



Full wwPDB EM Validation Report ⓘ

Mar 5, 2026 – 03:49 AM UTC

PDB ID : 6RXZ / pdb_00006rxz
EMDB ID : EMD-10056
Title : Cryo-EM structure of the 90S pre-ribosome (Kre33-Noc4) from *Chaetomium thermophilum*, state b
Authors : Cheng, J.; Kellner, N.; Griesel, S.; Berninghausen, O.; Beckmann, R.; Hurt, E.
Deposited on : 2019-06-10
Resolution : 4.40 Å(reported)

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

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

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

The types of validation reports are described at

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

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

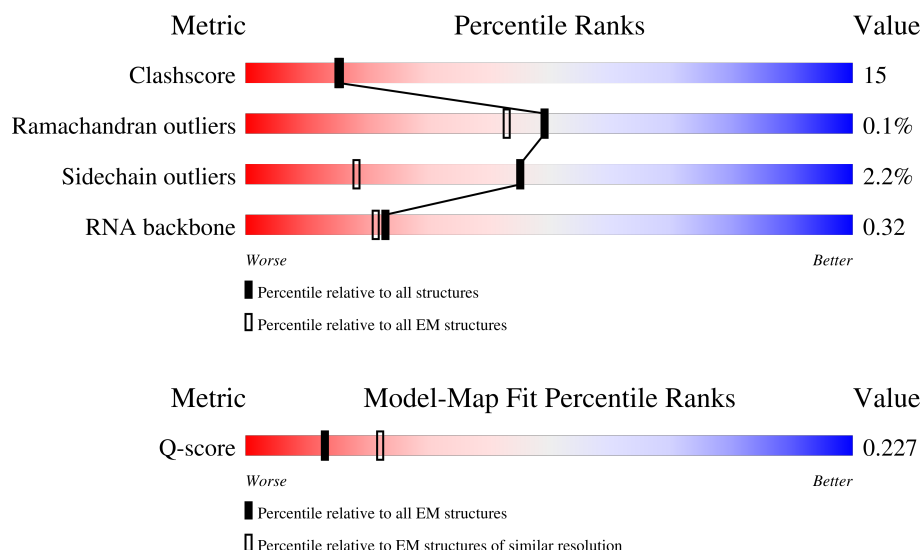
EMDB validation analysis : 0.0.1.dev132
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh &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

1 Overall quality at a glance

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

The reported resolution of this entry is 4.40 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	3132 (3.91 - 4.90)

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

Mol	Chain	Length	Quality of chain
1	UA	904	
2	UB	907	
3	UC	648	

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Mol	Chain	Length	Quality of chain
4	UD	884	
5	UF	414	
6	UG	558	
7	UJ	1802	
8	UK	270	
9	UL	962	
10	UM	912	
11	UN	938	
12	UO	557	
13	UQ	960	
14	UR	618	
15	UU	1049	
16	UX	193	
17	UZ	391	
18	CA	313	
18	CB	313	
19	CC	523	
20	CD	582	
21	CE	127	
21	CF	127	
22	CG	630	
23	CH	411	
24	CI	1163	
25	CJ	183	
26	CK	297	

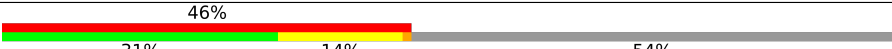
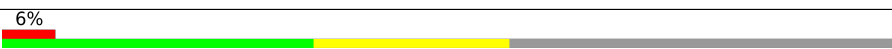
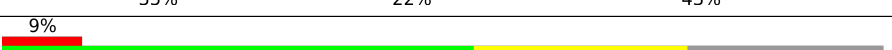
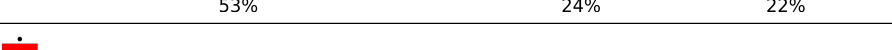
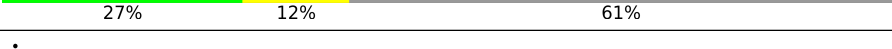
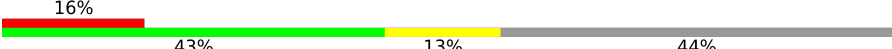
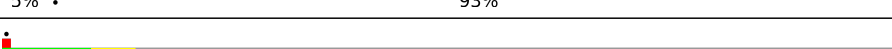
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Mol	Chain	Length	Quality of chain
27	CL	785	
28	CM	446	
29	CN	252	
29	CO	252	
30	CP	322	
31	CQ	259	
32	CR	1073	
32	CS	1073	
33	CT	203	
34	Cb	264	
35	Cc	212	
36	Cd	239	
37	Ce	203	
38	Cf	202	
39	Cg	190	
40	Ch	151	
41	Ci	150	
42	Cj	143	
43	Ck	161	
44	Cm	130	
45	Cn	145	
46	Co	136	
47	Cp	68	
48	CU	311	
49	C1	2323	

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Mol	Chain	Length	Quality of chain
50	C2	230	
51	UV	1171	
52	CV	322	
53	CW	668	
54	UT	2612	
55	UH	930	
56	UE	410	
56	UI	410	
57	US	549	
58	Cl	156	
59	CX	480	
60	CY	381	
61	CZ	609	
62	UP	364	
63	Cz	1796	

2 Entry composition

There are 64 unique types of molecules in this entry. The entry contains 218474 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called Periodic tryptophan protein 2-like protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	UA	839	Total	C	N	O	S	0	0
			6366	4101	1136	1105	24		

- Molecule 2 is a protein called Utp2.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	UB	512	Total	C	N	O	S	0	0
			4079	2576	781	711	11		

- Molecule 3 is a protein called Utp3.

Mol	Chain	Residues	Atoms				AltConf	Trace
3	UC	74	Total	C	N	O	0	0
			588	371	120	97		

- Molecule 4 is a protein called Utp4.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	UD	772	Total	C	N	O	S	0	0
			6071	3851	1093	1103	24		

- Molecule 5 is a protein called Utp6.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	UF	331	Total	C	N	O	S	0	0
			2591	1674	504	399	14		

- Molecule 6 is a protein called Utp7.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	UG	479	Total	C	N	O	S	0	0
			3717	2369	700	636	12		

- Molecule 7 is a protein called UTP10.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	UJ	1090	Total	C	N	O	S	0	0
			8416	5408	1452	1525	31		

- Molecule 8 is a protein called U3 small nucleolar RNA-associated protein 11.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	UK	217	Total	C	N	O	S	0	0
			1687	1062	351	269	5		

- Molecule 9 is a protein called Utp12.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	UL	785	Total	C	N	O	S	0	0
			6175	3940	1088	1130	17		

- Molecule 10 is a protein called Utp13.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	UM	679	Total	C	N	O	S	0	0
			5273	3351	924	986	12		

- Molecule 11 is a protein called Utp14.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	UN	177	Total	C	N	O	S	0	0
			1401	892	263	239	7		

- Molecule 12 is a protein called Utp15.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	UO	504	Total	C	N	O	S	0	0
			3819	2422	699	684	14		

- Molecule 13 is a protein called Utp17.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	UQ	789	Total	C	N	O	S	0	0
			6008	3831	1037	1119	21		

- Molecule 14 is a protein called Utp18.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	UR	447	Total	C	N	O	S	0	0
			3491	2209	656	616	10		

- Molecule 15 is a protein called Putative U3 snoRNP protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	UU	902	Total	C	N	O	S	0	0
			6734	4336	1236	1136	26		

- Molecule 16 is a protein called Utp24.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	UX	190	Total	C	N	O	S	0	0
			1470	932	282	246	10		

- Molecule 17 is a protein called Utp30.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	UZ	235	Total	C	N	O	S	0	0
			1815	1184	330	298	3		

- Molecule 18 is a protein called Nop1.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	CA	242	Total	C	N	O	S	0	0
			1778	1149	327	293	9		
18	CB	237	Total	C	N	O	S	0	0
			1816	1154	318	335	9		

- Molecule 19 is a protein called Putative nucleolar protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	CC	387	Total	C	N	O	S	0	0
			2866	1836	527	492	11		

- Molecule 20 is a protein called Nop58.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	CD	420	Total	C	N	O	S	0	0
			3150	2023	560	557	10		

- Molecule 21 is a protein called Snu13.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	CE	121	Total	C	N	O	S	0	0
			879	557	165	154	3		
21	CF	120	Total	C	N	O	S	0	0
			864	550	161	150	3		

- Molecule 22 is a protein called Rrp9.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	CG	416	Total	C	N	O	S	0	0
			3245	2065	587	580	13		

- Molecule 23 is a protein called RNA 3'-terminal phosphate cyclase-like protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	CH	389	Total	C	N	O	S	0	0
			2888	1827	526	525	10		

- Molecule 24 is a protein called Bms1.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	CI	822	Total	C	N	O	S	0	0
			6486	4169	1213	1077	27		

- Molecule 25 is a protein called Imp3.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	CJ	179	Total	C	N	O	S	0	0
			1434	918	283	226	7		

- Molecule 26 is a protein called Putative U3 small nucleolar ribonucleoprotein.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	CK	297	Total	C	N	O	S	0	0
			2329	1476	445	400	8		

- Molecule 27 is a protein called Putative U3 small nucleolar ribonucleoprotein protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	CL	231	Total	C	N	O	S	0	0
			1786	1114	339	327	6		

- Molecule 28 is a protein called Sof1.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	CM	445	Total	C	N	O	S	0	0
			3501	2195	672	619	15		

- Molecule 29 is a protein called Emg1.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	CN	226	Total	C	N	O	S	0	0
			1762	1119	306	327	10		
29	CO	215	Total	C	N	O	S	0	0
			1683	1067	293	313	10		

- Molecule 30 is a protein called KRR1 small subunit processome component.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	CP	187	Total	C	N	O	S	0	0
			1504	961	269	265	9		

- Molecule 31 is a protein called Pre-rRNA-processing protein PNO1.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	CQ	175	Total	C	N	O	S	0	0
			1361	862	250	242	7		

- Molecule 32 is a protein called Kre33.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	CR	760	Total	C	N	O	S	0	0
			5989	3851	1024	1087	27		
32	CS	760	Total	C	N	O	S	0	0
			5989	3851	1024	1087	27		

- Molecule 33 is a protein called Fcf2.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	CT	131	Total	C	N	O	S	0	0
			1035	656	197	178	4		

- Molecule 34 is a protein called 40S ribosomal protein S4.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	Cb	232	Total	C	N	O	S	0	0
			1851	1179	340	325	7		

- Molecule 35 is a protein called 40S ribosomal protein s5-like protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	Cc	192	Total	C	N	O	S	0	0
			1464	926	278	253	7		

- Molecule 36 is a protein called 40S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	Cd	226	Total	C	N	O	S	0	0
			1819	1138	363	313	5		

- Molecule 37 is a protein called 40S ribosomal protein S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	Ce	159	Total	C	N	O	S	0	0
			1279	810	237	232			

- Molecule 38 is a protein called 40S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	Cf	174	Total	C	N	O	S	0	0
			1398	872	283	242	1		

- Molecule 39 is a protein called 40S ribosomal protein s9-like protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	Cg	159	Total	C	N	O	S	0	0
			1242	801	255	184	2		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
40	Ch	49	Total	C	N	O	S	0	0
			406	265	79	62			

- Molecule 41 is a protein called 40S ribosomal protein S14-like protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	Ci	115	Total	C	N	O	S	0	0
			791	492	154	141	4		

- Molecule 42 is a protein called 40S ribosomal protein S16-like protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	Cj	126	Total	C	N	O	S	0	0
			943	613	177	151	2		

- Molecule 43 is a protein called 40S ribosomal protein S11-like protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	Ck	140	Total	C	N	O	S	0	0
			1163	750	224	184	5		

- Molecule 44 is a protein called 40S ribosomal protein S22-like protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	Cm	126	Total	C	N	O	S	0	0
			985	632	184	164	5		

- Molecule 45 is a protein called 40S ribosomal protein s23-like protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	Cn	96	Total	C	N	O	S	0	0
			702	456	134	110	2		

- Molecule 46 is a protein called 40S ribosomal protein S24.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	Co	92	Total	C	N	O	S	0	0
			741	474	139	126	2		

- Molecule 47 is a protein called 40S ribosomal protein S28-like protein.

Mol	Chain	Residues	Atoms				AltConf	Trace
47	Cp	61	Total	C	N	O	0	0
			455	284	97	74		

- Molecule 48 is a protein called Faf1.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	CU	114	Total	C	N	O	S	0	0
			882	544	178	154	6		

- Molecule 49 is a RNA chain called 35S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	C1	1487	Total	C	N	O	P	0	0
			31732	14158	5691	10396	1487		

- Molecule 50 is a RNA chain called U3 snoRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	C2	230	Total	C	N	O	P	0	0
			4891	2182	856	1623	230		

- Molecule 51 is a protein called U3 small nucleolar RNA-associated protein 22.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	UV	1061	Total	C	N	O	S	0	0
			8424	5399	1480	1523	22		

- Molecule 52 is a protein called Rrp7.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	CV	148	Total	C	N	O	S	0	0
			1145	729	198	216	2		

- Molecule 53 is a protein called Ribosome biogenesis protein ENP2.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	CW	382	Total	C	N	O	S	0	0
			2924	1857	530	524	13		

- Molecule 54 is a protein called Utp20.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	UT	2028	Total	C	N	O	S	0	0
			16000	10303	2813	2816	68		

- Molecule 55 is a protein called Utp8.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	UH	359	Total	C	N	O	S	0	0
			2809	1773	496	527	13		

- Molecule 56 is a protein called Utp5.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	UE	125	Total	C	N	O	S	0	0
			972	608	183	175	6		
56	UI	125	Total	C	N	O	S	0	0
			972	608	183	175	6		

- Molecule 57 is a protein called Noc4.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	US	451	Total	C	N	O	S	0	0
			3672	2389	608	660	15		

- Molecule 58 is a protein called Rps18.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	Cl	80	Total	C	N	O	S	0	0
			633	400	115	117	1		

- Molecule 59 is a protein called Enp1.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	CX	267	Total	C	N	O	S	0	0
			2122	1380	374	358	10		

- Molecule 60 is a protein called U3 small nucleolar ribonucleoprotein protein lcp5-like protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	CY	122	Total	C	N	O	S	0	0
			975	590	194	188	3		

- Molecule 61 is a protein called Bfr2.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	CZ	42	Total	C	N	O	S	0	0
			354	223	68	62	1		

- Molecule 62 is a protein called Utp16.

Mol	Chain	Residues	Atoms				AltConf	Trace
62	UP	54	Total	C	N	O	0	0
			422	264	88	70		

- Molecule 63 is a protein called Rrp5.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	Cz	275	Total	C	N	O	S	0	0
			2259	1435	401	420	3		

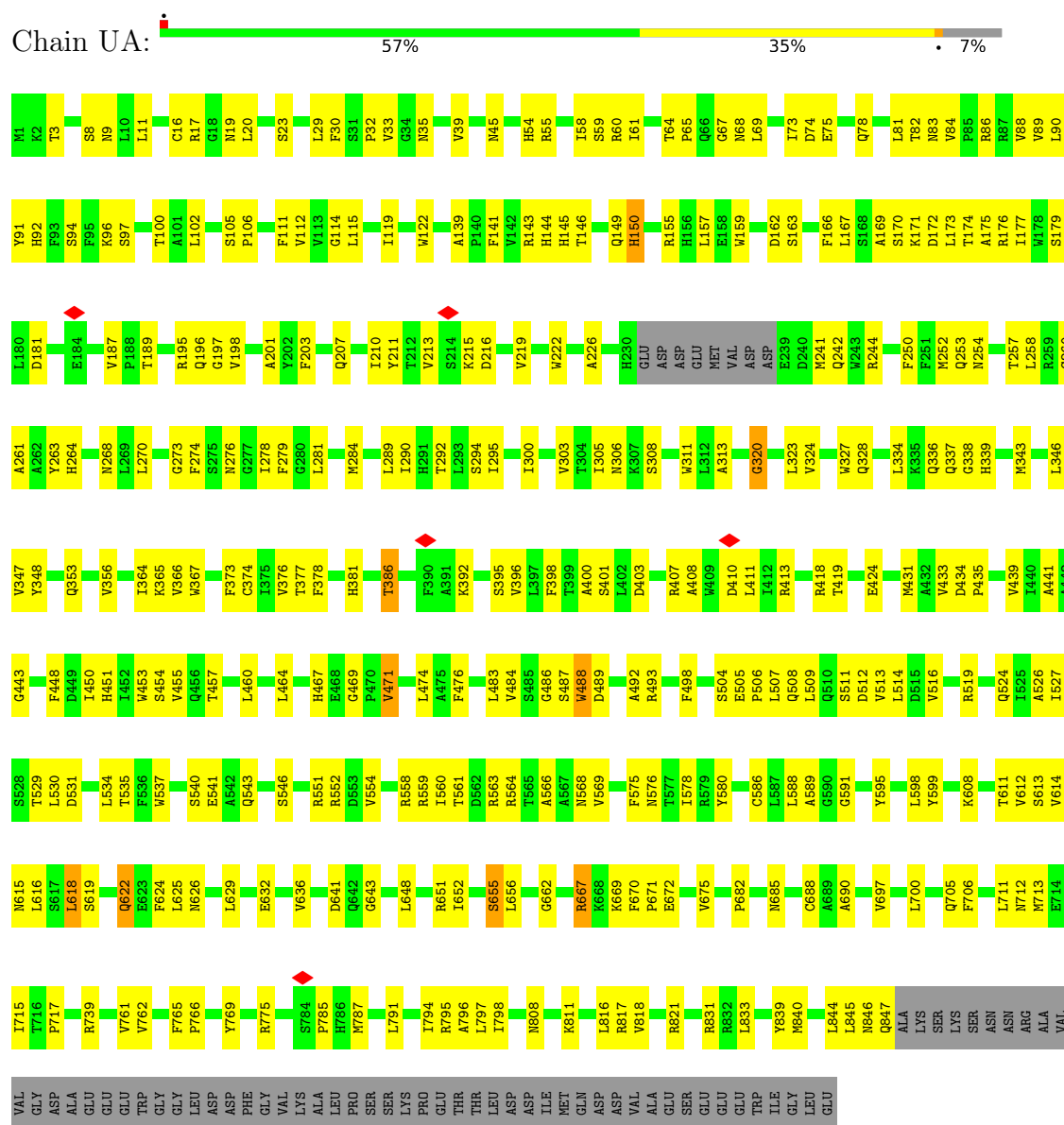
- Molecule 64 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
64	UX	1	Total	Zn	0
			1	1	

3 Residue-property plots

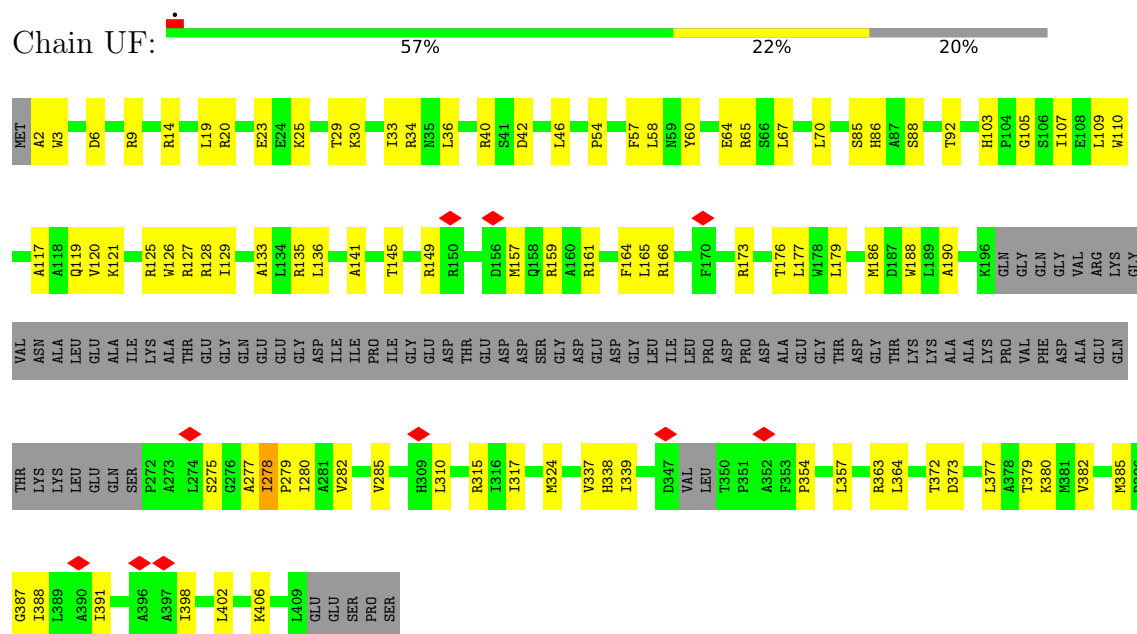
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion 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: Periodic tryptophan protein 2-like protein

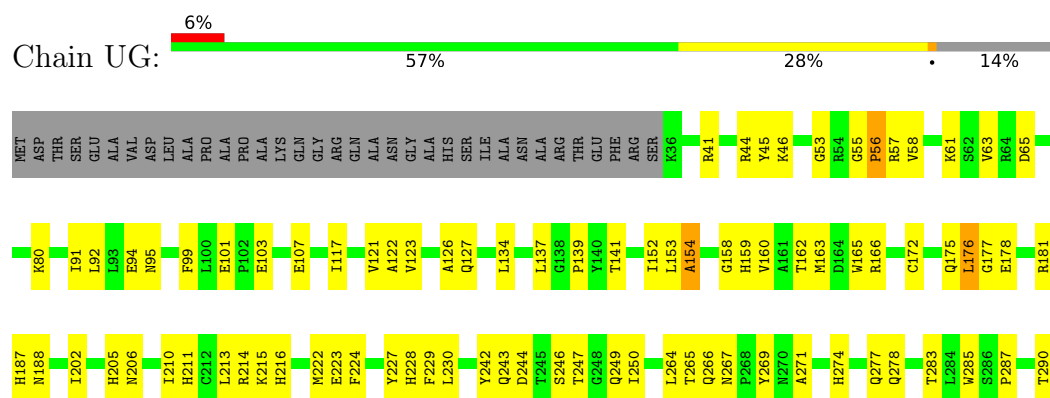


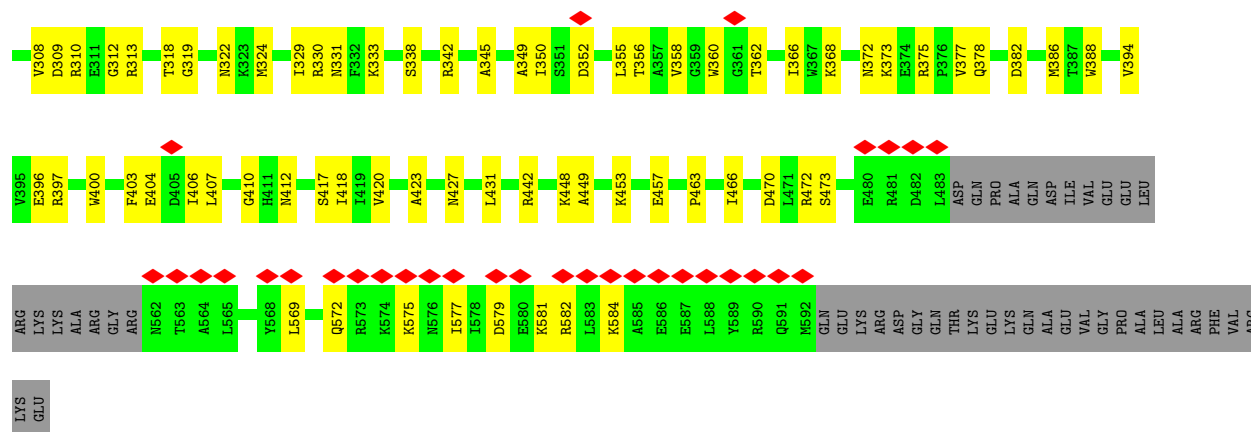
- Molecule 2: Utp2

- Molecule 5: Utp6

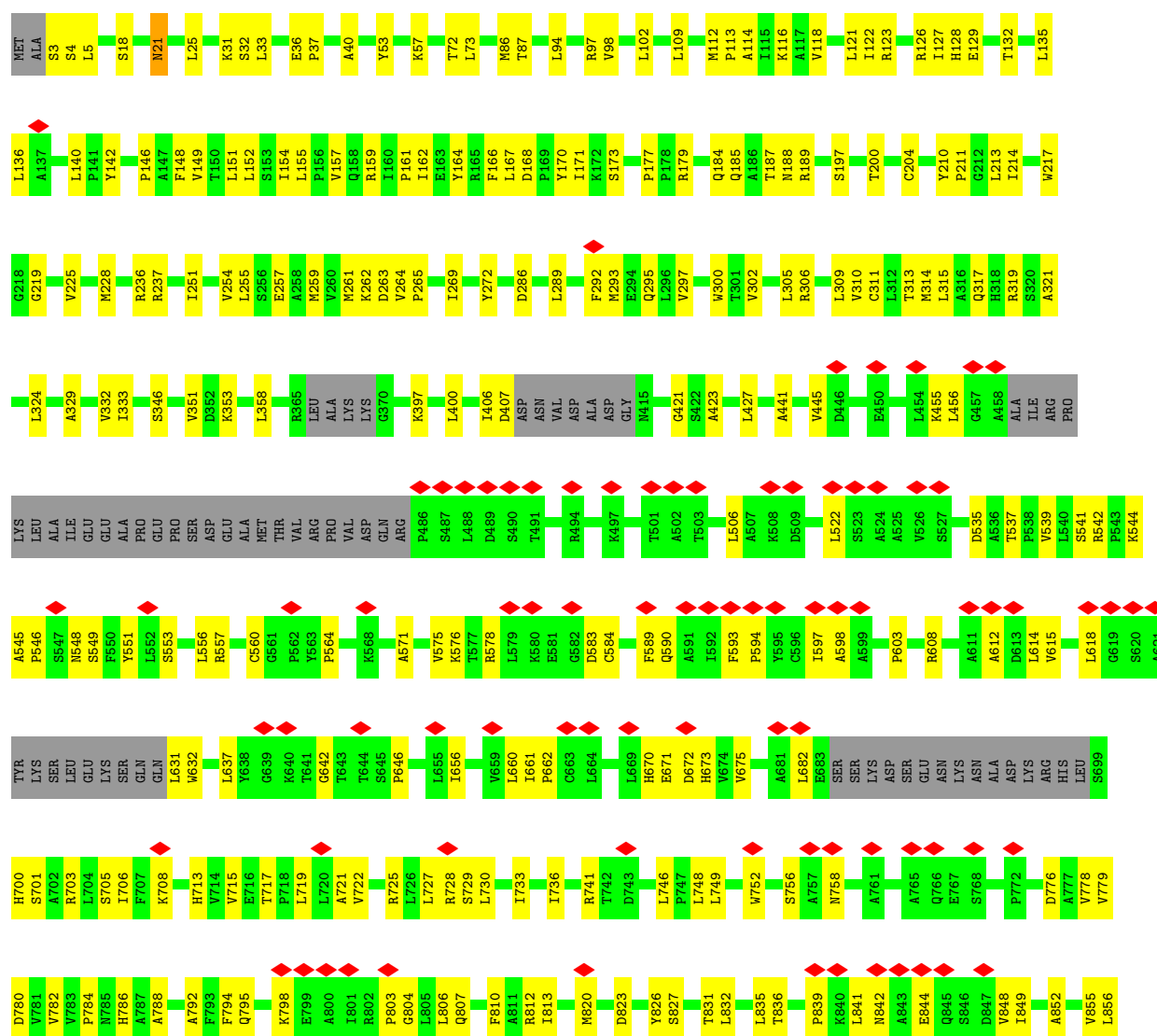
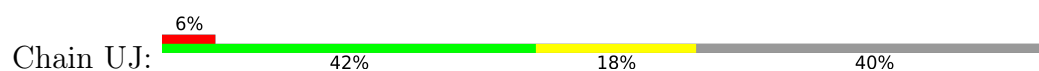


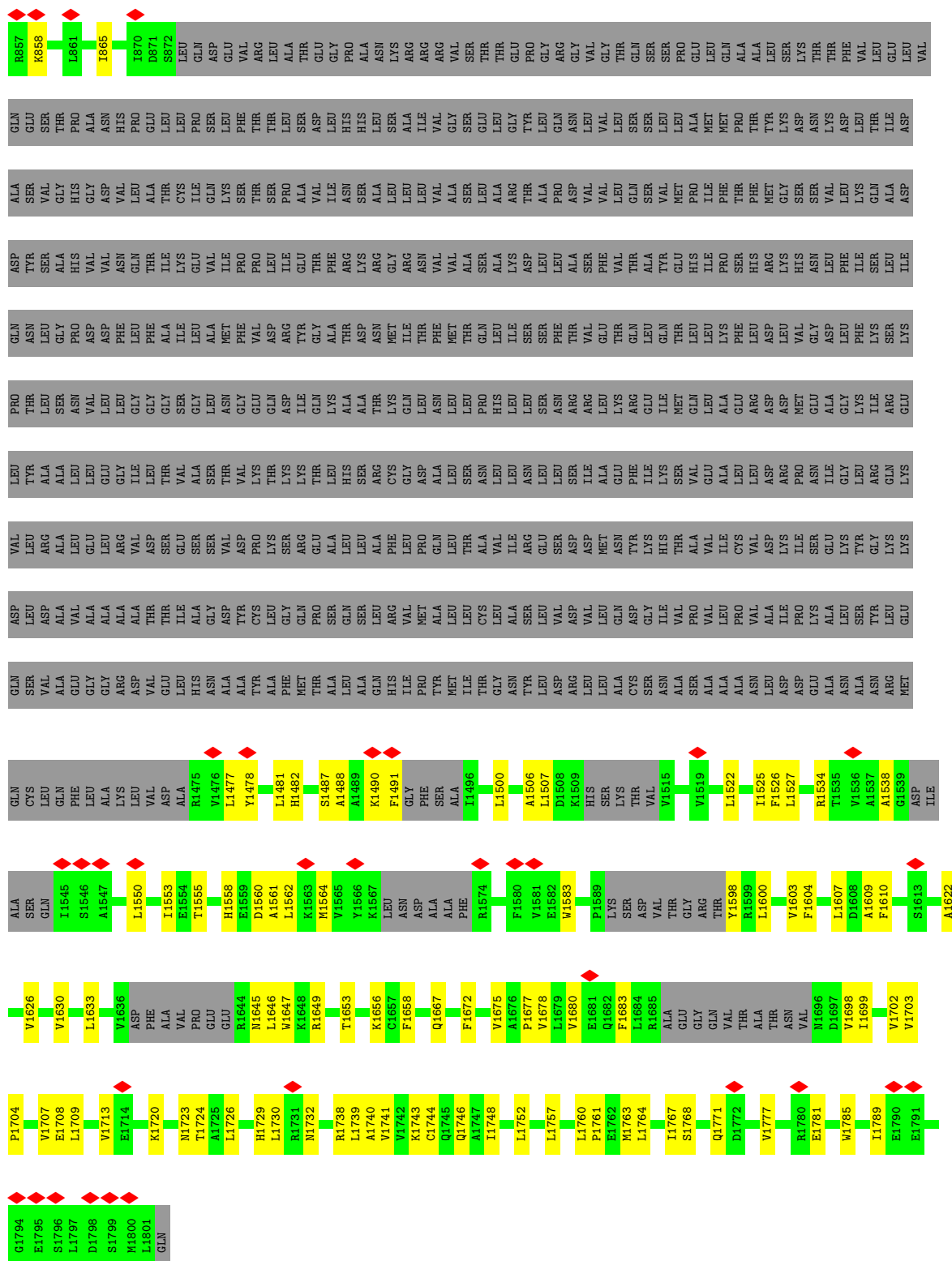
- Molecule 6: Utp7





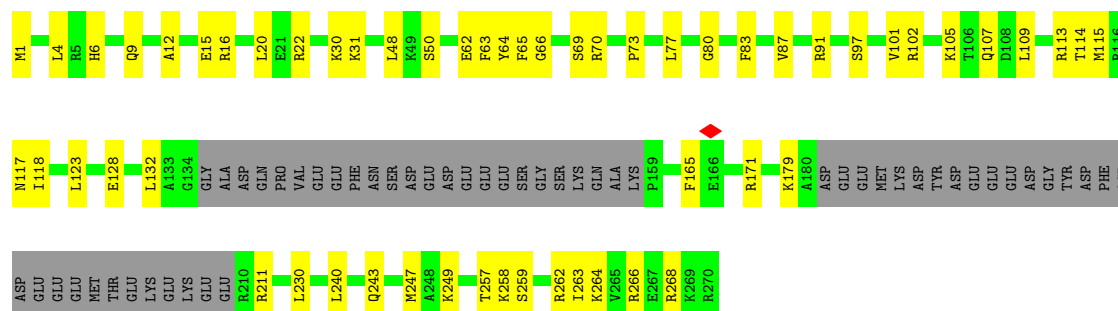
● Molecule 7: UTP10



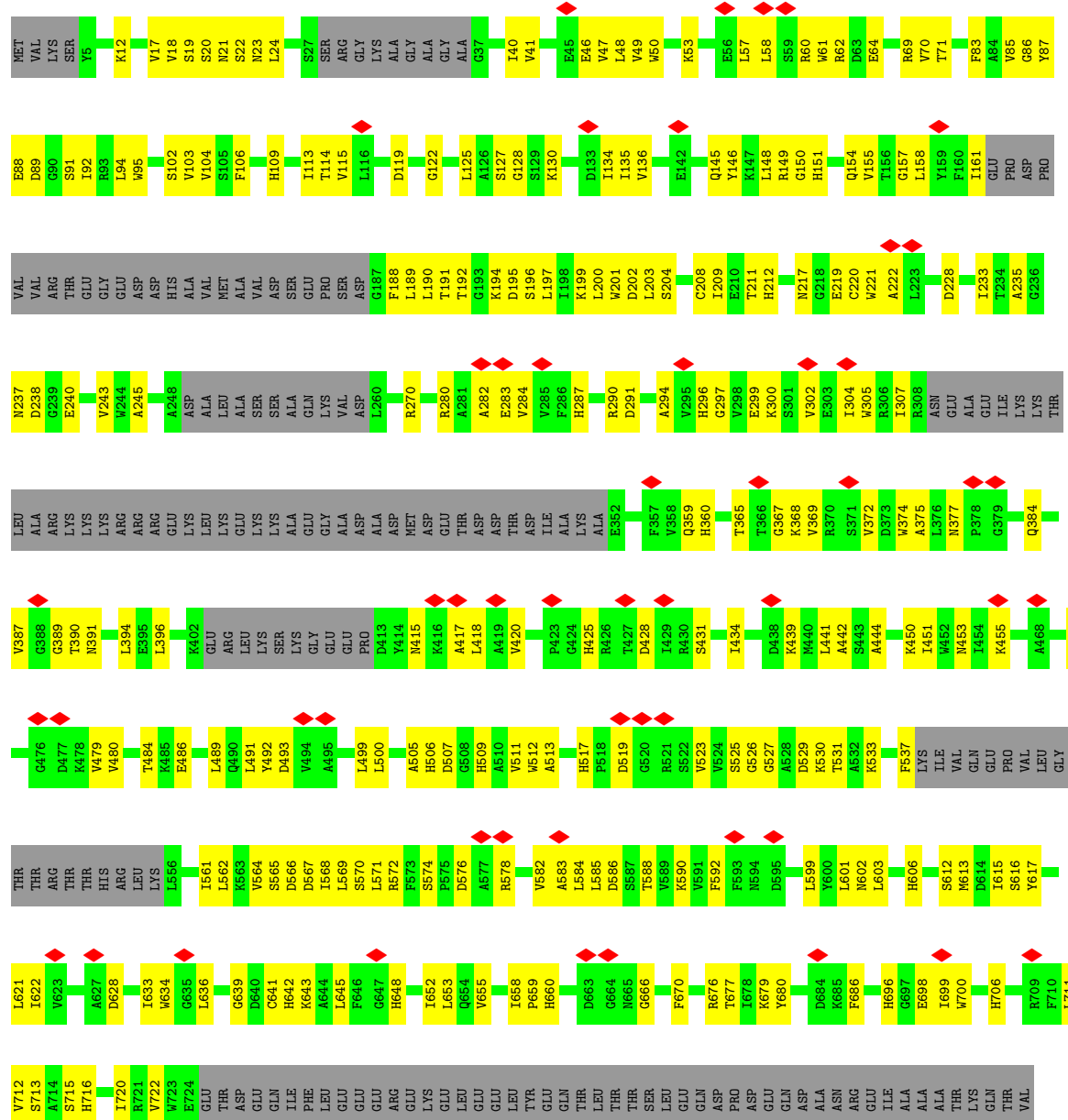


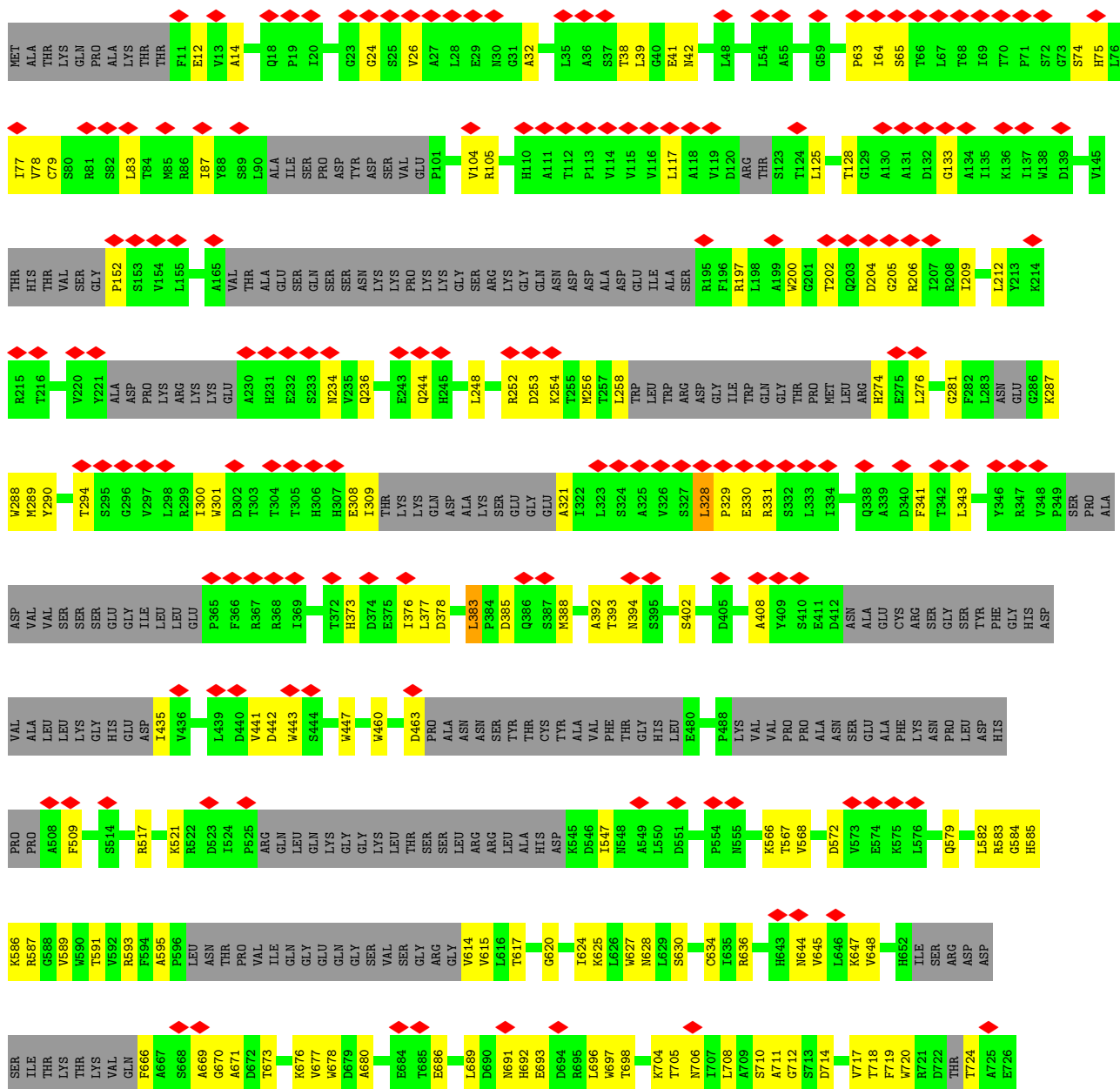
- Molecule 8: U3 small nucleolar RNA-associated protein 11

Chain UK:

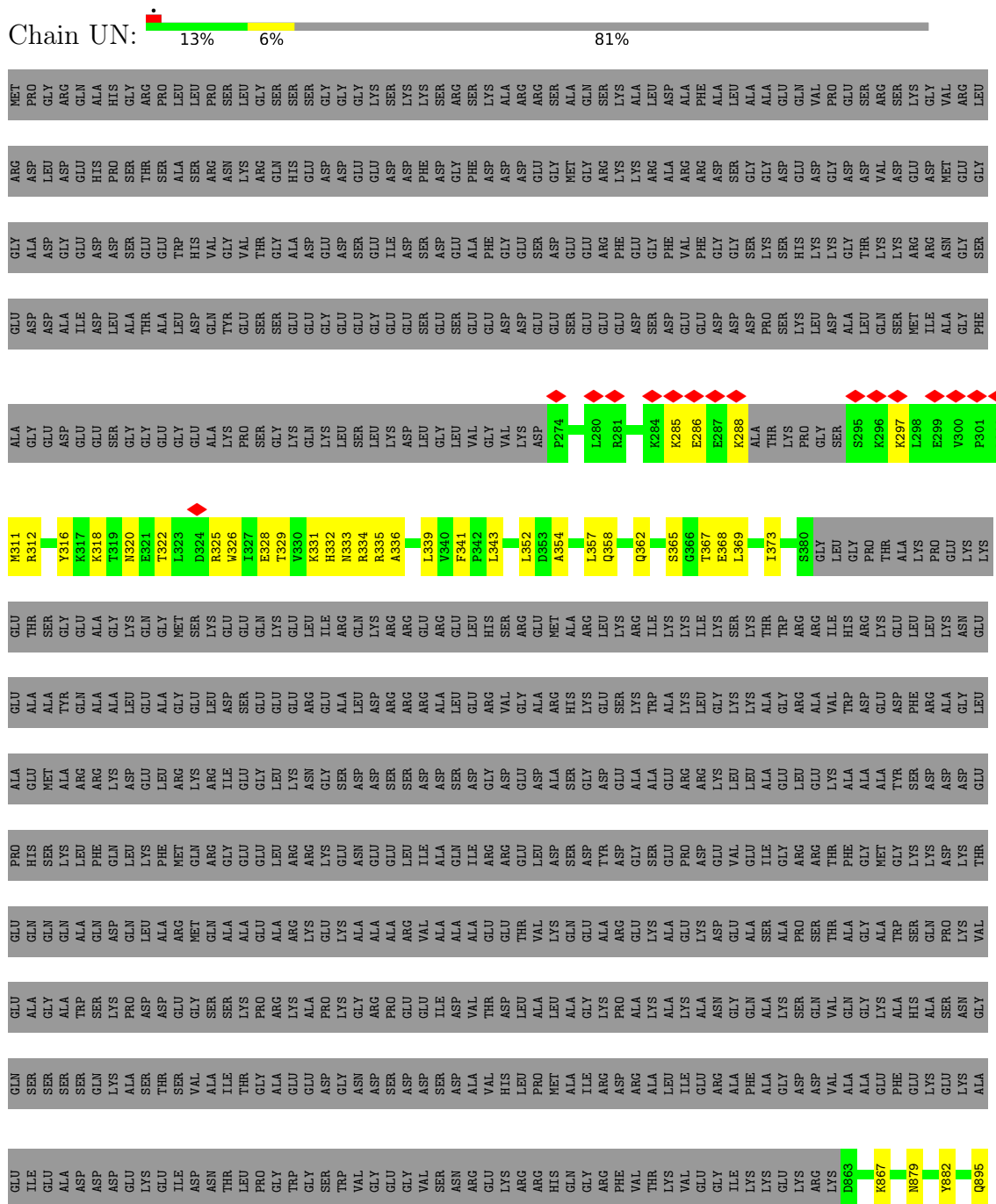


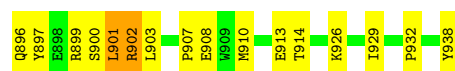
• Molecule 9: Utp12





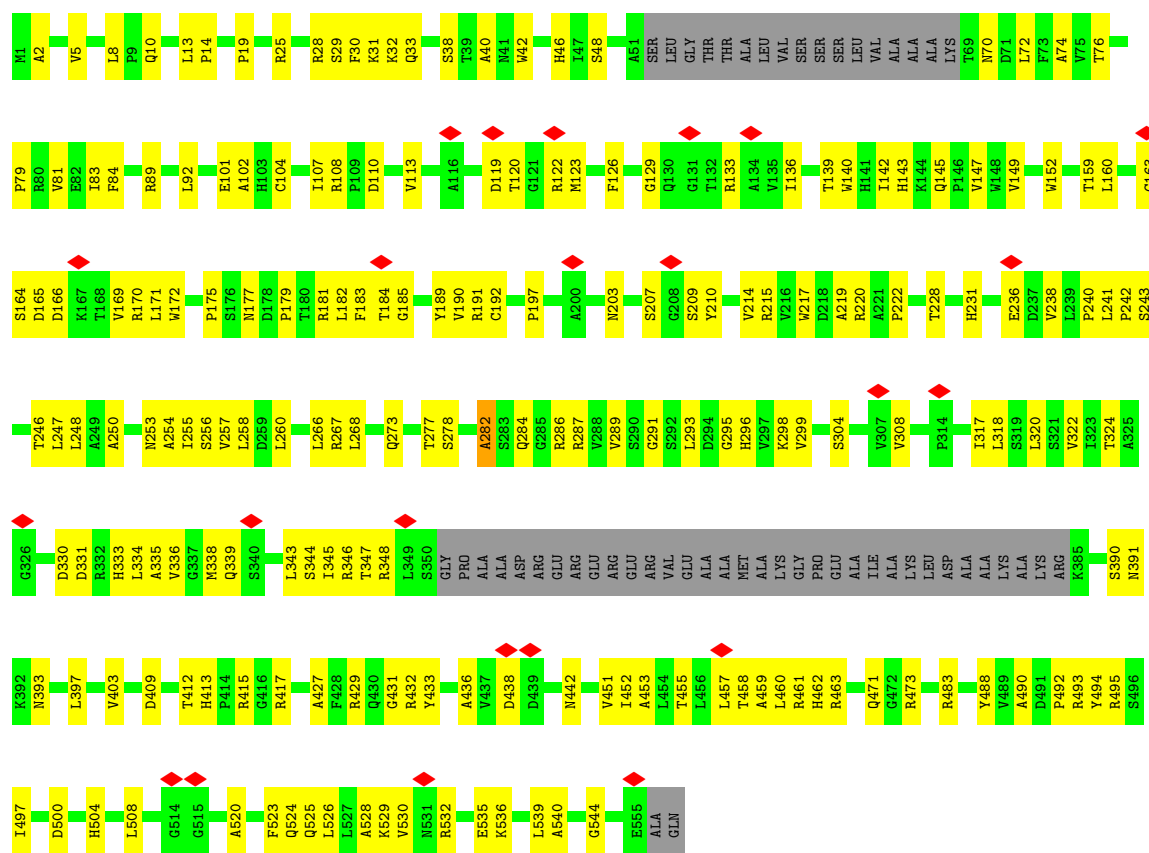
- Molecule 11: Utp14





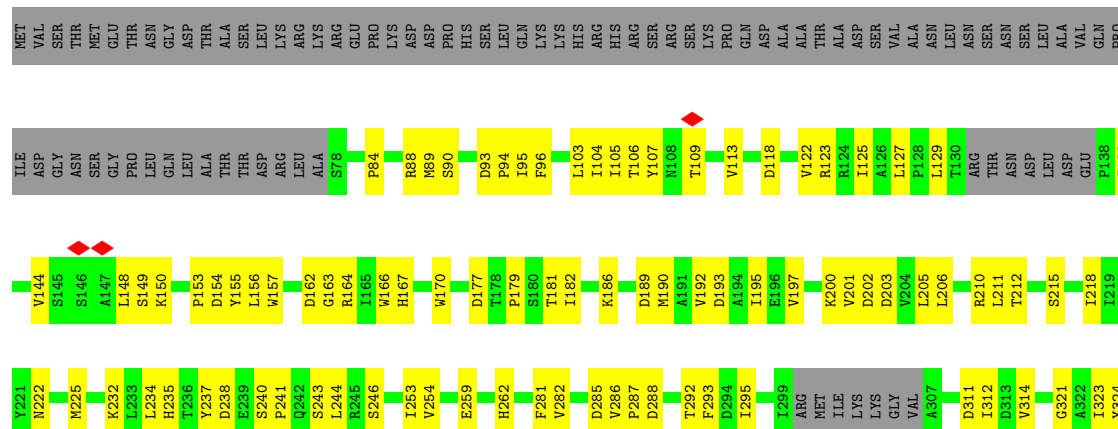
• Molecule 12: Utp15

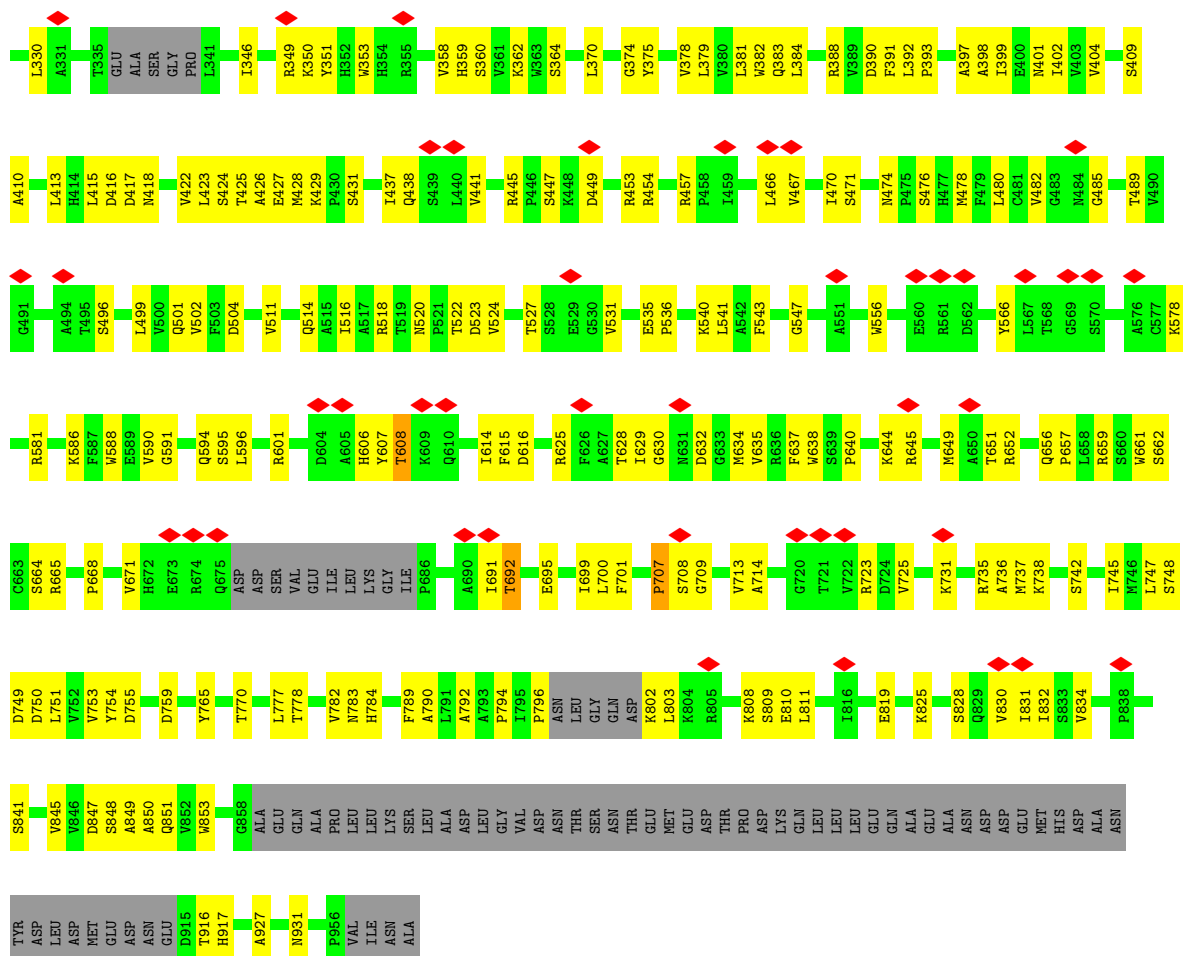
Chain UO: 55% 35% 10%



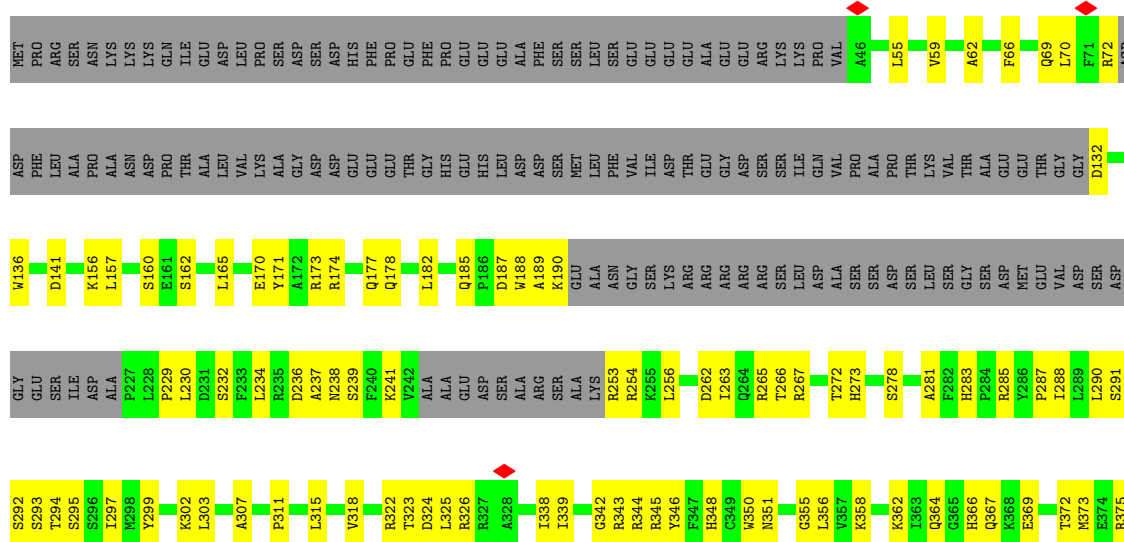
• Molecule 13: Utp17

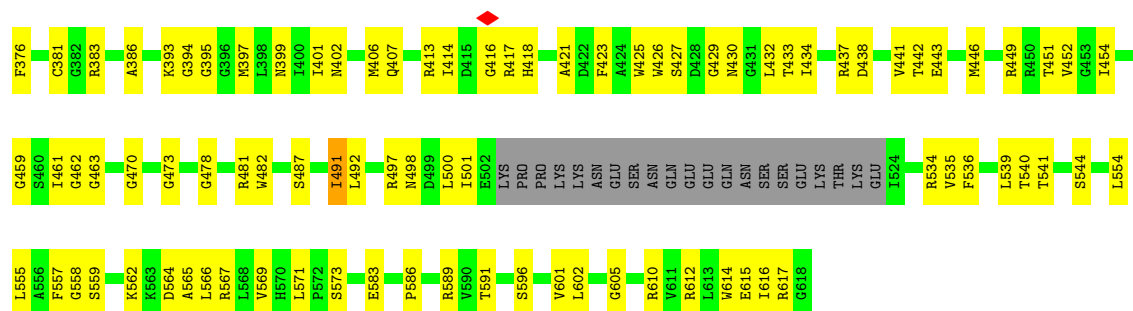
Chain UQ: 5% 52% 30% 18%



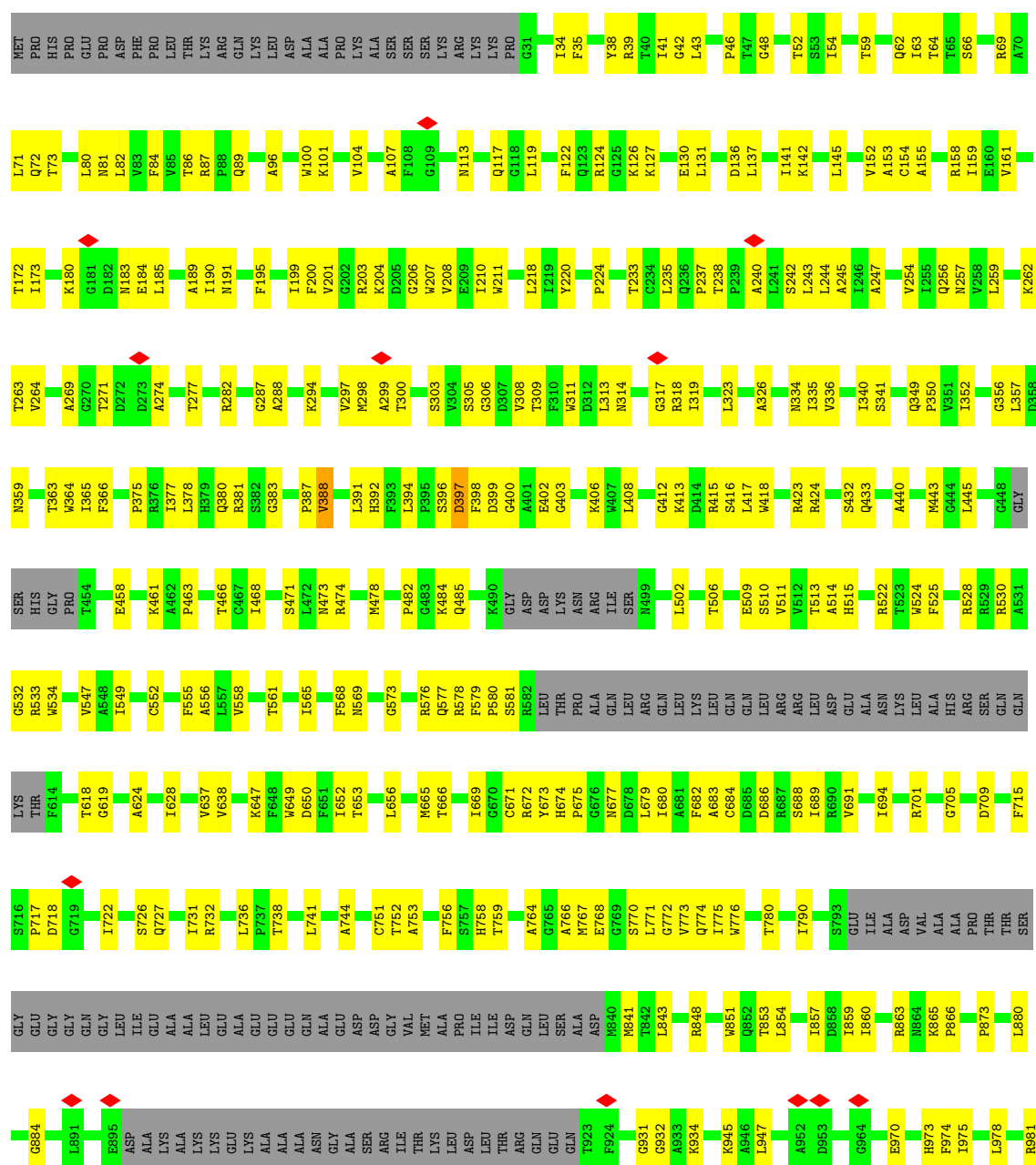


• Molecule 14: Utp18



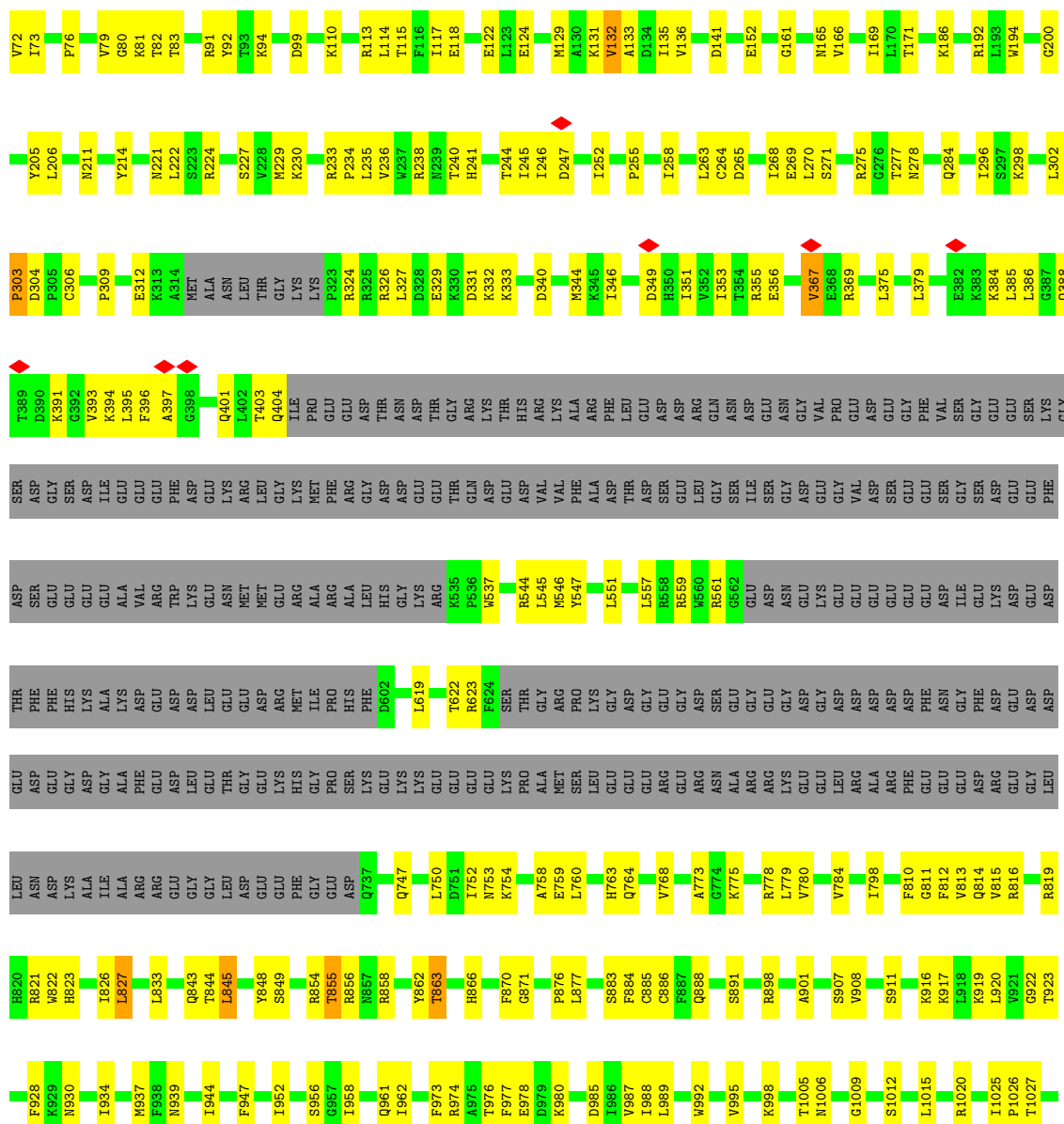


• Molecule 15: Putative U3 snoRNP protein

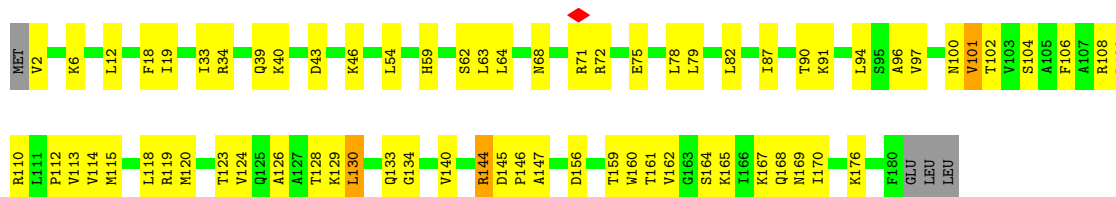


MET	PRO	L3	L4	I5	L6	T7	E8	T9	S10	A11	G12	Y13	A14	L15	F16	K17	A18	ALA	ASP	LVS	LEU	LEU	ASP	ASP	ASP	ASN	VAL	VAL	SER	GLU	ARG	LEU	LEU	THR	ASP	LVS	ILE	ILE	LVS	GLU	T43	K44	K45	K46	E47	F48	A49	K50	F51	D52	S53	A54	A55	I56	A57	V58	E59
-----	-----	----	----	----	----	----	----	----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----



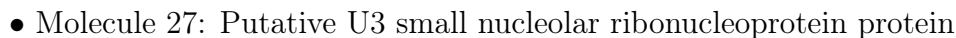


• Molecule 25: Imp3



• Molecule 26: Putative U3 small nucleolar ribonucleoprotein

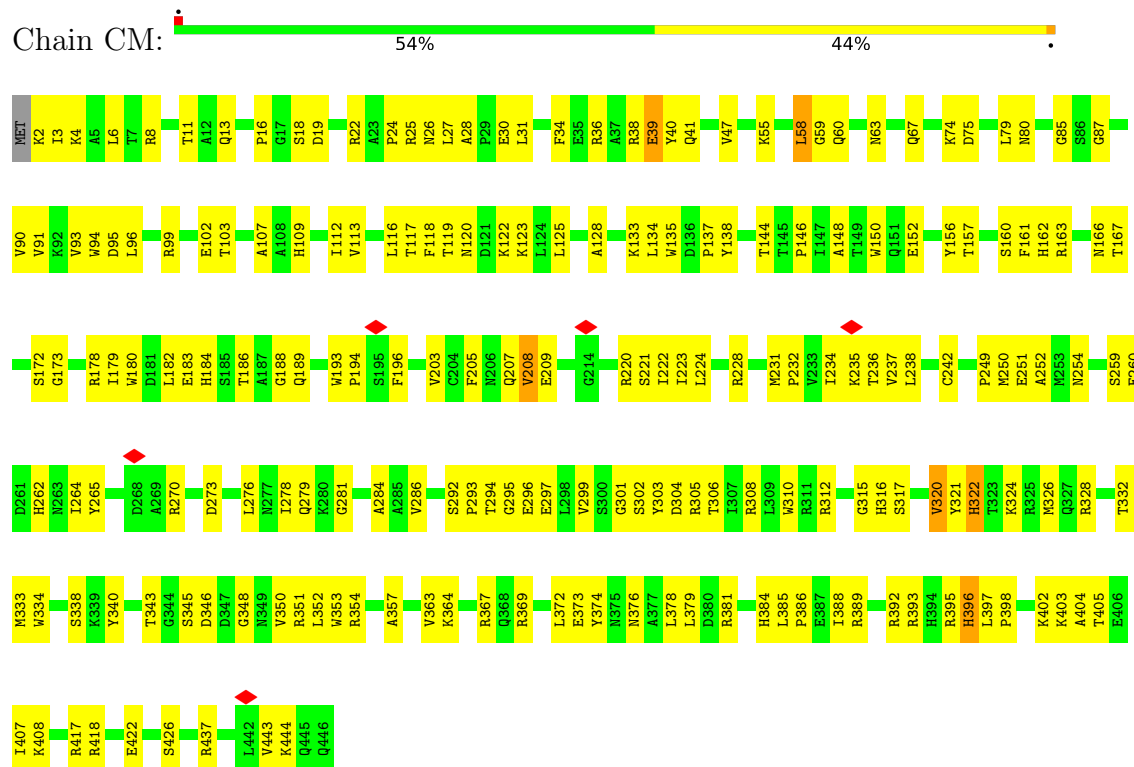
Opinion	Percentage
Doing a good job	62%
Doing a bad job	37%



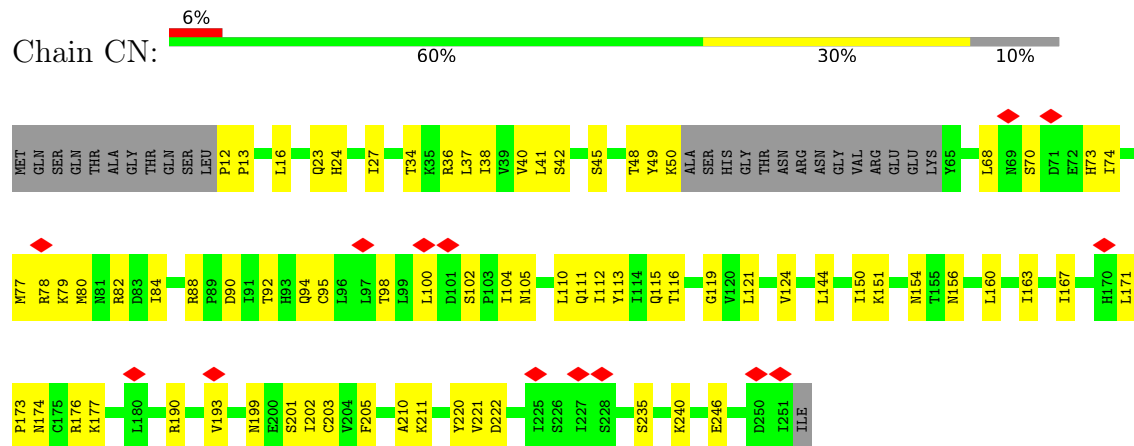
Response	Percentage
Yes	20%
No	9%
Don't know	71%



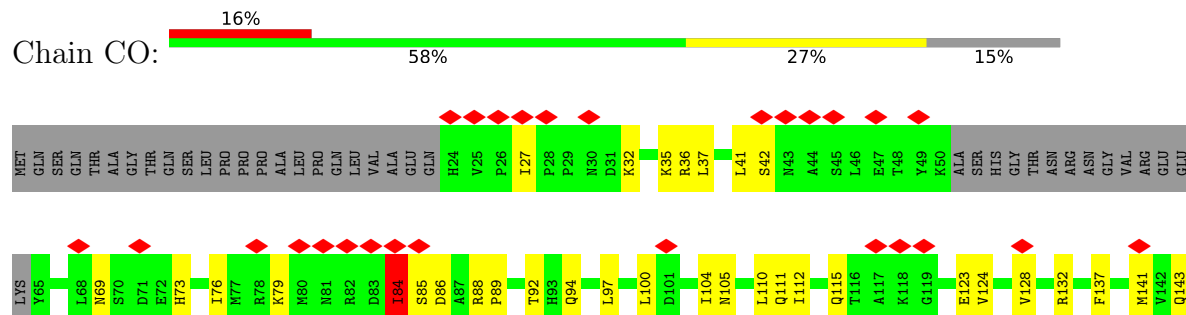
- Molecule 28: Sof1

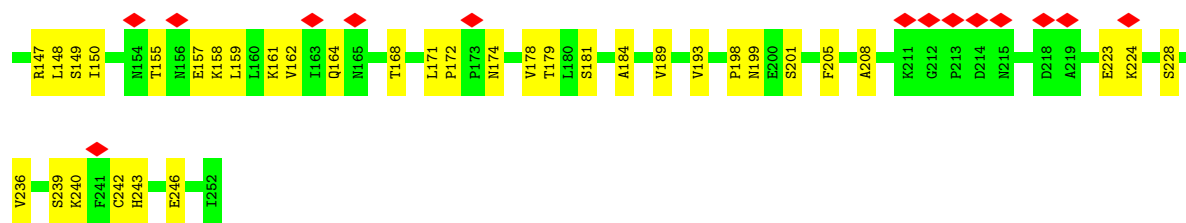


- Molecule 29: Emg1

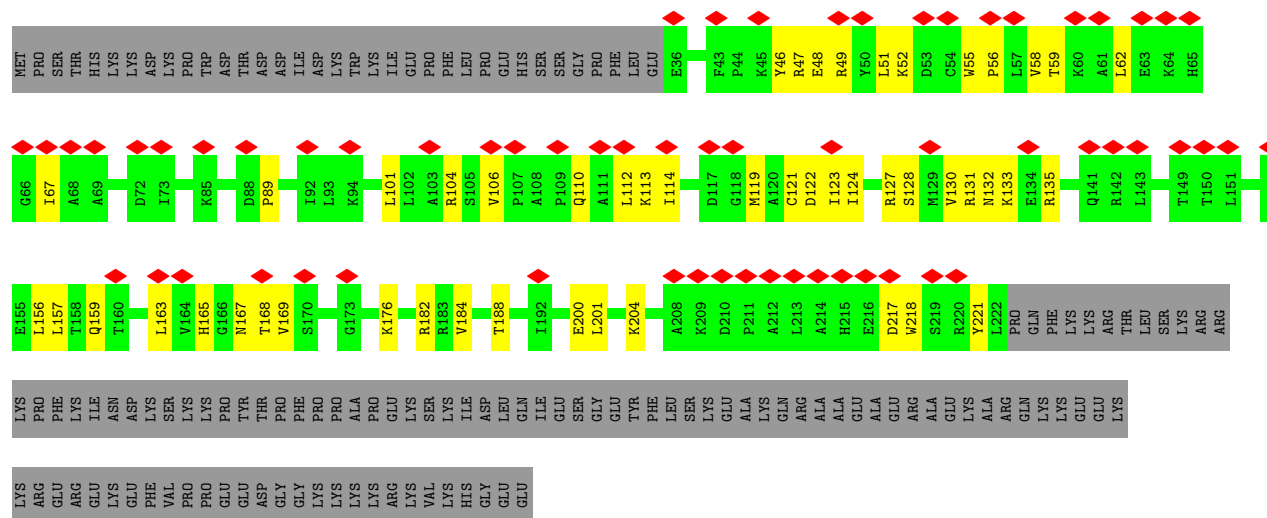


- Molecule 29: Emg1

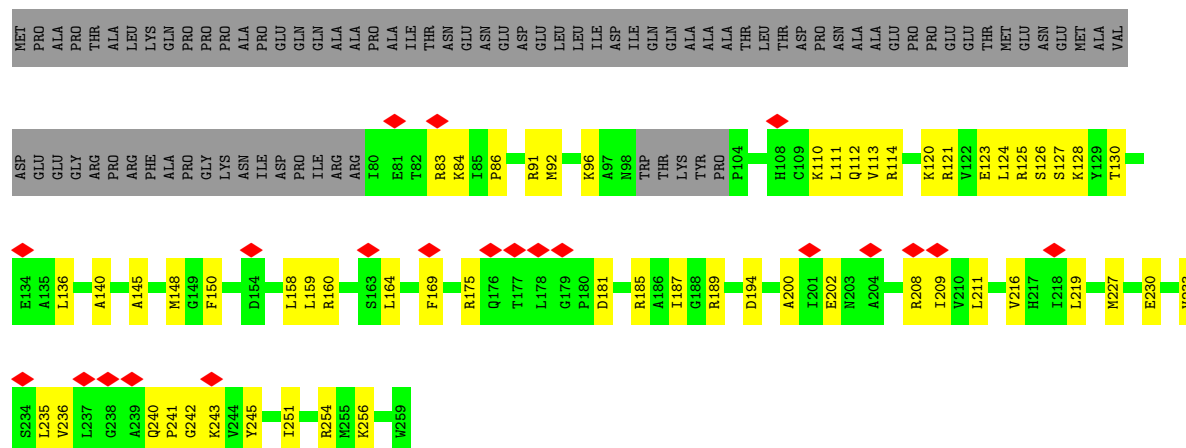




- Molecule 30: KRR1 small subunit processome component



- Molecule 31: Pre-rRNA-processing protein PNO1

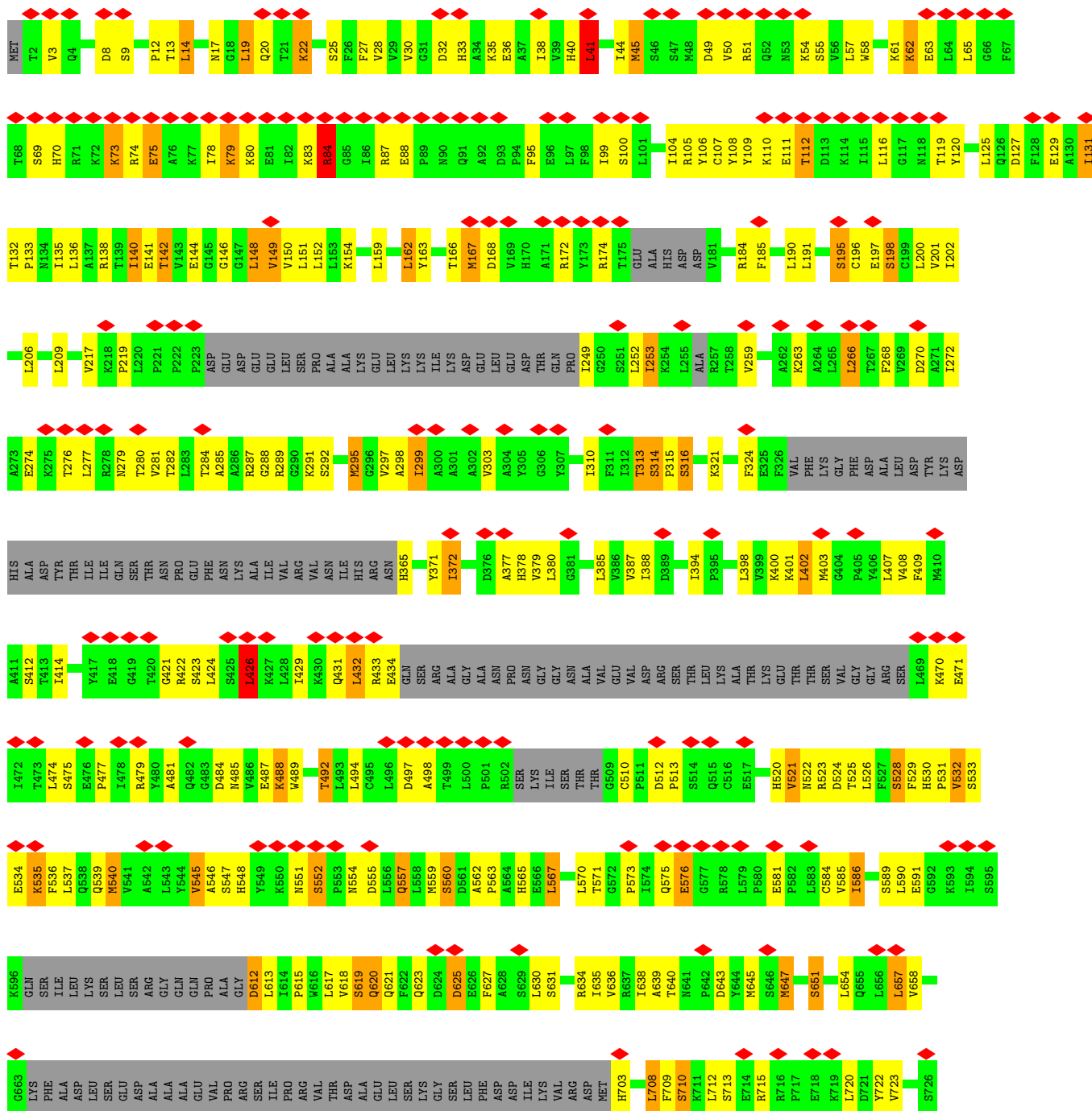


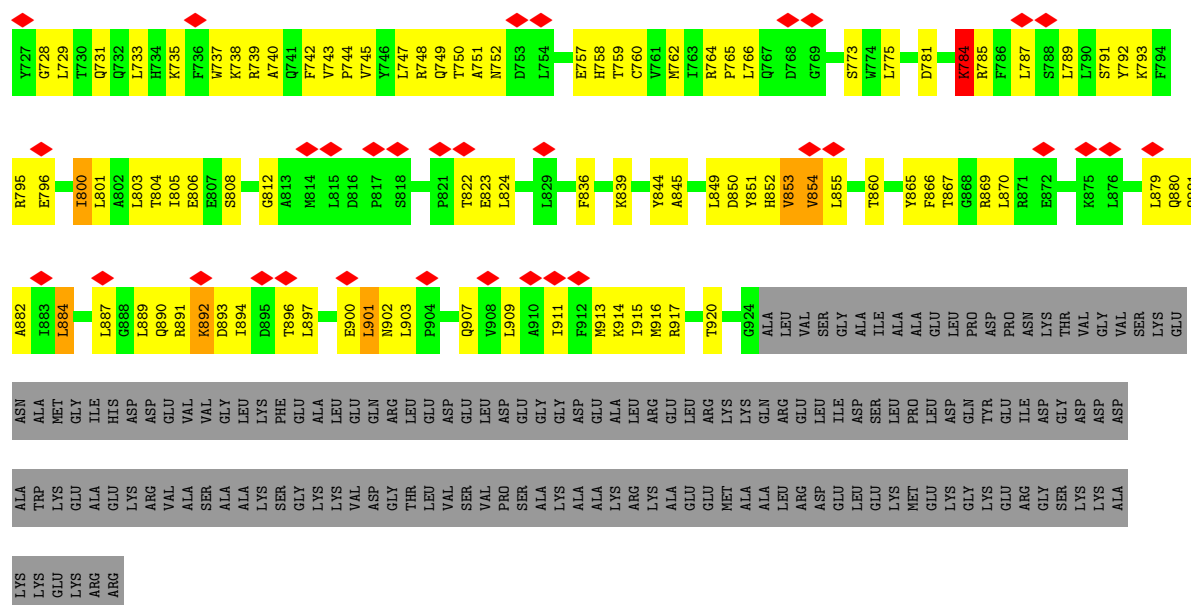
- Molecule 32: Kre33





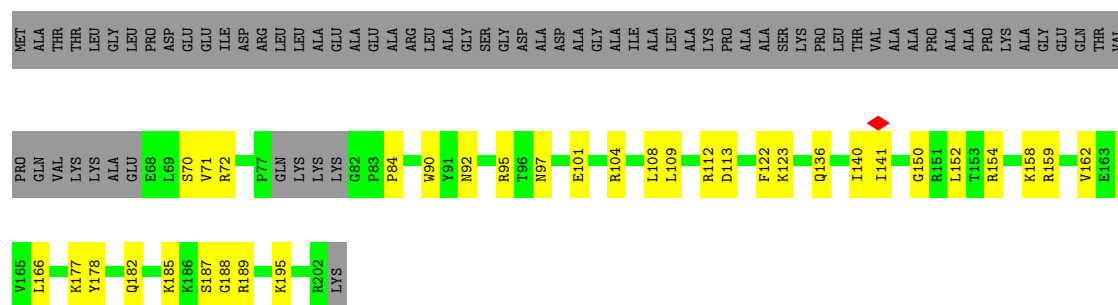
- Molecule 32: Kre33





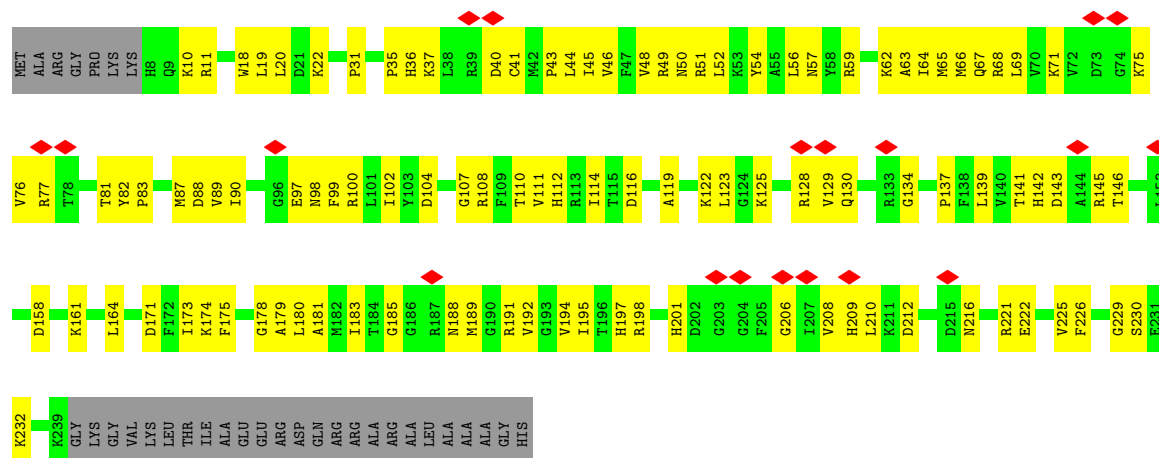
• Molecule 33: Fcf2

Chain CT: 47% 17% 35%



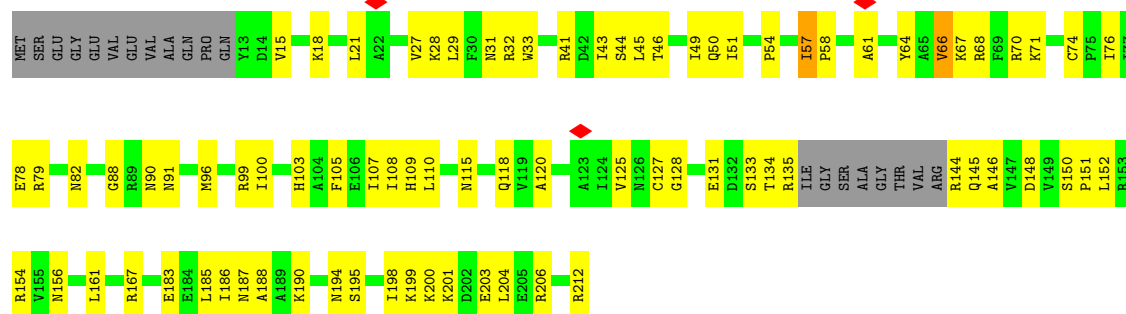
• Molecule 34: 40S ribosomal protein S4

Chain Cb: 7% 47% 41% 12%



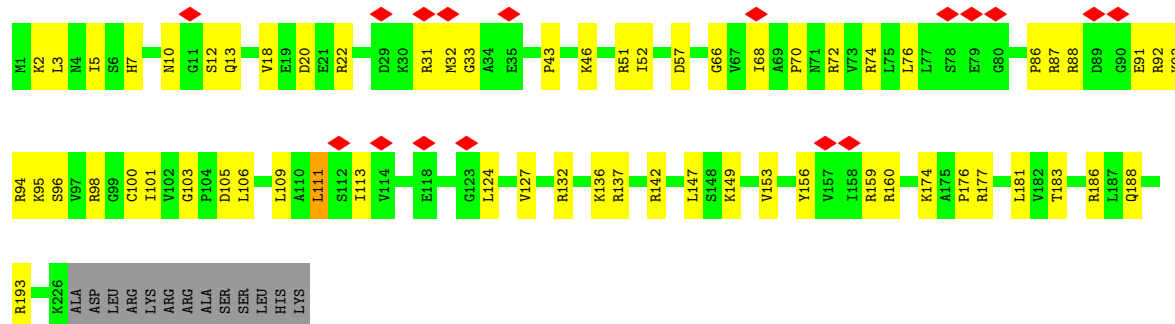
• Molecule 35: 40S ribosomal protein s5-like protein

Chain Cc: 



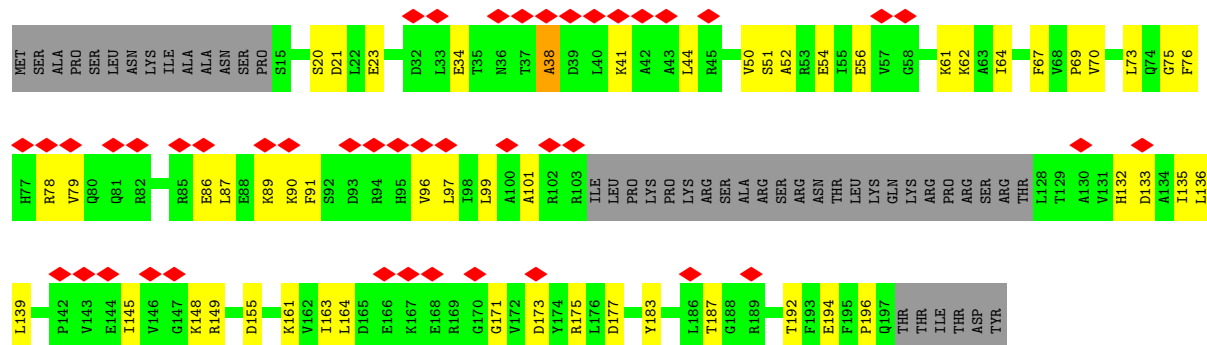
• Molecule 36: 40S ribosomal protein S6

Chain Cd: 



• Molecule 37: 40S ribosomal protein S7

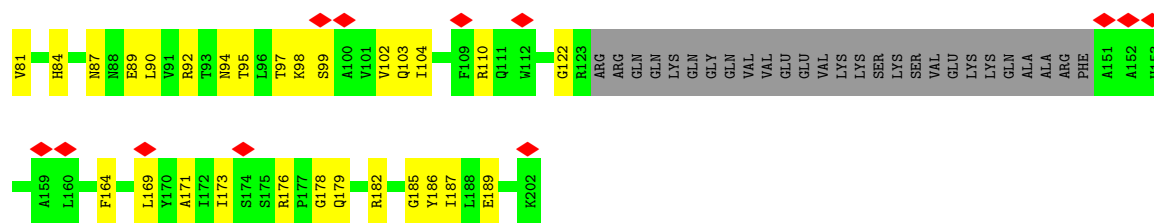
Chain Ce: 



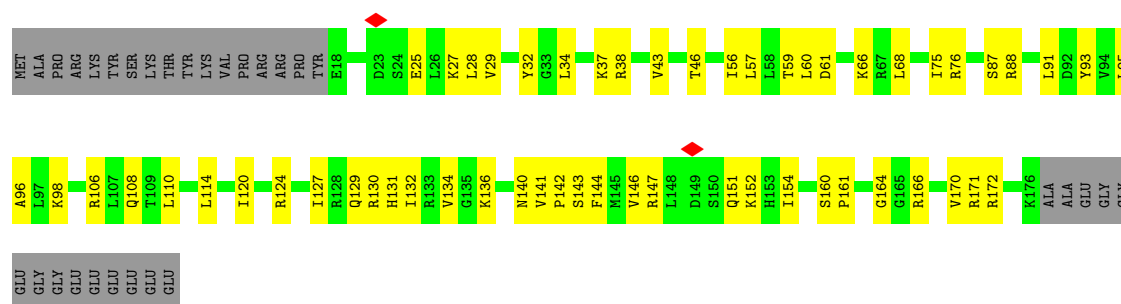
• Molecule 38: 40S ribosomal protein S8

Chain Cf: 

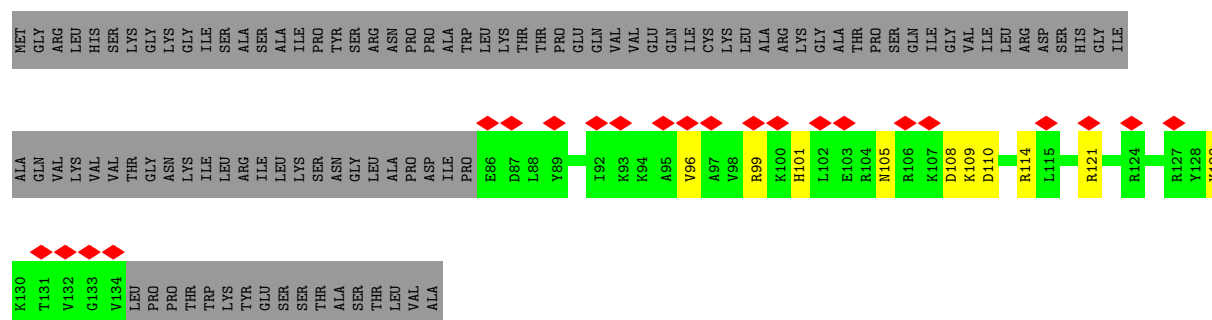




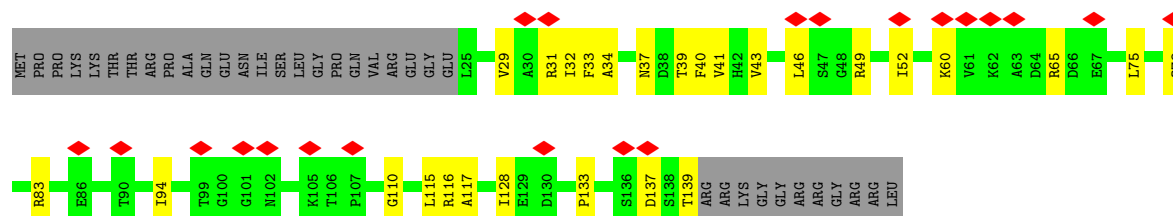
- Molecule 39: 40S ribosomal protein s9-like protein



- Molecule 40: 40S ribosomal protein S13-like protein

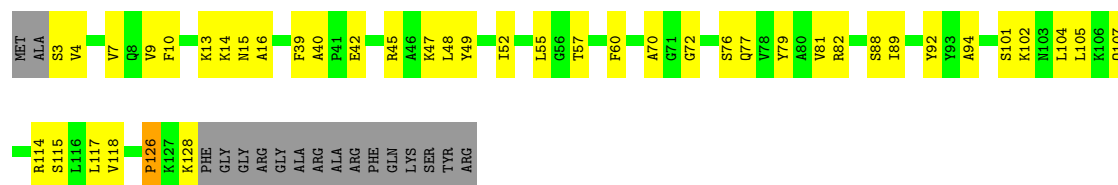


- Molecule 41: 40S ribosomal protein S14-like protein

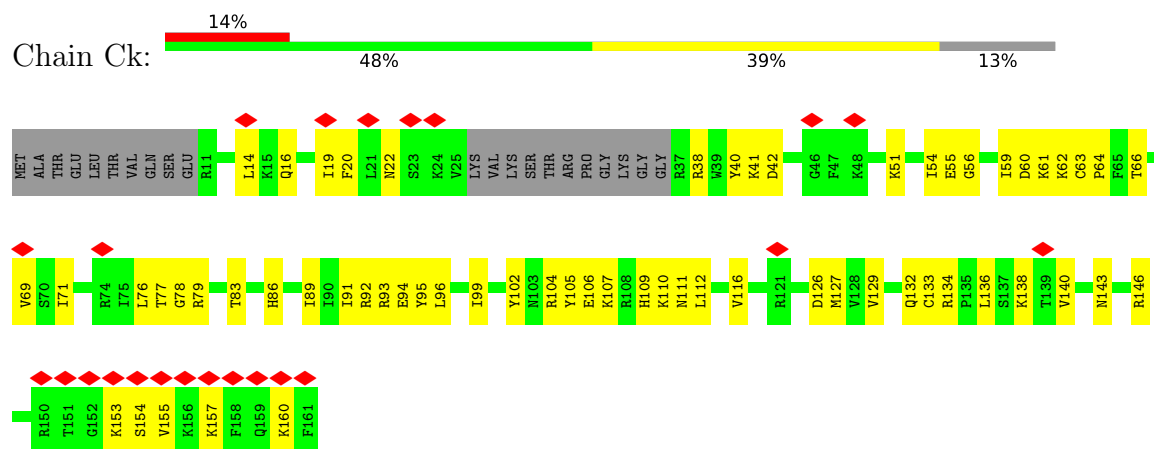


- Molecule 42: 40S ribosomal protein S16-like protein

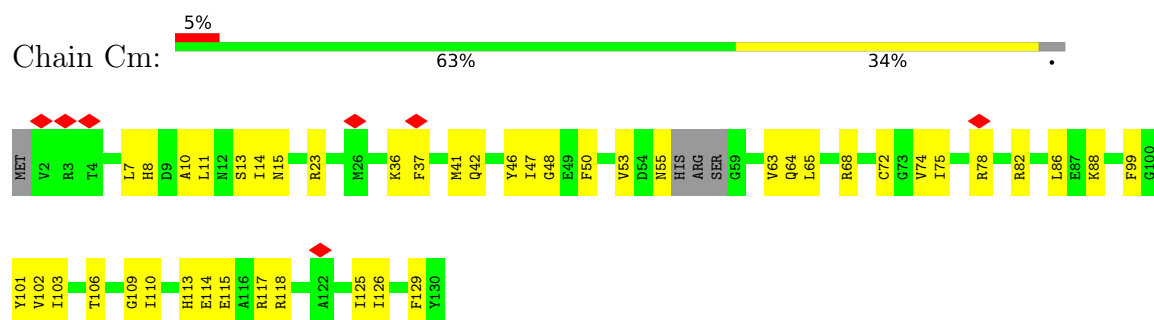




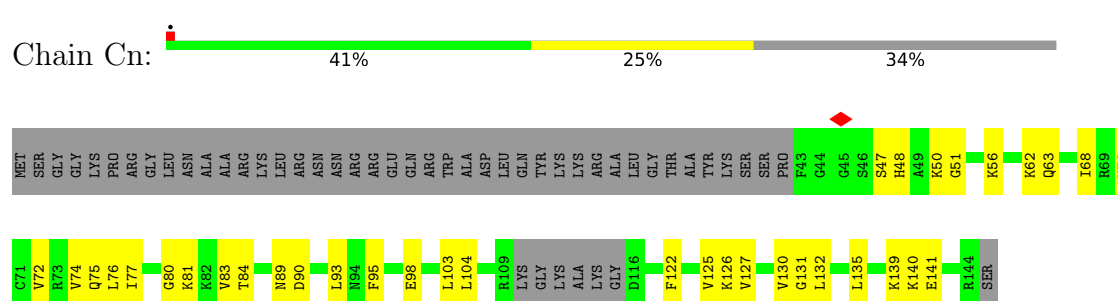
- Molecule 43: 40S ribosomal protein S11-like protein



