:5:1483:C:H4'	79:5:1484:G:H5'	2.01	0.43
79:5:1625:G:H4'	79:5:1626:G:O5'	2.18	0.43
79:5:1767:A:C5	79:5:1769:G:C5	3.06	0.43
79:5:1779:U:C2	79:5:1780:A:C8	3.07	0.43
79:5:2612:G:H2'	79:5:2613:C:C6	2.54	0.43
79:5:2662:G:H2'	79:5:2663:G:H8	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:3801:U:H1'	79:5:4497:U:C4'	2.48	0.43
79:5:4174:U:H2'	79:5:4175:G:C8	2.48	0.43
79:5:4622:A:H2'	79:5:4623:G:H8	1.84	0.43
79:5:4736:C:H4'	79:5:5068:G:C5	2.53	0.43
82:1:1359:A:N6	82:1:1373:C:O2'	2.52	0.43
82:1:1478:C:O3'	82:1:1479:U:C6	2.71	0.43
82:1:1491:C:O2'	84:EF:715:DDE:CAC	2.67	0.43
83:PT:67:A:C5	83:PT:68:C:C5	3.07	0.43
84:EF:6:VAL:O	84:EF:9:ILE:HG22	2.18	0.43
84:EF:143:LEU:HD22	84:EF:188:ILE:HG21	2.01	0.43
84:EF:266:PHE:CE2	84:EF:276:SER:HB3	2.53	0.43
84:EF:364:ALA:C	84:EF:366:LYS:H	2.27	0.43
84:EF:519:LYS:HG2	84:EF:568:ILE:CG1	2.49	0.43
84:EF:593:SER:HB3	84:EF:727:ARG:HG3	2.01	0.43
84:EF:616:ASP:O	84:EF:617:ILE:C	2.61	0.43
84:EF:730:TYR:HA	84:EF:733:VAL:HB	2.01	0.43
84:EF:773:GLU:CG	84:EF:774:SER:N	2.82	0.43
84:EF:829:SER:O	84:EF:830:ARG:C	2.62	0.43
1:DD:56:GLN:HA	1:DD:59:LEU:HD21	2.00	0.43
1:DD:163:PRO:HA	1:DD:166:TYR:CZ	2.54	0.43
2:FF:35:LEU:HD11	2:FF:146:ARG:CD	2.48	0.43
2:FF:38:TYR:CE2	2:FF:144:LEU:HB2	2.53	0.43
2:FF:123:GLU:CD	12:cc:59:LEU:HD12	2.44	0.43
7:RR:20:TYR:CE2	7:RR:38:ILE:HB	2.54	0.43
7:RR:53:TYR:O	7:RR:57:LEU:HG	2.18	0.43
9:TT:86:GLY:O	18:9:1530:U:H4'	2.19	0.43
13:dd:2:GLY:CA	18:9:1301:A:H4'	2.43	0.43
17:W:37:GLU:O	17:W:41:LEU:HD23	2.19	0.43
18:9:212:C:H2'	18:9:213:G:C8	2.53	0.43
18:9:824:C:H5'	26:JJ:147:PHE:HE1	1.84	0.43
18:9:1380:C:H2'	18:9:1381:G:O4'	2.18	0.43
18:9:1484:A:H2'	18:9:1485:U:C6	2.54	0.43
18:9:1532:C:H5''	18:9:1533:A:O4'	2.19	0.43
18:9:1836:G:OP2	18:9:1839:U:H4'	2.19	0.43
21:CC:248:TYR:OH	30:VV:11:LEU:HG	2.19	0.43
22:EE:107:GLY:HA2	22:EE:189:LEU:HG	2.01	0.43
26:JJ:32:ILE:HG21	36:ee:107:ARG:CG	2.49	0.43
26:JJ:67:ASP:OD1	26:JJ:68:PRO:HD2	2.19	0.43
26:JJ:93:LYS:HB3	26:JJ:96:TYR:HD2	1.83	0.43
27:LL:59:LYS:CD	27:LL:134:LEU:HB3	2.44	0.43
27:LL:61:PRO:HA	27:LL:66:VAL:CG1	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:LL:117:PHE:HB3	27:LL:120:VAL:HG21	2.01	0.43
37:A:156:LYS:HD2	79:5:3661:G:O2'	2.19	0.43
37:A:177:LYS:HD2	75:p:29:ILE:CG2	2.49	0.43
38:B:57:VAL:HG22	38:B:73:VAL:HG12	2.01	0.43
40:D:83:LEU:HB2	40:D:84:PRO:HD3	2.00	0.43
41:E:270:LEU:O	41:E:274:LEU:HG	2.18	0.43
42:F:39:LYS:HE2	42:F:43:LYS:HE2	2.01	0.43
42:F:170:ASP:HB3	42:F:173:LEU:CD1	2.45	0.43
43:G:91:ASN:OD1	43:G:96:GLN:HG3	2.19	0.43
43:G:210:ILE:HG21	43:G:220:VAL:HG11	2.01	0.43
44:H:57:VAL:CG1	44:H:70:VAL:HG13	2.49	0.43
45:I:145:LYS:O	45:I:149:VAL:HG23	2.19	0.43
49:N:47:LYS:O	49:N:51:LEU:HG	2.19	0.43
54:T:119:ALA:HB1	54:T:124:THR:OG1	2.19	0.43
56:V:25:VAL:HG13	56:V:38:TYR:HD1	1.84	0.43
56:V:51:ARG:HG3	79:5:3843:C:OP2	2.19	0.43
57:X:105:ASN:O	57:X:109:ILE:HG13	2.18	0.43
58:Y:25:ILE:O	58:Y:29:ILE:HG13	2.19	0.43
59:Z:12:LEU:HD13	59:Z:134:LEU:HD22	2.00	0.43
61:b:117:ARG:NH2	79:5:1272:C:H3'	2.33	0.43
62:c:17:ARG:O	62:c:21:VAL:HG23	2.18	0.43
63:d:88:LEU:HG	63:d:104:THR:HG23	2.00	0.43
64:e:30:LYS:HD3	79:5:1332:C:OP2	2.18	0.43
67:h:57:VAL:O	67:h:61:ILE:HG13	2.19	0.43
72:m:76:ARG:NH2	79:5:4472:G:H5'	2.34	0.43
75:p:30:GLU:HA	75:p:33:GLN:HG2	2.01	0.43
75:p:82:ALA:O	75:p:86:LEU:HG	2.18	0.43
77:s:8:THR:O	77:s:10:LYS:HB2	2.18	0.43
77:s:18:ILE:CG1	77:s:68:HIS:CD2	3.00	0.43
77:s:192:VAL:C	77:s:199:TYR:H	2.26	0.43
78:t:14:TYR:CE1	78:t:61:LYS:HD2	2.54	0.43
78:t:106:PHE:HE2	78:t:159:ALA:CB	2.16	0.43
78:t:145:GLY:O	78:t:146:ARG:C	2.60	0.43
78:t:149:HIS:HD2	78:t:150:ASP:OD1	2.02	0.43
79:5:383:A:H2'	79:5:384:A:O4'	2.19	0.43
79:5:438:G:O2'	79:5:439:G:H5'	2.19	0.43
79:5:445:U:H2'	79:5:446:C:C1'	2.49	0.43
79:5:966:A:H4'	79:5:967:C:C5'	2.49	0.43
79:5:1970:A:H5''	79:5:1971:C:H5'	2.01	0.43
79:5:2279:A:H2'	79:5:2280:G:O4'	2.19	0.43
79:5:2362:U:H2'	79:5:2363:A:C8	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:3775:A:H3'	79:5:3776:G:C5'	2.49	0.43
79:5:4632:U:H2'	79:5:4633:G:O4'	2.19	0.43
79:5:4980:C:H3'	79:5:4981:G:H21	1.84	0.43
80:7:88:A:H2'	80:7:89:G:O4'	2.18	0.43
81:8:37:A:O5'	81:8:39:G:H5'	2.19	0.43
81:8:68:G:H2'	81:8:69:U:H6	1.84	0.43
82:1:1371:U:C4	82:1:1449:U:C4	3.07	0.43
82:1:1470:C:C1'	82:1:1488:G:O4'	2.67	0.43
84:EF:128:VAL:HG23	84:EF:156:MET:HB2	2.00	0.43
84:EF:136:CYS:HB2	84:EF:139:THR:CB	2.49	0.43
84:EF:429:ILE:CD1	84:EF:443:TYR:HB2	2.47	0.43
84:EF:442:LEU:C	84:EF:443:TYR:CG	2.97	0.43
84:EF:513:ASN:N	84:EF:514:PRO:CD	2.80	0.43
84:EF:576:VAL:HG13	84:EF:841:ARG:NH1	2.34	0.43
84:EF:580:ARG:CA	84:EF:695:GLU:HB3	2.48	0.43
84:EF:597:ASN:O	84:EF:599:HIS:N	2.52	0.43
84:EF:650:TRP:CH2	84:EF:679:VAL:HG11	2.54	0.43
84:EF:654:PRO:HD3	84:EF:683:PHE:CZ	2.54	0.43
84:EF:743:PRO:HB3	84:EF:817:TRP:CZ2	2.53	0.43
84:EF:762:VAL:HG12	84:EF:803:ASN:HD21	1.84	0.43
4:MM:69:CYS:SG	4:MM:76:LEU:HD21	2.58	0.42
5:PP:38:SER:O	5:PP:42:ARG:HG3	2.19	0.42
6:QQ:23:ALA:CB	6:QQ:70:VAL:HG22	2.48	0.42
7:RR:55:THR:O	7:RR:59:LYS:HG3	2.18	0.42
9:TT:14:PHE:CE1	9:TT:134:ILE:HG13	2.54	0.42
13:dd:14:PHE:HB2	18:9:1661:A:H8	1.84	0.42
14:ff:99:LYS:HG3	18:9:1286:G:OP1	2.19	0.42
15:gg:197:THR:CG2	15:gg:239:LEU:HG	2.49	0.42
16:R:119:MET:O	16:R:123:LEU:HD13	2.19	0.42
18:9:204:G:O2'	18:9:205:G:H5'	2.19	0.42
18:9:292:A:H4'	27:LL:39:ASN:OD1	2.18	0.42
18:9:372:U:OP1	27:LL:136:LYS:HD3	2.19	0.42
18:9:493:A:H4'	33:YY:89:HIS:CD2	2.53	0.42
18:9:507:G:H5'	18:9:509:G:O6	2.19	0.42
18:9:806:U:H2'	18:9:807:G:C8	2.54	0.42
18:9:811:A:H2'	18:9:812:A:O4'	2.19	0.42
18:9:956:G:O5'	29:OO:60:MET:HG2	2.19	0.42
18:9:1218:C:O2'	18:9:1219:C:H5'	2.18	0.42
18:9:1231:C:H2'	18:9:1232:U:O4'	2.19	0.42
18:9:1359:U:H2'	18:9:1360:U:C6	2.54	0.42
18:9:1409:A:H2'	18:9:1410:C:H6	1.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:9:1549:U:H2'	18:9:1550:G:O4'	2.19	0.42
18:9:1822:A:H2'	18:9:1823:A:H5''	2.01	0.42
18:9:1860:A:O2'	18:9:1862:G:H5'	2.19	0.42
19:AA:57:LYS:HG3	19:AA:160:ALA:O	2.19	0.42
19:AA:154:LEU:HD13	30:VV:66:ASP:OD2	2.19	0.42
20:BB:71:LEU:HB2	20:BB:82:ARG:HB3	2.00	0.42
21:CC:184:VAL:CG2	21:CC:195:LEU:HB2	2.48	0.42
31:WW:111:MET:HE3	31:WW:116:ALA:CA	2.43	0.42
39:C:144:ILE:HG13	39:C:249:PHE:CE1	2.54	0.42
41:E:188:PRO:HD3	79:5:4938:A:O4'	2.19	0.42
41:E:277:VAL:HG12	79:5:4883:C:O5'	2.19	0.42
42:F:104:VAL:HG11	42:F:138:TYR:CD1	2.54	0.42
43:G:209:VAL:HG11	43:G:237:LEU:HD12	2.01	0.42
47:L:42:ARG:HA	47:L:45:ARG:NH1	2.33	0.42
47:L:186:ARG:HE	79:5:1394:G:H5'	1.84	0.42
47:L:203:ALA:O	47:L:207:VAL:HG23	2.19	0.42
48:M:27:ILE:HG12	48:M:55:MET:HE1	2.01	0.42
49:N:49:ARG:HH12	79:5:152:U:P	2.42	0.42
51:P:64:ASN:HB2	51:P:80:GLN:OE1	2.18	0.42
59:Z:26:VAL:HG22	59:Z:42:LEU:O	2.18	0.42
60:a:136:LYS:O	60:a:140:VAL:HG23	2.18	0.42
61:b:14:ARG:HD3	61:b:18:ARG:NH2	2.33	0.42
64:e:22:ARG:HG3	64:e:36:ARG:H	1.84	0.42
65:f:106:TYR:CD1	65:f:107:PRO:HD3	2.54	0.42
68:i:56:ARG:O	68:i:60:LEU:HD13	2.19	0.42
77:s:13:TYR:C	77:s:15:LEU:N	2.76	0.42
77:s:85:ASN:CA	79:5:2021:G:H4'	2.49	0.42
77:s:121:VAL:HB	77:s:161:ILE:N	2.34	0.42
77:s:128:THR:HG22	77:s:130:LEU:HD22	1.99	0.42
77:s:160:LEU:HA	77:s:160:LEU:HD22	1.69	0.42
78:t:74:VAL:O	78:t:75:PRO:C	2.59	0.42
78:t:91:ASP:H	78:t:93:LYS:NZ	2.16	0.42
79:5:82:U:H2'	79:5:83:C:O4'	2.19	0.42
79:5:490:C:H2'	79:5:491:G:C8	2.54	0.42
79:5:1069:G:H5''	79:5:1070:G:OP2	2.19	0.42
79:5:1515:A:H2'	79:5:1516:G:O4'	2.19	0.42
79:5:1834:U:H4'	79:5:1835:G:OP2	2.18	0.42
79:5:1975:G:N1	79:5:1984:A:N3	2.67	0.42
79:5:1983:A:O4'	79:5:2010:A:H4'	2.18	0.42
79:5:2322:G:O2'	79:5:2323:C:H5'	2.19	0.42
79:5:2388:A:O2'	79:5:2389:A:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:2706:G:H3'	79:5:2707:U:H5''	2.01	0.42
79:5:4070:U:H2'	79:5:4071:U:H6	1.84	0.42
79:5:4362:A:O2'	79:5:4363:A:H5'	2.19	0.42
79:5:4601:U:H2'	79:5:4602:A:C8	2.46	0.42
79:5:4655:A:OP1	79:5:4656:A:H5''	2.19	0.42
82:1:1430:G:N2	82:1:1431:G:C4	2.87	0.42
83:PT:9:A:C2	83:PT:46:G:C6	3.06	0.42
84:EF:153:PRO:HD3	84:EF:203:ILE:HG23	2.00	0.42
84:EF:167:LEU:HD22	84:EF:167:LEU:N	2.33	0.42
84:EF:224:THR:HG23	84:EF:227:GLN:H	1.85	0.42
84:EF:307:PHE:CE2	84:EF:332:GLY:HA3	2.54	0.42
84:EF:367:TYR:CD1	84:EF:368:ARG:CG	3.02	0.42
84:EF:398:ILE:HD11	84:EF:472:LEU:CD2	2.48	0.42
84:EF:480:VAL:HG12	84:EF:529:LYS:HE3	2.00	0.42
84:EF:624:ALA:N	84:EF:652:PHE:HB3	2.34	0.42
84:EF:634:TYR:HA	84:EF:638:LYS:CE	2.49	0.42
84:EF:666:THR:HG22	84:EF:706:ASP:CA	2.48	0.42
84:EF:731:ALA:HB1	84:EF:850:LEU:CD1	2.49	0.42
1:DD:141:LYS:NZ	18:9:1332:A:H1'	2.34	0.42
5:PP:107:ILE:H	5:PP:107:ILE:HG12	1.60	0.42
6:QQ:25:CYS:SG	6:QQ:68:ILE:HG12	2.59	0.42
6:QQ:117:ARG:HG2	6:QQ:121:VAL:HB	2.00	0.42
15:gg:5:MET:CE	15:gg:312:VAL:HG22	2.47	0.42
18:9:379:C:H2'	18:9:380:G:O4'	2.18	0.42
18:9:662:G:H5'	18:9:1156:U:C2	2.54	0.42
18:9:913:A:C4	24:HH:66:VAL:HG21	2.55	0.42
18:9:1045:U:H2'	18:9:1046:U:O4'	2.19	0.42
18:9:1146:C:H2'	18:9:1147:C:H6	1.84	0.42
18:9:1265:A:H4'	18:9:1327:G:OP2	2.19	0.42
18:9:1819:A:O2'	18:9:1820:G:H5'	2.20	0.42
19:AA:147:LEU:CD1	19:AA:161:ILE:HD12	2.48	0.42
21:CC:68:ARG:HG2	21:CC:277:HIS:ND1	2.34	0.42
23:GG:74:ARG:O	23:GG:75:LEU:HD23	2.18	0.42
26:JJ:38:ARG:HD2	26:JJ:39:ASN:ND2	2.33	0.42
37:A:120:PRO:CA	37:A:162:ASN:HB3	2.48	0.42
39:C:187:GLN:HG2	39:C:203:GLN:CB	2.49	0.42
39:C:193:LYS:HD2	39:C:196:MET:SD	2.59	0.42
40:D:200:MET:HE2	40:D:237:GLU:HG3	2.01	0.42
45:I:6:ALA:HB2	79:5:4431:U:OP1	2.19	0.42
48:M:105:THR:HG22	48:M:106:ASP:H	1.85	0.42
49:N:54:LYS:HE2	79:5:152:U:P	2.59	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:O:28:LEU:HD21	50:O:88:LEU:HD22	2.01	0.42
50:O:48:TYR:O	50:O:52:LEU:HD13	2.18	0.42
50:O:74:ARG:O	50:O:142:ALA:HB1	2.19	0.42
50:O:194:ASP:O	50:O:198:THR:HG23	2.19	0.42
51:P:139:TYR:CE2	79:5:2421:G:H1'	2.54	0.42
52:Q:18:PRO:HD3	52:Q:52:PHE:CD1	2.54	0.42
53:S:29:ARG:O	54:T:150:LEU:HD12	2.19	0.42
54:T:23:GLY:HA2	79:5:4279:A:OP1	2.19	0.42
57:X:73:HIS:O	57:X:116:LEU:HD11	2.19	0.42
62:c:14:ILE:O	62:c:18:LEU:HG	2.19	0.42
64:e:81:ASN:OD1	64:e:84:GLU:HG3	2.19	0.42
65:f:41:PHE:CE1	65:f:110:ILE:HD11	2.53	0.42
77:s:94:ASP:CG	77:s:95:LEU:N	2.76	0.42
77:s:103:LEU:O	77:s:106:LYS:HE2	2.20	0.42
77:s:175:LEU:C	77:s:180:ILE:HB	2.44	0.42
78:t:10:ILE:HG12	78:t:63:THR:HG21	2.01	0.42
78:t:18:THR:HG21	78:t:23:GLY:C	2.44	0.42
79:5:7:C:O2'	79:5:8:U:H5'	2.19	0.42
79:5:490:C:H2'	79:5:491:G:H8	1.84	0.42
79:5:677:G:O2'	79:5:678:C:H5'	2.18	0.42
79:5:723:A:O2'	79:5:724:C:H5'	2.20	0.42
79:5:758:G:H2'	79:5:759:G:O4'	2.18	0.42
79:5:1452:A:H2'	79:5:1453:G:O4'	2.19	0.42
79:5:1770:A:C5	79:5:1771:U:C4	3.07	0.42
79:5:2592:U:H2'	79:5:2593:C:H5'	2.01	0.42
79:5:2601:A:N7	79:5:2743:A:H5''	2.35	0.42
79:5:2718:U:O5'	79:5:2719:C:H5'	2.18	0.42
79:5:3688:U:H2'	79:5:3689:G:C8	2.53	0.42
79:5:3752:C:H2'	79:5:3777:G:C5'	2.48	0.42
79:5:4353:U:H5''	79:5:4354:U:O4'	2.18	0.42
80:7:3:C:O2'	80:7:4:U:H5'	2.19	0.42
81:8:145:C:O2'	81:8:146:U:H5'	2.19	0.42
82:1:1337:U:C4	82:1:1395:A:C2	3.07	0.42
82:1:1345:G:H21	82:1:1389:C:H42	1.65	0.42
82:1:1406:C:C6	82:1:1406:C:H5''	2.54	0.42
82:1:1454:A:H2	82:1:1455:A:O4'	2.02	0.42
82:1:1490:C:H2'	82:1:1491:C:C6	2.53	0.42
83:PT:30:G:N2	83:PT:40:C:H2'	2.34	0.42
84:EF:24:VAL:HG23	84:EF:126:LEU:HB3	2.01	0.42
84:EF:397:TYR:O	84:EF:398:ILE:C	2.61	0.42
84:EF:408:GLY:O	84:EF:409:ARG:C	2.62	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:EF:503:PRO:CB	84:EF:547:ALA:CB	2.98	0.42
84:EF:577:VAL:HG11	84:EF:791:ASN:CA	2.48	0.42
84:EF:632:ALA:HB1	84:EF:647:ARG:HH11	1.83	0.42
2:FF:82:ASN:HA	2:FF:85:LYS:HD2	2.00	0.42
3:KK:24:LYS:HB2	3:KK:66:HIS:CE1	2.54	0.42
9:TT:72:VAL:O	9:TT:76:THR:HG23	2.19	0.42
9:TT:104:LEU:HD13	9:TT:121:ARG:NE	2.32	0.42
13:dd:12:ARG:HH12	18:9:1262:C:H4'	1.83	0.42
15:gg:4:GLN:O	15:gg:5:MET:HE2	2.20	0.42
16:R:158:GLN:HB3	16:R:162:ARG:HH12	1.84	0.42
18:9:113:G:O6	18:9:290:U:H1'	2.19	0.42
18:9:113:G:N2	18:9:292:A:H2'	2.34	0.42
18:9:159:A:H2	18:9:468:A:H1'	1.84	0.42
18:9:224:A:H2'	18:9:225:G:C8	2.54	0.42
18:9:441:C:H2'	18:9:442:C:C6	2.55	0.42
18:9:600:G:H2'	18:9:601:G:C8	2.54	0.42
18:9:616:A:N3	36:ee:85:VAL:HG21	2.34	0.42
18:9:642:U:OP2	26:JJ:39:ASN:HB2	2.19	0.42
18:9:647:U:H2'	18:9:648:A:H8	1.83	0.42
18:9:1045:U:H2'	18:9:1046:U:C6	2.54	0.42
18:9:1074:C:O2'	18:9:1075:C:H5'	2.19	0.42
18:9:1349:G:H2'	18:9:1350:U:C6	2.54	0.42
18:9:1409:A:H2'	18:9:1410:C:C6	2.53	0.42
18:9:1444:U:H2'	18:9:1445:U:C6	2.54	0.42
18:9:1630:A:O2'	18:9:1631:U:H5'	2.19	0.42
18:9:1802:C:O2'	18:9:1803:U:H5'	2.19	0.42
18:9:1848:U:H2'	18:9:1849:G:H5'	2.00	0.42
19:AA:50:ASN:HB2	19:AA:53:ARG:HH21	1.84	0.42
19:AA:57:LYS:HD2	19:AA:159:ILE:HD11	2.01	0.42
21:CC:65:LYS:HG2	21:CC:273:LEU:HD13	2.00	0.42
21:CC:125:LYS:HE2	21:CC:141:VAL:HG11	2.02	0.42
24:HH:78:ARG:HG3	24:HH:82:GLU:OE2	2.19	0.42
25:II:80:ASP:OD1	25:II:94:LYS:HE2	2.19	0.42
26:JJ:16:PRO:HG2	26:JJ:24:ARG:NH1	2.34	0.42
28:NN:33:VAL:HG21	28:NN:66:VAL:HG11	2.01	0.42
31:WW:30:CYS:HB2	31:WW:61:ILE:HG13	2.01	0.42
33:YY:15:ASN:HD22	33:YY:18:LEU:HD12	1.84	0.42
37:A:112:ILE:HD12	37:A:133:TYR:CE2	2.54	0.42
37:A:177:LYS:HD3	75:p:69:TRP:CH2	2.54	0.42
37:A:237:LEU:HD13	37:A:243:THR:HB	2.00	0.42
38:B:83:PRO:HA	38:B:205:VAL:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:B:234:ARG:HA	38:B:272:LYS:NZ	2.35	0.42
39:C:116:ASN:HB2	39:C:119:GLN:HG3	2.01	0.42
40:D:163:LEU:O	40:D:167:VAL:HG23	2.20	0.42
41:E:50:PRO:HG2	41:E:58:ARG:CB	2.49	0.42
41:E:188:PRO:HB3	79:5:4938:A:H8	1.82	0.42
42:F:156:ARG:HD2	42:F:247:ASN:HD22	1.83	0.42
43:G:163:LYS:HE3	43:G:167:LEU:HD11	2.00	0.42
44:H:5:LEU:HD13	44:H:60:TRP:CE2	2.54	0.42
45:I:52:MET:HE1	45:I:155:ALA:HB3	2.02	0.42
47:L:31:ARG:HA	47:L:34:ARG:NH1	2.34	0.42
53:S:112:ASP:OD1	53:S:116:ARG:HD2	2.19	0.42
54:T:115:LYS:HA	54:T:118:GLU:CG	2.49	0.42
57:X:88:LYS:O	57:X:91:GLU:HG3	2.20	0.42
57:X:139:ARG:NH1	79:5:2533:C:H5''	2.34	0.42
58:Y:88:GLU:HG3	58:Y:92:GLY:O	2.20	0.42
63:d:29:ILE:HD11	63:d:84:ILE:CG2	2.49	0.42
63:d:70:LYS:HG3	79:5:2389:A:H4'	2.02	0.42
64:e:63:ASN:O	64:e:67:LYS:HB2	2.20	0.42
65:f:28:LEU:HD23	65:f:101:ILE:HG13	2.01	0.42
65:f:88:PHE:CE1	65:f:92:LEU:HD11	2.54	0.42
66:g:64:LEU:HD23	79:5:2749:C:O2'	2.19	0.42
75:p:37:TYR:O	75:p:47:MET:HB2	2.19	0.42
77:s:20:LEU:CB	77:s:24:TYR:HE1	2.31	0.42
77:s:45:MET:HA	77:s:48:ARG:CD	2.49	0.42
77:s:50:LYS:CD	77:s:98:ILE:HG12	2.49	0.42
77:s:55:MET:HB3	79:5:1998:A:N6	2.32	0.42
77:s:57:LYS:HA	79:5:2020:U:H5'	2.00	0.42
77:s:66:ARG:H	77:s:66:ARG:HG2	1.53	0.42
77:s:120:GLU:OE2	77:s:120:GLU:HA	2.19	0.42
77:s:144:THR:HB	77:s:155:LEU:HB3	2.01	0.42
78:t:15:LEU:HD12	78:t:62:LEU:CD1	2.49	0.42
78:t:108:GLU:O	78:t:112:ILE:N	2.50	0.42
78:t:147:HIS:CD2	78:t:151:ILE:HG12	2.55	0.42
79:5:485:C:H2'	79:5:486:C:C6	2.55	0.42
79:5:988:C:O2'	79:5:989:U:H5'	2.19	0.42
79:5:1662:C:H2'	79:5:1663:C:H6	1.85	0.42
79:5:1783:C:O2'	79:5:1784:U:H5'	2.19	0.42
79:5:1795:A:H1'	80:7:79:U:O2'	2.18	0.42
79:5:2730:U:H2'	79:5:2731:C:C6	2.55	0.42
79:5:3714:G:H2'	79:5:3715:U:O4'	2.19	0.42
79:5:4582:C:O2'	79:5:4583:C:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:5003:U:H2'	79:5:5004:C:C6	2.54	0.42
82:1:1456:G:H2'	82:1:1457:G:N7	2.32	0.42
84:EF:9:ILE:C	84:EF:11:ALA:N	2.75	0.42
84:EF:205:ILE:HG22	84:EF:211:THR:HG22	1.98	0.42
84:EF:503:PRO:HB2	84:EF:547:ALA:CB	2.50	0.42
84:EF:849:ALA:O	84:EF:853:PHE:CE1	2.72	0.42
2:FF:143:PRO:O	2:FF:147:VAL:HG23	2.19	0.42
8:SS:61:GLU:O	8:SS:64:VAL:HG22	2.19	0.42
9:TT:62:ARG:O	9:TT:66:LEU:HG	2.19	0.42
9:TT:77:LYS:HB2	9:TT:94:ARG:NH1	2.34	0.42
10:UU:56:MET:HE1	10:UU:88:LEU:HD21	2.02	0.42
18:9:71:G:H2'	18:9:72:C:C6	2.54	0.42
18:9:158:A:H2'	18:9:159:A:O4'	2.19	0.42
18:9:478:G:H2'	18:9:479:C:C6	2.55	0.42
18:9:527:C:H2'	18:9:528:A:H8	1.84	0.42
18:9:918:U:H2'	18:9:919:A:O4'	2.19	0.42
18:9:1202:U:H2'	18:9:1203:G:C8	2.55	0.42
18:9:1241:A:O2'	18:9:1266:C:H1'	2.19	0.42
18:9:1271:C:H4'	18:9:1303:C:H5''	2.01	0.42
18:9:1401:A:H5'	18:9:1402:A:OP1	2.19	0.42
19:AA:24:HIS:HB3	19:AA:51:LEU:HD21	2.02	0.42
21:CC:88:ILE:HG21	21:CC:94:ILE:HD11	2.01	0.42
21:CC:184:VAL:HG22	21:CC:195:LEU:HB2	2.00	0.42
22:EE:148:ARG:HG3	22:EE:149:TYR:HD2	1.83	0.42
23:GG:192:ILE:O	23:GG:196:LYS:HG3	2.20	0.42
27:LL:93:LEU:HD23	27:LL:104:LYS:HA	2.01	0.42
27:LL:134:LEU:HD22	27:LL:134:LEU:H	1.84	0.42
37:A:7:GLY:O	79:5:3667:C:H4'	2.20	0.42
37:A:41:ILE:HG23	37:A:90:CYS:SG	2.59	0.42
38:B:149:ASP:O	38:B:153:MET:HG3	2.19	0.42
38:B:229:LYS:HA	79:5:2836:A:H4'	2.02	0.42
38:B:286:LYS:HB2	38:B:365:LEU:HD11	2.01	0.42
39:C:109:ARG:HD2	39:C:111:TRP:CZ3	2.55	0.42
39:C:150:LEU:HB3	39:C:151:PRO:HD3	2.02	0.42
40:D:73:MET:HA	80:7:114:U:H1'	2.01	0.42
45:I:102:MET:HE1	45:I:114:GLY:O	2.20	0.42
46:J:34:THR:O	46:J:38:LYS:HG3	2.19	0.42
47:L:78:LEU:HD11	47:L:100:PRO:HB3	2.01	0.42
47:L:103:ARG:HD2	47:L:105:LYS:HD2	2.01	0.42
48:M:25:VAL:HG13	48:M:38:VAL:HG11	2.02	0.42
49:N:195:ARG:HD3	79:5:98:A:OP1	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:Q:3:VAL:HB	52:Q:5:ILE:HD13	2.01	0.42
53:S:166:ARG:HG2	53:S:167:PHE:CD2	2.54	0.42
58:Y:52:ASP:O	58:Y:110:LYS:HB2	2.20	0.42
60:a:63:LEU:HD23	60:a:64:LYS:N	2.34	0.42
61:b:43:MET:O	61:b:47:LYS:HG3	2.19	0.42
63:d:50:ARG:CG	63:d:54:MET:HE3	2.47	0.42
64:e:35:TRP:CZ2	64:e:56:PRO:HD2	2.55	0.42
67:h:20:GLN:O	67:h:24:LEU:HG	2.19	0.42
67:h:27:GLU:O	67:h:31:LEU:HG	2.20	0.42
76:r:21:ASN:O	76:r:23:GLN:HG3	2.20	0.42
77:s:59:THR:HA	77:s:62:ARG:HG3	2.00	0.42
78:t:113:ALA:CA	78:t:129:ILE:HG12	2.46	0.42
78:t:137:GLN:HA	78:t:141:CYS:N	2.33	0.42
78:t:147:HIS:CD2	78:t:151:ILE:HD11	2.55	0.42
79:5:37:U:H2'	79:5:38:A:O4'	2.20	0.42
79:5:106:A:H1'	79:5:336:A:N3	2.35	0.42
79:5:963:G:H2'	79:5:964:A:H8	1.83	0.42
79:5:1381:U:H5'	79:5:1382:G:OP2	2.20	0.42
79:5:1463:C:O2'	79:5:1464:C:H5'	2.19	0.42
79:5:1754:U:H2'	79:5:1756:U:C5	2.53	0.42
79:5:2061:U:H2'	79:5:2062:C:O4'	2.20	0.42
79:5:2078:C:H2'	79:5:2079:G:C8	2.53	0.42
79:5:2314:G:O2'	79:5:2315:G:H5'	2.19	0.42
79:5:2412:A:H2'	79:5:2413:U:H6	1.82	0.42
79:5:2439:G:H5'	79:5:2778:G:OP2	2.20	0.42
79:5:3639:U:H2'	79:5:3640:U:H6	1.85	0.42
79:5:3773:U:H3'	79:5:3775:A:OP2	2.19	0.42
79:5:3805:U:H2'	79:5:3806:G:C8	2.54	0.42
79:5:3826:C:O2'	79:5:3827:G:H5'	2.19	0.42
79:5:3913:G:H4'	79:5:3914:U:OP2	2.19	0.42
79:5:4313:A:H3'	79:5:4314:C:H5''	2.01	0.42
79:5:4762:A:O2'	79:5:4763:U:H5'	2.19	0.42
82:1:1380:G:H2'	82:1:1381:G:H8	1.82	0.42
82:1:1458:C:H2'	82:1:1459:U:H6	1.71	0.42
84:EF:220:GLY:HA3	84:EF:341:ARG:CZ	2.49	0.42
84:EF:377:PRO:C	84:EF:382:ALA:CB	2.92	0.42
84:EF:562:GLU:HG3	84:EF:570:ILE:CD1	2.50	0.42
84:EF:604:MET:HE3	84:EF:702:PHE:HB3	2.01	0.42
84:EF:626:GLN:O	84:EF:627:GLU:C	2.63	0.42
84:EF:824:PRO:O	84:EF:825:PHE:C	2.62	0.42
2:FF:128:ILE:HG13	2:FF:137:GLN:NE2	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:MM:64:LEU:O	4:MM:68:LEU:HD13	2.19	0.42
6:QQ:138:ARG:NH1	18:9:1646:C:H5''	2.34	0.42
8:SS:61:GLU:HA	8:SS:64:VAL:HG22	2.02	0.42
18:9:94:G:OP1	22:EE:6:LYS:HE3	2.18	0.42
18:9:111:A:O2'	18:9:112:U:H5'	2.19	0.42
18:9:155:G:O2'	18:9:156:G:H5'	2.19	0.42
18:9:304:C:H3'	18:9:305:U:OP1	2.18	0.42
18:9:943:U:H2'	18:9:944:A:O4'	2.19	0.42
18:9:1081:U:H5'	18:9:1184:G:H4'	2.00	0.42
18:9:1185:C:H2'	18:9:1186:U:O4'	2.19	0.42
18:9:1346:U:HO2'	18:9:1485:U:H1'	1.84	0.42
18:9:1348:G:H4'	21:CC:145:LYS:NZ	2.34	0.42
20:BB:163:GLN:HG2	20:BB:204:ILE:HD13	2.01	0.42
21:CC:108:LYS:CB	21:CC:233:LEU:HD23	2.49	0.42
23:GG:13:GLN:HA	23:GG:124:LEU:CD2	2.49	0.42
24:HH:69:LEU:O	24:HH:73:GLN:HG2	2.20	0.42
24:HH:83:LEU:HD13	24:HH:92:VAL:HG21	2.02	0.42
24:HH:117:PRO:CG	24:HH:120:ARG:HD3	2.38	0.42
24:HH:146:VAL:O	31:WW:49:GLU:HB2	2.20	0.42
27:LL:80:MET:HG2	27:LL:86:ILE:HG21	2.02	0.42
31:WW:50:PHE:CB	31:WW:63:VAL:HG22	2.50	0.42
32:XX:102:VAL:CG1	32:XX:120:PHE:HB3	2.49	0.42
39:C:210:ILE:O	39:C:253:THR:HG23	2.20	0.42
39:C:224:ILE:CG2	39:C:227:ILE:HD13	2.47	0.42
40:D:56:THR:HG22	40:D:57:ASN:H	1.85	0.42
43:G:218:GLU:OE2	49:N:22:LEU:HD13	2.19	0.42
43:G:241:ALA:HA	43:G:251:THR:HG22	2.01	0.42
47:L:8:MET:HG2	52:Q:166:TYR:HB3	2.02	0.42
48:M:10:GLY:HA2	48:M:64:PHE:CE2	2.55	0.42
50:O:70:PRO:HB2	50:O:72:HIS:CE1	2.54	0.42
51:P:41:ILE:O	51:P:45:THR:HG23	2.18	0.42
53:S:87:ARG:HH11	80:7:87:G:H5'	1.84	0.42
57:X:68:ARG:NH1	57:X:70:LYS:HG2	2.35	0.42
57:X:107:HIS:CD2	79:5:2778:G:H4'	2.55	0.42
65:f:18:LEU:HB3	79:5:1886:G:OP1	2.20	0.42
68:i:86:LYS:O	68:i:90:LEU:HG	2.19	0.42
69:j:16:HIS:HA	69:j:27:TYR:O	2.19	0.42
69:j:59:THR:HA	81:8:41:A:O2'	2.19	0.42
77:s:33:ASP:HB2	77:s:188:ILE:HG12	2.02	0.42
77:s:56:GLY:C	79:5:2020:U:H4'	2.44	0.42
77:s:58:ASN:OD1	79:5:2021:G:C5'	2.61	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:t:112:ILE:O	78:t:116:MET:HB2	2.19	0.42
78:t:115:GLN:H	78:t:115:GLN:HG3	1.50	0.42
78:t:117:ARG:O	78:t:118:HIS:C	2.62	0.42
79:5:122:U:H4'	79:5:153:G:O4'	2.19	0.42
79:5:162:A:H2'	79:5:163:A:C8	2.54	0.42
79:5:651:C:H2'	79:5:652:G:C8	2.54	0.42
79:5:925:C:O5'	79:5:926:G:H5'	2.19	0.42
79:5:1468:C:H2'	79:5:1469:C:H6	1.84	0.42
79:5:1727:U:H2'	79:5:1728:U:C6	2.54	0.42
79:5:2036:C:H2'	79:5:2037:C:C6	2.54	0.42
79:5:2635:U:H2'	79:5:2636:U:C6	2.55	0.42
79:5:2894:A:O2'	79:5:2895:A:H5'	2.20	0.42
79:5:3665:G:H2'	79:5:3666:C:C6	2.54	0.42
79:5:3814:U:H2'	79:5:3815:G:C8	2.55	0.42
79:5:4399:U:H2'	79:5:4400:G:O4'	2.19	0.42
79:5:4640:C:H2'	79:5:4641:U:H6	1.84	0.42
81:8:20:A:H2'	81:8:21:C:C6	2.54	0.42
81:8:71:A:H4'	81:8:72:A:O5'	2.20	0.42
82:1:1344:G:C2	82:1:1345:G:N3	2.88	0.42
82:1:1431:G:N2	82:1:1438:C:O2	2.52	0.42
84:EF:6:VAL:CG1	84:EF:10:ARG:CZ	2.97	0.42
84:EF:28:VAL:HB	84:EF:107:GLY:C	2.45	0.42
84:EF:42:LYS:HG2	84:EF:351:LEU:CD2	2.49	0.42
84:EF:141:THR:HG22	84:EF:142:VAL:N	2.35	0.42
84:EF:143:LEU:HB3	84:EF:188:ILE:CG2	2.48	0.42
84:EF:289:PHE:HA	84:EF:293:ILE:HB	2.01	0.42
84:EF:294:LEU:HD22	84:EF:298:PHE:CD2	2.55	0.42
84:EF:390:PRO:O	84:EF:466:CYS:HB3	2.20	0.42
84:EF:663:THR:HG23	84:EF:702:PHE:O	2.20	0.42
84:EF:773:GLU:CG	84:EF:774:SER:H	2.32	0.42
1:DD:48:ILE:HD13	1:DD:86:LEU:HG	2.01	0.42
2:FF:49:LEU:HD23	6:QQ:49:TYR:CB	2.45	0.42
7:RR:129:LYS:HB2	19:AA:28:THR:CG2	2.49	0.42
8:SS:70:ILE:HG12	8:SS:77:TYR:CD1	2.55	0.42
16:R:176:ARG:O	16:R:180:LYS:HD3	2.19	0.42
18:9:62:G:C2	18:9:87:U:H1'	2.55	0.42
18:9:164:A:H5''	23:GG:82:SER:OG	2.20	0.42
18:9:380:G:H1'	25:II:5:ARG:CZ	2.49	0.42
18:9:561:A:C5'	26:JJ:171:GLY:HA3	2.43	0.42
18:9:986:G:H2'	18:9:987:A:O4'	2.19	0.42
18:9:991:G:O4'	34:aa:11:ALA:HB1	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:9:1124:C:H5''	20:BB:150:ILE:HG13	2.01	0.42
18:9:1164:G:O2'	18:9:1165:G:H5'	2.19	0.42
18:9:1244:U:H3	18:9:1255:G:H1	1.67	0.42
18:9:1588:A:H2'	18:9:1589:A:C8	2.54	0.42
19:AA:206:ASP:O	19:AA:210:ILE:HG13	2.19	0.42
20:BB:168:MET:HG2	20:BB:197:ILE:HG23	2.01	0.42
20:BB:214:LYS:HE2	20:BB:216:LYS:HE3	2.01	0.42
22:EE:49:ARG:HG3	22:EE:55:ALA:O	2.19	0.42
23:GG:121:ILE:CD1	23:GG:122:PRO:HD2	2.44	0.42
25:II:70:GLU:HB3	25:II:112:TRP:CZ3	2.55	0.42
26:JJ:3:VAL:HG23	26:JJ:5:ARG:HG3	2.02	0.42
27:LL:111:VAL:HG21	27:LL:128:VAL:HG11	2.00	0.42
29:OO:32:HIS:CD2	29:OO:96:LYS:HD2	2.55	0.42
29:OO:62:VAL:HG21	29:OO:73:ALA:HB2	2.02	0.42
31:WW:32:LYS:O	31:WW:36:ARG:HD3	2.20	0.42
36:ee:79:LEU:O	36:ee:82:VAL:HG23	2.19	0.42
36:ee:101:ARG:O	36:ee:106:LYS:HB2	2.20	0.42
37:A:4:VAL:HB	79:5:1627:G:OP2	2.19	0.42
38:B:71:GLU:HG2	38:B:366:LYS:HE2	2.00	0.42
39:C:357:ALA:O	39:C:361:LYS:HG3	2.20	0.42
40:D:89:LYS:O	40:D:92:LEU:HD11	2.20	0.42
41:E:135:PRO:HG2	41:E:138:GLN:HG3	2.02	0.42
44:H:94:SER:OG	44:H:101:ILE:HD12	2.19	0.42
44:H:103:VAL:HG21	44:H:179:ILE:HD11	2.01	0.42
47:L:19:GLN:HA	47:L:22:VAL:CG2	2.46	0.42
48:M:20:HIS:CE1	79:5:936:C:H3'	2.55	0.42
50:O:15:LEU:HD21	50:O:129:LEU:HD13	2.02	0.42
52:Q:43:PHE:CZ	52:Q:81:VAL:HG11	2.55	0.42
52:Q:132:LYS:HD2	52:Q:134:ARG:HH12	1.85	0.42
53:S:19:THR:HB	53:S:20:PRO:HD2	2.00	0.42
59:Z:16:GLY:O	66:g:76:ARG:HG3	2.19	0.42
66:g:62:LYS:HE3	66:g:62:LYS:HB2	1.84	0.42
74:o:23:VAL:HG22	74:o:70:LEU:HG	2.01	0.42
77:s:21:LEU:HB3	77:s:22:ASP:H	1.54	0.42
77:s:25:PRO:HG3	77:s:92:LYS:HA	1.99	0.42
77:s:26:LYS:CG	77:s:91:THR:CG2	2.87	0.42
77:s:27:CYS:SG	77:s:90:PHE:CD1	3.12	0.42
77:s:138:PHE:CD1	77:s:174:LEU:HB3	2.54	0.42
78:t:11:LYS:CB	78:t:64:ILE:H	2.32	0.42
78:t:46:ILE:HA	78:t:60:VAL:HG21	2.00	0.42
78:t:103:ASN:HA	78:t:142:ASN:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:t:111:ASN:O	78:t:115:GLN:HG3	2.20	0.42
79:5:347:A:H2'	79:5:348:G:C8	2.54	0.42
79:5:713:C:H2'	79:5:714:G:H8	1.83	0.42
79:5:1085:C:H2'	79:5:1086:C:C6	2.54	0.42
79:5:1383:G:H2'	79:5:1384:C:C6	2.55	0.42
79:5:1649:U:C4'	79:5:1650:A:H3'	2.50	0.42
79:5:1761:G:N2	79:5:1772:C:H1'	2.34	0.42
79:5:1850:A:H2'	79:5:1851:G:C8	2.55	0.42
79:5:2086:G:H2'	79:5:2087:C:C6	2.55	0.42
79:5:2286:G:O2'	79:5:2287:G:H5'	2.19	0.42
79:5:4657:U:H3'	79:5:4658:G:H5''	2.01	0.42
81:8:28:C:H2'	81:8:29:G:H8	1.84	0.42
82:1:1357:U:O4	82:1:1375:C:N4	2.51	0.42
82:1:1386:U:H2'	82:1:1387:G:C8	2.54	0.42
84:EF:166:GLU:HB3	84:EF:167:LEU:HD22	2.02	0.42
84:EF:499:PHE:N	84:EF:499:PHE:CD1	2.87	0.42
84:EF:599:HIS:CE1	84:EF:710:HIS:CE1	3.08	0.42
84:EF:662:LEU:HB2	84:EF:683:PHE:CD2	2.55	0.42
84:EF:746:LEU:CD2	84:EF:787:TYR:CD2	3.03	0.42
2:FF:78:MET:HB2	2:FF:159:ARG:NH2	2.34	0.42
4:MM:17:ALA:O	4:MM:21:VAL:HG23	2.20	0.42
5:PP:45:LEU:CD2	5:PP:49:LEU:HD21	2.49	0.42
16:R:115:ILE:HG22	16:R:119:MET:HE3	2.00	0.42
16:R:134:ASN:ND2	16:R:136:ARG:HB3	2.34	0.42
16:R:158:GLN:HB3	16:R:162:ARG:NH1	2.34	0.42
18:9:84:A:H4'	33:YY:120:THR:HA	2.02	0.42
18:9:93:U:H2'	18:9:94:G:O4'	2.20	0.42
18:9:145:G:O2'	18:9:146:G:H5'	2.20	0.42
18:9:215:G:H2'	18:9:216:C:C6	2.55	0.42
18:9:479:C:H2'	18:9:480:G:C8	2.54	0.42
18:9:666:U:H4'	18:9:1087:A:O2'	2.19	0.42
18:9:687:C:O2'	24:HH:103:LYS:HE2	2.19	0.42
18:9:884:C:H2'	18:9:885:U:O4'	2.19	0.42
18:9:947:G:H2'	18:9:948:C:C6	2.55	0.42
18:9:1476:A:H4'	18:9:1477:U:OP2	2.19	0.42
18:9:1753:C:H2'	18:9:1754:G:C8	2.55	0.42
21:CC:204:ILE:HD11	21:CC:219:ILE:O	2.20	0.42
22:EE:184:THR:HA	22:EE:189:LEU:HD13	2.02	0.42
24:HH:158:LEU:O	24:HH:190:PRO:HD2	2.20	0.42
25:II:161:LEU:O	25:II:165:GLN:HG3	2.19	0.42
26:JJ:32:ILE:CD1	26:JJ:40:LYS:HD2	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:JJ:67:ASP:HB3	26:JJ:70:ARG:HB3	2.01	0.42
26:JJ:86:VAL:HG11	26:JJ:100:LEU:HD21	2.01	0.42
26:JJ:132:GLN:HB2	26:JJ:134:HIS:CD2	2.54	0.42
27:LL:93:LEU:HD21	27:LL:104:LYS:HG2	2.01	0.42
29:OO:42:VAL:CG1	29:OO:81:VAL:HG21	2.49	0.42
34:aa:75:VAL:O	34:aa:79:ILE:HG13	2.19	0.42
37:A:66:PRO:HG2	37:A:67:TYR:CE2	2.54	0.42
39:C:36:ILE:HD11	79:5:1350:C:O3'	2.19	0.42
40:D:197:LYS:HD2	40:D:202:GLN:HG2	2.02	0.42
41:E:95:VAL:O	41:E:110:VAL:HG22	2.19	0.42
42:F:107:VAL:HG22	79:5:1725:U:O2'	2.20	0.42
42:F:145:ASN:O	42:F:149:VAL:HG23	2.19	0.42
43:G:114:ILE:HG23	81:8:149:G:O2'	2.19	0.42
43:G:302:ARG:O	43:G:306:LEU:HD13	2.19	0.42
45:I:41:ALA:HB1	45:I:45:GLU:CD	2.44	0.42
45:I:95:HIS:HD2	45:I:128:ARG:HD2	1.85	0.42
45:I:184:MET:HA	45:I:187:GLU:CG	2.49	0.42
47:L:191:LEU:HA	47:L:194:ILE:HD13	2.01	0.42
48:M:106:ASP:HA	48:M:109:ARG:NH1	2.35	0.42
49:N:8:GLN:O	49:N:12:ARG:HG3	2.19	0.42
52:Q:176:ARG:O	52:Q:181:ARG:HG2	2.20	0.42
53:S:84:TYR:CE1	53:S:93:MET:HE3	2.55	0.42
59:Z:16:GLY:N	79:5:2581:A:H5''	2.35	0.42
62:c:78:ASN:HB2	62:c:91:VAL:C	2.45	0.42
66:g:97:ILE:O	66:g:101:LYS:HG3	2.20	0.42
67:h:28:LEU:HD11	67:h:51:ARG:CG	2.49	0.42
67:h:29:SER:O	67:h:33:VAL:HG23	2.19	0.42
69:j:64:MET:HG3	81:8:42:G:OP1	2.19	0.42
77:s:6:ARG:CG	77:s:10:LYS:HE3	2.49	0.42
77:s:26:LYS:HD2	77:s:91:THR:HG23	2.01	0.42
78:t:85:LEU:HA	78:t:86:LYS:HZ3	1.85	0.42
79:5:977:C:H2'	79:5:978:G:O4'	2.20	0.42
79:5:1211:G:H2'	79:5:1212:G:H8	1.84	0.42
79:5:1217:G:O2'	79:5:1218:G:H5'	2.20	0.42
79:5:1670:G:H5'	79:5:1671:U:O5'	2.19	0.42
79:5:1727:U:O2'	79:5:1728:U:H5'	2.20	0.42
79:5:1985:G:H3'	79:5:1986:U:H6	1.84	0.42
79:5:2311:C:H2'	79:5:2312:U:C6	2.55	0.42
79:5:2498:C:H2'	79:5:2499:C:H6	1.85	0.42
79:5:3727:A:H2'	79:5:3728:A:H8	1.84	0.42
79:5:3820:G:O2'	79:5:3821:A:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:4095:G:H2'	79:5:4096:C:H6	1.85	0.42
79:5:4345:C:O2'	79:5:4346:U:H5'	2.20	0.42
79:5:4438:U:H2'	79:5:4439:U:C6	2.54	0.42
81:8:63:U:O2'	81:8:64:U:H5'	2.20	0.42
82:1:1345:G:H2'	82:1:1346:U:H6	1.81	0.42
82:1:1415:U:H1'	82:1:1416:C:N3	2.35	0.42
84:EF:68:ILE:HD12	84:EF:108:HIS:CE1	2.54	0.42
84:EF:451:ILE:HD12	84:EF:458:VAL:CG1	2.49	0.42
84:EF:485:ILE:HG22	84:EF:486:THR:N	2.34	0.42
84:EF:759:ILE:HG23	84:EF:800:LEU:HD22	2.02	0.42
84:EF:767:ARG:CZ	84:EF:789:PRO:CG	2.98	0.42
2:FF:151:ILE:O	2:FF:154:LEU:HG	2.20	0.42
3:KK:53:LYS:HB2	3:KK:58:VAL:HG13	2.00	0.42
10:UU:31:SER:O	10:UU:35:VAL:HG23	2.19	0.42
16:R:70:ARG:CG	16:R:76:MET:HE2	2.48	0.42
17:W:53:VAL:HG12	17:W:57:ARG:HD3	2.00	0.42
17:W:115:ALA:O	17:W:119:LYS:HG3	2.20	0.42
18:9:31:U:H2'	18:9:32:U:C6	2.54	0.42
18:9:93:U:O2'	22:EE:7:LYS:HB2	2.19	0.42
18:9:211:G:H2'	18:9:212:C:H6	1.83	0.42
18:9:1097:G:H4'	19:AA:32:PHE:CG	2.54	0.42
18:9:1198:G:H2'	18:9:1199:A:H8	1.84	0.42
18:9:1378:A:H4'	18:9:1379:A:O5'	2.19	0.42
18:9:1819:A:H2'	18:9:1820:G:C8	2.54	0.42
19:AA:49:ILE:HG21	19:AA:162:PRO:HB2	2.01	0.42
20:BB:66:VAL:O	29:OO:48:SER:HA	2.20	0.42
22:EE:29:PRO:HG2	22:EE:46:ILE:HG13	2.02	0.42
24:HH:170:VAL:HG13	24:HH:187:PHE:CD1	2.54	0.42
26:JJ:78:LEU:O	26:JJ:82:VAL:HG23	2.20	0.42
26:JJ:110:LEU:HG	26:JJ:130:ILE:CD1	2.50	0.42
27:LL:42:LEU:HD12	27:LL:42:LEU:HA	1.88	0.42
27:LL:73:LEU:HB3	27:LL:90:ARG:NH1	2.35	0.42
27:LL:123:GLY:O	27:LL:148:ALA:HB2	2.19	0.42
34:aa:30:VAL:CG1	34:aa:35:ALA:HB2	2.49	0.42
38:B:117:ARG:HD2	38:B:180:LEU:CD1	2.46	0.42
40:D:43:LYS:HB3	40:D:46:THR:CB	2.45	0.42
40:D:271:MET:HE2	40:D:275:GLN:C	2.45	0.42
42:F:117:PHE:CD1	42:F:246:MET:HE1	2.55	0.42
43:G:200:VAL:HG12	43:G:226:LEU:HD22	2.02	0.42
44:H:47:LEU:HD21	44:H:52:LYS:HG3	2.01	0.42
44:H:104:VAL:HG13	44:H:113:GLU:HB2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:N:85:VAL:HA	74:o:49:GLY:CA	2.49	0.42
49:N:143:ARG:NH1	67:h:95:LEU:HA	2.35	0.42
50:O:186:GLU:HA	50:O:189:ILE:HG12	2.02	0.42
59:Z:26:VAL:CG1	59:Z:91:LEU:HD13	2.46	0.42
59:Z:112:ARG:O	59:Z:116:VAL:HG23	2.18	0.42
60:a:26:ARG:HA	60:a:26:ARG:HD3	1.90	0.42
60:a:112:LEU:CD2	60:a:130:SER:HB2	2.47	0.42
60:a:131:ARG:HH21	60:a:132:ARG:HH21	1.68	0.42
77:s:6:ARG:HD2	77:s:10:LYS:CE	2.48	0.42
77:s:20:LEU:HG	77:s:24:TYR:CD1	2.54	0.42
77:s:57:LYS:CG	77:s:60:MET:HB2	2.49	0.42
78:t:46:ILE:CB	78:t:60:VAL:HB	2.49	0.42
78:t:137:GLN:O	78:t:140:GLY:HA2	2.19	0.42
79:5:481:G:O2'	79:5:481(A):C:H5'	2.19	0.42
79:5:517:C:C2	79:5:518:C:C5	3.07	0.42
79:5:698:G:O2'	79:5:699:C:H5'	2.20	0.42
79:5:1618:G:O2'	79:5:1619:G:H5'	2.20	0.42
79:5:1657:G:H2'	79:5:1658:G:H8	1.84	0.42
79:5:1738:A:H2'	79:5:1739:G:C8	2.53	0.42
79:5:1795:A:H5''	80:7:98:G:O2'	2.20	0.42
79:5:1948:G:H2'	79:5:1949:U:C6	2.54	0.42
79:5:2025:A:H4'	79:5:2026:A:OP2	2.17	0.42
79:5:2357:G:H2'	79:5:2358:G:C8	2.54	0.42
79:5:2389:A:H2'	79:5:2390:G:C8	2.54	0.42
79:5:3737:A:H2'	79:5:3738:G:O4'	2.19	0.42
79:5:3832:U:H2'	79:5:3833:C:C6	2.54	0.42
79:5:4218:U:H5''	79:5:4219:A:OP1	2.20	0.42
79:5:4524:G:OP2	79:5:4524:G:H4'	2.20	0.42
79:5:4545:G:O2'	79:5:4546:A:H5'	2.20	0.42
79:5:4651:A:H2'	79:5:4652:G:O4'	2.20	0.42
79:5:4894:A:C5'	79:5:4895:C:H2'	2.46	0.42
82:1:1369:A:O2'	82:1:1450:C:O2	2.36	0.42
82:1:1477:G:H3'	82:1:1478:C:C6	2.54	0.42
83:PT:24:G:C6	83:PT:25:C:C4	3.07	0.42
83:PT:36:C:H4'	84:EF:599:HIS:CE1	2.54	0.42
83:PT:55:U:O2	83:PT:57:A:C8	2.72	0.42
84:EF:40:VAL:HG13	84:EF:45:ILE:HG23	2.01	0.42
84:EF:249:ARG:HA	84:EF:252:LYS:HB3	2.01	0.42
84:EF:613:LEU:CD2	84:EF:701:ARG:NH2	2.83	0.42
84:EF:731:ALA:HA	84:EF:850:LEU:CD1	2.50	0.42
84:EF:748:GLU:CG	84:EF:811:GLN:HB2	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:EF:781:MET:HE2	84:EF:781:MET:H	1.83	0.42
1:DD:175:VAL:CG1	1:DD:182:LEU:HB2	2.50	0.42
2:FF:165:ASN:HD22	2:FF:167:LYS:H	1.68	0.42
7:RR:13:ALA:O	7:RR:17:ILE:HG13	2.20	0.42
9:TT:60:THR:O	9:TT:64:LEU:HG	2.19	0.42
16:R:3:MET:HE1	79:5:2385:U:H5'	2.02	0.42
18:9:67:C:H5'	18:9:68:A:OP1	2.20	0.42
18:9:114:G:O2'	18:9:115:U:H5''	2.20	0.42
18:9:422:U:H2'	18:9:423:U:H6	1.85	0.42
18:9:522:A:H4'	26:JJ:131:ARG:NH2	2.35	0.42
18:9:925:G:H1	18:9:1017:U:H3	1.66	0.42
18:9:953:C:H2'	18:9:954:U:O4'	2.20	0.42
18:9:1046:U:H2'	18:9:1047:C:O4'	2.20	0.42
18:9:1577:G:H1'	18:9:1582:C:O2	2.20	0.42
18:9:1859:A:O2'	18:9:1860:A:H5'	2.20	0.42
20:BB:30:TRP:HB2	29:OO:19:PRO:HG3	2.01	0.42
20:BB:36:PRO:HG2	20:BB:39:PHE:CD2	2.55	0.42
20:BB:171:ILE:HD11	20:BB:200:ALA:CB	2.50	0.42
21:CC:167:ARG:HG3	21:CC:177:PRO:HB2	2.02	0.42
22:EE:127:ARG:HH21	22:EE:142:HIS:HB2	1.84	0.42
22:EE:143:ASP:OD2	22:EE:145:ARG:HD3	2.19	0.42
24:HH:95:ILE:HD13	24:HH:129:ILE:HG23	2.00	0.42
28:NN:37:ILE:HG12	28:NN:54:LEU:HD11	2.01	0.42
35:bb:56:CYS:HB2	35:bb:63:LEU:HD11	2.01	0.42
37:A:181:LYS:CE	37:A:184:ARG:HG2	2.49	0.42
38:B:67:VAL:HG22	38:B:70:LYS:HB2	2.02	0.42
39:C:33:ARG:O	39:C:37:VAL:HG23	2.20	0.42
39:C:100:ARG:HB3	39:C:100:ARG:NH1	2.35	0.42
39:C:212:ASN:HA	39:C:232:VAL:HG22	2.02	0.42
41:E:143:LEU:HA	41:E:194:GLN:HE22	1.84	0.42
41:E:261:LEU:CG	41:E:265:LYS:HE3	2.50	0.42
43:G:108:VAL:HA	57:X:44:PRO:O	2.20	0.42
