



Full wwPDB EM Validation Report ⓘ

Mar 20, 2026 – 10:30 AM UTC

PDB ID : 7AIH / pdb_00007aih
EMDB ID : EMD-11796
Title : The Large subunit of the Kinetoplastid mitochondrial ribosome
Authors : Soufari, H.; Waltz, F.; Parrot, C.; Bochler, A.; Hashem, Y.
Deposited on : 2020-09-27
Resolution : 3.60 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
Mogul : 2022.3.0, CSD as543be (2022)
MolProbity : 4-5-2 with Phenix2.0
Buster-report : wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

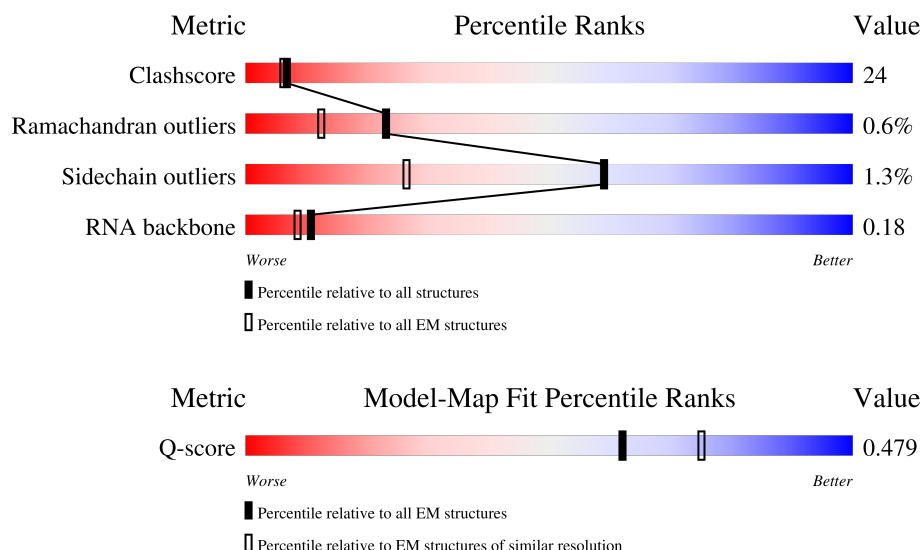
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.60 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	12797 (3.10 - 4.10)

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	A	467	10% 49% 28% 21%
2	B	436	17% 55% 43% •
3	C	262	14% 43% 37% 19%

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Mol	Chain	Length	Quality of chain
4	D	204	
5	E	346	
6	F	171	
7	G	374	
8	H	168	
9	I	305	
10	J	144	
11	K	194	
12	L	186	
13	M	279	
14	N	252	
15	O	476	
16	P	185	
17	Q	234	
18	R	480	
19	S	409	
20	T	83	
21	U	118	
22	V	151	
23	W	186	
24	X	513	
25	Y	292	
26	Z	197	
27	BA	167	
28	UA	203	

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Mol	Chain	Length	Quality of chain
29	BB	156	
30	Aw	187	
31	Bj	185	
32	An	331	
33	Al	346	
34	BI	266	
35	Az	152	
36	At	183	
37	BC	147	
38	Ab	262	
39	Ai	479	
40	Ap	240	
41	Au	186	
42	Aa	195	
43	Ao	284	
44	BM	457	
45	Ar	205	
46	Aj	503	
47	BH	229	
48	Am	340	
49	Aq	341	
50	BE	118	
51	Ak	323	
52	BP	254	
53	Ad	237	

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Mol	Chain	Length	Quality of chain
54	BF	109	
55	Av	192	
56	Af	155	
57	As	249	
58	Ae	311	
59	Ac	291	
60	Ah	570	
61	BD	102	
62	Ay	174	
63	Ag	244	
64	Ax	216	
65	BL	380	
66	BO	190	
67	BG	1347	
68	UB	67	
69	UC	144	
70	UD	95	
71	1	9070	

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
72	ZN	BG	1401	-	-	X	-
72	ZN	T	101	-	-	X	-

2 Entry composition

There are 73 unique types of molecules in this entry. The entry contains 143667 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 Ribosomal protein L3-like protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	368	Total	C	N	O	S	0	0
			2996	1929	496	556	15		

- Molecule 2 is a protein called uL4m.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	B	435	Total	C	N	O	S	0	0
			3513	2237	615	642	19		

- Molecule 3 is a protein called RIBOSOMAL_L9 domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	C	212	Total	C	N	O	S	0	0
			1772	1144	303	321	4		

- Molecule 4 is a protein called uL10m.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	D	128	Total	C	N	O	S	0	0
			1036	656	198	177	5		

- Molecule 5 is a protein called Putative ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	E	326	Total	C	N	O	S	0	0
			2668	1704	480	470	14		

- Molecule 6 is a protein called 50S ribosomal protein L13-like protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	F	170	Total	C	N	O	S	0	0
			1435	919	261	243	12		

- Molecule 7 is a protein called Ribosomal_L18e/L15P domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	G	365	Total	C	N	O	S	0	0
			3012	1917	555	531	9		

- Molecule 8 is a protein called Ribosomal_L16 domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	H	162	Total	C	N	O	S	0	0
			1305	836	239	226	4		

- Molecule 9 is a protein called Putative 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	I	257	Total	C	N	O	S	0	0
			2153	1362	406	372	13		

- Molecule 10 is a protein called bL19m.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	J	141	Total	C	N	O	S	0	0
			1146	727	211	202	6		

- Molecule 11 is a protein called bL20.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	K	179	Total	C	N	O	S	0	0
			1467	910	289	258	10		

- Molecule 12 is a protein called bL21m.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	L	178	Total	C	N	O	S	0	0
			1419	907	257	250	5		

- Molecule 13 is a protein called uL22m.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	M	259	Total	C	N	O	S	0	0
			2116	1345	385	371	15		

- Molecule 14 is a protein called uL23m.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	N	189	Total	C	N	O	S	0	0
			1599	1031	296	269	3		

- Molecule 15 is a protein called uL24m.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	O	307	Total	C	N	O	S	0	0
			2537	1600	455	475	7		

- Molecule 16 is a protein called bL27m.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	P	165	Total	C	N	O	S	0	0
			1367	856	266	238	7		

- Molecule 17 is a protein called bL28m.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	Q	217	Total	C	N	O	S	0	0
			1785	1127	331	316	11		

- Molecule 18 is a protein called uL29m.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	R	472	Total	C	N	O	S	0	0
			3755	2377	662	704	12		

- Molecule 19 is a protein called uL30m.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	S	150	Total	C	N	O	S	0	0
			1244	782	247	207	8		

- Molecule 20 is a protein called bL32m.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	T	55	Total	C	N	O	S	0	0
			487	311	93	78	5		

- Molecule 21 is a protein called bL33m.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	U	92	Total	C	N	O	S	0	0
			744	472	142	125	5		

- Molecule 22 is a protein called bL35m.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	V	141	Total	C	N	O	S	0	0
			1202	755	242	197	8		

- Molecule 23 is a protein called bL36m.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	W	54	Total	C	N	O	S	0	0
			465	299	89	74	3		

- Molecule 24 is a protein called mL38.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	X	468	Total	C	N	O	S	0	0
			3733	2365	657	694	17		

- Molecule 25 is a protein called mL40.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	Y	255	Total	C	N	O	S	0	0
			2067	1287	373	402	5		

- Molecule 26 is a protein called mL41.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	Z	150	Total	C	N	O	S	0	0
			1223	784	224	211	4		

- Molecule 27 is a protein called mL94.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	BA	138	Total	C	N	O	S	0	0
			1038	648	188	197	5		

- Molecule 28 is a protein called UA.

Mol	Chain	Residues	Atoms				AltConf	Trace
28	UA	203	Total	C	N	O	0	0
			1015	609	203	203		

- Molecule 29 is a protein called mL95.

Mol	Chain	Residues	Atoms				AltConf	Trace
29	BB	122	Total	C	N	O	0	0
			1028	663	189	176		

- Molecule 30 is a protein called mL89.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	Aw	185	Total	C	N	O	S	0	0
			1509	949	289	268	3		

- Molecule 31 is a protein called bL31m.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	Bj	168	Total	C	N	O	S	0	0
			1358	865	255	231	7		

- Molecule 32 is a protein called mL76.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	An	314	Total	C	N	O	S	0	0
			2605	1643	487	470	5		

- Molecule 33 is a protein called mL74.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	Al	264	Total	C	N	O	S	0	0
			2152	1371	374	399	8		

- Molecule 34 is a protein called Peptidyl-prolyl cis-trans isomerase.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	BI	186	Total	C	N	O	S	0	0
			1409	895	242	264	8		

- Molecule 35 is a protein called mL93.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	Az	138	Total	C	N	O	S	0	0
			1215	782	216	211	6		

- Molecule 36 is a protein called mL86.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	At	165	Total	C	N	O	S	0	0
			1346	824	260	254	8		

- Molecule 37 is a protein called mL96.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	BC	140	Total	C	N	O	S	0	0
			1114	693	205	207	9		

- Molecule 38 is a protein called L51_S25_CI-B8 domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	Ab	260	Total	C	N	O	S	0	0
			2185	1365	416	397	7		

- Molecule 39 is a protein called mL69.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	Ai	476	Total	C	N	O	S	0	0
			3789	2419	654	694	22		

- Molecule 40 is a protein called mL80.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	Ap	214	Total	C	N	O	S	0	0
			1775	1111	327	328	9		

- Molecule 41 is a protein called mL87.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	Au	176	Total	C	N	O	S	0	0
			1490	945	292	245	8		

- Molecule 42 is a protein called mL42.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	Aa	178	Total	C	N	O	S	0	0
			1417	884	270	256	7		

- Molecule 43 is a protein called mL79.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	Ao	275	Total	C	N	O	S	0	0
			2276	1433	429	402	12		

- Molecule 44 is a protein called mL70.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	BM	389	Total	C	N	O	S	0	0
			3069	1954	548	551	16		

- Molecule 45 is a protein called mL84.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	Ar	195	Total	C	N	O	S	0	0
			1644	1054	295	288	7		

- Molecule 46 is a protein called mL72.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	Aj	341	Total	C	N	O	S	0	0
			2766	1756	508	491	11		

- Molecule 47 is a protein called Peptidyl-prolyl cis-trans isomerase.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	BH	214	Total	C	N	O	S	0	0
			1659	1050	290	310	9		

- Molecule 48 is a protein called mL75.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	Am	330	Total	C	N	O	S	0	0
			2708	1727	491	474	16		

- Molecule 49 is a protein called mL82.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	Aq	258	Total	C	N	O	S	0	0
			2074	1296	406	360	12		

- Molecule 50 is a protein called mL98.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	BE	84	Total	C	N	O	S	0	0
			700	447	125	128			

- Molecule 51 is a protein called mL73.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	Ak	300	Total	C	N	O	S	0	0
			2352	1489	421	429	13		

- Molecule 52 is a protein called mL52,mL52.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	BP	195	Total	C	N	O	S	0	0
			1593	1014	288	288	3		

- Molecule 53 is a protein called mL49.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	Ad	207	Total	C	N	O	S	0	0
			1632	1049	289	286	8		

- Molecule 54 is a protein called mL99.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	BF	101	Total	C	N	O	S	0	0
			851	530	165	154	2		

- Molecule 55 is a protein called mL88.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	Av	155	Total	C	N	O	S	0	0
			1300	828	230	234	8		

- Molecule 56 is a protein called mL63.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	Af	139	Total	C	N	O	S	0	0
			1132	709	215	207	1		

- Molecule 57 is a protein called mL85.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	As	97	Total	C	N	O	S	0	0
			787	495	139	148	5		

- Molecule 58 is a protein called mL53.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	Ae	291	Total	C	N	O	S	0	0
			2359	1526	418	404	11		

- Molecule 59 is a protein called MRP-L46 domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	Ac	268	Total	C	N	O	S	0	0
			2174	1375	389	405	5		

- Molecule 60 is a protein called mL68.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	Ah	452	Total	C	N	O	S	0	0
			3686	2338	651	679	18		

- Molecule 61 is a protein called mL97.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	BD	97	Total	C	N	O	S	0	0
			807	499	160	140	8		

- Molecule 62 is a protein called C2H2-type domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
62	Ay	142	Total	C	N	O	S	0	0
			1226	774	228	217	7		

- Molecule 63 is a protein called mL54/69.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	Ag	231	Total	C	N	O	S	0	0
			1916	1211	356	340	9		

- Molecule 64 is a protein called LIM zinc-binding domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	Ax	167	Total	C	N	O	S	0	0
			1388	876	268	233	11		

- Molecule 65 is a protein called Putative ribosomal protein L2.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	BL	309	Total	C	N	O	S	0	0
			2497	1594	464	427	12		

- Molecule 66 is a protein called Putative ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	BO	155	Total	C	N	O	S	0	0
			1239	772	253	205	9		

- Molecule 67 is a protein called mL100.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	BG	85	Total	C	N	O	S	0	0
			643	400	122	115	6		

- Molecule 68 is a protein called UB.

Mol	Chain	Residues	Atoms				AltConf	Trace
68	UB	67	Total	C	N	O	0	0
			335	201	67	67		

- Molecule 69 is a protein called UC.

Mol	Chain	Residues	Atoms				AltConf	Trace
69	UC	144	Total	C	N	O	0	0
			720	432	144	144		

- Molecule 70 is a protein called UD.

Mol	Chain	Residues	Atoms				AltConf	Trace
70	UD	95	Total	C	N	O	0	0
			475	285	95	95		

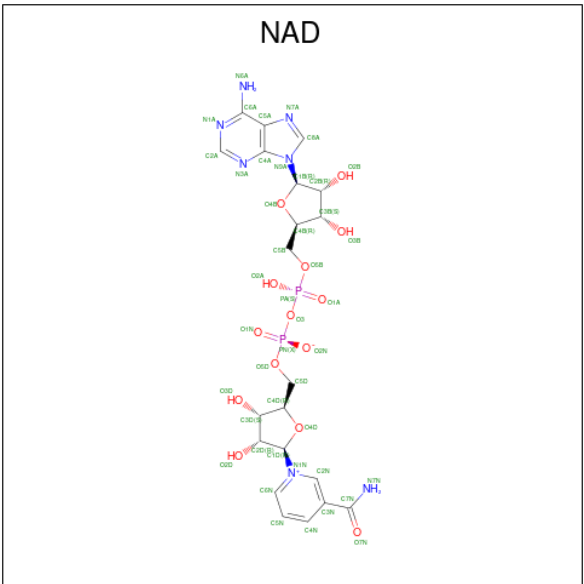
- Molecule 71 is a RNA chain called Ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
71	1	1087	Total	C	N	O	P	0	0
			22918	10319	3839	7673	1087		

- Molecule 72 is ZINC ION (CCD ID: ZN) (formula: Zn) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		AltConf
72	T	1	Total	Zn	0
			1	1	
72	W	1	Total	Zn	0
			1	1	
72	BD	1	Total	Zn	0
			1	1	
72	Ax	2	Total	Zn	0
			2	2	
72	BG	1	Total	Zn	0
			1	1	

- Molecule 73 is NICOTINAMIDE-ADENINE-DINUCLEOTIDE (CCD ID: NAD) (formula: C₂₁H₂₇N₇O₁₄P₂) (labeled as "Ligand of Interest" by depositor).

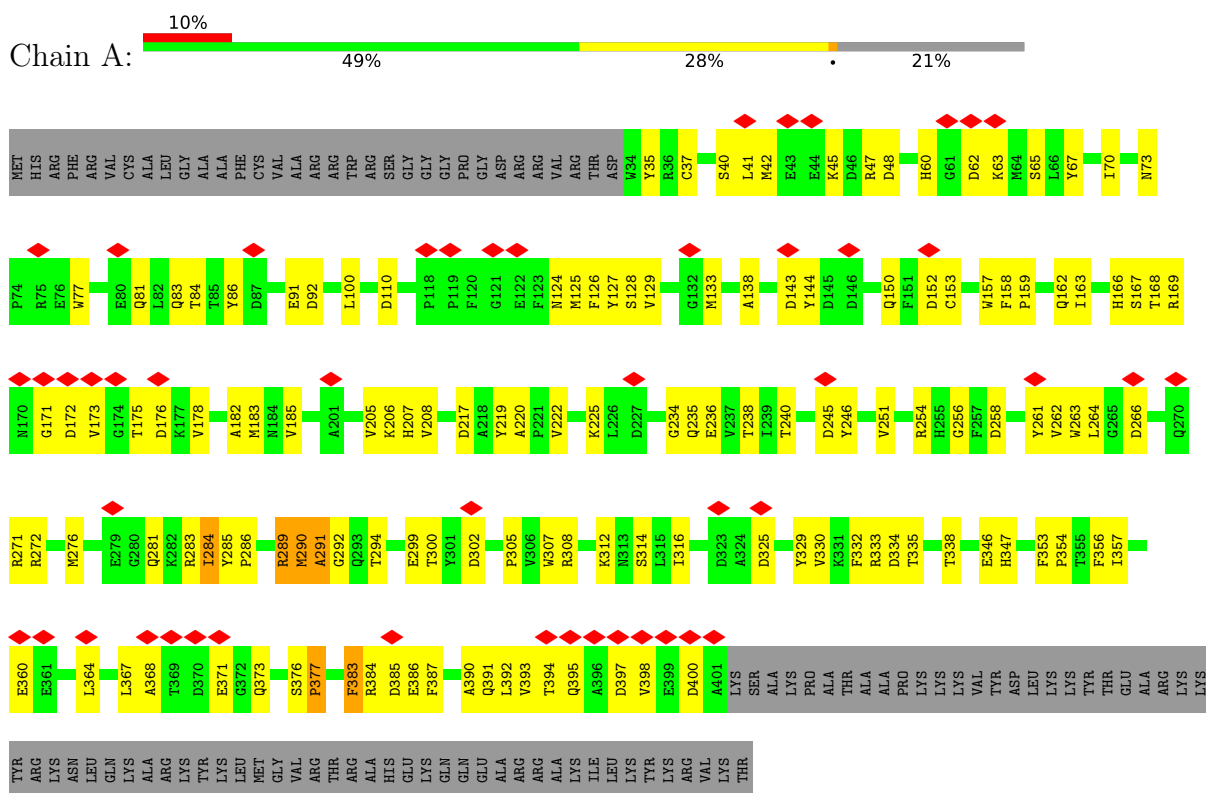


Mol	Chain	Residues	Atoms					AltConf
73	Ag	1	Total	C	N	O	P	0
			44	21	7	14	2	

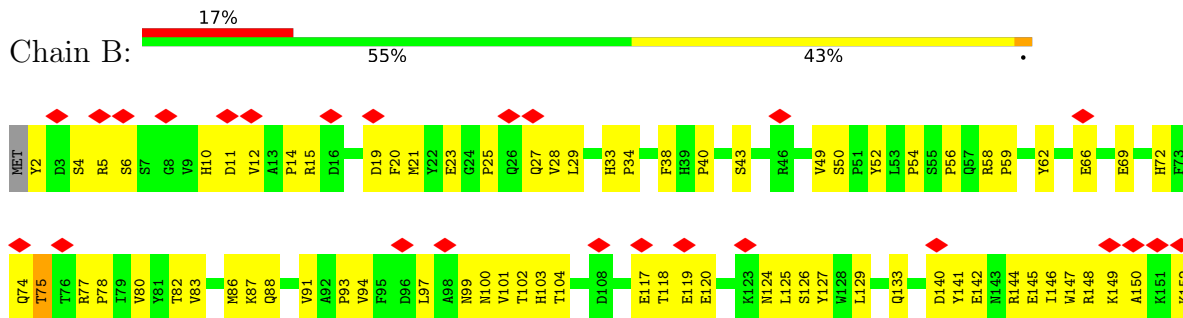
3 Residue-property plots

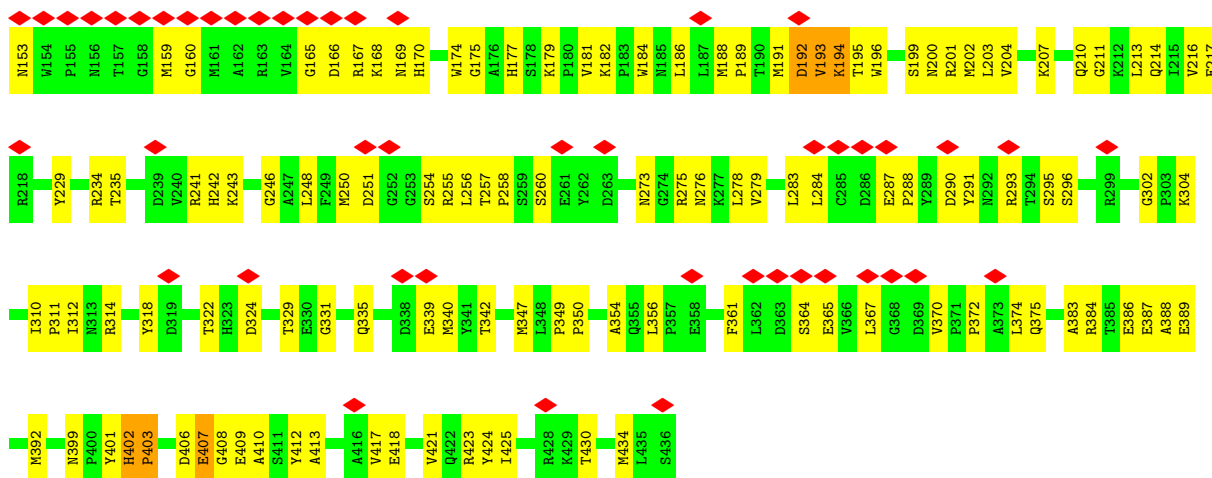
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion 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: Ribosomal protein L3-like protein

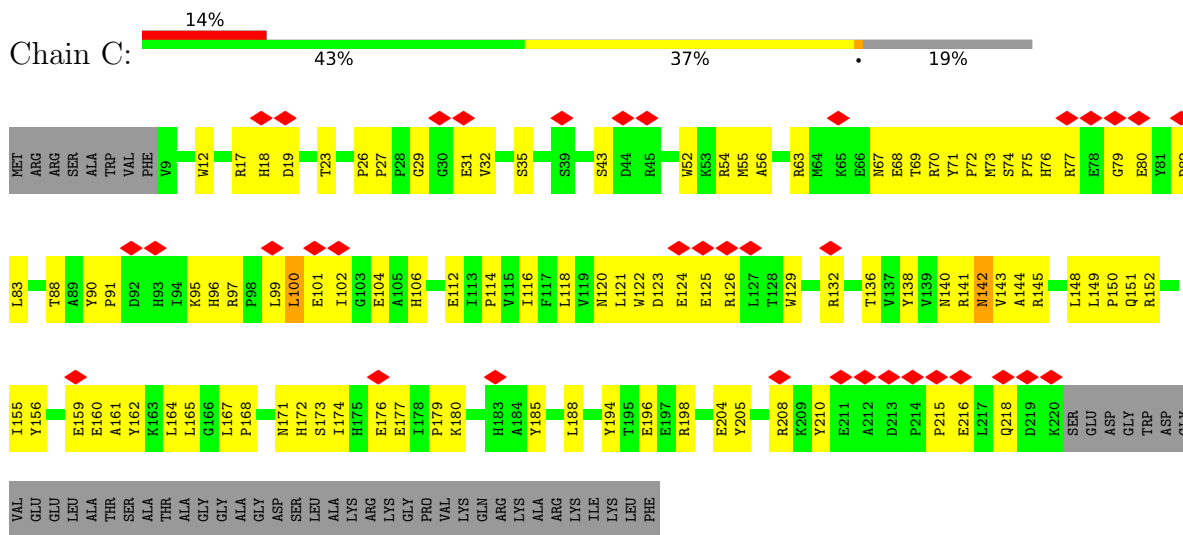


• Molecule 2: uL4m

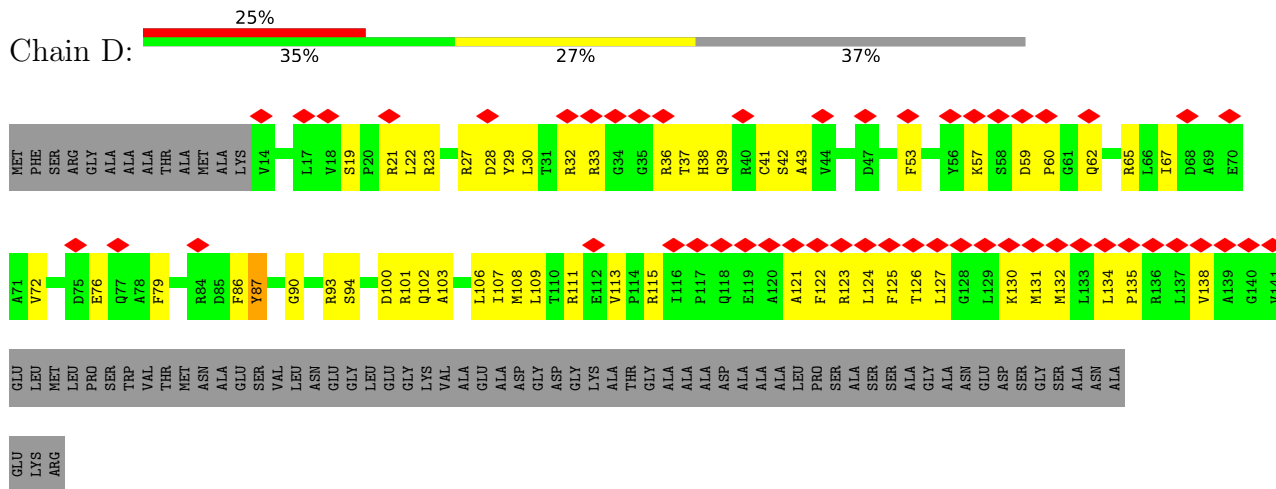




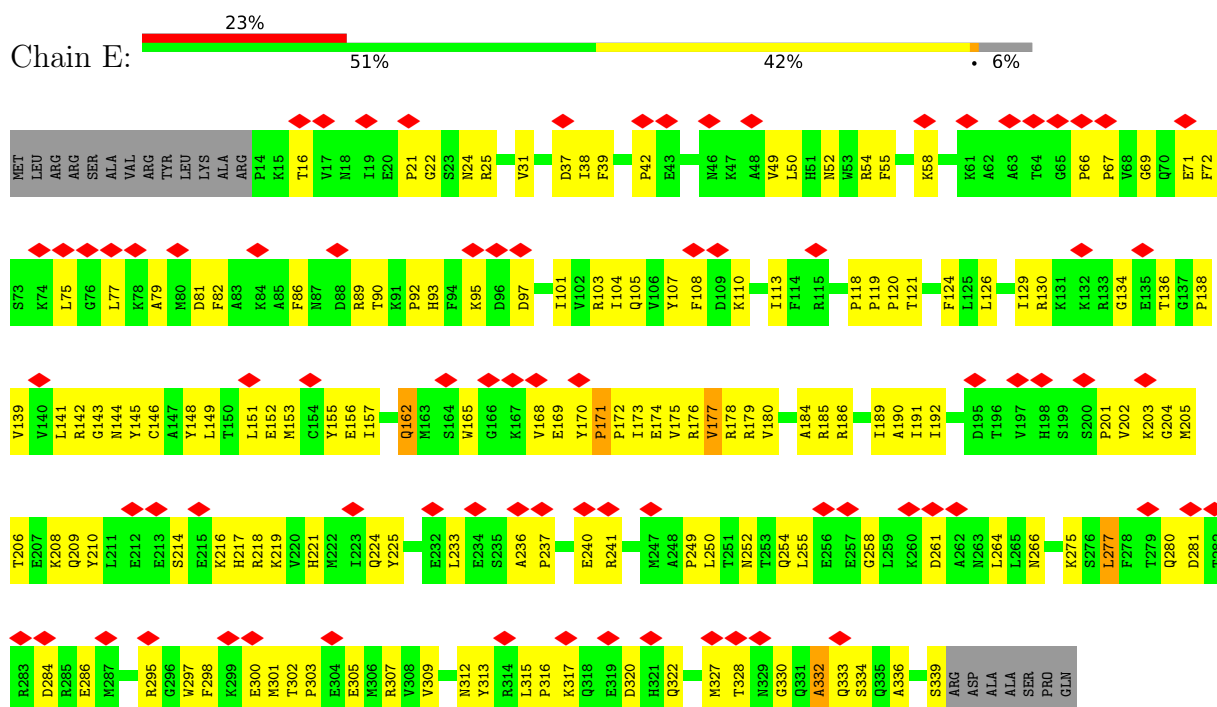
- Molecule 3: RIBOSOMAL L9 domain-containing protein



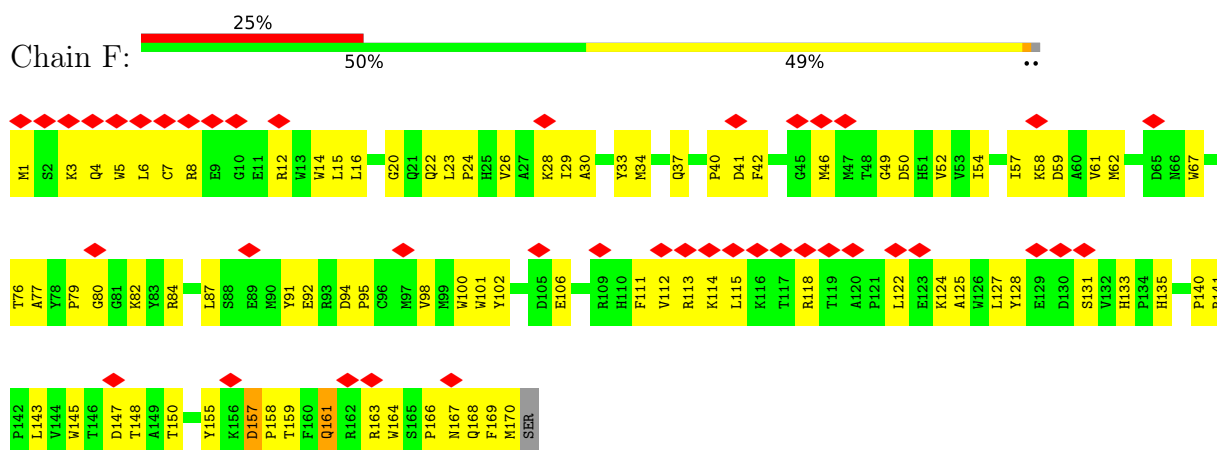
- Molecule 4: uL10m



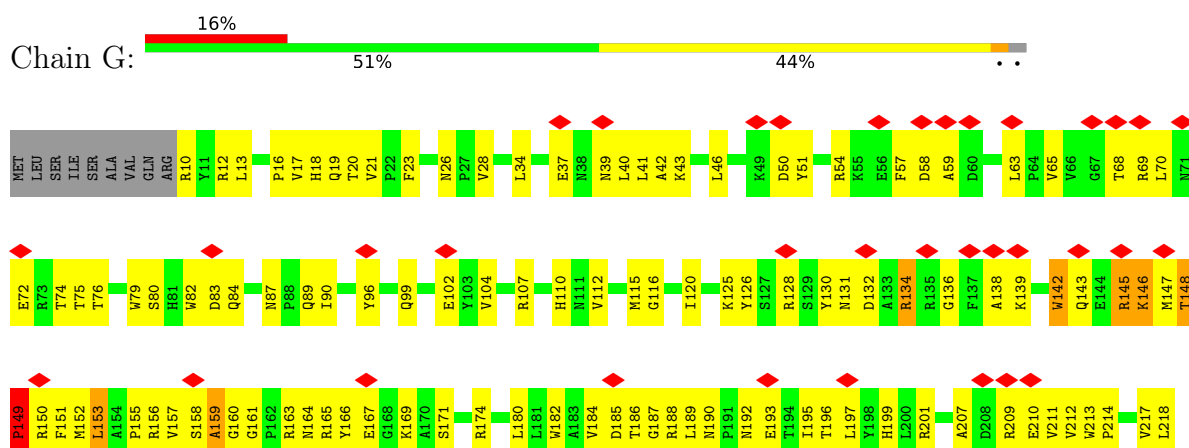
- Molecule 5: Putative ribosomal protein L11

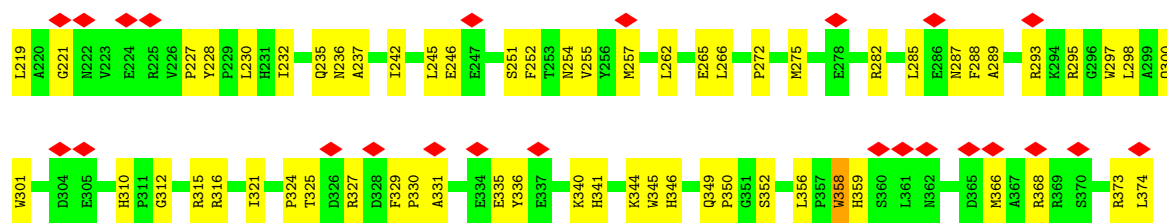


• Molecule 6: 50S ribosomal protein L13-like protein

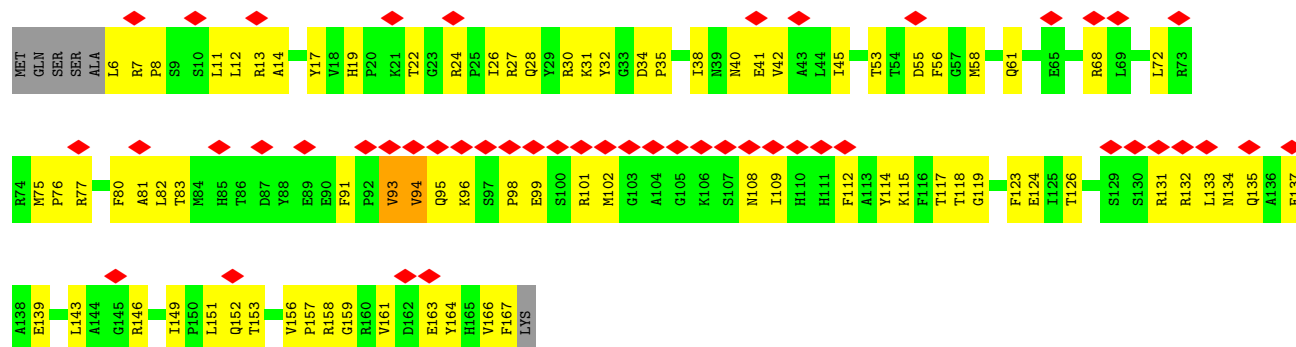


• Molecule 7: Ribosomal_L18e/L15P domain-containing protein

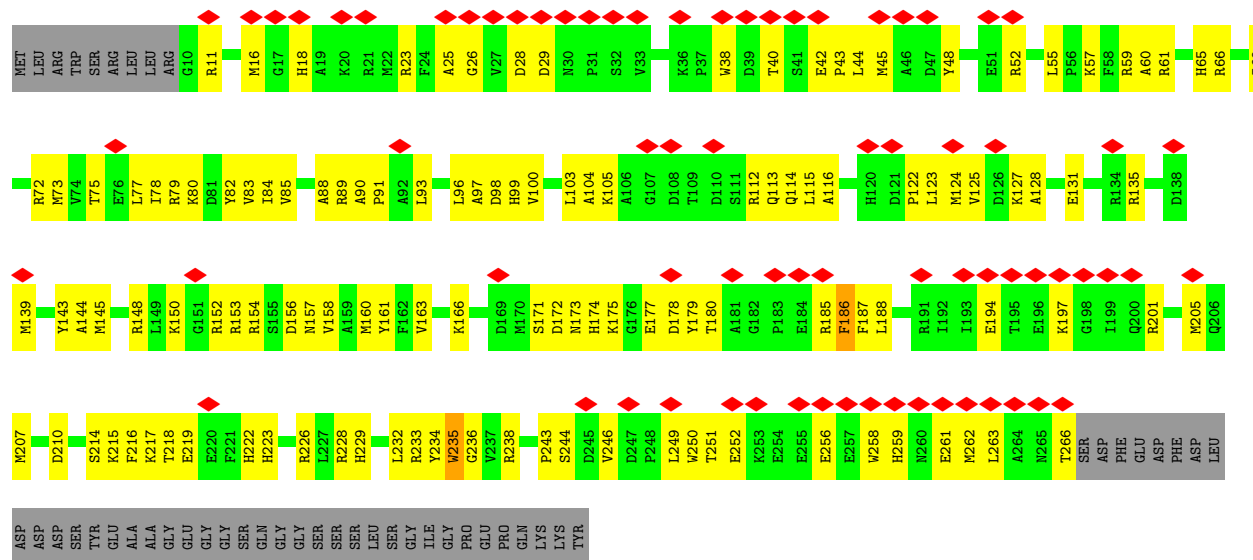
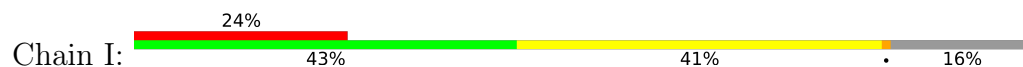




• Molecule 8: Ribosomal_L16 domain-containing protein

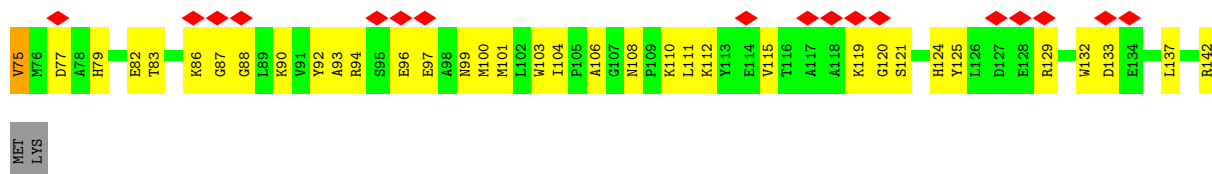


• Molecule 9: Putative 50S ribosomal protein L17

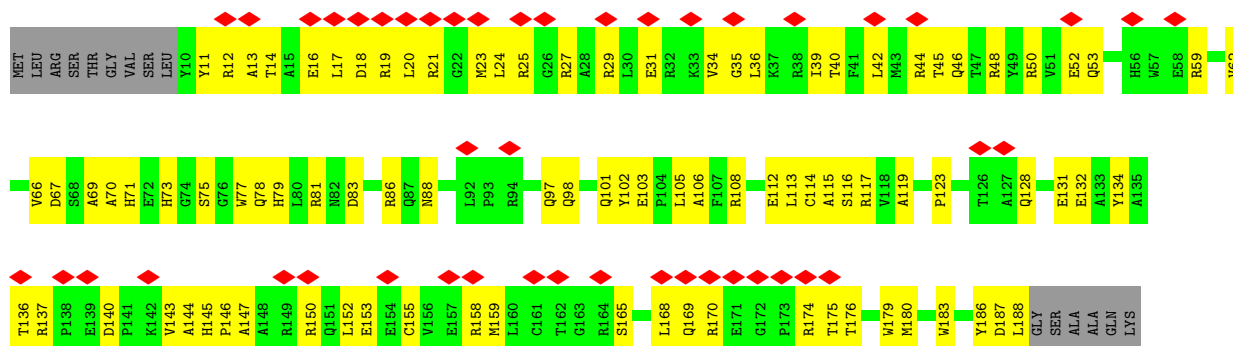
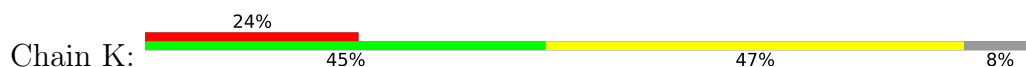


• Molecule 10: bL19m

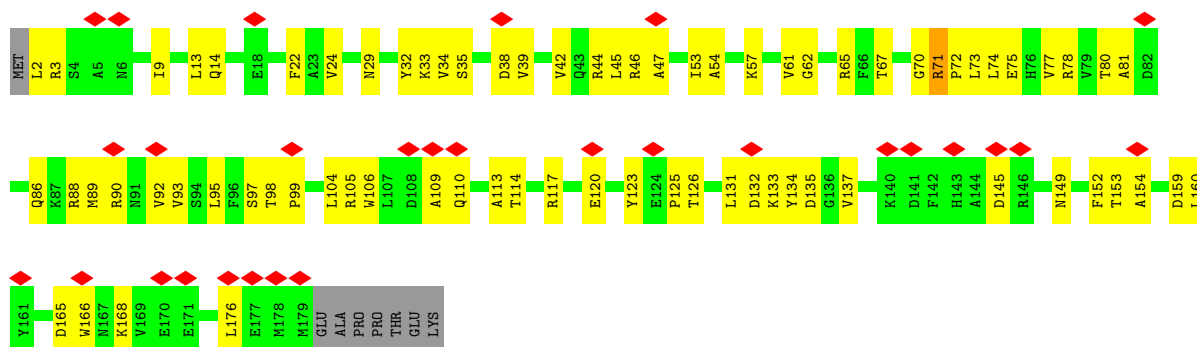




• Molecule 11: bL20

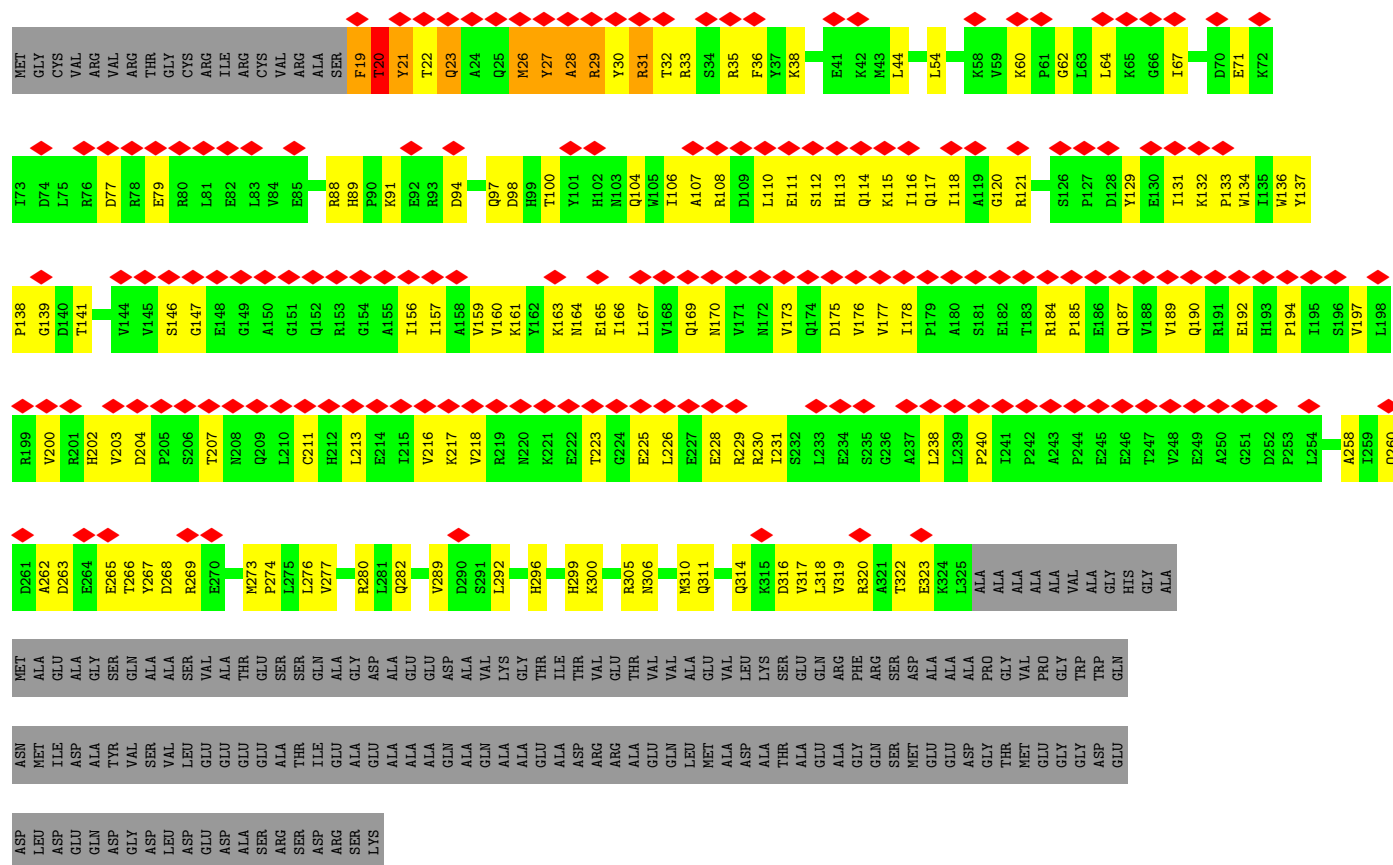


• Molecule 12: bL21m

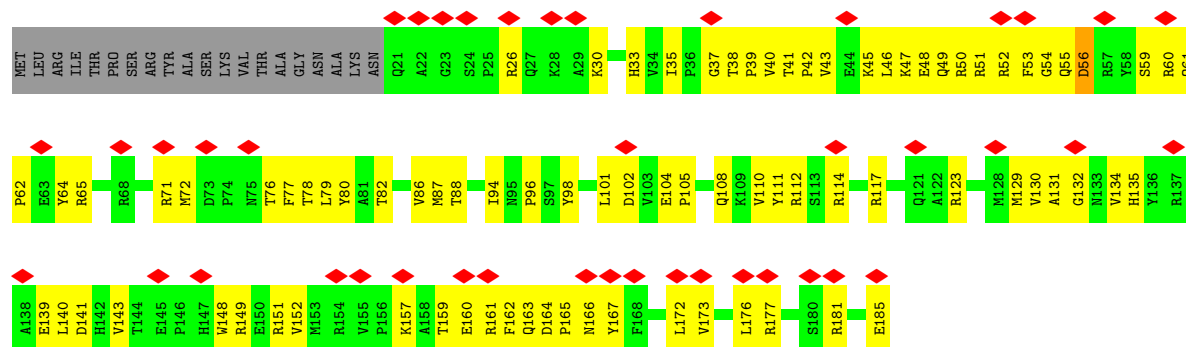
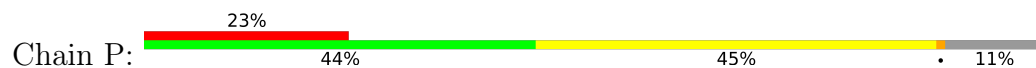


• Molecule 13: uL22m

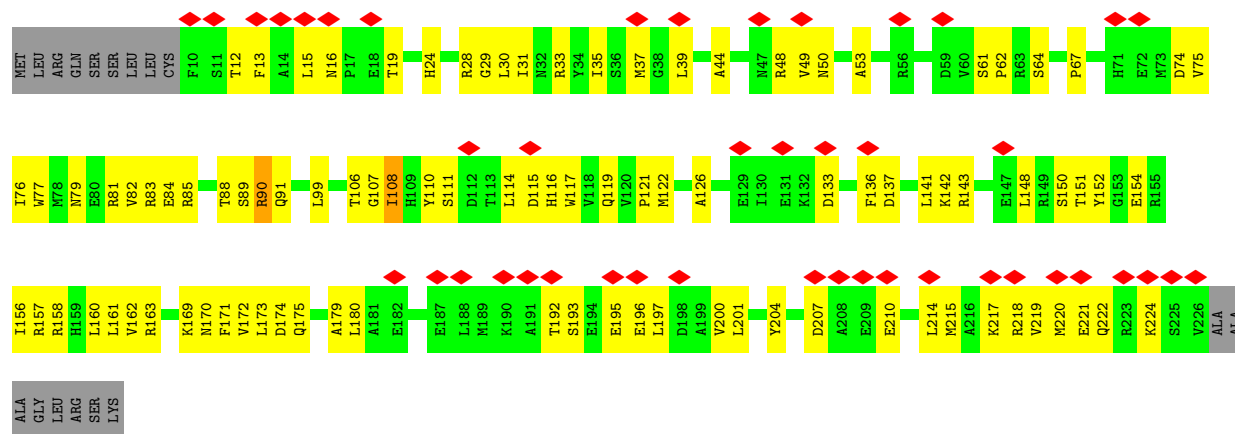




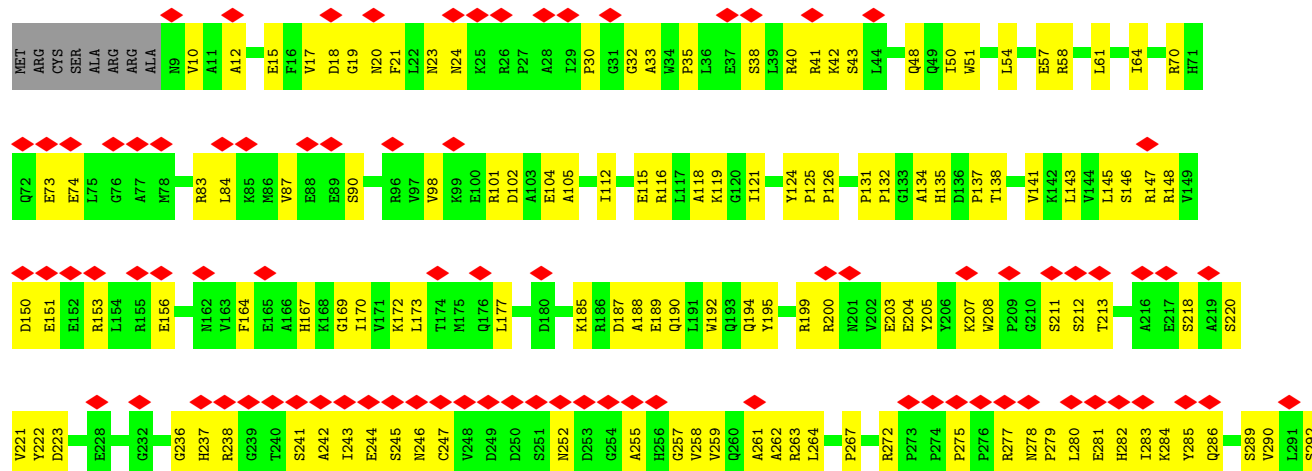
- Molecule 16: bL27m

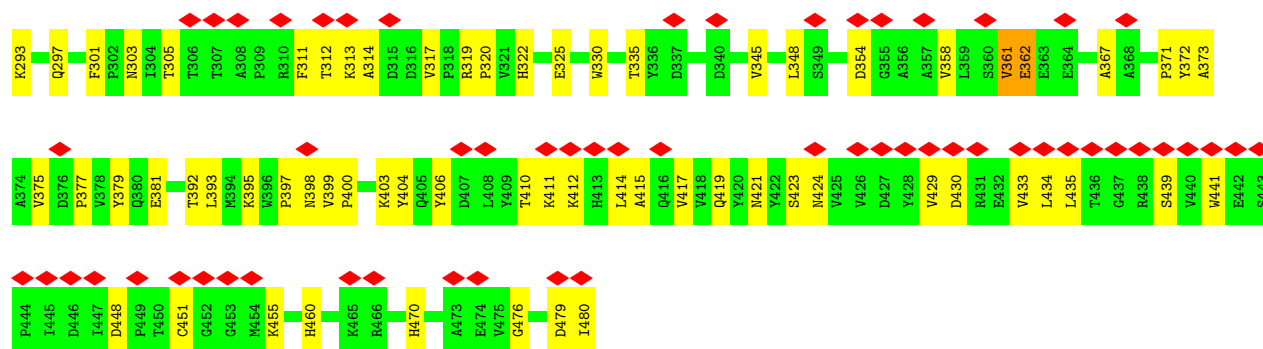


- Molecule 17: bL28m

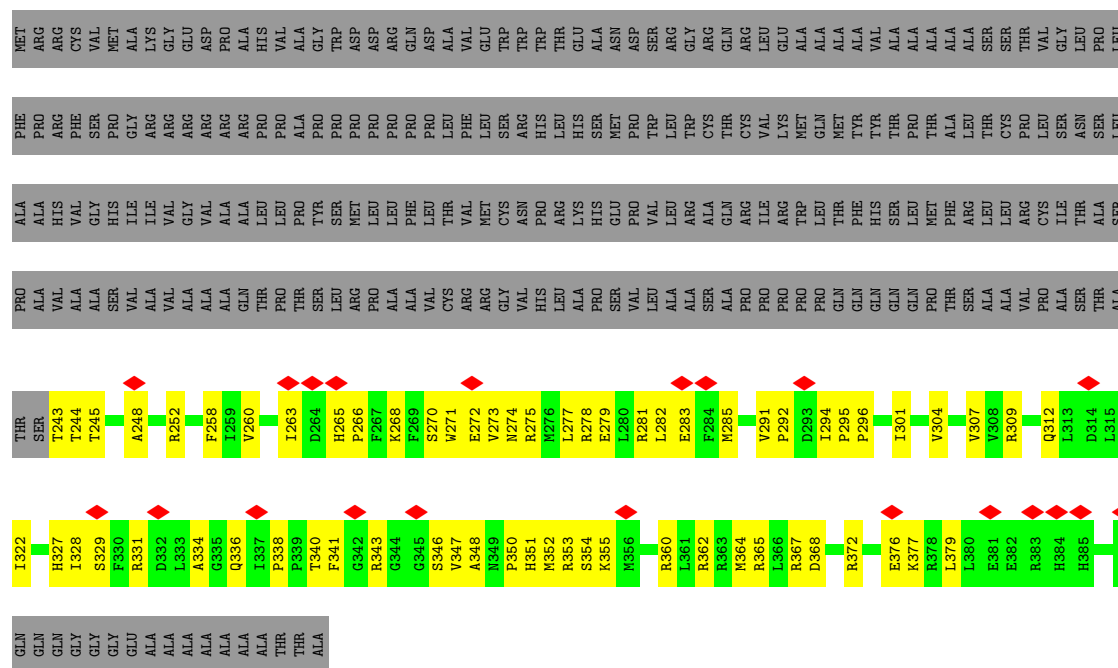


- Molecule 18: uL29m

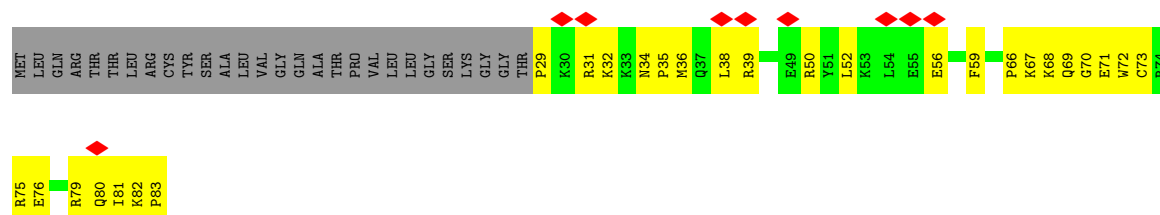




• Molecule 19: uL30m

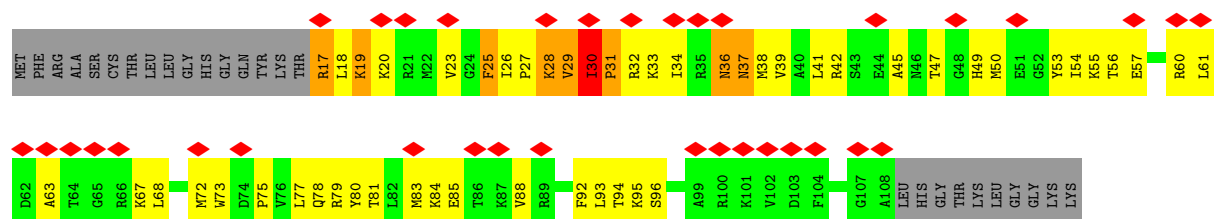


• Molecule 20: bL32m

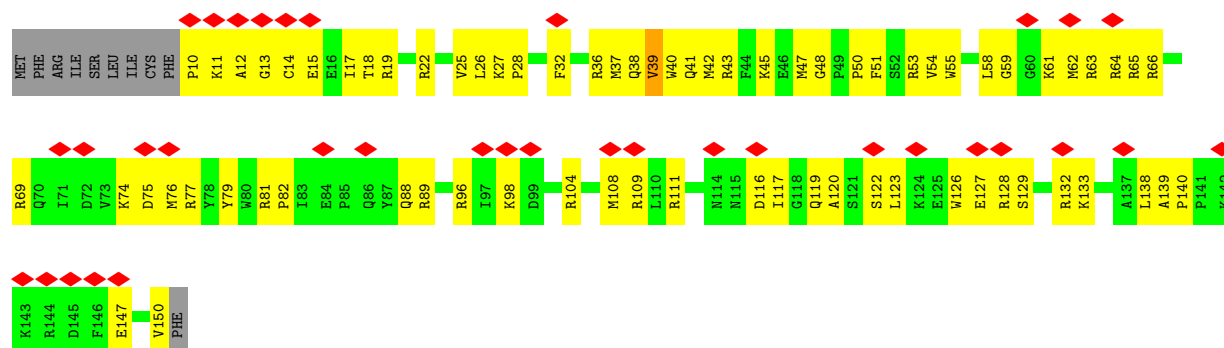


• Molecule 21: bL33m

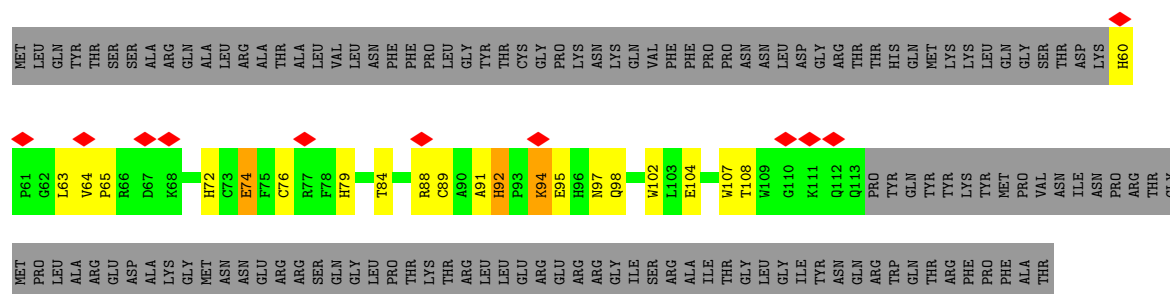




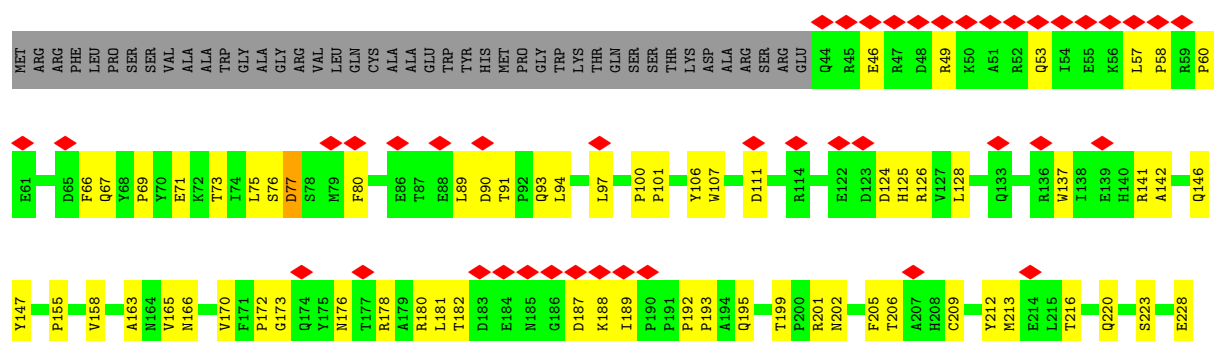
• Molecule 22: bL35m



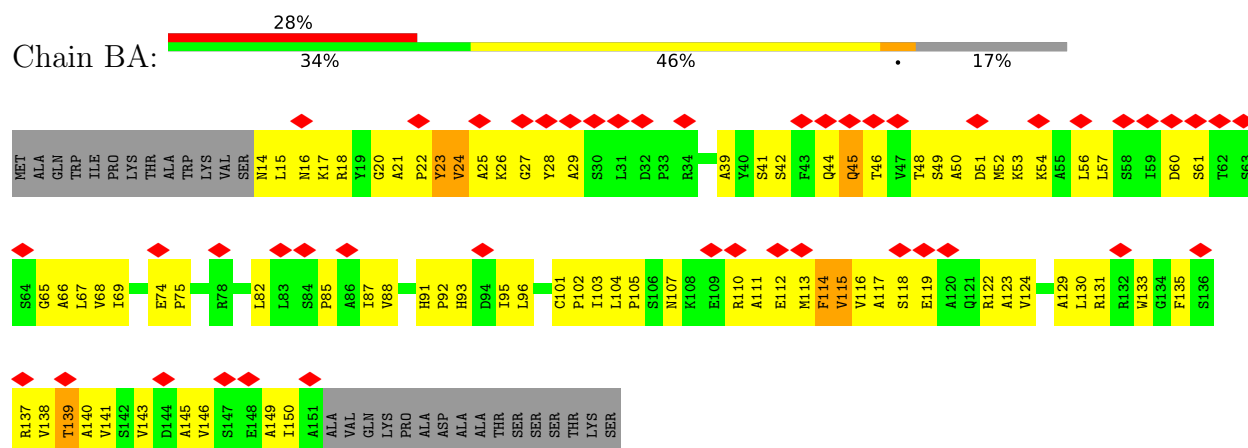
• Molecule 23: bL36m



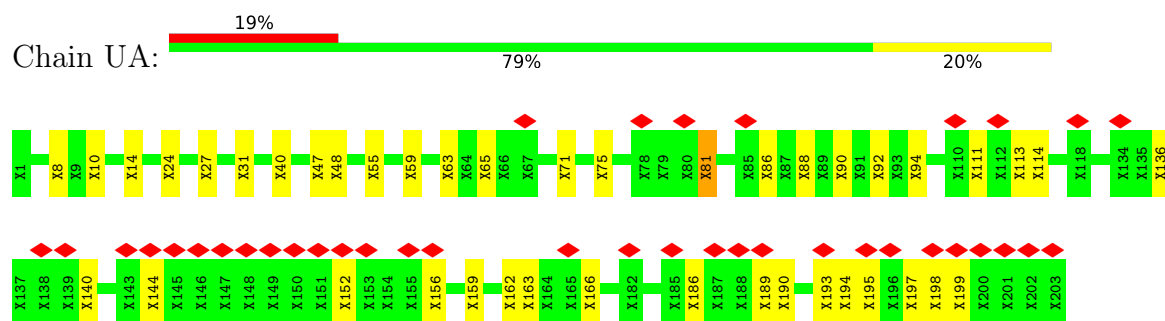
• Molecule 24: mL38



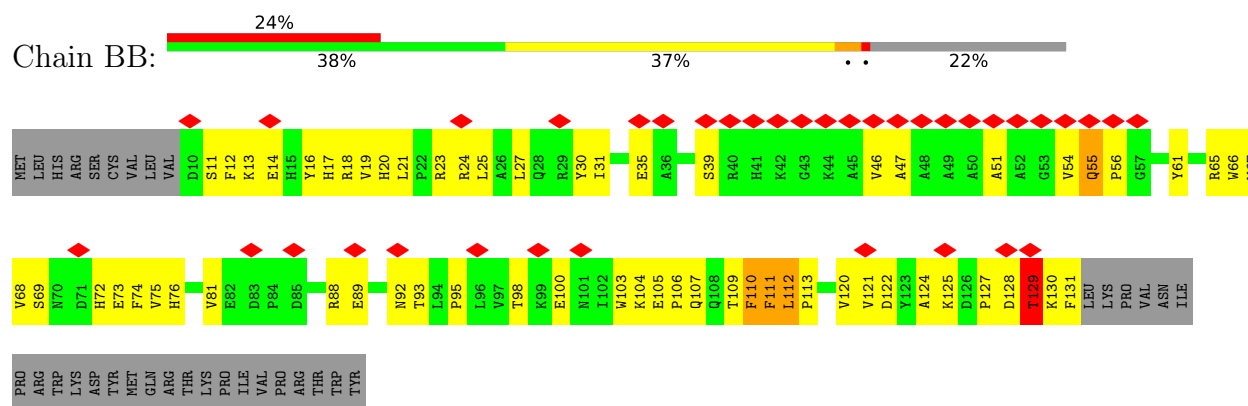
- Molecule 27: mL94



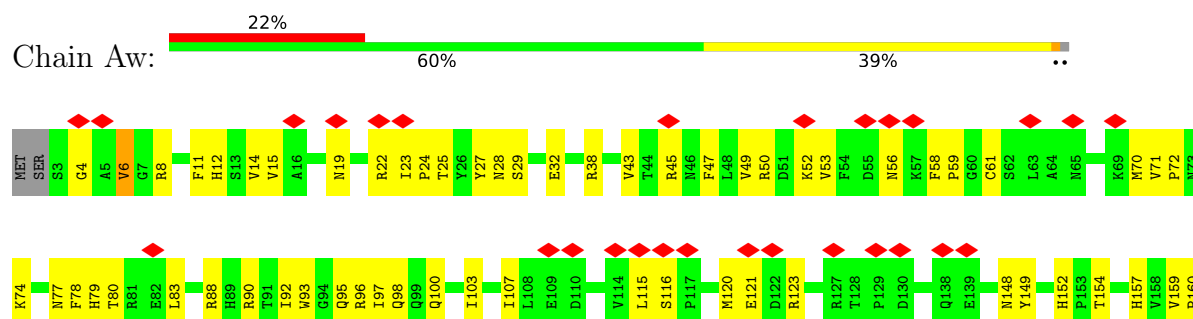
- Molecule 28: UA



- Molecule 29: mL95

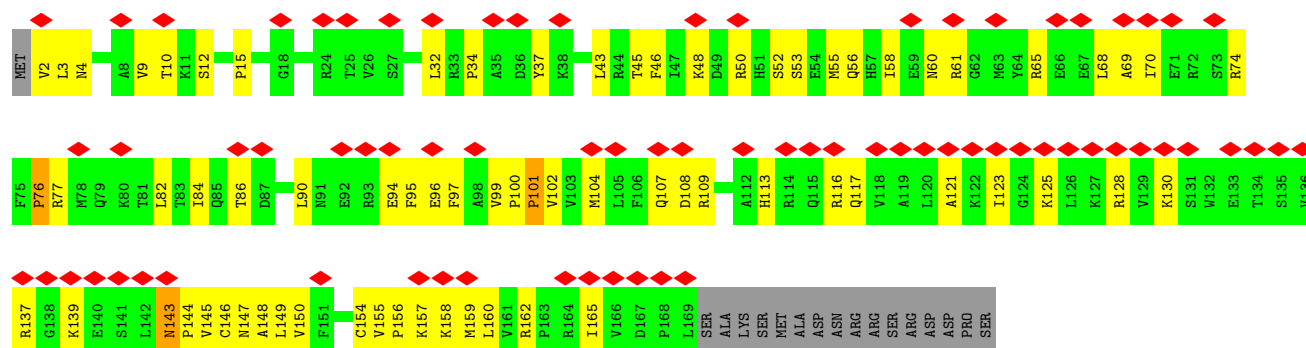
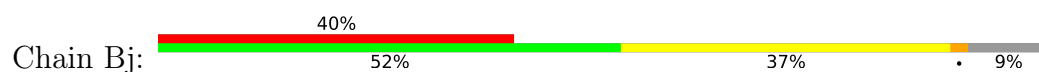


- Molecule 30: mL89

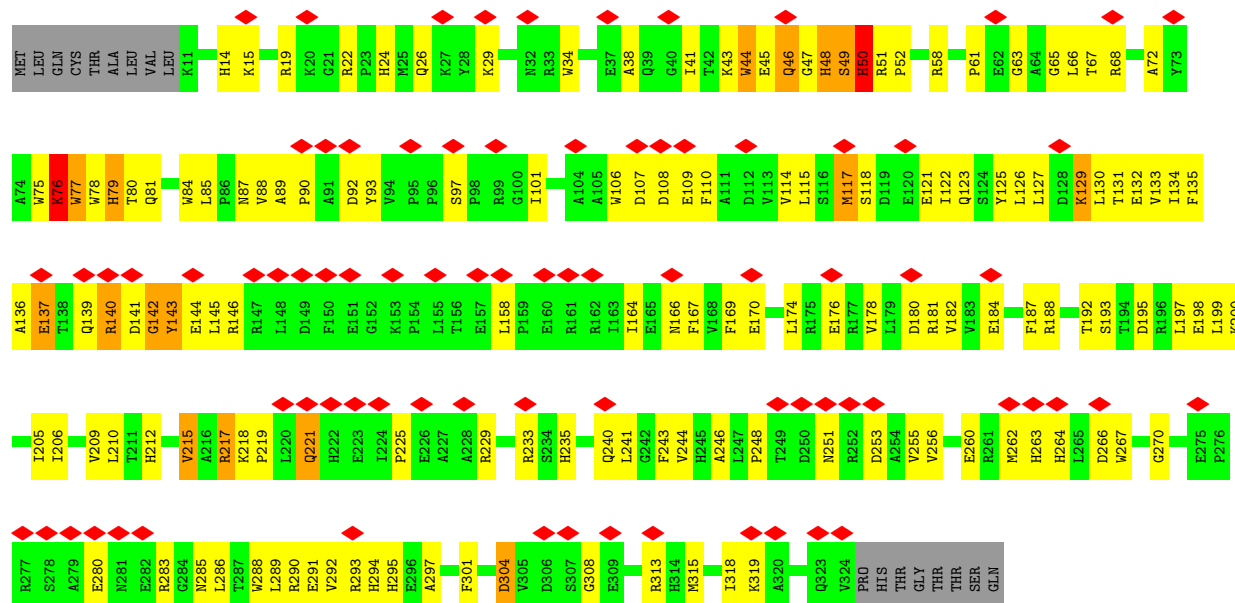




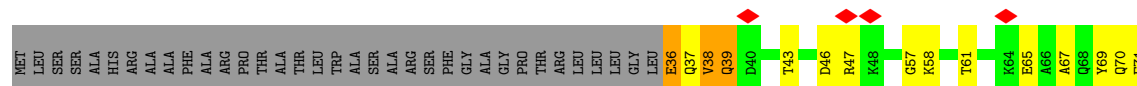
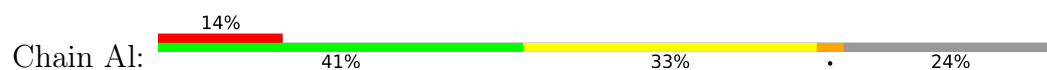
• Molecule 31: bL31m

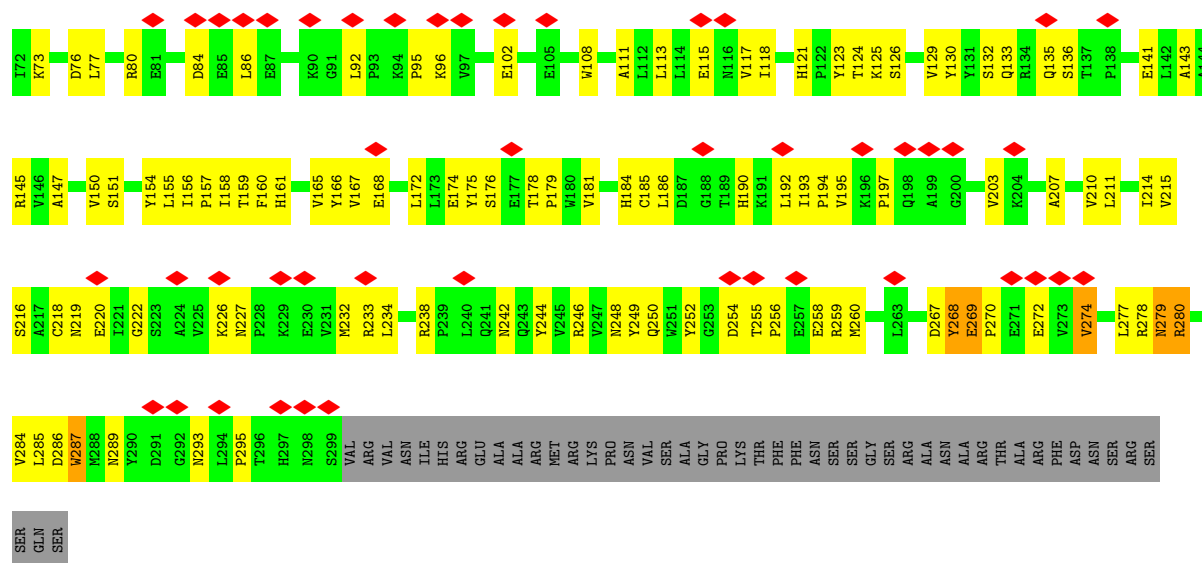


• Molecule 32: mL76

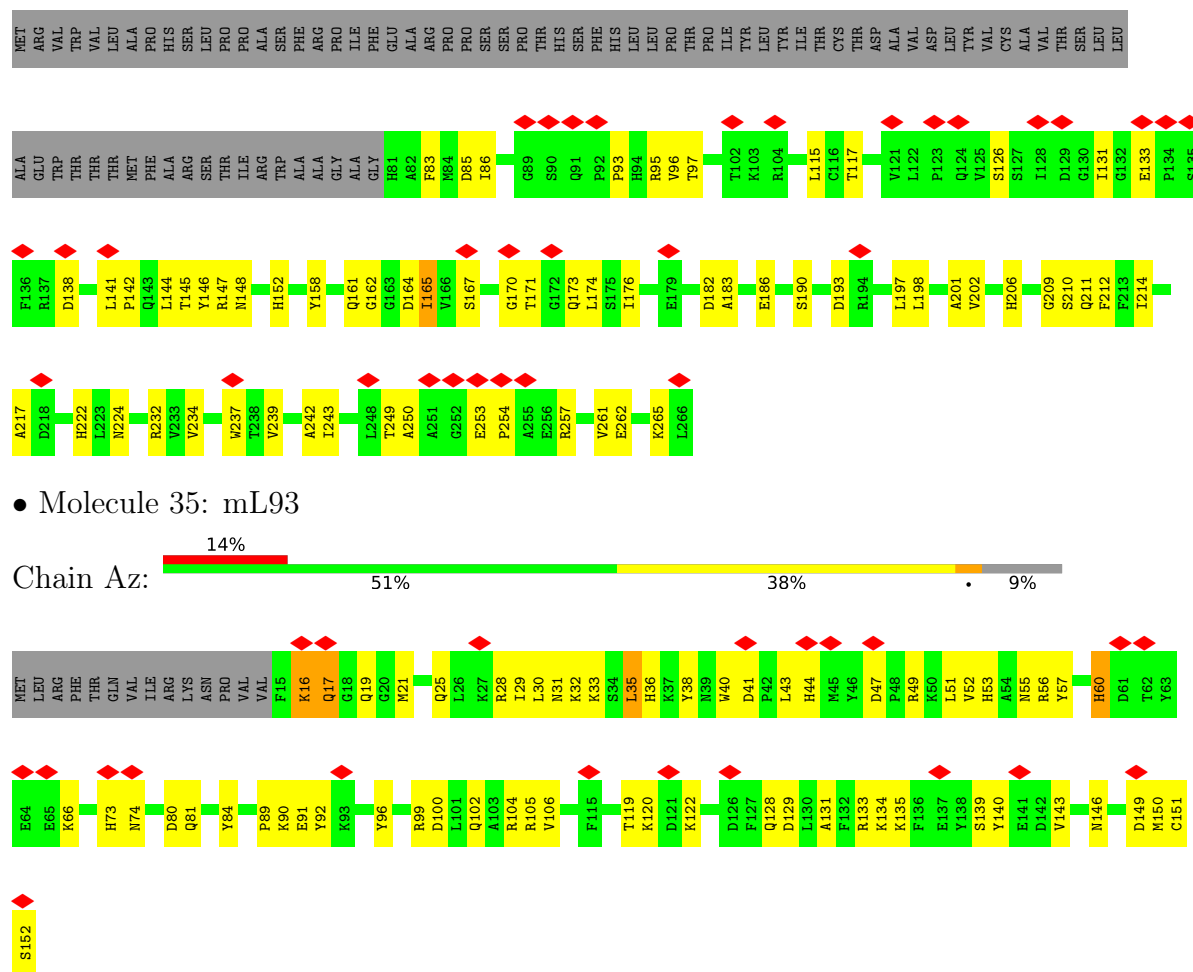


• Molecule 33: mL74

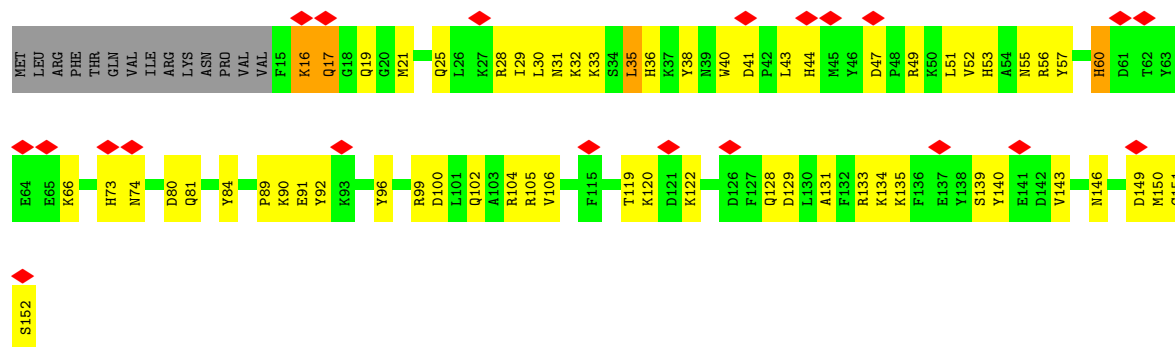




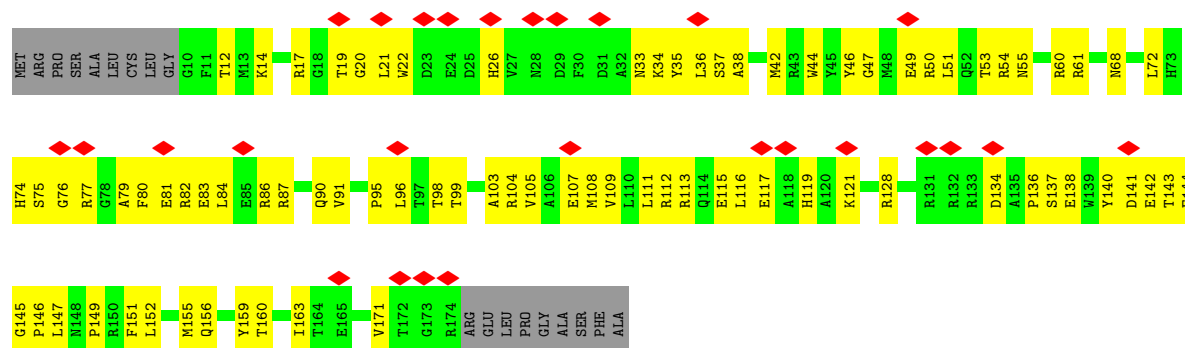
• Molecule 34: Peptidyl-prolyl cis-trans isomerase



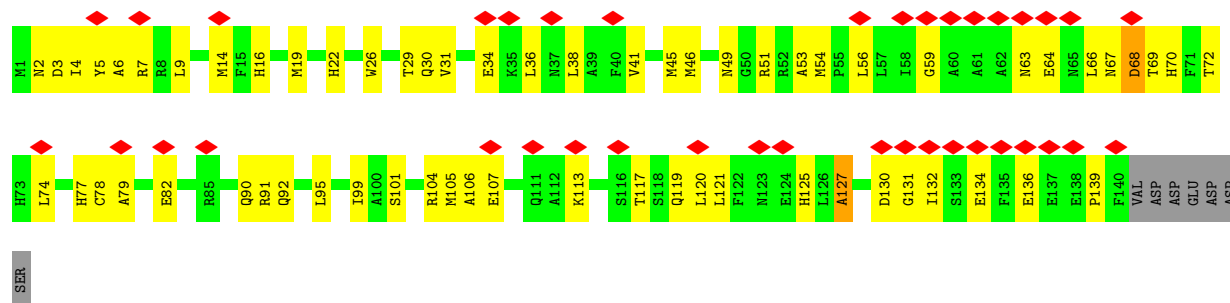
• Molecule 35: mL93



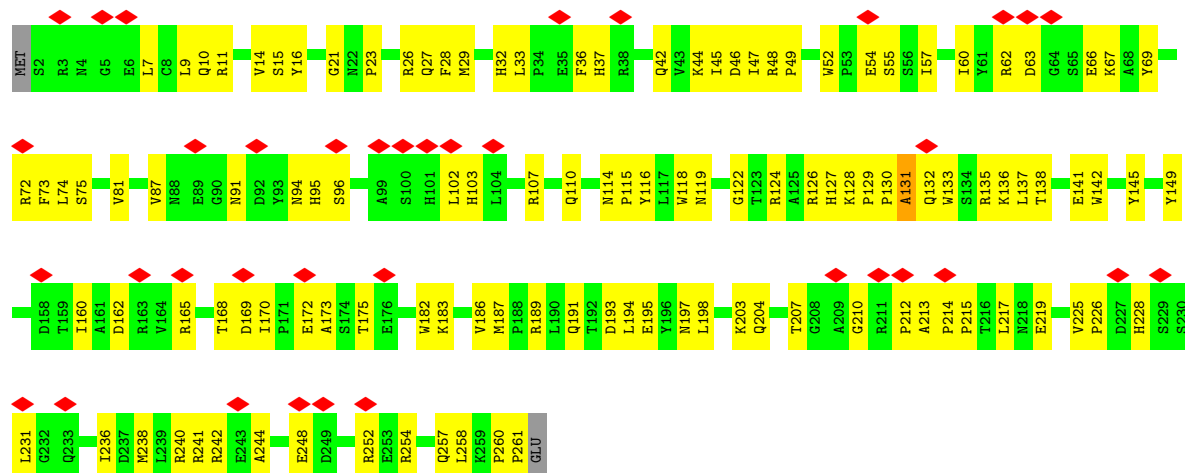
• Molecule 36: mL86



• Molecule 37: mL96

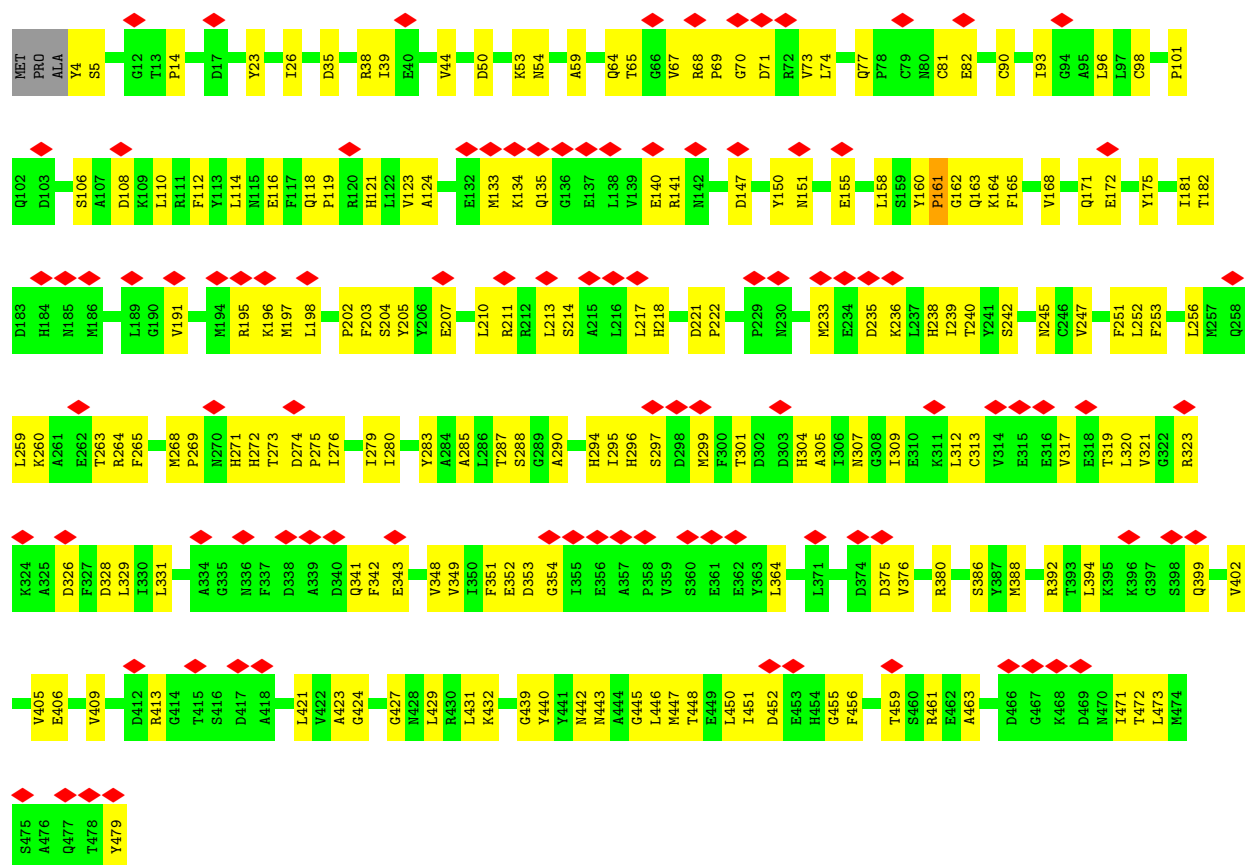


• Molecule 38: L51_S25_CI-B8 domain-containing protein

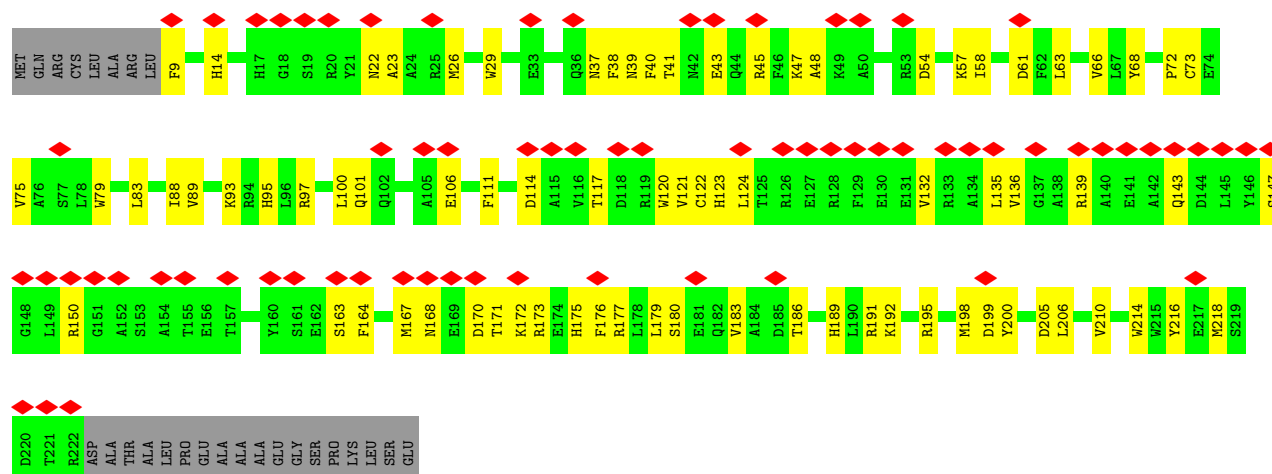


• Molecule 39: mL69



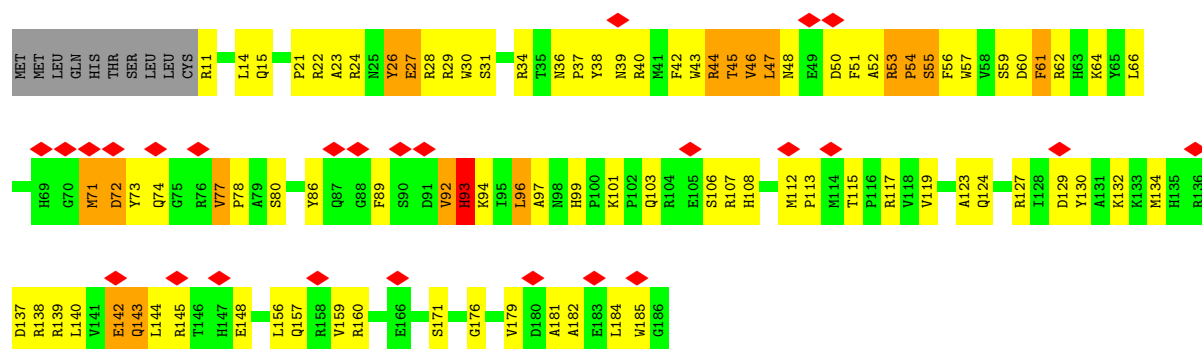


• Molecule 40: mL80

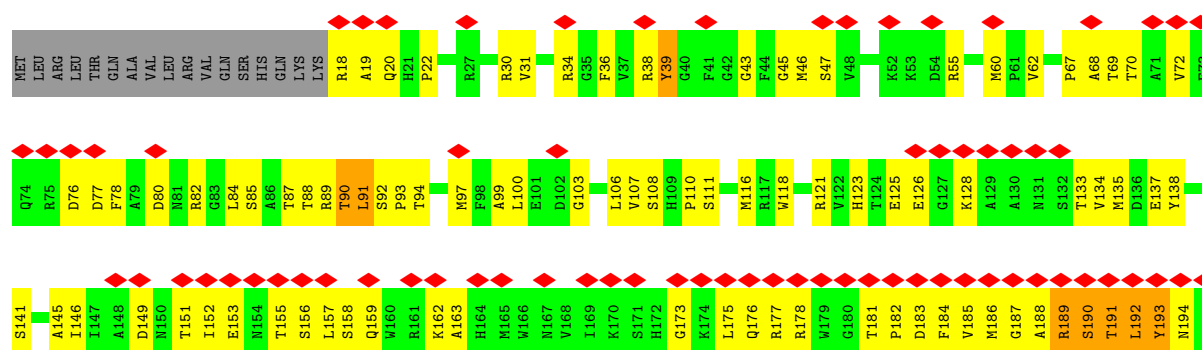


• Molecule 41: mL87

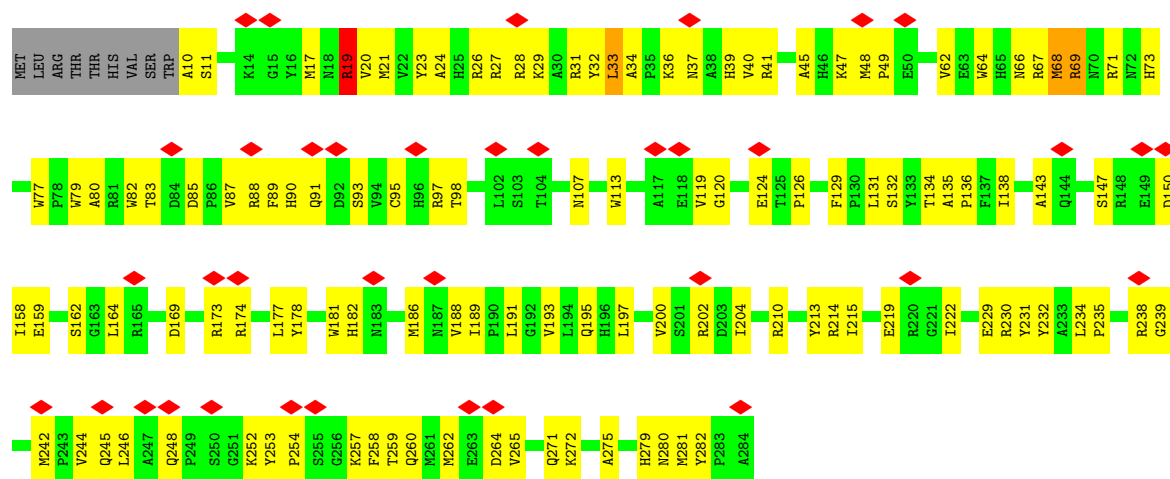




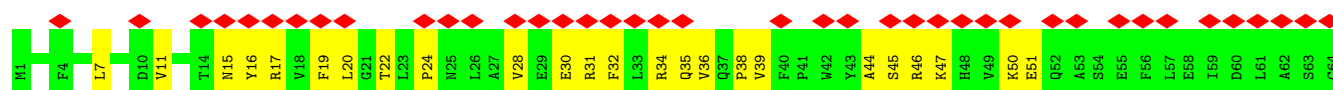
• Molecule 42: mL42

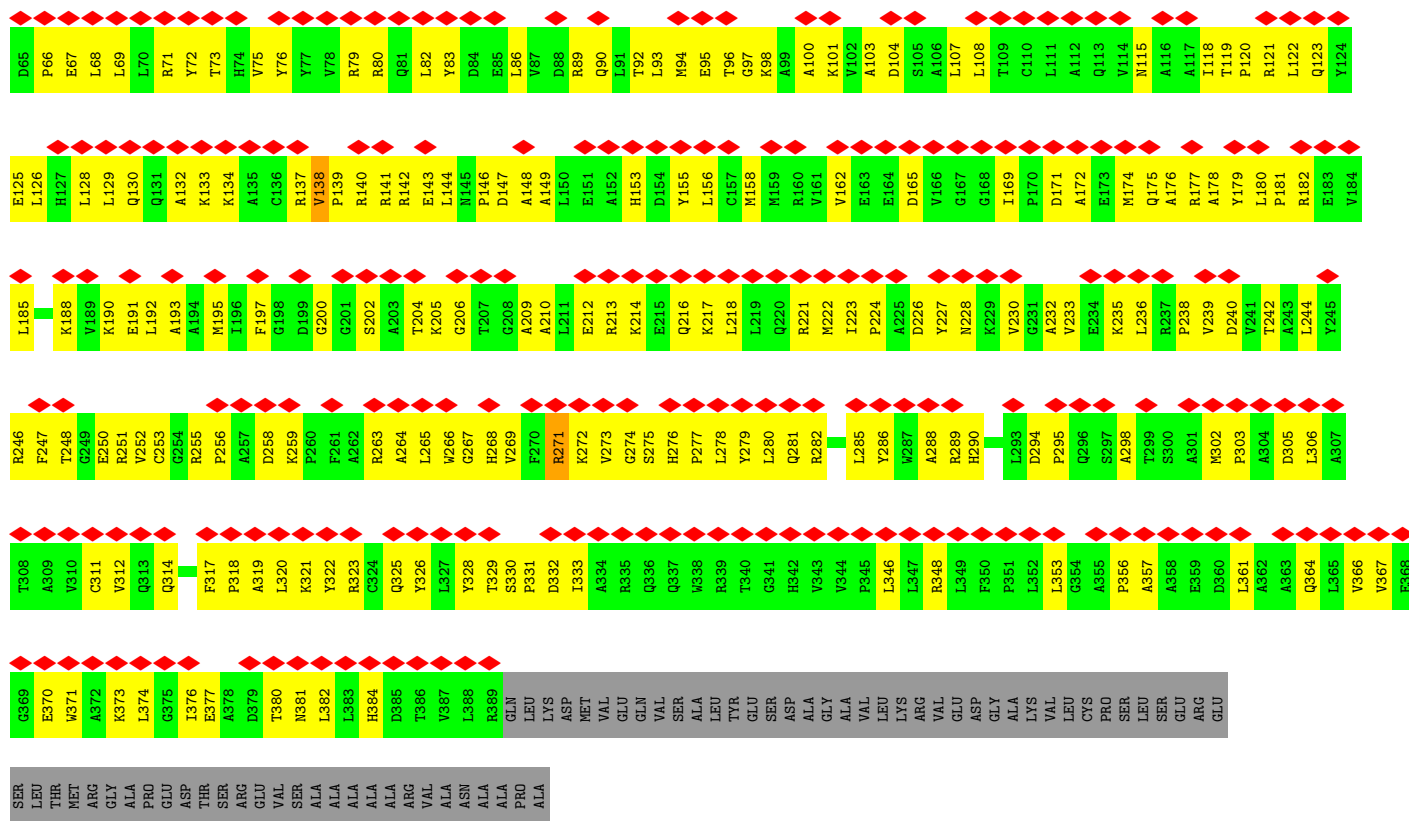


• Molecule 43: mL79

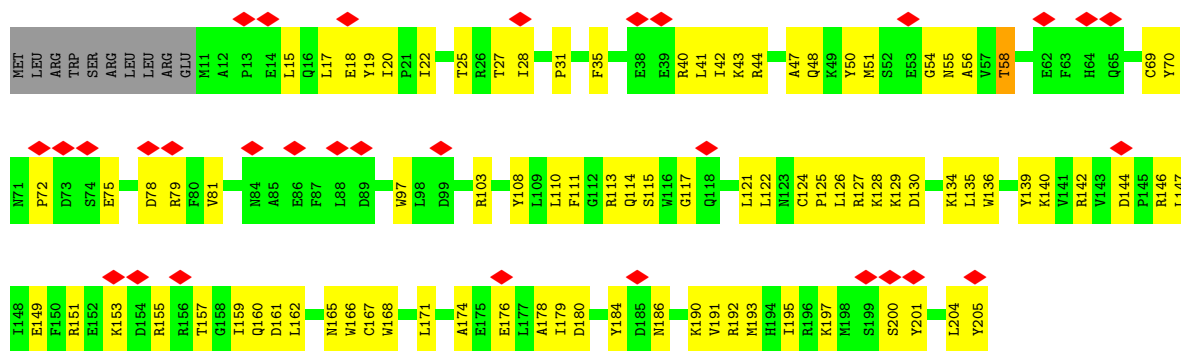


• Molecule 44: mL70

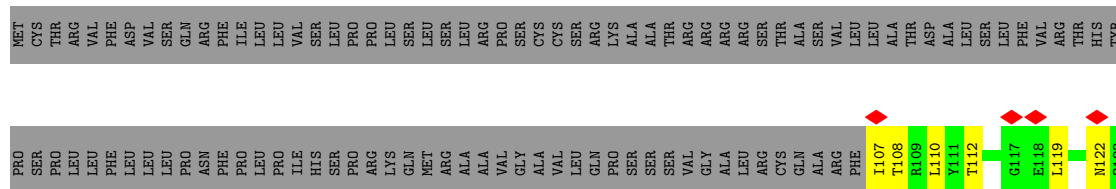


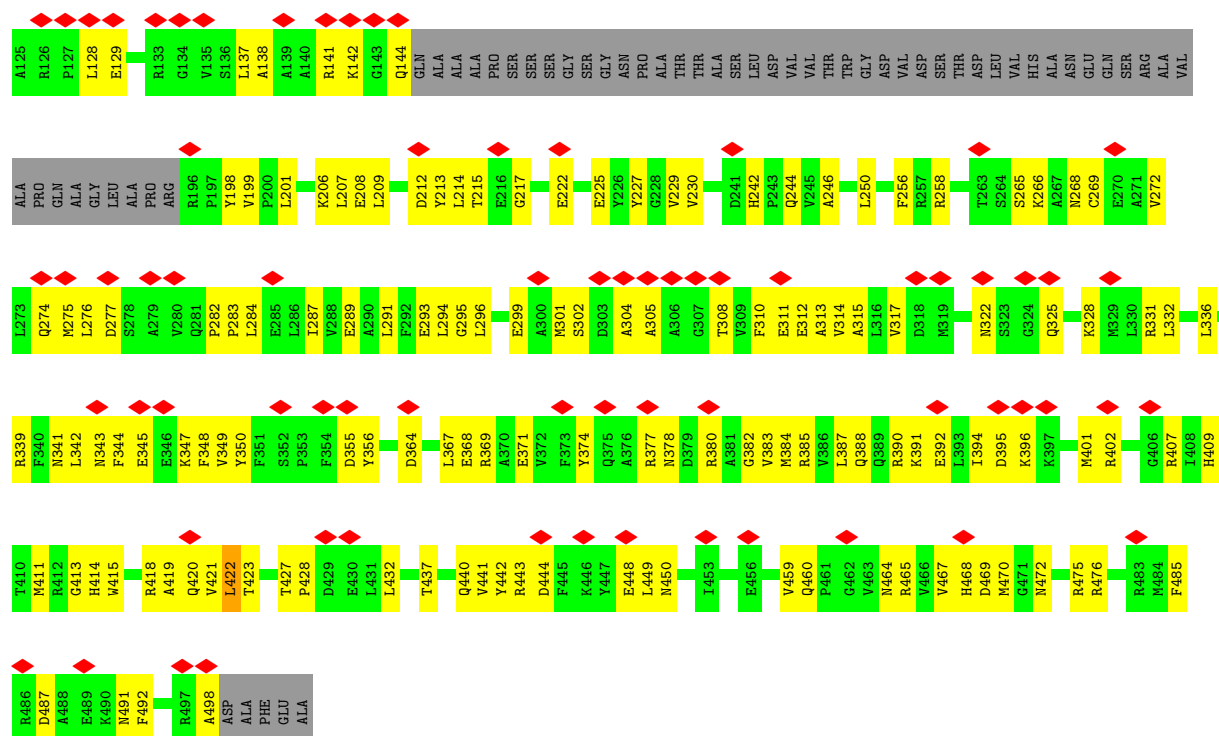


• Molecule 45: mL84

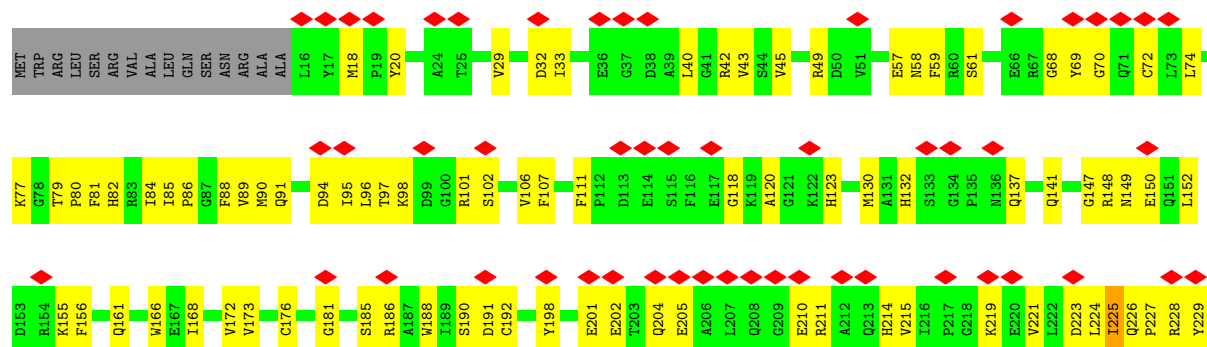


• Molecule 46: mL72

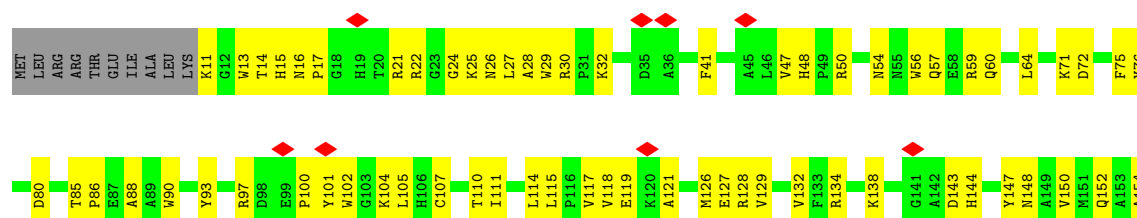




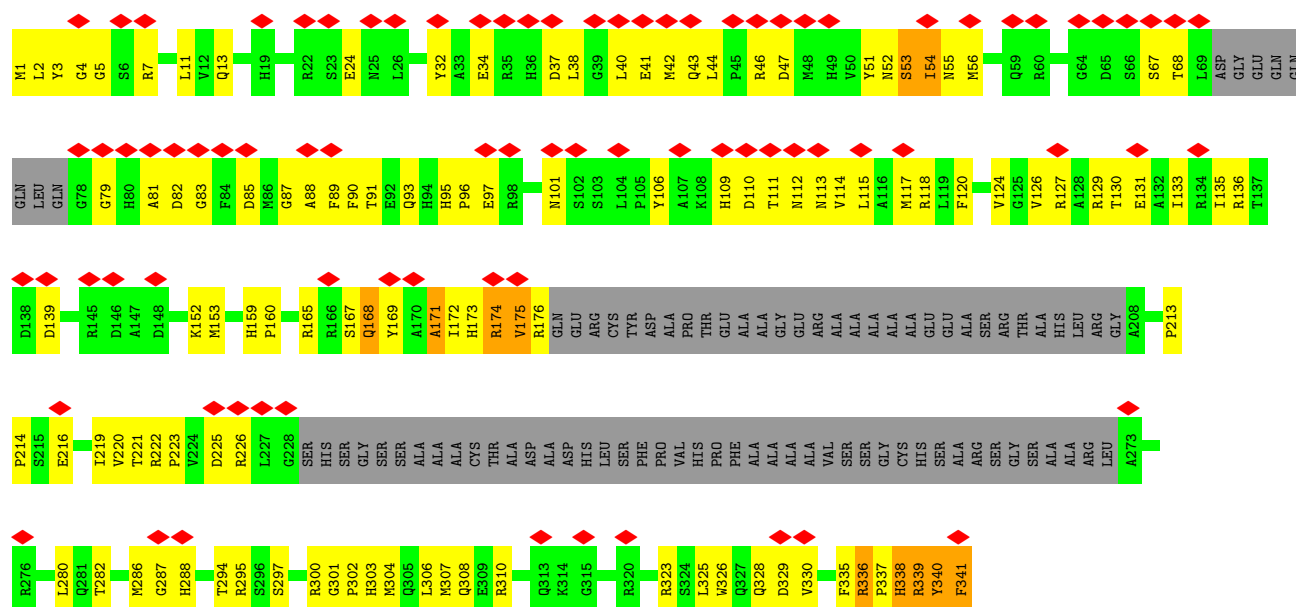
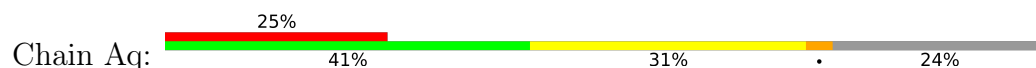
• Molecule 47: Peptidyl-prolyl cis-trans isomerase