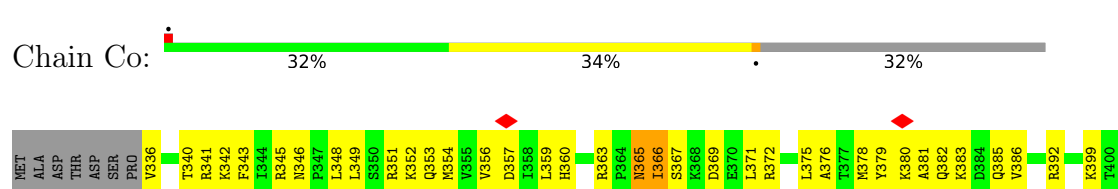
- Molecule 44: 40S ribosomal protein S22-like protein



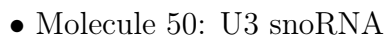
- Molecule 45: 40S ribosomal protein s23-like protein



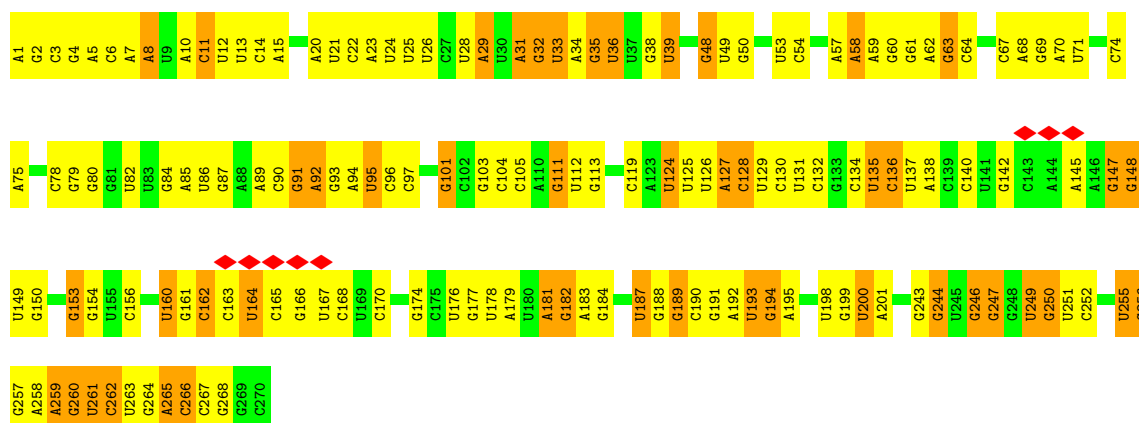
- Molecule 46: 40S ribosomal protein S24



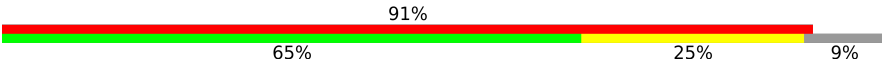


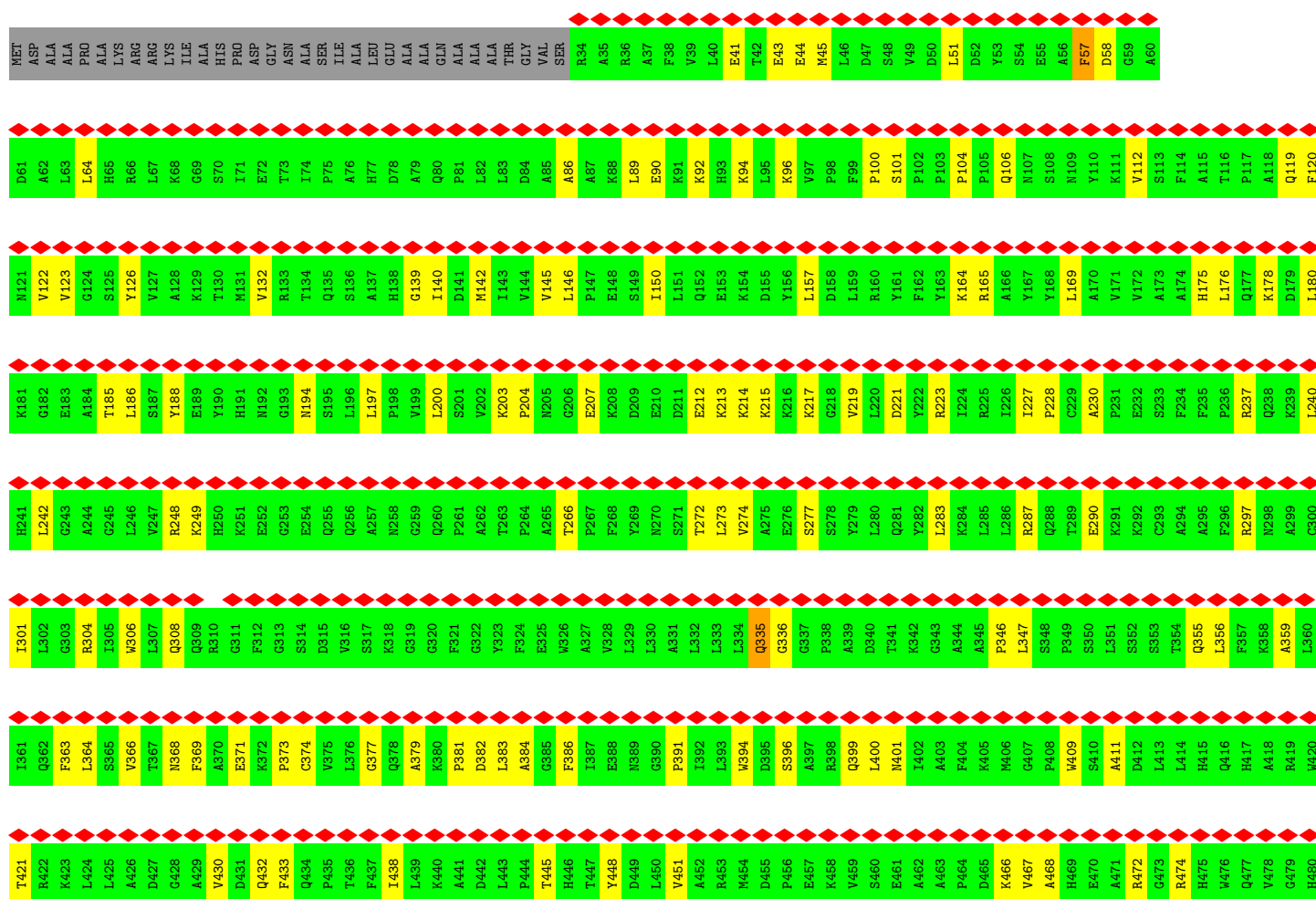


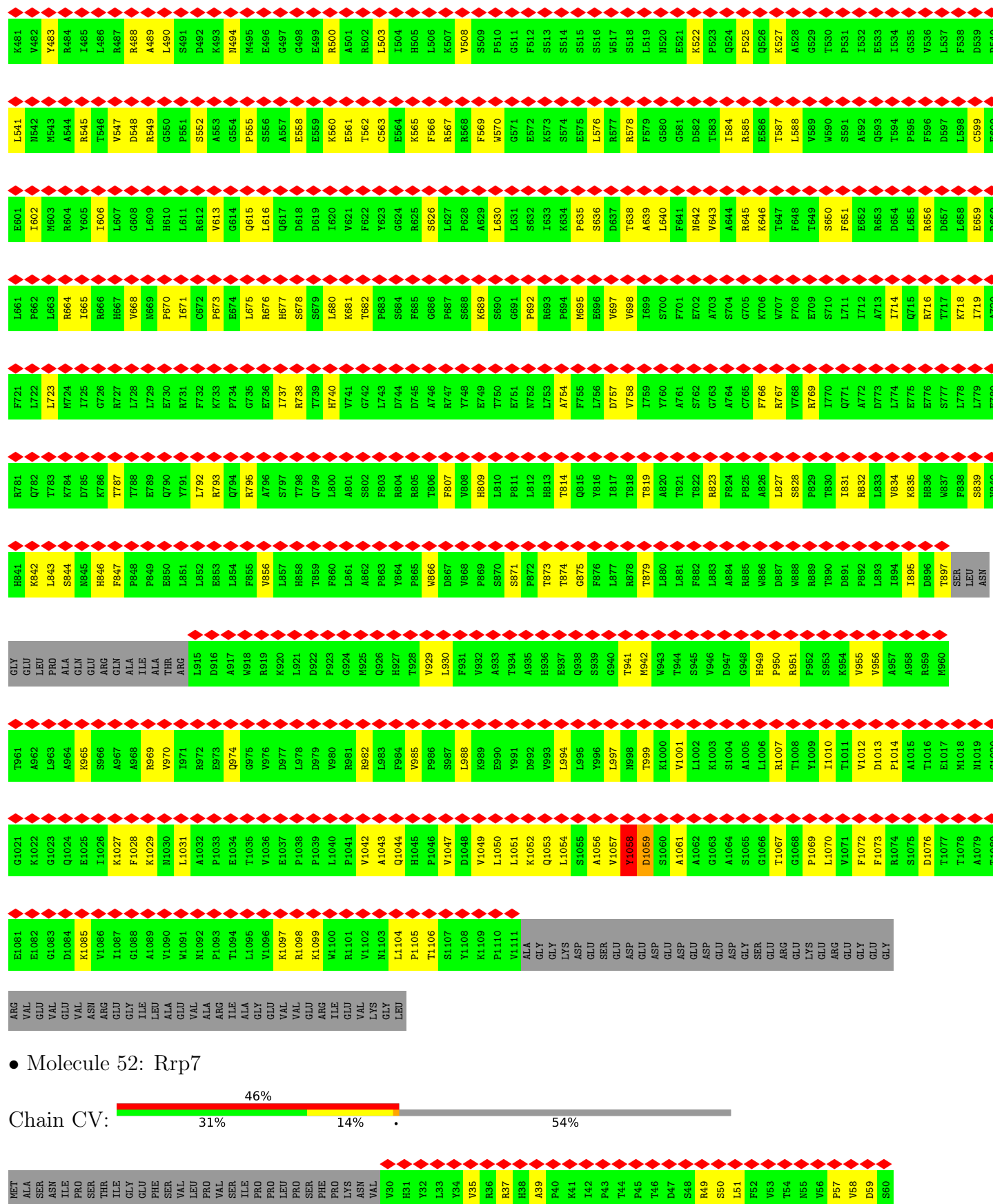
Chain C2: 



• Molecule 51: U3 small nucleolar RNA-associated protein 22

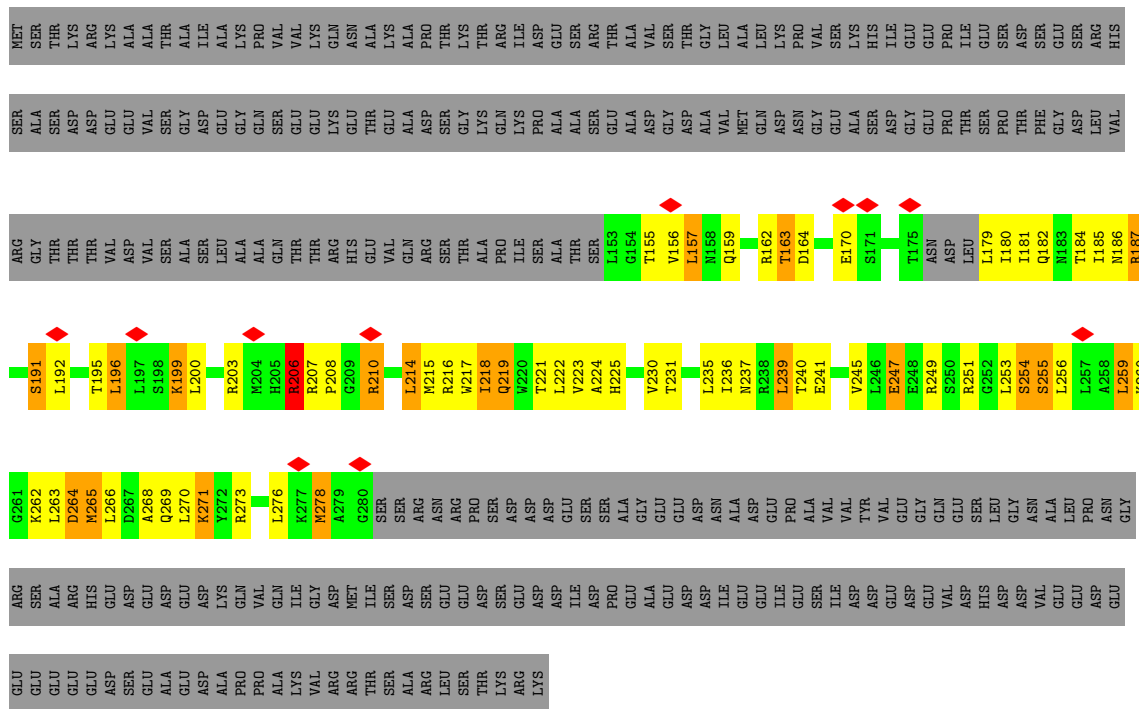
Chain UV: 



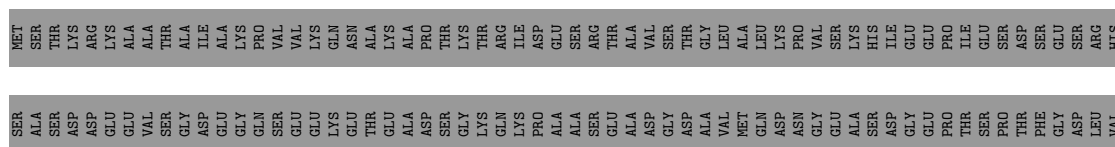


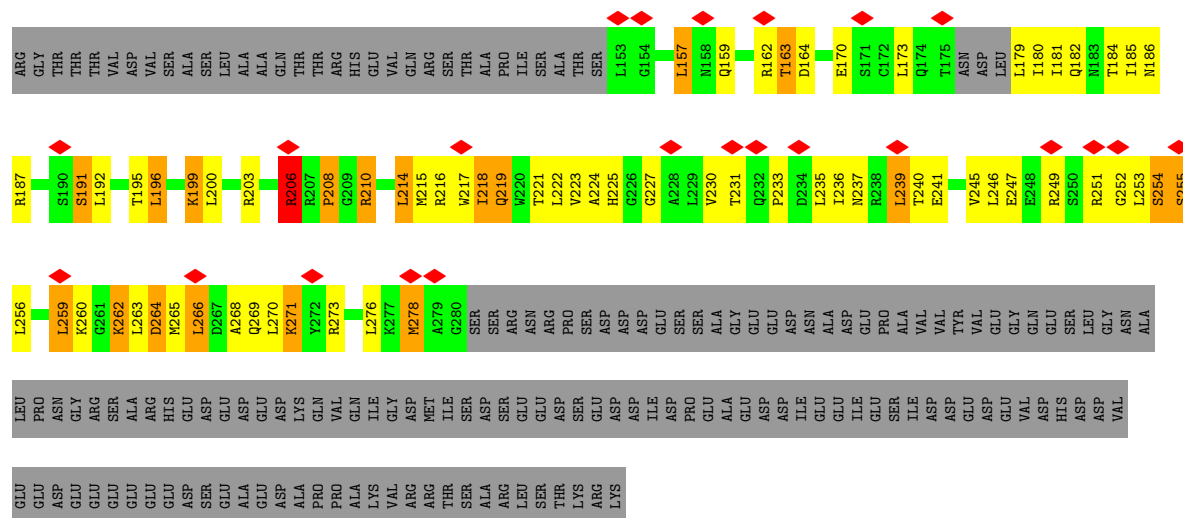


- Molecule 56: Utp5

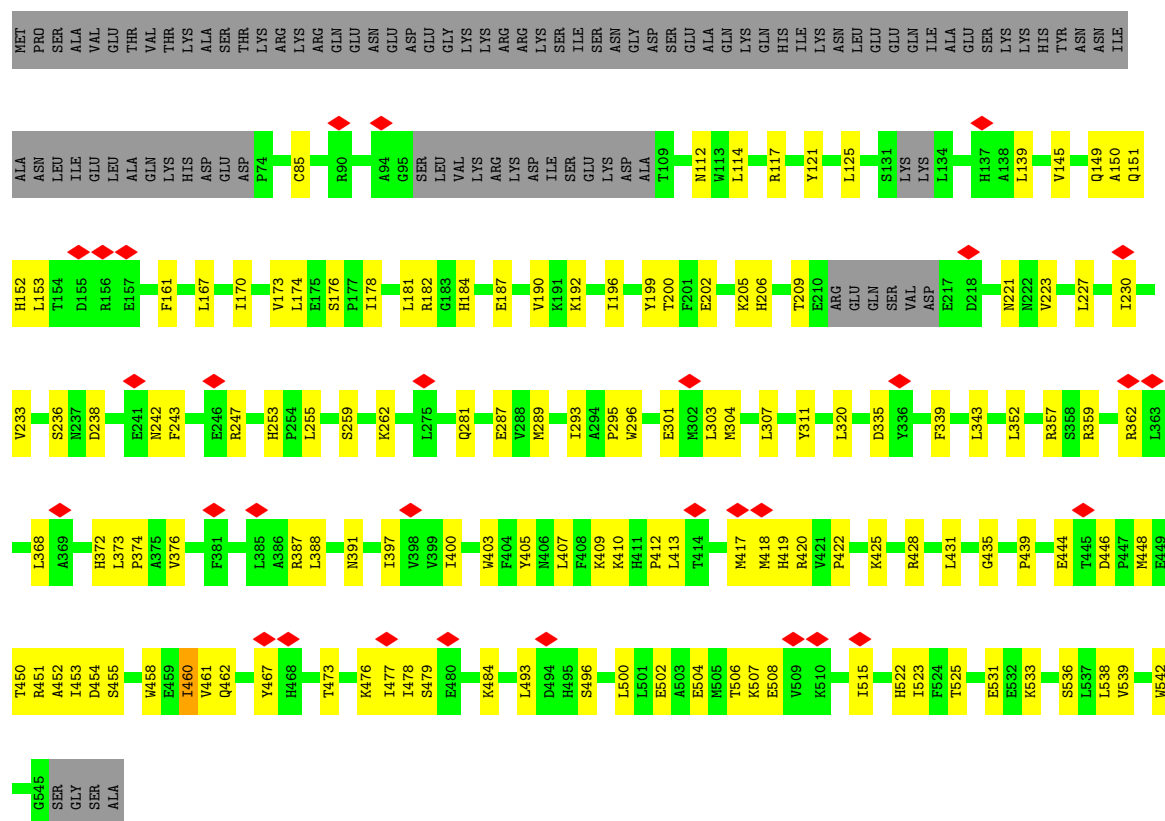


- Molecule 56: Utp5

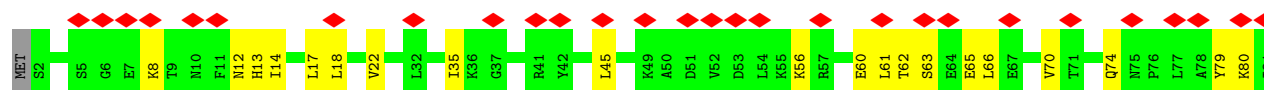
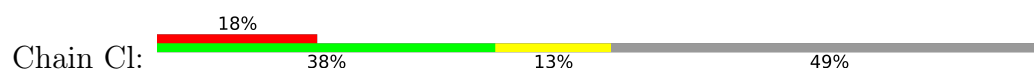




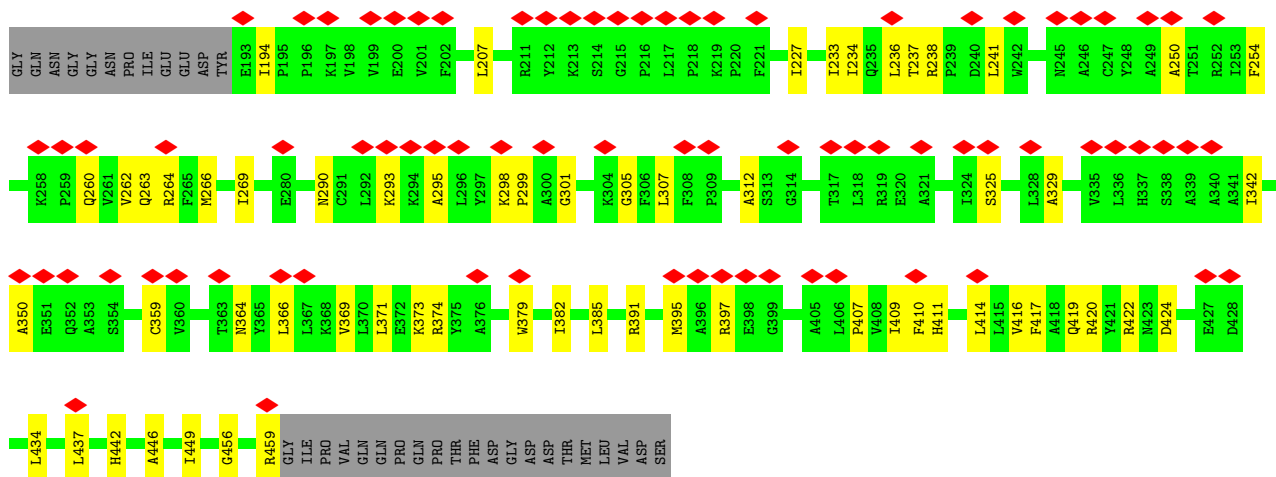
• Molecule 57: Noc4



• Molecule 58: Rps18



- Molecule 59: Enp1

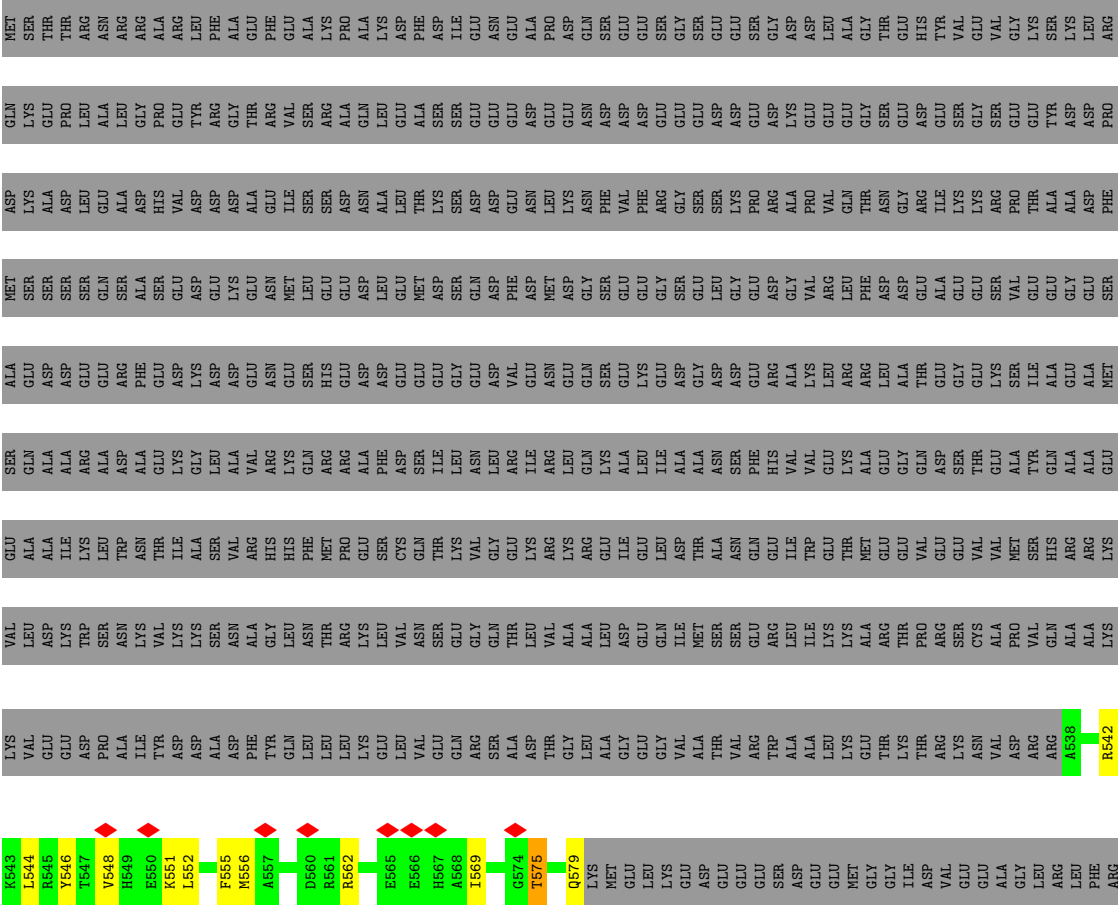
[illegible]

- Molecule 60: U3 small nucleolar ribonucleoprotein protein lcp5-like protein

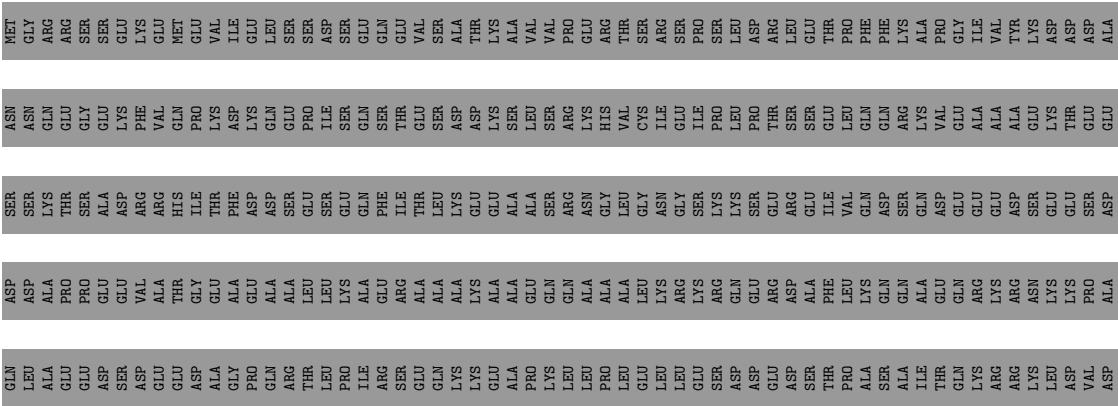
[illegible]

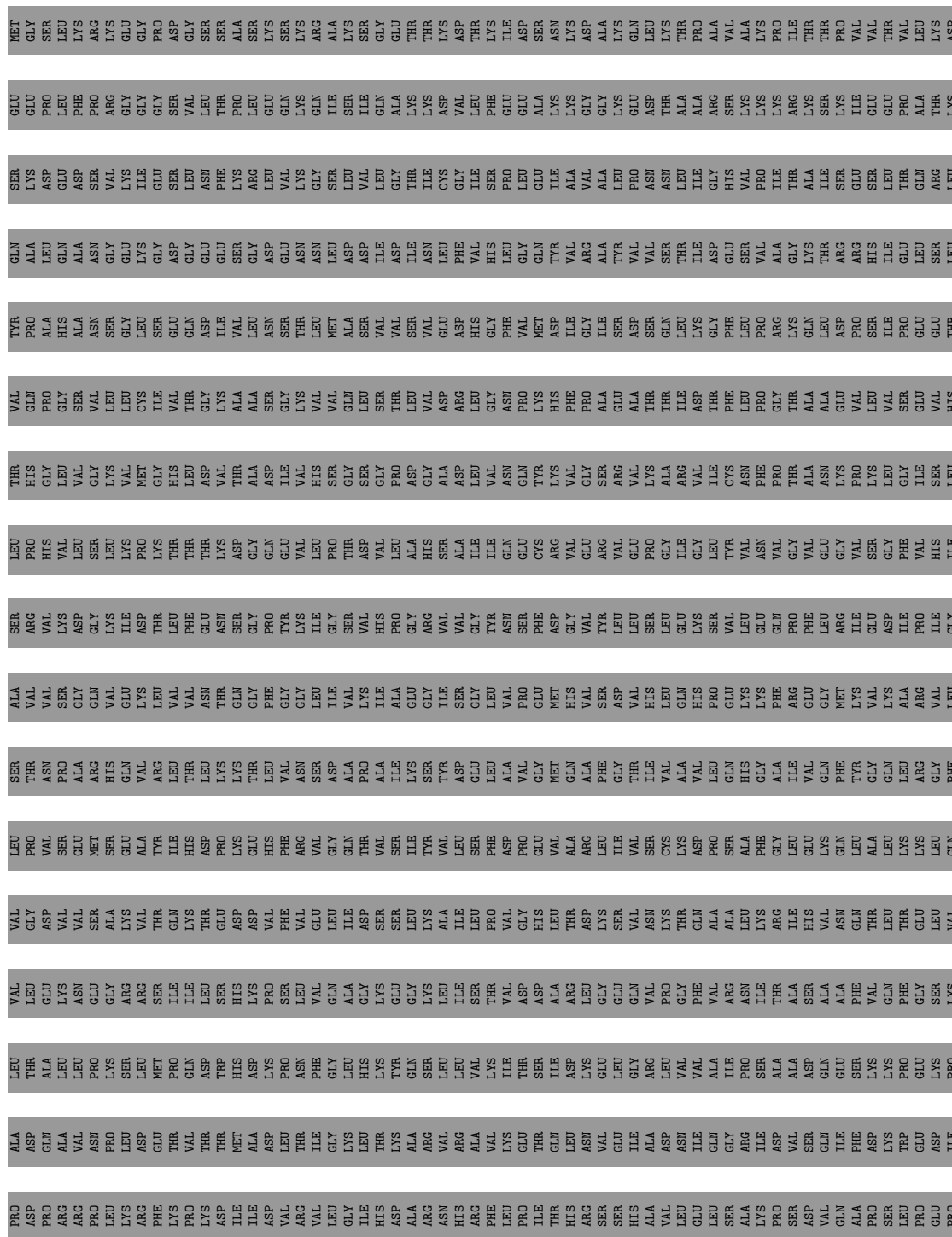


• Molecule 61: Bfr2



• Molecule 62: Utp16







4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	24283	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	28	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	FEI FALCON II (4k x 4k)	Depositor
Maximum map value	0.834	Depositor
Minimum map value	-0.505	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.012	Depositor
Recommended contour level	0.03	Depositor
Map size ($\text{\AA}$)	520.32, 520.32, 520.32	wwPDB
Map dimensions	480, 480, 480	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	1.084, 1.084, 1.084	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

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	UA	0.53	1/6521 (0.0%)	0.83	9/8867 (0.1%)
2	UB	0.31	0/4154	0.60	0/5583
3	UC	0.57	0/595	0.79	0/786
4	UD	0.29	1/6211 (0.0%)	0.60	0/8408
5	UF	0.29	0/2657	0.55	0/3596
6	UG	0.51	2/3790 (0.1%)	0.75	2/5120 (0.0%)
7	UJ	0.29	0/8567	0.63	0/11619
8	UK	0.59	0/1701	0.82	3/2251 (0.1%)
9	UL	0.29	0/6299	0.67	2/8531 (0.0%)
10	UM	0.25	0/5366	0.60	0/7282
11	UN	0.35	0/1425	0.63	0/1913
12	UO	0.31	0/3903	0.64	0/5312
13	UQ	0.26	0/6136	0.63	3/8348 (0.0%)
14	UR	0.36	0/3564	0.68	0/4816
15	UU	0.39	0/6903	0.71	4/9392 (0.0%)
16	UX	0.58	0/1493	0.81	0/2011
17	UZ	0.35	0/1857	0.74	4/2526 (0.2%)
18	CA	0.49	0/1814	0.74	0/2456
18	CB	0.30	0/1853	0.61	0/2511
19	CC	0.36	0/2911	0.66	0/3937
20	CD	0.34	0/3205	0.66	0/4338
21	CE	0.42	0/891	0.66	0/1214
21	CF	0.37	0/876	0.74	0/1195
22	CG	0.28	0/3307	0.63	0/4462
23	CH	0.40	0/2939	0.69	0/3988
24	CI	0.56	0/6631	0.96	7/8943 (0.1%)
25	CJ	0.70	0/1462	0.91	2/1967 (0.1%)
26	CK	0.70	0/2376	0.92	3/3214 (0.1%)
27	CL	0.44	0/1812	0.70	0/2437
28	CM	0.52	0/3573	0.81	6/4829 (0.1%)
29	CN	0.30	0/1797	0.66	0/2443
29	CO	0.27	0/1714	0.64	2/2325 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
30	CP	0.28	0/1528	0.78	0/2057
31	CQ	0.25	0/1379	0.59	0/1850
32	CR	0.32	0/6108	0.83	10/8266 (0.1%)
32	CS	0.32	0/6108	0.83	10/8266 (0.1%)
33	CT	0.47	0/1053	0.74	2/1413 (0.1%)
34	Cb	0.25	0/1890	0.61	0/2548
35	Cc	0.42	0/1485	0.68	0/2008
36	Cd	0.26	0/1850	0.60	0/2474
37	Ce	0.33	0/1298	0.76	2/1750 (0.1%)
38	Cf	0.23	0/1429	0.58	0/1915
39	Cg	0.45	0/1259	0.72	0/1687
40	Ch	0.23	0/412	0.72	0/549
41	Ci	0.25	0/801	0.72	0/1087
42	Cj	0.57	0/958	0.83	0/1293
43	Ck	0.23	0/1190	0.55	0/1592
44	Cm	0.35	0/1001	0.66	0/1345
45	Cn	0.74	0/712	0.90	0/954
46	Co	0.29	0/754	0.63	1/1011 (0.1%)
47	Cp	0.32	0/458	0.70	0/617
48	CU	0.33	0/887	0.72	0/1178
49	C1	0.40	0/35454	0.55	9/55209 (0.0%)
50	C2	0.42	0/5459	0.61	5/8498 (0.1%)
51	UV	0.30	0/8638	0.77	6/11725 (0.1%)
52	CV	0.34	0/1172	0.84	0/1592
53	CW	0.26	0/2996	0.63	1/4075 (0.0%)
54	UT	0.26	0/16314	0.60	1/22075 (0.0%)
55	UH	0.28	0/2852	0.61	2/3846 (0.1%)
56	UE	0.36	0/980	0.88	2/1316 (0.2%)
56	UI	0.36	0/980	0.88	2/1316 (0.2%)
57	US	0.25	0/3765	0.59	2/5100 (0.0%)
58	CI	0.28	0/638	0.76	1/857 (0.1%)
59	CX	0.21	0/2172	0.56	0/2946
60	CY	0.33	0/982	0.74	0/1298
61	CZ	0.31	0/362	0.82	0/483
62	UP	0.28	0/428	0.62	0/570
63	Cz	0.25	0/2310	0.59	0/3120
All	All	0.37	4/226365 (0.0%)	0.68	103/314506 (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
1	UA	0	10
5	UF	0	1
6	UG	0	2
8	UK	0	2
9	UL	0	2
10	UM	0	4
11	UN	0	1
12	UO	0	1
13	UQ	0	2
15	UU	0	4
16	UX	0	2
17	UZ	0	2
18	CB	0	1
21	CE	0	1
21	CF	0	2
23	CH	0	1
24	CI	0	6
25	CJ	0	2
26	CK	0	1
28	CM	0	1
29	CO	0	2
32	CR	0	1
32	CS	0	1
37	Ce	0	1
41	Ci	0	1
42	Cj	0	3
45	Cn	0	1
46	Co	0	1
51	UV	0	4
52	CV	0	2
54	UT	0	5
55	UH	0	1
58	Cl	0	1
60	CY	0	1
63	Cz	0	1
All	All	0	74

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	UA	488	TRP	CA-C	-10.82	1.38	1.52
6	UG	154	ALA	C-N	-9.49	1.28	1.33
4	UD	496	ALA	CA-CB	-8.13	1.42	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	UG	290	THR	C-N	-6.87	1.23	1.33

All (103) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	CI	995	VAL	CA-C-N	37.54	171.29	121.74
24	CI	995	VAL	C-N-CA	37.54	171.29	121.74
32	CS	372	ILE	CA-C-N	17.81	145.15	120.39
32	CS	372	ILE	C-N-CA	17.81	145.15	120.39
32	CR	372	ILE	CA-C-N	17.79	145.12	120.39
32	CR	372	ILE	C-N-CA	17.79	145.12	120.39
50	C2	2	G	OP1-P-OP2	-13.13	80.19	119.60
50	C2	2	G	O5'-P-OP1	-12.05	71.84	108.00
50	C2	1	A	OP2-P-O3'	-10.93	75.20	108.00
49	C1	55	G	OP1-P-O3'	-9.63	79.11	108.00
49	C1	45	U	OP1-P-O3'	-9.21	80.37	108.00
50	C2	1	A	OP1-P-O3'	8.61	133.82	108.00
53	CW	24	PRO	CA-N-CD	-8.61	99.95	112.00
49	C1	785	U	OP1-P-O3'	-8.30	83.10	108.00
29	CO	164	GLN	CA-C-N	8.27	136.65	120.94
29	CO	164	GLN	C-N-CA	8.27	136.65	120.94
57	US	335	ASP	CA-C-N	8.16	145.62	122.21
57	US	335	ASP	C-N-CA	8.16	145.62	122.21
50	C2	2	G	O5'-P-OP2	8.10	132.29	108.00
37	Ce	38	ALA	CA-C-N	7.77	135.69	121.70
37	Ce	38	ALA	C-N-CA	7.77	135.69	121.70
49	C1	45	U	OP2-P-O3'	-7.75	84.74	108.00
1	UA	670	PHE	CB-CA-C	-7.51	104.46	111.00
51	UV	1058	TYR	CA-CB-CG	7.51	127.41	113.90
1	UA	655	SER	CA-C-N	-7.03	111.09	122.48
1	UA	655	SER	C-N-CA	-7.03	111.09	122.48
49	C1	785	U	OP2-P-O3'	-7.00	87.00	108.00
32	CR	426	LEU	CA-CB-CG	6.82	140.16	116.30
32	CS	426	LEU	CA-CB-CG	6.82	140.16	116.30
33	CT	92	ASN	CA-C-N	-6.74	117.74	122.59
33	CT	92	ASN	C-N-CA	-6.74	117.74	122.59
51	UV	366	VAL	CA-C-N	-6.70	112.39	121.71
51	UV	366	VAL	C-N-CA	-6.70	112.39	121.71
1	UA	626	ASN	N-CA-C	6.38	119.41	109.52
17	UZ	18	VAL	CA-C-N	-6.21	110.41	122.70
17	UZ	18	VAL	C-N-CA	-6.21	110.41	122.70
17	UZ	115	GLU	CA-C-N	-6.03	115.53	122.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
17	UZ	115	GLU	C-N-CA	-6.03	115.53	122.52
1	UA	662	GLY	CA-C-N	5.98	131.82	122.26
1	UA	662	GLY	C-N-CA	5.98	131.82	122.26
51	UV	1058	TYR	CB-CA-C	-5.97	101.42	110.92
1	UA	662	GLY	N-CA-C	5.97	121.01	111.64
25	CJ	18	PHE	CA-C-N	-5.93	117.16	122.97
25	CJ	18	PHE	C-N-CA	-5.93	117.16	122.97
56	UE	206	ARG	CA-C-N	-5.92	115.61	122.00
56	UE	206	ARG	C-N-CA	-5.92	115.61	122.00
56	UI	206	ARG	CA-C-N	-5.90	115.63	122.00
56	UI	206	ARG	C-N-CA	-5.90	115.63	122.00
24	CI	753	ASN	CA-C-N	5.86	132.74	121.54
24	CI	753	ASN	C-N-CA	5.86	132.74	121.54
6	UG	575	LYS	CA-C-N	5.85	132.22	121.70
6	UG	575	LYS	C-N-CA	5.85	132.22	121.70
49	C1	55	G	OP2-P-O3'	-5.84	90.49	108.00
28	CM	58	LEU	CA-C-N	-5.82	112.13	121.32
28	CM	58	LEU	C-N-CA	-5.82	112.13	121.32
28	CM	232	PRO	CA-C-N	-5.77	117.25	123.08
28	CM	232	PRO	C-N-CA	-5.77	117.25	123.08
32	CS	620	GLN	CA-C-N	-5.75	113.51	122.42
32	CS	620	GLN	C-N-CA	-5.75	113.51	122.42
32	CR	620	GLN	CA-C-N	-5.74	113.52	122.42
32	CR	620	GLN	C-N-CA	-5.74	113.52	122.42
51	UV	1058	TYR	N-CA-C	5.70	117.97	111.02
24	CI	240	THR	CA-C-N	-5.68	107.94	121.80
24	CI	240	THR	C-N-CA	-5.68	107.94	121.80
49	C1	134	C	P-O3'-C3'	5.64	128.66	120.20
32	CR	41	LEU	CA-CB-CG	5.63	135.99	116.30
32	CS	41	LEU	CA-CB-CG	5.62	135.98	116.30
46	Co	366	ILE	N-CA-C	5.56	116.59	111.81
1	UA	625	LEU	CA-C-N	-5.53	113.91	122.59
1	UA	625	LEU	C-N-CA	-5.53	113.91	122.59
9	UL	870	ASN	CA-C-N	5.42	125.63	120.43
9	UL	870	ASN	C-N-CA	5.42	125.63	120.43
32	CR	784	LYS	CA-CB-CG	5.40	124.90	114.10
32	CS	784	LYS	CA-CB-CG	5.38	124.86	114.10
13	UQ	608	THR	N-CA-C	-5.37	100.67	108.07
15	UU	715	PHE	CA-C-N	5.35	138.63	121.98
15	UU	715	PHE	C-N-CA	5.35	138.63	121.98
28	CM	396	HIS	CA-C-N	-5.33	111.00	122.67
28	CM	396	HIS	C-N-CA	-5.33	111.00	122.67

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	CR	576	GLU	CB-CG-CD	5.31	121.63	112.60
26	CK	271	GLY	N-CA-C	-5.30	100.62	113.18
32	CS	576	GLU	CB-CG-CD	5.29	121.60	112.60
8	UK	15	GLU	CA-C-N	-5.28	115.72	123.00
8	UK	15	GLU	C-N-CA	-5.28	115.72	123.00
24	CI	367	VAL	N-CA-C	-5.26	107.46	111.62
32	CS	84	ARG	CG-CD-NE	5.26	123.56	112.00
13	UQ	668	PRO	CA-C-N	-5.25	112.30	122.70
13	UQ	668	PRO	C-N-CA	-5.25	112.30	122.70
32	CR	84	ARG	CG-CD-NE	5.24	123.52	112.00
51	UV	377	GLY	N-CA-C	5.23	117.18	110.96
32	CR	167	MET	CA-CB-CG	5.17	124.44	114.10
15	UU	650	ASP	CA-C-N	5.17	127.16	120.44
15	UU	650	ASP	C-N-CA	5.17	127.16	120.44
32	CS	167	MET	CA-CB-CG	5.17	124.43	114.10
49	C1	1163	A	P-O3'-C3'	5.15	127.93	120.20
26	CK	260	ARG	CA-C-N	-5.14	114.60	122.87
26	CK	260	ARG	C-N-CA	-5.14	114.60	122.87
55	UH	730	PHE	CA-C-N	5.08	136.78	122.21
55	UH	730	PHE	C-N-CA	5.08	136.78	122.21
54	UT	1732	LEU	N-CA-C	5.06	120.56	113.57
58	CI	80	LYS	N-CA-C	5.06	117.18	111.11
8	UK	80	GLY	N-CA-C	5.05	116.66	111.56
49	C1	134	C	C2'-C3'-O3'	5.00	121.20	113.70

There are no chirality outliers.

All (74) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
18	CB	293	GLU	Peptide
21	CE	33	GLN	Peptide
21	CF	14	ASP	Peptide
21	CF	60	GLN	Peptide
23	CH	170	ARG	Peptide
24	CI	132	VAL	Peptide
24	CI	141	ASP	Peptide
24	CI	211	ASN	Peptide
24	CI	303	PRO	Peptide
24	CI	855	THR	Peptide
24	CI	885	CYS	Peptide
25	CJ	101	VAL	Peptide
25	CJ	144	ARG	Peptide

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Mol	Chain	Res	Type	Group
26	CK	173	ARG	Peptide
28	CM	322	HIS	Peptide
29	CO	84	ILE	Peptide
29	CO	88	ARG	Peptide
32	CR	901	LEU	Peptide
32	CS	901	LEU	Peptide
52	CV	88	LYS	Peptide
52	CV	91	HIS	Peptide
60	CY	374	ARG	Peptide
37	Ce	38	ALA	Peptide
41	Ci	137	ASP	Peptide
42	Cj	126	PRO	Peptide
42	Cj	39	PHE	Peptide
42	Cj	40	ALA	Peptide
58	Cl	79	TYR	Peptide
45	Cn	68	ILE	Peptide
46	Co	365	ASN	Peptide
63	Cz	1628	THR	Peptide
1	UA	273	GLY	Peptide
1	UA	320	GLY	Peptide
1	UA	386	THR	Peptide
1	UA	424	GLU	Peptide
1	UA	443	GLY	Peptide
1	UA	506	PRO	Peptide
1	UA	618	LEU	Peptide
1	UA	622	GLN	Peptide
1	UA	641	ASP	Peptide
1	UA	667	ARG	Peptide
5	UF	120	VAL	Peptide
6	UG	227	TYR	Peptide
6	UG	264	LEU	Peptide
55	UH	753	THR	Peptide
8	UK	12	ALA	Peptide
8	UK	83	PHE	Peptide
9	UL	150	GLY	Peptide
9	UL	17	VAL	Peptide
10	UM	204	ASP	Peptide
10	UM	328	LEU	Peptide
10	UM	383	LEU	Peptide
10	UM	589	VAL	Peptide
11	UN	901	LEU	Peptide
12	UO	282	ALA	Peptide

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Mol	Chain	Res	Type	Group
13	UQ	707	PRO	Peptide
13	UQ	849	ALA	Peptide
54	UT	1516	LEU	Peptide
54	UT	1566	GLU	Peptide
54	UT	408	PRO	Peptide
54	UT	486	GLU	Peptide
54	UT	781	TRP	Peptide
15	UU	397	ASP	Peptide
15	UU	402	GLU	Peptide
15	UU	758	HIS	Peptide
15	UU	759	THR	Peptide
51	UV	1013	ASP	Peptide
51	UV	1058	TYR	Peptide
51	UV	1104	LEU	Peptide
51	UV	57	PHE	Peptide
16	UX	-5	LYS	Peptide
16	UX	126	LYS	Peptide
17	UZ	103	ASP	Peptide
17	UZ	273	GLN	Peptide

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	UA	6366	0	6273	253	0
2	UB	4079	0	4201	112	0
3	UC	588	0	647	16	0
4	UD	6071	0	6080	206	0
5	UF	2591	0	2642	68	0
6	UG	3717	0	3756	134	0
7	UJ	8416	0	8591	233	0
8	UK	1687	0	1820	48	0
9	UL	6175	0	6188	217	0
10	UM	5273	0	5284	155	0
11	UN	1401	0	1455	55	0
12	UO	3819	0	3873	154	0
13	UQ	6008	0	6033	202	0
14	UR	3491	0	3507	141	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
15	UU	6734	0	6745	234	0
16	UX	1470	0	1532	52	0
17	UZ	1815	0	1896	59	0
18	CA	1778	0	1830	73	0
18	CB	1816	0	1847	59	0
19	CC	2866	0	2960	97	0
20	CD	3150	0	3262	109	0
21	CE	879	0	918	36	0
21	CF	864	0	900	33	0
22	CG	3245	0	3262	105	0
23	CH	2888	0	2979	103	0
24	CI	6486	0	6649	199	0
25	CJ	1434	0	1482	65	0
26	CK	2329	0	2373	88	0
27	CL	1786	0	1826	76	0
28	CM	3501	0	3498	172	0
29	CN	1762	0	1807	61	0
29	CO	1683	0	1726	42	0
30	CP	1504	0	1596	34	0
31	CQ	1361	0	1431	39	0
32	CR	5989	0	6130	206	0
32	CS	5989	0	6130	196	0
33	CT	1035	0	1063	33	0
34	Cb	1851	0	1905	78	0
35	Cc	1464	0	1504	54	0
36	Cd	1819	0	1920	54	0
37	Ce	1279	0	1322	40	0
38	Cf	1398	0	1401	49	0
39	Cg	1242	0	1354	49	0
40	Ch	406	0	436	8	0
41	Ci	791	0	795	20	0
42	Cj	943	0	1002	35	0
43	Ck	1163	0	1230	48	0
44	Cm	985	0	1021	30	0
45	Cn	702	0	750	27	0
46	Co	741	0	785	42	0
47	Cp	455	0	482	21	0
48	CU	882	0	944	39	0
49	C1	31732	0	16064	862	0
50	C2	4891	0	2476	128	0
51	UV	8424	0	8502	191	0
52	CV	1145	0	1155	44	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
53	CW	2924	0	2854	122	0
54	UT	16000	0	16404	429	0
55	UH	2809	0	2843	89	0
56	UE	972	0	1032	46	0
56	UI	972	0	1032	50	0
57	US	3672	0	3679	92	0
58	Cl	633	0	676	12	0
59	CX	2122	0	2211	38	0
60	CY	975	0	992	36	0
61	CZ	354	0	345	12	0
62	UP	422	0	457	19	0
63	Cz	2259	0	2235	67	0
64	UX	1	0	0	0	0
All	All	218474	0	204000	6157	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 15.

