Full wwPDB EM Validation Report

Oct 27, 2024 – 02:18 PM EDT

PDB ID	:	8TRH
EMDB ID	:	EMD-41580
Title	:	The IDRc bound human core Mediator complex
Authors	:	Chen, S.F.; Chao, T.C.; Kim, H.J.; Tang, H.C.; Khadka, S.; Li, T.; Murakami, K.; Boyer, T.G.; Tsai, K.L.
Deposited on	:	2023-08-09
Resolution	:	3.70 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:

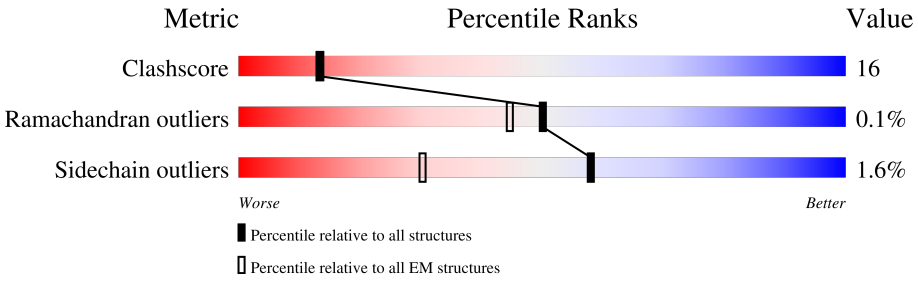
EMDB validation analysis	:	0.0.1.dev113
MolProbity	:	4.02b-467
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.39

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 3.70 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)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

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 <=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	0	311	69% 16% • 14%
2	1	178	• 43% 12% 44%
3	2	200	• 48% 9% 42%
4	3	178	• 49% 18% • 31%
5	4	131	51% 61% 20% 19%
6	A	1581	• 23% 6% 70%
7	B	20	5% 100%
8	D	270	24% 37% 20% • 41%

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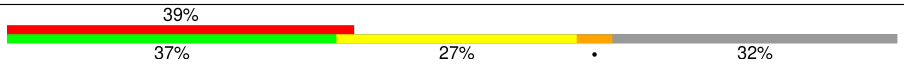
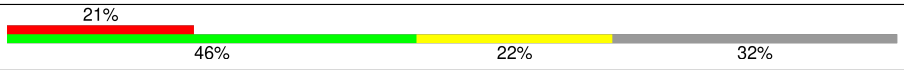
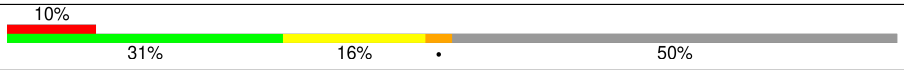
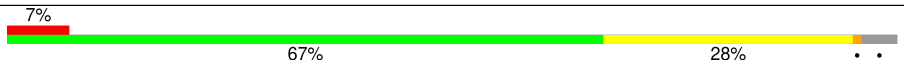
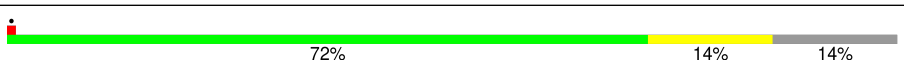
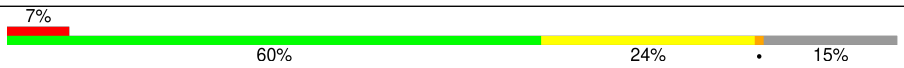
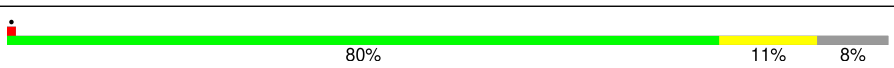
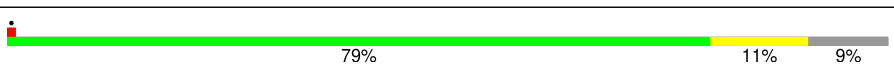
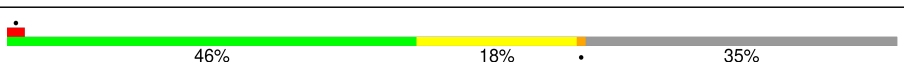
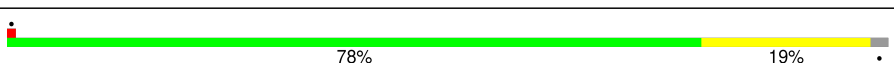
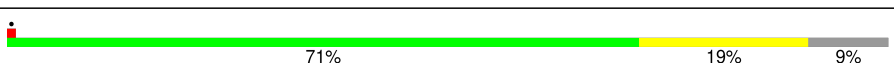
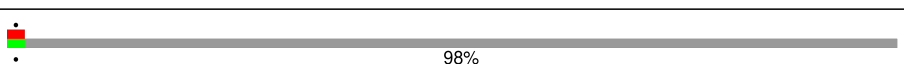
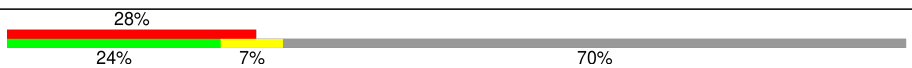
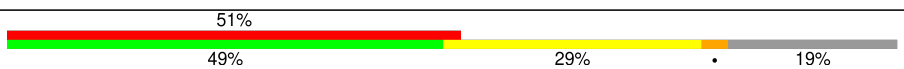
Mol	Chain	Length	Quality of chain
9	F	246	
10	G	233	
11	H	268	
12	I	146	
13	J	135	
14	K	117	
15	N	1454	
16	O	788	
17	P	877	
18	Q	651	
19	R	208	
20	T	212	
21	V	200	
22	W	1368	
23	X	989	
24	d	2174	
25	S	244	
26	U	144	

2 Entry composition (i)

There are 27 unique types of molecules in this entry. The entry contains 59957 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 Mediator of RNA polymerase II transcription subunit 27.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	0	267	2159	1373	384	390	12	0	0

- Molecule 2 is a protein called Mediator of RNA polymerase II transcription subunit 28.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	1	99	817	511	143	160	3	0	0

- Molecule 3 is a protein called Mediator of RNA polymerase II transcription subunit 29.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	2	115	899	563	155	172	9	0	0

- Molecule 4 is a protein called Mediator of RNA polymerase II transcription subunit 30.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	3	122	1022	639	187	189	7	0	0

- Molecule 5 is a protein called Mediator of RNA polymerase II transcription subunit 31.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	4	106	932	610	161	156	5	0	0

- Molecule 6 is a protein called Mediator of RNA polymerase II transcription subunit 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	A	467	3578	2278	613	663	24	0	0

- Molecule 7 is a protein called Unknown Chain.

Mol	Chain	Residues	Atoms				AltConf	Trace
7	B	20	Total	C	N	O	0	0
			100	60	20	20		

- Molecule 8 is a protein called Mediator of RNA polymerase II transcription subunit 4.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	D	158	Total	C	N	O	S	0	0
			1266	790	228	242	6		

- Molecule 9 is a protein called Mediator of RNA polymerase II transcription subunit 6.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	F	167	Total	C	N	O	S	0	0
			1374	888	238	243	5		

- Molecule 10 is a protein called Mediator of RNA polymerase II transcription subunit 7.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	G	159	Total	C	N	O	S	0	0
			1284	812	227	235	10		

- Molecule 11 is a protein called Mediator of RNA polymerase II transcription subunit 8.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	H	181	Total	C	N	O	S	0	0
			1422	888	250	280	4		

- Molecule 12 is a protein called Mediator of RNA polymerase II transcription subunit 9.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	I	73	Total	C	N	O	S	0	0
			605	382	107	110	6		

- Molecule 13 is a protein called Mediator of RNA polymerase II transcription subunit 10.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	J	122	Total	C	N	O	S	0	0
			834	521	151	159	3		

- Molecule 14 is a protein called Mediator of RNA polymerase II transcription subunit 11.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	K	112	Total	C	N	O	S	0	0
			879	537	163	175	4		

- Molecule 15 is a protein called Mediator of RNA polymerase II transcription subunit 14.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	N	1017	Total	C	N	O	S	0	0
			7768	4955	1364	1407	42		

- Molecule 16 is a protein called Mediator of RNA polymerase II transcription subunit 15.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	O	157	Total	C	N	O	S	0	0
			1226	783	213	223	7		

- Molecule 17 is a protein called Mediator of RNA polymerase II transcription subunit 16.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	P	753	Total	C	N	O	S	0	0
			5875	3742	1008	1077	48		

- Molecule 18 is a protein called Mediator of RNA polymerase II transcription subunit 17.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	Q	556	Total	C	N	O	S	0	0
			4387	2774	782	812	19		

- Molecule 19 is a protein called Mediator of RNA polymerase II transcription subunit 18.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	R	191	Total	C	N	O	S	0	0
			1532	971	270	276	15		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
20	T	193	Total	C	N	O	S	0	0
			1499	955	247	280	17		

- Molecule 21 is a protein called Mediator of RNA polymerase II transcription subunit 22.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	V	130	Total	C	N	O	S	0	0
			1063	656	181	222	4		

- Molecule 22 is a protein called Mediator of RNA polymerase II transcription subunit 23.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	W	1334	Total	C	N	O	S	0	0
			10774	6967	1827	1909	71		

- Molecule 23 is a protein called Mediator of RNA polymerase II transcription subunit 24.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	X	897	Total	C	N	O	S	0	0
			7061	4524	1190	1293	54		

- Molecule 24 is a protein called Mediator of RNA polymerase II transcription subunit 13.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	d	37	Total	C	N	O	S	0	0
			295	194	46	52	3		

- Molecule 25 is a protein called Mediator of RNA polymerase II transcription subunit 19.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	S	74	Total	C	N	O	S	0	0
			435	264	81	89	1		

- Molecule 26 is a protein called Mediator of RNA polymerase II transcription subunit 21.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	U	116	Total	C	N	O	S	0	0
			869	537	144	183	5		

- Molecule 27 is ZINC ION (three-letter code: ZN) (formula: Zn) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		AltConf
27	0	1	Total	Zn	0
			1	1	
27	P	1	Total	Zn	0
			1	1	

3 Residue-property plots (i)

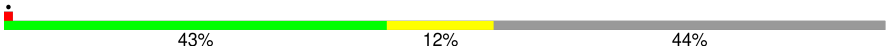
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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

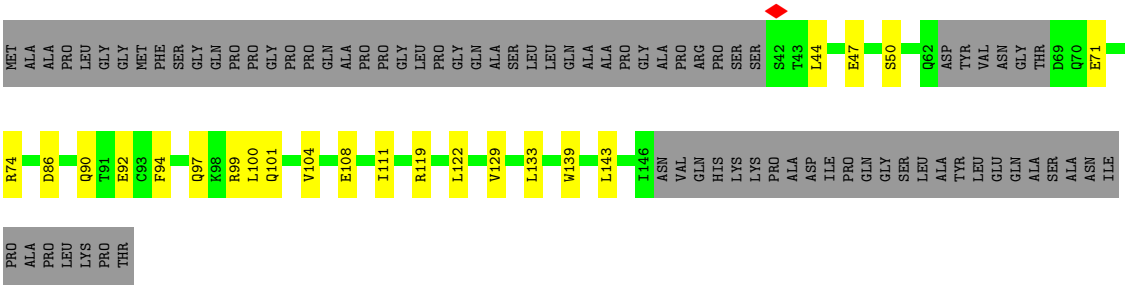
• Molecule 1: Mediator of RNA polymerase II transcription subunit 27

Chain 0:

• Molecule 2: Mediator of RNA polymerase II transcription subunit 28

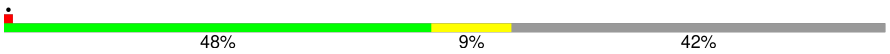
Chain 1:

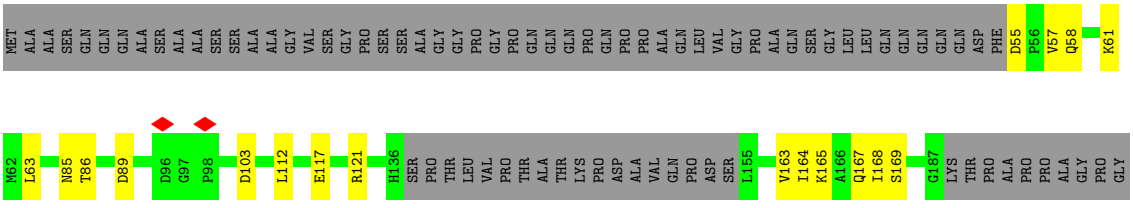




• Molecule 3: Mediator of RNA polymerase II transcription subunit 29

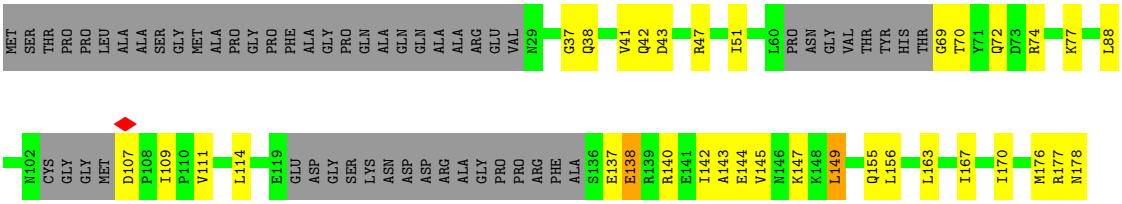
Chain 2:





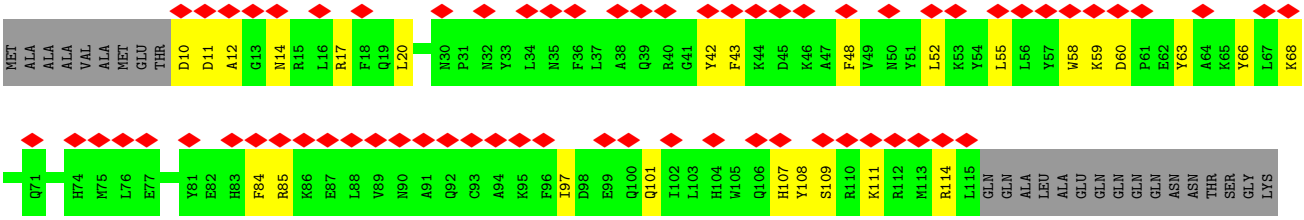
• Molecule 4: Mediator of RNA polymerase II transcription subunit 30

Chain 3:



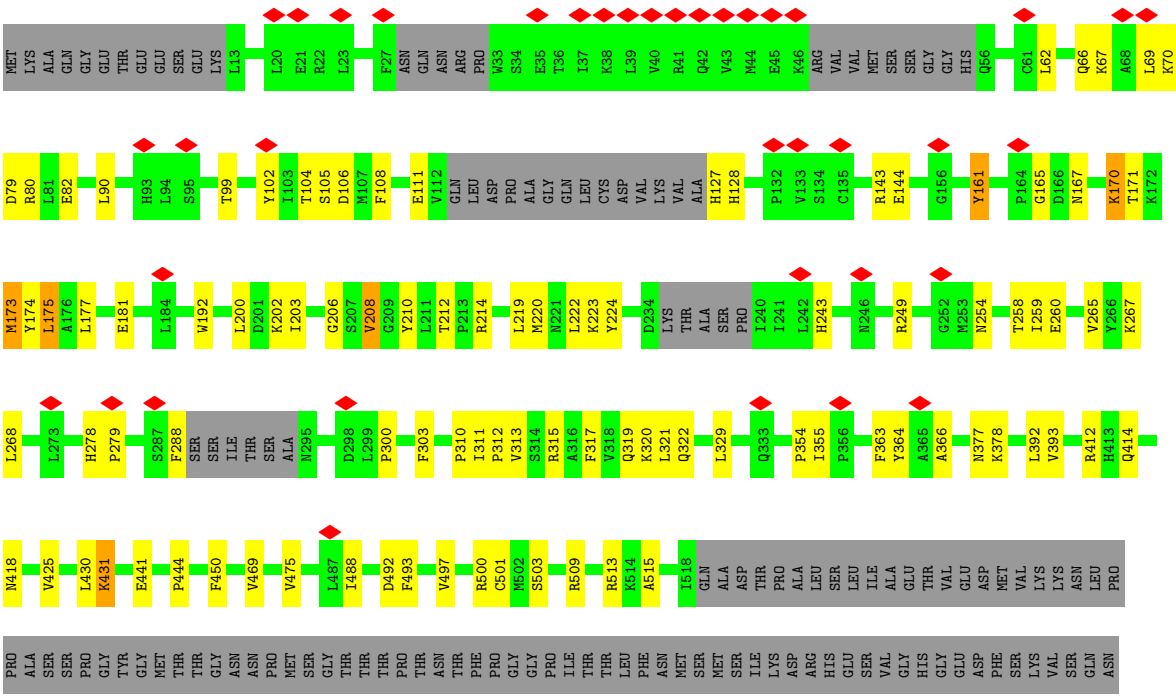
• Molecule 5: Mediator of RNA polymerase II transcription subunit 31

Chain 4:



• Molecule 6: Mediator of RNA polymerase II transcription subunit 1

Chain A:



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ASP LEU GLY LYS GLU LYS THR GLN LYS ARG VAL LYS GLU GLY ASN GLY THR SER ASN SER THR LEU SER SER GLY PRO GLY LEU ASP SER LYS PRO GLY LYS ARG SER ARG THR PRO SER ASN ASP GLY SER LYS SER ASP LYS PRO PRO LYS GLY LYS ALA ASP THR GLU GLY LYS SER

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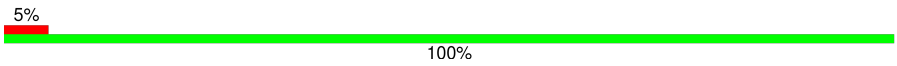
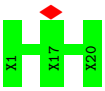
LYS GLU LYS LYS VAL LYS ASP ASP ARG ASP ARG ASP ASP ARG ASP LYS LYS LYS SER HIS SER ILE LYS PRO GLU SER TRP SER LYS SER PRO ILE SER SER ASP GLN SER LEU SER MET THR SER ASN THR ILE LEU LEU SER ALA ASP ARG PRO SER ARG LEU SER

PRO ASP PHE MET ILE GLY GLU GLU ASP ASP ASP LEU MET ASP VAL ALA LEU ILE GLY ASN

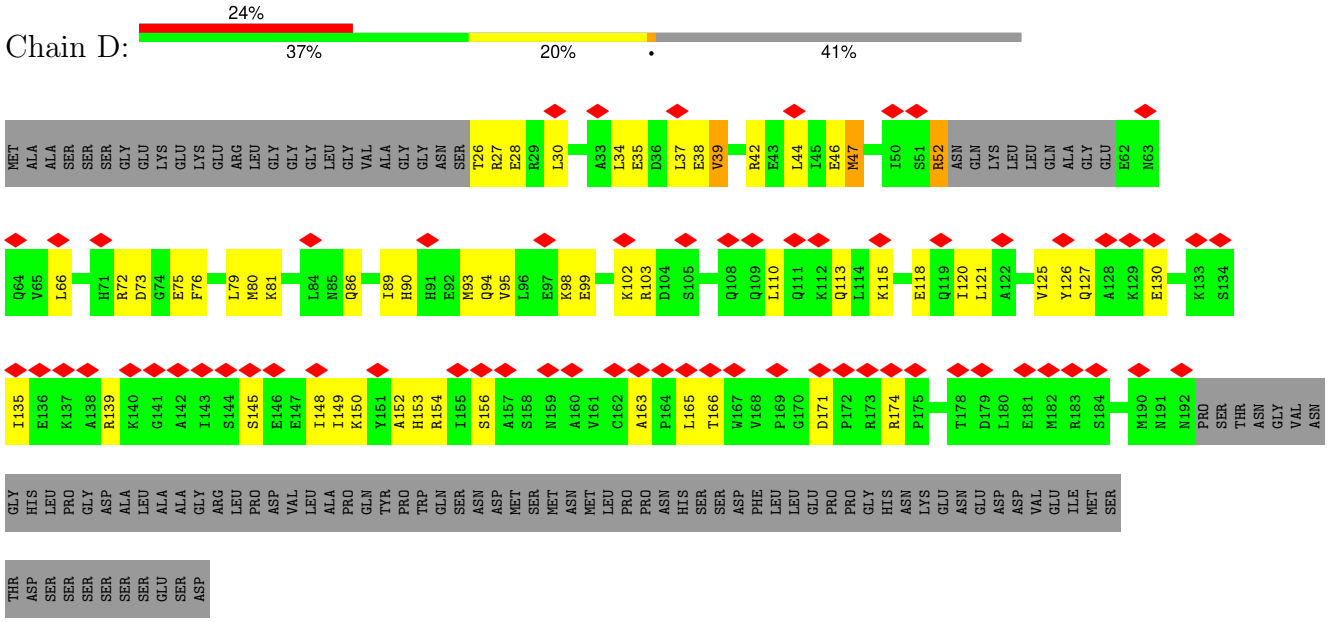
• Molecule 7: Unknown Chain

Chain B:

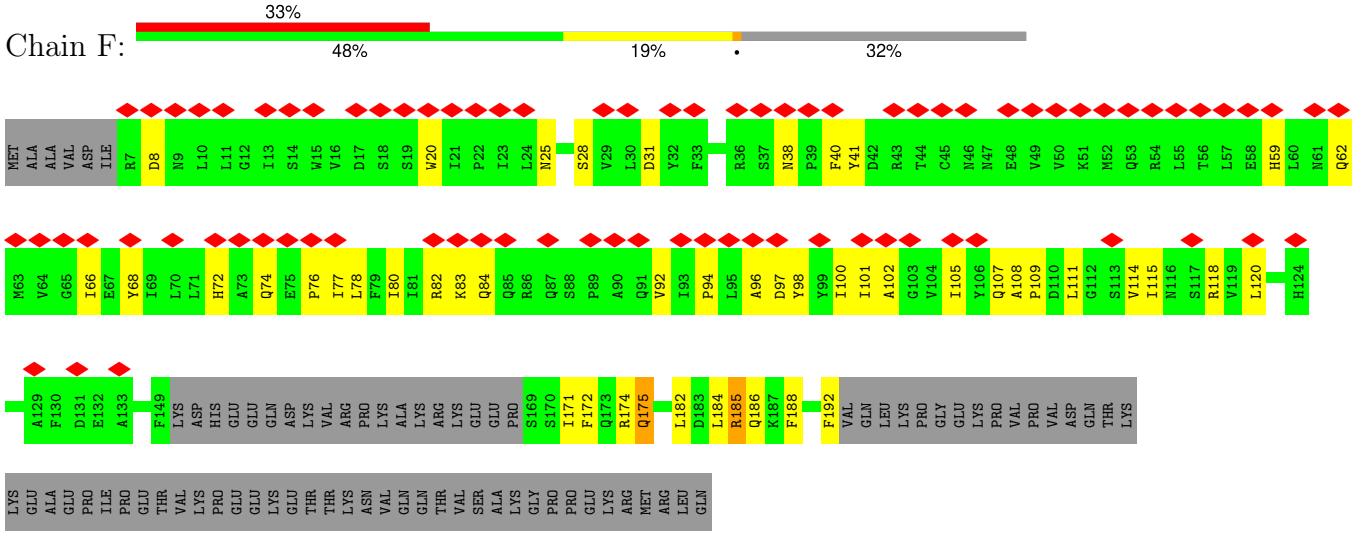




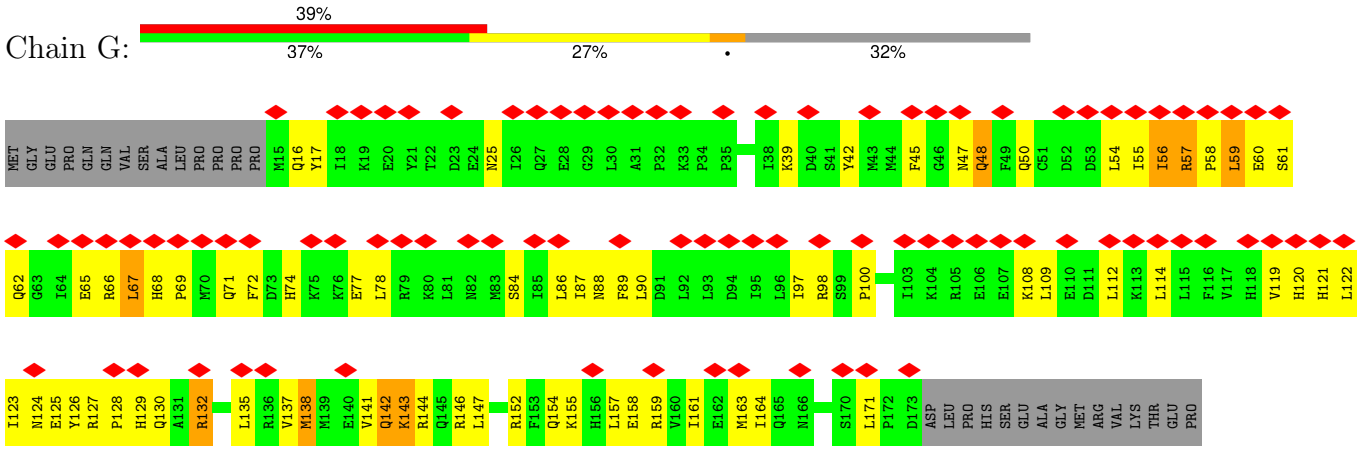
• Molecule 8: Mediator of RNA polymerase II transcription subunit 4



• Molecule 9: Mediator of RNA polymerase II transcription subunit 6

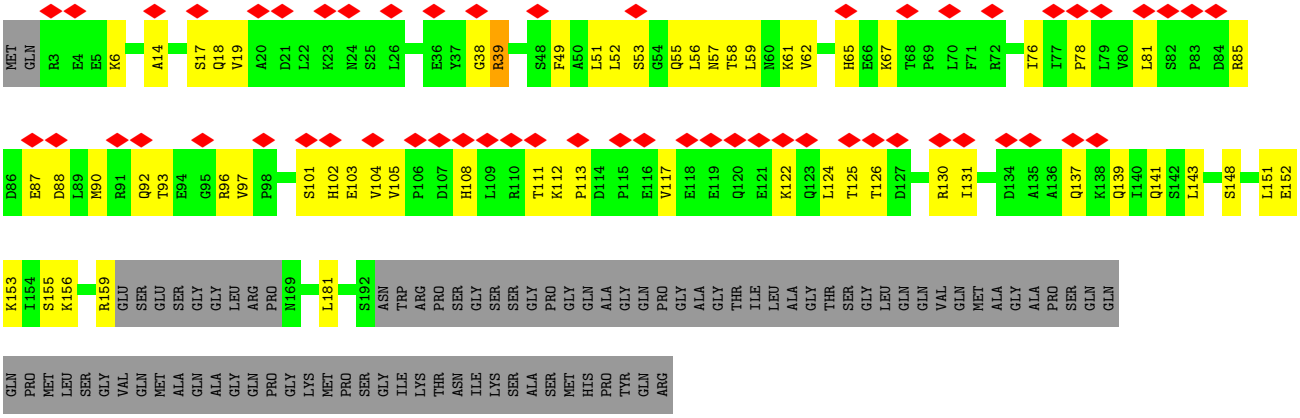


• Molecule 10: Mediator of RNA polymerase II transcription subunit 7



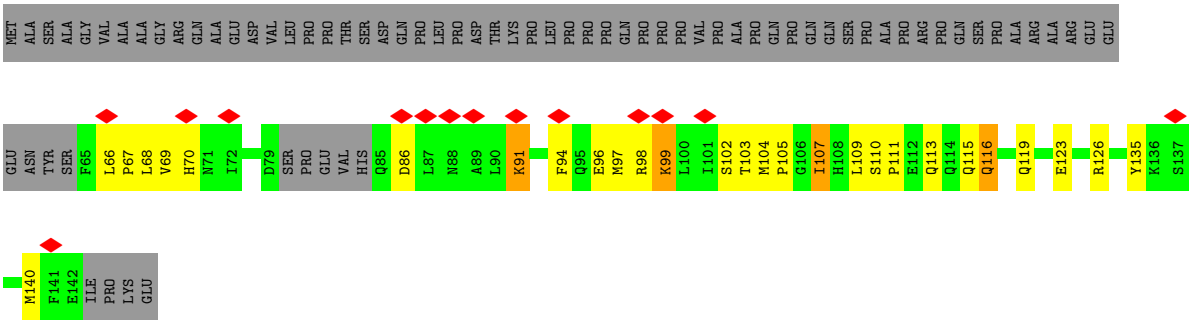
• Molecule 11: Mediator of RNA polymerase II transcription subunit 8

Chain H:



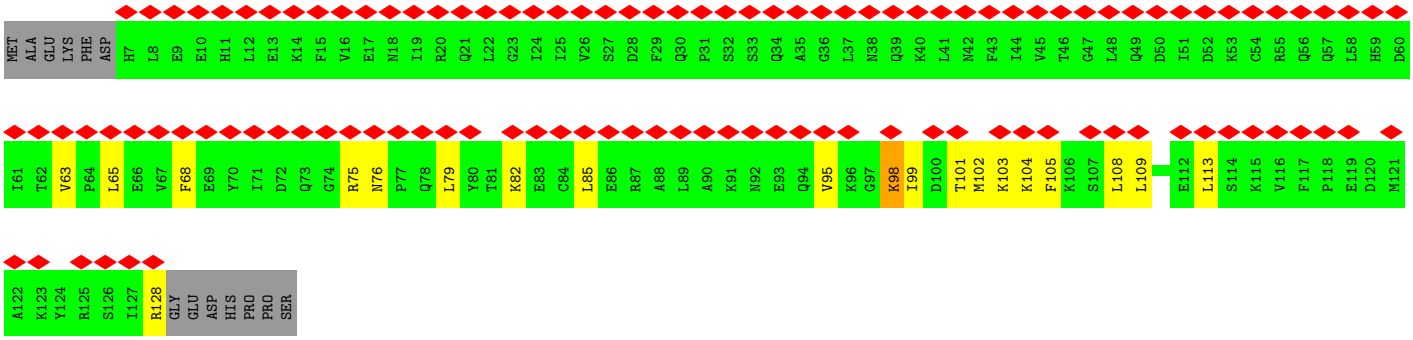
• Molecule 12: Mediator of RNA polymerase II transcription subunit 9

Chain I:



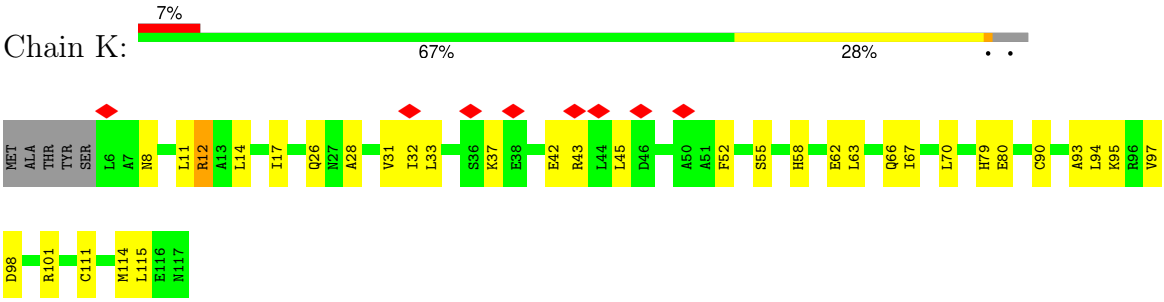
• Molecule 13: Mediator of RNA polymerase II transcription subunit 10

Chain J:



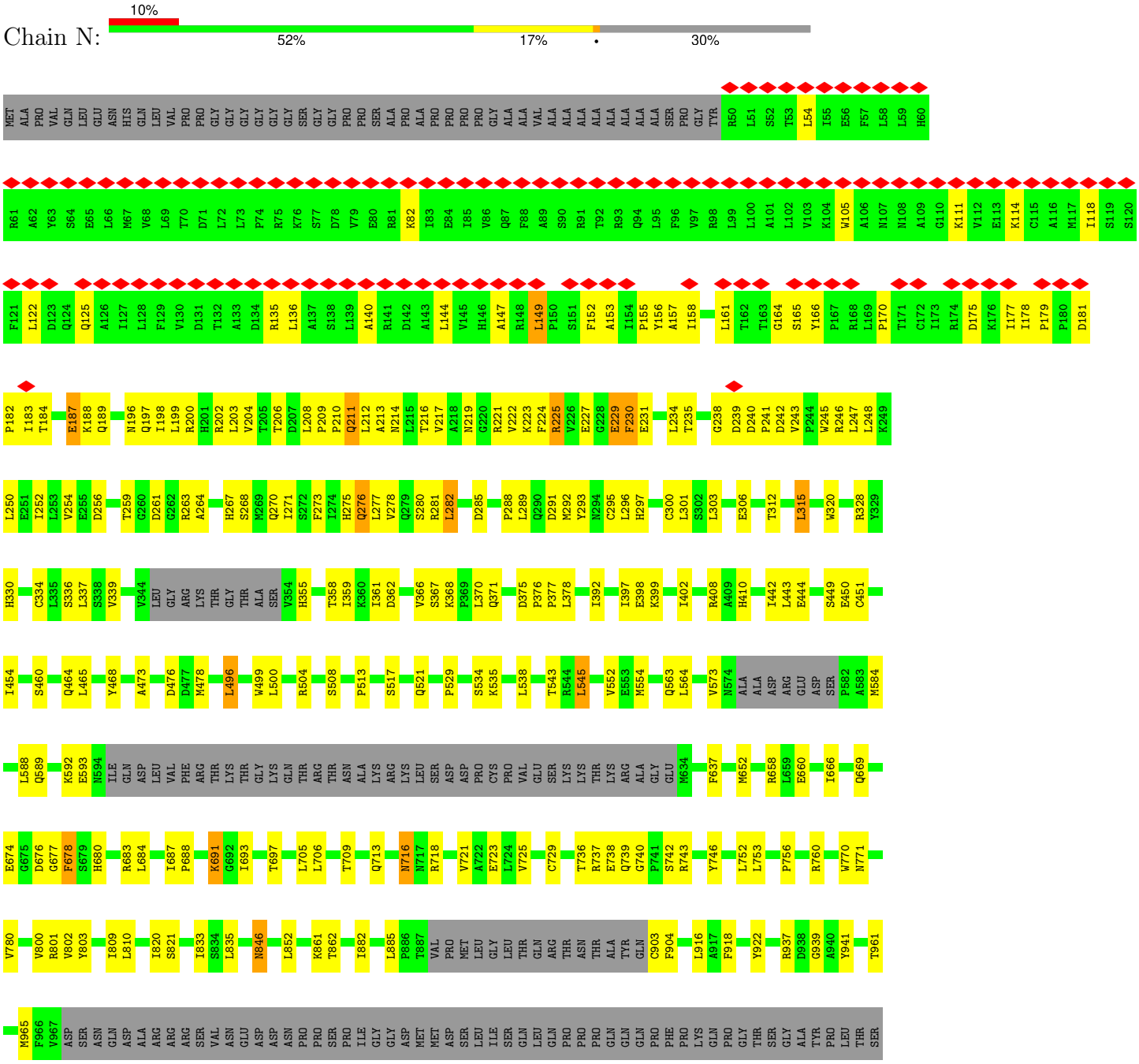
• Molecule 14: Mediator of RNA polymerase II transcription subunit 11

