



Full wwPDB EM Validation Report ⓘ

Feb 25, 2024 – 09:47 AM EST

PDB ID : 7JMI
EMDB ID : EMD-22395
Title : Functional Pathways of Biomolecules Retrieved from Single-particle Snapshots
- Frame 29 - State 3 (S3)
Authors : Dashti, A.; des Georges, A.; Frank, J.; Ourmazd, A.
Deposited on : 2020-07-31
Resolution : 4.50 Å(reported)
Based on initial model : 5TB4

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.dev70
MolProbity : 4.02b-467
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36

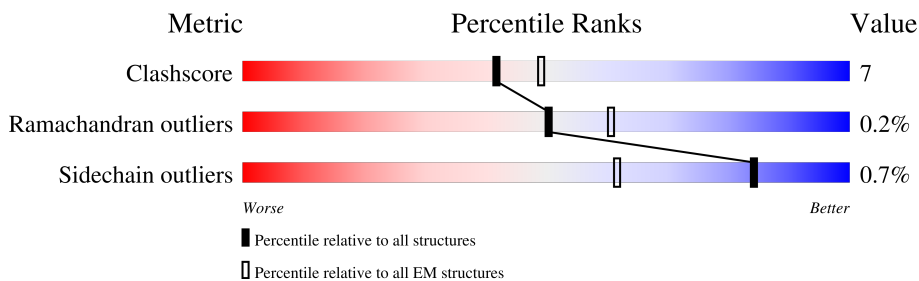
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 4.50 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	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

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

Mol	Chain	Length	Quality of chain
1	A	107	
1	F	107	
1	H	107	
1	J	107	
2	B	4687	
2	E	4687	
2	G	4687	
2	I	4687	

2 Entry composition [i](#)

There are 4 unique types of molecules in this entry. The entry contains 120756 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 Peptidyl-prolyl cis-trans isomerase FKBP1B.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	107	818	516	144	154	4	0	0
1	F	107	818	516	144	154	4	0	0
1	H	107	818	516	144	154	4	0	0
1	J	107	818	516	144	154	4	0	0

- Molecule 2 is a protein called ryanodine receptor type 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	B	4168	29369	18608	5202	5402	157	0	0
2	E	4168	29369	18608	5202	5402	157	0	0
2	G	4168	29369	18608	5202	5402	157	0	0
2	I	4168	29369	18608	5202	5402	157	0	0

- Molecule 3 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
3	B	1	Total	Zn	0
			1	1	
3	E	1	Total	Zn	0
			1	1	
3	G	1	Total	Zn	0
			1	1	
3	I	1	Total	Zn	0
			1	1	

- Molecule 4 is CALCIUM ION (three-letter code: CA) (formula: Ca) (labeled as "Ligand of

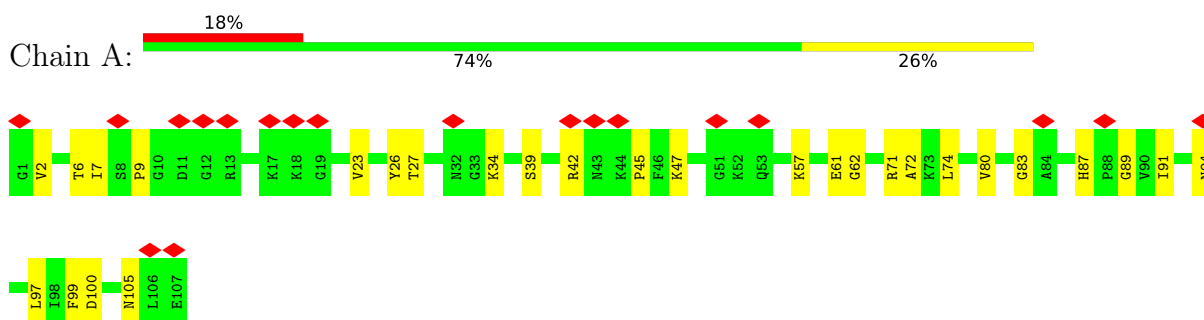
Interest" by depositor).

Mol	Chain	Residues	Atoms		AltConf
4	B	1	Total 1	Ca 1	0
4	E	1	Total 1	Ca 1	0
4	G	1	Total 1	Ca 1	0
4	I	1	Total 1	Ca 1	0

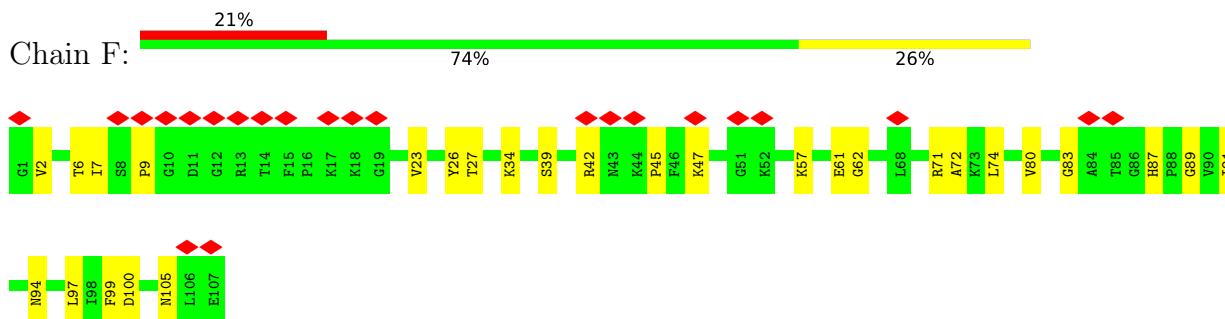
3 Residue-property plots [i](#)

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.

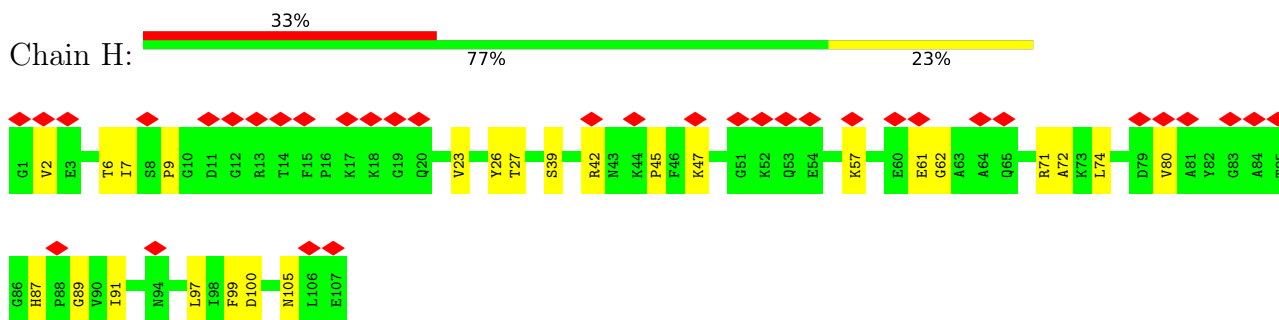
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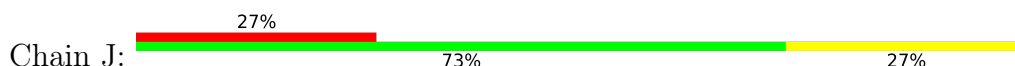
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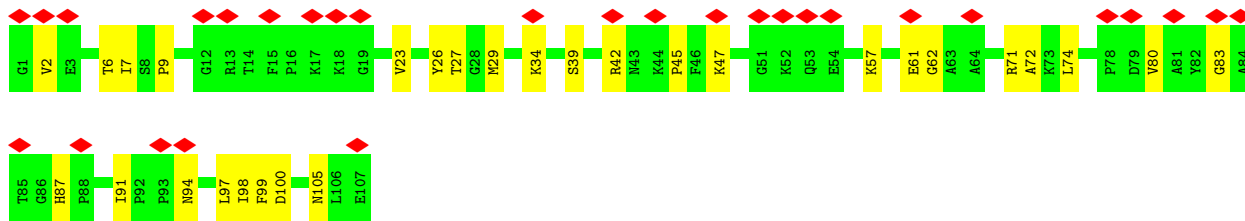


- Molecule 1: Peptidyl-prolyl cis-trans isomerase FKBP1B

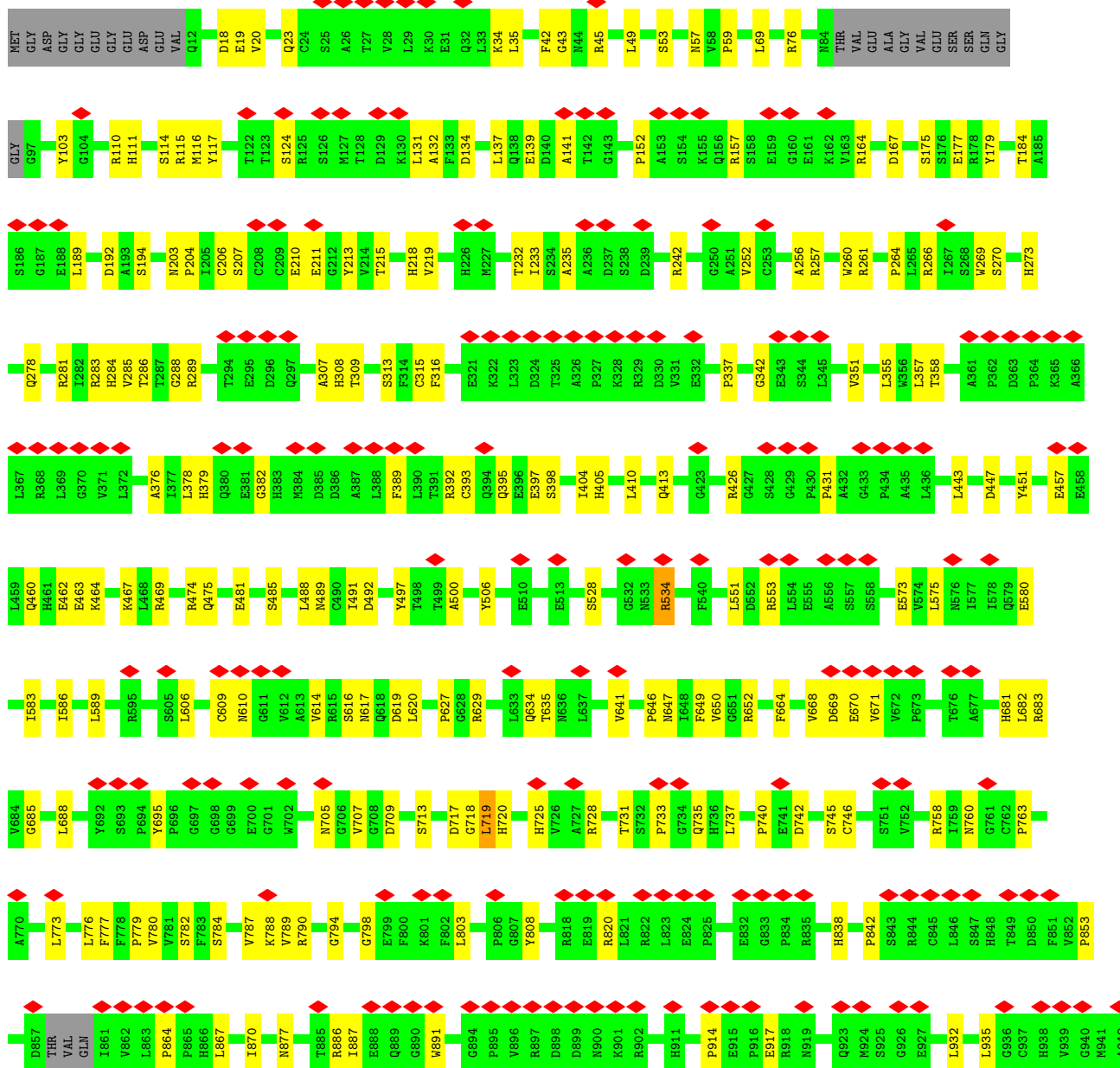
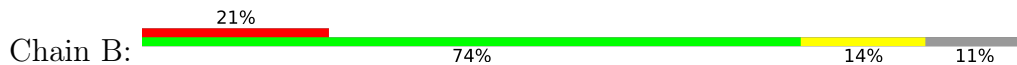


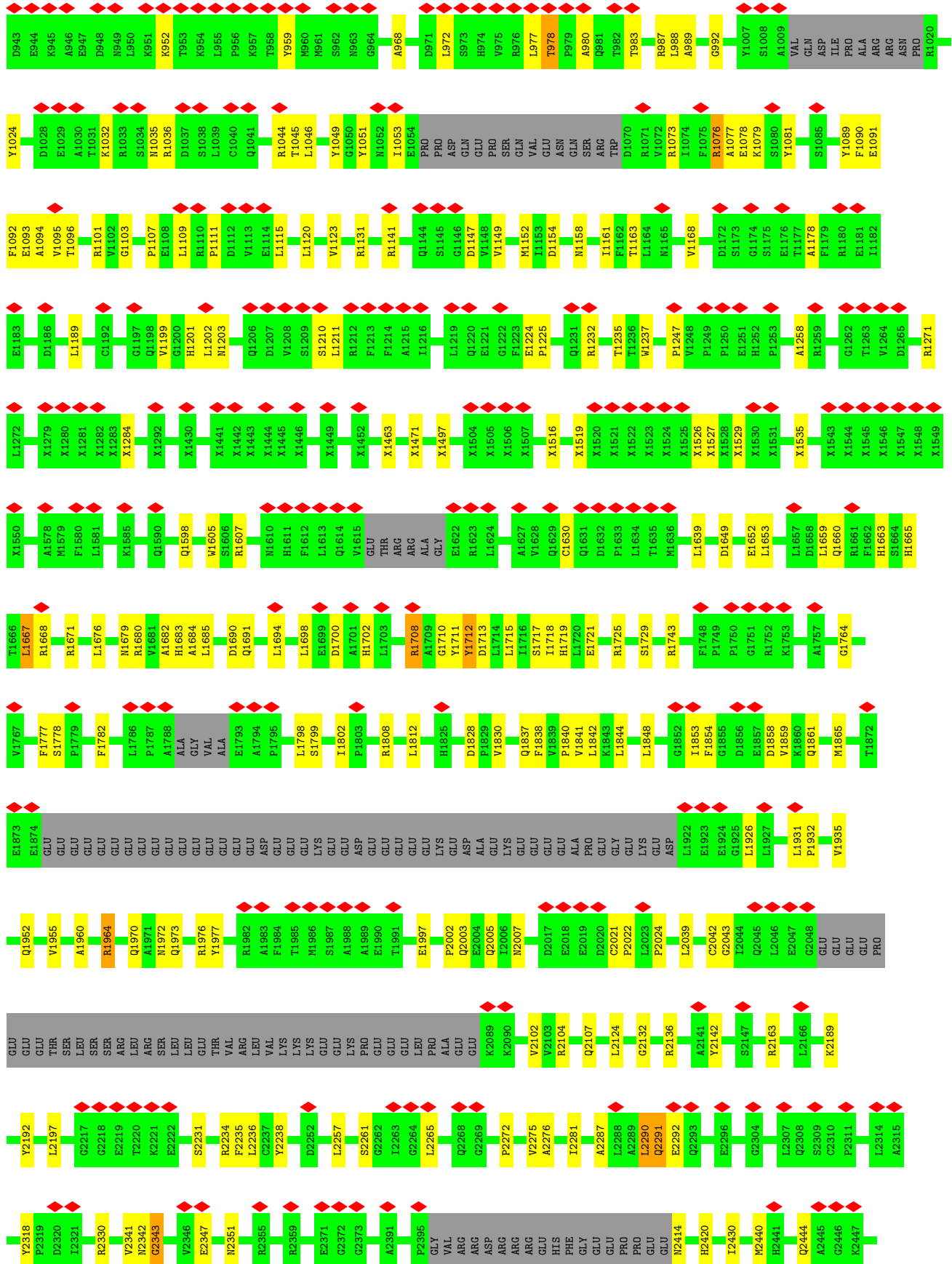
- Molecule 1: Peptidyl-prolyl cis-trans isomerase FKBP1B



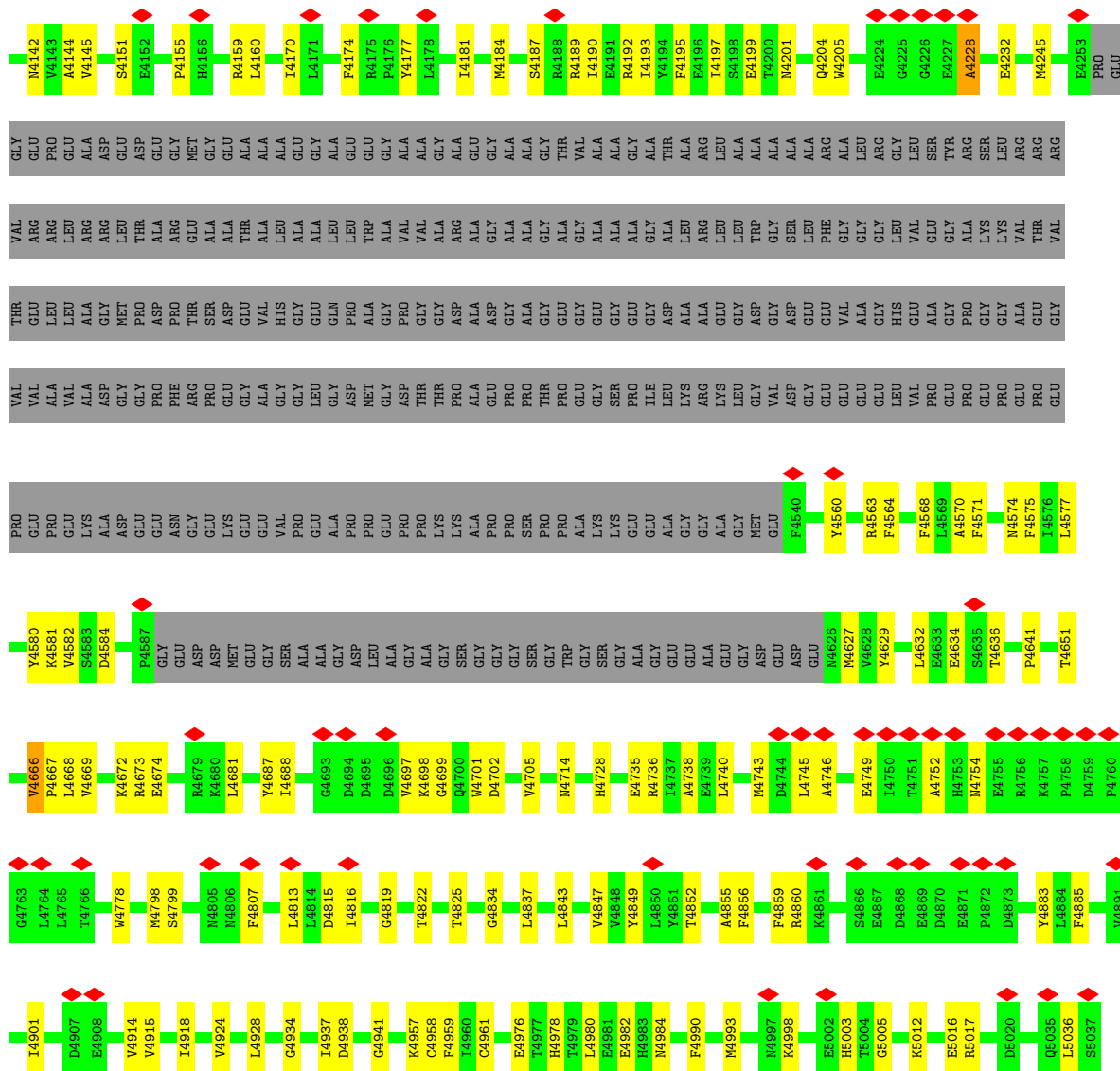


• Molecule 2: ryanodine receptor type 1

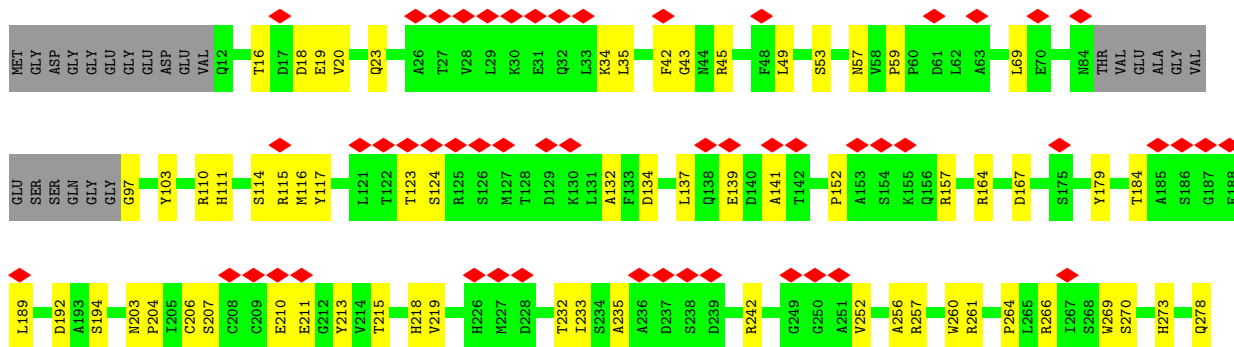
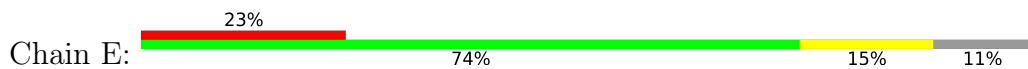


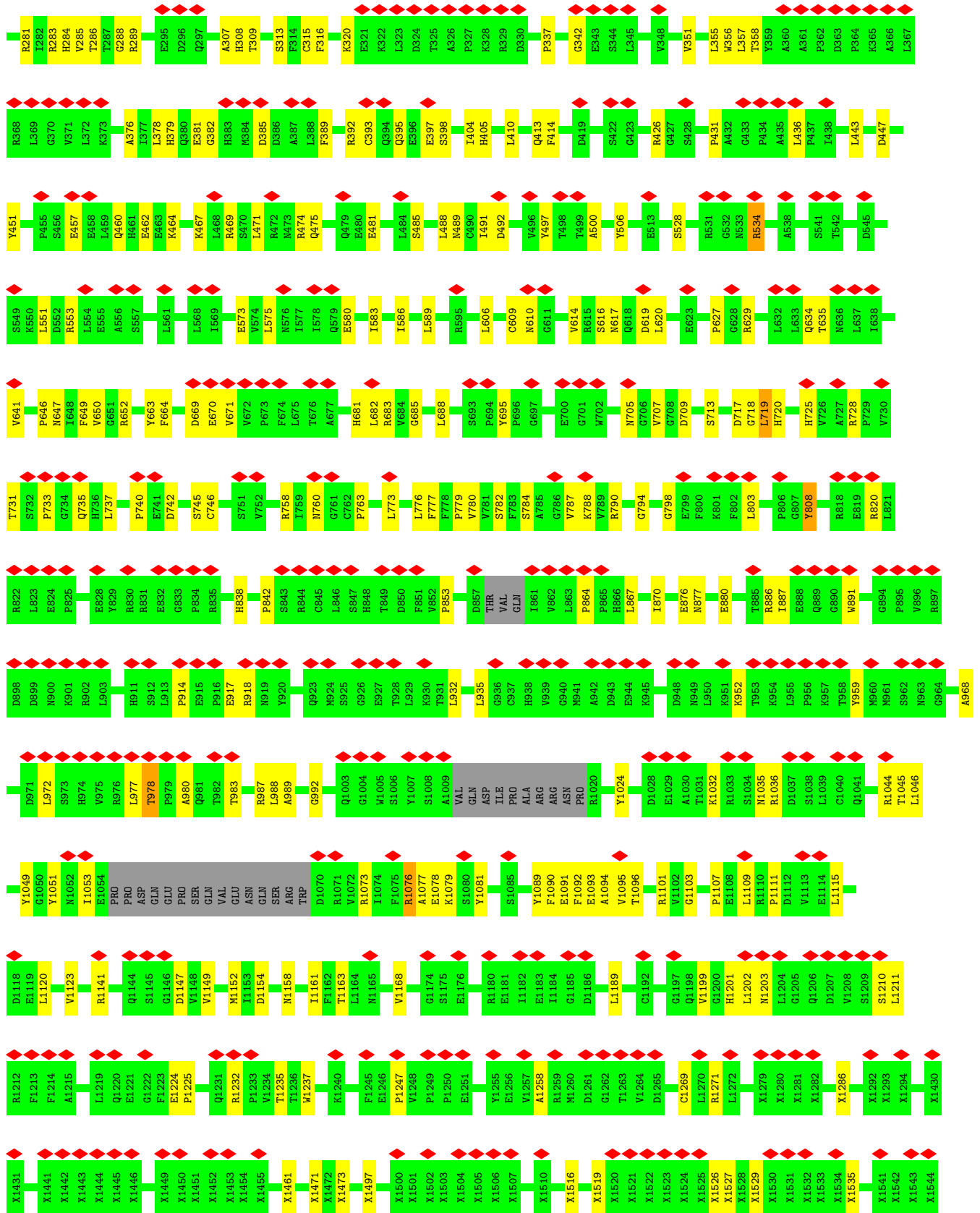


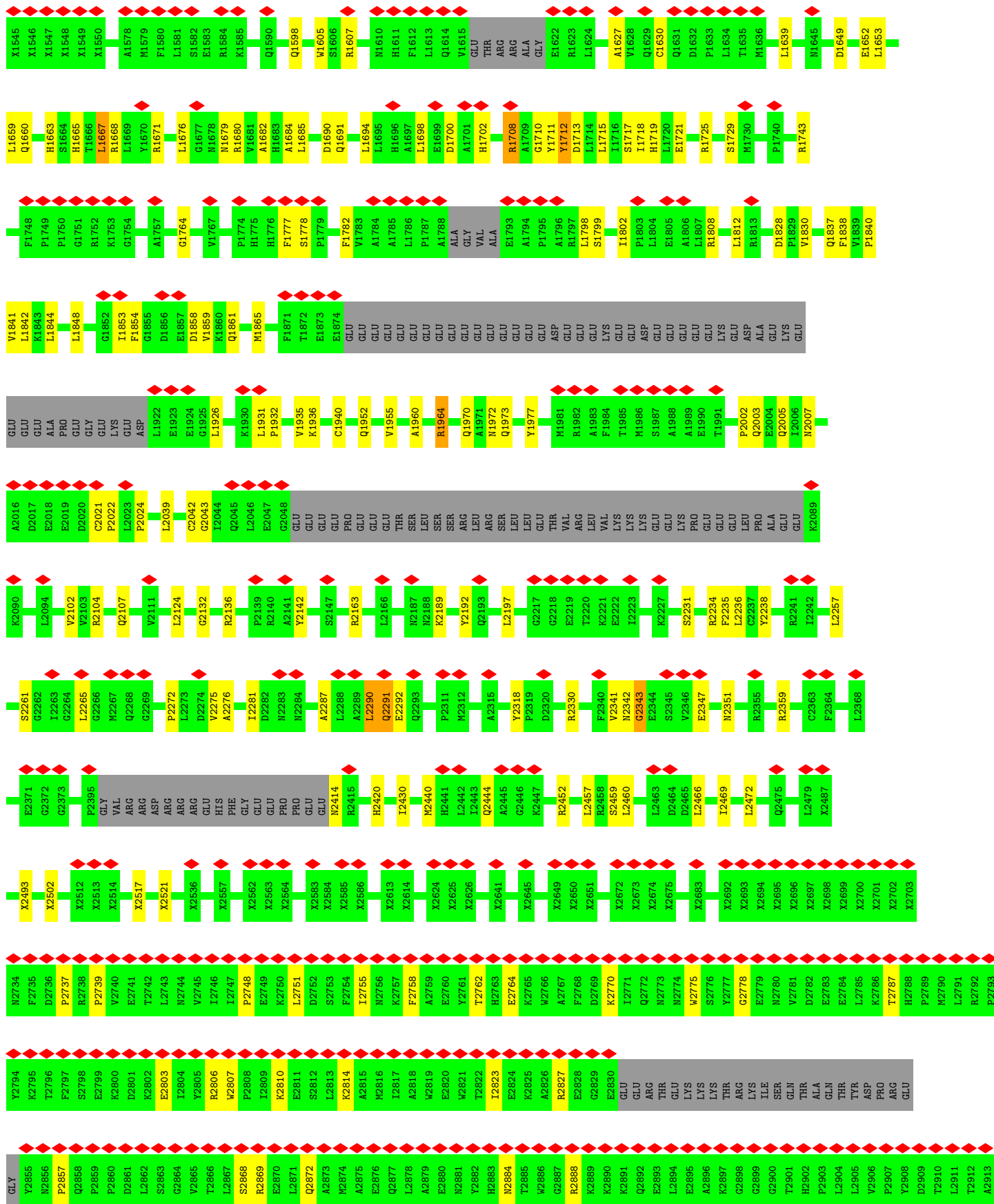
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S2459	X2673	E2779	ARG	G2899	X3016	X3249	X3424	X3580	K3715	L3817	S3931	V4049
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L2463	X2693	D2781	ILE	T2901	X3020	X3251	X3426	X3582	D3717	Q3830	S3935	S4051
D2464	X2694	D2782	SER	H2902	X3021	X3252	X3427	X3583	Y3720	S3831	Y3936	E4056
D2465	X2695	E2783	GLN	P2903	X3022	X3253	X3428	X3584	L3735	L3832	S3938	L4059
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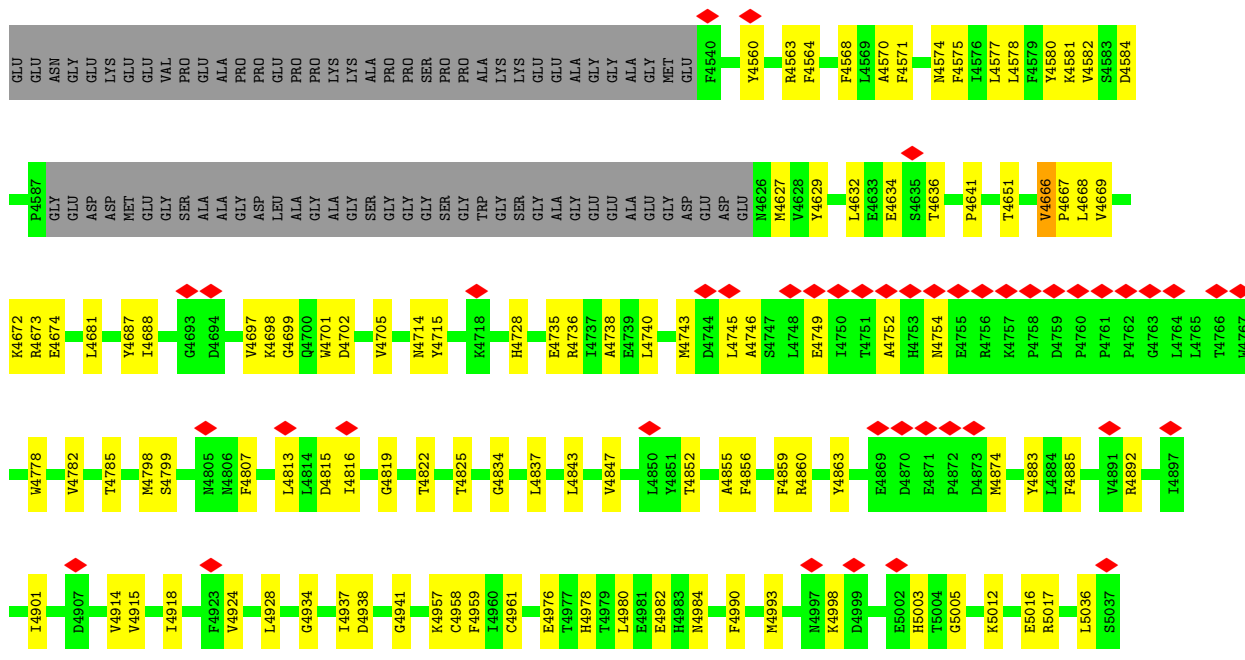