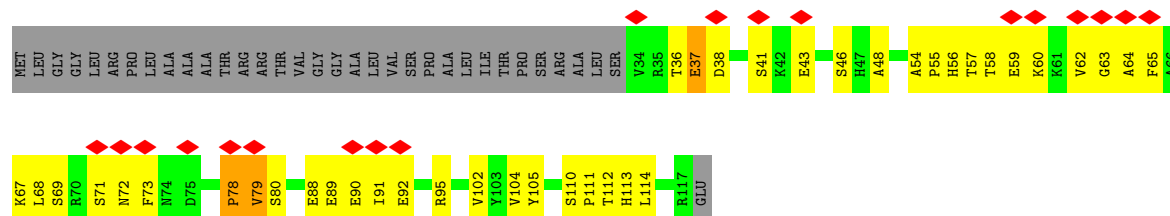
• Molecule 48: mL75



- Molecule 49: mL82

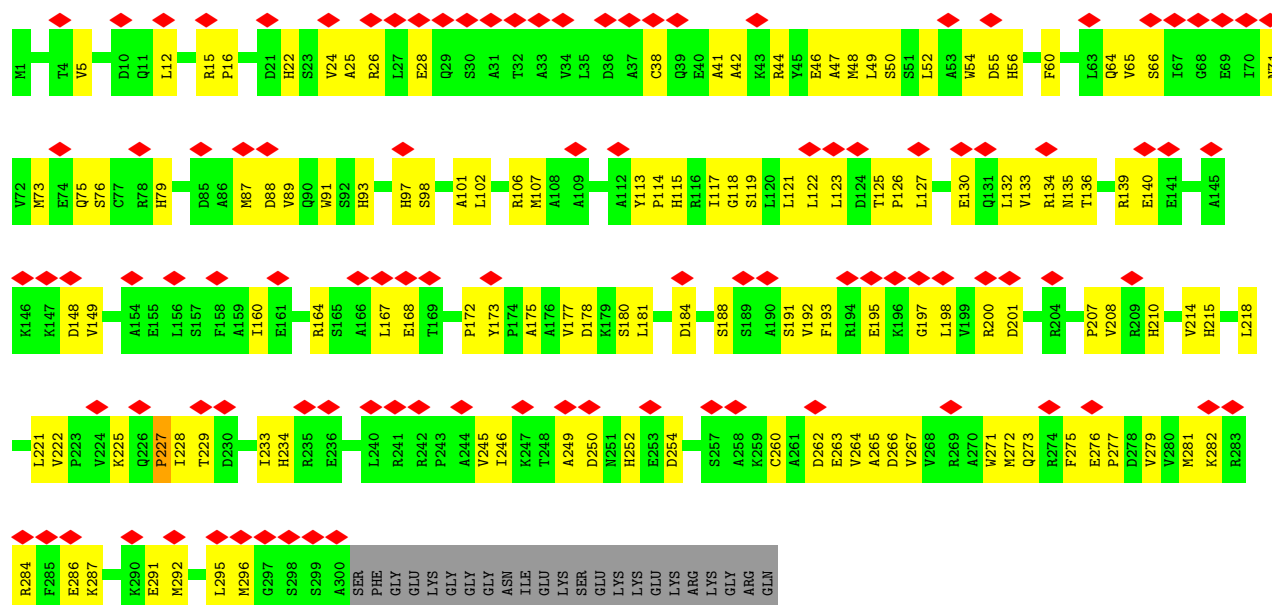


- Molecule 50: mL98

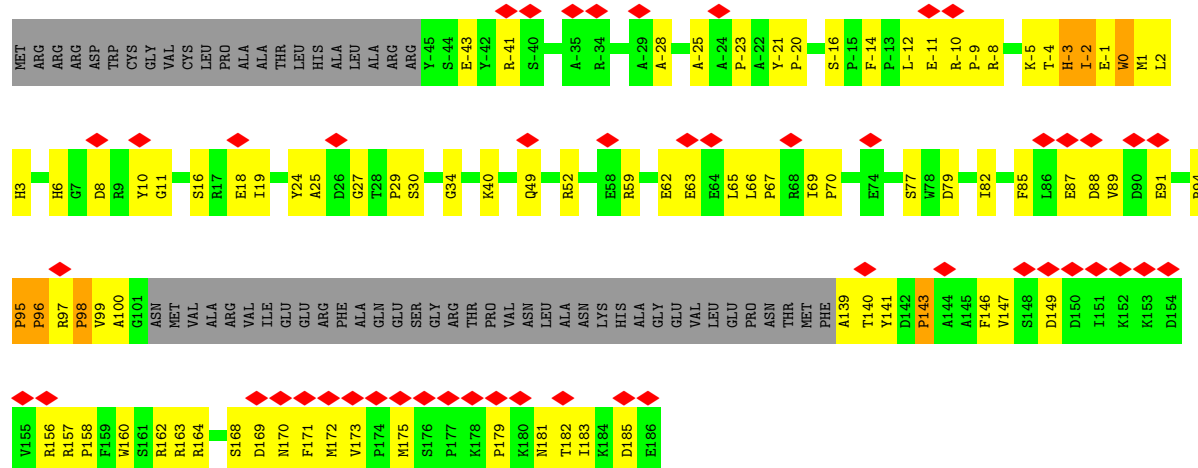
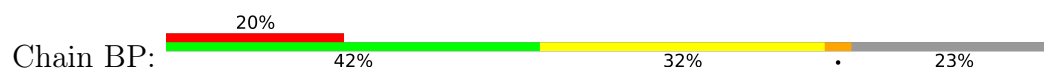


- Molecule 51: mL73

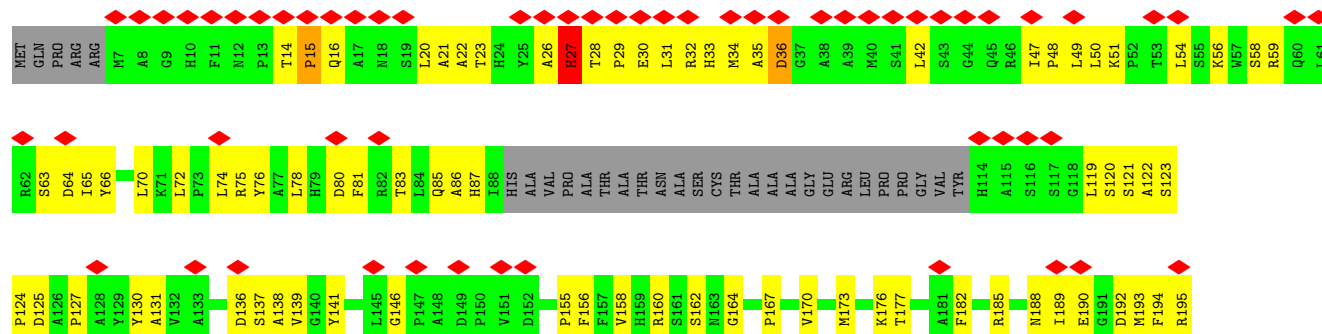
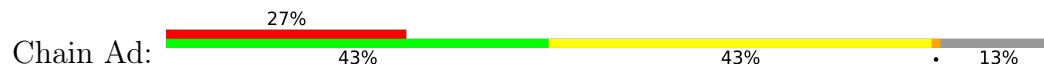


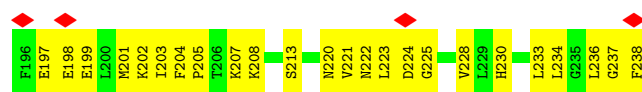


• Molecule 52: mL52,mL52

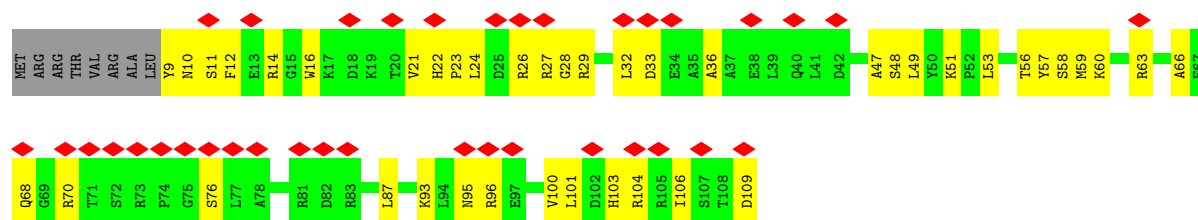


• Molecule 53: mL49

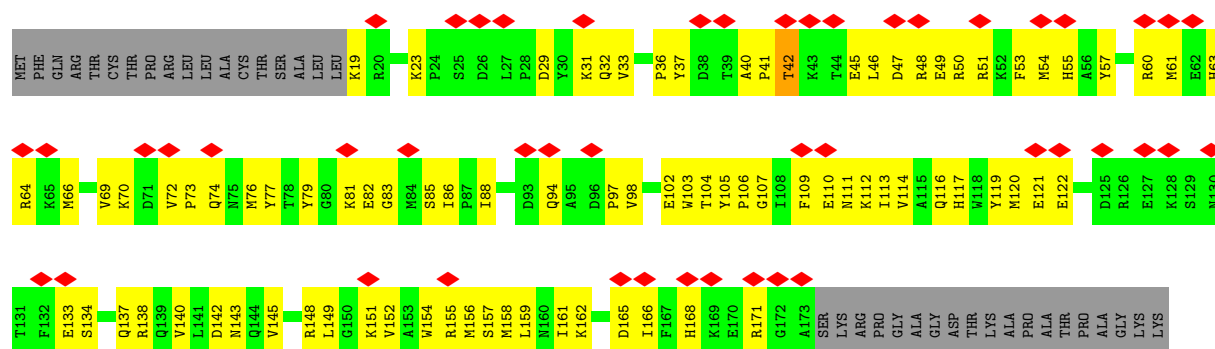




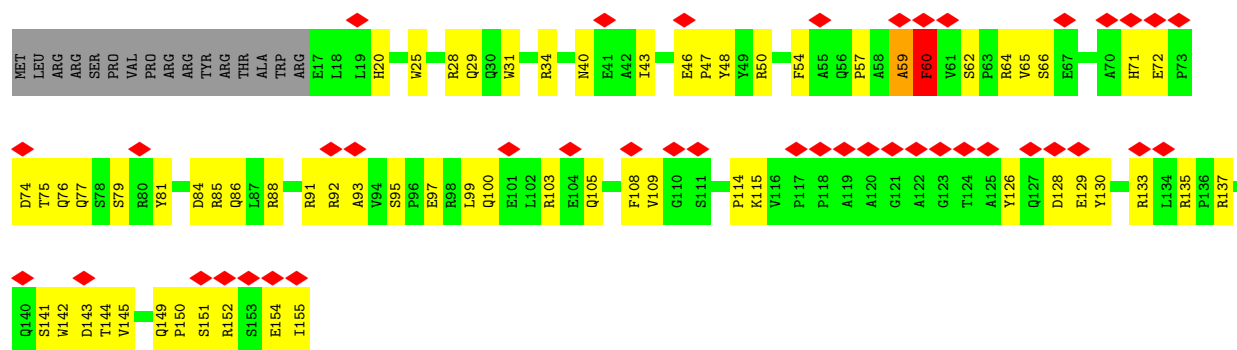
• Molecule 54: mL99



• Molecule 55: mL88

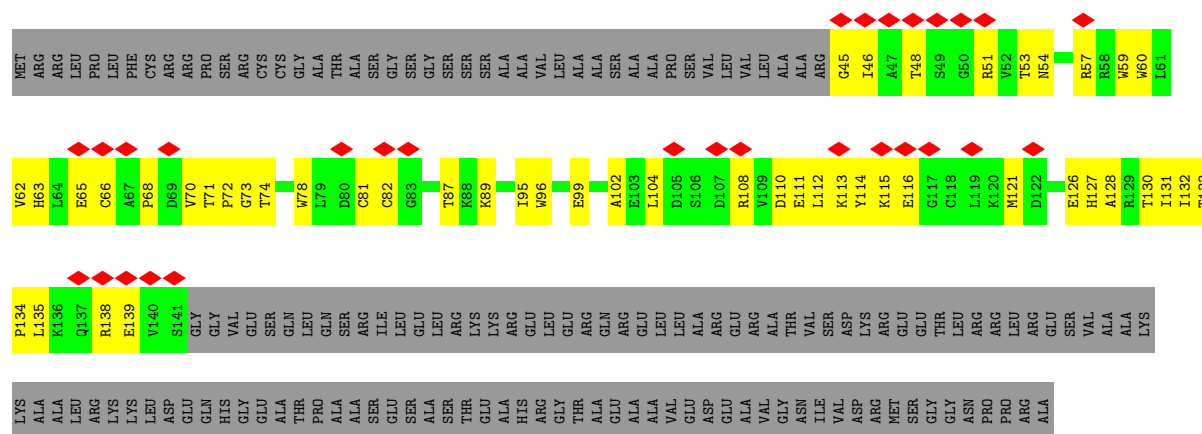


• Molecule 56: mL63

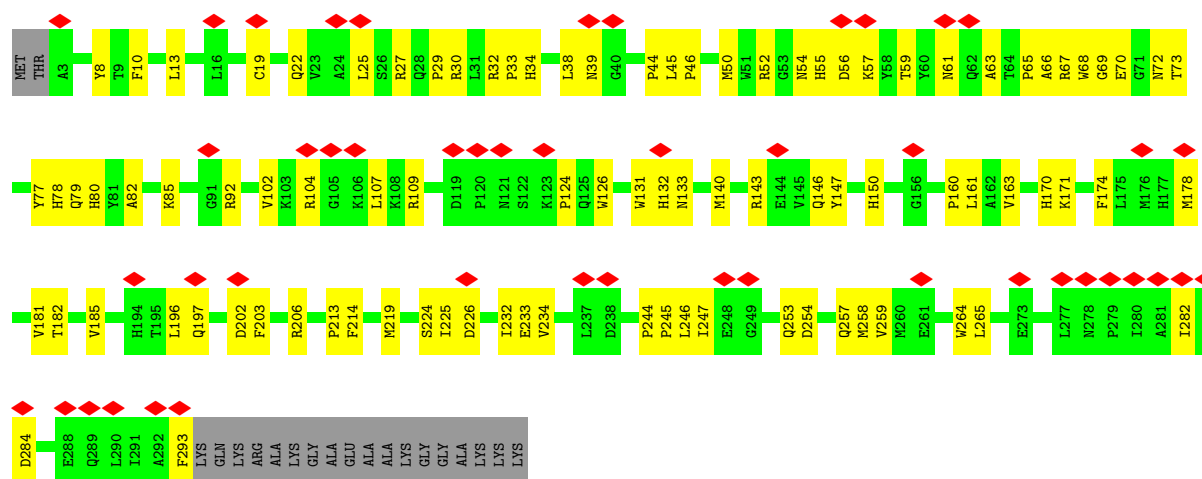


• Molecule 57: mL85

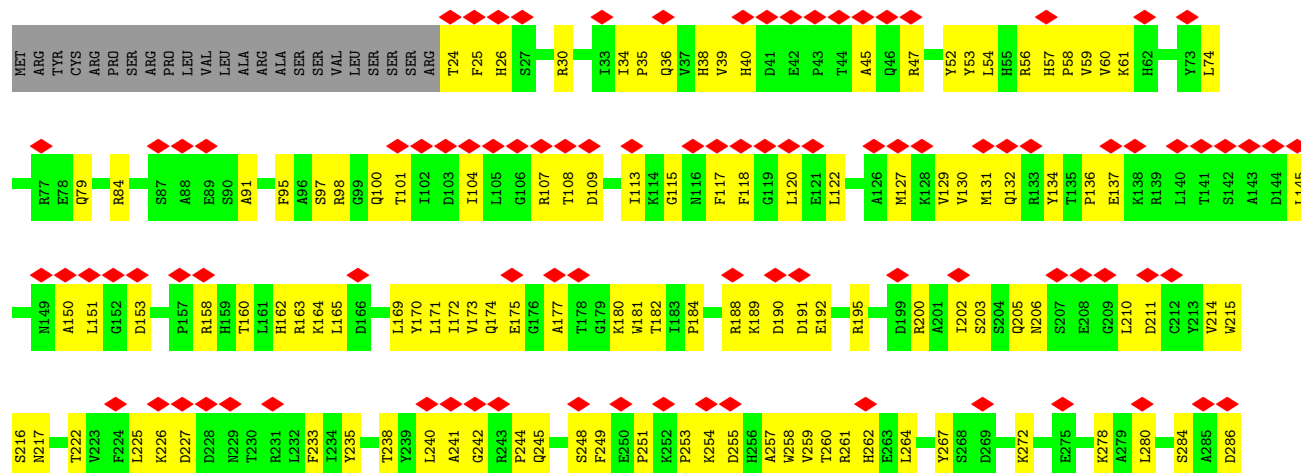




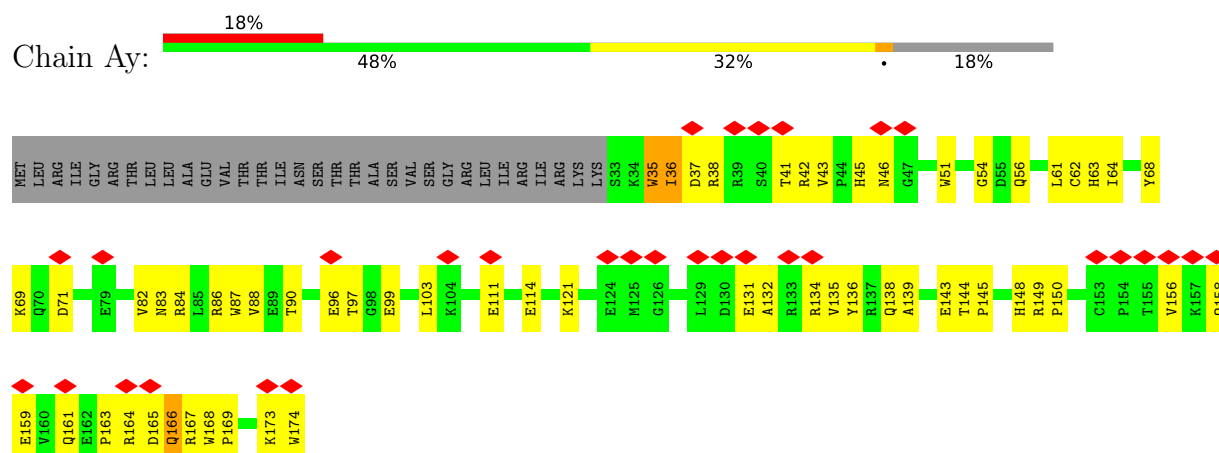
• Molecule 58: mL53



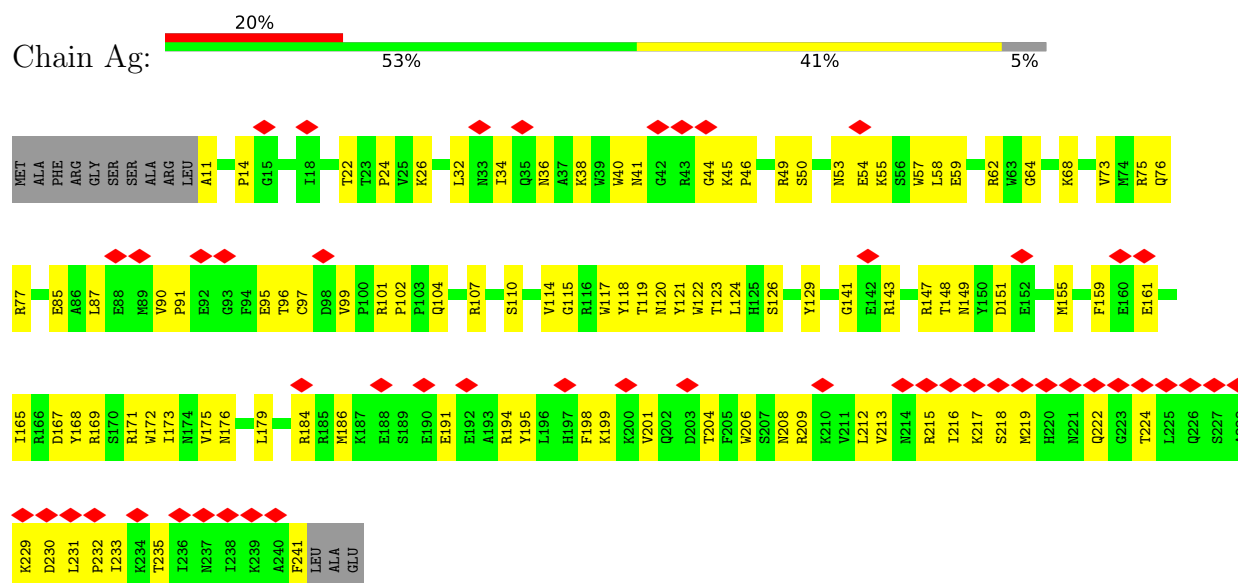
• Molecule 59: MRP-L46 domain-containing protein



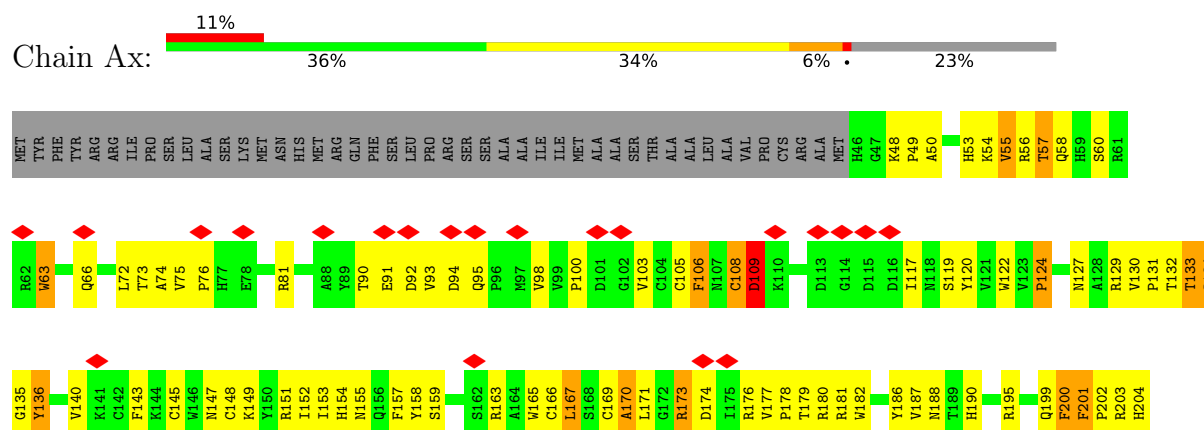
• Molecule 62: C2H2-type domain-containing protein

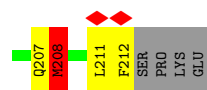


• Molecule 63: mL54/69

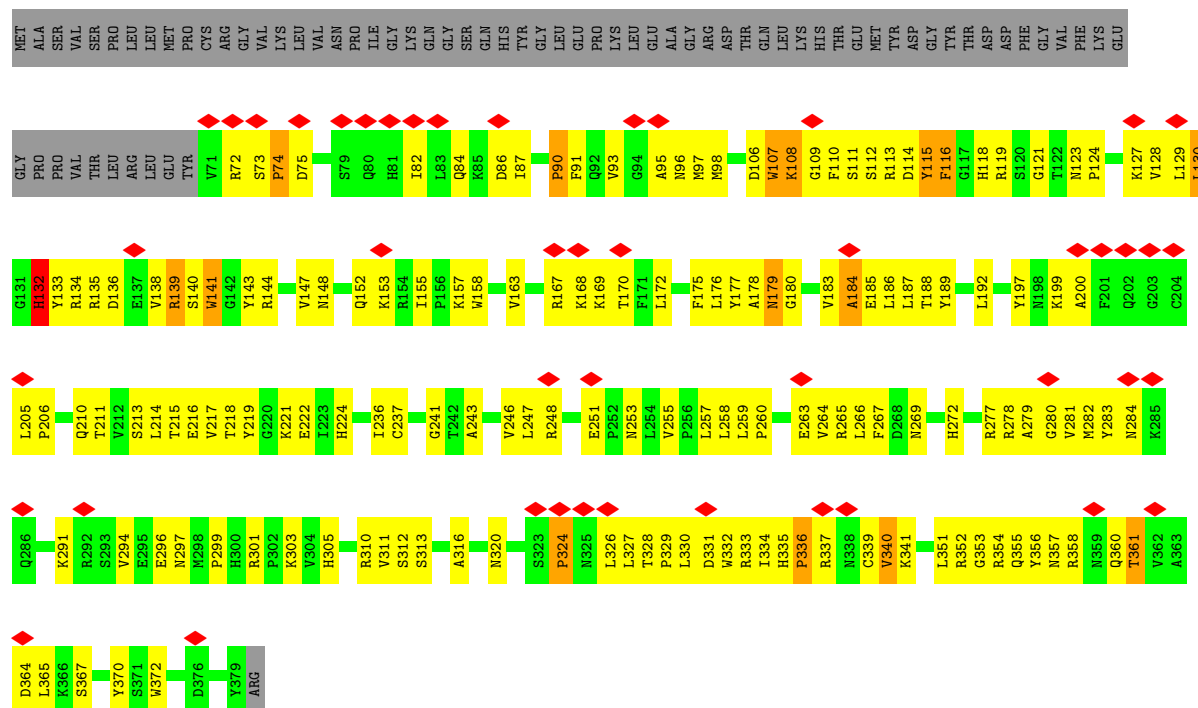


• Molecule 64: LIM zinc-binding domain-containing protein

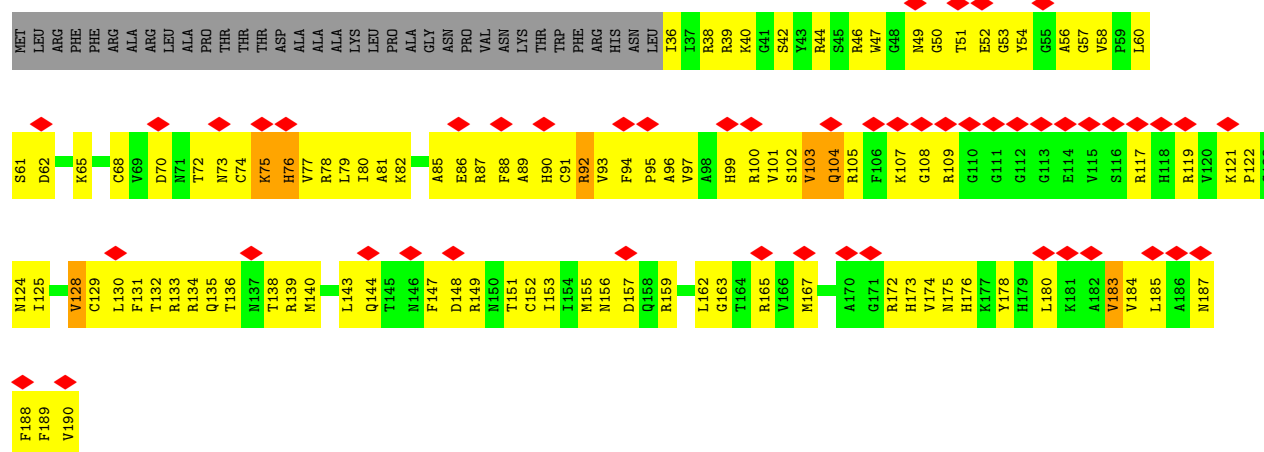




• Molecule 65: Putative ribosomal protein L2



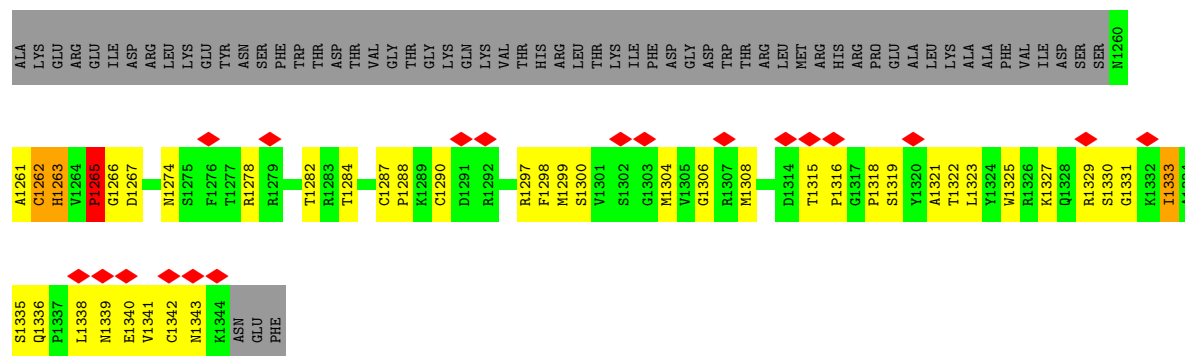
• Molecule 66: Putative ribosomal protein L14



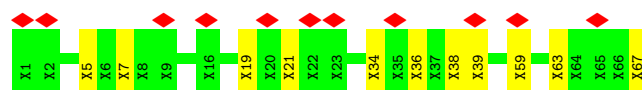
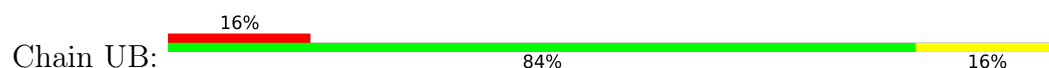
• Molecule 67: mL100



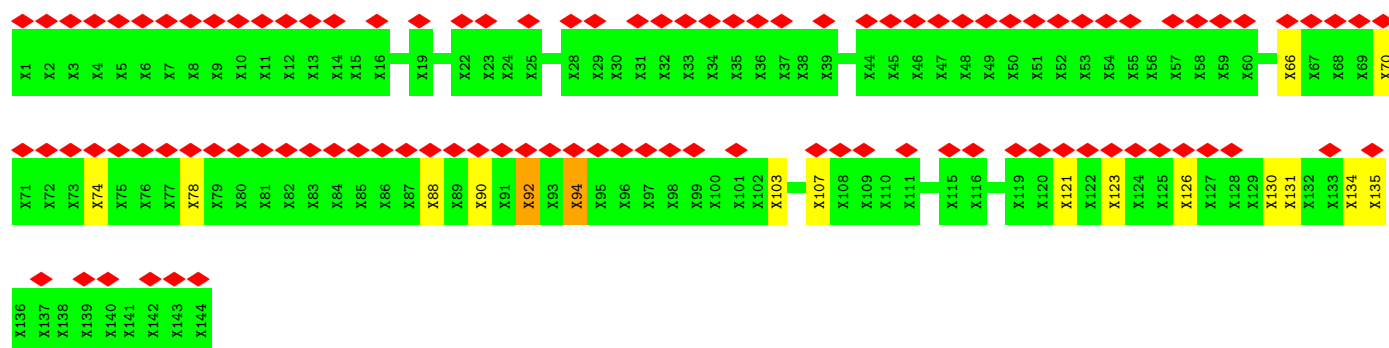
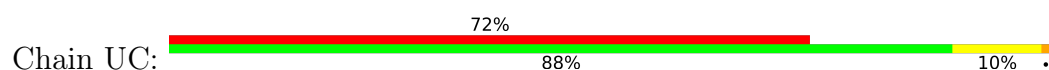




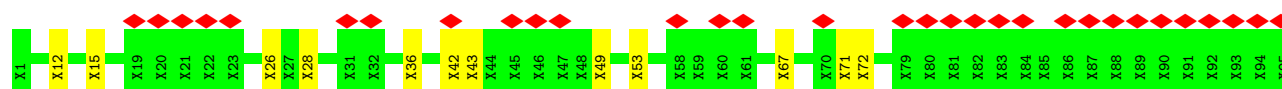
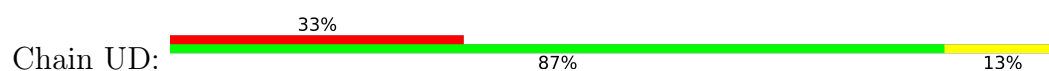
• Molecule 68: UB



• Molecule 69: UC



• Molecule 70: UD



• Molecule 71: Ribosomal RNA









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U U U G A U U U U U A U U U A C G A U U U U G U A A A U U U G A U U U A A A G U G G U A C U U A U A G

C A U A A A G C C U C A A U U U U G A A U U U U U A A A A U U U A U U U C A A A A A G C G A A A A A A A G

G C U U U A A C U U C A A G G U U U A U U U G C G U U A A G G U G G U U U A A G G U U U A G G U U U U

U A U U U G U A U G C A A U A A A U U U G U G U G U U U A G C A U U A U U U U A G U U U U A U

A U G U A C C U A A A U A U A U U U U G U U U U U G U A A U U U G A A U U U G G G U U U A A U C C G

A A G C A C A A U U U G U U U A C A A U U U G U U U U U U U C U U C U U U A U G U U C A U A A U U A





4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	82060	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TALOS ARCTICA	Depositor
Voltage (kV)	200	Depositor
Electron dose ($e^-/\text{\AA}^2$)	60	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	FEI FALCON III (4k x 4k)	Depositor
Maximum map value	0.245	Depositor
Minimum map value	-0.135	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.014	Depositor
Recommended contour level	0.06	Depositor
Map size (Å)	476.00003, 476.00003, 476.00003	wwPDB
Map dimensions	400, 400, 400	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.19, 1.19, 1.19	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: NAD, 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	A	0.51	0/3098	0.68	6/4217 (0.1%)
2	B	0.47	0/3623	0.59	3/4931 (0.1%)
3	C	0.44	0/1831	0.57	0/2498
4	D	0.41	0/1062	0.66	1/1438 (0.1%)
5	E	0.50	0/2734	0.77	4/3687 (0.1%)
6	F	0.51	0/1485	0.70	1/2019 (0.0%)
7	G	0.52	0/3110	0.77	7/4223 (0.2%)
8	H	0.40	0/1338	0.60	0/1808
9	I	0.45	0/2220	0.62	0/2998
10	J	0.48	0/1175	0.76	1/1582 (0.1%)
11	K	0.42	0/1499	0.52	0/2026
12	L	0.44	0/1452	0.53	0/1970
13	M	0.49	0/2168	0.75	9/2928 (0.3%)
14	N	0.46	0/1650	0.54	0/2242
15	O	0.38	0/2591	0.60	2/3507 (0.1%)
16	P	0.45	0/1402	0.60	0/1892
17	Q	0.47	0/1827	0.58	0/2463
18	R	0.44	0/3852	0.64	4/5243 (0.1%)
19	S	0.44	0/1271	0.52	0/1712
20	T	0.43	0/501	0.52	0/665
21	U	0.60	0/756	1.00	4/1011 (0.4%)
22	V	0.50	0/1231	0.68	0/1645
23	W	0.64	0/483	1.00	1/657 (0.2%)
24	X	0.49	0/3846	0.72	3/5250 (0.1%)
25	Y	0.36	0/2116	0.53	0/2866
26	Z	0.51	0/1268	0.92	7/1725 (0.4%)
27	BA	0.36	0/1056	0.68	0/1435
29	BB	0.49	0/1061	0.80	3/1438 (0.2%)
30	Aw	0.44	0/1552	0.57	0/2107
31	Bj	0.37	0/1389	0.51	0/1878
32	An	0.54	0/2677	0.93	8/3633 (0.2%)
33	Al	0.46	0/2212	0.67	3/3013 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
34	BI	0.35	0/1440	0.48	0/1953
35	Az	0.52	0/1259	0.61	0/1700
36	At	0.41	0/1373	0.53	0/1848
37	BC	0.39	0/1135	0.56	1/1532 (0.1%)
38	Ab	0.42	0/2249	0.51	1/3044 (0.0%)
39	Ai	0.42	0/3879	0.49	0/5258
40	Ap	0.33	0/1819	0.48	0/2458
41	Au	0.54	0/1542	0.93	6/2082 (0.3%)
42	Aa	0.62	1/1454 (0.1%)	0.93	9/1968 (0.5%)
43	Ao	0.47	0/2351	0.73	2/3196 (0.1%)
44	BM	0.26	0/3136	0.59	1/4259 (0.0%)
45	Ar	0.47	0/1689	0.56	1/2280 (0.0%)
46	Aj	0.40	0/2826	0.50	0/3807
47	BH	0.42	0/1700	0.54	0/2301
48	Am	0.42	0/2791	0.55	2/3775 (0.1%)
49	Aq	0.46	0/2128	0.76	2/2876 (0.1%)
50	BE	0.38	0/723	0.75	0/981
51	Ak	0.31	0/2403	0.50	0/3265
52	BP	0.46	0/1648	0.78	7/2238 (0.3%)
53	Ad	0.48	0/1682	0.70	0/2283
54	BF	0.38	0/871	0.61	0/1170
55	Av	0.34	0/1335	0.49	0/1797
56	Af	0.45	0/1165	0.92	3/1585 (0.2%)
57	As	0.37	0/804	0.48	0/1093
58	Ae	0.41	0/2441	0.51	0/3324
59	Ac	0.34	0/2236	0.49	0/3038
60	Ah	0.39	0/3780	0.62	2/5125 (0.0%)
61	BD	0.44	0/826	0.53	0/1109
62	Ay	0.51	0/1269	0.74	2/1724 (0.1%)
63	Ag	0.46	0/1968	0.58	0/2661
64	Ax	0.65	0/1439	1.11	15/1952 (0.8%)
65	BL	0.52	0/2572	0.86	8/3482 (0.2%)
66	BO	0.48	0/1266	0.86	0/1702
67	BG	0.48	0/657	0.98	4/888 (0.5%)
71	1	0.46	1/25626 (0.0%)	0.59	20/39842 (0.1%)
All	All	0.45	2/147018 (0.0%)	0.65	153/204303 (0.1%)

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
3	C	0	1
9	I	0	1
12	L	0	1
18	R	0	1
26	Z	0	1
27	BA	0	2
28	UA	0	2
29	BB	0	2
31	Bj	0	1
32	An	0	2
41	Au	0	3
43	Ao	0	1
48	Am	0	1
49	Aq	0	2
50	BE	0	3
51	Ak	0	1
53	Ad	0	1
56	Af	0	1
65	BL	0	3
66	BO	0	5
69	UC	0	2
70	UD	0	1
All	All	0	38

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
42	Aa	193	TYR	N-CA	15.63	1.66	1.46
71	1	482	C	C1'-N1	5.46	1.56	1.48

All (153) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	Af	60	PHE	N-CA-C	-18.27	81.82	110.14
42	Aa	91	LEU	N-CA-C	-15.60	88.17	109.54
7	G	214	PRO	N-CA-C	-12.90	91.32	110.80
56	Af	59	ALA	N-CA-C	-11.87	86.89	108.02
6	F	158	PRO	N-CA-C	-11.03	93.84	111.38
52	BP	-3	HIS	CB-CA-C	10.32	130.95	110.42
71	1	282	U	C4'-C3'-O3'	-9.92	94.52	109.40
52	BP	-2	ILE	N-CA-C	9.20	122.59	111.09
48	Am	324	ILE	CA-C-N	8.99	138.01	120.94
48	Am	324	ILE	C-N-CA	8.99	138.01	120.94

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
71	1	146	U	N1-C1'-C2'	-8.96	98.56	112.00
41	Au	138	ARG	N-CA-C	-8.78	102.34	113.23
67	BG	1261	ALA	CA-C-N	-8.59	111.34	121.64
67	BG	1261	ALA	C-N-CA	-8.59	111.34	121.64
24	X	353	PRO	CB-CA-C	8.45	125.50	111.56
43	Ao	68	MET	N-CA-C	-8.42	101.68	111.03
42	Aa	192	LEU	CA-C-N	8.32	137.43	121.54
42	Aa	192	LEU	C-N-CA	8.32	137.43	121.54
71	1	934	G	C1'-C2'-O2'	-8.26	96.01	108.40
13	M	14	PRO	N-CA-CB	-8.25	94.59	103.25
52	BP	95	PRO	O-C-N	8.09	125.03	121.31
56	Af	59	ALA	CB-CA-C	8.07	122.81	110.62
15	O	26	MET	N-CA-C	-8.05	98.56	110.23
7	G	346	HIS	N-CA-C	-7.99	97.58	110.20
71	1	858	A	C2'-C3'-O3'	7.95	121.42	109.50
71	1	906	C	C4'-C3'-O3'	-7.92	97.52	109.40
64	Ax	201	PHE	CB-CA-C	-7.84	98.18	112.76
5	E	332	ALA	N-CA-C	-7.82	103.74	113.28
21	U	25	PHE	CB-CA-C	-7.68	100.99	111.89
41	Au	53	ARG	CA-C-N	7.66	129.41	119.84
41	Au	53	ARG	C-N-CA	7.66	129.41	119.84
24	X	353	PRO	N-CA-CB	-7.53	95.34	103.25
65	BL	108	LYS	N-CA-C	-7.49	97.47	109.76
7	G	149	PRO	N-CA-CB	-7.49	95.39	103.25
71	1	511	A	C2'-C3'-O3'	7.39	120.59	109.50
10	J	66	PRO	N-CA-CB	-7.36	95.52	103.25
24	X	353	PRO	CA-N-CD	-7.33	101.74	112.00
65	BL	107	TRP	CB-CA-C	7.31	122.72	110.43
26	Z	29	PRO	CB-CA-C	-7.27	101.50	113.06
64	Ax	54	LYS	N-CA-C	-7.08	101.61	111.52
26	Z	42	ASN	N-CA-C	-7.05	103.52	111.14
71	1	511	A	C4'-C3'-O3'	-7.05	98.83	109.40
42	Aa	192	LEU	N-CA-CB	-6.98	100.38	110.65
5	E	171	PRO	N-CA-C	-6.96	102.20	110.70
44	BM	271	ARG	CB-CA-C	6.92	121.01	109.38
2	B	402	HIS	CA-C-N	6.92	127.34	119.93
2	B	402	HIS	C-N-CA	6.92	127.34	119.93
26	Z	43	ILE	N-CA-C	-6.89	99.71	109.63
41	Au	44	ARG	N-CA-C	-6.88	101.45	110.53
52	BP	95	PRO	CA-C-N	6.82	128.36	119.84
52	BP	95	PRO	C-N-CA	6.82	128.36	119.84
1	A	290	MET	CB-CA-C	6.80	123.96	110.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
33	Al	280	ARG	CB-CA-C	-6.80	101.71	112.05
41	Au	142	GLU	N-CA-C	-6.77	104.99	113.18
23	W	92	HIS	CB-CA-C	6.73	116.86	111.00
15	O	23	GLN	N-CA-C	-6.71	105.53	113.38
49	Aq	340	TYR	CB-CA-C	6.63	121.47	111.80
64	Ax	133	THR	N-CA-C	-6.57	104.12	111.28
65	BL	90	PRO	N-CA-C	-6.54	100.80	111.21
71	1	41	A	C2'-C3'-O3'	-6.54	103.89	113.70
13	M	5	ALA	CA-C-N	6.49	127.96	119.84
13	M	5	ALA	C-N-CA	6.49	127.96	119.84
26	Z	27	ASP	N-CA-C	-6.44	107.27	114.62
32	An	75	TRP	N-CA-C	-6.41	104.29	111.28
1	A	376	SER	CA-C-N	6.41	126.98	120.38
1	A	376	SER	C-N-CA	6.41	126.98	120.38
4	D	86	PHE	N-CA-C	-6.39	104.23	111.07
71	1	146	U	C4'-C3'-O3'	-6.39	103.42	113.00
13	M	7	ARG	N-CA-C	-6.37	104.43	111.82
64	Ax	170	ALA	N-CA-C	-6.33	105.41	113.01
21	U	37	ASN	CB-CA-C	6.32	121.59	110.85
41	Au	143	GLN	N-CA-C	-6.27	105.20	112.92
7	G	134	ARG	N-CA-C	-6.27	105.95	113.97
1	A	291	ALA	N-CA-C	-6.17	101.38	110.52
62	Ay	163	PRO	N-CA-C	-6.08	101.92	111.34
29	BB	112	LEU	CA-C-N	6.07	126.04	120.03
29	BB	112	LEU	C-N-CA	6.07	126.04	120.03
62	Ay	169	PRO	N-CA-C	-6.03	100.04	112.47
64	Ax	109	ASP	CB-CA-C	6.01	118.71	110.06
18	R	395	LYS	CB-CA-C	-5.94	99.58	109.55
64	Ax	106	PHE	CB-CA-C	-5.87	101.63	110.90
21	U	31	PRO	CB-CA-C	-5.86	102.95	112.62
71	1	858	A	C4'-C3'-O3'	5.85	118.18	109.40
29	BB	14	GLU	N-CA-C	-5.84	104.87	112.23
32	An	137	GLU	N-CA-C	-5.84	104.91	111.28
38	Ab	131	ALA	N-CA-C	-5.84	106.49	113.21
5	E	330	GLY	N-CA-C	-5.78	106.98	115.30
64	Ax	124	PRO	N-CA-C	-5.76	100.61	112.47
64	Ax	170	ALA	CA-C-N	-5.74	112.33	122.26
64	Ax	170	ALA	C-N-CA	-5.74	112.33	122.26
26	Z	43	ILE	CA-C-O	-5.73	115.05	121.36
65	BL	130	LEU	N-CA-C	-5.71	99.07	108.49
67	BG	1265	PRO	N-CA-CB	5.71	109.24	103.25
42	Aa	91	LEU	N-CA-CB	5.70	125.48	111.74

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
13	M	9	ASN	CA-C-N	-5.69	115.68	123.14
13	M	9	ASN	C-N-CA	-5.69	115.68	123.14
52	BP	98	PRO	CB-CA-C	-5.69	104.12	111.46
52	BP	143	PRO	N-CA-C	-5.69	106.44	113.84
21	U	95	LYS	N-CA-C	-5.66	106.42	113.15
13	M	9	ASN	CB-CA-C	-5.65	103.54	111.85
71	1	239	U	C4'-C3'-O3'	5.65	117.87	109.40
7	G	136	GLY	CA-C-O	-5.61	118.28	122.37
67	BG	1262	CYS	N-CA-C	5.61	117.73	108.48
64	Ax	108	CYS	CB-CA-C	5.58	119.00	109.24
32	An	48	HIS	CA-C-N	5.58	132.19	121.54
32	An	48	HIS	C-N-CA	5.58	132.19	121.54
65	BL	139	ARG	N-CA-C	5.57	117.44	111.36
32	An	76	LYS	N-CA-C	-5.55	103.38	110.53
60	Ah	66	LYS	N-CA-C	-5.53	100.66	109.23
71	1	416	A	C2'-C3'-O3'	5.53	117.79	109.50
7	G	345	TRP	N-CA-C	-5.51	105.17	111.07
71	1	906	C	C2'-C3'-O3'	-5.48	101.28	109.50
64	Ax	200	PHE	CB-CA-C	5.48	125.72	113.33
18	R	392	THR	N-CA-C	-5.47	105.33	112.23
5	E	162	GLN	CB-CA-C	5.45	119.21	110.16
33	Al	287	TRP	N-CA-C	-5.44	105.78	112.90
64	Ax	169	CYS	CB-CA-C	-5.43	101.61	110.85
13	M	17	LYS	CA-C-N	5.43	131.91	121.54
13	M	17	LYS	C-N-CA	5.43	131.91	121.54
42	Aa	90	THR	N-CA-C	5.42	122.34	110.80
42	Aa	192	LEU	O-C-N	5.42	129.01	122.35
71	1	859	U	C2'-C3'-O3'	-5.40	105.59	113.70
37	BC	127	ALA	N-CA-C	-5.40	105.50	112.68
18	R	132	PRO	CB-CA-C	-5.38	104.51	113.06
32	An	76	LYS	CA-C-O	-5.38	115.76	121.94
1	A	383	PHE	N-CA-C	-5.37	102.34	110.24
32	An	79	HIS	N-CA-C	-5.35	105.45	111.28
71	1	146	U	C2'-C3'-O3'	-5.31	105.74	113.70
71	1	905	A	C2'-C3'-O3'	5.23	117.35	109.50
65	BL	184	ALA	CA-C-N	-5.22	114.13	122.17
65	BL	184	ALA	C-N-CA	-5.22	114.13	122.17
71	1	146	U	C3'-C2'-O2'	5.22	118.53	110.70
1	A	289	ARG	CA-C-O	-5.21	115.53	121.00
26	Z	45	ARG	N-CA-C	-5.21	106.02	112.38
2	B	407	GLU	N-CA-C	-5.21	106.99	113.19
60	Ah	66	LYS	CA-C-O	-5.21	115.01	121.06

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
49	Aq	79	GLY	N-CA-C	-5.20	108.51	115.32
64	Ax	207	GLN	N-CA-C	-5.19	106.53	112.92
64	Ax	208	MET	N-CA-C	-5.17	105.76	111.71
43	Ao	69	ARG	N-CA-C	-5.17	103.21	110.50
26	Z	40	THR	N-CA-C	-5.14	107.37	113.38
42	Aa	45	GLY	CA-C-O	-5.14	117.87	121.88
18	R	367	ALA	N-CA-C	-5.12	106.81	113.16
42	Aa	190	SER	N-CA-C	-5.10	104.39	111.28
33	Al	38	VAL	N-CA-C	-5.10	107.33	112.17
65	BL	132	HIS	CB-CA-C	-5.08	102.91	110.88
71	1	282	U	C2'-C3'-O3'	5.07	117.11	109.50
32	An	72	ALA	N-CA-C	-5.07	107.05	113.43
64	Ax	149	LYS	CB-CA-C	5.04	120.58	111.06
71	1	860	U	C2'-C3'-O3'	-5.03	106.16	113.70
7	G	151	PHE	CA-CB-CG	5.03	118.83	113.80
45	Ar	117	GLY	CA-C-O	-5.02	117.66	122.13
71	1	41	A	N9-C1'-C2'	-5.01	104.49	112.00

There are no chirality outliers.

All (38) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
53	Ad	36	ASP	Peptide
56	Af	60	PHE	Peptide
51	Ak	227	PRO	Peptide
48	Am	329	PRO	Peptide
32	An	49	SER	Peptide
32	An	50	HIS	Peptide
43	Ao	19	ARG	Peptide
49	Aq	171	ALA	Peptide
49	Aq	174	ARG	Peptide
41	Au	26	TYR	Peptide
41	Au	55	SER	Peptide
41	Au	61	PHE	Peptide
27	BA	139	THR	Peptide
27	BA	141	VAL	Peptide
29	BB	129	THR	Peptide
29	BB	55	GLN	Peptide
50	BE	69	SER	Peptide
50	BE	78	PRO	Peptide
50	BE	79	VAL	Peptide
65	BL	178	ALA	Peptide

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Mol	Chain	Res	Type	Group
65	BL	179	ASN	Peptide
65	BL	336	PRO	Peptide
66	BO	103	VAL	Peptide
66	BO	104	GLN	Peptide
66	BO	183	VAL	Peptide
66	BO	75	LYS	Peptide
66	BO	76	HIS	Peptide
31	Bj	101	PRO	Peptide
3	C	142	ASN	Peptide
9	I	235	TRP	Peptide
12	L	71	ARG	Peptide
18	R	125	PRO	Peptide
28	UA	47	UNK	Peptide
28	UA	81	UNK	Peptide
69	UC	92	UNK	Peptide
69	UC	94	UNK	Peptide
70	UD	67	UNK	Peptide
26	Z	21	PHE	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	A	2996	0	2807	144	0
2	B	3513	0	3413	192	0
3	C	1772	0	1734	101	0
4	D	1036	0	1038	49	0
5	E	2668	0	2697	126	0
6	F	1435	0	1396	84	0
7	G	3012	0	2917	182	0
8	H	1305	0	1315	96	0
9	I	2153	0	2089	146	0
10	J	1146	0	1145	91	0
11	K	1467	0	1469	101	0
12	L	1419	0	1443	82	0
13	M	2116	0	2150	139	0
14	N	1599	0	1591	80	0
15	O	2537	0	2530	142	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
16	P	1367	0	1374	102	0
17	Q	1785	0	1784	106	0
18	R	3755	0	3722	183	0
19	S	1244	0	1272	63	0
20	T	487	0	496	27	0
21	U	744	0	798	80	0
22	V	1202	0	1224	90	0
23	W	465	0	446	17	0
24	X	3733	0	3604	192	0
25	Y	2067	0	1955	111	0
26	Z	1223	0	1192	82	0
27	BA	1038	0	1052	80	0
28	UA	1015	0	213	30	0
29	BB	1028	0	1003	78	0
30	Aw	1509	0	1470	83	0
31	Bj	1358	0	1422	85	0
32	An	2605	0	2536	180	0
33	Al	2152	0	2112	132	0
34	BI	1409	0	1400	49	0
35	Az	1215	0	1144	67	0
36	At	1346	0	1299	92	0
37	BC	1114	0	1096	63	0
38	Ab	2185	0	2095	143	0
39	Ai	3789	0	3752	157	0
40	Ap	1775	0	1699	66	0
41	Au	1490	0	1450	127	0
42	Aa	1417	0	1377	115	0
43	Ao	2276	0	2176	124	0
44	BM	3069	0	3105	213	0
45	Ar	1644	0	1608	102	0
46	Aj	2766	0	2765	149	0
47	BH	1659	0	1607	73	0
48	Am	2708	0	2634	139	0
49	Aq	2074	0	2050	148	0
50	BE	700	0	665	43	0
51	Ak	2352	0	2369	109	0
52	BP	1593	0	1529	106	0
53	Ad	1632	0	1607	120	0
54	BF	851	0	831	49	0
55	Av	1300	0	1284	92	0
56	Af	1132	0	1108	66	0
57	As	787	0	777	47	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
58	Ae	2359	0	2328	97	0
59	Ac	2174	0	2096	120	0
60	Ah	3686	0	3572	205	0
61	BD	807	0	772	35	0
62	Ay	1226	0	1157	67	0
63	Ag	1916	0	1888	106	0
64	Ax	1388	0	1308	111	0
65	BL	2497	0	2489	182	0
66	BO	1239	0	1246	154	0
67	BG	643	0	617	37	0
68	UB	335	0	73	8	0
69	UC	720	0	151	10	0
70	UD	475	0	105	11	0
71	1	22918	0	11465	1258	0
72	Ax	2	0	0	0	0
72	BD	1	0	0	0	0
72	BG	1	0	0	2	0
72	T	1	0	0	2	0
72	W	1	0	0	0	0
73	Ag	44	0	26	10	0
All	All	143667	0	128129	6601	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 24.