All (6157) 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)
49:C1:2238:A:N6	49:C1:2328:G:C2	2.08	1.21
55:UH:555:GLY:O	55:UH:567:LEU:HA	1.42	1.14
49:C1:2238:A:N6	49:C1:2328:G:N3	1.95	1.13
49:C1:2169:A:H62	49:C1:2193:G:N2	1.54	1.06
7:UJ:185:GLN:O	7:UJ:189:ARG:HB3	1.59	1.01
49:C1:307:U:H3	49:C1:333:C:N4	1.58	1.01
63:Cz:1652:ASP:O	63:Cz:1656:TYR:HB2	1.61	0.99
49:C1:902:U:H3	49:C1:930:G:H1	1.10	0.99
49:C1:306:G:H1	49:C1:334:U:H3	1.11	0.97
49:C1:2169:A:N6	49:C1:2193:G:H21	1.61	0.96
49:C1:460:U:H3	49:C1:472:G:H1	0.98	0.96
50:C2:137:U:H3	50:C2:150:G:H1	1.04	0.95
49:C1:452:G:H1	49:C1:480:U:H3	1.14	0.94
49:C1:994:A:C2	49:C1:1007:G:N1	2.33	0.94
49:C1:895:U:H3	49:C1:939:G:H1	1.13	0.94
49:C1:2169:A:H62	49:C1:2193:G:H21	0.95	0.94
49:C1:2054:A:N6	49:C1:2121:U:C2	2.37	0.93
60:CY:276:GLU:O	60:CY:280:PHE:HA	1.70	0.91
49:C1:994:A:H2	49:C1:1007:G:H1	0.94	0.91
49:C1:994:A:H2	49:C1:1007:G:N1	1.67	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:UT:607:ALA:O	54:UT:611:CYS:HB2	1.69	0.91
49:C1:1138:C:N4	49:C1:1155:G:O6	2.03	0.91
53:CW:23:LEU:HB3	53:CW:24:PRO:HD3	1.54	0.90
53:CW:23:LEU:HB3	53:CW:24:PRO:CD	2.01	0.90
49:C1:2358:U:H3	49:C1:2369:G:H1	0.91	0.89
1:UA:60:ARG:O	1:UA:73:ILE:HB	1.72	0.89
54:UT:1512:LEU:O	54:UT:1516:LEU:HB2	1.72	0.88
50:C2:103:G:C6	50:C2:250:G:C6	2.63	0.87
49:C1:5:G:H1	49:C1:30:U:H3	1.13	0.87
49:C1:1472:A:H2	49:C1:1510:G:H1	1.22	0.87
34:Cb:139:LEU:O	34:Cb:146:THR:HA	1.73	0.87
50:C2:103:G:O6	50:C2:250:G:C6	2.28	0.87
49:C1:1452:G:H1	49:C1:1546:U:H3	1.19	0.86
39:Cg:136:LYS:H	60:CY:250:GLY:HA3	1.40	0.86
13:UQ:482:VAL:O	13:UQ:499:LEU:HB3	1.77	0.85
49:C1:950:G:H1	49:C1:959:U:H3	0.88	0.85
51:UV:1049:VAL:HA	51:UV:1052:LYS:HG2	1.59	0.84
14:UR:559:SER:O	14:UR:565:ALA:HB3	1.78	0.83
49:C1:1735:A:H2'	49:C1:1736:A:H8	1.43	0.83
15:UU:853:THR:O	15:UU:857:ILE:HB	1.78	0.83
55:UH:557:GLU:O	55:UH:565:GLY:HA2	1.79	0.83
25:CJ:72:ARG:HH21	26:CK:71:ILE:HG22	1.43	0.82
51:UV:1058:TYR:N	52:CV:90:GLU:O	2.13	0.81
9:UL:511:VAL:HA	9:UL:527:GLY:HA2	1.62	0.81
49:C1:758:U:N3	49:C1:850:A:N6	2.28	0.81
10:UM:666:PHE:HB3	10:UM:678:TRP:O	1.81	0.81
49:C1:495:G:N7	49:C1:503:G:N1	2.29	0.81
12:UO:33:GLN:HA	12:UO:345:ILE:O	1.81	0.80
20:CD:240:ALA:O	20:CD:244:SER:HB3	1.81	0.80
26:CK:191:LEU:HB3	27:CL:556:GLU:HB3	1.63	0.80
49:C1:758:U:C2	49:C1:850:A:N6	2.50	0.80
49:C1:2238:A:N6	49:C1:2328:G:N2	2.29	0.80
12:UO:334:LEU:O	12:UO:345:ILE:HA	1.82	0.80
49:C1:345:U:C4	49:C1:346:C:N4	2.50	0.80
51:UV:1058:TYR:HB2	52:CV:91:HIS:HA	1.63	0.80
54:UT:1245:SER:HA	54:UT:1248:ASN:HB2	1.64	0.79
49:C1:619:U:H3	49:C1:1052:A:H62	1.25	0.79
27:CL:548:ARG:O	27:CL:552:GLY:HA2	1.81	0.79
60:CY:297:MET:O	60:CY:301:SER:HB2	1.81	0.79
1:UA:586:CYS:HA	1:UA:599:TYR:O	1.83	0.79
49:C1:1759:U:O4	49:C1:2048:C:N3	2.17	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CW:119:ARG:HH21	53:CW:134:ARG:HD3	1.48	0.78
28:CM:385:LEU:O	28:CM:389:ARG:HB3	1.82	0.78
31:CQ:240:GLN:HG2	31:CQ:243:LYS:HG2	1.65	0.78
8:UK:105:LYS:HE2	8:UK:243:GLN:HG2	1.65	0.77
49:C1:1448:A:N6	49:C1:1549:U:C4	2.52	0.77
20:CD:287:PRO:HB2	20:CD:391:ALA:HB2	1.67	0.77
19:CC:82:LEU:O	19:CC:86:LEU:HB2	1.85	0.77
1:UA:64:THR:HG23	1:UA:67:GLY:H	1.49	0.77
12:UO:282:ALA:HB3	12:UO:287:ARG:O	1.84	0.77
49:C1:619:U:O2	49:C1:1052:A:N6	2.18	0.76
42:Cj:126:PRO:HB3	49:C1:2166:A:H5'	1.68	0.76
1:UA:648:LEU:HD13	1:UA:651:ARG:HH21	1.50	0.76
11:UN:332:HIS:O	11:UN:336:ALA:HB2	1.84	0.76
1:UA:320:GLY:HA3	1:UA:338:GLY:H	1.51	0.76
49:C1:307:U:H3	49:C1:333:C:H42	0.81	0.76
49:C1:351:U:C4	49:C1:353:G:C6	2.74	0.76
59:CX:325:SER:HB2	59:CX:369:VAL:HG21	1.66	0.75
14:UR:555:LEU:HB3	14:UR:569:VAL:HB	1.68	0.75
49:C1:1665:A:N3	49:C1:1666:C:N4	2.35	0.75
23:CH:225:THR:O	23:CH:275:ILE:HA	1.87	0.75
1:UA:82:THR:HG22	1:UA:89:VAL:HA	1.68	0.75
49:C1:715:A:N6	49:C1:785:U:C2	2.55	0.75
23:CH:128:LEU:O	23:CH:195:ARG:HA	1.87	0.74
60:CY:252:ASN:HB2	60:CY:261:LYS:HB2	1.67	0.74
49:C1:2237:G:H1	49:C1:2329:A:H61	1.35	0.74
13:UQ:383:GLN:HB2	13:UQ:388:ARG:O	1.88	0.74
24:CI:858:ARG:NH1	49:C1:1157:C:O2'	2.21	0.74
14:UR:534:ARG:NH1	14:UR:535:VAL:O	2.21	0.74
49:C1:758:U:N3	49:C1:850:A:C6	2.55	0.74
50:C2:127:A:N7	50:C2:187:U:O4	2.20	0.74
49:C1:2237:G:H2'	49:C1:2238:A:H8	1.53	0.73
9:UL:95:TRP:HA	9:UL:102:SER:HA	1.70	0.73
1:UA:274:PHE:H	1:UA:300:ILE:HD13	1.54	0.73
29:CN:38:ILE:O	29:CN:203:CYS:HA	1.89	0.73
33:CT:84:PRO:O	33:CT:95:ARG:NH2	2.21	0.73
49:C1:1759:U:O4	49:C1:2048:C:C4	2.42	0.73
35:Cc:127:CYS:HA	35:Cc:201:LYS:HE2	1.71	0.73
19:CC:209:LEU:O	19:CC:213:VAL:HB	1.88	0.73
23:CH:233:ASN:HA	23:CH:236:ILE:HD12	1.70	0.73
50:C2:259:A:N3	50:C2:260:G:N1	2.36	0.73
47:Cp:13:VAL:O	47:Cp:52:ASN:HA	1.89	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:CI:930:ASN:ND2	24:CI:978:GLU:O	2.22	0.73
29:CO:112:ILE:HB	29:CO:124:VAL:HB	1.69	0.73
54:UT:1795:HIS:HE1	54:UT:1852:ASP:HB3	1.54	0.73
13:UQ:847:ASP:O	13:UQ:850:ALA:HA	1.88	0.73
29:CN:112:ILE:HB	29:CN:124:VAL:HB	1.71	0.72
49:C1:1546:U:H2'	49:C1:1547:C:H5	1.53	0.72
49:C1:2054:A:N6	49:C1:2121:U:O2	2.22	0.72
49:C1:2067:G:N2	49:C1:2174:C:O2	2.22	0.72
57:US:85:CYS:SG	57:US:121:TYR:OH	2.47	0.72
1:UA:576:ASN:HB2	1:UA:591:GLY:HA2	1.71	0.72
10:UM:253:ASP:HB2	51:UV:555:PRO:HB3	1.71	0.72
14:UR:265:ARG:HH12	14:UR:612:ARG:HD3	1.53	0.72
1:UA:16:CYS:SG	1:UA:17:ARG:N	2.63	0.72
2:UB:800:LEU:HD21	57:US:479:SER:HA	1.70	0.72
22:CG:344:CYS:HB2	22:CG:357:TRP:HB2	1.70	0.72
36:Cd:13:GLN:NE2	49:C1:735:G:N3	2.37	0.72
18:CB:94:THR:O	18:CB:127:TYR:HA	1.89	0.72
34:Cb:197:HIS:HB3	34:Cb:209:HIS:HB2	1.71	0.72
49:C1:212:C:H2'	49:C1:213:G:H8	1.54	0.72
49:C1:1213:U:O2	49:C1:1555:A:N7	2.22	0.72
29:CN:40:VAL:HA	29:CN:113:TYR:O	1.90	0.72
55:UH:557:GLU:O	55:UH:565:GLY:CA	2.37	0.72
15:UU:577:GLN:HE22	15:UU:581:SER:HB2	1.53	0.72
49:C1:1472:A:C2	49:C1:1510:G:N1	2.51	0.72
6:UG:205:HIS:NE2	49:C1:425:C:O2'	2.21	0.71
19:CC:222:VAL:O	19:CC:226:ILE:HB	1.89	0.71
24:CI:122:GLU:HG2	24:CI:124:GLU:H	1.54	0.71
49:C1:996:A:H2	49:C1:1005:A:H61	1.39	0.71
26:CK:229:THR:HG21	27:CL:545:ILE:HG12	1.71	0.71
29:CO:178:VAL:HG12	29:CO:223:GLU:HB2	1.72	0.71
49:C1:1625:G:N2	49:C1:1663:U:O2	2.23	0.71
1:UA:92:HIS:ND1	49:C1:258:C:N3	2.38	0.71
7:UJ:166:PHE:HB3	7:UJ:185:GLN:HE21	1.54	0.71
17:UZ:282:TYR:HB3	17:UZ:290:ALA:HB1	1.73	0.71
18:CB:250:GLY:HA2	18:CB:306:TYR:O	1.91	0.71
4:UD:549:VAL:HA	4:UD:565:ASP:HA	1.72	0.71
54:UT:1614:GLN:HA	54:UT:1617:ARG:HD3	1.73	0.71
13:UQ:150:LYS:HD2	13:UQ:193:ASP:HA	1.72	0.71
16:UX:13:ARG:HB3	25:CJ:19:ILE:HG13	1.72	0.71
28:CM:163:ARG:NH1	28:CM:207:GLN:O	2.21	0.71
2:UB:550:GLU:HG3	57:US:523:ILE:HB	1.73	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:CK:5:GLN:HE22	26:CK:158:PRO:HB3	1.54	0.71
38:Cf:48:THR:O	38:Cf:51:GLY:N	2.24	0.71
49:C1:1029:A:H61	49:C1:1046:G:H1'	1.55	0.71
49:C1:994:A:N1	49:C1:1007:G:O6	2.24	0.70
8:UK:268:ARG:NH1	14:UR:539:LEU:O	2.24	0.70
9:UL:793:LEU:HD11	9:UL:863:LEU:HD11	1.72	0.70
49:C1:66:G:OP2	55:UH:894:ARG:NH1	2.25	0.70
4:UD:673:ASN:HD21	4:UD:715:ASP:HA	1.56	0.70
10:UM:200:TRP:HE1	10:UM:206:ARG:HH12	1.37	0.70
1:UA:226:ALA:HA	1:UA:241:MET:HA	1.74	0.70
49:C1:495:G:H8	49:C1:503:G:H22	1.39	0.70
4:UD:182:THR:O	21:CE:124:ARG:NH2	2.24	0.70
9:UL:304:ILE:HG23	9:UL:360:HIS:HB3	1.74	0.70
13:UQ:195:ILE:O	13:UQ:201:VAL:HA	1.91	0.70
23:CH:202:LEU:HD21	23:CH:343:SER:HB3	1.74	0.70
23:CH:260:PRO:O	23:CH:272:LYS:HA	1.92	0.70
49:C1:1028:C:O2	49:C1:1044:A:N6	2.25	0.70
1:UA:531:ASP:O	1:UA:551:ARG:NH2	2.25	0.70
6:UG:243:GLN:HA	6:UG:250:ILE:HA	1.74	0.70
7:UJ:603:PRO:HA	7:UJ:671:GLU:HG2	1.74	0.70
25:CJ:62:SER:HA	25:CJ:71:ARG:HH21	1.56	0.70
28:CM:321:TYR:HB3	28:CM:353:TRP:HZ3	1.57	0.70
2:UB:796:ARG:HH12	57:US:435:GLY:HA2	1.57	0.70
2:UB:887:ASN:O	2:UB:891:ARG:HB2	1.92	0.70
23:CH:282:VAL:HA	23:CH:292:TYR:O	1.92	0.70
24:CI:269:GLU:HA	24:CI:779:LEU:O	1.92	0.70
35:Cc:212:ARG:HH22	47:Cp:58:LEU:HD22	1.57	0.70
49:C1:1023:U:C4	49:C1:1049:G:C6	2.80	0.70
49:C1:61:G:H5''	55:UH:893:SER:HB2	1.74	0.70
2:UB:564:PRO:HB3	57:US:515:ILE:HD11	1.74	0.69
9:UL:633:ILE:O	9:UL:642:HIS:N	2.25	0.69
15:UU:424:ARG:NH2	49:C1:259:U:OP1	2.25	0.69
20:CD:178:GLU:HG3	20:CD:267:ARG:HH12	1.55	0.69
24:CI:858:ARG:NH1	49:C1:1157:C:O2	2.21	0.69
46:Co:360:HIS:HB2	46:Co:363:ARG:HB2	1.73	0.69
51:UV:335:GLN:HG3	51:UV:382:ASP:HB3	1.74	0.69
55:UH:832:LEU:HA	55:UH:835:VAL:HG12	1.74	0.69
6:UG:95:ASN:H	6:UG:427:ASN:HD21	1.40	0.69
7:UJ:1680:VAL:HG13	7:UJ:1729:HIS:HE1	1.57	0.69
15:UU:478:MET:SD	50:C2:63:G:N2	2.65	0.69
36:Cd:5:ILE:HD11	36:Cd:113:ILE:HG13	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:UT:1434:LEU:O	54:UT:1438:LEU:HB2	1.91	0.69
1:UA:35:ASN:HD22	1:UA:54:HIS:H	1.41	0.69
1:UA:55:ARG:NH1	1:UA:614:VAL:O	2.25	0.69
4:UD:132:ILE:HD13	4:UD:158:THR:HB	1.74	0.69
12:UO:463:ARG:HH22	13:UQ:524:VAL:HB	1.56	0.69
12:UO:530:VAL:HG11	56:UE:259:LEU:HD22	1.74	0.69
14:UR:307:ALA:HB3	14:UR:311:PRO:HA	1.73	0.69
30:CP:123:ILE:HD11	30:CP:168:THR:HB	1.75	0.69
49:C1:902:U:O2	49:C1:930:G:N2	2.24	0.69
53:CW:145:LEU:O	53:CW:149:CYS:HA	1.93	0.69
56:UE:215:MET:SD	56:UE:249:ARG:NH1	2.66	0.69
14:UR:443:GLU:O	14:UR:452:VAL:N	2.25	0.69
31:CQ:92:MET:SD	31:CQ:120:LYS:NZ	2.65	0.69
1:UA:258:LEU:HA	1:UA:274:PHE:HA	1.72	0.69
23:CH:154:ARG:HA	23:CH:158:LEU:HD13	1.75	0.69
29:CN:116:THR:O	29:CN:119:GLY:N	2.24	0.69
50:C2:153:G:C6	50:C2:176:U:O2	2.46	0.69
51:UV:1059:ASP:N	52:CV:92:SER:O	2.25	0.69
6:UG:244:ASP:OD1	6:UG:247:THR:N	2.20	0.69
38:Cf:31:ARG:NH2	49:C1:917:A:OP2	2.25	0.69
1:UA:450:ILE:HD12	1:UA:471:VAL:HG11	1.75	0.69
12:UO:147:VAL:HA	12:UO:164:SER:HA	1.74	0.69
45:Cn:139:LYS:NZ	49:C1:618:C:O3'	2.26	0.69
57:US:362:ARG:HE	57:US:493:LEU:HD13	1.56	0.69
9:UL:489:LEU:HD23	9:UL:505:ALA:HB2	1.74	0.69
12:UO:257:VAL:HG13	12:UO:266:LEU:HB3	1.73	0.69
15:UU:751:CYS:HA	15:UU:767:MET:HA	1.75	0.69
1:UA:60:ARG:HG2	1:UA:102:LEU:HB3	1.75	0.69
5:UF:278:ILE:HG13	5:UF:279:PRO:HD3	1.75	0.68
6:UG:139:PRO:HA	6:UG:412:ASN:HA	1.75	0.68
13:UQ:520:ASN:HB2	13:UQ:523:ASP:HB2	1.75	0.68
24:CI:961:GLN:NE2	27:CL:526:VAL:O	2.25	0.68
26:CK:123:ILE:HG23	26:CK:126:ASP:HB2	1.74	0.68
24:CI:68:PRO:O	24:CI:275:ARG:NH1	2.26	0.68
49:C1:9:G:N1	49:C1:27:A:N6	2.41	0.68
18:CA:85:ARG:HD2	33:CT:112:ARG:HH22	1.58	0.68
28:CM:397:LEU:HD12	28:CM:398:PRO:HD2	1.75	0.68
56:UE:268:ALA:HB1	56:UI:223:VAL:HG22	1.75	0.68
1:UA:598:LEU:HB3	1:UA:608:LYS:O	1.92	0.68
13:UQ:381:LEU:HB3	13:UQ:390:ASP:O	1.93	0.68
14:UR:287:PRO:HB2	14:UR:303:LEU:HB3	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:CR:289:ARG:HA	32:CR:477:PRO:HA	1.76	0.68
49:C1:68:U:H3	55:UH:883:ARG:HH11	1.41	0.68
53:CW:333:LEU:HA	53:CW:349:ASN:HA	1.75	0.68
56:UI:215:MET:SD	56:UI:249:ARG:NH1	2.66	0.68
4:UD:123:LYS:HD2	4:UD:173:LEU:HB3	1.75	0.68
38:Cf:81:VAL:HA	38:Cf:102:VAL:HG22	1.75	0.68
42:Cj:72:GLY:O	42:Cj:77:GLN:NE2	2.26	0.68
46:Co:346:ASN:HB3	46:Co:351:ARG:O	1.94	0.68
1:UA:564:ARG:NH2	25:CJ:134:GLY:O	2.27	0.68
12:UO:277:THR:N	12:UO:291:GLY:O	2.27	0.68
14:UR:583:GLU:O	49:C1:241:G:N2	2.26	0.68
17:UZ:117:PRO:HA	17:UZ:121:ARG:HB2	1.75	0.68
31:CQ:112:GLN:HG3	31:CQ:125:ARG:HB3	1.76	0.68
39:Cg:142:PRO:HD2	49:C1:1058:A:H5'	1.76	0.68
54:UT:1080:ILE:HD12	54:UT:1087:VAL:HG11	1.74	0.68
9:UL:913:GLN:HG3	10:UM:874:ILE:HD11	1.76	0.68
16:UX:125:HIS:CE1	16:UX:128:THR:H	2.11	0.68
28:CM:392:ARG:O	28:CM:395:ARG:NH1	2.27	0.68
49:C1:1735:A:H2'	49:C1:1736:A:C8	2.28	0.68
51:UV:673:PRO:HA	51:UV:676:ARG:HG2	1.76	0.68
13:UQ:378:VAL:HG13	13:UQ:393:PRO:HA	1.76	0.68
18:CB:138:ALA:HA	18:CB:141:ILE:HD12	1.75	0.68
49:C1:1741:A:O2'	49:C1:1743:C:OP1	2.12	0.68
14:UR:262:ASP:O	14:UR:617:ARG:HB2	1.94	0.68
39:Cg:66:LYS:HG3	60:CY:318:ALA:HB1	1.75	0.68
49:C1:1640:U:H3	49:C1:1648:G:H1	1.41	0.68
13:UQ:590:VAL:HA	13:UQ:595:SER:O	1.93	0.68
26:CK:76:GLU:OE2	26:CK:203:ARG:NH1	2.26	0.68
28:CM:351:ARG:HB3	28:CM:353:TRP:NE1	2.09	0.68
46:Co:336:VAL:N	46:Co:359:LEU:O	2.27	0.67
54:UT:740:VAL:O	54:UT:746:TRP:NE1	2.27	0.67
11:UN:932:PRO:HG3	28:CM:249:PRO:HB3	1.76	0.67
15:UU:43:LEU:HD22	15:UU:46:PRO:HG3	1.75	0.67
15:UU:671:CYS:O	15:UU:672:ARG:NH2	2.27	0.67
49:C1:1480:G:H1	49:C1:1502:U:H3	1.42	0.67
51:UV:448:TYR:HB3	51:UV:616:LEU:HD11	1.76	0.67
1:UA:450:ILE:HG22	1:UA:464:LEU:HB2	1.76	0.67
16:UX:125:HIS:HE1	16:UX:128:THR:H	1.43	0.67
8:UK:105:LYS:HG3	8:UK:247:MET:HE1	1.77	0.67
21:CF:60:GLN:HB3	50:C2:193:U:H3	1.60	0.67
24:CI:391:LYS:O	32:CR:530:HIS:NE2	2.25	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:UT:123:LEU:HD21	54:UT:163:TRP:HB3	1.77	0.67
6:UG:53:GLY:O	11:UN:902:ARG:NH2	2.27	0.67
9:UL:937:ARG:O	31:CQ:240:GLN:NE2	2.27	0.67
11:UN:326:TRP:NE1	28:CM:209:GLU:OE1	2.27	0.67
15:UU:96:ALA:HB3	15:UU:107:ALA:HB3	1.76	0.67
26:CK:236:CYS:SG	26:CK:262:THR:OG1	2.52	0.67
46:Co:345:ARG:NH1	46:Co:345:ARG:O	2.27	0.67
63:Cz:1517:ALA:HA	63:Cz:1520:MET:HG2	1.76	0.67
51:UV:680:LEU:HD22	51:UV:835:LYS:HG3	1.77	0.67
15:UU:565:ILE:HB	15:UU:579:PHE:HB2	1.77	0.67
23:CH:218:ILE:HB	23:CH:250:VAL:HG12	1.77	0.67
45:Cn:103:LEU:HD23	45:Cn:126:LYS:HB2	1.76	0.67
1:UA:448:PHE:HB2	26:CK:135:ARG:HH11	1.60	0.67
15:UU:415:ARG:NH2	15:UU:458:GLU:O	2.28	0.67
17:UZ:87:HIS:HB2	17:UZ:258:ASN:HD21	1.60	0.67
22:CG:130:ARG:HH12	22:CG:133:LEU:HD12	1.59	0.67
13:UQ:379:LEU:HD12	13:UQ:413:LEU:HD11	1.75	0.66
22:CG:303:LEU:HD11	22:CG:317:LEU:HB2	1.76	0.66
32:CS:105:ARG:NH2	32:CS:106:TYR:O	2.28	0.66
14:UR:596:SER:HB3	14:UR:601:VAL:HB	1.76	0.66
26:CK:5:GLN:NE2	26:CK:132:GLN:OE1	2.28	0.66
49:C1:1138:C:N4	49:C1:1155:G:C6	2.63	0.66
4:UD:317:PHE:HB2	13:UQ:350:LYS:HE3	1.77	0.66
7:UJ:841:LEU:HD22	7:UJ:849:ILE:HG12	1.76	0.66
10:UM:281:GLY:H	10:UM:290:TYR:HB3	1.60	0.66
17:UZ:64:LEU:HD21	17:UZ:281:PHE:HB3	1.76	0.66
23:CH:221:VAL:HG22	23:CH:253:ALA:HB3	1.76	0.66
26:CK:152:ILE:HG23	26:CK:167:LEU:HD11	1.76	0.66
32:CR:105:ARG:NH2	32:CR:106:TYR:O	2.28	0.66
32:CR:421:GLY:HA2	32:CR:545:VAL:HG13	1.78	0.66
32:CS:289:ARG:HA	32:CS:477:PRO:HA	1.76	0.66
49:C1:2085:G:H21	49:C1:2088:A:N6	1.94	0.66
4:UD:264:LYS:HD2	4:UD:265:THR:HG23	1.77	0.66
18:CA:214:MET:N	18:CA:214:MET:SD	2.69	0.66
2:UB:759:HIS:O	2:UB:765:ASN:ND2	2.28	0.66
7:UJ:1729:HIS:HB3	7:UJ:1741:VAL:HG11	1.77	0.66
14:UR:323:THR:HG22	14:UR:344:ARG:HG3	1.76	0.66
24:CI:227:SER:HA	24:CI:229:MET:HE3	1.76	0.66
24:CI:1085:ARG:NH2	49:C1:391:C:OP1	2.28	0.66
1:UA:170:SER:OG	1:UA:171:LYS:N	2.27	0.66
2:UB:618:ILE:O	2:UB:622:LEU:HB2	1.94	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:UO:19:PRO:O	13:UQ:645:ARG:NH1	2.29	0.66
12:UO:40:ALA:HB2	58:CI:56:LYS:HD2	1.77	0.66
1:UA:787:MET:HE3	15:UU:841:MET:HB3	1.78	0.66
9:UL:238:ASP:HB3	9:UL:240:GLU:HG2	1.76	0.66
15:UU:665:MET:HG2	15:UU:666:THR:HG23	1.77	0.66
26:CK:116:ARG:NH1	26:CK:118:ASN:OD1	2.29	0.66
28:CM:343:THR:HB	28:CM:351:ARG:HB2	1.77	0.66
35:Cc:131:GLU:HG3	35:Cc:148:ASP:HA	1.77	0.66
49:C1:425:C:H2'	49:C1:426:A:H8	1.59	0.66
49:C1:702:U:O2'	49:C1:917:A:N3	2.28	0.66
49:C1:1702:G:H2'	49:C1:1703:G:H8	1.61	0.66
51:UV:197:LEU:HD23	51:UV:227:ILE:HD11	1.78	0.66
51:UV:834:VAL:HG21	51:UV:856:VAL:HG21	1.75	0.66
54:UT:1859:LYS:HD3	54:UT:1902:GLU:HG3	1.78	0.66
1:UA:795:ARG:NH2	10:UM:885:GLU:OE2	2.29	0.66
2:UB:685:PRO:HG2	2:UB:690:ARG:HH21	1.60	0.66
4:UD:88:GLU:HB3	4:UD:96:ILE:HB	1.77	0.66
23:CH:111:THR:HA	23:CH:114:LEU:HB3	1.78	0.66
49:C1:442:U:H2'	49:C1:483:U:H3	1.61	0.66
9:UL:46:GLU:HA	9:UL:61:TRP:O	1.96	0.66
17:UZ:151:ASP:O	17:UZ:177:LYS:NZ	2.28	0.66
23:CH:251:HIS:HB3	48:CU:111:MET:HG3	1.77	0.66
43:Ck:77:THR:O	43:Ck:93:ARG:NH2	2.29	0.66
53:CW:298:THR:HB	53:CW:362:LEU:HD12	1.78	0.66
54:UT:1352:TYR:HE2	54:UT:1429:ASP:HB3	1.61	0.66
6:UG:250:ILE:HD11	49:C1:342:G:H4'	1.78	0.66
18:CA:191:ARG:O	19:CC:172:LYS:NZ	2.28	0.66
35:Cc:68:ARG:O	35:Cc:70:ARG:NH2	2.29	0.66
5:UF:173:ARG:HD2	19:CC:57:THR:HB	1.78	0.65
6:UG:229:PHE:HZ	6:UG:449:ALA:HB1	1.60	0.65
14:UR:602:LEU:HB2	14:UR:616:ILE:HD11	1.78	0.65
23:CH:85:THR:HA	23:CH:90:ASN:HD22	1.60	0.65
26:CK:66:LYS:HG3	26:CK:71:ILE:HD11	1.78	0.65
31:CQ:158:LEU:HD23	31:CQ:164:LEU:HG	1.76	0.65
31:CQ:208:ARG:NH1	31:CQ:209:ILE:O	2.30	0.65
32:CS:421:GLY:HA2	32:CS:545:VAL:HG13	1.78	0.65
36:Cd:160:ARG:NH2	49:C1:655:A:OP1	2.29	0.65
38:Cf:99:SER:N	38:Cf:173:ILE:O	2.29	0.65
49:C1:1457:G:O6	49:C1:1540:A:N1	2.29	0.65
15:UU:511:VAL:HB	15:UU:524:TRP:HB2	1.78	0.65
16:UX:114:ARG:NH1	28:CM:348:GLY:O	2.29	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CG:301:ASN:HB3	22:CG:317:LEU:HB3	1.76	0.65
38:Cf:73:THR:O	38:Cf:74:ARG:NH1	2.29	0.65
6:UG:65:ASP:O	6:UG:69:ARG:HB2	1.96	0.65
9:UL:847:LEU:HD21	47:Cp:15:ARG:HE	1.60	0.65
16:UX:2:THR:OG1	25:CJ:39:GLN:NE2	2.30	0.65
18:CB:211:ARG:HG2	18:CB:238:ILE:HG12	1.79	0.65
20:CD:310:ASN:HA	20:CD:313:LYS:HD2	1.78	0.65
38:Cf:32:GLN:O	38:Cf:56:ARG:NH1	2.25	0.65
49:C1:1626:G:H2'	49:C1:1627:G:C8	2.31	0.65
28:CM:310:TRP:HE1	28:CM:317:SER:HA	1.60	0.65
32:CS:172:ARG:HH22	32:CS:528:SER:HA	1.61	0.65
49:C1:216:A:H61	49:C1:228:G:H1	1.43	0.65
7:UJ:1600:LEU:HB2	7:UJ:1646:LEU:HB3	1.78	0.65
16:UX:53:VAL:HB	39:Cg:98:LYS:HZ1	1.62	0.65
18:CA:245:LEU:O	19:CC:135:ARG:NH1	2.30	0.65
24:CI:886:CYS:HB3	24:CI:901:ALA:O	1.96	0.65
7:UJ:1757:LEU:HA	7:UJ:1760:LEU:HD23	1.77	0.65
9:UL:233:ILE:HG22	9:UL:243:VAL:HG12	1.77	0.65
39:Cg:60:LEU:HD22	39:Cg:66:LYS:HD2	1.77	0.65
44:Cm:50:PHE:HB3	44:Cm:63:VAL:HG13	1.77	0.65
49:C1:392:C:H2'	49:C1:393:G:H8	1.61	0.65
51:UV:204:PRO:HG2	51:UV:215:LYS:HE2	1.78	0.65
51:UV:970:VAL:HG21	51:UV:982:ARG:HD3	1.77	0.65
1:UA:386:THR:H	1:UA:401:SER:HA	1.62	0.65
1:UA:413:ARG:NH1	49:C1:2217:C:OP1	2.30	0.65
14:UR:62:ALA:O	14:UR:66:PHE:HB2	1.97	0.65
24:CI:845:LEU:HD11	24:CI:998:LYS:HB2	1.79	0.65
49:C1:9:G:H1	49:C1:27:A:N6	1.94	0.65
51:UV:671:ILE:O	51:UV:676:ARG:NH1	2.29	0.65
53:CW:24:PRO:O	53:CW:24:PRO:HD2	1.97	0.65
6:UG:137:LEU:HD23	6:UG:159:HIS:HB2	1.78	0.65
7:UJ:1703:VAL:HG12	7:UJ:1744:CYS:HB3	1.78	0.65
9:UL:924:LEU:HB3	10:UM:864:LYS:HG2	1.79	0.65
15:UU:59:THR:HA	20:CD:434:VAL:HG11	1.79	0.65
17:UZ:90:ASN:ND2	17:UZ:228:ILE:O	2.30	0.65
19:CC:205:HIS:ND1	19:CC:264:GLN:O	2.29	0.65
20:CD:227:GLU:HG2	20:CD:228:ILE:HG23	1.78	0.65
56:UI:268:ALA:HA	56:UI:271:LYS:HG3	1.79	0.65
2:UB:61:LYS:NZ	49:C1:1761:C:O3'	2.29	0.65
11:UN:896:GLN:O	11:UN:900:SER:HB3	1.96	0.65
12:UO:166:ASP:HA	57:US:413:LEU:HD11	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:UU:349:GLN:NE2	20:CD:435:LYS:O	2.29	0.65
37:Ce:75:GLY:HA2	37:Ce:78:ARG:HD2	1.77	0.65
49:C1:1017:C:N4	49:C1:1020:A:OP1	2.30	0.65
54:UT:1895:ARG:HA	54:UT:1898:LYS:HG2	1.77	0.65
15:UU:136:ASP:O	15:UU:158:ARG:NH1	2.30	0.65
15:UU:190:ILE:HG21	15:UU:237:PRO:HD3	1.78	0.65
19:CC:392:ILE:HD13	21:CF:63:SER:HB2	1.77	0.65
24:CI:759:GLU:HB2	24:CI:764:GLN:HE22	1.62	0.65
25:CJ:145:ASP:O	25:CJ:147:ALA:N	2.29	0.65
32:CS:152:LEU:HD11	32:CS:154:LYS:HE3	1.80	0.65
49:C1:715:A:C6	49:C1:785:U:N3	2.65	0.65
53:CW:137:ARG:HH12	53:CW:157:GLY:HA3	1.60	0.65
60:CY:231:LEU:HG	60:CY:321:ILE:HD12	1.78	0.65
1:UA:65:PRO:HG2	1:UA:106:PRO:HA	1.77	0.64
9:UL:119:ASP:HB3	9:UL:122:GLY:H	1.61	0.64
15:UU:857:ILE:O	31:CQ:254:ARG:NH2	2.30	0.64
54:UT:310:ILE:O	54:UT:353:ARG:NH2	2.30	0.64
9:UL:633:ILE:HD12	9:UL:643:LYS:HB3	1.79	0.64
12:UO:461:ARG:HG3	12:UO:462:HIS:HD1	1.61	0.64
14:UR:187:ASP:HB3	15:UU:314:ASN:HD21	1.62	0.64
28:CM:55:LYS:O	28:CM:354:ARG:NH1	2.30	0.64
4:UD:686:ARG:NH1	49:C1:63:C:O2	2.30	0.64
6:UG:577:ILE:O	6:UG:582:ARG:NH2	2.29	0.64
30:CP:127:ARG:HH12	30:CP:133:LYS:HA	1.61	0.64
1:UA:60:ARG:NH2	1:UA:100:THR:O	2.30	0.64
7:UJ:32:SER:OG	7:UJ:33:LEU:N	2.31	0.64
8:UK:64:TYR:OH	25:CJ:119:ARG:NH1	2.31	0.64
9:UL:50:TRP:HA	9:UL:57:LEU:HA	1.80	0.64
13:UQ:735:ARG:NH2	13:UQ:778:THR:OG1	2.30	0.64
14:UR:442:THR:HG22	14:UR:454:ILE:HG12	1.78	0.64
15:UU:305:SER:OG	15:UU:306:GLY:N	2.30	0.64
24:CI:394:LYS:HD2	24:CI:401:GLN:HB3	1.80	0.64
24:CI:826:ILE:HD11	24:CI:863:THR:HG23	1.77	0.64
26:CK:15:ARG:NH2	26:CK:74:ASP:OD2	2.31	0.64
28:CM:55:LYS:NZ	50:C2:35:G:OP2	2.29	0.64
32:CS:913:MET:HG3	53:CW:377:HIS:HE1	1.62	0.64
36:Cd:3:LEU:HD12	36:Cd:111:LEU:HD11	1.78	0.64
39:Cg:108:GLN:NE2	39:Cg:120:ILE:O	2.31	0.64
6:UG:267:ASN:O	6:UG:271:ALA:HA	1.98	0.64
12:UO:324:THR:HA	12:UO:331:ASP:HA	1.80	0.64
18:CB:243:ALA:O	20:CD:120:ARG:NH2	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:CM:183:GLU:O	54:UT:1940:ARG:NH2	2.30	0.64
5:UF:166:ARG:NH2	11:UN:358:GLN:O	2.30	0.64
9:UL:912:ARG:HE	10:UM:828:ARG:HH22	1.45	0.64
24:CI:69:ARG:NH1	24:CI:230:LYS:O	2.30	0.64
24:CI:883:SER:OG	24:CI:884:PHE:N	2.27	0.64
26:CK:26:ALA:HA	26:CK:29:ARG:HB3	1.80	0.64
30:CP:106:VAL:HG12	30:CP:163:LEU:HD13	1.79	0.64
34:Cb:57:ASN:HD22	34:Cb:59:ARG:HG2	1.63	0.64
49:C1:952:U:N3	49:C1:957:G:N1	2.44	0.64
53:CW:335:PHE:HE2	53:CW:337:THR:HG23	1.60	0.64
54:UT:536:ARG:NH1	54:UT:825:MET:SD	2.71	0.64
10:UM:64:ILE:HD11	10:UM:78:VAL:HB	1.79	0.64
17:UZ:245:VAL:HG21	17:UZ:259:ILE:HG13	1.79	0.64
22:CG:478:ILE:O	22:CG:489:VAL:HA	1.97	0.64
49:C1:1472:A:N1	49:C1:1510:G:O6	2.31	0.64
49:C1:1625:G:H2'	49:C1:1626:G:C8	2.32	0.64
53:CW:219:PHE:O	53:CW:226:VAL:HA	1.98	0.64
54:UT:499:VAL:HG21	54:UT:547:THR:HB	1.80	0.64
4:UD:131:GLU:H	4:UD:159:VAL:HG22	1.63	0.64
5:UF:105:GLY:HA2	19:CC:145:LEU:HD13	1.80	0.64
6:UG:303:VAL:HA	6:UG:319:GLY:HA2	1.79	0.64
10:UM:677:VAL:HG13	10:UM:686:GLU:HB2	1.79	0.64
18:CB:201:THR:HA	19:CC:262:MET:HE1	1.80	0.64
26:CK:240:ARG:NH1	26:CK:256:GLU:OE2	2.30	0.64
32:CR:152:LEU:HD11	32:CR:154:LYS:HE3	1.80	0.64
42:Cj:77:GLN:NE2	49:C1:2065:C:O2'	2.31	0.64
49:C1:700:C:C4	49:C1:831:A:C6	2.86	0.64
53:CW:24:PRO:HG2	53:CW:27:LEU:HB2	1.78	0.64
54:UT:480:PRO:HG3	54:UT:485:LYS:HB3	1.79	0.64
54:UT:1360:GLY:HA2	54:UT:1440:TYR:HB2	1.78	0.64
8:UK:262:ARG:HH12	8:UK:264:LYS:HB2	1.63	0.64
10:UM:376:ILE:HG22	10:UM:393:THR:HG22	1.80	0.64
13:UQ:699:ILE:HD13	13:UQ:723:ARG:HD3	1.78	0.64
14:UR:256:LEU:HD11	14:UR:554:LEU:HD21	1.79	0.64
25:CJ:165:LYS:NZ	25:CJ:168:GLN:OE1	2.28	0.64
29:CN:121:LEU:HB3	29:CN:163:ILE:O	1.98	0.64
62:UP:345:ALA:O	62:UP:348:ARG:O	2.16	0.64
1:UA:203:PHE:HA	1:UA:210:ILE:HG22	1.80	0.64
9:UL:280:ARG:NH2	49:C1:2235:C:OP1	2.30	0.64
18:CB:250:GLY:CA	18:CB:306:TYR:O	2.46	0.64
28:CM:301:GLY:HA3	28:CM:332:THR:HG21	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:Cf:73:THR:HG23	49:C1:841:A:H1'	1.80	0.64
49:C1:1453:G:N2	49:C1:1545:U:O2	2.31	0.64
54:UT:123:LEU:HD13	54:UT:167:ALA:HB2	1.79	0.64
1:UA:328:GLN:HE22	31:CQ:256:LYS:HG2	1.63	0.63
9:UL:574:SER:HA	9:UL:615:ILE:HD11	1.79	0.63
14:UR:417:ARG:HH11	21:CE:19:GLN:HB3	1.63	0.63
21:CF:24:CYS:HA	21:CF:27:GLN:HG2	1.81	0.63
24:CI:854:ARG:NH1	45:Cn:63:GLN:O	2.31	0.63
49:C1:811:C:OP2	54:UT:1614:GLN:NE2	2.31	0.63
54:UT:612:ARG:HH22	54:UT:838:LEU:HB3	1.62	0.63
55:UH:883:ARG:NH2	55:UH:887:GLU:OE2	2.32	0.63
56:UE:268:ALA:HA	56:UE:271:LYS:HG3	1.79	0.63
4:UD:650:VAL:HA	4:UD:655:GLN:O	1.98	0.63
4:UD:684:ASP:HB2	4:UD:734:ARG:HD3	1.80	0.63
4:UD:759:ALA:HA	13:UQ:282:VAL:HA	1.79	0.63
13:UQ:745:ILE:HG23	13:UQ:753:VAL:HG22	1.79	0.63
39:Cg:38:ARG:NH1	49:C1:1179:G:OP1	2.31	0.63
50:C2:267:C:H2'	50:C2:268:G:H8	1.63	0.63
54:UT:495:GLN:NE2	54:UT:547:THR:OG1	2.29	0.63
1:UA:149:GLN:OE1	1:UA:176:ARG:NH2	2.31	0.63
4:UD:65:GLN:HB3	4:UD:370:GLN:HB2	1.81	0.63
6:UG:158:GLY:O	6:UG:175:GLN:O	2.17	0.63
15:UU:189:ALA:HA	15:UU:200:PHE:O	1.97	0.63
19:CC:131:LEU:HA	19:CC:134:ILE:HD12	1.80	0.63
24:CI:773:ALA:O	24:CI:775:LYS:NZ	2.30	0.63
25:CJ:71:ARG:NH1	25:CJ:75:GLU:OE2	2.31	0.63
31:CQ:86:PRO:HA	31:CQ:120:LYS:O	1.98	0.63
32:CS:764:ARG:HG2	32:CS:766:LEU:HD22	1.80	0.63
35:Cc:66:VAL:HG22	35:Cc:67:LYS:HG3	1.80	0.63
49:C1:976:G:HO2'	53:CW:94:HIS:HD1	1.41	0.63
63:Cz:1516:MET:HE2	63:Cz:1531:ILE:HG22	1.79	0.63
2:UB:644:LEU:HG	2:UB:657:MET:HE1	1.81	0.63
6:UG:56:PRO:HG2	11:UN:899:ARG:HD3	1.81	0.63
32:CR:764:ARG:HG2	32:CR:766:LEU:HD22	1.80	0.63
32:CS:573:PRO:O	32:CS:575:GLN:NE2	2.31	0.63
49:C1:452:G:N2	49:C1:480:U:O2	2.25	0.63
50:C2:160:U:H2'	50:C2:161:G:H8	1.64	0.63
54:UT:1099:LEU:HD21	54:UT:1159:LEU:HG	1.79	0.63
7:UJ:1658:PHE:HB2	7:UJ:1708:GLU:HG3	1.79	0.63
9:UL:907:ARG:HH22	10:UM:882:TYR:HA	1.64	0.63
12:UO:267:ARG:NH2	12:UO:304:SER:O	2.28	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:UQ:360:SER:HB2	13:UQ:402:ILE:HG12	1.79	0.63
14:UR:292:SER:HB2	14:UR:325:LEU:HD23	1.81	0.63
21:CF:118:LEU:HA	21:CF:121:LYS:HD2	1.79	0.63
32:CR:738:LYS:HE3	32:CR:808:SER:HB3	1.80	0.63
34:Cb:19:LEU:HD11	34:Cb:108:ARG:HD2	1.80	0.63
38:Cf:5:ARG:NH1	49:C1:916:U:O2'	2.31	0.63
53:CW:282:LYS:NZ	53:CW:321:GLY:O	2.31	0.63
62:UP:345:ALA:O	62:UP:348:ARG:C	2.42	0.63
1:UA:563:ARG:NH1	16:UX:-2:ARG:O	2.31	0.63
4:UD:270:GLN:HE21	4:UD:271:ARG:H	1.46	0.63
11:UN:907:PRO:O	28:CM:25:ARG:NH2	2.31	0.63
12:UO:203:ASN:HD21	12:UO:220:ARG:HE	1.47	0.63
20:CD:438:ARG:NH2	49:C1:273:G:OP2	2.31	0.63
21:CE:56:ALA:HA	21:CE:82:VAL:O	1.98	0.63
20:CD:305:SER:O	20:CD:310:ASN:ND2	2.32	0.63
28:CM:310:TRP:NE1	28:CM:316:HIS:O	2.32	0.63
32:CR:172:ARG:HH22	32:CR:528:SER:HA	1.61	0.63
43:Ck:109:HIS:NE2	49:C1:933:G:OP1	2.32	0.63
57:US:303:LEU:O	57:US:307:LEU:HB2	1.99	0.63
13:UQ:163:GLY:O	13:UQ:181:THR:HA	1.99	0.63
20:CD:99:ILE:HG13	20:CD:109:PRO:HG3	1.79	0.63
31:CQ:126:SER:HB3	31:CQ:136:LEU:HD21	1.81	0.63
32:CR:287:ARG:HE	32:CR:288:GLY:H	1.47	0.63
50:C2:137:U:O2	50:C2:150:G:N2	2.26	0.63
54:UT:914:ARG:NH2	54:UT:949:LYS:O	2.32	0.63
11:UN:903:LEU:O	28:CM:381:ARG:NH2	2.31	0.63
14:UR:463:GLY:HA2	14:UR:487:SER:HA	1.80	0.63
32:CR:513:PRO:HD3	32:CR:647:MET:HE2	1.81	0.63
32:CR:573:PRO:O	32:CR:575:GLN:NE2	2.31	0.63
32:CS:738:LYS:HE3	32:CS:808:SER:HB3	1.80	0.63
49:C1:85:U:H3	49:C1:122:G:H1	1.45	0.63
49:C1:1182:U:H2'	49:C1:1183:A:H8	1.64	0.63
52:CV:49:ARG:HB3	52:CV:158:VAL:HG21	1.79	0.63
5:UF:65:ARG:NH1	5:UF:119:GLN:OE1	2.32	0.62
5:UF:338:HIS:O	5:UF:363:ARG:NH1	2.29	0.62
18:CA:254:LEU:HB3	18:CA:301:MET:HE1	1.81	0.62
22:CG:172:THR:HG23	22:CG:583:GLY:HA3	1.80	0.62
24:CI:192:ARG:O	24:CI:192:ARG:NH2	2.32	0.62
28:CM:28:ALA:HB3	28:CM:31:LEU:HG	1.81	0.62
33:CT:185:LYS:NZ	49:C1:400:C:OP1	2.32	0.62
49:C1:346:C:O2'	49:C1:347:C:O5'	2.17	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:C1:1729:U:OP2	49:C1:2228:G:N2	2.26	0.62
52:CV:184:ASP:OD2	52:CV:186:LYS:NZ	2.31	0.62
54:UT:247:GLN:HE21	54:UT:250:LEU:HD22	1.64	0.62
56:UI:162:ARG:HB3	56:UI:192:LEU:HD21	1.81	0.62
63:Cz:1580:ASP:O	63:Cz:1584:HIS:ND1	2.32	0.62
12:UO:29:SER:O	12:UO:31:LYS:NZ	2.32	0.62
15:UU:473:ASN:O	15:UU:474:ARG:NH1	2.32	0.62
24:CI:171:THR:HG22	24:CI:206:LEU:HB3	1.80	0.62
30:CP:132:ASN:HB3	30:CP:135:ARG:HB3	1.81	0.62
32:CR:315:PRO:HB3	32:CR:394:ILE:HD11	1.82	0.62
32:CS:513:PRO:HD3	32:CS:647:MET:HE2	1.81	0.62
33:CT:70:SER:OG	33:CT:71:VAL:N	2.33	0.62
49:C1:237:G:H2'	49:C1:238:G:H8	1.63	0.62
51:UV:659:GLU:O	51:UV:664:ARG:NH2	2.32	0.62
1:UA:143:ARG:NH1	49:C1:261:G:OP2	2.32	0.62
1:UA:519:ARG:NH1	1:UA:524:GLN:OE1	2.32	0.62
13:UQ:349:ARG:NH2	13:UQ:351:TYR:OH	2.31	0.62
17:UZ:116:PHE:HB3	17:UZ:120:LEU:HB2	1.81	0.62
22:CG:235:ARG:HH12	50:C2:119:C:H3'	1.63	0.62
24:CI:843:GLN:NE2	24:CI:1012:SER:OG	2.32	0.62
32:CS:287:ARG:HE	32:CS:288:GLY:H	1.47	0.62
37:Ce:149:ARG:HG2	44:Cm:53:VAL:HG12	1.80	0.62
1:UA:418:ARG:NH2	1:UA:455:VAL:O	2.32	0.62
14:UR:586:PRO:O	14:UR:612:ARG:NH1	2.33	0.62
25:CJ:167:LYS:HA	25:CJ:170:ILE:HD12	1.80	0.62
32:CR:712:LEU:HD12	32:CR:715:ARG:HH12	1.63	0.62
38:Cf:110:ARG:NH2	38:Cf:164:PHE:O	2.32	0.62
47:Cp:16:VAL:HG13	47:Cp:29:VAL:HG12	1.81	0.62
49:C1:1182:U:H2'	49:C1:1183:A:C8	2.34	0.62
49:C1:1448:A:C6	49:C1:1549:U:O4	2.52	0.62
51:UV:566:PHE:O	51:UV:569:PHE:N	2.32	0.62
54:UT:1277:ILE:HG13	54:UT:1281:LEU:HD23	1.81	0.62
54:UT:1391:ILE:HD11	54:UT:1430:GLN:HA	1.80	0.62
1:UA:339:HIS:HD2	1:UA:343:MET:HE2	1.63	0.62
4:UD:285:SER:HA	4:UD:354:LEU:HD21	1.81	0.62
9:UL:439:LYS:O	9:UL:453:ASN:ND2	2.32	0.62
10:UM:202:THR:O	10:UM:205:GLY:HA2	1.99	0.62
10:UM:566:LYS:HG2	10:UM:587:ARG:HA	1.82	0.62
11:UN:932:PRO:O	28:CM:163:ARG:NH2	2.31	0.62
19:CC:88:GLN:NE2	49:C1:455:G:OP1	2.31	0.62
24:CI:304:ASP:HB3	24:CI:306:CYS:H	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CJ:123:THR:OG1	25:CJ:124:VAL:N	2.32	0.62
27:CL:572:ARG:NH1	49:C1:2213:U:OP1	2.32	0.62
28:CM:276:LEU:HD11	49:C1:582:G:H5''	1.80	0.62
51:UV:716:ARG:HA	51:UV:719:ILE:HD12	1.81	0.62
54:UT:387:TRP:HH2	54:UT:814:THR:HG23	1.63	0.62
61:CZ:575:THR:HA	61:CZ:579:GLN:HB2	1.80	0.62
1:UA:94:SER:O	1:UA:96:LYS:NZ	2.31	0.62
36:CD:76:LEU:O	53:CW:49:GLN:NE2	2.32	0.62
49:C1:2358:U:O2	49:C1:2369:G:N2	2.28	0.62
54:UT:1302:ILE:HG21	54:UT:1338:LEU:HD22	1.82	0.62
54:UT:1783:LYS:O	54:UT:1787:LEU:N	2.32	0.62
7:UJ:715:VAL:HG12	7:UJ:748:LEU:HB2	1.81	0.62
7:UJ:855:VAL:HA	7:UJ:858:LYS:HG2	1.82	0.62
9:UL:814:ARG:NH2	9:UL:824:ILE:O	2.32	0.62
16:UX:146:VAL:HG21	16:UX:157:ILE:HD13	1.81	0.62
23:CH:173:LEU:HB2	23:CH:194:MET:HG3	1.81	0.62
29:CN:80:MET:O	29:CN:82:ARG:NH1	2.32	0.62
32:CR:276:THR:OG1	32:CR:279:ASN:ND2	2.33	0.62
37:CE:133:ASP:HA	37:CE:136:LEU:HD12	1.80	0.62
50:C2:103:G:O6	50:C2:250:G:O6	2.18	0.62
51:UV:494:ASN:HD21	51:UV:500:ARG:HB3	1.64	0.62
59:CX:234:ILE:HD12	59:CX:269:ILE:HD11	1.81	0.62
9:UL:49:VAL:HG23	9:UL:58:LEU:HB2	1.81	0.62
26:CK:228:ILE:HG13	26:CK:241:HIS:HB2	1.82	0.62
34:CB:175:PHE:HE2	34:CB:198:ARG:HD3	1.64	0.62
37:CE:171:GLY:O	37:CE:175:ARG:NH1	2.32	0.62
38:CF:79:ILE:HB	38:CF:103:GLN:HG3	1.81	0.62
51:UV:438:ILE:HB	51:UV:866:TRP:HE1	1.65	0.62
51:UV:489:ALA:HB1	51:UV:606:ILE:HD13	1.80	0.62
54:UT:932:ASN:O	54:UT:938:GLN:NE2	2.33	0.62
56:UE:162:ARG:HB3	56:UE:192:LEU:HD21	1.81	0.62
1:UA:761:VAL:O	1:UA:765:PHE:HB2	1.99	0.62
12:UO:317:ILE:HA	12:UO:338:MET:HA	1.81	0.62
14:UR:293:SER:HG	14:UR:295:SER:HG	1.41	0.62
14:UR:544:SER:N	14:UR:558:GLY:O	2.31	0.62
18:CB:272:PHE:HB3	18:CB:289:GLN:HE22	1.65	0.62
20:CD:364:GLN:NE2	50:C2:85:A:OP1	2.32	0.62
32:CS:712:LEU:HD12	32:CS:715:ARG:HH12	1.63	0.62
32:CS:765:PRO:HD2	32:CS:775:LEU:HD22	1.82	0.62
38:CF:47:ARG:NH1	49:C1:980:G:N7	2.45	0.62
7:UJ:578:ARG:NH1	7:UJ:584:CYS:SG	2.73	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:UQ:323:ILE:HB	13:UQ:351:TYR:HB2	1.81	0.62
20:CD:326:LYS:HB3	50:C2:91:G:H22	1.64	0.62
22:CG:173:VAL:HG13	22:CG:581:VAL:HG13	1.82	0.62
22:CG:568:ARG:NH1	22:CG:577:CYS:SG	2.73	0.62
24:CI:844:THR:OG1	24:CI:845:LEU:N	2.33	0.62
32:CR:824:LEU:HB3	32:CR:869:ARG:HD3	1.82	0.62
32:CS:315:PRO:HB3	32:CS:394:ILE:HD11	1.81	0.62
34:Cb:36:HIS:HB2	34:Cb:83:PRO:HB2	1.80	0.62
54:UT:192:PRO:HA	54:UT:196:LYS:HB2	1.82	0.62
55:UH:784:ILE:HB	56:UI:266:LEU:HD12	1.82	0.62
1:UA:144:HIS:O	1:UA:145:HIS:ND1	2.33	0.61
1:UA:762:VAL:HG11	1:UA:796:ALA:HB1	1.82	0.61
6:UG:141:THR:HG23	6:UG:397:ARG:HD3	1.82	0.61
16:UX:6:ILE:O	25:CJ:34:ARG:NH1	2.33	0.61
16:UX:8:GLY:O	16:UX:14:ARG:NH1	2.33	0.61
18:CB:306:TYR:OH	20:CD:120:ARG:NH1	2.33	0.61
20:CD:385:ALA:O	20:CD:390:ARG:NH2	2.33	0.61
21:CF:119:ARG:HA	21:CF:122:VAL:HG12	1.82	0.61
26:CK:289:ARG:NH2	49:C1:1144:U:OP2	2.33	0.61
29:CO:239:SER:O	29:CO:243:HIS:ND1	2.33	0.61
32:CR:197:GLU:OE2	32:CR:485:ASN:ND2	2.32	0.61
36:Cd:183:THR:HG23	36:Cd:186:ARG:H	1.65	0.61
49:C1:486:G:H2'	49:C1:487:G:H8	1.65	0.61
54:UT:1759:SER:HB3	54:UT:1800:VAL:HG11	1.80	0.61
1:UA:9:ASN:O	1:UA:697:VAL:HB	1.99	0.61
13:UQ:765:TYR:OH	13:UQ:819:GLU:O	2.18	0.61
14:UR:234:LEU:HD22	15:UU:318:ARG:HB2	1.82	0.61
21:CE:64:ILE:HG13	21:CE:65:VAL:HG13	1.82	0.61
32:CS:197:GLU:OE2	32:CS:485:ASN:ND2	2.32	0.61
13:UQ:514:GLN:NE2	13:UQ:596:LEU:O	2.32	0.61
15:UU:141:ILE:HA	15:UU:155:ALA:HA	1.80	0.61
31:CQ:91:ARG:NH2	31:CQ:150:PHE:O	2.33	0.61
32:CS:824:LEU:HB3	32:CS:869:ARG:HD3	1.82	0.61
38:Cf:89:GLU:HA	38:Cf:92:ARG:HD2	1.82	0.61
43:Ck:132:GLN:NE2	43:Ck:133:CYS:O	2.34	0.61
52:CV:98:ILE:HG23	52:CV:99:ILE:HG12	1.81	0.61
2:UB:655:PRO:O	2:UB:659:ASN:ND2	2.33	0.61
12:UO:236:GLU:N	12:UO:250:ALA:O	2.34	0.61
18:CA:174:VAL:HB	18:CA:178:GLY:HA3	1.81	0.61
18:CA:238:ILE:O	18:CA:242:ASN:ND2	2.33	0.61
49:C1:1744:A:H2'	49:C1:1745:C:H6	1.64	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:UT:401:ALA:O	54:UT:440:ARG:NH2	2.34	0.61
57:US:149:GLN:HG2	57:US:153:LEU:HD12	1.82	0.61
59:CX:371:LEU:HD21	59:CX:417:PHE:HB2	1.82	0.61
2:UB:807:ALA:O	29:CN:23:GLN:NE2	2.34	0.61
4:UD:312:ARG:NH2	14:UR:449:ARG:O	2.34	0.61
9:UL:196:SER:HB3	9:UL:219:GLU:HA	1.82	0.61
10:UM:32:ALA:H	10:UM:331:ARG:HD2	1.66	0.61
26:CK:48:ASN:HD21	48:CU:216:LYS:H	1.46	0.61
29:CN:16:LEU:HD21	57:US:412:PRO:HB2	1.82	0.61
29:CO:144:LEU:HD13	29:CO:150:ILE:HG12	1.81	0.61
32:CS:521:VAL:HA	32:CS:709:PHE:HA	1.81	0.61
49:C1:5:G:N2	49:C1:30:U:O2	2.32	0.61
51:UV:237:ARG:HA	51:UV:240:LEU:HB2	1.82	0.61
4:UD:73:LYS:HZ3	4:UD:389:ASN:HB3	1.65	0.61
7:UJ:179:ARG:HH11	7:UJ:219:GLY:HA3	1.64	0.61
12:UO:336:VAL:O	12:UO:343:LEU:HA	2.00	0.61
14:UR:188:TRP:HB3	15:UU:314:ASN:HA	1.83	0.61
22:CG:349:ALA:HB1	22:CG:397:SER:HB2	1.81	0.61
32:CR:765:PRO:HD2	32:CR:775:LEU:HD22	1.82	0.61
37:Ce:20:SER:H	37:Ce:23:GLU:HB3	1.66	0.61
46:Co:351:ARG:HB2	46:Co:353:GLN:HE22	1.65	0.61
49:C1:1135:G:H2'	49:C1:1136:G:H8	1.65	0.61
50:C2:101:G:O6	50:C2:251:U:O4	2.18	0.61
54:UT:677:LEU:HD12	54:UT:679:PHE:H	1.66	0.61
1:UA:195:ARG:O	6:UG:278:GLN:NE2	2.34	0.61
4:UD:358:GLY:O	4:UD:751:SER:OG	2.19	0.61
7:UJ:836:THR:HA	7:UJ:849:ILE:HD12	1.83	0.61
15:UU:577:GLN:NE2	15:UU:578:ARG:O	2.32	0.61
17:UZ:75:SER:HA	17:UZ:78:LEU:HB2	1.83	0.61
22:CG:303:LEU:O	22:CG:314:VAL:HA	2.00	0.61
32:CR:521:VAL:HA	32:CR:709:PHE:HA	1.81	0.61
36:Cd:2:LYS:HD2	36:Cd:18:VAL:H	1.64	0.61
36:Cd:7:HIS:H	36:Cd:124:LEU:HD11	1.66	0.61
51:UV:96:LYS:HB2	51:UV:522:LYS:HE2	1.81	0.61
52:CV:35:VAL:HG21	52:CV:165:ILE:HG21	1.82	0.61
54:UT:1471:ALA:O	54:UT:1475:GLN:N	2.32	0.61
9:UL:136:VAL:HG13	9:UL:145:GLN:HB2	1.83	0.61
12:UO:120:THR:HG23	12:UO:122:ARG:H	1.66	0.61
13:UQ:480:LEU:HD11	13:UQ:501:GLN:HE21	1.66	0.61
14:UR:426:TRP:HE1	14:UR:433:THR:HG23	1.64	0.61
14:UR:473:GLY:HA2	14:UR:498:ASN:HD21	1.66	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:UU:43:LEU:HA	15:UU:359:ASN:HD21	1.66	0.61
15:UU:684:CYS:SG	15:UU:688:SER:OG	2.56	0.61
15:UU:691:VAL:HB	15:UU:701:ARG:HB2	1.82	0.61
18:CA:156:VAL:HG22	18:CA:225:VAL:HB	1.81	0.61
19:CC:7:LEU:HA	19:CC:99:GLY:H	1.65	0.61
31:CQ:202:GLU:OE1	31:CQ:208:ARG:NH1	2.30	0.61
50:C2:153:G:O6	50:C2:176:U:O2	2.17	0.61
54:UT:196:LYS:NZ	54:UT:242:MET:SD	2.74	0.61
54:UT:1931:LEU:O	54:UT:1933:LYS:NZ	2.33	0.61
57:US:418:MET:HE1	57:US:478:ILE:HG23	1.82	0.61
4:UD:417:ARG:HH12	55:UH:928:GLU:HG3	1.66	0.61
9:UL:507:ASP:OD1	9:UL:509:HIS:ND1	2.33	0.61
12:UO:335:ALA:HA	12:UO:344:SER:O	2.01	0.61
15:UU:41:ILE:O	15:UU:772:GLY:CA	2.49	0.61
49:C1:306:G:O6	49:C1:334:U:O4	2.18	0.61
51:UV:929:VAL:HG13	51:UV:930:LEU:HG	1.83	0.61
53:CW:298:THR:HG23	53:CW:301:GLU:H	1.65	0.61
1:UA:408:ALA:HB3	1:UA:418:ARG:HB3	1.82	0.61
20:CD:420:GLY:N	20:CD:424:ILE:O	2.33	0.61
22:CG:586:MET:HE1	22:CG:592:LYS:H	1.65	0.61
31:CQ:181:ASP:HB3	31:CQ:185:ARG:HH21	1.66	0.61
32:CS:276:THR:OG1	32:CS:279:ASN:ND2	2.33	0.61
56:UI:253:LEU:HD12	56:UI:256:LEU:HB3	1.83	0.61
2:UB:652:ARG:HD3	57:US:467:TYR:HA	1.83	0.60
10:UM:248:LEU:HD21	10:UM:258:LEU:HD13	1.83	0.60
13:UQ:625:ARG:NH1	13:UQ:664:SER:OG	2.33	0.60
17:UZ:284:LYS:NZ	17:UZ:288:THR:O	2.33	0.60
22:CG:310:ARG:NH1	39:Cg:152:LYS:O	2.34	0.60
32:CS:144:GLU:HA	32:CS:479:ARG:HB3	1.83	0.60
44:Cm:82:ARG:O	44:Cm:86:LEU:N	2.34	0.60
49:C1:212:C:H2'	49:C1:213:G:C8	2.35	0.60
49:C1:652:A:H2	49:C1:670:A:H62	1.46	0.60
49:C1:2068:C:N3	49:C1:2175:A:O2'	2.33	0.60
53:CW:170:ARG:HH12	53:CW:234:LYS:HE2	1.65	0.60
55:UH:717:CYS:O	55:UH:782:ARG:NH1	2.34	0.60
1:UA:540:SER:O	35:Cc:70:ARG:NH1	2.31	0.60
12:UO:145:GLN:HE22	12:UO:165:ASP:HB3	1.66	0.60
27:CL:679:PRO:HA	27:CL:682:VAL:HG22	1.83	0.60
32:CS:108:TYR:HB2	32:CS:111:GLU:HB2	1.83	0.60
34:Cb:31:PRO:HA	34:Cb:81:THR:HB	1.83	0.60
44:Cm:114:GLU:OE2	44:Cm:117:ARG:NH2	2.33	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:UT:271:HIS:NE2	54:UT:273:THR:OG1	2.33	0.60
58:CI:17:LEU:HD22	58:CI:35:ILE:HD11	1.83	0.60
5:UF:64:GLU:HA	5:UF:67:LEU:HD12	1.82	0.60
9:UL:888:GLN:HE21	47:Cp:40:SER:H	1.48	0.60
13:UQ:246:SER:HB2	13:UQ:253:ILE:HG22	1.83	0.60
14:UR:589:ARG:NH1	49:C1:238:G:OP1	2.34	0.60
18:CA:77:ARG:NH2	18:CA:145:LEU:O	2.35	0.60
22:CG:179:CYS:HB3	22:CG:182:TYR:HB2	1.83	0.60
32:CR:803:LEU:HD22	32:CR:881:GLN:HE21	1.67	0.60
43:Ck:99:ILE:HG22	43:Ck:102:TYR:H	1.65	0.60
53:CW:296:LEU:HD22	53:CW:305:LEU:HD12	1.83	0.60
9:UL:592:PHE:HD1	9:UL:599:LEU:HA	1.66	0.60
9:UL:777:MET:SD	9:UL:781:ARG:NH2	2.74	0.60
12:UO:277:THR:HG22	12:UO:293:LEU:HD12	1.83	0.60
19:CC:417:TRP:HA	19:CC:420:LYS:HE2	1.83	0.60
24:CI:136:VAL:HB	24:CI:166:VAL:HG12	1.82	0.60
28:CM:208:VAL:HG21	28:CM:252:ALA:HA	1.83	0.60
4:UD:685:THR:O	49:C1:63:C:O2'	2.20	0.60
6:UG:342:ARG:NH2	49:C1:276:C:O2	2.33	0.60
12:UO:241:LEU:HG	12:UO:243:SER:H	1.67	0.60
19:CC:240:LEU:HA	19:CC:243:VAL:HB	1.83	0.60
29:CO:84:ILE:O	29:CO:86:ASP:N	2.32	0.60
30:CP:127:ARG:HB2	30:CP:167:ASN:HB3	1.83	0.60
32:CR:108:TYR:HB2	32:CR:111:GLU:HB2	1.83	0.60
32:CR:263:LYS:HA	32:CR:266:LEU:HB2	1.83	0.60
38:Cf:189:GLU:O	43:Ck:22:ASN:ND2	2.35	0.60
50:C2:103:G:C6	50:C2:250:G:N1	2.69	0.60
1:UA:563:ARG:NH1	16:UX:-1:LYS:O	2.35	0.60
4:UD:401:GLN:OE1	55:UH:911:ARG:NH2	2.34	0.60
6:UG:453:LYS:O	28:CM:41:GLN:NE2	2.33	0.60
9:UL:568:ILE:HD11	9:UL:571:LEU:HB3	1.82	0.60
10:UM:636:ARG:NH2	10:UM:680:ALA:O	2.34	0.60
32:CR:615:PRO:O	32:CR:619:SER:OG	2.18	0.60
32:CS:615:PRO:O	32:CS:619:SER:OG	2.18	0.60
35:Cc:128:GLY:HA3	35:Cc:154:ARG:HH21	1.66	0.60
49:C1:2085:G:N2	49:C1:2088:A:N6	2.49	0.60
54:UT:176:SER:O	54:UT:180:VAL:HB	2.02	0.60
21:CF:35:LYS:HB3	21:CF:40:GLU:HB3	1.83	0.60
25:CJ:96:ALA:O	25:CJ:100:ASN:HB3	2.01	0.60
50:C2:188:G:N1	50:C2:189:G:O6	2.34	0.60
51:UV:681:LYS:HE3	51:UV:1012:VAL:HG22	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:UV:758:VAL:HG12	51:UV:766:PHE:HB2	1.82	0.60
54:UT:1819:THR:HA	54:UT:1822:MET:HE3	1.82	0.60
54:UT:1855:GLU:HG3	54:UT:1895:ARG:HB3	1.84	0.60
1:UA:281:LEU:HG	1:UA:290:ILE:HB	1.84	0.60
1:UA:508:GLN:NE2	1:UA:509:LEU:O	2.34	0.60
4:UD:804:ARG:HH22	7:UJ:661:ILE:HD11	1.66	0.60
7:UJ:1562:LEU:HD22	7:UJ:1609:ALA:HB2	1.83	0.60
8:UK:91:ARG:NH1	49:C1:218:G:OP2	2.34	0.60
12:UO:189:TYR:HE1	57:US:413:LEU:HD12	1.67	0.60
20:CD:318:THR:OG1	50:C2:262:C:OP2	2.19	0.60
24:CI:99:ASP:N	24:CI:340:ASP:OD2	2.32	0.60
28:CM:152:GLU:O	28:CM:156:TYR:OH	2.18	0.60
29:CN:88:ARG:HH12	29:CO:132:ARG:HB2	1.67	0.60
32:CS:58:TRP:HB2	32:CS:104:ILE:HD11	1.83	0.60
32:CS:400:LYS:HA	32:CS:403:MET:HB2	1.83	0.60
33:CT:123:LYS:NZ	49:C1:1084:C:OP2	2.35	0.60
49:C1:67:G:H2'	55:UH:894:ARG:HH12	1.66	0.60
49:C1:666:A:H3'	49:C1:667:G:H8	1.67	0.60
51:UV:175:HIS:HA	51:UV:178:LYS:HD2	1.83	0.60
54:UT:1968:ASP:HA	54:UT:1971:ARG:HG2	1.83	0.60
55:UH:773:ILE:HB	56:UI:252:GLY:HA3	1.82	0.60
2:UB:85:LYS:NZ	49:C1:2045:G:O2'	2.33	0.60
11:UN:929:ILE:HD11	28:CM:79:LEU:HG	1.84	0.60
12:UO:291:GLY:HA2	12:UO:296:HIS:O	2.01	0.60
20:CD:435:LYS:NZ	20:CD:436:GLU:O	2.31	0.60
24:CI:270:LEU:HB2	24:CI:779:LEU:HD23	1.84	0.60
26:CK:229:THR:OG1	26:CK:240:ARG:O	2.19	0.60
32:CR:17:ASN:HD21	32:CR:219:PRO:HA	1.67	0.60
32:CR:400:LYS:HA	32:CR:403:MET:HB2	1.83	0.60
48:CU:295:ALA:HA	48:CU:298:ARG:HD2	1.82	0.60
51:UV:451:VAL:HG22	51:UV:615:GLN:HE21	1.66	0.60
52:CV:59:ASP:H	52:CV:89:GLN:HE21	1.49	0.60
53:CW:137:ARG:NH2	53:CW:156:VAL:O	2.35	0.60
4:UD:530:ARG:O	4:UD:532:GLN:NE2	2.34	0.60
7:UJ:841:LEU:HA	7:UJ:844:GLU:HG2	1.82	0.60
9:UL:70:VAL:HA	9:UL:87:TYR:HA	1.82	0.60
9:UL:505:ALA:O	9:UL:533:LYS:NZ	2.34	0.60
13:UQ:190:MET:HA	13:UQ:206:LEU:O	2.01	0.60
14:UR:348:HIS:HA	14:UR:358:LYS:O	2.01	0.60
15:UU:71:LEU:H	15:UU:86:THR:HB	1.67	0.60
15:UU:576:ARG:NH1	42:Cj:101:SER:OG	2.34	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:UX:72:LYS:HE3	48:CU:276:PRO:HA	1.83	0.60
20:CD:240:ALA:O	20:CD:244:SER:CB	2.50	0.60
26:CK:217:PRO:HB3	27:CL:558:LEU:HB2	1.84	0.60
42:Cj:47:LYS:O	42:Cj:82:ARG:NH1	2.35	0.60
42:Cj:101:SER:HA	42:Cj:104:LEU:HD12	1.83	0.60
45:Cn:56:LYS:N	45:Cn:98:GLU:OE1	2.34	0.60
49:C1:57:C:H2'	49:C1:58:G:C8	2.37	0.60
49:C1:906:G:H4'	49:C1:907:A:H5'	1.84	0.60
49:C1:2358:U:O4	49:C1:2369:G:O6	2.20	0.60
50:C2:91:G:OP1	50:C2:91:G:N2	2.31	0.60
54:UT:499:VAL:HA	54:UT:551:ILE:HD11	1.82	0.60
54:UT:993:PRO:O	54:UT:997:HIS:ND1	2.30	0.60
54:UT:1818:MET:HA	54:UT:1821:ILE:HG22	1.84	0.60
1:UA:19:ASN:HD22	1:UA:61:ILE:H	1.50	0.59
14:UR:185:GLN:NE2	14:UR:189:ALA:O	2.35	0.59
23:CH:92:SER:OG	23:CH:96:ASP:OD1	2.20	0.59
26:CK:77:TYR:HE2	26:CK:207:ILE:HG22	1.67	0.59
32:CR:41:LEU:HA	32:CR:44:ILE:HD12	1.84	0.59
32:CR:198:SER:HB2	32:CR:485:ASN:HB3	1.84	0.59
44:Cm:42:GLN:NE2	44:Cm:48:GLY:O	2.35	0.59
51:UV:1042:VAL:HA	52:CV:195:LEU:HD11	1.82	0.59
54:UT:2002:GLU:HA	54:UT:2005:LYS:HD2	1.84	0.59
1:UA:715:ILE:O	15:UU:701:ARG:NH2	2.29	0.59
5:UF:278:ILE:HG22	11:UN:373:ILE:HD12	1.84	0.59
9:UL:161:ILE:HB	9:UL:188:PHE:HB2	1.84	0.59
13:UQ:754:TYR:OH	13:UQ:759:ASP:OD1	2.21	0.59
15:UU:158:ARG:HE	15:UU:172:THR:HG21	1.66	0.59
15:UU:717:PRO:HD3	15:UU:756:PHE:HE2	1.67	0.59
17:UZ:175:THR:O	17:UZ:178:ARG:NH2	2.35	0.59
23:CH:168:PRO:HA	23:CH:171:ILE:HG12	1.84	0.59
28:CM:60:GLN:OE1	50:C2:32:G:N2	2.32	0.59
28:CM:316:HIS:HE2	49:C1:588:U:HO2'	1.49	0.59
49:C1:1472:A:N1	49:C1:1510:G:C6	2.69	0.59
54:UT:149:VAL:HG13	54:UT:193:LEU:HD13	1.84	0.59
6:UG:101:GLU:H	28:CM:2:LYS:HB2	1.66	0.59
9:UL:21:ASN:ND2	9:UL:70:VAL:O	2.35	0.59
9:UL:86:GLY:HA2	9:UL:91:SER:O	2.02	0.59
12:UO:463:ARG:NH1	13:UQ:524:VAL:O	2.35	0.59
14:UR:397:MET:HB3	14:UR:413:ARG:HG3	1.84	0.59
15:UU:647:LYS:HB3	15:UU:656:LEU:HD13	1.84	0.59
32:CR:45:MET:HE1	32:CR:148:LEU:HD13	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:CS:17:ASN:HD21	32:CS:219:PRO:HA	1.67	0.59
49:C1:692:U:H5''	49:C1:693:C:H5	1.68	0.59
49:C1:715:A:C6	49:C1:785:U:C2	2.90	0.59
49:C1:1023:U:C4	49:C1:1049:G:N1	2.70	0.59
55:UH:648:LEU:HD13	55:UH:707:LEU:HD22	1.83	0.59
57:US:114:LEU:HA	57:US:117:ARG:HD2	1.84	0.59
1:UA:712:ASN:H	1:UA:715:ILE:HD12	1.67	0.59
4:UD:482:THR:N	4:UD:496:ALA:O	2.33	0.59
5:UF:128:ARG:NH2	49:C1:481:G:OP1	2.35	0.59
9:UL:209:ILE:O	10:UM:747:ASN:ND2	2.33	0.59
13:UQ:466:LEU:HD21	13:UQ:480:LEU:HB2	1.84	0.59
20:CD:401:LEU:HA	20:CD:404:ASN:HD22	1.67	0.59
24:CI:855:THR:OG1	45:Cn:62:LYS:NZ	2.34	0.59
29:CN:80:MET:HE3	29:CN:82:ARG:HH12	1.67	0.59
32:CR:58:TRP:HB2	32:CR:104:ILE:HD11	1.83	0.59
32:CS:41:LEU:HA	32:CS:44:ILE:HD12	1.84	0.59
32:CS:84:ARG:HH11	32:CS:84:ARG:HG3	1.68	0.59
38:Cf:87:ASN:HB3	38:Cf:90:LEU:HG	1.85	0.59
49:C1:22:U:H2'	49:C1:23:G:H8	1.66	0.59
49:C1:675:G:N2	49:C1:1036:A:OP2	2.35	0.59
49:C1:1695:G:H2'	49:C1:1696:G:H8	1.67	0.59
49:C1:2085:G:N2	49:C1:2088:A:C6	2.71	0.59
1:UA:682:PRO:O	1:UA:817:ARG:NH1	2.35	0.59
8:UK:262:ARG:NH1	8:UK:263:ILE:O	2.36	0.59
9:UL:92:ILE:HB	9:UL:106:PHE:HB2	1.84	0.59
32:CS:45:MET:HE1	32:CS:148:LEU:HD13	1.83	0.59
34:Cb:90:ILE:O	34:Cb:98:ASN:HA	2.01	0.59
49:C1:462:G:N7	60:CY:374:ARG:NH1	2.48	0.59
49:C1:747:G:OP2	49:C1:747:G:N2	2.34	0.59
51:UV:186:LEU:HD21	51:UV:200:LEU:HD13	1.84	0.59
54:UT:111:ILE:O	54:UT:114:HIS:ND1	2.35	0.59
1:UA:213:VAL:HG12	1:UA:219:VAL:HG12	1.83	0.59
1:UA:407:ARG:NH2	9:UL:962:SER:O	2.36	0.59
9:UL:85:VAL:O	9:UL:92:ILE:HA	2.01	0.59
9:UL:571:LEU:O	9:UL:572:ARG:NH2	2.32	0.59
13:UQ:790:ALA:HB1	13:UQ:811:LEU:HD11	1.85	0.59
15:UU:82:LEU:O	49:C1:259:U:O2'	2.19	0.59
15:UU:555:PHE:HA	15:UU:568:PHE:O	2.03	0.59
23:CH:411:ALA:O	24:CI:816:ARG:NH2	2.36	0.59
32:CR:728:GLY:HA2	32:CR:759:THR:HA	1.85	0.59
32:CS:263:LYS:HA	32:CS:266:LEU:HB2	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:CS:484:ASP:HB3	32:CS:487:GLU:HB2	1.85	0.59
39:Cg:76:ARG:NH2	60:CY:238:GLU:OE2	2.36	0.59
46:Co:386:VAL:HG12	46:Co:406:ILE:HG12	1.84	0.59
49:C1:364:C:H2'	49:C1:365:G:C8	2.38	0.59
49:C1:1652:C:H2'	49:C1:1653:G:H8	1.68	0.59
56:UE:253:LEU:HD12	56:UE:256:LEU:HB3	1.83	0.59
1:UA:162:ASP:H	1:UA:207:GLN:HE22	1.51	0.59
1:UA:270:LEU:HB3	1:UA:284:MET:HE3	1.84	0.59
7:UJ:286:ASP:HA	7:UJ:289:LEU:HD12	1.84	0.59
14:UR:459:GLY:HA3	21:CE:86:VAL:HG12	1.85	0.59
23:CH:176:LEU:HB2	23:CH:191:ILE:HG13	1.84	0.59
23:CH:283:ALA:O	23:CH:291:ILE:HA	2.03	0.59
29:CO:100:LEU:O	29:CO:105:ASN:ND2	2.35	0.59
32:CR:784:LYS:HA	32:CR:787:LEU:HB2	1.85	0.59
49:C1:715:A:O2'	49:C1:765:A:N1	2.31	0.59
51:UV:664:ARG:HE	51:UV:665:ILE:H	1.50	0.59
1:UA:97:SER:HB3	1:UA:115:LEU:HD22	1.84	0.59
6:UG:99:PHE:HE1	28:CM:4:LYS:HE2	1.68	0.59
22:CG:223:ARG:N	50:C2:183:A:OP1	2.36	0.59
28:CM:369:ARG:HA	28:CM:372:LEU:HD12	1.84	0.59
32:CS:198:SER:HB2	32:CS:485:ASN:HB3	1.84	0.59
47:Cp:43:ARG:NH2	47:Cp:59:GLU:O	2.36	0.59
49:C1:840:A:OP1	54:UT:1013:ARG:NH1	2.35	0.59
51:UV:1056:ALA:N	52:CV:91:HIS:O	2.36	0.59
51:UV:1061:ALA:HB2	51:UV:1106:THR:HA	1.85	0.59
53:CW:367:ARG:O	53:CW:370:HIS:NE2	2.35	0.59
57:US:376:VAL:HG12	57:US:453:ILE:HG13	1.84	0.59
63:Cz:1631:ASN:OD1	63:Cz:1670:ASN:ND2	2.36	0.59
4:UD:619:LYS:HA	4:UD:622:MET:HE2	1.85	0.59
13:UQ:745:ILE:HG12	13:UQ:753:VAL:HG13	1.84	0.59
17:UZ:121:ARG:HA	17:UZ:124:ILE:HG22	1.83	0.59
18:CB:153:GLY:O	18:CB:155:LYS:NZ	2.36	0.59
25:CJ:124:VAL:O	25:CJ:128:THR:OG1	2.14	0.59
28:CM:251:GLU:OE1	28:CM:254:ASN:ND2	2.35	0.59
30:CP:46:TYR:HA	30:CP:49:ARG:HH21	1.68	0.59
32:CS:728:GLY:HA2	32:CS:759:THR:HA	1.85	0.59
49:C1:710:A:N1	49:C1:878:C:N3	2.51	0.59
49:C1:950:G:N2	49:C1:959:U:O2	2.25	0.59
53:CW:349:ASN:HB3	53:CW:355:HIS:CE1	2.37	0.59
54:UT:1419:THR:HA	54:UT:1461:LYS:HD2	1.84	0.59
1:UA:488:TRP:HZ2	25:CJ:140:VAL:HB	1.68	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:UD:647:LEU:O	4:UD:658:ILE:HA	2.03	0.59
18:CA:107:LYS:HB2	18:CA:129:ILE:HD12	1.84	0.59
20:CD:58:VAL:HG12	20:CD:145:LEU:HD13	1.85	0.59
24:CI:1069:PRO:HB3	49:C1:364:C:H5''	1.84	0.59
25:CJ:100:ASN:O	25:CJ:102:THR:OG1	2.20	0.59
28:CM:135:TRP:NE1	28:CM:144:THR:O	2.34	0.59
32:CR:144:GLU:HA	32:CR:479:ARG:HB3	1.83	0.59
49:C1:689:A:N7	49:C1:941:G:N1	2.51	0.59
2:UB:708:LEU:O	2:UB:710:LYS:NZ	2.36	0.58
4:UD:387:TRP:NE1	4:UD:390:GLU:OE2	2.36	0.58
13:UQ:206:LEU:HB3	13:UQ:218:ILE:HD11	1.85	0.58
15:UU:271:THR:HB	15:UU:274:ALA:HB3	1.85	0.58
15:UU:932:GLY:HA3	15:UU:973:HIS:HD2	1.67	0.58
22:CG:364:GLN:HE22	60:CY:248:SER:HA	1.67	0.58
26:CK:209:LYS:HD2	27:CL:556:GLU:HA	1.85	0.58
30:CP:128:SER:O	30:CP:131:ARG:NH1	2.36	0.58
36:CD:193:ARG:NH2	49:C1:849:A:O2'	2.36	0.58
46:Co:343:PHE:HE1	46:Co:352:LYS:HB3	1.66	0.58
49:C1:252:U:H2'	49:C1:253:G:C8	2.38	0.58
50:C2:267:C:H2'	50:C2:268:G:C8	2.38	0.58
54:UT:221:PRO:HA	54:UT:224:LYS:HD3	1.85	0.58
56:UE:200:LEU:HD11	56:UE:218:ILE:HD13	1.84	0.58
13:UQ:578:LYS:O	13:UQ:581:ARG:NE	2.36	0.58
28:CM:166:ASN:HB3	28:CM:182:LEU:HB2	1.85	0.58
32:CR:484:ASP:HB3	32:CR:487:GLU:HB2	1.85	0.58
32:CS:803:LEU:HD22	32:CS:881:GLN:HE21	1.67	0.58
49:C1:2237:G:H1	49:C1:2329:A:N6	2.01	0.58
51:UV:500:ARG:HH11	51:UV:541:LEU:HB2	1.68	0.58
54:UT:480:PRO:HB3	54:UT:485:LYS:HE3	1.85	0.58
54:UT:1921:GLU:OE2	54:UT:1924:ARG:NH1	2.35	0.58
4:UD:525:LYS:HZ3	4:UD:527:HIS:HA	1.68	0.58
10:UM:708:LEU:O	10:UM:719:PHE:HA	2.03	0.58
11:UN:297:LYS:HZ1	54:UT:2165:LYS:HD2	1.67	0.58
18:CA:93:CYS:HB3	18:CA:127:TYR:HB3	1.85	0.58
24:CI:333:LYS:HG3	32:CR:101:LEU:HD11	1.84	0.58
49:C1:990:U:H2'	49:C1:991:A:C8	2.38	0.58
6:UG:224:PHE:H	6:UG:266:GLN:HE22	1.52	0.58
6:UG:310:ARG:HD3	6:UG:352:ASP:HA	1.84	0.58
8:UK:66:GLY:O	8:UK:69:SER:N	2.33	0.58
15:UU:39:ARG:HB3	15:UU:775:ILE:HD12	1.85	0.58
24:CI:255:PRO:HA	24:CI:258:ILE:HD12	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:CN:201:SER:OG	29:CN:202:ILE:N	2.36	0.58
49:C1:667:G:H21	54:UT:19:THR:HG21	1.68	0.58
51:UV:1051:LEU:HD12	51:UV:1069:PRO:HD3	1.84	0.58
54:UT:1310:THR:O	54:UT:1314:ASN:ND2	2.37	0.58
54:UT:1966:ALA:HA	54:UT:1969:ILE:HD12	1.84	0.58
9:UL:533:LYS:HG2	9:UL:561:ILE:HG22	1.85	0.58
13:UQ:615:PHE:N	13:UQ:629:ILE:O	2.35	0.58
19:CC:414:ARG:NH2	19:CC:418:TYR:OH	2.34	0.58
49:C1:4:G:N1	49:C1:32:U:N3	2.52	0.58
49:C1:625:C:N3	49:C1:626:A:N6	2.52	0.58
49:C1:2115:U:H2'	49:C1:2116:C:H6	1.69	0.58
1:UA:615:ASN:OD1	1:UA:616:LEU:N	2.36	0.58
7:UJ:1527:LEU:HB3	7:UJ:1583:TRP:HE1	1.67	0.58
10:UM:289:MET:HB3	10:UM:301:TRP:HB2	1.84	0.58
17:UZ:154:LEU:HD13	17:UZ:180:ILE:HB	1.85	0.58
19:CC:46:LYS:NZ	28:CM:364:LYS:O	2.36	0.58
22:CG:273:TYR:HB3	22:CG:281:ILE:H	1.68	0.58
23:CH:83:THR:OG1	23:CH:84:GLY:N	2.35	0.58
24:CI:891:SER:O	24:CI:898:ARG:NE	2.32	0.58
38:Cf:11:ARG:HD2	49:C1:907:A:H5''	1.85	0.58
41:CI:39:THR:HG21	41:CI:110:GLY:HA3	1.86	0.58
49:C1:925:G:H5''	61:CZ:542:ARG:HH21	1.67	0.58
50:C2:200:U:N3	50:C2:246:G:N1	2.52	0.58
53:CW:6:PRO:HD3	53:CW:11:VAL:HG12	1.85	0.58
53:CW:272:ASP:HB3	53:CW:275:ASN:HB3	1.85	0.58
57:US:352:LEU:O	57:US:357:ARG:NH2	2.32	0.58
63:Cz:1687:TYR:HB3	63:Cz:1690:ARG:HD3	1.84	0.58
4:UD:492:TRP:HB3	4:UD:504:ILE:HD11	1.85	0.58
11:UN:902:ARG:HB3	11:UN:903:LEU:HD12	1.86	0.58
21:CE:86:VAL:O	21:CE:90:ARG:HB2	2.04	0.58
21:CF:19:GLN:O	22:CG:350:ARG:NH2	2.36	0.58
26:CK:162:THR:OG1	26:CK:269:THR:OG1	2.22	0.58
49:C1:85:U:O2	49:C1:122:G:N2	2.31	0.58
49:C1:650:G:O2'	49:C1:754:U:OP1	2.21	0.58
53:CW:347:THR:OG1	53:CW:355:HIS:O	2.20	0.58
1:UA:59:SER:HB3	1:UA:75:GLU:HG2	1.86	0.58
2:UB:572:ARG:NH1	57:US:508:GLU:O	2.36	0.58
9:UL:136:VAL:O	9:UL:145:GLN:N	2.36	0.58
9:UL:372:VAL:HG12	9:UL:387:VAL:HG12	1.86	0.58
9:UL:677:THR:OG1	9:UL:679:LYS:NZ	2.37	0.58
14:UR:69:GLN:OE1	14:UR:72:ARG:NH2	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:UU:159:ILE:HB	15:UU:173:ILE:HB	1.86	0.58
23:CH:271:LYS:HA	49:C1:1715:A:H61	1.68	0.58
24:CI:396:PHE:HE2	32:CR:519:LEU:HD11	1.68	0.58
32:CS:737:TRP:HB3	32:CS:742:PHE:HB2	1.86	0.58
35:Cc:120:ALA:HA	35:Cc:185:LEU:HD21	1.86	0.58
38:Cf:5:ARG:NH2	49:C1:919:U:O4	2.36	0.58
46:Co:415:LYS:HE2	54:UT:25:HIS:HE1	1.68	0.58
49:C1:186:C:H2'	49:C1:187:G:H8	1.69	0.58
50:C2:200:U:O4	50:C2:246:G:O6	2.22	0.58
53:CW:290:ILE:HA	53:CW:308:ALA:HA	1.86	0.58
57:US:150:ALA:HB2	57:US:161:PHE:HB3	1.83	0.58
1:UA:386:THR:C	1:UA:400:ALA:O	2.46	0.58
2:UB:867:LYS:HZ1	26:CK:292:ARG:HH21	1.50	0.58
4:UD:502:VAL:HG22	4:UD:526:LEU:HD21	1.85	0.58
5:UF:279:PRO:HA	5:UF:282:VAL:HG12	1.84	0.58
6:UG:158:GLY:O	6:UG:175:GLN:C	2.46	0.58
8:UK:257:THR:HG23	8:UK:259:SER:H	1.68	0.58
12:UO:535:GLU:HG2	12:UO:539:LEU:HD23	1.86	0.58
13:UQ:295:ILE:HG13	13:UQ:314:VAL:HG13	1.85	0.58
32:CR:84:ARG:HH11	32:CR:84:ARG:HG3	1.68	0.58
37:Cc:163:ILE:HA	37:Cc:194:GLU:O	2.03	0.58
39:Cg:160:SER:O	39:Cg:164:GLY:N	2.36	0.58
43:Ck:96:LEU:HB3	43:Ck:105:TYR:HB3	1.85	0.58
49:C1:307:U:O2	49:C1:333:C:N3	2.37	0.58
49:C1:1461:G:O6	49:C1:1520:U:C4	2.57	0.58
49:C1:2333:A:H2'	49:C1:2334:G:H8	1.69	0.58
54:UT:1778:ARG:NH2	54:UT:1819:THR:OG1	2.36	0.58
57:US:139:LEU:HD23	57:US:184:HIS:HD2	1.67	0.58
2:UB:615:MET:HA	2:UB:618:ILE:HD12	1.84	0.58
5:UF:6:ASP:OD2	28:CM:367:ARG:NH1	2.37	0.58
8:UK:268:ARG:HD2	21:CE:95:SER:HB3	1.86	0.58
17:UZ:282:TYR:HA	17:UZ:291:LEU:O	2.04	0.58
18:CA:91:LEU:HD13	18:CA:129:ILE:HG23	1.86	0.58
20:CD:282:MET:HA	20:CD:285:ILE:HG22	1.85	0.58
32:CS:36:GLU:O	32:CS:40:HIS:ND1	2.31	0.58
32:CS:784:LYS:HA	32:CS:787:LEU:HB2	1.84	0.58
35:Cc:57:ILE:HD12	35:Cc:58:PRO:HD2	1.85	0.58
46:Co:346:ASN:CB	46:Co:351:ARG:O	2.51	0.58
49:C1:191:C:O2'	49:C1:192:A:N7	2.36	0.58
55:UH:836:ILE:HB	56:UI:246:LEU:HD21	1.85	0.58
9:UL:570:SER:O	9:UL:583:ALA:HB3	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:UM:620:GLY:O	10:UM:644:ASN:ND2	2.37	0.57
15:UU:415:ARG:NH2	15:UU:461:LYS:O	2.38	0.57
18:CB:112:GLU:HB3	18:CB:122:ALA:HA	1.85	0.57
19:CC:152:ARG:HG3	19:CC:155:LEU:HD23	1.86	0.57
20:CD:168:ALA:HA	20:CD:171:LEU:HD12	1.86	0.57
24:CI:68:PRO:HB3	24:CI:113:ARG:HG2	1.85	0.57
26:CK:224:GLY:O	26:CK:244:TYR:OH	2.15	0.57
37:Ce:51:SER:HB3	37:Ce:67:PHE:HB2	1.85	0.57
46:Co:401:THR:HG23	60:CY:282:ARG:HH22	1.69	0.57
47:Cp:26:VAL:HG12	47:Cp:46:LYS:HB3	1.85	0.57
53:CW:303:ARG:HG2	53:CW:317:ASP:HA	1.86	0.57
54:UT:1235:ILE:HD12	54:UT:1295:MET:HG3	1.86	0.57
56:UI:200:LEU:HD11	56:UI:218:ILE:HD13	1.84	0.57
4:UD:306:MET:SD	4:UD:309:GLN:NE2	2.72	0.57
5:UF:23:GLU:OE2	5:UF:30:LYS:NZ	2.35	0.57
7:UJ:1507:LEU:HD11	7:UJ:1560:ASP:HB3	1.86	0.57
7:UJ:1761:PRO:HA	7:UJ:1764:LEU:HG	1.85	0.57
13:UQ:638:TRP:HA	13:UQ:662:SER:O	2.04	0.57
15:UU:547:VAL:HG23	15:UU:558:VAL:HG22	1.86	0.57
18:CA:108:ARG:HG3	33:CT:141:ILE:HD12	1.85	0.57
23:CH:299:PRO:HG2	23:CH:302:GLY:HA3	1.85	0.57
25:CJ:2:VAL:N	49:C1:427:G:OP2	2.37	0.57
29:CO:179:THR:HG22	29:CO:205:PHE:HB2	1.85	0.57
38:Cf:16:ALA:HB2	49:C1:938:C:H5''	1.84	0.57
48:CU:230:ARG:NH1	49:C1:595:U:O2	2.38	0.57
51:UV:297:ARG:HE	51:UV:301:ILE:HD11	1.69	0.57
51:UV:846:HIS:O	51:UV:949:HIS:NE2	2.38	0.57
63:Cz:1519:GLN:HA	63:Cz:1522:VAL:HG22	1.86	0.57
1:UA:410:ASP:OD2	49:C1:2216:A:O2'	2.21	0.57
11:UN:286:GLU:HB3	11:UN:297:LYS:HE2	1.86	0.57
12:UO:458:THR:O	12:UO:462:HIS:ND1	2.37	0.57
18:CB:229:ASP:N	18:CB:229:ASP:OD1	2.37	0.57
20:CD:441:ASN:N	49:C1:272:A:N7	2.42	0.57
49:C1:990:U:H2'	49:C1:991:A:H8	1.68	0.57
49:C1:994:A:N1	49:C1:1007:G:C6	2.71	0.57
51:UV:1027:LYS:HD3	51:UV:1028:PHE:H	1.69	0.57
52:CV:81:VAL:HG22	52:CV:150:VAL:HG12	1.85	0.57
54:UT:1798:LEU:HB3	54:UT:1856:LEU:HD11	1.85	0.57
63:Cz:1663:ALA:HA	63:Cz:1700:LEU:HD21	1.86	0.57
4:UD:833:ARG:NH2	49:C1:64:C:OP1	2.37	0.57
6:UG:312:GLY:O	6:UG:330:ARG:NE	2.32	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:UO:129:GLY:H	12:UO:133:ARG:HB2	1.69	0.57
15:UU:484:LYS:NZ	49:C1:247:C:OP1	2.30	0.57
22:CG:352:ARG:HA	22:CG:398:MET:HB2	1.86	0.57
26:CK:116:ARG:NH2	49:C1:2164:C:OP1	2.37	0.57
51:UV:274:VAL:HG13	51:UV:400:LEU:HD13	1.87	0.57
51:UV:719:ILE:HG12	51:UV:754:ALA:HB3	1.87	0.57
54:UT:1364:ASP:HB3	54:UT:1367:ASN:HB2	1.86	0.57
54:UT:1467:GLU:HA	54:UT:1470:TRP:HE1	1.68	0.57
4:UD:117:GLU:HG3	4:UD:545:TYR:HA	1.87	0.57
4:UD:270:GLN:OE1	4:UD:312:ARG:NH1	2.38	0.57
5:UF:58:LEU:HB2	5:UF:109:LEU:HD11	1.86	0.57
7:UJ:1534:ARG:HA	7:UJ:1538:ALA:HB3	1.86	0.57
7:UJ:1600:LEU:HA	7:UJ:1603:VAL:HG12	1.85	0.57
10:UM:697:TRP:H	10:UM:712:GLY:HA2	1.69	0.57
13:UQ:437:ILE:O	13:UQ:501:GLN:NE2	2.37	0.57
17:UZ:79:GLN:NE2	17:UZ:80:PRO:O	2.37	0.57
19:CC:380:ARG:NH2	50:C2:111:G:O6	2.38	0.57
20:CD:178:GLU:HA	20:CD:181:VAL:HG22	1.87	0.57
24:CI:302:LEU:HD12	24:CI:303:PRO:HD2	1.86	0.57
27:CL:781:GLY:O	27:CL:785:LEU:HB2	2.04	0.57
42:Cj:94:ALA:HB2	42:Cj:102:LYS:HD3	1.87	0.57
49:C1:454:C:H3'	49:C1:455:G:H8	1.70	0.57
49:C1:731:A:OP2	49:C1:750:C:N4	2.37	0.57
54:UT:23:LYS:NZ	54:UT:25:HIS:O	2.34	0.57
54:UT:1167:PRO:HG2	54:UT:1168:ARG:HG2	1.87	0.57
54:UT:1428:LEU:HD11	54:UT:1481:VAL:HG21	1.86	0.57
63:Cz:1695:ASN:HA	63:Cz:1698:LEU:HD12	1.86	0.57
2:UB:654:VAL:HG12	2:UB:657:MET:H	1.69	0.57
4:UD:437:SER:HB3	4:UD:442:LEU:HB2	1.86	0.57
6:UG:153:LEU:HD13	6:UG:163:MET:HE3	1.86	0.57
7:UJ:18:SER:HA	7:UJ:126:ARG:HH22	1.68	0.57
13:UQ:802:LYS:NZ	13:UQ:803:LEU:O	2.36	0.57
15:UU:391:LEU:HD11	15:UU:408:LEU:HD21	1.85	0.57
15:UU:741:LEU:HB2	15:UU:790:ILE:HG23	1.87	0.57
18:CA:106:GLU:OE2	18:CA:128:ARG:NH1	2.37	0.57
23:CH:219:ARG:HA	23:CH:251:HIS:O	2.03	0.57
25:CJ:82:LEU:HD12	25:CJ:87:ILE:HB	1.87	0.57
28:CM:373:GLU:HA	28:CM:376:ASN:HD22	1.70	0.57
38:Cf:22:ARG:HB3	38:Cf:25:ARG:HH12	1.68	0.57
49:C1:710:A:H61	49:C1:878:C:N4	2.03	0.57
49:C1:1457:G:H1	49:C1:1540:A:H2	1.52	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:C1:1486:G:OP1	49:C1:1501:U:O2'	2.22	0.57
53:CW:31:ARG:O	53:CW:35:ALA:HB3	2.05	0.57
54:UT:2213:LYS:HD2	54:UT:2216:LEU:HD12	1.86	0.57
55:UH:777:ALA:HA	56:UI:259:LEU:HG	1.86	0.57
56:UE:245:VAL:HG12	56:UE:249:ARG:HD2	1.86	0.57
60:CY:317:GLY:HA2	60:CY:320:ARG:HD2	1.86	0.57
63:Cz:1674:GLU:OE1	63:Cz:1677:ARG:NH1	2.38	0.57
4:UD:378:PRO:HB3	4:UD:841:ILE:HA	1.86	0.57
7:UJ:656:ILE:HA	7:UJ:660:LEU:HB2	1.86	0.57
10:UM:244:GLN:HB2	10:UM:287:LYS:HE2	1.86	0.57
10:UM:294:THR:HA	10:UM:321:ALA:HA	1.87	0.57
13:UQ:397:ALA:HB3	13:UQ:415:LEU:HG	1.87	0.57
14:UR:173:ARG:HG2	14:UR:177:GLN:HE21	1.70	0.57
15:UU:440:ALA:HB1	15:UU:445:LEU:HB2	1.87	0.57
17:UZ:89:LEU:HD11	17:UZ:244:LYS:HE2	1.86	0.57
26:CK:240:ARG:HG3	27:CL:541:ILE:HG21	1.87	0.57
34:Cb:44:LEU:HD11	34:Cb:82:TYR:HB3	1.87	0.57
36:Cd:98:ARG:HH22	36:Cd:103:GLY:H	1.53	0.57
39:Cg:127:ILE:HG12	39:Cg:132:ILE:HD11	1.87	0.57
52:CV:152:LEU:HD12	52:CV:158:VAL:HG22	1.87	0.57
53:CW:342:SER:HB2	53:CW:363:GLY:HA3	1.87	0.57
54:UT:313:SER:O	54:UT:353:ARG:NH2	2.38	0.57
54:UT:563:LEU:O	54:UT:609:ARG:NH2	2.37	0.57
57:US:422:PRO:O	57:US:428:ARG:NH2	2.37	0.57
63:Cz:1573:ARG:HH21	63:Cz:1576:THR:HG21	1.70	0.57
1:UA:35:ASN:ND2	1:UA:54:HIS:H	2.02	0.57
7:UJ:4:SER:OG	7:UJ:5:LEU:N	2.36	0.57
7:UJ:590:GLN:HE21	7:UJ:631:LEU:HD13	1.70	0.57
7:UJ:826:TYR:HA	7:UJ:865:ILE:HD11	1.85	0.57
13:UQ:286:VAL:HG12	13:UQ:288:ASP:H	1.70	0.57
13:UQ:751:LEU:HD22	13:UQ:765:TYR:HD2	1.69	0.57
23:CH:154:ARG:NH1	48:CU:121:SER:O	2.37	0.57
49:C1:293:G:H2'	49:C1:294:G:C8	2.39	0.57
49:C1:495:G:O6	49:C1:503:G:O6	2.23	0.57
49:C1:647:U:OP1	49:C1:1037:C:O2'	2.22	0.57
55:UH:789:LEU:HD21	56:UI:269:GLN:HB3	1.87	0.57
56:UE:185:ILE:HG21	56:UE:221:THR:HA	1.86	0.57
56:UI:185:ILE:HG22	56:UI:224:ALA:HB3	1.87	0.57
1:UA:395:SER:O	1:UA:411:LEU:N	2.31	0.57
1:UA:448:PHE:HZ	26:CK:4:LYS:HD3	1.70	0.57
4:UD:17:ASN:ND2	4:UD:77:VAL:O	2.36	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:UG:244:ASP:OD1	6:UG:246:SER:N	2.38	0.57
10:UM:41:GLU:HA	10:UM:63:PRO:HA	1.85	0.57
14:UR:345:ARG:HB2	49:C1:75:G:H5'	1.87	0.57
15:UU:387:PRO:HB2	15:UU:413:LYS:HD2	1.86	0.57
15:UU:863:ARG:HH12	27:CL:665:THR:HB	1.69	0.57
18:CB:277:GLN:NE2	62:UP:325:ASN:OD1	2.38	0.57
29:CN:74:ILE:HD12	29:CN:84:ILE:HG12	1.86	0.57
35:Cc:109:HIS:HD2	35:Cc:110:LEU:HD22	1.70	0.57
53:CW:97:SER:O	53:CW:116:GLN:NE2	2.37	0.57
57:US:253:HIS:HD2	57:US:255:LEU:HB3	1.70	0.57
57:US:259:SER:HA	57:US:262:LYS:HE2	1.87	0.57
57:US:287:GLU:HG3	57:US:320:LEU:HD21	1.87	0.57
58:Cl:63:SER:HA	58:Cl:66:LEU:HD12	1.86	0.57
1:UA:364:ILE:HD11	1:UA:378:PHE:HD2	1.70	0.57
2:UB:65:ARG:NH1	49:C1:1752:U:O2	2.37	0.57
2:UB:534:ILE:HG12	2:UB:552:LEU:HD21	1.87	0.57
6:UG:310:ARG:NH1	28:CM:30:GLU:O	2.38	0.57
9:UL:431:SER:HB3	9:UL:444:ALA:HB3	1.87	0.57
9:UL:531:THR:HA	9:UL:562:LEU:O	2.05	0.57
15:UU:682:PHE:O	15:UU:689:ILE:HA	2.05	0.57
18:CA:165:THR:OG1	18:CA:166:SER:N	2.38	0.57
18:CB:268:PRO:HA	18:CB:271:VAL:HG22	1.87	0.57
24:CI:264:CYS:SG	24:CI:265:ASP:N	2.78	0.57
32:CR:36:GLU:O	32:CR:40:HIS:ND1	2.31	0.57
49:C1:134:C:O2'	49:C1:135:A:OP1	2.22	0.57
49:C1:718:U:H2'	54:UT:1004:ILE:HD12	1.87	0.57
50:C2:257:G:H2'	50:C2:258:A:C8	2.39	0.57
54:UT:1866:LEU:HA	54:UT:1869:LEU:HD13	1.86	0.57
4:UD:90:MET:HE3	4:UD:96:ILE:HD11	1.85	0.56
4:UD:359:LYS:HG2	4:UD:753:VAL:HG21	1.87	0.56
13:UQ:831:ILE:HA	13:UQ:847:ASP:HA	1.86	0.56
18:CB:174:VAL:HB	18:CB:178:GLY:HA3	1.87	0.56
35:Cc:79:ARG:NH2	35:Cc:156:ASN:OD1	2.36	0.56
43:Ck:38:ARG:NH2	43:Ck:56:GLY:O	2.38	0.56
49:C1:195:U:H2'	49:C1:196:G:H8	1.70	0.56
49:C1:972:A:H2'	49:C1:973:G:H8	1.68	0.56
49:C1:1044:A:H3'	49:C1:1045:G:H8	1.70	0.56
51:UV:165:ARG:HG3	51:UV:228:PRO:HB2	1.85	0.56
51:UV:558:GLU:HG2	51:UV:561:GLU:H	1.70	0.56
53:CW:183:GLN:O	53:CW:236:ARG:NH2	2.38	0.56
54:UT:925:ALA:HA	54:UT:928:LYS:HE2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:UA:488:TRP:HD1	1:UA:512:ASP:HB3	1.69	0.56
2:UB:572:ARG:NH1	2:UB:609:GLN:OE1	2.38	0.56
4:UD:7:ARG:HB2	55:UH:906:ILE:HA	1.87	0.56
5:UF:382:VAL:HG23	5:UF:406:LYS:HG3	1.87	0.56
6:UG:45:TYR:OH	6:UG:57:ARG:NH1	2.39	0.56
7:UJ:257:GLU:O	7:UJ:261:MET:HB2	2.05	0.56
9:UL:797:ARG:NH1	9:UL:801:GLU:OE1	2.39	0.56
15:UU:152:VAL:HG12	15:UU:161:VAL:HG22	1.87	0.56
16:UX:90:ILE:HD12	16:UX:121:LEU:HD13	1.87	0.56
17:UZ:158:ARG:NH1	17:UZ:184:LEU:O	2.38	0.56
24:CI:922:GLY:N	24:CI:987:VAL:O	2.36	0.56
46:Co:382:GLN:HG2	46:Co:385:GLN:HG2	1.86	0.56
49:C1:1029:A:H62	49:C1:1045:G:H21	1.53	0.56
51:UV:240:LEU:HD13	51:UV:274:VAL:HB	1.88	0.56
51:UV:997:LEU:HB2	51:UV:1085:LYS:HG3	1.87	0.56
53:CW:294:ILE:HG13	53:CW:305:LEU:HD13	1.87	0.56
54:UT:1755:ARG:HG3	54:UT:1793:THR:HG22	1.86	0.56
56:UE:163:THR:O	56:UE:163:THR:OG1	2.23	0.56
56:UI:185:ILE:HG21	56:UI:221:THR:HA	1.86	0.56
4:UD:158:THR:OG1	4:UD:159:VAL:N	2.39	0.56
4:UD:195:GLN:NE2	4:UD:247:GLY:O	2.38	0.56
5:UF:2:ALA:N	50:C2:39:U:HO2'	2.03	0.56
5:UF:285:VAL:HG11	11:UN:369:LEU:HB2	1.87	0.56
6:UG:404:GLU:O	6:UG:406:ILE:N	2.37	0.56
7:UJ:1680:VAL:HG13	7:UJ:1729:HIS:CE1	2.40	0.56
9:UL:375:ALA:HB3	9:UL:384:GLN:HB2	1.87	0.56
10:UM:385:ASP:OD2	10:UM:704:LYS:NZ	2.39	0.56
11:UN:285:LYS:HA	11:UN:288:LYS:HD2	1.88	0.56
12:UO:159:THR:HA	12:UO:172:TRP:O	2.04	0.56
12:UO:415:ARG:NH1	49:C1:131:G:O6	2.33	0.56
13:UQ:777:LEU:HD21	13:UQ:830:VAL:HG11	1.88	0.56
14:UR:610:ARG:HE	14:UR:612:ARG:HH21	1.52	0.56
16:UX:11:ASP:OD1	50:C2:48:G:O2'	2.23	0.56
16:UX:178:LEU:HD23	16:UX:180:GLY:H	1.69	0.56
20:CD:14:ALA:HA	20:CD:48:PHE:HA	1.87	0.56
20:CD:210:VAL:O	20:CD:214:LEU:HB3	2.05	0.56
23:CH:163:LEU:HD21	23:CH:208:LEU:HD21	1.87	0.56
24:CI:1020:ARG:HG2	24:CI:1025:ILE:HG23	1.86	0.56
29:CO:149:SER:HB2	29:CO:158:LYS:HD3	1.87	0.56
32:CR:889:LEU:HA	32:CR:891:ARG:HE	1.70	0.56
36:Cd:98:ARG:NH2	36:Cd:101:ILE:O	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:Cd:153:VAL:HA	36:Cd:156:TYR:HB2	1.87	0.56
37:Ce:56:GLU:HG3	54:UT:2089:PRO:HG3	1.87	0.56
49:C1:64:C:OP2	49:C1:65:C:N4	2.30	0.56
49:C1:1174:C:H2'	49:C1:1175:A:C8	2.40	0.56
51:UV:1057:VAL:N	52:CV:91:HIS:O	2.35	0.56
54:UT:83:LYS:HA	54:UT:86:ILE:HG12	1.87	0.56
54:UT:387:TRP:HA	54:UT:391:ILE:HD12	1.87	0.56
54:UT:901:LYS:NZ	54:UT:936:GLU:OE1	2.36	0.56
54:UT:1339:ASP:OD2	54:UT:1381:ARG:NH2	2.38	0.56
56:UE:185:ILE:HG22	56:UE:224:ALA:HB3	1.87	0.56
57:US:187:GLU:O	57:US:192:LYS:NZ	2.34	0.56
59:CX:419:GLN:O	59:CX:422:ARG:NH2	2.38	0.56
63:Cz:1745:TRP:HA	63:Cz:1748:LYS:HD2	1.88	0.56
4:UD:186:LYS:NZ	49:C1:191:C:OP2	2.34	0.56
7:UJ:310:VAL:O	7:UJ:313:THR:OG1	2.20	0.56
12:UO:126:PHE:HB3	12:UO:136:ILE:HA	1.86	0.56
14:UR:383:ARG:NH2	14:UR:429:GLY:O	2.39	0.56
22:CG:356:TYR:HB3	22:CG:365:LEU:HB2	1.88	0.56
28:CM:321:TYR:HB3	28:CM:353:TRP:CZ3	2.40	0.56
39:Cg:29:VAL:O	39:Cg:32:TYR:O	2.22	0.56
43:Ck:93:ARG:HB3	43:Ck:110:LYS:HB2	1.85	0.56
46:Co:372:ARG:NH2	46:Co:383:LYS:O	2.39	0.56
48:CU:224:LYS:NZ	49:C1:346:C:OP1	2.38	0.56
54:UT:315:THR:HB	54:UT:353:ARG:HA	1.87	0.56
54:UT:1329:LEU:HD11	54:UT:1371:LEU:HG	1.87	0.56
4:UD:690:LYS:H	4:UD:703:GLY:HA2	1.70	0.56
9:UL:18:VAL:HG21	9:UL:24:LEU:HD11	1.88	0.56
22:CG:426:LYS:HE2	60:CY:241:THR:HA	1.87	0.56
23:CH:11:PHE:HB2	23:CH:33:ILE:HG12	1.87	0.56
24:CI:886:CYS:CB	24:CI:901:ALA:O	2.53	0.56
25:CJ:110:ARG:NH2	25:CJ:146:PRO:O	2.39	0.56
30:CP:58:VAL:HG22	30:CP:112:LEU:HD21	1.86	0.56
32:CR:163:TYR:O	32:CR:166:THR:OG1	2.23	0.56
36:Cd:52:ILE:HG22	36:Cd:111:LEU:HD22	1.86	0.56
45:Cn:48:HIS:HB3	45:Cn:103:LEU:HD11	1.86	0.56
49:C1:1068:C:H2'	49:C1:1069:A:H8	1.68	0.56
49:C1:2085:G:N2	49:C1:2088:A:C5	2.73	0.56
49:C1:2351:G:H1'	49:C1:2352:U:H5	1.70	0.56
51:UV:207:GLU:HG2	51:UV:215:LYS:HB3	1.87	0.56
51:UV:548:ASP:HB3	51:UV:588:LEU:HB2	1.87	0.56
54:UT:1092:ASP:O	54:UT:1096:ASN:ND2	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:UD:644:ASP:HA	4:UD:662:LEU:HD12	1.87	0.56
10:UM:628:ASN:ND2	10:UM:630:SER:OG	2.38	0.56
13:UQ:851:GLN:HG3	13:UQ:853:TRP:HZ3	1.71	0.56
20:CD:419:LEU:HB2	20:CD:423:GLY:HA2	1.88	0.56
22:CG:561:ASN:HB2	22:CG:581:VAL:HG12	1.88	0.56
24:CI:384:LYS:O	32:CR:215:LYS:NZ	2.39	0.56
26:CK:190:HIS:HB2	26:CK:227:VAL:HG23	1.87	0.56
28:CM:163:ARG:HD2	28:CM:207:GLN:HB3	1.87	0.56
28:CM:345:SER:OG	28:CM:346:ASP:N	2.37	0.56
36:Cd:31:ARG:NH2	53:CW:42:LEU:O	2.38	0.56
43:Ck:110:LYS:NZ	49:C1:890:U:OP1	2.38	0.56
45:Cn:126:LYS:HA	45:Cn:131:GLY:HA2	1.86	0.56
49:C1:181:G:H3'	49:C1:182:C:H4'	1.88	0.56
50:C2:134:C:H4'	50:C2:181:A:H61	1.71	0.56
54:UT:1438:LEU:O	54:UT:1455:SER:OG	2.23	0.56
54:UT:2012:LEU:O	54:UT:2029:TYR:OH	2.24	0.56
2:UB:820:ASP:OD2	2:UB:825:TYR:OH	2.18	0.56
4:UD:121:ALA:O	62:UP:330:ARG:NE	2.39	0.56
5:UF:133:ALA:HA	5:UF:136:LEU:HD12	1.87	0.56
7:UJ:1604:PHE:HA	7:UJ:1607:LEU:HD12	1.88	0.56
9:UL:94:LEU:HB2	9:UL:104:VAL:HG12	1.86	0.56
11:UN:335:ARG:NH1	49:C1:580:A:O2'	2.34	0.56
12:UO:89:ARG:NH2	12:UO:347:THR:OG1	2.38	0.56
12:UO:152:TRP:HA	12:UO:160:LEU:HG	1.87	0.56
18:CB:192:ASP:HA	18:CB:195:ASN:HD22	1.70	0.56
23:CH:246:LEU:HG	23:CH:247:VAL:HG23	1.88	0.56
23:CH:347:GLY:O	23:CH:397:SER:HA	2.06	0.56
25:CJ:78:LEU:HD21	25:CJ:97:VAL:HG11	1.88	0.56
28:CM:220:ARG:NH1	28:CM:238:LEU:O	2.38	0.56
32:CR:737:TRP:HB3	32:CR:742:PHE:HB2	1.86	0.56
36:Cd:57:ASP:HA	36:Cd:106:LEU:HA	1.86	0.56
36:Cd:174:LYS:NZ	49:C1:655:A:OP2	2.39	0.56
41:CI:31:ARG:HD3	49:C1:1503:U:H4'	1.88	0.56
49:C1:103:G:N2	49:C1:106:A:OP2	2.35	0.56
49:C1:256:U:H5''	49:C1:257:G:H5'	1.88	0.56
49:C1:1702:G:H2'	49:C1:1703:G:C8	2.41	0.56
51:UV:368:ASN:HD21	51:UV:379:ALA:HB2	1.71	0.56
51:UV:642:ASN:O	51:UV:646:LYS:HB2	2.06	0.56
51:UV:988:LEU:HD12	51:UV:994:LEU:HD11	1.88	0.56
52:CV:50:SER:OG	52:CV:51:LEU:N	2.37	0.56
53:CW:336:VAL:HG22	53:CW:347:THR:HG22	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:UT:290:LEU:HD11	54:UT:334:GLN:HB3	1.87	0.56
56:UI:163:THR:O	56:UI:163:THR:OG1	2.23	0.56
4:UD:624:PRO:HB3	7:UJ:673:HIS:HB2	1.88	0.56
7:UJ:397:LYS:HE3	7:UJ:441:ALA:HB1	1.87	0.56
10:UM:615:VAL:HG23	10:UM:627:TRP:HB2	1.88	0.56
10:UM:741:GLN:HB2	10:UM:760:LEU:HD11	1.87	0.56
10:UM:869:ARG:NH1	49:C1:2218:A:OP2	2.39	0.56
12:UO:483:ARG:NH2	49:C1:112:C:OP1	2.37	0.56
15:UU:397:ASP:O	15:UU:400:GLY:N	2.32	0.56
15:UU:848:ARG:HA	15:UU:851:TRP:CD1	2.41	0.56
23:CH:139:THR:HG21	23:CH:178:ARG:HA	1.86	0.56
24:CI:356:GLU:HA	32:CR:2:THR:HG23	1.87	0.56
34:Cb:87:MET:HE2	34:Cb:122:LYS:HG3	1.87	0.56
45:Cn:47:SER:OG	45:Cn:48:HIS:N	2.36	0.56
49:C1:645:U:H4'	49:C1:1035:G:H21	1.70	0.56
50:C2:68:A:H2'	50:C2:69:G:H8	1.71	0.56
60:CY:236:ALA:O	60:CY:240:SER:OG	2.24	0.56
10:UM:861:ASP:HA	10:UM:864:LYS:HD2	1.88	0.56
14:UR:236:ASP:O	14:UR:239:SER:OG	2.21	0.56
16:UX:122:THR:OG1	16:UX:123:CYS:N	2.39	0.56
22:CG:482:SER:OG	22:CG:483:TRP:N	2.38	0.56
24:CI:72:VAL:HB	24:CI:136:VAL:HG22	1.88	0.56
28:CM:160:SER:HB2	28:CM:203:VAL:HG13	1.86	0.56
30:CP:51:LEU:O	30:CP:55:TRP:HB2	2.05	0.56
32:CS:570:LEU:HB2	32:CS:584:CYS:HB3	1.88	0.56
47:Cp:26:VAL:HA	47:Cp:46:LYS:HA	1.87	0.56
49:C1:663:U:O2'	49:C1:665:C:OP2	2.24	0.56
50:C2:49:U:H2'	50:C2:50:G:H8	1.69	0.56
50:C2:103:G:C5	50:C2:250:G:N1	2.74	0.56
51:UV:1047:VAL:HA	51:UV:1050:LEU:HD12	1.87	0.56
56:UI:245:VAL:HG12	56:UI:249:ARG:HD2	1.86	0.56
63:Cz:1624:HIS:HA	63:Cz:1664:LEU:HD21	1.88	0.56
4:UD:267:THR:HG21	14:UR:451:THR:HB	1.87	0.56
15:UU:277:THR:OG1	15:UU:303:SER:N	2.38	0.56
19:CC:181:ILE:HG13	19:CC:316:ALA:HB1	1.88	0.56
20:CD:350:VAL:HG22	20:CD:358:LYS:HG3	1.87	0.56
25:CJ:90:THR:OG1	25:CJ:91:LYS:N	2.37	0.56
28:CM:179:ILE:O	28:CM:188:GLY:HA3	2.07	0.56
28:CM:437:ARG:NE	49:C1:586:G:O6	2.39	0.56
29:CO:73:HIS:HB3	29:CO:76:ILE:HG12	1.87	0.56
32:CR:285:ALA:HB2	32:CR:474:LEU:HB3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:C1:425:C:H2'	49:C1:426:A:C8	2.41	0.56
51:UV:157:LEU:HD11	51:UV:248:ARG:HD3	1.88	0.56
54:UT:2103:LEU:HD11	54:UT:2142:PHE:HA	1.87	0.56
55:UH:715:ALA:HB2	55:UH:775:LEU:HA	1.88	0.56
59:CX:301:GLY:O	59:CX:305:GLY:CA	2.54	0.56
63:Cz:1746:GLU:O	63:Cz:1755:ARG:NH2	2.39	0.56
1:UA:201:ALA:HA	1:UA:211:TYR:O	2.06	0.55
4:UD:390:GLU:OE1	4:UD:422:GLN:NE2	2.37	0.55
9:UL:62:ARG:HH22	9:UL:64:GLU:HA	1.71	0.55
15:UU:669:ILE:N	15:UU:683:ALA:O	2.37	0.55
17:UZ:69:LYS:HB3	17:UZ:279:ARG:HE	1.71	0.55
20:CD:115:THR:HB	20:CD:118:LEU:HD23	1.88	0.55
20:CD:216:LEU:H	20:CD:219:ASN:HD22	1.53	0.55
28:CM:296:GLU:OE2	28:CM:312:ARG:NH2	2.39	0.55
28:CM:385:LEU:O	28:CM:389:ARG:CB	2.54	0.55
29:CN:102:SER:HA	29:CO:236:VAL:HG21	1.88	0.55
32:CS:285:ALA:HB2	32:CS:474:LEU:HB3	1.88	0.55
32:CS:591:GLU:OE2	32:CS:612:ASP:N	2.39	0.55
38:Cf:65:PHE:HA	38:Cf:185:GLY:O	2.06	0.55
46:Co:353:GLN:HE21	46:Co:405:LEU:HG	1.69	0.55
49:C1:693:C:H2'	49:C1:694:A:C8	2.41	0.55
51:UV:970:VAL:HG22	51:UV:974:GLN:HE21	1.72	0.55
53:CW:58:ASN:ND2	53:CW:99:ASN:O	2.39	0.55
53:CW:335:PHE:O	53:CW:347:THR:HA	2.06	0.55
8:UK:114:THR:HG21	20:CD:332:LEU:HD13	1.88	0.55
10:UM:236:GLN:HE21	10:UM:252:ARG:HA	1.70	0.55
12:UO:540:ALA:O	12:UO:544:GLY:N	2.38	0.55
14:UR:171:TYR:OH	20:CD:444:ALA:O	2.24	0.55
14:UR:339:ILE:HA	14:UR:348:HIS:O	2.07	0.55
15:UU:388:VAL:HG11	15:UU:773:VAL:HG12	1.88	0.55
19:CC:286:ASP:HA	19:CC:289:ARG:HE	1.71	0.55
22:CG:583:GLY:HA2	22:CG:599:CYS:HA	1.89	0.55
24:CI:284:GLN:HB3	24:CI:296:ILE:HB	1.89	0.55
24:CI:1070:GLN:NE2	24:CI:1077:GLN:OE1	2.39	0.55
49:C1:301:U:O2	49:C1:341:G:C2	2.58	0.55
49:C1:816:C:O2	49:C1:817:G:N2	2.39	0.55
49:C1:1509:A:H4'	63:Cz:1646:VAL:HG12	1.87	0.55
63:Cz:1581:ARG:HH12	63:Cz:1614:GLU:HB3	1.71	0.55
2:UB:857:GLN:OE1	2:UB:860:ARG:NH2	2.40	0.55
4:UD:296:MET:O	4:UD:875:ARG:NH1	2.39	0.55
5:UF:190:ALA:HA	5:UF:310:LEU:HD21	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:UG:230:LEU:HD23	6:UG:242:TYR:HB3	1.89	0.55
14:UR:362:LYS:O	14:UR:364:GLN:NE2	2.40	0.55
24:CI:349:ASP:OD1	32:CR:16:ARG:NH2	2.38	0.55
27:CL:709:SER:OG	27:CL:711:GLU:OE1	2.25	0.55
32:CR:525:THR:HA	32:CR:528:SER:HB3	1.88	0.55
32:CS:889:LEU:HA	32:CS:891:ARG:HE	1.70	0.55
46:Co:345:ARG:O	46:Co:351:ARG:O	2.25	0.55
49:C1:1174:C:H2'	49:C1:1175:A:H8	1.71	0.55
51:UV:371:GLU:HA	51:UV:411:ALA:HB1	1.88	0.55
51:UV:642:ASN:HA	51:UV:646:LYS:HD3	1.88	0.55
52:CV:87:SER:H	52:CV:146:SER:HB2	1.71	0.55
54:UT:208:ALA:HA	54:UT:258:MET:HG2	1.88	0.55
54:UT:772:ASP:O	54:UT:839:ARG:NH2	2.40	0.55
56:UE:251:ARG:O	56:UE:254:SER:OG	2.25	0.55
59:CX:359:CYS:SG	59:CX:391:ARG:NH2	2.77	0.55
1:UA:81:LEU:HD12	1:UA:90:LEU:HB2	1.88	0.55
2:UB:761:LEU:HG	2:UB:777:LEU:HD22	1.88	0.55
5:UF:19:LEU:HD12	5:UF:33:ILE:HG23	1.87	0.55
7:UJ:97:ARG:NH1	14:UR:69:GLN:O	2.35	0.55
9:UL:114:THR:HG23	9:UL:115:VAL:HG23	1.88	0.55
10:UM:447:TRP:HD1	10:UM:460:TRP:HB2	1.69	0.55
12:UO:166:ASP:OD1	12:UO:166:ASP:N	2.39	0.55
13:UQ:449:ASP:HB2	13:UQ:454:ARG:HE	1.72	0.55
14:UR:394:GLY:O	14:UR:416:GLY:N	2.40	0.55
24:CI:403:THR:HA	32:CR:530:HIS:HE1	1.71	0.55
25:CJ:63:LEU:HG	48:CU:199:GLY:HA3	1.88	0.55
25:CJ:120:MET:HB3	25:CJ:160:TRP:HZ2	1.71	0.55
32:CS:625:ASP:OD1	32:CS:625:ASP:N	2.40	0.55
49:C1:306:G:N2	49:C1:334:U:O2	2.36	0.55
53:CW:356:CYS:SG	53:CW:357:PHE:N	2.79	0.55
54:UT:155:MET:HG2	54:UT:160:VAL:HG11	1.87	0.55
54:UT:1864:THR:HG22	54:UT:1910:GLU:HG2	1.87	0.55
63:Cz:1581:ARG:NH2	63:Cz:1614:GLU:OE1	2.38	0.55
63:Cz:1643:ALA:HA	63:Cz:1646:VAL:HG22	1.89	0.55
4:UD:15:ALA:HA	4:UD:345:SER:HA	1.89	0.55
10:UM:104:VAL:HG12	10:UM:105:ARG:HG3	1.87	0.55
13:UQ:163:GLY:HA3	13:UQ:182:ILE:HG22	1.88	0.55
13:UQ:370:LEU:HB2	13:UQ:382:TRP:HB2	1.88	0.55
13:UQ:393:PRO:HG3	49:C1:73:A:C8	2.40	0.55
15:UU:619:GLY:O	15:UU:647:LYS:NZ	2.40	0.55
17:UZ:88:PRO:HB3	17:UZ:229:GLY:HA3	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CA:248:LYS:NZ	18:CA:250:GLY:O	2.38	0.55
26:CK:150:THR:OG1	26:CK:151:ALA:N	2.40	0.55
27:CL:708:MET:HG2	27:CL:713:LYS:HG3	1.87	0.55
32:CR:651:SER:OG	32:CR:739:ARG:NH2	2.40	0.55
32:CS:172:ARG:HD2	32:CS:174:ARG:HH21	1.72	0.55
34:Cb:161:LYS:HE2	34:Cb:171:ASP:HB2	1.89	0.55
34:Cb:178:GLY:N	34:Cb:195:ILE:O	2.38	0.55
36:Cd:32:MET:HA	36:Cd:52:ILE:HG13	1.89	0.55
36:Cd:142:ARG:HG3	36:Cd:147:LEU:HB2	1.89	0.55
46:Co:413:LEU:O	46:Co:417:GLU:CB	2.54	0.55
49:C1:364:C:H2'	49:C1:365:G:H8	1.71	0.55
49:C1:686:A:H62	49:C1:968:G:H22	1.54	0.55
51:UV:355:GLN:HE21	63:Cz:1522:VAL:HA	1.70	0.55
1:UA:398:PHE:CE2	1:UA:433:VAL:HG21	2.41	0.55
1:UA:632:GLU:O	6:UG:175:GLN:NE2	2.36	0.55
7:UJ:576:LYS:HG2	7:UJ:614:LEU:HD13	1.88	0.55
9:UL:862:ASN:OD1	9:UL:905:ASN:ND2	2.39	0.55
11:UN:329:THR:HA	11:UN:938:TYR:HB2	1.89	0.55
13:UQ:200:LYS:NZ	13:UQ:201:VAL:O	2.35	0.55
13:UQ:447:SER:OG	13:UQ:449:ASP:OD1	2.24	0.55
15:UU:334:ASN:HB3	15:UU:336:VAL:HG22	1.88	0.55
15:UU:364:TRP:HB3	15:UU:375:PRO:HB2	1.87	0.55
19:CC:198:VAL:HB	19:CC:277:LEU:HD22	1.87	0.55
21:CE:53:VAL:O	21:CE:79:TYR:HA	2.07	0.55
22:CG:222:LYS:HB2	50:C2:183:A:H5''	1.89	0.55
24:CI:545:LEU:HD21	24:CI:559:ARG:HG2	1.89	0.55
24:CI:1043:ARG:NH1	49:C1:2072:U:O2'	2.40	0.55
26:CK:88:VAL:O	26:CK:114:ALA:HA	2.06	0.55
32:CR:184:ARG:HB2	32:CR:560:SER:HB2	1.88	0.55
32:CR:749:GLN:HB3	32:CR:793:LYS:HD2	1.89	0.55
51:UV:982:ARG:HA	51:UV:985:VAL:HG22	1.87	0.55
1:UA:629:LEU:HD22	1:UA:636:VAL:HG11	1.87	0.55
6:UG:123:VAL:HG22	6:UG:127:GLN:HE21	1.72	0.55
6:UG:331:ASN:HD22	6:UG:333:LYS:HE2	1.71	0.55
7:UJ:615:VAL:HA	7:UJ:618:LEU:HG	1.88	0.55
7:UJ:1487:SER:HA	7:UJ:1490:LYS:HG2	1.89	0.55
10:UM:587:ARG:HH21	10:UM:644:ASN:HD21	1.54	0.55
10:UM:595:ALA:HB3	10:UM:614:VAL:HB	1.88	0.55
10:UM:803:ASP:N	10:UM:803:ASP:OD1	2.40	0.55
15:UU:48:GLY:HA2	15:UU:357:LEU:HD22	1.88	0.55
15:UU:184:GLU:HB3	15:UU:204:LYS:HB2	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CF:39:ASN:ND2	50:C2:194:G:N7	2.53	0.55
22:CG:297:ARG:NE	22:CG:340:GLY:O	2.39	0.55
24:CI:866:HIS:O	49:C1:1156:C:N4	2.39	0.55
32:CR:570:LEU:HB2	32:CR:584:CYS:HB3	1.88	0.55
32:CS:125:LEU:HD22	32:CS:151:LEU:HG	1.88	0.55
32:CS:184:ARG:HB2	32:CS:560:SER:HB2	1.88	0.55
32:CS:903:LEU:HD21	32:CS:907:GLN:HB2	1.89	0.55
38:Cf:4:SER:OG	38:Cf:28:GLU:O	2.22	0.55
49:C1:460:U:H2'	49:C1:461:G:C8	2.42	0.55
49:C1:465:C:OP2	60:CY:366:ARG:NH1	2.38	0.55
49:C1:1630:C:H2'	49:C1:1631:G:H8	1.70	0.55
53:CW:286:MET:N	53:CW:286:MET:SD	2.79	0.55
54:UT:776:VAL:O	54:UT:844:ARG:NH2	2.38	0.55
57:US:221:ASN:OD1	57:US:281:GLN:NE2	2.39	0.55
2:UB:677:LEU:HD11	2:UB:756:VAL:HB	1.88	0.55
4:UD:197:HIS:ND1	4:UD:198:ASN:OD1	2.40	0.55
4:UD:747:ILE:O	4:UD:755:GLN:NE2	2.39	0.55
7:UJ:506:LEU:HD11	7:UJ:556:LEU:HD11	1.88	0.55
9:UL:601:LEU:HD11	9:UL:639:GLY:HA3	1.88	0.55
13:UQ:88:ARG:NH2	13:UQ:416:ASP:O	2.39	0.55
13:UQ:927:ALA:O	13:UQ:931:ASN:HB2	2.06	0.55
14:UR:324:ASP:N	14:UR:324:ASP:OD1	2.37	0.55
15:UU:482:PRO:HD2	15:UU:502:LEU:HD21	1.88	0.55
16:UX:60:VAL:HG11	16:UX:65:LEU:HD22	1.87	0.55
18:CA:68:GLY:H	33:CT:140:ILE:HB	1.72	0.55
18:CA:249:GLN:HB3	19:CC:39:LYS:HD3	1.88	0.55
23:CH:206:LEU:HD13	23:CH:208:LEU:HD23	1.89	0.55
23:CH:224:CYS:HB3	23:CH:227:VAL:HG22	1.88	0.55
29:CO:27:ILE:HG21	29:CO:36:ARG:HE	1.70	0.55
30:CP:110:GLN:HA	30:CP:113:LYS:HB2	1.89	0.55
32:CR:625:ASP:OD1	32:CR:625:ASP:N	2.40	0.55
32:CS:526:LEU:HD21	32:CS:540:MET:HE1	1.87	0.55
35:Cc:18:LYS:HA	35:Cc:21:LEU:HD12	1.89	0.55
38:Cf:46:VAL:O	38:Cf:53:HIS:HA	2.07	0.55
49:C1:392:C:H2'	49:C1:393:G:C8	2.42	0.55
54:UT:908:SER:HB3	54:UT:943:LYS:HD3	1.87	0.55
55:UH:723:VAL:HG13	55:UH:786:ALA:HA	1.88	0.55
59:CX:233:ILE:HA	59:CX:236:LEU:HD12	1.88	0.55
1:UA:705:GLN:HA	15:UU:718:ASP:HB3	1.89	0.55
7:UJ:122:ILE:HD12	7:UJ:128:HIS:HB3	1.89	0.55
7:UJ:1630:VAL:HG23	7:UJ:1678:VAL:HG11	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:UQ:671:VAL:HG22	55:UH:718:PRO:HD3	1.89	0.55
15:UU:412:GLY:O	15:UU:415:ARG:N	2.40	0.55
16:UX:141:HIS:HB3	16:UX:143:ILE:HG12	1.89	0.55
24:CI:66:PRO:O	24:CI:113:ARG:NH2	2.40	0.55
28:CM:85:GLY:HA2	28:CM:91:VAL:HA	1.89	0.55
29:CN:177:LYS:N	29:CN:222:ASP:OD2	2.37	0.55
32:CR:526:LEU:HD21	32:CR:540:MET:HE1	1.87	0.55
39:Cg:106:ARG:HH21	39:Cg:143:SER:HB2	1.72	0.55
50:C2:149:U:H2'	50:C2:150:G:H8	1.72	0.55
51:UV:490:LEU:HD23	51:UV:503:LEU:HB3	1.89	0.55
1:UA:818:VAL:HA	1:UA:821:ARG:HG2	1.88	0.55
2:UB:46:GLU:HA	2:UB:49:LYS:HG2	1.89	0.55
6:UG:278:GLN:HA	6:UG:302:PRO:HB3	1.88	0.55
8:UK:1:MET:HB2	8:UK:4:LEU:HG	1.89	0.55
13:UQ:353:TRP:NE1	49:C1:72:U:OP1	2.32	0.55
13:UQ:794:PRO:HA	13:UQ:809:SER:HA	1.87	0.55
16:UX:4:LYS:HD2	16:UX:6:ILE:HD11	1.89	0.55
21:CF:53:VAL:O	21:CF:79:TYR:HA	2.07	0.55
24:CI:544:ARG:NH2	24:CI:547:TYR:O	2.40	0.55
24:CI:980:LYS:NZ	49:C1:2071:G:N7	2.54	0.55
24:CI:1102:LYS:NZ	49:C1:401:C:OP2	2.38	0.55
30:CP:56:PRO:HA	30:CP:59:THR:HG22	1.88	0.55
30:CP:176:LYS:NZ	49:C1:1489:G:O3'	2.36	0.55
32:CR:903:LEU:HD21	32:CR:907:GLN:HB2	1.89	0.55
38:Cf:41:LYS:NZ	49:C1:844:U:OP2	2.40	0.55
43:Ck:42:ASP:O	49:C1:831:A:O2'	2.24	0.55
54:UT:1584:ILE:O	54:UT:1636:ARG:NH1	2.40	0.55
56:UI:251:ARG:O	56:UI:254:SER:OG	2.25	0.55
1:UA:334:LEU:HB2	1:UA:336:GLN:HE22	1.73	0.54
4:UD:35:TYR:HA	4:UD:38:LYS:HD2	1.89	0.54
4:UD:368:LEU:HD11	4:UD:865:ARG:HB3	1.89	0.54
6:UG:184:ARG:NH1	6:UG:222:MET:O	2.40	0.54
9:UL:568:ILE:HA	9:UL:584:LEU:HA	1.90	0.54
13:UQ:222:ASN:H	13:UQ:225:MET:HB3	1.72	0.54
13:UQ:637:PHE:O	13:UQ:664:SER:N	2.40	0.54
15:UU:365:ILE:HB	15:UU:378:LEU:HD22	1.90	0.54
18:CA:80:GLY:H	33:CT:90:TRP:NE1	2.05	0.54
20:CD:194:PHE:CD2	20:CD:197:LEU:HB2	2.42	0.54
22:CG:351:ASP:N	22:CG:351:ASP:OD1	2.36	0.54
25:CJ:102:THR:HG22	25:CJ:104:SER:H	1.72	0.54
27:CL:655:THR:OG1	27:CL:656:VAL:N	2.39	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:CO:158:LYS:HB2	29:CO:161:LYS:HD2	1.89	0.54
37:Ce:34:GLU:HA	37:Ce:44:LEU:HD23	1.89	0.54
37:Ce:177:ASP:OD1	37:Ce:177:ASP:N	2.40	0.54
39:Cg:25:GLU:HA	39:Cg:28:LEU:HD12	1.88	0.54
49:C1:9:G:N1	49:C1:27:A:C6	2.74	0.54
49:C1:693:C:H2'	49:C1:694:A:H8	1.72	0.54
54:UT:1028:ASP:O	54:UT:1032:MET:N	2.40	0.54
54:UT:1505:ILE:HA	54:UT:1508:VAL:HG22	1.88	0.54
56:UE:164:ASP:OD1	56:UE:199:LYS:NZ	2.34	0.54
1:UA:278:ILE:HA	1:UA:294:SER:HA	1.90	0.54
1:UA:845:LEU:O	1:UA:847:GLN:NE2	2.40	0.54
4:UD:128:GLN:HE21	18:CB:262:ILE:HD11	1.71	0.54
4:UD:488:PRO:HD2	4:UD:558:SER:HB2	1.89	0.54
4:UD:495:TRP:HZ2	4:UD:523:PRO:HB3	1.72	0.54
5:UF:36:LEU:HD11	5:UF:67:LEU:HD21	1.89	0.54
6:UG:55:GLY:HA3	11:UN:902:ARG:HD2	1.88	0.54
7:UJ:733:ILE:O	7:UJ:741:ARG:NH1	2.39	0.54
15:UU:38:TYR:O	15:UU:87:ARG:NH1	2.39	0.54
19:CC:124:SER:HB3	19:CC:127:VAL:HG12	1.88	0.54
19:CC:142:HIS:O	19:CC:146:GLN:N	2.37	0.54
26:CK:33:ARG:HA	26:CK:36:LEU:HD12	1.89	0.54
32:CR:125:LEU:HD22	32:CR:151:LEU:HG	1.88	0.54
32:CS:803:LEU:HD11	32:CS:882:ALA:HB2	1.89	0.54
34:Cb:212:ASP:OD1	34:Cb:216:ASN:N	2.35	0.54
35:Cc:50:GLN:H	35:Cc:76:ILE:HD11	1.72	0.54
49:C1:283:A:H2'	49:C1:284:A:C8	2.42	0.54
51:UV:599:CYS:HA	51:UV:602:ILE:HD12	1.89	0.54
54:UT:495:GLN:HE22	54:UT:544:HIS:H	1.55	0.54
59:CX:424:ASP:O	59:CX:459:ARG:NH1	2.36	0.54
1:UA:655:SER:OG	1:UA:656:LEU:O	2.25	0.54
9:UL:655:VAL:HA	9:UL:670:PHE:O	2.07	0.54
10:UM:517:ARG:HA	10:UM:547:ILE:HG13	1.90	0.54
13:UQ:502:VAL:HG13	13:UQ:511:VAL:HB	1.88	0.54
19:CC:20:VAL:HG12	19:CC:48:VAL:HG22	1.90	0.54
19:CC:100:VAL:O	19:CC:120:ALA:HA	2.07	0.54
23:CH:164:PHE:HZ	23:CH:339:MET:HG2	1.71	0.54
24:CI:1099:THR:HG21	33:CT:178:TYR:HE1	1.71	0.54
35:Cc:99:ARG:NH2	49:C1:2111:U:OP1	2.40	0.54
39:Cg:37:LYS:NZ	49:C1:1176:A:OP2	2.41	0.54
43:Ck:76:LEU:HB2	43:Ck:93:ARG:HH22	1.71	0.54
44:Cm:36:LYS:HB3	44:Cm:110:ILE:HG21	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:C1:10:U:O2	49:C1:25:G:N2	2.41	0.54
49:C1:252:U:H2'	49:C1:253:G:H8	1.71	0.54
49:C1:1453:G:H2'	49:C1:1454:A:H8	1.71	0.54
49:C1:1652:C:H2'	49:C1:1653:G:C8	2.43	0.54
54:UT:1466:VAL:HG22	54:UT:1478:TRP:HE3	1.72	0.54
62:UP:336:LYS:HZ2	62:UP:339:SER:H	1.55	0.54
1:UA:559:ARG:HH11	25:CJ:144:ARG:HE	1.56	0.54
4:UD:17:ASN:N	4:UD:47:GLY:O	2.38	0.54
4:UD:148:ALA:N	4:UD:151:ASN:O	2.40	0.54
4:UD:224:THR:HG21	14:UR:395:GLY:HA3	1.88	0.54
5:UF:339:ILE:HG12	5:UF:364:LEU:HA	1.90	0.54
6:UG:577:ILE:HG23	6:UG:579:ASP:HB2	1.90	0.54
7:UJ:841:LEU:HD11	7:UJ:848:VAL:HB	1.89	0.54
9:UL:287:HIS:CD2	9:UL:290:ARG:HB2	2.43	0.54
13:UQ:713:VAL:HG22	13:UQ:725:VAL:HG22	1.89	0.54
16:UX:0:PHE:HB3	25:CJ:129:LYS:HG3	1.90	0.54
17:UZ:70:LYS:NZ	49:C1:373:C:OP1	2.40	0.54
18:CA:94:THR:O	18:CA:127:TYR:HA	2.07	0.54
20:CD:51:PHE:HE2	20:CD:57:ALA:HB2	1.72	0.54
32:CR:803:LEU:HD11	32:CR:882:ALA:HB2	1.89	0.54
34:Cb:88:ASP:OD1	34:Cb:122:LYS:NZ	2.39	0.54
41:Ci:65:ARG:HH21	49:C1:1490:A:H4'	1.73	0.54
49:C1:787:U:O2	49:C1:847:C:N3	2.41	0.54
49:C1:1068:C:H2'	49:C1:1069:A:C8	2.42	0.54
49:C1:1138:C:C4	49:C1:1155:G:O6	2.60	0.54
49:C1:1729:U:H3'	49:C1:1730:G:H8	1.71	0.54
49:C1:2238:A:H62	49:C1:2328:G:N2	1.96	0.54
51:UV:185:THR:HG23	51:UV:203:LYS:HB2	1.90	0.54
51:UV:381:PRO:HG3	51:UV:396:SER:H	1.71	0.54
55:UH:586:LEU:HB2	55:UH:630:TYR:HE1	1.72	0.54
59:CX:422:ARG:HB2	59:CX:456:GLY:HA3	1.89	0.54
1:UA:112:VAL:HG13	1:UA:157:LEU:HD13	1.88	0.54
1:UA:155:ARG:N	1:UA:169:ALA:O	2.40	0.54
1:UA:558:ARG:NH1	1:UA:564:ARG:O	2.40	0.54
4:UD:299:ARG:HD3	4:UD:318:HIS:CD2	2.43	0.54
4:UD:316:VAL:HA	13:UQ:349:ARG:HG2	1.88	0.54
5:UF:40:ARG:NH1	5:UF:60:TYR:OH	2.40	0.54
32:CR:497:ASP:N	32:CR:497:ASP:OD1	2.40	0.54
32:CR:591:GLU:OE2	32:CR:612:ASP:N	2.39	0.54
39:Cg:130:ARG:HE	39:Cg:140:ASN:HB2	1.71	0.54
49:C1:1166:U:H1'	49:C1:1169:A:H62	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:C1:1472:A:H2	49:C1:1510:G:N1	1.98	0.54
55:UH:722:THR:O	55:UH:726:LEU:HB3	2.07	0.54
4:UD:535:LYS:HA	4:UD:538:LEU:HD12	1.90	0.54
4:UD:878:ALA:HB2	62:UP:351:ARG:HG2	1.89	0.54
8:UK:63:PHE:HE1	25:CJ:169:ASN:HD22	1.55	0.54
12:UO:438:ASP:OD1	12:UO:473:ARG:NH1	2.38	0.54
15:UU:117:GLN:NE2	15:UU:137:LEU:O	2.41	0.54
20:CD:346:HIS:HB3	50:C2:92:A:H62	1.73	0.54
22:CG:163:TYR:HB3	22:CG:604:PHE:HB3	1.90	0.54
24:CI:91:ARG:NH1	24:CI:91:ARG:O	2.40	0.54
24:CI:962:ILE:HG12	24:CI:973:PHE:HE2	1.72	0.54
32:CR:172:ARG:HD2	32:CR:174:ARG:HH21	1.72	0.54
32:CS:497:ASP:N	32:CS:497:ASP:OD1	2.40	0.54
32:CS:651:SER:OG	32:CS:739:ARG:NH2	2.40	0.54
34:Cb:45:ILE:HD11	34:Cb:49:ARG:HE	1.72	0.54
36:Cd:3:LEU:HD13	36:Cd:109:LEU:HB2	1.89	0.54
37:Ce:67:PHE:HB3	37:Ce:101:ALA:HB2	1.89	0.54
49:C1:68:U:O4	55:UH:881:ARG:NH1	2.40	0.54
49:C1:1485:A:C4	49:C1:1486:G:H8	2.25	0.54
49:C1:2051:U:H2'	49:C1:2052:A:H8	1.71	0.54
49:C1:2363:G:N7	49:C1:2365:A:N6	2.56	0.54
53:CW:159:SER:OG	53:CW:163:SER:O	2.26	0.54
54:UT:840:SER:OG	54:UT:841:GLU:N	2.39	0.54
54:UT:2123:MET:HE3	54:UT:2136:ARG:HA	1.90	0.54
1:UA:706:PHE:N	15:UU:718:ASP:O	2.36	0.54
2:UB:700:ARG:HG3	2:UB:724:ALA:HB2	1.89	0.54
6:UG:472:ARG:NH2	49:C1:333:C:OP1	2.40	0.54
8:UK:16:ARG:NH1	27:CL:505:GLU:OE2	2.41	0.54
10:UM:738:LEU:HD13	10:UM:741:GLN:HE21	1.73	0.54
13:UQ:424:SER:OG	14:UR:358:LYS:NZ	2.39	0.54
13:UQ:692:THR:HG21	13:UQ:738:LYS:HA	1.89	0.54
14:UR:351:ASN:O	14:UR:355:GLY:HA2	2.07	0.54
15:UU:416:SER:OG	15:UU:417:LEU:N	2.41	0.54
15:UU:841:MET:HG3	15:UU:1030:LEU:HD11	1.89	0.54
15:UU:978:LEU:HD13	15:UU:995:MET:HG2	1.90	0.54
18:CA:158:TYR:HA	18:CA:227:PHE:HB3	1.90	0.54
18:CB:167:VAL:HA	18:CB:170:VAL:HG22	1.89	0.54
19:CC:316:ALA:HA	19:CC:319:ILE:HG22	1.89	0.54
23:CH:342:GLY:O	23:CH:402:GLY:N	2.41	0.54
23:CH:374:SER:HB2	24:CI:768:VAL:HA	1.90	0.54
24:CI:344:MET:HB3	24:CI:353:ILE:HG22	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:CN:144:LEU:HD22	29:CN:160:LEU:HD13	1.89	0.54
32:CS:525:THR:HA	32:CS:528:SER:HB3	1.88	0.54
34:Cb:229:GLY:HA2	34:Cb:232:LYS:HE2	1.90	0.54
43:Ck:16:GLN:HB3	43:Ck:19:ILE:HD13	1.89	0.54
53:CW:2:LYS:HD3	53:CW:14:VAL:HA	1.88	0.54
53:CW:136:PRO:HG2	61:CZ:544:LEU:HG	1.90	0.54
54:UT:187:TYR:HB2	54:UT:231:PHE:HE2	1.73	0.54
54:UT:378:ILE:HG13	54:UT:425:TRP:HZ3	1.72	0.54
56:UE:196:LEU:HD23	56:UE:200:LEU:HD23	1.89	0.54
57:US:405:TYR:OH	57:US:484:LYS:O	2.20	0.54
7:UJ:129:GLU:OE2	7:UJ:159:ARG:NH1	2.40	0.54
8:UK:109:LEU:HA	8:UK:240:LEU:HD13	1.88	0.54
11:UN:352:LEU:HD11	19:CC:89:THR:HB	1.89	0.54
17:UZ:274:LYS:HZ1	17:UZ:275:TRP:CD1	2.26	0.54
19:CC:8:LEU:HD21	19:CC:100:VAL:HG13	1.88	0.54
23:CH:47:ALA:HB3	23:CH:50:GLU:HG3	1.89	0.54
23:CH:133:THR:HA	23:CH:191:ILE:HG22	1.90	0.54
24:CI:81:LYS:HG3	24:CI:82:THR:H	1.71	0.54
32:CR:313:THR:HB	32:CR:388:ILE:HD13	1.90	0.54
32:CS:749:GLN:HB3	32:CS:793:LYS:HD2	1.89	0.54
32:CS:892:LYS:NZ	32:CS:900:GLU:OE1	2.32	0.54
34:Cb:125:LYS:O	34:Cb:142:HIS:N	2.41	0.54
49:C1:270:C:H4'	49:C1:273:G:C5	2.42	0.54
49:C1:2333:A:H2'	49:C1:2334:G:C8	2.43	0.54
54:UT:149:VAL:HG22	54:UT:193:LEU:HD22	1.90	0.54
56:UI:196:LEU:HD23	56:UI:200:LEU:HD23	1.89	0.54
63:Cz:1530:GLN:HG3	63:Cz:1534:ARG:HH21	1.72	0.54
4:UD:291:ILE:O	4:UD:302:VAL:HA	2.07	0.54
7:UJ:407:ASP:OD2	7:UJ:407:ASP:N	2.41	0.54
9:UL:245:ALA:HB2	9:UL:270:ARG:HD2	1.89	0.54
9:UL:850:PRO:HG3	47:Cp:42:ILE:HD11	1.89	0.54
10:UM:745:LEU:HD13	10:UM:760:LEU:HB3	1.89	0.54
22:CG:100:ARG:HG3	39:Cg:68:LEU:HD23	1.90	0.54
24:CI:135:ILE:HG22	24:CI:165:ASN:HB2	1.90	0.54
26:CK:183:THR:HG22	49:C1:1743:C:H2'	1.89	0.54
27:CL:719:ARG:NH2	49:C1:2224:C:OP2	2.39	0.54
28:CM:306:THR:HG23	28:CM:320:VAL:HG23	1.90	0.54
30:CP:114:ILE:HA	30:CP:119:MET:HG2	1.89	0.54
32:CS:313:THR:HB	32:CS:388:ILE:HD13	1.90	0.54
43:Ck:136:LEU:HB2	43:Ck:140:VAL:HG13	1.89	0.54
43:Ck:138:LYS:NZ	49:C1:908:C:OP1	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:C1:902:U:O4	49:C1:930:G:O6	2.26	0.54
49:C1:1023:U:O4	49:C1:1049:G:C6	2.60	0.54
59:CX:329:ALA:HA	59:CX:373:LYS:HD3	1.90	0.54
2:UB:795:ARG:O	2:UB:796:ARG:NH1	2.41	0.54
6:UG:382:ASP:HA	49:C1:277:U:H3'	1.90	0.54
7:UJ:717:THR:HG22	7:UJ:719:LEU:H	1.73	0.54
9:UL:24:LEU:HD22	9:UL:41:VAL:HA	1.90	0.54
9:UL:127:SER:O	9:UL:134:ILE:HA	2.07	0.54
9:UL:377:ASN:N	9:UL:384:GLN:OE1	2.41	0.54
12:UO:74:ALA:HA	12:UO:83:ILE:HA	1.89	0.54
14:UR:160:SER:HG	14:UR:162:SER:HG	1.50	0.54
19:CC:208:GLU:HA	19:CC:211:ARG:HE	1.73	0.54
19:CC:264:GLN:NE2	19:CC:265:ASP:O	2.35	0.54
20:CD:305:SER:OG	20:CD:307:SER:O	2.21	0.54
29:CO:148:LEU:HD12	29:CO:162:VAL:HB	1.88	0.54
31:CQ:84:LYS:HD3	31:CQ:121:ARG:HD2	1.90	0.54
31:CQ:113:VAL:O	31:CQ:114:ARG:NH1	2.37	0.54
32:CR:523:ARG:NH1	32:CR:559:MET:O	2.42	0.54
32:CR:881:GLN:HA	32:CR:884:LEU:HD23	1.90	0.54
32:CS:744:PRO:HD3	32:CS:762:MET:HE3	1.90	0.54
34:Cb:11:ARG:HH22	34:Cb:22:LYS:HE3	1.71	0.54
39:Cg:170:VAL:HB	49:C1:1095:A:H5''	1.90	0.54
48:CU:114:GLN:HA	48:CU:117:LYS:HE2	1.90	0.54
49:C1:728:G:H4'	53:CW:36:LYS:HE2	1.90	0.54
49:C1:787:U:H2'	49:C1:788:A:H8	1.72	0.54
49:C1:2177:G:O2'	49:C1:2183:A:N6	2.38	0.54
55:UH:754:ARG:HA	56:UI:210:ARG:H	1.72	0.54
55:UH:850:LEU:HD12	56:UI:233:PRO:HG3	1.89	0.54
1:UA:100:THR:N	1:UA:114:GLY:O	2.32	0.53
4:UD:5:ARG:N	55:UH:908:SER:O	2.41	0.53
10:UM:591:THR:O	10:UM:617:THR:HA	2.07	0.53
11:UN:297:LYS:HZ2	54:UT:2162:ALA:HA	1.73	0.53
11:UN:901:LEU:O	11:UN:903:LEU:N	2.41	0.53
13:UQ:644:LYS:HE2	13:UQ:649:MET:HB3	1.89	0.53
15:UU:440:ALA:HA	15:UU:445:LEU:HD13	1.90	0.53
25:CJ:68:ASN:ND2	27:CL:616:GLU:OE2	2.35	0.53
26:CK:288:THR:OG1	26:CK:289:ARG:N	2.41	0.53
32:CS:791:SER:HA	32:CS:795:ARG:HA	1.89	0.53
34:Cb:180:LEU:HD22	34:Cb:194:VAL:HB	1.89	0.53
37:Ce:87:LEU:HA	37:Ce:90:LYS:HE3	1.89	0.53
38:Cf:34:ALA:HB2	38:Cf:56:ARG:HD2	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:C1:302:A:H2'	49:C1:303:C:C6	2.43	0.53
49:C1:839:U:H2'	49:C1:840:A:C8	2.43	0.53
49:C1:941:G:O2'	49:C1:943:A:N6	2.41	0.53
51:UV:843:LEU:HD23	51:UV:956:VAL:HG13	1.89	0.53
53:CW:214:HIS:HA	61:CZ:562:ARG:HE	1.72	0.53
54:UT:2056:LYS:HD3	54:UT:2094:VAL:HG13	1.90	0.53
54:UT:2080:SER:HA	54:UT:2083:LYS:HZ2	1.73	0.53
2:UB:14:ARG:NE	49:C1:1733:G:OP1	2.38	0.53
4:UD:376:SER:HA	4:UD:382:TYR:O	2.08	0.53
7:UJ:782:VAL:O	7:UJ:812:ARG:NH2	2.41	0.53
12:UO:190:VAL:HA	12:UO:209:SER:HA	1.90	0.53
14:UR:263:ILE:HD11	14:UR:614:TRP:HB3	1.90	0.53
15:UU:306:GLY:O	15:UU:326:ALA:N	2.41	0.53
18:CA:93:CYS:HA	18:CA:128:ARG:O	2.08	0.53
20:CD:51:PHE:HZ	20:CD:54:ALA:HB3	1.73	0.53
22:CG:123:PHE:HB2	34:Cb:104:ASP:HA	1.90	0.53
24:CI:814:GLN:HB3	24:CI:907:SER:HB3	1.89	0.53
25:CJ:164:SER:OG	25:CJ:165:LYS:N	2.40	0.53
28:CM:94:TRP:CD1	28:CM:102:GLU:HA	2.43	0.53
29:CN:240:LYS:NZ	29:CO:246:GLU:OE1	2.41	0.53
34:Cb:180:LEU:HA	34:Cb:194:VAL:HA	1.90	0.53
36:Cd:159:ARG:HH22	49:C1:663:U:H2'	1.73	0.53
42:Cj:3:SER:OG	42:Cj:4:VAL:N	2.34	0.53
43:Ck:153:LYS:H	43:Ck:157:LYS:HD2	1.73	0.53
49:C1:700:C:N3	49:C1:831:A:C6	2.76	0.53
54:UT:187:TYR:HA	54:UT:190:VAL:HG12	1.90	0.53
54:UT:907:PHE:HE2	54:UT:926:LEU:HD22	1.73	0.53
55:UH:624:MET:HB2	55:UH:627:LEU:HB2	1.90	0.53
57:US:504:GLU:HA	57:US:507:LYS:HG3	1.90	0.53
56:UI:214:LEU:HA	56:UI:217:TRP:HB2	1.90	0.53
63:Cz:1695:ASN:OD1	63:Cz:1741:ARG:NH1	2.41	0.53
1:UA:795:ARG:HH11	15:UU:1033:LEU:HA	1.74	0.53
7:UJ:161:PRO:O	7:UJ:164:TYR:N	2.40	0.53
15:UU:350:PRO:HB3	15:UU:366:PHE:HB2	1.90	0.53
18:CA:294:PRO:HG2	18:CA:295:TYR:CZ	2.44	0.53
20:CD:439:LYS:N	49:C1:272:A:OP2	2.30	0.53
24:CI:821:ARG:HH12	45:Cn:141:GLU:N	2.07	0.53
28:CM:34:PHE:O	28:CM:38:ARG:HB2	2.08	0.53
28:CM:117:THR:OG1	28:CM:118:PHE:N	2.40	0.53
28:CM:223:ILE:HA	28:CM:234:ILE:O	2.09	0.53
29:CO:111:GLN:NE2	29:CO:124:VAL:O	2.40	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:CT:182:GLN:HE22	49:C1:398:C:H1'	1.73	0.53
41:CI:33:PHE:HB3	41:CI:40:PHE:HB2	1.90	0.53
49:C1:700:C:C4	49:C1:831:A:N6	2.76	0.53
49:C1:1146:G:N1	49:C1:1149:C:OP1	2.35	0.53
51:UV:304:ARG:HE	51:UV:308:GLN:HG2	1.73	0.53
54:UT:440:ARG:HD2	54:UT:444:LEU:HD23	1.91	0.53
54:UT:901:LYS:HA	54:UT:904:ILE:HG22	1.91	0.53
54:UT:963:LEU:HD11	54:UT:973:LEU:HG	1.89	0.53
54:UT:1286:VAL:HG11	54:UT:1324:VAL:HG13	1.89	0.53
55:UH:555:GLY:O	55:UH:567:LEU:CA	2.36	0.53
60:CY:276:GLU:O	60:CY:280:PHE:CA	2.51	0.53
13:UQ:84:PRO:HA	13:UQ:853:TRP:HB3	1.89	0.53
13:UQ:148:LEU:HD11	13:UQ:153:PRO:HA	1.91	0.53
13:UQ:470:ILE:HD13	13:UQ:478:MET:HB2	1.89	0.53
15:UU:107:ALA:HB2	15:UU:119:LEU:HD12	1.89	0.53
15:UU:238:THR:HG23	15:UU:240:ALA:H	1.73	0.53
18:CA:224:ASP:HA	18:CA:248:LYS:HG2	1.90	0.53
24:CI:161:GLY:HA3	24:CI:235:LEU:HD21	1.90	0.53
28:CM:302:SER:OG	28:CM:304:ASP:N	2.39	0.53
32:CR:552:SER:OG	32:CR:554:ASN:OD1	2.27	0.53
49:C1:351:U:N3	49:C1:353:G:C6	2.76	0.53
49:C1:648:A:OP2	54:UT:26:ARG:NH1	2.41	0.53
49:C1:926:C:H5''	53:CW:194:GLY:HA3	1.91	0.53
49:C1:952:U:O4	49:C1:957:G:O6	2.26	0.53
49:C1:1626:G:H2'	49:C1:1627:G:H8	1.73	0.53
63:Cz:1680:PHE:HA	63:Cz:1683:LEU:HD12	1.90	0.53
1:UA:244:ARG:NH1	49:C1:282:C:OP2	2.41	0.53
2:UB:860:ARG:HG2	27:CL:529:PRO:HG3	1.91	0.53
3:UC:587:LYS:HD2	3:UC:590:THR:HG21	1.90	0.53
14:UR:381:CYS:SG	14:UR:383:ARG:NE	2.68	0.53
23:CH:328:MET:O	23:CH:331:SER:OG	2.26	0.53
25:CJ:87:ILE:HG21	25:CJ:101:VAL:HG23	1.89	0.53
28:CM:94:TRP:HD1	28:CM:102:GLU:HA	1.72	0.53
28:CM:422:GLU:O	28:CM:426:SER:OG	2.26	0.53
32:CR:791:SER:HA	32:CR:795:ARG:HA	1.89	0.53
32:CS:781:ASP:O	32:CS:784:LYS:HE3	2.08	0.53
43:Ck:20:PHE:CG	49:C1:793:U:H5''	2.43	0.53
49:C1:746:A:H3'	49:C1:747:G:H21	1.72	0.53
51:UV:272:THR:OG1	51:UV:474:ARG:NH2	2.41	0.53
51:UV:670:PRO:HA	51:UV:697:VAL:HG12	1.91	0.53
53:CW:293:LEU:HG	53:CW:306:LEU:HA	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:UT:873:THR:HG21	54:UT:925:ALA:HB1	1.89	0.53
1:UA:706:PHE:O	15:UU:677:ASN:ND2	2.41	0.53
4:UD:16:ILE:HG13	4:UD:48:ARG:HG2	1.90	0.53
4:UD:108:THR:HG21	62:UP:333:PRO:HB2	1.89	0.53
11:UN:318:LYS:HB3	28:CM:228:ARG:HH12	1.74	0.53
14:UR:470:GLY:HA3	14:UR:481:ARG:H	1.73	0.53
15:UU:183:ASN:OD1	15:UU:203:ARG:NH1	2.42	0.53
22:CG:229:PHE:O	50:C2:124:U:N3	2.42	0.53
24:CI:862:TYR:OH	49:C1:1162:U:OP2	2.26	0.53
24:CI:944:ILE:O	24:CI:947:PHE:N	2.41	0.53
26:CK:186:GLU:OE2	49:C1:1743:C:N4	2.41	0.53
45:Cn:95:PHE:CE1	45:Cn:135:LEU:HB3	2.43	0.53
49:C1:857:G:H2'	49:C1:858:G:C8	2.44	0.53
49:C1:1734:G:H2'	49:C1:1735:A:H8	1.73	0.53
49:C1:2177:G:N3	49:C1:2183:A:N6	2.56	0.53
59:CX:364:ASN:HD21	59:CX:410:PHE:HB2	1.73	0.53
1:UA:68:ASN:HA	1:UA:84:VAL:HG22	1.89	0.53
4:UD:165:LEU:O	4:UD:176:GLN:N	2.37	0.53
4:UD:443:LEU:HD23	4:UD:456:LEU:HD13	1.90	0.53
7:UJ:32:SER:HB2	7:UJ:123:ARG:HH11	1.72	0.53
9:UL:299:GLU:HA	9:UL:368:LYS:HZ2	1.74	0.53
9:UL:888:GLN:NE2	47:Cp:40:SER:O	2.41	0.53
10:UM:568:VAL:HB	10:UM:582:LEU:HB3	1.90	0.53
13:UQ:149:SER:HB3	13:UQ:155:TYR:HB2	1.90	0.53
13:UQ:632:ASP:HB3	13:UQ:634:MET:HE2	1.89	0.53
14:UR:541:THR:HG1	14:UR:559:SER:HG	1.55	0.53
22:CG:167:ARG:NH2	22:CG:599:CYS:SG	2.82	0.53
23:CH:56:LEU:HD11	23:CH:117:LEU:HD11	1.90	0.53
24:CI:94:LYS:HG3	24:CI:332:LYS:HZ1	1.74	0.53
24:CI:1088:ARG:NH2	49:C1:369:U:OP2	2.42	0.53
32:CS:523:ARG:NH1	32:CS:559:MET:O	2.42	0.53
32:CS:532:VAL:HA	32:CS:535:LYS:HD2	1.91	0.53
34:Cb:11:ARG:HG3	34:Cb:20:LEU:HD23	1.90	0.53
37:Ce:67:PHE:HA	37:Ce:99:LEU:O	2.09	0.53
40:Ch:109:LYS:HD3	49:C1:1560:C:H5'	1.91	0.53
49:C1:460:U:H2'	49:C1:461:G:H8	1.73	0.53
54:UT:897:LEU:HA	54:UT:900:ARG:HD2	1.88	0.53
54:UT:1718:LYS:O	54:UT:1721:THR:OG1	2.26	0.53
54:UT:1825:ILE:HD12	54:UT:1888:LYS:HD2	1.89	0.53
1:UA:486:GLY:HA3	1:UA:513:VAL:HG11	1.91	0.53
2:UB:758:GLN:HA	2:UB:761:LEU:HB2	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:UL:365:THR:OG1	9:UL:367:GLY:O	2.27	0.53
10:UM:74:SER:OG	10:UM:75:HIS:ND1	2.41	0.53
14:UR:558:GLY:CA	14:UR:565:ALA:O	2.57	0.53
15:UU:674:HIS:ND1	15:UU:675:PRO:O	2.39	0.53
15:UU:722:ILE:HD11	15:UU:736:LEU:HD22	1.90	0.53
24:CI:920:LEU:HB2	24:CI:989:LEU:HB3	1.91	0.53
48:CU:111:MET:N	48:CU:111:MET:SD	2.82	0.53
49:C1:2107:A:H2'	49:C1:2108:A:C8	2.44	0.53
50:C2:200:U:C4	50:C2:246:G:O6	2.61	0.53
54:UT:999:LEU:HD11	54:UT:1023:ILE:HG12	1.89	0.53
54:UT:1691:LEU:HD13	54:UT:1694:LEU:HD11	1.90	0.53
1:UA:81:LEU:HG	1:UA:91:TYR:HB2	1.90	0.53
1:UA:564:ARG:NH1	1:UA:568:ASN:O	2.37	0.53
2:UB:521:GLU:O	2:UB:525:ASN:ND2	2.42	0.53
4:UD:646:ASP:HB3	4:UD:658:ILE:HD11	1.91	0.53
6:UG:228:HIS:HB3	6:UG:230:LEU:HD13	1.91	0.53
8:UK:22:ARG:NH2	24:CI:985:ASP:O	2.41	0.53
9:UL:222:ALA:HB1	9:UL:284:VAL:HG22	1.91	0.53
9:UL:283:GLU:HB2	9:UL:296:HIS:CE1	2.44	0.53
10:UM:567:THR:HA	10:UM:584:GLY:HA2	1.89	0.53
15:UU:288:ALA:N	15:UU:294:LYS:O	2.40	0.53
17:UZ:158:ARG:HE	17:UZ:185:MET:HE2	1.74	0.53
19:CC:306:LEU:HA	19:CC:309:ILE:HG22	1.90	0.53
32:CR:781:ASP:O	32:CR:784:LYS:HE3	2.08	0.53
35:Cc:29:LEU:N	35:Cc:33:TRP:O	2.36	0.53
35:Cc:44:SER:HA	47:Cp:54:ILE:HB	1.91	0.53
49:C1:1456:A:H2'	49:C1:1457:G:C8	2.43	0.53
49:C1:1509:A:O2'	63:Cz:1645:GLN:O	2.25	0.53
50:C2:259:A:H1'	50:C2:260:G:C2	2.43	0.53
54:UT:1556:ARG:HH11	54:UT:1599:GLN:HE22	1.55	0.53
57:US:417:MET:SD	57:US:455:SER:OG	2.67	0.53
4:UD:509:ALA:HB1	4:UD:516:ILE:HD11	1.90	0.53
12:UO:76:THR:HB	12:UO:81:VAL:HG12	1.91	0.53
12:UO:238:VAL:HG13	12:UO:247:LEU:HD21	1.90	0.53
17:UZ:99:LEU:HD23	17:UZ:124:ILE:HD13	1.89	0.53
18:CB:170:VAL:HA	18:CB:173:ILE:HD12	1.90	0.53
19:CC:16:SER:OG	19:CC:17:LEU:N	2.41	0.53
19:CC:309:ILE:HD11	19:CC:411:LEU:HD22	1.90	0.53
21:CF:96:ARG:NH1	22:CG:591:TRP:O	2.42	0.53
27:CL:484:ALA:HA	27:CL:487:ILE:HD12	1.91	0.53
33:CT:187:SER:OG	33:CT:188:GLY:N	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:Ce:163:ILE:HB	37:Ce:196:PRO:HD3	1.91	0.53
49:C1:1461:G:O6	49:C1:1520:U:O4	2.26	0.53
50:C2:74:C:H2'	50:C2:75:A:H8	1.74	0.53
51:UV:1007:ARG:HG2	51:UV:1014:PRO:HG2	1.91	0.53
52:CV:58:VAL:HB	52:CV:186:LYS:HE3	1.91	0.53
54:UT:339:ILE:HG21	54:UT:390:ILE:HG23	1.91	0.53
1:UA:264:HIS:O	1:UA:268:ASN:N	2.41	0.52
2:UB:670:PRO:HB3	2:UB:691:ILE:HD11	1.91	0.52
4:UD:432:THR:N	4:UD:446:SER:O	2.42	0.52
5:UF:145:THR:O	5:UF:149:ARG:HB2	2.09	0.52
6:UG:176:LEU:O	6:UG:178:GLU:N	2.42	0.52
9:UL:643:LYS:HD2	9:UL:686:PHE:HB3	1.90	0.52
12:UO:170:ARG:HE	12:UO:182:LEU:HD13	1.74	0.52
12:UO:170:ARG:HG3	12:UO:172:TRP:HE1	1.73	0.52
13:UQ:453:ARG:HG3	13:UQ:457:ARG:HH11	1.74	0.52
15:UU:525:PHE:HB3	15:UU:528:ARG:HB2	1.91	0.52
19:CC:31:LEU:HD11	28:CM:58:LEU:HD21	1.90	0.52
32:CR:22:LYS:HB3	32:CR:481:ALA:HB2	1.91	0.52
32:CR:484:ASP:O	32:CR:488:LYS:NZ	2.41	0.52
35:Cc:90:ASN:OD1	35:Cc:167:ARG:NH2	2.40	0.52
48:CU:115:GLU:HA	48:CU:118:VAL:HG22	1.91	0.52
49:C1:2162:C:H2'	49:C1:2163:C:C6	2.44	0.52
51:UV:249:LYS:HE3	51:UV:468:ALA:HA	1.90	0.52
52:CV:192:PRO:HA	52:CV:195:LEU:HB3	1.91	0.52
54:UT:1400:GLU:O	54:UT:1411:ARG:NE	2.42	0.52
54:UT:2144:ARG:NH2	54:UT:2145:GLU:OE1	2.41	0.52
8:UK:266:ARG:NH2	49:C1:201:G:OP2	2.41	0.52
9:UL:221:TRP:HE1	9:UL:237:ASN:HB3	1.75	0.52
9:UL:878:LEU:O	9:UL:882:LEU:HG	2.10	0.52
18:CB:189:SER:O	18:CB:193:LEU:HB2	2.09	0.52
20:CD:316:GLY:HA2	20:CD:319:ILE:HD12	1.90	0.52
21:CE:36:LYS:HE2	50:C2:82:U:H5	1.73	0.52
24:CI:122:GLU:OE2	24:CI:1006:ASN:ND2	2.37	0.52
27:CL:515:SER:O	27:CL:519:GLU:HB2	2.09	0.52
28:CM:294:THR:OG1	28:CM:297:GLU:OE1	2.24	0.52
36:Cd:149:LYS:HZ2	54:UT:783:GLY:H	1.56	0.52
49:C1:839:U:H2'	49:C1:840:A:H8	1.75	0.52
49:C1:972:A:H2'	49:C1:973:G:C8	2.43	0.52
49:C1:1011:C:H2'	49:C1:1012:A:C8	2.44	0.52
51:UV:819:THR:HG22	51:UV:823:ARG:HH12	1.75	0.52
54:UT:2030:LYS:HG2	60:CY:370:LEU:HD21	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:UE:214:LEU:HA	56:UE:217:TRP:HB2	1.90	0.52
57:US:199:TYR:HA	57:US:202:GLU:HG2	1.91	0.52
1:UA:69:LEU:HD11	1:UA:81:LEU:HD13	1.90	0.52
4:UD:139:PRO:HA	4:UD:152:ARG:HH21	1.74	0.52
4:UD:758:ARG:HA	4:UD:769:GLU:O	2.09	0.52
7:UJ:682:LEU:O	7:UJ:703:ARG:NH2	2.42	0.52
12:UO:163:CYS:SG	12:UO:207:SER:OG	2.67	0.52
13:UQ:418:ASN:HD22	13:UQ:438:GLN:H	1.56	0.52
14:UR:372:THR:OG1	14:UR:373:MET:N	2.41	0.52
15:UU:122:PHE:HA	15:UU:127:LYS:HA	1.91	0.52
15:UU:485:GLN:O	15:UU:530:ARG:NH2	2.42	0.52
17:UZ:30:LEU:HD13	17:UZ:291:LEU:HD11	1.91	0.52
17:UZ:288:THR:O	49:C1:2081:G:O2'	2.27	0.52
27:CL:618:GLU:OE2	27:CL:621:ARG:NE	2.32	0.52
30:CP:89:PRO:HB2	41:CI:115:LEU:HG	1.91	0.52
34:Cb:100:ARG:HH11	34:Cb:119:ALA:HA	1.73	0.52
42:Cj:42:GLU:HA	42:Cj:45:ARG:HG3	1.90	0.52
49:C1:301:U:C2	49:C1:341:G:N1	2.77	0.52
53:CW:99:ASN:OD1	53:CW:114:HIS:ND1	2.42	0.52
1:UA:187:VAL:HG13	1:UA:189:THR:HB	1.90	0.52
1:UA:619:SER:HB2	1:UA:672:GLU:HA	1.91	0.52
2:UB:342:ARG:HB3	2:UB:605:ASP:HA	1.91	0.52
6:UG:41:ARG:O	6:UG:41:ARG:NH2	2.39	0.52
6:UG:58:VAL:HG11	6:UG:72:LEU:HD11	1.92	0.52
7:UJ:792:ALA:HA	7:UJ:795:GLN:HG3	1.91	0.52
9:UL:523:VAL:HB	9:UL:537:PHE:HE2	1.74	0.52
14:UR:402:ASN:O	14:UR:406:MET:N	2.42	0.52
21:CF:19:GLN:OE1	22:CG:350:ARG:NH1	2.38	0.52
21:CF:43:LYS:NZ	50:C2:112:U:OP2	2.29	0.52
24:CI:81:LYS:HG3	24:CI:82:THR:HG23	1.92	0.52
24:CI:404:GLN:O	32:CR:535:LYS:NZ	2.42	0.52
25:CJ:96:ALA:O	25:CJ:100:ASN:CB	2.57	0.52
26:CK:92:THR:OG1	26:CK:93:SER:N	2.37	0.52
26:CK:168:HIS:HB3	26:CK:169:ASN:HD22	1.73	0.52
30:CP:89:PRO:HG2	41:CI:116:ARG:HA	1.91	0.52
44:Cm:8:HIS:CD2	48:CU:285:GLU:HG3	2.45	0.52
46:Co:345:ARG:NE	54:UT:73:LEU:O	2.35	0.52
53:CW:156:VAL:HA	53:CW:203:ALA:HA	1.90	0.52
54:UT:1601:THR:HB	54:UT:1643:LYS:HD3	1.91	0.52
