



Full wwPDB EM Validation Report ⓘ

Oct 8, 2026 – 02:56 PM EDT

PDB ID : 9PDR / pdb_00009pdr
EMDB ID : EMD-71541
Title : Composite map of PIC-Med-SWI/SNF-Nucleosome
Authors : Yang, C.; Nagai, S.; Chen, D.-H.
Deposited on : 2025-07-01
Resolution : 2.84 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:

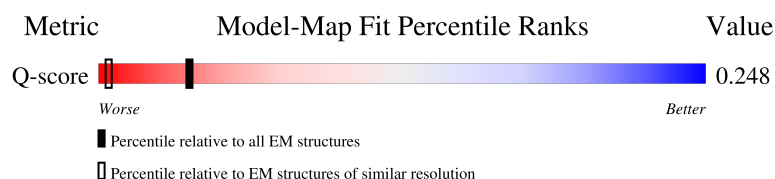
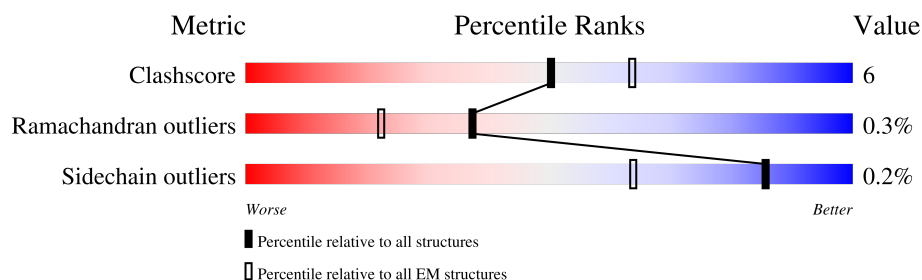
EMDB validation analysis : 0.0.1.dev133
Mogul : 2022.3.0, CSD as543be (2022)
MolProbity : 4-5-2 with Phenix2.2
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.51

1 Overall quality at a glance i

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

The reported resolution of this entry is 2.84 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.



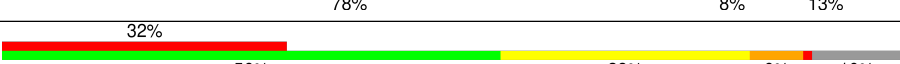
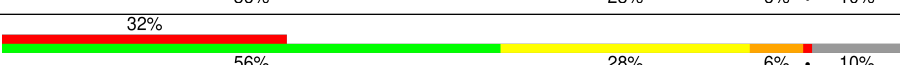
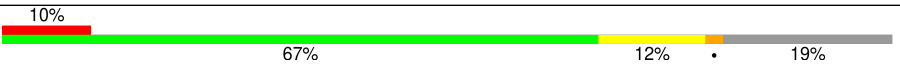
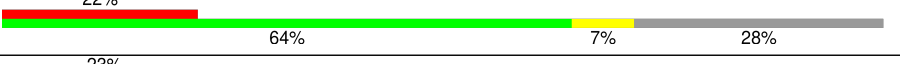
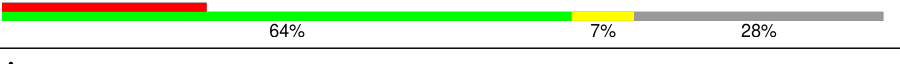
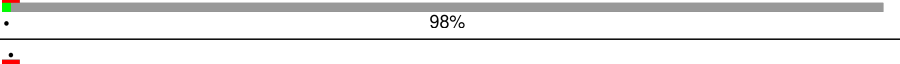
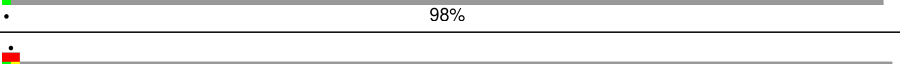
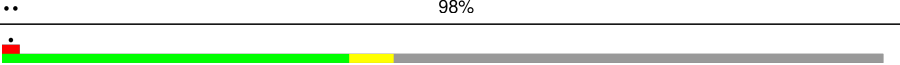
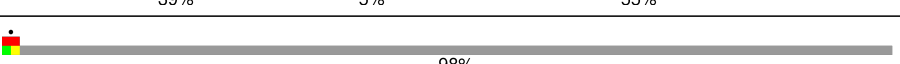
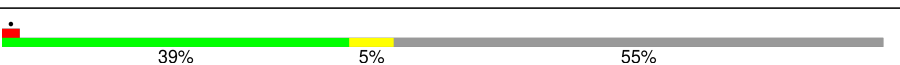
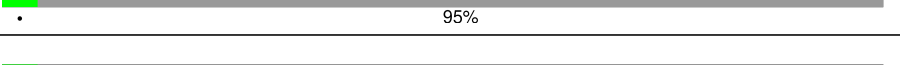
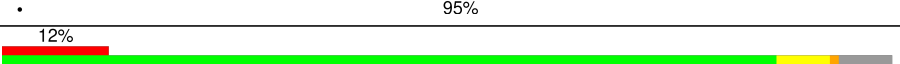
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
Q-score	-	25397	11884 (2.34 - 3.34)

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	A0	778	7% 80% 15% ••
1	B0	778	7% 80% 15% ••
2	A1	642	23% 60% 35% •
2	B1	642	24% 60% 35% •

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Mol	Chain	Length	Quality of chain
3	A2	513	
3	B2	513	
4	A3	321	
4	B3	321	
5	A4	338	
5	B4	338	
6	A5	72	
6	B5	72	
7	A6	461	
7	B6	461	
8	A7	843	
8	B7	843	
9	A8	905	
9	B8	905	
9	NF	905	
9	SF	905	
9	nF	905	
9	sF	905	
10	A9	244	
10	B9	244	
11	AA	1733	
11	BA	1733	
11	MA	1733	
11	mA	1733	
12	AB	1224	

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Mol	Chain	Length	Quality of chain
12	BB	1224	
13	AC	318	
13	BC	318	
14	AD	221	
14	BD	221	
15	AE	215	
15	BE	215	
16	AF	155	
16	BF	155	
17	AG	171	
17	BG	171	
18	AH	146	
18	BH	146	
19	AI	122	
19	BI	122	
20	AJ	70	
20	BJ	70	
21	AK	120	
21	BK	120	
22	AL	70	
22	BL	70	
23	AM	345	
23	BM	345	
24	AN	238	
24	BN	238	

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Mol	Chain	Length	Quality of chain
25	AO	240	
25	BO	240	
26	AQ	735	
26	BQ	735	
27	AR	400	
27	BR	400	
28	AS	309	
28	BS	309	
29	AT	238	
29	BT	238	
30	AU	286	
30	BU	286	
31	AV	122	
31	BV	122	
32	AW	482	
32	BW	482	
33	AX	328	
33	BX	328	
34	Ma	295	
34	ma	295	
35	Mb	223	
35	mb	223	
36	Mc	115	
36	mc	115	
37	Md	687	

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Mol	Chain	Length	Quality of chain
37	md	687	
38	Me	307	
38	me	307	
39	Mf	210	
39	mf	210	
40	Mg	121	
40	mg	121	
41	Mh	284	
41	mh	284	
42	Mi	222	
42	mi	222	
43	Mj	149	
43	mj	149	
44	Mk	157	
44	mk	157	
45	MI	1082	
45	T4	1082	
45	ml	1082	
45	t4	1082	
46	Mm	220	
46	mm	220	
47	Mn	140	
47	mn	140	
48	Mo	127	
48	mo	127	

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Mol	Chain	Length	Quality of chain
49	Mp	566	
49	mp	566	
50	NP	1703	
50	SH	1703	
50	nP	1703	
50	sH	1703	
51	No	136	
51	Ns	136	
51	no	136	
51	ns	136	
52	Np	103	
52	Nt	103	
52	np	103	
52	nt	103	
53	Nq	130	
53	Nu	130	
53	nq	130	
53	nu	130	
54	Nr	126	
54	Nv	126	
54	nr	126	
54	nv	126	
55	SA	566	
55	sA	566	
56	SB	825	

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Mol	Chain	Length	Quality of chain
56	SD	825	
56	sB	825	
56	sD	825	
57	SC	332	
57	sC	332	
58	SE	623	
58	sE	623	
59	SG	47	
59	sG	47	
60	SI	1314	
60	sI	1314	
61	SJ	157	
61	sJ	157	
62	SK	477	
62	sK	477	
63	SL	467	
63	sL	467	
64	T1	431	
64	t1	431	
65	T2	397	
65	t2	397	
66	T3	1132	
66	t3	1132	
67	T5	1081	
67	t5	1081	

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Mol	Chain	Length	Quality of chain
68	T6	974	11% 82% 13%
68	t6	974	10% 82% 13%

2 Entry composition

There are 71 unique types of molecules in this entry. The entry contains 341540 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 General transcription and DNA repair factor IIIH helicase subunit XPD/RAD3.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A0	752	Total	C	N	O	S	0	0
			6091	3882	1029	1142	38		
1	B0	752	Total	C	N	O	S	0	0
			6091	3882	1029	1142	38		

- Molecule 2 is a protein called General transcription and DNA repair factor IIIH subunit TFB1.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	A1	416	Total	C	N	O	S	0	0
			3374	2133	586	639	16		
2	B1	416	Total	C	N	O	S	0	0
			3374	2133	586	639	16		

- Molecule 3 is a protein called General transcription and DNA repair factor IIIH subunit TFB2.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	A2	445	Total	C	N	O	S	0	0
			3597	2327	591	663	16		
3	B2	445	Total	C	N	O	S	0	0
			3597	2327	591	663	16		

- Molecule 4 is a protein called RNA polymerase II transcription factor B subunit 3.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	A3	131	Total	C	N	O	S	0	0
			1089	692	180	209	8		
4	B3	131	Total	C	N	O	S	0	0
			1089	692	180	209	8		

- Molecule 5 is a protein called General transcription and DNA repair factor IIIH subunit TFB4.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	A4	293	Total	C	N	O	S	0	0
			2274	1454	377	429	14		
5	B4	293	Total	C	N	O	S	0	0
			2274	1454	377	429	14		

- Molecule 6 is a protein called General transcription and DNA repair factor IIH subunit TFB5.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	A5	65	Total	C	N	O	S	0	0
			514	326	90	95	3		
6	B5	65	Total	C	N	O	S	0	0
			514	326	90	95	3		

- Molecule 7 is a protein called General transcription and DNA repair factor IIH subunit SSL1.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	A6	374	Total	C	N	O	S	0	0
			2946	1870	507	541	28		
7	B6	374	Total	C	N	O	S	0	0
			2946	1870	507	541	28		

- Molecule 8 is a protein called General transcription and DNA repair factor IIH helicase subunit XPB.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	A7	607	Total	C	N	O	S	0	0
			4881	3104	846	905	26		
8	B7	607	Total	C	N	O	S	0	0
			4881	3104	846	905	26		

- Molecule 9 is a protein called SWI/SNF chromatin-remodeling complex subunit SNF5.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	A8	17	Total	C	N	O	S	0	0
			134	89	22	22	1		
9	NF	20	Total	C	N	O		0	0
			179	101	45	33			
9	SF	405	Total	C	N	O	S	0	0
			3321	2099	561	651	10		
9	B8	17	Total	C	N	O	S	0	0
			134	89	22	22	1		
9	nF	20	Total	C	N	O		0	0
			179	101	45	33			

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Mol	Chain	Residues	Atoms					AltConf	Trace
9	sF	405	Total	C	N	O	S	0	0
			3321	2099	561	651	10		

- Molecule 10 is a protein called Transcription initiation factor TFIID subunit 14.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	A9	68	Total	C	N	O	S	0	0
			542	345	82	113	2		
10	B9	68	Total	C	N	O	S	0	0
			542	345	82	113	2		

- Molecule 11 is a protein called DNA-directed RNA polymerase II subunit RPB1.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	AA	1398	Total	C	N	O	S	0	0
			10996	6931	1926	2078	61		
11	MA	79	Total	C	N	O		0	0
			575	361	79	135			
11	BA	1398	Total	C	N	O	S	0	0
			10996	6931	1926	2078	61		
11	mA	79	Total	C	N	O		0	0
			575	361	79	135			

- Molecule 12 is a protein called DNA-directed RNA polymerase II subunit RPB2.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	AB	1155	Total	C	N	O	S	0	0
			9200	5818	1610	1717	55		
12	BB	1155	Total	C	N	O	S	0	0
			9200	5818	1610	1717	55		

- Molecule 13 is a protein called DNA-directed RNA polymerase II subunit RPB3.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	AC	262	Total	C	N	O	S	0	0
			2061	1299	343	406	13		
13	BC	262	Total	C	N	O	S	0	0
			2061	1299	343	406	13		

- Molecule 14 is a protein called DNA-directed RNA polymerase II subunit RPB4.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	AD	157	Total	C	N	O	S	0	0
			1253	779	220	252	2		
14	BD	157	Total	C	N	O	S	0	0
			1253	779	220	252	2		

- Molecule 15 is a protein called DNA-directed RNA polymerases I, II, and III subunit RPABC1.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	AE	213	Total	C	N	O	S	0	0
			1744	1107	308	318	11		
15	BE	213	Total	C	N	O	S	0	0
			1744	1107	308	318	11		

- Molecule 16 is a protein called DNA-directed RNA polymerases I, II, and III subunit RPABC2.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	AF	83	Total	C	N	O	S	0	0
			670	428	114	125	3		
16	BF	83	Total	C	N	O	S	0	0
			670	428	114	125	3		

- Molecule 17 is a protein called DNA-directed RNA polymerase II subunit RPB7.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	AG	171	Total	C	N	O	S	0	0
			1340	861	222	249	8		
17	BG	171	Total	C	N	O	S	0	0
			1340	861	222	249	8		

- Molecule 18 is a protein called DNA-directed RNA polymerases I, II, and III subunit RPABC3.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	AH	136	Total	C	N	O	S	0	0
			1089	686	184	215	4		
18	BH	136	Total	C	N	O	S	0	0
			1089	686	184	215	4		

- Molecule 19 is a protein called DNA-directed RNA polymerase II subunit RPB9.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	AI	116	Total	C	N	O	S	0	0
			944	581	172	181	10		

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Mol	Chain	Residues	Atoms					AltConf	Trace
19	BI	116	Total	C	N	O	S	0	0
			944	581	172	181	10		

- Molecule 20 is a protein called DNA-directed RNA polymerases I, II, and III subunit RPABC5.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	AJ	69	Total	C	N	O	S	0	0
			569	362	101	100	6		
20	BJ	69	Total	C	N	O	S	0	0
			569	362	101	100	6		

- Molecule 21 is a protein called DNA-directed RNA polymerase II subunit RPB11.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	AK	115	Total	C	N	O	S	0	0
			924	593	157	172	2		
21	BK	115	Total	C	N	O	S	0	0
			924	593	157	172	2		

- Molecule 22 is a protein called DNA-directed RNA polymerases I, II, and III subunit RPABC4.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	AL	45	Total	C	N	O	S	0	0
			359	221	71	63	4		
22	BL	45	Total	C	N	O	S	0	0
			359	221	71	63	4		

- Molecule 23 is a protein called Transcription initiation factor IIB.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	AM	269	Total	C	N	O	S	0	0
			2062	1310	349	386	17		
23	BM	269	Total	C	N	O	S	0	0
			2062	1310	349	386	17		

- Molecule 24 is a DNA chain called promoter DNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	AN	238	Total	C	N	O	P	0	0
			4883	2332	863	1450	238		
24	BN	238	Total	C	N	O	P	0	0
			4883	2332	863	1450	238		

- Molecule 25 is a protein called TATA-box-binding protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	AO	181	Total	C	N	O	S	0	0
			1422	925	243	248	6		
25	BO	181	Total	C	N	O	S	0	0
			1422	925	243	248	6		

- Molecule 26 is a protein called Transcription initiation factor IIF subunit alpha.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	AQ	214	Total	C	N	O	S	0	0
			1817	1149	337	324	7		
26	BQ	214	Total	C	N	O	S	0	0
			1817	1149	337	324	7		

- Molecule 27 is a protein called Transcription initiation factor IIF subunit beta.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	AR	261	Total	C	N	O	S	0	0
			2173	1369	383	411	10		
27	BR	261	Total	C	N	O	S	0	0
			2173	1369	383	411	10		

- Molecule 28 is a protein called Transcription elongation factor S-II.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	AS	164	Total	C	N	O	S	0	0
			1302	812	230	252	8		
28	BS	164	Total	C	N	O	S	0	0
			1302	812	230	252	8		

- Molecule 29 is a DNA chain called promoter DNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	AT	238	Total	C	N	O	P	0	0
			4875	2322	909	1406	238		
29	BT	238	Total	C	N	O	P	0	0
			4875	2322	909	1406	238		

- Molecule 30 is a protein called Transcription initiation factor IIA large subunit.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	AU	107	Total	C	N	O	S	0	0
			885	559	147	176	3		
30	BU	107	Total	C	N	O	S	0	0
			885	559	147	176	3		

- Molecule 31 is a protein called Transcription initiation factor IIA subunit 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	AV	104	Total	C	N	O	S	0	0
			815	511	136	164	4		
31	BV	104	Total	C	N	O	S	0	0
			815	511	136	164	4		

- Molecule 32 is a protein called Transcription initiation factor IIE subunit alpha.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	AW	226	Total	C	N	O	S	0	0
			1836	1168	317	344	7		
32	BW	226	Total	C	N	O	S	0	0
			1836	1168	317	344	7		

- Molecule 33 is a protein called Transcription initiation factor IIE subunit beta.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	AX	191	Total	C	N	O	S	0	0
			1530	980	256	289	5		
33	BX	191	Total	C	N	O	S	0	0
			1530	980	256	289	5		

- Molecule 34 is a protein called Mediator of RNA polymerase II transcription subunit 6.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	Ma	171	Total	C	N	O	S	0	0
			1420	913	236	265	6		
34	ma	171	Total	C	N	O	S	0	0
			1420	913	236	265	6		

- Molecule 35 is a protein called Mediator of RNA polymerase II transcription subunit 8.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	Mb	144	Total	C	N	O	S	0	0
			1185	747	208	227	3		

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Mol	Chain	Residues	Atoms					AltConf	Trace
35	mb	144	Total	C	N	O	S	0	0
			1185	747	208	227	3		

- Molecule 36 is a protein called Mediator of RNA polymerase II transcription subunit 11.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	Mc	108	Total	C	N	O	S	0	0
			876	546	149	177	4		
36	mc	108	Total	C	N	O	S	0	0
			876	546	149	177	4		

- Molecule 37 is a protein called Mediator of RNA polymerase II transcription subunit 17.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	Md	535	Total	C	N	O	S	0	0
			4325	2766	730	816	13		
37	md	535	Total	C	N	O	S	0	0
			4325	2766	730	816	13		

- Molecule 38 is a protein called Mediator of RNA polymerase II transcription subunit 18.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	Me	253	Total	C	N	O	S	0	0
			1995	1271	331	383	10		
38	me	253	Total	C	N	O	S	0	0
			1995	1271	331	383	10		

- Molecule 39 is a protein called Mediator of RNA polymerase II transcription subunit 20.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	Mf	210	Total	C	N	O	S	0	0
			1609	1016	270	317	6		
39	mf	210	Total	C	N	O	S	0	0
			1609	1016	270	317	6		

- Molecule 40 is a protein called Mediator of RNA polymerase II transcription subunit 22.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	Mg	106	Total	C	N	O	S	0	0
			847	528	139	175	5		
40	mg	106	Total	C	N	O	S	0	0
			847	528	139	175	5		

- Molecule 41 is a protein called Mediator of RNA polymerase II transcription subunit 4.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	Mh	177	Total	C	N	O	S	0	0
			1441	910	242	284	5		
41	mh	177	Total	C	N	O	S	0	0
			1441	910	242	284	5		

- Molecule 42 is a protein called Mediator of RNA polymerase II transcription subunit 7.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	Mi	185	Total	C	N	O	S	0	0
			1538	989	259	284	6		
42	mi	185	Total	C	N	O	S	0	0
			1538	989	259	284	6		

- Molecule 43 is a protein called Mediator of RNA polymerase II transcription subunit 9.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	Mj	102	Total	C	N	O	S	0	0
			852	533	156	162	1		
43	mj	102	Total	C	N	O	S	0	0
			852	533	156	162	1		

- Molecule 44 is a protein called Mediator of RNA polymerase II transcription subunit 10.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	Mk	144	Total	C	N	O	S	0	0
			1157	715	204	235	3		
44	mk	144	Total	C	N	O	S	0	0
			1157	715	204	235	3		

- Molecule 45 is a protein called Mediator of RNA polymerase II transcription subunit 14.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	Ml	654	Total	C	N	O	S	0	0
			5367	3465	924	954	24		
45	T4	220	Total	C	N	O	S	0	0
			1780	1136	302	333	9		
45	t4	220	Total	C	N	O	S	0	0
			1780	1136	302	333	9		
45	ml	654	Total	C	N	O	S	0	0
			5367	3465	924	954	24		

- Molecule 46 is a protein called Mediator of RNA polymerase II transcription subunit 19.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	Mm	83	Total	C	N	O	S	0	0
			671	424	111	135	1		
46	mm	83	Total	C	N	O	S	0	0
			671	424	111	135	1		

- Molecule 47 is a protein called Mediator of RNA polymerase II transcription subunit 21.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	Mn	140	Total	C	N	O	S	0	0
			1124	701	189	228	6		
47	mn	140	Total	C	N	O	S	0	0
			1124	701	189	228	6		

- Molecule 48 is a protein called Mediator of RNA polymerase II transcription subunit 31.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	Mo	109	Total	C	N	O	S	0	0
			914	603	141	164	6		
48	mo	109	Total	C	N	O	S	0	0
			914	603	141	164	6		

- Molecule 49 is a protein called Mediator of RNA polymerase II transcription subunit 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	Mp	409	Total	C	N	O	S	0	0
			3330	2115	535	669	11		
49	mp	409	Total	C	N	O	S	0	0
			3330	2115	535	669	11		

- Molecule 50 is a protein called Transcription regulatory protein SNF2.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	NP	594	Total	C	N	O	S	0	0
			4881	3102	861	900	18		
50	SH	242	Total	C	N	O	S	1	0
			1971	1236	355	374	6		
50	nP	594	Total	C	N	O	S	0	0
			4881	3102	861	900	18		
50	sH	242	Total	C	N	O	S	1	0
			1971	1236	355	374	6		

- Molecule 51 is a protein called Histone H3.2.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	No	98	Total	C	N	O	S	0	0
			800	505	153	139	3		
51	Ns	95	Total	C	N	O	S	0	0
			778	491	148	136	3		
51	no	98	Total	C	N	O	S	0	0
			800	505	153	139	3		
51	ns	95	Total	C	N	O	S	0	0
			778	491	148	136	3		

- Molecule 52 is a protein called Histone H4.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	Np	86	Total	C	N	O	S	0	0
			698	440	141	116	1		
52	Nt	86	Total	C	N	O	S	0	0
			672	424	130	117	1		
52	np	86	Total	C	N	O	S	0	0
			698	440	141	116	1		
52	nt	86	Total	C	N	O	S	0	0
			672	424	130	117	1		

- Molecule 53 is a protein called Histone H2A type 1.

Mol	Chain	Residues	Atoms				AltConf	Trace
53	Nq	107	Total	C	N	O	0	0
			811	510	158	143		
53	Nu	107	Total	C	N	O	0	0
			815	513	159	143		
53	nq	107	Total	C	N	O	0	0
			811	510	158	143		
53	nu	107	Total	C	N	O	0	0
			815	513	159	143		

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
Nq	99	ARG	GLY	engineered mutation	UNP P06897
Nu	99	ARG	GLY	engineered mutation	UNP P06897
nq	99	ARG	GLY	engineered mutation	UNP P06897
nu	99	ARG	GLY	engineered mutation	UNP P06897

- Molecule 54 is a protein called Histone H2B 1.1.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	Nr	93	Total	C	N	O	S	0	0
			722	454	129	137	2		
54	Nv	107	Total	C	N	O	S	0	0
			844	529	157	156	2		
54	nr	93	Total	C	N	O	S	0	0
			722	454	129	137	2		
54	nv	107	Total	C	N	O	S	0	0
			844	529	157	156	2		

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
Nr	33	THR	SER	engineered mutation	UNP P02281
Nv	33	THR	SER	engineered mutation	UNP P02281
nr	33	THR	SER	engineered mutation	UNP P02281
nv	33	THR	SER	engineered mutation	UNP P02281

- Molecule 55 is a protein called Transcription regulatory protein SNF12.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	SA	442	Total	C	N	O	S	0	0
			3552	2231	608	698	15		
55	sA	442	Total	C	N	O	S	0	0
			3552	2231	608	698	15		

- Molecule 56 is a protein called SWI/SNF complex subunit SWI3.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	SB	395	Total	C	N	O	S	0	0
			3250	2082	560	597	11		
56	SD	421	Total	C	N	O	S	0	0
			3445	2203	592	638	12		
56	sB	395	Total	C	N	O	S	0	0
			3250	2082	560	597	11		
56	sD	421	Total	C	N	O	S	0	0
			3445	2203	592	638	12		

- Molecule 57 is a protein called Transcription regulatory protein SNF6.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	SC	154	Total	C	N	O	S	0	0
			1266	793	232	236	5		
57	sC	154	Total	C	N	O	S	0	0
			1266	793	232	236	5		

- Molecule 58 is a protein called SWI/SNF global transcription activator complex subunit SWP82.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	SE	411	Total	C	N	O	S	0	0
			3333	2142	569	617	5		
58	sE	411	Total	C	N	O	S	0	0
			3333	2142	569	617	5		

- Molecule 59 is a protein called unsigned peptide of SWI/SNF.

Mol	Chain	Residues	Atoms				AltConf	Trace
59	SG	47	Total	C	N	O	0	0
			271	166	56	49		
59	sG	47	Total	C	N	O	0	0
			271	166	56	49		

- Molecule 60 is a protein called SWI/SNF chromatin-remodeling complex subunit SWI1.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	SI	552	Total	C	N	O	S	0	0
			4474	2894	749	820	11		
60	sI	552	Total	C	N	O	S	0	0
			4474	2894	749	820	11		

- Molecule 61 is a protein called Regulator of Ty1 transposition protein 102.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	SJ	82	Total	C	N	O	S	0	0
			711	450	123	135	3		
61	sJ	82	Total	C	N	O	S	0	0
			711	450	123	135	3		

- Molecule 62 is a protein called Actin-related protein 7.

Mol	Chain	Residues	Atoms					AltConf	Trace
62	SK	431	Total	C	N	O	S	0	0
			3453	2213	563	658	19		

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Mol	Chain	Residues	Atoms					AltConf	Trace
62	sK	431	Total	C	N	O	S	0	0
			3453	2213	563	658	19		

- Molecule 63 is a protein called Actin-like protein ARP9.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	SL	407	Total	C	N	O	S	0	0
			3274	2101	534	631	8		
63	sL	407	Total	C	N	O	S	0	0
			3274	2101	534	631	8		

- Molecule 64 is a protein called Mediator of RNA polymerase II transcription subunit 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	T1	65	Total	C	N	O	S	0	0
			516	328	82	102	4		
64	t1	65	Total	C	N	O	S	0	0
			516	328	82	102	4		

- Molecule 65 is a protein called Mediator of RNA polymerase II transcription subunit 3.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	T2	110	Total	C	N	O	S	0	0
			891	560	155	172	4		
65	t2	110	Total	C	N	O	S	0	0
			891	560	155	172	4		

- Molecule 66 is a protein called Mediator of RNA polymerase II transcription subunit 5.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	T3	761	Total	C	N	O	S	0	0
			6173	3979	999	1181	14		
66	t3	761	Total	C	N	O	S	0	0
			6173	3979	999	1181	14		

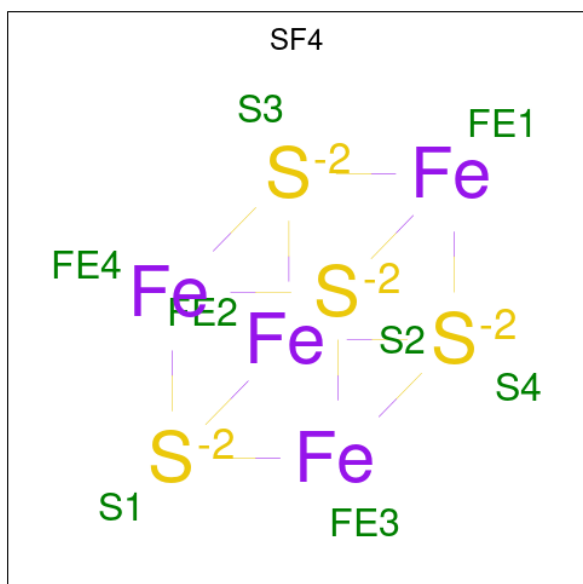
- Molecule 67 is a protein called Mediator of RNA polymerase II transcription subunit 15.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	T5	111	Total	C	N	O	S	0	0
			894	558	161	169	6		
67	t5	111	Total	C	N	O	S	0	0
			894	558	161	169	6		

- Molecule 68 is a protein called Mediator of RNA polymerase II transcription subunit 16.

Mol	Chain	Residues	Atoms					AltConf	Trace
68	T6	932	Total	C	N	O	S	0	0
			7551	4859	1258	1399	35		
68	t6	932	Total	C	N	O	S	0	0
			7551	4859	1258	1399	35		

- Molecule 69 is IRON/SULFUR CLUSTER (CCD ID: SF4) (formula: Fe_4S_4).



Mol	Chain	Residues	Atoms			AltConf
69	A0	1	Total	Fe	S	0
			8	4	4	
69	B0	1	Total	Fe	S	0
			8	4	4	

- Molecule 70 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
70	A3	2	Total	Zn	0
			2	2	
70	A4	1	Total	Zn	0
			1	1	
70	A6	4	Total	Zn	0
			4	4	
70	AA	2	Total	Zn	0
			2	2	
70	AB	1	Total	Zn	0
			1	1	

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Mol	Chain	Residues	Atoms		AltConf
70	AC	1	Total 1	Zn 1	0
70	AI	2	Total 2	Zn 2	0
70	AJ	1	Total 1	Zn 1	0
70	AL	1	Total 1	Zn 1	0
70	AM	1	Total 1	Zn 1	0
70	AS	1	Total 1	Zn 1	0
70	AW	1	Total 1	Zn 1	0
70	B3	2	Total 2	Zn 2	0
70	B4	1	Total 1	Zn 1	0
70	B6	4	Total 4	Zn 4	0
70	BA	2	Total 2	Zn 2	0
70	BB	1	Total 1	Zn 1	0
70	BC	1	Total 1	Zn 1	0
70	BI	2	Total 2	Zn 2	0
70	BJ	1	Total 1	Zn 1	0
70	BL	1	Total 1	Zn 1	0
70	BM	1	Total 1	Zn 1	0
70	BS	1	Total 1	Zn 1	0
70	BW	1	Total 1	Zn 1	0

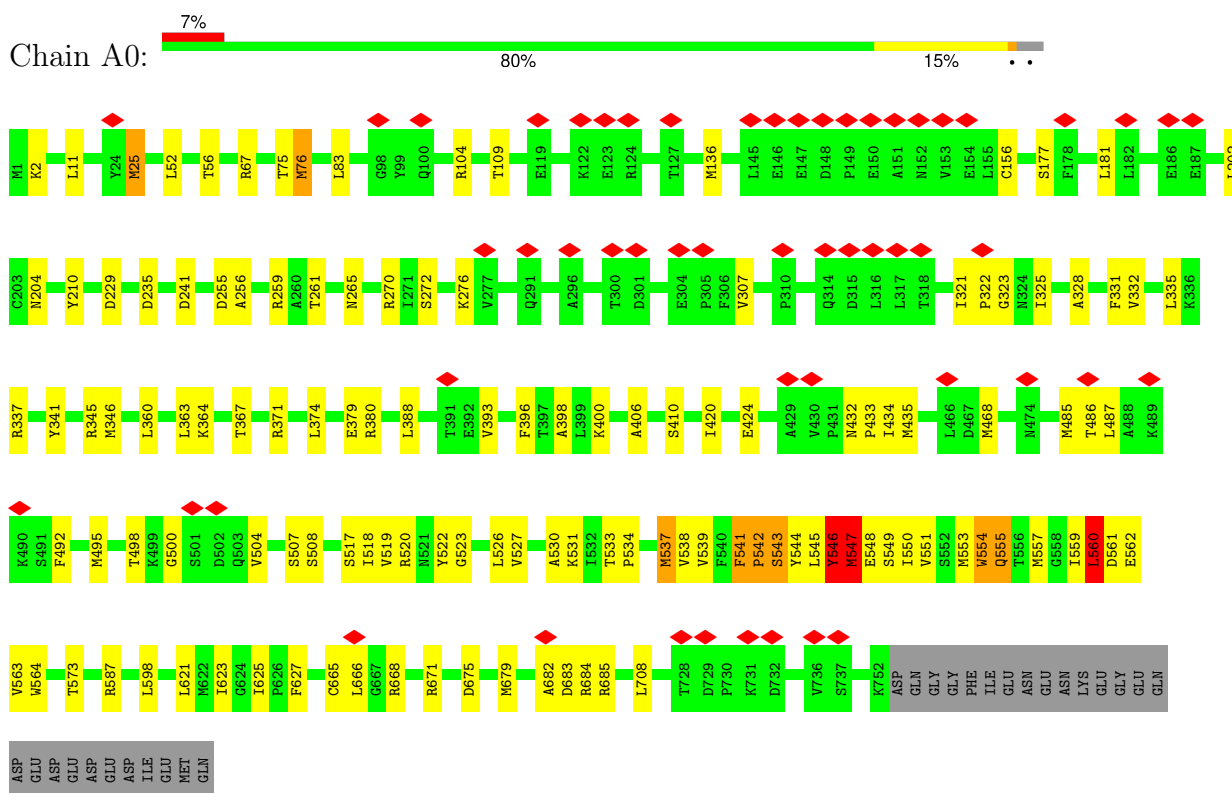
- Molecule 71 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
71	AA	1	Total 1	Mg 1	0
71	BA	1	Total 1	Mg 1	0

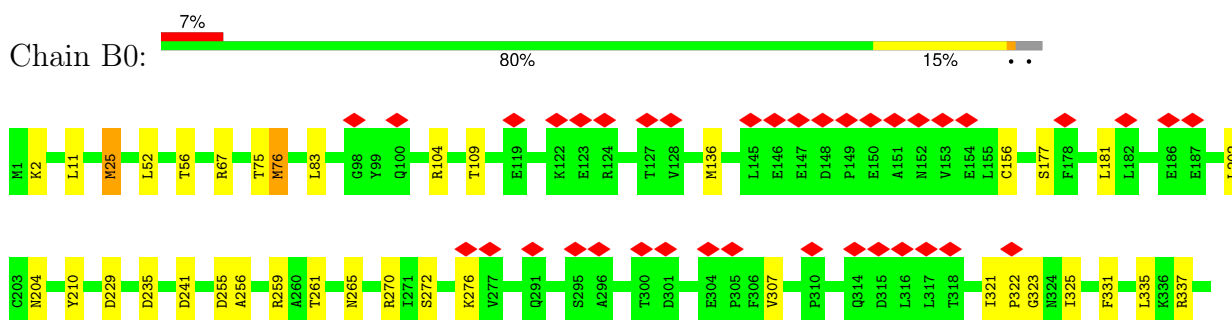
3 Residue-property plots

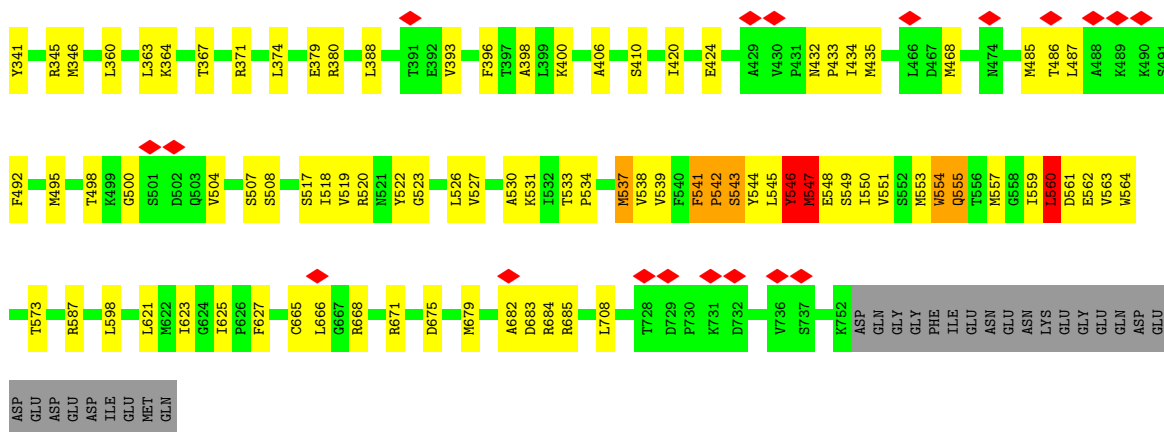
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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

- Molecule 1: General transcription and DNA repair factor IIH helicase subunit XPD/RAD3

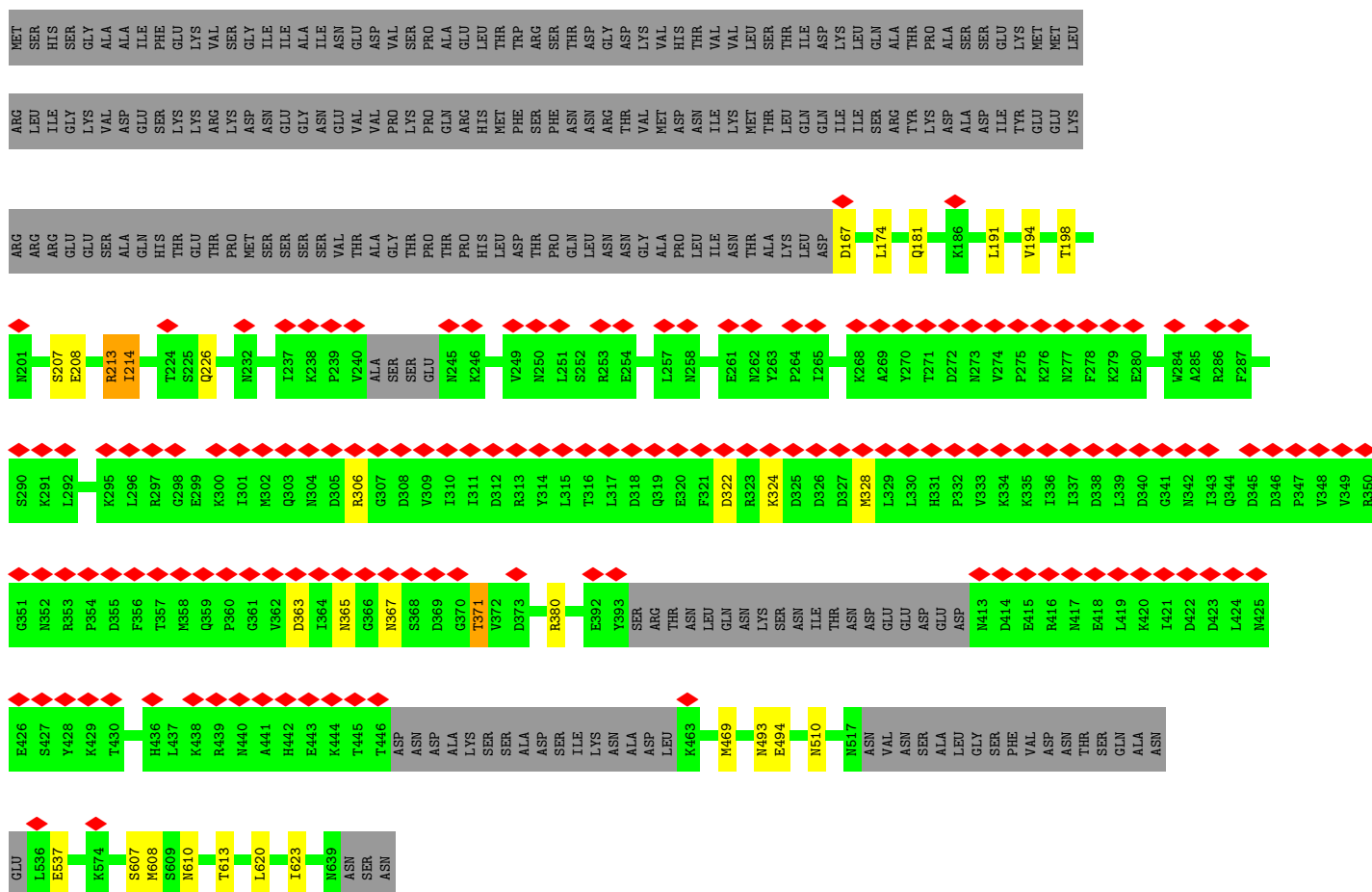


- Molecule 1: General transcription and DNA repair factor IIH helicase subunit XPD/RAD3



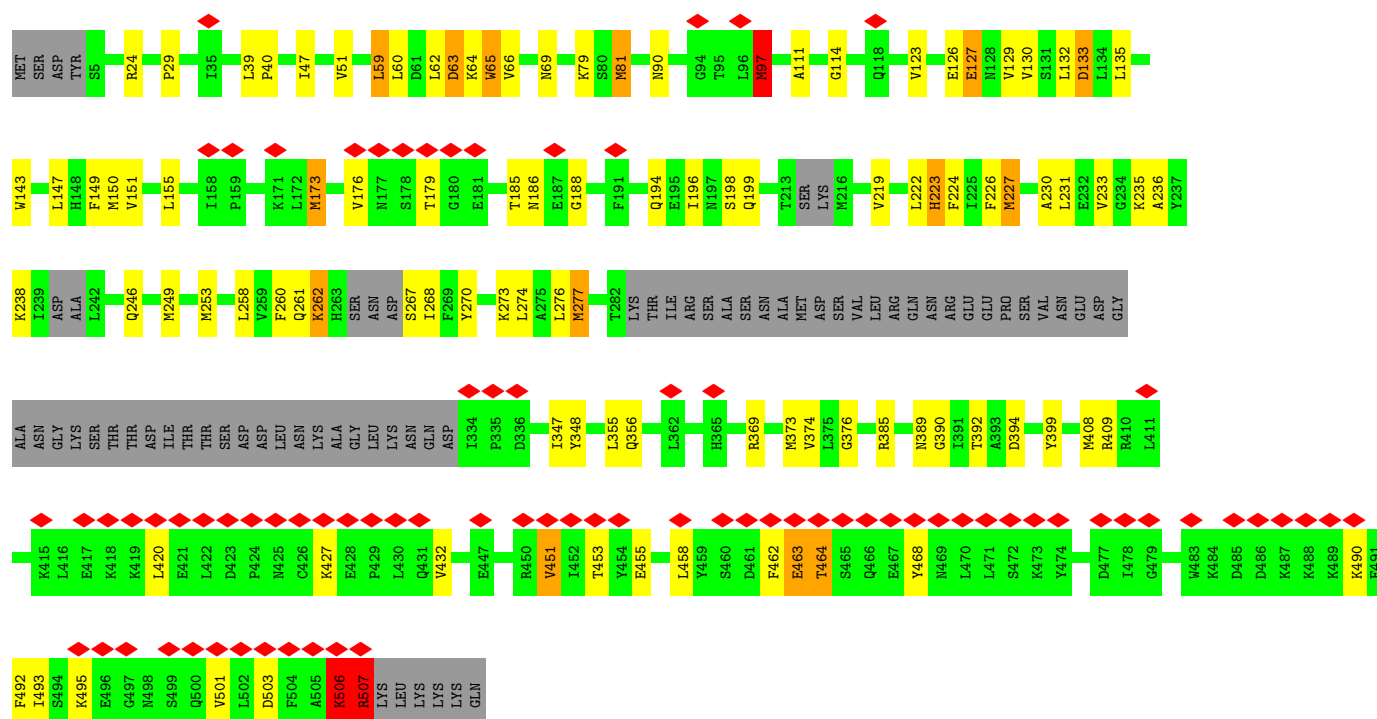


- Molecule 2: General transcription and DNA repair factor IIH subunit TFB1

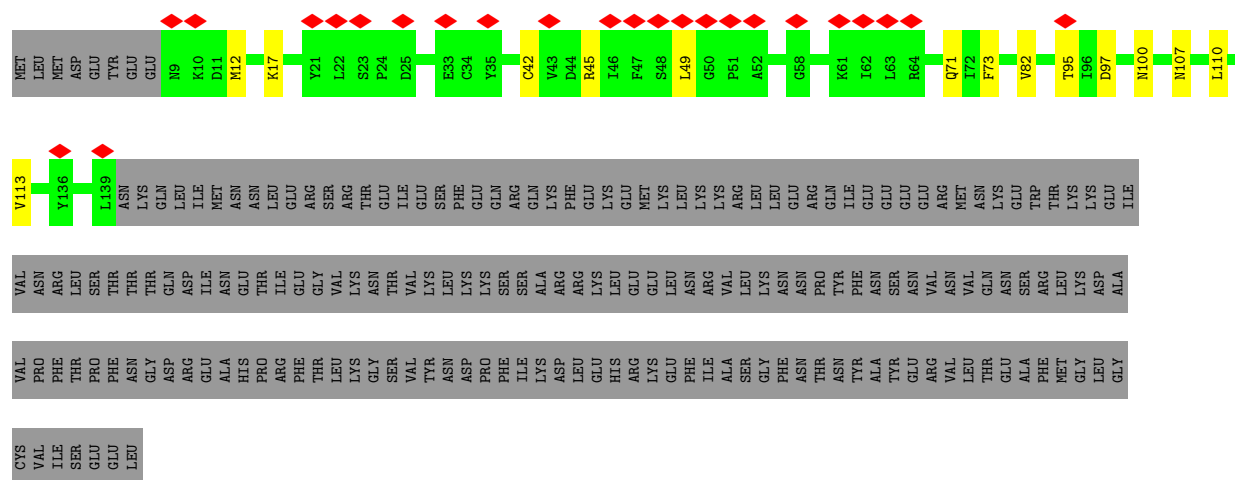


- Molecule 2: General transcription and DNA repair factor IIH subunit TFB1

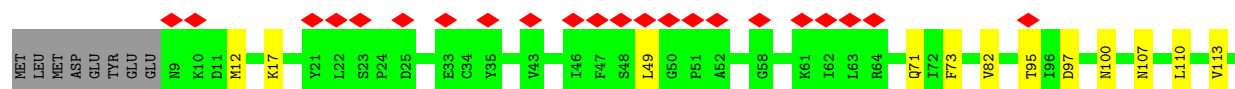


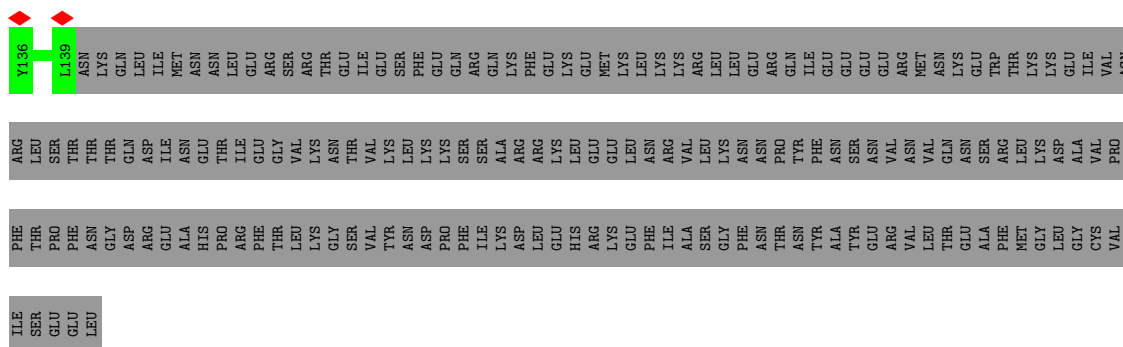


• Molecule 4: RNA polymerase II transcription factor B subunit 3

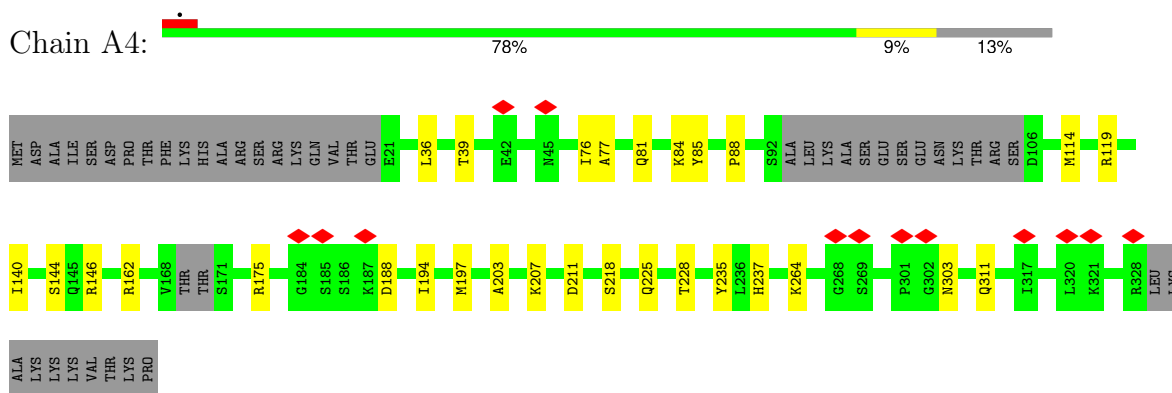


• Molecule 4: RNA polymerase II transcription factor B subunit 3

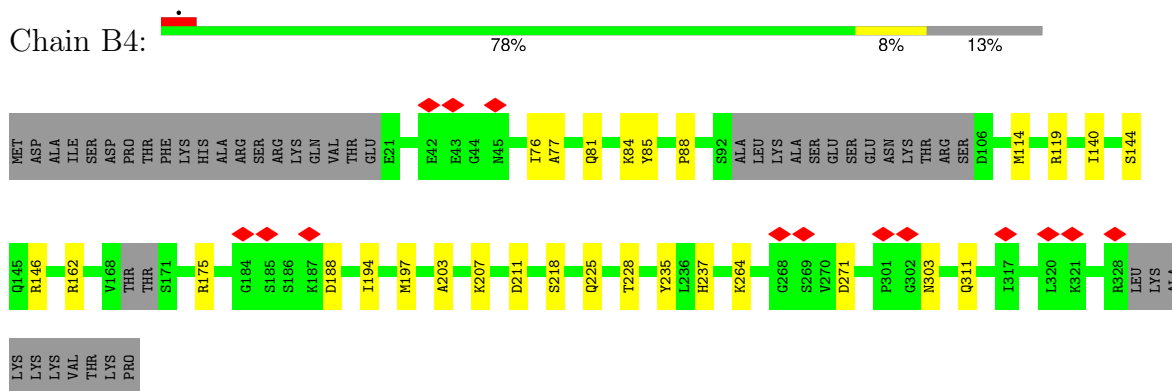




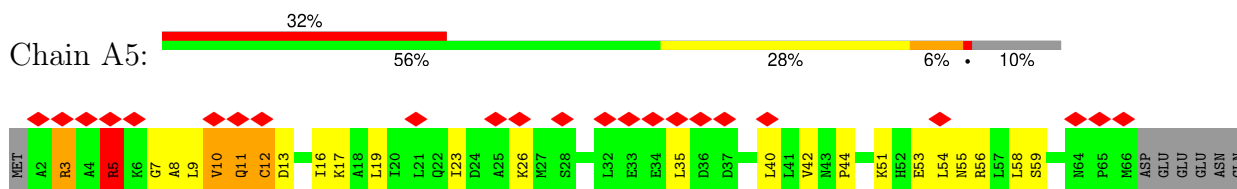
- Molecule 5: General transcription and DNA repair factor IIH subunit TFB4



- Molecule 5: General transcription and DNA repair factor IIH subunit TFB4

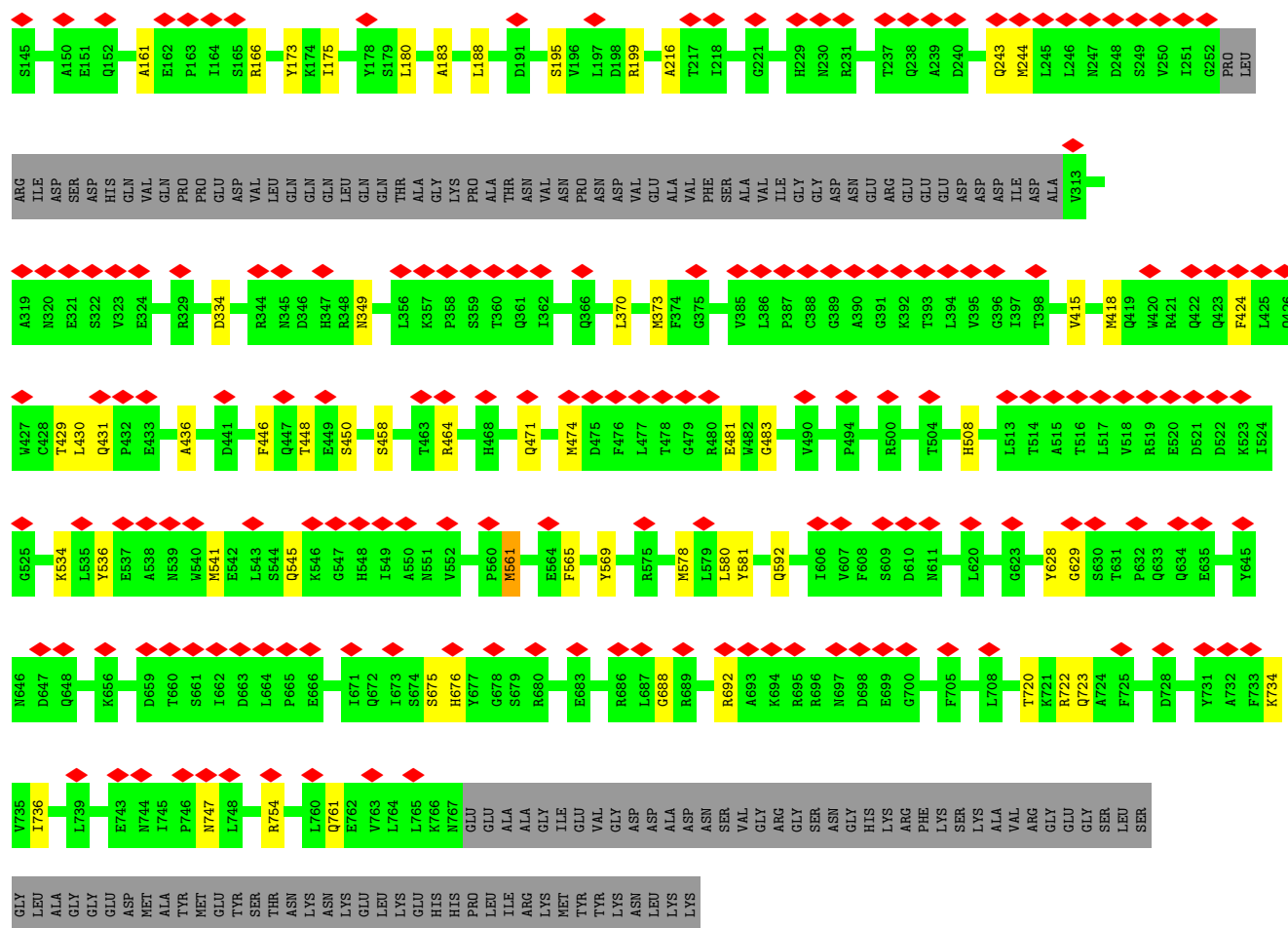


- Molecule 6: General transcription and DNA repair factor IIH subunit TFB5

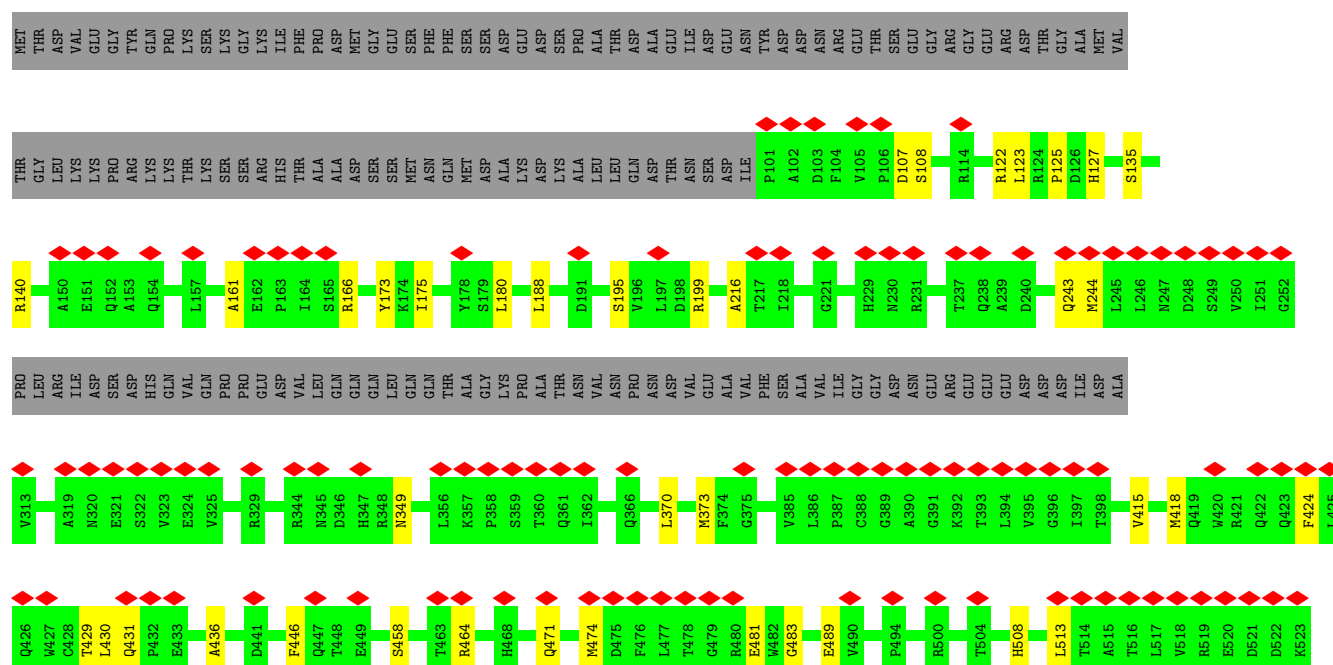


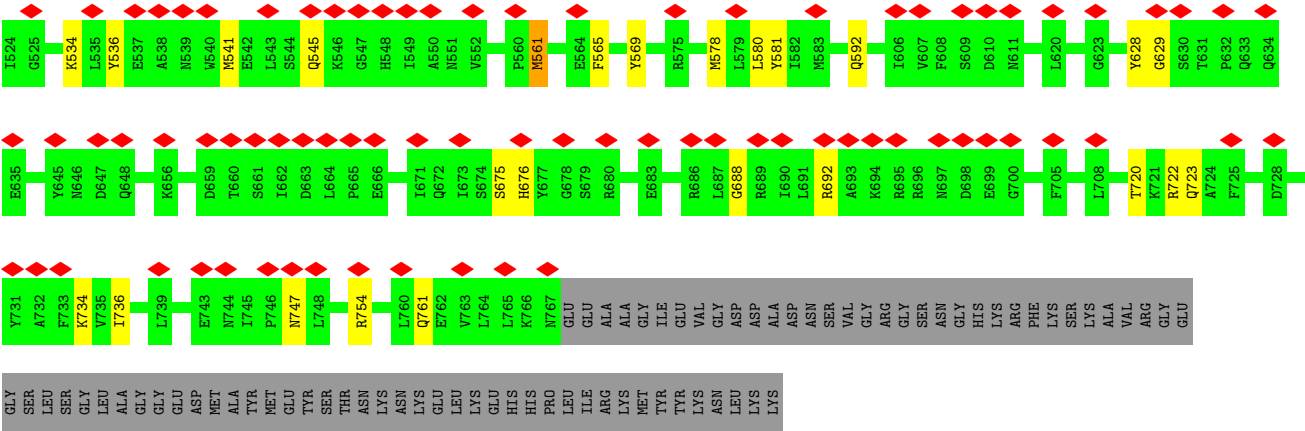
- Molecule 6: General transcription and DNA repair factor IIH subunit TFB5



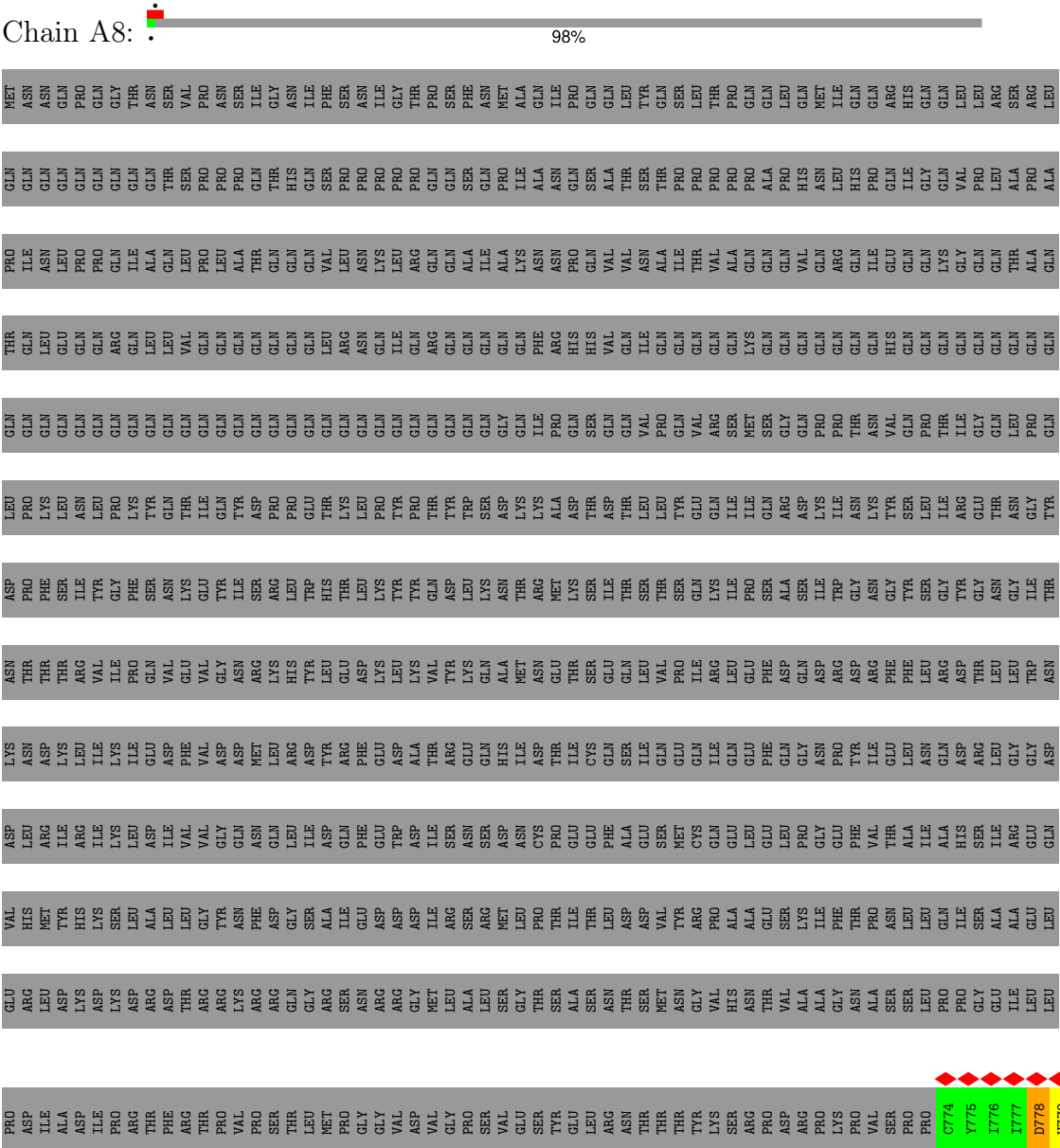


• Molecule 8: General transcription and DNA repair factor IIH helicase subunit XPB



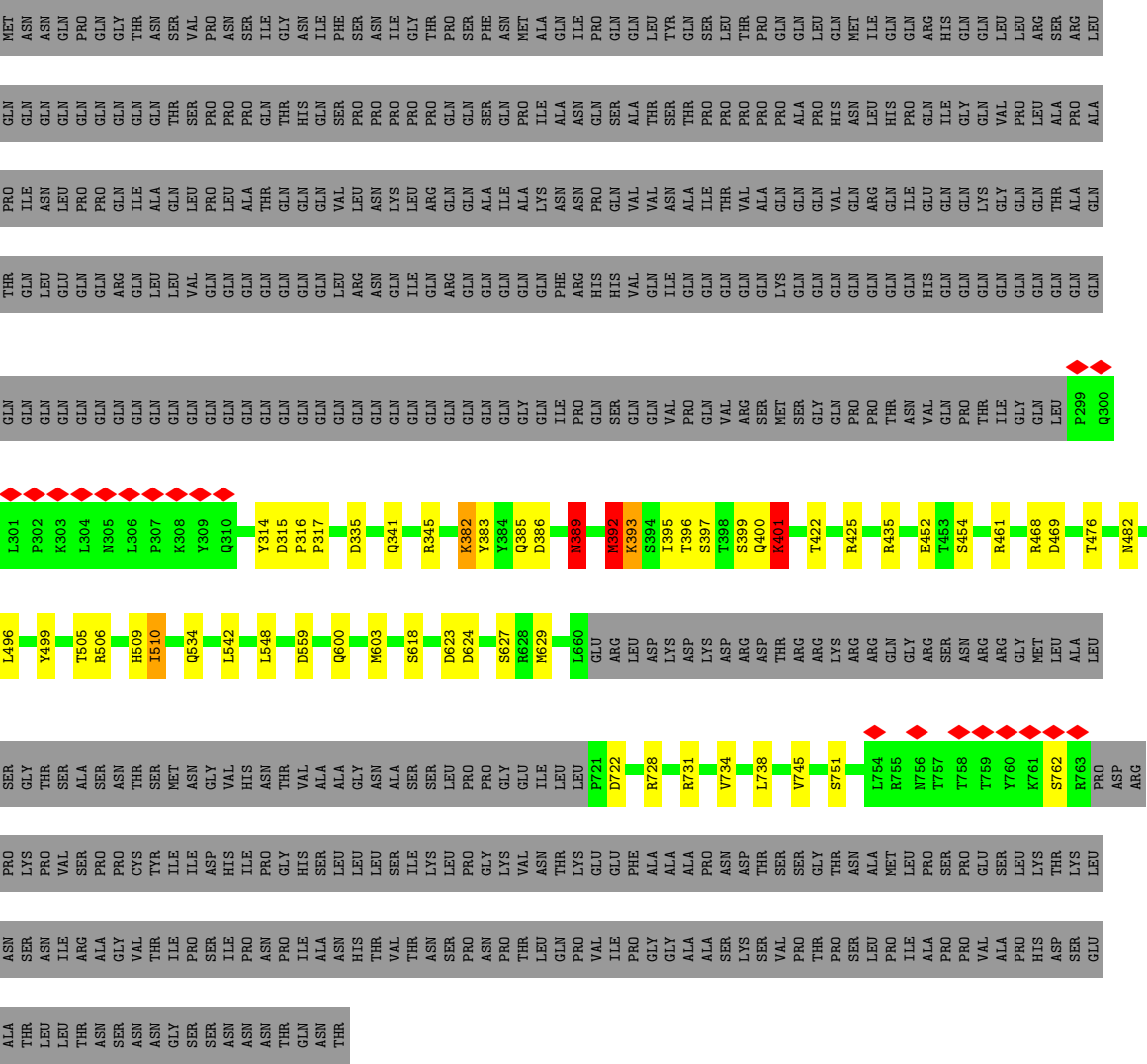
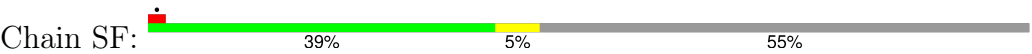


● Molecule 9: SWI/SNF chromatin-remodeling complex subunit SNF5

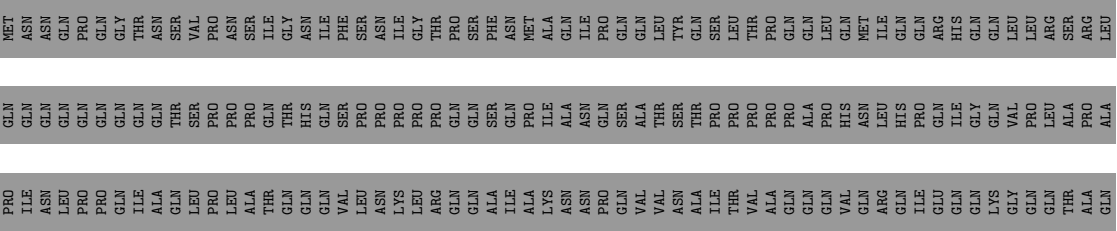


ASN
THR
GLN
ASN
THR

● Molecule 9: SWI/SNF chromatin-remodeling complex subunit SNF5



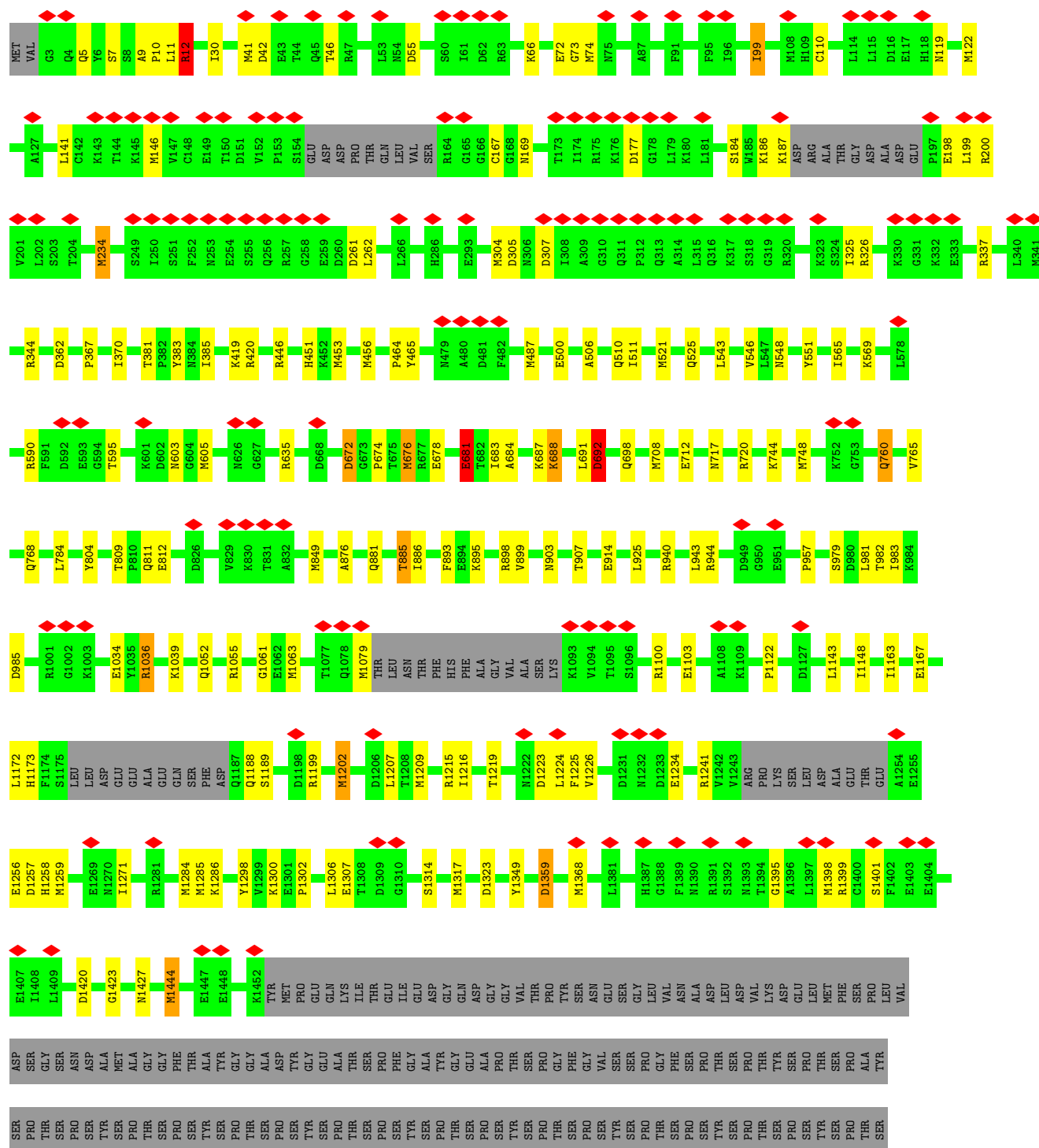
● Molecule 9: SWI/SNF chromatin-remodeling complex subunit SNF5



- Molecule 9: SWI/SNF chromatin-remodeling complex subunit SNF5

Chain nF: 98%

[illegible]



[illegible]

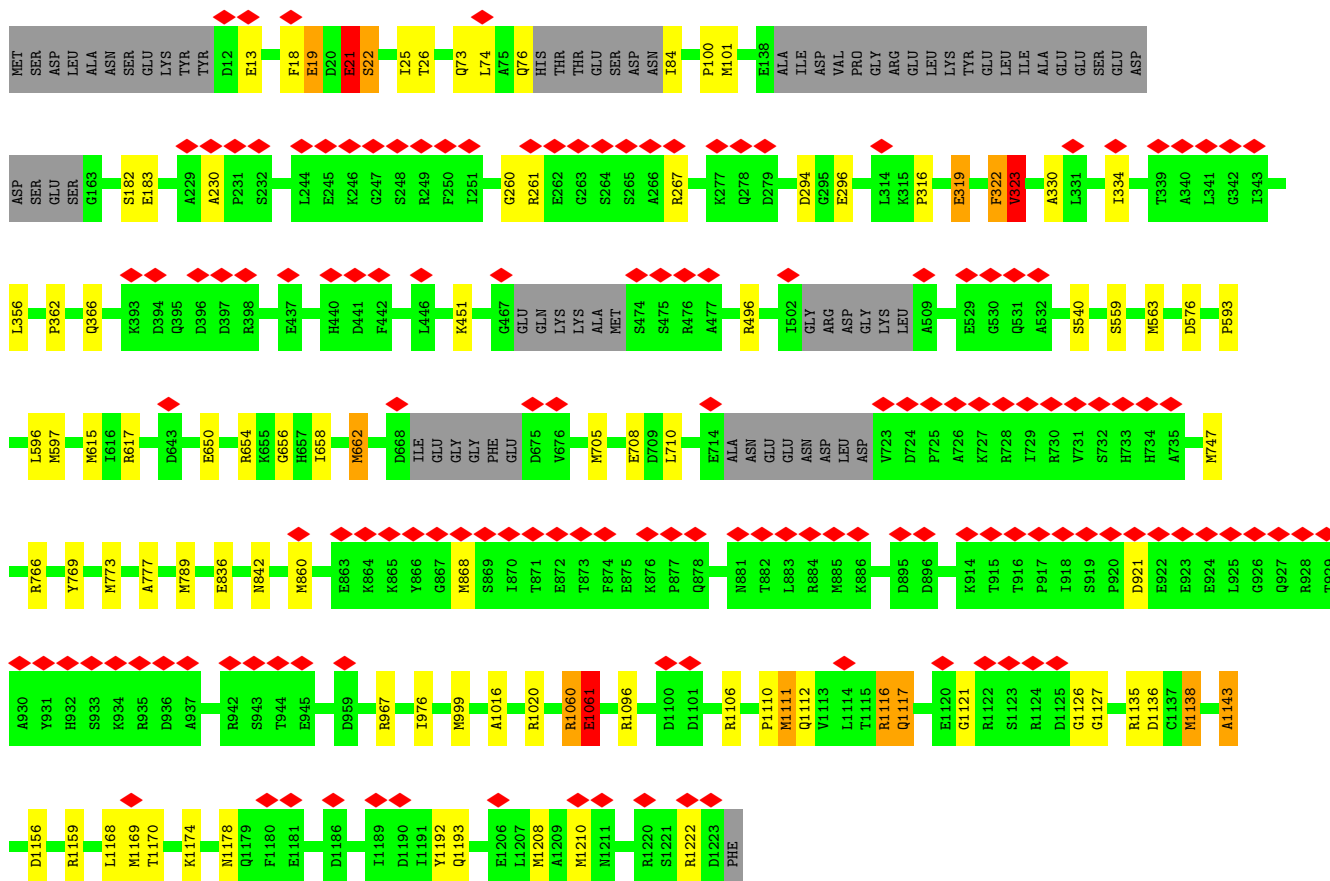
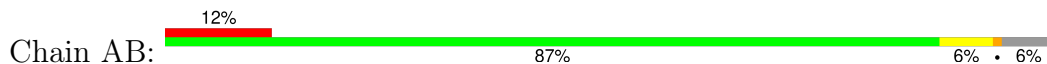
- Molecule 11: DNA-directed RNA polymerase II subunit RPB1

Chain MA: 95%

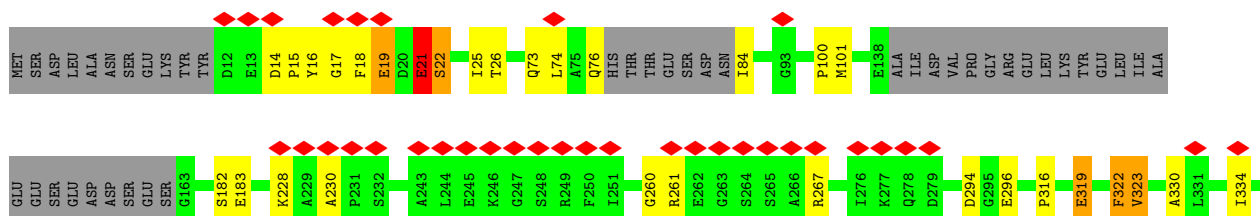
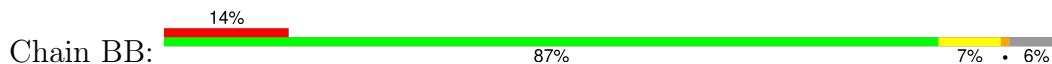
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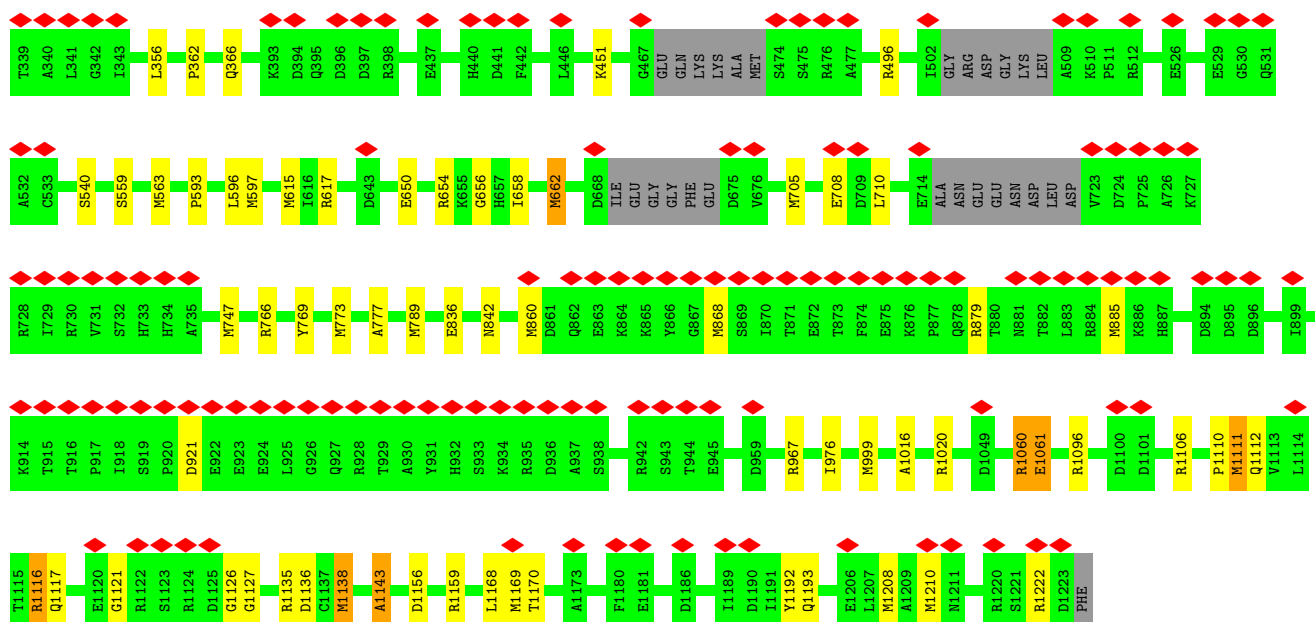


- Molecule 12: DNA-directed RNA polymerase II subunit RPB2

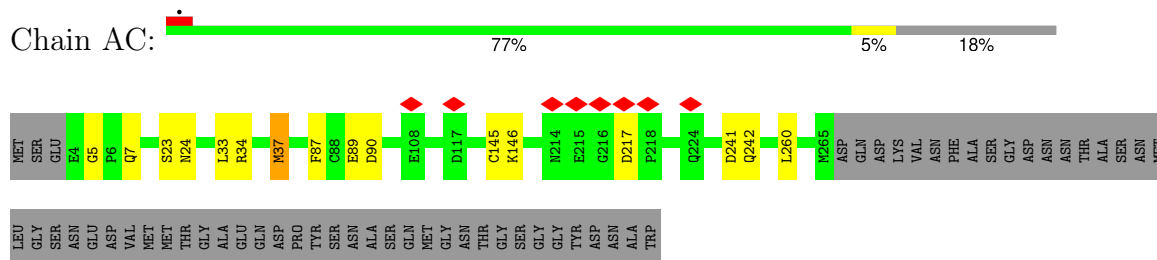


- Molecule 12: DNA-directed RNA polymerase II subunit RPB2

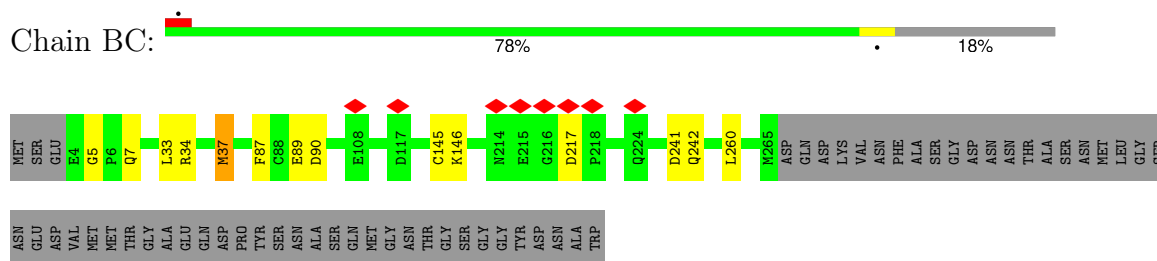




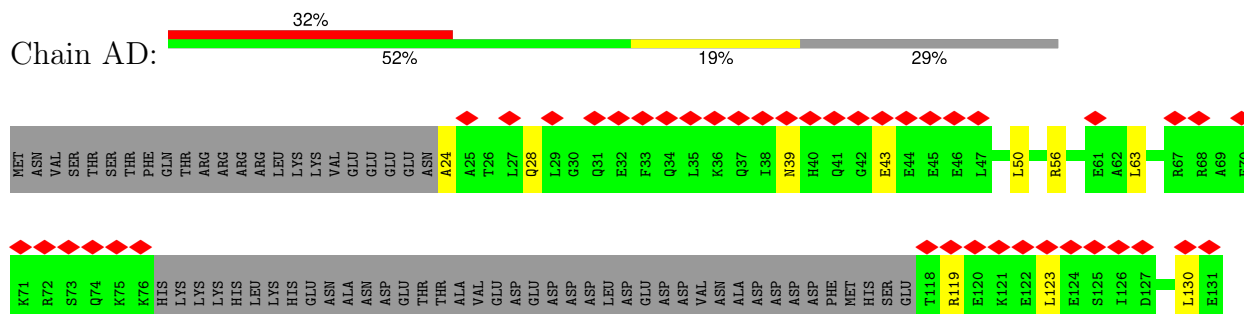
• Molecule 13: DNA-directed RNA polymerase II subunit RPB3

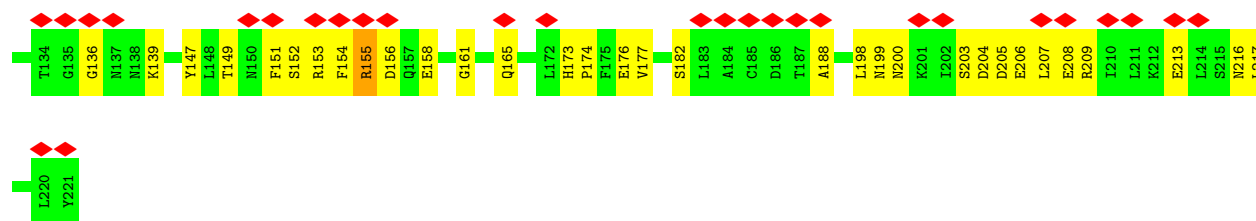


• Molecule 13: DNA-directed RNA polymerase II subunit RPB3

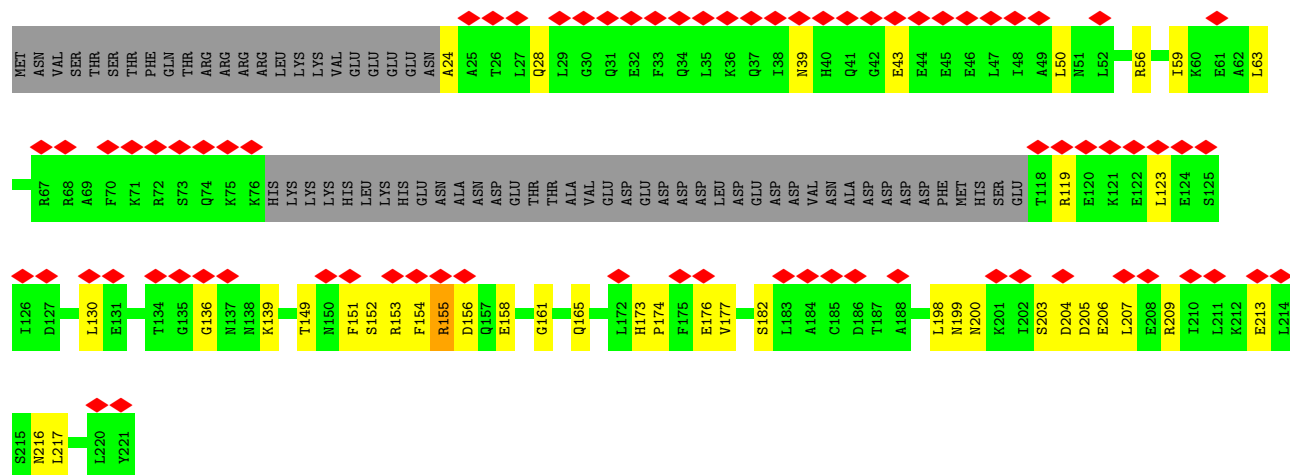


• Molecule 14: DNA-directed RNA polymerase II subunit RPB4

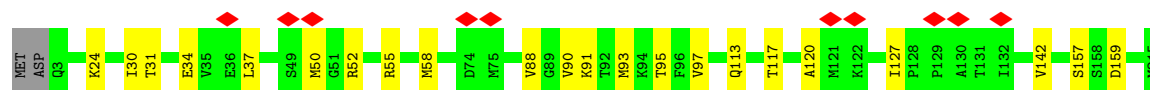
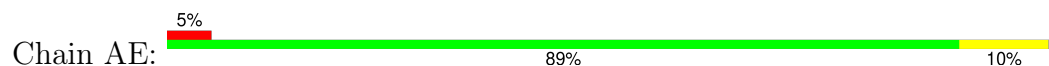




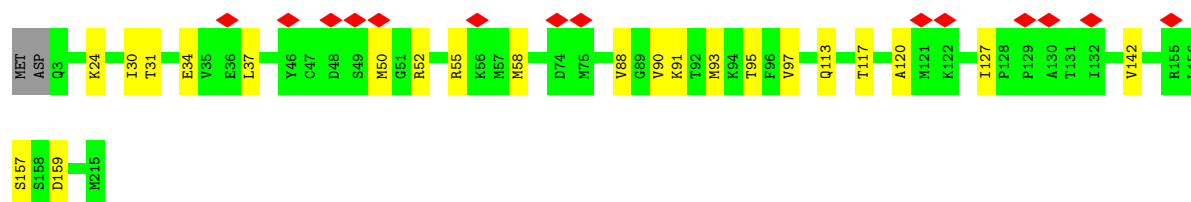
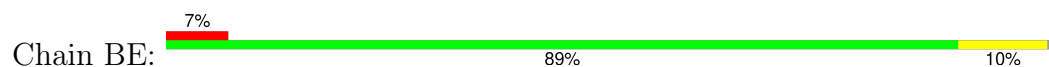
- Molecule 14: DNA-directed RNA polymerase II subunit RPB4



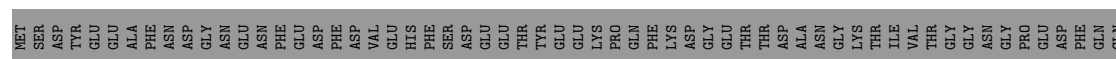
- Molecule 15: DNA-directed RNA polymerases I, II, and III subunit RPABC1

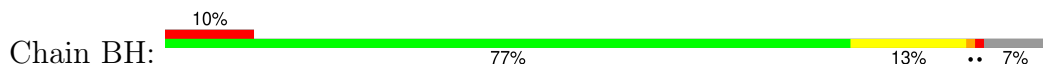


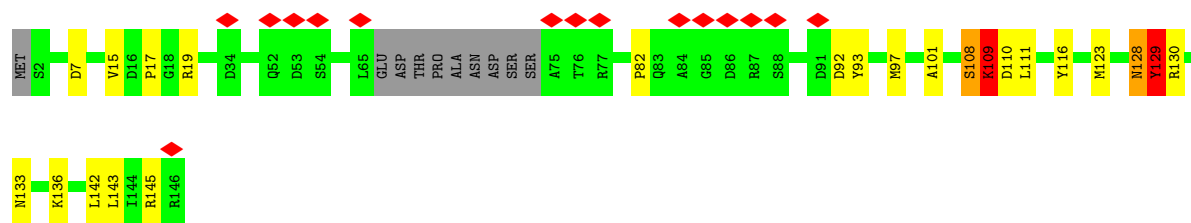
- Molecule 15: DNA-directed RNA polymerases I, II, and III subunit RPABC1



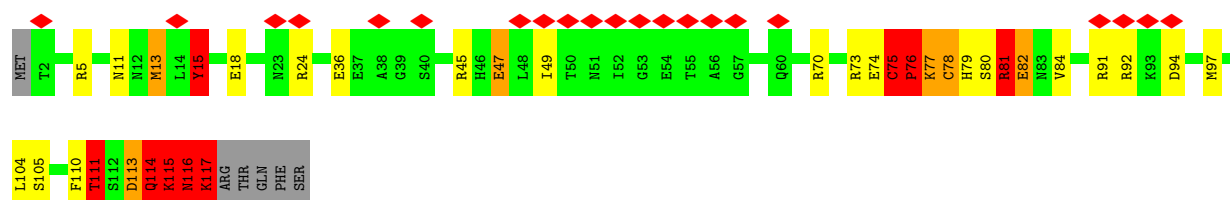
- Molecule 16: DNA-directed RNA polymerases I, II, and III subunit RPABC2



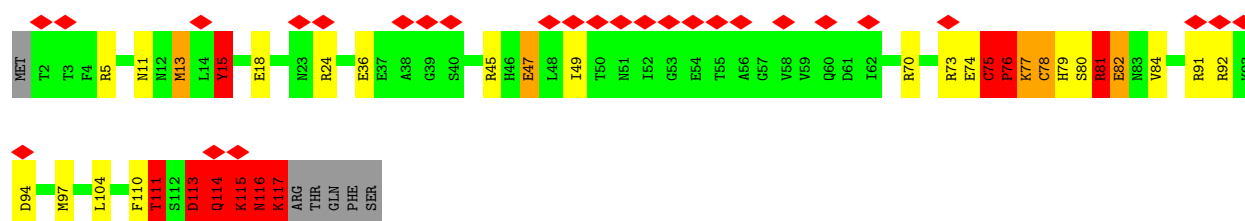




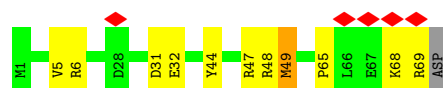
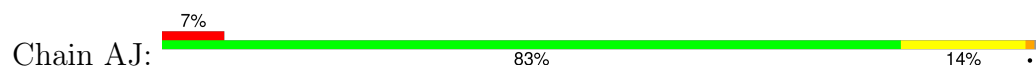
- Molecule 19: DNA-directed RNA polymerase II subunit RPB9



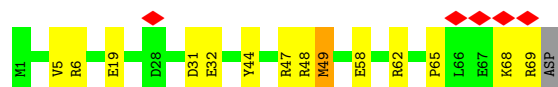
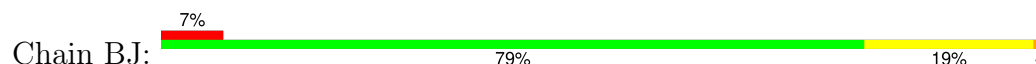
- Molecule 19: DNA-directed RNA polymerase II subunit RPB9



- Molecule 20: DNA-directed RNA polymerases I, II, and III subunit RPABC5

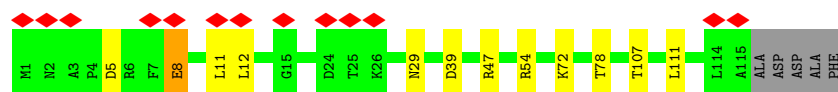


- Molecule 20: DNA-directed RNA polymerases I, II, and III subunit RPABC5

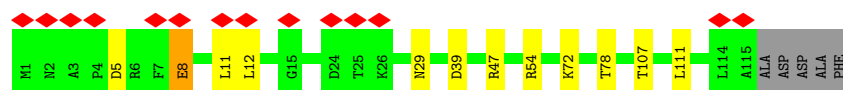
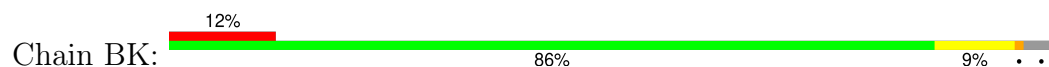


- Molecule 21: DNA-directed RNA polymerase II subunit RPB11

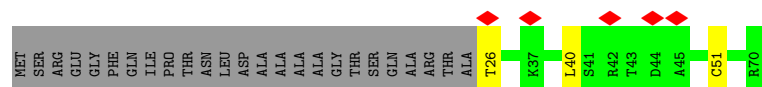




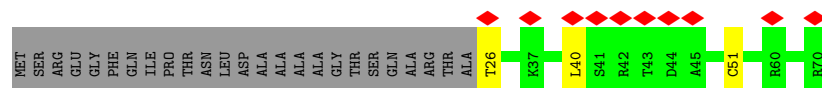
- Molecule 21: DNA-directed RNA polymerase II subunit RPB11



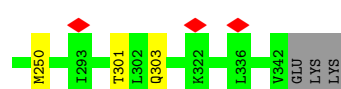
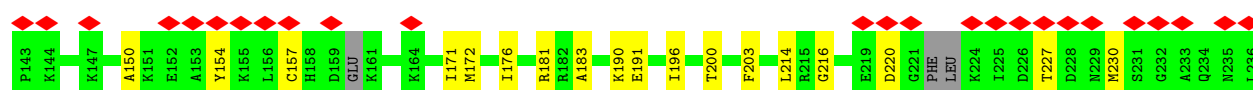
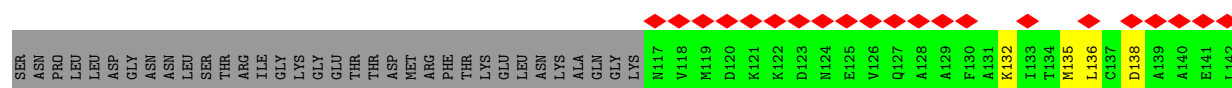
- Molecule 22: DNA-directed RNA polymerases I, II, and III subunit RPABC4



- Molecule 22: DNA-directed RNA polymerases I, II, and III subunit RPABC4

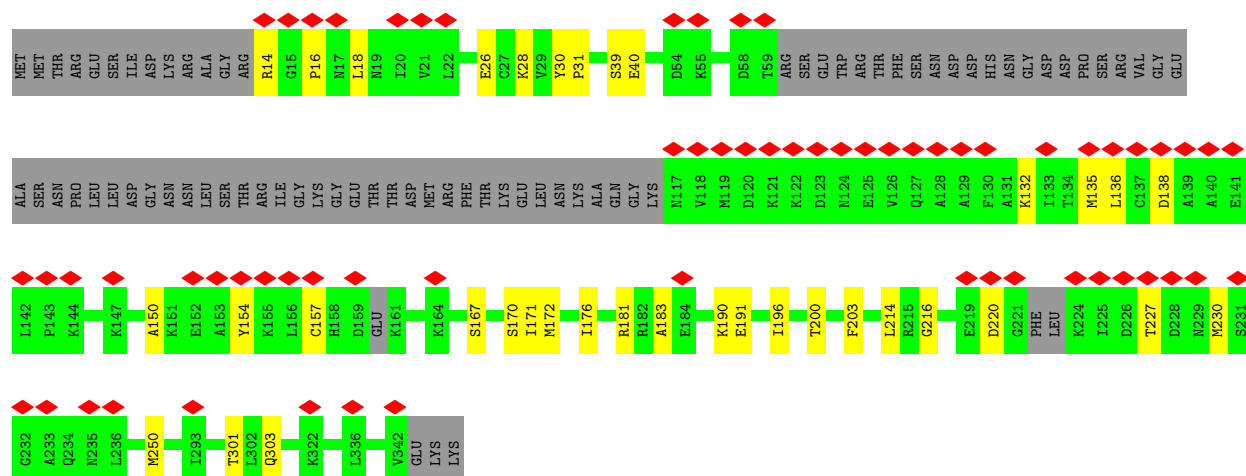


- Molecule 23: Transcription initiation factor IIB

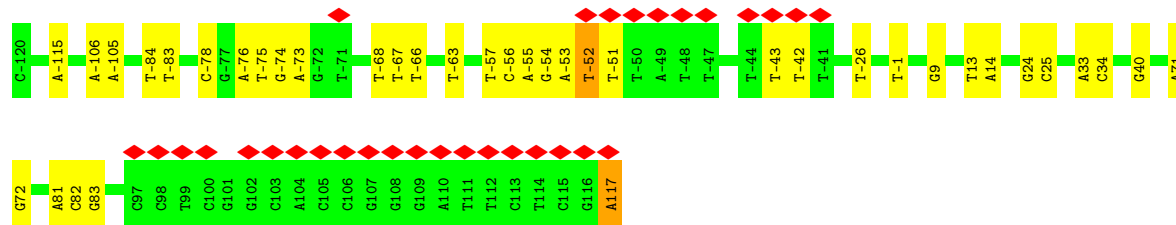
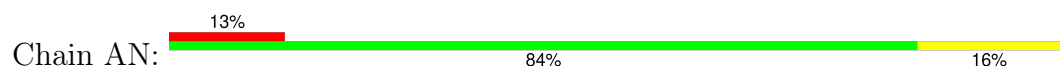


- Molecule 23: Transcription initiation factor IIB

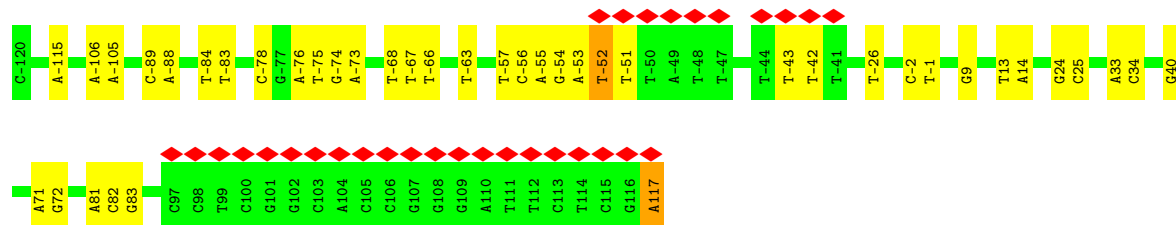
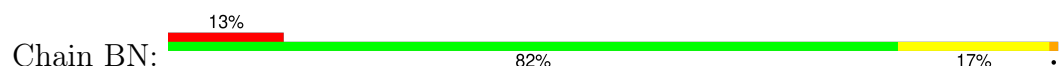