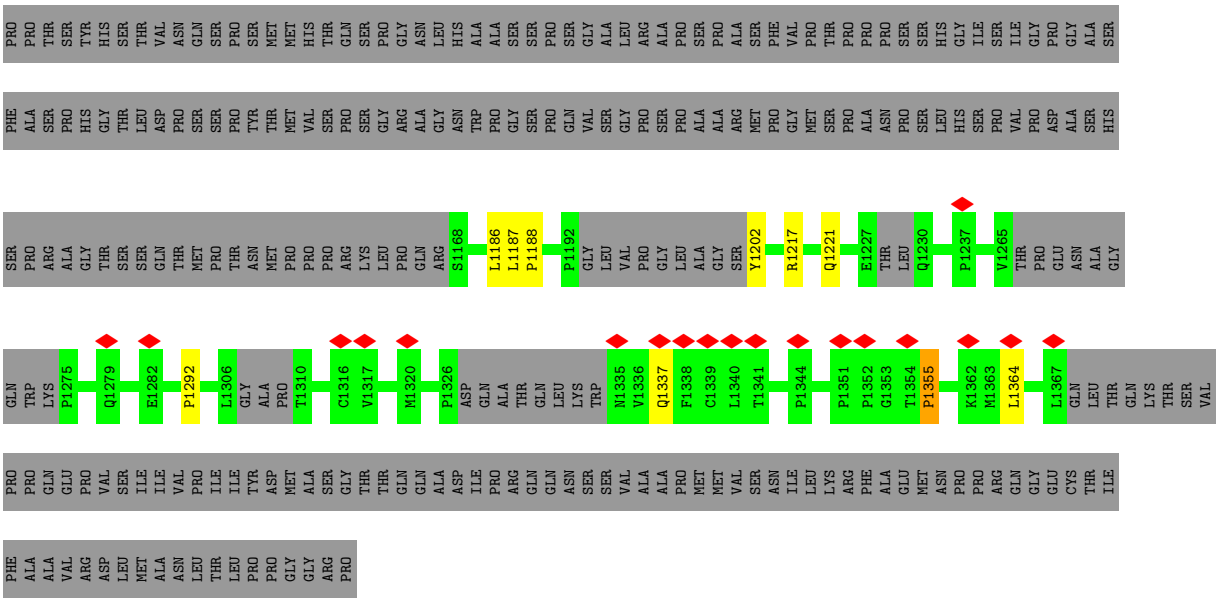
Chain K:



• Molecule 15: Mediator of RNA polymerase II transcription subunit 14

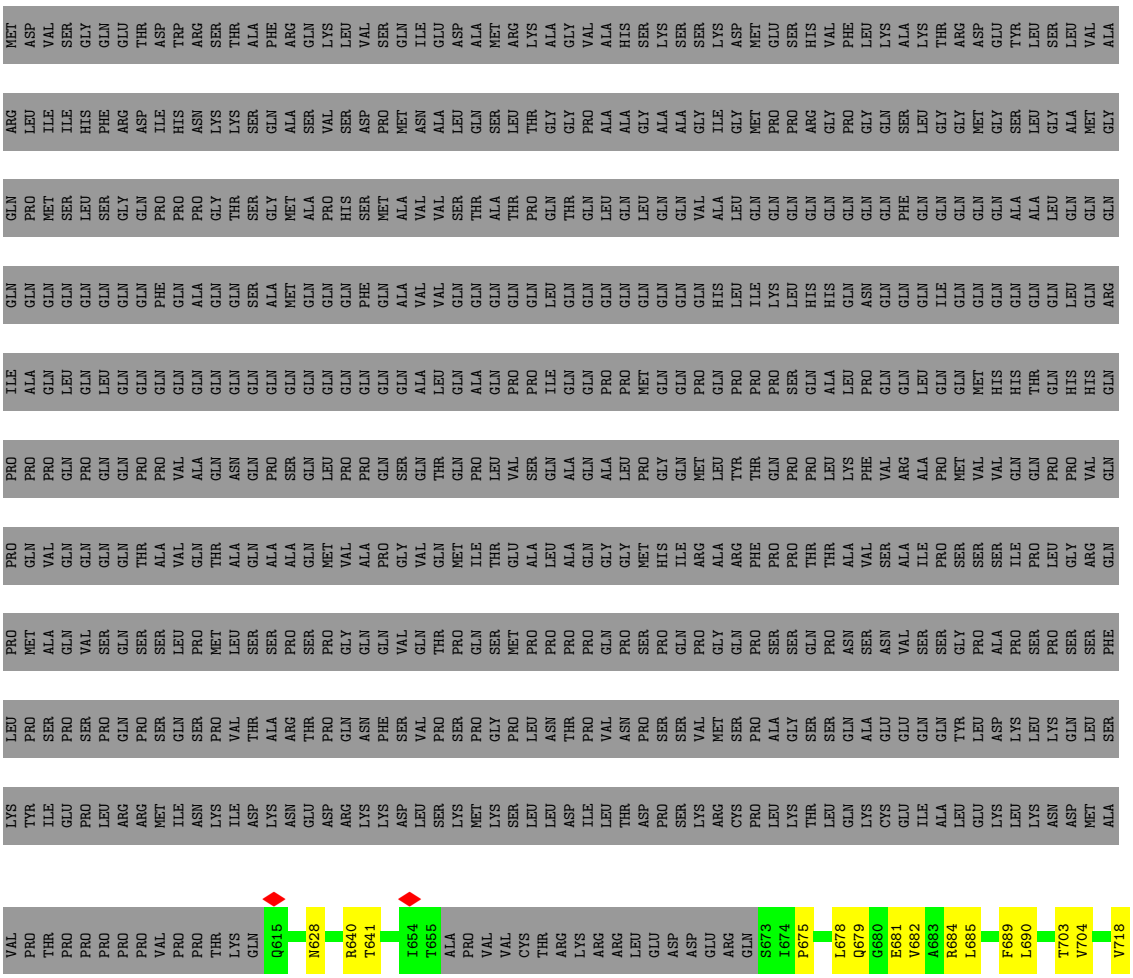
Chain N:





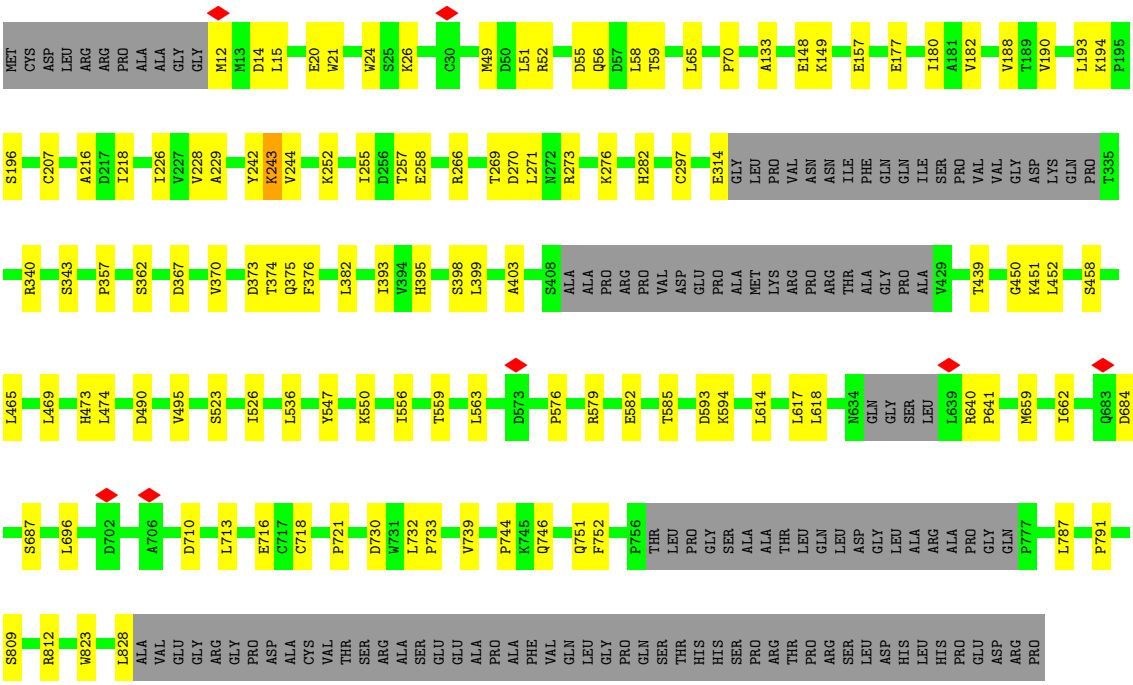
• Molecule 16: Mediator of RNA polymerase II transcription subunit 15

Chain O:



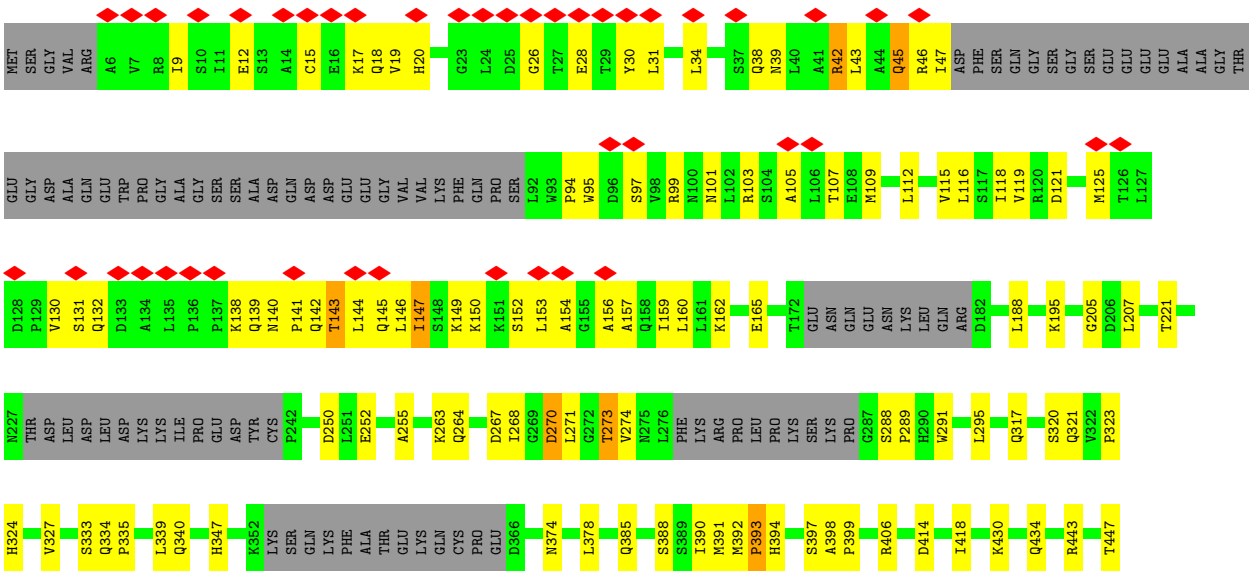
• Molecule 17: Mediator of RNA polymerase II transcription subunit 16

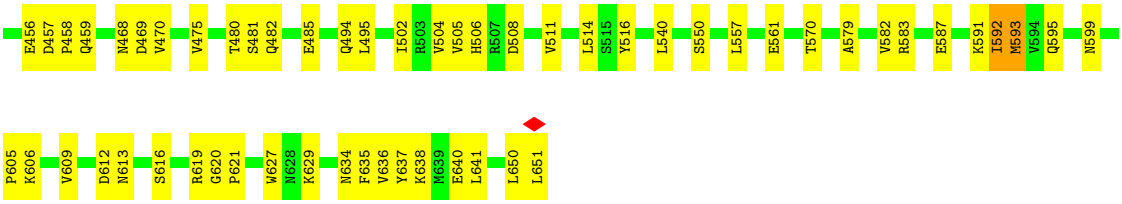
Chain P:



• Molecule 18: Mediator of RNA polymerase II transcription subunit 17

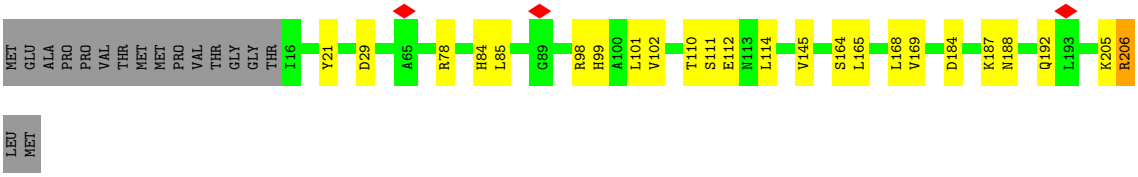
Chain Q:





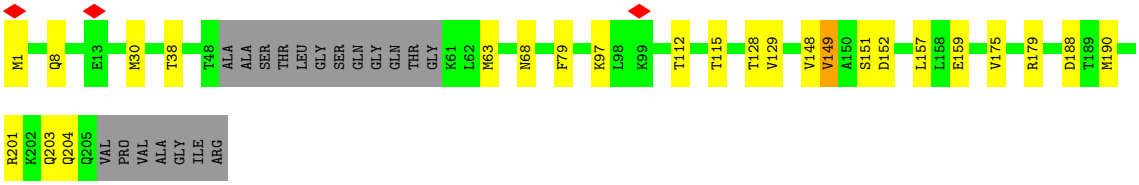
• Molecule 19: Mediator of RNA polymerase II transcription subunit 18

Chain R:



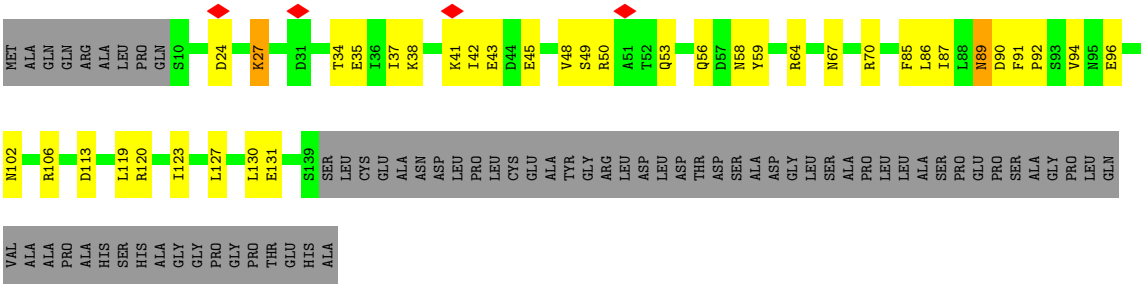
• Molecule 20: Mediator of RNA polymerase II transcription subunit 20

Chain T:



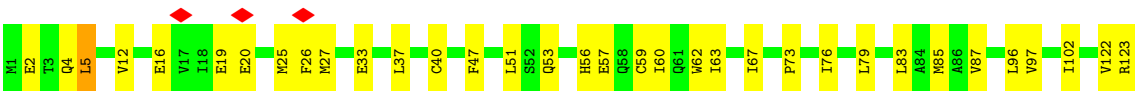
• Molecule 21: Mediator of RNA polymerase II transcription subunit 22

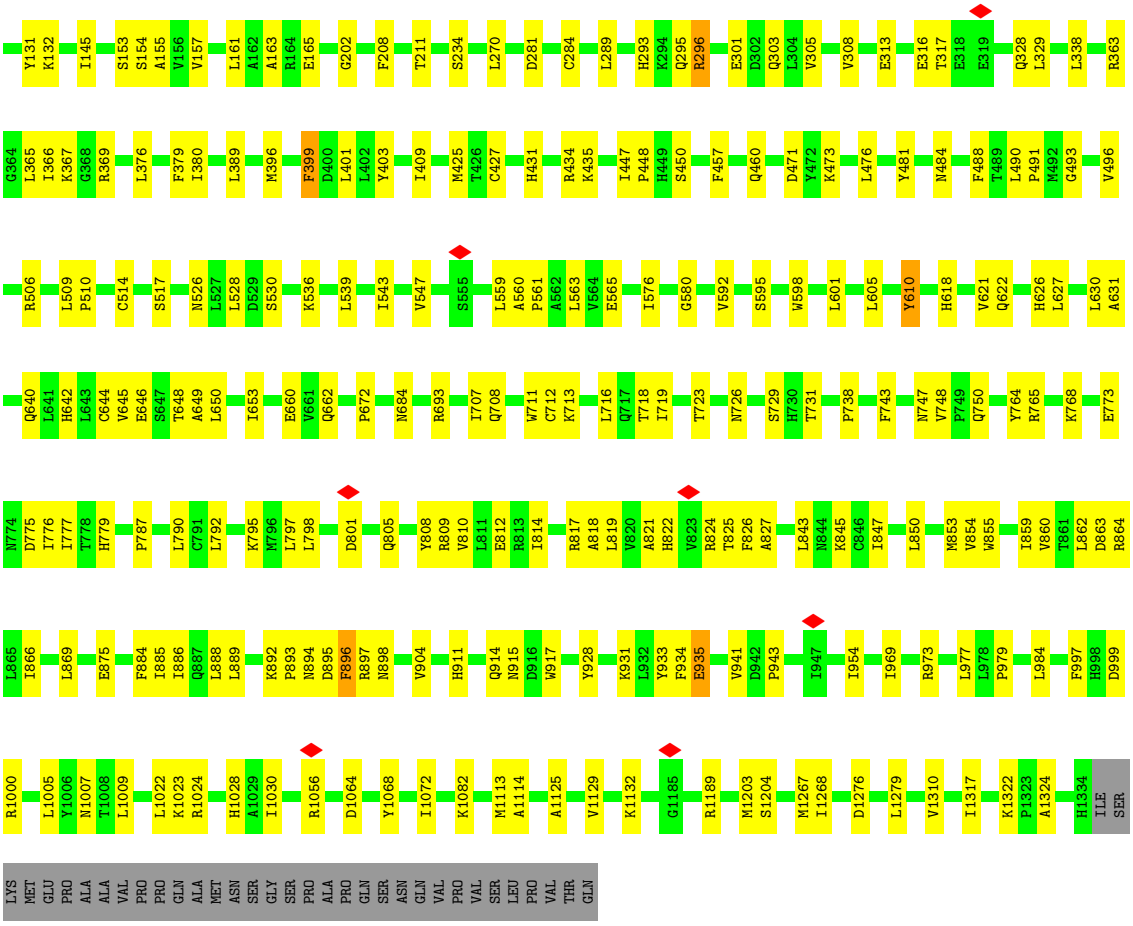
Chain V:



• Molecule 22: Mediator of RNA polymerase II transcription subunit 23

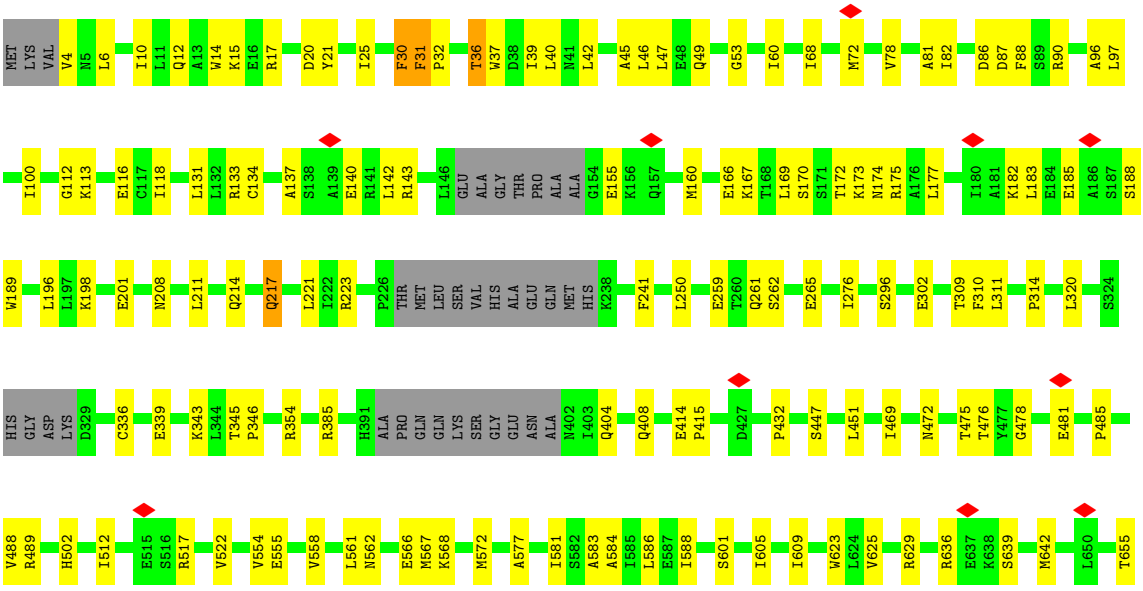
Chain W:

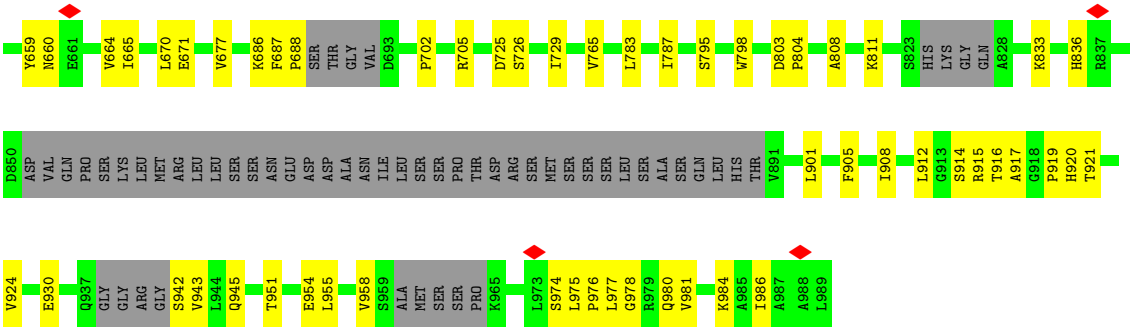




• Molecule 23: Mediator of RNA polymerase II transcription subunit 24

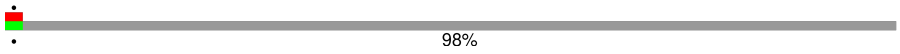
Chain X:

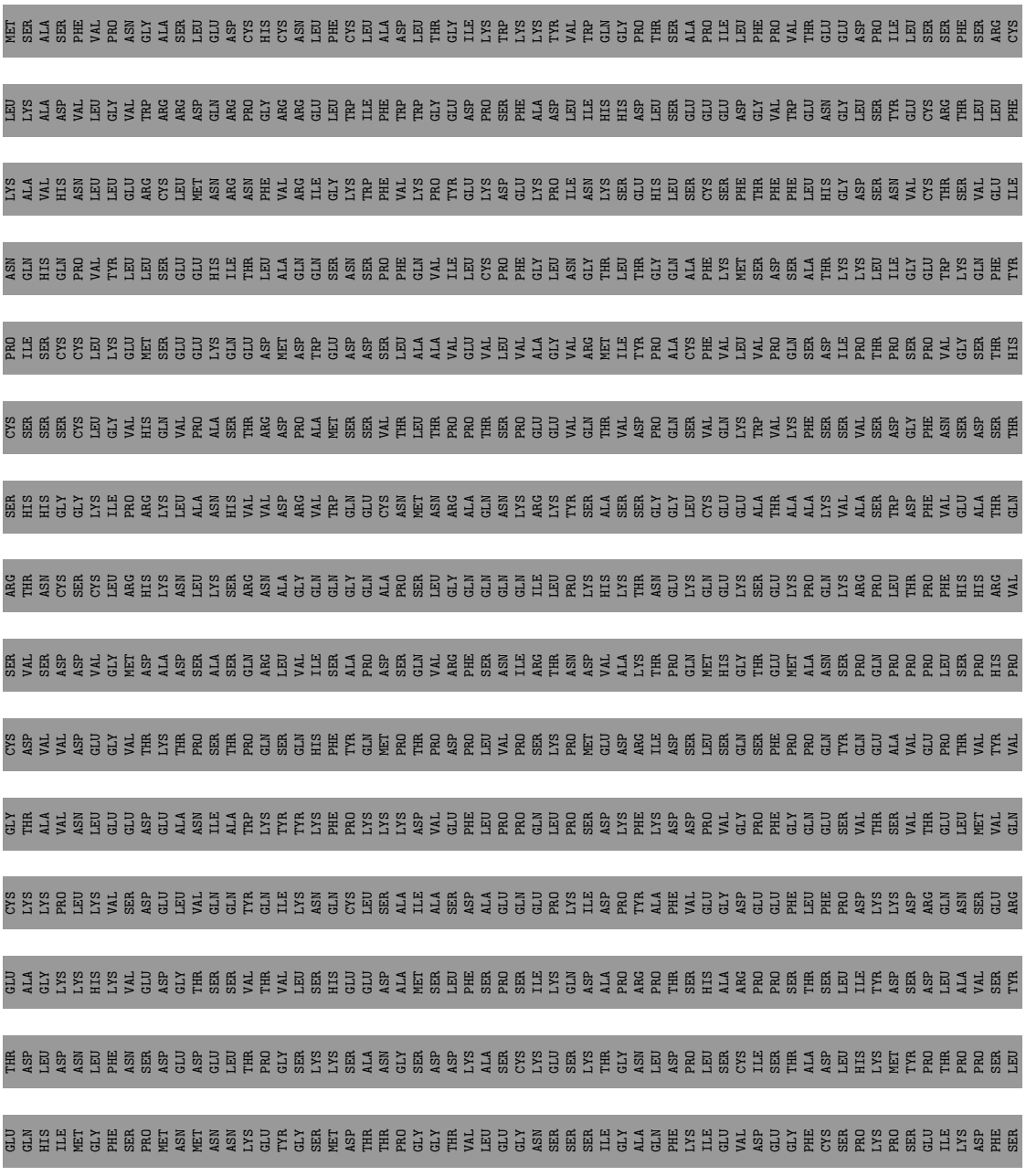




• Molecule 24: Mediator of RNA polymerase II transcription subunit 13

Chain d:





TYR VAL TYR LYS PRO GLU ASN CYS GLN ILE LEU VAL G913 C914 S915 M916 F917 A918 P919 L920 K921 T922 L923 P924 S925 Q926 Y927 L928 P929 P930 I931 K932 L933 P934 E935 E936 C937 I938 Y939 R940 Q941 S942 W943 T944 V945 G946 K947 L948 E949 LEU LEU SER SER GLY PRO SER MET PRO PHE ILE

LYS GLU GLY ASP GLY SER ASN MET ASP GLN GLU TYR GLY THR ALA TYR THR PRO GLN THR HIS THR SER PHE GLY MET PRO PRO SER SER ALA PRO PRO SER ASN SER GLY ALA GLY ILE LEU PRO SER PRO SER THR PRO ARG PHE PRO THR PRO ARG THR PRO ARG THR PRO ARG THR

PRO ARG GLY ALA GLY GLY PRO ALA SER ALA GLN GLY SER VAL LYS TYR GLU ASN SER ASP LEU TYR SER PRO ALA SER THR PRO SER THR CYS ARG PRO LEU ASN SER VAL GLU PRO ALA THR VAL PRO SER ILE PRO GLU ALA HIS SER LEU TYR VAL ASN LEU ILE LEU SER GLU SER

VAL MET ASN LEU PHE LYS ASP CYS ASN PHE ASP SER CYS CYS ILE CYS VAL CYS ASN MET ASN ILE LYS GLY ALA ASP VAL GLY VAL TYR ILE PRO ASP PRO THR GLN GLU ALA GLN TYR ARG CYS THR CYS GLY PHE SER ALA VAL MET ASN ARG LYS PHE GLY ASN ASN SER GLY LEU

PHE LEU GLU ASP GLU LEU ASP ILE ILE GLY ARG ASN THR ASP CYS GLY LYS GLU ALA GLU LYS ARG PHE GLU ALA LEU ARG ALA THR SER ALA GLU HIS VAL ASN GLY GLY LEU LYS GLU SER GLU LYS LEU SER ASP ASP LEU ILE LEU LEU LEU GLN ASP GLN CYS THR ASN LEU PHE

SER PRO PHE GLY ALA ALA ASP GLN ASP PRO PHE PRO LYS SER GLY VAL ILE SER ASN TRP VAL ARG VAL GLU GLU ARG ASP CYS CYS ASN ASP CYS TYR LEU ALA LEU GLU HIS GLY ARG GLN PHE MET ASP ASN MET SER GLY LYS VAL ASP GLU ALA LEU VAL LYS SER SER CYS

LEU HIS PRO TRP SER LYS ARG ASN ASP VAL SER MET GLN CYS SER GLN ASP ILE LEU ARG MET LEU LEU SER LEU GLN PRO VAL LEU GLN ASP ALA ILE GLN LYS LYS ARG THR VAL ARG PRO TRP GLY VAL GLN GLY PRO LEU THR TRP GLN GLN PHE HIS LYS MET ALA GLY ARG GLY

SER TYR GLY THR ASP GLU SER PRO GLU PRO LEU PRO ILE PRO THR PHE LEU LEU GLY TYR ASP TYR ASP TYR LEU VAL LEU SER PRO PHE ALA LEU PRO TYR TRP GLU ARG LEU MET LEU GLU PRO TYR GLY SER GLN ARG ASP ILE ALA TYR VAL VAL LEU CYS PRO GLU ASN GLU ALA

LEU LEU ASN GLY ALA LYS SER PHE PHE ARG ASP LEU THR ALA ILE TYR GLU SER CYS ARG LEU GLY GLN HIS ARG PRO VAL SER ARG LEU LEU THR ASP GLY ILE MET ARG VAL GLY SER THR ALA SER LYS LYS LEU SER GLU LYS LEU VAL ALA GLU TRP PHE SER GLN ALA ALA ASP

GLY ASN ASN GLU ALA PHE SER LYS LEU LYS LEU TYR ALA GLN VAL CYS ARG TYR ASP LEU GLY PRO TYR LEU ALA SER LEU PRO LEU ASP SER SER LEU LEU SER GLN PRO ASN LEU VAL ALA PRO THR SER GLN SER LEU ILE THR PRO PRO GLN MET THR ASN THR GLY ASN ALA ASN

THR PRO SER ALA THR LEU ALA SER ALA ALA SER SER THR MET THR VAL THR SER GLY VAL ALA ILE SER THR SER VAL ALA THR ALA ASN SER THR LEU THR THR ALA SER THR SER SER SER SER SER ASN LEU ASN SER GLY VAL SER SER ASN LYS LEU PRO SER PHE PRO PRO

PHE GLY SER MET ASN SER ASN ALA ALA GLY SER MET SER THR GLN ALA ASN THR VAL GLN SER GLY GLN LEU GLY GLY GLN GLN THR SER ALA LEU GLN THR ALA GLY ILE SER GLY GLU SER SER SER LEU PRO THR GLN PRO HIS PRO ASP VAL SER GLU SER THR MET ASP ARG ASP

LYS VAL GLY ILE PRO THR ASP GLY ASP SER HIS ALA VAL THR TYR PRO PRO ALA ILE VAL VAL TYR ILE ILE ASP PRO PHE THR TYR GLU ASN THR ASP GLU SER THR ASN SER SER SER VAL TRP THR LEU GLY LEU LEU ARG CYS PHE LEU GLU MET VAL GLN THR LEU PRO PRO HIS

ILE LYS SER THR VAL SER VAL GLN ILE ILE PRO CYS GLN TYR LEU LEU GLN PRO VAL LYS HIS GLU ASP ARG GLU ILE TYR PRO GLN HIS LEU LYS SER LEU ALA PHE SER ALA PHE THR GLN CYS ARG ARG PRO LEU PRO THR SER THR ASN VAL LYS THR LEU THR GLY PHE GLY PRO

GLY LEU ALA MET GLU THR ALA LEU ARG SER PRO ASP ARG PRO GLU CYS ILE ARG LEU TYR ALA PRO PRO PHE ILE LEU ALA PRO VAL LYS ASP LYS GLN THR GLU LEU GLY GLU THR PHE GLY GLU ALA GLY GLN LYS TYR ASN VAL LEU PHE VAL GLY TYR CYS LEU SER HIS ASP GLN

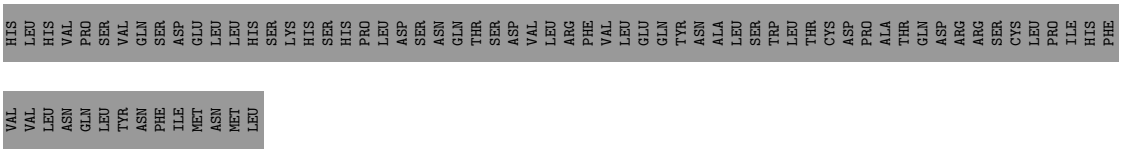
ARG TRP ILE LEU ALA SER CYS THR ASP LEU TYR GLY GLU LEU LEU GLU THR CYS ILE ILE ASN ILE ASP VAL PRO ASN ARG ALA ARG ARG LYS LYS SER SER ALA ARG LYS PHE GLY LEU GLN LYS LEU TRP GLU TRP CYS LEU GLY LEU VAL GLN MET SER SER LEU PRO TRP ARG VAL

VAL ILE GLY ARG LEU GLY ARG ILE GLY HIS GLY GLU LEU LYS ASP TRP SER CYS LEU LEU SER ARG ARG ASN LEU GLN SER LEU SER LYS ARG LEU LYS ASP MET CYS ARG MET CYS GLY ILE SER ALA ALA ASP SER PRO SER ILE LEU SER ALA CYS LEU VAL ALA MET GLU PRO GLN

GLY SER PHE VAL ILE MET PRO ASP SER VAL SER THR GLY SER VAL PHE GLY ARG SER THR THR LEU ASN MET GLN THR SER GLN LEU ASN THR PRO GLN ASP THR SER CYS THR HIS ILE LEU VAL PHE PRO THR SER ALA SER VAL GLN VAL ALA SER ALA THR TYR THR THR GLU ASN