1:UA:439:VAL:HG21	1:UA:498:PHE:HZ	1.74	0.52
4:UD:834:PRO:HG2	4:UD:864:GLU:HB3	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:UO:523:PHE:HA	12:UO:526:LEU:HD12	1.92	0.52
14:UR:375:ARG:HG2	14:UR:423:PHE:HE1	1.73	0.52
15:UU:680:ILE:O	15:UU:691:VAL:HA	2.10	0.52
25:CJ:129:LYS:HG2	25:CJ:133:GLN:HE21	1.74	0.52
26:CK:130:SER:OG	26:CK:133:ARG:NH2	2.42	0.52
32:CS:22:LYS:HB3	32:CS:481:ALA:HB2	1.91	0.52
36:Cd:72:ARG:NH2	49:C1:1003:G:O5'	2.43	0.52
46:Co:357:ASP:HB3	46:Co:399:LYS:HD2	1.92	0.52
49:C1:952:U:O2	49:C1:957:G:N2	2.43	0.52
49:C1:1744:A:O2'	49:C1:2203:C:N3	2.36	0.52
62:UP:336:LYS:NZ	62:UP:338:GLN:OE1	2.41	0.52
1:UA:560:ILE:HG22	1:UA:561:THR:HG23	1.92	0.52
6:UG:442:ARG:NH1	49:C1:426:A:OP1	2.42	0.52
7:UJ:113:PRO:HA	7:UJ:116:LYS:HD2	1.91	0.52
12:UO:333:HIS:HB3	12:UO:347:THR:HG23	1.91	0.52
13:UQ:637:PHE:HB2	13:UQ:665:ARG:HB2	1.91	0.52
13:UQ:699:ILE:HD11	13:UQ:714:ALA:HB1	1.91	0.52
14:UR:266:THR:OG1	14:UR:267:ARG:N	2.43	0.52
15:UU:66:SER:HA	15:UU:71:LEU:HG	1.91	0.52
17:UZ:61:PRO:HG2	17:UZ:63:TRP:HZ3	1.75	0.52
18:CB:188:ARG:HG3	18:CB:191:ARG:HH21	1.73	0.52
18:CB:217:ARG:HB3	18:CB:245:LEU:HD21	1.91	0.52
22:CG:438:LEU:HA	22:CG:463:PRO:HA	1.91	0.52
24:CI:557:LEU:HD11	24:CI:561:ARG:HH21	1.74	0.52
25:CJ:159:THR:OG1	25:CJ:160:TRP:N	2.41	0.52
26:CK:120:GLY:O	26:CK:121:ASN:ND2	2.42	0.52
27:CL:651:SER:OG	27:CL:652:ASP:N	2.43	0.52
36:Cd:10:ASN:ND2	36:Cd:127:VAL:O	2.42	0.52
50:C2:135:U:H4'	50:C2:136:C:H4'	1.92	0.52
51:UV:842:LYS:HG2	51:UV:1067:THR:HG23	1.91	0.52
54:UT:1313:LEU:HD22	54:UT:1358:LEU:HD21	1.92	0.52
4:UD:381:ARG:NH2	4:UD:398:ASN:O	2.42	0.52
14:UR:187:ASP:HA	14:UR:190:LYS:HD2	1.91	0.52
17:UZ:178:ARG:HD2	17:UZ:234:HIS:NE2	2.25	0.52
18:CA:170:VAL:HA	18:CA:173:ILE:HD12	1.92	0.52
23:CH:328:MET:HE3	23:CH:330:ALA:HB3	1.92	0.52
28:CM:262:HIS:HD2	28:CM:284:ALA:C	2.18	0.52
28:CM:351:ARG:HB3	28:CM:353:TRP:HE1	1.72	0.52
45:Cn:56:LYS:HG2	45:Cn:72:VAL:HG23	1.92	0.52
49:C1:1167:C:N3	49:C1:1169:A:N6	2.57	0.52
57:US:407:LEU:HA	57:US:410:LYS:HG2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:US:531:GLU:HG3	57:US:533:LYS:H	1.75	0.52
63:Cz:1661:PHE:O	63:Cz:1665:GLU:HG2	2.10	0.52
2:UB:13:LEU:HD21	2:UB:51:ILE:HG21	1.92	0.52
2:UB:531:ILE:HD13	2:UB:534:ILE:HD12	1.92	0.52
2:UB:826:ASP:O	2:UB:829:ARG:NH2	2.38	0.52
4:UD:297:ASP:OD1	4:UD:297:ASP:N	2.40	0.52
6:UG:103:GLU:OE2	28:CM:2:LYS:N	2.43	0.52
13:UQ:748:SER:OG	13:UQ:749:ASP:N	2.43	0.52
24:CI:298:LYS:HB3	24:CI:780:VAL:HB	1.92	0.52
29:CN:100:LEU:HA	29:CN:105:ASN:HD22	1.74	0.52
32:CR:585:VAL:HB	32:CR:639:ALA:HB3	1.92	0.52
32:CR:849:LEU:HD12	32:CR:853:VAL:HB	1.92	0.52
32:CS:398:LEU:HD12	32:CS:401:LYS:HD3	1.92	0.52
32:CS:849:LEU:HD12	32:CS:853:VAL:HB	1.92	0.52
39:Cg:110:LEU:HD13	39:Cg:146:VAL:HG11	1.91	0.52
49:C1:717:C:OP1	54:UT:1006:ARG:NH1	2.42	0.52
49:C1:1551:A:N6	49:C1:1552:A:N6	2.58	0.52
51:UV:1051:LEU:HA	51:UV:1054:LEU:HB3	1.92	0.52
53:CW:111:LYS:NZ	61:CZ:555:PHE:O	2.37	0.52
54:UT:2126:ASN:ND2	54:UT:2128:ASP:O	2.42	0.52
57:US:387:ARG:HH12	57:US:391:ASN:HD21	1.56	0.52
6:UG:154:ALA:HA	6:UG:159:HIS:O	2.09	0.52
7:UJ:455:LYS:HD3	7:UJ:456:LEU:HD22	1.91	0.52
8:UK:73:PRO:HD3	8:UK:87:VAL:HG22	1.92	0.52
9:UL:211:THR:HG22	10:UM:743:GLN:HG3	1.92	0.52
12:UO:70:ASN:HD22	12:UO:72:LEU:HB2	1.75	0.52
12:UO:142:ILE:HD12	12:UO:172:TRP:HH2	1.75	0.52
14:UR:238:ASN:HA	14:UR:241:LYS:HE3	1.91	0.52
15:UU:35:PHE:HB3	15:UU:776:TRP:HB3	1.92	0.52
15:UU:141:ILE:HD11	15:UU:153:ALA:HB1	1.91	0.52
20:CD:254:TYR:HA	20:CD:257:ILE:HD12	1.90	0.52
22:CG:407:ASP:HB3	22:CG:408:MET:HE2	1.92	0.52
24:CI:1020:ARG:HH11	24:CI:1027:THR:HG22	1.74	0.52
32:CS:484:ASP:O	32:CS:488:LYS:NZ	2.41	0.52
43:Ck:154:SER:OG	43:Ck:155:VAL:N	2.43	0.52
46:Co:341:ARG:O	46:Co:342:LYS:C	2.52	0.52
49:C1:627:A:H62	49:C1:1051:G:H21	1.58	0.52
54:UT:1982:THR:OG1	54:UT:1985:ASN:ND2	2.43	0.52
55:UH:634:THR:O	55:UH:713:LYS:NZ	2.43	0.52
59:CX:301:GLY:O	59:CX:305:GLY:N	2.43	0.52
1:UA:526:ALA:HA	1:UA:535:THR:O	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:UA:846:ASN:HD22	9:UL:919:PHE:HZ	1.57	0.52
2:UB:639:LEU:HA	2:UB:642:LEU:HB2	1.92	0.52
4:UD:375:LEU:HB3	4:UD:384:LEU:HB2	1.93	0.52
4:UD:667:SER:O	4:UD:670:SER:OG	2.28	0.52
5:UF:135:ARG:NH1	11:UN:354:ALA:O	2.35	0.52
6:UG:309:ASP:HA	6:UG:350:ILE:HD11	1.92	0.52
7:UJ:1768:SER:HA	7:UJ:1771:GLN:HB3	1.92	0.52
9:UL:208:CYS:SG	10:UM:743:GLN:NE2	2.82	0.52
10:UM:798:LEU:O	10:UM:837:HIS:NE2	2.42	0.52
17:UZ:273:GLN:HG2	17:UZ:276:GLN:HB2	1.90	0.52
19:CC:18:PHE:CD1	19:CC:50:LEU:HA	2.45	0.52
23:CH:365:ARG:NE	24:CI:546:MET:O	2.31	0.52
28:CM:281:GLY:O	28:CM:308:ARG:NE	2.43	0.52
28:CM:351:ARG:HD3	28:CM:353:TRP:CZ2	2.45	0.52
38:Cf:42:ARG:HH12	53:CW:22:PRO:HD2	1.74	0.52
38:Cf:98:LYS:HB2	38:Cf:176:ARG:HD2	1.92	0.52
44:Cm:115:GLU:HA	44:Cm:118:ARG:HE	1.75	0.52
49:C1:237:G:H2'	49:C1:238:G:C8	2.44	0.52
49:C1:472:G:H2'	49:C1:473:G:C8	2.45	0.52
51:UV:212:GLU:HG3	51:UV:213:LYS:HD2	1.92	0.52
51:UV:430:VAL:HG13	51:UV:432:GLN:HE21	1.75	0.52
54:UT:141:TYR:HE1	54:UT:171:LEU:HD12	1.75	0.52
54:UT:292:LEU:HB3	54:UT:381:MET:HE2	1.92	0.52
54:UT:1237:LEU:HD22	54:UT:1251:ILE:HD12	1.91	0.52
54:UT:1252:LYS:HA	54:UT:1256:LEU:HD12	1.92	0.52
1:UA:364:ILE:O	1:UA:377:THR:HA	2.10	0.51
1:UA:622:GLN:O	1:UA:624:PHE:N	2.43	0.51
7:UJ:544:LYS:HB3	7:UJ:548:ASN:HB2	1.92	0.51
12:UO:70:ASN:HB2	12:UO:72:LEU:HD13	1.92	0.51
13:UQ:362:LYS:HD3	13:UQ:404:VAL:HG23	1.92	0.51
15:UU:124:ARG:NH2	49:C1:261:G:OP2	2.43	0.51
29:CN:151:LYS:HE3	29:CN:156:ASN:HA	1.91	0.51
49:C1:857:G:H2'	49:C1:858:G:H8	1.74	0.51
50:C2:153:G:O6	50:C2:176:U:C2	2.62	0.51
54:UT:984:LEU:HD12	54:UT:985:PRO:HD2	1.92	0.51
54:UT:1328:ILE:HA	54:UT:1331:ILE:HD12	1.91	0.51
57:US:192:LYS:O	57:US:242:ASN:ND2	2.38	0.51
1:UA:618:LEU:HD22	1:UA:671:PRO:HG2	1.92	0.51
2:UB:730:THR:HG21	2:UB:776:LYS:HB3	1.91	0.51
7:UJ:1707:VAL:HG12	7:UJ:1748:ILE:HG12	1.91	0.51
7:UJ:1732:ASN:O	7:UJ:1738:ARG:NE	2.35	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:UO:10:GLN:HE22	12:UO:452:ILE:HA	1.75	0.51
12:UO:273:GLN:OE1	56:UE:162:ARG:NE	2.41	0.51
13:UQ:192:VAL:HG12	13:UQ:205:LEU:HG	1.92	0.51
13:UQ:422:VAL:O	13:UQ:431:SER:OG	2.27	0.51
14:UR:157:LEU:HD21	14:UR:178:GLN:HG3	1.92	0.51
14:UR:401:ILE:HA	14:UR:407:GLN:O	2.10	0.51
14:UR:566:LEU:O	14:UR:567:ARG:NH1	2.40	0.51
18:CB:74:GLU:OE1	18:CB:85:ARG:NH2	2.42	0.51
19:CC:287:TYR:OH	20:CD:256:ASN:O	2.24	0.51
22:CG:297:ARG:HB3	22:CG:300:THR:HB	1.92	0.51
22:CG:327:PHE:HE2	39:Cg:136:LYS:HD3	1.75	0.51
24:CI:135:ILE:HA	24:CI:165:ASN:O	2.10	0.51
25:CJ:120:MET:HB3	25:CJ:160:TRP:CZ2	2.45	0.51
28:CM:87:GLY:HA2	28:CM:112:ILE:HG23	1.92	0.51
32:CR:378:HIS:ND1	32:CS:378:HIS:HB2	2.25	0.51
33:CT:108:LEU:HG	33:CT:162:VAL:HG12	1.92	0.51
49:C1:925:G:OP1	53:CW:119:ARG:NH1	2.43	0.51
53:CW:260:ALA:HB3	53:CW:304:LYS:HZ3	1.74	0.51
54:UT:2043:SER:OG	54:UT:2045:SER:O	2.29	0.51
1:UA:487:SER:C	1:UA:489:ASP:H	2.17	0.51
1:UA:511:SER:OG	1:UA:531:ASP:OD2	2.19	0.51
6:UG:407:LEU:O	6:UG:417:SER:HA	2.10	0.51
9:UL:22:SER:OG	9:UL:283:GLU:OE2	2.27	0.51
9:UL:284:VAL:HA	9:UL:294:ALA:O	2.10	0.51
10:UM:791:LEU:HD22	10:UM:794:VAL:HG23	1.92	0.51
24:CI:819:ARG:NH1	24:CI:823:HIS:O	2.43	0.51
28:CM:303:TYR:CZ	28:CM:328:ARG:HG2	2.44	0.51
29:CO:147:ARG:HD3	29:CO:150:ILE:HD13	1.91	0.51
30:CP:127:ARG:NH2	30:CP:130:VAL:O	2.38	0.51
32:CR:61:LYS:O	32:CR:110:LYS:NZ	2.42	0.51
32:CR:532:VAL:HA	32:CR:535:LYS:HD2	1.91	0.51
32:CS:61:LYS:O	32:CS:110:LYS:NZ	2.42	0.51
43:Ck:94:GLU:HB3	43:Ck:107:LYS:HD2	1.92	0.51
49:C1:926:C:OP1	53:CW:195:LEU:N	2.43	0.51
49:C1:927:C:H2'	49:C1:928:G:H8	1.76	0.51
49:C1:1472:A:H2'	49:C1:1473:U:C6	2.46	0.51
54:UT:2045:SER:O	54:UT:2048:SER:OG	2.28	0.51
57:US:233:VAL:HG21	57:US:295:PRO:HB2	1.92	0.51
1:UA:685:ASN:OD1	1:UA:775:ARG:NH1	2.43	0.51
4:UD:384:LEU:HD21	4:UD:436:ILE:HD12	1.93	0.51
7:UJ:1478:TYR:OH	7:UJ:1506:ALA:O	2.29	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:UM:696:LEU:HA	10:UM:712:GLY:HA3	1.92	0.51
10:UM:837:HIS:HB3	10:UM:841:LYS:HD3	1.93	0.51
13:UQ:782:VAL:HG12	13:UQ:789:PHE:HB3	1.92	0.51
14:UR:386:ALA:HB3	14:UR:423:PHE:HE2	1.76	0.51
24:CI:327:LEU:HG	49:C1:638:A:H5''	1.93	0.51
25:CJ:64:LEU:HD12	25:CJ:68:ASN:HD22	1.76	0.51
30:CP:62:LEU:HB3	30:CP:67:ILE:HG23	1.91	0.51
31:CQ:145:ALA:HA	31:CQ:148:MET:HG2	1.92	0.51
32:CR:62:LYS:HG3	32:CR:63:GLU:HG2	1.92	0.51
32:CR:744:PRO:HD3	32:CR:762:MET:HE3	1.91	0.51
32:CR:792:TYR:OH	32:CS:891:ARG:NH1	2.43	0.51
36:Cd:70:PRO:HA	36:Cd:101:ILE:HB	1.93	0.51
38:Cf:84:HIS:NE2	38:Cf:97:THR:OG1	2.34	0.51
49:C1:462:G:H2'	49:C1:463:C:H6	1.75	0.51
49:C1:1000:A:H3'	49:C1:1001:A:H8	1.76	0.51
49:C1:1623:U:H5''	49:C1:1624:A:H2'	1.91	0.51
51:UV:146:LEU:HD12	51:UV:150:ILE:HG21	1.93	0.51
53:CW:23:LEU:HB3	53:CW:24:PRO:HD2	1.88	0.51
54:UT:1734:GLY:HA2	54:UT:1737:THR:HG22	1.92	0.51
54:UT:2126:ASN:ND2	54:UT:2128:ASP:OD1	2.39	0.51
56:UE:156:VAL:HG21	57:US:301:GLU:HB3	1.91	0.51
63:Cz:1701:GLU:OE1	63:Cz:1717:ILE:HG12	2.10	0.51
2:UB:820:ASP:O	2:UB:825:TYR:OH	2.28	0.51
4:UD:139:PRO:HG2	4:UD:197:HIS:HA	1.91	0.51
4:UD:683:ARG:O	4:UD:736:ARG:NH2	2.44	0.51
6:UG:123:VAL:HA	6:UG:126:ALA:HB3	1.92	0.51
6:UG:202:ILE:HG22	6:UG:210:ILE:HD12	1.91	0.51
9:UL:22:SER:OG	9:UL:23:ASN:N	2.44	0.51
13:UQ:809:SER:HB2	13:UQ:830:VAL:HG13	1.93	0.51
23:CH:137:VAL:O	23:CH:179:SER:OG	2.22	0.51
26:CK:94:ARG:NH2	26:CK:122:LEU:O	2.44	0.51
32:CS:586:ILE:HG21	32:CS:657:LEU:HD11	1.93	0.51
37:Ce:87:LEU:O	37:Ce:91:PHE:HB3	2.11	0.51
41:CI:133:PRO:HB2	49:C1:1472:A:H5''	1.90	0.51
49:C1:137:C:H2'	49:C1:138:A:H8	1.76	0.51
54:UT:101:ASP:OD1	54:UT:101:ASP:N	2.42	0.51
56:UE:185:ILE:O	56:UE:225:HIS:NE2	2.44	0.51
4:UD:362:HIS:CE1	49:C1:65:C:H5''	2.45	0.51
5:UF:161:ARG:O	5:UF:165:LEU:HB2	2.11	0.51
7:UJ:421:GLY:HA3	7:UJ:456:LEU:HG	1.93	0.51
12:UO:13:LEU:HD13	12:UO:493:ARG:HH21	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:UO:330:ASP:OD1	12:UO:330:ASP:N	2.43	0.51
12:UO:403:VAL:HB	14:UR:318:VAL:HG22	1.92	0.51
18:CB:191:ARG:O	18:CB:195:ASN:ND2	2.44	0.51
19:CC:81:ALA:O	19:CC:85:ASN:ND2	2.44	0.51
21:CF:14:ASP:O	21:CF:16:ALA:N	2.43	0.51
22:CG:174:THR:N	22:CG:186:THR:O	2.39	0.51
28:CM:59:GLY:HA3	28:CM:99:ARG:HH22	1.75	0.51
28:CM:113:VAL:HA	28:CM:128:ALA:HB2	1.91	0.51
28:CM:160:SER:OG	28:CM:205:PHE:N	2.44	0.51
32:CS:591:GLU:OE2	32:CS:613:LEU:N	2.44	0.51
32:CS:881:GLN:HA	32:CS:884:LEU:HD23	1.91	0.51
35:Cc:45:LEU:HD12	35:Cc:125:VAL:HG22	1.92	0.51
39:Cg:147:ARG:HD2	60:CY:260:LEU:HD21	1.92	0.51
48:CU:280:ARG:HB3	48:CU:287:ARG:HH21	1.76	0.51
49:C1:76:U:O2'	49:C1:77:C:O5'	2.29	0.51
49:C1:887:U:H2'	49:C1:888:U:H6	1.74	0.51
51:UV:214:LYS:HB2	51:UV:221:ASP:HB3	1.93	0.51
51:UV:827:LEU:O	51:UV:831:ILE:HG12	2.11	0.51
1:UA:467:HIS:O	26:CK:135:ARG:NH1	2.31	0.51
5:UF:141:ALA:HB1	5:UF:177:LEU:HB3	1.92	0.51
9:UL:280:ARG:NE	49:C1:2235:C:H5''	2.25	0.51
9:UL:896:ARG:NH2	10:UM:888:LEU:O	2.43	0.51
13:UQ:402:ILE:HG22	13:UQ:413:LEU:HD22	1.93	0.51
14:UR:497:ARG:HA	14:UR:500:LEU:HD12	1.91	0.51
15:UU:87:ARG:HH22	15:UU:89:GLN:HE21	1.58	0.51
16:UX:12:GLU:HA	16:UX:15:LYS:HG3	1.93	0.51
19:CC:170:VAL:HG23	19:CC:171:HIS:HD2	1.76	0.51
32:CR:398:LEU:HD12	32:CR:401:LYS:HD3	1.92	0.51
32:CR:586:ILE:HG21	32:CR:657:LEU:HD11	1.92	0.51
34:Cb:46:VAL:HA	34:Cb:50:ASN:HB2	1.93	0.51
34:Cb:122:LYS:HB2	34:Cb:164:LEU:HD11	1.93	0.51
37:Ce:86:GLU:O	37:Ce:90:LYS:HG3	2.11	0.51
46:Co:348:LEU:HG	46:Co:349:LEU:HD12	1.92	0.51
49:C1:973:G:H3'	49:C1:974:G:H21	1.75	0.51
49:C1:2089:G:H2'	49:C1:2090:G:C8	2.46	0.51
51:UV:545:ARG:HH11	51:UV:547:VAL:HG23	1.76	0.51
51:UV:871:SER:HB2	51:UV:874:THR:HG23	1.92	0.51
53:CW:6:PRO:HD2	53:CW:10:PRO:HA	1.91	0.51
54:UT:299:SER:OG	54:UT:340:ARG:NH1	2.44	0.51
54:UT:1747:ALA:HB3	54:UT:1750:SER:HB3	1.93	0.51
1:UA:216:ASP:O	49:C1:285:A:N6	2.42	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:UB:643:ALA:O	2:UB:647:GLN:NE2	2.43	0.51
6:UG:366:ILE:HB	6:UG:386:MET:O	2.11	0.51
12:UO:451:VAL:O	12:UO:455:THR:OG1	2.27	0.51
13:UQ:417:ASP:HB3	13:UQ:485:GLY:HA2	1.92	0.51
13:UQ:616:ASP:HB3	13:UQ:691:ILE:HG12	1.93	0.51
17:UZ:20:PRO:HA	17:UZ:23:THR:HG22	1.92	0.51
32:CS:552:SER:OG	32:CS:554:ASN:OD1	2.27	0.51
49:C1:950:G:O6	49:C1:959:U:O4	2.28	0.51
50:C2:101:G:H1	50:C2:251:U:H3	1.58	0.51
51:UV:64:LEU:HD12	51:UV:120:PHE:HZ	1.76	0.51
52:CV:35:VAL:HG13	52:CV:51:LEU:HD11	1.92	0.51
2:UB:530:LEU:HD21	2:UB:556:VAL:HG22	1.92	0.51
4:UD:575:LEU:HD11	4:UD:612:GLU:HB3	1.92	0.51
7:UJ:541:SER:HB2	7:UJ:544:LYS:HD3	1.93	0.51
7:UJ:803:PRO:HA	7:UJ:806:LEU:HB3	1.92	0.51
9:UL:569:LEU:HD13	27:CL:784:LYS:HD3	1.92	0.51
10:UM:447:TRP:CD1	10:UM:460:TRP:HB2	2.45	0.51
12:UO:492:PRO:HA	12:UO:495:ARG:HB2	1.92	0.51
15:UU:388:VAL:HA	15:UU:412:GLY:HA2	1.93	0.51
15:UU:753:ALA:HB3	15:UU:766:ALA:HB3	1.92	0.51
16:UX:2:THR:O	25:CJ:39:GLN:NE2	2.43	0.51
28:CM:223:ILE:HG13	28:CM:235:LYS:HG3	1.93	0.51
28:CM:364:LYS:H	49:C1:439:A:H61	1.58	0.51
39:Cg:34:LEU:HD13	39:Cg:124:ARG:HH22	1.76	0.51
49:C1:384:C:H3'	49:C1:385:A:C8	2.46	0.51
49:C1:638:A:H2'	49:C1:639:U:C6	2.46	0.51
49:C1:782:G:OP2	54:UT:1131:ARG:NH1	2.43	0.51
49:C1:1457:G:C6	49:C1:1540:A:N1	2.79	0.51
50:C2:90:C:H1'	50:C2:91:G:H5'	1.91	0.51
51:UV:578:ARG:HA	51:UV:584:ILE:HD12	1.93	0.51
52:CV:69:VAL:HG21	52:CV:78:PHE:HB2	1.93	0.51
54:UT:110:TYR:HA	54:UT:113:ARG:HD2	1.93	0.51
63:Cz:1554:TYR:CD2	63:Cz:1570:VAL:HG21	2.46	0.51
1:UA:8:SER:OG	1:UA:9:ASN:N	2.44	0.51
6:UG:267:ASN:HA	6:UG:308:VAL:HG11	1.92	0.51
11:UN:322:THR:HA	11:UN:325:ARG:HD3	1.91	0.51
12:UO:183:PHE:HE1	12:UO:222:PRO:HA	1.75	0.51
13:UQ:471:SER:OG	13:UQ:474:ASN:O	2.29	0.51
15:UU:398:PHE:HZ	15:UU:473:ASN:HA	1.76	0.51
17:UZ:82:LYS:HA	17:UZ:231:ALA:O	2.11	0.51
22:CG:298:ARG:HD3	22:CG:339:LEU:HA	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CH:344:GLU:OE1	24:CI:61:ARG:NH1	2.44	0.51
24:CI:974:ARG:HH22	49:C1:2183:A:H5'	1.75	0.51
28:CM:315:GLY:HA3	49:C1:586:G:H22	1.76	0.51
32:CS:520:HIS:ND1	32:CS:710:SER:OG	2.36	0.51
38:Cf:7:SER:O	38:Cf:18:ARG:NH2	2.43	0.51
43:Ck:93:ARG:O	43:Ck:110:LYS:N	2.43	0.51
49:C1:861:U:H5	49:C1:865:G:H21	1.58	0.51
49:C1:2189:C:H2'	49:C1:2190:G:H8	1.74	0.51
54:UT:414:GLN:HA	54:UT:417:MET:HE2	1.93	0.51
54:UT:506:GLU:HB2	54:UT:554:VAL:HG13	1.93	0.51
54:UT:1032:MET:HG2	54:UT:1083:LEU:HD11	1.92	0.51
54:UT:1640:LEU:HA	54:UT:1643:LYS:HE3	1.93	0.51
12:UO:191:ARG:NH2	12:UO:210:TYR:OH	2.44	0.50
14:UR:322:ARG:NH2	14:UR:346:TYR:OH	2.43	0.50
15:UU:64:THR:HG23	15:UU:73:THR:HG22	1.93	0.50
15:UU:100:TRP:CG	15:UU:101:LYS:H	2.29	0.50
15:UU:466:THR:N	15:UU:514:ALA:O	2.44	0.50
15:UU:528:ARG:NH1	50:C2:64:C:O3'	2.39	0.50
15:UU:975:ILE:HA	15:UU:978:LEU:HD12	1.93	0.50
18:CB:175:GLY:O	18:CB:202:ASN:ND2	2.40	0.50
18:CB:212:LYS:HD2	18:CB:214:MET:HB2	1.93	0.50
24:CI:386:LEU:HB3	32:CR:194:GLY:HA3	1.93	0.50
26:CK:240:ARG:HB3	26:CK:242:HIS:HE1	1.76	0.50
28:CM:90:VAL:HA	28:CM:107:ALA:HA	1.93	0.50
32:CS:62:LYS:HG3	32:CS:63:GLU:HG2	1.92	0.50
32:CS:585:VAL:HB	32:CS:639:ALA:HB3	1.92	0.50
36:Cd:33:GLY:O	36:Cd:51:ARG:NH1	2.43	0.50
49:C1:336:G:H2'	49:C1:337:G:C8	2.46	0.50
49:C1:619:U:C2	49:C1:1052:A:N6	2.79	0.50
49:C1:2169:A:N6	49:C1:2193:G:N2	2.33	0.50
50:C2:251:U:C4	50:C2:252:C:N4	2.79	0.50
53:CW:23:LEU:CB	53:CW:24:PRO:CD	2.74	0.50
53:CW:313:ILE:HG23	53:CW:327:VAL:HB	1.93	0.50
57:US:176:SER:O	57:US:182:ARG:NH2	2.44	0.50
57:US:473:THR:HA	57:US:476:LYS:HB2	1.93	0.50
59:CX:266:MET:HE2	59:CX:295:ALA:HB1	1.92	0.50
56:UI:182:GLN:O	56:UI:186:ASN:ND2	2.44	0.50
63:Cz:1572:LYS:O	63:Cz:1576:THR:OG1	2.26	0.50
1:UA:149:GLN:HE21	49:C1:266:C:H3'	1.77	0.50
1:UA:612:VAL:HG11	1:UA:675:VAL:HG21	1.92	0.50
4:UD:233:SER:H	49:C1:193:U:H4'	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:UL:188:PHE:HB3	9:UL:200:LEU:HD11	1.92	0.50
9:UL:512:TRP:N	9:UL:526:GLY:O	2.44	0.50
10:UM:769:ARG:NH2	27:CL:707:GLU:O	2.44	0.50
15:UU:440:ALA:O	15:UU:443:MET:C	2.55	0.50
16:UX:89:ILE:HD11	16:UX:118:TRP:CE2	2.46	0.50
26:CK:245:VAL:HG23	26:CK:253:GLU:HB2	1.93	0.50
35:Cc:71:LYS:NZ	49:C1:2197:A:OP2	2.31	0.50
35:Cc:115:ASN:HD22	35:Cc:118:GLN:H	1.59	0.50
37:Ce:41:LYS:HG3	37:Ce:44:LEU:HB2	1.93	0.50
42:Cj:55:LEU:HG	42:Cj:105:LEU:HD22	1.93	0.50
43:Ck:54:ILE:HG22	43:Ck:55:GLU:HG2	1.92	0.50
49:C1:680:U:H2'	49:C1:681:G:H8	1.75	0.50
49:C1:2119:G:H2'	49:C1:2121:U:C2	2.46	0.50
54:UT:249:ASP:OD2	54:UT:249:ASP:N	2.43	0.50
54:UT:685:ASN:OD1	54:UT:688:SER:OG	2.29	0.50
54:UT:1627:VAL:HG21	54:UT:1641:LEU:HD11	1.93	0.50
1:UA:213:VAL:HG21	1:UA:261:ALA:HB3	1.93	0.50
2:UB:743:LEU:HB3	57:US:462:GLN:HG2	1.92	0.50
6:UG:342:ARG:NH1	49:C1:265:G:N3	2.58	0.50
7:UJ:756:SER:OG	7:UJ:758:ASN:OD1	2.28	0.50
7:UJ:1534:ARG:HB2	7:UJ:1598:TYR:HB3	1.94	0.50
10:UM:566:LYS:O	10:UM:585:HIS:N	2.44	0.50
14:UR:170:GLU:OE2	14:UR:174:ARG:NH2	2.44	0.50
17:UZ:221:VAL:HA	17:UZ:224:ILE:HD12	1.94	0.50
22:CG:404:ILE:HG22	22:CG:409:PHE:HA	1.92	0.50
24:CI:944:ILE:HD13	24:CI:973:PHE:HB3	1.93	0.50
28:CM:183:GLU:O	28:CM:184:HIS:ND1	2.43	0.50
36:Cd:66:GLY:N	36:Cd:100:CYS:SG	2.84	0.50
39:Cg:29:VAL:O	39:Cg:32:TYR:C	2.54	0.50
39:Cg:87:SER:OG	39:Cg:88:ARG:N	2.43	0.50
39:Cg:134:VAL:HG12	39:Cg:154:ILE:HG12	1.94	0.50
49:C1:83:A:H61	49:C1:124:C:H42	1.58	0.50
49:C1:776:C:N3	49:C1:777:G:O2'	2.43	0.50
49:C1:843:U:OP2	54:UT:970:LYS:NZ	2.45	0.50
55:UH:478:LYS:HD3	55:UH:545:TRP:HZ2	1.76	0.50
56:UE:182:GLN:O	56:UE:186:ASN:ND2	2.44	0.50
56:UI:185:ILE:O	56:UI:225:HIS:NE2	2.44	0.50
1:UA:346:LEU:HD13	1:UA:690:ALA:HB2	1.93	0.50
1:UA:840:MET:HG2	15:UU:999:LEU:HD13	1.93	0.50
4:UD:506:ARG:NH1	4:UD:507:VAL:O	2.45	0.50
7:UJ:53:TYR:CZ	7:UJ:57:LYS:HD3	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:UJ:313:THR:O	7:UJ:317:GLN:HB2	2.12	0.50
9:UL:812:PRO:HB2	9:UL:814:ARG:HG3	1.93	0.50
11:UN:316:TYR:O	11:UN:320:ASN:ND2	2.35	0.50
13:UQ:543:PHE:HE2	13:UQ:547:GLY:HA2	1.77	0.50
13:UQ:700:LEU:O	13:UQ:714:ALA:HA	2.11	0.50
14:UR:230:LEU:O	14:UR:234:LEU:HB2	2.11	0.50
15:UU:313:LEU:HA	15:UU:317:GLY:HA2	1.92	0.50
15:UU:392:HIS:HB3	15:UU:468:ILE:HD11	1.93	0.50
15:UU:1018:GLU:O	15:UU:1022:HIS:ND1	2.45	0.50
17:UZ:78:LEU:HD13	17:UZ:235:LEU:HB2	1.93	0.50
21:CE:86:VAL:HG13	21:CE:90:ARG:HD3	1.93	0.50
25:CJ:108:ARG:HA	25:CJ:113:VAL:HG21	1.92	0.50
27:CL:720:GLU:OE2	27:CL:723:ARG:NH1	2.45	0.50
36:Cd:68:ILE:HD13	53:CW:47:LEU:HD22	1.93	0.50
38:Cf:179:GLN:HE22	49:C1:916:U:H5	1.60	0.50
49:C1:1647:U:H2'	49:C1:1648:G:H8	1.75	0.50
49:C1:2238:A:C6	49:C1:2328:G:N2	2.79	0.50
50:C2:3:C:H2'	50:C2:4:G:H8	1.76	0.50
51:UV:792:LEU:HD12	51:UV:795:ARG:HH11	1.76	0.50
51:UV:856:VAL:HG22	51:UV:879:THR:HG21	1.92	0.50
55:UH:829:ALA:HA	56:UI:215:MET:HE1	1.93	0.50
1:UA:504:SER:OG	1:UA:505:GLU:N	2.44	0.50
1:UA:711:LEU:HD12	1:UA:739:ARG:HG2	1.93	0.50
4:UD:707:LEU:HD21	4:UD:829:THR:HB	1.94	0.50
7:UJ:810:PHE:HA	7:UJ:813:ILE:HG22	1.93	0.50
12:UO:462:HIS:HA	13:UQ:556:TRP:CH2	2.47	0.50
13:UQ:243:SER:OG	13:UQ:244:LEU:N	2.42	0.50
13:UQ:778:THR:HA	13:UQ:792:ALA:O	2.11	0.50
16:UX:105:ARG:NH2	16:UX:106:TYR:OH	2.44	0.50
16:UX:151:ARG:HB3	16:UX:155:ARG:HH22	1.76	0.50
18:CA:152:PRO:HA	18:CA:174:VAL:HA	1.94	0.50
21:CF:111:LEU:O	21:CF:115:ILE:HG12	2.12	0.50
22:CG:160:LYS:HE3	22:CG:607:PRO:HD2	1.93	0.50
24:CI:54:LEU:HD13	45:Cn:77:ILE:HB	1.94	0.50
24:CI:778:ARG:HD3	32:CR:51:ARG:HH22	1.76	0.50
27:CL:718:ARG:NH2	49:C1:2226:U:OP2	2.32	0.50
34:Cb:185:GLY:HA2	34:Cb:189:MET:HE2	1.93	0.50
44:Cm:10:ALA:O	44:Cm:13:SER:OG	2.25	0.50
51:UV:242:LEU:HD11	51:UV:401:ASN:HB2	1.93	0.50
54:UT:285:VAL:HG22	54:UT:298:TRP:HD1	1.76	0.50
54:UT:671:LEU:HB3	54:UT:691:ILE:HG12	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:UT:1493:GLY:HA3	54:UT:1505:ILE:HD13	1.92	0.50
58:CI:12:ASN:O	58:CI:13:HIS:ND1	2.44	0.50
1:UA:365:LYS:HB3	1:UA:377:THR:HG22	1.94	0.50
1:UA:392:LYS:N	1:UA:435:PRO:O	2.36	0.50
2:UB:887:ASN:ND2	50:C2:8:A:N3	2.59	0.50
4:UD:368:LEU:HD13	4:UD:836:MET:HB3	1.93	0.50
7:UJ:265:PRO:O	7:UJ:269:ILE:HG12	2.11	0.50
7:UJ:1633:LEU:HG	7:UJ:1678:VAL:HG22	1.93	0.50
10:UM:591:THR:HG21	10:UM:647:LYS:HA	1.94	0.50
15:UU:416:SER:HG	15:UU:418:TRP:CD1	2.30	0.50
16:UX:-3:THR:HG21	50:C2:61:G:H21	1.77	0.50
26:CK:283:HIS:CD2	49:C1:2179:C:H41	2.30	0.50
28:CM:222:ILE:O	28:CM:235:LYS:HA	2.12	0.50
32:CR:520:HIS:ND1	32:CR:710:SER:OG	2.36	0.50
32:CR:591:GLU:OE2	32:CR:613:LEU:N	2.44	0.50
48:CU:121:SER:OG	48:CU:123:ARG:O	2.30	0.50
49:C1:68:U:O4	55:UH:883:ARG:NE	2.24	0.50
49:C1:253:G:H2'	49:C1:254:G:H8	1.77	0.50
49:C1:270:C:H4'	49:C1:273:G:C4	2.47	0.50
49:C1:782:G:H2'	49:C1:783:G:C8	2.46	0.50
50:C2:95:U:H2'	50:C2:96:C:C6	2.47	0.50
50:C2:200:U:N3	50:C2:246:G:C6	2.80	0.50
53:CW:105:LEU:HB3	61:CZ:556:MET:HE2	1.94	0.50
54:UT:391:ILE:HD13	54:UT:425:TRP:HB3	1.94	0.50
59:CX:301:GLY:O	59:CX:305:GLY:HA3	2.12	0.50
63:Cz:1554:TYR:HA	63:Cz:1557:LEU:HG	1.94	0.50
4:UD:296:MET:HG3	4:UD:325:ASP:HB3	1.93	0.50
10:UM:583:ARG:NH2	10:UM:634:CYS:SG	2.77	0.50
10:UM:593:ARG:HG3	10:UM:648:VAL:HB	1.94	0.50
10:UM:767:PRO:HA	10:UM:770:LEU:HB3	1.94	0.50
12:UO:33:GLN:OE1	12:UO:346:ARG:NH2	2.44	0.50
12:UO:442:ASN:OD1	12:UO:442:ASN:N	2.44	0.50
14:UR:430:ASN:O	14:UR:446:MET:HB2	2.12	0.50
18:CB:108:ARG:NE	50:C2:255:U:O4	2.45	0.50
20:CD:293:ILE:HG21	20:CD:369:ILE:HD11	1.92	0.50
21:CE:55:LEU:O	21:CE:81:TYR:HA	2.11	0.50
22:CG:420:LEU:HB2	22:CG:499:LEU:HD21	1.93	0.50
24:CI:50:LYS:HA	24:CI:53:ARG:HB2	1.94	0.50
24:CI:819:ARG:HD2	24:CI:826:ILE:HD13	1.94	0.50
24:CI:939:ASN:ND2	27:CL:513:VAL:O	2.39	0.50
31:CQ:159:LEU:HD23	31:CQ:160:ARG:HD2	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:CR:310:ILE:HG23	32:CR:385:LEU:HG	1.94	0.50
35:Cc:187:ASN:HD21	35:Cc:194:ASN:HB2	1.77	0.50
37:Ce:163:ILE:HG22	37:Ce:194:GLU:HB2	1.94	0.50
49:C1:1138:C:C4	49:C1:1155:G:C6	2.99	0.50
54:UT:100:GLU:HA	54:UT:103:ILE:HD12	1.94	0.50
54:UT:908:SER:OG	54:UT:940:LEU:O	2.25	0.50
1:UA:20:LEU:HD21	1:UA:313:ALA:HB1	1.94	0.50
1:UA:173:LEU:HA	1:UA:197:GLY:HA2	1.93	0.50
1:UA:242:GLN:OE1	1:UA:244:ARG:NH2	2.44	0.50
1:UA:365:LYS:HD3	1:UA:367:TRP:HE1	1.77	0.50
2:UB:531:ILE:HA	2:UB:534:ILE:HD12	1.94	0.50
2:UB:618:ILE:O	2:UB:622:LEU:CB	2.58	0.50
2:UB:726:LEU:HD22	2:UB:773:LEU:HD13	1.94	0.50
3:UC:598:ARG:NH1	49:C1:1060:U:O2'	2.45	0.50
4:UD:166:TYR:CZ	4:UD:175:PHE:HB2	2.47	0.50
4:UD:630:PRO:HA	4:UD:651:THR:HA	1.94	0.50
5:UF:145:THR:HA	5:UF:164:PHE:HE1	1.77	0.50
6:UG:70:ARG:HD2	49:C1:581:C:H41	1.77	0.50
8:UK:91:ARG:CZ	24:CI:1070:GLN:HB3	2.42	0.50
10:UM:850:ALA:HB1	10:UM:855:SER:HA	1.93	0.50
11:UN:352:LEU:HD12	19:CC:87:PRO:HB2	1.94	0.50
12:UO:101:GLU:HB2	12:UO:119:ASP:HB2	1.93	0.50
12:UO:210:TYR:OH	57:US:372:HIS:ND1	2.45	0.50
12:UO:254:ALA:HB1	12:UO:268:LEU:HD11	1.94	0.50
14:UR:253:ARG:NH2	14:UR:254:ARG:O	2.44	0.50
15:UU:287:GLY:N	15:UU:294:LYS:O	2.45	0.50
15:UU:298:MET:HB2	15:UU:313:LEU:HD11	1.93	0.50
19:CC:141:LEU:HD22	49:C1:435:A:C6	2.47	0.50
26:CK:189:PRO:HB3	26:CK:226:ARG:HD3	1.92	0.50
42:Cj:52:ILE:H	42:Cj:52:ILE:HD12	1.76	0.50
48:CU:218:SER:OG	48:CU:219:ILE:N	2.43	0.50
49:C1:249:C:H2'	49:C1:250:U:H6	1.77	0.50
51:UV:645:ARG:NH1	51:UV:675:LEU:O	2.45	0.50
53:CW:163:SER:OG	53:CW:164:GLY:N	2.45	0.50
54:UT:823:GLN:HA	54:UT:826:LEU:HG	1.93	0.50
12:UO:140:TRP:NE1	12:UO:177:ASN:OD1	2.41	0.50
22:CG:290:ALA:HB3	22:CG:308:LYS:HD2	1.93	0.50
24:CI:63:PRO:HG2	24:CI:66:PRO:HA	1.92	0.50
28:CM:95:ASP:OD1	28:CM:103:THR:OG1	2.26	0.50
32:CR:822:THR:OG1	32:CR:823:GLU:N	2.44	0.50
32:CS:433:ARG:HE	32:CS:434:GLU:HG3	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:Cm:78:ARG:HG2	44:Cm:126:ILE:HG23	1.93	0.50
48:CU:227:MET:HG3	49:C1:595:U:N3	2.27	0.50
49:C1:597:G:H2'	49:C1:598:A:C8	2.47	0.50
51:UV:488:ARG:HB3	51:UV:565:LYS:HG2	1.92	0.50
53:CW:214:HIS:HB3	61:CZ:569:ILE:HG21	1.94	0.50
54:UT:930:LEU:HB2	54:UT:997:HIS:HB3	1.94	0.50
54:UT:1311:TRP:HD1	54:UT:1312:LEU:HD22	1.77	0.50
57:US:444:GLU:HB3	57:US:450:THR:HG22	1.94	0.50
1:UA:55:ARG:HB2	49:C1:257:G:N2	2.27	0.49
4:UD:293:SER:O	4:UD:300:THR:HA	2.12	0.49
6:UG:396:GLU:N	6:UG:410:GLY:O	2.30	0.49
6:UG:403:PHE:HD1	28:CM:8:ARG:HH22	1.59	0.49
7:UJ:598:ALA:O	7:UJ:725:ARG:NH1	2.45	0.49
9:UL:291:ASP:HB2	9:UL:307:ILE:HB	1.93	0.49
10:UM:288:TRP:HB3	10:UM:300:ILE:HD11	1.94	0.49
14:UR:283:HIS:HE1	14:UR:285:ARG:HB2	1.77	0.49
15:UU:63:ILE:O	15:UU:73:THR:HA	2.11	0.49
21:CF:111:LEU:HD13	21:CF:114:LYS:HD2	1.94	0.49
24:CI:760:LEU:HD22	24:CI:763:HIS:H	1.77	0.49
24:CI:812:PHE:HD2	24:CI:911:SER:H	1.58	0.49
26:CK:216:ASP:OD1	27:CL:559:ARG:NH2	2.34	0.49
28:CM:237:VAL:HB	28:CM:443:VAL:HG23	1.93	0.49
30:CP:131:ARG:NH2	41:CI:139:THR:O	2.41	0.49
30:CP:204:LYS:HD2	49:C1:1489:G:N2	2.27	0.49
37:Ce:155:ASP:OD1	37:Ce:155:ASP:N	2.45	0.49
43:Ck:95:TYR:OH	49:C1:891:G:OP1	2.30	0.49
48:CU:281:MET:HG2	48:CU:286:LEU:HG	1.94	0.49
49:C1:460:U:O2	49:C1:472:G:N2	2.31	0.49
49:C1:596:U:H2'	49:C1:597:G:C8	2.47	0.49
49:C1:734:C:H42	49:C1:748:A:H61	1.59	0.49
49:C1:1026:C:H2'	49:C1:1027:C:C6	2.47	0.49
49:C1:1085:U:H2'	49:C1:1086:U:C6	2.47	0.49
49:C1:2189:C:H2'	49:C1:2190:G:C8	2.47	0.49
49:C1:2368:U:H2'	49:C1:2369:G:C8	2.47	0.49
54:UT:1919:ILE:HG12	54:UT:1992:VAL:HG13	1.93	0.49
57:US:121:TYR:HE2	57:US:145:VAL:HG11	1.77	0.49
59:CX:446:ALA:HA	59:CX:449:ILE:HD12	1.94	0.49
1:UA:150:HIS:NE2	1:UA:170:SER:HB2	2.27	0.49
1:UA:353:GLN:HE21	1:UA:821:ARG:HH21	1.60	0.49
4:UD:578:PRO:HB3	4:UD:611:GLY:HA3	1.94	0.49
6:UG:63:VAL:O	6:UG:69:ARG:NH2	2.44	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:UJ:112:MET:HG3	7:UJ:113:PRO:HD3	1.93	0.49
8:UK:171:ARG:HH21	62:UP:322:VAL:H	1.58	0.49
9:UL:89:ASP:OD1	9:UL:91:SER:OG	2.27	0.49
9:UL:584:LEU:HD13	9:UL:588:THR:HG23	1.93	0.49
10:UM:774:PHE:HA	10:UM:777:VAL:HG12	1.94	0.49
12:UO:433:TYR:CG	12:UO:460:LEU:HD11	2.47	0.49
18:CB:161:ALA:H	18:CB:184:GLU:HG2	1.77	0.49
20:CD:100:THR:HG23	20:CD:108:LYS:HD2	1.93	0.49
23:CH:12:THR:O	23:CH:20:ARG:NH1	2.37	0.49
23:CH:54:LEU:HD21	23:CH:66:ILE:HG21	1.93	0.49
31:CQ:211:LEU:HD22	49:C1:2352:U:H3	1.78	0.49
32:CS:41:LEU:O	32:CS:45:MET:HG2	2.12	0.49
32:CS:295:MET:O	32:CS:299:ILE:HG23	2.12	0.49
49:C1:97:C:N3	56:UE:210:ARG:NH1	2.60	0.49
49:C1:132:A:H2'	49:C1:133:G:C8	2.46	0.49
51:UV:1047:VAL:HG11	51:UV:1085:LYS:HD2	1.94	0.49
54:UT:392:VAL:O	54:UT:396:ILE:HG12	2.12	0.49
54:UT:1388:VAL:HA	54:UT:1391:ILE:HD12	1.93	0.49
55:UH:724:LYS:HE2	55:UH:728:ARG:HH22	1.77	0.49
9:UL:834:LEU:HG	9:UL:873:LEU:HD21	1.94	0.49
11:UN:343:LEU:HD11	28:CM:250:MET:HE1	1.95	0.49
14:UR:491:ILE:HD12	21:CE:90:ARG:HE	1.76	0.49
15:UU:510:SER:O	15:UU:510:SER:OG	2.31	0.49
22:CG:425:ARG:NH1	22:CG:427:LYS:O	2.45	0.49
24:CI:263:LEU:HD11	27:CL:478:ARG:HH22	1.78	0.49
24:CI:346:ILE:HG23	24:CI:351:ILE:HG13	1.94	0.49
27:CL:534:THR:HG22	27:CL:535:GLU:H	1.77	0.49
28:CM:47:VAL:HG21	28:CM:388:ILE:HG23	1.93	0.49
28:CM:404:ALA:HA	28:CM:407:ILE:HD12	1.93	0.49
29:CO:228:SER:OG	29:CO:240:LYS:NZ	2.34	0.49
32:CR:168:ASP:HB3	32:CR:703:HIS:HD2	1.78	0.49
32:CS:822:THR:OG1	32:CS:823:GLU:N	2.44	0.49
37:Ce:76:PHE:O	37:Ce:79:VAL:C	2.55	0.49
40:Ch:105:ASN:ND2	49:C1:1464:G:O2'	2.45	0.49
43:Ck:96:LEU:H	43:Ck:160:LYS:HE2	1.77	0.49
48:CU:218:SER:HB3	48:CU:221:THR:HG22	1.94	0.49
49:C1:496:U:C4	49:C1:503:G:N1	2.80	0.49
49:C1:902:U:N3	49:C1:931:G:N1	2.60	0.49
49:C1:1512:C:H2'	49:C1:1513:U:C6	2.47	0.49
49:C1:2051:U:H2'	49:C1:2052:A:C8	2.48	0.49
51:UV:483:TYR:CZ	51:UV:508:VAL:HG22	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:UC:640:THR:OG1	3:UC:641:ASN:N	2.45	0.49
6:UG:400:TRP:CE3	6:UG:407:LEU:HD13	2.47	0.49
7:UJ:166:PHE:HD1	7:UJ:185:GLN:HG2	1.76	0.49
7:UJ:1723:ASN:HB3	7:UJ:1763:MET:HE3	1.94	0.49
9:UL:53:LYS:HG3	9:UL:418:LEU:HD11	1.95	0.49
9:UL:506:HIS:HD2	9:UL:511:VAL:HG22	1.76	0.49
12:UO:203:ASN:HB2	12:UO:219:ALA:HB3	1.95	0.49
13:UQ:731:LYS:HG2	13:UQ:750:ASP:HB3	1.94	0.49
13:UQ:916:THR:OG1	13:UQ:917:HIS:N	2.45	0.49
15:UU:440:ALA:O	15:UU:443:MET:O	2.30	0.49
18:CB:164:GLY:O	18:CB:168:SER:OG	2.30	0.49
19:CC:214:SER:OG	19:CC:215:ASP:N	2.44	0.49
28:CM:293:PRO:HG2	28:CM:338:SER:HB2	1.94	0.49
32:CR:295:MET:O	32:CR:299:ILE:HG23	2.12	0.49
32:CS:163:TYR:O	32:CS:166:THR:OG1	2.23	0.49
32:CS:310:ILE:HG23	32:CS:385:LEU:HG	1.94	0.49
32:CS:731:GLN:HA	32:CS:801:LEU:HD21	1.95	0.49
44:Cm:102:VAL:H	44:Cm:113:HIS:HD2	1.60	0.49
51:UV:640:LEU:HB2	51:UV:682:THR:HG23	1.94	0.49
54:UT:913:PRO:HD3	54:UT:947:THR:HG22	1.94	0.49
63:Cz:1650:THR:OG1	63:Cz:1652:ASP:OD1	2.29	0.49
6:UG:213:LEU:HD23	6:UG:243:GLN:HE22	1.76	0.49
14:UR:351:ASN:O	14:UR:355:GLY:CA	2.60	0.49
14:UR:438:ASP:H	14:UR:462:GLY:HA2	1.78	0.49
15:UU:80:LEU:O	15:UU:381:ARG:NE	2.40	0.49
18:CB:74:GLU:HB3	18:CB:85:ARG:HH22	1.78	0.49
19:CC:179:GLN:HB3	20:CD:189:TRP:CZ3	2.47	0.49
21:CF:11:LYS:HA	21:CF:81:TYR:HB2	1.94	0.49
22:CG:351:ASP:OD2	22:CG:355:ARG:NH2	2.45	0.49
23:CH:305:VAL:HG12	23:CH:307:GLU:H	1.77	0.49
26:CK:89:LEU:HA	26:CK:115:ILE:O	2.12	0.49
31:CQ:111:LEU:HD11	31:CQ:136:LEU:HD13	1.94	0.49
32:CR:731:GLN:HA	32:CR:801:LEU:HD21	1.95	0.49
32:CS:634:ARG:HE	32:CS:636:VAL:HG12	1.78	0.49
33:CT:154:ARG:N	50:C2:249:U:OP1	2.44	0.49
34:Cb:52:LEU:HB3	34:Cb:54:TYR:CD2	2.47	0.49
49:C1:1480:G:N2	49:C1:1502:U:O2	2.45	0.49
49:C1:1648:G:H2'	49:C1:1649:A:H8	1.77	0.49
51:UV:364:LEU:HA	51:UV:369:PHE:HB2	1.94	0.49
51:UV:1010:ILE:HD12	51:UV:1076:ASP:HB3	1.93	0.49
54:UT:1632:ASP:OD1	54:UT:1632:ASP:N	2.41	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:UA:833:LEU:HD11	15:UU:996:THR:HG21	1.95	0.49
2:UB:92:ARG:HH12	27:CL:533:VAL:HB	1.78	0.49
5:UF:157:MET:HE3	5:UF:188:TRP:HB2	1.95	0.49
7:UJ:1561:ALA:HA	7:UJ:1564:MET:HG2	1.94	0.49
7:UJ:1672:PHE:HA	7:UJ:1675:VAL:HG22	1.94	0.49
10:UM:74:SER:OG	10:UM:75:HIS:N	2.45	0.49
10:UM:328:LEU:O	10:UM:330:GLU:N	2.45	0.49
10:UM:710:SER:O	10:UM:717:VAL:HA	2.13	0.49
10:UM:753:ALA:O	10:UM:757:ALA:HB2	2.13	0.49
12:UO:409:ASP:O	12:UO:412:THR:OG1	2.28	0.49
20:CD:83:GLU:HB3	20:CD:107:ILE:HB	1.94	0.49
20:CD:360:LYS:HG2	20:CD:363:ARG:HH21	1.78	0.49
20:CD:419:LEU:HD12	20:CD:423:GLY:HA2	1.93	0.49
22:CG:273:TYR:HE2	22:CG:278:LEU:HD12	1.77	0.49
23:CH:48:PRO:HA	23:CH:51:ILE:HG22	1.94	0.49
24:CI:133:ALA:O	24:CI:238:ARG:NH1	2.26	0.49
28:CM:172:SER:OG	28:CM:173:GLY:N	2.46	0.49
32:CS:35:LYS:HD2	32:CS:95:PHE:HE2	1.78	0.49
32:CS:168:ASP:HB3	32:CS:703:HIS:HD2	1.77	0.49
34:Cb:37:LYS:HB3	34:Cb:40:ASP:HB3	1.94	0.49
34:Cb:99:PHE:HA	34:Cb:112:HIS:O	2.12	0.49
43:Ck:92:ARG:NE	43:Ck:94:GLU:OE2	2.45	0.49
48:CU:236:HIS:CG	49:C1:298:A:H5''	2.47	0.49
49:C1:1209:C:O2'	49:C1:1524:A:N3	2.39	0.49
49:C1:1744:A:H2'	49:C1:1745:C:C6	2.47	0.49
54:UT:1908:SER:HB2	54:UT:1980:LEU:HD11	1.94	0.49
54:UT:1923:TYR:HE2	54:UT:1992:VAL:HG22	1.77	0.49
55:UH:755:TYR:CD2	56:UI:214:LEU:HD11	2.48	0.49
63:Cz:1595:GLY:HA2	63:Cz:1597:TYR:CZ	2.47	0.49
63:Cz:1680:PHE:HB3	63:Cz:1697:LEU:HD22	1.93	0.49
1:UA:476:PHE:CE1	1:UA:483:LEU:HD13	2.48	0.49
5:UF:176:THR:HA	5:UF:179:LEU:HD12	1.94	0.49
9:UL:713:SER:O	9:UL:720:ILE:HA	2.11	0.49
13:UQ:287:PRO:HG2	13:UQ:324:TYR:CZ	2.47	0.49
14:UR:141:ASP:OD1	14:UR:141:ASP:N	2.43	0.49
15:UU:54:ILE:HG22	15:UU:62:GLN:HB2	1.95	0.49
15:UU:569:ASN:O	15:UU:573:GLY:N	2.45	0.49
19:CC:41:LEU:HD23	49:C1:436:A:C5	2.48	0.49
20:CD:16:PHE:HA	20:CD:45:TYR:HA	1.94	0.49
24:CI:221:ASN:ND2	49:C1:1024:U:O4'	2.43	0.49
24:CI:1089:LYS:HB3	33:CT:166:LEU:HD11	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:CM:193:TRP:HB3	28:CM:196:PHE:HB2	1.95	0.49
28:CM:422:GLU:O	28:CM:426:SER:CB	2.60	0.49
29:CO:174:ASN:ND2	29:CO:199:ASN:O	2.46	0.49
31:CQ:194:ASP:H	49:C1:2352:U:H5'	1.78	0.49
32:CR:41:LEU:O	32:CR:45:MET:HG2	2.12	0.49
32:CR:433:ARG:HE	32:CR:434:GLU:HG3	1.77	0.49
32:CS:521:VAL:HG13	32:CS:567:LEU:HD21	1.95	0.49
35:Cc:195:SER:HB3	35:Cc:198:ILE:HD12	1.95	0.49
37:Ce:54:GLU:OE2	37:Ce:62:LYS:HB3	2.13	0.49
43:Ck:126:ASP:N	43:Ck:126:ASP:OD1	2.45	0.49
44:Cm:23:ARG:O	44:Cm:64:GLN:NE2	2.45	0.49
49:C1:62:U:O2'	49:C1:64:C:OP2	2.25	0.49
49:C1:649:A:O2'	49:C1:852:C:O2	2.31	0.49
54:UT:417:MET:HE3	54:UT:426:TYR:HE1	1.78	0.49
57:US:425:LYS:HA	57:US:428:ARG:HD2	1.95	0.49
57:US:458:TRP:HA	57:US:461:VAL:HG12	1.94	0.49
1:UA:527:ILE:HD12	1:UA:537:TRP:HE1	1.77	0.49
2:UB:747:ILE:HD12	2:UB:795:ARG:HE	1.77	0.49
6:UG:338:SER:OG	11:UN:867:LYS:NZ	2.37	0.49
6:UG:457:GLU:O	11:UN:879:ASN:ND2	2.44	0.49
7:UJ:1477:LEU:HB3	7:UJ:1481:LEU:HD23	1.94	0.49
9:UL:712:VAL:HG12	9:UL:722:VAL:HG22	1.94	0.49
10:UM:808:GLN:HG3	10:UM:811:LEU:HD12	1.94	0.49
12:UO:175:PRO:HB3	35:Cc:190:LYS:HD2	1.94	0.49
13:UQ:614:ILE:HA	13:UQ:630:GLY:HA2	1.94	0.49
13:UQ:640:PRO:HA	13:UQ:661:TRP:HA	1.94	0.49
19:CC:57:THR:N	19:CC:61:GLN:OE1	2.35	0.49
19:CC:198:VAL:HA	19:CC:201:TRP:HB3	1.95	0.49
20:CD:169:VAL:HA	20:CD:172:LEU:HG	1.95	0.49
26:CK:139:ILE:HG23	26:CK:155:SER:HB2	1.95	0.49
32:CR:634:ARG:HE	32:CR:636:VAL:HG12	1.78	0.49
32:CS:184:ARG:NH1	32:CS:560:SER:O	2.46	0.49
32:CS:892:LYS:HD2	32:CS:896:THR:HG23	1.95	0.49
35:Cc:28:LYS:HB2	35:Cc:31:ASN:HA	1.94	0.49
38:Cf:171:ALA:HB2	38:Cf:187:ILE:HD12	1.95	0.49
42:Cj:76:SER:OG	49:C1:2192:U:OP1	2.24	0.49
49:C1:85:U:H2'	49:C1:86:C:C6	2.48	0.49
49:C1:2368:U:H2'	49:C1:2369:G:H8	1.78	0.49
51:UV:1054:LEU:HD12	52:CV:91:HIS:H	1.78	0.49
53:CW:54:GLU:HA	53:CW:352:LYS:HD2	1.93	0.49
53:CW:302:GLU:HB2	53:CW:319:GLN:HE22	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CW:349:ASN:ND2	53:CW:353:GLN:O	2.36	0.49
54:UT:1986:LEU:HG	54:UT:1989:PHE:HD2	1.77	0.49
56:UI:278:MET:N	56:UI:278:MET:SD	2.85	0.49
63:Cz:1699:ASP:OD2	63:Cz:1741:ARG:NH2	2.46	0.49
63:Cz:1761:LYS:HA	63:Cz:1764:GLU:HG3	1.95	0.49
1:UA:448:PHE:HB3	1:UA:469:GLY:O	2.13	0.49
4:UD:628:ALA:HB2	4:UD:653:LEU:HD23	1.94	0.49
9:UL:954:ARG:NH1	27:CL:652:ASP:OD1	2.45	0.49
13:UQ:649:MET:HE2	13:UQ:651:THR:HG22	1.95	0.49
26:CK:93:SER:C	26:CK:119:ARG:HH11	2.21	0.49
45:Cn:56:LYS:HD3	45:Cn:93:LEU:HD11	1.94	0.49
45:Cn:104:LEU:HD12	45:Cn:122:PHE:HB3	1.95	0.49
49:C1:100:C:H2'	49:C1:101:G:C8	2.47	0.49
49:C1:1000:A:H3'	49:C1:1001:A:C8	2.48	0.49
56:UE:278:MET:N	56:UE:278:MET:SD	2.85	0.49
57:US:439:PRO:HB2	57:US:451:ARG:HE	1.77	0.49
1:UA:484:VAL:HG21	1:UA:516:VAL:HG11	1.95	0.49
6:UG:386:MET:HE3	6:UG:386:MET:HB2	1.66	0.49
7:UJ:703:ARG:HA	7:UJ:706:ILE:HD12	1.94	0.49
9:UL:195:ASP:HB3	9:UL:197:LEU:HG	1.95	0.49
10:UM:117:LEU:HD21	10:UM:128:THR:HG22	1.94	0.49
12:UO:429:ARG:NH2	49:C1:73:A:OP2	2.30	0.49
13:UQ:321:GLY:HA2	13:UQ:358:VAL:HG13	1.95	0.49
13:UQ:427:GLU:HG2	13:UQ:429:LYS:HB2	1.95	0.49
14:UR:322:ARG:NH1	49:C1:133:G:H22	2.10	0.49
18:CA:253:LEU:HD21	18:CA:304:CYS:HB2	1.95	0.49
24:CI:1150:LYS:HE3	49:C1:1696:G:H5'	1.95	0.49
27:CL:704:ALA:HB3	27:CL:707:GLU:HG2	1.94	0.49
28:CM:180:TRP:NE1	28:CM:186:THR:O	2.39	0.49
29:CN:173:PRO:HD2	35:Cc:199:LYS:HE3	1.95	0.49
30:CP:218:TRP:HB3	30:CP:221:TYR:HD2	1.77	0.49
31:CQ:158:LEU:HD11	31:CQ:219:LEU:HD11	1.95	0.49
32:CR:784:LYS:NZ	32:CR:785:ARG:HG3	2.27	0.49
33:CT:101:GLU:OE1	33:CT:101:GLU:N	2.41	0.49
35:Cc:78:GLU:O	35:Cc:82:ASN:ND2	2.46	0.49
36:Cd:43:PRO:O	36:Cd:46:LYS:NZ	2.37	0.49
49:C1:149:G:H5''	62:UP:337:LYS:HD3	1.95	0.49
49:C1:782:G:H2'	49:C1:783:G:H8	1.78	0.49
51:UV:122:VAL:HG22	51:UV:142:MET:HE1	1.95	0.49
51:UV:336:GLY:HA3	51:UV:384:ALA:HB3	1.95	0.49
51:UV:630:LEU:HD13	51:UV:635:PRO:HG3	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CW:206:VAL:HG13	53:CW:250:LEU:HD22	1.95	0.49
53:CW:227:GLU:HG2	53:CW:236:ARG:HH11	1.78	0.49
57:US:167:LEU:HD11	57:US:206:HIS:HB3	1.95	0.49
58:CI:61:LEU:HG	58:CI:65:GLU:HG3	1.94	0.49
60:CY:275:TYR:O	60:CY:278:THR:OG1	2.26	0.49
63:Cz:1619:TRP:HZ3	63:Cz:1639:LEU:HD12	1.77	0.49
4:UD:109:THR:OG1	4:UD:127:GLY:O	2.28	0.48
4:UD:377:ALA:O	4:UD:381:ARG:N	2.46	0.48
6:UG:215:LYS:HA	49:C1:291:C:O2	2.13	0.48
7:UJ:542:ARG:NH2	7:UJ:551:TYR:OH	2.42	0.48
8:UK:262:ARG:HH22	8:UK:264:LYS:HB2	1.78	0.48
9:UL:567:ASP:O	9:UL:585:LEU:N	2.40	0.48
9:UL:777:MET:O	9:UL:781:ARG:HB2	2.13	0.48
13:UQ:109:THR:OG1	13:UQ:127:LEU:O	2.30	0.48
13:UQ:215:SER:HB2	13:UQ:238:ASP:HA	1.95	0.48
15:UU:857:ILE:HG13	15:UU:860:ILE:HD11	1.94	0.48
18:CA:111:VAL:HG21	33:CT:136:GLN:HB3	1.95	0.48
20:CD:12:GLY:HA3	20:CD:49:ALA:O	2.13	0.48
21:CE:96:ARG:NE	50:C2:82:U:OP2	2.38	0.48
22:CG:350:ARG:O	22:CG:352:ARG:NE	2.46	0.48
24:CI:110:LYS:NZ	24:CI:324:ARG:O	2.41	0.48
24:CI:1147:LYS:HA	24:CI:1150:LYS:HB2	1.95	0.48
32:CR:310:ILE:HD12	32:CR:385:LEU:HB3	1.95	0.48
33:CT:177:LYS:NZ	49:C1:1070:G:OP1	2.33	0.48
49:C1:123:U:H2'	49:C1:124:C:C6	2.48	0.48
49:C1:729:A:OP1	53:CW:36:LYS:NZ	2.44	0.48
50:C2:53:U:H2'	50:C2:54:C:C6	2.47	0.48
50:C2:128:C:H2'	50:C2:129:U:C6	2.48	0.48
54:UT:161:ILE:HA	54:UT:164:THR:HG22	1.95	0.48
54:UT:1181:SER:OG	54:UT:1183:THR:OG1	2.31	0.48
1:UA:336:GLN:HG3	1:UA:374:CYS:SG	2.53	0.48
4:UD:104:SER:HB2	4:UD:114:TRP:HE1	1.79	0.48
5:UF:127:ARG:HD2	5:UF:159:ARG:HH12	1.78	0.48
7:UJ:261:MET:HE3	7:UJ:263:ASP:H	1.76	0.48
10:UM:39:LEU:HD23	10:UM:42:ASN:HB2	1.95	0.48
13:UQ:832:ILE:HD11	13:UQ:848:SER:HB3	1.95	0.48
20:CD:344:ILE:H	20:CD:344:ILE:HD12	1.77	0.48
24:CI:326:ARG:NH2	49:C1:640:G:N7	2.62	0.48
28:CM:18:SER:OG	28:CM:19:ASP:N	2.43	0.48
28:CM:396:HIS:CE1	50:C2:29:A:H1'	2.48	0.48
29:CN:27:ILE:HD13	29:CN:36:ARG:HE	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:CN:210:ALA:HB1	29:CN:211:LYS:HE2	1.93	0.48
32:CR:521:VAL:HG13	32:CR:567:LEU:HD21	1.95	0.48
32:CR:892:LYS:HD2	32:CR:896:THR:HG23	1.95	0.48
38:Cf:182:ARG:NH1	49:C1:789:U:O2	2.45	0.48
49:C1:424:U:H2'	49:C1:425:C:O4'	2.13	0.48
49:C1:1124:G:H3'	49:C1:1125:A:N3	2.28	0.48
49:C1:1538:G:H2'	49:C1:1539:G:H8	1.78	0.48
50:C2:78:C:H2'	50:C2:79:G:H8	1.78	0.48
54:UT:2184:LYS:HE3	54:UT:2185:LYS:HG2	1.94	0.48
1:UA:83:ASN:HB2	1:UA:90:LEU:HD11	1.94	0.48
1:UA:353:GLN:HE21	1:UA:821:ARG:HE	1.60	0.48
5:UF:377:LEU:HA	5:UF:380:LYS:HD2	1.94	0.48
9:UL:434:ILE:HG22	9:UL:441:LEU:HB3	1.94	0.48
10:UM:624:ILE:HD11	10:UM:645:VAL:HG21	1.96	0.48
13:UQ:211:LEU:HD12	13:UQ:212:THR:HG23	1.95	0.48
18:CA:188:ARG:HG2	18:CA:191:ARG:HD3	1.95	0.48
20:CD:15:LEU:HB2	20:CD:47:GLU:HG2	1.96	0.48
21:CF:109:SER:OG	21:CF:110:ASP:N	2.45	0.48
24:CI:747:GLN:HA	24:CI:750:LEU:HB3	1.94	0.48
30:CP:121:CYS:SG	30:CP:122:ASP:N	2.86	0.48
32:CS:784:LYS:NZ	32:CS:785:ARG:HG3	2.27	0.48
35:Cc:41:ARG:HB3	35:Cc:125:VAL:HG11	1.94	0.48
39:Cg:108:GLN:HE22	39:Cg:124:ARG:HB2	1.78	0.48
42:Cj:9:VAL:HG21	42:Cj:88:SER:HA	1.95	0.48
42:Cj:13:LYS:HB3	42:Cj:16:ALA:HB3	1.95	0.48
42:Cj:114:ARG:HH22	42:Cj:118:VAL:HG21	1.77	0.48
43:Ck:111:ASN:HD22	49:C1:932:U:H5''	1.78	0.48
49:C1:639:U:H2'	49:C1:640:G:C8	2.47	0.48
49:C1:995:C:H3'	49:C1:996:A:H8	1.79	0.48
53:CW:95:THR:OG1	53:CW:96:ASN:N	2.46	0.48
54:UT:348:VAL:HG22	54:UT:349:ARG:H	1.78	0.48
54:UT:942:LEU:HD13	54:UT:964:LEU:HD12	1.95	0.48
55:UH:631:LEU:HA	55:UH:636:LEU:HD11	1.95	0.48
57:US:352:LEU:HD11	57:US:388:LEU:HD23	1.96	0.48
63:Cz:1672:ASP:HB3	63:Cz:1675:GLN:HG2	1.94	0.48
6:UG:158:GLY:O	6:UG:176:LEU:HB2	2.13	0.48
7:UJ:293:MET:HG2	7:UJ:315:LEU:HD13	1.95	0.48
11:UN:328:GLU:HA	11:UN:331:LYS:HE2	1.95	0.48
12:UO:532:ARG:HH11	49:C1:98:A:H1'	1.79	0.48
13:UQ:139:SER:OG	49:C1:46:C:N3	2.45	0.48
13:UQ:409:SER:O	13:UQ:425:THR:OG1	2.25	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:UU:764:ALA:HA	15:UU:774:GLN:O	2.12	0.48
17:UZ:160:ILE:HA	17:UZ:163:LEU:HD12	1.94	0.48
20:CD:9:THR:HG23	20:CD:11:ALA:H	1.79	0.48
20:CD:88:LEU:HD11	20:CD:107:ILE:HG23	1.95	0.48
32:CR:57:LEU:HB2	32:CR:120:TYR:CG	2.48	0.48
32:CS:310:ILE:HD12	32:CS:385:LEU:HB3	1.95	0.48
34:Cb:183:ILE:HD12	34:Cb:191:ARG:HB2	1.96	0.48
39:Cg:108:GLN:HE21	39:Cg:120:ILE:HG22	1.77	0.48
42:Cj:7:VAL:HG21	42:Cj:92:TYR:HA	1.96	0.48
49:C1:472:G:H2'	49:C1:473:G:H8	1.77	0.48
49:C1:1098:G:HO2'	49:C1:1099:A:H8	1.61	0.48
49:C1:1514:A:O5'	49:C1:1516:C:N4	2.45	0.48
50:C2:129:U:H2'	50:C2:130:C:H6	1.79	0.48
50:C2:243:G:H2'	50:C2:244:G:C8	2.48	0.48
1:UA:254:ASN:O	49:C1:286:G:N2	2.46	0.48
1:UA:260:CYS:HB3	1:UA:303:VAL:HG23	1.95	0.48
1:UA:320:GLY:HA3	1:UA:338:GLY:N	2.26	0.48
1:UA:541:GLU:O	1:UA:543:GLN:N	2.46	0.48
1:UA:846:ASN:HD21	10:UM:835:LYS:HA	1.78	0.48
2:UB:806:LEU:HG	29:CN:23:GLN:HE22	1.79	0.48
4:UD:278:ASP:N	4:UD:278:ASP:OD1	2.45	0.48
5:UF:54:PRO:HA	5:UF:57:PHE:HB2	1.96	0.48
6:UG:122:ALA:HA	7:UJ:87:THR:HA	1.95	0.48
7:UJ:32:SER:HB2	7:UJ:123:ARG:NH1	2.29	0.48
7:UJ:272:TYR:HB3	7:UJ:311:CYS:SG	2.54	0.48
9:UL:711:LEU:O	9:UL:722:VAL:HA	2.14	0.48
13:UQ:285:ASP:OD1	13:UQ:285:ASP:N	2.36	0.48
15:UU:203:ARG:HG3	15:UU:207:TRP:HB2	1.95	0.48
18:CA:245:LEU:HD11	19:CC:135:ARG:HH22	1.78	0.48
21:CE:49:THR:OG1	21:CE:104:THR:OG1	2.28	0.48
22:CG:243:GLN:HE21	22:CG:282:LYS:HA	1.79	0.48
22:CG:273:TYR:HA	22:CG:281:ILE:HG12	1.95	0.48
27:CL:477:GLU:HG3	27:CL:478:ARG:HD2	1.95	0.48
28:CM:316:HIS:NE2	49:C1:588:U:O2'	2.43	0.48
31:CQ:227:MET:HE3	31:CQ:251:ILE:HG13	1.94	0.48
34:Cb:97:GLU:OE2	34:Cb:114:ILE:N	2.46	0.48
49:C1:216:A:N6	49:C1:228:G:H1	2.08	0.48
49:C1:1071:G:H2'	49:C1:1072:G:C8	2.48	0.48
51:UV:689:LYS:HE2	51:UV:1043:ALA:HB3	1.94	0.48
54:UT:2096:PHE:CD1	54:UT:2134:LEU:HB3	2.48	0.48
55:UH:581:VAL:HG11	55:UH:626:LEU:HG	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:UA:23:SER:HB3	1:UA:30:PHE:HE1	1.79	0.48
1:UA:559:ARG:HH11	25:CJ:144:ARG:NE	2.11	0.48
2:UB:632:ASP:HA	2:UB:635:VAL:HG12	1.96	0.48
4:UD:835:ILE:HD13	4:UD:838:ILE:HD11	1.95	0.48
7:UJ:1764:LEU:HA	7:UJ:1767:ILE:HD12	1.95	0.48
8:UK:123:LEU:HD22	8:UK:230:LEU:HG	1.94	0.48
12:UO:391:ASN:ND2	49:C1:133:G:O6	2.35	0.48
13:UQ:218:ILE:HG23	13:UQ:234:LEU:HB2	1.95	0.48
15:UU:104:VAL:HB	15:UU:122:PHE:HB2	1.96	0.48
20:CD:363:ARG:HD3	50:C2:87:G:O6	2.13	0.48
22:CG:314:VAL:HG13	22:CG:323:VAL:HG13	1.95	0.48
24:CI:833:LEU:O	24:CI:843:GLN:HA	2.14	0.48
28:CM:264:ILE:HB	28:CM:279:GLN:HB2	1.94	0.48
35:Cc:27:VAL:HG11	35:Cc:54:PRO:HB2	1.96	0.48
46:Co:340:THR:HB	46:Co:354:MET:HB3	1.95	0.48
49:C1:101:G:H2'	49:C1:102:G:H8	1.78	0.48
49:C1:195:U:H2'	49:C1:196:G:C8	2.47	0.48
49:C1:2239:U:O4	49:C1:2328:G:N2	2.46	0.48
51:UV:650:SER:HA	51:UV:651:PHE:HA	1.55	0.48
54:UT:365:ASN:HD21	54:UT:409:ALA:HB1	1.78	0.48
54:UT:971:ASN:HA	54:UT:974:THR:HG22	1.96	0.48
54:UT:1444:GLN:O	54:UT:1452:SER:OG	2.32	0.48
55:UH:859:MET:HB3	55:UH:874:ASP:HB3	1.95	0.48
63:Cz:1509:SER:O	63:Cz:1513:ILE:HG12	2.12	0.48
4:UD:124:HIS:CE1	62:UP:333:PRO:HD3	2.49	0.48
7:UJ:727:LEU:HD23	7:UJ:730:LEU:HD22	1.96	0.48
7:UJ:1760:LEU:HD21	7:UJ:1789:ILE:HD11	1.96	0.48
9:UL:94:LEU:O	9:UL:103:VAL:N	2.46	0.48
13:UQ:651:THR:HA	13:UQ:657:PRO:HA	1.96	0.48
13:UQ:917:HIS:NE2	14:UR:573:SER:OG	2.44	0.48
14:UR:434:ILE:O	14:UR:441:VAL:HA	2.14	0.48
15:UU:206:GLY:HA3	15:UU:224:PRO:HG3	1.96	0.48
18:CA:96:ASN:HD21	18:CA:98:VAL:HG23	1.79	0.48
20:CD:214:LEU:O	20:CD:254:TYR:OH	2.31	0.48
20:CD:292:LEU:HB3	20:CD:293:ILE:HG23	1.96	0.48
21:CF:18:VAL:HA	21:CF:21:LEU:HD12	1.96	0.48
30:CP:123:ILE:O	30:CP:182:ARG:NH1	2.46	0.48
32:CS:729:LEU:HD21	32:CS:805:ILE:HD11	1.96	0.48
34:Cb:64:ILE:HG23	34:Cb:69:LEU:HD12	1.95	0.48
35:Cc:188:ALA:HA	35:Cc:198:ILE:HD11	1.94	0.48
43:Ck:79:ARG:HB2	43:Ck:127:MET:HE1	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:C1:474:A:HO2'	49:C1:475:C:H5''	1.77	0.48
49:C1:496:U:N3	49:C1:503:G:C6	2.81	0.48
50:C2:262:C:H2'	50:C2:263:U:H6	1.79	0.48
51:UV:45:MET:HG3	51:UV:433:PHE:HE2	1.79	0.48
54:UT:232:ILE:HA	54:UT:235:VAL:HG22	1.95	0.48
54:UT:471:PRO:HA	54:UT:474:VAL:HG22	1.95	0.48
54:UT:1497:PRO:HA	54:UT:1502:ARG:HE	1.78	0.48
54:UT:2164:LEU:HD21	54:UT:2179:ILE:HG13	1.95	0.48
60:CY:293:LYS:O	60:CY:297:MET:HG2	2.13	0.48
1:UA:167:LEU:HD22	1:UA:177:ILE:HG12	1.95	0.48
6:UG:309:ASP:OD2	6:UG:313:ARG:N	2.44	0.48
6:UG:420:VAL:HG13	6:UG:423:ALA:HB2	1.95	0.48
12:UO:461:ARG:NH1	12:UO:500:ASP:OD1	2.39	0.48
13:UQ:96:PHE:HA	13:UQ:103:LEU:HD13	1.96	0.48
14:UR:461:ILE:HD12	21:CE:26:GLN:NE2	2.29	0.48
14:UR:492:LEU:HB3	14:UR:536:PHE:HB2	1.94	0.48
15:UU:41:ILE:O	15:UU:772:GLY:HA2	2.13	0.48
15:UU:119:LEU:HB3	15:UU:131:LEU:HB3	1.96	0.48
18:CA:186:SER:OG	18:CA:187:HIS:N	2.45	0.48
19:CC:195:ALA:O	19:CC:199:ARG:HB2	2.13	0.48
22:CG:235:ARG:HH22	50:C2:119:C:H2'	1.79	0.48
23:CH:368:LYS:NZ	23:CH:374:SER:OG	2.47	0.48
24:CI:919:LYS:NZ	49:C1:1159:C:O5'	2.37	0.48
26:CK:223:SER:OG	26:CK:224:GLY:N	2.46	0.48
29:CN:38:ILE:HA	29:CN:111:GLN:O	2.13	0.48
30:CP:157:LEU:HD13	30:CP:201:LEU:HB2	1.95	0.48
32:CS:620:GLN:O	32:CS:623:GLN:NE2	2.42	0.48
34:Cb:62:LYS:O	34:Cb:66:MET:HG2	2.13	0.48
36:Cd:87:ARG:NE	49:C1:743:U:O2'	2.43	0.48
36:Cd:181:LEU:HD22	49:C1:664:A:H62	1.78	0.48
44:Cm:8:HIS:HB2	44:Cm:74:VAL:HG11	1.95	0.48
49:C1:214:C:H2'	49:C1:215:A:H8	1.78	0.48
49:C1:493:G:H2'	49:C1:494:G:C8	2.49	0.48
54:UT:11:LYS:NZ	54:UT:796:LEU:O	2.37	0.48
54:UT:202:HIS:HA	54:UT:205:ARG:HG2	1.96	0.48
54:UT:583:HIS:NE2	54:UT:615:SER:O	2.40	0.48
55:UH:877:ILE:HD13	55:UH:896:ILE:HG23	1.96	0.48
1:UA:253:GLN:OE1	1:UA:276:ASN:ND2	2.41	0.48
4:UD:363:ARG:HG2	4:UD:365:LEU:HD22	1.96	0.48
5:UF:3:TRP:CZ2	28:CM:367:ARG:HG3	2.49	0.48
9:UL:157:GLY:O	9:UL:191:THR:HA	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:UL:530:LYS:HE3	9:UL:566:ASP:HA	1.95	0.48
10:UM:792:LYS:HD3	10:UM:795:ASP:HB2	1.94	0.48
12:UO:84:PHE:HA	12:UO:92:LEU:H	1.79	0.48
13:UQ:193:ASP:O	13:UQ:203:ASP:HA	2.14	0.48
14:UR:132:ASP:N	14:UR:132:ASP:OD1	2.47	0.48
14:UR:482:TRP:CE2	14:UR:571:LEU:HD22	2.48	0.48
15:UU:299:ALA:HA	15:UU:309:THR:O	2.14	0.48
17:UZ:63:TRP:HB3	17:UZ:244:LYS:HA	1.94	0.48
20:CD:353:ALA:HB1	20:CD:357:ASN:HB3	1.96	0.48
24:CI:278:ASN:OD1	24:CI:278:ASN:N	2.43	0.48
24:CI:329:GLU:HA	24:CI:332:LYS:HG2	1.94	0.48
24:CI:813:VAL:HG22	24:CI:908:VAL:HG12	1.95	0.48
29:CO:128:VAL:HG23	29:CO:159:LEU:HD13	1.95	0.48
29:CO:155:THR:OG1	29:CO:157:GLU:OE1	2.31	0.48
32:CR:184:ARG:NH1	32:CR:560:SER:O	2.46	0.48
49:C1:122:G:H2'	49:C1:123:U:C6	2.49	0.48
49:C1:907:A:H2'	49:C1:908:C:C6	2.49	0.48
49:C1:1219:A:N7	49:C1:1448:A:N6	2.62	0.48
54:UT:137:PHE:HD2	54:UT:175:LEU:HD11	1.78	0.48
54:UT:825:MET:SD	54:UT:828:THR:OG1	2.71	0.48
57:US:196:ILE:O	57:US:200:THR:OG1	2.26	0.48
57:US:397:ILE:HA	57:US:400:ILE:HG12	1.95	0.48
57:US:473:THR:HA	57:US:476:LYS:HD2	1.95	0.48
63:Cz:1754:SER:HA	63:Cz:1757:LYS:HD2	1.94	0.48
1:UA:139:ALA:O	15:UU:126:LYS:NZ	2.42	0.48
1:UA:175:ALA:HB2	1:UA:198:VAL:HG11	1.95	0.48
4:UD:666:LEU:HD23	4:UD:670:SER:HB2	1.95	0.48
6:UG:63:VAL:HB	6:UG:69:ARG:HG3	1.94	0.48
7:UJ:289:LEU:O	7:UJ:293:MET:HG3	2.13	0.48
7:UJ:397:LYS:HA	7:UJ:400:LEU:HG	1.95	0.48
7:UJ:537:THR:HG22	7:UJ:539:VAL:H	1.78	0.48
9:UL:19:SER:OG	9:UL:20:SER:N	2.43	0.48
9:UL:862:ASN:HA	9:UL:902:VAL:HG23	1.95	0.48
15:UU:463:PRO:O	15:UU:515:HIS:ND1	2.44	0.48
27:CL:709:SER:N	27:CL:712:GLU:OE2	2.36	0.48
28:CM:94:TRP:HZ3	28:CM:350:VAL:HG21	1.79	0.48
29:CN:113:TYR:HB3	29:CN:121:LEU:HD11	1.95	0.48
32:CR:35:LYS:HD2	32:CR:95:PHE:HE2	1.77	0.48
32:CS:45:MET:HE3	32:CS:45:MET:HB3	1.56	0.48
38:Cf:48:THR:HG21	38:Cf:54:LYS:HD2	1.95	0.48
41:Ci:29:VAL:HG23	41:Ci:46:LEU:HA	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:Cm:55:ASN:OD1	44:Cm:55:ASN:N	2.47	0.48
49:C1:4:G:C2	49:C1:32:U:C2	3.02	0.48
49:C1:10:U:O2	49:C1:25:G:C2	2.67	0.48
49:C1:434:A:H2'	49:C1:436:A:N7	2.28	0.48
49:C1:810:G:OP2	54:UT:1617:ARG:NH2	2.47	0.48
49:C1:923:C:H2'	49:C1:924:A:H8	1.78	0.48
49:C1:1625:G:H1	49:C1:1663:U:H3	1.62	0.48
51:UV:677:HIS:HB3	51:UV:828:SER:HB3	1.96	0.48
55:UH:538:TYR:OH	55:UH:582:ASP:OD2	2.26	0.48
56:UI:255:SER:O	56:UI:255:SER:OG	2.28	0.48
1:UA:119:ILE:O	1:UA:146:THR:HA	2.13	0.47
1:UA:159:TRP:HA	1:UA:166:PHE:HB3	1.96	0.47
4:UD:375:LEU:HD23	4:UD:384:LEU:HD22	1.96	0.47
6:UG:362:THR:HA	6:UG:394:VAL:HA	1.95	0.47
9:UL:134:ILE:HG13	9:UL:148:LEU:HB2	1.94	0.47
9:UL:189:LEU:O	9:UL:200:LEU:HA	2.14	0.47
9:UL:211:THR:O	9:UL:212:HIS:ND1	2.47	0.47
9:UL:956:ARG:NH2	27:CL:681:GLU:O	2.41	0.47
10:UM:887:THR:HA	10:UM:890:GLU:HG2	1.95	0.47
12:UO:79:PRO:HA	12:UO:101:GLU:HA	1.96	0.47
12:UO:240:PRO:HA	12:UO:247:LEU:HA	1.94	0.47
12:UO:246:THR:HA	12:UO:260:LEU:HG	1.96	0.47
13:UQ:104:ILE:HG12	13:UQ:113:VAL:HG12	1.96	0.47
13:UQ:625:ARG:HH11	13:UQ:637:PHE:HB3	1.79	0.47
13:UQ:810:GLU:OE2	13:UQ:825:LYS:N	2.46	0.47
14:UR:425:TRP:CE3	14:UR:432:LEU:HB3	2.49	0.47
14:UR:562:LYS:NZ	49:C1:237:G:OP1	2.42	0.47
18:CB:130:TRP:CE2	18:CB:138:ALA:HB2	2.49	0.47
24:CI:385:LEU:HB3	24:CI:388:GLN:HB3	1.96	0.47
24:CI:856:ARG:NH2	27:CL:522:GLU:OE2	2.43	0.47
24:CI:1005:THR:OG1	24:CI:1009:GLY:O	2.32	0.47
28:CM:224:LEU:HB3	28:CM:234:ILE:HG22	1.95	0.47
29:CN:37:LEU:HD13	29:CN:202:ILE:HG23	1.96	0.47
32:CS:57:LEU:HB2	32:CS:120:TYR:CG	2.48	0.47
32:CS:202:ILE:HD11	32:CS:206:LEU:HA	1.97	0.47
32:CS:285:ALA:HB3	32:CS:291:LYS:HD3	1.95	0.47
35:Cc:105:PHE:HA	35:Cc:108:ILE:HG12	1.95	0.47
38:Cf:5:ARG:HB2	49:C1:920:G:H1	1.78	0.47
39:Cg:151:GLN:HG3	39:Cg:152:LYS:HE2	1.96	0.47
49:C1:2115:U:H2'	49:C1:2116:C:C6	2.48	0.47
51:UV:306:TRP:HE1	51:UV:421:THR:HG21	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:UV:560:LYS:NZ	51:UV:563:CYS:SG	2.87	0.47
51:UV:809:HIS:HB2	51:UV:942:MET:HE1	1.96	0.47
51:UV:950:PRO:HB2	51:UV:955:VAL:HG11	1.95	0.47
54:UT:172:PHE:HB3	54:UT:214:LEU:HD21	1.96	0.47
54:UT:310:ILE:HG21	54:UT:348:VAL:HG11	1.95	0.47
54:UT:617:LEU:HA	54:UT:620:LEU:HD12	1.96	0.47
54:UT:2096:PHE:HD1	54:UT:2134:LEU:HB3	1.78	0.47
57:US:452:ALA:O	57:US:455:SER:OG	2.32	0.47
1:UA:111:PHE:CE1	1:UA:122:TRP:HB2	2.48	0.47
1:UA:401:SER:OG	1:UA:403:ASP:OD1	2.27	0.47
1:UA:546:SER:HA	42:Cj:107:GLN:HE22	1.79	0.47
1:UA:739:ARG:NH2	1:UA:769:TYR:OH	2.36	0.47
2:UB:612:THR:HG23	2:UB:613:PRO:HD3	1.96	0.47
6:UG:107:GLU:N	6:UG:107:GLU:OE1	2.47	0.47
6:UG:324:MET:HE1	6:UG:358:VAL:HG21	1.95	0.47
6:UG:342:ARG:HB2	6:UG:360:TRP:CZ3	2.49	0.47
7:UJ:166:PHE:CD1	7:UJ:185:GLN:HG2	2.48	0.47
7:UJ:184:GLN:O	7:UJ:187:THR:OG1	2.31	0.47
9:UL:125:LEU:O	9:UL:136:VAL:HA	2.14	0.47
10:UM:689:LEU:HD13	10:UM:720:TRP:CD2	2.49	0.47
12:UO:32:LYS:HA	12:UO:32:LYS:HD2	1.73	0.47
14:UR:395:GLY:HA3	14:UR:414:ILE:O	2.13	0.47
15:UU:242:SER:O	15:UU:242:SER:OG	2.29	0.47
15:UU:300:THR:HG22	15:UU:311:TRP:HE1	1.79	0.47
15:UU:406:LYS:HE3	15:UU:423:ARG:HD2	1.96	0.47
16:UX:120:ARG:NH2	28:CM:63:ASN:O	2.43	0.47
17:UZ:71:HIS:ND1	17:UZ:239:THR:HG23	2.29	0.47
20:CD:70:THR:HB	20:CD:73:LEU:HB2	1.95	0.47
20:CD:339:PRO:HA	50:C2:89:A:H3'	1.96	0.47
22:CG:326:LEU:HD13	22:CG:357:TRP:CD2	2.50	0.47
23:CH:171:ILE:HD12	23:CH:196:PHE:CE1	2.49	0.47
24:CI:309:PRO:HA	24:CI:312:GLU:HB2	1.96	0.47
24:CI:760:LEU:N	24:CI:764:GLN:OE1	2.43	0.47
28:CM:34:PHE:O	28:CM:38:ARG:CB	2.62	0.47
28:CM:324:LYS:NZ	50:C2:31:A:OP1	2.45	0.47
32:CR:520:HIS:O	32:CR:710:SER:N	2.43	0.47
45:Cn:89:ASN:OD1	45:Cn:90:ASP:N	2.47	0.47
49:C1:337:G:H2'	49:C1:338:U:C6	2.49	0.47
50:C2:11:C:H2'	50:C2:12:U:C6	2.48	0.47
50:C2:13:U:H2'	50:C2:14:C:C6	2.49	0.47
50:C2:20:A:H2'	50:C2:21:U:H6	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:UV:186:LEU:HD11	51:UV:200:LEU:HB3	1.96	0.47
51:UV:394:TRP:HE1	51:UV:399:GLN:HA	1.79	0.47
54:UT:1321:ASN:HB2	54:UT:1324:VAL:HG23	1.96	0.47
54:UT:2059:SER:OG	54:UT:2101:SER:OG	2.26	0.47
59:CX:379:TRP:HA	59:CX:382:ILE:HD12	1.96	0.47
56:UI:164:ASP:OD1	56:UI:199:LYS:NZ	2.34	0.47
1:UA:578:ILE:HG22	1:UA:589:ALA:HB2	1.96	0.47
2:UB:656:GLU:OE1	57:US:467:TYR:OH	2.30	0.47
5:UF:29:THR:OG1	5:UF:30:LYS:N	2.47	0.47
7:UJ:3:SER:OG	16:UX:-4:ARG:NH1	2.48	0.47
7:UJ:72:THR:HG23	7:UJ:73:LEU:HD23	1.95	0.47
9:UL:151:HIS:H	9:UL:199:LYS:HZ1	1.62	0.47
9:UL:517:HIS:CD2	9:UL:519:ASP:HB3	2.49	0.47
13:UQ:441:VAL:HG22	13:UQ:850:ALA:HB2	1.94	0.47
15:UU:398:PHE:CZ	15:UU:473:ASN:HA	2.49	0.47
18:CA:130:TRP:CE2	18:CA:138:ALA:HB2	2.49	0.47
18:CA:248:LYS:NZ	18:CA:249:GLN:O	2.31	0.47
19:CC:251:ALA:HA	19:CC:254:ILE:HD12	1.97	0.47
24:CI:333:LYS:HZ3	32:CR:101:LEU:HD21	1.79	0.47
25:CJ:129:LYS:NZ	50:C2:58:A:N1	2.53	0.47
32:CR:285:ALA:HB3	32:CR:291:LYS:HD3	1.95	0.47
37:Ce:64:ILE:HG23	37:Ce:96:VAL:HA	1.96	0.47
38:Cf:99:SER:CA	38:Cf:173:ILE:O	2.63	0.47
41:CI:65:ARG:HB2	49:C1:1490:A:H5'	1.96	0.47
46:Co:367:SER:OG	46:Co:369:ASP:OD1	2.27	0.47
49:C1:124:C:H2'	49:C1:125:G:H8	1.79	0.47
49:C1:2095:G:H2'	49:C1:2096:G:C8	2.49	0.47
51:UV:100:PRO:HA	51:UV:101:SER:HA	1.63	0.47
51:UV:671:ILE:HA	51:UV:814:THR:HG21	1.96	0.47
51:UV:844:SER:HA	51:UV:847:PHE:HB2	1.96	0.47
52:CV:171:THR:HA	52:CV:174:TYR:HB2	1.97	0.47
56:UE:159:GLN:O	56:UE:163:THR:HG22	2.14	0.47
56:UE:181:ILE:HD13	56:UE:216:ARG:HH22	1.79	0.47
56:UE:203:ARG:HH11	56:UE:206:ARG:HH21	1.62	0.47
63:Cz:1563:THR:OG1	63:Cz:1564:ASP:N	2.48	0.47
1:UA:35:ASN:HA	1:UA:58:ILE:HG12	1.96	0.47
1:UA:613:SER:OG	1:UA:614:VAL:N	2.48	0.47
4:UD:16:ILE:N	4:UD:344:GLY:O	2.47	0.47
5:UF:277:ALA:HA	5:UF:280:ILE:HD13	1.96	0.47
10:UM:248:LEU:HD12	10:UM:256:MET:HB2	1.95	0.47
10:UM:865:VAL:HG23	27:CL:679:PRO:HB3	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:UO:427:ALA:HB1	12:UO:432:ARG:HB3	1.95	0.47
14:UR:157:LEU:HD13	14:UR:157:LEU:HA	1.72	0.47
15:UU:34:ILE:HG23	15:UU:780:THR:HG23	1.96	0.47
15:UU:473:ASN:HD22	15:UU:552:CYS:HA	1.77	0.47
15:UU:931:GLY:O	15:UU:934:LYS:C	2.58	0.47
23:CH:278:GLY:HA3	23:CH:297:VAL:HG12	1.97	0.47
23:CH:353:ARG:HD3	24:CI:537:TRP:HE1	1.80	0.47
24:CI:68:PRO:HB2	24:CI:115:THR:HG23	1.96	0.47
28:CM:150:TRP:NE1	28:CM:186:THR:O	2.46	0.47
32:CR:791:SER:HB3	32:CR:890:GLN:HA	1.96	0.47
32:CS:747:LEU:HD11	32:CS:758:HIS:HB2	1.96	0.47
35:Cc:64:TYR:CG	35:Cc:74:CYS:HB3	2.50	0.47
43:Ck:77:THR:OG1	43:Ck:78:GLY:N	2.48	0.47
45:Cn:76:LEU:O	45:Cn:80:GLY:N	2.42	0.47
49:C1:57:C:H2'	49:C1:58:G:H8	1.79	0.47
49:C1:474:A:O2'	49:C1:475:C:H5''	2.15	0.47
49:C1:485:G:H2'	49:C1:486:G:C8	2.50	0.47
49:C1:685:C:O2	49:C1:686:A:N6	2.47	0.47
49:C1:2067:G:H1	49:C1:2174:C:H1'	1.80	0.47
53:CW:24:PRO:CD	53:CW:24:PRO:O	2.62	0.47
53:CW:93:ARG:NH1	53:CW:128:GLY:O	2.48	0.47
53:CW:183:GLN:O	53:CW:229:TYR:OH	2.32	0.47
53:CW:342:SER:OG	53:CW:364:LEU:O	2.30	0.47
54:UT:216:LYS:NZ	54:UT:262:ALA:O	2.42	0.47
54:UT:716:VAL:O	54:UT:720:ILE:HG12	2.14	0.47
54:UT:825:MET:O	54:UT:828:THR:OG1	2.28	0.47
54:UT:1472:THR:HA	54:UT:1475:GLN:HB2	1.95	0.47
60:CY:373:THR:OG1	60:CY:374:ARG:N	2.47	0.47
56:UI:203:ARG:HH11	56:UI:206:ARG:HH21	1.62	0.47
1:UA:155:ARG:HH21	1:UA:171:LYS:HD2	1.78	0.47
1:UA:844:LEU:HD13	15:UU:1006:ILE:HD11	1.96	0.47
6:UG:211:HIS:HD2	6:UG:213:LEU:HD11	1.80	0.47
7:UJ:168:ASP:HA	7:UJ:171:ILE:HG12	1.96	0.47
7:UJ:204:CYS:HB3	7:UJ:264:VAL:HG21	1.97	0.47
13:UQ:90:SER:OG	13:UQ:106:THR:OG1	2.24	0.47
13:UQ:144:VAL:O	13:UQ:445:ARG:NH2	2.47	0.47
13:UQ:536:PRO:HA	13:UQ:556:TRP:HB2	1.97	0.47
14:UR:376:PHE:HA	14:UR:386:ALA:O	2.14	0.47
14:UR:557:PHE:CE1	14:UR:567:ARG:HB2	2.50	0.47
19:CC:197:ARG:HG2	20:CD:171:LEU:HD21	1.95	0.47
20:CD:234:GLU:HA	20:CD:237:VAL:HG22	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:CM:186:THR:HG21	54:UT:2042:MET:HB2	1.97	0.47
32:CR:202:ILE:HD11	32:CR:206:LEU:HA	1.97	0.47
32:CR:562:ALA:HB3	32:CR:565:HIS:CD2	2.49	0.47
32:CS:131:ILE:H	32:CS:131:ILE:HG12	1.46	0.47
36:CD:177:ARG:HG3	49:C1:665:C:H1'	1.96	0.47
49:C1:398:C:H2'	49:C1:399:G:H8	1.80	0.47
49:C1:689:A:H1'	49:C1:892:C:N3	2.28	0.47
49:C1:974:G:H1'	53:CW:127:MET:HE3	1.97	0.47
49:C1:1455:C:H2'	49:C1:1456:A:C8	2.49	0.47
51:UV:92:LYS:HE3	51:UV:94:LYS:HB3	1.97	0.47
51:UV:1054:LEU:O	52:CV:91:HIS:HB2	2.14	0.47
51:UV:1098:ARG:NH2	51:UV:1099:LYS:O	2.47	0.47
53:CW:65:ASP:O	53:CW:367:ARG:NH2	2.48	0.47
54:UT:779:PRO:HG3	54:UT:842:ARG:HD3	1.96	0.47
60:CY:235:ILE:HA	60:CY:239:VAL:HG22	1.97	0.47
63:Cz:1591:TYR:HB3	63:Cz:1600:ALA:HB2	1.97	0.47
63:Cz:1605:GLU:HA	63:Cz:1608:VAL:HG22	1.96	0.47
1:UA:611:THR:HG23	15:UU:399:ASP:H	1.80	0.47
3:UC:580:THR:OG1	3:UC:581:TRP:N	2.47	0.47
4:UD:59:LEU:HB3	4:UD:62:GLY:HA3	1.96	0.47
9:UL:48:LEU:HA	9:UL:60:ARG:HA	1.95	0.47
10:UM:287:LYS:HA	10:UM:287:LYS:HD3	1.76	0.47
13:UQ:457:ARG:HH12	49:C1:39:C:H5'	1.79	0.47
14:UR:185:GLN:O	14:UR:190:LYS:NZ	2.34	0.47
15:UU:549:ILE:HG13	15:UU:556:ALA:HA	1.97	0.47
15:UU:637:VAL:HG13	15:UU:649:TRP:HB2	1.97	0.47
18:CA:66:LYS:HG2	33:CT:150:GLY:HA2	1.96	0.47
20:CD:5:ILE:HG12	20:CD:16:PHE:H	1.79	0.47
20:CD:196:GLU:HA	20:CD:199:LYS:HB2	1.97	0.47
20:CD:317:SER:OG	50:C2:264:G:O6	2.30	0.47
23:CH:90:ASN:ND2	23:CH:98:ILE:HG13	2.29	0.47
31:CQ:240:GLN:HG3	31:CQ:242:GLY:H	1.79	0.47
48:CU:116:LEU:HD21	49:C1:1710:G:C6	2.49	0.47
48:CU:233:ILE:HD11	49:C1:297:U:H5'	1.96	0.47
49:C1:188:C:H2'	49:C1:189:G:H8	1.78	0.47
49:C1:500:C:O2'	49:C1:501:U:O4'	2.33	0.47
49:C1:1448:A:C6	49:C1:1549:U:C4	3.02	0.47
51:UV:41:GLU:HA	51:UV:44:GLU:HG3	1.95	0.47
54:UT:738:MET:O	54:UT:746:TRP:NE1	2.48	0.47
54:UT:1182:ALA:HA	54:UT:1185:ARG:HB2	1.96	0.47
57:US:112:ASN:OD1	57:US:112:ASN:N	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:UA:3:THR:O	1:UA:3:THR:OG1	2.33	0.47
1:UA:45:ASN:HD21	27:CL:664:ALA:HB3	1.79	0.47
1:UA:58:ILE:HA	1:UA:74:ASP:HA	1.96	0.47
1:UA:279:PHE:O	1:UA:292:THR:OG1	2.29	0.47
1:UA:410:ASP:N	1:UA:410:ASP:OD1	2.45	0.47
1:UA:578:ILE:HA	1:UA:588:LEU:O	2.13	0.47
1:UA:816:LEU:HD11	15:UU:1044:LEU:HD23	1.97	0.47
2:UB:113:VAL:HG13	23:CH:63:GLY:HA2	1.96	0.47
4:UD:162:ASN:HB3	4:UD:181:ARG:HB3	1.96	0.47
4:UD:552:ILE:HG22	4:UD:563:VAL:HG23	1.96	0.47
5:UF:117:ALA:HB3	5:UF:126:TRP:HD1	1.80	0.47
5:UF:354:PRO:HA	5:UF:357:LEU:HB2	1.96	0.47
6:UG:265:THR:OG1	6:UG:266:GLN:N	2.46	0.47
7:UJ:98:VAL:O	7:UJ:102:LEU:HG	2.15	0.47
7:UJ:251:ILE:HG13	7:UJ:255:LEU:HD23	1.97	0.47
7:UJ:546:PRO:HB3	7:UJ:589:PHE:HZ	1.79	0.47
7:UJ:823:ASP:OD1	7:UJ:823:ASP:N	2.46	0.47
9:UL:957:ALA:HB3	27:CL:576:VAL:H	1.79	0.47
10:UM:794:VAL:HA	10:UM:797:VAL:HG22	1.96	0.47
12:UO:101:GLU:CD	12:UO:102:ALA:H	2.23	0.47
13:UQ:311:ASP:HA	13:UQ:330:LEU:HD12	1.95	0.47
13:UQ:691:ILE:HB	13:UQ:700:LEU:HD11	1.97	0.47
14:UR:417:ARG:O	14:UR:418:HIS:ND1	2.47	0.47
15:UU:180:LYS:HE3	15:UU:180:LYS:HB3	1.67	0.47
15:UU:468:ILE:HG22	15:UU:513:THR:HG23	1.97	0.47
18:CA:73:VAL:HA	18:CA:84:ALA:HA	1.96	0.47
18:CA:226:ILE:HD12	18:CA:247:LEU:HD22	1.97	0.47
19:CC:336:LEU:HD23	19:CC:336:LEU:HA	1.69	0.47
20:CD:270:TYR:O	20:CD:274:LEU:HB2	2.15	0.47
21:CE:78:PRO:HD3	21:CE:119:ARG:HH11	1.79	0.47
22:CG:436:HIS:CG	22:CG:488:ARG:HE	2.33	0.47
24:CI:246:ILE:HB	24:CI:798:ILE:HB	1.97	0.47
26:CK:131:ALA:HB1	26:CK:136:LEU:HD12	1.96	0.47
28:CM:13:GLN:O	28:CM:13:GLN:NE2	2.47	0.47
28:CM:242:CYS:HA	28:CM:259:SER:HA	1.95	0.47
28:CM:332:THR:O	28:CM:332:THR:OG1	2.25	0.47
29:CN:177:LYS:HB3	29:CN:205:PHE:HZ	1.80	0.47
32:CR:112:THR:O	32:CR:112:THR:OG1	2.32	0.47
32:CR:112:THR:HG21	32:CR:135:ILE:HB	1.97	0.47
32:CR:620:GLN:O	32:CR:623:GLN:NE2	2.42	0.47
32:CR:891:ARG:NH1	32:CS:792:TYR:OH	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:Cc:43:ILE:O	35:Cc:46:THR:OG1	2.25	0.47
36:Cd:74:ARG:HD3	36:Cd:94:ARG:HD3	1.97	0.47
40:Ch:129:TYR:OH	49:C1:1547:C:O2	2.32	0.47
42:Cj:52:ILE:HG13	42:Cj:60:PHE:HE2	1.79	0.47
43:Ck:91:ILE:HB	43:Ck:112:LEU:HB2	1.97	0.47
46:Co:343:PHE:HA	46:Co:353:GLN:O	2.13	0.47
49:C1:166:A:C6	49:C1:171:G:O6	2.68	0.47
49:C1:186:C:H2'	49:C1:187:G:C8	2.49	0.47
49:C1:253:G:H2'	49:C1:254:G:C8	2.49	0.47
49:C1:345:U:N3	49:C1:346:C:N4	2.62	0.47
49:C1:770:C:H3'	49:C1:771:G:H8	1.79	0.47
49:C1:893:C:H2'	49:C1:894:C:C6	2.50	0.47
49:C1:1023:U:O4	49:C1:1049:G:O6	2.32	0.47
49:C1:1175:A:H2'	49:C1:1176:A:C8	2.49	0.47
50:C2:84:G:N3	50:C2:264:G:N2	2.63	0.47
50:C2:262:C:H2'	50:C2:263:U:C6	2.50	0.47
51:UV:895:ILE:HG13	51:UV:897:THR:HG23	1.96	0.47
51:UV:1051:LEU:HD22	51:UV:1054:LEU:HD23	1.96	0.47
53:CW:70:MET:SD	53:CW:79:PHE:HB2	2.55	0.47
53:CW:131:TYR:H	61:CZ:551:LYS:HZ3	1.61	0.47
54:UT:1156:TYR:HE2	54:UT:1160:MET:HE3	1.79	0.47
54:UT:1356:SER:HB3	54:UT:1433:PRO:HG3	1.97	0.47
55:UH:632:SER:HB3	55:UH:709:ILE:HD13	1.96	0.47
55:UH:897:GLY:HA2	55:UH:900:ILE:HG22	1.96	0.47
4:UD:22:THR:HG23	4:UD:23:HIS:ND1	2.30	0.47
4:UD:154:LEU:HG	4:UD:168:ILE:HD13	1.95	0.47
4:UD:384:LEU:HG	4:UD:393:ILE:HD12	1.97	0.47
4:UD:690:LYS:HE2	4:UD:704:VAL:HG12	1.96	0.47
7:UJ:86:MET:HE2	7:UJ:86:MET:HB2	1.84	0.47
9:UL:660:HIS:ND1	9:UL:706:HIS:O	2.48	0.47
11:UN:895:GLN:OE1	11:UN:899:ARG:NH1	2.47	0.47
21:CE:36:LYS:HE2	50:C2:82:U:C5	2.49	0.47
25:CJ:165:LYS:HD3	25:CJ:165:LYS:HA	1.59	0.47
32:CS:791:SER:HB3	32:CS:890:GLN:HA	1.96	0.47
34:Cb:56:LEU:HD23	46:Co:351:ARG:HH22	1.78	0.47
35:Cc:161:LEU:HD11	35:Cc:200:LYS:HG2	1.96	0.47
37:Ce:56:GLU:HA	37:Ce:62:LYS:HG2	1.96	0.47
47:Cp:11:VAL:HG23	47:Cp:33:PHE:HA	1.97	0.47
49:C1:86:C:H2'	49:C1:87:G:C8	2.50	0.47
49:C1:849:A:N6	49:C1:874:G:C6	2.82	0.47
49:C1:1623:U:O2'	49:C1:1675:A:N7	2.41	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:UT:470:ILE:HD12	54:UT:473:MET:HB2	1.97	0.47
54:UT:1597:SER:OG	54:UT:1636:ARG:NH1	2.47	0.47
57:US:287:GLU:O	57:US:359:ARG:NH2	2.47	0.47
58:CI:18:LEU:HD13	58:CI:74:GLN:HE22	1.80	0.47
56:UI:159:GLN:O	56:UI:163:THR:HG22	2.14	0.47
56:UI:181:ILE:HD13	56:UI:216:ARG:HH22	1.79	0.47
7:UJ:855:VAL:HA	7:UJ:858:LYS:HE3	1.97	0.47
7:UJ:1683:PHE:HD1	7:UJ:1702:VAL:HG11	1.80	0.47
9:UL:513:ALA:O	9:UL:525:SER:HA	2.15	0.47
10:UM:32:ALA:HB2	10:UM:328:LEU:HD21	1.97	0.47
12:UO:14:PRO:HG2	12:UO:493:ARG:HD2	1.97	0.47
12:UO:397:LEU:HB3	14:UR:297:ILE:HD11	1.96	0.47
20:CD:169:VAL:HG21	20:CD:303:ALA:HB2	1.97	0.47
21:CF:67:HIS:CE1	21:CF:68:ILE:HG13	2.49	0.47
24:CI:132:VAL:HG21	24:CI:245:ILE:HD11	1.95	0.47
28:CM:385:LEU:HG	28:CM:386:PRO:HD2	1.95	0.47
32:CS:133:PRO:HA	32:CS:136:LEU:HD12	1.97	0.47
34:Cb:129:VAL:HG12	34:Cb:139:LEU:HD13	1.96	0.47
37:Ce:145:ILE:HG22	37:Ce:164:LEU:HD23	1.96	0.47
40:Ch:121:ARG:NH1	49:C1:1452:G:O3'	2.48	0.47
42:Cj:115:SER:O	42:Cj:115:SER:OG	2.28	0.47
42:Cj:117:LEU:HA	42:Cj:117:LEU:HD23	1.64	0.47
49:C1:448:C:H2'	49:C1:449:C:H6	1.80	0.47
49:C1:596:U:H2'	49:C1:597:G:H8	1.80	0.47
50:C2:113:G:H1'	50:C2:195:A:H61	1.79	0.47
50:C2:162:C:O2'	50:C2:164:U:OP2	2.28	0.47
54:UT:350:LYS:HB2	54:UT:352:THR:HG22	1.95	0.47
59:CX:234:ILE:HA	59:CX:237:THR:HG22	1.97	0.47
1:UA:324:VAL:HB	1:UA:334:LEU:HD23	1.96	0.47
4:UD:129:HIS:CD2	4:UD:164:VAL:HG11	2.50	0.47
7:UJ:146:PRO:HA	7:UJ:149:VAL:HB	1.97	0.47
9:UL:921:ILE:HA	9:UL:924:LEU:HD12	1.97	0.47
10:UM:718:THR:HG23	10:UM:720:TRP:HE1	1.80	0.47
12:UO:431:GLY:HA2	12:UO:433:TYR:CZ	2.49	0.47
13:UQ:166:TRP:CE2	13:UQ:179:PRO:HB3	2.50	0.47
13:UQ:759:ASP:HB3	55:UH:596:LYS:HD3	1.95	0.47
18:CB:84:ALA:O	18:CB:90:ASP:HA	2.15	0.47
19:CC:388:ILE:O	19:CC:392:ILE:HG12	2.14	0.47
24:CI:379:LEU:HB3	32:CR:209:LEU:HD21	1.97	0.47
25:CJ:114:VAL:HG12	25:CJ:118:LEU:HD12	1.96	0.47
26:CK:190:HIS:NE2	26:CK:220:ASN:O	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:CM:26:ASN:OD1	28:CM:27:LEU:N	2.48	0.47
29:CN:104:ILE:HG12	29:CN:110:LEU:HB2	1.96	0.47
30:CP:124:ILE:HB	30:CP:169:VAL:HB	1.97	0.47
32:CS:548:HIS:ND1	32:CS:551:ASN:OD1	2.48	0.47
32:CS:562:ALA:HB3	32:CS:565:HIS:CD2	2.49	0.47
34:Cb:158:ASP:OD1	34:Cb:174:LYS:NZ	2.38	0.47
35:Cc:187:ASN:HB3	35:Cc:195:SER:HB2	1.96	0.47
37:Ce:70:VAL:HA	37:Ce:73:LEU:HD23	1.97	0.47
45:Cn:76:LEU:HB2	45:Cn:81:LYS:HB2	1.97	0.47
49:C1:930:G:H3'	49:C1:931:G:H8	1.80	0.47
49:C1:1056:U:H2'	49:C1:1057:A:C8	2.49	0.47
49:C1:2328:G:H2'	49:C1:2329:A:C8	2.50	0.47
51:UV:1051:LEU:HB2	51:UV:1069:PRO:HG3	1.97	0.47
53:CW:25:ASP:HA	53:CW:28:LEU:HD12	1.97	0.47
53:CW:216:LEU:O	53:CW:252:TYR:OH	2.28	0.47
54:UT:7:GLY:HA2	54:UT:250:LEU:HD12	1.97	0.47
54:UT:1616:TYR:OH	54:UT:1644:GLU:O	2.33	0.47
54:UT:1882:ASP:OD1	54:UT:1885:THR:OG1	2.29	0.47
55:UH:615:ILE:HD13	55:UH:647:LEU:HD11	1.96	0.47
1:UA:264:HIS:HB2	1:UA:305:ILE:HD13	1.98	0.46
1:UA:552:ARG:NE	15:UU:506:THR:O	2.44	0.46
1:UA:831:ARG:HH21	15:UU:1031:SER:HB2	1.79	0.46
4:UD:372:PRO:HG3	4:UD:690:LYS:HG2	1.97	0.46
6:UG:579:ASP:O	6:UG:582:ARG:N	2.49	0.46
7:UJ:152:LEU:HD12	7:UJ:167:LEU:HD13	1.96	0.46
7:UJ:397:LYS:HZ3	7:UJ:400:LEU:HD21	1.80	0.46
9:UL:415:ASN:N	9:UL:415:ASN:OD1	2.48	0.46
9:UL:576:ASP:O	9:UL:578:ARG:N	2.48	0.46
10:UM:582:LEU:HD23	10:UM:584:GLY:H	1.80	0.46
13:UQ:374:GLY:O	13:UQ:399:ILE:N	2.46	0.46
17:UZ:67:THR:O	17:UZ:279:ARG:HB3	2.15	0.46
18:CA:86:GLY:HA2	33:CT:109:LEU:HD11	1.97	0.46
21:CE:41:THR:O	21:CE:44:SER:OG	2.27	0.46
23:CH:220:GLY:O	23:CH:252:ILE:HA	2.14	0.46
29:CN:171:LEU:HD12	29:CN:172:PRO:HD2	1.97	0.46
32:CR:806:GLU:OE2	32:CR:881:GLN:NE2	2.48	0.46
34:Cb:208:VAL:HG13	34:Cb:222:GLU:HG2	1.98	0.46
44:Cm:106:THR:N	44:Cm:109:GLY:O	2.40	0.46
48:CU:230:ARG:HA	48:CU:233:ILE:HG22	1.97	0.46
49:C1:150:C:H2'	49:C1:152:G:H8	1.80	0.46
51:UV:368:ASN:C	51:UV:373:PRO:HD3	2.40	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:CV:174:TYR:HD2	52:CV:176:VAL:HG12	1.79	0.46
54:UT:37:LEU:HD21	54:UT:158:VAL:HG22	1.97	0.46
54:UT:689:ILE:HD11	54:UT:709:HIS:CE1	2.50	0.46
54:UT:703:VAL:HG13	54:UT:745:VAL:HG23	1.97	0.46
54:UT:1345:GLN:HE21	54:UT:1349:ARG:HE	1.62	0.46
54:UT:1645:VAL:HA	54:UT:1648:LEU:HB2	1.96	0.46
54:UT:1909:GLN:NE2	54:UT:1985:ASN:OD1	2.44	0.46
54:UT:2161:VAL:HA	54:UT:2164:LEU:HB2	1.97	0.46
55:UH:784:ILE:HA	55:UH:787:VAL:HG12	1.96	0.46
55:UH:832:LEU:HD13	56:UI:215:MET:HB3	1.96	0.46
1:UA:323:LEU:HA	1:UA:334:LEU:O	2.15	0.46
1:UA:337:GLN:OE1	1:UA:337:GLN:N	2.48	0.46
1:UA:519:ARG:HB2	1:UA:580:TYR:HE2	1.80	0.46
2:UB:5:GLN:HE21	26:CK:182:GLY:H	1.62	0.46
2:UB:89:GLU:OE2	27:CL:535:GLU:HA	2.15	0.46
4:UD:86:PRO:HD3	4:UD:140:LEU:HD11	1.95	0.46
6:UG:318:THR:HG21	6:UG:345:ALA:HB3	1.96	0.46
6:UG:470:ASP:OD2	6:UG:473:SER:OG	2.33	0.46
7:UJ:211:PRO:HA	7:UJ:214:ILE:HG22	1.95	0.46
7:UJ:1746:GLN:NE2	7:UJ:1781:GLU:OE2	2.48	0.46
9:UL:479:VAL:HA	9:UL:493:ASP:HA	1.96	0.46
9:UL:800:GLU:HA	9:UL:803:ARG:HG2	1.97	0.46
9:UL:851:PHE:HA	9:UL:854:ILE:HG12	1.96	0.46
13:UQ:89:MET:HG2	13:UQ:107:TYR:CE1	2.50	0.46
13:UQ:129:LEU:HD12	13:UQ:164:ARG:HH22	1.80	0.46
13:UQ:202:ASP:OD1	13:UQ:202:ASP:N	2.45	0.46
13:UQ:476:SER:OG	13:UQ:504:ASP:OD1	2.30	0.46
15:UU:256:GLN:HG2	15:UU:263:THR:HA	1.96	0.46
15:UU:365:ILE:HD12	15:UU:378:LEU:HD13	1.98	0.46
15:UU:854:LEU:HD23	15:UU:994:TRP:HE1	1.80	0.46
21:CE:38:ALA:O	21:CE:41:THR:OG1	2.26	0.46
22:CG:156:LEU:HB3	22:CG:606:VAL:HG11	1.95	0.46
26:CK:96:PRO:HG2	26:CK:101:MET:HE2	1.97	0.46
28:CM:322:HIS:HA	28:CM:326:MET:HE1	1.97	0.46
29:CN:88:ARG:NH1	29:CN:90:ASP:OD2	2.43	0.46
31:CQ:110:LYS:O	31:CQ:130:THR:OG1	2.29	0.46
49:C1:434:A:O2'	49:C1:436:A:OP1	2.33	0.46
49:C1:616:U:H2'	49:C1:617:G:C8	2.50	0.46
49:C1:865:G:H2'	49:C1:866:C:C6	2.50	0.46
49:C1:1452:G:O6	49:C1:1546:U:O4	2.32	0.46
52:CV:186:LYS:HD3	52:CV:186:LYS:HA	1.69	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:UT:282:MET:HE1	54:UT:341:VAL:HG21	1.96	0.46
54:UT:614:PRO:HB3	54:UT:666:LEU:HB2	1.97	0.46
57:US:236:SER:OG	57:US:238:ASP:OD1	2.21	0.46
1:UA:643:GLY:O	6:UG:181:ARG:NH2	2.48	0.46
4:UD:304:GLU:HG2	4:UD:316:VAL:HG21	1.97	0.46
5:UF:186:MET:HE2	5:UF:186:MET:HB3	1.75	0.46
6:UG:162:THR:HG22	6:UG:172:CYS:HB3	1.97	0.46
7:UJ:237:ARG:HG3	14:UR:254:ARG:HH12	1.80	0.46
7:UJ:1726:LEU:HA	7:UJ:1729:HIS:HB2	1.96	0.46
10:UM:301:TRP:HA	10:UM:308:GLU:HA	1.97	0.46
10:UM:691:ASN:HB3	10:UM:718:THR:HG21	1.97	0.46
10:UM:766:HIS:O	10:UM:766:HIS:ND1	2.49	0.46
10:UM:784:ASP:HB2	10:UM:787:SER:HB2	1.98	0.46
12:UO:490:ALA:O	12:UO:495:ARG:NH2	2.48	0.46
13:UQ:692:THR:OG1	13:UQ:737:MET:SD	2.68	0.46
17:UZ:155:ALA:O	17:UZ:182:VAL:N	2.44	0.46
18:CB:152:PRO:HA	18:CB:174:VAL:HA	1.97	0.46
18:CB:189:SER:O	18:CB:193:LEU:CB	2.63	0.46
21:CE:106:ASN:H	21:CE:112:ASN:HD22	1.63	0.46
24:CI:246:ILE:HG13	24:CI:270:LEU:HD13	1.96	0.46
24:CI:375:LEU:HD23	32:CR:159:LEU:HB3	1.97	0.46
24:CI:1131:ARG:HH11	24:CI:1134:GLN:HG2	1.81	0.46
28:CM:67:GLN:HE21	44:Cm:99:PHE:HE1	1.63	0.46
28:CM:321:TYR:OH	28:CM:357:ALA:HB2	2.16	0.46
29:CN:77:MET:HB3	29:CN:84:ILE:HD13	1.98	0.46
29:CN:94:GLN:HE22	29:CN:235:SER:HB3	1.80	0.46
29:CN:167:ILE:HG22	29:CN:220:TYR:CZ	2.50	0.46
31:CQ:187:ILE:HD11	49:C1:2351:G:C6	2.51	0.46
32:CS:112:THR:HG21	32:CS:135:ILE:HB	1.97	0.46
45:Cn:125:VAL:O	45:Cn:132:LEU:N	2.33	0.46
49:C1:645:U:O2	49:C1:676:C:N3	2.48	0.46
49:C1:927:C:H2'	49:C1:928:G:C8	2.50	0.46
50:C2:246:G:H3'	50:C2:247:G:H8	1.79	0.46
51:UV:89:LEU:HD13	51:UV:92:LYS:HE2	1.97	0.46
51:UV:626:SER:O	51:UV:832:ARG:NH2	2.48	0.46
53:CW:272:ASP:HB2	53:CW:279:LEU:HD21	1.96	0.46
54:UT:661:SER:O	54:UT:667:ARG:NE	2.41	0.46
54:UT:852:ALA:HA	54:UT:909:GLN:HE22	1.80	0.46
54:UT:1738:ASP:N	54:UT:1738:ASP:OD1	2.48	0.46
55:UH:593:SER:HA	55:UH:596:LYS:HG3	1.97	0.46
55:UH:782:ARG:HG3	56:UI:262:LYS:HE3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:UD:260:ILE:HD13	4:UD:270:GLN:HB3	1.97	0.46
6:UG:569:LEU:HA	6:UG:572:GLN:HG2	1.97	0.46
7:UJ:295:GLN:HG3	14:UR:230:LEU:H	1.81	0.46
8:UK:211:ARG:NH2	49:C1:383:G:N7	2.57	0.46
9:UL:190:LEU:HD23	9:UL:190:LEU:HA	1.78	0.46
9:UL:192:THR:HA	9:UL:197:LEU:O	2.15	0.46
9:UL:561:ILE:HG23	48:CU:95:VAL:HG21	1.96	0.46
9:UL:658:ILE:HG13	9:UL:666:GLY:HA2	1.97	0.46
10:UM:236:GLN:HE22	10:UM:276:LEU:HD21	1.80	0.46
14:UR:350:TRP:HA	14:UR:356:LEU:O	2.15	0.46
21:CE:49:THR:O	21:CE:104:THR:OG1	2.32	0.46
22:CG:590:ARG:NH2	50:C2:191:G:N7	2.62	0.46
23:CH:171:ILE:HD12	23:CH:196:PHE:HE1	1.81	0.46
23:CH:228:ALA:HA	49:C1:1714:G:H22	1.80	0.46
24:CI:858:ARG:HG3	24:CI:992:TRP:HZ3	1.81	0.46
27:CL:516:LEU:HD11	27:CL:521:MET:HE2	1.97	0.46
32:CR:548:HIS:ND1	32:CR:551:ASN:OD1	2.48	0.46
32:CR:729:LEU:HD21	32:CR:805:ILE:HD11	1.96	0.46
37:Ce:87:LEU:HD13	37:Ce:96:VAL:HG11	1.97	0.46
47:Cp:20:THR:HG21	47:Cp:28:GLN:HB3	1.98	0.46
49:C1:82:C:H2'	49:C1:83:A:H8	1.81	0.46
49:C1:600:U:H2'	49:C1:601:C:H6	1.81	0.46
49:C1:1759:U:H2'	49:C1:1760:G:O4'	2.15	0.46
51:UV:740:HIS:NE2	51:UV:757:ASP:HB3	2.31	0.46
51:UV:1027:LYS:HD2	51:UV:1029:LYS:HG2	1.97	0.46
52:CV:59:ASP:N	52:CV:89:GLN:HE21	2.13	0.46
54:UT:1392:CYS:O	54:UT:1396:ASN:ND2	2.48	0.46
63:Cz:1712:ALA:HB1	63:Cz:1717:ILE:HD11	1.97	0.46
7:UJ:21:ASN:N	7:UJ:21:ASN:OD1	2.46	0.46
7:UJ:132:THR:O	7:UJ:136:LEU:HB2	2.15	0.46
7:UJ:200:THR:HG21	7:UJ:217:TRP:CD1	2.51	0.46
9:UL:202:ASP:OD1	9:UL:204:SER:N	2.49	0.46
9:UL:282:ALA:H	9:UL:297:GLY:HA2	1.80	0.46
9:UL:698:GLU:N	9:UL:716:HIS:HB3	2.30	0.46
18:CB:96:ASN:ND2	18:CB:98:VAL:O	2.49	0.46
22:CG:303:LEU:HB2	22:CG:315:TRP:HB2	1.98	0.46
28:CM:299:VAL:HG23	28:CM:334:TRP:CE2	2.50	0.46
29:CN:154:ASN:OD1	29:CN:154:ASN:N	2.49	0.46
32:CR:75:GLU:OE1	32:CR:79:LYS:HG3	2.16	0.46
32:CR:747:LEU:HD11	32:CR:758:HIS:HB2	1.96	0.46
32:CS:13:THR:HG22	32:CS:219:PRO:HB3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:Ce:20:SER:OG	37:Ce:21:ASP:N	2.48	0.46
49:C1:496:U:C4	49:C1:503:G:C6	3.03	0.46
49:C1:1213:U:C2	49:C1:1555:A:N7	2.83	0.46
51:UV:466:LYS:HD3	51:UV:468:ALA:H	1.80	0.46
52:CV:174:TYR:CD2	52:CV:176:VAL:HG12	2.50	0.46
54:UT:10:LEU:HA	54:UT:797:THR:HG22	1.97	0.46
54:UT:1573:SER:HA	54:UT:1577:ILE:HD12	1.97	0.46
54:UT:1850:SER:O	54:UT:1853:SER:OG	2.27	0.46
1:UA:492:ALA:HB3	1:UA:507:LEU:HB2	1.97	0.46
4:UD:81:VAL:HG21	4:UD:136:GLY:HA2	1.98	0.46
4:UD:299:ARG:HD3	4:UD:318:HIS:HD2	1.80	0.46
10:UM:705:THR:OG1	10:UM:706:ASN:N	2.47	0.46
11:UN:913:GLU:OE1	11:UN:913:GLU:N	2.48	0.46
13:UQ:123:ARG:HH11	13:UQ:125:ILE:HD13	1.81	0.46
13:UQ:808:LYS:HG3	13:UQ:828:SER:HA	1.96	0.46
17:UZ:272:PRO:HB2	49:C1:373:C:H5''	1.98	0.46
18:CB:247:LEU:O	20:CD:120:ARG:NH2	2.47	0.46
21:CF:26:GLN:NE2	22:CG:331:ASP:OD1	2.39	0.46
21:CF:40:GLU:HG3	50:C2:194:G:H1	1.79	0.46
23:CH:86:VAL:HG13	23:CH:90:ASN:H	1.80	0.46
24:CI:73:ILE:HB	24:CI:118:GLU:HA	1.97	0.46
24:CI:131:LYS:O	24:CI:238:ARG:NH2	2.48	0.46
28:CM:260:GLU:C	28:CM:262:HIS:H	2.24	0.46
32:CS:806:GLU:OE2	32:CS:881:GLN:NE2	2.48	0.46
34:Cb:35:PRO:HD2	34:Cb:83:PRO:HG2	1.97	0.46
46:Co:422:LEU:HD22	46:Co:427:LEU:HD23	1.98	0.46
49:C1:141:C:H2'	49:C1:142:C:C6	2.50	0.46
50:C2:78:C:H2'	50:C2:79:G:C8	2.51	0.46
54:UT:148:ILE:HA	54:UT:151:LEU:HD12	1.97	0.46
54:UT:1858:ALA:HB3	54:UT:1899:GLY:HA3	1.96	0.46
54:UT:1944:GLN:H	54:UT:2005:LYS:NZ	2.14	0.46
55:UH:575:SER:HA	55:UH:578:ILE:HG22	1.96	0.46
55:UH:752:THR:HG21	55:UH:818:GLU:HB2	1.98	0.46
55:UH:881:ARG:HG3	55:UH:891:ARG:HE	1.81	0.46
57:US:536:SER:HB2	57:US:539:VAL:HG23	1.98	0.46
1:UA:334:LEU:HB2	1:UA:336:GLN:NE2	2.31	0.46
2:UB:622:LEU:HD11	2:UB:657:MET:HA	1.96	0.46
4:UD:709:MET:HE3	55:UH:917:LEU:HD11	1.97	0.46
6:UG:134:LEU:HD21	7:UJ:5:LEU:HD22	1.97	0.46
9:UL:881:VAL:HA	9:UL:884:THR:HG22	1.97	0.46
10:UM:383:LEU:HA	10:UM:441:VAL:HG21	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:UM:585:HIS:CD2	10:UM:586:LYS:H	2.34	0.46
11:UN:332:HIS:O	11:UN:336:ALA:CB	2.61	0.46
13:UQ:94:PRO:HB3	13:UQ:105:ILE:HA	1.97	0.46
13:UQ:113:VAL:HG23	13:UQ:122:VAL:HG23	1.98	0.46
15:UU:726:SER:OG	15:UU:727:GLN:N	2.49	0.46
15:UU:1003:PHE:HA	15:UU:1006:ILE:HG12	1.96	0.46
17:UZ:116:PHE:HD2	17:UZ:120:LEU:H	1.62	0.46
22:CG:492:LEU:HD13	22:CG:496:LYS:HB2	1.98	0.46
29:CN:36:ARG:C	29:CN:201:SER:HG	2.24	0.46
29:CO:94:GLN:HA	29:CO:97:LEU:HD12	1.97	0.46
32:CR:265:LEU:HD23	32:CR:265:LEU:HA	1.80	0.46
49:C1:1071:G:H2'	49:C1:1072:G:H8	1.81	0.46
49:C1:1086:U:H2'	49:C1:1087:G:H8	1.81	0.46
49:C1:1702:G:H1	50:C2:7:A:H61	1.62	0.46
54:UT:1099:LEU:HD11	54:UT:1159:LEU:HB3	1.97	0.46
55:UH:826:VAL:HG11	56:UI:253:LEU:HD13	1.97	0.46
55:UH:832:LEU:HD23	55:UH:835:VAL:HG11	1.98	0.46
57:US:446:ASP:HB2	57:US:448:MET:SD	2.56	0.46
56:UI:215:MET:HA	56:UI:218:ILE:HG22	1.98	0.46
3:UC:583:ILE:HG23	24:CI:822:TRP:CZ2	2.51	0.46
7:UJ:329:ALA:O	7:UJ:333:ILE:HG12	2.16	0.46
8:UK:50:SER:OG	49:C1:409:A:OP1	2.31	0.46
9:UL:484:THR:OG1	9:UL:486:GLU:OE1	2.26	0.46
9:UL:590:LYS:HD3	9:UL:602:ASN:HB3	1.98	0.46
9:UL:612:SER:OG	9:UL:653:LEU:O	2.28	0.46
11:UN:903:LEU:HB3	11:UN:910:MET:HE1	1.98	0.46
12:UO:203:ASN:OD1	12:UO:203:ASN:N	2.48	0.46
12:UO:397:LEU:HD13	14:UR:297:ILE:HD12	1.96	0.46
15:UU:52:THR:HG23	15:UU:64:THR:HB	1.98	0.46
16:UX:138:VAL:HG13	16:UX:163:VAL:HG11	1.96	0.46
18:CA:80:GLY:H	33:CT:90:TRP:CD1	2.33	0.46
18:CB:96:ASN:HB3	18:CB:126:GLU:HB3	1.98	0.46
24:CI:754:LYS:O	24:CI:758:ALA:HB2	2.16	0.46
26:CK:162:THR:OG1	26:CK:162:THR:O	2.34	0.46
32:CR:836:PHE:HA	32:CR:839:LYS:HE3	1.97	0.46
32:CS:737:TRP:HA	32:CS:740:ALA:HB3	1.98	0.46
49:C1:189:G:H2'	49:C1:190:G:C8	2.50	0.46
49:C1:1000:A:H5''	49:C1:1001:A:N7	2.30	0.46
49:C1:1108:U:N3	49:C1:1111:A:OP2	2.45	0.46
49:C1:1146:G:H22	49:C1:1149:C:P	2.39	0.46
51:UV:347:LEU:HD11	51:UV:356:LEU:HG	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:UV:1059:ASP:H	52:CV:92:SER:H	1.64	0.46
54:UT:964:LEU:HD23	54:UT:964:LEU:HA	1.80	0.46
54:UT:2126:ASN:HB3	54:UT:2132:ARG:HG3	1.97	0.46
55:UH:581:VAL:HG13	55:UH:630:TYR:HB2	1.98	0.46
56:UE:215:MET:HA	56:UE:218:ILE:HG22	1.98	0.46
59:CX:227:ILE:HG21	59:CX:233:ILE:HD12	1.97	0.46
56:UI:273:ARG:HD3	56:UI:276:LEU:HD12	1.98	0.46
4:UD:437:SER:OG	4:UD:439:ASP:OD1	2.28	0.46
5:UF:9:ARG:CZ	28:CM:25:ARG:H	2.29	0.46
7:UJ:37:PRO:HA	7:UJ:40:ALA:HB3	1.98	0.46
7:UJ:197:SER:HB3	7:UJ:254:VAL:HG21	1.98	0.46
10:UM:402:SER:HB3	10:UM:408:ALA:HB3	1.98	0.46
12:UO:38:SER:OG	12:UO:42:TRP:N	2.49	0.46
13:UQ:359:HIS:HB2	13:UQ:374:GLY:HA2	1.98	0.46
14:UR:302:LYS:HG2	14:UR:315:LEU:HD21	1.97	0.46
15:UU:970:GLU:O	15:UU:974:PHE:HB2	2.15	0.46
19:CC:307:GLN:HG3	19:CC:312:THR:HB	1.97	0.46
24:CI:268:ILE:HG12	24:CI:784:VAL:HG11	1.96	0.46
29:CO:69:ASN:OD1	29:CO:69:ASN:N	2.47	0.46
32:CR:619:SER:HA	32:CR:623:GLN:HA	1.97	0.46
32:CR:737:TRP:HA	32:CR:740:ALA:HB3	1.98	0.46
32:CR:800:ILE:H	32:CR:800:ILE:HG12	1.21	0.46
37:Ce:34:GLU:HG2	37:Ce:44:LEU:HB3	1.98	0.46
37:Ce:86:GLU:HA	37:Ce:89:LYS:HE2	1.97	0.46
46:Co:409:SER:OG	46:Co:412:ALA:N	2.38	0.46
49:C1:246:G:H2'	49:C1:247:C:H6	1.81	0.46
49:C1:1456:A:H2'	49:C1:1457:G:H8	1.80	0.46
49:C1:1696:G:H2'	49:C1:1697:A:H8	1.81	0.46
49:C1:2161:U:H2'	49:C1:2162:C:C6	2.51	0.46
53:CW:79:PHE:CZ	53:CW:93:ARG:HB3	2.51	0.46
54:UT:77:ARG:HH11	54:UT:84:ARG:HH12	1.64	0.46
54:UT:329:ALA:HB2	54:UT:342:PHE:HZ	1.81	0.46
54:UT:1479:ILE:HA	54:UT:1482:VAL:HG22	1.98	0.46
63:Cz:1513:ILE:HA	63:Cz:1516:MET:HG2	1.98	0.46
1:UA:210:ILE:HG13	1:UA:222:TRP:HB2	1.98	0.46
1:UA:386:THR:O	1:UA:400:ALA:O	2.34	0.46
1:UA:514:LEU:HD13	1:UA:530:LEU:HB3	1.97	0.46
1:UA:791:LEU:HA	1:UA:794:ILE:HD12	1.98	0.46
4:UD:254:SER:OG	62:UP:349:ARG:NH2	2.49	0.46
4:UD:748:GLU:HA	4:UD:755:GLN:HE22	1.79	0.46
9:UL:699:ILE:HA	9:UL:715:SER:HA	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:UO:169:VAL:HG23	12:UO:183:PHE:HB2	1.97	0.46
12:UO:231:HIS:NE2	12:UO:256:SER:OG	2.36	0.46
13:UQ:235:HIS:HE1	13:UQ:262:HIS:HD2	1.64	0.46
13:UQ:364:SER:O	13:UQ:364:SER:OG	2.31	0.46
15:UU:185:LEU:HD11	15:UU:201:VAL:HB	1.97	0.46
15:UU:515:HIS:CD2	15:UU:522:ARG:HD3	2.51	0.46
19:CC:22:HIS:CE1	28:CM:363:VAL:HG22	2.51	0.46
23:CH:264:GLU:HA	23:CH:271:LYS:HE3	1.98	0.46
24:CI:54:LEU:HD23	24:CI:54:LEU:HA	1.67	0.46
24:CI:976:THR:HG21	49:C1:2180:A:P	2.55	0.46
31:CQ:114:ARG:HD3	31:CQ:114:ARG:HA	1.71	0.46
31:CQ:189:ARG:NH1	31:CQ:235:LEU:O	2.49	0.46
32:CR:70:HIS:HB3	32:CR:73:LYS:H	1.81	0.46
32:CS:619:SER:HA	32:CS:623:GLN:HA	1.97	0.46
33:CT:158:LYS:HG3	33:CT:164:GLU:HA	1.97	0.46
34:Cb:65:MET:O	34:Cb:68:ARG:NH2	2.48	0.46
34:Cb:198:ARG:HA	34:Cb:208:VAL:HA	1.97	0.46
36:Cd:87:ARG:HG3	49:C1:743:U:C2	2.51	0.46
37:Ce:132:HIS:HA	37:Ce:135:ILE:HD12	1.97	0.46
38:Cf:69:SER:OG	38:Cf:70:GLU:OE2	2.31	0.46
39:Cg:171:ARG:HD3	49:C1:1095:A:H5'	1.96	0.46
41:Ci:60:LYS:HA	41:Ci:75:LEU:HD22	1.98	0.46
49:C1:306:G:O6	49:C1:334:U:C4	2.69	0.46
49:C1:379:G:H2'	49:C1:380:C:H6	1.80	0.46
49:C1:1661:C:C4	49:C1:1662:C:N4	2.83	0.46
49:C1:1696:G:H2'	49:C1:1697:A:C8	2.51	0.46
51:UV:346:PRO:HB2	51:UV:359:ALA:HB2	1.97	0.46
51:UV:656:ARG:HA	51:UV:659:GLU:HG2	1.98	0.46
53:CW:267:GLN:OE1	53:CW:269:ARG:NH2	2.48	0.46
54:UT:287:LYS:HA	54:UT:290:LEU:HB2	1.98	0.46
54:UT:539:LYS:HB2	54:UT:587:ARG:HH22	1.81	0.46
54:UT:2046:THR:HG21	54:UT:2082:LEU:HD21	1.97	0.46
55:UH:553:VAL:HG11	55:UH:577:LEU:HD13	1.97	0.46
57:US:538:LEU:O	57:US:542:TRP:HB2	2.15	0.46
56:UI:237:ASN:HA	56:UI:240:THR:HB	1.98	0.46
1:UA:717:PRO:HD2	15:UU:738:THR:HA	1.98	0.45
2:UB:8:ARG:NH1	26:CK:179:SER:O	2.49	0.45
2:UB:61:LYS:HE2	26:CK:171:VAL:HG21	1.98	0.45
4:UD:82:TRP:CE2	4:UD:102:LEU:HD13	2.51	0.45
4:UD:158:THR:HG23	4:UD:161:GLY:H	1.81	0.45
5:UF:70:LEU:HD13	14:UR:55:LEU:HD12	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:UG:448:LYS:HG3	50:C2:38:G:C5	2.51	0.45
7:UJ:94:LEU:HA	14:UR:70:LEU:HD11	1.98	0.45
7:UJ:262:LYS:NZ	7:UJ:300:TRP:O	2.38	0.45
7:UJ:545:ALA:O	7:UJ:578:ARG:NH2	2.41	0.45
7:UJ:560:CYS:SG	7:UJ:721:ALA:HB3	2.56	0.45
8:UK:243:GLN:NE2	49:C1:214:C:H5''	2.31	0.45
9:UL:128:GLY:HA3	9:UL:155:VAL:HG21	1.97	0.45
9:UL:616:SER:HB3	9:UL:621:LEU:HB3	1.97	0.45
10:UM:771:LEU:HD12	10:UM:774:PHE:HB2	1.98	0.45
11:UN:333:ASN:HD22	11:UN:339:LEU:HD23	1.81	0.45
13:UQ:701:PHE:HB2	13:UQ:737:MET:HE1	1.98	0.45
17:UZ:215:ARG:HB3	17:UZ:220:ILE:HD11	1.98	0.45
21:CF:52:LEU:HD13	21:CF:78:PRO:HB2	1.98	0.45
21:CF:96:ARG:NH1	22:CG:590:ARG:O	2.37	0.45
24:CI:233:ARG:HA	24:CI:234:PRO:HD3	1.84	0.45
24:CI:329:GLU:HG2	24:CI:332:LYS:HD3	1.97	0.45
24:CI:355:ARG:O	32:CR:2:THR:N	2.50	0.45
26:CK:117:LEU:HD12	26:CK:118:ASN:H	1.80	0.45
26:CK:143:HIS:ND1	49:C1:2187:U:H5''	2.31	0.45
29:CN:95:CYS:O	29:CN:98:THR:OG1	2.24	0.45
29:CO:143:GLN:HG3	29:CO:150:ILE:HD11	1.97	0.45
29:CO:174:ASN:O	29:CO:201:SER:OG	2.33	0.45
32:CR:844:TYR:HB3	32:CR:916:MET:HE3	1.98	0.45
32:CS:168:ASP:HB3	32:CS:703:HIS:CD2	2.50	0.45
32:CS:845:ALA:HB2	32:CS:920:THR:HG21	1.98	0.45
34:Cb:141:THR:HG23	34:Cb:143:ASP:H	1.80	0.45
34:Cb:179:ALA:HA	34:Cb:230:SER:HA	1.98	0.45
40:Ch:96:VAL:HA	40:Ch:99:ARG:HD2	1.97	0.45
48:CU:243:LYS:HD2	48:CU:243:LYS:HA	1.72	0.45
49:C1:1662:C:H2'	49:C1:1663:U:C6	2.51	0.45
50:C2:128:C:H2'	50:C2:129:U:H6	1.81	0.45
51:UV:445:THR:HG21	51:UV:873:THR:OG1	2.16	0.45
54:UT:851:LEU:HD12	54:UT:858:ALA:HB2	1.98	0.45
54:UT:1931:LEU:HD13	60:CY:362:ARG:HE	1.80	0.45
56:UI:271:LYS:HE3	56:UI:271:LYS:HB3	1.48	0.45
63:Cz:1515:TYR:O	63:Cz:1518:SER:OG	2.29	0.45
1:UA:366:VAL:HB	1:UA:376:VAL:HG12	1.99	0.45
4:UD:75:ARG:HG2	62:UP:334:LYS:HA	1.97	0.45
4:UD:224:THR:HG23	14:UR:413:ARG:NE	2.32	0.45
6:UG:309:ASP:OD1	6:UG:310:ARG:N	2.49	0.45
6:UG:355:LEU:HD23	6:UG:368:LYS:HA	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:UL:606:HIS:ND1	9:UL:628:ASP:OD2	2.34	0.45
9:UL:830:VAL:HA	9:UL:833:THR:HG22	1.99	0.45
10:UM:711:ALA:HB2	10:UM:717:VAL:HG22	1.99	0.45
17:UZ:163:LEU:O	17:UZ:166:ALA:N	2.48	0.45
18:CA:168:SER:HB3	18:CA:196:MET:SD	2.57	0.45
20:CD:245:MET:HE2	20:CD:245:MET:HB3	1.73	0.45
22:CG:165:GLN:HA	22:CG:602:VAL:HG22	1.97	0.45
24:CI:247:ASP:N	24:CI:271:SER:O	2.44	0.45
27:CL:554:PHE:HB3	27:CL:556:GLU:HG2	1.98	0.45
28:CM:133:LYS:HD3	28:CM:146:PRO:HG3	1.99	0.45
28:CM:322:HIS:CE1	28:CM:398:PRO:HD3	2.51	0.45
31:CQ:241:PRO:O	31:CQ:245:TYR:HB2	2.16	0.45
32:CR:13:THR:HG22	32:CR:219:PRO:HB3	1.97	0.45
32:CR:133:PRO:HA	32:CR:136:LEU:HD12	1.97	0.45
32:CR:586:ILE:HD12	32:CR:586:ILE:HA	1.86	0.45
32:CR:621:GLN:HB2	32:CR:785:ARG:HH12	1.81	0.45
36:Cd:95:LYS:HD3	36:Cd:96:SER:H	1.80	0.45
38:Cf:76:THR:HG21	38:Cf:104:ILE:HD12	1.99	0.45
43:Ck:129:VAL:HB	43:Ck:146:ARG:HB3	1.99	0.45
49:C1:150:C:H2'	49:C1:152:G:C8	2.51	0.45
49:C1:207:U:OP1	49:C1:208:A:N6	2.49	0.45
49:C1:759:G:H22	49:C1:850:A:H5'	1.80	0.45
49:C1:828:G:H2'	49:C1:829:U:C6	2.52	0.45
51:UV:217:LYS:HD2	51:UV:217:LYS:HA	1.81	0.45
54:UT:197:ALA:O	54:UT:247:GLN:NE2	2.37	0.45
59:CX:411:HIS:CG	59:CX:442:HIS:HB2	2.51	0.45
60:CY:271:GLU:HA	60:CY:274:GLU:HG3	1.98	0.45
63:Cz:1581:ARG:HD3	63:Cz:1615:ALA:HB2	1.98	0.45
1:UA:527:ILE:HD12	1:UA:537:TRP:NE1	2.31	0.45
7:UJ:109:LEU:HD13	7:UJ:142:TYR:CE2	2.52	0.45
7:UJ:310:VAL:O	7:UJ:314:MET:HG2	2.17	0.45
9:UL:786:LEU:HA	9:UL:860:PHE:HE2	1.80	0.45
10:UM:300:ILE:O	10:UM:309:ILE:N	2.40	0.45
10:UM:509:PHE:HD1	10:UM:521:LYS:HG2	1.81	0.45
10:UM:797:VAL:HA	10:UM:800:LYS:HE2	1.98	0.45
13:UQ:397:ALA:H	13:UQ:415:LEU:HD21	1.81	0.45
15:UU:987:ASP:O	15:UU:991:THR:OG1	2.27	0.45
16:UX:21:LYS:HD2	16:UX:21:LYS:HA	1.68	0.45
18:CA:217:ARG:HA	18:CA:246:PHE:HZ	1.81	0.45
19:CC:40:THR:HG22	19:CC:42:ASP:H	1.81	0.45
22:CG:437:GLY:O	22:CG:464:ARG:N	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CH:139:THR:N	23:CH:179:SER:O	2.47	0.45
29:CN:42:SER:HA	29:CN:115:GLN:HB3	1.99	0.45
30:CP:156:LEU:O	30:CP:159:GLN:NE2	2.49	0.45
32:CS:523:ARG:HH22	32:CS:563:PRO:HA	1.82	0.45
34:Cb:128:ARG:HB2	34:Cb:130:GLN:HE22	1.81	0.45
39:Cg:32:TYR:O	39:Cg:34:LEU:N	2.48	0.45
42:Cj:77:GLN:O	42:Cj:81:VAL:HG23	2.17	0.45
46:Co:376:ALA:O	46:Co:381:ALA:N	2.42	0.45
49:C1:694:A:H2'	49:C1:695:G:C8	2.51	0.45
49:C1:954:A:N3	60:CY:320:ARG:HD3	2.31	0.45
49:C1:1221:C:N3	49:C1:1222:C:N4	2.64	0.45
54:UT:2122:VAL:O	54:UT:2126:ASN:HB2	2.16	0.45
57:US:368:LEU:HA	57:US:373:LEU:HD21	1.98	0.45
63:Cz:1627:HIS:HD2	63:Cz:1664:LEU:HD22	1.80	0.45
2:UB:641:ILE:HA	2:UB:644:LEU:HD12	1.99	0.45
4:UD:22:THR:HG22	4:UD:43:ARG:H	1.82	0.45
4:UD:339:VAL:HA	4:UD:352:LEU:O	2.16	0.45
6:UG:175:GLN:O	6:UG:177:GLY:N	2.36	0.45
7:UJ:109:LEU:HD22	7:UJ:142:TYR:CD1	2.52	0.45
9:UL:199:LYS:HD2	9:UL:208:CYS:HB2	1.97	0.45
9:UL:199:LYS:HG2	9:UL:201:TRP:NE1	2.32	0.45
9:UL:305:TRP:HA	9:UL:360:HIS:H	1.82	0.45
9:UL:396:LEU:HB3	9:UL:418:LEU:HB2	1.97	0.45
9:UL:613:MET:HE3	9:UL:615:ILE:HG23	1.98	0.45
10:UM:26:VAL:HG11	10:UM:343:LEU:HD11	1.99	0.45
10:UM:378:ASP:HA	10:UM:698:THR:HG21	1.98	0.45
14:UR:278:SER:HG	14:UR:294:THR:HG1	1.63	0.45
14:UR:362:LYS:HA	14:UR:367:GLN:NE2	2.31	0.45
15:UU:81:ASN:OD1	15:UU:81:ASN:N	2.50	0.45
15:UU:235:LEU:HB2	15:UU:244:LEU:HD11	1.98	0.45
16:UX:42:SER:OG	16:UX:43:SER:N	2.49	0.45
17:UZ:178:ARG:HH11	17:UZ:232:LEU:HD21	1.80	0.45
19:CC:197:ARG:NH2	20:CD:174:GLU:OE1	2.48	0.45
25:CJ:161:THR:OG1	25:CJ:162:VAL:N	2.39	0.45
27:CL:675:SER:O	27:CL:675:SER:OG	2.26	0.45
28:CM:163:ARG:HB2	28:CM:207:GLN:HG2	1.98	0.45
32:CS:75:GLU:OE1	32:CS:79:LYS:HG3	2.16	0.45
42:Cj:15:ASN:HD21	49:C1:2067:G:H5'	1.80	0.45
48:CU:201:ILE:O	48:CU:205:THR:HG23	2.16	0.45
49:C1:250:U:H2'	49:C1:251:G:H8	1.81	0.45
49:C1:1086:U:H2'	49:C1:1087:G:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:UV:112:VAL:HG13	51:UV:164:LYS:HG3	1.97	0.45
51:UV:689:LYS:HE3	51:UV:1044:GLN:HG3	1.97	0.45
53:CW:48:ILE:HG23	53:CW:51:PHE:HB3	1.98	0.45
54:UT:377:GLN:O	54:UT:381:MET:HB2	2.17	0.45
54:UT:2096:PHE:HA	54:UT:2099:LEU:HG	1.97	0.45
55:UH:862:HIS:HE1	55:UH:864:SER:HB2	1.81	0.45
59:CX:298:LYS:HD3	59:CX:299:PRO:HD2	1.97	0.45
60:CY:325:THR:HA	60:CY:328:LYS:HD2	1.99	0.45
1:UA:19:ASN:HB2	1:UA:60:ARG:HD3	1.99	0.45
4:UD:161:GLY:HA3	4:UD:182:THR:HG22	1.99	0.45
6:UG:163:MET:HE1	7:UJ:5:LEU:HD11	1.98	0.45
7:UJ:782:VAL:HG12	7:UJ:812:ARG:HE	1.81	0.45
7:UJ:784:PRO:HB3	7:UJ:820:MET:HG2	1.98	0.45
10:UM:197:ARG:HD3	10:UM:209:ILE:HD11	1.97	0.45
12:UO:40:ALA:O	58:CI:8:LYS:NZ	2.42	0.45
13:UQ:742:SER:OG	13:UQ:755:ASP:OD1	2.35	0.45
15:UU:417:LEU:HD12	15:UU:417:LEU:HA	1.82	0.45
15:UU:865:LYS:HD2	15:UU:866:PRO:HD2	1.98	0.45
16:UX:5:ARG:HD2	50:C2:50:G:H5'	1.99	0.45
18:CA:69:LYS:HG2	33:CT:152:LEU:HD11	1.98	0.45
19:CC:286:ASP:O	19:CC:290:ILE:HG12	2.17	0.45
23:CH:158:LEU:HD23	48:CU:124:PRO:HG3	1.98	0.45
23:CH:261:LEU:HD22	49:C1:1715:A:C6	2.52	0.45
23:CH:323:GLN:HE21	23:CH:355:VAL:HA	1.81	0.45
24:CI:1072:LYS:NZ	49:C1:217:G:O6	2.33	0.45
26:CK:119:ARG:NH1	49:C1:2188:G:OP1	2.49	0.45
26:CK:251:SER:HA	27:CL:546:LYS:HZ1	1.82	0.45
27:CL:725:ARG:NH2	49:C1:1731:A:OP2	2.47	0.45
32:CR:168:ASP:HB3	32:CR:703:HIS:CD2	2.50	0.45
32:CR:752:ASN:ND2	32:CR:757:GLU:O	2.48	0.45
32:CR:803:LEU:HD22	32:CR:881:GLN:NE2	2.32	0.45
32:CS:45:MET:HG2	32:CS:45:MET:H	1.64	0.45
32:CS:259:VAL:O	32:CS:263:LYS:HD2	2.16	0.45
36:Cd:177:ARG:HG2	49:C1:664:A:H2	1.81	0.45
43:Ck:109:HIS:N	49:C1:935:C:O2	2.50	0.45
46:Co:343:PHE:HB2	46:Co:354:MET:HG2	1.98	0.45
46:Co:375:LEU:HD13	46:Co:378:MET:HB3	1.99	0.45
49:C1:6:G:N1	49:C1:30:U:C2	2.85	0.45
49:C1:274:A:H2'	49:C1:275:C:C6	2.51	0.45
49:C1:781:G:HO2'	49:C1:782:G:H8	1.64	0.45
49:C1:907:A:H1'	49:C1:930:G:N2	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:C1:1506:U:H2'	49:C1:1507:G:H8	1.81	0.45
50:C2:257:G:H2'	50:C2:258:A:H8	1.78	0.45
51:UV:695:MET:O	51:UV:767:ARG:N	2.45	0.45
53:CW:247:ILE:HG12	53:CW:263:THR:HG22	1.99	0.45
54:UT:663:SER:OG	54:UT:666:LEU:HB3	2.16	0.45
54:UT:1102:LEU:HD11	54:UT:1138:LEU:HD23	1.97	0.45
54:UT:1516:LEU:O	54:UT:1518:GLN:N	2.50	0.45
56:UI:260:LYS:O	56:UI:264:ASP:N	2.31	0.45
63:Cz:1509:SER:HB2	63:Cz:1546:GLU:HB3	1.98	0.45
63:Cz:1706:SER:O	63:Cz:1706:SER:OG	2.34	0.45
1:UA:534:LEU:HD21	1:UA:575:PHE:HD2	1.82	0.45
2:UB:786:ARG:HH22	2:UB:790:LEU:HB2	1.82	0.45
3:UC:598:ARG:NH2	49:C1:1061:A:OP1	2.49	0.45
4:UD:456:LEU:HG	4:UD:469:ILE:HG12	1.99	0.45
7:UJ:324:LEU:HD12	7:UJ:358:LEU:HD23	1.99	0.45
11:UN:312:ARG:HG2	28:CM:231:MET:HG2	1.99	0.45
11:UN:362:GLN:NE2	11:UN:365:SER:OG	2.50	0.45
12:UO:247:LEU:HB2	12:UO:260:LEU:HD11	1.97	0.45
12:UO:289:VAL:HA	12:UO:298:LYS:O	2.17	0.45
13:UQ:157:TRP:HA	13:UQ:166:TRP:O	2.16	0.45
13:UQ:240:SER:O	13:UQ:240:SER:OG	2.33	0.45
13:UQ:527:THR:OG1	13:UQ:531:VAL:O	2.31	0.45
14:UR:160:SER:OG	14:UR:162:SER:OG	2.28	0.45
15:UU:352:ILE:HG13	15:UU:364:TRP:HB2	1.97	0.45
18:CB:156:VAL:HG13	18:CB:180:VAL:HG13	1.99	0.45
20:CD:180:ASN:O	20:CD:184:MET:HG2	2.17	0.45
23:CH:9:LEU:HB3	23:CH:31:ILE:HA	1.98	0.45
23:CH:40:SER:OG	23:CH:43:ASN:OD1	2.29	0.45
26:CK:220:ASN:OD1	26:CK:220:ASN:N	2.49	0.45
29:CN:190:ARG:HA	29:CN:193:VAL:HG12	1.98	0.45
31:CQ:113:VAL:HA	31:CQ:123:GLU:O	2.17	0.45
32:CR:172:ARG:HH21	32:CR:191:LEU:HD11	1.82	0.45
32:CR:259:VAL:O	32:CR:263:LYS:HD2	2.16	0.45
32:CS:70:HIS:HB3	32:CS:73:LYS:H	1.82	0.45
32:CS:138:ARG:O	32:CS:142:THR:HG22	2.17	0.45
32:CS:618:VAL:HG11	32:CS:627:PHE:CD2	2.52	0.45
32:CS:630:LEU:HB3	32:CS:722:TYR:HE1	1.82	0.45
32:CS:836:PHE:HA	32:CS:839:LYS:HE3	1.97	0.45
34:Cb:18:TRP:HE3	34:Cb:46:VAL:HG11	1.82	0.45
34:Cb:71:LYS:HA	34:Cb:76:VAL:HA	1.99	0.45
36:Cd:87:ARG:N	36:Cd:91:GLU:OE1	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:Cf:37:ARG:HG2	38:Cf:95:THR:HG22	1.99	0.45
43:Ck:62:LYS:HE2	43:Ck:136:LEU:HB3	1.98	0.45
44:Cm:41:MET:HE3	44:Cm:46:TYR:HD2	1.81	0.45
46:Co:372:ARG:NE	46:Co:386:VAL:O	2.50	0.45
49:C1:379:G:H2'	49:C1:380:C:C6	2.52	0.45
50:C2:92:A:O2'	50:C2:93:G:O4'	2.25	0.45
51:UV:549:ARG:HE	51:UV:587:THR:HG22	1.81	0.45
54:UT:377:GLN:HE21	54:UT:381:MET:HG2	1.81	0.45
59:CX:407:PRO:HB2	59:CX:409:ILE:HG22	1.97	0.45
1:UA:295:ILE:HB	1:UA:323:LEU:HD21	1.97	0.45
10:UM:377:LEU:N	10:UM:392:ALA:O	2.43	0.45
10:UM:394:ASN:HA	10:UM:435:ILE:HG23	1.99	0.45
10:UM:572:ASP:OD1	10:UM:579:GLN:NE2	2.50	0.45
13:UQ:186:LYS:HD3	13:UQ:210:ARG:HD3	1.99	0.45
14:UR:263:ILE:HD12	14:UR:615:GLU:O	2.16	0.45
19:CC:78:LEU:O	19:CC:82:LEU:HG	2.17	0.45
19:CC:319:ILE:HD11	19:CC:325:LEU:HA	1.99	0.45
19:CC:403:PHE:HA	19:CC:406:VAL:HG22	1.99	0.45
23:CH:175:VAL:HG12	23:CH:192:VAL:HG12	1.99	0.45
24:CI:46:SER:HA	24:CI:49:ILE:HD12	1.99	0.45
29:CN:90:ASP:OD1	29:CN:90:ASP:N	2.49	0.45
29:CO:35:LYS:HE3	29:CO:198:PRO:HA	1.98	0.45
32:CR:274:GLU:OE1	32:CR:279:ASN:ND2	2.50	0.45
36:Cd:147:LEU:HD12	36:Cd:153:VAL:HG22	1.99	0.45
39:Cg:114:LEU:HD23	39:Cg:114:LEU:HA	1.79	0.45
44:Cm:75:ILE:HG23	48:CU:288:ILE:HD13	1.99	0.45
46:Co:375:LEU:HA	46:Co:378:MET:HB3	1.99	0.45
49:C1:1056:U:H2'	49:C1:1057:A:H8	1.81	0.45
54:UT:107:LEU:HD13	54:UT:126:VAL:HG22	1.98	0.45
54:UT:311:HIS:CE1	54:UT:349:ARG:HH21	2.35	0.45
55:UH:554:PHE:HE1	55:UH:616:ILE:HG21	1.82	0.45
63:Cz:1701:GLU:HG2	63:Cz:1720:LEU:HD23	1.99	0.45
2:UB:582:ARG:HG2	2:UB:585:ALA:HB3	1.98	0.45
4:UD:312:ARG:HA	4:UD:312:ARG:HD3	1.85	0.45
4:UD:695:GLN:OE1	4:UD:700:TRP:NE1	2.44	0.45
5:UF:42:ASP:HA	28:CM:22:ARG:HH12	1.81	0.45
6:UG:356:THR:O	6:UG:366:ILE:HA	2.16	0.45
7:UJ:170:TYR:O	7:UJ:173:SER:C	2.60	0.45
7:UJ:786:HIS:HE1	7:UJ:788:ALA:HB3	1.81	0.45
7:UJ:1500:LEU:HD22	7:UJ:1526:PHE:HE1	1.82	0.45
13:UQ:391:PHE:CE2	49:C1:72:U:H4'	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:UU:340:ILE:HA	15:UU:356:GLY:HA2	1.98	0.45
15:UU:377:ILE:HD11	15:UU:380:GLN:HB3	1.98	0.45
16:UX:45:PHE:O	16:UX:48:HIS:N	2.50	0.45
24:CI:58:LEU:HD12	24:CI:58:LEU:HA	1.84	0.45
27:CL:621:ARG:NH1	27:CL:625:GLU:OE1	2.50	0.45
28:CM:221:SER:HA	28:CM:236:THR:O	2.17	0.45
32:CR:138:ARG:O	32:CR:142:THR:HG22	2.17	0.45
32:CR:432:LEU:HD13	32:CR:432:LEU:HA	1.87	0.45
32:CS:253:ILE:HD13	32:CS:253:ILE:HA	1.83	0.45
33:CT:189:ARG:O	49:C1:2072:U:N3	2.50	0.45
35:Cc:201:LYS:HA	35:Cc:204:LEU:HD12	1.98	0.45
39:Cg:60:LEU:HD12	39:Cg:60:LEU:HA	1.76	0.45
41:Ci:32:ILE:HG12	41:Ci:41:VAL:HG12	1.98	0.45
41:Ci:65:ARG:HD3	49:C1:1490:A:H4'	1.98	0.45
42:Cj:14:LYS:HD3	49:C1:2167:G:N7	2.32	0.45
43:Ck:41:LYS:NZ	43:Ck:64:PRO:O	2.39	0.45
48:CU:225:MET:HE3	48:CU:229:MET:HE2	1.98	0.45
49:C1:59:U:H2'	49:C1:60:A:C8	2.52	0.45
49:C1:124:C:H2'	49:C1:125:G:C8	2.52	0.45
49:C1:939:G:H2'	49:C1:940:G:H8	1.80	0.45
49:C1:1167:C:H2'	49:C1:1169:A:C8	2.52	0.45
51:UV:169:LEU:HD21	51:UV:188:TYR:HE1	1.82	0.45
54:UT:23:LYS:HG2	54:UT:25:HIS:H	1.82	0.45
54:UT:985:PRO:HA	54:UT:988:ARG:HB2	1.99	0.45
63:Cz:1543:GLU:N	63:Cz:1543:GLU:OE2	2.49	0.45
1:UA:373:PHE:HB3	27:CL:662:GLN:NE2	2.31	0.45
1:UA:396:VAL:HG22	1:UA:410:ASP:HA	1.98	0.45
4:UD:489:ASP:OD2	4:UD:491:ARG:NE	2.50	0.45
7:UJ:297:VAL:HA	7:UJ:300:TRP:CZ3	2.51	0.45
9:UL:784:GLU:O	9:UL:788:LEU:HG	2.17	0.45
10:UM:65:SER:OG	10:UM:79:CYS:O	2.34	0.45
12:UO:461:ARG:HD2	12:UO:497:ILE:HG23	1.99	0.45
12:UO:525:GLN:HA	12:UO:528:ALA:HB3	1.98	0.45
15:UU:113:ASN:OD1	15:UU:113:ASN:N	2.48	0.45
15:UU:533:ARG:HE	15:UU:534:TRP:NE1	2.14	0.45
15:UU:752:THR:OG1	15:UU:753:ALA:N	2.50	0.45
18:CA:156:VAL:HA	18:CA:225:VAL:O	2.17	0.45
18:CA:163:SER:N	18:CA:189:SER:OG	2.50	0.45
20:CD:160:LYS:HD3	20:CD:160:LYS:HA	1.65	0.45
25:CJ:12:LEU:HD23	25:CJ:12:LEU:HA	1.72	0.45
32:CR:196:CYS:HB2	32:CR:489:TRP:CD1	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:CS:314:SER:O	32:CS:371:TYR:OH	2.34	0.45
32:CS:380:LEU:HD11	32:CS:402:LEU:HB3	1.99	0.45
32:CS:914:LYS:HG2	53:CW:377:HIS:CD2	2.51	0.45
39:Cg:75:ILE:HD11	39:Cg:91:LEU:HD12	1.99	0.45
43:Ck:61:LYS:HZ2	43:Ck:62:LYS:HE3	1.81	0.45
46:Co:378:MET:HG3	46:Co:379:TYR:HD1	1.82	0.45
49:C1:345:U:H2'	49:C1:346:C:C6	2.51	0.45
49:C1:381:G:H21	49:C1:385:A:H62	1.64	0.45
49:C1:1033:C:H2'	49:C1:1034:C:H6	1.81	0.45
49:C1:1072:G:H2'	49:C1:1073:C:O4'	2.17	0.45
51:UV:287:ARG:HA	51:UV:290:GLU:HG2	1.99	0.45
51:UV:698:VAL:HA	51:UV:769:ARG:HG3	1.99	0.45
52:CV:64:HIS:HE1	52:CV:187:MET:HE3	1.82	0.45
54:UT:901:LYS:HE2	54:UT:937:LEU:HB2	1.99	0.45
54:UT:1317:LEU:HD11	54:UT:1322:PRO:HD3	1.99	0.45
54:UT:2047:GLN:O	54:UT:2052:GLN:NE2	2.49	0.45
56:UE:273:ARG:HD3	56:UE:276:LEU:HD12	1.98	0.45
1:UA:839:TYR:CZ	9:UL:918:GLY:HA3	2.52	0.45
2:UB:33:ASN:ND2	2:UB:34:ASP:OD1	2.50	0.45
3:UC:582:GLN:O	3:UC:585:LYS:C	2.60	0.45
4:UD:224:THR:HG23	14:UR:413:ARG:HE	1.81	0.45
4:UD:283:SER:HB2	4:UD:292:ILE:HB	1.99	0.45
4:UD:711:ASP:HB2	4:UD:825:LYS:HB3	1.97	0.45
5:UF:3:TRP:CE2	28:CM:367:ARG:HG3	2.52	0.45
9:UL:47:VAL:HG21	9:UL:85:VAL:HG11	1.99	0.45
9:UL:154:GLN:HG3	9:UL:194:LYS:HG3	1.98	0.45
9:UL:586:ASP:HB2	9:UL:588:THR:HG22	1.98	0.45
9:UL:645:LEU:HD23	9:UL:645:LEU:HA	1.77	0.45
10:UM:133:GLY:HA3	10:UM:152:PRO:HB2	1.99	0.45
12:UO:123:MET:SD	12:UO:140:TRP:HB2	2.57	0.45
12:UO:278:SER:HB2	12:UO:320:LEU:HG	1.98	0.45
13:UQ:429:LYS:HD3	13:UQ:429:LYS:HA	1.73	0.45
13:UQ:695:GLU:HB3	13:UQ:784:HIS:CE1	2.51	0.45
19:CC:244:LEU:HG	19:CC:250:LYS:HD3	1.98	0.45
19:CC:388:ILE:O	19:CC:391:ARG:HG2	2.17	0.45
23:CH:57:LEU:O	23:CH:61:THR:OG1	2.26	0.45
23:CH:164:PHE:HE2	23:CH:335:VAL:HG23	1.82	0.45
25:CJ:126:ALA:O	25:CJ:130:LEU:HB2	2.17	0.45
29:CO:41:LEU:HD11	29:CO:208:ALA:HB2	1.99	0.45
29:CO:128:VAL:HB	29:CO:159:LEU:HB3	1.98	0.45
32:CR:140:ILE:HD12	32:CR:149:VAL:HG21	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:CR:314:SER:O	32:CR:371:TYR:OH	2.34	0.45
32:CR:880:GLN:HE21	32:CR:915:ILE:HG12	1.81	0.45
32:CS:140:ILE:HD12	32:CS:149:VAL:HG21	1.99	0.45
32:CS:423:SER:OG	32:CS:546:ALA:O	2.24	0.45
33:CT:109:LEU:O	33:CT:112:ARG:NE	2.37	0.45
34:Cb:36:HIS:NE2	34:Cb:88:ASP:OD2	2.50	0.45
35:Cc:203:GLU:HA	35:Cc:206:ARG:HG2	1.98	0.45
49:C1:4:G:N1	49:C1:32:U:C2	2.85	0.45
49:C1:128:G:H2'	49:C1:129:G:C8	2.52	0.45
49:C1:140:C:H2'	49:C1:141:C:C6	2.52	0.45
49:C1:496:U:N3	49:C1:503:G:N1	2.65	0.45
49:C1:666:A:H5''	49:C1:667:G:N7	2.32	0.45
49:C1:759:G:N2	49:C1:850:A:H5'	2.32	0.45
49:C1:1090:A:H2'	49:C1:1091:U:C6	2.52	0.45
49:C1:1738:G:H2'	49:C1:1739:G:H8	1.81	0.45
49:C1:1747:A:N3	49:C1:2196:U:O2'	2.37	0.45
49:C1:2356:C:H2'	49:C1:2357:G:H8	1.82	0.45
50:C2:20:A:H2'	50:C2:21:U:C6	2.52	0.45
53:CW:105:LEU:HD23	61:CZ:556:MET:HG3	1.99	0.45
53:CW:165:TYR:HD2	53:CW:183:GLN:HB3	1.81	0.45
54:UT:67:LEU:HD23	54:UT:67:LEU:HA	1.86	0.45
54:UT:1633:TRP:HB2	54:UT:1636:ARG:HB2	1.98	0.45
54:UT:1784:GLY:HA2	54:UT:1787:LEU:HB2	1.99	0.45
55:UH:641:LEU:HD13	55:UH:714:LEU:HG	1.99	0.45
55:UH:866:GLU:C	56:UI:227:GLY:HA3	2.41	0.45
63:Cz:1566:THR:HA	63:Cz:1569:GLU:HG3	1.99	0.45
1:UA:179:SER:O	49:C1:267:U:N3	2.50	0.44
1:UA:434:ASP:HA	1:UA:476:PHE:HD2	1.82	0.44
1:UA:808:ASN:OD1	1:UA:811:LYS:N	2.43	0.44
2:UB:833:GLU:O	2:UB:837:LEU:HG	2.17	0.44
4:UD:138:GLN:O	4:UD:152:ARG:NE	2.33	0.44
4:UD:154:LEU:HB2	4:UD:166:TYR:HB2	1.99	0.44
4:UD:437:SER:HB2	4:UD:490:LYS:HG2	1.98	0.44
5:UF:54:PRO:HG3	5:UF:103:HIS:CG	2.52	0.44
5:UF:85:SER:O	5:UF:88:SER:OG	2.28	0.44
5:UF:324:MET:SD	5:UF:337:VAL:HG11	2.57	0.44
7:UJ:187:THR:OG1	7:UJ:188:ASN:N	2.50	0.44
7:UJ:670:HIS:CE1	7:UJ:672:ASP:HB2	2.52	0.44
9:UL:925:LYS:O	9:UL:928:SER:OG	2.23	0.44
9:UL:961:LEU:HB2	27:CL:573:ARG:HD3	1.99	0.44
10:UM:819:ASN:ND2	27:CL:699:ALA:O	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:UO:417:ARG:NH2	49:C1:128:G:O6	2.50	0.44
13:UQ:162:ASP:OD1	13:UQ:162:ASP:N	2.50	0.44
13:UQ:485:GLY:O	13:UQ:489:THR:OG1	2.24	0.44
14:UR:156:LYS:HG3	14:UR:157:LEU:HD22	1.98	0.44
15:UU:471:SER:O	15:UU:510:SER:OG	2.22	0.44
15:UU:686:ASP:OD1	15:UU:688:SER:OG	2.34	0.44
15:UU:1023:GLN:HE21	15:UU:1027:ARG:HB2	1.82	0.44
17:UZ:68:THR:OG1	17:UZ:277:ASN:O	2.28	0.44
18:CB:113:THR:H	18:CB:124:LYS:HE3	1.82	0.44
19:CC:180:GLY:O	19:CC:183:THR:OG1	2.33	0.44
24:CI:114:LEU:HD21	24:CI:229:MET:HE2	1.98	0.44
24:CI:920:LEU:HB3	24:CI:937:MET:HE3	1.99	0.44
24:CI:1094:MET:HE2	24:CI:1094:MET:HB2	1.73	0.44
28:CM:326:MET:HE2	28:CM:326:MET:HB3	1.56	0.44
29:CN:12:PRO:HA	29:CN:13:PRO:HD3	1.90	0.44
32:CR:57:LEU:HD13	32:CR:120:TYR:CZ	2.53	0.44
32:CR:523:ARG:HH22	32:CR:563:PRO:HA	1.82	0.44
32:CR:630:LEU:HB3	32:CR:722:TYR:HE1	1.82	0.44
32:CS:196:CYS:HB2	32:CS:489:TRP:CD1	2.52	0.44
32:CS:803:LEU:HD22	32:CS:881:GLN:NE2	2.32	0.44
34:Cb:185:GLY:N	34:Cb:189:MET:HG3	2.32	0.44
37:Ce:61:LYS:NZ	37:Ce:62:LYS:O	2.34	0.44
38:Cf:99:SER:HA	38:Cf:173:ILE:O	2.17	0.44
39:Cg:56:ILE:O	39:Cg:59:THR:OG1	2.23	0.44
43:Ck:86:HIS:O	49:C1:909:G:O2'	2.31	0.44
45:Cn:74:VAL:HG23	45:Cn:83:VAL:HG23	1.99	0.44
45:Cn:84:THR:O	45:Cn:84:THR:OG1	2.34	0.44
49:C1:130:C:H2'	49:C1:131:G:C8	2.52	0.44
49:C1:178:G:H2'	49:C1:179:G:C8	2.52	0.44
49:C1:600:U:H2'	49:C1:601:C:C6	2.52	0.44
49:C1:879:A:H3'	49:C1:880:U:H6	1.82	0.44
50:C2:147:G:H2'	50:C2:148:G:C8	2.52	0.44
51:UV:41:GLU:HB3	51:UV:433:PHE:CD2	2.52	0.44
51:UV:346:PRO:HB3	51:UV:355:GLN:NE2	2.32	0.44
54:UT:768:ASN:HD22	54:UT:769:ILE:HG13	1.82	0.44
54:UT:1279:ARG:HA	54:UT:1282:LEU:HD12	1.98	0.44
54:UT:1957:LYS:HE3	54:UT:1957:LYS:HB2	1.90	0.44
54:UT:1965:PHE:CZ	54:UT:1969:ILE:HD11	2.52	0.44
54:UT:2012:LEU:HD23	54:UT:2012:LEU:HA	1.82	0.44
55:UH:900:ILE:O	55:UH:904:ARG:HG2	2.16	0.44
57:US:174:LEU:HD13	57:US:223:VAL:HG12	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:CX:307:LEU:HD11	59:CX:366:LEU:HD13	1.99	0.44
60:CY:274:GLU:HA	60:CY:277:GLU:HG3	1.98	0.44
56:UI:179:LEU:N	56:UI:216:ARG:HH12	2.15	0.44
1:UA:356:VAL:HB	1:UA:366:VAL:HG22	1.98	0.44
4:UD:234:LYS:N	49:C1:193:U:OP1	2.50	0.44
7:UJ:97:ARG:HH22	14:UR:72:ARG:HB2	1.81	0.44
7:UJ:1739:LEU:HD11	7:UJ:1777:VAL:HG13	2.00	0.44
9:UL:222:ALA:HB3	9:UL:235:ALA:HB3	1.98	0.44
10:UM:341:PHE:HB2	10:UM:373:HIS:HB2	1.99	0.44
10:UM:860:LEU:C	10:UM:864:LYS:HZ3	2.25	0.44