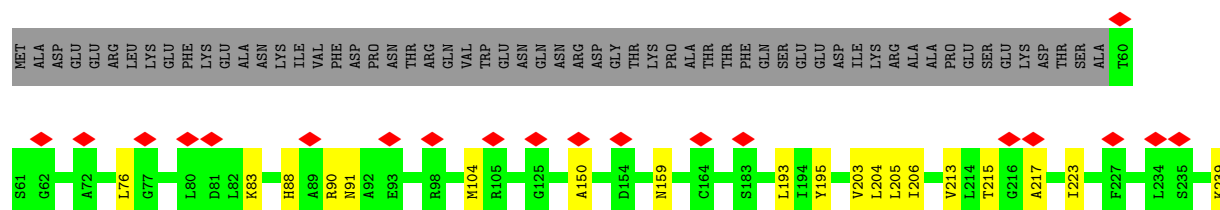
• Molecule 24: promoter DNA

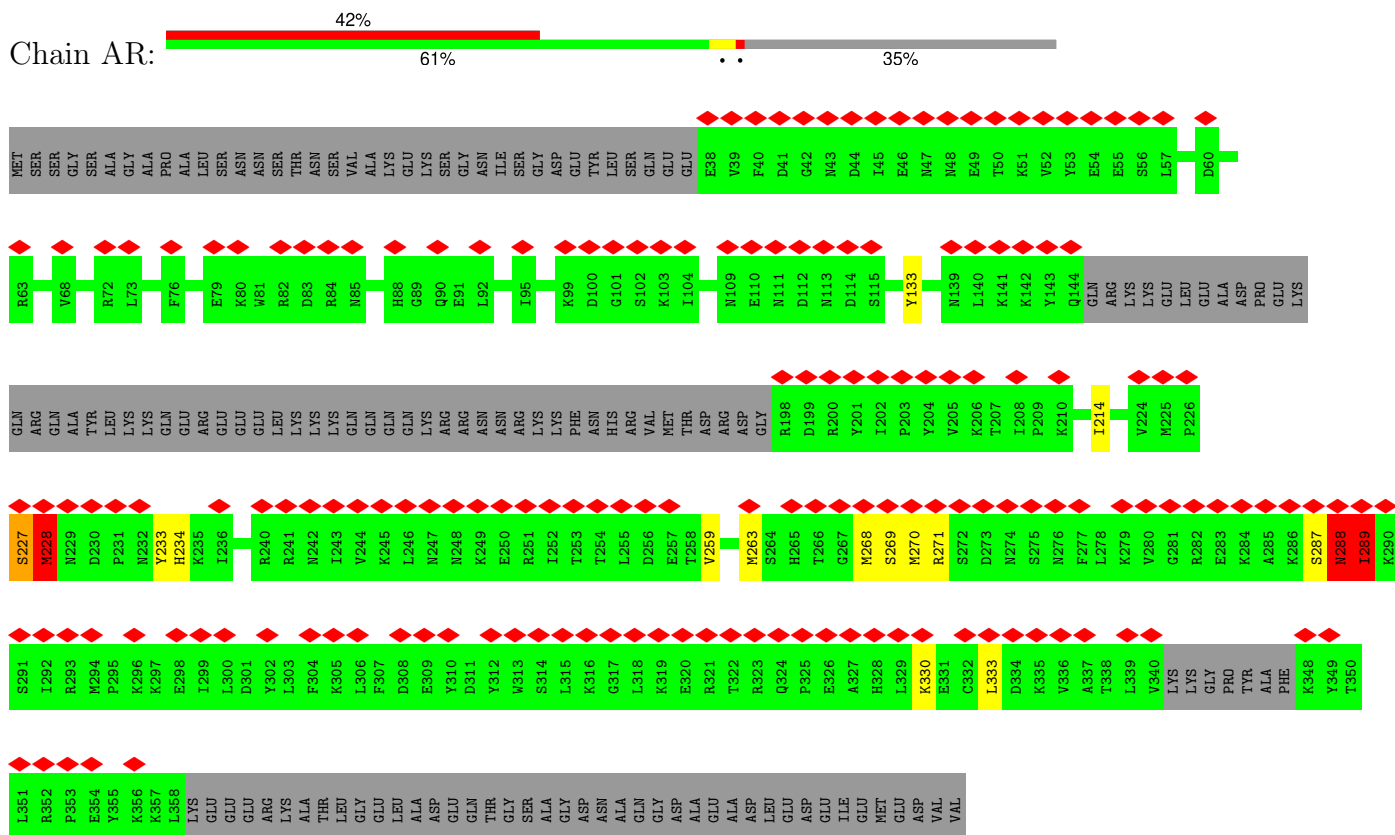


• Molecule 24: promoter DNA

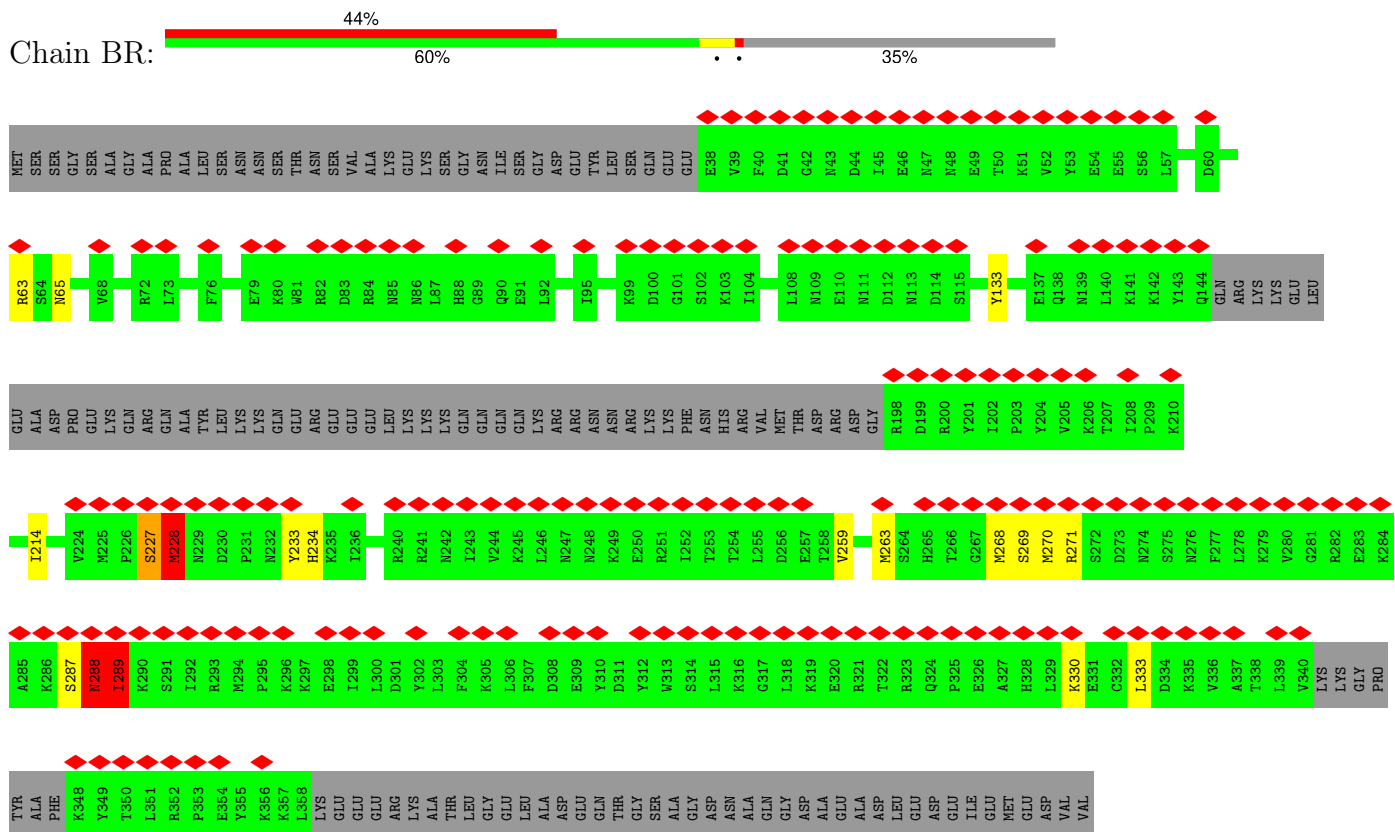


• Molecule 25: TATA-box-binding protein

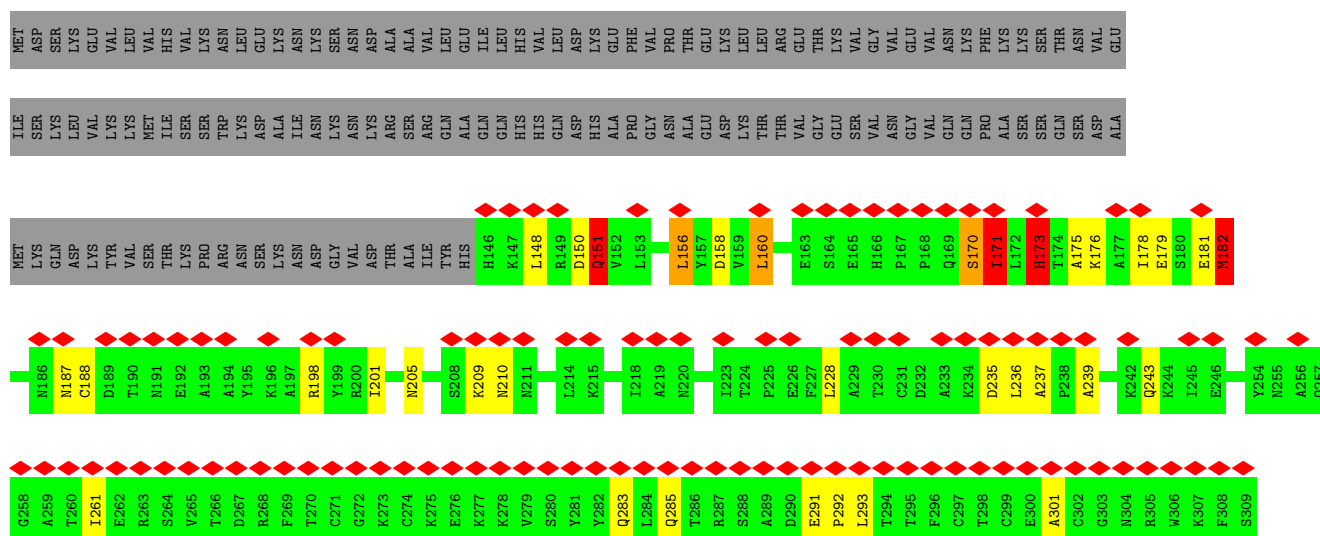
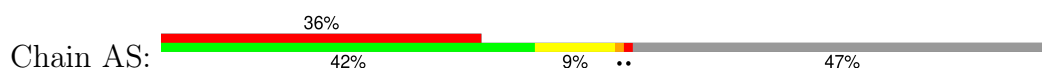




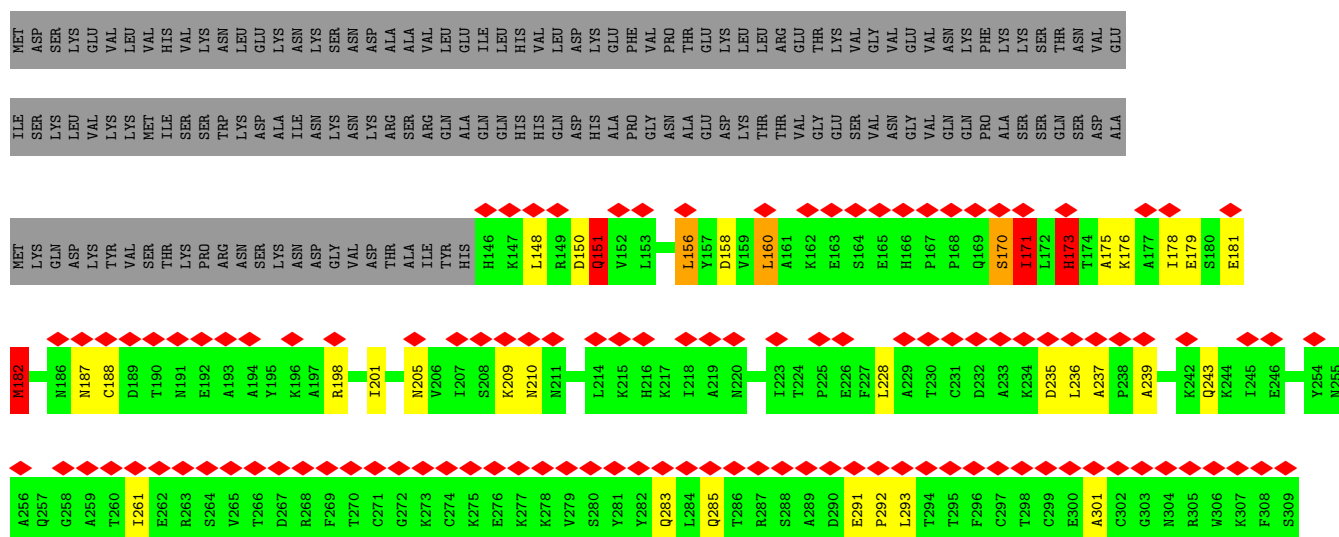
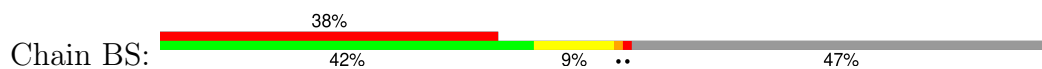
- Molecule 27: Transcription initiation factor IIF subunit beta



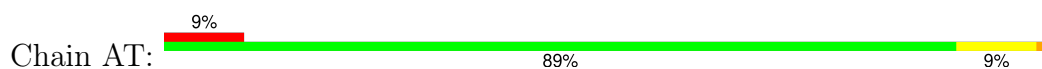
- Molecule 28: Transcription elongation factor S-II



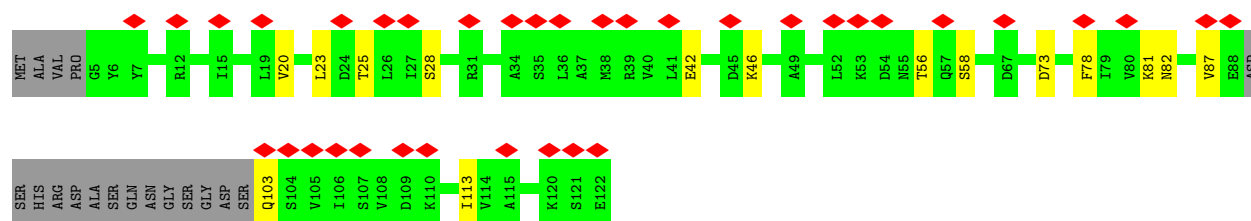
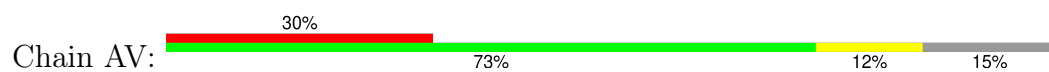
• Molecule 28: Transcription elongation factor S-II



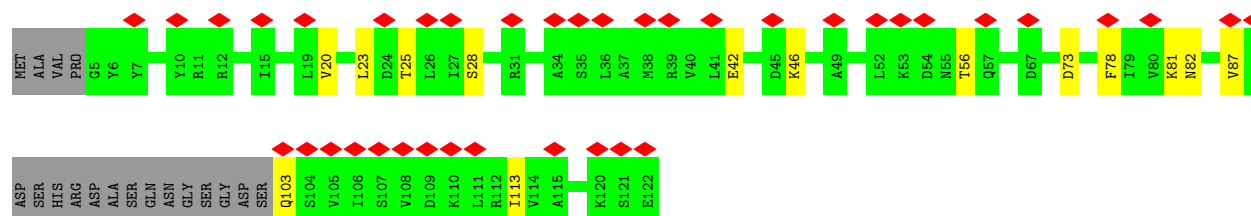
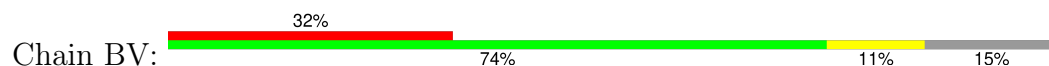
• Molecule 29: promoter DNA



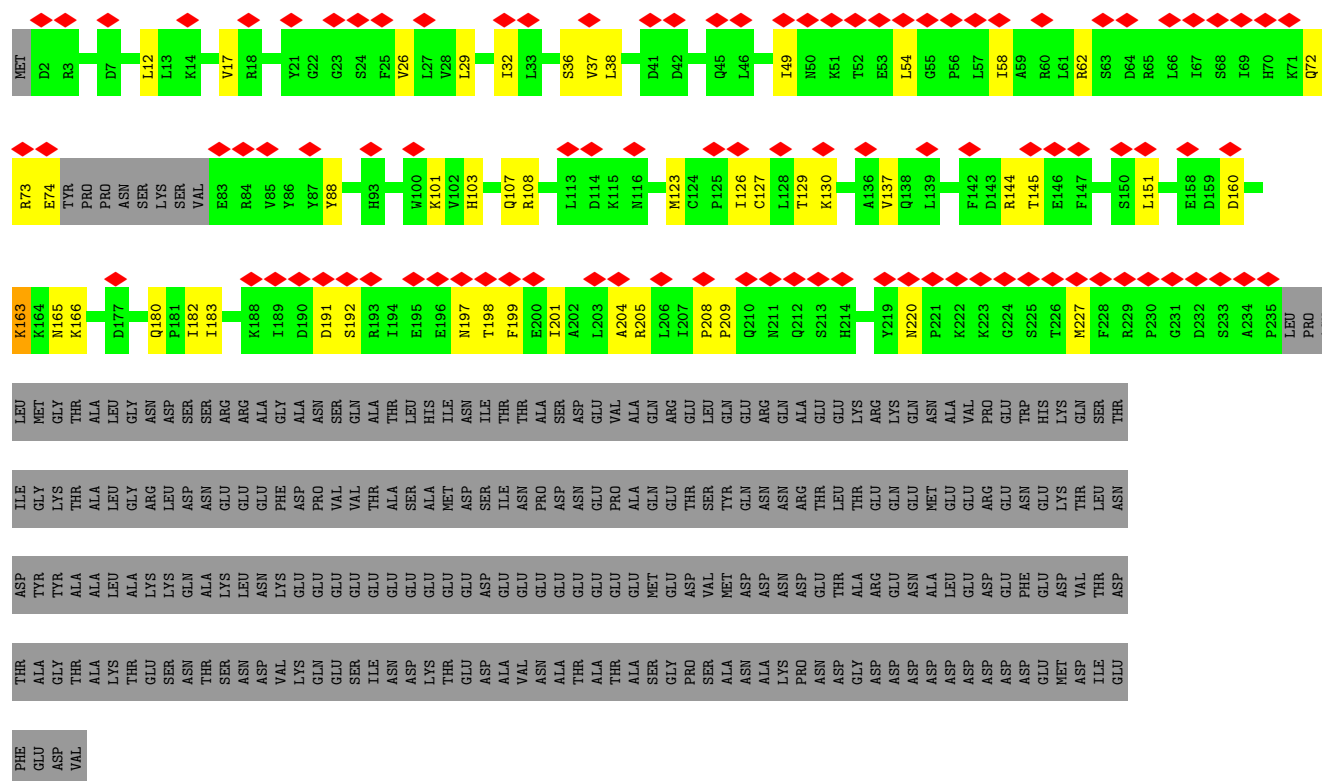
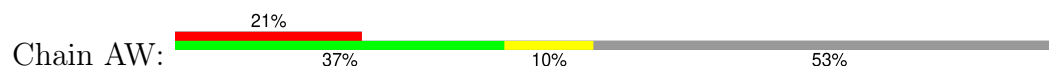
• Molecule 29: promoter DNA



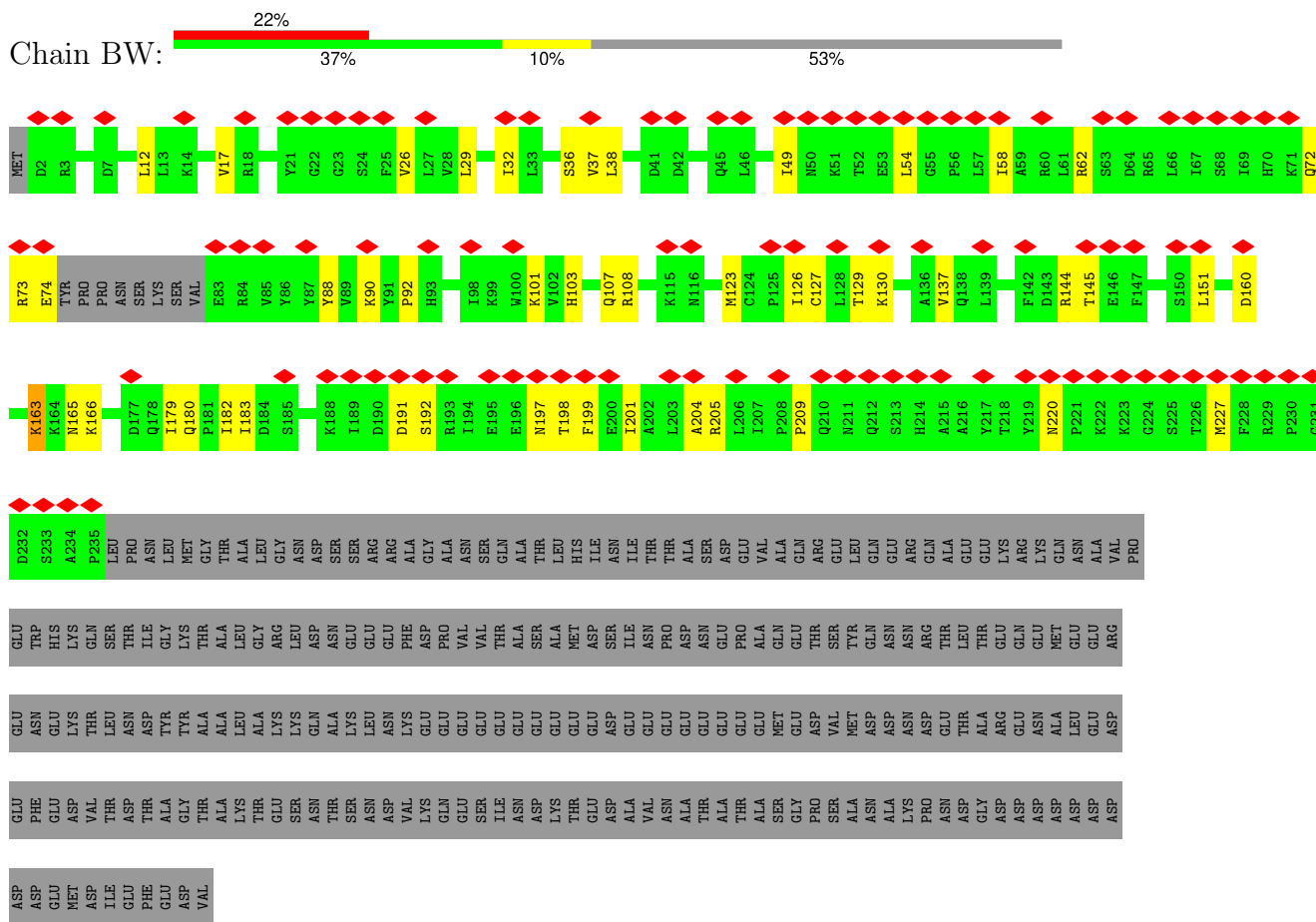
• Molecule 31: Transcription initiation factor IIA subunit 2



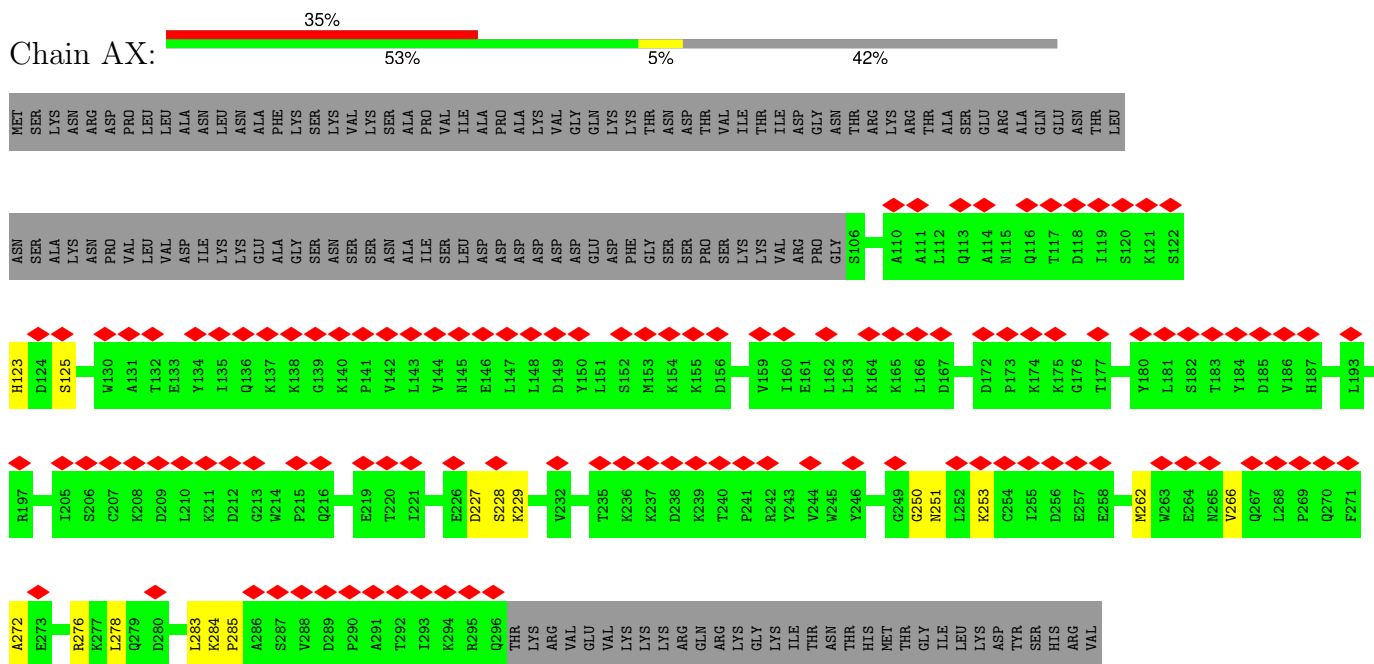
• Molecule 32: Transcription initiation factor IIE subunit alpha



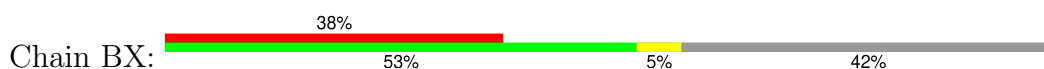
• Molecule 32: Transcription initiation factor IIE subunit alpha



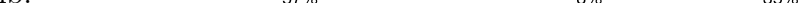
- Molecule 33: Transcription initiation factor IIE subunit beta

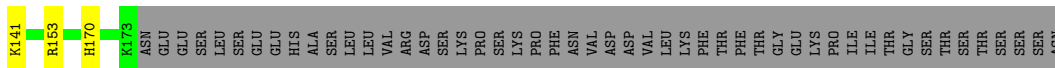
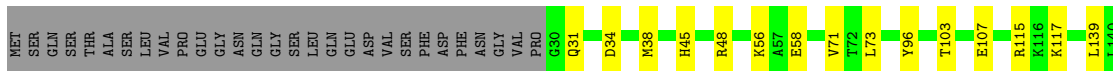


- Molecule 33: Transcription initiation factor IIE subunit beta

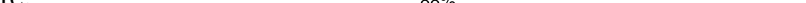


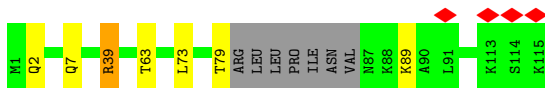
- Molecule 35: Mediator of RNA polymerase II transcription subunit 8

Chain mb: 

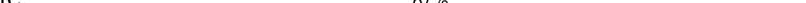


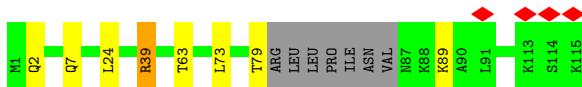
- Molecule 36: Mediator of RNA polymerase II transcription subunit 11

Chain Mc:  88% 5% 6%

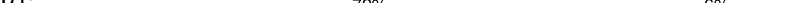


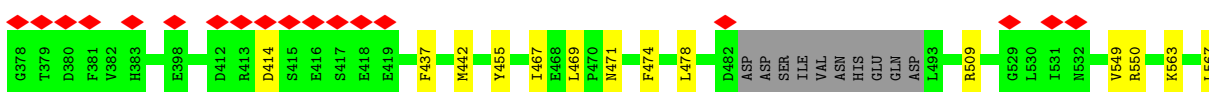
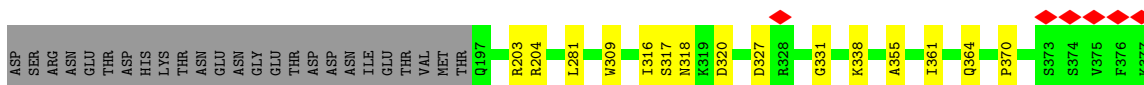
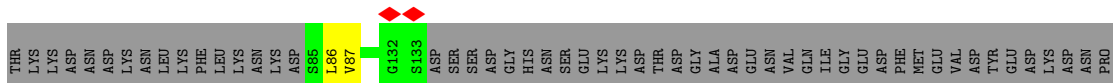
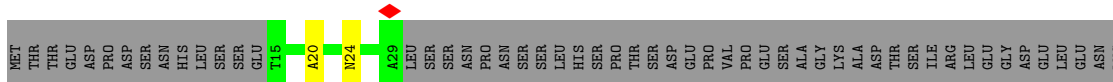
- Molecule 36: Mediator of RNA polymerase II transcription subunit 11

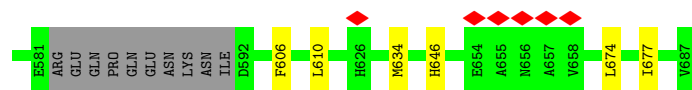
Chain mc:  87% 6% • 6%



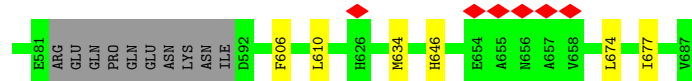
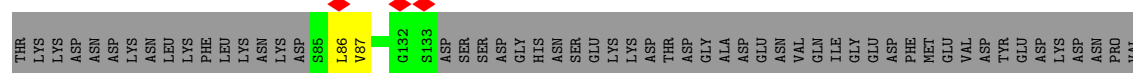
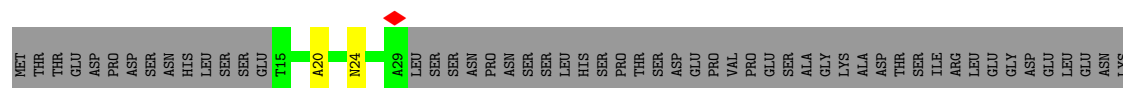
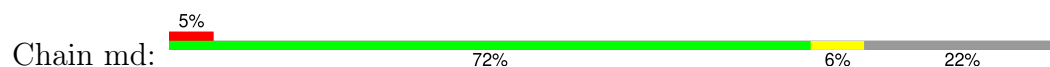
- Molecule 37: Mediator of RNA polymerase II transcription subunit 17

Chain Md: 

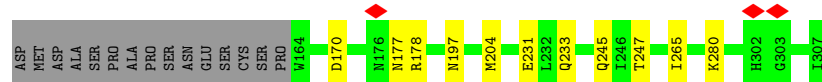
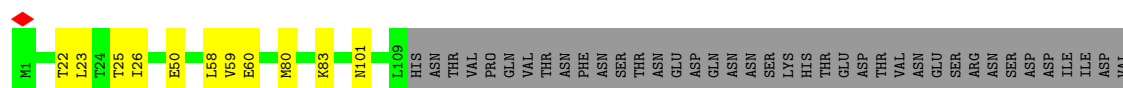
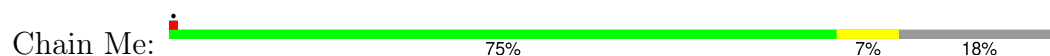




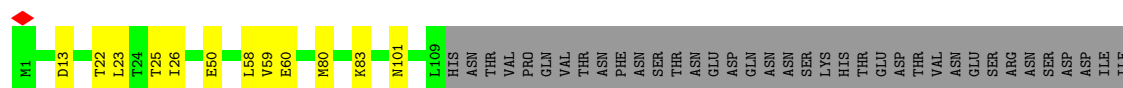
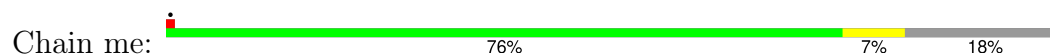
- Molecule 37: Mediator of RNA polymerase II transcription subunit 17



- Molecule 38: Mediator of RNA polymerase II transcription subunit 18



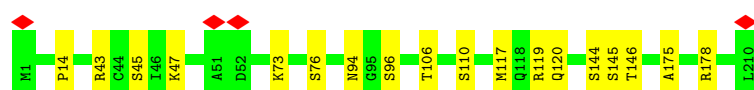
- Molecule 38: Mediator of RNA polymerase II transcription subunit 18



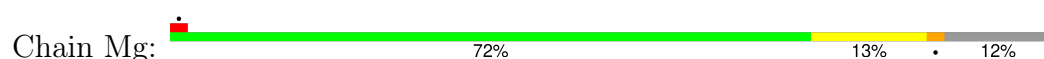
- Molecule 39: Mediator of RNA polymerase II transcription subunit 20



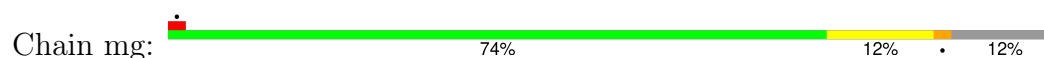
- Molecule 39: Mediator of RNA polymerase II transcription subunit 20



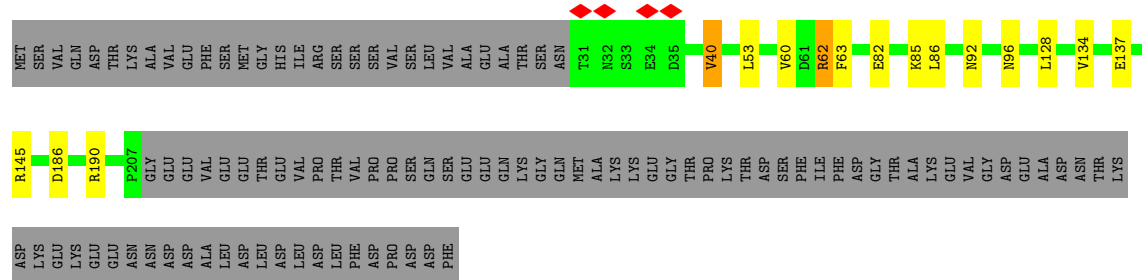
- Molecule 40: Mediator of RNA polymerase II transcription subunit 22



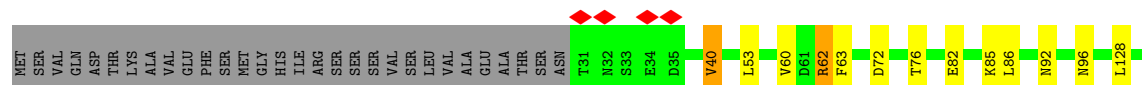
- Molecule 40: Mediator of RNA polymerase II transcription subunit 22

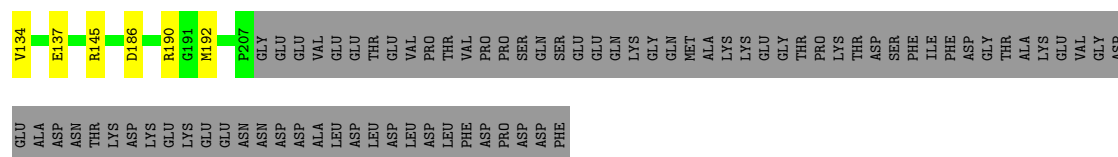


- Molecule 41: Mediator of RNA polymerase II transcription subunit 4

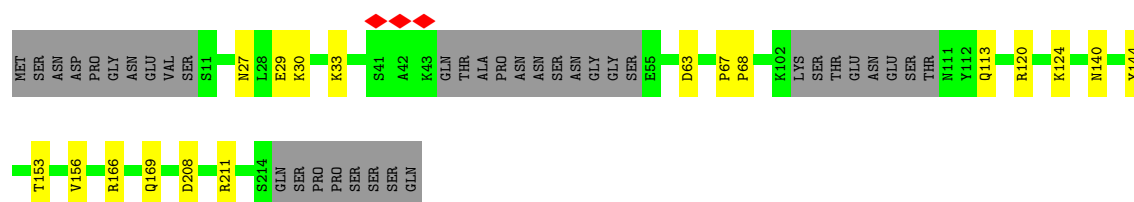
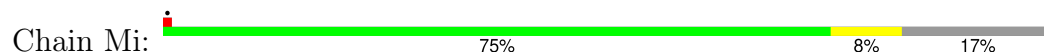


- Molecule 41: Mediator of RNA polymerase II transcription subunit 4

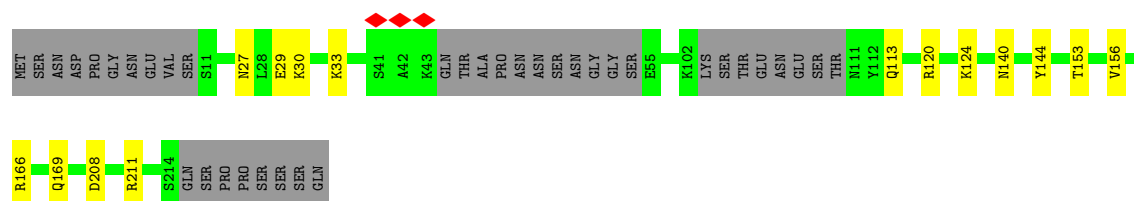
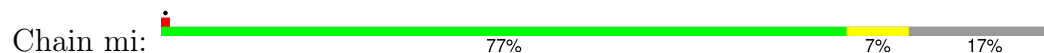




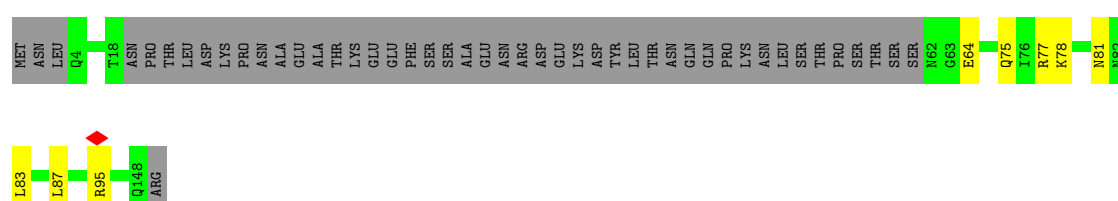
- Molecule 42: Mediator of RNA polymerase II transcription subunit 7



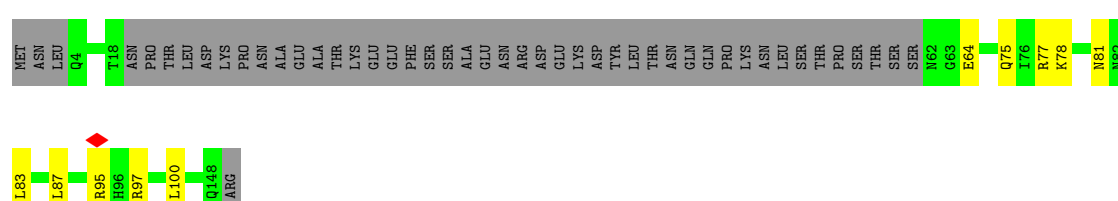
- Molecule 42: Mediator of RNA polymerase II transcription subunit 7



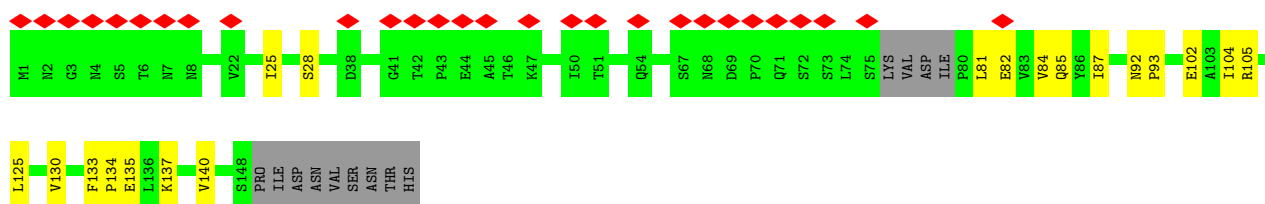
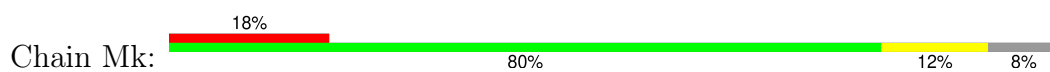
- Molecule 43: Mediator of RNA polymerase II transcription subunit 9



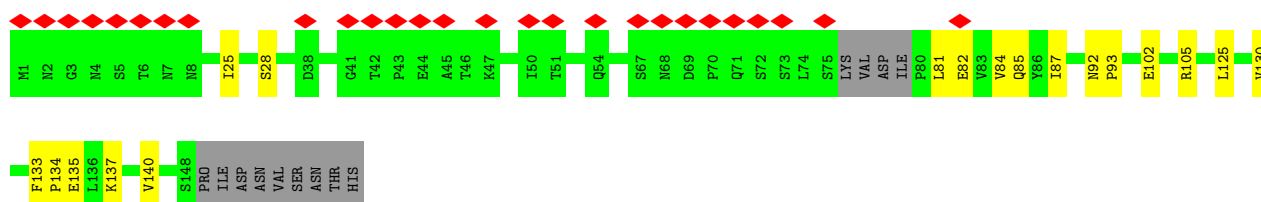
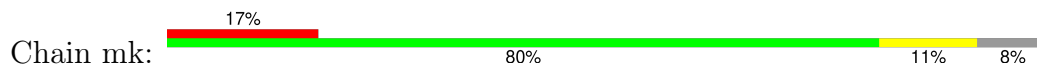
- Molecule 43: Mediator of RNA polymerase II transcription subunit 9



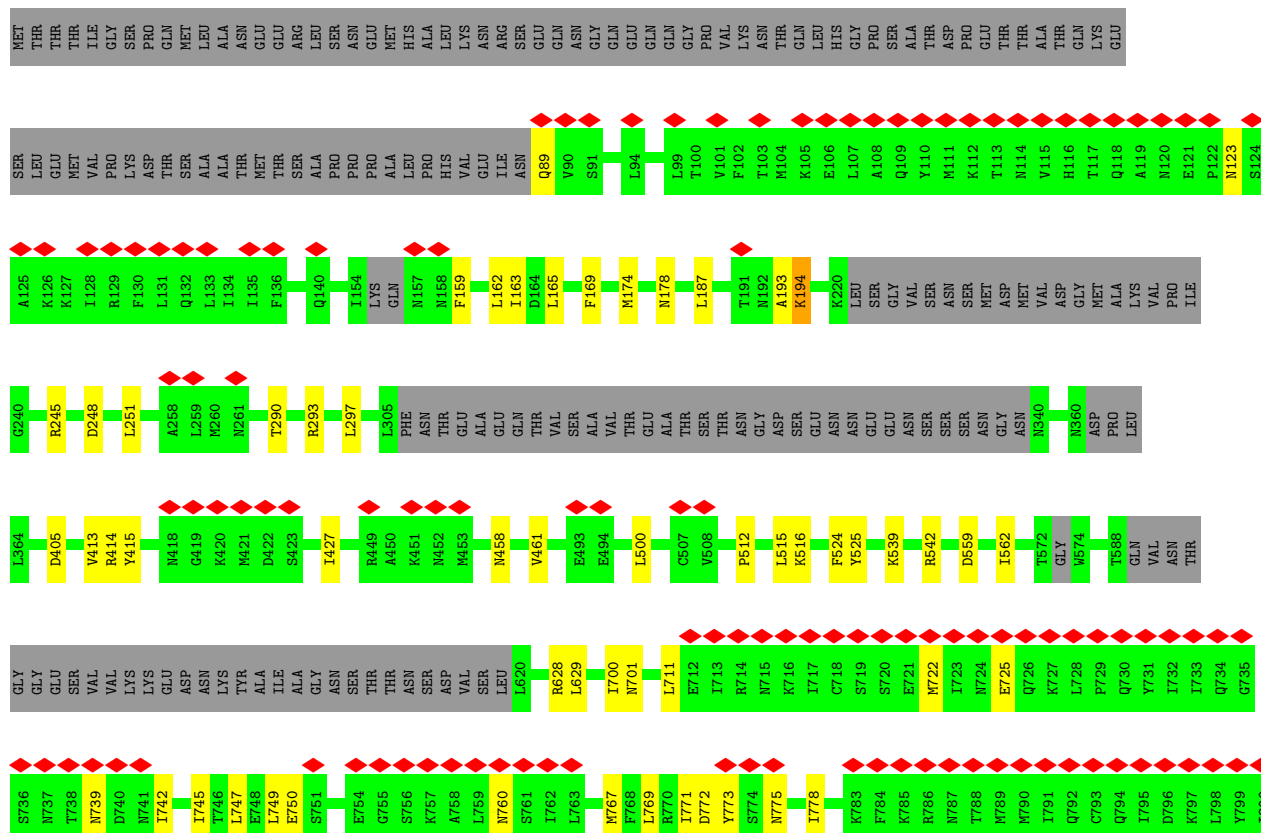
- Molecule 44: Mediator of RNA polymerase II transcription subunit 10



- Molecule 44: Mediator of RNA polymerase II transcription subunit 10

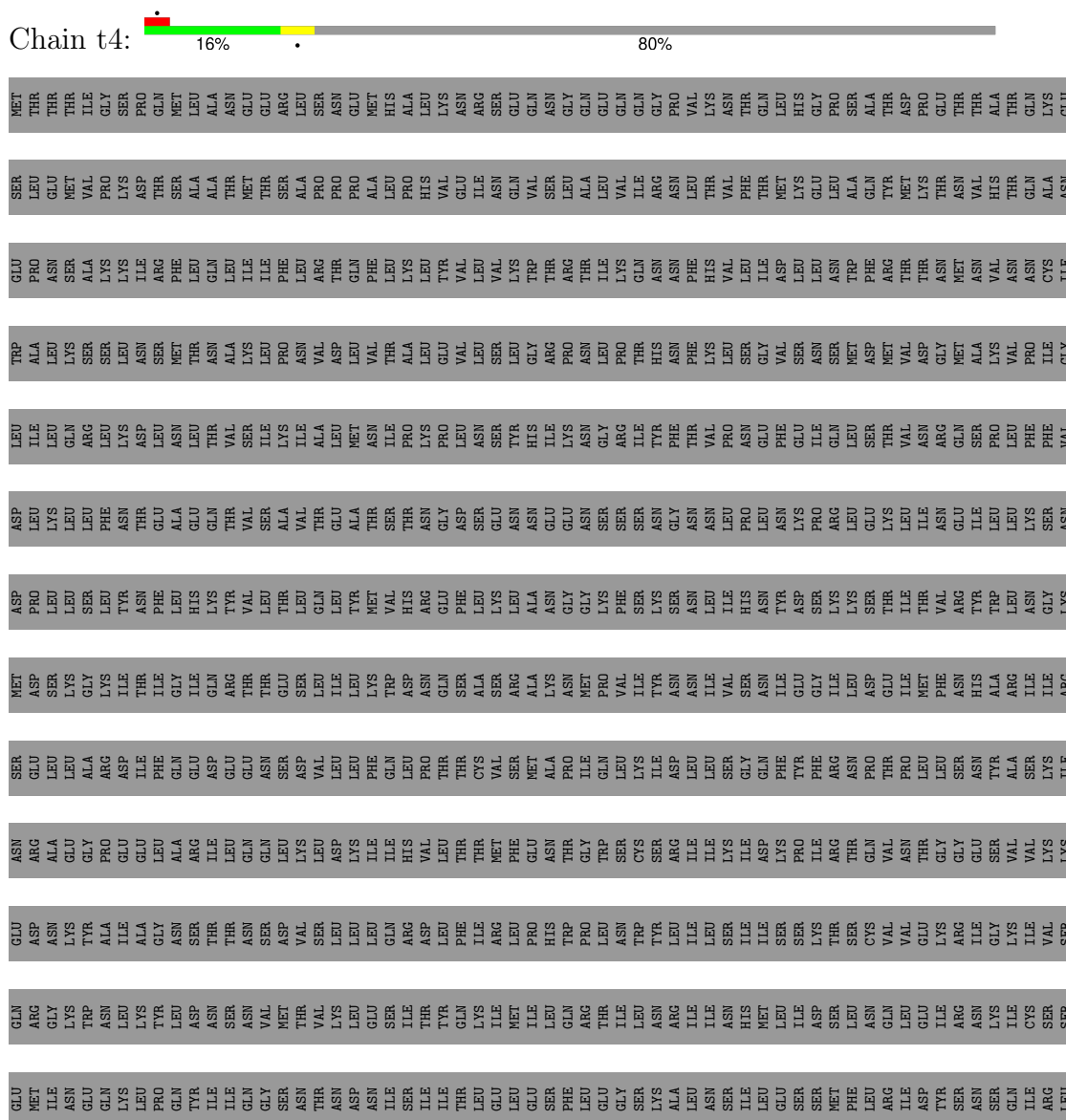


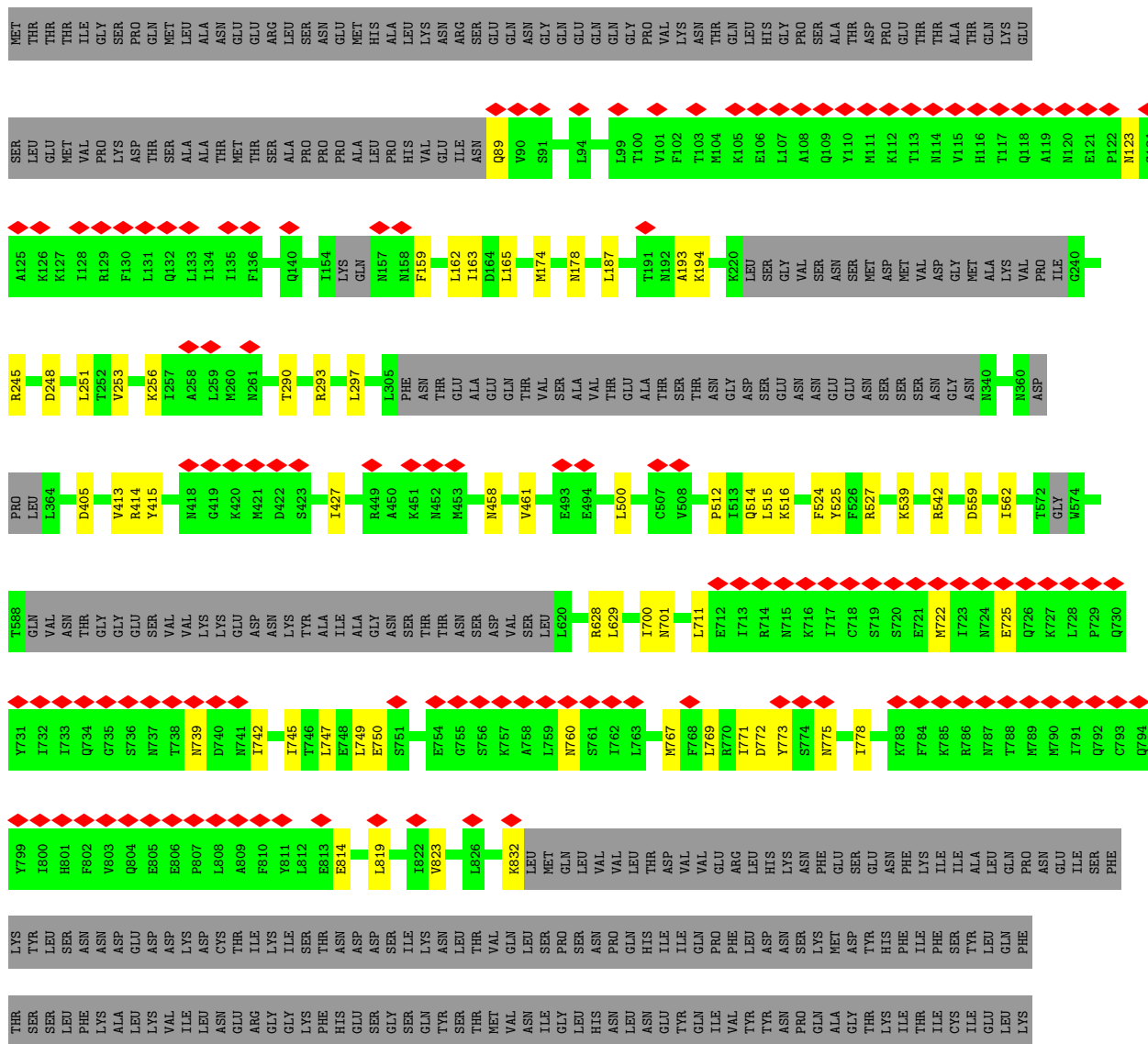
- Molecule 45: Mediator of RNA polymerase II transcription subunit 14

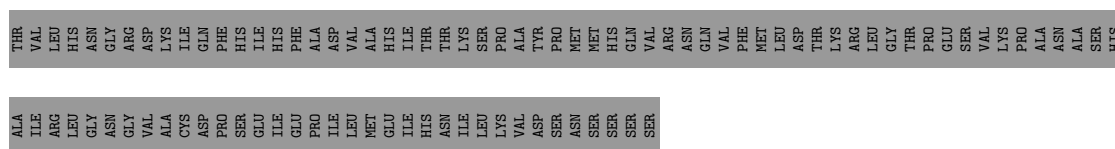




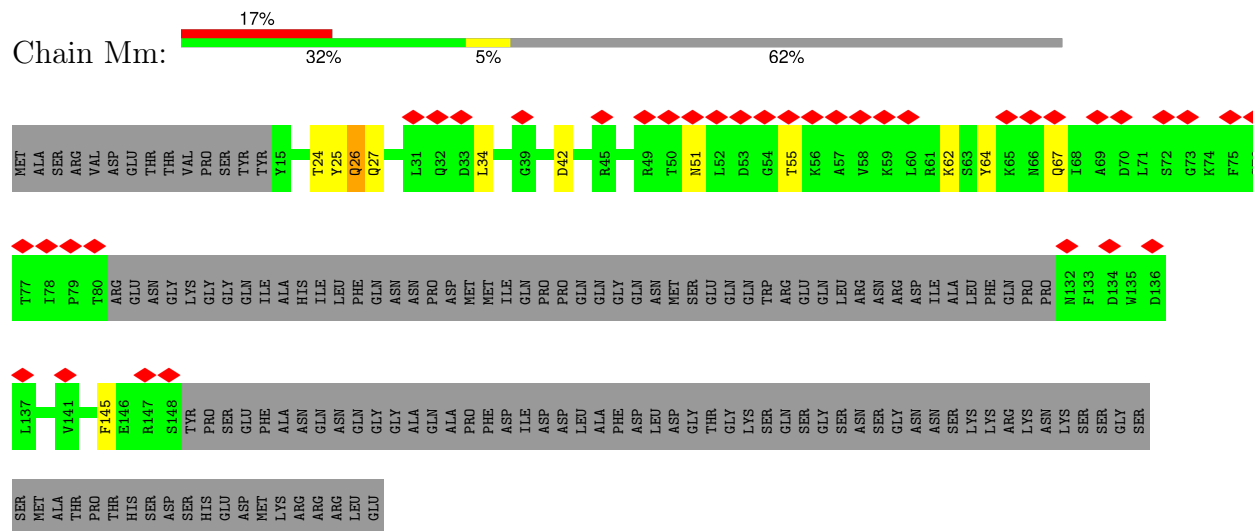
- Molecule 45: Mediator of RNA polymerase II transcription subunit 14



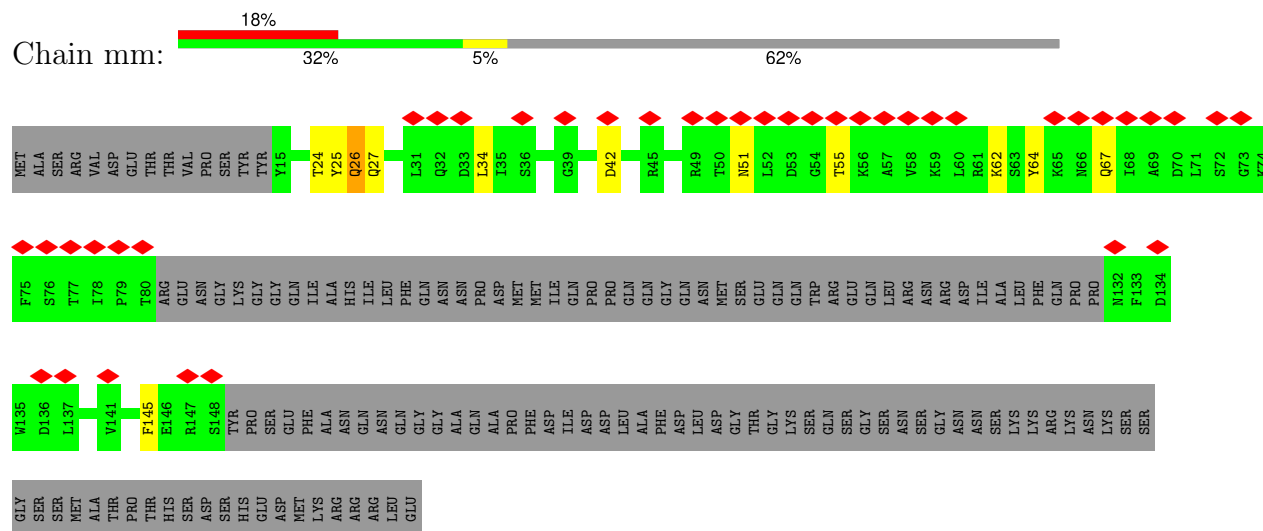




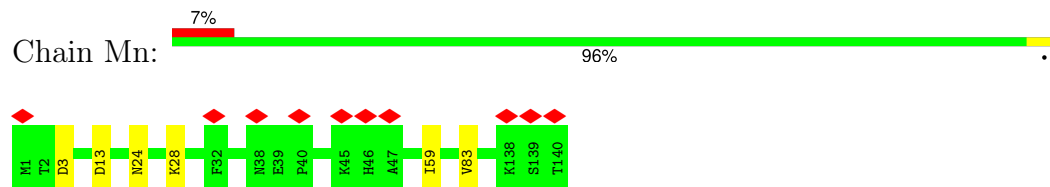
- Molecule 46: Mediator of RNA polymerase II transcription subunit 19



- Molecule 46: Mediator of RNA polymerase II transcription subunit 19



- Molecule 47: Mediator of RNA polymerase II transcription subunit 21



- Molecule 47: Mediator of RNA polymerase II transcription subunit 21

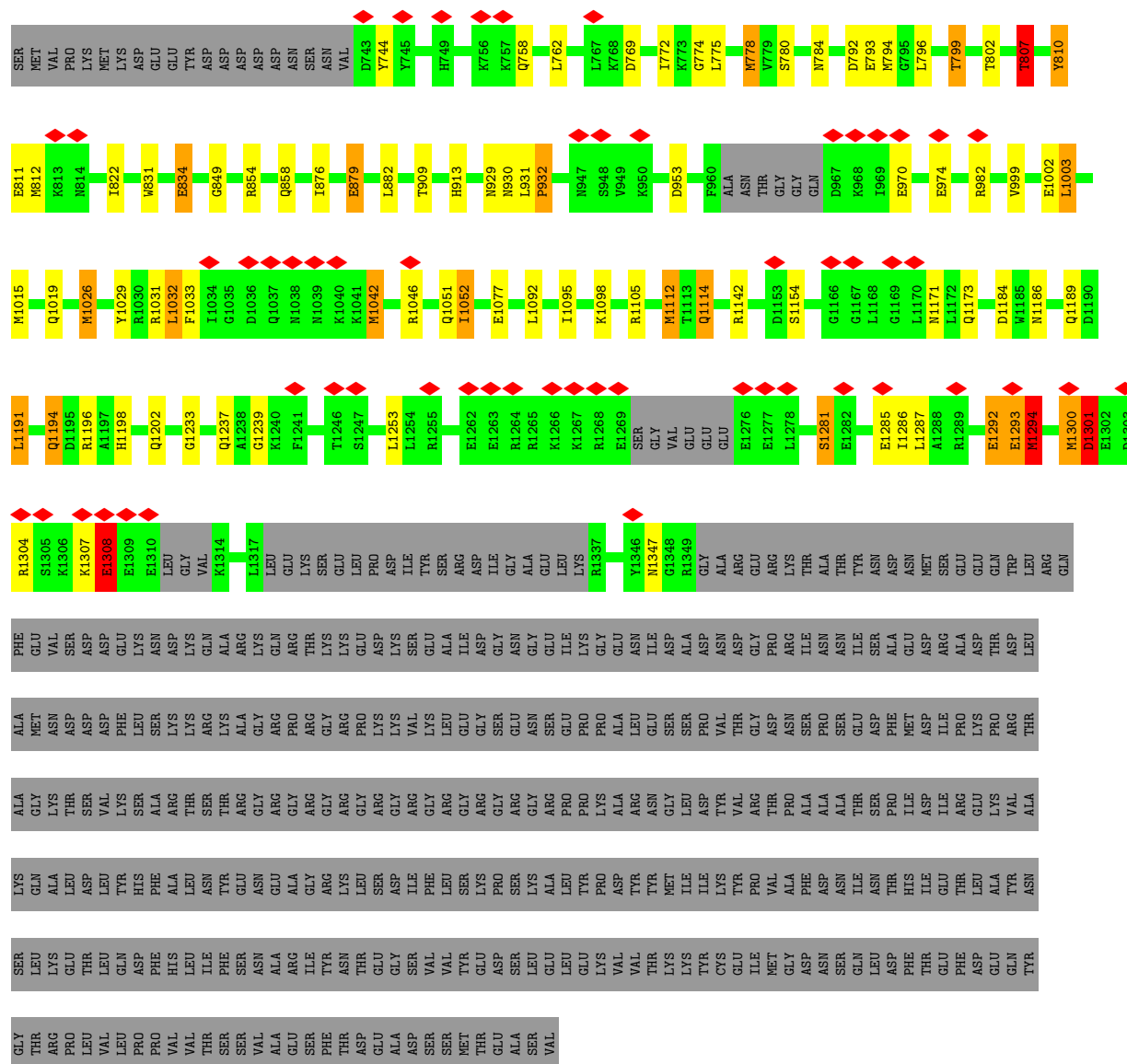












• Molecule 50: Transcription regulatory protein SNF2

Chain sH: 13% . 86%





VAL VAL THR SER SER VAL ALA GLU SER PHE THR ASP GLU ALA SER SER MET THR GLU ALA SER VAL

• Molecule 51: Histone H3.2



MET ALA ARG THR LYS LYS THR ALA ARG LYS SER THR GLY LYS LYS PRO ARG LYS LYS LEU THR THR LYS LYS ALA ALA ARG LYS LYS SER SER ALA ALA PRO THR THR GLY GLY VAL LYS LYS K37 E59 I62 A75 D81 Q93 E97 A98 V101 R128 R129 E133 R134 ALA

• Molecule 51: Histone H3.2



MET ALA ARG THR LYS LYS THR ALA ARG LYS SER THR GLY LYS LYS PRO ARG LYS LYS LEU THR THR LYS LYS ALA ALA ARG LYS LYS SER SER ALA ALA PRO THR THR GLY GLY VAL LYS LYS LYS HIS R40 Y41 R42 L48 R52 S57 T58 E59 D81 F104 T118 P121 K122

D123 I124 Q125 R134 ALA

• Molecule 51: Histone H3.2



MET ALA ARG THR LYS LYS THR ALA ARG LYS SER THR GLY LYS LYS PRO ARG LYS LYS LEU THR THR LYS LYS ALA ALA ARG LYS LYS SER SER ALA ALA PRO THR THR GLY GLY VAL LYS LYS LYS HIS R40 Y41 R42 L48 R52 S57 T58 E59 D81 F104 T118 P121 K122

• Molecule 51: Histone H3.2



MET ALA ARG THR LYS LYS THR ALA ARG LYS SER THR GLY LYS LYS PRO ARG LYS LYS LEU THR THR LYS LYS ALA ALA ARG LYS LYS SER SER ALA ALA PRO THR THR GLY GLY VAL LYS LYS LYS HIS R40 Y41 R42 L48 R52 S57 T58 E59 D81 F104 T118 P121 K122

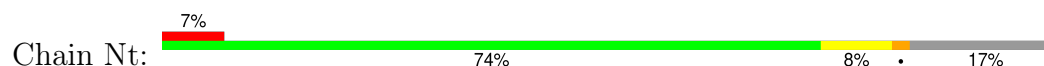
D123 I124 Q125 R134 ALA

• Molecule 52: Histone H4

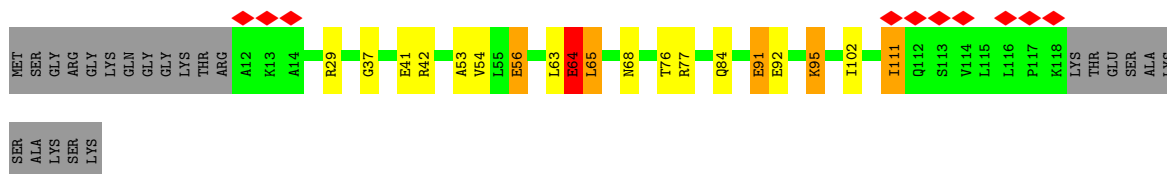


MET SER GLY GLY GLY LYS LYS GLY GLY GLY GLY GLY K16 R17 H18 R19 K20 V21 L22 P32 R35 R36 L37 V43 I46 S47 G48 V60 N64 V65 I66 V70 T73 R92 Q93 G101 GLY

• Molecule 52: Histone H4

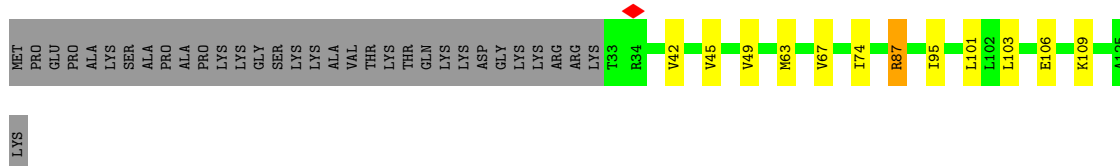






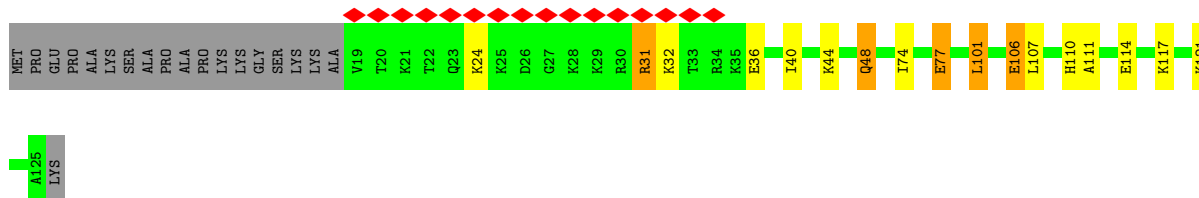
- Molecule 54: Histone H2B 1.1

Chain Nr:



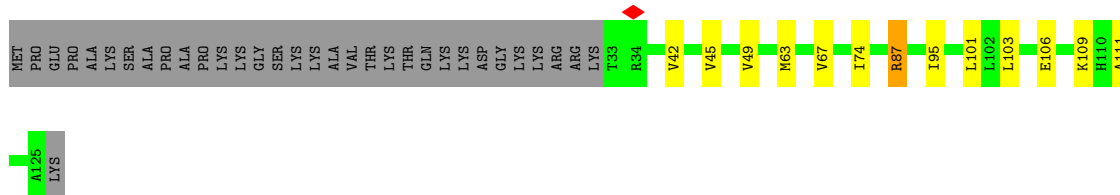
- Molecule 54: Histone H2B 1.1

Chain Nv:



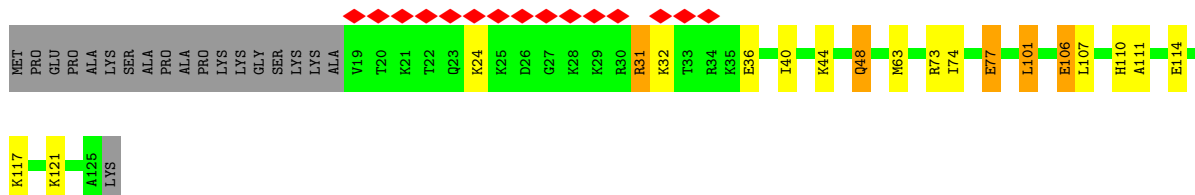
- Molecule 54: Histone H2B 1.1

Chain nr:

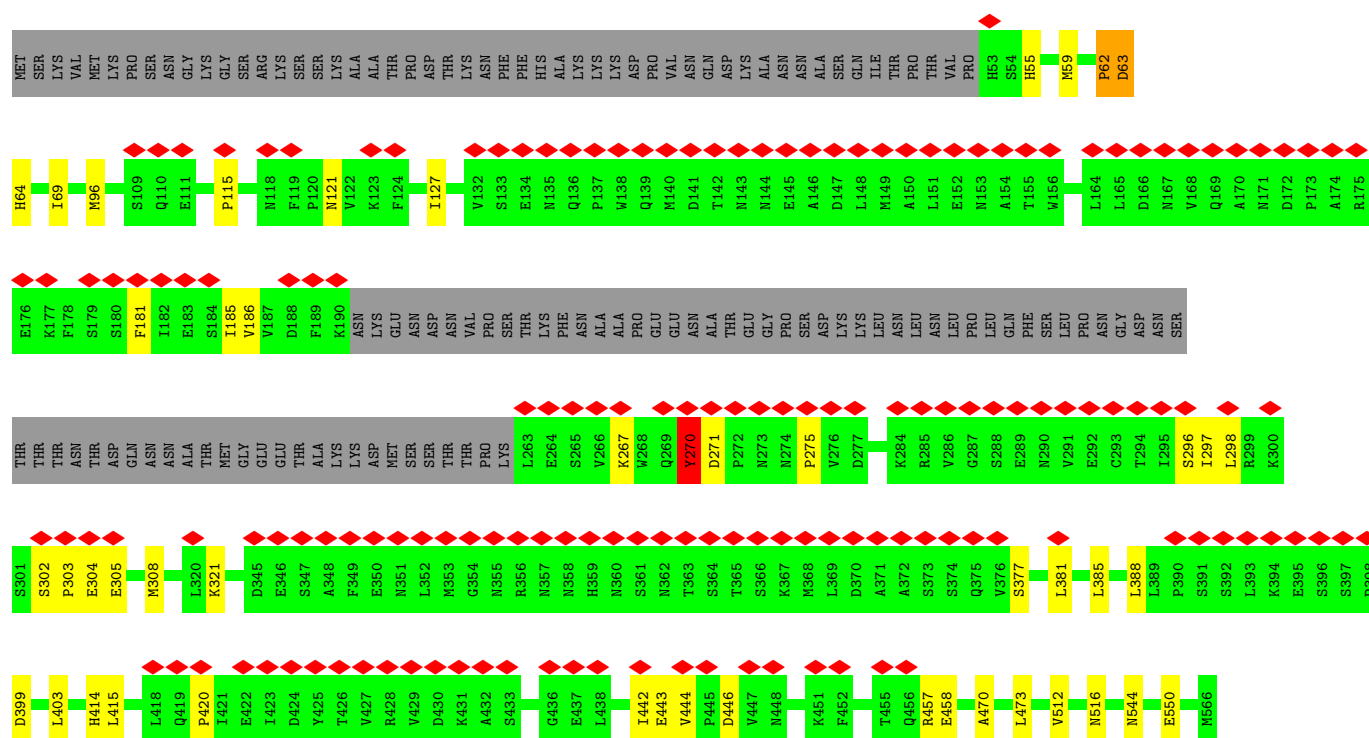


- Molecule 54: Histone H2B 1.1

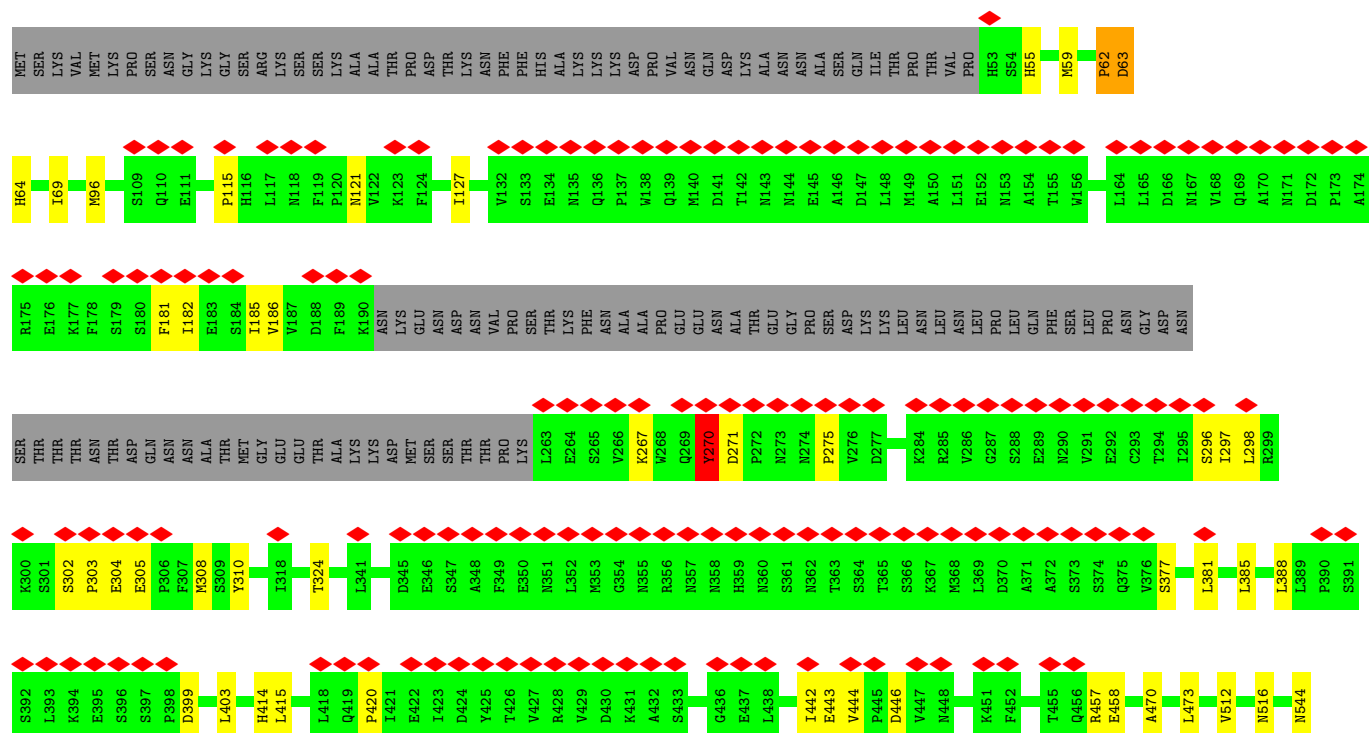
Chain nv:



- Molecule 55: Transcription regulatory protein SNF12

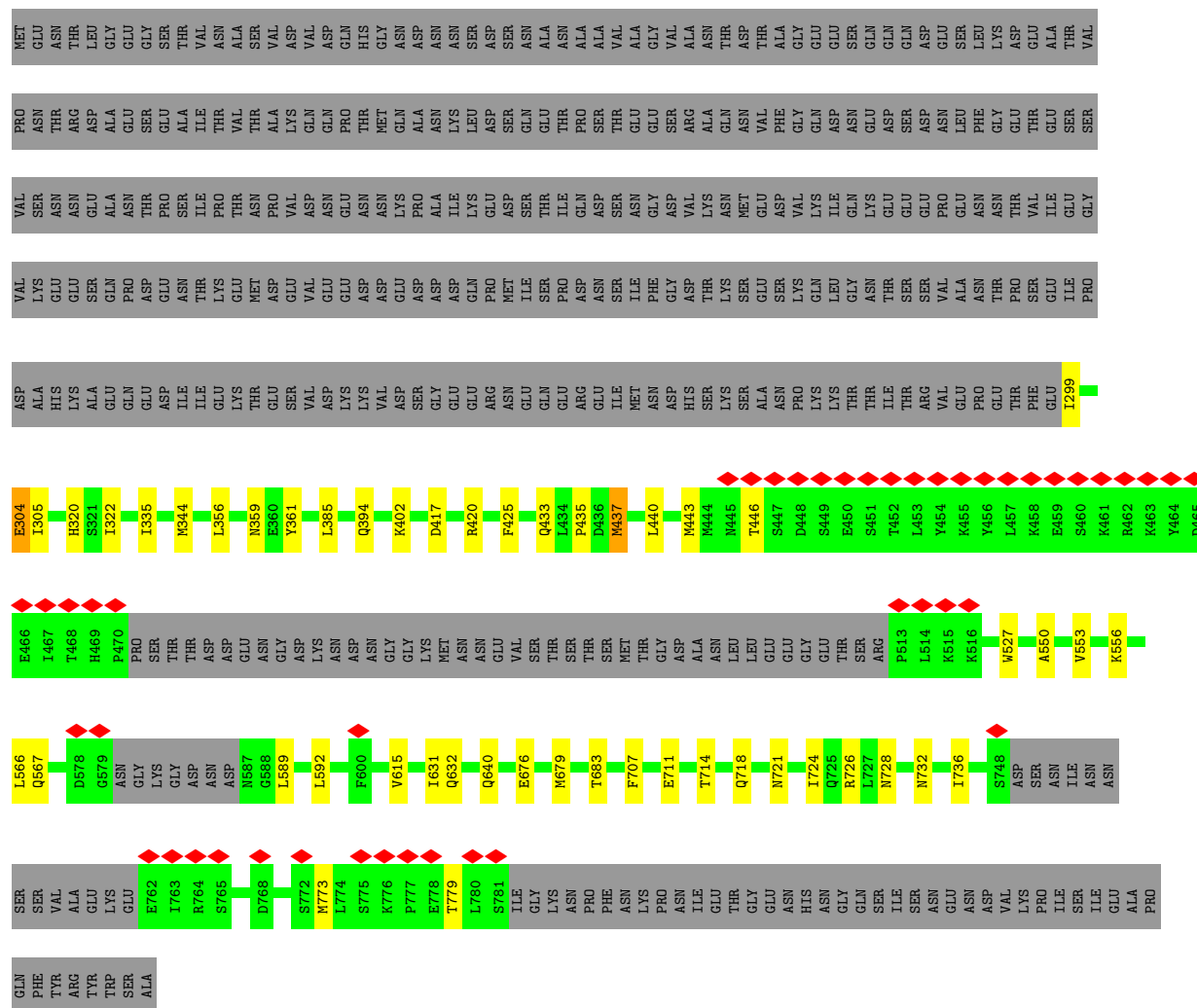


Chain sA:

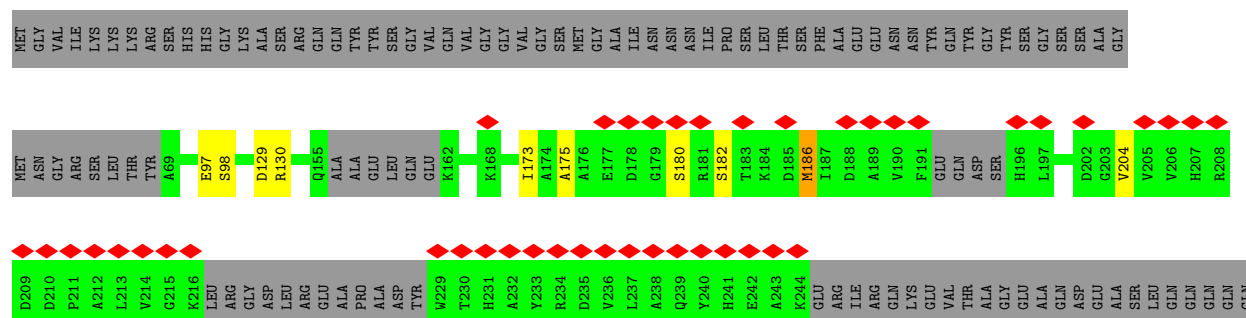




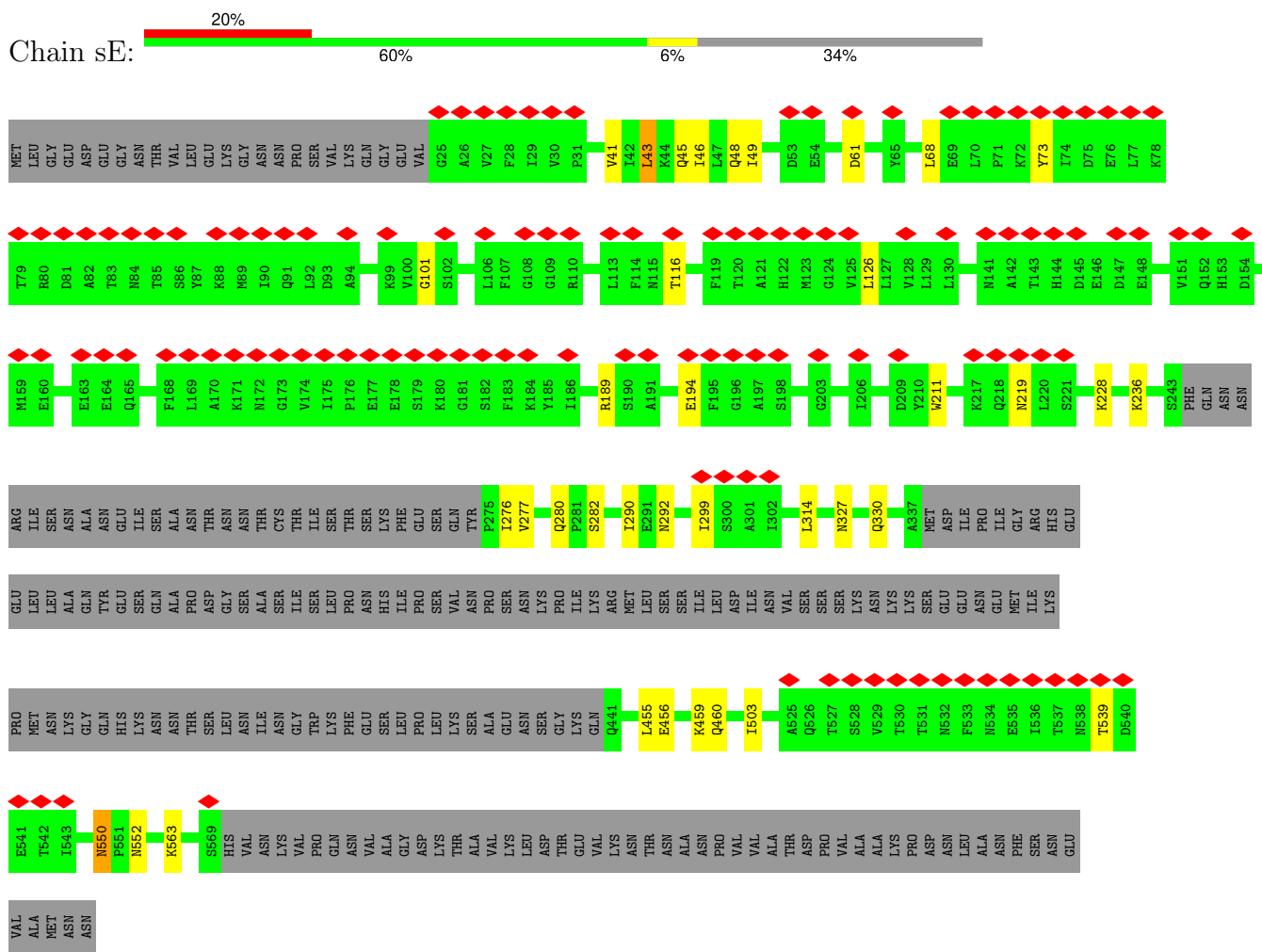
Chain sD:



Chain SC:



- Molecule 58: SWI/SNF global transcription activator complex subunit SWP82



- Molecule 59: unsigned peptide of SWI/SNF



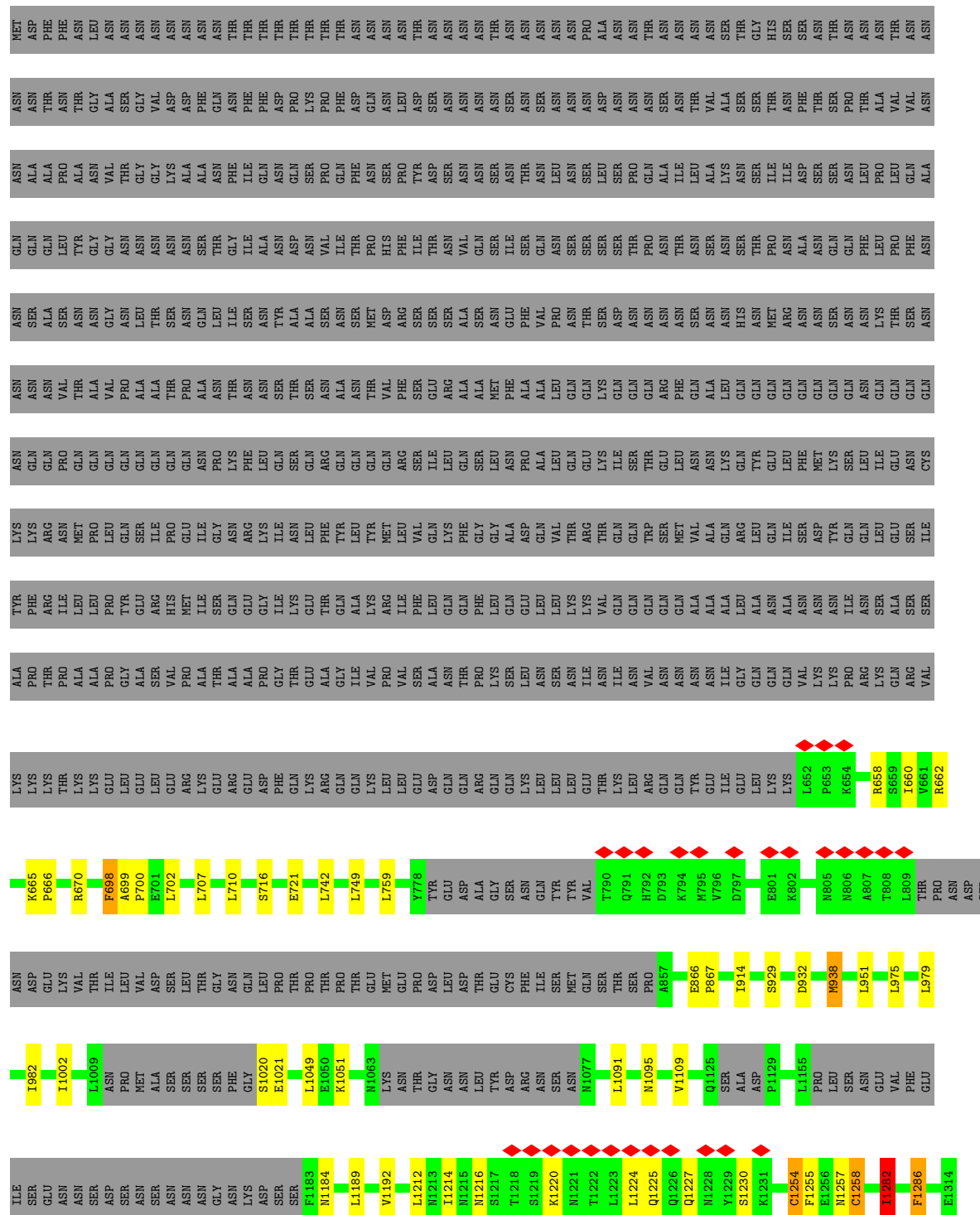
- Molecule 59: unsigned peptide of SWI/SNF





• Molecule 60: SWI/SNF chromatin-remodeling complex subunit SWI1

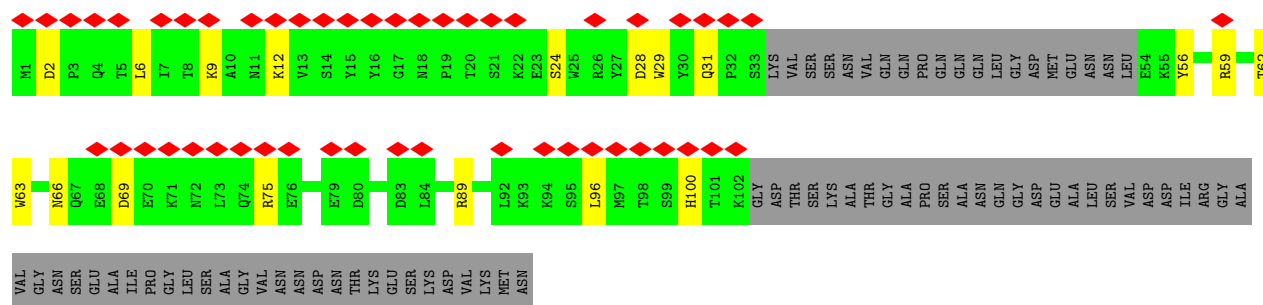
Chain sI:



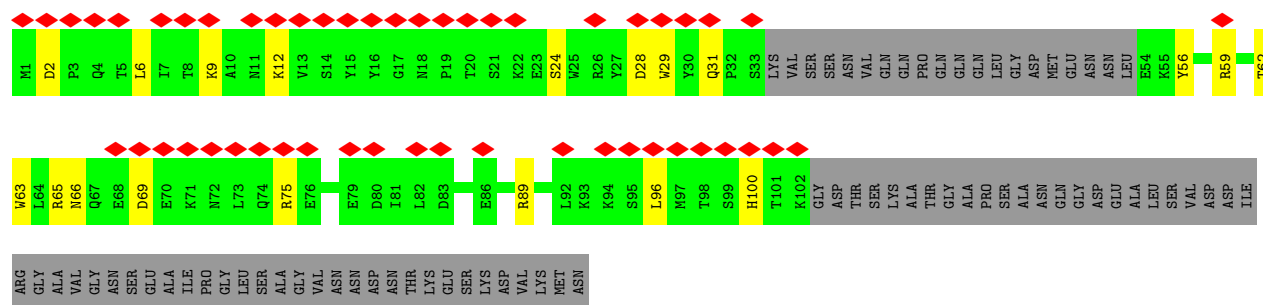
• Molecule 61: Regulator of Ty1 transposition protein 102

Chain SJ:

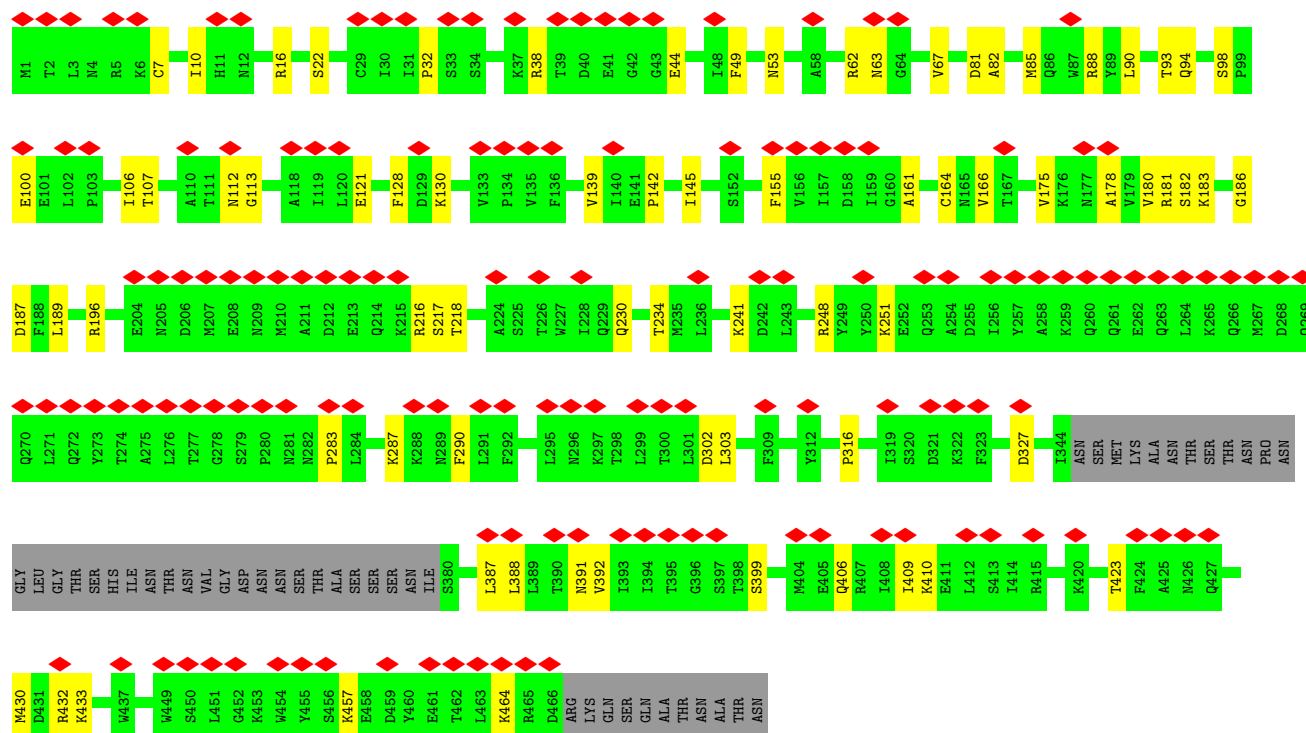
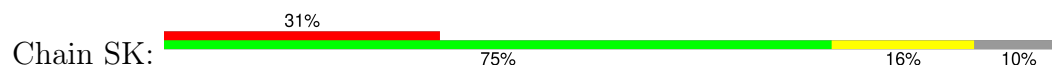




• Molecule 61: Regulator of Ty1 transposition protein 102

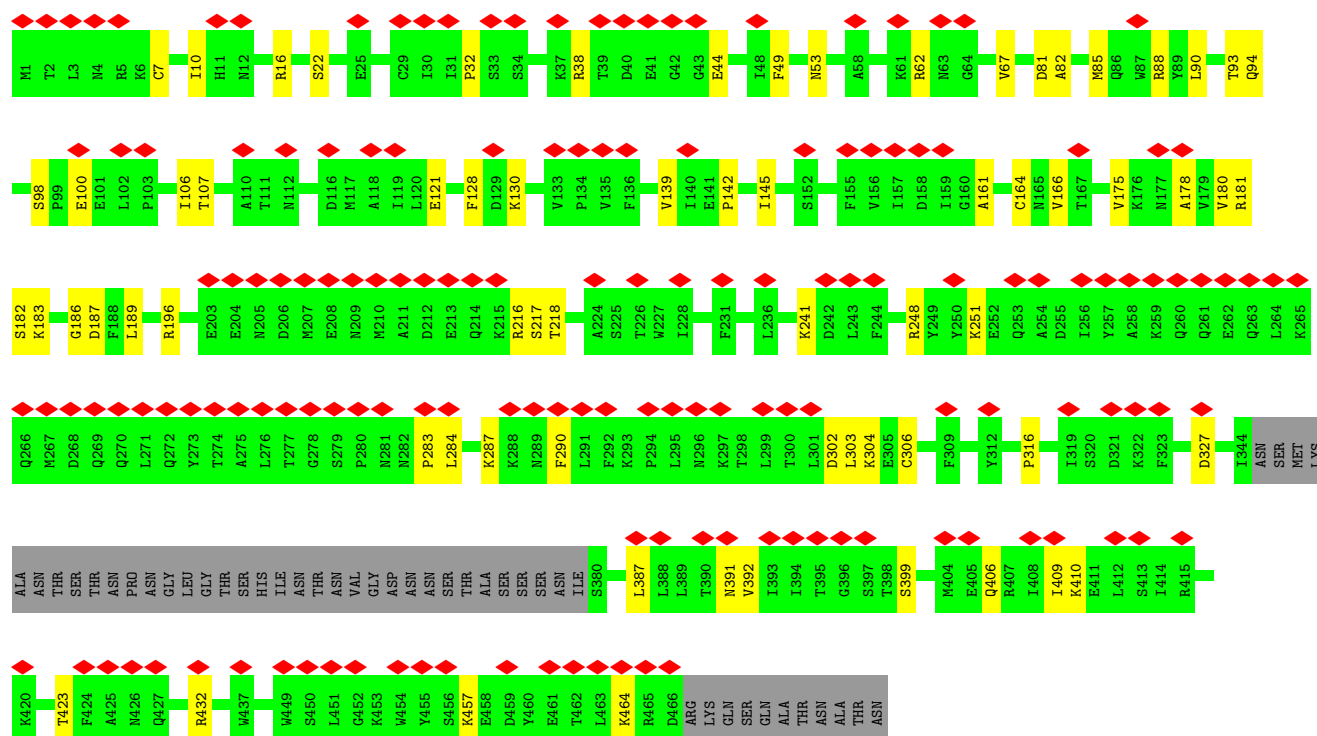


• Molecule 62: Actin-related protein 7

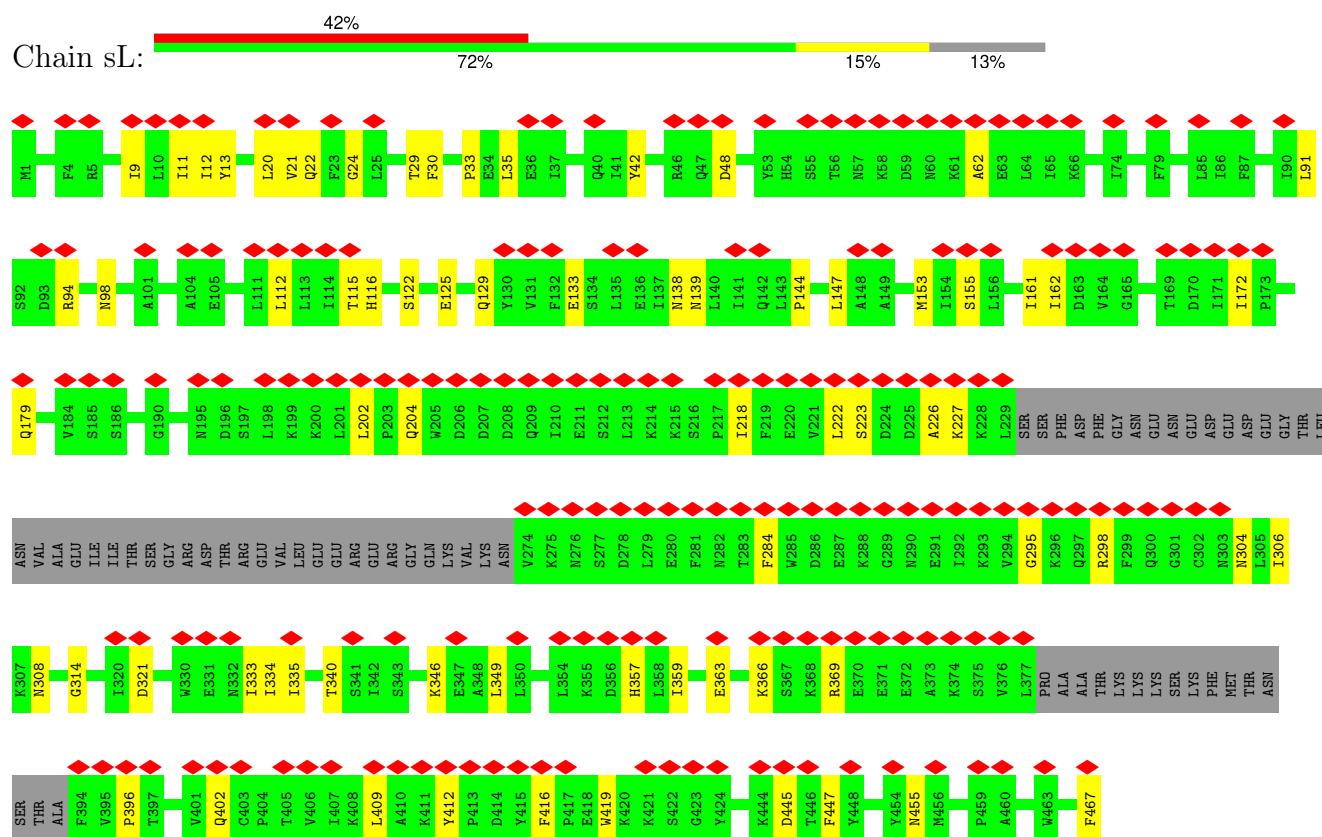


• Molecule 62: Actin-related protein 7

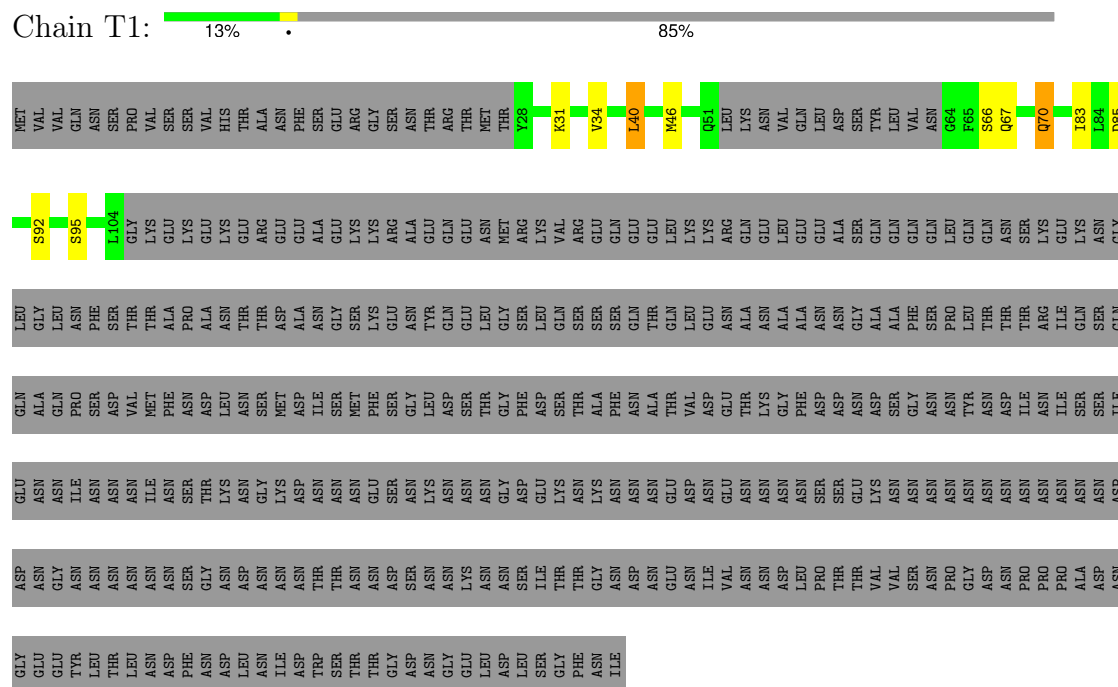
Chain sK: 