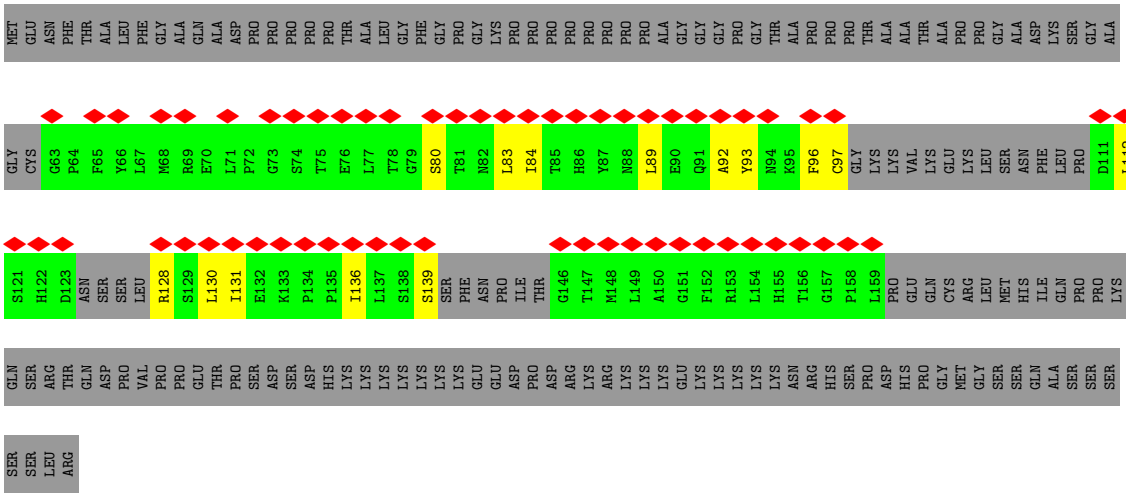
LEU ASP LEU ALA PHE ASN PRO ASN ASN ASP GLY ALA ASP GLY MET GLY ILE PHE ASP LEU LEU ASP THR GLY ASP ASP LEU ASP PRO ASP ILE ILE ASN ILE LEU PRO ALA SER PRO THR GLY SER PRO VAL HIS SER PRO GLY SER HIS TYR PRO HIS GLY GLY ASP ALA GLY LYS GLY

GLN SER THR ASP ARG LEU LEU SER THR GLU PRO HIS GLU GLU VAL PRO ASN ILE LEU GLN GLN PRO LEU ALA LEU GLY TYR PHE VAL SER THR ALA LYS ALA GLY PRO LEU PRO ASP TRP PHE TRP SER ALA CYS PRO GLN ALA GLN TYR GLN CYS PRO LEU PHE LEU LYS ALA SER LEU



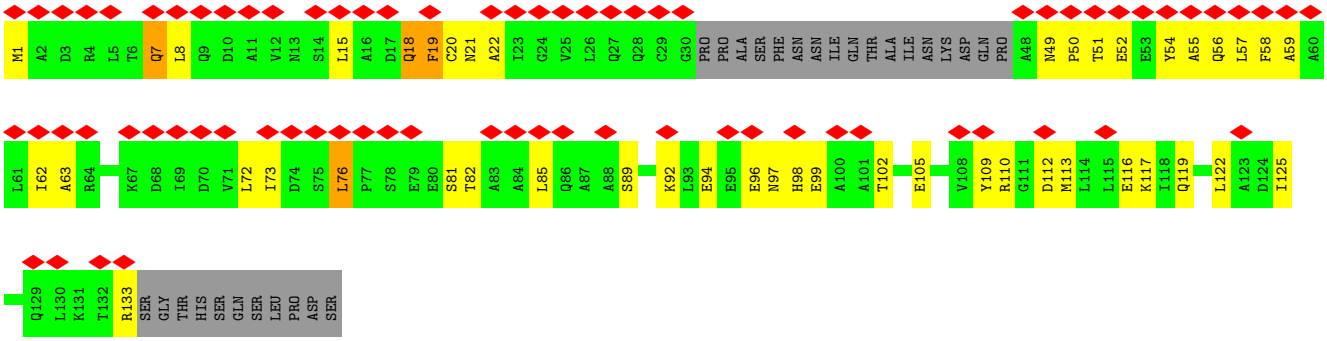
• Molecule 25: Mediator of RNA polymerase II transcription subunit 19

Chain S:



• Molecule 26: Mediator of RNA polymerase II transcription subunit 21

Chain U:



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	97904	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 ($e^-/Å^2$)	52	Depositor
Minimum defocus (nm)	600	Depositor
Maximum defocus (nm)	2800	Depositor
Magnification	Not provided	
Image detector	GATAN K2 QUANTUM (4k x 4k)	Depositor
Maximum map value	0.187	Depositor
Minimum map value	-0.103	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.003	Depositor
Recommended contour level	0.015	Depositor
Map size (Å)	549.3488, 549.3488, 549.3488	wwPDB
Map dimensions	392, 392, 392	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.4014001, 1.4014001, 1.4014001	Depositor

5 Model quality

5.1 Standard geometry

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	0	0.27	0/2201	0.52	0/2972
2	1	0.36	0/825	0.61	0/1107
3	2	0.26	0/911	0.45	0/1229
4	3	0.25	0/1029	0.52	0/1378
5	4	0.29	0/959	0.58	0/1291
6	A	0.29	0/3653	0.59	0/4961
8	D	0.26	0/1279	0.53	0/1715
9	F	0.28	0/1411	0.53	0/1916
10	G	0.25	0/1310	0.49	0/1769
11	H	0.28	0/1441	0.60	0/1946
12	I	0.31	0/612	0.71	0/815
13	J	0.26	0/842	0.46	0/1141
14	K	0.37	0/885	0.69	0/1190
15	N	0.29	0/7919	0.59	0/10757
16	O	0.26	0/1261	0.52	0/1731
17	P	0.25	0/6001	0.53	0/8151
18	Q	0.33	0/4469	0.63	0/6038
19	R	0.27	0/1562	0.55	0/2101
20	T	0.29	0/1530	0.53	0/2066
21	V	0.29	0/1072	0.54	0/1440
22	W	0.33	0/11056	0.60	0/15023
23	X	0.25	0/7191	0.48	0/9728
24	d	0.23	0/304	0.58	0/413
25	S	0.35	0/436	0.63	0/594
26	U	0.24	0/875	0.49	0/1186
All	All	0.29	0/61034	0.56	0/82658

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

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	0	2159	0	2176	46	0
2	1	817	0	818	29	0
3	2	899	0	908	14	0
4	3	1022	0	1054	38	0
5	4	932	0	914	35	0
6	A	3578	0	3522	91	0
7	B	100	0	23	0	0
8	D	1266	0	1300	92	0
9	F	1374	0	1357	75	0
10	G	1284	0	1248	163	0
11	H	1422	0	1440	64	0
12	I	605	0	628	68	0
13	J	834	0	711	78	0
14	K	879	0	886	62	0
15	N	7768	0	7546	382	0
16	O	1226	0	1217	27	0
17	P	5875	0	5969	72	0
18	Q	4387	0	4461	226	0
19	R	1532	0	1542	19	0
20	T	1499	0	1484	25	0
21	V	1063	0	1051	82	0
22	W	10774	0	10838	225	0
23	X	7061	0	7223	171	0
24	d	295	0	302	0	0
25	S	435	0	293	48	0
26	U	869	0	846	110	0
27	0	1	0	0	0	0
27	P	1	0	0	0	0
All	All	59957	0	59757	1804	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 16.