All (6601) 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:Aq:68:THR:HG21	53:Ad:30:GLU:OE1	1.38	1.22
11:K:46:GLN:OE1	42:Aa:191:THR:O	1.61	1.18
43:Ao:238:ARG:HG2	52:BP:98:PRO:HG3	1.27	1.13
48:Am:319:TYR:HB3	71:1:482:C:H5	1.01	1.13
48:Am:319:TYR:CD2	71:1:482:C:N4	2.16	1.12
21:U:25:PHE:HD1	71:1:933:G:N2	1.46	1.10
48:Am:319:TYR:HB3	71:1:482:C:C5	1.86	1.10
21:U:25:PHE:HB3	71:1:972:A:H61	1.09	1.09
64:Ax:129:ARG:HH21	64:Ax:134:GLN:NE2	1.50	1.05
49:Aq:336:ARG:HH11	49:Aq:336:ARG:HG2	1.16	1.04
21:U:39:VAL:HG21	21:U:85:GLU:HB2	1.36	1.03
49:Aq:339:ARG:HG2	49:Aq:339:ARG:HH11	1.22	1.02
10:J:67:ARG:HG2	10:J:68:PRO:HD2	1.38	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:67:ARG:CG	10:J:68:PRO:HD2	1.90	1.01
42:Aa:186:MET:HE1	42:Aa:189:ARG:HD2	1.37	1.01
2:B:194:LYS:C	2:B:194:LYS:HE2	1.86	1.00
2:B:124:ASN:HB2	2:B:199:SER:HB3	1.38	1.00
11:K:46:GLN:HE22	42:Aa:192:LEU:HA	1.24	1.00
64:Ax:129:ARG:NH2	64:Ax:134:GLN:NE2	2.10	1.00
21:U:25:PHE:CD1	71:1:933:G:N2	2.26	0.99
43:Ao:238:ARG:HG2	52:BP:98:PRO:CG	1.93	0.98
32:An:139:GLN:HG3	32:An:145:LEU:HD12	1.46	0.97
33:Al:274:VAL:HG23	33:Al:274:VAL:O	1.63	0.97
24:X:498:ARG:HG2	24:X:498:ARG:HH11	1.30	0.96
21:U:31:PRO:HB3	21:U:60:ARG:NH1	1.80	0.96
49:Aq:339:ARG:HH11	49:Aq:339:ARG:CG	1.78	0.95
20:T:73:CYS:HG	72:T:101:ZN:ZN	0.73	0.95
71:1:924:U:HO2'	71:1:925:G:H8	0.96	0.95
24:X:320:VAL:HG13	24:X:393:CYS:HB3	1.49	0.94
9:I:175:LYS:H	9:I:201:ARG:HH12	1.14	0.94
10:J:67:ARG:CG	10:J:68:PRO:CD	2.46	0.94
21:U:25:PHE:CB	71:1:972:A:H61	1.81	0.93
64:Ax:148:CYS:SG	64:Ax:176:ARG:HD3	2.09	0.93
71:1:863:A:N1	71:1:1105:G:N2	2.17	0.92
49:Aq:338:HIS:HB3	49:Aq:341:PHE:CD2	2.04	0.92
29:BB:111:PHE:CE1	29:BB:112:LEU:O	2.23	0.92
10:J:67:ARG:HG3	10:J:68:PRO:CD	1.99	0.92
48:Am:319:TYR:HD2	71:1:482:C:H41	1.16	0.92
6:F:161:GLN:HA	6:F:161:GLN:HE21	1.35	0.91
24:X:352:LYS:HB3	24:X:353:PRO:HD2	1.50	0.91
52:BP:97:ARG:N	52:BP:98:PRO:HD2	1.83	0.91
66:BO:172:ARG:HH21	66:BO:172:ARG:HA	1.34	0.91
24:X:499:ARG:HD2	47:BH:202:GLU:HG3	1.50	0.91
49:Aq:336:ARG:HH11	49:Aq:336:ARG:CG	1.82	0.90
44:BM:31:ARG:HH22	44:BM:47:LYS:HG3	1.34	0.90
64:Ax:73:THR:HG21	64:Ax:200:PHE:HB2	1.50	0.90
71:1:55:A:H61	71:1:122:U:H3	1.17	0.90
54:BF:96:ARG:NH2	71:1:563:U:O2'	2.04	0.90
10:J:67:ARG:HB2	10:J:67:ARG:NH2	1.87	0.90
64:Ax:145:CYS:SG	64:Ax:166:CYS:CB	2.60	0.90
65:BL:114:ASP:HB3	65:BL:130:LEU:HD13	1.55	0.89
8:H:27:ARG:HH22	8:H:96:LYS:HG2	1.37	0.89
65:BL:119:ARG:HH11	65:BL:132:HIS:C	1.81	0.89
64:Ax:129:ARG:O	64:Ax:132:THR:O	1.91	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:42:PRO:HD2	49:Aq:52:ASN:HA	1.53	0.89
32:An:229:ARG:O	32:An:229:ARG:NH2	2.07	0.88
29:BB:105:GLU:CD	29:BB:106:PRO:HD2	1.98	0.88
5:E:121:THR:N	71:1:433:G:OP1	2.07	0.88
14:N:50:ARG:HH11	22:V:27:LYS:HG2	1.37	0.87
21:U:17:ARG:HD3	21:U:17:ARG:N	1.88	0.87
33:Al:274:VAL:O	33:Al:274:VAL:CG2	2.23	0.87
32:An:139:GLN:HA	32:An:139:GLN:OE1	1.73	0.86
10:J:67:ARG:HG3	10:J:68:PRO:HD3	1.55	0.86
24:X:275:LEU:HD11	53:Ad:32:ARG:HH21	1.39	0.86
33:Al:256:PRO:HD3	62:Ay:158:GLN:HE22	1.39	0.86
6:F:40:PRO:HB3	11:K:69:ALA:HB2	1.55	0.86
40:Ap:168:ASN:HA	40:Ap:172:LYS:HB3	1.57	0.86
15:O:23:GLN:NE2	15:O:23:GLN:HA	1.90	0.86
52:BP:40:LYS:HG3	56:Af:145:VAL:HG11	1.55	0.86
24:X:358:GLU:HG2	24:X:364:PRO:HG2	1.57	0.86
17:Q:108:ILE:HB	71:1:905:A:H62	1.39	0.86
17:Q:108:ILE:HG23	17:Q:108:ILE:O	1.76	0.85
71:1:925:G:H1	71:1:931:U:H3	1.24	0.85
7:G:163:ARG:NH2	71:1:193:U:OP2	2.10	0.85
71:1:53:A:H61	71:1:124:A:H62	1.23	0.85
16:P:108:GLN:HG2	43:Ao:85:ASP:HB3	1.57	0.85
62:Ay:64:ILE:HD12	71:1:697:A:H5'	1.56	0.85
39:Ai:39:ILE:HG22	39:Ai:294:HIS:HB2	1.57	0.85
11:K:59:ARG:NH2	71:1:410:A:OP2	2.09	0.85
71:1:508:G:N2	71:1:518:U:OP1	2.08	0.85
22:V:76:MET:O	22:V:81:ARG:NH2	2.10	0.85
32:An:135:PHE:HA	32:An:139:GLN:HB2	1.58	0.85
21:U:25:PHE:HB3	71:1:972:A:N6	1.90	0.85
16:P:48:GLU:HA	16:P:78:THR:HG22	1.58	0.85
18:R:281:GLU:HA	18:R:284:LYS:HG2	1.58	0.84
71:1:923:A:O2'	71:1:980:A:OP2	1.95	0.84
65:BL:93:VAL:HG11	65:BL:163:VAL:HG22	1.58	0.84
71:1:887:C:N3	71:1:979:G:N2	2.26	0.84
32:An:45:GLU:O	32:An:47:GLY:N	2.10	0.84
11:K:23:MET:SD	71:1:146:U:C4	2.70	0.84
65:BL:310:ARG:HH11	71:1:297:U:H3	1.21	0.84
29:BB:111:PHE:CD1	29:BB:111:PHE:C	2.55	0.84
48:Am:315:ASN:ND2	71:1:417:U:O2'	2.10	0.84
71:1:40:C:H1'	71:1:41:A:N7	1.93	0.84
7:G:209:ARG:NH1	71:1:190:A:N3	2.25	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:243:LYS:HZ3	46:Aj:450:ASN:HB3	1.41	0.84
24:X:367:GLN:HG2	24:X:384:LYS:HG3	1.60	0.83
30:Aw:173:ILE:HG23	46:Aj:440:GLN:HB2	1.59	0.83
43:Ao:238:ARG:CG	52:BP:98:PRO:HG3	2.07	0.83
2:B:291:TYR:OH	71:1:111:A:N6	2.11	0.83
18:R:212:SER:HA	36:At:108:MET:HE3	1.60	0.83
33:Al:47:ARG:NH2	71:1:900:A:OP1	2.11	0.83
41:Au:94:LYS:HD3	71:1:239:U:H5	1.41	0.83
59:Ac:45:ALA:HB2	59:Ac:188:ARG:HH11	1.42	0.83
51:Ak:52:LEU:HB2	51:Ak:265:ALA:HB1	1.61	0.83
44:BM:45:SER:HA	44:BM:118:ILE:HG21	1.60	0.83
3:C:55:MET:SD	3:C:63:ARG:NH1	2.52	0.83
13:M:74:LYS:NZ	71:1:50:A:OP1	2.12	0.83
49:Aq:68:THR:CG2	53:Ad:30:GLU:OE1	2.25	0.83
64:Ax:145:CYS:SG	64:Ax:166:CYS:HB2	2.17	0.83
18:R:30:PRO:HD3	18:R:83:ARG:HG2	1.59	0.82
30:Aw:24:PRO:O	53:Ad:131:ALA:N	2.10	0.82
49:Aq:171:ALA:O	49:Aq:173:HIS:N	2.10	0.82
3:C:142:ASN:ND2	71:1:904:A:OP1	2.13	0.82
3:C:205:TYR:O	3:C:208:ARG:NH1	2.12	0.82
64:Ax:136:TYR:HD1	64:Ax:136:TYR:H	1.25	0.82
71:1:955:U:H5	71:1:970:A:H61	1.26	0.82
71:1:975:U:O2	71:1:975:U:H2'	1.79	0.82
15:O:28:ALA:HB1	15:O:29:ARG:HE	1.44	0.82
31:Bj:84:ILE:HD12	31:Bj:104:MET:HE1	1.62	0.82
43:Ao:48:MET:HG2	43:Ao:49:PRO:HD2	1.61	0.82
46:Aj:420:GLN:NE2	71:1:506:A:OP1	2.12	0.82
71:1:221:U:O2'	71:1:882:U:O2'	1.97	0.82
10:J:45:PRO:HB2	57:As:66:CYS:SG	2.20	0.82
64:Ax:73:THR:HG22	64:Ax:200:PHE:H	1.44	0.82
4:D:37:THR:HG22	48:Am:260:TRP:HH2	1.45	0.82
32:An:139:GLN:HG3	32:An:145:LEU:CD1	2.09	0.82
64:Ax:151:ARG:NH2	71:1:241:U:OP2	2.12	0.81
18:R:212:SER:HB3	36:At:105:VAL:HA	1.62	0.81
40:Ap:170:ASP:O	40:Ap:173:ARG:NH2	2.13	0.81
24:X:302:THR:O	24:X:306:ALA:N	2.10	0.81
15:O:29:ARG:H	15:O:29:ARG:HD2	1.46	0.81
14:N:76:TYR:OH	71:1:316:A:OP2	1.98	0.81
39:Ai:96:LEU:HD13	39:Ai:222:PRO:HB2	1.61	0.81
44:BM:128:LEU:HD12	44:BM:278:LEU:HB3	1.63	0.81
66:BO:86:GLU:OE2	66:BO:99:HIS:NE2	2.12	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:BO:103:VAL:HG11	66:BO:122:PRO:HA	1.63	0.81
14:N:95:TYR:OH	71:1:556:A:OP1	1.99	0.81
41:Au:46:VAL:HG12	41:Au:47:LEU:HD13	1.63	0.81
2:B:365:GLU:HG2	2:B:372:PRO:HA	1.61	0.81
60:Ah:347:ASN:HD21	60:Ah:458:LEU:HB3	1.45	0.81
9:I:259:HIS:HA	9:I:262:MET:HE2	1.63	0.81
64:Ax:129:ARG:NH2	64:Ax:134:GLN:HE22	1.74	0.81
71:1:933:G:H2'	71:1:934:G:C8	2.16	0.80
2:B:201:ARG:NH2	71:1:186:U:O4	2.13	0.80
26:Z:76:ARG:NH1	71:1:70:G:O3'	2.12	0.80
67:BG:1319:SER:HB2	67:BG:1322:THR:HG22	1.64	0.80
7:G:10:ARG:NH1	71:1:486:U:OP1	2.15	0.80
12:L:29:ASN:ND2	52:BP:10:TYR:OH	2.09	0.80
2:B:43:SER:HB3	46:Aj:440:GLN:HE22	1.47	0.80
13:M:61:LEU:O	46:Aj:475:ARG:NH2	2.14	0.80
17:Q:31:ILE:HD12	61:BD:32:PRO:HB3	1.63	0.80
44:BM:192:LEU:HD11	44:BM:252:VAL:HG22	1.63	0.80
52:BP:-3:HIS:O	52:BP:1:MET:HG3	1.82	0.80
21:U:39:VAL:CG2	21:U:85:GLU:HB2	2.11	0.80
44:BM:377:GLU:HG2	44:BM:381:ASN:HD21	1.47	0.80
21:U:25:PHE:CB	71:1:933:G:H21	1.95	0.80
19:S:343:ARG:NH2	71:1:368:U:OP2	2.15	0.80
41:Au:92:VAL:O	41:Au:94:LYS:N	2.13	0.80
2:B:148:ARG:O	14:N:85:ARG:NH1	2.15	0.80
27:BA:69:ILE:HG22	27:BA:88:VAL:HB	1.64	0.80
18:R:167:HIS:HD2	18:R:169:GLY:H	1.30	0.79
60:Ah:266:PRO:O	60:Ah:272:GLN:NE2	2.15	0.79
15:O:111:GLU:O	15:O:115:LYS:N	2.13	0.79
11:K:46:GLN:NE2	42:Aa:192:LEU:HA	1.97	0.79
21:U:57:GLU:HA	21:U:60:ARG:HB2	1.62	0.79
60:Ah:459:VAL:O	60:Ah:462:HIS:ND1	2.16	0.79
66:BO:87:ARG:HB3	66:BO:90:HIS:HB3	1.63	0.79
49:Aq:338:HIS:HB3	49:Aq:341:PHE:CG	2.17	0.79
66:BO:86:GLU:HA	66:BO:92:ARG:HH12	1.46	0.79
64:Ax:173:ARG:HG2	64:Ax:173:ARG:HH11	1.48	0.79
66:BO:91:CYS:HB3	66:BO:93:VAL:HG22	1.65	0.79
7:G:196:THR:HG21	30:Aw:4:GLY:HA3	1.64	0.79
9:I:89:ARG:NH2	71:1:599:U:OP1	2.16	0.79
21:U:37:ASN:ND2	21:U:60:ARG:HG2	1.97	0.79
32:An:132:GLU:O	32:An:136:ALA:HB2	1.81	0.79
29:BB:111:PHE:C	29:BB:111:PHE:HD1	1.90	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:Aq:341:PHE:HD1	49:Aq:341:PHE:H	1.26	0.79
64:Ax:148:CYS:SG	64:Ax:176:ARG:CD	2.70	0.79
71:1:158:A:N6	71:1:166:U:OP1	2.15	0.79
48:Am:319:TYR:CB	71:1:482:C:H5	1.92	0.78
9:I:223:HIS:HE1	54:BF:87:LEU:H	1.29	0.78
47:BH:102:SER:O	47:BH:141:GLN:NE2	2.17	0.78
71:1:959:G:O6	71:1:967:A:N6	2.16	0.78
8:H:7:ARG:HB3	8:H:8:PRO:HD2	1.64	0.78
8:H:143:LEU:HD13	52:BP:171:PHE:HB3	1.64	0.78
37:BC:119:GLN:HE21	59:Ac:104:ILE:HG13	1.48	0.78
44:BM:73:THR:OG1	44:BM:323:ARG:NH2	2.17	0.78
59:Ac:189:LYS:HG3	59:Ac:200:ARG:HH22	1.49	0.78
12:L:33:LYS:NZ	38:Ab:107:ARG:O	2.16	0.78
2:B:192:ASP:OD1	2:B:192:ASP:N	2.17	0.78
12:L:2:LEU:N	12:L:14:GLN:OE1	2.17	0.78
73:Ag:301:NAD:H3B	73:Ag:301:NAD:O1A	1.84	0.78
71:1:772:U:O2	71:1:1051:A:O2'	2.00	0.78
8:H:101:ARG:HH11	8:H:108:ASN:HD21	1.30	0.78
9:I:112:ARG:NH2	41:Au:171:SER:OG	2.17	0.78
24:X:57:LEU:HD21	63:Ag:219:MET:HE1	1.65	0.78
29:BB:19:VAL:HG12	29:BB:20:HIS:HD2	1.48	0.78
50:BE:56:HIS:HD2	50:BE:57:THR:H	1.28	0.78
32:An:137:GLU:HA	32:An:140:ARG:HH21	1.47	0.77
65:BL:175:PHE:HB2	65:BL:184:ALA:HB3	1.66	0.77
17:Q:114:LEU:HD12	32:An:267:TRP:HZ3	1.49	0.77
21:U:29:VAL:HG23	21:U:30:ILE:H	1.48	0.77
30:Aw:52:LYS:NZ	36:At:20:GLY:O	2.16	0.77
71:1:163:U:HO2'	71:1:846:A:HO2'	1.31	0.77
71:1:916:U:H4'	71:1:917:A:H5''	1.66	0.77
71:1:1041:U:O4	71:1:1049:A:N6	2.17	0.77
24:X:498:ARG:HG2	24:X:498:ARG:NH1	1.93	0.77
39:Ai:392:ARG:HB3	39:Ai:399:GLN:HB3	1.64	0.77
61:BD:49:ARG:NH1	61:BD:57:MET:SD	2.58	0.77
71:1:812:A:H3'	71:1:813:U:H5'	1.67	0.77
5:E:148:TYR:OH	55:Av:53:PHE:O	2.01	0.77
19:S:265:HIS:HB2	19:S:268:LYS:HE3	1.67	0.77
31:Bj:82:LEU:HB2	31:Bj:102:VAL:HG22	1.65	0.77
48:Am:264:ARG:HH22	48:Am:308:GLY:H	1.33	0.77
71:1:217:A:H62	71:1:323:A:H61	1.32	0.77
31:Bj:139:LYS:NZ	59:Ac:38:HIS:O	2.18	0.77
15:O:29:ARG:H	15:O:29:ARG:CD	1.94	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:61:ARG:H	9:I:65:HIS:HD2	1.33	0.77
13:M:97:TRP:O	13:M:97:TRP:CE3	2.38	0.77
26:Z:15:ALA:HB2	26:Z:33:ASP:HB3	1.66	0.77
44:BM:223:ILE:HA	44:BM:228:ASN:HD21	1.50	0.77
9:I:78:ILE:O	9:I:127:LYS:NZ	2.16	0.77
65:BL:236:ILE:HG21	65:BL:259:LEU:HD22	1.67	0.77
6:F:113:ARG:HH11	71:1:151:G:H5'	1.49	0.76
7:G:107:ARG:NH1	71:1:182:A:OP2	2.19	0.76
48:Am:115:LEU:HA	48:Am:118:VAL:HG12	1.67	0.76
71:1:887:C:O2'	71:1:1083:C:O2	2.02	0.76
1:A:271:ARG:NH2	71:1:815:A:OP2	2.18	0.76
29:BB:122:ASP:OD1	50:BE:56:HIS:ND1	2.19	0.76
71:1:149:U:O2'	71:1:150:A:O5'	2.01	0.76
10:J:77:ASP:HB2	10:J:90:LYS:HB3	1.66	0.76
1:A:383:PHE:CE2	1:A:385:ASP:HB3	2.20	0.76
41:Au:56:PHE:O	41:Au:60:ASP:N	2.18	0.76
49:Aq:175:VAL:O	49:Aq:176:ARG:NE	2.17	0.76
53:Ad:14:THR:O	53:Ad:16:GLN:N	2.19	0.76
2:B:229:TYR:OH	2:B:276:ASN:ND2	2.19	0.76
13:M:110:ASN:HD22	13:M:113:MET:HE3	1.51	0.76
2:B:29:LEU:HD13	38:Ab:29:MET:HE3	1.67	0.76
43:Ao:29:LYS:O	43:Ao:29:LYS:HG2	1.84	0.76
52:BP:59:ARG:NH2	71:1:365:U:OP1	2.18	0.76
71:1:190:A:N6	71:1:207:G:H2'	2.01	0.76
71:1:928:U:O2'	71:1:929:G:OP1	2.01	0.76
24:X:293:ASN:HD21	24:X:348:VAL:HG22	1.50	0.76
64:Ax:190:HIS:ND1	64:Ax:190:HIS:O	2.18	0.76
1:A:258:ASP:HB2	71:1:1023:A:H5''	1.68	0.76
18:R:455:LYS:HG3	71:1:66:U:H3	1.51	0.76
25:Y:146:ASP:HB3	25:Y:151:ARG:HH22	1.50	0.76
13:M:34:ARG:HH22	71:1:127:A:P	2.09	0.75
13:M:94:GLU:HG2	46:Aj:465:ARG:HG2	1.67	0.75
14:N:85:ARG:HB2	71:1:313:A:H5''	1.67	0.75
32:An:131:THR:HG22	32:An:164:ILE:HG13	1.68	0.75
49:Aq:220:VAL:O	49:Aq:226:ARG:NH1	2.19	0.75
13:M:205:MET:HE3	71:1:134:A:H5''	1.68	0.75
13:M:251:TYR:OH	70:UD:71:UNK:O	2.02	0.75
25:Y:247:TYR:OH	25:Y:258:TRP:NE1	2.15	0.75
44:BM:322:TYR:O	44:BM:326:TYR:N	2.19	0.75
71:1:148:U:O2	71:1:149:U:N3	2.18	0.75
49:Aq:88:ALA:H	49:Aq:91:THR:HB	1.51	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:346:SER:HA	19:S:353:ARG:HH21	1.50	0.75
27:BA:85:PRO:HG2	27:BA:87:ILE:HG23	1.67	0.75
53:Ad:32:ARG:NH2	53:Ad:32:ARG:O	2.20	0.75
49:Aq:341:PHE:HB2	71:1:98:G:C2	2.21	0.75
71:1:131:U:O2'	71:1:132:U:O5'	2.05	0.75
71:1:384:A:N6	71:1:398:U:O2	2.19	0.75
21:U:31:PRO:HB3	21:U:60:ARG:HH11	1.50	0.75
35:Az:55:ASN:ND2	35:Az:91:GLU:OE2	2.19	0.75
49:Aq:339:ARG:HG2	49:Aq:339:ARG:NH1	1.99	0.75
40:Ap:9:PHE:N	41:Au:181:ALA:O	2.20	0.75
55:Av:73:PRO:HG2	55:Av:76:MET:HE2	1.67	0.75
63:Ag:45:LYS:HD2	63:Ag:46:PRO:HD2	1.68	0.75
66:BO:139:ARG:HH11	66:BO:143:LEU:HD23	1.51	0.75
71:1:642:A:N7	71:1:643:G:N2	2.35	0.74
21:U:32:ARG:HB3	22:V:65:ARG:NH2	2.01	0.74
71:1:699:A:O2'	71:1:700:U:O5'	2.05	0.74
71:1:936:G:N2	71:1:947:U:O2	2.20	0.74
25:Y:245:ASP:OD1	25:Y:246:LYS:N	2.19	0.74
2:B:200:ASN:HB3	2:B:283:LEU:HD22	1.70	0.74
4:D:102:GLN:NE2	58:Ae:197:GLN:OE1	2.20	0.74
12:L:92:VAL:HB	42:Aa:191:THR:HG21	1.70	0.74
46:Aj:129:GLU:HG3	46:Aj:284:LEU:HB3	1.68	0.74
12:L:80:THR:HG22	12:L:120:GLU:HB3	1.70	0.74
44:BM:263:ARG:HG3	44:BM:264:ALA:H	1.50	0.74
57:As:51:ARG:HH21	70:UD:42:UNK:C	1.99	0.74
3:C:168:PRO:HG2	62:Ay:134:ARG:HE	1.52	0.74
22:V:22:ARG:HH21	71:1:314:A:H4'	1.51	0.74
44:BM:76:TYR:O	44:BM:80:ARG:N	2.20	0.74
46:Aj:443:ARG:NH2	46:Aj:448:GLU:OE2	2.20	0.74
31:Bj:102:VAL:HB	59:Ac:131:MET:HE1	1.69	0.74
7:G:13:LEU:O	19:S:309:ARG:NH2	2.21	0.73
13:M:143:TRP:NE1	13:M:206:PRO:HA	2.02	0.73
24:X:267:ASP:HB3	24:X:271:ARG:HA	1.69	0.73
51:Ak:41:ALA:HA	51:Ak:44:ARG:HH11	1.50	0.73
53:Ad:21:ALA:O	53:Ad:23:THR:OG1	2.04	0.73
8:H:95:GLN:HA	8:H:109:ILE:HG12	1.71	0.73
41:Au:94:LYS:HD3	71:1:239:U:C5	2.22	0.73
47:BH:147:GLY:O	47:BH:149:ASN:ND2	2.20	0.73
54:BF:60:LYS:NZ	71:1:551:A:N7	2.36	0.73
63:Ag:59:GLU:HA	63:Ag:62:ARG:HG2	1.70	0.73
64:Ax:98:VAL:HG11	67:BG:1265:PRO:HA	1.69	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:165:ASP:OD1	12:L:166:TRP:N	2.21	0.73
29:BB:105:GLU:OE1	29:BB:106:PRO:HD2	1.89	0.73
71:1:205:U:O2'	71:1:206:U:H5'	1.88	0.73
41:Au:22:ARG:N	71:1:587:U:OP1	2.22	0.73
61:BD:88:MET:HB3	61:BD:92:GLU:HG3	1.71	0.73
64:Ax:66:GLN:NE2	71:1:252:U:O2'	2.22	0.73
2:B:193:VAL:HG23	2:B:284:LEU:HD12	1.70	0.73
15:O:173:VAL:HA	15:O:192:GLU:HA	1.69	0.73
18:R:398:ASN:HB3	71:1:62:U:C4	2.23	0.73
30:Aw:8:ARG:NH2	33:Al:286:ASP:HB3	2.03	0.73
2:B:82:THR:HG22	2:B:83:VAL:H	1.54	0.73
6:F:141:ARG:NH1	38:Ab:119:ASN:O	2.20	0.73
7:G:10:ARG:NH2	52:BP:-1:GLU:OE2	2.21	0.73
54:BF:14:ARG:NH2	71:1:543:U:OP1	2.20	0.73
66:BO:47:TRP:HD1	71:1:813:U:H5''	1.54	0.73
71:1:755:G:O6	71:1:782:U:O2'	2.06	0.73
9:I:233:ARG:NH1	15:O:97:GLN:OE1	2.21	0.73
15:O:104:GLN:NE2	71:1:557:A:OP2	2.22	0.73
46:Aj:256:PHE:HB2	46:Aj:265:SER:HB2	1.71	0.73
71:1:841:A:H61	71:1:854:A:H61	1.36	0.73
11:K:20:LEU:HD22	42:Aa:188:ALA:HB3	1.69	0.73
16:P:51:ARG:O	16:P:53:PHE:N	2.21	0.73
40:Ap:23:ALA:O	40:Ap:191:ARG:NH2	2.20	0.73
44:BM:68:LEU:HG	44:BM:320:LEU:HA	1.71	0.73
46:Aj:258:ARG:NH2	56:Af:129:GLU:OE1	2.22	0.73
55:Av:165:ASP:HB2	55:Av:168:HIS:CD2	2.24	0.73
3:C:68:GLU:OE2	3:C:70:ARG:NH1	2.22	0.73
7:G:125:LYS:O	42:Aa:20:GLN:NE2	2.22	0.73
31:Bj:143:ASN:OD1	31:Bj:144:PRO:HD3	1.88	0.73
40:Ap:163:SER:O	40:Ap:167:MET:N	2.22	0.73
48:Am:102:TRP:NE1	48:Am:107:CYS:SG	2.60	0.73
1:A:256:GLY:HA3	66:BO:40:LYS:HG3	1.71	0.72
25:Y:286:TYR:HD2	39:Ai:161:PRO:HA	1.54	0.72
60:Ah:452:MET:HB2	60:Ah:457:PHE:CZ	2.24	0.72
3:C:96:HIS:HB3	17:Q:79:ASN:HD22	1.50	0.72
8:H:83:THR:HB	8:H:124:GLU:HB2	1.70	0.72
41:Au:29:ARG:NH1	71:1:650:U:O4	2.22	0.72
27:BA:131:ARG:NH2	27:BA:138:VAL:O	2.22	0.72
60:Ah:285:THR:OG1	60:Ah:421:CYS:SG	2.46	0.72
65:BL:147:VAL:HA	65:BL:185:GLU:HG3	1.71	0.72
71:1:533:U:H3	71:1:831:A:H61	1.38	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:82:LYS:O	48:Am:30:ARG:NH2	2.23	0.72
24:X:374:HIS:ND1	24:X:401:GLU:OE2	2.21	0.72
44:BM:80:ARG:NH2	44:BM:80:ARG:O	2.20	0.72
13:M:205:MET:HB3	13:M:230:HIS:HB2	1.70	0.72
32:An:130:LEU:HA	32:An:133:VAL:HG12	1.70	0.72
26:Z:48:LYS:HB2	26:Z:80:ARG:HH12	1.53	0.72
44:BM:146:PRO:HB3	44:BM:192:LEU:HD13	1.72	0.72
62:Ay:35:TRP:O	62:Ay:37:ASP:N	2.23	0.72
65:BL:119:ARG:NH1	65:BL:132:HIS:HB3	2.04	0.72
71:1:284:A:H4'	71:1:285:U:OP1	1.88	0.72
71:1:617:G:O2'	71:1:1040:C:OP1	2.08	0.72
71:1:850:U:O2'	71:1:851:U:O5'	2.07	0.72
2:B:413:ALA:HB2	33:Al:277:LEU:HD23	1.72	0.72
3:C:177:GLU:HG2	61:BD:58:VAL:H	1.54	0.72
30:Aw:49:VAL:HG11	36:At:19:THR:HA	1.72	0.72
43:Ao:234:LEU:HD21	45:Ar:171:LEU:HD12	1.72	0.72
66:BO:175:ASN:HA	66:BO:180:LEU:HD22	1.70	0.72
3:C:72:PRO:HB2	3:C:73:MET:HE2	1.71	0.72
26:Z:25:PHE:O	26:Z:27:ASP:N	2.22	0.72
20:T:76:GLU:OE2	20:T:79:ARG:NH2	2.21	0.72
33:Al:270:PRO:CB	63:Ag:147:ARG:HE	2.02	0.72
73:Ag:301:NAD:O1A	73:Ag:301:NAD:H52N	1.90	0.72
24:X:352:LYS:CB	24:X:353:PRO:HD2	2.19	0.71
25:Y:230:ARG:NH1	37:BC:34:GLU:OE1	2.23	0.71
27:BA:113:MET:HG2	27:BA:114:PHE:H	1.55	0.71
32:An:90:PRO:HD2	32:An:93:TYR:HB3	1.72	0.71
41:Au:28:ARG:NH1	71:1:280:A:OP1	2.23	0.71
71:1:410:A:C8	71:1:490:U:H4'	2.24	0.71
31:Bj:76:PRO:HA	59:Ac:84:ARG:HB3	1.71	0.71
39:Ai:235:ASP:OD1	39:Ai:442:ASN:ND2	2.23	0.71
15:O:159:VAL:HG22	15:O:166:ILE:HG12	1.71	0.71
18:R:279:PRO:HA	18:R:282:HIS:HB3	1.73	0.71
23:W:79:HIS:HD2	23:W:88:ARG:HB2	1.53	0.71
33:Al:279:ASN:HD22	33:Al:279:ASN:H	1.39	0.71
36:At:84:LEU:HD12	36:At:91:VAL:HG23	1.72	0.71
60:Ah:385:GLN:NE2	60:Ah:460:TYR:OH	2.17	0.71
65:BL:222:GLU:HB3	65:BL:243:ALA:HB1	1.71	0.71
22:V:63:ARG:NH1	71:1:957:U:OP1	2.23	0.71
44:BM:142:ARG:HH12	44:BM:185:LEU:HD13	1.55	0.71
46:Aj:369:ARG:HH12	56:Af:129:GLU:HA	1.55	0.71
7:G:373:ARG:HG2	7:G:374:LEU:H	1.54	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BE:38:ASP:HB3	50:BE:41:SER:HB3	1.71	0.71
53:Ad:56:LYS:NZ	71:1:190:A:OP2	2.21	0.71
66:BO:82:LYS:HD2	71:1:772:U:C4	2.26	0.71
1:A:392:LEU:HD13	10:J:64:TYR:CD2	2.26	0.71
1:A:153:CYS:HG	1:A:307:TRP:CD1	2.08	0.71
3:C:54:ARG:NH2	36:At:68:ASN:OD1	2.24	0.71
12:L:71:ARG:O	12:L:73:LEU:N	2.23	0.71
1:A:47:ARG:O	58:Ae:85:LYS:NZ	2.24	0.71
26:Z:104:LYS:HD2	26:Z:108:ARG:HA	1.72	0.71
34:BI:173:GLN:HB3	34:BI:209:GLY:HA3	1.73	0.71
41:Au:24:ARG:NH1	71:1:282:U:OP2	2.23	0.71
5:E:202:VAL:HG22	5:E:204:GLY:H	1.54	0.71
11:K:145:HIS:HD2	11:K:147:ALA:H	1.38	0.71
12:L:92:VAL:HB	42:Aa:191:THR:CG2	2.21	0.71
64:Ax:72:LEU:HB3	64:Ax:199:GLN:H	1.54	0.71
67:BG:1287:CYS:HG	72:BG:1401:ZN:ZN	1.04	0.71
38:Ab:72:ARG:NH1	71:1:508:G:O4'	2.24	0.70
69:UC:66:UNK:O	69:UC:70:UNK:N	2.23	0.70
39:Ai:191:VAL:HG23	39:Ai:196:LYS:HB2	1.72	0.70
46:Aj:311:GLU:OE2	46:Aj:374:TYR:OH	2.06	0.70
69:UC:90:UNK:HA	69:UC:94:UNK:HA	1.72	0.70
71:1:433:G:N2	71:1:435:A:H1'	2.06	0.70
71:1:1027:G:N2	71:1:1027:G:OP2	2.24	0.70
1:A:169:ARG:HH21	71:1:1117:U:H3	1.39	0.70
26:Z:81:ARG:NH2	71:1:67:U:OP1	2.24	0.70
36:At:33:ASN:ND2	71:1:123:U:OP1	2.25	0.70
47:BH:86:PRO:HA	47:BH:173:VAL:HG22	1.73	0.70
71:1:268:A:H2	71:1:272:A:H1'	1.57	0.70
71:1:320:G:O2'	71:1:377:U:N3	2.23	0.70
1:A:383:PHE:HE2	1:A:385:ASP:HB3	1.55	0.70
5:E:107:TYR:HE2	5:E:113:ILE:HD12	1.57	0.70
17:Q:19:THR:OG1	63:Ag:151:ASP:OD1	2.07	0.70
64:Ax:73:THR:CG2	64:Ax:200:PHE:HB2	2.21	0.70
67:BG:1287:CYS:SG	72:BG:1401:ZN:ZN	1.81	0.70
71:1:781:A:O2'	71:1:782:U:H2'	1.91	0.70
33:Al:46:ASP:HB2	62:Ay:88:VAL:HG12	1.72	0.70
60:Ah:452:MET:HB2	60:Ah:457:PHE:HZ	1.56	0.70
60:Ah:484:HIS:NE2	65:BL:199:LYS:O	2.25	0.70
65:BL:95:ALA:HA	65:BL:98:MET:HE3	1.74	0.70
5:E:206:THR:HG22	5:E:208:LYS:H	1.57	0.70
26:Z:68:ARG:NH2	26:Z:118:HIS:O	2.24	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:384:ARG:NH2	18:R:223:ASP:OD1	2.25	0.70
8:H:132:ARG:NH2	55:Av:121:GLU:OE1	2.24	0.70
12:L:168:LYS:HG2	42:Aa:126:GLU:HB2	1.73	0.70
24:X:172:PRO:HA	24:X:195:GLN:HE21	1.57	0.70
64:Ax:53:HIS:NE2	71:1:651:U:OP1	2.23	0.70
8:H:99:GLU:HG3	71:1:390:A:N3	2.07	0.70
10:J:67:ARG:HB2	10:J:67:ARG:CZ	2.21	0.70
13:M:46:ARG:NH2	71:1:509:U:OP1	2.25	0.70
16:P:139:GLU:OE1	43:Ao:214:ARG:NH1	2.24	0.70
17:Q:106:THR:HG21	71:1:905:A:N1	2.07	0.70
35:Az:16:LYS:HD2	35:Az:19:GLN:HE21	1.56	0.70
48:Am:221:GLU:OE2	50:BE:95:ARG:NH2	2.24	0.70
56:Af:91:ARG:NH1	56:Af:93:ALA:O	2.25	0.70
63:Ag:75:ARG:NH2	71:1:108:U:OP1	2.22	0.70
3:C:142:ASN:ND2	71:1:903:G:OP1	2.24	0.70
41:Au:89:PHE:O	41:Au:101:LYS:NZ	2.24	0.70
58:Ae:33:PRO:HB2	58:Ae:54:ASN:HD21	1.56	0.70
59:Ac:174:GLN:NE2	59:Ac:255:ASP:OD1	2.25	0.70
64:Ax:173:ARG:HD3	64:Ax:173:ARG:N	2.06	0.70
7:G:158:SER:O	7:G:161:GLY:N	2.23	0.70
8:H:94:VAL:HB	8:H:108:ASN:HB3	1.74	0.70
22:V:25:VAL:HG22	22:V:26:LEU:H	1.55	0.70
49:Aq:336:ARG:O	49:Aq:336:ARG:HG3	1.90	0.70
60:Ah:154:ASP:OD1	60:Ah:427:ARG:NH2	2.24	0.70
71:1:225:U:H2'	71:1:226:A:H8	1.54	0.70
6:F:41:ASP:O	42:Aa:155:THR:OG1	2.10	0.69
8:H:72:LEU:O	8:H:77:ARG:NH2	2.25	0.69
21:U:33:LYS:O	21:U:34:ILE:HG13	1.91	0.69
32:An:135:PHE:CG	32:An:135:PHE:O	2.43	0.69
60:Ah:167:ARG:NH1	60:Ah:412:ASP:OD2	2.25	0.69
5:E:179:ARG:NH2	71:1:454:A:H1'	2.06	0.69
11:K:81:ARG:NH2	71:1:410:A:OP1	2.25	0.69
18:R:208:TRP:CD1	18:R:211:SER:HG	2.10	0.69
26:Z:109:GLY:HA3	71:1:571:U:H4'	1.73	0.69
42:Aa:47:SER:HB2	71:1:845:A:H4'	1.73	0.69
53:Ad:28:THR:O	53:Ad:30:GLU:N	2.24	0.69
2:B:290:ASP:HB3	2:B:293:ARG:HE	1.56	0.69
24:X:249:LYS:O	24:X:252:SER:N	2.24	0.69
42:Aa:123:HIS:ND1	42:Aa:126:GLU:OE1	2.19	0.69
44:BM:224:PRO:O	44:BM:228:ASN:ND2	2.25	0.69
60:Ah:425:GLU:HA	60:Ah:428:ARG:HD2	1.72	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:1:159:U:H2'	71:1:160:U:H4'	1.75	0.69
71:1:236:A:H1'	71:1:288:C:H42	1.57	0.69
71:1:1130:A:H61	71:1:1148:A:H62	1.38	0.69
32:An:129:LYS:HA	32:An:129:LYS:HE2	1.72	0.69
33:Al:69:TYR:HB2	62:Ay:87:TRP:HZ3	1.57	0.69
41:Au:15:GLN:HG3	71:1:287:G:H1'	1.75	0.69
57:As:108:ARG:NH2	57:As:111:GLU:OE2	2.26	0.69
59:Ac:192:GLU:OE1	59:Ac:200:ARG:NH1	2.25	0.69
60:Ah:115:TYR:OH	60:Ah:179:ASN:OD1	2.10	0.69
71:1:901:G:H22	71:1:908:U:H3	1.38	0.69
31:Bj:143:ASN:HA	31:Bj:158:LYS:HD2	1.74	0.69
38:Ab:135:ARG:NH2	48:Am:333:ASN:OD1	2.26	0.69
41:Au:24:ARG:HG3	41:Au:36:ASN:HD22	1.58	0.69
41:Au:45:THR:HG22	41:Au:51:PHE:HD2	1.58	0.69
43:Ao:17:MET:HE3	46:Aj:107:ILE:HB	1.73	0.69
49:Aq:1:MET:HA	49:Aq:7:ARG:HH12	1.57	0.69
65:BL:114:ASP:CB	65:BL:130:LEU:HD13	2.21	0.69
71:1:1074:A:N6	71:1:1086:U:OP2	2.26	0.69
11:K:83:ASP:HB3	11:K:114:CYS:HB2	1.73	0.69
49:Aq:341:PHE:HD1	49:Aq:341:PHE:N	1.90	0.69
62:Ay:68:TYR:HB2	71:1:697:A:H61	1.57	0.69
4:D:27:ARG:NE	4:D:29:TYR:OH	2.26	0.69
21:U:30:ILE:HG23	21:U:30:ILE:O	1.92	0.69
38:Ab:136:LYS:HB2	48:Am:335:ALA:HB3	1.74	0.69
44:BM:34:ARG:HD3	44:BM:38:PRO:HG3	1.75	0.69
47:BH:155:LYS:NZ	56:Af:128:ASP:OD2	2.25	0.69
65:BL:147:VAL:HG13	65:BL:185:GLU:HB2	1.75	0.69
66:BO:172:ARG:HH21	66:BO:172:ARG:CA	2.04	0.69
4:D:135:PRO:HA	4:D:138:VAL:HB	1.73	0.69
5:E:55:PHE:HE2	5:E:104:ILE:HD12	1.58	0.69
7:G:246:GLU:OE2	7:G:295:ARG:NH1	2.26	0.69
9:I:112:ARG:NH2	41:Au:171:SER:HG	1.91	0.69
27:BA:102:PRO:HG2	56:Af:50:ARG:HB3	1.74	0.69
29:BB:54:VAL:HG23	29:BB:56:PRO:HD2	1.75	0.69
37:BC:14:MET:HG3	37:BC:45:MET:HE2	1.75	0.69
40:Ap:54:ASP:OD2	40:Ap:216:TYR:OH	2.11	0.69
41:Au:92:VAL:HG23	41:Au:93:HIS:H	1.57	0.69
47:BH:29:VAL:O	47:BH:45:VAL:N	2.23	0.69
64:Ax:173:ARG:HG2	64:Ax:173:ARG:NH1	2.06	0.69
71:1:781:A:O2'	71:1:782:U:O5'	2.10	0.69
71:1:1018:A:H62	71:1:1070:C:H42	1.40	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:97:ARG:NH2	61:BD:48:GLN:OE1	2.26	0.69
10:J:54:ILE:HG23	10:J:120:GLY:HA2	1.74	0.69
31:Bj:128:ARG:O	31:Bj:130:LYS:NZ	2.19	0.69
42:Aa:181:THR:HB	42:Aa:186:MET:HG2	1.74	0.69
71:1:983:U:H3'	71:1:984:A:H5''	1.75	0.69
1:A:171:GLY:O	58:Ae:104:ARG:NH2	2.26	0.69
6:F:94:ASP:OD2	29:BB:16:TYR:OH	2.10	0.69
33:Al:129:VAL:HG22	33:Al:181:VAL:HG22	1.75	0.69
39:Ai:207:GLU:OE2	39:Ai:211:ARG:NH1	2.24	0.69
41:Au:31:SER:OG	71:1:279:U:O2'	2.11	0.69
51:Ak:91:TRP:HD1	51:Ak:118:GLY:HA3	1.57	0.69
2:B:58:ARG:NH1	36:At:145:GLY:O	2.26	0.68
9:I:79:ARG:NH1	54:BF:26:ARG:HE	1.91	0.68
18:R:275:PRO:O	18:R:277:ARG:NH2	2.27	0.68
24:X:275:LEU:HD11	53:Ad:32:ARG:HD2	1.74	0.68
27:BA:51:ASP:HA	27:BA:54:LYS:HE2	1.75	0.68
39:Ai:301:THR:HG22	39:Ai:304:HIS:CE1	2.28	0.68
44:BM:242:THR:OG1	44:BM:276:HIS:ND1	2.25	0.68
60:Ah:452:MET:N	60:Ah:452:MET:SD	2.66	0.68
65:BL:320:ASN:ND2	71:1:1087:A:OP2	2.22	0.68
71:1:410:A:H8	71:1:490:U:H4'	1.58	0.68
44:BM:31:ARG:NH1	44:BM:47:LYS:O	2.24	0.68
44:BM:101:LYS:NZ	44:BM:122:LEU:O	2.26	0.68
57:As:82:CYS:HG	57:As:87:THR:HG1	1.39	0.68
71:1:336:U:O2	71:1:351:U:O2'	2.09	0.68
7:G:102:GLU:HG2	71:1:183:U:H4'	1.74	0.68
13:M:19:GLN:NE2	71:1:327:U:O2'	2.26	0.68
21:U:41:LEU:HD13	21:U:53:TYR:HB3	1.75	0.68
22:V:120:ALA:HB2	71:1:91:U:H5	1.57	0.68
25:Y:226:LYS:NZ	25:Y:264:GLY:O	2.27	0.68
40:Ap:183:VAL:HA	40:Ap:186:THR:HG22	1.74	0.68
42:Aa:189:ARG:HE	71:1:146:U:H5	1.39	0.68
43:Ao:188:VAL:HG13	43:Ao:189:ILE:HD12	1.76	0.68
48:Am:148:ASN:ND2	48:Am:181:SER:OG	2.25	0.68
53:Ad:198:GLU:HA	53:Ad:201:MET:HE2	1.74	0.68
18:R:236:GLY:O	18:R:237:HIS:ND1	2.24	0.68
29:BB:109:THR:O	29:BB:110:PHE:HB2	1.94	0.68
54:BF:23:PRO:HD2	71:1:595:A:H61	1.57	0.68
60:Ah:112:TYR:OH	60:Ah:144:ASN:OD1	2.11	0.68
2:B:129:LEU:HD12	13:M:7:ARG:HD3	1.75	0.68
4:D:37:THR:HG22	48:Am:260:TRP:CH2	2.29	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:An:253:ASP:HB3	32:An:256:VAL:HG12	1.76	0.68
33:Al:159:THR:HG22	33:Al:242:ASN:HB3	1.74	0.68
42:Aa:97:MET:HB3	42:Aa:107:VAL:HG22	1.75	0.68
14:N:85:ARG:NH2	71:1:314:A:OP2	2.27	0.68
28:UA:71:UNK:O	28:UA:75:UNK:N	2.26	0.68
65:BL:84:GLN:HE21	65:BL:294:VAL:HG11	1.57	0.68
65:BL:336:PRO:HD2	65:BL:340:VAL:HG13	1.76	0.68
18:R:238:ARG:HH11	18:R:242:ALA:HB1	1.57	0.68
46:Aj:414:HIS:ND1	71:1:505:A:OP1	2.26	0.68
47:BH:188:TRP:CD2	47:BH:227:PRO:HB3	2.29	0.68
48:Am:319:TYR:CE2	71:1:482:C:N4	2.53	0.68
70:UD:49:UNK:O	70:UD:53:UNK:N	2.26	0.68
15:O:29:ARG:HD2	15:O:29:ARG:N	2.07	0.68
19:S:278:ARG:NH2	46:Aj:108:THR:O	2.27	0.68
32:An:143:TYR:N	32:An:143:TYR:CD1	2.62	0.68
59:Ac:280:LEU:O	59:Ac:284:SER:OG	2.11	0.68
64:Ax:105:CYS:SG	64:Ax:108:CYS:N	2.67	0.68
65:BL:93:VAL:CG1	65:BL:163:VAL:HG22	2.24	0.68
9:I:153:ARG:NH2	71:1:543:U:O4	2.23	0.68
24:X:372:ARG:NH2	43:Ao:98:THR:O	2.27	0.68
65:BL:251:GLU:OE1	65:BL:372:TRP:N	2.27	0.68
65:BL:305:HIS:HD2	71:1:654:A:H5"	1.59	0.68
8:H:58:MET:HG2	8:H:115:LYS:HG2	1.75	0.68
11:K:114:CYS:HG	42:Aa:85:SER:HG	1.42	0.68
24:X:247:ALA:HB1	24:X:253:HIS:HB2	1.76	0.68
28:UA:190:UNK:O	28:UA:194:UNK:N	2.27	0.68
31:Bj:109:ARG:NH1	37:BC:130:ASP:O	2.27	0.68
32:An:289:LEU:HA	32:An:292:VAL:HG12	1.74	0.68
43:Ao:71:ARG:NH2	71:1:351:U:OP1	2.23	0.68
43:Ao:275:ALA:H	43:Ao:280:ASN:HD22	1.39	0.68
49:Aq:120:PHE:CD2	49:Aq:133:ILE:HG22	2.28	0.68
59:Ac:59:VAL:HB	59:Ac:165:LEU:HB3	1.75	0.68
60:Ah:126:PHE:O	60:Ah:167:ARG:NH2	2.27	0.68
71:1:47:A:N6	71:1:130:U:O4	2.26	0.68
29:BB:121:VAL:HG12	50:BE:56:HIS:NE2	2.10	0.67
30:Aw:123:ARG:NH1	53:Ad:123:SER:O	2.26	0.67
9:I:84:ILE:HG21	54:BF:12:PHE:HB2	1.76	0.67
26:Z:76:ARG:HH21	26:Z:80:ARG:NH1	1.92	0.67
32:An:46:GLN:HB2	63:Ag:14:PRO:HD3	1.76	0.67
57:As:115:LYS:NZ	57:As:116:GLU:OE1	2.26	0.67
66:BO:47:TRP:HE3	66:BO:57:GLY:HA2	1.60	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:1:542:G:O2'	71:1:596:U:O2	2.11	0.67
71:1:638:C:H42	71:1:800:A:H61	1.42	0.67
9:I:61:ARG:NH1	71:1:598:U:OP2	2.27	0.67
9:I:235:TRP:HB3	71:1:596:U:O4	1.94	0.67
16:P:123:ARG:NH2	47:BH:226:GLN:OE1	2.26	0.67
18:R:143:LEU:HD13	18:R:361:VAL:HG13	1.76	0.67
19:S:270:SER:O	19:S:274:ASN:ND2	2.26	0.67
27:BA:23:TYR:O	27:BA:25:ALA:N	2.27	0.67
30:Aw:176:VAL:HG12	30:Aw:178:ASP:H	1.59	0.67
32:An:22:ARG:HH21	71:1:286:G:H22	1.42	0.67
60:Ah:135:LEU:HA	60:Ah:138:ASP:HB2	1.76	0.67
9:I:42:GLU:HB3	9:I:45:MET:HG3	1.77	0.67
50:BE:56:HIS:HD2	50:BE:57:THR:N	1.93	0.67
51:Ak:28:GLU:N	51:Ak:28:GLU:OE1	2.27	0.67
56:Af:60:PHE:O	56:Af:62:SER:N	2.27	0.67
34:BI:239:VAL:O	34:BI:243:ILE:N	2.23	0.67
47:BH:123:HIS:O	47:BH:148:ARG:NH1	2.28	0.67
50:BE:72:ASN:HB3	58:Ae:132:HIS:HA	1.77	0.67
62:Ay:62:CYS:HB3	62:Ay:84:ARG:HD2	1.77	0.67
71:1:463:U:N3	71:1:466:U:OP2	2.18	0.67
1:A:283:ARG:HD2	71:1:840:A:H5''	1.77	0.67
4:D:23:ARG:HD3	48:Am:176:GLU:HB2	1.76	0.67
38:Ab:240:ARG:NH2	43:Ao:258:PHE:O	2.23	0.67
47:BH:58:ASN:HD22	47:BH:111:PHE:HE1	1.42	0.67
52:BP:170:ASN:HB2	52:BP:172:MET:HE3	1.77	0.67
60:Ah:435:TRP:HB2	60:Ah:452:MET:HG3	1.77	0.67
65:BL:355:GLN:NE2	71:1:664:C:OP2	2.27	0.67
71:1:99:A:H4'	71:1:100:A:H5'	1.76	0.67
71:1:426:G:HO2'	71:1:427:U:P	2.17	0.67
9:I:131:GLU:OE2	9:I:135:ARG:NH1	2.28	0.67
16:P:51:ARG:HD2	16:P:76:THR:HA	1.77	0.67
30:Aw:159:VAL:HG12	46:Aj:432:LEU:HD13	1.77	0.67
33:Al:38:VAL:HG22	33:Al:38:VAL:O	1.95	0.67
40:Ap:37:ASN:ND2	57:As:99:GLU:OE2	2.28	0.67
51:Ak:263:GLU:HA	51:Ak:266:ASP:HB2	1.76	0.67
56:Af:57:PRO:HB2	56:Af:60:PHE:HB2	1.77	0.67
65:BL:72:ARG:NH2	65:BL:73:SER:OG	2.28	0.67
66:BO:104:GLN:C	66:BO:105:ARG:HD3	2.19	0.67
71:1:433:G:O2'	71:1:434:U:O5'	2.13	0.67
29:BB:17:HIS:ND1	71:1:1118:G:O2'	2.27	0.67
35:Az:150:MET:HE1	36:At:75:SER:HB3	1.74	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:59:GLY:O	37:BC:63:ASN:ND2	2.28	0.67
43:Ao:257:LYS:HD3	43:Ao:265:VAL:HG22	1.77	0.67
60:Ah:362:GLU:O	60:Ah:366:ALA:N	2.26	0.67
66:BO:117:ARG:NH2	66:BO:119:ARG:O	2.27	0.67
3:C:63:ARG:HH12	36:At:82:ARG:HD3	1.58	0.67
14:N:167:ILE:HG12	14:N:222:VAL:HG22	1.77	0.67
18:R:398:ASN:HB3	71:1:62:U:C5	2.30	0.67
33:Al:254:ASP:N	33:Al:258:GLU:OE2	2.28	0.67
47:BH:79:THR:HG21	47:BH:95:ILE:HD12	1.76	0.67
58:Ae:50:MET:SD	58:Ae:54:ASN:ND2	2.68	0.67
66:BO:68:CYS:SG	66:BO:76:HIS:ND1	2.67	0.67
71:1:955:U:H5	71:1:970:A:N6	1.92	0.67
3:C:71:TYR:OH	63:Ag:107:ARG:O	2.12	0.67
25:Y:74:TYR:OH	37:BC:7:ARG:NH2	2.28	0.67
32:An:29:LYS:HZ1	71:1:229:A:H5''	1.58	0.67
58:Ae:19:CYS:HG	71:1:1147:A:HO2'	1.43	0.67
59:Ac:188:ARG:NH2	59:Ac:192:GLU:O	2.28	0.67
60:Ah:420:LEU:O	60:Ah:424:THR:OG1	2.08	0.67
65:BL:128:VAL:HG23	65:BL:128:VAL:O	1.93	0.67
66:BO:103:VAL:HB	66:BO:105:ARG:HB3	1.77	0.67
71:1:1077:G:H22	71:1:1090:U:H3	1.41	0.67
1:A:73:ASN:ND2	48:Am:246:GLU:OE1	2.27	0.66
8:H:6:LEU:O	8:H:7:ARG:NH1	2.28	0.66
21:U:25:PHE:HB2	71:1:933:G:N3	2.09	0.66
29:BB:31:ILE:O	29:BB:35:GLU:N	2.27	0.66
32:An:48:HIS:CG	32:An:49:SER:N	2.63	0.66
51:Ak:12:LEU:HD13	51:Ak:87:MET:HE3	1.77	0.66
53:Ad:170:VAL:HG21	53:Ad:223:LEU:HG	1.77	0.66
66:BO:172:ARG:HG3	66:BO:172:ARG:O	1.93	0.66
71:1:218:A:N6	71:1:319:A:O2'	2.28	0.66
71:1:361:A:H3'	71:1:362:A:H5''	1.75	0.66
71:1:829:U:H2'	71:1:830:A:H8	1.61	0.66
71:1:1018:A:H62	71:1:1070:C:N4	1.93	0.66
6:F:14:TRP:NE1	6:F:50:ASP:OD2	2.26	0.66
15:O:306:ASN:HD21	35:Az:53:HIS:HB3	1.59	0.66
18:R:167:HIS:CD2	18:R:169:GLY:H	2.13	0.66
44:BM:76:TYR:OH	44:BM:323:ARG:O	2.13	0.66
49:Aq:95:HIS:CD2	49:Aq:96:PRO:HD2	2.30	0.66
61:BD:31:ASN:HD21	61:BD:34:LEU:HG	1.59	0.66
71:1:611:A:H61	71:1:809:A:H5'	1.60	0.66
71:1:890:U:O2	71:1:921:G:N2	2.28	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:108:ARG:HH22	42:Aa:89:ARG:HB3	1.59	0.66
19:S:355:LYS:NZ	71:1:358:A:OP2	2.25	0.66
25:Y:54:VAL:HG11	39:Ai:158:LEU:HB3	1.77	0.66
38:Ab:260:PRO:HG2	45:Ar:72:PRO:HB3	1.75	0.66
39:Ai:222:PRO:HG3	39:Ai:446:LEU:HD11	1.76	0.66
42:Aa:192:LEU:HB3	71:1:146:U:H3	1.60	0.66
48:Am:260:TRP:CD1	48:Am:268:LYS:HA	2.31	0.66
71:1:55:A:N6	71:1:122:U:H3	1.92	0.66
7:G:157:VAL:HG21	22:V:58:LEU:HD12	1.77	0.66
10:J:48:HIS:ND1	10:J:48:HIS:O	2.28	0.66
38:Ab:122:GLY:O	38:Ab:124:ARG:NH1	2.28	0.66
71:1:554:G:C8	71:1:573:A:H2'	2.31	0.66
71:1:639:A:H61	71:1:799:A:H61	1.42	0.66
71:1:975:U:O2	71:1:975:U:C2'	2.40	0.66
2:B:62:TYR:OH	2:B:213:LEU:O	2.13	0.66
2:B:194:LYS:HE2	2:B:194:LYS:O	1.95	0.66
11:K:75:SER:HB2	42:Aa:87:THR:HG21	1.76	0.66
13:M:18:ARG:NH1	71:1:179:U:OP2	2.29	0.66
15:O:263:ASP:O	18:R:41:ARG:NH2	2.28	0.66
17:Q:119:GLN:OE1	60:Ah:68:ILE:HD11	1.95	0.66
18:R:377:PRO:HB3	35:Az:52:VAL:HG11	1.77	0.66
25:Y:155:ALA:HA	37:BC:134:GLU:HG2	1.76	0.66
32:An:192:THR:OG1	60:Ah:138:ASP:OD1	2.13	0.66
33:Al:216:SER:OG	33:Al:220:GLU:OE2	2.13	0.66
39:Ai:217:LEU:HA	49:Aq:136:ARG:HH12	1.60	0.66
44:BM:218:LEU:O	44:BM:221:ARG:NE	2.29	0.66
47:BH:59:PHE:HB2	47:BH:130:MET:HE1	1.77	0.66
49:Aq:174:ARG:O	49:Aq:176:ARG:N	2.29	0.66
65:BL:188:THR:HA	65:BL:278:ARG:O	1.96	0.66
71:1:843:A:H62	71:1:852:A:N6	1.93	0.66
4:D:33:ARG:NH1	4:D:41:CYS:SG	2.68	0.66
7:G:282:ARG:NH1	63:Ag:155:MET:SD	2.69	0.66
22:V:120:ALA:HB2	71:1:91:U:C5	2.30	0.66
51:Ak:173:TYR:CZ	51:Ak:175:ALA:HB3	2.31	0.66
71:1:864:A:N6	71:1:865:A:N1	2.43	0.66
28:UA:40:UNK:HA	64:Ax:188:ASN:HD21	1.61	0.66
66:BO:72:THR:HG21	66:BO:162:LEU:HD23	1.75	0.66
1:A:254:ARG:NH2	71:1:1107:A:OP1	2.28	0.66
10:J:57:PRO:HG3	10:J:115:VAL:HG12	1.78	0.66
18:R:272:ARG:HH12	18:R:286:GLN:HE22	1.44	0.66
31:Bj:139:LYS:HE3	59:Ac:40:HIS:CE1	2.31	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:Ar:70:TYR:OH	45:Ar:75:GLU:OE1	2.13	0.66
57:As:68:PRO:HA	57:As:138:ARG:HH22	1.60	0.66
60:Ah:182:ARG:NH2	60:Ah:197:VAL:O	2.29	0.66
71:1:39:U:H1'	71:1:40:C:OP1	1.96	0.66
1:A:325:ASP:HA	9:I:28:ASP:HB3	1.77	0.66
6:F:161:GLN:HA	6:F:161:GLN:NE2	2.08	0.66
16:P:98:TYR:HE2	45:Ar:15:LEU:HA	1.60	0.66
60:Ah:64:VAL:HG12	60:Ah:65:GLY:H	1.60	0.66
71:1:204:U:H3'	71:1:204:U:OP2	1.95	0.66
71:1:209:U:P	71:1:209:U:O4'	2.54	0.66
71:1:305:U:OP1	71:1:308:C:N4	2.29	0.66
8:H:137:GLU:HG2	55:Av:166:ILE:HG21	1.78	0.66
24:X:496:TRP:HZ3	53:Ad:65:ILE:CD1	2.09	0.66
44:BM:86:LEU:O	44:BM:90:GLN:N	2.29	0.66
58:Ae:170:HIS:ND1	58:Ae:284:ASP:OD2	2.26	0.66
65:BL:172:LEU:HB2	65:BL:185:GLU:HB3	1.77	0.66
71:1:663:U:H3	71:1:674:U:H3	1.44	0.66
8:H:40:ASN:OD1	8:H:41:GLU:N	2.29	0.65
16:P:130:VAL:HG12	16:P:132:GLY:H	1.61	0.65
18:R:400:PRO:HB3	71:1:62:U:H5'	1.77	0.65
25:Y:114:GLU:O	59:Ac:36:GLN:NE2	2.29	0.65
31:Bj:137:ARG:NH1	59:Ac:191:ASP:OD2	2.29	0.65
39:Ai:295:ILE:HG22	39:Ai:296:HIS:H	1.60	0.65
53:Ad:31:LEU:HB3	53:Ad:36:ASP:CG	2.20	0.65
24:X:498:ARG:HH11	24:X:498:ARG:CG	2.05	0.65
25:Y:119:ASN:ND2	59:Ac:215:TRP:O	2.25	0.65
26:Z:50:PRO:HD2	26:Z:53:MET:HE3	1.78	0.65
40:Ap:97:ARG:HH22	67:BG:1333:ILE:HD13	1.61	0.65
41:Au:92:VAL:C	41:Au:94:LYS:H	2.04	0.65
46:Aj:276:LEU:HD13	46:Aj:287:ILE:HG22	1.78	0.65
65:BL:141:TRP:CD1	65:BL:141:TRP:O	2.49	0.65
71:1:661:G:H1	71:1:676:U:H3	1.44	0.65
71:1:691:G:N2	71:1:709:U:O2	2.29	0.65
17:Q:50:ASN:OD1	71:1:100:A:O2'	2.14	0.65
31:Bj:146:CYS:HB3	31:Bj:156:PRO:HA	1.77	0.65
32:An:110:PHE:CZ	32:An:114:VAL:HG21	2.31	0.65
32:An:115:LEU:HD11	32:An:217:ARG:HA	1.78	0.65
1:A:166:HIS:NE2	1:A:220:ALA:O	2.29	0.65
1:A:391:GLN:HG2	66:BO:176:HIS:CE1	2.32	0.65
32:An:166:ASN:O	65:BL:152:GLN:NE2	2.29	0.65
37:BC:56:LEU:O	37:BC:104:ARG:NH1	2.28	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:As:110:ASP:OD1	57:As:111:GLU:N	2.30	0.65
58:Ae:55:HIS:HD2	58:Ae:57:LYS:H	1.45	0.65
66:BO:80:ILE:HG22	66:BO:100:ARG:HB3	1.78	0.65
66:BO:172:ARG:CZ	66:BO:172:ARG:HB2	2.27	0.65
1:A:258:ASP:OD1	66:BO:40:LYS:HE2	1.96	0.65
2:B:275:ARG:NH1	2:B:322:THR:O	2.30	0.65
12:L:105:ARG:NH2	71:1:403:U:O2	2.30	0.65
16:P:149:ARG:NH1	45:Ar:19:TYR:O	2.28	0.65
41:Au:34:ARG:NH1	71:1:256:A:O2'	2.30	0.65
43:Ao:77:TRP:O	43:Ao:79:TRP:N	2.28	0.65
43:Ao:246:LEU:O	45:Ar:186:ASN:ND2	2.28	0.65
51:Ak:107:MET:HE2	51:Ak:117:ILE:HG12	1.77	0.65
1:A:182:ALA:H	1:A:206:LYS:HB3	1.62	0.65
7:G:131:ASN:ND2	71:1:326:U:O4	2.29	0.65
33:Al:272:GLU:N	33:Al:272:GLU:OE2	2.30	0.65
34:BI:257:ARG:NH1	60:Ah:104:ASP:O	2.29	0.65
41:Au:123:ALA:O	41:Au:127:ARG:NE	2.29	0.65
48:Am:289:GLU:N	48:Am:289:GLU:OE1	2.28	0.65
52:BP:100:ALA:O	52:BP:139:ALA:N	2.29	0.65
55:Av:137:GLN:HA	55:Av:140:VAL:HG12	1.77	0.65
66:BO:77:VAL:HB	66:BO:104:GLN:HG3	1.77	0.65
11:K:103:GLU:HG3	38:Ab:110:GLN:HG3	1.78	0.65
16:P:56:ASP:HB3	71:1:952:U:C4	2.32	0.65
18:R:141:VAL:HG11	18:R:345:VAL:HG11	1.79	0.65
19:S:329:SER:OG	56:Af:103:ARG:NH2	2.30	0.65
31:Bj:68:LEU:HD12	49:Aq:11:LEU:HD13	1.77	0.65
35:Az:43:LEU:HD13	35:Az:96:TYR:HD1	1.62	0.65
49:Aq:341:PHE:N	49:Aq:341:PHE:CD1	2.63	0.65
58:Ae:234:VAL:HG11	58:Ae:259:VAL:HG21	1.78	0.65
60:Ah:114:PHE:HA	60:Ah:118:GLU:HB2	1.78	0.65
65:BL:354:ARG:NH1	71:1:663:U:OP2	2.29	0.65
66:BO:73:ASN:HD22	66:BO:119:ARG:HB3	1.61	0.65
7:G:287:ASN:ND2	71:1:198:A:OP1	2.30	0.65
24:X:348:VAL:HG21	24:X:353:PRO:HG2	1.78	0.65
71:1:704:U:O2'	71:1:705:A:OP1	2.14	0.65
2:B:12:VAL:HG13	38:Ab:60:ILE:HD13	1.79	0.65
5:E:52:ASN:N	71:1:467:U:O2'	2.28	0.65
6:F:14:TRP:HB2	6:F:52:VAL:HG12	1.79	0.65
7:G:74:THR:HB	46:Aj:423:THR:HG22	1.79	0.65
11:K:17:LEU:HD23	11:K:39:ILE:HG23	1.78	0.65
16:P:157:LYS:N	16:P:160:GLU:OE2	2.28	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:W:74:GLU:HG2	55:Av:161:ILE:HG23	1.79	0.65
25:Y:149:GLN:HE21	59:Ac:120:LEU:HD23	1.62	0.65
44:BM:180:LEU:HB2	44:BM:181:PRO:HD3	1.78	0.65
1:A:261:TYR:N	1:A:266:ASP:OD2	2.30	0.65
9:I:185:ARG:HD2	9:I:188:LEU:HD11	1.79	0.65
11:K:86:ARG:NH2	42:Aa:80:ASP:O	2.30	0.65
15:O:292:LEU:HB3	18:R:124:TYR:HB2	1.77	0.65
24:X:367:GLN:HB3	24:X:384:LYS:HE3	1.77	0.65
26:Z:43:ILE:O	26:Z:43:ILE:CG2	2.45	0.65
35:Az:140:TYR:OH	36:At:61:ARG:NH2	2.29	0.65
44:BM:317:PHE:HB2	44:BM:322:TYR:CE1	2.31	0.65
55:Av:60:ARG:H	55:Av:119:TYR:HE1	1.45	0.65
66:BO:174:VAL:O	66:BO:175:ASN:HB2	1.97	0.65
2:B:54:PRO:O	46:Aj:437:THR:OG1	2.11	0.64
2:B:99:ASN:ND2	2:B:235:THR:O	2.30	0.64
5:E:21:PRO:HB2	5:E:224:GLN:HE22	1.61	0.64
15:O:229:ARG:HD3	15:O:238:LEU:HB3	1.78	0.64
16:P:53:PHE:HB3	16:P:60:ARG:HE	1.62	0.64
18:R:261:ALA:HB3	36:At:108:MET:SD	2.37	0.64
18:R:301:PHE:O	18:R:303:ASN:N	2.29	0.64
41:Au:57:TRP:HZ3	41:Au:78:PRO:O	1.78	0.64
43:Ao:24:ALA:HA	71:1:402:U:H1'	1.79	0.64
43:Ao:182:HIS:HA	43:Ao:186:MET:HE2	1.77	0.64
44:BM:197:PHE:HE2	44:BM:279:TYR:HB3	1.62	0.64
46:Aj:217:GLY:HA2	56:Af:109:VAL:HG11	1.79	0.64
53:Ad:76:TYR:CZ	53:Ad:155:PRO:HD3	2.32	0.64
59:Ac:173:VAL:O	59:Ac:182:THR:N	2.27	0.64
73:Ag:301:NAD:H52N	73:Ag:301:NAD:PA	2.37	0.64
1:A:167:SER:OG	1:A:168:THR:N	2.31	0.64
22:V:104:ARG:NH1	71:1:184:G:O5'	2.30	0.64
24:X:357:THR:O	24:X:361:ARG:NH1	2.30	0.64
27:BA:57:LEU:HA	27:BA:60:ASP:HB2	1.79	0.64
40:Ap:177:ARG:O	40:Ap:180:SER:OG	2.16	0.64
41:Au:14:LEU:H	41:Au:14:LEU:HD12	1.62	0.64
44:BM:141:ARG:NH2	44:BM:268:HIS:O	2.30	0.64
44:BM:141:ARG:NE	44:BM:271:ARG:HB2	2.11	0.64
44:BM:285:LEU:HB3	44:BM:289:ARG:HE	1.61	0.64
46:Aj:289:GLU:OE1	56:Af:137:ARG:NH1	2.30	0.64
56:Af:149:GLN:OE1	56:Af:152:ARG:NE	2.29	0.64
60:Ah:347:ASN:ND2	60:Ah:458:LEU:HB3	2.12	0.64
66:BO:47:TRP:CD1	71:1:813:U:H5''	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:138:ALA:HA	10:J:21:PHE:HZ	1.63	0.64
1:A:263:TRP:NE1	71:1:810:U:OP2	2.21	0.64
12:L:98:THR:HB	42:Aa:31:VAL:HG11	1.80	0.64
24:X:301:SER:HA	24:X:306:ALA:HB2	1.78	0.64
26:Z:58:ASP:OD1	26:Z:58:ASP:N	2.30	0.64
29:BB:112:LEU:HD21	58:Ae:10:PHE:HE1	1.61	0.64
44:BM:45:SER:HB2	44:BM:118:ILE:HD13	1.77	0.64
51:Ak:225:LYS:HB2	51:Ak:250:ASP:O	1.98	0.64
71:1:132:U:H5''	71:1:133:A:H2	1.63	0.64
7:G:187:GLY:O	30:Aw:27:TYR:OH	2.14	0.64
10:J:87:GLY:HA3	10:J:106:ALA:HB3	1.80	0.64
12:L:70:GLY:HA3	12:L:74:LEU:HG	1.79	0.64
13:M:202:ILE:HD13	13:M:233:LEU:HD13	1.79	0.64
15:O:29:ARG:HG2	15:O:33:ARG:HB2	1.79	0.64
37:BC:29:THR:HG21	37:BC:36:LEU:HB2	1.78	0.64
44:BM:251:ARG:NH1	44:BM:253:CYS:SG	2.63	0.64
44:BM:366:VAL:HB	44:BM:374:LEU:HD13	1.80	0.64
65:BL:241:GLY:O	65:BL:277:ARG:NH1	2.31	0.64
3:C:19:ASP:HA	3:C:26:PRO:HB3	1.79	0.64
3:C:67:ASN:HB3	63:Ag:114:VAL:HB	1.79	0.64
6:F:114:LYS:NZ	71:1:151:G:OP2	2.29	0.64
14:N:201:ARG:NH1	14:N:217:ASP:OD2	2.31	0.64
15:O:60:LYS:HD3	15:O:62:GLY:H	1.63	0.64
29:BB:111:PHE:CD1	29:BB:112:LEU:O	2.50	0.64
29:BB:125:LYS:HG3	29:BB:127:PRO:HD3	1.80	0.64
32:An:264:HIS:HE1	60:Ah:68:ILE:HD12	1.62	0.64
63:Ag:62:ARG:NH2	71:1:104:U:O2'	2.30	0.64
24:X:172:PRO:HG2	24:X:220:GLN:HB3	1.78	0.64
25:Y:290:ARG:NH2	39:Ai:147:ASP:OD1	2.26	0.64
29:BB:111:PHE:HE1	29:BB:112:LEU:O	1.81	0.64
42:Aa:189:ARG:HA	71:1:146:U:O4	1.96	0.64
71:1:593:U:O2'	71:1:594:U:OP2	2.15	0.64
71:1:639:A:H2'	71:1:640:A:H8	1.62	0.64
7:G:192:ASN:OD1	30:Aw:25:THR:OG1	2.16	0.64
17:Q:218:ARG:O	17:Q:218:ARG:NH2	2.29	0.64
18:R:241:SER:O	18:R:245:SER:N	2.30	0.64
25:Y:147:VAL:HG22	59:Ac:122:LEU:HD22	1.78	0.64
26:Z:108:ARG:HE	71:1:571:U:H1'	1.63	0.64
39:Ai:35:ASP:OD2	39:Ai:38:ARG:NH1	2.31	0.64
2:B:100:ASN:OD1	2:B:101:VAL:N	2.30	0.64
18:R:73:GLU:OE1	18:R:73:GLU:N	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:249:LYS:O	24:X:253:HIS:N	2.31	0.64
38:Ab:130:PRO:C	38:Ab:132:GLN:H	2.05	0.64
54:BF:47:ALA:O	54:BF:51:LYS:NZ	2.31	0.64
63:Ag:96:THR:OG1	63:Ag:141:GLY:O	2.14	0.64
64:Ax:73:THR:HG22	64:Ax:200:PHE:N	2.13	0.64
66:BO:47:TRP:CE3	66:BO:57:GLY:HA2	2.32	0.64
8:H:82:LEU:HD11	8:H:123:PHE:HB3	1.80	0.64
16:P:52:ARG:C	16:P:60:ARG:HG2	2.22	0.64
31:Bj:113:HIS:HA	31:Bj:116:ARG:HG2	1.79	0.64
31:Bj:145:VAL:HG13	31:Bj:159:MET:HB3	1.80	0.64
36:At:72:LEU:HD13	36:At:76:GLY:HA2	1.80	0.64
38:Ab:57:ILE:HG22	38:Ab:69:TYR:HB2	1.80	0.64
59:Ac:172:ILE:HG13	59:Ac:257:ALA:HB3	1.79	0.64
65:BL:167:ARG:HH11	65:BL:299:PRO:HD2	1.62	0.64
69:UC:126:UNK:O	69:UC:130:UNK:N	2.31	0.64
71:1:850:U:O2'	71:1:851:U:O4'	2.16	0.64
71:1:924:U:O2'	71:1:925:G:H8	1.75	0.64
2:B:152:LYS:HG2	2:B:165:GLY:HA3	1.79	0.64
2:B:388:ALA:HB2	18:R:211:SER:HB3	1.80	0.64
40:Ap:97:ARG:NH1	67:BG:1336:GLN:O	2.31	0.64
25:Y:153:GLN:HE22	37:BC:134:GLU:HB3	1.63	0.63
36:At:83:GLU:OE2	36:At:86:ARG:NE	2.31	0.63
60:Ah:235:ILE:HG23	60:Ah:409:TYR:HB3	1.79	0.63
63:Ag:50:SER:OG	63:Ag:53:ASN:OD1	2.16	0.63
71:1:870:A:H2'	71:1:871:A:C4	2.32	0.63
2:B:59:PRO:HG2	2:B:88:GLN:HE21	1.63	0.63
2:B:412:TYR:HE1	33:Al:280:ARG:HD3	1.63	0.63
6:F:15:LEU:HB2	6:F:140:PRO:HB2	1.80	0.63
22:V:74:LYS:O	22:V:77:ARG:NE	2.31	0.63
26:Z:48:LYS:HB2	26:Z:80:ARG:NH1	2.12	0.63
43:Ao:10:ALA:HB2	71:1:491:U:H5''	1.79	0.63
1:A:283:ARG:O	1:A:284:ILE:C	2.41	0.63
5:E:300:GLU:OE1	5:E:300:GLU:N	2.31	0.63
13:M:84:GLU:HA	13:M:93:THR:HA	1.79	0.63
24:X:486:MET:HA	53:Ad:182:PHE:HE2	1.63	0.63
26:Z:50:PRO:CG	26:Z:53:MET:HE3	2.28	0.63
32:An:215:VAL:HG13	32:An:215:VAL:O	1.98	0.63
39:Ai:296:HIS:ND1	39:Ai:307:ASN:OD1	2.31	0.63
43:Ao:132:SER:N	43:Ao:159:GLU:OE2	2.31	0.63
48:Am:227:ASP:O	48:Am:231:ARG:NH1	2.31	0.63
66:BO:156:ASN:OD1	66:BO:157:ASP:N	2.30	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:1:862:A:N6	71:1:1105:G:H22	1.95	0.63
8:H:7:ARG:HB3	8:H:8:PRO:CD	2.28	0.63
12:L:46:ARG:NH2	30:Aw:187:TYR:OXT	2.27	0.63
15:O:29:ARG:HG2	15:O:33:ARG:HD3	1.79	0.63
16:P:37:GLY:O	16:P:114:ARG:NH2	2.30	0.63
33:Al:147:ALA:O	33:Al:151:SER:N	2.27	0.63
35:Az:41:ASP:OD1	71:1:77:U:N3	2.32	0.63
41:Au:72:ASP:N	41:Au:72:ASP:OD1	2.30	0.63
71:1:1130:A:N6	71:1:1148:A:H62	1.97	0.63
26:Z:40:THR:HG22	32:An:50:HIS:CD2	2.33	0.63
39:Ai:442:ASN:OD1	39:Ai:443:ASN:N	2.31	0.63
49:Aq:341:PHE:CE1	71:1:975:U:O2'	2.45	0.63
52:BP:97:ARG:HB3	52:BP:97:ARG:CZ	2.28	0.63
63:Ag:54:GLU:HG3	63:Ag:55:LYS:HG2	1.79	0.63
2:B:365:GLU:HG3	2:B:370:VAL:HG13	1.80	0.63
27:BA:14:ASN:N	45:Ar:157:THR:HG1	1.96	0.63
34:BI:170:GLY:O	34:BI:211:GLN:NE2	2.31	0.63
39:Ai:312:LEU:HB2	39:Ai:317:VAL:HG11	1.80	0.63
44:BM:317:PHE:HB3	44:BM:321:LYS:HB2	1.80	0.63
58:Ae:45:LEU:HD12	58:Ae:46:PRO:HD2	1.79	0.63
3:C:114:PRO:HD2	3:C:174:ILE:HD13	1.80	0.63
14:N:133:ARG:NH1	71:1:72:U:O4	2.30	0.63
15:O:89:HIS:HD2	15:O:91:LYS:H	1.46	0.63
23:W:79:HIS:CD2	23:W:88:ARG:HB2	2.33	0.63
24:X:332:ALA:HB2	24:X:436:ALA:HB2	1.81	0.63
52:BP:30:SER:HB2	56:Af:142:TRP:HB2	1.80	0.63
66:BO:151:THR:OG1	66:BO:152:CYS:N	2.29	0.63
71:1:548:A:H2'	71:1:588:A:H2	1.64	0.63
71:1:753:U:N3	71:1:754:A:N1	2.47	0.63
71:1:990:A:H3'	71:1:991:G:H8	1.64	0.63
1:A:299:GLU:HG3	71:1:1155:A:N3	2.14	0.63
5:E:203:LYS:NZ	55:Av:40:ALA:O	2.29	0.63
6:F:12:ARG:NH1	38:Ab:115:PRO:HB3	2.14	0.63
21:U:36:ASN:N	21:U:36:ASN:OD1	2.29	0.63
27:BA:26:LYS:HE2	27:BA:28:TYR:HA	1.81	0.63
38:Ab:135:ARG:NH1	38:Ab:141:GLU:OE2	2.32	0.63
38:Ab:160:ILE:HD11	48:Am:276:ILE:HA	1.80	0.63
42:Aa:39:TYR:HA	42:Aa:43:GLY:HA2	1.80	0.63
51:Ak:292:MET:HE2	59:Ac:131:MET:HG3	1.78	0.63
71:1:391:A:N7	71:1:393:A:N6	2.47	0.63
8:H:53:THR:HA	8:H:153:THR:HG22	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:108:LYS:NZ	71:1:63:G:OP2	2.32	0.63
16:P:39:PRO:HB2	43:Ao:80:ALA:O	1.99	0.63
33:Al:272:GLU:O	33:Al:272:GLU:HG2	1.98	0.63
51:Ak:91:TRP:CD1	51:Ak:118:GLY:HA3	2.33	0.63
58:Ae:29:PRO:HG3	71:1:1125:U:H1'	1.81	0.63
60:Ah:377:LYS:HD3	60:Ah:453:GLY:H	1.63	0.63
71:1:703:U:O2'	71:1:704:U:OP1	2.17	0.63
4:D:108:MET:SD	38:Ab:213:ALA:N	2.72	0.62
13:M:153:LEU:HA	13:M:156:LEU:HD12	1.79	0.62
38:Ab:183:LYS:HA	38:Ab:187:MET:HG3	1.81	0.62
48:Am:216:MET:HB2	48:Am:221:GLU:HG2	1.79	0.62
56:Af:81:TYR:HA	56:Af:84:ASP:OD1	1.99	0.62
9:I:105:LYS:NZ	9:I:139:MET:O	2.29	0.62
10:J:49:THR:HG23	10:J:50:LYS:H	1.62	0.62
21:U:56:THR:O	21:U:60:ARG:N	2.32	0.62
32:An:48:HIS:CG	32:An:49:SER:H	2.17	0.62
32:An:51:ARG:HH11	65:BL:115:TYR:H	1.46	0.62
2:B:193:VAL:CG2	2:B:284:LEU:HD12	2.30	0.62
15:O:29:ARG:HB2	15:O:32:THR:OG1	1.99	0.62
18:R:153:ARG:NH1	18:R:156:GLU:OE2	2.23	0.62
21:U:25:PHE:CB	71:1:933:G:N2	2.62	0.62
32:An:137:GLU:O	32:An:141:ASP:HB3	1.99	0.62
33:Al:215:VAL:O	33:Al:219:ASN:ND2	2.32	0.62
43:Ao:257:LYS:NZ	43:Ao:264:ASP:OD2	2.28	0.62
44:BM:82:LEU:HD11	44:BM:382:LEU:HD21	1.82	0.62
47:BH:176:CYS:SG	47:BH:185:SER:OG	2.55	0.62
53:Ad:125:ASP:HB3	53:Ad:127:PRO:HD2	1.81	0.62
58:Ae:52:ARG:HH12	58:Ae:59:THR:HG22	1.64	0.62
71:1:398:U:O2'	71:1:399:U:O5'	2.17	0.62
71:1:974:U:H4'	71:1:975:U:OP1	1.99	0.62
17:Q:108:ILE:CB	71:1:905:A:H62	2.12	0.62
44:BM:147:ASP:OD2	44:BM:182:ARG:NH2	2.32	0.62
49:Aq:329:ASP:OD1	49:Aq:330:VAL:N	2.29	0.62
50:BE:37:GLU:HB2	71:1:1144:G:N3	2.14	0.62
71:1:47:A:H4'	71:1:48:U:OP1	2.00	0.62
71:1:53:A:N6	71:1:124:A:H62	1.96	0.62
6:F:114:LYS:HD2	71:1:150:A:H5''	1.80	0.62
9:I:77:LEU:HD13	9:I:83:VAL:HG12	1.81	0.62
17:Q:24:HIS:HE1	39:Ai:413:ARG:HH22	1.46	0.62
27:BA:103:ILE:HG13	27:BA:103:ILE:O	2.00	0.62
33:Al:38:VAL:CG2	33:Al:70:GLN:HA	2.30	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:Aq:336:ARG:HG2	49:Aq:336:ARG:NH1	1.98	0.62
64:Ax:105:CYS:HB3	64:Ax:109:ASP:H	1.64	0.62
65:BL:335:HIS:CD2	65:BL:337:ARG:HH21	2.18	0.62
66:BO:183:VAL:O	66:BO:185:LEU:N	2.25	0.62
14:N:229:VAL:HG12	18:R:10:VAL:HA	1.82	0.62
32:An:50:HIS:CD2	32:An:51:ARG:H	2.18	0.62
35:Az:38:TYR:OH	35:Az:102:GLN:NE2	2.32	0.62
40:Ap:48:ALA:H	41:Au:185:TRP:HZ3	1.48	0.62
51:Ak:136:THR:HG21	51:Ak:208:VAL:HG11	1.81	0.62
71:1:208:U:H4'	71:1:209:U:OP1	1.96	0.62
71:1:345:A:H62	71:1:379:U:H5'	1.64	0.62
71:1:770:A:N1	71:1:774:A:O2'	2.27	0.62
20:T:80:GLN:HG3	20:T:81:ILE:H	1.63	0.62
21:U:18:LEU:HD23	21:U:19:LYS:H	1.63	0.62
21:U:25:PHE:HB2	71:1:933:G:N2	2.14	0.62
21:U:78:GLN:HE21	31:Bj:12:SER:HB2	1.65	0.62
34:BI:190:SER:OG	34:BI:224:ASN:O	2.16	0.62
36:At:33:ASN:HD21	71:1:123:U:H5'	1.63	0.62
39:Ai:429:LEU:HD13	39:Ai:463:ALA:HB3	1.81	0.62
48:Am:266:GLU:OE1	48:Am:300:ARG:NH2	2.29	0.62
60:Ah:115:TYR:HB3	60:Ah:178:ARG:HH12	1.64	0.62
65:BL:337:ARG:O	71:1:662:G:O2'	2.14	0.62
1:A:235:GLN:NE2	1:A:334:ASP:OD1	2.32	0.62
5:E:179:ARG:HH11	5:E:179:ARG:HG3	1.64	0.62
13:M:6:PRO:HB2	13:M:8:TYR:CD2	2.35	0.62
23:W:76:CYS:SG	23:W:89:CYS:HB3	2.40	0.62
25:Y:130:PRO:HD3	59:Ac:57:HIS:HE1	1.64	0.62
41:Au:40:ARG:O	41:Au:44:ARG:HD3	1.99	0.62
50:BE:65:PHE:CZ	50:BE:67:LYS:HE3	2.34	0.62
55:Av:120:MET:SD	55:Av:148:ARG:NH2	2.72	0.62
71:1:1068:A:H4'	71:1:1069:U:H5'	1.82	0.62
9:I:234:TYR:O	71:1:579:U:N3	2.29	0.62
12:L:92:VAL:HG12	42:Aa:190:SER:O	2.00	0.62
16:P:98:TYR:CE2	45:Ar:15:LEU:HA	2.35	0.62
49:Aq:97:GLU:OE2	49:Aq:101:ASN:ND2	2.32	0.62
63:Ag:73:VAL:O	63:Ag:110:SER:OG	2.12	0.62
65:BL:98:MET:HG3	65:BL:163:VAL:HG11	1.82	0.62
66:BO:176:HIS:HD2	66:BO:178:TYR:H	1.48	0.62
71:1:1127:U:O2'	71:1:1128:U:OP1	2.16	0.62
8:H:152:GLN:HE22	52:BP:175:MET:HA	1.63	0.62
28:UA:162:UNK:O	28:UA:166:UNK:N	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:An:135:PHE:H	32:An:139:GLN:HG2	1.63	0.62
40:Ap:189:HIS:HA	40:Ap:192:LYS:HE2	1.82	0.62
44:BM:79:ARG:HB3	44:BM:382:LEU:HD13	1.82	0.62
48:Am:25:LYS:NZ	71:1:1123:U:H3	1.97	0.62
48:Am:80:ASP:OD1	48:Am:254:ARG:NH1	2.33	0.62
64:Ax:181:ARG:NH1	71:1:589:A:OP2	2.23	0.62
71:1:642:A:O2'	71:1:643:G:OP1	2.14	0.62
1:A:286:PRO:HG2	6:F:77:ALA:O	2.00	0.61
11:K:46:GLN:CD	42:Aa:191:THR:O	2.41	0.61
32:An:22:ARG:HD3	71:1:286:G:H22	1.65	0.61
32:An:264:HIS:ND1	32:An:264:HIS:O	2.33	0.61
33:Al:270:PRO:HB2	63:Ag:147:ARG:HE	1.64	0.61
37:BC:104:ARG:HD2	63:Ag:235:THR:HG21	1.81	0.61
39:Ai:14:PRO:HG2	39:Ai:251:PHE:HE2	1.65	0.61
44:BM:17:ARG:NH2	44:BM:19:PHE:O	2.33	0.61
47:BH:72:CYS:HB3	47:BH:96:LEU:HD12	1.82	0.61
47:BH:123:HIS:NE2	47:BH:156:PHE:O	2.33	0.61
52:BP:97:ARG:HB3	52:BP:97:ARG:NH2	2.15	0.61
55:Av:41:PRO:HB2	55:Av:46:LEU:HD21	1.82	0.61
63:Ag:213:VAL:HA	63:Ag:216:ILE:HG22	1.81	0.61
65:BL:305:HIS:N	71:1:655:U:OP1	2.32	0.61
9:I:194:GLU:HA	9:I:197:LYS:HG2	1.82	0.61
35:Az:105:ARG:NH1	35:Az:106:VAL:O	2.34	0.61
41:Au:132:LYS:HE2	64:Ax:140:VAL:HG11	1.82	0.61
49:Aq:308:GLN:HE22	62:Ay:173:LYS:HB2	1.65	0.61
58:Ae:78:HIS:HD2	58:Ae:80:HIS:H	1.48	0.61
9:I:232:LEU:HD13	54:BF:16:TRP:HB2	1.80	0.61
14:N:72:THR:N	71:1:316:A:OP1	2.28	0.61
14:N:87:PHE:HB2	22:V:19:ARG:NH2	2.14	0.61
24:X:101:PRO:HB2	39:Ai:164:LYS:NZ	2.16	0.61
38:Ab:248:GLU:HB3	55:Av:121:GLU:HG2	1.82	0.61
39:Ai:399:GLN:N	39:Ai:399:GLN:OE1	2.33	0.61
42:Aa:193:TYR:HD1	71:1:146:U:H2'	1.64	0.61
49:Aq:171:ALA:C	49:Aq:173:HIS:H	2.07	0.61
64:Ax:155:ASN:ND2	64:Ax:187:VAL:HG12	2.15	0.61
71:1:159:U:N3	71:1:166:U:OP2	2.34	0.61
2:B:149:LYS:HZ3	2:B:153:ASN:HB2	1.65	0.61
5:E:186:ARG:HH22	71:1:458:A:N6	1.98	0.61
6:F:115:LEU:HA	6:F:118:ARG:HE	1.65	0.61
11:K:119:ALA:HB2	52:BP:-23:PRO:HB2	1.82	0.61
17:Q:143:ARG:HB3	17:Q:148:LEU:HB2	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:172:LYS:HE2	35:Az:73:HIS:HD2	1.64	0.61
18:R:205:TYR:O	18:R:213:THR:OG1	2.13	0.61
18:R:267:PRO:HG2	18:R:305:THR:HG21	1.82	0.61
27:BA:66:ALA:HB1	27:BA:87:ILE:HA	1.82	0.61
49:Aq:41:GLU:HG3	49:Aq:42:MET:H	1.64	0.61
49:Aq:167:SER:O	49:Aq:169:TYR:N	2.33	0.61
55:Av:76:MET:HA	55:Av:79:TYR:HB2	1.83	0.61
60:Ah:67:ARG:HH21	71:1:905:A:H4'	1.65	0.61
65:BL:335:HIS:HA	65:BL:340:VAL:HG11	1.83	0.61
14:N:92:VAL:O	35:Az:28:ARG:NH1	2.32	0.61
16:P:112:ARG:HH22	47:BH:219:LYS:HE2	1.65	0.61
32:An:48:HIS:CD2	32:An:49:SER:H	2.19	0.61
32:An:117:MET:HB2	32:An:122:ILE:CG1	2.31	0.61
39:Ai:380:ARG:NH1	39:Ai:471:ILE:O	2.31	0.61
44:BM:138:VAL:HG23	44:BM:139:PRO:HD3	1.82	0.61
50:BE:54:ALA:O	50:BE:68:LEU:HD23	2.01	0.61
55:Av:61:MET:HG3	55:Av:63:HIS:H	1.64	0.61
60:Ah:243:LEU:O	60:Ah:245:ARG:N	2.33	0.61
71:1:203:A:H3'	71:1:204:U:H5'	1.81	0.61
71:1:527:U:O2'	71:1:528:A:H8	1.83	0.61
1:A:300:THR:O	71:1:1154:A:O2'	2.18	0.61
15:O:266:THR:HG23	18:R:43:SER:H	1.66	0.61
21:U:29:VAL:HG23	21:U:30:ILE:N	2.15	0.61
24:X:400:VAL:O	24:X:404:ILE:HG12	2.01	0.61
25:Y:128:ARG:NH2	59:Ac:59:VAL:O	2.34	0.61
25:Y:134:PRO:HD2	59:Ac:137:GLU:HB3	1.83	0.61
31:Bj:74:ARG:NH2	37:BC:92:GLN:OE1	2.31	0.61
48:Am:216:MET:HG2	58:Ae:150:HIS:HA	1.82	0.61
52:BP:97:ARG:N	52:BP:98:PRO:CD	2.57	0.61
52:BP:163:ARG:HD2	55:Av:156:MET:HE2	1.81	0.61
58:Ae:171:LYS:HE2	71:1:426:G:H4'	1.81	0.61
62:Ay:38:ARG:HD3	62:Ay:38:ARG:H	1.66	0.61
64:Ax:75:VAL:HG23	64:Ax:202:PRO:HG2	1.83	0.61
65:BL:334:ILE:HB	65:BL:336:PRO:HD3	1.82	0.61
2:B:402:HIS:N	2:B:403:PRO:HD3	2.16	0.61
5:E:130:ARG:HD2	55:Av:29:ASP:HA	1.82	0.61
5:E:186:ARG:HH22	71:1:458:A:H61	1.49	0.61
9:I:180:THR:HG22	20:T:76:GLU:H	1.65	0.61
11:K:44:ARG:NH2	71:1:156:A:OP2	2.28	0.61
13:M:92:VAL:HG12	46:Aj:467:VAL:HA	1.82	0.61
16:P:33:HIS:O	43:Ao:67:ARG:NH1	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:403:LYS:NZ	71:1:63:G:OP1	2.33	0.61
26:Z:43:ILE:O	26:Z:44:LEU:HB3	2.01	0.61
28:UA:81:UNK:HA	64:Ax:127:ASN:HB2	1.82	0.61
32:An:110:PHE:HZ	32:An:187:PHE:HA	1.65	0.61
48:Am:178:ASN:OD1	48:Am:179:ALA:N	2.33	0.61
60:Ah:68:ILE:HG12	71:1:905:A:N1	2.15	0.61
62:Ay:38:ARG:HH12	71:1:749:U:H1'	1.64	0.61
2:B:375:GLN:O	36:At:113:ARG:NH2	2.34	0.61
8:H:93:VAL:HG12	8:H:94:VAL:HG23	1.81	0.61
14:N:203:ARG:HB2	14:N:215:LEU:HD12	1.81	0.61
27:BA:56:LEU:O	27:BA:60:ASP:N	2.33	0.61
33:Al:233:ARG:NH2	39:Ai:424:GLY:O	2.34	0.61
38:Ab:14:VAL:HG22	38:Ab:57:ILE:HD11	1.83	0.61
43:Ao:158:ILE:O	43:Ao:162:SER:OG	2.18	0.61
45:Ar:147:LEU:HD21	52:BP:141:TYR:CE2	2.35	0.61
45:Ar:149:GLU:OE2	45:Ar:155:ARG:NH2	2.34	0.61
60:Ah:165:TYR:HB2	60:Ah:281:ILE:HD12	1.82	0.61
60:Ah:187:GLU:HA	60:Ah:197:VAL:HG22	1.83	0.61
62:Ay:37:ASP:OD1	71:1:748:U:N3	2.34	0.61
67:BG:1341:VAL:HG23	67:BG:1342:CYS:H	1.64	0.61
15:O:132:LYS:HB2	15:O:133:PRO:HD2	1.83	0.61
29:BB:112:LEU:HD21	58:Ae:10:PHE:CE1	2.36	0.61
37:BC:77:HIS:O	59:Ac:24:THR:N	2.34	0.61
45:Ar:204:LEU:HG	45:Ar:205:TYR:H	1.66	0.61
47:BH:176:CYS:HG	47:BH:185:SER:HG	1.47	0.61
71:1:865:A:O2'	71:1:870:A:N7	2.29	0.61
9:I:23:ARG:NH2	71:1:600:A:N3	2.48	0.61
9:I:238:ARG:NH2	15:O:88:ARG:O	2.34	0.61
18:R:242:ALA:HA	18:R:245:SER:HB2	1.83	0.61
22:V:61:LYS:HD3	71:1:955:U:H4'	1.83	0.61
43:Ao:260:GLN:O	43:Ao:262:MET:N	2.34	0.61
57:As:51:ARG:NH2	70:UD:42:UNK:O	2.34	0.61
18:R:126:PRO:O	34:BI:161:GLN:NE2	2.29	0.60
18:R:187:ASP:OD1	18:R:188:ALA:N	2.34	0.60
26:Z:50:PRO:CD	26:Z:53:MET:HE3	2.31	0.60
35:Az:33:LYS:HD2	71:1:64:A:H5'	1.83	0.60
60:Ah:182:ARG:NH1	60:Ah:182:ARG:O	2.34	0.60
60:Ah:457:PHE:HB3	60:Ah:461:ARG:NH1	2.15	0.60
71:1:650:U:O2'	71:1:651:U:O5'	2.19	0.60
6:F:5:TRP:HE3	6:F:7:CYS:H	1.46	0.60
15:O:157:ILE:HG13	15:O:169:GLN:HB2	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:25:PHE:HB2	71:1:933:G:C2	2.35	0.60
25:Y:86:ASP:HB2	37:BC:38:LEU:HD21	1.83	0.60
51:Ak:102:LEU:O	51:Ak:106:ARG:N	2.33	0.60
60:Ah:449:VAL:HA	60:Ah:457:PHE:CD2	2.36	0.60
71:1:574:A:O2'	71:1:575:G:O4'	2.19	0.60
71:1:936:G:H1	71:1:947:U:H3	1.49	0.60
71:1:969:U:O2'	71:1:970:A:O4'	2.15	0.60
71:1:1097:A:O2'	71:1:1098:A:OP1	2.16	0.60
6:F:92:GLU:O	58:Ae:61:ASN:ND2	2.25	0.60
11:K:23:MET:SD	71:1:146:U:O4	2.58	0.60
13:M:132:TYR:OH	15:O:71:GLU:OE2	2.18	0.60
17:Q:106:THR:HG21	71:1:905:A:C2	2.37	0.60
25:Y:175:ASP:OD1	25:Y:176:ASP:N	2.34	0.60
30:Aw:80:THR:HG21	63:Ag:77:ARG:CZ	2.31	0.60
38:Ab:195:GLU:H	38:Ab:195:GLU:CD	2.09	0.60
41:Au:14:LEU:HD11	71:1:286:G:C4	2.35	0.60
48:Am:214:SER:HB2	48:Am:221:GLU:HG3	1.83	0.60
71:1:1077:G:N3	71:1:1091:G:N2	2.48	0.60
4:D:102:GLN:O	4:D:106:LEU:N	2.32	0.60
6:F:113:ARG:NH1	71:1:151:G:H5'	2.16	0.60
8:H:72:LEU:HB3	8:H:77:ARG:HH22	1.65	0.60
11:K:145:HIS:N	46:Aj:222:GLU:OE2	2.33	0.60
14:N:138:PHE:O	14:N:142:PHE:N	2.24	0.60
19:S:252:ARG:HB3	56:Af:54:PHE:CE2	2.37	0.60
24:X:170:VAL:HG12	24:X:206:THR:HG22	1.82	0.60
25:Y:108:LEU:HB3	25:Y:111:ALA:HB3	1.84	0.60
49:Aq:153:MET:HG3	49:Aq:168:GLN:HG2	1.81	0.60
51:Ak:160:ILE:HG23	51:Ak:198:LEU:HD21	1.83	0.60
61:BD:47:GLU:OE1	61:BD:50:ARG:NH1	2.34	0.60
71:1:862:A:H61	71:1:1105:G:H22	1.48	0.60
11:K:14:THR:OG1	71:1:522:U:N3	2.35	0.60
13:M:12:LEU:HD13	13:M:13:ARG:HB2	1.84	0.60
13:M:214:ASP:HB3	13:M:222:ALA:O	2.01	0.60
14:N:194:ARG:HB2	71:1:565:U:H3	1.67	0.60
18:R:40:ARG:HA	18:R:101:ARG:HH21	1.67	0.60
25:Y:42:GLN:OE1	63:Ag:206:TRP:NE1	2.28	0.60
26:Z:56:GLY:HA3	26:Z:61:GLY:HA2	1.83	0.60
32:An:22:ARG:NH1	41:Au:23:ALA:O	2.34	0.60
36:At:156:GLN:O	36:At:156:GLN:NE2	2.34	0.60
44:BM:17:ARG:HH22	44:BM:19:PHE:HB3	1.65	0.60
47:BH:18:MET:HE2	47:BH:166:TRP:HB2	1.81	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BP:-4:THR:O	52:BP:-2:ILE:N	2.35	0.60
58:Ae:253:GLN:HB3	71:1:426:G:C2	2.37	0.60
59:Ac:188:ARG:NH1	59:Ac:190:ASP:O	2.32	0.60
59:Ac:205:GLN:HB3	59:Ac:249:PHE:HD1	1.67	0.60
71:1:622:U:O4	71:1:623:A:N6	2.34	0.60
71:1:699:A:N3	71:1:699:A:H2'	2.15	0.60
10:J:92:TYR:OH	10:J:99:ASN:ND2	2.35	0.60
12:L:160:LEU:HD21	48:Am:251:PRO:HD2	1.84	0.60
13:M:150:LEU:HD13	13:M:202:ILE:HG13	1.84	0.60
17:Q:89:SER:OG	17:Q:90:ARG:N	2.34	0.60
25:Y:127:TYR:HE1	59:Ac:238:THR:HG21	1.66	0.60
25:Y:247:TYR:HH	25:Y:258:TRP:HE1	1.46	0.60
36:At:87:ARG:NH2	63:Ag:85:GLU:OE2	2.35	0.60
39:Ai:450:LEU:HD12	63:Ag:165:ILE:HD13	1.84	0.60
40:Ap:26:MET:HG2	40:Ap:29:TRP:CE2	2.36	0.60
46:Aj:322:ASN:OD1	46:Aj:325:GLN:N	2.34	0.60
48:Am:183:VAL:HG21	50:BE:102:VAL:HG11	1.82	0.60
65:BL:139:ARG:O	65:BL:140:SER:HB3	2.02	0.60
67:BG:1304:MET:HE2	67:BG:1316:PRO:HD3	1.84	0.60
71:1:410:A:O2'	71:1:411:U:OP2	2.16	0.60
18:R:411:LYS:NZ	71:1:116:U:H5'	2.16	0.60
26:Z:131:TRP:HZ2	71:1:567:A:C8	2.20	0.60
28:UA:152:UNK:O	28:UA:156:UNK:N	2.34	0.60
40:Ap:79:TRP:CD1	40:Ap:93:LYS:HE2	2.37	0.60
60:Ah:390:ASN:OD1	60:Ah:391:ALA:N	2.34	0.60
71:1:162:G:H8	71:1:164:U:H1'	1.67	0.60
71:1:438:G:H22	71:1:446:U:H3	1.50	0.60
71:1:841:A:H61	71:1:854:A:N6	2.00	0.60
7:G:166:TYR:HB2	49:Aq:302:PRO:HD2	1.83	0.60
9:I:18:HIS:HB3	71:1:815:A:O2'	2.02	0.60
11:K:102:TYR:HE1	42:Aa:157:LEU:HG	1.67	0.60
17:Q:84:GLU:HB3	17:Q:99:LEU:HD23	1.82	0.60
24:X:240:ALA:HB1	24:X:243:ALA:HB3	1.84	0.60
26:Z:86:ILE:HA	26:Z:89:VAL:HG12	1.82	0.60
30:Aw:8:ARG:HH22	33:Al:286:ASP:HB3	1.67	0.60
32:An:22:ARG:HH21	71:1:286:G:N2	2.00	0.60
37:BC:105:MET:HE1	63:Ag:209:ARG:HG3	1.84	0.60
40:Ap:164:PHE:O	40:Ap:168:ASN:ND2	2.26	0.60
44:BM:128:LEU:HB2	44:BM:278:LEU:HD22	1.82	0.60
47:BH:191:ASP:OD1	47:BH:192:CYS:N	2.35	0.60
48:Am:32:LYS:HG2	71:1:1124:A:H61	1.67	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BE:56:HIS:CD2	50:BE:57:THR:H	2.13	0.60
71:1:1038:U:O4	71:1:1055:U:O2'	2.20	0.60
9:I:59:ARG:NH2	71:1:601:A:OP2	2.35	0.60
13:M:159:ARG:HE	13:M:243:LEU:HD22	1.66	0.60
38:Ab:132:GLN:HA	38:Ab:135:ARG:HG2	1.84	0.60
43:Ao:26:ARG:NH1	71:1:336:U:OP2	2.33	0.60
45:Ar:40:ARG:HD3	45:Ar:42:ILE:HG22	1.84	0.60
45:Ar:108:TYR:N	45:Ar:139:TYR:OH	2.35	0.60
46:Aj:443:ARG:NE	46:Aj:448:GLU:OE1	2.35	0.60
51:Ak:42:ALA:O	51:Ak:46:GLU:N	2.22	0.60
56:Af:64:ARG:NH1	56:Af:65:VAL:O	2.35	0.60
63:Ag:49:ARG:HD3	71:1:82:U:H2'	1.84	0.60
64:Ax:127:ASN:ND2	64:Ax:199:GLN:OE1	2.35	0.60
71:1:641:A:N6	71:1:795:U:O2'	2.35	0.60
71:1:681:G:H1	71:1:793:C:H42	1.50	0.60
2:B:124:ASN:HB2	2:B:199:SER:CB	2.22	0.60
8:H:163:GLU:HG2	45:Ar:168:TRP:HH2	1.67	0.60
12:L:166:TRP:NE1	42:Aa:126:GLU:HG3	2.17	0.60
18:R:200:ARG:HD3	36:At:98:THR:HG21	1.84	0.60
26:Z:76:ARG:HD3	26:Z:77:GLY:N	2.17	0.60
31:Bj:50:ARG:HA	31:Bj:53:SER:HB3	1.83	0.60
32:An:117:MET:SD	32:An:117:MET:N	2.75	0.60
32:An:137:GLU:HB3	60:Ah:472:ARG:HH22	1.67	0.60
38:Ab:145:TYR:O	38:Ab:149:TYR:N	2.34	0.60
39:Ai:253:PHE:HB2	39:Ai:388:MET:HE1	1.84	0.60
39:Ai:279:ILE:HA	39:Ai:283:TYR:HD2	1.67	0.60
42:Aa:68:ALA:O	42:Aa:70:THR:HG23	2.02	0.60
44:BM:311:CYS:HB3	44:BM:314:GLN:HB2	1.84	0.60
48:Am:11:LYS:N	71:1:1022:A:OP1	2.34	0.60
52:BP:63:GLU:HG3	52:BP:65:LEU:HB2	1.84	0.60
63:Ag:172:TRP:HA	63:Ag:175:VAL:HG12	1.84	0.60
65:BL:119:ARG:NH1	65:BL:132:HIS:C	2.58	0.60
71:1:162:G:C8	71:1:164:U:H1'	2.36	0.60
71:1:527:U:O2'	71:1:528:A:OP2	2.17	0.60
18:R:208:TRP:CG	18:R:211:SER:HG	2.20	0.59
22:V:123:LEU:HB2	22:V:126:TRP:HD1	1.67	0.59
43:Ao:131:LEU:HD22	43:Ao:197:LEU:HD11	1.84	0.59
45:Ar:31:PRO:O	45:Ar:40:ARG:NH1	2.23	0.59
66:BO:39:ARG:HG3	66:BO:40:LYS:H	1.67	0.59
71:1:202:A:H4'	71:1:203:A:O4'	2.01	0.59
3:C:216:GLU:OE1	3:C:216:GLU:N	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:76:THR:HG21	71:1:1120:U:H5''	1.84	0.59
7:G:46:LEU:HD21	19:S:338:PRO:HG2	1.83	0.59
18:R:170:ILE:HD11	18:R:173:LEU:HB3	1.83	0.59
24:X:252:SER:HA	24:X:257:ASN:HB3	1.84	0.59
24:X:359:GLU:HG2	24:X:361:ARG:H	1.66	0.59
24:X:498:ARG:O	24:X:501:THR:HG22	2.03	0.59
38:Ab:128:LYS:NZ	48:Am:331:TYR:O	2.35	0.59
51:Ak:260:CYS:O	51:Ak:264:VAL:HG22	2.03	0.59
53:Ad:31:LEU:HA	53:Ad:35:ALA:HB3	1.83	0.59
59:Ac:47:ARG:H	59:Ac:47:ARG:HD3	1.66	0.59
64:Ax:153:ILE:HD11	64:Ax:178:PRO:HB3	1.84	0.59
71:1:559:U:O2'	71:1:560:U:OP1	2.18	0.59
2:B:401:TYR:HB3	33:Al:293:ASN:HB3	1.85	0.59
7:G:227:PRO:HG2	7:G:228:TYR:CD2	2.37	0.59
12:L:90:ARG:NH1	38:Ab:96:SER:OG	2.35	0.59
15:O:268:ASP:N	15:O:268:ASP:OD1	2.34	0.59
17:Q:37:MET:HG3	17:Q:39:LEU:HG	1.84	0.59
21:U:20:LYS:O	71:1:970:A:H5'	2.02	0.59
36:At:55:ASN:HB3	71:1:110:U:O2	2.02	0.59
48:Am:255:ASP:OD1	48:Am:255:ASP:N	2.34	0.59
60:Ah:188:ASP:OD1	60:Ah:189:ASN:N	2.29	0.59
60:Ah:214:ARG:NH2	60:Ah:263:ASP:OD2	2.35	0.59
62:Ay:35:TRP:C	62:Ay:37:ASP:H	2.10	0.59
71:1:98:G:H2'	71:1:98:G:N3	2.17	0.59
4:D:115:ARG:HH22	38:Ab:193:ASP:HB2	1.67	0.59
7:G:145:ARG:H	71:1:347:A:H1'	1.68	0.59
15:O:318:LEU:O	15:O:322:THR:N	2.34	0.59
27:BA:24:VAL:O	45:Ar:128:LYS:HG3	2.02	0.59
32:An:137:GLU:HB3	60:Ah:472:ARG:NH2	2.18	0.59
39:Ai:147:ASP:O	39:Ai:151:ASN:ND2	2.36	0.59
54:BF:101:LEU:HD21	54:BF:106:ILE:HD13	1.84	0.59
58:Ae:282:ILE:H	58:Ae:282:ILE:HD12	1.67	0.59
65:BL:153:LYS:HD3	65:BL:272:HIS:CE1	2.37	0.59
65:BL:303:LYS:NZ	71:1:676:U:OP2	2.35	0.59
67:BG:1263:HIS:CB	67:BG:1266:GLY:H	2.15	0.59
71:1:145:A:C3'	71:1:146:U:H5''	2.33	0.59
71:1:689:U:O2'	71:1:690:U:OP1	2.17	0.59
6:F:46:MET:HE2	6:F:46:MET:HA	1.85	0.59
15:O:91:LYS:NZ	71:1:824:A:N1	2.47	0.59
15:O:310:MET:HE3	32:An:241:LEU:HD22	1.84	0.59
16:P:79:LEU:HD12	16:P:101:LEU:HD22	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Y:130:PRO:HD3	59:Ac:57:HIS:CE1	2.38	0.59
30:Aw:149:TYR:CD1	53:Ad:192:ASP:HB3	2.37	0.59
39:Ai:271:HIS:NE2	39:Ai:326:ASP:OD2	2.36	0.59
42:Aa:190:SER:O	42:Aa:190:SER:OG	2.19	0.59
42:Aa:193:TYR:CD1	71:1:146:U:H2'	2.37	0.59
48:Am:164:GLU:OE1	48:Am:202:TYR:OH	2.20	0.59
55:Av:45:GLU:HA	55:Av:48:ARG:HD3	1.83	0.59
63:Ag:36:ASN:OD1	63:Ag:41:ASN:ND2	2.34	0.59
64:Ax:60:SER:HB2	64:Ax:63:TRP:HB3	1.85	0.59
65:BL:284:ASN:HD22	71:1:671:U:H1'	1.66	0.59
71:1:1113:G:C6	71:1:1114:A:H2	2.20	0.59
1:A:291:ALA:O	71:1:1106:U:O2'	2.19	0.59
11:K:79:HIS:CD2	42:Aa:84:LEU:HB3	2.37	0.59
13:M:38:TYR:OH	13:M:46:ARG:NH1	2.35	0.59
13:M:97:TRP:CZ3	13:M:99:LEU:HG	2.38	0.59
13:M:229:SER:OG	13:M:230:HIS:N	2.35	0.59
15:O:131:ILE:HG22	15:O:132:LYS:HG2	1.82	0.59
15:O:139:GLY:N	15:O:156:ILE:O	2.34	0.59
24:X:494:LEU:N	24:X:494:LEU:HD12	2.16	0.59
31:Bj:52:SER:HA	31:Bj:55:MET:HE3	1.84	0.59
33:Al:178:THR:HG21	44:BM:259:LYS:HG2	1.84	0.59
40:Ap:54:ASP:HB2	40:Ap:214:TRP:CE2	2.38	0.59
44:BM:346:LEU:HG	44:BM:348:ARG:H	1.68	0.59
45:Ar:22:ILE:HG23	45:Ar:56:ALA:HB1	1.85	0.59
71:1:560:U:OP1	71:1:560:U:H2'	2.03	0.59
7:G:161:GLY:HA2	22:V:42:MET:HA	1.84	0.59
8:H:96:LYS:HB2	71:1:390:A:OP1	2.03	0.59
10:J:125:TYR:OH	10:J:129:ARG:NH2	2.23	0.59
12:L:61:VAL:HG21	12:L:77:VAL:HG21	1.85	0.59
15:O:113:HIS:ND1	71:1:129:U:H1'	2.17	0.59
16:P:33:HIS:HB2	16:P:45:LYS:O	2.02	0.59
17:Q:76:ILE:HG12	17:Q:150:SER:HB2	1.85	0.59
25:Y:180:VAL:HG22	31:Bj:148:ALA:HB2	1.84	0.59
27:BA:24:VAL:O	45:Ar:127:ARG:NH1	2.36	0.59
32:An:43:LYS:O	32:An:45:GLU:N	2.35	0.59
32:An:123:GLN:HB2	32:An:210:LEU:HD11	1.84	0.59
36:At:90:GLN:HE22	36:At:95:PRO:HG3	1.68	0.59
39:Ai:354:GLY:O	39:Ai:380:ARG:NH2	2.36	0.59
44:BM:209:ALA:HB1	44:BM:213:ARG:NH1	2.18	0.59
58:Ae:55:HIS:CD2	58:Ae:57:LYS:H	2.21	0.59
58:Ae:182:THR:HG23	58:Ae:233:GLU:HB2	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:BG:1304:MET:HG2	67:BG:1306:GLY:H	1.68	0.59
71:1:827:A:O2'	71:1:828:A:OP2	2.21	0.59
5:E:303:PRO:HB2	5:E:307:ARG:HH12	1.66	0.59
7:G:207:ALA:HB2	71:1:189:U:N3	2.17	0.59
7:G:293:ARG:NE	7:G:374:LEU:OXT	2.35	0.59
10:J:88:GLY:HA2	10:J:103:TRP:CE3	2.37	0.59
16:P:42:PRO:O	49:Aq:55:ASN:ND2	2.36	0.59
25:Y:56:ASP:OD1	25:Y:58:ARG:NH2	2.32	0.59
33:Al:108:TRP:CE2	33:Al:156:ILE:HG21	2.37	0.59
36:At:109:VAL:O	36:At:113:ARG:HG2	2.02	0.59
38:Ab:122:GLY:N	42:Aa:90:THR:OG1	2.36	0.59
40:Ap:54:ASP:O	40:Ap:95:HIS:NE2	2.35	0.59
47:BH:57:GLU:OE2	47:BH:61:SER:OG	2.19	0.59
49:Aq:336:ARG:CG	49:Aq:336:ARG:O	2.50	0.59
69:UC:74:UNK:O	69:UC:78:UNK:N	2.36	0.59
71:1:840:A:N1	71:1:855:A:H2	2.01	0.59
71:1:894:U:O2'	71:1:918:A:N6	2.36	0.59
1:A:272:ARG:NH2	71:1:1065:U:O2'	2.35	0.59
5:E:277:LEU:HD13	5:E:336:ALA:HB2	1.82	0.59
15:O:67:ILE:N	71:1:134:A:H61	2.01	0.59
21:U:25:PHE:HB2	71:1:933:G:H21	1.67	0.59
21:U:30:ILE:O	21:U:30:ILE:CG2	2.51	0.59
33:Al:269:GLU:N	33:Al:270:PRO:CD	2.66	0.59
37:BC:45:MET:O	37:BC:49:ASN:ND2	2.35	0.59
38:Ab:126:ARG:O	38:Ab:127:HIS:ND1	2.36	0.59
39:Ai:461:ARG:HD3	39:Ai:473:LEU:HD13	1.85	0.59
41:Au:182:ALA:HB1	41:Au:184:LEU:HD23	1.85	0.59
45:Ar:19:TYR:HB3	45:Ar:43:LYS:HA	1.84	0.59
52:BP:157:ARG:NH2	52:BP:169:ASP:OD2	2.35	0.59
53:Ad:14:THR:HB	53:Ad:15:PRO:HD2	1.85	0.59
71:1:204:U:H3'	71:1:204:U:P	2.43	0.59
71:1:798:A:N3	71:1:798:A:H2'	2.17	0.59
1:A:386:GLU:OE1	10:J:63:GLU:HA	2.03	0.59
4:D:122:PHE:HA	4:D:125:PHE:HB3	1.85	0.59
5:E:69:GLY:HA2	5:E:79:ALA:HB3	1.84	0.59
6:F:87:LEU:HD11	6:F:98:VAL:HG13	1.84	0.59
14:N:198:ARG:HH21	14:N:220:VAL:HG11	1.68	0.59
29:BB:125:LYS:C	29:BB:127:PRO:HD3	2.28	0.59
30:Aw:123:ARG:HH11	53:Ad:123:SER:HB3	1.66	0.59
31:Bj:4:ASN:HD21	49:Aq:56:MET:HE1	1.68	0.59
38:Ab:137:LEU:HD12	48:Am:72:ASP:HB2	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:Ai:4:TYR:C	39:Ai:423:ALA:HB2	2.28	0.59
39:Ai:64:GLN:HE22	39:Ai:198:LEU:H	1.51	0.59
41:Au:107:ARG:NH2	60:Ah:130:GLU:OE2	2.36	0.59
44:BM:185:LEU:HD23	44:BM:193:ALA:HA	1.85	0.59
59:Ac:127:MET:HE1	59:Ac:131:MET:HE2	1.85	0.59
65:BL:167:ARG:NH1	65:BL:299:PRO:HD2	2.18	0.59
8:H:93:VAL:O	8:H:95:GLN:N	2.23	0.58
8:H:159:GLY:HA2	38:Ab:258:LEU:HD21	1.85	0.58
16:P:105:PRO:HG2	53:Ad:30:GLU:OE1	2.03	0.58
17:Q:114:LEU:O	17:Q:116:HIS:N	2.36	0.58
29:BB:128:ASP:OD1	29:BB:129:THR:N	2.36	0.58
39:Ai:26:ILE:HD11	49:Aq:219:ILE:HA	1.83	0.58
43:Ao:66:ASN:HA	43:Ao:71:ARG:HB2	1.85	0.58
64:Ax:143:PHE:CD1	64:Ax:143:PHE:O	2.56	0.58
65:BL:82:ILE:H	65:BL:82:ILE:HD12	1.68	0.58
66:BO:73:ASN:HB2	66:BO:119:ARG:HA	1.83	0.58
66:BO:148:ASP:OD1	66:BO:149:ARG:HG2	2.02	0.58
71:1:269:A:O2'	71:1:270:A:OP1	2.15	0.58
71:1:561:U:O2'	71:1:562:U:O4'	2.19	0.58
71:1:596:U:H1'	71:1:597:U:OP1	2.03	0.58
71:1:790:U:H4'	71:1:791:U:OP1	2.02	0.58
5:E:81:ASP:OD1	5:E:82:PHE:N	2.35	0.58
5:E:277:LEU:HD12	5:E:333:GLN:HA	1.85	0.58
11:K:98:GLN:HE22	38:Ab:103:HIS:CE1	2.21	0.58
11:K:132:GLU:OE2	11:K:150:ARG:NE	2.36	0.58
16:P:39:PRO:HA	16:P:86:VAL:HA	1.85	0.58
20:T:72:TRP:NE1	20:T:82:LYS:HB3	2.18	0.58
32:An:110:PHE:CE2	32:An:114:VAL:HG21	2.37	0.58
33:Al:76:ASP:O	33:Al:80:ARG:NH1	2.36	0.58
41:Au:106:SER:OG	41:Au:107:ARG:N	2.36	0.58
44:BM:28:VAL:HG22	44:BM:180:LEU:HD22	1.85	0.58
7:G:237:ALA:HB2	7:G:252:PHE:CZ	2.38	0.58
15:O:258:ALA:O	15:O:262:ALA:N	2.37	0.58
21:U:25:PHE:CE1	71:1:950:A:C5	2.92	0.58
29:BB:66:TRP:HD1	29:BB:74:PHE:HZ	1.50	0.58
32:An:135:PHE:CD2	32:An:158:LEU:HG	2.39	0.58
34:BI:133:GLU:OE2	60:Ah:186:TRP:NE1	2.36	0.58
41:Au:30:TRP:HZ3	71:1:259:U:H5''	1.67	0.58
44:BM:119:THR:O	44:BM:122:LEU:N	2.31	0.58
51:Ak:122:LEU:HD12	51:Ak:125:THR:HB	1.85	0.58
56:Af:59:ALA:HA	56:Af:62:SER:HB3	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:Ah:67:ARG:HB2	71:1:905:A:N3	2.19	0.58
60:Ah:493:LEU:HD11	65:BL:74:PRO:HD3	1.85	0.58
64:Ax:148:CYS:SG	64:Ax:176:ARG:CZ	2.91	0.58
71:1:315:A:O2'	71:1:317:A:OP2	2.21	0.58
25:Y:231:GLN:HE22	31:Bj:154:CYS:HB3	1.66	0.58
26:Z:19:TYR:HB2	71:1:907:G:N3	2.18	0.58
32:An:136:ALA:O	32:An:140:ARG:HB3	2.04	0.58
39:Ai:242:SER:H	39:Ai:245:ASN:HD22	1.51	0.58
44:BM:149:ALA:HB1	44:BM:250:GLU:OE2	2.03	0.58
48:Am:233:GLY:O	48:Am:242:LEU:HB2	2.03	0.58
65:BL:360:GLN:O	65:BL:361:THR:HG23	2.02	0.58
2:B:311:PRO:HG2	2:B:314:ARG:HG2	1.85	0.58
7:G:79:TRP:CD2	7:G:90:ILE:HD12	2.38	0.58
9:I:122:PRO:HG3	40:Ap:206:LEU:HA	1.85	0.58
10:J:67:ARG:HB2	10:J:67:ARG:HH21	1.68	0.58
16:P:55:GLN:HB3	71:1:949:U:HI'	1.84	0.58
32:An:34:TRP:CZ2	32:An:38:ALA:HB2	2.38	0.58
44:BM:132:ALA:HB2	44:BM:278:LEU:HD11	1.85	0.58
44:BM:240:ASP:HB3	44:BM:279:TYR:CD2	2.38	0.58
60:Ah:84:ARG:HD3	60:Ah:89:GLN:HE21	1.67	0.58
66:BO:131:PHE:HB2	66:BO:151:THR:HG23	1.86	0.58
3:C:150:PRO:HA	17:Q:110:TYR:CG	2.37	0.58
11:K:62:VAL:HG23	11:K:97:GLN:HB2	1.84	0.58
27:BA:26:LYS:HB3	45:Ar:127:ARG:NH2	2.18	0.58
33:Al:132:SER:HB3	33:Al:176:SER:HB2	1.86	0.58
41:Au:28:ARG:HB3	41:Au:31:SER:HB3	1.86	0.58
42:Aa:18:ARG:HA	71:1:161:U:HI'	1.85	0.58
49:Aq:67:SER:HA	53:Ad:31:LEU:HD22	1.85	0.58
63:Ag:11:ALA:N	71:1:290:C:OP1	2.36	0.58
2:B:4:SER:HA	42:Aa:182:PRO:HB2	1.84	0.58
17:Q:107:GLY:HA3	17:Q:122:MET:HE2	1.86	0.58
24:X:46:GLU:HA	24:X:49:ARG:HB3	1.84	0.58
30:Aw:8:ARG:HB3	33:Al:287:TRP:CZ2	2.38	0.58
38:Ab:126:ARG:NH1	42:Aa:88:THR:OG1	2.36	0.58
41:Au:43:TRP:CE3	41:Au:43:TRP:HA	2.38	0.58
48:Am:260:TRP:HD1	48:Am:268:LYS:HA	1.68	0.58
12:L:9:ILE:HG23	12:L:13:LEU:HD13	1.86	0.58
15:O:223:THR:HG22	15:O:225:GLU:HG2	1.85	0.58
18:R:204:GLU:OE2	36:At:98:THR:OG1	2.17	0.58
19:S:341:PHE:HB2	52:BP:52:ARG:HH22	1.67	0.58
33:Al:46:ASP:H	62:Ay:87:TRP:CD1	2.22	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:Ao:282:TYR:OH	71:1:428:A:OP1	2.20	0.58
44:BM:128:LEU:O	44:BM:132:ALA:N	2.34	0.58
48:Am:293:THR:HG21	58:Ae:257:GLN:HG2	1.86	0.58
60:Ah:66:LYS:HB2	71:1:905:A:H5''	1.86	0.58
64:Ax:53:HIS:HE2	71:1:651:U:P	2.26	0.58
71:1:641:A:H2'	71:1:796:A:H61	1.68	0.58
1:A:162:GLN:HE21	1:A:225:LYS:HG2	1.68	0.58
3:C:194:TYR:OH	33:Al:115:GLU:OE2	2.16	0.58
5:E:184:ALA:HB1	5:E:189:ILE:HB	1.84	0.58
5:E:312:ASN:HB3	5:E:315:LEU:HD13	1.85	0.58
13:M:85:LYS:HD2	13:M:94:GLU:OE2	2.03	0.58
18:R:74:GLU:OE2	18:R:74:GLU:N	2.31	0.58
19:S:327:HIS:CD2	19:S:328:ILE:HG13	2.39	0.58
24:X:124:ASP:N	24:X:124:ASP:OD1	2.35	0.58
35:Az:40:TRP:HE1	35:Az:99:ARG:HH11	1.50	0.58
47:BH:77:LYS:O	47:BH:228:ARG:NH1	2.36	0.58
64:Ax:48:LYS:O	64:Ax:50:ALA:N	2.36	0.58
71:1:873:U:O4	71:1:1015:A:N6	2.36	0.58
71:1:929:G:H5''	71:1:930:A:C4	2.39	0.58
5:E:42:PRO:HG2	5:E:113:ILE:HG23	1.85	0.58
10:J:99:ASN:N	66:BO:148:ASP:OD2	2.35	0.58
11:K:12:ARG:NH2	71:1:524:U:OP2	2.37	0.58
17:Q:204:TYR:C	32:An:225:PRO:HG3	2.29	0.58
43:Ao:37:ASN:O	43:Ao:40:VAL:HG22	2.04	0.58
44:BM:294:ASP:HB3	44:BM:323:ARG:HG3	1.86	0.58
54:BF:22:HIS:HA	71:1:595:A:N6	2.19	0.58
64:Ax:145:CYS:HB3	64:Ax:166:CYS:HB2	1.86	0.58
65:BL:109:GLY:O	65:BL:110:PHE:HB2	2.03	0.58
65:BL:316:ALA:HB2	65:BL:326:LEU:HD22	1.85	0.58
71:1:513:U:O2'	71:1:514:U:OP1	2.22	0.58
71:1:1046:G:H21	71:1:1047:C:H41	1.52	0.58
8:H:163:GLU:HA	8:H:166:VAL:HG22	1.85	0.57
9:I:175:LYS:H	9:I:201:ARG:NH1	1.95	0.57
9:I:223:HIS:CE1	54:BF:87:LEU:H	2.17	0.57
14:N:234:LYS:O	18:R:24:ASN:ND2	2.37	0.57
15:O:194:PRO:HD3	18:R:434:LEU:HD13	1.84	0.57
16:P:30:LYS:HG3	16:P:50:ARG:HG2	1.86	0.57
20:T:73:CYS:SG	72:T:101:ZN:ZN	1.84	0.57
29:BB:72:HIS:NE2	50:BE:80:SER:HB3	2.19	0.57
39:Ai:451:ILE:O	49:Aq:282:THR:OG1	2.16	0.57
47:BH:96:LEU:HD23	47:BH:97:THR:HG23	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:Ah:188:ASP:HB2	60:Ah:192:GLN:HG2	1.86	0.57
63:Ag:55:LYS:HB2	63:Ag:59:GLU:HG3	1.86	0.57
6:F:8:ARG:O	42:Aa:138:TYR:OH	2.14	0.57
7:G:80:SER:OG	7:G:83:ASP:OD2	2.21	0.57
11:K:168:LEU:HD13	11:K:175:THR:HB	1.85	0.57
16:P:55:GLN:HG3	71:1:935:G:N3	2.19	0.57
25:Y:122:GLN:HG3	25:Y:123:PRO:HD2	1.86	0.57
30:Aw:56:ASN:ND2	30:Aw:61:CYS:O	2.37	0.57
35:Az:33:LYS:HD3	71:1:63:G:H2'	1.87	0.57
36:At:141:ASP:OD1	36:At:142:GLU:N	2.37	0.57
38:Ab:241:ARG:NH1	55:Av:142:ASP:OD1	2.37	0.57
47:BH:229:TYR:CE2	52:BP:59:ARG:HD2	2.39	0.57
49:Aq:307:MET:SD	71:1:962:A:N6	2.77	0.57
51:Ak:97:HIS:HB2	51:Ak:123:LEU:HD12	1.85	0.57
54:BF:11:SER:O	54:BF:12:PHE:HB3	2.04	0.57
57:As:57:ARG:NH1	57:As:126:GLU:OE1	2.37	0.57
64:Ax:132:THR:HG22	64:Ax:133:THR:H	1.68	0.57
71:1:293:U:N3	71:1:919:U:O2	2.37	0.57
1:A:285:TYR:CG	6:F:79:PRO:HG3	2.40	0.57
7:G:300:GLN:HB2	30:Aw:15:VAL:HG23	1.86	0.57
13:M:135:MET:HE3	13:M:137:LYS:HG2	1.86	0.57
18:R:319:ARG:NH2	18:R:325:GLU:OE2	2.27	0.57
31:Bj:94:GLU:OE1	37:BC:2:ASN:ND2	2.38	0.57
39:Ai:204:SER:OG	39:Ai:205:TYR:N	2.38	0.57
43:Ao:19:ARG:O	43:Ao:21:MET:N	2.37	0.57
46:Aj:269:CYS:O	46:Aj:272:VAL:HG12	2.04	0.57
60:Ah:193:VAL:HG23	60:Ah:194:GLY:H	1.69	0.57
64:Ax:53:HIS:HB2	64:Ax:55:VAL:HG23	1.86	0.57
2:B:194:LYS:C	2:B:194:LYS:CE	2.72	0.57
10:J:108:ASN:HB3	10:J:111:LEU:HB2	1.86	0.57
11:K:25:ARG:HA	71:1:41:A:H5''	1.87	0.57
14:N:89:GLU:O	35:Az:31:ASN:ND2	2.37	0.57
27:BA:42:SER:HB2	27:BA:139:THR:HA	1.85	0.57
32:An:129:LYS:HE2	32:An:129:LYS:CA	2.34	0.57
37:BC:68:ASP:N	37:BC:68:ASP:OD1	2.32	0.57
44:BM:251:ARG:HH21	44:BM:263:ARG:NH2	2.03	0.57
53:Ad:29:PRO:O	53:Ad:31:LEU:N	2.30	0.57
57:As:112:LEU:HD13	57:As:121:MET:HE3	1.86	0.57
64:Ax:124:PRO:O	64:Ax:124:PRO:HG2	2.04	0.57
71:1:433:G:C2	71:1:435:A:H1'	2.38	0.57
4:D:43:ALA:HB2	58:Ae:247:ILE:HG22	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:190:ASN:HB3	7:G:193:GLU:HG2	1.86	0.57
26:Z:55:HIS:HA	26:Z:64:ILE:HD11	1.86	0.57
32:An:192:THR:HG23	32:An:195:ASP:H	1.70	0.57
38:Ab:228:HIS:HD2	43:Ao:271:GLN:HE21	1.52	0.57
39:Ai:260:LYS:O	39:Ai:263:THR:OG1	2.17	0.57
55:Av:54:MET:HG2	55:Av:72:VAL:HG21	1.85	0.57
71:1:331:U:O2	71:1:502:U:H5'	2.04	0.57
2:B:69:GLU:OE1	36:At:159:TYR:OH	2.20	0.57
5:E:134:GLY:HA2	71:1:437:U:H5''	1.87	0.57
9:I:215:LYS:HB3	54:BF:28:GLY:HA3	1.86	0.57
11:K:14:THR:O	11:K:18:ASP:N	2.32	0.57
17:Q:62:PRO:O	71:1:81:U:O2'	2.18	0.57
24:X:349:PRO:HD2	24:X:398:ARG:HB3	1.86	0.57
25:Y:122:GLN:HG2	59:Ac:26:HIS:O	2.04	0.57
38:Ab:252:ARG:NH2	55:Av:121:GLU:OE2	2.37	0.57
40:Ap:173:ARG:HD3	40:Ap:173:ARG:H	1.68	0.57
41:Au:38:TYR:C	41:Au:40:ARG:H	2.11	0.57
44:BM:28:VAL:HG12	44:BM:30:GLU:H	1.68	0.57
44:BM:263:ARG:HG3	44:BM:264:ALA:N	2.18	0.57
49:Aq:295:ARG:NH1	71:1:957:U:OP2	2.37	0.57
54:BF:9:TYR:OH	71:1:543:U:OP2	2.21	0.57
58:Ae:214:PHE:HE2	58:Ae:219:MET:HB2	1.69	0.57
65:BL:106:ASP:OD1	65:BL:107:TRP:N	2.38	0.57
67:BG:1304:MET:HE1	67:BG:1308:MET:HG3	1.85	0.57
71:1:110:U:O2'	71:1:111:A:OP1	2.21	0.57
71:1:141:A:H2	71:1:858:A:H62	1.51	0.57
5:E:21:PRO:HB2	5:E:224:GLN:NE2	2.19	0.57
7:G:156:ARG:NH2	7:G:159:ALA:O	2.38	0.57
11:K:123:PRO:HB3	52:BP:3:HIS:O	2.04	0.57
12:L:53:ILE:O	12:L:81:ALA:N	2.33	0.57
15:O:169:GLN:HA	15:O:192:GLU:HG2	1.87	0.57
18:R:164:PHE:HB2	32:An:301:PHE:CD2	2.40	0.57
22:V:32:PHE:HB2	22:V:98:LYS:HE3	1.86	0.57
25:Y:178:PRO:HB2	59:Ac:34:ILE:HD11	1.86	0.57
29:BB:11:SER:HA	71:1:857:A:H5''	1.85	0.57
29:BB:61:TYR:OH	29:BB:65:ARG:NH2	2.36	0.57
31:Bj:68:LEU:H	31:Bj:68:LEU:HD23	1.70	0.57
35:Az:80:ASP:OD1	35:Az:81:GLN:N	2.38	0.57
39:Ai:402:VAL:O	39:Ai:405:VAL:HG12	2.05	0.57
40:Ap:93:LYS:HB3	67:BG:1339:ASN:O	2.05	0.57
42:Aa:77:ASP:OD2	71:1:484:A:N6	2.32	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:Ax:93:VAL:HG11	67:BG:1325:TRP:HB2	1.86	0.57
67:BG:1325:TRP:CZ2	67:BG:1329:ARG:HD2	2.40	0.57
69:UC:130:UNK:O	69:UC:134:UNK:N	2.38	0.57
71:1:267:U:O2	71:1:269:A:N6	2.38	0.57
71:1:268:A:C2	71:1:272:A:H1'	2.39	0.57
71:1:322:A:N7	71:1:990:A:O2'	2.37	0.57
71:1:445:A:N7	71:1:461:U:H5	2.03	0.57
2:B:15:ARG:NE	13:M:99:LEU:HD11	2.20	0.57
7:G:164:ASN:HA	22:V:111:ARG:NH2	2.20	0.57
11:K:36:LEU:O	11:K:40:THR:HG22	2.05	0.57
15:O:218:VAL:HG11	15:O:229:ARG:HE	1.69	0.57
24:X:165:VAL:HG21	24:X:341:LEU:HD23	1.85	0.57
33:Al:133:GLN:O	33:Al:135:GLN:NE2	2.38	0.57
38:Ab:169:ASP:OD1	38:Ab:170:ILE:N	2.38	0.57
39:Ai:65:THR:HG21	39:Ai:197:MET:HE2	1.86	0.57
39:Ai:313:CYS:SG	39:Ai:341:GLN:HB3	2.44	0.57
42:Aa:55:ARG:HH22	71:1:855:A:P	2.27	0.57
44:BM:244:LEU:HD12	44:BM:247:PHE:HB3	1.87	0.57
46:Aj:250:LEU:HD13	46:Aj:272:VAL:HG11	1.86	0.57
46:Aj:291:LEU:HD11	46:Aj:313:ALA:HA	1.85	0.57
49:Aq:152:LYS:NZ	49:Aq:174:ARG:HB3	2.19	0.57
58:Ae:19:CYS:SG	71:1:1147:A:O2'	2.58	0.57
64:Ax:145:CYS:HG	64:Ax:166:CYS:CB	2.11	0.57
65:BL:246:VAL:HA	65:BL:257:LEU:HD23	1.86	0.57
2:B:11:ASP:OD1	2:B:11:ASP:N	2.32	0.57
10:J:65:ASN:O	10:J:67:ARG:N	2.38	0.57
11:K:23:MET:HE1	42:Aa:189:ARG:HB2	1.87	0.57
13:M:99:LEU:HD23	13:M:108:GLN:HA	1.87	0.57
22:V:79:TYR:HD2	24:X:477:TRP:HE3	1.52	0.57
24:X:293:ASN:ND2	24:X:348:VAL:HG22	2.19	0.57
32:An:34:TRP:CE2	32:An:38:ALA:HB2	2.40	0.57
49:Aq:87:GLY:C	49:Aq:89:PHE:H	2.12	0.57
49:Aq:120:PHE:CZ	49:Aq:136:ARG:HD3	2.40	0.57
57:As:62:VAL:HG12	57:As:63:HIS:HD2	1.69	0.57
60:Ah:116:ASN:O	60:Ah:120:LYS:NZ	2.29	0.57
71:1:508:G:O2'	71:1:509:U:OP1	2.23	0.57
4:D:107:ILE:HG21	38:Ab:215:PRO:HB3	1.87	0.57
9:I:148:ARG:HH22	9:I:152:ARG:HE	1.53	0.57
13:M:91:ARG:O	46:Aj:468:HIS:HB2	2.05	0.57
18:R:38:SER:HA	18:R:41:ARG:HD2	1.87	0.57
24:X:349:PRO:HB2	24:X:352:LYS:HG2	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Al:39:GLN:OE1	33:Al:39:GLN:HA	2.04	0.57
39:Ai:211:ARG:HA	39:Ai:214:SER:HB3	1.87	0.57
43:Ao:39:HIS:HB2	71:1:338:A:H5''	1.86	0.57
51:Ak:133:VAL:HA	51:Ak:136:THR:HG22	1.86	0.57
58:Ae:34:HIS:ND1	58:Ae:34:HIS:O	2.38	0.57
63:Ag:121:TYR:OH	63:Ag:143:ARG:NH2	2.33	0.57
66:BO:87:ARG:HH11	66:BO:89:ALA:HB3	1.69	0.57
71:1:364:U:H5'	71:1:365:U:O5'	2.04	0.57
71:1:664:C:H2'	71:1:670:A:N6	2.20	0.57
5:E:266:ASN:OD1	38:Ab:228:HIS:NE2	2.38	0.56
7:G:19:GLN:HE22	56:Af:79:SER:HB3	1.70	0.56
9:I:25:ALA:O	9:I:52:ARG:NH2	2.37	0.56
9:I:55:LEU:HD23	9:I:55:LEU:H	1.69	0.56
10:J:65:ASN:HB3	66:BO:172:ARG:HD2	1.86	0.56
10:J:82:GLU:HG3	10:J:83:THR:H	1.70	0.56
12:L:93:VAL:HG21	12:L:106:TRP:CE2	2.40	0.56
16:P:62:PRO:HD3	16:P:77:PHE:HE2	1.69	0.56
18:R:284:LYS:HG3	18:R:285:TYR:N	2.20	0.56
19:S:368:ASP:OD2	46:Aj:350:TYR:OH	2.15	0.56
21:U:18:LEU:HD23	21:U:19:LYS:N	2.20	0.56
21:U:41:LEU:HB3	21:U:83:MET:HB3	1.87	0.56
26:Z:77:GLY:O	26:Z:80:ARG:NH2	2.37	0.56
29:BB:72:HIS:CE1	50:BE:80:SER:HB3	2.40	0.56
34:BI:146:TYR:OH	34:BI:210:SER:O	2.21	0.56
46:Aj:380:ARG:HA	46:Aj:383:VAL:HG12	1.86	0.56
54:BF:22:HIS:O	54:BF:26:ARG:NH1	2.37	0.56
66:BO:80:ILE:HG21	66:BO:100:ARG:NH1	2.19	0.56
66:BO:133:ARG:NH2	66:BO:135:GLN:OE1	2.32	0.56
18:R:119:LYS:HB3	18:R:121:ILE:HG23	1.87	0.56
18:R:212:SER:O	36:At:104:ARG:NH1	2.37	0.56
25:Y:151:ARG:O	31:Bj:107:GLN:NE2	2.33	0.56
26:Z:21:PHE:CD2	60:Ah:70:VAL:HG12	2.41	0.56
49:Aq:127:ARG:HG3	49:Aq:288:HIS:CG	2.40	0.56
59:Ac:97:SER:OG	59:Ac:98:ARG:NH1	2.34	0.56
60:Ah:260:THR:HG23	60:Ah:262:ILE:HG22	1.86	0.56
71:1:381:A:O2'	71:1:382:A:OP1	2.20	0.56
71:1:478:A:H4'	71:1:480:A:C6	2.40	0.56
71:1:812:A:H5'	71:1:813:U:OP2	2.04	0.56
71:1:963:A:O2'	71:1:964:A:N3	2.37	0.56
1:A:110:ASP:N	1:A:110:ASP:OD1	2.36	0.56
3:C:52:TRP:HB3	18:R:189:GLU:HG2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:12:ARG:HH11	38:Ab:115:PRO:HB3	1.69	0.56
11:K:78:GLN:HE21	42:Aa:62:VAL:HG22	1.71	0.56
13:M:46:ARG:HB2	71:1:519:U:H5'	1.86	0.56
13:M:84:GLU:HB3	13:M:93:THR:HG22	1.88	0.56
15:O:230:ARG:NH2	15:O:240:PRO:O	2.33	0.56
19:S:376:GLU:OE1	53:Ad:195:ARG:NH2	2.37	0.56
23:W:63:LEU:HD13	23:W:98:GLN:HB3	1.86	0.56
24:X:80:PHE:HB3	39:Ai:165:PHE:CE2	2.40	0.56
25:Y:65:ASP:HA	25:Y:68:ARG:HB2	1.86	0.56
27:BA:67:LEU:O	27:BA:113:MET:HB2	2.05	0.56
29:BB:120:VAL:HG22	29:BB:121:VAL:H	1.70	0.56
34:BI:173:GLN:OE1	34:BI:209:GLY:N	2.39	0.56
38:Ab:228:HIS:HA	38:Ab:231:LEU:HB2	1.87	0.56
44:BM:35:GLN:HE22	44:BM:44:ALA:HA	1.70	0.56
47:BH:221:VAL:HG22	47:BH:225:ILE:HD11	1.86	0.56
51:Ak:192:VAL:O	51:Ak:201:ASP:N	2.37	0.56
52:BP:97:ARG:NH2	52:BP:97:ARG:CB	2.68	0.56
59:Ac:195:ARG:CZ	59:Ac:214:VAL:HB	2.35	0.56
61:BD:55:SER:OG	61:BD:56:GLY:N	2.39	0.56
65:BL:218:THR:H	65:BL:221:LYS:HZ1	1.53	0.56
66:BO:50:GLY:HA2	66:BO:56:ALA:HB1	1.86	0.56
66:BO:130:LEU:O	66:BO:173:HIS:HE1	1.89	0.56
2:B:126:SER:HG	13:M:7:ARG:HH21	1.54	0.56
2:B:354:ALA:O	30:Aw:28:ASN:ND2	2.38	0.56
7:G:142:TRP:CZ2	7:G:152:MET:HE1	2.40	0.56
9:I:171:SER:OG	9:I:172:ASP:N	2.38	0.56
13:M:148:ILE:HG22	15:O:33:ARG:NH1	2.21	0.56
14:N:175:SER:OG	14:N:178:GLU:OE2	2.24	0.56
18:R:112:ILE:O	18:R:115:GLU:HG3	2.05	0.56
19:S:331:ARG:HD3	52:BP:59:ARG:HB2	1.86	0.56
21:U:28:LYS:O	21:U:29:VAL:HG22	2.04	0.56
26:Z:78:ASN:O	26:Z:88:ARG:NH2	2.37	0.56
30:Aw:165:ARG:NH2	30:Aw:167:GLU:OE2	2.39	0.56
31:Bj:160:LEU:HD23	31:Bj:162:ARG:HH21	1.71	0.56
33:Al:176:SER:HA	44:BM:143:GLU:HG3	1.87	0.56
37:BC:46:MET:HG3	49:Aq:2:LEU:HB3	1.86	0.56
40:Ap:205:ASP:N	40:Ap:205:ASP:OD1	2.39	0.56
53:Ad:31:LEU:O	53:Ad:35:ALA:HB3	2.06	0.56
63:Ag:215:ARG:HB3	63:Ag:219:MET:HE3	1.88	0.56
71:1:639:A:H2'	71:1:640:A:C8	2.40	0.56
71:1:829:U:H2'	71:1:830:A:C8	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:1:863:A:C6	71:1:1105:G:N2	2.73	0.56
71:1:1077:G:N2	71:1:1090:U:H3	2.04	0.56
1:A:238:THR:OG1	1:A:302:ASP:O	2.19	0.56
2:B:159:MET:HE3	2:B:160:GLY:H	1.70	0.56
8:H:96:LYS:HD2	8:H:99:GLU:OE1	2.05	0.56
14:N:151:VAL:HG22	14:N:170:ILE:HG22	1.88	0.56
15:O:146:SER:OG	15:O:147:GLY:N	2.38	0.56
17:Q:99:LEU:HD12	63:Ag:26:LYS:HA	1.88	0.56
22:V:69:ARG:NH1	71:1:953:U:O2'	2.38	0.56
31:Bj:69:ALA:HB2	49:Aq:13:GLN:HG3	1.87	0.56
38:Ab:55:SER:O	38:Ab:55:SER:OG	2.22	0.56
44:BM:188:LYS:O	44:BM:191:GLU:HG2	2.05	0.56
47:BH:68:GLY:HA2	47:BH:214:HIS:HE1	1.70	0.56
50:BE:56:HIS:CD2	50:BE:57:THR:N	2.71	0.56
59:Ac:195:ARG:NE	59:Ac:214:VAL:HB	2.21	0.56
62:Ay:37:ASP:N	71:1:748:U:O4	2.39	0.56
66:BO:74:CYS:SG	66:BO:76:HIS:HB3	2.46	0.56
66:BO:172:ARG:HA	66:BO:172:ARG:NH2	2.13	0.56
71:1:1017:U:H5'	71:1:1018:A:OP2	2.06	0.56
3:C:102:ILE:O	17:Q:85:ARG:HD2	2.05	0.56
7:G:142:TRP:HZ2	7:G:152:MET:HE1	1.71	0.56
7:G:158:SER:O	7:G:160:GLY:N	2.38	0.56
8:H:61:GLN:NE2	8:H:114:TYR:OH	2.38	0.56
11:K:11:TYR:CZ	11:K:13:ALA:HA	2.40	0.56
22:V:96:ARG:NH2	71:1:374:U:H5'	2.20	0.56
25:Y:204:ARG:NH2	25:Y:218:GLU:OE2	2.37	0.56
32:An:88:VAL:HG23	32:An:89:ALA:H	1.69	0.56
35:Az:52:VAL:O	35:Az:56:ARG:NH1	2.38	0.56
40:Ap:75:VAL:HG22	40:Ap:122:CYS:SG	2.45	0.56
42:Aa:163:ALA:HB2	71:1:148:U:H5'	1.88	0.56
44:BM:294:ASP:HB2	44:BM:295:PRO:HD3	1.88	0.56
51:Ak:180:SER:O	51:Ak:184:ASP:N	2.39	0.56
60:Ah:171:ILE:HG12	60:Ah:202:MET:HE2	1.87	0.56
60:Ah:487:SER:OG	60:Ah:488:THR:N	2.37	0.56
71:1:391:A:H1'	71:1:392:A:C8	2.40	0.56
71:1:644:C:O2'	71:1:645:G:OP2	2.21	0.56
71:1:1075:A:P	71:1:1075:A:H3'	2.46	0.56
1:A:124:ASN:HB3	1:A:127:TYR:HB3	1.88	0.56
3:C:140:ASN:OD1	3:C:141:ARG:N	2.39	0.56
4:D:76:GLU:CD	4:D:76:GLU:H	2.12	0.56
10:J:59:THR:O	10:J:70:ARG:HA	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:68:ARG:NH1	71:1:123:U:OP2	2.39	0.56
17:Q:111:SER:HB3	17:Q:136:PHE:HD2	1.71	0.56
17:Q:158:ARG:NH1	32:An:246:ALA:O	2.34	0.56
25:Y:51:LYS:HZ3	25:Y:53:HIS:HB3	1.70	0.56
30:Aw:160:PRO:O	30:Aw:162:PRO:HD3	2.06	0.56
35:Az:60:HIS:CD2	35:Az:60:HIS:N	2.73	0.56
39:Ai:259:LEU:HD22	39:Ai:263:THR:HG21	1.86	0.56
44:BM:76:TYR:HE2	44:BM:323:ARG:HG2	1.71	0.56
65:BL:152:GLN:HB2	65:BL:177:TYR:CE1	2.41	0.56
65:BL:219:TYR:HB2	65:BL:248:ARG:HB2	1.88	0.56
65:BL:264:VAL:HG23	65:BL:351:LEU:HB3	1.87	0.56
71:1:176:A:N6	71:1:526:U:O4	2.23	0.56
2:B:117:GLU:CD	53:Ad:213:SER:HB2	2.31	0.56
3:C:179:PRO:HG3	3:C:185:TYR:CD1	2.41	0.56
7:G:116:GLY:H	71:1:353:A:H4'	1.71	0.56
7:G:201:ARG:NH1	7:G:266:LEU:O	2.39	0.56
15:O:274:PRO:HA	15:O:277:VAL:HG12	1.88	0.56
18:R:414:LEU:HA	18:R:417:VAL:HG12	1.87	0.56
45:Ar:144:ASP:OD2	45:Ar:146:ARG:NE	2.35	0.56
67:BG:1319:SER:HB3	67:BG:1321:ALA:H	1.71	0.56
71:1:177:G:H22	71:1:525:U:H3	1.54	0.56
3:C:104:GLU:HB3	49:Aq:326:TRP:CH2	2.41	0.56
7:G:192:ASN:ND2	30:Aw:100:GLN:OE1	2.39	0.56
12:L:166:TRP:HE1	42:Aa:126:GLU:HG3	1.70	0.56
15:O:213:LEU:HD11	15:O:230:ARG:HB3	1.86	0.56
16:P:112:ARG:HE	43:Ao:113:TRP:HH2	1.52	0.56
37:BC:78:CYS:HA	59:Ac:24:THR:N	2.21	0.56
42:Aa:55:ARG:NH2	71:1:855:A:OP2	2.38	0.56
43:Ao:36:LYS:HE2	43:Ao:69:ARG:HH12	1.71	0.56
44:BM:144:LEU:HD21	44:BM:263:ARG:HH22	1.71	0.56
44:BM:177:ARG:NE	44:BM:212:GLU:OE2	2.34	0.56
52:BP:70:PRO:HB3	56:Af:47:PRO:HA	1.86	0.56
52:BP:182:THR:OG1	52:BP:185:ASP:O	2.17	0.56
56:Af:25:TRP:CZ2	71:1:413:U:H2'	2.41	0.56
64:Ax:106:PHE:O	64:Ax:163:ARG:NH2	2.38	0.56
66:BO:172:ARG:CA	66:BO:172:ARG:NH2	2.69	0.56
3:C:23:THR:HG21	3:C:63:ARG:HG2	1.88	0.56
8:H:99:GLU:HA	71:1:390:A:C5	2.41	0.56
11:K:31:GLU:HB2	11:K:34:VAL:HG12	1.88	0.56
12:L:32:TYR:CZ	12:L:42:VAL:HG12	2.41	0.56
15:O:265:GLU:HA	18:R:41:ARG:HB3	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:25:PHE:CD2	21:U:25:PHE:O	2.58	0.56
25:Y:44:ALA:HB1	37:BC:99:ILE:HD13	1.88	0.56
25:Y:165:ASP:OD2	59:Ac:30:ARG:NH2	2.39	0.56
28:UA:193:UNK:O	28:UA:197:UNK:N	2.39	0.56
32:An:134:ILE:HD11	32:An:169:PHE:CZ	2.41	0.56
33:Al:160:PHE:HA	33:Al:242:ASN:HD22	1.71	0.56
36:At:137:SER:OG	36:At:138:GLU:N	2.36	0.56
38:Ab:228:HIS:CD2	43:Ao:271:GLN:HE21	2.24	0.56
39:Ai:77:GLN:O	39:Ai:272:HIS:NE2	2.39	0.56
46:Aj:336:LEU:HD11	46:Aj:422:LEU:HD23	1.87	0.56
52:BP:-41:ARG:NH2	52:BP:18:GLU:OE2	2.37	0.56
52:BP:-4:THR:O	52:BP:-4:THR:OG1	2.17	0.56
65:BL:114:ASP:CG	65:BL:114:ASP:O	2.48	0.56
71:1:553:A:H2'	71:1:554:G:H5'	1.88	0.56
8:H:11:LEU:HD12	8:H:14:ALA:N	2.21	0.55
9:I:139:MET:HE1	9:I:166:LYS:HD3	1.88	0.55
11:K:105:LEU:HB2	38:Ab:110:GLN:OE1	2.05	0.55
42:Aa:158:SER:O	42:Aa:162:LYS:HG2	2.06	0.55
61:BD:8:LYS:HA	61:BD:23:ALA:HA	1.88	0.55
63:Ag:233:ILE:HG13	63:Ag:233:ILE:O	2.06	0.55
71:1:319:A:O2'	71:1:320:G:OP1	2.22	0.55
71:1:754:A:N6	71:1:784:A:H61	2.03	0.55
5:E:171:PRO:HD2	5:E:176:ARG:NH1	2.21	0.55
12:L:54:ALA:HA	12:L:80:THR:HA	1.89	0.55
13:M:148:ILE:HG22	15:O:33:ARG:CZ	2.35	0.55
19:S:347:VAL:HG12	19:S:348:ALA:H	1.72	0.55
22:V:147:GLU:HG3	63:Ag:143:ARG:HH12	1.72	0.55
26:Z:54:ASP:O	26:Z:55:HIS:ND1	2.40	0.55
27:BA:112:GLU:OE1	27:BA:112:GLU:N	2.39	0.55
40:Ap:101:GLN:HG3	67:BG:1336:GLN:HE22	1.71	0.55
43:Ao:41:ARG:HH21	71:1:941:A:H5'	1.71	0.55
46:Aj:378:ASN:HA	46:Aj:380:ARG:NH2	2.22	0.55
48:Am:185:MET:HG2	48:Am:202:TYR:CE1	2.41	0.55
52:BP:95:PRO:O	52:BP:97:ARG:N	2.40	0.55
71:1:303:U:O2'	71:1:304:G:OP1	2.23	0.55
71:1:558:C:N4	71:1:559:U:O4	2.40	0.55
2:B:295:SER:OG	22:V:28:PRO:HA	2.06	0.55
11:K:116:SER:OG	12:L:133:LYS:O	2.14	0.55
12:L:90:ARG:HH11	42:Aa:190:SER:HB2	1.71	0.55
13:M:110:ASN:OD1	13:M:111:TRP:N	2.39	0.55
19:S:281:ARG:HA	46:Aj:110:LEU:HD13	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:302:THR:H	24:X:306:ALA:N	2.03	0.55
26:Z:37:PHE:O	32:An:44:TRP:NE1	2.39	0.55
28:UA:90:UNK:O	28:UA:94:UNK:N	2.38	0.55
32:An:127:LEU:C	32:An:127:LEU:HD23	2.31	0.55
33:Al:145:ARG:HB3	33:Al:203:VAL:HG11	1.88	0.55
35:Az:89:PRO:HG2	35:Az:92:TYR:CD2	2.40	0.55
37:BC:51:ARG:NH2	37:BC:90:GLN:O	2.39	0.55
38:Ab:116:TYR:HB2	42:Aa:116:MET:HE1	1.89	0.55
39:Ai:305:ALA:HB2	39:Ai:329:LEU:HD12	1.88	0.55
44:BM:90:GLN:HG2	44:BM:282:ARG:HH21	1.70	0.55
46:Aj:299:GLU:O	46:Aj:302:SER:N	2.39	0.55
46:Aj:413:GLY:O	46:Aj:415:TRP:N	2.39	0.55
55:Av:33:VAL:HG21	55:Av:98:VAL:HG12	1.86	0.55
66:BO:92:ARG:NH1	66:BO:97:VAL:HG11	2.22	0.55
3:C:124:GLU:O	3:C:124:GLU:HG2	2.07	0.55
7:G:16:PRO:HG2	7:G:19:GLN:HG2	1.87	0.55
15:O:316:ASP:HA	15:O:319:VAL:HG22	1.88	0.55
17:Q:220:MET:O	17:Q:224:LYS:N	2.38	0.55
25:Y:238:HIS:O	25:Y:244:ARG:NH2	2.40	0.55
33:Al:38:VAL:HG21	33:Al:70:GLN:O	2.07	0.55
43:Ao:40:VAL:HG13	71:1:338:A:P	2.47	0.55
44:BM:134:LYS:HG2	44:BM:271:ARG:CZ	2.36	0.55
44:BM:224:PRO:HD2	44:BM:228:ASN:OD1	2.07	0.55
46:Aj:314:VAL:HG11	46:Aj:367:LEU:HG	1.88	0.55
51:Ak:54:TRP:HA	51:Ak:54:TRP:CE3	2.41	0.55
60:Ah:342:PHE:O	60:Ah:346:ALA:N	2.40	0.55
63:Ag:231:LEU:HB2	63:Ag:232:PRO:HD2	1.88	0.55
71:1:1075:A:H8	71:1:1075:A:OP2	1.89	0.55
5:E:185:ARG:NH2	55:Av:116:GLN:HA	2.22	0.55
10:J:119:LYS:O	10:J:121:SER:N	2.38	0.55
12:L:38:ASP:OD1	38:Ab:107:ARG:NH1	2.40	0.55
18:R:278:ASN:O	18:R:282:HIS:N	2.38	0.55
20:T:50:ARG:NH2	71:1:536:A:O2'	2.39	0.55
24:X:349:PRO:HG2	24:X:398:ARG:HG3	1.87	0.55
26:Z:20:PRO:HD3	71:1:907:G:C2	2.42	0.55
32:An:133:VAL:HG23	32:An:181:ARG:HD2	1.89	0.55
39:Ai:106:SER:OG	39:Ai:108:ASP:OD1	2.24	0.55
40:Ap:100:LEU:HG	40:Ap:111:PHE:HZ	1.72	0.55
43:Ao:10:ALA:N	71:1:409:A:N1	2.55	0.55
46:Aj:368:GLU:HG2	46:Aj:390:ARG:HH12	1.71	0.55
48:Am:117:VAL:O	48:Am:121:ALA:N	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:Am:119:GLU:OE1	48:Am:235:PHE:N	2.30	0.55
49:Aq:47:ASP:HB3	49:Aq:53:SER:HB3	1.88	0.55
65:BL:253:ASN:OD1	65:BL:269:ASN:ND2	2.18	0.55
3:C:67:ASN:HD21	36:At:79:ALA:HB3	1.70	0.55
3:C:71:TYR:HE2	63:Ag:102:PRO:HG3	1.72	0.55
7:G:115:MET:HG2	42:Aa:22:PRO:HG3	1.88	0.55
8:H:42:VAL:HB	8:H:161:VAL:HG13	1.88	0.55
12:L:93:VAL:HG21	12:L:106:TRP:CD2	2.41	0.55
15:O:116:ILE:O	15:O:120:GLY:N	2.35	0.55
18:R:212:SER:OG	36:At:108:MET:HB3	2.07	0.55
19:S:377:LYS:HD3	53:Ad:75:ARG:HG3	1.88	0.55
22:V:15:GLU:HA	22:V:18:THR:HG22	1.87	0.55
29:BB:124:ALA:HA	50:BE:55:PRO:HD2	1.88	0.55
35:Az:47:ASP:OD1	35:Az:49:ARG:HG2	2.06	0.55
41:Au:46:VAL:O	64:Ax:173:ARG:NH1	2.40	0.55
48:Am:276:ILE:HG13	48:Am:277:MET:N	2.21	0.55
2:B:177:HIS:HE1	71:1:178:U:OP1	1.90	0.55
5:E:170:TYR:HB3	5:E:171:PRO:HD3	1.88	0.55
8:H:31:LYS:HB2	71:1:388:U:OP2	2.06	0.55
12:L:133:LYS:HB2	12:L:149:ASN:ND2	2.22	0.55
14:N:68:HIS:CD2	63:Ag:34:ILE:HD13	2.41	0.55
14:N:76:TYR:O	14:N:78:ARG:N	2.39	0.55
14:N:209:VAL:HG11	18:R:419:GLN:HG2	1.89	0.55
18:R:289:SER:O	18:R:292:SER:N	2.39	0.55
24:X:496:TRP:HZ3	53:Ad:65:ILE:HD12	1.71	0.55
41:Au:112:MET:HG3	60:Ah:242:TYR:HB3	1.89	0.55
44:BM:75:VAL:HG12	44:BM:79:ARG:HE	1.72	0.55
45:Ar:149:GLU:HB2	52:BP:147:VAL:HG13	1.88	0.55
52:BP:-16:SER:OG	52:BP:-1:GLU:OE1	2.19	0.55
55:Av:48:ARG:HA	55:Av:51:ARG:NH1	2.22	0.55
61:BD:92:GLU:OE1	61:BD:96:ARG:NH1	2.39	0.55
67:BG:1262:CYS:HA	67:BG:1267:ASP:HA	1.89	0.55
67:BG:1278:ARG:HH21	71:1:593:U:H1'	1.72	0.55
71:1:698:G:O6	71:1:699:A:N6	2.39	0.55
2:B:424:TYR:CD1	33:Al:277:LEU:HD21	2.41	0.55
3:C:204:GLU:OE2	62:Ay:121:LYS:NZ	2.40	0.55
6:F:5:TRP:HA	6:F:8:ARG:CZ	2.37	0.55
6:F:62:MET:HB3	6:F:67:TRP:CE2	2.42	0.55
10:J:64:TYR:CG	10:J:64:TYR:O	2.59	0.55
14:N:176:LYS:NZ	71:1:564:U:O4	2.35	0.55
15:O:134:TRP:NE1	15:O:136:TRP:O	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:173:VAL:HG22	15:O:190:GLN:HB3	1.88	0.55
16:P:88:THR:HG23	16:P:102:ASP:HB2	1.87	0.55
18:R:33:ALA:HB1	18:R:90:SER:HB2	1.88	0.55
22:V:126:TRP:CH2	71:1:90:A:H8	2.24	0.55
24:X:373:LEU:HB3	24:X:374:HIS:HD2	1.72	0.55
26:Z:70:HIS:HB2	26:Z:138:VAL:HG23	1.88	0.55
31:Bj:101:PRO:HG2	51:Ak:291:GLU:OE2	2.07	0.55
34:Bi:173:GLN:NE2	34:Bi:201:ALA:O	2.40	0.55
37:BC:69:THR:OG1	37:BC:72:THR:HG23	2.07	0.55
54:BF:70:ARG:HH21	54:BF:76:SER:CB	2.20	0.55
55:Av:19:LYS:HE3	71:1:434:U:H1'	1.88	0.55
63:Ag:117:TRP:HB2	63:Ag:123:THR:HG21	1.88	0.55
64:Ax:145:CYS:CB	64:Ax:166:CYS:HB2	2.37	0.55
66:BO:172:ARG:HB2	66:BO:172:ARG:NH2	2.22	0.55
71:1:146:U:O2	71:1:146:U:O4'	2.20	0.55
71:1:711:A:H2'	71:1:711:A:N3	2.22	0.55
71:1:1097:A:HO2'	71:1:1098:A:P	2.29	0.55
3:C:145:ARG:HH12	17:Q:108:ILE:CG2	2.20	0.55
6:F:163:ARG:H	56:Af:20:HIS:HE1	1.53	0.55
26:Z:131:TRP:CZ2	71:1:567:A:C8	2.95	0.55
33:Al:155:LEU:HB3	33:Al:167:VAL:HG11	1.88	0.55
34:Bi:158:TYR:OH	34:Bi:222:HIS:NE2	2.39	0.55
38:Ab:23:PRO:O	38:Ab:27:GLN:N	2.36	0.55
44:BM:46:ARG:HD2	44:BM:50:LYS:HZ2	1.72	0.55
56:Af:74:ASP:C	56:Af:76:GLN:H	2.15	0.55
58:Ae:66:ALA:HB1	58:Ae:70:GLU:HB2	1.88	0.55
73:Ag:301:NAD:N7A	73:Ag:301:NAD:O3D	2.34	0.55
65:BL:127:LYS:O	71:1:667:A:H3'	2.07	0.55
3:C:71:TYR:HB3	3:C:72:PRO:HD3	1.89	0.55
6:F:161:GLN:HE21	6:F:161:GLN:CA	2.15	0.55
9:I:43:PRO:O	9:I:45:MET:HE2	2.06	0.55
18:R:187:ASP:O	18:R:190:GLN:N	2.40	0.55
22:V:66:ARG:HH11	22:V:77:ARG:HH12	1.55	0.55
26:Z:18:VAL:CG2	26:Z:21:PHE:HB2	2.37	0.55
28:UA:81:UNK:HA	64:Ax:127:ASN:CB	2.36	0.55
30:Aw:115:LEU:HD12	30:Aw:116:SER:HB3	1.88	0.55
32:An:117:MET:HB2	32:An:122:ILE:HG12	1.88	0.55
35:Az:41:ASP:CG	71:1:77:U:H3	2.15	0.55
43:Ao:222:ILE:O	43:Ao:230:ARG:NE	2.40	0.55
44:BM:118:ILE:HG13	44:BM:119:THR:N	2.21	0.55
48:Am:13:TRP:HA	71:1:1037:C:O2'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BP:163:ARG:NE	71:1:473:U:O3'	2.39	0.55
65:BL:340:VAL:O	65:BL:341:LYS:C	2.51	0.55
71:1:322:A:N6	71:1:990:A:O2'	2.35	0.55
2:B:243:LYS:NZ	46:Aj:449:LEU:O	2.40	0.54
5:E:155:TYR:OH	55:Av:111:ASN:OD1	2.25	0.54
12:L:44:ARG:NH1	71:1:496:U:OP1	2.40	0.54
13:M:94:GLU:HA	46:Aj:464:ASN:O	2.07	0.54
18:R:455:LYS:HB3	71:1:66:U:O2	2.06	0.54
21:U:38:MET:O	21:U:38:MET:HG3	2.07	0.54
24:X:404:ILE:HG22	24:X:405:PRO:O	2.07	0.54
24:X:494:LEU:HB2	24:X:496:TRP:CD1	2.42	0.54
26:Z:76:ARG:NH1	71:1:71:A:N3	2.55	0.54
32:An:135:PHE:CA	32:An:139:GLN:HB2	2.34	0.54
33:Al:279:ASN:N	33:Al:279:ASN:ND2	2.55	0.54
39:Ai:50:ASP:O	39:Ai:54:ASN:N	2.32	0.54
44:BM:318:PRO:HA	44:BM:322:TYR:CD2	2.41	0.54
49:Aq:308:GLN:NE2	62:Ay:173:LYS:HB2	2.22	0.54
66:BO:100:ARG:HD2	71:1:772:U:O5'	2.06	0.54
3:C:80:GLU:OE2	3:C:96:HIS:NE2	2.40	0.54
10:J:83:THR:HB	57:As:59:TRP:CH2	2.42	0.54
11:K:42:LEU:O	11:K:46:GLN:HG3	2.08	0.54
13:M:94:GLU:OE1	71:1:515:A:N6	2.40	0.54
18:R:84:LEU:HA	18:R:87:VAL:HG12	1.88	0.54
24:X:101:PRO:HB2	39:Ai:164:LYS:HZ2	1.72	0.54
27:BA:24:VAL:HA	45:Ar:127:ARG:CZ	2.37	0.54
30:Aw:187:TYR:CD1	46:Aj:124:LEU:HG	2.43	0.54
32:An:110:PHE:CZ	32:An:187:PHE:HA	2.43	0.54
33:Al:269:GLU:CG	33:Al:269:GLU:O	2.53	0.54
35:Az:16:LYS:O	35:Az:17:GLN:HB2	2.07	0.54
46:Aj:274:GLN:HA	46:Aj:277:ASP:OD2	2.08	0.54
48:Am:319:TYR:CB	71:1:482:C:C5	2.76	0.54
55:Av:49:GLU:HG2	55:Av:77:TYR:HE1	1.73	0.54
56:Af:60:PHE:O	56:Af:62:SER:CB	2.55	0.54
71:1:233:G:H5'	71:1:234:U:OP2	2.07	0.54
71:1:1046:G:OP1	71:1:1046:G:H4'	2.06	0.54
2:B:174:TRP:HA	22:V:12:ALA:O	2.08	0.54
2:B:193:VAL:HG23	2:B:284:LEU:CD1	2.37	0.54
3:C:99:LEU:O	3:C:180:LYS:NZ	2.31	0.54
3:C:143:VAL:HG12	3:C:148:LEU:HG	1.89	0.54
5:E:218:ARG:NH2	55:Av:110:GLU:OE1	2.30	0.54
5:E:281:ASP:HB3	5:E:284:ASP:HB3	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:303:PRO:HB2	5:E:307:ARG:NH1	2.22	0.54
7:G:58:ASP:OD1	7:G:59:ALA:N	2.40	0.54
10:J:142:ARG:NH1	71:1:806:A:OP2	2.40	0.54
14:N:77:ASN:ND2	71:1:87:A:N3	2.56	0.54
31:Bj:32:LEU:HD11	49:Aq:90:PHE:HB3	1.90	0.54
50:BE:92:GLU:HB3	50:BE:95:ARG:HG3	1.88	0.54
51:Ak:188:SER:HG	51:Ak:191:SER:HG	1.50	0.54
56:Af:75:THR:HG23	56:Af:81:TYR:CE2	2.42	0.54
60:Ah:116:ASN:OD1	60:Ah:120:LYS:NZ	2.41	0.54
71:1:361:A:H3'	71:1:362:A:C5'	2.36	0.54
71:1:508:G:O2'	71:1:519:U:O4	2.24	0.54
71:1:876:G:C2	71:1:877:G:C4	2.96	0.54
2:B:296:SER:OG	71:1:89:U:H4'	2.08	0.54
4:D:130:LYS:O	4:D:134:LEU:HG	2.07	0.54
7:G:128:ARG:HG2	71:1:320:G:O6	2.07	0.54
7:G:148:THR:O	7:G:148:THR:HG22	2.08	0.54
7:G:349:GLN:HB2	7:G:352:SER:HB3	1.90	0.54
11:K:117:ARG:O	52:BP:-21:TYR:OH	2.20	0.54
14:N:85:ARG:HH21	71:1:313:A:H3'	1.72	0.54
15:O:320:ARG:O	15:O:323:GLU:HG3	2.06	0.54
24:X:278:ARG:HH12	43:Ao:93:SER:HB3	1.72	0.54
25:Y:234:ILE:HD12	31:Bj:156:PRO:HD3	1.90	0.54
26:Z:22:THR:CG2	60:Ah:72:SER:HB3	2.38	0.54
26:Z:97:VAL:HB	26:Z:105:LEU:HB2	1.90	0.54
33:Al:268:TYR:O	33:Al:269:GLU:HG2	2.07	0.54
40:Ap:47:LYS:HB2	41:Au:185:TRP:HZ3	1.73	0.54
43:Ao:231:TYR:OH	52:BP:91:GLU:O	2.21	0.54
46:Aj:371:GLU:CD	46:Aj:387:LEU:HD21	2.31	0.54
46:Aj:402:ARG:HD2	53:Ad:194:PHE:CG	2.42	0.54
60:Ah:145:SER:OG	60:Ah:146:GLY:N	2.41	0.54
60:Ah:333:LEU:HD23	60:Ah:339:ARG:HH12	1.71	0.54
71:1:848:U:H4'	71:1:996:G:OP1	2.07	0.54
1:A:183:MET:HE3	10:J:20:PHE:HB2	1.90	0.54
9:I:16:MET:HB2	66:BO:46:ARG:HD2	1.88	0.54
9:I:48:TYR:HB3	9:I:57:LYS:HB3	1.89	0.54
10:J:88:GLY:HA2	10:J:103:TRP:HE3	1.71	0.54
10:J:142:ARG:NH2	71:1:615:U:OP2	2.40	0.54
12:L:78:ARG:NH2	52:BP:25:ALA:O	2.41	0.54
19:S:270:SER:OG	19:S:271:TRP:N	2.38	0.54
19:S:295:PRO:HG2	19:S:296:PRO:HD3	1.89	0.54
21:U:79:ARG:NE	39:Ai:118:GLN:OE1	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:41:GLN:O	22:V:111:ARG:NH1	2.41	0.54
24:X:91:THR:HG22	24:X:94:LEU:HG	1.88	0.54
24:X:216:THR:HA	24:X:421:GLN:NE2	2.22	0.54
25:Y:275:ASP:N	25:Y:275:ASP:OD1	2.39	0.54
31:Bj:82:LEU:HD12	31:Bj:90:LEU:HD21	1.88	0.54
32:An:22:ARG:HD3	71:1:286:G:N2	2.21	0.54
32:An:46:GLN:HG2	32:An:49:SER:HB3	1.90	0.54
33:Al:181:VAL:HG11	33:Al:214:ILE:HD11	1.89	0.54
48:Am:71:LYS:HE2	48:Am:338:LYS:HD2	1.89	0.54
51:Ak:178:ASP:O	51:Ak:181:LEU:N	2.40	0.54
59:Ac:174:GLN:HG3	59:Ac:254:LYS:HB3	1.89	0.54
71:1:576:A:H5'	71:1:577:A:H5''	1.88	0.54
71:1:1028:U:O4	71:1:1057:A:N6	2.40	0.54
5:E:313:TYR:HB2	55:Av:138:ARG:NH2	2.22	0.54
7:G:255:VAL:HA	7:G:297:TRP:CD1	2.43	0.54
10:J:96:GLU:HG3	10:J:97:GLU:H	1.73	0.54
11:K:25:ARG:HE	71:1:145:A:P	2.31	0.54
11:K:62:VAL:O	11:K:66:VAL:HG12	2.07	0.54
12:L:90:ARG:HH11	42:Aa:190:SER:CB	2.20	0.54
13:M:71:TRP:HA	13:M:76:ASN:ND2	2.23	0.54
14:N:77:ASN:ND2	71:1:87:A:H1'	2.22	0.54
15:O:21:TYR:CE1	15:O:28:ALA:HA	2.43	0.54
29:BB:66:TRP:CD1	29:BB:76:HIS:HD1	2.26	0.54
39:Ai:70:GLY:HA3	49:Aq:118:ARG:HB3	1.90	0.54
44:BM:206:GLY:HA3	44:BM:314:GLN:HE21	1.71	0.54
45:Ar:124:CYS:HB2	56:Af:34:ARG:HD2	1.89	0.54
46:Aj:312:GLU:OE1	46:Aj:312:GLU:N	2.41	0.54
53:Ad:222:ASN:O	53:Ad:225:GLY:N	2.39	0.54
64:Ax:151:ARG:HH12	64:Ax:186:TYR:HE2	1.53	0.54
71:1:56:U:O4	71:1:57:A:N6	2.41	0.54
5:E:206:THR:HB	5:E:209:GLN:HG2	1.88	0.54
6:F:12:ARG:HH21	6:F:14:TRP:HZ2	1.53	0.54
7:G:217:VAL:HG23	7:G:236:ASN:O	2.08	0.54
13:M:138:ALA:H	13:M:230:HIS:HD2	1.55	0.54
15:O:114:GLN:O	15:O:118:ILE:HG12	2.08	0.54
19:S:351:HIS:HD2	71:1:358:A:H62	1.56	0.54
22:V:47:MET:HE2	24:X:459:ARG:HG3	1.89	0.54
26:Z:110:GLY:HA2	71:1:555:U:H3	1.73	0.54
31:Bj:139:LYS:HD2	31:Bj:160:LEU:HD21	1.90	0.54
33:Al:61:THR:OG1	33:Al:65:GLU:OE2	2.24	0.54
35:Az:131:ALA:O	35:Az:133:ARG:N	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:Aj:137:LEU:CD2	46:Aj:282:PRO:HG3	2.38	0.54
51:Ak:195:GLU:HG3	51:Ak:198:LEU:HB2	1.88	0.54
52:BP:-20:PRO:HB3	56:Af:77:GLN:HB3	1.90	0.54
59:Ac:56:ARG:NH2	59:Ac:164:LYS:O	2.29	0.54
62:Ay:45:HIS:CE1	71:1:704:U:H5'	2.42	0.54
71:1:187:U:H5''	71:1:188:A:H2'	1.90	0.54
71:1:442:U:H4'	71:1:443:G:C8	2.42	0.54
2:B:40:PRO:O	46:Aj:443:ARG:HD2	2.07	0.54
5:E:302:THR:HB	5:E:303:PRO:HD2	1.89	0.54
7:G:189:LEU:HD13	7:G:195:ILE:HG21	1.88	0.54
7:G:207:ALA:N	7:G:210:GLU:OE2	2.41	0.54
11:K:169:GLN:OE1	11:K:174:ARG:NH2	2.41	0.54
13:M:31:HIS:O	22:V:11:LYS:NZ	2.41	0.54
23:W:104:GLU:O	23:W:107:TRP:HD1	1.90	0.54
24:X:126:ARG:HD2	24:X:206:THR:HG21	1.89	0.54
24:X:252:SER:HA	24:X:257:ASN:CB	2.38	0.54
24:X:302:THR:HG22	24:X:304:ASP:H	1.73	0.54
30:Aw:19:ASN:HD22	30:Aw:22:ARG:HH11	1.54	0.54
32:An:285:ASN:HB3	32:An:288:TRP:HB3	1.89	0.54
43:Ao:242:MET:HE2	43:Ao:242:MET:HA	1.89	0.54
54:BF:33:ASP:N	54:BF:33:ASP:OD1	2.40	0.54
63:Ag:148:THR:HG22	63:Ag:149:ASN:H	1.72	0.54
64:Ax:49:PRO:HD3	71:1:1092:G:H4'	1.90	0.54
5:E:205:MET:HE3	5:E:210:TYR:HA	1.90	0.54
6:F:84:ARG:NH2	23:W:108:THR:OG1	2.41	0.54
7:G:180:LEU:O	7:G:184:VAL:HG23	2.08	0.54
9:I:229:HIS:ND1	9:I:246:VAL:HG11	2.23	0.54
10:J:5:ARG:HD3	71:1:1157:A:C4	2.42	0.54
15:O:20:THR:HG23	15:O:21:TYR:H	1.73	0.54
16:P:112:ARG:HH12	47:BH:219:LYS:HG2	1.73	0.54
17:Q:108:ILE:O	17:Q:108:ILE:CG2	2.48	0.54
19:S:346:SER:HA	19:S:353:ARG:NH2	2.20	0.54
33:Al:136:SER:HB2	33:Al:175:TYR:HD2	1.73	0.54
33:Al:192:LEU:HB2	44:BM:190:LYS:NZ	2.23	0.54
40:Ap:38:PHE:HE2	57:As:96:TRP:HB3	1.73	0.54
43:Ao:219:GLU:HB3	52:BP:94:ARG:HE	1.73	0.54
49:Aq:338:HIS:O	71:1:976:A:H5''	2.08	0.54
65:BL:167:ARG:NE	65:BL:297:ASN:O	2.40	0.54
71:1:798:A:H2	71:1:799:A:N6	2.04	0.54
9:I:72:ARG:HA	9:I:75:THR:HG22	1.90	0.54
10:J:54:ILE:HD12	10:J:55:GLY:H	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:23:MET:HG3	71:1:145:A:H2	1.72	0.54
11:K:27:ARG:NH1	71:1:835:A:OP2	2.41	0.54
22:V:138:LEU:HD23	22:V:138:LEU:H	1.72	0.54
25:Y:279:HIS:HB3	25:Y:282:GLN:HE21	1.72	0.54
27:BA:20:GLY:N	52:BP:-10:ARG:HG2	2.22	0.54
35:Az:152:SER:O	36:At:99:THR:OG1	2.25	0.54
47:BH:186:ARG:HB3	47:BH:188:TRP:HZ3	1.73	0.54
55:Av:152:VAL:HA	55:Av:155:ARG:HB3	1.90	0.54
65:BL:301:ARG:HH22	71:1:235:G:H4'	1.73	0.54
71:1:163:U:H2'	71:1:166:U:N3	2.23	0.54
71:1:392:A:O2'	71:1:997:A:N3	2.39	0.54
71:1:798:A:O2'	71:1:799:A:O5'	2.26	0.54
2:B:82:THR:HG21	2:B:347:MET:HE3	1.89	0.53
3:C:151:GLN:NE2	60:Ah:55:TYR:HB2	2.24	0.53
3:C:152:ARG:HB2	32:An:283:ARG:HE	1.73	0.53
8:H:38:ILE:O	45:Ar:192:ARG:NH1	2.41	0.53
9:I:115:LEU:HG	9:I:125:VAL:HG12	1.89	0.53
9:I:178:ASP:OD1	9:I:180:THR:HG23	2.08	0.53
10:J:7:ARG:HB3	71:1:1108:A:OP1	2.09	0.53
10:J:111:LEU:HD21	66:BO:143:LEU:HB2	1.88	0.53
24:X:137:TRP:O	24:X:141:ARG:N	2.40	0.53
24:X:201:ARG:HD2	51:Ak:149:VAL:HG23	1.91	0.53
26:Z:76:ARG:HH11	71:1:71:A:P	2.31	0.53
33:Al:132:SER:HB2	33:Al:174:GLU:O	2.08	0.53
35:Az:134:LYS:HG3	35:Az:135:LYS:O	2.08	0.53
36:At:108:MET:O	36:At:112:ARG:N	2.41	0.53
38:Ab:131:ALA:N	48:Am:333:ASN:OD1	2.37	0.53
41:Au:176:GLY:O	41:Au:179:VAL:HG12	2.08	0.53
43:Ao:272:LYS:NZ	43:Ao:279:HIS:HB3	2.23	0.53
44:BM:246:ARG:HE	44:BM:269:VAL:N	2.06	0.53
63:Ag:218:SER:O	63:Ag:222:GLN:HG2	2.08	0.53
64:Ax:124:PRO:O	64:Ax:124:PRO:CG	2.55	0.53
65:BL:336:PRO:HG2	65:BL:339:CYS:HB3	1.89	0.53
66:BO:47:TRP:N	71:1:814:A:H2	2.06	0.53
9:I:66:ARG:NH2	71:1:819:U:OP1	2.40	0.53
12:L:3:ARG:HB2	12:L:126:THR:HG23	1.90	0.53
15:O:184:ARG:HH22	15:O:187:GLN:HG2	1.71	0.53
19:S:263:ILE:O	19:S:285:MET:HE3	2.08	0.53
24:X:265:SER:HB2	24:X:337:HIS:ND1	2.23	0.53
32:An:197:LEU:O	32:An:200:LYS:HE3	2.07	0.53
34:BI:164:ASP:HB3	34:BI:211:GLN:HE21	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BP:141:TYR:CG	52:BP:141:TYR:O	2.61	0.53
56:Af:25:TRP:O	56:Af:29:GLN:HG2	2.08	0.53
65:BL:169:LYS:HB3	65:BL:283:TYR:CE2	2.42	0.53
71:1:73:G:H3'	71:1:74:A:C8	2.43	0.53
71:1:155:U:H2'	71:1:156:A:O4'	2.08	0.53
71:1:548:A:O2'	71:1:549:C:O4'	2.27	0.53
1:A:86:TYR:O	50:BE:112:THR:OG1	2.23	0.53
2:B:142:GLU:OE1	2:B:144:ARG:N	2.35	0.53
3:C:29:GLY:H	35:Az:128:GLN:NE2	2.06	0.53
5:E:241:ARG:HH21	38:Ab:217:LEU:HB2	1.74	0.53
7:G:102:GLU:O	46:Aj:407:ARG:NH1	2.41	0.53
39:Ai:242:SER:OG	39:Ai:245:ASN:ND2	2.41	0.53
39:Ai:287:THR:OG1	39:Ai:288:SER:N	2.41	0.53
44:BM:126:LEU:O	44:BM:130:GLN:N	2.41	0.53
44:BM:377:GLU:O	44:BM:381:ASN:ND2	2.41	0.53
46:Aj:242:HIS:CD2	46:Aj:244:GLN:H	2.26	0.53
52:BP:168:SER:O	52:BP:170:ASN:N	2.42	0.53
57:As:54:ASN:HA	57:As:57:ARG:HG2	1.89	0.53
57:As:72:PRO:HD2	57:As:139:GLU:HG3	1.89	0.53
59:Ac:195:ARG:NH1	59:Ac:216:SER:O	2.41	0.53
60:Ah:424:THR:HG23	60:Ah:427:ARG:HH11	1.72	0.53
64:Ax:148:CYS:SG	64:Ax:176:ARG:NE	2.81	0.53
71:1:1008:A:H8	71:1:1009:A:H1'	1.73	0.53
2:B:10:HIS:HE1	38:Ab:15:SER:HB3	1.74	0.53
9:I:152:ARG:NH1	9:I:157:ASN:O	2.41	0.53
10:J:38:ILE:HG22	10:J:43:MET:HG3	1.88	0.53
10:J:62:PHE:CE2	10:J:112:LYS:HD2	2.42	0.53
11:K:179:TRP:HE1	46:Aj:229:VAL:HG13	1.74	0.53
14:N:170:ILE:HD13	14:N:179:LEU:HD22	1.90	0.53
17:Q:74:ASP:OD2	26:Z:16:PRO:HA	2.08	0.53
21:U:55:LYS:O	21:U:60:ARG:HG3	2.09	0.53
22:V:62:MET:HA	22:V:77:ARG:HD2	1.91	0.53
22:V:104:ARG:NH1	71:1:184:G:O4'	2.41	0.53
30:Aw:71:VAL:HG11	71:1:109:U:H5'	1.91	0.53
33:Al:71:PHE:CD2	62:Ay:145:PRO:HA	2.43	0.53
33:Al:293:ASN:N	33:Al:293:ASN:OD1	2.40	0.53