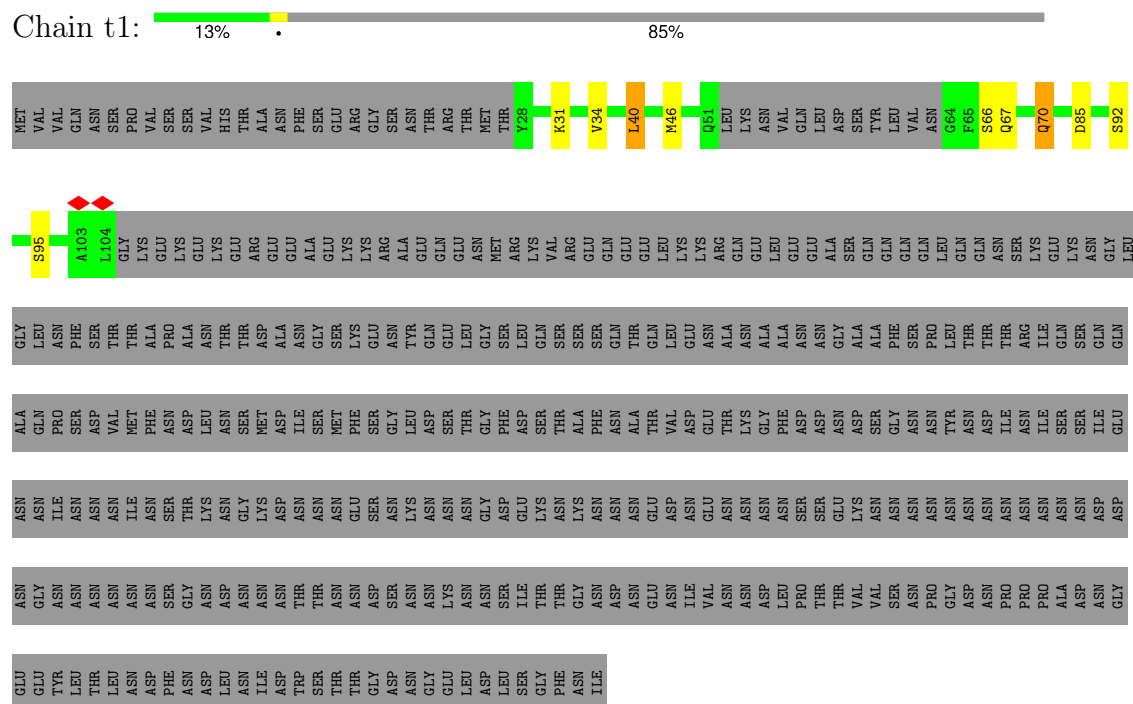
- Molecule 63: Actin-like protein ARP9



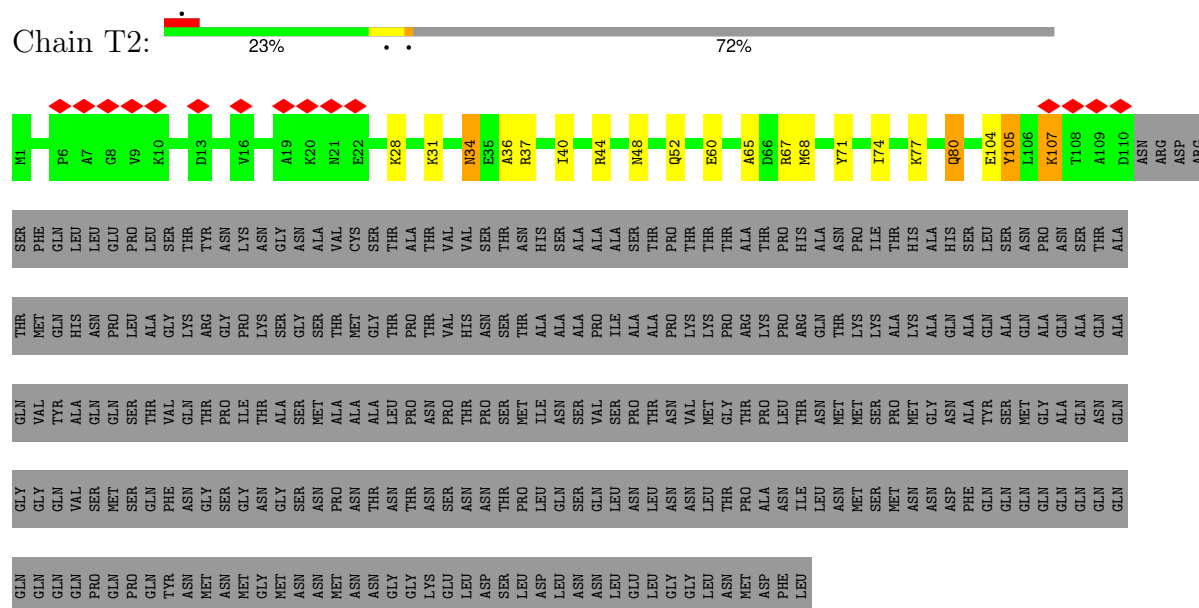
- Molecule 64: Mediator of RNA polymerase II transcription subunit 2



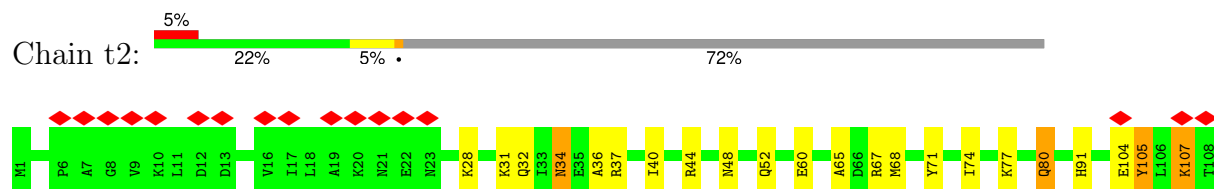
- Molecule 64: Mediator of RNA polymerase II transcription subunit 2



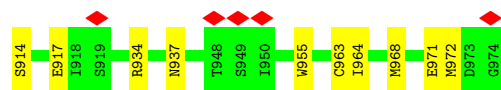
• Molecule 65: Mediator of RNA polymerase II transcription subunit 3



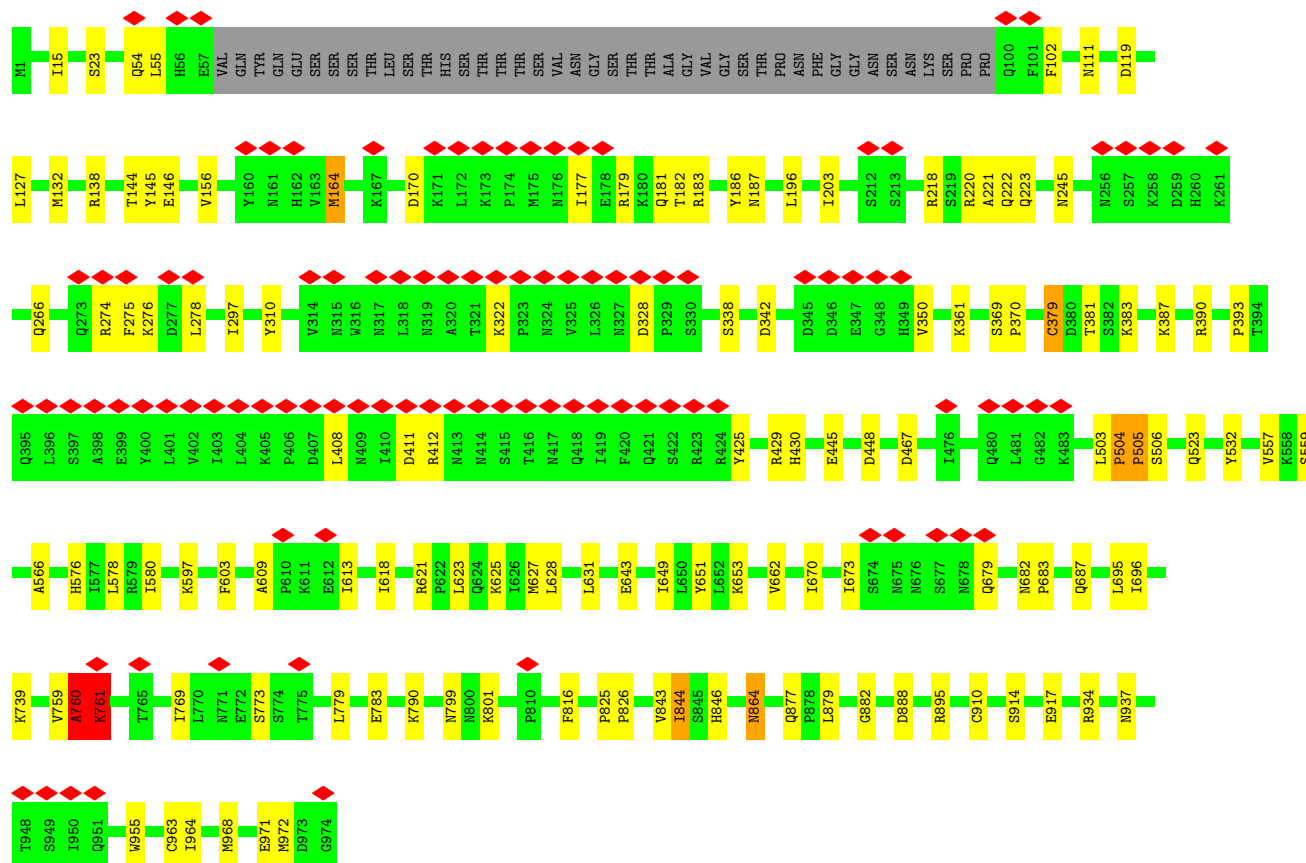
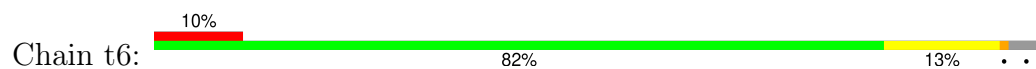
• Molecule 65: Mediator of RNA polymerase II transcription subunit 3







- Molecule 68: Mediator of RNA polymerase II transcription subunit 16



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	4131262	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	40.8	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	3.081	Depositor
Minimum map value	0.000	Depositor
Average map value	0.008	Depositor
Map value standard deviation	0.057	Depositor
Recommended contour level	0.393	Depositor
Map size (Å)	896.0, 896.0, 896.0	wwPDB
Map dimensions	640, 640, 640	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.4, 1.4, 1.4	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: ZN, MG, SF4

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	A0	1.16	32/6209 (0.5%)	1.15	43/8384 (0.5%)
1	B0	1.16	33/6209 (0.5%)	1.15	43/8384 (0.5%)
2	A1	0.33	2/3425 (0.1%)	0.54	5/4609 (0.1%)
2	B1	0.33	2/3425 (0.1%)	0.54	5/4609 (0.1%)
3	A2	0.83	20/3664 (0.5%)	1.17	36/4952 (0.7%)
3	B2	0.83	20/3664 (0.5%)	1.17	36/4952 (0.7%)
4	A3	0.20	0/1109	0.39	0/1492
4	B3	0.21	0/1109	0.39	0/1492
5	A4	0.29	0/2312	0.51	0/3127
5	B4	0.29	0/2312	0.51	0/3127
6	A5	0.72	0/520	1.43	9/701 (1.3%)
6	B5	0.72	0/520	1.43	9/701 (1.3%)
7	A6	0.48	3/3007 (0.1%)	0.75	5/4066 (0.1%)
7	B6	0.48	3/3007 (0.1%)	0.75	5/4066 (0.1%)
8	A7	0.26	1/4982 (0.0%)	0.42	0/6736
8	B7	0.27	1/4982 (0.0%)	0.42	0/6736
9	A8	2.06	5/137 (3.6%)	3.02	11/185 (5.9%)
9	B8	2.06	5/137 (3.6%)	3.03	11/185 (5.9%)
9	NF	2.58	11/178 (6.2%)	4.13	19/230 (8.3%)
9	SF	0.63	13/3394 (0.4%)	0.97	24/4601 (0.5%)
9	nF	2.58	11/178 (6.2%)	4.13	19/230 (8.3%)
9	sF	0.63	13/3394 (0.4%)	0.97	24/4601 (0.5%)
10	A9	1.93	10/549 (1.8%)	2.42	27/743 (3.6%)
10	B9	1.93	10/549 (1.8%)	2.42	27/743 (3.6%)
11	AA	0.54	20/11191 (0.2%)	0.72	29/15127 (0.2%)
11	BA	0.54	20/11191 (0.2%)	0.72	30/15127 (0.2%)
11	MA	0.34	0/606	0.84	0/848
11	mA	0.34	0/606	0.84	0/848
12	AB	0.42	11/9381 (0.1%)	0.63	27/12652 (0.2%)
12	BB	0.42	11/9381 (0.1%)	0.63	25/12652 (0.2%)
13	AC	0.45	1/2099 (0.0%)	0.43	1/2845 (0.0%)
13	BC	0.46	1/2099 (0.0%)	0.43	1/2845 (0.0%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
14	AD	0.51	2/1262 (0.2%)	0.63	0/1693
14	BD	0.51	2/1262 (0.2%)	0.63	0/1693
15	AE	0.31	0/1780	0.47	0/2395
15	BE	0.31	0/1780	0.47	0/2395
16	AF	0.35	0/682	0.49	0/922
16	BF	0.35	0/682	0.49	0/922
17	AG	0.46	2/1368 (0.1%)	0.56	0/1844
17	BG	0.46	2/1368 (0.1%)	0.56	0/1844
18	AH	0.98	10/1107 (0.9%)	1.19	15/1499 (1.0%)
18	BH	0.99	10/1107 (0.9%)	1.19	15/1499 (1.0%)
19	AI	2.29	22/962 (2.3%)	2.30	49/1295 (3.8%)
19	BI	2.29	22/962 (2.3%)	2.30	49/1295 (3.8%)
20	AJ	0.63	2/578 (0.3%)	0.77	2/775 (0.3%)
20	BJ	0.63	2/578 (0.3%)	0.77	2/775 (0.3%)
21	AK	0.38	0/942	0.53	1/1272 (0.1%)
21	BK	0.38	0/942	0.53	1/1272 (0.1%)
22	AL	0.20	0/361	0.40	0/478
22	BL	0.20	0/361	0.40	0/478
23	AM	0.30	0/2086	0.63	0/2808
23	BM	0.30	0/2086	0.63	0/2808
24	AN	1.04	18/5471 (0.3%)	1.14	18/8447 (0.2%)
24	BN	1.04	18/5471 (0.3%)	1.14	18/8447 (0.2%)
25	AO	0.25	0/1449	0.59	0/1952
25	BO	0.25	0/1449	0.60	0/1952
26	AQ	0.35	1/1852 (0.1%)	0.43	0/2480
26	BQ	0.35	1/1852 (0.1%)	0.43	0/2480
27	AR	0.87	10/2208 (0.5%)	0.89	12/2966 (0.4%)
27	BR	0.87	10/2208 (0.5%)	0.89	12/2966 (0.4%)
28	AS	1.27	17/1325 (1.3%)	2.17	31/1787 (1.7%)
28	BS	1.27	17/1325 (1.3%)	2.17	31/1787 (1.7%)
29	AT	1.31	9/5475 (0.2%)	1.08	18/8443 (0.2%)
29	BT	1.31	9/5475 (0.2%)	1.08	18/8443 (0.2%)
30	AU	0.28	0/898	0.69	0/1212
30	BU	0.28	0/898	0.69	0/1212
31	AV	0.27	0/822	0.69	2/1109 (0.2%)
31	BV	0.27	0/822	0.69	2/1109 (0.2%)
32	AW	0.22	0/1870	0.54	1/2524 (0.0%)
32	BW	0.22	0/1870	0.54	1/2524 (0.0%)
33	AX	0.21	0/1559	0.54	0/2102
33	BX	0.21	0/1559	0.54	0/2102
34	Ma	0.31	0/1455	0.70	0/1969
34	ma	0.31	0/1455	0.71	0/1969
35	Mb	0.32	0/1207	0.70	2/1636 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
35	mb	0.32	0/1207	0.70	2/1636 (0.1%)
36	Mc	0.39	0/885	0.75	0/1183
36	mc	0.39	0/885	0.75	0/1183
37	Md	0.30	0/4389	0.61	0/5901
37	md	0.30	0/4389	0.61	0/5901
38	Me	0.27	0/2030	0.63	0/2747
38	me	0.27	0/2030	0.63	0/2747
39	Mf	0.26	0/1635	0.61	2/2215 (0.1%)
39	mf	0.26	0/1635	0.61	2/2215 (0.1%)
40	Mg	0.51	0/851	1.12	4/1148 (0.3%)
40	mg	0.51	0/851	1.12	4/1148 (0.3%)
41	Mh	0.34	0/1462	0.89	4/1970 (0.2%)
41	mh	0.34	0/1462	0.89	4/1970 (0.2%)
42	Mi	0.42	1/1569 (0.1%)	0.79	2/2117 (0.1%)
42	mi	0.42	1/1569 (0.1%)	0.79	2/2117 (0.1%)
43	Mj	0.43	0/865	0.93	0/1166
43	mj	0.43	0/865	0.93	0/1166
44	Mk	0.46	0/1172	0.93	0/1581
44	mk	0.46	0/1172	0.93	0/1581
45	ML	0.30	0/5460	0.71	7/7373 (0.1%)
45	T4	0.55	5/1817 (0.3%)	0.86	9/2456 (0.4%)
45	ml	0.30	0/5460	0.71	7/7373 (0.1%)
45	t4	0.55	5/1817 (0.3%)	0.86	9/2456 (0.4%)
46	Mm	0.34	0/684	0.79	3/928 (0.3%)
46	mm	0.34	0/684	0.79	3/928 (0.3%)
47	Mn	0.36	0/1135	0.73	0/1526
47	mn	0.36	0/1135	0.73	0/1526
48	Mo	0.37	1/941 (0.1%)	0.76	1/1282 (0.1%)
48	mo	0.37	1/941 (0.1%)	0.76	1/1282 (0.1%)
49	Mp	0.26	0/3394	0.59	0/4589
49	mp	0.26	0/3394	0.59	0/4589
50	NP	0.94	37/4958 (0.7%)	1.26	49/6664 (0.7%)
50	SH	0.70	7/2008 (0.3%)	1.46	17/2717 (0.6%)
50	nP	0.95	37/4958 (0.7%)	1.26	50/6664 (0.8%)
50	sH	0.70	7/2008 (0.3%)	1.46	17/2717 (0.6%)
51	No	0.70	2/812 (0.2%)	0.85	2/1091 (0.2%)
51	Ns	0.88	4/788 (0.5%)	0.97	2/1057 (0.2%)
51	no	0.70	2/812 (0.2%)	0.85	2/1091 (0.2%)
51	ns	0.88	4/788 (0.5%)	0.97	2/1057 (0.2%)
52	Np	0.70	2/706 (0.3%)	0.84	1/943 (0.1%)
52	Nt	0.84	7/680 (1.0%)	0.88	2/912 (0.2%)
52	np	0.70	2/706 (0.3%)	0.84	1/943 (0.1%)
52	nt	0.84	7/680 (1.0%)	0.88	2/912 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
53	Nq	0.48	0/821	0.88	1/1112 (0.1%)
53	Nu	1.15	8/825 (1.0%)	1.78	17/1116 (1.5%)
53	nq	0.49	0/821	0.88	1/1112 (0.1%)
53	nu	1.15	8/825 (1.0%)	1.78	17/1116 (1.5%)
54	Nr	0.71	2/733 (0.3%)	0.98	2/989 (0.2%)
54	Nv	0.75	3/855 (0.4%)	1.03	7/1145 (0.6%)
54	nr	0.71	2/733 (0.3%)	0.98	2/989 (0.2%)
54	nv	0.75	4/855 (0.5%)	1.03	7/1145 (0.6%)
55	SA	0.40	6/3616 (0.2%)	0.65	11/4892 (0.2%)
55	sA	0.40	6/3616 (0.2%)	0.65	11/4892 (0.2%)
56	SB	0.32	1/3318 (0.0%)	0.57	0/4465
56	SD	0.40	3/3517 (0.1%)	0.66	4/4735 (0.1%)
56	sB	0.32	1/3318 (0.0%)	0.57	0/4465
56	sD	0.41	4/3517 (0.1%)	0.66	4/4735 (0.1%)
57	SC	0.38	0/1287	0.65	2/1729 (0.1%)
57	sC	0.38	0/1287	0.65	2/1729 (0.1%)
58	SE	0.35	3/3399 (0.1%)	0.54	0/4584
58	sE	0.36	3/3399 (0.1%)	0.54	0/4584
59	SG	0.24	0/101	0.36	0/123
59	sG	0.24	0/101	0.36	0/123
60	SI	0.36	3/4553 (0.1%)	0.59	6/6166 (0.1%)
60	sI	0.36	3/4553 (0.1%)	0.59	6/6166 (0.1%)
61	SJ	0.26	0/728	0.54	0/978
61	sJ	0.26	0/728	0.54	0/978
62	SK	0.22	0/3525	0.52	0/4769
62	sK	0.22	0/3525	0.52	0/4769
63	SL	0.20	0/3341	0.49	0/4528
63	sL	0.20	0/3341	0.49	0/4528
64	T1	0.68	2/520 (0.4%)	0.79	0/693
64	t1	0.68	2/520 (0.4%)	0.79	0/693
65	T2	0.85	2/902 (0.2%)	1.06	6/1215 (0.5%)
65	t2	0.85	2/902 (0.2%)	1.06	6/1215 (0.5%)
66	T3	0.64	17/6293 (0.3%)	0.97	36/8534 (0.4%)
66	t3	0.64	17/6293 (0.3%)	0.97	38/8534 (0.4%)
67	T5	1.29	16/904 (1.8%)	2.16	31/1202 (2.6%)
67	t5	1.29	16/904 (1.8%)	2.16	31/1202 (2.6%)
68	T6	0.46	9/7725 (0.1%)	0.71	9/10461 (0.1%)
68	t6	0.46	9/7725 (0.1%)	0.71	10/10461 (0.1%)
All	All	0.65	729/349372 (0.2%)	0.88	1251/475816 (0.3%)

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

sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A0	0	8
1	B0	0	8
2	A1	0	1
2	B1	0	1
3	A2	0	4
3	B2	0	4
6	A5	0	4
6	B5	0	4
7	A6	0	4
7	B6	0	4
9	A8	0	1
9	B8	0	1
9	NF	0	3
9	SF	0	3
9	nF	0	3
9	sF	0	3
10	A9	2	2
10	B9	2	2
11	AA	0	7
11	BA	0	7
12	AB	0	5
12	BB	0	5
18	AH	1	2
18	BH	1	2
19	AI	0	10
19	BI	0	10
27	AR	0	2
27	BR	0	2
28	AS	1	3
28	BS	1	3
34	Ma	0	1
34	ma	0	1
35	Mb	0	1
35	mb	0	1
36	Mc	0	1
36	mc	0	1
41	Mh	0	1
41	mh	0	1
44	Mk	0	1
44	mk	0	1
45	T4	0	1
45	t4	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
46	Mm	0	1
46	mm	0	1
48	Mo	0	1
48	mo	0	1
50	NP	1	9
50	SH	0	1
50	nP	1	9
50	sH	0	1
51	Ns	0	2
51	ns	0	2
53	Nq	0	1
53	Nu	0	2
53	nq	0	1
53	nu	0	2
54	Nr	0	2
54	Nv	0	1
54	nr	0	2
54	nv	0	1
55	SA	0	2
55	sA	0	2
60	SI	0	2
60	sI	0	2
65	T2	0	1
65	t2	0	1
66	T3	1	6
66	t3	1	6
67	T5	1	2
67	t5	1	2
68	T6	0	1
68	t6	0	1
All	All	14	198

All (729) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
29	AT	51	DA	O3'-P	-67.87	0.79	1.61
29	BT	51	DA	O3'-P	-67.82	0.79	1.61
1	B0	546	TYR	CD1-CE1	49.21	2.86	1.38
1	A0	546	TYR	CD1-CE1	49.21	2.86	1.38
19	AI	15	TYR	CZ-OH	46.39	2.35	1.38
19	BI	15	TYR	CZ-OH	46.38	2.35	1.38
19	BI	13	MET	SD-CE	28.54	2.50	1.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
19	AI	13	MET	SD-CE	28.54	2.50	1.79
1	A0	547	MET	CB-CG	25.36	2.28	1.52
1	B0	547	MET	CB-CG	25.34	2.28	1.52
1	A0	546	TYR	CB-CG	-25.19	0.96	1.51
1	B0	546	TYR	CB-CG	-25.19	0.96	1.51
24	AN	-76	DA	O3'-P	24.26	1.90	1.61
24	BN	-76	DA	O3'-P	24.25	1.90	1.61
50	NP	1294	MET	CB-CG	-21.10	0.89	1.52
50	nP	1294	MET	CB-CG	-21.08	0.89	1.52
10	A9	181	LYS	CA-C	20.51	1.80	1.52
10	B9	181	LYS	CA-C	20.47	1.80	1.52
1	B0	546	TYR	CG-CD2	20.23	1.81	1.39
1	A0	546	TYR	CG-CD2	20.22	1.81	1.39
66	T3	837	TYR	CG-CD2	19.68	1.80	1.39
66	t3	837	TYR	CG-CD2	19.68	1.80	1.39
27	AR	289	ILE	N-CA	19.50	1.70	1.46
27	BR	289	ILE	N-CA	19.43	1.70	1.46
11	BA	1444	MET	SD-CE	-18.73	1.32	1.79
11	AA	1444	MET	SD-CE	-18.73	1.32	1.79
28	AS	173	HIS	CB-CG	-18.64	1.24	1.50
28	BS	173	HIS	CB-CG	-18.63	1.24	1.50
18	BH	129	TYR	CA-C	18.12	1.77	1.52
18	AH	129	TYR	CA-C	18.08	1.77	1.52
13	AC	37	MET	SD-CE	-17.96	1.34	1.79
13	BC	37	MET	SD-CE	-17.95	1.34	1.79
50	NP	1294	MET	SD-CE	-17.43	1.35	1.79
50	nP	1294	MET	SD-CE	-17.43	1.35	1.79
10	B9	209	MET	CB-CG	-17.42	1.00	1.52
10	A9	209	MET	CB-CG	-17.40	1.00	1.52
24	BN	-52	DT	O3'-P	17.26	1.81	1.61
24	AN	-52	DT	O3'-P	17.22	1.81	1.61
11	AA	99	ILE	CB-CG2	-16.72	0.97	1.52
11	BA	99	ILE	CB-CG2	-16.71	0.97	1.52
19	BI	116	ASN	CA-C	16.41	1.73	1.52
19	AI	116	ASN	CA-C	16.39	1.73	1.52
50	nP	778	MET	SD-CE	-16.20	1.39	1.79
50	NP	778	MET	SD-CE	-16.19	1.39	1.79
67	t5	920	LYS	CB-CG	-16.19	1.03	1.52
67	T5	920	LYS	CB-CG	-16.18	1.03	1.52
50	sH	592	LEU	CA-C	15.28	1.73	1.52
50	SH	592	LEU	CA-C	15.27	1.73	1.52
11	AA	688	LYS	CD-CE	-15.24	1.06	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	BA	688	LYS	CD-CE	-15.22	1.06	1.52
28	AS	151	GLN	CA-C	14.96	1.73	1.52
9	NF	665	LYS	CB-CG	-14.94	1.07	1.52
28	BS	151	GLN	CA-C	14.94	1.73	1.52
9	nF	665	LYS	CB-CG	-14.93	1.07	1.52
9	SF	392	MET	N-CA	14.55	1.65	1.46
9	sF	392	MET	N-CA	14.54	1.65	1.46
1	A0	546	TYR	CA-C	14.20	1.71	1.52
1	B0	546	TYR	CA-C	14.16	1.71	1.52
24	AN	-56	DC	C3'-O3'	14.00	1.62	1.44
24	BN	-56	DC	C3'-O3'	13.98	1.62	1.44
1	A0	546	TYR	CD2-CE2	13.59	1.79	1.38
1	B0	546	TYR	CD2-CE2	13.58	1.79	1.38
1	B0	543	SER	N-CA	13.58	1.63	1.46
1	A0	543	SER	N-CA	13.57	1.63	1.46
1	B0	560	LEU	CG-CD2	13.50	1.97	1.52
1	A0	560	LEU	CG-CD2	13.49	1.97	1.52
27	BR	227	SER	C-O	13.45	1.39	1.23
27	AR	227	SER	C-O	13.44	1.39	1.23
28	BS	173	HIS	CA-CB	-13.06	1.32	1.53
28	AS	173	HIS	CA-CB	-13.01	1.32	1.53
1	A0	25	MET	SD-CE	-12.99	1.47	1.79
1	B0	25	MET	SD-CE	-12.99	1.47	1.79
53	Nu	56	GLU	CG-CD	-12.88	1.19	1.52
53	nu	56	GLU	CG-CD	-12.88	1.19	1.52
53	Nu	64	GLU	CG-CD	-12.80	1.20	1.52
53	nu	64	GLU	CG-CD	-12.79	1.20	1.52
1	B0	546	TYR	C-N	12.66	1.51	1.33
1	A0	546	TYR	C-N	12.62	1.51	1.33
27	AR	228	MET	CB-CG	-12.56	1.14	1.52
27	BR	228	MET	CB-CG	-12.56	1.14	1.52
50	NP	1301	ASP	N-CA	-12.37	1.30	1.46
50	nP	1301	ASP	N-CA	-12.35	1.30	1.46
66	T3	289	LYS	CG-CD	-12.17	1.16	1.52
1	B0	560	LEU	CB-CG	12.16	1.77	1.53
9	nF	676	ARG	CB-CG	-12.16	1.16	1.52
9	NF	676	ARG	CB-CG	-12.15	1.16	1.52
66	t3	289	LYS	CG-CD	-12.14	1.16	1.52
1	A0	560	LEU	CB-CG	12.14	1.77	1.53
27	BR	289	ILE	CA-C	12.13	1.68	1.52
27	AR	289	ILE	CA-C	12.12	1.68	1.52
52	Np	37	LEU	CG-CD2	-12.11	1.12	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	AR	228	MET	CA-CB	12.10	1.72	1.53
52	np	37	LEU	CG-CD2	-12.09	1.12	1.52
27	BR	228	MET	CA-CB	12.07	1.72	1.53
12	AB	1143	ALA	CA-CB	12.04	1.74	1.53
9	A8	786	LEU	CG-CD2	12.03	1.92	1.52
9	B8	786	LEU	CG-CD2	12.01	1.92	1.52
12	BB	1143	ALA	CA-CB	12.01	1.74	1.53
66	T3	289	LYS	CB-CG	12.00	1.88	1.52
29	AT	51	DA	C3'-O3'	-11.98	1.28	1.44
66	t3	289	LYS	CB-CG	11.98	1.88	1.52
29	BT	51	DA	C3'-O3'	-11.98	1.28	1.44
28	AS	156	LEU	CG-CD2	11.91	1.91	1.52
28	BS	156	LEU	CG-CD2	11.90	1.91	1.52
3	A2	59	LEU	CG-CD2	-11.89	1.13	1.52
3	B2	59	LEU	CG-CD2	-11.88	1.13	1.52
1	A0	573	THR	C-N	11.80	1.43	1.33
1	B0	573	THR	C-N	11.79	1.43	1.33
10	A9	181	LYS	N-CA	-11.77	1.31	1.46
10	B9	181	LYS	N-CA	-11.75	1.31	1.46
27	AR	228	MET	N-CA	11.74	1.60	1.46
27	BR	228	MET	N-CA	11.73	1.60	1.46
50	NP	1301	ASP	CB-CG	-11.68	1.22	1.52
50	nP	1301	ASP	CB-CG	-11.68	1.22	1.52
65	T2	34	ASN	CG-OD1	-11.63	1.01	1.23
65	t2	34	ASN	CG-OD1	-11.58	1.01	1.23
50	nP	1294	MET	CG-SD	11.43	2.09	1.80
50	NP	1294	MET	CG-SD	11.41	2.09	1.80
51	ns	125	GLN	CD-OE1	-11.35	1.01	1.23
51	Ns	125	GLN	CD-OE1	-11.34	1.02	1.23
28	AS	160	LEU	CG-CD2	11.22	1.89	1.52
28	BS	160	LEU	CG-CD2	11.21	1.89	1.52
18	BH	129	TYR	CG-CD2	11.04	1.62	1.39
18	AH	129	TYR	CG-CD2	11.02	1.62	1.39
50	nP	1026	MET	CA-C	-11.01	1.37	1.52
50	NP	1026	MET	CA-C	-11.01	1.37	1.52
19	BI	15	TYR	CD2-CE2	-10.94	1.05	1.38
19	AI	15	TYR	CD2-CE2	-10.94	1.05	1.38
18	BH	109	LYS	CD-CE	-10.74	1.20	1.52
18	AH	109	LYS	CD-CE	-10.73	1.20	1.52
12	AB	1138	MET	SD-CE	-10.62	1.52	1.79
12	BB	1138	MET	SD-CE	-10.61	1.53	1.79
1	A0	555	GLN	CD-OE1	10.45	1.43	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B0	555	GLN	CD-OE1	10.45	1.43	1.23
29	BT	56	DG	P-O5'	10.37	1.70	1.59
29	AT	56	DG	P-O5'	10.36	1.70	1.59
1	B0	546	TYR	CE1-CZ	10.28	1.62	1.38
12	AB	1060	ARG	CD-NE	-10.26	1.31	1.46
1	A0	546	TYR	CE1-CZ	10.26	1.62	1.38
12	BB	1060	ARG	CD-NE	-10.25	1.31	1.46
9	nF	667	LYS	CB-CG	-10.25	1.21	1.52
9	NF	667	LYS	CB-CG	-10.23	1.21	1.52
9	A8	786	LEU	CB-CG	-10.18	1.33	1.53
9	B8	786	LEU	CB-CG	-10.16	1.33	1.53
1	B0	547	MET	CA-C	-10.16	1.39	1.52
1	A0	547	MET	CA-C	-10.11	1.39	1.52
19	AI	117	LYS	CB-CG	9.99	1.82	1.52
19	BI	117	LYS	CB-CG	9.99	1.82	1.52
28	AS	173	HIS	CG-ND1	9.99	1.49	1.38
28	BS	173	HIS	CG-ND1	9.98	1.49	1.38
50	NP	1281	SER	C-O	-9.98	1.12	1.24
24	AN	-78	DC	C3'-O3'	9.98	1.56	1.44
9	NF	667	LYS	CA-CB	-9.97	1.38	1.53
24	BN	-78	DC	C3'-O3'	9.96	1.56	1.44
9	nF	667	LYS	CA-CB	-9.95	1.38	1.53
11	BA	676	MET	CA-C	9.94	1.66	1.52
50	nP	1281	SER	C-O	-9.93	1.12	1.24
11	AA	676	MET	CA-C	9.91	1.66	1.52
51	no	93	GLN	C-O	-9.89	1.11	1.24
51	No	93	GLN	C-O	-9.88	1.11	1.24
10	B9	191	GLU	CG-CD	-9.88	1.27	1.52
10	A9	191	GLU	CG-CD	-9.87	1.27	1.52
17	AG	59	GLY	C-O	-9.81	1.11	1.23
17	BG	59	GLY	C-O	-9.81	1.11	1.23
3	A2	63	ASP	CG-OD1	-9.70	1.06	1.25
27	AR	288	ASN	C-O	-9.69	1.11	1.24
3	B2	63	ASP	CG-OD1	-9.68	1.06	1.25
27	BR	288	ASN	C-O	-9.67	1.11	1.24
1	B0	547	MET	CA-CB	9.63	1.69	1.53
24	BN	-56	DC	C5'-C4'	9.62	1.58	1.51
24	AN	-56	DC	C5'-C4'	9.60	1.58	1.51
1	A0	547	MET	CA-CB	9.59	1.69	1.53
50	SH	590	GLU	CB-CG	-9.50	1.24	1.52
28	AS	171	ILE	CB-CG1	-9.49	1.34	1.53
28	BS	171	ILE	CB-CG1	-9.49	1.34	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	BN	-57	DT	C3'-O3'	9.48	1.56	1.44
50	sH	590	GLU	CB-CG	-9.48	1.24	1.52
19	BI	82	GLU	CA-C	9.47	1.63	1.52
24	AN	-57	DT	C3'-O3'	9.46	1.56	1.44
19	AI	82	GLU	CA-C	9.44	1.63	1.52
9	nF	665	LYS	CD-CE	-9.38	1.24	1.52
9	NF	665	LYS	CD-CE	-9.36	1.24	1.52
1	A0	547	MET	N-CA	9.35	1.58	1.46
50	SH	592	LEU	CG-CD1	9.31	1.83	1.52
50	sH	592	LEU	CG-CD1	9.30	1.83	1.52
20	BJ	49	MET	CG-SD	-9.29	1.57	1.80
1	B0	547	MET	N-CA	9.29	1.58	1.46
20	AJ	49	MET	CG-SD	-9.28	1.57	1.80
27	BR	289	ILE	C-N	9.23	1.49	1.33
53	nu	64	GLU	CB-CG	-9.22	1.24	1.52
27	AR	289	ILE	C-N	9.20	1.49	1.33
28	BS	156	LEU	CG-CD1	-9.20	1.22	1.52
28	AS	156	LEU	CG-CD1	-9.20	1.22	1.52
53	Nu	64	GLU	CB-CG	-9.20	1.24	1.52
50	NP	879	GLU	CD-OE2	-9.12	1.08	1.25
50	nP	879	GLU	CD-OE2	-9.12	1.08	1.25
26	AQ	114	MET	SD-CE	-9.08	1.56	1.79
26	BQ	114	MET	SD-CE	-9.08	1.56	1.79
50	NP	1285	GLU	CD-OE1	-9.06	1.08	1.25
54	nv	107	LEU	CG-CD1	-9.05	1.22	1.52
10	A9	191	GLU	N-CA	9.05	1.57	1.46
54	Nv	107	LEU	CG-CD1	-9.05	1.22	1.52
50	nP	1285	GLU	CD-OE1	-9.05	1.08	1.25
45	T4	1018	MET	CB-CG	-9.04	1.25	1.52
10	B9	191	GLU	N-CA	9.04	1.57	1.46
66	T3	836	ILE	C-N	9.03	1.46	1.33
50	nP	1052	ILE	CB-CG2	-9.02	1.22	1.52
45	t4	1018	MET	CB-CG	-9.02	1.25	1.52
50	NP	1052	ILE	CB-CG2	-9.01	1.22	1.52
66	t3	836	ILE	C-N	8.99	1.46	1.33
19	AI	13	MET	CG-SD	-8.99	1.58	1.80
19	BI	13	MET	CG-SD	-8.98	1.58	1.80
24	BN	-74	DG	C5'-C4'	8.95	1.57	1.51
24	AN	-78	DC	O3'-P	8.94	1.71	1.61
24	AN	-74	DG	C5'-C4'	8.93	1.57	1.51
24	BN	-78	DC	O3'-P	8.91	1.71	1.61
53	Nu	56	GLU	CD-OE1	8.86	1.42	1.25

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
53	nu	56	GLU	CD-OE1	8.84	1.42	1.25
66	t3	289	LYS	CA-CB	8.82	1.67	1.53
66	T3	289	LYS	CA-CB	8.78	1.67	1.53
11	BA	683	ILE	C-N	8.71	1.45	1.33
53	Nu	56	GLU	CB-CG	-8.70	1.26	1.52
24	BN	-75	DT	C3'-O3'	8.69	1.55	1.44
53	nu	56	GLU	CB-CG	-8.68	1.26	1.52
68	T6	864	ASN	CG-ND2	-8.68	1.15	1.33
24	AN	-75	DT	C3'-O3'	8.67	1.55	1.44
68	t6	864	ASN	CG-ND2	-8.67	1.15	1.33
11	AA	683	ILE	C-N	8.67	1.45	1.33
50	nP	1308	GLU	N-CA	-8.66	1.35	1.46
66	T3	288	MET	C-N	8.63	1.45	1.33
9	sF	392	MET	CB-CG	-8.62	1.26	1.52
50	NP	1308	GLU	N-CA	-8.61	1.36	1.46
9	SF	392	MET	CB-CG	-8.61	1.26	1.52
53	nu	95	LYS	CD-CE	-8.61	1.26	1.52
53	Nu	95	LYS	CD-CE	-8.60	1.26	1.52
66	t3	288	MET	C-N	8.60	1.45	1.33
50	SH	589	HIS	C-N	8.58	1.45	1.33
1	A0	547	MET	CG-SD	8.57	2.02	1.80
50	sH	589	HIS	C-N	8.57	1.45	1.33
1	B0	547	MET	CG-SD	8.54	2.02	1.80
9	NF	665	LYS	CE-NZ	-8.50	1.23	1.49
9	nF	665	LYS	CE-NZ	-8.50	1.23	1.49
50	SH	592	LEU	CB-CG	-8.45	1.36	1.53
50	sH	592	LEU	CB-CG	-8.44	1.36	1.53
10	B9	191	GLU	CA-CB	-8.43	1.40	1.53
10	A9	191	GLU	CA-CB	-8.42	1.40	1.53
9	SF	392	MET	SD-CE	-8.38	1.58	1.79
53	Nu	64	GLU	CA-CB	-8.37	1.40	1.53
9	sF	392	MET	SD-CE	-8.37	1.58	1.79
67	t5	919	ARG	NE-CZ	-8.36	1.23	1.33
1	B0	560	LEU	N-CA	8.35	1.56	1.46
9	SF	393	LYS	CB-CG	-8.34	1.27	1.52
3	A2	97	MET	CB-CG	-8.34	1.27	1.52
9	sF	393	LYS	CB-CG	-8.33	1.27	1.52
53	nu	64	GLU	CA-CB	-8.32	1.40	1.53
3	B2	97	MET	CB-CG	-8.31	1.27	1.52
1	A0	560	LEU	N-CA	8.30	1.56	1.46
3	B2	463	GLU	CA-CB	-8.30	1.39	1.53
3	A2	463	GLU	CA-CB	-8.30	1.39	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
51	Ns	125	GLN	CG-CD	-8.29	1.31	1.52
27	AR	228	MET	CG-SD	-8.28	1.60	1.80
27	BR	228	MET	CG-SD	-8.28	1.60	1.80
51	ns	125	GLN	CG-CD	-8.28	1.31	1.52
11	AA	234	MET	SD-CE	-8.27	1.58	1.79
67	T5	919	ARG	NE-CZ	-8.27	1.24	1.33
11	BA	234	MET	SD-CE	-8.26	1.58	1.79
67	T5	943	LEU	CG-CD1	-8.23	1.25	1.52
68	T6	132	MET	SD-CE	-8.22	1.58	1.79
67	t5	943	LEU	CG-CD1	-8.22	1.25	1.52
68	t6	132	MET	SD-CE	-8.21	1.59	1.79
9	nF	676	ARG	CG-CD	-8.18	1.27	1.52
9	NF	676	ARG	CG-CD	-8.14	1.28	1.52
10	A9	181	LYS	CE-NZ	-8.08	1.25	1.49
10	B9	181	LYS	CE-NZ	-8.07	1.25	1.49
19	BI	75	CYS	CB-SG	8.05	2.07	1.81
19	AI	75	CYS	CB-SG	8.03	2.07	1.81
11	AA	1202	MET	SD-CE	-7.95	1.59	1.79
11	BA	1202	MET	SD-CE	-7.94	1.59	1.79
9	sF	392	MET	CA-C	-7.85	1.42	1.52
28	AS	151	GLN	N-CA	-7.83	1.36	1.46
9	SF	392	MET	CA-C	-7.83	1.42	1.52
50	NP	930	ASN	CG-ND2	-7.82	1.16	1.33
60	SI	1282	ILE	CB-CG2	-7.81	1.26	1.52
50	nP	930	ASN	CG-ND2	-7.81	1.16	1.33
28	BS	151	GLN	N-CA	-7.81	1.36	1.46
60	sI	1282	ILE	CB-CG2	-7.78	1.26	1.52
1	A0	542	PRO	CA-C	7.76	1.63	1.52
1	B0	542	PRO	CA-C	7.70	1.63	1.52
10	B9	181	LYS	CA-CB	-7.69	1.41	1.53
56	sD	344	MET	SD-CE	-7.69	1.60	1.79
56	SD	344	MET	SD-CE	-7.68	1.60	1.79
50	nP	1308	GLU	CG-CD	-7.67	1.32	1.52
3	B2	463	GLU	CG-CD	-7.66	1.32	1.52
50	NP	1308	GLU	CG-CD	-7.65	1.32	1.52
3	A2	463	GLU	CG-CD	-7.65	1.32	1.52
10	A9	181	LYS	CA-CB	-7.62	1.41	1.53
66	T3	289	LYS	CA-C	-7.62	1.43	1.52
67	T5	920	LYS	CA-C	-7.62	1.42	1.52
67	t5	920	LYS	CA-C	-7.61	1.42	1.52
12	AB	1060	ARG	CA-CB	7.59	1.65	1.53
66	t3	289	LYS	CA-C	-7.57	1.43	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	B2	127	GLU	CD-OE2	-7.56	1.10	1.25
3	A2	127	GLU	CD-OE2	-7.55	1.10	1.25
12	BB	1060	ARG	CA-CB	7.54	1.65	1.53
7	B6	174	MET	CG-SD	-7.48	1.62	1.80
9	B8	786	LEU	CG-CD1	-7.48	1.27	1.52
1	A0	560	LEU	CA-CB	7.48	1.66	1.53
7	A6	174	MET	CG-SD	-7.47	1.62	1.80
9	A8	786	LEU	CG-CD1	-7.47	1.27	1.52
1	B0	560	LEU	CA-CB	7.45	1.66	1.53
18	AH	109	LYS	CE-NZ	-7.44	1.27	1.49
1	B0	544	TYR	N-CA	7.44	1.55	1.46
66	t3	290	LEU	N-CA	-7.43	1.37	1.46
11	BA	692	ASP	CA-C	7.43	1.62	1.52
18	BH	109	LYS	CE-NZ	-7.43	1.27	1.49
11	AA	692	ASP	CA-C	7.42	1.62	1.52
1	B0	555	GLN	CD-NE2	7.41	1.48	1.33
1	A0	547	MET	C-O	-7.41	1.14	1.24
1	A0	544	TYR	N-CA	7.39	1.55	1.46
56	sD	567	GLN	CD-NE2	-7.39	1.17	1.33
27	AR	288	ASN	C-N	7.39	1.43	1.33
55	SA	270	TYR	CA-CB	-7.39	1.41	1.53
55	sA	270	TYR	CA-CB	-7.39	1.41	1.53
27	BR	288	ASN	C-N	7.37	1.43	1.33
19	AI	15	TYR	CD1-CE1	-7.37	1.16	1.38
66	T3	290	LEU	N-CA	-7.37	1.37	1.46
1	A0	555	GLN	CD-NE2	7.37	1.48	1.33
60	SI	1286	PHE	CG-CD2	-7.37	1.23	1.38
19	BI	15	TYR	CD1-CE1	-7.37	1.16	1.38
56	SD	567	GLN	CD-NE2	-7.36	1.17	1.33
1	B0	547	MET	C-O	-7.35	1.14	1.24
67	T5	923	LYS	CE-NZ	-7.34	1.27	1.49
67	t5	923	LYS	CE-NZ	-7.34	1.27	1.49
60	sI	1286	PHE	CG-CD2	-7.34	1.23	1.38
28	AS	173	HIS	N-CA	7.30	1.55	1.46
1	A0	546	TYR	CZ-OH	7.27	1.53	1.38
28	BS	173	HIS	N-CA	7.26	1.55	1.46
1	B0	546	TYR	CZ-OH	7.26	1.53	1.38
24	AN	-55	DA	P-O5'	7.25	1.67	1.59
50	nP	970	GLU	CD-OE2	-7.24	1.11	1.25
50	NP	970	GLU	CD-OE2	-7.24	1.11	1.25
19	AI	82	GLU	CG-CD	-7.23	1.33	1.52
52	nt	88	TYR	CG-CD2	-7.22	1.24	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	BN	-55	DA	P-O5'	7.21	1.67	1.59
52	Nt	88	TYR	CG-CD2	-7.21	1.24	1.39
19	BI	82	GLU	CG-CD	-7.21	1.34	1.52
29	AT	74	DC	N1-C6	-7.18	1.32	1.37
29	BT	74	DC	N1-C6	-7.18	1.32	1.37
19	AI	111	THR	CB-CG2	7.18	1.76	1.52
19	BI	111	THR	CB-CG2	7.16	1.76	1.52
45	t4	1019	MET	CB-CG	-7.15	1.30	1.52
45	T4	1019	MET	CB-CG	-7.14	1.31	1.52
11	AA	684	ALA	N-CA	7.13	1.55	1.46
11	BA	684	ALA	N-CA	7.13	1.55	1.46
3	B2	506	LYS	CE-NZ	-7.08	1.28	1.49
67	t5	920	LYS	CE-NZ	-7.07	1.28	1.49
67	T5	920	LYS	CE-NZ	-7.07	1.28	1.49
1	A0	559	ILE	C-N	7.07	1.43	1.33
3	A2	506	LYS	CE-NZ	-7.06	1.28	1.49
9	nF	667	LYS	CG-CD	7.04	1.73	1.52
1	A0	546	TYR	CE2-CZ	-7.04	1.21	1.38
9	NF	667	LYS	CG-CD	7.04	1.73	1.52
1	B0	546	TYR	CE2-CZ	-7.03	1.21	1.38
9	SF	382	LYS	CG-CD	-7.01	1.31	1.52
1	B0	559	ILE	C-N	7.01	1.43	1.33
9	sF	382	LYS	CG-CD	-7.01	1.31	1.52
68	t6	972	MET	SD-CE	-6.99	1.62	1.79
9	NF	676	ARG	CD-NE	-6.97	1.36	1.46
9	nF	676	ARG	CD-NE	-6.96	1.36	1.46
68	T6	972	MET	SD-CE	-6.95	1.62	1.79
42	mi	166	ARG	C-N	6.93	1.43	1.34
52	Nt	84	MET	C-O	-6.93	1.15	1.24
42	Mi	166	ARG	C-N	6.92	1.43	1.34
52	nt	84	MET	C-O	-6.88	1.15	1.24
65	t2	80	GLN	CD-OE1	-6.88	1.10	1.23
54	Nr	103	LEU	CG-CD2	-6.88	1.29	1.52
51	Ns	57	SER	CB-OG	-6.87	1.28	1.42
9	SF	389	ASN	CG-OD1	-6.87	1.10	1.23
24	AN	-56	DC	P-O5'	6.87	1.66	1.59
54	nr	103	LEU	CG-CD2	-6.87	1.29	1.52
11	BA	683	ILE	CA-C	6.86	1.62	1.52
9	sF	389	ASN	CG-OD1	-6.86	1.10	1.23
24	BN	-56	DC	P-O5'	6.86	1.66	1.59
11	AA	683	ILE	CA-C	6.85	1.62	1.52
11	BA	688	LYS	CB-CG	-6.85	1.31	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
50	NP	1301	ASP	CA-CB	-6.84	1.42	1.53
65	T2	80	GLN	CD-OE1	-6.84	1.10	1.23
64	t1	40	LEU	CG-CD1	-6.84	1.29	1.52
11	AA	688	LYS	CB-CG	-6.83	1.31	1.52
51	ns	57	SER	CB-OG	-6.83	1.28	1.42
19	BI	117	LYS	CE-NZ	-6.82	1.28	1.49
50	nP	1301	ASP	CA-CB	-6.82	1.42	1.53
19	AI	117	LYS	CE-NZ	-6.81	1.28	1.49
64	T1	40	LEU	CG-CD1	-6.80	1.30	1.52
3	B2	97	MET	CG-SD	-6.79	1.63	1.80
66	t3	919	TYR	CD2-CE2	-6.79	1.18	1.38
3	A2	97	MET	CG-SD	-6.79	1.63	1.80
66	T3	919	TYR	CD2-CE2	-6.78	1.18	1.38
18	BH	129	TYR	CG-CD1	-6.75	1.25	1.39
58	sE	550	ASN	CG-ND2	-6.75	1.19	1.33
19	BI	82	GLU	CA-CB	-6.74	1.38	1.53
19	AI	78	CYS	CA-C	-6.73	1.43	1.52
58	SE	550	ASN	CG-ND2	-6.73	1.19	1.33
18	AH	129	TYR	CG-CD1	-6.73	1.25	1.39
19	AI	82	GLU	CA-CB	-6.73	1.38	1.53
28	AS	151	GLN	CG-CD	6.72	1.68	1.52
18	BH	129	TYR	N-CA	-6.72	1.37	1.46
55	SA	458	GLU	CD-OE1	-6.72	1.12	1.25
66	T3	838	SER	CA-C	6.72	1.61	1.52
24	AN	-74	DG	P-O5'	6.72	1.66	1.59
9	sF	393	LYS	CD-CE	-6.71	1.32	1.52
28	BS	151	GLN	CG-CD	6.71	1.68	1.52
9	SF	393	LYS	CD-CE	-6.71	1.32	1.52
18	AH	129	TYR	N-CA	-6.70	1.37	1.46
66	t3	838	SER	CA-C	6.70	1.61	1.52
19	BI	78	CYS	CA-C	-6.69	1.43	1.52
24	BN	-74	DG	P-O5'	6.68	1.66	1.59
55	sA	458	GLU	CD-OE1	-6.68	1.12	1.25
68	T6	971	GLU	CD-OE1	-6.66	1.12	1.25
28	AS	160	LEU	CG-CD1	-6.66	1.30	1.52
11	AA	676	MET	SD-CE	-6.66	1.62	1.79
28	BS	160	LEU	CG-CD1	-6.65	1.30	1.52
11	BA	676	MET	SD-CE	-6.64	1.62	1.79
50	nP	974	GLU	CD-OE1	-6.62	1.12	1.25
50	NP	974	GLU	CD-OE1	-6.62	1.12	1.25
8	B7	561	MET	SD-CE	-6.59	1.63	1.79
1	B0	550	ILE	CG1-CD1	-6.58	1.26	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
10	B9	202	THR	CB-OG1	-6.58	1.33	1.43
68	t6	971	GLU	CD-OE1	-6.58	1.12	1.25
10	A9	202	THR	CB-OG1	-6.57	1.33	1.43
8	A7	561	MET	SD-CE	-6.57	1.63	1.79
1	A0	550	ILE	CG1-CD1	-6.57	1.26	1.51
50	NP	1308	GLU	CB-CG	-6.56	1.32	1.52
50	nP	1308	GLU	CB-CG	-6.55	1.32	1.52
52	nt	37	LEU	CG-CD2	-6.51	1.31	1.52
52	Nt	37	LEU	CG-CD2	-6.51	1.31	1.52
50	NP	930	ASN	CG-OD1	-6.46	1.11	1.23
19	AI	116	ASN	CG-ND2	6.44	1.46	1.33
50	nP	930	ASN	CG-OD1	-6.43	1.11	1.23
3	B2	458	LEU	CG-CD2	-6.42	1.31	1.52
3	B2	63	ASP	CG-OD2	-6.42	1.13	1.25
3	A2	63	ASP	CG-OD2	-6.42	1.13	1.25
19	BI	116	ASN	CG-ND2	6.41	1.46	1.33
54	Nr	74	ILE	CG1-CD1	-6.41	1.26	1.51
3	A2	458	LEU	CG-CD2	-6.41	1.31	1.52
54	nr	74	ILE	CG1-CD1	-6.41	1.26	1.51
3	A2	253	MET	CG-SD	-6.40	1.64	1.80
50	NP	932	PRO	N-CD	-6.39	1.38	1.47
50	nP	932	PRO	N-CD	-6.38	1.38	1.47
3	B2	253	MET	CG-SD	-6.38	1.64	1.80
50	NP	1015	MET	CB-CG	-6.38	1.33	1.52
50	nP	1015	MET	CB-CG	-6.36	1.33	1.52
1	B0	537	MET	SD-CE	-6.31	1.63	1.79
1	A0	537	MET	SD-CE	-6.31	1.63	1.79
2	B1	537	GLU	C-N	-6.29	1.25	1.33
29	AT	57	DA	N9-C4	-6.29	1.34	1.37
29	BT	57	DA	N9-C4	-6.28	1.34	1.37
2	A1	537	GLU	C-N	-6.26	1.25	1.33
55	SA	270	TYR	CB-CG	-6.24	1.38	1.51
28	AS	171	ILE	CA-CB	-6.23	1.46	1.54
28	BS	171	ILE	CA-CB	-6.22	1.46	1.54
19	AI	78	CYS	CB-SG	-6.21	1.60	1.81
55	sA	270	TYR	CB-CG	-6.21	1.38	1.51
50	NP	1032	LEU	CA-C	-6.21	1.44	1.52
19	BI	78	CYS	CB-SG	-6.21	1.60	1.81
50	nP	1032	LEU	CA-C	-6.20	1.44	1.52
3	B2	81	MET	CB-CG	-6.18	1.33	1.52
3	A2	81	MET	CB-CG	-6.17	1.33	1.52
66	T3	837	TYR	CB-CG	-6.16	1.38	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	B8	783	HIS	CA-C	6.15	1.61	1.52
9	A8	783	HIS	CA-C	6.15	1.61	1.52
12	AB	1061	GLU	CA-C	6.14	1.60	1.52
50	nP	1194	GLN	CD-NE2	-6.14	1.20	1.33
48	Mo	106	LEU	C-N	6.14	1.42	1.34
9	SF	392	MET	CG-SD	-6.14	1.65	1.80
50	NP	1194	GLN	CD-NE2	-6.14	1.20	1.33
66	t3	837	TYR	CB-CG	-6.13	1.38	1.51
9	sF	392	MET	CG-SD	-6.12	1.65	1.80
11	AA	1209	MET	SD-CE	-6.11	1.64	1.79
66	T3	837	TYR	N-CA	6.11	1.54	1.46
9	sF	382	LYS	CE-NZ	-6.10	1.31	1.49
48	mo	106	LEU	C-N	6.10	1.42	1.34
66	t3	837	TYR	N-CA	6.09	1.54	1.46
11	BA	1209	MET	SD-CE	-6.09	1.64	1.79
12	BB	1061	GLU	CA-C	6.09	1.60	1.52
50	NP	834	GLU	CG-CD	-6.08	1.36	1.52
9	SF	382	LYS	CE-NZ	-6.08	1.31	1.49
9	SF	401	LYS	CB-CG	-6.08	1.34	1.52
17	AG	58	ARG	CB-CG	-6.07	1.34	1.52
17	BG	58	ARG	CB-CG	-6.06	1.34	1.52
50	nP	834	GLU	CG-CD	-6.06	1.36	1.52
9	sF	401	LYS	CB-CG	-6.05	1.34	1.52
67	T5	923	LYS	CG-CD	-6.04	1.34	1.52
24	BN	-56	DC	O5'-C5'	6.04	1.57	1.42
11	AA	12	ARG	CZ-NH2	-6.04	1.25	1.33
67	t5	923	LYS	CG-CD	-6.03	1.34	1.52
12	AB	1060	ARG	CB-CG	-6.02	1.34	1.52
24	AN	-56	DC	O5'-C5'	6.02	1.57	1.42
12	BB	1060	ARG	CB-CG	-6.02	1.34	1.52
66	T3	406	LYS	CA-C	6.00	1.60	1.52
11	BA	12	ARG	CZ-NH2	-6.00	1.25	1.33
19	BI	111	THR	CA-C	6.00	1.61	1.53
52	np	17	ARG	CZ-NH2	-6.00	1.25	1.33
66	t3	920	LEU	CG-CD1	-6.00	1.32	1.52
19	AI	111	THR	CA-C	6.00	1.61	1.53
54	nv	101	LEU	CG-CD1	-6.00	1.32	1.52
54	Nv	101	LEU	CG-CD1	-5.99	1.32	1.52
66	T3	920	LEU	CG-CD1	-5.99	1.32	1.52
66	t3	406	LYS	CA-C	5.95	1.60	1.52
52	Np	17	ARG	CZ-NH2	-5.95	1.25	1.33
67	T5	877	LYS	CD-CE	-5.95	1.34	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
67	t5	877	LYS	CD-CE	-5.94	1.34	1.52
11	AA	1202	MET	CG-SD	-5.91	1.66	1.80
45	t4	1016	TYR	C-N	5.90	1.41	1.33
52	Nt	88	TYR	CE1-CZ	-5.89	1.24	1.38
52	nt	88	TYR	CE1-CZ	-5.89	1.24	1.38
11	BA	1202	MET	CG-SD	-5.88	1.66	1.80
56	sB	437	MET	SD-CE	-5.88	1.64	1.79
19	BI	116	ASN	N-CA	-5.88	1.38	1.46
19	AI	116	ASN	N-CA	-5.87	1.38	1.46
45	T4	1016	TYR	C-N	5.87	1.41	1.33
18	BH	108	SER	CB-OG	-5.87	1.30	1.42
55	SA	303	PRO	CB-CG	-5.86	1.20	1.49
18	AH	108	SER	CB-OG	-5.86	1.30	1.42
55	sA	303	PRO	CB-CG	-5.86	1.20	1.49
56	SB	437	MET	SD-CE	-5.86	1.65	1.79
3	A2	277	MET	SD-CE	-5.85	1.65	1.79
3	B2	277	MET	SD-CE	-5.85	1.65	1.79
52	Nt	88	TYR	CG-CD1	-5.84	1.27	1.39
52	nt	88	TYR	CG-CD1	-5.82	1.27	1.39
50	NP	1308	GLU	CD-OE1	5.81	1.36	1.25
67	t5	872	ARG	CZ-NH2	-5.79	1.25	1.33
50	nP	1308	GLU	CD-OE1	5.79	1.36	1.25
3	B2	63	ASP	C-N	5.78	1.42	1.33
64	T1	70	GLN	CD-OE1	-5.78	1.12	1.23
67	t5	877	LYS	CA-C	-5.77	1.45	1.52
67	T5	872	ARG	CZ-NH2	-5.76	1.25	1.33
3	A2	63	ASP	C-N	5.76	1.42	1.33
64	t1	70	GLN	CD-OE1	-5.76	1.12	1.23
68	t6	955	TRP	C-N	5.75	1.40	1.34
67	T5	877	LYS	CA-C	-5.74	1.45	1.52
68	T6	955	TRP	C-N	5.74	1.40	1.34
67	T5	931	GLN	CB-CG	-5.73	1.35	1.52
18	BH	109	LYS	N-CA	-5.72	1.38	1.46
18	AH	109	LYS	N-CA	-5.71	1.38	1.46
67	t5	931	GLN	CB-CG	-5.71	1.35	1.52
55	sA	457	ARG	CG-CD	-5.70	1.35	1.52
29	AT	55	DT	O3'-P	5.69	1.68	1.61
12	AB	1208	MET	SD-CE	-5.69	1.65	1.79
12	BB	1208	MET	SD-CE	-5.69	1.65	1.79
52	Nt	88	TYR	CD1-CE1	5.68	1.55	1.38
55	SA	457	ARG	CG-CD	-5.68	1.35	1.52
50	nP	1293	GLU	C-N	5.68	1.41	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
58	SE	550	ASN	CG-OD1	-5.68	1.12	1.23
58	sE	550	ASN	CG-OD1	-5.68	1.12	1.23
9	B8	778	ASP	CG-OD2	-5.67	1.14	1.25
50	NP	1293	GLU	C-N	5.66	1.41	1.33
52	nt	88	TYR	CD1-CE1	5.66	1.55	1.38
29	BT	-67	DA	C3'-O3'	-5.66	1.36	1.44
66	t3	289	LYS	C-N	-5.66	1.26	1.33
24	BN	-57	DT	C5'-C4'	5.66	1.55	1.51
18	AH	108	SER	C-N	-5.66	1.25	1.33
68	T6	532	TYR	CD1-CE1	-5.65	1.21	1.38
29	BT	55	DT	O3'-P	5.65	1.68	1.61
29	AT	-67	DA	C3'-O3'	-5.64	1.36	1.44
29	AT	56	DG	C5'-C4'	5.64	1.55	1.51
18	BH	108	SER	C-N	-5.64	1.25	1.33
9	A8	778	ASP	CG-OD2	-5.64	1.14	1.25
11	BA	688	LYS	CG-CD	-5.64	1.35	1.52
11	AA	688	LYS	CG-CD	-5.63	1.35	1.52
7	B6	250	THR	CB-CG2	-5.63	1.33	1.52
50	sH	592	LEU	N-CA	-5.63	1.39	1.46
66	T3	289	LYS	C-N	-5.63	1.26	1.33
45	T4	1000	HIS	C-O	-5.63	1.15	1.23
50	SH	592	LEU	N-CA	-5.63	1.39	1.46
45	t4	1000	HIS	C-O	-5.62	1.15	1.23
67	t5	877	LYS	CE-NZ	-5.62	1.32	1.49
68	t6	532	TYR	CD1-CE1	-5.62	1.21	1.38
1	A0	546	TYR	C-O	-5.61	1.17	1.24
7	A6	250	THR	CB-CG2	-5.61	1.34	1.52
67	T5	877	LYS	CE-NZ	-5.61	1.32	1.49
29	BT	56	DG	C5'-C4'	5.61	1.55	1.51
24	BN	117	DA	P-OP2	-5.60	1.37	1.48
24	AN	117	DA	P-OP2	-5.60	1.37	1.48
51	no	97	GLU	CD-OE1	-5.60	1.14	1.25
50	NP	1015	MET	SD-CE	-5.59	1.65	1.79
66	t3	633	LEU	CG-CD1	-5.59	1.34	1.52
1	B0	546	TYR	C-O	-5.59	1.17	1.24
50	nP	1015	MET	SD-CE	-5.59	1.65	1.79
50	nP	931	LEU	CA-C	5.58	1.59	1.52
14	BD	155	ARG	CZ-NH2	-5.58	1.26	1.33
14	AD	155	ARG	CZ-NH2	-5.58	1.26	1.33
51	No	97	GLU	CD-OE1	-5.58	1.14	1.25
24	AN	-57	DT	C5'-C4'	5.58	1.55	1.51
50	NP	807	THR	C-O	-5.57	1.17	1.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
66	T3	633	LEU	CG-CD1	-5.57	1.34	1.52
28	AS	156	LEU	CB-CG	-5.56	1.42	1.53
9	nF	667	LYS	N-CA	-5.56	1.39	1.46
28	BS	156	LEU	CB-CG	-5.55	1.42	1.53
50	NP	931	LEU	CA-C	5.55	1.59	1.52
50	nP	1112	MET	CG-SD	-5.55	1.66	1.80
9	NF	667	LYS	N-CA	-5.54	1.39	1.46
50	NP	1112	MET	CG-SD	-5.54	1.67	1.80
50	nP	807	THR	C-O	-5.54	1.17	1.24
68	T6	761	LYS	CD-CE	-5.53	1.35	1.52
11	BA	1359	ASP	CG-OD2	-5.52	1.14	1.25
12	BB	319	GLU	CD-OE1	-5.52	1.14	1.25
68	t6	761	LYS	CD-CE	-5.52	1.35	1.52
9	SF	510	ILE	CB-CG2	-5.52	1.34	1.52
67	t5	923	LYS	CB-CG	-5.52	1.35	1.52
67	T5	923	LYS	CB-CG	-5.51	1.35	1.52
67	t5	931	GLN	CG-CD	-5.51	1.38	1.52
9	sF	510	ILE	CB-CG2	-5.50	1.34	1.52
12	AB	319	GLU	CD-OE1	-5.50	1.14	1.25
11	AA	1359	ASP	CG-OD2	-5.50	1.14	1.25
1	B0	25	MET	CG-SD	-5.49	1.67	1.80
60	sI	1286	PHE	CE2-CZ	-5.49	1.22	1.38
60	SI	1286	PHE	CE2-CZ	-5.48	1.22	1.38
1	A0	25	MET	CG-SD	-5.47	1.67	1.80
67	T5	931	GLN	CG-CD	-5.46	1.38	1.52
68	T6	164	MET	SD-CE	-5.46	1.65	1.79
2	A1	214	ILE	CB-CG2	5.46	1.70	1.52
68	t6	164	MET	SD-CE	-5.46	1.66	1.79
2	B1	214	ILE	CB-CG2	5.45	1.70	1.52
50	NP	932	PRO	CG-CD	-5.45	1.32	1.50
50	nP	932	PRO	CG-CD	-5.45	1.32	1.50
28	BS	158	ASP	N-CA	-5.43	1.39	1.46
19	AI	77	LYS	CE-NZ	-5.42	1.33	1.49
68	T6	54	GLN	CD-NE2	-5.42	1.21	1.33
24	BN	-74	DG	O5'-C5'	5.42	1.55	1.42
19	BI	77	LYS	CE-NZ	-5.42	1.33	1.49
24	AN	-74	DG	O5'-C5'	5.41	1.55	1.42
9	NF	667	LYS	CE-NZ	-5.41	1.33	1.49
68	t6	54	GLN	CD-NE2	-5.41	1.21	1.33
9	nF	667	LYS	CE-NZ	-5.40	1.33	1.49
11	AA	692	ASP	CG-OD2	5.39	1.35	1.25
28	AS	158	ASP	N-CA	-5.39	1.40	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
10	A9	234	SER	CB-OG	-5.39	1.31	1.42
45	t4	1018	MET	CG-SD	-5.38	1.67	1.80
10	B9	234	SER	CB-OG	-5.38	1.31	1.42
45	T4	1018	MET	CG-SD	-5.38	1.67	1.80
67	t5	931	GLN	CD-NE2	5.37	1.44	1.33
19	AI	15	TYR	CE2-CZ	5.37	1.51	1.38
12	AB	662	MET	CG-SD	-5.35	1.67	1.80
11	AA	688	LYS	CE-NZ	-5.35	1.33	1.49
11	BA	692	ASP	CG-OD2	5.35	1.35	1.25
19	BI	15	TYR	CE2-CZ	5.35	1.51	1.38
11	BA	688	LYS	CE-NZ	-5.34	1.33	1.49
12	BB	662	MET	CG-SD	-5.34	1.67	1.80
11	BA	885	THR	CB-CG2	-5.34	1.34	1.52
55	SA	271	ASP	C-N	5.33	1.46	1.33
11	AA	885	THR	CB-CG2	-5.33	1.34	1.52
1	A0	546	TYR	CA-CB	5.32	1.62	1.53
28	BS	160	LEU	CB-CG	-5.32	1.42	1.53
67	T5	931	GLN	CD-NE2	5.32	1.44	1.33
1	B0	546	TYR	CA-CB	5.32	1.62	1.53
19	BI	94	ASP	CG-OD2	-5.32	1.15	1.25
28	AS	160	LEU	CB-CG	-5.31	1.42	1.53
55	sA	271	ASP	C-N	5.31	1.46	1.33
50	nP	1300	MET	SD-CE	-5.31	1.66	1.79
3	A2	507	ARG	CG-CD	5.30	1.68	1.52
20	BJ	49	MET	CB-CG	-5.30	1.36	1.52
50	nP	1042	MET	CB-CG	-5.30	1.36	1.52
50	NP	1300	MET	SD-CE	-5.29	1.66	1.79
66	t3	917	LEU	CG-CD2	-5.29	1.35	1.52
3	B2	507	ARG	CG-CD	5.29	1.68	1.52
19	AI	94	ASP	CG-OD2	-5.29	1.15	1.25
66	T3	917	LEU	CG-CD2	-5.29	1.35	1.52
20	AJ	49	MET	CB-CG	-5.29	1.36	1.52
50	NP	1042	MET	CB-CG	-5.27	1.36	1.52
14	BD	155	ARG	CD-NE	-5.26	1.38	1.46
14	AD	155	ARG	CD-NE	-5.26	1.38	1.46
3	B2	463	GLU	C-N	5.25	1.40	1.33
3	A2	463	GLU	C-N	5.24	1.40	1.33
58	SE	43	LEU	CG-CD2	-5.24	1.35	1.52
3	A2	173	MET	SD-CE	-5.23	1.66	1.79
50	nP	1307	LYS	C-N	-5.23	1.27	1.33
24	AN	-75	DT	C3'-C2'	5.23	1.56	1.52
12	BB	1060	ARG	CZ-NH1	5.23	1.40	1.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
58	sE	43	LEU	CG-CD2	-5.23	1.35	1.52
24	BN	-75	DT	C3'-C2'	5.22	1.56	1.52
3	B2	173	MET	SD-CE	-5.21	1.66	1.79
50	NP	1307	LYS	C-N	-5.20	1.27	1.33
19	AI	13	MET	CB-CG	-5.19	1.36	1.52
12	AB	1060	ARG	CZ-NH1	5.18	1.40	1.32
19	BI	13	MET	CB-CG	-5.18	1.36	1.52
50	NP	1031	ARG	C-N	5.18	1.40	1.33
24	BN	-57	DT	N1-C2	-5.17	1.33	1.38
28	BS	182	MET	N-CA	5.17	1.52	1.46
7	A6	214	LEU	CG-CD1	-5.16	1.35	1.52
7	B6	214	LEU	CG-CD1	-5.16	1.35	1.52
24	AN	-57	DT	N1-C2	-5.16	1.33	1.38
50	sH	592	LEU	CA-CB	-5.15	1.45	1.53
28	AS	182	MET	N-CA	5.15	1.52	1.46
29	AT	56	DG	O5'-C5'	5.15	1.55	1.42
29	BT	56	DG	O5'-C5'	5.14	1.55	1.42
3	A2	507	ARG	CB-CG	-5.13	1.37	1.52
12	AB	1061	GLU	CG-CD	-5.13	1.39	1.52
3	B2	507	ARG	CB-CG	-5.13	1.37	1.52
50	NP	1301	ASP	CG-OD2	5.12	1.35	1.25
50	nP	1031	ARG	C-N	5.12	1.40	1.33
12	BB	1061	GLU	CG-CD	-5.11	1.39	1.52
9	SF	400	GLN	C-O	-5.10	1.17	1.24
3	A2	69	ASN	CG-ND2	-5.10	1.22	1.33
50	nP	1301	ASP	CG-OD2	5.09	1.35	1.25
50	SH	592	LEU	CA-CB	-5.09	1.46	1.53
9	sF	400	GLN	C-O	-5.09	1.17	1.24
50	nP	930	ASN	CB-CG	5.08	1.64	1.52
50	NP	930	ASN	CB-CG	5.08	1.64	1.52
53	nu	111	ILE	CG1-CD1	-5.06	1.32	1.51
3	B2	69	ASN	CG-ND2	-5.06	1.22	1.33
51	ns	122	LYS	CB-CG	-5.05	1.37	1.52
51	Ns	122	LYS	CB-CG	-5.05	1.37	1.52
53	Nu	111	ILE	CG1-CD1	-5.05	1.32	1.51
18	BH	109	LYS	CG-CD	5.04	1.67	1.52
54	nv	77	GLU	CD-OE1	-5.04	1.15	1.25
3	B2	63	ASP	CB-CG	5.04	1.64	1.52
3	A2	63	ASP	CB-CG	5.03	1.64	1.52
52	nt	84	MET	SD-CE	-5.03	1.67	1.79
52	Nt	84	MET	SD-CE	-5.02	1.67	1.79
56	SD	304	GLU	CG-CD	-5.02	1.39	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	sD	711	GLU	CG-CD	-5.02	1.39	1.52
67	T5	877	LYS	CG-CD	-5.02	1.37	1.52
67	t5	877	LYS	CG-CD	-5.01	1.37	1.52
1	B0	543	SER	CA-CB	5.01	1.61	1.53
18	AH	109	LYS	CG-CD	5.01	1.67	1.52
56	sD	304	GLU	CG-CD	-5.01	1.39	1.52
54	Nv	77	GLU	CD-OE1	-5.01	1.15	1.25
54	nv	73	ARG	C-O	-5.01	1.18	1.24

All (1251) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
28	AS	173	HIS	CA-CB-CG	66.15	179.95	113.80
28	BS	173	HIS	CA-CB-CG	66.14	179.94	113.80
50	sH	589	HIS	O-C-N	36.68	159.85	122.07
50	SH	589	HIS	O-C-N	36.66	159.83	122.07
50	NP	1301	ASP	CA-CB-CG	35.24	147.84	112.60
50	nP	1301	ASP	CA-CB-CG	35.24	147.84	112.60
1	A0	546	TYR	CG-CD1-CE1	-35.23	68.36	121.20
1	B0	546	TYR	CG-CD1-CE1	-35.22	68.37	121.20
50	NP	1294	MET	CA-CB-CG	32.93	179.96	114.10
50	nP	1294	MET	CA-CB-CG	32.92	179.93	114.10
1	B0	547	MET	CA-CB-CG	31.04	176.17	114.10
1	A0	547	MET	CA-CB-CG	31.03	176.16	114.10
67	t5	920	LYS	CB-CG-CD	29.86	179.99	111.30
67	T5	920	LYS	CB-CG-CD	29.86	179.97	111.30
9	NF	667	LYS	CA-CB-CG	28.31	170.72	114.10
9	nF	667	LYS	CA-CB-CG	28.31	170.72	114.10
10	A9	209	MET	CA-CB-CG	28.04	170.18	114.10
10	B9	209	MET	CA-CB-CG	28.02	170.14	114.10
53	nu	64	GLU	CB-CG-CD	27.00	158.50	112.60
53	Nu	64	GLU	CB-CG-CD	26.97	158.45	112.60
19	AI	82	GLU	CB-CG-CD	25.75	156.38	112.60
19	BI	82	GLU	CB-CG-CD	25.73	156.34	112.60
50	nP	1308	GLU	CB-CG-CD	25.37	155.73	112.60
50	NP	1308	GLU	CB-CG-CD	25.36	155.72	112.60
24	AN	-52	DT	O3'-P-O5'	24.92	151.35	104.00
24	BN	-52	DT	O3'-P-O5'	24.92	151.34	104.00
53	Nu	56	GLU	CA-CB-CG	24.66	163.43	114.10
53	nu	56	GLU	CA-CB-CG	24.64	163.39	114.10
66	T3	837	TYR	CB-CG-CD2	-22.98	86.32	120.80
66	t3	837	TYR	CB-CG-CD2	-22.98	86.33	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A2	97	MET	CB-CG-SD	22.43	179.97	112.70
3	B2	97	MET	CB-CG-SD	22.41	179.93	112.70
50	sH	589	HIS	CA-C-N	-21.63	80.23	121.54
50	sH	589	HIS	C-N-CA	-21.63	80.23	121.54
50	SH	589	HIS	CA-C-N	-21.62	80.25	121.54
50	SH	589	HIS	C-N-CA	-21.62	80.25	121.54
67	T5	919	ARG	CD-NE-CZ	21.02	153.83	124.40
67	t5	919	ARG	CD-NE-CZ	21.01	153.82	124.40
9	nF	665	LYS	CB-CG-CD	20.98	159.56	111.30
9	NF	665	LYS	CB-CG-CD	20.95	159.49	111.30
28	BS	156	LEU	CB-CG-CD1	20.86	173.28	110.70
28	AS	156	LEU	CB-CG-CD1	20.85	173.25	110.70
1	A0	546	TYR	CA-C-N	20.77	161.21	121.54
1	A0	546	TYR	C-N-CA	20.77	161.21	121.54
1	B0	546	TYR	CA-C-N	20.76	161.19	121.54
1	B0	546	TYR	C-N-CA	20.76	161.19	121.54
50	SH	590	GLU	CA-CB-CG	20.47	155.04	114.10
50	sH	590	GLU	CA-CB-CG	20.46	155.01	114.10
67	t5	923	LYS	CB-CG-CD	20.43	158.28	111.30
67	T5	923	LYS	CB-CG-CD	20.41	158.25	111.30
9	A8	786	LEU	CB-CG-CD1	20.27	171.52	110.70
9	B8	786	LEU	CB-CG-CD1	20.27	171.49	110.70
18	AH	129	TYR	N-CA-C	-19.62	85.18	112.45
18	BH	129	TYR	N-CA-C	-19.62	85.18	112.45
9	nF	676	ARG	CG-CD-NE	19.18	154.20	112.00
9	NF	676	ARG	CG-CD-NE	19.17	154.16	112.00
12	AB	1060	ARG	CG-CD-NE	19.16	154.14	112.00
12	BB	1060	ARG	CG-CD-NE	19.16	154.14	112.00
67	T5	923	LYS	CG-CD-CE	-18.81	68.04	111.30
67	t5	923	LYS	CG-CD-CE	-18.80	68.07	111.30
11	AA	676	MET	CG-SD-CE	18.53	141.68	100.90
11	BA	676	MET	CG-SD-CE	18.51	141.63	100.90
50	sH	592	LEU	N-CA-C	-18.39	90.98	113.41
50	SH	592	LEU	N-CA-C	-18.39	90.98	113.41
27	BR	228	MET	CA-CB-CG	-18.10	77.90	114.10
27	AR	228	MET	CA-CB-CG	-18.09	77.92	114.10
11	AA	688	LYS	CG-CD-CE	18.05	152.81	111.30
11	BA	692	ASP	N-CA-C	-18.04	90.57	113.12
11	BA	688	LYS	CG-CD-CE	18.04	152.78	111.30
11	AA	692	ASP	N-CA-C	-18.02	90.59	113.12
10	B9	181	LYS	N-CA-CB	17.92	136.96	110.26
10	A9	181	LYS	N-CA-CB	17.91	136.95	110.26

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	nF	667	LYS	N-CA-CB	17.83	140.04	109.72
9	NF	667	LYS	N-CA-CB	17.81	140.00	109.72
10	A9	191	GLU	CB-CG-CD	17.75	142.77	112.60
10	B9	191	GLU	CB-CG-CD	17.75	142.77	112.60
50	SH	590	GLU	CB-CG-CD	17.69	142.67	112.60
50	sH	590	GLU	CB-CG-CD	17.66	142.62	112.60
9	nF	665	LYS	CD-CE-NZ	17.66	168.40	111.90
9	NF	665	LYS	CD-CE-NZ	17.65	168.39	111.90
19	AI	117	LYS	CB-CG-CD	-17.59	70.85	111.30
19	BI	117	LYS	CB-CG-CD	-17.59	70.85	111.30
12	AB	1060	ARG	CD-NE-CZ	-17.51	99.89	124.40
12	BB	1060	ARG	CD-NE-CZ	-17.50	99.90	124.40
9	SF	392	MET	N-CA-CB	-17.27	83.70	110.30
9	sF	392	MET	N-CA-CB	-17.26	83.72	110.30
45	t4	1018	MET	N-CA-CB	17.17	134.98	109.91
45	T4	1018	MET	N-CA-CB	17.14	134.93	109.91
50	sH	592	LEU	N-CA-CB	16.90	135.14	110.47
50	SH	592	LEU	N-CA-CB	16.88	135.12	110.47
19	BI	78	CYS	CB-CA-C	-16.78	76.15	110.38
19	AI	78	CYS	CB-CA-C	-16.77	76.16	110.38
9	nF	676	ARG	CD-NE-CZ	-16.61	101.14	124.40
9	NF	676	ARG	CD-NE-CZ	-16.60	101.16	124.40
10	A9	209	MET	CB-CG-SD	16.60	162.49	112.70
10	B9	209	MET	CB-CG-SD	16.59	162.46	112.70
28	AS	151	GLN	N-CA-C	-16.57	89.42	112.45
28	BS	151	GLN	N-CA-C	-16.56	89.44	112.45
3	A2	506	LYS	CA-CB-CG	16.53	147.15	114.10
3	B2	506	LYS	CA-CB-CG	16.52	147.13	114.10
67	T5	920	LYS	CA-CB-CG	16.42	146.95	114.10
67	t5	920	LYS	CA-CB-CG	16.41	146.92	114.10
9	B8	786	LEU	N-CA-CB	-16.41	83.95	109.88
9	A8	786	LEU	N-CA-CB	-16.39	83.98	109.88
50	NP	1026	MET	CG-SD-CE	-16.32	64.98	100.90
50	nP	1026	MET	CG-SD-CE	-16.32	64.98	100.90
9	sF	389	ASN	OD1-CG-ND2	-16.22	106.38	122.60
9	SF	389	ASN	OD1-CG-ND2	-16.19	106.41	122.60
18	BH	129	TYR	CB-CG-CD1	16.19	145.08	120.80
18	AH	129	TYR	CB-CG-CD1	16.17	145.06	120.80
27	AR	288	ASN	O-C-N	-16.12	105.02	122.10
27	BR	288	ASN	O-C-N	-16.10	105.03	122.10
19	BI	82	GLU	N-CA-CB	16.07	136.84	110.32
6	A5	3	ARG	CD-NE-CZ	16.07	146.89	124.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
19	AI	82	GLU	N-CA-CB	16.07	136.83	110.32
10	B9	181	LYS	N-CA-C	-16.06	90.13	112.45
10	A9	181	LYS	N-CA-C	-16.06	90.13	112.45
6	B5	3	ARG	CD-NE-CZ	16.03	146.85	124.40
27	BR	228	MET	CB-CG-SD	15.99	160.68	112.70
27	AR	228	MET	CB-CG-SD	15.98	160.65	112.70
1	A0	560	LEU	N-CA-CB	15.95	137.44	110.49
1	B0	560	LEU	N-CA-CB	15.93	137.42	110.49
53	Nu	56	GLU	CB-CG-CD	15.91	139.65	112.60
53	nu	56	GLU	CB-CG-CD	15.91	139.64	112.60
19	BI	116	ASN	CA-CB-CG	15.60	128.20	112.60
19	AI	116	ASN	CA-CB-CG	15.54	128.14	112.60
20	BJ	49	MET	CB-CG-SD	15.49	159.16	112.70
20	AJ	49	MET	CB-CG-SD	15.48	159.14	112.70
1	A0	546	TYR	CD1-CG-CD2	15.29	141.03	118.10
1	B0	546	TYR	CD1-CG-CD2	15.28	141.02	118.10
1	A0	555	GLN	CB-CG-CD	15.16	138.37	112.60
1	B0	555	GLN	CB-CG-CD	15.15	138.36	112.60
9	sF	393	LYS	CA-CB-CG	15.11	144.32	114.10
19	AI	116	ASN	N-CA-C	-15.10	84.99	109.76
9	SF	393	LYS	CA-CB-CG	15.10	144.30	114.10
19	BI	116	ASN	N-CA-C	-15.10	85.00	109.76
66	T3	837	TYR	CD1-CG-CD2	-15.04	95.53	118.10
66	t3	837	TYR	CD1-CG-CD2	-15.02	95.57	118.10
9	nF	665	LYS	N-CA-CB	15.00	135.84	110.49
9	NF	665	LYS	N-CA-CB	14.98	135.81	110.49
28	AS	171	ILE	N-CA-CB	-14.89	90.28	110.54
28	BS	171	ILE	N-CA-CB	-14.89	90.28	110.54
3	A2	507	ARG	CA-CB-CG	14.65	143.39	114.10
3	B2	507	ARG	CA-CB-CG	14.64	143.38	114.10
11	BA	692	ASP	CA-CB-CG	14.64	127.24	112.60
11	AA	692	ASP	CA-CB-CG	14.63	127.23	112.60
11	BA	676	MET	N-CA-C	-14.57	94.92	111.82
11	AA	676	MET	N-CA-C	-14.55	94.94	111.82
11	AA	688	LYS	CB-CA-C	14.33	135.80	110.01
11	BA	688	LYS	CB-CA-C	14.32	135.79	110.01
19	AI	77	LYS	CD-CE-NZ	14.32	157.72	111.90
19	BI	77	LYS	CD-CE-NZ	14.31	157.70	111.90
50	nP	1300	MET	CG-SD-CE	14.21	132.17	100.90
50	NP	1300	MET	CG-SD-CE	14.20	132.15	100.90
67	t5	877	LYS	CG-CD-CE	14.17	143.89	111.30
67	T5	877	LYS	CG-CD-CE	14.14	143.83	111.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	AN	-52	DT	P-O3'-C3'	14.12	136.65	119.70
24	BN	-52	DT	P-O3'-C3'	14.10	136.62	119.70
19	BI	75	CYS	CB-CA-C	-14.04	87.59	109.08
1	B0	546	TYR	CG-CD2-CE2	14.04	142.26	121.20
19	AI	75	CYS	CB-CA-C	-14.04	87.60	109.08
1	A0	546	TYR	CG-CD2-CE2	14.03	142.25	121.20
19	AI	13	MET	CB-CG-SD	-13.87	71.09	112.70
19	BI	13	MET	CB-CG-SD	-13.87	71.11	112.70
12	AB	19	GLU	CG-CD-OE1	13.75	150.03	118.40
12	BB	19	GLU	CG-CD-OE1	13.74	150.01	118.40
1	A0	546	TYR	CD1-CE1-CZ	13.69	144.25	119.60
1	B0	546	TYR	CD1-CE1-CZ	13.69	144.24	119.60
19	AI	81	ARG	CA-C-N	-13.60	99.54	121.58
19	AI	81	ARG	C-N-CA	-13.60	99.54	121.58
19	BI	81	ARG	CA-C-N	-13.59	99.57	121.58
19	BI	81	ARG	C-N-CA	-13.59	99.57	121.58
1	A0	76	MET	CG-SD-CE	-13.51	71.17	100.90
1	B0	76	MET	CG-SD-CE	-13.51	71.19	100.90
18	BH	129	TYR	CG-CD1-CE1	13.47	141.41	121.20
18	AH	129	TYR	CG-CD1-CE1	13.44	141.36	121.20
53	Nu	56	GLU	OE1-CD-OE2	-13.38	90.78	122.90
53	nu	56	GLU	OE1-CD-OE2	-13.38	90.80	122.90
67	T5	919	ARG	CA-CB-CG	13.26	140.63	114.10
67	t5	919	ARG	CA-CB-CG	13.26	140.63	114.10
1	B0	547	MET	CA-C-O	-13.26	101.56	120.51
1	A0	547	MET	CA-C-O	-13.24	101.58	120.51
9	SF	401	LYS	CB-CA-C	13.11	136.50	110.42
9	sF	401	LYS	CB-CA-C	13.09	136.47	110.42
18	BH	129	TYR	CD1-CG-CD2	-13.07	98.50	118.10
18	AH	129	TYR	CD1-CG-CD2	-13.06	98.50	118.10
18	BH	129	TYR	CB-CG-CD2	-13.04	101.24	120.80
18	AH	129	TYR	CB-CG-CD2	-13.01	101.29	120.80
9	SF	389	ASN	CB-CG-ND2	-12.98	96.93	116.40
9	sF	389	ASN	CB-CG-ND2	-12.98	96.93	116.40
1	A0	547	MET	N-CA-C	-12.93	83.26	110.80
1	B0	547	MET	N-CA-C	-12.92	83.28	110.80
66	T3	837	TYR	CG-CD1-CE1	12.82	140.43	121.20
66	t3	837	TYR	CG-CD1-CE1	12.80	140.41	121.20
50	nP	1301	ASP	N-CA-CB	12.75	132.03	110.49
67	t5	931	GLN	CB-CG-CD	12.74	134.26	112.60
50	NP	1301	ASP	N-CA-CB	12.73	132.01	110.49
67	T5	931	GLN	CB-CG-CD	12.72	134.22	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B0	546	TYR	N-CA-CB	-12.71	89.00	110.49
1	A0	546	TYR	N-CA-CB	-12.70	89.02	110.49
50	sH	592	LEU	CA-CB-CG	12.69	160.70	116.30
50	SH	592	LEU	CA-CB-CG	12.68	160.69	116.30
11	AA	688	LYS	CD-CE-NZ	12.63	152.32	111.90
11	BA	688	LYS	CD-CE-NZ	12.61	152.25	111.90
19	AI	82	GLU	CB-CA-C	-12.56	92.76	110.34
19	BI	82	GLU	CB-CA-C	-12.56	92.76	110.34
67	t5	931	GLN	CG-CD-NE2	-12.52	97.61	116.40
19	AI	116	ASN	CB-CG-ND2	-12.52	97.63	116.40
67	T5	920	LYS	CG-CD-CE	-12.51	82.52	111.30
67	t5	920	LYS	CG-CD-CE	-12.51	82.52	111.30
67	T5	931	GLN	CG-CD-NE2	-12.51	97.64	116.40
9	B8	786	LEU	CB-CA-C	12.50	130.88	110.88
24	BN	-76	DA	O3'-P-O5'	12.50	127.75	104.00
24	AN	-76	DA	O3'-P-O5'	12.50	127.75	104.00
19	BI	116	ASN	CB-CG-ND2	-12.47	97.69	116.40
9	A8	786	LEU	CB-CA-C	12.47	130.83	110.88
9	NF	676	ARG	CA-CB-CG	-12.37	89.36	114.10
9	nF	676	ARG	CA-CB-CG	-12.36	89.38	114.10
12	AB	19	GLU	CG-CD-OE2	-12.29	90.14	118.40
12	BB	19	GLU	CG-CD-OE2	-12.29	90.14	118.40
66	T3	837	TYR	N-CA-CB	-12.26	91.85	111.22
66	t3	837	TYR	N-CA-CB	-12.22	91.91	111.22
27	AR	227	SER	CA-C-O	-12.21	107.76	121.19
27	BR	227	SER	CA-C-O	-12.19	107.78	121.19
6	A5	5	ARG	CG-CD-NE	12.16	138.75	112.00
6	B5	5	ARG	CG-CD-NE	12.15	138.74	112.00
66	T3	837	TYR	CB-CG-CD1	12.09	138.93	120.80
19	BI	75	CYS	CA-CB-SG	12.09	142.20	114.40
19	AI	75	CYS	CA-CB-SG	12.09	142.19	114.40
66	t3	837	TYR	CB-CG-CD1	12.07	138.91	120.80
28	AS	156	LEU	CD1-CG-CD2	-11.97	84.47	110.80
28	BS	156	LEU	CD1-CG-CD2	-11.95	84.50	110.80
19	BI	111	THR	OG1-CB-CG2	-11.94	85.42	109.30
19	AI	111	THR	OG1-CB-CG2	-11.93	85.45	109.30
1	B0	542	PRO	O-C-N	-11.90	106.57	122.64
1	A0	542	PRO	O-C-N	-11.87	106.61	122.64
50	NP	1301	ASP	OD1-CG-OD2	-11.86	94.43	122.90
50	nP	1301	ASP	OD1-CG-OD2	-11.85	94.47	122.90
10	A9	181	LYS	CB-CA-C	-11.81	87.78	110.11
10	B9	181	LYS	CB-CA-C	-11.80	87.81	110.11