45:I:40:LYS:HG3	79:5:1751:A:P	2.60	0.42
46:J:78:LYS:O	46:J:82:ILE:HG13	2.20	0.42
47:L:57:PRO:HB3	47:L:76:PHE:CE2	2.54	0.42
49:N:3:ALA:O	49:N:7:ILE:HG13	2.20	0.42
49:N:40:PRO:HG3	79:5:8:U:H5''	2.02	0.42
50:O:38:CYS:O	50:O:138:LEU:HD23	2.19	0.42
52:Q:146:ARG:HA	79:5:1504:G:OP1	2.20	0.42
55:U:84:LYS:O	55:U:88:LYS:HG3	2.20	0.42
58:Y:27:ARG:CZ	81:8:70:G:H5''	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:Y:106:ILE:HG21	58:Y:109:LEU:CD2	2.49	0.42
59:Z:11:VAL:CG1	59:Z:80:LEU:HD22	2.49	0.42
59:Z:119:GLU:O	59:Z:123:LYS:HG3	2.20	0.42
65:f:22:ARG:HB3	65:f:24:HIS:CE1	2.55	0.42
66:g:106:VAL:O	66:g:110:GLN:HG3	2.20	0.42
67:h:48:ARG:HB2	81:8:49:G:OP1	2.20	0.42
67:h:56:ARG:O	67:h:60:VAL:HG23	2.20	0.42
67:h:78:TYR:CE1	79:5:16:G:H4'	2.55	0.42
74:o:20:PRO:HG2	74:o:73:VAL:HB	2.01	0.42
77:s:50:LYS:NZ	77:s:98:ILE:HA	2.34	0.42
77:s:98:ILE:O	77:s:99:ARG:C	2.63	0.42
77:s:144:THR:N	77:s:158:VAL:HG21	2.34	0.42
78:t:17:CYS:CB	78:t:50:THR:HG21	2.49	0.42
78:t:32:ILE:HD11	78:t:42:VAL:CG1	2.50	0.42
79:5:279:A:H5'	79:5:329:A:N3	2.34	0.42
79:5:363:A:N1	79:5:376:A:H5''	2.35	0.42
79:5:686:A:H1'	79:5:688:U:C4	2.54	0.42
79:5:981:C:H2'	79:5:982:U:C6	2.55	0.42
79:5:1098:G:H2'	79:5:1099:C:H6	1.85	0.42
79:5:1169:G:H2'	79:5:1170:G:H8	1.85	0.42
79:5:1285:U:H2'	79:5:1286:C:C6	2.55	0.42
79:5:1486:C:H2'	79:5:1487:G:C8	2.55	0.42
79:5:1762:C:N4	79:5:1768:C:OP2	2.53	0.42
79:5:1774:C:H2'	79:5:1775:A:O4'	2.19	0.42
79:5:1823:G:H2'	79:5:1824:G:H8	1.84	0.42
79:5:2423:A:H2'	79:5:2424:G:O4'	2.20	0.42
79:5:2669:C:H2'	79:5:2670:C:O4'	2.20	0.42
79:5:2774:C:O2'	79:5:2775:C:H5'	2.20	0.42
79:5:3916:G:H2'	79:5:3917:A:H8	1.84	0.42
79:5:4471:U:O2	79:5:4484:G:N2	2.44	0.42
79:5:4598:C:H2'	79:5:4611:A:N6	2.35	0.42
79:5:4607:A:C5	79:5:4608:G:H1'	2.55	0.42
79:5:4643:G:O2'	79:5:4644:G:H5'	2.20	0.42
79:5:4922:C:H2'	79:5:4923:C:C6	2.55	0.42
79:5:5028:G:H2'	79:5:5029:C:H6	1.84	0.42
80:7:65:G:H2'	80:7:66:G:O4'	2.19	0.42
80:7:75:G:H1'	80:7:76:U:H5	1.85	0.42
82:1:1354:U:H3	82:1:1355:A:H62	1.67	0.42
82:1:1397:C:H2'	82:1:1398:C:C4'	2.49	0.42
82:1:1472:A:C6	82:1:1473:A:C6	3.07	0.42
82:1:1481:G:H2'	82:1:1482:U:O5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:PT:66:C:O2'	83:PT:67:A:H5'	2.20	0.42
84:EF:46:ILE:HD13	84:EF:46:ILE:HA	1.89	0.42
84:EF:175:TYR:CE2	84:EF:287:ARG:CZ	3.03	0.42
84:EF:365:GLN:HB3	84:EF:385:ILE:O	2.20	0.42
84:EF:451:ILE:HG23	84:EF:471:GLY:HA3	2.00	0.42
84:EF:451:ILE:HG13	84:EF:458:VAL:HG13	2.01	0.42
84:EF:472:LEU:O	84:EF:473:VAL:HG23	2.19	0.42
84:EF:595:SER:HB3	84:EF:599:HIS:H	1.84	0.42
84:EF:650:TRP:CH2	84:EF:679:VAL:CG1	3.03	0.42
84:EF:654:PRO:HD3	84:EF:683:PHE:CE1	2.55	0.42
84:EF:748:GLU:HG2	84:EF:811:GLN:HB2	2.01	0.42
2:FF:89:THR:O	2:FF:93:VAL:HG23	2.20	0.42
2:FF:109:LEU:O	2:FF:113:VAL:HG23	2.19	0.42
7:RR:28:PHE:HA	7:RR:31:ASN:ND2	2.35	0.42
7:RR:90:ALA:HB2	19:AA:196:GLU:C	2.45	0.42
8:SS:3:LEU:HB3	11:ZZ:50:PHE:HD2	1.84	0.42
9:TT:86:GLY:C	18:9:1606:G:H5''	2.45	0.42
10:UU:51:LYS:HB2	10:UU:90:ASP:HB2	2.02	0.42
15:gg:270:LEU:HD22	15:gg:310:TRP:CE3	2.54	0.42
18:9:68:A:H2'	18:9:69:C:O4'	2.19	0.42
18:9:96:C:O2'	18:9:97:U:H5'	2.19	0.42
18:9:293:C:H4'	27:LL:38:LYS:NZ	2.35	0.42
18:9:345:U:H2'	18:9:346:C:H6	1.85	0.42
18:9:378:U:H2'	18:9:379:C:C6	2.55	0.42
18:9:497:C:H2'	18:9:498:C:H6	1.85	0.42
18:9:1262:C:H3'	18:9:1263:U:C6	2.55	0.42
20:BB:62:LEU:HD21	20:BB:96:CYS:SG	2.60	0.42
20:BB:202:GLN:OE1	20:BB:206:PRO:HA	2.20	0.42
21:CC:152:ARG:O	21:CC:156:ILE:HG13	2.20	0.42
24:HH:25:GLN:O	24:HH:29:GLU:HG3	2.19	0.42
26:JJ:124:HIS:CD2	36:ee:108:ARG:HD2	2.55	0.42
29:OO:54:CYS:SG	29:OO:84:ARG:HG2	2.60	0.42
30:VV:57:GLY:O	30:VV:61:ARG:HG2	2.20	0.42
33:YY:40:ILE:O	33:YY:44:LEU:HD13	2.20	0.42
35:bb:33:MET:HG3	35:bb:35:VAL:HG23	2.01	0.42
38:B:76:VAL:HB	38:B:332:MET:CG	2.50	0.42
39:C:101:MET:HE2	79:5:2343:G:C5	2.54	0.42
39:C:232:VAL:CG1	39:C:256:ALA:HB1	2.49	0.42
41:E:152:ILE:O	41:E:200:THR:HB	2.20	0.42
41:E:154:ILE:HG22	41:E:156:LEU:HD23	2.02	0.42
42:F:63:MET:HA	42:F:66:THR:HG22	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:G:260:VAL:HG11	43:G:268:LEU:HG	2.02	0.42
44:H:73:ILE:O	44:H:77:VAL:HG23	2.19	0.42
45:I:16:PRO:HA	45:I:95:HIS:HD2	1.83	0.42
45:I:206:LEU:HD12	45:I:209:TRP:HB3	2.01	0.42
47:L:110:LEU:O	47:L:114:VAL:HG23	2.20	0.42
47:L:119:GLU:HG3	47:L:123:LYS:HE3	2.02	0.42
49:N:101:VAL:O	49:N:105:ARG:HG3	2.20	0.42
50:O:155:THR:O	50:O:159:LYS:HG3	2.20	0.42
52:Q:43:PHE:O	52:Q:47:VAL:HG23	2.19	0.42
53:S:53:LYS:HD3	80:7:75:G:C8	2.55	0.42
57:X:63:LYS:HE3	81:8:134:G:OP1	2.20	0.42
58:Y:34:LEU:HD21	58:Y:109:LEU:HD11	2.02	0.42
59:Z:26:VAL:HG12	59:Z:91:LEU:CD1	2.46	0.42
59:Z:33:THR:HG22	59:Z:34:SER:H	1.85	0.42
60:a:20:GLY:HA2	79:5:2282:A:O2'	2.19	0.42
62:c:10:SER:O	62:c:14:ILE:HG13	2.20	0.42
67:h:28:LEU:O	67:h:32:ARG:HG3	2.20	0.42
74:o:58:LYS:HE2	79:5:4380:A:OP1	2.19	0.42
77:s:17:ILE:HG12	77:s:64:ALA:O	2.19	0.42
77:s:18:ILE:HG21	77:s:71:ASN:ND2	2.33	0.42
77:s:141:LEU:CG	77:s:174:LEU:HD21	2.46	0.42
78:t:12:VAL:O	78:t:13:VAL:HB	2.20	0.42
78:t:31:LYS:O	78:t:34:PRO:HG2	2.19	0.42
79:5:351:C:H2'	79:5:352:G:O4'	2.20	0.42
79:5:393:U:H2'	79:5:394:G:C8	2.55	0.42
79:5:640:C:H2'	79:5:641:G:C8	2.54	0.42
79:5:675:C:O2'	79:5:676:C:H5'	2.19	0.42
79:5:731:G:O2'	79:5:732:A:H5'	2.20	0.42
79:5:1091:C:H2'	79:5:1092:G:C8	2.55	0.42
79:5:1340:C:O2'	79:5:1341:U:H5'	2.20	0.42
79:5:1342:A:H2'	79:5:1343:A:C8	2.55	0.42
79:5:1406:G:O2'	79:5:1406(A):G:H5'	2.20	0.42
79:5:2507:A:H2'	79:5:2508:U:H5'	2.01	0.42
79:5:2552:G:H3'	79:5:2553:A:H5''	2.01	0.42
79:5:3604:A:H2'	79:5:3605:C:C6	2.55	0.42
79:5:3647:A:N1	79:5:3649:A:H1'	2.35	0.42
79:5:3659:G:H2'	79:5:3660:C:H6	1.83	0.42
79:5:3771:C:H2'	79:5:3772:U:O4'	2.20	0.42
79:5:4357:G:O2'	79:5:4358:U:H5'	2.19	0.42
79:5:4361:U:H2'	79:5:4362:A:O4'	2.19	0.42
79:5:4477:A:C2	79:5:4604:G:H1'	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:4501:U:H2'	79:5:4502:C:H5'	2.02	0.42
82:1:1376:C:H2'	82:1:1377:U:O4'	2.19	0.42
82:1:1438:C:H2'	82:1:1439:A:H5''	2.02	0.42
83:PT:32:U:C5	83:PT:33:U:C4	3.08	0.42
84:EF:22:MET:HB2	84:EF:102:LEU:HB3	2.00	0.42
84:EF:60:ARG:HB2	84:EF:63:GLU:CG	2.50	0.42
84:EF:330:LYS:HD2	84:EF:334:PRO:HB2	2.02	0.42
84:EF:379:ASP:C	84:EF:381:ALA:H	2.28	0.42
84:EF:381:ALA:O	84:EF:385:ILE:CG1	2.68	0.42
84:EF:581:GLU:HG3	84:EF:695:GLU:CB	2.50	0.42
84:EF:620:GLY:C	84:EF:622:VAL:N	2.76	0.42
84:EF:641:TRP:CZ3	84:EF:701:ARG:HD3	2.54	0.42
84:EF:839:ARG:NE	84:EF:846:GLU:HA	2.35	0.42
4:MM:17:ALA:C	4:MM:124:ILE:HD11	2.45	0.41
10:UU:36:CYS:O	10:UU:40:ILE:HG13	2.20	0.41
13:dd:56:ASP:OXT	18:9:1481:G:H5'	2.20	0.41
16:R:6:LEU:O	16:R:10:LEU:HD13	2.20	0.41
16:R:45:ILE:HG12	16:R:50:ILE:CD1	2.43	0.41
18:9:92:A:N6	18:9:444:G:H1'	2.35	0.41
18:9:925:G:O2'	18:9:926:A:H5'	2.19	0.41
18:9:1047:C:H5''	29:OO:143:LYS:HA	2.02	0.41
18:9:1806:A:H2'	18:9:1807:C:H6	1.85	0.41
19:AA:45:GLY:H	19:AA:46:ILE:HD12	1.84	0.41
19:AA:52:LYS:HE3	19:AA:52:LYS:HB3	1.59	0.41
24:HH:160:LYS:CE	24:HH:189:PHE:HB3	2.50	0.41
24:HH:170:VAL:CG1	24:HH:187:PHE:HB2	2.45	0.41
27:LL:73:LEU:HD13	27:LL:90:ARG:CZ	2.50	0.41
29:OO:147:ARG:HB3	29:OO:150:ARG:HE	1.85	0.41
33:YY:114:MET:CG	33:YY:122:LYS:HB3	2.42	0.41
37:A:20:VAL:HG12	37:A:23:ARG:CD	2.48	0.41
37:A:181:LYS:HE3	37:A:184:ARG:HG2	2.02	0.41
39:C:135:ALA:HB2	76:r:43:LEU:O	2.20	0.41
39:C:284:MET:HE1	52:Q:27:LEU:HB2	2.02	0.41
41:E:247:GLU:O	41:E:251:VAL:HG23	2.20	0.41
42:F:94:ILE:HG12	42:F:138:TYR:O	2.20	0.41
46:J:151:ILE:HD11	46:J:156:ARG:CG	2.49	0.41
47:L:141:ALA:O	47:L:145:LYS:HG3	2.20	0.41
50:O:23:VAL:O	50:O:27:VAL:HG23	2.20	0.41
51:P:69:ARG:NH2	79:5:3893:C:H1'	2.35	0.41
53:S:44:PHE:CE2	53:S:61:ILE:HG12	2.55	0.41
56:V:25:VAL:HG22	79:5:2848:G:OP1	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:X:146:ALA:HA	57:X:149:VAL:HG12	2.00	0.41
62:c:37:MET:CG	62:c:97:ILE:HD11	2.49	0.41
63:d:89:SER:OG	63:d:91:LYS:HE3	2.20	0.41
69:j:20:ARG:HH12	81:8:109:C:H2'	1.85	0.41
77:s:14:PHE:HE1	77:s:63:LYS:CE	2.32	0.41
77:s:55:MET:O	79:5:1998:A:C8	2.72	0.41
77:s:127:ASN:HB2	77:s:151:THR:HB	2.00	0.41
78:t:46:ILE:CD1	78:t:62:LEU:HD21	2.50	0.41
78:t:149:HIS:CA	78:t:152:ILE:HG13	2.45	0.41
79:5:259:C:O2'	79:5:260:C:H5'	2.19	0.41
79:5:358:C:H2'	79:5:359:A:C8	2.55	0.41
79:5:431:G:H2'	79:5:3888:G:C2	2.55	0.41
79:5:709:C:O2'	79:5:710:G:H5'	2.19	0.41
79:5:1082:C:H2'	79:5:1083:U:O4'	2.20	0.41
79:5:1388:A:H2'	79:5:1389:U:H6	1.85	0.41
79:5:1494:U:H2'	79:5:1495:G:C8	2.55	0.41
79:5:1589:C:O2'	79:5:1590:C:H5'	2.20	0.41
79:5:1632:A:C8	79:5:1634:A:H1'	2.55	0.41
79:5:1692:C:O2'	79:5:1693:U:H5'	2.20	0.41
79:5:1757:U:C2'	79:5:1758:G:H8	2.22	0.41
79:5:1819:G:H3'	79:5:1820:C:H6	1.85	0.41
79:5:1825:A:O2'	79:5:1826:G:H5'	2.20	0.41
79:5:1840:G:O2'	79:5:1841:C:H5'	2.20	0.41
79:5:1886:G:O2'	79:5:1887:G:H5'	2.20	0.41
79:5:2306:G:H1'	79:5:2332:A:N6	2.35	0.41
79:5:2422:C:H2'	79:5:2423:A:C8	2.55	0.41
79:5:2785:C:H1'	79:5:2790:U:C2'	2.49	0.41
79:5:2807:A:H2'	79:5:2808:G:H8	1.84	0.41
79:5:2863:G:H2'	79:5:2864:A:C8	2.55	0.41
79:5:3889:G:N7	79:5:4720:C:H2'	2.35	0.41
79:5:4180:G:H2'	79:5:4181:U:O4'	2.20	0.41
79:5:4259:C:O2'	79:5:4260:U:H5'	2.20	0.41
79:5:4293:U:O2'	79:5:4294:C:H5'	2.20	0.41
79:5:4319:C:O2'	79:5:4320:G:H5'	2.19	0.41
79:5:4571:A:H2'	79:5:4572:U:C6	2.54	0.41
81:8:9:A:O2'	81:8:10:G:H5'	2.19	0.41
81:8:139:G:H2'	81:8:140:C:O4'	2.19	0.41
82:1:1361:U:C4	82:1:1427:U:H1'	2.55	0.41
83:PT:65:G:C5	83:PT:66:C:C5	3.07	0.41
84:EF:14:ASP:HA	84:EF:16:LYS:HG3	2.02	0.41
84:EF:25:ILE:HD11	84:EF:125:ALA:CB	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:EF:149:GLU:O	84:EF:150:ARG:C	2.63	0.41
84:EF:267:ASP:HB2	84:EF:268:PRO:HD2	2.01	0.41
84:EF:477:GLN:HB2	84:EF:478:PHE:CZ	2.55	0.41
84:EF:531:ASP:HB3	84:EF:532:PRO:CD	2.50	0.41
84:EF:712:ASP:O	84:EF:713:ALA:CB	2.68	0.41
2:FF:193:LYS:HE2	2:FF:197:GLU:OE2	2.20	0.41
4:MM:69:CYS:HA	4:MM:74:ILE:HD12	2.01	0.41
5:PP:25:LEU:HD23	5:PP:28:MET:SD	2.60	0.41
8:SS:43:VAL:HG21	8:SS:83:PHE:CE2	2.55	0.41
10:UU:24:LEU:CD2	10:UU:112:VAL:HG13	2.50	0.41
16:R:60:ARG:HB3	16:R:64:ARG:NH1	2.35	0.41
16:R:66:ASN:O	16:R:70:ARG:HD3	2.20	0.41
18:9:344:U:H2'	18:9:345:U:C6	2.54	0.41
18:9:529:A:H2'	18:9:530:U:C6	2.55	0.41
18:9:1127:C:O2'	18:9:1128:C:H5'	2.19	0.41
18:9:1490:G:OP1	18:9:1490:G:H3'	2.20	0.41
19:AA:44:ASP:HB3	19:AA:46:ILE:HD12	2.02	0.41
19:AA:71:PRO:O	19:AA:96:ALA:HA	2.20	0.41
20:BB:89:GLU:HG2	20:BB:223:PHE:CE1	2.56	0.41
24:HH:53:VAL:HG22	24:HH:54:GLY:H	1.84	0.41
24:HH:176:VAL:O	24:HH:180:LEU:HG	2.20	0.41
25:II:12:ARG:HE	25:II:18:ARG:HG3	1.84	0.41
28:NN:33:VAL:O	28:NN:37:ILE:HG13	2.20	0.41
29:OO:95:ILE:HD13	29:OO:116:LEU:HD21	2.01	0.41
32:XX:59:ALA:HB2	32:XX:67:ARG:HH11	1.85	0.41
37:A:177:LYS:HD3	75:p:69:TRP:CZ2	2.55	0.41
37:A:241:ARG:HG2	79:5:3707:U:O2'	2.20	0.41
38:B:120:LYS:HE3	79:5:4578:G:H5''	2.02	0.41
38:B:254:ILE:HG13	79:5:3897:G:H4'	2.02	0.41
39:C:153:VAL:CG1	39:C:254:GLU:HA	2.50	0.41
39:C:219:LYS:O	79:5:224:U:H4'	2.19	0.41
40:D:31:TYR:O	40:D:35:ARG:HG2	2.20	0.41
43:G:160:LYS:HG3	43:G:164:LYS:HE3	2.02	0.41
43:G:303:ILE:O	43:G:307:GLU:HG2	2.20	0.41
44:H:94:SER:HB3	44:H:142:ASP:HB3	2.02	0.41
45:I:91:LEU:CD1	45:I:135:ILE:HA	2.50	0.41
47:L:181:SER:O	68:i:7:MET:HE1	2.19	0.41
49:N:158:HIS:HB3	49:N:161:MET:CG	2.50	0.41
50:O:91:LYS:HD3	79:5:3887:C:N4	2.35	0.41
53:S:71:SER:HB2	53:S:74:ARG:HD3	2.03	0.41
53:S:80:ILE:HG12	53:S:129:VAL:HG13	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:T:158:PHE:CE2	54:T:160:ALA:HB3	2.55	0.41
56:V:107:ASN:OD1	56:V:109:LYS:HG2	2.20	0.41
58:Y:50:ARG:HG2	58:Y:51:LYS:H	1.85	0.41
59:Z:32:GLY:HA3	59:Z:36:ARG:O	2.20	0.41
61:b:92:LYS:HE3	79:5:1214:C:C6	2.54	0.41
64:e:22:ARG:HB2	64:e:34:ASN:O	2.20	0.41
65:f:36:ARG:HA	65:f:39:THR:CG2	2.48	0.41
67:h:91:MET:HG3	67:h:94:ARG:NH2	2.35	0.41
69:j:81:GLY:HA3	79:5:134:G:C4	2.55	0.41
71:l:9:ILE:O	71:l:13:LEU:HG	2.20	0.41
73:n:10:MET:O	73:n:14:LYS:HG3	2.20	0.41
75:p:8:VAL:HG22	79:5:2876:G:OP1	2.21	0.41
77:s:20:LEU:CA	77:s:23:ASP:HB3	2.49	0.41
77:s:25:PRO:CD	77:s:26:LYS:N	2.83	0.41
77:s:53:VAL:O	77:s:54:LEU:HB3	2.19	0.41
77:s:129:GLY:N	77:s:152:ILE:N	2.68	0.41
78:t:105:THR:HB	78:t:108:GLU:CD	2.44	0.41
79:5:673:C:H2'	79:5:674:G:H8	1.85	0.41
79:5:910:G:H2'	79:5:911:U:C6	2.55	0.41
79:5:937:U:H2'	79:5:938:C:C6	2.55	0.41
79:5:947:C:H2'	79:5:948:C:H6	1.85	0.41
79:5:1352:C:O2'	79:5:1356:U:H5''	2.20	0.41
79:5:1356:U:O2'	79:5:1357:C:H5'	2.20	0.41
79:5:1633:G:H4'	79:5:1634:A:O5'	2.20	0.41
79:5:1982:G:OP2	79:5:1982:G:H3'	2.20	0.41
79:5:2518:G:H1'	79:5:2539:C:C1'	2.50	0.41
79:5:2539:C:H2'	79:5:2540:C:H6	1.85	0.41
79:5:2728:U:H2'	79:5:2729:C:C6	2.55	0.41
79:5:3667:C:O2'	79:5:3668:C:H5'	2.20	0.41
79:5:4180:G:H2'	79:5:4181:U:C6	2.56	0.41
79:5:4499:G:H2'	79:5:4500:U:H4'	2.01	0.41
79:5:4644:G:O2'	79:5:4645:C:H5'	2.20	0.41
79:5:4750:G:H2'	79:5:4751:G:C8	2.55	0.41
79:5:4935:C:H2'	79:5:4936:G:C8	2.54	0.41
81:8:68:G:H2'	81:8:69:U:C6	2.54	0.41
81:8:91:A:H2'	81:8:92:U:H6	1.85	0.41
82:1:1342:A:N3	82:1:1343:C:H1'	2.35	0.41
82:1:1409:C:H1'	82:1:1410:C:O4'	2.19	0.41
82:1:1462:C:H6	82:1:1462:C:H2'	1.67	0.41
82:1:1477:G:C6	82:1:1478:C:C4	3.08	0.41
84:EF:117:ALA:HA	84:EF:497:MET:CE	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:EF:163:ALA:HA	84:EF:166:GLU:HB3	2.01	0.41
84:EF:199:PRO:C	84:EF:367:TYR:HB2	2.45	0.41
84:EF:517:LEU:HD12	84:EF:521:VAL:CG2	2.49	0.41
84:EF:524:LEU:HD23	84:EF:525:LYS:N	2.34	0.41
84:EF:590:LEU:HD13	84:EF:705:HIS:CG	2.56	0.41
84:EF:622:VAL:CG1	84:EF:652:PHE:CD1	3.03	0.41
1:DD:105:LEU:HG	1:DD:184:ILE:HD13	2.02	0.41
2:FF:72:LEU:HD13	2:FF:154:LEU:HD11	2.02	0.41
2:FF:170:ALA:HB3	11:ZZ:106:GLN:HE22	1.84	0.41
6:QQ:74:GLY:HA2	18:9:1545:A:C5'	2.49	0.41
7:RR:96:ILE:O	19:AA:12:GLU:HB2	2.21	0.41
15:gg:99:ARG:HD2	15:gg:99:ARG:HA	1.94	0.41
16:R:79:GLY:HA3	79:5:2887:U:O2'	2.20	0.41
16:R:98:ARG:O	16:R:102:LEU:HG	2.20	0.41
17:W:8:PHE:CE1	17:W:46:PRO:HG3	2.55	0.41
18:9:83:A:H2'	18:9:84:A:H5'	2.02	0.41
18:9:109:U:H2'	18:9:110:U:H6	1.85	0.41
18:9:295:C:H2'	18:9:296:U:H6	1.85	0.41
18:9:407:G:N1	32:XX:36:LEU:HD23	2.36	0.41
18:9:432:G:O2'	18:9:433:A:H5'	2.20	0.41
18:9:456:C:O2'	18:9:457:C:H5'	2.20	0.41
18:9:617:G:OP1	36:ee:82:VAL:HA	2.20	0.41
18:9:641:A:H2'	18:9:642:U:C6	2.56	0.41
18:9:935:G:O2'	18:9:936:G:H5'	2.21	0.41
18:9:1452:A:N6	18:9:1473:G:H21	2.19	0.41
19:AA:108:PHE:O	19:AA:140:VAL:HG21	2.20	0.41
19:AA:111:GLN:HE21	19:AA:111:GLN:HB2	1.60	0.41
21:CC:66:LEU:HD11	21:CC:81:ILE:HD13	2.00	0.41
22:EE:20:LEU:HD11	22:EE:29:PRO:HD2	2.03	0.41
25:II:165:GLN:OE1	25:II:172:LEU:HD13	2.19	0.41
29:OO:43:HIS:CD2	29:OO:55:ARG:HB2	2.55	0.41
29:OO:125:LYS:HA	34:aa:56:ALA:O	2.20	0.41
31:WW:11:LEU:HA	31:WW:14:ILE:HG12	2.03	0.41
32:XX:68:LYS:HE2	36:ee:82:VAL:CG2	2.45	0.41
37:A:179:ILE:O	79:5:3653:A:H4'	2.20	0.41
38:B:120:LYS:CE	79:5:4578:G:H5''	2.50	0.41
38:B:373:LYS:CD	79:5:4627:U:H4'	2.46	0.41
39:C:54:VAL:HG21	39:C:101:MET:CE	2.49	0.41
39:C:79:VAL:HB	39:C:88:GLY:N	2.32	0.41
39:C:341:LEU:HD13	41:E:58:ARG:NH1	2.35	0.41
40:D:50:ARG:NH2	40:D:52:ILE:HD11	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:F:193:ILE:HG13	42:F:207:LEU:HD11	2.01	0.41
43:G:199:LEU:HD12	43:G:200:VAL:N	2.35	0.41
43:G:247:VAL:HG21	43:G:249:ARG:CZ	2.50	0.41
43:G:314:LEU:O	43:G:318:LEU:HD23	2.21	0.41
47:L:90:VAL:O	47:L:94:ILE:HG23	2.20	0.41
48:M:47:ARG:HG2	53:S:73:LEU:HD13	2.02	0.41
55:U:26:THR:O	55:U:30:GLU:HG2	2.20	0.41
56:V:18:LEU:HB3	56:V:56:GLY:CA	2.49	0.41
56:V:111:GLU:HG2	56:V:131:ARG:NH1	2.36	0.41
60:a:70:CYS:HA	60:a:109:TYR:CD2	2.53	0.41
61:b:108:ALA:O	61:b:112:ILE:HG13	2.20	0.41
63:d:75:LYS:O	79:5:4653:C:H4'	2.19	0.41
66:g:65:MET:SD	79:5:2748:C:H4'	2.60	0.41
70:k:2:PRO:HG2	79:5:2693:G:O4'	2.20	0.41
75:p:33:GLN:HG3	75:p:34:HIS:CD2	2.55	0.41
76:r:103:HIS:CG	76:r:106:LEU:HD23	2.55	0.41
77:s:7:ALA:HB1	77:s:10:LYS:HG3	1.15	0.41
77:s:112:ARG:NE	77:s:113:ALA:HB2	2.35	0.41
77:s:116:ILE:HA	77:s:166:LYS:HA	0.61	0.41
77:s:193:PHE:CD2	77:s:198:ILE:CA	3.04	0.41
79:5:665:C:H5''	79:5:666:G:O5'	2.20	0.41
79:5:1071:C:H3'	79:5:1072:C:H5'	2.01	0.41
79:5:1078:A:H5'	79:5:1079:C:OP2	2.20	0.41
79:5:1316:G:O2'	79:5:1317:U:H5'	2.21	0.41
79:5:1400:G:H2'	79:5:1401:C:C6	2.55	0.41
79:5:1490:G:O2'	79:5:1491:A:H5'	2.21	0.41
79:5:1751:A:C2	79:5:1780:A:C2	3.08	0.41
79:5:1794:A:H5''	79:5:4214:A:N6	2.35	0.41
79:5:1901:C:H2'	79:5:1902:G:C8	2.55	0.41
79:5:2458:C:H2'	79:5:2459:G:C8	2.55	0.41
79:5:2612:G:H2'	79:5:2613:C:H6	1.85	0.41
79:5:2616:C:O2'	79:5:2617:G:H5'	2.20	0.41
79:5:2835:A:H1'	79:5:4979:A:H5'	2.02	0.41
79:5:3611:A:H2'	79:5:3612:C:C6	2.56	0.41
79:5:3874:G:H2'	79:5:3875:G:O4'	2.20	0.41
79:5:3911:C:H2'	79:5:3912:U:H6	1.84	0.41
79:5:4412:C:H2'	79:5:4413:C:C2	2.56	0.41
79:5:4596:C:O2'	79:5:4597:U:H5'	2.20	0.41
81:8:117:C:O2'	81:8:118:C:H5'	2.20	0.41
82:1:1371:U:H1'	82:1:1449:U:H1'	2.02	0.41
82:1:1453:C:H5'	82:1:1454:A:OP1	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:PT:18:G:C5	83:PT:58:A:N1	2.88	0.41
83:PT:42:C:C4	83:PT:43:G:N7	2.88	0.41
83:PT:52:G:C2	83:PT:53:G:C8	3.08	0.41
84:EF:5:THR:O	84:EF:6:VAL:C	2.60	0.41
84:EF:56:PHE:CE2	84:EF:456:ARG:CZ	3.02	0.41
84:EF:76:SER:HB3	84:EF:101:ASN:HD22	1.85	0.41
84:EF:86:LEU:HD23	84:EF:87:ASN:CA	2.50	0.41
84:EF:143:LEU:HD13	84:EF:188:ILE:HG21	2.02	0.41
84:EF:146:ALA:O	84:EF:149:GLU:N	2.52	0.41
84:EF:244:LEU:HD12	84:EF:244:LEU:C	2.45	0.41
84:EF:245:GLY:CA	84:EF:248:GLU:HB3	2.50	0.41
84:EF:265:TYR:CZ	84:EF:273:PHE:CE1	3.09	0.41
84:EF:323:LEU:HD13	84:EF:326:GLU:HB3	2.01	0.41
84:EF:404:THR:OG1	84:EF:405:SER:N	2.54	0.41
84:EF:421:VAL:CG2	84:EF:447:ILE:CD1	2.99	0.41
84:EF:712:ASP:HB3	84:EF:714:ILE:HG22	2.02	0.41
84:EF:746:LEU:HD21	84:EF:787:TYR:CZ	2.54	0.41
4:MM:91:LEU:HD22	18:9:1284:A:C6	2.56	0.41
7:RR:13:ALA:HB3	7:RR:53:TYR:HD2	1.84	0.41
7:RR:17:ILE:HG22	7:RR:69:ILE:HD11	2.01	0.41
10:UU:26:SER:CB	10:UU:32:LEU:HB2	2.49	0.41
11:ZZ:100:VAL:HB	11:ZZ:108:ILE:CG2	2.51	0.41
16:R:92:LYS:HE2	79:5:1573:G:OP1	2.20	0.41
16:R:102:LEU:HD22	16:R:138:LEU:CD1	2.51	0.41
18:9:13:C:H5'	21:CC:232:THR:CG2	2.51	0.41
18:9:96:C:C1'	18:9:474:G:H5'	2.42	0.41
18:9:154:U:H1'	23:GG:13:GLN:OE1	2.20	0.41
18:9:386:C:H4'	25:II:6:ASP:O	2.21	0.41
18:9:472:C:H4'	18:9:474:G:OP1	2.19	0.41
18:9:680:G:H2'	18:9:681:U:H6	1.81	0.41
18:9:1138:C:O2'	30:VV:61:ARG:HD3	2.20	0.41
18:9:1305:C:O2'	18:9:1306:U:H5'	2.21	0.41
18:9:1452:A:H61	18:9:1473:G:N2	2.18	0.41
18:9:1577:G:H1'	18:9:1582:C:C2	2.55	0.41
18:9:1648:G:H22	18:9:1674:G:H3'	1.85	0.41
18:9:1728:U:H2'	18:9:1729:U:O4'	2.19	0.41
18:9:1730:U:H2'	18:9:1731:A:O4'	2.20	0.41
19:AA:63:ARG:CG	19:AA:185:MET:HE1	2.49	0.41
19:AA:147:LEU:HD11	19:AA:161:ILE:HD12	2.03	0.41
21:CC:113:GLN:NE2	21:CC:120:GLN:HG3	2.36	0.41
22:EE:138:HIS:CD2	22:EE:148:ARG:HB3	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:II:10:LYS:HB3	25:II:10:LYS:HE2	1.90	0.41
26:JJ:81:LEU:HA	26:JJ:84:ILE:HG12	2.02	0.41
27:LL:101:ARG:HB2	32:XX:10:ALA:CB	2.39	0.41
29:OO:103:ASN:O	29:OO:142:ARG:HD3	2.21	0.41
33:YY:104:ARG:HA	33:YY:107:ARG:CZ	2.50	0.41
37:A:5:ILE:HD11	37:A:8:GLN:HG3	2.02	0.41
38:B:174:ARG:NH2	79:5:4986:G:H1'	2.36	0.41
38:B:206:PRO:HG2	38:B:209:GLN:HG2	2.01	0.41
38:B:320:PHE:HB2	38:B:323:TYR:HB3	2.01	0.41
38:B:323:TYR:HA	38:B:342:LYS:HE3	2.03	0.41
39:C:79:VAL:HG11	39:C:86:ARG:O	2.19	0.41
41:E:72:LYS:HE3	79:5:983:C:N3	2.35	0.41
43:G:123:LEU:HD12	49:N:28:TRP:CZ3	2.55	0.41
46:J:25:CYS:HA	46:J:69:ALA:HB2	2.02	0.41
48:M:5:ARG:HB3	48:M:57:LEU:CG	2.50	0.41
49:N:138:PHE:CZ	79:5:18:C:H4'	2.56	0.41
50:O:24:ALA:HB1	50:O:88:LEU:HD21	2.02	0.41
50:O:34:VAL:HA	50:O:103:LYS:O	2.20	0.41
52:Q:90:VAL:HG22	79:5:1502:G:O6	2.20	0.41
53:S:120:ARG:O	53:S:124:ILE:HG13	2.20	0.41
56:V:28:CYS:SG	56:V:37:LEU:HD11	2.60	0.41
58:Y:22:PRO:CD	58:Y:25:ILE:HD12	2.45	0.41
58:Y:32:SER:HB2	58:Y:104:VAL:HG12	2.02	0.41
60:a:63:LEU:HD22	60:a:65:ARG:HE	1.86	0.41
61:b:4:SER:HB2	79:5:1855:G:OP1	2.21	0.41
63:d:57:MET:HE1	63:d:88:LEU:O	2.21	0.41
64:e:10:PRO:O	64:e:12:ILE:HD12	2.20	0.41
66:g:6:THR:HG22	79:5:2400:G:N3	2.35	0.41
77:s:8:THR:O	77:s:10:LYS:CB	2.68	0.41
77:s:20:LEU:HD12	77:s:52:VAL:HG21	2.02	0.41
77:s:25:PRO:HG2	77:s:92:LYS:HA	1.99	0.41
77:s:35:VAL:HG21	77:s:40:MET:CA	2.50	0.41
77:s:82:ILE:O	77:s:83:ARG:HB2	2.19	0.41
79:5:1440:U:H2'	79:5:1441:C:H5	1.85	0.41
79:5:2573:A:H2'	79:5:2574:G:O4'	2.20	0.41
79:5:2662:G:H2'	79:5:2663:G:C8	2.56	0.41
79:5:3665:G:O2'	79:5:3666:C:H5'	2.21	0.41
79:5:3790:U:C4'	79:5:3791:C:H3'	2.50	0.41
79:5:4528:G:O2'	79:5:4529:G:H5'	2.20	0.41
79:5:4880:C:H2'	79:5:4881:U:O4'	2.20	0.41
80:7:11:A:O2'	80:7:13:A:H2'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:8:57:C:H4'	81:8:63:U:C4	2.55	0.41
81:8:124:U:H4'	81:8:125:C:C5'	2.50	0.41
82:1:1369:A:H1'	82:1:1451:C:O2	2.19	0.41
83:PT:28:G:C6	83:PT:29:U:O4	2.74	0.41
83:PT:53:G:C2	83:PT:62:C:C2	3.08	0.41
84:EF:24:VAL:HG23	84:EF:126:LEU:O	2.21	0.41
84:EF:25:ILE:CG2	84:EF:142:VAL:HG11	2.50	0.41
84:EF:131:CYS:SG	84:EF:160:MET:HA	2.61	0.41
84:EF:383:MET:CE	84:EF:386:LYS:HD2	2.50	0.41
84:EF:421:VAL:O	84:EF:421:VAL:HG22	2.19	0.41
84:EF:520:LEU:HA	84:EF:566:ALA:CB	2.50	0.41
84:EF:555:GLU:O	84:EF:559:LYS:N	2.44	0.41
84:EF:606:ALA:HB2	84:EF:702:PHE:CD1	2.55	0.41
84:EF:645:GLU:C	84:EF:647:ARG:N	2.75	0.41
1:DD:24:PHE:CD2	1:DD:25:LEU:HD12	2.56	0.41
1:DD:219:PRO:HB2	15:gg:190:GLY:HA2	2.02	0.41
2:FF:107:ASN:O	2:FF:111:VAL:HG23	2.21	0.41
5:PP:93:MET:CE	5:PP:106:GLU:HB3	2.47	0.41
5:PP:98:ASN:HB3	5:PP:122:THR:HA	2.01	0.41
6:QQ:57:LEU:HD11	6:QQ:115:TYR:CD2	2.55	0.41
8:SS:26:ILE:O	8:SS:30:ILE:HG13	2.21	0.41
8:SS:133:GLY:HA3	18:9:1623:A:H5''	2.02	0.41
10:UU:35:VAL:HG21	10:UU:110:VAL:HG21	2.02	0.41
10:UU:40:ILE:O	10:UU:44:LYS:HD3	2.20	0.41
10:UU:56:MET:HE3	18:9:1580:A:C8	2.54	0.41
15:gg:18:VAL:HG21	15:gg:307:VAL:CG2	2.50	0.41
16:R:10:LEU:O	16:R:14:VAL:HG23	2.20	0.41
18:9:183:G:H1'	18:9:184:G:O4'	2.21	0.41
18:9:322:C:H3'	18:9:323:C:H5'	2.02	0.41
18:9:383:G:H21	27:LL:133:PRO:HG3	1.84	0.41
18:9:799:U:O2'	18:9:800:U:H5'	2.20	0.41
18:9:1101:U:H3	18:9:1131:G:H1	1.66	0.41
20:BB:35:ALA:HB1	20:BB:36:PRO:HD2	2.02	0.41
20:BB:42:ARG:HH12	20:BB:232:HIS:HA	1.85	0.41
21:CC:204:ILE:HD13	21:CC:215:MET:CE	2.50	0.41
22:EE:183:VAL:CG1	22:EE:220:THR:HG21	2.45	0.41
23:GG:77:LEU:CD1	23:GG:95:LYS:HB2	2.50	0.41
25:II:43:ILE:HG21	25:II:55:TYR:HB3	2.02	0.41
26:JJ:101:LYS:HE2	26:JJ:103:GLU:HB2	2.02	0.41
29:OO:21:VAL:HG12	29:OO:25:GLU:HG3	2.01	0.41
30:VV:70:LEU:HD21	30:VV:79:VAL:HG11	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:VV:70:LEU:CD2	30:VV:79:VAL:HG11	2.50	0.41
37:A:116:LEU:CD1	37:A:164:ALA:HB2	2.51	0.41
38:B:14:LEU:O	38:B:17:LEU:HD23	2.19	0.41
38:B:55:HIS:HB2	38:B:369:ASP:HB2	2.01	0.41
38:B:59:GLU:HG2	38:B:366:LYS:CE	2.46	0.41
39:C:236:ASN:O	39:C:240:LEU:HG	2.20	0.41
40:D:39:GLN:OE1	40:D:43:LYS:HG3	2.20	0.41
43:G:199:LEU:HD12	43:G:200:VAL:HG23	2.03	0.41
44:H:8:GLN:OE1	44:H:71:ARG:HA	2.20	0.41
44:H:128:MET:HG3	44:H:157:SER:HB2	2.02	0.41
46:J:24:ILE:HG13	46:J:40:LEU:HD21	2.03	0.41
48:M:14:TYR:OH	48:M:22:GLY:HA2	2.20	0.41
48:M:69:ARG:HG2	48:M:72:TYR:CE2	2.55	0.41
49:N:86:HIS:CD2	79:5:33:A:H5'	2.55	0.41
52:Q:46:VAL:O	52:Q:50:ARG:HG3	2.21	0.41
52:Q:72:LEU:HG	79:5:1457:G:OP1	2.20	0.41
53:S:30:MET:HG2	54:T:151:LEU:O	2.21	0.41
59:Z:29:ILE:HG22	59:Z:32:GLY:HA2	2.02	0.41
59:Z:105:ALA:O	59:Z:109:LYS:HG3	2.20	0.41
65:f:33:VAL:HG23	65:f:38:GLU:CB	2.45	0.41
65:f:88:PHE:CZ	65:f:92:LEU:HD11	2.55	0.41
66:g:83:CYS:O	66:g:87:VAL:HG23	2.19	0.41
67:h:77:LYS:HD2	67:h:78:TYR:CE2	2.55	0.41
69:j:14:LYS:HE3	71:l:51:LEU:OXT	2.20	0.41
76:r:94:ARG:HG3	76:r:107:ARG:HD2	2.01	0.41
77:s:13:TYR:CE1	79:5:1998:A:H5'	2.56	0.41
77:s:28:PHE:HE2	77:s:99:ARG:HA	1.83	0.41
77:s:43:ILE:CG1	77:s:187:LEU:HD21	2.50	0.41
77:s:126:GLN:NE2	77:s:126:GLN:HA	2.33	0.41
79:5:12:A:H4'	79:5:13:U:OP1	2.17	0.41
79:5:22:G:H2'	79:5:23:C:H6	1.85	0.41
79:5:275:C:H4'	79:5:276:C:OP1	2.20	0.41
79:5:404:U:H2'	79:5:405:U:O4'	2.21	0.41
79:5:754:U:O2'	79:5:755:C:H5'	2.19	0.41
79:5:1198:G:H2'	79:5:1199:G:C8	2.56	0.41
79:5:1298:C:H2'	79:5:1299:G:C8	2.56	0.41
79:5:1354:A:H4'	79:5:1355:G:O5'	2.21	0.41
79:5:1534:A:H2'	79:5:1637:A:C2	2.55	0.41
79:5:1617:G:H1'	79:5:2513:A:N6	2.35	0.41
79:5:1617:G:O4'	79:5:2802:C:H4'	2.20	0.41
79:5:1772:C:N3	79:5:1773:U:C6	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:1850:A:O2'	79:5:2283:G:H4'	2.21	0.41
79:5:1854:G:H3'	79:5:1855:G:H5''	2.03	0.41
79:5:2611:A:O5'	79:5:2688:G:H4'	2.19	0.41
79:5:3754:G:O2'	79:5:3755:G:H5'	2.20	0.41
79:5:4531:U:H4'	79:5:4532:U:C5'	2.49	0.41
81:8:66:A:H2'	81:8:67:U:H6	1.84	0.41
82:1:1439:A:H2'	82:1:1439:A:N3	2.35	0.41
82:1:1481:G:C8	82:1:1482:U:C5	3.08	0.41
83:PT:5:G:C2	83:PT:6:U:C6	3.09	0.41
84:EF:55:ARG:NH2	84:EF:67:CYS:C	2.79	0.41
84:EF:66:ARG:HH12	84:EF:552:LEU:HD21	1.85	0.41
84:EF:200:MET:HG3	84:EF:203:ILE:HG13	2.03	0.41
84:EF:289:PHE:HA	84:EF:293:ILE:HG12	2.02	0.41
84:EF:324:ASP:C	84:EF:326:GLU:N	2.79	0.41
84:EF:372:LEU:O	84:EF:374:GLU:N	2.54	0.41
84:EF:380:GLU:HG3	84:EF:490:HIS:CE1	2.56	0.41
84:EF:534:VAL:CG2	84:EF:535:GLN:N	2.83	0.41
84:EF:580:ARG:O	84:EF:741:MET:N	2.54	0.41
84:EF:649:ILE:HG13	84:EF:663:THR:CB	2.51	0.41
84:EF:653:GLY:HA3	84:EF:658:GLY:O	2.21	0.41
84:EF:743:PRO:HB3	84:EF:817:TRP:CE2	2.56	0.41
84:EF:830:ARG:N	84:EF:831:PRO:CD	2.82	0.41
1:DD:50:ILE:CD1	1:DD:86:LEU:HD23	2.38	0.41
3:KK:25:LYS:HB2	3:KK:67:PHE:CE1	2.56	0.41
6:QQ:74:GLY:HA2	18:9:1545:A:C4'	2.42	0.41
6:QQ:135:PRO:HD2	6:QQ:139:ALA:O	2.21	0.41
7:RR:16:ILE:HG12	7:RR:38:ILE:HD11	2.03	0.41
7:RR:38:ILE:HD12	7:RR:39:ALA:HB2	2.02	0.41
8:SS:40:TYR:O	8:SS:44:VAL:HG23	2.21	0.41
10:UU:66:ARG:HB2	13:dd:40:ARG:NH1	2.36	0.41
10:UU:97:ILE:O	10:UU:101:ILE:HG13	2.21	0.41
17:W:33:ASN:OD1	17:W:35:LYS:HB3	2.21	0.41
18:9:127:C:H3'	18:9:128:U:H6	1.86	0.41
18:9:142:C:H1'	23:GG:180:VAL:HG11	2.02	0.41
18:9:218:U:H2'	18:9:219:U:H6	1.84	0.41
18:9:522:A:H3'	26:JJ:38:ARG:HH21	1.85	0.41
18:9:828:G:O2'	18:9:829:C:H5'	2.20	0.41
18:9:1008:A:O2'	18:9:1009:A:H5'	2.20	0.41
18:9:1097:G:H4'	19:AA:32:PHE:CD1	2.55	0.41
18:9:1740:C:O2'	18:9:1741:U:H5'	2.21	0.41
21:CC:137:VAL:O	21:CC:162:ILE:HA	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CC:151:ILE:O	21:CC:155:ILE:HG13	2.20	0.41
23:GG:122:PRO:HA	23:GG:126:ASP:HB2	2.03	0.41
27:LL:61:PRO:HA	27:LL:66:VAL:HG13	2.02	0.41
33:YY:14:THR:HG22	33:YY:21:LYS:CD	2.49	0.41
33:YY:28:LEU:HA	33:YY:67:GLY:O	2.21	0.41
37:A:83:HIS:HB3	75:p:64:VAL:HG22	2.02	0.41
38:B:62:ARG:HH21	38:B:358:ARG:HG3	1.84	0.41
38:B:207:VAL:HG11	38:B:331:VAL:CG1	2.51	0.41
39:C:122:TYR:CE2	79:5:1351:G:H5''	2.54	0.41
42:F:100:VAL:HG23	42:F:138:TYR:CZ	2.55	0.41
42:F:127:ALA:O	42:F:131:MET:HG3	2.21	0.41
42:F:134:ILE:O	42:F:134:ILE:HD13	2.19	0.41
42:F:222:LYS:CE	79:5:1907:A:H4'	2.46	0.41
44:H:92:MET:HE1	44:H:161:ILE:HG13	2.02	0.41
45:I:91:LEU:HD13	45:I:129:VAL:CG2	2.51	0.41
46:J:12:MET:O	46:J:137:PRO:HD2	2.21	0.41
46:J:24:ILE:HG22	46:J:26:VAL:HG13	2.02	0.41
50:O:130:LYS:CB	50:O:133:ARG:HG2	2.46	0.41
52:Q:18:PRO:HD3	52:Q:52:PHE:HD1	1.85	0.41
58:Y:127:GLN:O	58:Y:131:GLU:HG2	2.20	0.41
63:d:23:ARG:HG3	63:d:25:TYR:CZ	2.56	0.41
64:e:12:ILE:HG13	64:e:66:THR:CG2	2.51	0.41
64:e:60:TYR:CZ	79:5:1900:C:H4'	2.55	0.41
66:g:70:THR:HG21	79:5:2587:A:OP2	2.21	0.41
68:i:58:MET:O	68:i:62:LYS:HG3	2.20	0.41
76:r:89:THR:O	76:r:93:ILE:HG13	2.21	0.41
76:r:93:ILE:O	76:r:97:ILE:HG13	2.20	0.41
77:s:44:ARG:HG3	77:s:53:VAL:HG21	2.02	0.41
77:s:96:THR:O	77:s:97:GLU:C	2.64	0.41
77:s:128:THR:C	77:s:151:THR:HA	2.45	0.41
78:t:32:ILE:HG21	78:t:39:PRO:CA	2.51	0.41
78:t:53:TRP:HB3	78:t:56:LEU:HB3	1.99	0.41
79:5:178:C:H2'	79:5:179:G:C8	2.55	0.41
79:5:229:G:H2'	79:5:230:G:H8	1.86	0.41
79:5:273:U:H2'	79:5:274:C:C6	2.55	0.41
79:5:288:G:H2'	79:5:289:C:H6	1.83	0.41
79:5:290:U:O2'	79:5:291:U:H5'	2.20	0.41
79:5:324:A:H2'	79:5:325:U:H6	1.86	0.41
79:5:335:A:H2'	79:5:336:A:N9	2.35	0.41
79:5:1086:C:O2'	79:5:1087:A:H5'	2.20	0.41
79:5:1329:G:H5''	79:5:1330:A:OP2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:1395:U:O2'	79:5:1469:C:H5''	2.20	0.41
79:5:2258:C:H3'	79:5:2259:G:H5''	2.02	0.41
79:5:2409:U:H2'	79:5:2790:U:C2	2.55	0.41
79:5:2868:G:H2'	79:5:2869:U:C6	2.55	0.41
79:5:2874:U:H5''	79:5:2875:C:H5	1.85	0.41
79:5:4119:C:H4'	79:5:4120:U:OP1	2.21	0.41
79:5:4181:U:H2'	79:5:4182:G:O4'	2.21	0.41
79:5:4344:U:H3	79:5:4368:G:H1	1.69	0.41
79:5:4485:C:H2'	79:5:4486:C:H6	1.85	0.41
82:1:1431:G:H1	82:1:1437:C:N4	2.14	0.41
82:1:1455:A:H1'	82:1:1481:G:C1'	2.51	0.41
82:1:1477:G:H3'	82:1:1478:C:H6	1.86	0.41
83:PT:51:G:C6	83:PT:64:G:C6	3.09	0.41
83:PT:67:A:C4	83:PT:68:C:C6	3.08	0.41
84:EF:42:LYS:HG2	84:EF:351:LEU:CG	2.50	0.41
84:EF:746:LEU:HD21	84:EF:787:TYR:CE1	2.55	0.41
84:EF:748:GLU:N	84:EF:811:GLN:HB3	2.35	0.41
84:EF:839:ARG:HD3	84:EF:846:GLU:HA	2.02	0.41
1:DD:146:ARG:HD3	1:DD:146:ARG:HA	1.84	0.41
4:MM:33:ARG:O	4:MM:37:GLU:HB2	2.20	0.41
4:MM:91:LEU:HD13	18:9:1284:A:C8	2.56	0.41
5:PP:57:LEU:O	5:PP:61:ARG:HG3	2.20	0.41
6:QQ:34:VAL:O	6:QQ:37:ARG:HG2	2.21	0.41
6:QQ:89:SER:O	6:QQ:93:VAL:HG23	2.21	0.41
10:UU:24:LEU:HD13	10:UU:35:VAL:HG12	2.03	0.41
11:ZZ:65:TYR:O	11:ZZ:111:ARG:HB2	2.20	0.41
13:dd:19:ARG:HG3	13:dd:30:LEU:HD12	2.03	0.41
15:gg:168:CYS:HB2	15:gg:195:LEU:CD1	2.50	0.41
16:R:165:LYS:HE2	16:R:165:LYS:HB3	1.90	0.41
18:9:103:A:H4'	18:9:104:A:C5'	2.51	0.41
18:9:155:G:H4'	23:GG:15:LEU:HD12	2.02	0.41
18:9:222:U:H5''	27:LL:17:PHE:CD1	2.55	0.41
18:9:315:C:O2'	18:9:316:G:H5'	2.20	0.41
18:9:380:G:H1'	25:II:5:ARG:NH2	2.35	0.41
18:9:396:U:H4'	25:II:14:THR:HG22	2.02	0.41
18:9:434:G:H2'	18:9:435:A:C8	2.55	0.41
18:9:610:G:H2'	18:9:611:G:H8	1.85	0.41
18:9:828:G:N2	18:9:830:A:H1'	2.36	0.41
18:9:913:A:N6	24:HH:98:ARG:HB3	2.36	0.41
18:9:940:U:H3	18:9:1002:U:H3	1.67	0.41
18:9:1224:G:O2'	18:9:1225:U:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:9:1285:G:H3'	18:9:1286:G:H5'	2.03	0.41
18:9:1590:C:H2'	18:9:1591:C:H5'	2.02	0.41
19:AA:128:ARG:CZ	19:AA:153:PRO:HD3	2.49	0.41
21:CC:65:LYS:CG	21:CC:273:LEU:HD13	2.50	0.41
21:CC:179:THR:OG1	21:CC:197:PRO:HA	2.20	0.41
23:GG:132:ARG:CB	23:GG:133:LEU:HD12	2.51	0.41
26:JJ:55:LYS:HA	26:JJ:58:ARG:HE	1.85	0.41
27:LL:85:THR:HA	27:LL:113:LEU:H	1.86	0.41
37:A:147:ARG:HE	37:A:155:LYS:HD2	1.85	0.41
37:A:189:TYR:CB	37:A:196:TRP:HB2	2.50	0.41
39:C:8:ILE:HG23	39:C:149:GLU:CD	2.46	0.41
39:C:353:ARG:HD3	79:5:930:G:OP1	2.20	0.41
40:D:41:LYS:HB2	54:T:68:THR:O	2.21	0.41
43:G:155:TYR:O	43:G:189:LEU:HG	2.20	0.41
47:L:76:PHE:HZ	47:L:116:ARG:HH11	1.68	0.41
47:L:103:ARG:CZ	79:5:325:U:H5''	2.51	0.41
48:M:107:PHE:CE2	48:M:111:LYS:HD3	2.55	0.41
50:O:125:LYS:CG	50:O:129:LEU:HD22	2.44	0.41
51:P:128:ARG:HB2	51:P:136:ILE:CG2	2.48	0.41
53:S:81:TRP:O	53:S:127:MET:HG2	2.21	0.41
57:X:50:LYS:HG3	79:5:2475:G:N1	2.36	0.41
58:Y:59:ARG:HD2	79:5:200:U:C5	2.56	0.41
61:b:49:HIS:HB2	79:5:1813:U:O2'	2.21	0.41
64:e:108:ARG:O	64:e:112:VAL:HG23	2.20	0.41
65:f:73:LYS:HD3	79:5:952:G:OP1	2.20	0.41
66:g:93:ARG:HG2	79:5:4122:G:C8	2.56	0.41
68:i:51:ALA:HB3	68:i:54:GLU:CG	2.47	0.41
69:j:11:ARG:NH2	79:5:1637:A:H1'	2.36	0.41
69:j:69:ILE:HG13	69:j:73:ARG:HH12	1.85	0.41
72:m:78:HIS:HB2	72:m:79:PRO:HD2	2.02	0.41
77:s:58:ASN:ND2	77:s:86:VAL:H	2.19	0.41
77:s:62:ARG:HG3	77:s:62:ARG:H	1.60	0.41
77:s:112:ARG:O	77:s:113:ALA:HB3	2.21	0.41
77:s:199:TYR:O	77:s:200:ASN:C	2.62	0.41
79:5:221:C:H2'	79:5:222:C:H6	1.84	0.41
79:5:1099:C:H2'	79:5:1100:U:O4'	2.21	0.41
79:5:2635:U:O2'	79:5:2636:U:H5'	2.20	0.41
79:5:4123:C:H2'	79:5:4124:G:O4'	2.21	0.41
79:5:4253:A:H5'	79:5:4254:G:C8	2.55	0.41
79:5:4397:A:H2'	79:5:4398:C:H5''	2.03	0.41
82:1:1341:U:H4'	82:1:1342:A:OP1	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:1:1389:C:H1'	82:1:1390:A:N7	2.36	0.41
83:PT:15:G:N2	83:PT:48:C:N3	2.68	0.41
84:EF:39:LEU:HD13	84:EF:347:GLY:HA2	2.03	0.41
84:EF:56:PHE:CE2	84:EF:456:ARG:NE	2.88	0.41
84:EF:208:VAL:HB	84:EF:258:LYS:HA	2.01	0.41
84:EF:224:THR:HG22	84:EF:227:GLN:HG3	2.03	0.41
84:EF:391:LYS:HE3	84:EF:420:LEU:HD23	2.03	0.41
84:EF:503:PRO:CB	84:EF:535:GLN:CB	2.97	0.41
84:EF:506:ARG:HH22	84:EF:547:ALA:HB2	1.86	0.41
84:EF:628:LEU:O	84:EF:629:LYS:C	2.63	0.41
84:EF:643:VAL:O	84:EF:646:ALA:HB3	2.20	0.41
84:EF:670:GLN:O	84:EF:671:TYR:C	2.64	0.41
84:EF:672:LEU:HG	84:EF:676:LYS:HG3	2.03	0.41
84:EF:677:ASP:O	84:EF:680:VAL:HG12	2.21	0.41
84:EF:680:VAL:HA	84:EF:683:PHE:HB2	2.03	0.41
84:EF:691:ALA:HB2	84:EF:733:VAL:HG11	2.03	0.41
84:EF:718:GLY:HA2	84:EF:721:ILE:HB	2.03	0.41
84:EF:718:GLY:C	84:EF:720:GLN:N	2.76	0.41
4:MM:113:ASP:OD2	4:MM:121:LYS:HE3	2.20	0.41
8:SS:61:GLU:O	8:SS:65:GLU:HG3	2.21	0.41
15:gg:242:SER:OG	15:gg:245:ARG:HB2	2.21	0.41
18:9:298:G:O2'	18:9:299:A:H5'	2.20	0.41
18:9:792:C:H2'	18:9:793:G:C8	2.55	0.41
18:9:1201:U:O2'	18:9:1357:A:H2'	2.21	0.41
18:9:1313:A:H4'	18:9:1314:U:O5'	2.21	0.41
18:9:1316:C:H2'	18:9:1317:C:H6	1.85	0.41
18:9:1676:U:H2'	18:9:1677:U:O4'	2.21	0.41
18:9:1720:U:O5'	18:9:1721:U:H5''	2.21	0.41
19:AA:10:MET:SD	19:AA:52:LYS:HA	2.61	0.41
20:BB:121:ILE:HD11	20:BB:161:VAL:HG22	2.03	0.41