41:Au:72:ASP:HB2	41:Au:74:GLN:HG3	1.89	0.53
44:BM:46:ARG:HH12	44:BM:47:LYS:HD3	1.73	0.53
47:BH:33:ILE:HG22	47:BH:40:LEU:HD12	1.90	0.53
55:Av:154:TRP:O	55:Av:158:MET:HG2	2.09	0.53
59:Ac:53:TYR:N	59:Ac:235:TYR:O	2.32	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:Ah:67:ARG:HA	71:1:905:A:C4	2.43	0.53
64:Ax:174:ASP:O	64:Ax:176:ARG:HG3	2.09	0.53
71:1:69:G:H5''	71:1:70:G:O4'	2.07	0.53
71:1:482:C:H2'	71:1:483:U:H4'	1.89	0.53
2:B:384:ARG:NH1	18:R:212:SER:H	2.07	0.53
3:C:136:THR:HG23	62:Ay:139:ALA:HA	1.90	0.53
4:D:87:TYR:OH	5:E:172:PRO:HD3	2.08	0.53
5:E:149:LEU:HB2	5:E:191:ILE:HG22	1.91	0.53
10:J:65:ASN:HB3	66:BO:172:ARG:CD	2.38	0.53
14:N:77:ASN:HD21	71:1:87:A:H1'	1.73	0.53
16:P:123:ARG:HH12	47:BH:225:ILE:HB	1.72	0.53
21:U:32:ARG:HB3	22:V:65:ARG:HH22	1.69	0.53
24:X:496:TRP:HZ3	53:Ad:65:ILE:HD13	1.73	0.53
29:BB:17:HIS:HD2	29:BB:24:ARG:HH22	1.57	0.53
30:Aw:72:PRO:HD3	36:At:60:ARG:NH1	2.23	0.53
33:Al:113:LEU:O	33:Al:161:HIS:NE2	2.29	0.53
33:Al:279:ASN:H	33:Al:279:ASN:ND2	2.07	0.53
34:BI:198:LEU:HD13	34:BI:214:ILE:HG12	1.91	0.53
41:Au:66:LEU:HA	41:Au:71:MET:O	2.09	0.53
46:Aj:487:ASP:O	46:Aj:491:ASN:ND2	2.41	0.53
49:Aq:152:LYS:HZ2	49:Aq:174:ARG:HB3	1.74	0.53
53:Ad:162:SER:OG	71:1:188:A:OP2	2.24	0.53
60:Ah:181:LEU:HB2	60:Ah:184:HIS:CD2	2.44	0.53
60:Ah:249:ASN:O	60:Ah:249:ASN:ND2	2.42	0.53
71:1:269:A:H2	71:1:271:U:H1'	1.73	0.53
71:1:781:A:HO2'	71:1:782:U:P	2.31	0.53
1:A:169:ARG:NH2	71:1:1117:U:O2	2.41	0.53
8:H:99:GLU:HG3	71:1:390:A:C2	2.43	0.53
17:Q:108:ILE:HD11	60:Ah:58:VAL:HG13	1.91	0.53
22:V:89:ARG:HG2	71:1:374:U:H5''	1.90	0.53
29:BB:131:PHE:CZ	50:BE:73:PHE:HB2	2.44	0.53
34:BI:115:LEU:HD21	34:BI:144:LEU:HD12	1.89	0.53
38:Ab:66:GLU:O	38:Ab:91:ASN:ND2	2.41	0.53
43:Ao:91:GLN:NE2	53:Ad:34:MET:SD	2.82	0.53
44:BM:31:ARG:O	44:BM:35:GLN:HG2	2.09	0.53
44:BM:104:ASP:N	44:BM:104:ASP:OD1	2.37	0.53
45:Ar:27:THR:HG23	45:Ar:35:PHE:HA	1.90	0.53
47:BH:32:ASP:HB2	47:BH:191:ASP:HB3	1.91	0.53
54:BF:22:HIS:HA	71:1:595:A:H61	1.74	0.53
65:BL:310:ARG:O	65:BL:312:SER:N	2.41	0.53
71:1:568:A:H2'	71:1:569:U:O4'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:174:ARG:HH11	71:1:191:A:H3'	1.73	0.53
11:K:165:SER:OG	46:Aj:198:TYR:O	2.22	0.53
13:M:12:LEU:HD11	13:M:13:ARG:HD3	1.91	0.53
13:M:198:ARG:HD3	13:M:241:MET:SD	2.49	0.53
15:O:175:ASP:HA	15:O:190:GLN:HG2	1.91	0.53
15:O:282:GLN:HB2	34:BI:206:HIS:CD2	2.44	0.53
27:BA:15:LEU:C	27:BA:17:LYS:H	2.16	0.53
31:Bj:53:SER:O	31:Bj:56:GLN:NE2	2.42	0.53
31:Bj:117:GLN:O	31:Bj:121:ALA:N	2.41	0.53
32:An:135:PHE:O	32:An:135:PHE:CD2	2.61	0.53
33:Al:111:ALA:HB3	33:Al:250:GLN:HE21	1.72	0.53
39:Ai:81:CYS:SG	39:Ai:82:GLU:N	2.81	0.53
40:Ap:26:MET:HG2	40:Ap:29:TRP:CD2	2.44	0.53
41:Au:53:ARG:NH1	65:BL:141:TRP:HA	2.24	0.53
55:Av:55:HIS:HB3	55:Av:66:MET:SD	2.49	0.53
60:Ah:260:THR:OG1	60:Ah:261:GLU:N	2.40	0.53
64:Ax:152:ILE:HD13	64:Ax:157:PHE:HB3	1.90	0.53
65:BL:215:THR:HG22	65:BL:269:ASN:HB2	1.89	0.53
71:1:1029:U:H3	71:1:1057:A:H61	1.54	0.53
3:C:150:PRO:HA	17:Q:110:TYR:CD2	2.44	0.53
3:C:152:ARG:HB3	32:An:283:ARG:HG2	1.91	0.53
4:D:100:ASP:O	4:D:103:ALA:N	2.42	0.53
11:K:20:LEU:HD11	42:Aa:185:VAL:HA	1.89	0.53
16:P:53:PHE:HD1	16:P:56:ASP:H	1.57	0.53
18:R:243:ILE:HG13	18:R:257:GLY:H	1.74	0.53
20:T:79:ARG:O	20:T:82:LYS:NZ	2.35	0.53
24:X:75:LEU:HD13	24:X:80:PHE:HE2	1.73	0.53
27:BA:48:THR:H	27:BA:51:ASP:HB2	1.73	0.53
28:UA:195:UNK:O	28:UA:199:UNK:N	2.42	0.53
30:Aw:19:ASN:ND2	30:Aw:22:ARG:HH11	2.05	0.53
32:An:264:HIS:CD2	60:Ah:62:PHE:HB3	2.44	0.53
34:BI:97:THR:HB	34:BI:234:VAL:HG12	1.90	0.53
36:At:152:LEU:HB3	36:At:163:ILE:HG22	1.91	0.53
39:Ai:364:LEU:HB2	39:Ai:394:LEU:HD13	1.90	0.53
40:Ap:57:LYS:O	40:Ap:61:ASP:N	2.30	0.53
46:Aj:212:ASP:OD1	46:Aj:227:TYR:OH	2.24	0.53
48:Am:21:ARG:NH2	48:Am:24:GLY:O	2.40	0.53
48:Am:60:GLN:HE22	48:Am:64:LEU:HD21	1.73	0.53
49:Aq:89:PHE:O	49:Aq:90:PHE:HB2	2.07	0.53
49:Aq:167:SER:C	49:Aq:171:ALA:H	2.16	0.53
60:Ah:114:PHE:HD2	60:Ah:115:TYR:HD1	1.56	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:Ah:351:ARG:HA	60:Ah:354:ALA:HB3	1.90	0.53
65:BL:139:ARG:NH2	65:BL:299:PRO:HG3	2.24	0.53
66:BO:91:CYS:O	66:BO:95:PRO:HD3	2.09	0.53
71:1:132:U:H5''	71:1:133:A:C2	2.42	0.53
2:B:167:ARG:NH2	71:1:528:A:OP1	2.42	0.53
2:B:367:LEU:HD22	30:Aw:98:GLN:HG3	1.90	0.53
7:G:254:ASN:HD21	7:G:288:PHE:HB3	1.74	0.53
7:G:359:HIS:HB2	17:Q:12:THR:HG21	1.91	0.53
8:H:123:PHE:HE2	8:H:149:ILE:HD11	1.74	0.53
27:BA:42:SER:HB3	27:BA:131:ARG:HH22	1.73	0.53
33:Al:36:GLU:O	33:Al:37:GLN:HB2	2.09	0.53
39:Ai:118:GLN:HG2	39:Ai:175:TYR:CZ	2.44	0.53
39:Ai:210:LEU:O	39:Ai:214:SER:N	2.34	0.53
39:Ai:353:ASP:OD1	39:Ai:354:GLY:N	2.41	0.53
44:BM:280:LEU:H	44:BM:280:LEU:HD23	1.73	0.53
54:BF:32:LEU:O	54:BF:36:ALA:N	2.31	0.53
57:As:110:ASP:O	57:As:114:TYR:N	2.41	0.53
62:Ay:143:GLU:OE2	62:Ay:144:THR:N	2.41	0.53
71:1:643:G:O3'	71:1:656:G:N2	2.42	0.53
5:E:178:ARG:HH11	55:Av:114:VAL:HG11	1.74	0.53
8:H:41:GLU:HA	45:Ar:184:TYR:CE2	2.44	0.53
13:M:87:VAL:HG22	46:Aj:449:LEU:HD22	1.91	0.53
15:O:29:ARG:CD	15:O:29:ARG:N	2.66	0.53
15:O:269:ARG:HG2	15:O:273:MET:HG3	1.91	0.53
22:V:39:VAL:HG21	71:1:98:G:C8	2.44	0.53
24:X:348:VAL:O	24:X:349:PRO:C	2.51	0.53
32:An:188:ARG:HG3	60:Ah:444:THR:HG21	1.89	0.53
37:BC:53:ALA:HB2	37:BC:90:GLN:O	2.09	0.53
44:BM:240:ASP:HB3	44:BM:279:TYR:CE2	2.44	0.53
47:BH:94:ASP:OD2	47:BH:141:GLN:NE2	2.41	0.53
53:Ad:203:ILE:O	53:Ad:205:PRO:HD3	2.09	0.53
59:Ac:180:LYS:HD3	59:Ac:272:LYS:HA	1.91	0.53
65:BL:112:SER:OG	65:BL:112:SER:O	2.25	0.53
69:UC:88:UNK:O	69:UC:92:UNK:N	2.42	0.53
1:A:168:THR:OG1	1:A:169:ARG:N	2.42	0.52
7:G:40:LEU:HD23	56:Af:108:PHE:CE1	2.44	0.52
7:G:282:ARG:HA	7:G:285:LEU:HD12	1.90	0.52
11:K:31:GLU:OE1	71:1:172:A:H4'	2.09	0.52
16:P:135:HIS:CD2	43:Ao:229:GLU:HA	2.43	0.52
25:Y:167:LEU:HD13	25:Y:180:VAL:HG11	1.91	0.52
30:Aw:164:TRP:CZ3	36:At:146:PRO:HB3	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:An:178:VAL:O	32:An:182:VAL:HG22	2.08	0.52
33:Al:256:PRO:O	33:Al:260:MET:HG2	2.10	0.52
36:At:141:ASP:OD1	36:At:143:THR:HG23	2.09	0.52
44:BM:97:GLY:O	44:BM:101:LYS:N	2.42	0.52
52:BP:162:ARG:NH2	55:Av:161:ILE:O	2.40	0.52
62:Ay:111:GLU:HA	62:Ay:114:GLU:HG2	1.91	0.52
64:Ax:122:TRP:HZ2	64:Ax:134:GLN:HG3	1.73	0.52
2:B:78:PRO:HB2	2:B:361:PHE:CE2	2.43	0.52
8:H:131:ARG:HD3	71:1:450:A:H5'	1.91	0.52
9:I:42:GLU:HB3	9:I:45:MET:HE3	1.90	0.52
17:Q:81:ARG:HH21	71:1:81:U:H5	1.57	0.52
17:Q:108:ILE:HB	71:1:905:A:N6	2.16	0.52
22:V:82:PRO:HD3	24:X:458:VAL:HG11	1.91	0.52
24:X:170:VAL:HG23	24:X:223:SER:HB2	1.92	0.52
33:Al:121:HIS:CD2	33:Al:222:GLY:HA3	2.43	0.52
33:Al:124:THR:HG21	33:Al:218:CYS:SG	2.49	0.52
39:Ai:296:HIS:HD2	39:Ai:297:SER:H	1.57	0.52
40:Ap:164:PHE:HA	40:Ap:167:MET:HB3	1.92	0.52
41:Au:15:GLN:NE2	71:1:237:U:O2'	2.38	0.52
43:Ao:11:SER:O	43:Ao:11:SER:OG	2.25	0.52
44:BM:67:GLU:H	44:BM:319:ALA:HB1	1.73	0.52
49:Aq:341:PHE:HE1	71:1:975:U:H1'	1.73	0.52
53:Ad:63:SER:HB2	53:Ad:81:PHE:CE2	2.44	0.52
55:Av:158:MET:HE2	71:1:460:A:C5	2.44	0.52
71:1:99:A:H4'	71:1:100:A:C5'	2.39	0.52
71:1:393:A:H4'	71:1:1012:A:N6	2.24	0.52
71:1:573:A:O2'	71:1:574:A:OP1	2.21	0.52
71:1:608:A:O2'	71:1:817:A:N6	2.43	0.52
2:B:43:SER:HB3	46:Aj:440:GLN:NE2	2.20	0.52
2:B:254:SER:OG	2:B:255:ARG:N	2.39	0.52
10:J:65:ASN:O	10:J:66:PRO:C	2.51	0.52
14:N:194:ARG:HD3	71:1:565:U:N3	2.25	0.52
54:BF:63:ARG:NH1	54:BF:68:GLN:HA	2.24	0.52
59:Ac:175:GLU:HG3	59:Ac:177:ALA:HB3	1.92	0.52
66:BO:42:SER:C	66:BO:44:ARG:H	2.16	0.52
67:BG:1298:PHE:O	67:BG:1298:PHE:CG	2.60	0.52
71:1:166:U:H5'	71:1:167:U:OP2	2.09	0.52
71:1:433:G:HO2'	71:1:434:U:P	2.32	0.52
71:1:504:U:O2'	71:1:505:A:OP2	2.24	0.52
71:1:508:G:H1'	71:1:509:U:OP2	2.09	0.52
71:1:654:A:H2'	71:1:655:U:H5''	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:116:ILE:HD11	3:C:162:TYR:CE1	2.44	0.52
4:D:100:ASP:OD1	4:D:101:ARG:N	2.42	0.52
13:M:215:ILE:HG23	71:1:577:A:C6	2.44	0.52
14:N:78:ARG:HH21	14:N:79:ASP:H	1.55	0.52
14:N:85:ARG:NE	71:1:313:A:O3'	2.41	0.52
24:X:49:ARG:O	24:X:53:GLN:HG2	2.10	0.52
30:Aw:123:ARG:NH1	53:Ad:125:ASP:HB2	2.24	0.52
32:An:221:GLN:HA	32:An:221:GLN:NE2	2.24	0.52
32:An:266:ASP:N	32:An:266:ASP:OD1	2.38	0.52
35:Az:17:GLN:HG2	71:1:553:A:H4'	1.92	0.52
40:Ap:47:LYS:HB2	41:Au:185:TRP:CZ3	2.43	0.52
41:Au:139:ARG:HG2	41:Au:143:GLN:HG2	1.92	0.52
55:Av:36:PRO:HB3	55:Av:82:GLU:HB3	1.91	0.52
62:Ay:159:GLU:H	62:Ay:159:GLU:CD	2.17	0.52
63:Ag:114:VAL:H	63:Ag:117:TRP:HB3	1.74	0.52
71:1:433:G:O2'	71:1:434:U:H3'	2.09	0.52
71:1:929:G:H4'	71:1:930:A:C8	2.45	0.52
71:1:1131:A:N6	71:1:1147:A:H61	2.07	0.52
71:1:1136:U:H5	71:1:1142:U:N3	2.08	0.52
1:A:236:GLU:HA	1:A:305:PRO:HA	1.91	0.52
4:D:111:ARG:NH2	38:Ab:219:GLU:OE1	2.36	0.52
12:L:153:THR:O	38:Ab:129:PRO:HG3	2.10	0.52
15:O:89:HIS:CD2	15:O:91:LYS:H	2.27	0.52
18:R:190:GLN:O	18:R:194:GLN:NE2	2.42	0.52
21:U:25:PHE:CB	71:1:972:A:N6	2.62	0.52
22:V:32:PHE:HD2	22:V:98:LYS:NZ	2.08	0.52
24:X:278:ARG:NH1	43:Ao:93:SER:HB3	2.24	0.52
29:BB:17:HIS:CE1	71:1:1118:G:HO2'	2.27	0.52
32:An:251:ASN:O	35:Az:44:HIS:NE2	2.42	0.52
32:An:291:GLU:HA	32:An:294:HIS:HB3	1.91	0.52
33:Al:185:CYS:SG	33:Al:186:LEU:N	2.83	0.52
35:Az:120:LYS:HG3	71:1:112:U:H5''	1.92	0.52
43:Ao:131:LEU:O	43:Ao:134:THR:HG22	2.10	0.52
45:Ar:42:ILE:HG13	45:Ar:47:ALA:HB2	1.91	0.52
45:Ar:97:TRP:CE2	45:Ar:174:ALA:HB2	2.43	0.52
50:BE:110:SER:OG	50:BE:113:HIS:N	2.26	0.52
61:BD:15:ASN:CG	61:BD:68:ARG:HH12	2.18	0.52
73:Ag:301:NAD:PA	73:Ag:301:NAD:C5D	2.98	0.52
64:Ax:94:ASP:OD1	64:Ax:94:ASP:N	2.41	0.52
66:BO:97:VAL:O	66:BO:99:HIS:ND1	2.43	0.52
71:1:981:A:O2'	71:1:1086:U:O2'	2.28	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:159:THR:HG22	6:F:159:THR:O	2.09	0.52
7:G:34:LEU:HD12	7:G:39:ASN:HD21	1.74	0.52
7:G:79:TRP:HD1	7:G:96:TYR:CE2	2.27	0.52
7:G:130:TYR:CE2	7:G:134:ARG:HD2	2.44	0.52
8:H:167:PHE:HB3	45:Ar:166:TRP:HZ2	1.73	0.52
12:L:95:LEU:HD11	12:L:104:LEU:HD21	1.92	0.52
16:P:160:GLU:O	16:P:163:GLN:NE2	2.42	0.52
17:Q:142:LYS:HE2	17:Q:143:ARG:NH1	2.24	0.52
21:U:25:PHE:CE1	71:1:950:A:C6	2.97	0.52
30:Aw:77:ASN:HB3	71:1:106:A:N7	2.24	0.52
37:BC:95:LEU:HD13	37:BC:121:LEU:HD11	1.92	0.52
42:Aa:189:ARG:NE	71:1:146:U:H5	2.06	0.52
46:Aj:199:VAL:O	46:Aj:201:LEU:N	2.41	0.52
48:Am:250:LYS:HE2	48:Am:254:ARG:HD3	1.92	0.52
48:Am:260:TRP:HA	58:Ae:77:TYR:HE2	1.75	0.52
51:Ak:38:CYS:HB2	51:Ak:60:PHE:HE2	1.74	0.52
60:Ah:361:GLU:H	60:Ah:361:GLU:CD	2.17	0.52
65:BL:205:LEU:HD22	65:BL:210:GLN:NE2	2.24	0.52
66:BO:94:PHE:HE2	71:1:1128:U:H3'	1.74	0.52
71:1:1068:A:H2'	71:1:1096:A:H61	1.74	0.52
3:C:75:PRO:HG2	3:C:76:HIS:CD2	2.44	0.52
14:N:112:VAL:CG2	18:R:397:PRO:HB2	2.39	0.52
24:X:274:LEU:HD11	24:X:278:ARG:HD3	1.92	0.52
26:Z:152:ARG:HD2	26:Z:154:LYS:HE3	1.90	0.52
28:UA:59:UNK:O	28:UA:63:UNK:N	2.43	0.52
32:An:79:HIS:O	60:Ah:78:ARG:NH2	2.42	0.52
34:BI:158:TYR:HA	34:BI:217:ALA:HB2	1.92	0.52
39:AI:269:PRO:HG3	39:AI:296:HIS:O	2.10	0.52
48:Am:104:LYS:HG3	48:Am:105:LEU:H	1.74	0.52
59:Ac:211:ASP:N	59:Ac:241:ALA:O	2.36	0.52
60:Ah:119:THR:O	60:Ah:123:TRP:HD1	1.92	0.52
60:Ah:131:LEU:HD23	60:Ah:394:VAL:HG11	1.91	0.52
71:1:507:U:O2'	71:1:510:U:H4'	2.09	0.52
71:1:554:G:O2'	71:1:555:U:O5'	2.28	0.52
71:1:681:G:N2	71:1:793:C:N3	2.51	0.52
71:1:711:A:O2'	71:1:749:U:O4'	2.26	0.52
71:1:1157:A:O2'	71:1:1158:U:OP1	2.26	0.52
1:A:387:PHE:CE2	66:BO:93:VAL:HG11	2.44	0.52
2:B:58:ARG:NH2	36:At:144:GLU:OE1	2.43	0.52
2:B:210:GLN:HA	7:G:89:GLN:HE22	1.74	0.52
3:C:52:TRP:O	3:C:56:ALA:N	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:327:ARG:NH1	33:Al:238:ARG:O	2.43	0.52
8:H:11:LEU:HB3	8:H:17:TYR:CE1	2.45	0.52
9:I:59:ARG:NH1	71:1:821:U:OP2	2.42	0.52
14:N:47:ARG:HG3	71:1:90:A:OP1	2.09	0.52
16:P:53:PHE:HB3	16:P:60:ARG:NE	2.25	0.52
17:Q:154:GLU:CD	17:Q:157:ARG:HH21	2.17	0.52
18:R:406:TYR:O	18:R:410:THR:HG22	2.10	0.52
24:X:49:ARG:O	24:X:53:GLN:N	2.43	0.52
24:X:491:GLN:NE2	24:X:500:THR:OG1	2.42	0.52
26:Z:104:LYS:NZ	71:1:552:A:OP2	2.39	0.52
31:Bj:9:VAL:HA	49:Aq:127:ARG:HH12	1.74	0.52
31:Bj:104:MET:HG2	59:Ac:127:MET:SD	2.50	0.52
37:BC:117:THR:HG23	37:BC:120:LEU:H	1.74	0.52
48:Am:180:GLN:O	48:Am:183:VAL:N	2.42	0.52
49:Aq:90:PHE:H	49:Aq:93:GLN:HB2	1.75	0.52
50:BE:36:THR:O	50:BE:38:ASP:N	2.42	0.52
53:Ad:185:ARG:NH2	71:1:185:U:OP2	2.27	0.52
60:Ah:210:GLU:OE1	60:Ah:276:ARG:NE	2.37	0.52
62:Ay:99:GLU:O	62:Ay:103:LEU:HG	2.10	0.52
63:Ag:11:ALA:HA	71:1:291:A:OP2	2.10	0.52
65:BL:84:GLN:HG3	65:BL:291:LYS:HG3	1.91	0.52
71:1:401:U:O2'	71:1:402:U:OP2	2.25	0.52
2:B:181:VAL:HG23	2:B:186:LEU:HD21	1.92	0.52
2:B:312:ILE:HD13	36:At:36:LEU:HD12	1.91	0.52
10:J:104:ILE:HG22	10:J:106:ALA:H	1.75	0.52
13:M:12:LEU:HD13	13:M:12:LEU:C	2.34	0.52
13:M:251:TYR:OH	70:UD:72:UNK:HA	2.10	0.52
18:R:348:LEU:HA	32:An:315:MET:HE1	1.91	0.52
18:R:404:TYR:CD2	71:1:60:A:C4	2.98	0.52
25:Y:95:ARG:HH12	59:Ac:278:LYS:HZ2	1.58	0.52
26:Z:25:PHE:O	26:Z:28:THR:N	2.40	0.52
27:BA:22:PRO:O	27:BA:26:LYS:HB2	2.09	0.52
42:Aa:100:LEU:HD21	42:Aa:106:LEU:HB2	1.92	0.52
43:Ao:238:ARG:HG2	52:BP:98:PRO:CB	2.40	0.52
49:Aq:160:PRO:HD2	49:Aq:223:PRO:CD	2.39	0.52
51:Ak:26:ARG:HB2	51:Ak:28:GLU:OE1	2.10	0.52
55:Av:57:TYR:HB3	55:Av:64:ARG:HH11	1.75	0.52
60:Ah:81:LEU:HD22	60:Ah:84:ARG:NH2	2.24	0.52
60:Ah:270:HIS:HB3	60:Ah:274:ARG:CZ	2.40	0.52
60:Ah:369:PRO:HA	60:Ah:372:ALA:HB3	1.92	0.52
63:Ag:129:TYR:HD2	73:Ag:301:NAD:O4B	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:1:225:U:H2'	71:1:226:A:C8	2.41	0.52
71:1:639:A:H61	71:1:799:A:N6	2.07	0.52
71:1:697:A:H4'	71:1:698:G:OP2	2.10	0.52
71:1:871:A:N7	71:1:1064:G:O2'	2.42	0.52
71:1:1131:A:H61	71:1:1147:A:H61	1.56	0.52
1:A:207:HIS:HD2	1:A:329:TYR:OH	1.93	0.52
2:B:5:ARG:H	42:Aa:182:PRO:HG2	1.75	0.52
3:C:125:GLU:OE1	3:C:126:ARG:HG3	2.10	0.52
7:G:153:LEU:O	7:G:153:LEU:HD13	2.10	0.52
7:G:209:ARG:HD3	71:1:190:A:H2	1.75	0.52
12:L:97:SER:HB3	12:L:104:LEU:HD12	1.91	0.52
21:U:18:LEU:CD2	21:U:19:LYS:H	2.23	0.52
22:V:10:PRO:N	22:V:14:CYS:HA	2.25	0.52
34:Bi:86:ILE:HG21	34:Bi:243:ILE:HD11	1.92	0.52
39:Ai:39:ILE:HD11	39:Ai:44:VAL:HB	1.92	0.52
39:Ai:69:PRO:HG3	39:Ai:213:LEU:HD11	1.91	0.52
39:Ai:375:ASP:OD1	39:Ai:376:VAL:N	2.42	0.52
44:BM:71:ARG:O	44:BM:75:VAL:HG23	2.10	0.52
46:Aj:284:LEU:HA	46:Aj:287:ILE:HG12	1.92	0.52
55:Av:162:LYS:NZ	71:1:461:U:O4'	2.43	0.52
66:BO:107:LYS:HG3	66:BO:108:GLY:N	2.25	0.52
66:BO:176:HIS:CD2	66:BO:178:TYR:H	2.27	0.52
71:1:235:G:C2	71:1:236:A:C5	2.98	0.52
71:1:248:U:N3	71:1:250:A:N1	2.58	0.52
71:1:681:G:H1	71:1:793:C:N4	2.08	0.52
71:1:828:A:H2	71:1:1099:A:H62	1.58	0.52
1:A:60:HIS:CD2	1:A:65:SER:HB3	2.45	0.51
2:B:127:TYR:CD1	2:B:189:PRO:HG2	2.45	0.51
3:C:102:ILE:HG13	17:Q:83:ARG:HE	1.75	0.51
5:E:221:HIS:O	5:E:225:TYR:N	2.35	0.51
18:R:297:GLN:HB3	18:R:303:ASN:O	2.10	0.51
26:Z:152:ARG:HH11	26:Z:154:LYS:HE3	1.75	0.51
31:Bj:109:ARG:N	37:BC:130:ASP:OD2	2.43	0.51
33:Al:124:THR:HA	33:Al:185:CYS:HA	1.92	0.51
34:Bi:117:THR:HG22	34:Bi:265:LYS:HB2	1.92	0.51
42:Aa:173:GLY:O	42:Aa:175:LEU:N	2.40	0.51
45:Ar:113:ARG:HG3	45:Ar:122:LEU:HD11	1.92	0.51
48:Am:100:PRO:HG2	48:Am:101:TYR:CD2	2.45	0.51
60:Ah:457:PHE:HB3	60:Ah:461:ARG:HH12	1.75	0.51
61:BD:31:ASN:ND2	61:BD:34:LEU:HG	2.24	0.51
63:Ag:11:ALA:HB1	71:1:291:A:C8	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:BL:236:ILE:HG13	65:BL:267:PHE:HZ	1.75	0.51
66:BO:68:CYS:H	66:BO:76:HIS:HB2	1.75	0.51
1:A:152:ASP:OD2	9:I:11:ARG:NH1	2.43	0.51
5:E:177:VAL:HA	5:E:180:VAL:HG12	1.92	0.51
8:H:117:THR:OG1	8:H:118:THR:N	2.44	0.51
9:I:42:GLU:HB3	9:I:45:MET:CG	2.40	0.51
16:P:55:GLN:HG2	71:1:949:U:O2	2.10	0.51
25:Y:132:LEU:HD12	59:Ac:61:LYS:HD2	1.92	0.51
31:Bj:150:VAL:O	31:Bj:154:CYS:N	2.42	0.51
34:BI:152:HIS:CE1	34:BI:162:GLY:HA2	2.46	0.51
38:Ab:240:ARG:NH1	71:1:473:U:O4	2.43	0.51
39:Ai:5:SER:OG	39:Ai:409:VAL:HB	2.11	0.51
39:Ai:101:PRO:HB3	39:Ai:273:THR:HG21	1.91	0.51
46:Aj:341:ASN:ND2	71:1:356:A:N7	2.57	0.51
50:BE:72:ASN:H	58:Ae:132:HIS:HB2	1.74	0.51
51:Ak:47:ALA:O	51:Ak:50:SER:OG	2.27	0.51
62:Ay:165:ASP:O	62:Ay:167:ARG:N	2.43	0.51
71:1:1074:A:H1'	71:1:1075:A:P	2.50	0.51
3:C:150:PRO:HB2	60:Ah:55:TYR:CE2	2.46	0.51
16:P:112:ARG:NH1	47:BH:219:LYS:HG2	2.26	0.51
18:R:412:LYS:HD3	18:R:451:CYS:HB3	1.92	0.51
22:V:119:GLN:NE2	22:V:123:LEU:HD21	2.25	0.51
24:X:141:ARG:HH11	53:Ad:20:LEU:HD11	1.75	0.51
24:X:481:LEU:HD12	24:X:482:PRO:HD2	1.93	0.51
25:Y:46:GLU:OE1	31:Bj:45:THR:N	2.44	0.51
32:An:130:LEU:O	32:An:133:VAL:HG12	2.11	0.51
35:Az:32:LYS:HZ2	71:1:66:U:H5'	1.74	0.51
36:At:108:MET:HA	36:At:111:LEU:HB2	1.91	0.51
42:Aa:152:ILE:HD13	42:Aa:157:LEU:HD13	1.92	0.51
44:BM:148:ALA:HB1	44:BM:255:ARG:HH11	1.75	0.51
49:Aq:159:HIS:HB3	49:Aq:160:PRO:HD3	1.92	0.51
55:Av:19:LYS:HA	71:1:439:A:N6	2.25	0.51
71:1:509:U:O2	71:1:513:U:O2'	2.26	0.51
71:1:760:A:OP2	71:1:1079:A:O2'	2.17	0.51
1:A:84:THR:OG1	50:BE:89:GLU:OE2	2.26	0.51
2:B:14:PRO:HG2	13:M:105:VAL:HG12	1.91	0.51
6:F:58:LYS:HG3	6:F:59:ASP:OD1	2.10	0.51
9:I:57:LYS:NZ	71:1:819:U:OP2	2.44	0.51
15:O:217:LYS:HD3	15:O:228:GLU:HA	1.93	0.51
16:P:59:SER:C	16:P:60:ARG:HG3	2.36	0.51
16:P:143:VAL:HG11	43:Ao:210:ARG:HA	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:110:TYR:HB2	60:Ah:57:LEU:HD21	1.92	0.51
18:R:322:HIS:CG	36:At:86:ARG:HG3	2.45	0.51
21:U:45:ALA:O	21:U:47:THR:N	2.35	0.51
31:Bj:100:PRO:HD3	59:Ac:117:PHE:CD1	2.45	0.51
33:Al:67:ALA:HB1	62:Ay:148:HIS:NE2	2.26	0.51
41:Au:145:ARG:HD2	54:BF:27:ARG:NH1	2.25	0.51
46:Aj:222:GLU:OE1	46:Aj:222:GLU:N	2.43	0.51
48:Am:260:TRP:HA	58:Ae:77:TYR:CE2	2.45	0.51
51:Ak:22:HIS:CD2	51:Ak:177:VAL:HG21	2.44	0.51
53:Ad:26:ALA:O	53:Ad:28:THR:N	2.43	0.51
64:Ax:100:PRO:HG2	64:Ax:103:VAL:HB	1.93	0.51
64:Ax:180:ARG:NH1	71:1:241:U:OP1	2.43	0.51
71:1:766:A:H2'	71:1:767:U:O4'	2.11	0.51
71:1:1113:G:C6	71:1:1114:A:C2	2.98	0.51
71:1:1121:U:O2'	71:1:1122:A:O5'	2.29	0.51
2:B:402:HIS:N	2:B:403:PRO:CD	2.74	0.51
2:B:407:GLU:HB3	33:Al:287:TRP:CE2	2.46	0.51
5:E:275:LYS:HD2	5:E:327:MET:HB2	1.93	0.51
6:F:79:PRO:HD2	48:Am:22:ARG:HG2	1.93	0.51
6:F:114:LYS:O	6:F:118:ARG:HG3	2.09	0.51
7:G:65:VAL:HG13	30:Aw:186:ASP:HB2	1.91	0.51
11:K:67:ASP:O	11:K:71:HIS:N	2.42	0.51
11:K:176:THR:O	11:K:179:TRP:N	2.43	0.51
24:X:142:ALA:O	24:X:146:GLN:N	2.36	0.51
30:Aw:8:ARG:CB	33:Al:287:TRP:CZ2	2.93	0.51
38:Ab:52:TRP:NE1	71:1:509:U:N3	2.57	0.51
39:Ai:213:LEU:HD12	49:Aq:40:LEU:HD11	1.92	0.51
41:Au:21:PRO:O	64:Ax:180:ARG:NH2	2.38	0.51
41:Au:127:ARG:O	71:1:549:C:N4	2.44	0.51
44:BM:46:ARG:HH21	44:BM:50:LYS:NZ	2.08	0.51
49:Aq:46:ARG:NH2	49:Aq:53:SER:O	2.42	0.51
66:BO:80:ILE:HD13	66:BO:100:ARG:NH1	2.25	0.51
1:A:392:LEU:HD13	10:J:64:TYR:HD2	1.74	0.51
2:B:33:HIS:ND1	2:B:34:PRO:HD2	2.26	0.51
3:C:122:TRP:O	60:Ah:49:SER:HA	2.11	0.51
18:R:195:TYR:OH	18:R:199:ARG:HD2	2.11	0.51
20:T:72:TRP:CD1	20:T:83:PRO:HD2	2.46	0.51
33:Al:267:ASP:O	33:Al:267:ASP:CG	2.53	0.51
37:BC:29:THR:OG1	37:BC:34:GLU:O	2.28	0.51
43:Ao:28:ARG:O	71:1:334:A:O2'	2.24	0.51
44:BM:298:ALA:O	44:BM:302:MET:HE2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:Ar:151:ARG:HE	45:Ar:153:LYS:HD3	1.75	0.51
46:Aj:343:ASN:ND2	71:1:333:A:N7	2.57	0.51
49:Aq:336:ARG:CG	49:Aq:336:ARG:NH1	2.52	0.51
51:Ak:132:LEU:HA	51:Ak:168:GLU:HG2	1.92	0.51
58:Ae:264:TRP:CE3	58:Ae:265:LEU:HD23	2.46	0.51
71:1:969:U:H2'	71:1:970:A:C8	2.45	0.51
1:A:393:VAL:HG12	66:BO:180:LEU:HD23	1.92	0.51
5:E:136:THR:HA	5:E:146:CYS:SG	2.51	0.51
7:G:193:GLU:OE2	30:Aw:96:ARG:NH2	2.43	0.51
9:I:156:ASP:OD1	9:I:156:ASP:N	2.40	0.51
10:J:103:TRP:HE1	66:BO:144:GLN:NE2	2.09	0.51
13:M:145:LYS:O	13:M:148:ILE:HG12	2.11	0.51
22:V:43:ARG:NH1	71:1:97:U:O2	2.44	0.51
24:X:249:LYS:HB2	24:X:253:HIS:HA	1.92	0.51
30:Aw:50:ARG:HD3	30:Aw:83:LEU:HD13	1.92	0.51
32:An:167:PHE:HE2	32:An:174:LEU:HD21	1.76	0.51
45:Ar:147:LEU:HD21	52:BP:141:TYR:HE2	1.76	0.51
51:Ak:135:ASN:HD22	51:Ak:168:GLU:HG3	1.74	0.51
51:Ak:164:ARG:HH11	51:Ak:198:LEU:HD11	1.76	0.51
59:Ac:189:LYS:HD2	59:Ac:200:ARG:HH12	1.75	0.51
64:Ax:173:ARG:HH11	64:Ax:173:ARG:CG	2.18	0.51
71:1:572:A:H4'	71:1:573:A:OP2	2.10	0.51
71:1:575:G:H5'	71:1:576:A:OP2	2.11	0.51
71:1:1037:C:N4	71:1:1127:U:OP2	2.43	0.51
71:1:1077:G:H1	71:1:1090:U:H3	1.58	0.51
6:F:95:PRO:HG2	58:Ae:63:ALA:HB3	1.93	0.51
8:H:45:ILE:HD11	8:H:157:PRO:O	2.11	0.51
11:K:20:LEU:HD21	42:Aa:185:VAL:O	2.11	0.51
15:O:107:ALA:O	15:O:108:ARG:HG3	2.11	0.51
16:P:62:PRO:HG3	16:P:72:MET:HE1	1.91	0.51
17:Q:115:ASP:OD2	17:Q:163:ARG:NH2	2.43	0.51
18:R:190:GLN:HG2	18:R:194:GLN:HE22	1.75	0.51
18:R:301:PHE:HE2	36:At:103:ALA:HA	1.75	0.51
21:U:92:PHE:HE2	71:1:965:G:H21	1.58	0.51
22:V:53:ARG:HH21	22:V:109:ARG:NH1	2.08	0.51
24:X:440:GLU:HG2	53:Ad:42:LEU:HD22	1.91	0.51
24:X:504:ALA:HB3	53:Ad:49:LEU:HG	1.93	0.51
25:Y:148:PRO:HA	25:Y:151:ARG:HH11	1.75	0.51
28:UA:189:UNK:O	28:UA:193:UNK:N	2.44	0.51
28:UA:198:UNK:O	40:Ap:167:MET:HE1	2.11	0.51
29:BB:54:VAL:HG23	29:BB:56:PRO:CD	2.39	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Al:69:TYR:HB2	62:Ay:87:TRP:CZ3	2.44	0.51
37:BC:4:ILE:HG23	37:BC:7:ARG:HH21	1.75	0.51
39:Ai:271:HIS:CE1	39:Ai:323:ARG:HG3	2.46	0.51
40:Ap:114:ASP:O	40:Ap:117:THR:N	2.32	0.51
44:BM:222:MET:HE3	44:BM:224:PRO:HG3	1.92	0.51
50:BE:67:LYS:HD2	50:BE:67:LYS:O	2.10	0.51
60:Ah:111:SER:O	60:Ah:115:TYR:HB2	2.11	0.51
64:Ax:165:TRP:HB3	64:Ax:170:ALA:HB2	1.93	0.51
65:BL:107:TRP:CD1	65:BL:138:VAL:HG21	2.45	0.51
65:BL:158:TRP:CD1	65:BL:176:LEU:HD12	2.45	0.51
65:BL:189:TYR:HB3	65:BL:277:ARG:HB2	1.92	0.51
71:1:1143:A:C6	71:1:1144:G:C2	2.99	0.51
2:B:295:SER:OG	2:B:295:SER:O	2.18	0.51
3:C:120:ASN:HD22	3:C:129:TRP:HZ3	1.59	0.51
24:X:486:MET:HB3	53:Ad:223:LEU:HD12	1.92	0.51
26:Z:44:LEU:HG	26:Z:44:LEU:O	2.10	0.51
29:BB:13:LYS:NZ	71:1:1120:U:OP1	2.33	0.51
29:BB:129:THR:HB	50:BE:73:PHE:HB3	1.93	0.51
34:BI:201:ALA:HB3	34:BI:211:GLN:HB3	1.93	0.51
39:Ai:413:ARG:HH21	63:Ag:159:PHE:HB3	1.76	0.51
41:Au:27:GLU:HG2	41:Au:28:ARG:H	1.76	0.51
41:Au:37:PRO:HD2	71:1:281:G:H22	1.74	0.51
42:Aa:188:ALA:HB1	42:Aa:192:LEU:HD11	1.92	0.51
57:As:95:ILE:HD11	57:As:104:LEU:HD21	1.92	0.51
60:Ah:226:TRP:HZ2	60:Ah:243:LEU:HD21	1.74	0.51
2:B:386:GLU:HG3	30:Aw:47:PHE:CE2	2.46	0.51
6:F:168:GLN:NE2	71:1:490:U:OP2	2.44	0.51
9:I:244:SER:HB2	54:BF:70:ARG:HH22	1.75	0.51
12:L:35:SER:HB3	12:L:38:ASP:HB2	1.92	0.51
13:M:259:ARG:NE	70:UD:15:UNK:O	2.43	0.51
14:N:50:ARG:HB2	22:V:28:PRO:O	2.11	0.51
14:N:196:ARG:CZ	71:1:563:U:H5'	2.41	0.51
15:O:129:TYR:O	15:O:164:ASN:ND2	2.32	0.51
15:O:282:GLN:HB2	34:BI:206:HIS:NE2	2.26	0.51
22:V:116:ASP:O	22:V:119:GLN:HB3	2.10	0.51
32:An:41:ILE:HD13	32:An:44:TRP:CD1	2.46	0.51
33:Al:147:ALA:HA	33:Al:150:VAL:HG12	1.93	0.51
34:BI:174:LEU:O	34:BI:210:SER:N	2.44	0.51
40:Ap:22:ASN:OD1	40:Ap:191:ARG:NH1	2.44	0.51
42:Aa:70:THR:OG1	42:Aa:72:VAL:HG22	2.10	0.51
42:Aa:186:MET:HE1	42:Aa:189:ARG:CD	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:Ao:257:LYS:HG3	43:Ao:258:PHE:CD1	2.46	0.51
44:BM:32:PHE:O	44:BM:36:VAL:HG23	2.11	0.51
49:Aq:221:THR:HA	49:Aq:226:ARG:HH11	1.74	0.51
57:As:51:ARG:HE	70:UD:43:UNK:HA	1.76	0.51
60:Ah:358:ALA:HB3	60:Ah:364:VAL:HG22	1.92	0.51
65:BL:152:GLN:NE2	65:BL:177:TYR:OH	2.45	0.51
71:1:847:A:C8	71:1:848:U:H5	2.28	0.51
71:1:1105:G:C2	71:1:1106:U:C4	2.98	0.51
1:A:62:ASP:OD1	1:A:63:LYS:N	2.44	0.50
9:I:103:LEU:HD21	9:I:114:GLN:OE1	2.11	0.50
12:L:29:ASN:ND2	12:L:29:ASN:O	2.44	0.50
13:M:254:LEU:HD13	70:UD:12:UNK:HA	1.93	0.50
24:X:353:PRO:HD3	24:X:393:CYS:HA	1.93	0.50
24:X:355:THR:OG1	24:X:356:ALA:N	2.44	0.50
25:Y:118:LEU:HD21	37:BC:74:LEU:HD12	1.92	0.50
33:Al:125:LYS:HB3	33:Al:186:LEU:HD22	1.92	0.50
34:BI:85:ASP:HB3	34:BI:93:PRO:HB3	1.93	0.50
40:Ap:41:THR:O	40:Ap:45:ARG:HG3	2.11	0.50
43:Ao:138:ILE:HG12	43:Ao:200:VAL:HG21	1.92	0.50
44:BM:227:TYR:HA	44:BM:230:VAL:HG22	1.93	0.50
47:BH:69:TYR:OH	71:1:360:U:O2	2.24	0.50
48:Am:147:TYR:HB3	48:Am:170:MET:HE3	1.92	0.50
49:Aq:68:THR:HG21	53:Ad:30:GLU:CD	2.28	0.50
49:Aq:113:ASN:HB3	49:Aq:133:ILE:HD12	1.92	0.50
50:BE:63:GLY:C	50:BE:65:PHE:H	2.19	0.50
51:Ak:134:ARG:NH1	51:Ak:135:ASN:OD1	2.44	0.50
52:BP:-5:LYS:HD3	52:BP:0:TRP:CD1	2.46	0.50
53:Ad:221:VAL:CG2	53:Ad:225:GLY:HA3	2.41	0.50
57:As:135:LEU:O	57:As:139:GLU:HG2	2.11	0.50
60:Ah:344:LEU:O	60:Ah:368:GLN:NE2	2.38	0.50
63:Ag:57:TRP:CE2	63:Ag:58:LEU:HD12	2.46	0.50
65:BL:263:GLU:OE2	71:1:665:U:H2'	2.11	0.50
71:1:618:U:OP1	71:1:1040:C:H5'	2.10	0.50
1:A:371:GLU:N	1:A:371:GLU:OE2	2.44	0.50
2:B:312:ILE:HD11	36:At:44:TRP:CD2	2.46	0.50
24:X:89:LEU:HD21	24:X:125:HIS:NE2	2.26	0.50
24:X:293:ASN:H	24:X:344:GLN:NE2	2.09	0.50
25:Y:61:GLN:HA	25:Y:64:VAL:HG12	1.93	0.50
26:Z:44:LEU:O	26:Z:44:LEU:CG	2.59	0.50
30:Aw:11:PHE:O	30:Aw:14:VAL:HG23	2.11	0.50
32:An:67:THR:HG21	32:An:85:LEU:O	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:An:127:LEU:HD23	32:An:127:LEU:O	2.12	0.50
33:Al:38:VAL:HG22	33:Al:70:GLN:HA	1.93	0.50
35:Az:40:TRP:NE1	35:Az:99:ARG:HH11	2.09	0.50
44:BM:28:VAL:HB	44:BM:30:GLU:HG2	1.94	0.50
47:BH:150:GLU:OE1	47:BH:150:GLU:N	2.42	0.50
48:Am:119:GLU:HG2	48:Am:236:THR:HG23	1.93	0.50
53:Ad:59:ARG:HD3	53:Ad:234:LEU:HD11	1.92	0.50
60:Ah:86:PHE:HE2	65:BL:148:ASN:HD21	1.57	0.50
60:Ah:344:LEU:HD22	60:Ah:371:GLN:HG2	1.93	0.50
60:Ah:362:GLU:HA	60:Ah:365:ASP:HB2	1.92	0.50
62:Ay:68:TYR:H	71:1:697:A:N6	2.08	0.50
66:BO:138:THR:HG22	66:BO:144:GLN:HB3	1.92	0.50
71:1:408:U:H2'	71:1:409:A:C8	2.46	0.50
71:1:1031:C:N3	71:1:1035:G:N2	2.59	0.50
3:C:210:TYR:CD2	33:Al:102:GLU:HG3	2.46	0.50
5:E:37:ASP:OD1	5:E:38:ILE:N	2.44	0.50
5:E:50:LEU:HD11	5:E:108:PHE:HA	1.94	0.50
7:G:368:ARG:HD2	63:Ag:161:GLU:HG2	1.93	0.50
11:K:50:ARG:NH1	42:Aa:191:THR:HG21	2.26	0.50
12:L:32:TYR:CE2	38:Ab:102:LEU:HD22	2.47	0.50
21:U:25:PHE:CE2	21:U:27:PRO:HB3	2.47	0.50
33:Al:92:LEU:HD11	62:Ay:156:VAL:HG21	1.94	0.50
46:Aj:339:ARG:NH1	46:Aj:411:MET:O	2.44	0.50
51:Ak:26:ARG:HB3	51:Ak:65:VAL:HG12	1.93	0.50
51:Ak:93:HIS:HE1	51:Ak:275:PHE:HB2	1.76	0.50
51:Ak:193:PHE:HD2	51:Ak:200:ARG:HG3	1.77	0.50
55:Av:133:GLU:HB2	55:Av:137:GLN:HE22	1.76	0.50
60:Ah:210:GLU:CD	60:Ah:276:ARG:HH21	2.20	0.50
66:BO:79:LEU:HD12	66:BO:101:VAL:HG23	1.94	0.50
71:1:116:U:H2'	71:1:117:U:H5''	1.93	0.50
71:1:928:U:HO2'	71:1:929:G:P	2.28	0.50
1:A:330:VAL:HG13	1:A:332:PHE:HE1	1.76	0.50
2:B:387:GLU:HG3	18:R:222:TYR:HE2	1.76	0.50
9:I:214:SER:HB3	54:BF:29:ARG:HD3	1.92	0.50
10:J:108:ASN:HD22	10:J:111:LEU:HD22	1.76	0.50
17:Q:114:LEU:HD23	17:Q:114:LEU:H	1.77	0.50
24:X:260:THR:OG1	24:X:344:GLN:NE2	2.44	0.50
26:Z:44:LEU:O	26:Z:44:LEU:HD23	2.11	0.50
32:An:14:HIS:H	71:1:271:U:H5	1.58	0.50
32:An:61:PRO:HD2	41:Au:89:PHE:CD1	2.47	0.50
32:An:125:TYR:CD1	32:An:125:TYR:C	2.89	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:An:176:GLU:OE2	60:Ah:468:LEU:HD13	2.11	0.50
32:An:304:ASP:OD2	32:An:313:ARG:NH1	2.43	0.50
39:Ai:134:LYS:O	39:Ai:135:GLN:HG2	2.11	0.50
44:BM:325:GLN:HA	44:BM:328:TYR:CD2	2.47	0.50
46:Aj:385:ARG:HA	46:Aj:388:GLN:HG3	1.92	0.50
55:Av:94:GLN:HE21	55:Av:97:PRO:HG3	1.75	0.50
60:Ah:379:ASP:O	60:Ah:383:LEU:HB2	2.12	0.50
62:Ay:61:LEU:HG	62:Ay:84:ARG:HG2	1.93	0.50
64:Ax:148:CYS:SG	64:Ax:176:ARG:NH1	2.84	0.50
65:BL:301:ARG:HH12	71:1:235:G:H5'	1.77	0.50
71:1:865:A:H4'	71:1:866:A:OP1	2.12	0.50
71:1:1080:A:H2'	71:1:1081:U:C6	2.46	0.50
1:A:353:PHE:HB3	1:A:354:PRO:HD3	1.94	0.50
1:A:390:ALA:HB1	71:1:1132:U:O2'	2.12	0.50
4:D:76:GLU:HA	4:D:79:PHE:HB3	1.92	0.50
5:E:186:ARG:HD2	71:1:452:A:C5	2.46	0.50
8:H:132:ARG:HH22	38:Ab:248:GLU:HA	1.76	0.50
13:M:101:GLU:H	13:M:101:GLU:CD	2.19	0.50
14:N:152:ARG:HG3	14:N:169:HIS:HB2	1.93	0.50
16:P:167:TYR:HB3	16:P:173:VAL:HG23	1.93	0.50
18:R:17:VAL:HG23	18:R:64:ILE:HD11	1.94	0.50
38:Ab:132:GLN:OE1	38:Ab:135:ARG:NH1	2.44	0.50
48:Am:263:HIS:HB2	48:Am:302:PRO:HB2	1.92	0.50
50:BE:62:VAL:O	50:BE:64:ALA:N	2.45	0.50
55:Av:42:THR:N	55:Av:45:GLU:OE2	2.44	0.50
55:Av:60:ARG:HD3	55:Av:117:HIS:O	2.12	0.50
63:Ag:22:THR:HG21	71:1:907:G:O3'	2.12	0.50
71:1:991:G:N2	71:1:992:G:O4'	2.44	0.50
1:A:92:ASP:OD2	58:Ae:143:ARG:NE	2.41	0.50
1:A:377:PRO:HD3	29:BB:106:PRO:HB2	1.94	0.50
2:B:254:SER:HB3	2:B:257:THR:CG2	2.42	0.50
3:C:90:TYR:HB3	3:C:91:PRO:HD2	1.93	0.50
8:H:19:HIS:HB3	8:H:22:THR:O	2.12	0.50
9:I:42:GLU:HB3	9:I:45:MET:SD	2.52	0.50
10:J:121:SER:HG	10:J:124:HIS:H	1.54	0.50
15:O:163:LYS:NZ	18:R:430:ASP:OD2	2.45	0.50
18:R:381:GLU:OE2	35:Az:49:ARG:NE	2.45	0.50
24:X:300:VAL:HB	24:X:306:ALA:HA	1.93	0.50
24:X:365:LEU:N	24:X:367:GLN:OE1	2.37	0.50
25:Y:241:PRO:HA	25:Y:244:ARG:HH12	1.76	0.50
32:An:229:ARG:HH11	35:Az:60:HIS:HB2	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:Ab:135:ARG:HH22	48:Am:331:TYR:C	2.19	0.50
39:Ai:268:MET:HE3	39:Ai:320:LEU:HB2	1.93	0.50
40:Ap:37:ASN:HB3	57:As:73:GLY:HA3	1.92	0.50
51:Ak:119:SER:OG	51:Ak:271:TRP:NE1	2.40	0.50
62:Ay:63:HIS:O	62:Ay:64:ILE:HD13	2.11	0.50
66:BO:101:VAL:O	66:BO:103:VAL:N	2.44	0.50
71:1:757:A:O2'	71:1:758:G:H5'	2.11	0.50
71:1:1061:A:H3'	71:1:1062:U:H5''	1.93	0.50
1:A:35:TYR:C	1:A:37:CYS:H	2.20	0.50
1:A:312:LYS:HD2	1:A:367:LEU:HD12	1.94	0.50
2:B:401:TYR:C	2:B:403:PRO:HD3	2.37	0.50
6:F:29:ILE:HG13	6:F:145:TRP:CE2	2.46	0.50
6:F:95:PRO:HD3	58:Ae:61:ASN:HD22	1.76	0.50
7:G:221:GLY:HA2	71:1:202:A:OP1	2.12	0.50
12:L:2:LEU:HB2	12:L:125:PRO:HG2	1.94	0.50
12:L:45:LEU:O	12:L:47:ALA:N	2.45	0.50
13:M:20:ASN:OD1	71:1:326:U:O2'	2.30	0.50
13:M:143:TRP:CD1	13:M:206:PRO:HA	2.47	0.50
14:N:95:TYR:HD2	35:Az:25:GLN:HE21	1.59	0.50
24:X:141:ARG:NH1	53:Ad:20:LEU:HD11	2.27	0.50
24:X:199:THR:HG23	24:X:202:ASN:H	1.76	0.50
24:X:340:LEU:HG	24:X:411:VAL:HG22	1.94	0.50
25:Y:185:ILE:HD12	31:Bj:146:CYS:SG	2.52	0.50
30:Aw:123:ARG:HH12	53:Ad:125:ASP:HB2	1.77	0.50
31:Bj:96:GLU:OE2	37:BC:95:LEU:HB3	2.12	0.50
33:Al:69:TYR:CD2	62:Ay:90:THR:HG21	2.47	0.50
36:At:49:GLU:O	36:At:53:THR:HG22	2.11	0.50
38:Ab:15:SER:OG	38:Ab:54:GLU:O	2.30	0.50
42:Aa:125:GLU:HA	42:Aa:128:LYS:HD2	1.93	0.50
44:BM:15:ASN:HA	44:BM:20:LEU:HD22	1.93	0.50
44:BM:68:LEU:O	44:BM:69:LEU:HD23	2.12	0.50
48:Am:86:PRO:C	48:Am:88:ALA:H	2.20	0.50
50:BE:46:SER:HB2	50:BE:48:ALA:O	2.11	0.50
51:Ak:54:TRP:HA	51:Ak:54:TRP:HE3	1.77	0.50
51:Ak:207:PRO:HG2	51:Ak:210:HIS:CG	2.47	0.50
71:1:651:U:O2'	71:1:652:A:H5'	2.12	0.50
2:B:147:TRP:NE1	14:N:83:ASP:O	2.35	0.50
7:G:315:ARG:HD3	39:Ai:427:GLY:HA2	1.93	0.50
9:I:100:VAL:O	9:I:104:ALA:N	2.41	0.50
10:J:11:HIS:CD2	71:1:1113:G:H4'	2.47	0.50
13:M:14:PRO:O	13:M:14:PRO:CD	2.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:32:GLY:O	26:Z:156:TYR:HB2	2.12	0.50
25:Y:65:ASP:O	25:Y:69:SER:N	2.43	0.50
25:Y:102:GLU:OE1	59:Ac:222:THR:OG1	2.26	0.50
27:BA:68:VAL:HG12	27:BA:114:PHE:HB2	1.94	0.50
29:BB:19:VAL:HG12	29:BB:20:HIS:CD2	2.38	0.50
32:An:137:GLU:HA	32:An:140:ARG:NH2	2.23	0.50
32:An:141:ASP:OD1	32:An:142:GLY:N	2.45	0.50
39:Ai:141:ARG:HG3	39:Ai:141:ARG:O	2.12	0.50
41:Au:137:ASP:HA	41:Au:140:LEU:HB2	1.93	0.50
44:BM:224:PRO:HB2	44:BM:226:ASP:H	1.77	0.50
47:BH:202:GLU:HA	47:BH:205:GLU:OE2	2.12	0.50
50:BE:60:LYS:HZ1	50:BE:67:LYS:HB3	1.75	0.50
51:Ak:173:TYR:CE1	51:Ak:178:ASP:HB2	2.47	0.50
54:BF:48:SER:HB2	54:BF:56:THR:HG21	1.93	0.50
54:BF:48:SER:OG	54:BF:57:TYR:OH	2.25	0.50
58:Ae:133:ASN:HB2	58:Ae:140:MET:HE2	1.94	0.50
60:Ah:301:THR:HG23	60:Ah:333:LEU:HD12	1.94	0.50
65:BL:111:SER:OG	65:BL:112:SER:N	2.44	0.50
71:1:572:A:H3'	71:1:573:A:C8	2.46	0.50
71:1:646:U:H2'	71:1:647:U:H6	1.77	0.50
1:A:285:TYR:CD1	6:F:79:PRO:HG3	2.47	0.50
3:C:12:TRP:HB2	35:Az:84:TYR:CE1	2.47	0.50
3:C:100:LEU:HD21	3:C:106:HIS:HB2	1.93	0.50
5:E:139:VAL:O	5:E:143:GLY:N	2.40	0.50
5:E:153:MET:O	5:E:157:ILE:HD12	2.11	0.50
7:G:232:ILE:HD13	7:G:245:LEU:HD13	1.94	0.50
8:H:22:THR:HG21	8:H:24:ARG:HH21	1.76	0.50
9:I:185:ARG:CD	9:I:188:LEU:HD11	2.41	0.50
9:I:186:PHE:CD1	9:I:186:PHE:C	2.90	0.50
9:I:258:TRP:O	9:I:262:MET:HG3	2.11	0.50
11:K:168:LEU:HD12	11:K:179:TRP:HE3	1.76	0.50
12:L:65:ARG:HG2	42:Aa:111:SER:HB3	1.92	0.50
12:L:92:VAL:HG21	71:1:407:C:OP1	2.11	0.50
13:M:17:LYS:NZ	71:1:177:G:OP1	2.44	0.50
13:M:203:THR:HG21	15:O:31:ARG:NE	2.27	0.50
13:M:210:ASP:OD1	13:M:211:LYS:N	2.45	0.50
16:P:111:TYR:HB2	43:Ao:82:TRP:CE3	2.47	0.50
17:Q:62:PRO:HD2	71:1:81:U:C2	2.47	0.50
18:R:208:TRP:HD1	18:R:213:THR:CG2	2.25	0.50
28:UA:8:UNK:HA	67:BG:1274:ASN:HD21	1.77	0.50
32:An:22:ARG:CD	71:1:286:G:H22	2.25	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:An:67:THR:HG22	60:Ah:84:ARG:NH2	2.26	0.50
33:Al:249:TYR:HB3	33:Al:252:TYR:O	2.12	0.50
45:Ar:111:PHE:HB2	45:Ar:195:ILE:HA	1.94	0.50
46:Aj:291:LEU:HA	46:Aj:294:LEU:HB3	1.93	0.50
51:Ak:123:LEU:HD23	51:Ak:221:LEU:HD12	1.94	0.50
54:BF:22:HIS:CD2	71:1:595:A:H62	2.30	0.50
55:Av:121:GLU:HG3	71:1:451:A:H61	1.76	0.50
57:As:102:ALA:HB2	57:As:128:ALA:HB1	1.94	0.50
66:BO:85:ALA:O	66:BO:86:GLU:HG3	2.11	0.50
66:BO:92:ARG:HA	66:BO:92:ARG:NE	2.26	0.50
66:BO:183:VAL:O	66:BO:183:VAL:HG12	2.12	0.50
71:1:562:U:H4'	71:1:563:U:OP2	2.10	0.50
71:1:632:A:H2'	71:1:632:A:OP2	2.12	0.50
2:B:324:ASP:N	2:B:324:ASP:OD1	2.41	0.49
4:D:113:VAL:HG12	38:Ab:191:GLN:OE1	2.12	0.49
5:E:58:LYS:NZ	5:E:97:ASP:OD2	2.45	0.49
9:I:185:ARG:HD2	9:I:188:LEU:CD1	2.41	0.49
10:J:65:ASN:HD22	66:BO:189:PHE:HD2	1.57	0.49
11:K:20:LEU:HD13	42:Aa:188:ALA:CB	2.41	0.49
13:M:143:TRP:HB3	15:O:36:PHE:CZ	2.47	0.49
24:X:320:VAL:HG12	24:X:321:VAL:HG23	1.94	0.49
29:BB:21:LEU:O	29:BB:25:LEU:HG	2.12	0.49
29:BB:88:ARG:NH2	29:BB:89:GLU:HG2	2.26	0.49
31:Bj:12:SER:OG	71:1:964:A:N7	2.43	0.49
38:Ab:16:TYR:CZ	38:Ab:29:MET:HE1	2.47	0.49
38:Ab:182:TRP:CE3	38:Ab:186:VAL:HG11	2.47	0.49
39:Ai:77:GLN:OE1	39:Ai:182:THR:OG1	2.25	0.49
39:Ai:191:VAL:HB	39:Ai:195:ARG:HG3	1.94	0.49
42:Aa:141:SER:O	42:Aa:145:ALA:N	2.45	0.49
45:Ar:122:LEU:HD12	45:Ar:195:ILE:HG21	1.92	0.49
54:BF:96:ARG:HA	54:BF:100:VAL:HG12	1.93	0.49
55:Av:19:LYS:NZ	71:1:443:G:OP1	2.33	0.49
58:Ae:39:ASN:N	58:Ae:56:ASP:OD2	2.45	0.49
63:Ag:76:GLN:OE1	63:Ag:76:GLN:N	2.39	0.49
71:1:830:A:H3'	71:1:831:A:C8	2.47	0.49
71:1:1032:A:H2'	71:1:1033:U:H5''	1.93	0.49
3:C:88:THR:HA	63:Ag:54:GLU:OE2	2.13	0.49
5:E:152:GLU:OE2	55:Av:102:GLU:HA	2.12	0.49
8:H:27:ARG:NH2	8:H:96:LYS:HG2	2.16	0.49
9:I:186:PHE:HE1	9:I:216:PHE:CE2	2.30	0.49
24:X:363:PHE:CE1	24:X:387:PRO:HD3	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Y:169:PHE:CD1	37:BC:139:PRO:HD2	2.47	0.49
31:Bj:154:CYS:SG	31:Bj:155:VAL:N	2.85	0.49
32:An:109:GLU:CD	32:An:109:GLU:C	2.81	0.49
38:Ab:114:ASN:HB2	42:Aa:153:GLU:HG2	1.95	0.49
39:Ai:279:ILE:HG13	39:Ai:280:ILE:HG13	1.93	0.49
40:Ap:68:TYR:CE2	40:Ap:136:VAL:HG21	2.48	0.49
41:Au:86:TYR:HB3	41:Au:89:PHE:HD2	1.77	0.49
41:Au:113:PRO:O	41:Au:115:THR:N	2.45	0.49
44:BM:329:THR:O	44:BM:333:ILE:HG13	2.12	0.49
57:As:134:PRO:O	57:As:138:ARG:HG2	2.12	0.49
60:Ah:166:TRP:HB2	60:Ah:171:ILE:HD12	1.94	0.49
61:BD:80:GLN:NE2	61:BD:80:GLN:O	2.45	0.49
62:Ay:41:THR:OG1	62:Ay:42:ARG:N	2.45	0.49
65:BL:121:GLY:HA2	65:BL:130:LEU:O	2.12	0.49
71:1:341:U:H4'	71:1:973:U:C5	2.47	0.49
71:1:665:U:O4'	71:1:670:A:N6	2.45	0.49
71:1:827:A:HO2'	71:1:828:A:P	2.35	0.49
1:A:176:ASP:HB3	1:A:219:TYR:OH	2.12	0.49
3:C:106:HIS:ND1	3:C:106:HIS:O	2.45	0.49
7:G:146:LYS:HE3	71:1:345:A:O2'	2.12	0.49
7:G:321:ILE:HG22	63:Ag:151:ASP:O	2.12	0.49
8:H:56:PHE:HE1	52:BP:183:ILE:HD13	1.77	0.49
9:I:80:LYS:HA	9:I:174:HIS:HE1	1.77	0.49
9:I:160:MET:HE2	54:BF:12:PHE:HA	1.93	0.49
9:I:214:SER:HA	9:I:217:LYS:HE2	1.94	0.49
11:K:88:ASN:OD1	52:BP:6:HIS:HE1	1.95	0.49
13:M:204:CYS:HG	13:M:229:SER:HG	1.56	0.49
14:N:95:TYR:CZ	35:Az:21:MET:HG3	2.47	0.49
15:O:197:VAL:HA	15:O:200:VAL:HG22	1.94	0.49
15:O:299:HIS:NE2	18:R:381:GLU:OE1	2.46	0.49
17:Q:108:ILE:HD11	60:Ah:58:VAL:CG1	2.42	0.49
19:S:248:ALA:HB2	27:BA:66:ALA:H	1.77	0.49
25:Y:200:HIS:CD2	25:Y:221:VAL:HG11	2.47	0.49
26:Z:67:ASN:HB3	26:Z:121:LEU:HB2	1.94	0.49
28:UA:88:UNK:O	28:UA:92:UNK:N	2.45	0.49
30:Aw:32:GLU:HG2	30:Aw:93:TRP:HZ3	1.77	0.49
37:BC:90:GLN:HE21	49:Aq:4:GLY:HA3	1.77	0.49
39:Ai:276:ILE:HG12	39:Ai:351:PHE:CD2	2.46	0.49
41:Au:29:ARG:HH22	71:1:648:U:P	2.32	0.49
41:Au:62:ARG:C	41:Au:64:LYS:H	2.20	0.49
43:Ao:83:THR:HG21	47:BH:215:VAL:HB	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BM:271:ARG:O	44:BM:275:SER:N	2.43	0.49
45:Ar:121:LEU:HD22	45:Ar:160:GLN:HG2	1.93	0.49
48:Am:144:HIS:CE1	48:Am:175:LEU:HB3	2.47	0.49
51:Ak:52:LEU:HD23	51:Ak:54:TRP:HB2	1.93	0.49
55:Av:121:GLU:HG3	71:1:451:A:N6	2.27	0.49
62:Ay:46:ASN:ND2	71:1:702:U:O2	2.45	0.49
65:BL:128:VAL:O	65:BL:128:VAL:CG2	2.60	0.49
66:BO:132:THR:HG21	66:BO:147:PHE:CE2	2.47	0.49
71:1:127:A:H2'	71:1:128:U:H5'	1.94	0.49
71:1:302:A:C6	71:1:303:U:C4	3.00	0.49
71:1:509:U:C4	71:1:513:U:O2	2.66	0.49
71:1:1141:A:C6	71:1:1142:U:C2	3.01	0.49
3:C:172:HIS:ND1	3:C:196:GLU:OE2	2.43	0.49
5:E:332:ALA:C	5:E:334:SER:N	2.70	0.49
6:F:113:ARG:NH1	71:1:150:A:O2'	2.44	0.49
8:H:96:LYS:HB3	8:H:99:GLU:HB2	1.93	0.49
11:K:53:GLN:HE22	71:1:489:A:H61	1.60	0.49
12:L:159:ASP:OD1	12:L:159:ASP:N	2.44	0.49
13:M:71:TRP:CZ2	13:M:77:LEU:HD22	2.47	0.49
13:M:170:ARG:HD2	13:M:173:HIS:CD2	2.48	0.49
15:O:26:MET:O	15:O:27:TYR:C	2.54	0.49
19:S:270:SER:HA	45:Ar:201:TYR:CE1	2.47	0.49
24:X:187:ASP:OD1	24:X:188:LYS:N	2.45	0.49
24:X:250:GLN:HA	24:X:253:HIS:HB3	1.94	0.49
25:Y:237:LEU:HD23	37:BC:31:VAL:HG22	1.94	0.49
29:BB:20:HIS:HA	29:BB:23:ARG:HB2	1.94	0.49
30:Aw:107:ILE:HD12	53:Ad:130:TYR:HB2	1.94	0.49
32:An:15:LYS:HG3	71:1:258:U:H5'	1.93	0.49
32:An:26:GLN:NE2	71:1:230:A:H62	2.09	0.49
33:Al:158:ILE:HG22	33:Al:165:VAL:HG21	1.93	0.49
41:Au:134:MET:HE3	71:1:548:A:N6	2.28	0.49
43:Ao:85:ASP:OD1	43:Ao:85:ASP:N	2.45	0.49
44:BM:80:ARG:NH2	44:BM:83:TYR:HB2	2.27	0.49
49:Aq:1:MET:HA	49:Aq:7:ARG:NH1	2.24	0.49
53:Ad:146:GLY:O	53:Ad:237:GLY:HA3	2.12	0.49
58:Ae:181:VAL:HG13	58:Ae:234:VAL:HG12	1.94	0.49
59:Ac:52:TYR:CZ	59:Ac:184:PRO:HB2	2.46	0.49
60:Ah:383:LEU:O	60:Ah:387:THR:HG22	2.13	0.49
71:1:753:U:C4	71:1:754:A:C6	3.01	0.49
71:1:1121:U:H4'	71:1:1122:A:OP1	2.11	0.49
2:B:234:ARG:HH21	46:Aj:498:ALA:HA	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:302:THR:N	5:E:305:GLU:OE2	2.45	0.49
7:G:192:ASN:O	30:Aw:22:ARG:NH2	2.28	0.49
8:H:32:TYR:O	8:H:115:LYS:NZ	2.38	0.49
13:M:12:LEU:CD1	13:M:13:ARG:HD3	2.43	0.49
13:M:213:VAL:HG22	13:M:223:TRP:CZ3	2.46	0.49
25:Y:195:GLN:O	25:Y:199:GLN:HG2	2.12	0.49
33:Al:279:ASN:HD22	33:Al:279:ASN:N	2.07	0.49
38:Ab:10:GLN:HE21	38:Ab:62:ARG:HB3	1.76	0.49
39:Ai:442:ASN:HD21	63:Ag:176:ASN:HB2	1.76	0.49
45:Ar:201:TYR:CE1	71:1:399:U:H1'	2.48	0.49
58:Ae:224:SER:OG	58:Ae:225:ILE:N	2.43	0.49
60:Ah:303:LEU:HB2	60:Ah:331:VAL:HG13	1.92	0.49
60:Ah:429:ILE:O	60:Ah:436:GLY:HA3	2.13	0.49
62:Ay:46:ASN:HD21	71:1:702:U:H2'	1.77	0.49
65:BL:119:ARG:NH1	65:BL:132:HIS:O	2.40	0.49
66:BO:87:ARG:HE	66:BO:89:ALA:HB3	1.77	0.49
71:1:410:A:HO2'	71:1:411:U:P	2.35	0.49
71:1:425:A:H8	71:1:471:A:H5''	1.77	0.49
71:1:445:A:O2'	71:1:461:U:OP2	2.22	0.49
71:1:649:A:N6	71:1:1073:A:H2'	2.28	0.49
71:1:750:U:H4'	71:1:751:A:C8	2.48	0.49
2:B:184:TRP:HB2	22:V:26:LEU:HD13	1.93	0.49
2:B:189:PRO:HG3	13:M:5:ALA:HB2	1.95	0.49
2:B:384:ARG:HH11	18:R:212:SER:H	1.59	0.49
5:E:54:ARG:NE	71:1:434:U:H5'	2.28	0.49
5:E:280:GLN:HE22	5:E:333:GLN:HA	1.78	0.49
7:G:188:ARG:NH2	71:1:188:A:OP2	2.38	0.49
12:L:62:GLY:HA2	12:L:67:THR:HA	1.94	0.49
21:U:50:MET:O	71:1:965:G:O2'	2.27	0.49
22:V:96:ARG:O	53:Ad:176:LYS:NZ	2.39	0.49
24:X:439:ASP:HB3	24:X:442:ILE:HB	1.95	0.49
32:An:176:GLU:CD	60:Ah:468:LEU:HD13	2.37	0.49
33:Al:192:LEU:HD12	44:BM:190:LYS:HD2	1.95	0.49
41:Au:29:ARG:NH2	71:1:648:U:OP1	2.29	0.49
48:Am:163:ALA:C	48:Am:185:MET:HE1	2.37	0.49
51:Ak:126:PRO:HG3	51:Ak:172:PRO:HG2	1.94	0.49
52:BP:173:VAL:C	52:BP:175:MET:H	2.20	0.49
53:Ad:120:SER:OG	53:Ad:121:SER:N	2.45	0.49
53:Ad:182:PHE:HD2	53:Ad:222:ASN:HB3	1.76	0.49
55:Av:134:SER:HB3	55:Av:137:GLN:HE21	1.77	0.49
63:Ag:87:LEU:HA	63:Ag:90:VAL:HG23	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:Ax:151:ARG:NH1	64:Ax:186:TYR:HE2	2.10	0.49
66:BO:109:ARG:HA	66:BO:109:ARG:NE	2.28	0.49
69:UC:131:UNK:O	69:UC:135:UNK:N	2.44	0.49
71:1:164:U:O2'	71:1:165:G:OP1	2.30	0.49
71:1:226:A:H61	71:1:310:A:N6	2.10	0.49
71:1:463:U:C2	71:1:465:A:H5''	2.47	0.49
1:A:329:TYR:CZ	10:J:17:ALA:HB2	2.47	0.49
5:E:105:GLN:HE22	71:1:429:A:H1'	1.75	0.49
9:I:29:ASP:OD1	9:I:29:ASP:N	2.43	0.49
9:I:180:THR:HG22	20:T:75:ARG:HA	1.93	0.49
9:I:238:ARG:HG2	15:O:94:ASP:OD2	2.12	0.49
15:O:267:TYR:CE2	15:O:269:ARG:HB2	2.48	0.49
17:Q:169:LYS:HD3	32:An:243:PHE:HZ	1.78	0.49
18:R:12:ALA:O	18:R:15:GLU:HG2	2.12	0.49
19:S:376:GLU:OE1	53:Ad:75:ARG:NE	2.46	0.49
25:Y:143:PHE:HE2	59:Ac:130:VAL:HA	1.77	0.49
27:BA:112:GLU:HG2	27:BA:112:GLU:O	2.13	0.49
28:UA:159:UNK:O	28:UA:163:UNK:N	2.46	0.49
33:Al:123:TYR:C	33:Al:186:LEU:HD23	2.38	0.49
36:At:54:ARG:NH2	71:1:59:U:O4'	2.44	0.49
36:At:149:PRO:HA	36:At:152:LEU:HD12	1.95	0.49
38:Ab:135:ARG:CZ	48:Am:333:ASN:H	2.25	0.49
38:Ab:135:ARG:HH12	48:Am:331:TYR:HA	1.77	0.49
41:Au:80:SER:O	41:Au:80:SER:OG	2.28	0.49
43:Ao:188:VAL:HG13	43:Ao:189:ILE:H	1.77	0.49
46:Aj:305:ALA:O	46:Aj:308:THR:OG1	2.25	0.49
49:Aq:43:GLN:CD	49:Aq:44:LEU:H	2.20	0.49
49:Aq:81:ALA:O	49:Aq:82:ASP:HB2	2.13	0.49
49:Aq:323:ARG:NH1	71:1:912:U:OP2	2.46	0.49
51:Ak:295:LEU:HB3	59:Ac:115:GLY:HA2	1.95	0.49
52:BP:179:PRO:HG2	52:BP:181:ASN:HB3	1.93	0.49
53:Ad:54:LEU:HD11	53:Ad:230:HIS:HB2	1.94	0.49
57:As:68:PRO:HA	57:As:138:ARG:NH2	2.26	0.49
60:Ah:389:HIS:HB2	60:Ah:393:ARG:HD3	1.94	0.49
65:BL:75:ASP:OD2	65:BL:280:GLY:HA2	2.13	0.49
66:BO:68:CYS:N	66:BO:76:HIS:HB2	2.28	0.49
71:1:219:A:O4'	71:1:319:A:N6	2.40	0.49
71:1:1125:U:O2'	71:1:1126:A:OP1	2.31	0.49
2:B:94:VAL:HG22	2:B:103:HIS:O	2.13	0.49
2:B:254:SER:HB3	2:B:257:THR:HG22	1.94	0.49
3:C:121:LEU:HD21	60:Ah:50:TYR:HB3	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:262:LEU:O	7:G:266:LEU:HG	2.12	0.49
7:G:336:TYR:O	7:G:340:LYS:N	2.40	0.49
9:I:72:ARG:NH2	71:1:543:U:O2'	2.46	0.49
15:O:289:VAL:HA	15:O:292:LEU:HB2	1.95	0.49
24:X:349:PRO:CD	24:X:398:ARG:HB3	2.42	0.49
25:Y:205:GLU:HG3	25:Y:206:ALA:N	2.28	0.49
25:Y:231:GLN:NE2	31:Bj:154:CYS:HB3	2.27	0.49
27:BA:115:VAL:HG23	27:BA:140:ALA:O	2.12	0.49
29:BB:18:ARG:NH1	71:1:1118:G:N7	2.60	0.49
36:At:50:ARG:O	36:At:54:ARG:N	2.21	0.49
38:Ab:73:PHE:HZ	71:1:508:G:C8	2.31	0.49
41:Au:54:PRO:O	41:Au:55:SER:OG	2.28	0.49
42:Aa:92:SER:N	42:Aa:93:PRO:HD2	2.27	0.49
43:Ao:31:ARG:NH1	71:1:401:U:OP1	2.43	0.49
44:BM:68:LEU:HD13	44:BM:72:TYR:HD2	1.78	0.49
44:BM:330:SER:HB2	44:BM:331:PRO:HD3	1.95	0.49
47:BH:82:HIS:CE1	47:BH:91:GLN:HG2	2.48	0.49
47:BH:188:TRP:CE3	47:BH:227:PRO:HB3	2.47	0.49
48:Am:291:VAL:HG12	58:Ae:247:ILE:HD11	1.95	0.49
51:Ak:246:ILE:HG13	51:Ak:264:VAL:HG12	1.95	0.49
53:Ad:136:ASP:OD1	53:Ad:137:SER:N	2.46	0.49
56:Af:141:SER:OG	56:Af:142:TRP:N	2.46	0.49
65:BL:214:LEU:HB3	65:BL:255:VAL:HG11	1.94	0.49
66:BO:88:PHE:C	66:BO:91:CYS:H	2.21	0.49
71:1:425:A:H2'	71:1:425:A:N3	2.27	0.49
71:1:456:A:H1'	71:1:457:C:H5'	1.94	0.49
71:1:871:A:H2'	71:1:872:A:C4	2.48	0.49
4:D:115:ARG:NH2	38:Ab:193:ASP:HB2	2.27	0.49
4:D:134:LEU:HB2	4:D:135:PRO:HD3	1.95	0.49
8:H:27:ARG:HH12	8:H:96:LYS:HA	1.77	0.49
12:L:135:ASP:O	12:L:137:VAL:HG22	2.13	0.49
15:O:106:ILE:HD11	35:Az:21:MET:SD	2.53	0.49
18:R:20:ASN:OD1	18:R:21:PHE:N	2.45	0.49
18:R:262:ALA:N	36:At:108:MET:HE2	2.28	0.49
24:X:173:GLY:HA3	24:X:205:PHE:CD2	2.47	0.49
24:X:290:MET:SD	24:X:400:VAL:HG21	2.52	0.49
25:Y:162:ARG:HB2	25:Y:163:PRO:HD2	1.95	0.49
25:Y:234:ILE:O	25:Y:238:HIS:N	2.45	0.49
27:BA:23:TYR:CE2	45:Ar:127:ARG:HD3	2.48	0.49
38:Ab:36:PHE:HE2	38:Ab:45:ILE:HD11	1.78	0.49
38:Ab:169:ASP:O	38:Ab:173:ALA:N	2.26	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:Ap:139:ARG:O	40:Ap:143:GLN:N	2.46	0.49
44:BM:51:GLU:OE2	44:BM:312:VAL:HG23	2.13	0.49
44:BM:89:ARG:O	44:BM:92:THR:OG1	2.29	0.49
48:Am:27:LEU:O	58:Ae:55:HIS:ND1	2.43	0.49
56:Af:114:PRO:C	56:Af:115:LYS:HD3	2.37	0.49
58:Ae:61:ASN:OD1	58:Ae:92:ARG:NH2	2.40	0.49
65:BL:90:PRO:O	65:BL:91:PHE:HB2	2.13	0.49
66:BO:129:CYS:HB3	66:BO:153:ILE:HG13	1.95	0.49
71:1:320:G:N2	71:1:322:A:O3'	2.45	0.49
71:1:482:C:H2'	71:1:483:U:C4'	2.42	0.49
71:1:559:U:O2'	71:1:560:U:H3'	2.13	0.49
71:1:643:G:H2'	71:1:644:C:O4'	2.13	0.49
2:B:50:SER:OG	2:B:211:GLY:O	2.29	0.49
2:B:147:TRP:HH2	14:N:87:PHE:CD2	2.31	0.49
7:G:227:PRO:HG2	7:G:228:TYR:CE2	2.48	0.49
7:G:366:MET:SD	17:Q:28:ARG:NH1	2.69	0.49
8:H:81:ALA:O	8:H:126:THR:HG22	2.13	0.49
10:J:101:MET:HE2	10:J:132:TRP:CD2	2.48	0.49
12:L:166:TRP:CD1	42:Aa:126:GLU:HG3	2.48	0.49
13:M:196:HIS:HA	13:M:241:MET:HE2	1.95	0.49
15:O:137:TYR:HB3	15:O:138:PRO:HD2	1.95	0.49
15:O:260:GLN:H	15:O:260:GLN:CD	2.19	0.49
16:P:43:VAL:HA	49:Aq:55:ASN:ND2	2.27	0.49
27:BA:49:SER:OG	27:BA:50:ALA:N	2.46	0.49
32:An:134:ILE:HD11	32:An:169:PHE:HZ	1.76	0.49
32:An:229:ARG:HH22	32:An:233:ARG:N	2.11	0.49
34:BI:147:ARG:HH11	34:BI:148:ASN:ND2	2.11	0.49
43:Ao:232:TYR:HE2	45:Ar:103:ARG:CZ	2.25	0.49
46:Aj:129:GLU:O	46:Aj:284:LEU:N	2.42	0.49
47:BH:101:ARG:NH2	71:1:365:U:O2	2.46	0.49
48:Am:129:VAL:HG12	48:Am:150:VAL:HG23	1.94	0.49
49:Aq:37:ASP:OD1	49:Aq:38:LEU:N	2.45	0.49
52:BP:8:ASP:OD2	71:1:491:U:O2'	2.26	0.49
55:Av:32:GLN:NE2	55:Av:83:GLY:O	2.46	0.49
59:Ac:150:ALA:O	59:Ac:151:LEU:HB2	2.12	0.49
60:Ah:349:GLU:O	60:Ah:353:VAL:HG12	2.13	0.49
63:Ag:216:ILE:HD11	63:Ag:231:LEU:HD22	1.95	0.49
65:BL:116:PHE:O	65:BL:118:HIS:CD2	2.66	0.49
65:BL:241:GLY:HA3	71:1:671:U:C4	2.48	0.49
71:1:47:A:N6	71:1:131:U:H3	2.11	0.49
71:1:299:U:H4'	71:1:300:A:O5'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:162:GLN:HB3	1:A:206:LYS:HE3	1.94	0.48
1:A:299:GLU:HG2	1:A:300:THR:H	1.78	0.48
6:F:20:GLY:O	48:Am:54:ASN:N	2.46	0.48
8:H:93:VAL:HG12	8:H:94:VAL:H	1.78	0.48
13:M:118:LEU:O	13:M:121:GLU:N	2.45	0.48
15:O:204:ASP:HB3	15:O:207:THR:HB	1.95	0.48
18:R:247:CYS:HA	18:R:252:ASN:HA	1.94	0.48
21:U:54:ILE:O	21:U:54:ILE:HG13	2.12	0.48
21:U:72:MET:HB2	21:U:83:MET:HG3	1.95	0.48
22:V:116:ASP:HA	22:V:119:GLN:HB3	1.94	0.48
30:Aw:43:VAL:HG11	30:Aw:90:ARG:NH1	2.28	0.48
30:Aw:165:ARG:NH1	30:Aw:167:GLU:OE1	2.46	0.48
32:An:24:HIS:HD2	41:Au:11:ARG:N	2.11	0.48
38:Ab:29:MET:HG2	38:Ab:33:LEU:HD13	1.95	0.48
38:Ab:129:PRO:HA	42:Aa:69:THR:OG1	2.13	0.48
41:Au:48:ASN:OD1	41:Au:50:ASP:N	2.46	0.48
44:BM:158:MET:HG3	44:BM:217:LYS:NZ	2.27	0.48
46:Aj:350:TYR:HE1	46:Aj:401:MET:HE1	1.78	0.48
59:Ac:129:VAL:HA	59:Ac:132:GLN:HE21	1.77	0.48
60:Ah:268:ASN:OD1	60:Ah:269:THR:N	2.45	0.48
62:Ay:64:ILE:HG23	71:1:697:A:H5'	1.95	0.48
63:Ag:22:THR:O	63:Ag:24:PRO:HD3	2.13	0.48
71:1:269:A:C2	71:1:271:U:H1'	2.47	0.48
71:1:390:A:H2	71:1:391:A:C8	2.30	0.48
71:1:1013:U:H5''	71:1:1014:U:C4	2.48	0.48
1:A:166:HIS:ND1	1:A:178:VAL:HG22	2.28	0.48
3:C:70:ARG:NH1	3:C:70:ARG:HB2	2.28	0.48
12:L:154:ALA:HB1	42:Aa:67:PRO:HD2	1.94	0.48
13:M:63:ASP:O	46:Aj:476:ARG:NH2	2.45	0.48
26:Z:154:LYS:HB3	26:Z:155:PRO:HD2	1.96	0.48
31:Bj:70:ILE:HD11	59:Ac:79:GLN:NE2	2.28	0.48
36:At:33:ASN:ND2	71:1:123:U:H5'	2.28	0.48
38:Ab:132:GLN:HA	38:Ab:135:ARG:NE	2.28	0.48
38:Ab:133:TRP:HH2	48:Am:75:PHE:HB2	1.78	0.48
38:Ab:257:GLN:NE2	43:Ao:248:GLN:OE1	2.46	0.48
39:Ai:406:GLU:HB2	39:Ai:432:LYS:HB3	1.95	0.48
40:Ap:58:ILE:HG22	40:Ap:89:VAL:HG11	1.95	0.48
44:BM:45:SER:CB	44:BM:118:ILE:HD13	2.43	0.48
48:Am:13:TRP:HZ3	48:Am:15:HIS:CE1	2.31	0.48
49:Aq:160:PRO:HD2	49:Aq:223:PRO:HD3	1.95	0.48
52:BP:96:PRO:C	52:BP:98:PRO:HD2	2.37	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:Af:40:ASN:O	56:Af:43:ILE:N	2.40	0.48
58:Ae:25:LEU:HD12	58:Ae:25:LEU:H	1.79	0.48
59:Ac:53:TYR:CE1	59:Ac:170:TYR:HB3	2.48	0.48
60:Ah:64:VAL:O	60:Ah:65:GLY:C	2.55	0.48
61:BD:13:CYS:SG	61:BD:14:GLY:N	2.86	0.48
66:BO:172:ARG:NH2	66:BO:172:ARG:CB	2.76	0.48
71:1:55:A:H2'	71:1:56:U:O4'	2.14	0.48
71:1:120:A:H2	71:1:121:U:C5	2.30	0.48
71:1:433:G:HO2'	71:1:434:U:H3'	1.78	0.48
71:1:450:A:O2'	71:1:451:A:H4'	2.13	0.48
71:1:643:G:OP2	71:1:680:A:C4	2.66	0.48
71:1:935:G:N2	71:1:936:G:C4	2.81	0.48
71:1:1023:A:H2'	71:1:1024:U:O4'	2.13	0.48
2:B:287:GLU:OE1	2:B:288:PRO:HD2	2.13	0.48
6:F:58:LYS:HD2	58:Ae:72:ASN:HD21	1.77	0.48
7:G:174:ARG:HA	7:G:217:VAL:HG13	1.94	0.48
9:I:150:LYS:HA	20:T:71:GLU:HB3	1.95	0.48
9:I:256:GLU:HA	9:I:259:HIS:CD2	2.48	0.48
14:N:75:GLU:C	14:N:77:ASN:H	2.22	0.48
18:R:167:HIS:HD2	18:R:169:GLY:N	2.05	0.48
19:S:281:ARG:O	46:Aj:112:THR:HG21	2.14	0.48
19:S:372:ARG:NH2	53:Ad:198:GLU:OE1	2.47	0.48
20:T:35:PRO:O	20:T:39:ARG:N	2.44	0.48
22:V:48:GLY:HA2	24:X:459:ARG:O	2.14	0.48
24:X:300:VAL:HB	24:X:305:GLY:O	2.14	0.48
29:BB:120:VAL:HG13	29:BB:122:ASP:H	1.78	0.48
33:Al:57:GLY:N	71:1:698:G:H21	2.11	0.48
39:Ai:343:GLU:OE1	39:Ai:343:GLU:N	2.39	0.48
42:Aa:34:ARG:NH1	71:1:153:U:OP1	2.32	0.48
47:BH:84:ILE:HG23	47:BH:90:MET:HG2	1.94	0.48
48:Am:217:ARG:HG2	48:Am:220:THR:HG22	1.96	0.48
48:Am:290:LEU:HD13	48:Am:293:THR:HB	1.94	0.48
53:Ad:119:LEU:HD13	53:Ad:124:PRO:O	2.13	0.48
65:BL:281:VAL:O	65:BL:282:MET:HB2	2.13	0.48
71:1:347:A:C8	71:1:347:A:OP2	2.66	0.48
71:1:991:G:N1	71:1:992:G:C2	2.81	0.48
71:1:1123:U:O2'	71:1:1124:A:H5'	2.13	0.48
71:1:1126:A:H4'	71:1:1127:U:OP1	2.14	0.48
1:A:86:TYR:HE1	1:A:91:GLU:HG2	1.78	0.48
1:A:166:HIS:HD2	1:A:222:VAL:HG23	1.79	0.48
9:I:187:PHE:CE1	9:I:250:TRP:HB2	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:21:ARG:NH1	11:K:29:ARG:O	2.34	0.48
13:M:91:ARG:HH12	46:Aj:475:ARG:CZ	2.27	0.48
13:M:139:VAL:O	13:M:141:SER:N	2.46	0.48
16:P:53:PHE:HB2	16:P:56:ASP:HA	1.95	0.48
17:Q:158:ARG:O	17:Q:162:VAL:HG23	2.14	0.48
19:S:331:ARG:NH1	52:BP:62:GLU:OE1	2.46	0.48
22:V:55:TRP:CD1	22:V:88:GLN:HE22	2.32	0.48
24:X:128:LEU:HB2	24:X:166:ASN:ND2	2.28	0.48
24:X:266:PRO:HA	24:X:285:PHE:HD2	1.79	0.48
25:Y:279:HIS:CD2	25:Y:281:ALA:H	2.32	0.48
38:Ab:168:THR:O	38:Ab:172:GLU:HG2	2.13	0.48
44:BM:235:LYS:C	44:BM:238:PRO:HD2	2.38	0.48
49:Aq:114:VAL:HA	49:Aq:117:MET:HB2	1.95	0.48
51:Ak:41:ALA:HA	51:Ak:44:ARG:NH1	2.26	0.48
52:BP:79:ASP:HB3	52:BP:82:ILE:HD12	1.95	0.48
52:BP:163:ARG:HG3	52:BP:164:ARG:N	2.28	0.48
57:As:138:ARG:HG3	57:As:139:GLU:OE1	2.12	0.48
58:Ae:185:VAL:O	58:Ae:224:SER:N	2.32	0.48
59:Ac:160:THR:HG22	59:Ac:162:HIS:H	1.78	0.48
59:Ac:288:THR:HG22	59:Ac:290:GLU:H	1.78	0.48
65:BL:284:ASN:ND2	71:1:671:U:H1'	2.27	0.48
66:BO:60:LEU:HB2	66:BO:86:GLU:HB2	1.95	0.48
71:1:70:G:OP1	71:1:70:G:H4'	2.14	0.48
71:1:448:U:O2'	71:1:449:U:O5'	2.30	0.48
71:1:691:G:C2	71:1:709:U:O2	2.66	0.48
1:A:169:ARG:NH1	1:A:172:ASP:OD2	2.46	0.48
5:E:22:GLY:HA2	55:Av:104:THR:C	2.38	0.48
5:E:145:TYR:CG	5:E:190:ALA:HB2	2.48	0.48
6:F:6:LEU:H	6:F:8:ARG:NH1	2.12	0.48
8:H:30:ARG:HH11	71:1:389:A:H62	1.60	0.48
9:I:223:HIS:CE1	54:BF:87:LEU:HG	2.48	0.48
11:K:77:TRP:HZ2	11:K:81:ARG:HH11	1.61	0.48
13:M:31:HIS:CE1	71:1:177:G:H5'	2.47	0.48
13:M:143:TRP:CD1	13:M:229:SER:HB2	2.48	0.48
14:N:150:GLU:HG3	14:N:152:ARG:HH12	1.77	0.48
15:O:218:VAL:O	15:O:226:LEU:HA	2.14	0.48
18:R:289:SER:HA	18:R:476:GLY:O	2.13	0.48
25:Y:110:GLU:CD	59:Ac:39:VAL:HB	2.37	0.48
26:Z:76:ARG:HH22	71:1:70:G:P	2.37	0.48
33:Al:272:GLU:N	33:Al:272:GLU:CD	2.72	0.48
36:At:14:LYS:O	36:At:17:ARG:HG2	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:Ab:170:ILE:HG21	38:Ab:228:HIS:HE1	1.79	0.48
39:Ai:218:HIS:HE1	49:Aq:139:ASP:OD2	1.96	0.48
43:Ao:193:VAL:O	43:Ao:197:LEU:N	2.35	0.48
46:Aj:209:LEU:HD22	56:Af:144:THR:OG1	2.14	0.48
46:Aj:342:LEU:HD21	71:1:333:A:C5	2.48	0.48
48:Am:225:TRP:CZ2	50:BE:111:PRO:HD3	2.49	0.48
57:As:133:THR:OG1	57:As:134:PRO:HD3	2.13	0.48
60:Ah:50:TYR:CE1	60:Ah:54:ASP:HB2	2.48	0.48
60:Ah:264:VAL:HA	60:Ah:267:PHE:CD2	2.48	0.48
62:Ay:96:GLU:HG2	62:Ay:97:THR:HG23	1.95	0.48
65:BL:127:LYS:HG3	71:1:667:A:OP1	2.13	0.48
69:UC:103:UNK:O	69:UC:107:UNK:N	2.47	0.48
71:1:162:G:H2'	71:1:162:G:N3	2.28	0.48
71:1:649:A:HO2'	71:1:650:U:P	2.35	0.48
71:1:992:G:O2'	71:1:993:U:O5'	2.31	0.48
71:1:1068:A:N6	71:1:1096:A:H2'	2.29	0.48
71:1:1079:A:C6	71:1:1080:A:N7	2.82	0.48
1:A:67:TYR:OH	1:A:91:GLU:OE1	2.25	0.48
1:A:245:ASP:OD1	1:A:246:TYR:N	2.47	0.48
1:A:400:ASP:OD1	1:A:400:ASP:N	2.44	0.48
3:C:112:GLU:HG2	3:C:140:ASN:HA	1.95	0.48
4:D:122:PHE:O	4:D:126:THR:N	2.46	0.48
5:E:266:ASN:HD21	38:Ab:170:ILE:HG23	1.78	0.48
8:H:164:TYR:OH	45:Ar:149:GLU:OE2	2.25	0.48
10:J:53:ILE:HG23	10:J:54:ILE:HG22	1.95	0.48
13:M:82:ARG:HG3	13:M:93:THR:HB	1.94	0.48
18:R:211:SER:C	18:R:213:THR:H	2.21	0.48
23:W:91:ALA:O	23:W:92:HIS:C	2.56	0.48
27:BA:101:CYS:HA	27:BA:104:LEU:HD12	1.94	0.48
28:UA:186:UNK:O	28:UA:190:UNK:N	2.47	0.48
29:BB:109:THR:O	29:BB:110:PHE:CB	2.62	0.48
37:BC:26:TRP:O	37:BC:30:GLN:HG2	2.14	0.48
37:BC:119:GLN:HB2	59:Ac:104:ILE:HD11	1.94	0.48
38:Ab:240:ARG:HD2	55:Av:149:LEU:HD13	1.95	0.48
39:Ai:348:VAL:HG22	39:Ai:376:VAL:HG22	1.95	0.48
43:Ao:275:ALA:H	43:Ao:280:ASN:ND2	2.10	0.48
44:BM:76:TYR:HH	44:BM:323:ARG:C	2.21	0.48
44:BM:95:GLU:OE2	44:BM:115:ASN:HB2	2.12	0.48
44:BM:147:ASP:HA	44:BM:195:MET:HE2	1.96	0.48
45:Ar:136:TRP:CE3	45:Ar:142:ARG:HB2	2.48	0.48
51:Ak:222:VAL:HG23	51:Ak:245:VAL:HG13	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BP:-14:PHE:HE2	52:BP:-9:PRO:HG2	1.78	0.48
53:Ad:158:VAL:HG21	53:Ad:233:LEU:HD22	1.96	0.48
56:Af:71:HIS:HB2	56:Af:72:GLU:OE1	2.14	0.48
71:1:206:U:O2'	71:1:207:G:H5'	2.13	0.48
71:1:361:A:O5'	71:1:361:A:H8	1.96	0.48
71:1:548:A:O2'	71:1:549:C:O5'	2.25	0.48
71:1:941:A:N1	71:1:942:C:N4	2.61	0.48
71:1:1105:G:H8	71:1:1105:G:OP2	1.96	0.48
2:B:194:LYS:HE2	2:B:195:THR:N	2.27	0.48
2:B:409:GLU:CD	2:B:409:GLU:H	2.22	0.48
3:C:26:PRO:HG3	3:C:43:SER:HB3	1.96	0.48
14:N:78:ARG:HH21	14:N:79:ASP:N	2.11	0.48
18:R:48:GLN:HA	18:R:51:TRP:HB3	1.96	0.48
22:V:119:GLN:HE22	22:V:123:LEU:HD21	1.77	0.48
24:X:328:PRO:O	24:X:418:TRP:HD1	1.95	0.48
24:X:363:PHE:HB2	24:X:364:PRO:HD3	1.96	0.48
24:X:421:GLN:OE1	24:X:421:GLN:N	2.45	0.48
25:Y:244:ARG:O	25:Y:248:ASN:ND2	2.47	0.48
27:BA:21:ALA:N	27:BA:22:PRO:HD2	2.28	0.48
27:BA:41:SER:HA	27:BA:44:GLN:NE2	2.27	0.48
31:Bj:139:LYS:HB2	31:Bj:160:LEU:HD11	1.96	0.48
36:At:134:ASP:HB3	36:At:160:THR:OG1	2.13	0.48
44:BM:277:PRO:O	44:BM:281:GLN:NE2	2.29	0.48
45:Ar:51:MET:SD	45:Ar:58:THR:HG23	2.54	0.48
49:Aq:165:ARG:O	49:Aq:168:GLN:HA	2.13	0.48
51:Ak:91:TRP:CD1	51:Ak:91:TRP:C	2.91	0.48
63:Ag:62:ARG:NH2	71:1:104:U:O3'	2.47	0.48
65:BL:296:GLU:N	65:BL:296:GLU:OE1	2.47	0.48
71:1:536:A:N6	71:1:861:A:OP1	2.47	0.48
71:1:576:A:OP1	71:1:576:A:H4'	2.14	0.48
71:1:880:A:N6	71:1:881:G:O6	2.46	0.48
71:1:1093:G:C6	71:1:1094:U:C2	3.01	0.48
1:A:364:LEU:HD23	70:UD:36:UNK:HA	1.96	0.48
2:B:384:ARG:NH2	36:At:108:MET:HE1	2.28	0.48
3:C:71:TYR:H	61:BD:79:GLN:HE22	1.60	0.48
6:F:16:LEU:HD23	6:F:30:ALA:HB2	1.95	0.48
7:G:301:TRP:HD1	33:Al:278:ARG:HH22	1.62	0.48
9:I:11:ARG:HH22	66:BO:53:GLY:HA2	1.79	0.48
9:I:38:TRP:HA	9:I:52:ARG:HB3	1.96	0.48
9:I:178:ASP:OD1	9:I:179:TYR:N	2.46	0.48
10:J:77:ASP:HB2	10:J:90:LYS:CB	2.40	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:175:ASP:HB3	15:O:190:GLN:HE21	1.78	0.48
19:S:379:LEU:HB2	46:Aj:387:LEU:HB3	1.96	0.48
20:T:59:PHE:HE1	20:T:66:PRO:HG3	1.78	0.48
24:X:141:ARG:NH2	24:X:163:ALA:O	2.47	0.48
25:Y:220:TYR:OH	37:BC:64:GLU:OE2	2.31	0.48
30:Aw:45:ARG:NE	36:At:21:LEU:HD12	2.29	0.48
30:Aw:157:HIS:ND1	46:Aj:392:GLU:OE1	2.46	0.48
32:An:205:ILE:O	32:An:209:VAL:HG23	2.14	0.48
32:An:263:HIS:CG	32:An:264:HIS:H	2.30	0.48
42:Aa:133:THR:O	42:Aa:137:GLU:HG3	2.14	0.48
44:BM:68:LEU:HD13	44:BM:72:TYR:CD2	2.49	0.48
46:Aj:314:VAL:HA	46:Aj:317:VAL:HG22	1.95	0.48
48:Am:93:TYR:OH	48:Am:132:VAL:HA	2.14	0.48
59:Ac:60:VAL:HG22	59:Ac:165:LEU:HB2	1.96	0.48
59:Ac:259:VAL:HG11	59:Ac:267:TYR:CE1	2.49	0.48
60:Ah:134:MET:HG3	60:Ah:388:ARG:O	2.13	0.48
64:Ax:91:GLU:CD	67:BG:1321:ALA:HB1	2.39	0.48
64:Ax:92:ASP:OD1	67:BG:1297:ARG:NH1	2.46	0.48
64:Ax:151:ARG:NH1	64:Ax:186:TYR:CE2	2.82	0.48
65:BL:73:SER:O	65:BL:75:ASP:N	2.45	0.48
65:BL:177:TYR:CG	65:BL:177:TYR:O	2.67	0.48
66:BO:187:ASN:CG	66:BO:188:PHE:H	2.21	0.48
71:1:1075:A:H2'	71:1:1076:A:O4'	2.14	0.48
1:A:346:GLU:HG2	1:A:347:HIS:N	2.28	0.48
2:B:49:VAL:HG11	2:B:214:GLN:HB2	1.94	0.48
2:B:118:THR:OG1	7:G:84:GLN:OE1	2.20	0.48
6:F:29:ILE:HG13	6:F:145:TRP:NE1	2.29	0.48
8:H:34:ASP:OD1	8:H:35:PRO:HD2	2.14	0.48
11:K:20:LEU:HD13	42:Aa:188:ALA:HB2	1.96	0.48
14:N:64:MET:SD	49:Aq:337:PRO:HD2	2.54	0.48
15:O:258:ALA:HB1	15:O:260:GLN:NE2	2.29	0.48
15:O:317:VAL:HG12	17:Q:180:LEU:HD12	1.95	0.48
21:U:68:LEU:N	21:U:85:GLU:HG2	2.28	0.48
26:Z:60:THR:HG22	41:Au:119:VAL:HG11	1.96	0.48
36:At:77:ARG:HA	36:At:81:GLU:OE1	2.13	0.48
39:Ai:14:PRO:HG2	39:Ai:251:PHE:CE2	2.47	0.48
39:Ai:236:LYS:HA	39:Ai:440:TYR:CD2	2.48	0.48
39:Ai:439:GLY:HA2	39:Ai:448:THR:HA	1.96	0.48
43:Ao:272:LYS:HZ3	43:Ao:279:HIS:HB3	1.79	0.48
46:Aj:138:ALA:HB1	46:Aj:142:LYS:HD3	1.95	0.48
48:Am:75:PHE:CZ	48:Am:247:GLU:HG3	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BF:70:ARG:NE	54:BF:76:SER:OG	2.43	0.48
55:Av:109:PHE:CD1	55:Av:112:LYS:HD2	2.48	0.48
58:Ae:206:ARG:HH12	71:1:426:G:H21	1.62	0.48
60:Ah:377:LYS:HD3	60:Ah:452:MET:HB3	1.96	0.48
63:Ag:191:GLU:HG2	63:Ag:194:ARG:HH12	1.78	0.48
66:BO:101:VAL:HG22	66:BO:103:VAL:HG12	1.96	0.48
71:1:107:U:H6	71:1:107:U:OP1	1.96	0.48
71:1:145:A:H5''	71:1:146:U:OP2	2.14	0.48
71:1:162:G:H1	71:1:401:U:H6	1.61	0.48
71:1:642:A:H2'	71:1:643:G:O4'	2.13	0.48
71:1:1038:U:H5	71:1:1056:A:C8	2.31	0.48
1:A:284:ILE:O	1:A:285:TYR:C	2.57	0.48
2:B:120:GLU:HA	2:B:120:GLU:OE2	2.14	0.48
2:B:188:MET:N	2:B:304:LYS:O	2.40	0.48
7:G:185:ASP:OD1	7:G:186:THR:N	2.47	0.48
8:H:134:ASN:H	8:H:137:GLU:HB2	1.79	0.48
9:I:188:LEU:HD22	9:I:258:TRP:CH2	2.49	0.48
10:J:86:LYS:HD2	10:J:86:LYS:HA	1.68	0.48
17:Q:48:ARG:HB3	71:1:100:A:H4'	1.95	0.48
18:R:172:LYS:O	18:R:335:THR:HG22	2.14	0.48
19:S:275:ARG:O	19:S:279:GLU:HG3	2.14	0.48
19:S:281:ARG:HE	52:BP:49:GLN:NE2	2.12	0.48
24:X:263:MET:HG2	24:X:288:ASN:HD22	1.79	0.48
24:X:278:ARG:HG2	24:X:279:HIS:CD2	2.49	0.48
24:X:326:PRO:HB3	24:X:337:HIS:CE1	2.49	0.48
26:Z:48:LYS:HB3	71:1:71:A:H8	1.79	0.48
38:Ab:36:PHE:CE2	38:Ab:45:ILE:HD11	2.49	0.48
41:Au:52:ALA:O	41:Au:53:ARG:C	2.57	0.48
44:BM:39:VAL:HB	44:BM:108:LEU:HG	1.94	0.48
51:Ak:73:MET:HE1	51:Ak:102:LEU:HB2	1.95	0.48
62:Ay:132:ALA:HA	62:Ay:135:VAL:HG12	1.95	0.48
65:BL:158:TRP:HB3	65:BL:176:LEU:HB2	1.96	0.48
65:BL:260:PRO:HB2	71:1:671:U:OP1	2.13	0.48
65:BL:330:LEU:HA	65:BL:335:HIS:H	1.78	0.48
71:1:166:U:H1'	71:1:847:A:H61	1.79	0.48
71:1:390:A:C2	71:1:391:A:C4	3.02	0.48
71:1:548:A:H2'	71:1:588:A:C2	2.45	0.48
71:1:876:G:C2	71:1:991:G:N2	2.82	0.48
71:1:1022:A:N6	71:1:1023:A:N1	2.61	0.48
71:1:1077:G:H2'	71:1:1078:C:C6	2.48	0.48
5:E:295:ARG:NE	5:E:295:ARG:HA	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:1:MET:HG3	6:F:3:LYS:HG2	1.96	0.47
7:G:237:ALA:HB2	7:G:252:PHE:CE2	2.49	0.47
7:G:285:LEU:HA	7:G:289:ALA:HB3	1.96	0.47
9:I:210:ASP:O	9:I:214:SER:OG	2.14	0.47
11:K:113:LEU:HA	42:Aa:97:MET:HE1	1.95	0.47
13:M:81:ASN:ND2	13:M:112:LYS:HG3	2.29	0.47
13:M:250:PRO:HB3	20:T:56:GLU:HB3	1.95	0.47
18:R:290:VAL:HG12	18:R:293:LYS:HD2	1.95	0.47
19:S:244:THR:HA	27:BA:111:ALA:HB2	1.96	0.47
22:V:50:PRO:HA	22:V:53:ARG:NH1	2.29	0.47
22:V:79:TYR:OH	31:Bj:4:ASN:ND2	2.47	0.47
24:X:176:ASN:OD1	24:X:180:ARG:NH1	2.47	0.47
24:X:373:LEU:HB3	24:X:374:HIS:CD2	2.49	0.47
27:BA:105:PRO:HG2	27:BA:135:PHE:HE2	1.78	0.47
30:Aw:45:ARG:HE	36:At:21:LEU:HD12	1.79	0.47
31:Bj:143:ASN:HB3	31:Bj:158:LYS:NZ	2.29	0.47
32:An:129:LYS:CG	32:An:182:VAL:HG12	2.44	0.47
32:An:212:HIS:HE1	60:Ah:96:TYR:CZ	2.32	0.47
41:Au:24:ARG:NE	41:Au:26:TYR:OH	2.47	0.47
46:Aj:138:ALA:HA	46:Aj:141:ARG:HB2	1.95	0.47
48:Am:75:PHE:CE2	48:Am:247:GLU:HG3	2.49	0.47
48:Am:76:TYR:CD2	48:Am:253:PRO:HD3	2.49	0.47
48:Am:281:ARG:HA	48:Am:284:VAL:HG22	1.95	0.47
49:Aq:120:PHE:HD2	49:Aq:133:ILE:HG22	1.76	0.47
51:Ak:167:LEU:HG	51:Ak:168:GLU:H	1.77	0.47
54:BF:104:ARG:O	60:Ah:200:GLN:HB2	2.14	0.47
55:Av:155:ARG:NE	71:1:459:A:N7	2.61	0.47
59:Ac:118:PHE:HB3	59:Ac:120:LEU:HD13	1.96	0.47
60:Ah:139:GLU:HB2	60:Ah:147:MET:HG3	1.95	0.47
62:Ay:38:ARG:NH1	71:1:749:U:H1'	2.28	0.47
64:Ax:94:ASP:O	64:Ax:95:GLN:NE2	2.47	0.47
65:BL:218:THR:H	65:BL:221:LYS:NZ	2.11	0.47
66:BO:134:ARG:NH1	66:BO:148:ASP:O	2.47	0.47
71:1:574:A:O2'	71:1:575:G:H8	1.97	0.47
71:1:752:U:C4	71:1:753:U:C2	3.01	0.47
1:A:394:THR:O	1:A:398:VAL:HG23	2.15	0.47
8:H:61:GLN:HG2	8:H:114:TYR:CE2	2.49	0.47
11:K:114:CYS:SG	11:K:115:ALA:N	2.88	0.47
12:L:39:VAL:HG22	12:L:117:ARG:HD2	1.96	0.47
13:M:41:GLN:NE2	15:O:44:LEU:HD12	2.29	0.47
18:R:18:ASP:OD1	18:R:19:GLY:N	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:34:ILE:HB	21:U:37:ASN:HB2	1.94	0.47
24:X:486:MET:CB	53:Ad:223:LEU:HD12	2.44	0.47
31:Bj:157:LYS:NZ	31:Bj:159:MET:SD	2.88	0.47
32:An:44:TRP:HB2	32:An:48:HIS:NE2	2.28	0.47
33:Al:117:VAL:HG23	33:Al:161:HIS:ND1	2.29	0.47
38:Ab:210:GLY:C	38:Ab:212:PRO:HD3	2.39	0.47
39:Ai:221:ASP:HB2	39:Ai:222:PRO:HD2	1.94	0.47
41:Au:50:ASP:O	41:Au:51:PHE:C	2.58	0.47
42:Aa:123:HIS:O	42:Aa:126:GLU:HB3	2.14	0.47
44:BM:321:LYS:HB3	44:BM:325:GLN:NE2	2.29	0.47
46:Aj:206:LYS:HB2	56:Af:143:ASP:OD2	2.14	0.47
49:Aq:124:VAL:HB	49:Aq:129:ARG:HG3	1.97	0.47
49:Aq:294:THR:HG22	71:1:961:A:N7	2.29	0.47
51:Ak:178:ASP:HB3	51:Ak:181:LEU:HB3	1.97	0.47
60:Ah:114:PHE:HD2	60:Ah:115:TYR:CD1	2.32	0.47
64:Ax:158:TYR:CD1	64:Ax:170:ALA:HB1	2.49	0.47
65:BL:86:ASP:OD1	65:BL:87:ILE:N	2.45	0.47
65:BL:119:ARG:NH1	65:BL:132:HIS:CB	2.75	0.47
65:BL:334:ILE:HB	65:BL:336:PRO:CD	2.43	0.47
71:1:649:A:H3'	71:1:1093:G:H21	1.80	0.47
71:1:652:A:H4'	71:1:653:A:OP2	2.14	0.47
71:1:749:U:C5	71:1:750:U:C4	3.01	0.47
71:1:839:A:N7	71:1:856:A:H2	2.11	0.47
3:C:120:ASN:HB3	3:C:129:TRP:HZ3	1.79	0.47
4:D:124:LEU:HA	4:D:127:LEU:HB2	1.96	0.47
10:J:64:TYR:CD2	10:J:64:TYR:C	2.92	0.47
13:M:97:TRP:O	13:M:97:TRP:HE3	1.91	0.47
13:M:98:ALA:HB2	13:M:111:TRP:HD1	1.79	0.47
15:O:311:GLN:NE2	34:BI:250:ALA:HB2	2.30	0.47
25:Y:132:LEU:HD23	51:Ak:281:MET:SD	2.54	0.47
31:Bj:74:ARG:O	59:Ac:84:ARG:NH2	2.36	0.47
32:An:45:GLU:C	32:An:47:GLY:H	2.22	0.47
32:An:87:ASN:HB3	60:Ah:92:TRP:CZ2	2.49	0.47
35:Az:89:PRO:HG2	35:Az:92:TYR:HD2	1.79	0.47
38:Ab:11:ARG:HH11	38:Ab:44:LYS:NZ	2.12	0.47
41:Au:39:ASN:C	41:Au:39:ASN:OD1	2.56	0.47
41:Au:55:SER:HB2	41:Au:97:ALA:N	2.29	0.47
41:Au:139:ARG:O	41:Au:143:GLN:N	2.47	0.47
43:Ao:181:TRP:CH2	43:Ao:191:LEU:HB3	2.49	0.47
44:BM:140:ARG:HG2	44:BM:271:ARG:CZ	2.43	0.47
44:BM:188:LYS:C	44:BM:191:GLU:HG2	2.39	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:Am:264:ARG:NH2	48:Am:308:GLY:H	2.07	0.47
51:Ak:276:GLU:OE2	51:Ak:277:PRO:HD2	2.13	0.47
56:Af:81:TYR:HB3	56:Af:85:ARG:NH1	2.29	0.47
60:Ah:299:SER:HB3	60:Ah:470:LYS:HD3	1.95	0.47
61:BD:44:TYR:OH	61:BD:48:GLN:NE2	2.47	0.47
62:Ay:64:ILE:HG23	71:1:697:A:C5'	2.44	0.47
66:BO:77:VAL:CB	66:BO:104:GLN:HG3	2.43	0.47
66:BO:101:VAL:O	66:BO:103:VAL:HG13	2.13	0.47
71:1:40:C:H4'	71:1:41:A:H8	1.79	0.47
71:1:131:U:H1'	71:1:132:U:OP1	2.14	0.47
71:1:345:A:H62	71:1:379:U:C5'	2.27	0.47
71:1:408:U:H2'	71:1:409:A:H8	1.80	0.47
71:1:444:A:C1'	71:1:458:A:H8	2.27	0.47
71:1:487:U:O2'	71:1:488:U:OP1	2.28	0.47
71:1:923:A:H1'	71:1:979:G:C8	2.48	0.47
1:A:271:ARG:N	71:1:605:U:OP1	2.47	0.47
3:C:196:GLU:HA	62:Ay:138:GLN:HB2	1.96	0.47
6:F:91:TYR:HD2	58:Ae:65:PRO:HD3	1.79	0.47
7:G:28:VAL:HG13	19:S:322:ILE:HB	1.96	0.47
7:G:69:ARG:HB2	71:1:497:A:H5''	1.97	0.47
7:G:182:TRP:HA	53:Ad:139:VAL:HG11	1.96	0.47
9:I:258:TRP:N	9:I:258:TRP:CD1	2.82	0.47
10:J:83:THR:HG1	57:As:63:HIS:CE1	2.27	0.47
12:L:123:TYR:CZ	12:L:125:PRO:HB3	2.49	0.47
13:M:190:LYS:HD3	13:M:192:LEU:HD23	1.97	0.47
15:O:98:ASP:OD2	54:BF:66:ALA:HB2	2.14	0.47
16:P:35:ILE:O	16:P:38:THR:OG1	2.30	0.47
22:V:66:ARG:H	71:1:967:A:P	2.37	0.47
26:Z:115:PRO:HA	26:Z:118:HIS:CD2	2.49	0.47
27:BA:50:ALA:HA	27:BA:53:LYS:HB2	1.95	0.47
33:Al:39:GLN:OE1	33:Al:39:GLN:CA	2.62	0.47
33:Al:192:LEU:HB2	44:BM:190:LYS:HZ2	1.78	0.47
36:At:17:ARG:HG3	71:1:110:U:O2'	2.15	0.47
38:Ab:183:LYS:HA	38:Ab:187:MET:CG	2.44	0.47
41:Au:127:ARG:HA	41:Au:130:TYR:HB3	1.96	0.47
43:Ao:143:ALA:HB3	47:BH:224:LEU:HD21	1.94	0.47
48:Am:48:HIS:O	48:Am:50:ARG:N	2.47	0.47
51:Ak:91:TRP:O	51:Ak:91:TRP:CG	2.67	0.47
60:Ah:66:LYS:O	60:Ah:67:ARG:CB	2.61	0.47
65:BL:324:PRO:HG2	71:1:710:A:OP1	2.14	0.47
66:BO:139:ARG:NH1	66:BO:143:LEU:HD23	2.23	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:BG:1330:SER:O	67:BG:1333:ILE:HG23	2.15	0.47
71:1:556:A:H5'	71:1:557:A:H5'	1.96	0.47
71:1:924:U:O2'	71:1:925:G:C8	2.58	0.47
2:B:194:LYS:HB3	2:B:194:LYS:HZ3	1.80	0.47
5:E:142:ARG:HG3	5:E:144:ASN:OD1	2.14	0.47
6:F:28:LYS:HE3	42:Aa:60:MET:HE1	1.97	0.47
6:F:113:ARG:HD2	71:1:151:G:H5''	1.97	0.47
8:H:61:GLN:HG3	8:H:112:PHE:O	2.14	0.47
17:Q:193:SER:HB3	17:Q:195:GLU:OE1	2.15	0.47
21:U:77:LEU:HD12	21:U:81:THR:HG21	1.97	0.47
22:V:12:ALA:HB3	22:V:17:ILE:HG21	1.95	0.47
22:V:53:ARG:HE	22:V:109:ARG:NH2	2.11	0.47
26:Z:91:ASN:O	26:Z:95:GLN:HB2	2.13	0.47
28:UA:86:UNK:O	28:UA:88:UNK:N	2.47	0.47
29:BB:112:LEU:HD11	58:Ae:10:PHE:CD1	2.48	0.47
32:An:41:ILE:HD13	32:An:44:TRP:HD1	1.80	0.47
32:An:58:ARG:HG3	65:BL:108:LYS:HZ1	1.79	0.47
32:An:264:HIS:O	32:An:264:HIS:CG	2.67	0.47
35:Az:119:THR:O	35:Az:122:LYS:HG3	2.15	0.47
39:Ai:279:ILE:HA	39:Ai:283:TYR:CD2	2.47	0.47
44:BM:119:THR:O	44:BM:121:ARG:N	2.48	0.47
45:Ar:111:PHE:CZ	45:Ar:134:LYS:HG3	2.50	0.47
45:Ar:126:LEU:HB2	45:Ar:159:ILE:HB	1.96	0.47
47:BH:69:TYR:CE1	71:1:360:U:C2	3.02	0.47
48:Am:187:LEU:HD13	48:Am:229:LEU:HG	1.95	0.47
49:Aq:294:THR:O	49:Aq:297:SER:OG	2.32	0.47
51:Ak:12:LEU:HD23	51:Ak:12:LEU:HA	1.75	0.47
52:BP:156:ARG:NH2	71:1:420:A:OP2	2.48	0.47
53:Ad:66:TYR:OH	53:Ad:78:LEU:HB3	2.14	0.47
71:1:48:U:N3	71:1:130:U:H5	2.12	0.47
71:1:90:A:H2'	71:1:90:A:N3	2.28	0.47
71:1:143:A:H2'	71:1:144:U:C5	2.50	0.47
71:1:433:G:O2'	71:1:434:U:P	2.73	0.47
71:1:553:A:C2'	71:1:554:G:H5'	2.45	0.47
1:A:182:ALA:HB3	1:A:208:VAL:HG12	1.97	0.47
3:C:123:ASP:OD1	3:C:124:GLU:N	2.48	0.47
5:E:66:PRO:N	5:E:67:PRO:HD2	2.29	0.47
5:E:236:ALA:HB1	5:E:237:PRO:HD2	1.96	0.47
6:F:4:GLN:O	6:F:8:ARG:NH2	2.44	0.47
8:H:30:ARG:O	8:H:115:LYS:NZ	2.42	0.47
11:K:152:LEU:HD23	11:K:180:MET:HE3	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:254:LEU:C	13:M:256:THR:H	2.22	0.47
16:P:161:ARG:HD2	16:P:181:ARG:HE	1.80	0.47
17:Q:221:GLU:HA	17:Q:224:LYS:HB2	1.96	0.47
25:Y:235:MET:SD	31:Bj:156:PRO:HG3	2.54	0.47
31:Bj:34:PRO:HG2	31:Bj:37:TYR:HB2	1.96	0.47
32:An:134:ILE:HG12	32:An:169:PHE:HE1	1.80	0.47
32:An:264:HIS:NE2	60:Ah:68:ILE:HB	2.29	0.47
33:Al:175:TYR:CD1	44:BM:139:PRO:HB2	2.49	0.47
39:Ai:140:GLU:OE1	39:Ai:141:ARG:N	2.48	0.47
39:Ai:296:HIS:ND1	39:Ai:304:HIS:HB2	2.29	0.47
43:Ao:32:TYR:CD2	43:Ao:33:LEU:HD13	2.50	0.47
44:BM:247:PHE:HA	44:BM:266:TRP:CH2	2.49	0.47
45:Ar:97:TRP:CZ2	45:Ar:174:ALA:HB2	2.50	0.47
46:Aj:312:GLU:HA	46:Aj:315:ALA:HB3	1.97	0.47
48:Am:111:ILE:HG23	48:Am:129:VAL:HG13	1.96	0.47
48:Am:169:GLU:OE1	48:Am:169:GLU:N	2.48	0.47
49:Aq:3:TYR:O	49:Aq:5:GLY:N	2.47	0.47
49:Aq:32:TYR:HB2	53:Ad:36:ASP:HA	1.95	0.47
51:Ak:24:VAL:HG13	51:Ak:25:ALA:N	2.30	0.47
71:1:52:U:H3'	71:1:53:A:H5''	1.96	0.47
71:1:781:A:H1'	71:1:782:U:OP1	2.13	0.47
71:1:880:A:N1	71:1:987:A:N1	2.63	0.47
1:A:45:LYS:HD3	58:Ae:67:ARG:HD2	1.95	0.47
1:A:169:ARG:HH22	29:BB:25:LEU:HD22	1.80	0.47
2:B:260:SER:HB2	36:At:22:TRP:HE1	1.80	0.47
3:C:136:THR:HG21	3:C:172:HIS:HE1	1.80	0.47
4:D:60:PRO:HG2	4:D:62:GLN:HG3	1.96	0.47
5:E:151:LEU:HG	5:E:191:ILE:HD12	1.97	0.47
6:F:57:ILE:HG12	6:F:128:TYR:O	2.14	0.47
6:F:147:ASP:OD1	6:F:148:THR:N	2.48	0.47
7:G:82:TRP:HE1	46:Aj:428:PRO:HG3	1.80	0.47
7:G:325:THR:OG1	7:G:327:ARG:O	2.29	0.47
8:H:26:ILE:HG23	8:H:28:GLN:HG2	1.96	0.47
8:H:93:VAL:C	8:H:95:GLN:H	2.17	0.47
8:H:94:VAL:HG12	8:H:94:VAL:O	2.14	0.47
9:I:251:THR:OG1	9:I:252:GLU:OE1	2.31	0.47
10:J:58:ILE:HG13	10:J:58:ILE:O	2.15	0.47
11:K:31:GLU:HG2	15:O:38:LYS:HD3	1.97	0.47
12:L:93:VAL:HG12	42:Aa:187:GLY:O	2.15	0.47
13:M:37:TRP:CH2	13:M:47:PRO:HG3	2.50	0.47
13:M:91:ARG:HH12	46:Aj:475:ARG:NE	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:196:ARG:HD3	71:1:563:U:OP1	2.15	0.47
16:P:30:LYS:HB3	16:P:48:GLU:O	2.15	0.47
16:P:51:ARG:HG3	16:P:53:PHE:CE2	2.49	0.47
16:P:135:HIS:ND1	43:Ao:229:GLU:OE2	2.48	0.47
17:Q:122:MET:HB3	17:Q:126:ALA:HB3	1.96	0.47
17:Q:161:LEU:HD23	35:Az:92:TYR:CD1	2.50	0.47
18:R:470:HIS:HE1	36:At:47:GLY:HA2	1.78	0.47
21:U:29:VAL:O	21:U:30:ILE:HB	2.13	0.47
24:X:181:LEU:HD22	24:X:188:LYS:HA	1.96	0.47
24:X:352:LYS:HB3	24:X:353:PRO:CD	2.35	0.47
27:BA:113:MET:HG2	27:BA:114:PHE:N	2.27	0.47
27:BA:117:ALA:HB3	27:BA:123:ALA:HB2	1.97	0.47
30:Aw:184:ILE:HG21	46:Aj:124:LEU:HB3	1.97	0.47
31:Bj:48:LYS:O	63:Ag:191:GLU:HG2	2.15	0.47
32:An:46:GLN:HA	32:An:49:SER:HB3	1.96	0.47
32:An:50:HIS:CE1	71:1:289:A:H5"	2.50	0.47
32:An:144:GLU:OE2	32:An:146:ARG:HG2	2.14	0.47
33:Al:150:VAL:O	33:Al:155:LEU:HD13	2.14	0.47
33:Al:156:ILE:HD11	33:Al:244:TYR:HE1	1.79	0.47
37:BC:106:ALA:O	37:BC:107:GLU:HG3	2.14	0.47
39:Ai:155:GLU:OE1	39:Ai:171:GLN:NE2	2.48	0.47
40:Ap:147:SER:HB3	40:Ap:150:ARG:HG2	1.97	0.47
41:Au:97:ALA:C	41:Au:99:HIS:H	2.23	0.47
42:Aa:146:ILE:HD11	42:Aa:153:GLU:OE2	2.14	0.47
43:Ao:215:ILE:HG23	52:BP:89:VAL:HG12	1.97	0.47
44:BM:233:VAL:HA	44:BM:236:LEU:HG	1.97	0.47
45:Ar:50:TYR:O	45:Ar:54:GLY:N	2.48	0.47
45:Ar:78:ASP:OD1	45:Ar:79:ARG:N	2.48	0.47
46:Aj:304:ALA:HB1	46:Aj:377:ARG:HD2	1.95	0.47
46:Aj:409:HIS:CE1	53:Ad:173:MET:HG3	2.50	0.47
47:BH:201:GLU:O	47:BH:204:GLN:N	2.48	0.47
47:BH:210:GLU:HG3	47:BH:211:ARG:H	1.79	0.47
47:BH:229:TYR:CD2	52:BP:59:ARG:HD2	2.50	0.47
48:Am:15:HIS:CE1	66:BO:40:LYS:HD3	2.49	0.47
48:Am:47:VAL:HG11	58:Ae:68:TRP:NE1	2.29	0.47
48:Am:127:GLU:OE1	48:Am:127:GLU:N	2.48	0.47
50:BE:57:THR:HG23	50:BE:58:THR:H	1.78	0.47
53:Ad:224:ASP:O	53:Ad:228:VAL:HG23	2.14	0.47
56:Af:95:SER:OG	56:Af:97:GLU:OE1	2.30	0.47
60:Ah:187:GLU:N	60:Ah:195:THR:O	2.48	0.47
60:Ah:202:MET:O	60:Ah:205:ALA:N	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:Ah:307:PRO:HB2	60:Ah:310:SER:OG	2.14	0.47
61:BD:54:TYR:HB2	61:BD:75:VAL:HG21	1.96	0.47
65:BL:111:SER:OG	65:BL:301:ARG:NH2	2.42	0.47
65:BL:188:THR:HB	65:BL:224:HIS:HE1	1.79	0.47
66:BO:97:VAL:HB	66:BO:99:HIS:HE1	1.80	0.47
71:1:145:A:H3'	71:1:146:U:H5''	1.97	0.47
71:1:1097:A:O2'	71:1:1098:A:P	2.72	0.47
2:B:318:TYR:CE2	36:At:34:LYS:HE2	2.50	0.47
5:E:145:TYR:CD2	5:E:190:ALA:HB2	2.50	0.47
9:I:78:ILE:HD13	9:I:128:ALA:HB2	1.96	0.47
11:K:128:GLN:NE2	56:Af:86:GLN:OE1	2.48	0.47
13:M:196:HIS:HB3	13:M:238:ASP:O	2.14	0.47
14:N:169:HIS:CE1	14:N:220:VAL:HG22	2.50	0.47
15:O:306:ASN:ND2	35:Az:53:HIS:HB3	2.29	0.47
16:P:80:TYR:HD2	49:Aq:55:ASN:ND2	2.13	0.47
17:Q:117:TRP:HB3	60:Ah:57:LEU:HD22	1.96	0.47
18:R:207:LYS:NZ	18:R:314:ALA:H	2.12	0.47
19:S:243:THR:O	19:S:245:THR:HG23	2.15	0.47
25:Y:290:ARG:HD2	39:Ai:150:TYR:CE2	2.49	0.47
26:Z:76:ARG:HH21	26:Z:80:ARG:CZ	2.27	0.47
28:UA:81:UNK:CB	64:Ax:129:ARG:HG3	2.45	0.47
39:Ai:328:ASP:OD1	39:Ai:329:LEU:N	2.48	0.47
40:Ap:167:MET:HG2	40:Ap:175:HIS:ND1	2.30	0.47
41:Au:57:TRP:HB2	41:Au:86:TYR:HE2	1.78	0.47
41:Au:107:ARG:NH1	60:Ah:128:THR:HG22	2.30	0.47
43:Ao:87:VAL:HG23	43:Ao:88:ARG:H	1.77	0.47
44:BM:302:MET:HA	44:BM:305:ASP:HB2	1.97	0.47
53:Ad:122:ALA:C	53:Ad:124:PRO:HD3	2.39	0.47
55:Av:45:GLU:HA	55:Av:48:ARG:HB2	1.97	0.47
63:Ag:96:THR:HG22	63:Ag:124:LEU:HD21	1.96	0.47
67:BG:1319:SER:O	67:BG:1323:LEU:HD13	2.15	0.47
71:1:798:A:H2	71:1:799:A:C6	2.33	0.47
71:1:837:U:H2'	71:1:838:A:C8	2.50	0.47
71:1:904:A:H4'	71:1:906:C:OP1	2.14	0.47
2:B:52:TYR:HD1	36:At:147:LEU:HD23	1.80	0.47
2:B:169:ASN:O	2:B:175:GLY:HA3	2.15	0.47
7:G:156:ARG:O	22:V:63:ARG:NH2	2.47	0.47
11:K:46:GLN:OE1	42:Aa:194:ASN:ND2	2.48	0.47
12:L:90:ARG:HB2	38:Ab:95:HIS:C	2.40	0.47
17:Q:75:VAL:HG23	17:Q:121:PRO:O	2.15	0.47
20:T:31:ARG:HD3	71:1:834:A:N7	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:37:ASN:CG	21:U:60:ARG:HG2	2.39	0.47
25:Y:63:ASP:OD1	25:Y:64:VAL:N	2.48	0.47
25:Y:231:GLN:NE2	25:Y:234:ILE:HD11	2.30	0.47
27:BA:52:MET:O	27:BA:56:LEU:N	2.45	0.47
30:Aw:6:VAL:CG1	30:Aw:96:ARG:HG2	2.45	0.47
30:Aw:49:VAL:CG1	36:At:19:THR:HA	2.44	0.47
30:Aw:58:PHE:CE2	36:At:46:TYR:HB2	2.50	0.47
34:BI:237:TRP:CD1	34:BI:237:TRP:H	2.32	0.47
40:Ap:43:GLU:OE1	40:Ap:43:GLU:N	2.47	0.47
44:BM:69:LEU:HD11	44:BM:371:TRP:CE3	2.49	0.47
45:Ar:113:ARG:HD3	45:Ar:113:ARG:HA	1.57	0.47
49:Aq:2:LEU:HD23	49:Aq:2:LEU:H	1.78	0.47
52:BP:163:ARG:HH11	55:Av:156:MET:HE1	1.80	0.47
61:BD:13:CYS:SG	61:BD:15:ASN:N	2.82	0.47
66:BO:96:ALA:HB2	66:BO:178:TYR:OH	2.15	0.47
71:1:168:U:H2'	71:1:169:U:C6	2.49	0.47
71:1:423:G:H2'	71:1:423:G:N3	2.30	0.47
71:1:559:U:C2'	71:1:560:U:H5''	2.45	0.47
71:1:1063:U:H4'	71:1:1064:G:N2	2.30	0.47
71:1:1113:G:C5	71:1:1114:A:C2	3.03	0.47
1:A:158:PHE:CZ	1:A:316:ILE:HG21	2.50	0.47
2:B:199:SER:O	2:B:203:LEU:HD12	2.15	0.47
3:C:160:GLU:O	3:C:164:LEU:HG	2.15	0.47
7:G:297:TRP:CD1	7:G:297:TRP:H	2.32	0.47
9:I:79:ARG:HD2	9:I:124:MET:HE3	1.96	0.47
10:J:52:GLN:HE21	10:J:75:VAL:HG21	1.80	0.47
18:R:448:ASP:OD1	18:R:451:CYS:N	2.46	0.47
18:R:455:LYS:CG	71:1:66:U:H3	2.22	0.47
24:X:357:THR:HG23	24:X:358:GLU:N	2.30	0.47
25:Y:127:TYR:HE2	59:Ac:25:PHE:HE2	1.63	0.47
42:Aa:36:PHE:C	42:Aa:38:ARG:N	2.71	0.47
46:Aj:345:GLU:H	46:Aj:345:GLU:CD	2.22	0.47
48:Am:143:ASP:OD1	48:Am:144:HIS:N	2.44	0.47
48:Am:212:MET:HE3	48:Am:212:MET:HB2	1.87	0.47
49:Aq:325:LEU:HD23	49:Aq:325:LEU:HA	1.75	0.47
49:Aq:337:PRO:O	49:Aq:339:ARG:N	2.48	0.47
56:Af:81:TYR:OH	56:Af:88:ARG:NH1	2.47	0.47
57:As:72:PRO:O	57:As:99:GLU:HG3	2.14	0.47
63:Ag:219:MET:O	63:Ag:224:THR:HB	2.14	0.47
71:1:58:A:C4	71:1:114:A:C2	3.03	0.47
71:1:58:A:HO2'	71:1:112:U:HO2'	1.56	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:1:303:U:HO2'	71:1:304:G:P	2.38	0.47
71:1:862:A:H61	71:1:1105:G:H1	1.63	0.47
71:1:933:G:C2'	71:1:934:G:C8	2.95	0.47
1:A:302:ASP:OD1	1:A:302:ASP:N	2.48	0.46
2:B:66:GLU:CD	2:B:72:HIS:HB2	2.41	0.46
2:B:342:THR:OG1	30:Aw:38:ARG:NH1	2.47	0.46
4:D:94:SER:HB2	43:Ao:281:MET:HA	1.97	0.46
5:E:214:SER:HB2	55:Av:109:PHE:CD2	2.50	0.46
7:G:42:ALA:HB2	19:S:336:GLN:HB3	1.97	0.46
7:G:82:TRP:CD1	46:Aj:331:ARG:HH12	2.32	0.46
7:G:110:HIS:CE1	13:M:20:ASN:HB3	2.51	0.46
8:H:11:LEU:HD23	8:H:11:LEU:H	1.80	0.46
8:H:53:THR:O	8:H:119:GLY:N	2.32	0.46
9:I:113:GLN:O	9:I:116:ALA:N	2.48	0.46
10:J:29:ILE:O	10:J:33:LEU:N	2.37	0.46
13:M:17:LYS:HE2	13:M:33:ALA:O	2.14	0.46
13:M:46:ARG:NE	71:1:517:U:O2	2.48	0.46
18:R:212:SER:OG	36:At:104:ARG:O	2.27	0.46
18:R:218:SER:C	18:R:263:ARG:HH22	2.22	0.46
18:R:244:GLU:OE1	18:R:244:GLU:N	2.45	0.46
21:U:18:LEU:CG	21:U:19:LYS:H	2.28	0.46
24:X:502:MET:HA	24:X:508:PRO:HA	1.97	0.46
31:Bj:143:ASN:CG	31:Bj:144:PRO:HD3	2.40	0.46
33:Al:126:SER:HA	33:Al:166:TYR:H	1.81	0.46
38:Ab:11:ARG:HE	38:Ab:44:LYS:HE2	1.79	0.46
39:Ai:431:LEU:HD12	39:Ai:459:THR:HG21	1.97	0.46
41:Au:60:ASP:C	41:Au:62:ARG:N	2.73	0.46
41:Au:93:HIS:CE1	41:Au:94:LYS:HE3	2.50	0.46
44:BM:232:ALA:O	44:BM:236:LEU:N	2.45	0.46
44:BM:255:ARG:HB3	44:BM:256:PRO:HD3	1.97	0.46
45:Ar:174:ALA:HB1	45:Ar:179:ILE:CG2	2.45	0.46
48:Am:13:TRP:CZ3	48:Am:15:HIS:CE1	3.03	0.46
48:Am:90:TRP:CE2	48:Am:128:ARG:HG2	2.51	0.46
51:Ak:98:SER:O	51:Ak:101:ALA:N	2.34	0.46
51:Ak:121:LEU:HD11	51:Ak:272:MET:HE1	1.96	0.46
55:Av:151:LYS:HE2	71:1:458:A:H2'	1.96	0.46
59:Ac:36:GLN:OE1	59:Ac:195:ARG:HB3	2.15	0.46
59:Ac:47:ARG:H	59:Ac:47:ARG:CD	2.26	0.46
59:Ac:174:GLN:HA	59:Ac:181:TRP:HA	1.97	0.46
60:Ah:232:ILE:HD13	60:Ah:409:TYR:CE1	2.49	0.46
65:BL:113:ARG:HH22	71:1:289:A:H1'	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:BL:123:ASN:CG	65:BL:124:PRO:HD2	2.41	0.46
66:BO:101:VAL:O	66:BO:101:VAL:HG13	2.15	0.46
66:BO:136:THR:O	66:BO:136:THR:OG1	2.32	0.46
71:1:442:U:H4'	71:1:443:G:H8	1.80	0.46
71:1:476:A:O2'	71:1:477:U:OP1	2.33	0.46
71:1:911:A:N1	71:1:912:U:C2	2.82	0.46
1:A:125:MET:HE3	1:A:126:PHE:CE2	2.50	0.46
2:B:312:ILE:HD13	36:At:36:LEU:CD1	2.45	0.46
3:C:101:GLU:HG2	61:BD:45:HIS:CG	2.50	0.46
4:D:65:ARG:NH2	58:Ae:226:ASP:OD1	2.42	0.46
7:G:75:THR:C	38:Ab:75:SER:HB2	2.39	0.46
8:H:99:GLU:HG3	71:1:390:A:C4	2.50	0.46
12:L:71:ARG:HD2	42:Aa:103:GLY:O	2.15	0.46
14:N:149:VAL:O	18:R:58:ARG:NH2	2.44	0.46
16:P:43:VAL:HA	49:Aq:55:ASN:HD21	1.79	0.46
16:P:161:ARG:HD2	16:P:181:ARG:HB2	1.98	0.46
21:U:28:LYS:HZ3	21:U:28:LYS:HB2	1.79	0.46
22:V:75:ASP:OD2	31:Bj:2:VAL:N	2.48	0.46
24:X:228:GLU:OE1	24:X:228:GLU:N	2.48	0.46
24:X:293:ASN:H	24:X:344:GLN:HE22	1.63	0.46
24:X:328:PRO:HD2	24:X:422:VAL:HG21	1.97	0.46
25:Y:234:ILE:HG13	25:Y:235:MET:N	2.30	0.46
31:Bj:76:PRO:HG3	31:Bj:96:GLU:OE1	2.15	0.46
31:Bj:86:THR:HG23	31:Bj:108:ASP:HB2	1.97	0.46
32:An:263:HIS:CG	60:Ah:71:ARG:HB2	2.50	0.46
38:Ab:244:ALA:HB1	55:Av:148:ARG:NH2	2.30	0.46
39:Ai:133:MET:SD	39:Ai:133:MET:N	2.85	0.46
44:BM:242:THR:H	44:BM:276:HIS:CE1	2.33	0.46
47:BH:168:ILE:O	47:BH:172:VAL:HG23	2.15	0.46
48:Am:319:TYR:CD2	71:1:482:C:C4	3.00	0.46
49:Aq:32:TYR:HB3	53:Ad:36:ASP:HB3	1.96	0.46
55:Av:60:ARG:HB3	55:Av:60:ARG:CZ	2.45	0.46
60:Ah:111:SER:O	60:Ah:111:SER:OG	2.32	0.46
71:1:295:G:N1	71:1:296:U:O2	2.48	0.46
1:A:169:ARG:HH22	29:BB:25:LEU:CD2	2.28	0.46
2:B:434:MET:HG3	7:G:275:MET:HB3	1.97	0.46
6:F:84:ARG:HE	6:F:84:ARG:HB3	1.50	0.46
8:H:146:ARG:NH1	52:BP:171:PHE:O	2.48	0.46
9:I:148:ARG:HA	9:I:161:TYR:HA	1.97	0.46
14:N:198:ARG:NH1	71:1:561:U:OP1	2.40	0.46
16:P:49:GLN:NE2	16:P:64:TYR:O	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:170:ASN:HD22	32:An:280:GLU:HG2	1.80	0.46
25:Y:147:VAL:HG12	25:Y:149:GLN:H	1.80	0.46
28:UA:27:UNK:O	28:UA:31:UNK:N	2.49	0.46
32:An:198:GLU:OE1	60:Ah:91:ASN:HB2	2.16	0.46
39:Ai:218:HIS:CE1	49:Aq:139:ASP:HB3	2.50	0.46
41:Au:54:PRO:HB3	41:Au:59:SER:CB	2.45	0.46
44:BM:125:GLU:O	44:BM:129:LEU:HB2	2.14	0.46
46:Aj:293:GLU:OE1	56:Af:130:TYR:OH	2.33	0.46
47:BH:80:PRO:HD2	47:BH:98:LYS:HB3	1.97	0.46
47:BH:80:PRO:HA	47:BH:188:TRP:HA	1.96	0.46
47:BH:88:PHE:CG	47:BH:89:VAL:HG13	2.50	0.46
50:BE:65:PHE:HZ	50:BE:67:LYS:HE3	1.78	0.46
53:Ad:32:ARG:O	53:Ad:32:ARG:HD2	2.16	0.46
55:Av:157:SER:O	71:1:471:A:O2'	2.14	0.46
58:Ae:214:PHE:CE2	58:Ae:219:MET:HB2	2.50	0.46
58:Ae:232:ILE:O	58:Ae:244:PRO:HD2	2.15	0.46
59:Ac:171:LEU:HB2	59:Ac:258:TRP:CZ3	2.50	0.46
64:Ax:90:THR:HB	64:Ax:200:PHE:HD1	1.79	0.46
64:Ax:105:CYS:HB3	64:Ax:109:ASP:N	2.27	0.46
65:BL:218:THR:OG1	65:BL:221:LYS:NZ	2.35	0.46
65:BL:310:ARG:O	65:BL:313:SER:N	2.24	0.46
65:BL:358:ARG:NH2	71:1:663:U:OP2	2.48	0.46
66:BO:47:TRP:H	71:1:814:A:H2	1.63	0.46
71:1:47:A:H61	71:1:131:U:H3	1.62	0.46
71:1:171:U:H3	71:1:532:U:H3	1.64	0.46
71:1:343:A:O2'	71:1:344:U:OP1	2.26	0.46
71:1:649:A:H5''	71:1:1075:A:H5'	1.98	0.46
71:1:702:U:H5'	71:1:703:U:OP2	2.15	0.46
71:1:847:A:O2'	71:1:848:U:H5''	2.15	0.46
1:A:40:SER:OG	29:BB:75:VAL:HG22	2.16	0.46
3:C:68:GLU:HA	63:Ag:115:GLY:O	2.15	0.46
5:E:339:SER:HB3	38:Ab:189:ARG:HE	1.80	0.46
7:G:282:ARG:NH2	7:G:368:ARG:HH12	2.13	0.46
8:H:167:PHE:HB3	45:Ar:166:TRP:CZ2	2.49	0.46
11:K:168:LEU:HD12	11:K:179:TRP:CE3	2.50	0.46
13:M:181:GLU:O	13:M:185:GLN:HB2	2.15	0.46
14:N:122:PRO:HG2	14:N:123:HIS:CE1	2.50	0.46
15:O:310:MET:SD	35:Az:60:HIS:CD2	3.08	0.46
24:X:242:GLU:O	24:X:245:ASP:HB2	2.15	0.46
25:Y:177:PHE:C	25:Y:179:TYR:H	2.23	0.46
29:BB:111:PHE:CD1	29:BB:112:LEU:N	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:An:180:ASP:HA	32:An:184:GLU:HB2	1.97	0.46
33:Al:38:VAL:O	33:Al:38:VAL:CG2	2.63	0.46
33:Al:71:PHE:HD2	62:Ay:145:PRO:HA	1.80	0.46
33:Al:156:ILE:HG22	33:Al:157:PRO:HD3	1.96	0.46
33:Al:195:VAL:HG13	33:Al:210:VAL:HG21	1.97	0.46
37:BC:54:MET:O	37:BC:56:LEU:N	2.49	0.46
38:Ab:55:SER:OG	38:Ab:72:ARG:HD2	2.15	0.46
51:Ak:66:SER:HB2	51:Ak:71:ASN:C	2.41	0.46
51:Ak:139:ARG:NE	51:Ak:197:GLY:O	2.43	0.46
52:BP:99:VAL:HG23	52:BP:99:VAL:O	2.16	0.46
59:Ac:286:ASP:OD1	59:Ac:287:GLY:N	2.48	0.46
63:Ag:120:ASN:HB3	63:Ag:123:THR:HB	1.96	0.46
65:BL:237:CYS:SG	65:BL:260:PRO:HD3	2.55	0.46
71:1:138:A:H8	71:1:138:A:OP2	1.98	0.46
71:1:426:G:O2'	71:1:427:U:O5'	2.30	0.46
71:1:642:A:HO2'	71:1:643:G:P	2.33	0.46
71:1:880:A:H8	71:1:880:A:O5'	1.97	0.46
1:A:314:SER:O	1:A:314:SER:OG	2.33	0.46
5:E:95:LYS:HB2	5:E:95:LYS:HE3	1.79	0.46
5:E:218:ARG:HB3	55:Av:109:PHE:HD2	1.80	0.46
6:F:22:GLN:HA	6:F:61:VAL:O	2.15	0.46
7:G:57:PHE:CD2	52:BP:29:PRO:HD2	2.51	0.46
8:H:164:TYR:HA	45:Ar:168:TRP:CZ2	2.50	0.46
9:I:98:ASP:HA	9:I:143:TYR:HD2	1.81	0.46
9:I:99:HIS:O	9:I:103:LEU:N	2.48	0.46
10:J:100:MET:HE2	66:BO:147:PHE:CE2	2.51	0.46
11:K:35:GLY:O	11:K:39:ILE:HG22	2.15	0.46
11:K:168:LEU:HD23	11:K:168:LEU:HA	1.84	0.46
14:N:196:ARG:NH2	71:1:562:U:O2'	2.49	0.46
14:N:209:VAL:HG12	18:R:419:GLN:HE21	1.80	0.46
15:O:167:LEU:HD11	15:O:194:PRO:HG3	1.98	0.46
16:P:71:ARG:HD3	16:P:82:THR:HG21	1.97	0.46
17:Q:161:LEU:HD23	35:Az:92:TYR:HD1	1.80	0.46
24:X:401:GLU:OE1	24:X:402:ARG:NH2	2.49	0.46
24:X:482:PRO:HG2	71:1:203:A:N6	2.30	0.46
26:Z:62:PHE:HZ	26:Z:131:TRP:CH2	2.33	0.46
27:BA:24:VAL:HA	45:Ar:127:ARG:NH1	2.30	0.46
27:BA:118:SER:OG	27:BA:119:GLU:N	2.48	0.46
37:BC:3:ASP:O	37:BC:6:ALA:N	2.48	0.46
38:Ab:244:ALA:HB1	55:Av:148:ARG:HH21	1.80	0.46
48:Am:274:ASP:HA	48:Am:277:MET:HG2	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BF:23:PRO:O	54:BF:24:LEU:HG	2.15	0.46
55:Av:60:ARG:NH1	55:Av:122:GLU:OE1	2.48	0.46
56:Af:64:ARG:HH11	56:Af:65:VAL:HG23	1.79	0.46
57:As:51:ARG:HD3	57:As:53:THR:HG23	1.96	0.46
60:Ah:165:TYR:OH	60:Ah:274:ARG:NH1	2.40	0.46
63:Ag:68:LYS:HG2	63:Ag:122:TRP:CZ3	2.50	0.46
63:Ag:217:LYS:NZ	63:Ag:241:PHE:HB3	2.30	0.46
65:BL:187:LEU:O	65:BL:279:ALA:HB2	2.16	0.46
65:BL:247:LEU:HD11	65:BL:258:LEU:HB2	1.97	0.46
65:BL:335:HIS:CG	65:BL:335:HIS:O	2.66	0.46
71:1:432:U:N3	71:1:433:G:C6	2.84	0.46
71:1:433:G:O6	71:1:453:A:H2	1.99	0.46
71:1:457:C:H4'	71:1:458:A:OP1	2.15	0.46
71:1:698:G:H2'	71:1:699:A:C5'	2.46	0.46
71:1:855:A:C2	71:1:856:A:C4	3.03	0.46
3:C:100:LEU:HA	3:C:104:GLU:OE1	2.15	0.46
3:C:150:PRO:HB2	60:Ah:55:TYR:HE2	1.80	0.46
5:E:201:PRO:HD3	55:Av:53:PHE:CZ	2.50	0.46
6:F:155:TYR:CD2	6:F:155:TYR:O	2.69	0.46
7:G:331:ALA:N	7:G:335:GLU:OE1	2.25	0.46
9:I:60:ALA:HB3	9:I:66:ARG:HB2	1.98	0.46
9:I:97:ALA:HB3	9:I:144:ALA:HB2	1.97	0.46
11:K:170:ARG:H	11:K:174:ARG:HG3	1.81	0.46
14:N:112:VAL:HG11	18:R:399:VAL:HG11	1.97	0.46
18:R:200:ARG:NH2	35:Az:151:CYS:HB2	2.30	0.46
19:S:360:ARG:HG3	56:Af:155:ILE:HD11	1.97	0.46
20:T:80:GLN:HG3	20:T:81:ILE:N	2.30	0.46
21:U:33:LYS:C	21:U:34:ILE:HG13	2.40	0.46
21:U:73:TRP:CE3	31:Bj:15:PRO:HB3	2.50	0.46
24:X:467:SER:HB3	43:Ao:73:HIS:HA	1.96	0.46
25:Y:253:PHE:O	25:Y:257:GLU:N	2.36	0.46
26:Z:43:ILE:O	26:Z:43:ILE:HG22	2.16	0.46
27:BA:26:LYS:HB3	45:Ar:127:ARG:HH21	1.81	0.46
27:BA:113:MET:O	27:BA:114:PHE:CG	2.68	0.46
30:Aw:103:ILE:O	30:Aw:107:ILE:HG12	2.15	0.46
33:Al:84:ASP:HB2	33:Al:86:LEU:HD23	1.97	0.46
33:Al:130:TYR:HB3	33:Al:172:LEU:HD23	1.98	0.46
37:BC:132:ILE:O	37:BC:132:ILE:HG13	2.16	0.46
38:Ab:204:GLN:HB3	38:Ab:210:GLY:HA3	1.97	0.46
38:Ab:240:ARG:HE	43:Ao:259:THR:HA	1.81	0.46
39:Ai:74:LEU:HD12	39:Ai:98:CYS:HB2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:Ap:14:HIS:CE1	40:Ap:48:ALA:HB1	2.51	0.46
41:Au:103:GLN:HE21	41:Au:108:HIS:CE1	2.33	0.46
41:Au:129:ASP:OD1	60:Ah:248:HIS:NE2	2.48	0.46
43:Ao:89:PHE:HD1	53:Ad:34:MET:HG3	1.81	0.46
44:BM:253:CYS:HB3	44:BM:259:LYS:HB2	1.97	0.46
45:Ar:22:ILE:HD12	45:Ar:56:ALA:HB1	1.97	0.46
48:Am:110:THR:O	48:Am:114:LEU:HG	2.16	0.46
49:Aq:126:VAL:O	49:Aq:129:ARG:N	2.33	0.46
51:Ak:252:HIS:C	51:Ak:254:ASP:H	2.23	0.46
58:Ae:206:ARG:NH1	71:1:426:G:H21	2.14	0.46
60:Ah:159:TYR:HA	60:Ah:162:GLU:HG2	1.97	0.46
61:BD:50:ARG:HG2	61:BD:54:TYR:CE1	2.49	0.46
73:Ag:301:NAD:H8A	73:Ag:301:NAD:H51N	1.98	0.46
67:BG:1288:PRO:C	67:BG:1290:CYS:H	2.24	0.46
71:1:249:U:O2	71:1:249:U:O5'	2.34	0.46
71:1:764:U:O2'	71:1:765:A:OP1	2.33	0.46
71:1:869:A:O2'	71:1:870:A:P	2.73	0.46
71:1:935:G:C2	71:1:936:G:C4	3.04	0.46
71:1:1045:U:H3'	71:1:1045:U:O2	2.16	0.46
2:B:38:PHE:HB2	7:G:96:TYR:OH	2.16	0.46
2:B:417:VAL:HG23	2:B:418:GLU:OE1	2.15	0.46
5:E:176:ARG:O	5:E:179:ARG:HB3	2.16	0.46
5:E:254:GLN:O	5:E:258:GLY:N	2.47	0.46
6:F:80:GLY:N	71:1:1027:G:H5''	2.30	0.46
12:L:92:VAL:HB	42:Aa:191:THR:HG23	1.97	0.46
13:M:50:ILE:HD11	15:O:54:LEU:HD23	1.98	0.46
14:N:149:VAL:HG21	14:N:182:TYR:CE1	2.51	0.46
15:O:77:ASP:OD2	15:O:79:GLU:HB2	2.16	0.46
16:P:33:HIS:HB3	43:Ao:67:ARG:HH12	1.81	0.46
16:P:167:TYR:CD1	16:P:172:LEU:HD12	2.51	0.46
17:Q:169:LYS:HD3	32:An:243:PHE:CZ	2.50	0.46
17:Q:217:LYS:O	17:Q:221:GLU:HB2	2.16	0.46
18:R:421:ASN:ND2	18:R:448:ASP:HB3	2.31	0.46
18:R:423:SER:OG	18:R:424:ASN:N	2.49	0.46
18:R:479:ASP:OD1	18:R:480:ILE:N	2.49	0.46
20:T:34:ASN:OD1	20:T:34:ASN:N	2.48	0.46
22:V:32:PHE:O	22:V:98:LYS:NZ	2.40	0.46
25:Y:168:GLU:HB2	25:Y:177:PHE:CD1	2.50	0.46
31:Bj:10:THR:HG23	49:Aq:130:THR:HG21	1.98	0.46
39:Ai:116:GLU:OE1	39:Ai:238:HIS:NE2	2.49	0.46
41:Au:124:GLN:HA	41:Au:127:ARG:HG2	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BM:75:VAL:CG1	44:BM:79:ARG:HE	2.28	0.46
44:BM:153:HIS:HA	44:BM:156:LEU:HB3	1.97	0.46
44:BM:290:HIS:HB3	44:BM:326:TYR:CE1	2.51	0.46
44:BM:357:ALA:O	44:BM:361:LEU:HD12	2.15	0.46
44:BM:374:LEU:HD12	44:BM:374:LEU:HA	1.82	0.46
48:Am:263:HIS:CB	48:Am:302:PRO:HB2	2.46	0.46
52:BP:-10:ARG:HA	52:BP:-10:ARG:HD2	1.75	0.46
52:BP:11:GLY:HA2	52:BP:16:SER:OG	2.16	0.46
55:Av:57:TYR:CE1	55:Av:66:MET:HB2	2.50	0.46
60:Ah:439:LEU:HD13	60:Ah:452:MET:HE3	1.98	0.46
61:BD:86:LEU:HA	61:BD:93:ARG:HH21	1.81	0.46
65:BL:98:MET:HE2	65:BL:163:VAL:HG13	1.97	0.46
65:BL:183:VAL:HG23	65:BL:183:VAL:O	2.15	0.46
66:BO:91:CYS:C	66:BO:93:VAL:N	2.73	0.46
71:1:219:A:C8	71:1:319:A:N6	2.84	0.46
71:1:288:C:O2'	71:1:289:A:O5'	2.33	0.46
71:1:511:A:O2'	71:1:512:A:OP2	2.28	0.46
71:1:540:U:H5	71:1:541:U:C2	2.34	0.46
71:1:689:U:HO2'	71:1:690:U:P	2.39	0.46
71:1:881:G:H8	71:1:987:A:C2	2.33	0.46
71:1:1036:U:H5'	71:1:1037:C:OP1	2.15	0.46
2:B:144:ARG:HD3	14:N:76:TYR:HE1	1.80	0.46
2:B:389:GLU:O	2:B:392:MET:HG2	2.15	0.46
5:E:250:LEU:HB2	5:E:255:LEU:HD13	1.98	0.46
6:F:33:TYR:CZ	6:F:143:LEU:HD11	2.51	0.46
8:H:6:LEU:CG	8:H:7:ARG:H	2.28	0.46
14:N:168:PHE:HE1	14:N:223:VAL:HG11	1.80	0.46
19:S:362:ARG:O	19:S:365:ARG:N	2.49	0.46
21:U:93:LEU:HD23	63:Ag:171:ARG:HH21	1.81	0.46
22:V:64:ARG:HD3	71:1:955:U:OP2	2.15	0.46
24:X:90:ASP:HB2	24:X:147:TYR:CE1	2.51	0.46
26:Z:90:LEU:O	26:Z:94:ILE:HG12	2.16	0.46
28:UA:55:UNK:O	28:UA:59:UNK:N	2.49	0.46
32:An:319:LYS:N	32:An:319:LYS:HD2	2.31	0.46
35:Az:19:GLN:NE2	71:1:576:A:OP2	2.49	0.46
40:Ap:176:PHE:O	40:Ap:180:SER:N	2.46	0.46
41:Au:54:PRO:HD2	65:BL:143:TYR:HE1	1.80	0.46
44:BM:67:GLU:HA	44:BM:323:ARG:NH1	2.31	0.46
48:Am:93:TYR:OH	48:Am:97:ARG:NH1	2.48	0.46
51:Ak:229:THR:O	51:Ak:229:THR:HG23	2.16	0.46
51:Ak:263:GLU:O	51:Ak:267:VAL:HG23	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:Ak:292:MET:SD	51:Ak:296:MET:HG2	2.56	0.46
56:Af:46:GLU:OE2	56:Af:64:ARG:HD2	2.15	0.46
66:BO:87:ARG:HG2	66:BO:88:PHE:H	1.80	0.46
66:BO:180:LEU:HD11	66:BO:185:LEU:HD23	1.98	0.46
71:1:599:U:O2'	71:1:600:A:H5'	2.16	0.46
1:A:240:THR:HG21	71:1:1156:U:O4	2.16	0.46
2:B:5:ARG:HB3	2:B:5:ARG:CZ	2.45	0.46
3:C:159:GLU:OE2	3:C:171:ASN:HA	2.16	0.46
3:C:162:TYR:OH	3:C:172:HIS:NE2	2.26	0.46
5:E:92:PRO:HG2	5:E:93:HIS:CE1	2.51	0.46
5:E:148:TYR:CD2	5:E:192:ILE:HD11	2.50	0.46
5:E:202:VAL:HG22	5:E:204:GLY:N	2.25	0.46
9:I:83:VAL:HG23	54:BF:10:ASN:OD1	2.16	0.46
12:L:24:VAL:HA	12:L:32:TYR:O	2.16	0.46
15:O:217:LYS:HD2	15:O:226:LEU:O	2.15	0.46
16:P:47:LYS:NZ	71:1:940:U:O4	2.42	0.46
17:Q:158:ARG:HB3	32:An:248:PRO:HD3	1.97	0.46
27:BA:54:LYS:HE3	27:BA:54:LYS:HB2	1.64	0.46
28:UA:136:UNK:O	28:UA:140:UNK:N	2.49	0.46
31:Bj:61:ARG:HA	31:Bj:65:ARG:HH11	1.81	0.46
32:An:49:SER:O	32:An:50:HIS:HB2	2.16	0.46
37:BC:51:ARG:HG3	37:BC:51:ARG:O	2.16	0.46
41:Au:77:VAL:HG22	41:Au:78:PRO:O	2.16	0.46
44:BM:204:THR:HA	44:BM:286:TYR:CE1	2.51	0.46
44:BM:250:GLU:HA	44:BM:265:LEU:O	2.16	0.46
44:BM:258:ASP:C	44:BM:259:LYS:HD3	2.40	0.46
45:Ar:146:ARG:CD	52:BP:143:PRO:HG3	2.45	0.46
46:Aj:402:ARG:HD2	53:Ad:194:PHE:CD2	2.51	0.46
47:BH:18:MET:HB3	47:BH:18:MET:HE3	1.79	0.46
47:BH:215:VAL:CG1	71:1:361:A:H5'	2.46	0.46
48:Am:185:MET:HG2	48:Am:202:TYR:CZ	2.51	0.46
51:Ak:55:ASP:O	59:Ac:145:LEU:HD11	2.16	0.46
52:BP:-3:HIS:O	52:BP:1:MET:N	2.49	0.46
53:Ad:80:ASP:HB3	53:Ad:83:THR:HG22	1.98	0.46
60:Ah:235:ILE:HD13	60:Ah:411:PRO:HD3	1.98	0.46
60:Ah:293:ARG:NH2	60:Ah:428:ARG:HD3	2.31	0.46
60:Ah:383:LEU:HD11	60:Ah:425:GLU:OE2	2.16	0.46
63:Ag:38:LYS:HB2	63:Ag:38:LYS:HE2	1.78	0.46
63:Ag:126:SER:HB3	73:Ag:301:NAD:H4B	1.98	0.46
71:1:316:A:H3'	71:1:317:A:H5'	1.98	0.46
71:1:911:A:C2	71:1:912:U:C2	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:395:GLN:HA	1:A:398:VAL:HB	1.98	0.46
3:C:118:LEU:HD11	3:C:155:ILE:HG23	1.98	0.46
5:E:86:PHE:CE2	5:E:90:THR:HG21	2.51	0.46
8:H:22:THR:HG22	8:H:24:ARG:HD3	1.97	0.46
9:I:217:LYS:HD3	9:I:258:TRP:CZ3	2.51	0.46
9:I:236:GLY:HA3	15:O:94:ASP:O	2.16	0.46
13:M:183:ALA:O	13:M:187:ALA:N	2.48	0.46
15:O:64:LEU:HA	15:O:64:LEU:HD23	1.72	0.46
16:P:149:ARG:HH11	45:Ar:17:LEU:HD23	1.81	0.46
17:Q:74:ASP:HB3	17:Q:152:TYR:CZ	2.51	0.46
17:Q:192:THR:OG1	17:Q:193:SER:N	2.48	0.46
20:T:69:GLN:HG2	20:T:70:GLY:N	2.31	0.46
21:U:80:TYR:O	63:Ag:186:MET:HE1	2.16	0.46
23:W:64:VAL:HB	23:W:65:PRO:HD3	1.98	0.46
24:X:212:TYR:CZ	39:Ai:202:PRO:HD3	2.51	0.46
24:X:254:ALA:HB3	24:X:257:ASN:ND2	2.30	0.46
24:X:302:THR:C	24:X:305:GLY:H	2.24	0.46
31:Bj:143:ASN:OD1	31:Bj:143:ASN:N	2.40	0.46
32:An:229:ARG:NH1	35:Az:60:HIS:HB2	2.31	0.46
38:Ab:172:GLU:HA	38:Ab:175:THR:HG22	1.98	0.46
39:Ai:447:MET:HE1	63:Ag:172:TRP:HB3	1.98	0.46
41:Au:29:ARG:NH1	71:1:648:U:OP2	2.26	0.46
44:BM:79:ARG:HH21	44:BM:382:LEU:HD13	1.80	0.46
47:BH:223:ASP:C	47:BH:224:LEU:HD22	2.41	0.46
48:Am:160:TYR:HB2	48:Am:192:CYS:SG	2.56	0.46
49:Aq:112:ASN:HB3	49:Aq:133:ILE:HD11	1.98	0.46
51:Ak:114:PRO:HD2	51:Ak:115:HIS:ND1	2.31	0.46
51:Ak:139:ARG:NH1	51:Ak:168:GLU:OE2	2.50	0.46
53:Ad:192:ASP:OD1	53:Ad:192:ASP:N	2.48	0.46
54:BF:58:SER:H	54:BF:95:ASN:HD22	1.64	0.46
56:Af:62:SER:O	56:Af:62:SER:OG	2.24	0.46
64:Ax:201:PHE:HB3	64:Ax:202:PRO:HD3	1.98	0.46
65:BL:192:LEU:N	65:BL:197:TYR:OH	2.45	0.46
65:BL:205:LEU:HD22	65:BL:210:GLN:CD	2.41	0.46
66:BO:62:ASP:HB2	71:1:617:G:H8	1.81	0.46
71:1:212:A:O2'	71:1:213:U:H5'	2.15	0.46
71:1:565:U:H4'	71:1:566:G:OP1	2.16	0.46
71:1:750:U:H4'	71:1:751:A:H8	1.81	0.46
71:1:1130:A:N6	71:1:1131:A:N1	2.64	0.46
1:A:128:SER:HB3	1:A:353:PHE:HE1	1.81	0.45
2:B:72:HIS:CD2	2:B:74:GLN:HE21	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:166:ASP:OD1	2:B:168:LYS:HG2	2.17	0.45
3:C:161:ALA:O	3:C:165:LEU:HD23	2.16	0.45
5:E:92:PRO:HG2	5:E:93:HIS:ND1	2.31	0.45
6:F:37:GLN:HG2	6:F:42:PHE:CE2	2.50	0.45
7:G:310:HIS:CD2	7:G:312:GLY:H	2.35	0.45
9:I:173:ASN:HB2	9:I:174:HIS:CD2	2.50	0.45
13:M:131:GLN:O	13:M:190:LYS:NZ	2.42	0.45
15:O:20:THR:OG1	15:O:21:TYR:N	2.48	0.45
15:O:160:VAL:HG13	15:O:165:GLU:HB3	1.99	0.45
15:O:216:VAL:HG23	18:R:283:ILE:HD12	1.98	0.45
16:P:162:PHE:O	25:Y:204:ARG:HD3	2.16	0.45
17:Q:193:SER:HB2	17:Q:196:GLU:CB	2.45	0.45
18:R:153:ARG:NH2	18:R:354:ASP:OD2	2.24	0.45
18:R:207:LYS:HZ1	18:R:314:ALA:H	1.64	0.45
25:Y:119:ASN:OD1	25:Y:121:GLU:HG2	2.17	0.45
25:Y:209:LEU:HD12	25:Y:214:GLY:HA2	1.98	0.45
27:BA:27:GLY:O	27:BA:29:ALA:N	2.48	0.45
33:Al:95:PRO:HD2	33:Al:246:ARG:HH21	1.81	0.45
36:At:136:PRO:HD3	36:At:163:ILE:HD11	1.98	0.45
36:At:141:ASP:OD1	36:At:143:THR:N	2.30	0.45
43:Ao:202:ARG:HA	43:Ao:202:ARG:HD2	1.69	0.45
44:BM:290:HIS:HB3	44:BM:326:TYR:HE1	1.81	0.45
44:BM:302:MET:N	44:BM:303:PRO:HD2	2.31	0.45
45:Ar:146:ARG:NE	52:BP:143:PRO:HG3	2.30	0.45
45:Ar:160:GLN:HG2	45:Ar:160:GLN:O	2.15	0.45
46:Aj:137:LEU:HD21	46:Aj:287:ILE:HG21	1.97	0.45
56:Af:135:ARG:HG3	56:Af:150:PRO:HG3	1.98	0.45
58:Ae:55:HIS:CG	58:Ae:57:LYS:HG2	2.51	0.45
59:Ac:101:THR:HG22	59:Ac:108:THR:HG22	1.98	0.45
59:Ac:158:ARG:HE	59:Ac:259:VAL:HG12	1.81	0.45
59:Ac:175:GLU:HA	59:Ac:253:PRO:HA	1.98	0.45
59:Ac:225:LEU:HD12	59:Ac:226:LYS:H	1.81	0.45
60:Ah:72:SER:C	60:Ah:74:LEU:H	2.23	0.45
61:BD:2:SER:HA	61:BD:27:GLN:O	2.16	0.45
62:Ay:69:LYS:C	62:Ay:71:ASP:H	2.23	0.45
65:BL:278:ARG:HD3	65:BL:278:ARG:C	2.40	0.45
65:BL:339:CYS:HB2	71:1:693:A:O2'	2.17	0.45
71:1:121:U:C4	71:1:122:U:N3	2.84	0.45
71:1:125:A:H2'	71:1:126:U:H5'	1.97	0.45
71:1:328:A:H4'	71:1:328:A:OP1	2.15	0.45
71:1:378:A:O2'	71:1:379:U:H5''	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:1:439:A:N6	71:1:442:U:OP2	2.50	0.45
71:1:753:U:C4	71:1:754:A:N6	2.84	0.45
71:1:765:A:C6	71:1:766:A:N1	2.83	0.45
71:1:901:G:N2	71:1:908:U:H3	2.09	0.45
71:1:1000:A:H2'	71:1:1001:G:H8	1.81	0.45
1:A:254:ARG:HE	1:A:292:GLY:HA3	1.81	0.45
3:C:114:PRO:HB3	3:C:138:TYR:CE1	2.51	0.45
6:F:131:SER:O	6:F:133:HIS:ND1	2.37	0.45
12:L:42:VAL:HG23	12:L:114:THR:HG23	1.97	0.45
13:M:52:LYS:NZ	71:1:125:A:OP2	2.43	0.45
13:M:61:LEU:HD21	46:Aj:476:ARG:NH1	2.31	0.45
13:M:204:CYS:SG	13:M:229:SER:OG	2.70	0.45
16:P:96:PRO:HD3	45:Ar:18:GLU:HG2	1.98	0.45
18:R:200:ARG:HH22	35:Az:151:CYS:HB2	1.81	0.45
20:T:67:LYS:HG2	20:T:68:LYS:O	2.16	0.45
21:U:67:LYS:HE3	21:U:84:LYS:NZ	2.32	0.45
24:X:147:TYR:CB	24:X:209:CYS:HB3	2.47	0.45
24:X:286:PHE:HD1	24:X:369:SER:HA	1.80	0.45
25:Y:67:GLU:HB2	59:Ac:74:LEU:HD11	1.98	0.45
29:BB:111:PHE:HD1	29:BB:111:PHE:O	1.99	0.45
33:Al:117:VAL:HG13	33:Al:117:VAL:O	2.17	0.45
33:Al:123:TYR:OH	33:Al:232:MET:SD	2.64	0.45
34:BI:152:HIS:O	34:BI:254:PRO:HD3	2.17	0.45
34:BI:164:ASP:N	34:BI:164:ASP:OD1	2.48	0.45
36:At:51:LEU:HA	36:At:54:ARG:HB3	1.98	0.45
36:At:80:PHE:O	36:At:83:GLU:N	2.49	0.45
37:BC:16:HIS:O	37:BC:19:MET:N	2.49	0.45
38:Ab:28:PHE:HE2	38:Ab:33:LEU:HD12	1.82	0.45
41:Au:37:PRO:HD2	71:1:281:G:H1	1.81	0.45
41:Au:48:ASN:OD1	41:Au:48:ASN:C	2.59	0.45
46:Aj:110:LEU:HA	46:Aj:110:LEU:HD23	1.63	0.45
48:Am:203:PHE:CD2	48:Am:222:PHE:HB2	2.52	0.45
57:As:102:ALA:HB3	57:As:132:ILE:HD13	1.99	0.45
59:Ac:202:ILE:HG12	59:Ac:210:LEU:HD23	1.98	0.45
60:Ah:66:LYS:O	60:Ah:67:ARG:HB3	2.16	0.45
60:Ah:181:LEU:HB2	60:Ah:184:HIS:HD2	1.81	0.45
60:Ah:300:LEU:HD13	60:Ah:343:TYR:CZ	2.51	0.45
66:BO:134:ARG:HD3	71:1:614:A:OP1	2.16	0.45
71:1:48:U:H3	71:1:130:U:H5	1.64	0.45
71:1:204:U:O2'	71:1:205:U:H5''	2.16	0.45
71:1:249:U:O2	71:1:249:U:O4'	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:1:338:A:N6	71:1:381:A:C4	2.85	0.45
71:1:961:A:C8	71:1:966:A:N7	2.84	0.45
1:A:158:PHE:O	1:A:314:SER:OG	2.33	0.45
2:B:144:ARG:HD3	14:N:76:TYR:CE1	2.52	0.45
8:H:32:TYR:CD2	8:H:91:PHE:HE1	2.34	0.45
8:H:80:PHE:CZ	8:H:133:LEU:HG	2.51	0.45
8:H:149:ILE:HG22	8:H:151:LEU:HD23	1.99	0.45
10:J:100:MET:HE1	66:BO:190:VAL:HG21	1.97	0.45
14:N:78:ARG:NH2	14:N:79:ASP:O	2.49	0.45
16:P:51:ARG:C	16:P:60:ARG:HD3	2.42	0.45
16:P:87:MET:SD	16:P:88:THR:N	2.89	0.45
18:R:146:SER:OG	18:R:147:ARG:N	2.48	0.45
18:R:480:ILE:HD13	36:At:42:MET:SD	2.55	0.45
21:U:50:MET:HG2	21:U:92:PHE:CE2	2.52	0.45
22:V:43:ARG:NH2	71:1:956:A:O2'	2.49	0.45
33:Al:108:TRP:O	33:Al:248:ASN:N	2.41	0.45
36:At:35:TYR:CZ	36:At:37:SER:HA	2.51	0.45
42:Aa:177:ARG:HH22	42:Aa:178:ARG:HH21	1.62	0.45
43:Ao:21:MET:HE2	43:Ao:27:ARG:NH2	2.31	0.45
44:BM:94:MET:HE2	44:BM:115:ASN:HD21	1.82	0.45
46:Aj:246:ALA:HB1	46:Aj:272:VAL:HG23	1.97	0.45
46:Aj:336:LEU:HD23	46:Aj:336:LEU:HA	1.70	0.45
55:Av:142:ASP:HA	55:Av:145:VAL:HG12	1.97	0.45
64:Ax:122:TRP:O	64:Ax:124:PRO:HD3	2.16	0.45
66:BO:188:PHE:CD1	66:BO:188:PHE:C	2.94	0.45
71:1:228:G:H2'	71:1:291:A:N6	2.31	0.45
71:1:312:A:H2'	71:1:313:A:O4'	2.16	0.45
71:1:876:G:H3'	71:1:877:G:C8	2.51	0.45
71:1:886:A:C2	71:1:980:A:C5	3.05	0.45
71:1:1022:A:H8	71:1:1022:A:O5'	2.00	0.45
71:1:1075:A:H3'	71:1:1075:A:OP2	2.16	0.45
2:B:194:LYS:NZ	71:1:186:U:OP2	2.41	0.45
7:G:34:LEU:HD11	46:Aj:214:LEU:HA	1.97	0.45
7:G:75:THR:O	38:Ab:75:SER:HB2	2.17	0.45
7:G:79:TRP:HD1	7:G:96:TYR:CD2	2.35	0.45
7:G:316:ARG:HD2	39:Ai:479:TYR:OH	2.15	0.45
8:H:35:PRO:HD3	8:H:115:LYS:HD3	1.99	0.45
8:H:135:GLN:HG3	8:H:139:GLU:OE2	2.16	0.45
9:I:152:ARG:HH11	9:I:157:ASN:HB3	1.80	0.45
9:I:263:LEU:O	9:I:266:THR:OG1	2.29	0.45
11:K:108:ARG:NH2	11:K:112:GLU:OE2	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:179:TRP:NE1	46:Aj:229:VAL:HG13	2.30	0.45
13:M:9:ASN:HD21	13:M:12:LEU:HD12	1.82	0.45
13:M:259:ARG:NH2	70:UD:15:UNK:HA	2.32	0.45
14:N:112:VAL:HG22	18:R:397:PRO:HB2	1.98	0.45
16:P:52:ARG:O	16:P:54:GLY:N	2.49	0.45
18:R:126:PRO:HB3	34:BI:173:GLN:HE21	1.82	0.45
18:R:311:PHE:CD2	18:R:317:VAL:HG22	2.51	0.45
18:R:393:LEU:HD23	18:R:393:LEU:HA	1.71	0.45
20:T:32:LYS:HG3	71:1:533:U:H1'	1.98	0.45
25:Y:177:PHE:O	25:Y:180:VAL:HG13	2.16	0.45
31:Bj:60:ASN:O	31:Bj:65:ARG:NH1	2.49	0.45
34:BI:145:THR:O	34:BI:165:ILE:HD12	2.16	0.45
45:Ar:151:ARG:HD3	45:Ar:166:TRP:CE2	2.52	0.45
45:Ar:153:LYS:H	45:Ar:153:LYS:HD2	1.80	0.45
56:Af:60:PHE:O	56:Af:62:SER:HB3	2.16	0.45
57:As:89:LYS:HD2	57:As:116:GLU:HG3	1.99	0.45
60:Ah:137:HIS:HA	60:Ah:140:THR:HG22	1.98	0.45
60:Ah:445:ASP:OD1	60:Ah:445:ASP:N	2.47	0.45
64:Ax:120:TYR:OH	64:Ax:190:HIS:HD2	1.99	0.45
64:Ax:151:ARG:N	64:Ax:182:TRP:O	2.49	0.45
64:Ax:153:ILE:C	64:Ax:155:ASN:H	2.24	0.45
67:BG:1327:LYS:O	67:BG:1331:GLY:HA3	2.16	0.45
71:1:71:A:C2	71:1:72:U:H1'	2.51	0.45
71:1:435:A:OP1	71:1:443:G:H4'	2.17	0.45
71:1:844:A:O2'	71:1:845:A:OP1	2.29	0.45
71:1:1001:G:H2'	71:1:1001:G:N3	2.31	0.45
71:1:1049:A:N6	71:1:1050:A:C6	2.85	0.45
2:B:21:MET:SD	38:Ab:44:LYS:HE3	2.57	0.45
3:C:145:ARG:HH12	17:Q:108:ILE:HG22	1.81	0.45
6:F:150:THR:HB	48:Am:59:ARG:NH1	2.32	0.45
7:G:138:ALA:HB2	71:1:346:A:C2	2.51	0.45
7:G:165:ARG:HG2	71:1:93:U:OP1	2.16	0.45
8:H:163:GLU:HB2	8:H:167:PHE:CE2	2.51	0.45
9:I:88:ALA:N	71:1:600:A:OP1	2.38	0.45
9:I:114:GLN:HG3	68:UB:21:UNK:CB	2.46	0.45
11:K:187:ASP:OD1	11:K:188:LEU:N	2.49	0.45
13:M:72:LEU:HD22	71:1:50:A:N7	2.31	0.45
13:M:179:ALA:O	13:M:182:VAL:N	2.50	0.45
15:O:178:ILE:HD12	15:O:187:GLN:HG3	1.98	0.45
17:Q:67:PRO:HD3	17:Q:77:TRP:CZ3	2.51	0.45
17:Q:156:ILE:O	17:Q:160:LEU:HB2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:153:ARG:O	18:R:156:GLU:HG2	2.17	0.45
19:S:291:VAL:HG21	19:S:301:ILE:HD11	1.98	0.45
20:T:29:PRO:HD2	71:1:830:A:N1	2.32	0.45
22:V:127:GLU:OE1	22:V:127:GLU:N	2.50	0.45
24:X:111:ASP:N	24:X:111:ASP:OD1	2.45	0.45
28:UA:86:UNK:C	28:UA:88:UNK:N	2.79	0.45
34:BI:183:ALA:HB3	34:BI:186:GLU:HB2	1.98	0.45
39:AI:283:TYR:O	39:AI:287:THR:HG23	2.17	0.45
39:AI:352:GLU:HG2	39:AI:353:ASP:O	2.16	0.45
40:AP:176:PHE:HA	40:AP:179:LEU:HB3	1.97	0.45
42:Aa:194:ASN:CG	71:1:151:G:H22	2.25	0.45
43:Ao:200:VAL:HG12	43:Ao:204:ILE:HG13	1.98	0.45
45:Ar:180:ASP:N	45:Ar:180:ASP:OD1	2.49	0.45
47:BH:188:TRP:CG	47:BH:227:PRO:HB3	2.51	0.45
48:Am:310:LEU:HD22	71:1:420:A:C8	2.51	0.45
55:Av:151:LYS:HD3	71:1:458:A:OP1	2.17	0.45
59:Ac:52:TYR:CE2	59:Ac:202:ILE:HD13	2.51	0.45
59:Ac:249:PHE:HB3	59:Ac:251:PRO:HD2	1.98	0.45
60:Ah:67:ARG:HB3	71:1:905:A:O4'	2.16	0.45
62:Ay:131:GLU:HA	62:Ay:134:ARG:HH22	1.80	0.45
63:Ag:148:THR:HG22	63:Ag:149:ASN:N	2.31	0.45
64:Ax:151:ARG:HD3	64:Ax:181:ARG:O	2.16	0.45
65:BL:335:HIS:HD2	65:BL:337:ARG:HH21	1.64	0.45
71:1:383:A:H8	71:1:383:A:O5'	2.00	0.45
71:1:552:A:N1	71:1:584:U:N3	2.64	0.45
3:C:88:THR:HG21	17:Q:61:SER:OG	2.16	0.45
6:F:111:PHE:O	6:F:118:ARG:HG2	2.17	0.45
7:G:76:THR:HG21	38:Ab:23:PRO:HD2	1.99	0.45
9:I:61:ARG:H	9:I:65:HIS:CD2	2.23	0.45
12:L:74:LEU:HD23	12:L:74:LEU:HA	1.74	0.45
13:M:184:GLN:HA	13:M:187:ALA:HB3	1.97	0.45
15:O:296:HIS:CE1	15:O:300:LYS:HD2	2.51	0.45
16:P:62:PRO:HB3	16:P:77:PHE:HD2	1.82	0.45
16:P:143:VAL:HG22	43:Ao:213:TYR:CD2	2.52	0.45
17:Q:35:ILE:CD1	61:BD:29:ILE:HD12	2.46	0.45
18:R:172:LYS:HE2	35:Az:73:HIS:CD2	2.50	0.45
18:R:421:ASN:HD22	18:R:448:ASP:HB3	1.80	0.45
19:S:334:ALA:C	19:S:336:GLN:H	2.24	0.45
24:X:468:VAL:O	43:Ao:73:HIS:HB3	2.17	0.45
25:Y:181:ASP:OD1	25:Y:182:THR:N	2.49	0.45
26:Z:47:ASN:OD1	26:Z:47:ASN:N	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:An:291:GLU:O	32:An:295:HIS:N	2.37	0.45
38:Ab:198:LEU:HD11	58:Ae:225:ILE:HG13	1.97	0.45
39:Ai:38:ARG:NH1	39:Ai:264:ARG:HH22	2.15	0.45
43:Ao:45:ALA:O	43:Ao:47:LYS:N	2.49	0.45
45:Ar:108:TYR:O	45:Ar:110:LEU:HD22	2.17	0.45
48:Am:300:ARG:HH12	58:Ae:79:GLN:NE2	2.14	0.45
50:BE:91:ILE:HG23	50:BE:113:HIS:HE2	1.81	0.45
52:BP:66:LEU:HD23	52:BP:66:LEU:HA	1.74	0.45
52:BP:143:PRO:O	52:BP:147:VAL:HB	2.16	0.45
55:Av:50:ARG:CZ	55:Av:74:GLN:HA	2.47	0.45
60:Ah:299:SER:O	60:Ah:470:LYS:NZ	2.32	0.45
65:BL:179:ASN:O	65:BL:180:GLY:C	2.60	0.45
65:BL:364:ASP:O	65:BL:367:SER:OG	2.34	0.45
71:1:255:U:C4	71:1:279:U:C5	3.05	0.45
71:1:341:U:H4'	71:1:973:U:C6	2.52	0.45
71:1:452:A:C2	71:1:453:A:H1'	2.52	0.45
71:1:553:A:N1	71:1:573:A:H5'	2.32	0.45
71:1:991:G:H2'	71:1:991:G:N3	2.32	0.45
2:B:19:ASP:OD1	2:B:20:PHE:N	2.49	0.45
4:D:90:GLY:O	4:D:93:ARG:HG2	2.17	0.45
7:G:51:TYR:CE2	52:BP:34:GLY:HA2	2.52	0.45
7:G:148:THR:O	7:G:149:PRO:C	2.60	0.45
7:G:275:MET:HE1	73:Ag:301:NAD:H4D	1.98	0.45
11:K:59:ARG:HA	11:K:62:VAL:HG12	1.99	0.45
16:P:177:ARG:HD3	16:P:177:ARG:HA	1.83	0.45
19:S:348:ALA:HA	71:1:368:U:C5	2.52	0.45
33:Al:118:ILE:HD12	33:Al:211:LEU:HD21	1.98	0.45
36:At:108:MET:O	36:At:111:LEU:N	2.50	0.45
39:Ai:285:ALA:HA	39:Ai:290:ALA:HB3	1.97	0.45
44:BM:66:PRO:HD2	44:BM:319:ALA:HB3	1.99	0.45
44:BM:133:LYS:HA	44:BM:133:LYS:HD3	1.76	0.45
47:BH:70:GLY:H	47:BH:74:LEU:HD13	1.81	0.45
51:Ak:136:THR:O	51:Ak:140:GLU:HG3	2.17	0.45
52:BP:97:ARG:CB	52:BP:97:ARG:HH21	2.29	0.45
53:Ad:26:ALA:O	53:Ad:27:HIS:C	2.59	0.45
53:Ad:193:MET:O	53:Ad:197:GLU:N	2.31	0.45
58:Ae:55:HIS:CD2	58:Ae:57:LYS:HG2	2.52	0.45
60:Ah:118:GLU:O	60:Ah:122:ILE:HD12	2.17	0.45
60:Ah:469:ASP:O	60:Ah:473:ARG:HG2	2.16	0.45
64:Ax:91:GLU:HB2	67:BG:1300:SER:HB3	1.98	0.45
65:BL:114:ASP:O	65:BL:114:ASP:OD1	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:BL:186:LEU:CD2	65:BL:278:ARG:HH11	2.30	0.45
65:BL:352:ARG:NH2	65:BL:357:ASN:OD1	2.49	0.45
71:1:257:G:H2'	71:1:257:G:N3	2.30	0.45
71:1:1130:A:C6	71:1:1131:A:N1	2.85	0.45
1:A:60:HIS:NE2	1:A:65:SER:HB3	2.32	0.45
1:A:338:THR:HA	58:Ae:32:ARG:NH1	2.32	0.45
2:B:399:ASN:ND2	2:B:402:HIS:HB2	2.32	0.45
3:C:196:GLU:O	62:Ay:138:GLN:N	2.45	0.45