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	sF	393	LYS	CD-CE-NZ	11.79	149.61	111.90
9	SF	393	LYS	CD-CE-NZ	11.78	149.58	111.90
28	AS	160	LEU	CB-CG-CD1	11.70	145.80	110.70
3	A2	463	GLU	N-CA-CB	-11.70	91.65	110.14
28	BS	160	LEU	CB-CG-CD1	11.70	145.79	110.70
3	B2	463	GLU	N-CA-CB	-11.68	91.68	110.14
53	Nu	64	GLU	CA-CB-CG	11.58	137.26	114.10
67	t5	920	LYS	CB-CA-C	11.56	125.65	109.92
67	T5	920	LYS	CB-CA-C	11.56	125.64	109.92
53	nu	64	GLU	CA-CB-CG	11.56	137.21	114.10
10	B9	191	GLU	N-CA-CB	-11.54	93.16	110.12
10	A9	191	GLU	N-CA-CB	-11.53	93.17	110.12
53	nu	56	GLU	CG-CD-OE1	-11.51	91.93	118.40
53	Nu	56	GLU	CG-CD-OE1	-11.50	91.95	118.40
12	BB	19	GLU	CB-CG-CD	11.49	132.13	112.60
12	AB	19	GLU	CB-CG-CD	11.48	132.12	112.60
3	A2	463	GLU	CA-CB-CG	11.45	137.00	114.10
28	BS	171	ILE	CA-CB-CG1	11.44	129.85	110.40
3	B2	463	GLU	CA-CB-CG	11.43	136.97	114.10
28	AS	171	ILE	CA-CB-CG1	11.42	129.81	110.40
54	Nv	48	GLN	N-CA-CB	11.40	128.40	110.73
54	nv	48	GLN	N-CA-CB	11.37	128.36	110.73
2	B1	214	ILE	CA-CB-CG2	-11.37	91.17	110.50
2	A1	214	ILE	CA-CB-CG2	-11.37	91.18	110.50
28	AS	160	LEU	CB-CG-CD2	-11.36	76.62	110.70
28	BS	160	LEU	CB-CG-CD2	-11.35	76.64	110.70
9	sF	392	MET	CB-CA-C	11.28	133.38	110.38
9	SF	392	MET	CB-CA-C	11.26	133.34	110.38
50	nP	1281	SER	CA-C-O	-11.25	108.63	120.55
50	NP	1281	SER	CA-C-O	-11.23	108.65	120.55
66	t3	406	LYS	CA-C-N	11.21	139.01	120.62
66	t3	406	LYS	C-N-CA	11.21	139.01	120.62
1	A0	546	TYR	CB-CG-CD2	-11.17	104.04	120.80
66	T3	406	LYS	CA-C-N	11.16	138.93	120.62
66	T3	406	LYS	C-N-CA	11.16	138.93	120.62
1	B0	546	TYR	CB-CG-CD2	-11.15	104.08	120.80
9	sF	401	LYS	N-CA-CB	-11.11	91.71	110.49
9	SF	401	LYS	N-CA-CB	-11.11	91.71	110.49
6	B5	10	VAL	CG1-CB-CG2	-11.10	86.37	110.80
6	A5	10	VAL	CG1-CB-CG2	-11.09	86.41	110.80
10	A9	191	GLU	CA-CB-CG	11.07	136.24	114.10
10	B9	191	GLU	CA-CB-CG	11.07	136.24	114.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	SF	382	LYS	CG-CD-CE	11.06	136.75	111.30
9	sF	382	LYS	CG-CD-CE	11.06	136.75	111.30
53	Nu	64	GLU	CG-CD-OE1	-11.04	93.00	118.40
11	BA	692	ASP	OD1-CG-OD2	-11.04	96.40	122.90
55	sA	270	TYR	CB-CG-CD2	-11.04	104.24	120.80
11	AA	692	ASP	OD1-CG-OD2	-11.04	96.41	122.90
53	nu	64	GLU	CG-CD-OE1	-11.03	93.03	118.40
55	SA	270	TYR	CB-CG-CD2	-11.02	104.27	120.80
9	NF	676	ARG	N-CA-CB	10.99	126.52	109.82
10	B9	181	LYS	CG-CD-CE	10.98	136.56	111.30
10	A9	181	LYS	CG-CD-CE	10.98	136.55	111.30
9	nF	676	ARG	N-CA-CB	10.98	126.50	109.82
28	AS	173	HIS	CB-CA-C	-10.97	92.20	110.85
28	BS	173	HIS	CB-CA-C	-10.95	92.23	110.85
24	BN	-78	DC	P-O3'-C3'	10.94	132.83	119.70
24	AN	-78	DC	P-O3'-C3'	10.94	132.83	119.70
12	AB	1116	ARG	CA-C-N	10.93	148.47	121.80
12	AB	1116	ARG	C-N-CA	10.93	148.47	121.80
45	t4	1018	MET	CB-CA-C	-10.93	94.13	110.96
45	T4	1018	MET	CB-CA-C	-10.92	94.14	110.96
12	BB	1116	ARG	CA-C-N	10.91	148.43	121.80
12	BB	1116	ARG	C-N-CA	10.91	148.43	121.80
9	nF	667	LYS	CB-CA-C	-10.89	92.77	110.84
9	NF	667	LYS	CB-CA-C	-10.88	92.78	110.84
53	Nu	91	GLU	CB-CA-C	-10.87	92.54	112.00
53	nu	91	GLU	CB-CA-C	-10.86	92.56	112.00
50	NP	1294	MET	CG-SD-CE	10.84	124.75	100.90
50	nP	1294	MET	CG-SD-CE	10.81	124.69	100.90
67	t5	919	ARG	CG-CD-NE	-10.81	88.22	112.00
67	T5	919	ARG	CG-CD-NE	-10.81	88.22	112.00
45	T4	1018	MET	CB-CG-SD	10.77	145.01	112.70
9	B8	786	LEU	CD1-CG-CD2	-10.77	87.11	110.80
45	t4	1018	MET	CB-CG-SD	10.77	145.00	112.70
9	A8	786	LEU	CD1-CG-CD2	-10.76	87.12	110.80
68	t6	760	ALA	CA-C-N	10.71	141.99	121.54
68	t6	760	ALA	C-N-CA	10.71	141.99	121.54
68	T6	760	ALA	CA-C-N	10.71	141.99	121.54
68	T6	760	ALA	C-N-CA	10.71	141.99	121.54
9	A8	783	HIS	CB-CG-CD2	-10.63	117.38	131.20
9	B8	783	HIS	CB-CG-CD2	-10.63	117.39	131.20
1	A0	546	TYR	CE1-CZ-CE2	-10.60	99.11	120.30
1	B0	546	TYR	CE1-CZ-CE2	-10.60	99.11	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	AR	288	ASN	N-CA-C	10.55	127.96	114.56
27	BR	288	ASN	N-CA-C	10.55	127.95	114.56
50	nP	932	PRO	CA-N-CD	-10.54	97.24	112.00
50	NP	932	PRO	CA-N-CD	-10.53	97.26	112.00
11	AA	676	MET	CB-CG-SD	10.51	144.21	112.70
11	BA	676	MET	CB-CG-SD	10.50	144.20	112.70
12	AB	18	PHE	CB-CG-CD1	10.46	138.49	120.70
12	BB	18	PHE	CB-CG-CD1	10.46	138.49	120.70
1	B0	546	TYR	CB-CG-CD1	-10.45	105.12	120.80
1	A0	546	TYR	CB-CG-CD1	-10.44	105.14	120.80
28	BS	170	SER	CA-CB-OG	10.41	131.92	111.10
28	AS	170	SER	CA-CB-OG	10.40	131.91	111.10
50	SH	592	LEU	CB-CG-CD1	-10.35	79.64	110.70
50	sH	592	LEU	CB-CG-CD1	-10.34	79.67	110.70
50	NP	1308	GLU	CG-CD-OE1	-10.29	94.75	118.40
50	nP	1308	GLU	CG-CD-OE1	-10.29	94.74	118.40
9	nF	676	ARG	CB-CG-CD	10.26	134.89	111.30
9	NF	676	ARG	CB-CG-CD	10.24	134.85	111.30
55	SA	270	TYR	CA-CB-CG	10.23	132.32	113.90
10	B9	209	MET	CB-CA-C	10.23	126.57	109.80
55	sA	270	TYR	CA-CB-CG	10.21	132.29	113.90
3	A2	464	THR	OG1-CB-CG2	-10.21	88.88	109.30
10	A9	209	MET	CB-CA-C	10.21	126.54	109.80
3	B2	464	THR	OG1-CB-CG2	-10.20	88.90	109.30
1	A0	543	SER	N-CA-CB	10.17	127.67	110.49
1	B0	543	SER	N-CA-CB	10.15	127.65	110.49
3	A2	507	ARG	CD-NE-CZ	10.14	138.60	124.40
3	B2	507	ARG	CD-NE-CZ	10.12	138.57	124.40
50	nP	1308	GLU	N-CA-CB	10.10	124.99	109.94
10	B9	202	THR	CA-CB-OG1	10.09	124.73	109.60
10	A9	202	THR	CA-CB-OG1	10.08	124.73	109.60
50	NP	1308	GLU	N-CA-CB	10.08	124.96	109.94
3	A2	97	MET	CA-CB-CG	-10.06	93.98	114.10
3	B2	97	MET	CA-CB-CG	-10.04	94.01	114.10
12	BB	1061	GLU	CB-CG-CD	10.04	129.66	112.60
50	nP	1300	MET	CB-CA-C	-10.03	93.62	110.68
50	SH	592	LEU	CB-CA-C	-10.03	91.70	109.24
12	AB	1061	GLU	CB-CG-CD	10.02	129.64	112.60
50	NP	1300	MET	CB-CA-C	-10.02	93.64	110.68
50	sH	592	LEU	CB-CA-C	-10.02	91.70	109.24
28	AS	182	MET	CG-SD-CE	9.90	122.67	100.90
28	BS	182	MET	CG-SD-CE	9.89	122.66	100.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B0	555	GLN	CA-CB-CG	9.88	133.85	114.10
1	A0	555	GLN	CA-CB-CG	9.88	133.85	114.10
55	sA	270	TYR	CB-CG-CD1	9.87	135.60	120.80
55	SA	270	TYR	CB-CG-CD1	9.85	135.58	120.80
3	A2	63	ASP	OD1-CG-OD2	-9.80	99.38	122.90
3	B2	63	ASP	OD1-CG-OD2	-9.79	99.40	122.90
19	BI	82	GLU	N-CA-C	-9.77	91.81	107.93
19	AI	82	GLU	N-CA-C	-9.76	91.82	107.93
29	AT	75	DA	O3'-P-O5'	9.75	122.52	104.00
29	BT	75	DA	O3'-P-O5'	9.74	122.50	104.00
24	AN	-56	DC	O5'-C5'-C4'	9.72	117.18	109.40
24	BN	-56	DC	O5'-C5'-C4'	9.69	117.15	109.40
66	t3	836	ILE	N-CA-CB	9.67	131.04	110.64
66	T3	836	ILE	N-CA-CB	9.65	131.00	110.64
1	A0	560	LEU	CB-CG-CD2	9.64	139.61	110.70
19	AI	82	GLU	CA-CB-CG	9.63	133.36	114.10
1	B0	560	LEU	CB-CG-CD2	9.63	139.59	110.70
1	A0	560	LEU	CB-CA-C	-9.62	91.27	110.42
1	B0	560	LEU	CB-CA-C	-9.62	91.27	110.42
19	BI	82	GLU	CA-CB-CG	9.62	133.33	114.10
66	t3	837	TYR	CA-CB-CG	9.60	131.17	113.90
28	BS	160	LEU	CD1-CG-CD2	-9.59	89.70	110.80
28	AS	160	LEU	CD1-CG-CD2	-9.58	89.72	110.80
66	T3	837	TYR	CA-CB-CG	9.58	131.14	113.90
3	A2	81	MET	CB-CG-SD	9.57	141.40	112.70
3	B2	81	MET	CB-CG-SD	9.56	141.38	112.70
19	BI	111	THR	N-CA-C	-9.55	96.20	109.95
19	AI	111	THR	N-CA-C	-9.54	96.21	109.95
19	AI	81	ARG	CD-NE-CZ	-9.54	111.05	124.40
19	BI	81	ARG	CD-NE-CZ	-9.52	111.08	124.40
9	A8	786	LEU	CA-CB-CG	9.48	149.50	116.30
9	B8	786	LEU	CA-CB-CG	9.48	149.49	116.30
18	AH	109	LYS	CB-CG-CD	9.46	133.05	111.30
19	AI	117	LYS	CA-CB-CG	9.45	133.01	114.10
19	BI	117	LYS	CA-CB-CG	9.44	132.99	114.10
11	AA	681	GLU	CB-CG-CD	9.44	128.65	112.60
18	BH	109	LYS	CB-CG-CD	9.44	133.01	111.30
11	BA	681	GLU	CB-CG-CD	9.44	128.64	112.60
1	B0	554	TRP	CA-CB-CG	9.41	131.48	113.60
1	A0	554	TRP	CA-CB-CG	9.41	131.47	113.60
10	A9	234	SER	CB-CA-C	9.39	126.33	110.74
50	nP	1307	LYS	CA-C-N	9.39	133.21	120.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
50	nP	1307	LYS	C-N-CA	9.39	133.21	120.54
50	NP	1307	LYS	CA-C-N	9.37	133.19	120.54
50	NP	1307	LYS	C-N-CA	9.37	133.19	120.54
50	nP	1114	GLN	OE1-CD-NE2	-9.37	113.23	122.60
11	AA	1444	MET	CG-SD-CE	-9.36	80.30	100.90
10	B9	234	SER	CB-CA-C	9.36	126.28	110.74
11	BA	1444	MET	CG-SD-CE	-9.36	80.30	100.90
66	T3	409	LYS	N-CA-CB	9.34	126.28	110.49
66	t3	409	LYS	N-CA-CB	9.34	126.28	110.49
12	AB	1111	MET	CG-SD-CE	-9.34	80.36	100.90
50	NP	1114	GLN	OE1-CD-NE2	-9.33	113.27	122.60
27	AR	228	MET	N-CA-CB	9.33	123.53	110.01
27	BR	228	MET	N-CA-CB	9.33	123.53	110.01
12	BB	1111	MET	CG-SD-CE	-9.32	80.39	100.90
19	AI	115	LYS	CG-CD-CE	9.31	132.71	111.30
19	BI	115	LYS	CG-CD-CE	9.29	132.67	111.30
1	A0	546	TYR	CE1-CZ-OH	9.28	147.73	119.90
1	B0	546	TYR	CE1-CZ-OH	9.28	147.73	119.90
3	B2	69	ASN	CB-CG-ND2	-9.27	102.49	116.40
3	A2	69	ASN	CB-CG-ND2	-9.26	102.52	116.40
1	B0	543	SER	CA-CB-OG	9.26	129.61	111.10
55	sA	270	TYR	CB-CA-C	-9.25	92.02	110.42
55	SA	270	TYR	CB-CA-C	-9.24	92.03	110.42
1	A0	543	SER	CA-CB-OG	9.24	129.57	111.10
1	A0	547	MET	CG-SD-CE	-9.24	80.58	100.90
1	B0	547	MET	CG-SD-CE	-9.23	80.58	100.90
3	A2	453	THR	CA-CB-OG1	9.22	123.44	109.60
28	AS	170	SER	N-CA-C	9.20	122.15	111.11
3	B2	453	THR	CA-CB-OG1	9.20	123.40	109.60
50	NP	970	GLU	OE1-CD-OE2	-9.18	100.86	122.90
19	BI	77	LYS	CB-CG-CD	9.18	132.42	111.30
50	nP	970	GLU	OE1-CD-OE2	-9.18	100.87	122.90
19	AI	77	LYS	CB-CG-CD	9.17	132.40	111.30
28	BS	170	SER	N-CA-C	9.17	122.12	111.11
3	B2	69	ASN	CB-CG-OD1	9.16	139.12	120.80
6	A5	5	ARG	CA-CB-CG	-9.15	95.79	114.10
6	B5	5	ARG	CA-CB-CG	-9.15	95.81	114.10
3	A2	69	ASN	CB-CG-OD1	9.13	139.07	120.80
28	BS	182	MET	N-CA-CB	-9.12	94.22	109.72
28	AS	182	MET	N-CA-CB	-9.11	94.23	109.72
18	BH	129	TYR	CB-CA-C	-9.11	92.89	110.11
18	AH	129	TYR	CB-CA-C	-9.11	92.89	110.11

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
19	AI	117	LYS	CD-CE-NZ	9.10	141.03	111.90
19	BI	117	LYS	CD-CE-NZ	9.10	141.02	111.90
28	BS	160	LEU	N-CA-CB	9.09	124.29	110.30
28	AS	160	LEU	N-CA-CB	9.07	124.27	110.30
3	A2	81	MET	N-CA-C	9.04	120.74	111.07
50	nP	1294	MET	CB-CG-SD	-9.03	85.60	112.70
50	NP	1294	MET	CB-CG-SD	-9.03	85.62	112.70
67	t5	920	LYS	CD-CE-NZ	9.02	140.75	111.90
19	BI	116	ASN	N-CA-CB	9.01	125.39	110.52
67	T5	920	LYS	CD-CE-NZ	9.01	140.72	111.90
19	AI	116	ASN	N-CA-CB	9.00	125.37	110.52
3	B2	81	MET	N-CA-C	9.00	120.70	111.07
10	A9	181	LYS	CA-CB-CG	-8.99	96.12	114.10
10	B9	181	LYS	CA-CB-CG	-8.97	96.15	114.10
19	BI	78	CYS	N-CA-CB	8.97	124.11	110.30
51	ns	121	PRO	CA-C-O	-8.96	105.92	119.55
51	Ns	121	PRO	CA-C-O	-8.96	105.93	119.55
19	BI	77	LYS	CG-CD-CE	-8.95	90.70	111.30
19	AI	77	LYS	CG-CD-CE	-8.94	90.74	111.30
19	AI	78	CYS	N-CA-CB	8.92	124.04	110.30
9	SF	382	LYS	CD-CE-NZ	8.89	140.36	111.90
28	AS	182	MET	CB-CA-C	8.88	125.59	110.84
9	sF	382	LYS	CD-CE-NZ	8.88	140.32	111.90
28	BS	182	MET	CB-CA-C	8.87	125.56	110.84
9	SF	392	MET	CB-CG-SD	8.84	139.22	112.70
9	sF	392	MET	CB-CG-SD	8.83	139.19	112.70
66	t3	292	ARG	CD-NE-CZ	8.76	136.66	124.40
9	B8	786	LEU	CB-CG-CD2	-8.75	84.45	110.70
66	t3	289	LYS	N-CA-CB	8.75	122.93	110.07
50	nP	1300	MET	CA-C-N	8.75	138.25	121.54
50	nP	1300	MET	C-N-CA	8.75	138.25	121.54
9	A8	786	LEU	CB-CG-CD2	-8.75	84.46	110.70
50	NP	1300	MET	CA-C-N	8.74	138.24	121.54
50	NP	1300	MET	C-N-CA	8.74	138.24	121.54
66	T3	289	LYS	N-CA-CB	8.73	122.90	110.07
66	T3	292	ARG	CD-NE-CZ	8.73	136.62	124.40
19	AI	81	ARG	NE-CZ-NH2	-8.73	111.35	119.20
1	A0	542	PRO	N-CA-C	8.72	130.44	112.47
19	AI	113	ASP	N-CA-CB	8.72	125.23	110.49
1	B0	542	PRO	N-CA-C	8.72	130.44	112.47
3	A2	451	VAL	CG1-CB-CG2	-8.72	91.62	110.80
3	B2	451	VAL	CG1-CB-CG2	-8.72	91.62	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
19	BI	113	ASP	N-CA-CB	8.71	125.22	110.49
50	NP	1308	GLU	CA-CB-CG	8.71	131.52	114.10
50	nP	1308	GLU	CA-CB-CG	8.71	131.51	114.10
9	A8	783	HIS	CA-CB-CG	8.70	122.50	113.80
19	BI	81	ARG	NE-CZ-NH2	-8.68	111.39	119.20
50	nP	1285	GLU	CG-CD-OE1	-8.68	98.44	118.40
50	NP	1285	GLU	CG-CD-OE1	-8.67	98.46	118.40
9	B8	783	HIS	CA-CB-CG	8.66	122.46	113.80
9	sF	392	MET	N-CA-C	-8.66	101.31	112.23
24	AN	-75	DT	P-O3'-C3'	8.65	130.08	119.70
9	SF	392	MET	N-CA-C	-8.64	101.34	112.23
28	BS	170	SER	CB-CA-C	8.64	124.63	110.81
28	AS	170	SER	CB-CA-C	8.63	124.62	110.81
24	BN	-75	DT	P-O3'-C3'	8.63	130.06	119.70
19	AI	77	LYS	CA-CB-CG	-8.62	96.86	114.10
19	BI	77	LYS	CA-CB-CG	-8.62	96.87	114.10
1	A0	547	MET	CB-CA-C	8.61	127.56	110.42
1	B0	547	MET	CB-CA-C	8.59	127.52	110.42
28	BS	160	LEU	CA-CB-CG	-8.58	86.27	116.30
10	B9	200	MET	N-CA-CB	8.58	124.98	110.49
28	AS	160	LEU	CA-CB-CG	-8.57	86.30	116.30
10	A9	200	MET	N-CA-CB	8.57	124.97	110.49
68	T6	761	LYS	CB-CG-CD	8.56	130.99	111.30
68	t6	761	LYS	CB-CG-CD	8.55	130.96	111.30
50	nP	1300	MET	N-CA-CB	-8.52	97.28	110.06
50	NP	1300	MET	N-CA-CB	-8.52	97.28	110.06
1	A0	560	LEU	CA-C-O	-8.50	108.36	120.51
1	B0	560	LEU	CA-C-O	-8.50	108.36	120.51
13	BC	37	MET	CG-SD-CE	8.49	119.59	100.90
13	AC	37	MET	CG-SD-CE	8.49	119.57	100.90
19	BI	117	LYS	CG-CD-CE	8.46	130.76	111.30
19	AI	117	LYS	CG-CD-CE	8.46	130.75	111.30
67	t5	931	GLN	OE1-CD-NE2	-8.43	114.17	122.60
50	NP	1308	GLU	OE1-CD-OE2	-8.43	102.68	122.90
27	AR	289	ILE	CA-C-O	-8.42	110.26	120.78
50	nP	1308	GLU	OE1-CD-OE2	-8.42	102.70	122.90
12	AB	18	PHE	CB-CG-CD2	-8.42	106.39	120.70
67	T5	931	GLN	OE1-CD-NE2	-8.42	114.18	122.60
27	BR	289	ILE	CA-C-O	-8.42	110.26	120.78
12	BB	18	PHE	CB-CG-CD2	-8.40	106.42	120.70
65	T2	107	LYS	O-C-N	-8.37	110.91	122.46
65	t2	107	LYS	O-C-N	-8.37	110.92	122.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
28	AS	173	HIS	CB-CG-ND1	-8.35	110.17	122.70
28	BS	173	HIS	CB-CG-ND1	-8.34	110.19	122.70
67	t5	931	GLN	CG-CD-OE1	8.33	137.47	120.80
1	B0	541	PHE	CA-CB-CG	8.33	122.13	113.80
67	T5	931	GLN	CG-CD-OE1	8.31	137.43	120.80
1	A0	541	PHE	CA-CB-CG	8.30	122.10	113.80
29	AT	74	DC	O4'-C1'-N1	8.29	113.80	108.00
19	BI	115	LYS	CD-CE-NZ	-8.27	85.43	111.90
19	AI	115	LYS	CD-CE-NZ	-8.26	85.46	111.90
60	SI	1282	ILE	CA-CB-CG2	8.24	124.51	110.50
28	BS	171	ILE	CB-CA-C	8.24	123.26	112.14
60	sI	1282	ILE	CA-CB-CG2	8.24	124.50	110.50
28	AS	171	ILE	CB-CA-C	8.23	123.26	112.14
29	BT	74	DC	O4'-C1'-N1	8.23	113.76	108.00
29	AT	75	DA	P-O3'-C3'	-8.21	109.84	119.70
29	BT	75	DA	P-O3'-C3'	-8.21	109.84	119.70
9	NF	676	ARG	CB-CA-C	-8.15	97.95	110.92
45	t4	1018	MET	CG-SD-CE	-8.15	82.97	100.90
9	nF	676	ARG	CB-CA-C	-8.15	97.96	110.92
45	T4	1018	MET	CG-SD-CE	-8.15	82.97	100.90
24	BN	-52	DT	OP2-P-O3'	-8.13	83.60	108.00
24	AN	-52	DT	OP2-P-O3'	-8.13	83.60	108.00
12	AB	1061	GLU	N-CA-C	-8.12	102.43	111.28
12	BB	1061	GLU	N-CA-C	-8.10	102.45	111.28
29	BT	74	DC	OP1-P-O3'	-8.09	83.72	108.00
29	AT	74	DC	OP1-P-O3'	-8.09	83.73	108.00
29	BT	56	DG	O5'-C5'-C4'	8.08	115.86	109.40
29	AT	56	DG	O5'-C5'-C4'	8.06	115.85	109.40
40	Mg	89	PRO	CA-N-CD	-8.06	100.72	112.00
50	nP	1294	MET	N-CA-C	8.05	127.95	110.80
50	NP	1294	MET	N-CA-C	8.05	127.94	110.80
40	mg	89	PRO	CA-N-CD	-8.03	100.75	112.00
9	sF	400	GLN	CA-C-N	8.02	136.86	121.54
9	sF	400	GLN	C-N-CA	8.02	136.86	121.54
9	SF	400	GLN	CA-C-N	8.02	136.86	121.54
9	SF	400	GLN	C-N-CA	8.02	136.86	121.54
10	B9	234	SER	CA-CB-OG	8.02	127.13	111.10
19	AI	78	CYS	CA-CB-SG	8.01	132.83	114.40
3	B2	506	LYS	CA-C-N	-8.01	107.28	121.70
3	B2	506	LYS	C-N-CA	-8.01	107.28	121.70
19	BI	78	CYS	CA-CB-SG	8.01	132.82	114.40
10	A9	234	SER	CA-CB-OG	8.01	127.12	111.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A2	506	LYS	CA-C-N	-8.00	107.30	121.70
3	A2	506	LYS	C-N-CA	-8.00	107.30	121.70
57	sC	186	MET	CB-CG-SD	7.99	136.66	112.70
57	SC	186	MET	CB-CG-SD	7.98	136.64	112.70
57	SC	186	MET	CG-SD-CE	7.95	118.39	100.90
18	AH	109	LYS	N-CA-CB	7.95	123.92	110.49
18	BH	109	LYS	N-CA-CB	7.94	123.90	110.49
57	sC	186	MET	CG-SD-CE	7.94	118.36	100.90
56	SD	711	GLU	CG-CD-OE2	-7.93	100.17	118.40
56	sD	711	GLU	CG-CD-OE2	-7.92	100.17	118.40
18	AH	129	TYR	N-CA-CB	7.92	122.06	110.26
18	BH	129	TYR	N-CA-CB	7.91	122.04	110.26
12	AB	662	MET	CG-SD-CE	7.90	118.28	100.90
12	BB	662	MET	CG-SD-CE	7.89	118.27	100.90
1	B0	546	TYR	CB-CA-C	7.88	126.10	110.42
1	A0	546	TYR	CB-CA-C	7.87	126.07	110.42
1	A0	543	SER	O-C-N	-7.85	112.15	122.59
1	B0	543	SER	O-C-N	-7.82	112.19	122.59
67	T5	919	ARG	CB-CG-CD	7.79	129.22	111.30
67	t5	919	ARG	CB-CG-CD	7.79	129.22	111.30
11	BA	99	ILE	CA-CB-CG2	-7.73	97.36	110.50
11	AA	99	ILE	CA-CB-CG2	-7.72	97.38	110.50
67	T5	919	ARG	CA-C-N	7.72	136.20	122.08
67	T5	919	ARG	C-N-CA	7.72	136.20	122.08
9	sF	401	LYS	CA-CB-CG	7.71	129.52	114.10
12	AB	1060	ARG	CA-CB-CG	-7.71	98.69	114.10
9	SF	401	LYS	CA-CB-CG	7.71	129.51	114.10
67	t5	919	ARG	CA-C-N	7.71	136.18	122.08
67	t5	919	ARG	C-N-CA	7.71	136.18	122.08
12	BB	1060	ARG	CA-CB-CG	-7.70	98.69	114.10
9	sF	389	ASN	CA-CB-CG	7.68	120.28	112.60
24	BN	-56	DC	O3'-P-O5'	7.68	118.59	104.00
66	t3	836	ILE	CB-CG1-CD1	-7.67	97.69	113.80
66	T3	836	ILE	CB-CG1-CD1	-7.67	97.70	113.80
24	AN	-56	DC	O3'-P-O5'	7.67	118.56	104.00
67	t5	919	ARG	N-CA-C	7.66	120.98	109.95
67	T5	919	ARG	N-CA-C	7.66	120.98	109.95
29	BT	55	DT	O3'-P-O5'	7.65	118.54	104.00
9	SF	389	ASN	CA-CB-CG	7.65	120.25	112.60
66	T3	919	TYR	CZ-CE2-CD2	7.65	133.36	119.60
66	t3	919	TYR	CZ-CE2-CD2	7.64	133.36	119.60
29	AT	55	DT	O3'-P-O5'	7.64	118.52	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	AT	77	DC	O3'-P-O5'	-7.59	89.57	104.00
19	BI	76	PRO	N-CA-C	7.58	128.08	112.47
29	BT	77	DC	O3'-P-O5'	-7.58	89.60	104.00
19	AI	76	PRO	N-CA-C	7.57	128.06	112.47
50	NP	793	GLU	CA-C-N	7.57	135.99	121.54
50	NP	793	GLU	C-N-CA	7.57	135.99	121.54
29	BT	56	DG	O4'-C1'-N9	7.57	113.30	108.00
29	AT	56	DG	O4'-C1'-N9	7.56	113.29	108.00
50	nP	793	GLU	CA-C-N	7.56	135.97	121.54
50	nP	793	GLU	C-N-CA	7.56	135.97	121.54
12	AB	1060	ARG	CB-CG-CD	7.47	128.49	111.30
12	BB	1060	ARG	CB-CG-CD	7.47	128.48	111.30
11	BA	688	LYS	N-CA-CB	-7.46	99.03	110.44
19	BI	113	ASP	CA-CB-CG	7.46	120.06	112.60
60	SI	1258	CYS	CA-CB-SG	7.45	131.53	114.40
11	AA	688	LYS	N-CA-CB	-7.44	99.06	110.44
60	sI	1258	CYS	CA-CB-SG	7.44	131.51	114.40
66	T3	838	SER	CB-CA-C	-7.43	98.36	110.77
67	T5	877	LYS	CD-CE-NZ	7.42	135.65	111.90
53	nu	56	GLU	N-CA-CB	7.42	122.34	109.72
19	AI	113	ASP	CA-CB-CG	7.41	120.01	112.60
67	t5	877	LYS	CD-CE-NZ	7.41	135.60	111.90
66	t3	838	SER	CB-CA-C	-7.41	98.40	110.77
10	B9	202	THR	CB-CA-C	7.41	123.03	110.74
53	Nu	56	GLU	N-CA-CB	7.40	122.30	109.72
10	A9	202	THR	CB-CA-C	7.38	122.99	110.74
10	B9	209	MET	N-CA-CB	-7.35	98.03	110.16
10	A9	209	MET	N-CA-CB	-7.33	98.06	110.16
19	AI	110	PHE	CA-C-N	-7.33	109.71	123.27
19	AI	110	PHE	C-N-CA	-7.33	109.71	123.27
1	B0	468	MET	CG-SD-CE	7.33	117.02	100.90
1	A0	468	MET	CG-SD-CE	7.32	117.01	100.90
21	AK	8	GLU	CB-CG-CD	7.31	125.03	112.60
21	BK	8	GLU	CB-CG-CD	7.31	125.03	112.60
7	B6	135	ALA	CA-C-N	7.31	133.93	121.14
7	B6	135	ALA	C-N-CA	7.31	133.93	121.14
50	sH	590	GLU	N-CA-CB	7.31	122.84	110.49
50	SH	590	GLU	N-CA-CB	7.30	122.83	110.49
19	BI	110	PHE	CA-C-N	-7.30	109.76	123.27
19	BI	110	PHE	C-N-CA	-7.30	109.76	123.27
28	AS	171	ILE	CB-CG1-CD1	-7.29	98.48	113.80
7	A6	135	ALA	CA-C-N	7.29	133.90	121.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	A6	135	ALA	C-N-CA	7.29	133.90	121.14
28	BS	171	ILE	CB-CG1-CD1	-7.29	98.49	113.80
65	t2	34	ASN	CB-CG-ND2	7.26	127.29	116.40
11	BA	681	GLU	CG-CD-OE2	-7.23	101.77	118.40
52	nt	84	MET	CG-SD-CE	7.23	116.81	100.90
52	Nt	84	MET	CG-SD-CE	7.23	116.81	100.90
3	A2	97	MET	N-CA-C	-7.23	98.43	109.85
11	AA	681	GLU	CG-CD-OE2	-7.23	101.78	118.40
28	AS	156	LEU	CB-CG-CD2	-7.22	89.03	110.70
3	B2	97	MET	N-CA-C	-7.22	98.44	109.85
28	BS	156	LEU	CB-CG-CD2	-7.22	89.03	110.70
65	T2	34	ASN	CB-CG-ND2	7.22	127.22	116.40
18	AH	129	TYR	CA-CB-CG	7.08	126.64	113.90
29	BT	51	DA	P-O3'-C3'	-7.08	111.20	119.70
12	BB	19	GLU	CB-CA-C	7.07	123.71	110.63
50	SH	592	LEU	CB-CG-CD2	7.07	131.91	110.70
18	BH	129	TYR	CA-CB-CG	7.07	126.62	113.90
50	sH	592	LEU	CB-CG-CD2	7.07	131.90	110.70
12	AB	19	GLU	CB-CA-C	7.05	123.68	110.63
66	t3	836	ILE	CB-CA-C	-7.05	100.72	111.08
29	AT	51	DA	P-O3'-C3'	-7.05	111.24	119.70
1	A0	555	GLN	N-CA-C	-7.05	104.49	113.23
1	B0	555	GLN	N-CA-C	-7.05	104.49	113.23
66	T3	836	ILE	CB-CA-C	-7.04	100.72	111.08
66	t3	289	LYS	N-CA-C	-7.04	102.16	111.24
66	T3	289	LYS	N-CA-C	-7.03	102.17	111.24
28	BS	151	GLN	OE1-CD-NE2	-7.03	115.57	122.60
19	AI	13	MET	CA-CB-CG	-7.01	100.07	114.10
54	nr	74	ILE	CB-CG1-CD1	7.01	128.53	113.80
54	Nr	74	ILE	CB-CG1-CD1	7.01	128.52	113.80
19	BI	13	MET	CA-CB-CG	-7.00	100.09	114.10
28	AS	151	GLN	OE1-CD-NE2	-7.00	115.60	122.60
20	BJ	49	MET	CA-CB-CG	-7.00	100.10	114.10
20	AJ	49	MET	CA-CB-CG	-7.00	100.11	114.10
3	B2	507	ARG	N-CA-CB	6.96	122.33	110.50
3	A2	507	ARG	N-CA-CB	6.95	122.31	110.50
1	A0	543	SER	CB-CA-C	-6.93	96.62	110.42
1	B0	543	SER	CB-CA-C	-6.93	96.62	110.42
10	B9	234	SER	N-CA-C	6.92	122.79	111.37
24	BN	-74	DG	O5'-C5'-C4'	6.92	114.94	109.40
24	AN	-74	DG	O5'-C5'-C4'	6.91	114.93	109.40
10	A9	234	SER	N-CA-C	6.90	122.76	111.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
28	AS	170	SER	CA-C-O	-6.90	113.52	120.90
3	B2	63	ASP	CB-CG-OD2	6.90	134.27	118.40
3	A2	63	ASP	CB-CG-OD2	6.89	134.25	118.40
28	BS	170	SER	CA-C-O	-6.88	113.54	120.90
45	T4	1018	MET	N-CA-C	6.88	118.47	110.97
50	nP	810	TYR	CA-CB-CG	6.87	126.26	113.90
50	NP	810	TYR	CA-CB-CG	6.85	126.23	113.90
67	t5	920	LYS	N-CA-CB	6.84	120.28	110.77
46	mm	26	GLN	CA-C-N	6.83	138.47	121.80
46	mm	26	GLN	C-N-CA	6.83	138.47	121.80
46	Mm	26	GLN	CA-C-N	6.83	138.47	121.80
46	Mm	26	GLN	C-N-CA	6.83	138.47	121.80
67	T5	920	LYS	N-CA-CB	6.83	120.26	110.77
45	t4	1018	MET	N-CA-C	6.83	118.41	110.97
2	A1	371	THR	CA-CB-CG2	-6.82	98.91	110.50
2	B1	371	THR	CA-CB-CG2	-6.81	98.92	110.50
45	Ml	194	LYS	N-CA-C	6.80	119.09	110.24
45	ml	194	LYS	N-CA-C	6.79	119.07	110.24
65	t2	105	TYR	CB-CG-CD2	-6.79	110.61	120.80
32	AW	163	LYS	N-CA-C	-6.79	105.94	114.56
11	BA	687	LYS	CA-C-N	-6.77	110.12	122.38
11	BA	687	LYS	C-N-CA	-6.77	110.12	122.38
50	NP	1285	GLU	CG-CD-OE2	6.77	133.96	118.40
50	nP	1285	GLU	CG-CD-OE2	6.77	133.96	118.40
11	AA	687	LYS	CA-C-N	-6.76	110.14	122.38
11	AA	687	LYS	C-N-CA	-6.76	110.14	122.38
32	BW	163	LYS	N-CA-C	-6.75	105.99	114.56
65	T2	105	TYR	CB-CG-CD2	-6.75	110.68	120.80
50	nP	1300	MET	N-CA-C	6.74	119.49	111.33
9	NF	665	LYS	CB-CA-C	-6.73	97.02	110.42
50	NP	1300	MET	N-CA-C	6.73	119.48	111.33
9	nF	665	LYS	CB-CA-C	-6.73	97.03	110.42
29	AT	75	DA	OP1-P-O3'	-6.73	87.81	108.00
29	BT	75	DA	OP1-P-O3'	-6.72	87.83	108.00
53	Nq	34	LEU	CD1-CG-CD2	-6.69	96.09	110.80
18	BH	129	TYR	CD1-CE1-CZ	-6.68	107.57	119.60
53	nq	34	LEU	CD1-CG-CD2	-6.68	96.11	110.80
3	A2	65	TRP	N-CA-C	6.67	120.64	112.23
18	AH	129	TYR	CD1-CE1-CZ	-6.67	107.60	119.60
3	B2	65	TRP	N-CA-C	6.66	120.62	112.23
27	AR	289	ILE	CA-C-N	6.65	136.83	123.20
27	AR	289	ILE	C-N-CA	6.65	136.83	123.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	BR	289	ILE	CA-C-N	6.63	136.80	123.20
27	BR	289	ILE	C-N-CA	6.63	136.80	123.20
9	nF	667	LYS	CG-CD-CE	-6.63	96.05	111.30
28	AS	151	GLN	CB-CA-C	-6.63	97.58	110.11
55	sA	271	ASP	CA-C-N	6.63	128.12	119.84
55	sA	271	ASP	C-N-CA	6.63	128.12	119.84
28	BS	151	GLN	CB-CA-C	-6.62	97.60	110.11
9	NF	667	LYS	CG-CD-CE	-6.62	96.08	111.30
50	NP	1308	GLU	CG-CD-OE2	6.61	133.60	118.40
50	nP	1308	GLU	CG-CD-OE2	6.60	133.58	118.40
9	B8	783	HIS	CB-CG-ND1	6.59	132.59	122.70
55	SA	271	ASP	CA-C-N	6.59	128.08	119.84
55	SA	271	ASP	C-N-CA	6.59	128.08	119.84
12	AB	18	PHE	N-CA-C	-6.58	102.61	112.54
12	BB	18	PHE	N-CA-C	-6.57	102.62	112.54
9	A8	783	HIS	CB-CG-ND1	6.57	132.55	122.70
53	Nu	64	GLU	OE1-CD-OE2	-6.55	107.17	122.90
56	SD	304	GLU	CG-CD-OE2	-6.54	103.36	118.40
56	sD	304	GLU	CG-CD-OE2	-6.53	103.38	118.40
66	t3	837	TYR	CB-CA-C	6.53	124.82	111.11
68	t6	379	CYS	CA-C-N	6.53	134.00	121.54
68	t6	379	CYS	C-N-CA	6.53	134.00	121.54
66	T3	837	TYR	CB-CA-C	6.52	124.81	111.11
53	nu	64	GLU	OE1-CD-OE2	-6.52	107.24	122.90
68	T6	379	CYS	CA-C-N	6.51	133.97	121.54
68	T6	379	CYS	C-N-CA	6.51	133.97	121.54
45	Ml	193	ALA	N-CA-C	6.51	118.03	111.07
50	NP	1300	MET	CA-CB-CG	6.50	127.10	114.10
50	nP	1300	MET	CA-CB-CG	6.50	127.10	114.10
67	t5	919	ARG	CB-CA-C	6.49	123.88	111.48
29	BT	57	DA	O4'-C4'-C3'	-6.48	102.11	106.00
66	t3	838	SER	N-CA-C	-6.48	98.62	108.67
67	T5	919	ARG	CB-CA-C	6.48	123.85	111.48
45	ml	193	ALA	N-CA-C	6.48	118.00	111.07
11	AA	676	MET	CB-CA-C	-6.47	98.25	110.67
11	BA	676	MET	CB-CA-C	-6.47	98.25	110.67
45	ml	187	LEU	N-CA-C	6.47	119.16	111.33
29	AT	57	DA	O4'-C4'-C3'	-6.46	102.12	106.00
45	Ml	187	LEU	N-CA-C	6.45	119.13	111.33
19	BI	114	GLN	N-CA-CB	-6.45	99.59	110.49
66	T3	838	SER	N-CA-C	-6.44	98.68	108.67
50	sH	595	GLU	N-CA-CB	6.44	121.09	110.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
50	NP	1002	GLU	CA-C-N	6.43	137.50	121.80
50	NP	1002	GLU	C-N-CA	6.43	137.50	121.80
19	AI	114	GLN	N-CA-CB	-6.43	99.62	110.49
50	nP	1002	GLU	CA-C-N	6.43	137.49	121.80
50	nP	1002	GLU	C-N-CA	6.43	137.49	121.80
50	SH	595	GLU	N-CA-CB	6.43	121.06	110.39
29	AT	74	DC	OP2-P-O3'	6.41	127.22	108.00
12	BB	19	GLU	N-CA-CB	-6.40	100.37	110.22
10	B9	237	ASP	CA-CB-CG	6.39	118.99	112.60
29	BT	74	DC	OP2-P-O3'	6.39	127.17	108.00
50	NP	931	LEU	N-CA-C	6.38	122.22	113.16
12	AB	19	GLU	N-CA-CB	-6.38	100.40	110.22
11	BA	681	GLU	CA-CB-CG	6.37	126.84	114.10
10	A9	202	THR	N-CA-C	6.37	121.88	111.37
10	A9	237	ASP	CA-CB-CG	6.36	118.96	112.60
10	B9	202	THR	N-CA-C	6.36	121.86	111.37
11	AA	681	GLU	CA-CB-CG	6.35	126.81	114.10
50	nP	931	LEU	N-CA-C	6.34	122.16	113.16
29	BT	56	DG	C3'-C2'-C1'	-6.34	94.90	102.50
50	NP	1052	ILE	CG1-CB-CG2	-6.33	91.70	110.70
50	nP	1052	ILE	CG1-CB-CG2	-6.33	91.70	110.70
3	B2	230	ALA	CA-C-N	6.33	133.63	121.54
3	B2	230	ALA	C-N-CA	6.33	133.63	121.54
3	A2	230	ALA	CA-C-N	6.32	133.62	121.54
3	A2	230	ALA	C-N-CA	6.32	133.62	121.54
29	AT	56	DG	C3'-C2'-C1'	-6.30	94.94	102.50
51	No	97	GLU	CG-CD-OE1	-6.30	103.90	118.40
10	A9	200	MET	N-CA-C	6.30	124.21	110.80
51	no	97	GLU	CG-CD-OE1	-6.28	103.95	118.40
10	B9	200	MET	N-CA-C	6.28	124.18	110.80
28	AS	173	HIS	N-CA-C	-6.28	104.52	111.36
9	A8	780	ILE	CB-CG1-CD1	-6.27	100.63	113.80
28	BS	173	HIS	N-CA-C	-6.27	104.53	111.36
66	T3	840	ASP	CA-CB-CG	6.26	118.86	112.60
9	B8	780	ILE	CB-CG1-CD1	-6.26	100.66	113.80
66	t3	840	ASP	CA-CB-CG	6.25	118.84	112.60
10	A9	181	LYS	CD-CE-NZ	6.23	131.84	111.90
41	Mh	86	LEU	CA-C-N	6.22	128.90	120.38
41	Mh	86	LEU	C-N-CA	6.22	128.90	120.38
10	B9	181	LYS	CD-CE-NZ	6.22	131.80	111.90
41	mh	86	LEU	CA-C-N	6.20	128.87	120.38
41	mh	86	LEU	C-N-CA	6.20	128.87	120.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	sF	389	ASN	CB-CG-OD1	6.20	133.19	120.80
56	SD	631	ILE	CB-CG1-CD1	6.19	126.80	113.80
56	sD	631	ILE	CB-CG1-CD1	6.18	126.79	113.80
9	SF	389	ASN	CB-CG-OD1	6.18	133.15	120.80
67	t5	923	LYS	CA-CB-CG	-6.17	101.77	114.10
67	T5	923	LYS	CA-CB-CG	-6.14	101.81	114.10
10	A9	181	LYS	CA-C-O	6.14	127.49	120.00
67	t5	922	THR	CA-C-N	6.14	133.26	121.54
67	t5	922	THR	C-N-CA	6.14	133.26	121.54
10	B9	181	LYS	CA-C-O	6.12	127.47	120.00
67	T5	922	THR	CA-C-N	6.12	133.23	121.54
67	T5	922	THR	C-N-CA	6.12	133.23	121.54
19	BI	115	LYS	CA-C-N	-6.10	113.56	122.65
19	BI	115	LYS	C-N-CA	-6.10	113.56	122.65
19	AI	115	LYS	CA-C-N	-6.10	113.56	122.65
19	AI	115	LYS	C-N-CA	-6.10	113.56	122.65
1	B0	550	ILE	CB-CG1-CD1	6.10	126.61	113.80
67	t5	877	LYS	N-CA-C	6.09	118.70	111.33
10	B9	237	ASP	N-CA-CB	-6.09	100.93	110.30
1	A0	550	ILE	CB-CG1-CD1	6.08	126.58	113.80
3	B2	463	GLU	OE1-CD-OE2	-6.08	108.30	122.90
3	A2	463	GLU	OE1-CD-OE2	-6.08	108.30	122.90
1	B0	559	ILE	N-CA-C	-6.07	107.94	113.71
67	T5	877	LYS	N-CA-C	6.07	118.67	111.33
10	A9	237	ASP	N-CA-CB	-6.06	100.97	110.30
11	AA	672	ASP	N-CA-C	6.06	119.02	110.23
55	SA	270	TYR	N-CA-C	-6.06	97.89	110.80
50	NP	970	GLU	CG-CD-OE2	6.06	132.34	118.40
11	BA	672	ASP	N-CA-C	6.05	119.01	110.23
1	A0	559	ILE	N-CA-C	-6.05	107.96	113.71
50	nP	970	GLU	CG-CD-OE2	6.05	132.31	118.40
55	sA	270	TYR	N-CA-C	-6.04	97.93	110.80
1	B0	560	LEU	CD1-CG-CD2	-6.04	97.51	110.80
1	A0	560	LEU	CD1-CG-CD2	-6.04	97.51	110.80
54	Nv	101	LEU	CB-CG-CD1	6.03	128.80	110.70
54	nv	101	LEU	CB-CG-CD1	6.03	128.79	110.70
6	A5	11	GLN	CG-CD-NE2	-6.00	107.39	116.40
66	T3	405	GLU	CA-C-N	-6.00	112.23	120.28
66	T3	405	GLU	C-N-CA	-6.00	112.23	120.28
66	t3	405	GLU	CA-C-N	-6.00	112.23	120.28
66	t3	405	GLU	C-N-CA	-6.00	112.23	120.28
27	AR	288	ASN	CA-C-N	-6.00	111.17	121.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	AR	288	ASN	C-N-CA	-6.00	111.17	121.97
3	B2	506	LYS	CB-CA-C	-6.00	98.48	110.42
3	A2	506	LYS	CB-CA-C	-6.00	98.49	110.42
24	AN	-74	DG	O4'-C4'-C3'	-6.00	102.40	106.00
1	A0	546	TYR	N-CA-C	5.99	123.57	110.80
68	t6	971	GLU	CG-CD-OE2	5.99	132.18	118.40
6	B5	11	GLN	CG-CD-NE2	-5.99	107.41	116.40
27	AR	289	ILE	O-C-N	-5.99	115.08	122.57
27	BR	288	ASN	CA-C-N	-5.99	111.19	121.97
27	BR	288	ASN	C-N-CA	-5.99	111.19	121.97
24	BN	-52	DT	OP1-P-O3'	-5.99	90.04	108.00
24	BN	-74	DG	O4'-C4'-C3'	-5.98	102.41	106.00
11	AA	688	LYS	CB-CG-CD	5.98	125.06	111.30
1	B0	546	TYR	N-CA-C	5.98	123.54	110.80
11	BA	688	LYS	CB-CG-CD	5.98	125.06	111.30
24	AN	-52	DT	OP1-P-O3'	-5.98	90.06	108.00
27	BR	289	ILE	O-C-N	-5.97	115.11	122.57
65	T2	34	ASN	CB-CG-OD1	-5.96	108.87	120.80
68	T6	971	GLU	CG-CD-OE2	5.96	132.12	118.40
66	T3	836	ILE	CG1-CB-CG2	5.95	128.55	110.70
28	AS	209	LYS	CA-C-N	5.95	132.40	121.70
28	AS	209	LYS	C-N-CA	5.95	132.40	121.70
67	T5	927	ARG	N-CA-CB	5.93	119.81	109.72
66	t3	836	ILE	CG1-CB-CG2	5.93	128.49	110.70
9	NF	677	GLN	CG-CD-NE2	-5.92	107.52	116.40
9	nF	677	GLN	CG-CD-NE2	-5.92	107.52	116.40
28	BS	209	LYS	CA-C-N	5.91	132.34	121.70
28	BS	209	LYS	C-N-CA	5.91	132.34	121.70
67	t5	927	ARG	N-CA-CB	5.91	119.77	109.72
3	B2	63	ASP	CB-CA-C	5.91	121.57	110.63
65	t2	34	ASN	CB-CG-OD1	-5.91	108.98	120.80
51	ns	118	THR	OG1-CB-CG2	-5.91	97.48	109.30
29	AT	96	DG	O4'-C1'-N9	5.90	112.13	108.00
51	Ns	118	THR	OG1-CB-CG2	-5.90	97.50	109.30
3	A2	63	ASP	CB-CA-C	5.90	121.55	110.63
67	T5	931	GLN	N-CA-CB	-5.90	101.43	110.16
29	BT	96	DG	O4'-C1'-N9	5.89	112.12	108.00
50	SH	590	GLU	CB-CA-C	-5.88	98.72	110.42
67	t5	931	GLN	N-CA-CB	-5.88	101.46	110.16
50	sH	590	GLU	CB-CA-C	-5.87	98.74	110.42
10	A9	200	MET	CA-CB-CG	5.86	125.81	114.10
19	AI	75	CYS	N-CA-C	5.85	119.64	109.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	sF	392	MET	CA-C-O	-5.84	112.89	119.79
66	T3	409	LYS	CB-CA-C	-5.84	98.80	110.42
10	B9	200	MET	CA-CB-CG	5.84	125.78	114.10
50	nP	1308	GLU	N-CA-C	5.84	118.11	111.11
19	BI	75	CYS	N-CA-C	5.83	119.62	109.82
66	t3	409	LYS	CB-CA-C	-5.83	98.83	110.42
9	SF	392	MET	CA-C-O	-5.82	112.92	119.79
54	nv	48	GLN	CB-CA-C	-5.82	100.89	110.72
54	Nv	48	GLN	CB-CA-C	-5.82	100.89	110.72
50	NP	1308	GLU	N-CA-C	5.82	118.09	111.11
3	B2	227	MET	CB-CG-SD	5.80	130.11	112.70
24	AN	-78	DC	OP1-P-O3'	5.80	125.41	108.00
24	BN	-78	DC	OP1-P-O3'	5.80	125.39	108.00
3	A2	227	MET	CB-CG-SD	5.80	130.09	112.70
50	NP	807	THR	O-C-N	-5.79	116.00	122.03
2	A1	214	ILE	N-CA-C	5.79	121.38	108.88
42	mi	144	TYR	CA-C-N	5.79	128.31	120.38
42	mi	144	TYR	C-N-CA	5.79	128.31	120.38
1	A0	561	ASP	N-CA-CB	-5.79	101.39	110.30
42	Mi	144	TYR	CA-C-N	5.78	128.30	120.38
42	Mi	144	TYR	C-N-CA	5.78	128.30	120.38
1	B0	561	ASP	N-CA-CB	-5.78	101.41	110.30
40	Mg	20	LYS	CA-CB-CG	5.76	125.63	114.10
2	B1	214	ILE	N-CA-C	5.76	121.33	108.88
68	t6	504	PRO	N-CA-C	5.76	117.73	110.70
41	mh	62	ARG	CA-C-N	5.76	130.58	122.46
41	mh	62	ARG	C-N-CA	5.76	130.58	122.46
68	T6	504	PRO	N-CA-C	5.75	117.72	110.70
11	BA	1163	ILE	CA-CB-CG2	5.75	120.28	110.50
40	mg	20	LYS	CA-CB-CG	5.75	125.61	114.10
54	Nv	48	GLN	CG-CD-OE1	-5.74	109.32	120.80
41	Mh	62	ARG	CA-C-N	5.73	130.54	122.46
41	Mh	62	ARG	C-N-CA	5.73	130.54	122.46
50	nP	807	THR	O-C-N	-5.73	116.08	122.03
28	BS	210	ASN	CA-C-N	5.72	132.00	121.70
28	BS	210	ASN	C-N-CA	5.72	132.00	121.70
29	AT	74	DC	C3'-C2'-C1'	-5.72	95.63	102.50
11	AA	1163	ILE	CA-CB-CG2	5.72	120.22	110.50
54	nv	48	GLN	CG-CD-OE1	-5.72	109.37	120.80
46	mm	27	GLN	CA-CB-CG	5.71	125.51	114.10
3	B2	463	GLU	N-CA-C	-5.70	104.45	111.75
29	BT	74	DC	C3'-C2'-C1'	-5.70	95.66	102.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A2	463	GLU	N-CA-C	-5.70	104.46	111.75
28	AS	210	ASN	CA-C-N	5.70	131.96	121.70
28	AS	210	ASN	C-N-CA	5.70	131.96	121.70
66	T3	288	MET	CA-C-N	5.69	130.09	120.88
66	T3	288	MET	C-N-CA	5.69	130.09	120.88
46	Mm	27	GLN	CA-CB-CG	5.68	125.47	114.10
66	t3	288	MET	CA-C-N	5.67	130.07	120.88
66	t3	288	MET	C-N-CA	5.67	130.07	120.88
55	sA	62	PRO	CA-C-N	5.67	132.37	121.54
55	sA	62	PRO	C-N-CA	5.67	132.37	121.54
12	AB	662	MET	CB-CG-SD	5.67	129.69	112.70
18	AH	109	LYS	N-CA-C	5.66	122.86	110.80
55	SA	62	PRO	CA-C-N	5.66	132.36	121.54
55	SA	62	PRO	C-N-CA	5.66	132.36	121.54
18	BH	109	LYS	N-CA-C	5.66	122.86	110.80
12	BB	662	MET	CB-CG-SD	5.66	129.67	112.70
1	B0	542	PRO	N-CA-CB	-5.64	97.33	103.25
50	NP	932	PRO	N-CA-C	5.62	124.05	112.47
50	nP	932	PRO	N-CA-C	5.62	124.05	112.47
1	A0	547	MET	CB-CG-SD	-5.61	95.86	112.70
9	SF	392	MET	CG-SD-CE	5.61	113.24	100.90
1	B0	547	MET	CB-CG-SD	-5.61	95.87	112.70
11	AA	683	ILE	CA-C-O	-5.61	113.25	120.03
53	nu	56	GLU	CA-C-O	-5.60	114.47	121.02
11	BA	683	ILE	CA-C-O	-5.60	113.25	120.03
9	sF	392	MET	CG-SD-CE	5.60	113.22	100.90
1	A0	561	ASP	N-CA-C	5.59	119.28	112.23
3	B2	462	PHE	CA-C-N	5.59	128.55	120.38
3	B2	462	PHE	C-N-CA	5.59	128.55	120.38
11	AA	683	ILE	CA-C-N	5.59	133.88	121.80
11	AA	683	ILE	C-N-CA	5.59	133.88	121.80
18	AH	108	SER	CA-C-N	5.59	132.22	121.54
18	AH	108	SER	C-N-CA	5.59	132.22	121.54
1	B0	561	ASP	N-CA-C	5.58	119.27	112.23
18	BH	108	SER	CA-C-N	5.58	132.21	121.54
18	BH	108	SER	C-N-CA	5.58	132.21	121.54
1	A0	542	PRO	N-CA-CB	-5.58	97.39	103.25
11	BA	683	ILE	CA-C-N	5.58	133.85	121.80
11	BA	683	ILE	C-N-CA	5.58	133.85	121.80
53	Nu	56	GLU	CA-C-O	-5.58	114.50	121.02
10	B9	209	MET	CG-SD-CE	-5.58	88.63	100.90
3	A2	462	PHE	CA-C-N	5.57	128.52	120.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A2	462	PHE	C-N-CA	5.57	128.52	120.38
7	B6	143	PRO	N-CA-C	5.57	126.59	112.10
7	A6	143	PRO	N-CA-C	5.57	126.58	112.10
7	A6	222	LEU	CA-CB-CG	5.57	135.78	116.30
7	B6	222	LEU	CA-CB-CG	5.57	135.78	116.30
53	Nu	56	GLU	N-CA-C	5.56	120.49	111.37
19	BI	114	GLN	CB-CG-CD	5.56	122.05	112.60
10	A9	209	MET	CG-SD-CE	-5.56	88.68	100.90
12	BB	1143	ALA	N-CA-CB	5.55	119.85	110.69
19	AI	114	GLN	CB-CG-CD	5.55	122.03	112.60
53	nu	56	GLU	N-CA-C	5.54	120.45	111.37
12	AB	1143	ALA	N-CA-CB	5.53	119.81	110.69
50	NP	799	THR	CA-CB-CG2	-5.51	101.13	110.50
3	A2	66	VAL	N-CA-C	5.51	116.64	108.65
65	T2	105	TYR	CB-CA-C	-5.51	101.65	110.79
50	nP	799	THR	CA-CB-CG2	-5.50	101.14	110.50
19	BI	81	ARG	N-CA-CB	-5.50	102.53	112.27
19	AI	81	ARG	N-CA-CB	-5.50	102.54	112.27
3	B2	66	VAL	N-CA-C	5.50	116.62	108.65
65	t2	105	TYR	CB-CA-C	-5.50	101.67	110.79
67	T5	920	LYS	CA-C-O	-5.47	114.45	119.76
12	AB	21	GLU	CA-C-O	-5.47	112.69	120.51
12	BB	21	GLU	CA-C-O	-5.46	112.69	120.51
9	SF	618	SER	CA-C-N	5.46	130.16	122.46
9	SF	618	SER	C-N-CA	5.46	130.16	122.46
45	t4	1052	GLY	CA-C-N	5.46	131.97	121.54
45	t4	1052	GLY	C-N-CA	5.46	131.97	121.54
9	sF	618	SER	CA-C-N	5.46	130.16	122.46
9	sF	618	SER	C-N-CA	5.46	130.16	122.46
11	BA	681	GLU	CG-CD-OE1	5.46	130.96	118.40
24	BN	-26	DT	O4'-C4'-C3'	-5.46	102.73	106.00
11	AA	681	GLU	CG-CD-OE1	5.46	130.95	118.40
19	AI	114	GLN	CG-CD-NE2	-5.45	108.22	116.40
45	T4	1052	GLY	CA-C-N	5.45	131.95	121.54
45	T4	1052	GLY	C-N-CA	5.45	131.95	121.54
19	BI	114	GLN	CG-CD-NE2	-5.45	108.23	116.40
54	Nv	48	GLN	CB-CG-CD	5.44	121.85	112.60
18	AH	108	SER	N-CA-C	-5.44	101.23	108.74
18	BH	108	SER	N-CA-C	-5.43	101.25	108.74
54	nv	48	GLN	CB-CG-CD	5.42	121.81	112.60
24	AN	-26	DT	O4'-C4'-C3'	-5.42	102.75	106.00
67	t5	920	LYS	CA-C-O	-5.41	114.51	119.76

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
67	t5	927	ARG	CB-CG-CD	5.41	123.75	111.30
67	T5	927	ARG	CB-CG-CD	5.40	123.72	111.30
60	sI	938	MET	CG-SD-CE	-5.40	89.03	100.90
53	Nu	65	LEU	N-CA-C	-5.39	104.99	113.02
60	SI	938	MET	CG-SD-CE	-5.39	89.05	100.90
40	mg	27	MET	CB-CG-SD	5.39	128.86	112.70
53	nu	65	LEU	N-CA-C	-5.39	104.99	113.02
66	T3	412	ARG	CA-C-N	5.38	127.33	120.56
66	T3	412	ARG	C-N-CA	5.38	127.33	120.56
40	Mg	27	MET	CB-CG-SD	5.37	128.82	112.70
19	BI	82	GLU	CG-CD-OE2	-5.37	106.05	118.40
9	nF	666	ASP	CB-CG-OD1	-5.37	106.05	118.40
24	AN	-57	DT	C4'-C3'-C2'	-5.36	98.27	103.10
19	AI	82	GLU	CG-CD-OE2	-5.36	106.08	118.40
66	t3	860	VAL	N-CA-C	5.36	115.99	110.36
29	BT	-50	DA	O4'-C4'-C3'	-5.36	102.79	106.00
9	NF	666	ASP	CB-CG-OD1	-5.36	106.08	118.40
66	T3	860	VAL	N-CA-C	5.35	115.98	110.36
56	sD	437	MET	CG-SD-CE	-5.35	89.13	100.90
56	SD	437	MET	CG-SD-CE	-5.34	89.14	100.90
50	NP	1114	GLN	CG-CD-NE2	-5.34	108.39	116.40
66	t3	412	ARG	CA-C-N	5.34	127.29	120.56
66	t3	412	ARG	C-N-CA	5.34	127.29	120.56
9	NF	677	GLN	OE1-CD-NE2	-5.34	117.26	122.60
9	SF	534	GLN	CA-C-N	5.34	129.99	122.46
9	SF	534	GLN	C-N-CA	5.34	129.99	122.46
50	nP	1301	ASP	CB-CG-OD2	5.34	130.68	118.40
12	BB	322	PHE	CA-C-N	5.33	131.57	121.97
12	BB	322	PHE	C-N-CA	5.33	131.57	121.97
24	BN	-57	DT	C4'-C3'-C2'	-5.33	98.30	103.10
54	Nv	101	LEU	CB-CG-CD2	-5.33	94.71	110.70
9	sF	534	GLN	CA-C-N	5.33	129.97	122.46
9	sF	534	GLN	C-N-CA	5.33	129.97	122.46
9	nF	677	GLN	OE1-CD-NE2	-5.33	117.27	122.60
50	nP	1114	GLN	CG-CD-NE2	-5.33	108.41	116.40
66	T3	292	ARG	CA-CB-CG	5.32	124.75	114.10
54	nv	101	LEU	CB-CG-CD2	-5.32	94.73	110.70
50	NP	1301	ASP	CB-CG-OD2	5.32	130.64	118.40
31	BV	81	LYS	CA-C-N	5.32	131.70	121.54
31	BV	81	LYS	C-N-CA	5.32	131.70	121.54
9	NF	665	LYS	N-CA-C	5.32	122.12	110.80
2	A1	213	ARG	N-CA-C	5.31	119.53	112.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B1	214	ILE	CA-CB-CG1	-5.31	101.37	110.40
12	AB	322	PHE	CA-C-N	5.31	131.53	121.97
12	AB	322	PHE	C-N-CA	5.31	131.53	121.97
24	AN	-74	DG	C4'-C3'-C2'	-5.31	98.32	103.10
29	AT	-50	DA	O4'-C4'-C3'	-5.31	102.81	106.00
2	A1	214	ILE	CA-CB-CG1	-5.31	101.38	110.40
31	AV	81	LYS	CA-C-N	5.31	131.68	121.54
31	AV	81	LYS	C-N-CA	5.31	131.68	121.54
6	A5	12	CYS	CA-C-N	5.30	129.35	120.86
6	A5	12	CYS	C-N-CA	5.30	129.35	120.86
11	AA	234	MET	CA-CB-CG	5.30	124.71	114.10
9	nF	665	LYS	N-CA-C	5.30	122.09	110.80
66	t3	292	ARG	CA-CB-CG	5.30	124.70	114.10
19	AI	81	ARG	CA-C-O	-5.30	113.52	122.20
6	B5	12	CYS	CA-C-N	5.30	129.34	120.86
6	B5	12	CYS	C-N-CA	5.30	129.34	120.86
24	BN	-74	DG	C4'-C3'-C2'	-5.30	98.33	103.10
45	t4	1017	PRO	CA-C-N	-5.28	113.67	120.65
45	t4	1017	PRO	C-N-CA	-5.28	113.67	120.65
11	BA	234	MET	CA-CB-CG	5.28	124.67	114.10
45	T4	1017	PRO	CA-C-N	-5.28	113.68	120.65
45	T4	1017	PRO	C-N-CA	-5.28	113.68	120.65
19	BI	81	ARG	CA-C-O	-5.28	113.54	122.20
2	B1	213	ARG	N-CA-C	5.28	119.47	112.30
39	mf	73	LYS	CA-C-N	5.26	130.29	122.82
39	mf	73	LYS	C-N-CA	5.26	130.29	122.82
39	Mf	73	LYS	CA-C-N	5.26	130.29	122.82
39	Mf	73	LYS	C-N-CA	5.26	130.29	122.82
29	BT	57	DA	O5'-C5'-C4'	5.26	113.61	109.40
66	T3	843	GLY	CA-C-N	5.25	134.61	121.80
66	T3	843	GLY	C-N-CA	5.25	134.61	121.80
6	B5	3	ARG	NE-CZ-NH1	5.25	126.75	121.50
12	BB	1138	MET	CG-SD-CE	-5.25	89.35	100.90
12	AB	1138	MET	CG-SD-CE	-5.25	89.36	100.90
50	NP	932	PRO	N-CD-CG	5.25	111.07	103.20
66	t3	843	GLY	CA-C-N	5.25	134.60	121.80
66	t3	843	GLY	C-N-CA	5.25	134.60	121.80
6	A5	3	ARG	NE-CZ-NH1	5.24	126.74	121.50
45	Ml	458	ASN	CA-C-N	5.24	130.38	122.68
45	Ml	458	ASN	C-N-CA	5.24	130.38	122.68
29	AT	57	DA	O5'-C5'-C4'	5.24	113.59	109.40
50	nP	932	PRO	N-CD-CG	5.23	111.05	103.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
50	nP	1031	ARG	CA-C-O	-5.23	112.99	120.15
35	Mb	170	HIS	CA-C-N	5.22	130.23	122.82
35	Mb	170	HIS	C-N-CA	5.22	130.23	122.82
50	SH	591	LEU	CA-C-N	-5.22	112.75	122.09
50	SH	591	LEU	C-N-CA	-5.22	112.75	122.09
54	nv	106	GLU	CB-CG-CD	-5.22	103.73	112.60
10	A9	237	ASP	N-CA-C	-5.21	105.66	112.23
48	Mo	89	MET	CA-CB-CG	5.21	124.53	114.10
54	Nv	106	GLU	CB-CG-CD	-5.21	103.74	112.60
45	ml	458	ASN	CA-C-N	5.21	130.34	122.68
45	ml	458	ASN	C-N-CA	5.21	130.34	122.68
48	mo	89	MET	CA-CB-CG	5.21	124.52	114.10
50	SH	595	GLU	CB-CA-C	-5.21	99.43	110.31
50	sH	595	GLU	CB-CA-C	-5.21	99.43	110.31
50	NP	1031	ARG	CA-C-O	-5.20	113.02	120.15
10	B9	237	ASP	N-CA-C	-5.20	105.69	112.23
35	mb	170	HIS	CA-C-N	5.20	130.20	122.82
35	mb	170	HIS	C-N-CA	5.20	130.20	122.82
51	no	93	GLN	CA-C-O	-5.19	114.00	119.97
50	sH	591	LEU	CA-C-N	-5.19	112.80	122.09
50	sH	591	LEU	C-N-CA	-5.19	112.80	122.09
1	A0	547	MET	N-CA-CB	-5.19	101.72	110.49
1	B0	547	MET	N-CA-CB	-5.19	101.72	110.49
50	NP	1292	GLU	CA-CB-CG	5.18	124.47	114.10
24	BN	-115	DA	O4'-C1'-N9	5.18	111.63	108.00
24	BN	-57	DT	C3'-C2'-C1'	-5.18	96.29	102.50
24	AN	-115	DA	O4'-C1'-N9	5.17	111.62	108.00
40	Mg	56	MET	CB-CG-SD	5.17	128.21	112.70
51	No	93	GLN	CA-C-O	-5.17	114.02	119.97
54	Nr	49	VAL	CA-C-O	-5.17	114.94	119.29
40	mg	56	MET	CB-CG-SD	5.16	128.19	112.70
50	nP	1292	GLU	CA-CB-CG	5.16	124.42	114.10
9	A8	783	HIS	CB-CA-C	-5.16	100.16	110.42
11	AA	681	GLU	OE1-CD-OE2	-5.15	110.53	122.90
66	t3	859	ASN	CA-C-N	5.15	127.25	120.60
66	t3	859	ASN	C-N-CA	5.15	127.25	120.60
9	B8	783	HIS	CB-CA-C	-5.15	100.17	110.42
11	BA	681	GLU	OE1-CD-OE2	-5.15	110.53	122.90
55	sA	304	GLU	CA-C-N	5.15	134.37	121.80
55	sA	304	GLU	C-N-CA	5.15	134.37	121.80
54	nr	49	VAL	CA-C-O	-5.15	114.96	119.29
24	AN	-57	DT	C3'-C2'-C1'	-5.15	96.32	102.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	SA	304	GLU	CA-C-N	5.14	134.35	121.80
55	SA	304	GLU	C-N-CA	5.14	134.35	121.80
12	BB	1060	ARG	N-CA-C	-5.14	105.86	111.82
11	BA	691	LEU	CA-C-N	-5.14	112.67	122.53
11	BA	691	LEU	C-N-CA	-5.14	112.67	122.53
12	AB	1060	ARG	N-CA-C	-5.13	105.86	111.82
3	A2	81	MET	CG-SD-CE	-5.13	89.62	100.90
52	Nt	81	VAL	CG1-CB-CG2	-5.13	99.52	110.80
3	B2	69	ASN	OD1-CG-ND2	-5.13	117.47	122.60
3	B2	66	VAL	CA-CB-CG2	5.13	119.12	110.40
3	B2	81	MET	CG-SD-CE	-5.12	89.63	100.90
11	AA	691	LEU	CA-C-N	-5.12	112.69	122.53
11	AA	691	LEU	C-N-CA	-5.12	112.69	122.53
50	nP	1142	ARG	CD-NE-CZ	5.12	131.57	124.40
45	ml	193	ALA	CA-C-N	5.12	128.34	120.82
45	ml	193	ALA	C-N-CA	5.12	128.34	120.82
50	NP	810	TYR	N-CA-CB	5.11	118.10	110.22
52	nt	81	VAL	CG1-CB-CG2	-5.11	99.55	110.80
7	A6	136	MET	N-CA-C	5.11	119.23	112.89
3	A2	66	VAL	CA-CB-CG2	5.11	119.08	110.40
29	AT	74	DC	C1'-O4'-C4'	-5.11	104.99	110.10
29	BT	74	DC	C1'-O4'-C4'	-5.11	104.99	110.10
3	A2	69	ASN	OD1-CG-ND2	-5.11	117.49	122.60
50	nP	810	TYR	N-CA-CB	5.11	118.08	110.22
50	NP	1142	ARG	CD-NE-CZ	5.10	131.55	124.40
66	T3	859	ASN	CA-C-N	5.10	127.18	120.60
66	T3	859	ASN	C-N-CA	5.10	127.18	120.60
7	B6	136	MET	N-CA-C	5.10	119.22	112.89
45	Ml	193	ALA	CA-C-N	5.10	128.31	120.82
45	Ml	193	ALA	C-N-CA	5.10	128.31	120.82
50	NP	1191	LEU	CD1-CG-CD2	-5.10	99.59	110.80
50	nP	1191	LEU	CD1-CG-CD2	-5.09	99.59	110.80
65	T2	105	TYR	CB-CG-CD1	5.09	128.43	120.80
65	t2	105	TYR	CB-CG-CD1	5.08	128.43	120.80
9	sF	392	MET	CA-CB-CG	5.08	124.26	114.10
9	SF	392	MET	CA-CB-CG	5.06	124.22	114.10
53	Nu	37	GLY	CA-C-N	5.06	129.59	122.46
53	Nu	37	GLY	C-N-CA	5.06	129.59	122.46
6	A5	5	ARG	N-CA-C	5.05	117.63	109.40
68	t6	759	VAL	CA-C-N	-5.05	115.99	123.05
68	t6	759	VAL	C-N-CA	-5.05	115.99	123.05
28	BS	158	ASP	CA-CB-CG	5.05	117.65	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
66	t3	289	LYS	CA-C-O	5.04	126.10	120.80
19	AI	113	ASP	CA-C-N	5.04	131.17	121.54
19	AI	113	ASP	C-N-CA	5.04	131.17	121.54
19	BI	113	ASP	CA-C-N	5.04	131.17	121.54
19	BI	113	ASP	C-N-CA	5.04	131.17	121.54
60	SI	1254	CYS	CA-CB-SG	-5.04	102.81	114.40
53	Nu	63	LEU	CA-C-N	5.04	130.29	122.49
53	Nu	63	LEU	C-N-CA	5.04	130.29	122.49
66	T3	289	LYS	CA-C-O	5.04	126.09	120.80
24	BN	-73	DA	O5'-C5'-C4'	5.04	113.43	109.40
24	AN	-73	DA	O5'-C5'-C4'	5.03	113.43	109.40
53	nu	63	LEU	CA-C-N	5.03	130.29	122.49
53	nu	63	LEU	C-N-CA	5.03	130.29	122.49
60	sI	1254	CYS	CA-CB-SG	-5.03	102.82	114.40
67	T5	919	ARG	NE-CZ-NH2	-5.03	114.67	119.20
66	t3	859	ASN	N-CA-C	5.03	117.50	111.71
53	nu	37	GLY	CA-C-N	5.03	129.55	122.46
53	nu	37	GLY	C-N-CA	5.03	129.55	122.46
3	A2	458	LEU	CD1-CG-CD2	-5.03	99.74	110.80
66	T3	859	ASN	N-CA-C	5.03	117.49	111.71
68	T6	759	VAL	CA-C-N	-5.03	116.01	123.05
68	T6	759	VAL	C-N-CA	-5.03	116.01	123.05
9	nF	676	ARG	NE-CZ-NH2	5.03	123.72	119.20
12	AB	1117	GLN	N-CA-CB	-5.02	101.43	110.37
9	NF	676	ARG	NE-CZ-NH2	5.02	123.72	119.20
3	B2	458	LEU	CD1-CG-CD2	-5.02	99.75	110.80
6	B5	5	ARG	N-CA-C	5.02	117.59	109.40
19	AI	114	GLN	OE1-CD-NE2	-5.02	117.58	122.60
66	t3	841	ALA	CA-C-N	5.02	131.13	121.54
66	t3	841	ALA	C-N-CA	5.02	131.13	121.54
11	BA	688	LYS	N-CA-C	-5.02	106.94	113.16
60	sI	698	PHE	CA-C-N	5.02	126.03	120.06
60	sI	698	PHE	C-N-CA	5.02	126.03	120.06
28	AS	158	ASP	CA-CB-CG	5.02	117.62	112.60
3	B2	507	ARG	CB-CG-CD	-5.02	99.76	111.30
68	t6	971	GLU	CG-CD-OE1	-5.02	106.86	118.40
19	BI	114	GLN	OE1-CD-NE2	-5.01	117.58	122.60
60	SI	698	PHE	CA-C-N	5.01	126.02	120.06
60	SI	698	PHE	C-N-CA	5.01	126.02	120.06
50	nP	1019	GLN	CA-CB-CG	5.01	124.12	114.10
52	np	37	LEU	CB-CG-CD2	5.01	125.72	110.70
3	A2	507	ARG	CB-CG-CD	-5.00	99.79	111.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	AB	323	VAL	CA-CB-CG1	5.00	118.90	110.40
52	Np	37	LEU	CB-CG-CD2	5.00	125.70	110.70
67	t5	919	ARG	NE-CZ-NH2	-5.00	114.70	119.20

All (14) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
10	A9	202	THR	CB,CA
18	AH	109	LYS	CA
28	AS	171	ILE	CB
50	NP	1301	ASP	CA
66	T3	836	ILE	CB
67	T5	920	LYS	CA
66	t3	836	ILE	CB
67	t5	920	LYS	CA
10	B9	202	THR	CB,CA
18	BH	109	LYS	CA
28	BS	171	ILE	CB
50	nP	1301	ASP	CA

All (198) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A0	337	ARG	Sidechain
1	A0	542	PRO	Peptide
1	A0	545	LEU	Peptide
1	A0	546	TYR	Sidechain,Peptide
1	A0	560	LEU	Mainchain
1	A0	587	ARG	Sidechain
1	A0	666	LEU	Peptide
2	A1	213	ARG	Peptide
3	A2	223	HIS	Mainchain
3	A2	260	PHE	Peptide
3	A2	463	GLU	Sidechain
3	A2	507	ARG	Sidechain
6	A5	11	GLN	Sidechain
6	A5	3	ARG	Sidechain
6	A5	5	ARG	Sidechain
6	A5	53	GLU	Peptide
7	A6	134	GLU	Peptide
7	A6	135	ALA	Mainchain,Peptide
7	A6	283	GLY	Peptide

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Mol	Chain	Res	Type	Group
9	A8	783	HIS	Sidechain
10	A9	191	GLU	Sidechain
10	A9	237	ASP	Sidechain
11	AA	1036	ARG	Sidechain
11	AA	12	ARG	Sidechain
11	AA	464	PRO	Peptide
11	AA	681	GLU	Sidechain
11	AA	688	LYS	Mainchain
11	AA	692	ASP	Sidechain
11	AA	760	GLN	Peptide
12	AB	1060	ARG	Sidechain
12	AB	1061	GLU	Sidechain
12	AB	19	GLU	Sidechain
12	AB	21	GLU	Mainchain
12	AB	322	PHE	Peptide
18	AH	128	ASN	Peptide
18	AH	129	TYR	Sidechain
19	AI	114	GLN	Sidechain
19	AI	115	LYS	Peptide
19	AI	116	ASN	Sidechain
19	AI	15	TYR	Sidechain
19	AI	70	ARG	Sidechain
19	AI	75	CYS	Mainchain
19	AI	81	ARG	Sidechain
19	AI	82	GLU	Sidechain
19	AI	91	ARG	Sidechain
19	AI	92	ARG	Sidechain
27	AR	287	SER	Mainchain
27	AR	288	ASN	Mainchain
28	AS	150	ASP	Peptide
28	AS	151	GLN	Sidechain
28	AS	173	HIS	Sidechain
1	B0	337	ARG	Sidechain
1	B0	542	PRO	Peptide
1	B0	545	LEU	Peptide
1	B0	546	TYR	Sidechain,Peptide
1	B0	560	LEU	Mainchain
1	B0	587	ARG	Sidechain
1	B0	666	LEU	Peptide
2	B1	213	ARG	Peptide
3	B2	223	HIS	Mainchain
3	B2	260	PHE	Peptide

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Mol	Chain	Res	Type	Group
3	B2	463	GLU	Sidechain
3	B2	507	ARG	Sidechain
6	B5	11	GLN	Sidechain
6	B5	3	ARG	Sidechain
6	B5	5	ARG	Sidechain
6	B5	53	GLU	Peptide
7	B6	134	GLU	Peptide
7	B6	135	ALA	Mainchain,Peptide
7	B6	283	GLY	Peptide
9	B8	783	HIS	Sidechain
10	B9	191	GLU	Sidechain
10	B9	237	ASP	Sidechain
11	BA	1036	ARG	Sidechain
11	BA	12	ARG	Sidechain
11	BA	464	PRO	Peptide
11	BA	681	GLU	Sidechain
11	BA	688	LYS	Mainchain
11	BA	692	ASP	Sidechain
11	BA	760	GLN	Peptide
12	BB	1060	ARG	Sidechain
12	BB	1061	GLU	Sidechain
12	BB	19	GLU	Sidechain
12	BB	21	GLU	Mainchain
12	BB	322	PHE	Peptide
18	BH	128	ASN	Peptide
18	BH	129	TYR	Sidechain
19	BI	114	GLN	Sidechain
19	BI	115	LYS	Peptide
19	BI	116	ASN	Sidechain
19	BI	15	TYR	Sidechain
19	BI	70	ARG	Sidechain
19	BI	75	CYS	Mainchain
19	BI	81	ARG	Sidechain
19	BI	82	GLU	Sidechain
19	BI	91	ARG	Sidechain
19	BI	92	ARG	Sidechain
27	BR	287	SER	Mainchain
27	BR	288	ASN	Mainchain
28	BS	150	ASP	Peptide
28	BS	151	GLN	Sidechain
28	BS	173	HIS	Sidechain
34	Ma	144	GLY	Peptide

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Mol	Chain	Res	Type	Group
35	Mb	96	TYR	Peptide
36	Mc	39	ARG	Peptide
41	Mh	40	VAL	Peptide
44	Mk	133	PHE	Peptide
46	Mm	26	GLN	Peptide
48	Mo	67	PRO	Peptide
9	NF	673	ARG	Sidechain
9	NF	676	ARG	Sidechain
9	NF	677	GLN	Sidechain
50	NP	1114	GLN	Sidechain
50	NP	1281	SER	Mainchain
50	NP	1292	GLU	Sidechain
50	NP	1293	GLU	Peptide
50	NP	1300	MET	Mainchain
50	NP	1301	ASP	Sidechain
50	NP	1308	GLU	Sidechain
50	NP	807	THR	Mainchain
50	NP	810	TYR	Sidechain
53	Nq	30	VAL	Mainchain
54	Nr	67	VAL	Peptide
54	Nr	87	ARG	Sidechain
51	Ns	104	PHE	Sidechain
51	Ns	121	PRO	Mainchain
53	Nu	56	GLU	Sidechain
53	Nu	64	GLU	Sidechain
54	Nv	48	GLN	Sidechain
55	SA	270	TYR	Mainchain
55	SA	305	GLU	Peptide
9	SF	389	ASN	Sidechain
9	SF	397	SER	Mainchain
9	SF	469	ASP	Peptide
50	SH	590	GLU	Sidechain
60	SI	1282	ILE	Mainchain
60	SI	866	GLU	Peptide
65	T2	105	TYR	Sidechain
66	T3	288	MET	Mainchain
66	T3	292	ARG	Sidechain
66	T3	406	LYS	Mainchain
66	T3	409	LYS	Mainchain
66	T3	837	TYR	Sidechain
66	T3	912	SER	Peptide
45	T4	1002	HIS	Sidechain

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Mol	Chain	Res	Type	Group
67	T5	923	LYS	Mainchain
67	T5	931	GLN	Sidechain
68	T6	760	ALA	Peptide
34	ma	144	GLY	Peptide
35	mb	96	TYR	Peptide
36	mc	39	ARG	Peptide
41	mh	40	VAL	Peptide
44	mk	133	PHE	Peptide
46	mm	26	GLN	Peptide
48	mo	67	PRO	Peptide
9	nF	673	ARG	Sidechain
9	nF	676	ARG	Sidechain
9	nF	677	GLN	Sidechain
50	nP	1114	GLN	Sidechain
50	nP	1281	SER	Mainchain
50	nP	1292	GLU	Sidechain
50	nP	1293	GLU	Peptide
50	nP	1300	MET	Mainchain
50	nP	1301	ASP	Sidechain
50	nP	1308	GLU	Sidechain
50	nP	807	THR	Mainchain
50	nP	810	TYR	Sidechain
53	nq	30	VAL	Mainchain
54	nr	67	VAL	Peptide
54	nr	87	ARG	Sidechain
51	ns	104	PHE	Sidechain
51	ns	121	PRO	Mainchain
53	nu	56	GLU	Sidechain
53	nu	64	GLU	Sidechain
54	nv	48	GLN	Sidechain
55	sA	270	TYR	Mainchain
55	sA	305	GLU	Peptide
9	sF	389	ASN	Sidechain
9	sF	397	SER	Mainchain
9	sF	469	ASP	Peptide
50	sH	590	GLU	Sidechain
60	sI	1282	ILE	Mainchain
60	sI	866	GLU	Peptide
65	t2	105	TYR	Sidechain
66	t3	288	MET	Mainchain
66	t3	292	ARG	Sidechain
66	t3	406	LYS	Mainchain

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Mol	Chain	Res	Type	Group
66	t3	409	LYS	Mainchain
66	t3	837	TYR	Sidechain
66	t3	912	SER	Peptide
45	t4	1002	HIS	Sidechain
67	t5	923	LYS	Mainchain
67	t5	931	GLN	Sidechain
68	t6	760	ALA	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	A0	6091	0	6155	112	0
1	B0	6091	0	6155	111	0
2	A1	3374	0	3423	21	0
2	B1	3374	0	3423	21	0
3	A2	3597	0	3687	124	0
3	B2	3597	0	3687	123	0
4	A3	1089	0	1069	39	0
4	B3	1089	0	1069	38	0
5	A4	2274	0	2332	21	0
5	B4	2274	0	2332	21	0
6	A5	514	0	541	16	0
6	B5	514	0	541	16	0
7	A6	2946	0	2958	49	0
7	B6	2946	0	2958	46	0
8	A7	4881	0	4865	36	0
8	B7	4881	0	4865	35	0
9	A8	134	0	141	32	0
9	B8	134	0	141	31	0
9	NF	179	0	184	31	0
9	SF	3321	0	3241	87	0
9	nF	179	0	184	30	0
9	sF	3321	0	3241	86	0
10	A9	542	0	537	15	0
10	B9	542	0	537	15	0
11	AA	10996	0	11079	134	0
11	BA	10996	0	11079	126	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
11	MA	575	0	507	3	0
11	mA	575	0	507	3	0
12	AB	9200	0	9193	84	0
12	BB	9200	0	9193	91	0
13	AC	2061	0	2029	22	0
13	BC	2061	0	2029	21	0
14	AD	1253	0	1273	48	0
14	BD	1253	0	1273	47	0
15	AE	1744	0	1772	14	0
15	BE	1744	0	1772	15	0
16	AF	670	0	690	7	0
16	BF	670	0	690	8	0
17	AG	1340	0	1357	33	0
17	BG	1340	0	1357	33	0
18	AH	1089	0	1062	41	0
18	BH	1089	0	1062	41	0
19	AI	944	0	900	48	0
19	BI	944	0	900	56	0
20	AJ	569	0	585	8	0
20	BJ	569	0	585	10	0
21	AK	924	0	934	21	0
21	BK	924	0	934	21	0
22	AL	359	0	381	2	0
22	BL	359	0	381	2	0
23	AM	2062	0	2163	84	0
23	BM	2062	0	2163	86	0
24	AN	4883	0	2696	21	0
24	BN	4883	0	2696	24	0
25	AO	1422	0	1500	12	0
25	BO	1422	0	1500	12	0
26	AQ	1817	0	1843	12	0
26	BQ	1817	0	1843	12	0
27	AR	2173	0	2193	52	0
27	BR	2173	0	2193	54	0
28	AS	1302	0	1295	34	0
28	BS	1302	0	1295	35	0
29	AT	4875	0	2675	16	0
29	BT	4875	0	2675	18	0
30	AU	885	0	866	6	0
30	BU	885	0	866	6	0
31	AV	815	0	822	8	0
31	BV	815	0	822	7	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
32	AW	1836	0	1856	42	0
32	BW	1836	0	1856	43	0
33	AX	1530	0	1565	9	0
33	BX	1530	0	1565	9	0
34	Ma	1420	0	1398	30	0
34	ma	1420	0	1398	30	0
35	Mb	1185	0	1193	27	0
35	mb	1185	0	1193	26	0
36	Mc	876	0	885	7	0
36	mc	876	0	885	8	0
37	Md	4325	0	4482	26	0
37	md	4325	0	4482	26	0
38	Me	1995	0	2018	18	0
38	me	1995	0	2018	16	0
39	Mf	1609	0	1626	34	0
39	mf	1609	0	1626	34	0
40	Mg	847	0	858	13	0
40	mg	847	0	858	11	0
41	Mh	1441	0	1461	17	0
41	mh	1441	0	1461	19	0
42	Mi	1538	0	1576	10	0
42	mi	1538	0	1576	8	0
43	Mj	852	0	857	14	0
43	mj	852	0	857	15	0
44	Mk	1157	0	1142	12	0
44	mk	1157	0	1142	12	0
45	Ml	5367	0	5607	34	0
45	T4	1780	0	1765	31	0
45	ml	5367	0	5607	34	0
45	t4	1780	0	1765	29	0
46	Mm	671	0	650	8	0
46	mm	671	0	650	8	0
47	Mn	1124	0	1147	5	0
47	mn	1124	0	1147	5	0
48	Mo	914	0	902	3	0
48	mo	914	0	902	3	0
49	Mp	3330	0	3243	27	0
49	mp	3330	0	3243	42	0
50	NP	4881	0	4976	67	0
50	SH	1971	0	1997	39	0
50	nP	4881	0	4976	65	0
50	sH	1971	0	1997	40	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
51	No	800	0	829	6	0
51	Ns	778	0	813	9	0
51	no	800	0	829	6	0
51	ns	778	0	813	9	0
52	Np	698	0	752	10	0
52	Nt	672	0	698	5	0
52	np	698	0	752	10	0
52	nt	672	0	698	5	0
53	Nq	811	0	849	6	0
53	Nu	815	0	860	13	0
53	nq	811	0	849	8	0
53	nu	815	0	860	12	0
54	Nr	722	0	736	6	0
54	Nv	844	0	889	12	0
54	nr	722	0	736	7	0
54	nv	844	0	889	12	0
55	SA	3552	0	3508	25	0
55	sA	3552	0	3508	26	0
56	SB	3250	0	3302	23	0
56	SD	3445	0	3505	34	0
56	sB	3250	0	3302	20	0
56	sD	3445	0	3505	32	0
57	SC	1266	0	1264	9	0
57	sC	1266	0	1264	8	0
58	SE	3333	0	3375	27	0
58	sE	3333	0	3375	29	0
59	SG	271	0	134	0	0
59	sG	271	0	134	0	0
60	SI	4474	0	4634	34	0
60	sI	4474	0	4634	34	0
61	SJ	711	0	695	13	0
61	sJ	711	0	695	15	0
62	SK	3453	0	3450	44	0
62	sK	3453	0	3450	41	0
63	SL	3274	0	3275	43	0
63	sL	3274	0	3275	42	0
64	T1	516	0	527	8	0
64	t1	516	0	527	7	0
65	T2	891	0	907	14	0
65	t2	891	0	907	15	0
66	T3	6173	0	6169	73	0
66	t3	6173	0	6169	91	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
67	T5	894	0	930	26	0
67	t5	894	0	927	33	0
68	T6	7551	0	7605	88	0
68	t6	7551	0	7605	95	0
69	A0	8	0	0	1	0
69	B0	8	0	0	1	0
70	A3	2	0	0	0	0
70	A4	1	0	0	0	0
70	A6	4	0	0	0	0
70	AA	2	0	0	0	0
70	AB	1	0	0	0	0
70	AC	1	0	0	0	0
70	AI	2	0	0	0	0
70	AJ	1	0	0	0	0
70	AL	1	0	0	0	0
70	AM	1	0	0	0	0
70	AS	1	0	0	0	0
70	AW	1	0	0	0	0
70	B3	2	0	0	0	0
70	B4	1	0	0	0	0
70	B6	4	0	0	0	0
70	BA	2	0	0	0	0
70	BB	1	0	0	0	0
70	BC	1	0	0	0	0
70	BI	2	0	0	0	0
70	BJ	1	0	0	0	0
70	BL	1	0	0	0	0
70	BM	1	0	0	0	0
70	BS	1	0	0	0	0
70	BW	1	0	0	0	0
71	AA	1	0	0	0	0
71	BA	1	0	0	0	0
All	All	341540	0	335713	3740	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 6.