22:EE:89:VAL:CG1	22:EE:119:ALA:HB1	2.51	0.41
23:GG:214:ALA:O	23:GG:218:LYS:HG3	2.21	0.41
26:JJ:113:GLN:O	26:JJ:117:LEU:HD13	2.21	0.41
26:JJ:127:ARG:HD3	36:ee:104:ARG:CD	2.45	0.41
28:NN:98:VAL:CG1	28:NN:115:LEU:HB2	2.51	0.41
32:XX:51:VAL:HG13	32:XX:70:VAL:CG1	2.50	0.41
32:XX:90:CYS:O	32:XX:94:ILE:HG13	2.20	0.41
35:bb:36:LYS:CB	35:bb:43:ILE:HG12	2.41	0.41
38:B:82:PRO:HG3	38:B:171:LEU:HD21	2.01	0.41
38:B:141:ALA:O	38:B:145:GLN:HG2	2.20	0.41
38:B:193:LYS:HE3	38:B:193:LYS:HB2	1.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:B:314:ILE:HG12	38:B:330:PHE:CE1	2.56	0.41
39:C:182:LYS:HE2	79:5:2300:A:H5'	2.03	0.41
40:D:4:VAL:HG11	79:5:4247:G:H5'	2.02	0.41
40:D:16:TYR:HA	79:5:4265:U:O2'	2.21	0.41
40:D:138:GLN:HB3	40:D:139:PRO:HD2	2.03	0.41
40:D:279:ARG:HD3	40:D:283:LYS:HE3	2.02	0.41
41:E:267:VAL:CG1	41:E:270:LEU:HB2	2.51	0.41
42:F:56:TYR:HE2	42:F:188:ASP:HA	1.86	0.41
43:G:84:LEU:HB3	59:Z:53:VAL:HG11	2.02	0.41
44:H:123:ILE:HD11	44:H:125:ARG:NH2	2.30	0.41
45:I:60:LEU:CD1	45:I:129:VAL:HG21	2.51	0.41
45:I:152:LEU:HB2	45:I:165:ILE:HD13	2.02	0.41
47:L:91:ALA:HA	47:L:94:ILE:CG1	2.46	0.41
48:M:15:VAL:CG1	48:M:21:ALA:HA	2.51	0.41
48:M:17:PHE:CE1	48:M:54:CYS:HA	2.56	0.41
50:O:166:ILE:O	50:O:170:LYS:HG3	2.21	0.41
51:P:118:GLN:HG3	79:5:423:G:O2'	2.21	0.41
51:P:124:LYS:HA	51:P:143:PRO:HD2	2.01	0.41
53:S:73:LEU:CD1	79:5:734:G:H4'	2.51	0.41
54:T:128:LEU:HG	79:5:1834:U:C5	2.56	0.41
56:V:112:MET:HE1	56:V:117:ILE:CG1	2.48	0.41
58:Y:33:PRO:HD2	58:Y:104:VAL:O	2.21	0.41
58:Y:46:SER:CB	79:5:239:C:H5''	2.50	0.41
63:d:57:MET:HA	63:d:90:ARG:HH21	1.86	0.41
65:f:34:TYR:HA	65:f:82:GLY:HA3	2.03	0.41
67:h:50:VAL:O	67:h:54:ILE:HG13	2.21	0.41
68:i:8:ALA:O	68:i:13:LYS:HB2	2.21	0.41
69:j:52:LYS:HD2	69:j:55:ARG:NH1	2.36	0.41
70:k:33:LYS:HD3	79:5:2693:G:OP1	2.20	0.41
77:s:86:VAL:CG1	77:s:87:GLY:H	2.24	0.41
77:s:175:LEU:C	77:s:180:ILE:H	2.29	0.41
77:s:193:PHE:HA	77:s:197:SER:O	2.21	0.41
78:t:151:ILE:O	78:t:154:ASP:HB3	2.21	0.41
79:5:7:C:H2'	79:5:8:U:H6	1.82	0.41
79:5:210:C:O2'	79:5:234:G:H2'	2.21	0.41
79:5:518:C:O2'	79:5:519:C:H5'	2.20	0.41
79:5:1446:C:H42	79:5:2108:G:H1	1.69	0.41
79:5:1838:A:O2'	79:5:1839:U:H5'	2.21	0.41
79:5:2007:G:H2'	79:5:2008:U:H5''	2.03	0.41
79:5:2058:G:O2'	79:5:2059:C:H5'	2.21	0.41
79:5:2645:G:O2'	79:5:2646:C:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:2800:G:O2'	79:5:2801:U:H5'	2.20	0.41
79:5:3689:G:H2'	79:5:3690:U:C6	2.56	0.41
79:5:3732:A:H2'	79:5:3733:A:H8	1.83	0.41
79:5:4080:C:H2'	79:5:4081:G:H8	1.85	0.41
79:5:4083:U:H2'	79:5:4084:G:H3'	2.03	0.41
79:5:4388:A:O2'	79:5:4389:C:H5'	2.20	0.41
79:5:4575:G:OP1	79:5:4575:G:H3'	2.20	0.41
79:5:4725:C:H2'	79:5:4726:G:H8	1.85	0.41
80:7:99:G:H2'	80:7:100:A:H5''	2.02	0.41
82:1:1389:C:H4'	82:1:1394:A:C4'	2.51	0.41
82:1:1417:A:H2'	82:1:1418:U:C6	2.55	0.41
82:1:1439:A:H5'	82:1:1440:G:C8	2.56	0.41
82:1:1454:A:N3	82:1:1454:A:C2'	2.83	0.41
82:1:1455:A:C6	82:1:1480:U:C5	3.08	0.41
84:EF:22:MET:O	84:EF:122:THR:HG21	2.21	0.41
84:EF:120:ARG:HG2	84:EF:397:TYR:CE2	2.55	0.41
84:EF:207:PRO:CA	84:EF:212:VAL:HG22	2.50	0.41
84:EF:249:ARG:O	84:EF:253:VAL:HG23	2.21	0.41
84:EF:402:VAL:H	84:EF:410:PHE:HB2	1.84	0.41
84:EF:451:ILE:HG13	84:EF:452:LEU:N	2.36	0.41
84:EF:590:LEU:HD11	84:EF:604:MET:N	2.36	0.41
84:EF:737:GLN:N	84:EF:738:PRO:CD	2.83	0.41
84:EF:804:THR:C	84:EF:806:GLY:N	2.78	0.41
1:DD:118:ALA:O	1:DD:122:VAL:HG23	2.21	0.41
3:KK:43:LEU:HD13	18:9:1274:G:N7	2.35	0.41
5:PP:15:PHE:CE2	5:PP:17:TYR:HB2	2.56	0.41
7:RR:59:LYS:HB3	7:RR:63:ARG:NH1	2.36	0.41
8:SS:36:VAL:HG23	8:SS:40:TYR:CD2	2.55	0.41
8:SS:39:ARG:HG3	18:9:1629:C:OP1	2.21	0.41
10:UU:32:LEU:CD2	10:UU:87:ARG:HG2	2.51	0.41
15:gg:82:SER:HB3	15:gg:84:ASP:OD1	2.21	0.41
15:gg:184:LEU:HD12	15:gg:184:LEU:O	2.20	0.41
16:R:56:THR:HB	79:5:2820:C:O3'	2.20	0.41
18:9:855:G:H4'	27:LL:71:ARG:HH12	1.85	0.41
18:9:1042:A:O2'	18:9:1043:G:H5'	2.21	0.41
18:9:1076:G:P	28:NN:107:LYS:HD3	2.61	0.41
18:9:1208:A:C5'	34:aa:82:LYS:HE2	2.50	0.41
18:9:1373:C:H2'	18:9:1374:C:H6	1.82	0.41
18:9:1692:U:H2'	18:9:1693:G:C8	2.56	0.41
18:9:1791:A:O2'	23:GG:67:VAL:HG23	2.21	0.41
18:9:1863:A:H3'	18:9:1863:A:OP2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:BB:37:ALA:HB2	20:BB:42:ARG:NH2	2.35	0.41
20:BB:110:MET:O	20:BB:114:VAL:HG23	2.21	0.41
21:CC:183:LYS:HD3	21:CC:194:ARG:NH2	2.36	0.41
23:GG:2:LYS:HB3	23:GG:15:LEU:CD2	2.51	0.41
24:HH:148:LEU:HD12	31:WW:42:MET:CG	2.51	0.41
25:II:36:THR:O	25:II:95:THR:HA	2.20	0.41
25:II:88:ASN:HB3	25:II:205:ARG:HH12	1.85	0.41
27:LL:22:ARG:O	27:LL:23:VAL:HG22	2.21	0.41
27:LL:82:MET:HE2	27:LL:85:THR:HG21	2.03	0.41
28:NN:92:ILE:HG12	28:NN:141:TYR:CE1	2.56	0.41
30:VV:40:ASP:HB3	30:VV:43:THR:HB	2.03	0.41
33:YY:43:LYS:HA	33:YY:46:LYS:NZ	2.36	0.41
37:A:46:LYS:HA	79:5:4121:G:N2	2.35	0.41
37:A:66:PRO:O	43:G:98:ILE:HG13	2.21	0.41
37:A:102:LEU:HD12	37:A:106:THR:OG1	2.21	0.41
37:A:131:GLY:HA3	79:5:3683:C:C4	2.56	0.41
37:A:226:ARG:HG3	79:5:3706:C:O5'	2.20	0.41
38:B:223:THR:O	38:B:274:TYR:HA	2.21	0.41
38:B:392:LEU:HD12	79:5:5042:A:OP2	2.21	0.41
39:C:4:ALA:HA	79:5:490:C:O2'	2.20	0.41
39:C:59:GLY:HA2	39:C:99:GLY:HA2	2.03	0.41
39:C:89:GLN:HE21	79:5:2353:U:H5''	1.85	0.41
40:D:10:LYS:O	40:D:14:LYS:HG3	2.21	0.41
40:D:109:LEU:HD11	40:D:113:PHE:CE2	2.56	0.41
40:D:270:LYS:CB	80:7:60:G:H5''	2.51	0.41
40:D:279:ARG:O	40:D:283:LYS:HG3	2.20	0.41
41:E:215:LEU:O	41:E:215:LEU:HD12	2.20	0.41
41:E:222:LYS:HE3	79:5:4941:G:OP1	2.20	0.41
41:E:252:ASP:O	41:E:256:VAL:HG23	2.21	0.41
41:E:255:ALA:O	41:E:259:GLN:HG3	2.20	0.41
42:F:50:TYR:CE2	79:5:1237:C:H5''	2.56	0.41
42:F:106:LYS:HA	42:F:109:GLN:HG2	2.02	0.41
42:F:141:TRP:CZ2	42:F:234:ASN:HB2	2.56	0.41
43:G:109:LYS:HA	79:5:4085:A:N7	2.35	0.41
46:J:18:ARG:HG3	46:J:134:LEU:C	2.46	0.41
46:J:33:LEU:HD22	46:J:50:PHE:CD1	2.55	0.41
47:L:67:HIS:CD2	47:L:68:THR:HG23	2.56	0.41
47:L:74:ARG:HD2	47:L:99:ASP:CB	2.49	0.41
47:L:172:GLU:CD	68:i:3:LEU:HD23	2.45	0.41
48:M:127:VAL:O	48:M:131:GLN:HG3	2.21	0.41
49:N:113:LEU:HD11	81:8:141:C:H5'	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:O:15:LEU:HB2	50:O:18:ARG:CB	2.49	0.41
50:O:188:LYS:CE	79:5:4892:A:H5''	2.50	0.41
50:O:193:THR:HG22	50:O:197:LYS:HE3	2.03	0.41
50:O:200:GLY:O	50:O:201:LEU:HD23	2.21	0.41
51:P:39:MET:O	51:P:114:ILE:HG22	2.21	0.41
51:P:57:CYS:SG	51:P:72:GLN:HB2	2.61	0.41
53:S:111:ARG:NH1	79:5:2062:C:H1'	2.36	0.41
54:T:17:ARG:NH1	54:T:45:MET:HG3	2.35	0.41
55:U:21:PHE:CE1	55:U:80:LYS:HB2	2.55	0.41
55:U:80:LYS:HE3	55:U:110:TYR:CZ	2.56	0.41
57:X:138:VAL:HG12	57:X:140:LEU:HD23	2.03	0.41
58:Y:124:LYS:O	58:Y:128:VAL:HG23	2.21	0.41
59:Z:11:VAL:HG13	59:Z:81:MET:N	2.36	0.41
59:Z:73:LYS:NZ	79:5:2580:U:H5''	2.35	0.41
63:d:38:PHE:CD2	63:d:78:ARG:HD2	2.55	0.41
65:f:18:LEU:HD13	79:5:1915:C:C6	2.55	0.41
65:f:102:ARG:HB2	65:f:104:MET:CE	2.51	0.41
66:g:94:ALA:O	66:g:98:GLU:HG2	2.21	0.41
68:i:28:ARG:HD3	79:5:327:U:O4	2.20	0.41
73:n:4:LYS:HE3	73:n:5:TRP:CH2	2.56	0.41
75:p:84:ARG:HB3	75:p:84:ARG:NH1	2.35	0.41
77:s:15:LEU:CA	77:s:17:ILE:HG22	2.50	0.41
77:s:18:ILE:HG13	77:s:21:LEU:CD1	2.51	0.41
77:s:24:TYR:CA	77:s:92:LYS:HE2	2.51	0.41
77:s:38:LYS:HZ3	77:s:38:LYS:CA	2.34	0.41
77:s:72:ASN:C	77:s:74:ALA:H	2.29	0.41
77:s:143:ILE:CD1	77:s:160:LEU:HD21	2.51	0.41
77:s:162:LYS:H	77:s:165:ASP:CB	2.30	0.41
77:s:175:LEU:O	77:s:180:ILE:N	2.53	0.41
78:t:10:ILE:HA	78:t:64:ILE:O	2.21	0.41
78:t:16:ARG:HA	78:t:58:ILE:C	2.45	0.41
78:t:82:ILE:HG12	78:t:100:HIS:CE1	2.55	0.41
78:t:82:ILE:HD13	78:t:100:HIS:HE1	1.83	0.41
78:t:112:ILE:CG2	78:t:132:ILE:HG21	2.49	0.41
79:5:64:A:C4	79:5:76:A:H1'	2.56	0.41
79:5:372:A:N3	79:5:1531:U:H1'	2.35	0.41
79:5:385:A:N3	79:5:387:G:H5''	2.35	0.41
79:5:1186:U:H2'	79:5:1187:G:C4	2.56	0.41
79:5:1207:C:H2'	79:5:1208:G:C8	2.54	0.41
79:5:1356:U:H2'	79:5:1357:C:C6	2.55	0.41
79:5:1541:C:O2'	79:5:1542:U:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:1664:U:O2'	79:5:1665:C:H5'	2.21	0.41
79:5:1755:C:O2	79:5:1756:U:C5	2.74	0.41
79:5:1831:G:H2'	79:5:1832:C:O4'	2.21	0.41
79:5:2074:C:H2'	79:5:2075:G:C8	2.56	0.41
79:5:2402:G:H5''	79:5:2786:C:H42	1.86	0.41
79:5:2459:G:H1'	79:5:2463:G:N2	2.35	0.41
79:5:2494:U:H2'	79:5:2495:U:C6	2.56	0.41
79:5:2730:U:H2'	79:5:2731:C:H6	1.86	0.41
79:5:2770:C:H2'	79:5:2771:G:H8	1.86	0.41
79:5:2872:C:H2'	79:5:2873:U:O4'	2.20	0.41
79:5:3787:G:P	79:5:4549:G:H21	2.44	0.41
79:5:3846:C:O2'	79:5:3847:C:H5'	2.20	0.41
79:5:4335:C:H2'	79:5:4336:A:C8	2.56	0.41
79:5:4493:U:O2'	79:5:4494:G:H5'	2.21	0.41
79:5:4631:G:O2'	79:5:4632:U:H5'	2.20	0.41
79:5:4959:U:H3'	79:5:4960:G:H5''	2.01	0.41
80:7:45:U:H2'	80:7:46:C:C6	2.56	0.41
81:8:31:G:H2'	81:8:32:C:O4'	2.21	0.41
81:8:59:A:H5''	81:8:61:A:C8	2.56	0.41
82:1:1337:U:N3	82:1:1395:A:C2	2.89	0.41
82:1:1360:A:OP1	82:1:1360:A:H3'	2.20	0.41
82:1:1454:A:C2	82:1:1482:U:N3	2.89	0.41
83:PT:7:G:N1	83:PT:67:A:C6	2.89	0.41
83:PT:41:A:H2'	83:PT:42:C:C4'	2.50	0.41
84:EF:116:THR:HB	84:EF:499:PHE:CD2	2.56	0.41
84:EF:153:PRO:HB2	84:EF:205:ILE:CG2	2.50	0.41
84:EF:265:TYR:HB3	84:EF:286:PRO:HB2	2.03	0.41
84:EF:279:SER:CB	84:EF:282:GLY:HA3	2.51	0.41
84:EF:359:PRO:HB2	84:EF:363:THR:HB	2.02	0.41
84:EF:517:LEU:CB	84:EF:518:PRO:HD3	2.51	0.41
84:EF:583:VAL:HA	84:EF:738:PRO:HA	2.02	0.41
84:EF:622:VAL:HA	84:EF:626:GLN:HG3	2.02	0.41
84:EF:666:THR:HG21	84:EF:707:VAL:HG22	2.03	0.41
84:EF:671:TYR:HB2	84:EF:674:GLU:HB3	2.02	0.41
84:EF:685:TRP:CD2	84:EF:689:GLU:HG3	2.56	0.41
84:EF:713:ALA:C	84:EF:715:DDE:N	2.72	0.41
84:EF:766:LYS:CE	84:EF:796:PHE:HA	2.51	0.41
84:EF:839:ARG:HA	84:EF:843:GLY:HA3	2.03	0.41
84:EF:841:ARG:O	84:EF:842:LYS:HB3	2.21	0.41
1:DD:21:LEU:HD21	1:DD:48:ILE:CD1	2.41	0.41
1:DD:96:LEU:HD23	1:DD:190:LEU:CD2	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:FF:22:LYS:HE3	2:FF:23:TRP:CH2	2.56	0.41
4:MM:26:LEU:CD2	4:MM:31:LEU:HD21	2.46	0.41
5:PP:53:GLN:O	5:PP:57:LEU:HD13	2.22	0.41
5:PP:56:LEU:O	5:PP:60:LEU:HG	2.21	0.41
6:QQ:12:VAL:HB	6:QQ:91:ALA:HB2	2.02	0.41
6:QQ:23:ALA:CA	6:QQ:70:VAL:HG22	2.47	0.41
9:TT:128:GLN:NE2	18:9:1415:C:H1'	2.36	0.41
10:UU:46:LYS:NZ	10:UU:97:ILE:HG23	2.35	0.41
14:ff:130:VAL:CG1	18:9:1310:U:H5'	2.50	0.41
15:gg:158:PRO:HG2	15:gg:201:SER:O	2.21	0.41
16:R:63:CYS:O	16:R:67:THR:HG23	2.21	0.41
17:W:44:ARG:HD3	79:5:3615:G:N3	2.36	0.41
18:9:54:A:H1'	18:9:474:G:N2	2.36	0.41
18:9:126:G:OP2	23:GG:195:LYS:HG2	2.21	0.41
18:9:940:U:H2'	18:9:941:C:C6	2.55	0.41
18:9:1104:G:O2'	18:9:1105:G:H5'	2.20	0.41
18:9:1208:A:H5'	34:aa:82:LYS:HE2	2.03	0.41
18:9:1439:A:H2'	18:9:1440:C:C6	2.56	0.41
18:9:1629:C:H2'	18:9:1630:A:C8	2.56	0.41
19:AA:207:PRO:O	19:AA:211:GLU:HG3	2.21	0.41
21:CC:186:GLY:O	21:CC:239:ALA:HB1	2.21	0.41
24:HH:130:LEU:HD23	24:HH:142:LYS:HE2	2.03	0.41
25:II:165:GLN:HB3	25:II:170:LYS:O	2.21	0.41
27:LL:125:ILE:HB	27:LL:146:THR:OG1	2.21	0.41
31:WW:35:VAL:O	31:WW:39:THR:HG23	2.21	0.41
32:XX:29:LYS:HE2	32:XX:29:LYS:HB3	1.88	0.41
34:aa:46:GLU:HG3	34:aa:47:ALA:H	1.85	0.41
37:A:181:LYS:HG3	37:A:184:ARG:H	1.85	0.41
37:A:233:ARG:CG	79:5:4184:G:H5'	2.49	0.41
38:B:185:VAL:HB	38:B:193:LYS:HD3	2.02	0.41
38:B:300:LYS:O	38:B:313:SER:HB3	2.21	0.41
39:C:144:ILE:CD1	76:r:73:PRO:HG2	2.43	0.41
39:C:210:ILE:HG21	39:C:252:TRP:CZ3	2.56	0.41
39:C:263:LEU:HD23	39:C:273:LEU:HD22	2.03	0.41
40:D:53:VAL:HG11	40:D:159:VAL:HA	2.03	0.41
41:E:98:PRO:CA	41:E:107:THR:HG22	2.44	0.41
42:F:74:ALA:HB2	42:F:81:TYR:HB2	2.01	0.41
42:F:150:ASN:HD21	79:5:943:A:H62	1.69	0.41
42:F:155:LYS:HD3	42:F:247:ASN:OD1	2.21	0.41
44:H:146:LEU:HD11	44:H:161:ILE:CD1	2.42	0.41
46:J:23:ASN:CG	46:J:129:ASP:HB3	2.45	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:L:206:ASP:O	47:L:210:LYS:HG3	2.21	0.41
49:N:38:ARG:HA	49:N:62:TYR:HA	2.03	0.41
49:N:60:VAL:HG21	81:8:141:C:C5'	2.49	0.41
49:N:138:PHE:CD1	79:5:18:C:H4'	2.56	0.41
50:O:25:LYS:HD3	79:5:1913:C:H5''	2.03	0.41
52:Q:42:THR:O	52:Q:46:VAL:HG23	2.21	0.41
52:Q:78:LYS:CG	52:Q:137:VAL:HG23	2.51	0.41
56:V:26:ILE:HB	56:V:101:ASN:O	2.21	0.41
57:X:90:ILE:HG12	57:X:96:LEU:HA	2.03	0.41
68:i:40:VAL:O	68:i:44:ILE:HG13	2.21	0.41
70:k:49:ASP:HB3	70:k:52:LYS:HB3	2.02	0.41
71:l:27:ILE:HD12	71:l:30:LYS:HE3	2.03	0.41
77:s:5:ASP:CG	77:s:6:ARG:N	2.76	0.41
77:s:47:LEU:CB	77:s:50:LYS:CG	2.98	0.41
77:s:135:THR:C	77:s:138:PHE:H	2.28	0.41
78:t:90:ARG:HE	78:t:98:ILE:HG13	1.83	0.41
78:t:117:ARG:NH1	78:t:124:GLU:HA	2.36	0.41
79:5:393:U:H2'	79:5:394:G:O4'	2.20	0.41
79:5:706:C:O2'	79:5:707:C:H5'	2.21	0.41
79:5:1738:A:H4'	80:7:101:A:C2	2.54	0.41
79:5:1763:C:N3	79:5:1770:A:C2	2.89	0.41
79:5:2071:A:H2'	79:5:2072:C:C6	2.55	0.41
79:5:2520:C:H2'	79:5:2521:G:H8	1.85	0.41
79:5:2726:G:H2'	79:5:2727:C:C6	2.56	0.41
79:5:2899:C:H2'	79:5:2900:U:C6	2.56	0.41
79:5:3662:A:OP2	79:5:3662:A:H3'	2.21	0.41
79:5:4587:G:H2'	79:5:4588:U:O4'	2.21	0.41
81:8:91:A:O2'	81:8:92:U:H5'	2.20	0.41
82:1:1354:U:H2'	82:1:1355:A:C8	2.57	0.41
82:1:1387:G:P	82:1:1387:G:O4'	2.79	0.41
82:1:1443:A:H1'	82:1:1444:A:C5	2.55	0.41
84:EF:197:SER:CA	84:EF:201:GLY:HA2	2.51	0.41
84:EF:349:ALA:O	84:EF:352:GLN:HB2	2.21	0.41
84:EF:393:PRO:O	84:EF:394:LEU:C	2.64	0.41
84:EF:395:MET:CE	84:EF:494:MET:HE2	2.51	0.41
84:EF:501:VAL:HG22	84:EF:533:MET:HE3	2.03	0.41
84:EF:506:ARG:O	84:EF:507:VAL:HG23	2.21	0.41
4:MM:62:VAL:HA	4:MM:65:VAL:CG1	2.51	0.40
7:RR:6:THR:O	7:RR:10:LYS:HG3	2.21	0.40
7:RR:59:LYS:HB3	7:RR:63:ARG:HH12	1.86	0.40
13:dd:13:LYS:HA	18:9:1556:A:N7	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:gg:12:LYS:HB2	15:gg:306:LEU:CD2	2.52	0.40
15:gg:45:LEU:HD22	15:gg:52:TYR:CE2	2.56	0.40
15:gg:174:VAL:HG22	15:gg:195:LEU:HD13	2.02	0.40
18:9:6:G:O2'	18:9:7:G:H5'	2.21	0.40
18:9:28:U:H2'	18:9:29:G:C8	2.55	0.40
18:9:31:U:H2'	18:9:32:U:H6	1.86	0.40
18:9:106:C:H2'	18:9:107:A:C8	2.54	0.40
18:9:151:C:H2'	18:9:152:U:C6	2.56	0.40
18:9:399:C:H4'	32:XX:11:ARG:NH1	2.36	0.40
18:9:440:G:OP1	25:II:24:LYS:HD2	2.21	0.40
18:9:1102:G:O2'	18:9:1103:C:H5'	2.21	0.40
18:9:1383:A:H2'	18:9:1384:C:H6	1.85	0.40
18:9:1714:U:H2'	18:9:1715:A:C8	2.56	0.40
19:AA:34:MET:SD	19:AA:154:LEU:HD21	2.60	0.40
19:AA:80:ARG:HG3	19:AA:129:ALA:HB1	2.01	0.40
19:AA:89:LYS:HE2	19:AA:201:LEU:HD11	2.02	0.40
19:AA:111:GLN:OE1	21:CC:89:LYS:HD3	2.21	0.40
21:CC:219:ILE:HG21	21:CC:222:CYS:HB2	2.01	0.40
21:CC:253:PRO:HA	21:CC:256:TRP:CD1	2.57	0.40
26:JJ:57:ALA:O	26:JJ:61:LEU:HD13	2.20	0.40
27:LL:73:LEU:HD13	27:LL:90:ARG:NH1	2.36	0.40
28:NN:50:ILE:O	28:NN:54:LEU:HG	2.20	0.40
28:NN:92:ILE:O	28:NN:96:VAL:HG23	2.21	0.40
31:WW:3:ARG:HD3	31:WW:6:VAL:CG2	2.48	0.40
31:WW:27:ILE:HD11	31:WW:61:ILE:HD12	2.02	0.40
32:XX:100:VAL:HG12	32:XX:125:VAL:HG13	2.03	0.40
33:YY:38:THR:O	33:YY:42:GLU:HG3	2.21	0.40
34:aa:44:ILE:CD1	34:aa:45:VAL:HG22	2.49	0.40
39:C:26:ALA:HB1	39:C:267:TRP:CZ3	2.56	0.40
40:D:36:LEU:HA	79:5:4325:A:O2'	2.20	0.40
42:F:107:VAL:O	42:F:111:LEU:HG	2.21	0.40
42:F:128:SER:O	42:F:132:LEU:HG	2.20	0.40
42:F:223:THR:CB	80:7:83:A:H4'	2.48	0.40
43:G:189:LEU:HD13	43:G:255:VAL:HG11	2.03	0.40
44:H:5:LEU:HD22	44:H:60:TRP:CH2	2.55	0.40
44:H:41:ILE:HG23	44:H:43:VAL:HG22	2.02	0.40
45:I:184:MET:HB3	45:I:190:LEU:HG	2.02	0.40
49:N:22:LEU:O	49:N:26:ARG:HD3	2.21	0.40
49:N:157:LYS:HB2	79:5:56:A:H4'	2.03	0.40
52:Q:17:GLU:HB3	52:Q:33:ARG:HH22	1.86	0.40
53:S:147:ASP:HB3	53:S:150:ILE:HB	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:Y:38:LEU:HD11	58:Y:107:THR:C	2.45	0.40
61:b:23:LYS:HB3	61:b:24:PRO:HD2	2.03	0.40
62:c:78:ASN:OD1	62:c:90:ARG:HB2	2.21	0.40
65:f:23:GLU:HG3	79:5:439:G:C1'	2.51	0.40
76:r:2:SER:O	76:r:6:GLN:HG2	2.20	0.40
77:s:21:LEU:HD23	77:s:68:HIS:HB2	1.93	0.40
77:s:31:GLY:O	77:s:188:ILE:HB	2.21	0.40
77:s:52:VAL:HG13	77:s:54:LEU:HD23	2.04	0.40
77:s:61:MET:O	77:s:65:ILE:N	2.54	0.40
77:s:123:VAL:HG22	77:s:175:LEU:HD23	2.03	0.40
77:s:189:ILE:HD12	77:s:190:GLN:N	2.36	0.40
77:s:197:SER:O	77:s:199:TYR:HD1	2.05	0.40
78:t:129:ILE:HD13	78:t:160:VAL:CG2	2.51	0.40
78:t:132:ILE:CA	78:t:135:THR:HG23	2.51	0.40
79:5:464:G:H2'	79:5:465:G:C8	2.56	0.40
79:5:1246:G:H2'	79:5:1247:U:C6	2.55	0.40
79:5:1744:U:O2'	79:5:1745:G:H5'	2.20	0.40
79:5:1895:G:H4'	79:5:1907:A:O2'	2.21	0.40
79:5:1953:U:O2'	79:5:1954:U:H5'	2.21	0.40
79:5:1996:C:H42	79:5:2000:G:H22	1.69	0.40
79:5:2350:U:O5'	79:5:2351:C:H5''	2.21	0.40
79:5:2546:G:H4'	79:5:2547:G:OP1	2.21	0.40
79:5:2808:G:O2'	79:5:2809:G:H5'	2.20	0.40
79:5:4303:C:H2'	79:5:4305:G:H8	1.85	0.40
79:5:4659:G:H2'	79:5:4660:G:O4'	2.21	0.40
82:1:1369:A:H2	82:1:1450:C:N4	2.13	0.40
82:1:1425:A:N3	82:1:1437:C:C5	2.78	0.40
82:1:1444:A:O2'	82:1:1447:A:N6	2.54	0.40
82:1:1470:C:H2'	82:1:1471:A:C5'	2.50	0.40
82:1:1470:C:C4	82:1:1488:G:H5''	2.56	0.40
83:PT:37:A:OP1	84:EF:599:HIS:CE1	2.74	0.40
83:PT:40:C:C5'	83:PT:41:A:P	3.04	0.40
83:PT:55:U:O2'	83:PT:57:A:N7	2.54	0.40
84:EF:191:THR:OG1	84:EF:192:TYR:N	2.54	0.40
84:EF:223:PHE:HD2	84:EF:344:LEU:HD21	1.85	0.40
84:EF:266:PHE:HB2	84:EF:273:PHE:HA	2.03	0.40
84:EF:374:GLU:CD	84:EF:385:ILE:HG13	2.46	0.40
84:EF:590:LEU:HA	84:EF:605:LYS:HG3	2.03	0.40
84:EF:635:LEU:O	84:EF:639:TYR:HB2	2.22	0.40
84:EF:651:CYS:O	84:EF:653:GLY:N	2.54	0.40
84:EF:654:PRO:HA	84:EF:684:GLN:NE2	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:FF:38:TYR:CE1	2:FF:143:PRO:HG2	2.56	0.40
2:FF:169:ILE:HB	18:9:1535:U:H5'	2.01	0.40
8:SS:129:LEU:HD13	18:9:1521:C:OP1	2.21	0.40
13:dd:33:LYS:HG2	13:dd:34:TYR:CD2	2.56	0.40
15:gg:25:PRO:HA	15:gg:293:ALA:HB2	2.03	0.40
15:gg:30:MET:HG3	15:gg:42:MET:HE3	2.02	0.40
18:9:43:U:H2'	18:9:44:U:H5	1.86	0.40
18:9:116:U:H2'	18:9:117:C:C6	2.55	0.40
18:9:176:U:H2'	18:9:177:G:O4'	2.21	0.40
18:9:318:A:H3'	18:9:319:C:C5'	2.47	0.40
18:9:358:C:OP1	32:XX:18:ARG:HD3	2.20	0.40
18:9:524:U:H5''	18:9:525:A:O4'	2.21	0.40
18:9:806:U:H2'	18:9:807:G:H8	1.86	0.40
18:9:1034:A:H2'	18:9:1035:A:O4'	2.21	0.40
18:9:1146:C:OP1	34:aa:89:ARG:HD3	2.20	0.40
18:9:1253:A:H4'	18:9:1254:C:C5'	2.51	0.40
18:9:1292:C:H3'	18:9:1293:A:H5''	2.02	0.40
18:9:1338:G:O2'	18:9:1339:U:H5'	2.21	0.40
18:9:1478:U:H2'	18:9:1479:G:C8	2.57	0.40
18:9:1751:C:H2'	18:9:1752:C:H5'	2.03	0.40
26:JJ:86:VAL:HG12	26:JJ:100:LEU:HD11	2.03	0.40
26:JJ:104:ASP:O	26:JJ:108:ARG:HG2	2.21	0.40
27:LL:80:MET:HG2	27:LL:86:ILE:CG2	2.52	0.40
28:NN:46:THR:O	28:NN:50:ILE:HG13	2.22	0.40
28:NN:69:ASN:HB3	28:NN:73:ARG:HD2	2.02	0.40
29:OO:53:ILE:HG23	29:OO:88:LEU:CD2	2.50	0.40
31:WW:38:LEU:CD1	31:WW:61:ILE:HG21	2.52	0.40
33:YY:17:LEU:CD1	33:YY:18:LEU:HG	2.52	0.40
33:YY:17:LEU:HD12	33:YY:18:LEU:H	1.87	0.40
37:A:84:THR:CG2	75:p:63:THR:HB	2.52	0.40
37:A:234:LYS:HB2	37:A:234:LYS:HE3	1.85	0.40
38:B:144:ARG:O	38:B:148:LYS:HG3	2.20	0.40
39:C:13:GLU:HB2	39:C:161:TYR:OH	2.21	0.40
39:C:139:SER:CB	76:r:10:VAL:HG11	2.51	0.40
39:C:264:TYR:O	39:C:271:ALA:HB2	2.21	0.40
40:D:56:THR:CG2	80:7:26:C:H5''	2.47	0.40
42:F:75:ARG:CZ	79:5:728:U:H5''	2.51	0.40
42:F:115:GLN:CG	52:Q:3:VAL:HG13	2.44	0.40
43:G:121:ALA:O	43:G:125:LYS:HG3	2.21	0.40
47:L:68:THR:HG22	79:5:72:C:H41	1.86	0.40
48:M:91:TRP:HA	48:M:94:LYS:CE	2.40	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:O:24:ALA:O	50:O:28:LEU:HG	2.21	0.40
50:O:46:ASN:ND2	50:O:49:ARG:HG2	2.36	0.40
50:O:157:GLU:O	50:O:161:LYS:HG3	2.21	0.40
53:S:12:VAL:HG22	53:S:64:CYS:SG	2.61	0.40
53:S:83:ARG:NH1	54:T:156:TYR:HB2	2.36	0.40
54:T:100:LYS:HB2	79:5:1730:U:H4'	2.03	0.40
56:V:65:VAL:HB	56:V:73:ARG:HA	2.02	0.40
58:Y:51:LYS:HB2	81:8:72:A:P	2.62	0.40
59:Z:5:MET:HE1	59:Z:11:VAL:HG21	2.04	0.40
61:b:101:HIS:ND1	61:b:102:PRO:HD2	2.35	0.40
61:b:106:ARG:HG2	61:b:109:ARG:NH2	2.37	0.40
65:f:54:LYS:HD3	79:5:443:G:H4'	2.03	0.40
66:g:59:VAL:HG22	66:g:60:ARG:H	1.86	0.40
77:s:20:LEU:HD11	77:s:90:PHE:CB	2.51	0.40
77:s:24:TYR:CB	77:s:92:LYS:HE2	2.50	0.40
77:s:47:LEU:H	77:s:47:LEU:HG	1.68	0.40
77:s:96:THR:HG23	77:s:97:GLU:HG3	2.03	0.40
77:s:191:GLN:NE2	77:s:200:ASN:C	2.79	0.40
77:s:193:PHE:HB2	77:s:198:ILE:HA	2.03	0.40
78:t:93:LYS:HG3	78:t:93:LYS:H	1.60	0.40
78:t:117:ARG:HE	78:t:128:THR:CG2	2.34	0.40
79:5:1288:G:H2'	79:5:1289:C:O4'	2.21	0.40
79:5:1381:U:H5''	79:5:1382:G:N7	2.36	0.40
79:5:1427:A:O4'	79:5:1694:C:H5'	2.20	0.40
79:5:1459:A:H2'	79:5:1460:C:O4'	2.21	0.40
79:5:1491:A:O2'	79:5:1492:G:H5'	2.21	0.40
79:5:1981:G:C4	79:5:1982:G:N7	2.89	0.40
79:5:2305:U:H3'	79:5:2306:G:H5'	2.03	0.40
79:5:2307:A:H2'	79:5:2308:A:C8	2.57	0.40
79:5:2422:C:H2'	79:5:2423:A:O4'	2.21	0.40
79:5:3911:C:H1'	79:5:4395:U:C2	2.56	0.40
79:5:4130:C:H2'	79:5:4131:G:H8	1.86	0.40
79:5:4185:G:O2'	79:5:4186:A:H5'	2.21	0.40
79:5:4208:U:H2'	79:5:4209:G:H8	1.87	0.40
79:5:4300:U:O2'	79:5:4301:U:H5'	2.22	0.40
79:5:4336:A:H5'	79:5:4337:C:O4'	2.22	0.40
79:5:4414:A:P	79:5:4422:A:H61	2.45	0.40
79:5:4629:U:H2'	79:5:4630:G:H8	1.87	0.40
79:5:4682:U:O2'	79:5:4683:U:H5'	2.21	0.40
79:5:4769:G:H2'	79:5:4770:U:C6	2.56	0.40
80:7:23:A:N3	80:7:118:C:H1'	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:7:114:U:H2'	80:7:115:A:H8	1.84	0.40
81:8:14:U:H2'	81:8:15:G:H5'	2.02	0.40
81:8:57:C:H2'	81:8:58:G:H8	1.86	0.40
82:1:1377:U:H6	82:1:1377:U:O5'	2.03	0.40
82:1:1378:A:H2'	82:1:1378:A:N3	2.36	0.40
82:1:1471:A:H2'	82:1:1472:A:C5'	2.51	0.40
84:EF:8:GLN:C	84:EF:8:GLN:CD	2.89	0.40
84:EF:89:ILE:HD13	84:EF:91:GLN:HG3	2.04	0.40
84:EF:91:GLN:NE2	84:EF:98:PHE:CZ	2.89	0.40
84:EF:109:VAL:O	84:EF:110:ASP:C	2.64	0.40
84:EF:142:VAL:HA	84:EF:145:GLN:HG3	2.03	0.40
84:EF:158:ASN:O	84:EF:160:MET:N	2.54	0.40
84:EF:246:PRO:O	84:EF:250:ALA:N	2.47	0.40
84:EF:362:VAL:HG13	84:EF:388:CYS:HB3	2.02	0.40
84:EF:372:LEU:C	84:EF:495:ARG:H	2.30	0.40
84:EF:501:VAL:CG2	84:EF:533:MET:HE3	2.51	0.40
84:EF:517:LEU:O	84:EF:518:PRO:C	2.63	0.40
84:EF:541:SER:C	84:EF:543:GLU:H	2.29	0.40
84:EF:613:LEU:O	84:EF:617:ILE:HD12	2.21	0.40
84:EF:649:ILE:HG13	84:EF:663:THR:HG22	2.03	0.40
84:EF:662:LEU:HD13	84:EF:683:PHE:CG	2.57	0.40
84:EF:750:GLN:O	84:EF:751:CYS:SG	2.77	0.40
84:EF:773:GLU:HA	84:EF:784:VAL:HA	2.02	0.40
84:EF:823:ASP:O	84:EF:824:PRO:C	2.65	0.40
1:DD:56:GLN:HA	1:DD:59:LEU:CG	2.52	0.40
1:DD:161:GLY:HA3	18:9:1388:A:H61	1.86	0.40
2:FF:95:HIS:O	2:FF:99:ILE:HG13	2.20	0.40
2:FF:201:LYS:HG3	2:FF:204:ARG:NH2	2.36	0.40
3:KK:55:ARG:HG3	3:KK:57:TYR:CD2	2.56	0.40
10:UU:74:SER:OG	10:UU:76:THR:HG23	2.21	0.40
16:R:4:LEU:HA	16:R:7:GLN:OE1	2.21	0.40
16:R:81:ARG:HG2	16:R:88:ARG:CZ	2.51	0.40
18:9:5:U:H2'	18:9:6:G:C8	2.56	0.40
18:9:9:U:H2'	18:9:11:A:OP2	2.21	0.40
18:9:47:G:O2'	18:9:48:C:H5'	2.20	0.40
18:9:167:G:N2	23:GG:132:ARG:HG3	2.36	0.40
18:9:459:C:H2'	18:9:460:A:C8	2.56	0.40
18:9:616:A:OP2	32:XX:65:ALA:HB1	2.21	0.40
18:9:1142:G:H2'	18:9:1144:A:OP2	2.21	0.40
18:9:1273:C:H1'	18:9:1274:G:O2'	2.21	0.40
18:9:1386:A:H2'	18:9:1387:G:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:9:1537:A:O2'	18:9:1604:G:H5''	2.20	0.40
18:9:1547:C:H1'	18:9:1670:C:O4'	2.20	0.40
19:AA:40:LYS:H	19:AA:48:ILE:HG21	1.86	0.40
19:AA:198:MET:HE2	19:AA:198:MET:HB2	1.90	0.40
25:II:8:TRP:HA	25:II:18:ARG:CD	2.49	0.40
30:VV:68:SER:O	30:VV:72:LEU:HG	2.22	0.40
34:aa:44:ILE:H	34:aa:44:ILE:HG13	1.64	0.40
37:A:83:HIS:CE1	37:A:86:GLN:HB2	2.56	0.40
37:A:150:LEU:HD13	79:5:3661:G:C5	2.55	0.40
37:A:207:VAL:HG23	37:A:208:GLU:HG3	2.03	0.40
38:B:220:ILE:HG12	38:B:278:THR:CG2	2.46	0.40
38:B:286:LYS:HB3	38:B:332:MET:HE2	2.03	0.40
39:C:78:ARG:HD3	39:C:88:GLY:O	2.21	0.40
39:C:124:ILE:HG12	39:C:237:ILE:HG13	2.02	0.40
39:C:147:VAL:HG13	39:C:148:PRO:HD2	2.03	0.40
40:D:52:ILE:HG12	40:D:147:ASP:OD2	2.22	0.40
40:D:221:LYS:HE2	40:D:221:LYS:HB3	1.92	0.40
41:E:148:THR:O	41:E:151:THR:HG22	2.22	0.40
41:E:182:LEU:O	41:E:182:LEU:HD13	2.21	0.40
42:F:221:LYS:HD3	42:F:224:THR:HG23	2.03	0.40
44:H:47:LEU:CD1	44:H:55:LEU:HB2	2.47	0.40
45:I:152:LEU:CD1	45:I:165:ILE:HG23	2.47	0.40
47:L:56:ARG:HD3	47:L:73:GLY:O	2.21	0.40
47:L:139:SER:HB2	47:L:143:GLU:OE1	2.21	0.40
48:M:119:ARG:NH2	50:O:202:LEU:HD21	2.35	0.40
50:O:90:HIS:CE1	50:O:91:LYS:HE3	2.56	0.40
50:O:110:PRO:HB2	50:O:111:PRO:HD3	2.03	0.40
50:O:122:ALA:O	50:O:128:ARG:HD2	2.21	0.40
52:Q:71:LYS:CE	52:Q:96:PRO:HG2	2.49	0.40
53:S:174:THR:HG23	79:5:4763:U:O2'	2.21	0.40
56:V:69:LYS:HE3	56:V:72:LEU:HD11	2.03	0.40
58:Y:123:ALA:O	58:Y:127:GLN:HG3	2.22	0.40
61:b:105:GLY:O	61:b:109:ARG:HG3	2.21	0.40
65:f:104:MET:O	65:f:105:LEU:HD23	2.21	0.40
66:g:32:TYR:HD1	66:g:32:TYR:HA	1.76	0.40
67:h:26:VAL:O	67:h:30:GLN:HG3	2.21	0.40
68:i:8:ALA:O	68:i:13:LYS:HD2	2.21	0.40
68:i:31:GLY:O	79:5:308:G:H1'	2.22	0.40
74:o:4:VAL:O	74:o:93:LEU:HA	2.21	0.40
74:o:66:ILE:HD11	74:o:85:ILE:HB	2.03	0.40
75:p:74:THR:O	75:p:78:THR:HG23	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:r:14:SER:OG	76:r:17:LEU:HB2	2.21	0.40
76:r:42:GLY:O	76:r:48:THR:HG21	2.22	0.40
77:s:12:ASN:O	77:s:16:LYS:HB2	2.21	0.40
77:s:114:GLY:C	77:s:167:VAL:HB	2.46	0.40
77:s:114:GLY:CA	77:s:167:VAL:HB	2.52	0.40
77:s:193:PHE:HA	77:s:199:TYR:N	2.34	0.40
78:t:15:LEU:HD12	78:t:62:LEU:HD13	2.03	0.40
78:t:15:LEU:CD2	78:t:28:LEU:HA	2.48	0.40
78:t:111:ASN:HA	78:t:114:ARG:HG3	2.04	0.40
78:t:119:ARG:HD2	78:t:119:ARG:N	2.37	0.40
78:t:137:GLN:HB2	78:t:137:GLN:HE21	1.58	0.40
79:5:285:G:H2'	79:5:286:U:O4'	2.22	0.40
79:5:421:C:H2'	79:5:422:C:H6	1.87	0.40
79:5:735:G:H2'	79:5:736:C:C6	2.56	0.40
79:5:1373:A:H2'	79:5:1374:G:H8	1.86	0.40
79:5:1424:G:O2'	79:5:1425:G:H5'	2.22	0.40
79:5:1577:G:O2'	79:5:1612:G:H4'	2.21	0.40
79:5:1855:G:H2'	79:5:1856:C:H6	1.85	0.40
79:5:2029:A:H2'	79:5:2030:A:H8	1.82	0.40
79:5:2277:C:O2'	79:5:2278:G:H5'	2.22	0.40
79:5:2892:C:H4'	79:5:5018:C:H5'	2.02	0.40
79:5:4408:G:H2'	79:5:4409:C:C6	2.57	0.40
79:5:4555:U:O2'	79:5:4556:U:H5'	2.21	0.40
79:5:4606:G:H2'	79:5:4607:A:O4'	2.20	0.40
82:1:1383:G:C2	82:1:1384:C:C2	3.10	0.40
82:1:1471:A:H2'	82:1:1472:A:H5'	2.03	0.40
83:PT:25:C:C4	83:PT:26:G:C5	3.09	0.40
84:EF:35:LEU:HD21	84:EF:158:ASN:ND2	2.36	0.40
84:EF:206:ASP:HB2	84:EF:209:LEU:HB3	2.02	0.40
84:EF:393:PRO:O	84:EF:488:PHE:CE1	2.74	0.40
84:EF:465:PRO:O	84:EF:466:CYS:C	2.63	0.40
84:EF:839:ARG:O	84:EF:843:GLY:N	2.55	0.40
1:DD:157:MET:HE1	1:DD:189:MET:H	1.86	0.40
2:FF:86:LYS:HA	2:FF:89:THR:CG2	2.52	0.40
6:QQ:97:GLN:N	6:QQ:105:LYS:HG3	2.37	0.40
16:R:99:MET:HE1	16:R:127:VAL:O	2.21	0.40
16:R:141:HIS:CE1	16:R:145:LEU:HD11	2.57	0.40
18:9:530:U:H2'	18:9:531:A:H8	1.86	0.40
18:9:615:C:O5'	36:ee:76:HIS:HB3	2.22	0.40
18:9:676:C:H4'	28:NN:117:LEU:CD2	2.52	0.40
18:9:928:G:O2'	35:bb:66:PRO:HB2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:9:1199:A:H2'	18:9:1200:A:C8	2.56	0.40
18:9:1241:A:H2'	18:9:1242:U:H4'	2.02	0.40
18:9:1476:A:C4'	18:9:1477:U:H5'	2.52	0.40
18:9:1514:G:O2'	18:9:1515:G:H5'	2.21	0.40
18:9:1724:A:H2'	18:9:1725:U:C6	2.56	0.40
19:AA:34:MET:HE1	19:AA:162:PRO:HB3	2.04	0.40
19:AA:179:ALA:O	19:AA:183:LEU:HG	2.22	0.40
20:BB:41:ILE:HD12	20:BB:73:ASP:O	2.21	0.40
21:CC:82:TYR:CE2	21:CC:164:PRO:HD3	2.56	0.40
22:EE:15:PRO:HD2	22:EE:18:TRP:CE3	2.56	0.40
22:EE:86:PHE:CE2	22:EE:87:MET:HE2	2.57	0.40
24:HH:7:LYS:HG3	24:HH:28:LEU:HD21	2.04	0.40
24:HH:36:LEU:HD23	24:HH:40:LEU:HG	2.03	0.40
28:NN:49:GLN:O	28:NN:53:ILE:HG13	2.22	0.40
28:NN:91:LEU:O	28:NN:122:ILE:HD11	2.21	0.40
32:XX:61:GLN:HB3	32:XX:62:PRO:CD	2.49	0.40
33:YY:4:THR:CG2	33:YY:32:LYS:HE3	2.51	0.40
37:A:38:HIS:O	37:A:93:LYS:HG2	2.21	0.40
38:B:113:GLU:HB3	38:B:178:ALA:HB2	2.03	0.40
38:B:229:LYS:HB2	38:B:272:LYS:CB	2.52	0.40
39:C:44:LEU:HD22	79:5:1373:A:OP1	2.20	0.40
39:C:263:LEU:CD2	39:C:273:LEU:HD22	2.51	0.40
39:C:319:LEU:CD1	42:F:151:GLU:HG3	2.50	0.40
43:G:92:PHE:HB3	43:G:99:GLN:HE22	1.86	0.40
43:G:96:GLN:NE2	79:5:4117:U:H5'	2.37	0.40
43:G:130:PRO:HA	43:G:290:TRP:CZ3	2.57	0.40
43:G:161:GLN:O	43:G:165:GLN:HG3	2.21	0.40
45:I:139:ARG:HD2	45:I:173:PHE:CD2	2.56	0.40
46:J:95:ARG:HG2	46:J:175:LEU:HD11	2.03	0.40
47:L:89:LYS:O	47:L:93:THR:HG23	2.21	0.40
49:N:138:PHE:CE2	67:h:93:ARG:HG2	2.57	0.40
50:O:130:LYS:HD3	79:5:2055:G:C4	2.57	0.40
54:T:28:ALA:HA	54:T:31:MET:CG	2.52	0.40
54:T:35:LYS:HB2	54:T:38:ASP:OD2	2.22	0.40
59:Z:50:PRO:CG	59:Z:68:ILE:HD11	2.51	0.40
69:j:18:LEU:CD2	69:j:25:LYS:HB2	2.43	0.40
72:m:54:PRO:O	72:m:58:GLN:HG2	2.22	0.40
76:r:6:GLN:HG3	76:r:44:ILE:HG12	2.04	0.40
77:s:99:ARG:HH11	77:s:99:ARG:CG	2.25	0.40
77:s:117:ALA:HA	77:s:167:VAL:HG23	2.03	0.40
77:s:175:LEU:HG	77:s:175:LEU:H	1.75	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:t:15:LEU:HG	78:t:31:LYS:HD3	2.02	0.40
78:t:37:LEU:HD13	78:t:38:SER:O	2.22	0.40
78:t:80:LEU:H	78:t:80:LEU:HG	1.52	0.40
78:t:113:ALA:HB3	78:t:114:ARG:CZ	2.51	0.40
79:5:215:C:H5''	79:5:216:C:O5'	2.22	0.40
79:5:504:G:H4'	79:5:505:G:OP1	2.21	0.40
79:5:652:G:H2'	79:5:653:U:C6	2.57	0.40
79:5:676:C:O2'	79:5:677:G:H5'	2.22	0.40
79:5:689:U:O2'	79:5:690:C:H5'	2.21	0.40
79:5:1979:A:H3'	79:5:1980:U:C2	2.57	0.40
79:5:1982:G:C8	79:5:1982:G:OP2	2.74	0.40
79:5:2727:C:H2'	79:5:2728:U:C6	2.56	0.40
79:5:3623:C:H2'	79:5:3624:A:O4'	2.21	0.40
79:5:3625:G:H4'	79:5:3626:G:OP1	2.22	0.40
79:5:4517:A:OP1	79:5:4519:C:H4'	2.21	0.40
82:1:1342:A:N6	82:1:1390:A:H3'	2.37	0.40
82:1:1366:G:HO2'	82:1:1367:G:H8	1.58	0.40
82:1:1404:A:N6	82:1:1432:U:OP1	2.49	0.40
82:1:1455:A:H5''	82:1:1456:G:P	2.62	0.40
82:1:1493:G:H5''	84:EF:714:ILE:HD12	2.04	0.40
83:PT:18:G:C2	83:PT:58:A:C5	3.09	0.40
84:EF:60:ARG:HB2	84:EF:63:GLU:HG3	2.03	0.40
84:EF:124:GLY:CA	84:EF:358:LEU:HD11	2.51	0.40
84:EF:343:TRP:HZ3	84:EF:344:LEU:HD22	1.87	0.40
84:EF:395:MET:HB2	84:EF:418:SER:N	2.36	0.40
84:EF:447:ILE:O	84:EF:447:ILE:HG22	2.21	0.40
84:EF:580:ARG:C	84:EF:695:GLU:HB3	2.47	0.40
84:EF:582:THR:O	84:EF:739:ARG:N	2.55	0.40
84:EF:659:PRO:HG2	84:EF:698:ARG:HD2	2.03	0.40
84:EF:661:ILE:HG23	84:EF:663:THR:H	1.86	0.40
84:EF:728:CYS:O	84:EF:729:LEU:C	2.60	0.40
84:EF:769:HIS:O	84:EF:770:VAL:C	2.64	0.40
1:DD:9:ARG:NH2	18:9:1552:G:H1'	2.37	0.40
1:DD:137:VAL:HG22	1:DD:151:LYS:HG3	2.02	0.40
2:FF:147:VAL:O	2:FF:151:ILE:HG13	2.22	0.40
7:RR:32:LYS:HD2	7:RR:47:ARG:NH2	2.37	0.40
12:cc:9:ILE:CG2	12:cc:57:THR:HG22	2.50	0.40
15:gg:46:THR:HB	15:gg:48:ASP:OD2	2.21	0.40
15:gg:79:LEU:HD22	15:gg:111:VAL:HG21	2.02	0.40
18:9:72:C:H4'	18:9:73:C:OP2	2.19	0.40
18:9:95:G:O2'	18:9:96:C:H5'	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:9:100:U:H3'	18:9:101:U:H6	1.86	0.40
18:9:877:C:H3'	18:9:878:G:H5''	2.03	0.40
18:9:1021:U:H4'	18:9:1022:U:O4'	2.21	0.40
18:9:1056:U:C2'	18:9:1057:C:H5'	2.52	0.40
18:9:1395:C:H4'	18:9:1396:A:OP1	2.22	0.40
18:9:1606:G:N2	18:9:1633:A:N7	2.61	0.40
18:9:1612:G:O2'	18:9:1613:G:H5'	2.22	0.40
18:9:1816:G:O2'	18:9:1817:G:H5'	2.20	0.40
20:BB:138:PHE:CD2	20:BB:214:LYS:HB3	2.55	0.40
21:CC:70:VAL:HG21	21:CC:93:ILE:HD13	2.04	0.40
21:CC:128:VAL:O	21:CC:139:LEU:HD22	2.21	0.40
24:HH:145:ARG:HA	31:WW:51:GLU:CB	2.51	0.40
24:HH:172:THR:O	24:HH:176:VAL:HG23	2.21	0.40
26:JJ:86:VAL:HG13	26:JJ:104:ASP:CB	2.51	0.40
28:NN:31:ASP:O	28:NN:35:GLU:HG3	2.21	0.40
29:OO:96:LYS:HB3	29:OO:132:VAL:CG2	2.51	0.40
31:WW:15:ASN:O	31:WW:19:LYS:HG3	2.20	0.40
31:WW:42:MET:HE2	31:WW:49:GLU:HA	2.02	0.40
31:WW:71:LYS:HB3	31:WW:130:PHE:CZ	2.56	0.40
37:A:226:ARG:NH1	37:A:229:ALA:HB2	2.37	0.40
39:C:67:TRP:HE3	39:C:73:VAL:HG11	1.85	0.40
39:C:323:ARG:HH21	79:5:976:G:N2	2.19	0.40
41:E:127:LYS:HB2	79:5:958:G:N3	2.37	0.40
45:I:47:PRO:HD2	45:I:141:LYS:HA	2.03	0.40
47:L:80:GLU:HG2	47:L:110:LEU:CD1	2.51	0.40
47:L:179:PHE:O	47:L:183:ARG:HG2	2.21	0.40
51:P:23:ARG:NH2	51:P:125:MET:HG3	2.37	0.40
52:Q:17:GLU:HB2	52:Q:18:PRO:HD2	2.03	0.40
55:U:43:LEU:HD12	55:U:70:ILE:HG21	2.02	0.40
57:X:76:ILE:HG13	57:X:104:ALA:HB2	2.03	0.40
59:Z:24:VAL:HG23	59:Z:130:PHE:CE1	2.57	0.40
59:Z:73:LYS:HB3	59:Z:75:TYR:CE2	2.57	0.40
60:a:133:ALA:O	60:a:137:ILE:HG13	2.22	0.40
77:s:102:LEU:CD2	77:s:102:LEU:N	2.69	0.40
77:s:118:PRO:CG	77:s:185:PHE:CE2	3.00	0.40
77:s:127:ASN:HA	77:s:151:THR:O	2.21	0.40
77:s:145:THR:CB	77:s:154:ILE:HG23	2.51	0.40
77:s:186:GLY:O	77:s:187:LEU:C	2.65	0.40
78:t:32:ILE:HG21	78:t:39:PRO:HB3	2.02	0.40
78:t:60:VAL:HG13	78:t:73:VAL:HG22	2.04	0.40
79:5:113:A:H2'	79:5:114:G:H5'	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:5:314:G:H4'	79:5:315:G:H21	1.87	0.40
79:5:694:C:H2'	79:5:695:G:C8	2.56	0.40
79:5:1084:C:H2'	79:5:1085:C:C6	2.57	0.40
79:5:1200:G:O2'	79:5:1201:U:H5'	2.22	0.40
79:5:1324:A:H5''	79:5:1326:A:N7	2.37	0.40
79:5:1394:G:H2'	79:5:1395:U:O4'	2.21	0.40
79:5:1411(A):G:H2'	79:5:1411(B):C:C6	2.57	0.40
79:5:1588:U:O4	79:5:1607:C:H1'	2.21	0.40
79:5:1645:C:H2'	79:5:1646:A:H8	1.87	0.40
79:5:2305:U:H3'	79:5:2306:G:C5'	2.51	0.40
79:5:2597:G:O2'	79:5:2598:A:H5'	2.21	0.40
79:5:3870:C:H2'	79:5:3871:A:H8	1.87	0.40
79:5:4236:G:H2'	79:5:4237:C:O4'	2.21	0.40
79:5:4640:C:O2'	79:5:4641:U:H5'	2.22	0.40
79:5:4653:C:H2'	79:5:4654:C:H6	1.85	0.40
80:7:8:G:H2'	80:7:9:C:C6	2.57	0.40
82:1:1331:A:N6	82:1:1415:U:OP1	2.55	0.40
82:1:1353:U:H2'	82:1:1354:U:O3'	2.22	0.40
82:1:1386:U:H6	82:1:1386:U:O5'	2.05	0.40
82:1:1455:A:N6	82:1:1480:U:C5	2.90	0.40
82:1:1480:U:H5'	82:1:1481:G:N2	2.35	0.40
84:EF:36:THR:O	84:EF:37:ASP:C	2.64	0.40
84:EF:344:LEU:O	84:EF:345:PRO:C	2.63	0.40
84:EF:506:ARG:HG2	84:EF:545:ILE:CG2	2.52	0.40
84:EF:739:ARG:HA	84:EF:824:PRO:HD2	2.04	0.40
84:EF:766:LYS:O	84:EF:767:ARG:C	2.65	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles [i](#)