All (1804) 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)
13:J:108:LEU:HD21	26:U:55:ALA:CB	1.37	1.52
14:K:70:LEU:HD21	21:V:86:LEU:CD1	1.40	1.51
10:G:68:HIS:ND1	10:G:69:PRO:HD2	1.41	1.35
13:J:76:ASN:HB3	25:S:112:LEU:CB	1.56	1.33
10:G:89:PHE:HE2	26:U:19:PHE:CD1	1.47	1.31
15:N:188:LYS:CD	18:Q:47:ILE:HD11	1.62	1.28
15:N:187:GLU:OE2	18:Q:43:LEU:HD11	1.28	1.28
15:N:181:ASP:OD1	15:N:182:PRO:HD2	1.25	1.26
13:J:82:LYS:HD3	25:S:96:PHE:O	1.35	1.24
15:N:111:LYS:HE2	25:S:92:ALA:CB	1.67	1.23
18:Q:140:ASN:HA	18:Q:143:THR:CG2	1.68	1.23
15:N:442:ILE:HG21	15:N:496:LEU:CD1	1.67	1.22
14:K:70:LEU:CD2	21:V:86:LEU:HD11	1.70	1.21
6:A:66:GLN:NE2	12:I:69:VAL:HG11	1.54	1.19
10:G:89:PHE:CE2	26:U:19:PHE:CD1	2.30	1.18
9:F:101:ILE:CD1	11:H:105:VAL:HG11	1.72	1.17
14:K:70:LEU:HD11	21:V:86:LEU:CD2	1.72	1.17
23:X:4:VAL:HG11	23:X:31:PHE:CG	1.80	1.17
13:J:76:ASN:CB	25:S:112:LEU:CB	2.21	1.16
15:N:376:PRO:HG2	15:N:377:PRO:CD	1.75	1.16
15:N:666:ILE:HG21	15:N:684:LEU:HD11	1.18	1.16
23:X:4:VAL:HG11	23:X:31:PHE:CB	1.75	1.15
14:K:70:LEU:CD2	21:V:86:LEU:CD1	2.22	1.15
10:G:74:HIS:CD2	10:G:126:TYR:HE2	1.64	1.15
12:I:140:MET:HG3	26:U:117:LYS:HE3	1.23	1.15
10:G:57:ARG:HD3	10:G:58:PRO:HD2	1.21	1.14
13:J:85:LEU:CD1	25:S:93:TYR:HA	1.75	1.14
10:G:74:HIS:CE1	10:G:122:LEU:CD1	2.31	1.14
9:F:118:ARG:HD2	18:Q:112:LEU:HD22	1.28	1.13
10:G:143:LYS:HG3	26:U:96:GLU:OE1	1.47	1.13
18:Q:139:GLN:O	18:Q:143:THR:HG22	1.46	1.13
13:J:85:LEU:HD13	25:S:93:TYR:HA	1.23	1.12
23:X:4:VAL:HG21	23:X:31:PHE:CD2	1.83	1.12
6:A:66:GLN:HE22	12:I:69:VAL:HG11	1.04	1.12
13:J:76:ASN:HB3	25:S:112:LEU:CA	1.79	1.12
14:K:70:LEU:HD11	21:V:86:LEU:HD21	1.17	1.12
6:A:71:VAL:CG2	12:I:67:PRO:HD3	1.78	1.12
18:Q:394:HIS:CD2	19:R:78:ARG:HG3	1.85	1.11
8:D:30:LEU:HD23	8:D:34:LEU:HD23	1.29	1.11
6:A:71:VAL:HG21	12:I:67:PRO:HD3	1.27	1.11
15:N:216:THR:CB	15:N:223:LYS:HB3	1.79	1.10
23:X:4:VAL:HG11	23:X:31:PHE:CD1	1.86	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:666:ILE:HG21	15:N:684:LEU:CD1	1.82	1.10
13:J:76:ASN:N	25:S:112:LEU:H	1.50	1.09
15:N:216:THR:HB	15:N:223:LYS:HB3	1.10	1.09
13:J:108:LEU:CD2	26:U:55:ALA:CB	2.32	1.08
10:G:142:GLN:O	10:G:146:ARG:HG2	1.53	1.07
10:G:108:LYS:O	10:G:112:LEU:HG	1.55	1.07
13:J:108:LEU:HD21	26:U:55:ALA:HB1	1.31	1.07
13:J:108:LEU:HD11	26:U:55:ALA:C	1.75	1.07
14:K:70:LEU:HD21	21:V:86:LEU:HD11	1.16	1.07
15:N:376:PRO:HG2	15:N:377:PRO:HD3	1.10	1.07
15:N:442:ILE:HG21	15:N:496:LEU:HD11	1.09	1.06
9:F:101:ILE:HD13	11:H:105:VAL:HG11	1.35	1.06
2:1:100:LEU:HD12	18:Q:641:LEU:HB3	1.29	1.06
23:X:4:VAL:CG1	23:X:31:PHE:CB	2.34	1.05
15:N:687:ILE:HG22	15:N:688:PRO:HD2	1.34	1.05
13:J:108:LEU:CD2	26:U:55:ALA:HB3	1.86	1.05
15:N:225:ARG:HB3	15:N:231:GLU:HG3	1.34	1.05
22:W:399:PHE:CE2	22:W:425:MET:HB2	1.92	1.05
15:N:213:ALA:HB1	15:N:224:PHE:CE1	1.91	1.05
18:Q:188:LEU:HD22	21:V:87:ILE:CD1	1.86	1.05
8:D:34:LEU:HD13	8:D:37:LEU:HD21	1.05	1.04
15:N:111:LYS:HE2	25:S:92:ALA:HB1	1.33	1.04
13:J:76:ASN:CA	25:S:112:LEU:CB	2.36	1.04
15:N:188:LYS:HD3	18:Q:47:ILE:CD1	1.87	1.04
10:G:74:HIS:HE1	10:G:122:LEU:HD12	1.17	1.03
10:G:124:ASN:ND2	15:N:149:LEU:HD21	1.72	1.03
8:D:30:LEU:CD2	8:D:34:LEU:HD23	1.88	1.03
14:K:70:LEU:CD1	21:V:86:LEU:HD21	1.90	1.02
18:Q:142:GLN:HG3	21:V:43:GLU:O	1.58	1.02
23:X:4:VAL:HG11	23:X:31:PHE:CA	1.90	1.02
23:X:4:VAL:HG21	23:X:31:PHE:CG	1.94	1.02
15:N:442:ILE:CG2	15:N:496:LEU:HD11	1.90	1.02
26:U:49:ASN:OD1	26:U:50:PRO:HD3	1.59	1.02
17:P:12:MET:N	17:P:458:SER:HG	1.56	1.01
14:K:70:LEU:HD21	21:V:86:LEU:HD13	1.37	1.01
14:K:79:HIS:CE1	21:V:94:VAL:HG11	1.96	1.01
15:N:111:LYS:HE2	25:S:92:ALA:HB2	1.42	1.01
18:Q:141:PRO:HB3	21:V:45:GLU:HB3	1.39	1.01
8:D:27:ARG:HA	12:I:103:THR:OG1	1.60	1.00
23:X:31:PHE:HD1	23:X:32:PRO:HD2	1.20	1.00
15:N:315:LEU:HD13	15:N:320:TRP:HB2	1.44	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:D:35:GLU:O	8:D:39:VAL:HG12	1.62	0.99
10:G:74:HIS:CE1	10:G:122:LEU:HD12	1.93	0.99
10:G:74:HIS:HE1	10:G:122:LEU:CD1	1.70	0.99
8:D:34:LEU:HD13	8:D:37:LEU:CD2	1.93	0.99
8:D:52:ARG:HA	8:D:52:ARG:HE	1.26	0.99
10:G:74:HIS:CE1	10:G:122:LEU:HD13	1.97	0.98
13:J:76:ASN:HA	25:S:112:LEU:CB	1.92	0.98
15:N:111:LYS:HA	25:S:89:LEU:HD21	1.47	0.97
18:Q:140:ASN:HA	18:Q:143:THR:HG23	1.41	0.96
8:D:90:HIS:CE1	12:I:105:PRO:HA	2.00	0.96
15:N:376:PRO:CG	15:N:377:PRO:CD	2.43	0.96
23:X:6:LEU:HD11	23:X:40:LEU:O	1.66	0.96
13:J:108:LEU:HD21	26:U:55:ALA:HB3	0.99	0.95
15:N:680:HIS:NE2	18:Q:557:LEU:HD11	1.81	0.95
15:N:376:PRO:CG	15:N:377:PRO:HD3	1.95	0.95
18:Q:582:VAL:HG22	18:Q:592:ILE:HG23	1.46	0.95
6:A:165:GLY:HA3	6:A:170:LYS:HG3	1.49	0.95
22:W:601:LEU:HD21	22:W:630:LEU:HD11	1.46	0.95
8:D:34:LEU:HA	8:D:37:LEU:CD2	1.96	0.95
8:D:34:LEU:CD1	8:D:37:LEU:HD21	1.96	0.94
23:X:4:VAL:HG11	23:X:31:PHE:HA	1.47	0.94
13:J:76:ASN:H	25:S:112:LEU:H	0.94	0.94
15:N:188:LYS:HD3	18:Q:47:ILE:HD11	0.96	0.94
10:G:97:ILE:HD11	13:J:102:MET:CE	1.98	0.93
22:W:154:SER:H	23:X:915:ARG:NH2	1.65	0.93
15:N:136:LEU:HB3	26:U:20:CYS:HB2	1.47	0.93
15:N:693:ILE:HD12	15:N:697:THR:HB	1.47	0.93
10:G:74:HIS:CD2	10:G:126:TYR:CE2	2.56	0.93
14:K:12:ARG:HA	14:K:12:ARG:NH2	1.84	0.92
23:X:4:VAL:HG21	23:X:31:PHE:CE2	2.05	0.92
12:I:135:TYR:CE2	26:U:125:ILE:HG12	2.05	0.92
8:D:121:LEU:O	8:D:125:VAL:HG12	1.69	0.92
15:N:111:LYS:CE	25:S:92:ALA:HB1	1.98	0.92
10:G:68:HIS:HD1	10:G:69:PRO:HD2	1.32	0.92
10:G:89:PHE:CE2	26:U:19:PHE:CE1	2.57	0.92
4:3:107:ASP:CB	18:Q:651:LEU:HD13	1.98	0.92
10:G:127:ARG:HD3	15:N:152:PHE:CE1	2.05	0.92
15:N:376:PRO:CD	15:N:377:PRO:HD2	1.99	0.92
4:3:107:ASP:HB2	18:Q:651:LEU:HD13	1.49	0.92
15:N:693:ILE:HD12	15:N:697:THR:CB	1.99	0.92
23:X:4:VAL:CG1	23:X:31:PHE:HB2	1.99	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:G:78:LEU:CD2	26:U:73:ILE:HG21	2.00	0.92
23:X:12:GLN:HE22	23:X:30:PHE:HZ	1.12	0.91
10:G:97:ILE:HD11	13:J:102:MET:HE1	1.51	0.91
9:F:120:LEU:HD21	11:H:117:VAL:HG11	1.51	0.91
18:Q:188:LEU:CD2	21:V:87:ILE:HD12	2.01	0.91
15:N:666:ILE:CG2	15:N:684:LEU:HD11	2.00	0.91
15:N:676:ASP:CG	18:Q:593:MET:HE2	1.91	0.91
14:K:8:ASN:O	14:K:12:ARG:HG2	1.70	0.91
10:G:68:HIS:ND1	10:G:69:PRO:CD	2.31	0.91
18:Q:540:LEU:HD11	18:Q:640:GLU:OE1	1.71	0.91
22:W:27:MET:HA	22:W:27:MET:HE2	1.50	0.91
26:U:49:ASN:OD1	26:U:50:PRO:CD	2.18	0.90
10:G:57:ARG:CD	10:G:58:PRO:HD2	1.99	0.90
9:F:118:ARG:CD	18:Q:112:LEU:HD22	2.00	0.90
10:G:157:LEU:CD2	26:U:110:ARG:HH12	1.85	0.90
13:J:82:LYS:HE3	25:S:97:CYS:HA	1.52	0.90
10:G:127:ARG:HD3	15:N:152:PHE:HE1	1.38	0.89
10:G:142:GLN:HE21	10:G:146:ARG:HH21	1.15	0.89
15:N:54:LEU:HA	25:S:139:SER:CB	2.02	0.89
15:N:292:MET:O	15:N:296:LEU:HD23	1.73	0.89
23:X:4:VAL:HB	23:X:31:PHE:HB2	1.53	0.89
12:I:102:SER:O	12:I:105:PRO:HD2	1.71	0.89
23:X:4:VAL:CG1	23:X:31:PHE:CG	2.56	0.89
23:X:4:VAL:CG1	23:X:31:PHE:CA	2.50	0.89
8:D:99:GLU:O	8:D:103:ARG:HD3	1.73	0.88
8:D:90:HIS:CE1	12:I:105:PRO:CA	2.56	0.88
11:H:151:LEU:HD13	21:V:41:LYS:HZ1	1.38	0.88
15:N:213:ALA:CB	15:N:224:PHE:CE1	2.56	0.88
18:Q:141:PRO:HA	21:V:50:ARG:HD3	1.54	0.88
18:Q:394:HIS:CD2	19:R:78:ARG:CG	2.56	0.88
10:G:57:ARG:HG2	10:G:57:ARG:HH11	1.36	0.88
13:J:85:LEU:HD13	25:S:93:TYR:CA	2.05	0.87
1:0:272:SER:HB3	1:0:302:LEU:HD23	1.56	0.87
9:F:118:ARG:NH1	18:Q:112:LEU:HB3	1.88	0.87
15:N:216:THR:HB	15:N:223:LYS:CB	2.02	0.87
10:G:89:PHE:HE2	26:U:19:PHE:CE1	1.92	0.86
12:I:110:SER:HB3	12:I:111:PRO:HD2	1.57	0.86
10:G:78:LEU:HD22	26:U:73:ILE:HG21	1.56	0.86
23:X:31:PHE:CD1	23:X:32:PRO:HD2	2.09	0.86
15:N:691:LYS:O	15:N:691:LYS:NZ	2.08	0.86
4:3:142:ILE:O	4:3:145:VAL:HG12	1.76	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:J:82:LYS:CD	25:S:97:CYS:HA	2.06	0.85
22:W:27:MET:HA	22:W:27:MET:CE	2.05	0.85
13:J:108:LEU:CD2	26:U:55:ALA:HB1	2.03	0.85
9:F:185:ARG:O	9:F:185:ARG:HD3	1.77	0.85
14:K:12:ARG:HA	14:K:12:ARG:HH21	1.36	0.85
18:Q:46:ARG:HH11	18:Q:46:ARG:HG3	1.42	0.84
23:X:4:VAL:CG1	23:X:31:PHE:HA	2.06	0.84
15:N:181:ASP:OD1	15:N:182:PRO:CD	2.20	0.84
12:I:135:TYR:HE2	26:U:125:ILE:HG12	1.41	0.84
15:N:693:ILE:CD1	15:N:697:THR:CG2	2.55	0.84
15:N:693:ILE:HD12	15:N:697:THR:CG2	2.08	0.84
23:X:12:GLN:NE2	23:X:30:PHE:HZ	1.76	0.84
15:N:296:LEU:O	15:N:300:CYS:SG	2.36	0.84
18:Q:9:ILE:HG13	26:U:94:GLU:OE2	1.77	0.83
22:W:396:MET:HA	22:W:396:MET:CE	2.08	0.83
14:K:70:LEU:HD21	21:V:86:LEU:CG	2.08	0.83
15:N:687:ILE:HG22	15:N:688:PRO:CD	2.07	0.83
8:D:34:LEU:HA	8:D:37:LEU:HD21	1.59	0.83
23:X:4:VAL:CB	23:X:31:PHE:HB2	2.07	0.83
15:N:315:LEU:CD1	15:N:320:TRP:HB2	2.08	0.83
13:J:76:ASN:CB	25:S:112:LEU:N	2.41	0.83
5:4:84:PHE:CZ	15:N:177:ILE:HD13	2.14	0.83
6:A:71:VAL:HG21	12:I:67:PRO:CD	2.09	0.82
23:X:4:VAL:CG2	23:X:31:PHE:CD2	2.62	0.82
9:F:101:ILE:HD12	11:H:105:VAL:HG11	1.59	0.82
10:G:68:HIS:CE1	10:G:69:PRO:HD2	2.14	0.82
10:G:124:ASN:HD21	15:N:149:LEU:HD21	1.44	0.82
12:I:140:MET:CG	26:U:117:LYS:HE3	2.07	0.82
15:N:399:LYS:NZ	18:Q:271:LEU:HB3	1.94	0.82
17:P:640:ARG:HE	17:P:641:PRO:HD2	1.42	0.82
13:J:76:ASN:HB3	25:S:112:LEU:N	1.94	0.82
18:Q:140:ASN:HA	18:Q:143:THR:HG21	1.58	0.82
14:K:70:LEU:HD21	21:V:86:LEU:CD2	2.08	0.82
13:J:82:LYS:CE	25:S:97:CYS:HA	2.10	0.82
18:Q:9:ILE:CG1	26:U:94:GLU:OE2	2.28	0.82
22:W:399:PHE:HE2	22:W:425:MET:HB2	1.40	0.81
6:A:66:GLN:HE22	12:I:69:VAL:CG1	1.90	0.81
13:J:101:THR:HG22	26:U:51:THR:HG21	1.62	0.81
15:N:187:GLU:OE2	18:Q:43:LEU:CD1	2.21	0.81
9:F:171:ILE:HG22	15:N:263:ARG:NH1	1.95	0.81
15:N:135:ARG:NE	15:N:135:ARG:HA	1.96	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:W:37:LEU:HD13	22:W:85:MET:HE2	1.64	0.80
5:4:84:PHE:CE2	15:N:177:ILE:HG21	2.16	0.80
18:Q:152:SER:HB2	21:V:58:ASN:OD1	1.80	0.80
5:4:84:PHE:CD2	15:N:177:ILE:HG21	2.17	0.80
13:J:108:LEU:HD11	26:U:55:ALA:O	1.81	0.80
8:D:30:LEU:CD2	8:D:34:LEU:CD2	2.59	0.79
10:G:142:GLN:HE21	10:G:146:ARG:NH2	1.79	0.79
15:N:691:LYS:NZ	15:N:691:LYS:HB2	1.97	0.79
15:N:225:ARG:HB3	15:N:231:GLU:CG	2.12	0.79
10:G:55:ILE:HB	10:G:59:LEU:HD11	1.64	0.79
13:J:76:ASN:H	25:S:112:LEU:N	1.78	0.79
18:Q:144:LEU:HA	18:Q:147:ILE:HG23	1.63	0.79
9:F:174:ARG:HD2	15:N:270:GLN:NE2	1.98	0.79
10:G:100:PRO:HB2	15:N:125:GLN:HE22	1.47	0.79
10:G:68:HIS:CG	10:G:69:PRO:HD2	2.18	0.79
11:H:151:LEU:HD12	21:V:37:ILE:HG23	1.65	0.79
23:X:4:VAL:CG2	23:X:31:PHE:CG	2.66	0.79
9:F:74:GLN:HE21	9:F:78:LEU:H	1.30	0.79
9:F:38:ASN:HB3	9:F:41:TYR:HB3	1.64	0.78
18:Q:188:LEU:HD22	21:V:87:ILE:HD12	1.58	0.78
22:W:642:HIS:HA	22:W:645:VAL:HG12	1.65	0.78
6:A:69:LEU:HG	12:I:66:LEU:HD12	1.64	0.78
15:N:315:LEU:CD1	15:N:320:TRP:CB	2.61	0.78
18:Q:141:PRO:HG3	21:V:45:GLU:HG2	1.65	0.78
6:A:315:ARG:HG2	6:A:319:GLN:HE22	1.49	0.78
15:N:399:LYS:HZ1	18:Q:271:LEU:HB3	1.47	0.78
4:3:156:LEU:HD11	21:V:130:LEU:HD12	1.65	0.78
13:J:104:LYS:NZ	26:U:52:GLU:HB2	1.99	0.78
22:W:646:GLU:OE1	22:W:864:ARG:HG2	1.84	0.78
8:D:52:ARG:HA	8:D:52:ARG:NE	1.98	0.78
14:K:70:LEU:HD23	21:V:86:LEU:HD11	1.66	0.78
15:N:691:LYS:HB2	15:N:691:LYS:HZ2	1.48	0.78
13:J:113:LEU:HD22	26:U:63:ALA:CB	2.14	0.78
22:W:389:LEU:O	22:W:389:LEU:HD23	1.84	0.78
4:3:138:GLU:OE1	4:3:138:GLU:HA	1.84	0.77
13:J:85:LEU:HD11	25:S:93:TYR:HA	1.65	0.77
22:W:154:SER:H	23:X:915:ARG:HH21	1.29	0.77
10:G:89:PHE:HE2	26:U:19:PHE:CG	2.02	0.77
6:A:310:PRO:HA	6:A:393:VAL:O	1.85	0.77
18:Q:109:MET:HA	18:Q:112:LEU:HG	1.67	0.77
13:J:95:VAL:HG21	15:N:122:LEU:CD2	2.15	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:U:81:SER:HA	26:U:85:LEU:HD23	1.67	0.77
15:N:589:GLN:HG2	22:W:26:PHE:CD1	2.21	0.76
15:N:111:LYS:CE	25:S:92:ALA:CB	2.55	0.76
15:N:589:GLN:HG2	22:W:26:PHE:HD1	1.49	0.76
15:N:212:LEU:HD12	15:N:293:TYR:OH	1.85	0.76
15:N:189:GLN:HA	15:N:189:GLN:HE21	1.49	0.76
15:N:545:LEU:N	15:N:545:LEU:HD23	2.01	0.76
10:G:138:MET:HA	10:G:138:MET:CE	2.15	0.76
10:G:129:HIS:CD2	26:U:82:THR:OG1	2.38	0.76
15:N:693:ILE:CD1	15:N:697:THR:HB	2.15	0.76
2:1:111:ILE:HG21	4:3:138:GLU:HG3	1.66	0.76
6:A:165:GLY:HA3	6:A:170:LYS:CG	2.16	0.76
15:N:666:ILE:CG2	15:N:684:LEU:CD1	2.62	0.76
15:N:247:LEU:O	15:N:275:HIS:CE1	2.39	0.75
11:H:96:ARG:HG3	11:H:97:VAL:HG23	1.68	0.75
13:J:95:VAL:HG21	15:N:122:LEU:HD22	1.68	0.75
6:A:167:ASN:O	6:A:171:THR:CG2	2.34	0.75
10:G:98:ARG:HH12	13:J:128:ARG:HH12	1.34	0.75
15:N:149:LEU:HD22	15:N:149:LEU:N	2.01	0.75
6:A:71:VAL:HG23	12:I:67:PRO:HD3	1.69	0.75
10:G:135:LEU:HD23	10:G:135:LEU:O	1.86	0.75
22:W:889:LEU:O	22:W:893:PRO:HG2	1.87	0.75
18:Q:18:GLN:O	18:Q:30:TYR:CE2	2.39	0.75
18:Q:146:LEU:HD21	21:V:42:ILE:HD13	1.68	0.75
8:D:35:GLU:O	8:D:39:VAL:CG1	2.34	0.75
13:J:82:LYS:CD	25:S:96:PHE:O	2.27	0.75
15:N:376:PRO:CG	15:N:377:PRO:HD2	2.13	0.75
23:X:12:GLN:HA	23:X:15:LYS:HE2	1.66	0.75
23:X:4:VAL:CB	23:X:31:PHE:CG	2.70	0.75
15:N:188:LYS:CE	18:Q:47:ILE:HD11	2.16	0.74
18:Q:97:SER:O	18:Q:101:ASN:ND2	2.20	0.74
23:X:4:VAL:HG21	23:X:31:PHE:CD1	2.21	0.74
9:F:185:ARG:HD3	9:F:185:ARG:C	2.07	0.74
14:K:79:HIS:HE1	21:V:94:VAL:HG11	1.50	0.74
17:P:282:HIS:HB2	17:P:297:CYS:HB3	1.69	0.74
15:N:301:LEU:HD23	15:N:361:ILE:HG12	1.69	0.74
26:U:57:LEU:O	26:U:57:LEU:HD23	1.87	0.74
15:N:247:LEU:O	15:N:275:HIS:NE2	2.20	0.74
22:W:941:VAL:HG12	22:W:943:PRO:HD2	1.70	0.74
11:H:93:THR:HB	11:H:96:ARG:HE	1.52	0.74
15:N:136:LEU:HB3	26:U:20:CYS:CB	2.18	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:189:GLN:HA	15:N:189:GLN:NE2	2.03	0.74
15:N:245:TRP:HB2	15:N:282:LEU:HG	1.69	0.74
22:W:862:LEU:HD23	22:W:896:PHE:HE2	1.53	0.74
22:W:37:LEU:HD12	22:W:85:MET:HE1	1.67	0.73
9:F:182:LEU:O	9:F:186:GLN:HG2	1.87	0.73
23:X:21:TYR:O	23:X:25:ILE:HG13	1.87	0.73
8:D:30:LEU:HD23	8:D:34:LEU:CD2	2.12	0.73
15:N:111:LYS:CD	25:S:92:ALA:HB1	2.19	0.73
15:N:442:ILE:HG21	15:N:496:LEU:HD12	1.67	0.73
9:F:115:ILE:HG12	9:F:118:ARG:HH21	1.52	0.73
18:Q:152:SER:CB	21:V:58:ASN:OD1	2.36	0.73
23:X:37:TRP:CD1	23:X:72:MET:HE3	2.24	0.73
18:Q:582:VAL:HG22	18:Q:592:ILE:CG2	2.18	0.73
22:W:631:ALA:HB2	22:W:645:VAL:HG21	1.68	0.73
9:F:94:PRO:HG2	18:Q:130:VAL:HG11	1.69	0.72
10:G:120:HIS:HB3	15:N:147:ALA:HB1	1.70	0.72
18:Q:12:GLU:OE1	18:Q:12:GLU:N	2.17	0.72
3:2:86:THR:HG21	16:O:628:ASN:HD21	1.55	0.72
23:X:4:VAL:CG1	23:X:31:PHE:CD1	2.70	0.72
2:1:111:ILE:HG23	4:3:142:ILE:HD11	1.72	0.72
14:K:70:LEU:CD2	21:V:86:LEU:HD13	2.04	0.72
9:F:118:ARG:HH11	18:Q:112:LEU:HB3	1.54	0.72
14:K:70:LEU:CG	21:V:86:LEU:HD21	2.19	0.72
9:F:101:ILE:CD1	11:H:105:VAL:CG1	2.62	0.72
18:Q:140:ASN:CA	18:Q:143:THR:CG2	2.59	0.72
1:0:238:VAL:HG23	1:0:295:THR:HG21	1.71	0.72
6:A:69:LEU:HG	12:I:66:LEU:CD1	2.20	0.72
8:D:28:GLU:OE1	8:D:28:GLU:N	2.17	0.72
15:N:211:GLN:HA	26:U:133:ARG:HH21	1.53	0.72
15:N:718:ARG:NH2	15:N:752:LEU:O	2.22	0.72
2:1:129:VAL:HG21	14:K:114:MET:HE3	1.70	0.72
14:K:79:HIS:CE1	21:V:94:VAL:CG1	2.73	0.72
10:G:59:LEU:HD22	10:G:59:LEU:N	2.06	0.71
10:G:62:GLN:OE1	10:G:62:GLN:N	2.23	0.71
10:G:86:LEU:O	10:G:86:LEU:HD13	1.90	0.71
15:N:227:GLU:OE1	15:N:227:GLU:N	2.19	0.71
17:P:244:VAL:HG22	17:P:257:THR:HG22	1.72	0.71
11:H:53:SER:O	11:H:57:ASN:HB3	1.90	0.71
15:N:213:ALA:CB	15:N:224:PHE:CZ	2.73	0.71
15:N:693:ILE:CD1	15:N:697:THR:HG21	2.20	0.71
8:D:90:HIS:CE1	12:I:105:PRO:CB	2.74	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:313:VAL:HG12	6:A:414:GLN:HG2	1.70	0.71
10:G:100:PRO:HB2	15:N:125:GLN:NE2	2.05	0.71
11:H:126:THR:O	11:H:130:ARG:NH1	2.24	0.71
23:X:414:GLU:HG3	23:X:415:PRO:HD3	1.71	0.71
15:N:238:GLY:HA3	15:N:243:VAL:HG21	1.72	0.71
17:P:182:VAL:HG22	17:P:188:VAL:HG12	1.73	0.70
9:F:25:ASN:H	9:F:28:SER:HB3	1.56	0.70
15:N:136:LEU:CB	26:U:20:CYS:HB2	2.21	0.70
4:3:155:GLN:OE1	4:3:155:GLN:HA	1.90	0.70
10:G:127:ARG:HG2	15:N:152:PHE:CZ	2.26	0.70
23:X:37:TRP:CD1	23:X:72:MET:CE	2.75	0.70
15:N:213:ALA:HB2	15:N:224:PHE:CZ	2.26	0.70
14:K:12:ARG:N	14:K:12:ARG:HD2	2.07	0.70
18:Q:144:LEU:HD22	18:Q:147:ILE:HD13	1.74	0.70
15:N:315:LEU:C	15:N:315:LEU:HD12	2.12	0.70
15:N:545:LEU:HD23	15:N:545:LEU:H	1.57	0.70
17:P:243:LYS:HG2	17:P:258:GLU:HG2	1.72	0.70
18:Q:43:LEU:O	18:Q:43:LEU:HD13	1.92	0.70
6:A:70:LYS:HG2	12:I:70:HIS:NE2	2.07	0.70
18:Q:139:GLN:O	18:Q:143:THR:CG2	2.34	0.70
22:W:396:MET:HA	22:W:396:MET:HE2	1.74	0.70
9:F:171:ILE:CG2	15:N:263:ARG:NH1	2.55	0.69
14:K:70:LEU:CD1	21:V:86:LEU:CD2	2.57	0.69
22:W:528:LEU:O	22:W:536:LYS:NZ	2.25	0.69
6:A:70:LYS:HG2	12:I:70:HIS:CE1	2.27	0.69
11:H:143:LEU:HD22	18:Q:146:LEU:HD22	1.73	0.69
20:T:149:VAL:HG22	20:T:152:ASP:HB2	1.74	0.69
10:G:97:ILE:HD11	13:J:102:MET:HE3	1.74	0.69
8:D:120:ILE:HG21	10:G:159:ARG:NH2	2.07	0.69
14:K:8:ASN:HA	14:K:11:LEU:HD12	1.73	0.69
15:N:676:ASP:CG	18:Q:593:MET:CE	2.61	0.69
10:G:68:HIS:CG	10:G:69:PRO:CD	2.74	0.69
12:I:116:GLN:O	12:I:119:GLN:HG2	1.91	0.69
15:N:261:ASP:HB2	18:Q:250:ASP:OD2	1.93	0.69
4:3:143:ALA:O	4:3:147:LYS:HG2	1.93	0.69
15:N:592:LYS:HB3	22:W:27:MET:SD	2.33	0.69
15:N:676:ASP:OD1	18:Q:593:MET:CE	2.41	0.69
15:N:693:ILE:HD12	15:N:697:THR:HG21	1.75	0.69
17:P:314:GLU:HB3	17:P:340:ARG:HH12	1.56	0.69
18:Q:38:GLN:OE1	18:Q:38:GLN:N	2.26	0.69
18:Q:629:LYS:HG3	18:Q:629:LYS:O	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:W:234:SER:HB2	22:W:660:GLU:HB3	1.73	0.69
22:W:399:PHE:CZ	22:W:425:MET:HB2	2.28	0.69
1:0:168:ARG:HA	1:0:171:ARG:HE	1.58	0.69
8:D:26:THR:HA	12:I:107:ILE:HG22	1.73	0.69
15:N:399:LYS:HE3	18:Q:271:LEU:H	1.58	0.69
22:W:509:LEU:HB2	22:W:514:CYS:HB3	1.74	0.69
23:X:40:LEU:N	23:X:40:LEU:HD23	2.07	0.69
9:F:72:HIS:HB3	9:F:80:ILE:HD12	1.75	0.69
11:H:143:LEU:HD22	18:Q:146:LEU:CD2	2.23	0.68
15:N:250:LEU:HD23	15:N:250:LEU:C	2.13	0.68
16:O:718:VAL:HG21	16:O:776:TRP:HE1	1.58	0.68
18:Q:599:ASN:ND2	18:Q:616:SER:O	2.26	0.68
10:G:143:LYS:HD2	10:G:143:LYS:C	2.13	0.68
12:I:102:SER:C	12:I:105:PRO:HD2	2.12	0.68
23:X:577:ALA:O	23:X:581:ILE:HD12	1.94	0.68
8:D:30:LEU:HD23	8:D:30:LEU:O	1.94	0.68
15:N:199:LEU:HD21	15:N:222:VAL:CG2	2.22	0.68
18:Q:149:LYS:O	18:Q:153:LEU:HB3	1.94	0.68
22:W:153:SER:OG	23:X:915:ARG:NH2	2.26	0.68
22:W:707:ILE:HG23	22:W:738:PRO:HB2	1.76	0.68
23:X:42:LEU:HD23	23:X:42:LEU:C	2.14	0.68
17:P:536:LEU:HD21	17:P:739:VAL:HG12	1.74	0.68
22:W:399:PHE:HZ	22:W:425:MET:CG	2.06	0.68
8:D:30:LEU:CD2	12:I:99:LYS:HD3	2.24	0.68
10:G:74:HIS:CG	10:G:126:TYR:HE2	2.11	0.68
22:W:855:TRP:CZ3	22:W:896:PHE:HA	2.28	0.68
8:D:90:HIS:CE1	12:I:105:PRO:HB3	2.29	0.68
22:W:399:PHE:HZ	22:W:425:MET:HG3	1.59	0.68
15:N:277:LEU:HD23	15:N:277:LEU:O	1.93	0.67
8:D:152:ALA:O	8:D:156:SER:CB	2.42	0.67
8:D:152:ALA:O	8:D:156:SER:HB3	1.95	0.67
11:H:52:LEU:HD23	11:H:52:LEU:C	2.15	0.67
15:N:210:PRO:HG2	26:U:133:ARG:HG3	1.76	0.67
15:N:593:GLU:H	15:N:593:GLU:CD	1.95	0.67
22:W:855:TRP:CH2	22:W:896:PHE:CD2	2.83	0.67
8:D:86:GLN:OE1	12:I:107:ILE:HB	1.93	0.67
9:F:188:PHE:HD1	15:N:281:ARG:HH22	1.42	0.67
10:G:114:LEU:HD23	10:G:114:LEU:C	2.14	0.67
15:N:208:LEU:HD12	15:N:208:LEU:C	2.14	0.67
6:A:161:TYR:CD1	6:A:170:LYS:NZ	2.58	0.67
10:G:60:GLU:HG2	10:G:121:HIS:NE2	2.09	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:J:82:LYS:HE3	25:S:97:CYS:CA	2.24	0.67
16:O:759:ARG:NH2	16:O:782:GLN:OE1	2.27	0.67
18:Q:457:ASP:HB2	18:Q:458:PRO:HD3	1.76	0.67
10:G:71:GLN:OE1	10:G:71:GLN:N	2.22	0.67
10:G:78:LEU:HD23	10:G:78:LEU:C	2.14	0.67
26:U:99:GLU:OE2	26:U:99:GLU:HA	1.94	0.67
18:Q:271:LEU:HD13	18:Q:271:LEU:C	2.15	0.67
2:1:143:LEU:HD11	14:K:97:VAL:HG13	1.76	0.67
8:D:34:LEU:O	8:D:37:LEU:HG	1.95	0.67
10:G:127:ARG:CD	15:N:152:PHE:HE1	2.07	0.67
15:N:181:ASP:CG	15:N:182:PRO:HD2	2.13	0.67
15:N:376:PRO:HD2	15:N:377:PRO:HD2	1.77	0.67
11:H:49:PHE:HD2	21:V:59:TYR:HH	1.41	0.67
15:N:288:PRO:HB2	15:N:289:LEU:HD22	1.77	0.67
8:D:149:ILE:CD1	10:G:132:ARG:NH1	2.58	0.67
22:W:931:LYS:HD3	22:W:935:GLU:HB3	1.75	0.67
9:F:118:ARG:CG	18:Q:112:LEU:HD22	2.24	0.66
15:N:277:LEU:HD23	15:N:277:LEU:C	2.15	0.66
15:N:687:ILE:HD11	15:N:705:LEU:HD11	1.77	0.66
22:W:389:LEU:HD23	22:W:389:LEU:C	2.15	0.66
23:X:12:GLN:NE2	23:X:30:PHE:CZ	2.62	0.66
14:K:98:ASP:HA	14:K:101:ARG:HG2	1.77	0.66
15:N:918:PHE:HB3	15:N:922:TYR:HB2	1.76	0.66
22:W:37:LEU:CD1	22:W:85:MET:CE	2.74	0.66
22:W:630:LEU:C	22:W:630:LEU:HD23	2.15	0.66
22:W:646:GLU:OE1	22:W:864:ARG:CG	2.44	0.66
18:Q:289:PRO:HB2	18:Q:291:TRP:CE2	2.30	0.66
8:D:30:LEU:HD22	12:I:99:LYS:HD3	1.78	0.66
15:N:281:ARG:HD2	15:N:291:ASP:OD2	1.95	0.66
8:D:44:LEU:C	8:D:44:LEU:HD23	2.16	0.66
11:H:112:LYS:NZ	11:H:113:PRO:O	2.28	0.66
22:W:630:LEU:HD23	22:W:630:LEU:O	1.94	0.66
1:0:184:ASN:OD1	21:V:120:ARG:NH2	2.29	0.66
18:Q:19:VAL:HG23	18:Q:28:GLU:HB3	1.78	0.66
26:U:49:ASN:N	26:U:50:PRO:HD2	2.11	0.66
12:I:68:LEU:HB2	12:I:91:LYS:HZ1	1.59	0.66
15:N:223:LYS:HD2	15:N:231:GLU:OE2	1.95	0.66
13:J:76:ASN:N	25:S:112:LEU:N	2.35	0.66
13:J:104:LYS:HZ2	26:U:52:GLU:HB2	1.59	0.66
15:N:1187:LEU:HD12	15:N:1188:PRO:HD2	1.76	0.65
26:U:94:GLU:O	26:U:98:HIS:ND1	2.28	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:P:56:GLN:NE2	17:P:59:THR:OG1	2.29	0.65
22:W:427:CYS:O	22:W:431:HIS:ND1	2.29	0.65
6:A:212:THR:O	6:A:220:MET:HA	1.97	0.65
8:D:90:HIS:NE2	12:I:105:PRO:HA	2.11	0.65
15:N:706:LEU:HB2	15:N:725:VAL:HG13	1.78	0.65
15:N:802:VAL:HB	15:N:809:ILE:HB	1.77	0.65
23:X:655:THR:HG21	23:X:659:TYR:HB3	1.77	0.65
10:G:60:GLU:HG2	10:G:121:HIS:CE1	2.32	0.65
15:N:212:LEU:HD11	15:N:367:SER:CA	2.27	0.65
22:W:37:LEU:HD13	22:W:85:MET:CE	2.27	0.65
23:X:39:ILE:HD12	23:X:39:ILE:N	2.11	0.65
23:X:975:LEU:HG	23:X:976:PRO:HD2	1.79	0.65
6:A:206:GLY:O	6:A:412:ARG:NH1	2.23	0.65
6:A:322:GLN:HE21	6:A:329:LEU:H	1.43	0.65
15:N:443:LEU:HD12	15:N:500:LEU:HD23	1.77	0.65
21:V:85:PHE:HD1	21:V:86:LEU:HD22	1.61	0.65
8:D:52:ARG:HE	8:D:52:ARG:CA	2.06	0.65
15:N:545:LEU:HD11	15:N:652:MET:HB2	1.79	0.65
5:4:84:PHE:CZ	15:N:177:ILE:CD1	2.80	0.65
11:H:51:LEU:O	11:H:55:GLN:HG3	1.97	0.65
23:X:4:VAL:HG21	23:X:31:PHE:CZ	2.32	0.65
6:A:165:GLY:CA	6:A:170:LYS:HG3	2.25	0.65
10:G:143:LYS:O	10:G:147:LEU:HG	1.97	0.65
18:Q:18:GLN:OE1	18:Q:18:GLN:HA	1.96	0.65
8:D:98:LYS:O	8:D:102:LYS:HD3	1.97	0.64
10:G:74:HIS:ND1	10:G:122:LEU:HD13	2.12	0.64
6:A:208:VAL:O	6:A:412:ARG:NH2	2.31	0.64
15:N:196:ASN:HB3	15:N:217:VAL:CG2	2.28	0.64
22:W:1322:LYS:HD3	22:W:1324:ALA:H	1.62	0.64
8:D:27:ARG:CA	12:I:103:THR:OG1	2.40	0.64
15:N:234:LEU:HD13	15:N:247:LEU:HA	1.80	0.64
18:Q:146:LEU:O	18:Q:150:LYS:HG2	1.97	0.64
14:K:79:HIS:HE1	21:V:94:VAL:CG1	2.09	0.64
18:Q:140:ASN:CA	18:Q:143:THR:HG23	2.22	0.64
6:A:104:THR:HG22	6:A:105:SER:H	1.61	0.64
12:I:107:ILE:HD11	12:I:110:SER:HA	1.79	0.64
11:H:87:GLU:HA	11:H:90:MET:HG2	1.78	0.64
1:0:178:ILE:HG12	1:0:192:VAL:HG22	1.79	0.64
10:G:78:LEU:HD21	26:U:73:ILE:HG21	1.76	0.64
15:N:687:ILE:CG2	15:N:688:PRO:HD2	2.21	0.64
23:X:4:VAL:CB	23:X:31:PHE:CB	2.73	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:218:ASN:ND2	20:T:1:MET:CG	2.61	0.64
10:G:138:MET:HA	10:G:138:MET:HE3	1.79	0.64
15:N:125:GLN:HA	15:N:125:GLN:OE1	1.98	0.64
15:N:376:PRO:N	15:N:377:PRO:HD2	2.13	0.64
15:N:677:GLY:O	18:Q:557:LEU:HD22	1.98	0.64
18:Q:31:LEU:HG	18:Q:31:LEU:O	1.99	0.64
25:S:113:PRO:O	25:S:117:ASP:N	2.30	0.64
15:N:183:ILE:HD11	15:N:188:LYS:HD3	1.80	0.63
23:X:4:VAL:HG12	23:X:30:PHE:O	1.98	0.63
10:G:86:LEU:HD13	10:G:86:LEU:C	2.19	0.63
23:X:803:ASP:HB2	23:X:804:PRO:HD3	1.80	0.63
9:F:78:LEU:HA	9:F:100:ILE:O	1.99	0.63
12:I:107:ILE:HD11	12:I:111:PRO:HD3	1.81	0.63
18:Q:188:LEU:HD21	21:V:87:ILE:HD12	1.81	0.63
22:W:627:LEU:HD21	22:W:648:THR:HG21	1.80	0.63
4:3:177:ARG:NH1	4:3:178:ASN:OD1	2.32	0.63
10:G:143:LYS:CG	26:U:96:GLU:OE1	2.37	0.63
15:N:339:VAL:O	15:N:355:HIS:HB2	1.98	0.63
15:N:835:LEU:HD12	15:N:852:LEU:HD12	1.80	0.63
14:K:33:LEU:HD23	14:K:45:LEU:HD13	1.80	0.63
17:P:55:ASP:HB3	17:P:58:LEU:HD13	1.81	0.63
18:Q:459:GLN:HB2	18:Q:480:THR:O	1.98	0.63
15:N:371:GLN:HA	15:N:371:GLN:OE1	1.98	0.63
18:Q:46:ARG:HH11	18:Q:46:ARG:CG	2.11	0.63
4:3:137:GLU:OE1	4:3:137:GLU:HA	1.98	0.63
10:G:127:ARG:CD	15:N:152:PHE:CE1	2.79	0.63
11:H:52:LEU:HA	11:H:56:LEU:HD12	1.79	0.63
22:W:37:LEU:CD1	22:W:85:MET:HE1	2.28	0.63
22:W:559:LEU:HD21	22:W:563:LEU:HD22	1.81	0.63
9:F:118:ARG:HB3	18:Q:112:LEU:CD2	2.28	0.62
15:N:1337:GLN:HA	15:N:1355:PRO:CB	2.29	0.62
22:W:892:LYS:N	22:W:893:PRO:CD	2.62	0.62
8:D:149:ILE:HD13	10:G:132:ARG:NH1	2.14	0.62
18:Q:385:GLN:O	18:Q:391:MET:HE3	1.99	0.62
10:G:142:GLN:NE2	10:G:146:ARG:HH21	1.93	0.62
15:N:713:GLN:HE21	15:N:721:VAL:CG2	2.12	0.62
22:W:855:TRP:HZ3	22:W:896:PHE:HA	1.63	0.62
23:X:142:LEU:HD13	23:X:155:GLU:HB2	1.80	0.62
9:F:114:VAL:HG12	11:H:111:THR:HG22	1.81	0.62
15:N:713:GLN:NE2	15:N:721:VAL:HG21	2.14	0.62
9:F:118:ARG:HB3	18:Q:112:LEU:CD1	2.29	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:H:92:GLN:NE2	18:Q:121:ASP:OD2	2.33	0.62
22:W:154:SER:HB2	23:X:917:ALA:HB3	1.81	0.62
10:G:142:GLN:NE2	10:G:146:ARG:NH2	2.47	0.62
16:O:675:PRO:HG2	16:O:678:LEU:HD23	1.79	0.62
21:V:53:GLN:HA	21:V:56:GLN:HG2	1.81	0.62
18:Q:505:VAL:HG22	18:Q:511:VAL:HG12	1.82	0.62
3:2:165:LYS:NZ	3:2:169:SER:HB3	2.14	0.62
4:3:156:LEU:HD11	21:V:130:LEU:CD1	2.30	0.62
15:N:399:LYS:NZ	18:Q:271:LEU:CB	2.62	0.62
14:K:70:LEU:HD13	21:V:85:PHE:CD1	2.33	0.61
23:X:175:ARG:HD3	23:X:221:LEU:HD21	1.81	0.61
9:F:186:GLN:OE1	9:F:186:GLN:HA	2.00	0.61
15:N:212:LEU:HD11	15:N:367:SER:HA	1.80	0.61
15:N:592:LYS:CB	22:W:27:MET:SD	2.88	0.61
22:W:640:GLN:HG3	22:W:933:TYR:HE1	1.64	0.61
15:N:392:ILE:O	15:N:392:ILE:HG22	2.00	0.61
15:N:111:LYS:HD3	25:S:92:ALA:HB1	1.82	0.61
23:X:4:VAL:HG12	23:X:31:PHE:CA	2.30	0.61
8:D:30:LEU:CD2	12:I:99:LYS:HB2	2.30	0.61
23:X:4:VAL:HG12	23:X:30:PHE:C	2.20	0.61
26:U:102:THR:O	26:U:105:GLU:HG2	1.99	0.61
8:D:30:LEU:HD23	8:D:30:LEU:C	2.21	0.61
15:N:676:ASP:OD1	18:Q:593:MET:HE2	1.97	0.61
23:X:259:GLU:HG3	23:X:261:GLN:H	1.65	0.61
2:1:139:TRP:CD1	21:V:119:LEU:HD13	2.35	0.61
6:A:177:LEU:HD12	6:A:259:ILE:HG12	1.80	0.61
9:F:77:ILE:HB	9:F:102:ALA:H	1.65	0.61
10:G:157:LEU:HD21	26:U:110:ARG:HH12	1.63	0.61
17:P:266:ARG:NH2	17:P:269:THR:OG1	2.34	0.61
23:X:36:THR:HG23	23:X:36:THR:O	2.00	0.61
15:N:234:LEU:CD1	15:N:246:ARG:O	2.49	0.61
26:U:15:LEU:O	26:U:19:PHE:HD2	1.84	0.61
13:J:113:LEU:HD13	26:U:63:ALA:HB1	1.83	0.61
23:X:833:LYS:HA	23:X:836:HIS:CE1	2.36	0.61
8:D:113:GLN:NE2	10:G:163:MET:SD	2.72	0.61
15:N:214:ASN:O	15:N:224:PHE:HA	2.01	0.61
18:Q:468:ASN:OD1	18:Q:469:ASP:N	2.34	0.61
9:F:184:LEU:HD11	15:N:295:CYS:SG	2.41	0.60
13:J:85:LEU:CD1	25:S:93:TYR:CA	2.65	0.60
18:Q:188:LEU:HD22	21:V:87:ILE:HD13	1.82	0.60
8:D:145:SER:HB2	10:G:135:LEU:HD11	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:D:171:ASP:O	8:D:174:ARG:NH1	2.33	0.60
17:P:659:MET:HA	17:P:662:ILE:HG12	1.83	0.60
18:Q:485:GLU:OE1	18:Q:485:GLU:N	2.28	0.60
15:N:247:LEU:HB3	15:N:275:HIS:NE2	2.17	0.60
18:Q:394:HIS:NE2	19:R:78:ARG:HG3	2.16	0.60
6:A:210:TYR:O	6:A:222:LEU:HA	2.02	0.60
8:D:110:LEU:HD21	10:G:171:LEU:HD21	1.83	0.60
15:N:713:GLN:HE21	15:N:721:VAL:HG21	1.66	0.60
9:F:82:ARG:NH2	9:F:96:ALA:O	2.34	0.60
9:F:171:ILE:HG23	15:N:263:ARG:CZ	2.31	0.60
10:G:57:ARG:HH11	10:G:57:ARG:CG	2.11	0.60
22:W:808:TYR:HE1	22:W:934:PHE:HB2	1.66	0.60
23:X:170:SER:O	23:X:175:ARG:NH2	2.35	0.60
26:U:57:LEU:HD23	26:U:57:LEU:C	2.22	0.60
9:F:77:ILE:HD12	9:F:101:ILE:HG23	1.82	0.60
13:J:108:LEU:CG	26:U:55:ALA:HB1	2.31	0.60
10:G:57:ARG:HG2	10:G:57:ARG:NH1	2.13	0.60
10:G:88:ASN:ND2	10:G:112:LEU:CD2	2.65	0.60
11:H:85:ARG:NH1	11:H:97:VAL:O	2.34	0.60
18:Q:152:SER:HB2	21:V:58:ASN:CG	2.21	0.60
10:G:142:GLN:HG3	10:G:146:ARG:HE	1.66	0.60
15:N:729:CYS:SG	15:N:743:ARG:NH1	2.75	0.60
22:W:719:ILE:O	22:W:723:THR:OG1	2.20	0.60
10:G:129:HIS:NE2	26:U:82:THR:OG1	2.35	0.59
17:P:273:ARG:O	17:P:276:LYS:NZ	2.35	0.59
18:Q:141:PRO:CB	21:V:45:GLU:HB3	2.26	0.59
18:Q:335:PRO:HB2	18:Q:339:LEU:HD23	1.84	0.59
21:V:91:PHE:HB2	21:V:92:PRO:HD3	1.82	0.59
10:G:61:SER:HB3	10:G:66:ARG:HH21	1.67	0.59
22:W:765:ARG:HA	22:W:768:LYS:HG2	1.84	0.59
5:4:107:HIS:HE1	18:Q:26:GLY:HA2	1.67	0.59
13:J:105:PHE:HA	26:U:55:ALA:HB1	1.82	0.59
15:N:534:SER:OG	15:N:535:LYS:N	2.34	0.59
17:P:474:LEU:HD13	17:P:495:VAL:HG12	1.83	0.59
20:T:68:ASN:HB2	20:T:190:MET:HE1	1.84	0.59