All (3740) 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)
1:B0:546:TYR:CE2	1:B0:546:TYR:CD2	1.79	1.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:T3:837:TYR:CD2	66:T3:837:TYR:CG	1.80	1.70
1:A0:546:TYR:CD2	1:A0:546:TYR:CG	1.81	1.67
1:B0:546:TYR:CD2	1:B0:546:TYR:CG	1.81	1.65
23:BM:191:GLU:HA	27:BR:270:MET:CE	1.25	1.65
23:AM:191:GLU:HA	27:AR:270:MET:CE	1.25	1.64
66:t3:837:TYR:CD2	66:t3:837:TYR:CG	1.80	1.63
1:A0:560:LEU:CB	1:A0:560:LEU:CG	1.77	1.62
1:B0:560:LEU:CG	1:B0:560:LEU:CB	1.77	1.62
50:nP:1294:MET:SD	50:nP:1294:MET:HB3	1.39	1.62
14:BD:213:GLU:HG3	35:mb:38:MET:CE	1.14	1.61
1:A0:546:TYR:CD2	1:A0:546:TYR:CE2	1.79	1.60
19:BI:111:THR:CB	19:BI:111:THR:CG2	1.76	1.60
50:NP:689:PHE:CZ	50:SH:656:LEU:HD11	1.35	1.57
23:BM:191:GLU:CA	27:BR:270:MET:HE1	1.10	1.57
19:AI:117:LYS:CG	19:AI:117:LYS:CB	1.82	1.57
19:BI:117:LYS:CB	19:BI:117:LYS:CG	1.82	1.57
14:AD:213:GLU:HG3	35:Mb:38:MET:CE	1.14	1.56
18:AH:129:TYR:CA	18:AH:129:TYR:C	1.77	1.56
23:AM:191:GLU:CA	27:AR:270:MET:HE1	1.10	1.56
19:BI:117:LYS:CB	19:BI:117:LYS:HD3	1.30	1.56
50:nP:689:PHE:CZ	50:sH:656:LEU:HD11	1.35	1.56
19:AI:111:THR:CB	19:AI:111:THR:CG2	1.76	1.55
10:A9:181:LYS:C	10:A9:181:LYS:CA	1.80	1.54
19:AI:117:LYS:CB	19:AI:117:LYS:HD3	1.30	1.54
23:BM:132:LYS:CD	23:BM:172:MET:HE1	1.36	1.53
18:BH:129:TYR:C	18:BH:129:TYR:CA	1.77	1.53
50:SH:592:LEU:CG	50:SH:592:LEU:CD1	1.83	1.52
27:AR:289:ILE:N	27:AR:289:ILE:CA	1.70	1.51
4:A3:100:ASN:ND2	34:Ma:139:VAL:CG2	1.74	1.50
10:B9:181:LYS:CA	10:B9:181:LYS:C	1.80	1.50
27:BR:289:ILE:N	27:BR:289:ILE:CA	1.70	1.50
50:sH:592:LEU:CD1	50:sH:592:LEU:CG	1.83	1.50
23:AM:303:GLN:NE2	27:AR:271:ARG:CA	1.72	1.49
28:BS:160:LEU:CD2	28:BS:160:LEU:CG	1.89	1.49
4:A3:49:LEU:CD2	17:AG:164:LYS:HG2	1.40	1.49
66:t3:289:LYS:CB	66:t3:289:LYS:CG	1.88	1.49
23:AM:191:GLU:CA	27:AR:270:MET:CE	1.78	1.49
4:B3:100:ASN:ND2	34:ma:139:VAL:CG2	1.74	1.49
23:BM:303:GLN:NE2	27:BR:271:ARG:CA	1.72	1.49
23:AM:132:LYS:CD	23:AM:172:MET:HE1	1.36	1.48
50:NP:1294:MET:SD	50:NP:1294:MET:HB3	1.53	1.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A0:547:MET:CG	1:A0:547:MET:SD	2.02	1.48
1:B0:547:MET:SD	1:B0:547:MET:CG	2.02	1.48
23:BM:136:LEU:CD2	23:BM:196:ILE:HD11	1.40	1.48
19:AI:117:LYS:CB	19:AI:117:LYS:CD	1.89	1.48
66:T3:289:LYS:CG	66:T3:289:LYS:CB	1.88	1.48
23:BM:303:GLN:NE2	27:BR:271:ARG:HA	1.16	1.48
28:AS:156:LEU:CG	28:AS:156:LEU:CD2	1.91	1.47
23:AM:136:LEU:CD2	23:AM:196:ILE:HD11	1.40	1.47
4:B3:49:LEU:CD2	17:BG:164:LYS:HG2	1.40	1.47
19:BI:117:LYS:CB	19:BI:117:LYS:CD	1.89	1.47
28:BS:156:LEU:CD2	28:BS:156:LEU:CG	1.91	1.47
4:A3:49:LEU:HD21	17:AG:164:LYS:C	1.39	1.46
28:AS:160:LEU:CD2	28:AS:160:LEU:CG	1.89	1.46
9:B8:786:LEU:CD2	9:B8:786:LEU:CG	1.92	1.46
14:BD:213:GLU:CG	35:mb:38:MET:HE3	0.98	1.46
11:AA:110:CYS:SG	11:AA:167:CYS:SG	1.45	1.45
11:BA:110:CYS:SG	11:BA:167:CYS:SG	1.45	1.44
9:A8:786:LEU:CD2	9:A8:786:LEU:CG	1.92	1.44
4:B3:49:LEU:HD21	17:BG:164:LYS:C	1.39	1.44
3:B2:506:LYS:NZ	9:sF:396:THR:HG21	1.33	1.43
1:A0:547:MET:HE3	1:A0:547:MET:CB	1.49	1.43
14:AD:213:GLU:CG	35:Mb:38:MET:HE3	0.98	1.43
19:AI:75:CYS:SG	19:AI:75:CYS:CB	2.07	1.43
19:BI:75:CYS:CB	19:BI:75:CYS:SG	2.07	1.42
1:B0:560:LEU:CG	1:B0:560:LEU:CD2	1.97	1.42
23:AM:303:GLN:NE2	27:AR:271:ARG:HA	1.16	1.42
50:NP:1294:MET:SD	50:NP:1294:MET:CG	2.09	1.41
50:nP:1294:MET:SD	50:nP:1294:MET:CG	2.09	1.40
1:A0:560:LEU:CG	1:A0:560:LEU:CD2	1.97	1.40
1:B0:547:MET:HE3	1:B0:547:MET:CB	1.49	1.40
4:A3:100:ASN:CB	34:Ma:139:VAL:HG21	1.51	1.39
3:A2:506:LYS:NZ	9:SF:396:THR:HG21	1.33	1.38
4:B3:100:ASN:ND2	34:ma:139:VAL:HG23	1.07	1.38
4:B3:100:ASN:CB	34:ma:139:VAL:CG2	2.02	1.38
4:B3:100:ASN:HB3	34:ma:139:VAL:CG2	1.53	1.37
4:B3:100:ASN:CB	34:ma:139:VAL:HG21	1.51	1.37
23:BM:191:GLU:CA	27:BR:270:MET:CE	1.78	1.37
4:A3:100:ASN:HB3	34:Ma:139:VAL:CG2	1.53	1.37
18:AH:129:TYR:CE2	41:Mh:63:PHE:HE1	1.41	1.37
18:BH:129:TYR:CE2	41:mh:63:PHE:HE1	1.41	1.35
4:A3:100:ASN:ND2	34:Ma:139:VAL:HG23	1.07	1.35

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:Nf:677:GLN:CG	9:SF:624:ASP:HB2	1.57	1.35
9:nF:677:GLN:CG	9:sF:624:ASP:HB2	1.57	1.35
4:A3:100:ASN:CB	34:Ma:139:VAL:CG2	2.02	1.34
4:B3:49:LEU:HD22	17:BG:164:LYS:CG	1.55	1.34
4:A3:49:LEU:HD22	17:AG:164:LYS:CG	1.55	1.33
23:AM:303:GLN:NE2	27:AR:270:MET:C	1.84	1.33
23:BM:303:GLN:NE2	27:BR:270:MET:O	1.61	1.33
23:BM:132:LYS:CE	23:BM:172:MET:HE1	1.58	1.32
23:BM:303:GLN:NE2	27:BR:270:MET:C	1.84	1.32
23:AM:132:LYS:CE	23:AM:172:MET:HE1	1.58	1.31
23:AM:303:GLN:NE2	27:AR:270:MET:O	1.61	1.31
50:sH:592:LEU:CD1	50:sH:592:LEU:CB	2.07	1.31
28:BS:160:LEU:CD2	28:BS:160:LEU:CB	2.09	1.31
50:NP:689:PHE:CE1	50:SH:656:LEU:HD11	1.66	1.31
50:SH:592:LEU:CD1	50:SH:592:LEU:CB	2.07	1.30
9:Nf:677:GLN:CG	9:SF:624:ASP:CB	2.09	1.30
4:A3:100:ASN:CG	34:Ma:139:VAL:CG2	2.04	1.30
9:nF:677:GLN:CG	9:sF:624:ASP:CB	2.09	1.30
50:SH:592:LEU:CD1	50:SH:592:LEU:HB2	1.59	1.29
28:AS:160:LEU:CD2	28:AS:160:LEU:CB	2.09	1.29
50:nP:689:PHE:CE1	50:sH:656:LEU:HD11	1.66	1.28
50:nP:1294:MET:SD	50:nP:1294:MET:CB	2.21	1.28
11:AA:678:GLU:OE2	68:T6:761:LYS:NZ	1.66	1.28
50:NP:1294:MET:SD	50:NP:1294:MET:CB	2.21	1.28
50:sH:592:LEU:CD1	50:sH:592:LEU:HB2	1.59	1.28
4:B3:100:ASN:CG	34:ma:139:VAL:CG2	2.03	1.28
4:A3:100:ASN:HD22	34:Ma:139:VAL:CG2	1.37	1.27
23:AM:132:LYS:HE3	23:AM:172:MET:SD	1.75	1.26
9:Nf:677:GLN:HG3	9:SF:624:ASP:CB	1.62	1.25
50:NP:689:PHE:CE1	50:SH:656:LEU:CD1	2.19	1.25
9:nF:677:GLN:HG3	9:sF:624:ASP:CB	1.62	1.25
68:t6:801:LYS:NZ	19:BI:117:LYS:CG	1.99	1.25
23:BM:132:LYS:HE3	23:BM:172:MET:SD	1.75	1.25
18:AH:129:TYR:CE2	41:Mh:63:PHE:CE1	2.25	1.25
50:nP:689:PHE:CE1	50:sH:656:LEU:CD1	2.19	1.25
3:B2:506:LYS:NZ	9:sF:396:THR:CG2	1.99	1.24
9:nF:677:GLN:HG2	9:sF:624:ASP:CG	1.61	1.24
66:t3:837:TYR:CD2	66:t3:837:TYR:CB	2.20	1.24
3:A2:506:LYS:NZ	9:SF:396:THR:CG2	1.99	1.24
18:BH:129:TYR:CE2	41:mh:63:PHE:CE1	2.25	1.24
4:B3:100:ASN:HD22	34:ma:139:VAL:CG2	1.37	1.24

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:Nf:677:GLN:HG2	9:Sf:624:ASP:CG	1.61	1.23
1:B0:546:TYR:CD2	1:B0:546:TYR:CE1	2.25	1.23
66:T3:837:TYR:CD2	66:T3:837:TYR:CB	2.20	1.23
1:A0:546:TYR:CD2	1:A0:546:TYR:CE1	2.25	1.23
4:A3:49:LEU:HD21	17:AG:164:LYS:O	1.36	1.22
4:B3:49:LEU:HD21	17:BG:164:LYS:O	1.36	1.22
23:AM:303:GLN:NE2	27:AR:271:ARG:N	1.87	1.22
3:A2:507:ARG:C	9:Sf:393:LYS:NZ	1.97	1.22
23:AM:132:LYS:HE3	23:AM:172:MET:CE	1.68	1.22
28:AS:156:LEU:CD2	28:AS:156:LEU:CD1	2.17	1.22
3:B2:507:ARG:C	9:sF:393:LYS:NZ	1.97	1.22
28:BS:156:LEU:CD2	28:BS:156:LEU:CD1	2.17	1.22
3:B2:506:LYS:HZ2	9:sF:396:THR:CG2	1.51	1.21
4:B3:100:ASN:CG	34:ma:139:VAL:HG23	1.64	1.21
23:BM:132:LYS:HE3	23:BM:172:MET:CE	1.68	1.21
66:T3:837:TYR:CD2	66:T3:837:TYR:HB3	1.73	1.20
66:t3:837:TYR:CD2	66:t3:837:TYR:HB3	1.73	1.20
23:BM:303:GLN:CD	27:BR:270:MET:O	1.84	1.20
21:AK:11:LEU:CD2	39:Mf:146:THR:HA	1.72	1.19
23:AM:132:LYS:CE	23:AM:172:MET:CE	2.20	1.19
23:AM:303:GLN:CD	27:AR:270:MET:O	1.84	1.19
23:BM:132:LYS:CE	23:BM:172:MET:CE	2.21	1.19
23:BM:303:GLN:NE2	27:BR:271:ARG:N	1.87	1.19
4:A3:100:ASN:CG	34:Ma:139:VAL:HG23	1.64	1.19
68:t6:801:LYS:NZ	19:BI:117:LYS:HG2	1.57	1.18
1:B0:546:TYR:CD2	1:B0:546:TYR:CB	2.25	1.18
1:A0:546:TYR:CD2	1:A0:546:TYR:CB	2.25	1.17
10:A9:244:GLU:OXT	58:SE:219:ASN:HA	1.44	1.17
21:BK:11:LEU:CD2	39:mf:146:THR:HA	1.72	1.17
23:BM:132:LYS:CD	23:BM:172:MET:CE	2.23	1.17
3:A2:507:ARG:C	9:Sf:393:LYS:HZ3	1.49	1.17
2:B1:365:ASN:OD1	32:BW:191:ASP:O	1.63	1.17
68:t6:801:LYS:HZ3	19:BI:117:LYS:CD	1.56	1.16
1:A0:560:LEU:CB	1:A0:560:LEU:HG	1.57	1.16
9:B8:786:LEU:CD2	9:B8:786:LEU:CB	2.22	1.16
9:A8:786:LEU:CD2	9:A8:786:LEU:CB	2.22	1.15
23:BM:132:LYS:HG2	23:BM:172:MET:SD	1.86	1.15
23:AM:132:LYS:HG2	23:AM:172:MET:SD	1.86	1.15
23:AM:132:LYS:CD	23:AM:172:MET:CE	2.23	1.15
3:B2:64:LYS:HD3	9:B8:780:ILE:HD13	1.29	1.15
10:B9:244:GLU:OXT	58:sE:219:ASN:HA	1.44	1.15