### 5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	DD	226/228 (99%)	221 (98%)	4 (2%)	1 (0%)	30	65
2	FF	181/191 (95%)	178 (98%)	3 (2%)	0	100	100
3	KK	94/96 (98%)	91 (97%)	3 (3%)	0	100	100
4	MM	115/117 (98%)	106 (92%)	9 (8%)	0	100	100
5	PP	109/111 (98%)	103 (94%)	6 (6%)	0	100	100
6	QQ	140/142 (99%)	137 (98%)	3 (2%)	0	100	100
7	RR	130/132 (98%)	124 (95%)	6 (5%)	0	100	100
8	SS	142/144 (99%)	140 (99%)	2 (1%)	0	100	100
9	TT	139/141 (99%)	137 (99%)	2 (1%)	0	100	100
10	UU	98/100 (98%)	96 (98%)	2 (2%)	0	100	100
11	ZZ	73/75 (97%)	72 (99%)	1 (1%)	0	100	100
12	cc	60/62 (97%)	60 (100%)	0	0	100	100
13	dd	53/55 (96%)	53 (100%)	0	0	100	100
14	ff	66/68 (97%)	64 (97%)	2 (3%)	0	100	100
15	gg	311/313 (99%)	302 (97%)	9 (3%)	0	100	100
16	R	178/180 (99%)	175 (98%)	3 (2%)	0	100	100
17	W	85/121 (70%)	84 (99%)	1 (1%)	0	100	100
19	AA	215/217 (99%)	202 (94%)	13 (6%)	0	100	100
20	BB	211/213 (99%)	201 (95%)	10 (5%)	0	100	100
21	CC	219/221 (99%)	213 (97%)	6 (3%)	0	100	100
22	EE	260/262 (99%)	252 (97%)	8 (3%)	0	100	100
23	GG	235/237 (99%)	232 (99%)	3 (1%)	0	100	100
24	HH	181/189 (96%)	178 (98%)	3 (2%)	0	100	100
25	II	204/206 (99%)	193 (95%)	11 (5%)	0	100	100
26	JJ	183/185 (99%)	180 (98%)	3 (2%)	0	100	100
27	LL	139/151 (92%)	132 (95%)	7 (5%)	0	100	100
28	NN	147/149 (99%)	144 (98%)	3 (2%)	0	100	100
29	OO	134/136 (98%)	131 (98%)	3 (2%)	0	100	100
30	VV	81/83 (98%)	80 (99%)	1 (1%)	0	100	100
31	WW	127/129 (98%)	122 (96%)	5 (4%)	0	100	100
32	XX	139/141 (99%)	133 (96%)	5 (4%)	1 (1%)	18	55
33	YY	122/124 (98%)	121 (99%)	1 (1%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
34	aa	99/101 (98%)	95 (96%)	4 (4%)	0	100	100
35	bb	81/83 (98%)	80 (99%)	1 (1%)	0	100	100
36	ee	55/57 (96%)	53 (96%)	2 (4%)	0	100	100
37	A	246/248 (99%)	239 (97%)	7 (3%)	0	100	100
38	B	392/394 (100%)	383 (98%)	8 (2%)	1 (0%)	36	70
39	C	360/362 (99%)	353 (98%)	7 (2%)	0	100	100
40	D	291/293 (99%)	282 (97%)	8 (3%)	1 (0%)	36	70
41	E	208/251 (83%)	205 (99%)	3 (1%)	0	100	100
42	F	223/225 (99%)	218 (98%)	5 (2%)	0	100	100
43	G	229/240 (95%)	226 (99%)	3 (1%)	0	100	100
44	H	188/190 (99%)	185 (98%)	3 (2%)	0	100	100
45	I	201/213 (94%)	197 (98%)	4 (2%)	0	100	100
46	J	168/170 (99%)	167 (99%)	1 (1%)	0	100	100
47	L	208/210 (99%)	204 (98%)	4 (2%)	0	100	100
48	M	136/138 (99%)	130 (96%)	6 (4%)	0	100	100
49	N	201/203 (99%)	198 (98%)	3 (2%)	0	100	100
50	O	197/199 (99%)	192 (98%)	5 (2%)	0	100	100
51	P	151/153 (99%)	146 (97%)	5 (3%)	0	100	100
52	Q	185/187 (99%)	177 (96%)	8 (4%)	0	100	100
53	S	174/176 (99%)	169 (97%)	5 (3%)	0	100	100
54	T	157/159 (99%)	153 (98%)	4 (2%)	0	100	100
55	U	97/99 (98%)	96 (99%)	1 (1%)	0	100	100
56	V	137/139 (99%)	132 (96%)	5 (4%)	0	100	100
57	X	116/118 (98%)	115 (99%)	1 (1%)	0	100	100
58	Y	132/134 (98%)	132 (100%)	0	0	100	100
59	Z	133/135 (98%)	128 (96%)	5 (4%)	0	100	100
60	a	145/147 (99%)	142 (98%)	3 (2%)	0	100	100
61	b	100/116 (86%)	98 (98%)	2 (2%)	0	100	100
62	c	96/98 (98%)	94 (98%)	2 (2%)	0	100	100
63	d	105/107 (98%)	100 (95%)	5 (5%)	0	100	100
64	e	126/128 (98%)	125 (99%)	1 (1%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
65	f	107/109 (98%)	103 (96%)	4 (4%)	0	100	100
66	g	112/114 (98%)	110 (98%)	2 (2%)	0	100	100
67	h	120/122 (98%)	118 (98%)	2 (2%)	0	100	100
68	i	100/102 (98%)	98 (98%)	2 (2%)	0	100	100
69	j	84/86 (98%)	82 (98%)	2 (2%)	0	100	100
70	k	67/69 (97%)	66 (98%)	1 (2%)	0	100	100
71	l	48/50 (96%)	47 (98%)	1 (2%)	0	100	100
72	m	50/52 (96%)	50 (100%)	0	0	100	100
73	n	23/25 (92%)	23 (100%)	0	0	100	100
74	o	102/104 (98%)	99 (97%)	3 (3%)	0	100	100
75	p	89/91 (98%)	86 (97%)	3 (3%)	0	100	100
76	r	122/124 (98%)	117 (96%)	5 (4%)	0	100	100
77	s	194/196 (99%)	101 (52%)	50 (26%)	43 (22%)	0	1
78	t	151/153 (99%)	93 (62%)	44 (29%)	14 (9%)	0	9
84	EF	850/853 (100%)	550 (65%)	225 (26%)	75 (9%)	0	10
All	All	12353/12642 (98%)	11614 (94%)	603 (5%)	136 (1%)	14	44