12:UO:123:MET:O	12:UO:139:THR:OG1	2.25	0.44
12:UO:282:ALA:CB	12:UO:287:ARG:O	2.60	0.44
24:CI:811:GLY:N	24:CI:877:LEU:HD21	2.33	0.44
26:CK:221:ALA:HA	27:CL:554:PHE:HE2	1.81	0.44
27:CL:516:LEU:HA	27:CL:516:LEU:HD13	1.73	0.44
27:CL:652:ASP:O	27:CL:675:SER:OG	2.35	0.44
32:CS:880:GLN:HE21	32:CS:915:ILE:HG12	1.81	0.44
34:Cb:173:ILE:HD13	34:Cb:229:GLY:HA2	1.99	0.44
36:Cd:188:GLN:OE1	49:C1:855:A:N6	2.49	0.44
42:Cj:89:ILE:HD12	42:Cj:89:ILE:HA	1.89	0.44
43:Ck:71:ILE:HD13	43:Ck:133:CYS:HB3	1.98	0.44
45:Cn:51:GLY:HA2	45:Cn:77:ILE:HG12	1.98	0.44
49:C1:104:U:H3'	49:C1:105:A:C8	2.52	0.44
49:C1:214:C:H2'	49:C1:215:A:C8	2.52	0.44
49:C1:1630:C:H2'	49:C1:1631:G:C8	2.51	0.44
50:C2:58:A:H2'	50:C2:59:A:C8	2.53	0.44
51:UV:835:LYS:NZ	51:UV:844:SER:OG	2.49	0.44
54:UT:988:ARG:HA	54:UT:991:VAL:HG22	1.98	0.44
54:UT:2184:LYS:HE2	54:UT:2184:LYS:HB3	1.84	0.44
57:US:403:TRP:O	57:US:407:LEU:HG	2.17	0.44
59:CX:395:MET:SD	59:CX:395:MET:N	2.90	0.44
1:UA:289:LEU:HB2	15:UU:873:PRO:HG3	1.99	0.44
4:UD:413:LEU:HB3	55:UH:907:TYR:HD2	1.82	0.44
7:UJ:332:VAL:HG11	7:UJ:358:LEU:HD22	2.00	0.44
7:UJ:594:PRO:HG2	7:UJ:713:HIS:CG	2.52	0.44
8:UK:247:MET:HB2	8:UK:247:MET:HE3	1.69	0.44
9:UL:648:HIS:HB2	9:UL:652:ILE:HD11	1.99	0.44
9:UL:911:ARG:HA	9:UL:914:LYS:HG2	1.99	0.44
12:UO:525:GLN:NE2	49:C1:99:A:N3	2.65	0.44
13:UQ:89:MET:HA	13:UQ:107:TYR:HA	1.99	0.44
15:UU:238:THR:HG23	15:UU:240:ALA:N	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:UX:5:ARG:NH1	50:C2:50:G:OP1	2.50	0.44
18:CA:194:ILE:O	18:CA:198:THR:HG23	2.17	0.44
19:CC:46:LYS:HE3	19:CC:46:LYS:HB2	1.75	0.44
23:CH:218:ILE:O	23:CH:250:VAL:HA	2.17	0.44
28:CM:184:HIS:HA	54:UT:1940:ARG:HH22	1.82	0.44
28:CM:292:SER:HB2	28:CM:338:SER:OG	2.17	0.44
29:CO:137:PHE:O	29:CO:141:MET:HG2	2.17	0.44
32:CS:274:GLU:OE1	32:CS:279:ASN:ND2	2.50	0.44
35:Cc:49:ILE:HG22	35:Cc:51:ILE:HG23	1.98	0.44
36:Cd:137:ARG:HG3	49:C1:752:A:H5'	1.99	0.44
49:C1:62:U:C2	55:UH:894:ARG:HG3	2.52	0.44
49:C1:351:U:N3	49:C1:353:G:C5	2.85	0.44
49:C1:1136:G:H2'	49:C1:1137:G:H8	1.81	0.44
49:C1:1503:U:H2'	49:C1:1504:A:C8	2.53	0.44
49:C1:1695:G:H2'	49:C1:1696:G:C8	2.51	0.44
51:UV:680:LEU:HD22	51:UV:835:LYS:HE3	2.00	0.44
51:UV:1057:VAL:HB	52:CV:90:GLU:O	2.17	0.44
53:CW:339:VAL:HG12	53:CW:341:ASP:H	1.80	0.44
54:UT:1748:TRP:NE1	54:UT:1752:GLU:OE2	2.50	0.44
56:UE:179:LEU:N	56:UE:216:ARG:HH12	2.15	0.44
56:UE:237:ASN:HA	56:UE:240:THR:HB	1.98	0.44
57:US:190:VAL:HG12	57:US:230:ILE:HD11	1.99	0.44
1:UA:652:ILE:HA	49:C1:290:C:N4	2.31	0.44
3:UC:611:LYS:HA	3:UC:614:LYS:HB2	1.98	0.44
4:UD:452:LYS:HE2	4:UD:452:LYS:HB2	1.84	0.44
5:UF:310:LEU:HD23	5:UF:310:LEU:HA	1.79	0.44
7:UJ:225:VAL:HA	7:UJ:228:MET:HB2	1.99	0.44
9:UL:603:LEU:HD13	9:UL:634:TRP:CE2	2.52	0.44
10:UM:666:PHE:CB	10:UM:678:TRP:O	2.58	0.44
10:UM:670:GLY:O	10:UM:696:LEU:HB3	2.18	0.44
12:UO:32:LYS:NZ	12:UO:33:GLN:O	2.49	0.44
12:UO:331:ASP:N	12:UO:331:ASP:OD1	2.43	0.44
14:UR:564:ASP:OD2	14:UR:564:ASP:N	2.51	0.44
18:CA:237:ARG:HH12	18:CA:240:GLY:HA3	1.83	0.44
18:CB:104:TYR:CZ	18:CB:106:GLU:HB3	2.52	0.44
19:CC:168:PHE:CD1	19:CC:172:LYS:HD2	2.51	0.44
24:CI:1150:LYS:NZ	49:C1:1695:G:O3'	2.39	0.44
28:CM:273:ASP:HA	28:CM:444:LYS:HE3	1.99	0.44
30:CP:200:GLU:O	30:CP:204:LYS:HG2	2.18	0.44
32:CS:635:ILE:HD11	32:CS:723:VAL:HB	2.00	0.44
32:CS:824:LEU:HD22	32:CS:869:ARG:HB3	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:Cd:136:LYS:HD2	49:C1:752:A:H4'	2.00	0.44
38:Cf:11:ARG:HG2	38:Cf:17:LYS:HB3	1.98	0.44
38:Cf:56:ARG:HD3	38:Cf:178:GLY:O	2.16	0.44
38:Cf:76:THR:HA	54:UT:978:GLN:HE22	1.82	0.44
49:C1:354:G:H2'	49:C1:355:G:H8	1.83	0.44
49:C1:496:U:O4	49:C1:503:G:O6	2.35	0.44
50:C2:183:A:H2'	50:C2:184:G:C8	2.52	0.44
53:CW:217:CYS:HB2	53:CW:229:TYR:HB2	1.99	0.44
54:UT:738:MET:HE1	54:UT:850:ALA:HB2	1.99	0.44
54:UT:1000:TYR:O	54:UT:1004:ILE:HG12	2.18	0.44
54:UT:1231:LEU:HA	54:UT:1234:LEU:HD12	2.00	0.44
54:UT:1973:VAL:O	54:UT:1977:HIS:HB2	2.18	0.44
56:UE:207:ARG:HA	56:UE:207:ARG:HD3	1.82	0.44
56:UI:236:ILE:HA	56:UI:239:LEU:HD12	1.99	0.44
2:UB:71:VAL:HA	29:CN:48:THR:HG23	1.99	0.44
5:UF:372:THR:HG22	5:UF:373:ASP:H	1.81	0.44
7:UJ:319:ARG:NH1	7:UJ:321:ALA:O	2.51	0.44
7:UJ:535:ASP:OD1	7:UJ:551:TYR:OH	2.36	0.44
7:UJ:1698:VAL:O	7:UJ:1702:VAL:HG23	2.17	0.44
7:UJ:1699:ILE:HG21	7:UJ:1740:ALA:HB1	1.99	0.44
8:UK:257:THR:OG1	8:UK:258:LYS:N	2.50	0.44
9:UL:924:LEU:HD13	10:UM:864:LYS:HA	2.00	0.44
11:UN:335:ARG:HH11	49:C1:580:A:HO2'	1.60	0.44
15:UU:859:ILE:HG21	27:CL:656:VAL:HG23	2.00	0.44
16:UX:61:ASP:HB3	16:UX:148:THR:HG23	1.98	0.44
19:CC:247:ASP:OD1	19:CC:247:ASP:N	2.45	0.44
20:CD:93:THR:O	20:CD:97:ASN:ND2	2.50	0.44
20:CD:258:LYS:HE3	20:CD:258:LYS:HB3	1.85	0.44
23:CH:375:TRP:CG	23:CH:398:VAL:HG12	2.53	0.44
26:CK:76:GLU:CD	26:CK:161:PRO:HD3	2.43	0.44
26:CK:237:ILE:HD13	26:CK:265:PRO:HG3	1.99	0.44
28:CM:379:LEU:HD21	28:CM:392:ARG:CZ	2.47	0.44
30:CP:104:ARG:HH22	30:CP:165:HIS:HB3	1.82	0.44
32:CR:109:TYR:HE2	32:CR:127:ASP:HB2	1.82	0.44
32:CR:787:LEU:HD21	32:CR:866:PHE:HD2	1.82	0.44
32:CR:845:ALA:HB2	32:CR:920:THR:HG21	1.98	0.44
32:CS:743:VAL:HG11	32:CS:812:GLY:HA3	1.98	0.44
32:CS:914:LYS:HG2	53:CW:377:HIS:CG	2.53	0.44
34:Cb:130:GLN:O	34:Cb:137:PRO:HA	2.18	0.44
37:Ce:52:ALA:HB1	37:Ce:64:ILE:HD11	2.00	0.44
38:Cf:66:ALA:H	38:Cf:186:TYR:HA	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:C1:372:U:H2'	49:C1:373:C:C6	2.52	0.44
49:C1:710:A:N6	49:C1:878:C:H42	2.15	0.44
49:C1:1082:G:H2'	49:C1:1083:U:C6	2.52	0.44
49:C1:1696:G:H1	50:C2:13:U:H3	1.64	0.44
49:C1:2176:A:H2'	49:C1:2177:G:O4'	2.17	0.44
50:C2:129:U:H2'	50:C2:130:C:C6	2.53	0.44
51:UV:552:SER:HA	51:UV:585:ARG:HG2	2.00	0.44
54:UT:473:MET:HB3	54:UT:479:LEU:HG	1.99	0.44
54:UT:1208:PRO:HA	54:UT:1211:VAL:HG12	1.99	0.44
55:UH:842:TYR:OH	55:UH:872:LYS:O	2.32	0.44
59:CX:342:ILE:HG13	59:CX:385:LEU:HD21	2.00	0.44
60:CY:320:ARG:HG2	60:CY:323:ARG:HH22	1.82	0.44
63:Cz:1651:LYS:HD2	63:Cz:1655:LEU:HD13	1.99	0.44
1:UA:454:SER:OG	1:UA:457:THR:OG1	2.28	0.44
1:UA:713:MET:O	15:UU:701:ARG:NH1	2.51	0.44
1:UA:785:PRO:HA	15:UU:843:LEU:HB2	2.00	0.44
2:UB:590:ASP:O	2:UB:594:LEU:HG	2.17	0.44
2:UB:736:ALA:O	2:UB:740:TRP:HB2	2.18	0.44
3:UC:642:LEU:HD12	3:UC:642:LEU:HA	1.86	0.44
5:UF:25:LYS:HA	5:UF:25:LYS:HD3	1.79	0.44
7:UJ:236:ARG:HH11	49:C1:243:U:H3'	1.81	0.44
8:UK:48:LEU:HD12	8:UK:48:LEU:HA	1.74	0.44
8:UK:77:LEU:HD12	42:Cj:70:ALA:HB3	2.00	0.44
9:UL:83:PHE:O	9:UL:94:LEU:HA	2.18	0.44
9:UL:158:LEU:HD23	9:UL:191:THR:HG22	2.00	0.44
9:UL:228:ASP:OD1	9:UL:228:ASP:N	2.39	0.44
10:UM:83:LEU:HD23	10:UM:83:LEU:HA	1.87	0.44
10:UM:125:LEU:HG	10:UM:212:LEU:HD11	1.99	0.44
12:UO:108:ARG:NH2	12:UO:110:ASP:OD1	2.48	0.44
13:UQ:259:GLU:O	13:UQ:286:VAL:N	2.49	0.44
14:UR:170:GLU:O	14:UR:174:ARG:HG2	2.17	0.44
16:UX:28:LYS:HD2	16:UX:28:LYS:HA	1.84	0.44
17:UZ:216:PRO:O	17:UZ:220:ILE:HG12	2.18	0.44
19:CC:120:ALA:O	19:CC:123:THR:OG1	2.34	0.44
22:CG:173:VAL:HA	22:CG:187:THR:HA	2.00	0.44
22:CG:253:LYS:HE3	22:CG:296:PHE:HD2	1.83	0.44
22:CG:388:ASP:OD1	22:CG:388:ASP:N	2.49	0.44
22:CG:402:ALA:HB3	22:CG:410:VAL:HG12	1.99	0.44
22:CG:420:LEU:HG	22:CG:429:LEU:HD12	2.00	0.44
22:CG:436:HIS:CD2	22:CG:482:SER:HB3	2.52	0.44
23:CH:343:SER:O	23:CH:345:ASP:N	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:CN:205:PHE:HE1	29:CN:221:VAL:HA	1.83	0.44
32:CR:142:THR:O	32:CR:142:THR:OG1	2.34	0.44
32:CS:377:ALA:HB1	32:CS:380:LEU:HD22	2.00	0.44
32:CS:522:ASN:N	32:CS:708:LEU:O	2.49	0.44
32:CS:654:LEU:HD11	32:CS:737:TRP:HZ3	1.83	0.44
34:Cb:63:ALA:O	34:Cb:67:GLN:HG2	2.18	0.44
48:CU:230:ARG:HH12	49:C1:596:U:H1'	1.82	0.44
49:C1:1487:G:N2	49:C1:1493:U:O4	2.50	0.44
52:CV:66:ARG:HA	52:CV:69:VAL:HG22	1.98	0.44
52:CV:167:LYS:O	52:CV:171:THR:HG23	2.17	0.44
54:UT:926:LEU:HD12	54:UT:926:LEU:HA	1.84	0.44
54:UT:1358:LEU:HD23	54:UT:1362:PHE:HE2	1.82	0.44
54:UT:1742:ILE:O	54:UT:1745:SER:OG	2.28	0.44
54:UT:1851:GLN:HB2	54:UT:1895:ARG:HD3	1.99	0.44
54:UT:2129:LYS:HA	54:UT:2132:ARG:HB2	1.99	0.44
56:UE:255:SER:O	56:UE:255:SER:OG	2.27	0.44
59:CX:250:ALA:O	59:CX:254:PHE:HB2	2.18	0.44
7:UJ:541:SER:OG	7:UJ:548:ASN:ND2	2.48	0.44
7:UJ:700:HIS:HA	7:UJ:701:SER:HA	1.60	0.44
9:UL:130:LYS:HE3	9:UL:154:GLN:HE22	1.82	0.44
9:UL:428:ASP:OD1	9:UL:428:ASP:N	2.48	0.44
9:UL:890:VAL:HA	10:UM:891:MET:HG3	1.99	0.44
9:UL:920:ASN:O	9:UL:924:LEU:HG	2.18	0.44
9:UL:955:LYS:HE2	27:CL:649:VAL:HG11	1.99	0.44
10:UM:77:ILE:HG12	10:UM:87:ILE:HG12	2.00	0.44
11:UN:926:LYS:NZ	49:C1:439:A:O2'	2.51	0.44
12:UO:504:HIS:HE2	13:UQ:566:TYR:HH	1.63	0.44
15:UU:359:ASN:ND2	15:UU:383:GLY:HA3	2.32	0.44
15:UU:854:LEU:HD12	15:UU:854:LEU:HA	1.78	0.44
15:UU:982:LEU:HD22	15:UU:1022:HIS:HB3	1.98	0.44
16:UX:163:VAL:HA	16:UX:164:PRO:HD3	1.68	0.44
19:CC:23:GLN:H	19:CC:23:GLN:HG3	1.56	0.44
20:CD:363:ARG:HH22	50:C2:86:U:P	2.41	0.44
22:CG:95:THR:O	22:CG:98:GLU:HG2	2.18	0.44
24:CI:367:VAL:HG22	24:CI:369:ARG:HH12	1.81	0.44
24:CI:764:GLN:HA	24:CI:768:VAL:HB	2.00	0.44
26:CK:42:LEU:HD21	26:CK:47:ALA:HB2	2.00	0.44
28:CM:116:LEU:HA	28:CM:125:LEU:O	2.18	0.44
29:CN:79:LYS:HE3	29:CN:79:LYS:HB3	1.88	0.44
32:CR:523:ARG:HA	32:CR:526:LEU:HB3	2.00	0.44
32:CR:742:PHE:HB3	32:CR:762:MET:HB3	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:CR:824:LEU:HD22	32:CR:869:ARG:HB3	1.99	0.44
32:CS:385:LEU:HD22	32:CS:407:LEU:HD23	1.99	0.44
45:Cn:70:LYS:HB2	45:Cn:70:LYS:HE3	1.79	0.44
45:Cn:76:LEU:HD23	45:Cn:76:LEU:HA	1.72	0.44
48:CU:225:MET:HE2	48:CU:225:MET:HB3	1.82	0.44
48:CU:281:MET:HE2	48:CU:281:MET:HB3	1.80	0.44
49:C1:98:A:H2'	49:C1:99:A:C8	2.52	0.44
49:C1:597:G:H2'	49:C1:598:A:H8	1.83	0.44
49:C1:687:U:H2'	49:C1:688:U:O4'	2.18	0.44
49:C1:710:A:N6	49:C1:878:C:N4	2.65	0.44
49:C1:755:A:C6	49:C1:756:C:N4	2.86	0.44
51:UV:409:TRP:CD1	51:UV:409:TRP:H	2.35	0.44
54:UT:18:LYS:HA	54:UT:18:LYS:HD2	1.72	0.44
54:UT:1242:GLU:HA	54:UT:1245:SER:HB2	1.99	0.44
54:UT:1613:TRP:CE2	54:UT:1617:ARG:HD2	2.52	0.44
54:UT:1781:LEU:HD22	54:UT:1786:GLN:HB3	1.98	0.44
54:UT:2149:LYS:HD3	54:UT:2149:LYS:HA	1.76	0.44
54:UT:2202:LEU:HD22	54:UT:2222:ILE:HG23	1.99	0.44
59:CX:397:ARG:HD3	59:CX:397:ARG:HA	1.90	0.44
63:Cz:1537:LYS:HB2	63:Cz:1537:LYS:HE3	1.85	0.44
1:UA:474:LEU:HD12	1:UA:474:LEU:HA	1.79	0.44
1:UA:794:ILE:HA	1:UA:797:LEU:HD12	2.00	0.44
1:UA:816:LEU:HA	1:UA:816:LEU:HD12	1.80	0.44
2:UB:339:ARG:HD2	2:UB:342:ARG:HD2	1.99	0.44
4:UD:13:ALA:HB1	4:UD:347:ALA:HB2	1.99	0.44
4:UD:356:ALA:HA	4:UD:359:LYS:HD3	2.00	0.44
6:UG:211:HIS:CD2	6:UG:213:LEU:HD11	2.52	0.44
7:UJ:637:LEU:HB3	7:UJ:642:GLY:HA2	2.00	0.44
8:UK:70:ARG:NE	8:UK:87:VAL:HG11	2.32	0.44
8:UK:102:ARG:NH2	8:UK:247:MET:O	2.44	0.44
9:UL:12:LYS:HG2	9:UL:722:VAL:HB	1.99	0.44
9:UL:69:ARG:HG3	9:UL:88:GLU:HB2	2.00	0.44
9:UL:932:ARG:O	9:UL:936:VAL:HG13	2.17	0.44
12:UO:107:ILE:HA	12:UO:113:VAL:O	2.17	0.44
15:UU:423:ARG:HB3	49:C1:258:C:H6	1.83	0.44
15:UU:752:THR:N	15:UU:766:ALA:O	2.51	0.44
15:UU:995:MET:HE3	15:UU:1019:TRP:CD2	2.53	0.44
16:UX:175:ILE:HD12	16:UX:175:ILE:HA	1.76	0.44
18:CB:219:LEU:HD22	20:CD:149:LEU:HD21	2.00	0.44
19:CC:176:HIS:HD2	19:CC:177:ILE:HD13	1.83	0.44
19:CC:309:ILE:HG23	19:CC:310:LEU:HG	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CC:414:ARG:HA	19:CC:414:ARG:HD2	1.76	0.44
20:CD:431:LYS:HG2	49:C1:252:U:OP1	2.17	0.44
21:CF:88:LEU:HD11	21:CF:101:VAL:HG12	2.00	0.44
22:CG:123:PHE:HE2	34:Cb:192:VAL:HG21	1.83	0.44
22:CG:128:ILE:O	22:CG:132:LEU:HG	2.17	0.44
22:CG:325:THR:OG1	22:CG:326:LEU:N	2.51	0.44
24:CI:394:LYS:HA	24:CI:401:GLN:HA	1.99	0.44
25:CJ:102:THR:HG22	25:CJ:104:SER:N	2.32	0.44
28:CM:119:THR:OG1	28:CM:123:LYS:N	2.51	0.44
29:CO:181:SER:HB3	29:CO:224:LYS:HD2	2.00	0.44
32:CR:385:LEU:HD22	32:CR:407:LEU:HD23	1.99	0.44
32:CS:520:HIS:O	32:CS:710:SER:N	2.43	0.44
35:Cc:150:SER:OG	47:Cp:48:PRO:O	2.32	0.44
36:Cd:160:ARG:NH1	49:C1:653:U:O2	2.50	0.44
42:Cj:52:ILE:HG13	42:Cj:60:PHE:CE2	2.53	0.44
49:C1:390:C:H2'	49:C1:391:C:H6	1.83	0.44
49:C1:914:G:H2'	49:C1:915:G:C8	2.53	0.44
49:C1:2068:C:H5	49:C1:2069:G:H8	1.65	0.44
54:UT:1822:MET:HA	54:UT:1825:ILE:HG12	2.00	0.44
56:UE:157:LEU:HD12	56:UE:184:THR:HB	1.99	0.44
1:UA:595:TYR:CE1	1:UA:611:THR:HG22	2.52	0.44
6:UG:283:THR:OG1	6:UG:285:TRP:NE1	2.47	0.44
7:UJ:269:ILE:HA	7:UJ:272:TYR:CD1	2.53	0.44
9:UL:899:LEU:HA	9:UL:902:VAL:HG12	2.00	0.44
12:UO:25:ARG:HA	12:UO:28:ARG:HG2	1.99	0.44
12:UO:42:TRP:NE1	58:CI:60:GLU:OE1	2.39	0.44
13:UQ:220:ALA:HB3	13:UQ:232:LYS:HB3	1.99	0.44
15:UU:679:LEU:HD23	15:UU:679:LEU:HA	1.79	0.44
18:CA:221:PRO:HA	19:CC:135:ARG:HD3	1.99	0.44
18:CA:287:LYS:HE2	18:CA:287:LYS:HB3	1.86	0.44
18:CB:148:ILE:HG22	18:CB:150:MET:HE3	1.99	0.44
22:CG:125:ALA:HA	34:Cb:110:THR:HG22	2.00	0.44
22:CG:222:LYS:N	50:C2:183:A:OP1	2.51	0.44
22:CG:478:ILE:HB	22:CG:490:TRP:HB2	1.99	0.44
24:CI:619:LEU:HA	24:CI:622:THR:HG22	1.99	0.44
26:CK:46:ILE:H	26:CK:46:ILE:HD12	1.83	0.44
28:CM:184:HIS:HA	54:UT:1940:ARG:HH12	1.82	0.44
28:CM:326:MET:HG3	28:CM:345:SER:HB2	1.99	0.44
30:CP:176:LYS:HD2	49:C1:1489:G:H4'	2.00	0.44
39:Cg:129:GLN:HG3	39:Cg:131:HIS:NE2	2.32	0.44
44:Cm:36:LYS:HD2	44:Cm:36:LYS:HA	1.88	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:Cm:47:ILE:HG22	44:Cm:65:LEU:HD22	2.00	0.44
46:Co:353:GLN:NE2	46:Co:405:LEU:HG	2.33	0.44
49:C1:1465:C:H2'	49:C1:1466:G:C8	2.53	0.44
49:C1:1740:C:O2'	49:C1:1741:A:H5'	2.17	0.44
49:C1:2056:U:O2'	49:C1:2057:G:O5'	2.33	0.44
50:C2:127:A:O2'	50:C2:128:C:H6	2.00	0.44
54:UT:422:TRP:O	54:UT:426:TYR:HB2	2.18	0.44
54:UT:973:LEU:HB3	54:UT:1026:GLN:HE22	1.83	0.44
54:UT:1711:PRO:O	54:UT:1715:ILE:HG12	2.18	0.44
54:UT:2223:LYS:HD2	54:UT:2223:LYS:HA	1.83	0.44
1:UA:122:TRP:CZ3	1:UA:141:PHE:HB3	2.53	0.43
1:UA:215:LYS:HD3	1:UA:257:THR:HB	1.98	0.43
1:UA:308:SER:HB2	15:UU:884:GLY:HA2	2.00	0.43
1:UA:327:TRP:HH2	15:UU:880:LEU:HD13	1.83	0.43
1:UA:374:CYS:O	27:CL:662:GLN:NE2	2.35	0.43
2:UB:661:LEU:O	2:UB:665:LEU:HG	2.18	0.43
2:UB:770:PRO:HD2	2:UB:773:LEU:HD12	2.00	0.43
4:UD:760:ALA:N	13:UQ:281:PHE:O	2.36	0.43
4:UD:830:TYR:CZ	49:C1:63:C:H5''	2.53	0.43
6:UG:165:TRP:CE2	6:UG:166:ARG:HG3	2.53	0.43
7:UJ:1740:ALA:HA	7:UJ:1743:LYS:HG2	1.99	0.43
9:UL:473:PHE:HA	9:UL:480:VAL:HA	1.98	0.43
9:UL:944:TRP:HA	9:UL:947:LYS:NZ	2.33	0.43
9:UL:961:LEU:H	27:CL:573:ARG:HG2	1.82	0.43
10:UM:798:LEU:HA	10:UM:801:LEU:HG	2.00	0.43
10:UM:860:LEU:O	10:UM:864:LYS:HG3	2.18	0.43
12:UO:390:SER:H	12:UO:393:ASN:HD22	1.66	0.43
13:UQ:103:LEU:O	13:UQ:113:VAL:HA	2.18	0.43
13:UQ:736:ALA:HB3	13:UQ:747:LEU:HD21	2.00	0.43
15:UU:84:PHE:HE2	49:C1:261:G:C2	2.35	0.43
15:UU:638:VAL:HG11	15:UU:694:ILE:HD11	2.00	0.43
20:CD:216:LEU:H	20:CD:219:ASN:ND2	2.15	0.43
22:CG:414:ASP:N	22:CG:414:ASP:OD2	2.48	0.43
23:CH:12:THR:OG1	23:CH:13:GLY:N	2.51	0.43
23:CH:53:PHE:HD1	23:CH:56:LEU:HD23	1.82	0.43
23:CH:107:THR:HG23	23:CH:185:GLY:HA3	2.01	0.43
23:CH:207:HIS:CE1	24:CI:752:ILE:HG21	2.53	0.43
24:CI:952:ILE:HD13	24:CI:952:ILE:HG21	1.83	0.43
25:CJ:68:ASN:HB3	25:CJ:71:ARG:HB2	2.00	0.43
32:CR:618:VAL:HG11	32:CR:627:PHE:CD2	2.52	0.43
32:CS:414:ILE:HD11	32:CS:422:ARG:HA	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:CS:530:HIS:H	32:CS:533:SER:HG	1.66	0.43
32:CS:844:TYR:HB3	32:CS:916:MET:HE3	1.98	0.43
49:C1:679:A:H61	49:C1:980:G:H1'	1.82	0.43
49:C1:1065:A:H2'	49:C1:1066:U:C6	2.53	0.43
49:C1:1098:G:O2'	49:C1:1099:A:H8	2.01	0.43
49:C1:2218:A:H2'	49:C1:2219:C:C6	2.53	0.43
50:C2:153:G:H3'	50:C2:154:G:H8	1.82	0.43
51:UV:86:ALA:O	51:UV:90:GLU:HG2	2.17	0.43
53:CW:224:GLY:HA2	53:CW:247:ILE:HG13	1.99	0.43
54:UT:946:LEU:HD11	54:UT:957:GLN:HB2	2.00	0.43
54:UT:1352:TYR:OH	54:UT:1429:ASP:O	2.29	0.43
54:UT:1731:LYS:HA	54:UT:1731:LYS:HD3	1.69	0.43
54:UT:2175:VAL:O	54:UT:2179:ILE:HG12	2.18	0.43
54:UT:2194:VAL:HA	54:UT:2197:THR:HG22	2.00	0.43
57:US:243:PHE:HB2	57:US:247:ARG:HG2	2.00	0.43
2:UB:734:LYS:HD3	2:UB:780:LEU:HA	2.00	0.43
2:UB:797:PRO:HD3	57:US:431:LEU:HD11	2.00	0.43
3:UC:619:LYS:HB2	3:UC:619:LYS:HE3	1.80	0.43
4:UD:123:LYS:HE3	4:UD:123:LYS:HB2	1.77	0.43
4:UD:182:THR:HB	4:UD:189:PHE:HE2	1.83	0.43
4:UD:188:LYS:HB2	4:UD:205:SER:HB3	2.01	0.43
4:UD:651:THR:O	4:UD:654:LYS:N	2.51	0.43
5:UF:88:SER:O	5:UF:92:THR:OG1	2.28	0.43
5:UF:379:THR:HA	5:UF:382:VAL:HG12	2.00	0.43
6:UG:277:GLN:NE2	6:UG:283:THR:OG1	2.39	0.43
7:UJ:148:PHE:CE2	7:UJ:177:PRO:HD2	2.53	0.43
7:UJ:185:GLN:O	7:UJ:189:ARG:CB	2.49	0.43
7:UJ:423:ALA:O	7:UJ:427:LEU:HG	2.18	0.43
7:UJ:776:ASP:HA	7:UJ:779:VAL:HG12	2.00	0.43
7:UJ:1607:LEU:HD23	7:UJ:1610:PHE:CZ	2.54	0.43
9:UL:425:HIS:CD2	9:UL:450:LYS:HD3	2.54	0.43
12:UO:471:GLN:HA	12:UO:508:LEU:HD13	2.00	0.43
13:UQ:524:VAL:HG21	49:C1:71:A:H2	1.82	0.43
14:UR:281:ALA:HB3	14:UR:290:LEU:HD23	2.01	0.43
14:UR:393:LYS:HA	14:UR:393:LYS:HD3	1.87	0.43
15:UU:199:ILE:O	15:UU:210:ILE:HA	2.18	0.43
15:UU:243:LEU:HD21	15:UU:264:VAL:HG21	2.00	0.43
15:UU:257:ASN:HB2	15:UU:262:LYS:HB3	2.00	0.43
17:UZ:84:ILE:HD12	17:UZ:226:LYS:HB2	2.00	0.43
18:CB:241:ILE:HG22	18:CB:244:ARG:HH22	1.83	0.43
19:CC:7:LEU:O	19:CC:17:LEU:HA	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CD:400:LYS:O	20:CD:404:ASN:ND2	2.51	0.43
24:CI:810:PHE:HE1	24:CI:876:PRO:HG3	1.83	0.43
25:CJ:33:ILE:HG13	25:CJ:34:ARG:HG3	2.00	0.43
26:CK:215:ARG:HA	26:CK:215:ARG:HD2	1.73	0.43
27:CL:608:ALA:HB3	27:CL:611:LYS:HG3	2.00	0.43
27:CL:713:LYS:NZ	49:C1:2336:A:OP1	2.40	0.43
29:CN:176:ARG:HB2	29:CN:202:ILE:HD12	2.00	0.43
32:CR:377:ALA:HB1	32:CR:380:LEU:HD22	2.00	0.43
32:CR:380:LEU:HD11	32:CR:402:LEU:HB3	1.99	0.43
32:CR:635:ILE:HD11	32:CR:723:VAL:HB	2.00	0.43
32:CS:57:LEU:HD13	32:CS:120:TYR:CZ	2.53	0.43
32:CS:162:LEU:HD22	32:CS:190:LEU:HD13	2.01	0.43
32:CS:172:ARG:HH21	32:CS:191:LEU:HD11	1.82	0.43
34:Cb:201:HIS:HB2	34:Cb:206:GLY:HA2	2.00	0.43
35:Cc:134:THR:OG1	47:Cp:23:ARG:NH2	2.51	0.43
41:Ci:37:ASN:HB2	49:C1:1486:G:H22	1.83	0.43
42:Cj:72:GLY:O	49:C1:2065:C:O2'	2.29	0.43
49:C1:148:C:H2'	49:C1:149:G:H8	1.83	0.43
49:C1:285:A:H2'	49:C1:286:G:H8	1.83	0.43
49:C1:910:G:H2'	49:C1:911:C:H6	1.83	0.43
52:CV:159:GLU:O	52:CV:163:LYS:HG2	2.18	0.43
53:CW:57:SER:HA	53:CW:73:GLY:HA2	1.99	0.43
54:UT:1744:ARG:HH21	54:UT:1780:SER:HA	1.83	0.43
54:UT:2213:LYS:O	54:UT:2213:LYS:NZ	2.45	0.43
61:CZ:552:LEU:HD13	61:CZ:555:PHE:CE2	2.53	0.43
1:UA:55:ARG:HH11	1:UA:614:VAL:HG12	1.84	0.43
1:UA:306:ASN:HB2	1:UA:311:TRP:HB2	1.99	0.43
1:UA:453:TRP:CD1	1:UA:460:LEU:HA	2.52	0.43
2:UB:13:LEU:HB2	2:UB:19:ILE:HD13	2.00	0.43
2:UB:20:GLY:O	49:C1:1731:A:O2'	2.36	0.43
3:UC:641:ASN:N	3:UC:641:ASN:OD1	2.49	0.43
4:UD:7:ARG:N	55:UH:906:ILE:O	2.51	0.43
4:UD:228:ASP:OD2	4:UD:233:SER:OG	2.36	0.43
6:UG:215:LYS:HB2	6:UG:216:HIS:CE1	2.53	0.43
7:UJ:135:LEU:HD21	7:UJ:151:LEU:HD11	2.00	0.43
7:UJ:794:PHE:O	7:UJ:798:LYS:HG2	2.18	0.43
9:UL:391:ASN:OD1	9:UL:391:ASN:N	2.51	0.43
9:UL:641:CYS:HB3	49:C1:1714:G:N7	2.33	0.43
10:UM:24:GLY:HA3	10:UM:38:THR:HG21	2.00	0.43
10:UM:769:ARG:O	10:UM:773:LEU:HG	2.18	0.43
13:UQ:516:ILE:HG23	13:UQ:588:TRP:HZ2	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:UQ:607:TYR:CZ	56:UE:251:ARG:HD3	2.53	0.43
14:UR:433:THR:HA	14:UR:442:THR:O	2.17	0.43
15:UU:127:LYS:NZ	15:UU:130:GLU:OE2	2.35	0.43
15:UU:308:VAL:HG22	15:UU:323:LEU:HB3	1.99	0.43
16:UX:9:LYS:HG3	16:UX:14:ARG:HH12	1.81	0.43
17:UZ:81:GLY:HA2	17:UZ:181:PRO:HG3	2.00	0.43
21:CE:61:PRO:HB2	21:CE:64:ILE:HG23	2.00	0.43
22:CG:268:LYS:HE2	22:CG:288:ARG:O	2.18	0.43
22:CG:585:GLU:HG3	22:CG:590:ARG:HG2	2.00	0.43
23:CH:248:SER:OG	23:CH:249:ASP:N	2.51	0.43
24:CI:386:LEU:HB2	32:CR:211:ILE:HG22	2.00	0.43
26:CK:290:THR:HG21	49:C1:1145:G:H5'	2.01	0.43
27:CL:708:MET:HG3	27:CL:712:GLU:HG2	1.99	0.43
29:CN:174:ASN:HA	35:Cc:206:ARG:HH22	1.82	0.43
31:CQ:83:ARG:HG3	31:CQ:124:LEU:HB2	2.00	0.43
32:CR:743:VAL:HG11	32:CR:812:GLY:HA3	1.98	0.43
32:CS:35:LYS:HA	32:CS:38:ILE:HD12	2.00	0.43
32:CS:109:TYR:HE2	32:CS:127:ASP:HB2	1.82	0.43
35:Cc:109:HIS:CD2	35:Cc:110:LEU:HD22	2.52	0.43
46:Co:424:ARG:NH2	49:C1:1110:A:H5'	2.33	0.43
49:C1:285:A:H2'	49:C1:286:G:C8	2.53	0.43
49:C1:488:C:H2'	49:C1:489:A:C8	2.54	0.43
49:C1:2059:C:H2'	49:C1:2060:A:C8	2.53	0.43
51:UV:787:THR:HG22	51:UV:793:ARG:HH11	1.83	0.43
51:UV:839:SER:HA	51:UV:1070:LEU:HD13	2.00	0.43
51:UV:1054:LEU:HA	52:CV:90:GLU:HB3	2.00	0.43
53:CW:246:GLU:N	53:CW:264:SER:OG	2.50	0.43
54:UT:88:PRO:HA	54:UT:91:GLU:HG2	2.00	0.43
54:UT:122:LEU:O	54:UT:126:VAL:HG23	2.18	0.43
54:UT:530:LYS:HD3	54:UT:530:LYS:HA	1.77	0.43
54:UT:1136:THR:HA	54:UT:1139:LYS:HG2	1.99	0.43
55:UH:775:LEU:H	55:UH:775:LEU:HD12	1.84	0.43
1:UA:92:HIS:CE1	49:C1:258:C:H42	2.36	0.43
1:UA:467:HIS:ND1	1:UA:487:SER:OG	2.47	0.43
1:UA:546:SER:OG	42:Cj:107:GLN:NE2	2.51	0.43
1:UA:667:ARG:O	1:UA:669:LYS:N	2.51	0.43
2:UB:71:VAL:HG23	29:CN:48:THR:HG23	2.01	0.43
2:UB:112:LYS:HE3	23:CH:62:ASN:HA	1.99	0.43
6:UG:184:ARG:CZ	6:UG:223:GLU:HA	2.48	0.43
7:UJ:804:GLY:O	7:UJ:807:GLN:NE2	2.51	0.43
9:UL:568:ILE:HD12	9:UL:582:VAL:HB	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:UM:234:ASN:HB3	10:UM:252:ARG:HD3	2.01	0.43
10:UM:724:THR:O	10:UM:727:THR:OG1	2.32	0.43
11:UN:334:ARG:NH1	49:C1:582:G:OP2	2.52	0.43
12:UO:214:VAL:O	12:UO:228:THR:HA	2.18	0.43
13:UQ:154:ASP:HA	13:UQ:170:TRP:NE1	2.34	0.43
13:UQ:349:ARG:HH12	13:UQ:384:LEU:HD11	1.83	0.43
15:UU:201:VAL:O	15:UU:208:VAL:HA	2.18	0.43
15:UU:578:ARG:HH21	15:UU:581:SER:HA	1.83	0.43
21:CE:21:LEU:HD22	21:CE:54:ILE:HD11	1.99	0.43
21:CF:115:ILE:HA	21:CF:118:LEU:HD12	2.01	0.43
22:CG:221:LYS:HD3	50:C2:182:G:H5'	2.00	0.43
22:CG:331:ASP:OD2	22:CG:350:ARG:N	2.51	0.43
23:CH:261:LEU:HA	23:CH:271:LYS:O	2.17	0.43
24:CI:849:SER:OG	24:CI:870:PHE:O	2.33	0.43
28:CM:279:GLN:HE22	28:CM:315:GLY:H	1.66	0.43
28:CM:333:MET:HE2	28:CM:333:MET:HB3	1.72	0.43
28:CM:367:ARG:HE	28:CM:367:ARG:HB3	1.60	0.43
28:CM:403:LYS:HE3	49:C1:1664:U:H4'	2.01	0.43
28:CM:417:ARG:HE	28:CM:418:ARG:HH22	1.66	0.43
29:CN:38:ILE:HG23	29:CN:111:GLN:HG2	2.01	0.43
29:CN:45:SER:O	29:CN:45:SER:OG	2.35	0.43
29:CO:104:ILE:HD13	29:CO:242:CYS:HB2	2.00	0.43
37:Ce:183:TYR:CZ	37:Ce:187:THR:HG21	2.53	0.43
38:Cf:3:ILE:HD12	38:Cf:3:ILE:HA	1.90	0.43
41:CI:34:ALA:HA	41:CI:39:THR:HA	2.01	0.43
49:C1:131:G:H2'	49:C1:132:A:C8	2.53	0.43
49:C1:293:G:H2'	49:C1:294:G:H8	1.81	0.43
49:C1:623:C:H2'	49:C1:624:U:C6	2.53	0.43
49:C1:922:C:H2'	49:C1:923:C:C6	2.53	0.43
49:C1:2206:C:H2'	49:C1:2207:C:C6	2.53	0.43
50:C2:137:U:H2'	50:C2:138:A:C8	2.53	0.43
53:CW:157:GLY:N	53:CW:202:GLY:O	2.35	0.43
54:UT:1932:PRO:O	60:CY:362:ARG:NH2	2.51	0.43
59:CX:207:LEU:HD22	59:CX:238:ARG:HH12	1.83	0.43
59:CX:414:LEU:HG	59:CX:449:ILE:HG21	1.99	0.43
3:UC:607:LYS:NZ	49:C1:1175:A:OP2	2.38	0.43
4:UD:338:SER:O	4:UD:338:SER:OG	2.35	0.43
5:UF:107:ILE:HA	5:UF:110:TRP:HD1	1.84	0.43
6:UG:581:LYS:HD2	6:UG:584:LYS:HD2	2.00	0.43
7:UJ:546:PRO:HB3	7:UJ:589:PHE:CZ	2.54	0.43
7:UJ:593:PHE:O	7:UJ:597:ILE:HG12	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:UJ:715:VAL:HA	7:UJ:748:LEU:HD13	1.99	0.43
8:UK:165:PHE:N	62:UP:321:ARG:O	2.52	0.43
12:UO:248:LEU:HD12	12:UO:255:ILE:HG22	1.99	0.43
12:UO:322:VAL:HG22	12:UO:334:LEU:HB3	1.99	0.43
12:UO:532:ARG:NH1	49:C1:98:A:H1'	2.34	0.43
14:UR:272:THR:OG1	14:UR:273:HIS:N	2.51	0.43
14:UR:501:ILE:HD12	14:UR:501:ILE:HA	1.87	0.43
15:UU:297:VAL:HA	15:UU:311:TRP:O	2.19	0.43
16:UX:9:LYS:HG2	16:UX:10:GLN:H	1.84	0.43
19:CC:27:VAL:HG11	28:CM:340:TYR:CG	2.53	0.43
19:CC:319:ILE:HD12	19:CC:319:ILE:HA	1.83	0.43
21:CF:52:LEU:HD12	21:CF:53:VAL:H	1.83	0.43
22:CG:486:CYS:HB2	22:CG:504:ILE:HD11	2.00	0.43
23:CH:34:SER:HA	23:CH:74:THR:HG23	2.00	0.43
23:CH:148:LEU:HD12	23:CH:152:THR:HG21	2.01	0.43
23:CH:229:ALA:O	23:CH:233:ASN:ND2	2.51	0.43
23:CH:284:GLU:HA	23:CH:291:ILE:HG22	2.01	0.43
26:CK:252:VAL:H	27:CL:546:LYS:HZ3	1.64	0.43
32:CS:752:ASN:ND2	32:CS:757:GLU:O	2.48	0.43
32:CS:787:LEU:HD21	32:CS:866:PHE:HD2	1.82	0.43
35:Cc:152:LEU:HD23	35:Cc:152:LEU:HA	1.79	0.43
39:Cg:141:VAL:HG13	39:Cg:144:PHE:HB2	2.00	0.43
42:Cj:57:THR:O	42:Cj:60:PHE:N	2.51	0.43
43:Ck:153:LYS:HG2	43:Ck:157:LYS:HE3	2.00	0.43
46:Co:340:THR:HG22	46:Co:356:VAL:HG22	2.01	0.43
49:C1:30:U:H2'	49:C1:31:C:C6	2.54	0.43
49:C1:340:G:H2'	49:C1:341:G:H8	1.84	0.43
49:C1:929:U:O2'	49:C1:930:G:O4'	2.28	0.43
49:C1:1138:C:N3	49:C1:1155:G:C6	2.87	0.43
49:C1:2112:C:H2'	49:C1:2113:U:C6	2.54	0.43
49:C1:2112:C:H2'	49:C1:2113:U:H6	1.81	0.43
51:UV:51:LEU:HD21	51:UV:132:VAL:HA	2.00	0.43
51:UV:719:ILE:O	51:UV:723:LEU:HG	2.19	0.43
54:UT:1073:LEU:HD23	54:UT:1076:LEU:HD21	2.00	0.43
54:UT:1211:VAL:HG22	54:UT:1266:THR:HG21	2.00	0.43
55:UH:544:ARG:HA	55:UH:547:VAL:HG12	1.99	0.43
55:UH:634:THR:HB	55:UH:636:LEU:HD21	2.00	0.43
57:US:153:LEU:HD23	57:US:153:LEU:HA	1.85	0.43
63:Cz:1519:GLN:HG3	63:Cz:1531:ILE:HD12	2.00	0.43
63:Cz:1627:HIS:NE2	63:Cz:1665:GLU:OE2	2.43	0.43
1:UA:11:LEU:HA	1:UA:11:LEU:HD12	1.73	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:UA:105:SER:OG	1:UA:163:SER:OG	2.34	0.43
1:UA:431:MET:HB2	1:UA:431:MET:HE3	1.79	0.43
1:UA:833:LEU:HD12	1:UA:833:LEU:HA	1.88	0.43
2:UB:867:LYS:HG2	26:CK:293:LYS:HE3	2.01	0.43
4:UD:646:ASP:OD1	4:UD:660:ASN:ND2	2.52	0.43
5:UF:42:ASP:O	5:UF:46:LEU:HG	2.18	0.43
5:UF:275:SER:O	5:UF:315:ARG:NH2	2.50	0.43
7:UJ:309:LEU:O	7:UJ:313:THR:HG23	2.19	0.43
7:UJ:839:PRO:HA	7:UJ:842:ASN:HD22	1.84	0.43
10:UM:254:LYS:HG2	10:UM:274:HIS:HB2	2.00	0.43
10:UM:585:HIS:HE1	10:UM:625:LYS:HG3	1.84	0.43
10:UM:671:ALA:HA	10:UM:696:LEU:H	1.83	0.43
10:UM:765:ASN:O	10:UM:812:ARG:NH1	2.52	0.43
12:UO:30:PHE:HA	12:UO:348:ARG:HB2	2.00	0.43
12:UO:171:LEU:HB2	12:UO:181:ARG:HB2	2.01	0.43
13:UQ:177:ASP:N	13:UQ:177:ASP:OD1	2.51	0.43
16:UX:135:VAL:HG11	16:UX:156:ARG:CZ	2.49	0.43
18:CA:111:VAL:O	18:CA:125:THR:OG1	2.37	0.43
19:CC:374:VAL:HG23	19:CC:375:LYS:HD2	1.99	0.43
23:CH:64:SER:HB2	23:CH:77:TYR:HE1	1.83	0.43
24:CI:152:GLU:OE1	24:CI:898:ARG:NH1	2.51	0.43
24:CI:395:LEU:O	24:CI:397:ALA:N	2.49	0.43
24:CI:561:ARG:HE	24:CI:561:ARG:HB2	1.57	0.43
25:CJ:87:ILE:HD11	25:CJ:106:PHE:CD1	2.54	0.43
29:CO:89:PRO:O	29:CO:92:THR:OG1	2.29	0.43
32:CR:27:PHE:HB2	32:CR:150:VAL:HG22	2.01	0.43
32:CS:621:GLN:HB2	32:CS:785:ARG:HH12	1.81	0.43
37:Ce:161:LYS:HA	37:Ce:192:THR:O	2.19	0.43
39:Cg:61:ASP:N	39:Cg:61:ASP:OD1	2.50	0.43
40:Ch:108:ASP:OD1	49:C1:1463:G:O2'	2.34	0.43
49:C1:140:C:H2'	49:C1:141:C:H6	1.83	0.43
49:C1:262:G:N2	49:C1:271:C:O2	2.51	0.43
49:C1:335:C:H2'	49:C1:336:G:C8	2.54	0.43
49:C1:488:C:H2'	49:C1:489:A:H8	1.83	0.43
49:C1:903:U:O2'	49:C1:907:A:N7	2.50	0.43
49:C1:956:G:H2'	49:C1:957:G:O4'	2.19	0.43
49:C1:1033:C:H2'	49:C1:1034:C:C6	2.54	0.43
49:C1:1085:U:HO2'	49:C1:1086:U:C5'	2.32	0.43
49:C1:1455:C:H2'	49:C1:1456:A:H8	1.84	0.43
51:UV:1105:PRO:HG3	52:CV:145:GLY:HA2	2.01	0.43
53:CW:53:PHE:CD2	53:CW:73:GLY:HA3	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CW:93:ARG:NH2	53:CW:125:THR:O	2.31	0.43
54:UT:33:LYS:HE3	54:UT:158:VAL:HG11	2.00	0.43
54:UT:973:LEU:HD23	54:UT:973:LEU:HA	1.89	0.43
54:UT:1572:ILE:HG23	54:UT:1607:LEU:HD13	1.99	0.43
54:UT:1623:PHE:O	54:UT:1627:VAL:HG23	2.18	0.43
59:CX:371:LEU:HG	59:CX:416:VAL:HG12	2.01	0.43
1:UA:798:ILE:HD12	15:UU:1040:VAL:HG21	2.01	0.43
2:UB:605:ASP:OD1	2:UB:605:ASP:N	2.52	0.43
2:UB:710:LYS:HD2	2:UB:713:LEU:HD13	2.01	0.43
2:UB:723:ILE:HG23	2:UB:773:LEU:HD11	2.00	0.43
4:UD:22:THR:HG23	4:UD:23:HIS:HD1	1.83	0.43
4:UD:497:GLU:O	4:UD:501:LYS:HB2	2.19	0.43
6:UG:186:LEU:HD23	6:UG:186:LEU:HA	1.84	0.43
6:UG:388:TRP:CD1	6:UG:418:ILE:HD13	2.53	0.43
7:UJ:1645:ASN:O	7:UJ:1649:ARG:HG2	2.19	0.43
7:UJ:1720:LYS:HE3	7:UJ:1720:LYS:HB3	1.78	0.43
8:UK:266:ARG:HD2	49:C1:202:A:N7	2.34	0.43
9:UL:622:ILE:HB	9:UL:634:TRP:HB2	2.00	0.43
10:UM:669:ALA:HB1	10:UM:696:LEU:HD21	2.01	0.43
10:UM:692:HIS:NE2	10:UM:714:ASP:OD1	2.52	0.43
10:UM:851:ARG:H	10:UM:854:LYS:HG3	1.83	0.43
11:UN:367:THR:OG1	11:UN:368:GLU:N	2.51	0.43
12:UO:210:TYR:HB3	57:US:374:PRO:HB3	1.99	0.43
13:UQ:606:HIS:HD2	13:UQ:632:ASP:HB2	1.84	0.43
14:UR:326:ARG:HB2	14:UR:342:GLY:HA2	2.00	0.43
15:UU:768:GLU:O	15:UU:770:SER:N	2.48	0.43
19:CC:7:LEU:HD11	19:CC:18:PHE:HB2	2.00	0.43
22:CG:345:VAL:HG21	22:CG:403:MET:HE2	2.01	0.43
22:CG:393:ALA:O	22:CG:415:ASN:ND2	2.44	0.43
24:CI:952:ILE:HG13	24:CI:988:ILE:O	2.19	0.43
29:CO:32:LYS:HD2	29:CO:172:PRO:HG3	2.01	0.43
32:CR:892:LYS:NZ	32:CR:900:GLU:OE1	2.32	0.43
32:CS:523:ARG:HA	32:CS:526:LEU:HB3	2.00	0.43
35:Cc:31:ASN:HA	35:Cc:31:ASN:HD22	1.60	0.43
36:Cd:132:ARG:HD2	36:Cd:132:ARG:HA	1.88	0.43
37:Ce:50:VAL:HG21	37:Ce:69:PRO:HD3	2.01	0.43
49:C1:391:C:H2'	49:C1:392:C:H6	1.84	0.43
49:C1:637:C:H2'	49:C1:638:A:C8	2.54	0.43
49:C1:890:U:H2'	49:C1:891:G:C8	2.54	0.43
49:C1:1167:C:H5''	49:C1:1169:A:C8	2.54	0.43
49:C1:1534:C:H2'	49:C1:1535:C:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CW:270:ILE:O	53:CW:279:LEU:N	2.52	0.43
54:UT:165:PHE:CZ	54:UT:210:ALA:HB2	2.54	0.43
54:UT:324:ARG:O	54:UT:324:ARG:NH2	2.46	0.43
54:UT:982:LYS:HE2	54:UT:982:LYS:HB2	1.88	0.43
54:UT:1218:LYS:O	54:UT:1220:LYS:NZ	2.36	0.43
54:UT:2225:THR:HA	54:UT:2228:VAL:HG22	2.00	0.43
56:UE:236:ILE:HA	56:UE:239:LEU:HD12	1.99	0.43
57:US:125:LEU:HD23	57:US:125:LEU:HA	1.78	0.43
57:US:223:VAL:O	57:US:227:LEU:HG	2.19	0.43
56:UI:173:LEU:HD23	56:UI:173:LEU:HA	1.89	0.43
4:UD:754:PRO:HG3	13:UQ:346:ILE:HD11	2.01	0.43
6:UG:304:ARG:N	6:UG:318:THR:O	2.52	0.43
7:UJ:675:VAL:HG13	7:UJ:729:SER:HA	2.00	0.43
9:UL:40:ILE:HB	9:UL:49:VAL:HG12	2.00	0.43
9:UL:492:TYR:CZ	9:UL:499:LEU:HD12	2.53	0.43
10:UM:741:GLN:HA	10:UM:744:THR:HG22	2.00	0.43
10:UM:808:GLN:O	10:UM:812:ARG:HG2	2.18	0.43
11:UN:316:TYR:OH	28:CM:270:ARG:O	2.37	0.43
12:UO:13:LEU:HD13	12:UO:493:ARG:HE	1.84	0.43
14:UR:338:ILE:HD11	14:UR:350:TRP:HE3	1.84	0.43
15:UU:48:GLY:O	15:UU:341:SER:OG	2.36	0.43
15:UU:145:LEU:HB3	15:UU:152:VAL:HG23	2.01	0.43
15:UU:424:ARG:HH22	49:C1:258:C:H5"	1.83	0.43
15:UU:992:GLN:O	15:UU:996:THR:OG1	2.33	0.43
18:CB:72:ILE:HG23	18:CB:85:ARG:HH11	1.84	0.43
20:CD:320:GLN:NE2	20:CD:340:LYS:O	2.43	0.43
21:CE:36:LYS:NZ	50:C2:265:A:OP2	2.44	0.43
23:CH:201:ARG:HH22	23:CH:408:ARG:HB3	1.84	0.43
23:CH:357:SER:HB3	23:CH:360:LEU:HG	2.01	0.43
24:CI:302:LEU:HD21	32:CR:50:VAL:HB	2.01	0.43
24:CI:1102:LYS:HZ2	49:C1:400:C:H5"	1.82	0.43
25:CJ:112:PRO:O	25:CJ:115:MET:HG2	2.19	0.43
27:CL:514:ASN:HD22	27:CL:517:LEU:HD13	1.84	0.43
27:CL:627:SER:OG	27:CL:628:ALA:N	2.52	0.43
27:CL:694:GLU:HA	27:CL:704:ALA:HA	2.00	0.43
28:CM:109:HIS:CG	28:CM:128:ALA:HB3	2.54	0.43
31:CQ:110:LYS:HA	31:CQ:110:LYS:HD3	1.78	0.43
32:CR:791:SER:O	32:CR:795:ARG:NH1	2.52	0.43
32:CS:9:SER:C	32:CS:12:PRO:HD2	2.44	0.43
32:CS:747:LEU:HD13	32:CS:760:CYS:HB2	1.99	0.43
35:Cc:96:MET:O	35:Cc:100:ILE:HG13	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:Ce:90:LYS:HZ2	37:Ce:91:PHE:HB2	1.83	0.43
44:Cm:7:LEU:O	44:Cm:11:LEU:HG	2.19	0.43
49:C1:287:C:H2'	49:C1:288:C:C6	2.54	0.43
49:C1:1046:G:H2'	49:C1:1047:U:H6	1.84	0.43
49:C1:1669:U:H2'	49:C1:1670:A:H3'	2.00	0.43
49:C1:1701:U:H2'	49:C1:1702:G:C8	2.54	0.43
49:C1:2116:C:H2'	49:C1:2117:G:C8	2.54	0.43
49:C1:2334:G:H2'	49:C1:2335:U:C6	2.53	0.43
49:C1:2356:C:H2'	49:C1:2357:G:C8	2.53	0.43
51:UV:240:LEU:HD21	51:UV:273:LEU:HD22	2.01	0.43
51:UV:1052:LYS:NZ	51:UV:1069:PRO:HA	2.34	0.43
54:UT:9:ILE:HD11	54:UT:205:ARG:HD2	2.00	0.43
54:UT:1943:VAL:HA	54:UT:2005:LYS:HZ3	1.83	0.43
54:UT:2054:ALA:O	54:UT:2058:ILE:HG12	2.19	0.43
63:Cz:1657:LEU:HD23	63:Cz:1657:LEU:HA	1.81	0.43
1:UA:170:SER:HB3	1:UA:174:THR:O	2.18	0.43
2:UB:857:GLN:HB3	2:UB:861:ARG:NH2	2.34	0.43
3:UC:643:VAL:HG12	3:UC:645:SER:H	1.83	0.43
4:UD:446:SER:HA	4:UD:451:VAL:HG12	2.00	0.43
6:UG:176:LEU:HA	6:UG:176:LEU:HD23	1.67	0.43
6:UG:372:ASN:H	6:UG:378:GLN:HE22	1.66	0.43
7:UJ:136:LEU:O	7:UJ:140:LEU:HB2	2.19	0.43
9:UL:453:ASN:HD21	9:UL:455:LYS:NZ	2.17	0.43
11:UN:305:ARG:NE	37:Ce:173:ASP:O	2.52	0.43
12:UO:2:ALA:HB2	13:UQ:392:LEU:HD11	2.01	0.43
13:UQ:410:ALA:HA	13:UQ:423:LEU:O	2.19	0.43
13:UQ:540:LYS:HE2	13:UQ:540:LYS:HB2	1.81	0.43
13:UQ:652:ARG:N	13:UQ:656:GLN:O	2.44	0.43
14:UR:229:PRO:O	14:UR:232:SER:OG	2.28	0.43
17:UZ:155:ALA:N	17:UZ:180:ILE:O	2.50	0.43
18:CA:137:LEU:O	18:CA:141:ILE:HG12	2.19	0.43
18:CA:195:ASN:HB2	19:CC:172:LYS:HZ3	1.83	0.43
20:CD:194:PHE:HB2	20:CD:217:ARG:HD3	2.00	0.43
32:CS:742:PHE:HB3	32:CS:762:MET:HB3	2.00	0.43
34:Cb:75:LYS:HD3	34:Cb:77:ARG:HH22	1.83	0.43
34:Cb:221:ARG:O	34:Cb:225:VAL:HG13	2.19	0.43
41:Ci:94:ILE:HB	41:Ci:128:ILE:HG23	2.01	0.43
42:Cj:49:TYR:HA	42:Cj:52:ILE:HD13	2.00	0.43
43:Ck:133:CYS:SG	43:Ck:143:ASN:ND2	2.92	0.43
49:C1:421:A:H2'	49:C1:422:A:H8	1.83	0.43
49:C1:746:A:H3'	49:C1:747:G:N2	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:C1:781:G:H3'	54:UT:1131:ARG:HH12	1.84	0.43
49:C1:1023:U:N3	49:C1:1049:G:C6	2.87	0.43
49:C1:1459:C:H2'	49:C1:1460:G:C8	2.54	0.43
49:C1:1533:G:H2'	49:C1:1534:C:C6	2.53	0.43
51:UV:1097:LYS:HA	51:UV:1097:LYS:HD2	1.70	0.43
53:CW:140:ARG:HD3	53:CW:140:ARG:HA	1.73	0.43
54:UT:300:ASP:OD2	54:UT:340:ARG:NH2	2.44	0.43
54:UT:998:LEU:HD23	54:UT:998:LEU:HA	1.87	0.43
54:UT:1048:VAL:HG23	54:UT:1049:VAL:HG23	2.00	0.43
54:UT:1877:LEU:HD11	54:UT:1958:HIS:HB2	2.00	0.43
55:UH:475:TRP:CE2	55:UH:544:ARG:HB2	2.54	0.43
1:UA:364:ILE:HD11	1:UA:378:PHE:CD2	2.51	0.43
1:UA:688:CYS:HB3	1:UA:697:VAL:HG22	2.01	0.43
4:UD:75:ARG:HD3	62:UP:332:ALA:HB3	2.01	0.43
4:UD:234:LYS:HE2	4:UD:234:LYS:HB2	1.77	0.43
6:UG:134:LEU:HD11	7:UJ:5:LEU:HD22	2.01	0.43
6:UG:249:GLN:HG2	49:C1:343:C:H5''	2.01	0.43
8:UK:243:GLN:HG3	8:UK:247:MET:HE2	2.00	0.43
9:UL:109:HIS:CE1	9:UL:135:ILE:HG12	2.54	0.43
10:UM:254:LYS:HB2	51:UV:555:PRO:HB2	2.01	0.43
10:UM:738:LEU:HD22	10:UM:741:GLN:NE2	2.33	0.43
12:UO:295:GLY:HA2	12:UO:317:ILE:HG13	2.00	0.43
13:UQ:189:ASP:OD2	13:UQ:190:MET:N	2.51	0.43
13:UQ:777:LEU:HD23	13:UQ:794:PRO:HG3	2.00	0.43
14:UR:283:HIS:CE1	14:UR:285:ARG:HB2	2.54	0.43
15:UU:80:LEU:HD23	15:UU:80:LEU:HA	1.74	0.43
15:UU:282:ARG:HH11	15:UU:287:GLY:HA3	1.84	0.43
16:UX:45:PHE:CD2	39:Cg:27:LYS:HD2	2.53	0.43
16:UX:73:LEU:HD23	16:UX:73:LEU:HA	1.87	0.43
19:CC:221:LYS:HA	19:CC:221:LYS:HD2	1.85	0.43
19:CC:372:PRO:HD2	19:CC:375:LYS:HD3	2.00	0.43
20:CD:187:LYS:HA	20:CD:207:TYR:CZ	2.54	0.43
22:CG:464:ARG:HA	22:CG:483:TRP:CZ2	2.54	0.43
23:CH:406:VAL:HG12	24:CI:908:VAL:HG21	1.99	0.43
24:CI:1091:ARG:HE	33:CT:104:ARG:HH22	1.67	0.43
25:CJ:40:LYS:O	25:CJ:43:ASP:N	2.51	0.43
25:CJ:43:ASP:HA	25:CJ:46:LYS:HD2	2.00	0.43
28:CM:286:VAL:HA	28:CM:302:SER:HA	2.00	0.43
28:CM:408:LYS:HE3	28:CM:408:LYS:HB3	1.68	0.43
29:CN:50:LYS:HE3	29:CN:50:LYS:HB2	1.86	0.43
29:CO:42:SER:HA	29:CO:115:GLN:HB3	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:CO:168:THR:HA	29:CO:171:LEU:HB2	2.00	0.43
32:CR:35:LYS:HA	32:CR:38:ILE:HD12	2.00	0.43
32:CR:74:ARG:HH22	32:CR:100:SER:HA	1.84	0.43
32:CR:522:ASN:N	32:CR:708:LEU:O	2.49	0.43
35:Cc:135:ARG:HH11	35:Cc:144:ARG:HB3	1.84	0.43
37:Ce:145:ILE:HD12	37:Ce:148:LYS:HD2	2.00	0.43
41:Ci:83:ARG:HD2	41:Ci:83:ARG:HA	1.92	0.43
49:C1:340:G:H2'	49:C1:341:G:C8	2.54	0.43
49:C1:874:G:H2'	49:C1:875:G:H8	1.83	0.43
49:C1:1139:A:C5	49:C1:1141:G:C5	3.07	0.43
51:UV:374:CYS:HA	51:UV:391:PRO:HB3	2.00	0.43
54:UT:30:PHE:HD2	54:UT:33:LYS:HE2	1.84	0.43
54:UT:360:PHE:O	54:UT:364:LEU:HG	2.19	0.43
54:UT:1964:ARG:HA	54:UT:1967:ILE:HG22	2.01	0.43
54:UT:2129:LYS:NZ	54:UT:2177:GLU:OE2	2.45	0.43
56:UE:260:LYS:O	56:UE:264:ASP:N	2.31	0.43
57:US:173:VAL:HG22	57:US:181:LEU:HD21	2.01	0.43
57:US:502:GLU:O	57:US:506:THR:OG1	2.31	0.43
59:CX:434:LEU:HD23	59:CX:437:LEU:HD21	2.01	0.43
63:Cz:1554:TYR:HD2	63:Cz:1570:VAL:HG21	1.84	0.43
1:UA:407:ARG:HE	1:UA:419:THR:HG22	1.84	0.42
4:UD:413:LEU:HD22	55:UH:907:TYR:HE2	1.83	0.42
5:UF:317:ILE:HD13	5:UF:317:ILE:HA	1.88	0.42
6:UG:46:LYS:HE3	6:UG:46:LYS:HB3	1.83	0.42
7:UJ:121:LEU:HB3	7:UJ:127:ILE:HG13	2.01	0.42
8:UK:102:ARG:CZ	8:UK:249:LYS:HG2	2.49	0.42
12:UO:32:LYS:O	12:UO:89:ARG:NH2	2.52	0.42
12:UO:488:TYR:HB3	12:UO:494:TYR:HE1	1.83	0.42
13:UQ:118:ASP:OD1	13:UQ:118:ASP:N	2.45	0.42
13:UQ:607:TYR:N	13:UQ:632:ASP:OD2	2.52	0.42
14:UR:70:LEU:HD12	14:UR:70:LEU:HA	1.81	0.42
14:UR:237:ALA:HB3	15:UU:269:ALA:HA	2.00	0.42
15:UU:142:LYS:N	15:UU:154:CYS:O	2.51	0.42
15:UU:397:ASP:O	15:UU:399:ASP:N	2.51	0.42
15:UU:561:THR:HA	15:UU:624:ALA:HA	2.00	0.42
16:UX:5:ARG:HD3	16:UX:5:ARG:HA	1.91	0.42
16:UX:85:ALA:HA	39:Cg:95:LEU:HD22	2.00	0.42
16:UX:119:GLN:OE1	16:UX:119:GLN:N	2.52	0.42
17:UZ:85:LEU:HD23	17:UZ:85:LEU:HA	1.83	0.42
20:CD:308:LEU:HA	20:CD:308:LEU:HD12	1.79	0.42
22:CG:250:LEU:N	22:CG:264:GLY:O	2.27	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:CI:221:ASN:HA	24:CI:224:ARG:HB3	2.01	0.42
24:CI:956:SER:HB2	24:CI:958:ILE:HD11	2.00	0.42
24:CI:1025:ILE:HA	24:CI:1026:PRO:HD3	1.89	0.42
26:CK:53:ARG:HD3	48:CU:219:ILE:HD11	2.01	0.42
26:CK:290:THR:HG22	26:CK:293:LYS:HD2	2.00	0.42
29:CN:150:ILE:HD13	29:CN:150:ILE:HA	1.88	0.42
32:CR:162:LEU:HD22	32:CR:190:LEU:HD13	2.00	0.42
32:CR:850:ASP:OD2	32:CR:852:HIS:ND1	2.50	0.42
32:CS:378:HIS:ND1	32:CS:379:VAL:HG23	2.34	0.42
32:CS:800:ILE:H	32:CS:800:ILE:HG12	1.21	0.42
35:Cc:61:ALA:N	42:Cj:79:TYR:OH	2.45	0.42
36:Cd:92:ARG:O	49:C1:989:C:O2'	2.32	0.42
41:CI:43:VAL:HG22	41:CI:52:ILE:HD12	2.00	0.42
46:Co:365:ASN:HB3	49:C1:1105:A:H1'	2.01	0.42
46:Co:383:LYS:HE3	46:Co:383:LYS:HB3	1.85	0.42
49:C1:461:G:H2'	49:C1:462:G:C8	2.54	0.42
49:C1:888:U:H2'	49:C1:889:C:C6	2.54	0.42
49:C1:902:U:N3	49:C1:931:G:C6	2.86	0.42
49:C1:1146:G:N2	49:C1:1149:C:OP2	2.48	0.42
49:C1:1657:G:H2'	49:C1:1658:G:C8	2.54	0.42
51:UV:194:ASN:OD1	51:UV:474:ARG:NH1	2.51	0.42
51:UV:566:PHE:HA	51:UV:570:TRP:CD1	2.54	0.42
53:CW:131:TYR:CZ	61:CZ:552:LEU:HD23	2.54	0.42
54:UT:1769:LYS:O	54:UT:1773:ILE:HG12	2.19	0.42
57:US:205:LYS:O	57:US:209:THR:OG1	2.29	0.42
60:CY:297:MET:SD	60:CY:300:ARG:NH2	2.92	0.42
56:UI:157:LEU:HD12	56:UI:184:THR:HB	1.99	0.42
62:UP:314:ARG:NH2	62:UP:316:GLY:O	2.52	0.42
1:UA:656:LEU:HD13	27:CL:633:LEU:HB2	2.00	0.42
2:UB:754:LEU:HB2	2:UB:784:LEU:HD22	2.00	0.42
5:UF:385:MET:HA	5:UF:388:ILE:HD12	2.01	0.42
7:UJ:170:TYR:CZ	20:CD:413:LEU:HB2	2.54	0.42
9:UL:146:TYR:HE2	9:UL:148:LEU:HD21	1.84	0.42
10:UM:854:LYS:HB3	10:UM:854:LYS:HE2	1.77	0.42
10:UM:866:TYR:CE2	27:CL:679:PRO:HB2	2.54	0.42
13:UQ:608:THR:OG1	13:UQ:632:ASP:OD1	2.32	0.42
14:UR:182:LEU:HD11	20:CD:439:LYS:C	2.44	0.42
14:UR:481:ARG:HG2	14:UR:482:TRP:CE2	2.54	0.42
16:UX:41:PRO:O	16:UX:44:MET:HB2	2.19	0.42
18:CA:104:TYR:CZ	18:CA:106:GLU:HB3	2.55	0.42
20:CD:90:VAL:HG11	20:CD:99:ILE:HD11	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CD:194:PHE:CE2	20:CD:197:LEU:HB2	2.54	0.42
21:CE:42:THR:HA	21:CE:45:VAL:HG12	2.01	0.42
22:CG:234:ALA:HA	22:CG:237:ALA:HB2	2.00	0.42
22:CG:308:LYS:HA	22:CG:332:GLU:HB3	2.01	0.42
23:CH:81:LEU:HD11	23:CH:406:VAL:HB	1.99	0.42
24:CI:928:PHE:HB3	49:C1:2177:G:H2'	2.00	0.42
24:CI:934:ILE:HD13	24:CI:987:VAL:HG11	2.01	0.42
24:CI:952:ILE:HG23	24:CI:977:PHE:HE1	1.84	0.42
24:CI:1030:ASN:HA	24:CI:1031:PRO:HD3	1.91	0.42
25:CJ:94:LEU:HA	25:CJ:94:LEU:HD12	1.81	0.42
27:CL:540:SER:HA	27:CL:543:GLU:HG3	2.00	0.42
28:CM:39:GLU:HG2	28:CM:40:TYR:N	2.33	0.42
29:CO:184:ALA:HB2	29:CO:224:LYS:HG3	2.01	0.42
32:CR:654:LEU:HD11	32:CR:737:TRP:HZ3	1.83	0.42
32:CR:747:LEU:HD13	32:CR:760:CYS:HB2	1.99	0.42
32:CS:791:SER:O	32:CS:795:ARG:NH1	2.52	0.42
34:Cb:44:LEU:HD21	34:Cb:82:TYR:HD2	1.83	0.42
36:Cd:12:SER:OG	36:Cd:124:LEU:O	2.34	0.42
44:Cm:10:ALA:O	44:Cm:14:ILE:HG12	2.19	0.42
47:Cp:43:ARG:HA	47:Cp:64:ALA:HB3	2.00	0.42
49:C1:122:G:H2'	49:C1:123:U:H6	1.83	0.42
49:C1:255:G:H2'	49:C1:256:U:O4'	2.19	0.42
49:C1:695:G:N1	49:C1:890:U:N3	2.67	0.42
49:C1:1738:G:H2'	49:C1:1739:G:C8	2.54	0.42
49:C1:1756:G:H2'	49:C1:1757:C:C6	2.54	0.42
50:C2:59:A:H2'	50:C2:60:G:C8	2.54	0.42
50:C2:96:C:H2'	50:C2:97:C:H6	1.83	0.42
51:UV:368:ASN:HB3	51:UV:386:PHE:CE1	2.54	0.42
54:UT:261:GLU:HA	54:UT:264:LYS:HB2	2.02	0.42
54:UT:401:ALA:HA	54:UT:402:PRO:HD3	1.93	0.42
54:UT:2098:PHE:O	54:UT:2102:VAL:HG23	2.18	0.42
1:UA:765:PHE:HA	1:UA:766:PRO:HD3	1.92	0.42
3:UC:613:LYS:HA	3:UC:616:ARG:HD3	2.00	0.42
4:UD:680:GLU:OE1	4:UD:683:ARG:NH2	2.52	0.42
5:UF:86:HIS:HB3	49:C1:443:G:C4	2.54	0.42
6:UG:80:LYS:HE2	6:UG:80:LYS:HB3	1.85	0.42
6:UG:91:ILE:HG13	6:UG:92:LEU:HD23	2.00	0.42
6:UG:152:ILE:HD11	6:UG:160:VAL:HG13	2.01	0.42
6:UG:242:TYR:CE1	6:UG:287:PRO:HG3	2.54	0.42
6:UG:313:ARG:O	6:UG:329:ILE:HG22	2.20	0.42
9:UL:653:LEU:HD23	9:UL:700:TRP:HA	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:UU:652:ILE:HG13	15:UU:653:THR:HG23	2.01	0.42
18:CA:82:PHE:HE1	33:CT:90:TRP:HB3	1.84	0.42
18:CA:204:ILE:HD12	19:CC:155:LEU:HA	2.01	0.42
18:CA:206:ILE:HD13	18:CA:216:TYR:HB2	2.00	0.42
18:CB:259:ALA:HB2	18:CB:272:PHE:CE1	2.54	0.42
19:CC:80:SER:O	19:CC:84:MET:HB2	2.19	0.42
20:CD:220:ALA:O	20:CD:238:LYS:NZ	2.52	0.42
21:CE:39:ASN:ND2	50:C2:84:G:N7	2.65	0.42
24:CI:833:LEU:HD12	24:CI:833:LEU:HA	1.68	0.42
26:CK:289:ARG:HD3	49:C1:1145:G:N7	2.34	0.42
31:CQ:83:ARG:HD3	31:CQ:140:ALA:HB2	2.01	0.42
32:CR:488:LYS:O	32:CR:492:THR:HG22	2.19	0.42
32:CS:27:PHE:HB2	32:CS:150:VAL:HG22	2.01	0.42
32:CS:74:ARG:HH22	32:CS:100:SER:HA	1.84	0.42
42:Cj:48:LEU:HA	42:Cj:48:LEU:HD12	1.77	0.42
45:Cn:50:LYS:HA	45:Cn:50:LYS:HD2	1.84	0.42
49:C1:86:C:H2'	49:C1:87:G:H8	1.84	0.42
49:C1:784:A:H2'	49:C1:785:U:C6	2.54	0.42
49:C1:1034:C:H2'	49:C1:1035:G:C8	2.54	0.42
49:C1:1715:A:H2'	49:C1:1716:A:C4	2.54	0.42
49:C1:2158:G:H2'	49:C1:2159:A:C8	2.55	0.42
51:UV:525:PRO:HG2	51:UV:527:LYS:HZ1	1.84	0.42
53:CW:167:GLU:HB2	53:CW:181:PRO:HB2	2.02	0.42
54:UT:165:PHE:HZ	54:UT:210:ALA:HB2	1.84	0.42
54:UT:953:ILE:HD13	54:UT:991:VAL:HG12	2.01	0.42
54:UT:1069:GLN:O	54:UT:1073:LEU:HG	2.19	0.42
54:UT:2120:GLY:HA2	54:UT:2123:MET:SD	2.59	0.42
56:UE:155:THR:HG21	57:US:304:MET:HE3	2.00	0.42
63:Cz:1579:ASP:OD2	63:Cz:1579:ASP:N	2.50	0.42
2:UB:579:GLU:HG2	2:UB:583:PRO:HA	2.01	0.42
4:UD:63:TRP:HH2	4:UD:339:VAL:HG21	1.84	0.42
6:UG:45:TYR:HE1	6:UG:80:LYS:HG3	1.83	0.42
6:UG:117:ILE:HG23	28:CM:3:ILE:HG21	2.00	0.42
6:UG:269:TYR:CZ	6:UG:463:PRO:HG3	2.55	0.42
7:UJ:353:LYS:HE3	7:UJ:353:LYS:HB3	1.90	0.42
7:UJ:549:SER:HA	7:UJ:632:TRP:HZ2	1.84	0.42
7:UJ:571:ALA:O	7:UJ:575:VAL:HG23	2.20	0.42
7:UJ:682:LEU:HD11	7:UJ:736:ILE:HD13	2.00	0.42
7:UJ:713:HIS:O	7:UJ:717:THR:OG1	2.30	0.42
9:UL:202:ASP:OD1	9:UL:203:LEU:N	2.53	0.42
11:UN:932:PRO:HB2	28:CM:163:ARG:NH1	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:UQ:156:LEU:O	13:UQ:167:HIS:HA	2.19	0.42
14:UR:461:ILE:HD13	21:CE:91:ALA:HA	2.01	0.42
15:UU:432:SER:OG	15:UU:433:GLN:N	2.53	0.42
18:CA:292:LEU:HD11	18:CA:299:HIS:HB2	2.00	0.42
19:CC:319:ILE:HD13	19:CC:328:LEU:HD22	2.02	0.42
20:CD:233:ILE:O	20:CD:237:VAL:HG13	2.20	0.42
22:CG:345:VAL:HA	22:CG:355:ARG:O	2.20	0.42
25:CJ:130:LEU:HA	25:CJ:130:LEU:HD13	1.83	0.42
26:CK:163:LEU:HA	26:CK:267:SER:O	2.18	0.42
29:CN:80:MET:HB3	29:CN:82:ARG:HH22	1.84	0.42
29:CO:189:VAL:O	29:CO:193:VAL:HG22	2.18	0.42
32:CR:414:ILE:HD11	32:CR:422:ARG:HA	2.00	0.42
33:CT:97:ASN:OD1	33:CT:97:ASN:N	2.53	0.42
35:Cc:151:PRO:O	35:Cc:154:ARG:HB2	2.20	0.42
36:Cd:86:PRO:HB2	36:Cd:88:ARG:O	2.19	0.42
47:Cp:41:ILE:HG22	47:Cp:42:ILE:H	1.84	0.42
49:C1:350:U:H5''	49:C1:351:U:H6	1.84	0.42
49:C1:616:U:H2'	49:C1:617:G:H8	1.85	0.42
49:C1:700:C:C5	49:C1:831:A:N6	2.88	0.42
49:C1:1076:U:H2'	49:C1:1077:U:C2	2.54	0.42
49:C1:1170:G:H5''	49:C1:1171:C:H5'	2.01	0.42
49:C1:1506:U:H2'	49:C1:1507:G:C8	2.54	0.42
51:UV:562:THR:HG22	51:UV:567:ARG:HH11	1.84	0.42
51:UV:680:LEU:HD12	51:UV:680:LEU:HA	1.85	0.42
52:CV:39:ALA:HB2	52:CV:49:ARG:HH22	1.85	0.42
53:CW:72:THR:HG21	53:CW:99:ASN:HD22	1.85	0.42
53:CW:290:ILE:HG22	53:CW:308:ALA:HB2	2.01	0.42
54:UT:314:ASN:O	54:UT:318:PHE:HB2	2.19	0.42
54:UT:1018:ALA:HA	54:UT:1021:LEU:HD12	2.02	0.42
54:UT:1225:VAL:HA	54:UT:1228:LEU:HD12	2.00	0.42
54:UT:1341:LEU:HD21	54:UT:1381:ARG:HB3	2.02	0.42
56:UE:265:MET:HE2	56:UE:265:MET:HB3	1.82	0.42
56:UI:203:ARG:HA	56:UI:206:ARG:HD3	2.01	0.42
63:Cz:1700:LEU:HD12	63:Cz:1700:LEU:HA	1.80	0.42
3:UC:615:LEU:HD12	3:UC:615:LEU:HA	1.89	0.42
6:UG:313:ARG:HA	6:UG:313:ARG:HD3	1.82	0.42
6:UG:431:LEU:HB3	11:UN:908:GLU:HG3	2.00	0.42
7:UJ:705:SER:HA	7:UJ:708:LYS:HG2	2.02	0.42
7:UJ:1522:LEU:HA	7:UJ:1525:ILE:HG12	2.00	0.42
8:UK:70:ARG:HE	8:UK:87:VAL:HG11	1.83	0.42
9:UL:86:GLY:HA3	9:UL:113:ILE:HG21	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:UL:217:ASN:ND2	10:UM:728:GLN:OE1	2.44	0.42
9:UL:564:VAL:HG23	48:CU:100:TYR:HB2	2.00	0.42
12:UO:104:CYS:SG	12:UO:149:VAL:HA	2.59	0.42
12:UO:317:ILE:HG12	12:UO:338:MET:HG2	2.02	0.42
13:UQ:426:ALA:H	13:UQ:428:MET:HE2	1.85	0.42
13:UQ:640:PRO:O	13:UQ:659:ARG:NH2	2.40	0.42
13:UQ:770:THR:HG22	13:UQ:796:PRO:HB3	2.01	0.42
15:UU:334:ASN:OD1	15:UU:335:ILE:N	2.52	0.42
18:CA:70:LYS:NZ	33:CT:159:ARG:O	2.45	0.42
18:CA:104:TYR:CE2	18:CA:106:GLU:HB3	2.54	0.42
18:CB:213:PRO:HA	18:CB:216:TYR:CE1	2.54	0.42
20:CD:155:LYS:HD2	20:CD:155:LYS:HA	1.72	0.42
22:CG:333:ILE:HG21	22:CG:346:SER:HB2	2.01	0.42
24:CI:759:GLU:HB2	24:CI:764:GLN:NE2	2.34	0.42
28:CM:120:ASN:HB2	28:CM:161:PHE:HE2	1.85	0.42
28:CM:402:LYS:HA	28:CM:405:THR:HG22	2.01	0.42
29:CO:37:LEU:O	29:CO:110:LEU:HA	2.20	0.42
32:CR:9:SER:C	32:CR:12:PRO:HD2	2.44	0.42
32:CR:378:HIS:ND1	32:CR:379:VAL:HG23	2.34	0.42
32:CS:720:LEU:HD23	32:CS:720:LEU:HA	1.86	0.42
32:CS:907:GLN:O	32:CS:911:ILE:HG12	2.20	0.42
35:Cc:183:GLU:HA	35:Cc:186:ILE:HG22	2.01	0.42
38:Cf:49:ARG:NH2	49:C1:702:U:O2	2.49	0.42
38:Cf:176:ARG:NH2	49:C1:914:G:H3'	2.35	0.42
39:Cg:166:ARG:HD3	39:Cg:172:ARG:HH21	1.84	0.42
49:C1:134:C:H3'	49:C1:135:A:H2'	2.01	0.42
49:C1:142:C:H2'	49:C1:143:A:H8	1.85	0.42
49:C1:481:G:H2'	49:C1:482:C:C6	2.54	0.42
49:C1:958:C:H2'	49:C1:959:U:H6	1.84	0.42
49:C1:2092:C:H2'	49:C1:2093:C:C6	2.55	0.42
51:UV:139:GLY:HA3	51:UV:223:ARG:HE	1.85	0.42
53:CW:206:VAL:O	53:CW:220:GLY:N	2.49	0.42
54:UT:717:TYR:CE2	54:UT:756:VAL:HG13	2.55	0.42
54:UT:1256:LEU:HD13	54:UT:1295:MET:HE2	2.01	0.42
54:UT:1581:GLU:HG3	54:UT:1585:PHE:CE2	2.55	0.42
54:UT:1649:ARG:NH1	54:UT:1721:THR:O	2.52	0.42
54:UT:2116:LEU:HD13	54:UT:2142:PHE:CG	2.54	0.42
55:UH:826:VAL:O	55:UH:830:VAL:HG23	2.19	0.42
58:Cl:14:ILE:HD13	58:Cl:14:ILE:HA	1.91	0.42
1:UA:16:CYS:N	1:UA:32:PRO:O	2.53	0.42
1:UA:343:MET:HE2	1:UA:343:MET:HB3	1.86	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:UB:805:PRO:HB2	29:CN:24:HIS:CD2	2.54	0.42
4:UD:181:ARG:HD2	21:CE:124:ARG:O	2.19	0.42
4:UD:362:HIS:NE2	49:C1:65:C:H5'	2.34	0.42
5:UF:20:ARG:HE	6:UG:44:ARG:HD2	1.84	0.42
5:UF:30:LYS:HE3	5:UF:30:LYS:HB3	1.95	0.42
6:UG:309:ASP:OD2	6:UG:312:GLY:N	2.52	0.42
7:UJ:612:ALA:HA	7:UJ:615:VAL:HG12	2.00	0.42
7:UJ:780:ASP:OD1	7:UJ:812:ARG:NH1	2.52	0.42
7:UJ:1667:GLN:CD	7:UJ:1713:VAL:HB	2.45	0.42
9:UL:670:PHE:CE1	9:UL:680:TYR:HB2	2.55	0.42
10:UM:234:ASN:O	10:UM:252:ARG:N	2.46	0.42
12:UO:284:GLN:HB2	12:UO:286:ARG:HE	1.85	0.42
12:UO:462:HIS:HB3	13:UQ:518:ARG:CZ	2.49	0.42
13:UQ:244:LEU:HA	13:UQ:254:VAL:O	2.19	0.42
13:UQ:312:ILE:HG12	13:UQ:330:LEU:HG	2.02	0.42
17:UZ:90:ASN:HD22	17:UZ:229:GLY:HA2	1.83	0.42
17:UZ:226:LYS:HE2	17:UZ:226:LYS:HB3	1.92	0.42
18:CA:194:ILE:HD13	19:CC:166:VAL:HG11	2.01	0.42
22:CG:95:THR:O	22:CG:99:LYS:HG2	2.20	0.42
22:CG:256:GLN:OE1	22:CG:299:GLY:N	2.44	0.42
23:CH:128:LEU:HB3	23:CH:196:PHE:HB2	2.01	0.42
23:CH:135:PRO:HB3	23:CH:262:VAL:HG11	2.00	0.42
24:CI:888:GLN:HE21	24:CI:1015:LEU:HD13	1.85	0.42
25:CJ:54:LEU:HD11	25:CJ:78:LEU:HD13	2.01	0.42
27:CL:537:VAL:O	27:CL:541:ILE:HG13	2.20	0.42
28:CM:374:TYR:CZ	28:CM:378:LEU:HD11	2.53	0.42
29:CN:199:ASN:OD1	29:CN:199:ASN:N	2.51	0.42
32:CS:865:TYR:CD2	32:CS:884:LEU:HD21	2.55	0.42
33:CT:112:ARG:HG3	33:CT:122:PHE:CD2	2.54	0.42
36:Cd:136:LYS:NZ	36:Cd:176:PRO:O	2.42	0.42
43:Ck:83:THR:HA	43:Ck:89:ILE:HG22	2.01	0.42
49:C1:116:C:H2'	49:C1:117:A:O4'	2.20	0.42
49:C1:227:C:H2'	49:C1:228:G:C8	2.54	0.42
49:C1:449:C:H2'	49:C1:450:G:C8	2.54	0.42
50:C2:96:C:H2'	50:C2:97:C:C6	2.55	0.42
54:UT:432:TYR:HD2	54:UT:814:THR:HG21	1.84	0.42
54:UT:949:LYS:HE2	54:UT:949:LYS:HB2	1.78	0.42
54:UT:1271:LEU:HD22	54:UT:1312:LEU:HD21	2.01	0.42
54:UT:2036:ALA:O	54:UT:2040:ILE:HG12	2.20	0.42
57:US:460:ILE:HG21	57:US:478:ILE:HG21	2.02	0.42
60:CY:297:MET:N	60:CY:300:ARG:HH21	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:UA:179:SER:OG	1:UA:181:ASP:O	2.24	0.42
1:UA:439:VAL:HG21	1:UA:498:PHE:CZ	2.54	0.42
1:UA:512:ASP:O	1:UA:529:THR:OG1	2.33	0.42
1:UA:700:LEU:HD23	1:UA:700:LEU:HA	1.87	0.42
2:UB:107:MET:O	2:UB:110:ARG:HG3	2.20	0.42
4:UD:11:TYR:N	4:UD:865:ARG:HE	2.17	0.42
4:UD:413:LEU:HB3	55:UH:907:TYR:CD2	2.55	0.42
6:UG:366:ILE:HD12	6:UG:386:MET:HG3	2.02	0.42
6:UG:372:ASN:HD22	6:UG:375:ARG:HG3	1.85	0.42
7:UJ:549:SER:O	7:UJ:553:SER:OG	2.34	0.42
7:UJ:1726:LEU:O	7:UJ:1730:LEU:HG	2.19	0.42
9:UL:636:LEU:HD23	9:UL:636:LEU:HA	1.90	0.42
11:UN:341:PHE:O	11:UN:926:LYS:N	2.43	0.42
15:UU:173:ILE:HD13	15:UU:173:ILE:HA	1.89	0.42
15:UU:184:GLU:O	15:UU:204:LYS:N	2.52	0.42
15:UU:233:THR:N	15:UU:247:ALA:O	2.52	0.42
18:CA:98:VAL:HA	18:CA:99:PRO:HD3	1.84	0.42
19:CC:384:ASN:O	19:CC:388:ILE:HG12	2.20	0.42
20:CD:401:LEU:HA	20:CD:401:LEU:HD12	1.80	0.42
21:CE:18:VAL:HG22	21:CE:82:VAL:HG12	2.02	0.42
21:CF:37:GLY:O	21:CF:41:THR:HG23	2.19	0.42
24:CI:331:ASP:O	24:CI:333:LYS:N	2.53	0.42
24:CI:1037:LYS:HE2	24:CI:1037:LYS:HB2	1.85	0.42
26:CK:222:LYS:HD3	26:CK:222:LYS:HA	1.82	0.42
27:CL:709:SER:OG	27:CL:710:ARG:N	2.52	0.42
28:CM:55:LYS:HD3	50:C2:33:U:C2	2.55	0.42
28:CM:437:ARG:NH2	49:C1:588:U:O4	2.48	0.42
29:CN:34:THR:HG22	29:CN:36:ARG:NH2	2.35	0.42
29:CN:94:GLN:O	29:CN:98:THR:HG23	2.19	0.42
29:CN:160:LEU:HD23	29:CN:160:LEU:HA	1.93	0.42
32:CR:303:VAL:HB	32:CR:365:HIS:HE1	1.84	0.42
32:CS:303:VAL:HB	32:CS:365:HIS:HE1	1.84	0.42
32:CS:751:ALA:HB2	32:CS:758:HIS:CE1	2.55	0.42
32:CS:850:ASP:OD2	32:CS:852:HIS:ND1	2.50	0.42
34:Cb:64:ILE:HD13	34:Cb:67:GLN:HE21	1.85	0.42
36:Cd:74:ARG:NH1	36:Cd:94:ARG:HD3	2.35	0.42
36:Cd:181:LEU:HD22	49:C1:664:A:N6	2.35	0.42
45:Cn:127:VAL:N	45:Cn:130:VAL:O	2.45	0.42
47:Cp:13:VAL:O	47:Cp:52:ASN:CA	2.64	0.42
48:CU:225:MET:HG3	48:CU:230:ARG:HH21	1.85	0.42
49:C1:232:G:H2'	49:C1:233:C:H6	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:C1:391:C:H2'	49:C1:392:C:C6	2.55	0.42
49:C1:447:C:H2'	49:C1:448:C:C6	2.55	0.42
49:C1:625:C:H2'	49:C1:626:A:C8	2.55	0.42
49:C1:907:A:H2'	49:C1:908:C:H6	1.85	0.42
49:C1:980:G:N2	49:C1:982:G:H3'	2.35	0.42
49:C1:1122:A:O4'	49:C1:1127:C:N4	2.52	0.42
49:C1:1457:G:N1	49:C1:1540:A:C2	2.78	0.42
49:C1:2185:C:H2'	49:C1:2186:U:H6	1.85	0.42
53:CW:104:LEU:HD21	53:CW:109:TYR:HA	2.01	0.42
54:UT:902:ASP:O	54:UT:906:VAL:HG23	2.19	0.42
54:UT:2062:LEU:O	54:UT:2066:ARG:NH1	2.34	0.42
55:UH:755:TYR:O	56:UI:203:ARG:NH2	2.36	0.42
4:UD:322:HIS:NE2	4:UD:342:SER:OG	2.43	0.42
4:UD:831:GLN:HB2	49:C1:61:G:C5	2.55	0.42
6:UG:187:HIS:ND1	6:UG:188:ASN:OD1	2.44	0.42
7:UJ:713:HIS:O	7:UJ:717:THR:CB	2.68	0.42
7:UJ:1658:PHE:CE2	7:UJ:1709:LEU:HB3	2.54	0.42
10:UM:676:LYS:HB3	10:UM:678:TRP:HZ3	1.85	0.42
11:UN:311:MET:HB3	28:CM:231:MET:HE1	2.02	0.42
13:UQ:591:GLY:O	13:UQ:594:GLN:N	2.53	0.42
15:UU:211:TRP:CE2	15:UU:218:LEU:HB2	2.54	0.42
17:UZ:139:ALA:O	17:UZ:143:GLN:HG3	2.19	0.42
18:CA:77:ARG:HH21	18:CA:78:HIS:CE1	2.37	0.42
18:CB:220:VAL:HB	18:CB:246:PHE:CE1	2.55	0.42
20:CD:56:ILE:HA	20:CD:59:GLU:HG2	2.01	0.42
20:CD:325:GLU:HA	20:CD:328:LEU:HB3	2.01	0.42
21:CF:41:THR:HG21	21:CF:100:ALA:HB1	2.01	0.42
23:CH:137:VAL:O	23:CH:189:GLY:N	2.51	0.42
24:CI:92:TYR:HD1	24:CI:92:TYR:HA	1.70	0.42
24:CI:1077:GLN:NE2	49:C1:366:G:OP1	2.50	0.42
28:CM:137:PRO:HG2	28:CM:138:TYR:CD2	2.55	0.42
28:CM:162:HIS:HB2	28:CM:167:THR:HB	2.01	0.42
29:CN:104:ILE:N	29:CN:246:GLU:OE2	2.52	0.42
35:Cc:43:ILE:HA	35:Cc:46:THR:HG23	2.02	0.42
35:Cc:103:HIS:O	35:Cc:107:ILE:HG13	2.19	0.42
44:Cm:101:TYR:HB2	44:Cm:129:PHE:CE1	2.55	0.42
49:C1:388:C:H2'	49:C1:389:U:C6	2.55	0.42
49:C1:939:G:H2'	49:C1:940:G:C8	2.54	0.42
49:C1:1102:A:O2'	49:C1:1118:A:N6	2.43	0.42
50:C2:68:A:H2'	50:C2:69:G:C8	2.51	0.42
51:UV:204:PRO:HG3	51:UV:214:LYS:HG3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:UT:543:VAL:HG23	54:UT:548:ASN:HD21	1.85	0.42
54:UT:706:ILE:O	54:UT:710:LEU:HG	2.20	0.42
54:UT:810:ALA:O	54:UT:814:THR:HG22	2.20	0.42
57:US:233:VAL:HG22	57:US:296:TRP:CD1	2.55	0.42
59:CX:238:ARG:HH11	59:CX:241:LEU:HD23	1.84	0.42
4:UD:281:CYS:HB2	4:UD:329:MET:HG2	2.01	0.42
5:UF:398:ILE:O	5:UF:402:LEU:HG	2.20	0.42
7:UJ:1720:LYS:O	7:UJ:1724:THR:HG23	2.19	0.42
9:UL:394:LEU:HB3	9:UL:420:VAL:HB	2.01	0.42
9:UL:396:LEU:HD23	9:UL:417:ALA:HB3	2.02	0.42
10:UM:753:ALA:O	10:UM:757:ALA:CB	2.67	0.42
12:UO:32:LYS:HB3	12:UO:347:THR:HB	2.00	0.42
12:UO:490:ALA:HB2	12:UO:529:LYS:HE2	2.02	0.42
13:UQ:586:LYS:HG2	13:UQ:601:ARG:HG3	2.00	0.42
14:UR:165:LEU:HD12	14:UR:165:LEU:HA	1.83	0.42
14:UR:366:HIS:HB3	14:UR:369:GLU:HB3	2.02	0.42
15:UU:245:ALA:HA	15:UU:254:VAL:O	2.20	0.42
15:UU:709:ASP:H	15:UU:727:GLN:NE2	2.18	0.42
15:UU:731:ILE:O	15:UU:744:ALA:HA	2.20	0.42
18:CA:136:LYS:HE2	18:CA:299:HIS:HD1	1.84	0.42
18:CA:137:LEU:HB2	18:CA:227:PHE:HE1	1.83	0.42
18:CA:247:LEU:HA	18:CA:247:LEU:HD12	1.72	0.42
18:CB:255:ILE:O	18:CB:301:MET:HA	2.20	0.42
20:CD:304:HIS:CD2	20:CD:322:LEU:HD22	2.55	0.42
20:CD:321:ILE:HD12	20:CD:321:ILE:HG23	1.78	0.42
20:CD:375:THR:HG21	20:CD:393:VAL:HG21	2.02	0.42
22:CG:160:LYS:HE2	22:CG:160:LYS:HB3	1.67	0.42
22:CG:183:ALA:O	22:CG:194:LYS:HA	2.20	0.42
25:CJ:109:ARG:HD2	25:CJ:109:ARG:HA	1.82	0.42
25:CJ:144:ARG:O	25:CJ:146:PRO:HD3	2.20	0.42
26:CK:240:ARG:HB3	26:CK:242:HIS:CE1	2.55	0.42
27:CL:678:ALA:HB3	27:CL:681:GLU:OE2	2.19	0.42
28:CM:58:LEU:HD23	28:CM:352:LEU:HD22	2.01	0.42
28:CM:179:ILE:O	28:CM:188:GLY:CA	2.67	0.42
32:CR:58:TRP:HE1	32:CR:126:GLN:HE21	1.67	0.42
32:CR:209:LEU:HA	32:CR:210:PRO:HD3	1.93	0.42
32:CS:112:THR:O	32:CS:112:THR:OG1	2.33	0.42
34:Cb:41:CYS:SG	34:Cb:83:PRO:HA	2.59	0.42
34:Cb:188:ASN:HB2	34:Cb:191:ARG:HD3	2.02	0.42
49:C1:33:C:H2'	49:C1:34:C:H6	1.84	0.42
49:C1:246:G:H2'	49:C1:247:C:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:C1:848:G:H5''	49:C1:849:A:H5'	2.01	0.42
49:C1:1697:A:H2'	49:C1:1698:G:C8	2.54	0.42
49:C1:1734:G:H2'	49:C1:1735:A:C8	2.54	0.42
53:CW:24:PRO:HG2	53:CW:27:LEU:HD23	2.01	0.42
54:UT:89:LEU:HD22	54:UT:99:HIS:CG	2.54	0.42
54:UT:913:PRO:O	54:UT:919:SER:OG	2.30	0.42
54:UT:1231:LEU:HD11	54:UT:1288:THR:HB	2.01	0.42
55:UH:742:LEU:HD13	55:UH:742:LEU:HA	1.86	0.42
56:UE:235:LEU:HD23	56:UE:235:LEU:HA	1.80	0.42
57:US:170:ILE:HD13	57:US:170:ILE:HA	1.93	0.42
63:Cz:1657:LEU:HD23	63:Cz:1660:LYS:HE2	2.02	0.42
2:UB:3:GLY:O	26:CK:183:THR:OG1	2.34	0.42
2:UB:902:ALA:O	2:UB:903:ARG:NH2	2.50	0.42
4:UD:90:MET:SD	4:UD:94:LYS:HE3	2.60	0.42
4:UD:209:ILE:HG12	4:UD:238:VAL:HG11	2.01	0.42
4:UD:504:ILE:O	4:UD:524:HIS:N	2.42	0.42
4:UD:697:GLN:HE21	4:UD:713:SER:HB3	1.83	0.42
7:UJ:1555:THR:HA	7:UJ:1558:HIS:CD2	2.55	0.42
8:UK:6:HIS:O	8:UK:9:GLN:HB3	2.20	0.42
10:UM:827:GLN:O	10:UM:831:TRP:N	2.52	0.42
11:UN:897:TYR:OH	28:CM:384:HIS:NE2	2.53	0.42
12:UO:5:VAL:HG13	13:UQ:522:THR:HG21	2.01	0.42
12:UO:8:LEU:HD11	12:UO:459:ALA:HB2	2.02	0.42
12:UO:197:PRO:HD2	12:UO:240:PRO:HG2	2.01	0.42
12:UO:453:ALA:O	12:UO:457:LEU:HG	2.20	0.42
13:UQ:370:LEU:HG	13:UQ:384:LEU:HD22	2.01	0.42
13:UQ:707:PRO:O	13:UQ:709:GLY:N	2.53	0.42
13:UQ:834:VAL:HG23	13:UQ:845:VAL:HG22	2.01	0.42
14:UR:278:SER:OG	14:UR:294:THR:N	2.53	0.42
15:UU:981:ARG:HD2	15:UU:981:ARG:HA	1.76	0.42
19:CC:79:LYS:HG3	19:CC:113:PHE:HZ	1.85	0.42
20:CD:97:ASN:O	20:CD:101:LYS:HG2	2.20	0.42
25:CJ:33:ILE:HG13	25:CJ:34:ARG:N	2.34	0.42
25:CJ:79:LEU:HD23	25:CJ:79:LEU:HA	1.79	0.42
28:CM:305:ARG:H	28:CM:305:ARG:HG2	1.63	0.42
32:CR:185:PHE:HB3	32:CR:557:GLN:NE2	2.35	0.42
32:CS:142:THR:O	32:CS:142:THR:OG1	2.34	0.42
32:CS:913:MET:HG3	53:CW:377:HIS:CE1	2.49	0.42
32:CS:917:ARG:NH1	53:CW:381:SER:HB3	2.35	0.42
36:Cd:177:ARG:NH1	49:C1:652:A:OP2	2.52	0.42
49:C1:617:G:C6	49:C1:1181:G:C6	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:C1:1122:A:H5''	49:C1:1127:C:H41	1.85	0.42
49:C1:2107:A:H2'	49:C1:2108:A:H8	1.83	0.42
50:C2:35:G:O2'	50:C2:36:U:OP1	2.34	0.42
51:UV:266:THR:HB	51:UV:472:ARG:HH11	1.84	0.42
51:UV:1047:VAL:O	51:UV:1051:LEU:HG	2.20	0.42
53:CW:114:HIS:NE2	53:CW:122:GLU:HB3	2.35	0.42
53:CW:184:VAL:HA	53:CW:236:ARG:HH12	1.85	0.42
54:UT:374:GLN:HE22	54:UT:377:GLN:HB2	1.85	0.42
54:UT:860:ARG:HA	54:UT:860:ARG:HD3	1.85	0.42
54:UT:1087:VAL:HG23	54:UT:1091:MET:HE1	2.02	0.42
54:UT:1767:PRO:HB3	54:UT:1804:SER:HB2	2.01	0.42
54:UT:2152:ARG:O	54:UT:2156:GLN:HG2	2.20	0.42
57:US:410:LYS:HE3	57:US:410:LYS:HB2	1.92	0.42
2:UB:58:PHE:HB2	26:CK:256:GLU:CD	2.45	0.41
4:UD:277:GLN:HG2	62:UP:351:ARG:NH2	2.35	0.41
4:UD:481:ALA:HA	4:UD:497:GLU:HA	2.01	0.41
5:UF:14:ARG:HA	5:UF:14:ARG:HD2	1.75	0.41
5:UF:105:GLY:HA3	19:CC:144:SER:O	2.20	0.41
7:UJ:631:LEU:HD21	7:UJ:646:PRO:HG2	2.02	0.41
8:UK:20:LEU:HG	24:CI:1036:ARG:HH22	1.84	0.41
9:UL:300:LYS:HE3	9:UL:367:GLY:HA2	2.02	0.41
9:UL:368:LYS:O	9:UL:390:THR:OG1	2.36	0.41
9:UL:961:LEU:N	27:CL:573:ARG:HG2	2.35	0.41
10:UM:254:LYS:HB2	10:UM:254:LYS:HE2	1.91	0.41
12:UO:215:ARG:HB2	12:UO:217:TRP:CH2	2.55	0.41
13:UQ:186:LYS:HD2	49:C1:46:C:H4'	2.01	0.41
13:UQ:467:VAL:HG12	13:UQ:541:LEU:HG	2.01	0.41
13:UQ:783:ASN:ND2	13:UQ:841:SER:OG	2.54	0.41
15:UU:363:THR:O	15:UU:378:LEU:HD23	2.20	0.41
18:CA:78:HIS:HB2	18:CA:81:VAL:HG12	2.02	0.41
19:CC:391:ARG:HD3	21:CF:67:HIS:CD2	2.55	0.41
21:CE:68:ILE:HG22	21:CE:72:CYS:SG	2.60	0.41
26:CK:7:ARG:HH22	26:CK:8:GLN:NE2	2.18	0.41
26:CK:11:ASP:OD1	49:C1:352:G:N1	2.42	0.41
28:CM:386:PRO:HA	28:CM:389:ARG:HE	1.84	0.41
32:CR:191:LEU:O	32:CR:195:SER:OG	2.38	0.41
32:CR:865:TYR:CD2	32:CR:884:LEU:HD21	2.55	0.41
32:CS:185:PHE:HB3	32:CS:557:GLN:NE2	2.35	0.41
32:CS:839:LYS:HE3	32:CS:839:LYS:HB3	1.91	0.41
42:Cj:77:GLN:HE22	49:C1:2065:C:H1'	1.85	0.41
46:Co:392:ARG:NH2	60:CY:282:ARG:HD2	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:C1:109:G:H2'	49:C1:110:U:C6	2.54	0.41
49:C1:303:C:H2'	49:C1:304:C:C6	2.55	0.41
49:C1:345:U:N3	49:C1:346:C:C4	2.88	0.41
49:C1:918:U:H2'	49:C1:919:U:C6	2.54	0.41
49:C1:2086:A:H5''	49:C1:2087:G:C8	2.55	0.41
50:C2:79:G:H2'	50:C2:80:G:C8	2.55	0.41
51:UV:576:LEU:HD12	51:UV:576:LEU:HA	1.93	0.41
51:UV:636:SER:O	51:UV:638:THR:N	2.51	0.41
51:UV:692:PRO:HB3	51:UV:1072:PHE:HB3	2.02	0.41
51:UV:1028:PHE:HD1	51:UV:1031:LEU:HD22	1.84	0.41
52:CV:201:LEU:HD12	52:CV:202:SER:HB3	2.03	0.41
53:CW:268:ILE:HG12	53:CW:282:LYS:HB2	2.02	0.41
53:CW:309:ASP:OD1	53:CW:309:ASP:N	2.53	0.41
54:UT:545:PRO:HA	54:UT:548:ASN:HB2	2.02	0.41
2:UB:701:GLN:HE21	57:US:542:TRP:N	2.18	0.41
4:UD:257:GLN:HG2	4:UD:273:GLN:HA	2.01	0.41
6:UG:404:GLU:HA	28:CM:6:LEU:HD11	2.02	0.41
7:UJ:148:PHE:HE2	7:UJ:177:PRO:HD2	1.84	0.41
9:UL:648:HIS:CE1	9:UL:679:LYS:HG2	2.55	0.41
10:UM:809:LEU:O	10:UM:813:LEU:HB2	2.20	0.41
11:UN:357:LEU:HD13	11:UN:357:LEU:HA	1.95	0.41
14:UR:540:THR:OG1	14:UR:541:THR:N	2.53	0.41
15:UU:391:LEU:HD12	15:UU:391:LEU:HA	1.77	0.41
18:CA:159:LEU:HD23	18:CA:159:LEU:HA	1.81	0.41
18:CB:219:LEU:HD11	20:CD:146:ALA:HB2	2.02	0.41
18:CB:285:PHE:HB2	18:CB:305:VAL:HG22	2.01	0.41
22:CG:438:LEU:HA	22:CG:464:ARG:H	1.85	0.41
23:CH:60:VAL:HG13	23:CH:61:THR:HG23	2.01	0.41
24:CI:246:ILE:HG21	24:CI:270:LEU:HD22	2.02	0.41
24:CI:775:LYS:HD3	24:CI:775:LYS:HA	1.80	0.41
26:CK:29:ARG:HA	26:CK:52:LEU:HD11	2.02	0.41
32:CR:131:ILE:H	32:CR:131:ILE:HG12	1.46	0.41
32:CR:851:TYR:O	32:CR:854:VAL:HG22	2.20	0.41
32:CR:907:GLN:O	32:CR:911:ILE:HG12	2.20	0.41
32:CS:191:LEU:HD12	32:CS:529:PHE:H	1.85	0.41
32:CS:851:TYR:O	32:CS:854:VAL:HG22	2.20	0.41
32:CS:880:GLN:HG2	32:CS:915:ILE:HD11	2.03	0.41
33:CT:195:LYS:HB2	33:CT:195:LYS:HE2	1.82	0.41
34:Cb:64:ILE:HD11	46:Co:349:LEU:HG	2.03	0.41
35:Cc:88:GLY:O	35:Cc:91:ASN:ND2	2.54	0.41
36:Cd:74:ARG:HH11	36:Cd:94:ARG:HD3	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:Co:351:ARG:HD3	46:Co:407:TYR:CZ	2.55	0.41
46:Co:415:LYS:HE2	54:UT:25:HIS:CE1	2.52	0.41
49:C1:301:U:C2	49:C1:341:G:C2	3.08	0.41
49:C1:639:U:H2'	49:C1:640:G:H8	1.85	0.41
49:C1:720:A:N1	54:UT:1006:ARG:NH2	2.68	0.41
49:C1:764:A:C8	54:UT:1129:LEU:HD11	2.55	0.41
49:C1:2054:A:N6	49:C1:2121:U:N3	2.68	0.41
49:C1:2163:C:H2'	49:C1:2164:C:C6	2.55	0.41
49:C1:2235:C:H2'	49:C1:2236:C:C6	2.55	0.41
50:C2:266:C:H2'	50:C2:267:C:C6	2.55	0.41
51:UV:57:PHE:HA	51:UV:58:ASP:HA	1.87	0.41
51:UV:249:LYS:HD2	51:UV:467:VAL:HG12	2.02	0.41
53:CW:23:LEU:CB	53:CW:24:PRO:HD3	2.34	0.41
54:UT:12:THR:HG22	54:UT:14:ARG:HG3	2.00	0.41
54:UT:21:HIS:ND1	54:UT:23:LYS:O	2.49	0.41
54:UT:240:GLU:HA	54:UT:243:VAL:HG23	2.02	0.41
54:UT:375:ALA:O	54:UT:378:ILE:HG22	2.20	0.41
54:UT:422:TRP:HB2	54:UT:425:TRP:HB2	2.02	0.41
54:UT:459:GLN:H	54:UT:462:ASN:HB2	1.84	0.41
54:UT:659:LEU:HD11	54:UT:733:PHE:HD1	1.85	0.41
54:UT:1927:LYS:HA	54:UT:1927:LYS:HD2	1.81	0.41
1:UA:162:ASP:H	1:UA:207:GLN:NE2	2.15	0.41
1:UA:250:PHE:HB2	1:UA:252:MET:HE2	2.03	0.41
1:UA:376:VAL:HB	27:CL:659:GLU:OE2	2.20	0.41
1:UA:419:THR:HG21	9:UL:960:SER:HB2	2.01	0.41
1:UA:566:ALA:HA	1:UA:569:VAL:HG23	2.02	0.41
2:UB:572:ARG:NH2	57:US:504:GLU:O	2.53	0.41
4:UD:42:VAL:O	4:UD:43:ARG:NH1	2.40	0.41
4:UD:381:ARG:NH1	4:UD:842:GLU:O	2.42	0.41
7:UJ:289:LEU:HA	7:UJ:292:PHE:CD1	2.55	0.41
7:UJ:329:ALA:HA	7:UJ:332:VAL:HG12	2.00	0.41
7:UJ:557:ARG:HE	7:UJ:719:LEU:HD21	1.85	0.41
7:UJ:752:TRP:CD1	7:UJ:778:VAL:HG11	2.55	0.41
8:UK:62:GLU:O	25:CJ:170:ILE:HG12	2.21	0.41
8:UK:107:GLN:NE2	20:CD:336:HIS:O	2.53	0.41
9:UL:396:LEU:HD22	9:UL:418:LEU:HD12	2.03	0.41
10:UM:766:HIS:CE1	10:UM:769:ARG:HB2	2.56	0.41
12:UO:299:VAL:HG13	12:UO:308:VAL:HB	2.03	0.41
13:UQ:95:ILE:HD11	13:UQ:156:LEU:HD11	2.00	0.41
13:UQ:295:ILE:HG23	13:UQ:314:VAL:HG22	2.01	0.41
20:CD:46:LYS:HE2	20:CD:46:LYS:HB3	1.77	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CE:40:GLU:OE2	50:C2:264:G:H2'	2.21	0.41
21:CF:64:ILE:HA	21:CF:67:HIS:CD2	2.54	0.41
23:CH:52:SER:HB3	23:CH:102:ILE:HG22	2.03	0.41
24:CI:244:THR:HG22	24:CI:246:ILE:HD13	2.02	0.41
28:CM:178:ARG:HA	28:CM:189:GLN:O	2.20	0.41
29:CN:74:ILE:O	29:CN:78:ARG:HB2	2.21	0.41
31:CQ:230:GLU:HA	31:CQ:233:VAL:HG22	2.00	0.41
32:CR:268:PHE:CE1	32:CR:298:ALA:HB1	2.55	0.41
32:CR:431:GLN:HE22	32:CR:432:LEU:HD22	1.85	0.41
32:CS:259:VAL:HB	32:CS:263:LYS:NZ	2.36	0.41
36:Cd:20:ASP:OD1	36:Cd:22:ARG:NH2	2.53	0.41
44:Cm:88:LYS:HD3	44:Cm:88:LYS:HA	1.83	0.41
47:Cp:46:LYS:H	47:Cp:46:LYS:HG2	1.76	0.41
49:C1:141:C:H2'	49:C1:142:C:H6	1.86	0.41
49:C1:895:U:O2	49:C1:939:G:N2	2.37	0.41
49:C1:2047:G:C6	49:C1:2048:C:N3	2.89	0.41
51:UV:176:LEU:O	51:UV:180:LEU:HG	2.21	0.41
51:UV:346:PRO:HD2	51:UV:363:PHE:HZ	1.85	0.41
51:UV:769:ARG:HD3	51:UV:807:PHE:HE1	1.85	0.41
52:CV:37:ARG:HD2	52:CV:37:ARG:HA	1.93	0.41
53:CW:177:GLN:NE2	61:CZ:546:TYR:O	2.53	0.41
54:UT:428:PRO:HA	54:UT:431:SER:HB3	2.02	0.41
57:US:151:GLN:HG3	57:US:152:HIS:CD2	2.55	0.41
57:US:178:ILE:HG22	57:US:181:LEU:H	1.85	0.41
57:US:496:SER:O	57:US:500:LEU:HG	2.20	0.41
59:CX:263:GLN:HG2	59:CX:301:GLY:HA2	2.01	0.41
60:CY:293:LYS:HG2	60:CY:296:ARG:HH12	1.85	0.41
56:UI:235:LEU:HD23	56:UI:235:LEU:HA	1.80	0.41
63:Cz:1512:TRP:CD1	63:Cz:1539:ILE:HD11	2.55	0.41
63:Cz:1627:HIS:CD2	63:Cz:1664:LEU:HD22	2.55	0.41
1:UA:29:LEU:O	1:UA:39:VAL:HA	2.20	0.41
1:UA:170:SER:OG	1:UA:172:ASP:N	2.41	0.41
1:UA:337:GLN:HE21	1:UA:377:THR:CG2	2.33	0.41
1:UA:381:HIS:NE2	1:UA:407:ARG:HB2	2.35	0.41
1:UA:483:LEU:HD12	1:UA:484:VAL:N	2.34	0.41
1:UA:787:MET:HB3	15:UU:843:LEU:HD11	2.02	0.41
2:UB:710:LYS:HE2	2:UB:710:LYS:HB2	1.90	0.41
2:UB:789:GLN:HG2	2:UB:792:ARG:HH22	1.85	0.41
4:UD:322:HIS:CD2	4:UD:350:ILE:HD12	2.55	0.41
6:UG:184:ARG:HE	6:UG:184:ARG:HB2	1.61	0.41
7:UJ:36:GLU:HG3	33:CT:72:ARG:HD3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:UJ:560:CYS:SG	7:UJ:722:VAL:HG23	2.60	0.41
7:UJ:583:ASP:OD1	7:UJ:583:ASP:N	2.49	0.41
7:UJ:656:ILE:HD13	7:UJ:660:LEU:HD22	2.01	0.41
7:UJ:1622:ALA:O	7:UJ:1626:VAL:HG13	2.19	0.41
8:UK:30:LYS:HB3	8:UK:31:LYS:H	1.71	0.41
9:UL:304:ILE:HD11	9:UL:374:TRP:CH2	2.56	0.41
10:UM:388:MET:HG2	10:UM:402:SER:HA	2.02	0.41
10:UM:443:TRP:CD1	10:UM:443:TRP:H	2.37	0.41
10:UM:889:ARG:NH1	10:UM:893:ALA:HB2	2.36	0.41
13:UQ:607:TYR:OH	56:UE:251:ARG:HD3	2.19	0.41
15:UU:396:SER:HA	15:UU:403:GLY:C	2.45	0.41
18:CB:222:MET:HE3	20:CD:124:GLN:HB2	2.01	0.41
19:CC:146:GLN:HG2	19:CC:150:ILE:HD11	2.02	0.41
20:CD:175:LEU:O	20:CD:179:LEU:HB2	2.19	0.41
20:CD:253:ASP:O	20:CD:257:ILE:HG13	2.20	0.41
22:CG:222:LYS:H	50:C2:183:A:H5''	1.85	0.41
23:CH:159:PRO:HA	48:CU:127:PRO:HD3	2.02	0.41
24:CI:958:ILE:HG21	24:CI:977:PHE:HB3	2.01	0.41
26:CK:7:ARG:HH12	26:CK:8:GLN:HE21	1.67	0.41
26:CK:43:ASP:HA	26:CK:44:PRO:HD3	1.87	0.41
30:CP:101:LEU:HA	30:CP:104:ARG:HB2	2.01	0.41
31:CQ:96:LYS:HA	31:CQ:96:LYS:HD2	1.87	0.41
32:CS:19:LEU:HA	32:CS:146:GLY:HA2	2.02	0.41
32:CS:191:LEU:O	32:CS:195:SER:OG	2.38	0.41
32:CS:268:PHE:CE1	32:CS:298:ALA:HB1	2.55	0.41
32:CS:647:MET:HE1	53:CW:274:ARG:HD2	2.01	0.41
34:Cb:10:LYS:NZ	49:C1:960:C:OP1	2.39	0.41
34:Cb:116:ASP:HA	34:Cb:119:ALA:HB3	2.02	0.41
39:Cg:160:SER:HA	39:Cg:161:PRO:HD3	1.96	0.41
42:Cj:126:PRO:O	42:Cj:128:LYS:HG3	2.20	0.41
49:C1:838:A:H2'	49:C1:839:U:C6	2.56	0.41
49:C1:1099:A:H2'	49:C1:1100:G:O4'	2.19	0.41
51:UV:673:PRO:HB3	51:UV:678:SER:HB3	2.01	0.41
51:UV:1053:GLN:HA	51:UV:1056:ALA:HB3	2.02	0.41
52:CV:167:LYS:HA	52:CV:170:LYS:HG2	2.02	0.41
53:CW:23:LEU:HB2	53:CW:28:LEU:HG	2.03	0.41
53:CW:248:THR:N	53:CW:262:GLY:O	2.48	0.41
54:UT:814:THR:O	54:UT:817:ILE:HG22	2.20	0.41
54:UT:984:LEU:HG	54:UT:986:GLU:H	1.86	0.41
54:UT:1091:MET:SD	54:UT:1144:LEU:HD11	2.60	0.41
54:UT:1313:LEU:HA	54:UT:1313:LEU:HD23	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:UH:749:ASP:OD2	55:UH:751:TRP:NE1	2.53	0.41
57:US:409:LYS:NZ	57:US:484:LYS:O	2.53	0.41
58:CI:14:ILE:HG23	58:CI:22:VAL:HA	2.02	0.41
2:UB:119:ARG:NH1	23:CH:67:ASP:OD1	2.54	0.41
2:UB:597:ILE:HG23	2:UB:601:PHE:HD2	1.86	0.41
2:UB:653:TYR:HA	2:UB:740:TRP:CZ2	2.56	0.41
4:UD:337:MET:HG3	4:UD:742:GLY:H	1.85	0.41
4:UD:356:ALA:HB1	4:UD:359:LYS:HB2	2.02	0.41
4:UD:389:ASN:ND2	4:UD:424:LEU:HD23	2.36	0.41
4:UD:663:ARG:HD3	4:UD:665:MET:HE2	2.02	0.41
5:UF:9:ARG:NH1	28:CM:24:PRO:HA	2.36	0.41
6:UG:453:LYS:HE2	6:UG:453:LYS:HB2	1.88	0.41
7:UJ:827:SER:O	7:UJ:831:THR:OG1	2.32	0.41
8:UK:22:ARG:NH2	24:CI:923:THR:HG23	2.35	0.41
9:UL:622:ILE:HD12	9:UL:634:TRP:HB2	2.02	0.41
9:UL:864:PHE:O	9:UL:868:GLU:HA	2.20	0.41
10:UM:442:ASP:OD1	10:UM:442:ASP:N	2.53	0.41
10:UM:818:THR:HA	10:UM:866:TYR:CE2	2.56	0.41
11:UN:910:MET:HB3	11:UN:914:THR:HG21	2.02	0.41
12:UO:296:HIS:HB3	12:UO:298:LYS:HE2	2.01	0.41
13:UQ:237:TYR:CZ	13:UQ:241:PRO:HB3	2.55	0.41
13:UQ:607:TYR:CD2	56:UE:247:GLU:HB2	2.56	0.41
14:UR:136:TRP:NE1	15:UU:259:LEU:HA	2.36	0.41
14:UR:278:SER:OG	14:UR:294:THR:OG1	2.36	0.41
15:UU:200:PHE:CD2	15:UU:210:ILE:HG12	2.55	0.41
15:UU:509:GLU:HG2	15:UU:532:GLY:HA3	2.02	0.41
18:CA:237:ARG:HD2	18:CA:237:ARG:HA	1.87	0.41
18:CA:249:GLN:HG2	19:CC:39:LYS:HB2	2.01	0.41
18:CB:279:LEU:HD11	18:CB:286:PRO:HB3	2.02	0.41
20:CD:50:LYS:HG2	20:CD:133:MET:HE3	2.01	0.41
22:CG:418:LEU:O	22:CG:431:VAL:HA	2.20	0.41
22:CG:434:ARG:HB2	22:CG:437:GLY:HA2	2.03	0.41
24:CI:194:TRP:CZ2	24:CI:200:GLY:HA2	2.56	0.41
28:CM:295:GLY:O	28:CM:312:ARG:NH1	2.54	0.41
28:CM:352:LEU:C	28:CM:353:TRP:HD1	2.29	0.41
30:CP:217:ASP:OD1	49:C1:1490:A:N6	2.37	0.41
32:CS:321:LYS:HD3	32:CS:324:PHE:HD2	1.85	0.41
32:CS:423:SER:HA	32:CS:426:LEU:HD12	2.03	0.41
32:CS:488:LYS:O	32:CS:492:THR:HG22	2.19	0.41
46:Co:366:ILE:HB	46:Co:371:LEU:HD11	2.02	0.41
48:CU:206:THR:O	48:CU:210:ILE:HG12	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:C1:365:G:H2'	49:C1:366:G:C8	2.56	0.41
49:C1:840:A:N6	49:C1:841:A:N6	2.69	0.41
49:C1:1629:U:O2	49:C1:1659:C:N4	2.53	0.41
49:C1:2060:A:H2'	49:C1:2061:G:C8	2.55	0.41
49:C1:2068:C:C5	49:C1:2069:G:H8	2.38	0.41
50:C2:255:U:H1'	50:C2:256:G:H5'	2.03	0.41
51:UV:119:GLN:HE21	51:UV:145:VAL:HG23	1.84	0.41
51:UV:1052:LYS:HZ2	51:UV:1069:PRO:HA	1.86	0.41
53:CW:168:VAL:HB	53:CW:182:TRP:HB2	2.02	0.41
54:UT:474:VAL:HG12	54:UT:479:LEU:HB3	2.01	0.41
54:UT:583:HIS:HE2	54:UT:615:SER:C	2.26	0.41
54:UT:1024:ILE:HG21	54:UT:1079:VAL:HA	2.02	0.41
54:UT:2173:LEU:HD21	54:UT:2214:CYS:HA	2.03	0.41
55:UH:869:LEU:HD13	56:UE:269:GLN:OE1	2.20	0.41
56:UE:271:LYS:HE3	56:UE:271:LYS:HB3	1.48	0.41
57:US:420:ARG:CZ	57:US:454:ASP:HA	2.51	0.41
62:UP:334:LYS:HE3	62:UP:334:LYS:HB3	1.89	0.41
1:UA:441:ALA:HA	1:UA:451:HIS:O	2.20	0.41
5:UF:387:GLY:O	5:UF:391:ILE:HD12	2.20	0.41
6:UG:95:ASN:H	6:UG:427:ASN:ND2	2.14	0.41
7:UJ:31:LYS:HD2	7:UJ:154:ILE:HB	2.01	0.41
7:UJ:522:LEU:HD11	7:UJ:564:PRO:HD2	2.02	0.41
7:UJ:608:ARG:HD3	7:UJ:671:GLU:HG3	2.02	0.41
7:UJ:1704:PRO:HA	7:UJ:1707:VAL:HG22	2.01	0.41
7:UJ:1739:LEU:HD21	7:UJ:1777:VAL:HG22	2.01	0.41
9:UL:47:VAL:HB	9:UL:61:TRP:HB2	2.02	0.41
10:UM:823:ALA:O	10:UM:827:GLN:HG2	2.21	0.41
12:UO:192:CYS:O	12:UO:207:SER:OG	2.38	0.41
12:UO:343:LEU:HD23	12:UO:345:ILE:HD11	2.02	0.41
14:UR:421:ALA:HB2	14:UR:437:ARG:HD3	2.02	0.41
14:UR:427:SER:OG	14:UR:478:GLY:O	2.24	0.41
14:UR:562:LYS:HD2	14:UR:562:LYS:HA	1.83	0.41
15:UU:349:GLN:HG2	20:CD:435:LYS:HB3	2.02	0.41
15:UU:705:GLY:O	15:UU:732:ARG:NE	2.54	0.41
16:UX:60:VAL:HB	16:UX:91:ILE:HG22	2.03	0.41
16:UX:89:ILE:HD13	16:UX:89:ILE:HG21	1.85	0.41
17:UZ:266:LEU:HD12	17:UZ:270:PHE:HB2	2.03	0.41
18:CA:196:MET:HE3	18:CA:196:MET:HB2	1.89	0.41
18:CB:171:ALA:HA	18:CB:174:VAL:HG22	2.02	0.41
18:CB:255:ILE:HG23	18:CB:257:ILE:HD11	2.02	0.41
18:CB:280:ARG:HH21	18:CB:286:PRO:HD2	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CD:346:HIS:NE2	50:C2:90:C:N3	2.69	0.41
24:CI:827:LEU:HD11	24:CI:848:TYR:HE2	1.85	0.41
28:CM:351:ARG:HB3	28:CM:353:TRP:CD1	2.55	0.41
30:CP:47:ARG:HD2	30:CP:47:ARG:HA	1.77	0.41
31:CQ:233:VAL:HA	31:CQ:236:VAL:HG22	2.01	0.41
32:CR:423:SER:OG	32:CR:546:ALA:O	2.24	0.41
32:CR:751:ALA:HB2	32:CR:758:HIS:CE1	2.55	0.41
32:CS:281:VAL:HB	32:CS:409:PHE:CD1	2.55	0.41
33:CT:158:LYS:HA	33:CT:158:LYS:HD3	1.88	0.41
35:Cc:133:SER:HA	35:Cc:145:GLN:O	2.21	0.41
37:Ce:97:LEU:HD21	37:Ce:139:LEU:HD23	2.02	0.41
38:Cf:42:ARG:HB2	38:Cf:59:ARG:HB2	2.02	0.41
38:Cf:169:LEU:HB2	38:Cf:187:ILE:HD11	2.03	0.41
41:Ci:78:GLN:NE2	41:Ci:117:ALA:HB1	2.35	0.41
43:Ck:104:ARG:HE	43:Ck:106:GLU:CD	2.29	0.41
49:C1:274:A:C6	49:C1:275:C:N4	2.88	0.41
49:C1:1546:U:H2'	49:C1:1547:C:C5	2.44	0.41
51:UV:126:TYR:HB2	51:UV:140:ILE:HD12	2.02	0.41
51:UV:1076:ASP:N	51:UV:1076:ASP:OD1	2.51	0.41
53:CW:228:PHE:HB2	53:CW:238:ALA:HB3	2.02	0.41
54:UT:556:LEU:HD23	54:UT:556:LEU:HA	1.91	0.41
54:UT:1971:ARG:CZ	54:UT:2010:LYS:HD2	2.51	0.41
54:UT:1999:ALA:HB3	54:UT:2004:VAL:HG21	2.02	0.41
56:UE:219:GLN:O	56:UE:223:VAL:HG23	2.21	0.41
57:US:289:MET:HA	57:US:293:ILE:HD12	2.02	0.41
57:US:307:LEU:O	57:US:311:TYR:HB2	2.21	0.41
57:US:387:ARG:NH1	57:US:391:ASN:HD21	2.19	0.41
60:CY:326:LYS:HA	60:CY:326:LYS:HD2	1.94	0.41
1:UA:624:PHE:HD1	50:C2:63:G:C6	2.38	0.41
2:UB:802:HIS:CE1	57:US:419:HIS:HE2	2.39	0.41
4:UD:327:LYS:HG3	4:UD:344:GLY:HA2	2.03	0.41
4:UD:484:VAL:HG22	4:UD:495:TRP:HB3	2.02	0.41
5:UF:135:ARG:NE	19:CC:85:ASN:HA	2.35	0.41
6:UG:466:ILE:H	28:CM:36:ARG:HD2	1.85	0.41
7:UJ:97:ARG:NH2	14:UR:70:LEU:O	2.54	0.41
7:UJ:109:LEU:HD13	7:UJ:142:TYR:CD2	2.55	0.41
7:UJ:114:ALA:O	7:UJ:118:VAL:HG23	2.21	0.41
7:UJ:155:LEU:HD23	7:UJ:155:LEU:HA	1.91	0.41
7:UJ:302:VAL:HA	7:UJ:305:LEU:HB2	2.02	0.41
7:UJ:798:LYS:HE3	7:UJ:835:LEU:HD13	2.03	0.41
7:UJ:832:LEU:HD13	7:UJ:835:LEU:HD23	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:UJ:1550:LEU:HA	7:UJ:1553:ILE:HG22	2.02	0.41
9:UL:564:VAL:HG22	9:UL:565:SER:H	1.86	0.41
9:UL:676:ARG:NH1	9:UL:696:HIS:O	2.54	0.41
10:UM:12:GLU:O	10:UM:720:TRP:HA	2.20	0.41
10:UM:673:THR:OG1	10:UM:693:GLU:O	2.28	0.41
10:UM:797:VAL:HA	10:UM:800:LYS:HG2	2.03	0.41
10:UM:813:LEU:HD21	10:UM:830:LEU:HD13	2.03	0.41
12:UO:318:LEU:HD11	12:UO:339:GLN:HA	2.02	0.41
15:UU:69:ARG:HD3	15:UU:69:ARG:HA	1.82	0.41
18:CA:292:LEU:H	18:CA:292:LEU:HG	1.59	0.41
18:CB:183:VAL:HA	18:CB:206:ILE:O	2.21	0.41
21:CE:85:LYS:HD2	21:CE:97:ALA:HB1	2.03	0.41
21:CF:66:LEU:C	21:CF:69:PRO:HD2	2.46	0.41
24:CI:117:ILE:HG23	24:CI:129:MET:HE3	2.01	0.41
24:CI:961:GLN:OE1	26:CK:286:GLN:NE2	2.53	0.41
25:CJ:156:ASP:O	26:CK:3:ARG:HD2	2.21	0.41
28:CM:80:ASN:HB2	28:CM:96:LEU:HB2	2.02	0.41
28:CM:208:VAL:HG23	28:CM:209:GLU:H	1.85	0.41
29:CO:123:GLU:HB3	29:CO:161:LYS:HB2	2.03	0.41
32:CR:19:LEU:HA	32:CR:146:GLY:HA2	2.02	0.41
32:CR:281:VAL:HB	32:CR:409:PHE:CD1	2.55	0.41
32:CS:33:HIS:O	32:CS:35:LYS:HG3	2.20	0.41
32:CS:268:PHE:O	32:CS:272:ILE:HG13	2.21	0.41
33:CT:113:ASP:HA	33:CT:122:PHE:HD2	1.86	0.41
34:Cb:87:MET:HE3	34:Cb:87:MET:HB2	1.83	0.41
34:Cb:104:ASP:OD1	34:Cb:107:GLY:N	2.53	0.41
35:Cc:145:GLN:NE2	35:Cc:146:ALA:O	2.54	0.41
37:Ce:136:LEU:HA	37:Ce:139:LEU:HD12	2.01	0.41
43:Ck:14:LEU:HD12	43:Ck:59:ILE:HB	2.03	0.41
44:Cm:37:PHE:CE2	44:Cm:103:ILE:HG13	2.55	0.41
49:C1:142:C:H2'	49:C1:143:A:C8	2.55	0.41
49:C1:344:C:H2'	49:C1:345:U:H6	1.85	0.41
49:C1:1137:G:C2	49:C1:1138:C:C5	3.09	0.41
49:C1:1169:A:H4'	49:C1:1170:G:H5'	2.02	0.41
49:C1:1539:G:H2'	49:C1:1540:A:C8	2.55	0.41
54:UT:560:LYS:NZ	54:UT:596:ASP:OD2	2.54	0.41
54:UT:687:LEU:HA	54:UT:690:MET:HE2	2.03	0.41
54:UT:918:LEU:HD12	54:UT:918:LEU:HA	1.93	0.41
54:UT:1048:VAL:HG21	54:UT:1099:LEU:HD23	2.02	0.41
54:UT:1091:MET:O	54:UT:1095:VAL:HG22	2.20	0.41
54:UT:2077:MET:HE3	54:UT:2077:MET:HB3	1.92	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:UH:625:GLU:HA	55:UH:702:HIS:CD2	2.55	0.41
55:UH:915:GLU:O	55:UH:920:ALA:N	2.42	0.41
57:US:522:HIS:HB3	57:US:525:THR:HB	2.02	0.41
58:CI:62:THR:OG1	58:CI:63:SER:N	2.53	0.41
59:CX:194:ILE:HG21	59:CX:236:LEU:HD11	2.03	0.41
59:CX:260:GLN:OE1	59:CX:264:ARG:NH1	2.48	0.41
59:CX:262:VAL:HG12	59:CX:266:MET:HE3	2.03	0.41
56:UI:219:GLN:O	56:UI:223:VAL:HG23	2.21	0.41
1:UA:295:ILE:HD11	1:UA:300:ILE:HG13	2.02	0.41
1:UA:629:LEU:HD23	1:UA:629:LEU:HA	1.91	0.41
2:UB:860:ARG:NH1	27:CL:529:PRO:HA	2.36	0.41
4:UD:324:HIS:HB2	4:UD:872:LEU:HD11	2.02	0.41
4:UD:560:MET:HE2	4:UD:560:MET:HB2	1.79	0.41
6:UG:210:ILE:HG22	6:UG:211:HIS:ND1	2.36	0.41
7:UJ:210:TYR:CE1	7:UJ:213:LEU:HB2	2.56	0.41
7:UJ:675:VAL:HG21	7:UJ:728:ARG:NE	2.36	0.41
7:UJ:852:ALA:O	7:UJ:856:LEU:HG	2.21	0.41
7:UJ:1482:HIS:NE2	7:UJ:1522:LEU:HB3	2.36	0.41
8:UK:117:ASN:HD21	50:C2:261:U:H5'	1.85	0.41
9:UL:149:ARG:NE	27:CL:710:ARG:HH22	2.19	0.41
9:UL:509:HIS:ND1	9:UL:529:ASP:HB3	2.36	0.41
10:UM:463:ASP:OD2	10:UM:463:ASP:N	2.46	0.41
12:UO:10:GLN:OE1	12:UO:455:THR:OG1	2.35	0.41
12:UO:30:PHE:HE1	12:UO:333:HIS:HA	1.85	0.41
15:UU:72:GLN:HA	15:UU:84:PHE:O	2.20	0.41
15:UU:195:PHE:HZ	15:UU:259:LEU:HD23	1.86	0.41
15:UU:311:TRP:HA	15:UU:319:ILE:HA	2.03	0.41
16:UX:54:PRO:HD2	39:Cg:98:LYS:HZ1	1.84	0.41
21:CE:36:LYS:HB2	50:C2:82:U:H5	1.84	0.41
22:CG:245:HIS:CE1	22:CG:263:THR:HG23	2.56	0.41
23:CH:14:HIS:CG	23:CH:37:ARG:HE	2.39	0.41
23:CH:105:THR:HA	23:CH:186:LYS:HG2	2.03	0.41
23:CH:321:ILE:O	24:CI:623:ARG:NH1	2.51	0.41
24:CI:214:TYR:HD1	24:CI:214:TYR:HA	1.69	0.41
27:CL:475:ALA:N	27:CL:478:ARG:HH21	2.19	0.41
28:CM:11:THR:HG23	28:CM:16:PRO:HD3	2.03	0.41
31:CQ:169:PHE:HB3	31:CQ:216:VAL:HG12	2.03	0.41
32:CR:27:PHE:HE1	32:CR:200:LEU:HD12	1.86	0.41
32:CR:33:HIS:O	32:CR:35:LYS:HG3	2.20	0.41
32:CR:191:LEU:HD12	32:CR:529:PHE:H	1.85	0.41
32:CR:314:SER:OG	32:CR:316:SER:O	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:CR:423:SER:HA	32:CR:426:LEU:HD12	2.03	0.41
32:CS:27:PHE:HE1	32:CS:200:LEU:HD12	1.86	0.41
32:CS:268:PHE:CE2	32:CS:272:ILE:HD11	2.56	0.41
34:Cb:175:PHE:CE2	34:Cb:198:ARG:HD3	2.50	0.41
43:Ck:69:VAL:HA	43:Ck:134:ARG:HH12	1.86	0.41
44:Cm:75:ILE:N	44:Cm:126:ILE:O	2.39	0.41
49:C1:351:U:C4	49:C1:353:G:O6	2.74	0.41
49:C1:448:C:H2'	49:C1:449:C:C6	2.56	0.41
49:C1:878:C:H2'	49:C1:879:A:O4'	2.20	0.41
50:C2:4:G:H2'	50:C2:5:A:H8	1.86	0.41
50:C2:70:A:H2'	50:C2:71:U:C6	2.55	0.41
53:CW:204:VAL:HA	53:CW:221:THR:HA	2.02	0.41
53:CW:306:LEU:HD22	53:CW:314:LYS:HB2	2.01	0.41
54:UT:422:TRP:O	54:UT:426:TYR:CB	2.68	0.41
54:UT:1183:THR:O	54:UT:1186:LEU:HG	2.21	0.41
54:UT:1387:GLU:HB2	54:UT:1430:GLN:HG2	2.01	0.41
54:UT:1648:LEU:HB3	54:UT:1722:LEU:HD11	2.02	0.41
54:UT:1765:LEU:HD23	54:UT:1765:LEU:HA	1.86	0.41
54:UT:1919:ILE:HA	54:UT:1922:VAL:HG12	2.01	0.41
54:UT:2212:ASP:O	54:UT:2216:LEU:HG	2.20	0.41
55:UH:502:PHE:HE2	55:UH:576:VAL:HG13	1.85	0.41
55:UH:909:ILE:HB	55:UH:926:VAL:HG23	2.01	0.41
58:Cl:70:VAL:O	58:Cl:74:GLN:HG2	2.20	0.41
56:UI:191:SER:O	56:UI:195:THR:HG23	2.21	0.41
1:UA:347:VAL:HG22	1:UA:348:TYR:O	2.21	0.41
1:UA:488:TRP:CZ2	25:CJ:140:VAL:HB	2.51	0.41
1:UA:632:GLU:OE2	7:UJ:3:SER:N	2.53	0.41
1:UA:685:ASN:HD22	1:UA:700:LEU:HD12	1.86	0.41
4:UD:7:ARG:HH21	55:UH:904:ARG:HB2	1.86	0.41
5:UF:125:ARG:HE	5:UF:129:ILE:HD11	1.86	0.41
6:UG:205:HIS:HE2	49:C1:425:C:HO2'	1.54	0.41
6:UG:206:ASN:HD22	6:UG:206:ASN:HA	1.72	0.41
6:UG:274:HIS:HE1	6:UG:329:ILE:HD12	1.86	0.41
6:UG:373:LYS:HB2	6:UG:373:LYS:HE2	1.94	0.41
7:UJ:557:ARG:HG3	7:UJ:719:LEU:HD21	2.03	0.41
7:UJ:661:ILE:HG23	7:UJ:662:PRO:HD3	2.02	0.41
7:UJ:1488:ALA:HA	7:UJ:1491:PHE:CD1	2.56	0.41
8:UK:115:MET:HA	8:UK:118:ILE:HG12	2.03	0.41
8:UK:128:GLU:O	8:UK:132:LEU:HG	2.21	0.41
8:UK:179:LYS:HD3	8:UK:179:LYS:HA	1.95	0.41
9:UL:296:HIS:CE1	9:UL:372:VAL:H	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:UL:455:LYS:H	9:UL:455:LYS:HG2	1.74	0.41
9:UL:617:TYR:HB3	9:UL:659:PRO:HA	2.02	0.41
9:UL:844:ASP:O	9:UL:848:VAL:HG23	2.20	0.41
10:UM:745:LEU:O	10:UM:749:ILE:HG12	2.20	0.41
11:UN:882:TYR:HA	28:CM:385:LEU:HD21	2.03	0.41
11:UN:901:LEU:HD12	11:UN:902:ARG:H	1.86	0.41
12:UO:333:HIS:HB3	12:UO:347:THR:HA	2.03	0.41
13:UQ:182:ILE:HD12	13:UQ:182:ILE:HA	1.89	0.41
14:UR:558:GLY:HA2	14:UR:565:ALA:O	2.20	0.41
15:UU:42:GLY:O	15:UU:359:ASN:ND2	2.54	0.41
15:UU:191:ASN:OD1	15:UU:191:ASN:N	2.44	0.41
15:UU:628:ILE:HD12	15:UU:638:VAL:O	2.21	0.41
16:UX:65:LEU:HD21	16:UX:113:ALA:HB2	2.02	0.41
17:UZ:35:LYS:HA	17:UZ:35:LYS:HD2	1.72	0.41
17:UZ:69:LYS:HB3	17:UZ:279:ARG:HH21	1.85	0.41
17:UZ:159:ILE:HD13	17:UZ:159:ILE:HA	1.86	0.41
17:UZ:163:LEU:HD23	17:UZ:163:LEU:HA	1.87	0.41
17:UZ:251:GLU:O	17:UZ:255:LEU:HG	2.21	0.41
18:CB:113:THR:HG23	18:CB:124:LYS:HD2	2.03	0.41
20:CD:334:THR:HG23	20:CD:336:HIS:HB2	2.03	0.41
21:CE:114:LYS:HB3	21:CE:114:LYS:HE2	1.75	0.41
22:CG:251:VAL:O	22:CG:263:THR:OG1	2.27	0.41
23:CH:9:LEU:HD22	23:CH:31:ILE:HG22	2.03	0.41
23:CH:133:THR:HG23	23:CH:191:ILE:HG21	2.03	0.41
23:CH:161:TYR:HB3	23:CH:166:ILE:HB	2.03	0.41
24:CI:76:PRO:HD2	24:CI:79:VAL:HG21	2.03	0.41
24:CI:186:LYS:HD2	24:CI:205:TYR:CE1	2.56	0.41
24:CI:393:VAL:HG12	32:CR:708:LEU:HG	2.03	0.41
31:CQ:175:ARG:HA	31:CQ:175:ARG:HD2	1.80	0.41
32:CR:14:LEU:HD12	32:CR:217:VAL:HG11	2.03	0.41
32:CR:28:VAL:HB	32:CR:201:VAL:HG12	2.02	0.41
32:CR:259:VAL:HB	32:CR:263:LYS:NZ	2.36	0.41
32:CR:398:LEU:O	32:CR:402:LEU:HG	2.21	0.41
32:CR:801:LEU:HA	32:CR:804:THR:HG22	2.03	0.41
32:CS:14:LEU:HD12	32:CS:217:VAL:HG11	2.03	0.41
32:CS:28:VAL:HB	32:CS:201:VAL:HG12	2.02	0.41
34:Cb:31:PRO:HG3	34:Cb:43:PRO:HG3	2.01	0.41
34:Cb:48:VAL:O	34:Cb:54:TYR:N	2.43	0.41
34:Cb:181:ALA:HB3	34:Cb:210:LEU:HD11	2.03	0.41
36:Cd:88:ARG:HH22	49:C1:987:G:H2'	1.86	0.41
36:Cd:105:ASP:OD2	36:Cd:105:ASP:N	2.45	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:Cg:34:LEU:HD13	39:Cg:34:LEU:HA	1.79	0.41
39:Cg:43:VAL:O	39:Cg:46:THR:OG1	2.30	0.41
39:Cg:88:ARG:HB2	39:Cg:93:TYR:CD2	2.56	0.41
39:Cg:108:GLN:NE2	39:Cg:124:ARG:HB2	2.36	0.41
43:Ck:60:ASP:H	43:Ck:66:THR:HG21	1.85	0.41
43:Ck:96:LEU:HD23	43:Ck:96:LEU:HA	1.88	0.41
45:Cn:140:LYS:HE2	45:Cn:140:LYS:HB2	1.87	0.41
47:Cp:9:LYS:HA	47:Cp:9:LYS:HD3	1.79	0.41
47:Cp:11:VAL:HG23	47:Cp:33:PHE:HD1	1.86	0.41
49:C1:366:G:H2'	49:C1:367:U:O4'	2.20	0.41
49:C1:834:C:H2'	49:C1:835:A:H8	1.85	0.41
49:C1:1085:U:O2'	49:C1:1086:U:O5'	2.35	0.41
49:C1:2063:G:N2	49:C1:2111:U:C2	2.89	0.41
49:C1:2072:U:H4'	49:C1:2073:A:H5'	2.03	0.41
49:C1:2219:C:H2'	49:C1:2220:C:C6	2.55	0.41
50:C2:12:U:H2'	50:C2:13:U:C6	2.56	0.41
50:C2:246:G:C6	50:C2:247:G:C6	3.09	0.41
51:UV:123:VAL:HG12	51:UV:283:LEU:HG	2.03	0.41
51:UV:714:ILE:HG22	51:UV:718:LYS:HE3	2.03	0.41
51:UV:965:LYS:O	51:UV:969:ARG:HG2	2.21	0.41
51:UV:1059:ASP:H	52:CV:92:SER:C	2.26	0.41
53:CW:104:LEU:HD11	53:CW:109:TYR:HA	2.02	0.41
53:CW:189:ASP:OD1	53:CW:198:SER:OG	2.39	0.41
53:CW:214:HIS:NE2	53:CW:256:GLY:O	2.44	0.41
54:UT:259:PHE:O	54:UT:263:MET:HG2	2.21	0.41
54:UT:454:VAL:HA	54:UT:491:PRO:HG3	2.02	0.41
54:UT:497:GLN:HE22	54:UT:501:LYS:HE3	1.85	0.41
54:UT:1141:LEU:HD23	54:UT:1144:LEU:HD23	2.02	0.41
54:UT:1194:PRO:HA	54:UT:1237:LEU:HD11	2.01	0.41
54:UT:1385:ALA:O	54:UT:1389:SER:OG	2.27	0.41
54:UT:1470:TRP:O	54:UT:1475:GLN:NE2	2.52	0.41
54:UT:2116:LEU:HA	54:UT:2116:LEU:HD23	1.78	0.41
54:UT:2163:ASN:HA	54:UT:2166:TYR:HB3	2.03	0.41
55:UH:595:PHE:HB3	55:UH:598:ASP:OD1	2.21	0.41
55:UH:847:ARG:HD2	56:UI:236:ILE:HG12	2.02	0.41
55:UH:881:ARG:HB2	55:UH:891:ARG:HG2	2.01	0.41
56:UE:203:ARG:HA	56:UE:206:ARG:HD3	2.01	0.41
57:US:477:ILE:HG13	57:US:478:ILE:HD12	2.03	0.41
59:CX:374:ARG:HG2	59:CX:420:ARG:HG2	2.03	0.41
63:Cz:1682:LYS:O	63:Cz:1686:THR:HG22	2.21	0.41
1:UA:196:GLN:HB2	1:UA:216:ASP:HB3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:UA:839:TYR:CE2	9:UL:918:GLY:HA3	2.56	0.41
2:UB:799:GLU:CD	2:UB:802:HIS:HE2	2.28	0.41
2:UB:866:ILE:HD13	2:UB:866:ILE:HA	1.84	0.41
4:UD:4:HIS:CE1	4:UD:859:GLU:HB3	2.55	0.41
4:UD:156:ALA:HB3	4:UD:164:VAL:HG23	2.02	0.41
4:UD:277:GLN:HE21	62:UP:351:ARG:NE	2.19	0.41
5:UF:2:ALA:N	50:C2:39:U:O2'	2.54	0.41
7:UJ:746:LEU:HD23	7:UJ:749:LEU:HD11	2.04	0.41
10:UM:14:ALA:HB3	10:UM:719:PHE:HB2	2.03	0.41
11:UN:331:LYS:HE2	11:UN:331:LYS:HB3	1.76	0.41
12:UO:46:HIS:CE1	12:UO:48:SER:HB2	2.56	0.41
13:UQ:93:ASP:HA	13:UQ:401:ASN:HD21	1.86	0.41
13:UQ:157:TRP:CD1	13:UQ:192:VAL:HG11	2.56	0.41
14:UR:386:ALA:HA	14:UR:399:ASN:O	2.20	0.41
19:CC:135:ARG:HA	19:CC:138:ALA:HB2	2.02	0.41
19:CC:208:GLU:HA	19:CC:211:ARG:HB2	2.03	0.41
19:CC:406:VAL:O	19:CC:410:GLN:HG2	2.21	0.41
23:CH:29:ARG:NH1	23:CH:370:PHE:O	2.52	0.41
24:CI:206:LEU:HD21	24:CI:214:TYR:CD1	2.56	0.41
24:CI:252:ILE:HD13	24:CI:252:ILE:HA	1.94	0.41
24:CI:815:VAL:HG12	24:CI:871:GLY:O	2.21	0.41
24:CI:916:LYS:HG2	24:CI:917:LYS:H	1.86	0.41
24:CI:920:LEU:HD23	24:CI:920:LEU:HA	1.83	0.41
25:CJ:176:LYS:HA	42:Cj:10:PHE:CZ	2.56	0.41
27:CL:681:GLU:OE2	27:CL:681:GLU:N	2.54	0.41
28:CM:122:LYS:HD2	28:CM:122:LYS:HA	1.90	0.41
28:CM:303:TYR:CE1	28:CM:328:ARG:HG2	2.56	0.41
29:CN:68:LEU:HA	29:CN:73:HIS:HD2	1.86	0.41
29:CN:70:SER:HA	29:CN:84:ILE:HD11	2.02	0.41
29:CO:150:ILE:HD13	29:CO:150:ILE:HA	1.88	0.41
31:CQ:127:SER:OG	31:CQ:128:LYS:N	2.53	0.41
32:CS:314:SER:OG	32:CS:316:SER:O	2.38	0.41
34:Cb:100:ARG:HA	34:Cb:100:ARG:HD3	1.89	0.41
34:Cb:143:ASP:HB3	34:Cb:145:ARG:HG3	2.03	0.41
41:CI:49:ARG:NE	49:C1:1479:U:O2	2.53	0.41
43:Ck:51:LYS:HA	43:Ck:54:ILE:HD12	2.03	0.41
44:Cm:15:ASN:OD1	44:Cm:72:CYS:N	2.45	0.41
49:C1:774:U:N3	49:C1:777:G:OP2	2.54	0.41
49:C1:973:G:H21	53:CW:127:MET:HE1	1.85	0.41
49:C1:997:U:H2'	49:C1:998:C:C6	2.55	0.41
49:C1:1160:G:C5	49:C1:1161:G:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:C1:1509:A:H4'	63:Cz:1646:VAL:HA	2.02	0.41
49:C1:2054:A:O2'	49:C1:2055:C:O5'	2.34	0.41
49:C1:2186:U:H2'	49:C1:2187:U:H6	1.86	0.41
49:C1:2366:C:H2'	49:C1:2367:C:C6	2.56	0.41
49:C1:2367:C:H2'	49:C1:2368:U:C6	2.56	0.41
51:UV:217:LYS:HE2	51:UV:219:VAL:HB	2.03	0.41
51:UV:466:LYS:HD3	51:UV:467:VAL:N	2.35	0.41
51:UV:875:GLY:O	51:UV:879:THR:HG23	2.20	0.41
54:UT:590:LYS:HD2	54:UT:590:LYS:HA	1.80	0.41
54:UT:1277:ILE:HG12	54:UT:1282:LEU:HG	2.02	0.41
54:UT:1562:ASN:O	54:UT:1565:ARG:C	2.64	0.41
54:UT:2066:ARG:HA	54:UT:2105:ARG:HH22	1.85	0.41
56:UE:187:ARG:HD2	56:UE:187:ARG:HA	1.73	0.41
56:UE:191:SER:O	56:UE:195:THR:HG23	2.21	0.41
57:US:339:PHE:O	57:US:343:LEU:HG	2.21	0.41
1:UA:78:GLN:OE1	49:C1:258:C:O2'	2.38	0.40
1:UA:86:ARG:O	1:UA:88:VAL:N	2.54	0.40
2:UB:29:ARG:HA	2:UB:29:ARG:HD3	1.76	0.40
2:UB:73:THR:HA	29:CN:49:TYR:CE2	2.57	0.40
2:UB:591:LEU:HB3	2:UB:638:TYR:CE2	2.56	0.40
2:UB:661:LEU:HB3	2:UB:733:LEU:HD21	2.03	0.40
2:UB:867:LYS:NZ	26:CK:292:ARG:HH21	2.18	0.40
4:UD:480:GLY:O	4:UD:497:GLU:HG2	2.22	0.40
5:UF:34:ARG:NH2	6:UG:94:GLU:O	2.53	0.40
6:UG:137:LEU:HD12	6:UG:137:LEU:HA	1.83	0.40
7:UJ:259:MET:HE1	7:UJ:292:PHE:HA	2.03	0.40
7:UJ:1677:PRO:HA	7:UJ:1680:VAL:HB	2.03	0.40
9:UL:192:THR:OG1	9:UL:220:CYS:SG	2.67	0.40
9:UL:903:ARG:O	9:UL:907:ARG:HG2	2.22	0.40
10:UM:678:TRP:HA	10:UM:686:GLU:HG2	2.02	0.40
10:UM:771:LEU:O	10:UM:775:THR:HG23	2.21	0.40
12:UO:172:TRP:CE2	12:UO:179:PRO:HB3	2.55	0.40
12:UO:536:LYS:HE3	56:UE:210:ARG:HA	2.02	0.40
13:UQ:292:THR:OG1	13:UQ:293:PHE:N	2.53	0.40
13:UQ:783:ASN:HD21	13:UQ:841:SER:HA	1.86	0.40
17:UZ:101:THR:OG1	17:UZ:102:ALA:N	2.53	0.40
17:UZ:130:ILE:HD12	17:UZ:133:LEU:HB3	2.02	0.40
22:CG:245:HIS:HE1	22:CG:263:THR:HG23	1.86	0.40
22:CG:472:LEU:O	22:CG:475:SER:OG	2.39	0.40
25:CJ:6:LYS:HE2	25:CJ:6:LYS:HB2	1.96	0.40
28:CM:122:LYS:HE3	28:CM:138:TYR:CD2	2.55	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:CN:41:LEU:HD21	29:CN:92:THR:HA	2.03	0.40
32:CR:531:PRO:O	32:CR:535:LYS:HG3	2.21	0.40
32:CR:851:TYR:HA	32:CR:854:VAL:HG22	2.02	0.40
32:CS:95:PHE:O	32:CS:99:ILE:HG12	2.20	0.40
32:CS:431:GLN:HE22	32:CS:432:LEU:HD22	1.85	0.40
32:CS:801:LEU:HA	32:CS:804:THR:HG22	2.03	0.40
34:Cb:87:MET:HE1	34:Cb:123:LEU:H	1.86	0.40
34:Cb:89:VAL:HA	34:Cb:99:PHE:O	2.21	0.40
34:Cb:125:LYS:HD2	34:Cb:226:PHE:HD1	1.86	0.40
34:Cb:134:GLY:N	49:C1:837:A:OP1	2.51	0.40
40:Ch:110:ASP:O	40:Ch:114:ARG:HG2	2.21	0.40
49:C1:28:C:H2'	49:C1:29:C:C6	2.55	0.40
49:C1:1479:U:H2'	49:C1:1480:G:C8	2.56	0.40
49:C1:2359:A:H2'	49:C1:2360:G:C8	2.56	0.40
50:C2:92:A:H3'	50:C2:92:A:N3	2.36	0.40
54:UT:32:GLN:O	54:UT:35:SER:OG	2.34	0.40
54:UT:245:THR:OG1	54:UT:246:LYS:N	2.54	0.40
54:UT:340:ARG:O	54:UT:344:THR:HG23	2.20	0.40
54:UT:674:LEU:HD13	54:UT:725:TRP:HZ2	1.86	0.40
54:UT:999:LEU:HD21	54:UT:1023:ILE:HG23	2.04	0.40
54:UT:2056:LYS:NZ	54:UT:2097:ASN:HD22	2.18	0.40
63:Cz:1697:LEU:O	63:Cz:1701:GLU:HG3	2.21	0.40
1:UA:373:PHE:HD1	1:UA:373:PHE:HA	1.75	0.40
1:UA:554:VAL:HB	1:UA:575:PHE:HE1	1.85	0.40
2:UB:330:LYS:O	2:UB:334:GLU:HG2	2.21	0.40
4:UD:50:ASN:OD1	4:UD:50:ASN:N	2.49	0.40
6:UG:214:ARG:NH2	49:C1:292:G:N7	2.69	0.40
7:UJ:406:ILE:HD12	7:UJ:406:ILE:HA	1.92	0.40
7:UJ:1633:LEU:HD12	7:UJ:1647:TRP:HE1	1.85	0.40
9:UL:442:ALA:HA	9:UL:451:ILE:HG22	2.03	0.40
12:UO:184:THR:OG1	12:UO:185:GLY:N	2.53	0.40
12:UO:277:THR:OG1	12:UO:278:SER:N	2.54	0.40
13:UQ:93:ASP:HA	13:UQ:401:ASN:ND2	2.36	0.40
13:UQ:496:SER:OG	13:UQ:535:GLU:OE2	2.30	0.40
13:UQ:628:THR:O	13:UQ:635:VAL:HA	2.22	0.40
14:UR:591:THR:N	14:UR:605:GLY:O	2.45	0.40
15:UU:947:LEU:HD23	15:UU:947:LEU:HA	1.90	0.40
18:CA:214:MET:HA	18:CA:217:ARG:HB2	2.04	0.40
19:CC:403:PHE:HZ	22:CG:446:ASP:HA	1.86	0.40
21:CE:60:GLN:HB3	21:CE:61:PRO:HD3	2.02	0.40
22:CG:162:THR:O	22:CG:604:PHE:HA	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CG:438:LEU:HD13	22:CG:461:PRO:HG2	2.03	0.40
23:CH:81:LEU:HA	23:CH:81:LEU:HD12	1.80	0.40
23:CH:110:ILE:O	23:CH:114:LEU:HB3	2.21	0.40
23:CH:219:ARG:HG3	48:CU:119:TYR:CE2	2.57	0.40
25:CJ:59:HIS:O	25:CJ:62:SER:OG	2.24	0.40
25:CJ:133:GLN:H	25:CJ:133:GLN:HG2	1.54	0.40
28:CM:134:LEU:HB3	28:CM:148:ALA:HB3	2.04	0.40
31:CQ:200:ALA:HB1	31:CQ:245:TYR:CZ	2.57	0.40
32:CR:253:ILE:HD13	32:CR:253:ILE:HA	1.83	0.40
32:CR:268:PHE:CE2	32:CR:272:ILE:HD11	2.56	0.40
32:CR:590:LEU:H	32:CR:590:LEU:HG	1.77	0.40
32:CS:422:ARG:NH1	32:CS:498:ALA:H	2.20	0.40
34:Cb:11:ARG:CZ	34:Cb:22:LYS:HA	2.52	0.40
38:Cf:103:GLN:H	38:Cf:103:GLN:HG2	1.69	0.40
38:Cf:110:ARG:HH21	38:Cf:122:GLY:HA3	1.86	0.40
43:Ck:63:CYS:HB2	43:Ck:66:THR:HB	2.03	0.40
43:Ck:89:ILE:HG23	43:Ck:116:VAL:HG21	2.03	0.40
48:CU:130:LYS:HB3	48:CU:130:LYS:HE2	1.87	0.40
49:C1:23:G:H2'	49:C1:24:G:C8	2.56	0.40
49:C1:912:U:N3	49:C1:925:G:C6	2.89	0.40
49:C1:1065:A:H2'	49:C1:1066:U:H6	1.86	0.40
49:C1:2331:G:H2'	49:C1:2332:A:C8	2.56	0.40
50:C2:149:U:H2'	50:C2:150:G:C8	2.54	0.40
51:UV:382:ASP:HA	51:UV:383:LEU:HA	1.87	0.40
51:UV:719:ILE:HG21	52:CV:209:LEU:HD11	2.03	0.40
52:CV:68:LEU:O	52:CV:72:LEU:HG	2.20	0.40
54:UT:97:LEU:HD13	54:UT:97:LEU:HA	1.97	0.40
54:UT:287:LYS:HD3	54:UT:290:LEU:HB2	2.02	0.40
57:US:174:LEU:HD22	57:US:223:VAL:HG12	2.03	0.40
63:Cz:1513:ILE:HD11	63:Cz:1550:VAL:HA	2.03	0.40
1:UA:19:ASN:HB3	1:UA:60:ARG:HA	2.04	0.40
1:UA:263:TYR:HB2	1:UA:270:LEU:HG	2.03	0.40
2:UB:524:GLY:O	2:UB:528:GLN:NE2	2.43	0.40
2:UB:826:ASP:HB3	2:UB:832:ALA:HB2	2.03	0.40
4:UD:165:LEU:HB3	4:UD:177:LYS:O	2.22	0.40
4:UD:228:ASP:N	4:UD:228:ASP:OD1	2.48	0.40
6:UG:61:LYS:HD2	6:UG:61:LYS:HA	1.86	0.40
7:UJ:162:ILE:H	7:UJ:162:ILE:HD12	1.86	0.40
7:UJ:306:ARG:O	7:UJ:310:VAL:HG23	2.20	0.40
7:UJ:560:CYS:HB3	7:UJ:719:LEU:HD13	2.03	0.40
7:UJ:1653:THR:O	7:UJ:1656:LYS:HG3	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:UJ:1746:GLN:HB3	7:UJ:1785:TRP:HD1	1.86	0.40
8:UK:113:ARG:HH11	21:CE:47:ARG:NH1	2.19	0.40
9:UL:369:VAL:HA	9:UL:389:GLY:HA2	2.03	0.40
9:UL:491:LEU:O	9:UL:500:LEU:N	2.33	0.40
9:UL:857:LEU:O	9:UL:861:LEU:HG	2.22	0.40
10:UM:624:ILE:HD11	10:UM:645:VAL:HG11	2.03	0.40
12:UO:241:LEU:HD12	12:UO:242:PRO:HD2	2.01	0.40
12:UO:413:HIS:HB3	12:UO:417:ARG:H	1.85	0.40
12:UO:427:ALA:O	12:UO:432:ARG:N	2.37	0.40
13:UQ:362:LYS:HG3	13:UQ:402:ILE:HG13	2.03	0.40
13:UQ:375:TYR:HA	13:UQ:398:ALA:HB1	2.03	0.40
13:UQ:851:GLN:HG3	13:UQ:853:TRP:CZ3	2.55	0.40
15:UU:673:TYR:HD1	15:UU:680:ILE:HG13	1.86	0.40
16:UX:151:ARG:HB3	16:UX:155:ARG:NH2	2.35	0.40
21:CF:96:ARG:NH1	21:CF:97:ALA:H	2.19	0.40
23:CH:110:ILE:O	23:CH:114:LEU:CB	2.69	0.40
24:CI:241:HIS:C	24:CI:277:THR:HG22	2.47	0.40
24:CI:1120:LYS:HA	24:CI:1123:LEU:HG	2.02	0.40
28:CM:112:ILE:HD11	44:Cm:68:ARG:NH1	2.36	0.40
28:CM:265:TYR:HE1	28:CM:278:ILE:HG23	1.86	0.40
28:CM:284:ALA:HB3	28:CM:304:ASP:HB2	2.04	0.40
28:CM:393:ARG:NH1	49:C1:591:C:H41	2.19	0.40
29:CO:79:LYS:HE3	29:CO:79:LYS:HB3	1.82	0.40
32:CR:268:PHE:O	32:CR:272:ILE:HG13	2.21	0.40
32:CS:531:PRO:O	32:CS:535:LYS:HG3	2.21	0.40
35:Cc:32:ARG:HB3	35:Cc:33:TRP:CD1	2.56	0.40
44:Cm:8:HIS:CG	48:CU:285:GLU:HG3	2.56	0.40
49:C1:63:C:H2'	49:C1:64:C:H6	1.86	0.40
49:C1:994:A:H2	49:C1:1007:G:C2	2.35	0.40
49:C1:1511:A:H2'	49:C1:1512:C:C6	2.56	0.40
51:UV:104:PRO:HG2	51:UV:106:GLN:HE21	1.86	0.40
51:UV:999:THR:HG22	51:UV:1001:VAL:HG13	2.04	0.40
52:CV:174:TYR:HA	52:CV:175:PRO:HD3	1.93	0.40
53:CW:210:ALA:H	53:CW:215:GLY:HA2	1.85	0.40
54:UT:909:GLN:HE21	54:UT:909:GLN:HB2	1.52	0.40
55:UH:745:GLU:O	55:UH:748:LYS:HG3	2.22	0.40
55:UH:755:TYR:CZ	56:UI:208:PRO:HA	2.57	0.40
55:UH:899:PHE:O	55:UH:902:LYS:HG3	2.22	0.40
60:CY:287:SER:OG	60:CY:290:GLU:OE1	2.23	0.40
63:Cz:1646:VAL:HG23	63:Cz:1647:LEU:HG	2.03	0.40
2:UB:663:ASN:HD21	2:UB:683:HIS:HD2	1.68	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:UC:627:GLY:HA2	3:UC:628:PRO:HD3	1.93	0.40
4:UD:116:LEU:HA	4:UD:116:LEU:HD12	1.77	0.40
6:UG:349:ALA:C	6:UG:400:TRP:HE1	2.29	0.40
6:UG:375:ARG:HB3	6:UG:377:VAL:O	2.22	0.40
7:UJ:157:VAL:HG22	7:UJ:171:ILE:HD12	2.04	0.40
7:UJ:397:LYS:HD2	7:UJ:445:VAL:HB	2.04	0.40
8:UK:97:SER:O	8:UK:101:VAL:HG23	2.21	0.40
9:UL:305:TRP:CE2	9:UL:359:GLN:HB3	2.57	0.40
9:UL:786:LEU:HG	9:UL:860:PHE:CD2	2.56	0.40
12:UO:143:HIS:CD2	12:UO:147:VAL:HB	2.56	0.40
12:UO:433:TYR:HA	12:UO:436:ALA:HB3	2.04	0.40
13:UQ:186:LYS:HB3	13:UQ:210:ARG:HD3	2.03	0.40
14:UR:136:TRP:HB3	15:UU:220:TYR:CD1	2.57	0.40
14:UR:291:SER:OG	14:UR:299:TYR:HB2	2.22	0.40
18:CA:291:THR:O	18:CA:293:GLU:N	2.53	0.40
18:CB:137:LEU:HD13	18:CB:227:PHE:HE1	1.87	0.40
20:CD:117:ASP:O	20:CD:121:ALA:CB	2.69	0.40
21:CF:16:ALA:HB2	22:CG:394:HIS:ND1	2.36	0.40
23:CH:201:ARG:HH12	23:CH:408:ARG:HB3	1.86	0.40
24:CI:69:ARG:O	24:CI:114:LEU:HA	2.21	0.40
24:CI:849:SER:N	24:CI:870:PHE:O	2.53	0.40
26:CK:198:THR:O	26:CK:201:GLY:N	2.55	0.40
28:CM:193:TRP:HA	28:CM:194:PRO:HD3	1.95	0.40
30:CP:48:GLU:HG2	30:CP:52:LYS:HE2	2.03	0.40
30:CP:101:LEU:HD12	30:CP:106:VAL:HG11	2.03	0.40
32:CR:95:PHE:O	32:CR:99:ILE:HG12	2.20	0.40
32:CR:422:ARG:NH1	32:CR:498:ALA:H	2.20	0.40
32:CS:398:LEU:O	32:CS:402:LEU:HG	2.21	0.40
32:CS:432:LEU:HD13	32:CS:432:LEU:HA	1.87	0.40
32:CS:731:GLN:O	32:CS:735:LYS:HG2	2.22	0.40
32:CS:851:TYR:HA	32:CS:854:VAL:HG22	2.02	0.40
34:Cb:19:LEU:HB2	34:Cb:51:ARG:CZ	2.51	0.40
36:Cd:93:LYS:NZ	49:C1:989:C:H5'	2.36	0.40
38:Cf:81:VAL:HG12	38:Cf:94:ASN:HD22	1.86	0.40
39:Cg:57:LEU:HD21	60:CY:314:LEU:HG	2.04	0.40
43:Ck:40:TYR:CZ	43:Ck:54:ILE:HG23	2.57	0.40
43:Ck:107:LYS:HG3	49:C1:935:C:C2	2.56	0.40
44:Cm:103:ILE:O	44:Cm:125:ILE:HD12	2.21	0.40
45:Cn:75:GLN:HG3	45:Cn:81:LYS:O	2.21	0.40
49:C1:249:C:H2'	49:C1:250:U:C6	2.55	0.40
49:C1:255:G:H22	50:C2:64:C:N4	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:C1:1144:U:C2	49:C1:1145:G:C8	3.09	0.40
49:C1:1453:G:H2'	49:C1:1454:A:C8	2.55	0.40
49:C1:1508:A:H2'	49:C1:1509:A:C8	2.55	0.40
51:UV:230:ALA:HB3	51:UV:277:SER:HA	2.02	0.40
51:UV:738:ARG:HH22	52:CV:203:PHE:HE1	1.68	0.40
51:UV:839:SER:HB3	51:UV:1073:PHE:CE2	2.56	0.40
51:UV:929:VAL:HG12	51:UV:951:ARG:NE	2.36	0.40
54:UT:536:ARG:HA	54:UT:539:LYS:HE2	2.04	0.40
54:UT:652:ILE:O	54:UT:656:ILE:HG12	2.21	0.40
54:UT:713:LEU:HA	54:UT:716:VAL:HG22	2.03	0.40
54:UT:904:ILE:HG21	54:UT:937:LEU:HD12	2.04	0.40
54:UT:1090:TYR:O	54:UT:1094:LEU:HG	2.22	0.40
54:UT:1619:ILE:HD12	54:UT:1619:ILE:HA	1.92	0.40
54:UT:1944:GLN:H	54:UT:2005:LYS:HZ3	1.67	0.40
59:CX:312:ALA:HB1	59:CX:350:ALA:HB2	2.04	0.40
2:UB:557:HIS:HD2	2:UB:561:LYS:HD2	1.86	0.40
2:UB:796:ARG:O	57:US:458:TRP:NE1	2.54	0.40
2:UB:806:LEU:HD12	2:UB:807:ALA:H	1.87	0.40
4:UD:102:LEU:HA	4:UD:102:LEU:HD12	1.90	0.40
4:UD:161:GLY:HA2	4:UD:189:PHE:CD2	2.57	0.40
4:UD:306:MET:HE3	4:UD:312:ARG:HB3	2.03	0.40
4:UD:526:LEU:HD12	4:UD:573:TRP:CD2	2.56	0.40
4:UD:709:MET:HG3	4:UD:827:TRP:HB3	2.02	0.40
5:UF:36:LEU:HA	5:UF:36:LEU:HD13	1.75	0.40
7:UJ:346:SER:HB3	7:UJ:351:VAL:HG22	2.03	0.40
7:UJ:1748:ILE:HG23	7:UJ:1752:LEU:HD22	2.04	0.40
9:UL:296:HIS:HB2	9:UL:302:VAL:HG12	2.03	0.40
12:UO:149:VAL:HG12	12:UO:163:CYS:HB2	2.04	0.40
12:UO:520:ALA:O	12:UO:524:GLN:N	2.50	0.40
14:UR:283:HIS:CG	14:UR:288:ILE:HD12	2.57	0.40
14:UR:343:ARG:O	49:C1:133:G:O2'	2.40	0.40
15:UU:43:LEU:HD21	15:UU:771:LEU:O	2.22	0.40
15:UU:579:PHE:HA	15:UU:580:PRO:HA	1.83	0.40
15:UU:945:LYS:HD2	15:UU:990:LEU:HD22	2.03	0.40
18:CA:195:ASN:HB2	19:CC:172:LYS:NZ	2.37	0.40
18:CB:250:GLY:N	18:CB:306:TYR:O	2.55	0.40
24:CI:80:GLY:O	24:CI:83:THR:OG1	2.32	0.40
24:CI:551:LEU:HD12	24:CI:551:LEU:HA	1.87	0.40
28:CM:74:LYS:HG2	28:CM:75:ASP:O	2.20	0.40
29:CO:105:ASN:HA	29:CO:110:LEU:HD22	2.03	0.40
30:CP:184:VAL:O	30:CP:188:THR:HG23	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:CR:310:ILE:HD12	32:CR:385:LEU:HD23	2.03	0.40
32:CR:536:PHE:O	32:CR:540:MET:HG2	2.21	0.40
32:CR:720:LEU:HD23	32:CR:720:LEU:HA	1.87	0.40
32:CR:731:GLN:O	32:CR:735:LYS:HG2	2.22	0.40
32:CS:184:ARG:HD3	32:CS:524:ASP:HA	2.04	0.40
32:CS:892:LYS:HB2	32:CS:893:ASP:H	1.75	0.40
34:Cb:99:PHE:HB3	34:Cb:111:VAL:HG13	2.03	0.40
34:Cb:102:ILE:HG13	34:Cb:110:THR:OG1	2.22	0.40
39:Cg:93:TYR:HA	39:Cg:96:ALA:HB3	2.04	0.40
39:Cg:130:ARG:HG2	39:Cg:140:ASN:HD22	1.86	0.40
40:Ch:101:HIS:ND1	49:C1:1535:C:O2'	2.49	0.40
46:Co:378:MET:O	46:Co:380:LYS:NZ	2.51	0.40
49:C1:82:C:H2'	49:C1:83:A:C8	2.57	0.40
49:C1:101:G:H2'	49:C1:102:G:C8	2.55	0.40
49:C1:161:A:H2	49:C1:176:G:H1	1.69	0.40
49:C1:408:C:C2	49:C1:409:A:C8	3.10	0.40
49:C1:672:A:H2'	49:C1:673:C:H6	1.86	0.40
49:C1:885:A:H2'	49:C1:886:U:C6	2.56	0.40
49:C1:1006:G:H2'	49:C1:1007:G:C8	2.57	0.40
49:C1:1212:G:N1	49:C1:1555:A:OP2	2.37	0.40
51:UV:639:ALA:O	51:UV:643:VAL:HG22	2.22	0.40
52:CV:57:PRO:HB2	52:CV:186:LYS:HZ1	1.87	0.40
54:UT:1974:MET:HE2	54:UT:1986:LEU:HD11	2.02	0.40
55:UH:618:ALA:HA	55:UH:627:LEU:HD11	2.03	0.40
57:US:289:MET:HE1	57:US:307:LEU:HD21	2.03	0.40
59:CX:290:ASN:HA	59:CX:293:LYS:HD3	2.03	0.40
60:CY:254:VAL:N	60:CY:259:GLY:O	2.34	0.40
63:Cz:1753:LYS:H	63:Cz:1753:LYS:HG3	1.71	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	UA	835/904 (92%)	733 (88%)	102 (12%)	0	100	100
2	UB	502/907 (55%)	472 (94%)	30 (6%)	0	100	100
3	UC	72/648 (11%)	58 (81%)	14 (19%)	0	100	100
4	UD	754/884 (85%)	708 (94%)	46 (6%)	0	100	100
5	UF	325/414 (78%)	303 (93%)	21 (6%)	1 (0%)	36	71
6	UG	475/558 (85%)	433 (91%)	39 (8%)	3 (1%)	21	58
7	UJ	1062/1802 (59%)	1000 (94%)	62 (6%)	0	100	100
8	UK	211/270 (78%)	196 (93%)	15 (7%)	0	100	100
9	UL	767/962 (80%)	704 (92%)	63 (8%)	0	100	100
10	UM	645/912 (71%)	595 (92%)	49 (8%)	1 (0%)	43	77
11	UN	171/938 (18%)	161 (94%)	9 (5%)	1 (1%)	21	58
12	UO	498/557 (89%)	459 (92%)	39 (8%)	0	100	100
13	UQ	775/960 (81%)	703 (91%)	71 (9%)	1 (0%)	48	83
14	UR	437/618 (71%)	400 (92%)	37 (8%)	0	100	100
15	UU	890/1049 (85%)	797 (90%)	93 (10%)	0	100	100
16	UX	188/193 (97%)	172 (92%)	16 (8%)	0	100	100
17	UZ	229/391 (59%)	206 (90%)	23 (10%)	0	100	100
18	CA	238/313 (76%)	218 (92%)	20 (8%)	0	100	100
18	CB	235/313 (75%)	216 (92%)	19 (8%)	0	100	100
19	CC	383/523 (73%)	361 (94%)	22 (6%)	0	100	100
20	CD	416/582 (72%)	384 (92%)	32 (8%)	0	100	100
21	CE	119/127 (94%)	112 (94%)	7 (6%)	0	100	100
21	CF	118/127 (93%)	109 (92%)	9 (8%)	0	100	100
22	CG	402/630 (64%)	366 (91%)	36 (9%)	0	100	100
23	CH	383/411 (93%)	344 (90%)	38 (10%)	1 (0%)	36	71
24	CI	812/1163 (70%)	732 (90%)	80 (10%)	0	100	100
25	CJ	177/183 (97%)	154 (87%)	23 (13%)	0	100	100
26	CK	295/297 (99%)	255 (86%)	40 (14%)	0	100	100
27	CL	225/785 (29%)	205 (91%)	20 (9%)	0	100	100
28	CM	443/446 (99%)	402 (91%)	41 (9%)	0	100	100
29	CN	222/252 (88%)	202 (91%)	20 (9%)	0	100	100
29	CO	211/252 (84%)	196 (93%)	13 (6%)	2 (1%)	14	49