4:D:32:ARG:HG2	4:D:38:HIS:CE1	2.52	0.45
5:E:218:ARG:NH2	55:Av:113:ILE:HG13	2.32	0.45
7:G:341:HIS:HA	7:G:344:LYS:HE2	1.98	0.45
8:H:76:PRO:HB3	55:Av:171:ARG:HE	1.82	0.45
9:I:42:GLU:CB	9:I:45:MET:HE3	2.47	0.45
9:I:214:SER:HB3	54:BF:29:ARG:HB2	1.99	0.45
9:I:214:SER:CB	54:BF:29:ARG:HB2	2.47	0.45
10:J:83:THR:O	10:J:83:THR:HG22	2.17	0.45
13:M:41:GLN:HE21	15:O:44:LEU:HD12	1.81	0.45
15:O:19:PHE:O	20:T:52:LEU:HD13	2.16	0.45
17:Q:74:ASP:HB3	17:Q:152:TYR:CE2	2.52	0.45
17:Q:156:ILE:HB	32:An:270:GLY:HA2	1.98	0.45
17:Q:171:PHE:O	17:Q:174:ASP:N	2.49	0.45
18:R:259:VAL:O	18:R:259:VAL:HG23	2.17	0.45
19:S:258:PHE:HE1	19:S:312:GLN:HB2	1.82	0.45
19:S:367:ARG:HD3	56:Af:133:ARG:NH1	2.32	0.45
22:V:139:ALA:HB1	22:V:140:PRO:HD2	1.99	0.45
27:BA:53:LYS:O	27:BA:56:LEU:HB3	2.17	0.45
32:An:304:ASP:O	32:An:308:GLY:N	2.37	0.45
36:At:117:GLU:O	36:At:121:LYS:N	2.31	0.45
37:BC:16:HIS:HA	37:BC:19:MET:HE2	1.99	0.45
38:Ab:225:VAL:HG22	38:Ab:226:PRO:HD2	1.99	0.45
38:Ab:228:HIS:HB3	43:Ao:271:GLN:HG2	1.98	0.45
39:Ai:110:LEU:C	39:Ai:112:PHE:H	2.25	0.45
39:Ai:119:PRO:HB2	39:Ai:121:HIS:O	2.17	0.45
41:Au:92:VAL:HG23	41:Au:93:HIS:N	2.29	0.45
44:BM:46:ARG:HH21	44:BM:50:LYS:HZ2	1.64	0.45
44:BM:192:LEU:O	44:BM:192:LEU:HD12	2.17	0.45
44:BM:269:VAL:O	44:BM:273:VAL:HG22	2.17	0.45
44:BM:285:LEU:HB3	44:BM:289:ARG:NE	2.30	0.45
45:Ar:114:GLN:HE21	45:Ar:200:SER:HA	1.81	0.45
51:Ak:24:VAL:HG13	51:Ak:25:ALA:H	1.80	0.45
51:Ak:148:ASP:OD1	51:Ak:149:VAL:N	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BP:146:PHE:CD2	52:BP:147:VAL:HG23	2.52	0.45
56:Af:126:TYR:OH	56:Af:130:TYR:HD2	1.99	0.45
58:Ae:146:GLN:HB3	58:Ae:160:PRO:HD2	1.98	0.45
60:Ah:324:THR:OG1	60:Ah:324:THR:O	2.33	0.45
64:Ax:73:THR:CG2	64:Ax:200:PHE:H	2.20	0.45
64:Ax:117:ILE:HG23	64:Ax:119:SER:H	1.82	0.45
66:BO:103:VAL:HB	66:BO:105:ARG:CB	2.46	0.45
66:BO:130:LEU:HD12	66:BO:151:THR:O	2.17	0.45
71:1:269:A:H2'	71:1:270:A:H5''	1.98	0.45
71:1:577:A:H2'	71:1:577:A:N3	2.30	0.45
71:1:777:G:H2'	71:1:778:A:C8	2.52	0.45
71:1:1079:A:N6	71:1:1088:G:H1	2.14	0.45
1:A:163:ILE:HG21	1:A:166:HIS:CE1	2.52	0.45
2:B:170:HIS:HE1	71:1:216:U:H4'	1.81	0.45
2:B:256:LEU:C	2:B:258:PRO:HD3	2.41	0.45
2:B:408:GLY:HA2	33:Al:287:TRP:CE3	2.51	0.45
4:D:28:ASP:OD1	4:D:42:SER:OG	2.31	0.45
7:G:128:ARG:HB2	42:Aa:20:GLN:NE2	2.32	0.45
14:N:138:PHE:HE1	18:R:98:VAL:HG12	1.82	0.45
15:O:161:LYS:HB3	18:R:441:TRP:O	2.17	0.45
18:R:221:VAL:HG21	33:Al:295:PRO:O	2.16	0.45
24:X:231:PRO:HB3	24:X:257:ASN:HD21	1.82	0.45
24:X:440:GLU:OE2	53:Ad:42:LEU:HB2	2.16	0.45
27:BA:16:ASN:C	27:BA:16:ASN:OD1	2.60	0.45
29:BB:129:THR:HG23	29:BB:130:LYS:HA	1.99	0.45
30:Aw:149:TYR:CG	53:Ad:192:ASP:HB3	2.52	0.45
31:Bj:104:MET:SD	59:Ac:130:VAL:HG11	2.57	0.45
32:An:78:TRP:HB3	65:BL:110:PHE:HZ	1.81	0.45
36:At:17:ARG:NH1	36:At:26:HIS:O	2.50	0.45
39:Ai:118:GLN:HG2	39:Ai:175:TYR:CE2	2.51	0.45
40:Ap:83:LEU:HA	40:Ap:88:ILE:HD12	1.98	0.45
42:Aa:19:ALA:HB1	71:1:378:A:N3	2.31	0.45
42:Aa:133:THR:HG22	42:Aa:134:VAL:H	1.82	0.45
44:BM:321:LYS:O	44:BM:325:GLN:N	2.40	0.45
46:Aj:485:PHE:O	46:Aj:485:PHE:CG	2.70	0.45
48:Am:280:VAL:O	48:Am:284:VAL:HG13	2.17	0.45
54:BF:63:ARG:HH12	54:BF:68:GLN:HA	1.82	0.45
57:As:71:THR:O	57:As:74:THR:N	2.42	0.45
59:Ac:260:THR:HG22	59:Ac:261:ARG:N	2.32	0.45
63:Ag:55:LYS:HE2	63:Ag:55:LYS:HB3	1.71	0.45
64:Ax:167:LEU:O	64:Ax:171:LEU:N	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:BL:119:ARG:HH12	65:BL:132:HIS:HB3	1.81	0.45
66:BO:79:LEU:O	66:BO:79:LEU:HD23	2.16	0.45
66:BO:103:VAL:CB	66:BO:105:ARG:HB3	2.47	0.45
66:BO:103:VAL:CG1	66:BO:122:PRO:HA	2.39	0.45
71:1:143:A:C8	71:1:144:U:H5	2.35	0.45
3:C:101:GLU:OE1	3:C:101:GLU:N	2.50	0.45
4:D:36:ARG:CZ	48:Am:266:GLU:HB3	2.47	0.45
7:G:125:LYS:C	7:G:126:TYR:HD1	2.25	0.45
10:J:45:PRO:HA	10:J:83:THR:HG23	1.99	0.45
13:M:61:LEU:HD21	46:Aj:476:ARG:HD2	1.99	0.45
13:M:99:LEU:HB3	13:M:106:MET:HE3	1.99	0.45
15:O:265:GLU:HB2	18:R:41:ARG:NH2	2.31	0.45
16:P:30:LYS:O	71:1:940:U:N3	2.33	0.45
16:P:51:ARG:NE	16:P:53:PHE:HE2	2.15	0.45
18:R:203:GLU:HG2	18:R:207:LYS:HD2	1.98	0.45
20:T:76:GLU:O	20:T:80:GLN:HG2	2.16	0.45
21:U:17:ARG:N	21:U:17:ARG:CD	2.64	0.45
23:W:84:THR:HG22	23:W:102:TRP:HB3	1.99	0.45
24:X:266:PRO:HD3	24:X:338:LEU:HD13	1.99	0.45
28:UA:65:UNK:HA	28:UA:114:UNK:HA	1.97	0.45
29:BB:127:PRO:O	50:BE:43:GLU:HA	2.16	0.45
31:Bj:137:ARG:HD3	59:Ac:40:HIS:NE2	2.32	0.45
32:An:51:ARG:HE	32:An:52:PRO:HD2	1.82	0.45
32:An:118:SER:H	32:An:121:GLU:HB2	1.82	0.45
33:Al:86:LEU:HD23	33:Al:86:LEU:H	1.82	0.45
33:Al:96:LYS:HD3	33:Al:168:GLU:OE2	2.17	0.45
35:Az:57:TYR:HB2	35:Az:66:LYS:HE3	1.99	0.45
35:Az:100:ASP:O	35:Az:104:ARG:HG3	2.16	0.45
37:BC:117:THR:HG21	59:Ac:104:ILE:HG12	1.99	0.45
41:Au:42:PHE:CE1	41:Au:46:VAL:HG21	2.52	0.45
42:Aa:108:SER:O	42:Aa:108:SER:OG	2.34	0.45
43:Ao:181:TRP:CZ2	43:Ao:191:LEU:HB3	2.52	0.45
44:BM:140:ARG:HH12	44:BM:263:ARG:CD	2.30	0.45
45:Ar:115:SER:HB3	45:Ar:197:LYS:HE2	1.98	0.45
45:Ar:151:ARG:HE	45:Ar:153:LYS:CD	2.30	0.45
47:BH:94:ASP:OD2	47:BH:101:ARG:N	2.49	0.45
49:Aq:295:ARG:H	71:1:961:A:N6	2.14	0.45
54:BF:27:ARG:O	54:BF:27:ARG:HD2	2.16	0.45
54:BF:109:ASP:N	54:BF:109:ASP:OD1	2.50	0.45
56:Af:64:ARG:HG3	56:Af:66:SER:HB3	1.98	0.45
57:As:70:VAL:HG11	57:As:78:TRP:CZ3	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:Ah:363:VAL:HG13	60:Ah:364:VAL:N	2.32	0.45
64:Ax:130:VAL:HB	64:Ax:131:PRO:HD3	1.98	0.45
66:BO:50:GLY:O	66:BO:52:GLU:HG3	2.16	0.45
71:1:216:U:O4	71:1:217:A:N6	2.50	0.45
71:1:316:A:H3'	71:1:317:A:C5'	2.47	0.45
71:1:480:A:H8	71:1:481:U:H5'	1.82	0.45
71:1:558:C:C4	71:1:559:U:C4	3.05	0.45
71:1:563:U:O2'	71:1:564:U:O4'	2.24	0.45
71:1:762:A:H8	71:1:762:A:O5'	2.00	0.45
71:1:1027:G:H2'	71:1:1028:U:O4'	2.16	0.45
71:1:1141:A:H2'	71:1:1142:U:O4'	2.17	0.45
2:B:91:VAL:HG12	2:B:104:THR:OG1	2.16	0.44
3:C:150:PRO:HG3	60:Ah:57:LEU:HG	1.98	0.44
7:G:34:LEU:HD11	46:Aj:213:TYR:O	2.17	0.44
7:G:147:MET:HE3	7:G:147:MET:HB3	1.78	0.44
7:G:165:ARG:HA	7:G:169:LYS:HD2	1.99	0.44
9:I:153:ARG:HG3	9:I:160:MET:SD	2.57	0.44
9:I:215:LYS:O	9:I:218:THR:OG1	2.35	0.44
12:L:93:VAL:HG11	12:L:106:TRP:CH2	2.53	0.44
13:M:7:ARG:O	13:M:8:TYR:C	2.60	0.44
17:Q:133:ASP:OD1	17:Q:142:LYS:HD3	2.17	0.44
18:R:131:PRO:HG2	18:R:134:ALA:HB2	1.98	0.44
19:S:271:TRP:CE3	43:Ao:34:ALA:HA	2.53	0.44
21:U:49:HIS:CE1	21:U:75:PRO:HG2	2.52	0.44
22:V:64:ARG:CZ	71:1:969:U:C4	3.00	0.44
24:X:155:PRO:O	43:Ao:107:ASN:ND2	2.40	0.44
30:Aw:4:GLY:C	30:Aw:6:VAL:H	2.25	0.44
32:An:76:LYS:O	32:An:77:TRP:HB2	2.17	0.44
32:An:141:ASP:OD1	32:An:141:ASP:C	2.60	0.44
34:BI:144:LEU:HD11	34:BI:176:ILE:HD13	1.98	0.44
35:Az:151:CYS:O	36:At:98:THR:HB	2.17	0.44
41:Au:44:ARG:HD2	71:1:250:A:OP1	2.17	0.44
41:Au:53:ARG:HA	41:Au:54:PRO:HD2	1.72	0.44
42:Aa:30:ARG:NH2	71:1:162:G:N7	2.66	0.44
44:BM:47:LYS:HA	44:BM:47:LYS:HD2	1.77	0.44
44:BM:202:SER:OG	44:BM:205:LYS:HE2	2.17	0.44
44:BM:271:ARG:C	44:BM:274:GLY:H	2.25	0.44
44:BM:294:ASP:HB3	44:BM:323:ARG:CG	2.46	0.44
48:Am:56:TRP:O	48:Am:59:ARG:N	2.50	0.44
51:Ak:273:GLN:HB3	51:Ak:279:VAL:HG11	2.00	0.44
53:Ad:85:GLN:HA	53:Ad:85:GLN:HE21	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:Ah:309:ALA:HA	60:Ah:312:VAL:HG12	1.99	0.44
60:Ah:444:THR:O	60:Ah:448:ARG:HB2	2.17	0.44
64:Ax:208:MET:HE2	64:Ax:208:MET:HB3	1.89	0.44
65:BL:241:GLY:HA3	71:1:671:U:O4	2.16	0.44
66:BO:51:THR:HG23	66:BO:136:THR:HG21	1.99	0.44
66:BO:80:ILE:HG21	66:BO:100:ARG:HH11	1.80	0.44
71:1:149:U:O2'	71:1:150:A:C8	2.65	0.44
71:1:347:A:H5'	71:1:348:U:OP2	2.17	0.44
2:B:97:LEU:HD23	2:B:97:LEU:HA	1.70	0.44
5:E:103:ARG:CZ	71:1:431:A:H5''	2.46	0.44
5:E:107:TYR:CE2	5:E:113:ILE:HD12	2.45	0.44
7:G:196:THR:N	7:G:199:HIS:HD2	2.15	0.44
7:G:228:TYR:HE1	7:G:230:LEU:HD13	1.82	0.44
13:M:146:LEU:HD23	13:M:204:CYS:SG	2.57	0.44
19:S:377:LYS:HD2	19:S:377:LYS:HA	1.72	0.44
21:U:42:ARG:HA	21:U:50:MET:HA	1.99	0.44
24:X:213:MET:HE2	24:X:213:MET:HB3	1.79	0.44
27:BA:107:ASN:HB3	27:BA:110:ARG:HB2	1.98	0.44
30:Aw:120:MET:HE1	30:Aw:121:GLU:OE2	2.18	0.44
33:Al:76:ASP:HB3	33:Al:80:ARG:HH12	1.82	0.44
36:At:115:GLU:O	36:At:119:HIS:HB2	2.16	0.44
39:Ai:252:LEU:O	39:Ai:256:LEU:HG	2.17	0.44
39:Ai:265:PHE:HB2	39:Ai:319:THR:HG22	1.99	0.44
40:Ap:191:ARG:HH12	40:Ap:195:ARG:CZ	2.29	0.44
41:Au:108:HIS:HB3	60:Ah:126:PHE:HE1	1.82	0.44
43:Ao:253:TYR:HA	43:Ao:254:PRO:HD3	1.84	0.44
46:Aj:409:HIS:HE1	53:Ad:173:MET:HG3	1.82	0.44
46:Aj:459:VAL:HG22	46:Aj:460:GLN:H	1.81	0.44
48:Am:26:ASN:HD22	48:Am:29:TRP:HD1	1.65	0.44
48:Am:215:VAL:HG23	58:Ae:161:LEU:HD22	1.99	0.44
51:Ak:282:LYS:HA	51:Ak:282:LYS:HD2	1.67	0.44
58:Ae:178:MET:HB2	58:Ae:178:MET:HE3	1.79	0.44
59:Ac:95:PHE:HB3	59:Ac:100:GLN:O	2.16	0.44
59:Ac:107:ARG:O	59:Ac:113:ILE:HD11	2.16	0.44
60:Ah:318:LEU:O	60:Ah:322:ALA:HB2	2.17	0.44
60:Ah:337:ASP:O	60:Ah:340:THR:HG22	2.17	0.44
62:Ay:38:ARG:O	62:Ay:38:ARG:HG2	2.18	0.44
65:BL:93:VAL:HG22	65:BL:97:MET:HB2	1.99	0.44
66:BO:60:LEU:HG	66:BO:133:ARG:HH12	1.81	0.44
71:1:372:A:N6	71:1:373:A:C6	2.85	0.44
71:1:447:A:C6	71:1:448:U:C4	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:1:508:G:O2'	71:1:509:U:P	2.74	0.44
71:1:572:A:H8	71:1:572:A:H5''	1.83	0.44
71:1:687:U:H2'	71:1:688:C:H5'	1.99	0.44
71:1:812:A:C3'	71:1:813:U:H5'	2.43	0.44
71:1:841:A:N1	71:1:854:A:N1	2.66	0.44
71:1:845:A:H2'	71:1:846:A:H5''	1.98	0.44
71:1:1025:G:H4'	71:1:1025:G:OP1	2.17	0.44
1:A:360:GLU:N	1:A:360:GLU:OE1	2.50	0.44
2:B:80:VAL:HG13	2:B:361:PHE:CE2	2.52	0.44
2:B:250:MET:HG2	2:B:279:VAL:CG2	2.48	0.44
5:E:316:PRO:O	5:E:317:LYS:C	2.59	0.44
7:G:41:LEU:HD12	7:G:42:ALA:H	1.83	0.44
7:G:146:LYS:HZ1	71:1:345:A:H1'	1.83	0.44
7:G:217:VAL:HG21	71:1:200:U:O4	2.17	0.44
7:G:236:ASN:H	7:G:254:ASN:CG	2.26	0.44
9:I:90:ALA:HB3	9:I:91:PRO:HD3	2.00	0.44
10:J:52:GLN:HE22	10:J:75:VAL:HG11	1.83	0.44
15:O:23:GLN:HA	15:O:23:GLN:HE21	1.76	0.44
17:Q:215:MET:HE3	17:Q:215:MET:HB3	1.86	0.44
18:R:208:TRP:CD1	18:R:211:SER:OG	2.69	0.44
24:X:363:PHE:CB	24:X:364:PRO:HD3	2.48	0.44
32:An:110:PHE:CZ	32:An:114:VAL:CG2	3.01	0.44
32:An:115:LEU:O	32:An:115:LEU:HD23	2.18	0.44
35:Az:51:LEU:HD23	35:Az:51:LEU:HA	1.73	0.44
38:Ab:137:LEU:HD22	38:Ab:141:GLU:HB3	2.00	0.44
39:Ai:77:GLN:NE2	39:Ai:123:VAL:HG12	2.32	0.44
39:Ai:312:LEU:HB2	39:Ai:317:VAL:CG1	2.47	0.44
40:Ap:132:VAL:HA	40:Ap:135:LEU:HB3	1.98	0.44
43:Ao:134:THR:O	43:Ao:138:ILE:HG13	2.17	0.44
44:BM:36:VAL:O	44:BM:122:LEU:HD23	2.17	0.44
45:Ar:135:LEU:HD23	45:Ar:135:LEU:HA	1.78	0.44
46:Aj:449:LEU:HD23	46:Aj:449:LEU:HA	1.78	0.44
47:BH:42:ARG:HE	47:BH:42:ARG:HB2	1.66	0.44
47:BH:215:VAL:HG11	71:1:361:A:H5'	1.98	0.44
48:Am:152:GLN:HB2	48:Am:184:ASN:ND2	2.31	0.44
53:Ad:193:MET:SD	53:Ad:193:MET:N	2.75	0.44
55:Av:82:GLU:HG2	55:Av:83:GLY:N	2.32	0.44
62:Ay:35:TRP:HB3	62:Ay:36:ILE:H	1.59	0.44
65:BL:333:ARG:O	65:BL:334:ILE:HG23	2.17	0.44
71:1:194:U:O2'	71:1:196:A:N7	2.42	0.44
71:1:288:C:H1'	71:1:289:A:H5'	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:1:543:U:H2'	71:1:598:U:OP1	2.17	0.44
71:1:688:C:H42	71:1:710:A:H62	1.65	0.44
2:B:284:LEU:HD23	2:B:339:GLU:CD	2.41	0.44
2:B:350:PRO:HB3	7:G:186:THR:HG23	1.98	0.44
3:C:35:SER:HB2	35:Az:129:ASP:HB3	1.99	0.44
3:C:73:MET:O	3:C:82:ASP:HB2	2.17	0.44
3:C:149:LEU:HD11	3:C:156:TYR:CZ	2.51	0.44
5:E:86:PHE:O	5:E:90:THR:HG22	2.16	0.44
5:E:118:PRO:HG3	5:E:165:TRP:HE1	1.83	0.44
7:G:155:PRO:HD3	22:V:59:GLY:O	2.17	0.44
8:H:72:LEU:HD23	8:H:72:LEU:HA	1.79	0.44
9:I:77:LEU:HD22	9:I:93:LEU:HD21	1.99	0.44
9:I:154:ARG:O	15:O:89:HIS:NE2	2.51	0.44
10:J:21:PHE:CD2	10:J:26:ILE:HD11	2.52	0.44
10:J:61:ASN:C	10:J:63:GLU:H	2.24	0.44
19:S:245:THR:HB	27:BA:65:GLY:O	2.18	0.44
21:U:61:LEU:O	21:U:63:ALA:N	2.47	0.44
25:Y:147:VAL:HG11	25:Y:150:LEU:HD13	1.99	0.44
27:BA:123:ALA:HB1	27:BA:140:ALA:O	2.17	0.44
28:UA:111:UNK:O	28:UA:113:UNK:N	2.50	0.44
35:Az:150:MET:HE3	35:Az:150:MET:HB2	1.86	0.44
39:Ai:59:ALA:HB3	39:Ai:210:LEU:HD11	2.00	0.44
44:BM:140:ARG:HD2	44:BM:140:ARG:O	2.17	0.44
45:Ar:44:ARG:HH21	45:Ar:48:GLN:HE22	1.65	0.44
45:Ar:111:PHE:CE2	45:Ar:134:LYS:HG3	2.52	0.44
45:Ar:161:ASP:OD1	45:Ar:162:LEU:N	2.51	0.44
45:Ar:168:TRP:CZ3	45:Ar:190:LYS:HB2	2.52	0.44
48:Am:328:ALA:O	48:Am:330:GLU:N	2.51	0.44
51:Ak:71:ASN:O	51:Ak:75:GLN:HB2	2.16	0.44
53:Ad:70:LEU:HD23	53:Ad:70:LEU:HA	1.83	0.44
53:Ad:160:ARG:HD3	53:Ad:164:GLY:O	2.17	0.44
53:Ad:204:PHE:HB3	53:Ad:207:LYS:HG2	2.00	0.44
58:Ae:196:LEU:HD21	58:Ae:246:LEU:O	2.16	0.44
60:Ah:64:VAL:HG12	60:Ah:65:GLY:N	2.31	0.44
63:Ag:229:LYS:HA	63:Ag:229:LYS:HD2	1.85	0.44
64:Ax:155:ASN:CG	64:Ax:187:VAL:HG12	2.42	0.44
65:BL:135:ARG:HG2	65:BL:136:ASP:N	2.30	0.44
65:BL:188:THR:HB	65:BL:224:HIS:CE1	2.53	0.44
65:BL:192:LEU:O	65:BL:197:TYR:OH	2.24	0.44
65:BL:339:CYS:O	65:BL:341:LYS:N	2.50	0.44
71:1:654:A:O5'	71:1:654:A:H8	2.01	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:1:777:G:H8	71:1:777:G:O5'	2.00	0.44
71:1:924:U:C2	71:1:925:G:C8	3.05	0.44
71:1:1018:A:H61	71:1:1096:A:H2	1.65	0.44
1:A:162:GLN:NE2	1:A:225:LYS:HG2	2.31	0.44
5:E:16:THR:HG22	55:Av:82:GLU:OE2	2.18	0.44
5:E:31:VAL:HG21	55:Av:94:GLN:HB2	1.99	0.44
5:E:39:PHE:O	5:E:165:TRP:HB3	2.17	0.44
6:F:49:GLY:H	6:F:124:LYS:NZ	2.15	0.44
7:G:50:ASP:HB3	56:Af:149:GLN:HB2	2.00	0.44
7:G:139:LYS:HB3	7:G:139:LYS:HE3	1.81	0.44
7:G:197:LEU:HD22	7:G:266:LEU:HD21	2.00	0.44
9:I:89:ARG:O	9:I:93:LEU:N	2.50	0.44
14:N:171:PRO:HG2	14:N:174:MET:HG3	1.98	0.44
15:O:216:VAL:N	15:O:229:ARG:O	2.49	0.44
17:Q:210:GLU:O	17:Q:214:LEU:HB2	2.17	0.44
18:R:261:ALA:HB1	18:R:264:LEU:HD12	1.99	0.44
19:S:273:VAL:HG13	19:S:304:VAL:HG12	1.99	0.44
21:U:31:PRO:CB	21:U:60:ARG:NH1	2.67	0.44
27:BA:24:VAL:HA	45:Ar:127:ARG:HD2	2.00	0.44
27:BA:67:LEU:HD12	27:BA:67:LEU:HA	1.86	0.44
30:Aw:23:ILE:N	30:Aw:24:PRO:HD3	2.32	0.44
32:An:240:GLN:HE21	35:Az:55:ASN:HB3	1.82	0.44
33:Al:143:ALA:HA	33:Al:197:PRO:HG3	2.00	0.44
40:Ap:171:THR:HA	40:Ap:173:ARG:NH2	2.33	0.44
40:Ap:218:MET:N	40:Ap:218:MET:SD	2.91	0.44
43:Ao:82:TRP:O	43:Ao:83:THR:OG1	2.29	0.44
44:BM:140:ARG:HG3	44:BM:141:ARG:HH11	1.82	0.44
44:BM:141:ARG:HH21	44:BM:272:LYS:HE2	1.82	0.44
44:BM:221:ARG:HD2	44:BM:228:ASN:OD1	2.17	0.44
44:BM:222:MET:HG3	44:BM:224:PRO:HD3	1.99	0.44
44:BM:288:ALA:HB1	44:BM:306:LEU:HD21	2.00	0.44
45:Ar:140:LYS:NZ	52:BP:77:SER:HB2	2.32	0.44
48:Am:293:THR:HG21	58:Ae:257:GLN:CG	2.47	0.44
56:Af:65:VAL:O	56:Af:65:VAL:HG23	2.18	0.44
60:Ah:166:TRP:O	60:Ah:171:ILE:HB	2.18	0.44
60:Ah:426:LEU:HA	60:Ah:426:LEU:HD23	1.81	0.44
65:BL:360:GLN:HB2	65:BL:365:LEU:HD21	2.00	0.44
71:1:270:A:C5	71:1:306:A:N6	2.85	0.44
71:1:845:A:H2	71:1:850:U:O4	2.01	0.44
71:1:876:G:H3'	71:1:877:G:H8	1.82	0.44
1:A:312:LYS:NZ	1:A:368:ALA:HA	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:145:GLU:OE2	2:B:182:LYS:NZ	2.42	0.44
3:C:204:GLU:OE1	3:C:204:GLU:N	2.51	0.44
5:E:221:HIS:CD2	55:Av:107:GLY:H	2.34	0.44
7:G:23:PHE:HA	7:G:26:ASN:OD1	2.17	0.44
8:H:35:PRO:HB2	8:H:56:PHE:HB2	1.98	0.44
11:K:16:GLU:N	11:K:16:GLU:OE2	2.50	0.44
15:O:67:ILE:HB	71:1:134:A:C6	2.53	0.44
15:O:113:HIS:O	15:O:117:GLN:HB2	2.18	0.44
15:O:169:GLN:HG2	15:O:170:ASN:OD1	2.18	0.44
17:Q:35:ILE:HD12	61:BD:29:ILE:HD12	1.99	0.44
18:R:50:ILE:HG22	26:Z:153:TYR:CG	2.53	0.44
24:X:320:VAL:HG21	24:X:400:VAL:HG11	2.00	0.44
24:X:496:TRP:CH2	53:Ad:228:VAL:HG22	2.52	0.44
26:Z:76:ARG:CZ	71:1:71:A:O4'	2.65	0.44
26:Z:76:ARG:NH2	71:1:70:G:O5'	2.51	0.44
27:BA:67:LEU:HG	27:BA:113:MET:HA	1.99	0.44
29:BB:92:ASN:OD1	29:BB:93:THR:HG23	2.18	0.44
32:An:46:GLN:HG2	32:An:49:SER:CB	2.47	0.44
35:Az:74:ASN:O	35:Az:90:LYS:N	2.51	0.44
36:At:142:GLU:HG2	36:At:171:VAL:HB	2.00	0.44
37:BC:119:GLN:NE2	59:Ac:104:ILE:HG13	2.26	0.44
39:Ai:160:TYR:O	39:Ai:162:GLY:N	2.50	0.44
39:Ai:445:GLY:O	39:Ai:447:MET:HG3	2.18	0.44
40:Ap:114:ASP:HB3	40:Ap:117:THR:OG1	2.18	0.44
42:Aa:188:ALA:HB1	42:Aa:192:LEU:CD1	2.47	0.44
43:Ao:87:VAL:HG23	43:Ao:88:ARG:N	2.32	0.44
44:BM:169:ILE:HG21	44:BM:175:GLN:HE21	1.82	0.44
44:BM:210:ALA:HB2	44:BM:239:VAL:HG21	2.00	0.44
52:BP:97:ARG:HH21	52:BP:97:ARG:HB2	1.82	0.44
53:Ad:50:LEU:HD23	53:Ad:51:LYS:N	2.32	0.44
55:Av:47:ASP:O	55:Av:51:ARG:HB2	2.17	0.44
58:Ae:27:ARG:NH2	71:1:1152:U:O4'	2.46	0.44
58:Ae:264:TRP:HE3	58:Ae:265:LEU:HD23	1.81	0.44
60:Ah:306:ILE:HG12	60:Ah:462:HIS:HD2	1.83	0.44
62:Ay:148:HIS:HD1	62:Ay:148:HIS:H	1.64	0.44
64:Ax:93:VAL:HG12	67:BG:1299:MET:SD	2.57	0.44
65:BL:155:ILE:HB	65:BL:177:TYR:CE1	2.53	0.44
66:BO:60:LEU:HG	66:BO:133:ARG:NH1	2.33	0.44
66:BO:104:GLN:O	66:BO:105:ARG:HD3	2.18	0.44
71:1:124:A:H2'	71:1:125:A:O4'	2.18	0.44
71:1:145:A:H2'	71:1:146:U:H5''	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:1:539:U:C2	71:1:540:U:O2	2.71	0.44
71:1:645:G:N1	71:1:646:U:O2	2.51	0.44
1:A:48:ASP:OD1	1:A:48:ASP:N	2.50	0.44
1:A:70:ILE:HD11	1:A:77:TRP:CZ2	2.52	0.44
1:A:144:TYR:CE2	1:A:150:GLN:HB2	2.53	0.44
3:C:173:SER:HB2	3:C:176:GLU:HB2	1.99	0.44
4:D:27:ARG:NE	4:D:29:TYR:HH	2.15	0.44
4:D:121:ALA:O	4:D:125:PHE:N	2.31	0.44
5:E:72:PHE:HB3	5:E:77:LEU:HB2	2.00	0.44
6:F:16:LEU:O	6:F:54:ILE:HA	2.18	0.44
7:G:43:LYS:HD3	7:G:43:LYS:HA	1.85	0.44
7:G:110:HIS:O	7:G:112:VAL:N	2.51	0.44
7:G:128:ARG:NH2	42:Aa:18:ARG:O	2.49	0.44
7:G:167:GLU:OE2	49:Aq:303:HIS:HB2	2.18	0.44
9:I:40:THR:O	9:I:40:THR:OG1	2.29	0.44
10:J:66:PRO:HG3	66:BO:185:LEU:HD11	1.99	0.44
10:J:92:TYR:HE1	10:J:99:ASN:HB3	1.82	0.44
12:L:152:PHE:O	38:Ab:124:ARG:HB3	2.17	0.44
15:O:231:ILE:HG22	15:O:238:LEU:HA	2.00	0.44
16:P:129:MET:HB2	16:P:129:MET:HE3	1.81	0.44
16:P:161:ARG:CD	16:P:181:ARG:HE	2.30	0.44
18:R:208:TRP:HD1	18:R:213:THR:HG23	1.83	0.44
18:R:259:VAL:O	18:R:261:ALA:N	2.51	0.44
20:T:72:TRP:CE2	20:T:82:LYS:HB3	2.52	0.44
21:U:31:PRO:HG2	71:1:951:U:C1'	2.48	0.44
23:W:94:LYS:HD2	23:W:94:LYS:H	1.82	0.44
25:Y:40:TRP:CD1	37:BC:113:LYS:HE3	2.53	0.44
26:Z:76:ARG:NH1	71:1:71:A:C4	2.86	0.44
28:UA:140:UNK:O	28:UA:144:UNK:N	2.51	0.44
35:Az:43:LEU:HD23	35:Az:43:LEU:HA	1.88	0.44
35:Az:139:SER:O	35:Az:143:VAL:HG23	2.18	0.44
39:Ai:73:VAL:HG11	39:Ai:90:CYS:SG	2.58	0.44
45:Ar:146:ARG:HB3	52:BP:143:PRO:CB	2.47	0.44
46:Aj:296:LEU:HD13	56:Af:129:GLU:OE2	2.18	0.44
50:BE:91:ILE:H	50:BE:91:ILE:HD12	1.82	0.44
53:Ad:177:THR:OG1	71:1:374:U:O4'	2.36	0.44
63:Ag:204:THR:O	63:Ag:208:ASN:N	2.31	0.44
66:BO:73:ASN:ND2	66:BO:119:ARG:HD3	2.33	0.44
66:BO:121:LYS:HB2	66:BO:124:ASN:ND2	2.33	0.44
71:1:784:A:N1	71:1:787:G:C6	2.86	0.44
71:1:798:A:O2'	71:1:799:A:O4'	2.36	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:1:960:A:O2'	71:1:961:A:OP1	2.32	0.44
2:B:383:ALA:HB1	18:R:222:TYR:CZ	2.53	0.44
2:B:384:ARG:CZ	36:At:108:MET:HE1	2.48	0.44
3:C:18:HIS:HB3	3:C:27:PRO:HD2	1.98	0.44
7:G:120:ILE:HG21	13:M:19:GLN:HE21	1.82	0.44
9:I:85:VAL:HG22	9:I:89:ARG:HB2	2.00	0.44
9:I:238:ARG:NH1	15:O:88:ARG:HB2	2.33	0.44
13:M:94:GLU:OE2	46:Aj:465:ARG:NE	2.51	0.44
14:N:118:GLU:OE1	14:N:139:PRO:HG3	2.18	0.44
15:O:112:SER:O	15:O:116:ILE:HG12	2.18	0.44
15:O:156:ILE:HG23	15:O:166:ILE:HG23	2.00	0.44
16:P:94:ILE:HD11	16:P:152:VAL:HG11	1.99	0.44
24:X:58:PRO:HB3	63:Ag:208:ASN:HD21	1.82	0.44
24:X:192:PRO:HA	24:X:193:PRO:HD3	1.87	0.44
24:X:275:LEU:HD13	53:Ad:34:MET:H	1.82	0.44
24:X:345:THR:HG23	24:X:403:ALA:O	2.18	0.44
24:X:354:MET:O	24:X:355:THR:HB	2.16	0.44
26:Z:34:ARG:HG3	32:An:48:HIS:HB3	2.00	0.44
27:BA:130:LEU:O	27:BA:133:TRP:N	2.50	0.44
32:An:108:ASP:O	32:An:109:GLU:HB3	2.18	0.44
33:Al:43:THR:N	62:Ay:83:ASN:HD22	2.16	0.44
38:Ab:204:GLN:HB3	38:Ab:210:GLY:CA	2.48	0.44
41:Au:60:ASP:C	41:Au:62:ARG:H	2.25	0.44
43:Ao:275:ALA:HB1	43:Ao:279:HIS:H	1.83	0.44
44:BM:244:LEU:HD11	44:BM:348:ARG:HH11	1.83	0.44
44:BM:246:ARG:NE	44:BM:267:GLY:O	2.50	0.44
45:Ar:28:ILE:HD11	45:Ar:55:ASN:ND2	2.33	0.44
46:Aj:395:ASP:OD1	46:Aj:396:LYS:N	2.51	0.44
46:Aj:460:GLN:O	46:Aj:465:ARG:NH2	2.51	0.44
50:BE:56:HIS:CE1	50:BE:59:GLU:HB3	2.53	0.44
51:Ak:227:PRO:HB2	51:Ak:228:ILE:O	2.18	0.44
63:Ag:101:ARG:HA	63:Ag:121:TYR:CD2	2.53	0.44
63:Ag:195:TYR:CE2	63:Ag:199:LYS:HD2	2.52	0.44
64:Ax:136:TYR:CD1	64:Ax:136:TYR:N	2.65	0.44
65:BL:129:LEU:N	65:BL:129:LEU:CD1	2.81	0.44
66:BO:40:LYS:HA	66:BO:40:LYS:HD2	1.40	0.44
71:1:169:U:O4	71:1:170:A:N6	2.51	0.44
71:1:355:U:C2	71:1:356:A:C8	3.06	0.44
71:1:629:A:C8	71:1:631:C:N4	2.86	0.44
71:1:640:A:C2	71:1:799:A:C2	3.06	0.44
71:1:703:U:HO2'	71:1:704:U:P	2.40	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:1:933:G:H2'	71:1:934:G:N7	2.33	0.44
71:1:1033:U:H2'	71:1:1034:C:C6	2.53	0.44
1:A:41:LEU:HD21	48:Am:41:PHE:CZ	2.53	0.44
1:A:276:MET:HG3	71:1:865:A:H4'	2.00	0.44
1:A:384:ARG:HD3	66:BO:140:MET:SD	2.57	0.44
2:B:283:LEU:HB2	2:B:340:MET:HE3	2.00	0.44
4:D:131:MET:HE2	4:D:132:MET:HE2	2.00	0.44
7:G:12:ARG:HG3	56:Af:29:GLN:O	2.17	0.44
7:G:21:VAL:HG23	7:G:21:VAL:O	2.18	0.44
7:G:139:LYS:HB2	14:N:52:LEU:HD11	1.99	0.44
7:G:373:ARG:HG3	49:Aq:280:LEU:O	2.18	0.44
9:I:11:ARG:NH1	9:I:11:ARG:O	2.51	0.44
13:M:210:ASP:O	13:M:225:THR:OG1	2.26	0.44
18:R:35:PRO:HG2	18:R:38:SER:HB2	2.00	0.44
18:R:185:LYS:HE3	18:R:185:LYS:HB3	1.65	0.44
19:S:285:MET:HE2	71:1:491:U:C5	2.52	0.44
21:U:45:ALA:O	21:U:47:THR:HG22	2.18	0.44
24:X:363:PHE:CD1	24:X:387:PRO:HD3	2.52	0.44
25:Y:54:VAL:CG1	31:Bj:55:MET:HE1	2.48	0.44
25:Y:102:GLU:OE1	59:Ac:233:PHE:HE1	2.01	0.44
25:Y:267:SER:O	25:Y:267:SER:OG	2.36	0.44
25:Y:286:TYR:CD2	39:Ai:161:PRO:HA	2.43	0.44
30:Aw:123:ARG:NH1	53:Ad:123:SER:HB3	2.32	0.44
32:An:66:LEU:O	32:An:67:THR:OG1	2.29	0.44
38:Ab:67:LYS:HB2	38:Ab:91:ASN:ND2	2.33	0.44
43:Ao:169:ASP:OD1	43:Ao:173:ARG:HG3	2.17	0.44
44:BM:246:ARG:HG2	44:BM:266:TRP:CE3	2.53	0.44
49:Aq:300:ARG:HH12	49:Aq:307:MET:HG3	1.83	0.44
51:Ak:25:ALA:O	51:Ak:64:GLN:HA	2.18	0.44
51:Ak:48:MET:HE3	51:Ak:49:LEU:HD12	2.00	0.44
51:Ak:88:ASP:OD1	59:Ac:262:HIS:ND1	2.50	0.44
60:Ah:284:ASP:OD1	60:Ah:284:ASP:N	2.47	0.44
60:Ah:303:LEU:HD13	60:Ah:331:VAL:HA	1.99	0.44
60:Ah:348:PRO:HG2	60:Ah:351:ARG:HB2	2.00	0.44
71:1:320:G:H4'	71:1:321:U:O5'	2.18	0.44
71:1:433:G:O6	71:1:452:A:N6	2.46	0.44
71:1:1036:U:C4	71:1:1057:A:C5	3.06	0.44
1:A:70:ILE:HA	1:A:83:GLN:NE2	2.33	0.43
1:A:338:THR:HA	58:Ae:32:ARG:HH12	1.82	0.43
2:B:248:LEU:HD12	2:B:248:LEU:HA	1.85	0.43
2:B:410:ALA:HB2	2:B:423:ARG:NH1	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:162:GLN:HB3	5:E:168:VAL:O	2.19	0.43
5:E:252:ASN:HB3	38:Ab:242:ARG:HD2	1.99	0.43
6:F:16:LEU:HD21	6:F:26:VAL:HG13	1.98	0.43
7:G:17:VAL:O	7:G:20:THR:HG22	2.18	0.43
7:G:142:TRP:O	7:G:145:ARG:NH2	2.50	0.43
7:G:257:MET:SD	7:G:262:LEU:HA	2.57	0.43
9:I:44:LEU:HD22	9:I:99:HIS:HB3	2.00	0.43
12:L:133:LYS:N	12:L:149:ASN:HD21	2.15	0.43
16:P:141:ASP:OD1	16:P:148:TRP:NE1	2.50	0.43
17:Q:137:ASP:HB2	17:Q:160:LEU:HD21	2.00	0.43
17:Q:215:MET:O	17:Q:218:ARG:HB3	2.18	0.43
19:S:277:LEU:HD11	19:S:307:VAL:HG11	2.00	0.43
25:Y:96:MET:HB3	37:BC:22:HIS:CD2	2.53	0.43
29:BB:35:GLU:O	29:BB:39:SER:OG	2.25	0.43
29:BB:61:TYR:CD2	58:Ae:109:ARG:HG3	2.53	0.43
29:BB:81:VAL:HG21	58:Ae:107:LEU:HD13	1.99	0.43
32:An:126:LEU:HG	32:An:187:PHE:CZ	2.53	0.43
32:An:167:PHE:CE2	32:An:174:LEU:HD21	2.52	0.43
41:Au:62:ARG:HD2	65:BL:97:MET:SD	2.57	0.43
43:Ao:64:TRP:HE3	43:Ao:68:MET:HG2	1.83	0.43
44:BM:119:THR:O	44:BM:120:PRO:C	2.61	0.43
44:BM:276:HIS:HA	44:BM:279:TYR:CE2	2.53	0.43
46:Aj:368:GLU:HG2	46:Aj:390:ARG:NH1	2.33	0.43
49:Aq:341:PHE:C	71:1:98:G:C5	2.96	0.43
57:As:65:GLU:OE2	57:As:65:GLU:N	2.47	0.43
64:Ax:143:PHE:O	64:Ax:143:PHE:HD1	2.01	0.43
71:1:496:U:C5	71:1:497:A:C4	3.06	0.43
71:1:983:U:H3'	71:1:984:A:C5'	2.46	0.43
71:1:1114:A:O2'	71:1:1115:U:H5'	2.19	0.43
3:C:144:ALA:HA	3:C:148:LEU:HB2	1.99	0.43
3:C:177:GLU:HG2	61:BD:58:VAL:N	2.27	0.43
9:I:173:ASN:HB2	9:I:174:HIS:HD2	1.82	0.43
16:P:53:PHE:CB	16:P:60:ARG:HE	2.29	0.43
16:P:112:ARG:NE	43:Ao:113:TRP:HH2	2.16	0.43
18:R:143:LEU:HD11	18:R:358:VAL:HG21	2.00	0.43
19:S:266:PRO:HG3	19:S:283:GLU:O	2.17	0.43
19:S:340:THR:HB	56:Af:155:ILE:HD12	2.00	0.43
21:U:17:ARG:O	21:U:18:LEU:HB3	2.18	0.43
22:V:22:ARG:NH2	71:1:314:A:H4'	2.28	0.43
23:W:89:CYS:SG	23:W:92:HIS:O	2.76	0.43
26:Z:42:ASN:N	26:Z:42:ASN:OD1	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:Bj:68:LEU:HB2	49:Aq:11:LEU:HB3	2.00	0.43
33:Al:118:ILE:HB	33:Al:158:ILE:HG12	2.00	0.43
33:Al:154:TYR:CD2	33:Al:211:LEU:HD22	2.53	0.43
33:Al:194:PRO:HB3	44:BM:259:LYS:HG3	1.99	0.43
35:Az:143:VAL:HG21	36:At:61:ARG:HB2	2.00	0.43
39:Ai:233:MET:SD	63:Ag:169:ARG:NH1	2.91	0.43
39:Ai:236:LYS:HA	39:Ai:440:TYR:HD2	1.84	0.43
39:Ai:321:VAL:HG12	39:Ai:349:VAL:HB	1.99	0.43
39:Ai:331:LEU:HA	39:Ai:331:LEU:HD23	1.77	0.43
41:Au:28:ARG:CB	41:Au:31:SER:HB3	2.48	0.43
42:Aa:149:ASP:HB3	42:Aa:151:THR:HG23	2.00	0.43
46:Aj:332:LEU:HA	46:Aj:332:LEU:HD23	1.72	0.43
49:Aq:24:GLU:H	49:Aq:24:GLU:CD	2.26	0.43
49:Aq:339:ARG:CG	49:Aq:339:ARG:NH1	2.50	0.43
51:Ak:22:HIS:N	51:Ak:98:SER:OG	2.51	0.43
54:BF:16:TRP:CD1	54:BF:16:TRP:H	2.34	0.43
58:Ae:22:GLN:O	58:Ae:30:ARG:NH1	2.51	0.43
60:Ah:444:THR:HG22	60:Ah:445:ASP:OD1	2.18	0.43
62:Ay:121:LYS:HD2	62:Ay:136:TYR:CZ	2.53	0.43
63:Ag:49:ARG:HD2	71:1:82:U:OP2	2.18	0.43
65:BL:259:LEU:HD21	65:BL:267:PHE:CE1	2.53	0.43
66:BO:36:ILE:HD11	66:BO:38:ARG:NH1	2.32	0.43
71:1:107:U:H5'	71:1:108:U:H5'	2.00	0.43
71:1:109:U:O2'	71:1:110:U:OP2	2.36	0.43
71:1:164:U:OP2	71:1:166:U:N3	2.51	0.43
71:1:567:A:O2'	71:1:568:A:P	2.76	0.43
71:1:826:A:N6	71:1:827:A:N1	2.66	0.43
71:1:913:A:H5'	71:1:914:U:OP2	2.18	0.43
1:A:235:GLN:HG2	1:A:236:GLU:H	1.83	0.43
1:A:235:GLN:HG2	1:A:236:GLU:N	2.33	0.43
2:B:117:GLU:H	2:B:202:MET:HE2	1.83	0.43
5:E:179:ARG:HD3	71:1:432:U:O4'	2.19	0.43
7:G:374:LEU:HD21	39:Ai:455:GLY:HA2	2.01	0.43
8:H:72:LEU:HB3	8:H:77:ARG:NH2	2.30	0.43
9:I:103:LEU:HD13	9:I:115:LEU:HB2	2.01	0.43
10:J:50:LYS:C	10:J:52:GLN:H	2.27	0.43
11:K:73:HIS:HE1	38:Ab:118:TRP:CD1	2.36	0.43
11:K:101:GLN:NE2	42:Aa:156:SER:OG	2.51	0.43
15:O:159:VAL:N	18:R:439:SER:OG	2.41	0.43
15:O:202:HIS:O	15:O:211:CYS:N	2.36	0.43
18:R:203:GLU:HG3	18:R:314:ALA:HB2	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:261:ALA:O	18:R:264:LEU:HB2	2.19	0.43
19:S:351:HIS:O	19:S:354:SER:N	2.50	0.43
24:X:334:THR:HB	24:X:415:THR:HB	2.00	0.43
24:X:484:ARG:HD2	24:X:511:TYR:HE1	1.83	0.43
27:BA:116:VAL:HG13	27:BA:143:VAL:HA	2.01	0.43
37:BC:91:ARG:N	37:BC:91:ARG:HD2	2.33	0.43
44:BM:200:GLY:C	44:BM:239:VAL:HG11	2.43	0.43
57:As:45:GLY:O	57:As:48:THR:OG1	2.30	0.43
57:As:60:TRP:CZ3	57:As:127:HIS:HA	2.53	0.43
60:Ah:78:ARG:CD	71:1:667:A:H61	2.32	0.43
64:Ax:57:THR:O	64:Ax:58:GLN:HB2	2.19	0.43
64:Ax:90:THR:HB	64:Ax:200:PHE:CD1	2.53	0.43
71:1:105:A:O3'	71:1:106:A:H4'	2.17	0.43
71:1:163:U:N3	71:1:1013:U:H5'	2.34	0.43
71:1:383:A:H2'	71:1:384:A:O4'	2.18	0.43
71:1:509:U:C2	71:1:513:U:H1'	2.53	0.43
71:1:510:U:H5	71:1:513:U:H4'	1.84	0.43
71:1:682:A:C6	71:1:683:U:C4	3.06	0.43
71:1:910:U:HO2'	71:1:911:A:P	2.41	0.43
71:1:975:U:C2	71:1:976:A:H2	2.36	0.43
71:1:991:G:N2	71:1:992:G:C4	2.86	0.43
71:1:1045:U:OP2	71:1:1070:C:H4'	2.18	0.43
2:B:15:ARG:NH2	71:1:516:A:OP2	2.43	0.43
2:B:33:HIS:HB2	46:Aj:441:VAL:HG22	2.00	0.43
3:C:162:TYR:HD1	3:C:167:LEU:HB2	1.83	0.43
5:E:156:GLU:OE2	55:Av:105:TYR:OH	2.34	0.43
12:L:99:PRO:HG2	42:Aa:31:VAL:HG12	2.00	0.43
17:Q:169:LYS:O	17:Q:172:VAL:HG22	2.19	0.43
17:Q:173:LEU:HD23	17:Q:173:LEU:HA	1.79	0.43
18:R:280:LEU:HD23	18:R:281:GLU:HG3	2.00	0.43
18:R:290:VAL:HG21	30:Aw:59:PRO:HG3	1.99	0.43
24:X:278:ARG:HG2	24:X:279:HIS:NE2	2.32	0.43
26:Z:43:ILE:O	26:Z:44:LEU:CB	2.64	0.43
28:UA:81:UNK:CB	64:Ax:129:ARG:CG	2.96	0.43
32:An:46:GLN:CB	63:Ag:14:PRO:HD3	2.45	0.43
33:Al:179:PRO:HG2	33:Al:195:VAL:HB	1.99	0.43
33:Al:255:THR:H	33:Al:258:GLU:CD	2.26	0.43
36:At:14:LYS:HE3	71:1:110:U:OP2	2.19	0.43
38:Ab:7:LEU:HG	38:Ab:42:GLN:HE21	1.84	0.43
39:Ai:268:MET:HE1	39:Ai:295:ILE:HG13	1.99	0.43
40:Ap:39:ASN:OD1	40:Ap:39:ASN:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:Ap:124:LEU:HD13	40:Ap:132:VAL:HG21	1.99	0.43
42:Aa:78:PHE:CZ	52:BP:-8:ARG:HD2	2.53	0.43
43:Ao:85:ASP:OD2	43:Ao:90:HIS:N	2.48	0.43
44:BM:119:THR:HG23	44:BM:122:LEU:HB2	1.99	0.43
45:Ar:69:CYS:SG	45:Ar:79:ARG:HD3	2.59	0.43
46:Aj:122:ASN:ND2	46:Aj:356:TYR:OH	2.51	0.43
49:Aq:165:ARG:HA	49:Aq:165:ARG:HD2	1.80	0.43
49:Aq:338:HIS:HA	49:Aq:341:PHE:HB3	1.99	0.43
51:Ak:26:ARG:HB3	51:Ak:65:VAL:CG1	2.49	0.43
52:BP:158:PRO:HB3	52:BP:160:TRP:CZ2	2.52	0.43
53:Ad:58:SER:HA	53:Ad:139:VAL:HG22	1.99	0.43
60:Ah:185:CYS:O	60:Ah:197:VAL:HG23	2.18	0.43
62:Ay:165:ASP:O	62:Ay:166:GLN:C	2.61	0.43
65:BL:213:SER:OG	65:BL:216:GLU:OE2	2.35	0.43
66:BO:47:TRP:HB2	71:1:814:A:C2	2.53	0.43
71:1:228:G:N2	71:1:304:G:H2'	2.32	0.43
71:1:574:A:O2'	71:1:575:G:C8	2.69	0.43
71:1:772:U:C5	71:1:773:A:C6	3.06	0.43
71:1:881:G:C8	71:1:987:A:C2	3.06	0.43
71:1:1110:G:H3'	71:1:1111:C:H5'	2.01	0.43
1:A:392:LEU:HD13	10:J:64:TYR:CE2	2.53	0.43
2:B:82:THR:O	2:B:87:LYS:NZ	2.43	0.43
3:C:136:THR:HG21	3:C:172:HIS:CE1	2.54	0.43
4:D:19:SER:OG	4:D:22:LEU:HD12	2.18	0.43
5:E:206:THR:O	5:E:210:TYR:N	2.50	0.43
5:E:264:LEU:HD13	5:E:297:TRP:CE2	2.53	0.43
7:G:227:PRO:HD3	53:Ad:138:ALA:HB2	2.00	0.43
8:H:75:MET:HE2	8:H:75:MET:HB3	1.91	0.43
10:J:67:ARG:CZ	10:J:67:ARG:CB	2.94	0.43
10:J:133:ASP:O	10:J:137:LEU:HD23	2.19	0.43
11:K:66:VAL:O	11:K:70:ALA:N	2.44	0.43
11:K:140:ASP:HB2	11:K:143:VAL:HG22	1.99	0.43
11:K:186:TYR:HB3	46:Aj:268:ASN:ND2	2.34	0.43
12:L:89:MET:HG3	12:L:113:ALA:HB3	1.99	0.43
13:M:15:ALA:O	13:M:35:GLU:HB2	2.19	0.43
16:P:61:GLN:NE2	16:P:65:ARG:HD3	2.33	0.43
17:Q:108:ILE:HG21	71:1:905:A:N7	2.34	0.43
19:S:272:GLU:HG2	43:Ao:49:PRO:HB3	2.00	0.43
21:U:25:PHE:O	21:U:25:PHE:CG	2.65	0.43
22:V:25:VAL:HG22	22:V:26:LEU:N	2.29	0.43
23:W:60:HIS:HE1	23:W:94:LYS:HB3	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BB:46:VAL:HG22	29:BB:47:ALA:H	1.83	0.43
29:BB:100:GLU:O	29:BB:104:LYS:HB2	2.18	0.43
31:Bj:165:ILE:HG13	59:Ac:35:PRO:HG3	1.98	0.43
32:An:19:ARG:HA	41:Au:11:ARG:HH22	1.84	0.43
32:An:61:PRO:HD2	41:Au:89:PHE:CE1	2.54	0.43
32:An:133:VAL:O	32:An:136:ALA:HB3	2.18	0.43
37:BC:125:HIS:C	37:BC:127:ALA:H	2.25	0.43
37:BC:136:GLU:OE2	37:BC:139:PRO:HA	2.18	0.43
38:Ab:248:GLU:H	38:Ab:248:GLU:CD	2.27	0.43
39:Ai:23:TYR:CD2	39:Ai:247:VAL:HG11	2.54	0.43
40:Ap:63:LEU:O	40:Ap:66:VAL:HB	2.18	0.43
44:BM:221:ARG:HD2	44:BM:228:ASN:CG	2.43	0.43
45:Ar:18:GLU:O	45:Ar:43:LYS:HD3	2.18	0.43
46:Aj:308:THR:HG21	46:Aj:374:TYR:CE1	2.53	0.43
46:Aj:347:LYS:NZ	46:Aj:407:ARG:O	2.50	0.43
47:BH:74:LEU:HD23	47:BH:106:VAL:HG12	2.01	0.43
48:Am:328:ALA:N	48:Am:329:PRO:HD2	2.32	0.43
49:Aq:287:GLY:HA3	63:Ag:168:TYR:CZ	2.53	0.43
51:Ak:113:TYR:N	51:Ak:114:PRO:HD3	2.33	0.43
51:Ak:262:ASP:O	51:Ak:266:ASP:N	2.41	0.43
52:BP:140:THR:HG23	52:BP:140:THR:O	2.18	0.43
53:Ad:29:PRO:C	53:Ad:31:LEU:N	2.75	0.43
53:Ad:156:PHE:HE2	53:Ad:199:GLU:OE2	2.02	0.43
54:BF:22:HIS:C	54:BF:24:LEU:H	2.27	0.43
54:BF:53:LEU:HD12	54:BF:57:TYR:CE2	2.53	0.43
56:Af:99:LEU:HB3	56:Af:100:GLN:HE21	1.82	0.43
57:As:46:ILE:HG13	57:As:81:CYS:SG	2.58	0.43
59:Ac:172:ILE:HG21	59:Ac:264:LEU:HD21	2.00	0.43
59:Ac:245:GLN:O	59:Ac:248:SER:OG	2.35	0.43
63:Ag:175:VAL:O	63:Ag:179:LEU:HB2	2.18	0.43
71:1:217:A:H62	71:1:323:A:N6	2.08	0.43
71:1:434:U:O4'	71:1:443:G:H1'	2.18	0.43
71:1:699:A:O2'	71:1:700:U:O4'	2.32	0.43
71:1:711:A:H5''	71:1:712:U:C5	2.54	0.43
71:1:876:G:N1	71:1:991:G:N2	2.67	0.43
71:1:1068:A:H2'	71:1:1096:A:N6	2.32	0.43
71:1:1080:A:H8	71:1:1088:G:C2	2.36	0.43
71:1:1122:A:O2'	71:1:1123:U:OP2	2.31	0.43
1:A:42:MET:HE2	29:BB:67:TRP:HB3	2.01	0.43
2:B:152:LYS:HE2	2:B:165:GLY:HA3	2.00	0.43
2:B:246:GLY:HA3	2:B:275:ARG:HG2	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:138:PRO:HG2	5:E:141:LEU:HD13	2.00	0.43
7:G:142:TRP:HB2	49:Aq:340:TYR:CD1	2.52	0.43
8:H:77:ARG:HA	8:H:77:ARG:HD3	1.61	0.43
10:J:5:ARG:NH2	71:1:1109:A:OP2	2.52	0.43
13:M:99:LEU:HD21	13:M:108:GLN:HG2	2.00	0.43
14:N:95:TYR:CZ	14:N:97:GLY:HA3	2.53	0.43
15:O:280:ARG:HH21	18:R:102:ASP:CG	2.26	0.43
16:P:40:VAL:HG11	16:P:46:LEU:HD21	2.00	0.43
16:P:139:GLU:O	16:P:143:VAL:HG23	2.19	0.43
17:Q:29:GLY:HA2	49:Aq:306:LEU:HG	2.00	0.43
18:R:19:GLY:O	18:R:23:ASN:ND2	2.52	0.43
18:R:373:ALA:HB1	18:R:379:TYR:CE1	2.54	0.43
22:V:132:ARG:HD3	71:1:103:U:C5	2.54	0.43
29:BB:66:TRP:NE1	29:BB:76:HIS:HD1	2.17	0.43
29:BB:112:LEU:HB3	29:BB:113:PRO:HD2	2.01	0.43
32:An:264:HIS:CE1	60:Ah:68:ILE:HB	2.54	0.43
34:BI:261:VAL:HG23	34:BI:262:GLU:H	1.84	0.43
38:Ab:170:ILE:HG21	38:Ab:228:HIS:CE1	2.52	0.43
48:Am:273:ARG:O	48:Am:277:MET:HE3	2.19	0.43
49:Aq:222:ARG:O	49:Aq:226:ARG:N	2.52	0.43
50:BE:78:PRO:O	50:BE:79:VAL:C	2.62	0.43
51:Ak:180:SER:O	51:Ak:184:ASP:HB2	2.18	0.43
52:BP:70:PRO:HD2	52:BP:85:PHE:CZ	2.54	0.43
53:Ad:189:ILE:HG12	53:Ad:190:GLU:N	2.34	0.43
58:Ae:33:PRO:O	58:Ae:34:HIS:CD2	2.71	0.43
60:Ah:169:ILE:HG13	60:Ah:206:LEU:HD21	2.00	0.43
60:Ah:306:ILE:CG1	60:Ah:462:HIS:HD2	2.30	0.43
62:Ay:56:GLN:NE2	71:1:695:A:O2'	2.52	0.43
65:BL:84:GLN:HG3	65:BL:291:LYS:HD2	1.99	0.43
65:BL:310:ARG:NH1	71:1:297:U:H3	2.01	0.43
66:BO:65:LYS:HB3	66:BO:78:ARG:HG3	2.00	0.43
67:BG:1341:VAL:HG23	67:BG:1342:CYS:N	2.30	0.43
71:1:46:U:H2'	71:1:47:A:N7	2.33	0.43
71:1:190:A:H61	71:1:207:G:H2'	1.77	0.43
71:1:390:A:H2	71:1:391:A:C4	2.36	0.43
71:1:949:U:N3	71:1:950:A:N7	2.67	0.43
71:1:1079:A:N6	71:1:1080:A:N7	2.66	0.43
2:B:119:GLU:OE1	53:Ad:213:SER:OG	2.32	0.43
3:C:79:GLY:O	3:C:95:LYS:NZ	2.52	0.43
3:C:185:TYR:O	3:C:188:LEU:N	2.51	0.43
5:E:22:GLY:N	55:Av:103:TRP:O	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:261:ASP:OD1	5:E:261:ASP:N	2.52	0.43
5:E:298:PHE:CD2	5:E:301:MET:HE2	2.54	0.43
8:H:58:MET:HE2	8:H:58:MET:HB3	1.92	0.43
12:L:89:MET:HB3	38:Ab:95:HIS:O	2.18	0.43
12:L:145:ASP:OD1	12:L:145:ASP:N	2.51	0.43
15:O:178:ILE:HG12	18:R:435:LEU:HD21	2.01	0.43
16:P:53:PHE:O	16:P:54:GLY:C	2.61	0.43
22:V:122:SER:O	22:V:122:SER:OG	2.27	0.43
25:Y:287:GLU:HB3	39:Ai:163:GLN:NE2	2.34	0.43
26:Z:105:LEU:O	26:Z:107:PHE:N	2.52	0.43
27:BA:91:HIS:CD2	27:BA:93:HIS:H	2.37	0.43
30:Aw:12:HIS:C	30:Aw:14:VAL:H	2.26	0.43
31:Bj:108:ASP:CG	31:Bj:109:ARG:H	2.27	0.43
31:Bj:123:ILE:HG23	31:Bj:125:LYS:H	1.84	0.43
32:An:58:ARG:HG3	65:BL:108:LYS:NZ	2.34	0.43
34:BI:83:PHE:HB2	34:BI:95:ARG:HG3	2.01	0.43
39:Ai:14:PRO:HB3	49:Aq:225:ASP:HB3	2.00	0.43
39:Ai:452:ASP:OD1	39:Ai:456:PHE:N	2.51	0.43
42:Aa:135:MET:O	42:Aa:138:TYR:HB3	2.19	0.43
44:BM:210:ALA:HB3	44:BM:236:LEU:HA	2.00	0.43
44:BM:364:GLN:O	44:BM:367:VAL:HG12	2.18	0.43
55:Av:31:LYS:O	55:Av:85:SER:OG	2.37	0.43
57:As:57:ARG:NE	57:As:130:THR:OG1	2.41	0.43
58:Ae:202:ASP:OD1	58:Ae:203:PHE:N	2.52	0.43
61:BD:50:ARG:HG3	61:BD:57:MET:HE3	2.00	0.43
63:Ag:36:ASN:O	63:Ag:44:GLY:HA3	2.19	0.43
63:Ag:230:ASP:OD1	63:Ag:230:ASP:N	2.48	0.43
64:Ax:122:TRP:CD1	64:Ax:122:TRP:C	2.97	0.43
64:Ax:134:GLN:OE1	64:Ax:135:GLY:N	2.52	0.43
66:BO:51:THR:HG22	66:BO:144:GLN:NE2	2.34	0.43
66:BO:87:ARG:HG3	66:BO:133:ARG:NH1	2.33	0.43
71:1:170:A:O2'	71:1:172:A:OP2	2.31	0.43
71:1:855:A:O5'	71:1:855:A:H8	2.02	0.43
71:1:886:A:C2	71:1:980:A:C4	3.07	0.43
1:A:312:LYS:NZ	1:A:367:LEU:O	2.29	0.43
2:B:273:ASN:HA	36:At:38:ALA:HB2	2.00	0.43
2:B:408:GLY:HA2	33:Al:287:TRP:CZ3	2.53	0.43
7:G:298:LEU:HD23	7:G:298:LEU:HA	1.86	0.43
8:H:56:PHE:CE1	52:BP:183:ILE:HD13	2.52	0.43
9:I:72:ARG:NH1	71:1:544:U:H2'	2.33	0.43
9:I:228:ARG:NH1	9:I:232:LEU:HD21	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:48:HIS:NE2	10:J:52:GLN:HG2	2.33	0.43
10:J:79:HIS:HB3	10:J:87:GLY:O	2.19	0.43
11:K:19:ARG:NH2	42:Aa:178:ARG:HH12	2.16	0.43
13:M:15:ALA:HA	13:M:16:PRO:HD3	1.91	0.43
13:M:178:ARG:HA	13:M:178:ARG:HD3	1.79	0.43
15:O:305:ARG:NH1	32:An:244:VAL:HG11	2.33	0.43
16:P:30:LYS:NZ	16:P:48:GLU:OE2	2.33	0.43
16:P:161:ARG:NH1	16:P:181:ARG:HH21	2.17	0.43
17:Q:82:VAL:O	17:Q:82:VAL:HG23	2.18	0.43
19:S:292:PRO:HB2	19:S:294:ILE:HG23	2.01	0.43
24:X:494:LEU:N	24:X:494:LEU:CD1	2.81	0.43
24:X:499:ARG:O	24:X:502:MET:HG2	2.19	0.43
27:BA:27:GLY:C	27:BA:29:ALA:N	2.75	0.43
32:An:129:LYS:HG3	32:An:182:VAL:HG12	2.00	0.43
37:BC:101:SER:OG	37:BC:104:ARG:NH2	2.52	0.43
39:Ai:239:ILE:HD13	39:Ai:239:ILE:HA	1.88	0.43
44:BM:101:LYS:HG2	44:BM:108:LEU:HD13	1.99	0.43
44:BM:204:THR:C	44:BM:205:LYS:HD3	2.43	0.43
44:BM:251:ARG:HE	44:BM:253:CYS:HB2	1.84	0.43
49:Aq:109:HIS:HD2	49:Aq:111:THR:HG22	1.83	0.43
51:Ak:76:SER:HA	51:Ak:79:HIS:HB3	2.00	0.43
51:Ak:192:VAL:HG13	51:Ak:193:PHE:CD2	2.53	0.43
51:Ak:193:PHE:HB3	51:Ak:200:ARG:HA	2.00	0.43
58:Ae:38:LEU:HD22	58:Ae:56:ASP:HB3	2.01	0.43
59:Ac:210:LEU:HA	59:Ac:242:GLY:HA3	2.01	0.43
62:Ay:45:HIS:ND1	71:1:704:U:OP1	2.52	0.43
65:BL:119:ARG:HH11	65:BL:132:HIS:CA	2.32	0.43
65:BL:200:ALA:HB2	65:BL:205:LEU:HD23	2.01	0.43
66:BO:92:ARG:O	66:BO:95:PRO:HD2	2.19	0.43
66:BO:176:HIS:HD2	66:BO:178:TYR:N	2.16	0.43
68:UB:5:UNK:C	68:UB:7:UNK:H	2.32	0.43
68:UB:38:UNK:O	68:UB:39:UNK:C	2.66	0.43
71:1:71:A:H61	71:1:75:A:H61	1.67	0.43
71:1:420:A:O2'	71:1:421:U:H5''	2.19	0.43
5:E:75:LEU:HB3	5:E:110:LYS:NZ	2.34	0.43
5:E:148:TYR:CZ	55:Av:69:VAL:HG11	2.54	0.43
7:G:272:PRO:HB3	30:Aw:88:ARG:HH21	1.83	0.43
8:H:95:GLN:HA	8:H:109:ILE:CG1	2.46	0.43
9:I:175:LYS:N	9:I:201:ARG:HH12	1.97	0.43
11:K:134:TYR:CD2	56:Af:92:ARG:HG3	2.54	0.43
13:M:144:LYS:HB3	13:M:144:LYS:HE2	1.76	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:162:GLU:HG2	14:N:228:PRO:HB2	2.01	0.43
14:N:170:ILE:HG21	14:N:179:LEU:HD13	2.01	0.43
15:O:29:ARG:CG	15:O:33:ARG:HD3	2.48	0.43
17:Q:108:ILE:CG1	71:1:905:A:H62	2.31	0.43
18:R:54:LEU:HD22	18:R:87:VAL:HG23	2.01	0.43
18:R:211:SER:C	18:R:213:THR:N	2.77	0.43
21:U:19:LYS:O	21:U:19:LYS:HG2	2.19	0.43
22:V:150:VAL:HG22	63:Ag:104:GLN:HG3	2.01	0.43
24:X:89:LEU:C	24:X:91:THR:H	2.26	0.43
24:X:234:ALA:H	24:X:237:ALA:HA	1.84	0.43
24:X:275:LEU:CD1	53:Ad:32:ARG:HD2	2.45	0.43
24:X:343:LYS:HD3	24:X:409:CYS:SG	2.59	0.43
25:Y:93:ILE:HD11	37:BC:41:VAL:HG21	2.01	0.43
27:BA:74:GLU:HG2	27:BA:75:PRO:HD3	2.00	0.43
32:An:63:GLY:C	32:An:65:GLY:H	2.26	0.43
33:Al:69:TYR:OH	33:Al:73:LYS:HD2	2.19	0.43
38:Ab:9:LEU:HD23	38:Ab:87:VAL:HG12	2.01	0.43
40:Ap:200:TYR:HB3	40:Ap:214:TRP:CE3	2.53	0.43
41:Au:144:LEU:O	41:Au:148:GLU:N	2.40	0.43
43:Ao:244:VAL:HG23	43:Ao:245:GLN:N	2.33	0.43
46:Aj:369:ARG:HD3	46:Aj:369:ARG:HA	1.75	0.43
46:Aj:382:GLY:HA2	46:Aj:385:ARG:HG2	2.01	0.43
47:BH:152:LEU:HD22	47:BH:156:PHE:CD2	2.54	0.43
49:Aq:32:TYR:HB3	53:Ad:36:ASP:CB	2.49	0.43
52:BP:4:THR:HB	71:1:487:U:OP2	2.19	0.43
60:Ah:58:VAL:HG11	60:Ah:68:ILE:CG2	2.49	0.43
60:Ah:320:LEU:HD21	60:Ah:327:ALA:HB2	2.00	0.43
64:Ax:81:ARG:HD3	64:Ax:81:ARG:HA	1.80	0.43
65:BL:133:TYR:CD2	65:BL:303:LYS:HG2	2.54	0.43
65:BL:141:TRP:O	65:BL:141:TRP:HD1	1.98	0.43
65:BL:284:ASN:HB2	71:1:671:U:C2	2.54	0.43
65:BL:330:LEU:HD12	65:BL:330:LEU:O	2.19	0.43
66:BO:68:CYS:SG	66:BO:76:HIS:HB3	2.58	0.43
71:1:503:U:O2'	71:1:504:U:OP2	2.31	0.43
71:1:556:A:OP2	71:1:557:A:H2'	2.19	0.43
71:1:581:U:H5'	71:1:582:U:C5	2.54	0.43
71:1:763:G:H4'	71:1:764:U:OP1	2.18	0.43
71:1:974:U:O2	71:1:974:U:H2'	2.18	0.43
4:D:36:ARG:NH2	48:Am:266:GLU:HB3	2.34	0.43
4:D:65:ARG:HH11	38:Ab:195:GLU:HG3	1.83	0.43
6:F:112:VAL:O	6:F:118:ARG:HD3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:164:TRP:CE3	6:F:170:MET:HE1	2.54	0.43
7:G:75:THR:OG1	46:Aj:419:ALA:O	2.19	0.43
9:I:152:ARG:NH1	9:I:157:ASN:HB3	2.34	0.43
13:M:76:ASN:O	13:M:78:PRO:HD3	2.19	0.43
15:O:21:TYR:OH	15:O:28:ALA:HA	2.19	0.43
15:O:112:SER:O	15:O:115:LYS:HB3	2.19	0.43
17:Q:141:LEU:HD23	17:Q:141:LEU:HA	1.74	0.43
18:R:246:ASN:HD22	18:R:255:ALA:HB1	1.83	0.43
20:T:29:PRO:HA	71:1:1101:C:H1'	2.00	0.43
24:X:93:GLN:HG3	24:X:94:LEU:N	2.34	0.43
24:X:100:PRO:HD2	39:Ai:65:THR:HG22	2.01	0.43
24:X:106:TYR:CE2	39:Ai:195:ARG:HD3	2.53	0.43
26:Z:110:GLY:N	71:1:572:A:OP1	2.52	0.43
30:Aw:120:MET:SD	30:Aw:121:GLU:HG3	2.59	0.43
31:Bj:128:ARG:HE	31:Bj:130:LYS:CD	2.32	0.43
33:Al:254:ASP:HB2	33:Al:258:GLU:OE1	2.19	0.43
34:BI:182:ASP:HB2	34:BI:206:HIS:HA	2.00	0.43
41:Au:30:TRP:CE2	71:1:259:U:C5	3.07	0.43
41:Au:99:HIS:N	64:Ax:177:VAL:HG11	2.34	0.43
46:Aj:422:LEU:HD12	46:Aj:422:LEU:O	2.19	0.43
46:Aj:469:ASP:N	46:Aj:469:ASP:OD1	2.50	0.43
48:Am:134:ARG:O	48:Am:138:LYS:HG2	2.19	0.43
60:Ah:154:ASP:OD1	60:Ah:427:ARG:HD3	2.19	0.43
60:Ah:448:ARG:HB3	60:Ah:461:ARG:HH22	1.84	0.43
61:BD:58:VAL:HG13	61:BD:71:SER:HB2	1.99	0.43
61:BD:63:CYS:SG	61:BD:64:HIS:N	2.92	0.43
64:Ax:203:ARG:O	64:Ax:204:HIS:HB2	2.19	0.43
65:BL:157:LYS:HA	65:BL:177:TYR:HA	2.01	0.43
65:BL:259:LEU:HD21	65:BL:267:PHE:HE1	1.83	0.43
66:BO:75:LYS:C	66:BO:76:HIS:CG	2.96	0.43
66:BO:80:ILE:HB	66:BO:102:SER:HB2	2.01	0.43
71:1:861:A:C2	71:1:862:A:C5	3.07	0.43
71:1:863:A:N6	71:1:864:A:C6	2.86	0.43
1:A:261:TYR:CB	1:A:264:LEU:HB2	2.49	0.42
2:B:133:GLN:NE2	13:M:10:ILE:HD13	2.34	0.42
2:B:140:ASP:OD1	2:B:141:TYR:N	2.52	0.42
2:B:250:MET:HE2	2:B:250:MET:HB3	1.94	0.42
2:B:295:SER:O	2:B:296:SER:C	2.62	0.42
2:B:364:SER:O	2:B:364:SER:OG	2.34	0.42
2:B:406:ASP:C	2:B:408:GLY:N	2.75	0.42
3:C:122:TRP:HD1	3:C:129:TRP:NE1	2.17	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:339:SER:HB3	38:Ab:189:ARG:NE	2.34	0.42
9:I:116:ALA:HA	9:I:125:VAL:HG11	2.01	0.42
9:I:226:ARG:O	9:I:243:PRO:HB3	2.18	0.42
11:K:45:THR:HG21	71:1:153:U:O2	2.18	0.42
12:L:86:GLN:OE1	12:L:114:THR:HB	2.18	0.42
13:M:159:ARG:HE	13:M:243:LEU:HD13	1.84	0.42
15:O:131:ILE:HG12	15:O:164:ASN:CG	2.44	0.42
18:R:116:ARG:HH11	18:R:121:ILE:HD11	1.83	0.42
21:U:17:ARG:HB2	21:U:19:LYS:HE2	2.01	0.42
22:V:37:MET:HG3	22:V:39:VAL:HG23	2.01	0.42
26:Z:76:ARG:NE	71:1:71:A:O4'	2.51	0.42
32:An:134:ILE:O	32:An:135:PHE:C	2.62	0.42
34:Bi:249:THR:HG22	34:Bi:253:GLU:O	2.19	0.42
35:Az:35:LEU:HD12	35:Az:36:HIS:H	1.84	0.42
39:Ai:269:PRO:HG2	39:Ai:299:MET:HB2	2.00	0.42
44:BM:17:ARG:NH2	44:BM:19:PHE:HB3	2.32	0.42
44:BM:98:LYS:HA	44:BM:123:GLN:NE2	2.34	0.42
46:Aj:384:MET:O	46:Aj:388:GLN:N	2.49	0.42
47:BH:68:GLY:HA2	47:BH:214:HIS:CE1	2.52	0.42
47:BH:118:GLY:C	47:BH:120:ALA:H	2.27	0.42
49:Aq:52:ASN:O	49:Aq:52:ASN:ND2	2.52	0.42
51:Ak:136:THR:CG2	51:Ak:208:VAL:HG11	2.49	0.42
51:Ak:249:ALA:HB2	51:Ak:260:CYS:SG	2.59	0.42
51:Ak:276:GLU:CD	51:Ak:277:PRO:HD2	2.44	0.42
52:BP:-12:LEU:O	52:BP:-11:GLU:HB3	2.19	0.42
53:Ad:31:LEU:HB3	53:Ad:36:ASP:OD2	2.18	0.42
53:Ad:222:ASN:O	53:Ad:224:ASP:N	2.52	0.42
61:BD:63:CYS:SG	61:BD:65:ARG:N	2.90	0.42
62:Ay:82:VAL:O	62:Ay:86:ARG:HG3	2.19	0.42
64:Ax:132:THR:HG22	64:Ax:133:THR:N	2.31	0.42
64:Ax:151:ARG:HE	64:Ax:153:ILE:HG12	1.84	0.42
68:UB:63:UNK:O	68:UB:67:UNK:N	2.53	0.42
71:1:235:G:N2	71:1:236:A:C5	2.86	0.42
71:1:318:U:N3	71:1:319:A:N7	2.67	0.42
71:1:353:A:H61	71:1:373:A:N6	2.17	0.42
71:1:662:G:N2	71:1:675:A:C2	2.87	0.42
71:1:700:U:C3'	71:1:701:U:H5'	2.49	0.42
71:1:763:G:H2'	71:1:764:U:H3'	2.01	0.42
71:1:803:U:H2'	71:1:804:U:O4'	2.19	0.42
71:1:910:U:H2'	71:1:911:A:O4'	2.19	0.42
71:1:1029:U:H3	71:1:1057:A:N6	2.17	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:1:1039:A:H61	71:1:1051:A:H61	1.67	0.42
2:B:241:ARG:HG2	46:Aj:492:PHE:HZ	1.84	0.42
5:E:249:PRO:HG3	5:E:309:VAL:HG22	2.01	0.42
5:E:339:SER:HB2	38:Ab:189:ARG:O	2.19	0.42
8:H:13:ARG:CZ	8:H:13:ARG:HA	2.49	0.42
9:I:73:MET:CE	9:I:89:ARG:HH11	2.33	0.42
10:J:34:ALA:O	10:J:38:ILE:HG23	2.18	0.42
10:J:142:ARG:HD2	71:1:806:A:OP2	2.18	0.42
11:K:24:LEU:HD11	11:K:39:ILE:HB	2.00	0.42
11:K:44:ARG:HD2	12:L:97:SER:O	2.19	0.42
13:M:149:GLU:HG2	13:M:170:ARG:HD3	2.01	0.42
14:N:47:ARG:NH1	71:1:91:U:OP1	2.52	0.42
17:Q:219:VAL:O	17:Q:222:GLN:HB3	2.18	0.42
19:S:260:VAL:HG12	19:S:282:LEU:HD11	2.01	0.42
21:U:31:PRO:HG2	71:1:951:U:C2	2.54	0.42
22:V:45:LYS:HE3	71:1:194:U:OP2	2.19	0.42
24:X:67:GLN:HG3	24:X:69:PRO:HD2	2.01	0.42
24:X:362:ASP:OD1	24:X:362:ASP:N	2.51	0.42
24:X:481:LEU:HD12	24:X:482:PRO:CD	2.49	0.42
25:Y:127:TYR:HD1	59:Ac:240:LEU:HD21	1.85	0.42
33:Al:184:HIS:HA	33:Al:190:HIS:HB3	2.01	0.42
39:Ai:222:PRO:HB3	39:Ai:240:THR:CG2	2.49	0.42
42:Aa:176:GLN:C	42:Aa:178:ARG:H	2.26	0.42
43:Ao:39:HIS:CE1	43:Ao:62:VAL:HB	2.54	0.42
43:Ao:71:ARG:HH22	71:1:351:U:P	2.40	0.42
43:Ao:88:ARG:O	43:Ao:91:GLN:HG2	2.20	0.42
44:BM:15:ASN:OD1	44:BM:16:TYR:N	2.52	0.42
44:BM:178:ALA:O	44:BM:182:ARG:HB3	2.20	0.42
45:Ar:144:ASP:OD2	45:Ar:146:ARG:HB2	2.19	0.42
48:Am:28:ALA:HA	58:Ae:55:HIS:CE1	2.54	0.42
48:Am:72:ASP:O	48:Am:85:THR:HB	2.19	0.42
49:Aq:341:PHE:CD1	49:Aq:341:PHE:C	2.97	0.42
55:Av:143:ASN:HB3	71:1:454:A:C8	2.54	0.42
57:As:110:ASP:HA	57:As:113:LYS:HG2	2.00	0.42
59:Ac:109:ASP:OD1	59:Ac:109:ASP:N	2.52	0.42
61:BD:33:ILE:HG21	62:Ay:174:TRP:CD1	2.55	0.42
73:Ag:301:NAD:H3B	73:Ag:301:NAD:PA	2.58	0.42
64:Ax:190:HIS:O	64:Ax:190:HIS:CG	2.72	0.42
65:BL:257:LEU:HD12	65:BL:267:PHE:CD1	2.53	0.42
65:BL:337:ARG:HB3	71:1:707:U:O2'	2.19	0.42
66:BO:42:SER:C	66:BO:44:ARG:N	2.77	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:BO:44:ARG:HD3	66:BO:44:ARG:HA	1.78	0.42
71:1:478:A:H4'	71:1:480:A:N6	2.34	0.42
71:1:617:G:H3'	71:1:617:G:N3	2.34	0.42
71:1:801:A:H2'	71:1:802:U:O4'	2.19	0.42
71:1:864:A:N7	71:1:865:A:C6	2.87	0.42
1:A:128:SER:HB3	1:A:353:PHE:CE1	2.53	0.42
1:A:286:PRO:HG3	71:1:1105:G:O5'	2.19	0.42
2:B:257:THR:HB	36:At:113:ARG:HB3	2.01	0.42
2:B:425:ILE:HD12	2:B:430:THR:HG21	2.00	0.42
4:D:67:ILE:HD13	4:D:72:VAL:HG13	2.00	0.42
4:D:72:VAL:O	38:Ab:212:PRO:HB3	2.18	0.42
5:E:101:ILE:HG13	5:E:120:PRO:HD3	2.01	0.42
8:H:68:ARG:HG3	8:H:82:LEU:HD23	2.00	0.42
10:J:83:THR:HB	57:As:59:TRP:HH2	1.83	0.42
11:K:183:TRP:NE1	46:Aj:225:GLU:HG2	2.34	0.42
12:L:90:ARG:HG3	38:Ab:94:ASN:HB3	2.00	0.42
12:L:134:TYR:OH	42:Aa:88:THR:HG23	2.19	0.42
15:O:114:GLN:HA	15:O:117:GLN:CB	2.48	0.42
15:O:280:ARG:NE	18:R:102:ASP:OD1	2.45	0.42
17:Q:207:ASP:N	17:Q:210:GLU:OE2	2.52	0.42
19:S:295:PRO:CG	19:S:296:PRO:HD3	2.49	0.42
24:X:66:PHE:HB3	24:X:71:GLU:OE1	2.19	0.42
25:Y:147:VAL:O	25:Y:151:ARG:HG2	2.19	0.42
31:Bj:149:LEU:HD22	37:BC:70:HIS:CG	2.55	0.42
34:BI:138:ASP:O	34:BI:141:LEU:HB3	2.18	0.42
34:BI:141:LEU:HG	34:BI:142:PRO:HD2	2.02	0.42
36:At:136:PRO:HB2	36:At:140:TYR:HB2	2.00	0.42
38:Ab:261:PRO:HB2	45:Ar:27:THR:HB	1.99	0.42
39:Ai:364:LEU:HD22	39:Ai:376:VAL:HG11	2.00	0.42
40:Ap:191:ARG:HH22	40:Ap:195:ARG:NH2	2.16	0.42
43:Ao:124:GLU:O	43:Ao:126:PRO:HD3	2.20	0.42
45:Ar:25:THR:OG1	45:Ar:54:GLY:O	2.36	0.42
62:Ay:143:GLU:CD	62:Ay:148:HIS:HA	2.44	0.42
63:Ag:32:LEU:HD12	63:Ag:32:LEU:HA	1.78	0.42
65:BL:205:LEU:N	65:BL:206:PRO:HD3	2.34	0.42
65:BL:279:ALA:O	65:BL:280:GLY:C	2.61	0.42
66:BO:87:ARG:HH11	66:BO:89:ALA:CB	2.31	0.42
66:BO:88:PHE:N	66:BO:88:PHE:CD1	2.87	0.42
66:BO:95:PRO:HG2	66:BO:97:VAL:HG13	2.01	0.42
71:1:111:A:H4'	71:1:112:U:O5'	2.19	0.42
71:1:144:U:H4'	71:1:836:U:H5'	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:1:288:C:H2'	71:1:288:C:OP2	2.20	0.42
71:1:448:U:HO2'	71:1:449:U:H6	1.62	0.42
71:1:520:A:O2'	71:1:521:U:OP2	2.31	0.42
71:1:596:U:H6	71:1:596:U:H2'	1.69	0.42
71:1:936:G:N1	71:1:937:C:C4	2.87	0.42
71:1:1019:C:O5'	71:1:1019:C:H6	2.01	0.42
2:B:93:PRO:HA	2:B:104:THR:HA	2.00	0.42
2:B:150:ALA:HB3	14:N:85:ARG:HH22	1.83	0.42
4:D:33:ARG:NE	4:D:41:CYS:SG	2.91	0.42
5:E:179:ARG:NH1	71:1:432:U:C4	2.87	0.42
6:F:34:MET:O	6:F:49:GLY:HA3	2.20	0.42
7:G:83:ASP:O	7:G:90:ILE:HD11	2.19	0.42
9:I:207:MET:SD	41:AU:159:VAL:HG11	2.59	0.42
11:K:159:MET:HE3	11:K:159:MET:HB3	1.83	0.42
12:L:44:ARG:HA	12:L:114:THR:HG22	2.00	0.42
12:L:132:ASP:OD1	12:L:132:ASP:N	2.46	0.42
15:O:32:THR:OG1	15:O:33:ARG:N	2.52	0.42
15:O:184:ARG:HG2	15:O:185:PRO:HD2	2.00	0.42
16:P:104:GLU:OE1	16:P:104:GLU:HA	2.19	0.42
16:P:151:ARG:HH21	16:P:185:GLU:HG3	1.82	0.42
17:Q:180:LEU:HD23	17:Q:180:LEU:HA	1.88	0.42
18:R:42:LYS:O	18:R:101:ARG:NH2	2.41	0.42
21:U:78:GLN:NE2	31:Bj:12:SER:HB2	2.31	0.42
22:V:38:GLN:HA	22:V:41:GLN:HB2	2.00	0.42
24:X:249:LYS:O	24:X:250:GLN:C	2.62	0.42
24:X:349:PRO:HD3	24:X:398:ARG:HE	1.83	0.42
24:X:359:GLU:C	24:X:361:ARG:N	2.77	0.42
28:UA:10:UNK:O	28:UA:14:UNK:N	2.52	0.42
30:Aw:79:HIS:CD2	36:At:96:LEU:HD21	2.54	0.42
32:An:286:LEU:O	32:An:290:ARG:N	2.40	0.42
33:Al:181:VAL:HB	33:Al:193:ILE:HB	2.01	0.42
34:BI:167:SER:OG	34:BI:171:THR:O	2.30	0.42
37:BC:77:HIS:CE1	37:BC:79:ALA:HB2	2.53	0.42
38:Ab:142:TRP:CH2	48:Am:88:ALA:HB2	2.54	0.42
38:Ab:214:PRO:HA	38:Ab:215:PRO:HD3	1.89	0.42
41:AU:14:LEU:HD23	41:AU:21:PRO:HD2	2.01	0.42
41:AU:39:ASN:ND2	71:1:243:G:N7	2.66	0.42
44:BM:103:ALA:O	44:BM:107:LEU:HG	2.18	0.42
44:BM:251:ARG:HD2	44:BM:263:ARG:NH2	2.34	0.42
44:BM:285:LEU:HA	44:BM:288:ALA:HB3	2.01	0.42
47:BH:107:PHE:O	53:Ad:205:PRO:HG2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:Ak:296:MET:HE1	59:Ac:115:GLY:O	2.19	0.42
53:Ad:177:THR:O	71:1:373:A:O2'	2.33	0.42
53:Ad:236:LEU:HD13	53:Ad:236:LEU:HA	1.88	0.42
59:Ac:118:PHE:C	59:Ac:120:LEU:H	2.28	0.42
60:Ah:121:VAL:O	60:Ah:125:ALA:N	2.38	0.42
63:Ag:49:ARG:NH2	71:1:84:U:O2	2.48	0.42
71:1:314:A:OP2	71:1:314:A:H3'	2.19	0.42
71:1:1031:C:C4	71:1:1035:G:C2	3.07	0.42
71:1:1067:C:O2'	71:1:1068:A:OP1	2.34	0.42
1:A:42:MET:HB2	29:BB:75:VAL:HG21	2.02	0.42
1:A:81:GLN:HE21	58:Ae:82:ALA:HB1	1.83	0.42
1:A:346:GLU:HG2	1:A:347:HIS:H	1.84	0.42
1:A:357:ILE:CD1	29:BB:95:PRO:HG2	2.49	0.42
1:A:384:ARG:HH21	71:1:1149:A:H5''	1.84	0.42
2:B:28:VAL:O	2:B:28:VAL:HG13	2.18	0.42
2:B:170:HIS:HB3	2:B:177:HIS:HA	2.01	0.42
7:G:358:TRP:HE1	62:Ay:161:GLN:HG3	1.84	0.42
7:G:366:MET:CG	17:Q:28:ARG:HH12	2.30	0.42
8:H:31:LYS:HE3	71:1:388:U:OP2	2.19	0.42
9:I:44:LEU:H	9:I:99:HIS:CD2	2.36	0.42
9:I:123:LEU:HD13	41:Au:156:LEU:HD21	2.01	0.42
9:I:187:PHE:HZ	9:I:249:LEU:HB3	1.85	0.42
9:I:244:SER:CB	54:BF:70:ARG:HH22	2.33	0.42
12:L:145:ASP:O	12:L:176:LEU:HD23	2.20	0.42
15:O:22:THR:HG22	15:O:22:THR:O	2.18	0.42
15:O:110:LEU:HD12	15:O:111:GLU:H	1.85	0.42
18:R:145:LEU:O	18:R:330:TRP:N	2.53	0.42
19:S:350:PRO:HB2	46:Aj:342:LEU:HD11	2.01	0.42
19:S:367:ARG:HD2	56:Af:154:GLU:OE2	2.20	0.42
21:U:23:VAL:O	21:U:23:VAL:HG12	2.19	0.42
22:V:38:GLN:O	22:V:42:MET:HG2	2.19	0.42
22:V:147:GLU:CG	63:Ag:143:ARG:HH12	2.32	0.42
24:X:228:GLU:CD	24:X:296:ALA:HB1	2.44	0.42
24:X:278:ARG:HG3	43:Ao:95:CYS:HA	2.02	0.42
24:X:294:LEU:HD23	24:X:317:GLY:HA3	2.01	0.42
25:Y:151:ARG:HA	31:Bj:107:GLN:HB2	2.02	0.42
27:BA:45:GLN:O	27:BA:46:THR:HB	2.20	0.42
29:BB:27:LEU:O	29:BB:30:TYR:HB3	2.20	0.42
31:Bj:55:MET:HE2	31:Bj:55:MET:HB2	1.89	0.42
37:BC:127:ALA:O	37:BC:131:GLY:N	2.51	0.42
38:Ab:194:LEU:O	38:Ab:197:ASN:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:Ai:5:SER:HB2	39:Ai:423:ALA:H	1.84	0.42
39:Ai:376:VAL:O	39:Ai:394:LEU:N	2.53	0.42
41:Au:57:TRP:HB2	41:Au:86:TYR:CE2	2.53	0.42
41:Au:60:ASP:O	41:Au:61:PHE:HB3	2.18	0.42
42:Aa:194:ASN:ND2	71:1:151:G:H22	2.18	0.42
43:Ao:135:ALA:N	43:Ao:136:PRO:HD2	2.35	0.42
44:BM:162:VAL:HB	44:BM:165:ASP:HB2	2.00	0.42
45:Ar:127:ARG:NH1	45:Ar:128:LYS:H	2.17	0.42
46:Aj:295:GLY:HA3	46:Aj:310:PHE:CE1	2.54	0.42
49:Aq:335:PHE:CE1	49:Aq:337:PRO:HD3	2.54	0.42
52:BP:69:ILE:HG23	52:BP:85:PHE:CD1	2.55	0.42
59:Ac:54:LEU:HD12	59:Ac:54:LEU:HA	1.86	0.42
63:Ag:95:GLU:OE2	63:Ag:141:GLY:HA3	2.19	0.42
64:Ax:74:ALA:O	64:Ax:75:VAL:C	2.63	0.42
66:BO:36:ILE:HG22	71:1:1128:U:H3	1.85	0.42
71:1:438:G:H2'	71:1:439:A:O4'	2.19	0.42
71:1:538:A:C6	71:1:539:U:C2	3.08	0.42
71:1:551:A:H2'	71:1:552:A:O4'	2.19	0.42
71:1:617:G:C2'	71:1:618:U:H5'	2.50	0.42
71:1:650:U:O2	71:1:650:U:H2'	2.19	0.42
1:A:158:PHE:CE2	1:A:316:ILE:HG21	2.54	0.42
2:B:23:GLU:OE1	2:B:27:GLN:NE2	2.53	0.42
2:B:25:PRO:HD3	38:Ab:37:HIS:HD2	1.85	0.42
2:B:207:LYS:HA	2:B:207:LYS:HD3	1.66	0.42
2:B:356:LEU:HB3	2:B:361:PHE:HB2	2.02	0.42
3:C:17:ARG:HB3	3:C:32:VAL:HG11	2.01	0.42
3:C:77:ARG:CZ	3:C:83:LEU:HD23	2.50	0.42
3:C:102:ILE:HD12	3:C:102:ILE:H	1.84	0.42
5:E:216:LYS:HG3	5:E:217:HIS:N	2.35	0.42
7:G:99:GLN:CD	71:1:183:U:H3	2.27	0.42
8:H:6:LEU:HG	8:H:7:ARG:N	2.35	0.42
12:L:22:PHE:HA	12:L:34:VAL:O	2.19	0.42
14:N:154:VAL:HG22	14:N:167:ILE:O	2.19	0.42
15:O:216:VAL:O	15:O:229:ARG:N	2.44	0.42
16:P:96:PRO:CD	45:Ar:18:GLU:HG2	2.49	0.42
21:U:67:LYS:NZ	21:U:84:LYS:HD2	2.35	0.42
25:Y:230:ARG:HA	25:Y:233:LEU:HB3	2.02	0.42
25:Y:277:GLU:OE1	25:Y:277:GLU:N	2.52	0.42
26:Z:19:TYR:HB2	71:1:907:G:C2	2.53	0.42
27:BA:69:ILE:HD12	27:BA:95:ILE:HD11	2.01	0.42
30:Aw:95:GLN:C	30:Aw:97:ILE:N	2.76	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Al:234:LEU:O	33:Al:238:ARG:N	2.52	0.42
36:At:12:THR:HG21	71:1:111:A:C8	2.53	0.42
38:Ab:142:TRP:HH2	48:Am:88:ALA:HB2	1.85	0.42
42:Aa:183:ASP:HA	42:Aa:186:MET:HB2	2.00	0.42
43:Ao:89:PHE:CD1	53:Ad:34:MET:HG3	2.53	0.42
44:BM:353:LEU:C	44:BM:356:PRO:HD2	2.45	0.42
45:Ar:122:LEU:HD12	45:Ar:195:ILE:HD13	2.01	0.42
46:Aj:355:ASP:OD2	56:Af:151:SER:HB3	2.19	0.42
46:Aj:418:ARG:HA	46:Aj:421:VAL:HG22	2.01	0.42
47:BH:20:TYR:HD2	47:BH:161:GLN:NE2	2.17	0.42
52:BP:-23:PRO:HG2	52:BP:-21:TYR:CZ	2.55	0.42
53:Ad:86:ALA:O	53:Ad:87:HIS:ND1	2.51	0.42
58:Ae:29:PRO:HG3	71:1:1125:U:O2'	2.20	0.42
58:Ae:214:PHE:CE2	58:Ae:219:MET:HE3	2.53	0.42
59:Ac:211:ASP:HB3	59:Ac:241:ALA:H	1.84	0.42
65:BL:331:ASP:CG	65:BL:332:TRP:H	2.27	0.42
66:BO:130:LEU:O	66:BO:173:HIS:CE1	2.70	0.42
66:BO:165:ARG:NH2	66:BO:167:MET:SD	2.93	0.42
67:BG:1308:MET:HB2	67:BG:1315:THR:HG21	2.02	0.42
69:UC:70:UNK:O	69:UC:74:UNK:N	2.52	0.42
71:1:127:A:C2'	71:1:128:U:H5'	2.49	0.42
71:1:128:U:O2'	71:1:129:U:C6	2.73	0.42
71:1:698:G:H2'	71:1:699:A:H5''	2.02	0.42
71:1:1043:A:O5'	71:1:1043:A:H8	2.03	0.42
1:A:393:VAL:CG2	1:A:397:ASP:HB3	2.49	0.42
4:D:123:ARG:O	4:D:127:LEU:N	2.53	0.42
5:E:38:ILE:HG22	5:E:89:ARG:HG2	2.01	0.42
5:E:219:LYS:HB2	5:E:219:LYS:HE3	1.81	0.42
6:F:101:TRP:HE3	29:BB:12:PHE:CE2	2.37	0.42
6:F:169:PHE:HB3	43:Ao:23:TYR:CD1	2.54	0.42
7:G:68:THR:O	7:G:72:GLU:HG2	2.19	0.42
7:G:145:ARG:HG2	71:1:346:A:H5''	2.02	0.42
7:G:197:LEU:O	7:G:197:LEU:HD23	2.19	0.42
10:J:73:GLY:HA2	10:J:93:ALA:HA	2.01	0.42
11:K:103:GLU:HG2	12:L:22:PHE:CE1	2.54	0.42
13:M:258:LYS:HD2	13:M:259:ARG:H	1.83	0.42
15:O:276:LEU:HB3	18:R:105:ALA:HB1	2.01	0.42
16:P:64:TYR:O	16:P:79:LEU:HD11	2.20	0.42
18:R:135:HIS:CE1	18:R:372:TYR:HA	2.54	0.42
24:X:97:LEU:HD11	39:Ai:203:PHE:HB3	2.02	0.42
24:X:182:THR:HG23	24:X:189:ILE:HG22	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:57:LEU:O	27:BA:61:SER:N	2.50	0.42
27:BA:122:ARG:NE	52:BP:88:ASP:OD1	2.48	0.42
31:Bj:77:ARG:O	31:Bj:96:GLU:HA	2.19	0.42
33:Al:256:PRO:HA	33:Al:259:ARG:HB2	2.01	0.42
35:Az:16:LYS:HB3	35:Az:16:LYS:HE2	1.84	0.42
41:Au:15:GLN:NE2	71:1:237:U:O3'	2.51	0.42
41:Au:59:SER:HB3	65:BL:96:ASN:O	2.20	0.42
42:Aa:30:ARG:HG3	71:1:402:U:O4	2.20	0.42
43:Ao:246:LEU:HD11	45:Ar:178:ALA:HA	2.02	0.42
44:BM:141:ARG:HH12	44:BM:268:HIS:HB2	1.84	0.42
48:Am:85:THR:HG22	48:Am:86:PRO:O	2.19	0.42
48:Am:222:PHE:O	48:Am:226:MET:HG2	2.20	0.42
51:Ak:284:ARG:O	51:Ak:287:LYS:HB3	2.19	0.42
53:Ad:208:LYS:NZ	53:Ad:220:ASN:HD21	2.18	0.42
55:Av:138:ARG:HE	55:Av:138:ARG:HB3	1.77	0.42
58:Ae:13:LEU:HD21	58:Ae:19:CYS:C	2.44	0.42
60:Ah:457:PHE:HD1	60:Ah:460:TYR:HE1	1.67	0.42
62:Ay:68:TYR:OH	71:1:703:U:O2	2.37	0.42
65:BL:168:LYS:O	65:BL:170:THR:N	2.53	0.42
71:1:106:A:O2'	71:1:107:U:OP2	2.32	0.42
71:1:826:A:H62	71:1:827:A:N6	2.17	0.42
71:1:860:U:H2'	71:1:861:A:H8	1.85	0.42
71:1:865:A:C5	71:1:1100:U:C4	3.07	0.42
71:1:1000:A:N6	71:1:1009:A:O2'	2.50	0.42
1:A:393:VAL:HG21	1:A:397:ASP:HB3	2.02	0.42
2:B:191:MET:HG2	2:B:196:TRP:CE3	2.54	0.42
2:B:331:GLY:O	2:B:335:GLN:HG3	2.20	0.42
5:E:144:ASN:HD22	55:Av:70:LYS:HB2	1.85	0.42
5:E:206:THR:HG22	5:E:208:LYS:N	2.28	0.42
6:F:22:GLN:O	6:F:26:VAL:HG23	2.20	0.42
6:F:23:LEU:HB3	6:F:24:PRO:HD3	2.01	0.42
6:F:34:MET:SD	6:F:125:ALA:HB2	2.60	0.42
6:F:102:TYR:O	6:F:106:GLU:HG2	2.20	0.42
8:H:98:PRO:HG2	8:H:99:GLU:OE1	2.20	0.42
11:K:48:ARG:O	11:K:52:GLU:HG2	2.19	0.42
11:K:50:ARG:HH12	42:Aa:191:THR:HG21	1.83	0.42
11:K:131:GLU:H	11:K:131:GLU:HG3	1.69	0.42
12:L:131:LEU:HD12	42:Aa:99:ALA:HB2	2.02	0.42
13:M:249:ILE:O	13:M:250:PRO:C	2.63	0.42
14:N:78:ARG:HA	14:N:78:ARG:HD2	1.65	0.42
15:O:177:VAL:HG23	15:O:177:VAL:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:53:PHE:N	16:P:60:ARG:HG2	2.34	0.42
16:P:131:ALA:HA	16:P:140:LEU:HD22	2.01	0.42
17:Q:15:LEU:HG	33:Al:256:PRO:HB2	2.01	0.42
17:Q:44:ALA:O	49:Aq:310:ARG:NH1	2.52	0.42
17:Q:150:SER:OG	17:Q:151:THR:N	2.52	0.42
18:R:118:ALA:O	18:R:371:PRO:HG3	2.20	0.42
22:V:75:ASP:C	22:V:77:ARG:N	2.77	0.42
24:X:303:VAL:HA	24:X:307:VAL:HB	2.01	0.42
24:X:476:PHE:HE2	49:Aq:51:TYR:HE1	1.67	0.42
25:Y:84:LYS:HA	25:Y:87:GLU:HG2	2.01	0.42
27:BA:20:GLY:HA2	52:BP:-10:ARG:HH11	1.83	0.42
29:BB:88:ARG:HG3	29:BB:89:GLU:N	2.35	0.42
30:Aw:27:TYR:CE2	30:Aw:29:SER:HA	2.55	0.42
32:An:22:ARG:NH1	41:Au:21:PRO:HB2	2.34	0.42
32:An:192:THR:OG1	32:An:193:SER:N	2.52	0.42
33:Al:154:TYR:C	33:Al:157:PRO:HD2	2.45	0.42
34:BI:126:SER:O	34:BI:131:ILE:HG22	2.19	0.42
37:BC:9:LEU:HD23	37:BC:82:GLU:CD	2.45	0.42
38:Ab:114:ASN:O	38:Ab:116:TYR:N	2.52	0.42
38:Ab:138:THR:HG22	38:Ab:141:GLU:OE1	2.20	0.42
38:Ab:238:MET:HA	38:Ab:241:ARG:HG2	2.02	0.42
39:Ai:256:LEU:HG	39:Ai:256:LEU:H	1.70	0.42
39:Ai:275:PRO:O	39:Ai:279:ILE:HG12	2.20	0.42
41:Au:46:VAL:HG12	41:Au:47:LEU:CD1	2.41	0.42
42:Aa:176:GLN:O	42:Aa:177:ARG:HB2	2.20	0.42
43:Ao:126:PRO:HD2	43:Ao:129:PHE:CZ	2.54	0.42
43:Ao:191:LEU:O	43:Ao:195:GLN:HG2	2.20	0.42
44:BM:141:ARG:HH22	44:BM:268:HIS:N	2.17	0.42
46:Aj:266:LYS:HD2	46:Aj:301:MET:SD	2.60	0.42
46:Aj:348:PHE:HZ	53:Ad:208:LYS:HB3	1.84	0.42
46:Aj:470:MET:C	46:Aj:472:ASN:H	2.28	0.42
48:Am:60:GLN:NE2	48:Am:64:LEU:HD21	2.33	0.42
48:Am:147:TYR:HD1	48:Am:147:TYR:HA	1.73	0.42
48:Am:214:SER:O	48:Am:214:SER:OG	2.38	0.42
59:Ac:97:SER:HG	59:Ac:98:ARG:NH1	2.17	0.42
59:Ac:200:ARG:HA	59:Ac:203:SER:OG	2.19	0.42
62:Ay:42:ARG:O	62:Ay:43:VAL:C	2.63	0.42
63:Ag:91:PRO:HD3	63:Ag:118:TYR:CZ	2.55	0.42
65:BL:266:LEU:HG	65:BL:351:LEU:HD13	2.02	0.42
66:BO:82:LYS:HD3	66:BO:82:LYS:HA	1.80	0.42
66:BO:86:GLU:O	66:BO:87:ARG:HB2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:BO:155:MET:HE3	66:BO:159:ARG:HA	2.01	0.42
71:1:75:A:H8	71:1:75:A:O5'	2.02	0.42
71:1:130:U:N3	71:1:131:U:C4	2.88	0.42
71:1:391:A:C8	71:1:393:A:N6	2.87	0.42
71:1:567:A:C8	71:1:568:A:C8	3.08	0.42
71:1:646:U:H2'	71:1:647:U:C6	2.54	0.42
1:A:208:VAL:CG2	10:J:12:PHE:HA	2.50	0.42
4:D:108:MET:O	4:D:111:ARG:HG3	2.20	0.42
5:E:186:ARG:NH2	71:1:458:A:H61	2.17	0.42
6:F:49:GLY:H	6:F:124:LYS:HZ2	1.67	0.42
8:H:139:GLU:HB3	52:BP:171:PHE:HB2	2.01	0.42
9:I:187:PHE:HB3	9:I:216:PHE:HD2	1.84	0.42
14:N:184:LYS:HE3	14:N:184:LYS:HB2	1.90	0.42
16:P:55:GLN:CB	71:1:949:U:HI'	2.50	0.42
17:Q:90:ARG:O	17:Q:91:GLN:C	2.63	0.42
17:Q:106:THR:HG21	71:1:905:A:C6	2.55	0.42
18:R:150:ASP:OD1	18:R:151:GLU:N	2.53	0.42
18:R:177:LEU:HA	18:R:177:LEU:HD23	1.77	0.42
23:W:74:GLU:C	23:W:74:GLU:CD	2.88	0.42
24:X:60:PRO:HG3	63:Ag:208:ASN:O	2.19	0.42
27:BA:18:ARG:NH1	56:Af:28:ARG:HB3	2.34	0.42
29:BB:100:GLU:HA	29:BB:103:TRP:NE1	2.35	0.42
29:BB:128:ASP:HA	58:Ae:131:TRP:CH2	2.55	0.42
30:Aw:77:ASN:O	30:Aw:80:THR:N	2.53	0.42
30:Aw:92:ILE:O	30:Aw:96:ARG:HG3	2.19	0.42
30:Aw:183:PRO:HG2	38:Ab:32:HIS:CE1	2.54	0.42
39:Ai:124:ALA:O	39:Ai:181:ILE:HA	2.20	0.42
42:Aa:76:ASP:O	42:Aa:82:ARG:NE	2.50	0.42
43:Ao:234:LEU:HD23	43:Ao:235:PRO:HD2	2.01	0.42
44:BM:101:LYS:HE3	44:BM:126:LEU:HB2	2.02	0.42
44:BM:174:MET:SD	44:BM:216:GLN:HG2	2.60	0.42
49:Aq:168:GLN:H	49:Aq:171:ALA:HA	1.84	0.42
52:BP:67:PRO:O	56:Af:48:TYR:HD2	2.03	0.42
71:1:145:A:C2'	71:1:146:U:H5''	2.49	0.42
71:1:438:G:N2	71:1:447:A:C4	2.88	0.42
71:1:754:A:H3'	71:1:755:G:H5''	2.01	0.42
71:1:933:G:C2	71:1:950:A:N6	2.87	0.42
71:1:1132:U:C4	71:1:1133:U:C2	3.07	0.42
1:A:251:VAL:HG23	1:A:290:MET:O	2.20	0.42
1:A:289:ARG:HH12	48:Am:16:ASN:HD21	1.67	0.42
2:B:374:LEU:HD12	2:B:374:LEU:HA	1.89	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:215:PRO:HA	3:C:218:GLN:CD	2.44	0.42
5:E:126:LEU:HD12	55:Av:23:LYS:HD2	2.02	0.42
6:F:23:LEU:HD12	6:F:23:LEU:HA	1.79	0.42
6:F:135:HIS:O	6:F:140:PRO:HD3	2.19	0.42
7:G:16:PRO:HG2	7:G:19:GLN:CG	2.50	0.42
7:G:104:VAL:CG1	46:Aj:407:ARG:HD2	2.49	0.42
7:G:196:THR:OG1	7:G:265:GLU:OE2	2.37	0.42
13:M:53:HIS:CD2	13:M:58:PRO:HB3	2.54	0.42
16:P:80:TYR:CD2	49:Aq:55:ASN:ND2	2.88	0.42
17:Q:88:THR:OG1	49:Aq:328:GLN:OE1	2.37	0.42
18:R:398:ASN:HB3	71:1:62:U:O4	2.19	0.42
18:R:415:ALA:O	18:R:419:GLN:HG3	2.20	0.42
20:T:34:ASN:HD22	20:T:36:MET:HE2	1.84	0.42
25:Y:238:HIS:HA	25:Y:244:ARG:HH21	1.85	0.42
26:Z:12:PHE:O	26:Z:33:ASP:HB2	2.20	0.42
26:Z:68:ARG:HB2	26:Z:79:LEU:HD13	2.02	0.42
27:BA:96:LEU:HD23	27:BA:129:ALA:HB2	2.01	0.42
29:BB:128:ASP:OD1	29:BB:128:ASP:C	2.63	0.42
31:Bj:97:PHE:HB3	59:Ac:91:ALA:HB3	2.02	0.42
33:Al:254:ASP:N	33:Al:254:ASP:OD1	2.53	0.42
35:Az:40:TRP:HB2	35:Az:102:GLN:OE1	2.19	0.42
37:BC:51:ARG:HB3	37:BC:67:ASN:ND2	2.35	0.42
38:Ab:130:PRO:HD3	42:Aa:69:THR:OG1	2.20	0.42
40:Ap:40:PHE:HB2	40:Ap:45:ARG:HG2	2.02	0.42
41:Au:73:TYR:CD1	41:Au:73:TYR:C	2.97	0.42
42:Aa:94:THR:HB	42:Aa:110:PRO:HD3	2.01	0.42
44:BM:155:TYR:O	44:BM:158:MET:N	2.50	0.42
44:BM:233:VAL:HG22	44:BM:332:ASP:OD2	2.20	0.42
44:BM:366:VAL:HG13	44:BM:370:GLU:HB2	2.01	0.42
45:Ar:167:CYS:O	45:Ar:191:VAL:HG22	2.20	0.42
46:Aj:144:GLN:HB3	46:Aj:312:GLU:HG2	2.01	0.42
46:Aj:212:ASP:HA	46:Aj:215:THR:HG22	2.02	0.42
47:BH:85:ILE:HG12	47:BH:181:GLY:HA2	2.01	0.42
48:Am:292:GLY:O	58:Ae:258:MET:HE2	2.20	0.42
49:Aq:120:PHE:HD1	49:Aq:120:PHE:HA	1.66	0.42
52:BP:10:TYR:HD1	52:BP:10:TYR:H	1.68	0.42
55:Av:37:TYR:CE1	55:Av:41:PRO:HD3	2.55	0.42
55:Av:86:ILE:HD12	55:Av:88:ILE:HG12	2.01	0.42
55:Av:117:HIS:CD2	71:1:452:A:H5''	2.54	0.42
57:As:57:ARG:HE	57:As:130:THR:HG1	1.63	0.42
57:As:99:GLU:HA	57:As:132:ILE:HD11	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:Ac:130:VAL:HG13	59:Ac:134:TYR:HB2	2.00	0.42
59:Ac:216:SER:OG	59:Ac:217:ASN:N	2.53	0.42
60:Ah:422:TYR:CD2	60:Ah:423:LEU:HD12	2.54	0.42
61:BD:66:CYS:O	61:BD:68:ARG:N	2.53	0.42
63:Ag:62:ARG:HB2	71:1:104:U:OP2	2.19	0.42
64:Ax:127:ASN:ND2	64:Ax:127:ASN:N	2.66	0.42
65:BL:265:ARG:NH1	71:1:666:A:OP2	2.53	0.42
66:BO:58:VAL:HB	66:BO:135:GLN:HE22	1.85	0.42
66:BO:74:CYS:O	66:BO:76:HIS:ND1	2.53	0.42
71:1:39:U:C1'	71:1:40:C:OP1	2.67	0.42
71:1:231:C:N3	71:1:305:U:H5'	2.35	0.42
71:1:238:U:H6	71:1:238:U:H2'	1.71	0.42
71:1:269:A:N3	71:1:271:U:O2'	2.50	0.42
71:1:424:A:N6	71:1:476:A:OP2	2.53	0.42
71:1:896:A:C4	71:1:915:G:O6	2.72	0.42
71:1:954:A:N1	71:1:970:A:H3'	2.35	0.42
1:A:325:ASP:HB3	9:I:26:GLY:HA3	2.01	0.41
2:B:19:ASP:OD2	38:Ab:48:ARG:HG2	2.20	0.41
2:B:56:PRO:HG3	46:Aj:432:LEU:O	2.20	0.41
5:E:24:ASN:HB3	55:Av:105:TYR:CE1	2.55	0.41
5:E:149:LEU:O	5:E:192:ILE:HG12	2.21	0.41
6:F:113:ARG:HD2	71:1:151:G:OP1	2.20	0.41
7:G:99:GLN:OE1	71:1:183:U:N3	2.52	0.41
7:G:213:TRP:CE2	22:V:140:PRO:HD3	2.55	0.41
7:G:349:GLN:HB3	7:G:350:PRO:HD2	2.02	0.41
9:I:80:LYS:O	9:I:82:TYR:N	2.53	0.41
9:I:145:MET:O	9:I:163:VAL:HA	2.20	0.41
12:L:160:LEU:HD11	48:Am:252:MET:O	2.20	0.41
13:M:86:VAL:HA	13:M:90:GLN:O	2.20	0.41
18:R:57:GLU:O	18:R:61:LEU:N	2.49	0.41
24:X:484:ARG:HD2	24:X:511:TYR:CE1	2.55	0.41
26:Z:92:MET:HE3	26:Z:92:MET:HB3	1.89	0.41
26:Z:106:TYR:OH	26:Z:118:HIS:NE2	2.25	0.41
27:BA:150:ILE:H	27:BA:150:ILE:HG13	1.61	0.41
30:Aw:8:ARG:HB3	33:Al:287:TRP:CH2	2.55	0.41
30:Aw:47:PHE:CE2	30:Aw:83:LEU:HD21	2.55	0.41
32:An:46:GLN:HB2	63:Ag:14:PRO:CD	2.47	0.41
32:An:143:TYR:N	32:An:143:TYR:HD1	2.15	0.41
33:Al:285:LEU:O	33:Al:286:ASP:HB2	2.19	0.41
37:BC:14:MET:SD	49:Aq:2:LEU:HD12	2.60	0.41
38:Ab:28:PHE:CE2	38:Ab:33:LEU:HD12	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:Ai:217:LEU:HD23	39:Ai:217:LEU:H	1.85	0.41
43:Ao:131:LEU:HD23	43:Ao:131:LEU:HA	1.91	0.41
45:Ar:20:ILE:O	45:Ar:41:LEU:HA	2.19	0.41
45:Ar:81:VAL:O	45:Ar:81:VAL:HG13	2.20	0.41
49:Aq:88:ALA:N	49:Aq:91:THR:HB	2.26	0.41
52:BP:10:TYR:CG	52:BP:11:GLY:N	2.88	0.41
53:Ad:74:LEU:HD23	53:Ad:202:LYS:HD2	2.01	0.41
53:Ad:198:GLU:O	53:Ad:202:LYS:HE3	2.19	0.41
60:Ah:99:GLN:O	60:Ah:102:CYS:N	2.49	0.41
60:Ah:268:ASN:H	60:Ah:272:GLN:HE21	1.68	0.41
61:BD:82:LEU:HD13	63:Ag:119:THR:HG22	2.02	0.41
64:Ax:75:VAL:O	64:Ax:76:PRO:C	2.63	0.41
66:BO:172:ARG:CZ	66:BO:172:ARG:CB	2.98	0.41
67:BG:1319:SER:HB2	67:BG:1322:THR:H	1.84	0.41
71:1:355:U:N3	71:1:356:A:N7	2.67	0.41
71:1:792:C:H2'	71:1:793:C:O4'	2.20	0.41
71:1:870:A:H2'	71:1:871:A:C5	2.54	0.41
71:1:875:G:N2	71:1:992:G:O6	2.25	0.41
71:1:1008:A:H3'	71:1:1009:A:O4'	2.19	0.41
1:A:308:ARG:HD3	1:A:373:GLN:HE21	1.85	0.41
2:B:2:TYR:C	2:B:4:SER:H	2.27	0.41
7:G:145:ARG:CG	71:1:346:A:H5''	2.50	0.41
7:G:146:LYS:NZ	71:1:345:A:N3	2.65	0.41
8:H:102:MET:O	8:H:102:MET:HG2	2.19	0.41
9:I:177:GLU:OE1	9:I:179:TYR:OH	2.35	0.41
11:K:155:CYS:SG	46:Aj:207:LEU:HD13	2.60	0.41
12:L:75:GLU:HG3	52:BP:-43:GLU:HA	2.02	0.41
13:M:99:LEU:HD13	13:M:106:MET:HE2	2.02	0.41
13:M:121:GLU:O	13:M:125:ALA:N	2.52	0.41
13:M:138:ALA:HA	13:M:228:SER:OG	2.20	0.41
15:O:111:GLU:CD	71:1:129:U:H4'	2.45	0.41
15:O:117:GLN:HG2	15:O:121:ARG:HG2	2.02	0.41
16:P:33:HIS:CE1	16:P:45:LYS:HE2	2.56	0.41
17:Q:201:LEU:HD23	17:Q:201:LEU:HA	1.77	0.41
18:R:192:TRP:HE3	18:R:320:PRO:HG2	1.85	0.41
22:V:36:ARG:HE	22:V:108:MET:HE3	1.85	0.41
22:V:128:ARG:HA	22:V:128:ARG:HD3	1.77	0.41
23:W:92:HIS:HB3	23:W:95:GLU:HB3	2.01	0.41
26:Z:43:ILE:O	26:Z:43:ILE:HG23	2.18	0.41
29:BB:68:VAL:O	29:BB:68:VAL:HG23	2.20	0.41
30:Aw:50:ARG:HD2	30:Aw:79:HIS:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:Aw:164:TRP:CD1	30:Aw:164:TRP:H	2.39	0.41
32:An:68:ARG:NH2	60:Ah:90:LYS:O	2.39	0.41
32:An:218:LYS:O	32:An:219:PRO:C	2.63	0.41
33:Al:43:THR:H	62:Ay:83:ASN:HD22	1.67	0.41
35:Az:29:ILE:HG13	35:Az:30:LEU:HD23	2.02	0.41
36:At:116:LEU:HD23	36:At:116:LEU:HA	1.90	0.41
38:Ab:203:LYS:O	38:Ab:207:THR:HG23	2.20	0.41
39:Ai:172:GLU:OE1	63:Ag:184:ARG:HA	2.20	0.41
39:Ai:222:PRO:HG3	39:Ai:446:LEU:CD1	2.46	0.41
40:Ap:23:ALA:C	40:Ap:191:ARG:HH21	2.20	0.41
41:Au:157:GLN:HE22	41:Au:160:ARG:HD3	1.84	0.41
43:Ao:23:TYR:O	43:Ao:23:TYR:CG	2.73	0.41
43:Ao:188:VAL:HG13	43:Ao:189:ILE:N	2.35	0.41
43:Ao:275:ALA:C	43:Ao:280:ASN:HB2	2.44	0.41
44:BM:139:PRO:O	44:BM:142:ARG:N	2.53	0.41
45:Ar:69:CYS:SG	45:Ar:70:TYR:N	2.93	0.41
45:Ar:122:LEU:N	45:Ar:160:GLN:O	2.53	0.41
45:Ar:127:ARG:CZ	45:Ar:129:LYS:HG3	2.50	0.41
46:Aj:119:LEU:HD12	46:Aj:119:LEU:HA	1.79	0.41
51:Ak:127:LEU:H	51:Ak:234:HIS:CE1	2.38	0.41
53:Ad:137:SER:OG	53:Ad:141:TYR:O	2.30	0.41
55:Av:165:ASP:OD1	55:Av:165:ASP:N	2.46	0.41
60:Ah:126:PHE:HE2	60:Ah:166:TRP:CD1	2.38	0.41
65:BL:123:ASN:OD1	65:BL:124:PRO:HD2	2.19	0.41
65:BL:331:ASP:OD1	65:BL:332:TRP:N	2.46	0.41
71:1:393:A:H4'	71:1:1012:A:C6	2.55	0.41
71:1:557:A:N6	71:1:573:A:N7	2.69	0.41
71:1:753:U:C2	71:1:754:A:C2	3.07	0.41
71:1:952:U:H5''	71:1:953:U:H5'	2.02	0.41
1:A:217:ASP:OD1	1:A:217:ASP:N	2.51	0.41
4:D:109:LEU:HD23	4:D:109:LEU:HA	1.94	0.41
10:J:121:SER:OG	10:J:124:HIS:N	2.33	0.41
13:M:36:LEU:HD12	13:M:36:LEU:HA	1.69	0.41
15:O:192:GLU:OE1	15:O:192:GLU:N	2.53	0.41
16:P:55:GLN:CG	71:1:949:U:H1'	2.51	0.41
16:P:159:THR:OG1	16:P:160:GLU:N	2.53	0.41
18:R:241:SER:HB2	18:R:244:GLU:HB2	2.02	0.41
19:S:367:ARG:HG3	47:BH:137:GLN:NE2	2.35	0.41
21:U:38:MET:HE3	21:U:88:VAL:HG11	2.01	0.41
22:V:129:SER:O	22:V:133:LYS:HB2	2.21	0.41
24:X:233:ALA:HB3	24:X:237:ALA:HA	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:27:GLY:HA3	45:Ar:146:ARG:HG3	2.02	0.41
27:BA:68:VAL:HG12	27:BA:114:PHE:HD2	1.85	0.41
28:UA:24:UNK:HA	64:Ax:195:ARG:HH12	1.84	0.41
29:BB:128:ASP:O	29:BB:129:THR:HB	2.19	0.41
32:An:115:LEU:CD1	32:An:217:ARG:HA	2.48	0.41
33:Al:135:GLN:HB2	33:Al:141:GLU:HG2	2.02	0.41
34:BI:141:LEU:O	34:BI:142:PRO:C	2.64	0.41
39:Ai:67:VAL:HG23	39:Ai:121:HIS:CE1	2.55	0.41
39:Ai:274:ASP:OD1	39:Ai:274:ASP:N	2.36	0.41
41:Au:123:ALA:HB1	41:Au:127:ARG:HH21	1.85	0.41
44:BM:176:ALA:HA	44:BM:179:TYR:CD2	2.55	0.41
44:BM:192:LEU:HD21	44:BM:252:VAL:HG13	2.02	0.41
46:Aj:208:GLU:HB2	46:Aj:230:VAL:HG11	2.02	0.41
47:BH:98:LYS:H	47:BH:98:LYS:HD2	1.84	0.41
51:Ak:5:VAL:HG13	51:Ak:60:PHE:O	2.20	0.41
52:BP:-28:ALA:HB3	52:BP:-25:ALA:HB3	2.02	0.41
53:Ad:158:VAL:HG22	53:Ad:238:PHE:CD2	2.56	0.41
57:As:71:THR:O	57:As:74:THR:OG1	2.29	0.41
60:Ah:320:LEU:HA	60:Ah:320:LEU:HD23	1.75	0.41
62:Ay:61:LEU:HD11	62:Ay:88:VAL:HG11	2.02	0.41
63:Ag:38:LYS:HG2	71:1:85:U:C5	2.55	0.41
65:BL:138:VAL:HG13	65:BL:144:ARG:NE	2.35	0.41
65:BL:327:LEU:O	65:BL:329:PRO:HD3	2.20	0.41
66:BO:87:ARG:NH1	66:BO:89:ALA:HB3	2.33	0.41
71:1:181:A:N6	71:1:211:U:OP1	2.54	0.41
71:1:382:A:H3'	71:1:383:A:C8	2.55	0.41
71:1:442:U:O2'	71:1:443:G:OP2	2.38	0.41
71:1:539:U:N3	71:1:540:U:O2	2.53	0.41
71:1:631:C:H4'	71:1:632:A:OP2	2.20	0.41
71:1:997:A:N6	71:1:1012:A:O5'	2.54	0.41
71:1:1080:A:H2'	71:1:1081:U:H6	1.85	0.41
71:1:1131:A:O5'	71:1:1131:A:H8	2.04	0.41
4:D:22:LEU:HD11	58:Ae:226:ASP:HB3	2.00	0.41
6:F:143:LEU:HD12	6:F:143:LEU:HA	1.92	0.41
7:G:211:VAL:O	7:G:211:VAL:HG13	2.20	0.41
10:J:54:ILE:HG23	10:J:120:GLY:CA	2.48	0.41
10:J:142:ARG:HB3	71:1:805:U:H5''	2.02	0.41
13:M:172:GLY:O	13:M:176:VAL:HG12	2.21	0.41
15:O:28:ALA:HB1	15:O:29:ARG:NE	2.23	0.41
15:O:132:LYS:O	15:O:133:PRO:C	2.63	0.41
17:Q:175:GLN:O	32:An:235:HIS:NE2	2.52	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:261:ALA:C	36:At:108:MET:HG3	2.45	0.41
18:R:312:THR:HG22	18:R:313:LYS:HG3	2.02	0.41
18:R:348:LEU:HB3	32:An:318:ILE:HD13	2.02	0.41
21:U:77:LEU:HD21	63:Ag:175:VAL:HG21	2.02	0.41
24:X:380:GLN:OE1	24:X:384:LYS:HD3	2.20	0.41
25:Y:101:GLU:OE2	25:Y:104:ARG:NH1	2.54	0.41
27:BA:104:LEU:HD23	27:BA:104:LEU:HA	1.96	0.41
29:BB:113:PRO:HG2	58:Ae:8:TYR:HD2	1.86	0.41
33:Al:250:GLN:C	33:Al:252:TYR:H	2.28	0.41
41:Au:171:SER:OG	41:Au:171:SER:O	2.39	0.41
45:Ar:40:ARG:HD3	45:Ar:42:ILE:CG2	2.49	0.41
50:BE:91:ILE:HG22	50:BE:95:ARG:HB2	2.03	0.41
51:Ak:15:ARG:HG2	51:Ak:89:VAL:HG23	2.02	0.41
51:Ak:130:GLU:HG2	51:Ak:233:ILE:HB	2.02	0.41
55:Av:36:PRO:HB2	55:Av:81:LYS:NZ	2.36	0.41
58:Ae:38:LEU:HD23	58:Ae:38:LEU:HA	1.74	0.41
59:Ac:225:LEU:HG	59:Ac:227:ASP:H	1.86	0.41
60:Ah:347:ASN:HB3	60:Ah:348:PRO:HD3	2.02	0.41
61:BD:62:ARG:HA	61:BD:69:VAL:HA	2.02	0.41
65:BL:72:ARG:HA	65:BL:72:ARG:HD2	1.89	0.41
66:BO:49:ASN:OD1	66:BO:49:ASN:N	2.53	0.41
66:BO:50:GLY:HA2	66:BO:56:ALA:CB	2.49	0.41
66:BO:133:ARG:O	66:BO:147:PHE:HB2	2.21	0.41
71:1:649:A:O2'	71:1:650:U:OP2	2.38	0.41
71:1:688:C:H42	71:1:710:A:N6	2.18	0.41
1:A:42:MET:HE3	1:A:47:ARG:HB3	2.02	0.41
1:A:185:VAL:HG23	10:J:20:PHE:CZ	2.55	0.41
1:A:234:GLY:HA3	29:BB:107:GLN:O	2.20	0.41
2:B:21:MET:HA	38:Ab:46:ASP:HA	2.01	0.41
3:C:140:ASN:HB3	3:C:143:VAL:HG23	2.03	0.41
5:E:72:PHE:CG	5:E:79:ALA:HB2	2.55	0.41
5:E:179:ARG:HG3	5:E:179:ARG:NH1	2.32	0.41
7:G:87:ASN:O	7:G:90:ILE:HG12	2.21	0.41
7:G:189:LEU:HD23	7:G:189:LEU:HA	1.85	0.41
9:I:93:LEU:O	9:I:96:LEU:N	2.51	0.41
9:I:186:PHE:CZ	54:BF:21:VAL:HG21	2.55	0.41
14:N:170:ILE:O	14:N:219:LYS:HB3	2.21	0.41
18:R:220:SER:N	18:R:223:ASP:OD2	2.53	0.41
18:R:470:HIS:HE1	36:At:47:GLY:CA	2.33	0.41
19:S:352:MET:HE2	71:1:359:C:H1'	2.02	0.41
19:S:362:ARG:C	19:S:364:MET:N	2.78	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:37:MET:HE2	22:V:37:MET:HB3	1.82	0.41
24:X:163:ALA:HA	24:X:409:CYS:O	2.21	0.41
24:X:275:LEU:HD13	53:Ad:33:HIS:CA	2.51	0.41
25:Y:70:ILE:HA	51:Ak:215:HIS:CD2	2.56	0.41
25:Y:130:PRO:HB3	59:Ac:58:PRO:O	2.19	0.41
26:Z:90:LEU:HA	26:Z:90:LEU:HD23	1.76	0.41
27:BA:66:ALA:CB	27:BA:87:ILE:HA	2.50	0.41
27:BA:93:HIS:NE2	52:BP:87:GLU:OE2	2.54	0.41
27:BA:145:ALA:O	27:BA:149:ALA:N	2.43	0.41
29:BB:110:PHE:HE1	58:Ae:22:GLN:HA	1.85	0.41
29:BB:110:PHE:CE1	58:Ae:22:GLN:HA	2.55	0.41
33:Al:36:GLU:O	33:Al:37:GLN:CB	2.68	0.41
35:Az:146:ASN:HB3	36:At:74:HIS:CE1	2.55	0.41
37:BC:5:TYR:CD2	59:Ac:61:LYS:HD3	2.55	0.41
38:Ab:21:GLY:N	38:Ab:26:ARG:HH12	2.18	0.41
38:Ab:54:GLU:HG3	71:1:516:A:H3'	2.03	0.41
39:Ai:69:PRO:HB2	49:Aq:115:LEU:HD11	2.02	0.41
41:Au:53:ARG:HG3	65:BL:143:TYR:CE1	2.56	0.41
41:Au:80:SER:HB3	60:Ah:240:ALA:H	1.85	0.41
44:BM:76:TYR:CZ	44:BM:326:TYR:HB3	2.55	0.41
44:BM:137:ARG:NE	44:BM:278:LEU:HD12	2.35	0.41
44:BM:158:MET:SD	44:BM:214:LYS:HD3	2.60	0.41
44:BM:217:LYS:HB2	44:BM:217:LYS:HE3	1.88	0.41
46:Aj:343:ASN:HD21	71:1:500:U:H5	1.68	0.41
46:Aj:442:TYR:OH	46:Aj:444:ASP:OD2	2.37	0.41
48:Am:57:GLN:O	48:Am:256:MET:HE3	2.20	0.41
49:Aq:54:ILE:HD12	49:Aq:54:ILE:HA	1.82	0.41
49:Aq:288:HIS:CE1	71:1:963:A:H1'	2.55	0.41
51:Ak:281:MET:HE3	51:Ak:281:MET:HB3	1.75	0.41
51:Ak:282:LYS:O	51:Ak:286:GLU:HB2	2.21	0.41
52:BP:10:TYR:CE1	71:1:409:A:H1'	2.55	0.41
52:BP:94:ARG:HG3	52:BP:95:PRO:O	2.21	0.41
53:Ad:21:ALA:O	53:Ad:22:ALA:C	2.63	0.41
53:Ad:158:VAL:O	53:Ad:158:VAL:HG23	2.20	0.41
55:Av:19:LYS:HA	71:1:439:A:H62	1.85	0.41
58:Ae:78:HIS:O	58:Ae:80:HIS:N	2.53	0.41
59:Ac:153:ASP:OD1	59:Ac:153:ASP:N	2.45	0.41
64:Ax:57:THR:HB	71:1:278:C:OP1	2.20	0.41
65:BL:127:LYS:HB2	71:1:667:A:OP1	2.20	0.41
66:BO:54:TYR:CD2	66:BO:140:MET:HE3	2.55	0.41
68:UB:34:UNK:O	68:UB:36:UNK:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:1:521:U:O2'	71:1:522:U:O5'	2.37	0.41
71:1:610:A:H2'	71:1:611:A:O4'	2.21	0.41
1:A:262:VAL:HG22	71:1:809:A:C2	2.56	0.41
1:A:294:THR:N	10:J:6:GLU:OE2	2.53	0.41
2:B:28:VAL:HG23	30:Aw:175:ARG:HH12	1.85	0.41
2:B:86:MET:HE3	30:Aw:148:ASN:HD21	1.85	0.41
2:B:86:MET:HE2	2:B:86:MET:HB3	1.91	0.41
2:B:216:VAL:O	2:B:329:THR:HA	2.21	0.41
2:B:242:HIS:ND1	13:M:59:ARG:HB3	2.36	0.41
2:B:243:LYS:HB3	2:B:243:LYS:HE2	1.90	0.41
6:F:113:ARG:H	6:F:113:ARG:HG3	1.52	0.41
7:G:251:SER:OG	7:G:252:PHE:N	2.53	0.41
9:I:45:MET:SD	68:UB:19:UNK:HA	2.61	0.41
9:I:153:ARG:HD2	9:I:158:VAL:CG1	2.50	0.41
10:J:5:ARG:NH1	71:1:1108:A:OP2	2.54	0.41
10:J:53:ILE:HD12	10:J:53:ILE:HA	1.83	0.41
16:P:26:ARG:HD3	71:1:340:U:OP1	2.20	0.41
17:Q:64:SER:OG	17:Q:81:ARG:HG3	2.21	0.41
18:R:261:ALA:HA	18:R:264:LEU:HG	2.02	0.41
20:T:38:LEU:HD21	71:1:533:U:H5''	2.02	0.41
26:Z:123:GLY:O	26:Z:131:TRP:HD1	2.03	0.41
29:BB:51:ALA:O	29:BB:55:GLN:NE2	2.53	0.41
30:Aw:120:MET:HE3	30:Aw:120:MET:HB3	1.66	0.41
32:An:68:ARG:NH2	60:Ah:91:ASN:HA	2.36	0.41
32:An:80:THR:HG23	32:An:81:GLN:HG3	2.01	0.41
32:An:126:LEU:HD13	32:An:206:ILE:HA	2.03	0.41
39:Ai:386:SER:O	39:Ai:388:MET:HG2	2.21	0.41
40:Ap:198:MET:HB3	40:Ap:216:TYR:CE1	2.55	0.41
41:Au:30:TRP:CE3	71:1:259:U:C2	3.08	0.41
41:Au:66:LEU:HD23	41:Au:66:LEU:O	2.21	0.41
43:Ao:239:GLY:HA3	45:Ar:176:GLU:HG3	2.01	0.41
44:BM:328:TYR:O	44:BM:331:PRO:HD2	2.20	0.41
46:Aj:328:LYS:HA	46:Aj:427:THR:HG23	2.02	0.41
48:Am:93:TYR:CE2	48:Am:132:VAL:HG22	2.56	0.41
50:BE:71:SER:OG	58:Ae:132:HIS:HB2	2.20	0.41
51:Ak:126:PRO:CG	51:Ak:172:PRO:HG2	2.51	0.41
52:BP:95:PRO:HA	52:BP:96:PRO:HD2	1.74	0.41
55:Av:154:TRP:CD1	71:1:457:C:HO2'	2.38	0.41
60:Ah:494:GLU:OE1	60:Ah:494:GLU:N	2.37	0.41
64:Ax:147:ASN:OD1	64:Ax:147:ASN:C	2.63	0.41
65:BL:247:LEU:HD13	65:BL:370:TYR:CE2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:BL:335:HIS:O	65:BL:336:PRO:C	2.63	0.41
67:BG:1333:ILE:O	67:BG:1335:SER:N	2.54	0.41
71:1:178:U:H2'	71:1:327:U:O4	2.21	0.41
71:1:269:A:HO2'	71:1:270:A:P	2.37	0.41
71:1:798:A:O2'	71:1:799:A:P	2.79	0.41
2:B:194:LYS:O	2:B:194:LYS:CE	2.68	0.41
5:E:55:PHE:HE1	5:E:71:GLU:OE2	2.03	0.41
7:G:130:TYR:C	7:G:132:ASP:H	2.28	0.41
10:J:93:ALA:O	10:J:94:ARG:C	2.63	0.41
13:M:13:ARG:NH2	71:1:506:A:O2'	2.52	0.41
13:M:159:ARG:NE	13:M:243:LEU:HD22	2.34	0.41
16:P:51:ARG:NE	16:P:53:PHE:CE2	2.89	0.41
16:P:86:VAL:HG11	16:P:110:VAL:HG11	2.03	0.41
17:Q:107:GLY:O	17:Q:119:GLN:HA	2.21	0.41
18:R:116:ARG:HA	18:R:119:LYS:HB2	2.02	0.41
18:R:148:ARG:HB2	18:R:330:TRP:CE2	2.56	0.41
18:R:261:ALA:O	36:At:108:MET:HG3	2.20	0.41
23:W:91:ALA:HB2	58:Ae:293:PHE:CD1	2.56	0.41
24:X:73:THR:CG2	31:Bj:58:ILE:HG22	2.50	0.41
24:X:76:SER:OG	24:X:77:ASP:N	2.53	0.41
25:Y:220:TYR:HE1	37:BC:67:ASN:HD21	1.67	0.41
30:Aw:152:HIS:ND1	30:Aw:154:THR:HG22	2.35	0.41
34:BI:96:VAL:HG22	34:BI:239:VAL:HG21	2.02	0.41
38:Ab:14:VAL:HB	38:Ab:47:ILE:HG22	2.02	0.41
39:Ai:274:ASP:HB2	39:Ai:275:PRO:HD2	2.01	0.41
41:Au:139:ARG:HA	41:Au:142:GLU:HB3	2.03	0.41
42:Aa:18:ARG:N	71:1:161:U:O2	2.54	0.41
43:Ao:147:SER:OG	43:Ao:150:ASP:HB2	2.21	0.41
44:BM:22:THR:O	44:BM:24:PRO:HD3	2.21	0.41
44:BM:93:LEU:HA	44:BM:96:THR:OG1	2.20	0.41
44:BM:242:THR:HG1	44:BM:276:HIS:CE1	2.34	0.41
44:BM:268:HIS:O	44:BM:272:LYS:HG2	2.20	0.41
45:Ar:162:LEU:HA	45:Ar:195:ILE:HB	2.03	0.41
46:Aj:275:MET:HE3	46:Aj:275:MET:HB2	1.79	0.41
46:Aj:293:GLU:O	46:Aj:296:LEU:N	2.53	0.41
46:Aj:391:LYS:HA	46:Aj:394:ILE:HG22	2.03	0.41
46:Aj:449:LEU:HD12	71:1:514:U:H3'	2.03	0.41
49:Aq:83:GLY:C	49:Aq:85:ASP:H	2.29	0.41
49:Aq:160:PRO:HD2	49:Aq:223:PRO:HD2	2.02	0.41
49:Aq:286:MET:HB2	63:Ag:165:ILE:HG13	2.02	0.41
49:Aq:301:GLY:H	49:Aq:304:MET:HE3	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:Ak:122:LEU:HD23	51:Ak:218:LEU:HD11	2.02	0.41
59:Ac:160:THR:O	59:Ac:163:ARG:HB2	2.20	0.41
63:Ag:169:ARG:O	63:Ag:173:ILE:HG13	2.21	0.41
65:BL:90:PRO:O	65:BL:91:PHE:CB	2.68	0.41
65:BL:98:MET:HE3	65:BL:98:MET:HB2	1.77	0.41
66:BO:99:HIS:HB2	66:BO:128:VAL:HB	2.03	0.41
71:1:177:G:N2	71:1:525:U:H3	2.16	0.41
71:1:432:U:C2	71:1:433:G:C6	3.09	0.41
71:1:513:U:O2'	71:1:514:U:P	2.79	0.41
71:1:1004:U:H3'	71:1:1005:A:C8	2.55	0.41
71:1:1074:A:C1'	71:1:1075:A:P	3.08	0.41
1:A:126:PHE:C	58:Ae:44:PRO:HG2	2.45	0.41
2:B:69:GLU:OE2	2:B:69:GLU:N	2.52	0.41
4:D:53:PHE:O	4:D:57:LYS:NZ	2.52	0.41
5:E:25:ARG:HB3	55:Av:106:PRO:HG3	2.02	0.41
6:F:166:PRO:HG3	56:Af:25:TRP:CZ2	2.56	0.41
7:G:34:LEU:HB3	7:G:37:GLU:HB2	2.01	0.41
7:G:329:PHE:CG	7:G:330:PRO:HD2	2.55	0.41
8:H:12:LEU:HG	8:H:12:LEU:O	2.21	0.41
8:H:55:ASP:OD1	8:H:152:GLN:HB3	2.20	0.41
8:H:61:GLN:HG2	8:H:114:TYR:CZ	2.56	0.41
9:I:72:ARG:HH22	71:1:544:U:P	2.43	0.41
9:I:127:LYS:HB2	9:I:205:MET:HE1	2.02	0.41
9:I:256:GLU:HA	9:I:259:HIS:HD2	1.85	0.41
10:J:48:HIS:CE1	10:J:52:GLN:HG2	2.56	0.41
11:K:153:GLU:HB2	11:K:180:MET:SD	2.60	0.41
12:L:134:TYR:H	12:L:149:ASN:ND2	2.19	0.41
13:M:238:ASP:HB3	13:M:241:MET:HB2	2.03	0.41
15:O:299:HIS:HE2	18:R:381:GLU:CD	2.28	0.41
15:O:314:GLN:NE2	35:Az:60:HIS:HB3	2.36	0.41
16:P:165:PRO:HA	16:P:176:LEU:HD11	2.03	0.41
18:R:429:VAL:O	18:R:433:VAL:HG12	2.21	0.41
19:S:294:ILE:HG13	19:S:296:PRO:HD2	2.02	0.41
22:V:58:LEU:HD23	22:V:58:LEU:HA	1.54	0.41
24:X:266:PRO:O	43:Ao:97:ARG:NH2	2.53	0.41
24:X:423:GLN:HE21	49:Aq:214:PRO:HG3	1.85	0.41
25:Y:87:GLU:O	25:Y:91:ARG:HG2	2.20	0.41
27:BA:24:VAL:HA	45:Ar:127:ARG:CD	2.51	0.41
30:Aw:70:MET:HE1	30:Aw:78:PHE:CD2	2.56	0.41
30:Aw:170:LEU:HD22	46:Aj:442:TYR:CD1	2.56	0.41
31:Bj:46:PHE:HB2	63:Ag:198:PHE:CE1	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:An:129:LYS:O	32:An:133:VAL:N	2.45	0.41
34:BI:239:VAL:HA	34:BI:242:ALA:HB3	2.03	0.41
39:AI:204:SER:OG	49:Aq:34:GLU:OE1	2.26	0.41
40:Ap:72:PRO:HB3	40:Ap:123:HIS:CE1	2.56	0.41
41:Au:15:GLN:H	41:Au:15:GLN:HG2	1.64	0.41
41:Au:47:LEU:HD12	41:Au:47:LEU:HA	1.86	0.41
44:BM:171:ASP:OD1	44:BM:172:ALA:N	2.54	0.41
44:BM:380:THR:HG22	44:BM:384:HIS:CE1	2.56	0.41
47:BH:33:ILE:HD12	47:BH:43:VAL:HG21	2.01	0.41
47:BH:81:PHE:CE1	47:BH:90:MET:HE1	2.56	0.41
47:BH:148:ARG:HA	47:BH:148:ARG:HD2	1.83	0.41
51:Ak:139:ARG:HH21	51:Ak:197:GLY:HA2	1.85	0.41
52:BP:97:ARG:H	52:BP:98:PRO:HD2	1.75	0.41
53:Ad:167:PRO:HB3	53:Ad:188:ASN:H	1.85	0.41
55:Av:155:ARG:HH12	55:Av:159:LEU:CD1	2.34	0.41
59:Ac:39:VAL:HG22	59:Ac:191:ASP:HA	2.02	0.41
60:Ah:300:LEU:HD13	60:Ah:343:TYR:OH	2.20	0.41
62:Ay:149:ARG:O	62:Ay:150:PRO:C	2.63	0.41
64:Ax:154:HIS:O	64:Ax:154:HIS:CG	2.72	0.41
65:BL:214:LEU:O	65:BL:217:VAL:HG22	2.21	0.41
66:BO:70:ASP:HB2	66:BO:163:GLY:HA3	2.03	0.41
66:BO:153:ILE:HG13	66:BO:153:ILE:O	2.20	0.41
67:BG:1340:GLU:OE2	67:BG:1343:ASN:HB2	2.20	0.41
71:1:542:G:N3	71:1:596:U:O2'	2.51	0.41
71:1:641:A:H2	71:1:798:A:N6	2.18	0.41
71:1:879:A:H8	71:1:879:A:O5'	2.04	0.41
1:A:133:MET:HE2	1:A:133:MET:HB3	1.79	0.41
1:A:143:ASP:HB3	1:A:307:TRP:HE1	1.86	0.41
1:A:157:TRP:CZ3	1:A:183:MET:HE1	2.55	0.41
1:A:173:VAL:HG21	58:Ae:102:VAL:HG12	2.03	0.41
1:A:302:ASP:O	1:A:335:THR:OG1	2.39	0.41
2:B:20:PHE:HE1	38:Ab:49:PRO:HG3	1.86	0.41
2:B:125:LEU:HD11	2:B:129:LEU:HD21	2.03	0.41
2:B:170:HIS:CD2	2:B:170:HIS:C	2.99	0.41
2:B:251:ASP:HB2	2:B:278:LEU:HD11	2.03	0.41
2:B:349:PRO:HB3	53:Ad:160:ARG:HB2	2.02	0.41
2:B:421:VAL:HG11	30:Aw:11:PHE:HE2	1.86	0.41
2:B:434:MET:CG	7:G:275:MET:HB3	2.51	0.41
3:C:198:ARG:HH22	62:Ay:135:VAL:HG22	1.85	0.41
4:D:21:ARG:NH2	58:Ae:226:ASP:OD2	2.45	0.41
5:E:49:VAL:HG21	5:E:52:ASN:ND2	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:264:LEU:HD21	5:E:295:ARG:HG3	2.03	0.41
6:F:100:TRP:CZ2	6:F:122:LEU:HB3	2.56	0.41
7:G:54:ARG:HD3	7:G:63:LEU:HD22	2.03	0.41
7:G:70:LEU:HG	71:1:498:G:OP2	2.21	0.41
7:G:237:ALA:HB3	7:G:242:ILE:HG13	2.02	0.41
8:H:11:LEU:HD23	8:H:11:LEU:N	2.36	0.41
9:I:238:ARG:HH21	15:O:89:HIS:C	2.29	0.41
11:K:144:ALA:HB1	46:Aj:222:GLU:HG3	2.03	0.41
12:L:57:LYS:HE2	52:BP:19:ILE:O	2.21	0.41
13:M:32:TYR:CD1	71:1:176:A:H4'	2.55	0.41
13:M:62:LEU:HD23	13:M:91:ARG:HG2	2.02	0.41
13:M:99:LEU:CD2	13:M:108:GLN:HA	2.51	0.41
13:M:143:TRP:HB3	15:O:36:PHE:CE2	2.55	0.41
13:M:257:MET:HE2	13:M:257:MET:HB2	2.00	0.41
17:Q:50:ASN:O	17:Q:53:ALA:N	2.54	0.41
18:R:48:GLN:H	18:R:48:GLN:HG2	1.73	0.41
21:U:68:LEU:H	21:U:85:GLU:HG2	1.85	0.41
22:V:22:ARG:NH2	63:Ag:40:TRP:O	2.52	0.41
22:V:51:PHE:H	22:V:53:ARG:NH1	2.19	0.41
22:V:104:ARG:NE	71:1:184:G:C8	2.88	0.41
24:X:178:ARG:HB3	39:Ai:53:LYS:HE2	2.02	0.41
24:X:379:LYS:NZ	24:X:382:GLY:HA3	2.36	0.41
27:BA:39:ALA:HB1	27:BA:124:VAL:HG23	2.03	0.41
29:BB:92:ASN:OD1	29:BB:93:THR:N	2.51	0.41
29:BB:127:PRO:HB3	50:BE:43:GLU:HG2	2.03	0.41
30:Aw:6:VAL:HG13	30:Aw:96:ARG:HG2	2.03	0.41
31:Bj:147:ASN:OD1	31:Bj:148:ALA:N	2.54	0.41
33:Al:58:LYS:HB2	71:1:698:G:O2'	2.20	0.41
34:BI:197:LEU:HD12	34:BI:232:ARG:HB3	2.03	0.41
34:BI:249:THR:OG1	34:BI:250:ALA:N	2.53	0.41
35:Az:149:ASP:OD1	35:Az:150:MET:N	2.54	0.41
39:Ai:309:ILE:HG23	39:Ai:342:PHE:HE1	1.85	0.41
39:Ai:380:ARG:HH22	39:Ai:472:THR:HA	1.85	0.41
40:Ap:106:GLU:OE1	67:BG:1288:PRO:HB2	2.20	0.41
40:Ap:173:ARG:HD3	40:Ap:173:ARG:N	2.34	0.41
41:Au:57:TRP:C	41:Au:59:SER:N	2.77	0.41
42:Aa:155:THR:O	42:Aa:159:GLN:N	2.33	0.41
43:Ao:252:LYS:HB2	43:Ao:252:LYS:HE2	1.84	0.41
44:BM:244:LEU:O	44:BM:247:PHE:HB3	2.21	0.41
45:Ar:165:ASN:O	45:Ar:193:MET:N	2.54	0.41
46:Aj:344:PHE:CE2	53:Ad:208:LYS:HD3	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BH:186:ARG:NH1	47:BH:225:ILE:O	2.54	0.41
48:Am:17:PRO:CB	71:1:1037:C:H5''	2.51	0.41
48:Am:60:GLN:HG3	48:Am:257:TRP:CZ2	2.56	0.41
48:Am:126:MET:HE1	48:Am:154:ALA:HA	2.02	0.41
48:Am:168:LYS:HD3	48:Am:168:LYS:HA	1.73	0.41
48:Am:256:MET:HB2	48:Am:256:MET:HE2	1.73	0.41
48:Am:305:LYS:HB3	48:Am:305:LYS:HE3	1.85	0.41
49:Aq:67:SER:HA	53:Ad:31:LEU:CD2	2.48	0.41
49:Aq:213:PRO:HG2	49:Aq:216:GLU:OE1	2.21	0.41
49:Aq:286:MET:HG2	49:Aq:287:GLY:N	2.36	0.41
51:Ak:16:PRO:HB3	51:Ak:56:HIS:O	2.20	0.41
51:Ak:139:ARG:NH1	51:Ak:200:ARG:HB2	2.36	0.41
51:Ak:281:MET:O	51:Ak:284:ARG:HB3	2.21	0.41
52:BP:24:TYR:O	52:BP:27:GLY:N	2.35	0.41
53:Ad:47:ILE:HA	53:Ad:48:PRO:HD3	1.95	0.41
54:BF:59:MET:HE2	71:1:549:C:O2'	2.21	0.41
56:Af:76:GLN:O	56:Af:77:GLN:HB2	2.21	0.41
57:As:131:ILE:O	57:As:134:PRO:HD2	2.21	0.41
60:Ah:132:ILE:O	60:Ah:136:LEU:HD13	2.21	0.41
60:Ah:357:LYS:HB3	60:Ah:357:LYS:HE3	1.88	0.41
62:Ay:45:HIS:HE1	71:1:705:A:OP2	2.03	0.41
62:Ay:165:ASP:C	62:Ay:167:ARG:N	2.78	0.41
64:Ax:211:LEU:HG	64:Ax:212:PHE:CD1	2.55	0.41
65:BL:247:LEU:HD23	65:BL:247:LEU:HA	1.65	0.41
65:BL:337:ARG:NE	65:BL:337:ARG:HA	2.35	0.41
66:BO:81:ALA:HA	66:BO:99:HIS:CD2	2.55	0.41
66:BO:87:ARG:CB	66:BO:90:HIS:HB3	2.44	0.41
70:UD:26:UNK:C	70:UD:28:UNK:N	2.83	0.41
71:1:149:U:O2'	71:1:150:A:H8	2.04	0.41
71:1:163:U:H3	71:1:1013:U:H5'	1.84	0.41
71:1:302:A:N6	71:1:303:U:O4	2.54	0.41
71:1:391:A:O3'	71:1:392:A:H3'	2.21	0.41
71:1:393:A:O2'	71:1:394:U:P	2.79	0.41
71:1:465:A:N6	71:1:466:U:C4	2.89	0.41
71:1:628:U:H4'	71:1:629:A:OP1	2.19	0.41
71:1:652:A:C8	71:1:758:G:O6	2.74	0.41
71:1:810:U:C3'	71:1:811:U:H5''	2.51	0.41
71:1:911:A:C6	71:1:912:U:C4	3.09	0.41
71:1:975:U:N3	71:1:976:A:H2	2.18	0.41
1:A:83:GLN:HB2	50:BE:114:LEU:O	2.20	0.41
2:B:6:SER:OG	42:Aa:182:PRO:HB3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:174:TRP:HA	22:V:13:GLY:HA2	2.03	0.41
6:F:157:ASP:OD1	6:F:157:ASP:N	2.52	0.41
7:G:157:VAL:CG2	22:V:58:LEU:HD12	2.48	0.41
9:I:88:ALA:HB2	71:1:600:A:C8	2.56	0.41
9:I:258:TRP:C	9:I:261:GLU:H	2.28	0.41
12:L:88:ARG:HB3	12:L:110:GLN:HB2	2.03	0.41
13:M:29:GLN:HG2	13:M:30:LYS:H	1.86	0.41
13:M:62:LEU:HD22	13:M:84:GLU:HG3	2.02	0.41
15:O:141:THR:OG1	15:O:203:VAL:O	2.18	0.41
15:O:176:VAL:HB	15:O:189:VAL:O	2.21	0.41
16:P:130:VAL:HG22	43:Ao:120:GLY:HA3	2.02	0.41
16:P:162:PHE:O	16:P:163:GLN:C	2.64	0.41
17:Q:122:MET:HB2	17:Q:122:MET:HE3	1.64	0.41
17:Q:197:LEU:HA	17:Q:200:VAL:HG12	2.03	0.41
22:V:116:ASP:OD1	22:V:117:ILE:N	2.54	0.41
25:Y:220:TYR:CE1	37:BC:67:ASN:ND2	2.89	0.41
26:Z:28:THR:HG22	32:An:81:GLN:CD	2.46	0.41
26:Z:107:PHE:CE1	26:Z:112:PRO:HA	2.56	0.41
27:BA:112:GLU:HA	27:BA:137:ARG:O	2.21	0.41
29:BB:69:SER:OG	29:BB:73:GLU:HG3	2.21	0.41
32:An:170:GLU:HG2	65:BL:180:GLY:O	2.21	0.41
33:Al:108:TRP:CZ2	33:Al:156:ILE:HG21	2.56	0.41
33:Al:159:THR:HG22	33:Al:242:ASN:CB	2.48	0.41
36:At:42:MET:HE2	36:At:42:MET:HB3	1.77	0.41
36:At:128:ARG:CZ	36:At:128:ARG:HB2	2.51	0.41
38:Ab:236:ILE:O	38:Ab:240:ARG:N	2.51	0.41
42:Aa:190:SER:O	42:Aa:191:THR:OG1	2.38	0.41
45:Ar:125:PRO:HD2	56:Af:31:TRP:NE1	2.36	0.41
46:Aj:364:ASP:CG	46:Aj:390:ARG:HH21	2.29	0.41
46:Aj:367:LEU:HA	46:Aj:367:LEU:HD23	1.82	0.41
46:Aj:388:GLN:O	46:Aj:392:GLU:HG3	2.20	0.41
48:Am:119:GLU:OE1	48:Am:234:SER:HB2	2.21	0.41
50:BE:104:VAL:O	50:BE:105:TYR:C	2.64	0.41
52:BP:2:LEU:HD13	52:BP:2:LEU:HA	1.92	0.41
59:Ac:210:LEU:HD12	59:Ac:241:ALA:O	2.21	0.41
67:BG:1327:LYS:HA	67:BG:1327:LYS:HD2	1.88	0.41
71:1:252:U:C4	71:1:253:U:C2	3.09	0.41
71:1:395:U:O2'	71:1:943:U:C2	2.73	0.41
71:1:544:U:H1'	71:1:595:A:C2	2.56	0.41
71:1:594:U:O2'	71:1:595:A:P	2.79	0.41
1:A:281:GLN:HB2	1:A:283:ARG:HG2	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:383:PHE:CE1	10:J:110:LYS:HD2	2.56	0.40
5:E:171:PRO:HD2	5:E:176:ARG:HH11	1.84	0.40
7:G:218:LEU:O	7:G:219:LEU:HD23	2.21	0.40
7:G:324:PRO:O	63:Ag:149:ASN:ND2	2.54	0.40
9:I:252:GLU:H	9:I:252:GLU:CD	2.28	0.40
11:K:158:ARG:HH21	52:BP:-41:ARG:HG2	1.86	0.40
12:L:133:LYS:NZ	42:Aa:92:SER:O	2.54	0.40
14:N:138:PHE:HA	14:N:141:PHE:HB3	2.03	0.40
16:P:117:ARG:HD3	43:Ao:119:VAL:O	2.21	0.40
17:Q:30:LEU:O	17:Q:33:ARG:HB3	2.20	0.40
21:U:94:THR:C	21:U:96:SER:H	2.29	0.40
22:V:39:VAL:C	22:V:40:TRP:CD1	2.99	0.40
24:X:496:TRP:CZ3	53:Ad:65:ILE:HD12	2.54	0.40
25:Y:74:TYR:O	25:Y:77:TYR:N	2.54	0.40
25:Y:223:LEU:HA	25:Y:223:LEU:HD23	1.90	0.40
30:Aw:74:LYS:HD2	71:I:110:U:H5	1.85	0.40
31:Bj:2:VAL:HG21	49:Aq:109:HIS:HB3	2.03	0.40
31:Bj:32:LEU:HD13	31:Bj:32:LEU:HA	1.84	0.40
32:An:199:LEU:HA	32:An:199:LEU:HD12	1.78	0.40
33:Al:73:LYS:O	33:Al:77:LEU:HG	2.21	0.40
33:Al:207:ALA:O	33:Al:211:LEU:N	2.41	0.40
34:Bi:198:LEU:HD11	34:Bi:212:PHE:HB2	2.03	0.40
39:Ai:68:ARG:HB2	39:Ai:71:ASP:OD2	2.20	0.40
39:Ai:69:PRO:HA	39:Ai:93:ILE:O	2.21	0.40
39:Ai:296:HIS:HD2	39:Ai:297:SER:N	2.17	0.40
40:Ap:73:CYS:H	40:Ap:121:VAL:HG13	1.86	0.40
41:Au:137:ASP:OD1	54:BF:49:LEU:HD11	2.21	0.40
42:Aa:182:PRO:C	42:Aa:184:PHE:H	2.29	0.40
43:Ao:174:ARG:O	43:Ao:178:TYR:HD1	2.04	0.40
43:Ao:244:VAL:HG23	43:Ao:245:GLN:H	1.87	0.40
44:BM:134:LYS:HA	44:BM:134:LYS:HD3	1.87	0.40
44:BM:298:ALA:O	44:BM:302:MET:HB2	2.20	0.40
48:Am:276:ILE:HG13	48:Am:277:MET:H	1.86	0.40
49:Aq:42:MET:HG2	49:Aq:110:ASP:HA	2.03	0.40
49:Aq:42:MET:HB2	49:Aq:106:TYR:OH	2.21	0.40
49:Aq:131:GLU:O	49:Aq:135:ILE:HG13	2.21	0.40
56:Af:75:THR:HG22	56:Af:85:ARG:HH22	1.87	0.40
58:Ae:174:PHE:HB3	58:Ae:213:PRO:HG2	2.02	0.40
59:Ac:47:ARG:HG2	59:Ac:47:ARG:O	2.21	0.40
60:Ah:228:ARG:HG2	60:Ah:236:ASP:OD2	2.20	0.40
60:Ah:460:TYR:C	60:Ah:463:ILE:H	2.30	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:BD:29:ILE:HG12	61:BD:30:ALA:O	2.21	0.40
66:BO:36:ILE:N	71:1:1128:U:O2	2.54	0.40
71:1:542:G:C2	71:1:596:U:C6	3.09	0.40
71:1:643:G:C5'	71:1:656:G:H22	2.34	0.40
71:1:828:A:N3	71:1:828:A:H2'	2.36	0.40
71:1:923:A:C2	71:1:980:A:N7	2.89	0.40
71:1:936:G:N2	71:1:937:C:C2	2.89	0.40
1:A:100:LEU:HD13	58:Ae:126:TRP:CZ2	2.56	0.40
1:A:173:VAL:O	1:A:175:THR:HG23	2.22	0.40
1:A:384:ARG:NH2	71:1:1149:A:OP1	2.54	0.40
2:B:102:THR:OG1	2:B:217:GLU:OE2	2.33	0.40
2:B:127:TYR:OH	2:B:310:ILE:HG12	2.21	0.40
2:B:146:ILE:HD13	2:B:146:ILE:HA	1.77	0.40
9:I:11:ARG:NH2	66:BO:53:GLY:HA2	2.36	0.40
9:I:65:HIS:O	9:I:69:ILE:HG13	2.21	0.40
9:I:219:GLU:HA	9:I:222:HIS:HB3	2.03	0.40
14:N:71:TRP:CD1	71:1:315:A:H1'	2.56	0.40
15:O:138:PRO:HA	15:O:156:ILE:HG22	2.02	0.40
17:Q:12:THR:HG23	62:Ay:174:TRP:CZ2	2.56	0.40
18:R:243:ILE:HD11	18:R:258:VAL:N	2.36	0.40
18:R:362:GLU:H	18:R:362:GLU:HG2	1.41	0.40
24:X:245:ASP:HA	24:X:250:GLN:HE21	1.86	0.40
26:Z:22:THR:HG21	60:Ah:72:SER:HB3	2.02	0.40
27:BA:23:TYR:O	27:BA:26:LYS:N	2.54	0.40
28:UA:48:UNK:CB	64:Ax:159:SER:H	2.34	0.40
30:Aw:100:GLN:O	30:Aw:100:GLN:NE2	2.52	0.40
32:An:84:TRP:CD1	60:Ah:81:LEU:HD11	2.55	0.40
32:An:85:LEU:HD23	32:An:85:LEU:HA	1.94	0.40
34:BI:173:GLN:HE22	34:BI:202:VAL:HA	1.86	0.40
34:BI:193:ASP:OD1	34:BI:193:ASP:N	2.54	0.40
39:Ai:114:LEU:HD23	39:Ai:114:LEU:HA	1.87	0.40
40:Ap:120:TRP:CD2	67:BG:1335:SER:HA	2.56	0.40
41:Au:21:PRO:HA	71:1:587:U:OP1	2.22	0.40
41:Au:117:ARG:NH2	64:Ax:179:THR:O	2.48	0.40
46:Aj:310:PHE:CE2	46:Aj:369:ARG:HB3	2.56	0.40
47:BH:190:SER:HB2	47:BH:223:ASP:HA	2.03	0.40
49:Aq:339:ARG:O	49:Aq:340:TYR:C	2.64	0.40
50:BE:88:GLU:HG3	50:BE:90:GLU:OE2	2.21	0.40
56:Af:99:LEU:O	56:Af:103:ARG:N	2.43	0.40
59:Ac:129:VAL:O	59:Ac:132:GLN:HG2	2.22	0.40
60:Ah:188:ASP:H	60:Ah:192:GLN:HB2	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:Ah:344:LEU:HB3	60:Ah:371:GLN:OE1	2.21	0.40
61:BD:20:GLN:HB3	61:BD:64:HIS:HD2	1.86	0.40
64:Ax:167:LEU:O	64:Ax:171:LEU:HB2	2.21	0.40
64:Ax:201:PHE:CD1	64:Ax:201:PHE:O	2.74	0.40
65:BL:257:LEU:HD12	65:BL:267:PHE:CG	2.56	0.40
66:BO:73:ASN:HB2	66:BO:119:ARG:HE	1.86	0.40
66:BO:81:ALA:HB1	66:BO:86:GLU:OE2	2.21	0.40
69:UC:121:UNK:C	69:UC:123:UNK:N	2.83	0.40
71:1:228:G:C2	71:1:310:A:C2	3.09	0.40
71:1:236:A:H1'	71:1:288:C:N4	2.32	0.40
71:1:712:U:OP2	71:1:749:U:H5''	2.21	0.40
71:1:780:U:C4	71:1:781:A:C6	3.09	0.40
71:1:798:A:C2	71:1:799:A:C6	3.09	0.40
71:1:821:U:H2'	71:1:822:A:O4'	2.22	0.40
71:1:1033:U:H2'	71:1:1034:C:N1	2.36	0.40
71:1:1075:A:C2	71:1:1092:G:C2	3.10	0.40
71:1:1080:A:H8	71:1:1088:G:N2	2.20	0.40
1:A:387:PHE:CD1	1:A:387:PHE:N	2.89	0.40
2:B:201:ARG:HA	2:B:204:VAL:HG12	2.02	0.40
3:C:69:THR:HG23	3:C:69:THR:O	2.21	0.40
3:C:132:ARG:HE	3:C:132:ARG:HB3	1.60	0.40
4:D:59:ASP:N	4:D:60:PRO:HD2	2.35	0.40
5:E:119:PRO:HD2	5:E:124:PHE:CZ	2.57	0.40
6:F:54:ILE:HB	6:F:127:LEU:HD13	2.03	0.40
7:G:72:GLU:O	38:Ab:74:LEU:HD11	2.21	0.40
7:G:356:LEU:HA	7:G:356:LEU:HD23	1.80	0.40
11:K:31:GLU:HB2	11:K:34:VAL:CG1	2.50	0.40
11:K:103:GLU:CD	12:L:33:LYS:HE3	2.47	0.40
11:K:136:THR:HB	56:Af:105:GLN:NE2	2.36	0.40
13:M:214:ASP:HB2	13:M:224:LYS:HG3	2.02	0.40
14:N:122:PRO:HG3	18:R:460:HIS:HB2	2.03	0.40
15:O:35:ARG:HH12	71:1:43:A:H3'	1.85	0.40
15:O:184:ARG:HH22	15:O:187:GLN:HE21	1.69	0.40
16:P:164:ASP:OD2	16:P:166:ASN:HB2	2.20	0.40
19:S:348:ALA:HA	71:1:368:U:C6	2.56	0.40
22:V:104:ARG:NH2	71:1:184:G:OP2	2.46	0.40
24:X:60:PRO:HD2	63:Ag:212:LEU:HD22	2.03	0.40
24:X:261:PHE:HE1	24:X:339:CYS:HB3	1.85	0.40
24:X:427:GLU:O	24:X:428:LYS:C	2.64	0.40
24:X:498:ARG:HA	24:X:498:ARG:HD3	1.91	0.40
25:Y:127:TYR:HE2	59:Ac:25:PHE:CE2	2.39	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:49:SER:O	27:BA:53:LYS:N	2.46	0.40
27:BA:82:LEU:HD13	27:BA:146:VAL:HG23	2.03	0.40
27:BA:91:HIS:CG	27:BA:92:PRO:HD2	2.55	0.40
32:An:107:ASP:CG	32:An:108:ASP:N	2.80	0.40
32:An:166:ASN:HA	60:Ah:87:MET:SD	2.61	0.40
32:An:260:GLU:C	32:An:262:MET:H	2.29	0.40
32:An:293:ARG:O	32:An:297:ALA:N	2.54	0.40
33:Al:226:LYS:HG2	33:Al:227:ASN:H	1.84	0.40
38:Ab:124:ARG:HG2	42:Aa:89:ARG:O	2.22	0.40
38:Ab:162:ASP:O	38:Ab:165:ARG:N	2.54	0.40
39:Ai:64:GLN:HE21	39:Ai:197:MET:HB2	1.86	0.40
39:Ai:409:VAL:HG12	39:Ai:421:LEU:HD22	2.02	0.40
40:Ap:73:CYS:N	40:Ap:121:VAL:HG13	2.35	0.40
40:Ap:199:ASP:OD1	40:Ap:199:ASP:N	2.44	0.40
41:Au:66:LEU:HD23	41:Au:66:LEU:C	2.46	0.40
41:Au:96:LEU:HD12	41:Au:96:LEU:HA	1.71	0.40
43:Ao:248:GLN:HG2	45:Ar:186:ASN:ND2	2.35	0.40
44:BM:97:GLY:HA2	44:BM:100:ALA:HB3	2.03	0.40
44:BM:129:LEU:HD13	44:BM:129:LEU:HA	1.92	0.40
44:BM:373:LYS:HA	44:BM:376:ILE:HG12	2.03	0.40
46:Aj:128:LEU:HD21	46:Aj:283:PRO:HB3	2.03	0.40
47:BH:132:HIS:HB2	47:BH:137:GLN:O	2.21	0.40
49:Aq:106:TYR:CE1	49:Aq:114:VAL:HG21	2.55	0.40
49:Aq:120:PHE:CE2	49:Aq:133:ILE:HG22	2.57	0.40
51:Ak:139:ARG:HH21	51:Ak:197:GLY:CA	2.34	0.40
53:Ad:72:LEU:HA	53:Ad:72:LEU:HD23	1.86	0.40
58:Ae:69:GLY:H	58:Ae:73:THR:HG21	1.86	0.40
58:Ae:124:PRO:HB3	58:Ae:147:TYR:CD1	2.57	0.40
58:Ae:244:PRO:HA	58:Ae:245:PRO:HD2	1.95	0.40
60:Ah:322:ALA:CB	60:Ah:361:GLU:HG2	2.51	0.40
60:Ah:376:GLU:H	60:Ah:376:GLU:HG3	1.76	0.40
62:Ay:54:GLY:HA2	65:BL:356:TYR:CD2	2.55	0.40
64:Ax:91:GLU:HG2	64:Ax:93:VAL:HG13	2.03	0.40
65:BL:263:GLU:HB2	65:BL:352:ARG:O	2.21	0.40
65:BL:305:HIS:HE1	71:1:678:U:OP2	2.05	0.40
67:BG:1338:LEU:H	67:BG:1338:LEU:HG	1.65	0.40
68:UB:59:UNK:O	68:UB:63:UNK:N	2.54	0.40
71:1:229:A:C8	71:1:290:C:N4	2.89	0.40
71:1:396:A:N6	71:1:397:A:C5	2.90	0.40
71:1:862:A:H2'	71:1:863:A:O4'	2.21	0.40
71:1:934:G:O2'	71:1:935:G:O5'	2.39	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:1:998:G:N3	71:1:998:G:H2'	2.37	0.40
71:1:1103:U:C4	71:1:1104:U:C2	3.10	0.40
71:1:1105:G:OP2	71:1:1105:G:C8	2.73	0.40
1:A:283:ARG:CD	71:1:840:A:H5''	2.49	0.40
1:A:356:PHE:HA	29:BB:98:THR:OG1	2.22	0.40
2:B:21:MET:SD	38:Ab:44:LYS:HG3	2.62	0.40
2:B:75:THR:HB	2:B:77:ARG:O	2.22	0.40
3:C:31:GLU:OE2	3:C:74:SER:HB2	2.21	0.40
5:E:21:PRO:O	5:E:224:GLN:NE2	2.51	0.40
7:G:16:PRO:C	7:G:18:HIS:N	2.77	0.40
7:G:145:ARG:HD2	71:1:346:A:H5''	2.04	0.40
7:G:228:TYR:CE1	7:G:230:LEU:HD13	2.56	0.40
9:I:114:GLN:NE2	68:UB:19:UNK:O	2.54	0.40
11:K:106:ALA:HB2	38:Ab:110:GLN:NE2	2.35	0.40
12:L:109:ALA:HB2	71:1:405:U:O2'	2.22	0.40
14:N:112:VAL:HG13	14:N:121:TRP:CZ3	2.57	0.40
14:N:166:PRO:O	14:N:223:VAL:HG12	2.21	0.40
17:Q:13:PHE:HB2	17:Q:16:ASN:OD1	2.22	0.40
18:R:70:ARG:HD3	18:R:70:ARG:HA	1.94	0.40
22:V:32:PHE:HD2	22:V:98:LYS:HZ1	1.69	0.40
22:V:32:PHE:HZ	71:1:91:U:C5	2.40	0.40
24:X:234:ALA:N	24:X:237:ALA:HA	2.36	0.40
24:X:326:PRO:C	24:X:328:PRO:HD3	2.46	0.40
25:Y:121:GLU:OE2	59:Ac:195:ARG:NH2	2.54	0.40
25:Y:134:PRO:HG3	59:Ac:165:LEU:HD13	2.03	0.40
31:Bj:95:PHE:HB2	31:Bj:99:VAL:HG11	2.04	0.40
32:An:90:PRO:C	32:An:92:ASP:H	2.29	0.40
42:Aa:118:TRP:CZ3	42:Aa:121:ARG:HD3	2.57	0.40
43:Ao:164:LEU:HD22	43:Ao:177:LEU:HB2	2.03	0.40
44:BM:7:LEU:O	44:BM:11:VAL:HG22	2.21	0.40
44:BM:214:LYS:HD2	44:BM:214:LYS:HA	1.81	0.40
44:BM:247:PHE:HD2	44:BM:248:THR:HG23	1.87	0.40
45:Ar:127:ARG:HB2	45:Ar:130:ASP:OD1	2.22	0.40
45:Ar:155:ARG:NE	52:BP:149:ASP:HA	2.36	0.40
47:BH:49:ARG:NH2	47:BH:198:TYR:HD2	2.19	0.40
49:Aq:112:ASN:O	49:Aq:114:VAL:HG23	2.22	0.40
49:Aq:120:PHE:HE2	49:Aq:133:ILE:HA	1.86	0.40
49:Aq:174:ARG:C	49:Aq:176:ARG:N	2.80	0.40
49:Aq:304:MET:HE3	49:Aq:304:MET:HB2	1.67	0.40
51:Ak:282:LYS:HE3	59:Ac:136:PRO:HD2	2.03	0.40
56:Af:66:SER:O	56:Af:66:SER:OG	2.32	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:As:65:GLU:N	57:As:65:GLU:CD	2.80	0.40
57:As:104:LEU:HD23	57:As:104:LEU:HA	1.94	0.40
57:As:131:ILE:C	57:As:134:PRO:HD2	2.47	0.40
60:Ah:58:VAL:HG11	60:Ah:68:ILE:HG23	2.02	0.40
60:Ah:67:ARG:HB3	60:Ah:67:ARG:HE	1.59	0.40
60:Ah:137:HIS:CE1	60:Ah:443:LEU:HD23	2.56	0.40
63:Ag:95:GLU:HG3	63:Ag:97:CYS:H	1.86	0.40
65:BL:135:ARG:HD3	71:1:235:G:OP1	2.22	0.40
65:BL:155:ILE:HG21	65:BL:179:ASN:OD1	2.21	0.40
65:BL:341:LYS:HE2	65:BL:341:LYS:HB3	1.87	0.40
71:1:128:U:O2'	71:1:129:U:O4'	2.37	0.40
71:1:226:A:H61	71:1:310:A:H62	1.69	0.40
71:1:412:U:H6	71:1:412:U:H2'	1.76	0.40
71:1:608:A:H1'	71:1:817:A:H61	1.85	0.40
71:1:656:G:N7	71:1:679:A:N6	2.69	0.40
71:1:950:A:O2'	71:1:951:U:H5''	2.21	0.40
71:1:971:U:H4'	71:1:972:A:OP2	2.21	0.40
1:A:129:VAL:CG1	1:A:333:ARG:HH12	2.35	0.40
2:B:179:LYS:NZ	71:1:215:U:O3'	2.55	0.40
4:D:30:LEU:HA	4:D:39:GLN:O	2.21	0.40
5:E:129:ILE:HG22	5:E:149:LEU:HD21	2.03	0.40
7:G:72:GLU:HB3	38:Ab:81:VAL:HG11	2.02	0.40
8:H:45:ILE:HD13	8:H:156:VAL:HG23	2.04	0.40
8:H:158:ARG:O	38:Ab:254:ARG:NE	2.55	0.40
9:I:57:LYS:HG3	9:I:57:LYS:O	2.20	0.40
11:K:137:ARG:HE	11:K:146:PRO:HD3	1.85	0.40
14:N:105:ILE:HG12	26:Z:86:ILE:HD13	2.03	0.40
16:P:33:HIS:ND1	16:P:45:LYS:HE2	2.37	0.40
16:P:94:ILE:HG23	45:Ar:17:LEU:HG	2.03	0.40
17:Q:158:ARG:HA	17:Q:158:ARG:HD3	1.74	0.40
17:Q:179:ALA:HB2	32:An:235:HIS:CD2	2.56	0.40
18:R:57:GLU:HG3	26:Z:155:PRO:HG3	2.03	0.40
18:R:104:GLU:OE2	18:R:104:GLU:HA	2.21	0.40
23:W:74:GLU:CD	23:W:74:GLU:O	2.64	0.40
24:X:107:TRP:CH2	39:Ai:82:GLU:HB2	2.56	0.40
24:X:486:MET:O	53:Ad:222:ASN:HB2	2.22	0.40
25:Y:45:MET:HE3	31:Bj:43:LEU:HD12	2.03	0.40
25:Y:224:HIS:HD2	37:BC:66:LEU:HD22	1.87	0.40
31:Bj:3:LEU:HD23	31:Bj:3:LEU:HA	1.95	0.40
32:An:84:TRP:O	32:An:85:LEU:C	2.62	0.40
36:At:21:LEU:HD23	36:At:21:LEU:O	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:At:107:GLU:O	36:At:111:LEU:HD13	2.21	0.40
36:At:151:PHE:CE2	36:At:155:MET:HG3	2.56	0.40
39:Ai:233:MET:HE1	63:Ag:173:ILE:CD1	2.51	0.40
41:Au:73:TYR:CD1	41:Au:73:TYR:O	2.74	0.40
41:Au:108:HIS:HA	60:Ah:167:ARG:HG3	2.03	0.40
44:BM:31:ARG:HD2	44:BM:31:ARG:HA	1.89	0.40
51:Ak:214:VAL:O	51:Ak:214:VAL:HG23	2.22	0.40
51:Ak:262:ASP:OD1	51:Ak:262:ASP:N	2.54	0.40
54:BF:93:LYS:NZ	71:1:562:U:H5''	2.36	0.40
59:Ac:169:LEU:HA	59:Ac:169:LEU:HD23	1.78	0.40
59:Ac:206:ASN:ND2	59:Ac:244:PRO:HA	2.37	0.40
59:Ac:286:ASP:OD2	59:Ac:288:THR:HB	2.22	0.40
60:Ah:67:ARG:HB2	71:1:905:A:C4	2.56	0.40
60:Ah:137:HIS:HE1	60:Ah:443:LEU:HD23	1.87	0.40
60:Ah:188:ASP:HB3	60:Ah:191:LEU:H	1.87	0.40
60:Ah:234:PHE:HD1	60:Ah:234:PHE:HA	1.75	0.40
60:Ah:460:TYR:O	60:Ah:463:ILE:N	2.54	0.40
63:Ag:49:ARG:HH11	71:1:82:U:P	2.45	0.40
63:Ag:64:GLY:HA3	71:1:104:U:O4'	2.20	0.40
63:Ag:201:VAL:HA	63:Ag:204:THR:HG22	2.04	0.40
64:Ax:56:ARG:HD3	71:1:798:A:OP2	2.22	0.40
65:BL:263:GLU:OE1	65:BL:353:GLY:HA2	2.22	0.40
71:1:51:U:O4	71:1:119:G:N2	2.54	0.40
71:1:166:U:H1'	71:1:847:A:N6	2.37	0.40
71:1:205:U:C2'	71:1:206:U:H5'	2.52	0.40
71:1:419:U:C2	71:1:420:A:N6	2.89	0.40
71:1:912:U:O4	71:1:913:A:C5	2.74	0.40
71:1:982:A:O2'	71:1:983:U:H5''	2.21	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	366/467 (78%)	315 (86%)	48 (13%)	3 (1%)	16	49
2	B	433/436 (99%)	380 (88%)	52 (12%)	1 (0%)	43	72
3	C	210/262 (80%)	179 (85%)	31 (15%)	0	100	100
4	D	126/204 (62%)	108 (86%)	18 (14%)	0	100	100
5	E	324/346 (94%)	294 (91%)	30 (9%)	0	100	100
6	F	168/171 (98%)	152 (90%)	15 (9%)	1 (1%)	21	54
7	G	363/374 (97%)	313 (86%)	48 (13%)	2 (1%)	21	54
8	H	160/168 (95%)	144 (90%)	14 (9%)	2 (1%)	9	39
9	I	255/305 (84%)	224 (88%)	31 (12%)	0	100	100
10	J	139/144 (96%)	102 (73%)	36 (26%)	1 (1%)	18	51
11	K	177/194 (91%)	158 (89%)	19 (11%)	0	100	100
12	L	176/186 (95%)	157 (89%)	18 (10%)	1 (1%)	21	54
13	M	257/279 (92%)	217 (84%)	39 (15%)	1 (0%)	30	61
14	N	187/252 (74%)	163 (87%)	24 (13%)	0	100	100
15	O	305/476 (64%)	271 (89%)	29 (10%)	5 (2%)	7	36
16	P	163/185 (88%)	145 (89%)	17 (10%)	1 (1%)	21	54
17	Q	215/234 (92%)	192 (89%)	22 (10%)	1 (0%)	24	57
18	R	470/480 (98%)	409 (87%)	60 (13%)	1 (0%)	43	72
19	S	148/409 (36%)	132 (89%)	16 (11%)	0	100	100
20	T	53/83 (64%)	50 (94%)	3 (6%)	0	100	100
21	U	90/118 (76%)	75 (83%)	13 (14%)	2 (2%)	5	30
22	V	139/151 (92%)	119 (86%)	20 (14%)	0	100	100
23	W	52/186 (28%)	46 (88%)	6 (12%)	0	100	100
24	X	466/513 (91%)	418 (90%)	45 (10%)	3 (1%)	21	54
25	Y	253/292 (87%)	234 (92%)	19 (8%)	0	100	100
26	Z	148/197 (75%)	117 (79%)	28 (19%)	3 (2%)	6	32
27	BA	136/167 (81%)	103 (76%)	29 (21%)	4 (3%)	3	26
29	BB	120/156 (77%)	95 (79%)	23 (19%)	2 (2%)	7	35
30	Aw	183/187 (98%)	161 (88%)	22 (12%)	0	100	100
31	Bj	166/185 (90%)	143 (86%)	22 (13%)	1 (1%)	21	54
32	An	312/331 (94%)	256 (82%)	49 (16%)	7 (2%)	5	30
33	Al	262/346 (76%)	219 (84%)	43 (16%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
34	BI	184/266 (69%)	155 (84%)	29 (16%)	0	100	100
35	Az	136/152 (90%)	109 (80%)	25 (18%)	2 (2%)	8	37
36	At	163/183 (89%)	145 (89%)	18 (11%)	0	100	100
37	BC	138/147 (94%)	127 (92%)	11 (8%)	0	100	100
38	Ab	258/262 (98%)	226 (88%)	32 (12%)	0	100	100
39	Ai	474/479 (99%)	413 (87%)	60 (13%)	1 (0%)	43	72
40	Ap	212/240 (88%)	188 (89%)	24 (11%)	0	100	100
41	Au	174/186 (94%)	132 (76%)	36 (21%)	6 (3%)	3	23
42	Aa	176/195 (90%)	142 (81%)	32 (18%)	2 (1%)	11	43
43	Ao	273/284 (96%)	233 (85%)	38 (14%)	2 (1%)	18	51
44	BM	387/457 (85%)	326 (84%)	61 (16%)	0	100	100
45	Ar	193/205 (94%)	167 (86%)	26 (14%)	0	100	100
46	Aj	337/503 (67%)	292 (87%)	45 (13%)	0	100	100
47	BH	212/229 (93%)	185 (87%)	27 (13%)	0	100	100
48	Am	328/340 (96%)	275 (84%)	53 (16%)	0	100	100
49	Aq	250/341 (73%)	199 (80%)	45 (18%)	6 (2%)	4	29
50	BE	82/118 (70%)	56 (68%)	25 (30%)	1 (1%)	10	41
51	Ak	298/323 (92%)	254 (85%)	44 (15%)	0	100	100
52	BP	191/254 (75%)	162 (85%)	28 (15%)	1 (0%)	24	57
53	Ad	203/237 (86%)	163 (80%)	38 (19%)	2 (1%)	12	45
54	BF	99/109 (91%)	79 (80%)	20 (20%)	0	100	100
55	Av	153/192 (80%)	128 (84%)	25 (16%)	0	100	100
56	Af	137/155 (88%)	119 (87%)	18 (13%)	0	100	100
57	As	95/249 (38%)	87 (92%)	8 (8%)	0	100	100
58	Ae	289/311 (93%)	253 (88%)	36 (12%)	0	100	100
59	Ac	266/291 (91%)	234 (88%)	32 (12%)	0	100	100
60	Ah	450/570 (79%)	386 (86%)	62 (14%)	2 (0%)	30	61
61	BD	95/102 (93%)	85 (90%)	10 (10%)	0	100	100
62	Ay	140/174 (80%)	117 (84%)	18 (13%)	5 (4%)	2	22
63	Ag	229/244 (94%)	204 (89%)	25 (11%)	0	100	100
64	Ax	165/216 (76%)	134 (81%)	31 (19%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
65	BL	307/380 (81%)	235 (76%)	66 (22%)	6 (2%)	6	32
66	BO	153/190 (80%)	105 (69%)	45 (29%)	3 (2%)	6	32
67	BG	83/1347 (6%)	57 (69%)	23 (28%)	3 (4%)	2	22
All	All	14352/18415 (78%)	12263 (85%)	2005 (14%)	84 (1%)	23	54