• Molecule 2: ryanodine receptor type 1

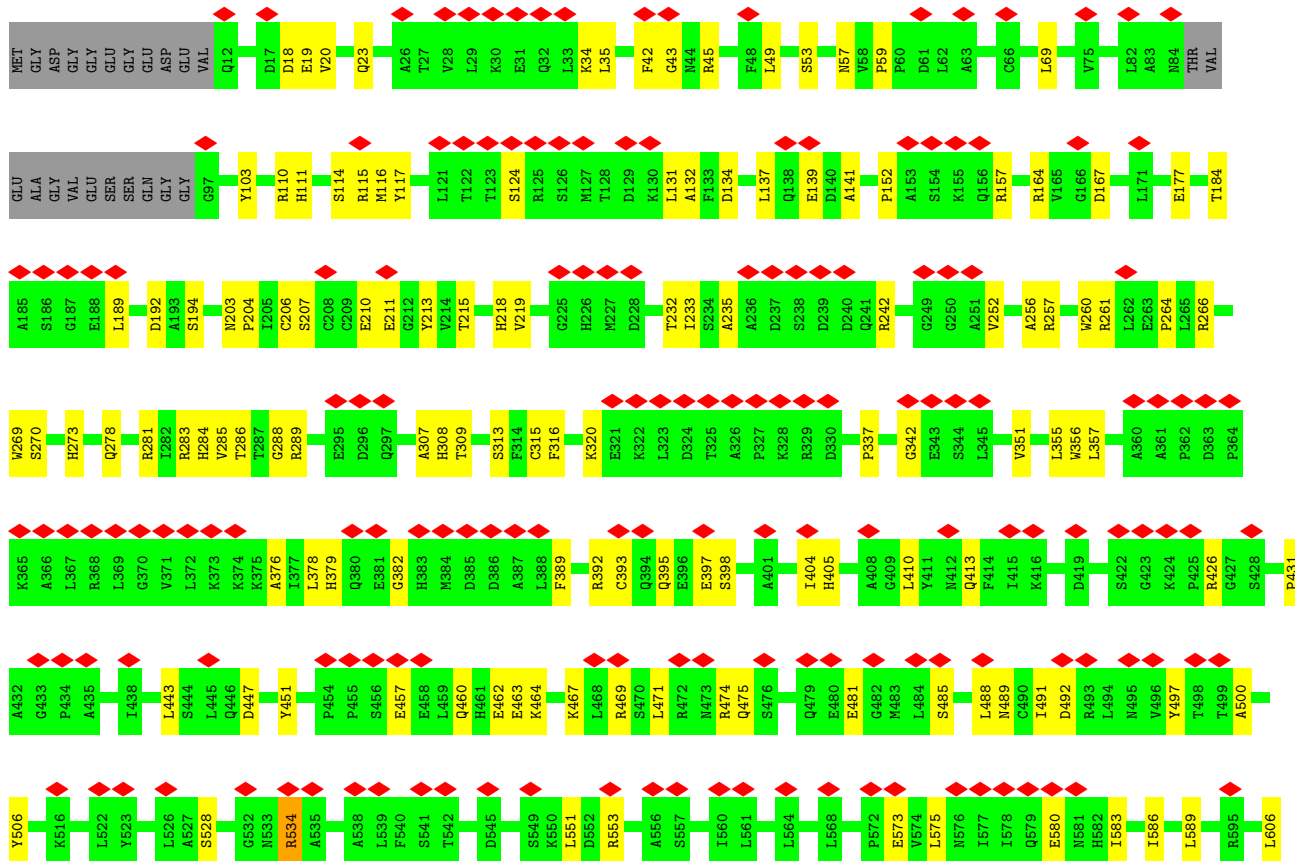
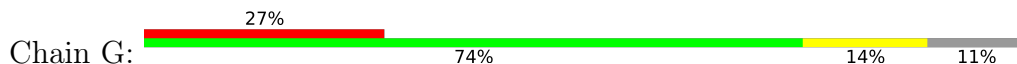




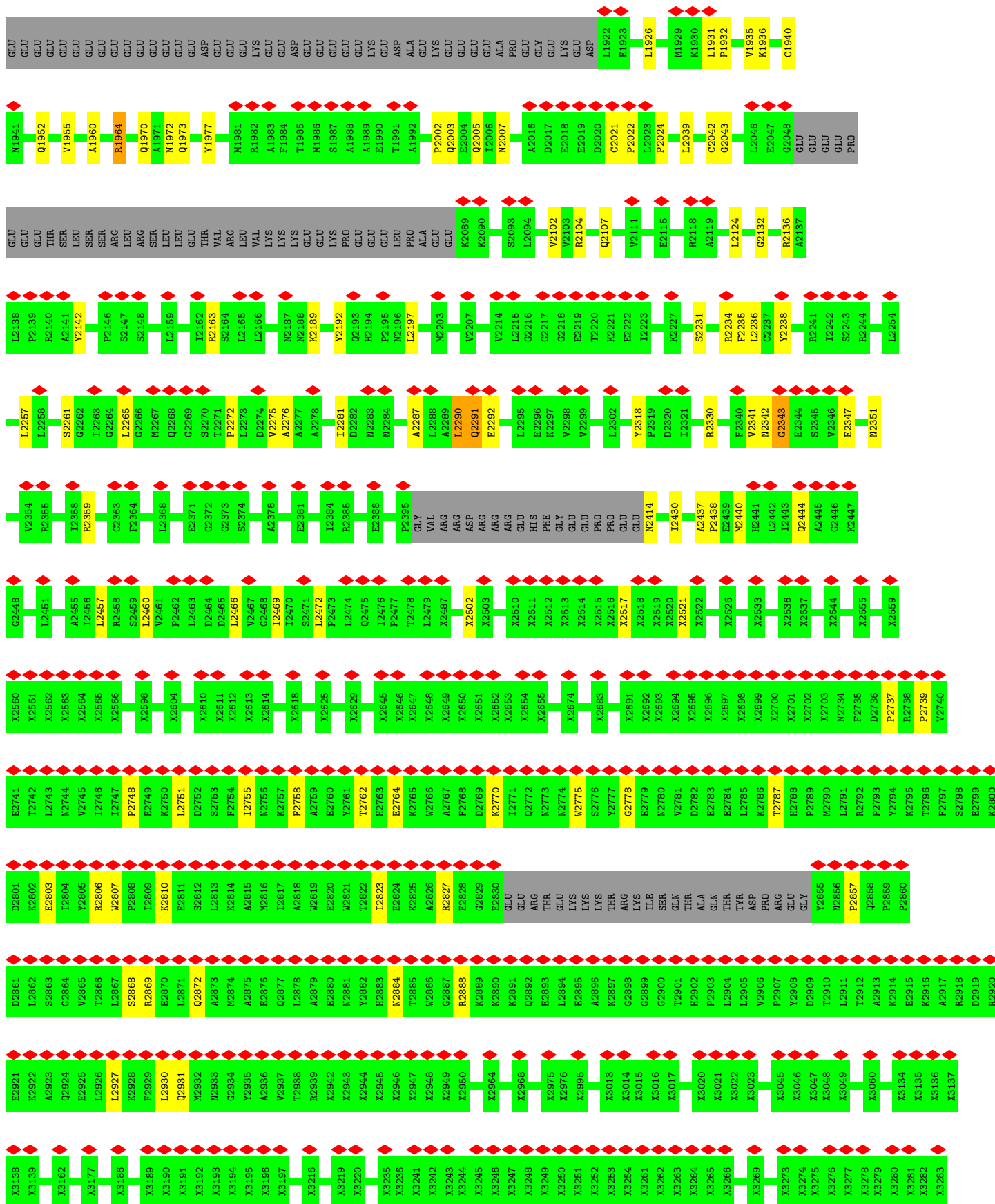


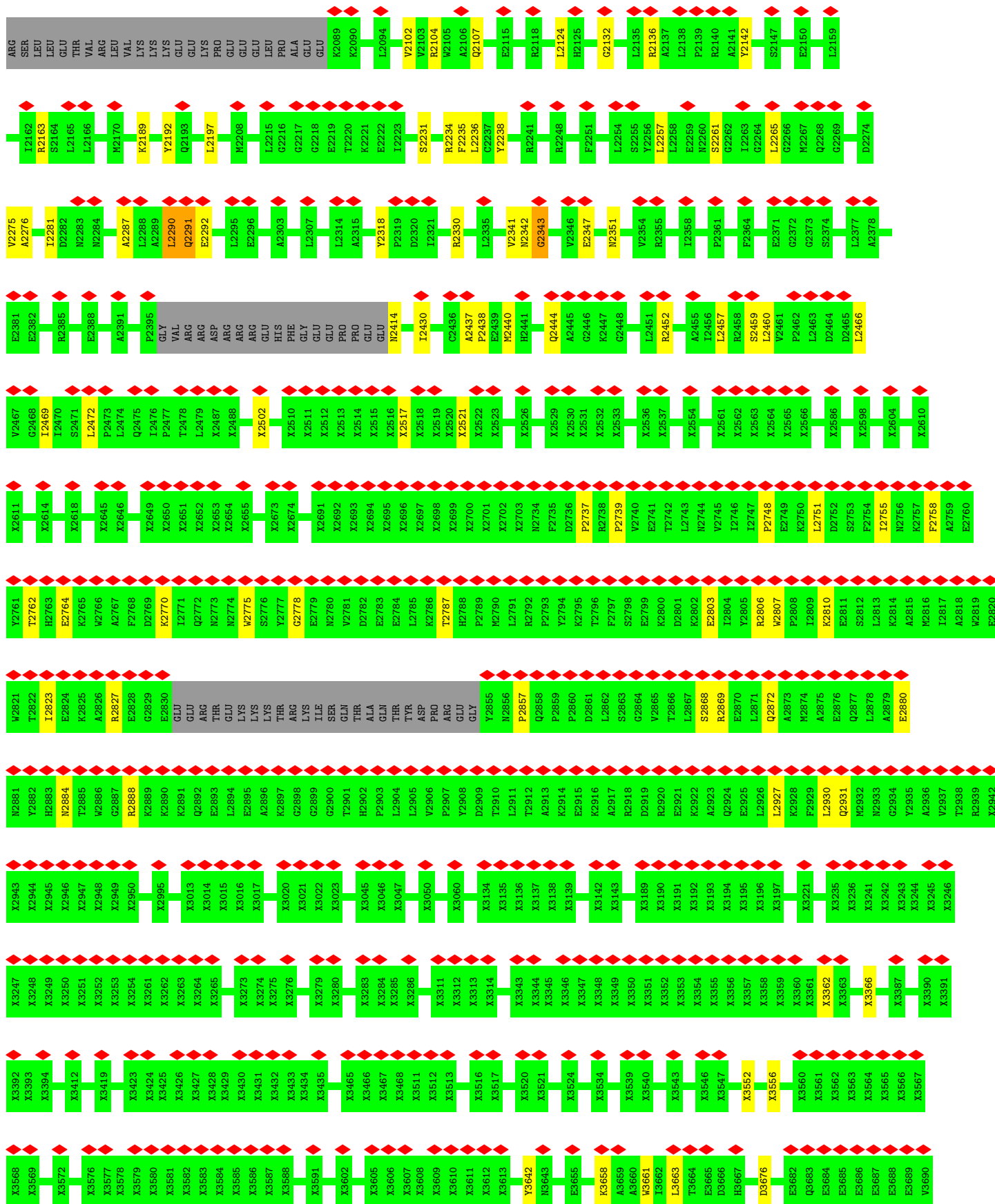


• Molecule 2: ryanodine receptor type 1

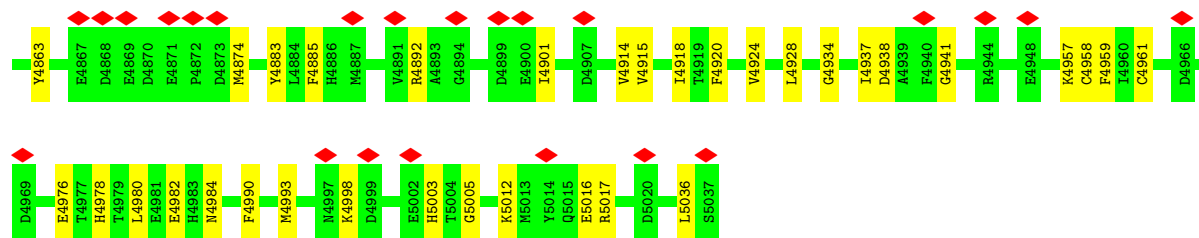








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D4079	T4082	D4083	P4084	R4085	K4091	Q4094	K4095	A4096	M4097	D4098	S4099	K4101	Q4102	F4103	T4104	G4105	P4106	E4107	I4108	S4113	A4117	D4118	A4119	M4120	E4121	F4125	F4128	E4134	P4135	A4136	R4137	D4138	I4139	G4140	F4141	N4142	Y4143	A4144	S4151	E4152	P4155	H4156	D4157	P4158	R4159	L4160	R4161			
E4165	L4166	T4170	L4171	F4174	R4175	P4176	Y4177	L4178	I4181	M4184	S4187	R4188	L4189	I4190	E4191	R4192	F4195	E4196	I4197	S4198	T4200	M4201	R4202	A4203	M4205	E4206	Q4225	Q4226	E4227	A4228	E4232	M4245	A4249	S4252	E4253	PRO	GLU	GLY	PRO	GLU	GLU	ALA	ASP	GLU	ASP	GLU	ASP			
GLU	GLY	MET	GLY	GLU	ALA	ALA	GLU	GLY	GLY	ALA	ALA	GLY	ALA	ALA	THR	VAL	ALA	ALA	ALA	ARG	ALA	ARG	LEU	ALA	ALA	ALA	ARG	GLY	GLY	GLY	GLY	VAL	VAL	THR	VAL	VAL	ARG	ARG	ARG	GLY	PRO	GLU	LEU	LEU	THR					
ALA	ARG	GLU	ALA	THR	ALA	LEU	ALA	ALA	GLN	LEU	ALA	TRP	ALA	VAL	VAL	ARG	ALA	GLY	ALA	LEU	LEU	LEU	ALA	LEU	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA		
ASP	PRO	THR	SER	ASP	GLU	VAL	HIS	VAL	GLU	GLN	PRO	ALA	GLY	PRO	PRO	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP
PRO	PHE	ARG	PRO	GLU	GLY	ALA	GLY	GLY	LEU	GLU	GLY	MET	ASP	GLY	ALA	ASP	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR
GLU	ASN	GLY	LYS	GLU	VAL	PRO	GLU	GLU	ALA	PRO	PRO	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY		
V4582	S4583	D4584	P4587	GLY	ASP	MET	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY			
L4656	L4664	K4665	V4666	P4667	L4668	V4669	K4672	G4673	E4674	R4679	K4680	L4681	Y4687	I4688	G4693	D4694	D4695	D4696	V4697	K4698	G4699	Q4700	W4701	D4702	V4705	N4714	Y4715	D4726	K4727	H4728	R4734	E4735	R4736	I4737	M4738	E4739	L4740	M4743	D4744	L4745	A4746	E4749	I4750	T4751	A4752	H4753	M4754			
E4755	R4756	K4757	P4758	D4759	P4760	P4761	P4762	G4763	L4764	L4765	T4766	H4767	D4772	H4778	V4782	T4785	M4798	S4799	F4807	F4808	F4809	L4813	L4814	D4815	I4816	A4817	M4818	Q4819	T4822	T4825	E4826	R4827	H4832	M4833	C4834	L4837	L4843	L4844	V4847	V4848	T4852	A4855	F4856	F4859	R4860					



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C4	Depositor
Number of particles used	791956	Depositor
Resolution determination method	OTHER	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI POLARA 300	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	50	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.549	Depositor
Minimum map value	-0.237	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.030	Depositor
Recommended contour level	0.16	Depositor
Map size (Å)	502.0, 502.0, 502.0	wwPDB
Map dimensions	400, 400, 400	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.255, 1.255, 1.255	Depositor

5 Model quality i

5.1 Standard geometry i

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	A	0.31	0/834	0.56	0/1123
1	F	0.31	0/834	0.56	0/1123
1	H	0.31	0/834	0.56	0/1123
1	J	0.31	0/834	0.56	0/1123
2	B	0.30	0/25428	0.55	5/34534 (0.0%)
2	E	0.30	0/25428	0.55	5/34534 (0.0%)
2	G	0.30	0/25428	0.55	5/34534 (0.0%)
2	I	0.30	0/25428	0.55	5/34534 (0.0%)
All	All	0.30	0/105048	0.55	20/142628 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
2	B	0	16
2	E	0	16
2	G	0	16
2	I	0	16
All	All	0	64

There are no bond length outliers.

All (20) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	719	LEU	CA-CB-CG	6.09	129.30	115.30
2	G	719	LEU	CA-CB-CG	6.08	129.29	115.30
2	E	719	LEU	CA-CB-CG	6.08	129.28	115.30
2	I	719	LEU	CA-CB-CG	6.07	129.27	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	G	1667	LEU	CA-CB-CG	5.71	128.43	115.30
2	B	1667	LEU	CA-CB-CG	5.70	128.42	115.30
2	E	1667	LEU	CA-CB-CG	5.69	128.40	115.30
2	I	1667	LEU	CA-CB-CG	5.69	128.39	115.30
2	B	977	LEU	CA-CB-CG	5.51	127.98	115.30
2	I	977	LEU	CA-CB-CG	5.51	127.97	115.30
2	E	977	LEU	CA-CB-CG	5.49	127.93	115.30
2	G	977	LEU	CA-CB-CG	5.47	127.88	115.30
2	I	2290	LEU	CA-CB-CG	5.17	127.20	115.30
2	G	2290	LEU	CA-CB-CG	5.15	127.15	115.30
2	B	2290	LEU	CA-CB-CG	5.14	127.11	115.30
2	E	2290	LEU	CA-CB-CG	5.13	127.10	115.30
2	E	2291	GLN	C-N-CA	5.04	134.29	121.70
2	I	2291	GLN	C-N-CA	5.03	134.29	121.70
2	B	2291	GLN	C-N-CA	5.03	134.28	121.70
2	G	2291	GLN	C-N-CA	5.01	134.22	121.70

There are no chirality outliers.

All (64) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	B	137	LEU	Peptide
2	B	1676	LEU	Peptide
2	B	1690	ASP	Peptide
2	B	1712	TYR	Peptide
2	B	1828	ASP	Peptide
2	B	2291	GLN	Peptide
2	B	2292	GLU	Peptide
2	B	2342	ASN	Peptide
2	B	2343	GLY	Peptide
2	B	2472	LEU	Peptide
2	B	2807	TRP	Peptide
2	B	3971	GLY	Peptide
2	B	4228	ALA	Peptide
2	B	4666	VAL	Peptide
2	B	4807	PHE	Peptide
2	B	808	TYR	Peptide
2	E	137	LEU	Peptide
2	E	1676	LEU	Peptide
2	E	1690	ASP	Peptide
2	E	1712	TYR	Peptide
2	E	1828	ASP	Peptide

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Mol	Chain	Res	Type	Group
2	E	2291	GLN	Peptide
2	E	2292	GLU	Peptide
2	E	2342	ASN	Peptide
2	E	2343	GLY	Peptide
2	E	2472	LEU	Peptide
2	E	2807	TRP	Peptide
2	E	3971	GLY	Peptide
2	E	4228	ALA	Peptide
2	E	4666	VAL	Peptide
2	E	4807	PHE	Peptide
2	E	808	TYR	Peptide
2	G	137	LEU	Peptide
2	G	1676	LEU	Peptide
2	G	1690	ASP	Peptide
2	G	1712	TYR	Peptide
2	G	1828	ASP	Peptide
2	G	2291	GLN	Peptide
2	G	2292	GLU	Peptide
2	G	2342	ASN	Peptide
2	G	2343	GLY	Peptide
2	G	2472	LEU	Peptide
2	G	2807	TRP	Peptide
2	G	3971	GLY	Peptide
2	G	4228	ALA	Peptide
2	G	4666	VAL	Peptide
2	G	4807	PHE	Peptide
2	G	808	TYR	Peptide
2	I	137	LEU	Peptide
2	I	1676	LEU	Peptide
2	I	1690	ASP	Peptide
2	I	1712	TYR	Peptide
2	I	1828	ASP	Peptide
2	I	2291	GLN	Peptide
2	I	2292	GLU	Peptide
2	I	2342	ASN	Peptide
2	I	2343	GLY	Peptide
2	I	2472	LEU	Peptide
2	I	2807	TRP	Peptide
2	I	3971	GLY	Peptide
2	I	4228	ALA	Peptide
2	I	4666	VAL	Peptide
2	I	4807	PHE	Peptide

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Mol	Chain	Res	Type	Group
2	I	808	TYR	Peptide

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	818	0	824	18	0
1	F	818	0	824	17	0
1	H	818	0	824	17	0
1	J	818	0	824	18	0
2	B	29369	0	24711	395	0
2	E	29369	0	24713	406	0
2	G	29369	0	24713	395	0
2	I	29369	0	24712	397	0
3	B	1	0	0	0	0
3	E	1	0	0	0	0
3	G	1	0	0	0	0
3	I	1	0	0	0	0
4	B	1	0	0	0	0
4	E	1	0	0	0	0
4	G	1	0	0	0	0
4	I	1	0	0	0	0
All	All	120756	0	102145	1629	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 7.