All (136) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
32	XX	62	PRO
77	s	6	ARG
77	s	7	ALA
77	s	8	THR
77	s	10	LYS
77	s	12	ASN
77	s	16	LYS
77	s	17	ILE
77	s	18	ILE
77	s	19	GLN
77	s	21	LEU
77	s	23	ASP
77	s	25	PRO
77	s	38	LYS
77	s	50	LYS
77	s	74	ALA
77	s	76	GLU

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Mol	Chain	Res	Type
77	s	132	PRO
77	s	146	LYS
77	s	152	ILE
77	s	169	ALA
77	s	181	SER
77	s	182	PRO
77	s	192	VAL
78	t	141	CYS
84	EF	13	MET
84	EF	17	ALA
84	EF	121	VAL
84	EF	333	LYS
84	EF	373	TYR
84	EF	378	ASP
84	EF	447	ILE
84	EF	466	CYS
84	EF	532	PRO
84	EF	534	VAL
84	EF	711	ALA
84	EF	776	VAL
77	s	9	TRP
77	s	14	PHE
77	s	39	GLN
77	s	46	SER
77	s	190	GLN
78	t	22	VAL
78	t	71	ILE
78	t	86	LYS
78	t	158	GLY
84	EF	46	ILE
84	EF	89	ILE
84	EF	115	VAL
84	EF	133	SER
84	EF	154	VAL
84	EF	159	LYS
84	EF	197	SER
84	EF	237	ALA
84	EF	271	GLY
84	EF	302	ASP
84	EF	394	LEU
84	EF	409	ARG
84	EF	419	GLY

