Full wwPDB EM Validation Report

Feb 5, 2026 – 10:02 AM EST

PDB ID	:	9PGG / pdb_00009pgg
EMDB ID	:	EMD-71631
Title	:	Cryo-EM structure of bacteriophage P22 gp1-gp5-gp4 complex at 2.76 angstrom
Authors	:	Yu, H.; Liu, J.; Molienux, I.J.
Deposited on	:	2025-07-07
Resolution	:	2.76 Å(reported)

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

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/EMValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

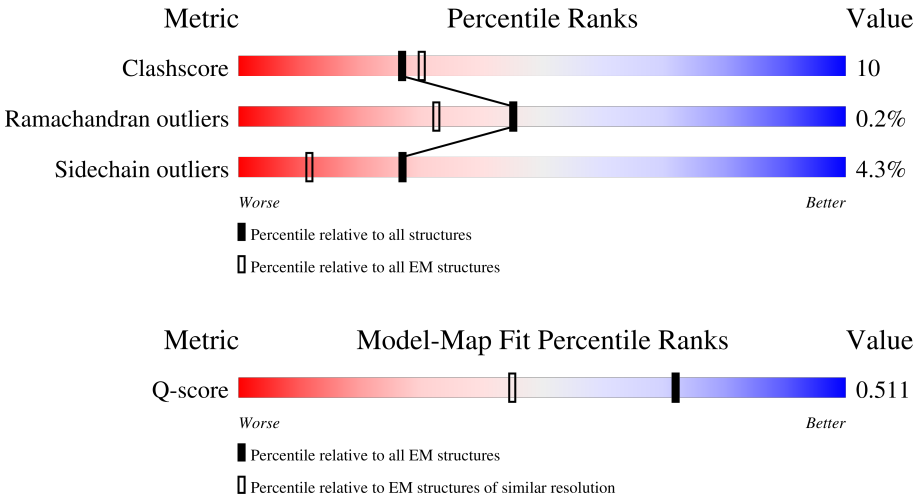
EMDB validation analysis	:	0.0.1.dev129
MolProbity	:	4-5-2 with Phenix2.0
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
EM percentile statistics	:	202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.47

1 Overall quality at a glance

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

The reported resolution of this entry is 2.76 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	210492	15764	-
Ramachandran outliers	207382	16835	-
Sidechain outliers	206894	16415	-
Q-score	-	25397	10642 (2.26 - 3.26)

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

Mol	Chain	Length	Quality of chain
1	Aa	430	72% 27%
1	Ab	430	74% 23%
1	Ac	430	80% 18%
1	Ad	430	73% 26%

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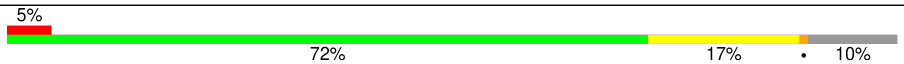
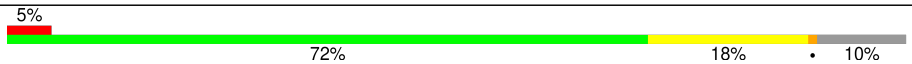
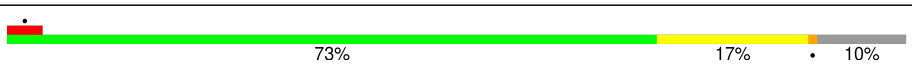
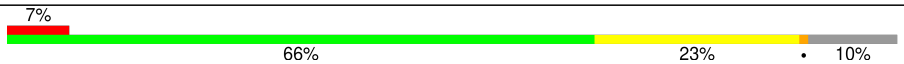
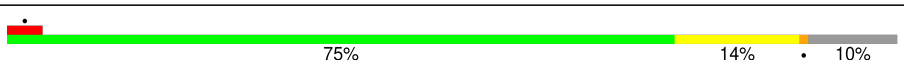
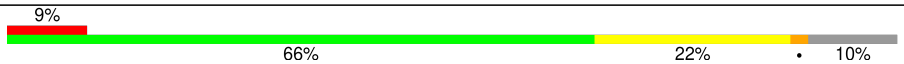
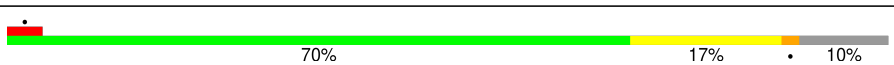
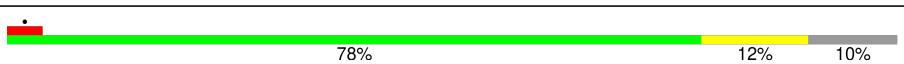
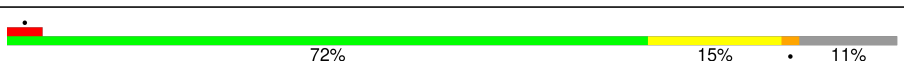
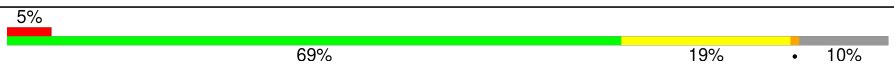
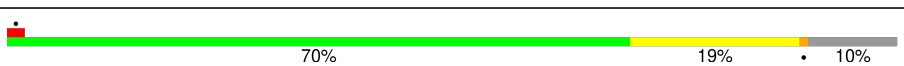
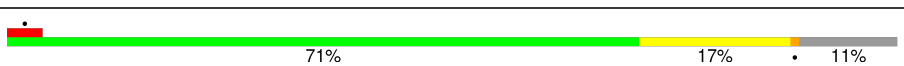
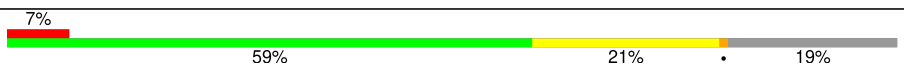
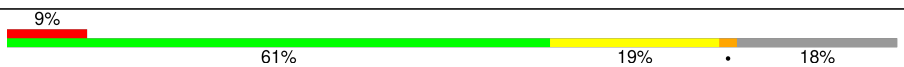
Mol	Chain	Length	Quality of chain
1	Ae	430	
1	Af	430	
1	Ag	430	
1	Ah	430	
1	Ai	430	
1	Aj	430	
1	Ak	430	
1	Al	430	
1	Am	430	
1	An	430	
1	Ao	430	
2	Ap	166	
2	Aq	166	
2	Ar	166	
2	As	166	
2	At	166	
2	Au	166	
2	Av	166	
2	Aw	166	
2	Ax	166	
2	Ay	166	
2	Az	166	
2	Ba	166	
3	Bb	725	
3	Bd	725	

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Mol	Chain	Length	Quality of chain
3	Bf	725	8% 61% 19% 18%
3	Bh	725	8% 61% 20% 18%
3	Bj	725	8% 57% 24% 18%
3	Bl	725	7% 58% 22% 18%
3	Bn	725	8% 59% 22% 18%
3	Bp	725	7% 62% 19% 19%
3	Br	725	7% 58% 22% 18%
3	Bt	725	7% 62% 19% 18%
3	Bv	725	9% 58% 22% 18%
3	Bx	725	8% 59% 22% 18%

2 Entry composition (i)

There are 3 unique types of molecules in this entry. The entry contains 120038 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 Major capsid protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	Aa	429	Total 3275	C 2051	N 568	O 643	S 13	0	0
1	Ab	422	Total 3226	C 2022	N 559	O 632	S 13	0	0
1	Ac	429	Total 3277	C 2053	N 568	O 643	S 13	0	0
1	Ad	429	Total 3275	C 2051	N 568	O 643	S 13	0	0
1	Ae	429	Total 3275	C 2051	N 568	O 643	S 13	0	0
1	Af	429	Total 3275	C 2051	N 568	O 643	S 13	0	0
1	Ag	429	Total 3275	C 2051	N 568	O 643	S 13	0	0
1	Ah	420	Total 3212	C 2013	N 557	O 629	S 13	0	0
1	Ai	423	Total 3234	C 2028	N 560	O 633	S 13	0	0
1	Aj	421	Total 3219	C 2017	N 558	O 631	S 13	0	0
1	Ak	422	Total 3226	C 2022	N 559	O 632	S 13	0	0
1	Al	429	Total 3277	C 2053	N 568	O 643	S 13	0	0
1	Am	429	Total 3277	C 2053	N 568	O 643	S 13	0	0
1	An	429	Total 3277	C 2053	N 568	O 643	S 13	0	0
1	Ao	428	Total 3272	C 2050	N 567	O 642	S 13	0	0

- Molecule 2 is a protein called Peptidoglycan hydrolase gp4.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	Ap	150	Total	C	N	O	S	0	0
			1149	721	198	225	5		
2	Aq	150	Total	C	N	O	S	0	0
			1149	721	198	225	5		
2	Ar	150	Total	C	N	O	S	0	0
			1149	721	198	225	5		
2	As	150	Total	C	N	O	S	0	0
			1149	721	198	225	5		
2	At	150	Total	C	N	O	S	0	0
			1149	721	198	225	5		
2	Au	150	Total	C	N	O	S	0	0
			1149	721	198	225	5		
2	Av	149	Total	C	N	O	S	0	0
			1140	716	196	223	5		
2	Aw	149	Total	C	N	O	S	0	0
			1140	716	196	223	5		
2	Ax	148	Total	C	N	O	S	0	0
			1136	714	195	222	5		
2	Ay	149	Total	C	N	O	S	0	0
			1140	716	196	223	5		
2	Az	149	Total	C	N	O	S	0	0
			1140	716	196	223	5		
2	Ba	148	Total	C	N	O	S	0	0
			1136	714	195	222	5		

- Molecule 3 is a protein called Portal protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	Bb	590	Total	C	N	O	S	0	0
			4774	3008	819	926	21		
3	Bd	592	Total	C	N	O	S	0	0
			4791	3017	822	931	21		
3	Bf	591	Total	C	N	O	S	0	0
			4782	3012	821	928	21		
3	Bh	592	Total	C	N	O	S	0	0
			4791	3017	822	931	21		
3	Bj	591	Total	C	N	O	S	0	0
			4783	3013	820	929	21		
3	Bl	592	Total	C	N	O	S	0	0
			4791	3017	822	931	21		
3	Bn	593	Total	C	N	O	S	0	0
			4799	3021	823	934	21		
3	Bp	590	Total	C	N	O	S	0	0
			4774	3008	819	926	21		

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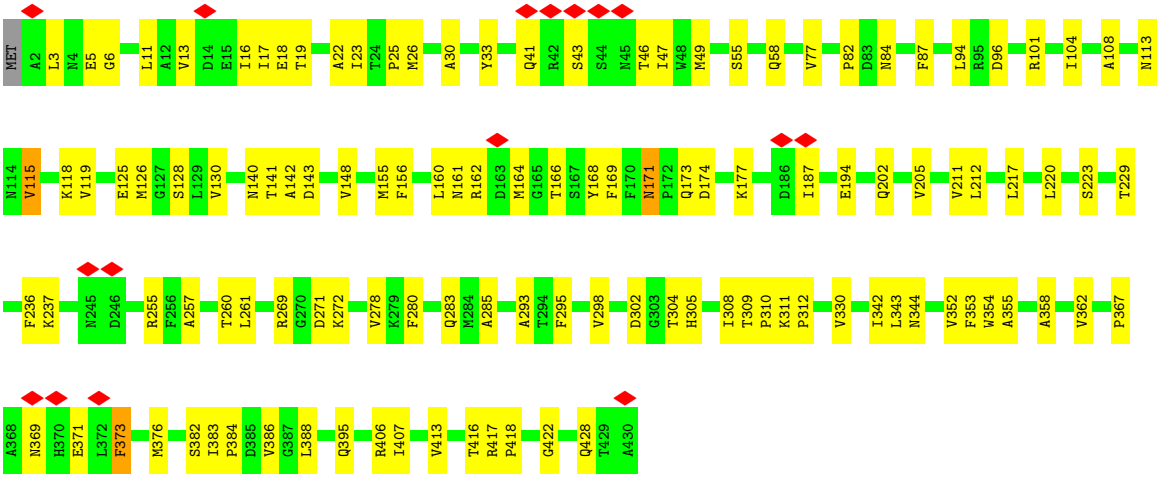
Mol	Chain	Residues	Atoms					AltConf	Trace
3	Br	591	Total	C	N	O	S	0	0
			4782	3012	821	928	21		
3	Bt	591	Total	C	N	O	S	0	0
			4783	3013	820	929	21		
3	Bv	591	Total	C	N	O	S	0	0
			4783	3013	820	929	21		
3	Bx	594	Total	C	N	O	S	0	0
			4807	3025	825	936	21		

3 Residue-property plots (i)

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

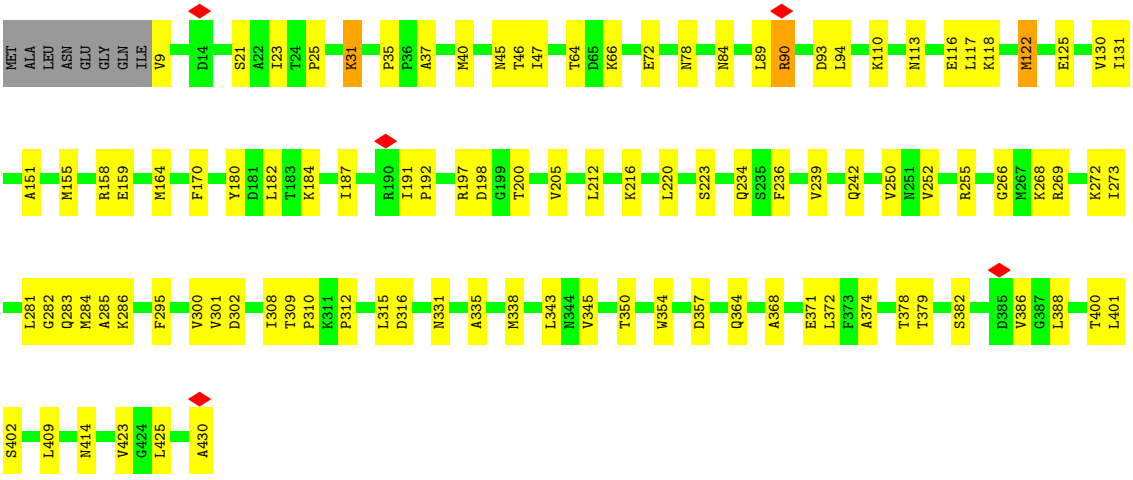
• Molecule 1: Major capsid protein

Chain Aa:



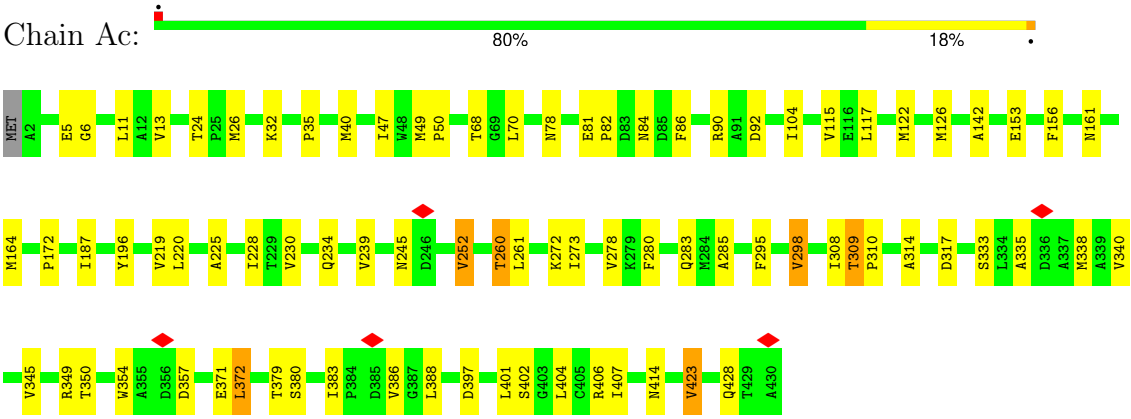
• Molecule 1: Major capsid protein

Chain Ab:



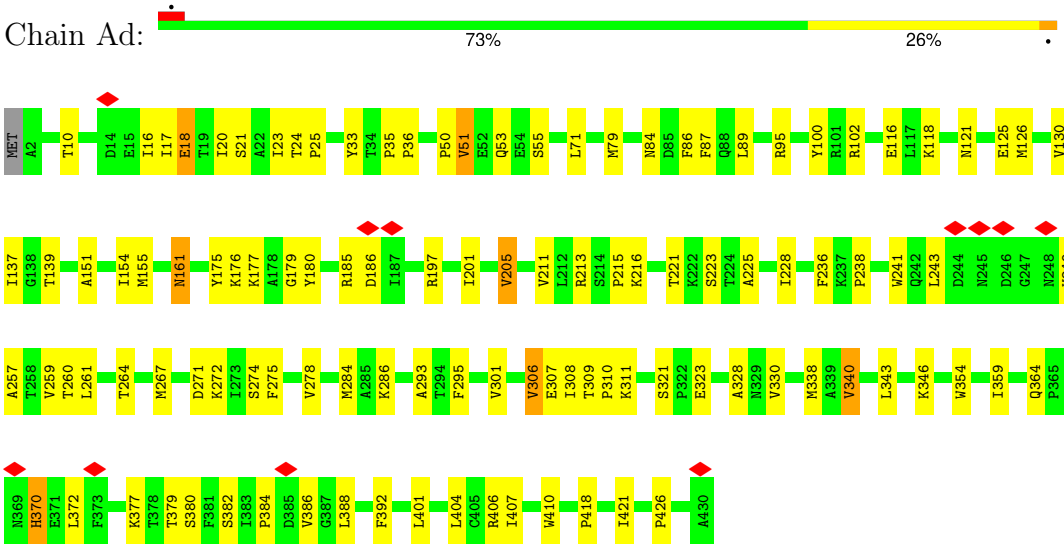
• Molecule 1: Major capsid protein

Chain Ac:



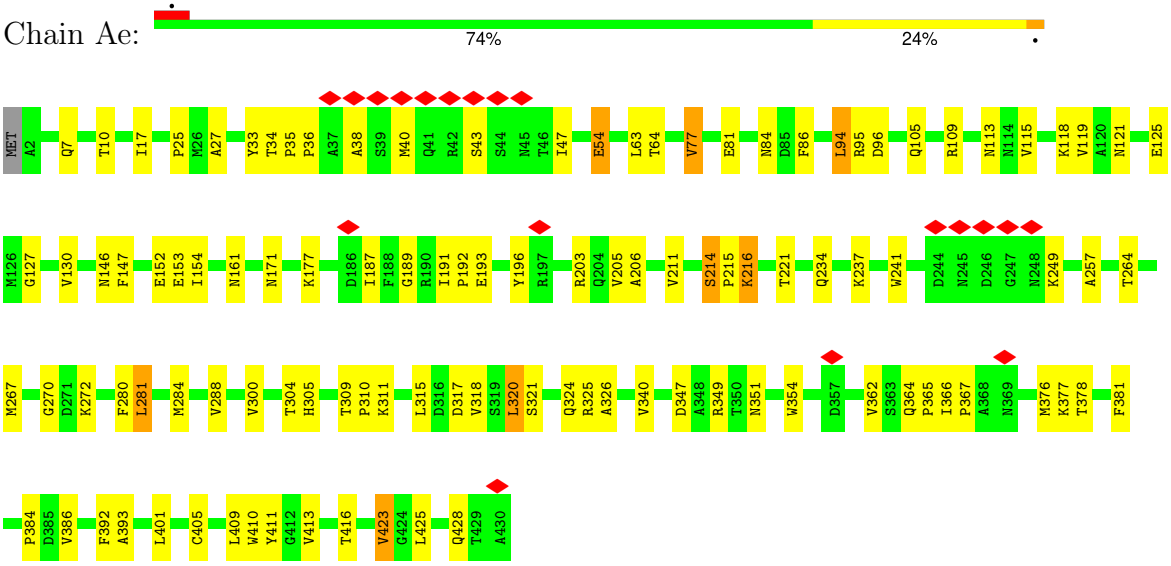
• Molecule 1: Major capsid protein

Chain Ad:



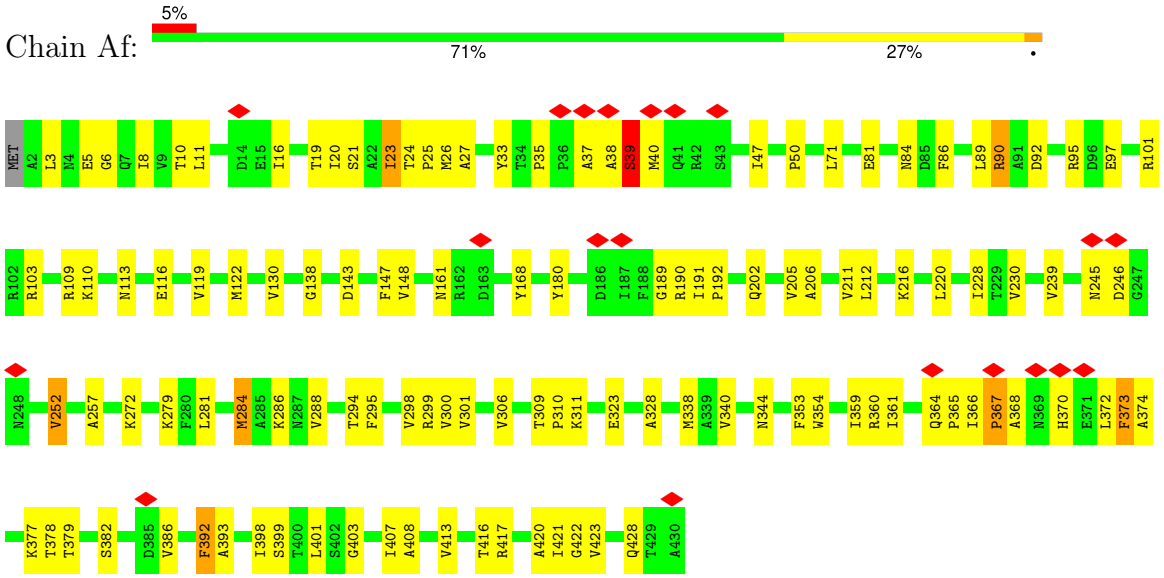
• Molecule 1: Major capsid protein

Chain Ae:



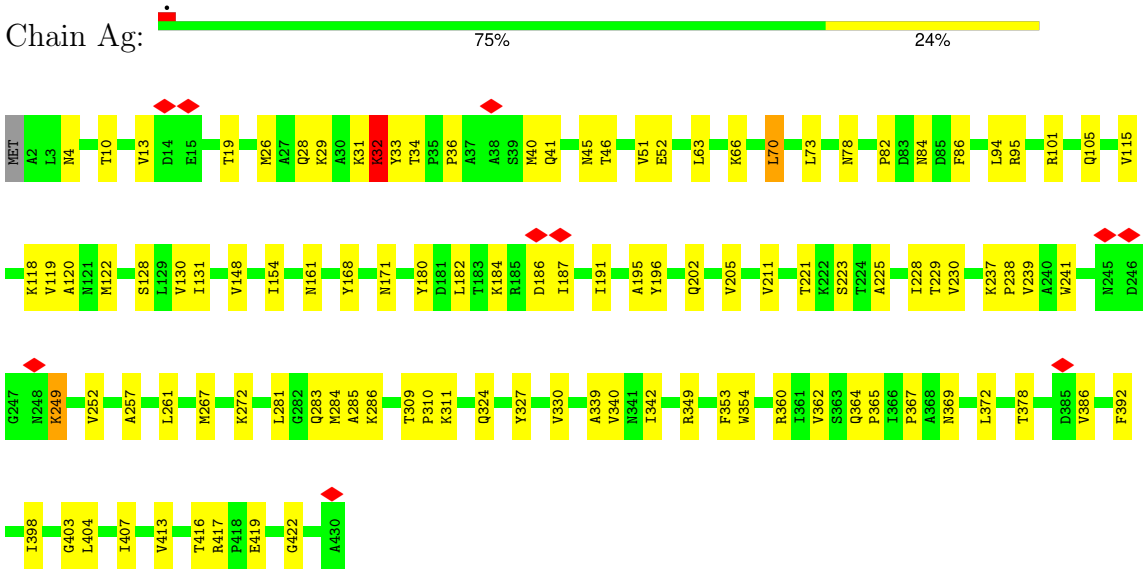
• Molecule 1: Major capsid protein

Chain Af:



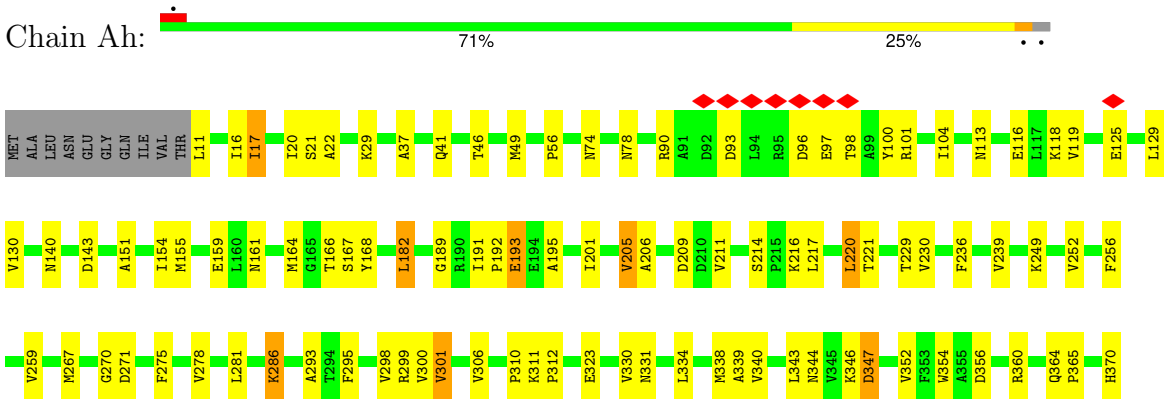
• Molecule 1: Major capsid protein

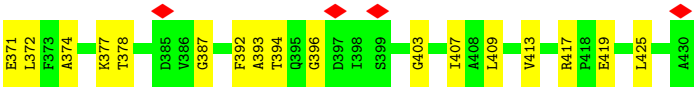
Chain Ag:



• Molecule 1: Major capsid protein

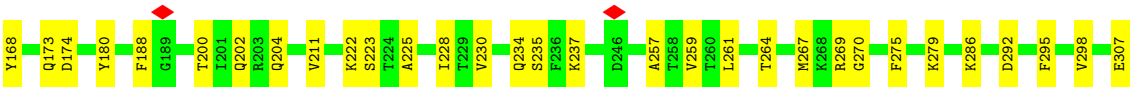
Chain Ah:





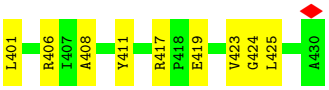
• Molecule 1: Major capsid protein

Chain Ai:



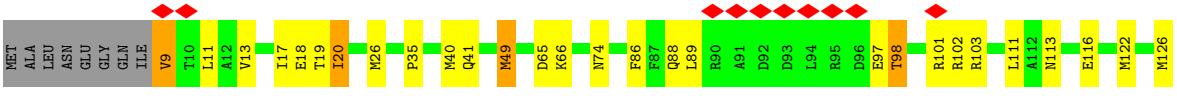
• Molecule 1: Major capsid protein

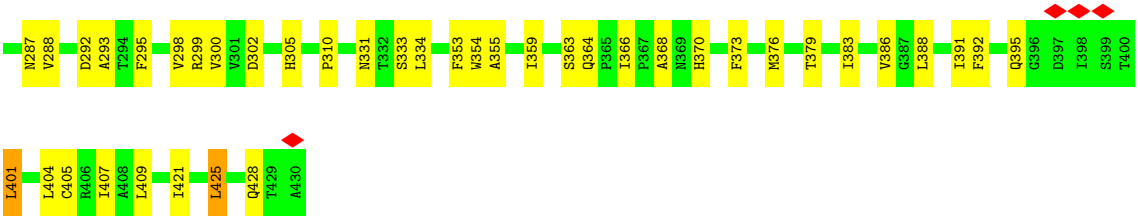
Chain Aj:



• Molecule 1: Major capsid protein

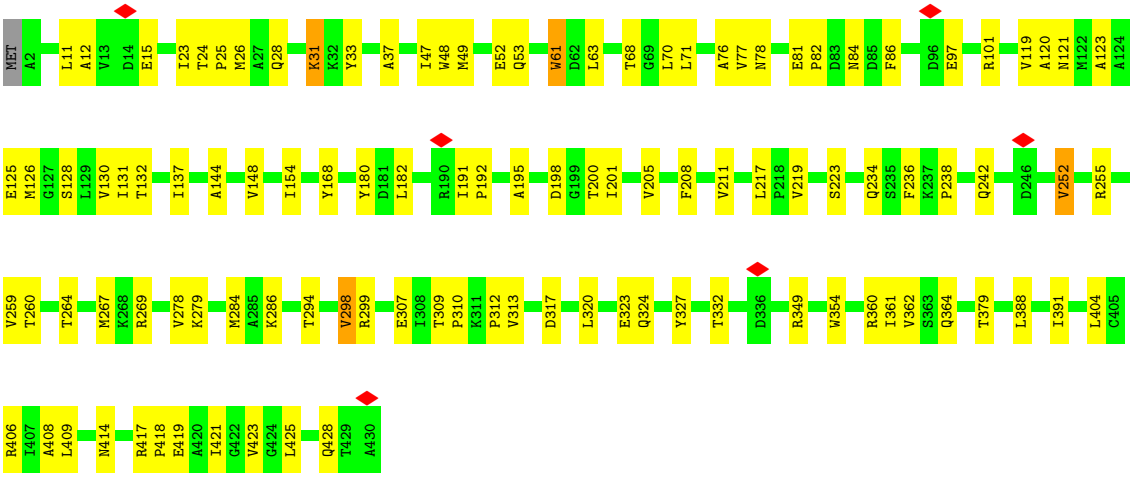
Chain Ak:





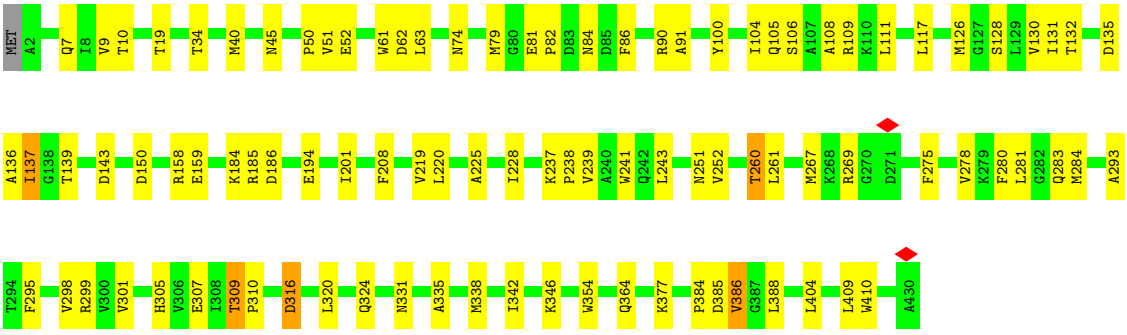
• Molecule 1: Major capsid protein

Chain Al:



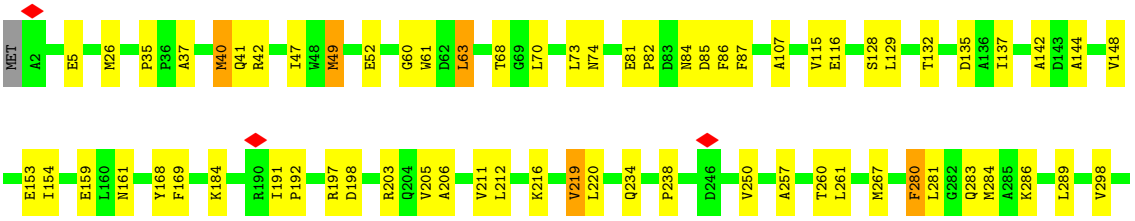
• Molecule 1: Major capsid protein

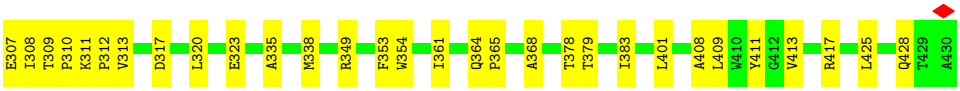
Chain Am:



• Molecule 1: Major capsid protein

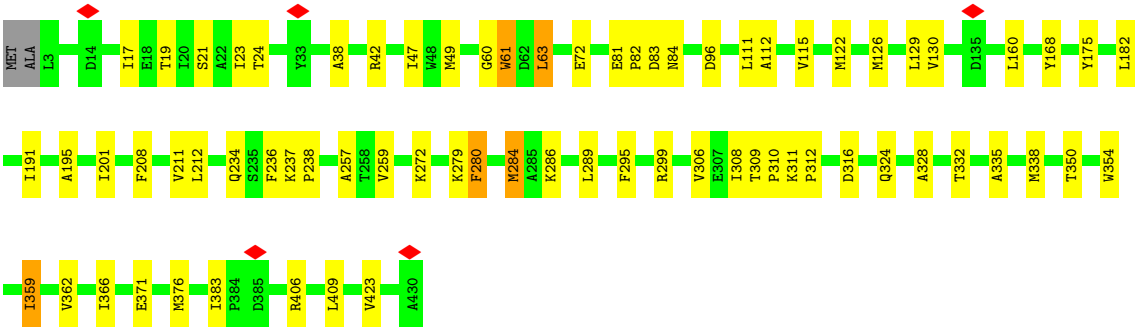
Chain An:





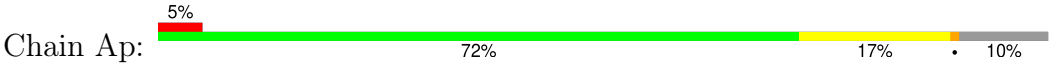
• Molecule 1: Major capsid protein

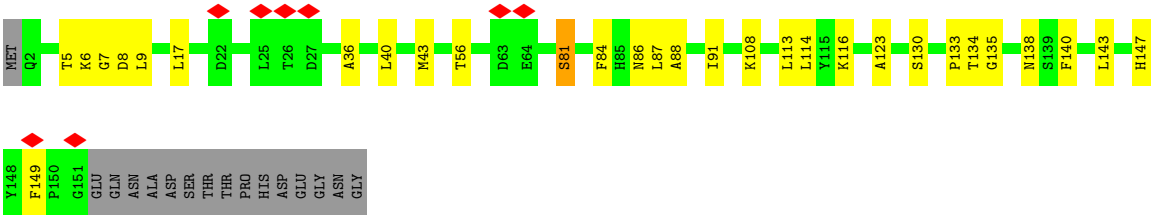
Chain Ao:



• Molecule 2: Peptidoglycan hydrolase gp4

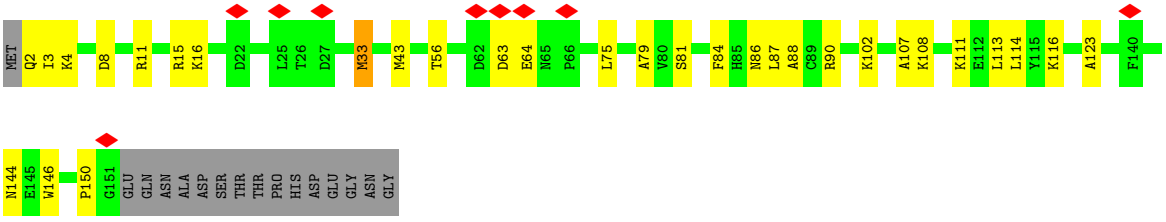
Chain Ap:





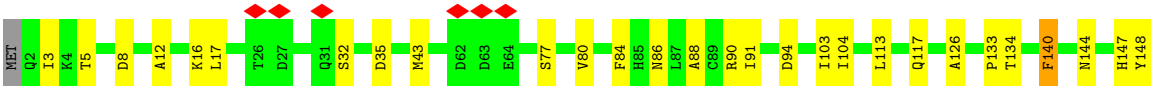
• Molecule 2: Peptidoglycan hydrolase gp4

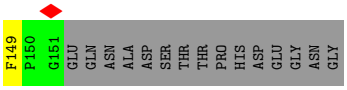
Chain Aq:



• Molecule 2: Peptidoglycan hydrolase gp4

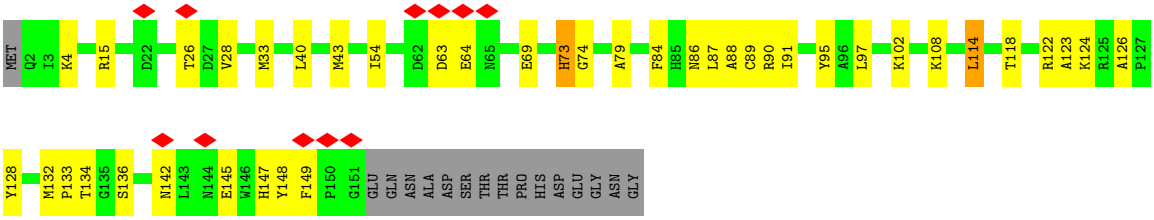
Chain Ar:





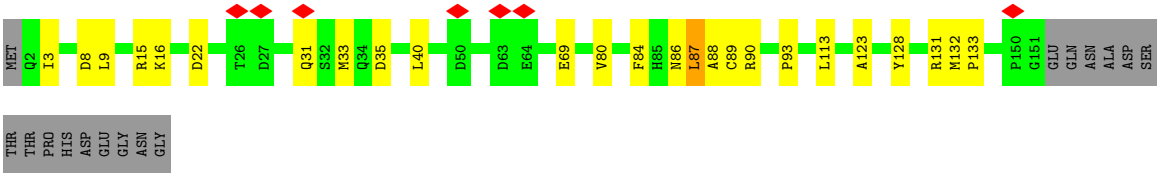
• Molecule 2: Peptidoglycan hydrolase gp4

Chain As:



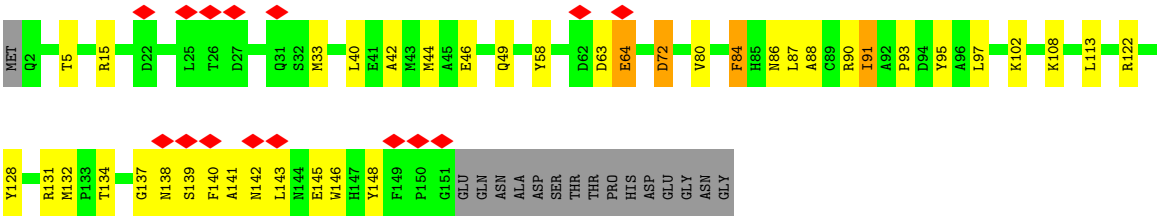
• Molecule 2: Peptidoglycan hydrolase gp4

Chain At:



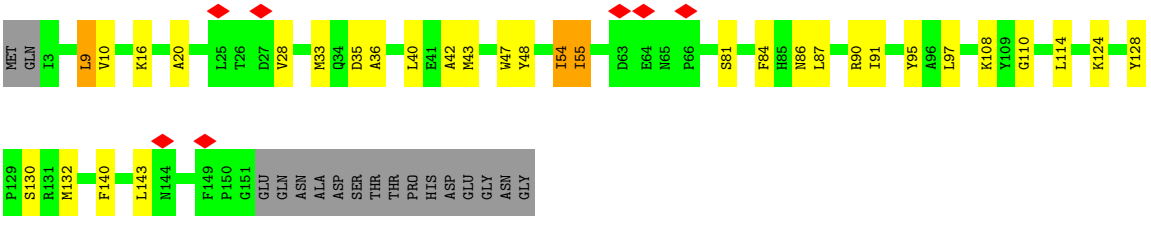
• Molecule 2: Peptidoglycan hydrolase gp4

Chain Au:



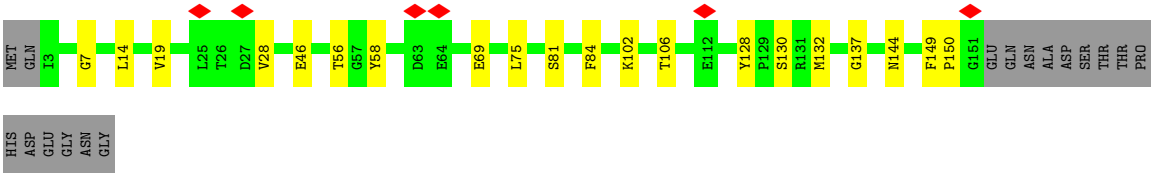
• Molecule 2: Peptidoglycan hydrolase gp4

Chain Av:

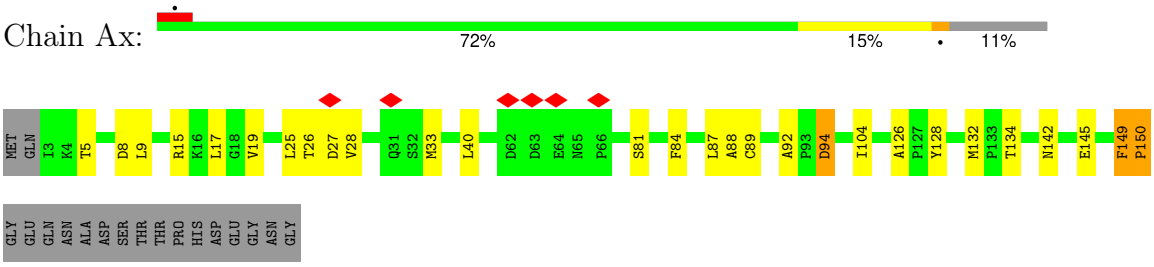


• Molecule 2: Peptidoglycan hydrolase gp4

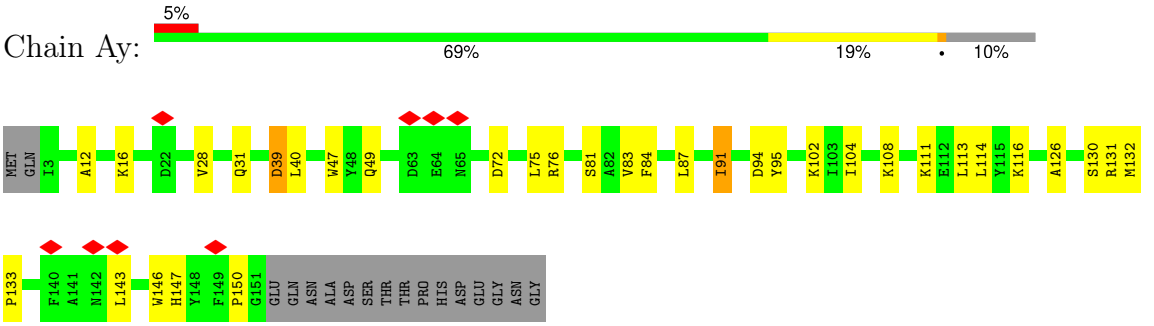
Chain Aw:



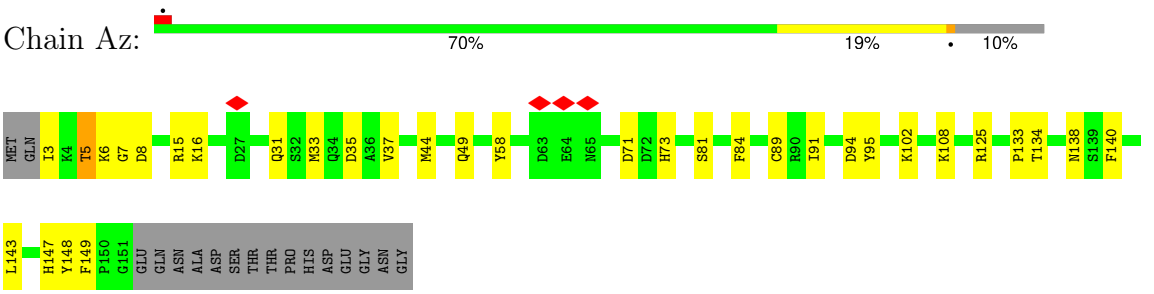
• Molecule 2: Peptidoglycan hydrolase gp4



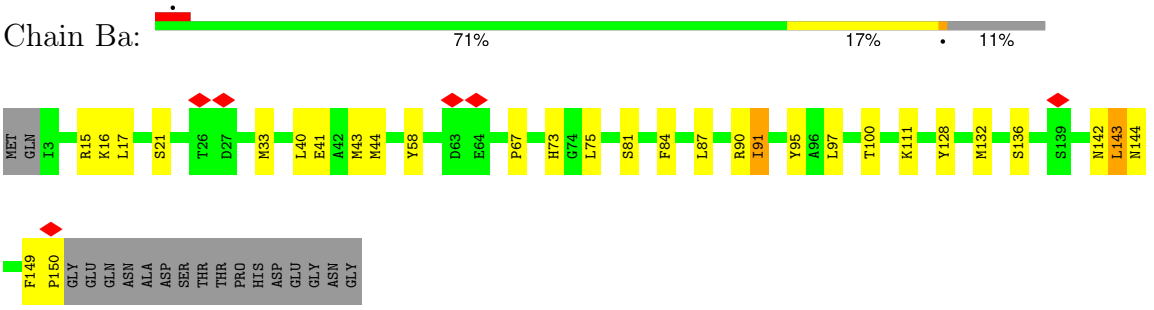
• Molecule 2: Peptidoglycan hydrolase gp4



• Molecule 2: Peptidoglycan hydrolase gp4

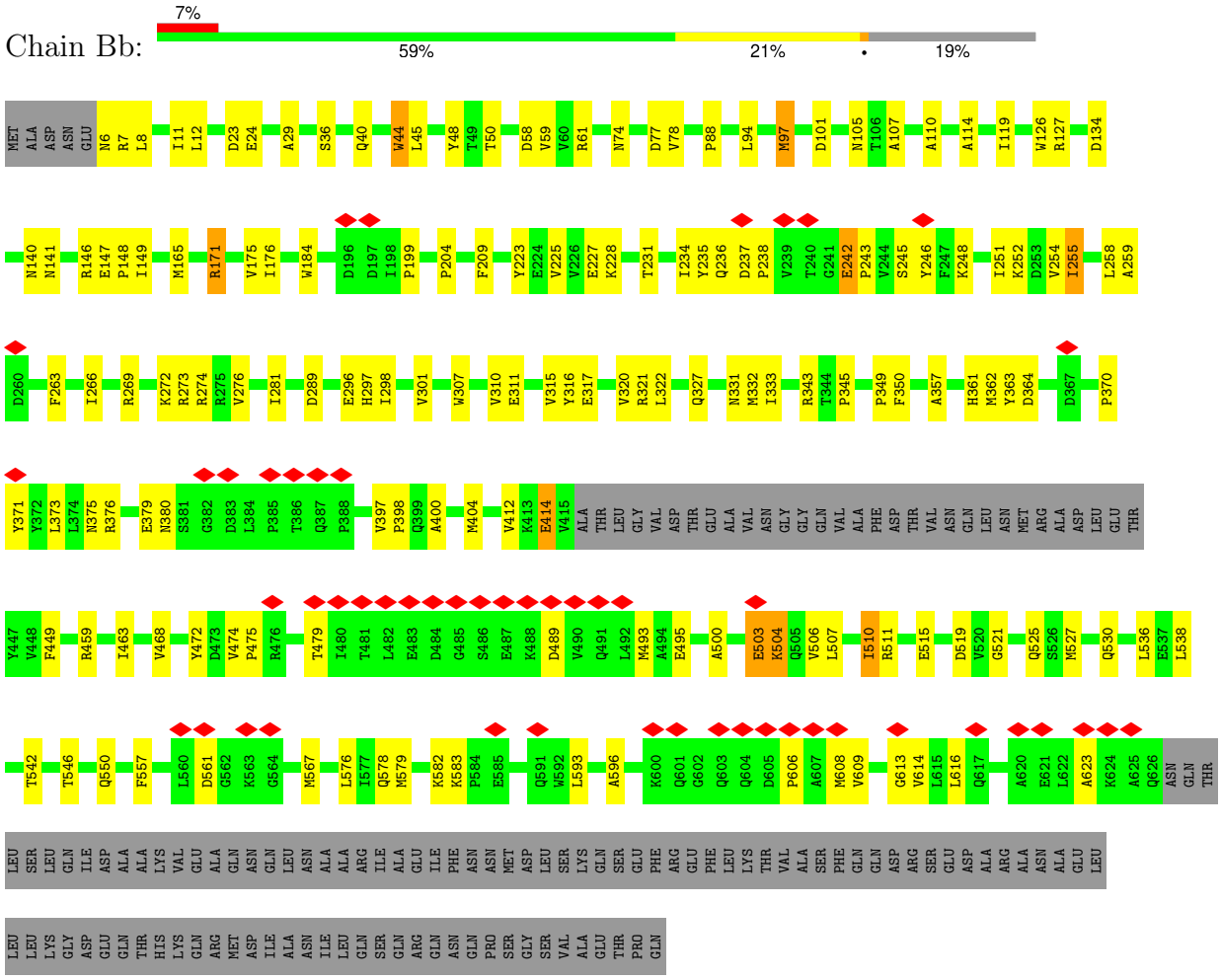


• Molecule 2: Peptidoglycan hydrolase gp4



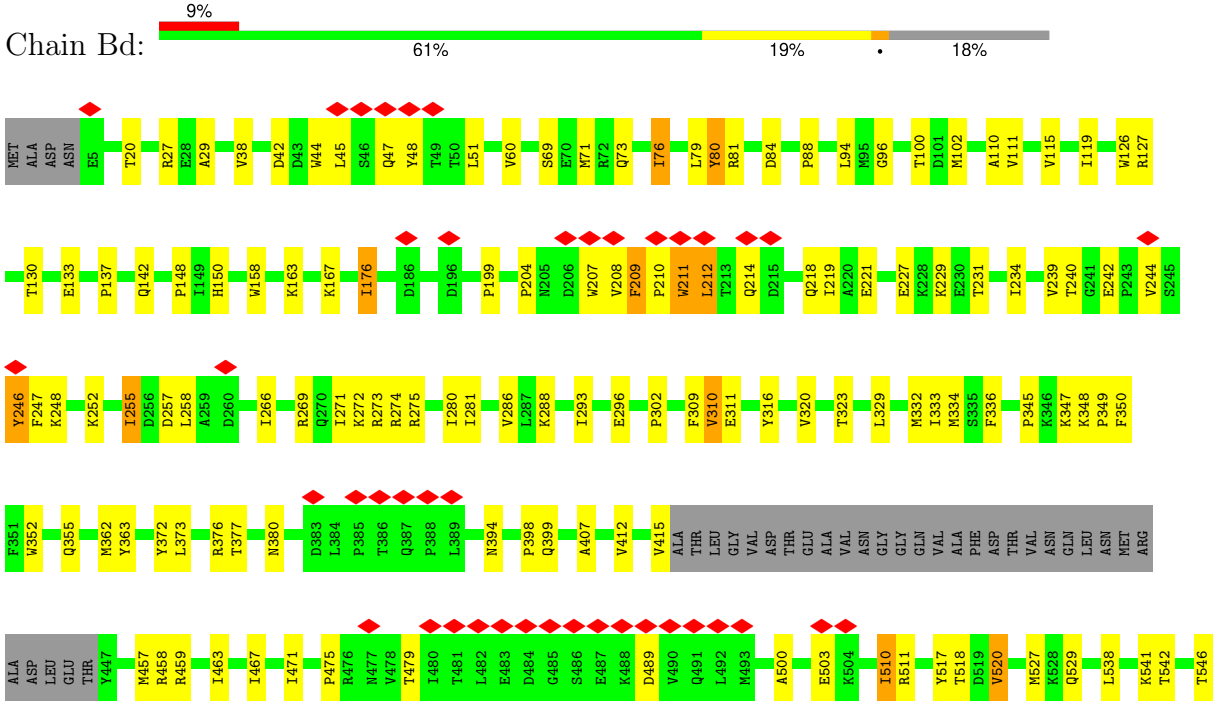
• Molecule 3: Portal protein

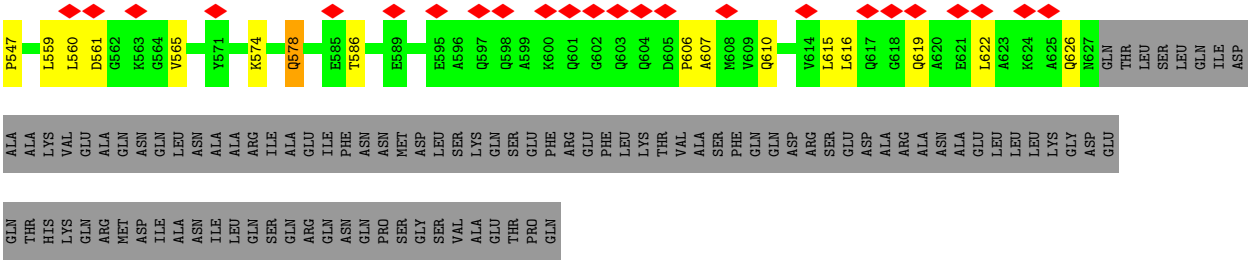
Chain Bb:



• Molecule 3: Portal protein

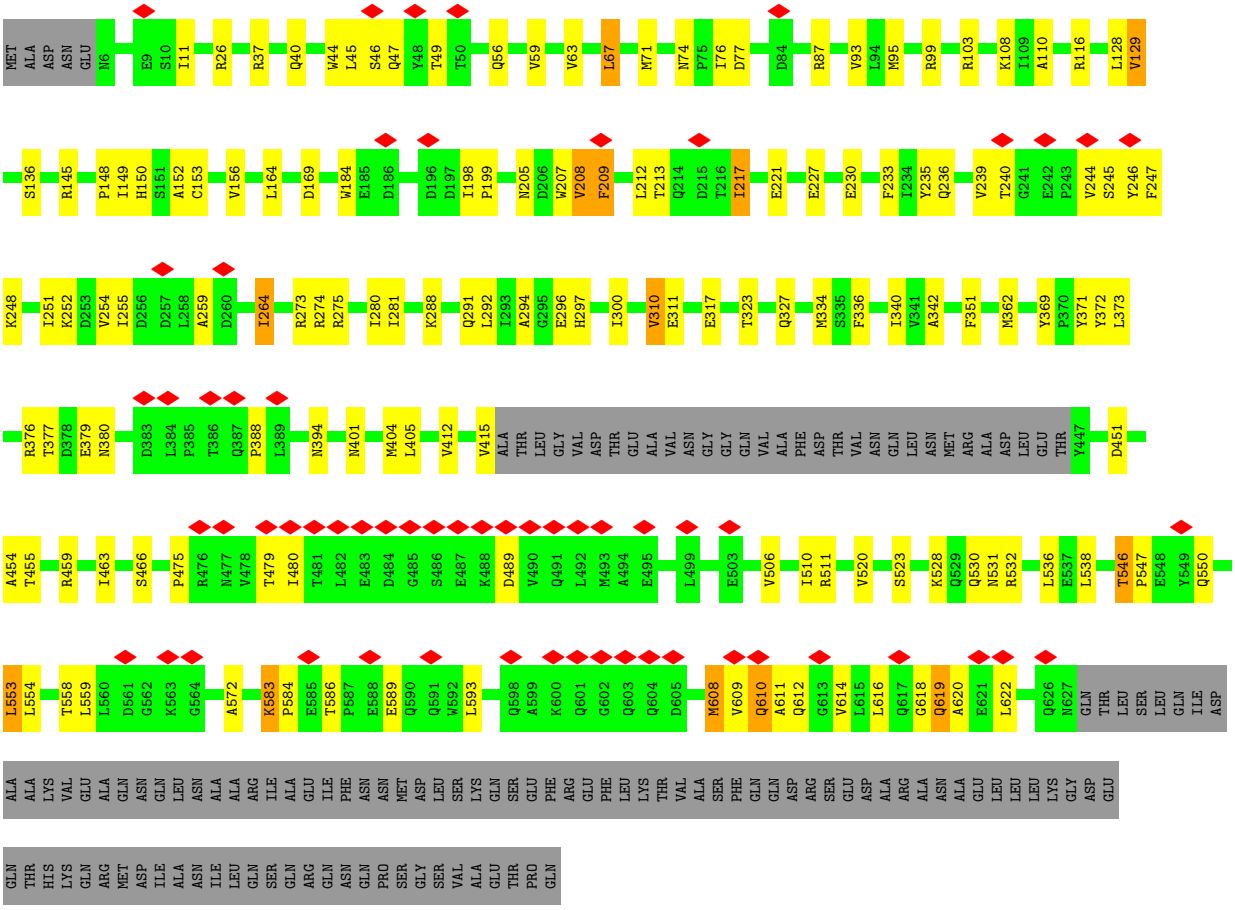
Chain Bd:





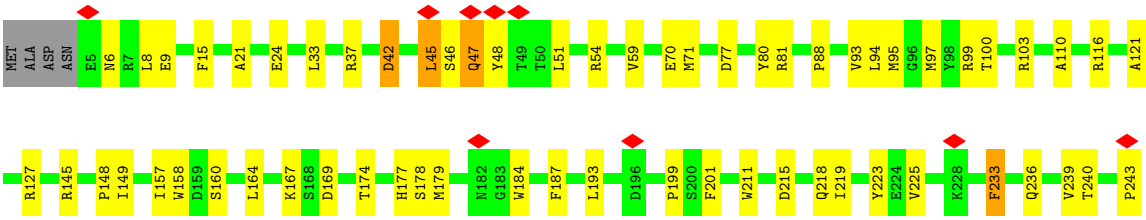
• Molecule 3: Portal protein

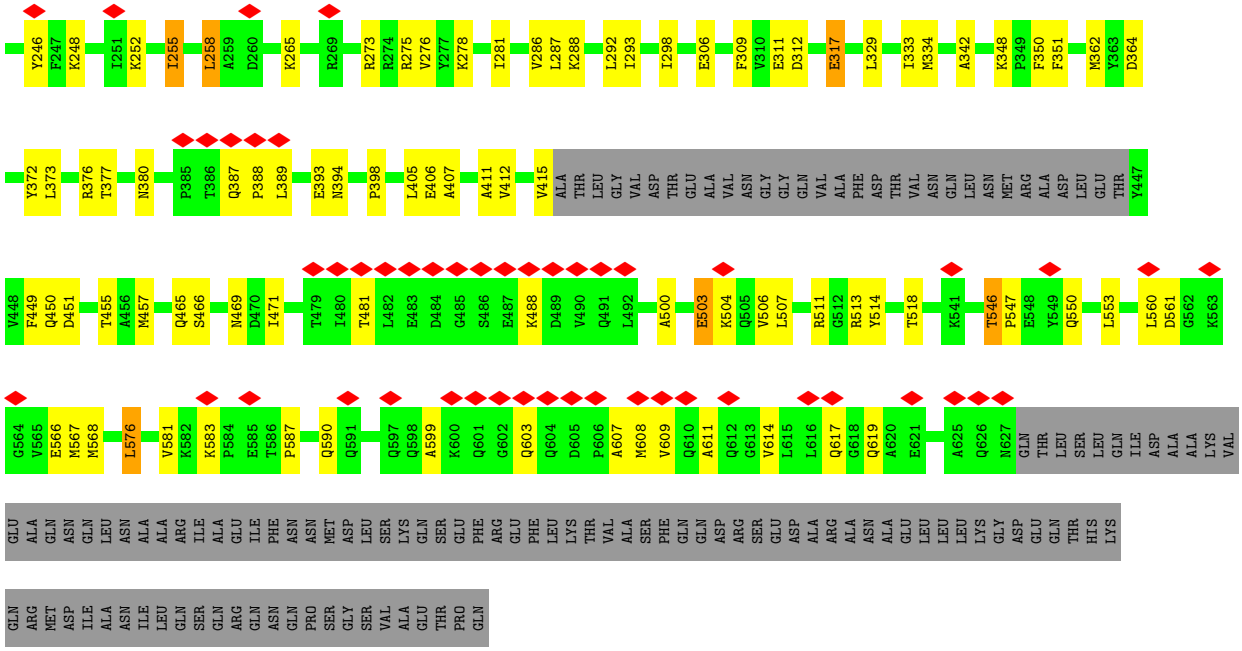
Chain Bf:



• Molecule 3: Portal protein

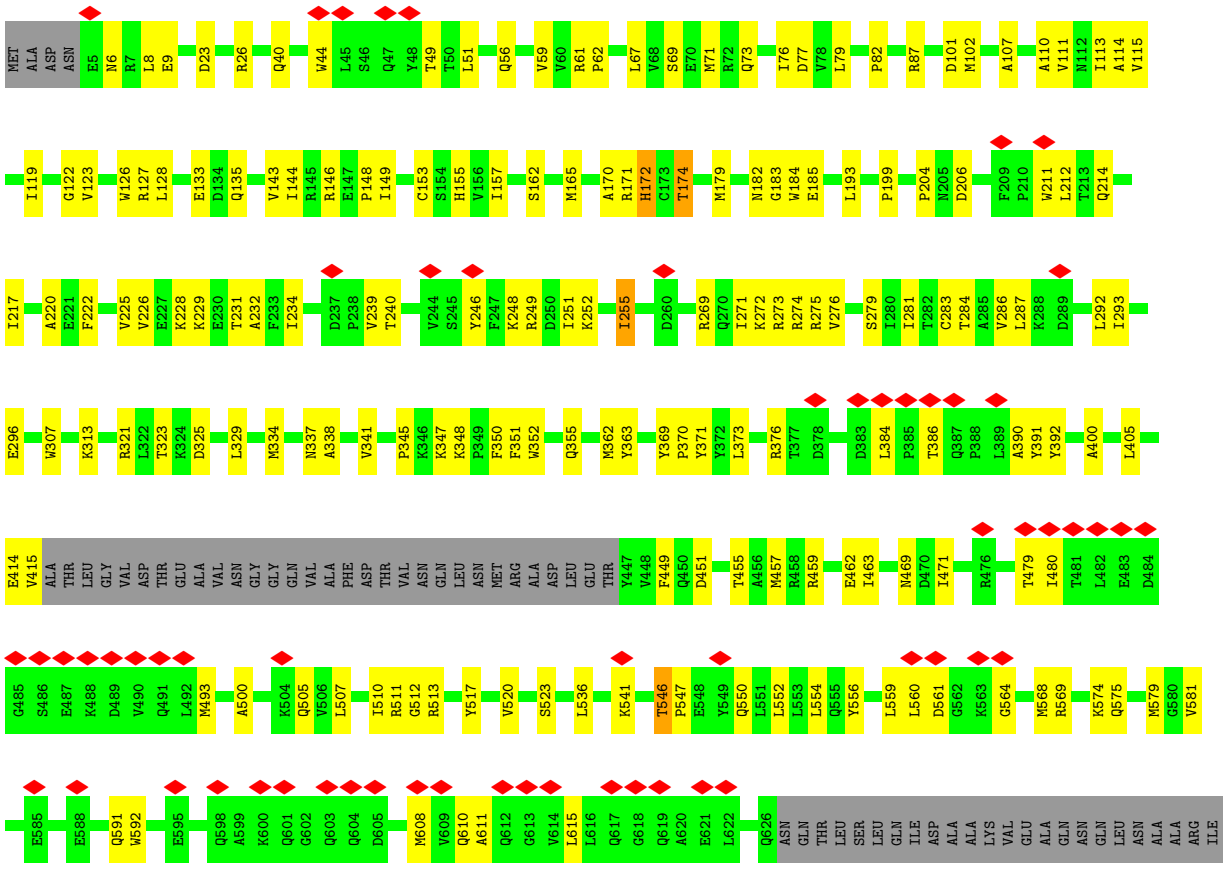
Chain Bh:

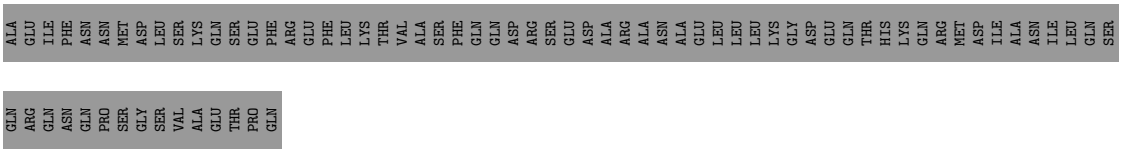




• Molecule 3: Portal protein

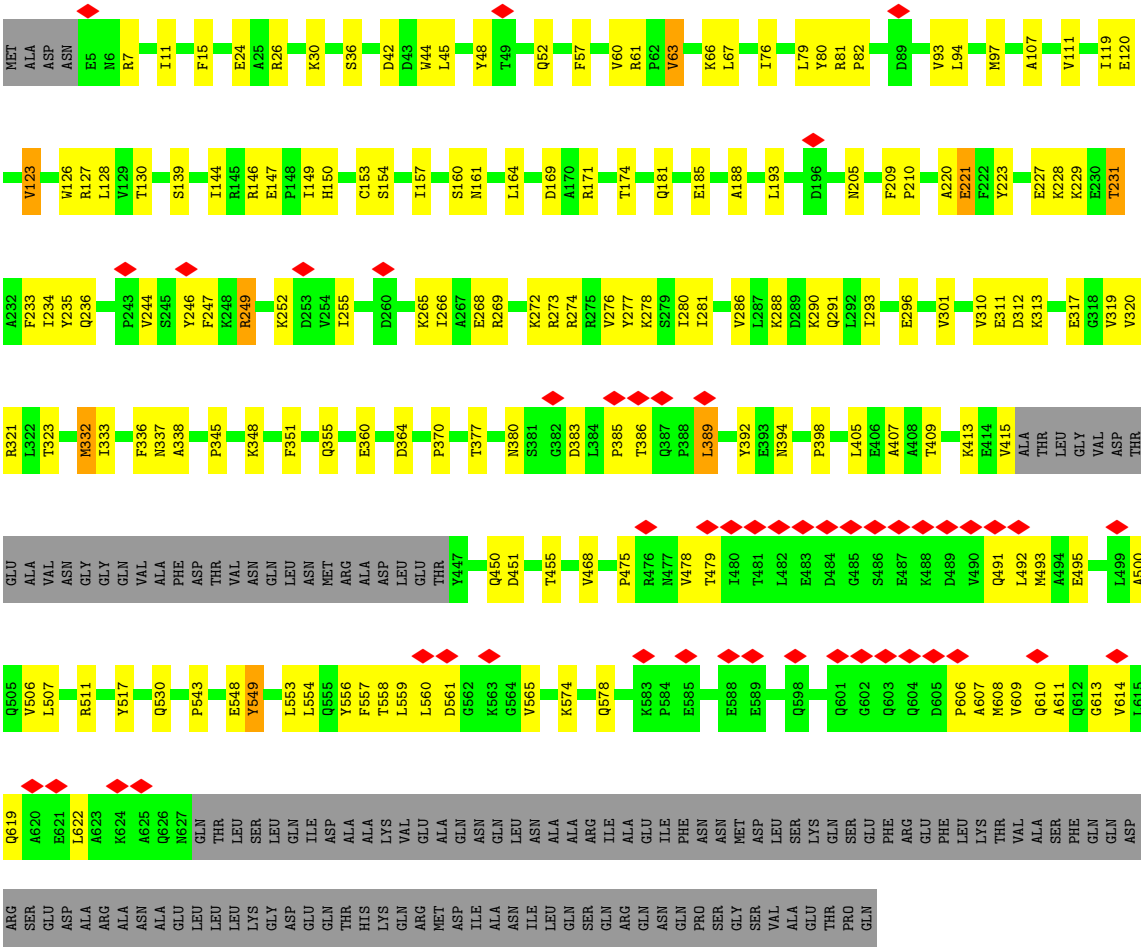
Chain Bj:





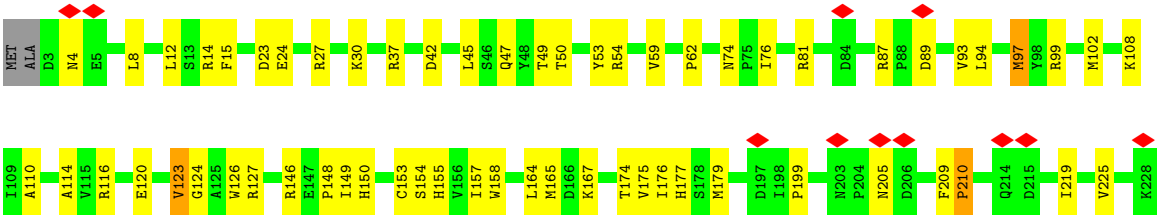
• Molecule 3: Portal protein

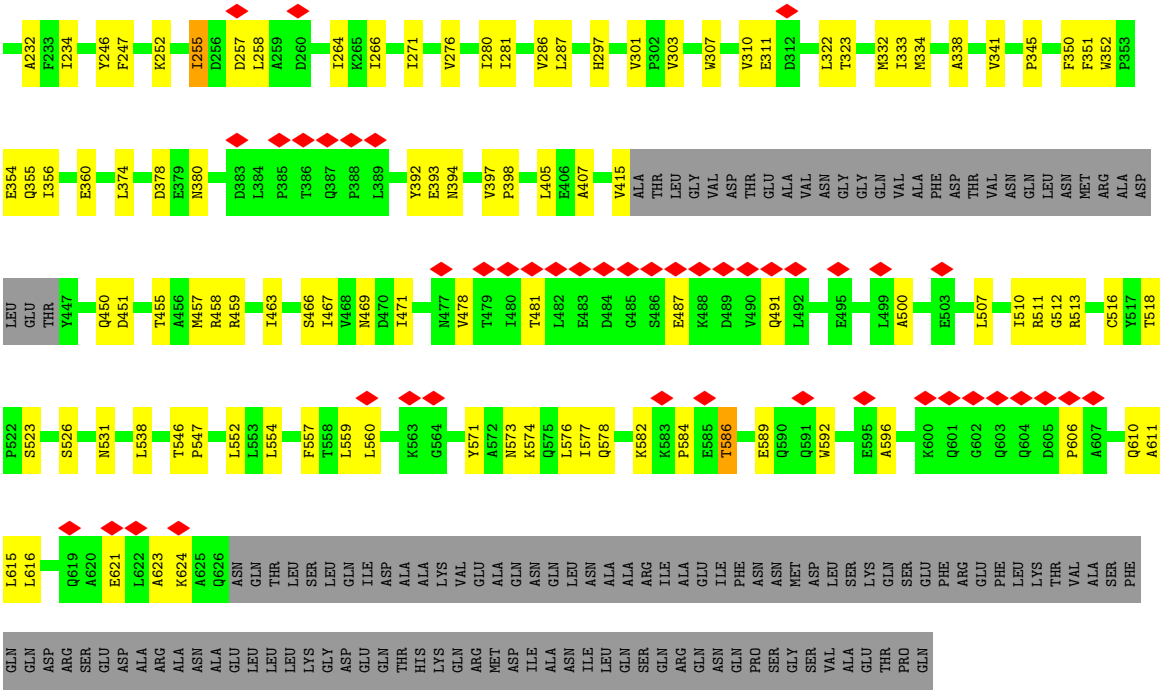
Chain Bl:



• Molecule 3: Portal protein

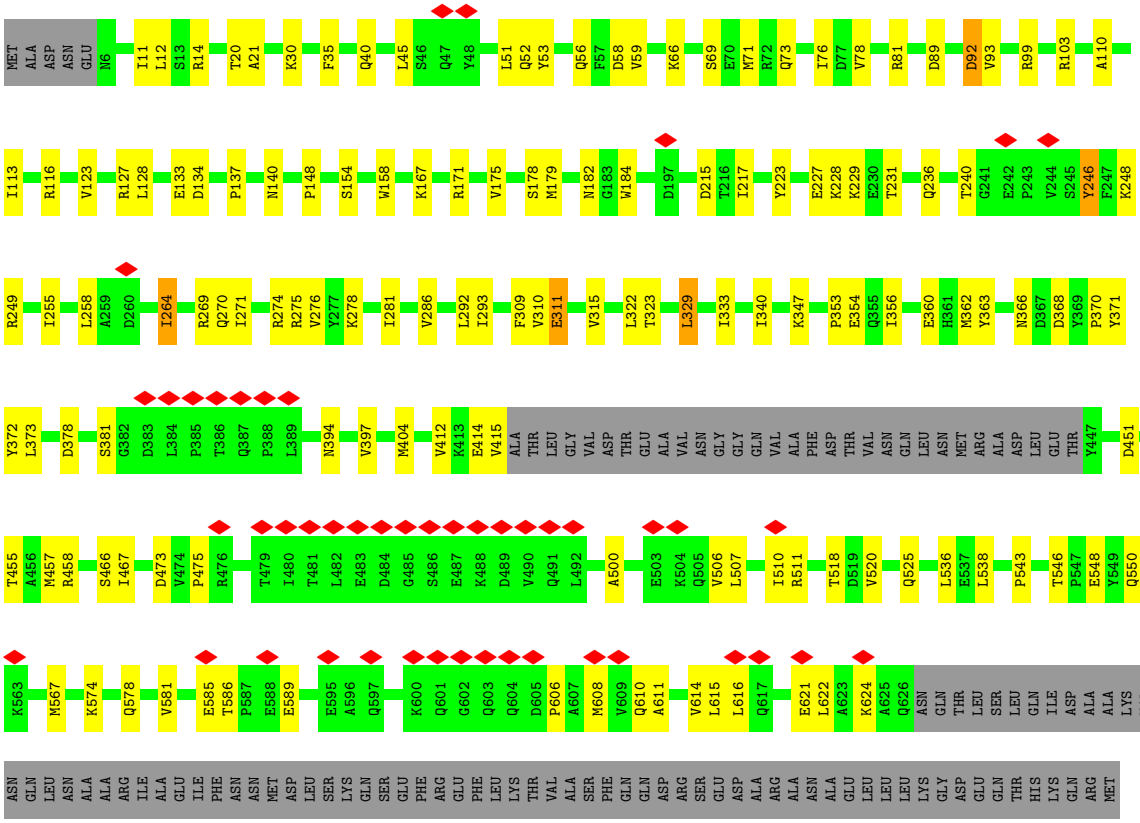
Chain Bn:





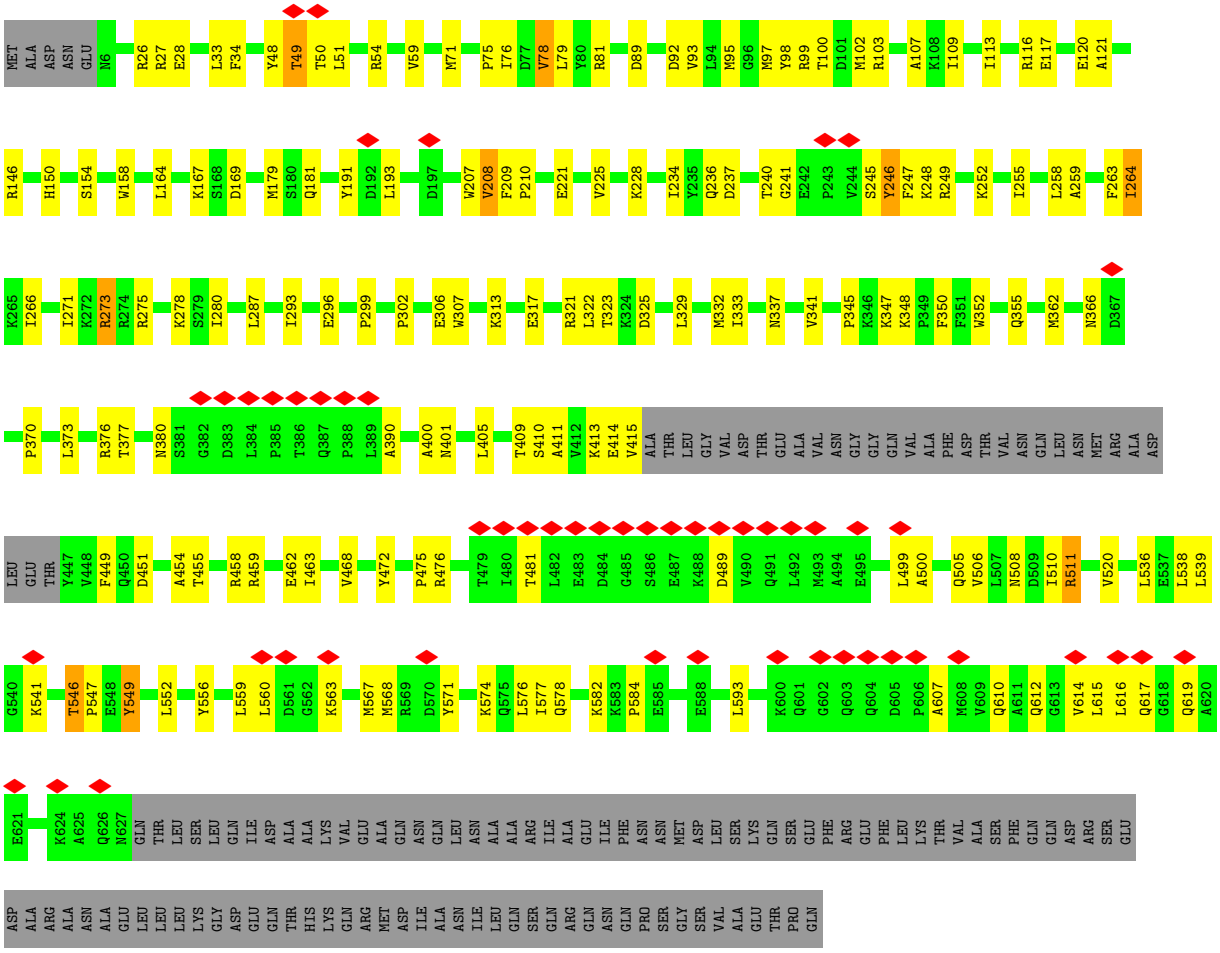
• Molecule 3: Portal protein

Chain Bp:



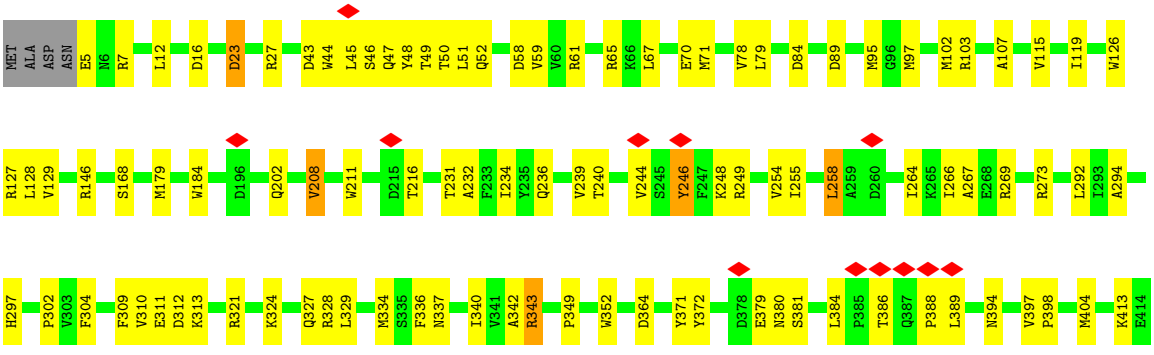
• Molecule 3: Portal protein

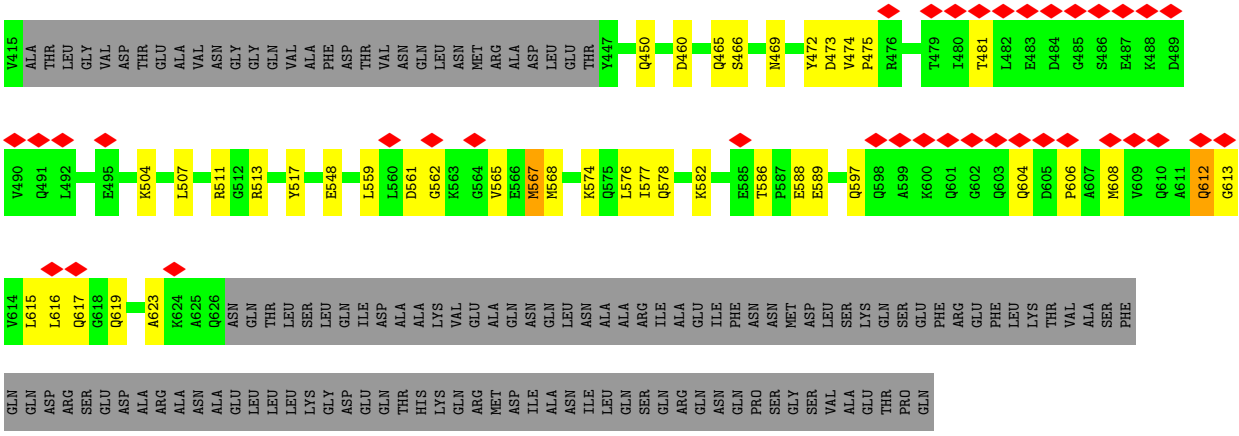
Chain Br:



• Molecule 3: Portal protein

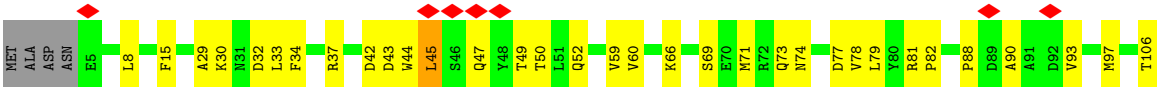
Chain Bt:

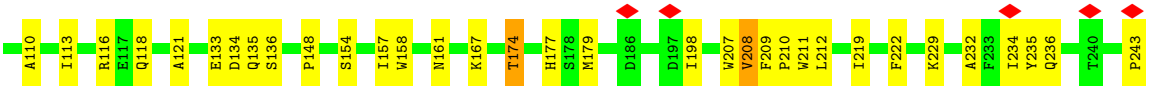


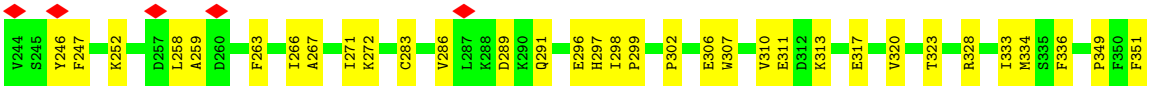


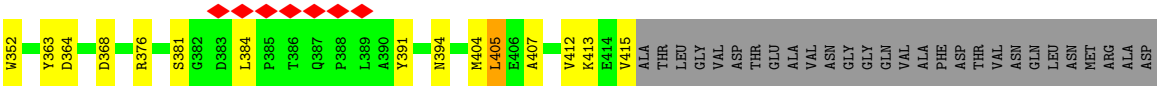
• Molecule 3: Portal protein

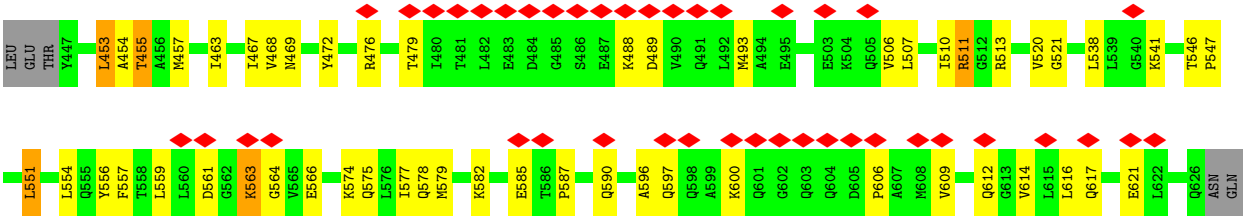
Chain Bv:





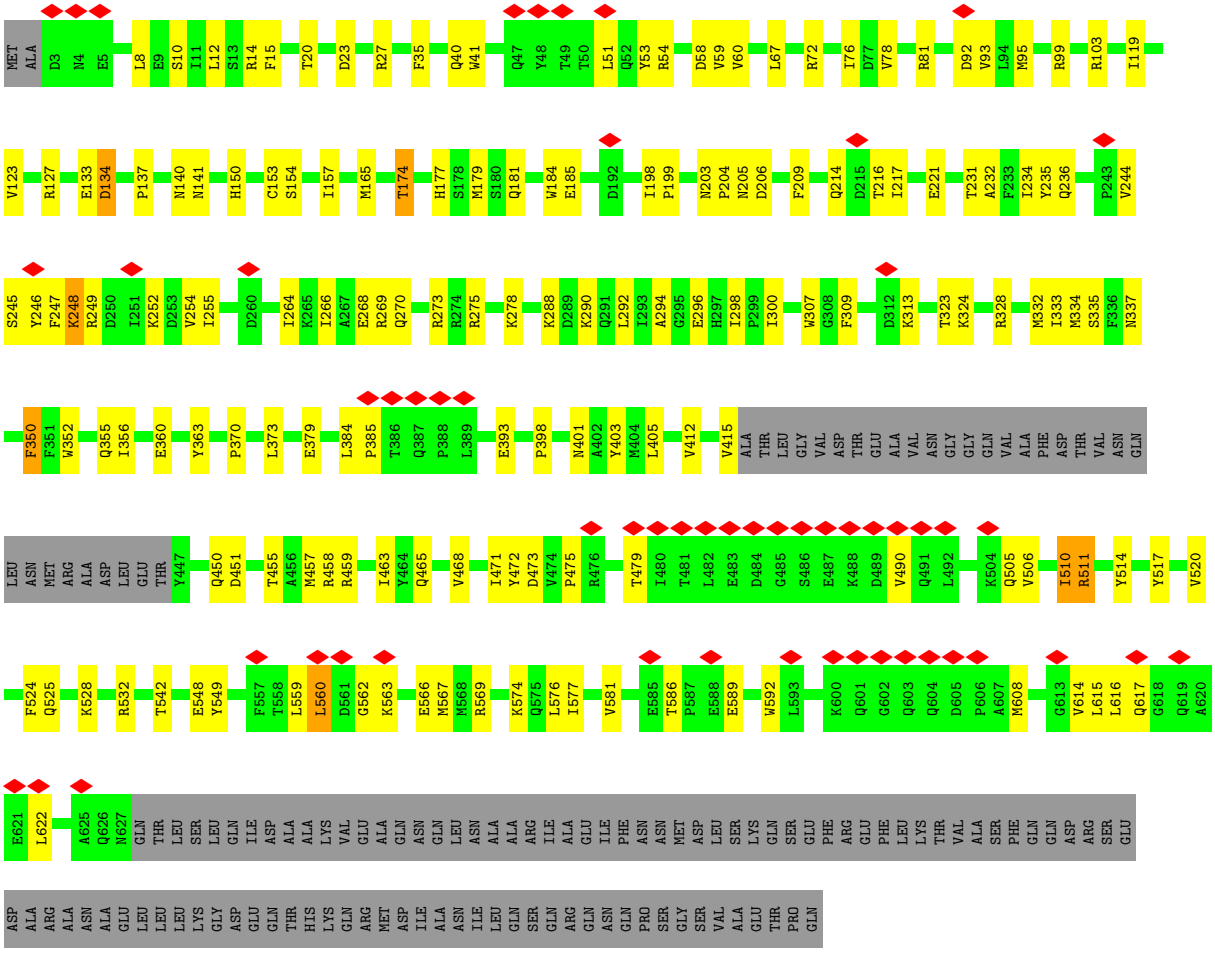






• Molecule 3: Portal protein

Chain Bx:


MET ALA D3 N4 E5 L8 E9 S10 I11 L12 S13 R14 F15 T20 D23 R27 F35 Q40 W41 Q47 Y48 T49 T50 L51 Q52 Y53 R54 D58 V59 V60 L67 R72 I76 D77 V78 R81 D92 V93 L94 M95 R99 R103 I119
V123 R127 E133 D134 P137 N140 N141 H150 C153 S154 I157 M165 T174 H177 S178 M179 S180 Q181 W184 E185 D192 I198 P199 N203 P204 N205 D206 F209 Q214 D215 T216 I217 E221 T231 A232 F233 T234 Y235 Q236 P243 V244
S245 Y246 F247 K248 R249 D250 T251 K252 D253 V254 I255 D260 I264 K265 I266 A267 E268 R269 Q270 R273 R274 R275 K278 K288 D289 K290 Q291 L292 I293 A294 G295 E296 H297 I298 P299 I300 W307 G308 F309 D312 K313 T323 K324 R328 M332 I333 M334 S335 F336 N337
F350 F351 W352 Q355 I356 E360 Y363 P370 L373 E379 L384 P385 T386 Q387 P388 L389 E393 P398 N401 A402 Y403 M404 L405 V412 V415 ALA THR LEU GLY VAL ASP THR GLU ALA VAL ASN GLY GLY GLN VAL ALA PHE ASP THR VAL ASN GLN
LEU ASN MET ARG ALA ASP LEU GLU THR Y447 Q450 D451 T455 A456 M457 R458 R459 I463 Y464 Q465 V468 I471 Y472 D473 V474 P475 R476 T479 I480 T481 L482 E483 D484 G485 S486 E487 K488 D489 V490 Q491 L492 K504 Q505 V506 I510 R511 Y514 Y517 V520
F524 Q525 K528 R532 T542 E548 Y549 F557 T558 L559 L560 D561 G562 K563 E566 M567 M568 R569 K574 Q575 L576 I577 V581 E585 T586 P587 E588 E589 W592 L593 K600 Q601 G602 Q603 Q604 D605 P606 A607 M608 G613 V614 L615 L616 Q617 G618 Q619 A620
E621 L622 A625 Q626 N627 GLN THR LEU SER LEU GLN ILE ASP ALA ALA LYS VAL GLU ALA GLN ASN GLN LEU ASN ALA ALA ARG ILE ALA GLU ILE PHE ASN ASN MET ASP LEU SER LYS GLN SER GLU PHE ARG GLU PHE LEU LYS THR VAL ALA SER PHE GLN GLN ASP ARG SER GLU
ASP ALA ARG ALA ASN ALA GLU LEU LEU LEU LYS GLY ASP GLU GLN THR HIS LYS GLN ARG MET ASP ILE ALA ASN ILE LEU GLN SER GLN ARG GLN ASN GLN PRO SER GLY SER VAL ALA GLU THR PRO GLN

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	93834	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	30	Depositor
Minimum defocus (nm)	600	Depositor
Maximum defocus (nm)	1200	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	1.916	Depositor
Minimum map value	-0.005	Depositor
Average map value	0.005	Depositor
Map value standard deviation	0.053	Depositor
Recommended contour level	0.15	Depositor
Map size (Å)	478.464, 478.464, 478.464	wwPDB
Map dimensions	448, 448, 448	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.068, 1.068, 1.068	Depositor

5 Model quality (i)

5.1 Standard geometry (i)

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	Aa	0.13	0/3332	0.33	1/4530 (0.0%)
1	Ab	0.14	0/3284	0.36	0/4466
1	Ac	0.15	0/3335	0.36	0/4535
1	Ad	0.13	0/3332	0.35	1/4530 (0.0%)
1	Ae	0.14	0/3332	0.35	1/4530 (0.0%)
1	Af	0.15	0/3332	0.46	3/4530 (0.1%)
1	Ag	0.14	0/3332	0.36	1/4530 (0.0%)
1	Ah	0.14	0/3270	0.35	0/4446
1	Ai	0.14	0/3292	0.35	0/4477
1	Aj	0.14	0/3277	0.33	0/4456
1	Ak	0.14	0/3284	0.35	0/4466
1	Al	0.13	0/3335	0.33	0/4535
1	Am	0.14	0/3335	0.38	0/4535
1	An	0.14	0/3335	0.35	0/4535
1	Ao	0.15	0/3330	0.36	0/4528
2	Ap	0.15	0/1174	0.35	0/1592
2	Aq	0.14	0/1174	0.33	0/1592
2	Ar	0.13	0/1174	0.33	0/1592
2	As	0.14	0/1174	0.38	0/1592
2	At	0.14	0/1174	0.36	0/1592
2	Au	0.15	0/1174	0.42	0/1592
2	Av	0.14	0/1165	0.34	0/1580
2	Aw	0.14	0/1165	0.35	0/1580
2	Ax	0.15	0/1161	0.37	0/1575
2	Ay	0.14	0/1165	0.32	0/1580
2	Az	0.15	0/1165	0.36	0/1580
2	Ba	0.14	0/1161	0.36	0/1575
3	Bb	0.15	0/4875	0.36	1/6610 (0.0%)
3	Bd	0.14	0/4892	0.35	0/6633
3	Bf	0.14	0/4883	0.39	0/6621
3	Bh	0.14	0/4892	0.37	0/6633
3	Bj	0.15	0/4884	0.37	0/6622
3	Bl	0.14	0/4892	0.36	0/6633
3	Bn	0.15	0/4900	0.39	1/6644 (0.0%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
3	Bp	0.14	0/4875	0.35	0/6610
3	Br	0.14	0/4883	0.36	1/6621 (0.0%)
3	Bt	0.14	0/4884	0.36	0/6622
3	Bv	0.14	0/4884	0.35	1/6622 (0.0%)
3	Bx	0.14	0/4908	0.39	0/6655
All	All	0.14	0/122415	0.36	11/166177 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	Ag	0	1
3	Bf	0	1
3	Bl	0	1
All	All	0	3

There are no bond length outliers.

All (11) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	Af	367	PRO	N-CA-CB	12.62	111.23	102.65
1	Ad	367	PRO	N-CA-CB	8.01	110.32	103.35
1	Aa	367	PRO	N-CA-CB	7.93	110.70	103.33
1	Ag	367	PRO	N-CA-CB	7.45	109.97	103.27
3	Bn	59	VAL	N-CA-C	-6.94	107.12	113.71
1	Af	39	SER	CA-C-N	6.61	134.17	121.54
1	Af	39	SER	C-N-CA	6.61	134.17	121.54
1	Ae	367	PRO	N-CA-CB	6.43	110.00	103.25
3	Bb	255	ILE	N-CA-C	-6.05	106.52	111.91
3	Br	59	VAL	N-CA-C	-5.87	107.56	113.20
3	Bv	208	VAL	N-CA-C	-5.17	107.31	111.91

There are no chirality outliers.

All (3) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	Ag	32	LYS	Peptide
3	Bf	208	VAL	Peptide
3	Bl	57	PHE	Peptide

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	Aa	3275	0	3241	77	0
1	Ab	3226	0	3197	65	0
1	Ac	3277	0	3247	53	0
1	Ad	3275	0	3241	75	0
1	Ae	3275	0	3241	78	0
1	Af	3275	0	3241	93	0
1	Ag	3275	0	3241	81	0
1	Ah	3212	0	3181	77	0
1	Ai	3234	0	3208	55	0
1	Aj	3219	0	3188	61	0
1	Ak	3226	0	3197	71	0
1	Al	3277	0	3247	69	0
1	Am	3277	0	3247	59	0
1	An	3277	0	3247	62	0
1	Ao	3272	0	3242	43	0
2	Ap	1149	0	1115	17	0
2	Aq	1149	0	1115	24	0
2	Ar	1149	0	1115	23	0
2	As	1149	0	1115	27	0
2	At	1149	0	1115	19	0
2	Au	1149	0	1115	41	0
2	Av	1140	0	1107	24	0
2	Aw	1140	0	1107	12	0
2	Ax	1136	0	1104	30	0
2	Ay	1140	0	1107	26	0
2	Az	1140	0	1107	25	0
2	Ba	1136	0	1104	24	0
3	Bb	4774	0	4636	135	0
3	Bd	4791	0	4648	123	0
3	Bf	4782	0	4642	128	0
3	Bh	4791	0	4648	120	0
3	Bj	4783	0	4642	146	0
3	Bl	4791	0	4648	129	0
3	Bn	4799	0	4652	139	0
3	Bp	4774	0	4636	118	0
3	Br	4782	0	4642	130	0
3	Bt	4783	0	4642	119	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	Bv	4783	0	4642	144	0
3	Bx	4807	0	4658	133	0
All	All	120038	0	117468	2313	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 10.