3:2:63:LEU:HD22	3:2:112:LEU:HD11	1.84	0.59
8:D:44:LEU:HD23	8:D:44:LEU:O	2.02	0.59
14:K:31:VAL:HG23	18:Q:157:ALA:HB2	1.85	0.59
15:N:658:ARG:NH1	22:W:20:GLU:OE1	2.35	0.59
16:O:723:LEU:HD21	16:O:772:LEU:HD23	1.84	0.59
2:1:108:GLU:OE2	4:3:138:GLU:HG2	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:D:30:LEU:HD21	12:I:99:LYS:HB2	1.83	0.59
14:K:12:ARG:HH21	14:K:12:ARG:CA	2.13	0.59
14:K:26:GLN:HE22	14:K:52:PHE:HD1	1.50	0.59
22:W:399:PHE:CZ	22:W:425:MET:CG	2.86	0.59
10:G:138:MET:HE3	10:G:138:MET:CA	2.32	0.59
22:W:627:LEU:CD2	22:W:648:THR:HG21	2.32	0.59
22:W:731:THR:HG21	22:W:973:ARG:HH22	1.68	0.59
15:N:114:LYS:CB	25:S:89:LEU:HD22	2.32	0.59
15:N:200:ARG:O	15:N:204:VAL:HG12	2.02	0.59
3:2:117:GLU:OE1	3:2:121:ARG:NH2	2.36	0.59
4:3:163:LEU:HD11	21:V:123:ILE:HG23	1.85	0.59
17:P:809:SER:HB3	17:P:812:ARG:HD3	1.83	0.59
21:V:50:ARG:NH1	21:V:50:ARG:O	2.36	0.59
5:4:84:PHE:HB2	15:N:178:ILE:HD11	1.85	0.59
8:D:28:GLU:H	8:D:28:GLU:CD	2.04	0.59
18:Q:207:LEU:HD21	18:Q:295:LEU:HD22	1.83	0.59
23:X:4:VAL:HB	23:X:31:PHE:CB	2.31	0.59
1:0:286:LYS:HB3	20:T:159:GLU:OE2	2.03	0.58
10:G:48:GLN:CD	10:G:48:GLN:H	2.06	0.58
10:G:61:SER:HA	10:G:66:ARG:HE	1.68	0.58
15:N:199:LEU:HD21	15:N:222:VAL:HG23	1.85	0.58
11:H:88:ASP:O	11:H:92:GLN:HB3	2.03	0.58
13:J:82:LYS:HD2	25:S:97:CYS:HA	1.85	0.58
15:N:217:VAL:HG22	15:N:217:VAL:O	2.02	0.58
15:N:312:THR:OG1	15:N:397:ILE:HD13	2.03	0.58
22:W:67:ILE:HD12	22:W:79:LEU:HB3	1.86	0.58
13:J:76:ASN:CA	25:S:112:LEU:H	2.16	0.58
13:J:76:ASN:CG	25:S:112:LEU:N	2.55	0.58
15:N:297:HIS:CE1	15:N:301:LEU:HD22	2.37	0.58
11:H:61:LYS:O	11:H:65:HIS:ND1	2.32	0.58
15:N:183:ILE:CD1	15:N:188:LYS:CD	2.80	0.58
15:N:315:LEU:CD1	15:N:320:TRP:HB3	2.33	0.58
13:J:76:ASN:CB	25:S:112:LEU:H	2.16	0.58
15:N:687:ILE:CG2	15:N:688:PRO:CD	2.80	0.58
2:1:94:PHE:HB2	18:Q:650:LEU:HD22	1.85	0.58
2:1:104:VAL:HG11	4:3:114:LEU:HG	1.84	0.58
20:T:151:SER:CB	20:T:179:ARG:HH22	2.17	0.58
18:Q:188:LEU:CD2	21:V:87:ILE:CD1	2.62	0.58
22:W:818:ALA:O	22:W:822:HIS:ND1	2.30	0.58
5:4:84:PHE:CD2	15:N:177:ILE:CG2	2.85	0.58
8:D:90:HIS:HE1	12:I:105:PRO:CA	2.12	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:I:107:ILE:O	12:I:107:ILE:HD13	2.02	0.58
12:I:140:MET:HG3	26:U:117:LYS:CE	2.16	0.58
23:X:169:LEU:HD13	23:X:221:LEU:HD22	1.84	0.58
11:H:151:LEU:HD12	21:V:37:ILE:CG2	2.33	0.58
22:W:154:SER:N	23:X:915:ARG:NH2	2.46	0.58
22:W:827:ALA:HB1	22:W:869:LEU:HD23	1.85	0.58
1:0:218:ASN:ND2	20:T:1:MET:HG3	2.18	0.58
18:Q:469:ASP:OD1	18:Q:470:VAL:N	2.34	0.58
18:Q:31:LEU:HD23	18:Q:31:LEU:H	1.67	0.57
15:N:234:LEU:HD12	15:N:246:ARG:O	2.04	0.57
18:Q:152:SER:OG	21:V:58:ASN:HA	2.03	0.57
22:W:726:ASN:HD21	22:W:750:GLN:HG3	1.69	0.57
1:0:218:ASN:HD22	20:T:1:MET:HG3	1.68	0.57
10:G:57:ARG:HE	10:G:128:PRO:HG2	1.69	0.57
15:N:691:LYS:HE2	15:N:693:ILE:HG23	1.86	0.57
22:W:576:ILE:O	22:W:580:GLY:N	2.36	0.57
22:W:1203:MET:HG2	22:W:1204:SER:H	1.69	0.57
15:N:140:ALA:HA	15:N:144:LEU:HG	1.86	0.57
15:N:903:CYS:SG	15:N:904:PHE:N	2.77	0.57
1:0:298:ASP:OD2	1:0:301:THR:OG1	2.22	0.57
6:A:69:LEU:HD23	12:I:66:LEU:HD11	1.85	0.57
11:H:101:SER:H	11:H:104:VAL:HG12	1.69	0.57
23:X:566:GLU:HG2	23:X:567:MET:H	1.68	0.57
5:4:111:LYS:HD3	18:Q:17:LYS:NZ	2.20	0.57
10:G:100:PRO:CB	15:N:125:GLN:HE22	2.18	0.57
11:H:78:PRO:HA	18:Q:125:MET:HA	1.87	0.57
13:J:108:LEU:CD1	26:U:55:ALA:C	2.62	0.57
15:N:442:ILE:HG13	15:N:496:LEU:HD11	1.85	0.57
22:W:293:HIS:NE2	22:W:295:GLN:OE1	2.31	0.57
22:W:821:ALA:HA	22:W:824:ARG:HE	1.70	0.57
22:W:984:LEU:HD23	22:W:1022:LEU:HD11	1.86	0.57
23:X:86:ASP:HB2	23:X:133:ARG:HH21	1.69	0.57
8:D:26:THR:HA	12:I:107:ILE:H	1.69	0.57
10:G:88:ASN:ND2	10:G:112:LEU:HD23	2.19	0.57
18:Q:612:ASP:OD1	18:Q:613:ASN:N	2.38	0.57
19:R:184:ASP:HA	19:R:187:LYS:HE3	1.86	0.57
2:1:129:VAL:HG22	14:K:111:CYS:SG	2.44	0.57
17:P:20:GLU:HB3	17:P:451:LYS:HG3	1.86	0.57
18:Q:324:HIS:ND1	18:Q:333:SER:OG	2.37	0.57
19:R:164:SER:OG	19:R:165:LEU:N	2.38	0.57
1:0:166:ILE:HD13	1:0:190:LEU:HD21	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1:129:VAL:HG21	14:K:114:MET:CE	2.35	0.57
3:2:89:ASP:OD1	16:O:640:ARG:NH2	2.38	0.57
3:2:85:ASN:HD22	16:O:641:THR:HB	1.70	0.56
13:J:101:THR:CG2	26:U:51:THR:HG21	2.32	0.56
15:N:312:THR:OG1	15:N:397:ILE:CD1	2.53	0.56
18:Q:144:LEU:HB2	21:V:50:ARG:HE	1.70	0.56
10:G:129:HIS:CD2	26:U:82:THR:HG1	2.21	0.56
11:H:155:SER:O	11:H:159:ARG:NH1	2.38	0.56
15:N:496:LEU:HD12	15:N:496:LEU:C	2.26	0.56
5:4:84:PHE:CD2	15:N:178:ILE:HD11	2.40	0.56
9:F:118:ARG:HH11	18:Q:112:LEU:CB	2.18	0.56
10:G:67:LEU:C	10:G:67:LEU:HD12	2.25	0.56
10:G:127:ARG:CG	15:N:152:PHE:CE1	2.88	0.56
10:G:161:ILE:HD12	10:G:164:ILE:CG2	2.35	0.56
15:N:183:ILE:HD12	15:N:188:LYS:CD	2.35	0.56
22:W:87:VAL:HG11	22:W:97:VAL:HG11	1.86	0.56
22:W:708:GLN:HA	22:W:713:LYS:HD2	1.87	0.56
23:X:478:GLY:HA3	23:X:489:ARG:HH11	1.70	0.56
23:X:702:PRO:HG2	23:X:705:ARG:HD3	1.86	0.56
6:A:167:ASN:O	6:A:171:THR:HG23	2.04	0.56
15:N:736:THR:O	15:N:737:ARG:NH1	2.34	0.56
18:Q:141:PRO:HA	21:V:50:ARG:CD	2.32	0.56
22:W:969:ILE:O	22:W:973:ARG:HG2	2.05	0.56
5:4:59:LYS:NZ	15:N:164:GLY:O	2.38	0.56
8:D:72:ARG:NE	8:D:75:GLU:OE2	2.39	0.56
15:N:183:ILE:HD12	15:N:188:LYS:HG2	1.86	0.56
5:4:84:PHE:CE2	15:N:177:ILE:CD1	2.88	0.56
8:D:76:PHE:O	8:D:80:MET:N	2.38	0.56
17:P:194:LYS:HD3	17:P:196:SER:H	1.69	0.56
26:U:49:ASN:OD1	26:U:50:PRO:HD2	2.04	0.56
26:U:49:ASN:CG	26:U:50:PRO:HD3	2.25	0.56
13:J:104:LYS:HZ1	26:U:52:GLU:HB2	1.70	0.56
22:W:610:TYR:N	22:W:610:TYR:CD1	2.73	0.56
22:W:855:TRP:HH2	22:W:896:PHE:CG	2.24	0.56
23:X:4:VAL:HG21	23:X:31:PHE:CE1	2.40	0.56
6:A:66:GLN:CD	12:I:69:VAL:HG11	2.24	0.56
15:N:450:GLU:OE2	15:N:504:ARG:NH2	2.36	0.56
22:W:208:PHE:O	22:W:211:THR:OG1	2.21	0.56
23:X:469:ILE:HD11	23:X:512:ILE:HG23	1.88	0.56
23:X:472:ASN:O	23:X:476:THR:HG23	2.06	0.56
3:2:57:VAL:O	3:2:61:LYS:HG2	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:F:77:ILE:HD11	11:H:81:LEU:HD13	1.87	0.56
12:I:135:TYR:CE2	26:U:125:ILE:CG1	2.84	0.56
18:Q:141:PRO:HG3	21:V:45:GLU:H	1.69	0.56
4:3:144:GLU:HA	4:3:147:LYS:CG	2.37	0.55
6:A:62:LEU:CD2	8:D:66:LEU:HD13	2.37	0.55
9:F:77:ILE:HD13	11:H:102:HIS:NE2	2.21	0.55
18:Q:146:LEU:CD2	21:V:42:ILE:HD13	2.36	0.55
18:Q:627:TRP:NE1	18:Q:638:LYS:HD2	2.21	0.55
20:T:8:GLN:HE22	20:T:203:GLN:HE22	1.53	0.55
11:H:148:SER:OG	11:H:152:GLU:OE2	2.24	0.55
14:K:70:LEU:CD2	21:V:86:LEU:CD2	2.82	0.55
15:N:306:GLU:OE1	15:N:306:GLU:HA	2.06	0.55
15:N:683:ARG:HD2	16:O:684:ARG:HG2	1.88	0.55
22:W:797:LEU:HA	22:W:801:ASP:H	1.71	0.55
5:4:52:LEU:HD23	5:4:55:LEU:HD12	1.89	0.55
11:H:151:LEU:CD1	21:V:41:LYS:HZ1	2.14	0.55
15:N:691:LYS:HZ1	15:N:691:LYS:C	2.05	0.55
22:W:399:PHE:O	22:W:403:TYR:HB2	2.07	0.55
23:X:912:LEU:HD11	23:X:958:VAL:HG21	1.88	0.55
2:1:47:GLU:HA	2:1:50:SER:HB3	1.89	0.55
6:A:79:ASP:OD1	6:A:82:GLU:OE2	2.23	0.55
15:N:691:LYS:HD3	15:N:693:ILE:HG12	1.87	0.55
21:V:35:GLU:OE1	21:V:64:ARG:NH2	2.40	0.55
22:W:646:GLU:OE1	22:W:864:ARG:HD2	2.07	0.55
6:A:377:ASN:ND2	6:A:441:GLU:OE2	2.40	0.55
4:3:144:GLU:HA	4:3:147:LYS:HD3	1.89	0.55
13:J:104:LYS:NZ	26:U:52:GLU:CB	2.68	0.55
13:J:113:LEU:HD22	26:U:63:ALA:HB2	1.89	0.55
15:N:199:LEU:HD21	15:N:222:VAL:HG22	1.88	0.55
17:P:362:SER:OG	17:P:367:ASP:OD2	2.25	0.55
23:X:53:GLY:O	23:X:90:ARG:NH2	2.40	0.55
8:D:135:ILE:CD1	10:G:146:ARG:NH1	2.70	0.55
9:F:174:ARG:HD2	15:N:270:GLN:HE22	1.68	0.55
14:K:98:ASP:O	14:K:101:ARG:HG2	2.06	0.55
15:N:800:VAL:HA	15:N:810:LEU:HD23	1.87	0.55
17:P:180:ILE:HG22	17:P:190:VAL:HG22	1.89	0.55
18:Q:43:LEU:HD13	18:Q:43:LEU:C	2.26	0.55
18:Q:271:LEU:HD13	18:Q:271:LEU:O	2.07	0.55
26:U:18:GLN:HE22	26:U:62:ILE:HG12	1.72	0.55
14:K:8:ASN:O	14:K:12:ARG:CG	2.51	0.55
15:N:235:THR:HG23	15:N:248:LEU:HD21	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:Q:641:LEU:N	18:Q:641:LEU:HD23	2.21	0.55
26:U:76:LEU:HD13	26:U:76:LEU:N	2.20	0.55
2:1:101:GLN:NE2	4:3:109:ILE:O	2.41	0.54
1:0:239:PHE:HA	1:0:242:VAL:HG12	1.88	0.54
9:F:82:ARG:NH2	9:F:97:ASP:OD1	2.41	0.54
16:O:727:ALA:O	16:O:732:GLN:NE2	2.39	0.54
18:Q:141:PRO:HB3	21:V:45:GLU:CB	2.27	0.54
22:W:154:SER:HA	22:W:157:VAL:HG13	1.90	0.54
22:W:369:ARG:NH1	22:W:403:TYR:OH	2.40	0.54
22:W:510:PRO:HB2	22:W:954:ILE:HD11	1.89	0.54
2:1:129:VAL:HG13	14:K:115:LEU:HD21	1.89	0.54
10:G:100:PRO:CB	15:N:125:GLN:NE2	2.70	0.54
21:V:67:ASN:OD1	21:V:70:ARG:NH1	2.39	0.54
22:W:389:LEU:HD12	22:W:435:LYS:HG3	1.88	0.54
6:A:62:LEU:HD22	8:D:66:LEU:HD13	1.90	0.54
8:D:115:LYS:O	8:D:118:GLU:HG3	2.08	0.54
17:P:177:GLU:HG2	17:P:193:LEU:HB2	1.88	0.54
18:Q:270:ASP:OD2	18:Q:327:VAL:HB	2.07	0.54
15:N:175:ASP:N	15:N:175:ASP:OD1	2.37	0.54
18:Q:99:ARG:HG2	18:Q:103:ARG:NE	2.22	0.54
15:N:521:GLN:HG3	20:T:30:MET:SD	2.48	0.54
15:N:709:THR:HG21	16:O:684:ARG:HH12	1.72	0.54
16:O:704:VAL:HG12	16:O:725:VAL:HB	1.90	0.54
17:P:787:LEU:HD13	17:P:791:PRO:HB3	1.90	0.54
22:W:316:GLU:HG2	22:W:367:LYS:HB2	1.88	0.54
1:0:218:ASN:HD22	20:T:1:MET:CG	2.19	0.54
2:1:111:ILE:CG2	4:3:138:GLU:HG3	2.37	0.54
11:H:17:SER:OG	11:H:18:GLN:NE2	2.38	0.54
11:H:151:LEU:HD11	21:V:38:LYS:NZ	2.23	0.54
15:N:247:LEU:HD21	15:N:278:VAL:HG11	1.89	0.54
15:N:666:ILE:HG21	15:N:684:LEU:HD12	1.83	0.54
16:O:690:LEU:HD21	18:Q:605:PRO:HB2	1.90	0.54
18:Q:397:SER:HB2	19:R:84:HIS:ND1	2.23	0.54
22:W:155:ALA:N	23:X:915:ARG:HH22	2.06	0.54
12:I:94:PHE:HB3	12:I:98:ARG:NH1	2.22	0.54
18:Q:291:TRP:O	18:Q:295:LEU:HB2	2.08	0.54
8:D:30:LEU:HD21	8:D:34:LEU:HG	1.89	0.54
8:D:90:HIS:HE1	12:I:105:PRO:O	1.91	0.54
1:0:272:SER:CB	1:0:302:LEU:HD23	2.33	0.54
6:A:267:LYS:NZ	6:A:288:PHE:HB2	2.23	0.54
23:X:629:ARG:O	23:X:636:ARG:NH2	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:U:8:LEU:CD1	26:U:72:LEU:HD12	2.38	0.54
1:0:31:VAL:HG22	1:0:59:ASN:HB3	1.90	0.53
1:0:218:ASN:ND2	20:T:148:VAL:CG1	2.72	0.53
22:W:898:ASN:O	22:W:928:TYR:OH	2.22	0.53
23:X:554:VAL:HG11	23:X:583:ALA:HB3	1.89	0.53
8:D:30:LEU:O	8:D:34:LEU:HD23	2.08	0.53
1:0:158:PRO:HG2	1:0:161:TYR:HB2	1.90	0.53
6:A:143:ARG:HG3	6:A:144:GLU:HG3	1.91	0.53
8:D:30:LEU:CG	8:D:34:LEU:HD23	2.39	0.53
10:G:74:HIS:CG	10:G:126:TYR:CE2	2.93	0.53
22:W:862:LEU:HD23	22:W:896:PHE:CE2	2.38	0.53
23:X:46:LEU:HD22	23:X:60:ILE:HG23	1.90	0.53
23:X:112:GLY:O	23:X:984:LYS:NZ	2.36	0.53
10:G:138:MET:CE	10:G:138:MET:CA	2.85	0.53
18:Q:495:LEU:HG	18:Q:504:VAL:HG22	1.90	0.53
11:H:122:LYS:O	11:H:125:THR:OG1	2.22	0.53
15:N:54:LEU:CA	25:S:139:SER:CB	2.81	0.53
15:N:183:ILE:CD1	15:N:188:LYS:HD3	2.38	0.53
15:N:211:GLN:HA	26:U:133:ARG:NH2	2.21	0.53
15:N:691:LYS:O	15:N:771:ASN:ND2	2.42	0.53
18:Q:9:ILE:HG12	26:U:94:GLU:OE2	2.06	0.53
23:X:783:LEU:HA	23:X:787:ILE:HD13	1.91	0.53
10:G:84:SER:HA	10:G:87:ILE:HG22	1.90	0.53
11:H:151:LEU:HD13	21:V:41:LYS:NZ	2.16	0.53
15:N:135:ARG:HA	15:N:135:ARG:HE	1.72	0.53
18:Q:45:GLN:OE1	18:Q:45:GLN:HA	2.09	0.53
23:X:811:LYS:HG2	23:X:930:GLU:HG2	1.91	0.53
6:A:69:LEU:CG	12:I:66:LEU:CD1	2.86	0.53
6:A:315:ARG:HG2	6:A:319:GLN:NE2	2.21	0.53
11:H:108:HIS:CD2	18:Q:118:ILE:HD12	2.43	0.53
21:V:96:GLU:OE1	21:V:96:GLU:HA	2.08	0.53
22:W:328:GLN:HG2	22:W:329:LEU:HD12	1.91	0.53
22:W:684:ASN:HD21	22:W:723:THR:HG21	1.73	0.53
23:X:14:TRP:O	23:X:17:ARG:NH2	2.42	0.53
26:U:7:GLN:HE21	26:U:7:GLN:H	1.56	0.53
10:G:138:MET:HA	10:G:138:MET:HE2	1.91	0.53
10:G:155:LYS:HD2	10:G:155:LYS:O	2.09	0.53
13:J:104:LYS:NZ	26:U:52:GLU:HA	2.23	0.53
18:Q:506:HIS:ND1	18:Q:508:ASP:OD1	2.41	0.53
22:W:399:PHE:CZ	22:W:425:MET:SD	3.02	0.53
23:X:584:ALA:O	23:X:588:ILE:HD12	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:U:18:GLN:HE22	26:U:62:ILE:CG1	2.22	0.53
4:3:107:ASP:HB3	18:Q:651:LEU:HD13	1.87	0.53
15:N:203:LEU:HD23	15:N:289:LEU:HD21	1.90	0.53
15:N:297:HIS:CE1	15:N:366:VAL:O	2.62	0.53
15:N:449:SER:O	15:N:451:CYS:N	2.42	0.53
22:W:855:TRP:HZ3	22:W:896:PHE:CA	2.21	0.53
8:D:120:ILE:HG21	10:G:159:ARG:HH21	1.73	0.53
10:G:143:LYS:HD2	10:G:143:LYS:O	2.09	0.53
15:N:250:LEU:O	15:N:271:ILE:HD11	2.09	0.53
18:Q:99:ARG:HG2	18:Q:103:ARG:HE	1.74	0.53
18:Q:634:ASN:O	18:Q:638:LYS:HG3	2.09	0.53
22:W:672:PRO:HB2	22:W:718:THR:HG21	1.91	0.53
22:W:866:ILE:HG23	22:W:886:ILE:HD12	1.91	0.53
23:X:502:HIS:HB2	23:X:665:ILE:HD11	1.89	0.53
10:G:56:ILE:HD12	10:G:56:ILE:O	2.09	0.52
11:H:108:HIS:CE1	18:Q:115:VAL:HG23	2.44	0.52
13:J:113:LEU:HD22	26:U:63:ALA:HA	1.89	0.52
15:N:678:PHE:CD1	18:Q:583:ARG:HD2	2.45	0.52
13:J:85:LEU:HD12	25:S:96:PHE:HB2	1.90	0.52
13:J:99:ILE:HD13	25:S:80:SER:HB2	1.89	0.52
15:N:187:GLU:CD	18:Q:43:LEU:HD21	2.29	0.52
15:N:820:ILE:HG22	15:N:835:LEU:HD23	1.90	0.52
22:W:1005:LEU:HD21	22:W:1030:ILE:HG13	1.90	0.52
6:A:265:VAL:HA	6:A:300:PRO:HA	1.91	0.52
10:G:142:GLN:HG3	10:G:146:ARG:NE	2.23	0.52
12:I:110:SER:HB3	12:I:111:PRO:CD	2.36	0.52
14:K:70:LEU:HD11	21:V:86:LEU:HD22	1.80	0.52
20:T:201:ARG:O	20:T:204:GLN:NE2	2.43	0.52
22:W:338:LEU:HD23	22:W:338:LEU:O	2.10	0.52
22:W:447:ILE:HD12	22:W:448:PRO:HD2	1.91	0.52
10:G:50:GLN:HG3	10:G:50:GLN:O	2.10	0.52
15:N:444:GLU:HG2	15:N:563:GLN:HE21	1.75	0.52
15:N:465:LEU:HD13	15:N:478:MET:HG3	1.91	0.52
16:O:735:LEU:HD21	22:W:73:PRO:HG2	1.92	0.52
22:W:396:MET:HA	22:W:396:MET:HE3	1.88	0.52
6:A:224:TYR:HB2	6:A:412:ARG:HE	1.75	0.52
18:Q:385:GLN:O	18:Q:391:MET:CE	2.57	0.52
18:Q:592:ILE:HG13	18:Q:627:TRP:CE3	2.44	0.52
23:X:31:PHE:HD1	23:X:32:PRO:CD	2.09	0.52
9:F:188:PHE:HD1	15:N:281:ARG:NH2	2.06	0.52
15:N:937:ARG:NH2	15:N:941:TYR:O	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:W:490:LEU:HB3	22:W:491:PRO:HD3	1.92	0.52
22:W:526:ASN:O	22:W:530:SER:OG	2.20	0.52
5:4:111:LYS:HD3	18:Q:17:LYS:HZ2	1.74	0.52
11:H:88:ASP:O	11:H:92:GLN:CB	2.58	0.52
22:W:37:LEU:HD12	22:W:85:MET:CE	2.38	0.52
23:X:39:ILE:N	23:X:39:ILE:CD1	2.73	0.52
6:A:363:PHE:HE2	6:A:425:VAL:HG13	1.74	0.52
15:N:362:ASP:O	15:N:368:LYS:NZ	2.42	0.52
15:N:208:LEU:HD12	15:N:208:LEU:O	2.10	0.52
18:Q:595:GLN:HE22	18:Q:619:ARG:HB2	1.75	0.52
22:W:1024:ARG:O	22:W:1028:HIS:ND1	2.29	0.52
10:G:78:LEU:CD1	26:U:73:ILE:HG22	2.40	0.52
10:G:120:HIS:CB	15:N:147:ALA:HB1	2.38	0.52
10:G:127:ARG:HG2	15:N:152:PHE:CE1	2.45	0.52
15:N:216:THR:OG1	15:N:223:LYS:HB3	2.09	0.52
15:N:410:HIS:ND1	15:N:410:HIS:O	2.43	0.52
15:N:676:ASP:OD1	18:Q:593:MET:HE3	2.09	0.52
15:N:691:LYS:C	15:N:691:LYS:HE3	2.30	0.52
15:N:740:GLY:O	15:N:742:SER:N	2.42	0.52
18:Q:267:ASP:OD1	18:Q:268:ILE:N	2.43	0.52
18:Q:289:PRO:HB2	18:Q:291:TRP:NE1	2.25	0.52
19:R:21:TYR:HD1	19:R:102:VAL:HG22	1.75	0.52
22:W:270:LEU:HD11	22:W:303:GLN:HG3	1.90	0.52
22:W:854:VAL:HG12	22:W:855:TRP:CD1	2.45	0.52
5:4:84:PHE:CE2	15:N:177:ILE:HD13	2.43	0.51
8:D:135:ILE:HD13	10:G:146:ARG:NH1	2.25	0.51
23:X:10:ILE:HG21	23:X:49:GLN:HG3	1.92	0.51
23:X:432:PRO:HB2	23:X:488:VAL:HG11	1.92	0.51
23:X:625:VAL:HG13	23:X:677:VAL:HG21	1.92	0.51
14:K:63:LEU:O	14:K:67:ILE:HG12	2.10	0.51
22:W:27:MET:CE	22:W:27:MET:CA	2.85	0.51
22:W:155:ALA:H	23:X:915:ARG:HH22	1.56	0.51
22:W:366:ILE:HD11	22:W:369:ARG:HE	1.76	0.51
22:W:805:GLN:HB3	22:W:941:VAL:HG11	1.92	0.51
25:S:84:ILE:HG23	25:S:89:LEU:HB3	1.92	0.51
13:J:109:LEU:HB3	26:U:59:ALA:HB2	1.91	0.51
17:P:52:ARG:NH1	17:P:56:GLN:OE1	2.43	0.51
21:V:86:LEU:O	21:V:90:ASP:HB2	2.10	0.51
15:N:216:THR:CB	15:N:223:LYS:CB	2.71	0.51
15:N:399:LYS:HD2	18:Q:271:LEU:HB2	1.93	0.51
17:P:547:TYR:O	17:P:550:LYS:HB3	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:W:1009:LEU:HD23	22:W:1113:MET:HE3	1.93	0.51
5:4:43:PHE:HB3	5:4:85:ARG:HD3	1.92	0.51
13:J:95:VAL:CG2	15:N:122:LEU:HD22	2.40	0.51
11:H:58:THR:O	11:H:62:VAL:HG22	2.11	0.51
15:N:247:LEU:CB	15:N:275:HIS:NE2	2.73	0.51
15:N:593:GLU:N	15:N:593:GLU:OE1	2.43	0.51
18:Q:591:LYS:HG2	18:Q:591:LYS:O	2.09	0.51
17:P:133:ALA:HB3	17:P:182:VAL:HB	1.92	0.51
18:Q:288:SER:HB2	18:Q:289:PRO:HD2	1.92	0.51
18:Q:289:PRO:CB	18:Q:291:TRP:CE2	2.93	0.51
22:W:819:LEU:O	22:W:822:HIS:HB2	2.11	0.51
23:X:978:GLY:HA2	23:X:981:VAL:HG12	1.92	0.51
9:F:115:ILE:HG12	9:F:118:ARG:NH2	2.25	0.51
5:4:84:PHE:HD2	15:N:178:ILE:HD11	1.76	0.51
8:D:38:GLU:OE2	8:D:42:ARG:HD2	2.11	0.51
9:F:84:GLN:HG3	9:F:92:VAL:HG13	1.92	0.51
10:G:60:GLU:HB3	10:G:121:HIS:CD2	2.46	0.51
11:H:131:ILE:H	11:H:131:ILE:HD12	1.76	0.51
12:I:94:PHE:HB3	12:I:98:ARG:HH12	1.76	0.51
15:N:189:GLN:HE21	15:N:189:GLN:CA	2.13	0.51
15:N:203:LEU:CD2	15:N:289:LEU:HD21	2.41	0.51
15:N:370:LEU:H	15:N:370:LEU:HD12	1.76	0.51
22:W:855:TRP:HH2	22:W:896:PHE:CD2	2.26	0.51
23:X:6:LEU:HD13	23:X:45:ALA:HB2	1.93	0.51
6:A:67:LYS:HA	6:A:70:LYS:HG3	1.93	0.51
6:A:192:TRP:HE3	6:A:202:LYS:HZ1	1.59	0.51
6:A:312:PRO:O	6:A:418:ASN:ND2	2.36	0.51
10:G:152:ARG:O	10:G:152:ARG:HD3	2.11	0.51
15:N:399:LYS:HE3	18:Q:271:LEU:N	2.25	0.51
15:N:399:LYS:CE	18:Q:271:LEU:HB2	2.41	0.51
22:W:396:MET:CE	22:W:396:MET:CA	2.85	0.51
22:W:775:ASP:O	22:W:779:HIS:ND1	2.32	0.50
23:X:975:LEU:HB3	23:X:978:GLY:H	1.76	0.50
11:H:137:GLN:O	11:H:141:GLN:HG3	2.10	0.50
12:I:113:GLN:HA	12:I:116:GLN:HG3	1.92	0.50
15:N:554:MET:HB3	15:N:564:LEU:HD23	1.93	0.50
18:Q:39:ASN:O	18:Q:42:ARG:HG3	2.10	0.50
18:Q:270:ASP:CG	18:Q:327:VAL:HG11	2.31	0.50
21:V:38:LYS:HA	21:V:41:LYS:HZ2	1.75	0.50
5:4:11:ASP:OD1	5:4:12:ALA:N	2.44	0.50
10:G:137:VAL:HG12	10:G:138:MET:HE3	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:273:PHE:CD1	15:N:273:PHE:C	2.85	0.50
15:N:508:SER:OG	15:N:637:PHE:O	2.23	0.50
21:V:50:ARG:HA	21:V:53:GLN:NE2	2.26	0.50
5:4:66:TYR:HE2	10:G:39:LYS:HG2	1.77	0.50
9:F:175:GLN:N	9:F:175:GLN:HE21	2.10	0.50
14:K:70:LEU:HD13	21:V:85:PHE:CE1	2.47	0.50
18:Q:115:VAL:O	18:Q:119:VAL:HG23	2.12	0.50
22:W:102:ILE:HD11	22:W:122:VAL:HG21	1.94	0.50
23:X:118:ILE:HD11	23:X:980:GLN:HB3	1.92	0.50
6:A:310:PRO:HB2	6:A:392:LEU:HB2	1.93	0.50
8:D:27:ARG:HA	12:I:103:THR:HG1	1.72	0.50
14:K:98:ASP:O	14:K:101:ARG:CG	2.60	0.50
18:Q:145:GLN:OE1	21:V:42:ILE:HA	2.12	0.50
18:Q:394:HIS:CD2	19:R:78:ARG:HG2	2.46	0.50
22:W:281:ASP:OD1	22:W:281:ASP:N	2.43	0.50
22:W:481:TYR:O	22:W:488:PHE:HB2	2.12	0.50
23:X:86:ASP:OD1	23:X:87:ASP:N	2.45	0.50
23:X:172:THR:HA	23:X:175:ARG:HE	1.77	0.50
9:F:83:LYS:HZ1	9:F:98:TYR:HE1	1.58	0.50
9:F:175:GLN:N	9:F:175:GLN:NE2	2.60	0.50
15:N:293:TYR:CD1	15:N:293:TYR:C	2.85	0.50
15:N:573:VAL:HG23	15:N:584:MET:O	2.12	0.50
18:Q:502:ILE:HB	18:Q:514:LEU:HB2	1.94	0.50
22:W:821:ALA:O	22:W:825:THR:HG23	2.12	0.50
22:W:896:PHE:CD1	22:W:896:PHE:C	2.85	0.50
23:X:37:TRP:CE3	23:X:40:LEU:HD12	2.47	0.50
22:W:67:ILE:HG22	22:W:76:ILE:HG23	1.94	0.50
26:U:15:LEU:O	26:U:15:LEU:HD12	2.12	0.50
2:1:92:GLU:HG2	4:3:38:GLN:HE22	1.77	0.50
11:H:124:LEU:HD13	18:Q:144:LEU:HD11	1.93	0.50
14:K:28:ALA:O	14:K:32:ILE:HG12	2.11	0.50
16:O:703:THR:HA	16:O:725:VAL:O	2.12	0.50
17:P:14:ASP:OD1	17:P:15:LEU:N	2.40	0.50
19:R:111:SER:OG	19:R:112:GLU:N	2.44	0.50
26:U:7:GLN:HE21	26:U:7:GLN:N	2.09	0.50
14:K:55:SER:HA	14:K:58:HIS:CE1	2.47	0.49
15:N:328:ARG:NH1	15:N:334:CYS:SG	2.84	0.49
17:P:343:SER:HB2	17:P:399:LEU:HD23	1.94	0.49
18:Q:31:LEU:HD23	18:Q:31:LEU:N	2.26	0.49
18:Q:289:PRO:HG3	18:Q:291:TRP:CZ2	2.46	0.49
22:W:810:VAL:O	22:W:814:ILE:HG12	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:X:671:GLU:HG2	23:X:687:PHE:CD2	2.46	0.49
8:D:93:MET:SD	8:D:94:GLN:N	2.85	0.49
9:F:97:ASP:H	9:F:107:GLN:HE21	1.59	0.49
10:G:68:HIS:CE1	10:G:72:PHE:HA	2.47	0.49
13:J:113:LEU:HD22	26:U:63:ALA:CA	2.41	0.49
22:W:60:ILE:O	22:W:63:ILE:HG22	2.12	0.49
5:4:60:ASP:HB3	5:4:63:TYR:HD2	1.75	0.49
10:G:71:GLN:H	10:G:71:GLN:CD	2.10	0.49
13:J:75:ARG:HD2	13:J:79:LEU:HD12	1.93	0.49
15:N:496:LEU:O	15:N:499:TRP:N	2.45	0.49
23:X:68:ILE:HD11	23:X:78:VAL:HG21	1.94	0.49
23:X:686:LYS:NZ	23:X:688:PRO:HB2	2.27	0.49
26:U:20:CYS:SG	26:U:21:ASN:N	2.85	0.49
1:0:159:PRO:HB3	1:0:182:ARG:HH12	1.77	0.49
5:4:42:TYR:HB3	5:4:48:PHE:CE2	2.48	0.49
8:D:149:ILE:HD11	10:G:132:ARG:NH1	2.27	0.49
1:0:13:ALA:HB1	1:0:77:VAL:HG12	1.94	0.49
10:G:127:ARG:HG2	15:N:152:PHE:HZ	1.75	0.49
13:J:101:THR:HG22	26:U:51:THR:CG2	2.35	0.49
18:Q:152:SER:HB3	21:V:58:ASN:OD1	2.12	0.49
23:X:670:LEU:HB3	23:X:687:PHE:HE2	1.77	0.49
26:U:54:TYR:HD1	26:U:58:PHE:CZ	2.30	0.49
5:4:108:TYR:HD1	5:4:111:LYS:HD2	1.77	0.49
10:G:123:ILE:CD1	26:U:8:LEU:HD23	2.41	0.49
15:N:376:PRO:CD	15:N:377:PRO:CD	2.78	0.49
20:T:151:SER:HB3	20:T:179:ARG:HH22	1.78	0.49
22:W:729:SER:N	22:W:875:GLU:OE2	2.39	0.49
22:W:843:LEU:HD21	22:W:884:PHE:HE2	1.76	0.49
23:X:183:LEU:HD22	23:X:974:SER:HB3	1.93	0.49
23:X:517:ARG:HG2	23:X:522:VAL:HG12	1.95	0.49
2:1:100:LEU:CD1	18:Q:641:LEU:HB3	2.21	0.49
12:I:96:GLU:O	12:I:99:LYS:HG3	2.13	0.49
19:R:110:THR:HG21	19:R:114:LEU:HD13	1.94	0.49
26:U:19:PHE:CD1	26:U:19:PHE:C	2.85	0.49
1:0:218:ASN:ND2	20:T:1:MET:HG2	2.27	0.49
6:A:364:TYR:HE2	6:A:431:LYS:HA	1.78	0.49
8:D:86:GLN:HA	8:D:89:ILE:HB	1.94	0.49
9:F:40:PHE:HB3	9:F:98:TYR:HE2	1.78	0.49
15:N:184:THR:HG23	15:N:187:GLU:HB3	1.93	0.49
15:N:297:HIS:CE1	15:N:301:LEU:CD2	2.96	0.49
15:N:961:THR:O	15:N:965:MET:HG3	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:P:582:GLU:HA	17:P:585:THR:HG22	1.94	0.49
18:Q:263:LYS:HA	18:Q:340:GLN:OE1	2.13	0.49
20:T:112:THR:HG22	20:T:129:VAL:HG22	1.95	0.49
1:0:107:LEU:HD13	3:2:164:ILE:HG23	1.93	0.49
10:G:89:PHE:CZ	26:U:19:PHE:CD1	2.95	0.49
10:G:123:ILE:HD11	26:U:8:LEU:HD23	1.95	0.49
11:H:152:GLU:O	11:H:156:LYS:HB2	2.11	0.49
15:N:261:ASP:HB2	18:Q:250:ASP:CG	2.31	0.49
15:N:268:SER:HA	15:N:271:ILE:HG22	1.95	0.49
15:N:454:ILE:HG12	15:N:465:LEU:HD23	1.93	0.49
18:Q:146:LEU:HD21	21:V:42:ILE:CD1	2.39	0.49
22:W:399:PHE:CZ	22:W:425:MET:CB	2.94	0.49
23:X:166:GLU:HA	23:X:169:LEU:HG	1.95	0.49
26:U:18:GLN:NE2	26:U:62:ILE:HG12	2.27	0.49
13:J:85:LEU:HD22	25:S:93:TYR:CB	2.42	0.49
15:N:183:ILE:CD1	15:N:188:LYS:HG2	2.43	0.49
15:N:687:ILE:HD12	15:N:770:TRP:CZ2	2.48	0.49
16:O:682:VAL:HA	16:O:685:LEU:HD23	1.93	0.49
17:P:375:GLN:HB2	17:P:465:LEU:HD11	1.95	0.49
18:Q:131:SER:OG	18:Q:132:GLN:N	2.45	0.49
18:Q:561:GLU:OE1	18:Q:587:GLU:HB3	2.13	0.49
21:V:102:ASN:O	21:V:106:ARG:HG3	2.13	0.49
22:W:1023:LYS:HD2	22:W:1114:ALA:HA	1.95	0.49
26:U:7:GLN:N	26:U:7:GLN:NE2	2.60	0.49
1:0:200:VAL:HG13	1:0:214:VAL:HG12	1.94	0.48
14:K:70:LEU:CD2	21:V:86:LEU:HD21	2.43	0.48
15:N:442:ILE:CB	15:N:496:LEU:HD11	2.44	0.48
10:G:161:ILE:HD12	10:G:164:ILE:HG22	1.95	0.48
13:J:95:VAL:HG21	15:N:122:LEU:HD21	1.95	0.48
13:J:104:LYS:NZ	26:U:52:GLU:CA	2.76	0.48
15:N:184:THR:CG2	15:N:187:GLU:HB3	2.44	0.48
15:N:691:LYS:NZ	15:N:691:LYS:CB	2.73	0.48
17:P:218:ILE:HG12	17:P:228:VAL:HG12	1.95	0.48
2:1:92:GLU:HG2	4:3:38:GLN:OE1	2.13	0.48
10:G:120:HIS:HA	10:G:123:ILE:HG22	1.96	0.48
13:J:68:PHE:HE1	25:S:136:ILE:CB	2.27	0.48
15:N:296:LEU:HD22	15:N:296:LEU:N	2.29	0.48
15:N:683:ARG:CD	16:O:684:ARG:HG2	2.43	0.48
17:P:713:LEU:HA	17:P:716:GLU:HG2	1.95	0.48
22:W:63:ILE:O	22:W:67:ILE:HG12	2.13	0.48
22:W:790:LEU:HB3	22:W:826:PHE:CE2	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:W:855:TRP:CH2	22:W:896:PHE:CG	3.01	0.48
25:S:128:ARG:HA	25:S:131:ILE:H	1.78	0.48
9:F:114:VAL:O	9:F:118:ARG:HG3	2.14	0.48
9:F:118:ARG:HD2	18:Q:112:LEU:CD2	2.21	0.48
15:N:370:LEU:HD12	15:N:370:LEU:N	2.28	0.48
15:N:442:ILE:CG1	15:N:496:LEU:HD11	2.43	0.48
16:O:684:ARG:O	16:O:684:ARG:HG3	2.14	0.48
19:R:21:TYR:HA	19:R:101:LEU:O	2.13	0.48
23:X:311:LEU:O	23:X:314:PRO:HD2	2.13	0.48
4:3:144:GLU:HA	4:3:147:LYS:CD	2.43	0.48
8:D:34:LEU:HA	8:D:37:LEU:HD23	1.88	0.48
10:G:88:ASN:ND2	10:G:112:LEU:HD21	2.29	0.48
15:N:234:LEU:HD13	15:N:246:ARG:O	2.14	0.48
22:W:646:GLU:OE1	22:W:864:ARG:CD	2.61	0.48
4:3:167:ILE:HA	4:3:170:ILE:HG22	1.95	0.48
9:F:174:ARG:CD	15:N:270:GLN:HE22	2.27	0.48
10:G:127:ARG:CG	15:N:152:PHE:HE1	2.26	0.48
11:H:55:GLN:O	11:H:59:LEU:HG	2.13	0.48
18:Q:46:ARG:CG	18:Q:46:ARG:NH1	2.72	0.48
18:Q:606:LYS:HE2	18:Q:606:LYS:HA	1.94	0.48
23:X:558:VAL:O	23:X:562:ASN:ND2	2.47	0.48
23:X:942:SER:O	23:X:945:GLN:NE2	2.44	0.48
26:U:8:LEU:HD13	26:U:72:LEU:HD12	1.96	0.48
3:2:103:ASP:N	3:2:103:ASP:OD1	2.45	0.48
9:F:171:ILE:HG21	15:N:263:ARG:HB2	1.96	0.48
10:G:57:ARG:HD3	10:G:58:PRO:CD	2.16	0.48
11:H:19:VAL:HG21	18:Q:116:LEU:HD13	1.95	0.48
5:4:42:TYR:HB3	5:4:48:PHE:HE2	1.79	0.48
6:A:317:PHE:CE2	6:A:414:GLN:HB2	2.49	0.48
16:O:738:ASP:OD1	16:O:739:ARG:N	2.46	0.48
17:P:556:ILE:HD11	17:P:617:LEU:HB3	1.96	0.48
23:X:404:GLN:OE1	23:X:408:GLN:NE2	2.47	0.48
2:1:94:PHE:HB2	18:Q:650:LEU:CD2	2.44	0.48
6:A:108:PHE:HB2	6:A:127:HIS:CE1	2.49	0.48
15:N:188:LYS:HE3	18:Q:47:ILE:CD1	2.43	0.48
17:P:65:LEU:HD11	17:P:70:PRO:HA	1.96	0.48
22:W:855:TRP:CZ3	22:W:896:PHE:CA	2.96	0.48
23:X:174:ASN:HA	23:X:177:LEU:HD12	1.95	0.48
26:U:15:LEU:O	26:U:19:PHE:CD2	2.66	0.48
6:A:267:LYS:C	6:A:268:LEU:HD23	2.35	0.48
15:N:592:LYS:HA	22:W:27:MET:SD	2.53	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:O:721:LEU:HG	16:O:736:TRP:NE1	2.29	0.48
20:T:151:SER:OG	20:T:179:ARG:NH2	2.47	0.48
22:W:627:LEU:HD22	22:W:648:THR:CG2	2.44	0.48
22:W:743:PHE:O	22:W:747:ASN:ND2	2.47	0.48
1:0:106:GLN:HG2	3:2:168:ILE:HD11	1.96	0.47
6:A:214:ARG:HD3	6:A:219:LEU:HD23	1.96	0.47
8:D:153:HIS:HA	8:D:156:SER:HB3	1.96	0.47
15:N:230:PHE:CE2	15:N:296:LEU:HB3	2.49	0.47
15:N:846:ASN:O	15:N:846:ASN:ND2	2.46	0.47
23:X:241:PHE:CE2	23:X:276:ILE:HG12	2.49	0.47
23:X:481:GLU:HB3	23:X:485:PRO:HG2	1.96	0.47
23:X:605:ILE:O	23:X:609:ILE:HG12	2.14	0.47
10:G:135:LEU:HD23	10:G:135:LEU:C	2.34	0.47
10:G:157:LEU:HD21	26:U:110:ARG:HH22	1.78	0.47
15:N:273:PHE:O	15:N:276:GLN:HG3	2.14	0.47
18:Q:252:GLU:OE1	18:Q:252:GLU:N	2.47	0.47
22:W:57:GLU:HA	22:W:96:LEU:HD21	1.96	0.47
8:D:73:ASP:HA	8:D:76:PHE:HE1	1.79	0.47
9:F:74:GLN:HE22	9:F:76:PRO:HG2	1.79	0.47
9:F:98:TYR:HD2	9:F:105:ILE:HD11	1.78	0.47
10:G:65:GLU:HA	10:G:65:GLU:OE2	2.13	0.47
15:N:683:ARG:NE	16:O:684:ARG:HG2	2.30	0.47
15:N:885:LEU:HD11	15:N:1186:LEU:HD22	1.95	0.47
17:P:12:MET:N	17:P:458:SER:OG	2.35	0.47
22:W:131:TYR:HE1	22:W:132:LYS:HE3	1.78	0.47
22:W:457:PHE:O	22:W:460:GLN:HG3	2.13	0.47
22:W:809:ARG:NH2	22:W:812:GLU:OE1	2.41	0.47
23:X:42:LEU:HD23	23:X:42:LEU:O	2.13	0.47
23:X:173:LYS:HG2	23:X:986:ILE:HG13	1.96	0.47
23:X:795:SER:HA	23:X:798:TRP:CZ3	2.49	0.47
26:U:22:ALA:HB1	26:U:58:PHE:CD2	2.49	0.47
4:3:43:ASP:HB2	4:3:88:LEU:HD21	1.95	0.47
10:G:141:VAL:HA	10:G:144:ARG:HD3	1.96	0.47
13:J:101:THR:HB	26:U:51:THR:OG1	2.14	0.47
15:N:153:ALA:HB1	15:N:156:TYR:HD2	1.78	0.47
15:N:473:ALA:O	15:N:476:ASP:OD1	2.32	0.47
18:Q:94:PRO:HB2	18:Q:95:TRP:CE3	2.49	0.47
22:W:37:LEU:CD1	22:W:85:MET:HE2	2.36	0.47
22:W:376:LEU:HA	22:W:379:PHE:HD2	1.80	0.47
22:W:894:ASN:HA	22:W:897:ARG:HE	1.78	0.47
23:X:37:TRP:HD1	23:X:72:MET:CE	2.23	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:460:SER:O	15:N:460:SER:OG	2.28	0.47
22:W:605:LEU:HB3	22:W:644:CYS:SG	2.54	0.47
22:W:662:GLN:HG2	22:W:711:TRP:CE2	2.49	0.47
5:4:14:ASN:HA	5:4:17:ARG:HG2	1.97	0.47
10:G:47:ASN:N	10:G:47:ASN:ND2	2.60	0.47
11:H:38:GLY:C	11:H:39:ARG:HD3	2.35	0.47
16:O:723:LEU:HD22	16:O:769:VAL:HG23	1.97	0.47
22:W:409:ILE:HG12	22:W:450:SER:HB3	1.97	0.47
22:W:506:ARG:HD3	22:W:506:ARG:HA	1.65	0.47
23:X:88:PHE:HZ	23:X:134:CYS:HB2	1.79	0.47
1:0:251:LEU:HD11	18:Q:494:GLN:HB2	1.97	0.47
6:A:268:LEU:HD13	6:A:303:PHE:CZ	2.50	0.47
6:A:317:PHE:HA	6:A:320:LYS:HG2	1.97	0.47
6:A:509:ARG:O	6:A:513:ARG:HG2	2.14	0.47
8:D:76:PHE:HA	8:D:79:LEU:HB2	1.97	0.47
8:D:95:VAL:HA	8:D:98:LYS:HD2	1.95	0.47
11:H:38:GLY:O	11:H:39:ARG:HD3	2.14	0.47
14:K:93:ALA:O	14:K:97:VAL:HG23	2.15	0.47
16:O:685:LEU:HD13	16:O:689:PHE:HB2	1.97	0.47
20:T:112:THR:HA	20:T:128:THR:O	2.14	0.47
21:V:38:LYS:HA	21:V:41:LYS:NZ	2.29	0.47
22:W:53:GLN:HA	22:W:56:HIS:CD2	2.49	0.47
22:W:154:SER:O	22:W:157:VAL:HG22	2.15	0.47
22:W:854:VAL:HG11	22:W:862:LEU:HD13	1.96	0.47
23:X:20:ASP:OD1	23:X:21:TYR:N	2.48	0.47
23:X:472:ASN:HA	23:X:475:THR:HG22	1.97	0.47
1:0:245:HIS:CD2	1:0:295:THR:O	2.68	0.47
8:D:30:LEU:HD21	12:I:99:LYS:CB	2.45	0.47
8:D:30:LEU:HD21	8:D:34:LEU:CD2	2.43	0.47
10:G:59:LEU:HD22	10:G:59:LEU:H	1.76	0.47