All (84) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	284	ILE
6	F	167	ASN
8	H	94	VAL
10	J	66	PRO
21	U	30	ILE
24	X	353	PRO
26	Z	26	HIS
27	BA	24	VAL
29	BB	110	PHE
32	An	46	GLN
32	An	50	HIS
32	An	97	SER
41	Au	54	PRO
42	Aa	191	THR
49	Aq	172	ILE
49	Aq	175	VAL
62	Ay	36	ILE
62	Ay	164	ARG
65	BL	115	TYR
66	BO	184	VAL
67	BG	1265	PRO
7	G	149	PRO
7	G	159	ALA
15	O	20	THR
15	O	21	TYR
15	O	28	ALA
15	O	31	ARG
24	X	355	THR
26	Z	44	LEU
26	Z	106	TYR
35	Az	16	LYS
41	Au	27	GLU
41	Au	92	VAL

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Mol	Chain	Res	Type
41	Au	93	HIS
42	Aa	189	ARG
43	Ao	20	VAL
49	Aq	338	HIS
50	BE	37	GLU
52	BP	96	PRO
60	Ah	67	ARG
66	BO	92	ARG
18	R	137	PRO
27	BA	114	PHE
29	BB	129	THR
35	Az	17	GLN
41	Au	96	LEU
49	Aq	53	SER
49	Aq	168	GLN
53	Ad	15	PRO
53	Ad	27	HIS
62	Ay	35	TRP
67	BG	1263	HIS
21	U	29	VAL
31	Bj	76	PRO
32	An	44	TRP
41	Au	45	THR
43	Ao	19	ARG
62	Ay	166	GLN
15	O	27	TYR
16	P	56	ASP
17	Q	90	ARG
27	BA	23	TYR
32	An	77	TRP
32	An	215	VAL
65	BL	116	PHE
66	BO	61	SER
12	L	72	PRO
27	BA	45	GLN
32	An	142	GLY
1	A	159	PRO
1	A	377	PRO
24	X	364	PRO
39	Ai	161	PRO
62	Ay	168	TRP
65	BL	74	PRO