All (2313) 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)
3:Bd:255:ILE:HD12	3:Bh:506:VAL:HB	1.44	0.99
3:Bn:334:MET:HE3	3:Bn:405:LEU:HD11	1.52	0.92
3:Bf:40:GLN:HE22	3:Bf:327:GLN:HE21	1.16	0.88
2:Aw:144:ASN:HB3	3:Bl:44:TRP:HE1	1.38	0.88
2:Ap:40:LEU:HD13	2:Ap:87:LEU:HD22	1.57	0.86
3:Bj:334:MET:HE1	3:Bv:407:ALA:HB1	1.58	0.86
1:Ac:35:PRO:HG2	1:Ac:40:MET:HE3	1.58	0.85
3:Bj:546:THR:HG23	3:Bj:547:PRO:HD3	1.58	0.84
1:Ak:13:VAL:HA	2:Av:143:LEU:HD21	1.60	0.84
2:At:132:MET:HE3	2:At:133:PRO:HD2	1.59	0.83
1:Al:238:PRO:HD2	1:Al:324:GLN:HB3	1.62	0.81
1:Af:298:VAL:HG23	1:Af:299:ARG:HG2	1.60	0.81
1:Ad:370:HIS:HB2	2:Ax:142:ASN:HD21	1.45	0.80
3:Bj:214:GLN:HG3	3:Bv:313:LYS:HZ3	1.47	0.80
1:Af:116:GLU:HG2	1:Af:216:LYS:HD2	1.64	0.79
3:Bb:59:VAL:H	3:Bb:327:GLN:HE22	1.30	0.79
3:Bt:473:ASP:HB3	3:Bt:507:LEU:HD22	1.63	0.79
1:Ae:257:ALA:HB2	1:Ae:311:LYS:HG2	1.63	0.78
3:Bh:37:ARG:HE	3:Bh:116:ARG:HH12	1.31	0.78
1:Ao:182:LEU:HD21	1:Ao:191:ILE:HG22	1.63	0.78
3:Bj:352:TRP:HB2	3:Bj:355:GLN:HG3	1.65	0.78
3:Bf:506:VAL:HG11	3:Br:255:ILE:HD11	1.64	0.78
3:Bb:255:ILE:HD11	3:Bj:500:ALA:HB2	1.65	0.77
3:Bp:538:LEU:HB3	3:Bp:551:LEU:HD21	1.66	0.77
2:Aq:43:MET:HE1	2:Aq:86:ASN:HB3	1.66	0.76
3:Bt:386:THR:HB	3:Bt:388:PRO:HD2	1.68	0.76
1:Ag:36:PRO:HD2	1:Ag:364:GLN:HB3	1.67	0.76
1:Am:225:ALA:HB1	1:Am:228:ILE:HD11	1.68	0.76
2:Ax:128:TYR:CD1	2:Ax:150:PRO:HA	2.20	0.76
3:Bn:457:MET:HE2	3:Bv:77:ASP:HA	1.68	0.76
2:Ax:104:ILE:HG23	3:Bl:380:ASN:HB3	1.66	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Bf:511:ARG:HH21	3:Br:248:LYS:HG2	1.51	0.76
3:Bb:273:ARG:HD2	3:Bj:511:ARG:HH12	1.48	0.75
3:Bf:334:MET:HE2	3:Bf:405:LEU:HD21	1.68	0.75
1:Aj:370:HIS:HD2	1:Aj:372:LEU:H	1.33	0.75
3:Bd:407:ALA:HB1	3:Bf:334:MET:HE1	1.67	0.75
3:Bh:394:ASN:HB2	3:Bl:398:PRO:HB3	1.68	0.75
3:Bl:556:TYR:HA	3:Bl:559:LEU:HG	1.69	0.75
1:Ai:228:ILE:HD13	1:Ai:267:MET:HE2	1.69	0.74
1:Ab:159:GLU:HG2	1:Ab:284:MET:HB2	1.69	0.74
1:Af:89:LEU:HD21	1:An:70:LEU:HD23	1.68	0.74
1:Aj:24:THR:HG23	1:Aj:116:GLU:HG2	1.69	0.74
1:Aa:205:VAL:HG12	1:Aa:211:VAL:HG21	1.68	0.74
2:Ba:132:MET:HG2	2:Ba:149:PHE:HD2	1.53	0.74
1:Ac:49:MET:HE3	1:Ad:17:ILE:HD11	1.70	0.74
2:At:3:ILE:HB	2:At:8:ASP:HB3	1.68	0.74
3:Bd:394:ASN:HB3	3:Bh:398:PRO:HB3	1.70	0.73
2:As:43:MET:HE3	2:As:90:ARG:HD2	1.70	0.73
3:Bl:252:LYS:HB2	3:Bl:255:ILE:HB	1.69	0.73
3:Bb:613:GLY:HA2	3:Bb:616:LEU:HD23	1.69	0.73
1:Aj:131:ILE:HG23	1:Aj:424:GLY:HA2	1.71	0.73
3:Bd:615:LEU:HA	3:Bh:619:GLN:HG3	1.71	0.73
2:As:132:MET:HE3	2:As:133:PRO:HD2	1.70	0.73
3:Bj:77:ASP:HA	3:Bv:457:MET:HE2	1.71	0.73
1:Ad:161:ASN:HA	1:Ah:21:SER:HB3	1.70	0.73
1:Ai:257:ALA:HB2	1:Ai:311:LYS:HD3	1.70	0.72
2:Ar:133:PRO:HA	2:Ar:147:HIS:HA	1.71	0.72
3:Bt:255:ILE:HA	3:Bt:258:LEU:HD12	1.71	0.72
3:Bl:614:VAL:HG11	3:Bt:616:LEU:HA	1.71	0.72
3:Bd:362:MET:HE1	3:Bd:373:LEU:H	1.55	0.72
3:Bf:274:ARG:HH12	3:Bf:297:HIS:CE1	2.08	0.72
3:Bd:209:PHE:CG	3:Bd:210:PRO:HD2	2.25	0.71
1:An:205:VAL:HG22	1:An:211:VAL:HG21	1.72	0.71
2:Aq:123:ALA:HB1	3:Br:370:PRO:HD2	1.72	0.71
3:Bf:323:THR:HB	3:Bf:412:VAL:HG13	1.70	0.71
1:Ac:220:LEU:HD13	1:Ac:350:THR:HG21	1.72	0.71
1:Ag:281:LEU:HD21	1:Ag:286:LYS:HD2	1.72	0.71
2:At:123:ALA:HB1	3:Bb:370:PRO:HD2	1.73	0.71
3:Bn:623:ALA:HB1	3:Bv:621:GLU:HB2	1.71	0.71
3:Bp:550:GLN:HE22	3:Bp:581:VAL:HG21	1.55	0.71
3:Bl:67:LEU:HB3	3:Bl:119:ILE:HD12	1.72	0.71
1:Af:161:ASN:HD22	1:Aj:18:GLU:HB2	1.56	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Ar:43:MET:HE1	2:Ar:86:ASN:HB3	1.72	0.70
3:Bd:511:ARG:HG2	3:Bf:246:TYR:HB2	1.72	0.70
1:Ag:34:THR:HB	1:Ag:362:VAL:HG12	1.71	0.70
3:Bj:107:ALA:HB1	3:Bj:146:ARG:HH21	1.56	0.70
1:Ab:335:ALA:HB3	1:Ab:338:MET:HG3	1.73	0.70
3:Bh:225:VAL:HG12	3:Bh:276:VAL:HG22	1.74	0.70
1:Am:335:ALA:H	1:Am:338:MET:HE3	1.55	0.70
3:Bn:323:THR:HG22	3:Bn:415:VAL:HG23	1.74	0.70
1:Ad:35:PRO:HG2	1:Ad:364:GLN:HB2	1.74	0.70
3:Bb:500:ALA:HA	3:Bt:258:LEU:HD13	1.74	0.70
3:Bf:198:ILE:HG23	3:Bf:217:ILE:HD12	1.74	0.70
3:Bn:271:ILE:HG23	3:Bv:134:ASP:HB2	1.74	0.70
3:Bj:102:MET:HE1	3:Bj:128:LEU:HD21	1.72	0.69
1:Ad:366:ILE:HG13	1:Ad:410:TRP:HB2	1.74	0.69
3:Bh:546:THR:HG23	3:Bh:547:PRO:HD3	1.74	0.69
3:Bn:407:ALA:HB1	3:Bv:334:MET:HE1	1.73	0.69
1:Ae:381:PHE:HB2	1:Ae:392:PHE:HB2	1.74	0.69
3:Bt:577:ILE:HD13	3:Bt:582:LYS:HB3	1.74	0.69
1:Al:37:ALA:HA	1:Al:364:GLN:HE22	1.57	0.69
1:An:148:VAL:HG11	1:An:205:VAL:HG23	1.73	0.69
2:Ap:134:THR:HG23	2:Ap:138:ASN:HD22	1.57	0.69
1:Ao:272:LYS:HE3	1:Ao:423:VAL:HG11	1.74	0.69
3:Br:255:ILE:HG22	3:Br:258:LEU:HD12	1.74	0.69
3:Bd:239:VAL:HG23	3:Bd:240:THR:HG23	1.74	0.69
3:Bv:234:ILE:HD12	3:Bv:267:ALA:HB3	1.74	0.69
1:Ae:272:LYS:HE3	1:Ae:423:VAL:HG11	1.74	0.69
1:Af:205:VAL:HG22	1:Af:211:VAL:HG21	1.74	0.69
2:Au:138:ASN:CG	2:Au:139:SER:H	1.99	0.69
3:Bf:620:ALA:HB1	3:Br:617:GLN:HB2	1.75	0.69
3:Bt:102:MET:HE1	3:Bt:128:LEU:HD21	1.73	0.69
3:Bx:236:GLN:HB2	3:Bx:266:ILE:HD11	1.75	0.69
1:Ac:298:VAL:HG11	1:Ac:309:THR:HG23	1.74	0.69
3:Bh:387:GLN:HB3	3:Bh:388:PRO:HD2	1.75	0.69
1:An:364:GLN:HE21	1:An:365:PRO:HD2	1.58	0.68
2:Au:138:ASN:H	3:Bx:54:ARG:HB2	1.58	0.68
2:Ax:128:TYR:CG	2:Ax:150:PRO:HA	2.28	0.68
3:Br:323:THR:HG22	3:Br:415:VAL:HG23	1.74	0.68
3:Br:538:LEU:HD22	3:Br:541:LYS:HZ1	1.57	0.68
1:Ac:47:ILE:HG13	1:Ad:10:THR:HG23	1.74	0.68
1:Aj:335:ALA:H	1:Aj:338:MET:HE3	1.58	0.68
3:Bj:615:LEU:HB2	3:Bv:616:LEU:HD13	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Bn:234:ILE:HD13	3:Bn:246:TYR:HB3	1.75	0.68
2:Au:40:LEU:HD13	2:Au:87:LEU:HD22	1.75	0.68
3:Bh:179:MET:HE1	3:Bh:187:PHE:HB2	1.74	0.68
3:Bj:157:ILE:HB	3:Bj:174:THR:HG23	1.76	0.68
3:Bn:93:VAL:HG21	3:Bx:475:PRO:HD2	1.75	0.68
3:Br:306:GLU:HB3	3:Br:317:GLU:HB3	1.74	0.68
1:Al:97:GLU:HG3	1:Al:101:ARG:HH22	1.57	0.68
3:Br:333:ILE:HG21	3:Br:405:LEU:HB2	1.76	0.68
1:Al:242:GLN:HG2	1:Al:252:VAL:HG12	1.74	0.68
3:Bn:246:TYR:HE1	3:Bx:511:ARG:HE	1.43	0.67
1:Ah:377:LYS:HE2	1:Ah:394:THR:HG23	1.77	0.67
3:Bl:385:PRO:HA	3:Bt:352:TRP:HZ2	1.58	0.67
3:Bb:246:TYR:CD1	3:Bj:511:ARG:HB3	2.28	0.67
3:Bn:355:GLN:HG2	3:Bn:374:LEU:HD22	1.76	0.67
1:Ag:225:ALA:HB1	1:Ag:228:ILE:HD12	1.76	0.67
3:Bl:44:TRP:HD1	3:Bl:45:LEU:HG	1.59	0.67
1:Ag:191:ILE:HD11	1:Ak:197:ARG:HH21	1.60	0.67
2:Au:63:ASP:O	2:Au:64:GLU:HG2	1.94	0.67
3:Bd:255:ILE:HG12	3:Bd:258:LEU:HD23	1.77	0.67
3:Bp:614:VAL:HG11	3:Br:616:LEU:HA	1.76	0.67
1:Af:35:PRO:HB2	1:Af:38:ALA:HB2	1.77	0.67
3:Bn:466:SER:HB3	3:Bv:296:GLU:HB2	1.77	0.67
1:Ab:281:LEU:HD23	1:Ab:286:LYS:HG3	1.76	0.66
1:Ae:33:TYR:HB3	3:Bv:212:LEU:HD22	1.75	0.66
3:Bb:140:ASN:ND2	3:Bj:507:LEU:HD21	2.09	0.66
3:Bp:371:TYR:HA	3:Br:348:LYS:HB3	1.78	0.66
1:Ag:285:ALA:HA	1:Ak:113:ASN:HD21	1.60	0.66
3:Bd:234:ILE:HG22	3:Bd:266:ILE:HB	1.76	0.66
1:Ah:116:GLU:HG3	1:Ah:216:LYS:HG2	1.78	0.66
3:Bb:234:ILE:HG12	3:