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Mol	Chain	Res	Type
84	EF	649	ILE
84	EF	652	PHE
84	EF	668	GLY
84	EF	747	VAL
84	EF	757	GLY
38	B	323	TYR
77	s	40	MET
77	s	94	ASP
78	t	104	ILE
78	t	114	ARG
78	t	120	SER
78	t	146	ARG
84	EF	58	ASP
84	EF	137	VAL
84	EF	244	LEU
84	EF	246	PRO
84	EF	264	ARG
84	EF	399	SER
84	EF	420	LEU
84	EF	496	VAL
84	EF	504	VAL
84	EF	544	HIS
84	EF	566	ALA
84	EF	598	LYS
84	EF	599	HIS
84	EF	642	ASP
84	EF	690	GLY
84	EF	815	ASP
84	EF	816	HIS
84	EF	844	LEU
77	s	15	LEU
77	s	54	LEU
77	s	113	ALA
77	s	130	LEU
77	s	147	ILE
77	s	193	PHE
78	t	98	ILE
84	EF	47	ALA
84	EF	190	SER
84	EF	207	PRO
84	EF	235	LYS
84	EF	323	LEU

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Mol	Chain	Res	Type
84	EF	515	ALA
84	EF	695	GLU
84	EF	712	ASP
84	EF	736	ALA
84	EF	837	GLU
84	EF	843	GLY
77	s	89	VAL
77	s	110	ALA
77	s	114	GLY
77	s	116	ILE
77	s	141	LEU
78	t	101	SER
78	t	155	ILE
78	t	160	VAL
84	EF	260	LEU
84	EF	317	GLU
84	EF	393	PRO
84	EF	425	LEU
84	EF	564	ASP
84	EF	812	CYS
1	DD	44	THR
77	s	189	ILE
84	EF	108	HIS
84	EF	168	GLN
84	EF	424	GLY
84	EF	517	LEU
84	EF	538	ILE
77	s	86	VAL
84	EF	286	PRO
84	EF	332	GLY
40	D	125	VAL
78	t	143	VAL
84	EF	455	GLY
84	EF	505	VAL
84	EF	577	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	DD	190/190 (100%)	185 (97%)	5 (3%)	40	61
2	FF	158/161 (98%)	153 (97%)	5 (3%)	34	56
3	KK	87/87 (100%)	82 (94%)	5 (6%)	18	43
4	MM	99/99 (100%)	93 (94%)	6 (6%)	17	41
5	PP	101/101 (100%)	95 (94%)	6 (6%)	18	42
6	QQ	117/117 (100%)	113 (97%)	4 (3%)	32	55
7	RR	119/119 (100%)	111 (93%)	8 (7%)	15	39
8	SS	125/125 (100%)	122 (98%)	3 (2%)	43	63
9	TT	111/111 (100%)	106 (96%)	5 (4%)	24	48
10	UU	92/92 (100%)	90 (98%)	2 (2%)	45	64
11	ZZ	66/66 (100%)	64 (97%)	2 (3%)	36	57
12	cc	55/55 (100%)	55 (100%)	0	100	100
13	dd	48/48 (100%)	48 (100%)	0	100	100
14	ff	61/61 (100%)	56 (92%)	5 (8%)	10	33
15	gg	272/272 (100%)	266 (98%)	6 (2%)	45	64
16	R	159/159 (100%)	150 (94%)	9 (6%)	18	43
17	W	73/100 (73%)	73 (100%)	0	100	100
19	AA	180/181 (99%)	164 (91%)	16 (9%)	9	30
20	BB	194/194 (100%)	185 (95%)	9 (5%)	24	47
21	CC	187/187 (100%)	181 (97%)	6 (3%)	34	56
22	EE	224/224 (100%)	216 (96%)	8 (4%)	31	53
23	GG	207/207 (100%)	203 (98%)	4 (2%)	50	67
24	HH	165/169 (98%)	159 (96%)	6 (4%)	31	53
25	II	178/178 (100%)	171 (96%)	7 (4%)	28	51
26	JJ	161/161 (100%)	159 (99%)	2 (1%)	63	73
27	LL	130/136 (96%)	121 (93%)	9 (7%)	14	38
28	NN	130/130 (100%)	125 (96%)	5 (4%)	29	51
29	OO	106/106 (100%)	100 (94%)	6 (6%)	18	43
30	VV	67/67 (100%)	66 (98%)	1 (2%)	57	70
31	WW	112/112 (100%)	109 (97%)	3 (3%)	39	60
32	XX	113/113 (100%)	108 (96%)	5 (4%)	25	48

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
33	YY	107/107 (100%)	101 (94%)	6 (6%)	19	43
34	aa	88/88 (100%)	85 (97%)	3 (3%)	32	55
35	bb	75/75 (100%)	73 (97%)	2 (3%)	39	60
36	ee	47/47 (100%)	46 (98%)	1 (2%)	47	65
37	A	190/190 (100%)	180 (95%)	10 (5%)	20	44
38	B	342/342 (100%)	327 (96%)	15 (4%)	25	48
39	C	302/302 (100%)	289 (96%)	13 (4%)	26	49
40	D	247/247 (100%)	239 (97%)	8 (3%)	34	56
41	E	190/223 (85%)	180 (95%)	10 (5%)	20	44
42	F	196/196 (100%)	186 (95%)	10 (5%)	21	45
43	G	200/205 (98%)	193 (96%)	7 (4%)	32	54
44	H	169/169 (100%)	162 (96%)	7 (4%)	27	50
45	I	175/180 (97%)	166 (95%)	9 (5%)	21	45
46	J	143/143 (100%)	133 (93%)	10 (7%)	14	38
47	L	175/175 (100%)	169 (97%)	6 (3%)	32	55
48	M	117/117 (100%)	112 (96%)	5 (4%)	26	49
49	N	171/171 (100%)	166 (97%)	5 (3%)	37	58
50	O	171/171 (100%)	166 (97%)	5 (3%)	37	58
51	P	134/134 (100%)	134 (100%)	0	100	100
52	Q	164/164 (100%)	156 (95%)	8 (5%)	22	46
53	S	157/157 (100%)	149 (95%)	8 (5%)	21	45
54	T	139/139 (100%)	133 (96%)	6 (4%)	26	49
55	U	89/89 (100%)	86 (97%)	3 (3%)	32	55
56	V	106/106 (100%)	96 (91%)	10 (9%)	8	28
57	X	106/106 (100%)	101 (95%)	5 (5%)	23	47
58	Y	124/124 (100%)	119 (96%)	5 (4%)	28	50
59	Z	117/117 (100%)	115 (98%)	2 (2%)	53	68
60	a	119/119 (100%)	118 (99%)	1 (1%)	73	77
61	b	84/95 (88%)	82 (98%)	2 (2%)	43	63
62	c	84/84 (100%)	82 (98%)	2 (2%)	43	63
63	d	98/98 (100%)	92 (94%)	6 (6%)	17	41

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
64	e	114/114 (100%)	107 (94%)	7 (6%)	17	41
65	f	88/88 (100%)	85 (97%)	3 (3%)	32	55
66	g	98/98 (100%)	91 (93%)	7 (7%)	13	37
67	h	109/109 (100%)	108 (99%)	1 (1%)	70	76
68	i	86/86 (100%)	84 (98%)	2 (2%)	44	64
69	j	73/73 (100%)	71 (97%)	2 (3%)	39	60
70	k	64/64 (100%)	60 (94%)	4 (6%)	16	40
71	l	47/47 (100%)	46 (98%)	1 (2%)	47	65
72	m	48/48 (100%)	48 (100%)	0	100	100
73	n	24/24 (100%)	22 (92%)	2 (8%)	10	32
74	o	92/92 (100%)	87 (95%)	5 (5%)	20	44
75	p	74/74 (100%)	72 (97%)	2 (3%)	39	60
76	r	108/108 (100%)	105 (97%)	3 (3%)	38	59
77	s	164/164 (100%)	87 (53%)	77 (47%)	0	0
78	t	126/126 (100%)	79 (63%)	47 (37%)	0	1
84	EF	725/725 (100%)	564 (78%)	161 (22%)	1	6
All	All	10753/10848 (99%)	10081 (94%)	672 (6%)	18	41

All (672) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	DD	39	VAL
1	DD	48	ILE
1	DD	127	MET
1	DD	146	ARG
1	DD	218	LEU
2	FF	29	GLN
2	FF	63	LYS
2	FF	71	ARG
2	FF	76	MET
2	FF	169	ILE
3	KK	1	MET
3	KK	2	LEU
3	KK	35	LEU
3	KK	60	GLU
3	KK	89	ILE

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Mol	Chain	Res	Type
4	MM	31	LEU
4	MM	40	LYS
4	MM	64	LEU
4	MM	85	LEU
4	MM	99	LYS
4	MM	101	ARG
5	PP	15	PHE
5	PP	28	MET
5	PP	37	TYR
5	PP	83	MET
5	PP	107	ILE
5	PP	108	LYS
6	QQ	41	MET
6	QQ	60	LYS
6	QQ	85	ARG
6	QQ	140	ARG
7	RR	31	ASN
7	RR	44	LYS
7	RR	62	GLN
7	RR	91	LEU
7	RR	97	GLU
7	RR	105	MET
7	RR	109	LEU
7	RR	128	PHE
8	SS	63	GLU
8	SS	76	GLN
8	SS	83	PHE
9	TT	39	LEU
9	TT	62	ARG
9	TT	110	LEU
9	TT	124	THR
9	TT	142	LYS
10	UU	56	MET
10	UU	106	ILE
11	ZZ	89	GLN
11	ZZ	92	LEU
14	ff	83	LYS
14	ff	94	LYS
14	ff	99	LYS
14	ff	138	ARG
14	ff	140	TYR
15	gg	20	GLN

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Mol	Chain	Res	Type
15	gg	38	LYS
15	gg	79	LEU
15	gg	119	GLN
15	gg	198	VAL
15	gg	274	VAL
16	R	8	LYS
16	R	36	ASN
16	R	40	GLN
16	R	82	LYS
16	R	89	MET
16	R	99	MET
16	R	103	ARG
16	R	113	LYS
16	R	178	GLN
19	AA	9	GLN
19	AA	18	PHE
19	AA	47	TYR
19	AA	48	ILE
19	AA	52	LYS
19	AA	56	GLU
19	AA	102	ARG
19	AA	111	GLN
19	AA	123	VAL
19	AA	132	GLN
19	AA	136	GLU
19	AA	155	ARG
19	AA	163	CYS
19	AA	173	LEU
19	AA	178	LEU
19	AA	180	ARG
20	BB	63	LYS
20	BB	71	LEU
20	BB	82	ARG
20	BB	92	GLN
20	BB	126	ASP
20	BB	175	GLU
20	BB	181	LEU
20	BB	207	LEU
20	BB	225	LEU
21	CC	78	LEU
21	CC	120	GLN
21	CC	121	ARG

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Mol	Chain	Res	Type
21	CC	137	VAL
21	CC	236	PHE
21	CC	248	TYR
22	EE	51	ARG
22	EE	66	MET
22	EE	67	GLN
22	EE	162	ILE
22	EE	205	PHE
22	EE	222	LEU
22	EE	232	ASN
22	EE	246	LEU
23	GG	63	MET
23	GG	190	ARG
23	GG	213	LEU
23	GG	216	ARG
24	HH	8	ILE
24	HH	36	LEU
24	HH	60	ILE
24	HH	82	GLU
24	HH	100	ILE
24	HH	105	THR
25	II	3	ILE
25	II	107	THR
25	II	121	LEU
25	II	130	THR
25	II	145	ILE
25	II	147	LYS
25	II	168	GLN
26	JJ	29	LEU
26	JJ	116	LYS
27	LL	16	ILE
27	LL	20	LYS
27	LL	23	VAL
27	LL	40	ILE
27	LL	42	LEU
27	LL	49	GLU
27	LL	56	ILE
27	LL	69	ARG
27	LL	134	LEU
28	NN	55	ARG
28	NN	60	VAL
28	NN	78	LYS

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Mol	Chain	Res	Type
28	NN	84	LEU
28	NN	132	LYS
29	OO	27	VAL
29	OO	85	CYS
29	OO	131	ASP
29	OO	146	ARG
29	OO	150	ARG
29	OO	151	LEU
30	VV	55	ILE
31	WW	51	GLU
31	WW	103	VAL
31	WW	104	LEU
32	XX	7	LEU
32	XX	55	VAL
32	XX	61	GLN
32	XX	105	PHE
32	XX	115	ILE
33	YY	16	ARG
33	YY	17	LEU
33	YY	32	LYS
33	YY	40	ILE
33	YY	47	MET
33	YY	88	LYS
34	aa	12	LYS
34	aa	19	GLN
34	aa	77	CYS
35	bb	42	LYS
35	bb	51	GLN
36	ee	99	LYS
37	A	5	ILE
37	A	163	ARG
37	A	175	ILE
37	A	200	ARG
37	A	208	GLU
37	A	221	LYS
37	A	226	ARG
37	A	233	ARG
37	A	242	ARG
37	A	243	THR
38	B	10	ARG
38	B	60	VAL
38	B	89	ILE

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Mol	Chain	Res	Type
38	B	99	LEU
38	B	101	THR
38	B	135	LYS
38	B	248	LEU
38	B	250	LYS
38	B	258	HIS
38	B	262	VAL
38	B	279	GLU
38	B	294	LYS
38	B	314	ILE
38	B	356	LYS
38	B	366	LYS
39	C	20	LYS
39	C	95	MET
39	C	115	VAL
39	C	144	ILE
39	C	150	LEU
39	C	154	VAL
39	C	165	LYS
39	C	175	LYS
39	C	193	LYS
39	C	232	VAL
39	C	281	MET
39	C	307	LYS
39	C	333	LYS
40	D	56	THR
40	D	89	LYS
40	D	104	LEU
40	D	124	GLU
40	D	146	LEU
40	D	202	GLN
40	D	262	LYS
40	D	264	LYS
41	E	52	LEU
41	E	53	VAL
41	E	58	ARG
41	E	143	LEU
41	E	155	ILE
41	E	169	LYS
41	E	178	VAL
41	E	182	LEU
41	E	213	LYS

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Mol	Chain	Res	Type
41	E	289	LEU
42	F	38	GLN
42	F	46	ARG
42	F	65	ARG
42	F	67	GLU
42	F	88	LEU
42	F	134	ILE
42	F	151	GLU
42	F	189	LEU
42	F	198	LYS
42	F	211	LYS
43	G	154	LYS
43	G	159	THR
43	G	184	LYS
43	G	204	LYS
43	G	220	VAL
43	G	223	LEU
43	G	293	ASN
44	H	20	LEU
44	H	52	LYS
44	H	59	LYS
44	H	66	GLU
44	H	82	LYS
44	H	105	ILE
44	H	106	GLN
45	I	36	LEU
45	I	39	LYS
45	I	97	ILE
45	I	146	GLU
45	I	153	ARG
45	I	163	GLN
45	I	164	LYS
45	I	208	LYS
45	I	212	LEU
46	J	16	ARG
46	J	22	LEU
46	J	28	GLU
46	J	33	LEU
46	J	75	ARG
46	J	83	LEU
46	J	96	LYS
46	J	113	ILE

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Mol	Chain	Res	Type
46	J	128	LEU
46	J	175	LEU
47	L	59	VAL
47	L	63	THR
47	L	130	LYS
47	L	154	VAL
47	L	162	LYS
47	L	186	ARG
48	M	37	LEU
48	M	38	VAL
48	M	96	GLU
48	M	105	THR
48	M	119	ARG
49	N	9	GLU
49	N	32	GLN
49	N	64	ILE
49	N	89	VAL
49	N	197	THR
50	O	128	ARG
50	O	165	LYS
50	O	175	MET
50	O	179	LYS
50	O	185	VAL
52	Q	3	VAL
52	Q	31	LEU
52	Q	63	LEU
52	Q	91	ARG
52	Q	95	VAL
52	Q	115	LYS
52	Q	119	LYS
52	Q	138	LEU
53	S	9	GLU
53	S	17	LEU
53	S	24	THR
53	S	70	LYS
53	S	95	ARG
53	S	149	LYS
53	S	158	VAL
53	S	174	THR
54	T	5	LYS
54	T	33	ILE
54	T	60	LYS

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Mol	Chain	Res	Type
54	T	143	THR
54	T	154	ILE
54	T	159	MET
55	U	24	ASP
55	U	33	ILE
55	U	69	LYS
56	V	3	LYS
56	V	15	ARG
56	V	16	ILE
56	V	18	LEU
56	V	35	LYS
56	V	60	MET
56	V	69	LYS
56	V	91	LYS
56	V	109	LYS
56	V	123	LYS
57	X	50	LYS
57	X	59	LYS
57	X	63	LYS
57	X	100	VAL
57	X	111	GLN
58	Y	2	LYS
58	Y	8	THR
58	Y	72	GLN
58	Y	79	VAL
58	Y	104	VAL
59	Z	14	LEU
59	Z	33	THR
60	a	82	VAL
61	b	22	LYS
61	b	35	VAL
62	c	55	LEU
62	c	78	ASN
63	d	23	ARG
63	d	26	THR
63	d	48	GLU
63	d	56	GLU
63	d	85	ARG
63	d	98	SER
64	e	9	LYS
64	e	11	LYS
64	e	21	ILE

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Mol	Chain	Res	Type
64	e	64	LYS
64	e	86	GLU
64	e	91	CYS
64	e	106	LYS
65	f	52	LYS
65	f	73	LYS
65	f	101	ILE
66	g	5	LEU
66	g	15	THR
66	g	32	TYR
66	g	54	ARG
66	g	60	ARG
66	g	66	ARG
66	g	114	GLN
67	h	67	GLU
68	i	33	LEU
68	i	86	LYS
69	j	3	LYS
69	j	58	THR
70	k	27	LYS
70	k	60	LEU
70	k	69	LEU
70	k	70	LYS
71	l	49	LEU
73	n	1	MET
73	n	13	LEU
74	o	17	LYS
74	o	28	LYS
74	o	36	GLN
74	o	83	LEU
74	o	85	ILE
75	p	54	ILE
75	p	84	ARG
76	r	8	MET
76	r	10	VAL
76	r	103	HIS
77	s	5	ASP
77	s	8	THR
77	s	9	TRP
77	s	10	LYS
77	s	12	ASN
77	s	13	TYR

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Mol	Chain	Res	Type
77	s	15	LEU
77	s	18	ILE
77	s	19	GLN
77	s	20	LEU
77	s	21	LEU
77	s	22	ASP
77	s	26	LYS
77	s	27	CYS
77	s	29	ILE
77	s	30	VAL
77	s	35	VAL
77	s	38	LYS
77	s	42	GLN
77	s	43	ILE
77	s	44	ARG
77	s	47	LEU
77	s	52	VAL
77	s	54	LEU
77	s	55	MET
77	s	60	MET
77	s	61	MET
77	s	63	LYS
77	s	69	LEU
77	s	70	GLU
77	s	72	ASN
77	s	76	GLU
77	s	77	LYS
77	s	78	LEU
77	s	81	HIS
77	s	82	ILE
77	s	83	ARG
77	s	92	LYS
77	s	93	GLU
77	s	94	ASP
77	s	95	LEU
77	s	99	ARG
77	s	101	MET
77	s	102	LEU
77	s	103	LEU
77	s	105	ASN
77	s	106	LYS
77	s	112	ARG

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Mol	Chain	Res	Type
77	s	116	ILE
77	s	126	GLN
77	s	128	THR
77	s	130	LEU
77	s	134	LYS
77	s	136	SER
77	s	137	PHE
77	s	141	LEU
77	s	146	LYS
77	s	149	ARG
77	s	151	THR
77	s	153	GLU
77	s	155	LEU
77	s	157	ASP
77	s	158	VAL
77	s	159	GLN
77	s	160	LEU
77	s	162	LYS
77	s	176	ASN
77	s	178	LEU
77	s	184	SER
77	s	185	PHE
77	s	187	LEU
77	s	189	ILE
77	s	191	GLN
77	s	192	VAL
77	s	194	ASP
77	s	198	ILE
77	s	200	ASN
78	t	9	GLU
78	t	10	ILE
78	t	11	LYS
78	t	14	TYR
78	t	17	CYS
78	t	22	VAL
78	t	32	ILE
78	t	35	LEU
78	t	41	LYS
78	t	48	LYS
78	t	56	LEU
78	t	57	ARG
78	t	61	LYS

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Mol	Chain	Res	Type
78	t	64	ILE
78	t	68	GLN
78	t	71	ILE
78	t	76	SER
78	t	80	LEU
78	t	83	LYS
78	t	86	LYS
78	t	93	LYS
78	t	96	LYS
78	t	98	ILE
78	t	99	LYS
78	t	104	ILE
78	t	111	ASN
78	t	112	ILE
78	t	115	GLN
78	t	117	ARG
78	t	119	ARG
78	t	121	LEU
78	t	123	ARG
78	t	124	GLU
78	t	125	LEU
78	t	129	ILE
78	t	130	LYS
78	t	132	ILE
78	t	135	THR
78	t	137	GLN
78	t	139	VAL
78	t	141	CYS
78	t	142	ASN
78	t	143	VAL
78	t	147	HIS
78	t	149	HIS
78	t	154	ASP
78	t	160	VAL
84	EF	5	THR
84	EF	8	GLN
84	EF	15	LYS
84	EF	18	ASN
84	EF	22	MET
84	EF	25	ILE
84	EF	32	LYS
84	EF	42	LYS

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Mol	Chain	Res	Type
84	EF	45	ILE
84	EF	46	ILE
84	EF	61	LYS
84	EF	69	THR
84	EF	73	THR
84	EF	77	LEU
84	EF	81	LEU
84	EF	88	PHE
84	EF	90	LYS
84	EF	93	LYS
84	EF	94	ASP
84	EF	102	LEU
84	EF	116	THR
84	EF	120	ARG
84	EF	127	VAL
84	EF	129	VAL
84	EF	152	LYS
84	EF	154	VAL
84	EF	165	LEU
84	EF	167	LEU
84	EF	187	VAL
84	EF	194	GLU
84	EF	200	MET
84	EF	204	MET
84	EF	212	VAL
84	EF	218	LEU
84	EF	225	LEU
84	EF	226	LYS
84	EF	228	PHE
84	EF	230	GLU
84	EF	235	LYS
84	EF	236	PHE
84	EF	244	LEU
84	EF	255	ASP
84	EF	256	MET
84	EF	258	LYS
84	EF	259	LYS
84	EF	260	LEU
84	EF	270	ASN
84	EF	272	LYS
84	EF	279	SER
84	EF	284	LYS

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Mol	Chain	Res	Type
84	EF	285	LEU
84	EF	287	ARG
84	EF	290	CYS
84	EF	295	ASP
84	EF	299	LYS
84	EF	305	MET
84	EF	306	ASN
84	EF	320	ASP
84	EF	321	ILE
84	EF	322	LYS
84	EF	323	LEU
84	EF	330	LYS
84	EF	333	LYS
84	EF	352	GLN
84	EF	354	ILE
84	EF	355	THR
84	EF	357	HIS
84	EF	358	LEU
84	EF	371	LEU
84	EF	372	LEU
84	EF	387	SER
84	EF	388	CYS
84	EF	396	MET
84	EF	401	MET
84	EF	402	VAL
84	EF	404	THR
84	EF	406	ASP
84	EF	421	VAL
84	EF	428	ARG
84	EF	438	LYS
84	EF	439	LYS
84	EF	441	ASP
84	EF	442	LEU
84	EF	444	LEU
84	EF	451	ILE
84	EF	458	VAL
84	EF	461	ILE
84	EF	462	GLU
84	EF	464	VAL
84	EF	469	ILE
84	EF	472	LEU
84	EF	477	GLN

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Mol	Chain	Res	Type
84	EF	478	PHE
84	EF	486	THR
84	EF	495	ARG
84	EF	497	MET
84	EF	507	VAL
84	EF	512	LYS
84	EF	517	LEU
84	EF	519	LYS
84	EF	524	LEU
84	EF	526	ARG
84	EF	527	LEU
84	EF	529	LYS
84	EF	537	ILE
84	EF	538	ILE
84	EF	539	GLU
84	EF	543	GLU
84	EF	563	GLU
84	EF	564	ASP
84	EF	577	VAL
84	EF	579	TYR
84	EF	580	ARG
84	EF	585	GLU
84	EF	591	CYS
84	EF	598	LYS
84	EF	605	LYS
84	EF	609	PHE
84	EF	622	VAL
84	EF	629	LYS
84	EF	631	ARG
84	EF	637	GLU
84	EF	638	LYS
84	EF	640	GLU
84	EF	643	VAL
84	EF	661	ILE
84	EF	663	THR
84	EF	664	ASP
84	EF	665	ILE
84	EF	671	TYR
84	EF	673	ASN
84	EF	677	ASP
84	EF	688	LYS
84	EF	689	GLU

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Mol	Chain	Res	Type
84	EF	695	GLU
84	EF	700	VAL
84	EF	707	VAL
84	EF	708	THR
84	EF	709	LEU
84	EF	712	ASP
84	EF	714	ILE
84	EF	716	ARG
84	EF	720	GLN
84	EF	722	ILE
84	EF	733	VAL
84	EF	741	MET
84	EF	744	ILE
84	EF	747	VAL
84	EF	774	SER
84	EF	782	PHE
84	EF	788	LEU
84	EF	817	TRP
84	EF	829	SER
84	EF	830	ARG
84	EF	842	LYS
84	EF	844	LEU
84	EF	845	LYS
84	EF	851	ASP
84	EF	854	LEU
84	EF	856	LYS
84	EF	857	LEU

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

Mol	Chain	Res	Type
1	DD	56	GLN
1	DD	145	GLN
1	DD	207	HIS
2	FF	29	GLN
2	FF	65	GLN
2	FF	79	HIS
2	FF	83	ASN
2	FF	137	GLN
2	FF	165	ASN
3	KK	61	GLN
3	KK	66	HIS

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Mol	Chain	Res	Type
4	MM	19	GLN
4	MM	73	GLN
4	MM	119	GLN
5	PP	53	GLN
5	PP	104	GLN
6	QQ	24	HIS
6	QQ	35	ASN
6	QQ	80	GLN
6	QQ	114	GLN
7	RR	62	GLN
7	RR	74	GLN
7	RR	93	GLN
8	SS	73	ASN
8	SS	76	GLN
9	TT	117	GLN
11	ZZ	106	GLN
12	cc	7	GLN
12	cc	29	GLN
15	gg	119	GLN
15	gg	133	ASN
15	gg	143	GLN
15	gg	181	ASN
15	gg	305	ASN
16	R	40	GLN
16	R	75	HIS
16	R	158	GLN
17	W	30	GLN
17	W	63	GLN
19	AA	50	ASN
19	AA	113	GLN
19	AA	215	GLN
20	BB	101	HIS
20	BB	124	HIS
20	BB	163	GLN
20	BB	177	GLN
20	BB	186	ASN
22	EE	36	HIS
22	EE	112	HIS
22	EE	260	GLN
23	GG	177	GLN
23	GG	197	GLN
24	HH	76	GLN

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Mol	Chain	Res	Type
24	HH	114	GLN
24	HH	168	HIS
24	HH	193	GLN
25	II	64	ASN
25	II	111	GLN
26	JJ	154	GLN
27	LL	18	GLN
28	NN	49	GLN
28	NN	62	GLN
28	NN	105	ASN
30	VV	47	ASN
30	VV	49	GLN
31	WW	113	HIS
32	XX	61	GLN
33	YY	19	GLN
33	YY	63	HIS
33	YY	89	HIS
34	aa	19	GLN
34	aa	80	HIS
35	bb	26	GLN
35	bb	51	GLN
35	bb	65	GLN
36	ee	117	ASN
36	ee	131	ASN
37	A	205	ASN
37	A	218	HIS
38	B	204	GLN
39	C	61	GLN
39	C	223	ASN
40	D	198	HIS
40	D	202	GLN
41	E	139	HIS
41	E	194	GLN
41	E	253	GLN
42	F	79	ASN
42	F	109	GLN
42	F	130	ASN
43	G	99	GLN
43	G	135	GLN
43	G	206	GLN
44	H	116	ASN
44	H	188	GLN

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Mol	Chain	Res	Type
45	I	59	GLN
45	I	95	HIS
45	I	144	ASN
46	J	42	GLN
46	J	71	HIS
46	J	104	ASN
47	L	19	GLN
47	L	28	GLN
48	M	20	HIS
48	M	48	GLN
49	N	8	GLN
50	O	42	ASN
50	O	90	HIS
50	O	143	HIS
51	P	97	ASN
51	P	116	HIS
52	Q	188	ASN
53	S	50	GLN
53	S	77	ASN
53	S	92	ASN
53	S	125	GLN
53	S	144	GLN
53	S	163	HIS
54	T	3	ASN
54	T	22	HIS
54	T	58	HIS
55	U	44	GLN
56	V	108	ASN
57	X	57	GLN
57	X	93	ASN
60	a	14	HIS
60	a	39	HIS
60	a	40	HIS
60	a	41	HIS
60	a	66	ASN
60	a	67	GLN
61	b	42	ASN
61	b	58	GLN
63	d	34	HIS
64	e	43	ASN
64	e	80	HIS
65	f	99	HIS

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Mol	Chain	Res	Type
66	g	110	GLN
67	h	65	GLN
67	h	107	GLN
67	h	108	GLN
69	j	76	HIS
71	l	17	GLN
74	o	25	GLN
74	o	102	GLN
76	r	6	GLN
76	r	36	ASN
77	s	42	GLN
77	s	71	ASN
77	s	72	ASN
77	s	127	ASN
77	s	139	GLN
77	s	176	ASN
77	s	191	GLN
77	s	195	ASN
78	t	70	GLN
78	t	100	HIS
78	t	118	HIS
78	t	137	GLN
78	t	142	ASN
84	EF	8	GLN
84	EF	145	GLN
84	EF	184	ASN
84	EF	227	GLN
84	EF	270	ASN
84	EF	291	GLN
84	EF	306	ASN
84	EF	352	GLN
84	EF	468	ASN
84	EF	513	ASN
84	EF	553	HIS
84	EF	670	GLN
84	EF	705	HIS
84	EF	720	GLN
84	EF	803	ASN
84	EF	807	GLN
84	EF	818	GLN

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
18	9	1679/1697 (98%)	322 (19%)	20 (1%)
79	5	3519/3543 (99%)	748 (21%)	71 (2%)
80	7	118/119 (99%)	12 (10%)	0
81	8	149/156 (95%)	32 (21%)	2 (1%)
82	1	151/154 (98%)	101 (66%)	22 (14%)
83	PT	75/76 (98%)	39 (52%)	2 (2%)
All	All	5691/5745 (99%)	1254 (22%)	117 (2%)

All (1254) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
18	9	3	C
18	9	4	C
18	9	25	A
18	9	33	G
18	9	41	G
18	9	42	A
18	9	46	A
18	9	56	G
18	9	58	C
18	9	62	G
18	9	65	C
18	9	67	C
18	9	68	A
18	9	69	C
18	9	71	G
18	9	73	C
18	9	74	G
18	9	75	G
18	9	79	A
18	9	103	A
18	9	111	A
18	9	113	G
18	9	114	G
18	9	115	U
18	9	116	U
18	9	124	U
18	9	126	G
18	9	143	U
18	9	146	G
18	9	147	A
18	9	155	G
18	9	158	A

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Mol	Chain	Res	Type
18	9	163	U
18	9	168	C
18	9	180	G
18	9	182	C
18	9	183	G
18	9	184	G
18	9	187	G
18	9	188	C
18	9	189	U
18	9	190	G
18	9	191	A
18	9	192	C
18	9	215	G
18	9	294	U
18	9	302	A
18	9	306	C
18	9	307	G
18	9	308	G
18	9	309	G
18	9	312	G
18	9	314	U
18	9	318	A
18	9	319	C
18	9	320	G
18	9	330	G
18	9	347	G
18	9	362	C
18	9	364	A
18	9	368	U
18	9	370	G
18	9	383	G
18	9	385	G
18	9	386	C
18	9	388	U
18	9	394	G
18	9	398	A
18	9	399	C
18	9	400	C
18	9	407	G
18	9	408	A
18	9	409	C
18	9	418	A

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Mol	Chain	Res	Type
18	9	448	A
18	9	450	C
18	9	451	G
18	9	454	U
18	9	464	A
18	9	465	A
18	9	466	G
18	9	471	G
18	9	472	C
18	9	473	A
18	9	474	G
18	9	476	A
18	9	482	G
18	9	485	A
18	9	487	U
18	9	492	C
18	9	496	C
18	9	502	C
18	9	509	G
18	9	517	C
18	9	526	A
18	9	530	U
18	9	531	A
18	9	532	C
18	9	533	A
18	9	544	G
18	9	547	G
18	9	548	C
18	9	549	C
18	9	550	C
18	9	551	U
18	9	554	A
18	9	555	A
18	9	556	U
18	9	557	U
18	9	559	G
18	9	562	U
18	9	571	U
18	9	576	A
18	9	583	A
18	9	587	A
18	9	588	G

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Mol	Chain	Res	Type
18	9	590	A
18	9	591	U
18	9	592	C
18	9	595	U
18	9	606	G
18	9	608	C
18	9	609	U
18	9	613	G
18	9	614	C
18	9	617	G
18	9	620	G
18	9	627	U
18	9	628	A
18	9	643	A
18	9	644	G
18	9	660	C
18	9	663	C
18	9	668	A
18	9	669	A
18	9	671	A
18	9	672	A
18	9	673	G
18	9	684	G
18	9	689	U
18	9	752	G
18	9	753	C
18	9	754	G
18	9	798	G
18	9	811	A
18	9	821	G
18	9	822	U
18	9	830	A
18	9	833	C
18	9	834	C
18	9	844	U
18	9	847	A
18	9	852	G
18	9	859	G
18	9	860	G
18	9	867	G
18	9	868	G
18	9	870	A

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Mol	Chain	Res	Type
18	9	871	U
18	9	872	A
18	9	873	G
18	9	874	G
18	9	875	A
18	9	878	G
18	9	887	U
18	9	890	U
18	9	891	G
18	9	892	U
18	9	913	A
18	9	914	U
18	9	920	A
18	9	922	A
18	9	933	G
18	9	934	G
18	9	955	A
18	9	970	G
18	9	971	G
18	9	990	A
18	9	992	A
18	9	1023	A
18	9	1045	U
18	9	1053	C
18	9	1057	C
18	9	1062	A
18	9	1083	A
18	9	1085	C
18	9	1096	G
18	9	1115	U
18	9	1116	C
18	9	1117	C
18	9	1118	C
18	9	1121	G
18	9	1133	A
18	9	1138	C
18	9	1139	C
18	9	1150	A
18	9	1153	C
18	9	1154	U
18	9	1161	U
18	9	1170	A

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Mol	Chain	Res	Type
18	9	1195	A
18	9	1207	G
18	9	1208	A
18	9	1215	C
18	9	1216	C
18	9	1221	G
18	9	1224	G
18	9	1240	A
18	9	1242	U
18	9	1251	A
18	9	1253	A
18	9	1254	C
18	9	1256	G
18	9	1257	G
18	9	1259	A
18	9	1264	C
18	9	1274	G
18	9	1275	G
18	9	1281	G
18	9	1282	A
18	9	1285	G
18	9	1286	G
18	9	1293	A
18	9	1295	A
18	9	1298	G
18	9	1299	A
18	9	1300	U
18	9	1301	A
18	9	1302	G
18	9	1303	C
18	9	1307	U
18	9	1308	U
18	9	1309	C
18	9	1310	U
18	9	1314	U
18	9	1315	U
18	9	1342	U
18	9	1354	G
18	9	1356	G
18	9	1371	U
18	9	1372	U
18	9	1378	A