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
30	CP	185/322 (58%)	181 (98%)	4 (2%)	0	100	100
31	CQ	171/259 (66%)	165 (96%)	6 (4%)	0	100	100
32	CR	746/1073 (70%)	692 (93%)	54 (7%)	0	100	100
32	CS	746/1073 (70%)	692 (93%)	54 (7%)	0	100	100
33	CT	127/203 (63%)	111 (87%)	16 (13%)	0	100	100
34	Cb	230/264 (87%)	211 (92%)	19 (8%)	0	100	100
35	Cc	188/212 (89%)	166 (88%)	22 (12%)	0	100	100
36	Cd	224/239 (94%)	208 (93%)	16 (7%)	0	100	100
37	Ce	155/203 (76%)	145 (94%)	10 (6%)	0	100	100
38	Cf	170/202 (84%)	162 (95%)	8 (5%)	0	100	100
39	Cg	157/190 (83%)	149 (95%)	8 (5%)	0	100	100
40	Ch	47/151 (31%)	47 (100%)	0	0	100	100
41	Ci	113/150 (75%)	100 (88%)	13 (12%)	0	100	100
42	Cj	124/143 (87%)	109 (88%)	15 (12%)	0	100	100
43	Ck	136/161 (84%)	131 (96%)	5 (4%)	0	100	100
44	Cm	122/130 (94%)	116 (95%)	6 (5%)	0	100	100
45	Cn	92/145 (63%)	83 (90%)	9 (10%)	0	100	100
46	Co	90/136 (66%)	82 (91%)	8 (9%)	0	100	100
47	Cp	59/68 (87%)	55 (93%)	4 (7%)	0	100	100
48	CU	106/311 (34%)	99 (93%)	7 (7%)	0	100	100
51	UV	1057/1171 (90%)	948 (90%)	108 (10%)	1 (0%)	48	83
52	CV	144/322 (45%)	129 (90%)	14 (10%)	1 (1%)	18	55
53	CW	380/668 (57%)	349 (92%)	31 (8%)	0	100	100
54	UT	1982/2612 (76%)	1878 (95%)	100 (5%)	4 (0%)	43	77
55	UH	349/930 (38%)	335 (96%)	14 (4%)	0	100	100
56	UE	121/410 (30%)	111 (92%)	9 (7%)	1 (1%)	16	52
56	UI	121/410 (30%)	111 (92%)	9 (7%)	1 (1%)	16	52
57	US	443/549 (81%)	420 (95%)	23 (5%)	0	100	100
58	Cl	78/156 (50%)	74 (95%)	4 (5%)	0	100	100
59	CX	265/480 (55%)	251 (95%)	14 (5%)	0	100	100
60	CY	118/381 (31%)	109 (92%)	9 (8%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
61	CZ	40/609 (7%)	32 (80%)	8 (20%)	0	100	100
62	UP	52/364 (14%)	45 (86%)	7 (14%)	0	100	100
63	Cz	273/1796 (15%)	261 (96%)	12 (4%)	0	100	100
All	All	22926/35864 (64%)	21113 (92%)	1795 (8%)	18 (0%)	49	83