11:H:181:LEU:HB3	19:R:168:LEU:HD12	1.95	0.47
17:P:244:VAL:HG13	17:P:255:ILE:HG23	1.95	0.47
22:W:509:LEU:HB2	22:W:514:CYS:CB	2.44	0.47
22:W:862:LEU:CD2	22:W:896:PHE:HE2	2.27	0.47
8:D:152:ALA:O	8:D:156:SER:HB2	2.13	0.47
9:F:20:TRP:HZ3	9:F:31:ASP:HB3	1.80	0.47
10:G:158:GLU:HA	10:G:161:ILE:HG22	1.95	0.47
15:N:399:LYS:CD	18:Q:271:LEU:HB2	2.45	0.47
16:O:759:ARG:HD2	16:O:779:SER:HB2	1.96	0.47
18:Q:138:LYS:HG2	18:Q:139:GLN:H	1.80	0.47
18:Q:320:SER:OG	18:Q:321:GLN:N	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:Q:635:PHE:CD1	18:Q:635:PHE:C	2.88	0.47
22:W:296:ARG:NH1	22:W:301:GLU:OE2	2.48	0.47
2:1:92:GLU:HG2	4:3:38:GLN:NE2	2.29	0.47
6:A:249:ARG:O	6:A:254:ASN:ND2	2.45	0.47
9:F:171:ILE:CG2	15:N:263:ARG:CZ	2.93	0.47
15:N:165:SER:OG	15:N:166:TYR:N	2.48	0.47
15:N:301:LEU:HD23	15:N:361:ILE:CG1	2.42	0.47
19:R:85:LEU:HG	19:R:114:LEU:HD21	1.97	0.47
22:W:25:MET:SD	22:W:25:MET:C	2.94	0.47
23:X:31:PHE:CD1	23:X:32:PRO:CD	2.92	0.47
23:X:37:TRP:HE3	23:X:40:LEU:HD12	1.80	0.47
4:3:149:LEU:C	4:3:149:LEU:HD12	2.36	0.46
6:A:366:ALA:HB2	6:A:430:LEU:HD11	1.98	0.46
15:N:529:PRO:HB2	15:N:588:LEU:HD12	1.97	0.46
17:P:180:ILE:HD13	17:P:226:ILE:HD13	1.97	0.46
22:W:1132:LYS:HE2	22:W:1132:LYS:HB3	1.82	0.46
23:X:951:THR:HA	23:X:954:GLU:HB2	1.96	0.46
2:1:129:VAL:HG13	14:K:115:LEU:HD11	1.96	0.46
5:4:109:SER:HB3	8:D:163:ALA:HB3	1.98	0.46
6:A:173:MET:HA	6:A:173:MET:CE	2.45	0.46
14:K:70:LEU:HD21	21:V:86:LEU:HD21	1.92	0.46
15:N:184:THR:HG23	15:N:187:GLU:H	1.79	0.46
21:V:50:ARG:HA	21:V:53:GLN:HE22	1.81	0.46
22:W:155:ALA:H	23:X:915:ARG:NH2	2.13	0.46
22:W:693:ARG:HD3	22:W:1007:ASN:HD22	1.80	0.46
23:X:296:SER:O	23:X:354:ARG:NH2	2.48	0.46
23:X:977:LEU:HA	23:X:980:GLN:NE2	2.31	0.46
15:N:242:ASP:N	15:N:242:ASP:OD1	2.47	0.46
15:N:252:ILE:HG22	15:N:254:VAL:HG22	1.97	0.46
18:Q:255:ALA:HB2	18:Q:347:HIS:CD2	2.50	0.46
22:W:145:ILE:HD11	22:W:163:ALA:HB1	1.97	0.46
8:D:47:MET:SD	8:D:47:MET:C	2.94	0.46
8:D:126:TYR:CD1	8:D:126:TYR:C	2.88	0.46
8:D:145:SER:HA	8:D:148:ILE:HD12	1.96	0.46
15:N:320:TRP:O	18:Q:317:GLN:NE2	2.48	0.46
15:N:669:GLN:NE2	15:N:683:ARG:HD3	2.31	0.46
22:W:787:PRO:HB3	22:W:822:HIS:CD2	2.50	0.46
1:0:176:MET:HG2	1:0:194:LEU:HD21	1.97	0.46
1:0:306:HIS:HB2	1:0:309:CYS:SG	2.55	0.46
15:N:398:GLU:O	15:N:402:ILE:HG12	2.16	0.46
1:0:281:CYS:HB2	1:0:306:HIS:ND1	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:67:LYS:HD2	6:A:80:ARG:HG3	1.97	0.46
15:N:223:LYS:CD	15:N:231:GLU:OE2	2.61	0.46
22:W:895:ASP:HA	22:W:898:ASN:ND2	2.30	0.46
23:X:558:VAL:HG23	23:X:588:ILE:HD11	1.97	0.46
6:A:175:LEU:N	6:A:175:LEU:HD23	2.30	0.46
6:A:363:PHE:HD2	6:A:425:VAL:HA	1.80	0.46
11:H:139:GLN:HE22	14:K:37:LYS:HD2	1.81	0.46
15:N:240:ASP:N	15:N:241:PRO:CD	2.78	0.46
20:T:149:VAL:CG2	20:T:152:ASP:HB2	2.44	0.46
4:3:69:GLY:O	4:3:72:GLN:NE2	2.49	0.46
17:P:439:THR:OG1	17:P:490:ASP:OD2	2.33	0.46
23:X:639:SER:O	23:X:642:MET:HG3	2.16	0.46
11:H:14:ALA:O	11:H:18:GLN:HG2	2.16	0.46
15:N:212:LEU:CD1	15:N:367:SER:HA	2.43	0.46
15:N:377:PRO:HB2	15:N:408:ARG:NH2	2.31	0.46
16:O:681:GLU:OE2	16:O:768:SER:OG	2.34	0.46
18:Q:153:LEU:HD12	18:Q:156:ALA:HB3	1.97	0.46
18:Q:334:GLN:OE1	18:Q:340:GLN:HG3	2.16	0.46
19:R:99:HIS:CD2	19:R:187:LYS:HD3	2.51	0.46
22:W:642:HIS:CE1	22:W:817:ARG:HA	2.51	0.46
22:W:896:PHE:O	22:W:896:PHE:HD1	1.99	0.46
5:4:84:PHE:CB	15:N:178:ILE:HD11	2.46	0.46
10:G:142:GLN:O	10:G:146:ARG:CG	2.44	0.46
15:N:177:ILE:HG22	15:N:178:ILE:CD1	2.46	0.46
15:N:183:ILE:HD11	15:N:188:LYS:CD	2.45	0.46
16:O:731:ALA:O	16:O:766:LYS:NZ	2.46	0.46
18:Q:482:GLN:OE1	18:Q:482:GLN:HA	2.16	0.46
23:X:4:VAL:CG2	23:X:31:PHE:CE2	2.91	0.46
1:0:168:ARG:O	1:0:171:ARG:HG2	2.15	0.45
13:J:104:LYS:HZ1	26:U:52:GLU:CB	2.29	0.45
15:N:149:LEU:HD22	15:N:149:LEU:H	1.77	0.45
15:N:222:VAL:HB	15:N:234:LEU:HB2	1.97	0.45
17:P:373:ASP:OD1	17:P:374:THR:N	2.49	0.45
18:Q:394:HIS:NE2	19:R:78:ARG:CG	2.76	0.45
18:Q:430:LYS:O	18:Q:434:GLN:HG3	2.16	0.45
20:T:38:THR:HA	20:T:115:THR:HA	1.99	0.45
23:X:39:ILE:CD1	23:X:39:ILE:H	2.29	0.45
23:X:901:LEU:HD21	23:X:943:VAL:HB	1.98	0.45
1:0:238:VAL:HG23	1:0:295:THR:CG2	2.43	0.45
1:0:278:GLN:HE21	1:0:278:GLN:HB2	1.57	0.45
6:A:444:PRO:HA	6:A:450:PHE:HA	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:F:77:ILE:HG13	9:F:78:LEU:N	2.31	0.45
15:N:376:PRO:N	15:N:377:PRO:CD	2.79	0.45
23:X:555:GLU:HA	23:X:558:VAL:HG12	1.97	0.45
6:A:174:TYR:C	6:A:174:TYR:CD1	2.90	0.45
6:A:259:ILE:HG22	6:A:303:PHE:HD1	1.82	0.45
10:G:47:ASN:N	10:G:47:ASN:HD22	2.14	0.45
10:G:57:ARG:CZ	10:G:125:GLU:HG3	2.47	0.45
14:K:62:GLU:O	14:K:66:GLN:HG2	2.16	0.45
22:W:473:LYS:HA	22:W:476:LEU:HD12	1.97	0.45
23:X:765:VAL:HG21	23:X:808:ALA:HB1	1.98	0.45
9:F:109:PRO:O	11:H:76:ILE:HG22	2.16	0.45
10:G:154:GLN:OE1	10:G:154:GLN:HA	2.15	0.45
11:H:52:LEU:HD23	11:H:52:LEU:O	2.15	0.45
15:N:183:ILE:HD12	15:N:188:LYS:CG	2.46	0.45
15:N:212:LEU:HD11	15:N:367:SER:OG	2.15	0.45
17:P:51:LEU:H	17:P:59:THR:HG22	1.81	0.45
22:W:904:VAL:HG12	22:W:997:PHE:HE2	1.81	0.45
26:U:1:MET:HG2	26:U:1:MET:O	2.16	0.45
10:G:97:ILE:CD1	13:J:102:MET:HE1	2.34	0.45
14:K:55:SER:HA	14:K:58:HIS:HD1	1.82	0.45
15:N:114:LYS:CB	25:S:89:LEU:CD2	2.94	0.45
15:N:359:ILE:CG2	15:N:370:LEU:HD23	2.47	0.45
15:N:738:GLU:N	15:N:739:GLN:OE1	2.49	0.45
18:Q:150:LYS:O	18:Q:154:ALA:HB2	2.16	0.45
22:W:859:ILE:HG23	22:W:860:VAL:HG22	1.98	0.45
9:F:98:TYR:HB3	9:F:105:ILE:HD11	1.99	0.45
15:N:312:THR:HG21	15:N:337:LEU:HD11	1.99	0.45
17:P:751:GLN:HG2	17:P:752:PHE:H	1.81	0.45
18:Q:144:LEU:HD23	18:Q:147:ILE:HG21	1.97	0.45
22:W:389:LEU:C	22:W:389:LEU:CD2	2.85	0.45
22:W:773:GLU:O	22:W:777:ILE:HG13	2.17	0.45
23:X:185:GLU:OE1	23:X:188:SER:OG	2.24	0.45
1:0:275:LYS:O	1:0:275:LYS:HD3	2.16	0.45
4:3:144:GLU:HA	4:3:147:LYS:HG2	1.98	0.45
6:A:174:TYR:CD1	6:A:174:TYR:O	2.70	0.45
8:D:95:VAL:HA	8:D:98:LYS:CD	2.47	0.45
8:D:95:VAL:HA	8:D:98:LYS:CE	2.47	0.45
9:F:77:ILE:HD11	11:H:81:LEU:CD1	2.46	0.45
22:W:642:HIS:HA	22:W:645:VAL:CG1	2.43	0.45
23:X:566:GLU:HG2	23:X:567:MET:N	2.30	0.45
4:3:163:LEU:HD11	21:V:123:ILE:CG2	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:108:PHE:HB2	6:A:127:HIS:ND1	2.32	0.45
10:G:60:GLU:CG	10:G:121:HIS:NE2	2.79	0.45
10:G:67:LEU:C	10:G:67:LEU:CD1	2.85	0.45
13:J:98:LYS:O	13:J:102:MET:HG2	2.16	0.45
15:N:736:THR:HG22	15:N:739:GLN:HE22	1.82	0.45
15:N:937:ARG:NH1	15:N:939:GLY:HA2	2.32	0.45
22:W:202:GLY:HA2	23:X:803:ASP:OD2	2.15	0.45
22:W:396:MET:HE3	22:W:396:MET:CA	2.46	0.45
6:A:210:TYR:HB3	6:A:223:LYS:HB2	1.99	0.45
6:A:488:ILE:HG23	6:A:515:ALA:HB2	1.99	0.45
13:J:95:VAL:O	13:J:98:LYS:HG3	2.16	0.45
22:W:434:ARG:HD2	22:W:484:ASN:HD21	1.82	0.45
23:X:182:LYS:HA	23:X:189:TRP:NE1	2.32	0.45
26:U:57:LEU:C	26:U:57:LEU:CD2	2.85	0.45
5:4:84:PHE:CE2	15:N:177:ILE:HD12	2.52	0.45
6:A:165:GLY:CA	6:A:170:LYS:CG	2.89	0.45
6:A:258:THR:HG23	6:A:260:GLU:OE2	2.17	0.45
6:A:278:HIS:CG	6:A:279:PRO:HD2	2.52	0.45
9:F:97:ASP:HB2	9:F:108:ALA:HB3	1.99	0.45
10:G:42:TYR:CD1	10:G:42:TYR:C	2.90	0.45
12:I:86:ASP:OD1	12:I:86:ASP:N	2.49	0.45
15:N:212:LEU:HD11	15:N:367:SER:O	2.16	0.45
15:N:219:ASN:O	15:N:221:ARG:HG3	2.17	0.45
17:P:207:CYS:HG	17:P:242:TYR:HE2	1.59	0.45
18:Q:620:GLY:H	18:Q:621:PRO:HD2	1.80	0.45
22:W:376:LEU:O	22:W:380:ILE:HG13	2.17	0.45
22:W:618:HIS:HA	22:W:621:VAL:HG12	1.98	0.45
23:X:915:ARG:NE	23:X:916:THR:H	2.14	0.45
26:U:109:TYR:HD1	26:U:112:ASP:HB3	1.82	0.45
6:A:69:LEU:CG	12:I:66:LEU:HD11	2.46	0.44
8:D:145:SER:H	18:Q:9:ILE:HD13	1.81	0.44
9:F:172:PHE:CG	9:F:172:PHE:O	2.71	0.44
15:N:669:GLN:HE22	15:N:683:ARG:HD3	1.82	0.44
21:V:24:ASP:OD1	21:V:27:LYS:HE3	2.17	0.44
22:W:999:ASP:OD1	22:W:1000:ARG:N	2.50	0.44
23:X:601:SER:O	23:X:605:ILE:HG12	2.16	0.44
15:N:801:ARG:HG2	15:N:802:VAL:HG23	2.00	0.44
18:Q:592:ILE:H	18:Q:592:ILE:HG12	1.63	0.44
15:N:170:PRO:HA	18:Q:20:HIS:O	2.17	0.44
15:N:399:LYS:CE	18:Q:271:LEU:CB	2.95	0.44
23:X:137:ALA:O	23:X:140:GLU:HG2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:192:TRP:HA	6:A:202:LYS:HZ2	1.82	0.44
12:I:107:ILE:CD1	12:I:110:SER:HA	2.47	0.44
17:P:148:GLU:HB2	17:P:370:VAL:HG21	1.99	0.44
18:Q:105:ALA:O	18:Q:109:MET:HG3	2.18	0.44
18:Q:485:GLU:H	18:Q:485:GLU:CD	2.14	0.44
23:X:568:LYS:NZ	23:X:572:MET:HG3	2.33	0.44
26:U:49:ASN:N	26:U:50:PRO:CD	2.79	0.44
6:A:70:LYS:HE2	6:A:79:ASP:HB3	2.00	0.44
8:D:27:ARG:HG3	12:I:103:THR:OG1	2.17	0.44
9:F:172:PHE:O	9:F:172:PHE:CD2	2.70	0.44
10:G:42:TYR:CD1	10:G:42:TYR:O	2.71	0.44
10:G:86:LEU:HD13	10:G:90:LEU:HD23	1.99	0.44
12:I:104:MET:N	12:I:105:PRO:CD	2.80	0.44
14:K:55:SER:HA	14:K:58:HIS:ND1	2.32	0.44
18:Q:156:ALA:O	18:Q:159:ILE:HG22	2.18	0.44
22:W:561:PRO:O	22:W:565:GLU:HG2	2.17	0.44
23:X:905:PHE:HA	23:X:908:ILE:HG22	1.98	0.44
8:D:73:ASP:HA	8:D:76:PHE:CE1	2.52	0.44
10:G:78:LEU:HD23	10:G:78:LEU:O	2.17	0.44
13:J:108:LEU:CD1	26:U:55:ALA:O	2.61	0.44
15:N:277:LEU:O	15:N:280:SER:HB2	2.18	0.44
17:P:21:TRP:HH2	17:P:452:LEU:HD12	1.82	0.44
22:W:12:VAL:HG22	22:W:40:CYS:SG	2.58	0.44
22:W:493:GLY:O	22:W:496:VAL:N	2.50	0.44
23:X:302:GLU:OE1	23:X:354:ARG:NH2	2.50	0.44
5:4:107:HIS:CE1	18:Q:26:GLY:HA2	2.51	0.44
6:A:363:PHE:CD2	6:A:425:VAL:HA	2.53	0.44
9:F:94:PRO:CG	18:Q:130:VAL:HG11	2.45	0.44
10:G:78:LEU:CD2	10:G:78:LEU:C	2.86	0.44
10:G:114:LEU:HD23	10:G:114:LEU:O	2.18	0.44
15:N:660:GLU:OE1	15:N:760:ARG:HD2	2.17	0.44
18:Q:43:LEU:CD1	18:Q:43:LEU:C	2.86	0.44
18:Q:144:LEU:CD2	18:Q:147:ILE:HD13	2.45	0.44
22:W:862:LEU:CD2	22:W:896:PHE:CE2	3.01	0.44
22:W:896:PHE:C	22:W:896:PHE:HD1	2.20	0.44
1:0:240:GLN:O	1:0:243:THR:OG1	2.28	0.44
2:1:119:ARG:HA	2:1:122:LEU:HD12	1.98	0.44
4:3:70:THR:O	4:3:74:ARG:HG3	2.17	0.44
5:4:10:ASP:N	5:4:10:ASP:OD1	2.51	0.44
15:N:545:LEU:CD1	15:N:652:MET:HB2	2.47	0.44
15:N:589:GLN:HG2	22:W:25:MET:HE1	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:Q:264:GLN:OE1	18:Q:264:GLN:N	2.39	0.44
22:W:1279:LEU:HD22	22:W:1317:ILE:HG23	2.00	0.44
2:1:86:ASP:O	2:1:90:GLN:HG3	2.18	0.44
8:D:34:LEU:HA	8:D:37:LEU:CG	2.46	0.44
9:F:171:ILE:HD11	15:N:264:ALA:O	2.17	0.44
15:N:256:ASP:OD1	15:N:259:THR:HG22	2.17	0.44
15:N:517:SER:O	15:N:538:LEU:HD12	2.18	0.44
17:P:395:HIS:HB3	17:P:398:SER:O	2.18	0.44
18:Q:398:ALA:HA	18:Q:399:PRO:HD3	1.68	0.44
22:W:83:LEU:HD23	22:W:83:LEU:HA	1.84	0.44
22:W:627:LEU:CD2	22:W:648:THR:CG2	2.96	0.44
22:W:684:ASN:HB2	22:W:719:ILE:HG23	1.99	0.44
22:W:787:PRO:HG2	22:W:825:THR:HG21	2.00	0.44
22:W:892:LYS:HB3	22:W:893:PRO:HD3	2.00	0.44
22:W:1064:ASP:OD1	22:W:1064:ASP:N	2.48	0.44
23:X:198:LYS:O	23:X:201:GLU:HG3	2.18	0.44
8:D:30:LEU:CD2	8:D:30:LEU:C	2.85	0.43
10:G:57:ARG:CG	10:G:57:ARG:NH1	2.72	0.43
10:G:86:LEU:C	10:G:86:LEU:CD1	2.85	0.43
13:J:113:LEU:CD2	26:U:63:ALA:HA	2.48	0.43
15:N:208:LEU:C	15:N:208:LEU:CD1	2.85	0.43
15:N:230:PHE:N	15:N:230:PHE:CD1	2.86	0.43
15:N:687:ILE:CD1	15:N:705:LEU:HD11	2.45	0.43
17:P:823:TRP:HZ3	17:P:828:LEU:HG	1.83	0.43
18:Q:156:ALA:O	18:Q:160:LEU:HG	2.17	0.43
18:Q:550:SER:HB3	18:Q:570:THR:HG22	2.00	0.43
21:V:85:PHE:CD1	21:V:85:PHE:C	2.90	0.43
22:W:369:ARG:HD2	22:W:403:TYR:CZ	2.53	0.43
22:W:896:PHE:CD1	22:W:896:PHE:O	2.70	0.43
2:1:143:LEU:HD11	14:K:97:VAL:CG1	2.45	0.43
9:F:188:PHE:CD2	15:N:295:CYS:SG	2.91	0.43
15:N:204:VAL:C	15:N:206:THR:H	2.22	0.43
15:N:468:TYR:CD1	18:Q:516:TYR:HE2	2.36	0.43
15:N:545:LEU:HD11	15:N:652:MET:CB	2.46	0.43
17:P:710:ASP:OD1	17:P:710:ASP:N	2.51	0.43
18:Q:103:ARG:O	18:Q:107:THR:HG23	2.18	0.43
18:Q:414:ASP:O	18:Q:418:ILE:HG12	2.18	0.43
22:W:847:ILE:HG12	22:W:888:LEU:HB3	1.99	0.43
22:W:853:MET:O	22:W:859:ILE:HG22	2.18	0.43
22:W:1082:LYS:HD3	22:W:1082:LYS:HA	1.87	0.43
23:X:905:PHE:O	23:X:908:ILE:HG22	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:X:977:LEU:HD12	23:X:980:GLN:HE21	1.83	0.43
12:I:123:GLU:HA	12:I:126:ARG:HG2	2.00	0.43
17:P:684:ASP:HB3	17:P:687:SER:HB3	1.99	0.43
20:T:63:MET:HG3	20:T:79:PHE:CE1	2.53	0.43
22:W:726:ASN:ND2	22:W:748:VAL:O	2.51	0.43
22:W:1068:TYR:O	22:W:1072:ILE:HG12	2.19	0.43
6:A:267:LYS:HZ1	6:A:288:PHE:HB2	1.81	0.43
15:N:297:HIS:O	15:N:300:CYS:HB2	2.18	0.43
15:N:821:SER:O	15:N:833:ILE:HA	2.17	0.43
18:Q:443:ARG:O	18:Q:447:THR:HG23	2.18	0.43
22:W:369:ARG:HD2	22:W:403:TYR:CE2	2.53	0.43
22:W:662:GLN:HG2	22:W:711:TRP:CZ2	2.53	0.43
23:X:47:LEU:HD12	23:X:81:ALA:HB1	1.99	0.43
23:X:262:SER:HA	23:X:265:GLU:HG2	1.99	0.43
23:X:798:TRP:CD1	23:X:919:PRO:HD2	2.54	0.43
11:H:103:GLU:N	11:H:103:GLU:OE2	2.51	0.43
13:J:65:LEU:O	13:J:68:PHE:N	2.52	0.43
15:N:336:SER:HB2	15:N:358:THR:HG22	2.00	0.43
18:Q:595:GLN:OE1	18:Q:619:ARG:HD2	2.18	0.43
22:W:892:LYS:N	22:W:893:PRO:HD3	2.33	0.43
23:X:167:LYS:HA	23:X:167:LYS:HD2	1.75	0.43
9:F:82:ARG:NH2	9:F:94:PRO:HB2	2.33	0.43
10:G:89:PHE:CE2	26:U:19:PHE:CG	2.91	0.43
10:G:114:LEU:C	10:G:114:LEU:CD2	2.86	0.43
15:N:155:PRO:HA	15:N:158:ILE:HG22	1.99	0.43
15:N:178:ILE:CG2	15:N:179:PRO:HD2	2.49	0.43
15:N:183:ILE:HB	15:N:187:GLU:CG	2.49	0.43
15:N:1217:ARG:O	15:N:1221:GLN:HG2	2.19	0.43
17:P:576:PRO:HA	17:P:579:ARG:HG2	2.00	0.43
23:X:4:VAL:CG2	23:X:31:PHE:CD1	2.95	0.43
23:X:196:LEU:HD11	23:X:223:ARG:HH11	1.84	0.43
6:A:69:LEU:CD2	12:I:66:LEU:HD11	2.48	0.43
10:G:57:ARG:NE	10:G:125:GLU:HA	2.33	0.43
11:H:139:GLN:NE2	14:K:37:LYS:HD2	2.34	0.43
13:J:85:LEU:HD13	25:S:93:TYR:CB	2.47	0.43
17:P:593:ASP:OD1	17:P:594:LYS:N	2.51	0.43
17:P:732:LEU:HB3	17:P:733:PRO:HD3	1.99	0.43
18:Q:109:MET:HE2	18:Q:109:MET:HB2	1.76	0.43
18:Q:456:GLU:OE1	18:Q:456:GLU:N	2.52	0.43
15:N:1202:TYR:HD2	15:N:1292:PRO:HG2	1.83	0.43
18:Q:162:LYS:HA	18:Q:165:GLU:HG3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:W:51:LEU:HD12	22:W:51:LEU:HA	1.90	0.43
23:X:336:CYS:O	23:X:339:GLU:HG3	2.18	0.43
23:X:345:THR:OG1	23:X:346:PRO:HD3	2.19	0.43
23:X:660:ASN:O	23:X:664:VAL:HG23	2.19	0.43
2:1:97:GLN:HG2	4:3:111:VAL:HG11	2.01	0.43
15:N:245:TRP:HB2	15:N:282:LEU:CG	2.45	0.43
22:W:16:GLU:HB3	22:W:19:GLU:HG3	2.00	0.43
22:W:622:GLN:O	22:W:626:HIS:ND1	2.43	0.43
5:4:68:LYS:HB2	8:D:154:ARG:HH12	1.84	0.43
6:A:90:LEU:HD11	6:A:102:TYR:HB3	2.01	0.43
6:A:203:ILE:HG12	6:A:210:TYR:HB2	2.00	0.43
11:H:49:PHE:HD2	21:V:59:TYR:OH	2.02	0.43
15:N:376:PRO:CB	15:N:377:PRO:CD	2.92	0.43
15:N:464:GLN:OE1	18:Q:323:PRO:HD3	2.19	0.43
17:P:696:LEU:HD13	17:P:713:LEU:HD21	2.01	0.43
22:W:850:LEU:HD21	22:W:889:LEU:HD22	2.01	0.43
23:X:140:GLU:HB2	23:X:143:ARG:HH22	1.84	0.43
6:A:69:LEU:HB3	12:I:66:LEU:CD1	2.49	0.42
9:F:101:ILE:HD12	11:H:105:VAL:CG1	2.39	0.42
17:P:149:LYS:HD2	17:P:157:GLU:HG3	2.00	0.42
22:W:894:ASN:HA	22:W:897:ARG:HH21	1.84	0.42
9:F:74:GLN:NE2	9:F:78:LEU:H	2.08	0.42
13:J:108:LEU:HD11	26:U:55:ALA:CB	2.50	0.42
15:N:188:LYS:CE	18:Q:47:ILE:CD1	2.90	0.42
15:N:222:VAL:CG1	15:N:224:PHE:HB2	2.49	0.42
18:Q:46:ARG:HG3	18:Q:46:ARG:NH1	2.21	0.42
22:W:401:LEU:O	22:W:401:LEU:HD12	2.19	0.42
22:W:712:CYS:O	22:W:716:LEU:HG	2.19	0.42
1:0:104:TYR:O	1:0:107:LEU:HB3	2.20	0.42
1:0:245:HIS:HD2	1:0:295:THR:O	2.01	0.42
6:A:62:LEU:CD2	8:D:66:LEU:CD1	2.97	0.42
9:F:174:ARG:HH21	15:N:267:HIS:N	2.17	0.42
10:G:74:HIS:ND1	10:G:122:LEU:CD1	2.73	0.42
13:J:63:VAL:HG12	15:N:105:TRP:HZ3	1.83	0.42
14:K:70:LEU:HD23	14:K:70:LEU:HA	1.84	0.42
23:X:586:LEU:HD12	23:X:623:TRP:CZ2	2.54	0.42
4:3:47:ARG:O	4:3:51:ILE:HG12	2.19	0.42
6:A:492:ASP:OD1	6:A:493:PHE:N	2.52	0.42
10:G:138:MET:HE3	10:G:138:MET:N	2.34	0.42
15:N:229:GLU:CG	15:N:300:CYS:HB3	2.49	0.42
15:N:328:ARG:HD2	15:N:330:HIS:CE1	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:376:PRO:HG2	15:N:377:PRO:HD2	1.72	0.42
15:N:861:LYS:HG2	15:N:862:THR:HG23	2.00	0.42
16:O:679:GLN:HG2	18:Q:609:VAL:HG12	2.01	0.42
17:P:49:MET:SD	17:P:450:GLY:HA2	2.60	0.42
18:Q:139:GLN:HB3	18:Q:142:GLN:OE1	2.20	0.42
22:W:547:VAL:HG12	22:W:559:LEU:HD11	2.01	0.42
22:W:977:LEU:HG	22:W:979:PRO:HD2	2.02	0.42
1:0:218:ASN:ND2	20:T:148:VAL:HG12	2.35	0.42
6:A:321:LEU:HD22	6:A:329:LEU:HD12	2.02	0.42
10:G:127:ARG:HG3	10:G:130:GLN:OE1	2.19	0.42
11:H:52:LEU:C	11:H:52:LEU:CD2	2.85	0.42
26:U:89:SER:HA	26:U:92:LYS:CE	2.48	0.42
5:4:114:ARG:HE	5:4:114:ARG:HB3	1.62	0.42
6:A:106:ASP:HB3	6:A:128:HIS:HD2	1.85	0.42
14:K:14:LEU:HA	14:K:17:ILE:HD12	2.00	0.42
18:Q:579:ALA:HB2	18:Q:619:ARG:NH1	2.33	0.42
5:4:58:TRP:CE3	5:4:63:TYR:HB3	2.54	0.42
10:G:78:LEU:HD11	26:U:73:ILE:HG22	2.01	0.42
11:H:153:LYS:HE3	11:H:153:LYS:HB3	1.77	0.42
14:K:95:LYS:HE2	14:K:95:LYS:HB3	1.68	0.42
17:P:718:CYS:O	17:P:721:PRO:HD2	2.20	0.42
17:P:744:PRO:O	17:P:746:GLN:HG2	2.20	0.42
18:Q:140:ASN:N	18:Q:141:PRO:HD2	2.34	0.42
22:W:543:ILE:HD12	22:W:563:LEU:HD11	2.02	0.42
14:K:42:GLU:HB2	14:K:43:ARG:HH21	1.85	0.42
15:N:315:LEU:CD1	15:N:315:LEU:C	2.86	0.42
15:N:716:ASN:C	15:N:716:ASN:ND2	2.73	0.42
17:P:469:LEU:O	17:P:473:HIS:ND1	2.36	0.42
17:P:579:ARG:O	17:P:582:GLU:HG3	2.19	0.42
18:Q:150:LYS:O	18:Q:154:ALA:CB	2.68	0.42
18:Q:374:ASN:O	18:Q:378:LEU:HD23	2.19	0.42
21:V:34:THR:O	21:V:38:LYS:HG2	2.20	0.42
23:X:96:ALA:O	23:X:100:ILE:HG12	2.20	0.42
12:I:104:MET:HB2	12:I:105:PRO:HD3	2.01	0.42
15:N:118:ILE:HD11	25:S:83:LEU:HB3	2.01	0.42
17:P:207:CYS:SG	17:P:242:TYR:CE2	3.11	0.42
18:Q:205:GLY:O	18:Q:221:THR:HA	2.18	0.42
22:W:869:LEU:HD23	22:W:869:LEU:HA	1.90	0.42
2:1:44:LEU:HA	2:1:47:GLU:OE2	2.19	0.42
9:F:111:LEU:HD12	9:F:111:LEU:HA	1.94	0.42
11:H:67:LYS:O	11:H:67:LYS:HD3	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:I:109:LEU:HD21	12:I:113:GLN:NE2	2.34	0.42
15:N:82:LYS:HD3	15:N:82:LYS:HA	1.78	0.42
15:N:223:LYS:HG3	15:N:223:LYS:O	2.20	0.42
15:N:247:LEU:HD12	15:N:247:LEU:N	2.34	0.42
15:N:397:ILE:HG13	15:N:398:GLU:N	2.35	0.42
15:N:513:PRO:O	15:N:543:THR:HG22	2.20	0.42
22:W:5:LEU:HD23	22:W:5:LEU:HA	1.95	0.42
23:X:4:VAL:HG12	23:X:31:PHE:N	2.35	0.42
23:X:6:LEU:CD1	23:X:40:LEU:O	2.53	0.42
23:X:309:THR:HG23	23:X:310:PHE:HD1	1.85	0.42
23:X:561:LEU:HD13	23:X:609:ILE:HD11	2.01	0.42
6:A:99:THR:HA	6:A:111:GLU:O	2.20	0.41
6:A:167:ASN:O	6:A:171:THR:HG21	2.18	0.41
6:A:200:LEU:HD21	6:A:243:HIS:ND1	2.35	0.41
10:G:89:PHE:CD1	10:G:89:PHE:C	2.93	0.41
12:I:94:PHE:HA	12:I:97:MET:HG3	2.01	0.41
12:I:97:MET:SD	12:I:98:ARG:HD3	2.59	0.41
15:N:545:LEU:N	15:N:545:LEU:CD2	2.73	0.41
17:P:559:THR:O	17:P:563:LEU:HB2	2.20	0.41
17:P:730:ASP:N	17:P:730:ASP:OD1	2.53	0.41
18:Q:18:GLN:O	18:Q:30:TYR:HE2	1.98	0.41
19:R:145:VAL:HG22	19:R:169:VAL:HG22	2.01	0.41
22:W:4:GLN:HB3	22:W:47:PHE:HE2	1.85	0.41
22:W:775:ASP:OD1	22:W:776:ILE:N	2.52	0.41
22:W:1268:ILE:HG23	22:W:1310:VAL:HG22	2.02	0.41
23:X:113:LYS:N	23:X:116:GLU:OE1	2.52	0.41
2:1:133:LEU:HB2	14:K:111:CYS:SG	2.60	0.41
3:2:55:ASP:HA	3:2:58:GLN:HE21	1.85	0.41
8:D:150:LYS:HD2	10:G:56:ILE:HB	2.01	0.41
9:F:83:LYS:HE2	9:F:96:ALA:H	1.85	0.41
15:N:248:LEU:HD12	15:N:248:LEU:N	2.35	0.41
17:P:357:PRO:HD3	17:P:382:LEU:HD23	2.02	0.41
19:R:188:ASN:O	19:R:192:GLN:HG2	2.21	0.41
22:W:517:SER:HB2	22:W:560:ALA:HB2	2.01	0.41
22:W:592:VAL:O	22:W:595:SER:OG	2.36	0.41
22:W:885:ILE:HD13	22:W:885:ILE:HA	1.82	0.41
1:0:79:LYS:HG2	3:2:57:VAL:HG21	2.02	0.41
8:D:90:HIS:HE1	12:I:105:PRO:C	2.24	0.41
15:N:157:ALA:O	15:N:161:LEU:HB2	2.19	0.41
15:N:197:GLN:OE1	15:N:197:GLN:HA	2.20	0.41
17:P:216:ALA:HA	17:P:229:ALA:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:Q:273:THR:HG22	18:Q:274:VAL:H	1.85	0.41
22:W:59:CYS:SG	22:W:60:ILE:N	2.94	0.41
23:X:160:MET:N	23:X:160:MET:SD	2.94	0.41
23:X:725:ASP:OD1	23:X:726:SER:N	2.50	0.41
23:X:921:THR:HA	23:X:924:VAL:HG22	2.01	0.41
1:0:200:VAL:HG22	1:0:214:VAL:HG12	2.02	0.41
2:1:71:GLU:O	2:1:74:ARG:HG2	2.20	0.41
6:A:497:VAL:HA	6:A:500:ARG:HG2	2.02	0.41
10:G:132:ARG:HD2	10:G:132:ARG:HA	1.74	0.41
15:N:198:ILE:HG21	15:N:239:ASP:HA	2.02	0.41
15:N:693:ILE:HD11	15:N:697:THR:CG2	2.47	0.41
18:Q:475:VAL:CG2	18:Q:495:LEU:HB2	2.50	0.41
20:T:157:LEU:HD23	20:T:157:LEU:HA	1.93	0.41
22:W:2:GLU:OE2	22:W:62:TRP:NE1	2.53	0.41
22:W:539:LEU:O	22:W:543:ILE:HG12	2.21	0.41
4:3:38:GLN:OE1	4:3:42:GLN:NE2	2.54	0.41
6:A:311:ILE:HD13	6:A:311:ILE:HA	1.96	0.41
10:G:109:LEU:HA	10:G:112:LEU:HD12	2.03	0.41
12:I:110:SER:CB	12:I:111:PRO:HD2	2.38	0.41
13:J:103:LYS:HB3	13:J:103:LYS:HE3	1.81	0.41
15:N:177:ILE:HG22	15:N:178:ILE:HD13	2.02	0.41
15:N:723:GLU:HG3	15:N:746:TYR:CD1	2.56	0.41
17:P:614:LEU:O	17:P:618:LEU:HG	2.21	0.41
17:P:618:LEU:HD22	17:P:662:ILE:HG21	2.01	0.41
18:Q:388:SER:OG	18:Q:390:ILE:HG12	2.19	0.41
19:R:205:LYS:O	19:R:206:ARG:HD3	2.21	0.41
22:W:313:GLU:O	22:W:317:THR:HG23	2.21	0.41
25:S:128:ARG:C	25:S:130:LEU:N	2.71	0.41
26:U:15:LEU:HA	26:U:18:GLN:HG3	2.02	0.41
5:4:97:ILE:O	5:4:101:GLN:NE2	2.35	0.41
6:A:70:LYS:HA	12:I:70:HIS:NE2	2.35	0.41
6:A:354:PRO:HG2	6:A:355:ILE:HD12	2.02	0.41
8:D:135:ILE:O	8:D:139:ARG:HG2	2.20	0.41
10:G:129:HIS:HD2	26:U:82:THR:OG1	2.00	0.41
11:H:93:THR:HG21	11:H:97:VAL:HG21	2.02	0.41
12:I:109:LEU:HD21	12:I:113:GLN:HE21	1.86	0.41
15:N:254:VAL:HG21	15:N:303:LEU:HD23	2.03	0.41
17:P:207:CYS:SG	17:P:242:TYR:HE2	2.43	0.41
17:P:376:PHE:HD1	17:P:473:HIS:CD2	2.38	0.41
22:W:284:CYS:HB2	22:W:289:LEU:HB2	2.02	0.41
22:W:795:LYS:HA	22:W:798:LEU:HD22	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:X:46:LEU:HD22	23:X:60:ILE:HD12	2.02	0.41
23:X:214:GLN:HA	23:X:217:GLN:HG3	2.01	0.41
1:0:214:VAL:HG21	1:0:242:VAL:HG13	2.02	0.41
5:4:107:HIS:NE2	18:Q:28:GLU:OE2	2.43	0.41
6:A:79:ASP:O	6:A:82:GLU:HG2	2.21	0.41
10:G:78:LEU:CD2	26:U:73:ILE:CG2	2.86	0.41
15:N:188:LYS:HE3	18:Q:47:ILE:HD11	1.97	0.41
15:N:222:VAL:CG2	15:N:234:LEU:HB2	2.50	0.41
15:N:737:ARG:HD3	15:N:737:ARG:HA	1.81	0.41
15:N:882:ILE:HD12	15:N:916:LEU:HD11	2.02	0.41
17:P:24:TRP:CE3	17:P:51:LEU:HD21	2.55	0.41
20:T:175:VAL:HG11	20:T:188:ASP:HB3	2.02	0.41
22:W:598:TRP:HA	22:W:601:LEU:HB3	2.02	0.41
22:W:1189:ARG:HE	22:W:1189:ARG:HB2	1.59	0.41
23:X:343:LYS:HA	23:X:343:LYS:HD3	1.86	0.41
23:X:955:LEU:HA	23:X:958:VAL:HG22	2.03	0.41
1:0:177:SER:HB3	1:0:193:THR:CG2	2.50	0.41
1:0:284:CYS:SG	1:0:306:HIS:CE1	3.14	0.41
6:A:469:VAL:HA	6:A:475:VAL:HG22	2.01	0.41
10:G:16:GLN:NE2	10:G:17:TYR:O	2.54	0.41
11:H:6:LYS:HA	11:H:6:LYS:HD3	1.89	0.41
15:N:183:ILE:CD1	15:N:188:LYS:CG	2.99	0.41
15:N:375:ASP:N	15:N:376:PRO:HD2	2.35	0.41
17:P:393:ILE:HB	17:P:403:ALA:HB3	2.03	0.41
17:P:523:SER:O	17:P:526:ILE:HG22	2.21	0.41
18:Q:116:LEU:HA	18:Q:119:VAL:HB	2.01	0.41
20:T:8:GLN:HE22	20:T:203:GLN:NE2	2.18	0.41
26:U:8:LEU:HD12	26:U:72:LEU:HD12	2.02	0.41
1:0:194:LEU:HD23	1:0:194:LEU:HA	1.85	0.41
3:2:163:VAL:O	3:2:167:GLN:HG3	2.20	0.41
4:3:177:ARG:NE	21:V:113:ASP:OD2	2.53	0.41
5:4:17:ARG:HA	5:4:20:LEU:HG	2.03	0.41
8:D:165:LEU:HG	8:D:166:THR:HG23	2.03	0.41
9:F:41:TYR:CD1	9:F:68:TYR:HE2	2.39	0.41
10:G:57:ARG:NE	10:G:128:PRO:HG2	2.33	0.41
10:G:78:LEU:HD21	26:U:73:ILE:CG2	2.48	0.41
10:G:127:ARG:CG	15:N:152:PHE:CZ	3.01	0.41
15:N:149:LEU:N	15:N:149:LEU:CD2	2.73	0.41
15:N:229:GLU:H	15:N:229:GLU:HG2	1.65	0.41
15:N:315:LEU:HD11	15:N:320:TRP:CB	2.47	0.41
15:N:691:LYS:C	15:N:691:LYS:CE	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:691:LYS:CE	15:N:693:ILE:HG12	2.51	0.41
15:N:693:ILE:CD1	15:N:697:THR:CB	2.75	0.41
15:N:1355:PRO:O	15:N:1364:LEU:CB	2.69	0.41
18:Q:15:CYS:O	18:Q:15:CYS:SG	2.79	0.41
18:Q:392:MET:HA	18:Q:393:PRO:HD3	1.95	0.41
21:V:89:ASN:C	21:V:89:ASN:ND2	2.73	0.41
22:W:911:HIS:HA	22:W:914:GLN:HE21	1.85	0.41
22:W:915:ASN:OD1	22:W:915:ASN:N	2.53	0.41
23:X:4:VAL:HG11	23:X:31:PHE:HD1	1.71	0.41
23:X:131:LEU:HD23	23:X:131:LEU:HA	1.95	0.41
23:X:208:ASN:HB3	23:X:211:LEU:HB3	2.03	0.41
23:X:250:LEU:HD12	23:X:729:ILE:HD12	2.02	0.41
26:U:113:MET:HA	26:U:116:GLU:HG2	2.03	0.41
26:U:119:GLN:HA	26:U:122:LEU:HG	2.03	0.41
4:3:176:MET:O	4:3:176:MET:HG2	2.21	0.41
9:F:118:ARG:HB3	18:Q:112:LEU:HD22	2.02	0.41
14:K:11:LEU:O	14:K:14:LEU:HG	2.21	0.41
15:N:135:ARG:NE	15:N:135:ARG:CA	2.73	0.41
15:N:229:GLU:HG3	15:N:300:CYS:HB3	2.01	0.41
15:N:538:LEU:HB3	15:N:552:VAL:HG12	2.02	0.41
17:P:56:GLN:O	17:P:59:THR:OG1	2.36	0.41
18:Q:140:ASN:O	18:Q:143:THR:HG23	2.21	0.41
18:Q:481:SER:HB3	18:Q:636:VAL:HG11	2.03	0.41
23:X:82:ILE:HG23	23:X:97:LEU:HD13	2.02	0.41
23:X:447:SER:O	23:X:451:LEU:HG	2.21	0.41
2:1:129:VAL:HG22	14:K:115:LEU:HD21	2.03	0.40
10:G:62:GLN:HG2	10:G:62:GLN:O	2.21	0.40
14:K:90:CYS:O	14:K:94:LEU:HD23	2.20	0.40
15:N:250:LEU:C	15:N:250:LEU:CD2	2.86	0.40
15:N:252:ILE:CG2	15:N:254:VAL:HG22	2.51	0.40
17:P:751:GLN:HG2	17:P:752:PHE:N	2.37	0.40
18:Q:295:LEU:HD23	18:Q:295:LEU:HA	1.86	0.40
22:W:863:ASP:OD1	22:W:864:ARG:N	2.54	0.40
22:W:1125:ALA:O	22:W:1129:VAL:HG23	2.21	0.40
23:X:686:LYS:HZ3	23:X:688:PRO:HB2	1.87	0.40
23:X:914:SER:OG	23:X:915:ARG:N	2.54	0.40
1:0:72:ARG:HH12	1:0:76:LEU:HB2	1.87	0.40
1:0:282:GLN:HB2	1:0:305:PHE:CE1	2.55	0.40
3:2:86:THR:HG21	16:O:628:ASN:ND2	2.29	0.40
5:4:84:PHE:CE2	15:N:177:ILE:CG2	2.97	0.40
8:D:30:LEU:CD2	8:D:34:LEU:CG	2.99	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:F:8:ASP:N	9:F:8:ASP:OD1	2.53	0.40
9:F:59:HIS:ND1	9:F:62:GLN:OE1	2.54	0.40
9:F:66:ILE:HA	9:F:84:GLN:O	2.21	0.40
10:G:68:HIS:CG	10:G:69:PRO:HD3	2.56	0.40
10:G:157:LEU:HD21	26:U:110:ARG:NH1	2.32	0.40
13:J:108:LEU:HD13	26:U:56:GLN:HA	2.04	0.40
15:N:753:LEU:HA	15:N:753:LEU:HD23	1.83	0.40
18:Q:138:LYS:HG2	18:Q:139:GLN:N	2.36	0.40
22:W:161:LEU:O	22:W:165:GLU:HG2	2.20	0.40
22:W:305:VAL:HA	22:W:308:VAL:HG12	2.03	0.40
22:W:363:ARG:HG3	22:W:365:LEU:HG	2.04	0.40
23:X:320:LEU:HD23	23:X:320:LEU:HA	1.92	0.40
26:U:58:PHE:N	26:U:58:PHE:CD1	2.89	0.40
1:0:46:GLU:OE1	1:0:46:GLU:HA	2.22	0.40
1:0:162:VAL:HG13	1:0:207:LEU:HD12	2.03	0.40
4:3:37:GLY:O	4:3:41:VAL:HG23	2.22	0.40
4:3:77:LYS:HB2	4:3:77:LYS:HE3	1.91	0.40
10:G:54:LEU:HD11	10:G:59:LEU:HD23	2.03	0.40
11:H:53:SER:O	11:H:57:ASN:CB	2.65	0.40
14:K:80:GLU:HA	18:Q:195:LYS:HE2	2.03	0.40
15:N:723:GLU:HG3	15:N:746:TYR:CE1	2.56	0.40
17:P:26:LYS:HD2	17:P:26:LYS:HA	1.86	0.40
18:Q:399:PRO:O	18:Q:406:ARG:NH2	2.54	0.40
19:R:29:ASP:N	19:R:29:ASP:OD1	2.48	0.40
20:T:97:LYS:HA	20:T:97:LYS:HD3	1.86	0.40
22:W:914:GLN:HE22	22:W:917:TRP:HB2	1.86	0.40
23:X:920:HIS:O	23:X:924:VAL:HG13	2.21	0.40
8:D:139:ARG:HA	8:D:139:ARG:HD3	1.95	0.40
15:N:240:ASP:HB2	15:N:241:PRO:HD3	2.04	0.40
15:N:315:LEU:HD12	15:N:315:LEU:O	2.21	0.40
21:V:48:VAL:C	21:V:49:SER:HG	2.25	0.40
21:V:127:LEU:O	21:V:131:GLU:HG3	2.20	0.40
23:X:385:ARG:HA	23:X:385:ARG:HD2	1.95	0.40
6:A:501:CYS:HG	6:A:503:SER:HG	1.69	0.40
12:I:91:LYS:HA	12:I:94:PHE:HB2	2.03	0.40
15:N:780:VAL:HG11	15:N:803:TYR:CZ	2.56	0.40
17:P:270:ASP:O	17:P:271:LEU:HG	2.21	0.40
18:Q:414:ASP:OD1	18:Q:414:ASP:N	2.55	0.40
22:W:649:ALA:O	22:W:653:ILE:HG13	2.20	0.40
22:W:764:TYR:CD1	22:W:792:LEU:HD13	2.56	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	0	261/311 (84%)	254 (97%)	7 (3%)	0	100	100
2	1	95/178 (53%)	95 (100%)	0	0	100	100
3	2	111/200 (56%)	107 (96%)	4 (4%)	0	100	100
4	3	114/178 (64%)	112 (98%)	2 (2%)	0	100	100
5	4	104/131 (79%)	100 (96%)	4 (4%)	0	100	100
6	A	455/1581 (29%)	435 (96%)	19 (4%)	1 (0%)	44	72
8	D	154/270 (57%)	149 (97%)	5 (3%)	0	100	100
9	F	163/246 (66%)	145 (89%)	18 (11%)	0	100	100
10	G	157/233 (67%)	153 (98%)	4 (2%)	0	100	100
11	H	177/268 (66%)	160 (90%)	17 (10%)	0	100	100
12	I	69/146 (47%)	67 (97%)	2 (3%)	0	100	100
13	J	120/135 (89%)	116 (97%)	4 (3%)	0	100	100
14	K	110/117 (94%)	104 (94%)	6 (6%)	0	100	100
15	N	995/1454 (68%)	925 (93%)	66 (7%)	4 (0%)	30	62
16	O	153/788 (19%)	142 (93%)	11 (7%)	0	100	100
17	P	743/877 (85%)	695 (94%)	48 (6%)	0	100	100
18	Q	544/651 (84%)	496 (91%)	46 (8%)	2 (0%)	30	62
19	R	189/208 (91%)	181 (96%)	8 (4%)	0	100	100
20	T	189/212 (89%)	173 (92%)	16 (8%)	0	100	100
21	V	128/200 (64%)	126 (98%)	2 (2%)	0	100	100
22	W	1332/1368 (97%)	1277 (96%)	55 (4%)	0	100	100
23	X	877/989 (89%)	844 (96%)	33 (4%)	0	100	100
24	d	35/2174 (2%)	27 (77%)	6 (17%)	2 (6%)	1	16
25	S	66/244 (27%)	63 (96%)	3 (4%)	0	100	100
26	U	112/144 (78%)	107 (96%)	5 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
All	All	7453/13303 (56%)	7053 (95%)	391 (5%)	9 (0%)	50 78