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Mol	Chain	Res	Type
18	9	1395	C
18	9	1396	A
18	9	1397	U
18	9	1398	G
18	9	1402	A
18	9	1428	G
18	9	1442	U
18	9	1447	G
18	9	1449	G
18	9	1454	A
18	9	1462	U
18	9	1463	U
18	9	1466	G
18	9	1473	G
18	9	1475	G
18	9	1476	A
18	9	1477	U
18	9	1489	A
18	9	1490	G
18	9	1495	G
18	9	1497	G
18	9	1498	A
18	9	1520	G
18	9	1535	U
18	9	1536	G
18	9	1544	C
18	9	1548	G
18	9	1552	G
18	9	1553	C
18	9	1555	U
18	9	1556	A
18	9	1557	C
18	9	1564	C
18	9	1575	G
18	9	1579	A
18	9	1580	A
18	9	1585	U
18	9	1587	G
18	9	1588	A
18	9	1601	A
18	9	1604	G
18	9	1606	G

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Mol	Chain	Res	Type
18	9	1621	U
18	9	1623	A
18	9	1637	A
18	9	1638	G
18	9	1639	G
18	9	1646	C
18	9	1648	G
18	9	1654	G
18	9	1665	G
18	9	1671	G
18	9	1680	G
18	9	1683	C
18	9	1698	C
18	9	1699	A
18	9	1715	A
18	9	1721	U
18	9	1722	G
18	9	1726	G
18	9	1729	U
18	9	1730	U
18	9	1744	G
18	9	1748	G
18	9	1783	C
18	9	1785	C
18	9	1823	A
18	9	1824	A
18	9	1831	A
18	9	1835	A
18	9	1836	G
18	9	1838	U
18	9	1839	U
18	9	1849	G
18	9	1851	A
18	9	1861	G
18	9	1862	G
18	9	1863	A
18	9	1865	C
18	9	1869	A
79	5	11	G
79	5	12	A
79	5	13	U
79	5	25	A

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Mol	Chain	Res	Type
79	5	35	U
79	5	39	A
79	5	42	A
79	5	47	A
79	5	48	G
79	5	49	U
79	5	58	G
79	5	59	A
79	5	64	A
79	5	65	A
79	5	73	A
79	5	91	G
79	5	93	G
79	5	109	G
79	5	118	C
79	5	119	G
79	5	120	A
79	5	126	C
79	5	134	G
79	5	135	G
79	5	136	C
79	5	144	G
79	5	151	G
79	5	159	C
79	5	160	G
79	5	172	C
79	5	173	C
79	5	197	A
79	5	200	U
79	5	201	C
79	5	207	G
79	5	209	U
79	5	216	C
79	5	218	A
79	5	220	C
79	5	224	U
79	5	227	A
79	5	232	G
79	5	233	U
79	5	234	G
79	5	236	G
79	5	246	G

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Mol	Chain	Res	Type
79	5	262	C
79	5	264	C
79	5	265	C
79	5	266	C
79	5	276	C
79	5	280	G
79	5	281	U
79	5	297	U
79	5	306	A
79	5	309	C
79	5	310	G
79	5	315	G
79	5	316	U
79	5	322	C
79	5	334	A
79	5	340	C
79	5	350	C
79	5	363	A
79	5	371	A
79	5	379	G
79	5	386	A
79	5	387	G
79	5	399	G
79	5	407	A
79	5	410	A
79	5	412	G
79	5	413	G
79	5	431	G
79	5	432	U
79	5	446	C
79	5	449	C
79	5	450	G
79	5	452	A
79	5	453	G
79	5	454	U
79	5	455	C
79	5	464	G
79	5	467	U
79	5	468	U
79	5	469	C
79	5	481	G
79	5	481(A)	C

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Mol	Chain	Res	Type
79	5	482	G
79	5	483	G
79	5	485	C
79	5	486	C
79	5	492	U
79	5	493	G
79	5	495	C
79	5	497	G
79	5	498	C
79	5	499	G
79	5	505	G
79	5	510	U
79	5	658	C
79	5	666	G
79	5	667	A
79	5	683	C
79	5	684	G
79	5	685	C
79	5	687	U
79	5	688	U
79	5	696	C
79	5	697	G
79	5	704	C
79	5	705	G
79	5	708	G
79	5	718	C
79	5	719	C
79	5	730	G
79	5	731	G
79	5	738	C
79	5	738(A)	C
79	5	739	G
79	5	744	G
79	5	747	A
79	5	748	G
79	5	749	G
79	5	758	G
79	5	913	U
79	5	914	U
79	5	917	A
79	5	918	G
79	5	923	C

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Mol	Chain	Res	Type
79	5	925	C
79	5	926	G
79	5	929	A
79	5	931	C
79	5	932	A
79	5	933	G
79	5	934	C
79	5	935	A
79	5	935(A)	G
79	5	936	C
79	5	939	G
79	5	941	C
79	5	944	A
79	5	945	U
79	5	957	G
79	5	959	G
79	5	960	A
79	5	961	G
79	5	967	C
79	5	969	C
79	5	972	C
79	5	979	C
79	5	983	C
79	5	1070	G
79	5	1072	C
79	5	1073	G
79	5	1076	C
79	5	1179	U
79	5	1187	G
79	5	1193	C
79	5	1195	G
79	5	1211	G
79	5	1212	G
79	5	1215	C
79	5	1216	C
79	5	1234	G
79	5	1235	G
79	5	1236	C
79	5	1237	C
79	5	1238	A
79	5	1239	C
79	5	1273	G

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Mol	Chain	Res	Type
79	5	1274	A
79	5	1276	C
79	5	1277	G
79	5	1284	G
79	5	1285	U
79	5	1287	G
79	5	1288	G
79	5	1292	C
79	5	1293	G
79	5	1294	A
79	5	1295	C
79	5	1296	G
79	5	1301	C
79	5	1304	C
79	5	1314	C
79	5	1326	A
79	5	1330	A
79	5	1354	A
79	5	1358	G
79	5	1359	G
79	5	1371	A
79	5	1377	G
79	5	1380	G
79	5	1382	G
79	5	1387	A
79	5	1394	G
79	5	1397	A
79	5	1398	A
79	5	1415	G
79	5	1419	G
79	5	1420	A
79	5	1421	G
79	5	1429	C
79	5	1438	U
79	5	1440	U
79	5	1441	C
79	5	1445	U
79	5	1446	C
79	5	1456	C
79	5	1457	G
79	5	1458	C
79	5	1478	C

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Mol	Chain	Res	Type
79	5	1482	G
79	5	1483	C
79	5	1484	G
79	5	1486	C
79	5	1497	A
79	5	1498	G
79	5	1501	C
79	5	1502	G
79	5	1504	G
79	5	1516	G
79	5	1518	A
79	5	1523	A
79	5	1534	A
79	5	1547	A
79	5	1552	G
79	5	1553	A
79	5	1563	A
79	5	1564	A
79	5	1566	C
79	5	1574	G
79	5	1577	G
79	5	1578	U
79	5	1591	U
79	5	1596	U
79	5	1602	U
79	5	1612	G
79	5	1613	A
79	5	1614	C
79	5	1624	G
79	5	1625	G
79	5	1631	A
79	5	1633	G
79	5	1634	A
79	5	1637	A
79	5	1641	G
79	5	1654	G
79	5	1661	C
79	5	1676	C
79	5	1680	G
79	5	1684	A
79	5	1721	G
79	5	1733	G

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Mol	Chain	Res	Type
79	5	1740	C
79	5	1741	G
79	5	1742	A
79	5	1746	A
79	5	1750	G
79	5	1752	G
79	5	1754	U
79	5	1755	C
79	5	1756	U
79	5	1759	G
79	5	1761	G
79	5	1762	C
79	5	1763	C
79	5	1764	G
79	5	1766	A
79	5	1767	A
79	5	1768	C
79	5	1769	G
79	5	1770	A
79	5	1772	C
79	5	1773	U
79	5	1774	C
79	5	1776	A
79	5	1777	C
79	5	1780	A
79	5	1781	U
79	5	1787	A
79	5	1788	A
79	5	1803	G
79	5	1804	A
79	5	1805	A
79	5	1815	G
79	5	1819	G
79	5	1821	G
79	5	1822	U
79	5	1828	C
79	5	1830	G
79	5	1834	U
79	5	1835	G
79	5	1836	G
79	5	1837	A
79	5	1842	G

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Mol	Chain	Res	Type
79	5	1855	G
79	5	1869	G
79	5	1888	A
79	5	1890	G
79	5	1897	A
79	5	1899	G
79	5	1910	G
79	5	1916	G
79	5	1918	U
79	5	1919	G
79	5	1920	C
79	5	1921	C
79	5	1922	G
79	5	1923	A
79	5	1931	C
79	5	1945	G
79	5	1948	G
79	5	1951	G
79	5	1960	A
79	5	1961	G
79	5	1962	A
79	5	1963	C
79	5	1964	A
79	5	1974	U
79	5	1975	G
79	5	1976	G
79	5	1977	C
79	5	1978	C
79	5	1979	A
79	5	1980	U
79	5	1981	G
79	5	1982	G
79	5	1983	A
79	5	1984	A
79	5	1985	G
79	5	1986	U
79	5	1987	C
79	5	1991	A
79	5	1992	U
79	5	1997	U
79	5	2001	G
79	5	2002	A

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Mol	Chain	Res	Type
79	5	2003	G
79	5	2004	U
79	5	2008	U
79	5	2024	G
79	5	2026	A
79	5	2047	A
79	5	2048	U
79	5	2055	G
79	5	2056	G
79	5	2062	C
79	5	2064	G
79	5	2069	A
79	5	2071	A
79	5	2084	C
79	5	2085	G
79	5	2089	G
79	5	2090	U
79	5	2092	G
79	5	2093	A
79	5	2094	C
79	5	2095	A
79	5	2097	U
79	5	2098	G
79	5	2100	G
79	5	2101	A
79	5	2102	G
79	5	2104	A
79	5	2105	A
79	5	2106	G
79	5	2107	C
79	5	2108	G
79	5	2259	G
79	5	2260	C
79	5	2262	G
79	5	2265	G
79	5	2266	C
79	5	2267	U
79	5	2268	A
79	5	2269	C
79	5	2270	G
79	5	2275	G
79	5	2289	C

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Mol	Chain	Res	Type
79	5	2300	A
79	5	2301	G
79	5	2306	G
79	5	2313	A
79	5	2314	G
79	5	2316	G
79	5	2331	G
79	5	2333	G
79	5	2345	G
79	5	2348	G
79	5	2350	U
79	5	2351	C
79	5	2360	A
79	5	2370	A
79	5	2382	A
79	5	2395	A
79	5	2396	A
79	5	2399	G
79	5	2402	G
79	5	2409	U
79	5	2416	G
79	5	2417	A
79	5	2422	C
79	5	2425	U
79	5	2433	G
79	5	2450	G
79	5	2469	C
79	5	2471	G
79	5	2475	G
79	5	2485	U
79	5	2488	C
79	5	2489	C
79	5	2490	U
79	5	2491	C
79	5	2503	G
79	5	2504	C
79	5	2505	C
79	5	2506	G
79	5	2512	A
79	5	2513	A
79	5	2529	A
79	5	2530	U

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Mol	Chain	Res	Type
79	5	2536	A
79	5	2537	A
79	5	2546	G
79	5	2547	G
79	5	2549	G
79	5	2552	G
79	5	2554	U
79	5	2572	C
79	5	2581	A
79	5	2583	C
79	5	2586	G
79	5	2587	A
79	5	2589	C
79	5	2601	A
79	5	2611	A
79	5	2612	G
79	5	2638	G
79	5	2649	G
79	5	2650	G
79	5	2658	G
79	5	2661	U
79	5	2662	G
79	5	2669	C
79	5	2675	G
79	5	2676	A
79	5	2686	G
79	5	2687	U
79	5	2694	G
79	5	2695	A
79	5	2696	A
79	5	2707	U
79	5	2708	U
79	5	2710	C
79	5	2711	G
79	5	2712	G
79	5	2715	G
79	5	2716	C
79	5	2724	G
79	5	2725	A
79	5	2726	G
79	5	2738	C
79	5	2740	U

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Mol	Chain	Res	Type
79	5	2743	A
79	5	2744	A
79	5	2753	G
79	5	2754	G
79	5	2759	G
79	5	2760	G
79	5	2761	U
79	5	2763	U
79	5	2764	A
79	5	2772	C
79	5	2783	A
79	5	2787	A
79	5	2788	U
79	5	2790	U
79	5	2796	G
79	5	2798	A
79	5	2802	C
79	5	2814	C
79	5	2826	U
79	5	2827	G
79	5	2828	U
79	5	2842	G
79	5	2855	G
79	5	2880	U
79	5	2898	G
79	5	3598	C
79	5	3604	A
79	5	3605	C
79	5	3606	U
79	5	3615	G
79	5	3625	G
79	5	3626	G
79	5	3635	A
79	5	3644	U
79	5	3653	A
79	5	3654	G
79	5	3662	A
79	5	3664	G
79	5	3672	G
79	5	3673	C
79	5	3692	A
79	5	3696	C

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Mol	Chain	Res	Type
79	5	3698	G
79	5	3706	C
79	5	3711	A
79	5	3714	G
79	5	3729	U
79	5	3739	C
79	5	3748	A
79	5	3753	G
79	5	3759	A
79	5	3763	A
79	5	3772	U
79	5	3773	U
79	5	3774	A
79	5	3775	A
79	5	3776	G
79	5	3777	G
79	5	3784	A
79	5	3786	U
79	5	3789	C
79	5	3791	C
79	5	3807	A
79	5	3810	C
79	5	3812	C
79	5	3813	A
79	5	3814	U
79	5	3817	A
79	5	3819	G
79	5	3838	U
79	5	3839	G
79	5	3840	U
79	5	3876	A
79	5	3877	A
79	5	3878	C
79	5	3879	G
79	5	3889	G
79	5	3892	U
79	5	3897	G
79	5	3901	A
79	5	3905	A
79	5	3906	A
79	5	3907	G
79	5	3914	U

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Mol	Chain	Res	Type
79	5	3915	U
79	5	3916	G
79	5	3917	A
79	5	3927	U
79	5	3938	G
79	5	3939	G
79	5	3942	A
79	5	3943	A
79	5	3946	G
79	5	4069	U
79	5	4073	A
79	5	4076	G
79	5	4077	A
79	5	4085	A
79	5	4086	G
79	5	4088	C
79	5	4116	C
79	5	4119	C
79	5	4120	U
79	5	4122	G
79	5	4125	C
79	5	4127	A
79	5	4128	A
79	5	4162	C
79	5	4163	U
79	5	4166	G
79	5	4170	A
79	5	4171	C
79	5	4183	G
79	5	4184	G
79	5	4191	G
79	5	4203	A
79	5	4213	A
79	5	4228	G
79	5	4229	U
79	5	4232	U
79	5	4233	A
79	5	4251	A
79	5	4254	G
79	5	4266	G
79	5	4268	A
79	5	4271	A

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Mol	Chain	Res	Type
79	5	4273	A
79	5	4281	A
79	5	4291	G
79	5	4297	G
79	5	4303	C
79	5	4304	A
79	5	4305	G
79	5	4306	U
79	5	4314	C
79	5	4317	A
79	5	4330	G
79	5	4332	C
79	5	4336	A
79	5	4339	A
79	5	4349	C
79	5	4354	U
79	5	4355	G
79	5	4373	G
79	5	4376	A
79	5	4377	G
79	5	4378	A
79	5	4387	C
79	5	4394	A
79	5	4395	U
79	5	4398	C
79	5	4413	C
79	5	4419	U
79	5	4421	C
79	5	4422	A
79	5	4424	A
79	5	4437	U
79	5	4440	G
79	5	4444	C
79	5	4448	G
79	5	4449	A
79	5	4453	C
79	5	4464	A
79	5	4471	U
79	5	4475	G
79	5	4488	A
79	5	4500	U
79	5	4510	A

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Mol	Chain	Res	Type
79	5	4511	A
79	5	4512	U
79	5	4513	A
79	5	4518	A
79	5	4519	C
79	5	4520	G
79	5	4525	C
79	5	4527	G
79	5	4528	G
79	5	4531	U
79	5	4548	A
79	5	4560	C
79	5	4567	G
79	5	4573	G
79	5	4575	G
79	5	4577	U
79	5	4584	A
79	5	4586	G
79	5	4587	G
79	5	4590	A
79	5	4599	A
79	5	4627	U
79	5	4633	G
79	5	4636	U
79	5	4637	G
79	5	4639	G
79	5	4656	A
79	5	4667	C
79	5	4670	C
79	5	4671	C
79	5	4672	A
79	5	4677	U
79	5	4694	G
79	5	4695	C
79	5	4700	A
79	5	4709	U
79	5	4719	G
79	5	4720	C
79	5	4721	G
79	5	4736	C
79	5	4737	G
79	5	4745	G

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Mol	Chain	Res	Type
79	5	4750	G
79	5	4751	G
79	5	4752	U
79	5	4754	G
79	5	4757	C
79	5	4758	U
79	5	4759	C
79	5	4761	G
79	5	4765	G
79	5	4771	C
79	5	4772	C
79	5	4867	G
79	5	4870	G
79	5	4871	C
79	5	4872	G
79	5	4873	G
79	5	4875	G
79	5	4876	U
79	5	4877	G
79	5	4882	U
79	5	4883	C
79	5	4885	U
79	5	4895	C
79	5	4902	C
79	5	4910	A
79	5	4914	C
79	5	4915	G
79	5	4919	G
79	5	4921	C
79	5	4922	C
79	5	4924	C
79	5	4925	U
79	5	4926	C
79	5	4927	G
79	5	4928	C
79	5	4931	G
79	5	4934	A
79	5	4937	C
79	5	4938	A
79	5	4943	A
79	5	4944	C
79	5	4945	G

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Mol	Chain	Res	Type
79	5	4947	U
79	5	4948	C
79	5	4949	G
79	5	4950	U
79	5	4951	G
79	5	4955	A
79	5	4956	A
79	5	4957	C
79	5	4958	C
79	5	4960	G
79	5	4965	U
79	5	4966	A
79	5	4976	U
79	5	4985	U
79	5	4988	U
79	5	4989	U
79	5	4990	C
79	5	4991	U
79	5	4993	G
79	5	5006	U
79	5	5007	A
79	5	5014	A
79	5	5017	G
79	5	5040	U
79	5	5041	G
79	5	5047	C
79	5	5050	C
79	5	5054	C
79	5	5061	A
79	5	5062	G
80	7	7	G
80	7	11	A
80	7	22	A
80	7	33	U
80	7	53	U
80	7	54	A
80	7	63	C
80	7	64	G
80	7	97	G
80	7	100	A
80	7	110	G
80	7	111	C

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Mol	Chain	Res	Type
81	8	2	G
81	8	15	G
81	8	16	G
81	8	23	C
81	8	34	U
81	8	35	C
81	8	39	G
81	8	59	A
81	8	62	A
81	8	63	U
81	8	70	G
81	8	75	G
81	8	77	A
81	8	79	G
81	8	86	U
81	8	87	G
81	8	94	G
81	8	95	A
81	8	103	A
81	8	105	C
81	8	108	A
81	8	109	C
81	8	111	U
81	8	112	G
81	8	114	G
81	8	123	U
81	8	125	C
81	8	126	C
81	8	127	U
81	8	128	C
81	8	150	C
81	8	153	C
82	1	1332	G
82	1	1335	U
82	1	1336	G
82	1	1337	U
82	1	1340	A
82	1	1341	U
82	1	1342	A
82	1	1343	C
82	1	1345	G
82	1	1351	U

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Mol	Chain	Res	Type
82	1	1353	U
82	1	1354	U
82	1	1355	A
82	1	1356	G
82	1	1357	U
82	1	1358	A
82	1	1359	A
82	1	1360	A
82	1	1361	U
82	1	1362	A
82	1	1363	A
82	1	1365	U
82	1	1366	G
82	1	1367	G
82	1	1368	G
82	1	1369	A
82	1	1370	U
82	1	1371	U
82	1	1373	C
82	1	1374	C
82	1	1375	C
82	1	1378	A
82	1	1379	U
82	1	1381	G
82	1	1382	A
82	1	1387	G
82	1	1388	A
82	1	1389	C
82	1	1390	A
82	1	1391	G
82	1	1392	G
82	1	1393	U
82	1	1398	C
82	1	1399	A
82	1	1400	U
82	1	1401	U
82	1	1402	U
82	1	1403	C
82	1	1404	A
82	1	1406	C
82	1	1408	C
82	1	1409	C

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Mol	Chain	Res	Type
82	1	1412	U
82	1	1413	U
82	1	1415	U
82	1	1416	C
82	1	1421	U
82	1	1422	A
82	1	1423	C
82	1	1424	U
82	1	1425	A
82	1	1426	C
82	1	1429	A
82	1	1432	U
82	1	1433	U
82	1	1435	G
82	1	1436	A
82	1	1437	C
82	1	1439	A
82	1	1442	G
82	1	1443	A
82	1	1444	A
82	1	1445	G
82	1	1446	G
82	1	1447	A
82	1	1448	U
82	1	1449	U
82	1	1450	C
82	1	1452	C
82	1	1454	A
82	1	1455	A
82	1	1456	G
82	1	1457	G
82	1	1461	C
82	1	1462	C
82	1	1473	A
82	1	1474	G
82	1	1476	A
82	1	1478	C
82	1	1479	U
82	1	1480	U
82	1	1481	G
82	1	1482	U
82	1	1483	A

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Mol	Chain	Res	Type
82	1	1484	U
82	1	1489	U
82	1	1490	C
82	1	1491	C
82	1	1492	C
82	1	1493	G
82	1	1494	C
83	PT	7	G
83	PT	8	U
83	PT	9	A
83	PT	16	U
83	PT	17	G
83	PT	18	G
83	PT	19	U
83	PT	20	U
83	PT	21	A
83	PT	22	G
83	PT	26	G
83	PT	27	C
83	PT	29	U
83	PT	30	G
83	PT	31	C
83	PT	32	U
83	PT	35	G
83	PT	37	A
83	PT	38	U
83	PT	39	G
83	PT	41	A
83	PT	42	C
83	PT	43	G
83	PT	44	A
83	PT	45	G
83	PT	48	C
83	PT	49	C
83	PT	50	C
83	PT	52	G
83	PT	56	C
83	PT	59	U
83	PT	61	C
83	PT	65	G
83	PT	66	C
83	PT	68	C

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Mol	Chain	Res	Type
83	PT	73	A
83	PT	74	C
83	PT	75	C
83	PT	76	A

All (117) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
18	9	24	C
18	9	72	C
18	9	110	U
18	9	393	U
18	9	465	A
18	9	532	C
18	9	553	U
18	9	555	A
18	9	561	A
18	9	688	U
18	9	752	G
18	9	870	A
18	9	872	A
18	9	1137	U
18	9	1253	A
18	9	1395	C
18	9	1489	A
18	9	1637	A
18	9	1664	A
18	9	1679	A
79	5	12	A
79	5	47	A
79	5	48	G
79	5	125	C
79	5	217	C
79	5	226	G
79	5	245	C
79	5	275	C
79	5	385	A
79	5	449	C
79	5	480	C
79	5	485	C
79	5	492	U
79	5	504	G

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Mol	Chain	Res	Type
79	5	696	C
79	5	930	G
79	5	935(A)	G
79	5	959	G
79	5	966	A
79	5	971(A)	G
79	5	1072	C
79	5	1211	G
79	5	1236	C
79	5	1238	A
79	5	1291	G
79	5	1329	G
79	5	1358	G
79	5	1370	G
79	5	1440	U
79	5	1445	U
79	5	1455	G
79	5	1633	G
79	5	1761	G
79	5	1766	A
79	5	1804	A
79	5	1818	G
79	5	1834	U
79	5	1835	G
79	5	1921	C
79	5	1974	U
79	5	1977	C
79	5	1979	A
79	5	1983	A
79	5	2025	A
79	5	2046	G
79	5	2068	C
79	5	2089	G
79	5	2265	G
79	5	2266	C
79	5	2313	A
79	5	2398	U
79	5	2468	U
79	5	2474	G
79	5	2502	G
79	5	2546	G
79	5	2661	U

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Mol	Chain	Res	Type
79	5	2695	A
79	5	3625	G
79	5	3876	A
79	5	3904	G
79	5	4075	U
79	5	4119	C
79	5	4170	A
79	5	4232	U
79	5	4448	G
79	5	4699	U
79	5	4719	G
79	5	4884	G
79	5	4925	U
79	5	4936	G
79	5	4947	U
81	8	94	G
81	8	124	U
82	1	1334	U
82	1	1336	G
82	1	1341	U
82	1	1342	A
82	1	1360	A
82	1	1366	G
82	1	1390	A
82	1	1391	G
82	1	1392	G
82	1	1397	C
82	1	1408	C
82	1	1435	G
82	1	1443	A
82	1	1448	U
82	1	1449	U
82	1	1455	A
82	1	1461	C
82	1	1473	A
82	1	1477	G
82	1	1478	C
82	1	1482	U
82	1	1492	C
83	PT	40	C
83	PT	65	G

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

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	$\# Z  > 2$
84	DDE	EF	715	-	18,20,21	7.02	4 (22%)	17,28,30	21.12	9 (52%)

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
84	DDE	EF	715	-	-	5/20/21/23	0/1/1/1

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
84	EF	715	DDE	CD2-NE2	-21.42	0.93	1.36
84	EF	715	DDE	CG-ND1	-19.73	1.01	1.38
84	EF	715	DDE	CD2-CG	-4.03	1.27	1.36
84	EF	715	DDE	CBW-NCB	-2.39	1.49	1.54

All (9) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
84	EF	715	DDE	CD2-NE2-CE1	79.94	174.42	107.55
84	EF	715	DDE	CB-CG-ND1	18.19	176.63	121.68
84	EF	715	DDE	CG-CD2-NE2	-17.51	79.76	106.53
84	EF	715	DDE	CD2-CG-ND1	-16.05	76.53	108.87
84	EF	715	DDE	CB-CG-CD2	-11.02	106.81	129.33
84	EF	715	DDE	CAT-CE1-NE2	9.77	145.11	123.26
84	EF	715	DDE	CAT-CE1-ND1	-7.44	105.91	124.78
84	EF	715	DDE	CA-CB-CG	-3.12	106.06	113.77
84	EF	715	DDE	CAB-NCB-CBW	2.02	115.37	110.52

There are no chirality outliers.

All (5) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
84	EF	715	DDE	CA-CB-CG-CD2
84	EF	715	DDE	CA-CB-CG-ND1
84	EF	715	DDE	CE1-CAT-CAU-CBW
84	EF	715	DDE	NAD-CBI-CBW-NCB
84	EF	715	DDE	NAD-CBI-CBW-CAU

There are no ring outliers.

1 monomer is involved in 7 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
84	EF	715	DDE	7	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 [i](#)

The following chains have linkage breaks:



Mol	Chain	Number of breaks
79	5	30
18	9	20
82	1	2

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	5	2113:G	O3'	2258:C	P	41.91
1	5	1252:C	O3'	1271:G	P	36.16
1	1	1484:U	O3'	1488:G	P	22.09
1	5	1219:G	O3'	1233:G	P	21.55
1	5	3948:C	O3'	4065:G	P	19.77
1	9	130:G	O3'	141:A	P	18.95
1	9	697:G	O3'	729:C	P	18.47
1	9	1761:U	O3'	1771:G	P	18.06
1	5	4138:C	O3'	4146:G	P	17.85
1	5	990:C	O3'	1064:G	P	17.65
1	5	1406(C):G	O3'	1411:C	P	17.61
1	5	523:C	O3'	638:G	P	17.53
1	9	323:C	O3'	329:G	P	17.40
1	9	756:C	O3'	788:G	P	17.37
1	5	4101:C	O3'	4107:G	P	17.11
1	9	834:C	O3'	841:G	P	16.87
1	5	4777:C	O3'	4859:C	P	16.40
1	9	1417:C	O3'	1423:C	P	16.02
1	5	1696:C	O3'	1720:C	P	14.68
1	5	760:G	O3'	904:G	P	14.61
1	5	5022:U	O3'	5028:G	P	13.91
1	1	1462:C	O3'	1470:C	P	13.18
1	5	1364:U	O3'	1368:A	P	12.91
1	5	2901:G	O3'	3597:G	P	12.71
1	5	182:G	O3'	189:G	P	11.96
1	5	4729:A	O3'	4735:G	P	9.42
1	5	1180:C	O3'	1183:C	P	9.23
1	5	512:U	O3'	515:C	P	8.42
1	9	225:G	O3'	287:U	P	7.66
1	9	736:C	O3'	743:U	P	7.58
1	9	745:C	O3'	749:U	P	6.82
1	9	1203:G	O3'	1204:A	P	6.28
1	9	689:U	O3'	690:G	P	5.83
1	5	1100:U	O3'	1168:G	P	5.48
1	5	1957:U	O3'	1958:A	P	5.41
1	5	1239:C	O3'	1244:G	P	5.24
1	5	500:G	O3'	504:G	P	5.06

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	5	4740:G	O3'	4743:G	P	4.94
1	9	1691:U	O3'	1692:U	P	4.62
1	9	322:C	O3'	323:C	P	4.48
1	9	1432:U	O3'	1438:A	P	4.25
1	9	798:G	O3'	799:U	P	4.06
1	9	304:C	O3'	305:U	P	3.78
1	5	267:G	O3'	268:G	P	3.46
1	5	4899:G	O3'	4902:C	P	3.37
1	5	1438:U	O3'	1440:U	P	3.19
1	5	170:C	O3'	171:U	P	3.18
1	9	886:A	O3'	887:U	P	3.16
1	9	902:G	O3'	903:A	P	3.16
1	5	751:G	O3'	752:G	P	3.16
1	5	5020:G	O3'	5021:C	P	3.16
1	9	903:A	O3'	904:A	P	3.15

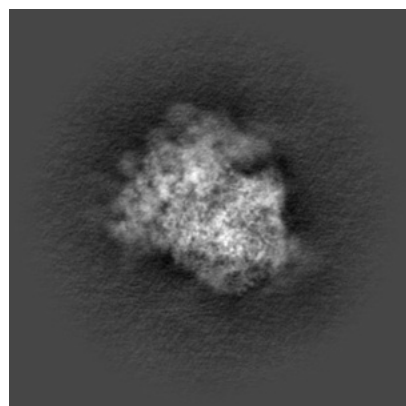
## 6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-72175. These allow visual inspection of the internal detail of the map and identification of artifacts.

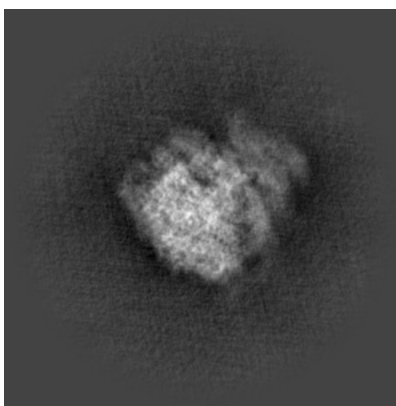
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

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

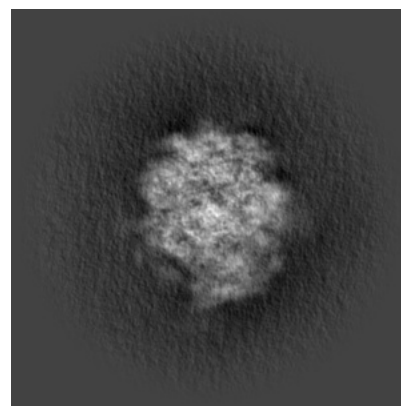
#### 6.1.1 Primary map



X

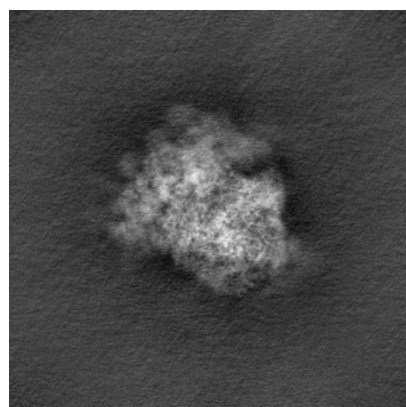


Y

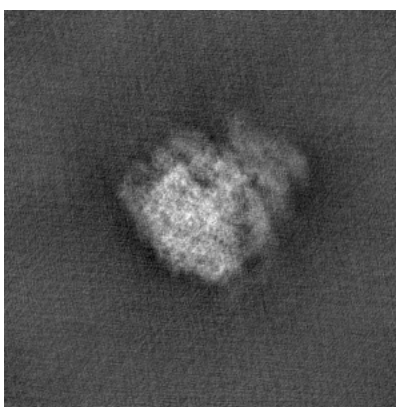


Z

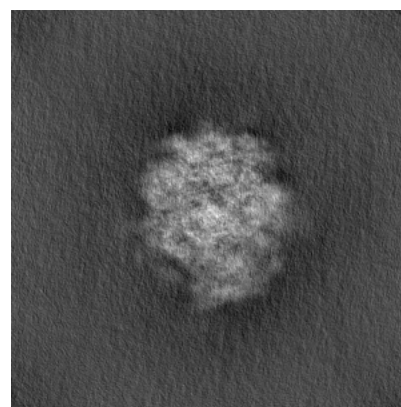
#### 6.1.2 Raw map



X



Y

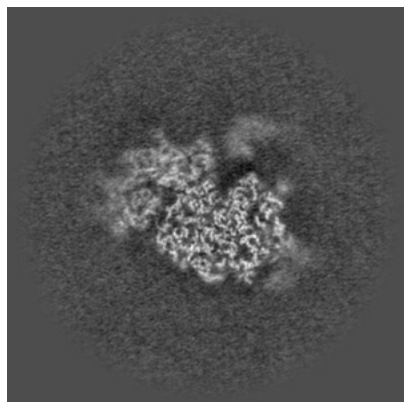


Z

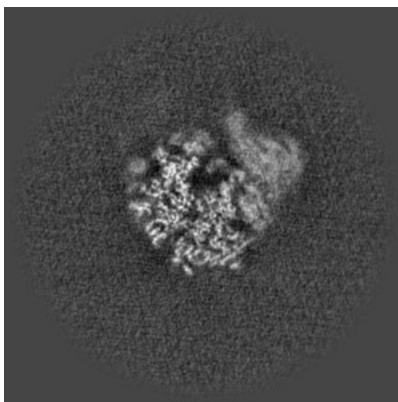
The images above show the map projected in three orthogonal directions.

## 6.2 Central slices [i](#)

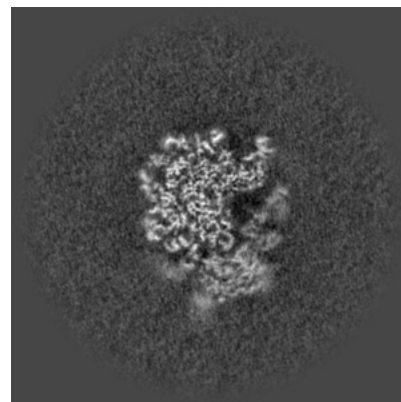
### 6.2.1 Primary map



X Index: 180

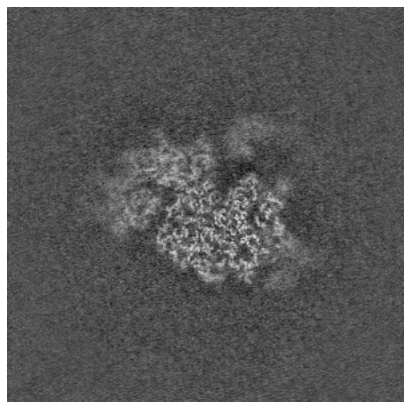


Y Index: 180

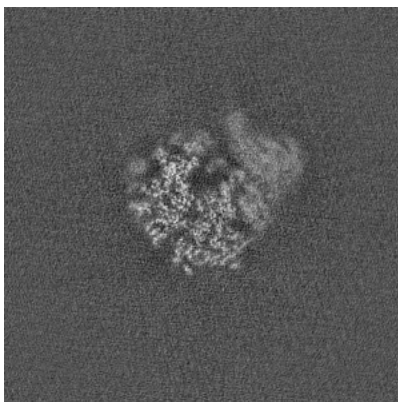


Z Index: 180

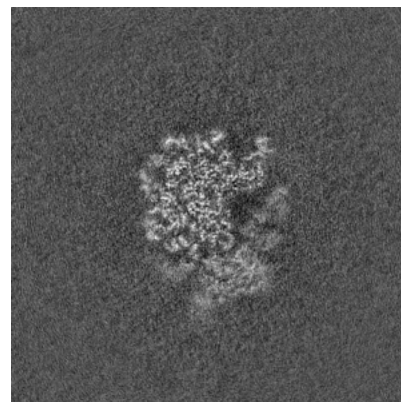
### 6.2.2 Raw map



X Index: 180



Y Index: 180

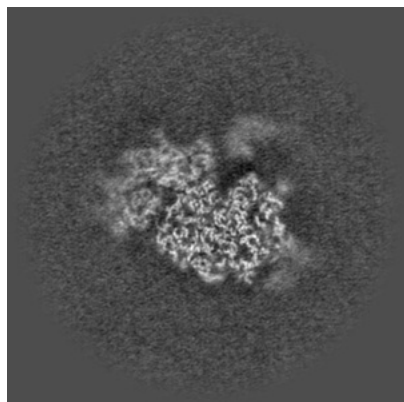


Z Index: 180

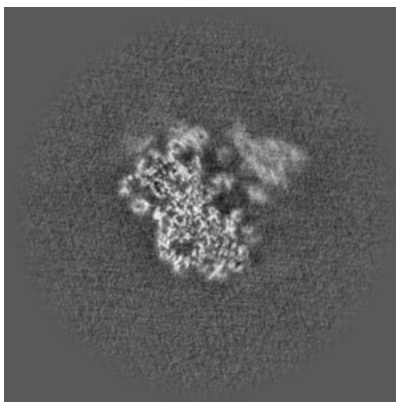
The images above show central slices of the map in three orthogonal directions.