All (18) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
6	UG	176	LEU
29	CO	85	SER
51	UV	1059	ASP
54	UT	487	ILE
5	UF	121	LYS
29	CO	84	ILE
54	UT	457	TRP
6	UG	56	PRO
13	UQ	708	SER
54	UT	1567	PHE
6	UG	322	ASN
54	UT	408	PRO
11	UN	902	ARG
52	CV	92	SER
56	UE	208	PRO
10	UM	329	PRO
56	UI	208	PRO
23	CH	258	PRO

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	UA	651/775 (84%)	647 (99%)	4 (1%)	78	80
2	UB	425/788 (54%)	425 (100%)	0	100	100
3	UC	61/536 (11%)	61 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
4	UD	653/738 (88%)	650 (100%)	3 (0%)	81	81
5	UF	248/341 (73%)	247 (100%)	1 (0%)	84	82
6	UG	373/474 (79%)	371 (100%)	2 (0%)	81	81
7	UJ	898/1526 (59%)	896 (100%)	2 (0%)	87	85
8	UK	159/227 (70%)	158 (99%)	1 (1%)	78	80
9	UL	667/821 (81%)	666 (100%)	1 (0%)	88	88
10	UM	569/770 (74%)	569 (100%)	0	100	100
11	UN	146/765 (19%)	146 (100%)	0	100	100
12	UO	404/456 (89%)	402 (100%)	2 (0%)	81	81
13	UQ	650/817 (80%)	648 (100%)	2 (0%)	86	84
14	UR	360/524 (69%)	358 (99%)	2 (1%)	78	80
15	UU	672/863 (78%)	669 (100%)	3 (0%)	84	82
16	UX	150/167 (90%)	147 (98%)	3 (2%)	48	66
17	UZ	186/329 (56%)	184 (99%)	2 (1%)	65	74
18	CA	175/228 (77%)	172 (98%)	3 (2%)	53	67
18	CB	195/228 (86%)	193 (99%)	2 (1%)	68	76
19	CC	287/435 (66%)	287 (100%)	0	100	100
20	CD	319/489 (65%)	317 (99%)	2 (1%)	78	80
21	CE	91/108 (84%)	91 (100%)	0	100	100
21	CF	88/108 (82%)	88 (100%)	0	100	100
22	CG	331/525 (63%)	330 (100%)	1 (0%)	86	84
23	CH	303/320 (95%)	297 (98%)	6 (2%)	48	66
24	CI	661/1009 (66%)	655 (99%)	6 (1%)	70	76
25	CJ	147/169 (87%)	146 (99%)	1 (1%)	76	79
26	CK	245/266 (92%)	242 (99%)	3 (1%)	63	73
27	CL	181/642 (28%)	178 (98%)	3 (2%)	53	67
28	CM	364/383 (95%)	359 (99%)	5 (1%)	59	71
29	CN	202/223 (91%)	202 (100%)	0	100	100
29	CO	193/223 (86%)	193 (100%)	0	100	100
30	CP	164/287 (57%)	164 (100%)	0	100	100
31	CQ	145/215 (67%)	145 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
32	CR	654/916 (71%)	513 (78%)	141 (22%)	1	6
32	CS	654/916 (71%)	513 (78%)	141 (22%)	1	6
33	CT	108/167 (65%)	108 (100%)	0	100	100
34	Cb	199/221 (90%)	199 (100%)	0	100	100
35	Cc	149/178 (84%)	146 (98%)	3 (2%)	48	66
36	Cd	192/204 (94%)	191 (100%)	1 (0%)	81	81
37	Ce	137/177 (77%)	137 (100%)	0	100	100
38	Cf	139/164 (85%)	139 (100%)	0	100	100
39	Cg	122/162 (75%)	122 (100%)	0	100	100
40	Ch	41/130 (32%)	41 (100%)	0	100	100
41	Ci	74/117 (63%)	74 (100%)	0	100	100
42	Cj	92/115 (80%)	92 (100%)	0	100	100
43	Ck	126/143 (88%)	126 (100%)	0	100	100
44	Cm	103/113 (91%)	103 (100%)	0	100	100
45	Cn	70/116 (60%)	70 (100%)	0	100	100
46	Co	79/115 (69%)	79 (100%)	0	100	100
47	Cp	46/61 (75%)	45 (98%)	1 (2%)	45	64
48	CU	92/260 (35%)	92 (100%)	0	100	100
51	UV	908/989 (92%)	902 (99%)	6 (1%)	76	79
52	CV	129/276 (47%)	129 (100%)	0	100	100
53	CW	309/587 (53%)	308 (100%)	1 (0%)	86	84
54	UT	1724/2276 (76%)	1721 (100%)	3 (0%)	87	85
55	UH	301/788 (38%)	300 (100%)	1 (0%)	86	84
56	UE	105/346 (30%)	75 (71%)	30 (29%)	0	3
56	UI	105/346 (30%)	75 (71%)	30 (29%)	0	3
57	US	404/493 (82%)	403 (100%)	1 (0%)	87	85
58	Cl	71/135 (53%)	70 (99%)	1 (1%)	59	71
59	CX	225/411 (55%)	225 (100%)	0	100	100
60	CY	100/322 (31%)	100 (100%)	0	100	100
61	CZ	36/519 (7%)	34 (94%)	2 (6%)	19	41
62	UP	44/314 (14%)	44 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
63	Cz	235/1533 (15%)	233 (99%)	2 (1%)	70	76
All	All	19136/30385 (63%)	18712 (98%)	424 (2%)	45	64