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:B8:786:LEU:CD2	9:B8:786:LEU:CD1	2.25	1.14
18:BH:129:TYR:HE2	41:mh:63:PHE:CE1	1.64	1.14
9:A8:786:LEU:CD2	9:A8:786:LEU:CD1	2.25	1.14
14:BD:156:ASP:OD2	35:mb:71:VAL:HG11	1.47	1.14
14:AD:156:ASP:OD2	35:Mb:71:VAL:HG11	1.47	1.13
50:NP:689:PHE:CZ	50:SH:656:LEU:CD1	2.30	1.13
1:B0:547:MET:CB	1:B0:547:MET:CE	2.26	1.13
14:BD:213:GLU:CG	35:mb:38:MET:CE	1.90	1.13
3:A2:506:LYS:HZ2	9:SF:396:THR:CG2	1.58	1.13
18:AH:109:LYS:O	43:Mj:83:LEU:CD1	1.96	1.12
19:AI:117:LYS:HD3	19:AI:117:LYS:CA	1.80	1.12
19:BI:117:LYS:HD3	19:BI:117:LYS:CA	1.80	1.12
2:A1:365:ASN:OD1	32:AW:191:ASP:O	1.63	1.12
18:BH:109:LYS:O	43:mj:83:LEU:CD1	1.96	1.12
1:A0:547:MET:CG	1:A0:547:MET:CB	2.28	1.12
3:A2:64:LYS:HD3	9:A8:780:ILE:HD13	1.29	1.11
3:B2:507:ARG:HH22	9:sF:393:LYS:HA	1.14	1.11
1:A0:547:MET:CB	1:A0:547:MET:CE	2.26	1.11
1:B0:547:MET:CG	1:B0:547:MET:CB	2.28	1.11
23:AM:136:LEU:HD21	23:AM:196:ILE:HD11	1.30	1.11
66:t3:740:ASP:HB2	49:mp:156:PHE:HD2	1.09	1.11
13:AC:260:LEU:HD21	39:Mf:14:PRO:HB3	1.31	1.10
28:AS:160:LEU:CD2	28:AS:160:LEU:CD1	2.29	1.10
23:BM:191:GLU:CB	27:BR:270:MET:CE	2.28	1.10
50:nP:689:PHE:CZ	50:sH:656:LEU:CD1	2.30	1.10
3:A2:507:ARG:HH22	9:SF:393:LYS:HA	1.14	1.10
23:AM:136:LEU:CD2	23:AM:196:ILE:CD1	2.30	1.10
23:AM:191:GLU:CB	27:AR:270:MET:CE	2.28	1.10
28:AS:160:LEU:CD2	28:AS:160:LEU:HB3	1.82	1.09
28:BS:160:LEU:CD2	28:BS:160:LEU:CD1	2.29	1.09
18:AH:129:TYR:HE2	41:Mh:63:PHE:CE1	1.64	1.09
10:B9:181:LYS:C	10:B9:181:LYS:CB	2.25	1.09
50:NP:1294:MET:CB	50:NP:1294:MET:HG2	1.57	1.09
66:t3:837:TYR:CD2	66:t3:837:TYR:CD1	2.33	1.09
10:A9:181:LYS:C	10:A9:181:LYS:CB	2.25	1.09
9:nF:677:GLN:HG2	9:sF:624:ASP:CB	1.78	1.09
21:BK:11:LEU:HD22	39:mf:146:THR:CA	1.83	1.08
23:BM:136:LEU:CD2	23:BM:196:ILE:CD1	2.30	1.08
21:AK:11:LEU:HD22	39:Mf:146:THR:CA	1.83	1.08
13:BC:260:LEU:HD21	39:mf:14:PRO:HB3	1.31	1.08
14:AD:213:GLU:CG	35:Mb:38:MET:CE	1.90	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:nP:1294:MET:CB	50:nP:1294:MET:HG3	1.57	1.08
1:B0:560:LEU:CB	1:B0:560:LEU:HG	1.57	1.07
28:BS:160:LEU:CD2	28:BS:160:LEU:HB3	1.82	1.07
23:BM:191:GLU:N	27:BR:270:MET:CE	2.18	1.07
68:t6:801:LYS:HZ3	19:BI:117:LYS:CG	1.64	1.07
4:A3:49:LEU:CD2	17:AG:164:LYS:C	2.27	1.06
23:AM:301:THR:HG23	27:AR:271:ARG:HH22	1.19	1.06
23:BM:301:THR:HG23	27:BR:271:ARG:HH22	1.19	1.06
23:AM:191:GLU:N	27:AR:270:MET:CE	2.18	1.06
68:t6:801:LYS:HZ1	19:BI:117:LYS:HG2	0.91	1.06
50:NP:1294:MET:CB	50:NP:1294:MET:HG3	1.57	1.06
66:t3:739:THR:HB	49:mp:154:ALA:HA	1.12	1.06
4:B3:49:LEU:CD2	17:BG:164:LYS:C	2.27	1.06
23:BM:191:GLU:CA	27:BR:270:MET:HE2	1.83	1.06
11:BA:1444:MET:HE2	17:BG:58:ARG:HH11	1.21	1.05
23:AM:191:GLU:CA	27:AR:270:MET:HE2	1.83	1.05
66:t3:740:ASP:HA	49:mp:157:ASN:OD1	1.56	1.05
23:AM:136:LEU:HD21	23:AM:196:ILE:CD1	1.87	1.05
23:AM:191:GLU:N	27:AR:270:MET:HE2	1.72	1.05
18:AH:129:TYR:C	18:AH:129:TYR:N	2.15	1.05
50:nP:1294:MET:CB	50:nP:1294:MET:HG2	1.57	1.04
23:BM:136:LEU:HD21	23:BM:196:ILE:HD11	1.30	1.04
9:Nf:677:GLN:HG2	9:SF:624:ASP:CB	1.78	1.04
18:BH:129:TYR:C	18:BH:129:TYR:N	2.15	1.04
23:AM:132:LYS:HD3	23:AM:172:MET:HE1	1.04	1.04
14:AD:209:ARG:CZ	35:Mb:31:GLN:HE21	1.71	1.03
9:Nf:677:GLN:HG2	9:SF:624:ASP:OD1	1.57	1.03
50:SH:589:HIS:O	50:SH:592:LEU:N	1.90	1.03
9:nF:677:GLN:HG2	9:sF:624:ASP:OD1	1.57	1.03
50:sH:589:HIS:O	50:sH:592:LEU:N	1.90	1.03
14:BD:209:ARG:CZ	35:mb:31:GLN:HE21	1.71	1.03
17:BG:95:SER:HB2	32:BW:144:ARG:O	1.59	1.03
23:BM:191:GLU:N	27:BR:270:MET:HE2	1.72	1.03
17:AG:95:SER:HB2	32:AW:144:ARG:O	1.59	1.03
28:BS:156:LEU:CD2	28:BS:156:LEU:CB	2.36	1.03
23:BM:136:LEU:HD21	23:BM:196:ILE:CD1	1.87	1.03
50:sH:592:LEU:HB2	50:sH:592:LEU:HD13	1.40	1.03
23:AM:132:LYS:HD3	23:AM:172:MET:CE	1.88	1.03
50:SH:592:LEU:HB2	50:SH:592:LEU:HD13	1.40	1.02
28:AS:156:LEU:CD2	28:AS:156:LEU:CB	2.36	1.02
21:BK:12:LEU:HD23	39:mf:145:SER:O	1.58	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BM:132:LYS:HD3	23:BM:172:MET:HE1	1.04	1.02
28:AS:160:LEU:CD2	28:AS:160:LEU:HD13	1.89	1.02
11:AA:1444:MET:HE2	17:AG:58:ARG:HH11	1.21	1.01
14:AD:213:GLU:CB	35:Mb:38:MET:HE3	1.90	1.01
14:BD:213:GLU:CB	35:mb:38:MET:HE3	1.90	1.01
23:BM:132:LYS:HD3	23:BM:172:MET:CE	1.88	1.01
19:AI:117:LYS:HD3	19:AI:117:LYS:HB2	1.37	1.01
19:BI:117:LYS:HD3	19:BI:117:LYS:HB2	1.38	1.01
50:SH:588:ASN:O	50:SH:591:LEU:HB3	1.60	1.00
66:T3:837:TYR:CD2	66:T3:837:TYR:CD1	2.33	1.00
21:AK:12:LEU:HD23	39:Mf:145:SER:O	1.58	1.00
28:BS:160:LEU:CD2	28:BS:160:LEU:HD13	1.89	1.00
4:A3:49:LEU:CD2	17:AG:164:LYS:CG	2.25	1.00
23:AM:136:LEU:HD23	23:AM:196:ILE:HD11	1.01	1.00
23:BM:136:LEU:HD23	23:BM:196:ILE:HD11	1.01	1.00
50:sH:588:ASN:O	50:sH:591:LEU:HB3	1.60	1.00
50:NP:689:PHE:CE1	50:SH:656:LEU:HD13	1.97	0.99
66:t3:740:ASP:CB	49:mp:156:PHE:HD2	1.73	0.99
19:BI:13:MET:SD	19:BI:13:MET:CE	2.50	0.99
19:AI:13:MET:CE	19:AI:13:MET:SD	2.50	0.99
3:B2:507:ARG:C	9:sF:393:LYS:HZ3	1.60	0.99
3:B2:369:ARG:HG3	3:B2:374:VAL:HG12	1.45	0.98
18:BH:129:TYR:C	18:BH:129:TYR:CB	2.37	0.98
4:A3:100:ASN:ND2	34:Ma:139:VAL:HG22	1.77	0.98
3:B2:507:ARG:NH2	9:sF:393:LYS:HA	1.79	0.97
50:nP:689:PHE:CE1	50:sH:656:LEU:HD13	1.97	0.97
66:t3:740:ASP:HB2	49:mp:156:PHE:CD2	1.99	0.97
68:t6:846:HIS:NE2	19:BI:74:GLU:HG3	1.78	0.97
10:B9:181:LYS:C	10:B9:181:LYS:N	2.23	0.97
18:AH:109:LYS:O	43:Mj:83:LEU:HD11	1.65	0.97
66:t3:739:THR:HB	49:mp:154:ALA:CA	1.93	0.97
10:A9:181:LYS:C	10:A9:181:LYS:N	2.23	0.96
23:BM:303:GLN:HE21	27:BR:271:ARG:HA	1.22	0.96
4:B3:49:LEU:CD2	17:BG:164:LYS:CG	2.25	0.96
3:A2:507:ARG:NH2	9:SF:393:LYS:HA	1.79	0.96
3:A2:369:ARG:HG3	3:A2:374:VAL:HG12	1.45	0.96
18:AH:129:TYR:C	18:AH:129:TYR:CB	2.36	0.96
67:t5:927:ARG:HG3	12:BB:15:PRO:O	1.66	0.96
27:BR:227:SER:C	27:BR:228:MET:N	2.24	0.96
50:NP:689:PHE:HZ	50:SH:656:LEU:HD11	1.17	0.96
4:B3:100:ASN:ND2	34:ma:139:VAL:HG22	1.77	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:BC:89:GLU:OE1	39:mf:119:ARG:NH1	1.99	0.96
28:BS:156:LEU:CD2	28:BS:156:LEU:HD13	1.95	0.96
9:nF:680:SER:OG	9:sF:623:ASP:HB2	1.67	0.95
28:AS:156:LEU:CD2	28:AS:156:LEU:HD13	1.95	0.95
27:AR:227:SER:C	27:AR:228:MET:N	2.24	0.95
2:B1:365:ASN:HD21	32:BW:192:SER:HA	1.29	0.95
2:A1:365:ASN:HD21	32:AW:192:SER:HA	1.29	0.95
18:BH:109:LYS:O	43:mj:83:LEU:HD11	1.65	0.95
9:Nf:680:SER:OG	9:SF:623:ASP:HB2	1.67	0.95
13:AC:89:GLU:OE1	39:Mf:119:ARG:NH1	1.99	0.94
68:t6:790:LYS:HE3	19:BI:81:ARG:HH22	1.32	0.94
19:AI:111:THR:CG2	19:AI:111:THR:OG1	2.14	0.94
23:AM:303:GLN:HE21	27:AR:271:ARG:HA	1.22	0.93
19:BI:111:THR:CG2	19:BI:111:THR:OG1	2.14	0.93
1:A0:546:TYR:CD2	1:A0:546:TYR:CZ	2.55	0.93
68:t6:846:HIS:CD2	19:BI:74:GLU:HG3	2.04	0.92
50:NP:1294:MET:CG	50:NP:1294:MET:CA	2.48	0.92
11:AA:110:CYS:SG	11:AA:167:CYS:CB	2.58	0.92
50:nP:689:PHE:HZ	50:sH:656:LEU:HD11	1.17	0.92
50:nP:1294:MET:CG	50:nP:1294:MET:CA	2.48	0.92
23:AM:136:LEU:HD23	23:AM:196:ILE:CD1	1.97	0.91
3:B2:507:ARG:C	9:sF:393:LYS:HZ2	1.75	0.91
13:BC:87:PHE:HD1	39:mf:120:GLN:HE21	0.95	0.91
9:B8:786:LEU:CD2	9:B8:786:LEU:HB2	2.01	0.91
3:B2:506:LYS:HZ3	9:sF:396:THR:CG2	1.83	0.91
11:BA:110:CYS:SG	11:BA:167:CYS:CB	2.58	0.91
23:AM:132:LYS:CE	23:AM:172:MET:SD	2.57	0.90
13:BC:87:PHE:CE1	39:mf:120:GLN:HG3	2.07	0.90
9:nF:677:GLN:OE1	9:sF:623:ASP:HB3	1.72	0.90
23:BM:190:LYS:HD3	27:BR:270:MET:CE	2.02	0.90
23:BM:301:THR:HG23	27:BR:271:ARG:NH2	1.85	0.90
13:AC:87:PHE:CE1	39:Mf:120:GLN:HG3	2.07	0.90
23:AM:190:LYS:HD3	27:AR:270:MET:CE	2.02	0.90
23:AM:301:THR:HG23	27:AR:271:ARG:NH2	1.85	0.90
3:B2:506:LYS:HZ2	9:sF:396:THR:HG21	0.81	0.90
13:BC:87:PHE:CD1	39:mf:120:GLN:NE2	2.40	0.90
1:B0:546:TYR:CD2	1:B0:546:TYR:CZ	2.55	0.90
14:BD:209:ARG:NH1	35:mb:31:GLN:HE21	1.70	0.90
14:BD:152:SER:OG	14:BD:155:ARG:NH2	2.05	0.89
3:A2:506:LYS:HZ3	9:SF:396:THR:CG2	1.75	0.89
13:AC:87:PHE:CD1	39:Mf:120:GLN:NE2	2.40	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AD:209:ARG:NH1	35:Mb:31:GLN:HE21	1.70	0.89
50:nP:1294:MET:CG	50:nP:1294:MET:CB	0.89	0.89
9:A8:786:LEU:CD2	9:A8:786:LEU:HB2	2.01	0.89
14:AD:152:SER:OG	14:AD:155:ARG:NH2	2.05	0.89
21:AK:11:LEU:HD22	39:Mf:146:THR:HA	0.91	0.89
1:B0:547:MET:CG	1:B0:547:MET:CE	2.51	0.89
50:NP:1294:MET:CG	50:NP:1294:MET:CB	0.89	0.88
13:AC:87:PHE:HD1	39:Mf:120:GLN:HE21	0.95	0.88
14:AD:213:GLU:HG2	35:Mb:38:MET:HE3	1.52	0.88
9:Nf:677:GLN:OE1	9:SF:623:ASP:HB3	1.72	0.88
19:BI:117:LYS:CD	19:BI:117:LYS:HB2	1.98	0.88
23:BM:136:LEU:HD23	23:BM:196:ILE:CD1	1.97	0.88
17:BG:95:SER:HB3	32:BW:144:ARG:HB3	1.54	0.88
3:B2:506:LYS:HZ3	9:sF:396:THR:HG21	1.38	0.88
23:BM:132:LYS:CE	23:BM:172:MET:SD	2.57	0.88
1:A0:547:MET:CG	1:A0:547:MET:CE	2.52	0.88
13:BC:87:PHE:HE1	39:mf:120:GLN:HG3	1.40	0.87
9:Nf:677:GLN:CG	9:SF:624:ASP:CA	2.53	0.87
9:nF:677:GLN:HG3	9:sF:624:ASP:HB2	0.89	0.87
3:A2:506:LYS:HZ2	9:SF:396:THR:HG21	0.92	0.87
9:Nf:677:GLN:HG3	9:SF:624:ASP:HB2	0.89	0.86
11:AA:187:LYS:HG3	32:AW:227:MET:HB2	1.57	0.86
50:nP:689:PHE:HE1	50:sH:656:LEU:CD1	1.87	0.86
17:AG:95:SER:HB3	32:AW:144:ARG:HB3	1.54	0.85
67:t5:927:ARG:CG	12:BB:15:PRO:O	2.23	0.85
10:B9:244:GLU:OXT	58:sE:219:ASN:CA	2.24	0.85
68:t6:801:LYS:NZ	19:BI:117:LYS:CD	2.30	0.85
9:nF:677:GLN:CG	9:sF:624:ASP:CA	2.53	0.85
11:BA:187:LYS:HG3	32:BW:227:MET:HB2	1.57	0.85
19:AI:117:LYS:CD	19:AI:117:LYS:HB2	1.98	0.85
23:BM:132:LYS:CG	23:BM:172:MET:SD	2.64	0.85
23:BM:303:GLN:OE1	27:BR:270:MET:O	1.94	0.85
23:AM:132:LYS:CG	23:AM:172:MET:SD	2.64	0.84
19:AI:105:SER:HB2	45:T4:1011:THR:HG21	1.59	0.84
19:AI:117:LYS:HG2	68:T6:801:LYS:CE	2.07	0.84
50:NP:689:PHE:HE1	50:SH:656:LEU:CD1	1.87	0.84
18:AH:133:ASN:ND2	41:Mh:63:PHE:CD1	2.46	0.84
13:AC:87:PHE:HE1	39:Mf:120:GLN:HG3	1.40	0.84
50:SH:592:LEU:CD1	50:SH:592:LEU:CD2	2.56	0.83
3:B2:129:VAL:HG22	3:B2:270:TYR:HE2	1.43	0.83
18:BH:133:ASN:ND2	41:mh:63:PHE:CD1	2.46	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A2:129:VAL:HG22	3:A2:270:TYR:HE2	1.43	0.83
10:A9:244:GLU:OXT	58:SE:219:ASN:CA	2.24	0.83
11:BA:419:LYS:HE3	38:me:58:LEU:HD12	1.60	0.83
18:AH:109:LYS:O	43:Mj:83:LEU:CG	2.26	0.83
23:AM:303:GLN:OE1	27:AR:270:MET:O	1.94	0.83
50:SH:589:HIS:C	50:SH:591:LEU:N	2.30	0.83
14:BD:213:GLU:CB	35:mb:38:MET:CE	2.54	0.83
21:BK:11:LEU:HD22	39:mf:146:THR:HA	0.91	0.83
9:nF:677:GLN:CG	9:sF:624:ASP:CG	2.42	0.83
50:nP:1294:MET:CG	50:nP:1294:MET:HB2	1.32	0.83
50:nP:1294:MET:HG3	50:nP:1294:MET:HB2	1.32	0.83
50:NP:1294:MET:HB3	50:NP:1294:MET:CG	1.31	0.83
1:A0:546:TYR:CG	1:A0:546:TYR:CE1	2.67	0.83
28:AS:160:LEU:HB3	28:AS:160:LEU:HD23	1.60	0.83
18:BH:109:LYS:O	43:mj:83:LEU:CG	2.26	0.83
50:sH:592:LEU:CD1	50:sH:592:LEU:CD2	2.56	0.83
7:A6:130:LEU:HD12	7:A6:149:ILE:HD12	1.61	0.82
1:B0:546:TYR:CG	1:B0:546:TYR:CE1	2.67	0.82
18:AH:93:TYR:HD2	18:AH:143:LEU:HB3	1.44	0.82
7:B6:130:LEU:HD12	7:B6:149:ILE:HD12	1.61	0.82
50:nP:1294:MET:HB3	50:nP:1294:MET:CG	1.32	0.82
11:AA:419:LYS:HE3	38:Me:58:LEU:HD12	1.60	0.82
67:t5:927:ARG:CZ	12:BB:16:TYR:O	2.28	0.82
4:A3:97:ASP:HB2	34:Ma:140:GLY:HA2	1.62	0.81
68:T6:503:LEU:HG	68:T6:505:PRO:HD2	1.62	0.81
18:BH:93:TYR:HD2	18:BH:143:LEU:HB3	1.44	0.81
12:AB:13:GLU:HB2	67:T5:919:ARG:CZ	2.09	0.81
50:NP:1294:MET:CG	50:NP:1294:MET:HB2	1.31	0.81
66:t3:741:ILE:H	49:mp:157:ASN:HD21	1.26	0.81
68:t6:503:LEU:HG	68:t6:505:PRO:HD2	1.63	0.81
66:t3:740:ASP:CA	49:mp:157:ASN:OD1	2.18	0.81
4:A3:100:ASN:CG	34:Ma:139:VAL:HG22	1.99	0.81
28:BS:160:LEU:HB3	28:BS:160:LEU:HD23	1.60	0.81
16:BF:103:MET:HE2	17:BG:15:PRO:HG2	1.63	0.81
9:Nf:677:GLN:CG	9:sF:624:ASP:CG	2.42	0.81
4:B3:97:ASP:HB2	34:ma:140:GLY:HA2	1.62	0.80
19:AI:117:LYS:HD3	19:AI:117:LYS:HA	1.61	0.80
23:BM:301:THR:O	27:BR:271:ARG:NH1	2.15	0.80
68:t6:846:HIS:NE2	19:BI:74:GLU:CG	2.44	0.80
19:BI:15:TYR:OH	19:BI:15:TYR:CZ	2.35	0.80
3:A2:507:ARG:C	9:sF:393:LYS:HZ2	1.87	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AK:12:LEU:CD2	39:Mf:145:SER:O	2.30	0.80
50:SH:589:HIS:O	50:SH:590:GLU:C	2.13	0.80
11:BA:456:MET:HE1	11:BA:510:GLN:HB2	1.64	0.80
19:AI:15:TYR:CZ	19:AI:15:TYR:OH	2.35	0.80
19:BI:117:LYS:HD3	19:BI:117:LYS:HA	1.61	0.80
23:AM:150:ALA:CB	23:AM:176:ILE:HD12	2.13	0.79
50:NP:689:PHE:HE1	50:SH:656:LEU:HD13	1.44	0.79
23:AM:191:GLU:HB2	27:AR:270:MET:HE2	1.64	0.79
67:t5:927:ARG:HH22	12:BB:14:ASP:HB3	1.47	0.79
14:BD:213:GLU:HG3	35:mb:38:MET:SD	2.22	0.79
11:AA:1284:MET:HE2	11:AA:1306:LEU:HD21	1.65	0.79
68:t6:801:LYS:HZ3	19:BI:117:LYS:CE	1.95	0.79
14:BD:213:GLU:HG2	35:mb:38:MET:HE3	1.52	0.79
23:BM:150:ALA:CB	23:BM:176:ILE:HD12	2.13	0.79
23:AM:301:THR:O	27:AR:271:ARG:NH1	2.15	0.79
21:BK:12:LEU:CD2	39:mf:145:SER:O	2.30	0.79
23:BM:191:GLU:OE2	27:BR:268:MET:C	2.26	0.79
14:AD:213:GLU:HG3	35:Mb:38:MET:SD	2.22	0.79
16:AF:103:MET:HE2	17:AG:15:PRO:HG2	1.63	0.79
23:AM:191:GLU:OE2	27:AR:268:MET:C	2.26	0.79
23:AM:190:LYS:HD3	27:AR:270:MET:HE3	1.65	0.78
9:nF:677:GLN:HG3	9:sF:624:ASP:CA	2.14	0.78
11:AA:456:MET:HE1	11:AA:510:GLN:HB2	1.64	0.78
23:AM:191:GLU:CB	27:AR:270:MET:HE2	2.07	0.78
23:AM:303:GLN:HE21	27:AR:271:ARG:CA	1.79	0.78
23:AM:191:GLU:HB2	27:AR:270:MET:CE	2.12	0.78
1:B0:546:TYR:CD2	1:B0:546:TYR:HB2	2.19	0.78
23:BM:191:GLU:HB2	27:BR:270:MET:CE	2.12	0.78
21:BK:12:LEU:HD21	39:mf:144:SER:O	1.83	0.78
1:A0:546:TYR:CD2	1:A0:546:TYR:HB2	2.19	0.78
23:BM:190:LYS:HD3	27:BR:270:MET:HE3	1.65	0.78
18:BH:93:TYR:CD2	18:BH:143:LEU:HB3	2.19	0.78
23:BM:191:GLU:CB	27:BR:270:MET:HE2	2.07	0.78
28:BS:160:LEU:HD13	28:BS:160:LEU:HD21	1.65	0.78
1:A0:546:TYR:CE1	1:A0:547:MET:CE	2.67	0.78
28:AS:156:LEU:CD1	28:AS:156:LEU:HD21	2.14	0.78
3:B2:135:LEU:HD13	3:B2:233:VAL:HG22	1.66	0.78
3:A2:506:LYS:HZ2	9:SF:396:THR:CB	1.97	0.77
13:BC:33:LEU:HG	13:BC:37:MET:HE2	1.66	0.77
23:BM:190:LYS:CE	27:BR:270:MET:O	2.32	0.77
3:A2:451:VAL:O	6:A5:51:LYS:NZ	2.15	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AC:34:ARG:HA	13:AC:37:MET:HE3	1.67	0.77
21:AK:12:LEU:HD21	39:Mf:144:SER:O	1.83	0.77
66:t3:740:ASP:HA	49:mp:157:ASN:CG	2.08	0.77
1:B0:256:ALA:HA	1:B0:259:ARG:HG2	1.66	0.77
3:B2:451:VAL:O	6:B5:51:LYS:NZ	2.14	0.77
23:BM:191:GLU:HB2	27:BR:270:MET:HE2	1.64	0.77
3:A2:506:LYS:HZ3	9:SF:396:THR:HG21	1.28	0.77
19:AI:13:MET:SD	19:AI:15:TYR:CZ	2.78	0.77
1:B0:546:TYR:CE1	1:B0:547:MET:CE	2.67	0.77
19:BI:13:MET:SD	19:BI:15:TYR:CZ	2.78	0.77
3:B2:506:LYS:NZ	9:sF:396:THR:CB	2.47	0.77
11:BA:1317:MET:HE2	15:BE:142:VAL:HG21	1.67	0.77
1:A0:546:TYR:CD1	1:A0:547:MET:HB2	2.20	0.77
18:AH:93:TYR:CD2	18:AH:143:LEU:HB3	2.19	0.77
4:B3:100:ASN:CG	34:ma:139:VAL:HG22	1.99	0.77
28:AS:160:LEU:HD13	28:AS:160:LEU:HD21	1.65	0.77
1:B0:498:THR:HG22	1:B0:684:ARG:HA	1.66	0.77
13:BC:34:ARG:HA	13:BC:37:MET:HE3	1.67	0.77
14:AD:213:GLU:CB	35:Mb:38:MET:CE	2.54	0.77
13:AC:33:LEU:HG	13:AC:37:MET:HE2	1.66	0.77
18:AH:129:TYR:HE2	41:Mh:63:PHE:CZ	2.03	0.77
18:BH:129:TYR:HE2	41:mh:63:PHE:CZ	2.03	0.77
10:A9:181:LYS:C	10:A9:181:LYS:HB3	2.09	0.76
3:A2:506:LYS:NZ	9:SF:396:THR:CB	2.47	0.76
23:AM:190:LYS:CE	27:AR:270:MET:O	2.32	0.76
9:B8:786:LEU:CD2	9:B8:786:LEU:HD13	2.16	0.76
10:B9:181:LYS:C	10:B9:181:LYS:HB3	2.09	0.76
11:BA:1284:MET:HE2	11:BA:1306:LEU:HD21	1.65	0.76
28:BS:156:LEU:HD13	28:BS:156:LEU:HD21	1.65	0.76
3:A2:135:LEU:HD13	3:A2:233:VAL:HG22	1.66	0.76
9:Nf:677:GLN:HG3	9:SF:624:ASP:CA	2.13	0.76
4:B3:100:ASN:CB	34:ma:139:VAL:HG23	1.93	0.76
1:A0:498:THR:HG22	1:A0:684:ARG:HA	1.66	0.76
9:A8:786:LEU:CD2	9:A8:786:LEU:HD13	2.16	0.76
1:A0:256:ALA:HA	1:A0:259:ARG:HG2	1.66	0.76
1:B0:546:TYR:CD1	1:B0:547:MET:HB2	2.20	0.76
12:AB:13:GLU:HB2	67:T5:919:ARG:NH2	2.01	0.76
67:T5:855:LEU:HD22	68:T6:769:ILE:HD11	1.68	0.76
9:nF:680:SER:OG	9:sF:623:ASP:CB	2.33	0.76
68:t6:801:LYS:NZ	19:BI:117:LYS:CE	2.49	0.75
9:nF:670:ASP:CG	9:sF:722:ASP:OD2	2.29	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1317:MET:HE2	15:AE:142:VAL:HG21	1.66	0.75
27:AR:288:ASN:C	27:AR:289:ILE:CA	2.59	0.75
67:t5:931:GLN:HG2	12:BB:15:PRO:C	2.10	0.75
9:Nf:680:SER:OG	9:SF:623:ASP:CB	2.33	0.75
66:t3:740:ASP:CB	49:mp:156:PHE:CD2	2.65	0.75
4:A3:100:ASN:CB	34:Ma:139:VAL:HG23	1.93	0.75
19:AI:80:SER:O	19:AI:81:ARG:HG3	1.87	0.75
9:Nf:670:ASP:CG	9:SF:722:ASP:OD2	2.29	0.75
3:B2:507:ARG:HH22	9:sF:393:LYS:CA	1.96	0.75
18:BH:109:LYS:O	43:mj:83:LEU:HG	1.87	0.75
1:A0:325:ILE:HD12	1:A0:380:ARG:HG3	1.67	0.75
50:sH:589:HIS:O	50:sH:590:GLU:C	2.13	0.75
18:AH:109:LYS:O	43:Mj:83:LEU:HG	1.87	0.75
67:t5:855:LEU:HD22	68:t6:769:ILE:HD11	1.68	0.75
23:BM:303:GLN:HE21	27:BR:271:ARG:CA	1.79	0.75
28:AS:156:LEU:HD13	28:AS:156:LEU:HD21	1.66	0.75
1:B0:325:ILE:HD12	1:B0:380:ARG:HG3	1.67	0.75
27:BR:288:ASN:C	27:BR:289:ILE:CA	2.59	0.75
2:B1:365:ASN:ND2	32:BW:192:SER:HA	2.02	0.74
11:AA:420:ARG:HD3	38:Me:60:GLU:CG	2.17	0.74
19:BI:80:SER:O	19:BI:81:ARG:HG3	1.87	0.74
2:A1:365:ASN:ND2	32:AW:192:SER:HA	2.02	0.74
3:B2:507:ARG:C	9:sF:393:LYS:CE	2.61	0.74
11:BA:420:ARG:HD3	38:me:60:GLU:CG	2.17	0.74
50:sH:589:HIS:C	50:sH:591:LEU:N	2.30	0.74
1:B0:546:TYR:CE1	1:B0:547:MET:HE1	2.23	0.74
58:sE:43:LEU:HD11	50:sH:513:LEU:HD21	1.70	0.74
50:sH:588:ASN:O	50:sH:591:LEU:N	2.21	0.73
1:A0:546:TYR:CE1	1:A0:547:MET:HE1	2.23	0.73
3:A2:507:ARG:HH22	9:SF:393:LYS:CA	1.96	0.73
58:SE:43:LEU:HD11	50:SH:513:LEU:HD21	1.70	0.73
68:t6:801:LYS:HZ1	19:BI:117:LYS:CG	1.70	0.73
10:A9:243:THR:O	58:SE:219:ASN:HB3	1.88	0.73
12:AB:1111:MET:CE	12:AB:1117:GLN:H	2.02	0.73
3:A2:507:ARG:C	9:SF:393:LYS:CE	2.61	0.73
3:B2:506:LYS:HZ2	9:sF:396:THR:CB	1.99	0.73
4:A3:49:LEU:CD2	17:AG:164:LYS:O	2.28	0.73
66:t3:837:TYR:HB3	66:t3:837:TYR:HD2	1.50	0.73
67:t5:927:ARG:NH2	12:BB:14:ASP:HB3	2.03	0.72
19:BI:111:THR:CG2	19:BI:111:THR:CA	2.66	0.72
10:A9:243:THR:O	58:SE:219:ASN:CB	2.37	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B2:64:LYS:N	9:B8:780:ILE:HD11	2.04	0.72
67:T5:868:ARG:HG2	67:T5:872:ARG:HD2	1.72	0.72
10:B9:243:THR:O	58:sE:219:ASN:CB	2.37	0.72
12:BB:1111:MET:CE	12:BB:1117:GLN:H	2.01	0.72
50:SH:588:ASN:O	50:SH:591:LEU:N	2.21	0.72
10:B9:243:THR:O	58:sE:219:ASN:HB3	1.88	0.72
17:AG:95:SER:CB	32:AW:144:ARG:HB3	2.20	0.72
50:NP:1077:GLU:OE1	52:Np:17:ARG:NH2	2.23	0.72
19:AI:111:THR:CG2	19:AI:111:THR:CA	2.66	0.72
67:t5:868:ARG:HG2	67:t5:872:ARG:HD2	1.72	0.72
1:A0:104:ARG:NH2	1:A0:202:LEU:O	2.23	0.72
4:B3:49:LEU:CD2	17:BG:164:LYS:O	2.28	0.72
50:nP:1077:GLU:OE1	52:np:17:ARG:NH2	2.23	0.72
50:SH:589:HIS:C	50:SH:592:LEU:H	1.97	0.72
17:BG:95:SER:CB	32:BW:144:ARG:HB3	2.20	0.72
8:A7:688:GLY:O	8:A7:692:ARG:NH1	2.23	0.71
11:AA:446:ARG:HB2	11:AA:487:MET:HE1	1.70	0.71
50:SH:588:ASN:O	50:SH:591:LEU:CB	2.37	0.71
50:nP:689:PHE:HE1	50:sH:656:LEU:HD13	1.44	0.71
3:A2:64:LYS:HE2	9:A8:780:ILE:HG23	1.72	0.71
15:AE:88:VAL:HG12	15:AE:93:MET:HE2	1.72	0.71
8:B7:688:GLY:O	8:B7:692:ARG:NH1	2.23	0.71
50:nP:1026:MET:HE1	50:nP:1032:LEU:HA	1.72	0.71
23:AM:132:LYS:CG	23:AM:172:MET:CE	2.69	0.71
3:A2:64:LYS:N	9:A8:780:ILE:HD11	2.04	0.71
3:B2:507:ARG:NH2	9:sF:393:LYS:CA	2.52	0.71
26:AQ:110:ASP:C	26:AQ:114:MET:HE3	2.15	0.71
28:BS:156:LEU:CD1	28:BS:156:LEU:HD21	2.14	0.71
50:sH:589:HIS:C	50:sH:592:LEU:H	1.97	0.71
12:AB:100:PRO:O	12:AB:101:MET:HE2	1.91	0.71
50:nP:775:LEU:HA	50:nP:778:MET:HE2	1.73	0.71
50:NP:1026:MET:HE1	50:NP:1032:LEU:HA	1.72	0.71
23:BM:132:LYS:CG	23:BM:172:MET:CE	2.69	0.71
50:sH:588:ASN:O	50:sH:591:LEU:CB	2.37	0.71
3:B2:507:ARG:HH21	9:sF:393:LYS:CD	2.04	0.71
3:A2:507:ARG:HH21	9:sF:393:LYS:CD	2.04	0.71
50:NP:775:LEU:HA	50:NP:778:MET:HE2	1.73	0.71
1:B0:546:TYR:CD2	1:B0:546:TYR:CA	2.74	0.71
11:BA:446:ARG:HB2	11:BA:487:MET:HE1	1.70	0.71
3:B2:64:LYS:HE2	9:B8:780:ILE:HG23	1.72	0.71
14:BD:161:GLY:O	14:BD:165:GLN:NE2	2.24	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A0:530:ALA:HA	1:A0:537:MET:HE3	1.73	0.70
26:AQ:110:ASP:O	26:AQ:114:MET:HE3	1.91	0.70
3:A2:59:LEU:CD2	9:A8:778:ASP:HB2	2.21	0.70
3:A2:507:ARG:NH2	9:SF:393:LYS:CA	2.52	0.70
11:AA:1148:ILE:HG23	19:AI:49:ILE:HD13	1.73	0.70
14:AD:161:GLY:O	14:AD:165:GLN:NE2	2.24	0.70
45:t4:981:THR:HG1	45:t4:1004:ALA:N	1.90	0.70
11:BA:1148:ILE:HG23	19:BI:49:ILE:HD13	1.73	0.70
19:AI:5:ARG:NH2	19:AI:36:GLU:OE1	2.24	0.70
1:B0:547:MET:HA	1:B0:551:VAL:HG13	1.71	0.70
26:BQ:110:ASP:C	26:BQ:114:MET:HE3	2.15	0.70
29:AT:-67:DA:H4'	50:NP:1112:MET:HE1	1.74	0.70
66:t3:360:HIS:CD2	66:t3:919:TYR:HE2	2.10	0.70
3:B2:59:LEU:CD2	9:B8:778:ASP:HB2	2.21	0.70
68:t6:846:HIS:NE2	19:BI:74:GLU:CD	2.49	0.70
15:BE:88:VAL:HG12	15:BE:93:MET:HE2	1.72	0.70
19:BI:5:ARG:NH2	19:BI:36:GLU:OE1	2.24	0.70
14:BD:209:ARG:NH1	35:mb:31:GLN:NE2	2.39	0.70
14:AD:209:ARG:NH1	35:Mb:31:GLN:NE2	2.39	0.70
23:AM:157:CYS:SG	23:AM:214:LEU:HB3	2.32	0.70
45:T4:981:THR:HG1	45:T4:1004:ALA:N	1.90	0.70
67:T5:936:ILE:HG23	67:T5:943:LEU:HD11	1.74	0.70
1:A0:547:MET:HA	1:A0:551:VAL:HG13	1.71	0.69
12:BB:100:PRO:O	12:BB:101:MET:HE2	1.91	0.69
26:BQ:110:ASP:O	26:BQ:114:MET:HE3	1.91	0.69
1:A0:546:TYR:CD2	1:A0:546:TYR:CA	2.74	0.69
9:A8:786:LEU:CD1	9:A8:786:LEU:HD21	2.21	0.69
23:AM:303:GLN:CD	27:AR:271:ARG:HA	2.13	0.69
66:T3:360:HIS:CD2	66:T3:919:TYR:HE2	2.10	0.69
29:BT:-67:DA:H4'	50:nP:1112:MET:HE1	1.74	0.69
11:BA:1444:MET:HE2	17:BG:58:ARG:NH1	2.03	0.69
8:A7:349:ASN:ND2	8:A7:481:GLU:OE1	2.26	0.69
11:AA:1444:MET:HE2	17:AG:58:ARG:NH1	2.03	0.69
19:AI:117:LYS:HG2	68:T6:801:LYS:HE2	1.73	0.69
66:T3:360:HIS:HD2	66:T3:919:TYR:HE2	1.41	0.69
68:t6:218:ARG:HH22	68:t6:220:ARG:HB2	1.57	0.69
1:B0:530:ALA:HA	1:B0:537:MET:HE3	1.73	0.69
18:BH:129:TYR:CZ	41:mh:63:PHE:HE1	2.08	0.69
54:nv:40:ILE:O	54:nv:44:LYS:HB2	1.91	0.69
23:AM:150:ALA:HB2	23:AM:176:ILE:HD12	1.75	0.69
61:SJ:6:LEU:HD22	63:SL:91:LEU:HD13	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B0:104:ARG:NH2	1:B0:202:LEU:O	2.23	0.69
8:B7:349:ASN:ND2	8:B7:481:GLU:OE1	2.26	0.69
66:t3:360:HIS:HD2	66:t3:919:TYR:HE2	1.41	0.69
8:B7:676:HIS:O	8:B7:722:ARG:NH2	2.26	0.69
67:t5:913:ILE:HD11	67:t5:943:LEU:HD13	1.74	0.68
9:B8:786:LEU:CD1	9:B8:786:LEU:HD21	2.21	0.68
14:AD:153:ARG:NH2	14:AD:182:SER:O	2.27	0.68
68:T6:218:ARG:HH22	68:T6:220:ARG:HB2	1.57	0.68
1:B0:210:TYR:OH	1:B0:235:ASP:O	2.11	0.68
23:BM:157:CYS:SG	23:BM:214:LEU:HB3	2.32	0.68
52:nt:73:THR:HG21	52:nt:81:VAL:HG12	1.76	0.68
54:Nv:40:ILE:O	54:Nv:44:LYS:HB2	1.91	0.68
65:T2:65:ALA:HA	65:T2:68:MET:HE2	1.75	0.68
23:BM:16:PRO:HG3	32:BW:151:LEU:HD21	1.75	0.68
61:sJ:6:LEU:HD22	63:sL:91:LEU:HD13	1.74	0.68
26:AQ:27:MET:N	26:AQ:27:MET:SD	2.67	0.68
66:T3:837:TYR:HB3	66:T3:837:TYR:HD2	1.50	0.68
11:AA:304:MET:HE1	12:AB:1210:MET:HA	1.76	0.68
67:t5:936:ILE:HG23	67:t5:943:LEU:HD11	1.74	0.68
3:B2:506:LYS:CE	9:sF:396:THR:HG21	2.21	0.68
23:AM:16:PRO:CG	32:AW:151:LEU:HD21	2.24	0.68
14:BD:151:PHE:O	14:BD:153:ARG:NH1	2.27	0.68
14:BD:153:ARG:NH2	14:BD:182:SER:O	2.27	0.68
3:A2:408:MET:SD	3:A2:409:ARG:HD3	2.34	0.68
11:AA:1444:MET:HE1	17:AG:59:GLY:O	1.93	0.68
26:AQ:122:GLN:NE2	26:AQ:395:PHE:O	2.27	0.68
64:t1:46:MET:HE1	64:t1:66:SER:H	1.59	0.68
11:BA:1444:MET:HE1	17:BG:59:GLY:O	1.93	0.68
23:BM:150:ALA:HB2	23:BM:176:ILE:HD12	1.75	0.68
8:A7:676:HIS:O	8:A7:722:ARG:NH2	2.26	0.67
14:AD:151:PHE:O	14:AD:153:ARG:NH1	2.27	0.67
23:BM:16:PRO:CG	32:BW:151:LEU:HD21	2.24	0.67
65:t2:65:ALA:HA	65:t2:68:MET:HE2	1.76	0.67
23:AM:191:GLU:OE2	27:AR:268:MET:CA	2.43	0.67
52:Nt:73:THR:HG21	52:Nt:81:VAL:HG12	1.76	0.67
67:T5:913:ILE:HD11	67:T5:943:LEU:HD13	1.74	0.67
9:nF:677:GLN:OE1	9:sF:623:ASP:CB	2.43	0.67
3:A2:64:LYS:CD	9:A8:780:ILE:HD13	2.17	0.67
28:AS:156:LEU:CD2	28:AS:156:LEU:HB3	2.24	0.67
29:AT:74:DC:H1'	29:AT:75:DA:H5'	1.76	0.67
17:BG:30:LEU:HD11	17:BG:72:VAL:HG21	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BT:74:DC:H1'	29:BT:75:DA:H5'	1.76	0.67
1:A0:210:TYR:OH	1:A0:235:ASP:O	2.11	0.67
7:A6:148:MET:N	7:A6:148:MET:SD	2.68	0.67
12:AB:868:MET:HE1	23:AM:183:ALA:HB2	1.77	0.67
21:AK:12:LEU:HD21	39:Mf:145:SER:HA	1.77	0.67
1:B0:424:GLU:N	1:B0:432:ASN:O	2.27	0.67
14:AD:203:SER:N	14:AD:206:GLU:OE2	2.27	0.67
64:T1:46:MET:HE1	64:T1:66:SER:H	1.60	0.67
12:BB:766:ARG:CZ	12:BB:1020:ARG:HG3	2.25	0.67
12:BB:868:MET:HE1	23:BM:183:ALA:HB2	1.77	0.67
1:A0:424:GLU:N	1:A0:432:ASN:O	2.27	0.67
3:A2:127:GLU:OE2	3:A2:236:ALA:HB3	1.95	0.67
12:AB:766:ARG:CZ	12:AB:1020:ARG:HG3	2.25	0.67
22:AL:51:CYS:O	23:AM:250:MET:SD	2.53	0.67
21:BK:12:LEU:HD21	39:mf:145:SER:HA	1.77	0.67
23:AM:16:PRO:HG3	32:AW:151:LEU:HD21	1.75	0.66
23:BM:191:GLU:OE2	27:BR:268:MET:CA	2.43	0.66
1:B0:136:MET:HE1	1:B0:156:CYS:HB2	1.77	0.66
28:BS:156:LEU:CD2	28:BS:156:LEU:HB3	2.24	0.66
11:AA:678:GLU:CD	68:T6:761:LYS:NZ	2.53	0.66
16:BF:85:MET:HE1	16:BF:90:ARG:HB2	1.77	0.66
26:BQ:122:GLN:NE2	26:BQ:395:PHE:O	2.27	0.66
1:B0:560:LEU:CD2	1:B0:560:LEU:CD1	2.73	0.66
14:BD:203:SER:N	14:BD:206:GLU:OE2	2.27	0.66
13:BC:87:PHE:CE1	39:mf:120:GLN:NE2	2.64	0.66
13:AC:87:PHE:CE1	39:Mf:120:GLN:NE2	2.64	0.66
17:AG:30:LEU:HD11	17:AG:72:VAL:HG21	1.77	0.66
9:Nf:677:GLN:OE1	9:SF:623:ASP:CB	2.43	0.66
12:BB:25:ILE:HD13	12:BB:658:ILE:HD11	1.77	0.66
11:AA:548:ASN:OD1	21:AK:47:ARG:NH1	2.29	0.66
3:B2:408:MET:SD	3:B2:409:ARG:HD3	2.34	0.66
7:B6:148:MET:N	7:B6:148:MET:SD	2.68	0.66
11:BA:304:MET:HE1	12:BB:1210:MET:HA	1.76	0.66
14:BD:213:GLU:HG2	35:mb:38:MET:CE	2.15	0.66
12:AB:25:ILE:HD13	12:AB:658:ILE:HD11	1.77	0.66
11:AA:500:GLU:OE1	12:AB:1143:ALA:HB1	1.96	0.66
19:AI:13:MET:SD	19:AI:15:TYR:OH	2.54	0.66
24:AN:40:DG:OP1	51:Ns:42:ARG:NH2	2.29	0.66
12:BB:362:PRO:O	12:BB:366:GLN:NE2	2.29	0.66
22:BL:51:CYS:O	23:BM:250:MET:SD	2.53	0.66
1:A0:560:LEU:CD2	1:A0:560:LEU:CD1	2.73	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B0:420:ILE:HG23	1:B0:435:MET:HE1	1.78	0.66
11:BA:548:ASN:OD1	21:BK:47:ARG:NH1	2.29	0.66
50:NP:1294:MET:HG3	50:NP:1294:MET:HB2	1.36	0.65
68:T6:651:TYR:HH	68:T6:910:CYS:HG	1.44	0.65
1:B0:76:MET:HE1	1:B0:109:THR:HB	1.78	0.65
1:A0:136:MET:HE1	1:A0:156:CYS:HB2	1.77	0.65
1:A0:420:ILE:HG23	1:A0:435:MET:HE1	1.78	0.65
67:t5:927:ARG:HD3	12:BB:16:TYR:O	1.95	0.65
67:t5:931:GLN:HG2	12:BB:15:PRO:O	1.97	0.65
67:t5:927:ARG:CD	12:BB:16:TYR:O	2.44	0.65
15:BE:97:VAL:HG13	15:BE:127:ILE:HD11	1.78	0.65
57:sC:173:ILE:HG23	56:sD:726:ARG:HH12	1.62	0.65
12:AB:362:PRO:O	12:AB:366:GLN:NE2	2.29	0.65
15:AE:97:VAL:HG13	15:AE:127:ILE:HD11	1.78	0.65
67:t5:874:GLU:OE1	67:t5:874:GLU:N	2.28	0.65
16:AF:85:MET:HE1	16:AF:90:ARG:HB2	1.77	0.65
67:T5:874:GLU:OE1	67:T5:874:GLU:N	2.28	0.65
68:T6:643:GLU:OE1	68:T6:864:ASN:ND2	2.30	0.65
19:BI:13:MET:SD	19:BI:15:TYR:OH	2.54	0.65
11:AA:1143:LEU:HD23	11:AA:1271:ILE:HB	1.79	0.65
66:t3:741:ILE:H	49:mp:157:ASN:ND2	1.94	0.65
11:BA:500:GLU:OE1	12:BB:1143:ALA:HB1	1.96	0.65
51:Ns:57:SER:OG	51:Ns:59:GLU:OE1	2.15	0.65
50:SH:589:HIS:O	50:SH:593:LYS:N	2.28	0.65
23:AM:190:LYS:C	27:AR:270:MET:CE	2.70	0.65
27:AR:288:ASN:O	27:AR:289:ILE:C	2.40	0.65
3:B2:127:GLU:OE2	3:B2:236:ALA:HB3	1.95	0.65
11:BA:1143:LEU:HD23	11:BA:1271:ILE:HB	1.79	0.65
11:AA:903:ASN:O	11:AA:907:THR:OG1	2.15	0.65
14:AD:213:GLU:HG2	35:Mb:38:MET:CE	2.15	0.65
24:BN:40:DG:OP1	51:ns:42:ARG:NH2	2.29	0.65
7:B6:276:LEU:O	7:B6:280:THR:OG1	2.09	0.64
11:BA:903:ASN:O	11:BA:907:THR:OG1	2.15	0.64
1:A0:76:MET:HE1	1:A0:109:THR:HB	1.79	0.64
1:A0:379:GLU:OE1	1:A0:380:ARG:NH1	2.31	0.64
23:AM:26:GLU:O	23:AM:28:LYS:NZ	2.31	0.64
57:SC:173:ILE:HG23	56:SD:726:ARG:HH12	1.62	0.64
1:A0:546:TYR:CE1	1:A0:546:TYR:CD1	2.86	0.64
11:BA:1285:MET:HE1	11:BA:1307:GLU:HG2	1.80	0.64
13:BC:87:PHE:CE1	39:mf:120:GLN:CG	2.80	0.64
18:AH:133:ASN:HD22	41:Mh:63:PHE:HD1	1.43	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B0:492:PHE:HB2	1:B0:679:MET:HE1	1.80	0.64
23:BM:16:PRO:HG3	32:BW:151:LEU:CD2	2.27	0.64
14:AD:154:PHE:C	14:AD:155:ARG:HD2	2.23	0.64
23:AM:132:LYS:HG2	23:AM:172:MET:CE	2.27	0.64
67:t5:927:ARG:NE	12:BB:16:TYR:O	2.30	0.64
1:B0:379:GLU:OE1	1:B0:380:ARG:NH1	2.31	0.64
11:BA:1052:GLN:HG2	11:BA:1055:ARG:HH22	1.63	0.64
13:BC:87:PHE:HE1	39:mf:120:GLN:CG	2.11	0.64
27:BR:288:ASN:O	27:BR:289:ILE:C	2.40	0.64
3:A2:507:ARG:NH2	9:SF:393:LYS:HD2	2.13	0.64
3:A2:507:ARG:HH21	9:SF:393:LYS:HD2	1.62	0.64
9:A8:786:LEU:HB2	9:A8:786:LEU:HD23	1.80	0.64
13:AC:87:PHE:HE1	39:Mf:120:GLN:CG	2.11	0.64
68:t6:643:GLU:OE1	68:t6:864:ASN:ND2	2.30	0.64
14:BD:154:PHE:C	14:BD:155:ARG:HD2	2.23	0.64
51:ns:57:SER:OG	51:ns:59:GLU:OE1	2.15	0.64
23:AM:16:PRO:HG3	32:AW:151:LEU:CD2	2.27	0.64
1:B0:546:TYR:CE1	1:B0:546:TYR:CD1	2.86	0.64
8:B7:436:ALA:HB2	8:B7:446:PHE:HB3	1.80	0.64
23:BM:190:LYS:C	27:BR:270:MET:CE	2.70	0.64
25:BO:217:ALA:HB2	25:BO:223:ILE:HD13	1.79	0.64
13:AC:87:PHE:CE1	39:Mf:120:GLN:CG	2.80	0.63
3:B2:507:ARG:NH2	9:sF:393:LYS:HD2	2.13	0.63
11:BA:187:LYS:CG	32:BW:227:MET:HB2	2.28	0.63
18:BH:129:TYR:N	18:BH:130:ARG:N	2.46	0.63
8:A7:436:ALA:HB2	8:A7:446:PHE:HB3	1.80	0.63
12:AB:1061:GLU:OE2	67:T5:927:ARG:NH1	2.30	0.63
25:AO:217:ALA:HB2	25:AO:223:ILE:HD13	1.79	0.63
23:BM:190:LYS:HD3	27:BR:270:MET:HE2	1.80	0.63
50:nP:688:ALA:HB1	50:sH:656:LEU:HD22	1.79	0.63
1:A0:322:PRO:O	4:A3:107:ASN:ND2	2.32	0.63
3:A2:60:LEU:HD22	9:A8:779:HIS:O	1.99	0.63
3:A2:64:LYS:CE	9:A8:780:ILE:HG23	2.29	0.63
8:B7:122:ARG:NH1	8:B7:123:LEU:O	2.32	0.63
11:BA:809:THR:OG1	11:BA:812:GLU:OE1	2.16	0.63
11:AA:187:LYS:CG	32:AW:227:MET:HB2	2.28	0.63
18:AH:129:TYR:N	18:AH:130:ARG:N	2.46	0.63
50:NP:1095:ILE:HD12	50:NP:1098:LYS:HD2	1.81	0.63
13:BC:33:LEU:C	13:BC:37:MET:HE2	2.24	0.63
11:AA:1285:MET:HE1	11:AA:1307:GLU:HG2	1.80	0.63
18:AH:129:TYR:CZ	41:Mh:63:PHE:HE1	2.08	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BA:119:ASN:HB3	11:BA:122:MET:HE1	1.79	0.63
12:BB:330:ALA:O	12:BB:334:ILE:HD12	1.98	0.63
50:sH:589:HIS:O	50:sH:593:LYS:N	2.28	0.63
12:AB:330:ALA:O	12:AB:334:ILE:HD12	1.98	0.63
13:AC:33:LEU:C	13:AC:37:MET:HE2	2.24	0.63
3:B2:64:LYS:CE	9:B8:780:ILE:HG23	2.29	0.63
23:BM:26:GLU:O	23:BM:28:LYS:NZ	2.31	0.63
50:nP:1095:ILE:HD12	50:nP:1098:LYS:HD2	1.81	0.63
1:A0:492:PHE:HB2	1:A0:679:MET:HE1	1.80	0.63
11:AA:809:THR:OG1	11:AA:812:GLU:OE1	2.16	0.63
64:t1:85:ASP:OD1	65:t2:44:ARG:NH2	2.32	0.63
11:AA:119:ASN:HB3	11:AA:122:MET:HE1	1.80	0.62
11:AA:1052:GLN:HG2	11:AA:1055:ARG:HH22	1.63	0.62
1:B0:322:PRO:O	4:B3:107:ASN:ND2	2.32	0.62
3:B2:64:LYS:CD	9:B8:780:ILE:HD13	2.17	0.62
12:BB:559:SER:HA	12:BB:563:MET:HE3	1.81	0.62
13:BC:145:CYS:SG	13:BC:146:LYS:N	2.72	0.62
4:A3:100:ASN:HB3	34:Ma:139:VAL:HG21	0.69	0.62
14:AD:213:GLU:N	14:AD:213:GLU:OE1	2.32	0.62
23:AM:190:LYS:HD3	27:AR:270:MET:HE2	1.80	0.62
9:B8:786:LEU:HB2	9:B8:786:LEU:HD23	1.80	0.62
23:BM:132:LYS:HG2	23:BM:172:MET:CE	2.27	0.62
26:BQ:27:MET:N	26:BQ:27:MET:SD	2.67	0.62
18:BH:133:ASN:ND2	41:mh:63:PHE:HD1	1.96	0.62
23:BM:303:GLN:CD	27:BR:271:ARG:HA	2.13	0.62
13:AC:145:CYS:SG	13:AC:146:LYS:N	2.72	0.62
53:nu:91:GLU:HB3	53:nu:95:LYS:HZ1	1.63	0.62
3:A2:59:LEU:HD21	9:A8:778:ASP:HB2	1.80	0.62
8:A7:122:ARG:NH1	8:A7:123:LEU:O	2.32	0.62
50:SH:592:LEU:CB	50:SH:592:LEU:HD12	2.25	0.62
9:sF:600:GLN:HA	9:sF:603:MET:HE3	1.82	0.62
10:A9:236:TRP:CE2	10:A9:240:LYS:HE3	2.34	0.62
11:AA:1395:GLY:O	11:AA:1399:ARG:NH2	2.33	0.62
12:AB:766:ARG:NH2	12:AB:1020:ARG:HG3	2.14	0.62
3:A2:64:LYS:HD3	9:A8:780:ILE:CD1	2.19	0.62
9:nF:677:GLN:HG3	9:sF:624:ASP:N	2.15	0.62
3:A2:356:GLN:NE2	3:A2:399:TYR:OH	2.33	0.62
11:AA:420:ARG:HD3	38:Me:60:GLU:HG2	1.82	0.62
38:Me:59:VAL:HG23	38:Me:60:GLU:HG2	1.82	0.62
50:NP:688:ALA:HB1	50:SH:656:LEU:HD22	1.80	0.62
11:AA:186:LYS:NZ	11:AA:187:LYS:O	2.33	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B2:60:LEU:HD22	9:B8:779:HIS:O	1.99	0.62
12:BB:1138:MET:CE	12:BB:1143:ALA:HB3	2.30	0.62
28:BS:283:GLN:HB3	28:BS:293:LEU:HD13	1.82	0.62
28:AS:283:GLN:HB3	28:AS:293:LEU:HD13	1.82	0.62
60:SI:929:SER:HB3	60:SI:938:MET:HE1	1.82	0.62
11:BA:186:LYS:NZ	11:BA:187:LYS:O	2.33	0.62
14:BD:213:GLU:OE1	14:BD:213:GLU:N	2.32	0.62
14:AD:209:ARG:CZ	35:Mb:31:GLN:NE2	2.55	0.61
28:AS:181:GLU:HG3	28:AS:182:MET:HE2	1.82	0.61
3:B2:123:VAL:HG13	3:B2:238:LYS:HB3	1.82	0.61
10:B9:236:TRP:CE2	10:B9:240:LYS:HE3	2.34	0.61
12:BB:766:ARG:NH2	12:BB:1020:ARG:HG3	2.14	0.61
18:BH:109:LYS:O	43:mj:83:LEU:HD12	1.96	0.61
3:A2:506:LYS:CE	9:SF:396:THR:HG21	2.21	0.61
68:t6:963:CYS:SG	68:t6:964:ILE:N	2.72	0.61
28:BS:160:LEU:CB	28:BS:160:LEU:HD22	2.25	0.61
1:A0:546:TYR:CD1	1:A0:547:MET:N	2.69	0.61
68:T6:963:CYS:SG	68:T6:964:ILE:N	2.72	0.61
9:Nf:677:GLN:HG3	9:SF:624:ASP:N	2.15	0.61
3:B2:132:LEU:HG	3:B2:133:ASP:H	1.64	0.61
38:me:59:VAL:HG23	38:me:60:GLU:HG2	1.82	0.61
9:nF:670:ASP:OD1	9:sF:722:ASP:OD2	2.19	0.61
12:AB:1138:MET:CE	12:AB:1143:ALA:HB3	2.30	0.61
9:Nf:670:ASP:OD1	9:SF:722:ASP:OD2	2.19	0.61
3:B2:150:MET:O	3:B2:150:MET:HE3	2.00	0.61
3:B2:224:PHE:HA	3:B2:227:MET:HE2	1.82	0.61
25:BO:239:LYS:HG2	25:BO:240:MET:HG3	1.82	0.61
3:A2:132:LEU:HG	3:A2:133:ASP:H	1.64	0.61
64:T1:85:ASP:OD1	65:T2:44:ARG:NH2	2.32	0.61
3:B2:59:LEU:HD21	9:B8:778:ASP:HB2	1.80	0.61
1:A0:546:TYR:CE1	1:A0:547:MET:HE3	2.36	0.61
3:A2:123:VAL:HG13	3:A2:238:LYS:HB3	1.83	0.61
12:AB:559:SER:HA	12:AB:563:MET:HE3	1.81	0.61
50:NP:858:GLN:HG3	50:NP:882:LEU:HD22	1.83	0.61
1:B0:546:TYR:CD1	1:B0:547:MET:N	2.69	0.61
3:B2:507:ARG:HH21	9:sF:393:LYS:HD2	1.62	0.61
28:BS:181:GLU:HG3	28:BS:182:MET:HE2	1.83	0.61
3:A2:224:PHE:HA	3:A2:227:MET:HE2	1.81	0.61
18:AH:133:ASN:ND2	41:Mh:63:PHE:HD1	1.96	0.61
3:B2:356:GLN:NE2	3:B2:399:TYR:OH	2.33	0.61
11:BA:167:CYS:O	11:BA:169:ASN:ND2	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BR:233:TYR:O	27:BR:234:HIS:ND1	2.34	0.61
32:BW:101:LYS:HG3	33:BX:266:VAL:HG11	1.83	0.61
1:B0:541:PHE:HB2	1:B0:547:MET:SD	2.41	0.61
1:B0:546:TYR:CE1	1:B0:547:MET:HE3	2.36	0.61
11:BA:1395:GLY:O	11:BA:1399:ARG:NH2	2.33	0.61
20:BJ:48:ARG:NH1	20:BJ:49:MET:SD	2.74	0.61
18:AH:109:LYS:H	18:AH:109:LYS:HE3	1.66	0.61
9:Nf:670:ASP:OD1	9:Sf:722:ASP:CG	2.44	0.61
18:BH:109:LYS:HE3	18:BH:109:LYS:H	1.66	0.61
39:mf:45:SER:HB2	39:mf:117:MET:HE1	1.83	0.61
1:A0:424:GLU:OE1	1:A0:432:ASN:ND2	2.33	0.60
3:A2:274:LEU:HA	3:A2:277:MET:HE2	1.83	0.60
25:AO:239:LYS:HG2	25:AO:240:MET:HG3	1.82	0.60
39:Mf:45:SER:HB2	39:Mf:117:MET:HE1	1.83	0.60
3:B2:63:ASP:OD2	9:B8:780:ILE:HB	2.00	0.60
11:BA:420:ARG:HD3	38:me:60:GLU:HG2	1.82	0.60
9:nF:670:ASP:OD1	9:sF:722:ASP:CG	2.44	0.60
3:A2:63:ASP:OD2	9:A8:780:ILE:HB	2.00	0.60
11:AA:167:CYS:O	11:AA:169:ASN:ND2	2.34	0.60
9:Sf:600:GLN:HA	9:Sf:603:MET:HE3	1.82	0.60
1:B0:424:GLU:OE1	1:B0:432:ASN:ND2	2.33	0.60
1:A0:541:PHE:HB2	1:A0:547:MET:SD	2.41	0.60
1:A0:560:LEU:HG	1:A0:560:LEU:CA	2.31	0.60
17:BG:160:ILE:HD13	32:BW:137:VAL:HG21	1.84	0.60
3:B2:274:LEU:HA	3:B2:277:MET:HE2	1.83	0.60
11:AA:1444:MET:CE	17:AG:58:ARG:HD2	2.32	0.60
14:AD:205:ASP:OD1	14:AD:206:GLU:N	2.33	0.60
18:AH:15:VAL:HG22	18:AH:17:PRO:HD3	1.84	0.60
18:BH:15:VAL:HG22	18:BH:17:PRO:HD3	1.84	0.60
63:sL:129:GLN:O	63:sL:133:GLU:HB3	2.02	0.60
3:A2:150:MET:O	3:A2:150:MET:HE3	2.00	0.60
18:AH:129:TYR:CE2	41:Mh:63:PHE:CZ	2.84	0.60
27:AR:233:TYR:O	27:AR:234:HIS:ND1	2.34	0.60
68:t6:790:LYS:HE3	19:BI:81:ARG:NH2	2.12	0.60
29:BT:75:DA:H2"	29:BT:76:DT:OP2	2.01	0.60
60:sI:929:SER:HB3	60:sI:938:MET:HE1	1.82	0.60
20:AJ:48:ARG:NH1	20:AJ:49:MET:SD	2.74	0.60
52:Nt:72:TYR:HE1	54:Nv:101:LEU:HD21	1.66	0.60
67:t5:909:VAL:HA	67:t5:912:HIS:HB2	1.84	0.60
2:B1:365:ASN:HD21	32:BW:192:SER:CA	2.10	0.60
4:B3:49:LEU:CD2	17:BG:165:GLU:N	2.62	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:SL:162:ILE:HD11	63:SL:335:ILE:HG23	1.84	0.60
14:BD:198:LEU:HD21	14:BD:207:LEU:HG	1.83	0.60
1:A0:507:SER:OG	1:A0:685:ARG:NH2	2.35	0.60
7:A6:363:CYS:SG	7:A6:366:CYS:N	2.70	0.60
67:T5:909:VAL:HA	67:T5:912:HIS:HB2	1.84	0.60
68:T6:145:TYR:HB2	68:T6:968:MET:HE3	1.83	0.60
68:t6:503:LEU:HD12	68:t6:504:PRO:HD2	1.84	0.60
1:B0:507:SER:OG	1:B0:685:ARG:NH2	2.35	0.60
1:B0:560:LEU:HG	1:B0:560:LEU:CA	2.31	0.60
26:AQ:134:HIS:ND1	26:AQ:356:ASP:OD2	2.36	0.59
24:BN:-106:DA:N3	25:BO:159:ASN:ND2	2.50	0.59
49:mp:167:TYR:O	49:mp:171:LEU:HB2	2.02	0.59
1:A0:546:TYR:CE1	1:A0:547:MET:N	2.68	0.59
14:AD:198:LEU:HD21	14:AD:207:LEU:HG	1.83	0.59
19:AI:105:SER:HB2	45:T4:1011:THR:CG2	2.31	0.59
68:t6:145:TYR:HB2	68:t6:968:MET:HE3	1.83	0.59
5:B4:114:MET:O	5:B4:119:ARG:NH2	2.35	0.59
52:nt:72:TYR:HE1	54:nv:101:LEU:HD21	1.67	0.59
5:A4:114:MET:O	5:A4:119:ARG:NH2	2.35	0.59
29:AT:51:DA:H2"	29:AT:52:DA:N7	2.16	0.59
62:SK:82:ALA:HA	62:SK:85:MET:HE2	1.84	0.59
66:t3:289:LYS:CB	66:t3:289:LYS:CD	2.67	0.59
67:t5:923:LYS:O	67:t5:926:GLN:N	2.34	0.59
8:B7:534:LYS:NZ	8:B7:536:TYR:O	2.35	0.59
29:BT:51:DA:H2"	29:BT:52:DA:N7	2.16	0.59
2:A1:365:ASN:HD21	32:AW:192:SER:CA	2.10	0.59
24:AN:-106:DA:N3	25:AO:159:ASN:ND2	2.50	0.59
32:AW:101:LYS:HG3	33:AX:266:VAL:HG11	1.83	0.59
63:SL:129:GLN:O	63:SL:133:GLU:HB3	2.02	0.59
1:B0:495:MET:HE1	1:B0:708:LEU:HB2	1.84	0.59
8:B7:754:ARG:NH2	8:B7:761:GLN:OE1	2.35	0.59
11:BA:1444:MET:CE	17:BG:58:ARG:HD2	2.32	0.59
11:AA:925:LEU:HD13	11:AA:983:ILE:HB	1.84	0.59
17:AG:160:ILE:HD13	32:AW:137:VAL:HG21	1.84	0.59
19:AI:117:LYS:HG3	68:T6:834:PHE:CE1	2.36	0.59
21:AK:12:LEU:CD2	39:Mf:145:SER:HA	2.33	0.59
28:AS:235:ASP:O	28:AS:237:ALA:N	2.36	0.59
56:SD:676:GLU:HA	56:SD:679:MET:HE2	1.85	0.59
12:BB:747:MET:HE3	12:BB:747:MET:HA	1.85	0.59
26:BQ:134:HIS:ND1	26:BQ:356:ASP:OD2	2.36	0.59
3:A2:233:VAL:HB	3:A2:276:LEU:HD11	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:BD:209:ARG:CZ	35:mb:31:GLN:NE2	2.55	0.59
50:nP:1042:MET:HE3	50:nP:1347:ASN:HD21	1.67	0.59
61:sJ:75:ARG:NH2	63:sL:48:ASP:OD2	2.36	0.59
1:A0:307:VAL:HG22	1:A0:400:LYS:HG3	1.85	0.59
4:A3:100:ASN:HD22	34:Ma:139:VAL:HG23	0.62	0.59
11:AA:881:GLN:NE2	11:AA:957:PRO:O	2.35	0.59
35:Mb:115:ARG:HE	35:Mb:117:LYS:HB3	1.68	0.59
3:B2:143:TRP:CZ2	3:B2:196:ILE:HG13	2.38	0.59
3:B2:507:ARG:NH2	9:sF:393:LYS:CD	2.66	0.59
7:B6:140:ASP:OD2	7:B6:145:ARG:NH2	2.36	0.59
23:BM:14:ARG:NH2	32:BW:126:ILE:HA	2.17	0.59
8:A7:534:LYS:NZ	8:A7:536:TYR:O	2.35	0.59
12:AB:230:ALA:O	12:AB:261:ARG:NH1	2.36	0.59
49:Mp:167:TYR:O	49:Mp:171:LEU:HB2	2.02	0.59
63:SL:340:THR:O	63:SL:346:LYS:NZ	2.36	0.59
68:T6:503:LEU:HD12	68:T6:504:PRO:HD2	1.84	0.59
11:BA:881:GLN:NE2	11:BA:957:PRO:O	2.35	0.59
11:BA:914:GLU:N	11:BA:979:SER:O	2.36	0.59
50:sH:592:LEU:CB	50:sH:592:LEU:HD12	2.25	0.59
14:BD:119:ARG:HH22	14:BD:155:ARG:NH2	2.01	0.59
23:BM:191:GLU:OE2	27:BR:269:SER:N	2.36	0.59
50:nP:858:GLN:HG3	50:nP:882:LEU:HD22	1.83	0.59
56:sD:676:GLU:HA	56:sD:679:MET:HE2	1.85	0.59
62:sK:283:PRO:HB2	62:sK:303:LEU:HD23	1.85	0.59
8:B7:180:LEU:HD23	8:B7:216:ALA:HB3	1.85	0.59
17:BG:1:MET:N	17:BG:80:LYS:O	2.36	0.59
12:AB:747:MET:HA	12:AB:747:MET:HE3	1.85	0.58
19:AI:13:MET:HG3	19:AI:15:TYR:CE2	2.38	0.58
23:AM:14:ARG:HH21	32:AW:126:ILE:HA	1.67	0.58
68:T6:127:LEU:HD21	68:T6:182:THR:HG21	1.85	0.58
1:B0:307:VAL:HG22	1:B0:400:LYS:HG3	1.85	0.58
3:B2:233:VAL:HB	3:B2:276:LEU:HD11	1.84	0.58
7:A6:276:LEU:O	7:A6:280:THR:OG1	2.09	0.58
8:A7:754:ARG:NH2	8:A7:761:GLN:OE1	2.35	0.58
23:AM:14:ARG:NH2	32:AW:126:ILE:HA	2.17	0.58
23:AM:191:GLU:OE2	27:AR:269:SER:N	2.36	0.58
29:AT:75:DA:H2"	29:AT:76:DT:OP2	2.01	0.58
1:B0:341:TYR:CD1	1:B0:363:LEU:HD13	2.38	0.58
11:BA:1167:GLU:OE1	11:BA:1167:GLU:N	2.37	0.58
15:BE:31:THR:HG23	15:BE:34:GLU:H	1.69	0.58
63:sL:162:ILE:HD11	63:sL:335:ILE:HG23	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A2:143:TRP:CZ2	3:A2:196:ILE:HG13	2.38	0.58
3:A2:506:LYS:NZ	9:SF:396:THR:HB	2.18	0.58
17:AG:1:MET:N	17:AG:80:LYS:O	2.36	0.58
12:BB:230:ALA:O	12:BB:261:ARG:NH1	2.36	0.58
27:BR:133:TYR:CD2	27:BR:214:ILE:HD11	2.39	0.58
28:BS:235:ASP:O	28:BS:237:ALA:N	2.36	0.58
58:sE:327:ASN:HB3	58:sE:330:GLN:HE21	1.68	0.58
1:A0:495:MET:HE1	1:A0:708:LEU:HB2	1.84	0.58
2:A1:510:ASN:ND2	5:A4:264:LYS:O	2.35	0.58
3:A2:507:ARG:NH2	9:SF:393:LYS:CD	2.66	0.58
5:A4:85:TYR:OH	7:A6:405:SER:O	2.20	0.58
7:A6:140:ASP:OD2	7:A6:145:ARG:NH2	2.36	0.58
7:A6:174:MET:HE1	7:A6:212:ASN:HB2	1.85	0.58
18:AH:109:LYS:O	43:Mj:83:LEU:HD12	1.96	0.58
55:SA:181:PHE:HB3	55:SA:444:VAL:HG21	1.86	0.58
61:SJ:75:ARG:NH2	63:SL:48:ASP:OD2	2.36	0.58
66:t3:406:LYS:O	66:t3:409:LYS:N	2.29	0.58
18:BH:133:ASN:HD22	41:mh:63:PHE:HD1	1.43	0.58
6:A5:23:ILE:HG23	6:A5:26:LYS:HE3	1.86	0.58
8:A7:180:LEU:HD23	8:A7:216:ALA:HB3	1.85	0.58
10:A9:243:THR:O	58:SE:219:ASN:HB2	2.04	0.58
14:AD:119:ARG:HH22	14:AD:155:ARG:NH2	2.00	0.58
28:AS:160:LEU:CB	28:AS:160:LEU:HD22	2.25	0.58
55:SA:127:ILE:HD12	55:SA:442:ILE:HD12	1.86	0.58
56:SB:453:LEU:HD13	56:SD:437:MET:HE1	1.85	0.58
10:B9:243:THR:O	58:sE:219:ASN:HB2	2.04	0.58
19:BI:13:MET:HG3	19:BI:15:TYR:CE2	2.38	0.58
28:BS:170:SER:HA	28:BS:173:HIS:ND1	2.19	0.58
55:sA:181:PHE:HB3	55:sA:444:VAL:HG21	1.86	0.58
1:A0:341:TYR:CD1	1:A0:363:LEU:HD13	2.38	0.58
11:AA:914:GLU:N	11:AA:979:SER:O	2.36	0.58
67:t5:927:ARG:NH2	12:BB:14:ASP:CB	2.66	0.58
3:B2:63:ASP:C	9:B8:780:ILE:HD11	2.29	0.58
4:B3:49:LEU:HD22	17:BG:164:LYS:HG2	0.63	0.58
7:B6:174:MET:HE1	7:B6:212:ASN:HB2	1.85	0.58
21:BK:12:LEU:CD2	39:mf:145:SER:HA	2.33	0.58
9:sF:392:MET:HA	9:sF:395:ILE:HG22	1.84	0.58
17:AG:93:SER:OG	17:AG:100:GLU:OE2	2.22	0.58
2:B1:510:ASN:ND2	5:B4:264:LYS:O	2.35	0.58
51:no:59:GLU:N	51:no:59:GLU:OE2	2.37	0.58
3:A2:63:ASP:OD2	9:A8:780:ILE:HD12	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:Mc:2:GLN:HB2	36:Mc:7:GLN:HE21	1.68	0.58
9:SF:392:MET:HA	9:SF:395:ILE:HG22	1.83	0.58
68:t6:801:LYS:NZ	19:BI:117:LYS:HE3	2.19	0.58
11:BA:885:THR:HG23	11:BA:893:PHE:HE1	1.68	0.58
11:AA:678:GLU:CD	68:T6:761:LYS:HZ2	2.10	0.58
27:AR:133:TYR:CD2	27:AR:214:ILE:HD11	2.39	0.58
1:B0:363:LEU:O	1:B0:367:THR:N	2.37	0.58
4:B3:100:ASN:HD22	34:ma:139:VAL:CB	2.14	0.58
21:BK:5:ASP:OD1	21:BK:8:GLU:HG3	2.03	0.58
3:A2:506:LYS:HZ3	9:SF:396:THR:HG22	1.65	0.58
11:BA:122:MET:HE3	11:BA:141:LEU:HD11	1.86	0.58
35:mb:115:ARG:HE	35:mb:117:LYS:HB3	1.68	0.58
11:AA:5:GLN:O	12:AB:1159:ARG:NH1	2.37	0.57
66:T3:406:LYS:O	66:T3:409:LYS:N	2.29	0.57
37:md:634:MET:HB3	37:md:646:HIS:HB3	1.86	0.57
3:A2:63:ASP:C	9:A8:780:ILE:HD11	2.29	0.57
21:AK:5:ASP:OD1	21:AK:8:GLU:HG3	2.03	0.57
23:AM:191:GLU:OE2	27:AR:268:MET:CG	2.52	0.57
68:t6:127:LEU:HD21	68:t6:182:THR:HG21	1.85	0.57
4:B3:71:GLN:NE2	4:B3:73:PHE:O	2.38	0.57
7:B6:237:GLY:HA3	7:B6:266:LEU:HD12	1.86	0.57
63:sL:340:THR:O	63:sL:346:LYS:NZ	2.36	0.57
7:A6:400:SER:OG	7:A6:435:GLU:OE2	2.22	0.57
44:Mk:87:ILE:HG23	44:Mk:93:PRO:HD3	1.86	0.57
50:NP:1042:MET:HE3	50:NP:1347:ASN:HD21	1.67	0.57
64:T1:67:GLN:HA	64:T1:70:GLN:OE1	2.04	0.57
3:B2:506:LYS:NZ	9:sF:396:THR:HB	2.18	0.57
4:B3:100:ASN:HB3	34:ma:139:VAL:HG21	0.69	0.57
6:B5:23:ILE:HG23	6:B5:26:LYS:HE3	1.86	0.57
11:BA:5:GLN:O	12:BB:1159:ARG:NH1	2.37	0.57
11:BA:925:LEU:HD13	11:BA:983:ILE:HB	1.84	0.57
17:BG:93:SER:OG	17:BG:100:GLU:OE2	2.22	0.57
11:AA:885:THR:HG23	11:AA:893:PHE:HE1	1.68	0.57
15:AE:90:VAL:HA	15:AE:93:MET:HE3	1.87	0.57
63:SL:153:MET:HE1	63:SL:412:TYR:HA	1.86	0.57
12:BB:868:MET:CE	23:BM:183:ALA:HB2	2.34	0.57
13:BC:33:LEU:HG	13:BC:37:MET:CE	2.35	0.57
36:mc:2:GLN:HB2	36:mc:7:GLN:HE21	1.69	0.57
56:sB:453:LEU:HD13	56:sD:437:MET:HE1	1.85	0.57
62:sK:82:ALA:HA	62:sK:85:MET:HE2	1.84	0.57
3:A2:129:VAL:HG22	3:A2:270:TYR:CE2	2.33	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:Np:92:ARG:NH2	54:Nr:101:LEU:O	2.37	0.57
21:BK:12:LEU:CD2	39:mf:145:SER:C	2.77	0.57
50:nP:1003:LEU:HD11	50:nP:1198:HIS:HB2	1.86	0.57
52:np:92:ARG:NH2	54:nr:101:LEU:O	2.37	0.57
13:AC:33:LEU:HG	13:AC:37:MET:CE	2.35	0.57
58:SE:327:ASN:HB3	58:SE:330:GLN:HE21	1.68	0.57
23:BM:14:ARG:HH21	32:BW:126:ILE:HA	1.67	0.57
23:BM:191:GLU:OE2	27:BR:268:MET:CG	2.52	0.57
12:AB:21:GLU:OE1	12:AB:22:SER:N	2.37	0.57
28:AS:170:SER:HA	28:AS:173:HIS:ND1	2.19	0.57
51:No:59:GLU:N	51:No:59:GLU:OE2	2.37	0.57
67:T5:923:LYS:O	67:T5:926:GLN:N	2.34	0.57
11:BA:982:THR:HG22	11:BA:985:ASP:OD2	2.04	0.57
15:BE:90:VAL:HA	15:BE:93:MET:HE3	1.87	0.57
3:A2:129:VAL:HG21	3:A2:235:LYS:H	1.69	0.57
12:AB:868:MET:CE	23:AM:183:ALA:HB2	2.34	0.57
7:B6:400:SER:OG	7:B6:435:GLU:OE2	2.22	0.57
12:BB:21:GLU:OE1	12:BB:22:SER:N	2.37	0.57
12:BB:593:PRO:HA	12:BB:596:LEU:CD2	2.35	0.57
35:mb:56:LYS:HD3	35:mb:58:GLU:H	1.70	0.57
11:AA:1167:GLU:OE1	11:AA:1167:GLU:N	2.36	0.57
15:AE:31:THR:HG23	15:AE:34:GLU:H	1.69	0.57
21:AK:12:LEU:CD2	39:Mf:145:SER:C	2.77	0.57
50:NP:1003:LEU:HD11	50:NP:1198:HIS:HB2	1.86	0.57
62:SK:93:THR:HG23	62:SK:94:GLN:HG2	1.87	0.57
3:B2:507:ARG:NH2	9:sF:393:LYS:CB	2.68	0.57
4:B3:49:LEU:HD22	17:BG:164:LYS:CB	2.33	0.57
6:B5:12:CYS:HB3	6:B5:16:ILE:HG21	1.87	0.57
55:sA:127:ILE:HD12	55:sA:442:ILE:HD12	1.86	0.57
56:sB:307:ILE:HG23	56:sB:390:LEU:HD21	1.87	0.57
7:A6:237:GLY:HA3	7:A6:266:LEU:HD12	1.87	0.57
1:B0:67:ARG:NE	1:B0:229:ASP:O	2.34	0.57
62:sK:93:THR:HG23	62:sK:94:GLN:HG2	1.87	0.57
14:AD:119:ARG:NH2	14:AD:149:THR:OG1	2.38	0.56
35:Mb:56:LYS:HD3	35:Mb:58:GLU:H	1.70	0.56
4:B3:100:ASN:HD22	34:ma:139:VAL:HG23	0.62	0.56
14:BD:119:ARG:NH2	14:BD:149:THR:OG1	2.38	0.56
21:AK:12:LEU:HD23	39:Mf:145:SER:C	2.30	0.56
44:Mk:130:VAL:HG11	44:Mk:140:VAL:HG21	1.87	0.56
62:SK:283:PRO:HB2	62:SK:303:LEU:HD23	1.85	0.56
1:B0:547:MET:HE3	1:B0:547:MET:CA	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:B5:17:LYS:HA	6:B5:40:LEU:HD11	1.87	0.56
53:nq:84:GLN:HA	53:nq:87:VAL:HG12	1.86	0.56
1:A0:363:LEU:O	1:A0:367:THR:N	2.37	0.56
3:A2:63:ASP:HB2	9:A8:778:ASP:OD2	2.05	0.56
3:A2:507:ARG:NH2	9:SF:393:LYS:CB	2.68	0.56
4:A3:71:GLN:NE2	4:A3:73:PHE:O	2.38	0.56
5:A4:228:THR:HG21	5:A4:235:TYR:HB2	1.88	0.56
37:Md:634:MET:HB3	37:Md:646:HIS:HB3	1.86	0.56
53:Nu:91:GLU:HB3	53:Nu:95:LYS:HZ1	1.69	0.56
64:t1:67:GLN:HA	64:t1:70:GLN:OE1	2.04	0.56
65:t2:36:ALA:O	65:t2:40:ILE:HG12	2.05	0.56
3:B2:63:ASP:OD2	9:B8:780:ILE:HD12	2.04	0.56
3:B2:63:ASP:HB2	9:B8:778:ASP:OD2	2.05	0.56
3:B2:129:VAL:HG21	3:B2:235:LYS:H	1.69	0.56
61:sJ:89:ARG:NH1	63:sL:33:PRO:O	2.38	0.56
12:AB:13:GLU:CB	67:T5:919:ARG:NH2	2.68	0.56
63:sL:153:MET:HE1	63:sL:412:TYR:HA	1.86	0.56
12:AB:182:SER:OG	12:AB:183:GLU:OE1	2.23	0.56
63:SL:218:ILE:HD11	63:SL:284:PHE:HB3	1.88	0.56
63:SL:306:ILE:HD11	63:SL:349:LEU:HA	1.88	0.56
3:B2:186:ASN:ND2	3:B2:390:GLY:O	2.39	0.56
11:BA:187:LYS:HG3	32:BW:227:MET:CB	2.31	0.56
18:BH:129:TYR:CE2	41:mh:63:PHE:CZ	2.84	0.56
11:AA:122:MET:HE3	11:AA:141:LEU:HD11	1.86	0.56
23:AM:39:SER:OG	23:AM:40:GLU:OE1	2.24	0.56
50:NP:849:GLY:O	50:NP:854:ARG:NH2	2.39	0.56
53:Nq:84:GLN:HA	53:Nq:87:VAL:HG12	1.86	0.56
45:T4:879:ASP:O	45:T4:902:ASN:ND2	2.39	0.56
67:T5:934:ILE:HG23	67:T5:945:MET:HE1	1.86	0.56
66:t3:541:VAL:HG11	66:t3:581:PHE:HB2	1.87	0.56
67:t5:934:ILE:HG23	67:t5:945:MET:HE1	1.86	0.56
19:BI:15:TYR:CZ	26:BQ:422:ARG:NH1	2.74	0.56
44:mk:87:ILE:HG23	44:mk:93:PRO:HD3	1.86	0.56
1:A0:541:PHE:HB2	1:A0:547:MET:HG3	1.87	0.56
6:A5:7:GLY:HA2	6:A5:44:PRO:HD3	1.87	0.56
7:A6:135:ALA:HB3	7:A6:136:MET:SD	2.45	0.56
13:AC:87:PHE:HD1	39:Mf:120:GLN:NE2	1.81	0.56
61:SJ:89:ARG:NH1	63:SL:33:PRO:O	2.38	0.56
45:T4:903:PRO:HG3	45:T4:936:LYS:HB2	1.87	0.56
1:B0:177:SER:O	1:B0:181:LEU:N	2.36	0.56
7:B6:234:ILE:HG23	7:B6:263:VAL:HG23	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BM:190:LYS:HE2	27:BR:270:MET:O	2.06	0.56
28:BS:285:GLN:HB3	28:BS:293:LEU:HD23	1.87	0.56
63:sL:306:ILE:HD11	63:sL:349:LEU:HA	1.88	0.56
1:A0:270:ARG:HG3	1:A0:388:LEU:HD22	1.88	0.56
11:AA:325:ILE:HB	12:AB:1210:MET:HE1	1.87	0.56
11:AA:506:ALA:O	11:AA:510:GLN:NE2	2.39	0.56
65:T2:36:ALA:O	65:T2:40:ILE:HG12	2.05	0.56
3:B2:63:ASP:CG	9:B8:780:ILE:HD12	2.31	0.56
7:B6:135:ALA:HB3	7:B6:136:MET:SD	2.45	0.56
1:A0:255:ASP:OD1	1:A0:256:ALA:N	2.39	0.56
6:A5:12:CYS:HB3	6:A5:16:ILE:HG21	1.87	0.56
11:AA:849:MET:HE3	11:AA:1061:GLY:HA2	1.88	0.56
12:AB:1111:MET:HE2	12:AB:1116:ARG:HA	1.88	0.56
56:SB:307:ILE:HG23	56:SB:390:LEU:HD21	1.87	0.56
66:t3:888:LEU:HD21	68:t6:274:ARG:HD3	1.88	0.56
1:B0:541:PHE:HB2	1:B0:547:MET:HG3	1.87	0.56
12:BB:323:VAL:HG11	26:BQ:412:ARG:HB2	1.87	0.56
14:BD:136:GLY:O	14:BD:139:LYS:NZ	2.28	0.56
60:sI:749:LEU:HD21	60:sI:938:MET:HG2	1.88	0.56
3:A2:63:ASP:CG	9:A8:780:ILE:HD12	2.31	0.56
12:AB:593:PRO:HA	12:AB:596:LEU:CD2	2.35	0.56
55:SA:308:MET:HG2	55:SA:415:LEU:HB3	1.88	0.56
56:SB:557:SER:OG	56:SB:559:GLU:OE1	2.24	0.56
50:SH:616:TYR:O	50:SH:620:GLN:NE2	2.38	0.56
3:B2:507:ARG:HH21	9:sF:393:LYS:HD3	1.71	0.56
11:BA:325:ILE:HB	12:BB:1210:MET:HE1	1.87	0.56
11:BA:1256:GLU:HA	11:BA:1259:MET:HE2	1.88	0.56
23:BM:39:SER:OG	23:BM:40:GLU:OE1	2.24	0.56
9:nF:677:GLN:HG2	9:sF:624:ASP:CA	2.30	0.56
50:nP:849:GLY:O	50:nP:854:ARG:NH2	2.39	0.56
3:A2:186:ASN:ND2	3:A2:390:GLY:O	2.39	0.55
28:AS:285:GLN:HB3	28:AS:293:LEU:HD23	1.87	0.55
66:T3:769:GLN:NE2	68:T6:338:SER:O	2.39	0.55
12:BB:650:GLU:OE2	12:BB:654:ARG:NH2	2.39	0.55
12:BB:1111:MET:HE2	12:BB:1116:ARG:HA	1.88	0.55
35:mb:103:THR:O	35:mb:107:GLU:HB3	2.05	0.55
50:sH:616:TYR:O	50:sH:620:GLN:NE2	2.38	0.55
4:A3:100:ASN:ND2	34:Ma:139:VAL:O	2.38	0.55
11:AA:982:THR:HG22	11:AA:985:ASP:OD2	2.04	0.55
11:BA:1063:MET:HA	11:BA:1063:MET:HE3	1.88	0.55
14:BD:205:ASP:OD1	14:BD:206:GLU:N	2.33	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:456:MET:HE1	11:AA:510:GLN:CB	2.35	0.55
14:AD:155:ARG:HD2	14:AD:155:ARG:N	2.22	0.55
56:SD:589:LEU:HD12	56:SD:592:LEU:HB3	1.88	0.55
66:T3:301:ASN:ND2	66:T3:974:LEU:O	2.38	0.55
6:B5:7:GLY:HA2	6:B5:44:PRO:HD3	1.87	0.55
12:BB:182:SER:OG	12:BB:183:GLU:OE1	2.23	0.55
44:mk:130:VAL:HG11	44:mk:140:VAL:HG21	1.87	0.55
6:A5:17:LYS:HA	6:A5:40:LEU:HD11	1.87	0.55
65:t2:71:TYR:HA	65:t2:74:ILE:HG12	1.88	0.55
3:B2:39:LEU:HD12	3:B2:40:PRO:HD2	1.89	0.55
23:BM:216:GLY:O	23:BM:220:ASP:HB2	2.06	0.55
1:A0:67:ARG:NE	1:A0:229:ASP:O	2.34	0.55
11:AA:1256:GLU:HA	11:AA:1259:MET:HE2	1.88	0.55
38:Me:177:ASN:OD1	38:Me:178:ARG:NH1	2.40	0.55
60:SI:749:LEU:HD21	60:SI:938:MET:HG2	1.88	0.55
45:t4:903:PRO:HG3	45:t4:936:LYS:HB2	1.87	0.55
68:t6:846:HIS:CD2	19:BI:74:GLU:CG	2.85	0.55
1:B0:255:ASP:OD1	1:B0:256:ALA:N	2.39	0.55
4:B3:100:ASN:ND2	34:ma:139:VAL:O	2.39	0.55
11:BA:506:ALA:O	11:BA:510:GLN:NE2	2.39	0.55
11:BA:849:MET:HE3	11:BA:1061:GLY:HA2	1.88	0.55
12:BB:451:LYS:NZ	23:BM:138:ASP:O	2.31	0.55
56:sD:589:LEU:HD12	56:sD:592:LEU:HB3	1.88	0.55
3:A2:507:ARG:HH21	9:SF:393:LYS:HD3	1.71	0.55
55:SA:115:PRO:HG3	56:SD:721:ASN:HB2	1.89	0.55
66:T3:416:THR:O	66:T3:420:ASP:HB2	2.06	0.55
66:T3:888:LEU:HD21	68:T6:274:ARG:HD3	1.88	0.55
68:T6:618:ILE:O	68:T6:653:LYS:NZ	2.39	0.55
5:B4:162:ARG:NH1	7:B6:406:CYS:O	2.40	0.55
8:B7:464:ARG:HD3	24:BN:-63:DT:OP1	2.07	0.55
50:nP:799:THR:HA	50:nP:802:THR:HG22	1.88	0.55
1:A0:177:SER:O	1:A0:181:LEU:N	2.36	0.55
4:A3:49:LEU:HD22	17:AG:164:LYS:CB	2.33	0.55
12:AB:323:VAL:HG11	26:AQ:412:ARG:HB2	1.87	0.55
20:AJ:65:PRO:HD2	20:AJ:68:LYS:HE2	1.89	0.55
54:Nr:106:GLU:HA	54:Nr:109:LYS:HE2	1.89	0.55
66:T3:541:VAL:HG11	66:T3:581:PHE:HB2	1.87	0.55
44:mk:92:ASN:ND2	46:mm:62:LYS:O	2.40	0.55
56:sD:728:ASN:O	56:sD:732:ASN:ND2	2.39	0.55
12:AB:777:ALA:O	12:AB:1096:ARG:NH2	2.39	0.55
14:AD:213:GLU:CG	35:Mb:38:MET:HE2	2.24	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AM:216:GLY:O	23:AM:220:ASP:HB2	2.06	0.55
31:AV:20:VAL:HA	31:AV:23:LEU:HD12	1.89	0.55
45:t4:971:TYR:HB2	45:t4:980:ILE:HB	1.89	0.55
23:BM:303:GLN:HE21	27:BR:271:ARG:N	1.92	0.55
5:A4:162:ARG:NH1	7:A6:406:CYS:O	2.40	0.55
8:A7:464:ARG:HD3	24:AN:-63:DT:OP1	2.07	0.55
32:AW:197:ASN:HA	32:AW:201:ILE:HD12	1.88	0.55
35:Mb:103:THR:O	35:Mb:107:GLU:HB3	2.05	0.55
45:Ml:165:LEU:HD21	46:Mm:34:LEU:HD21	1.89	0.55
11:BA:66:LYS:HB2	23:BM:18:LEU:HD22	1.89	0.55
60:sI:951:LEU:HD23	60:sI:975:LEU:HD21	1.89	0.55
4:A3:49:LEU:HD22	17:AG:164:LYS:HG2	0.63	0.55
7:A6:234:ILE:HG23	7:A6:263:VAL:HG23	1.88	0.55
9:A8:786:LEU:CD2	9:A8:786:LEU:HD12	2.32	0.55
19:AI:15:TYR:CZ	26:AQ:422:ARG:NH1	2.74	0.55
56:SD:728:ASN:O	56:SD:732:ASN:ND2	2.39	0.55
68:T6:429:ARG:NH1	68:T6:430:HIS:O	2.40	0.55
3:B2:507:ARG:HB2	9:sF:393:LYS:HZ2	1.71	0.55
12:BB:777:ALA:O	12:BB:1096:ARG:NH2	2.39	0.55
53:nu:84:GLN:HB2	53:nu:102:ILE:HD11	1.89	0.55
55:sA:308:MET:HG2	55:sA:415:LEU:HB3	1.88	0.55
36:Mc:39:ARG:HE	37:Md:281:LEU:HD21	1.72	0.54
45:Ml:749:LEU:HD13	45:Ml:767:MET:HE3	1.88	0.54
45:T4:1000:HIS:O	45:T4:1002:HIS:HD2	1.90	0.54
66:t3:416:THR:O	66:t3:420:ASP:HB2	2.06	0.54
58:sE:41:VAL:O	58:sE:45:GLN:NE2	2.40	0.54
3:A2:246:GLN:HA	3:A2:249:MET:HG3	1.89	0.54
14:AD:209:ARG:HH21	35:Mb:34:ASP:HB3	1.72	0.54
9:Nf:661:GLU:O	9:sF:468:ARG:NH2	2.40	0.54
50:NP:799:THR:HA	50:NP:802:THR:HG22	1.88	0.54
65:T2:71:TYR:HA	65:T2:74:ILE:HG12	1.88	0.54
1:B0:270:ARG:HG3	1:B0:388:LEU:HD22	1.88	0.54
12:BB:1135:ARG:NH2	12:BB:1136:ASP:OD1	2.41	0.54
14:BD:204:ASP:OD1	14:BD:205:ASP:N	2.40	0.54
32:BW:197:ASN:HA	32:BW:201:ILE:HD12	1.88	0.54
45:ml:165:LEU:HD21	46:mm:34:LEU:HD21	1.89	0.54
12:AB:650:GLU:OE2	12:AB:654:ARG:NH2	2.39	0.54
14:AD:24:ALA:N	14:AD:28:GLN:O	2.39	0.54
44:Mk:92:ASN:ND2	46:Mm:62:LYS:O	2.40	0.54
53:Nu:84:GLN:HB2	53:Nu:102:ILE:HD11	1.89	0.54
66:t3:769:GLN:NE2	68:t6:338:SER:O	2.39	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:t5:922:THR:OG1	67:t5:923:LYS:N	2.41	0.54
5:B4:85:TYR:OH	7:B6:405:SER:O	2.20	0.54
8:B7:481:GLU:OE2	8:B7:508:HIS:NE2	2.39	0.54
31:BV:20:VAL:HA	31:BV:23:LEU:HD12	1.89	0.54
45:ml:749:LEU:HD13	45:ml:767:MET:HE3	1.88	0.54
63:sL:223:SER:H	63:sL:226:ALA:HB3	1.72	0.54
11:AA:187:LYS:HG3	32:AW:227:MET:CB	2.31	0.54
23:AM:190:LYS:HE2	27:AR:270:MET:O	2.06	0.54
45:t4:1000:HIS:O	45:t4:1002:HIS:HD2	1.90	0.54
5:B4:228:THR:HG21	5:B4:235:TYR:HB2	1.88	0.54
14:BD:24:ALA:N	14:BD:28:GLN:O	2.39	0.54
18:BH:92:ASP:O	18:BH:93:TYR:HD1	1.90	0.54
23:BM:190:LYS:HE3	27:BR:270:MET:O	2.07	0.54
28:AS:291:GLU:HG2	28:AS:292:PRO:HD2	1.89	0.54
50:NP:774:GLY:O	50:NP:778:MET:HG3	2.08	0.54
50:NP:1051:GLN:HB2	50:NP:1052:ILE:HD12	1.89	0.54
45:T4:835:GLN:HG2	45:T4:886:THR:HG21	1.89	0.54
68:t6:429:ARG:NH1	68:t6:430:HIS:O	2.40	0.54
63:sL:218:ILE:HD11	63:sL:284:PHE:HB3	1.88	0.54
1:A0:519:VAL:HG22	1:A0:554:TRP:CD1	2.43	0.54
1:A0:541:PHE:HB2	1:A0:547:MET:CG	2.38	0.54
11:AA:66:LYS:HB2	23:AM:18:LEU:HD22	1.89	0.54
12:AB:1135:ARG:NH2	12:AB:1136:ASP:OD1	2.40	0.54
19:AI:117:LYS:HG2	68:T6:801:LYS:NZ	2.23	0.54
1:B0:519:VAL:HG22	1:B0:554:TRP:CD1	2.43	0.54
21:BK:12:LEU:HD23	39:mf:145:SER:C	2.30	0.54
28:BS:188:CYS:SG	28:BS:198:ARG:NH2	2.80	0.54
56:sB:557:SER:OG	56:sB:559:GLU:OE1	2.24	0.54
23:AM:190:LYS:HE3	27:AR:270:MET:O	2.07	0.54
58:SE:41:VAL:O	58:SE:45:GLN:NE2	2.40	0.54
60:SI:951:LEU:HD23	60:SI:975:LEU:HD21	1.89	0.54
66:T3:1126:MET:HA	66:T3:1129:THR:HG22	1.90	0.54
11:BA:981:LEU:HD23	11:BA:1039:LYS:HG2	1.90	0.54
17:BG:132:SER:OG	17:BG:135:ASP:O	2.23	0.54
23:BM:190:LYS:CD	27:BR:270:MET:HE3	2.35	0.54
49:mp:298:PRO:HA	49:mp:301:ASP:HB2	1.90	0.54
6:A5:56:ARG:O	6:A5:59:SER:OG	2.21	0.54
28:AS:188:CYS:SG	28:AS:198:ARG:NH2	2.80	0.54
50:NP:677:THR:OG1	50:NP:678:ARG:NH1	2.40	0.54
45:T4:971:TYR:HB2	45:T4:980:ILE:HB	1.89	0.54
68:T6:381:THR:HG22	68:T6:383:LYS:H	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:t3:1126:MET:HA	66:t3:1129:THR:HG22	1.90	0.54
3:B2:63:ASP:HB3	9:B8:780:ILE:HG13	1.90	0.54
9:B8:786:LEU:CD2	9:B8:786:LEU:HD12	2.32	0.54
18:BH:19:ARG:O	18:BH:19:ARG:NE	2.41	0.54
20:BJ:65:PRO:HD2	20:BJ:68:LYS:HE2	1.89	0.54
3:A2:63:ASP:HB3	9:A8:780:ILE:HG13	1.90	0.54
3:A2:147:LEU:HD13	3:A2:355:LEU:HD22	1.89	0.54
4:A3:95:THR:OG1	4:A3:97:ASP:OD1	2.26	0.54
5:A4:203:ALA:O	5:A4:207:LYS:N	2.41	0.54
8:A7:481:GLU:OE2	8:A7:508:HIS:NE2	2.39	0.54
11:AA:981:LEU:HD23	11:AA:1039:LYS:HG2	1.90	0.54
18:AH:19:ARG:NE	18:AH:19:ARG:O	2.41	0.54
55:SA:69:ILE:HG21	56:SD:683:THR:HG21	1.90	0.54
66:T3:289:LYS:CB	66:T3:289:LYS:CD	2.67	0.54
68:t6:381:THR:HG22	68:t6:383:LYS:H	1.72	0.54
3:B2:147:LEU:HD13	3:B2:355:LEU:HD22	1.89	0.54
6:B5:8:ALA:HB3	6:B5:42:VAL:HG23	1.90	0.54
10:B9:181:LYS:N	10:B9:182:LEU:N	2.56	0.54
14:BD:155:ARG:HD2	14:BD:155:ARG:N	2.22	0.54
23:BM:191:GLU:OE2	27:BR:268:MET:HA	2.07	0.54
28:BS:291:GLU:HG2	28:BS:292:PRO:HD2	1.89	0.54
50:nP:677:THR:OG1	50:nP:678:ARG:NH1	2.40	0.54
50:nP:1051:GLN:HB2	50:nP:1052:ILE:HD12	1.89	0.54
54:nr:106:GLU:HA	54:nr:109:LYS:HE2	1.89	0.54
51:ns:124:ILE:HD11	52:nt:53:GLU:HG3	1.90	0.54
1:A0:547:MET:HE3	1:A0:547:MET:CA	2.35	0.54
1:A0:555:GLN:O	1:A0:560:LEU:N	2.31	0.54
6:A5:8:ALA:HB3	6:A5:42:VAL:HG23	1.90	0.54
14:AD:204:ASP:OD1	14:AD:205:ASP:N	2.40	0.54
15:AE:55:ARG:NH1	15:AE:113:GLN:OE1	2.41	0.54
21:AK:11:LEU:HD21	39:Mf:146:THR:HG22	1.90	0.54
32:AW:12:LEU:HD11	32:AW:182:ILE:HG23	1.90	0.54
51:Ns:122:LYS:HA	51:Ns:125:GLN:NE2	2.23	0.54
56:SD:433:GLN:HG3	56:SD:435:PRO:HD2	1.90	0.54
1:B0:541:PHE:HB2	1:B0:547:MET:CG	2.38	0.54
3:B2:246:GLN:HA	3:B2:249:MET:HG3	1.89	0.54
4:B3:100:ASN:CA	34:ma:139:VAL:CG2	2.83	0.54
36:mc:79:THR:O	40:mg:87:GLN:NE2	2.41	0.54
9:sF:454:SER:OG	9:sF:482:ASN:ND2	2.41	0.54
11:AA:1063:MET:HA	11:AA:1063:MET:HE3	1.88	0.53
13:AC:89:GLU:HB2	39:Mf:43:ARG:HH22	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:Mc:79:THR:O	40:Mg:87:GLN:NE2	2.41	0.53
1:B0:546:TYR:CE1	1:B0:547:MET:N	2.68	0.53
38:me:177:ASN:OD1	38:me:178:ARG:NH1	2.40	0.53
1:A0:523:GLY:O	1:A0:526:LEU:HG	2.08	0.53
14:AD:209:ARG:NE	35:Mb:31:GLN:HG2	2.23	0.53
27:AR:288:ASN:O	27:AR:289:ILE:CA	2.56	0.53
66:t3:301:ASN:ND2	66:t3:974:LEU:O	2.38	0.53
66:t3:741:ILE:N	49:mp:157:ASN:HD21	2.03	0.53
1:B0:523:GLY:O	1:B0:526:LEU:HG	2.08	0.53
11:BA:456:MET:HE1	11:BA:510:GLN:CB	2.35	0.53
13:BC:89:GLU:HB2	39:mf:43:ARG:HH22	1.74	0.53
9:nF:661:GLU:O	9:sF:468:ARG:NH2	2.40	0.53
56:sD:361:TYR:OH	9:sF:435:ARG:NH1	2.42	0.53
7:A6:138:GLU:OE1	7:A6:138:GLU:N	2.40	0.53
12:AB:1121:GLY:O	12:AB:1126:GLY:N	2.41	0.53
56:SD:361:TYR:OH	9:SF:435:ARG:NH1	2.42	0.53
16:BF:85:MET:HE1	16:BF:90:ARG:CB	2.37	0.53
26:BQ:151:LEU:HD23	26:BQ:440:ARG:HH22	1.72	0.53
56:sD:433:GLN:HG3	56:sD:435:PRO:HD2	1.90	0.53
11:AA:565:ILE:HG13	18:AH:97:MET:HE1	1.91	0.53
12:AB:451:LYS:NZ	23:AM:138:ASP:O	2.31	0.53
55:SA:121:ASN:HB2	55:SA:446:ASP:HB3	1.91	0.53
3:B2:194:GLN:NE2	3:B2:198:SER:OG	2.42	0.53
51:ns:122:LYS:HA	51:ns:125:GLN:NE2	2.23	0.53
9:sF:315:ASP:HA	60:sI:658:ARG:HH12	1.74	0.53
11:AA:708:MET:SD	11:AA:712:GLU:HB2	2.49	0.53
16:AF:85:MET:HE1	16:AF:90:ARG:CB	2.37	0.53
18:AH:92:ASP:O	18:AH:93:TYR:HD1	1.90	0.53
25:AO:195:TYR:HB3	25:AO:204:LEU:HB2	1.90	0.53
9:SF:454:SER:OG	9:SF:482:ASN:ND2	2.41	0.53
62:SK:38:ARG:NH1	62:SK:44:GLU:O	2.41	0.53
5:B4:203:ALA:O	5:B4:207:LYS:N	2.41	0.53
11:BA:1172:LEU:HD22	11:BA:1173:HIS:CE1	2.44	0.53
12:BB:1121:GLY:O	12:BB:1126:GLY:N	2.41	0.53
15:BE:55:ARG:NH1	15:BE:113:GLN:OE1	2.41	0.53
32:BW:12:LEU:HD11	32:BW:182:ILE:HG23	1.90	0.53
50:nP:774:GLY:O	50:nP:778:MET:HG3	2.08	0.53
55:sA:121:ASN:HB2	55:sA:446:ASP:HB3	1.91	0.53
60:sI:1227:GLN:HB3	60:sI:1230:SER:HB3	1.91	0.53
3:A2:39:LEU:HD12	3:A2:40:PRO:HD2	1.89	0.53
3:A2:194:GLN:NE2	3:A2:198:SER:OG	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:t4:835:GLN:HG2	45:t4:886:THR:HG21	1.89	0.53
12:BB:1111:MET:HE1	12:BB:1117:GLN:H	1.73	0.53
60:sI:1091:LEU:O	60:sI:1095:ASN:ND2	2.42	0.53
1:A0:83:LEU:HD11	1:A0:177:SER:HA	1.90	0.53
11:AA:1172:LEU:HD22	11:AA:1173:HIS:CE1	2.44	0.53
45:Ml:290:THR:HB	45:Ml:297:LEU:HD13	1.91	0.53
9:Nf:677:GLN:HG2	9:Sf:624:ASP:CA	2.30	0.53
63:SL:223:SER:H	63:SL:226:ALA:HB3	1.72	0.53
68:T6:679:GLN:O	68:T6:682:ASN:ND2	2.42	0.53
66:t3:360:HIS:HD2	66:t3:919:TYR:CE2	2.26	0.53
12:BB:496:ARG:NH2	12:BB:540:SER:O	2.42	0.53
13:BC:241:ASP:OD1	13:BC:242:GLN:N	2.42	0.53
14:BD:209:ARG:HH21	35:mb:34:ASP:HB3	1.72	0.53
23:BM:150:ALA:CB	23:BM:176:ILE:CD1	2.87	0.53
53:nq:84:GLN:HG3	53:nq:102:ILE:HD13	1.91	0.53
18:AH:128:ASN:OD1	43:Mj:81:ASN:ND2	2.42	0.53
23:AM:150:ALA:CB	23:AM:176:ILE:CD1	2.87	0.53
35:Mb:56:LYS:O	37:Md:204:ARG:NH2	2.42	0.53
49:Mp:298:PRO:HA	49:Mp:301:ASP:HB2	1.90	0.53
56:SB:557:SER:HB3	56:SB:560:GLN:HG3	1.91	0.53
68:T6:361:LYS:HB3	68:T6:370:PRO:HA	1.91	0.53
23:BM:132:LYS:HA	23:BM:135:MET:HE2	1.91	0.53
55:sA:69:ILE:HG21	56:sD:683:THR:HG21	1.90	0.53
62:sK:38:ARG:NH1	62:sK:44:GLU:O	2.41	0.53
11:AA:337:ARG:NH2	11:AA:1401:SER:O	2.42	0.53
12:AB:496:ARG:NH2	12:AB:540:SER:O	2.42	0.53
12:AB:1111:MET:HE1	12:AB:1117:GLN:H	1.73	0.53
23:AM:132:LYS:HA	23:AM:135:MET:HE2	1.91	0.53
63:SL:304:ASN:O	63:SL:308:ASN:ND2	2.37	0.53
1:B0:83:LEU:HD11	1:B0:177:SER:HA	1.90	0.53
18:BH:82:PRO:O	21:BK:54:ARG:NH2	2.42	0.53
27:BR:288:ASN:O	27:BR:289:ILE:CA	2.56	0.53
45:ml:290:THR:HB	45:ml:297:LEU:HD13	1.91	0.53
56:sB:557:SER:HB3	56:sB:560:GLN:HG3	1.91	0.53
3:A2:258:LEU:HD11	3:A2:274:LEU:HD12	1.91	0.53
4:A3:100:ASN:CA	34:Ma:139:VAL:CG2	2.83	0.53
14:AD:63:LEU:HB3	14:AD:130:LEU:HD22	1.91	0.53
23:AM:190:LYS:CD	27:AR:270:MET:HE3	2.35	0.53
23:AM:191:GLU:OE2	27:AR:268:MET:HA	2.07	0.53
26:AQ:151:LEU:HD23	26:AQ:440:ARG:HH22	1.72	0.53
9:Sf:315:ASP:HA	60:SI:658:ARG:HH12	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B2:129:VAL:HG22	3:B2:270:TYR:CE2	2.33	0.53
7:B6:138:GLU:OE1	7:B6:138:GLU:N	2.40	0.53
18:BH:108:SER:OG	18:BH:109:LYS:HE3	2.09	0.53
22:BL:26:THR:OG1	22:BL:40:LEU:O	2.26	0.53
55:sA:115:PRO:HG3	56:sD:721:ASN:HB2	1.89	0.53
9:sF:548:LEU:HD21	9:sF:559:ASP:HB3	1.91	0.53
60:sI:699:ALA:HA	60:sI:702:LEU:HD23	1.91	0.53
13:AC:241:ASP:OD1	13:AC:242:GLN:N	2.42	0.52
50:NP:769:ASP:HA	50:NP:772:ILE:HD12	1.91	0.52
56:SD:714:THR:O	56:SD:718:GLN:NE2	2.41	0.52
68:T6:23:SER:O	68:T6:179:ARG:NH2	2.41	0.52
66:t3:360:HIS:CD2	66:t3:919:TYR:CE2	2.95	0.52
68:t6:23:SER:O	68:t6:179:ARG:NH2	2.41	0.52
3:B2:64:LYS:HD3	9:B8:780:ILE:CD1	2.19	0.52
11:BA:337:ARG:NH2	11:BA:1401:SER:O	2.42	0.52
11:BA:744:LYS:HG3	11:BA:748:MET:HE2	1.92	0.52
12:BB:597:MET:HE3	12:BB:617:ARG:HB2	1.91	0.52
18:BH:128:ASN:OD1	43:mj:81:ASN:ND2	2.42	0.52
21:BK:11:LEU:HD21	39:mf:146:THR:HG22	1.90	0.52
1:A0:527:VAL:HG12	1:A0:531:LYS:HZ2	1.75	0.52
7:A6:174:MET:HB2	7:A6:179:ALA:HB2	1.91	0.52
10:A9:181:LYS:N	10:A9:182:LEU:N	2.56	0.52
12:AB:1111:MET:HE3	12:AB:1112:GLN:N	2.24	0.52
18:AH:82:PRO:O	21:AK:54:ARG:NH2	2.42	0.52
18:AH:108:SER:OG	18:AH:109:LYS:HE3	2.09	0.52
22:AL:26:THR:OG1	22:AL:40:LEU:O	2.26	0.52
27:AR:263:MET:HA	27:AR:263:MET:HE3	1.91	0.52
50:SH:588:ASN:O	50:SH:591:LEU:CA	2.58	0.52
62:SK:128:PHE:HB3	62:SK:457:LYS:HE3	1.91	0.52
68:t6:618:ILE:O	68:t6:653:LYS:NZ	2.39	0.52
7:B6:363:CYS:SG	7:B6:366:CYS:N	2.70	0.52
11:BA:66:LYS:HG2	11:BA:72:GLU:HG2	1.91	0.52
12:BB:1111:MET:HE3	12:BB:1112:GLN:N	2.24	0.52
14:BD:209:ARG:NE	35:mb:31:GLN:HG2	2.23	0.52
62:sK:7:CYS:H	62:sK:22:SER:HB3	1.74	0.52
18:AH:136:LYS:HZ1	41:Mh:62:ARG:NE	2.06	0.52
51:Ns:48:LEU:O	51:Ns:52:ARG:NH1	2.42	0.52
45:t4:881:THR:HB	45:t4:897:GLN:HB2	1.92	0.52
3:B2:392:THR:OG1	3:B2:394:ASP:OD1	2.27	0.52
6:B5:56:ARG:O	6:B5:59:SER:OG	2.21	0.52
27:BR:263:MET:HA	27:BR:263:MET:HE3	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:mk:130:VAL:O	44:mk:137:LYS:NZ	2.42	0.52
51:ns:48:LEU:O	51:ns:52:ARG:NH1	2.42	0.52
62:sK:142:PRO:HA	62:sK:145:ILE:HG22	1.91	0.52
11:AA:1349:TYR:HE1	11:AA:1368:MET:SD	2.32	0.52
36:Mc:2:GLN:NE2	37:Md:316:ILE:O	2.42	0.52
41:Mh:186:ASP:O	41:Mh:190:ARG:NH1	2.42	0.52
51:Ns:124:ILE:HD11	52:Nt:53:GLU:HG3	1.90	0.52
56:SD:632:GLN:HE22	56:SD:640:GLN:HE21	1.57	0.52
68:t6:679:GLN:O	68:t6:682:ASN:ND2	2.42	0.52
8:B7:166:ARG:NH2	8:B7:173:TYR:OH	2.41	0.52
14:BD:63:LEU:HB3	14:BD:130:LEU:HD22	1.91	0.52
36:mc:39:ARG:HE	37:md:281:LEU:HD21	1.72	0.52
3:A2:392:THR:OG1	3:A2:394:ASP:OD1	2.27	0.52
11:AA:744:LYS:HG3	11:AA:748:MET:HE2	1.92	0.52
17:AG:132:SER:OG	17:AG:135:ASP:O	2.23	0.52
9:Nf:669:ARG:HA	9:Nf:672:ARG:HD3	1.91	0.52
56:SB:667:ARG:HB3	56:SB:670:ILE:HD13	1.92	0.52
9:SF:461:ARG:NH2	9:SF:728:ARG:O	2.43	0.52
60:SI:1091:LEU:O	60:SI:1095:ASN:ND2	2.42	0.52
25:BO:195:TYR:HB3	25:BO:204:LEU:HB2	1.90	0.52
30:BU:41:ILE:HA	30:BU:44:LYS:HG2	1.91	0.52
23:AM:303:GLN:HE21	27:AR:271:ARG:N	1.92	0.52
28:AS:156:LEU:CD2	28:AS:156:LEU:HD12	2.33	0.52
40:Mg:16:ILE:HA	40:Mg:19:VAL:HG12	1.92	0.52
45:MI:123:ASN:ND2	46:Mm:145:PHE:O	2.43	0.52
53:Nq:84:GLN:HG3	53:Nq:102:ILE:HD13	1.91	0.52
62:SK:142:PRO:HA	62:SK:145:ILE:HG22	1.91	0.52
5:B4:175:ARG:NH2	5:B4:211:ASP:OD2	2.42	0.52
11:BA:708:MET:SD	11:BA:712:GLU:HB2	2.49	0.52
11:BA:717:ASN:HD22	11:BA:720:ARG:NH2	2.08	0.52
35:mb:56:LYS:O	37:md:204:ARG:NH2	2.42	0.52
45:ml:515:LEU:HD11	45:ml:524:PHE:HB3	1.91	0.52
9:nF:669:ARG:HA	9:nF:672:ARG:HD3	1.91	0.52
50:nP:769:ASP:HA	50:nP:772:ILE:HD12	1.91	0.52
56:sD:714:THR:O	56:sD:718:GLN:NE2	2.41	0.52
62:sK:399:SER:O	62:sK:432:ARG:NH1	2.43	0.52
3:A2:274:LEU:HD23	3:A2:277:MET:HE2	1.91	0.52
11:AA:66:LYS:HG2	11:AA:72:GLU:HG2	1.91	0.52
12:AB:26:THR:OG1	12:AB:708:GLU:OE2	2.26	0.52
60:SI:699:ALA:HA	60:SI:702:LEU:HD23	1.91	0.52
62:SK:107:THR:HB	62:SK:139:VAL:HG23	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:SK:399:SER:O	62:SK:432:ARG:NH1	2.43	0.52
45:T4:1021:GLN:OE1	45:T4:1025:GLN:NE2	2.43	0.52
68:T6:445:GLU:OE1	68:T6:448:ASP:HB2	2.10	0.52
3:A2:62:LEU:HA	3:A2:65:TRP:HD1	1.75	0.52
3:A2:507:ARG:HB2	9:SF:393:LYS:HZ2	1.75	0.52
8:A7:195:SER:OG	8:A7:199:ARG:NH2	2.43	0.52
37:Md:320:ASP:OD1	37:Md:320:ASP:N	2.43	0.52
56:SB:459:GLU:HG2	56:SB:462:ARG:HH21	1.75	0.52
62:SK:287:LYS:HA	62:SK:302:ASP:HA	1.92	0.52
66:t3:981:GLU:OE1	66:t3:985:GLN:NE2	2.43	0.52
68:t6:361:LYS:HB3	68:t6:370:PRO:HA	1.91	0.52
68:t6:445:GLU:OE1	68:t6:448:ASP:HB2	2.10	0.52
41:mh:186:ASP:O	41:mh:190:ARG:NH1	2.42	0.52
9:sF:314:TYR:O	60:sI:658:ARG:NH1	2.43	0.52
5:A4:175:ARG:NH2	5:A4:211:ASP:OD2	2.42	0.52
11:AA:717:ASN:HD22	11:AA:720:ARG:NH2	2.08	0.52
19:AI:76:PRO:HB2	19:AI:77:LYS:HZ2	1.75	0.52
45:MI:414:ARG:NH1	45:MI:415:TYR:O	2.42	0.52
68:T6:220:ARG:NH1	68:T6:221:ALA:O	2.43	0.52
68:t6:683:PRO:O	68:t6:687:GLN:NE2	2.43	0.52
5:B4:81:GLN:NE2	5:B4:144:SER:OG	2.43	0.52
33:BX:227:ASP:O	33:BX:229:LYS:NZ	2.41	0.52
37:md:320:ASP:OD1	37:md:320:ASP:N	2.43	0.52
45:ml:414:ARG:NH1	45:ml:415:TYR:O	2.43	0.52
3:A2:129:VAL:HG21	3:A2:235:LYS:N	2.25	0.52
8:A7:675:SER:OG	8:A7:676:HIS:N	2.43	0.52
12:AB:13:GLU:CB	67:T5:919:ARG:CZ	2.84	0.52
12:AB:1168:LEU:C	12:AB:1169:MET:HE2	2.35	0.52
32:AW:58:ILE:HD12	32:AW:62:ARG:HH22	1.75	0.52
44:Mk:130:VAL:O	44:Mk:137:LYS:NZ	2.42	0.52
45:MI:515:LEU:HD11	45:MI:524:PHE:HB3	1.91	0.52
58:SE:116:THR:HB	58:SE:126:LEU:HD11	1.92	0.52
60:SI:1254:CYS:O	60:SI:1257:ASN:N	2.43	0.52
68:T6:369:SER:O	68:T6:390:ARG:NH1	2.43	0.52
1:B0:527:VAL:HG12	1:B0:531:LYS:HZ2	1.75	0.52
2:B1:607:SER:OG	2:B1:608:MET:SD	2.63	0.52
8:B7:125:PRO:O	8:B7:127:HIS:ND1	2.41	0.52
37:md:327:ASP:HB3	37:md:331:GLY:H	1.76	0.52
4:A3:73:PHE:HE2	4:A3:82:VAL:HG21	1.75	0.51
3:B2:127:GLU:OE1	3:B2:127:GLU:N	2.43	0.51
8:B7:195:SER:OG	8:B7:199:ARG:NH2	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:BB:101:MET:HG3	27:BR:259:VAL:HG21	1.92	0.51
18:BH:109:LYS:HA	43:mj:83:LEU:HD12	1.91	0.51
33:BX:251:ASN:ND2	33:BX:253:LYS:O	2.44	0.51
37:md:455:TYR:O	37:md:550:ARG:NH2	2.44	0.51
56:sB:459:GLU:HG2	56:sB:462:ARG:HH21	1.75	0.51
9:sF:461:ARG:NH2	9:sF:728:ARG:O	2.43	0.51
62:sK:290:PHE:HA	63:sL:402:GLN:HE22	1.74	0.51
3:A2:127:GLU:OE1	3:A2:127:GLU:N	2.43	0.51
52:Np:64:ASN:O	52:Np:93:GLN:NE2	2.43	0.51
53:Nq:50:TYR:HB3	54:Nr:95:ILE:HD11	1.92	0.51
60:SI:1227:GLN:HB3	60:SI:1230:SER:HB3	1.91	0.51
68:T6:696:ILE:HG13	68:T6:773:SER:HB3	1.92	0.51
67:t5:927:ARG:NH1	12:BB:16:TYR:O	2.43	0.51
11:BA:565:ILE:HG13	18:BH:97:MET:HE1	1.91	0.51
58:sE:116:THR:HB	58:sE:126:LEU:HD11	1.92	0.51
4:A3:100:ASN:CA	34:Ma:139:VAL:HG23	2.40	0.51
5:A4:81:GLN:NE2	5:A4:144:SER:OG	2.43	0.51
8:A7:166:ARG:NH2	8:A7:173:TYR:OH	2.41	0.51
23:AM:200:THR:HA	23:AM:203:PHE:HD2	1.75	0.51
37:Md:327:ASP:HB3	37:Md:331:GLY:H	1.76	0.51
49:Mp:531:ILE:HB	49:Mp:538:ILE:HB	1.93	0.51
9:SF:314:TYR:O	60:SI:658:ARG:NH1	2.43	0.51
62:SK:290:PHE:HA	63:SL:402:GLN:HE22	1.74	0.51
45:t4:879:ASP:O	45:t4:902:ASN:ND2	2.39	0.51
68:t6:218:ARG:HH12	68:t6:220:ARG:HB2	1.76	0.51
4:B3:73:PHE:HE2	4:B3:82:VAL:HG21	1.75	0.51
8:B7:675:SER:OG	8:B7:676:HIS:N	2.43	0.51
11:BA:99:ILE:HG21	11:BA:234:MET:CE	2.40	0.51
26:BQ:137:VAL:HG11	26:BQ:352:MET:HE3	1.92	0.51
45:ml:123:ASN:ND2	46:mm:145:PHE:O	2.43	0.51
9:nF:672:ARG:HH22	53:nu:65:LEU:HD22	1.75	0.51
52:np:60:VAL:O	52:np:64:ASN:ND2	2.44	0.51
55:sA:399:ASP:OD1	55:sA:399:ASP:N	2.43	0.51
56:sB:611:ILE:HA	56:sB:614:LEU:HG	1.92	0.51
61:sJ:24:SER:OG	61:sJ:66:ASN:ND2	2.44	0.51
14:AD:216:ASN:OD1	14:AD:217:LEU:N	2.43	0.51
18:AH:109:LYS:HA	43:Mj:83:LEU:HD12	1.91	0.51
30:AU:41:ILE:HA	30:AU:44:LYS:HG2	1.91	0.51
36:Mc:89:LYS:NZ	37:Md:338:LYS:O	2.39	0.51
37:Md:455:TYR:O	37:Md:550:ARG:NH2	2.44	0.51
58:SE:43:LEU:HA	58:SE:46:ILE:HG22	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:SF:548:LEU:HD21	9:SF:559:ASP:HB3	1.91	0.51
45:t4:896:VAL:O	45:t4:908:GLN:NE2	2.38	0.51
45:t4:1021:GLN:OE1	45:t4:1025:GLN:NE2	2.43	0.51
3:B2:258:LEU:HD11	3:B2:274:LEU:HD12	1.91	0.51
11:BA:30:ILE:HD12	12:BB:1170:THR:HG21	1.93	0.51
12:BB:1168:LEU:C	12:BB:1169:MET:HE2	2.35	0.51
14:BD:173:HIS:HB3	14:BD:176:GLU:OE1	2.11	0.51
19:BI:76:PRO:HB2	19:BI:77:LYS:HZ2	1.76	0.51
32:BW:180:GLN:HA	32:BW:183:ILE:HG22	1.93	0.51
42:mi:120:ARG:HG3	42:mi:124:LYS:HE2	1.93	0.51
49:mp:531:ILE:HB	49:mp:538:ILE:HB	1.93	0.51
14:AD:174:PRO:HA	14:AD:177:VAL:HG22	1.93	0.51
26:AQ:137:VAL:HG11	26:AQ:352:MET:HE3	1.92	0.51
27:AR:270:MET:N	27:AR:270:MET:SD	2.84	0.51
9:NF:672:ARG:HH22	53:Nu:65:LEU:HD22	1.75	0.51
52:Np:60:VAL:O	52:Np:64:ASN:ND2	2.44	0.51
55:SA:550:GLU:OE1	56:SB:567:GLN:NE2	2.44	0.51
56:SB:313:TRP:HE1	56:SB:388:TRP:HE1	1.59	0.51
67:T5:857:ASP:OD2	67:T5:954:ARG:NH2	2.43	0.51
68:T6:557:VAL:HG22	68:T6:603:PHE:CE1	2.46	0.51
67:t5:871:HIS:HA	67:t5:874:GLU:OE2	2.11	0.51
3:B2:62:LEU:HA	3:B2:65:TRP:HD1	1.75	0.51
9:B8:786:LEU:HD13	9:B8:786:LEU:HD21	1.88	0.51
11:BA:1349:TYR:HE1	11:BA:1368:MET:SD	2.32	0.51
25:BO:193:LEU:HB3	25:BO:206:ILE:HB	1.93	0.51
50:nP:1233:GLY:HA2	50:nP:1237:GLN:HB3	1.93	0.51
53:nq:50:TYR:HB3	54:nr:95:ILE:HD11	1.92	0.51
53:nu:92:GLU:HA	53:nu:95:LYS:HE2	1.93	0.51
62:sK:10:ILE:HB	62:sK:106:ILE:HG22	1.93	0.51
62:sK:287:LYS:HA	62:sK:302:ASP:HA	1.92	0.51
21:AK:29:ASN:ND2	21:AK:78:THR:O	2.43	0.51
68:t6:557:VAL:HG22	68:t6:603:PHE:CE1	2.46	0.51
7:B6:174:MET:HB2	7:B6:179:ALA:HB2	1.91	0.51
23:BM:301:THR:HA	27:BR:271:ARG:CZ	2.41	0.51
53:nu:54:VAL:HG23	54:nv:111:ALA:HB1	1.93	0.51
62:sK:107:THR:HB	62:sK:139:VAL:HG23	1.91	0.51
1:A0:562:GLU:OE2	1:A0:563:VAL:HG13	2.11	0.51
21:AK:39:ASP:N	21:AK:39:ASP:OD1	2.43	0.51
68:T6:683:PRO:O	68:T6:687:GLN:NE2	2.43	0.51
21:BK:29:ASN:ND2	21:BK:78:THR:O	2.43	0.51
23:BM:200:THR:HA	23:BM:203:PHE:HD2	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:mc:2:GLN:NE2	37:md:316:ILE:O	2.42	0.51
55:sA:550:GLU:OE1	56:sB:567:GLN:NE2	2.44	0.51
60:sI:1254:CYS:O	60:sI:1257:ASN:N	2.43	0.51
62:sK:241:LYS:HB3	62:sK:410:LYS:HG2	1.93	0.51
11:AA:187:LYS:CG	32:AW:227:MET:CB	2.89	0.51
11:AA:1122:PRO:HD3	11:AA:1323:ASP:OD1	2.11	0.51
12:AB:705:MET:H	12:AB:710:LEU:HD22	1.76	0.51
52:Nt:88:TYR:HA	52:Nt:91:LYS:HG2	1.93	0.51
66:T3:360:HIS:CD2	66:T3:919:TYR:CE2	2.95	0.51
56:sB:667:ARG:HB3	56:sB:670:ILE:HD13	1.92	0.51
50:sH:588:ASN:C	50:sH:591:LEU:H	2.19	0.51
62:sK:49:PHE:O	62:sK:53:ASN:ND2	2.44	0.51
4:A3:100:ASN:HD22	34:Ma:139:VAL:C	2.19	0.51
8:A7:125:PRO:O	8:A7:127:HIS:ND1	2.41	0.51
11:AA:1202:MET:SD	11:AA:1207:LEU:HB2	2.51	0.51
12:AB:101:MET:HG3	27:AR:259:VAL:HG21	1.92	0.51
15:AE:55:ARG:HA	15:AE:58:MET:HE1	1.93	0.51
33:AX:251:ASN:ND2	33:AX:253:LYS:O	2.44	0.51
50:NP:792:ASP:OD1	50:NP:792:ASP:N	2.44	0.51
53:Nu:54:VAL:HG23	54:Nv:111:ALA:HB1	1.93	0.51
62:SK:7:CYS:H	62:SK:22:SER:HB3	1.75	0.51
62:SK:241:LYS:HB3	62:SK:410:LYS:HG2	1.93	0.51
45:T4:881:THR:HB	45:T4:897:GLN:HB2	1.92	0.51
68:T6:218:ARG:HH12	68:T6:220:ARG:HB2	1.76	0.51
1:B0:546:TYR:CD1	1:B0:546:TYR:C	2.87	0.51
10:B9:184:PHE:CE2	10:B9:188:LYS:HE3	2.46	0.51
11:BA:187:LYS:CG	32:BW:227:MET:CB	2.89	0.51
48:mo:78:CYS:SG	48:mo:79:LEU:N	2.84	0.51
55:sA:55:HIS:ND1	57:sC:97:GLU:OE1	2.44	0.51
56:sB:619:ASN:ND2	56:sB:622:THR:OG1	2.43	0.51
61:sJ:31:GLN:NE2	61:sJ:56:TYR:O	2.44	0.51
62:sK:128:PHE:HB3	62:sK:457:LYS:HE3	1.92	0.51
11:AA:99:ILE:HG21	11:AA:234:MET:CE	2.40	0.51
11:AA:681:GLU:OE1	68:T6:757:GLN:NE2	2.44	0.51
37:Md:361:ILE:O	37:Md:364:GLN:NE2	2.44	0.51
42:Mi:120:ARG:HG3	42:Mi:124:LYS:HE2	1.93	0.51
42:Mi:140:ASN:ND2	46:Mm:24:THR:O	2.43	0.51
49:Mp:261:ASN:ND2	49:Mp:325:ILE:O	2.44	0.51
56:SB:611:ILE:HA	56:SB:614:LEU:HG	1.92	0.51
68:t6:369:SER:O	68:t6:390:ARG:NH1	2.44	0.51
3:B2:129:VAL:HG21	3:B2:235:LYS:N	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:BB:705:MET:H	12:BB:710:LEU:HD22	1.76	0.51
14:BD:174:PRO:HA	14:BD:177:VAL:HG22	1.93	0.51
50:nP:1029:TYR:O	50:nP:1046:ARG:NH2	2.43	0.51
1:A0:546:TYR:O	1:A0:549:SER:N	2.44	0.50
3:A2:492:PHE:CD2	6:A5:9:LEU:HB2	2.46	0.50
41:Mh:60:VAL:HG11	43:Mj:87:LEU:HD22	1.93	0.50
42:Mi:169:GLN:NE2	47:Mn:3:ASP:OD2	2.41	0.50
48:Mo:78:CYS:SG	48:Mo:79:LEU:N	2.84	0.50
49:Mp:95:ASP:OD1	49:Mp:189:ARG:NH1	2.43	0.50
55:SA:55:HIS:ND1	57:SC:97:GLU:OE1	2.44	0.50
66:T3:981:GLU:OE1	66:T3:985:GLN:NE2	2.43	0.50
67:T5:871:HIS:HA	67:T5:874:GLU:OE2	2.11	0.50
27:BR:270:MET:N	27:BR:270:MET:SD	2.84	0.50
32:BW:58:ILE:HD12	32:BW:62:ARG:HH22	1.75	0.50
42:mi:140:ASN:ND2	46:mm:24:THR:O	2.43	0.50
56:sD:420:ARG:NH2	56:sD:425:PHE:O	2.44	0.50
56:sD:527:TRP:HE1	56:sD:556:LYS:HD3	1.76	0.50
50:sH:588:ASN:O	50:sH:591:LEU:CA	2.58	0.50
2:A1:607:SER:OG	2:A1:608:MET:SD	2.63	0.50
11:AA:30:ILE:HD12	12:AB:1170:THR:HG21	1.93	0.50
14:AD:136:GLY:O	14:AD:139:LYS:NZ	2.28	0.50
16:AF:79:ARG:NH2	16:AF:150:GLU:OE2	2.44	0.50
23:AM:301:THR:HA	27:AR:271:ARG:CZ	2.41	0.50
50:NP:1233:GLY:HA2	50:NP:1237:GLN:HB3	1.92	0.50
56:SD:527:TRP:HE1	56:SD:556:LYS:HD3	1.76	0.50
66:T3:405:GLU:O	66:T3:406:LYS:C	2.53	0.50
68:T6:914:SER:OG	68:T6:917:GLU:OE1	2.29	0.50
68:t6:220:ARG:NH1	68:t6:221:ALA:O	2.43	0.50
3:B2:274:LEU:HD23	3:B2:277:MET:HE2	1.91	0.50
35:mb:139:LEU:O	35:mb:141:LYS:NZ	2.43	0.50
45:ml:771:ILE:HG12	45:ml:778:ILE:HG23	1.93	0.50
49:mp:95:ASP:OD1	49:mp:189:ARG:NH1	2.43	0.50
56:sB:313:TRP:HE1	56:sB:388:TRP:HE1	1.59	0.50
56:sD:632:GLN:HE22	56:sD:640:GLN:HE21	1.57	0.50
50:sH:475:ALA:O	60:sI:670:ARG:NH1	2.45	0.50
63:sL:9:ILE:O	63:sL:24:GLY:N	2.41	0.50
1:A0:539:VAL:HG12	1:A0:621:LEU:HD23	1.94	0.50
11:AA:635:ARG:NH2	11:AA:876:ALA:O	2.43	0.50
12:AB:597:MET:HE3	12:AB:617:ARG:HB2	1.91	0.50
19:AI:111:THR:CG2	19:AI:111:THR:C	2.85	0.50
31:AV:87:VAL:O	31:AV:103:GLN:N	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:Md:469:LEU:HD11	37:Md:549:VAL:HG11	1.94	0.50
45:Ml:771:ILE:HG12	45:Ml:778:ILE:HG23	1.93	0.50
49:Mp:53:ARG:NH1	49:Mp:66:ASP:OD1	2.44	0.50
61:SJ:31:GLN:NE2	61:SJ:56:TYR:O	2.44	0.50
45:T4:918:TYR:HA	45:T4:921:ILE:HD12	1.93	0.50
68:t6:218:ARG:NH2	68:t6:220:ARG:HB2	2.26	0.50
68:t6:888:ASP:O	68:t6:895:ARG:NH2	2.45	0.50
1:B0:562:GLU:OE2	1:B0:563:VAL:HG13	2.11	0.50
5:B4:188:ASP:OD1	5:B4:188:ASP:N	2.45	0.50
12:BB:26:THR:OG1	12:BB:708:GLU:OE2	2.26	0.50
40:mg:16:ILE:HA	40:mg:19:VAL:HG12	1.92	0.50
49:mp:53:ARG:NH1	49:mp:66:ASP:OD1	2.44	0.50
52:np:64:ASN:O	52:np:93:GLN:NE2	2.43	0.50
55:sA:59:MET:N	55:sA:59:MET:SD	2.85	0.50
63:sL:122:SER:HA	63:sL:125:GLU:HG2	1.93	0.50
63:sL:304:ASN:O	63:sL:308:ASN:ND2	2.37	0.50
8:A7:243:GLN:HE21	8:A7:244:MET:HE3	1.77	0.50
10:A9:184:PHE:CE2	10:A9:188:LYS:HE3	2.46	0.50
14:AD:173:HIS:HB3	14:AD:176:GLU:OE1	2.11	0.50
68:T6:888:ASP:O	68:T6:895:ARG:NH2	2.45	0.50
66:t3:782:ASP:OD1	66:t3:783:ILE:N	2.44	0.50
11:BA:1188:GLN:NE2	11:BA:1189:SER:O	2.44	0.50
11:BA:1202:MET:SD	11:BA:1207:LEU:HB2	2.51	0.50
14:BD:216:ASN:OD1	14:BD:217:LEU:N	2.43	0.50
32:BW:108:ARG:NH2	33:BX:262:MET:O	2.45	0.50
37:md:361:ILE:O	37:md:364:GLN:NE2	2.44	0.50
1:A0:546:TYR:CD1	1:A0:546:TYR:C	2.87	0.50
7:A6:145:ARG:HA	7:A6:148:MET:HE2	1.93	0.50
11:AA:7:SER:OG	12:AB:1193:GLN:OE1	2.30	0.50
12:AB:1106:ARG:NH2	12:AB:1110:PRO:O	2.45	0.50
50:NP:1029:TYR:O	50:NP:1046:ARG:NH2	2.43	0.50
50:NP:1184:ASP:OD2	50:NP:1189:GLN:NE2	2.45	0.50
68:T6:218:ARG:NH2	68:T6:220:ARG:HB2	2.26	0.50
68:T6:328:ASP:N	68:T6:328:ASP:OD1	2.44	0.50
66:t3:438:ASP:OD1	66:t3:441:HIS:ND1	2.44	0.50
1:B0:546:TYR:O	1:B0:549:SER:N	2.44	0.50
11:BA:7:SER:OG	12:BB:1193:GLN:OE1	2.30	0.50
11:BA:1122:PRO:HD3	11:BA:1323:ASP:OD1	2.11	0.50
12:BB:1106:ARG:NH2	12:BB:1110:PRO:O	2.45	0.50
27:BR:330:LYS:HA	27:BR:333:LEU:HG	1.93	0.50
31:BV:42:GLU:OE2	31:BV:46:LYS:NZ	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:nP:1184:ASP:OD2	50:nP:1189:GLN:NE2	2.45	0.50
3:A2:60:LEU:HD23	9:A8:778:ASP:OD1	2.11	0.50
11:AA:898:ARG:NH1	11:AA:899:VAL:O	2.45	0.50
11:AA:1216:ILE:HD11	11:AA:1226:VAL:HG11	1.94	0.50
25:AO:193:LEU:HB3	25:AO:206:ILE:HB	1.93	0.50
32:AW:180:GLN:HA	32:AW:183:ILE:HG22	1.93	0.50
49:Mp:297:PRO:HG2	49:Mp:300:ILE:HD12	1.93	0.50
50:SH:475:ALA:O	60:SI:670:ARG:NH1	2.45	0.50
50:SH:588:ASN:C	50:SH:591:LEU:H	2.19	0.50
62:SK:10:ILE:HB	62:SK:106:ILE:HG22	1.93	0.50
62:SK:121:GLU:OE2	62:SK:464:LYS:NZ	2.44	0.50
45:T4:994:ARG:HH12	45:T4:996:LYS:HG2	1.77	0.50
68:T6:877:GLN:NE2	68:T6:882:GLY:O	2.45	0.50
3:B2:60:LEU:HD23	9:B8:778:ASP:OD1	2.11	0.50
3:B2:507:ARG:CB	9:sF:393:LYS:HZ2	2.24	0.50
11:BA:672:ASP:OD1	11:BA:672:ASP:N	2.44	0.50
62:sK:88:ARG:NH2	62:sK:130:LYS:O	2.45	0.50
4:A3:100:ASN:HD22	34:Ma:139:VAL:CB	2.14	0.50
18:AH:109:LYS:CA	43:Mj:83:LEU:HD12	2.42	0.50
18:AH:129:TYR:C	18:AH:129:TYR:CG	2.89	0.50
50:NP:1173:GLN:O	50:NP:1202:GLN:NE2	2.45	0.50
56:SD:420:ARG:NH2	56:SD:425:PHE:O	2.44	0.50
62:SK:49:PHE:O	62:SK:53:ASN:ND2	2.44	0.50
65:T2:28:LYS:HA	65:T2:31:LYS:HE2	1.94	0.50
68:t6:696:ILE:HG13	68:t6:773:SER:HB3	1.92	0.50
1:B0:523:GLY:O	1:B0:527:VAL:HG23	2.12	0.50
5:B4:76:ILE:HG12	5:B4:85:TYR:CD1	2.47	0.50
8:B7:541:MET:O	8:B7:545:GLN:NE2	2.44	0.50
11:BA:635:ARG:NH2	11:BA:876:ALA:O	2.43	0.50
11:BA:1216:ILE:HD11	11:BA:1226:VAL:HG11	1.94	0.50
12:BB:1111:MET:HE2	12:BB:1116:ARG:CA	2.41	0.50
36:mc:89:LYS:NZ	37:md:338:LYS:O	2.39	0.50
37:md:469:LEU:HD11	37:md:549:VAL:HG11	1.94	0.50
45:ml:248:ASP:OD1	45:ml:293:ARG:NH2	2.45	0.50
49:mp:261:ASN:ND2	49:mp:325:ILE:O	2.44	0.50
50:nP:1173:GLN:O	50:nP:1202:GLN:NE2	2.45	0.50
58:sE:43:LEU:HA	58:sE:46:ILE:HG22	1.92	0.50
28:AS:175:ALA:HA	28:AS:178:ILE:HG12	1.94	0.50
48:Mo:19:LEU:HD12	48:Mo:20:PRO:HD2	1.94	0.50
50:SH:455:MET:HE3	50:SH:456:PRO:HD2	1.94	0.50
61:SJ:2:ASP:N	61:SJ:2:ASP:OD1	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B2:39:LEU:HD21	3:B2:47:ILE:HD12	1.94	0.50
14:BD:152:SER:CB	14:BD:155:ARG:HH21	2.23	0.50
15:BE:55:ARG:HA	15:BE:58:MET:HE1	1.93	0.50
6:A5:10:VAL:HG23	6:A5:40:LEU:HB2	1.94	0.50
8:A7:458:SER:OG	29:AT:66:DA:OP1	2.23	0.50
11:AA:944:ARG:NE	11:AA:1298:TYR:OH	2.45	0.50
68:T6:739:LYS:HZ2	68:T6:743:THR:HG23	1.76	0.50
65:t2:28:LYS:HA	65:t2:31:LYS:HE2	1.94	0.50
66:t3:913:THR:OG1	66:t3:914:TYR:N	2.44	0.50
45:t4:994:ARG:HH12	45:t4:996:LYS:HG2	1.77	0.50
67:t5:857:ASP:OD2	67:t5:954:ARG:NH2	2.43	0.50
4:B3:100:ASN:HD22	34:ma:139:VAL:C	2.19	0.50
41:mh:60:VAL:HG11	43:mj:87:LEU:HD22	1.93	0.50
58:sE:290:ILE:HG21	9:sF:745:VAL:HG11	1.94	0.50
3:A2:176:VAL:HG12	3:A2:179:THR:H	1.77	0.49
11:AA:1188:GLN:NE2	11:AA:1189:SER:O	2.44	0.49
24:AN:-106:DA:H5'	25:AO:203:VAL:HG21	1.94	0.49
53:Nu:92:GLU:HA	53:Nu:95:LYS:HE2	1.93	0.49
62:SK:181:ARG:NH1	62:SK:182:SER:O	2.45	0.49
66:t3:289:LYS:CG	66:t3:289:LYS:CA	2.88	0.49
68:t6:914:SER:OG	68:t6:917:GLU:OE1	2.29	0.49
2:B1:174:LEU:O	2:B1:181:GLN:NE2	2.44	0.49
7:B6:145:ARG:HA	7:B6:148:MET:HE2	1.93	0.49
11:BA:944:ARG:NE	11:BA:1298:TYR:OH	2.45	0.49
14:BD:158:GLU:HG3	35:mb:45:HIS:ND1	2.27	0.49
32:BW:36:SER:OG	32:BW:205:ARG:NH2	2.45	0.49
42:mi:27:ASN:HA	42:mi:30:LYS:HG2	1.94	0.49
63:sL:11:ILE:HG23	63:sL:112:LEU:HD22	1.94	0.49
2:A1:174:LEU:O	2:A1:181:GLN:NE2	2.44	0.49
50:NP:1239:GLY:HA2	50:NP:1253:LEU:HD23	1.94	0.49
53:Nu:29:ARG:NH1	54:Nv:36:GLU:OE2	2.46	0.49
55:SA:59:MET:N	55:SA:59:MET:SD	2.85	0.49
63:SL:12:ILE:HG23	63:SL:21:VAL:HG22	1.94	0.49
66:T3:782:ASP:OD1	66:T3:783:ILE:N	2.44	0.49
66:t3:869:ARG:HH21	66:t3:882:LEU:HD23	1.76	0.49
3:B2:150:MET:HE1	3:B2:173:MET:SD	2.52	0.49
3:B2:176:VAL:HG12	3:B2:179:THR:H	1.77	0.49
3:B2:492:PHE:CD2	6:B5:9:LEU:HB2	2.46	0.49
11:BA:898:ARG:NH1	11:BA:899:VAL:O	2.45	0.49
21:BK:39:ASP:OD1	21:BK:39:ASP:N	2.43	0.49
26:BQ:115:ARG:NH1	26:BQ:345:GLU:OE2	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BV:87:VAL:O	31:BV:103:GLN:N	2.45	0.49
1:A0:625:ILE:HD12	1:A0:627:PHE:CD2	2.47	0.49
8:A7:541:MET:O	8:A7:545:GLN:NE2	2.44	0.49
11:AA:672:ASP:N	11:AA:672:ASP:OD1	2.44	0.49
13:AC:217:ASP:N	13:AC:217:ASP:OD1	2.45	0.49
15:AE:24:LYS:NZ	15:AE:30:ILE:O	2.33	0.49
21:AK:12:LEU:HD21	39:Mf:145:SER:CA	2.42	0.49
31:AV:42:GLU:OE2	31:AV:46:LYS:NZ	2.44	0.49
34:Ma:168:LYS:HA	34:Ma:171:GLN:HG2	1.95	0.49
42:Mi:27:ASN:HA	42:Mi:30:LYS:HG2	1.94	0.49
45:Mi:248:ASP:OD1	45:Mi:293:ARG:NH2	2.45	0.49
50:NP:1191:LEU:HD23	50:NP:1194:GLN:NE2	2.27	0.49
57:SC:97:GLU:N	57:SC:97:GLU:OE2	2.45	0.49
63:SL:122:SER:HA	63:SL:125:GLU:HG2	1.93	0.49
63:SL:416:PHE:HB3	63:SL:419:TRP:HD1	1.77	0.49
45:t4:918:TYR:HA	45:t4:921:ILE:HD12	1.93	0.49
6:B5:12:CYS:SG	6:B5:13:ASP:N	2.85	0.49
19:BI:111:THR:CG2	19:BI:111:THR:C	2.85	0.49
23:BM:132:LYS:CD	23:BM:172:MET:SD	2.93	0.49
24:BN:-106:DA:H5'	25:BO:203:VAL:HG21	1.94	0.49
25:BO:88:HIS:O	25:BO:90:ARG:NH2	2.45	0.49
56:sB:440:LEU:HD12	56:sB:444:MET:HE1	1.95	0.49
26:AQ:115:ARG:NH1	26:AQ:345:GLU:OE2	2.45	0.49
50:NP:674:THR:O	50:NP:678:ARG:NH1	2.46	0.49
1:B0:331:PHE:CE2	1:B0:335:LEU:HD23	2.47	0.49
3:B2:506:LYS:HZ3	9:sF:396:THR:HG22	1.70	0.49
23:BM:150:ALA:HB1	23:BM:176:ILE:HD12	1.93	0.49
61:sJ:89:ARG:NH1	63:sL:35:LEU:O	2.45	0.49
1:A0:523:GLY:O	1:A0:527:VAL:HG23	2.12	0.49
5:A4:76:ILE:HG12	5:A4:85:TYR:CD1	2.47	0.49
12:AB:1111:MET:HE2	12:AB:1116:ARG:CA	2.41	0.49
18:AH:93:TYR:CE1	18:AH:145:ARG:NH1	2.81	0.49
27:AR:330:LYS:HA	27:AR:333:LEU:HG	1.93	0.49
60:SI:1254:CYS:O	60:SI:1258:CYS:N	2.46	0.49
66:t3:405:GLU:O	66:t3:406:LYS:C	2.53	0.49
68:t6:467:ASP:OD1	68:t6:467:ASP:N	2.46	0.49
1:B0:104:ARG:NH1	1:B0:204:ASN:OD1	2.46	0.49
1:B0:560:LEU:HD22	1:B0:564:TRP:HB2	1.94	0.49
4:B3:100:ASN:CA	34:ma:139:VAL:HG23	2.40	0.49
34:ma:168:LYS:HA	34:ma:171:GLN:HG2	1.95	0.49
57:sC:97:GLU:OE2	57:sC:97:GLU:N	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:sE:101:GLY:O	58:sE:189:ARG:NH1	2.45	0.49
60:sI:1020:SER:OG	60:sI:1021:GLU:N	2.45	0.49
63:sL:12:ILE:HG23	63:sL:21:VAL:HG22	1.94	0.49
1:A0:331:PHE:CE2	1:A0:335:LEU:HD23	2.47	0.49
3:A2:490:LYS:HE3	6:A5:35:LEU:HD22	1.94	0.49
12:AB:21:GLU:O	12:AB:22:SER:C	2.56	0.49
12:AB:319:GLU:OE1	12:AB:319:GLU:N	2.46	0.49
61:SJ:89:ARG:NH1	63:SL:35:LEU:O	2.45	0.49
62:SK:88:ARG:NH2	62:SK:130:LYS:O	2.45	0.49
66:T3:869:ARG:HH21	66:T3:882:LEU:HD23	1.76	0.49
65:t2:60:GLU:O	65:t2:67:ARG:NH2	2.46	0.49
68:t6:877:GLN:NE2	68:t6:882:GLY:O	2.44	0.49
3:B2:506:LYS:HZ1	9:sF:396:THR:HB	1.75	0.49
3:B2:507:ARG:NH2	9:sF:393:LYS:HB3	2.28	0.49
6:B5:10:VAL:HG23	6:B5:40:LEU:HB2	1.94	0.49
12:BB:1111:MET:HE1	12:BB:1117:GLN:O	2.12	0.49
13:BC:217:ASP:N	13:BC:217:ASP:OD1	2.45	0.49
18:BH:129:TYR:C	18:BH:129:TYR:CG	2.89	0.49
25:BO:205:LEU:HB2	25:BO:213:VAL:HB	1.94	0.49
9:nF:677:GLN:CB	9:sF:624:ASP:HB2	2.35	0.49
1:A0:25:MET:HE1	1:A0:52:LEU:HA	1.94	0.49
1:A0:104:ARG:NH1	1:A0:204:ASN:OD1	2.46	0.49
7:A6:154:ILE:HD11	7:A6:197:LYS:HE3	1.95	0.49
11:AA:465:TYR:HB2	12:AB:976:ILE:HD12	1.94	0.49
12:AB:1111:MET:HE1	12:AB:1117:GLN:O	2.12	0.49
68:t6:266:GLN:NE2	68:t6:276:LYS:O	2.46	0.49
10:B9:236:TRP:CZ2	10:B9:240:LYS:HE3	2.48	0.49
14:BD:119:ARG:NH2	14:BD:155:ARG:NH2	2.61	0.49
18:BH:109:LYS:CA	43:mj:83:LEU:HD12	2.42	0.49
49:mp:297:PRO:HG2	49:mp:300:ILE:HD12	1.94	0.49
52:nt:88:TYR:HA	52:nt:91:LYS:HG2	1.93	0.49
62:sK:181:ARG:NH1	62:sK:182:SER:O	2.45	0.49
1:A0:560:LEU:HD22	1:A0:564:TRP:HB2	1.94	0.49
9:A8:786:LEU:HD13	9:A8:786:LEU:HD21	1.88	0.49
10:A9:236:TRP:CZ2	10:A9:240:LYS:HE3	2.48	0.49
11:AA:1395:GLY:O	11:AA:1399:ARG:NH1	2.46	0.49
14:AD:158:GLU:HG3	35:Mb:45:HIS:ND1	2.27	0.49
25:AO:88:HIS:O	25:AO:90:ARG:NH2	2.45	0.49
32:AW:36:SER:OG	32:AW:205:ARG:NH2	2.45	0.49
32:AW:108:ARG:NH2	33:AX:262:MET:O	2.45	0.49
45:MI:245:ARG:NH2	45:MI:248:ASP:OD2	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:SI:1220:LYS:HA	60:SI:1225:GLN:HG2	1.95	0.49
66:t3:301:ASN:HD22	66:t3:974:LEU:HB3	1.78	0.49
68:t6:651:TYR:OH	68:t6:910:CYS:SG	2.61	0.49
1:B0:623:ILE:HD13	1:B0:682:ALA:HB3	1.94	0.49
11:BA:465:TYR:HB2	12:BB:976:ILE:HD12	1.94	0.49
18:BH:93:TYR:CE1	18:BH:145:ARG:NH1	2.81	0.49
41:mh:134:VAL:HA	41:mh:137:GLU:HG2	1.94	0.49
46:mm:24:THR:OG1	46:mm:25:TYR:N	2.45	0.49
48:mo:19:LEU:HD12	48:mo:20:PRO:HD2	1.94	0.49
50:nP:1191:LEU:HD23	50:nP:1194:GLN:NE2	2.27	0.49
53:nu:64:GLU:O	53:nu:68:ASN:ND2	2.46	0.49
60:sI:1254:CYS:O	60:sI:1258:CYS:N	2.46	0.49
1:A0:261:THR:O	1:A0:265:ASN:ND2	2.46	0.49
55:SA:381:LEU:HG	55:SA:385:LEU:HD22	1.94	0.49
62:SK:316:PRO:HG3	62:SK:327:ASP:HB2	1.95	0.49
45:T4:981:THR:OG1	45:T4:1004:ALA:N	2.46	0.49
1:B0:539:VAL:HG12	1:B0:621:LEU:HD23	1.94	0.49
32:BW:103:HIS:O	32:BW:107:GLN:NE2	2.46	0.49
39:mf:175:ALA:O	39:mf:178:ARG:NH2	2.46	0.49
53:nu:29:ARG:NH1	54:nv:36:GLU:OE2	2.45	0.49
62:sK:121:GLU:OE2	62:sK:464:LYS:NZ	2.44	0.49
2:A1:493:ASN:OD1	2:A1:494:GLU:N	2.46	0.49
33:AX:228:SER:OG	33:AX:250:GLY:O	2.30	0.49
33:AX:272:ALA:O	33:AX:276:ARG:NH1	2.46	0.49
37:Md:86:LEU:HD12	37:Md:87:VAL:HG23	1.95	0.49
39:Mf:175:ALA:O	39:Mf:178:ARG:NH2	2.46	0.49
65:T2:60:GLU:O	65:T2:67:ARG:NH2	2.46	0.49
66:T3:289:LYS:CG	66:T3:289:LYS:CA	2.88	0.49
68:T6:934:ARG:HG2	68:T6:937:ASN:HD21	1.78	0.49
45:t4:1070:HIS:O	45:t4:1074:LYS:N	2.46	0.49
68:t6:144:THR:OG1	68:t6:146:GLU:OE2	2.19	0.49
68:t6:801:LYS:CE	19:BI:117:LYS:CG	2.88	0.49
33:BX:272:ALA:O	33:BX:276:ARG:NH1	2.46	0.49
50:nP:1239:GLY:HA2	50:nP:1253:LEU:HD23	1.94	0.49
38:Me:231:GLU:OE1	38:Me:233:GLN:NE2	2.46	0.48
40:Mg:113:GLU:HA	40:Mg:116:VAL:HG12	1.95	0.48
50:NP:1286:ILE:HG22	50:NP:1287:LEU:HD22	1.95	0.48
45:T4:909:PRO:O	45:T4:913:ASN:ND2	2.46	0.48
45:T4:1070:HIS:O	45:T4:1074:LYS:N	2.46	0.48
1:B0:261:THR:O	1:B0:265:ASN:ND2	2.46	0.48
11:BA:146:MET:O	11:BA:146:MET:HE3	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:BB:21:GLU:OE2	12:BB:656:GLY:N	2.32	0.48
28:BS:175:ALA:HA	28:BS:178:ILE:HG12	1.94	0.48
33:BX:228:SER:OG	33:BX:250:GLY:O	2.30	0.48
58:sE:48:GLN:OE1	58:sE:49:ILE:HG23	2.12	0.48
60:sI:979:LEU:HA	60:sI:982:ILE:HG22	1.94	0.48
3:A2:150:MET:HE1	3:A2:173:MET:SD	2.52	0.48
14:AD:39:ASN:OD1	14:AD:43:GLU:N	2.44	0.48
53:Nu:64:GLU:O	53:Nu:68:ASN:ND2	2.46	0.48
53:Nu:91:GLU:HB3	53:Nu:95:LYS:NZ	2.28	0.48
56:SB:619:ASN:ND2	56:SB:622:THR:OG1	2.43	0.48
57:SC:129:ASP:OD1	57:SC:129:ASP:N	2.46	0.48
66:T3:1095:ARG:O	66:T3:1099:ASN:ND2	2.46	0.48
68:T6:266:GLN:NE2	68:T6:276:LYS:O	2.46	0.48
64:t1:92:SER:HA	65:t2:37:ARG:HH22	1.78	0.48
45:t4:909:PRO:O	45:t4:913:ASN:ND2	2.46	0.48
1:B0:25:MET:HE1	1:B0:52:LEU:HA	1.94	0.48
1:B0:625:ILE:HD12	1:B0:627:PHE:CD2	2.47	0.48
2:B1:493:ASN:OD1	2:B1:494:GLU:N	2.46	0.48
19:BI:76:PRO:HB2	19:BI:77:LYS:NZ	2.28	0.48
31:BV:25:THR:O	31:BV:28:SER:OG	2.25	0.48
45:ml:245:ARG:NH2	45:ml:248:ASP:OD2	2.46	0.48
56:sD:305:ILE:HA	56:sD:394:GLN:HE22	1.78	0.48
19:AI:117:LYS:HG2	68:T6:801:LYS:CD	2.42	0.48
46:Mm:24:THR:OG1	46:Mm:25:TYR:N	2.45	0.48
56:SB:440:LEU:HD12	56:SB:444:MET:HE1	1.95	0.48
60:SI:979:LEU:HA	60:SI:982:ILE:HG22	1.94	0.48
62:SK:187:ASP:N	62:SK:187:ASP:OD1	2.46	0.48
64:T1:92:SER:HA	65:T2:37:ARG:HH22	1.78	0.48
68:T6:342:ASP:OD2	68:T6:387:LYS:NZ	2.46	0.48
3:B2:490:LYS:HE3	6:B5:35:LEU:HD22	1.94	0.48
5:B4:146:ARG:NH2	7:B6:455:GLU:OE2	2.45	0.48
14:BD:213:GLU:CG	35:mb:38:MET:HE2	2.24	0.48
18:BH:108:SER:OG	18:BH:109:LYS:CE	2.61	0.48
23:BM:227:THR:H	23:BM:230:MET:HE1	1.78	0.48
38:me:231:GLU:OE1	38:me:233:GLN:NE2	2.46	0.48
44:mk:130:VAL:HG21	44:mk:140:VAL:HG11	1.96	0.48
46:mm:51:ASN:ND2	46:mm:55:THR:O	2.46	0.48
56:sD:304:GLU:OE2	58:sE:552:ASN:HA	2.13	0.48
1:A0:623:ILE:HD13	1:A0:682:ALA:HB3	1.94	0.48
3:A2:39:LEU:HD21	3:A2:47:ILE:HD12	1.94	0.48
12:AB:21:GLU:OE2	12:AB:656:GLY:N	2.32	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:AW:103:HIS:O	32:AW:107:GLN:NE2	2.46	0.48
45:MI:722:MET:HA	45:MI:725:GLU:HB2	1.95	0.48
49:MP:351:VAL:HA	49:MP:558:ILE:HD11	1.96	0.48
58:SE:48:GLN:OE1	58:SE:49:ILE:HG23	2.12	0.48
63:SL:11:ILE:HG23	63:SL:112:LEU:HD22	1.94	0.48
45:T4:896:VAL:O	45:T4:908:GLN:NE2	2.38	0.48
8:B7:243:GLN:HE21	8:B7:244:MET:HE3	1.77	0.48
51:NO:62:ILE:HG23	51:NO:93:GLN:HE21	1.78	0.48
3:A2:507:ARG:NH2	9:SF:393:LYS:HB3	2.28	0.48
14:AD:119:ARG:NH2	14:AD:155:ARG:NH2	2.61	0.48
23:AM:227:THR:H	23:AM:230:MET:HE1	1.78	0.48
56:SB:578:ASP:OD1	56:SB:578:ASP:N	2.46	0.48
61:SJ:24:SER:OG	61:SJ:66:ASN:ND2	2.44	0.48
66:T3:438:ASP:OD1	66:T3:441:HIS:ND1	2.43	0.48
66:t3:1095:ARG:O	66:t3:1099:ASN:ND2	2.46	0.48
68:t6:55:LEU:O	68:t6:164:MET:HE1	2.14	0.48
1:B0:538:VAL:HG12	1:B0:598:LEU:HB2	1.96	0.48
11:BA:1395:GLY:O	11:BA:1399:ARG:NH1	2.46	0.48
14:BD:119:ARG:HE	14:BD:123:LEU:HD23	1.78	0.48
32:BW:73:ARG:O	32:BW:220:ASN:ND2	2.43	0.48
50:nP:1286:ILE:HG22	50:nP:1287:LEU:HD22	1.95	0.48
55:sA:381:LEU:HG	55:sA:385:LEU:HD22	1.94	0.48
1:A0:272:SER:OG	1:A0:276:LYS:NZ	2.32	0.48
11:AA:198:GLU:O	11:AA:200:ARG:N	2.47	0.48
18:AH:108:SER:OG	18:AH:109:LYS:CE	2.61	0.48
19:AI:76:PRO:HB2	19:AI:77:LYS:NZ	2.28	0.48
35:Mb:139:LEU:O	35:Mb:141:LYS:NZ	2.43	0.48
41:Mh:134:VAL:HA	41:Mh:137:GLU:HG2	1.94	0.48
68:T6:55:LEU:O	68:T6:164:MET:HE1	2.14	0.48
66:t3:698:ASP:HA	66:t3:702:ASN:HD22	1.79	0.48
66:t3:1087:SER:OG	66:t3:1088:PHE:N	2.47	0.48
68:t6:627:MET:SD	68:t6:649:ILE:HD11	2.54	0.48
68:t6:846:HIS:CD2	19:BI:74:GLU:OE2	2.66	0.48
3:B2:149:PHE:HB2	3:B2:155:LEU:HD21	1.95	0.48
49:mp:351:VAL:HA	49:mp:558:ILE:HD11	1.96	0.48
9:sF:505:THR:O	9:sF:509:HIS:ND1	2.47	0.48
63:sL:416:PHE:HB3	63:sL:419:TRP:HD1	1.77	0.48
12:AB:1111:MET:HE3	12:AB:1112:GLN:H	1.78	0.48
17:AG:60:ARG:HH21	17:AG:62:LEU:HD23	1.79	0.48
20:AJ:69:ARG:HA	20:AJ:69:ARG:HE	1.78	0.48
55:SA:298:LEU:HB2	55:SA:420:PRO:HB3	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:SE:276:ILE:HG13	58:SE:277:VAL:HG23	1.96	0.48
58:SE:290:ILE:HG21	9:SF:745:VAL:HG11	1.94	0.48
9:SF:505:THR:O	9:SF:509:HIS:ND1	2.47	0.48
68:t6:342:ASP:OD2	68:t6:387:LYS:NZ	2.46	0.48
68:t6:559:SER:OG	68:t6:566:ALA:HB2	2.14	0.48
68:t6:779:LEU:O	68:t6:783:GLU:HB2	2.14	0.48
4:B3:95:THR:OG1	4:B3:97:ASP:OD1	2.26	0.48
8:B7:483:GLY:O	8:B7:508:HIS:ND1	2.47	0.48
14:BD:39:ASN:OD1	14:BD:43:GLU:N	2.44	0.48
23:BM:303:GLN:NE2	27:BR:271:ARG:C	2.65	0.48
35:mb:153:ARG:NH1	40:mg:34:ASN:O	2.46	0.48
50:sH:455:MET:HE3	50:sH:456:PRO:HD2	1.94	0.48
62:sK:187:ASP:N	62:sK:187:ASP:OD1	2.46	0.48
1:A0:485:MET:HE3	1:A0:486:THR:C	2.39	0.48
1:A0:538:VAL:HG12	1:A0:598:LEU:HB2	1.96	0.48
5:A4:303:ASN:O	5:A4:311:GLN:NE2	2.46	0.48
8:A7:483:GLY:O	8:A7:508:HIS:ND1	2.47	0.48
8:A7:628:TYR:O	8:A7:629:GLY:N	2.47	0.48
11:AA:146:MET:O	11:AA:146:MET:HE3	2.13	0.48
23:AM:191:GLU:OE2	27:AR:268:MET:HG3	2.13	0.48
34:Ma:190:ASP:OD2	37:Md:203:ARG:NH1	2.47	0.48
38:Me:50:GLU:OE2	39:Mf:47:LYS:NZ	2.46	0.48
41:Mh:92:ASN:O	41:Mh:96:ASN:ND2	2.47	0.48
47:Mn:24:ASN:O	47:Mn:28:LYS:NZ	2.46	0.48
9:Nf:673:ARG:HH12	54:Nv:110:HIS:CE1	2.31	0.48
51:No:62:ILE:HG23	51:No:93:GLN:HE21	1.78	0.48
60:SI:1212:LEU:O	60:SI:1216:ASN:ND2	2.47	0.48
39:mf:106:THR:O	39:mf:110:SER:HB3	2.14	0.48
9:nF:677:GLN:CG	9:sF:624:ASP:N	2.76	0.48
50:nP:674:THR:O	50:nP:678:ARG:NH1	2.46	0.48
55:sA:298:LEU:HB2	55:sA:420:PRO:HB3	1.96	0.48
60:sI:1212:LEU:O	60:sI:1216:ASN:ND2	2.47	0.48
4:A3:110:LEU:HA	4:A3:113:VAL:HG12	1.96	0.48
5:A4:146:ARG:NH2	7:A6:455:GLU:OE2	2.45	0.48
18:AH:116:TYR:HB2	18:AH:123:MET:SD	2.54	0.48
25:AO:205:LEU:HB2	25:AO:213:VAL:HB	1.94	0.48
32:AW:127:CYS:SG	32:AW:129:THR:OG1	2.68	0.48
45:MI:559:ASP:HA	45:MI:562:ILE:HB	1.96	0.48
49:Mp:76:ASP:OD1	49:Mp:76:ASP:N	2.46	0.48
50:NP:929:ASN:OD1	50:NP:1186:ASN:ND2	2.47	0.48
55:SA:544:ASN:ND2	56:SB:578:ASP:O	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:SD:304:GLU:OE2	58:SE:552:ASN:HA	2.13	0.48
7:B6:154:ILE:HD11	7:B6:197:LYS:HE3	1.94	0.48
11:BA:305:ASP:OD1	11:BA:305:ASP:N	2.46	0.48
18:BH:116:TYR:HB2	18:BH:123:MET:SD	2.54	0.48
21:BK:12:LEU:HD21	39:mf:145:SER:CA	2.42	0.48
27:BR:289:ILE:N	27:BR:289:ILE:CB	2.69	0.48
41:mh:92:ASN:O	41:mh:96:ASN:ND2	2.47	0.48
50:nP:758:GLN:NE2	50:nP:762:LEU:O	2.47	0.48
31:AV:25:THR:O	31:AV:28:SER:OG	2.25	0.48
46:Mm:51:ASN:ND2	46:Mm:55:THR:O	2.46	0.48
50:NP:758:GLN:NE2	50:NP:762:LEU:O	2.47	0.48
56:SD:305:ILE:HA	56:SD:394:GLN:HE22	1.78	0.48
66:t3:1114:GLU:HA	66:t3:1117:ILE:HG22	1.95	0.48
1:B0:518:ILE:HG23	1:B0:522:TYR:CE2	2.49	0.48
3:B2:506:LYS:HE3	3:B2:506:LYS:O	2.14	0.48
11:BA:1215:ARG:NH1	11:BA:1219:THR:OG1	2.47	0.48
19:BI:81:ARG:HH11	19:BI:81:ARG:HD3	1.41	0.48
28:BS:171:ILE:HD12	28:BS:171:ILE:HG21	1.53	0.48
45:ml:722:MET:HA	45:ml:725:GLU:HB2	1.95	0.48
9:nF:673:ARG:HH12	54:nv:110:HIS:CE1	2.31	0.48
54:nv:106:GLU:HG2	54:nv:110:HIS:NE2	2.29	0.48
9:sF:389:ASN:O	9:sF:392:MET:N	2.45	0.48
50:sH:592:LEU:CD1	50:sH:592:LEU:HD22	2.43	0.48
1:A0:346:MET:HE1	1:A0:433:PRO:HD2	1.97	0.47
3:A2:408:MET:HE1	3:A2:432:VAL:HG22	1.96	0.47
3:A2:506:LYS:O	3:A2:506:LYS:HE3	2.14	0.47
19:AI:81:ARG:HH22	68:T6:846:HIS:CD2	2.31	0.47
34:Ma:39:LYS:O	34:Ma:44:GLN:NE2	2.47	0.47
9:Nf:677:GLN:CG	9:SF:624:ASP:N	2.76	0.47
60:SI:1020:SER:OG	60:SI:1021:GLU:N	2.45	0.47
66:T3:698:ASP:HA	66:T3:702:ASN:HD22	1.79	0.47
15:BE:157:SER:OG	15:BE:159:ASP:OD1	2.29	0.47
37:md:606:PHE:HB3	37:md:610:LEU:HD23	1.96	0.47
60:sI:1220:LYS:HA	60:sI:1225:GLN:HG2	1.95	0.47
62:sK:316:PRO:HG3	62:sK:327:ASP:HB2	1.95	0.47
52:Np:47:SER:OG	52:Np:48:GLY:N	2.48	0.47
51:Ns:81:ASP:OD1	51:Ns:81:ASP:N	2.46	0.47
63:SL:22:GLN:HB2	63:SL:33:PRO:HA	1.96	0.47
66:t3:371:ARG:O	66:t3:375:ILE:HG12	2.15	0.47
1:B0:560:LEU:CG	1:B0:560:LEU:C	2.87	0.47
37:md:86:LEU:HD12	37:md:87:VAL:HG23	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:me:50:GLU:OE2	39:mf:47:LYS:NZ	2.46	0.47
47:mn:24:ASN:O	47:mn:28:LYS:NZ	2.46	0.47
3:A2:79:LYS:HE3	10:A9:221:ILE:HD11	1.95	0.47
29:AT:-80:DA:OP1	54:Nr:87:ARG:HD3	2.14	0.47
32:AW:37:VAL:HG12	32:AW:88:TYR:HB3	1.96	0.47
49:Mp:200:ILE:HB	49:Mp:213:ALA:HB3	1.96	0.47
51:No:75:ALA:HB2	52:Np:66:ILE:HD11	1.96	0.47
54:Nv:106:GLU:HG2	54:Nv:110:HIS:NE2	2.29	0.47
56:SD:566:LEU:HD11	56:SD:615:VAL:HG21	1.96	0.47
66:T3:301:ASN:HD22	66:T3:974:LEU:HB3	1.78	0.47
68:T6:559:SER:OG	68:T6:566:ALA:HB2	2.14	0.47
68:t6:609:ALA:HB1	68:t6:613:ILE:HD12	1.96	0.47
20:BJ:69:ARG:HE	20:BJ:69:ARG:HA	1.78	0.47
24:BN:-68:DT:H1'	24:BN:-67:DT:H5'	1.97	0.47
24:BN:117:DA:OP2	51:ns:42:ARG:HG2	2.15	0.47
50:nP:929:ASN:OD1	50:nP:1186:ASN:ND2	2.47	0.47
58:sE:68:LEU:HD21	58:sE:211:TRP:HB2	1.96	0.47
3:A2:123:VAL:O	3:A2:238:LYS:N	2.42	0.47
3:A2:149:PHE:HB2	3:A2:155:LEU:HD21	1.95	0.47
35:Mb:153:ARG:NH1	40:Mg:34:ASN:O	2.46	0.47
58:SE:61:ASP:O	58:SE:228:LYS:NZ	2.42	0.47
63:SL:29:THR:OG1	63:SL:30:PHE:N	2.48	0.47
66:T3:539:GLU:OE1	66:T3:542:LYS:NZ	2.47	0.47
66:T3:1114:GLU:HA	66:T3:1117:ILE:HG22	1.95	0.47
66:t3:539:GLU:OE1	66:t3:542:LYS:NZ	2.47	0.47
66:t3:1103:LEU:HD22	66:t3:1113:ASN:HD22	1.80	0.47
45:t4:902:ASN:O	45:t4:905:HIS:ND1	2.44	0.47
68:t6:934:ARG:HG2	68:t6:937:ASN:HD21	1.78	0.47
23:BM:191:GLU:OE2	27:BR:268:MET:HG3	2.13	0.47
24:BN:-106:DA:H2'	24:BN:-105:DA:H8	1.80	0.47
37:md:563:LYS:HG3	37:md:567:LEU:HD23	1.97	0.47
49:mp:315:MET:HE3	49:mp:316:ASN:H	1.80	0.47
49:mp:549:ASP:OD1	49:mp:554:TRP:NE1	2.47	0.47
50:nP:792:ASP:OD1	50:nP:792:ASP:N	2.44	0.47
54:nv:63:MET:HE3	54:nv:63:MET:HB3	1.73	0.47
61:sJ:96:LEU:O	61:sJ:100:HIS:ND1	2.47	0.47
1:A0:321:ILE:HG22	1:A0:323:GLY:H	1.79	0.47
12:AB:789:MET:HE3	12:AB:967:ARG:HB2	1.96	0.47
32:AW:73:ARG:O	32:AW:220:ASN:ND2	2.43	0.47
50:SH:592:LEU:CD1	50:SH:592:LEU:HD22	2.43	0.47
68:T6:203:ILE:HA	68:T6:223:GLN:HA	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
68:t6:297:ILE:HB	68:t6:310:TYR:HB2	1.96	0.47
3:B2:79:LYS:HE3	10:B9:221:ILE:HD11	1.95	0.47
11:BA:198:GLU:O	11:BA:200:ARG:N	2.47	0.47
11:BA:307:ASP:OD2	11:BA:326:ARG:NH1	2.46	0.47
11:BA:885:THR:HG23	11:BA:893:PHE:CE1	2.49	0.47
12:BB:260:GLY:O	12:BB:267:ARG:NH2	2.45	0.47
17:BG:60:ARG:HH21	17:BG:62:LEU:HD23	1.79	0.47
18:BH:136:LYS:HZ1	41:mh:62:ARG:NE	2.12	0.47
34:ma:124:ASP:N	34:ma:124:ASP:OD1	2.48	0.47
40:mg:113:GLU:HA	40:mg:116:VAL:HG12	1.95	0.47
1:A0:560:LEU:CG	1:A0:560:LEU:C	2.87	0.47
11:AA:307:ASP:OD2	11:AA:326:ARG:NH1	2.46	0.47
11:AA:1215:ARG:NH1	11:AA:1219:THR:OG1	2.47	0.47
24:AN:-68:DT:H1'	24:AN:-67:DT:H5'	1.97	0.47
37:Md:563:LYS:HG3	37:Md:567:LEU:HD23	1.97	0.47
39:Mf:106:THR:O	39:Mf:110:SER:HB3	2.14	0.47
49:Mp:315:MET:HE3	49:Mp:316:ASN:H	1.80	0.47
58:SE:539:THR:HG22	9:SF:762:SER:HA	1.97	0.47
66:T3:371:ARG:O	66:T3:375:ILE:HG12	2.15	0.47
68:T6:779:LEU:O	68:T6:783:GLU:HB2	2.14	0.47
66:t3:920:LEU:O	66:t3:924:ILE:HG12	2.14	0.47
67:t5:927:ARG:HD3	12:BB:16:TYR:C	2.40	0.47
3:B2:123:VAL:O	3:B2:238:LYS:N	2.42	0.47
5:B4:76:ILE:HG12	5:B4:85:TYR:CE1	2.50	0.47
11:BA:74:MET:HE2	11:BA:74:MET:N	2.30	0.47
15:BE:24:LYS:NZ	15:BE:30:ILE:O	2.33	0.47
29:BT:-80:DA:OP1	54:nr:87:ARG:HD3	2.14	0.47
11:mA:1573:THR:HG21	35:mb:48:ARG:HD3	1.97	0.47
34:ma:39:LYS:O	34:ma:44:GLN:NE2	2.47	0.47
34:ma:190:ASP:OD2	37:md:203:ARG:NH1	2.47	0.47
9:nF:667:LYS:HE2	9:nF:667:LYS:HB2	1.57	0.47
55:sA:470:ALA:HA	55:sA:473:LEU:HG	1.97	0.47
55:sA:544:ASN:ND2	56:sB:578:ASP:O	2.47	0.47
1:A0:374:LEU:HG	1:A0:410:SER:HB3	1.97	0.47
1:A0:504:VAL:HG11	1:A0:517:SER:HB2	1.97	0.47
1:A0:671:ARG:N	1:A0:675:ASP:OD2	2.48	0.47
3:A2:114:GLY:HA2	5:A4:114:MET:HE1	1.97	0.47
4:A3:49:LEU:CD2	17:AG:164:LYS:CB	2.92	0.47
6:A5:10:VAL:HG23	6:A5:40:LEU:CB	2.45	0.47
8:A7:720:THR:HA	8:A7:723:GLN:HG2	1.97	0.47
11:AA:420:ARG:HD3	38:Me:60:GLU:HG3	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1199:ARG:NH2	11:AA:1234:GLU:O	2.48	0.47
14:AD:119:ARG:HE	14:AD:123:LEU:HD23	1.78	0.47
18:AH:109:LYS:HE3	18:AH:109:LYS:N	2.29	0.47
23:AM:132:LYS:CD	23:AM:172:MET:SD	2.93	0.47
27:AR:289:ILE:N	27:AR:289:ILE:CB	2.69	0.47
33:AX:227:ASP:O	33:AX:229:LYS:NZ	2.41	0.47
34:Ma:7:ASP:OD1	34:Ma:7:ASP:N	2.45	0.47
56:SB:436:ASP:C	56:SB:437:MET:HE2	2.40	0.47
60:SI:707:LEU:HA	60:SI:710:LEU:HD12	1.96	0.47
61:SJ:28:ASP:OD1	61:SJ:28:ASP:N	2.47	0.47
66:T3:920:LEU:O	66:T3:924:ILE:HG12	2.14	0.47
68:T6:297:ILE:HB	68:T6:310:TYR:HB2	1.96	0.47
45:t4:981:THR:OG1	45:t4:1004:ALA:N	2.46	0.47
68:t6:506:SER:OG	68:t6:523:GLN:OE1	2.31	0.47
1:B0:485:MET:HE3	1:B0:486:THR:C	2.39	0.47
4:B3:110:LEU:HA	4:B3:113:VAL:HG12	1.96	0.47
5:B4:303:ASN:O	5:B4:311:GLN:NE2	2.46	0.47
8:B7:458:SER:OG	29:BT:66:DA:OP1	2.23	0.47
11:BA:698:GLN:HA	19:BI:97:MET:HG3	1.97	0.47
11:BA:1199:ARG:NH2	11:BA:1234:GLU:O	2.48	0.47
24:BN:-1:DT:O4	29:BT:0:DC:N4	2.48	0.47
49:mp:45:GLU:HB3	49:mp:53:ARG:HB2	1.96	0.47
49:mp:76:ASP:OD1	49:mp:76:ASP:N	2.46	0.47
51:no:98:ALA:HA	51:no:101:VAL:HG12	1.97	0.47
56:sB:436:ASP:C	56:sB:437:MET:HE2	2.39	0.47
9:sF:476:THR:OG1	9:sF:731:ARG:NH2	2.46	0.47
3:A2:506:LYS:HZ1	9:SF:396:THR:HB	1.80	0.47
8:A7:561:MET:HE3	8:A7:565:PHE:HB2	1.97	0.47
11:AA:305:ASP:N	11:AA:305:ASP:OD1	2.45	0.47
14:AD:152:SER:CB	14:AD:155:ARG:HH21	2.23	0.47
15:AE:157:SER:OG	15:AE:159:ASP:OD1	2.29	0.47
49:Mp:45:GLU:HB3	49:Mp:53:ARG:HB2	1.97	0.47
50:NP:1092:LEU:HA	50:NP:1095:ILE:HG22	1.97	0.47
62:SK:164:CYS:O	62:SK:181:ARG:NH1	2.48	0.47
62:SK:230:GLN:O	62:SK:234:THR:OG1	2.30	0.47
68:T6:627:MET:SD	68:T6:649:ILE:HD11	2.54	0.47
12:BB:789:MET:HE3	12:BB:967:ARG:HB2	1.96	0.47
51:ns:81:ASP:OD1	51:ns:81:ASP:N	2.46	0.47
60:sI:759:LEU:HD12	60:sI:914:ILE:HG23	1.96	0.47
61:sJ:2:ASP:N	61:sJ:2:ASP:OD1	2.45	0.47
1:A0:518:ILE:HG23	1:A0:522:TYR:CE2	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A5:5:ARG:HD2	6:A5:5:ARG:HA	1.47	0.47
6:A5:12:CYS:SG	6:A5:13:ASP:N	2.85	0.47
11:AA:74:MET:HE2	11:AA:74:MET:N	2.30	0.47
11:AA:1317:MET:CE	15:AE:142:VAL:HG21	2.42	0.47
9:Nf:677:GLN:CG	9:SF:624:ASP:HA	2.44	0.47
67:T5:849:ARG:O	67:T5:853:LEU:HD23	2.15	0.47
66:t3:783:ILE:O	66:t3:787:ILE:HG12	2.15	0.47
45:t4:1001:ILE:HG23	45:t4:1055:VAL:HB	1.97	0.47
3:B2:63:ASP:C	9:B8:780:ILE:CD1	2.88	0.47
6:B5:10:VAL:HG23	6:B5:40:LEU:CB	2.45	0.47
8:B7:628:TYR:O	8:B7:629:GLY:N	2.47	0.47
12:BB:860:MET:HA	12:BB:860:MET:HE2	1.97	0.47
63:sL:29:THR:OG1	63:sL:30:PHE:N	2.48	0.47
8:A7:135:SER:OG	8:A7:140:ARG:N	2.47	0.47
11:AA:590:ARG:CZ	11:AA:605:MET:HE1	2.45	0.47
19:AI:77:LYS:H	19:AI:77:LYS:HG2	1.58	0.47
24:AN:-1:DT:O4	29:AT:0:DC:N4	2.48	0.47
32:AW:165:ASN:OD1	32:AW:166:LYS:N	2.48	0.47
42:Mi:208:ASP:OD1	42:Mi:211:ARG:NH1	2.48	0.47
55:SA:470:ALA:HA	55:SA:473:LEU:HG	1.97	0.47
58:SE:68:LEU:HD21	58:SE:211:TRP:HB2	1.96	0.47
68:T6:393:PRO:HA	68:T6:425:TYR:HA	1.97	0.47
3:B2:267:SER:OG	3:B2:268:ILE:N	2.46	0.47
7:B6:214:LEU:CD1	7:B6:250:THR:HG21	2.45	0.47
42:mi:208:ASP:OD1	42:mi:211:ARG:NH1	2.48	0.47
45:ml:559:ASP:HA	45:ml:562:ILE:HB	1.96	0.47
50:nP:1092:LEU:HA	50:nP:1095:ILE:HG22	1.97	0.47
56:sD:566:LEU:HD11	56:sD:615:VAL:HG21	1.97	0.47
62:sK:67:VAL:HG23	62:sK:218:THR:HG22	1.97	0.47
63:sL:22:GLN:HB2	63:sL:33:PRO:HA	1.96	0.47
12:AB:593:PRO:HA	12:AB:596:LEU:HD21	1.98	0.46
13:AC:260:LEU:CD2	39:Mf:14:PRO:HB3	2.23	0.46
19:AI:117:LYS:HG2	68:T6:801:LYS:HD3	1.97	0.46
44:Mk:130:VAL:HG21	44:Mk:140:VAL:HG11	1.96	0.46
45:Ml:174:MET:O	45:Ml:178:ASN:ND2	2.48	0.46
45:Ml:516:LYS:HB2	45:Ml:525:TYR:HD2	1.80	0.46
9:Nf:677:GLN:CD	9:SF:624:ASP:N	2.73	0.46
56:SB:440:LEU:O	56:SB:444:MET:HE3	2.15	0.46
50:SH:647:ARG:HH22	50:SH:651:LYS:HD2	1.80	0.46
66:T3:518:SER:O	66:T3:524:GLN:NE2	2.47	0.46
66:T3:783:ILE:O	66:T3:787:ILE:HG12	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
68:T6:411:ASP:OD1	68:T6:411:ASP:N	2.48	0.46
66:t3:306:TRP:HD1	66:t3:580:SER:HA	1.80	0.46
66:t3:483:ASN:OD1	66:t3:487:ILE:N	2.47	0.46
66:t3:518:SER:O	66:t3:524:GLN:NE2	2.47	0.46
68:t6:203:ILE:HA	68:t6:223:GLN:HA	1.96	0.46
3:B2:60:LEU:CD2	9:B8:779:HIS:O	2.64	0.46
7:B6:174:MET:HA	7:B6:179:ALA:HA	1.98	0.46
8:B7:135:SER:OG	8:B7:140:ARG:N	2.47	0.46
8:B7:370:LEU:HA	8:B7:373:MET:HE3	1.97	0.46
11:BA:362:ASP:OD1	11:BA:362:ASP:N	2.48	0.46
12:BB:21:GLU:O	12:BB:22:SER:C	2.56	0.46
32:BW:37:VAL:HG12	32:BW:88:TYR:HB3	1.96	0.46
32:BW:165:ASN:OD1	32:BW:166:LYS:N	2.48	0.46
44:mk:102:GLU:HA	44:mk:105:ARG:HD3	1.97	0.46
45:ml:745:ILE:HG22	45:ml:769:LEU:HB3	1.97	0.46
62:sK:81:ASP:N	62:sK:81:ASP:OD1	2.47	0.46
3:A2:63:ASP:C	9:A8:780:ILE:CD1	2.88	0.46
5:A4:76:ILE:HG12	5:A4:85:TYR:CE1	2.50	0.46
12:AB:294:ASP:OD1	12:AB:294:ASP:N	2.48	0.46
12:AB:860:MET:HE2	12:AB:860:MET:HA	1.97	0.46
50:NP:762:LEU:HD21	50:NP:807:THR:HG21	1.97	0.46
56:SB:685:GLU:HA	56:SB:688:ARG:HG2	1.97	0.46
66:T3:306:TRP:HD1	66:T3:580:SER:HA	1.80	0.46
66:T3:1087:SER:OG	66:T3:1088:PHE:N	2.47	0.46
45:T4:1001:ILE:HG23	45:T4:1055:VAL:HB	1.97	0.46
68:T6:643:GLU:H	68:T6:643:GLU:HG2	1.52	0.46
1:B0:321:ILE:HG22	1:B0:323:GLY:H	1.79	0.46
5:B4:194:ILE:HA	5:B4:197:MET:HE2	1.97	0.46
49:mp:200:ILE:HB	49:mp:213:ALA:HB3	1.96	0.46
56:sB:440:LEU:O	56:sB:444:MET:HE3	2.15	0.46
9:sF:315:ASP:OD1	60:sI:658:ARG:NH2	2.45	0.46
50:sH:620:GLN:O	50:sH:624:ASN:ND2	2.48	0.46
60:sI:707:LEU:HA	60:sI:710:LEU:HD12	1.96	0.46
3:A2:130:VAL:HG12	3:A2:133:ASP:HB3	1.97	0.46
12:AB:296:GLU:OE1	19:AI:11:ASN:ND2	2.48	0.46
16:AF:103:MET:O	16:AF:103:MET:HE3	2.15	0.46
24:AN:-106:DA:H2'	24:AN:-105:DA:H8	1.80	0.46
29:AT:64:DG:H2'	29:AT:65:DT:H71	1.98	0.46
38:Me:204:MET:HE3	38:Me:204:MET:HB3	1.86	0.46
49:Mp:62:VAL:HB	49:Mp:80:VAL:HB	1.97	0.46
58:SE:101:GLY:O	58:SE:189:ARG:NH1	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:SI:716:SER:OG	60:SI:721:GLU:OE2	2.31	0.46
45:T4:917:ASP:HB3	45:T4:920:PHE:HD2	1.81	0.46
68:t6:670:ILE:HA	68:t6:673:ILE:HD12	1.97	0.46
3:B2:408:MET:HE1	3:B2:432:VAL:HG22	1.96	0.46
7:B6:214:LEU:HD12	7:B6:215:GLU:N	2.30	0.46
13:BC:5:GLY:O	13:BC:7:GLN:NE2	2.49	0.46
16:BF:79:ARG:NH2	16:BF:150:GLU:OE2	2.44	0.46
11:mA:1671:THR:HG22	45:ml:163:ILE:HD12	1.96	0.46
51:ns:122:LYS:HA	51:ns:125:GLN:CD	2.41	0.46
56:sB:685:GLU:HA	56:sB:688:ARG:HG2	1.97	0.46
58:sE:276:ILE:HG13	58:sE:277:VAL:HG23	1.95	0.46
50:sH:647:ARG:HH22	50:sH:651:LYS:HD2	1.80	0.46
5:A4:77:ALA:N	5:A4:84:LYS:O	2.40	0.46
5:A4:188:ASP:N	5:A4:188:ASP:OD1	2.45	0.46
11:AA:1444:MET:HG2	17:AG:58:ARG:NH1	2.30	0.46
61:SJ:96:LEU:O	61:SJ:100:HIS:ND1	2.47	0.46
66:T3:360:HIS:HD2	66:T3:919:TYR:CE2	2.26	0.46
68:T6:609:ALA:HB1	68:T6:613:ILE:HD12	1.96	0.46
45:t4:917:ASP:HB3	45:t4:920:PHE:HD2	1.81	0.46
68:t6:662:VAL:HB	68:t6:695:LEU:HD21	1.98	0.46
11:BA:1317:MET:CE	15:BE:142:VAL:HG21	2.42	0.46
16:BF:103:MET:O	16:BF:103:MET:HE3	2.15	0.46
18:BH:109:LYS:HE3	18:BH:109:LYS:N	2.29	0.46
49:mp:62:VAL:HB	49:mp:80:VAL:HB	1.97	0.46
52:np:47:SER:OG	52:np:48:GLY:N	2.47	0.46
57:sC:129:ASP:OD1	57:sC:129:ASP:N	2.46	0.46
60:sI:932:ASP:OD1	60:sI:932:ASP:N	2.45	0.46
62:sK:164:CYS:O	62:sK:181:ARG:NH1	2.48	0.46
7:A6:214:LEU:HD11	7:A6:250:THR:HG21	1.98	0.46
11:AA:1257:ASP:OD1	11:AA:1258:HIS:N	2.49	0.46
24:AN:-106:DA:H2'	24:AN:-105:DA:C8	2.51	0.46
28:AS:187:ASN:HB2	28:AS:228:LEU:HD11	1.97	0.46
49:Mp:537:ILE:HB	49:Mp:545:CYS:HB3	1.98	0.46
51:No:98:ALA:HA	51:No:101:VAL:HG12	1.97	0.46
9:SF:389:ASN:O	9:SF:392:MET:N	2.45	0.46
50:SH:620:GLN:O	50:SH:624:ASN:ND2	2.48	0.46
63:SL:295:GLY:O	63:SL:298:ARG:NH1	2.49	0.46
66:T3:541:VAL:HG22	66:T3:578:ILE:HD13	1.98	0.46
66:t3:830:SER:HB2	66:t3:841:ALA:HB1	1.97	0.46
3:B2:114:GLY:HA2	5:B4:114:MET:HE1	1.97	0.46
13:BC:260:LEU:CD2	39:mf:14:PRO:HB3	2.23	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:sA:186:VAL:HG22	55:sA:267:LYS:HG3	1.98	0.46
1:A0:374:LEU:HD12	1:A0:406:ALA:HB1	1.97	0.46
7:A6:174:MET:HA	7:A6:179:ALA:HA	1.98	0.46
11:AA:99:ILE:CG2	11:AA:234:MET:HE2	2.46	0.46
11:AA:698:GLN:HA	19:AI:97:MET:HG3	1.97	0.46
18:AH:109:LYS:C	43:Mj:83:LEU:HD12	2.41	0.46
51:Ns:122:LYS:HA	51:Ns:125:GLN:CD	2.41	0.46
63:SL:161:ILE:HG13	63:SL:334:ILE:HD13	1.97	0.46
63:SL:369:ARG:NH1	63:SL:396:PRO:O	2.49	0.46
66:T3:830:SER:HB2	66:T3:841:ALA:HB1	1.96	0.46
66:T3:1103:LEU:HD22	66:T3:1113:ASN:HD22	1.80	0.46
68:T6:467:ASP:N	68:T6:467:ASP:OD1	2.46	0.46
66:t3:364:SER:HB2	66:t3:366:LEU:HD13	1.98	0.46
66:t3:869:ARG:NH2	66:t3:882:LEU:HD23	2.31	0.46
1:B0:555:GLN:O	1:B0:560:LEU:N	2.31	0.46
6:B5:5:ARG:HA	6:B5:5:ARG:HD2	1.47	0.46
11:BA:511:ILE:HA	11:BA:521:MET:CE	2.46	0.46
19:BI:78:CYS:C	19:BI:79:HIS:CG	2.93	0.46
29:BT:106:DT:H2'	29:BT:107:DA:C8	2.51	0.46
46:mm:64:TYR:HB2	46:mm:67:GLN:HB2	1.97	0.46
51:no:75:ALA:HB2	52:np:66:ILE:HD11	1.96	0.46
53:nu:41:GLU:CD	53:nu:42:ARG:HG3	2.41	0.46
56:sD:320:HIS:HD2	56:sD:322:ILE:HG12	1.81	0.46
56:sD:356:LEU:HD12	9:sF:738:LEU:HD21	1.98	0.46
58:sE:550:ASN:HD22	9:sF:751:SER:C	2.24	0.46
7:A6:98:LEU:O	7:A6:102:ILE:HG12	2.16	0.46
19:AI:78:CYS:C	19:AI:79:HIS:CG	2.93	0.46
11:MA:1671:THR:HG22	45:MI:163:ILE:HD12	1.96	0.46
55:SA:399:ASP:OD1	55:SA:399:ASP:N	2.43	0.46
9:SF:316:PRO:HA	9:SF:317:PRO:HD3	1.82	0.46
65:T2:77:LYS:HA	65:T2:80:GLN:NE2	2.30	0.46
66:T3:364:SER:HB2	66:T3:366:LEU:HD13	1.98	0.46
66:T3:869:ARG:NH2	66:T3:882:LEU:HD23	2.31	0.46
45:T4:1023:ARG:NH1	45:T4:1027:PHE:O	2.48	0.46
67:t5:849:ARG:O	67:t5:853:LEU:HD23	2.15	0.46
1:B0:504:VAL:HG11	1:B0:517:SER:HB2	1.97	0.46
29:BT:64:DG:H2'	29:BT:65:DT:H71	1.98	0.46
32:BW:127:CYS:SG	32:BW:129:THR:OG1	2.68	0.46
32:BW:160:ASP:OD1	32:BW:163:LYS:NZ	2.49	0.46
9:sF:624:ASP:O	9:sF:627:SER:OG	2.34	0.46
60:sI:716:SER:OG	60:sI:721:GLU:OE2	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:sJ:28:ASP:OD1	61:sJ:28:ASP:N	2.47	0.46
63:sL:369:ARG:NH1	63:sL:396:PRO:O	2.49	0.46
1:A0:241:ASP:N	1:A0:241:ASP:OD1	2.49	0.46
3:A2:506:LYS:CD	9:SF:396:THR:HG21	2.45	0.46
3:A2:507:ARG:CB	9:SF:393:LYS:HZ2	2.29	0.46
5:A4:146:ARG:NH1	7:A6:457:LYS:O	2.49	0.46
5:A4:194:ILE:HA	5:A4:197:MET:HE2	1.98	0.46
7:A6:136:MET:HB2	7:A6:145:ARG:HB2	1.98	0.46
11:AA:1225:PHE:N	11:AA:1241:ARG:O	2.49	0.46
13:AC:5:GLY:O	13:AC:7:GLN:NE2	2.49	0.46
17:AG:96:GLN:HG2	32:AW:145:THR:O	2.16	0.46
19:AI:117:LYS:HG3	68:T6:834:PHE:CZ	2.51	0.46
37:Md:606:PHE:HB3	37:Md:610:LEU:HD23	1.96	0.46
41:Mh:82:GLU:HA	41:Mh:85:LYS:HG2	1.97	0.46
58:SE:550:ASN:HD22	9:SF:751:SER:C	2.24	0.46
62:SK:67:VAL:HG23	62:SK:218:THR:HG22	1.97	0.46
67:T5:922:THR:OG1	67:T5:923:LYS:N	2.41	0.46
66:t3:739:THR:CB	49:mp:154:ALA:HA	2.07	0.46
45:t4:1023:ARG:NH1	45:t4:1027:PHE:O	2.48	0.46
1:B0:346:MET:HE1	1:B0:433:PRO:HD2	1.97	0.46
1:B0:374:LEU:HD12	1:B0:406:ALA:HB1	1.98	0.46
3:B2:196:ILE:HD13	3:B2:196:ILE:HG21	1.76	0.46
11:BA:99:ILE:CG2	11:BA:234:MET:HE2	2.46	0.46
11:BA:590:ARG:CZ	11:BA:605:MET:HE1	2.45	0.46
11:BA:1257:ASP:OD1	11:BA:1258:HIS:N	2.49	0.46
12:BB:1111:MET:HE3	12:BB:1112:GLN:H	1.78	0.46
24:BN:-106:DA:H2'	24:BN:-105:DA:C8	2.51	0.46
41:mh:82:GLU:HA	41:mh:85:LYS:HG2	1.97	0.46
55:sA:186:VAL:HB	55:sA:296:SER:HB2	1.98	0.46
1:A0:520:ARG:NH1	1:A0:557:MET:SD	2.88	0.46
1:A0:683:ASP:OD1	1:A0:684:ARG:N	2.47	0.46
24:AN:117:DA:OP2	51:Ns:42:ARG:HG2	2.15	0.46
11:MA:1573:THR:HG21	35:Mb:48:ARG:HD3	1.97	0.46
42:Mi:29:GLU:O	42:Mi:33:LYS:NZ	2.49	0.46
45:MI:628:ARG:NH1	45:MI:629:LEU:O	2.49	0.46
7:B6:98:LEU:O	7:B6:102:ILE:HG12	2.16	0.46
37:md:467:ILE:HB	37:md:474:PHE:HB2	1.98	0.46
9:nF:668:ASP:O	9:nF:672:ARG:HG3	2.16	0.46
63:sL:161:ILE:HG13	63:sL:334:ILE:HD13	1.97	0.46
63:sL:172:ILE:HD11	63:sL:179:GLN:HB2	1.98	0.46
63:sL:363:GLU:HA	63:sL:366:LYS:HG2	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A2:455:GLU:C	3:A2:495:LYS:HG3	2.41	0.46
7:A6:214:LEU:CD1	7:A6:250:THR:HG21	2.45	0.46
11:AA:362:ASP:OD1	11:AA:362:ASP:N	2.48	0.46
11:AA:511:ILE:HA	11:AA:521:MET:CE	2.46	0.46
11:AA:525:GLN:NE2	12:AB:836:GLU:OE2	2.49	0.46
15:AE:34:GLU:O	15:AE:37:LEU:HD23	2.16	0.46
24:AN:-54:DG:H2''	24:AN:-53:DA:C8	2.51	0.46
28:AS:201:ILE:O	28:AS:205:ASN:ND2	2.49	0.46
29:AT:106:DT:H2'	29:AT:107:DA:C8	2.51	0.46
34:Ma:124:ASP:OD1	34:Ma:124:ASP:N	2.48	0.46
9:Nf:667:LYS:HE2	9:Nf:667:LYS:HB2	1.57	0.46
53:Nu:41:GLU:CD	53:Nu:42:ARG:HG3	2.41	0.46
62:SK:81:ASP:N	62:SK:81:ASP:OD1	2.47	0.46
63:SL:9:ILE:O	63:SL:24:GLY:N	2.41	0.46
45:T4:902:ASN:O	45:T4:905:HIS:ND1	2.44	0.46
68:T6:670:ILE:HA	68:T6:673:ILE:HD12	1.97	0.46
66:t3:775:LYS:HB2	66:t3:826:PHE:HE1	1.81	0.46
68:t6:393:PRO:HA	68:t6:425:TYR:HA	1.97	0.46
1:B0:272:SER:OG	1:B0:276:LYS:NZ	2.32	0.46
3:B2:506:LYS:CD	9:sF:396:THR:HG21	2.45	0.46
11:BA:525:GLN:NE2	12:BB:836:GLU:OE2	2.49	0.46
32:BW:72:GLN:NE2	32:BW:74:GLU:OE2	2.49	0.46
45:ml:174:MET:O	45:ml:178:ASN:ND2	2.48	0.46
50:nP:1171:ASN:HB3	50:nP:1196:ARG:NH1	2.31	0.46
58:sE:539:THR:HG22	9:sF:762:SER:HA	1.97	0.46
4:A3:12:MET:SD	4:A3:17:LYS:HA	2.56	0.45
8:A7:370:LEU:HA	8:A7:373:MET:HE3	1.97	0.45
32:AW:72:GLN:NE2	32:AW:74:GLU:OE2	2.49	0.45
45:Ml:772:ASP:OD2	45:Ml:775:ASN:ND2	2.49	0.45
62:SK:182:SER:OG	62:SK:183:LYS:N	2.50	0.45
63:SL:172:ILE:HD11	63:SL:179:GLN:HB2	1.98	0.45
45:T4:1058:ASP:OD1	45:T4:1061:GLU:HG2	2.17	0.45
68:T6:651:TYR:OH	68:T6:910:CYS:SG	2.61	0.45
67:t5:950:ASN:HB3	67:t5:954:ARG:HD2	1.98	0.45
1:B0:683:ASP:OD1	1:B0:684:ARG:N	2.47	0.45
3:B2:47:ILE:O	3:B2:51:VAL:HG23	2.16	0.45
3:B2:493:ILE:HD13	3:B2:501:VAL:HG21	1.99	0.45
5:B4:146:ARG:NH1	7:B6:457:LYS:O	2.49	0.45
8:B7:720:THR:HA	8:B7:723:GLN:HG2	1.97	0.45
11:BA:1444:MET:HG2	17:BG:58:ARG:NH1	2.30	0.45
17:BG:96:GLN:HG2	32:BW:145:THR:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BQ:111:LEU:HA	26:BQ:114:MET:SD	2.56	0.45
45:ml:772:ASP:OD2	45:ml:775:ASN:ND2	2.49	0.45
63:sL:295:GLY:O	63:sL:298:ARG:NH1	2.49	0.45
1:A0:256:ALA:HB1	1:A0:398:ALA:HB2	1.97	0.45
19:AI:74:GLU:CG	19:AI:81:ARG:HE	2.30	0.45
24:AN:-67:DT:H2"	24:AN:-66:DT:H5"	1.98	0.45
32:AW:160:ASP:OD1	32:AW:163:LYS:NZ	2.49	0.45
49:Mp:35:CYS:SG	49:Mp:36:GLN:N	2.90	0.45
68:T6:322:LYS:HD3	68:T6:322:LYS:HA	1.74	0.45
65:t2:77:LYS:HA	65:t2:80:GLN:NE2	2.30	0.45
1:B0:374:LEU:HG	1:B0:410:SER:HB3	1.97	0.45
1:B0:671:ARG:N	1:B0:675:ASP:OD2	2.48	0.45
11:BA:41:MET:HE3	11:BA:46:THR:O	2.17	0.45
12:BB:296:GLU:OE1	19:BI:11:ASN:ND2	2.48	0.45
49:mp:35:CYS:SG	49:mp:36:GLN:N	2.90	0.45
9:nF:677:GLN:CD	9:sF:624:ASP:N	2.73	0.45
50:nP:762:LEU:HD21	50:nP:807:THR:HG21	1.97	0.45
1:A0:52:LEU:O	1:A0:56:THR:HG23	2.17	0.45
4:A3:49:LEU:CD2	17:AG:165:GLU:N	2.62	0.45
28:AS:171:ILE:HD12	28:AS:171:ILE:HG21	1.53	0.45
44:Mk:102:GLU:HA	44:Mk:105:ARG:HD3	1.97	0.45
54:Nv:31:ARG:HG2	54:Nv:32:LYS:HG2	1.98	0.45
50:SH:441:VAL:HG21	60:SI:660:ILE:HD12	1.98	0.45
60:SI:759:LEU:HD12	60:SI:914:ILE:HG23	1.96	0.45
62:SK:62:ARG:O	62:SK:216:ARG:NH1	2.46	0.45
65:T2:48:ASN:O	65:T2:52:GLN:NE2	2.50	0.45
68:T6:176:ASN:OD1	68:T6:176:ASN:N	2.49	0.45
7:B6:136:MET:HB2	7:B6:145:ARG:HB2	1.98	0.45
8:B7:561:MET:HE3	8:B7:565:PHE:HB2	1.97	0.45
15:BE:117:THR:O	15:BE:120:ALA:N	2.50	0.45
18:BH:109:LYS:C	43:mj:83:LEU:HD12	2.41	0.45
19:BI:74:GLU:CG	19:BI:81:ARG:HE	2.30	0.45
28:BS:201:ILE:O	28:BS:205:ASN:ND2	2.49	0.45
45:ml:516:LYS:HB2	45:ml:525:TYR:HD2	1.80	0.45
2:A1:469:MET:HE1	5:A4:140:ILE:HD11	1.98	0.45
3:A2:47:ILE:O	3:A2:51:VAL:HG23	2.16	0.45
3:A2:60:LEU:CD2	9:A8:779:HIS:O	2.64	0.45
3:A2:385:ARG:O	3:A2:389:ASN:ND2	2.49	0.45
8:A7:429:THR:O	8:A7:431:GLN:NE2	2.44	0.45
11:AA:885:THR:HG23	11:AA:893:PHE:CE1	2.49	0.45
36:Mc:63:THR:HG21	40:Mg:17:LEU:HD12	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:Mm:42:ASP:OD1	46:Mm:42:ASP:N	2.50	0.45
56:SD:356:LEU:HD12	9:SF:738:LEU:HD21	1.98	0.45
62:SK:175:VAL:HG21	62:SK:178:ALA:HB3	1.99	0.45
66:T3:289:LYS:HB3	66:T3:290:LEU:HD22	1.97	0.45
66:t3:288:MET:HG2	66:t3:292:ARG:NH1	2.32	0.45
68:t6:170:ASP:OD1	68:t6:170:ASP:N	2.48	0.45
3:B2:130:VAL:HG12	3:B2:133:ASP:HB3	1.97	0.45
3:B2:273:LYS:HG2	3:B2:277:MET:SD	2.57	0.45
7:B6:174:MET:HE3	7:B6:179:ALA:HB2	1.99	0.45
7:B6:214:LEU:HD11	7:B6:250:THR:HG21	1.98	0.45
11:BA:1286:LYS:HD2	11:BA:1302:PRO:HB2	1.99	0.45
19:BI:45:ARG:NH2	19:BI:47:GLU:OE1	2.47	0.45
24:BN:9:DG:H1	29:BT:-9:DC:H42	1.65	0.45
45:ml:700:ILE:HG12	45:ml:819:LEU:HD11	1.99	0.45
7:A6:214:LEU:HD12	7:A6:215:GLU:N	2.30	0.45
26:AQ:111:LEU:HA	26:AQ:114:MET:SD	2.56	0.45
30:AU:277:GLN:N	31:AV:58:SER:O	2.39	0.45
44:Mk:135:GLU:HA	44:Mk:137:LYS:HE2	1.99	0.45
9:SF:624:ASP:O	9:SF:627:SER:OG	2.34	0.45
67:T5:937:SER:O	67:T5:943:LEU:HD12	2.17	0.45
66:t3:289:LYS:HB3	66:t3:290:LEU:HD22	1.98	0.45
1:B0:52:LEU:O	1:B0:56:THR:HG23	2.17	0.45
37:md:563:LYS:O	37:md:567:LEU:HB3	2.16	0.45
7:A6:261:VAL:HG12	7:A6:262:LYS:O	2.17	0.45
24:AN:-84:DT:H2"	24:AN:-83:DT:C5	2.52	0.45
24:AN:9:DG:H1	29:AT:-9:DC:H42	1.65	0.45
45:MI:745:ILE:HG22	45:MI:769:LEU:HB3	1.97	0.45
58:SE:73:TYR:OH	58:SE:194:GLU:OE1	2.34	0.45
60:SI:665:LYS:NZ	60:SI:666:PRO:O	2.48	0.45
66:T3:483:ASN:OD1	66:T3:487:ILE:N	2.47	0.45
67:t5:927:ARG:HG2	12:BB:15:PRO:O	2.12	0.45
1:B0:241:ASP:N	1:B0:241:ASP:OD1	2.49	0.45
1:B0:256:ALA:HB1	1:B0:398:ALA:HB2	1.98	0.45
1:B0:553:MET:SD	1:B0:554:TRP:N	2.90	0.45
2:B1:214:ILE:H	2:B1:214:ILE:HG12	1.51	0.45
3:B2:385:ARG:O	3:B2:389:ASN:ND2	2.49	0.45
11:BA:1225:PHE:N	11:BA:1241:ARG:O	2.49	0.45
19:BI:80:SER:C	19:BI:81:ARG:HG3	2.42	0.45
20:BJ:31:ASP:OD1	20:BJ:31:ASP:N	2.49	0.45
24:BN:-84:DT:H2"	24:BN:-83:DT:C5	2.52	0.45
49:mp:537:ILE:HB	49:mp:545:CYS:HB3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:nP:831:TRP:HA	50:nP:834:GLU:OE2	2.16	0.45
54:nv:31:ARG:HG2	54:nv:32:LYS:HG2	1.98	0.45
58:sE:61:ASP:O	58:sE:228:LYS:NZ	2.42	0.45
63:sL:42:TYR:HB3	63:sL:62:ALA:HB1	1.99	0.45
9:A8:780:ILE:HD13	9:A8:780:ILE:HG21	1.62	0.45
11:AA:41:MET:HE3	11:AA:46:THR:O	2.16	0.45
11:AA:381:THR:HG23	11:AA:383:TYR:H	1.82	0.45
11:AA:1079:MET:SD	11:AA:1359:ASP:OD2	2.75	0.45
12:AB:1016:ALA:O	12:AB:1020:ARG:HB2	2.17	0.45
54:Nr:42:VAL:HA	54:Nr:45:VAL:HG12	1.98	0.45
9:SF:496:LEU:HD23	9:SF:506:ARG:HG3	1.98	0.45
68:T6:825:PRO:HA	68:T6:826:PRO:HD3	1.85	0.45
66:t3:541:VAL:HG22	66:t3:578:ILE:HD13	1.98	0.45
68:t6:411:ASP:OD1	68:t6:411:ASP:N	2.48	0.45
3:B2:503:ASP:HA	3:B2:506:LYS:HG3	1.98	0.45
7:B6:174:MET:HG3	7:B6:178:LEU:O	2.17	0.45
11:BA:9:ALA:O	12:BB:1193:GLN:NE2	2.50	0.45
11:BA:551:TYR:OH	21:BK:72:LYS:NZ	2.39	0.45
14:BD:56:ARG:HH22	14:BD:155:ARG:HG3	1.81	0.45
28:BS:156:LEU:CD2	28:BS:156:LEU:HD12	2.34	0.45
42:mi:29:GLU:O	42:mi:33:LYS:NZ	2.49	0.45
45:ml:159:PHE:HA	45:ml:162:LEU:HD13	1.99	0.45
45:ml:628:ARG:NH1	45:ml:629:LEU:O	2.49	0.45
50:nP:796:LEU:HD22	50:nP:999:VAL:HG21	1.99	0.45
50:nP:879:GLU:OE2	50:nP:882:LEU:HB3	2.17	0.45
56:sB:514:LEU:HD23	56:sD:446:THR:HG23	1.98	0.45
9:sF:387:LEU:HD23	9:sF:387:LEU:HA	1.82	0.45
62:sK:166:VAL:HB	62:sK:180:VAL:HB	1.99	0.45
11:AA:9:ALA:O	12:AB:1193:GLN:NE2	2.50	0.45
14:AD:56:ARG:HH22	14:AD:155:ARG:HG3	1.81	0.45
24:AN:-43:DT:H4'	24:AN:-42:DT:H5'	1.99	0.45
40:Mg:20:LYS:HZ1	40:Mg:69:VAL:HG23	1.82	0.45
56:SD:524:ASP:OD1	56:SD:524:ASP:N	2.47	0.45
62:SK:16:ARG:HA	62:SK:32:PRO:HA	1.99	0.45
67:T5:922:THR:HG23	67:T5:925:ALA:H	1.82	0.45
68:T6:181:GLN:HB2	68:T6:183:ARG:HH11	1.82	0.45
66:t3:739:THR:HG23	49:mp:153:ASN:HB3	1.77	0.45
68:t6:825:PRO:HA	68:t6:826:PRO:HD3	1.85	0.45
12:BB:1016:ALA:O	12:BB:1020:ARG:HB2	2.17	0.45
29:BT:75:DA:C2'	29:BT:76:DT:OP2	2.64	0.45
44:mk:135:GLU:HA	44:mk:137:LYS:HE2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:nu:91:GLU:HB3	53:nu:95:LYS:NZ	2.28	0.45
7:A6:174:MET:HG3	7:A6:178:LEU:O	2.17	0.45
12:AB:842:ASN:HA	12:AB:999:MET:HE1	1.99	0.45
24:AN:81:DA:N6	29:AT:-82:DG:O6	2.50	0.45
25:AO:83:LYS:NZ	31:AV:73:ASP:OD2	2.42	0.45
45:Ml:739:ASN:HB2	45:Ml:742:ILE:HD12	1.99	0.45
49:Mp:190:THR:HG22	49:Mp:198:ILE:HA	1.99	0.45
9:Nf:668:ASP:O	9:Nf:672:ARG:HG3	2.16	0.45
50:NP:1171:ASN:HB3	50:NP:1196:ARG:NH1	2.31	0.45
55:SA:186:VAL:HB	55:SA:296:SER:HB2	1.98	0.45
55:SA:186:VAL:HG22	55:SA:267:LYS:HG3	1.97	0.45
63:SL:42:TYR:HB3	63:SL:62:ALA:HB1	1.99	0.45
45:T4:1003:PHE:CZ	45:T4:1019:MET:HG3	2.52	0.45
67:T5:950:ASN:HB3	67:T5:954:ARG:HD2	1.98	0.45
45:t4:1058:ASP:OD1	45:t4:1061:GLU:HG2	2.17	0.45
1:B0:156:CYS:CB	69:B0:801:SF4:S1	3.05	0.45
2:B1:469:MET:HE1	5:B4:140:ILE:HD11	1.98	0.45
4:B3:12:MET:SD	4:B3:17:LYS:HA	2.56	0.45
7:B6:171:ILE:N	7:B6:183:SER:OG	2.42	0.45
7:B6:261:VAL:HG12	7:B6:262:LYS:O	2.17	0.45
11:BA:849:MET:CE	11:BA:1061:GLY:HA2	2.47	0.45
12:BB:593:PRO:HA	12:BB:596:LEU:HD21	1.98	0.45
12:BB:842:ASN:HA	12:BB:999:MET:HE1	1.99	0.45
21:BK:12:LEU:CD2	39:mf:145:SER:CA	2.95	0.45
24:BN:-54:DG:H2"	24:BN:-53:DA:C8	2.51	0.45
24:BN:33:DA:H2"	24:BN:34:DC:H5"	1.99	0.45
24:BN:81:DA:N6	29:BT:-82:DG:O6	2.50	0.45
25:BO:83:LYS:NZ	31:BV:73:ASP:OD2	2.42	0.45
25:BO:203:VAL:O	25:BO:215:THR:OG1	2.31	0.45
49:mp:190:THR:HG22	49:mp:198:ILE:HA	1.99	0.45
1:A0:527:VAL:HG22	1:A0:562:GLU:OE2	2.17	0.45
3:A2:69:ASN:HD22	3:A2:69:ASN:HA	1.49	0.45
3:A2:236:ALA:HB2	3:A2:270:TYR:CD2	2.52	0.45
14:AD:50:LEU:H	17:AG:1:MET:HE1	1.82	0.45
19:AI:73:ARG:HE	19:AI:73:ARG:HB3	1.53	0.45
37:Md:563:LYS:O	37:Md:567:LEU:HB3	2.16	0.45
50:NP:831:TRP:HA	50:NP:834:GLU:OE2	2.16	0.45
50:NP:879:GLU:OE2	50:NP:882:LEU:HB3	2.17	0.45
9:SF:476:THR:OG1	9:SF:731:ARG:NH2	2.47	0.45
68:t6:328:ASP:N	68:t6:328:ASP:OD1	2.44	0.45
3:B2:455:GLU:C	3:B2:495:LYS:HG3	2.41	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:BD:119:ARG:NH2	14:BD:149:THR:O	2.50	0.45
19:BI:73:ARG:HE	19:BI:73:ARG:HB3	1.53	0.45
28:BS:187:ASN:HB2	28:BS:228:LEU:HD11	1.97	0.45
50:nP:822:ILE:HG12	50:nP:876:ILE:HD11	1.99	0.45
1:A0:548:GLU:OE2	2:A1:371:THR:HG21	2.18	0.44
3:A2:273:LYS:HG2	3:A2:277:MET:SD	2.57	0.44
3:A2:493:ILE:HD13	3:A2:501:VAL:HG21	1.99	0.44
3:A2:506:LYS:HE3	3:A2:506:LYS:HB3	1.47	0.44
11:AA:42:ASP:OD2	11:AA:46:THR:OG1	2.35	0.44
12:AB:296:GLU:OE1	12:AB:296:GLU:N	2.50	0.44
15:AE:117:THR:O	15:AE:120:ALA:N	2.50	0.44
50:NP:822:ILE:HG12	50:NP:876:ILE:HD11	1.99	0.44
56:SB:524:ASP:OD1	56:SB:524:ASP:N	2.46	0.44
62:SK:67:VAL:N	62:SK:217:SER:OG	2.50	0.44
63:SL:363:GLU:HA	63:SL:366:LYS:HG2	1.98	0.44
68:t6:187:ASN:HB3	68:t6:245:ASN:HB3	1.99	0.44
68:t6:739:LYS:HZ3	68:t6:799:ASN:CG	2.26	0.44
7:B6:106:ARG:O	7:B6:110:THR:HG23	2.17	0.44
15:BE:34:GLU:O	15:BE:37:LEU:HD23	2.16	0.44
50:nP:677:THR:O	50:nP:681:HIS:ND1	2.38	0.44
50:sH:443:ILE:HD11	60:sI:662:ARG:HD2	1.99	0.44
3:A2:24:ARG:HH21	3:A2:219:VAL:HG21	1.83	0.44
3:A2:503:ASP:HA	3:A2:506:LYS:HG3	1.98	0.44
10:A9:181:LYS:CA	10:A9:182:LEU:N	2.68	0.44
20:AJ:31:ASP:OD1	20:AJ:31:ASP:N	2.49	0.44
21:AK:12:LEU:CD2	39:Mf:145:SER:CA	2.95	0.44
25:AO:91:ASN:H	25:AO:104:MET:HE1	1.82	0.44
37:Md:467:ILE:HB	37:Md:474:PHE:HB2	1.98	0.44
58:SE:292:ASN:HD22	58:SE:299:ILE:HG22	1.83	0.44
50:SH:592:LEU:HD12	50:SH:592:LEU:O	2.18	0.44
68:t6:322:LYS:HA	68:t6:322:LYS:HD3	1.74	0.44
1:B0:527:VAL:HG22	1:B0:562:GLU:OE2	2.17	0.44
1:B0:548:GLU:OE2	2:B1:371:THR:HG21	2.18	0.44
1:B0:665:CYS:O	1:B0:668:ARG:N	2.50	0.44
3:B2:147:LEU:O	3:B2:151:VAL:HG23	2.18	0.44
12:BB:296:GLU:OE1	12:BB:296:GLU:N	2.50	0.44
24:BN:-67:DT:H2''	24:BN:-66:DT:H5''	1.98	0.44
24:BN:13:DT:H2'	24:BN:14:DA:C8	2.53	0.44
60:sI:665:LYS:NZ	60:sI:666:PRO:O	2.48	0.44
1:A0:665:CYS:O	1:A0:668:ARG:N	2.50	0.44
7:A6:82:ARG:HH12	8:A7:188:LEU:CD2	2.30	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AI:45:ARG:NH2	19:AI:47:GLU:OE1	2.47	0.44
24:AN:-52:DT:H2''	24:AN:-51:DT:OP2	2.17	0.44
42:Mi:113:GLN:NE2	47:Mn:83:VAL:O	2.51	0.44
50:NP:796:LEU:HD22	50:NP:999:VAL:HG21	1.99	0.44
56:SD:773:MET:SD	56:SD:779:THR:OG1	2.75	0.44
50:SH:443:ILE:HD11	60:SI:662:ARG:HD2	1.99	0.44
61:SJ:69:ASP:OD1	61:SJ:69:ASP:N	2.51	0.44
66:T3:775:LYS:HB2	66:T3:826:PHE:HE1	1.81	0.44
66:t3:532:VAL:HB	66:t3:537:GLN:HE21	1.82	0.44
45:t4:985:GLU:OE1	45:t4:1002:HIS:NE2	2.50	0.44
45:t4:1003:PHE:CZ	45:t4:1019:MET:HG3	2.52	0.44
67:t5:937:SER:O	67:t5:943:LEU:HD12	2.17	0.44
62:sK:175:VAL:HG21	62:sK:178:ALA:HB3	1.99	0.44
1:A0:553:MET:SD	1:A0:554:TRP:N	2.90	0.44
11:AA:1286:LYS:HD2	11:AA:1302:PRO:HB2	1.99	0.44
12:AB:593:PRO:O	12:AB:596:LEU:HG	2.18	0.44
34:Ma:135:ASN:HA	34:Ma:145:PRO:HG3	2.00	0.44
46:Mm:64:TYR:HB2	46:Mm:67:GLN:HB2	1.97	0.44
50:NP:953:ASP:OD2	54:Nv:24:LYS:NZ	2.51	0.44
63:SL:359:ILE:HG21	63:SL:402:GLN:HB2	1.99	0.44
65:T2:77:LYS:HA	65:T2:80:GLN:CD	2.42	0.44
45:T4:985:GLU:OE1	45:T4:1002:HIS:NE2	2.50	0.44
68:T6:187:ASN:HB3	68:T6:245:ASN:HB3	1.99	0.44
3:B2:222:LEU:HD12	3:B2:226:PHE:HE2	1.83	0.44
7:B6:82:ARG:HH12	8:B7:188:LEU:CD2	2.30	0.44
11:BA:1079:MET:SD	11:BA:1359:ASP:OD2	2.75	0.44
11:BA:1300:LYS:NZ	28:BS:301:ALA:O	2.49	0.44
12:BB:593:PRO:O	12:BB:596:LEU:HG	2.18	0.44
33:BX:123:HIS:HD2	33:BX:125:SER:HB2	1.82	0.44
34:ma:135:ASN:HA	34:ma:145:PRO:HG3	2.00	0.44
62:sK:16:ARG:HA	62:sK:32:PRO:HA	1.99	0.44
62:sK:67:VAL:N	62:sK:217:SER:OG	2.50	0.44
62:sK:248:ARG:HH21	62:sK:251:LYS:HG2	1.83	0.44
11:AA:595:THR:OG1	11:AA:603:ASN:ND2	2.51	0.44
11:AA:849:MET:CE	11:AA:1061:GLY:HA2	2.47	0.44
19:AI:80:SER:C	19:AI:81:ARG:HG3	2.42	0.44
45:MI:700:ILE:HG12	45:MI:819:LEU:HD11	1.99	0.44
49:Mp:549:ASP:OD1	49:Mp:554:TRP:NE1	2.47	0.44
52:Np:70:VAL:HA	52:Np:73:THR:HG22	2.00	0.44
55:SA:96:MET:HG2	56:SD:707:PHE:CE2	2.53	0.44
9:SF:506:ARG:O	9:SF:510:ILE:HG12	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:T2:34:ASN:N	65:T2:34:ASN:OD1	2.46	0.44
66:T3:288:MET:HG2	66:T3:292:ARG:NH1	2.32	0.44
66:T3:578:ILE:O	66:T3:581:PHE:N	2.50	0.44
68:T6:662:VAL:HB	68:T6:695:LEU:HD21	1.98	0.44
64:t1:40:LEU:HA	64:t1:40:LEU:HD13	1.69	0.44
65:t2:48:ASN:O	65:t2:52:GLN:NE2	2.50	0.44
66:t3:578:ILE:O	66:t3:581:PHE:N	2.50	0.44
2:B1:324:LYS:O	2:B1:328:MET:HE3	2.18	0.44
3:B2:507:ARG:HB3	9:sF:393:LYS:HD2	2.00	0.44
7:B6:177:GLY:O	7:B6:178:LEU:HD23	2.17	0.44
12:BB:294:ASP:N	12:BB:294:ASP:OD1	2.48	0.44
17:BG:137:ILE:HG13	17:BG:170:ALA:HB2	2.00	0.44
33:BX:278:LEU:HD22	33:BX:283:LEU:HD22	2.00	0.44
52:nt:83:ALA:HA	52:nt:86:VAL:HG12	2.00	0.44
58:sE:292:ASN:HD22	58:sE:299:ILE:HG22	1.83	0.44
5:A4:218:SER:O	5:A4:237:HIS:NE2	2.49	0.44
7:A6:106:ARG:O	7:A6:110:THR:HG23	2.17	0.44
23:AM:303:GLN:NE2	27:AR:271:ARG:C	2.65	0.44
25:AO:203:VAL:O	25:AO:215:THR:OG1	2.31	0.44
32:AW:49:ILE:HD11	32:AW:54:LEU:HD12	2.00	0.44
36:Mc:73:LEU:HD22	40:Mg:79:ILE:HG23	2.00	0.44
56:SB:514:LEU:HD23	56:SD:446:THR:HG23	1.98	0.44
61:SJ:9:LYS:HA	61:SJ:12:LYS:HE3	2.00	0.44
63:SL:162:ILE:HG12	63:SL:335:ILE:HA	1.99	0.44
8:B7:569:TYR:HB2	8:B7:580:LEU:HD22	2.00	0.44
23:BM:154:TYR:HE2	23:BM:171:ILE:HG22	1.83	0.44
36:mc:63:THR:HG21	40:mg:17:LEU:HD12	1.99	0.44
51:no:129:ARG:O	51:no:129:ARG:NH1	2.47	0.44
52:np:70:VAL:HA	52:np:73:THR:HG22	2.00	0.44
54:nr:42:VAL:HA	54:nr:45:VAL:HG12	1.98	0.44
55:sA:96:MET:HG2	56:sD:707:PHE:CE2	2.53	0.44
1:A0:156:CYS:CB	69:A0:801:SF4:S1	3.05	0.44
1:A0:360:LEU:O	1:A0:364:LYS:HB3	2.18	0.44
3:A2:60:LEU:HD23	3:A2:60:LEU:HA	1.73	0.44
3:A2:267:SER:OG	3:A2:268:ILE:N	2.46	0.44
7:A6:177:GLY:O	7:A6:178:LEU:HD23	2.17	0.44
14:AD:119:ARG:NH2	14:AD:149:THR:O	2.50	0.44
9:Nf:677:GLN:CB	9:SF:624:ASP:HB2	2.35	0.44
62:SK:161:ALA:O	62:SK:187:ASP:N	2.49	0.44
66:T3:532:VAL:HB	66:T3:537:GLN:HE21	1.82	0.44
3:B2:236:ALA:HB2	3:B2:270:TYR:CD2	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B2:347:ILE:N	3:B2:376:GLY:O	2.51	0.44
8:B7:429:THR:O	8:B7:431:GLN:NE2	2.44	0.44
11:BA:717:ASN:O	11:BA:720:ARG:HD3	2.17	0.44
12:BB:1156:ASP:OD1	12:BB:1156:ASP:N	2.50	0.44
24:BN:24:DG:H2"	24:BN:25:DC:H5"	2.00	0.44
37:md:20:ALA:HB2	41:mh:145:ARG:HE	1.83	0.44
41:mh:53:LEU:HD23	43:mj:95:ARG:HG3	2.00	0.44
9:sF:341:GLN:HE21	9:sF:345:ARG:HH21	1.65	0.44
9:sF:496:LEU:HD23	9:sF:506:ARG:HG3	1.99	0.44
50:sH:592:LEU:HD12	50:sH:592:LEU:O	2.18	0.44
63:sL:359:ILE:HG21	63:sL:402:GLN:HB2	1.99	0.44
3:A2:147:LEU:O	3:A2:151:VAL:HG23	2.17	0.44
3:A2:347:ILE:N	3:A2:376:GLY:O	2.51	0.44
7:A6:174:MET:HE3	7:A6:179:ALA:HB2	1.99	0.44
11:AA:717:ASN:O	11:AA:720:ARG:HD3	2.17	0.44
11:AA:1223:ASP:OD1	11:AA:1224:LEU:N	2.51	0.44
23:AM:150:ALA:HB1	23:AM:176:ILE:HD12	1.94	0.44
56:SD:359:ASN:ND2	58:SE:552:ASN:OD1	2.49	0.44
66:T3:658:ILE:O	66:T3:662:ILE:HG12	2.18	0.44
68:T6:350:VAL:HG23	68:T6:379:CYS:HB3	1.99	0.44
66:t3:359:TYR:HE2	66:t3:913:THR:HB	1.83	0.44
66:t3:824:ARG:NH1	66:t3:870:ILE:O	2.42	0.44
68:t6:408:LEU:O	68:t6:412:ARG:NH2	2.48	0.44
1:B0:346:MET:HE2	1:B0:433:PRO:HB2	2.00	0.44
11:BA:42:ASP:OD2	11:BA:46:THR:OG1	2.35	0.44
11:BA:595:THR:OG1	11:BA:603:ASN:ND2	2.51	0.44
11:BA:1100:ARG:NH1	11:BA:1103:GLU:OE1	2.51	0.44
24:BN:-52:DT:H2"	24:BN:-51:DT:OP2	2.18	0.44
38:me:13:ASP:OD1	38:me:13:ASP:N	2.50	0.44
42:mi:169:GLN:NE2	47:mn:3:ASP:OD2	2.41	0.44
50:nP:780:SER:O	50:nP:784:ASN:ND2	2.50	0.44
58:sE:73:TYR:OH	58:sE:194:GLU:OE1	2.34	0.44
63:sL:162:ILE:HG12	63:sL:335:ILE:HA	1.99	0.44
7:A6:142:ARG:HA	7:A6:143:PRO:HA	1.79	0.44
8:A7:734:LYS:HE2	8:A7:736:ILE:HD11	1.99	0.44
50:NP:780:SER:O	50:NP:784:ASN:ND2	2.50	0.44
51:Ns:57:SER:OG	51:Ns:58:THR:N	2.50	0.44
58:SE:280:GLN:NE2	58:SE:282:SER:OG	2.49	0.44
58:SE:455:LEU:O	58:SE:459:LYS:HB2	2.18	0.44
62:SK:248:ARG:HH21	62:SK:251:LYS:HG2	1.83	0.44
8:B7:734:LYS:HE2	8:B7:736:ILE:HD11	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BA:1223:ASP:OD1	11:BA:1224:LEU:N	2.51	0.44
28:BS:148:LEU:HA	28:BS:151:GLN:OE1	2.18	0.44
50:sH:441:VAL:HG21	60:sI:660:ILE:HD12	1.98	0.44
63:sL:94:ARG:NH2	63:sL:98:ASN:OD1	2.51	0.44
3:A2:143:TRP:NE1	3:A2:147:LEU:HD11	2.33	0.43
3:A2:222:LEU:HD12	3:A2:226:PHE:HE2	1.83	0.43
7:A6:211:GLN:HA	7:A6:214:LEU:HD21	1.99	0.43
8:A7:569:TYR:HB2	8:A7:580:LEU:HD22	2.00	0.43
13:AC:89:GLU:HB2	39:Mf:43:ARG:NH2	2.33	0.43
26:AQ:116:THR:N	26:AQ:390:ASP:OD2	2.47	0.43
28:AS:239:ALA:C	28:AS:243:GLN:HE22	2.26	0.43
33:AX:123:HIS:HD2	33:AX:125:SER:HB2	1.82	0.43
56:SD:299:ILE:HG23	58:SE:503:ILE:HD11	2.00	0.43
62:SK:166:VAL:HB	62:SK:180:VAL:HB	1.99	0.43
66:T3:732:SER:O	66:T3:734:GLU:N	2.51	0.43
66:T3:789:ASN:OD1	66:T3:846:ASN:ND2	2.47	0.43
65:t2:34:ASN:N	65:t2:34:ASN:OD1	2.46	0.43
68:t6:138:ARG:HD3	68:t6:138:ARG:HA	1.79	0.43
68:t6:181:GLN:HB2	68:t6:183:ARG:HH11	1.82	0.43
68:t6:222:GLN:NE2	68:t6:223:GLN:O	2.51	0.43
13:BC:87:PHE:HD1	39:mf:120:GLN:NE2	1.81	0.43
24:BN:-43:DT:H4'	24:BN:-42:DT:H5'	1.99	0.43
28:BS:170:SER:HA	28:BS:173:HIS:CE1	2.53	0.43
46:mm:42:ASP:N	46:mm:42:ASP:OD1	2.50	0.43
55:sA:63:ASP:OD1	55:sA:64:HIS:N	2.51	0.43
56:sD:299:ILE:HG23	58:sE:503:ILE:HD11	2.00	0.43
56:sD:359:ASN:ND2	58:sE:552:ASN:OD1	2.49	0.43
60:sI:1189:LEU:HA	60:sI:1192:VAL:HG22	2.00	0.43
2:A1:322:ASP:OD2	2:A1:380:ARG:NH1	2.51	0.43
19:AI:81:ARG:HH11	19:AI:81:ARG:HD3	1.41	0.43
28:AS:176:LYS:O	28:AS:179:GLU:HG3	2.17	0.43
29:AT:51:DA:H2''	29:AT:52:DA:C8	2.53	0.43
45:Ml:159:PHE:HA	45:Ml:162:LEU:HD13	1.99	0.43
56:SB:385:LEU:HD23	56:SB:385:LEU:HA	1.90	0.43
56:SD:443:MET:HE3	50:SH:500:LEU:HD22	2.00	0.43
63:SL:94:ARG:NH2	63:SL:98:ASN:OD1	2.51	0.43
1:B0:500:GLY:N	1:B0:504:VAL:O	2.52	0.43
3:B2:63:ASP:OD2	9:B8:780:ILE:CG1	2.66	0.43
23:BM:181:ARG:NH2	23:BM:230:MET:O	2.52	0.43
56:sB:352:ASN:HA	56:sB:355:ARG:HG2	2.00	0.43
56:sD:773:MET:SD	56:sD:779:THR:OG1	2.75	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:sE:456:GLU:O	58:sE:460:GLN:NE2	2.51	0.43
9:sF:540:ASP:O	9:sF:566:SER:OG	2.32	0.43
1:A0:500:GLY:N	1:A0:504:VAL:O	2.52	0.43
1:A0:546:TYR:CD2	1:A0:546:TYR:HA	2.52	0.43
3:A2:63:ASP:OD2	9:A8:780:ILE:CB	2.64	0.43
3:A2:219:VAL:O	3:A2:223:HIS:ND1	2.51	0.43
8:A7:161:ALA:HB2	8:A7:175:ILE:HG12	2.00	0.43
12:AB:1156:ASP:OD1	12:AB:1156:ASP:N	2.50	0.43
23:AM:181:ARG:NH2	23:AM:230:MET:O	2.52	0.43
24:AN:13:DT:H2'	24:AN:14:DA:C8	2.53	0.43
28:AS:148:LEU:HA	28:AS:151:GLN:OE1	2.18	0.43
44:Mk:82:GLU:OE1	44:Mk:85:GLN:NE2	2.51	0.43
63:SL:321:ASP:OD1	63:SL:321:ASP:N	2.51	0.43
3:B2:24:ARG:HH21	3:B2:219:VAL:HG21	1.83	0.43
3:B2:194:GLN:O	3:B2:199:GLN:NE2	2.52	0.43
28:BS:176:LYS:O	28:BS:179:GLU:HG3	2.17	0.43
11:mA:1634:SER:OG	11:mA:1637:SER:O	2.37	0.43
45:ml:739:ASN:HB2	45:ml:742:ILE:HD12	1.99	0.43
49:mp:61:ILE:HD12	49:mp:128:ASP:HB2	2.00	0.43
51:ns:57:SER:OG	51:ns:58:THR:N	2.50	0.43
55:sA:270:TYR:O	55:sA:275:PRO:HB3	2.18	0.43
58:sE:280:GLN:NE2	58:sE:282:SER:OG	2.49	0.43
58:sE:455:LEU:O	58:sE:459:LYS:HB2	2.18	0.43
2:A1:610:ASN:O	2:A1:613:THR:OG1	2.31	0.43
24:AN:24:DG:H2''	24:AN:25:DC:H5''	2.00	0.43
56:SD:402:LYS:HD3	56:SD:402:LYS:HA	1.81	0.43
68:T6:222:GLN:NE2	68:T6:223:GLN:O	2.51	0.43
65:t2:77:LYS:HA	65:t2:80:GLN:CD	2.42	0.43
66:t3:789:ASN:OD1	66:t3:846:ASN:ND2	2.47	0.43
67:t5:922:THR:HG23	67:t5:925:ALA:H	1.82	0.43
8:B7:471:GLN:HA	8:B7:474:MET:HE2	2.01	0.43
21:BK:107:THR:O	21:BK:111:LEU:HD23	2.19	0.43
28:BS:239:ALA:HB1	28:BS:243:GLN:HE22	1.83	0.43
37:md:414:ASP:OD1	37:md:414:ASP:N	2.49	0.43
40:mg:20:LYS:HZ1	40:mg:69:VAL:HG23	1.84	0.43
49:mp:113:ASP:OD1	49:mp:113:ASP:N	2.50	0.43
3:A2:90:ASN:OD1	3:A2:97:MET:HB2	2.18	0.43
19:AI:114:GLN:H	19:AI:115:LYS:HZ3	1.66	0.43
23:AM:154:TYR:HE2	23:AM:171:ILE:HG22	1.83	0.43
24:AN:33:DA:H2''	24:AN:34:DC:H5''	1.99	0.43
28:AS:170:SER:HA	28:AS:173:HIS:CE1	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:Mp:61:ILE:HD12	49:Mp:128:ASP:HB2	2.00	0.43
60:SI:932:ASP:OD1	60:SI:932:ASP:N	2.45	0.43
62:SK:164:CYS:HB3	62:SK:182:SER:HB3	2.01	0.43
63:SL:138:ASN:OD1	63:SL:139:ASN:ND2	2.52	0.43
45:T4:1003:PHE:CE1	45:T4:1019:MET:HE2	2.54	0.43
66:t3:883:GLY:HA2	68:t6:275:PHE:HE1	1.84	0.43
68:t6:127:LEU:HD13	68:t6:186:TYR:CE2	2.54	0.43
68:t6:350:VAL:HG23	68:t6:379:CYS:HB3	1.99	0.43
4:B3:49:LEU:CD2	17:BG:164:LYS:CB	2.92	0.43
7:B6:172:ILE:HD11	7:B6:179:ALA:HB1	2.01	0.43
12:BB:921:ASP:OD1	12:BB:921:ASP:N	2.52	0.43
25:BO:91:ASN:H	25:BO:104:MET:HE1	1.82	0.43
28:BS:239:ALA:C	28:BS:243:GLN:HE22	2.26	0.43
29:BT:-53:DC:H2"	29:BT:-52:DG:C8	2.54	0.43
43:mj:75:GLN:OE1	43:mj:78:LYS:NZ	2.52	0.43
50:nP:953:ASP:OD2	54:nv:24:LYS:NZ	2.51	0.43
52:np:43:VAL:HG21	52:np:46:ILE:HD11	2.01	0.43
9:sF:606:LYS:HE2	9:sF:606:LYS:HB2	1.89	0.43
61:sJ:69:ASP:OD1	61:sJ:69:ASP:N	2.51	0.43
1:A0:393:VAL:HG12	1:A0:396:PHE:HD2	1.84	0.43
1:A0:547:MET:O	1:A0:551:VAL:HG22	2.19	0.43
2:A1:194:VAL:O	2:A1:198:THR:OG1	2.22	0.43
3:A2:63:ASP:OD2	9:A8:780:ILE:CG1	2.66	0.43
8:A7:471:GLN:HA	8:A7:474:MET:HE2	2.01	0.43
11:AA:1100:ARG:NH1	11:AA:1103:GLU:OE1	2.51	0.43
21:AK:107:THR:O	21:AK:111:LEU:HD23	2.18	0.43
32:AW:17:VAL:HG13	32:AW:26:VAL:HG22	2.01	0.43
32:AW:29:LEU:HA	32:AW:32:ILE:HG22	2.00	0.43
33:AX:278:LEU:HD22	33:AX:283:LEU:HD22	2.00	0.43
43:Mj:75:GLN:OE1	43:Mj:78:LYS:NZ	2.52	0.43
45:MI:251:LEU:HB3	45:MI:293:ARG:HH22	1.83	0.43
52:Nt:83:ALA:HA	52:Nt:86:VAL:HG12	2.00	0.43
9:SF:341:GLN:HE21	9:SF:345:ARG:HH21	1.65	0.43
45:T4:1000:HIS:ND1	45:T4:1002:HIS:CD2	2.87	0.43
45:t4:840:THR:HA	45:t4:843:VAL:HG12	2.00	0.43
3:B2:63:ASP:CB	9:B8:778:ASP:OD2	2.67	0.43
11:BA:11:LEU:C	11:BA:12:ARG:HD3	2.44	0.43
11:BA:381:THR:HG23	11:BA:383:TYR:H	1.82	0.43
12:BB:316:PRO:HA	12:BB:319:GLU:CD	2.44	0.43
21:BK:11:LEU:CD2	39:mf:146:THR:HG22	2.49	0.43
32:BW:49:ILE:HD11	32:BW:54:LEU:HD12	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:mi:113:GLN:NE2	47:mn:83:VAL:O	2.51	0.43
44:mk:82:GLU:OE1	44:mk:85:GLN:NE2	2.51	0.43
55:sA:512:VAL:O	55:sA:516:ASN:ND2	2.51	0.43
56:sD:443:MET:HE3	50:sH:500:LEU:HD22	2.00	0.43
63:sL:138:ASN:OD1	63:sL:139:ASN:ND2	2.52	0.43
33:AX:284:LYS:HD3	33:AX:285:PRO:HD2	2.00	0.43
53:Nu:65:LEU:HD12	53:Nu:65:LEU:HA	1.77	0.43
55:SA:63:ASP:OD1	55:SA:64:HIS:N	2.51	0.43
56:SD:320:HIS:HD2	56:SD:322:ILE:HG12	1.81	0.43
66:T3:413:ILE:HD13	66:T3:413:ILE:HA	1.94	0.43
66:T3:869:ARG:HG2	66:T3:876:ASP:OD2	2.19	0.43
66:T3:888:LEU:HA	68:T6:278:LEU:HD21	2.00	0.43
66:t3:833:ASN:HB2	66:t3:834:TYR:H	1.70	0.43
3:B2:29:PRO:HB3	3:B2:111:ALA:HB2	2.01	0.43
3:B2:143:TRP:NE1	3:B2:147:LEU:HD11	2.33	0.43
7:B6:211:GLN:HA	7:B6:214:LEU:HD21	1.99	0.43
19:BI:77:LYS:H	19:BI:77:LYS:HG2	1.58	0.43
29:BT:95:DA:H2'	29:BT:96:DG:C8	2.53	0.43
50:nP:675:LYS:HG2	50:nP:744:TYR:CZ	2.54	0.43
56:sD:417:ASP:OD1	56:sD:417:ASP:N	2.46	0.43
61:sJ:9:LYS:HA	61:sJ:12:LYS:HE3	2.00	0.43
1:A0:434:ILE:O	1:A0:435:MET:HE2	2.19	0.43
3:A2:507:ARG:HB3	9:SF:393:LYS:HD2	2.00	0.43
7:A6:144:ASN:OD1	7:A6:144:ASN:N	2.52	0.43
19:AI:18:GLU:OE2	19:AI:24:ARG:N	2.52	0.43
24:AN:82:DC:H2''	24:AN:83:DG:C8	2.54	0.43
30:AU:44:LYS:HA	30:AU:47:THR:HG22	2.01	0.43
37:Md:20:ALA:HB2	41:Mh:145:ARG:HE	1.83	0.43
41:Mh:53:LEU:HD23	43:Mj:95:ARG:HG3	2.00	0.43
50:NP:675:LYS:HG2	50:NP:744:TYR:CZ	2.54	0.43
63:SL:153:MET:O	63:SL:155:SER:N	2.50	0.43
66:T3:378:THR:HG22	66:T3:379:LYS:HD3	2.01	0.43
66:T3:867:ASP:HB3	66:T3:870:ILE:HG12	2.00	0.43
68:T6:111:ASN:HD21	68:T6:119:ASP:H	1.67	0.43
66:t3:658:ILE:O	66:t3:662:ILE:HG12	2.18	0.43
3:B2:63:ASP:C	3:B2:65:TRP:H	2.27	0.43
3:B2:219:VAL:O	3:B2:223:HIS:ND1	2.51	0.43
3:B2:261:GLN:HG3	3:B2:262:LYS:H	1.84	0.43
35:mb:73:LEU:HD22	40:mg:56:MET:HE1	2.01	0.43
36:mc:73:LEU:HD22	40:mg:79:ILE:HG23	2.00	0.43
39:mf:94:ASN:ND2	39:mf:96:SER:OG	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:ml:701:ASN:OD1	45:ml:773:TYR:OH	2.33	0.43
53:nu:76:THR:OG1	53:nu:77:ARG:N	2.52	0.43
56:sD:335:ILE:HD11	9:sF:452:GLU:HG3	2.01	0.43
62:sK:164:CYS:HB3	62:sK:182:SER:HB3	2.01	0.43
63:sL:115:THR:OG1	63:sL:116:HIS:N	2.52	0.43
63:sL:153:MET:O	63:sL:155:SER:N	2.50	0.43
1:A0:341:TYR:HD1	1:A0:363:LEU:HD13	1.84	0.43
1:A0:541:PHE:CB	1:A0:547:MET:SD	3.07	0.43
3:A2:59:LEU:CD2	9:A8:778:ASP:CB	2.96	0.43
3:A2:223:HIS:HB3	3:A2:227:MET:HE1	2.01	0.43
11:AA:261:ASP:OD1	11:AA:262:LEU:N	2.52	0.43
12:AB:260:GLY:O	12:AB:267:ARG:NH2	2.45	0.43
32:AW:198:THR:OG1	32:AW:199:PHE:N	2.52	0.43
11:MA:1634:SER:OG	11:MA:1637:SER:O	2.37	0.43
38:Me:80:MET:HG3	38:Me:83:LYS:HD2	2.00	0.43
49:Mp:258:ILE:HB	49:Mp:261:ASN:HB2	2.00	0.43
50:NP:671:LEU:HD13	50:NP:982:ARG:HG3	2.01	0.43
50:NP:679:ILE:HG23	50:NP:744:TYR:CE2	2.54	0.43
55:SA:270:TYR:O	55:SA:275:PRO:HB3	2.18	0.43
55:SA:512:VAL:O	55:SA:516:ASN:ND2	2.51	0.43
60:SI:1189:LEU:HA	60:SI:1192:VAL:HG22	2.00	0.43
66:t3:732:SER:O	66:t3:734:GLU:N	2.51	0.43
3:B2:62:LEU:O	3:B2:65:TRP:HB2	2.19	0.43
8:B7:161:ALA:HB2	8:B7:175:ILE:HG12	2.00	0.43
13:BC:89:GLU:HB2	39:mf:43:ARG:NH2	2.33	0.43
29:BT:51:DA:H2"	29:BT:52:DA:C8	2.53	0.43
45:ml:251:LEU:HB3	45:ml:293:ARG:HH22	1.83	0.43
45:ml:539:LYS:O	45:ml:542:ARG:NH1	2.51	0.43
9:nF:677:GLN:CG	9:sF:624:ASP:HA	2.45	0.43
53:nq:89:ASN:OD1	53:nq:89:ASN:N	2.52	0.43
57:sC:184:LYS:HA	57:sC:184:LYS:HD2	1.87	0.43
56:sD:437:MET:HA	56:sD:440:LEU:HB2	2.01	0.43
9:sF:506:ARG:O	9:sF:510:ILE:HG12	2.18	0.43
2:A1:324:LYS:O	2:A1:328:MET:HE3	2.18	0.43
3:A2:261:GLN:HG3	3:A2:262:LYS:H	1.84	0.43
11:AA:885:THR:HG22	11:AA:940:ARG:HG2	2.01	0.43
17:AG:137:ILE:HG13	17:AG:170:ALA:HB2	2.00	0.43
54:Nv:74:ILE:HD12	54:Nv:77:GLU:OE2	2.19	0.43
58:SE:456:GLU:O	58:SE:460:GLN:NE2	2.51	0.43
63:SL:202:LEU:HD22	63:SL:204:GLN:HE22	1.84	0.43
45:T4:1003:PHE:CE2	45:T4:1019:MET:HG3	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:t3:378:THR:HG22	66:t3:379:LYS:HD3	2.01	0.43
66:t3:480:PHE:HB3	66:t3:488:GLN:HB3	2.01	0.43
68:t6:119:ASP:N	68:t6:119:ASP:OD1	2.51	0.43
68:t6:739:LYS:HZ3	68:t6:799:ASN:HD21	1.66	0.43
68:t6:739:LYS:HZ3	68:t6:799:ASN:ND2	2.17	0.43
1:B0:393:VAL:HG12	1:B0:396:PHE:HD2	1.84	0.43
3:B2:468:TYR:OH	3:B2:490:LYS:O	2.35	0.43
6:B5:19:LEU:HB3	6:B5:54:LEU:HD21	2.01	0.43
11:BA:55:ASP:OD1	11:BA:55:ASP:N	2.46	0.43
11:BA:261:ASP:OD1	11:BA:262:LEU:N	2.52	0.43
18:BH:110:ASP:OD1	18:BH:111:LEU:N	2.52	0.43
24:BN:82:DC:H2''	24:BN:83:DG:C8	2.54	0.43
32:BW:198:THR:OG1	32:BW:199:PHE:N	2.52	0.43
34:ma:107:LEU:O	34:ma:133:ARG:NH1	2.51	0.43
43:mj:77:ARG:HH12	49:mp:147:LYS:HG3	1.84	0.43
54:nv:74:ILE:HD12	54:nv:77:GLU:OE2	2.19	0.43
9:sF:382:LYS:O	9:sF:385:GLN:N	2.52	0.43
62:sK:161:ALA:O	62:sK:187:ASP:N	2.49	0.43
62:sK:387:LEU:O	62:sK:391:ASN:ND2	2.39	0.43
1:A0:371:ARG:NH2	1:A0:410:SER:O	2.52	0.42
1:A0:485:MET:HE2	1:A0:487:LEU:HB3	2.01	0.42
3:A2:62:LEU:O	3:A2:65:TRP:HB2	2.19	0.42
11:AA:1423:GLY:O	11:AA:1427:ASN:ND2	2.51	0.42
12:AB:921:ASP:N	12:AB:921:ASP:OD1	2.52	0.42
14:AD:119:ARG:NH2	14:AD:155:ARG:HH22	2.17	0.42
14:AD:147:TYR:OH	17:AG:88:ASP:O	2.31	0.42
20:AJ:44:TYR:HA	20:AJ:47:ARG:HD3	2.00	0.42
21:AK:11:LEU:CD2	39:Mf:146:THR:HG22	2.49	0.42
29:AT:95:DA:H2'	29:AT:96:DG:C8	2.53	0.42
45:MI:194:LYS:NZ	47:Mn:13:ASP:OD2	2.45	0.42
53:Nu:76:THR:OG1	53:Nu:77:ARG:N	2.52	0.42
55:SA:388:LEU:O	55:SA:414:HIS:NE2	2.40	0.42
56:SD:437:MET:HA	56:SD:440:LEU:HB2	2.01	0.42
62:SK:186:GLY:HA2	62:SK:189:LEU:HD12	2.00	0.42
62:SK:196:ARG:HD2	62:SK:196:ARG:HA	1.87	0.42
63:SL:222:LEU:HB2	63:SL:227:LYS:HE3	2.01	0.42
65:T2:104:GLU:HA	65:T2:107:LYS:HG2	2.00	0.42
66:T3:359:TYR:HE2	66:T3:913:THR:HB	1.83	0.42
5:B4:77:ALA:N	5:B4:84:LYS:O	2.40	0.42
7:B6:222:LEU:HB3	7:B6:223:PRO:HD3	2.01	0.42
14:BD:50:LEU:H	17:BG:1:MET:HE1	1.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:BD:213:GLU:HB3	35:mb:38:MET:CE	2.47	0.42
16:BF:89:GLU:O	16:BF:93:ILE:HG23	2.19	0.42
23:BM:30:TYR:HD2	23:BM:31:PRO:HA	1.84	0.42
30:BU:45:LYS:HA	30:BU:48:GLU:HG2	2.01	0.42
38:me:197:ASN:OD1	39:mf:76:SER:OG	2.37	0.42
50:nP:671:LEU:HD13	50:nP:982:ARG:HG3	2.01	0.42
7:A6:361:THR:OG1	7:A6:362:VAL:N	2.52	0.42
12:AB:1061:GLU:OE2	67:T5:927:ARG:CZ	2.68	0.42
16:AF:89:GLU:O	16:AF:93:ILE:HG23	2.19	0.42
38:Me:23:LEU:HA	38:Me:26:ILE:HG22	2.01	0.42
62:SK:98:SER:OG	62:SK:100:GLU:OE1	2.37	0.42
63:SL:115:THR:OG1	63:SL:116:HIS:N	2.52	0.42
65:t2:104:GLU:HA	65:t2:107:LYS:HG2	2.00	0.42
45:t4:1000:HIS:ND1	45:t4:1002:HIS:CD2	2.87	0.42
68:t6:597:LYS:HG3	68:t6:816:PHE:HE2	1.84	0.42
1:B0:371:ARG:NH2	1:B0:410:SER:O	2.52	0.42
3:B2:63:ASP:OD2	9:B8:780:ILE:CB	2.64	0.42
7:B6:361:THR:OG1	7:B6:362:VAL:N	2.52	0.42
8:B7:578:MET:HA	8:B7:581:TYR:CE2	2.54	0.42
20:BJ:65:PRO:HB2	20:BJ:68:LYS:HG2	2.02	0.42
49:mp:258:ILE:HB	49:mp:261:ASN:HB2	2.00	0.42
53:nq:15:LYS:HA	53:nq:15:LYS:HD3	1.89	0.42
53:nq:53:ALA:O	53:nq:56:GLU:HG3	2.19	0.42
62:sK:186:GLY:HA2	62:sK:189:LEU:HD12	2.00	0.42
1:A0:504:VAL:HG11	1:A0:517:SER:CB	2.50	0.42
11:AA:1314:SER:O	11:AA:1317:MET:HG2	2.20	0.42
18:AH:110:ASP:OD1	18:AH:111:LEU:N	2.52	0.42
38:Me:22:THR:HA	38:Me:25:THR:HG22	2.02	0.42
45:Ml:500:LEU:HD22	45:Ml:512:PRO:HB2	2.02	0.42
60:SI:698:PHE:CD2	60:SI:700:PRO:HD2	2.55	0.42
66:T3:909:LEU:HG	66:T3:967:TYR:HE2	1.84	0.42
68:T6:597:LYS:HG3	68:T6:816:PHE:HE2	1.84	0.42
64:t1:31:LYS:HA	64:t1:34:VAL:HG12	2.00	0.42
45:t4:1003:PHE:CE1	45:t4:1019:MET:HE2	2.54	0.42
45:t4:1003:PHE:CE2	45:t4:1019:MET:HG3	2.54	0.42
68:t6:843:VAL:HG22	68:t6:844:ILE:H	1.84	0.42
1:B0:360:LEU:O	1:B0:364:LYS:HB3	2.18	0.42
1:B0:519:VAL:HG22	1:B0:554:TRP:HD1	1.83	0.42
1:B0:541:PHE:CB	1:B0:547:MET:SD	3.07	0.42
1:B0:546:TYR:CD2	1:B0:546:TYR:HA	2.52	0.42
1:B0:547:MET:O	1:B0:551:VAL:HG22	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B1:322:ASP:OD2	2:B1:380:ARG:NH1	2.51	0.42
7:B6:144:ASN:OD1	7:B6:144:ASN:N	2.52	0.42
14:BD:119:ARG:NH2	14:BD:155:ARG:HH22	2.17	0.42
19:BI:18:GLU:OE2	19:BI:24:ARG:N	2.52	0.42
20:BJ:32:GLU:OE1	20:BJ:32:GLU:N	2.50	0.42
20:BJ:44:TYR:HA	20:BJ:47:ARG:HD3	2.00	0.42
32:BW:29:LEU:HA	32:BW:32:ILE:HG22	2.00	0.42
45:ml:89:GLN:HG3	45:ml:159:PHE:HB3	2.01	0.42
60:sI:742:LEU:HD13	60:sI:749:LEU:HD11	2.01	0.42
60:sI:1184:ASN:OD1	60:sI:1184:ASN:N	2.51	0.42
62:sK:62:ARG:O	62:sK:216:ARG:NH1	2.46	0.42
29:AT:-53:DC:H2"	29:AT:-52:DG:C8	2.54	0.42
35:Mb:73:LEU:HD22	40:Mg:56:MET:HE1	2.01	0.42
38:Me:280:LYS:HD3	38:Me:280:LYS:HA	1.87	0.42
9:SF:382:LYS:O	9:SF:385:GLN:N	2.52	0.42
50:SH:610:LYS:HA	50:SH:610:LYS:HD2	1.89	0.42
60:SI:742:LEU:HD13	60:SI:749:LEU:HD11	2.01	0.42
62:SK:90:LEU:HA	62:SK:93:THR:HG22	2.02	0.42
64:T1:31:LYS:HA	64:T1:34:VAL:HG12	2.00	0.42
64:T1:40:LEU:HA	64:T1:40:LEU:HD13	1.69	0.42
68:T6:119:ASP:N	68:T6:119:ASP:OD1	2.51	0.42
66:t3:909:LEU:HG	66:t3:967:TYR:HE2	1.84	0.42
66:t3:958:SER:O	66:t3:962:GLU:HB2	2.20	0.42
1:B0:485:MET:HE2	1:B0:487:LEU:HB3	2.00	0.42
3:B2:274:LEU:HA	3:B2:274:LEU:HD23	1.79	0.42
11:BA:10:PRO:HG2	11:BA:12:ARG:HH12	1.85	0.42
57:sC:182:SER:O	57:sC:186:MET:HG3	2.20	0.42
50:sH:610:LYS:HA	50:sH:610:LYS:HD2	1.89	0.42
63:sL:202:LEU:HD22	63:sL:204:GLN:HE22	1.84	0.42
63:sL:321:ASP:N	63:sL:321:ASP:OD1	2.50	0.42
3:A2:63:ASP:CB	9:A8:778:ASP:OD2	2.67	0.42
4:A3:100:ASN:ND2	34:Ma:139:VAL:C	2.77	0.42
7:A6:429:CYS:SG	7:A6:430:GLU:N	2.93	0.42
11:AA:367:PRO:HG2	11:AA:370:ILE:HD12	2.01	0.42
12:AB:1061:GLU:OE2	67:T5:927:ARG:NH2	2.52	0.42
34:Ma:107:LEU:O	34:Ma:133:ARG:NH1	2.51	0.42
49:Mp:113:ASP:OD1	49:Mp:113:ASP:N	2.50	0.42
66:T3:480:PHE:HB3	66:T3:488:GLN:HB3	2.01	0.42
68:T6:843:VAL:HG22	68:T6:844:ILE:H	1.83	0.42
1:B0:533:THR:HB	1:B0:537:MET:SD	2.60	0.42
4:B3:100:ASN:ND2	34:ma:139:VAL:C	2.77	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BA:784:LEU:HD21	11:BA:811:GLN:HG2	2.02	0.42
12:BB:319:GLU:OE1	12:BB:319:GLU:N	2.46	0.42
37:md:309:TRP:CE2	40:mg:80:LYS:HE2	2.55	0.42
45:ml:711:LEU:HD11	45:ml:823:VAL:HG13	2.01	0.42
56:sB:729:PHE:HZ	56:sD:736:ILE:HG21	1.84	0.42
62:sK:182:SER:OG	62:sK:183:LYS:N	2.50	0.42
1:A0:346:MET:HE2	1:A0:433:PRO:HB2	2.00	0.42
3:A2:194:GLN:O	3:A2:199:GLN:NE2	2.52	0.42
11:AA:11:LEU:C	11:AA:12:ARG:HD3	2.44	0.42
11:AA:551:TYR:OH	21:AK:72:LYS:NZ	2.39	0.42
18:AH:7:ASP:N	18:AH:7:ASP:OD1	2.53	0.42
20:AJ:5:VAL:HG12	20:AJ:6:ARG:HG2	2.01	0.42
28:AS:261:ILE:H	28:AS:261:ILE:HD12	1.85	0.42
37:Md:437:PHE:HE2	37:Md:509:ARG:HG2	1.85	0.42
45:MI:539:LYS:O	45:MI:542:ARG:NH1	2.51	0.42
9:SF:315:ASP:OD1	60:SI:658:ARG:NH2	2.45	0.42
60:SI:1184:ASN:OD1	60:SI:1184:ASN:N	2.51	0.42
45:T4:840:THR:HA	45:T4:843:VAL:HG12	2.00	0.42
45:T4:914:SER:HB2	45:T4:916:MET:HE2	2.02	0.42
68:T6:127:LEU:HD13	68:T6:186:TYR:CE2	2.54	0.42
66:t3:482:ARG:HH22	66:t3:517:ASP:HA	1.85	0.42
8:B7:424:PHE:HE1	8:B7:430:LEU:HD13	1.84	0.42
11:BA:344:ARG:NH1	12:BB:1127:GLY:O	2.52	0.42
26:BQ:116:THR:N	26:BQ:390:ASP:OD2	2.47	0.42
32:BW:17:VAL:HG13	32:BW:26:VAL:HG22	2.01	0.42
44:mk:81:LEU:HA	44:mk:84:VAL:HG22	2.02	0.42
53:nu:65:LEU:HA	53:nu:65:LEU:HD12	1.77	0.42
63:sL:445:ASP:OD1	63:sL:445:ASP:N	2.53	0.42
37:Md:442:MET:HG2	37:Md:478:LEU:HD22	2.02	0.42
55:SA:377:SER:HB2	55:SA:403:LEU:HD13	2.01	0.42
56:SB:729:PHE:HZ	56:SD:736:ILE:HG21	1.84	0.42
57:SC:182:SER:O	57:SC:186:MET:HG3	2.20	0.42
56:SD:335:ILE:HD11	9:SF:452:GLU:HG3	2.01	0.42
66:T3:498:ILE:HD13	66:T3:498:ILE:HA	1.94	0.42
66:T3:958:SER:O	66:T3:962:GLU:HB2	2.20	0.42
68:T6:102:PHE:HD1	68:T6:177:ILE:HG22	1.84	0.42
68:T6:621:ARG:O	68:T6:625:LYS:NZ	2.52	0.42
68:T6:628:LEU:HD23	68:T6:631:LEU:HD12	2.01	0.42
64:t1:95:SER:OG	65:t2:37:ARG:NH2	2.53	0.42
66:t3:867:ASP:HB3	66:t3:870:ILE:HG12	2.00	0.42
2:B1:191:LEU:HA	2:B1:194:VAL:HG12	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B2:90:ASN:OD1	3:B2:97:MET:HB2	2.19	0.42
11:BA:885:THR:HG22	11:BA:940:ARG:HG2	2.01	0.42
23:BM:136:LEU:HD21	23:BM:196:ILE:HD13	1.91	0.42
28:BS:261:ILE:H	28:BS:261:ILE:HD12	1.85	0.42
45:ml:413:VAL:HB	45:ml:427:ILE:HB	2.02	0.42
45:ml:500:LEU:HD22	45:ml:512:PRO:HB2	2.02	0.42
49:mp:93:GLN:O	49:mp:189:ARG:NH2	2.53	0.42
60:sI:1224:LEU:HB3	60:sI:1230:SER:HB2	2.02	0.42
62:sK:98:SER:OG	62:sK:100:GLU:OE1	2.37	0.42
3:A2:232:GLU:O	3:A2:237:TYR:OH	2.33	0.42
7:A6:284:ASP:OD1	7:A6:285:GLU:N	2.50	0.42
15:AE:91:LYS:O	15:AE:95:THR:HG23	2.20	0.42
17:AG:95:SER:CB	32:AW:144:ARG:CB	2.96	0.42
34:Ma:133:ARG:HE	34:Ma:147:ILE:HD11	1.85	0.42
37:Md:355:ALA:HA	37:Md:370:PRO:HA	2.02	0.42
44:Mk:81:LEU:HA	44:Mk:84:VAL:HG22	2.02	0.42
54:Nv:117:LYS:HE3	54:Nv:121:LYS:HE2	2.02	0.42
61:SJ:62:THR:OG1	61:SJ:63:TRP:N	2.53	0.42
66:T3:482:ARG:HH22	66:T3:517:ASP:HA	1.85	0.42
66:T3:838:SER:O	66:T3:839:SER:C	2.62	0.42
45:T4:859:ALA:HB3	45:T4:866:SER:HB2	2.02	0.42
67:T5:869:PHE:O	67:T5:873:GLN:HG3	2.20	0.42
68:T6:218:ARG:HH12	68:T6:220:ARG:CB	2.33	0.42
67:t5:913:ILE:HG21	67:t5:938:ILE:HB	2.02	0.42
68:t6:621:ARG:O	68:t6:625:LYS:NZ	2.52	0.42
11:BA:367:PRO:HG2	11:BA:370:ILE:HD12	2.01	0.42
17:BG:95:SER:HB3	32:BW:144:ARG:CB	2.39	0.42
18:BH:7:ASP:OD1	18:BH:7:ASP:N	2.53	0.42
34:ma:6:LEU:HA	34:ma:9:LEU:HD23	2.02	0.42
50:nP:1033:PHE:HB3	50:nP:1042:MET:HE3	2.02	0.42
55:sA:377:SER:HB2	55:sA:403:LEU:HD13	2.01	0.42
55:sA:443:GLU:H	57:sC:204:VAL:HG12	1.85	0.42
60:sI:698:PHE:CD2	60:sI:700:PRO:HD2	2.55	0.42
62:sK:406:GLN:HA	62:sK:409:ILE:HG12	2.01	0.42
3:A2:29:PRO:HB3	3:A2:111:ALA:HB2	2.01	0.42
3:A2:492:PHE:CE2	6:A5:9:LEU:HB2	2.55	0.42
7:A6:154:ILE:HD13	7:A6:196:LEU:HD23	2.02	0.42
7:A6:172:ILE:HD11	7:A6:179:ALA:HB1	2.01	0.42
8:A7:415:VAL:HA	8:A7:418:MET:HE2	2.01	0.42
11:AA:12:ARG:NH2	12:AB:1192:TYR:CE2	2.88	0.42
11:AA:451:HIS:HD2	11:AA:453:MET:HE2	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1300:LYS:NZ	28:AS:301:ALA:O	2.49	0.42
12:AB:316:PRO:HA	12:AB:319:GLU:CD	2.43	0.42
20:AJ:65:PRO:HB2	20:AJ:68:LYS:HG2	2.02	0.42
28:AS:239:ALA:HB1	28:AS:243:GLN:HE22	1.83	0.42
39:Mf:94:ASN:ND2	39:Mf:96:SER:OG	2.52	0.42
53:Nq:53:ALA:O	53:Nq:56:GLU:HG3	2.19	0.42
9:SF:383:TYR:HA	9:SF:386:ASP:OD2	2.20	0.42
66:T3:887:PHE:HE1	66:T3:919:TYR:HD1	1.67	0.42
68:T6:138:ARG:HD3	68:T6:138:ARG:HA	1.79	0.42
66:t3:683:ASP:OD1	66:t3:683:ASP:N	2.53	0.42
66:t3:838:SER:O	66:t3:839:SER:C	2.62	0.42
68:t6:102:PHE:HD1	68:t6:177:ILE:HG22	1.84	0.42
1:B0:434:ILE:O	1:B0:435:MET:HE2	2.19	0.42
5:B4:218:SER:O	5:B4:237:HIS:NE2	2.49	0.42
5:B4:271:ASP:OD1	5:B4:271:ASP:N	2.52	0.42
6:B5:55:ASN:HA	6:B5:58:LEU:HG	2.02	0.42
7:B6:142:ARG:HH21	7:B6:143:PRO:CB	2.33	0.42
20:BJ:19:GLU:OE1	20:BJ:19:GLU:N	2.49	0.42
27:BR:63:ARG:NH2	27:BR:65:ASN:O	2.45	0.42
48:mo:30:ILE:HD11	48:mo:82:LEU:HD22	2.02	0.42
2:A1:167:ASP:OD1	2:A1:167:ASP:N	2.53	0.42
3:A2:63:ASP:C	3:A2:65:TRP:H	2.27	0.42
3:A2:507:ARG:HB3	9:SF:393:LYS:CE	2.50	0.42
7:A6:188:ASN:O	7:A6:192:HIS:ND1	2.53	0.42
7:A6:322:MET:HE2	7:A6:322:MET:HB2	1.94	0.42
12:AB:596:LEU:HD12	12:AB:597:MET:N	2.35	0.42
12:AB:769:TYR:O	12:AB:773:MET:HG3	2.19	0.42
39:Mf:117:MET:N	39:Mf:117:MET:SD	2.93	0.42
52:Np:43:VAL:HG21	52:Np:46:ILE:HD11	2.01	0.42
53:Nu:55:LEU:HD23	53:Nu:55:LEU:HA	1.92	0.42
55:SA:443:GLU:H	57:SC:204:VAL:HG12	1.85	0.42
60:SI:1255:PHE:HA	60:SI:1258:CYS:HB2	2.02	0.42
62:SK:406:GLN:HA	62:SK:409:ILE:HG12	2.01	0.42
66:T3:683:ASP:OD1	66:T3:683:ASP:N	2.53	0.42
66:T3:731:LEU:HD23	66:T3:731:LEU:HA	1.86	0.42
66:T3:883:GLY:HA2	68:T6:275:PHE:HE1	1.84	0.42
66:t3:869:ARG:HG2	66:t3:876:ASP:OD2	2.19	0.42
68:t6:628:LEU:HD23	68:t6:631:LEU:HD12	2.01	0.42
8:B7:415:VAL:HA	8:B7:418:MET:HE2	2.01	0.42
29:BT:-90:DA:H2'	29:BT:-89:DA:C8	2.55	0.42
38:me:22:THR:HA	38:me:25:THR:HG22	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:sF:383:TYR:HA	9:sF:386:ASP:OD2	2.20	0.42
63:sL:222:LEU:HB2	63:sL:227:LYS:HE3	2.01	0.42
1:A0:345:ARG:NH1	1:A0:345:ARG:O	2.53	0.41
1:A0:518:ILE:HG23	1:A0:522:TYR:HE2	1.85	0.41
7:A6:142:ARG:NE	7:A6:143:PRO:HA	2.35	0.41
7:A6:142:ARG:HH21	7:A6:143:PRO:CB	2.33	0.41
11:AA:344:ARG:NH1	12:AB:1127:GLY:O	2.52	0.41
11:AA:760:GLN:HB3	11:AA:804:TYR:CE2	2.55	0.41
12:AB:576:ASP:OD1	12:AB:576:ASP:N	2.51	0.41
14:AD:213:GLU:HB3	35:Mb:38:MET:CE	2.47	0.41
30:AU:45:LYS:HA	30:AU:48:GLU:HG2	2.01	0.41
45:MI:747:LEU:N	45:MI:767:MET:O	2.51	0.41
45:MI:750:GLU:HB3	45:MI:760:ASN:HD21	1.85	0.41
48:Mo:30:ILE:HD11	48:Mo:82:LEU:HD22	2.02	0.41
49:Mp:93:GLN:O	49:Mp:189:ARG:NH2	2.52	0.41
51:No:129:ARG:O	51:No:129:ARG:NH1	2.47	0.41
56:SB:352:ASN:HA	56:SB:355:ARG:HG2	2.00	0.41
9:SF:499:TYR:HE1	9:SF:734:VAL:HG12	1.85	0.41
62:SK:392:VAL:HB	62:SK:423:THR:HA	2.02	0.41
63:SL:445:ASP:OD1	63:SL:445:ASP:N	2.53	0.41
66:t3:888:LEU:HA	68:t6:278:LEU:HD21	2.00	0.41
1:B0:83:LEU:HD21	1:B0:177:SER:HA	2.02	0.41
1:B0:345:ARG:NH1	1:B0:345:ARG:O	2.53	0.41
1:B0:560:LEU:CD2	1:B0:560:LEU:HD11	2.50	0.41
7:B6:142:ARG:NE	7:B6:143:PRO:HA	2.35	0.41
8:B7:592:GLN:NE2	8:B7:747:ASN:O	2.51	0.41
11:BA:543:LEU:HA	11:BA:546:VAL:HG22	2.01	0.41
11:BA:886:ILE:HD13	11:BA:943:LEU:HB3	2.02	0.41
15:BE:91:LYS:O	15:BE:95:THR:HG23	2.20	0.41
37:md:437:PHE:HE2	37:md:509:ARG:HG2	1.85	0.41
37:md:469:LEU:HD23	37:md:471:ASN:H	1.85	0.41
38:me:23:LEU:HA	38:me:26:ILE:HG22	2.01	0.41
45:ml:747:LEU:N	45:ml:767:MET:O	2.51	0.41
9:nF:665:LYS:NZ	9:nF:669:ARG:HH21	2.18	0.41
58:sE:236:LYS:HA	58:sE:236:LYS:HD3	1.90	0.41
62:sK:303:LEU:HD12	62:sK:306:CYS:HB2	2.02	0.41
63:sL:314:GLY:HA3	63:sL:357:HIS:CE1	2.55	0.41
7:A6:124:ARG:NH1	7:A6:305:VAL:O	2.54	0.41
8:A7:183:ALA:HB1	8:A7:188:LEU:HD12	2.02	0.41
11:AA:55:ASP:OD1	11:AA:55:ASP:N	2.46	0.41
11:AA:99:ILE:H	11:AA:99:ILE:HG23	1.65	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:886:ILE:HD13	11:AA:943:LEU:HB3	2.02	0.41
12:AB:76:GLN:O	12:AB:84:ILE:N	2.54	0.41
12:AB:593:PRO:HA	12:AB:596:LEU:CG	2.50	0.41
40:Mg:112:ILE:HD12	40:Mg:112:ILE:HA	1.95	0.41
43:Mj:77:ARG:HH12	49:Mp:147:LYS:HG3	1.84	0.41
45:MI:405:ASP:OD1	45:MI:405:ASP:N	2.53	0.41
45:MI:711:LEU:HD11	45:MI:823:VAL:HG13	2.01	0.41
45:MI:747:LEU:HB2	45:MI:767:MET:HB2	2.02	0.41
50:NP:1105:ARG:NH2	50:NP:1154:SER:OG	2.53	0.41
55:SA:185:ILE:HG12	55:SA:297:ILE:HG12	2.03	0.41
57:SC:130:ARG:HD3	57:SC:130:ARG:HA	1.86	0.41
63:SL:314:GLY:HA3	63:SL:357:HIS:CE1	2.55	0.41
67:T5:880:PRO:HA	67:T5:883:LEU:HG	2.01	0.41
65:t2:31:LYS:HA	65:t2:34:ASN:HD21	1.85	0.41
66:t3:768:GLU:OE1	66:t3:819:LEU:HD23	2.20	0.41
45:t4:914:SER:HB2	45:t4:916:MET:HE2	2.02	0.41
67:t5:869:PHE:O	67:t5:873:GLN:HG3	2.20	0.41
67:t5:880:PRO:HA	67:t5:883:LEU:HG	2.01	0.41
68:t6:111:ASN:HD21	68:t6:119:ASP:H	1.67	0.41
3:B2:185:THR:OG1	3:B2:188:GLY:N	2.48	0.41
7:B6:124:ARG:NH1	7:B6:305:VAL:O	2.53	0.41
11:BA:12:ARG:NH2	12:BB:1192:TYR:CE2	2.88	0.41
12:BB:76:GLN:O	12:BB:84:ILE:N	2.54	0.41
12:BB:593:PRO:HA	12:BB:596:LEU:CG	2.50	0.41
37:md:442:MET:HG2	37:md:478:LEU:HD22	2.02	0.41
40:mg:34:ASN:HD21	40:mg:42:ALA:HB3	1.85	0.41
50:nP:679:ILE:HG23	50:nP:744:TYR:CE2	2.54	0.41
51:no:128:ARG:NE	51:no:133:GLU:OE1	2.49	0.41
52:np:32:PRO:HA	52:np:35:ARG:HB3	2.02	0.41
9:sF:499:TYR:HE1	9:sF:734:VAL:HG12	1.85	0.41
9:sF:510:ILE:HD12	9:sF:510:ILE:HG23	1.84	0.41
60:sI:1214:ILE:HD12	60:sI:1214:ILE:HA	1.97	0.41
60:sI:1255:PHE:HA	60:sI:1258:CYS:HB2	2.02	0.41
62:sK:90:LEU:HA	62:sK:93:THR:HG22	2.01	0.41
62:sK:392:VAL:HB	62:sK:423:THR:HA	2.02	0.41
63:sL:333:ILE:HG23	63:sL:409:LEU:HD13	2.02	0.41
8:A7:448:THR:OG1	8:A7:450:SER:O	2.34	0.41
12:AB:593:PRO:HA	12:AB:596:LEU:HG	2.03	0.41
19:AI:74:GLU:HB2	19:AI:81:ARG:HH21	1.86	0.41
23:AM:30:TYR:HD2	23:AM:31:PRO:HA	1.84	0.41
37:Md:24:ASN:HD21	37:Md:87:VAL:HB	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:NP:1033:PHE:HB3	50:NP:1042:MET:HE3	2.02	0.41
60:SI:964:CYS:HB3	60:SI:967:LYS:HG2	2.03	0.41
61:SJ:29:TRP:HB3	61:SJ:59:ARG:HG2	2.03	0.41
67:T5:913:ILE:HG21	67:T5:938:ILE:HB	2.02	0.41
68:T6:623:LEU:HD11	68:T6:653:LYS:HE3	2.02	0.41
68:t6:218:ARG:HH12	68:t6:220:ARG:CB	2.33	0.41
1:B0:341:TYR:HD1	1:B0:363:LEU:HD13	1.84	0.41
12:BB:615:MET:SD	12:BB:615:MET:C	3.04	0.41
19:BI:84:VAL:HG13	19:BI:104:LEU:HD11	2.03	0.41
30:BU:44:LYS:HA	30:BU:47:THR:HG22	2.01	0.41
30:BU:277:GLN:HB2	31:BV:56:THR:HG23	2.02	0.41
44:mk:25:ILE:O	44:mk:28:SER:OG	2.38	0.41
45:ml:747:LEU:HB2	45:ml:767:MET:HB2	2.02	0.41
47:mn:51:PRO:HA	47:mn:52:PRO:HD3	1.94	0.41
9:sF:316:PRO:HA	9:sF:317:PRO:HD3	1.82	0.41
61:sJ:62:THR:OG1	61:sJ:63:TRP:N	2.53	0.41
1:A0:83:LEU:HD21	1:A0:177:SER:HA	2.02	0.41
3:A2:63:ASP:C	3:A2:65:TRP:N	2.78	0.41
6:A5:19:LEU:HB3	6:A5:54:LEU:HD21	2.01	0.41
11:AA:1420:ASP:OD2	12:AB:1222:ARG:NH2	2.52	0.41
17:AG:47:CYS:SG	17:AG:48:VAL:N	2.93	0.41
35:Mb:128:TYR:O	35:Mb:132:THR:OG1	2.34	0.41
37:Md:317:SER:OG	37:Md:318:ASN:N	2.53	0.41
42:Mi:67:PRO:HA	42:Mi:68:PRO:HD3	1.95	0.41
53:Nu:53:ALA:HB1	54:Nv:114:GLU:OE1	2.21	0.41
60:SI:1282:ILE:CG2	60:SI:1286:PHE:HE2	2.33	0.41
63:SL:333:ILE:HG23	63:SL:409:LEU:HD13	2.03	0.41
66:T3:833:ASN:HB2	66:T3:834:TYR:H	1.70	0.41
66:T3:1126:MET:HE3	66:T3:1126:MET:HB2	1.95	0.41
45:T4:1023:ARG:HA	45:T4:1027:PHE:HB2	2.02	0.41
68:T6:170:ASP:OD1	68:T6:170:ASP:N	2.48	0.41
68:T6:760:ALA:O	68:T6:761:LYS:HG3	2.20	0.41
68:t6:760:ALA:O	68:t6:761:LYS:HG3	2.20	0.41
2:B1:167:ASP:N	2:B1:167:ASP:OD1	2.53	0.41
2:B1:306:ARG:HB2	32:BW:204:ALA:C	2.44	0.41
3:B2:60:LEU:HD23	3:B2:60:LEU:HA	1.73	0.41
3:B2:492:PHE:CE2	6:B5:9:LEU:HB2	2.55	0.41
3:B2:507:ARG:HB3	9:sF:393:LYS:CE	2.50	0.41
7:B6:188:ASN:O	7:B6:192:HIS:ND1	2.53	0.41
7:B6:429:CYS:SG	7:B6:430:GLU:N	2.93	0.41
11:BA:234:MET:HB3	11:BA:234:MET:HE3	1.62	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BA:385:ILE:CD1	38:me:265:ILE:HD11	2.51	0.41
11:BA:1314:SER:O	11:BA:1317:MET:HG2	2.20	0.41
33:BX:284:LYS:HD3	33:BX:285:PRO:HD2	2.00	0.41
38:me:80:MET:HG3	38:me:83:LYS:HD2	2.00	0.41
44:mk:125:LEU:HD23	47:mn:59:ILE:HD11	2.02	0.41
50:nP:811:GLU:HB2	50:nP:812:MET:SD	2.60	0.41
61:sJ:29:TRP:HB3	61:sJ:59:ARG:HG2	2.03	0.41
11:AA:184:SER:OG	11:AA:199:LEU:HG	2.20	0.41
11:AA:385:ILE:CD1	38:Me:265:ILE:HD11	2.51	0.41
11:AA:768:GLN:OE1	11:AA:768:GLN:N	2.45	0.41
12:AB:73:GLN:NE2	12:AB:74:LEU:O	2.54	0.41
16:AF:149:GLU:OE1	16:AF:149:GLU:N	2.51	0.41
18:AH:101:ALA:HB2	18:AH:116:TYR:CE1	2.56	0.41
30:AU:14:VAL:HA	30:AU:17:VAL:HG22	2.03	0.41
37:Md:469:LEU:HD23	37:Md:471:ASN:H	1.85	0.41
38:Me:170:ASP:OD1	38:Me:170:ASP:N	2.53	0.41
50:NP:909:THR:O	50:NP:913:HIS:HB2	2.20	0.41
53:Nq:62:ILE:HG21	54:Nr:63:MET:HE1	2.02	0.41
9:SF:335:ASP:OD1	9:SF:335:ASP:N	2.48	0.41
63:SL:144:PRO:HD2	63:SL:147:LEU:HD22	2.02	0.41
66:T3:666:PRO:HA	66:T3:765:TYR:HB3	2.02	0.41
66:t3:509:SER:O	66:t3:513:SER:OG	2.38	0.41
45:t4:1013:SER:HA	45:t4:1014:PRO:HD3	1.93	0.41
7:B6:154:ILE:HD13	7:B6:196:LEU:HD23	2.02	0.41
11:BA:184:SER:OG	11:BA:199:LEU:HG	2.20	0.41
12:BB:16:TYR:HB3	12:BB:17:GLY:H	1.71	0.41
12:BB:1138:MET:HE1	12:BB:1143:ALA:HB3	2.01	0.41
19:BI:113:ASP:HB3	19:BI:114:GLN:H	1.76	0.41
37:md:355:ALA:HA	37:md:370:PRO:HA	2.02	0.41
50:nP:1077:GLU:CD	52:np:17:ARG:HH21	2.28	0.41
56:sB:600:PHE:HB2	50:sH:490:THR:HG21	2.03	0.41
56:sD:402:LYS:HA	56:sD:402:LYS:HD3	1.81	0.41
63:sL:144:PRO:HD2	63:sL:147:LEU:HD22	2.02	0.41
1:A0:519:VAL:HG22	1:A0:554:TRP:HD1	1.83	0.41
1:A0:533:THR:HB	1:A0:537:MET:SD	2.60	0.41
1:A0:560:LEU:CD2	1:A0:560:LEU:HD11	2.50	0.41
3:A2:487:LYS:HA	3:A2:487:LYS:HD2	1.96	0.41
8:A7:424:PHE:HE1	8:A7:430:LEU:HD13	1.84	0.41
8:A7:578:MET:HA	8:A7:581:TYR:CE2	2.55	0.41
11:AA:10:PRO:HG2	11:AA:12:ARG:HH12	1.85	0.41
17:AG:58:ARG:HA	17:AG:58:ARG:HD3	1.92	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:Md:309:TRP:CE2	40:Mg:80:LYS:HE2	2.55	0.41
42:Mi:63:ASP:OD1	42:Mi:63:ASP:N	2.53	0.41
50:NP:677:THR:O	50:NP:681:HIS:ND1	2.38	0.41
50:NP:811:GLU:HB2	50:NP:812:MET:SD	2.60	0.41
57:SC:175:ALA:O	57:SC:180:SER:OG	2.32	0.41
64:T1:95:SER:OG	65:T2:37:ARG:NH2	2.53	0.41
68:T6:408:LEU:O	68:T6:412:ARG:NH2	2.48	0.41
1:B0:520:ARG:NH1	1:B0:557:MET:SD	2.88	0.41
2:B1:324:LYS:HG2	2:B1:328:MET:CE	2.51	0.41
11:BA:765:VAL:HG22	11:BA:804:TYR:CE2	2.55	0.41
12:BB:73:GLN:NE2	12:BB:74:LEU:O	2.54	0.41
12:BB:769:TYR:O	12:BB:773:MET:HG3	2.19	0.41
17:BG:47:CYS:SG	17:BG:48:VAL:N	2.94	0.41
20:BJ:5:VAL:HG12	20:BJ:6:ARG:HG2	2.01	0.41
32:BW:103:HIS:CG	32:BW:107:GLN:HE22	2.39	0.41
32:BW:123:MET:HE1	32:BW:130:LYS:HG3	2.03	0.41
45:ml:814:GLU:OE2	45:ml:832:LYS:NZ	2.53	0.41
49:mp:1:MET:HE3	49:mp:1:MET:HB3	1.94	0.41
50:nP:1105:ARG:NH2	50:nP:1154:SER:OG	2.53	0.41
5:A4:36:LEU:O	5:A4:39:THR:OG1	2.33	0.41
11:AA:543:LEU:HA	11:AA:546:VAL:HG22	2.02	0.41
14:AD:199:ASN:OD1	14:AD:200:ASN:N	2.54	0.41
20:AJ:32:GLU:OE1	20:AJ:32:GLU:N	2.50	0.41
30:AU:277:GLN:HB2	31:AV:56:THR:HG23	2.02	0.41
37:Md:414:ASP:OD1	37:Md:414:ASP:N	2.49	0.41
43:Mj:78:LYS:O	49:Mp:147:LYS:NZ	2.44	0.41
44:Mk:25:ILE:O	44:Mk:28:SER:OG	2.38	0.41
45:MI:701:ASN:OD1	45:MI:773:TYR:OH	2.33	0.41
51:No:128:ARG:NE	51:No:133:GLU:OE1	2.49	0.41
65:T2:31:LYS:HA	65:T2:34:ASN:HD21	1.85	0.41
66:T3:768:GLU:OE1	66:T3:819:LEU:HD23	2.20	0.41
67:T5:896:ASP:N	67:T5:896:ASP:OD1	2.48	0.41
66:t3:534:PRO:HA	66:t3:537:GLN:HG3	2.02	0.41
45:t4:859:ALA:HB3	45:t4:866:SER:HB2	2.02	0.41
2:B1:620:LEU:HA	2:B1:623:ILE:HG22	2.03	0.41
3:B2:420:LEU:HD11	3:B2:427:LYS:HD2	2.03	0.41
7:B6:142:ARG:HA	7:B6:143:PRO:HA	1.79	0.41
11:BA:1450:LEU:HD11	17:BG:22:MET:HE1	2.03	0.41
15:BE:58:MET:HE3	15:BE:58:MET:HB3	1.91	0.41
18:BH:101:ALA:HB2	18:BH:116:TYR:CE1	2.56	0.41
19:BI:78:CYS:C	19:BI:79:HIS:CD2	2.99	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:mi:153:THR:HA	42:mi:156:VAL:HG22	2.03	0.41
49:mp:19:LYS:HD2	49:mp:118:HIS:CE1	2.56	0.41
49:mp:77:VAL:HG11	49:mp:104:LEU:HB2	2.03	0.41
50:nP:1026:MET:HE2	50:nP:1026:MET:N	2.35	0.41
54:nv:117:LYS:HE3	54:nv:121:LYS:HE2	2.02	0.41
55:sA:185:ILE:HG12	55:sA:297:ILE:HG12	2.02	0.41
58:sE:563:LYS:HD3	58:sE:563:LYS:HA	1.92	0.41
62:sK:196:ARG:HD2	62:sK:196:ARG:HA	1.87	0.41
7:A6:171:ILE:N	7:A6:183:SER:OG	2.42	0.41
11:AA:177:ASP:OD1	11:AA:177:ASP:N	2.53	0.41
12:AB:615:MET:C	12:AB:615:MET:SD	3.03	0.41
19:AI:84:VAL:HG13	19:AI:104:LEU:HD11	2.02	0.41
40:Mg:34:ASN:HD21	40:Mg:42:ALA:HB3	1.85	0.41
40:Mg:64:GLN:HA	40:Mg:67:LYS:HG2	2.03	0.41
50:NP:1026:MET:HE2	50:NP:1026:MET:N	2.35	0.41
60:SI:903:ASN:OD1	60:SI:903:ASN:N	2.54	0.41
66:T3:1082:ILE:HD11	68:T6:380:ASP:HB3	2.03	0.41
66:t3:448:ILE:HD12	66:t3:448:ILE:HA	1.96	0.41
68:t6:196:LEU:HD23	68:t6:196:LEU:HA	1.92	0.41
1:B0:504:VAL:HG11	1:B0:517:SER:CB	2.50	0.41
1:B0:518:ILE:HG23	1:B0:522:TYR:HE2	1.85	0.41
11:BA:385:ILE:HD11	38:me:265:ILE:HD11	2.03	0.41
11:BA:1444:MET:HB3	16:BF:133:VAL:HG13	2.03	0.41
19:BI:74:GLU:HB2	19:BI:81:ARG:HH21	1.86	0.41
41:mh:72:ASP:O	41:mh:76:THR:OG1	2.32	0.41
50:nP:689:PHE:CE2	50:sH:653:LYS:HG2	2.55	0.41
50:nP:1304:ARG:O	50:nP:1308:GLU:HG3	2.21	0.41
55:sA:310:TYR:OH	55:sA:324:THR:O	2.32	0.41
58:sE:314:LEU:HD23	58:sE:314:LEU:HA	1.93	0.41
60:sI:1282:ILE:CG2	60:sI:1286:PHE:HE2	2.33	0.41
63:sL:13:TYR:HD2	63:sL:20:LEU:HD12	1.86	0.41
2:A1:226:GLN:HG2	7:A6:178:LEU:HD22	2.03	0.41
2:A1:306:ARG:HB2	32:AW:204:ALA:C	2.44	0.41
2:A1:620:LEU:HA	2:A1:623:ILE:HG22	2.03	0.41
4:A3:42:CYS:SG	4:A3:45:ARG:NH2	2.91	0.41
4:A3:100:ASN:HA	34:Ma:139:VAL:HG23	2.03	0.41
6:A5:55:ASN:HA	6:A5:58:LEU:HG	2.02	0.41
7:A6:222:LEU:HB3	7:A6:223:PRO:HD3	2.01	0.41
7:A6:263:VAL:HG22	7:A6:264:LEU:O	2.20	0.41
11:AA:385:ILE:HD11	38:Me:265:ILE:HD11	2.03	0.41
11:AA:784:LEU:HD21	11:AA:811:GLN:HG2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:895:LYS:HD2	11:AA:895:LYS:HA	1.88	0.41
11:AA:1349:TYR:CE1	11:AA:1368:MET:SD	3.14	0.41
12:AB:316:PRO:HA	12:AB:319:GLU:OE1	2.21	0.41
15:AE:50:MET:HE1	15:AE:52:ARG:HG2	2.02	0.41
18:AH:97:MET:HB2	18:AH:142:LEU:HB3	2.03	0.41
19:AI:78:CYS:C	19:AI:79:HIS:CD2	2.99	0.41
19:AI:97:MET:HE2	19:AI:97:MET:HB3	1.89	0.41
29:AT:-90:DA:H2'	29:AT:-89:DA:C8	2.55	0.41
29:AT:5:DA:OP2	54:Nv:31:ARG:NH1	2.54	0.41
31:AV:78:PHE:HB2	31:AV:113:ILE:HB	2.03	0.41
32:AW:123:MET:HE1	32:AW:130:LYS:HG3	2.03	0.41
34:Ma:6:LEU:HA	34:Ma:9:LEU:HD23	2.02	0.41
42:Mi:153:THR:HA	42:Mi:156:VAL:HG22	2.03	0.41
44:Mk:104:ILE:HG23	45:Ml:169:PHE:HE2	1.86	0.41
44:Mk:125:LEU:HD23	47:Mn:59:ILE:HD11	2.02	0.41
45:Ml:814:GLU:OE2	45:Ml:832:LYS:NZ	2.53	0.41
49:Mp:19:LYS:HD2	49:Mp:118:HIS:CE1	2.56	0.41
49:Mp:256:MET:HB2	49:Mp:330:ILE:HG12	2.03	0.41
9:Nf:665:LYS:NZ	9:Nf:669:ARG:HH21	2.18	0.41
50:NP:1077:GLU:CD	52:Np:17:ARG:HH21	2.28	0.41
52:Np:32:PRO:HA	52:Np:35:ARG:HB3	2.02	0.41
53:Nq:62:ILE:HD13	53:Nq:62:ILE:HA	1.95	0.41
55:SA:321:LYS:HA	55:SA:321:LYS:HD2	1.93	0.41
56:SD:550:ALA:HA	56:SD:553:VAL:HG12	2.03	0.41
58:SE:335:MET:HE3	58:SE:335:MET:HB3	1.96	0.41
9:SF:422:THR:OG1	9:SF:425:ARG:NH1	2.54	0.41
62:SK:62:ARG:HB3	62:SK:63:ASN:H	1.75	0.41
63:SL:13:TYR:HD2	63:SL:20:LEU:HD12	1.86	0.41
63:SL:447:PHE:HB3	63:SL:467:PHE:HE1	1.86	0.41
64:T1:31:LYS:HZ3	64:T1:83:ILE:HD12	1.86	0.41
66:T3:534:PRO:HA	66:T3:537:GLN:HG3	2.02	0.41
68:T6:649:ILE:HG21	68:T6:649:ILE:HD13	1.89	0.41
66:t3:887:PHE:HE1	66:t3:919:TYR:HD1	1.67	0.41
68:t6:623:LEU:HD11	68:t6:653:LYS:HE3	2.02	0.41
2:B1:363:ASP:OD1	2:B1:367:ASN:N	2.54	0.41
3:B2:59:LEU:CD2	9:B8:778:ASP:CB	2.96	0.41
3:B2:223:HIS:HB3	3:B2:227:MET:HE1	2.01	0.41
8:B7:489:GLU:N	8:B7:513:LEU:O	2.48	0.41
11:BA:760:GLN:HB3	11:BA:804:TYR:CE2	2.55	0.41
12:BB:596:LEU:HD12	12:BB:597:MET:N	2.35	0.41
18:BH:97:MET:HB2	18:BH:142:LEU:HB3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BM:167:SER:O	23:BM:170:SER:OG	2.36	0.41
34:ma:190:ASP:OD1	34:ma:190:ASP:N	2.53	0.41
37:md:674:LEU:HA	37:md:677:ILE:HG22	2.02	0.41
39:mf:117:MET:N	39:mf:117:MET:SD	2.93	0.41
41:mh:192:MET:HE2	41:mh:192:MET:HB3	1.85	0.41
43:mj:97:ARG:HA	43:mj:100:LEU:HD23	2.03	0.41
45:ml:405:ASP:OD1	45:ml:405:ASP:N	2.53	0.41
45:ml:750:GLU:HB3	45:ml:760:ASN:HD21	1.85	0.41
50:nP:909:THR:O	50:nP:913:HIS:HB2	2.20	0.41
53:nq:62:ILE:HG21	54:nr:63:MET:HE1	2.02	0.41
55:sA:388:LEU:O	55:sA:414:HIS:NE2	2.40	0.41
56:sB:578:ASP:OD1	56:sB:578:ASP:N	2.46	0.41
57:sC:175:ALA:O	57:sC:180:SER:OG	2.32	0.41
61:sJ:65:ARG:NH1	63:sL:455:ASN:O	2.54	0.41
1:A0:2:LYS:HG2	1:A0:11:LEU:HG	2.03	0.41
2:A1:363:ASP:OD1	2:A1:367:ASN:N	2.54	0.41
3:A2:196:ILE:HD13	3:A2:196:ILE:HG21	1.76	0.41
11:AA:765:VAL:HG22	11:AA:804:TYR:CE2	2.55	0.41
11:AA:1398:MET:SD	11:AA:1399:ARG:N	2.94	0.41
12:AB:356:LEU:O	12:AB:356:LEU:HD23	2.21	0.41
14:AD:188:ALA:HB2	14:AD:208:GLU:HB2	2.03	0.41
24:AN:71:DA:H2"	24:AN:72:DG:C8	2.56	0.41
32:AW:38:LEU:HD13	32:AW:209:PRO:HG2	2.02	0.41
32:AW:103:HIS:CG	32:AW:107:GLN:HE22	2.39	0.41
32:AW:208:PRO:HA	32:AW:209:PRO:HD3	1.97	0.41
45:MI:89:GLN:HG3	45:MI:159:PHE:HB3	2.01	0.41
49:Mp:77:VAL:HG11	49:Mp:104:LEU:HB2	2.03	0.41
50:NP:1160:ILE:HD12	50:NP:1160:ILE:HG23	1.89	0.41
9:SF:510:ILE:HD12	9:SF:510:ILE:HG23	1.85	0.41
60:SI:1224:LEU:HB3	60:SI:1230:SER:HB2	2.02	0.41
62:SK:112:ASN:OD1	62:SK:113:GLY:N	2.47	0.41
62:SK:287:LYS:HG2	62:SK:302:ASP:HB3	2.03	0.41
62:SK:387:LEU:O	62:SK:391:ASN:ND2	2.39	0.41
63:SL:361:GLU:HA	63:SL:362:PRO:HD3	1.93	0.41
45:T4:1010:THR:O	45:T4:1013:SER:OG	2.27	0.41
68:T6:480:GLN:NE2	68:T6:486:ASN:OD1	2.41	0.41
66:t3:976:ASP:OD2	66:t3:1123:TYR:OH	2.38	0.41
3:B2:151:VAL:HG21	3:B2:355:LEU:HD11	2.03	0.41
4:B3:100:ASN:HA	34:ma:139:VAL:HG23	2.03	0.41
11:BA:177:ASP:OD1	11:BA:177:ASP:N	2.53	0.41
12:BB:21:GLU:CD	12:BB:22:SER:N	2.79	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:BB:228:LYS:O	12:BB:261:ARG:NH1	2.50	0.41
15:BE:50:MET:HE1	15:BE:52:ARG:HG2	2.02	0.41
24:BN:-2:DC:H2"	24:BN:-1:DT:C5	2.56	0.41
27:BR:233:TYR:CG	27:BR:234:HIS:N	2.89	0.41
31:BV:78:PHE:HB2	31:BV:113:ILE:HB	2.03	0.41
38:me:170:ASP:OD1	38:me:170:ASP:N	2.53	0.41
43:mj:78:LYS:O	49:mp:147:LYS:NZ	2.44	0.41
49:mp:256:MET:HB2	49:mp:330:ILE:HG12	2.03	0.41
53:nq:54:VAL:HG12	54:nr:111:ALA:HB1	2.03	0.41
56:sD:721:ASN:HA	56:sD:724:ILE:HG22	2.03	0.41
9:sF:422:THR:OG1	9:sF:425:ARG:NH1	2.54	0.41
60:sI:979:LEU:HA	60:sI:979:LEU:HD23	1.94	0.41
63:sL:447:PHE:HB3	63:sL:467:PHE:HE1	1.86	0.41
2:A1:207:SER:OG	2:A1:208:GLU:OE1	2.39	0.40
5:A4:225:GLN:HA	5:A4:228:THR:HG22	2.03	0.40
11:AA:10:PRO:HB2	11:AA:12:ARG:NH1	2.37	0.40
37:Md:674:LEU:HA	37:Md:677:ILE:HG22	2.02	0.40
38:Me:245:GLN:NE2	38:Me:247:THR:O	2.54	0.40
50:NP:689:PHE:CE2	50:SH:653:LYS:HG2	2.55	0.40
50:NP:1304:ARG:O	50:NP:1308:GLU:HG3	2.21	0.40
56:SB:600:PHE:HB2	50:SH:490:THR:HG21	2.03	0.40
60:SI:979:LEU:HA	60:SI:979:LEU:HD23	1.94	0.40
66:t3:413:ILE:O	66:t3:417:GLU:HG3	2.22	0.40
66:t3:495:ASN:OD1	66:t3:495:ASN:N	2.54	0.40
67:t5:934:ILE:CG2	67:t5:945:MET:HE1	2.51	0.40
7:B6:263:VAL:HG22	7:B6:264:LEU:O	2.20	0.40
11:BA:1111:MET:HE2	11:BA:1113:THR:O	2.21	0.40
14:BD:59:ILE:HD11	17:BG:47:CYS:SG	2.62	0.40
24:BN:83:DG:H1	29:BT:-83:DC:H42	1.69	0.40
29:BT:77:DC:H2"	29:BT:78:DG:H8	1.86	0.40
30:BU:14:VAL:HA	30:BU:17:VAL:HG22	2.03	0.40
34:ma:133:ARG:HE	34:ma:147:ILE:HD11	1.85	0.40
45:ml:514:GLN:OE1	45:ml:527:ARG:NH1	2.54	0.40
53:nu:53:ALA:HB1	54:nv:114:GLU:OE1	2.21	0.40
55:sA:182:ILE:HG21	55:sA:185:ILE:HG13	2.03	0.40
56:sD:550:ALA:HA	56:sD:553:VAL:HG12	2.03	0.40
62:sK:287:LYS:HG2	62:sK:302:ASP:HB3	2.03	0.40
1:A0:507:SER:OG	1:A0:508:SER:N	2.53	0.40
8:A7:592:GLN:NE2	8:A7:747:ASN:O	2.51	0.40
11:AA:304:MET:CE	12:AB:1210:MET:HA	2.48	0.40
13:AC:23:SER:OG	13:AC:24:ASN:N	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:Me:197:ASN:OD1	39:Mf:76:SER:OG	2.37	0.40
45:Ml:413:VAL:HB	45:Ml:427:ILE:HB	2.02	0.40
50:NP:861:ILE:HD13	50:NP:861:ILE:HA	1.96	0.40
57:SC:98:SER:O	57:SC:98:SER:OG	2.36	0.40
56:SD:348:ASN:O	56:SD:352:ASN:HB2	2.21	0.40
62:SK:430:MET:HA	62:SK:433:LYS:HG2	2.03	0.40
66:T3:448:ILE:HD12	66:T3:448:ILE:HA	1.96	0.40
66:T3:509:SER:O	66:T3:513:SER:OG	2.38	0.40
65:t2:32:GLN:NE2	65:t2:91:HIS:O	2.55	0.40
66:t3:731:LEU:HD23	66:t3:731:LEU:HA	1.86	0.40
66:t3:1126:MET:HE3	66:t3:1126:MET:HB2	1.95	0.40
68:t6:578:LEU:HD22	68:t6:879:LEU:HD13	2.03	0.40
5:B4:225:GLN:HA	5:B4:228:THR:HG22	2.03	0.40
10:B9:236:TRP:NE1	10:B9:240:LYS:HE3	2.36	0.40
14:BD:199:ASN:OD1	14:BD:200:ASN:N	2.54	0.40
30:BU:33:GLN:NE2	30:BU:37:ASP:OD1	2.54	0.40
50:sH:590:GLU:O	50:sH:594:LEU:HD23	2.22	0.40
60:sI:1002:ILE:HD11	60:sI:1109:VAL:HG23	2.04	0.40
1:A0:328:ALA:O	1:A0:332:VAL:HG23	2.22	0.40
7:A6:136:MET:HB3	7:A6:136:MET:HE3	1.91	0.40
8:A7:334:ASP:OD1	8:A7:334:ASP:N	2.54	0.40
11:AA:1395:GLY:O	11:AA:1399:ARG:CZ	2.69	0.40
12:AB:1111:MET:HE2	12:AB:1116:ARG:N	2.37	0.40
12:AB:1174:LYS:O	12:AB:1178:ASN:N	2.54	0.40
40:Mg:56:MET:O	40:Mg:60:ASN:HB2	2.22	0.40
49:Mp:45:GLU:O	49:Mp:53:ARG:N	2.50	0.40
9:SF:399:SER:C	9:SF:401:LYS:H	2.29	0.40
60:SI:1054:LEU:HD12	60:SI:1054:LEU:HA	1.96	0.40
68:T6:196:LEU:HD23	68:T6:196:LEU:HA	1.92	0.40
68:T6:521:VAL:HB	68:T6:530:GLN:HE21	1.87	0.40
66:t3:741:ILE:HD12	49:mp:157:ASN:ND2	2.37	0.40
66:t3:836:ILE:HG21	66:t3:836:ILE:HD12	1.91	0.40
68:t6:576:HIS:NE2	68:t6:580:ILE:HD11	2.37	0.40
1:B0:2:LYS:HG2	1:B0:11:LEU:HG	2.03	0.40
8:B7:107:ASP:OD1	8:B7:108:SER:N	2.55	0.40
11:BA:451:HIS:HD2	11:BA:453:MET:HE2	1.85	0.40
12:BB:879:ARG:HA	12:BB:885:MET:HE1	2.03	0.40
16:BF:93:ILE:HG13	16:BF:94:LEU:N	2.36	0.40
24:BN:-89:DC:H2"	24:BN:-88:DA:C8	2.57	0.40
24:BN:71:DA:H2"	24:BN:72:DG:C8	2.56	0.40
25:BO:76:LEU:HD12	25:BO:150:ALA:HB1	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BW:38:LEU:HD13	32:BW:209:PRO:HG2	2.02	0.40
61:sJ:6:LEU:HG	61:sJ:9:LYS:HE3	2.03	0.40
2:A1:191:LEU:HA	2:A1:194:VAL:HG12	2.01	0.40
3:A2:197:ASN:OD1	3:A2:198:SER:N	2.54	0.40
11:AA:72:GLU:HB3	11:AA:73:GLY:H	1.78	0.40
11:AA:456:MET:CE	11:AA:510:GLN:HE21	2.35	0.40
25:AO:76:LEU:HD12	25:AO:150:ALA:HB1	2.03	0.40
9:Nf:677:GLN:CD	9:SF:624:ASP:CA	2.94	0.40
56:SB:408:LEU:HA	56:SD:352:ASN:HD21	1.86	0.40
56:SD:385:LEU:HD23	56:SD:385:LEU:HA	1.96	0.40
56:SD:721:ASN:HA	56:SD:724:ILE:HG22	2.03	0.40
9:SF:542:LEU:HD23	9:SF:629:MET:HE1	2.04	0.40
62:SK:155:PHE:HB2	62:SK:388:LEU:HD12	2.03	0.40
63:SL:189:MET:HE1	63:SL:305:LEU:HA	2.03	0.40
68:T6:574:LYS:HA	68:T6:577:ILE:HG22	2.04	0.40
45:t4:1023:ARG:HA	45:t4:1027:PHE:HB2	2.03	0.40
68:t6:15:ILE:HD11	68:t6:145:TYR:HB3	2.03	0.40
68:t6:625:LYS:H	68:t6:625:LYS:HG2	1.66	0.40
2:B1:386:ILE:HG22	2:B1:387:MET:HE2	2.04	0.40
7:B6:136:MET:HE3	7:B6:136:MET:HB3	1.91	0.40
7:B6:141:LEU:HD12	7:B6:148:MET:HE3	2.04	0.40
11:BA:10:PRO:HB2	11:BA:12:ARG:NH1	2.37	0.40
11:BA:1349:TYR:CE1	11:BA:1368:MET:SD	3.14	0.40
12:BB:356:LEU:HD23	12:BB:356:LEU:O	2.21	0.40
12:BB:593:PRO:HA	12:BB:596:LEU:HG	2.03	0.40
28:BS:148:LEU:H	28:BS:148:LEU:HD12	1.86	0.40
36:mc:24:LEU:HB3	37:md:295:PHE:HB2	2.04	0.40
37:md:24:ASN:HD21	37:md:87:VAL:HB	1.86	0.40
44:mk:84:VAL:HA	44:mk:87:ILE:HD12	2.03	0.40
45:ml:253:VAL:HA	45:ml:256:LYS:HB2	2.03	0.40
3:A2:151:VAL:HG21	3:A2:355:LEU:HD11	2.03	0.40
7:A6:141:LEU:HD12	7:A6:148:MET:HE3	2.04	0.40
12:AB:21:GLU:CD	12:AB:22:SER:N	2.79	0.40
66:t3:567:LEU:HD23	66:t3:567:LEU:HA	1.94	0.40
1:B0:507:SER:OG	1:B0:508:SER:N	2.53	0.40
2:B1:610:ASN:O	2:B1:613:THR:OG1	2.31	0.40
3:B2:348:TYR:HB3	3:B2:373:MET:HE1	2.04	0.40
11:BA:1173:HIS:CG	11:BA:1227:ILE:HG23	2.57	0.40
11:BA:1395:GLY:O	11:BA:1399:ARG:CZ	2.69	0.40
11:BA:1420:ASP:OD2	12:BB:1222:ARG:NH2	2.52	0.40
12:BB:597:MET:SD	12:BB:615:MET:SD	3.19	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:BJ:58:GLU:O	20:BJ:62:ARG:HG2	2.21	0.40
32:BW:90:LYS:HG3	32:BW:92:PRO:HD2	2.04	0.40
32:BW:179:ILE:HA	32:BW:182:ILE:HD13	2.04	0.40
38:me:245:GLN:NE2	38:me:247:THR:O	2.54	0.40
40:mg:64:GLN:HA	40:mg:67:LYS:HG2	2.03	0.40
56:sD:385:LEU:HD23	56:sD:385:LEU:HA	1.96	0.40
60:sI:1049:LEU:HD23	60:sI:1049:LEU:HA	1.98	0.40
62:sK:284:LEU:HD22	62:sK:304:LYS:HA	2.03	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A0	750/778 (96%)	714 (95%)	31 (4%)	5 (1%)	18	35
1	B0	750/778 (96%)	714 (95%)	31 (4%)	5 (1%)	18	35
2	A1	404/642 (63%)	385 (95%)	18 (4%)	1 (0%)	43	62
2	B1	404/642 (63%)	385 (95%)	18 (4%)	1 (0%)	43	62
3	A2	435/513 (85%)	403 (93%)	27 (6%)	5 (1%)	11	23
3	B2	435/513 (85%)	404 (93%)	26 (6%)	5 (1%)	11	23
4	A3	129/321 (40%)	126 (98%)	3 (2%)	0	100	100
4	B3	129/321 (40%)	126 (98%)	3 (2%)	0	100	100
5	A4	287/338 (85%)	279 (97%)	7 (2%)	1 (0%)	36	55
5	B4	287/338 (85%)	279 (97%)	7 (2%)	1 (0%)	36	55
6	A5	63/72 (88%)	56 (89%)	7 (11%)	0	100	100
6	B5	63/72 (88%)	56 (89%)	7 (11%)	0	100	100
7	A6	368/461 (80%)	324 (88%)	42 (11%)	2 (0%)	24	43