All (1629) 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)
2:I:2318:TYR:HH	2:I:2414:ASN:N	1.88	0.72
2:G:2318:TYR:HH	2:G:2414:ASN:N	1.88	0.71
2:B:2318:TYR:HH	2:B:2414:ASN:N	1.88	0.71
2:E:853:PRO:HB3	2:E:1024:TYR:H	1.56	0.71
2:I:853:PRO:HB3	2:I:1024:TYR:H	1.56	0.70
2:G:853:PRO:HB3	2:G:1024:TYR:H	1.56	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:2318:TYR:HH	2:E:2414:ASN:N	1.89	0.70
2:E:4674:GLU:HG3	2:E:4714:ASN:HB3	1.74	0.69
2:I:4674:GLU:HG3	2:I:4714:ASN:HB3	1.74	0.69
2:I:745:SER:HB2	2:I:758:ARG:HB3	1.75	0.68
2:B:745:SER:HB2	2:B:758:ARG:HB3	1.75	0.68
2:B:853:PRO:HB3	2:B:1024:TYR:H	1.56	0.68
2:G:4674:GLU:HG3	2:G:4714:ASN:HB3	1.74	0.68
2:E:745:SER:HB2	2:E:758:ARG:HB3	1.75	0.68
2:G:788:LYS:HG2	2:G:1630:CYS:H	1.59	0.68
2:B:788:LYS:HG2	2:B:1630:CYS:H	1.59	0.68
2:G:745:SER:HB2	2:G:758:ARG:HB3	1.75	0.68
2:I:788:LYS:HG2	2:I:1630:CYS:H	1.59	0.68
2:E:788:LYS:HG2	2:E:1630:CYS:H	1.59	0.67
2:B:4674:GLU:HG3	2:B:4714:ASN:HB3	1.74	0.67
2:G:3990:VAL:HG13	2:G:4051:SER:HB2	1.77	0.66
2:E:3990:VAL:HG13	2:E:4051:SER:HB2	1.77	0.66
2:I:646:PRO:HD2	2:I:779:PRO:HB2	1.78	0.66
2:I:379:HIS:HD2	2:I:382:GLY:H	1.43	0.66
2:E:379:HIS:HD2	2:E:382:GLY:H	1.43	0.66
2:I:1092:PHE:HB3	2:I:1149:VAL:HB	1.78	0.65
2:I:3990:VAL:HG13	2:I:4051:SER:HB2	1.78	0.65
2:E:1671:ARG:NH2	2:E:1710:GLY:O	2.29	0.65
2:E:1092:PHE:HB3	2:E:1149:VAL:HB	1.78	0.65
2:B:1092:PHE:HB3	2:B:1149:VAL:HB	1.78	0.65
2:G:1671:ARG:NH2	2:G:1710:GLY:O	2.29	0.65
2:G:646:PRO:HD2	2:G:779:PRO:HB2	1.78	0.65
2:B:1519:UNK:HA	2:B:1526:UNK:HA	1.79	0.65
2:B:1671:ARG:NH2	2:B:1710:GLY:O	2.29	0.65
2:G:379:HIS:HD2	2:G:382:GLY:H	1.43	0.65
2:I:1519:UNK:HA	2:I:1526:UNK:HA	1.79	0.65
2:I:1671:ARG:NH2	2:I:1710:GLY:O	2.29	0.65
2:B:3990:VAL:HG13	2:B:4051:SER:HB2	1.78	0.64
2:B:4961:CYS:SG	2:B:4978:HIS:NE2	2.71	0.64
2:E:646:PRO:HD2	2:E:779:PRO:HB2	1.78	0.64
2:B:1232:ARG:HD2	2:B:1702:HIS:HB3	1.80	0.64
2:G:1092:PHE:HB3	2:G:1149:VAL:HB	1.78	0.64
2:I:989:ALA:O	2:I:1035:ASN:ND2	2.31	0.64
2:I:4961:CYS:SG	2:I:4978:HIS:NE2	2.71	0.64
2:B:379:HIS:HD2	2:B:382:GLY:H	1.43	0.64
2:B:989:ALA:O	2:B:1035:ASN:ND2	2.31	0.64
2:G:4961:CYS:SG	2:G:4978:HIS:NE2	2.71	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:989:ALA:O	2:G:1035:ASN:ND2	2.31	0.64
2:B:646:PRO:HD2	2:B:779:PRO:HB2	1.78	0.63
2:G:650:VAL:HB	2:G:777:PHE:HB2	1.80	0.63
2:E:1232:ARG:HD2	2:E:1702:HIS:HB3	1.80	0.63
2:E:4961:CYS:SG	2:E:4978:HIS:NE2	2.71	0.63
2:E:989:ALA:O	2:E:1035:ASN:ND2	2.31	0.63
2:I:606:LEU:O	2:I:617:ASN:ND2	2.32	0.63
2:I:650:VAL:HB	2:I:777:PHE:HB2	1.81	0.63
2:E:650:VAL:HB	2:E:777:PHE:HB2	1.81	0.63
2:B:606:LEU:O	2:B:617:ASN:ND2	2.32	0.63
2:B:650:VAL:HB	2:B:777:PHE:HB2	1.81	0.63
2:E:606:LEU:O	2:E:617:ASN:ND2	2.32	0.63
2:G:3937:TYR:O	2:G:4002:LYS:NZ	2.32	0.63
2:G:606:LEU:O	2:G:617:ASN:ND2	2.32	0.62
2:I:1232:ARG:HD2	2:I:1702:HIS:HB3	1.80	0.62
2:B:1743:ARG:O	2:B:1964:ARG:NH2	2.32	0.62
2:E:1743:ARG:O	2:E:1964:ARG:NH2	2.32	0.62
2:B:2755:ILE:HD13	2:B:2810:LYS:HG2	1.81	0.62
2:I:1743:ARG:O	2:I:1964:ARG:NH2	2.32	0.62
2:B:3937:TYR:O	2:B:4002:LYS:NZ	2.32	0.62
2:E:4918:ILE:HG23	2:G:4892:ARG:HD3	1.81	0.62
2:G:1247:PRO:HA	2:G:1598:GLN:HA	1.81	0.62
2:E:2755:ILE:HD13	2:E:2810:LYS:HG2	1.81	0.62
2:I:2755:ILE:HD13	2:I:2810:LYS:HG2	1.81	0.62
2:B:4934:GLY:HA3	2:E:4937:ILE:HD12	1.81	0.62
2:G:2755:ILE:HD13	2:G:2810:LYS:HG2	1.81	0.62
2:G:1743:ARG:O	2:G:1964:ARG:NH2	2.32	0.62
1:A:34:LYS:NZ	2:B:635:THR:O	2.33	0.62
2:I:1247:PRO:HA	2:I:1598:GLN:HA	1.81	0.62
2:G:1232:ARG:HD2	2:G:1702:HIS:HB3	1.80	0.62
2:B:281:ARG:NH2	2:B:309:THR:OG1	2.33	0.62
2:E:281:ARG:NH2	2:E:309:THR:OG1	2.33	0.62
2:G:4673:ARG:HH22	2:G:4698:LYS:HB2	1.66	0.61
2:E:1247:PRO:HA	2:E:1598:GLN:HA	1.81	0.61
2:E:3937:TYR:O	2:E:4002:LYS:NZ	2.32	0.61
2:B:4673:ARG:HH22	2:B:4698:LYS:HB2	1.66	0.61
2:I:3937:TYR:O	2:I:4002:LYS:NZ	2.32	0.61
2:I:281:ARG:NH2	2:I:309:THR:OG1	2.33	0.61
2:G:281:ARG:NH2	2:G:309:THR:OG1	2.33	0.61
2:E:4673:ARG:HH22	2:E:4698:LYS:HB2	1.66	0.61
2:E:4144:ALA:HB2	2:E:4170:ILE:HG22	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:4855:ALA:HA	2:I:4859:PHE:HB2	1.84	0.60
2:B:1247:PRO:HA	2:B:1598:GLN:HA	1.81	0.60
2:G:111:HIS:HD2	2:G:114:SER:H	1.49	0.60
2:G:4855:ALA:HA	2:G:4859:PHE:HB2	1.84	0.60
2:I:111:HIS:HD2	2:I:114:SER:H	1.49	0.60
2:G:4144:ALA:HB2	2:G:4170:ILE:HG22	1.84	0.60
2:B:4144:ALA:HB2	2:B:4170:ILE:HG22	1.84	0.60
2:I:4144:ALA:HB2	2:I:4170:ILE:HG22	1.84	0.60
2:B:111:HIS:HD2	2:B:114:SER:H	1.49	0.60
2:E:4855:ALA:HA	2:E:4859:PHE:HB2	1.84	0.60
2:I:742:ASP:HA	2:I:760:ASN:HD21	1.67	0.59
2:E:111:HIS:HD2	2:E:114:SER:H	1.49	0.59
2:I:4673:ARG:HH22	2:I:4698:LYS:HB2	1.66	0.59
2:G:742:ASP:HA	2:G:760:ASN:HD21	1.67	0.59
2:B:609:CYS:SG	2:B:610:ASN:N	2.76	0.59
2:B:1700:ASP:OD2	2:B:1708:ARG:NH2	2.36	0.59
2:B:4847:VAL:HG11	2:B:4924:VAL:HG11	1.85	0.59
2:B:4855:ALA:HA	2:B:4859:PHE:HB2	1.84	0.59
2:E:2281:ILE:HG23	2:E:2341:VAL:HG11	1.85	0.59
1:F:23:VAL:HG22	1:F:47:LYS:HG2	1.85	0.59
2:I:609:CYS:SG	2:I:610:ASN:N	2.76	0.59
2:E:1519:UNK:HA	2:E:1526:UNK:HA	1.84	0.59
2:I:2281:ILE:HG23	2:I:2341:VAL:HG11	1.85	0.59
2:B:742:ASP:HA	2:B:760:ASN:HD21	1.67	0.59
2:E:1700:ASP:OD2	2:E:1708:ARG:NH2	2.36	0.59
2:I:132:ALA:HA	2:I:194:SER:HB2	1.84	0.59
1:A:23:VAL:HG22	1:A:47:LYS:HG2	1.85	0.59
2:B:315:CYS:SG	2:B:316:PHE:N	2.75	0.59
2:I:315:CYS:SG	2:I:316:PHE:N	2.75	0.59
2:E:315:CYS:SG	2:E:316:PHE:N	2.75	0.59
2:E:742:ASP:HA	2:E:760:ASN:HD21	1.67	0.59
2:G:3889:GLN:OE1	2:G:3960:GLN:NE2	2.36	0.59
1:J:23:VAL:HG22	1:J:47:LYS:HG2	1.85	0.59
2:B:132:ALA:HA	2:B:194:SER:HB2	1.84	0.58
2:E:3889:GLN:OE1	2:E:3960:GLN:NE2	2.36	0.58
2:G:2281:ILE:HG23	2:G:2341:VAL:HG11	1.85	0.58
2:I:4847:VAL:HG11	2:I:4924:VAL:HG11	1.85	0.58
2:B:1973:GLN:O	2:B:1977:TYR:N	2.35	0.58
2:B:2281:ILE:HG23	2:B:2341:VAL:HG11	1.85	0.58
2:E:3761:GLN:HB3	2:E:4754:ASN:HA	1.85	0.58
2:G:132:ALA:HA	2:G:194:SER:HB2	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2003:GLN:O	2:B:2007:ASN:ND2	2.37	0.58
2:E:2003:GLN:O	2:E:2007:ASN:ND2	2.36	0.58
2:B:103:TYR:HB3	2:B:152:PRO:HD3	1.85	0.58
2:E:609:CYS:SG	2:E:610:ASN:N	2.76	0.58
2:E:3932:ASP:HA	2:E:3935:TRP:HD1	1.69	0.58
1:H:6:THR:HA	1:H:72:ALA:HA	1.85	0.58
2:I:3761:GLN:HB3	2:I:4754:ASN:HA	1.86	0.58
2:I:3932:ASP:HA	2:I:3935:TRP:HD1	1.69	0.58
2:E:3767:GLN:HB3	2:E:3772:THR:HG22	1.86	0.58
2:G:3761:GLN:HB3	2:G:4754:ASN:HA	1.86	0.58
2:I:103:TYR:HB3	2:I:152:PRO:HD3	1.85	0.58
2:I:3889:GLN:OE1	2:I:3960:GLN:NE2	2.36	0.58
2:B:3761:GLN:HB3	2:B:4754:ASN:HA	1.86	0.58
2:E:132:ALA:HA	2:E:194:SER:HB2	1.84	0.58
2:E:719:LEU:HD22	2:E:735:GLN:HG2	1.85	0.58
2:E:4847:VAL:HG11	2:E:4924:VAL:HG11	1.85	0.58
2:G:103:TYR:HB3	2:G:152:PRO:HD3	1.85	0.58
2:G:3932:ASP:HA	2:G:3935:TRP:HD1	1.69	0.58
2:I:719:LEU:HD22	2:I:735:GLN:HG2	1.85	0.58
2:I:1721:GLU:OE2	2:I:1725:ARG:NH2	2.33	0.58
2:G:315:CYS:SG	2:G:316:PHE:N	2.75	0.58
2:I:1667:LEU:HD23	2:I:1671:ARG:HH12	1.69	0.58
2:B:3932:ASP:HA	2:B:3935:TRP:HD1	1.69	0.58
2:G:426:ARG:HB2	2:G:506:TYR:HA	1.86	0.58
2:G:609:CYS:SG	2:G:610:ASN:N	2.76	0.58
2:G:719:LEU:HD22	2:G:735:GLN:HG2	1.85	0.58
2:B:719:LEU:HD22	2:B:735:GLN:HG2	1.85	0.57
2:B:1667:LEU:HD23	2:B:1671:ARG:HH12	1.69	0.57
2:G:1700:ASP:OD2	2:G:1708:ARG:NH2	2.36	0.57
2:G:4847:VAL:HG11	2:G:4924:VAL:HG11	1.85	0.57
2:B:3889:GLN:OE1	2:B:3960:GLN:NE2	2.36	0.57
2:G:2748:PRO:HD2	2:G:2751:LEU:HD12	1.86	0.57
2:E:842:PRO:HD3	2:E:1073:ARG:HG3	1.87	0.57
2:G:842:PRO:HD3	2:G:1073:ARG:HG3	1.86	0.57
2:I:2003:GLN:O	2:I:2007:ASN:ND2	2.37	0.57
2:B:18:ASP:HB2	2:B:69:LEU:HD12	1.86	0.57
2:E:256:ALA:HB1	2:E:286:THR:HG21	1.86	0.57
2:G:256:ALA:HB1	2:G:286:THR:HG21	1.86	0.57
2:I:18:ASP:HB2	2:I:69:LEU:HD12	1.86	0.57
1:J:6:THR:HA	1:J:72:ALA:HA	1.85	0.57
1:A:6:THR:HA	1:A:72:ALA:HA	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:842:PRO:HD3	2:I:1073:ARG:HG3	1.87	0.57
2:I:1271:ARG:HA	2:I:1471:UNK:HA	1.85	0.57
2:E:18:ASP:HB2	2:E:69:LEU:HD12	1.86	0.57
2:E:426:ARG:HB2	2:E:506:TYR:HA	1.86	0.57
1:F:6:THR:HA	1:F:72:ALA:HA	1.85	0.57
2:G:18:ASP:HB2	2:G:69:LEU:HD12	1.86	0.57
2:G:1667:LEU:HD23	2:G:1671:ARG:HH12	1.69	0.57
2:G:2003:GLN:O	2:G:2007:ASN:ND2	2.37	0.57
2:I:1679:ASN:ND2	2:I:1798:LEU:O	2.37	0.57
2:I:2748:PRO:HD2	2:I:2751:LEU:HD12	1.86	0.57
2:E:4581:LYS:HB2	2:E:4632:LEU:HB2	1.86	0.57
2:B:256:ALA:HB1	2:B:286:THR:HG21	1.86	0.57
1:H:23:VAL:HG22	1:H:47:LYS:HG2	1.85	0.57
2:B:842:PRO:HD3	2:B:1073:ARG:HG3	1.87	0.57
2:B:1271:ARG:HA	2:B:1471:UNK:HA	1.87	0.57
2:B:1679:ASN:ND2	2:B:1798:LEU:O	2.37	0.57
2:E:110:ARG:HH21	2:E:115:ARG:HB3	1.70	0.57
2:E:2042:CYS:SG	2:E:2043:GLY:N	2.78	0.57
2:E:4749:GLU:HA	2:E:4752:ALA:HB3	1.87	0.57
2:G:1271:ARG:HA	2:G:1471:UNK:HA	1.86	0.57
2:G:3767:GLN:HB3	2:G:3772:THR:HG22	1.86	0.57
2:G:4059:LEU:O	2:G:4063:ASP:N	2.36	0.57
2:E:103:TYR:HB3	2:E:152:PRO:HD3	1.85	0.57
2:I:551:LEU:HD11	2:I:589:LEU:HD13	1.87	0.57
2:I:2042:CYS:SG	2:I:2043:GLY:N	2.78	0.57
2:I:3767:GLN:HB3	2:I:3772:THR:HG22	1.86	0.57
2:E:2748:PRO:HD2	2:E:2751:LEU:HD12	1.86	0.56
2:G:717:ASP:OD1	2:G:720:HIS:ND1	2.38	0.56
2:G:1679:ASN:ND2	2:G:1798:LEU:O	2.37	0.56
2:I:4581:LYS:HB2	2:I:4632:LEU:HB2	1.86	0.56
2:G:551:LEU:HD11	2:G:589:LEU:HD13	1.87	0.56
2:B:717:ASP:OD1	2:B:720:HIS:ND1	2.39	0.56
2:B:1079:LYS:NZ	2:B:1107:PRO:O	2.38	0.56
2:B:4749:GLU:HA	2:B:4752:ALA:HB3	1.87	0.56
2:G:1519:UNK:HA	2:G:1526:UNK:HA	1.86	0.56
2:G:4581:LYS:HB2	2:G:4632:LEU:HB2	1.86	0.56
2:I:426:ARG:HB2	2:I:506:TYR:HA	1.86	0.56
2:I:4059:LEU:O	2:I:4063:ASP:N	2.36	0.56
2:B:4581:LYS:HB2	2:B:4632:LEU:HB2	1.86	0.56
2:E:551:LEU:HD11	2:E:589:LEU:HD13	1.88	0.56
2:I:717:ASP:OD1	2:I:720:HIS:ND1	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:551:LEU:HD11	2:B:589:LEU:HD13	1.87	0.56
2:E:1721:GLU:OE2	2:E:1725:ARG:NH2	2.33	0.56
2:G:110:ARG:HH21	2:G:115:ARG:HB3	1.71	0.56
2:G:1237:TRP:HH2	2:G:1652:GLU:HA	1.71	0.56
2:I:1700:ASP:OD2	2:I:1708:ARG:NH2	2.36	0.56
2:B:1721:GLU:OE2	2:B:1725:ARG:NH2	2.33	0.56
2:B:4582:VAL:HG11	2:I:4860:ARG:HD2	1.88	0.56
2:E:1237:TRP:HH2	2:E:1652:GLU:HA	1.71	0.56
2:E:1667:LEU:HD23	2:E:1671:ARG:HH12	1.69	0.56
2:E:1679:ASN:ND2	2:E:1798:LEU:O	2.37	0.56
2:I:57:ASN:HD22	2:I:308:HIS:HB2	1.70	0.56
2:I:110:ARG:HH21	2:I:115:ARG:HB3	1.70	0.56
2:I:1079:LYS:NZ	2:I:1107:PRO:O	2.38	0.56
2:I:1237:TRP:HH2	2:I:1652:GLU:HA	1.71	0.56
2:B:110:ARG:HH21	2:B:115:ARG:HB3	1.70	0.56
2:B:2748:PRO:HD2	2:B:2751:LEU:HD12	1.86	0.56
2:E:57:ASN:HD22	2:E:308:HIS:HB2	1.70	0.56
2:B:2042:CYS:SG	2:B:2043:GLY:N	2.78	0.56
2:B:3767:GLN:HB3	2:B:3772:THR:HG22	1.86	0.56
2:B:3973:CYS:SG	2:B:3976:ASN:ND2	2.79	0.56
2:B:4155:PRO:HD2	2:B:5036:LEU:HD23	1.88	0.56
2:G:728:ARG:NH2	2:G:1527:UNK:O	2.38	0.56
2:G:3817:LEU:HD13	2:G:3899:PHE:HD1	1.71	0.56
2:G:4155:PRO:HD2	2:G:5036:LEU:HD23	1.88	0.56
2:B:1237:TRP:HH2	2:B:1652:GLU:HA	1.71	0.56
2:E:3817:LEU:HD13	2:E:3899:PHE:HD1	1.71	0.56
2:E:3973:CYS:SG	2:E:3976:ASN:ND2	2.79	0.56
2:E:4059:LEU:O	2:E:4063:ASP:N	2.36	0.56
2:G:4749:GLU:HA	2:G:4752:ALA:HB3	1.87	0.56
2:B:426:ARG:HB2	2:B:506:TYR:HA	1.86	0.56
2:B:1653:LEU:HB3	2:B:1660:GLN:HB2	1.88	0.56
1:H:74:LEU:HB2	1:H:99:PHE:HB2	1.88	0.56
2:I:256:ALA:HB1	2:I:286:THR:HG21	1.86	0.56
2:I:4749:GLU:HA	2:I:4752:ALA:HB3	1.87	0.56
2:E:717:ASP:OD1	2:E:720:HIS:ND1	2.39	0.55
2:E:1649:ASP:HB3	2:E:1652:GLU:HG2	1.88	0.55
2:E:4155:PRO:HD2	2:E:5036:LEU:HD23	1.88	0.55
2:G:57:ASN:HD22	2:G:308:HIS:HB2	1.70	0.55
2:I:1973:GLN:O	2:I:1977:TYR:N	2.35	0.55
2:B:3817:LEU:HD13	2:B:3899:PHE:HD1	1.71	0.55
2:I:4155:PRO:HD2	2:I:5036:LEU:HD23	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:57:ASN:HD22	2:B:308:HIS:HB2	1.70	0.55
2:B:4980:LEU:O	2:B:4984:ASN:ND2	2.40	0.55
2:I:3817:LEU:HD13	2:I:3899:PHE:HD1	1.71	0.55
2:I:4056:GLU:HA	2:I:4059:LEU:HB2	1.89	0.55
1:J:74:LEU:HB2	1:J:99:PHE:HB2	1.88	0.55
2:I:1649:ASP:HB3	2:I:1652:GLU:HG2	1.88	0.55
2:I:2764:GLU:HG3	2:I:2857:PRO:HB2	1.89	0.55
2:B:1093:GLU:OE1	2:B:1201:HIS:NE2	2.40	0.55
2:B:1808:ARG:NH1	2:B:1853:ILE:O	2.40	0.55
2:B:4056:GLU:HA	2:B:4059:LEU:HB2	1.89	0.55
2:G:3973:CYS:SG	2:G:3976:ASN:ND2	2.79	0.55
2:G:4134:GLU:HG3	2:G:4135:PRO:HD3	1.89	0.55
2:I:4134:GLU:HG3	2:I:4135:PRO:HD3	1.89	0.55
2:B:4134:GLU:HG3	2:B:4135:PRO:HD3	1.89	0.55
2:E:4201:ASN:O	2:E:4205:TRP:N	2.40	0.55
2:E:4980:LEU:O	2:E:4984:ASN:ND2	2.40	0.55
2:I:669:ASP:OD2	2:I:790:ARG:NH2	2.40	0.55
2:I:887:ILE:HG21	2:I:959:TYR:HA	1.88	0.55
2:I:4980:LEU:O	2:I:4984:ASN:ND2	2.40	0.55
2:B:1649:ASP:HB3	2:B:1652:GLU:HG2	1.88	0.55
2:E:1653:LEU:HB3	2:E:1660:GLN:HB2	1.88	0.55
2:E:4056:GLU:HA	2:E:4059:LEU:HB2	1.89	0.55
2:E:4134:GLU:HG3	2:E:4135:PRO:HD3	1.89	0.55
2:I:3973:CYS:SG	2:I:3976:ASN:ND2	2.79	0.55
2:B:2318:TYR:OH	2:B:2414:ASN:N	2.40	0.55
2:E:1093:GLU:OE1	2:E:1201:HIS:NE2	2.40	0.55
2:E:1109:LEU:HA	2:E:1120:LEU:HD21	1.89	0.55
2:I:1093:GLU:OE1	2:I:1201:HIS:NE2	2.40	0.55
2:B:887:ILE:HG21	2:B:959:TYR:HA	1.88	0.55
2:G:669:ASP:OD2	2:G:790:ARG:NH2	2.40	0.55
2:G:1721:GLU:OE2	2:G:1725:ARG:NH2	2.33	0.55
2:G:1808:ARG:NH1	2:G:1853:ILE:O	2.40	0.55
2:G:1973:GLN:O	2:G:1977:TYR:N	2.35	0.55
2:G:2318:TYR:OH	2:G:2414:ASN:N	2.40	0.55
2:G:4201:ASN:O	2:G:4205:TRP:N	2.40	0.55
2:I:451:TYR:O	2:I:474:ARG:NH1	2.40	0.55
2:I:1667:LEU:O	2:I:1671:ARG:NH1	2.40	0.55
2:G:1653:LEU:HB3	2:G:1660:GLN:HB2	1.88	0.55
1:A:74:LEU:HB2	1:A:99:PHE:HB2	1.88	0.54
2:B:488:LEU:O	2:B:492:ASP:N	2.40	0.54
2:E:669:ASP:OD2	2:E:790:ARG:NH2	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:2764:GLU:HG3	2:G:2857:PRO:HB2	1.89	0.54
2:E:683:ARG:NH1	2:E:707:VAL:O	2.39	0.54
2:E:972:LEU:O	2:E:1044:ARG:NH2	2.40	0.54
2:G:1109:LEU:HA	2:G:1120:LEU:HD21	1.89	0.54
2:G:2022:PRO:HB2	2:G:2024:PRO:HD2	1.90	0.54
2:I:2189:LYS:HA	2:I:2192:TYR:HD2	1.72	0.54
2:I:4201:ASN:O	2:I:4205:TRP:N	2.40	0.54
2:B:669:ASP:OD2	2:B:790:ARG:NH2	2.40	0.54
2:B:1109:LEU:HA	2:B:1120:LEU:HD21	1.89	0.54
2:B:1667:LEU:O	2:B:1671:ARG:NH1	2.40	0.54
2:B:1931:LEU:HB3	2:B:1935:VAL:HB	1.89	0.54
2:B:2189:LYS:HA	2:B:2192:TYR:HD2	1.72	0.54
2:B:4187:SER:HB2	2:B:4189:ARG:HH21	1.73	0.54
2:B:4201:ASN:O	2:B:4205:TRP:N	2.40	0.54
2:E:887:ILE:HG21	2:E:959:TYR:HA	1.88	0.54
2:E:2764:GLU:HG3	2:E:2857:PRO:HB2	1.88	0.54
2:G:887:ILE:HG21	2:G:959:TYR:HA	1.88	0.54
2:E:4187:SER:HB2	2:E:4189:ARG:HH21	1.73	0.54
1:F:74:LEU:HB2	1:F:99:PHE:HB2	1.88	0.54
2:G:2042:CYS:SG	2:G:2043:GLY:N	2.78	0.54
2:I:1101:ARG:HE	2:I:1115:LEU:HB3	1.72	0.54
2:I:1653:LEU:HB3	2:I:1660:GLN:HB2	1.88	0.54
2:B:2764:GLU:HG3	2:B:2857:PRO:HB2	1.88	0.54
2:G:1649:ASP:HB3	2:G:1652:GLU:HG2	1.88	0.54
2:G:2189:LYS:HA	2:G:2192:TYR:HD2	1.72	0.54
2:I:683:ARG:NH1	2:I:707:VAL:O	2.39	0.54
2:G:264:PRO:HG2	2:G:270:SER:HB2	1.90	0.54
2:G:1079:LYS:NZ	2:G:1107:PRO:O	2.38	0.54
2:I:1931:LEU:HB3	2:I:1935:VAL:HB	1.89	0.54
2:B:4059:LEU:O	2:B:4063:ASP:N	2.36	0.54
2:E:1973:GLN:O	2:E:1977:TYR:N	2.35	0.54
2:G:4980:LEU:O	2:G:4984:ASN:ND2	2.40	0.54
2:B:972:LEU:O	2:B:1044:ARG:NH2	2.40	0.54
2:E:451:TYR:O	2:E:474:ARG:NH1	2.40	0.54
2:E:683:ARG:HB2	2:E:782:SER:HB3	1.90	0.54
2:E:2803:GLU:OE2	2:E:2806:ARG:NH1	2.41	0.54
2:I:23:GLN:HE21	2:I:34:LYS:HB3	1.73	0.54
2:B:23:GLN:OE1	2:B:203:ASN:ND2	2.41	0.54
2:E:264:PRO:HG2	2:E:270:SER:HB2	1.90	0.54
2:E:2022:PRO:HB2	2:E:2024:PRO:HD2	1.90	0.54
2:G:1101:ARG:HE	2:G:1115:LEU:HB3	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:1667:LEU:O	2:G:1671:ARG:NH1	2.40	0.54
2:I:2022:PRO:HB2	2:I:2024:PRO:HD2	1.90	0.54
2:B:20:VAL:HG12	2:B:204:PRO:HA	1.90	0.54
2:E:23:GLN:OE1	2:E:203:ASN:ND2	2.41	0.54
2:E:1808:ARG:NH1	2:E:1853:ILE:O	2.40	0.54
2:E:2737:PRO:O	2:E:2888:ARG:NH2	2.41	0.54
2:E:3843:ASP:H	2:E:3874:VAL:HG13	1.73	0.54
2:E:3897:ASN:O	2:E:3901:ASN:ND2	2.41	0.54
2:G:451:TYR:O	2:G:474:ARG:NH1	2.40	0.54
2:G:1777:PHE:HA	2:G:1799:SER:HB2	1.90	0.54
2:I:20:VAL:HG12	2:I:204:PRO:HA	1.90	0.54
2:I:1152:MET:HB2	2:I:1161:ILE:HB	1.90	0.54
2:I:3897:ASN:O	2:I:3901:ASN:ND2	2.41	0.54
2:G:2803:GLU:OE2	2:G:2806:ARG:NH1	2.41	0.53
1:H:26:TYR:OH	1:H:42:ARG:NH2	2.41	0.53
2:I:23:GLN:OE1	2:I:203:ASN:ND2	2.41	0.53
2:I:1109:LEU:HA	2:I:1120:LEU:HD21	1.89	0.53
2:I:1808:ARG:NH1	2:I:1853:ILE:O	2.40	0.53
2:I:2737:PRO:O	2:I:2888:ARG:NH2	2.41	0.53
2:I:4187:SER:HB2	2:I:4189:ARG:HH21	1.73	0.53
2:E:1667:LEU:O	2:E:1671:ARG:NH1	2.40	0.53
2:G:1152:MET:HB2	2:G:1161:ILE:HB	1.90	0.53
2:I:972:LEU:O	2:I:1044:ARG:NH2	2.40	0.53
2:I:4563:ARG:NH1	2:I:4815:ASP:OD2	2.41	0.53
2:B:683:ARG:HB2	2:B:782:SER:HB3	1.90	0.53
2:B:1101:ARG:HE	2:B:1115:LEU:HB3	1.72	0.53
2:E:488:LEU:O	2:E:492:ASP:N	2.40	0.53
2:E:1101:ARG:HE	2:E:1115:LEU:HB3	1.72	0.53
2:E:2318:TYR:OH	2:E:2414:ASN:N	2.40	0.53
2:G:235:ALA:HA	2:G:257:ARG:HD3	1.91	0.53
2:G:4056:GLU:HA	2:G:4059:LEU:HB2	1.89	0.53
2:I:157:ARG:NH2	2:I:167:ASP:OD1	2.38	0.53
2:I:682:LEU:HD13	2:I:787:VAL:HG11	1.90	0.53
2:I:1777:PHE:HA	2:I:1799:SER:HB2	1.90	0.53
2:I:1960:ALA:O	2:I:1964:ARG:NE	2.42	0.53
2:I:2318:TYR:OH	2:I:2414:ASN:N	2.40	0.53
2:I:4914:VAL:HG13	2:I:4915:VAL:HG23	1.90	0.53
2:B:1152:MET:HB2	2:B:1161:ILE:HB	1.90	0.53
2:B:1764:GLY:HA3	2:B:1859:VAL:HG11	1.91	0.53
2:E:2751:LEU:HD11	2:E:2823:ILE:HG21	1.91	0.53
2:G:731:THR:OG1	2:G:1519:UNK:O	2.27	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:2751:LEU:HD11	2:G:2823:ILE:HG21	1.90	0.53
2:I:235:ALA:HA	2:I:257:ARG:HD3	1.90	0.53
2:B:2022:PRO:HB2	2:B:2024:PRO:HD2	1.90	0.53
2:E:4563:ARG:NH1	2:E:4815:ASP:OD2	2.41	0.53
2:G:469:ARG:HH21	2:G:3712:GLU:HB3	1.74	0.53
2:G:488:LEU:O	2:G:492:ASP:N	2.40	0.53
2:G:685:GLY:N	2:G:780:VAL:O	2.38	0.53
2:G:2737:PRO:O	2:G:2888:ARG:NH2	2.41	0.53
2:I:2803:GLU:OE2	2:I:2806:ARG:NH1	2.41	0.53
2:B:4702:ASP:HA	2:B:4778:TRP:HE1	1.74	0.53
2:E:469:ARG:HH21	2:E:3712:GLU:HB3	1.74	0.53
2:E:1152:MET:HB2	2:E:1161:ILE:HB	1.90	0.53
2:B:2737:PRO:O	2:B:2888:ARG:NH2	2.41	0.53
2:E:647:ASN:ND2	2:E:820:ARG:O	2.40	0.53
2:G:4187:SER:HB2	2:G:4189:ARG:HH21	1.73	0.53
2:G:4815:ASP:O	2:G:4819:GLY:N	2.42	0.53
2:I:111:HIS:N	2:I:116:MET:O	2.40	0.53
2:I:1764:GLY:HA3	2:I:1859:VAL:HG11	1.91	0.53
2:B:131:LEU:HB3	2:E:2459:SER:HB2	1.91	0.53
2:B:451:TYR:O	2:B:474:ARG:NH1	2.40	0.53
2:B:2457:LEU:HD23	2:B:2460:LEU:HD12	1.91	0.53
2:B:2751:LEU:HD11	2:B:2823:ILE:HG21	1.90	0.53
2:B:3843:ASP:H	2:B:3874:VAL:HG13	1.73	0.53
2:B:3897:ASN:O	2:B:3901:ASN:ND2	2.41	0.53
2:E:23:GLN:HE21	2:E:34:LYS:HB3	1.73	0.53
2:E:1764:GLY:HA3	2:E:1859:VAL:HG11	1.91	0.53
2:E:4702:ASP:HA	2:E:4778:TRP:HE1	1.74	0.53
2:G:23:GLN:OE1	2:G:203:ASN:ND2	2.41	0.53
2:G:3780:LEU:HD11	2:G:3816:MET:HG3	1.91	0.53
2:G:3897:ASN:O	2:G:3901:ASN:ND2	2.41	0.53
2:B:264:PRO:HG2	2:B:270:SER:HB2	1.90	0.53
2:E:731:THR:OG1	2:E:1519:UNK:O	2.26	0.53
2:E:2189:LYS:HA	2:E:2192:TYR:HD2	1.72	0.53
2:G:683:ARG:HB2	2:G:782:SER:HB3	1.90	0.53
2:I:2457:LEU:HD23	2:I:2460:LEU:HD12	1.91	0.53
2:I:2751:LEU:HD11	2:I:2823:ILE:HG21	1.91	0.53
2:B:23:GLN:HE21	2:B:34:LYS:HB3	1.73	0.53
2:E:682:LEU:HD13	2:E:787:VAL:HG11	1.90	0.53
2:E:3955:MET:HG3	2:E:4019:LEU:HD22	1.91	0.53
1:F:26:TYR:OH	1:F:42:ARG:NH2	2.41	0.53
2:G:682:LEU:HD13	2:G:787:VAL:HG11	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:1093:GLU:OE1	2:G:1201:HIS:NE2	2.40	0.53
2:I:469:ARG:HH21	2:I:3712:GLU:HB3	1.74	0.53
2:I:488:LEU:O	2:I:492:ASP:N	2.40	0.53
2:I:683:ARG:HB2	2:I:782:SER:HB3	1.90	0.53
2:B:664:PHE:HB2	2:B:746:CYS:HB2	1.91	0.52
2:E:664:PHE:HB2	2:E:746:CYS:HB2	1.91	0.52
2:G:20:VAL:HG12	2:G:204:PRO:HA	1.90	0.52
2:G:972:LEU:O	2:G:1044:ARG:NH2	2.40	0.52
2:G:1931:LEU:HB3	2:G:1935:VAL:HB	1.89	0.52
2:I:4702:ASP:HA	2:I:4778:TRP:HE1	1.74	0.52
1:J:26:TYR:OH	1:J:42:ARG:NH2	2.41	0.52
2:E:20:VAL:HG12	2:E:204:PRO:HA	1.90	0.52
2:E:1931:LEU:HB3	2:E:1935:VAL:HB	1.90	0.52
2:G:3946:GLN:OE1	2:G:3950:ASN:ND2	2.43	0.52
2:G:4563:ARG:NH1	2:G:4815:ASP:OD2	2.41	0.52
2:I:264:PRO:HG2	2:I:270:SER:HB2	1.90	0.52
2:I:664:PHE:HB2	2:I:746:CYS:HB2	1.91	0.52
2:I:3780:LEU:HD11	2:I:3816:MET:HG3	1.91	0.52
2:B:4860:ARG:HD2	2:E:4582:VAL:HG11	1.92	0.52
2:B:4914:VAL:HG13	2:B:4915:VAL:HG23	1.90	0.52
2:G:647:ASN:ND2	2:G:820:ARG:O	2.40	0.52
2:G:3843:ASP:H	2:G:3874:VAL:HG13	1.73	0.52
1:J:7:ILE:HG22	1:J:9:PRO:HD2	1.91	0.52
2:B:469:ARG:HH21	2:B:3712:GLU:HB3	1.74	0.52
2:B:1777:PHE:HA	2:B:1799:SER:HB2	1.90	0.52
2:E:235:ALA:HA	2:E:257:ARG:HD3	1.91	0.52
2:E:3946:GLN:OE1	2:E:3950:ASN:ND2	2.43	0.52
2:G:641:VAL:HG21	2:G:705:ASN:HA	1.92	0.52
2:G:1960:ALA:O	2:G:1964:ARG:NE	2.42	0.52
2:G:2457:LEU:HD23	2:G:2460:LEU:HD12	1.91	0.52
2:G:3840:SER:OG	2:G:3875:MET:O	2.25	0.52
2:I:1729:SER:O	2:I:2163:ARG:NH1	2.43	0.52
2:B:3946:GLN:OE1	2:B:3950:ASN:ND2	2.43	0.52
2:E:45:ARG:HG2	2:E:443:LEU:HD21	1.92	0.52
2:E:1777:PHE:HA	2:E:1799:SER:HB2	1.90	0.52
2:E:1865:MET:HB3	2:E:1926:LEU:HB2	1.92	0.52
1:F:7:ILE:HG22	1:F:9:PRO:HD2	1.91	0.52
2:G:23:GLN:HE21	2:G:34:LYS:HB3	1.73	0.52
2:G:111:HIS:N	2:G:116:MET:O	2.40	0.52
2:G:671:VAL:HG22	2:G:740:PRO:HG3	1.91	0.52
2:G:4702:ASP:HA	2:G:4778:TRP:HE1	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1729:SER:O	2:B:2163:ARG:NH1	2.43	0.52
2:B:3955:MET:HG3	2:B:4019:LEU:HD22	1.92	0.52
2:B:4151:SER:HA	2:B:4160:LEU:HD21	1.92	0.52
2:E:641:VAL:HG21	2:E:705:ASN:HA	1.92	0.52
2:E:2457:LEU:HD23	2:E:2460:LEU:HD12	1.91	0.52
2:E:3780:LEU:HD11	2:E:3816:MET:HG3	1.91	0.52
2:G:1764:GLY:HA3	2:G:1859:VAL:HG11	1.91	0.52
2:G:4914:VAL:HG13	2:G:4915:VAL:HG23	1.90	0.52
2:B:671:VAL:HG22	2:B:740:PRO:HG3	1.91	0.52
2:B:3780:LEU:HD11	2:B:3816:MET:HG3	1.91	0.52
2:G:45:ARG:HG2	2:G:443:LEU:HD21	1.92	0.52
2:G:1865:MET:HB3	2:G:1926:LEU:HB2	1.92	0.52
2:G:4834:GLY:HA2	2:G:4837:LEU:HD12	1.92	0.52
2:I:641:VAL:HG21	2:I:705:ASN:HA	1.92	0.52
2:B:157:ARG:NH2	2:B:167:ASP:OD1	2.38	0.52
2:B:683:ARG:NH1	2:B:707:VAL:O	2.39	0.52
2:E:111:HIS:N	2:E:116:MET:O	2.40	0.52
2:E:4834:GLY:HA2	2:E:4837:LEU:HD12	1.92	0.52
2:G:1729:SER:O	2:G:2163:ARG:NH1	2.43	0.52
2:I:1865:MET:HB3	2:I:1926:LEU:HB2	1.92	0.52
2:B:235:ALA:HA	2:B:257:ARG:HD3	1.91	0.52
2:B:728:ARG:NH2	2:B:1527:UNK:O	2.43	0.52
2:B:2803:GLU:OE2	2:B:2806:ARG:NH1	2.41	0.52
2:B:4024:VAL:HG23	2:B:4027:LEU:HD12	1.92	0.52
2:E:671:VAL:HG22	2:E:740:PRO:HG3	1.91	0.52
2:E:4815:ASP:O	2:E:4819:GLY:N	2.42	0.52
2:G:664:PHE:HB2	2:G:746:CYS:HB2	1.91	0.52
2:G:838:HIS:HA	2:G:1201:HIS:HB3	1.92	0.52
2:I:3843:ASP:H	2:I:3874:VAL:HG13	1.73	0.52
2:B:111:HIS:N	2:B:116:MET:O	2.40	0.52
2:B:682:LEU:HD13	2:B:787:VAL:HG11	1.90	0.52
2:B:1865:MET:HB3	2:B:1926:LEU:HB2	1.92	0.52
2:E:4914:VAL:HG13	2:E:4915:VAL:HG23	1.90	0.52
2:B:4815:ASP:O	2:B:4819:GLY:N	2.41	0.51
1:A:26:TYR:OH	1:A:42:ARG:NH2	2.41	0.51
2:B:641:VAL:HG21	2:B:705:ASN:HA	1.92	0.51
2:B:2739:PRO:HB3	2:B:2884:ASN:HB3	1.92	0.51
2:E:278:GLN:N	2:E:315:CYS:SG	2.83	0.51
2:G:3955:MET:HG3	2:G:4019:LEU:HD22	1.92	0.51
2:I:4151:SER:HA	2:I:4160:LEU:HD21	1.92	0.51
2:B:3781:GLN:HA	2:B:3784:SER:HB3	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:671:VAL:HG22	2:I:740:PRO:HG3	1.91	0.51
2:I:4666:VAL:HG23	2:I:4669:VAL:HB	1.93	0.51
2:I:4834:GLY:HA2	2:I:4837:LEU:HD12	1.92	0.51
2:B:177:GLU:HG3	2:E:2452:ARG:HH12	1.75	0.51
2:B:1258:ALA:HB3	2:B:1271:ARG:HB3	1.93	0.51
2:E:1729:SER:O	2:E:2163:ARG:NH1	2.43	0.51
2:E:2739:PRO:HB3	2:E:2884:ASN:HB3	1.92	0.51
2:G:1258:ALA:HB3	2:G:1271:ARG:HB3	1.93	0.51
2:I:1258:ALA:HB3	2:I:1271:ARG:HB3	1.93	0.51
2:B:718:GLY:HA3	2:B:737:LEU:HA	1.92	0.51
2:E:395:GLN:HG3	2:E:397:GLU:H	1.76	0.51
2:E:1258:ALA:HB3	2:E:1271:ARG:HB3	1.93	0.51
2:G:157:ARG:NH2	2:G:167:ASP:OD1	2.38	0.51
2:G:4687:TYR:OH	2:G:4699:GLY:O	2.29	0.51
2:G:4860:ARG:HD2	2:I:4582:VAL:HG11	1.91	0.51
2:I:647:ASN:ND2	2:I:820:ARG:O	2.40	0.51
2:I:3955:MET:HG3	2:I:4019:LEU:HD22	1.91	0.51
2:B:45:ARG:HG2	2:B:443:LEU:HD21	1.92	0.51
2:B:4044:MET:HA	2:B:4047:MET:HG2	1.92	0.51
2:B:4666:VAL:HG23	2:B:4669:VAL:HB	1.93	0.51
2:I:838:HIS:HA	2:I:1201:HIS:HB3	1.92	0.51
2:I:3817:LEU:HD22	2:I:3899:PHE:HB2	1.93	0.51
2:I:3946:GLN:OE1	2:I:3950:ASN:ND2	2.43	0.51
2:B:278:GLN:N	2:B:315:CYS:SG	2.83	0.51
2:E:4024:VAL:HG23	2:E:4027:LEU:HD12	1.92	0.51
2:G:619:ASP:OD1	2:G:1680:ARG:NH1	2.44	0.51
2:I:45:ARG:HG2	2:I:443:LEU:HD21	1.92	0.51
2:I:395:GLN:HG3	2:I:397:GLU:H	1.76	0.51
2:I:635:THR:O	1:J:34:LYS:NZ	2.44	0.51
2:I:2739:PRO:HB3	2:I:2884:ASN:HB3	1.92	0.51
2:I:4815:ASP:O	2:I:4819:GLY:N	2.42	0.51
2:B:794:GLY:H	2:B:798:GLY:HA3	1.76	0.51
2:B:4834:GLY:HA2	2:B:4837:LEU:HD12	1.92	0.51
2:E:261:ARG:N	2:E:283:ARG:O	2.40	0.51
2:E:619:ASP:OD1	2:E:1680:ARG:NH1	2.44	0.51
2:G:683:ARG:NH1	2:G:707:VAL:O	2.39	0.51
1:H:7:ILE:HG22	1:H:9:PRO:HD2	1.91	0.51
2:I:718:GLY:HA3	2:I:737:LEU:HA	1.93	0.51
1:A:7:ILE:HG22	1:A:9:PRO:HD2	1.91	0.51
2:B:497:TYR:HB3	2:B:500:ALA:HB2	1.92	0.51
2:B:619:ASP:OD1	2:B:1680:ARG:NH1	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1111:PRO:HD3	2:B:1605:TRP:HE1	1.76	0.51
2:E:497:TYR:HB3	2:E:500:ALA:HB2	1.93	0.51
2:E:4044:MET:HA	2:E:4047:MET:HG2	1.92	0.51
2:E:4151:SER:HA	2:E:4160:LEU:HD21	1.92	0.51
2:B:647:ASN:ND2	2:B:820:ARG:O	2.40	0.51
2:B:4892:ARG:HD3	2:I:4918:ILE:HG23	1.91	0.51
2:E:4666:VAL:HG23	2:E:4669:VAL:HB	1.93	0.51
2:I:877:ASN:HD22	2:I:1045:THR:HG23	1.76	0.51
2:I:4024:VAL:HG23	2:I:4027:LEU:HD12	1.92	0.51
2:B:35:LEU:HD13	2:B:49:LEU:HD13	1.94	0.50
2:B:709:ASP:O	2:B:725:HIS:ND1	2.44	0.50
2:B:3817:LEU:HD22	2:B:3899:PHE:HB2	1.93	0.50
2:E:1079:LYS:NZ	2:E:1107:PRO:O	2.38	0.50
2:G:877:ASN:HD22	2:G:1045:THR:HG23	1.77	0.50
2:I:1111:PRO:HD3	2:I:1605:TRP:HE1	1.76	0.50
2:B:877:ASN:HD22	2:B:1045:THR:HG23	1.77	0.50
2:E:2770:LYS:HB3	2:E:2775:TRP:HB2	1.93	0.50
2:G:3781:GLN:HA	2:G:3784:SER:HB3	1.92	0.50
2:G:4151:SER:HA	2:G:4160:LEU:HD21	1.92	0.50
2:G:4860:ARG:NH2	2:I:4629:TYR:OH	2.43	0.50
2:I:3781:GLN:HA	2:I:3784:SER:HB3	1.92	0.50
2:I:4044:MET:HA	2:I:4047:MET:HG2	1.92	0.50
2:B:3767:GLN:HA	2:B:3770:LEU:HB2	1.93	0.50
2:E:838:HIS:HA	2:E:1201:HIS:HB3	1.92	0.50
2:E:3781:GLN:HA	2:E:3784:SER:HB3	1.92	0.50
2:E:4584:ASP:HA	2:E:4627:MET:HA	1.93	0.50
2:E:4687:TYR:OH	2:E:4699:GLY:O	2.29	0.50
2:I:619:ASP:OD1	2:I:1680:ARG:NH1	2.44	0.50
2:I:728:ARG:NH2	2:I:1527:UNK:O	2.44	0.50
2:E:718:GLY:HA3	2:E:737:LEU:HA	1.92	0.50
2:E:794:GLY:H	2:E:798:GLY:HA3	1.76	0.50
2:E:3817:LEU:HD22	2:E:3899:PHE:HB2	1.93	0.50
2:G:242:ARG:NH1	2:G:481:GLU:OE1	2.45	0.50
2:G:278:GLN:N	2:G:315:CYS:SG	2.83	0.50
2:G:4044:MET:HA	2:G:4047:MET:HG2	1.92	0.50
2:I:497:TYR:HB3	2:I:500:ALA:HB2	1.93	0.50
2:I:3767:GLN:HA	2:I:3770:LEU:HB2	1.93	0.50
2:B:3830:GLN:HA	2:B:3833:GLN:HG2	1.94	0.50
2:G:2758:PHE:O	2:G:2762:THR:N	2.45	0.50
2:I:35:LEU:HD13	2:I:49:LEU:HD13	1.94	0.50
2:I:211:GLU:OE2	2:I:3907:THR:OG1	2.30	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:4571:PHE:O	2:I:4575:PHE:N	2.44	0.50
2:I:4687:TYR:OH	2:I:4699:GLY:O	2.29	0.50
2:B:242:ARG:NH1	2:B:481:GLU:OE1	2.45	0.50
2:E:35:LEU:HD13	2:E:49:LEU:HD13	1.94	0.50
2:E:242:ARG:NH1	2:E:481:GLU:OE1	2.45	0.50
2:E:1111:PRO:HD3	2:E:1605:TRP:HE1	1.77	0.50
2:G:497:TYR:HB3	2:G:500:ALA:HB2	1.93	0.50
2:G:718:GLY:HA3	2:G:737:LEU:HA	1.92	0.50
2:G:1111:PRO:HD3	2:G:1605:TRP:HE1	1.77	0.50
2:G:1665:HIS:HA	2:G:1668:ARG:HG2	1.94	0.50
2:G:4666:VAL:HG23	2:G:4669:VAL:HB	1.93	0.50
2:E:3767:GLN:HA	2:E:3770:LEU:HB2	1.93	0.50
2:G:211:GLU:OE2	2:G:3907:THR:OG1	2.30	0.50
2:I:2770:LYS:HB3	2:I:2775:TRP:HB2	1.93	0.50
2:I:3963:ASN:O	2:I:3966:THR:OG1	2.28	0.50
1:A:27:THR:HB	1:A:100:ASP:HB3	1.94	0.50
2:G:395:GLN:HG3	2:G:397:GLU:H	1.76	0.50
2:G:3767:GLN:NE2	2:G:3804:ILE:O	2.45	0.50
2:I:794:GLY:H	2:I:798:GLY:HA3	1.76	0.50
2:I:3830:GLN:HA	2:I:3833:GLN:HG2	1.94	0.50
2:B:1665:HIS:HA	2:B:1668:ARG:HG2	1.94	0.50
2:B:2770:LYS:HB3	2:B:2775:TRP:HB2	1.93	0.50
2:B:4584:ASP:HA	2:B:4627:MET:HA	1.94	0.50
2:E:404:ILE:HG21	2:E:481:GLU:HG3	1.94	0.50
2:E:4934:GLY:O	2:E:4938:ASP:N	2.42	0.50
2:G:709:ASP:O	2:G:725:HIS:ND1	2.44	0.50
1:J:57:LYS:HB2	1:J:80:VAL:HB	1.94	0.50
2:B:43:GLY:N	2:B:447:ASP:OD2	2.44	0.49
2:B:211:GLU:OE2	2:B:3907:THR:OG1	2.30	0.49
2:B:3840:SER:OG	2:B:3875:MET:O	2.25	0.49
2:E:877:ASN:HD22	2:E:1045:THR:HG23	1.77	0.49
2:E:1665:HIS:HA	2:E:1668:ARG:HG2	1.94	0.49
1:F:57:LYS:HB2	1:F:80:VAL:HB	1.94	0.49
2:G:4024:VAL:HG23	2:G:4027:LEU:HD12	1.92	0.49
2:G:4584:ASP:HA	2:G:4627:MET:HA	1.94	0.49
2:I:709:ASP:O	2:I:725:HIS:ND1	2.44	0.49
2:I:4584:ASP:HA	2:I:4627:MET:HA	1.94	0.49
2:B:313:SER:HB3	2:B:351:VAL:HB	1.95	0.49
2:B:395:GLN:HG3	2:B:397:GLU:H	1.76	0.49
2:B:838:HIS:HA	2:B:1201:HIS:HB3	1.92	0.49
2:B:4197:ILE:HG21	2:B:4990:PHE:HB3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:1848:LEU:HB3	2:E:1853:ILE:HB	1.94	0.49
2:G:2257:LEU:HD11	2:G:2276:ALA:HB2	1.94	0.49
2:G:2739:PRO:HB3	2:G:2884:ASN:HB3	1.92	0.49
2:I:242:ARG:NH1	2:I:481:GLU:OE1	2.45	0.49
1:J:27:THR:HB	1:J:100:ASP:HB3	1.94	0.49
2:B:34:LYS:H	2:B:53:SER:HG	1.60	0.49
2:B:4687:TYR:OH	2:B:4699:GLY:O	2.29	0.49
2:E:3840:SER:OG	2:E:3875:MET:O	2.25	0.49
1:F:27:THR:HB	1:F:100:ASP:HB3	1.94	0.49
2:G:35:LEU:HD13	2:G:49:LEU:HD13	1.94	0.49
2:G:404:ILE:HG21	2:G:481:GLU:HG3	1.94	0.49
2:G:3817:LEU:HD22	2:G:3899:PHE:HB2	1.93	0.49
2:G:3830:GLN:HA	2:G:3833:GLN:HG2	1.94	0.49
1:H:57:LYS:HB2	1:H:80:VAL:HB	1.94	0.49
2:I:1848:LEU:HB3	2:I:1853:ILE:HB	1.94	0.49
2:I:3767:GLN:NE2	2:I:3804:ILE:O	2.45	0.49
2:I:4177:TYR:HE1	2:I:4199:GLU:HB2	1.78	0.49
2:G:1972:ASN:HD21	2:G:2024:PRO:HB3	1.78	0.49
2:G:4177:TYR:HE1	2:G:4199:GLU:HB2	1.78	0.49
2:B:76:ARG:HB3	2:E:3935:TRP:HB3	1.95	0.49
2:B:213:TYR:CG	2:B:337:PRO:HB2	2.48	0.49
2:B:485:SER:O	2:B:489:ASN:N	2.46	0.49
2:B:1960:ALA:O	2:B:1964:ARG:NE	2.42	0.49
2:B:4570:ALA:O	2:B:4574:ASN:ND2	2.45	0.49
2:E:313:SER:HB3	2:E:351:VAL:HB	1.95	0.49
2:E:2257:LEU:HD11	2:E:2276:ALA:HB2	1.94	0.49
2:E:3830:GLN:HA	2:E:3833:GLN:HG2	1.94	0.49
1:H:87:HIS:N	1:H:91:ILE:O	2.45	0.49
2:I:313:SER:HB3	2:I:351:VAL:HB	1.95	0.49
2:I:1665:HIS:HA	2:I:1668:ARG:HG2	1.94	0.49
2:E:111:HIS:CD2	2:E:114:SER:H	2.30	0.49
2:E:211:GLU:OE2	2:E:3907:THR:OG1	2.30	0.49
2:E:709:ASP:O	2:E:725:HIS:ND1	2.44	0.49
2:E:3767:GLN:NE2	2:E:3804:ILE:O	2.45	0.49
2:E:4197:ILE:HG21	2:E:4990:PHE:HB3	1.94	0.49
2:G:313:SER:HB3	2:G:351:VAL:HB	1.95	0.49
2:G:794:GLY:H	2:G:798:GLY:HA3	1.76	0.49
2:G:2770:LYS:HB3	2:G:2775:TRP:HB2	1.93	0.49
2:I:278:GLN:N	2:I:315:CYS:SG	2.83	0.49
2:I:1972:ASN:HD21	2:I:2024:PRO:HB3	1.78	0.49
2:I:4570:ALA:O	2:I:4574:ASN:ND2	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:87:HIS:N	1:J:91:ILE:O	2.45	0.49
2:B:2758:PHE:O	2:B:2762:THR:N	2.45	0.49
2:B:4822:THR:O	2:B:4825:THR:OG1	2.30	0.49
2:E:34:LYS:N	2:E:53:SER:OG	2.42	0.49
1:F:87:HIS:N	1:F:91:ILE:O	2.45	0.49
2:G:261:ARG:N	2:G:283:ARG:O	2.40	0.49
2:G:1848:LEU:HB3	2:G:1853:ILE:HB	1.94	0.49
1:H:27:THR:HB	1:H:100:ASP:HB3	1.94	0.49
2:B:3905:THR:HA	2:B:3912:THR:HG23	1.94	0.49
2:E:4822:THR:O	2:E:4825:THR:OG1	2.30	0.49
2:G:3767:GLN:HA	2:G:3770:LEU:HB2	1.93	0.49
2:G:3905:THR:HA	2:G:3912:THR:HG23	1.94	0.49
2:I:2758:PHE:O	2:I:2762:THR:N	2.45	0.49
2:B:4563:ARG:NH1	2:B:4815:ASP:OD2	2.41	0.49
2:E:1960:ALA:O	2:E:1964:ARG:NE	2.42	0.49
2:E:2440:MET:O	2:E:2444:GLN:N	2.40	0.49
2:E:3766:GLN:HE21	2:E:3767:GLN:HE22	1.61	0.49
2:G:3766:GLN:HE21	2:G:3767:GLN:HE22	1.61	0.49
2:I:43:GLY:N	2:I:447:ASP:OD2	2.44	0.49
1:A:57:LYS:HB2	1:A:80:VAL:HB	1.94	0.49
2:B:3766:GLN:HE21	2:B:3767:GLN:HE22	1.61	0.49
2:I:111:HIS:CD2	2:I:114:SER:H	2.30	0.49
2:I:4560:TYR:O	2:I:4564:PHE:N	2.45	0.49
2:B:1848:LEU:HB3	2:B:1853:ILE:HB	1.94	0.48
2:B:3767:GLN:NE2	2:B:3804:ILE:O	2.45	0.48
2:E:952:LYS:HB3	2:E:968:ALA:HB1	1.95	0.48
2:E:4570:ALA:O	2:E:4574:ASN:ND2	2.45	0.48
2:G:4192:ARG:HH12	2:G:4982:GLU:HG2	1.78	0.48
2:I:4232:GLU:OE2	2:I:5017:ARG:NH1	2.46	0.48
1:A:87:HIS:N	1:A:91:ILE:O	2.45	0.48
2:B:685:GLY:N	2:B:780:VAL:O	2.38	0.48
2:B:731:THR:OG1	2:B:1519:UNK:O	2.31	0.48
2:B:2257:LEU:HD11	2:B:2276:ALA:HB2	1.94	0.48
2:B:4177:TYR:HE1	2:B:4199:GLU:HB2	1.78	0.48
2:E:43:GLY:N	2:E:447:ASP:OD2	2.44	0.48
2:G:213:TYR:CG	2:G:337:PRO:HB2	2.48	0.48
2:G:1698:LEU:N	2:G:1712:TYR:OH	2.47	0.48
2:B:1972:ASN:HD21	2:B:2024:PRO:HB3	1.78	0.48
2:E:4697:VAL:O	2:E:4701:TRP:N	2.46	0.48
2:G:4197:ILE:HG21	2:G:4990:PHE:HB3	1.94	0.48
2:G:4697:VAL:O	2:G:4701:TRP:N	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:1679:ASN:HA	2:I:1682:ALA:HB3	1.95	0.48
2:I:3766:GLN:HE21	2:I:3767:GLN:HE22	1.61	0.48
2:I:4192:ARG:HH12	2:I:4982:GLU:HG2	1.78	0.48
2:B:952:LYS:HB3	2:B:968:ALA:HB1	1.95	0.48
2:B:1679:ASN:HA	2:B:1682:ALA:HB3	1.95	0.48
2:E:1972:ASN:HD21	2:E:2024:PRO:HB3	1.78	0.48
2:E:4177:TYR:HE1	2:E:4199:GLU:HB2	1.78	0.48
2:I:2868:SER:O	2:I:2872:GLN:N	2.47	0.48
2:I:3772:THR:OG1	2:I:3815:LYS:NZ	2.46	0.48
2:I:4197:ILE:HG21	2:I:4990:PHE:HB3	1.94	0.48
2:B:219:VAL:HG13	2:B:285:VAL:HG21	1.96	0.48
2:B:3772:THR:OG1	2:B:3815:LYS:NZ	2.46	0.48
2:B:4192:ARG:HH12	2:B:4982:GLU:HG2	1.78	0.48
2:E:1096:THR:HG23	2:E:1199:VAL:HG22	1.96	0.48
2:E:3772:THR:OG1	2:E:3815:LYS:NZ	2.46	0.48
2:G:111:HIS:CD2	2:G:114:SER:H	2.30	0.48
2:G:1096:THR:HG23	2:G:1199:VAL:HG22	1.96	0.48
2:G:4570:ALA:O	2:G:4574:ASN:ND2	2.45	0.48
2:I:1698:LEU:N	2:I:1712:TYR:OH	2.47	0.48
2:G:1713:ASP:O	2:G:1717:SER:N	2.45	0.48
1:H:2:VAL:HG21	1:H:61:GLU:HB2	1.96	0.48
2:I:4697:VAL:O	2:I:4701:TRP:N	2.46	0.48
2:B:1698:LEU:N	2:B:1712:TYR:OH	2.47	0.48
2:B:2868:SER:O	2:B:2872:GLN:N	2.47	0.48
2:E:2758:PHE:O	2:E:2762:THR:N	2.45	0.48
2:E:3905:THR:HA	2:E:3912:THR:HG23	1.94	0.48
2:G:4184:MET:HB2	2:G:4190:ILE:HD13	1.95	0.48
2:G:4688:ILE:HG21	2:G:4728:HIS:HB3	1.95	0.48
2:I:213:TYR:CG	2:I:337:PRO:HB2	2.48	0.48
2:I:460:GLN:HG2	2:I:462:GLU:H	1.79	0.48
2:I:2440:MET:O	2:I:2444:GLN:N	2.40	0.48
2:B:404:ILE:HG21	2:B:481:GLU:HG3	1.94	0.48
2:E:219:VAL:HG13	2:E:285:VAL:HG21	1.96	0.48
2:E:2868:SER:O	2:E:2872:GLN:N	2.47	0.48
2:G:219:VAL:HG13	2:G:285:VAL:HG21	1.96	0.48
2:G:1679:ASN:HA	2:G:1682:ALA:HB3	1.95	0.48
2:I:19:GLU:HB2	2:I:206:CYS:HB3	1.96	0.48
2:I:404:ILE:HG21	2:I:481:GLU:HG3	1.94	0.48
2:I:2347:GLU:O	2:I:2351:ASN:N	2.45	0.48
2:B:1659:LEU:O	2:B:1663:HIS:N	2.44	0.48
2:B:4843:LEU:HD22	2:B:4928:LEU:HD11	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:213:TYR:CG	2:E:337:PRO:HB2	2.48	0.48
2:E:1713:ASP:O	2:E:1717:SER:N	2.45	0.48
2:E:4192:ARG:HH12	2:E:4982:GLU:HG2	1.78	0.48
2:G:34:LYS:N	2:G:53:SER:OG	2.42	0.48
2:G:952:LYS:HB3	2:G:968:ALA:HB1	1.95	0.48
2:G:4822:THR:O	2:G:4825:THR:OG1	2.30	0.48
2:I:34:LYS:N	2:I:53:SER:OG	2.42	0.48
2:I:685:GLY:N	2:I:780:VAL:O	2.38	0.48
2:I:2257:LEU:HD11	2:I:2276:ALA:HB2	1.94	0.48
2:I:3905:THR:HA	2:I:3912:THR:HG23	1.94	0.48
1:J:91:ILE:HD12	1:J:97:LEU:HD11	1.96	0.48
2:B:19:GLU:HB2	2:B:206:CYS:HB3	1.96	0.48
2:B:111:HIS:CD2	2:B:114:SER:H	2.30	0.48
2:E:3971:GLY:H	2:E:5005:GLY:HA3	1.79	0.48
2:E:4184:MET:HB2	2:E:4190:ILE:HD13	1.95	0.48
2:E:4232:GLU:OE2	2:E:5017:ARG:NH1	2.46	0.48
2:E:4688:ILE:HG21	2:E:4728:HIS:HB3	1.95	0.48
2:G:2868:SER:O	2:G:2872:GLN:N	2.47	0.48
2:I:485:SER:O	2:I:489:ASN:N	2.46	0.48
2:I:731:THR:OG1	2:I:1519:UNK:O	2.32	0.48
2:B:460:GLN:HG2	2:B:462:GLU:H	1.79	0.47
2:E:3963:ASN:O	2:E:3966:THR:OG1	2.29	0.47
2:G:3772:THR:OG1	2:G:3815:LYS:NZ	2.46	0.47
2:I:219:VAL:HG13	2:I:285:VAL:HG21	1.96	0.47
2:B:2440:MET:O	2:B:2444:GLN:N	2.40	0.47
2:B:4688:ILE:HG21	2:B:4728:HIS:HB3	1.95	0.47
2:G:4232:GLU:OE2	2:G:5017:ARG:NH1	2.46	0.47
2:G:4843:LEU:HD22	2:G:4928:LEU:HD11	1.96	0.47
2:I:1096:THR:HG23	2:I:1199:VAL:HG22	1.96	0.47
2:I:1659:LEU:O	2:I:1663:HIS:N	2.44	0.47
2:I:4688:ILE:HG21	2:I:4728:HIS:HB3	1.95	0.47
2:I:4843:LEU:HD22	2:I:4928:LEU:HD11	1.96	0.47
2:B:4232:GLU:OE2	2:B:5017:ARG:NH1	2.46	0.47
2:E:4843:LEU:HD22	2:E:4928:LEU:HD11	1.96	0.47
1:F:2:VAL:HG21	1:F:61:GLU:HB2	1.96	0.47
2:G:59:PRO:HG3	2:G:307:ALA:HB3	1.96	0.47
1:H:91:ILE:HD12	1:H:97:LEU:HD11	1.96	0.47
2:I:3971:GLY:H	2:I:5005:GLY:HA3	1.79	0.47
2:I:4184:MET:HB2	2:I:4190:ILE:HD13	1.96	0.47
2:B:983:THR:O	2:B:987:ARG:N	2.45	0.47
2:B:4937:ILE:HD12	2:I:4934:GLY:HA3	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:19:GLU:HB2	2:E:206:CYS:HB3	1.96	0.47
2:E:1698:LEU:N	2:E:1712:TYR:OH	2.47	0.47
2:E:3832:ILE:O	2:E:3836:MET:N	2.45	0.47
1:F:91:ILE:HD12	1:F:97:LEU:HD11	1.96	0.47
2:G:288:GLY:HA3	2:G:405:HIS:CE1	2.49	0.47
1:H:62:GLY:HA3	1:H:74:LEU:HD21	1.97	0.47
2:I:952:LYS:HB3	2:I:968:ALA:HB1	1.95	0.47
2:I:1103:GLY:HA3	2:I:1123:VAL:HA	1.97	0.47
2:B:864:PRO:HD2	2:B:867:LEU:HD12	1.97	0.47
2:B:1096:THR:HG23	2:B:1199:VAL:HG22	1.96	0.47
2:B:1713:ASP:O	2:B:1717:SER:N	2.45	0.47
2:B:4184:MET:HB2	2:B:4190:ILE:HD13	1.95	0.47
2:E:410:LEU:HD12	2:E:413:GLN:HE21	1.79	0.47
2:E:635:THR:HB	2:E:1639:LEU:HD23	1.97	0.47
2:E:864:PRO:HD2	2:E:867:LEU:HD12	1.97	0.47
2:E:983:THR:O	2:E:987:ARG:N	2.45	0.47
2:E:1679:ASN:HA	2:E:1682:ALA:HB3	1.95	0.47
2:G:19:GLU:HB2	2:G:206:CYS:HB3	1.96	0.47
2:G:575:LEU:HD22	2:G:609:CYS:HB3	1.97	0.47
2:B:288:GLY:HA3	2:B:405:HIS:CE1	2.49	0.47
2:B:1046:LEU:HB3	2:B:1051:TYR:HB2	1.97	0.47
2:B:3971:GLY:H	2:B:5005:GLY:HA3	1.79	0.47
2:E:59:PRO:HG3	2:E:307:ALA:HB3	1.96	0.47
1:F:62:GLY:HA3	1:F:74:LEU:HD21	1.97	0.47
2:I:2265:LEU:HD22	2:I:2330:ARG:HB3	1.97	0.47
1:J:2:VAL:HG21	1:J:61:GLU:HB2	1.96	0.47
1:A:91:ILE:HD12	1:A:97:LEU:HD11	1.96	0.47
2:B:2265:LEU:HD22	2:B:2330:ARG:HB3	1.97	0.47
2:B:4860:ARG:NH2	2:E:4629:TYR:OH	2.47	0.47
2:E:460:GLN:HG2	2:E:462:GLU:H	1.79	0.47
2:E:4571:PHE:O	2:E:4575:PHE:N	2.44	0.47
2:G:1046:LEU:HB3	2:G:1051:TYR:HB2	1.97	0.47
2:G:1090:PHE:HD2	2:G:1202:LEU:HD11	1.80	0.47
2:I:1046:LEU:HB3	2:I:1051:TYR:HB2	1.97	0.47