All (424) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	UA	33	VAL
1	UA	150	HIS
1	UA	471	VAL
1	UA	493	ARG
4	UD	228	ASP
4	UD	346	ASP
4	UD	841	ILE
5	UF	278	ILE
6	UG	121	VAL
6	UG	303	VAL
7	UJ	21	ASN
7	UJ	25	LEU
8	UK	65	PHE
9	UL	71	THR
12	UO	253	ASN
12	UO	258	LEU
13	UQ	197	VAL
13	UQ	692	THR
14	UR	59	VAL
14	UR	491	ILE
15	UU	388	VAL
15	UU	394	LEU
15	UU	618	THR
16	UX	37	VAL
16	UX	58	VAL
16	UX	148	THR
17	UZ	170	THR
17	UZ	183	VAL
18	CA	111	VAL
18	CA	291	THR
18	CA	292	LEU
18	CB	130	TRP
18	CB	225	VAL
20	CD	58	VAL
20	CD	174	GLU
22	CG	345	VAL

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Mol	Chain	Res	Type
23	CH	73	THR
23	CH	208	LEU
23	CH	252	ILE
23	CH	273	THR
23	CH	304	VAL
23	CH	410	VAL
24	CI	169	ILE
24	CI	222	LEU
24	CI	236	VAL
24	CI	827	LEU
24	CI	845	LEU
24	CI	863	THR
25	CJ	130	LEU
26	CK	88	VAL
26	CK	92	THR
26	CK	280	VAL
27	CL	501	THR
27	CL	534	THR
27	CL	655	THR
28	CM	39	GLU
28	CM	93	VAL
28	CM	157	THR
28	CM	208	VAL
28	CM	320	VAL
32	CR	3	VAL
32	CR	8	ASP
32	CR	14	LEU
32	CR	19	LEU
32	CR	20	GLN
32	CR	22	LYS
32	CR	25	SER
32	CR	30	VAL
32	CR	32	ASP
32	CR	41	LEU
32	CR	45	MET
32	CR	49	ASP
32	CR	50	VAL
32	CR	51	ARG
32	CR	54	LYS
32	CR	55	SER
32	CR	62	LYS
32	CR	65	LEU

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Mol	Chain	Res	Type
32	CR	69	SER
32	CR	73	LYS
32	CR	75	GLU
32	CR	78	ILE
32	CR	79	LYS
32	CR	80	LYS
32	CR	83	LYS
32	CR	84	ARG
32	CR	87	ARG
32	CR	88	GLU
32	CR	107	CYS
32	CR	112	THR
32	CR	116	LEU
32	CR	119	THR
32	CR	129	GLU
32	CR	131	ILE
32	CR	132	THR
32	CR	140	ILE
32	CR	141	GLU
32	CR	142	THR
32	CR	148	LEU
32	CR	149	VAL
32	CR	159	LEU
32	CR	162	LEU
32	CR	167	MET
32	CR	195	SER
32	CR	198	SER
32	CR	209	LEU
32	CR	249	ILE
32	CR	252	LEU
32	CR	253	ILE
32	CR	266	LEU
32	CR	270	ASP
32	CR	277	LEU
32	CR	280	THR
32	CR	282	THR
32	CR	284	THR
32	CR	292	SER
32	CR	295	MET
32	CR	297	VAL
32	CR	299	ILE
32	CR	313	THR

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Mol	Chain	Res	Type
32	CR	314	SER
32	CR	316	SER
32	CR	372	ILE
32	CR	387	VAL
32	CR	402	LEU
32	CR	408	VAL
32	CR	412	SER
32	CR	424	LEU
32	CR	426	LEU
32	CR	429	ILE
32	CR	432	LEU
32	CR	470	LYS
32	CR	471	GLU
32	CR	475	SER
32	CR	488	LYS
32	CR	492	THR
32	CR	494	LEU
32	CR	510	CYS
32	CR	512	ASP
32	CR	521	VAL
32	CR	528	SER
32	CR	532	VAL
32	CR	534	GLU
32	CR	535	LYS
32	CR	536	PHE
32	CR	537	LEU
32	CR	539	GLN
32	CR	540	MET
32	CR	545	VAL
32	CR	547	SER
32	CR	552	SER
32	CR	555	ASP
32	CR	557	GLN
32	CR	560	SER
32	CR	567	LEU
32	CR	571	THR
32	CR	576	GLU
32	CR	581	GLU
32	CR	586	ILE
32	CR	589	SER
32	CR	590	LEU
32	CR	612	ASP

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Mol	Chain	Res	Type
32	CR	617	LEU
32	CR	619	SER
32	CR	625	ASP
32	CR	631	SER
32	CR	638	ILE
32	CR	640	THR
32	CR	643	ASP
32	CR	645	MET
32	CR	647	MET
32	CR	651	SER
32	CR	657	LEU
32	CR	658	VAL
32	CR	708	LEU
32	CR	710	SER
32	CR	713	SER
32	CR	733	LEU
32	CR	745	VAL
32	CR	748	ARG
32	CR	750	THR
32	CR	773	SER
32	CR	784	LYS
32	CR	789	LEU
32	CR	796	GLU
32	CR	800	ILE
32	CR	853	VAL
32	CR	854	VAL
32	CR	855	LEU
32	CR	860	THR
32	CR	867	THR
32	CR	870	LEU
32	CR	879	LEU
32	CR	884	LEU
32	CR	887	LEU
32	CR	892	LYS
32	CR	894	ILE
32	CR	897	LEU
32	CR	901	LEU
32	CR	902	ASN
32	CR	909	LEU
32	CS	3	VAL
32	CS	8	ASP
32	CS	14	LEU

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Mol	Chain	Res	Type
32	CS	19	LEU
32	CS	20	GLN
32	CS	22	LYS
32	CS	25	SER
32	CS	30	VAL
32	CS	32	ASP
32	CS	41	LEU
32	CS	45	MET
32	CS	49	ASP
32	CS	50	VAL
32	CS	51	ARG
32	CS	54	LYS
32	CS	55	SER
32	CS	62	LYS
32	CS	65	LEU
32	CS	69	SER
32	CS	73	LYS
32	CS	75	GLU
32	CS	78	ILE
32	CS	79	LYS
32	CS	80	LYS
32	CS	83	LYS
32	CS	84	ARG
32	CS	87	ARG
32	CS	88	GLU
32	CS	107	CYS
32	CS	112	THR
32	CS	116	LEU
32	CS	119	THR
32	CS	129	GLU
32	CS	131	ILE
32	CS	132	THR
32	CS	140	ILE
32	CS	141	GLU
32	CS	142	THR
32	CS	148	LEU
32	CS	149	VAL
32	CS	159	LEU
32	CS	162	LEU
32	CS	167	MET
32	CS	195	SER
32	CS	198	SER

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Mol	Chain	Res	Type
32	CS	209	LEU
32	CS	249	ILE
32	CS	252	LEU
32	CS	253	ILE
32	CS	266	LEU
32	CS	270	ASP
32	CS	277	LEU
32	CS	280	THR
32	CS	282	THR
32	CS	284	THR
32	CS	292	SER
32	CS	295	MET
32	CS	297	VAL
32	CS	299	ILE
32	CS	313	THR
32	CS	314	SER
32	CS	316	SER
32	CS	372	ILE
32	CS	387	VAL
32	CS	402	LEU
32	CS	408	VAL
32	CS	412	SER
32	CS	424	LEU
32	CS	426	LEU
32	CS	429	ILE
32	CS	432	LEU
32	CS	470	LYS
32	CS	471	GLU
32	CS	475	SER
32	CS	488	LYS
32	CS	492	THR
32	CS	494	LEU
32	CS	510	CYS
32	CS	512	ASP
32	CS	521	VAL
32	CS	528	SER
32	CS	532	VAL
32	CS	534	GLU
32	CS	535	LYS
32	CS	536	PHE
32	CS	537	LEU
32	CS	539	GLN

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Mol	Chain	Res	Type
32	CS	540	MET
32	CS	545	VAL
32	CS	547	SER
32	CS	552	SER
32	CS	555	ASP
32	CS	557	GLN
32	CS	560	SER
32	CS	567	LEU
32	CS	571	THR
32	CS	576	GLU
32	CS	581	GLU
32	CS	586	ILE
32	CS	589	SER
32	CS	590	LEU
32	CS	612	ASP
32	CS	617	LEU
32	CS	619	SER
32	CS	625	ASP
32	CS	631	SER
32	CS	638	ILE
32	CS	640	THR
32	CS	643	ASP
32	CS	645	MET
32	CS	647	MET
32	CS	651	SER
32	CS	657	LEU
32	CS	658	VAL
32	CS	708	LEU
32	CS	710	SER
32	CS	713	SER
32	CS	733	LEU
32	CS	745	VAL
32	CS	748	ARG
32	CS	750	THR
32	CS	773	SER
32	CS	784	LYS
32	CS	789	LEU
32	CS	796	GLU
32	CS	800	ILE
32	CS	853	VAL
32	CS	854	VAL
32	CS	855	LEU

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Mol	Chain	Res	Type
32	CS	860	THR
32	CS	867	THR
32	CS	870	LEU
32	CS	879	LEU
32	CS	884	LEU
32	CS	887	LEU
32	CS	892	LYS
32	CS	894	ILE
32	CS	897	LEU
32	CS	901	LEU
32	CS	902	ASN
32	CS	909	LEU
35	Cc	15	VAL
35	Cc	57	ILE
35	Cc	66	VAL
36	Cd	111	LEU
47	Cp	56	VAL
51	UV	43	GLU
51	UV	335	GLN
51	UV	613	VAL
51	UV	668	VAL
51	UV	737	ILE
51	UV	941	THR
53	CW	337	THR
54	UT	1202	VAL
54	UT	1472	THR
54	UT	1857	LEU
55	UH	784	ILE
56	UE	157	LEU
56	UE	163	THR
56	UE	170	GLU
56	UE	180	ILE
56	UE	187	ARG
56	UE	191	SER
56	UE	196	LEU
56	UE	199	LYS
56	UE	206	ARG
56	UE	210	ARG
56	UE	214	LEU
56	UE	218	ILE
56	UE	219	GLN
56	UE	222	LEU

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Mol	Chain	Res	Type
56	UE	230	VAL
56	UE	231	THR
56	UE	239	LEU
56	UE	241	GLU
56	UE	247	GLU
56	UE	254	SER
56	UE	255	SER
56	UE	259	LEU
56	UE	262	LYS
56	UE	263	LEU
56	UE	264	ASP
56	UE	265	MET
56	UE	266	LEU
56	UE	270	LEU
56	UE	271	LYS
56	UE	278	MET
57	US	460	ILE
58	CI	45	LEU
61	CZ	548	VAL
61	CZ	575	THR
56	UI	157	LEU
56	UI	163	THR
56	UI	170	GLU
56	UI	180	ILE
56	UI	187	ARG
56	UI	191	SER
56	UI	196	LEU
56	UI	199	LYS
56	UI	206	ARG
56	UI	210	ARG
56	UI	214	LEU
56	UI	218	ILE
56	UI	219	GLN
56	UI	222	LEU
56	UI	230	VAL
56	UI	231	THR
56	UI	239	LEU
56	UI	241	GLU
56	UI	247	GLU
56	UI	254	SER
56	UI	255	SER
56	UI	259	LEU

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Mol	Chain	Res	Type
56	UI	262	LYS
56	UI	263	LEU
56	UI	264	ASP
56	UI	265	MET
56	UI	266	LEU
56	UI	270	LEU
56	UI	271	LYS
56	UI	278	MET
63	Cz	1664	LEU
63	Cz	1722	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (344) such sidechains are listed below:

Mol	Chain	Res	Type
1	UA	19	ASN
1	UA	68	ASN
1	UA	83	ASN
1	UA	207	GLN
1	UA	328	GLN
1	UA	344	ASN
1	UA	353	GLN
1	UA	451	HIS
1	UA	456	GLN
1	UA	508	GLN
1	UA	846	ASN
2	UB	5	GLN
2	UB	525	ASN
2	UB	542	GLN
2	UB	606	HIS
2	UB	683	HIS
2	UB	765	ASN
4	UD	60	ASN
4	UD	176	GLN
4	UD	195	GLN
4	UD	268	GLN
4	UD	277	GLN
4	UD	324	HIS
4	UD	473	ASN
4	UD	527	HIS
4	UD	536	HIS
4	UD	673	ASN
4	UD	697	GLN

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Mol	Chain	Res	Type
4	UD	755	GLN
4	UD	828	HIS
5	UF	79	ASN
5	UF	103	HIS
5	UF	154	ASN
6	UG	95	ASN
6	UG	159	HIS
6	UG	216	HIS
6	UG	239	GLN
6	UG	243	GLN
6	UG	320	GLN
6	UG	331	ASN
6	UG	378	GLN
6	UG	412	ASN
6	UG	427	ASN
7	UJ	8	GLN
7	UJ	11	GLN
7	UJ	15	ASN
7	UJ	250	GLN
7	UJ	317	GLN
7	UJ	318	HIS
7	UJ	515	ASN
7	UJ	731	ASN
7	UJ	785	ASN
7	UJ	842	ASN
7	UJ	1482	HIS
7	UJ	1645	ASN
7	UJ	1732	ASN
7	UJ	1746	GLN
8	UK	9	GLN
8	UK	173	GLN
8	UK	213	GLN
9	UL	21	ASN
9	UL	151	HIS
9	UL	207	HIS
9	UL	215	GLN
9	UL	296	HIS
9	UL	360	HIS
9	UL	453	ASN
9	UL	506	HIS
9	UL	630	ASN
9	UL	688	GLN

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Mol	Chain	Res	Type
9	UL	716	HIS
9	UL	832	ASN
9	UL	888	GLN
10	UM	236	GLN
10	UM	338	GLN
10	UM	394	ASN
10	UM	628	ASN
10	UM	644	ASN
10	UM	706	ASN
10	UM	733	GLN
10	UM	741	GLN
10	UM	743	GLN
10	UM	747	ASN
10	UM	765	ASN
10	UM	857	ASN
11	UN	332	HIS
11	UN	333	ASN
11	UN	362	GLN
12	UO	124	GLN
12	UO	306	ASN
12	UO	339	GLN
12	UO	393	ASN
12	UO	531	ASN
13	UQ	262	HIS
13	UQ	328	ASN
13	UQ	473	GLN
13	UQ	631	ASN
13	UQ	783	ASN
13	UQ	924	GLN
14	UR	177	GLN
14	UR	493	ASN
14	UR	498	ASN
14	UR	560	GLN
15	UU	62	GLN
15	UU	89	GLN
15	UU	197	ASN
15	UU	236	GLN
15	UU	314	ASN
15	UU	577	GLN
15	UU	677	ASN
15	UU	727	GLN
15	UU	943	HIS

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Mol	Chain	Res	Type
15	UU	963	ASN
15	UU	1023	GLN
16	UX	57	ASN
16	UX	63	ASN
17	UZ	90	ASN
17	UZ	110	ASN
17	UZ	240	ASN
18	CB	187	HIS
18	CB	195	ASN
18	CB	232	GLN
18	CB	235	GLN
18	CB	277	GLN
18	CB	289	GLN
19	CC	173	ASN
19	CC	305	ASN
19	CC	384	ASN
19	CC	413	GLN
20	CD	97	ASN
20	CD	106	ASN
20	CD	125	HIS
20	CD	180	ASN
20	CD	219	ASN
20	CD	404	ASN
20	CD	422	ASN
21	CE	112	ASN
21	CF	46	ASN
21	CF	67	HIS
22	CG	169	ASN
22	CG	198	GLN
22	CG	243	GLN
22	CG	330	GLN
22	CG	430	HIS
23	CH	90	ASN
23	CH	127	HIS
23	CH	233	ASN
23	CH	244	ASN
23	CH	316	GLN
23	CH	323	GLN
24	CI	55	HIS
24	CI	165	ASN
24	CI	388	GLN
24	CI	823	HIS

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Mol	Chain	Res	Type
24	CI	888	GLN
24	CI	930	ASN
24	CI	1002	ASN
24	CI	1030	ASN
25	CJ	39	GLN
25	CJ	59	HIS
25	CJ	135	HIS
26	CK	5	GLN
26	CK	8	GLN
26	CK	48	ASN
26	CK	121	ASN
26	CK	132	GLN
26	CK	159	HIS
26	CK	169	ASN
26	CK	242	HIS
27	CL	476	HIS
27	CL	525	HIS
28	CM	65	HIS
28	CM	77	ASN
28	CM	151	GLN
28	CM	206	ASN
28	CM	262	HIS
28	CM	279	GLN
28	CM	282	HIS
28	CM	322	HIS
28	CM	376	ASN
29	CN	73	HIS
29	CN	81	ASN
29	CN	111	GLN
29	CO	94	GLN
29	CO	105	ASN
29	CO	164	GLN
30	CP	159	GLN
30	CP	167	ASN
30	CP	190	ASN
31	CQ	167	GLN
31	CQ	203	ASN
31	CQ	247	ASN
32	CR	4	GLN
32	CR	102	ASN
32	CR	126	GLN
32	CR	279	ASN

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Mol	Chain	Res	Type
32	CR	485	ASN
32	CR	587	GLN
32	CR	655	GLN
32	CR	749	GLN
32	CR	770	ASN
32	CR	880	GLN
32	CR	881	GLN
32	CS	102	ASN
32	CS	126	GLN
32	CS	279	ASN
32	CS	431	GLN
32	CS	485	ASN
32	CS	587	GLN
32	CS	655	GLN
32	CS	749	GLN
32	CS	770	ASN
32	CS	880	GLN
32	CS	881	GLN
34	Cb	57	ASN
34	Cb	67	GLN
34	Cb	197	HIS
35	Cc	31	ASN
35	Cc	82	ASN
35	Cc	109	HIS
35	Cc	115	ASN
35	Cc	211	ASN
36	Cd	129	HIS
36	Cd	179	GLN
37	Ce	36	ASN
37	Ce	80	GLN
38	Cf	52	ASN
38	Cf	94	ASN
39	Cg	121	HIS
39	Cg	140	ASN
41	Ci	93	HIS
42	Cj	32	ASN
42	Cj	77	GLN
42	Cj	107	GLN
43	Ck	111	ASN
43	Ck	115	HIS
43	Ck	143	ASN
44	Cm	8	HIS

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Mol	Chain	Res	Type
44	Cm	42	GLN
44	Cm	64	GLN
44	Cm	66	ASN
44	Cm	113	HIS
45	Cn	48	HIS
45	Cn	79	ASN
46	Co	353	GLN
46	Co	385	GLN
48	CU	211	GLN
48	CU	223	GLN
51	UV	77	HIS
51	UV	106	GLN
51	UV	107	ASN
51	UV	135	GLN
51	UV	260	GLN
51	UV	298	ASN
51	UV	309	GLN
51	UV	355	GLN
51	UV	368	ASN
51	UV	432	GLN
51	UV	494	ASN
51	UV	526	GLN
51	UV	542	ASN
51	UV	615	GLN
51	UV	642	ASN
51	UV	809	HIS
51	UV	813	HIS
51	UV	974	GLN
51	UV	1019	ASN
52	CV	31	HIS
52	CV	64	HIS
53	CW	80	HIS
53	CW	83	ASN
53	CW	177	GLN
53	CW	212	ASN
53	CW	243	GLN
53	CW	374	ASN
54	UT	24	ASN
54	UT	25	HIS
54	UT	87	ASN
54	UT	311	HIS
54	UT	335	GLN

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Mol	Chain	Res	Type
54	UT	365	ASN
54	UT	377	GLN
54	UT	389	HIS
54	UT	462	ASN
54	UT	495	GLN
54	UT	575	ASN
54	UT	768	ASN
54	UT	780	GLN
54	UT	798	ASN
54	UT	803	ASN
54	UT	909	GLN
54	UT	1026	GLN
54	UT	1126	ASN
54	UT	1233	ASN
54	UT	1239	GLN
54	UT	1272	HIS
54	UT	1314	ASN
54	UT	1315	GLN
54	UT	1345	GLN
54	UT	1416	ASN
54	UT	1436	HIS
54	UT	1437	ASN
54	UT	1443	GLN
54	UT	1454	ASN
54	UT	1599	GLN
54	UT	1602	ASN
54	UT	1688	ASN
54	UT	1696	ASN
54	UT	1726	GLN
54	UT	1795	HIS
54	UT	1909	GLN
54	UT	1985	ASN
54	UT	2047	GLN
54	UT	2097	ASN
54	UT	2126	ASN
54	UT	2141	GLN
55	UH	489	ASN
55	UH	590	ASN
55	UH	898	HIS
56	UE	186	ASN
56	UE	205	HIS
56	UE	237	ASN

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Mol	Chain	Res	Type
57	US	151	GLN
57	US	152	HIS
57	US	184	HIS
57	US	225	ASN
57	US	264	GLN
57	US	312	ASN
57	US	391	ASN
57	US	468	HIS
58	Cl	21	ASN
58	Cl	26	GLN
58	Cl	74	GLN
59	CX	290	ASN
59	CX	322	GLN
59	CX	352	GLN
59	CX	364	ASN
59	CX	423	ASN
56	UI	186	ASN
56	UI	237	ASN
62	UP	325	ASN
62	UP	341	ASN
63	Cz	1530	GLN
63	Cz	1556	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
49	C1	1461/2323 (62%)	560 (38%)	35 (2%)
50	C2	226/230 (98%)	86 (38%)	6 (2%)
All	All	1687/2553 (66%)	646 (38%)	41 (2%)

All (646) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
49	C1	4	G
49	C1	5	G
49	C1	7	A
49	C1	13	G
49	C1	14	G
49	C1	15	G
49	C1	16	U
49	C1	17	C

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Mol	Chain	Res	Type
49	C1	18	G
49	C1	19	C
49	C1	23	G
49	C1	26	C
49	C1	38	G
49	C1	40	A
49	C1	41	G
49	C1	42	C
49	C1	43	C
49	C1	47	G
49	C1	49	G
49	C1	56	C
49	C1	59	U
49	C1	60	A
49	C1	61	G
49	C1	62	U
49	C1	63	C
49	C1	66	G
49	C1	68	U
49	C1	71	A
49	C1	72	U
49	C1	73	A
49	C1	74	C
49	C1	75	G
49	C1	77	C
49	C1	84	A
49	C1	88	C
49	C1	89	G
49	C1	90	A
49	C1	93	G
49	C1	96	C
49	C1	104	U
49	C1	105	A
49	C1	121	G
49	C1	126	C
49	C1	127	C
49	C1	128	G
49	C1	134	C
49	C1	135	A
49	C1	136	C
49	C1	139	C
49	C1	143	A

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Mol	Chain	Res	Type
49	C1	152	G
49	C1	154	C
49	C1	155	G
49	C1	158	C
49	C1	159	C
49	C1	160	C
49	C1	161	A
49	C1	162	G
49	C1	166	A
49	C1	169	G
49	C1	180	G
49	C1	182	C
49	C1	183	C
49	C1	188	C
49	C1	192	A
49	C1	193	U
49	C1	198	G
49	C1	201	G
49	C1	202	A
49	C1	203	C
49	C1	204	U
49	C1	205	C
49	C1	206	C
49	C1	207	U
49	C1	208	A
49	C1	209	A
49	C1	210	G
49	C1	211	G
49	C1	212	C
49	C1	219	G
49	C1	220	A
49	C1	222	U
49	C1	223	A
49	C1	224	C
49	C1	228	G
49	C1	234	G
49	C1	236	C
49	C1	241	G
49	C1	242	U
49	C1	243	U
49	C1	244	G
49	C1	256	U

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Mol	Chain	Res	Type
49	C1	257	G
49	C1	258	C
49	C1	260	U
49	C1	265	G
49	C1	266	C
49	C1	268	G
49	C1	269	G
49	C1	271	C
49	C1	273	G
49	C1	276	C
49	C1	277	U
49	C1	278	A
49	C1	282	C
49	C1	283	A
49	C1	285	A
49	C1	286	G
49	C1	289	A
49	C1	290	C
49	C1	291	C
49	C1	292	G
49	C1	297	U
49	C1	298	A
49	C1	309	G
49	C1	334	U
49	C1	339	C
49	C1	340	G
49	C1	346	C
49	C1	347	C
49	C1	349	C
49	C1	351	U
49	C1	352	G
49	C1	353	G
49	C1	362	G
49	C1	368	G
49	C1	378	C
49	C1	382	U
49	C1	383	G
49	C1	384	C
49	C1	386	G
49	C1	397	U
49	C1	402	U
49	C1	403	G

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Mol	Chain	Res	Type
49	C1	406	G
49	C1	408	C
49	C1	409	A
49	C1	410	G
49	C1	411	C
49	C1	416	U
49	C1	417	G
49	C1	419	G
49	C1	425	C
49	C1	427	G
49	C1	433	G
49	C1	435	A
49	C1	436	A
49	C1	438	C
49	C1	440	G
49	C1	441	A
49	C1	442	U
49	C1	443	G
49	C1	453	G
49	C1	454	C
49	C1	458	A
49	C1	459	C
49	C1	467	C
49	C1	468	C
49	C1	469	G
49	C1	471	C
49	C1	473	G
49	C1	474	A
49	C1	475	C
49	C1	483	U
49	C1	484	G
49	C1	491	G
49	C1	492	C
49	C1	494	G
49	C1	499	G
49	C1	500	C
49	C1	501	U
49	C1	502	A
49	C1	504	C
49	C1	581	C
49	C1	582	G
49	C1	583	A

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Mol	Chain	Res	Type
49	C1	584	U
49	C1	585	A
49	C1	586	G
49	C1	587	U
49	C1	591	C
49	C1	594	G
49	C1	602	U
49	C1	604	C
49	C1	609	A
49	C1	610	G
49	C1	612	C
49	C1	613	A
49	C1	614	U
49	C1	618	C
49	C1	621	G
49	C1	627	A
49	C1	628	A
49	C1	636	C
49	C1	646	C
49	C1	650	G
49	C1	652	A
49	C1	653	U
49	C1	655	A
49	C1	656	G
49	C1	659	A
49	C1	660	U
49	C1	664	A
49	C1	666	A
49	C1	667	G
49	C1	678	A
49	C1	679	A
49	C1	680	U
49	C1	682	G
49	C1	683	C
49	C1	685	C
49	C1	686	A
49	C1	687	U
49	C1	688	U
49	C1	689	A
49	C1	690	A
49	C1	692	U
49	C1	693	C

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Mol	Chain	Res	Type
49	C1	697	U
49	C1	700	C
49	C1	702	U
49	C1	703	U
49	C1	710	A
49	C1	711	U
49	C1	713	G
49	C1	714	U
49	C1	719	U
49	C1	720	A
49	C1	728	G
49	C1	729	A
49	C1	730	U
49	C1	735	G
49	C1	740	A
49	C1	741	A
49	C1	742	U
49	C1	743	U
49	C1	744	C
49	C1	745	U
49	C1	756	C
49	C1	758	U
49	C1	760	C
49	C1	764	A
49	C1	765	A
49	C1	767	U
49	C1	768	C
49	C1	769	C
49	C1	770	C
49	C1	771	G
49	C1	772	A
49	C1	774	U
49	C1	775	U
49	C1	776	C
49	C1	777	G
49	C1	778	G
49	C1	780	A
49	C1	782	G
49	C1	785	U
49	C1	786	G
49	C1	797	A
49	C1	816	C

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Mol	Chain	Res	Type
49	C1	828	G
49	C1	832	U
49	C1	833	U
49	C1	834	C
49	C1	841	A
49	C1	845	C
49	C1	849	A
49	C1	850	A
49	C1	851	U
49	C1	856	C
49	C1	858	G
49	C1	860	C
49	C1	861	U
49	C1	862	U
49	C1	863	G
49	C1	864	C
49	C1	865	G
49	C1	871	G
49	C1	880	U
49	C1	886	U
49	C1	888	U
49	C1	889	C
49	C1	892	C
49	C1	893	C
49	C1	897	U
49	C1	898	C
49	C1	900	A
49	C1	903	U
49	C1	905	C
49	C1	906	G
49	C1	907	A
49	C1	910	G
49	C1	913	G
49	C1	915	G
49	C1	916	U
49	C1	921	G
49	C1	925	G
49	C1	927	C
49	C1	930	G
49	C1	931	G
49	C1	934	A
49	C1	935	C

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Mol	Chain	Res	Type
49	C1	936	A
49	C1	941	G
49	C1	942	U
49	C1	943	A
49	C1	944	A
49	C1	953	U
49	C1	958	C
49	C1	971	A
49	C1	972	A
49	C1	974	G
49	C1	983	A
49	C1	984	A
49	C1	985	A
49	C1	986	C
49	C1	988	G
49	C1	989	C
49	C1	990	U
49	C1	995	C
49	C1	1000	A
49	C1	1001	A
49	C1	1002	G
49	C1	1005	A
49	C1	1007	G
49	C1	1015	C
49	C1	1017	C
49	C1	1019	C
49	C1	1020	A
49	C1	1021	A
49	C1	1022	A
49	C1	1023	U
49	C1	1024	U
49	C1	1025	A
49	C1	1027	C
49	C1	1028	C
49	C1	1029	A
49	C1	1030	A
49	C1	1035	G
49	C1	1036	A
49	C1	1037	C
49	C1	1038	A
49	C1	1039	C
49	C1	1043	G

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Mol	Chain	Res	Type
49	C1	1044	A
49	C1	1052	A
49	C1	1053	C
49	C1	1054	A
49	C1	1057	A
49	C1	1058	A
49	C1	1059	A
49	C1	1061	A
49	C1	1069	A
49	C1	1076	U
49	C1	1077	U
49	C1	1078	U
49	C1	1079	C
49	C1	1080	G
49	C1	1083	U
49	C1	1085	U
49	C1	1086	U
49	C1	1087	G
49	C1	1088	U
49	C1	1089	A
49	C1	1093	G
49	C1	1094	G
49	C1	1095	A
49	C1	1097	U
49	C1	1098	G
49	C1	1099	A
49	C1	1103	C
49	C1	1104	A
49	C1	1105	A
49	C1	1111	A
49	C1	1116	U
49	C1	1120	C
49	C1	1123	G
49	C1	1124	G
49	C1	1125	A
49	C1	1126	A
49	C1	1127	C
49	C1	1128	A
49	C1	1129	A
49	C1	1134	A
49	C1	1141	G
49	C1	1145	G

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Mol	Chain	Res	Type
49	C1	1147	U
49	C1	1148	G
49	C1	1149	C
49	C1	1150	C
49	C1	1154	A
49	C1	1156	C
49	C1	1157	C
49	C1	1158	G
49	C1	1159	C
49	C1	1163	A
49	C1	1164	A
49	C1	1166	U
49	C1	1167	C
49	C1	1168	C
49	C1	1169	A
49	C1	1171	C
49	C1	1177	U
49	C1	1178	A
49	C1	1179	G
49	C1	1181	G
49	C1	1186	U
49	C1	1218	G
49	C1	1219	A
49	C1	1222	C
49	C1	1223	U
49	C1	1444	A
49	C1	1447	A
49	C1	1448	A
49	C1	1449	U
49	C1	1450	A
49	C1	1451	G
49	C1	1452	G
49	C1	1458	U
49	C1	1461	G
49	C1	1471	U
49	C1	1479	U
49	C1	1480	G
49	C1	1481	U
49	C1	1483	A
49	C1	1484	G
49	C1	1486	G
49	C1	1489	G

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Mol	Chain	Res	Type
49	C1	1491	A
49	C1	1497	U
49	C1	1498	G
49	C1	1499	G
49	C1	1507	G
49	C1	1517	A
49	C1	1518	A
49	C1	1519	C
49	C1	1520	U
49	C1	1525	A
49	C1	1527	G
49	C1	1529	A
49	C1	1536	A
49	C1	1544	U
49	C1	1545	U
49	C1	1546	U
49	C1	1547	C
49	C1	1549	U
49	C1	1551	A
49	C1	1554	C
49	C1	1555	A
49	C1	1624	A
49	C1	1625	G
49	C1	1628	A
49	C1	1636	G
49	C1	1637	C
49	C1	1639	U
49	C1	1642	A
49	C1	1643	U
49	C1	1644	U
49	C1	1645	U
49	C1	1656	C
49	C1	1665	A
49	C1	1666	C
49	C1	1667	G
49	C1	1668	A
49	C1	1669	U
49	C1	1670	A
49	C1	1673	U
49	C1	1675	A
49	C1	1676	A
49	C1	1677	A

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Mol	Chain	Res	Type
49	C1	1678	A
49	C1	1698	G
49	C1	1699	U
49	C1	1700	A
49	C1	1709	A
49	C1	1710	G
49	C1	1711	G
49	C1	1712	C
49	C1	1713	U
49	C1	1716	A
49	C1	1730	G
49	C1	1733	G
49	C1	1734	G
49	C1	1735	A
49	C1	1741	A
49	C1	1742	C
49	C1	1743	C
49	C1	1744	A
49	C1	1751	G
49	C1	1761	C
49	C1	2054	A
49	C1	2055	C
49	C1	2056	U
49	C1	2057	G
49	C1	2059	C
49	C1	2061	G
49	C1	2068	C
49	C1	2069	G
49	C1	2070	A
49	C1	2071	G
49	C1	2072	U
49	C1	2073	A
49	C1	2074	C
49	C1	2075	U
49	C1	2077	C
49	C1	2078	C
49	C1	2085	G
49	C1	2086	A
49	C1	2087	G
49	C1	2088	A
49	C1	2107	A
49	C1	2109	A

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Mol	Chain	Res	Type
49	C1	2114	G
49	C1	2115	U
49	C1	2118	U
49	C1	2119	G
49	C1	2120	C
49	C1	2121	U
49	C1	2157	G
49	C1	2158	G
49	C1	2166	A
49	C1	2167	G
49	C1	2173	G
49	C1	2175	A
49	C1	2176	A
49	C1	2177	G
49	C1	2178	U
49	C1	2179	C
49	C1	2181	U
49	C1	2183	A
49	C1	2184	G
49	C1	2185	C
49	C1	2193	G
49	C1	2196	U
49	C1	2197	A
49	C1	2199	G
49	C1	2201	C
49	C1	2210	U
49	C1	2211	U
49	C1	2212	G
49	C1	2213	U
49	C1	2214	A
49	C1	2215	C
49	C1	2216	A
49	C1	2217	C
49	C1	2220	C
49	C1	2222	C
49	C1	2223	C
49	C1	2227	C
49	C1	2329	A
49	C1	2330	G
49	C1	2351	G
49	C1	2352	U
49	C1	2358	U

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Mol	Chain	Res	Type
49	C1	2362	U
49	C1	2363	G
49	C1	2364	A
49	C1	2365	A
49	C1	2366	C
49	C1	2374	G
50	C2	6	C
50	C2	8	A
50	C2	10	A
50	C2	11	C
50	C2	15	A
50	C2	22	C
50	C2	23	A
50	C2	24	U
50	C2	25	U
50	C2	26	U
50	C2	28	U
50	C2	29	A
50	C2	31	A
50	C2	32	G
50	C2	33	U
50	C2	34	A
50	C2	36	U
50	C2	39	U
50	C2	48	G
50	C2	57	A
50	C2	58	A
50	C2	62	A
50	C2	63	G
50	C2	67	C
50	C2	91	G
50	C2	92	A
50	C2	94	A
50	C2	95	U
50	C2	101	G
50	C2	104	C
50	C2	105	C
50	C2	111	G
50	C2	124	U
50	C2	125	U
50	C2	126	U
50	C2	127	A

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Mol	Chain	Res	Type
50	C2	128	C
50	C2	131	U
50	C2	132	C
50	C2	135	U
50	C2	136	C
50	C2	140	C
50	C2	142	G
50	C2	145	A
50	C2	147	G
50	C2	148	G
50	C2	153	G
50	C2	156	C
50	C2	160	U
50	C2	162	C
50	C2	163	C
50	C2	164	U
50	C2	165	C
50	C2	166	G
50	C2	167	U
50	C2	168	C
50	C2	170	C
50	C2	174	G
50	C2	177	G
50	C2	178	U
50	C2	179	A
50	C2	181	A
50	C2	182	G
50	C2	187	U
50	C2	189	G
50	C2	190	C
50	C2	192	A
50	C2	193	U
50	C2	194	G
50	C2	198	U
50	C2	199	G
50	C2	200	U
50	C2	201	A
50	C2	244	G
50	C2	246	G
50	C2	247	G
50	C2	249	U
50	C2	250	G

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Mol	Chain	Res	Type
50	C2	255	U
50	C2	256	G
50	C2	259	A
50	C2	260	G
50	C2	261	U
50	C2	262	C
50	C2	265	A
50	C2	266	C

All (41) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
49	C1	67	G
49	C1	89	G
49	C1	134	C
49	C1	135	A
49	C1	150	C
49	C1	200	A
49	C1	205	C
49	C1	209	A
49	C1	257	G
49	C1	277	U
49	C1	281	U
49	C1	290	C
49	C1	424	U
49	C1	582	G
49	C1	593	G
49	C1	684	U
49	C1	742	U
49	C1	771	G
49	C1	1001	A
49	C1	1058	A
49	C1	1068	C
49	C1	1077	U
49	C1	1085	U
49	C1	1087	G
49	C1	1163	A
49	C1	1176	A
49	C1	1485	A
49	C1	1712	C
49	C1	1734	G
49	C1	2054	A

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Mol	Chain	Res	Type
49	C1	2070	A
49	C1	2106	U
49	C1	2156	A
49	C1	2166	A
49	C1	2219	C
50	C2	23	A
50	C2	33	U
50	C2	35	G
50	C2	91	G
50	C2	255	U
50	C2	259	A

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 1 ligands modelled in this entry, 1 is monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

The following chains have linkage breaks:

Mol	Chain	Number of breaks
50	C2	3

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	C2	206:G	O3'	240:C	P	18.94
1	C2	105:C	O3'	110:A	P	15.09
1	C2	119:C	O3'	123:A	P	11.47

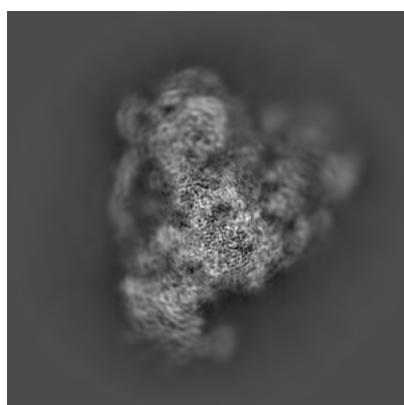
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-10056. These allow visual inspection of the internal detail of the map and identification of artifacts.

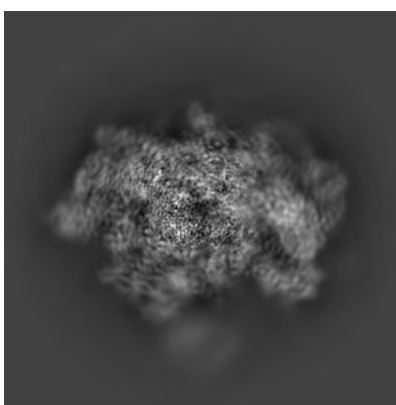
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

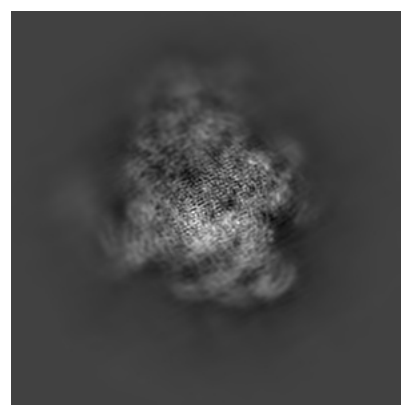
6.1.1 Primary map



X



Y

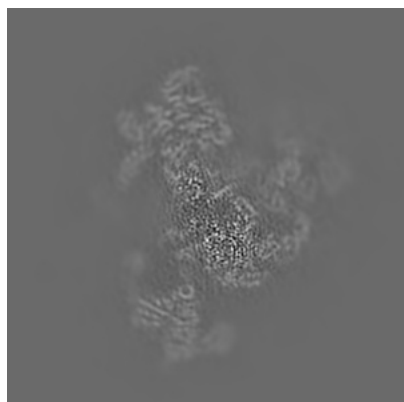


Z

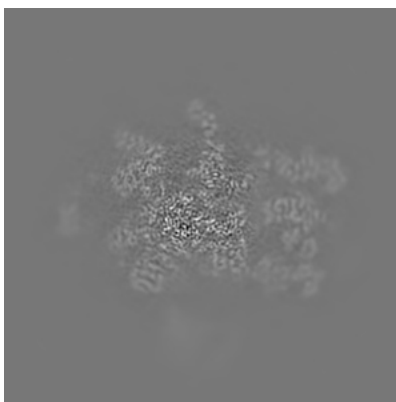
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

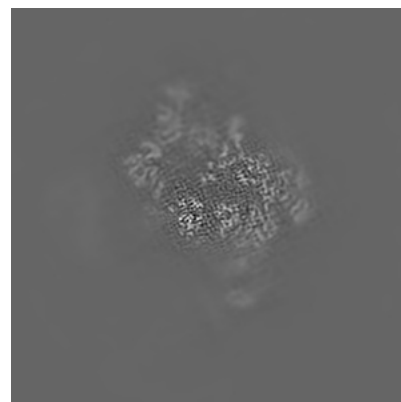
6.2.1 Primary map



X Index: 240



Y Index: 240

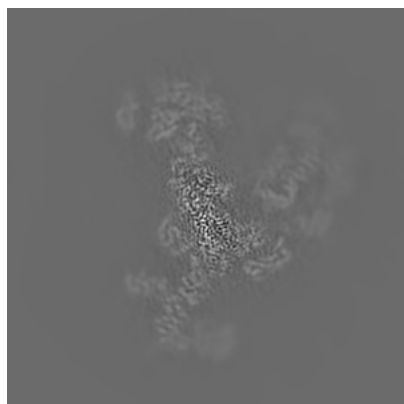


Z Index: 240

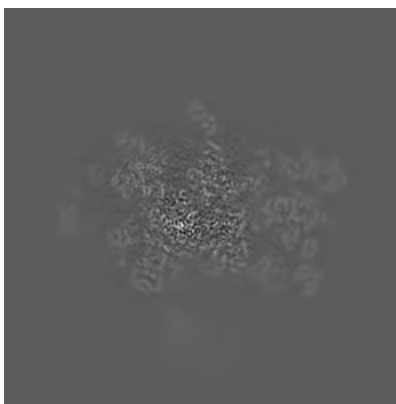
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

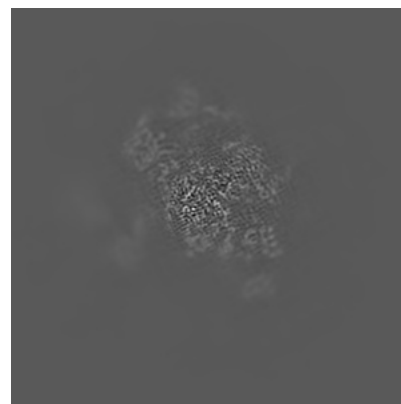
6.3.1 Primary map



X Index: 217



Y Index: 238

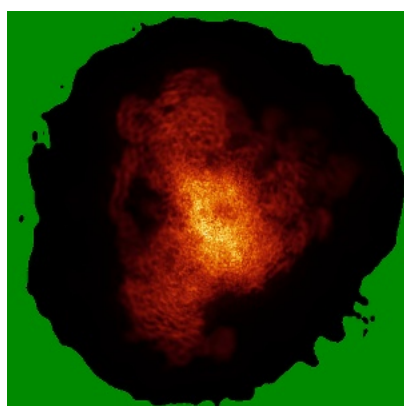


Z Index: 214

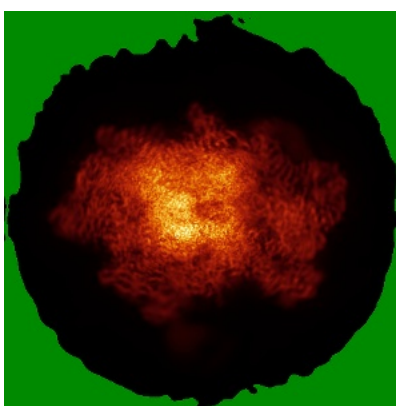
The images above show the largest variance slices of the map in three orthogonal directions.

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

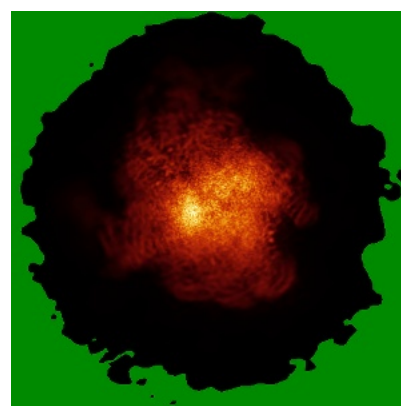
6.4.1 Primary map



X



Y



Z

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

6.5 Orthogonal surface views [i](#)

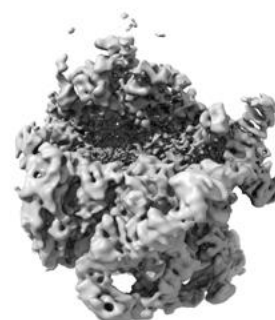
6.5.1 Primary map



X



Y



Z

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

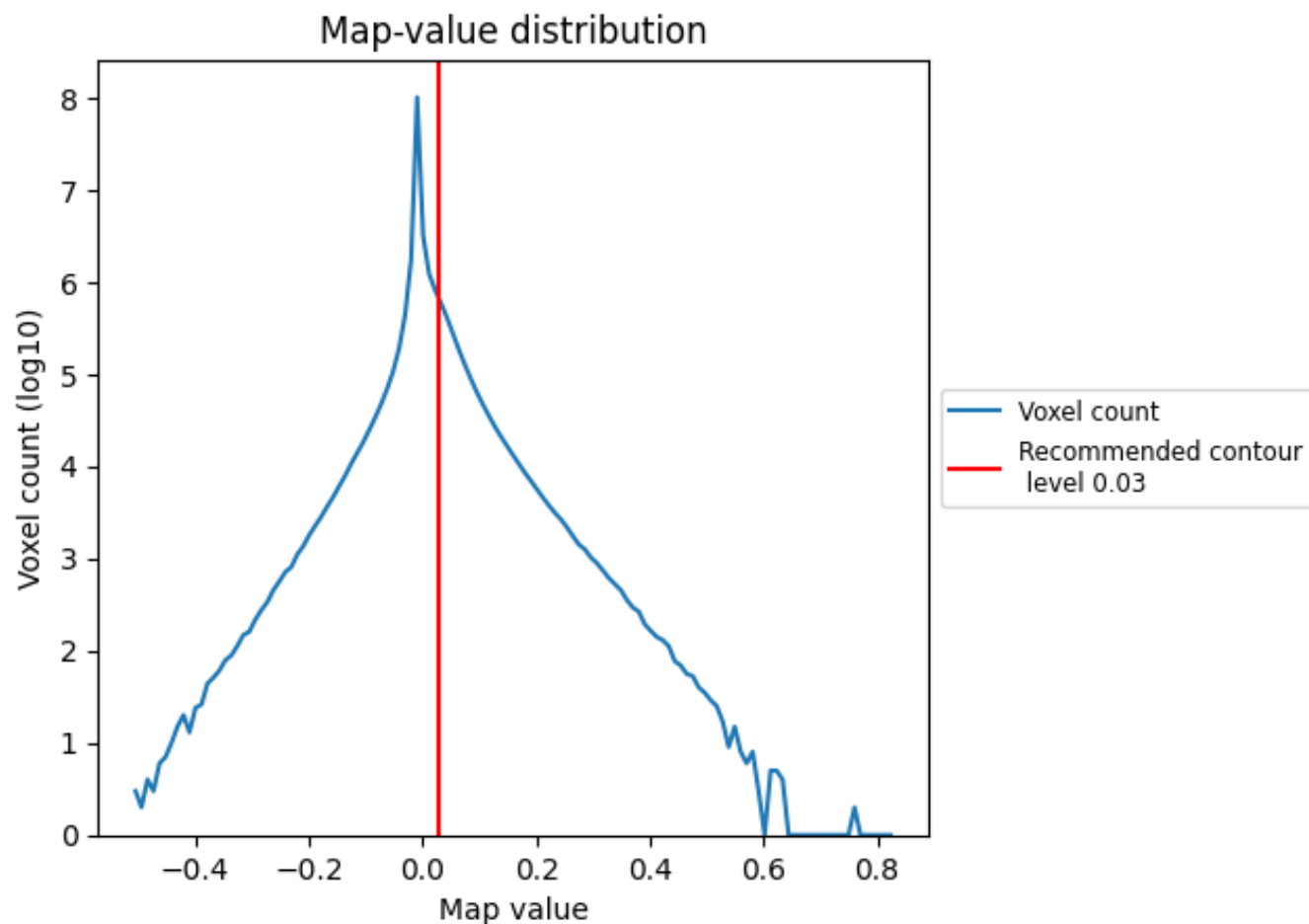
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

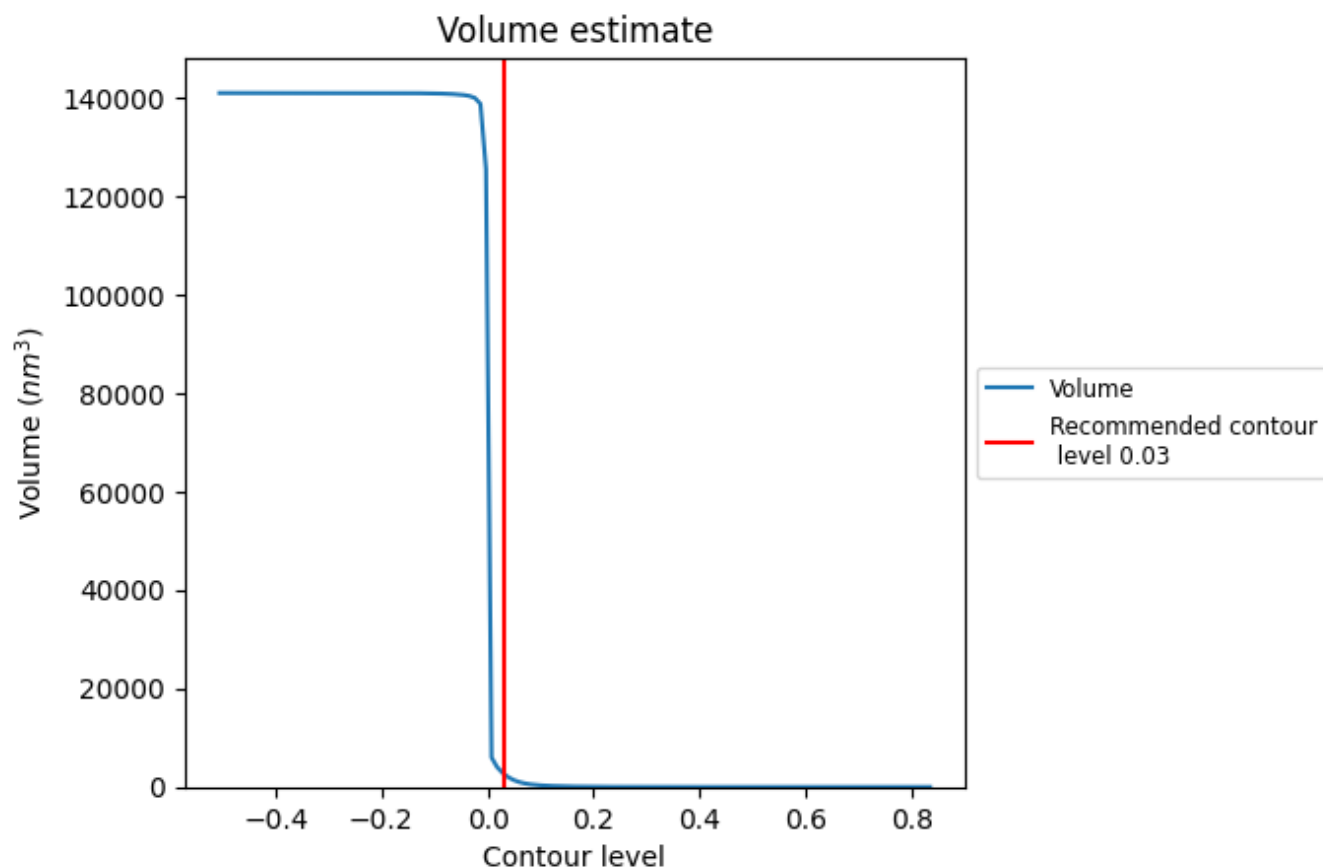
This section contains the results of statistical analysis of the map.

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.

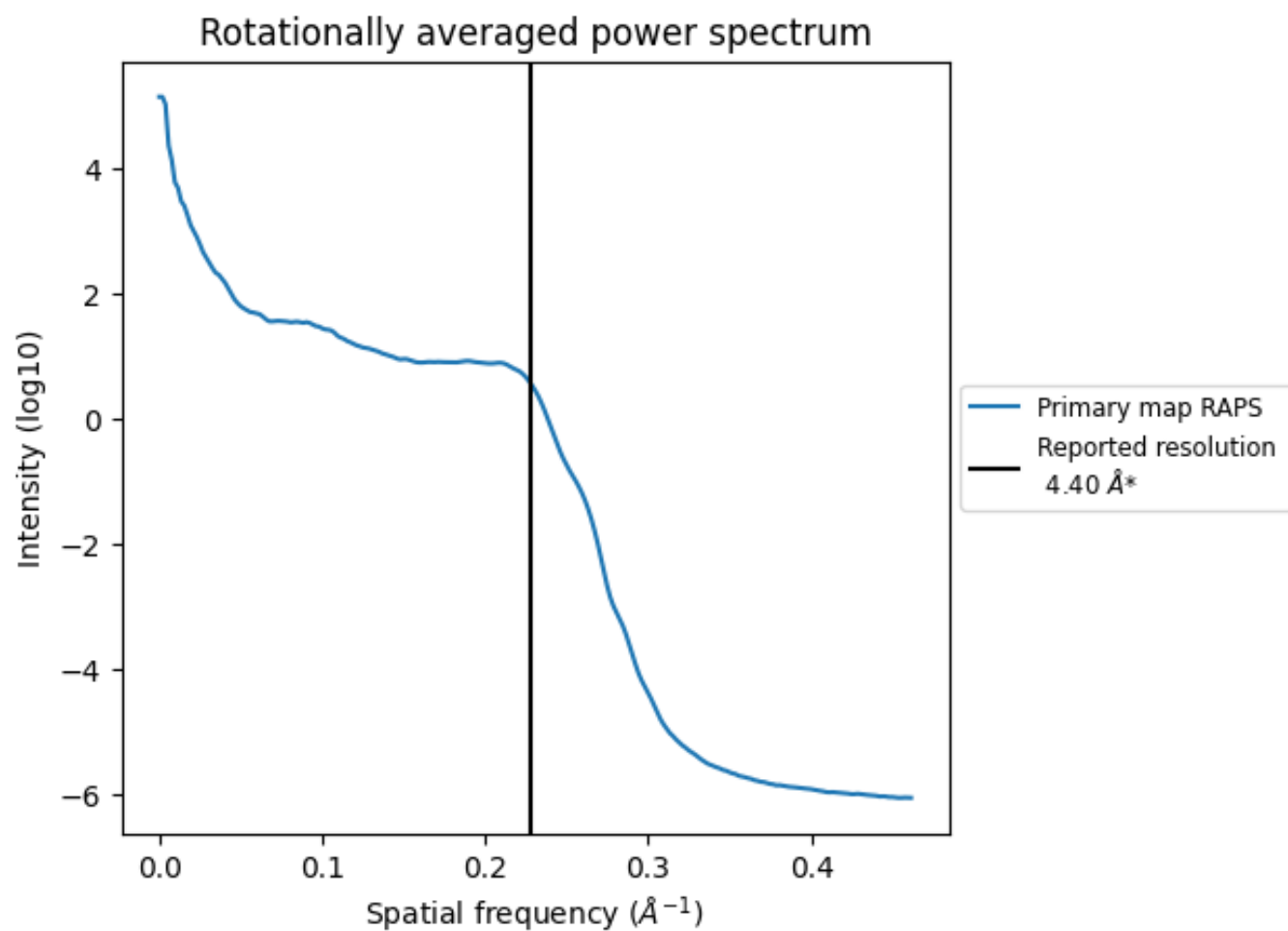
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 2721 nm^3 ; this corresponds to an approximate mass of 2458 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 ⓘ

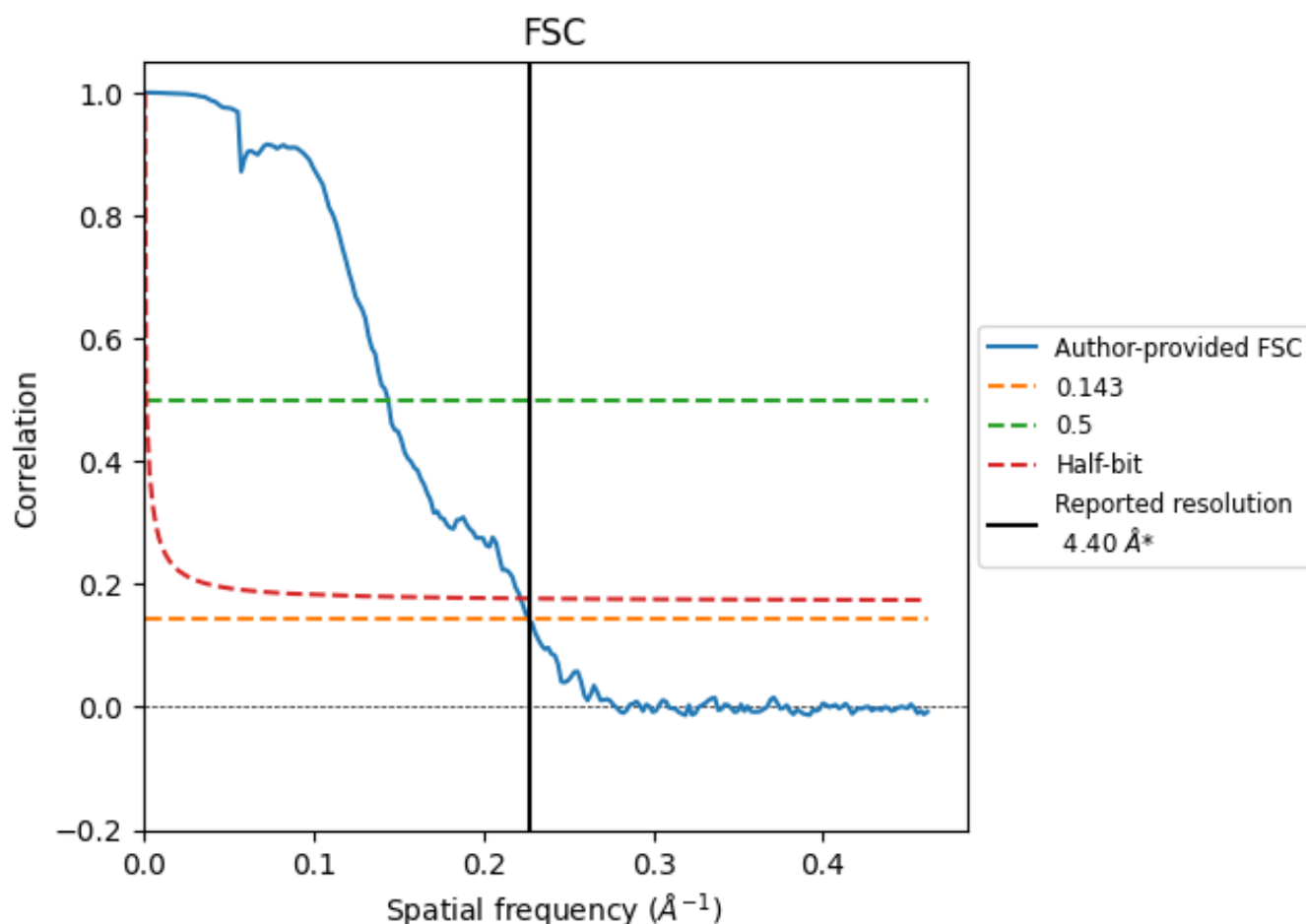


*Reported resolution corresponds to spatial frequency of 0.227 Å⁻¹

8 Fourier-Shell correlation [i](#)

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

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.227 Å⁻¹

8.2 Resolution estimates [i](#)

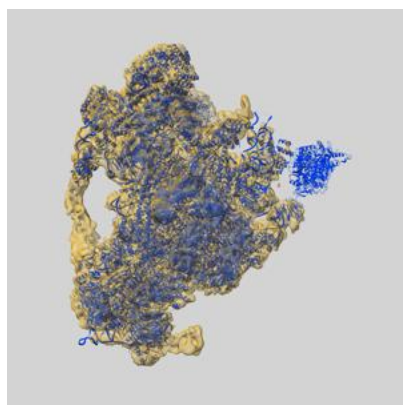
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.40	-	-
Author-provided FSC curve	4.42	6.93	4.50
Unmasked-calculated*	-	-	-

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

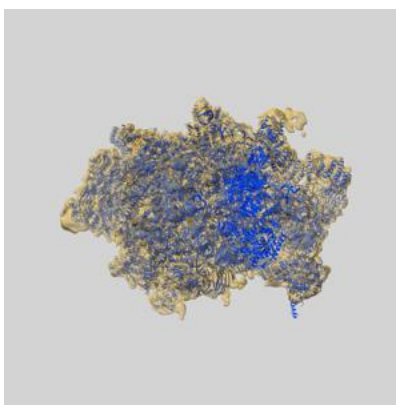
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-10056 and PDB model 6RXZ. Per-residue inclusion information can be found in section 3 on page 16.

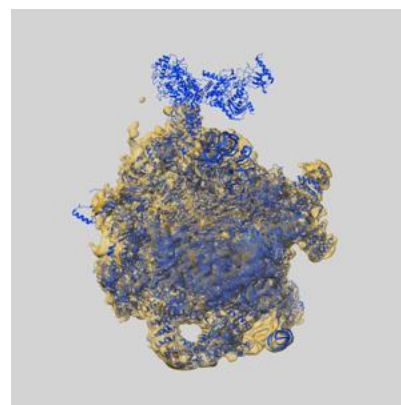
9.1 Map-model overlay [i](#)



X



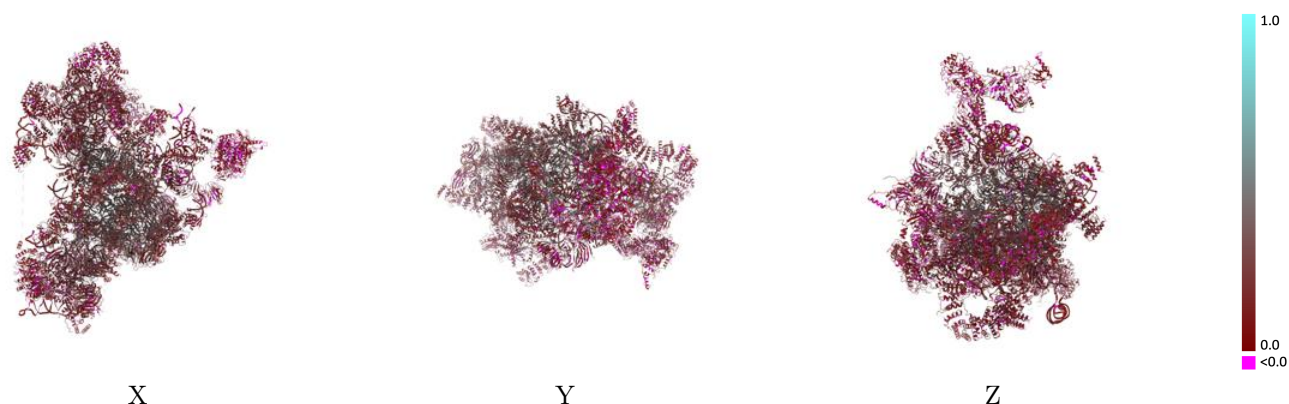
Y



Z

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

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

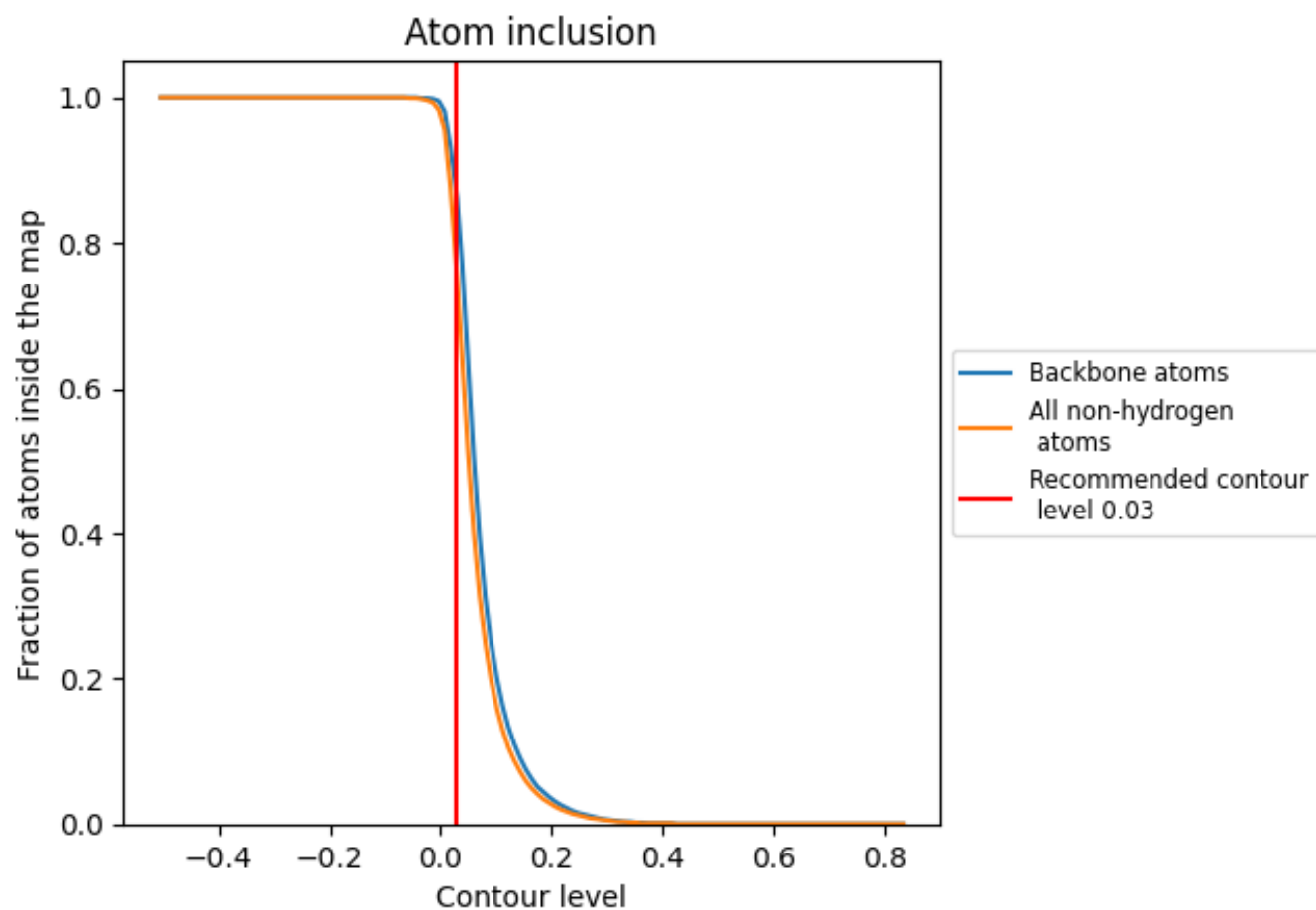


The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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

This section was not generated.

9.4 Atom inclusion ⓘ



At the recommended contour level, 86% of all backbone atoms, 75% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

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

Chain	Atom inclusion	Q-score
All	 0.7520	 0.2270
C1	 0.8700	 0.2580
C2	 0.9050	 0.2760
CA	 0.8720	 0.3590
CB	 0.7420	 0.2130
CC	 0.8130	 0.2470
CD	 0.7940	 0.2420
CE	 0.8610	 0.3370
CF	 0.8180	 0.2680
CG	 0.7830	 0.2070
CH	 0.8130	 0.2770
CI	 0.8790	 0.3550
CJ	 0.9150	 0.4170
CK	 0.8980	 0.4110
CL	 0.8390	 0.3190
CM	 0.8580	 0.3350
CN	 0.7370	 0.2190
CO	 0.6650	 0.1760
CP	 0.5340	 0.1610
CQ	 0.7250	 0.1670
CR	 0.7260	 0.1710
CS	 0.6120	 0.1210
CT	 0.8940	 0.3680
CU	 0.7960	 0.2810
CV	 0.0000	 0.0660
CW	 0.7380	 0.1660
CX	 0.6190	 0.1010
CY	 0.7510	 0.2410
CZ	 0.6960	 0.1540
Cb	 0.7140	 0.1810
Cc	 0.8230	 0.2950
Cd	 0.7370	 0.1700
Ce	 0.5820	 0.1730
Cf	 0.7440	 0.1410
Cg	 0.8540	 0.3460



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Chain	Atom inclusion	Q-score
Ch	 0.5340	 0.1030
Ci	 0.6460	 0.1590
Cj	 0.8910	 0.4000
Ck	 0.6730	 0.1430
Cl	 0.5030	 0.2250
Cm	 0.7760	 0.2740
Cn	 0.9170	 0.4400
Co	 0.7560	 0.2010
Cp	 0.8020	 0.2540
Cz	 0.4380	 0.1550
UA	 0.8580	 0.3350
UB	 0.7750	 0.2200
UC	 0.8880	 0.3970
UD	 0.7720	 0.2150
UE	 0.7200	 0.1650
UF	 0.8260	 0.2180
UG	 0.8040	 0.3170
UH	 0.7480	 0.1680
UI	 0.6510	 0.1390
UJ	 0.7460	 0.2010
UK	 0.8760	 0.3630
UL	 0.7580	 0.1780
UM	 0.6520	 0.1240
UN	 0.7670	 0.2770
UO	 0.7730	 0.2240
UP	 0.7540	 0.2410
UQ	 0.7900	 0.2070
UR	 0.8520	 0.3000
US	 0.7560	 0.1660
UT	 0.7440	 0.1570
UU	 0.8530	 0.2850
UV	 0.0030	 0.0740
UX	 0.8960	 0.4090
UZ	 0.8150	 0.2630