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
7	B6	368/461 (80%)	324 (88%)	42 (11%)	2 (0%)	24	43
8	A7	599/843 (71%)	577 (96%)	22 (4%)	0	100	100
8	B7	599/843 (71%)	577 (96%)	22 (4%)	0	100	100
9	A8	15/905 (2%)	12 (80%)	3 (20%)	0	100	100
9	B8	15/905 (2%)	12 (80%)	3 (20%)	0	100	100
9	NF	18/905 (2%)	17 (94%)	0	1 (6%)	1	2
9	SF	401/905 (44%)	369 (92%)	31 (8%)	1 (0%)	43	62
9	nF	18/905 (2%)	17 (94%)	0	1 (6%)	1	2
9	sF	401/905 (44%)	369 (92%)	31 (8%)	1 (0%)	43	62
10	A9	66/244 (27%)	61 (92%)	4 (6%)	1 (2%)	8	17
10	B9	66/244 (27%)	61 (92%)	4 (6%)	1 (2%)	8	17
11	AA	1386/1733 (80%)	1297 (94%)	85 (6%)	4 (0%)	36	55
11	BA	1386/1733 (80%)	1298 (94%)	83 (6%)	5 (0%)	30	48
11	MA	73/1733 (4%)	64 (88%)	7 (10%)	2 (3%)	4	8
11	mA	73/1733 (4%)	64 (88%)	7 (10%)	2 (3%)	4	8
12	AB	1139/1224 (93%)	1110 (98%)	27 (2%)	2 (0%)	43	62
12	BB	1139/1224 (93%)	1110 (98%)	27 (2%)	2 (0%)	43	62
13	AC	260/318 (82%)	253 (97%)	6 (2%)	1 (0%)	30	48
13	BC	260/318 (82%)	253 (97%)	6 (2%)	1 (0%)	30	48
14	AD	153/221 (69%)	142 (93%)	11 (7%)	0	100	100
14	BD	153/221 (69%)	142 (93%)	11 (7%)	0	100	100
15	AE	211/215 (98%)	201 (95%)	10 (5%)	0	100	100
15	BE	211/215 (98%)	201 (95%)	10 (5%)	0	100	100
16	AF	81/155 (52%)	77 (95%)	4 (5%)	0	100	100
16	BF	81/155 (52%)	77 (95%)	4 (5%)	0	100	100
17	AG	169/171 (99%)	165 (98%)	4 (2%)	0	100	100
17	BG	169/171 (99%)	165 (98%)	4 (2%)	0	100	100
18	AH	132/146 (90%)	127 (96%)	4 (3%)	1 (1%)	16	31
18	BH	132/146 (90%)	127 (96%)	4 (3%)	1 (1%)	16	31
19	AI	114/122 (93%)	93 (82%)	17 (15%)	4 (4%)	3	5
19	BI	114/122 (93%)	93 (82%)	17 (15%)	4 (4%)	3	5