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Mol	Chain	Res	Type
65	BL	324	PRO
65	BL	340	VAL
67	BG	1318	PRO
2	B	302	GLY
8	H	93	VAL
13	M	14	PRO
65	BL	311	VAL
49	Aq	54	ILE
60	Ah	64	VAL

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	314/394 (80%)	313 (100%)	1 (0%)	86	83
2	B	380/381 (100%)	375 (99%)	5 (1%)	61	72
3	C	190/227 (84%)	189 (100%)	1 (0%)	81	80
4	D	106/154 (69%)	105 (99%)	1 (1%)	70	76
5	E	285/301 (95%)	273 (96%)	12 (4%)	26	53
6	F	151/152 (99%)	149 (99%)	2 (1%)	61	72
7	G	315/323 (98%)	303 (96%)	12 (4%)	29	55
8	H	138/143 (96%)	138 (100%)	0	100	100
9	I	223/262 (85%)	222 (100%)	1 (0%)	84	81
10	J	119/122 (98%)	115 (97%)	4 (3%)	32	57
11	K	151/162 (93%)	151 (100%)	0	100	100
12	L	151/158 (96%)	151 (100%)	0	100	100
13	M	226/242 (93%)	222 (98%)	4 (2%)	51	68
14	N	175/220 (80%)	175 (100%)	0	100	100
15	O	278/397 (70%)	273 (98%)	5 (2%)	51	68
16	P	147/163 (90%)	145 (99%)	2 (1%)	59	71
17	Q	191/204 (94%)	189 (99%)	2 (1%)	68	75