2:B:635:THR:HB	2:B:1639:LEU:HD23	1.97	0.47
2:B:2430:ILE:HG21	2:B:2502:UNK:HA	1.97	0.47
2:E:157:ARG:NH2	2:E:167:ASP:OD1	2.38	0.47
2:G:215:THR:HG22	2:G:273:HIS:HA	1.97	0.47
2:G:410:LEU:HD12	2:G:413:GLN:HE21	1.79	0.47
2:I:288:GLY:HA3	2:I:405:HIS:CE1	2.49	0.47
2:I:983:THR:O	2:I:987:ARG:N	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2:VAL:HG21	1:A:61:GLU:HB2	1.96	0.47
2:B:1203:ASN:ND2	2:B:1210:SER:O	2.48	0.47
2:E:1668:ARG:HA	2:E:1671:ARG:HH11	1.80	0.47
2:G:485:SER:O	2:G:489:ASN:N	2.46	0.47
2:I:3840:SER:OG	2:I:3875:MET:O	2.25	0.47
2:I:4204:GLN:NE2	2:I:4245:MET:SD	2.88	0.47
2:B:1668:ARG:HA	2:B:1671:ARG:HH11	1.80	0.47
2:B:4885:PHE:HE2	2:B:4901:ILE:HD11	1.80	0.47
2:E:575:LEU:HD22	2:E:609:CYS:HB3	1.97	0.47
2:E:1103:GLY:HA3	2:E:1123:VAL:HA	1.97	0.47
2:E:1203:ASN:ND2	2:E:1210:SER:O	2.48	0.47
2:E:4885:PHE:HE2	2:E:4901:ILE:HD11	1.80	0.47
2:G:2347:GLU:O	2:G:2351:ASN:N	2.45	0.47
2:G:4745:LEU:O	2:G:4749:GLU:N	2.47	0.47
2:I:59:PRO:HG3	2:I:307:ALA:HB3	1.96	0.47
2:E:215:THR:HG22	2:E:273:HIS:HA	1.97	0.46
2:E:1046:LEU:HB3	2:E:1051:TYR:HB2	1.97	0.46
2:E:4204:GLN:NE2	2:E:4245:MET:SD	2.88	0.46
2:G:886:ARG:HB3	2:G:891:TRP:HB2	1.98	0.46
2:G:3971:GLY:H	2:G:5005:GLY:HA3	1.79	0.46
2:I:886:ARG:HB3	2:I:891:TRP:HB2	1.97	0.46
2:I:988:LEU:O	2:I:992:GLY:N	2.49	0.46
2:I:2778:GLY:HA3	2:I:2787:THR:HB	1.97	0.46
2:I:4201:ASN:ND2	2:I:4993:MET:SD	2.89	0.46
1:A:62:GLY:HA3	1:A:74:LEU:HD21	1.97	0.46
2:B:575:LEU:HD22	2:B:609:CYS:HB3	1.97	0.46
2:B:707:VAL:HG23	2:B:713:SER:HB2	1.97	0.46
2:B:1090:PHE:HD2	2:B:1202:LEU:HD11	1.80	0.46
2:B:1103:GLY:HA3	2:B:1123:VAL:HA	1.97	0.46
2:E:164:ARG:N	2:E:167:ASP:OD2	2.48	0.46
2:E:2265:LEU:HD22	2:E:2330:ARG:HB3	1.97	0.46
2:E:4174:PHE:HA	2:E:4177:TYR:HD2	1.81	0.46
2:G:707:VAL:HG23	2:G:713:SER:HB2	1.97	0.46
2:I:410:LEU:HD12	2:I:413:GLN:HE21	1.79	0.46
2:I:1812:LEU:HD21	2:I:1861:GLN:HG2	1.97	0.46
2:B:179:TYR:OH	2:E:2359:ARG:NH1	2.49	0.46
2:B:580:GLU:HG3	2:B:620:LEU:HD22	1.97	0.46
2:B:2452:ARG:HH12	2:I:177:GLU:HG3	1.79	0.46
2:B:3963:ASN:O	2:B:3966:THR:OG1	2.28	0.46
2:B:4204:GLN:NE2	2:B:4245:MET:SD	2.88	0.46
2:B:4571:PHE:O	2:B:4575:PHE:N	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:232:THR:HB	2:E:252:VAL:HG11	1.97	0.46
2:E:4852:THR:HG21	2:E:4883:TYR:HB2	1.98	0.46
2:G:983:THR:O	2:G:987:ARG:N	2.45	0.46
2:G:988:LEU:O	2:G:992:GLY:N	2.48	0.46
2:I:164:ARG:N	2:I:167:ASP:OD2	2.48	0.46
2:I:215:THR:HG22	2:I:273:HIS:HA	1.97	0.46
2:B:1091:GLU:HB3	2:B:1203:ASN:HB3	1.98	0.46
2:B:4201:ASN:ND2	2:B:4993:MET:SD	2.89	0.46
2:E:988:LEU:O	2:E:992:GLY:N	2.48	0.46
2:I:1694:LEU:O	2:I:1712:TYR:OH	2.25	0.46
2:I:4083:ASP:HA	2:I:4085:ARG:HH11	1.81	0.46
2:B:59:PRO:HB3	2:B:281:ARG:HD3	1.98	0.46
2:B:410:LEU:HD12	2:B:413:GLN:HE21	1.80	0.46
2:B:4697:VAL:O	2:B:4701:TRP:N	2.46	0.46
2:E:42:PHE:HD1	2:E:447:ASP:HB3	1.81	0.46
2:E:288:GLY:HA3	2:E:405:HIS:CE1	2.49	0.46
2:E:886:ARG:HB3	2:E:891:TRP:HB2	1.98	0.46
2:G:43:GLY:N	2:G:447:ASP:OD2	2.44	0.46
2:G:460:GLN:HG2	2:G:462:GLU:H	1.79	0.46
2:G:876:GLU:O	2:G:880:GLU:N	2.47	0.46
2:G:1103:GLY:HA3	2:G:1123:VAL:HA	1.97	0.46
2:G:4681:LEU:HD21	2:G:4687:TYR:HD2	1.80	0.46
2:I:1091:GLU:HB3	2:I:1203:ASN:HB3	1.98	0.46
2:I:1970:GLN:HB2	2:I:3642:TYR:HA	1.98	0.46
2:B:59:PRO:HG3	2:B:307:ALA:HB3	1.96	0.46
2:E:707:VAL:HG23	2:E:713:SER:HB2	1.97	0.46
2:E:4681:LEU:HD21	2:E:4687:TYR:HD2	1.80	0.46
2:E:4860:ARG:HD2	2:G:4582:VAL:HG11	1.96	0.46
2:G:1668:ARG:HA	2:G:1671:ARG:HH11	1.80	0.46
2:B:232:THR:HB	2:B:252:VAL:HG11	1.97	0.46
2:B:261:ARG:N	2:B:283:ARG:O	2.40	0.46
2:B:583:ILE:HA	2:B:586:ILE:HD12	1.98	0.46
2:B:886:ARG:HB3	2:B:891:TRP:HB2	1.98	0.46
2:B:4174:PHE:HA	2:B:4177:TYR:HD2	1.80	0.46
2:E:876:GLU:O	2:E:880:GLU:N	2.47	0.46
2:E:3759:GLU:HA	2:E:3762:ARG:HH11	1.81	0.46
2:G:184:THR:HB	2:G:189:LEU:HG	1.98	0.46
2:G:1091:GLU:HB3	2:G:1203:ASN:HB3	1.98	0.46
2:G:2102:VAL:HB	2:G:2124:LEU:HD12	1.98	0.46
2:G:4049:VAL:HG21	2:G:4159:ARG:HD2	1.98	0.46
2:I:2235:PHE:HA	2:I:2238:TYR:HD2	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:4040:ILE:O	2:I:4044:MET:N	2.47	0.46
2:B:164:ARG:N	2:B:167:ASP:OD2	2.48	0.46
2:B:1830:VAL:HB	2:B:1837:GLN:HA	1.98	0.46
2:E:2927:LEU:HD23	2:E:2930:LEU:HD12	1.97	0.46
2:E:3696:ASP:OD2	2:E:3771:HIS:NE2	2.49	0.46
2:G:1684:ALA:HA	2:G:1782:PHE:HZ	1.81	0.46
2:I:1203:ASN:ND2	2:I:1210:SER:O	2.48	0.46
2:I:1668:ARG:HA	2:I:1671:ARG:HH11	1.80	0.46
2:I:2927:LEU:HD23	2:I:2930:LEU:HD12	1.97	0.46
2:I:4049:VAL:HG21	2:I:4159:ARG:HD2	1.98	0.46
2:I:4681:LEU:HD21	2:I:4687:TYR:HD2	1.80	0.46
2:B:1970:GLN:HB2	2:B:3642:TYR:HA	1.98	0.46
2:B:4852:THR:HG21	2:B:4883:TYR:HB2	1.98	0.46
2:E:184:THR:HB	2:E:189:LEU:HG	1.98	0.46
2:E:260:TRP:CE2	2:E:284:HIS:HD2	2.34	0.46
2:E:1091:GLU:HB3	2:E:1203:ASN:HB3	1.98	0.46
2:E:1269:CYS:HA	2:E:1473:UNK:HA	1.98	0.46
2:E:1812:LEU:HD21	2:E:1861:GLN:HG2	1.97	0.46
2:G:260:TRP:CE2	2:G:284:HIS:HD2	2.34	0.46
2:G:583:ILE:HA	2:G:586:ILE:HD12	1.98	0.46
2:I:583:ILE:HA	2:I:586:ILE:HD12	1.98	0.46
2:I:1841:VAL:HA	2:I:1844:LEU:HB3	1.98	0.46
2:I:4937:ILE:O	2:I:4941:GLY:N	2.49	0.46
2:B:215:THR:HG22	2:B:273:HIS:HA	1.97	0.46
2:B:742:ASP:OD1	2:B:760:ASN:ND2	2.49	0.46
2:E:59:PRO:HB3	2:E:281:ARG:HD3	1.98	0.46
2:E:1286:UNK:HA	2:E:1461:UNK:HA	1.97	0.46
2:E:4745:LEU:O	2:E:4749:GLU:N	2.47	0.46
2:G:177:GLU:HG3	2:I:2452:ARG:HH12	1.81	0.46
2:G:1970:GLN:HB2	2:G:3642:TYR:HA	1.98	0.46
2:G:2265:LEU:HD22	2:G:2330:ARG:HB3	1.97	0.46
2:G:3927:GLN:O	2:G:3931:SER:N	2.46	0.46
2:G:4174:PHE:HA	2:G:4177:TYR:HD2	1.80	0.46
2:G:4204:GLN:NE2	2:G:4245:MET:SD	2.88	0.46
2:I:59:PRO:HB3	2:I:281:ARG:HD3	1.98	0.46
2:I:260:TRP:CE2	2:I:284:HIS:HD2	2.34	0.46
2:I:635:THR:HB	2:I:1639:LEU:HD23	1.97	0.46
2:I:1092:PHE:N	2:I:1149:VAL:O	2.38	0.46
2:I:3832:ILE:O	2:I:3836:MET:N	2.45	0.46
1:J:62:GLY:HA3	1:J:74:LEU:HD21	1.97	0.46
2:B:184:THR:HB	2:B:189:LEU:HG	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:260:TRP:CE2	2:B:284:HIS:HD2	2.34	0.45
2:B:870:ILE:HA	2:B:870:ILE:HD12	1.85	0.45
2:B:1854:PHE:HD1	2:B:1858:ASP:HB3	1.81	0.45
2:B:4083:ASP:HA	2:B:4085:ARG:HH11	1.81	0.45
2:E:742:ASP:OD1	2:E:760:ASN:ND2	2.49	0.45
2:E:1032:LYS:O	2:E:1036:ARG:N	2.45	0.45
2:E:1516:UNK:N	2:E:1529:UNK:O	2.49	0.45
2:E:1970:GLN:HB2	2:E:3642:TYR:HA	1.98	0.45
2:E:2002:PRO:HA	2:E:2005:GLN:HB3	1.98	0.45
2:E:3927:GLN:O	2:E:3931:SER:N	2.46	0.45
2:G:629:ARG:NH2	1:H:89:GLY:O	2.49	0.45
2:G:864:PRO:HD2	2:G:867:LEU:HD12	1.97	0.45
2:G:3759:GLU:HA	2:G:3762:ARG:HH11	1.81	0.45
2:G:4083:ASP:HA	2:G:4085:ARG:HH11	1.81	0.45
2:I:3696:ASP:OD2	2:I:3771:HIS:NE2	2.49	0.45
2:I:4852:THR:HG21	2:I:4883:TYR:HB2	1.98	0.45
2:E:485:SER:O	2:E:489:ASN:N	2.46	0.45
2:E:580:GLU:HG3	2:E:620:LEU:HD22	1.98	0.45
2:E:1271:ARG:HA	2:E:1471:UNK:HA	1.99	0.45
2:E:2102:VAL:HB	2:E:2124:LEU:HD12	1.98	0.45
2:E:4201:ASN:ND2	2:E:4993:MET:SD	2.89	0.45
2:G:164:ARG:N	2:G:167:ASP:OD2	2.48	0.45
2:G:580:GLU:HG3	2:G:620:LEU:HD22	1.98	0.45
2:G:670:GLU:H	2:G:740:PRO:HB3	1.81	0.45
2:G:1203:ASN:ND2	2:G:1210:SER:O	2.49	0.45
2:G:4201:ASN:ND2	2:G:4993:MET:SD	2.89	0.45
2:G:4852:THR:HG21	2:G:4883:TYR:HB2	1.98	0.45
2:I:42:PHE:HD1	2:I:447:ASP:HB3	1.81	0.45
2:I:864:PRO:HD2	2:I:867:LEU:HD12	1.97	0.45
2:I:1684:ALA:HA	2:I:1782:PHE:HZ	1.81	0.45
1:J:39:SER:HB2	1:J:45:PRO:HA	1.99	0.45
2:B:978:THR:HB	2:B:980:ALA:H	1.81	0.45
2:E:583:ILE:HA	2:E:586:ILE:HD12	1.98	0.45
2:E:4934:GLY:HA3	2:G:4937:ILE:HD12	1.98	0.45
2:G:232:THR:HB	2:G:252:VAL:HG11	1.97	0.45
2:G:1854:PHE:HD1	2:G:1858:ASP:HB3	1.81	0.45
2:I:1639:LEU:HD12	2:I:1653:LEU:HD21	1.99	0.45
2:I:1713:ASP:O	2:I:1717:SER:N	2.45	0.45
2:I:1854:PHE:HD1	2:I:1858:ASP:HB3	1.81	0.45
2:B:42:PHE:HD1	2:B:447:ASP:HB3	1.81	0.45
2:B:1691:GLN:HE22	2:B:1802:ILE:HG12	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3759:GLU:HA	2:B:3762:ARG:HH11	1.81	0.45
2:B:4934:GLY:O	2:B:4938:ASP:N	2.42	0.45
2:G:42:PHE:HD1	2:G:447:ASP:HB3	1.81	0.45
2:G:3910:THR:HG23	2:G:3911:THR:HG23	1.99	0.45
2:I:707:VAL:HG23	2:I:713:SER:HB2	1.97	0.45
2:I:742:ASP:OD1	2:I:760:ASN:ND2	2.49	0.45
2:I:1090:PHE:HD2	2:I:1202:LEU:HD11	1.80	0.45
2:I:2869:ARG:HA	2:I:2872:GLN:HB3	1.99	0.45
2:B:134:ASP:HA	2:B:192:ASP:HA	1.99	0.45
2:B:670:GLU:H	2:B:740:PRO:HB3	1.82	0.45
2:B:1841:VAL:HA	2:B:1844:LEU:HB3	1.98	0.45
2:B:2235:PHE:HA	2:B:2238:TYR:HD2	1.81	0.45
2:E:1090:PHE:HD2	2:E:1202:LEU:HD11	1.80	0.45
2:G:1830:VAL:HB	2:G:1837:GLN:HA	1.98	0.45
2:G:3696:ASP:OD2	2:G:3771:HIS:NE2	2.49	0.45
2:I:184:THR:HB	2:I:189:LEU:HG	1.98	0.45
2:I:261:ARG:HB3	2:I:283:ARG:HB3	1.99	0.45
2:I:1830:VAL:HB	2:I:1837:GLN:HA	1.98	0.45
2:B:1812:LEU:HD21	2:B:1861:GLN:HG2	1.97	0.45
2:B:3910:THR:HG23	2:B:3911:THR:HG23	1.99	0.45
2:B:4681:LEU:HD21	2:B:4687:TYR:HD2	1.80	0.45
2:E:635:THR:O	1:F:34:LYS:NZ	2.49	0.45
2:G:635:THR:HB	2:G:1639:LEU:HD23	1.97	0.45
2:G:2235:PHE:HA	2:G:2238:TYR:HD2	1.81	0.45
2:G:4885:PHE:HE2	2:G:4901:ILE:HD11	1.80	0.45
2:I:232:THR:HB	2:I:252:VAL:HG11	1.97	0.45
2:I:575:LEU:HD22	2:I:609:CYS:HB3	1.97	0.45
2:I:1691:GLN:HE22	2:I:1802:ILE:HG12	1.81	0.45
2:I:4174:PHE:HA	2:I:4177:TYR:HD2	1.81	0.45
2:I:4934:GLY:O	2:I:4938:ASP:N	2.42	0.45
2:E:2778:GLY:HA3	2:E:2787:THR:HB	1.98	0.45
2:E:3910:THR:HG23	2:E:3911:THR:HG23	1.99	0.45
2:G:629:ARG:HB3	2:G:634:GLN:NE2	2.32	0.45
2:G:2257:LEU:O	2:G:2261:SER:N	2.50	0.45
2:G:3832:ILE:O	2:G:3836:MET:N	2.45	0.45
2:I:2002:PRO:HA	2:I:2005:GLN:HB3	1.98	0.45
2:E:206:CYS:SG	2:E:207:SER:N	2.90	0.45
2:E:629:ARG:HB3	2:E:634:GLN:NE2	2.32	0.45
2:E:670:GLU:H	2:E:740:PRO:HB3	1.81	0.45
2:E:1659:LEU:O	2:E:1663:HIS:N	2.44	0.45
2:G:1691:GLN:HE22	2:G:1802:ILE:HG12	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:1812:LEU:HD21	2:G:1861:GLN:HG2	1.97	0.45
2:G:4937:ILE:O	2:G:4941:GLY:N	2.49	0.45
2:I:580:GLU:HG3	2:I:620:LEU:HD22	1.97	0.45
2:I:670:GLU:H	2:I:740:PRO:HB3	1.81	0.45
2:I:3759:GLU:HA	2:I:3762:ARG:HH11	1.81	0.45
1:A:89:GLY:O	2:B:629:ARG:NH2	2.50	0.45
2:B:988:LEU:O	2:B:992:GLY:N	2.49	0.45
2:B:2927:LEU:HD23	2:B:2930:LEU:HD12	1.97	0.45
2:B:3696:ASP:OD2	2:B:3771:HIS:NE2	2.49	0.45
2:E:1235:THR:OG1	2:E:1607:ARG:NE	2.50	0.45
2:E:1830:VAL:HB	2:E:1837:GLN:HA	1.98	0.45
2:G:206:CYS:SG	2:G:207:SER:N	2.90	0.45
2:G:261:ARG:HB3	2:G:283:ARG:HB3	1.99	0.45
2:G:3963:ASN:O	2:G:3966:THR:OG1	2.28	0.45
2:I:2102:VAL:HB	2:I:2124:LEU:HD12	1.98	0.45
2:I:3910:THR:HG23	2:I:3911:THR:HG23	1.99	0.45
1:A:39:SER:HB2	1:A:45:PRO:HA	1.99	0.45
2:B:1092:PHE:N	2:B:1149:VAL:O	2.38	0.45
2:B:1639:LEU:HD12	2:B:1653:LEU:HD21	1.99	0.45
2:B:2869:ARG:HA	2:B:2872:GLN:HB3	1.99	0.45
2:B:4049:VAL:HG21	2:B:4159:ARG:HD2	1.98	0.45
2:E:134:ASP:HA	2:E:192:ASP:HA	1.99	0.45
2:E:1718:ILE:HG13	2:E:1719:HIS:CD2	2.52	0.45
2:E:2257:LEU:O	2:E:2261:SER:N	2.50	0.45
2:G:59:PRO:HB3	2:G:281:ARG:HD3	1.98	0.45
2:G:870:ILE:HD11	2:G:1049:TYR:CG	2.52	0.45
2:G:978:THR:HB	2:G:980:ALA:H	1.81	0.45
2:G:1639:LEU:HD12	2:G:1653:LEU:HD21	1.99	0.45
2:G:1841:VAL:HA	2:G:1844:LEU:HB3	1.98	0.45
2:G:2778:GLY:HA3	2:G:2787:THR:HB	1.97	0.45
2:I:1235:THR:OG1	2:I:1607:ARG:NE	2.50	0.45
2:I:4012:LEU:O	2:I:4016:LEU:N	2.50	0.45
2:I:4885:PHE:HE2	2:I:4901:ILE:HD11	1.80	0.45
2:B:629:ARG:HB3	2:B:634:GLN:NE2	2.32	0.44
2:B:1718:ILE:HG13	2:B:1719:HIS:CD2	2.52	0.44
2:B:2002:PRO:HA	2:B:2005:GLN:HB3	1.98	0.44
2:B:2778:GLY:HA3	2:B:2787:THR:HB	1.97	0.44
2:E:978:THR:HB	2:E:980:ALA:H	1.81	0.44
2:E:1854:PHE:HD1	2:E:1858:ASP:HB3	1.81	0.44
2:B:2257:LEU:O	2:B:2261:SER:N	2.50	0.44
2:E:1691:GLN:HE22	2:E:1802:ILE:HG12	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:1841:VAL:HA	2:E:1844:LEU:HB3	1.98	0.44
2:E:2235:PHE:HA	2:E:2238:TYR:HD2	1.81	0.44
2:E:4049:VAL:HG21	2:E:4159:ARG:HD2	1.98	0.44
2:G:124:SER:HA	2:G:132:ALA:HB3	2.00	0.44
2:I:124:SER:HA	2:I:132:ALA:HB3	1.99	0.44
2:B:206:CYS:SG	2:B:207:SER:N	2.90	0.44
2:E:4560:TYR:O	2:E:4564:PHE:N	2.45	0.44
2:E:4998:LYS:HB3	2:E:5003:HIS:HE1	1.83	0.44
2:G:742:ASP:OD1	2:G:760:ASN:ND2	2.49	0.44
2:G:1659:LEU:O	2:G:1663:HIS:N	2.44	0.44
2:G:2927:LEU:HD23	2:G:2930:LEU:HD12	1.97	0.44
1:H:39:SER:HB2	1:H:45:PRO:HA	1.99	0.44
2:B:475:GLN:NE2	2:B:528:SER:O	2.51	0.44
2:E:838:HIS:CE1	2:E:1201:HIS:HD2	2.36	0.44
2:E:870:ILE:HD11	2:E:1049:TYR:CG	2.52	0.44
2:G:627:PRO:HG3	1:H:89:GLY:H	1.82	0.44
2:G:1076:ARG:HD3	2:G:1237:TRP:HB2	1.99	0.44
2:I:4782:VAL:O	2:I:4785:THR:OG1	2.30	0.44
2:I:4822:THR:O	2:I:4825:THR:OG1	2.30	0.44
2:E:2347:GLU:O	2:E:2351:ASN:N	2.45	0.44
1:F:39:SER:HB2	1:F:45:PRO:HA	1.99	0.44
2:G:1235:THR:OG1	2:G:1607:ARG:NE	2.50	0.44
2:G:4571:PHE:O	2:G:4575:PHE:N	2.44	0.44
2:I:1077:ALA:HB3	2:I:1189:LEU:HD11	2.00	0.44
2:I:2257:LEU:O	2:I:2261:SER:N	2.50	0.44
2:B:1235:THR:OG1	2:B:1607:ARG:NE	2.50	0.44
2:E:179:TYR:OH	2:G:2359:ARG:NH1	2.51	0.44
2:E:475:GLN:NE2	2:E:528:SER:O	2.51	0.44
2:E:627:PRO:HG3	1:F:89:GLY:H	1.83	0.44
2:E:685:GLY:N	2:E:780:VAL:O	2.38	0.44
2:E:1163:THR:HA	2:E:1168:VAL:HA	1.99	0.44
2:E:1684:ALA:HA	2:E:1782:PHE:HZ	1.81	0.44
2:E:2827:ARG:HH21	2:E:2931:GLN:HG3	1.83	0.44
2:G:1718:ILE:HG13	2:G:1719:HIS:CD2	2.52	0.44
2:G:2869:ARG:HA	2:G:2872:GLN:HB3	1.99	0.44
2:G:3552:UNK:O	2:G:3556:UNK:N	2.51	0.44
2:G:5012:LYS:O	2:G:5016:GLU:N	2.49	0.44
2:I:4736:ARG:O	2:I:4740:LEU:N	2.51	0.44
2:I:4998:LYS:HB3	2:I:5003:HIS:HE1	1.83	0.44
2:B:261:ARG:HB3	2:B:283:ARG:HB3	1.99	0.44
2:B:1076:ARG:HD3	2:B:1237:TRP:HB2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2102:VAL:HB	2:B:2124:LEU:HD12	1.98	0.44
2:E:2869:ARG:HA	2:E:2872:GLN:HB3	1.99	0.44
2:E:4083:ASP:HA	2:E:4085:ARG:HH11	1.81	0.44
2:G:475:GLN:NE2	2:G:528:SER:O	2.51	0.44
2:G:1077:ALA:HB3	2:G:1189:LEU:HD11	2.00	0.44
2:G:2002:PRO:HA	2:G:2005:GLN:HB3	1.98	0.44
2:I:709:ASP:HB3	2:I:725:HIS:CE1	2.53	0.44
2:I:838:HIS:CE1	2:I:1201:HIS:HD2	2.36	0.44
2:I:1076:ARG:HD3	2:I:1237:TRP:HB2	1.99	0.44
2:I:1163:THR:HA	2:I:1168:VAL:HA	1.99	0.44
2:I:1718:ILE:HG13	2:I:1719:HIS:CD2	2.52	0.44
2:B:838:HIS:CE1	2:B:1201:HIS:HD2	2.36	0.44
2:B:1685:LEU:HD22	2:B:1718:ILE:HD13	1.99	0.44
2:B:1976:ARG:NH1	2:B:1997:GLU:OE2	2.36	0.44
2:B:3927:GLN:O	2:B:3931:SER:N	2.46	0.44
2:B:4228:ALA:O	2:B:4232:GLU:N	2.51	0.44
2:E:1092:PHE:N	2:E:1149:VAL:O	2.38	0.44
2:E:1639:LEU:HD12	2:E:1653:LEU:HD21	1.99	0.44
2:G:709:ASP:HB3	2:G:725:HIS:CE1	2.53	0.44
2:I:206:CYS:SG	2:I:207:SER:N	2.90	0.44
2:I:629:ARG:HB3	2:I:634:GLN:NE2	2.32	0.44
2:I:3552:UNK:O	2:I:3556:UNK:N	2.50	0.44
2:I:4104:THR:HG22	2:I:4106:PRO:HD2	1.99	0.44
2:B:870:ILE:HD11	2:B:1049:TYR:CG	2.52	0.44
2:B:4978:HIS:ND1	2:B:4982:GLU:OE1	2.51	0.44
2:E:4104:THR:HG22	2:E:4106:PRO:HD2	2.00	0.44
2:G:134:ASP:HA	2:G:192:ASP:HA	1.99	0.44
2:G:355:LEU:HB3	2:G:378:LEU:HB3	2.00	0.44
2:G:2827:ARG:HH21	2:G:2931:GLN:HG3	1.83	0.44
2:G:3713:LYS:HG2	2:G:3715:LYS:H	1.83	0.44
2:G:4041:ALA:HA	2:G:4044:MET:HB2	2.00	0.44
2:I:134:ASP:HA	2:I:192:ASP:HA	1.99	0.44
2:I:978:THR:HB	2:I:980:ALA:H	1.81	0.44
2:B:124:SER:HA	2:B:132:ALA:HB3	1.99	0.43
2:B:175:SER:O	2:E:2452:ARG:NE	2.52	0.43
2:B:3552:UNK:O	2:B:3556:UNK:N	2.51	0.43
2:B:4041:ALA:HA	2:B:4044:MET:HB2	2.00	0.43
2:B:4634:GLU:HG3	2:B:4636:THR:H	1.83	0.43
2:B:4998:LYS:HB3	2:B:5003:HIS:HE1	1.83	0.43
2:E:261:ARG:HB3	2:E:283:ARG:HB3	1.99	0.43
2:E:728:ARG:NH2	2:E:1527:UNK:O	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:4937:ILE:O	2:E:4941:GLY:N	2.49	0.43
2:G:131:LEU:HB3	2:I:2459:SER:HB2	2.00	0.43
2:G:4104:THR:HG22	2:G:4106:PRO:HD2	1.99	0.43
2:I:139:GLU:O	2:I:141:ALA:N	2.51	0.43
2:I:233:ILE:HD11	2:I:242:ARG:HH21	1.83	0.43
2:I:870:ILE:HD11	2:I:1049:TYR:CG	2.52	0.43
2:I:4978:HIS:ND1	2:I:4982:GLU:OE1	2.51	0.43
2:B:1663:HIS:O	2:B:1667:LEU:N	2.49	0.43
2:B:1684:ALA:HA	2:B:1782:PHE:HZ	1.81	0.43
2:B:2827:ARG:HH21	2:B:2931:GLN:HG3	1.83	0.43
2:E:534:ARG:NH2	2:E:573:GLU:OE2	2.51	0.43
2:E:4012:LEU:O	2:E:4016:LEU:N	2.50	0.43
2:G:139:GLU:O	2:G:141:ALA:N	2.51	0.43
2:G:342:GLY:HA2	2:G:389:PHE:HD2	1.83	0.43
2:I:1685:LEU:HD22	2:I:1718:ILE:HD13	1.99	0.43
2:I:1838:PHE:HB3	2:I:1842:LEU:HD11	2.00	0.43
2:I:4634:GLU:HG3	2:I:4636:THR:H	1.83	0.43
2:B:4705:VAL:HB	2:B:4778:TRP:CG	2.54	0.43
2:B:4745:LEU:O	2:B:4749:GLU:N	2.47	0.43
2:B:4918:ILE:HG23	2:E:4892:ARG:HD3	1.99	0.43
2:E:355:LEU:HB3	2:E:378:LEU:HB3	2.00	0.43
2:E:649:PHE:HB3	2:E:776:LEU:HD13	2.01	0.43
2:E:709:ASP:HB3	2:E:725:HIS:CE1	2.53	0.43
2:E:1076:ARG:HD3	2:E:1237:TRP:HB2	1.99	0.43
2:E:4978:HIS:ND1	2:E:4982:GLU:OE1	2.51	0.43
2:G:1095:VAL:HB	2:G:1199:VAL:HG23	2.00	0.43
2:G:4918:ILE:HG23	2:I:4892:ARG:HD3	2.00	0.43
2:I:4228:ALA:O	2:I:4232:GLU:N	2.51	0.43
2:I:4976:GLU:O	2:I:4980:LEU:N	2.44	0.43
2:B:695:TYR:OH	2:B:1073:ARG:NH1	2.52	0.43
2:B:3832:ILE:O	2:B:3836:MET:N	2.45	0.43
2:B:4705:VAL:HB	2:B:4778:TRP:CD1	2.54	0.43
2:E:695:TYR:OH	2:E:1073:ARG:NH1	2.52	0.43
2:E:1095:VAL:HB	2:E:1199:VAL:HG23	2.00	0.43
2:E:4228:ALA:O	2:E:4232:GLU:N	2.51	0.43
2:E:4705:VAL:HB	2:E:4778:TRP:CD1	2.54	0.43
2:G:4978:HIS:ND1	2:G:4982:GLU:OE1	2.51	0.43
2:I:4743:MET:HB3	2:I:4746:ALA:HB3	2.01	0.43
2:B:709:ASP:HB3	2:B:725:HIS:CE1	2.53	0.43
2:B:1694:LEU:HD23	2:B:1715:LEU:HD13	2.01	0.43
2:B:2039:LEU:HA	2:B:2042:CYS:HB3	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2517:UNK:O	2:B:2521:UNK:N	2.52	0.43
2:B:4560:TYR:O	2:B:4564:PHE:N	2.45	0.43
2:E:124:SER:HA	2:E:132:ALA:HB3	2.00	0.43
2:E:457:GLU:OE1	2:E:464:LYS:NZ	2.51	0.43
2:E:1685:LEU:HD22	2:E:1718:ILE:HD13	1.99	0.43
2:E:1778:SER:N	2:E:1799:SER:O	2.52	0.43
2:E:2517:UNK:O	2:E:2521:UNK:N	2.51	0.43
2:E:3713:LYS:HG2	2:E:3715:LYS:H	1.83	0.43
2:G:838:HIS:CE1	2:G:1201:HIS:HD2	2.36	0.43
2:G:1685:LEU:HD22	2:G:1718:ILE:HD13	1.99	0.43
2:I:355:LEU:HB3	2:I:378:LEU:HB3	2.00	0.43
2:I:534:ARG:NH2	2:I:573:GLU:OE2	2.51	0.43
2:I:695:TYR:OH	2:I:1073:ARG:NH1	2.52	0.43
2:I:1679:ASN:O	2:I:1683:HIS:ND1	2.37	0.43
2:I:4705:VAL:HB	2:I:4778:TRP:CG	2.53	0.43
2:B:139:GLU:O	2:B:141:ALA:N	2.51	0.43
2:B:233:ILE:HD11	2:B:242:ARG:HH21	1.83	0.43
2:B:3993:LEU:HA	2:B:3996:PHE:HB2	2.00	0.43
2:E:139:GLU:O	2:E:141:ALA:N	2.51	0.43
2:E:4181:ILE:HG23	2:E:4195:PHE:HE1	1.83	0.43
2:G:4040:ILE:O	2:G:4044:MET:N	2.47	0.43
2:I:733:PRO:HD2	2:I:763:PRO:HD2	2.00	0.43
2:I:2104:ARG:HA	2:I:2107:GLN:HB3	2.01	0.43
2:I:3805:LEU:H	2:I:3805:LEU:HG	1.72	0.43
2:I:3993:LEU:HA	2:I:3996:PHE:HB2	2.00	0.43
2:B:1679:ASN:O	2:B:1683:HIS:ND1	2.37	0.43
2:B:2104:ARG:HA	2:B:2107:GLN:HB3	2.01	0.43
2:B:2347:GLU:O	2:B:2351:ASN:N	2.45	0.43
2:E:2104:ARG:HA	2:E:2107:GLN:HB3	2.01	0.43
2:E:3552:UNK:O	2:E:3556:UNK:N	2.51	0.43
2:E:4041:ALA:HA	2:E:4044:MET:HB2	2.01	0.43
2:E:4634:GLU:HG3	2:E:4636:THR:H	1.83	0.43
2:G:534:ARG:NH2	2:G:573:GLU:OE2	2.52	0.43
2:G:2104:ARG:HA	2:G:2107:GLN:HB3	2.01	0.43
2:G:4634:GLU:HG3	2:G:4636:THR:H	1.83	0.43
2:I:1694:LEU:HD23	2:I:1715:LEU:HD13	2.01	0.43
2:I:3658:LYS:HA	2:I:3661:TRP:CD2	2.53	0.43
2:B:1077:ALA:HB3	2:B:1189:LEU:HD11	2.00	0.43
2:B:1163:THR:HA	2:B:1168:VAL:HA	1.99	0.43
2:B:1778:SER:N	2:B:1799:SER:O	2.52	0.43
2:B:1931:LEU:HD22	2:B:1935:VAL:HG11	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:233:ILE:HD11	2:G:242:ARG:HH21	1.83	0.43
2:G:3805:LEU:H	2:G:3805:LEU:HG	1.72	0.43
2:G:4055:VAL:O	2:G:4059:LEU:N	2.49	0.43
2:G:4228:ALA:O	2:G:4232:GLU:N	2.51	0.43
2:G:4934:GLY:O	2:G:4938:ASP:N	2.42	0.43
2:I:1931:LEU:HD22	2:I:1935:VAL:HG11	2.01	0.43
2:I:2039:LEU:HA	2:I:2042:CYS:HB3	2.01	0.43
2:I:3927:GLN:O	2:I:3931:SER:N	2.46	0.43
2:B:932:LEU:HD23	2:B:935:LEU:HD12	2.01	0.43
2:B:1838:PHE:HB3	2:B:1842:LEU:HD11	2.00	0.43
2:B:2231:SER:HA	2:B:2234:ARG:HG2	2.01	0.43
2:B:4104:THR:HG22	2:B:4106:PRO:HD2	1.99	0.43
2:B:4138:ASP:O	2:B:4142:ASN:ND2	2.52	0.43
2:B:5012:LYS:O	2:B:5016:GLU:N	2.49	0.43
2:E:2132:GLY:O	2:E:2136:ARG:N	2.52	0.43
1:F:7:ILE:HB	1:F:71:ARG:HB3	2.01	0.43
2:G:695:TYR:OH	2:G:1073:ARG:NH1	2.52	0.43
2:G:2287:ALA:HA	2:G:2290:LEU:HD13	2.01	0.43
2:G:2440:MET:O	2:G:2444:GLN:N	2.41	0.43
2:G:4998:LYS:HB3	2:G:5003:HIS:HE1	1.83	0.43
2:I:475:GLN:NE2	2:I:528:SER:O	2.51	0.43
2:I:932:LEU:HD23	2:I:935:LEU:HD12	2.01	0.43
2:I:2430:ILE:HG21	2:I:2502:UNK:HA	2.00	0.43
2:I:4041:ALA:HA	2:I:4044:MET:HB2	2.00	0.43
2:B:2459:SER:HB2	2:I:131:LEU:HB3	2.00	0.43
2:E:233:ILE:HD11	2:E:242:ARG:HH21	1.83	0.43
2:E:733:PRO:HD2	2:E:763:PRO:HD2	2.00	0.43
2:E:1694:LEU:HD23	2:E:1715:LEU:HD13	2.01	0.43
2:E:2420:HIS:ND1	2:E:2493:UNK:O	2.34	0.43
2:E:3658:LYS:HA	2:E:3661:TRP:CD2	2.53	0.43
2:E:4976:GLU:O	2:E:4980:LEU:N	2.44	0.43
2:G:733:PRO:HD2	2:G:763:PRO:HD2	2.00	0.43
2:G:914:PRO:O	2:G:918:ARG:N	2.50	0.43
2:G:1163:THR:HA	2:G:1168:VAL:HA	1.99	0.43
2:G:1931:LEU:HD22	2:G:1935:VAL:HG11	2.01	0.43
2:G:1952:GLN:HA	2:G:1955:VAL:HG12	2.01	0.43
2:G:3993:LEU:HA	2:G:3996:PHE:HB2	2.00	0.43
2:G:4705:VAL:HB	2:G:4778:TRP:CG	2.53	0.43
2:I:342:GLY:HA2	2:I:389:PHE:HD2	1.84	0.43
2:I:876:GLU:O	2:I:880:GLU:N	2.47	0.43
2:I:4138:ASP:O	2:I:4142:ASN:ND2	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:4705:VAL:HB	2:I:4778:TRP:CD1	2.54	0.43
2:B:733:PRO:HD2	2:B:763:PRO:HD2	2.00	0.42
2:B:3658:LYS:HA	2:B:3661:TRP:CD2	2.53	0.42
2:B:4105:GLY:HA2	2:B:4108:ILE:HD12	2.01	0.42
2:E:16:THR:OG1	2:E:97:GLY:O	2.36	0.42
2:E:1077:ALA:HB3	2:E:1189:LEU:HD11	2.00	0.42
2:E:2231:SER:HA	2:E:2234:ARG:HG2	2.01	0.42
2:E:4125:PHE:HA	2:E:4128:PHE:HB3	2.01	0.42
2:G:1663:HIS:O	2:G:1667:LEU:N	2.49	0.42
2:G:1694:LEU:HD23	2:G:1715:LEU:HD13	2.01	0.42
2:G:1778:SER:N	2:G:1799:SER:O	2.52	0.42
2:G:2517:UNK:O	2:G:2521:UNK:N	2.52	0.42
2:G:3658:LYS:HA	2:G:3661:TRP:CD2	2.53	0.42
2:I:110:ARG:HA	2:I:117:TYR:HA	2.01	0.42
2:I:4181:ILE:HG23	2:I:4195:PHE:HE1	1.83	0.42
2:I:4745:LEU:O	2:I:4749:GLU:N	2.47	0.42
2:I:5012:LYS:O	2:I:5016:GLU:N	2.49	0.42
2:E:110:ARG:HA	2:E:117:TYR:HA	2.02	0.42
2:E:1497:UNK:HA	2:E:1535:UNK:HA	2.00	0.42
2:E:4705:VAL:HB	2:E:4778:TRP:CG	2.53	0.42
2:G:3992:PHE:O	2:G:3996:PHE:N	2.48	0.42
2:I:652:ARG:HB3	2:I:773:LEU:HD13	2.02	0.42
2:I:4105:GLY:HA2	2:I:4108:ILE:HD12	2.01	0.42
2:E:342:GLY:HA2	2:E:389:PHE:HD2	1.84	0.42
2:E:1931:LEU:HD22	2:E:1935:VAL:HG11	2.01	0.42
2:E:1952:GLN:HA	2:E:1955:VAL:HG12	2.01	0.42
2:G:758:ARG:NH2	2:G:803:LEU:O	2.53	0.42
2:G:2466:LEU:HA	2:G:2469:ILE:HD12	2.01	0.42
2:G:4181:ILE:HG23	2:G:4195:PHE:HE1	1.83	0.42
2:G:4705:VAL:HB	2:G:4778:TRP:CD1	2.54	0.42
2:G:4976:GLU:O	2:G:4980:LEU:N	2.44	0.42
2:I:1094:ALA:HB3	2:I:1147:ASP:HB3	2.02	0.42
2:I:2231:SER:HA	2:I:2234:ARG:HG2	2.01	0.42
2:I:2827:ARG:HH21	2:I:2931:GLN:HG3	1.83	0.42
2:I:3829:PHE:HA	2:I:3832:ILE:HD12	2.01	0.42
2:B:266:ARG:NH2	2:B:269:TRP:O	2.52	0.42
2:B:355:LEU:HB3	2:B:378:LEU:HB3	2.00	0.42
2:B:649:PHE:HB3	2:B:776:LEU:HD13	2.01	0.42
2:B:758:ARG:NH2	2:B:803:LEU:O	2.53	0.42
2:B:1865:MET:SD	2:B:1865:MET:N	2.93	0.42
2:B:2287:ALA:HA	2:B:2290:LEU:HD13	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:4736:ARG:O	2:B:4740:LEU:N	2.51	0.42
2:B:4849:TYR:HE1	2:E:4578:LEU:HD21	1.84	0.42
2:B:4937:ILE:O	2:B:4941:GLY:N	2.49	0.42
2:E:488:LEU:HD23	2:E:491:ILE:HD12	2.01	0.42
2:E:652:ARG:HB3	2:E:773:LEU:HD13	2.02	0.42
2:E:4105:GLY:HA2	2:E:4108:ILE:HD12	2.01	0.42
2:E:4138:ASP:O	2:E:4142:ASN:ND2	2.52	0.42
2:G:266:ARG:NH2	2:G:269:TRP:O	2.52	0.42
2:G:652:ARG:HB3	2:G:773:LEU:HD13	2.02	0.42
2:I:1095:VAL:HB	2:I:1199:VAL:HG23	2.00	0.42
2:B:534:ARG:NH2	2:B:573:GLU:OE2	2.52	0.42
2:B:614:VAL:HG22	2:B:616:SER:H	1.85	0.42
2:B:1094:ALA:HB3	2:B:1147:ASP:HB3	2.02	0.42
2:E:870:ILE:HD12	2:E:870:ILE:HA	1.85	0.42
2:E:4782:VAL:O	2:E:4785:THR:OG1	2.30	0.42
2:G:649:PHE:HB3	2:G:776:LEU:HD13	2.01	0.42
2:G:4012:LEU:O	2:G:4016:LEU:N	2.50	0.42
2:G:4105:GLY:HA2	2:G:4108:ILE:HD12	2.02	0.42
1:H:7:ILE:HB	1:H:71:ARG:HB3	2.01	0.42
2:I:266:ARG:NH2	2:I:269:TRP:O	2.52	0.42
2:I:758:ARG:NH2	2:I:803:LEU:O	2.53	0.42
2:I:1778:SER:N	2:I:1799:SER:O	2.52	0.42
2:I:1865:MET:SD	2:I:1865:MET:N	2.93	0.42
2:B:1095:VAL:HB	2:B:1199:VAL:HG23	2.01	0.42
2:B:2132:GLY:O	2:B:2136:ARG:N	2.52	0.42
2:B:4012:LEU:O	2:B:4016:LEU:N	2.50	0.42
2:E:932:LEU:HD23	2:E:935:LEU:HD12	2.01	0.42
2:G:110:ARG:HA	2:G:117:TYR:HA	2.01	0.42
2:G:1094:ALA:HB3	2:G:1147:ASP:HB3	2.02	0.42
2:G:2231:SER:HA	2:G:2234:ARG:HG2	2.01	0.42
2:G:3733:CYS:O	2:G:3737:GLU:N	2.49	0.42
2:G:4743:MET:HB3	2:G:4746:ALA:HB3	2.01	0.42
2:B:342:GLY:HA2	2:B:389:PHE:HD2	1.84	0.42
2:B:3713:LYS:HG2	2:B:3715:LYS:H	1.83	0.42
2:E:614:VAL:HG22	2:E:616:SER:H	1.85	0.42
2:E:1211:LEU:HD11	2:E:1225:PRO:HB3	2.02	0.42
2:G:457:GLU:OE1	2:G:464:LYS:NZ	2.51	0.42
2:G:488:LEU:HD23	2:G:491:ILE:HD12	2.01	0.42
2:G:1838:PHE:HB3	2:G:1842:LEU:HD11	2.01	0.42
2:G:2021:CYS:HA	2:G:2022:PRO:HD3	1.90	0.42
2:G:4138:ASP:O	2:G:4142:ASN:ND2	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:2287:ALA:HA	2:I:2290:LEU:HD13	2.01	0.42
2:I:3713:LYS:HG2	2:I:3715:LYS:H	1.83	0.42
2:I:4863:TYR:HB2	2:I:4874:MET:HE2	2.01	0.42
1:A:89:GLY:H	2:B:627:PRO:HG3	1.85	0.42
2:B:110:ARG:HA	2:B:117:TYR:HA	2.01	0.42
2:B:2466:LEU:HA	2:B:2469:ILE:HD12	2.01	0.42
2:B:4181:ILE:HG23	2:B:4195:PHE:HE1	1.83	0.42
2:B:4629:TYR:OH	2:I:4860:ARG:NH2	2.51	0.42
2:E:266:ARG:NH2	2:E:269:TRP:O	2.52	0.42
2:E:3993:LEU:HA	2:E:3996:PHE:HB2	2.00	0.42
2:G:2430:ILE:HG21	2:G:2502:UNK:HA	2.00	0.42
2:I:393:CYS:SG	2:I:395:GLN:NE2	2.93	0.42
2:I:870:ILE:HD12	2:I:870:ILE:HA	1.85	0.42
2:I:2517:UNK:O	2:I:2521:UNK:N	2.53	0.42
2:B:2142:TYR:CG	2:B:2197:LEU:HD13	2.55	0.42
2:G:2039:LEU:HA	2:G:2042:CYS:HB3	2.01	0.42
2:G:4934:GLY:HA3	2:I:4937:ILE:HD12	2.01	0.42
2:I:392:ARG:HH12	2:I:398:SER:HB2	1.85	0.42
2:I:1516:UNK:N	2:I:1529:UNK:O	2.53	0.42
1:J:7:ILE:HB	1:J:71:ARG:HB3	2.01	0.42
2:B:393:CYS:SG	2:B:395:GLN:NE2	2.93	0.42
2:B:652:ARG:HB3	2:B:773:LEU:HD13	2.02	0.42
2:B:3850:GLN:HA	2:B:3853:ALA:HB3	2.02	0.42
2:E:218:HIS:HB3	2:E:392:ARG:HD3	2.02	0.42
2:E:758:ARG:NH2	2:E:803:LEU:O	2.53	0.42
2:E:1094:ALA:HB3	2:E:1147:ASP:HB3	2.02	0.42
2:E:1865:MET:SD	2:E:1865:MET:N	2.93	0.42
2:E:2142:TYR:CG	2:E:2197:LEU:HD13	2.55	0.42
2:E:2466:LEU:HA	2:E:2469:ILE:HD12	2.01	0.42
2:E:4743:MET:HB3	2:E:4746:ALA:HB3	2.01	0.42
2:E:4813:LEU:HA	2:E:4816:ILE:HG12	2.01	0.42
2:G:210:GLU:HG3	2:G:337:PRO:HG3	2.02	0.42
2:G:392:ARG:HH12	2:G:398:SER:HB2	1.85	0.42
2:G:1032:LYS:O	2:G:1036:ARG:N	2.45	0.42
2:I:261:ARG:N	2:I:283:ARG:O	2.40	0.42
2:I:1952:GLN:HA	2:I:1955:VAL:HG12	2.01	0.42
2:I:2142:TYR:CG	2:I:2197:LEU:HD13	2.55	0.42
1:J:83:GLY:HA2	1:J:94:ASN:H	1.85	0.42
1:A:7:ILE:HB	1:A:71:ARG:HB3	2.01	0.41
2:B:914:PRO:HD2	2:B:917:GLU:HB2	2.02	0.41
2:B:2236:LEU:HD23	2:B:2275:VAL:HG21	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3676:ASP:OD1	2:B:3676:ASP:N	2.53	0.41
2:B:4568:PHE:HA	2:B:4571:PHE:HD2	1.85	0.41
2:E:392:ARG:HH12	2:E:398:SER:HB2	1.85	0.41
2:E:393:CYS:SG	2:E:395:GLN:NE2	2.93	0.41
2:E:2039:LEU:HA	2:E:2042:CYS:HB3	2.01	0.41
2:E:2810:LYS:O	2:E:2814:LYS:N	2.49	0.41
2:E:4055:VAL:O	2:E:4059:LEU:N	2.49	0.41
2:E:4668:LEU:HG	2:E:4672:LYS:HE3	2.02	0.41
2:G:870:ILE:HA	2:G:870:ILE:HD12	1.85	0.41
2:G:1679:ASN:O	2:G:1683:HIS:ND1	2.37	0.41
2:G:2142:TYR:CG	2:G:2197:LEU:HD13	2.55	0.41
2:G:4125:PHE:HA	2:G:4128:PHE:HB3	2.01	0.41
2:I:242:ARG:O	2:I:289:ARG:NH1	2.53	0.41
2:I:2466:LEU:HA	2:I:2469:ILE:HD12	2.01	0.41
2:I:4568:PHE:HA	2:I:4571:PHE:HD2	1.85	0.41
2:B:242:ARG:O	2:B:289:ARG:NH1	2.53	0.41
2:B:392:ARG:HH12	2:B:398:SER:HB2	1.85	0.41
2:B:457:GLU:OE1	2:B:464:LYS:NZ	2.51	0.41
2:B:1032:LYS:O	2:B:1036:ARG:N	2.45	0.41
2:B:1211:LEU:HD11	2:B:1225:PRO:HB3	2.02	0.41
2:B:2021:CYS:HA	2:B:2022:PRO:HD3	1.91	0.41
2:E:426:ARG:HG2	2:E:431:PRO:HA	2.02	0.41
2:E:1838:PHE:HB3	2:E:1842:LEU:HD11	2.01	0.41
2:E:1936:LYS:O	2:E:1940:CYS:N	2.47	0.41
2:E:2272:PRO:HA	2:E:2275:VAL:HG12	2.03	0.41
2:E:4568:PHE:HA	2:E:4571:PHE:HD2	1.85	0.41
2:E:4577:LEU:HG	2:E:4580:TYR:HE2	1.86	0.41
2:G:242:ARG:O	2:G:289:ARG:NH1	2.53	0.41
2:G:393:CYS:SG	2:G:395:GLN:NE2	2.93	0.41
2:G:3829:PHE:HA	2:G:3832:ILE:HD12	2.01	0.41
2:I:426:ARG:HG2	2:I:431:PRO:HA	2.03	0.41
2:I:457:GLU:OE1	2:I:464:LYS:NZ	2.51	0.41
2:I:649:PHE:HB3	2:I:776:LEU:HD13	2.01	0.41
2:I:1211:LEU:HD11	2:I:1225:PRO:HB3	2.02	0.41
2:B:4743:MET:HB3	2:B:4746:ALA:HB3	2.01	0.41
2:E:1848:LEU:HD22	2:E:1853:ILE:HG13	2.03	0.41
2:E:2021:CYS:HA	2:E:2022:PRO:HD3	1.91	0.41
2:G:426:ARG:HG2	2:G:431:PRO:HA	2.02	0.41
2:G:1848:LEU:HD22	2:G:1853:ILE:HG13	2.03	0.41
2:G:1865:MET:SD	2:G:1865:MET:N	2.93	0.41
2:G:4674:GLU:HB3	2:G:4715:TYR:HB2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:4813:LEU:HA	2:I:4816:ILE:HG12	2.01	0.41
2:B:357:LEU:HD21	2:B:376:ALA:HB1	2.03	0.41
2:B:1952:GLN:HA	2:B:1955:VAL:HG12	2.01	0.41
2:B:3694:LYS:HA	2:B:3695:PRO:HD3	1.95	0.41
2:B:4125:PHE:HA	2:B:4128:PHE:HB3	2.01	0.41
2:B:4193:ILE:HD13	2:B:4193:ILE:HA	1.90	0.41
2:B:4668:LEU:HG	2:B:4672:LYS:HE3	2.02	0.41
2:B:4958:CYS:SG	2:B:4959:PHE:N	2.94	0.41
2:E:242:ARG:O	2:E:289:ARG:NH1	2.53	0.41
2:E:3733:CYS:O	2:E:3737:GLU:N	2.49	0.41
2:E:3850:GLN:HA	2:E:3853:ALA:HB3	2.02	0.41
2:G:1708:ARG:HG2	2:G:1711:TYR:CE2	2.56	0.41
2:G:1808:ARG:HD3	2:G:1853:ILE:HG22	2.02	0.41
2:G:2437:ALA:HA	2:G:2438:PRO:HD3	1.94	0.41
2:I:614:VAL:HG22	2:I:616:SER:H	1.85	0.41
2:I:914:PRO:O	2:I:918:ARG:N	2.50	0.41
2:I:1708:ARG:HG2	2:I:1711:TYR:CE2	2.56	0.41
2:I:2236:LEU:HD23	2:I:2275:VAL:HG21	2.02	0.41
2:I:2437:ALA:HA	2:I:2438:PRO:HD3	1.94	0.41
2:I:4958:CYS:SG	2:I:4959:PHE:N	2.94	0.41
2:B:218:HIS:HB3	2:B:392:ARG:HD3	2.02	0.41
2:B:1089:TYR:N	2:B:1224:GLU:O	2.54	0.41
2:B:2880:GLU:O	2:B:2884:ASN:N	2.49	0.41
2:B:3829:PHE:HA	2:B:3832:ILE:HD12	2.01	0.41
2:B:4852:THR:O	2:B:4856:PHE:N	2.53	0.41
2:E:1708:ARG:HG2	2:E:1711:TYR:CE2	2.56	0.41
2:E:3676:ASP:N	2:E:3676:ASP:OD1	2.53	0.41
2:E:4193:ILE:HD13	2:E:4193:ILE:HA	1.90	0.41
2:G:932:LEU:HD23	2:G:935:LEU:HD12	2.01	0.41
2:G:2132:GLY:O	2:G:2136:ARG:N	2.52	0.41
2:G:4813:LEU:HA	2:G:4816:ILE:HG12	2.01	0.41
2:I:218:HIS:HB3	2:I:392:ARG:HD3	2.02	0.41
2:I:668:VAL:HG22	2:I:789:VAL:HG23	2.03	0.41
2:I:2132:GLY:O	2:I:2136:ARG:N	2.52	0.41
2:I:3930:ILE:HG23	2:I:3951:PHE:HE1	1.86	0.41
2:B:1708:ARG:HG2	2:B:1711:TYR:CE2	2.56	0.41
2:B:4813:LEU:HA	2:B:4816:ILE:HG12	2.01	0.41
2:E:1808:ARG:HD3	2:E:1853:ILE:HG22	2.02	0.41
2:E:4040:ILE:O	2:E:4044:MET:N	2.47	0.41
1:F:23:VAL:HB	1:F:105:ASN:HA	2.02	0.41
2:G:3930:ILE:HG23	2:G:3951:PHE:HE1	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:4668:LEU:HG	2:G:4672:LYS:HE3	2.02	0.41
2:G:4852:THR:O	2:G:4856:PHE:N	2.53	0.41
2:I:488:LEU:HD23	2:I:491:ILE:HD12	2.01	0.41
2:I:3676:ASP:OD1	2:I:3676:ASP:N	2.53	0.41
2:I:4125:PHE:HA	2:I:4128:PHE:HB3	2.01	0.41
2:I:4577:LEU:HG	2:I:4580:TYR:HE2	1.85	0.41
2:B:426:ARG:HG2	2:B:431:PRO:HA	2.03	0.41
2:B:488:LEU:HD23	2:B:491:ILE:HD12	2.01	0.41
2:E:210:GLU:HG3	2:E:337:PRO:HG3	2.02	0.41
2:E:357:LEU:HD21	2:E:376:ALA:HB1	2.03	0.41
2:E:2869:ARG:HH12	2:E:2945:UNK:C	2.33	0.41
2:E:3829:PHE:HA	2:E:3832:ILE:HD12	2.01	0.41
2:E:4735:GLU:HA	2:E:4738:ALA:HB3	2.03	0.41
2:E:4852:THR:O	2:E:4856:PHE:N	2.53	0.41
2:G:357:LEU:HD21	2:G:376:ALA:HB1	2.03	0.41
2:G:1211:LEU:HD11	2:G:1225:PRO:HB3	2.02	0.41
2:G:2272:PRO:HA	2:G:2275:VAL:HG12	2.03	0.41
2:G:3362:UNK:O	2:G:3366:UNK:N	2.54	0.41
2:G:3676:ASP:OD1	2:G:3676:ASP:N	2.53	0.41
2:G:4560:TYR:O	2:G:4564:PHE:N	2.45	0.41
2:G:4958:CYS:SG	2:G:4959:PHE:N	2.94	0.41
1:H:7:ILE:N	1:H:71:ARG:O	2.45	0.41
2:I:1848:LEU:HD22	2:I:1853:ILE:HG13	2.02	0.41
2:I:2880:GLU:O	2:I:2884:ASN:N	2.49	0.41
2:B:1046:LEU:HD12	2:B:1053:ILE:HD11	2.03	0.41
2:B:1848:LEU:HD22	2:B:1853:ILE:HG13	2.03	0.41
2:E:1046:LEU:HD12	2:E:1053:ILE:HD11	2.03	0.41
2:E:4958:CYS:SG	2:E:4959:PHE:N	2.94	0.41
2:G:218:HIS:HB3	2:G:392:ARG:HD3	2.02	0.41
2:G:4863:TYR:HB2	2:G:4874:MET:HE2	2.03	0.41
2:I:16:THR:OG1	2:I:97:GLY:O	2.36	0.41
2:I:1131:ARG:NH1	2:I:1178:ALA:O	2.53	0.41
2:I:4668:LEU:HG	2:I:4672:LYS:HE3	2.02	0.41
1:A:83:GLY:HA2	1:A:94:ASN:H	1.85	0.41
2:B:2420:HIS:ND1	2:B:2493:UNK:O	2.39	0.41
2:B:3930:ILE:HG23	2:B:3951:PHE:HE1	1.86	0.41
2:B:4735:GLU:HA	2:B:4738:ALA:HB3	2.03	0.41
2:B:4976:GLU:O	2:B:4980:LEU:N	2.44	0.41
2:E:379:HIS:CD2	2:E:381:GLU:H	2.39	0.41
2:E:385:ASP:N	2:E:385:ASP:OD1	2.54	0.41
2:E:414:PHE:HE1	2:E:436:LEU:HB3	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:467:LYS:O	2:E:471:LEU:N	2.54	0.41
2:E:2287:ALA:HA	2:E:2290:LEU:HD13	2.01	0.41
2:E:3779:VAL:HG23	2:E:3780:LEU:HD12	2.03	0.41
2:E:4674:GLU:HB3	2:E:4715:TYR:HB2	2.03	0.41
2:G:681:HIS:HB3	2:G:784:SER:HB3	2.03	0.41
2:G:776:LEU:HG	2:G:848:HIS:HA	2.03	0.41
2:G:914:PRO:HD2	2:G:917:GLU:HB2	2.02	0.41
2:G:2236:LEU:HD23	2:G:2275:VAL:HG21	2.02	0.41
2:G:3850:GLN:HA	2:G:3853:ALA:HB3	2.03	0.41
2:G:4735:GLU:HA	2:G:4738:ALA:HB3	2.03	0.41
2:G:4736:ARG:O	2:G:4740:LEU:N	2.51	0.41
2:I:123:THR:OG1	2:I:134:ASP:OD1	2.39	0.41
2:I:668:VAL:O	2:I:741:GLU:N	2.53	0.41
2:I:1089:TYR:N	2:I:1224:GLU:O	2.54	0.41
2:I:1497:UNK:HA	2:I:1535:UNK:HA	2.02	0.41
2:I:4204:GLN:HE22	2:I:4245:MET:HA	1.86	0.41
2:I:4735:GLU:HA	2:I:4738:ALA:HB3	2.03	0.41
2:I:4852:THR:O	2:I:4856:PHE:N	2.53	0.41
1:A:23:VAL:HB	1:A:105:ASN:HA	2.03	0.41
2:B:2272:PRO:HA	2:B:2275:VAL:HG12	2.03	0.41
2:E:3698:LEU:HD23	2:E:3771:HIS:CE1	2.56	0.41
2:E:4863:TYR:HB2	2:E:4874:MET:HE2	2.02	0.41
1:F:83:GLY:HA2	1:F:94:ASN:H	1.85	0.41
2:G:1046:LEU:HD12	2:G:1053:ILE:HD11	2.03	0.41
2:G:4059:LEU:HD13	2:G:4166:LEU:HB3	2.03	0.41
1:J:23:VAL:HB	1:J:105:ASN:HA	2.03	0.41
1:J:29:MET:HB3	1:J:98:ILE:HB	2.03	0.41
2:B:1078:GLU:HB3	2:B:1081:TYR:HD2	1.87	0.40
2:B:3698:LEU:HD23	2:B:3771:HIS:CE1	2.56	0.40
2:B:4142:ASN:HA	2:B:4145:VAL:HG12	2.03	0.40
2:E:358:THR:HG21	2:E:382:GLY:HA2	2.04	0.40
2:E:914:PRO:O	2:E:918:ARG:N	2.50	0.40
2:E:1089:TYR:N	2:E:1224:GLU:O	2.54	0.40
2:E:1154:ASP:O	2:E:1158:ASN:N	2.55	0.40
2:E:3930:ILE:HG23	2:E:3951:PHE:HE1	1.86	0.40
2:E:3999:MET:HA	2:E:4002:LYS:HB3	2.03	0.40
2:E:4736:ARG:O	2:E:4740:LEU:N	2.51	0.40
2:G:1089:TYR:N	2:G:1224:GLU:O	2.54	0.40
2:G:4142:ASN:HA	2:G:4145:VAL:HG12	2.03	0.40
2:G:4782:VAL:O	2:G:4785:THR:OG1	2.30	0.40
2:I:357:LEU:HD21	2:I:376:ALA:HB1	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:776:LEU:HG	2:I:848:HIS:HA	2.03	0.40
2:I:1725:ARG:HA	2:I:1728:ARG:HG2	2.03	0.40
2:I:4848:VAL:HG12	2:I:4920:PHE:HZ	1.86	0.40
2:B:1497:UNK:HA	2:B:1535:UNK:HA	2.03	0.40
2:B:4577:LEU:HG	2:B:4580:TYR:HE2	1.85	0.40
2:E:123:THR:OG1	2:E:134:ASP:OD1	2.39	0.40
2:E:681:HIS:HB3	2:E:784:SER:HB3	2.03	0.40
2:E:914:PRO:HD2	2:E:917:GLU:HB2	2.02	0.40
2:G:320:LYS:HG2	2:G:356:TRP:CD1	2.56	0.40
2:G:614:VAL:HG22	2:G:616:SER:H	1.85	0.40
2:G:668:VAL:HG22	2:G:789:VAL:HG23	2.03	0.40
2:G:1936:LYS:O	2:G:1940:CYS:N	2.47	0.40
2:I:320:LYS:HG2	2:I:356:TRP:CD1	2.56	0.40
2:I:1046:LEU:HD12	2:I:1053:ILE:HD11	2.03	0.40
2:I:3362:UNK:O	2:I:3366:UNK:N	2.54	0.40
2:I:3698:LEU:HD23	2:I:3771:HIS:CE1	2.56	0.40
2:I:4055:VAL:O	2:I:4059:LEU:N	2.49	0.40
2:B:668:VAL:HG22	2:B:789:VAL:HG23	2.03	0.40
2:B:3779:VAL:HG23	2:B:3780:LEU:HD12	2.03	0.40
2:B:4204:GLN:HE22	2:B:4245:MET:HA	1.87	0.40
2:E:663:TYR:HB2	2:E:808:TYR:HB3	2.04	0.40
2:E:790:ARG:HG2	2:E:1627:ALA:HA	2.03	0.40
2:E:5012:LYS:O	2:E:5016:GLU:N	2.49	0.40
2:G:463:GLU:OE2	2:G:467:LYS:NZ	2.55	0.40
2:G:1269:CYS:HA	2:G:1473:UNK:HA	2.04	0.40
2:G:1720:LEU:HB2	2:G:1847:THR:HG23	2.03	0.40
1:H:23:VAL:HB	1:H:105:ASN:HA	2.03	0.40
2:I:914:PRO:HD2	2:I:917:GLU:HB2	2.02	0.40
2:I:3850:GLN:HA	2:I:3853:ALA:HB3	2.02	0.40
2:B:210:GLU:HG3	2:B:337:PRO:HG3	2.02	0.40
2:B:681:HIS:HB3	2:B:784:SER:HB3	2.03	0.40
2:B:1131:ARG:NH1	2:B:1178:ALA:O	2.53	0.40
2:B:1154:ASP:O	2:B:1158:ASN:N	2.55	0.40
2:B:1284:UNK:HA	2:B:1463:UNK:HA	2.03	0.40
2:B:4651:THR:HA	2:B:4799:SER:HB3	2.02	0.40
2:E:320:LYS:HG2	2:E:356:TRP:CD1	2.56	0.40
2:E:1078:GLU:HB3	2:E:1081:TYR:HD2	1.86	0.40
2:E:2236:LEU:HD23	2:E:2275:VAL:HG21	2.02	0.40
2:E:2430:ILE:HG21	2:E:2502:UNK:HA	2.03	0.40
2:E:2950:UNK:O	2:E:2954:UNK:N	2.55	0.40
2:E:3362:UNK:O	2:E:3366:UNK:N	2.55	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:4651:THR:HA	2:E:4799:SER:HB3	2.03	0.40
2:G:467:LYS:O	2:G:471:LEU:N	2.54	0.40
2:G:1078:GLU:HB3	2:G:1081:TYR:HD2	1.87	0.40
2:G:1131:ARG:NH1	2:G:1178:ALA:O	2.53	0.40
2:G:1497:UNK:HA	2:G:1535:UNK:HA	2.03	0.40
2:I:176:SER:HB2	2:I:178:ARG:HD3	2.04	0.40
2:I:414:PHE:HE1	2:I:436:LEU:HB3	1.86	0.40
2:I:1808:ARG:HD3	2:I:1853:ILE:HG22	2.02	0.40
2:I:4059:LEU:HD13	2:I:4166:LEU:HB3	2.04	0.40
2:I:4651:THR:HA	2:I:4799:SER:HB3	2.02	0.40
2:I:4674:GLU:HB3	2:I:4715:TYR:HB2	2.03	0.40
2:B:358:THR:HG21	2:B:382:GLY:HA2	2.04	0.40
2:B:463:GLU:OE2	2:B:467:LYS:NZ	2.55	0.40
2:B:1516:UNK:N	2:B:1529:UNK:O	2.54	0.40
2:B:2950:UNK:O	2:B:2954:UNK:N	2.55	0.40
2:G:1092:PHE:N	2:G:1149:VAL:O	2.38	0.40
2:G:1863:LEU:HB3	2:G:1870:VAL:HG11	2.03	0.40
2:G:3999:MET:HA	2:G:4002:LYS:HB3	2.03	0.40
2:G:4577:LEU:HG	2:G:4580:TYR:HE2	1.86	0.40
2:I:358:THR:HG21	2:I:382:GLY:HA2	2.04	0.40
2:I:681:HIS:HB3	2:I:784:SER:HB3	2.03	0.40
2:I:1720:LEU:HB2	2:I:1847:THR:HG23	2.03	0.40
2:I:1863:LEU:HB3	2:I:1870:VAL:HG11	2.03	0.40
1:J:7:ILE:N	1:J:71:ARG:O	2.45	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	A	105/107 (98%)	92 (88%)	13 (12%)	0	100 100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	F	105/107 (98%)	92 (88%)	13 (12%)	0	100	100
1	H	105/107 (98%)	92 (88%)	13 (12%)	0	100	100
1	J	105/107 (98%)	92 (88%)	13 (12%)	0	100	100
2	B	3235/4687 (69%)	2890 (89%)	339 (10%)	6 (0%)	47	81
2	E	3235/4687 (69%)	2887 (89%)	342 (11%)	6 (0%)	47	81
2	G	3235/4687 (69%)	2892 (89%)	337 (10%)	6 (0%)	47	81
2	I	3235/4687 (69%)	2889 (89%)	340 (10%)	6 (0%)	47	81
All	All	13360/19176 (70%)	11926 (89%)	1410 (11%)	24 (0%)	50	81