All (9) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
15	N	1355	PRO
18	Q	34	LEU
24	d	928	LEU
15	N	209	PRO
24	d	934	PRO
6	A	208	VAL
15	N	378	LEU
15	N	756	PRO
18	Q	393	PRO

5.3.2 Protein sidechains (i)

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	0	241/280 (86%)	239 (99%)	2 (1%)	79 85
2	1	94/152 (62%)	93 (99%)	1 (1%)	70 80
3	2	102/163 (63%)	102 (100%)	0	100 100
4	3	116/155 (75%)	113 (97%)	3 (3%)	41 61
5	4	97/115 (84%)	97 (100%)	0	100 100
6	A	394/1391 (28%)	387 (98%)	7 (2%)	54 71
8	D	138/230 (60%)	131 (95%)	7 (5%)	20 47
9	F	151/223 (68%)	148 (98%)	3 (2%)	50 68
10	G	139/216 (64%)	126 (91%)	13 (9%)	7 29
11	H	161/225 (72%)	160 (99%)	1 (1%)	84 90
12	I	71/133 (53%)	66 (93%)	5 (7%)	12 39
13	J	65/124 (52%)	64 (98%)	1 (2%)	60 75

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
14	K	94/98 (96%)	93 (99%)	1 (1%)	70 80
15	N	809/1271 (64%)	791 (98%)	18 (2%)	47 65
16	O	141/697 (20%)	141 (100%)	0	100 100
17	P	670/766 (88%)	668 (100%)	2 (0%)	91 94
18	Q	496/577 (86%)	487 (98%)	9 (2%)	54 71
19	R	169/183 (92%)	167 (99%)	2 (1%)	67 79
20	T	166/178 (93%)	165 (99%)	1 (1%)	84 90
21	V	122/173 (70%)	120 (98%)	2 (2%)	58 74
22	W	1203/1232 (98%)	1189 (99%)	14 (1%)	67 79
23	X	789/864 (91%)	785 (100%)	4 (0%)	86 92
24	d	34/1918 (2%)	33 (97%)	1 (3%)	37 59
25	S	24/208 (12%)	24 (100%)	0	100 100
26	U	91/119 (76%)	86 (94%)	5 (6%)	18 45
All	All	6577/11691 (56%)	6475 (98%)	102 (2%)	58 74

All (102) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	0	278	GLN
1	0	295	THR
2	1	99	ARG
4	3	138	GLU
4	3	140	ARG
4	3	149	LEU
6	A	161	TYR
6	A	170	LYS
6	A	173	MET
6	A	175	LEU
6	A	181	GLU
6	A	378	LYS
6	A	431	LYS
8	D	39	VAL
8	D	46	GLU
8	D	47	MET
8	D	52	ARG
8	D	81	LYS
8	D	127	GLN

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Mol	Chain	Res	Type
8	D	130	GLU
9	F	175	GLN
9	F	185	ARG
9	F	192	PHE
10	G	25	ASN
10	G	45	PHE
10	G	48	GLN
10	G	56	ILE
10	G	57	ARG
10	G	59	LEU
10	G	67	LEU
10	G	77	GLU
10	G	119	VAL
10	G	132	ARG
10	G	138	MET
10	G	142	GLN
10	G	143	LYS
11	H	39	ARG
12	I	91	LYS
12	I	99	LYS
12	I	107	ILE
12	I	115	GLN
12	I	116	GLN
13	J	98	LYS
14	K	12	ARG
15	N	149	LEU
15	N	187	GLU
15	N	202	ARG
15	N	211	GLN
15	N	225	ARG
15	N	229	GLU
15	N	230	PHE
15	N	276	GLN
15	N	282	LEU
15	N	285	ASP
15	N	315	LEU
15	N	496	LEU
15	N	545	LEU
15	N	674	GLU
15	N	678	PHE
15	N	691	LYS
15	N	716	ASN

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Mol	Chain	Res	Type
15	N	846	ASN
17	P	243	LYS
17	P	252	LYS
18	Q	42	ARG
18	Q	45	GLN
18	Q	143	THR
18	Q	147	ILE
18	Q	270	ASP
18	Q	273	THR
18	Q	592	ILE
18	Q	593	MET
18	Q	637	TYR
19	R	98	ARG
19	R	206	ARG
20	T	149	VAL
21	V	27	LYS
21	V	89	ASN
22	W	5	LEU
22	W	33	GLU
22	W	123	ARG
22	W	296	ARG
22	W	399	PHE
22	W	471	ASP
22	W	610	TYR
22	W	650	LEU
22	W	845	LYS
22	W	896	PHE
22	W	935	GLU
22	W	1056	ARG
22	W	1267	MET
22	W	1276	ASP
23	X	30	PHE
23	X	31	PHE
23	X	36	THR
23	X	217	GLN
24	d	923	LEU
26	U	7	GLN
26	U	18	GLN
26	U	19	PHE
26	U	76	LEU
26	U	97	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (42)

such sidechains are listed below:

Mol	Chain	Res	Type
1	0	218	ASN
1	0	245	HIS
1	0	278	GLN
5	4	19	GLN
6	A	66	GLN
6	A	319	GLN
6	A	360	ASN
8	D	63	ASN
8	D	90	HIS
8	D	153	HIS
9	F	74	GLN
9	F	107	GLN
9	F	175	GLN
10	G	25	ASN
10	G	47	ASN
10	G	50	GLN
10	G	74	HIS
10	G	88	ASN
10	G	120	HIS
10	G	129	HIS
10	G	142	GLN
14	K	79	HIS
15	N	189	GLN
15	N	297	HIS
15	N	374	HIS
15	N	669	GLN
15	N	713	GLN
15	N	771	ASN
16	O	628	ASN
18	Q	394	HIS
19	R	37	HIS
20	T	8	GLN
22	W	351	HIS
22	W	552	HIS
22	W	1197	HIS
23	X	12	GLN
23	X	408	GLN
23	X	903	ASN
24	d	941	GLN
26	U	7	GLN
26	U	13	ASN
26	U	18	GLN

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates

There are no oligosaccharides in this entry.

5.6 Ligand geometry

Of 2 ligands modelled in this entry, 2 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Map visualisation

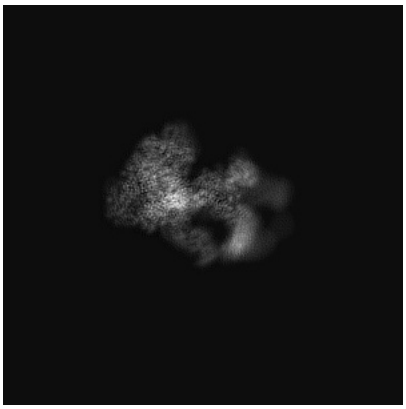
This section contains visualisations of the EMDB entry EMD-41580. These allow visual inspection of the internal detail of the map and identification of artifacts.