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
18	R	406/412 (98%)	402 (99%)	4 (1%)	68	75
19	S	135/336 (40%)	135 (100%)	0	100	100
20	T	52/74 (70%)	52 (100%)	0	100	100
21	U	80/100 (80%)	74 (92%)	6 (8%)	12	39
22	V	125/135 (93%)	123 (98%)	2 (2%)	55	69
23	W	50/164 (30%)	46 (92%)	4 (8%)	11	37
24	X	402/438 (92%)	393 (98%)	9 (2%)	45	65
25	Y	209/236 (89%)	208 (100%)	1 (0%)	81	80
26	Z	132/172 (77%)	129 (98%)	3 (2%)	44	64
27	BA	112/135 (83%)	111 (99%)	1 (1%)	70	76
29	BB	106/140 (76%)	105 (99%)	1 (1%)	70	76
30	Aw	157/159 (99%)	155 (99%)	2 (1%)	61	72
31	Bj	150/165 (91%)	149 (99%)	1 (1%)	76	78
32	An	274/289 (95%)	263 (96%)	11 (4%)	28	54
33	Al	236/299 (79%)	228 (97%)	8 (3%)	32	57
34	BI	153/221 (69%)	152 (99%)	1 (1%)	76	78
35	Az	129/143 (90%)	127 (98%)	2 (2%)	55	69
36	At	140/153 (92%)	140 (100%)	0	100	100
37	BC	117/124 (94%)	116 (99%)	1 (1%)	70	76
38	Ab	233/235 (99%)	232 (100%)	1 (0%)	84	81
39	Ai	408/410 (100%)	407 (100%)	1 (0%)	87	85
40	Ap	189/208 (91%)	188 (100%)	1 (0%)	81	80
41	Au	154/164 (94%)	148 (96%)	6 (4%)	28	54
42	Aa	150/166 (90%)	147 (98%)	3 (2%)	48	66
43	Ao	236/245 (96%)	235 (100%)	1 (0%)	84	81
44	BM	319/370 (86%)	318 (100%)	1 (0%)	86	83
45	Ar	169/179 (94%)	168 (99%)	1 (1%)	78	79
46	Aj	286/420 (68%)	284 (99%)	2 (1%)	76	78
47	BH	177/189 (94%)	176 (99%)	1 (1%)	78	79
48	Am	278/287 (97%)	276 (99%)	2 (1%)	76	78
49	Aq	221/276 (80%)	218 (99%)	3 (1%)	59	71

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
50	BE	76/100 (76%)	76 (100%)	0	100	100
51	Ak	254/272 (93%)	254 (100%)	0	100	100
52	BP	167/215 (78%)	166 (99%)	1 (1%)	78	79
53	Ad	172/193 (89%)	170 (99%)	2 (1%)	63	73
54	BF	88/95 (93%)	87 (99%)	1 (1%)	65	74
55	Av	141/169 (83%)	140 (99%)	1 (1%)	76	78
56	Af	120/135 (89%)	120 (100%)	0	100	100
57	As	88/204 (43%)	88 (100%)	0	100	100
58	Ae	249/261 (95%)	247 (99%)	2 (1%)	73	77
59	Ac	232/253 (92%)	232 (100%)	0	100	100
60	Ah	385/485 (79%)	378 (98%)	7 (2%)	51	68
61	BD	85/90 (94%)	85 (100%)	0	100	100
62	Ay	130/158 (82%)	129 (99%)	1 (1%)	73	77
63	Ag	202/211 (96%)	200 (99%)	2 (1%)	68	75
64	Ax	150/190 (79%)	141 (94%)	9 (6%)	17	45
65	BL	268/329 (82%)	262 (98%)	6 (2%)	45	65
66	BO	130/158 (82%)	128 (98%)	2 (2%)	57	70
67	BG	67/1047 (6%)	64 (96%)	3 (4%)	24	51
All	All	12529/15614 (80%)	12360 (99%)	169 (1%)	59	72

All (169) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	205	VAL
2	B	75	THR
2	B	192	ASP
2	B	193	VAL
2	B	194	LYS
2	B	403	PRO
3	C	100	LEU
4	D	87	TYR
5	E	169	GLU
5	E	173	ILE
5	E	174	GLU
5	E	175	VAL
5	E	177	VAL

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Mol	Chain	Res	Type
5	E	233	LEU
5	E	240	GLU
5	E	277	LEU
5	E	286	GLU
5	E	320	ASP
5	E	322	GLN
5	E	328	THR
6	F	157	ASP
6	F	161	GLN
7	G	142	TRP
7	G	143	GLN
7	G	145	ARG
7	G	146	LYS
7	G	148	THR
7	G	149	PRO
7	G	150	ARG
7	G	153	LEU
7	G	171	SER
7	G	212	VAL
7	G	235	GLN
7	G	358	TRP
9	I	186	PHE
10	J	66	PRO
10	J	67	ARG
10	J	69	VAL
10	J	75	VAL
13	M	9	ASN
13	M	14	PRO
13	M	54	MET
13	M	56	SER
15	O	19	PHE
15	O	20	THR
15	O	29	ARG
15	O	30	TYR
15	O	100	THR
16	P	41	THR
16	P	134	VAL
17	Q	49	VAL
17	Q	108	ILE
18	R	138	THR
18	R	361	VAL
18	R	362	GLU

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Mol	Chain	Res	Type
18	R	375	VAL
21	U	17	ARG
21	U	19	LYS
21	U	26	ILE
21	U	28	LYS
21	U	30	ILE
21	U	36	ASN
22	V	39	VAL
22	V	54	VAL
23	W	72	HIS
23	W	74	GLU
23	W	94	LYS
23	W	97	ASN
24	X	77	ASP
24	X	158	VAL
24	X	264	LEU
24	X	270	TYR
24	X	283	ARG
24	X	326	PRO
24	X	353	PRO
24	X	498	ARG
24	X	500	THR
25	Y	160	LEU
26	Z	40	THR
26	Z	43	ILE
26	Z	44	LEU
27	BA	115	VAL
29	BB	111	PHE
30	Aw	6	VAL
30	Aw	53	VAL
31	Bj	143	ASN
32	An	76	LYS
32	An	101	ILE
32	An	106	TRP
32	An	117	MET
32	An	129	LYS
32	An	140	ARG
32	An	143	TYR
32	An	217	ARG
32	An	221	GLN
32	An	255	VAL
32	An	304	ASP

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Mol	Chain	Res	Type
33	Al	36	GLU
33	Al	39	GLN
33	Al	268	TYR
33	Al	269	GLU
33	Al	274	VAL
33	Al	279	ASN
33	Al	284	VAL
33	Al	289	ASN
34	BI	165	ILE
35	Az	35	LEU
35	Az	60	HIS
37	BC	68	ASP
38	Ab	63	ASP
39	Ai	168	VAL
40	Ap	210	VAL
41	Au	46	VAL
41	Au	47	LEU
41	Au	71	MET
41	Au	72	ASP
41	Au	77	VAL
41	Au	93	HIS
42	Aa	39	TYR
42	Aa	46	MET
42	Aa	91	LEU
43	Ao	33	LEU
44	BM	138	VAL
45	Ar	58	THR
46	Aj	349	VAL
46	Aj	422	LEU
47	BH	225	ILE
48	Am	14	THR
48	Am	332	THR
49	Aq	336	ARG
49	Aq	339	ARG
49	Aq	341	PHE
52	BP	0	TRP
53	Ad	27	HIS
53	Ad	64	ASP
54	BF	103	HIS
55	Av	42	THR
58	Ae	163	VAL
58	Ae	254	ASP

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Mol	Chain	Res	Type
60	Ah	57	LEU
60	Ah	58	VAL
60	Ah	67	ARG
60	Ah	68	ILE
60	Ah	112	TYR
60	Ah	279	ASP
60	Ah	444	THR
62	Ay	51	TRP
63	Ag	99	VAL
63	Ag	167	ASP
64	Ax	55	VAL
64	Ax	57	THR
64	Ax	63	TRP
64	Ax	109	ASP
64	Ax	134	GLN
64	Ax	136	TYR
64	Ax	167	LEU
64	Ax	173	ARG
64	Ax	208	MET
65	BL	132	HIS
65	BL	134	ARG
65	BL	141	TRP
65	BL	211	THR
65	BL	328	THR
65	BL	361	THR
66	BO	125	ILE
66	BO	128	VAL
67	BG	1282	THR
67	BG	1284	THR
67	BG	1333	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (343) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	81	GLN
1	A	109	GLN
1	A	162	GLN
1	A	184	ASN
1	A	207	HIS
1	A	337	ASN
2	B	74	GLN
2	B	88	GLN

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Mol	Chain	Res	Type
2	B	133	GLN
2	B	153	ASN
2	B	170	HIS
2	B	172	HIS
2	B	177	HIS
2	B	200	ASN
2	B	273	ASN
2	B	276	ASN
2	B	323	HIS
3	C	67	ASN
3	C	120	ASN
3	C	142	ASN
4	D	26	HIS
4	D	38	HIS
4	D	62	GLN
5	E	52	ASN
5	E	87	ASN
5	E	221	HIS
5	E	246	ASN
5	E	280	GLN
6	F	51	HIS
6	F	135	HIS
6	F	161	GLN
7	G	19	GLN
7	G	29	GLN
7	G	38	ASN
7	G	89	GLN
7	G	143	GLN
7	G	202	ASN
7	G	236	ASN
7	G	264	GLN
7	G	277	GLN
8	H	61	GLN
8	H	108	ASN
8	H	134	ASN
8	H	152	GLN
9	I	18	HIS
9	I	65	HIS
9	I	99	HIS
9	I	120	HIS
9	I	223	HIS
9	I	242	HIS

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Mol	Chain	Res	Type
9	I	259	HIS
10	J	52	GLN
10	J	65	ASN
10	J	99	ASN
11	K	78	GLN
11	K	79	HIS
11	K	97	GLN
11	K	98	GLN
11	K	101	GLN
11	K	145	HIS
12	L	14	GLN
12	L	29	ASN
12	L	43	GLN
12	L	52	GLN
13	M	19	GLN
13	M	24	GLN
13	M	31	HIS
13	M	76	ASN
13	M	123	GLN
13	M	131	GLN
13	M	173	HIS
13	M	230	HIS
14	N	55	GLN
14	N	58	ASN
14	N	77	ASN
14	N	160	ASN
15	O	23	GLN
15	O	89	HIS
15	O	104	GLN
15	O	187	GLN
15	O	190	GLN
15	O	193	HIS
15	O	212	HIS
15	O	296	HIS
15	O	303	GLN
16	P	142	HIS
17	Q	24	HIS
17	Q	71	HIS
17	Q	79	ASN
17	Q	164	GLN
17	Q	170	ASN
17	Q	222	GLN

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Mol	Chain	Res	Type
18	R	23	ASN
18	R	67	HIS
18	R	71	HIS
18	R	167	HIS
18	R	194	GLN
18	R	246	ASN
18	R	260	GLN
18	R	286	GLN
18	R	370	GLN
18	R	419	GLN
18	R	421	ASN
18	R	470	HIS
19	S	256	ASN
19	S	327	HIS
19	S	371	HIS
19	S	374	GLN
19	S	384	HIS
19	S	385	HIS
19	S	388	GLN
19	S	389	GLN
21	U	37	ASN
21	U	78	GLN
22	V	29	GLN
22	V	119	GLN
23	W	60	HIS
23	W	72	HIS
23	W	79	HIS
23	W	97	ASN
24	X	64	HIS
24	X	220	GLN
24	X	250	GLN
24	X	257	ASN
24	X	344	GLN
24	X	347	HIS
24	X	479	GLN
24	X	491	GLN
25	Y	149	GLN
25	Y	153	GLN
25	Y	231	GLN
25	Y	279	HIS
26	Z	13	HIS
26	Z	14	ASN

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Mol	Chain	Res	Type
26	Z	26	HIS
26	Z	91	ASN
26	Z	146	GLN
27	BA	91	HIS
29	BB	41	HIS
29	BB	55	GLN
29	BB	70	ASN
29	BB	108	GLN
30	Aw	79	HIS
30	Aw	89	HIS
30	Aw	95	GLN
31	Bj	4	ASN
31	Bj	29	ASN
31	Bj	57	HIS
31	Bj	91	ASN
32	An	24	HIS
32	An	48	HIS
32	An	50	HIS
32	An	123	GLN
32	An	166	ASN
32	An	212	HIS
32	An	221	GLN
32	An	240	GLN
32	An	264	HIS
32	An	295	HIS
32	An	314	HIS
33	Al	133	GLN
33	Al	164	HIS
33	Al	276	GLN
33	Al	279	ASN
33	Al	298	ASN
34	BI	81	HIS
34	BI	148	ASN
34	BI	206	HIS
35	Az	19	GLN
35	Az	24	HIS
35	Az	31	ASN
35	Az	70	HIS
35	Az	73	HIS
35	Az	128	GLN
35	Az	146	ASN
36	At	56	ASN

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Mol	Chain	Res	Type
36	At	73	HIS
36	At	90	GLN
36	At	161	GLN
37	BC	22	HIS
37	BC	49	ASN
37	BC	65	ASN
37	BC	67	ASN
37	BC	90	GLN
37	BC	119	GLN
37	BC	123	ASN
37	BC	125	HIS
38	Ab	10	GLN
38	Ab	27	GLN
38	Ab	37	HIS
38	Ab	84	HIS
38	Ab	94	ASN
38	Ab	147	GLN
38	Ab	205	HIS
38	Ab	245	GLN
38	Ab	257	GLN
39	Ai	27	GLN
39	Ai	64	GLN
39	Ai	80	ASN
39	Ai	151	ASN
39	Ai	245	ASN
39	Ai	248	ASN
40	Ap	81	HIS
40	Ap	123	HIS
41	Au	74	GLN
41	Au	93	HIS
41	Au	98	ASN
41	Au	99	HIS
41	Au	103	GLN
41	Au	157	GLN
41	Au	167	HIS
42	Aa	20	GLN
42	Aa	23	ASN
42	Aa	109	HIS
42	Aa	112	HIS
42	Aa	159	GLN
42	Aa	194	ASN
43	Ao	90	HIS

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Mol	Chain	Res	Type
43	Ao	96	HIS
43	Ao	160	GLN
43	Ao	248	GLN
43	Ao	271	GLN
43	Ao	280	ASN
44	BM	35	GLN
44	BM	113	GLN
44	BM	127	HIS
44	BM	228	ASN
44	BM	314	GLN
44	BM	325	GLN
44	BM	381	ASN
45	Ar	48	GLN
45	Ar	96	GLN
45	Ar	105	ASN
45	Ar	160	GLN
45	Ar	164	HIS
45	Ar	186	ASN
45	Ar	194	HIS
46	Aj	122	ASN
46	Aj	210	GLN
46	Aj	220	HIS
46	Aj	242	HIS
46	Aj	281	GLN
46	Aj	375	GLN
46	Aj	389	GLN
46	Aj	409	HIS
46	Aj	440	GLN
46	Aj	450	ASN
46	Aj	468	HIS
46	Aj	482	GLN
47	BH	82	HIS
47	BH	132	HIS
47	BH	137	GLN
47	BH	149	ASN
47	BH	214	HIS
48	Am	15	HIS
48	Am	16	ASN
48	Am	95	HIS
48	Am	106	HIS
48	Am	144	HIS
48	Am	148	ASN

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Mol	Chain	Res	Type
48	Am	184	ASN
48	Am	228	GLN
48	Am	263	HIS
48	Am	278	GLN
48	Am	315	ASN
49	Aq	19	HIS
49	Aq	36	HIS
49	Aq	55	ASN
49	Aq	80	HIS
49	Aq	109	HIS
49	Aq	281	GLN
49	Aq	289	ASN
49	Aq	308	GLN
50	BE	56	HIS
50	BE	97	HIS
51	Ak	22	HIS
51	Ak	64	GLN
51	Ak	216	HIS
51	Ak	234	HIS
51	Ak	294	GLN
52	BP	6	HIS
52	BP	49	GLN
53	Ad	85	GLN
53	Ad	187	GLN
53	Ad	188	ASN
53	Ad	220	ASN
55	Av	137	GLN
55	Av	168	HIS
56	Af	20	HIS
56	Af	30	GLN
56	Af	100	GLN
56	Af	105	GLN
57	As	94	ASN
58	Ae	37	HIS
58	Ae	54	ASN
58	Ae	79	GLN
58	Ae	83	HIS
58	Ae	172	HIS
59	Ac	38	HIS
59	Ac	55	HIS
59	Ac	57	HIS
59	Ac	62	HIS

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Mol	Chain	Res	Type
59	Ac	124	GLN
59	Ac	132	GLN
59	Ac	147	GLN
59	Ac	149	ASN
59	Ac	245	GLN
60	Ah	56	HIS
60	Ah	107	HIS
60	Ah	184	HIS
60	Ah	272	GLN
60	Ah	347	ASN
60	Ah	385	GLN
61	BD	3	ASN
61	BD	64	HIS
61	BD	80	GLN
62	Ay	83	ASN
62	Ay	158	GLN
63	Ag	120	ASN
63	Ag	197	HIS
64	Ax	66	GLN
64	Ax	85	HIS
64	Ax	95	GLN
64	Ax	183	HIS
64	Ax	188	ASN
65	BL	92	GLN
65	BL	118	HIS
65	BL	152	GLN
65	BL	164	HIS
65	BL	210	GLN
65	BL	224	HIS
65	BL	232	HIS
65	BL	284	ASN
65	BL	305	HIS
65	BL	335	HIS
65	BL	374	ASN
66	BO	118	HIS
66	BO	137	ASN
66	BO	144	GLN
66	BO	176	HIS
67	BG	1274	ASN
67	BG	1328	GLN
67	BG	1336	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
71	1	1085/9070 (11%)	639 (58%)	127 (11%)

All (639) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
71	1	39	U
71	1	40	C
71	1	41	A
71	1	42	A
71	1	43	A
71	1	44	G
71	1	45	U
71	1	46	U
71	1	47	A
71	1	48	U
71	1	49	U
71	1	50	A
71	1	51	U
71	1	52	U
71	1	53	A
71	1	58	A
71	1	59	U
71	1	62	U
71	1	63	G
71	1	64	A
71	1	66	U
71	1	67	U
71	1	68	U
71	1	69	G
71	1	70	G
71	1	71	A
71	1	72	U
71	1	73	G
71	1	74	A
71	1	75	A
71	1	76	U
71	1	79	A
71	1	81	U
71	1	83	U
71	1	84	U
71	1	88	U

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Mol	Chain	Res	Type
71	1	89	U
71	1	90	A
71	1	91	U
71	1	92	A
71	1	93	U
71	1	96	U
71	1	98	G
71	1	99	A
71	1	102	U
71	1	103	U
71	1	104	U
71	1	106	A
71	1	107	U
71	1	108	U
71	1	110	U
71	1	111	A
71	1	113	U
71	1	115	U
71	1	116	U
71	1	117	U
71	1	118	U
71	1	119	G
71	1	120	A
71	1	126	U
71	1	127	A
71	1	128	U
71	1	130	U
71	1	132	U
71	1	134	A
71	1	135	A
71	1	136	A
71	1	137	U
71	1	138	A
71	1	139	U
71	1	141	A
71	1	142	U
71	1	143	A
71	1	144	U
71	1	145	A
71	1	146	U
71	1	147	U
71	1	148	U

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Mol	Chain	Res	Type
71	1	149	U
71	1	150	A
71	1	152	A
71	1	153	U
71	1	154	U
71	1	155	U
71	1	156	A
71	1	158	A
71	1	160	U
71	1	161	U
71	1	162	G
71	1	163	U
71	1	164	U
71	1	165	G
71	1	166	U
71	1	167	U
71	1	184	G
71	1	185	U
71	1	187	U
71	1	188	A
71	1	189	U
71	1	190	A
71	1	192	A
71	1	193	U
71	1	198	A
71	1	201	U
71	1	202	A
71	1	203	A
71	1	204	U
71	1	205	U
71	1	206	U
71	1	207	G
71	1	208	U
71	1	209	U
71	1	210	U
71	1	211	U
71	1	212	A
71	1	214	U
71	1	215	U
71	1	221	U
71	1	225	U
71	1	226	A

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Mol	Chain	Res	Type
71	1	230	A
71	1	233	G
71	1	238	U
71	1	239	U
71	1	240	A
71	1	241	U
71	1	245	U
71	1	246	U
71	1	247	A
71	1	249	U
71	1	250	A
71	1	251	U
71	1	252	U
71	1	253	U
71	1	254	U
71	1	256	A
71	1	257	G
71	1	259	U
71	1	268	A
71	1	270	A
71	1	271	U
71	1	272	A
71	1	280	A
71	1	282	U
71	1	283	G
71	1	284	A
71	1	285	U
71	1	286	G
71	1	287	G
71	1	288	C
71	1	289	A
71	1	290	C
71	1	292	G
71	1	293	U
71	1	294	U
71	1	298	C
71	1	299	U
71	1	300	A
71	1	301	U
71	1	302	A
71	1	303	U
71	1	304	G

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Mol	Chain	Res	Type
71	1	306	A
71	1	307	C
71	1	308	C
71	1	309	U
71	1	310	A
71	1	311	U
71	1	312	A
71	1	314	A
71	1	316	A
71	1	317	A
71	1	319	A
71	1	320	G
71	1	322	A
71	1	323	A
71	1	327	U
71	1	328	A
71	1	329	U
71	1	331	U
71	1	333	A
71	1	336	U
71	1	339	A
71	1	343	A
71	1	344	U
71	1	345	A
71	1	346	A
71	1	347	A
71	1	350	A
71	1	359	C
71	1	360	U
71	1	361	A
71	1	362	A
71	1	363	U
71	1	364	U
71	1	365	U
71	1	370	U
71	1	374	U
71	1	377	U
71	1	379	U
71	1	380	G
71	1	381	A
71	1	382	A
71	1	383	A

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Mol	Chain	Res	Type
71	1	384	A
71	1	388	U
71	1	391	A
71	1	392	A
71	1	393	A
71	1	394	U
71	1	396	A
71	1	397	A
71	1	398	U
71	1	399	U
71	1	400	U
71	1	401	U
71	1	402	U
71	1	404	U
71	1	405	U
71	1	407	C
71	1	411	U
71	1	412	U
71	1	413	U
71	1	414	U
71	1	415	U
71	1	416	A
71	1	418	A
71	1	420	A
71	1	421	U
71	1	422	U
71	1	423	G
71	1	424	A
71	1	425	A
71	1	426	G
71	1	427	U
71	1	429	A
71	1	431	A
71	1	432	U
71	1	433	G
71	1	434	U
71	1	435	A
71	1	439	A
71	1	440	A
71	1	443	G
71	1	446	U
71	1	447	A

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Mol	Chain	Res	Type
71	1	449	U
71	1	450	A
71	1	451	A
71	1	452	A
71	1	453	A
71	1	454	A
71	1	455	U
71	1	456	A
71	1	457	C
71	1	458	A
71	1	459	A
71	1	460	A
71	1	465	A
71	1	466	U
71	1	468	U
71	1	471	A
71	1	472	A
71	1	473	U
71	1	474	U
71	1	475	A
71	1	476	A
71	1	477	U
71	1	478	A
71	1	479	A
71	1	480	A
71	1	481	U
71	1	482	C
71	1	483	U
71	1	484	A
71	1	486	U
71	1	488	U
71	1	489	A
71	1	492	U
71	1	495	A
71	1	496	U
71	1	497	A
71	1	498	G
71	1	500	U
71	1	501	G
71	1	504	U
71	1	506	A
71	1	507	U

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Mol	Chain	Res	Type
71	1	508	G
71	1	509	U
71	1	510	U
71	1	511	A
71	1	512	A
71	1	514	U
71	1	515	A
71	1	516	A
71	1	517	U
71	1	518	U
71	1	519	U
71	1	520	A
71	1	521	U
71	1	522	U
71	1	523	A
71	1	524	U
71	1	525	U
71	1	526	U
71	1	527	U
71	1	528	A
71	1	529	A
71	1	532	U
71	1	536	A
71	1	537	U
71	1	538	A
71	1	543	U
71	1	544	U
71	1	545	U
71	1	546	A
71	1	547	U
71	1	548	A
71	1	549	C
71	1	550	A
71	1	552	A
71	1	555	U
71	1	556	A
71	1	557	A
71	1	558	C
71	1	559	U
71	1	560	U
71	1	561	U
71	1	562	U

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Mol	Chain	Res	Type
71	1	564	U
71	1	565	U
71	1	566	G
71	1	567	A
71	1	568	A
71	1	572	A
71	1	573	A
71	1	574	A
71	1	575	G
71	1	576	A
71	1	578	U
71	1	580	A
71	1	581	U
71	1	582	U
71	1	583	A
71	1	584	U
71	1	587	U
71	1	588	A
71	1	589	A
71	1	591	U
71	1	592	A
71	1	593	U
71	1	594	U
71	1	595	A
71	1	596	U
71	1	597	U
71	1	598	U
71	1	599	U
71	1	600	A
71	1	601	A
71	1	602	A
71	1	604	A
71	1	608	A
71	1	609	A
71	1	612	A
71	1	617	G
71	1	618	U
71	1	621	A
71	1	622	U
71	1	624	A
71	1	625	A
71	1	626	A

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Mol	Chain	Res	Type
71	1	627	U
71	1	629	A
71	1	630	U
71	1	631	C
71	1	632	A
71	1	633	A
71	1	634	G
71	1	641	A
71	1	642	A
71	1	643	G
71	1	644	C
71	1	645	G
71	1	647	U
71	1	648	U
71	1	649	A
71	1	650	U
71	1	651	U
71	1	652	A
71	1	653	A
71	1	655	U
71	1	661	G
71	1	665	U
71	1	666	A
71	1	667	A
71	1	668	G
71	1	669	U
71	1	670	A
71	1	675	A
71	1	679	A
71	1	680	A
71	1	684	U
71	1	685	A
71	1	690	U
71	1	691	G
71	1	697	A
71	1	698	G
71	1	699	A
71	1	700	U
71	1	701	U
71	1	702	U
71	1	704	U
71	1	705	A

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Mol	Chain	Res	Type
71	1	710	A
71	1	712	U
71	1	749	U
71	1	750	U
71	1	751	A
71	1	754	A
71	1	755	G
71	1	756	U
71	1	760	A
71	1	763	G
71	1	764	U
71	1	765	A
71	1	768	U
71	1	769	U
71	1	772	U
71	1	775	C
71	1	776	U
71	1	781	A
71	1	782	U
71	1	783	U
71	1	784	A
71	1	785	A
71	1	786	A
71	1	787	G
71	1	788	C
71	1	789	G
71	1	790	U
71	1	791	U
71	1	794	A
71	1	795	U
71	1	796	A
71	1	798	A
71	1	799	A
71	1	802	U
71	1	807	A
71	1	808	A
71	1	809	A
71	1	810	U
71	1	811	U
71	1	812	A
71	1	813	U
71	1	815	A

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Mol	Chain	Res	Type
71	1	816	C
71	1	817	A
71	1	821	U
71	1	822	A
71	1	830	A
71	1	835	A
71	1	836	U
71	1	837	U
71	1	839	A
71	1	845	A
71	1	847	A
71	1	848	U
71	1	850	U
71	1	851	U
71	1	857	A
71	1	858	A
71	1	859	U
71	1	860	U
71	1	863	A
71	1	864	A
71	1	868	U
71	1	869	A
71	1	870	A
71	1	873	U
71	1	876	G
71	1	887	C
71	1	888	U
71	1	889	C
71	1	890	U
71	1	892	C
71	1	893	U
71	1	894	U
71	1	895	U
71	1	896	A
71	1	902	A
71	1	903	G
71	1	904	A
71	1	905	A
71	1	906	C
71	1	907	G
71	1	908	U
71	1	910	U

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Mol	Chain	Res	Type
71	1	911	A
71	1	914	U
71	1	915	G
71	1	916	U
71	1	917	A
71	1	918	A
71	1	919	U
71	1	924	U
71	1	925	G
71	1	927	U
71	1	928	U
71	1	929	G
71	1	930	A
71	1	932	U
71	1	933	G
71	1	934	G
71	1	939	A
71	1	940	U
71	1	941	A
71	1	943	U
71	1	944	A
71	1	945	U
71	1	948	C
71	1	949	U
71	1	952	U
71	1	953	U
71	1	954	A
71	1	955	U
71	1	960	A
71	1	961	A
71	1	962	A
71	1	963	A
71	1	964	A
71	1	969	U
71	1	971	U
71	1	972	A
71	1	973	U
71	1	974	U
71	1	975	U
71	1	977	U
71	1	978	U
71	1	980	A

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Mol	Chain	Res	Type
71	1	982	A
71	1	983	U
71	1	984	A
71	1	985	A
71	1	988	A
71	1	990	A
71	1	992	G
71	1	993	U
71	1	995	C
71	1	996	G
71	1	997	A
71	1	998	G
71	1	999	C
71	1	1002	G
71	1	1003	U
71	1	1004	U
71	1	1005	A
71	1	1006	A
71	1	1007	C
71	1	1008	A
71	1	1009	A
71	1	1010	G
71	1	1011	C
71	1	1012	A
71	1	1013	U
71	1	1014	U
71	1	1015	A
71	1	1016	A
71	1	1017	U
71	1	1018	A
71	1	1019	C
71	1	1025	G
71	1	1028	U
71	1	1031	C
71	1	1032	A
71	1	1033	U
71	1	1034	C
71	1	1035	G
71	1	1036	U
71	1	1037	C
71	1	1038	U
71	1	1040	C

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Mol	Chain	Res	Type
71	1	1041	U
71	1	1044	U
71	1	1045	U
71	1	1046	G
71	1	1047	C
71	1	1050	A
71	1	1051	A
71	1	1053	U
71	1	1054	A
71	1	1055	U
71	1	1056	A
71	1	1059	U
71	1	1062	U
71	1	1063	U
71	1	1064	G
71	1	1065	U
71	1	1066	U
71	1	1068	A
71	1	1069	U
71	1	1072	A
71	1	1073	A
71	1	1074	A
71	1	1075	A
71	1	1086	U
71	1	1093	G
71	1	1095	U
71	1	1096	A
71	1	1097	A
71	1	1098	A
71	1	1099	A
71	1	1100	U
71	1	1101	C
71	1	1103	U
71	1	1105	G
71	1	1107	A
71	1	1111	C
71	1	1116	U
71	1	1117	U
71	1	1118	G
71	1	1122	A
71	1	1123	U
71	1	1124	A

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Mol	Chain	Res	Type
71	1	1125	U
71	1	1126	A
71	1	1127	U
71	1	1128	U
71	1	1129	U
71	1	1135	U
71	1	1136	U
71	1	1137	G
71	1	1138	U
71	1	1139	A
71	1	1140	U
71	1	1141	A
71	1	1146	U
71	1	1157	A
71	1	1158	U

All (127) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
71	1	39	U
71	1	40	C
71	1	41	A
71	1	45	U
71	1	47	A
71	1	50	A
71	1	65	U
71	1	70	G
71	1	74	A
71	1	97	U
71	1	98	G
71	1	106	A
71	1	131	U
71	1	135	A
71	1	146	U
71	1	155	U
71	1	161	U
71	1	164	U
71	1	191	A
71	1	201	U
71	1	202	A
71	1	203	A
71	1	204	U

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Mol	Chain	Res	Type
71	1	206	U
71	1	207	G
71	1	208	U
71	1	209	U
71	1	210	U
71	1	239	U
71	1	249	U
71	1	269	A
71	1	282	U
71	1	284	A
71	1	293	U
71	1	299	U
71	1	303	U
71	1	309	U
71	1	343	A
71	1	346	A
71	1	369	A
71	1	381	A
71	1	398	U
71	1	401	U
71	1	403	U
71	1	406	U
71	1	412	U
71	1	413	U
71	1	414	U
71	1	416	A
71	1	424	A
71	1	430	U
71	1	433	G
71	1	450	A
71	1	455	U
71	1	477	U
71	1	487	U
71	1	491	U
71	1	506	A
71	1	508	G
71	1	509	U
71	1	511	A
71	1	513	U
71	1	519	U
71	1	523	A
71	1	547	U

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Mol	Chain	Res	Type
71	1	565	U
71	1	572	A
71	1	592	A
71	1	593	U
71	1	595	A
71	1	596	U
71	1	617	G
71	1	626	A
71	1	628	U
71	1	632	A
71	1	642	A
71	1	643	G
71	1	649	A
71	1	650	U
71	1	652	A
71	1	660	C
71	1	668	G
71	1	689	U
71	1	697	A
71	1	698	G
71	1	703	U
71	1	704	U
71	1	754	A
71	1	759	C
71	1	763	G
71	1	781	A
71	1	782	U
71	1	790	U
71	1	798	A
71	1	811	U
71	1	821	U
71	1	835	A
71	1	844	A
71	1	847	A
71	1	849	U
71	1	858	A
71	1	862	A
71	1	905	A
71	1	906	C
71	1	910	U
71	1	915	G
71	1	916	U

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Mol	Chain	Res	Type
71	1	928	U
71	1	929	G
71	1	932	U
71	1	944	A
71	1	951	U
71	1	960	A
71	1	974	U
71	1	1015	A
71	1	1044	U
71	1	1054	A
71	1	1067	C
71	1	1074	A
71	1	1097	A
71	1	1121	U
71	1	1122	A
71	1	1125	U
71	1	1126	A
71	1	1127	U
71	1	1128	U
71	1	1157	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 7 ligands modelled in this entry, 6 are monoatomic - leaving 1 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
73	NAD	Ag	301	-	46,48,48	0.50	0	64,73,73	0.79	3 (4%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
73	NAD	Ag	301	-	-	11/30/62/62	0/5/5/5

There are no bond length outliers.

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
73	Ag	301	NAD	C4D-O4D-C1D	-3.26	106.94	109.92
73	Ag	301	NAD	C6N-N1N-C2N	-2.24	119.97	121.88
73	Ag	301	NAD	O4B-C4B-C3B	-2.10	100.98	105.15

There are no chirality outliers.

All (11) torsion outliers are listed below:

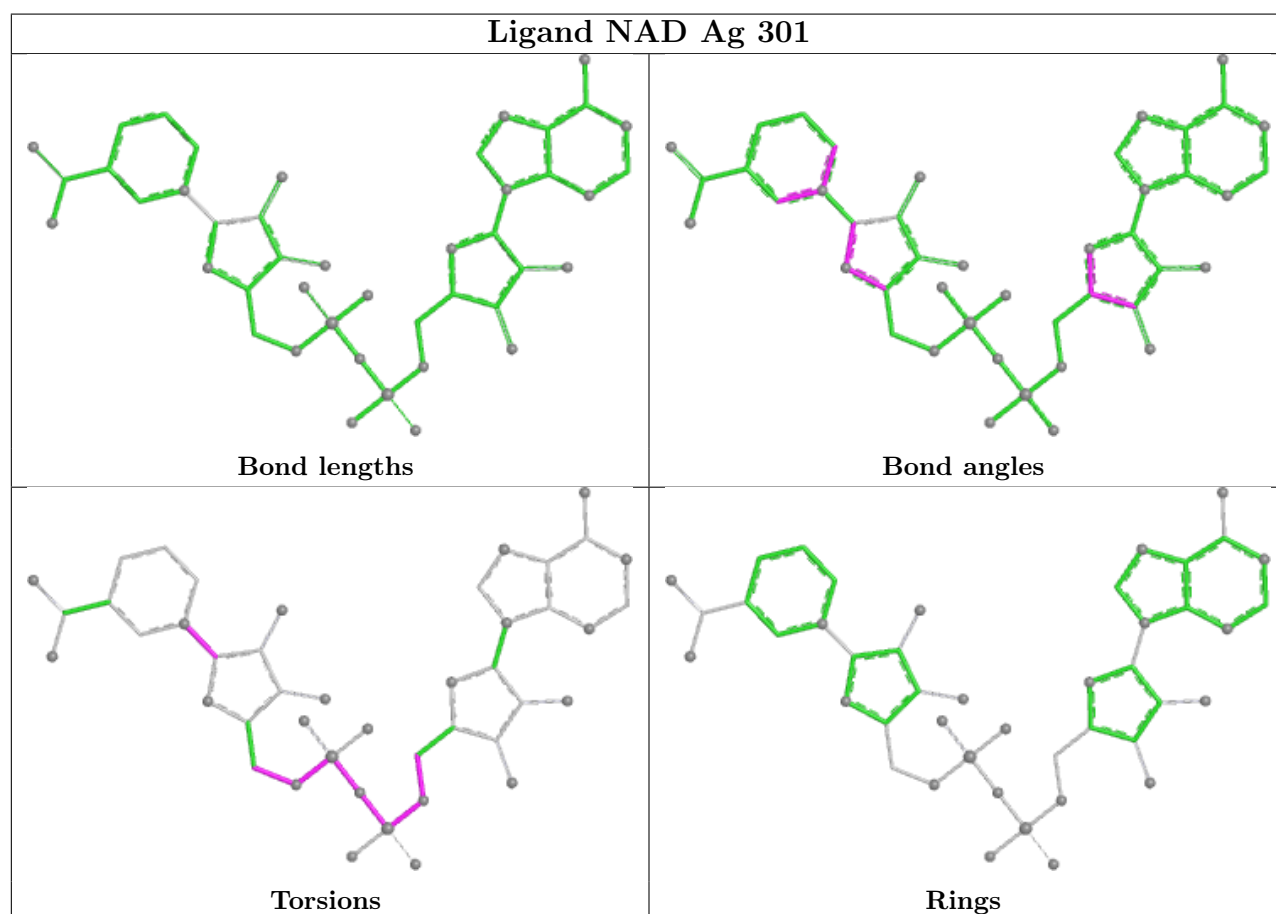
Mol	Chain	Res	Type	Atoms
73	Ag	301	NAD	C5B-O5B-PA-O3
73	Ag	301	NAD	C2D-C1D-N1N-C2N
73	Ag	301	NAD	C4B-C5B-O5B-PA
73	Ag	301	NAD	PN-O3-PA-O5B
73	Ag	301	NAD	PA-O3-PN-O5D
73	Ag	301	NAD	C4D-C5D-O5D-PN
73	Ag	301	NAD	C5B-O5B-PA-O1A
73	Ag	301	NAD	C5D-O5D-PN-O1N
73	Ag	301	NAD	PA-O3-PN-O1N
73	Ag	301	NAD	C2D-C1D-N1N-C6N
73	Ag	301	NAD	PN-O3-PA-O2A

There are no ring outliers.

1 monomer is involved in 10 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
73	Ag	301	NAD	10	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.



5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

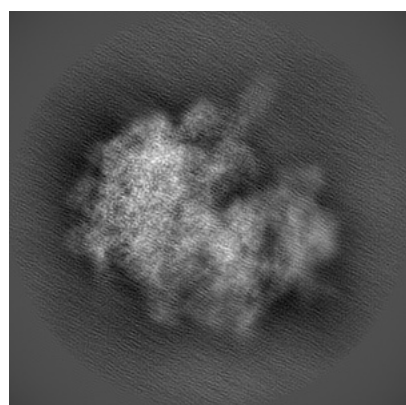
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-11796. These allow visual inspection of the internal detail of the map and identification of artifacts.

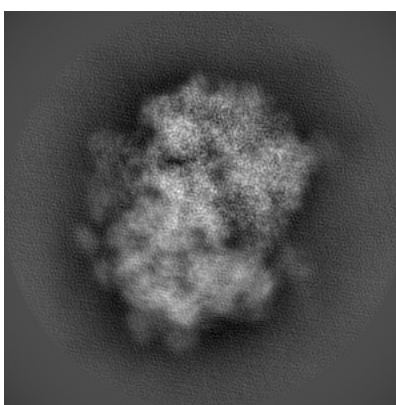
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

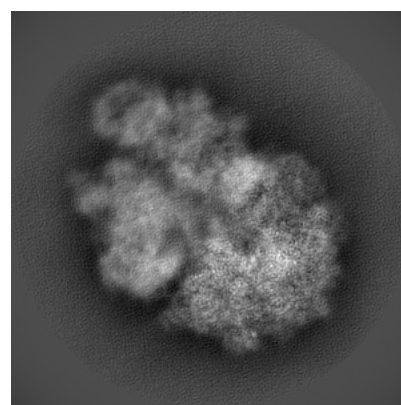
6.1.1 Primary map



X



Y

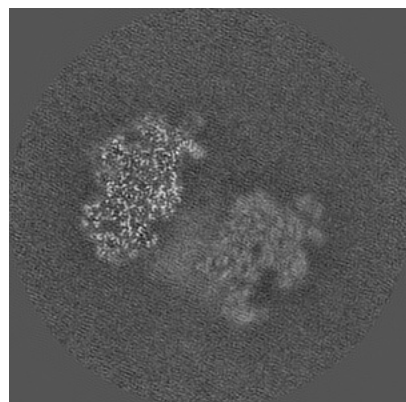


Z

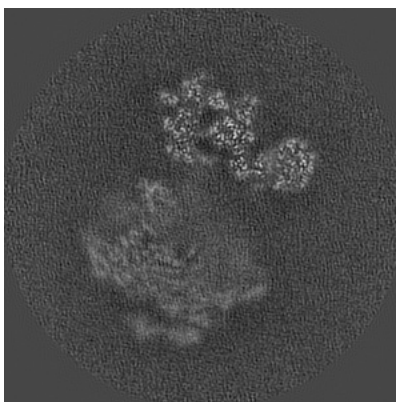
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

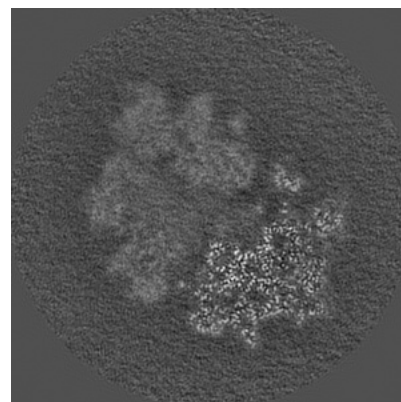
6.2.1 Primary map



X Index: 200



Y Index: 200

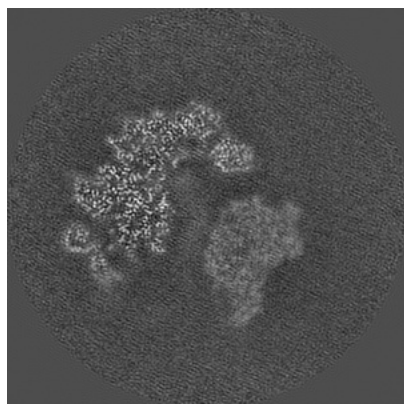


Z Index: 200

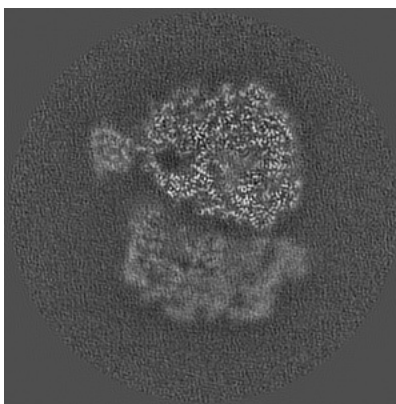
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

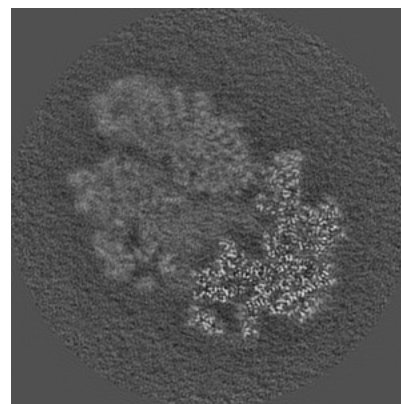
6.3.1 Primary map



X Index: 224



Y Index: 150

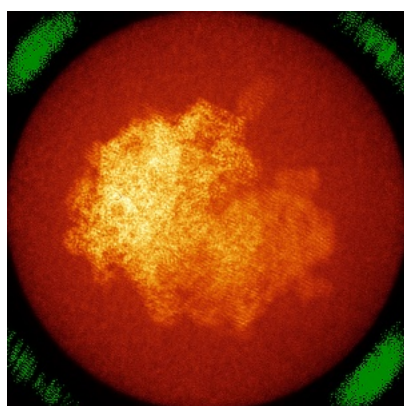


Z Index: 185

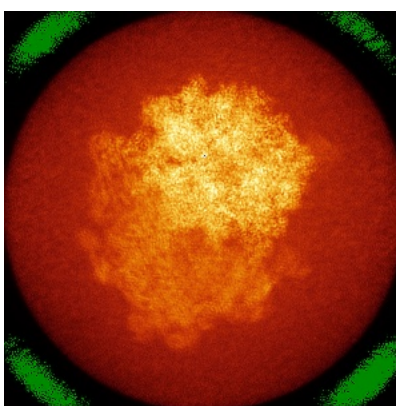
The images above show the largest variance slices of the map in three orthogonal directions.

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

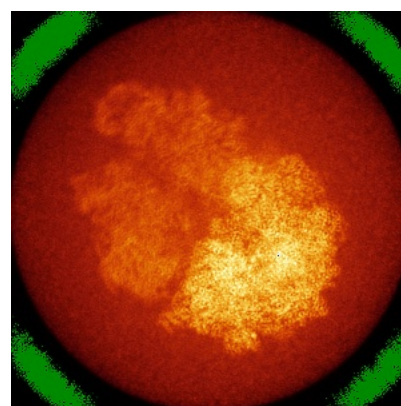
6.4.1 Primary map



X



Y

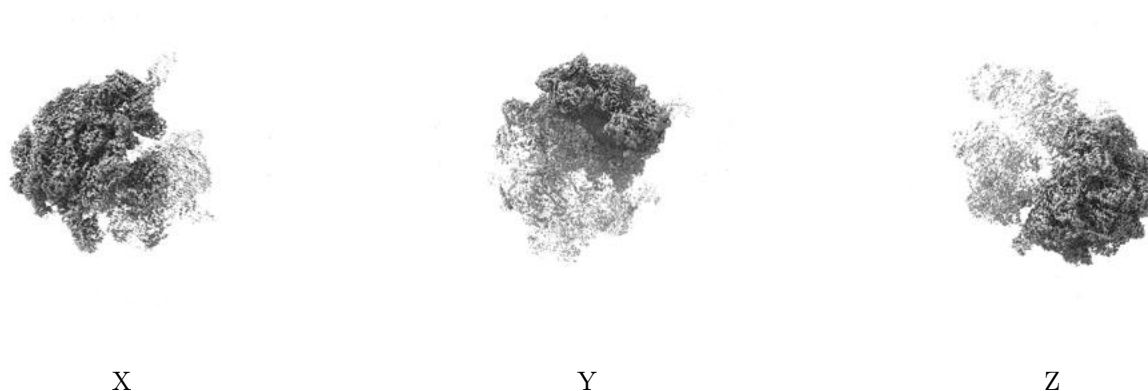


Z

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



The images above show the 3D surface view of the map at the recommended contour level 0.06. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

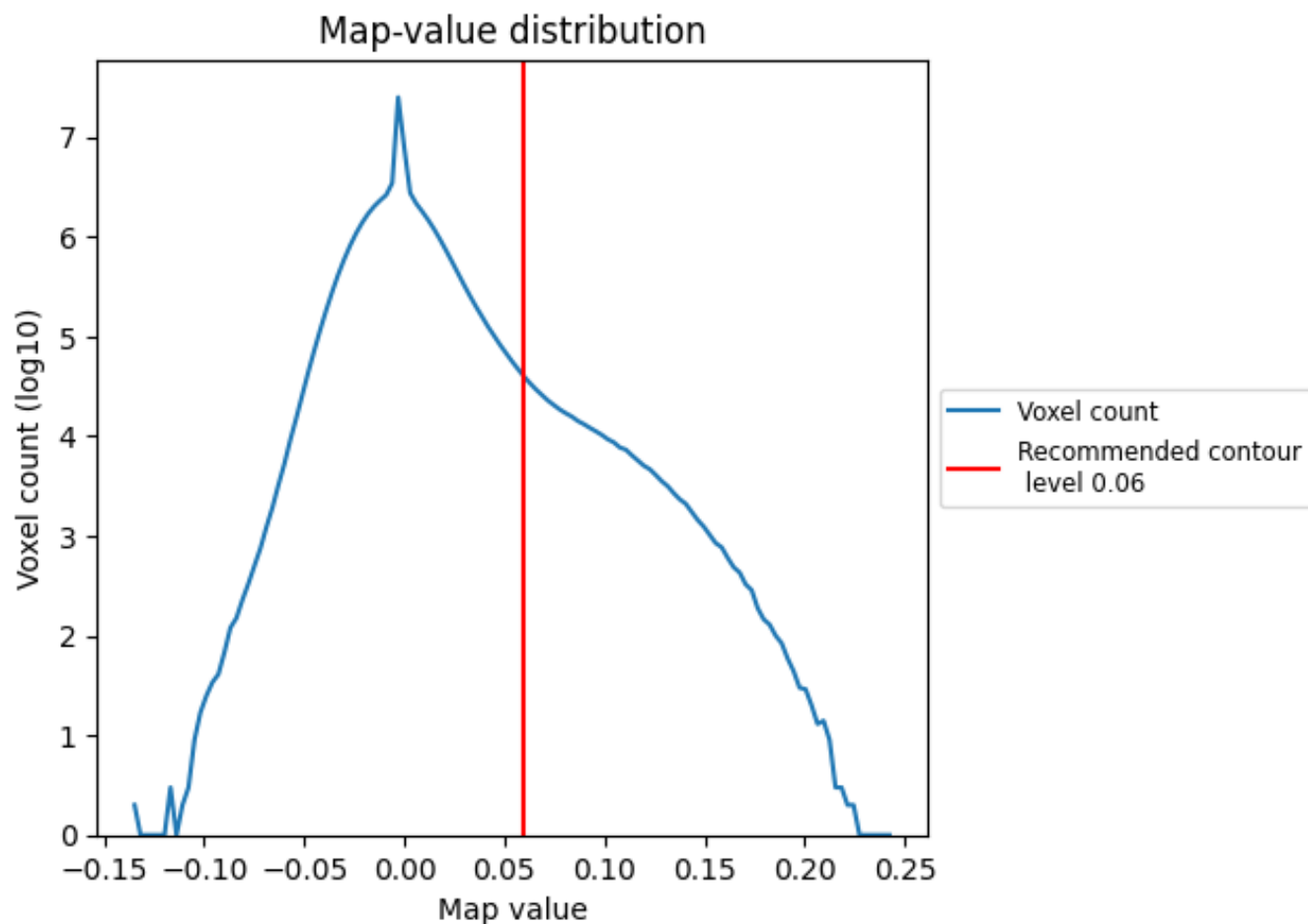
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

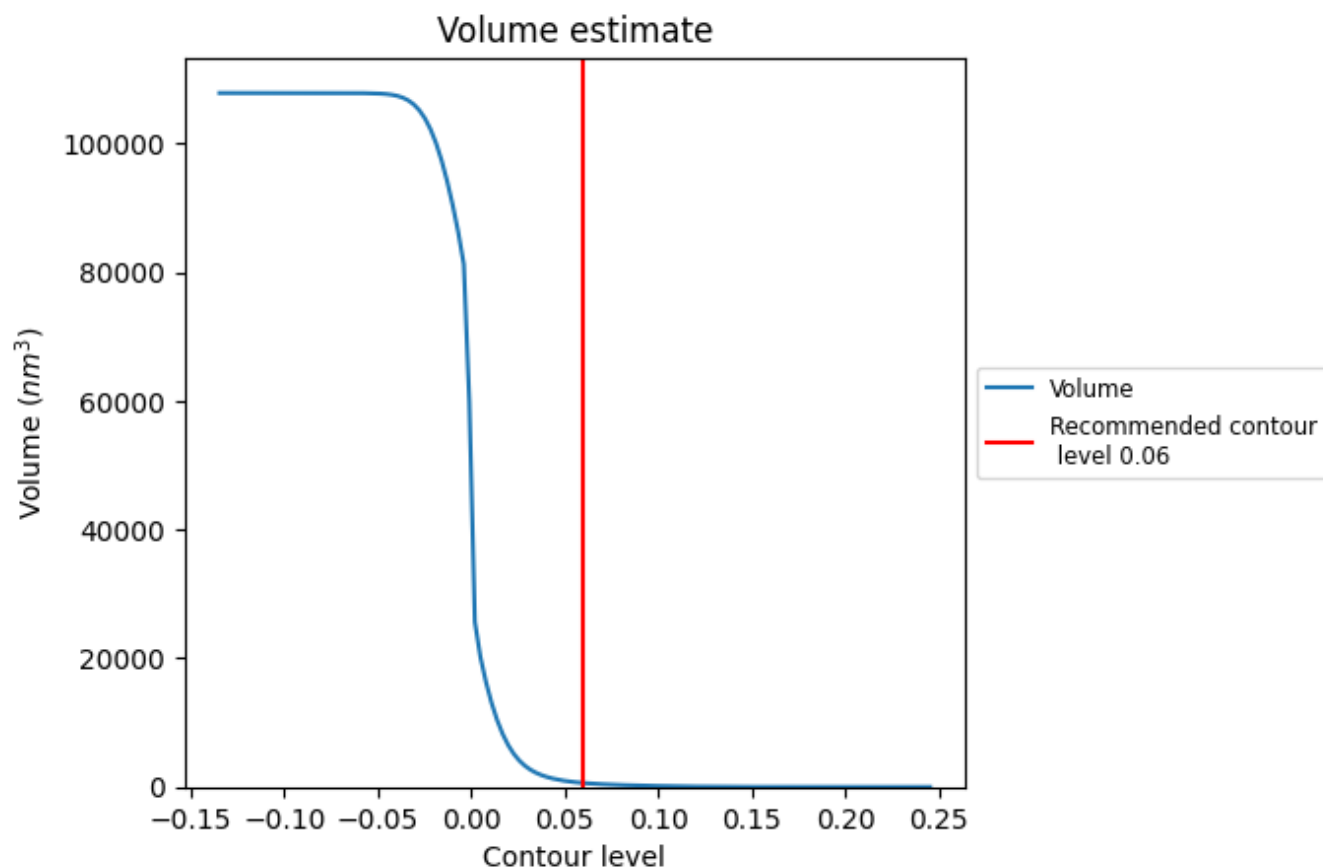
This section contains the results of statistical analysis of the map.

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.

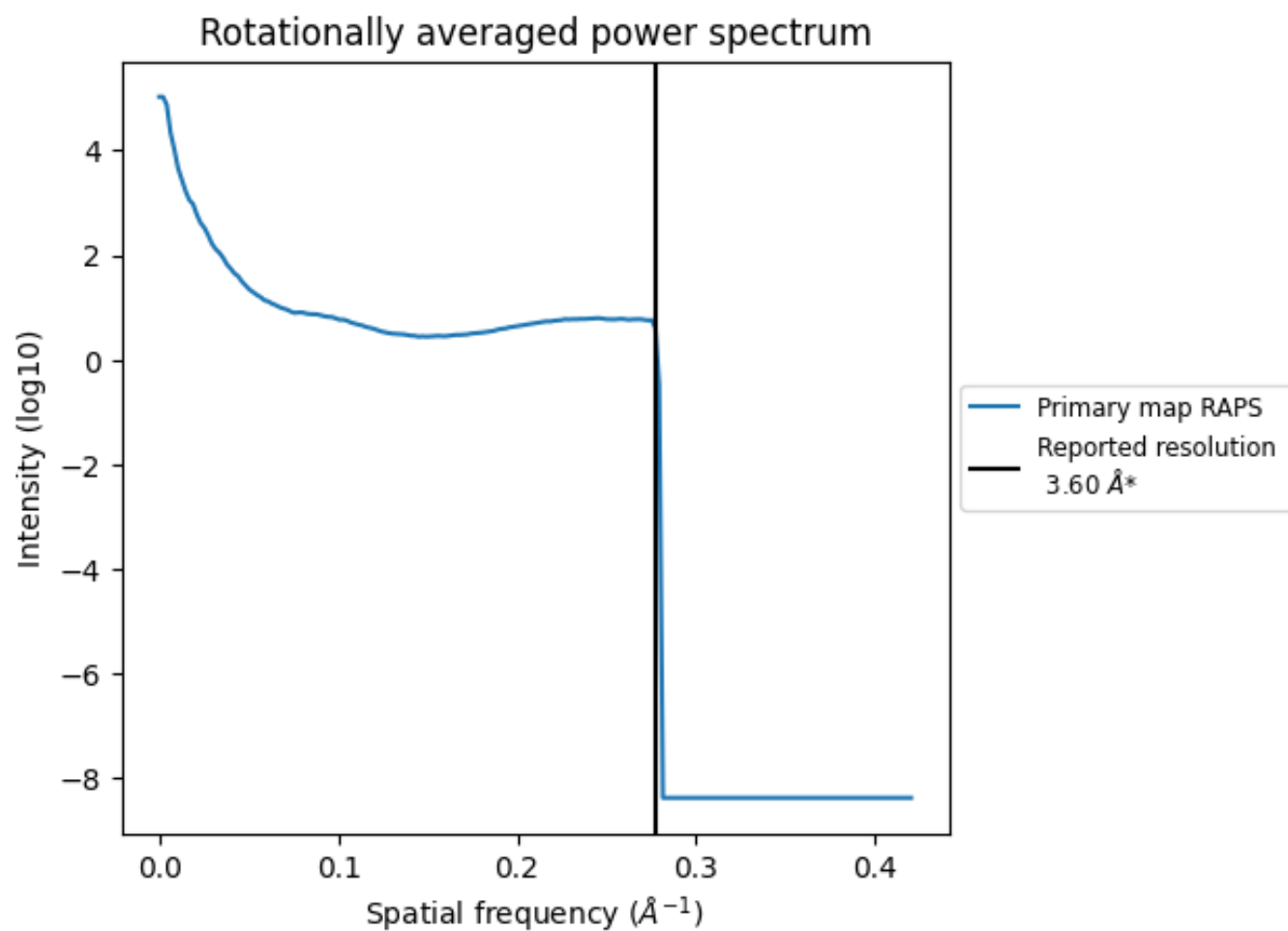
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 617 nm³; this corresponds to an approximate mass of 557 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 0.278 Å⁻¹

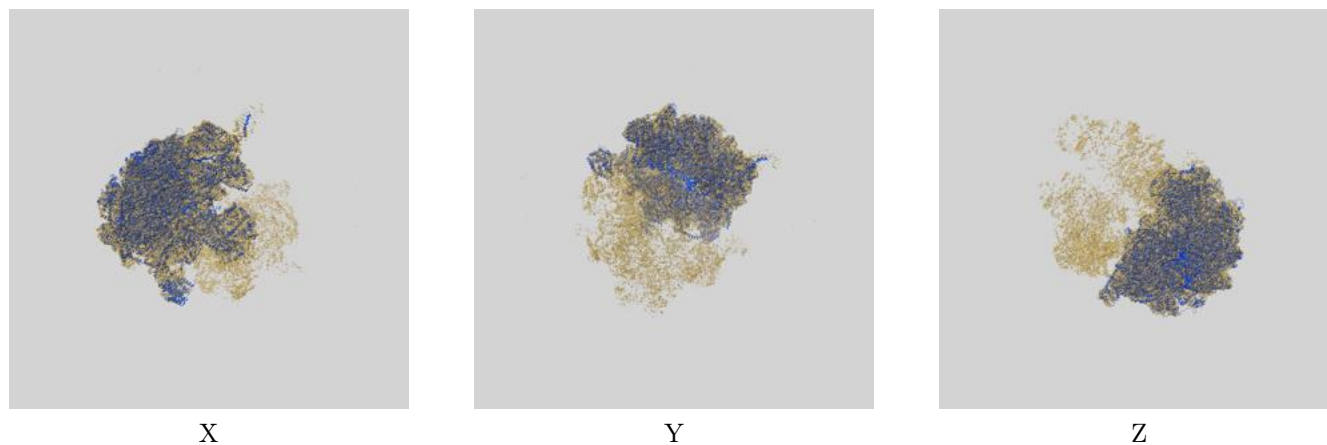
8 Fourier-Shell correlation ⓘ

This section was not generated. No FSC curve or half-maps provided.

9 Map-model fit [i](#)

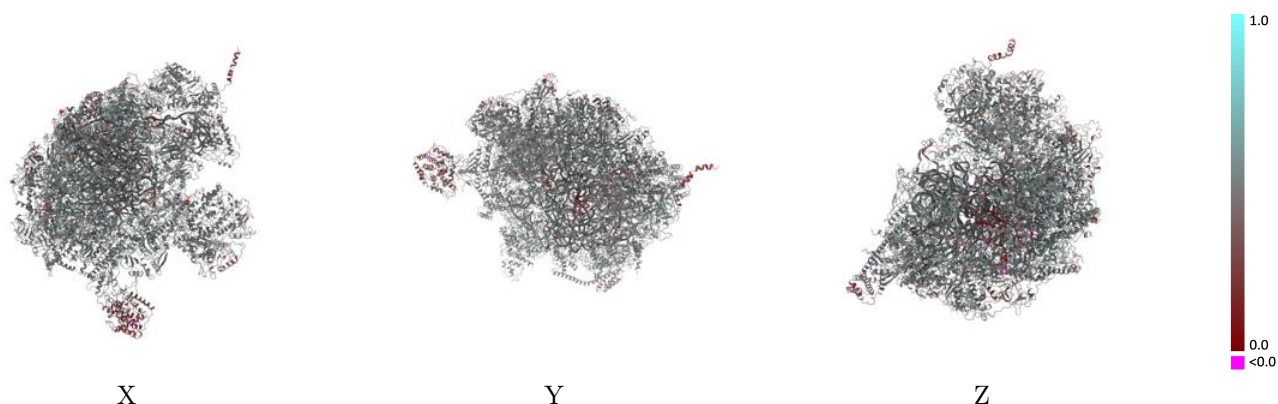
This section contains information regarding the fit between EMDB map EMD-11796 and PDB model 7AIH. Per-residue inclusion information can be found in section [3](#) on page [18](#).

9.1 Map-model overlay [i](#)



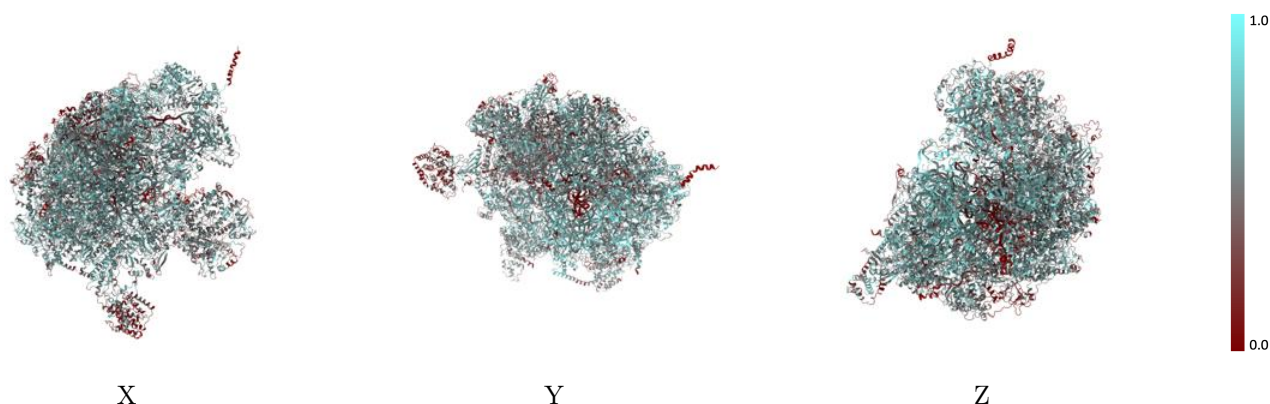
The images above show the 3D surface view of the map at the recommended contour level 0.06 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



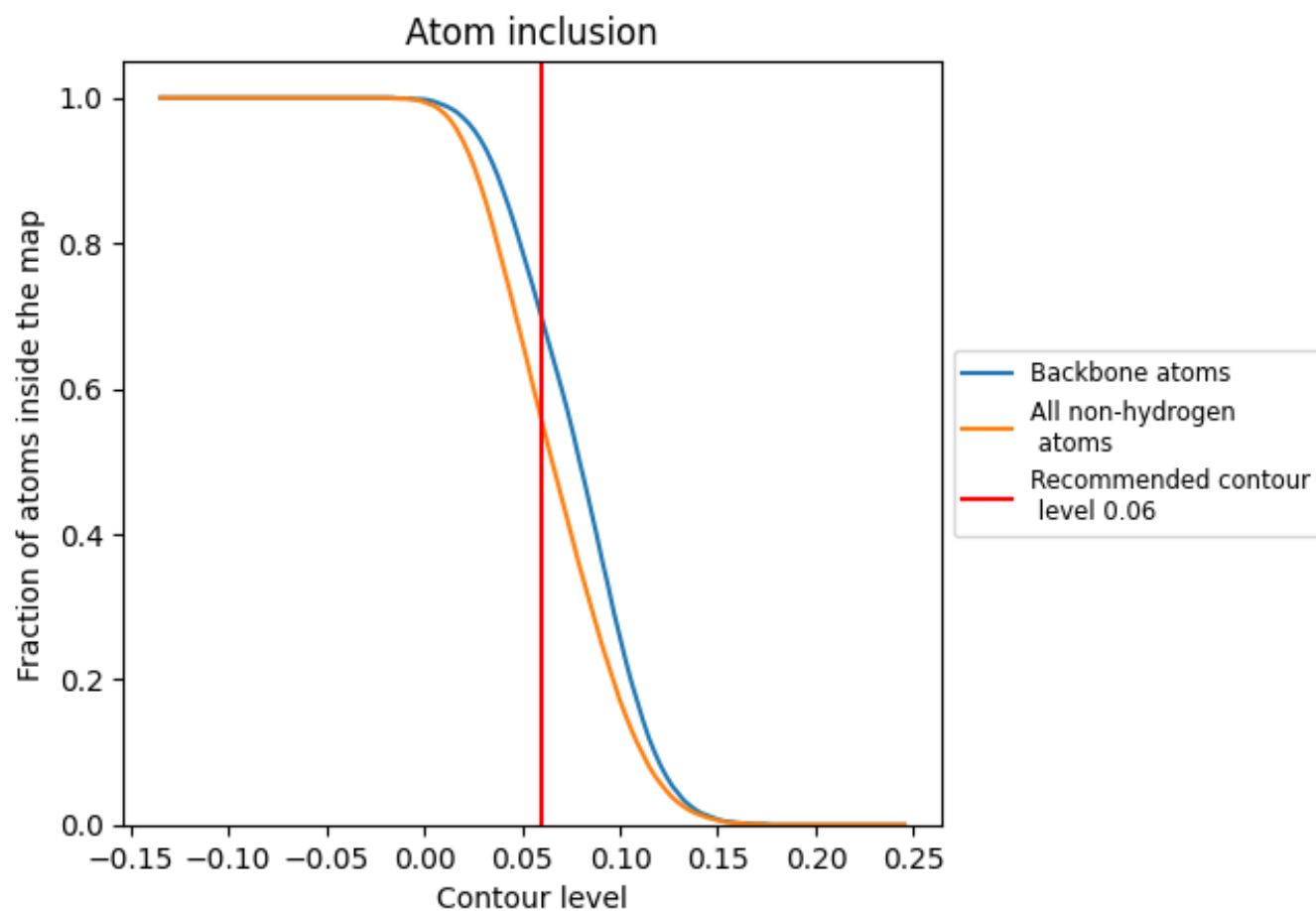
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.06).

9.4 Atom inclusion [i](#)



At the recommended contour level, 70% of all backbone atoms, 56% 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 (0.06) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.5560	 0.4790
1	 0.6140	 0.4520
A	 0.6480	 0.5200
Aa	 0.4530	 0.4490
Ab	 0.6170	 0.5000
Ac	 0.4800	 0.4600
Ad	 0.5160	 0.4950
Ae	 0.6230	 0.5110
Af	 0.5220	 0.4740
Ag	 0.5740	 0.5060
Ah	 0.5280	 0.4630
Ai	 0.5570	 0.5060
Aj	 0.5570	 0.4990
Ak	 0.4720	 0.4440
Al	 0.5900	 0.4970
Am	 0.6380	 0.4910
An	 0.5490	 0.4840
Ao	 0.6240	 0.5100
Ap	 0.4920	 0.4530
Aq	 0.5040	 0.5020
Ar	 0.6090	 0.5180
As	 0.5420	 0.4690
At	 0.5910	 0.4980
Au	 0.6160	 0.5040
Av	 0.5240	 0.4600
Aw	 0.6010	 0.4990
Ax	 0.6050	 0.4990
Ay	 0.5880	 0.4910
Az	 0.6370	 0.5210
B	 0.5880	 0.5130
BA	 0.4920	 0.4510
BB	 0.5560	 0.4620
BC	 0.4970	 0.4860
BD	 0.6090	 0.5130
BE	 0.5690	 0.4430



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Chain	Atom inclusion	Q-score
BF	 0.4960	 0.4800
BG	 0.5610	 0.4930
BH	 0.5450	 0.4970
BI	 0.5760	 0.4760
BL	 0.5950	 0.5110
BM	 0.2680	 0.3150
BO	 0.5190	 0.4600
BP	 0.5470	 0.4990
Bj	 0.4450	 0.4790
C	 0.6010	 0.5080
D	 0.4770	 0.4210
E	 0.5620	 0.4670
F	 0.5610	 0.5100
G	 0.5960	 0.5200
H	 0.4930	 0.4920
I	 0.5470	 0.4970
J	 0.5650	 0.4970
K	 0.5550	 0.4920
L	 0.5850	 0.5030
M	 0.5720	 0.5010
N	 0.5680	 0.4990
O	 0.3660	 0.4270
P	 0.5370	 0.5070
Q	 0.5680	 0.4970
R	 0.5170	 0.4670
S	 0.5550	 0.5110
T	 0.6370	 0.5140
U	 0.4740	 0.4910
UA	 0.6620	 0.4690
UB	 0.6780	 0.5100
UC	 0.2810	 0.3630
UD	 0.5450	 0.3890
V	 0.5570	 0.5230
W	 0.5620	 0.5070
X	 0.5120	 0.4770
Y	 0.4660	 0.4700
Z	 0.5640	 0.5010