All (24) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	B	1708	ARG
2	E	1708	ARG
2	G	1708	ARG
2	I	1708	ARG
2	B	1932	PRO
2	E	1932	PRO
2	G	1932	PRO
2	I	1932	PRO
2	B	1840	PRO
2	B	4667	PRO
2	E	1840	PRO
2	E	4667	PRO
2	G	1840	PRO
2	G	4667	PRO
2	I	1840	PRO
2	I	4667	PRO
2	B	2343	GLY
2	E	2343	GLY
2	G	2343	GLY
2	I	2343	GLY
2	B	4641	PRO
2	E	4641	PRO
2	G	4641	PRO
2	I	4641	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	A	88/88 (100%)	88 (100%)	0	100	100
1	F	88/88 (100%)	88 (100%)	0	100	100
1	H	88/88 (100%)	88 (100%)	0	100	100
1	J	88/88 (100%)	88 (100%)	0	100	100
2	B	2493/3209 (78%)	2476 (99%)	17 (1%)	84	90
2	E	2493/3209 (78%)	2476 (99%)	17 (1%)	84	90
2	G	2493/3209 (78%)	2476 (99%)	17 (1%)	84	90
2	I	2493/3209 (78%)	2476 (99%)	17 (1%)	84	90
All	All	10324/13188 (78%)	10256 (99%)	68 (1%)	84	90