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

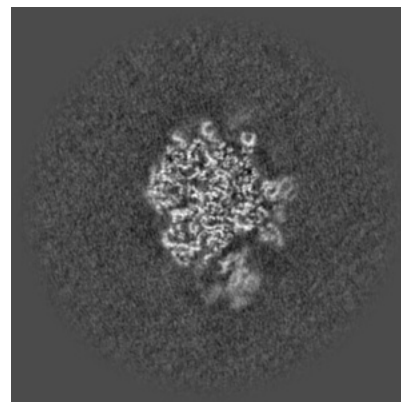
### 6.3.1 Primary map



X Index: 180

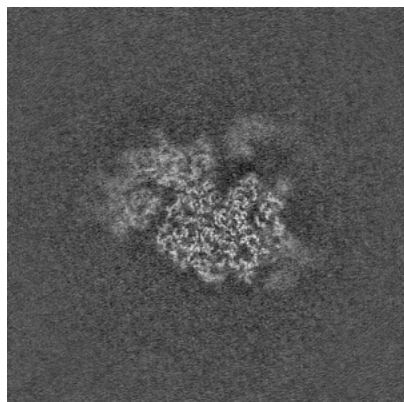


Y Index: 193

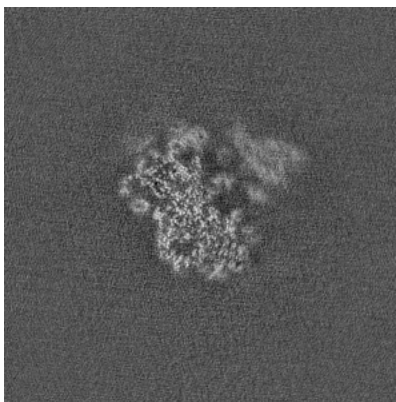


Z Index: 154

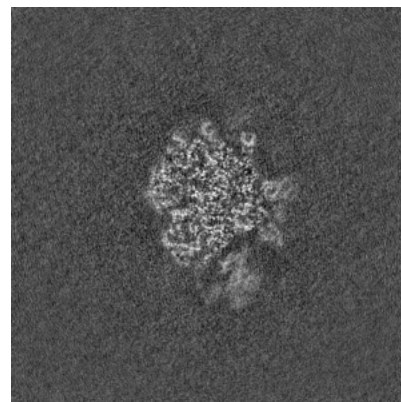
### 6.3.2 Raw map



X Index: 180



Y Index: 193



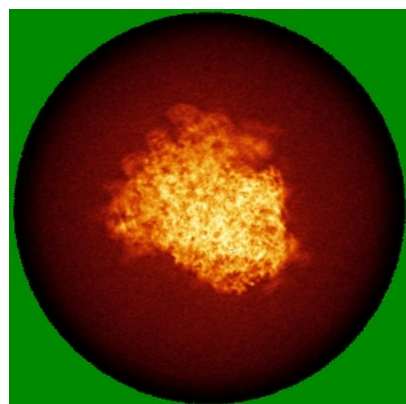
Z Index: 154

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

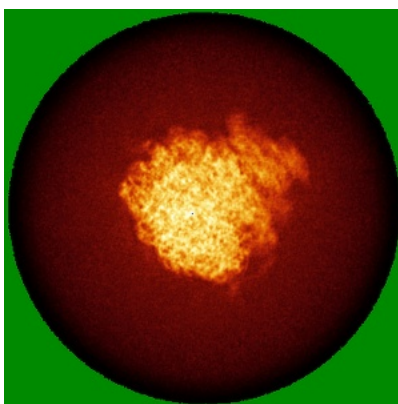


## 6.4 Orthogonal standard-deviation projections (False-color) [i](#)

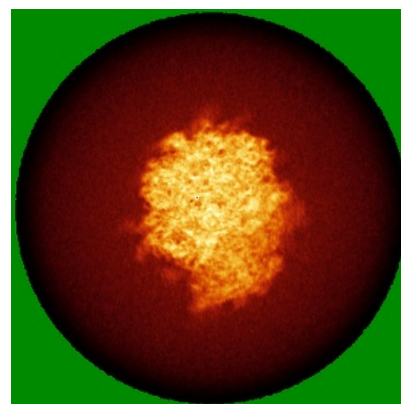
### 6.4.1 Primary map



X

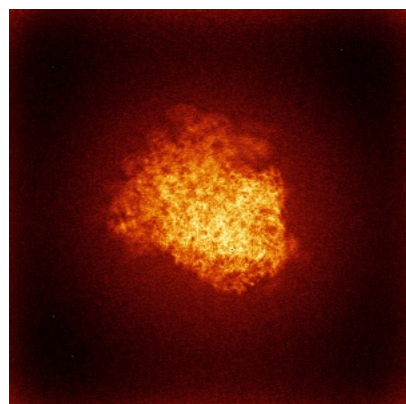


Y

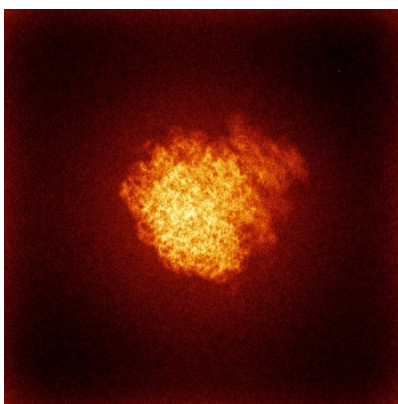


Z

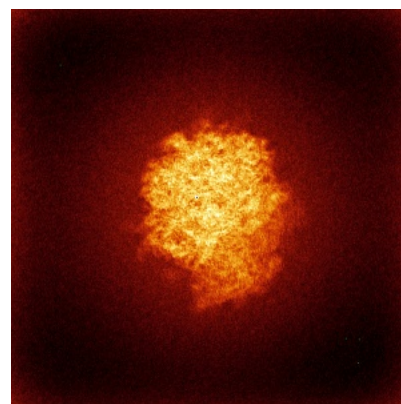
### 6.4.2 Raw map



X



Y

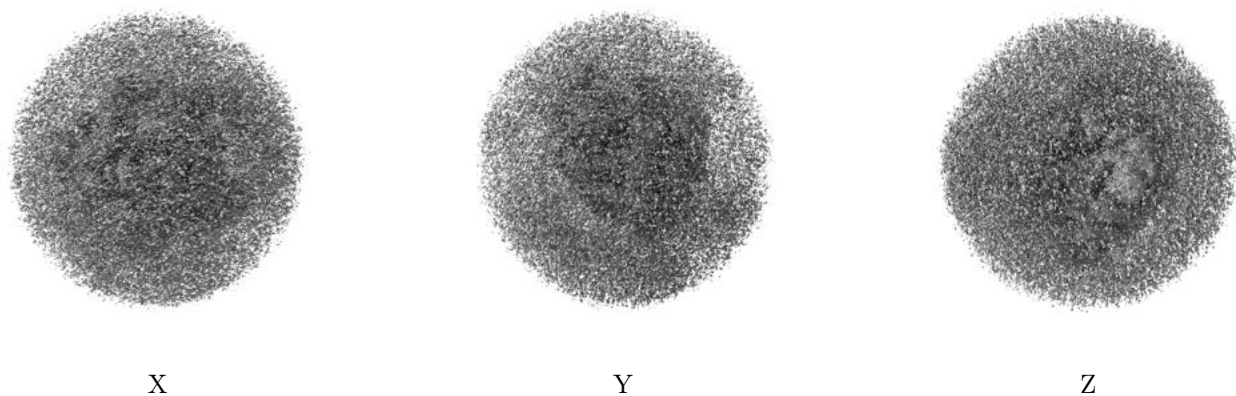


Z

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.

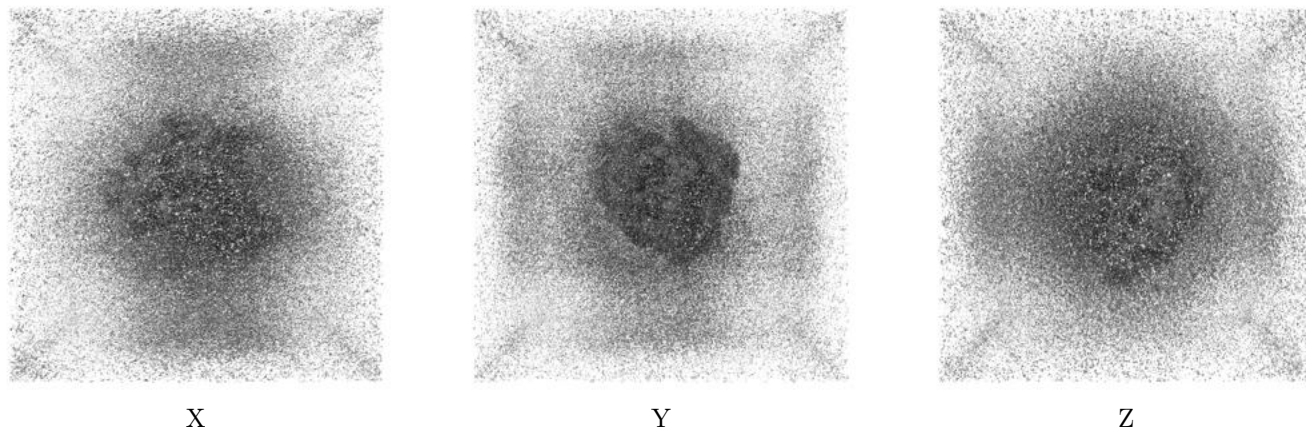
## 6.5 Orthogonal surface views [i](#)

### 6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.15. 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.

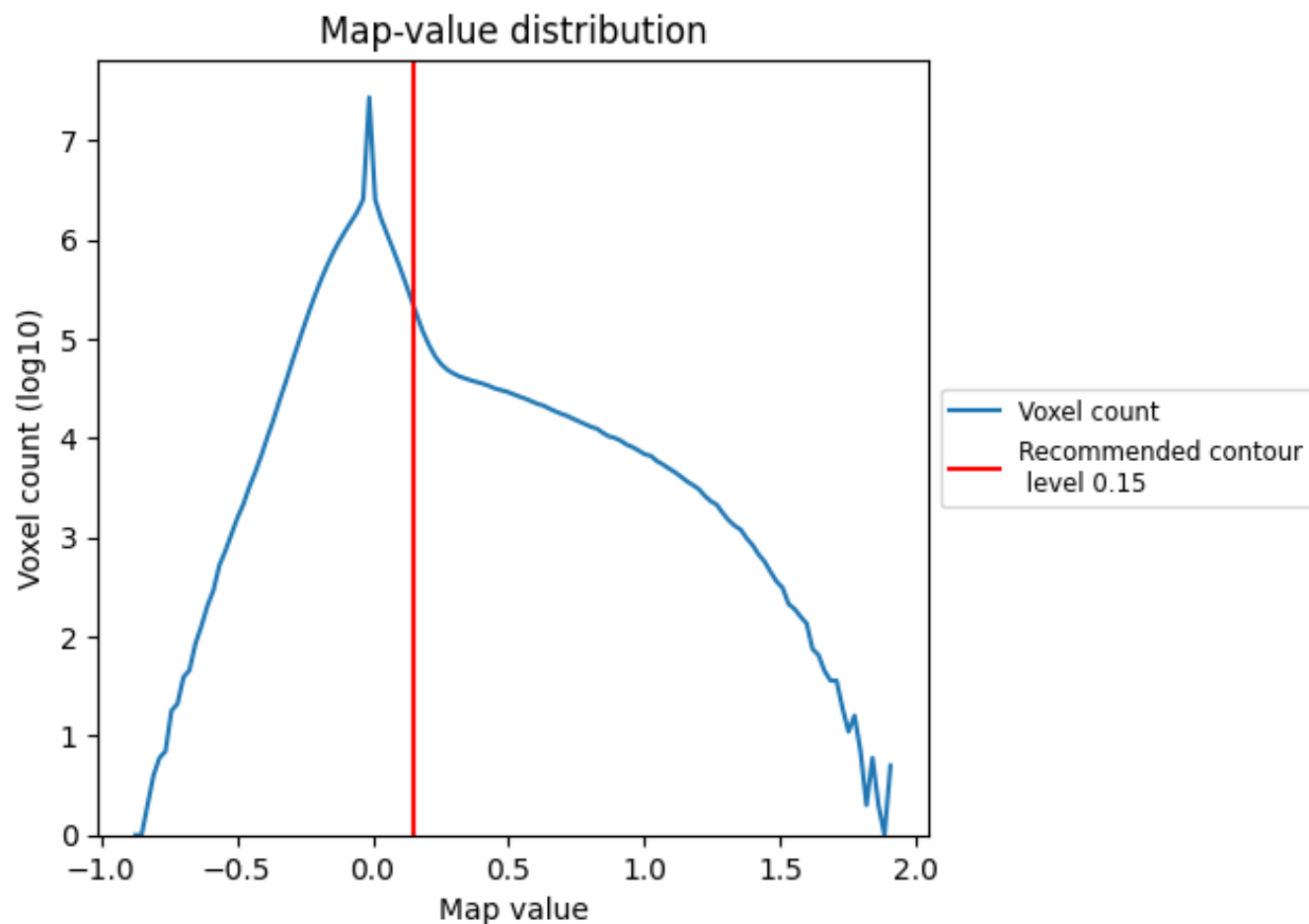
## 6.6 Mask visualisation [i](#)

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.

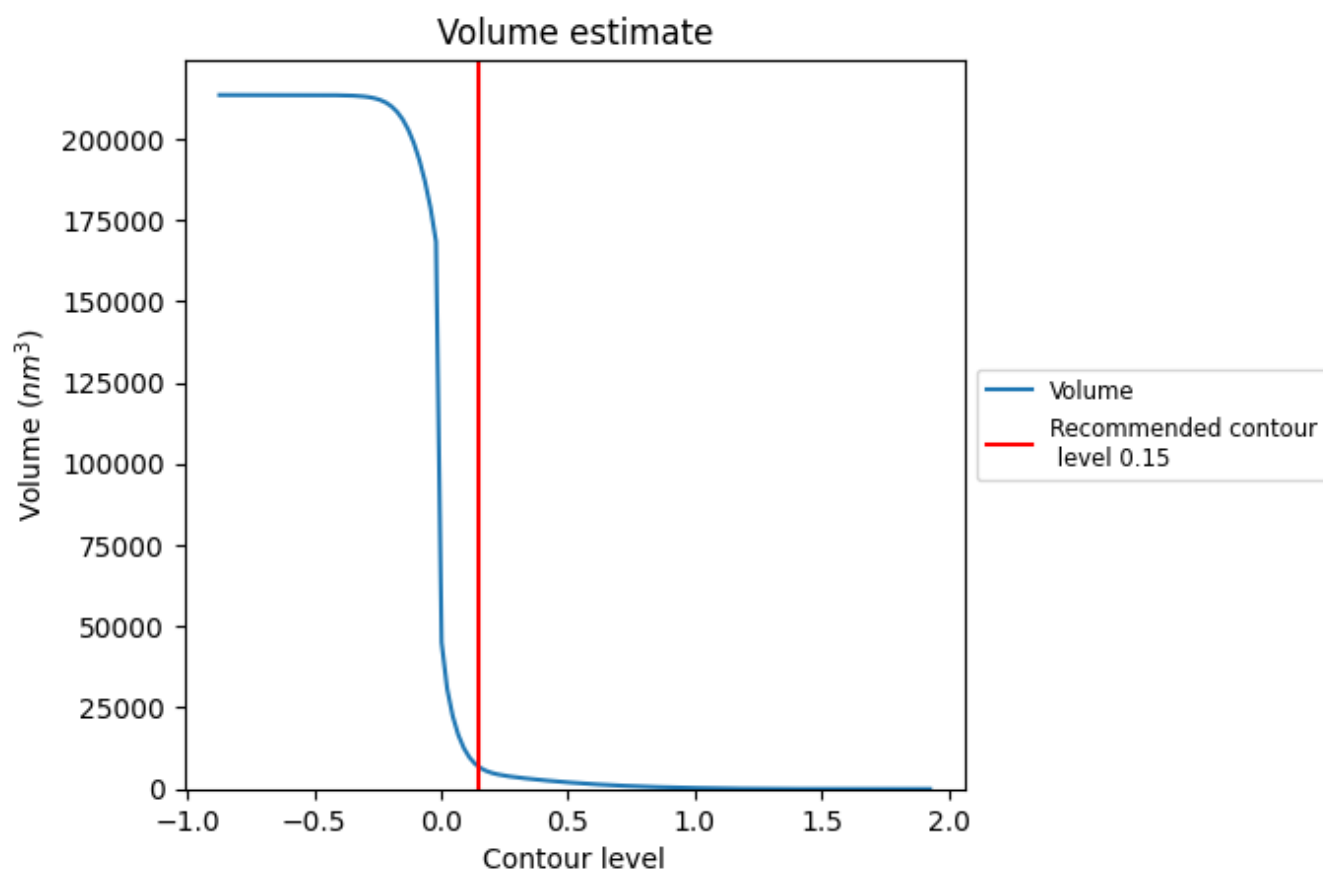
### 7.1 Map-value distribution [i](#)



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.



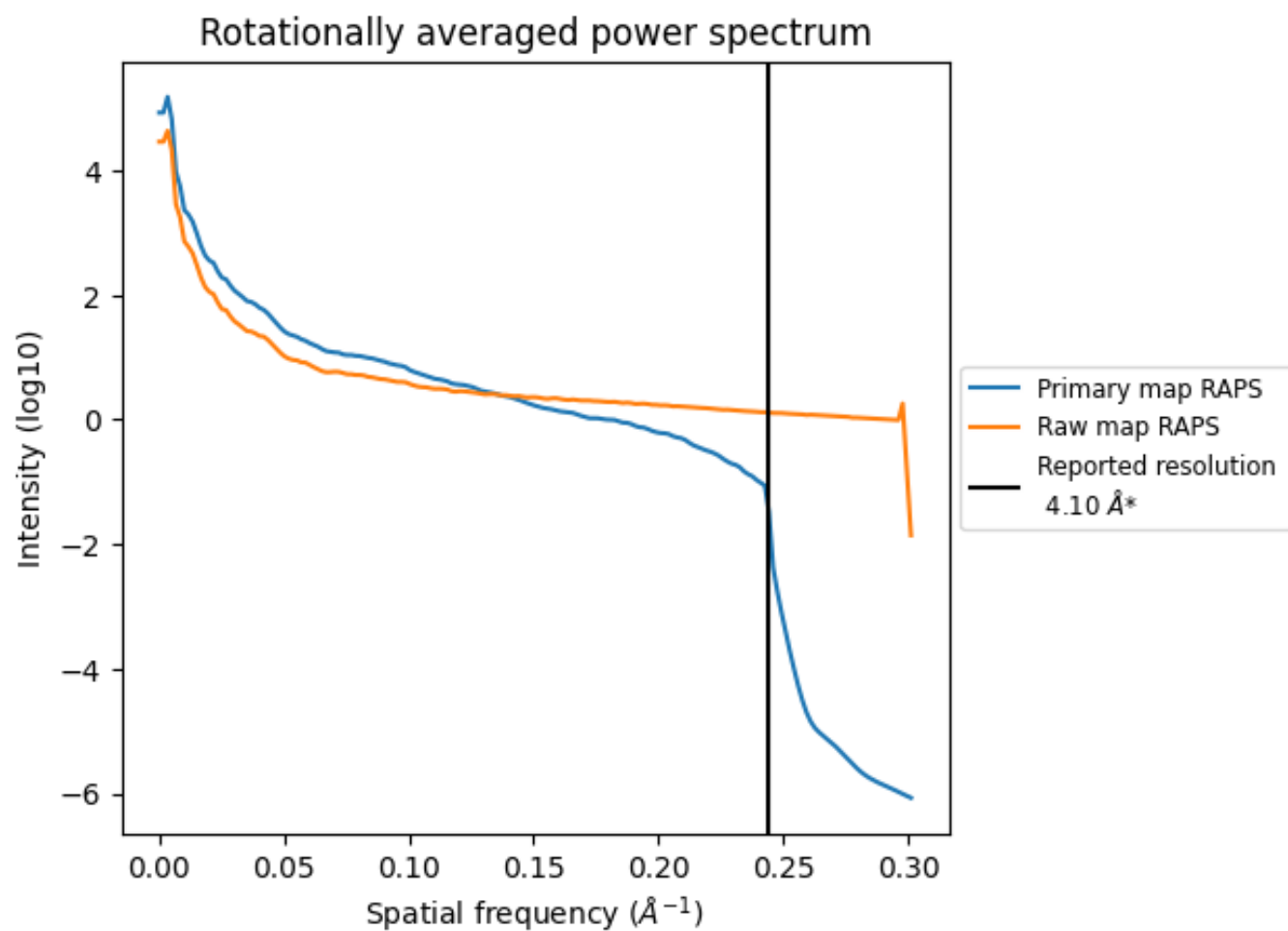
## 7.2 Volume estimate [i](#)



The volume at the recommended contour level is 6774  $\text{nm}^3$ ; this corresponds to an approximate mass of 6119 kDa.

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

### 7.3 Rotationally averaged power spectrum ⓘ

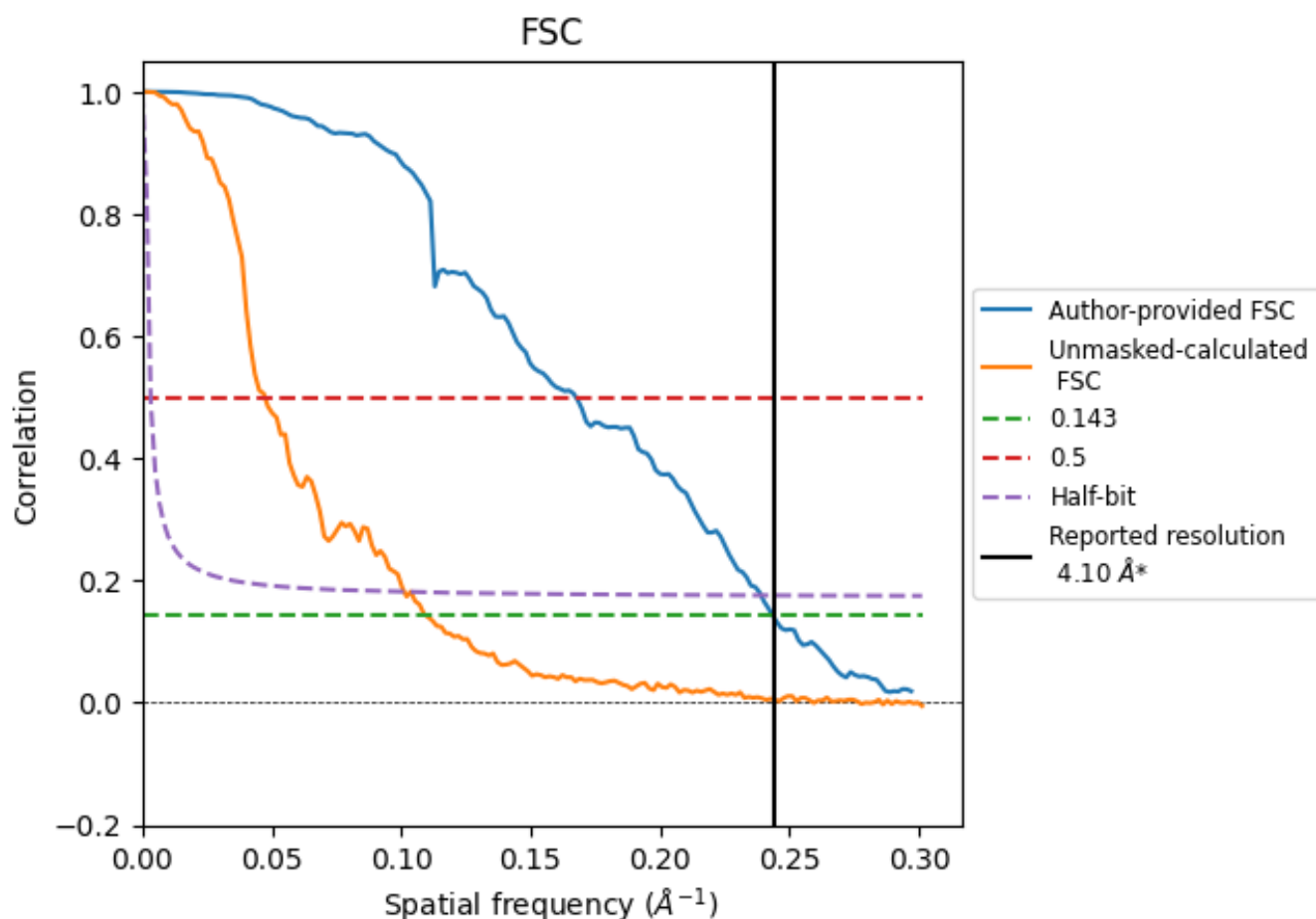


\*Reported resolution corresponds to spatial frequency of 0.244 Å<sup>-1</sup>

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

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

### 8.1 FSC [i](#)



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

## 8.2 Resolution estimates [i](#)

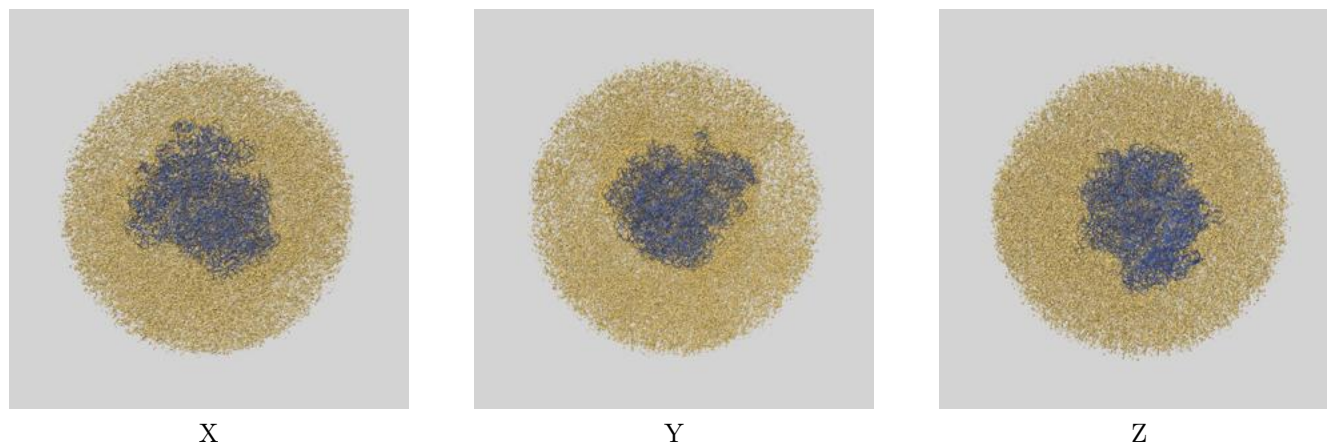
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.10	-	-
Author-provided FSC curve	4.11	5.97	4.18
Unmasked-calculated*	9.13	21.14	9.88

\*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 9.13 differs from the reported value 4.1 by more than 10 %

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

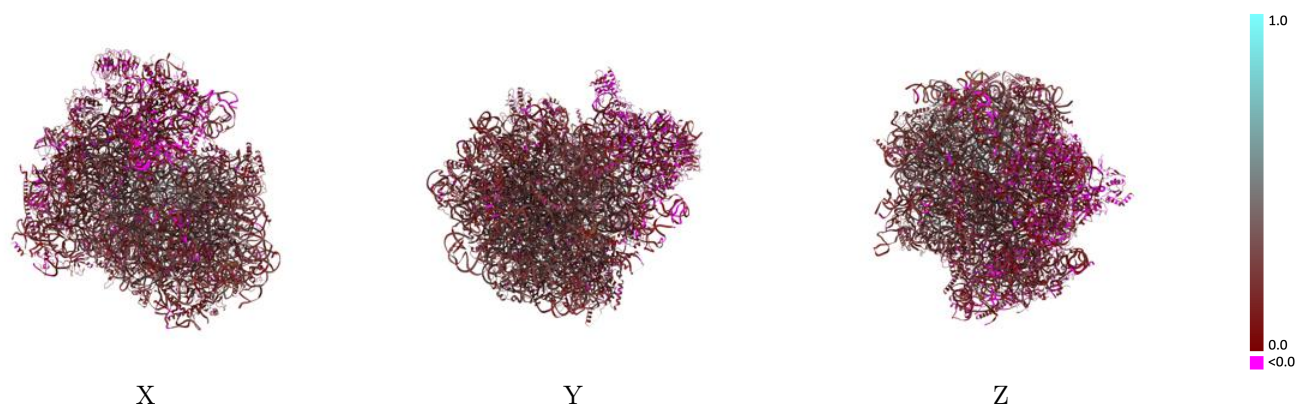
This section contains information regarding the fit between EMDB map EMD-72175 and PDB model 9Q2T. Per-residue inclusion information can be found in section [3](#) on page [23](#).

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



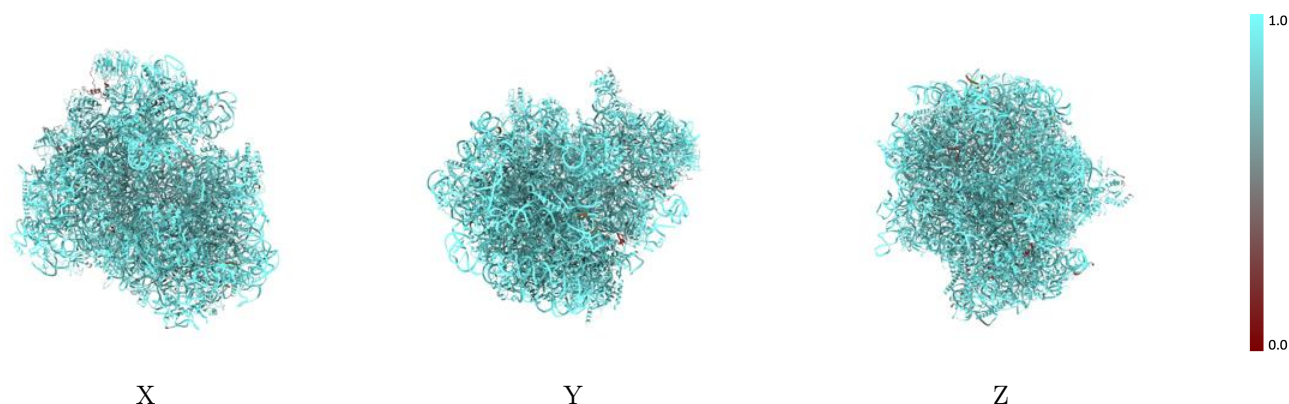
The images above show the 3D surface view of the map at the recommended contour level 0.15 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



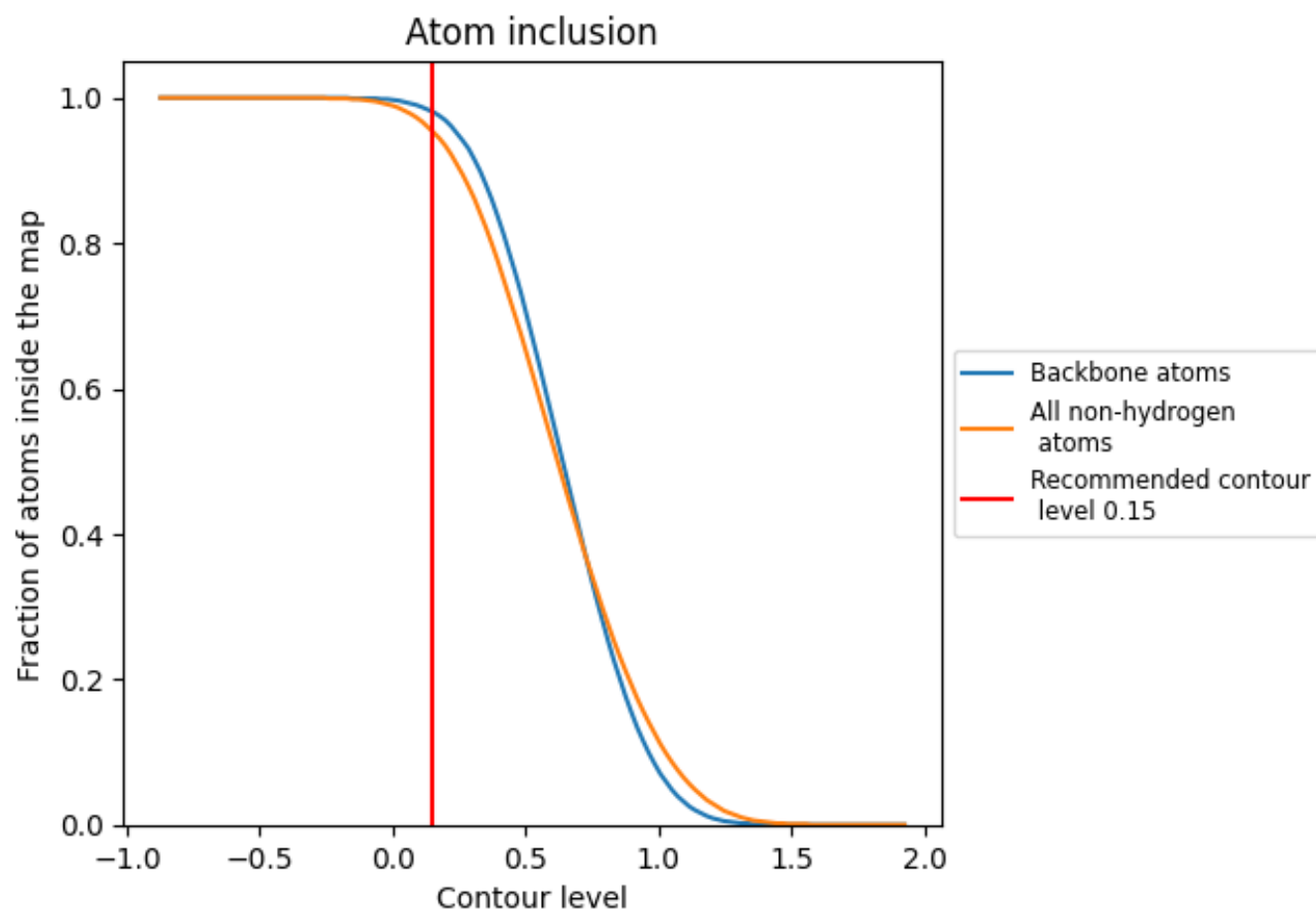
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.15).







































































## 9.4 Atom inclusion [i](#)



At the recommended contour level, 98% 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 (0.15) and Q-score for the entire model and for each chain.





















































































Chain	Atom inclusion	Q-score
All	 0.9540	 0.2120
1	 0.9810	 0.1220
5	 0.9910	 0.2690
7	 0.9940	 0.2490
8	 0.9950	 0.2980
9	 0.9800	 0.1870
A	 0.9190	 0.2520
AA	 0.8970	 0.1470
B	 0.9220	 0.2240
BB	 0.9420	 0.1410
C	 0.9160	 0.2470
CC	 0.8670	 0.1660
D	 0.9650	 0.1740
DD	 0.8830	 0.1100
E	 0.9260	 0.1950
EE	 0.9230	 0.1390
EF	 0.8850	 0.1900
F	 0.8740	 0.2080
FF	 0.9140	 0.0870
G	 0.9270	 0.2080
GG	 0.9320	 0.1390
H	 0.8770	 0.1830
HH	 0.8620	 0.1490
I	 0.8870	 0.2120
II	 0.8870	 0.1360
J	 0.9430	 0.1670
JJ	 0.9240	 0.1500
KK	 0.9670	 0.0590
L	 0.9150	 0.2380
LL	 0.8550	 0.1600
M	 0.9250	 0.1700
MM	 0.9150	 0.0040
N	 0.9300	 0.2360
NN	 0.8940	 0.1800
O	 0.8600	 0.2050



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Chain	Atom inclusion	Q-score
OO	 0.9350	 0.1660
P	 0.9620	 0.2480
PP	 0.8860	 0.0700
PT	 0.9750	 0.2310
Q	 0.9060	 0.2260
QQ	 0.9800	 0.0950
R	 0.9350	 0.1910
RR	 0.6860	 0.0740
S	 0.8880	 0.1970
SS	 0.8630	 0.0590
T	 0.8880	 0.2100
TT	 0.9570	 0.0680
U	 0.9550	 0.2100
UU	 0.9300	 0.0930
V	 0.8540	 0.2270
VV	 0.8840	 0.1620
W	 0.9010	 0.1340
WW	 0.9180	 0.1640
X	 0.9610	 0.2610
XX	 0.9070	 0.1700
Y	 0.9600	 0.2790
YY	 0.9690	 0.1280
Z	 0.9630	 0.1960
ZZ	 0.8200	 0.0790
a	 0.9250	 0.2370
aa	 0.9300	 0.1870
b	 0.9260	 0.1940
bb	 0.9250	 0.1690
c	 0.9340	 0.2190
cc	 0.8720	 0.0800
d	 0.9490	 0.2480
dd	 0.9840	 0.0850
e	 0.9330	 0.2600
ee	 0.8710	 0.1400
f	 0.8840	 0.2180
ff	 0.7890	 0.0360
g	 0.9520	 0.2340
gg	 0.9300	 0.0890
h	 0.9540	 0.2470
i	 0.9150	 0.2250
j	 0.9530	 0.2550
k	 0.9210	 0.2280

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Chain	Atom inclusion	Q-score
l	 0.9440	 0.2480
m	 0.9110	 0.1810
n	 0.8670	 0.1870
o	 0.9080	 0.2270
p	 0.8910	 0.2320
r	 0.9350	 0.2570
s	 0.9540	 0.1780
t	 0.9170	 0.1350