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
20	AJ	67/70 (96%)	66 (98%)	1 (2%)	0	100	100
20	BJ	67/70 (96%)	66 (98%)	1 (2%)	0	100	100
21	AK	113/120 (94%)	112 (99%)	1 (1%)	0	100	100
21	BK	113/120 (94%)	112 (99%)	1 (1%)	0	100	100
22	AL	43/70 (61%)	41 (95%)	2 (5%)	0	100	100
22	BL	43/70 (61%)	41 (95%)	2 (5%)	0	100	100
23	AM	261/345 (76%)	255 (98%)	6 (2%)	0	100	100
23	BM	261/345 (76%)	255 (98%)	6 (2%)	0	100	100
25	AO	179/240 (75%)	174 (97%)	5 (3%)	0	100	100
25	BO	179/240 (75%)	174 (97%)	5 (3%)	0	100	100
26	AQ	208/735 (28%)	203 (98%)	5 (2%)	0	100	100
26	BQ	208/735 (28%)	203 (98%)	5 (2%)	0	100	100
27	AR	253/400 (63%)	241 (95%)	11 (4%)	1 (0%)	30	48
27	BR	253/400 (63%)	241 (95%)	11 (4%)	1 (0%)	30	48
28	AS	162/309 (52%)	147 (91%)	14 (9%)	1 (1%)	21	39
28	BS	162/309 (52%)	147 (91%)	14 (9%)	1 (1%)	21	39
30	AU	101/286 (35%)	98 (97%)	3 (3%)	0	100	100
30	BU	101/286 (35%)	98 (97%)	3 (3%)	0	100	100
31	AV	100/122 (82%)	97 (97%)	2 (2%)	1 (1%)	12	24
31	BV	100/122 (82%)	97 (97%)	2 (2%)	1 (1%)	12	24
32	AW	222/482 (46%)	212 (96%)	10 (4%)	0	100	100
32	BW	222/482 (46%)	212 (96%)	10 (4%)	0	100	100
33	AX	189/328 (58%)	180 (95%)	9 (5%)	0	100	100
33	BX	189/328 (58%)	180 (95%)	9 (5%)	0	100	100
34	Ma	167/295 (57%)	163 (98%)	4 (2%)	0	100	100
34	ma	167/295 (57%)	163 (98%)	4 (2%)	0	100	100
35	Mb	142/223 (64%)	141 (99%)	1 (1%)	0	100	100
35	mb	142/223 (64%)	141 (99%)	1 (1%)	0	100	100
36	Mc	104/115 (90%)	100 (96%)	4 (4%)	0	100	100
36	mc	104/115 (90%)	100 (96%)	4 (4%)	0	100	100
37	Md	525/687 (76%)	520 (99%)	5 (1%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
37	md	525/687 (76%)	520 (99%)	5 (1%)	0	100	100
38	Me	249/307 (81%)	238 (96%)	10 (4%)	1 (0%)	30	48
38	me	249/307 (81%)	238 (96%)	10 (4%)	1 (0%)	30	48
39	Mf	208/210 (99%)	203 (98%)	5 (2%)	0	100	100
39	mf	208/210 (99%)	203 (98%)	5 (2%)	0	100	100
40	Mg	102/121 (84%)	99 (97%)	2 (2%)	1 (1%)	12	24
40	mg	102/121 (84%)	99 (97%)	2 (2%)	1 (1%)	12	24
41	Mh	175/284 (62%)	167 (95%)	6 (3%)	2 (1%)	11	23
41	mh	175/284 (62%)	167 (95%)	6 (3%)	2 (1%)	11	23
42	Mi	179/222 (81%)	175 (98%)	4 (2%)	0	100	100
42	mi	179/222 (81%)	175 (98%)	4 (2%)	0	100	100
43	Mj	98/149 (66%)	93 (95%)	4 (4%)	1 (1%)	12	24
43	mj	98/149 (66%)	93 (95%)	4 (4%)	1 (1%)	12	24
44	Mk	140/157 (89%)	137 (98%)	2 (1%)	1 (1%)	18	35
44	mk	140/157 (89%)	137 (98%)	2 (1%)	1 (1%)	18	35
45	Ml	640/1082 (59%)	620 (97%)	19 (3%)	1 (0%)	43	62
45	T4	214/1082 (20%)	203 (95%)	10 (5%)	1 (0%)	24	43
45	ml	640/1082 (59%)	620 (97%)	19 (3%)	1 (0%)	43	62
45	t4	214/1082 (20%)	203 (95%)	10 (5%)	1 (0%)	24	43
46	Mm	79/220 (36%)	77 (98%)	2 (2%)	0	100	100
46	mm	79/220 (36%)	77 (98%)	2 (2%)	0	100	100
47	Mn	138/140 (99%)	133 (96%)	5 (4%)	0	100	100
47	mn	138/140 (99%)	133 (96%)	5 (4%)	0	100	100
48	Mo	107/127 (84%)	101 (94%)	6 (6%)	0	100	100
48	mo	107/127 (84%)	101 (94%)	6 (6%)	0	100	100
49	Mp	405/566 (72%)	389 (96%)	16 (4%)	0	100	100
49	mp	405/566 (72%)	390 (96%)	15 (4%)	0	100	100
50	NP	580/1703 (34%)	543 (94%)	33 (6%)	4 (1%)	18	35
50	SH	241/1703 (14%)	230 (95%)	11 (5%)	0	100	100
50	nP	580/1703 (34%)	543 (94%)	33 (6%)	4 (1%)	18	35
50	sH	241/1703 (14%)	230 (95%)	11 (5%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
51	No	96/136 (71%)	92 (96%)	3 (3%)	1 (1%)	12	24
51	Ns	93/136 (68%)	92 (99%)	1 (1%)	0	100	100
51	no	96/136 (71%)	92 (96%)	3 (3%)	1 (1%)	12	24
51	ns	93/136 (68%)	92 (99%)	1 (1%)	0	100	100
52	Np	84/103 (82%)	79 (94%)	3 (4%)	2 (2%)	4	10
52	Nt	84/103 (82%)	83 (99%)	1 (1%)	0	100	100
52	np	84/103 (82%)	79 (94%)	3 (4%)	2 (2%)	4	10
52	nt	84/103 (82%)	83 (99%)	1 (1%)	0	100	100
53	Nq	105/130 (81%)	97 (92%)	8 (8%)	0	100	100
53	Nu	105/130 (81%)	96 (91%)	8 (8%)	1 (1%)	12	24
53	nq	105/130 (81%)	97 (92%)	8 (8%)	0	100	100
53	nu	105/130 (81%)	96 (91%)	8 (8%)	1 (1%)	12	24
54	Nr	91/126 (72%)	83 (91%)	8 (9%)	0	100	100
54	Nv	105/126 (83%)	99 (94%)	5 (5%)	1 (1%)	12	24
54	nr	91/126 (72%)	83 (91%)	8 (9%)	0	100	100
54	nv	105/126 (83%)	99 (94%)	5 (5%)	1 (1%)	12	24
55	SA	436/566 (77%)	413 (95%)	20 (5%)	3 (1%)	18	35
55	sA	436/566 (77%)	413 (95%)	20 (5%)	3 (1%)	18	35
56	SB	385/825 (47%)	374 (97%)	11 (3%)	0	100	100
56	SD	413/825 (50%)	390 (94%)	23 (6%)	0	100	100
56	sB	385/825 (47%)	374 (97%)	11 (3%)	0	100	100
56	sD	413/825 (50%)	389 (94%)	24 (6%)	0	100	100
57	SC	146/332 (44%)	136 (93%)	10 (7%)	0	100	100
57	sC	146/332 (44%)	136 (93%)	10 (7%)	0	100	100
58	SE	401/623 (64%)	381 (95%)	20 (5%)	0	100	100
58	sE	401/623 (64%)	381 (95%)	20 (5%)	0	100	100
59	SG	13/47 (28%)	11 (85%)	1 (8%)	1 (8%)	1	1
59	sG	13/47 (28%)	11 (85%)	1 (8%)	1 (8%)	1	1
60	SI	538/1314 (41%)	513 (95%)	23 (4%)	2 (0%)	30	48
60	sI	538/1314 (41%)	513 (95%)	23 (4%)	2 (0%)	30	48
61	SJ	78/157 (50%)	78 (100%)	0	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
61	sJ	78/157 (50%)	78 (100%)	0	0	100	100
62	SK	427/477 (90%)	411 (96%)	16 (4%)	0	100	100
62	sK	427/477 (90%)	411 (96%)	16 (4%)	0	100	100
63	SL	401/467 (86%)	380 (95%)	21 (5%)	0	100	100
63	sL	401/467 (86%)	380 (95%)	21 (5%)	0	100	100
64	T1	61/431 (14%)	61 (100%)	0	0	100	100
64	t1	61/431 (14%)	61 (100%)	0	0	100	100
65	T2	108/397 (27%)	105 (97%)	3 (3%)	0	100	100
65	t2	108/397 (27%)	105 (97%)	3 (3%)	0	100	100
66	T3	749/1132 (66%)	705 (94%)	40 (5%)	4 (0%)	24	43
66	t3	749/1132 (66%)	705 (94%)	40 (5%)	4 (0%)	24	43
67	T5	109/1081 (10%)	98 (90%)	9 (8%)	2 (2%)	6	14
67	t5	109/1081 (10%)	98 (90%)	9 (8%)	2 (2%)	6	14
68	T6	928/974 (95%)	889 (96%)	36 (4%)	3 (0%)	36	55
68	t6	928/974 (95%)	889 (96%)	36 (4%)	3 (0%)	36	55
All	All	39200/73006 (54%)	37354 (95%)	1713 (4%)	133 (0%)	37	55

All (133) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A0	543	SER
1	A0	546	TYR
1	A0	547	MET
2	A1	214	ILE
3	A2	231	LEU
18	AH	109	LYS
19	AI	76	PRO
19	AI	113	ASP
27	AR	289	ILE
28	AS	236	LEU
31	AV	82	ASN
41	Mh	128	LEU
44	Mk	134	PRO
51	No	81	ASP
53	Nu	111	ILE
55	SA	63	ASP
9	SF	401	LYS

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Mol	Chain	Res	Type
66	T3	844	ASP
45	T4	1053	ASN
68	T6	761	LYS
66	t3	844	ASP
45	t4	1053	ASN
68	t6	761	LYS
1	B0	543	SER
1	B0	546	TYR
1	B0	547	MET
2	B1	214	ILE
3	B2	231	LEU
18	BH	109	LYS
19	BI	76	PRO
19	BI	113	ASP
27	BR	289	ILE
28	BS	236	LEU
31	BV	82	ASN
41	mh	128	LEU
44	mk	134	PRO
51	no	81	ASP
53	nu	111	ILE
55	sA	63	ASP
9	sF	401	LYS
3	A2	133	ASP
10	A9	200	MET
11	AA	674	PRO
12	AB	22	SER
40	Mg	42	ALA
41	Mh	40	VAL
43	Mj	64	GLU
50	NP	794	MET
50	NP	1294	MET
55	SA	302	SER
59	SG	90	LEU
66	T3	839	SER
68	T6	156	VAL
66	t3	839	SER
68	t6	156	VAL
3	B2	133	ASP
10	B9	200	MET
11	BA	674	PRO
12	BB	22	SER

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Mol	Chain	Res	Type
40	mg	42	ALA
41	mh	40	VAL
43	mj	64	GLU
50	nP	794	MET
50	nP	1294	MET
55	sA	302	SER
59	sG	90	LEU
3	A2	506	LYS
11	AA	1034	GLU
19	AI	115	LYS
11	MA	1573	THR
11	MA	1613	SER
50	NP	932	PRO
50	NP	1003	LEU
52	Np	20	LYS
60	SI	1051	LYS
67	T5	906	PRO
67	t5	906	PRO
3	B2	506	LYS
11	BA	1034	GLU
19	BI	115	LYS
11	mA	1573	THR
11	mA	1613	SER
50	nP	932	PRO
50	nP	1003	LEU
52	np	20	LYS
60	sI	1051	LYS
3	A2	262	LYS
7	A6	135	ALA
19	AI	47	GLU
38	Me	101	ASN
60	SI	867	PRO
66	T3	362	ALA
68	T6	844	ILE
66	t3	362	ALA
68	t6	844	ILE
3	B2	262	LYS
7	B6	135	ALA
19	BI	47	GLU
38	me	101	ASN
60	sI	867	PRO
1	A0	75	THR

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Mol	Chain	Res	Type
1	A0	534	PRO
3	A2	126	GLU
11	AA	569	LYS
11	AA	1036	ARG
13	AC	90	ASP
45	Ml	461	VAL
67	T5	921	PRO
67	t5	921	PRO
1	B0	75	THR
1	B0	534	PRO
3	B2	126	GLU
11	BA	569	LYS
11	BA	1036	ARG
13	BC	90	ASP
45	ml	461	VAL
7	A6	223	PRO
9	NF	665	LYS
52	Np	19	ARG
54	Nv	31	ARG
7	B6	223	PRO
11	BA	465	TYR
9	nF	665	LYS
52	np	19	ARG
54	nv	31	ARG
12	AB	323	VAL
12	BB	323	VAL
55	sA	62	PRO
5	A4	88	PRO
55	SA	62	PRO
66	T3	928	THR
66	t3	928	THR
5	B4	88	PRO

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A0	684/707 (97%)	683 (100%)	1 (0%)	88	96
1	B0	684/707 (97%)	683 (100%)	1 (0%)	88	96
2	A1	388/589 (66%)	388 (100%)	0	100	100
2	B1	388/589 (66%)	388 (100%)	0	100	100
3	A2	408/468 (87%)	405 (99%)	3 (1%)	76	88
3	B2	408/468 (87%)	405 (99%)	3 (1%)	76	88
4	A3	125/303 (41%)	125 (100%)	0	100	100
4	B3	125/303 (41%)	125 (100%)	0	100	100
5	A4	260/300 (87%)	260 (100%)	0	100	100
5	B4	260/300 (87%)	260 (100%)	0	100	100
6	A5	59/66 (89%)	59 (100%)	0	100	100
6	B5	59/66 (89%)	59 (100%)	0	100	100
7	A6	338/418 (81%)	338 (100%)	0	100	100
7	B6	338/418 (81%)	338 (100%)	0	100	100
8	A7	539/737 (73%)	539 (100%)	0	100	100
8	B7	539/737 (73%)	539 (100%)	0	100	100
9	A8	16/823 (2%)	16 (100%)	0	100	100
9	B8	16/823 (2%)	16 (100%)	0	100	100
9	NF	19/823 (2%)	16 (84%)	3 (16%)	2	5
9	SF	373/823 (45%)	372 (100%)	1 (0%)	86	94
9	nF	19/823 (2%)	16 (84%)	3 (16%)	2	5
9	sF	373/823 (45%)	372 (100%)	1 (0%)	86	94
10	A9	63/219 (29%)	61 (97%)	2 (3%)	34	59
10	B9	63/219 (29%)	61 (97%)	2 (3%)	34	59
11	AA	1221/1520 (80%)	1219 (100%)	2 (0%)	87	95
11	BA	1221/1520 (80%)	1219 (100%)	2 (0%)	87	95
11	MA	79/1520 (5%)	79 (100%)	0	100	100
11	mA	79/1520 (5%)	79 (100%)	0	100	100
12	AB	1002/1061 (94%)	1001 (100%)	1 (0%)	88	96
12	BB	1002/1061 (94%)	1001 (100%)	1 (0%)	88	96
13	AC	230/274 (84%)	230 (100%)	0	100	100
13	BC	230/274 (84%)	230 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
14	AD	139/200 (70%)	139 (100%)	0	100	100
14	BD	139/200 (70%)	139 (100%)	0	100	100
15	AE	195/197 (99%)	195 (100%)	0	100	100
15	BE	195/197 (99%)	195 (100%)	0	100	100
16	AF	73/137 (53%)	73 (100%)	0	100	100
16	BF	73/137 (53%)	73 (100%)	0	100	100
17	AG	152/152 (100%)	152 (100%)	0	100	100
17	BG	152/152 (100%)	152 (100%)	0	100	100
18	AH	119/128 (93%)	117 (98%)	2 (2%)	53	75
18	BH	119/128 (93%)	117 (98%)	2 (2%)	53	75
19	AI	110/116 (95%)	107 (97%)	3 (3%)	39	63
19	BI	110/116 (95%)	107 (97%)	3 (3%)	39	63
20	AJ	64/65 (98%)	64 (100%)	0	100	100
20	BJ	64/65 (98%)	64 (100%)	0	100	100
21	AK	99/102 (97%)	99 (100%)	0	100	100
21	BK	99/102 (97%)	99 (100%)	0	100	100
22	AL	40/57 (70%)	40 (100%)	0	100	100
22	BL	40/57 (70%)	40 (100%)	0	100	100
23	AM	233/299 (78%)	233 (100%)	0	100	100
23	BM	233/299 (78%)	233 (100%)	0	100	100
25	AO	153/205 (75%)	153 (100%)	0	100	100
25	BO	153/205 (75%)	153 (100%)	0	100	100
26	AQ	198/641 (31%)	198 (100%)	0	100	100
26	BQ	198/641 (31%)	198 (100%)	0	100	100
27	AR	247/363 (68%)	246 (100%)	1 (0%)	84	92
27	BR	247/363 (68%)	246 (100%)	1 (0%)	84	92
28	AS	143/274 (52%)	140 (98%)	3 (2%)	47	70
28	BS	143/274 (52%)	140 (98%)	3 (2%)	47	70
30	AU	99/260 (38%)	99 (100%)	0	100	100
30	BU	99/260 (38%)	99 (100%)	0	100	100
31	AV	94/108 (87%)	94 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
31	BV	94/108 (87%)	94 (100%)	0	100	100
32	AW	207/429 (48%)	207 (100%)	0	100	100
32	BW	207/429 (48%)	207 (100%)	0	100	100
33	AX	171/295 (58%)	171 (100%)	0	100	100
33	BX	171/295 (58%)	171 (100%)	0	100	100
34	Ma	160/259 (62%)	160 (100%)	0	100	100
34	ma	160/259 (62%)	160 (100%)	0	100	100
35	Mb	135/207 (65%)	135 (100%)	0	100	100
35	mb	135/207 (65%)	135 (100%)	0	100	100
36	Mc	101/108 (94%)	101 (100%)	0	100	100
36	mc	101/108 (94%)	101 (100%)	0	100	100
37	Md	499/642 (78%)	499 (100%)	0	100	100
37	md	499/642 (78%)	499 (100%)	0	100	100
38	Me	228/280 (81%)	228 (100%)	0	100	100
38	me	228/280 (81%)	228 (100%)	0	100	100
39	Mf	178/178 (100%)	178 (100%)	0	100	100
39	mf	178/178 (100%)	178 (100%)	0	100	100
40	Mg	98/113 (87%)	98 (100%)	0	100	100
40	mg	98/113 (87%)	98 (100%)	0	100	100
41	Mh	164/258 (64%)	164 (100%)	0	100	100
41	mh	164/258 (64%)	164 (100%)	0	100	100
42	Mi	175/208 (84%)	175 (100%)	0	100	100
42	mi	175/208 (84%)	175 (100%)	0	100	100
43	Mj	100/144 (69%)	100 (100%)	0	100	100
43	mj	100/144 (69%)	100 (100%)	0	100	100
44	Mk	132/145 (91%)	132 (100%)	0	100	100
44	mk	132/145 (91%)	132 (100%)	0	100	100
45	MI	618/1001 (62%)	618 (100%)	0	100	100
45	T4	205/1001 (20%)	205 (100%)	0	100	100
45	ml	618/1001 (62%)	618 (100%)	0	100	100
45	t4	205/1001 (20%)	205 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
46	Mm	77/195 (40%)	77 (100%)	0	100	100
46	mm	77/195 (40%)	77 (100%)	0	100	100
47	Mn	132/132 (100%)	132 (100%)	0	100	100
47	mn	132/132 (100%)	132 (100%)	0	100	100
48	Mo	102/117 (87%)	102 (100%)	0	100	100
48	mo	102/117 (87%)	102 (100%)	0	100	100
49	Mp	390/528 (74%)	390 (100%)	0	100	100
49	mp	390/528 (74%)	390 (100%)	0	100	100
50	NP	538/1520 (35%)	536 (100%)	2 (0%)	84	92
50	SH	223/1520 (15%)	222 (100%)	1 (0%)	84	92
50	nP	538/1520 (35%)	536 (100%)	2 (0%)	84	92
50	sH	223/1520 (15%)	222 (100%)	1 (0%)	84	92
51	No	84/111 (76%)	84 (100%)	0	100	100
51	Ns	82/111 (74%)	82 (100%)	0	100	100
51	no	84/111 (76%)	84 (100%)	0	100	100
51	ns	82/111 (74%)	82 (100%)	0	100	100
52	Np	72/79 (91%)	72 (100%)	0	100	100
52	Nt	67/79 (85%)	67 (100%)	0	100	100
52	np	72/79 (91%)	72 (100%)	0	100	100
52	nt	67/79 (85%)	67 (100%)	0	100	100
53	Nq	81/101 (80%)	81 (100%)	0	100	100
53	Nu	82/101 (81%)	81 (99%)	1 (1%)	63	80
53	nq	81/101 (80%)	81 (100%)	0	100	100
53	nu	82/101 (81%)	81 (99%)	1 (1%)	63	80
54	Nr	78/106 (74%)	78 (100%)	0	100	100
54	Nv	92/106 (87%)	92 (100%)	0	100	100
54	nr	78/106 (74%)	78 (100%)	0	100	100
54	nv	92/106 (87%)	92 (100%)	0	100	100
55	SA	408/517 (79%)	408 (100%)	0	100	100
55	sA	408/517 (79%)	408 (100%)	0	100	100
56	SB	368/751 (49%)	368 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
56	SD	392/751 (52%)	392 (100%)	0	100	100
56	sB	368/751 (49%)	368 (100%)	0	100	100
56	sD	392/751 (52%)	392 (100%)	0	100	100
57	SC	141/288 (49%)	141 (100%)	0	100	100
57	sC	141/288 (49%)	141 (100%)	0	100	100
58	SE	368/558 (66%)	368 (100%)	0	100	100
58	sE	368/558 (66%)	368 (100%)	0	100	100
59	SG	7/13 (54%)	7 (100%)	0	100	100
59	sG	7/13 (54%)	7 (100%)	0	100	100
60	SI	528/1218 (43%)	528 (100%)	0	100	100
60	sI	528/1218 (43%)	528 (100%)	0	100	100
61	SJ	80/140 (57%)	80 (100%)	0	100	100
61	sJ	80/140 (57%)	80 (100%)	0	100	100
62	SK	381/420 (91%)	381 (100%)	0	100	100
62	sK	381/420 (91%)	381 (100%)	0	100	100
63	SL	371/423 (88%)	371 (100%)	0	100	100
63	sL	371/423 (88%)	371 (100%)	0	100	100
64	T1	60/389 (15%)	60 (100%)	0	100	100
64	t1	60/389 (15%)	60 (100%)	0	100	100
65	T2	100/339 (30%)	100 (100%)	0	100	100
65	t2	100/339 (30%)	100 (100%)	0	100	100
66	T3	713/1053 (68%)	709 (99%)	4 (1%)	78	89
66	t3	713/1053 (68%)	709 (99%)	4 (1%)	78	89
67	T5	103/944 (11%)	99 (96%)	4 (4%)	28	53
67	t5	103/944 (11%)	99 (96%)	4 (4%)	28	53
68	T6	861/897 (96%)	860 (100%)	1 (0%)	88	96
68	t6	861/897 (96%)	860 (100%)	1 (0%)	88	96
All	All	36228/65460 (55%)	36158 (100%)	70 (0%)	85	95

All (70) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A0	547	MET

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Mol	Chain	Res	Type
3	A2	81	MET
3	A2	97	MET
3	A2	464	THR
10	A9	181	LYS
10	A9	202	THR
11	AA	676	MET
11	AA	692	ASP
12	AB	662	MET
18	AH	109	LYS
18	AH	129	TYR
19	AI	111	THR
19	AI	116	ASN
19	AI	117	LYS
27	AR	228	MET
28	AS	151	GLN
28	AS	171	ILE
28	AS	182	MET
9	NF	665	LYS
9	NF	666	ASP
9	NF	676	ARG
50	NP	1294	MET
50	NP	1301	ASP
53	Nu	64	GLU
9	SF	392	MET
50	SH	592	LEU
66	T3	833	ASN
66	T3	836	ILE
66	T3	837	TYR
66	T3	838	SER
67	T5	877	LYS
67	T5	919	ARG
67	T5	920	LYS
67	T5	931	GLN
68	T6	505	PRO
66	t3	833	ASN
66	t3	836	ILE
66	t3	837	TYR
66	t3	838	SER
67	t5	877	LYS
67	t5	919	ARG
67	t5	920	LYS
67	t5	931	GLN

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Mol	Chain	Res	Type
68	t6	505	PRO
1	B0	547	MET
3	B2	81	MET
3	B2	97	MET
3	B2	464	THR
10	B9	181	LYS
10	B9	202	THR
11	BA	676	MET
11	BA	692	ASP
12	BB	662	MET
18	BH	109	LYS
18	BH	129	TYR
19	BI	111	THR
19	BI	116	ASN
19	BI	117	LYS
27	BR	228	MET
28	BS	151	GLN
28	BS	171	ILE
28	BS	182	MET
9	nF	665	LYS
9	nF	666	ASP
9	nF	676	ARG
50	nP	1294	MET
50	nP	1301	ASP
53	nu	64	GLU
9	sF	392	MET
50	sH	592	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (613) such sidechains are listed below:

Mol	Chain	Res	Type
1	A0	37	ASN
1	A0	280	GLN
1	A0	283	GLN
1	A0	432	ASN
1	A0	614	HIS
1	A0	645	ASN
1	A0	661	HIS
2	A1	258	ASN
2	A1	359	GLN
2	A1	365	ASN
2	A1	417	ASN

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Mol	Chain	Res	Type
2	A1	425	ASN
2	A1	554	HIS
2	A1	563	HIS
2	A1	638	ASN
3	A2	8	HIS
3	A2	19	GLN
3	A2	22	GLN
3	A2	53	ASN
3	A2	69	ASN
3	A2	141	ASN
3	A2	194	GLN
3	A2	356	GLN
3	A2	365	HIS
3	A2	372	ASN
3	A2	403	HIS
3	A2	498	ASN
3	A2	500	GLN
4	A3	9	ASN
4	A3	31	ASN
4	A3	100	ASN
5	A4	81	GLN
5	A4	145	GLN
5	A4	303	ASN
5	A4	311	GLN
6	A5	11	GLN
7	A6	269	GLN
8	A7	211	ASN
8	A7	331	GLN
8	A7	434	ASN
8	A7	468	HIS
8	A7	545	GLN
8	A7	644	GLN
8	A7	685	GLN
8	A7	702	ASN
10	A9	210	ASN
11	AA	171	GLN
11	AA	213	HIS
11	AA	256	GLN
11	AA	287	HIS
11	AA	451	HIS
11	AA	525	GLN
11	AA	650	GLN

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Mol	Chain	Res	Type
11	AA	660	ASN
11	AA	717	ASN
11	AA	786	HIS
11	AA	838	GLN
11	AA	862	ASN
11	AA	996	ASN
11	AA	1188	GLN
11	AA	1232	ASN
11	AA	1378	GLN
12	AB	236	HIS
12	AB	583	ASN
12	AB	770	GLN
12	AB	958	GLN
12	AB	984	HIS
12	AB	1065	GLN
13	AC	131	HIS
13	AC	151	GLN
14	AD	143	ASN
14	AD	165	GLN
15	AE	104	ASN
17	AG	14	HIS
17	AG	53	ASN
17	AG	102	GLN
17	AG	122	ASN
18	AH	139	ASN
19	AI	23	ASN
19	AI	79	HIS
19	AI	83	ASN
19	AI	108	HIS
20	AJ	53	HIS
23	AM	19	ASN
23	AM	285	ASN
23	AM	331	ASN
26	AQ	369	ASN
27	AR	67	GLN
27	AR	232	ASN
27	AR	265	HIS
27	AR	328	HIS
28	AS	243	GLN
30	AU	19	ASN
31	AV	103	GLN
32	AW	93	HIS

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Mol	Chain	Res	Type
32	AW	104	GLN
32	AW	107	GLN
32	AW	116	ASN
33	AX	123	HIS
33	AX	296	GLN
35	Mb	31	GLN
35	Mb	84	GLN
35	Mb	87	GLN
35	Mb	157	ASN
35	Mb	165	ASN
36	Mc	7	GLN
36	Mc	50	ASN
36	Mc	65	GLN
37	Md	255	ASN
37	Md	285	ASN
37	Md	310	ASN
37	Md	428	GLN
37	Md	444	GLN
37	Md	646	HIS
38	Me	3	GLN
38	Me	57	GLN
38	Me	62	ASN
39	Mf	68	GLN
39	Mf	94	ASN
39	Mf	141	ASN
40	Mg	12	GLN
40	Mg	34	ASN
40	Mg	45	ASN
40	Mg	60	ASN
40	Mg	64	GLN
41	Mh	96	ASN
41	Mh	143	GLN
42	Mi	129	ASN
42	Mi	150	ASN
42	Mi	207	GLN
43	Mj	86	GLN
43	Mj	123	GLN
43	Mj	127	HIS
44	Mk	68	ASN
44	Mk	116	HIS
45	Ml	123	ASN
45	Ml	160	HIS

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Mol	Chain	Res	Type
45	Ml	167	ASN
45	Ml	192	ASN
45	Ml	340	ASN
45	Ml	344	ASN
45	Ml	452	ASN
45	Ml	502	GLN
45	Ml	726	GLN
45	Ml	741	ASN
47	Mn	18	GLN
47	Mn	74	ASN
48	Mo	35	ASN
49	Mp	36	GLN
49	Mp	118	HIS
49	Mp	220	ASN
49	Mp	247	ASN
49	Mp	313	GLN
50	NP	776	GLN
50	NP	801	GLN
50	NP	858	GLN
50	NP	928	GLN
50	NP	984	HIS
50	NP	1049	ASN
50	NP	1194	GLN
50	NP	1290	ASN
50	NP	1347	ASN
52	Np	27	GLN
52	Np	64	ASN
53	Nq	104	GLN
54	Nr	50	HIS
52	Nt	64	ASN
53	Nu	38	ASN
53	Nu	68	ASN
53	Nu	82	HIS
53	Nu	89	ASN
53	Nu	112	GLN
55	SA	87	HIS
55	SA	274	ASN
55	SA	469	ASN
55	SA	483	GLN
55	SA	516	ASN
55	SA	549	ASN
55	SA	556	ASN

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Mol	Chain	Res	Type
56	SB	315	ASN
56	SB	333	ASN
56	SB	370	ASN
56	SB	394	GLN
56	SB	403	ASN
56	SB	605	ASN
56	SB	619	ASN
56	SB	624	GLN
56	SB	731	GLN
56	SB	738	ASN
57	SC	78	GLN
57	SC	147	GLN
57	SC	207	HIS
56	SD	394	GLN
56	SD	552	ASN
56	SD	555	ASN
56	SD	587	ASN
56	SD	624	GLN
56	SD	640	GLN
56	SD	669	HIS
56	SD	718	GLN
56	SD	725	GLN
56	SD	730	ASN
56	SD	732	ASN
58	SE	38	HIS
58	SE	45	GLN
58	SE	115	ASN
58	SE	280	GLN
58	SE	306	GLN
58	SE	330	GLN
58	SE	558	ASN
9	SF	341	GLN
9	SF	480	ASN
9	SF	482	ASN
9	SF	555	ASN
9	SF	581	GLN
9	SF	602	HIS
9	SF	651	ASN
50	SH	498	GLN
50	SH	583	ASN
50	SH	588	ASN
50	SH	624	ASN

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Mol	Chain	Res	Type
50	SH	645	GLN
60	SI	675	ASN
60	SI	766	ASN
60	SI	805	ASN
60	SI	860	GLN
60	SI	874	GLN
60	SI	915	ASN
60	SI	917	GLN
60	SI	981	ASN
60	SI	1095	ASN
60	SI	1142	GLN
60	SI	1188	ASN
60	SI	1213	ASN
60	SI	1215	ASN
60	SI	1216	ASN
60	SI	1298	GLN
60	SI	1300	GLN
61	SJ	11	ASN
62	SK	4	ASN
62	SK	12	ASN
62	SK	28	GLN
62	SK	282	ASN
62	SK	308	GLN
62	SK	418	GLN
62	SK	435	GLN
63	SL	17	GLN
63	SL	139	ASN
63	SL	142	GLN
63	SL	311	ASN
63	SL	466	GLN
65	T2	46	GLN
65	T2	52	GLN
65	T2	82	ASN
65	T2	96	GLN
66	T3	333	GLN
66	T3	352	GLN
66	T3	356	ASN
66	T3	363	ASN
66	T3	421	ASN
66	T3	485	GLN
66	T3	537	GLN
66	T3	608	ASN

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Mol	Chain	Res	Type
66	T3	632	ASN
66	T3	690	ASN
66	T3	702	ASN
66	T3	728	GLN
66	T3	769	GLN
66	T3	901	ASN
66	T3	1099	ASN
66	T3	1105	ASN
66	T3	1113	ASN
45	T4	893	ASN
45	T4	913	ASN
45	T4	919	HIS
45	T4	1002	HIS
45	T4	1021	GLN
45	T4	1025	GLN
45	T4	1070	HIS
67	T5	871	HIS
67	T5	931	GLN
67	T5	941	ASN
68	T6	6	HIS
68	T6	25	ASN
68	T6	40	ASN
68	T6	44	HIS
68	T6	47	GLN
68	T6	100	GLN
68	T6	109	HIS
68	T6	129	ASN
68	T6	137	GLN
68	T6	162	HIS
68	T6	187	ASN
68	T6	266	GLN
68	T6	293	GLN
68	T6	317	ASN
68	T6	327	ASN
68	T6	530	GLN
68	T6	548	ASN
68	T6	675	ASN
68	T6	687	GLN
68	T6	693	GLN
68	T6	697	HIS
68	T6	726	ASN
68	T6	771	ASN

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Mol	Chain	Res	Type
68	T6	800	ASN
68	T6	864	ASN
68	T6	894	ASN
68	T6	937	ASN
65	t2	46	GLN
65	t2	52	GLN
65	t2	96	GLN
66	t3	333	GLN
66	t3	352	GLN
66	t3	356	ASN
66	t3	363	ASN
66	t3	421	ASN
66	t3	485	GLN
66	t3	528	ASN
66	t3	537	GLN
66	t3	608	ASN
66	t3	632	ASN
66	t3	635	GLN
66	t3	690	ASN
66	t3	702	ASN
66	t3	769	GLN
66	t3	901	ASN
66	t3	1099	ASN
66	t3	1105	ASN
66	t3	1113	ASN
45	t4	893	ASN
45	t4	913	ASN
45	t4	919	HIS
45	t4	1002	HIS
45	t4	1021	GLN
45	t4	1025	GLN
45	t4	1070	HIS
67	t5	871	HIS
68	t6	6	HIS
68	t6	25	ASN
68	t6	40	ASN
68	t6	44	HIS
68	t6	47	GLN
68	t6	100	GLN
68	t6	109	HIS
68	t6	129	ASN
68	t6	137	GLN

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Mol	Chain	Res	Type
68	t6	162	HIS
68	t6	187	ASN
68	t6	266	GLN
68	t6	293	GLN
68	t6	317	ASN
68	t6	327	ASN
68	t6	530	GLN
68	t6	548	ASN
68	t6	675	ASN
68	t6	687	GLN
68	t6	693	GLN
68	t6	697	HIS
68	t6	726	ASN
68	t6	733	HIS
68	t6	771	ASN
68	t6	800	ASN
68	t6	864	ASN
68	t6	894	ASN
1	B0	37	ASN
1	B0	280	GLN
1	B0	283	GLN
1	B0	432	ASN
1	B0	614	HIS
1	B0	645	ASN
1	B0	661	HIS
2	B1	258	ASN
2	B1	365	ASN
2	B1	417	ASN
2	B1	554	HIS
2	B1	563	HIS
2	B1	638	ASN
3	B2	8	HIS
3	B2	19	GLN
3	B2	22	GLN
3	B2	53	ASN
3	B2	69	ASN
3	B2	141	ASN
3	B2	194	GLN
3	B2	356	GLN
3	B2	365	HIS
3	B2	372	ASN
3	B2	403	HIS

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Mol	Chain	Res	Type
3	B2	498	ASN
3	B2	500	GLN
4	B3	100	ASN
5	B4	81	GLN
5	B4	142	GLN
5	B4	145	GLN
5	B4	303	ASN
6	B5	64	ASN
7	B6	269	GLN
7	B6	302	ASN
8	B7	211	ASN
8	B7	331	GLN
8	B7	434	ASN
8	B7	468	HIS
8	B7	545	GLN
8	B7	644	GLN
8	B7	685	GLN
8	B7	702	ASN
10	B9	210	ASN
11	BA	171	GLN
11	BA	213	HIS
11	BA	256	GLN
11	BA	287	HIS
11	BA	451	HIS
11	BA	490	HIS
11	BA	525	GLN
11	BA	650	GLN
11	BA	660	ASN
11	BA	717	ASN
11	BA	786	HIS
11	BA	838	GLN
11	BA	862	ASN
11	BA	996	ASN
11	BA	1232	ASN
11	BA	1378	GLN
12	BB	206	ASN
12	BB	236	HIS
12	BB	583	ASN
12	BB	770	GLN
12	BB	958	GLN
12	BB	984	HIS
12	BB	1065	GLN

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Mol	Chain	Res	Type
12	BB	1195	HIS
13	BC	131	HIS
13	BC	151	GLN
14	BD	143	ASN
14	BD	165	GLN
15	BE	104	ASN
17	BG	14	HIS
17	BG	53	ASN
17	BG	102	GLN
17	BG	122	ASN
18	BH	139	ASN
19	BI	23	ASN
19	BI	79	HIS
19	BI	83	ASN
19	BI	108	HIS
20	BJ	53	HIS
21	BK	40	HIS
23	BM	19	ASN
23	BM	197	HIS
23	BM	285	ASN
23	BM	331	ASN
26	BQ	369	ASN
27	BR	67	GLN
27	BR	232	ASN
27	BR	265	HIS
27	BR	328	HIS
28	BS	243	GLN
30	BU	19	ASN
31	BV	103	GLN
32	BW	104	GLN
32	BW	107	GLN
32	BW	116	ASN
33	BX	123	HIS
33	BX	296	GLN
35	mb	31	GLN
35	mb	84	GLN
35	mb	87	GLN
35	mb	157	ASN
35	mb	165	ASN
36	mc	7	GLN
36	mc	50	ASN
36	mc	65	GLN

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Mol	Chain	Res	Type
36	mc	101	GLN
37	md	24	ASN
37	md	276	ASN
37	md	285	ASN
37	md	310	ASN
37	md	428	GLN
37	md	444	GLN
37	md	646	HIS
38	me	3	GLN
38	me	57	GLN
38	me	62	ASN
39	mf	68	GLN
39	mf	94	ASN
39	mf	141	ASN
40	mg	12	GLN
40	mg	34	ASN
40	mg	45	ASN
40	mg	60	ASN
40	mg	64	GLN
41	mh	83	ASN
41	mh	96	ASN
41	mh	143	GLN
42	mi	129	ASN
42	mi	150	ASN
42	mi	207	GLN
43	mj	86	GLN
43	mj	123	GLN
43	mj	127	HIS
44	mk	68	ASN
44	mk	116	HIS
45	ml	123	ASN
45	ml	167	ASN
45	ml	178	ASN
45	ml	192	ASN
45	ml	340	ASN
45	ml	344	ASN
45	ml	452	ASN
45	ml	459	ASN
45	ml	502	GLN
45	ml	726	GLN
45	ml	741	ASN
47	mn	18	GLN

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Mol	Chain	Res	Type
47	mn	74	ASN
48	mo	35	ASN
49	mp	36	GLN
49	mp	118	HIS
49	mp	141	ASN
49	mp	247	ASN
50	nP	776	GLN
50	nP	801	GLN
50	nP	858	GLN
50	nP	897	HIS
50	nP	928	GLN
50	nP	1049	ASN
50	nP	1194	GLN
50	nP	1290	ASN
50	nP	1347	ASN
52	np	27	GLN
52	np	64	ASN
53	nq	104	GLN
54	nr	50	HIS
52	nt	64	ASN
53	nu	38	ASN
53	nu	82	HIS
53	nu	89	ASN
53	nu	112	GLN
55	sA	87	HIS
55	sA	274	ASN
55	sA	483	GLN
55	sA	516	ASN
55	sA	549	ASN
55	sA	556	ASN
56	sB	315	ASN
56	sB	333	ASN
56	sB	370	ASN
56	sB	403	ASN
56	sB	605	ASN
56	sB	619	ASN
56	sB	624	GLN
56	sB	731	GLN
56	sB	738	ASN
57	sC	78	GLN
57	sC	147	GLN
57	sC	207	HIS

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Mol	Chain	Res	Type
56	sD	394	GLN
56	sD	552	ASN
56	sD	555	ASN
56	sD	587	ASN
56	sD	624	GLN
56	sD	640	GLN
56	sD	669	HIS
56	sD	718	GLN
56	sD	725	GLN
56	sD	730	ASN
56	sD	732	ASN
58	sE	38	HIS
58	sE	45	GLN
58	sE	115	ASN
58	sE	280	GLN
58	sE	306	GLN
58	sE	330	GLN
58	sE	558	ASN
9	sF	341	GLN
9	sF	480	ASN
9	sF	482	ASN
9	sF	555	ASN
9	sF	581	GLN
9	sF	602	HIS
9	sF	651	ASN
50	sH	498	GLN
50	sH	583	ASN
50	sH	588	ASN
50	sH	624	ASN
50	sH	645	GLN
60	sI	675	ASN
60	sI	766	ASN
60	sI	771	HIS
60	sI	805	ASN
60	sI	860	GLN
60	sI	874	GLN
60	sI	915	ASN
60	sI	917	GLN
60	sI	981	ASN
60	sI	1095	ASN
60	sI	1142	GLN
60	sI	1213	ASN

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Mol	Chain	Res	Type
60	sI	1215	ASN
60	sI	1298	GLN
60	sI	1300	GLN
61	sJ	11	ASN
62	sK	4	ASN
62	sK	12	ASN
62	sK	28	GLN
62	sK	308	GLN
62	sK	418	GLN
62	sK	435	GLN
63	sL	139	ASN
63	sL	142	GLN
63	sL	311	ASN
63	sL	466	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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 40 ligands modelled in this entry, 38 are monoatomic - leaving 2 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	$\# Z > 2$
69	SF4	B0	801	1	0,12,12	-	-	-		
69	SF4	A0	801	1	0,12,12	-	-	-		

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
69	SF4	B0	801	1	-	-	0/6/5/5
69	SF4	A0	801	1	-	-	0/6/5/5

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

2 monomers are involved in 2 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
69	B0	801	SF4	1	0
69	A0	801	SF4	1	0

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
66	T3	4
66	t3	4
58	SE	3
58	sE	3
59	SG	2
59	sG	2

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Mol	Chain	Number of breaks
11	MA	2
11	mA	2
8	A7	2
8	B7	2
24	AN	2
24	BN	2
45	T4	1
45	t4	1
50	NP	1
50	nP	1
55	SA	1
55	sA	1
12	AB	1
12	BB	1
2	A1	1
2	B1	1
27	AR	1
27	BR	1
29	AT	1
29	BT	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	SG	95:UNK	C	118:ARG	N	72.46
1	sG	95:UNK	C	118:ARG	N	72.46
1	SG	66:UNK	C	82:UNK	N	33.55
1	sG	66:UNK	C	82:UNK	N	33.55
1	MA	1652:PRO	C	1667:SER	N	31.63
1	mA	1652:PRO	C	1667:SER	N	31.63
1	MA	1614:PRO	C	1629:THR	N	22.64
1	mA	1614:PRO	C	1629:THR	N	22.64
1	T4	1003:PHE	C	1004:ALA	N	4.95
1	t4	1003:PHE	C	1004:ALA	N	4.95
1	A7	538:ALA	C	539:ASN	N	4.12
1	B7	538:ALA	C	539:ASN	N	4.12
1	SE	441:GLN	C	442:TYR	N	4.07
1	sE	441:GLN	C	442:TYR	N	4.07
1	SE	52:GLN	C	53:ASP	N	3.99
1	sE	52:GLN	C	53:ASP	N	3.99
1	SE	242:PRO	C	243:SER	N	3.85
1	T3	333:GLN	C	334:ASN	N	3.85
1	t3	333:GLN	C	334:ASN	N	3.85

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	sE	242:PRO	C	243:SER	N	3.85
1	NP	1289:ARG	C	1290:ASN	N	3.48
1	nP	1289:ARG	C	1290:ASN	N	3.48
1	T3	676:GLU	C	677:SER	N	3.42
1	t3	676:GLU	C	677:SER	N	3.42
1	T3	580:SER	C	581:PHE	N	3.27
1	t3	580:SER	C	581:PHE	N	3.27
1	T3	667:ASN	C	668:VAL	N	3.25
1	t3	667:ASN	C	668:VAL	N	3.25
1	SA	110:GLN	C	111:GLU	N	3.20
1	sA	110:GLN	C	111:GLU	N	3.20
1	AB	1155:SER	C	1156:ASP	N	3.18
1	BB	1155:SER	C	1156:ASP	N	3.18
1	A7	628:TYR	C	629:GLY	N	3.15
1	B7	628:TYR	C	629:GLY	N	3.15
1	A1	229:GLY	C	230:PRO	N	3.13
1	B1	229:GLY	C	230:PRO	N	3.13
1	AR	227:SER	C	228:MET	N	2.24
1	BR	227:SER	C	228:MET	N	2.24
1	AN	-76:DA	O3'	-75:DT	P	1.90
1	BN	-76:DA	O3'	-75:DT	P	1.90
1	AN	-52:DT	O3'	-51:DT	P	1.81
1	BN	-52:DT	O3'	-51:DT	P	1.81
1	AT	51:DA	O3'	52:DA	P	0.79
1	BT	51:DA	O3'	52:DA	P	0.79

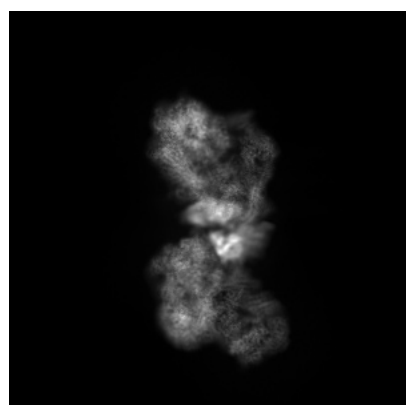
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-71541. These allow visual inspection of the internal detail of the map and identification of artifacts.

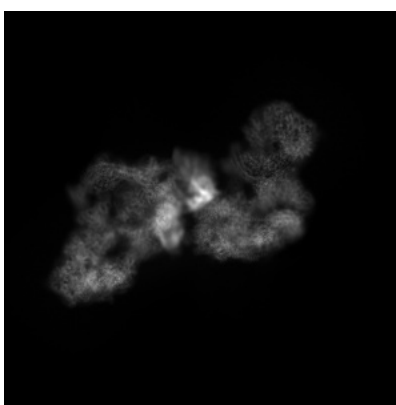
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

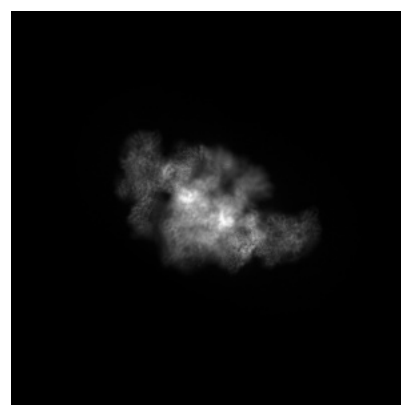
6.1.1 Primary map



X



Y

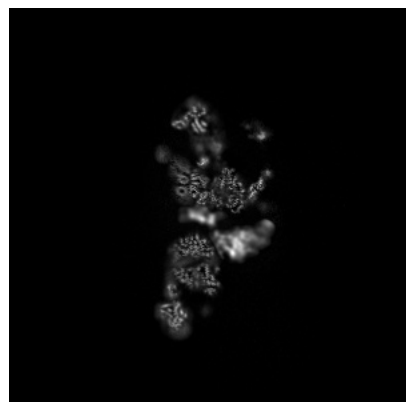


Z

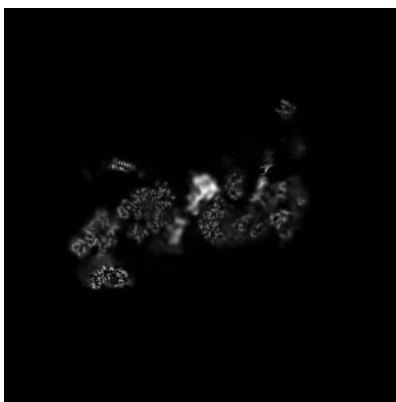
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

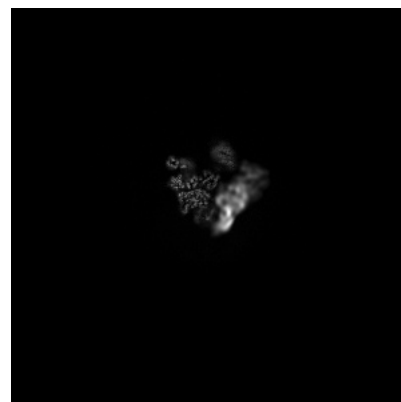
6.2.1 Primary map



X Index: 320



Y Index: 320

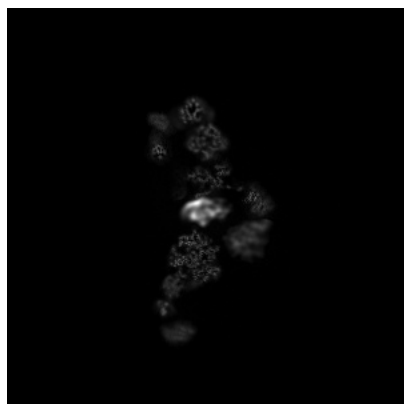


Z Index: 320

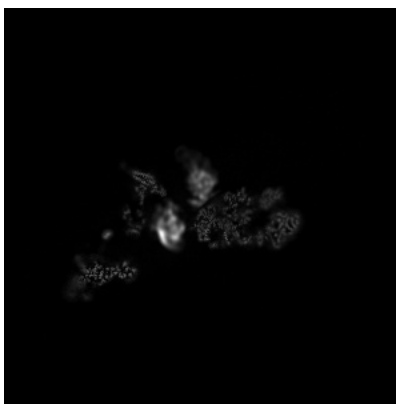
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

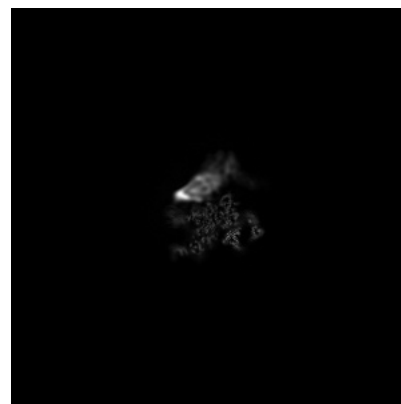
6.3.1 Primary map



X Index: 339



Y Index: 338

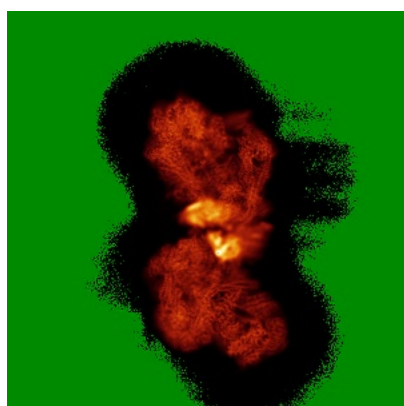


Z Index: 254

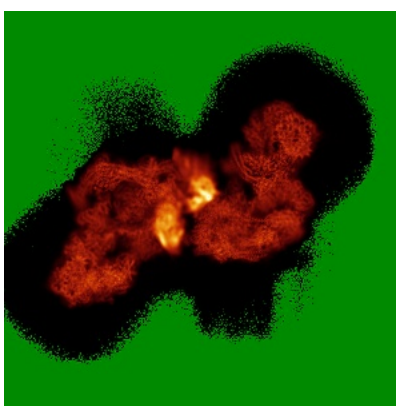
The images above show the largest variance slices of the map in three orthogonal directions.

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

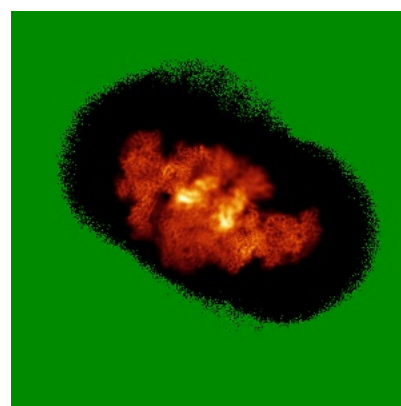
6.4.1 Primary map



X



Y



Z

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

6.5 Orthogonal surface views [i](#)

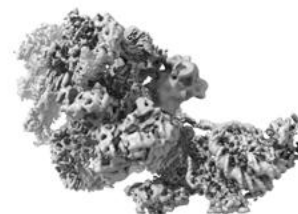
6.5.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.393. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

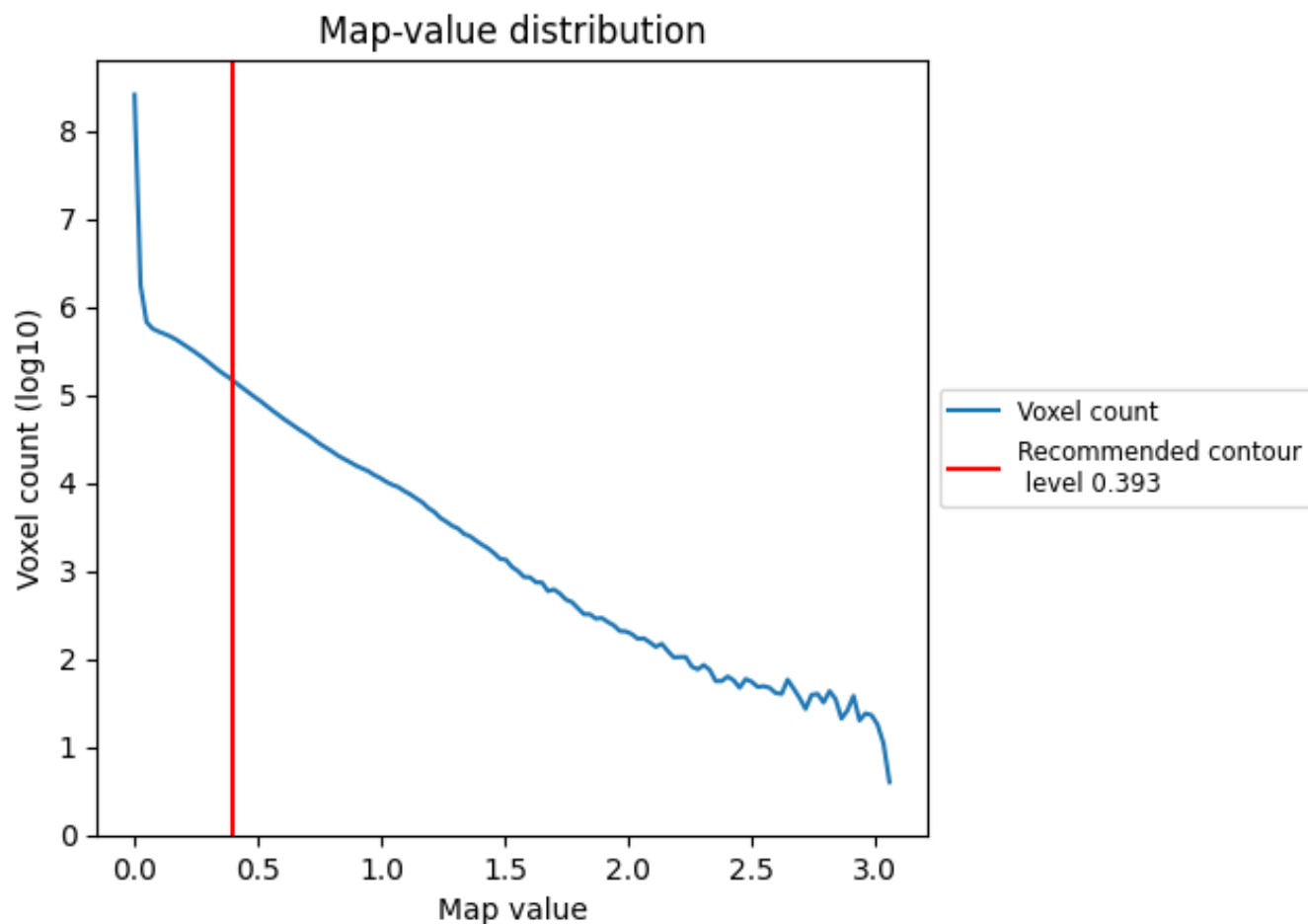
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

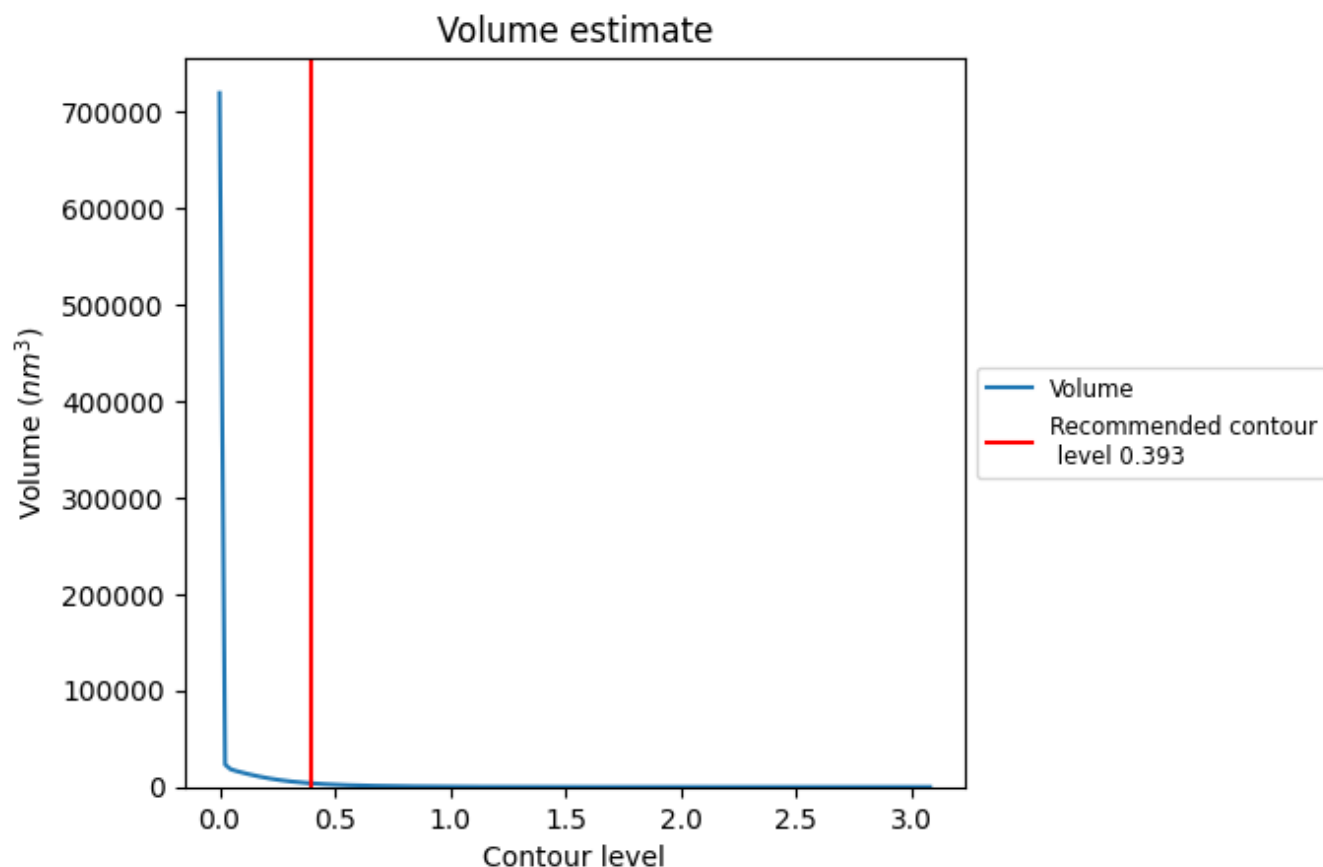
This section contains the results of statistical analysis of the map.

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.

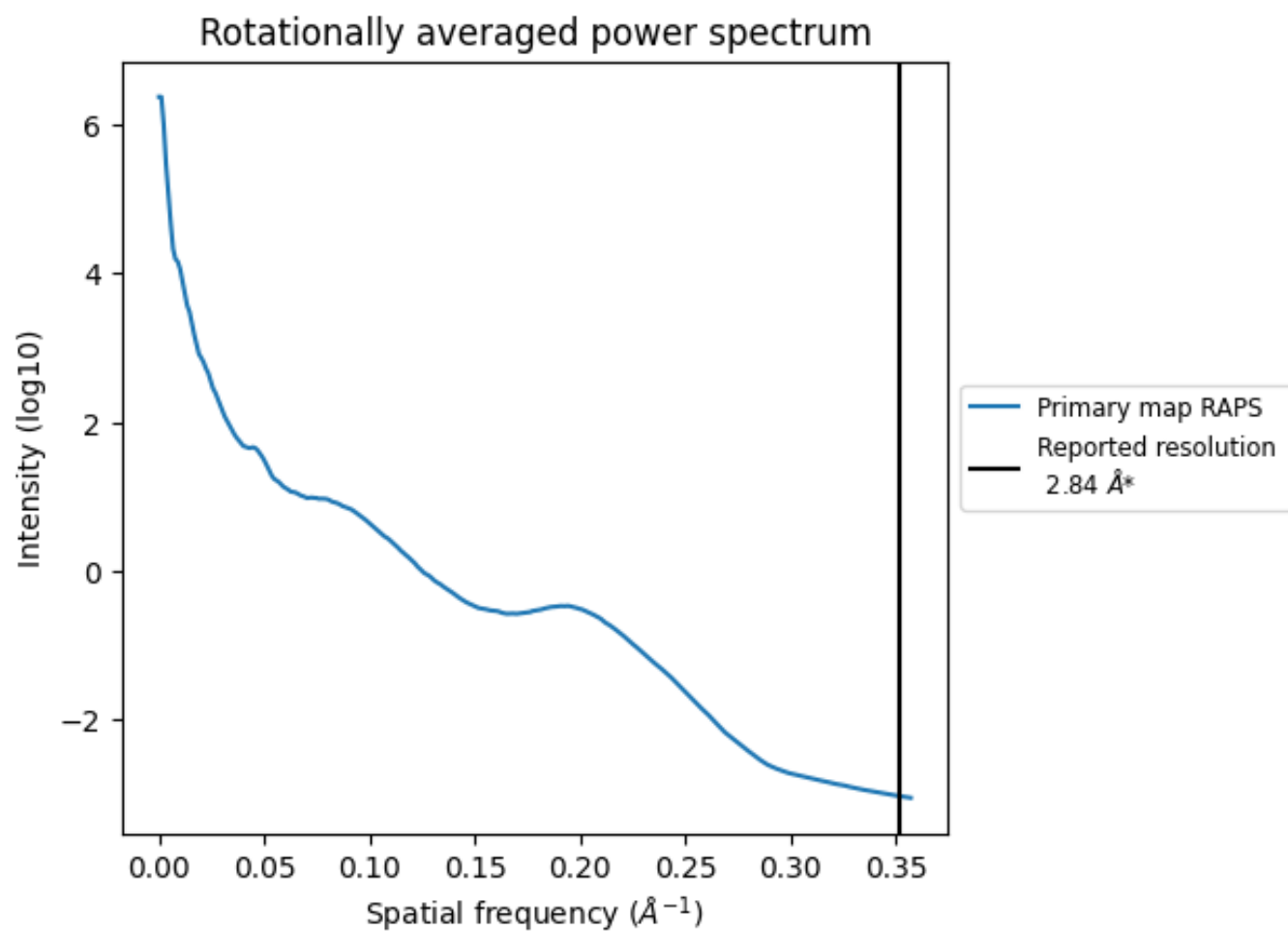
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 3880 nm^3 ; this corresponds to an approximate mass of 3505 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 0.352 Å⁻¹

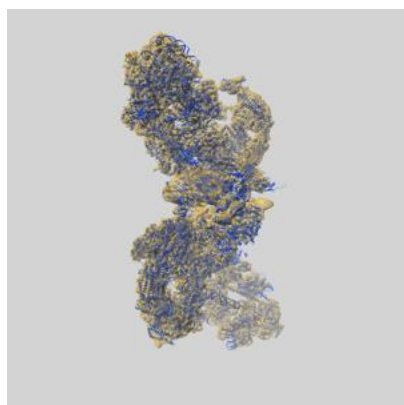
8 Fourier-Shell correlation

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

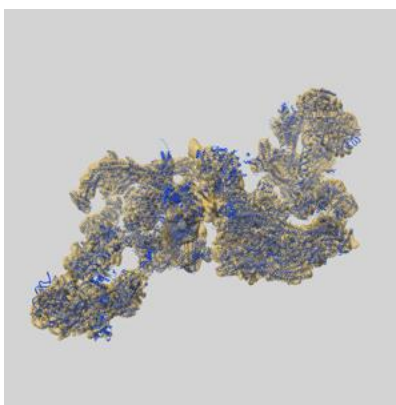
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-71541 and PDB model 9PDR. Per-residue inclusion information can be found in section [3](#) on page [27](#).

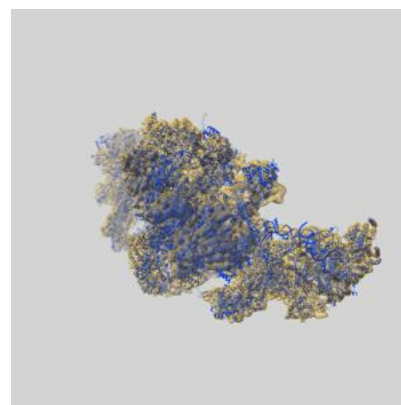
9.1 Map-model overlay [i](#)



X



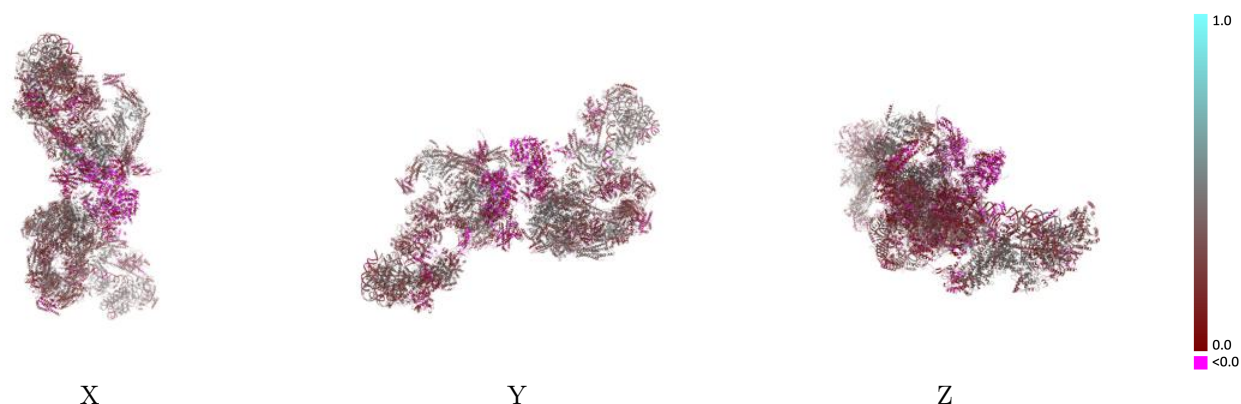
Y



Z

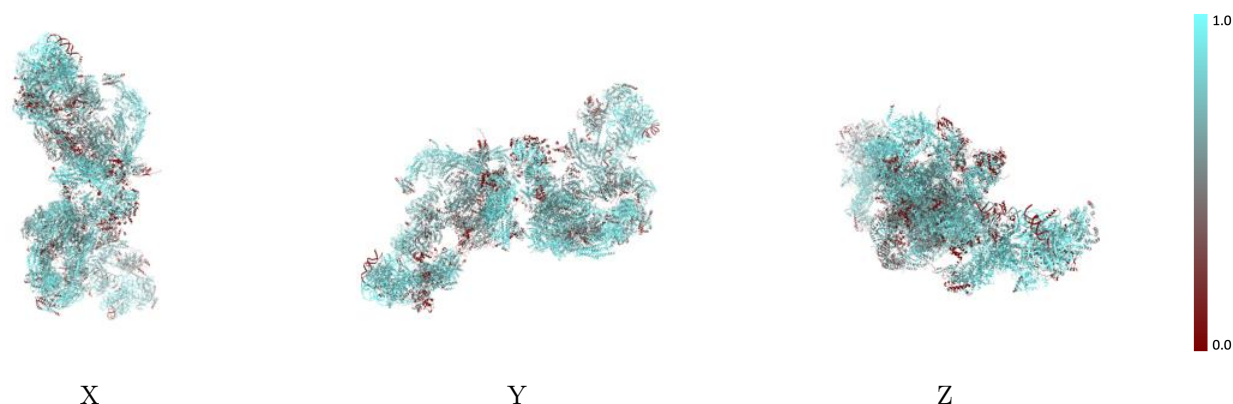
The images above show the 3D surface view of the map at the recommended contour level 0.393 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



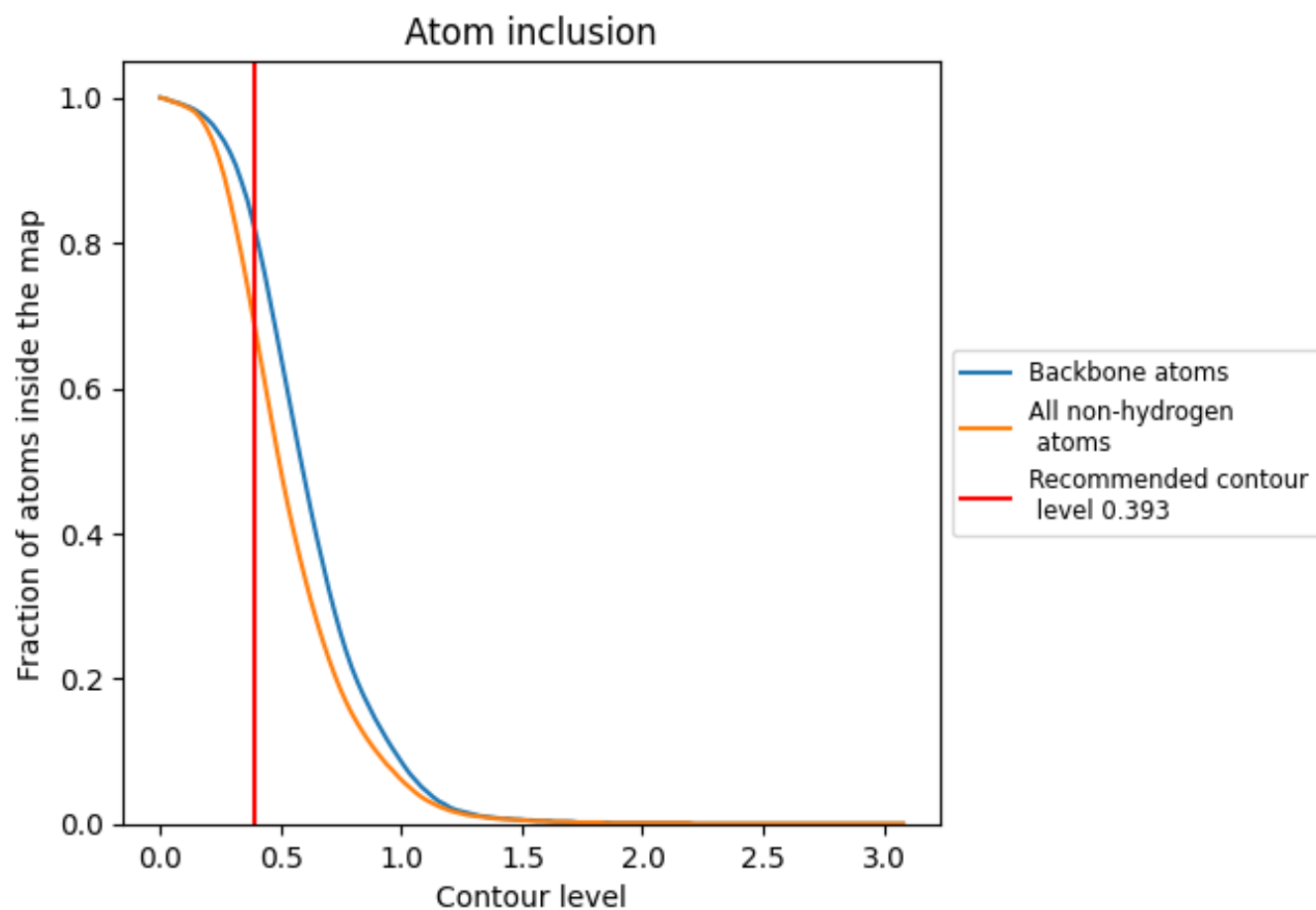
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.393).

9.4 Atom inclusion [i](#)



At the recommended contour level, 82% of all backbone atoms, 68% 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 (0.393) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.6820	 0.2480
A0	 0.7530	 0.1920
A1	 0.4960	 0.1470
A2	 0.6770	 0.1760
A3	 0.6720	 0.1530
A4	 0.7800	 0.2230
A5	 0.4990	 0.1550
A6	 0.7300	 0.2250
A7	 0.5850	 0.1340
A8	 0.0150	 -0.0270
A9	 0.0000	 0.0500
AA	 0.6770	 0.3730
AB	 0.6930	 0.3790
AC	 0.8270	 0.4370
AD	 0.4150	 0.1720
AE	 0.7000	 0.3670
AF	 0.7220	 0.4010
AG	 0.5970	 0.2410
AH	 0.6670	 0.3660
AI	 0.6920	 0.2840
AJ	 0.7880	 0.3950
AK	 0.7510	 0.3700
AL	 0.6920	 0.3610
AM	 0.5420	 0.2490
AN	 0.7920	 0.2640
AO	 0.6260	 0.2800
AQ	 0.3670	 0.1840
AR	 0.3000	 0.1490
AS	 0.2630	 0.1770
AT	 0.8280	 0.2790
AU	 0.4670	 0.1920
AV	 0.4920	 0.2160
AW	 0.4460	 0.1350
AX	 0.3140	 0.1720
B0	 0.7500	 0.1890



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Chain	Atom inclusion	Q-score
B1	0.4920	0.1470
B2	0.6740	0.1760
B3	0.6700	0.1460
B4	0.7830	0.2160
B5	0.4790	0.1570
B6	0.7300	0.2140
B7	0.5780	0.1370
B8	0.0150	-0.0210
B9	0.0000	0.0530
BA	0.6460	0.3550
BB	0.6610	0.3620
BC	0.8080	0.4130
BD	0.3950	0.1710
BE	0.6710	0.3500
BF	0.6730	0.3860
BG	0.5740	0.2410
BH	0.6350	0.3510
BI	0.6380	0.2820
BJ	0.7790	0.3750
BK	0.7180	0.3520
BL	0.6370	0.3490
BM	0.5230	0.2410
BN	0.7860	0.2570
BO	0.6060	0.2680
BQ	0.3470	0.1840
BR	0.2770	0.1490
BS	0.2440	0.1790
BT	0.8220	0.2720
BU	0.4430	0.1910
BV	0.4750	0.2130
BW	0.4300	0.1400
BX	0.2920	0.1710
MA	0.8490	0.4310
Ma	0.8830	0.4170
Mb	0.8900	0.3990
Mc	0.8790	0.3840
Md	0.8130	0.3410
Me	0.9000	0.4530
Mf	0.8860	0.4400
Mg	0.8210	0.3430
Mh	0.8530	0.3680
Mi	0.8820	0.3710

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Chain	Atom inclusion	Q-score
Mj	 0.8780	 0.3410
Mk	 0.7310	 0.1420
MI	 0.6840	 0.2280
Mm	 0.4890	 0.1570
Mn	 0.7880	 0.3040
Mo	 0.8920	 0.4370
Mp	 0.4300	 0.1250
NF	 0.3090	 0.1990
NP	 0.7100	 0.2780
No	 0.8440	 0.3810
Np	 0.8190	 0.3850
Nq	 0.8330	 0.3700
Nr	 0.8790	 0.3740
Ns	 0.8390	 0.3860
Nt	 0.8070	 0.3750
Nu	 0.7870	 0.3680
Nv	 0.7500	 0.3470
SA	 0.5400	 0.1990
SB	 0.8020	 0.3340
SC	 0.6250	 0.2650
SD	 0.7810	 0.3450
SE	 0.5950	 0.2280
SF	 0.8440	 0.3810
SG	 0.9430	 0.4320
SH	 0.7940	 0.3210
SI	 0.8430	 0.3950
SJ	 0.3360	 0.1220
SK	 0.5120	 0.1390
SL	 0.4200	 0.1440
T1	 0.9980	 0.0750
T2	 0.8670	 0.0640
T3	 0.5640	 0.0100
T4	 0.8580	 0.0380
T5	 0.7240	 0.0510
T6	 0.8650	 0.0250
mA	 0.8370	 0.4190
ma	 0.8750	 0.3960
mb	 0.8790	 0.3780
mc	 0.8650	 0.3590
md	 0.8010	 0.3200
me	 0.8840	 0.4290
mf	 0.8690	 0.4190

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Chain	Atom inclusion	Q-score
mg	 0.8030	 0.3270
mh	 0.8430	 0.3510
mi	 0.8750	 0.3560
mj	 0.8760	 0.3210
mk	 0.7250	 0.1420
ml	 0.6760	 0.2220
mm	 0.4790	 0.1550
mn	 0.7780	 0.2870
mo	 0.8800	 0.4110
mp	 0.4200	 0.1270
nF	 0.2730	 0.1870
nP	 0.6980	 0.2670
no	 0.8300	 0.3580
np	 0.8010	 0.3640
nq	 0.8030	 0.3500
nr	 0.8450	 0.3520
ns	 0.8290	 0.3610
nt	 0.7750	 0.3550
nu	 0.7820	 0.3540
nv	 0.7280	 0.3260
sA	 0.5270	 0.1890
sB	 0.7890	 0.3160
sC	 0.6000	 0.2550
sD	 0.7660	 0.3260
sE	 0.5790	 0.2210
sF	 0.8320	 0.3660
sG	 0.9390	 0.4220
sH	 0.7760	 0.3080
sI	 0.8210	 0.3730
sJ	 0.3290	 0.1270
sK	 0.5030	 0.1380
sL	 0.4060	 0.1450
t1	 0.9840	 0.0630
t2	 0.8210	 0.0670
t3	 0.5820	 0.0070
t4	 0.8490	 0.0450
t5	 0.6670	 0.0490
t6	 0.8720	 0.0260