All (68) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	B	534	ARG
2	B	553	ARG
2	B	688	LEU
2	B	978	THR
2	B	1076	ARG
2	B	1141	ARG
2	B	1964	ARG
2	B	3663	LEU
2	B	3787	LYS
2	B	3805	LEU
2	B	3896	ASN
2	B	4034	ASN
2	B	4085	ARG
2	B	4120	ASN
2	B	4137	ARG
2	B	4798	MET
2	B	4957	LYS
2	E	534	ARG
2	E	553	ARG

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Mol	Chain	Res	Type
2	E	688	LEU
2	E	978	THR
2	E	1076	ARG
2	E	1141	ARG
2	E	1964	ARG
2	E	3663	LEU
2	E	3787	LYS
2	E	3805	LEU
2	E	3896	ASN
2	E	4034	ASN
2	E	4085	ARG
2	E	4120	ASN
2	E	4137	ARG
2	E	4798	MET
2	E	4957	LYS
2	G	534	ARG
2	G	553	ARG
2	G	688	LEU
2	G	978	THR
2	G	1076	ARG
2	G	1141	ARG
2	G	1964	ARG
2	G	3663	LEU
2	G	3787	LYS
2	G	3805	LEU
2	G	3896	ASN
2	G	4034	ASN
2	G	4085	ARG
2	G	4120	ASN
2	G	4137	ARG
2	G	4798	MET
2	G	4957	LYS
2	I	534	ARG
2	I	553	ARG
2	I	688	LEU
2	I	978	THR
2	I	1076	ARG
2	I	1141	ARG
2	I	1964	ARG
2	I	3663	LEU
2	I	3787	LYS
2	I	3805	LEU