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

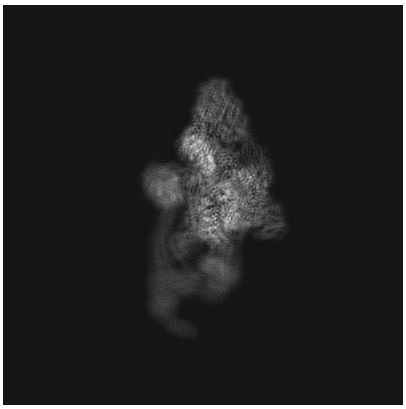
6.1 Orthogonal projections

6.1.1 Primary map

X

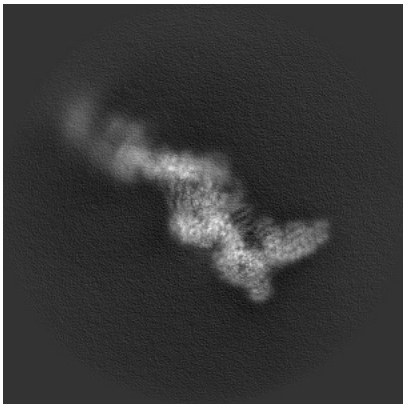


Y

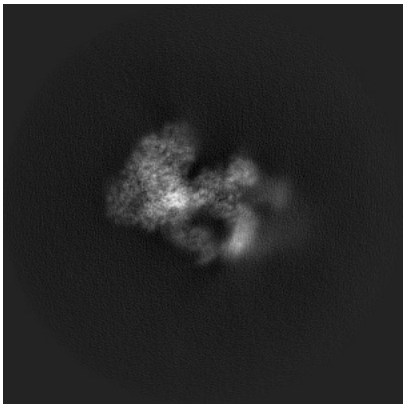


Z

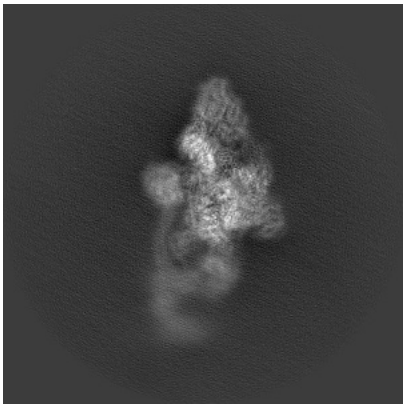
6.1.2 Raw map



X



Y

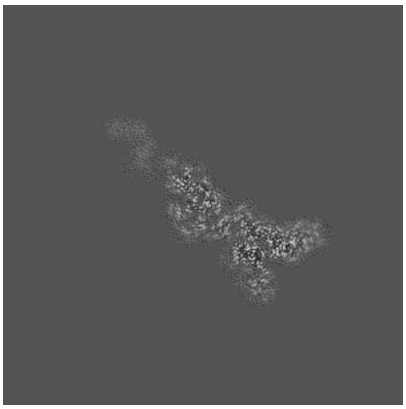


Z

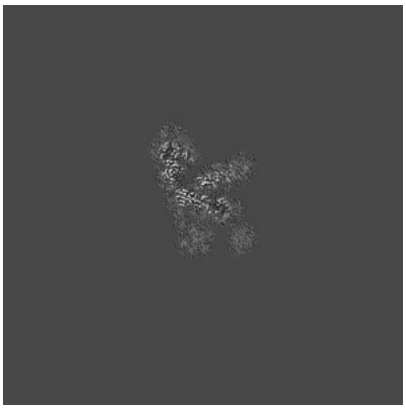
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

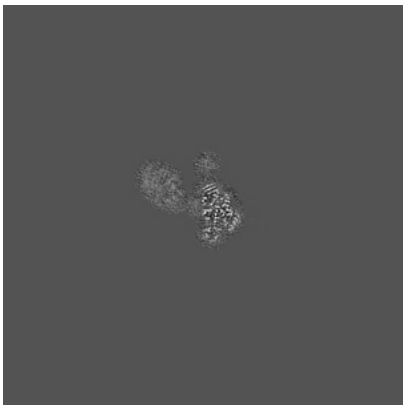
6.2.1 Primary map



X Index: 196

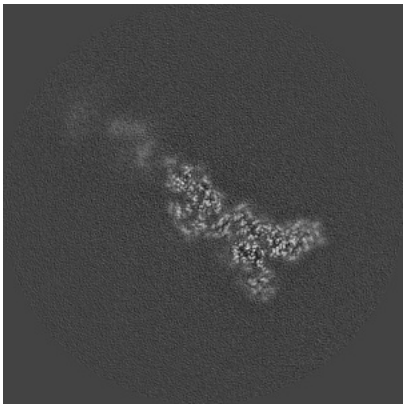


Y Index: 196

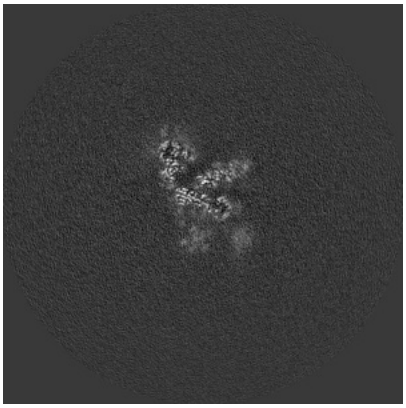


Z Index: 196

6.2.2 Raw map



X Index: 196



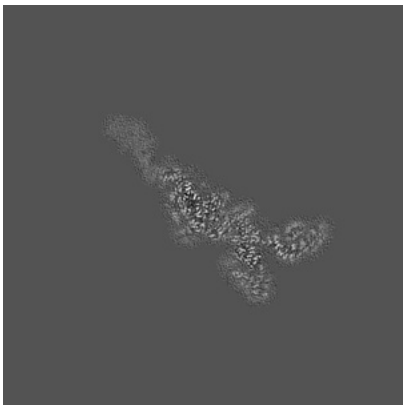
Y Index: 196

Z Index: 196

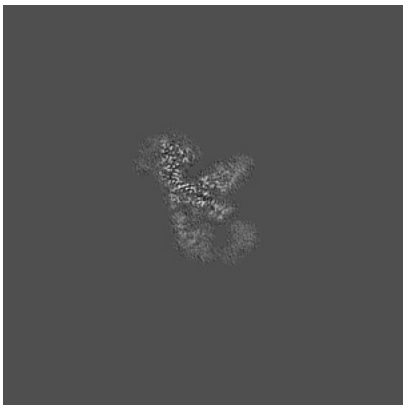
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

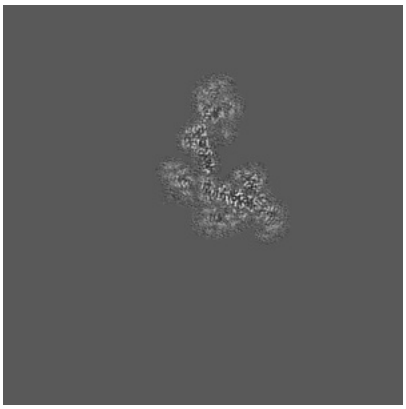
6.3.1 Primary map



X Index: 203

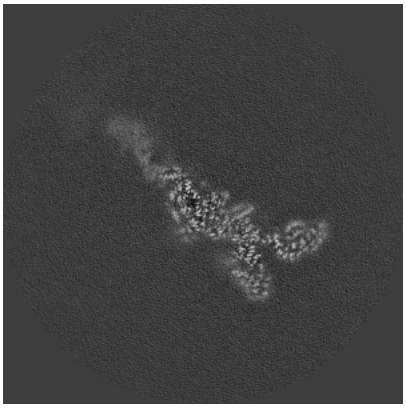


Y Index: 202

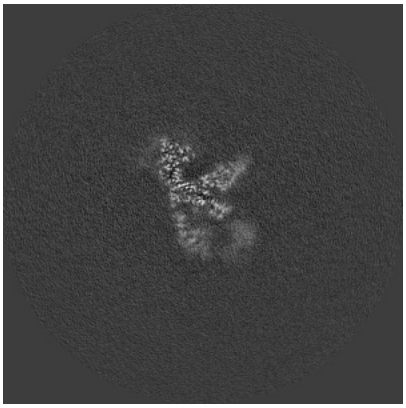


Z Index: 167

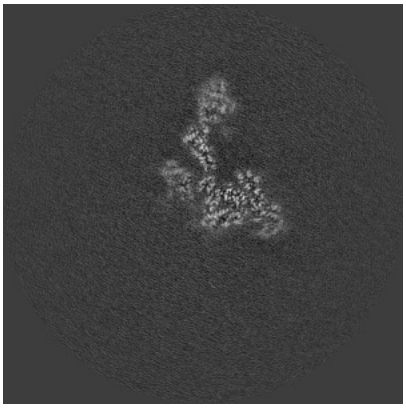
6.3.2 Raw map



X Index: 203



Y Index: 202

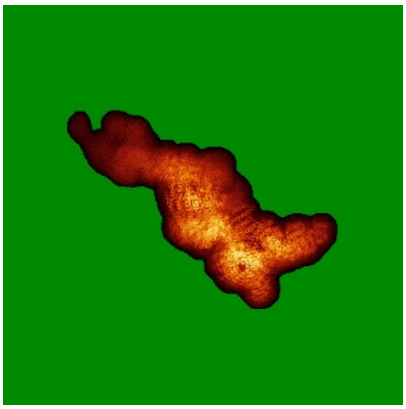


Z Index: 170

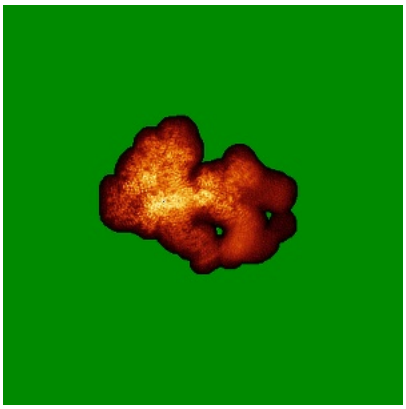
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) (i)

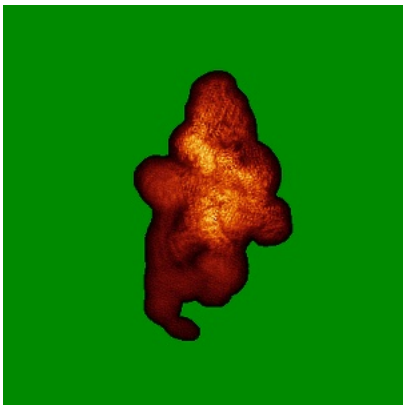
6.4.1 Primary map



X

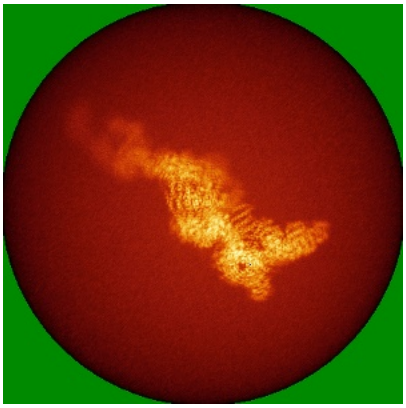


Y

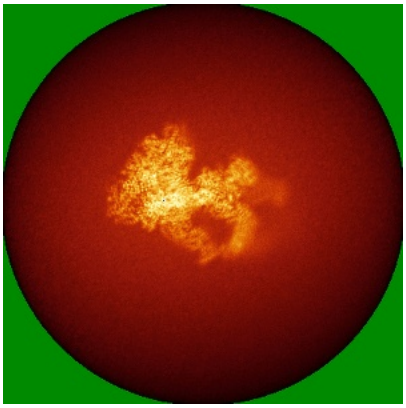


Z

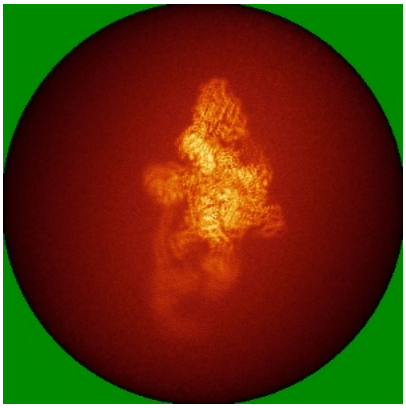
6.4.2 Raw map



X



Y

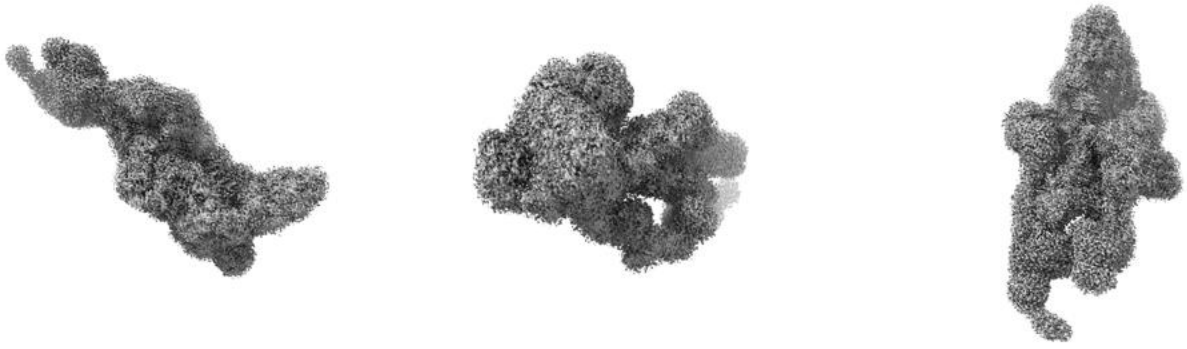


Z

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

6.5 Orthogonal surface views (i)

6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.015. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map

X Y Z

These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

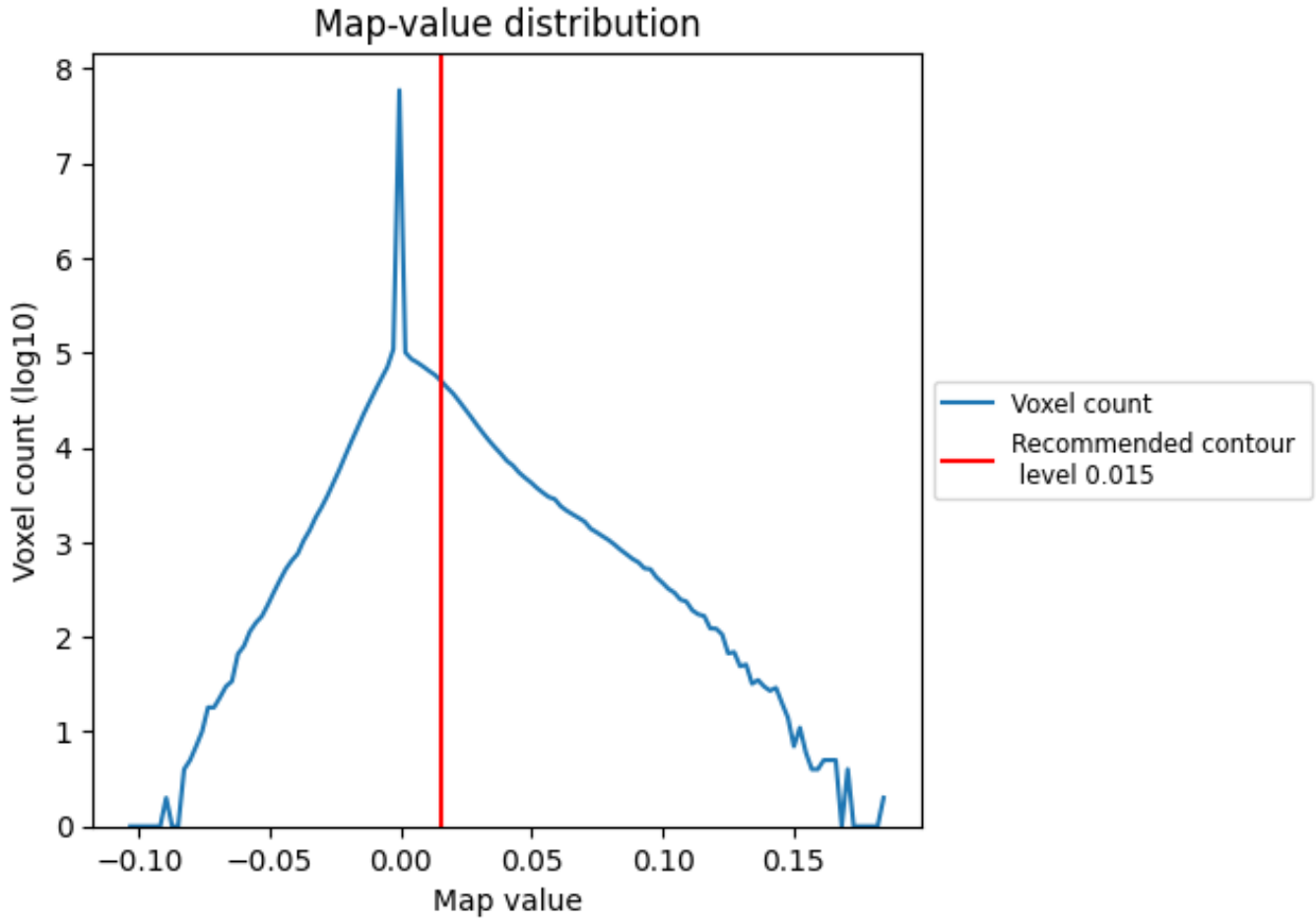
6.6 Mask visualisation (i)

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

7 Map analysis

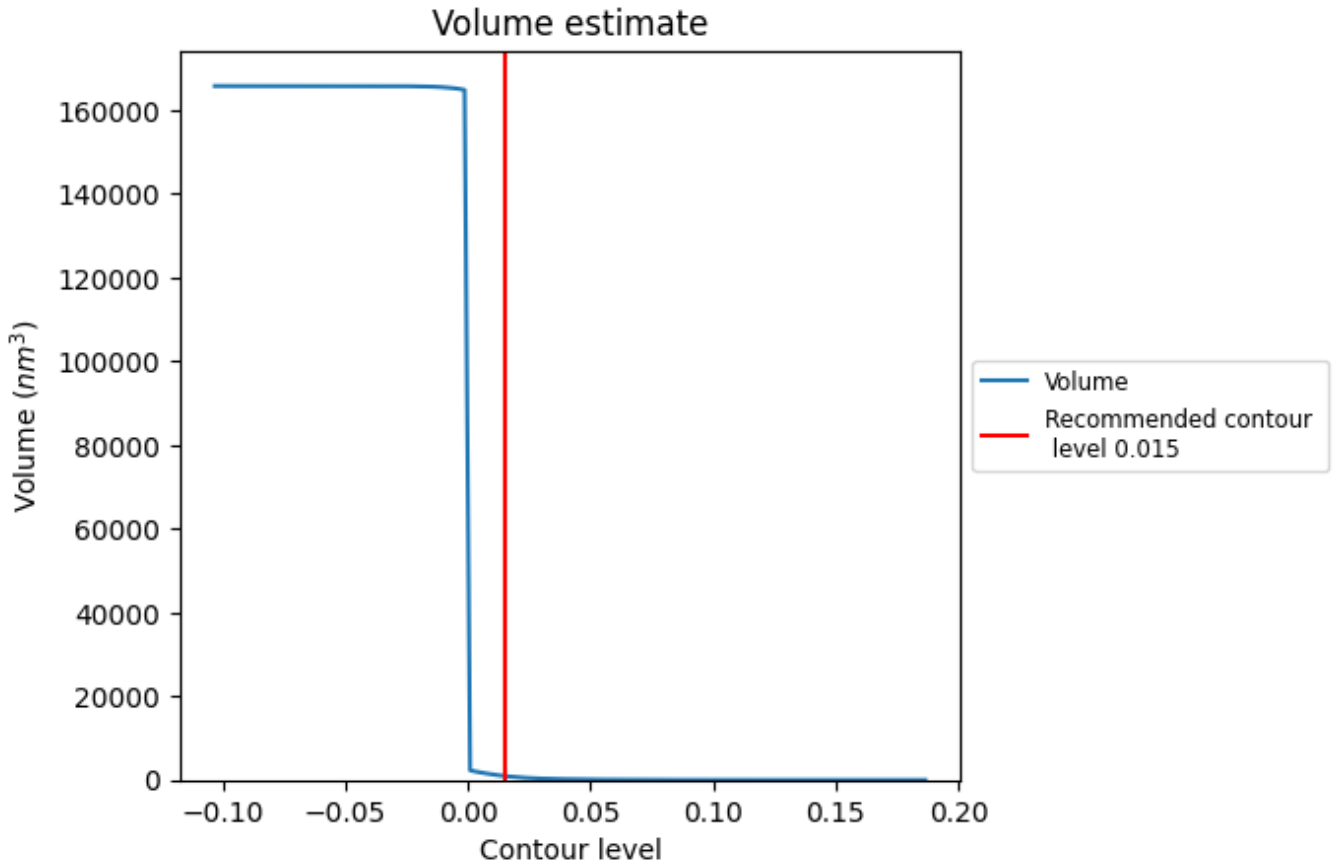
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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.

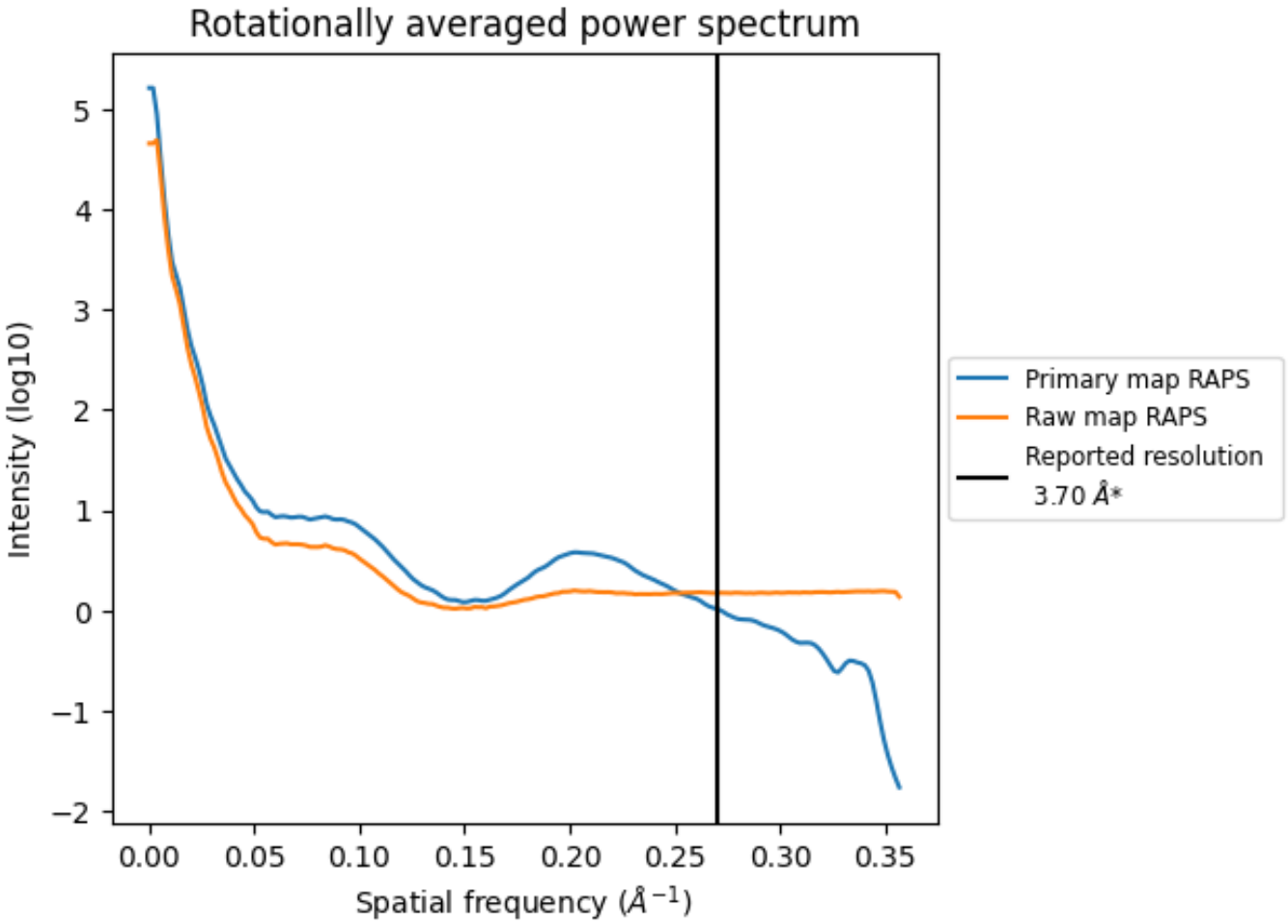
7.2 Volume estimate



The volume at the recommended contour level is 945 nm^3; this corresponds to an approximate mass of 853 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 (i)

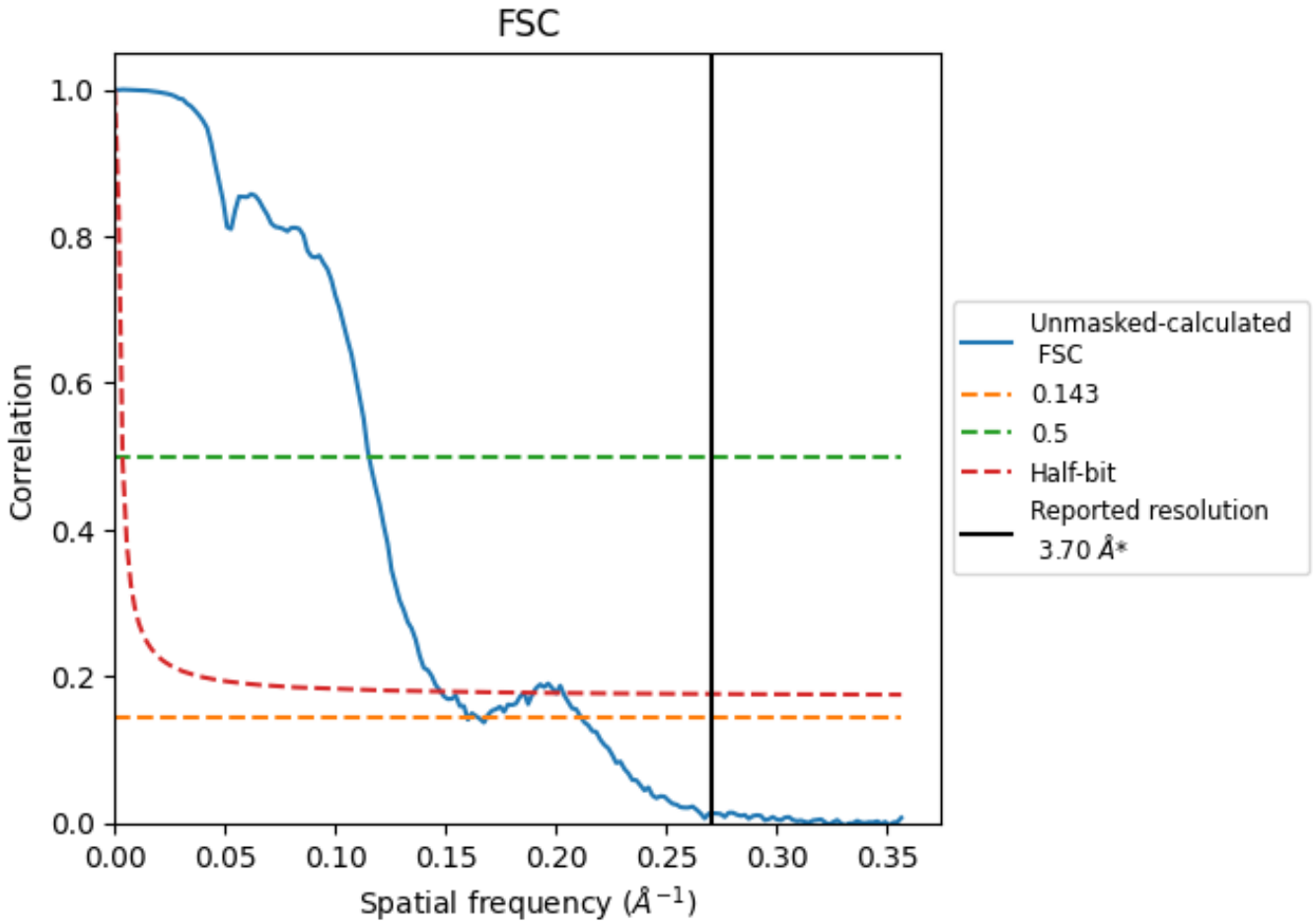


*Reported resolution corresponds to spatial frequency of 0.270 Å^{-1}

8 Fourier-Shell correlation

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

8.1 FSC



*Reported resolution corresponds to spatial frequency of 0.270 Å^{-1}

8.2 Resolution estimates (i)

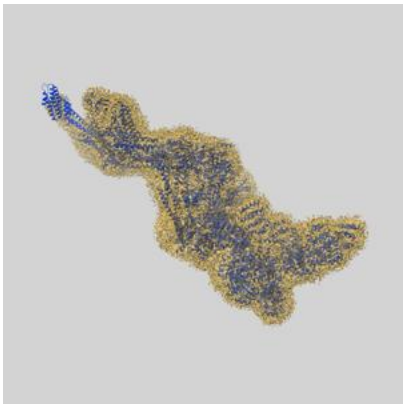
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.70	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	6.25	8.67	6.76

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 6.25 differs from the reported value 3.7 by more than 10 %

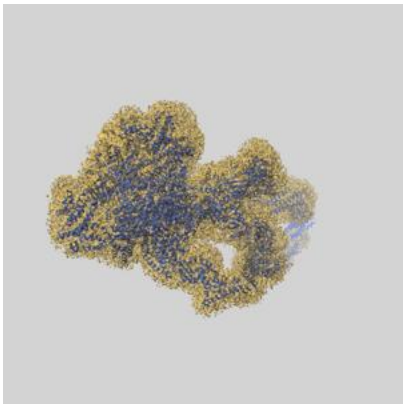
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-41580 and PDB model 8TRH. Per-residue inclusion information can be found in section 3 on page 8.

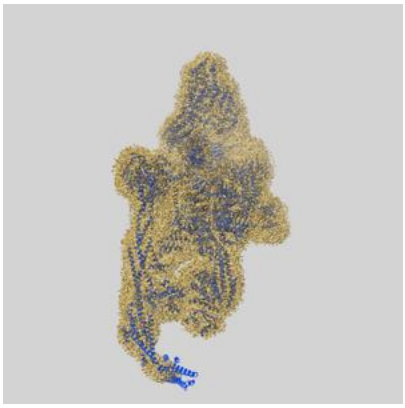
9.1 Map-model overlay



X



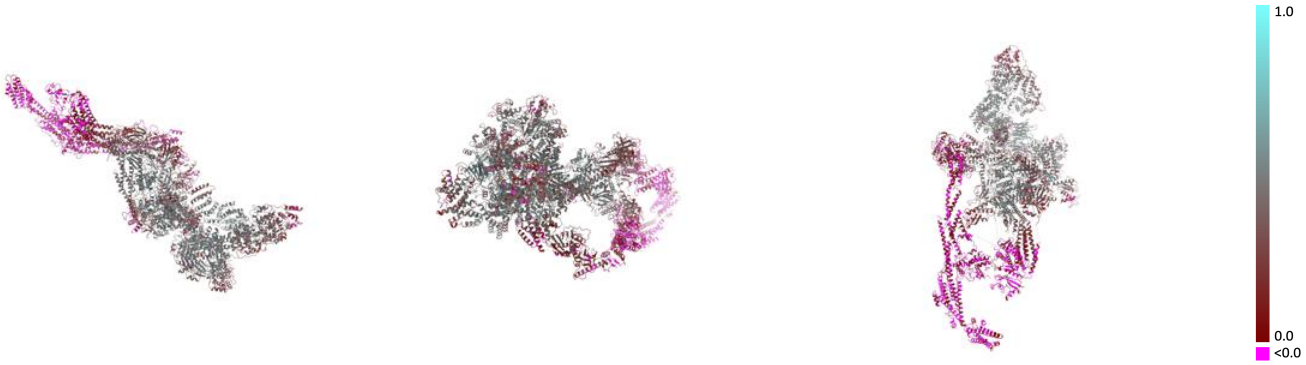
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.015 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.

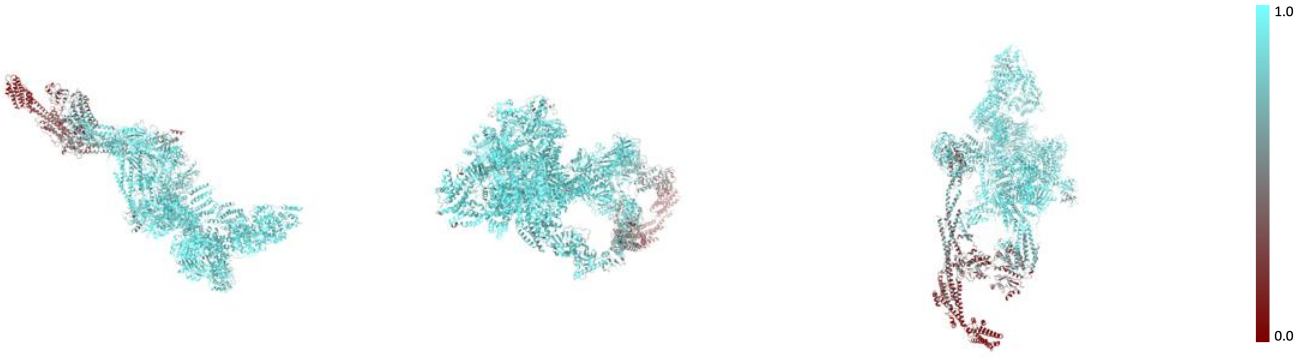
9.2 Q-score mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according 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.

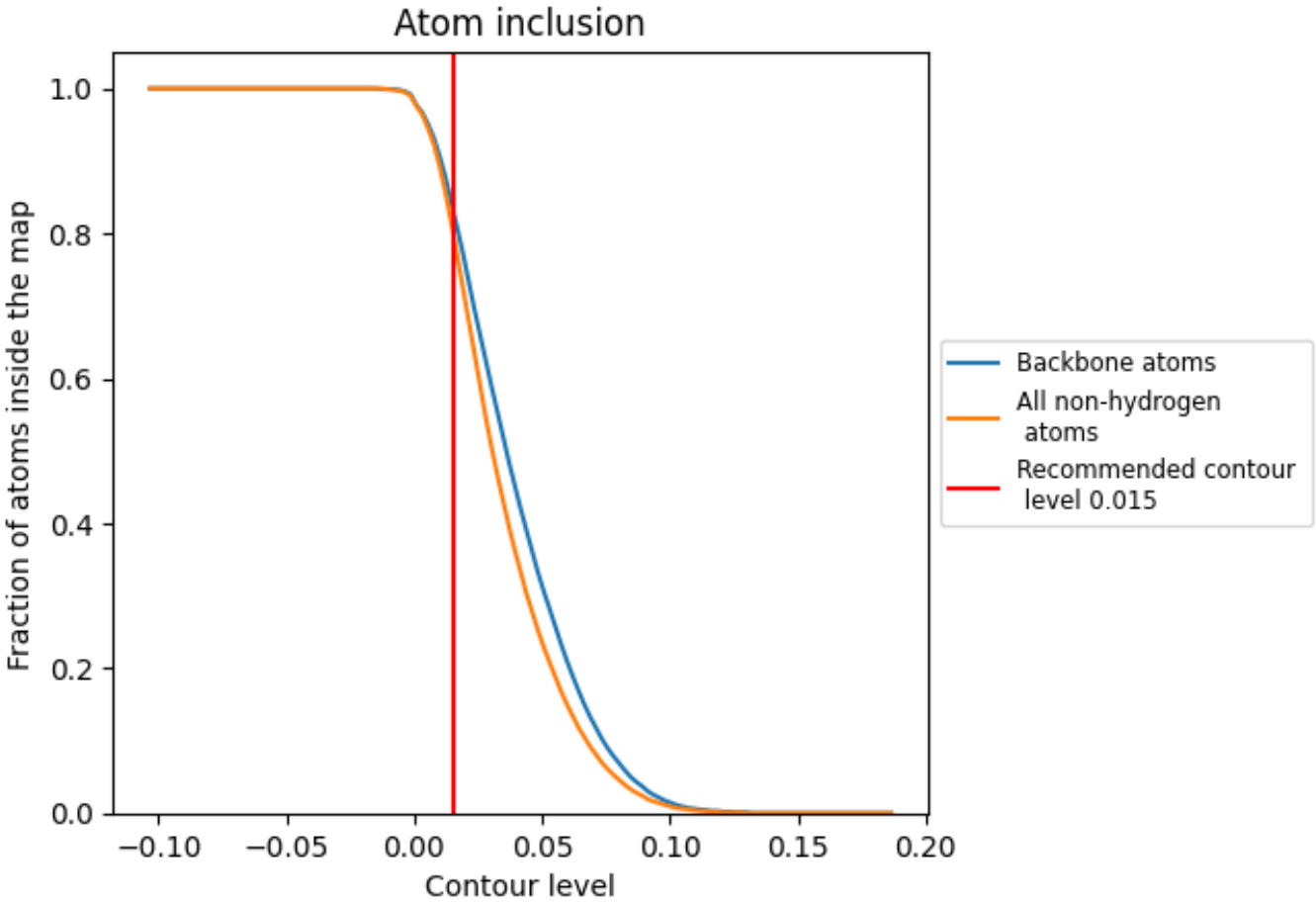
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

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 (0.015).

9.4 Atom inclusion (i)



At the recommended contour level, 84% of all backbone atoms, 81% 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 (0.015) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.8060	0.3170
0	0.9430	0.4670
1	0.9520	0.4210
2	0.9100	0.4040
3	0.9250	0.4000
4	0.3490	0.0150
A	0.7810	0.2080
B	0.8700	0.2510
D	0.4710	0.0200
F	0.4680	0.0590
G	0.3670	0.0150
H	0.5390	0.0480
I	0.5850	0.0570
J	0.1130	0.0170
K	0.8070	0.2610
N	0.8090	0.3390
O	0.9240	0.4100
P	0.9350	0.4470
Q	0.8410	0.3620
R	0.8850	0.2980
S	0.1010	-0.0090
T	0.8890	0.3230
U	0.3500	0.0010
V	0.8340	0.2780
W	0.9300	0.4070
X	0.9000	0.3810
d	0.1450	-0.0350