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Mol	Chain	Res	Type
2	I	3896	ASN
2	I	4034	ASN
2	I	4085	ARG
2	I	4120	ASN
2	I	4137	ARG
2	I	4798	MET
2	I	4957	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (147) such sidechains are listed below:

Mol	Chain	Res	Type
2	B	23	GLN
2	B	57	ASN
2	B	105	HIS
2	B	111	HIS
2	B	203	ASN
2	B	224	HIS
2	B	273	HIS
2	B	379	HIS
2	B	383	HIS
2	B	395	GLN
2	B	413	GLN
2	B	479	GLN
2	B	838	HIS
2	B	1035	ASN
2	B	1158	ASN
2	B	1598	GLN
2	B	1679	ASN
2	B	1691	GLN
2	B	1719	HIS
2	B	1775	HIS
2	B	1972	ASN
2	B	2127	GLN
2	B	2931	GLN
2	B	3766	GLN
2	B	3809	ASN
2	B	3889	GLN
2	B	3896	ASN
2	B	3946	GLN
2	B	3950	ASN
2	B	3960	GLN
2	B	3976	ASN

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Mol	Chain	Res	Type
2	B	4054	ASN
2	B	4120	ASN
2	B	4142	ASN
2	B	4201	ASN
2	B	4728	HIS
2	B	5031	GLN
2	E	23	GLN
2	E	57	ASN
2	E	105	HIS
2	E	111	HIS
2	E	203	ASN
2	E	224	HIS
2	E	273	HIS
2	E	379	HIS
2	E	383	HIS
2	E	395	GLN
2	E	413	GLN
2	E	479	GLN
2	E	838	HIS
2	E	1035	ASN
2	E	1158	ASN
2	E	1598	GLN
2	E	1679	ASN
2	E	1691	GLN
2	E	1719	HIS
2	E	1775	HIS
2	E	1972	ASN
2	E	2127	GLN
2	E	3766	GLN
2	E	3809	ASN
2	E	3889	GLN
2	E	3896	ASN
2	E	3946	GLN
2	E	3950	ASN
2	E	3960	GLN
2	E	3976	ASN
2	E	4054	ASN
2	E	4120	ASN
2	E	4142	ASN
2	E	4201	ASN
2	E	4728	HIS
2	E	5031	GLN

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Mol	Chain	Res	Type
2	G	23	GLN
2	G	57	ASN
2	G	105	HIS
2	G	111	HIS
2	G	203	ASN
2	G	224	HIS
2	G	273	HIS
2	G	379	HIS
2	G	383	HIS
2	G	395	GLN
2	G	413	GLN
2	G	479	GLN
2	G	838	HIS
2	G	1035	ASN
2	G	1158	ASN
2	G	1598	GLN
2	G	1679	ASN
2	G	1691	GLN
2	G	1719	HIS
2	G	1775	HIS
2	G	1972	ASN
2	G	2127	GLN
2	G	3766	GLN
2	G	3809	ASN
2	G	3889	GLN
2	G	3896	ASN
2	G	3946	GLN
2	G	3950	ASN
2	G	3960	GLN
2	G	3976	ASN
2	G	4054	ASN
2	G	4120	ASN
2	G	4142	ASN
2	G	4201	ASN
2	G	4728	HIS
2	G	5031	GLN
1	H	25	HIS
2	I	23	GLN
2	I	57	ASN
2	I	105	HIS
2	I	111	HIS
2	I	203	ASN

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Mol	Chain	Res	Type
2	I	224	HIS
2	I	273	HIS
2	I	379	HIS
2	I	383	HIS
2	I	395	GLN
2	I	413	GLN
2	I	479	GLN
2	I	838	HIS
2	I	1035	ASN
2	I	1158	ASN
2	I	1598	GLN
2	I	1679	ASN
2	I	1691	GLN
2	I	1719	HIS
2	I	1775	HIS
2	I	1972	ASN
2	I	2127	GLN
2	I	2931	GLN
2	I	3766	GLN
2	I	3809	ASN
2	I	3889	GLN
2	I	3896	ASN
2	I	3946	GLN
2	I	3950	ASN
2	I	3960	GLN
2	I	3976	ASN
2	I	4054	ASN
2	I	4120	ASN
2	I	4142	ASN
2	I	4201	ASN
2	I	4728	HIS
2	I	5031	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 8 ligands modelled in this entry, 8 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
2	G	12
2	B	12
2	I	12
2	E	12

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	G	3613:UNK	C	3639:THR	N	44.80
1	B	3613:UNK	C	3639:THR	N	44.74
1	I	3613:UNK	C	3639:THR	N	44.65
1	E	3613:UNK	C	3639:THR	N	44.57
1	B	3163:UNK	C	3170:UNK	N	16.54
1	E	3163:UNK	C	3170:UNK	N	16.53
1	G	3163:UNK	C	3170:UNK	N	16.53
1	I	3163:UNK	C	3170:UNK	N	16.50
1	E	3468:UNK	C	3511:UNK	N	14.95

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	B	3468:UNK	C	3511:UNK	N	14.94
1	G	3468:UNK	C	3511:UNK	N	14.91
1	I	3468:UNK	C	3511:UNK	N	14.90
1	E	3063:UNK	C	3134:UNK	N	14.65
1	B	3063:UNK	C	3134:UNK	N	14.64
1	I	3063:UNK	C	3134:UNK	N	14.62
1	G	3063:UNK	C	3134:UNK	N	14.60
1	G	2703:UNK	C	2734:ASN	N	14.51
1	I	2703:UNK	C	2734:ASN	N	14.47
1	E	2703:UNK	C	2734:ASN	N	14.44
1	B	2703:UNK	C	2734:ASN	N	14.32
1	E	3236:UNK	C	3241:UNK	N	13.44
1	B	3236:UNK	C	3241:UNK	N	13.43
1	I	3236:UNK	C	3241:UNK	N	13.42
1	G	3236:UNK	C	3241:UNK	N	13.41
1	G	1564:UNK	C	1573:MET	N	12.96
1	B	1564:UNK	C	1573:MET	N	12.89
1	I	1564:UNK	C	1573:MET	N	12.89
1	E	1564:UNK	C	1573:MET	N	12.80
1	E	2976:UNK	C	2995:UNK	N	12.34
1	I	2976:UNK	C	2995:UNK	N	12.34
1	B	2976:UNK	C	2995:UNK	N	12.33
1	G	2976:UNK	C	2995:UNK	N	12.32
1	G	3254:UNK	C	3261:UNK	N	8.64
1	I	3254:UNK	C	3261:UNK	N	8.64
1	B	3254:UNK	C	3261:UNK	N	8.62
1	E	3254:UNK	C	3261:UNK	N	8.61
1	B	1297:UNK	C	1430:UNK	N	5.93
1	I	1297:UNK	C	1430:UNK	N	5.91
1	E	1297:UNK	C	1430:UNK	N	5.78
1	G	1297:UNK	C	1430:UNK	N	5.58
1	B	2479:LEU	C	2487:UNK	N	3.79
1	G	2479:LEU	C	2487:UNK	N	3.71
1	I	2479:LEU	C	2487:UNK	N	3.68
1	E	2479:LEU	C	2487:UNK	N	3.62
1	B	2939:ARG	C	2942:UNK	N	3.60
1	E	2939:ARG	C	2942:UNK	N	3.56
1	I	2939:ARG	C	2942:UNK	N	3.52
1	G	2939:ARG	C	2942:UNK	N	3.42

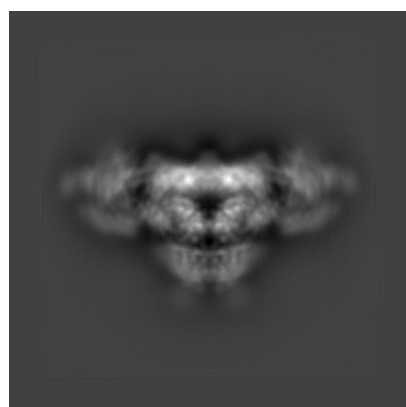
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-22395. These allow visual inspection of the internal detail of the map and identification of artifacts.

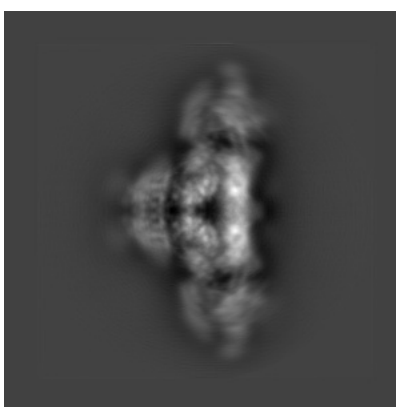
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

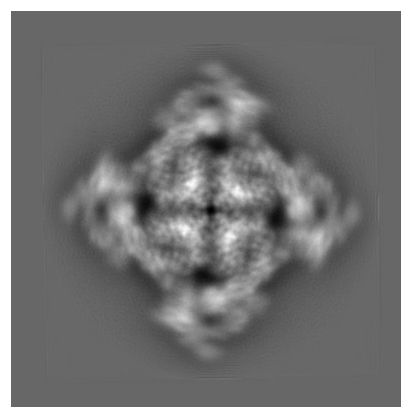
6.1.1 Primary map



X



Y

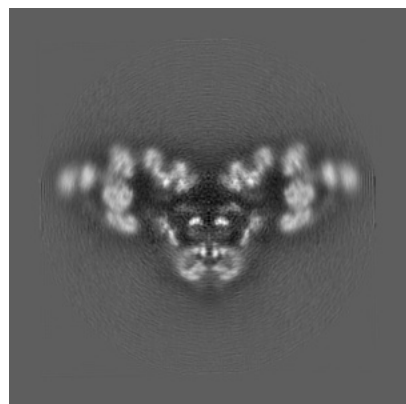


Z

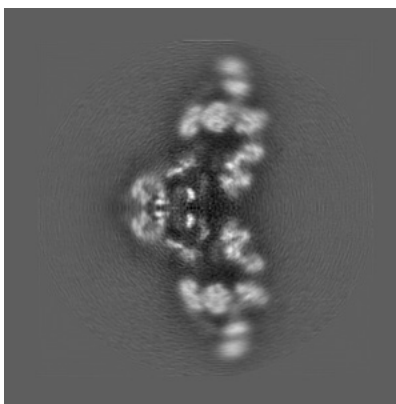
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

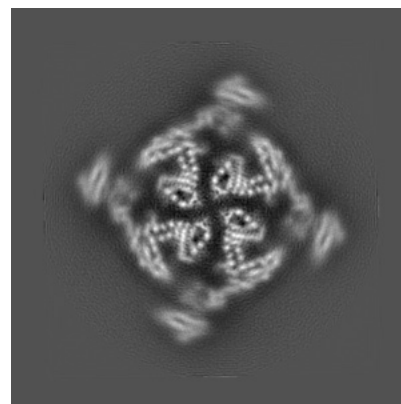
6.2.1 Primary map



X Index: 200



Y Index: 200

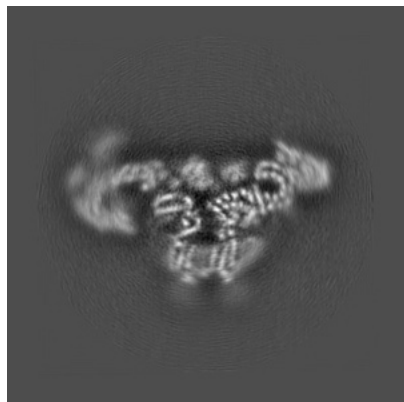


Z Index: 200

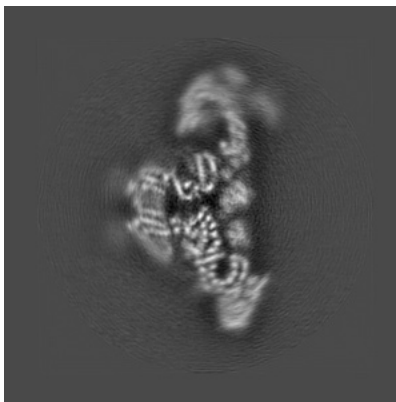
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

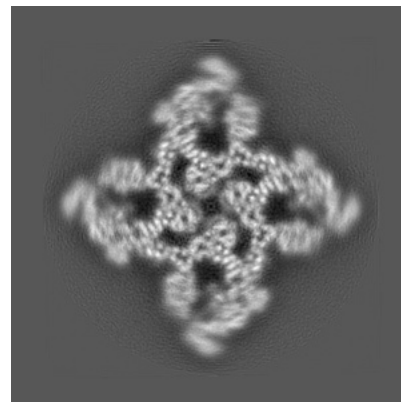
6.3.1 Primary map



X Index: 177



Y Index: 177



Z Index: 230

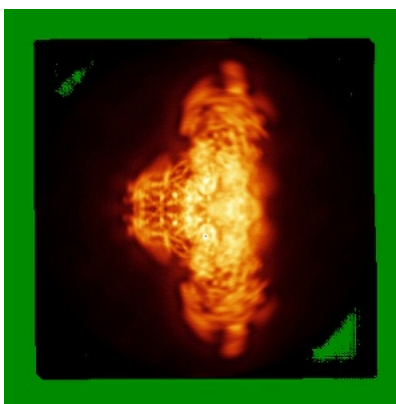
The images above show the largest variance slices of the map in three orthogonal directions.

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

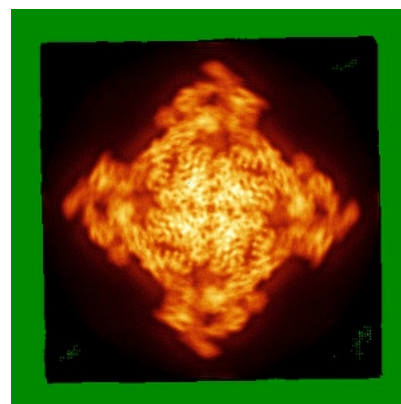
6.4.1 Primary map



X



Y



Z

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

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.16. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

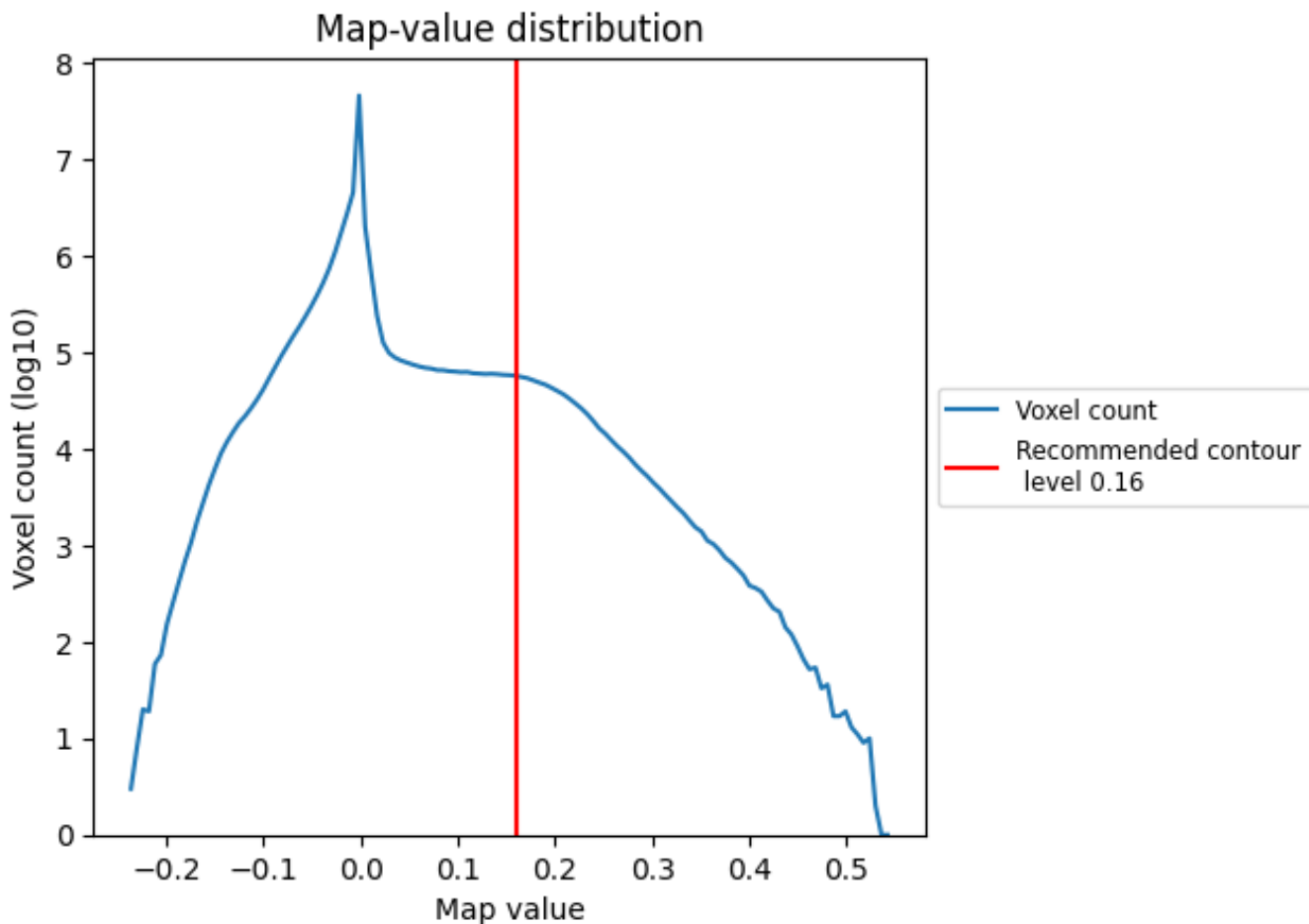
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

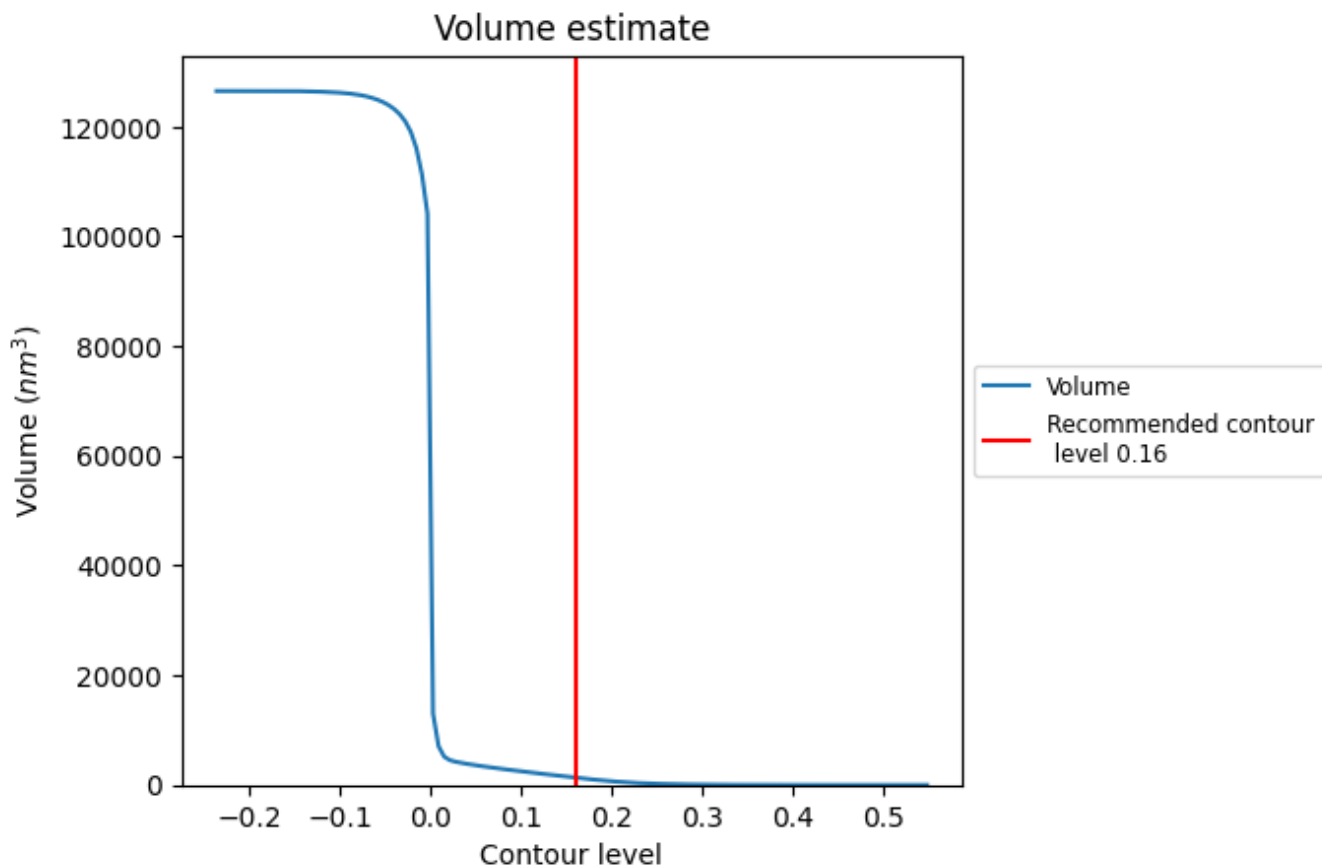
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

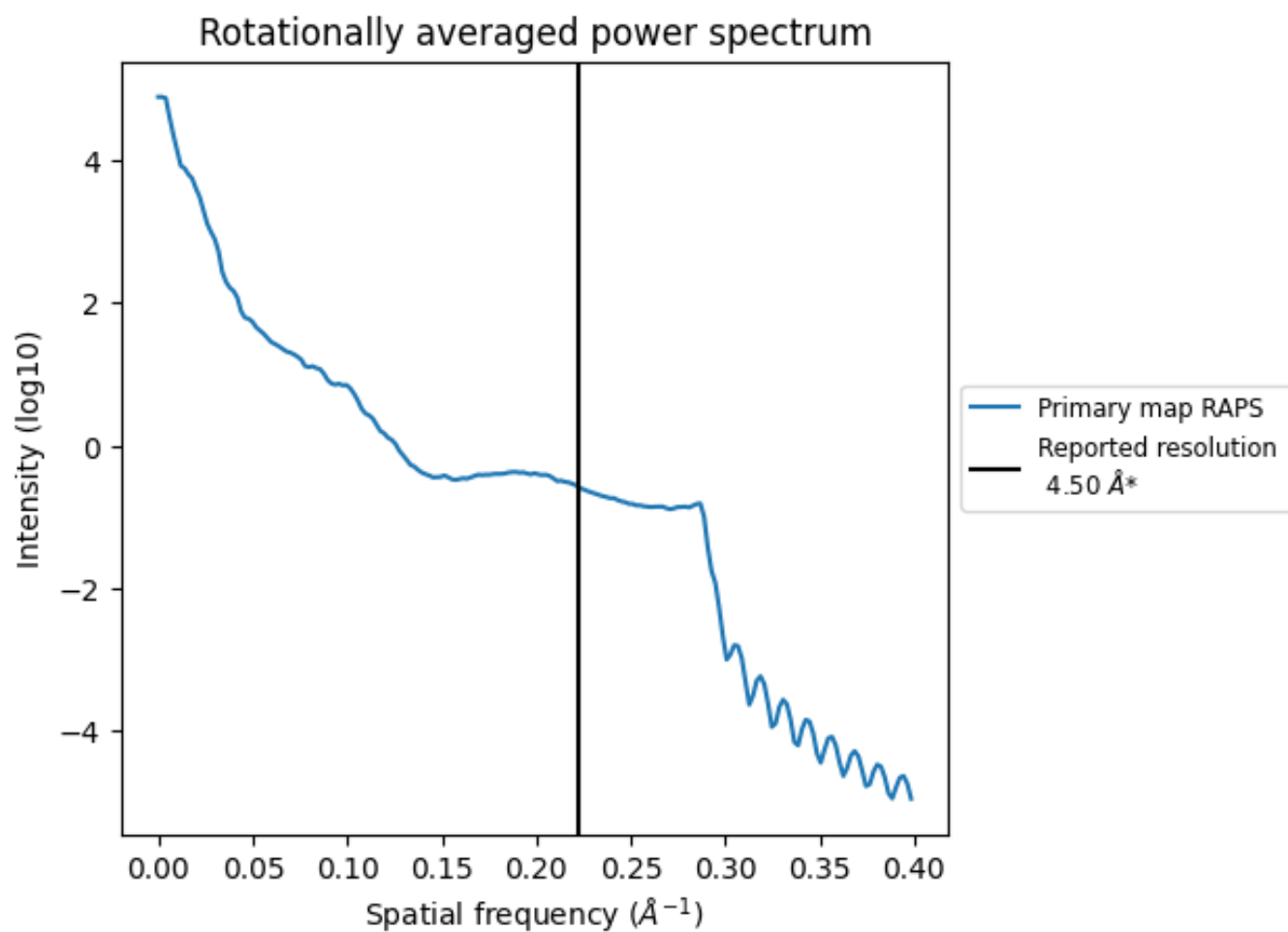
7.2 Volume estimate [\(i\)](#)



The volume at the recommended contour level is 1337 nm^3 ; this corresponds to an approximate mass of 1208 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 0.222\AA^{-1}

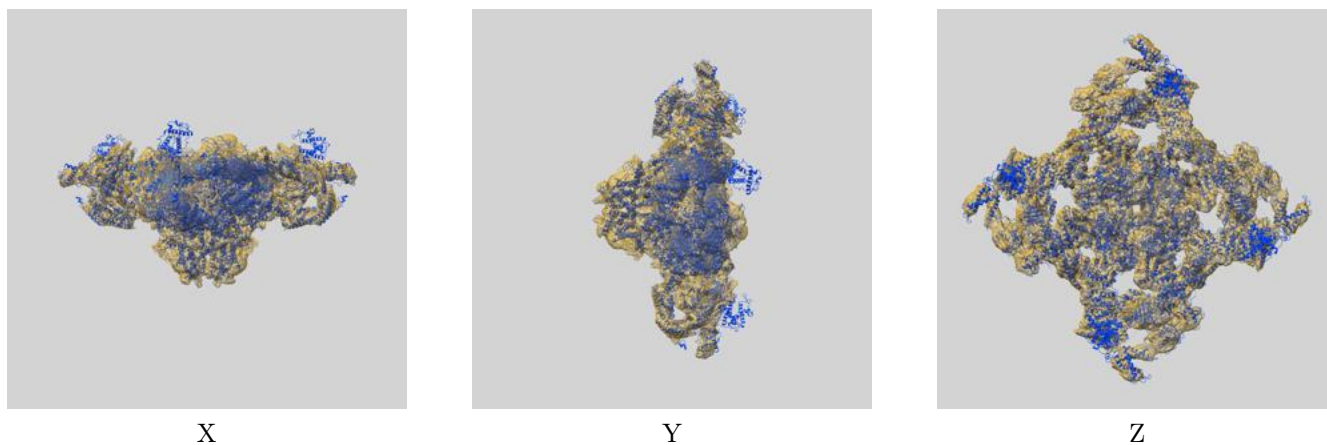
8 Fourier-Shell correlation

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

9 Map-model fit [i](#)

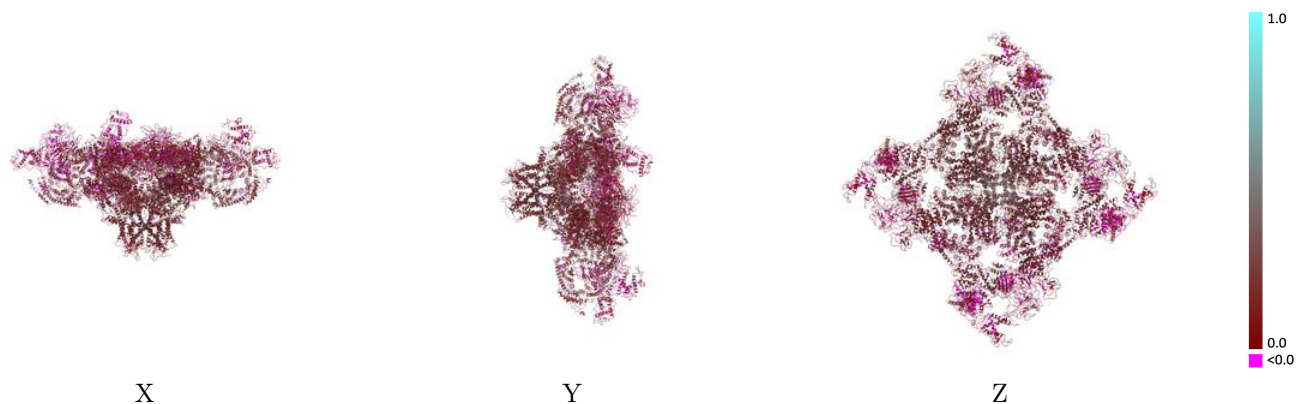
This section contains information regarding the fit between EMDB map EMD-22395 and PDB model 7JMI. Per-residue inclusion information can be found in section 3 on page 5.

9.1 Map-model overlay [i](#)



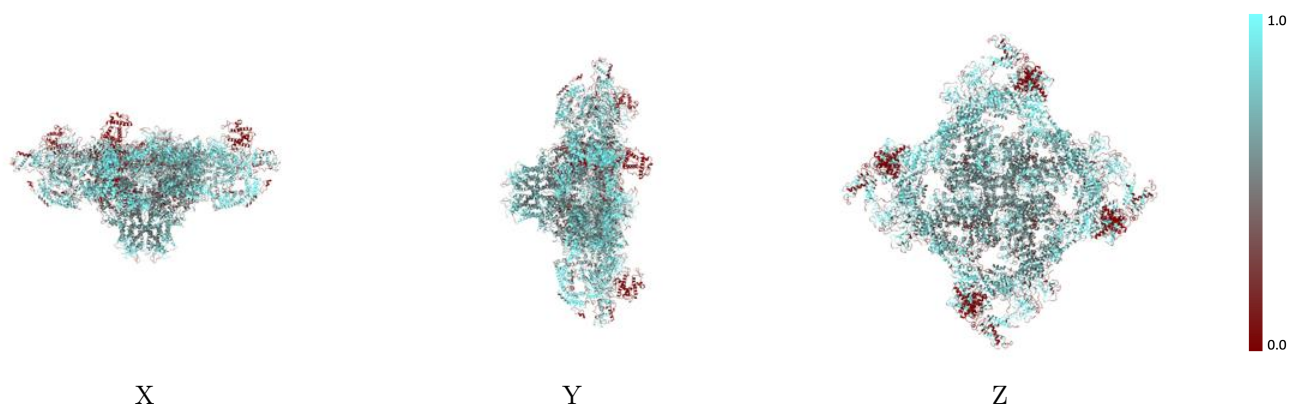
The images above show the 3D surface view of the map at the recommended contour level 0.16 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



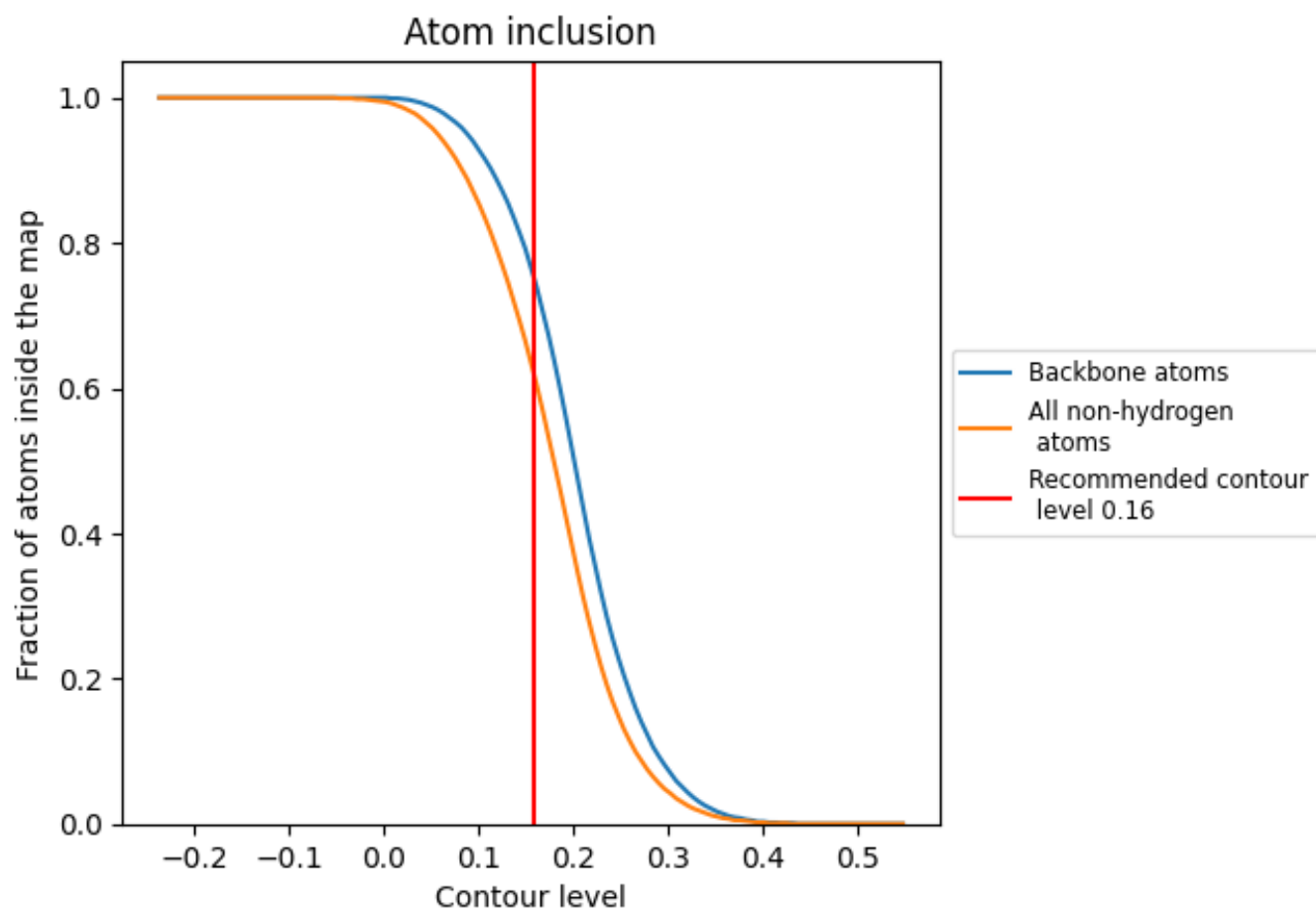
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.16).



















9.4 Atom inclusion [i](#)



At the recommended contour level, 75% of all backbone atoms, 61% 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 (0.16) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.6140	 0.1530
A	 0.7020	 0.1430
B	 0.6330	 0.1730
E	 0.6190	 0.1580
F	 0.6700	 0.1150
G	 0.5960	 0.1340
H	 0.6220	 0.1130
I	 0.6040	 0.1490
J	 0.6440	 0.1220

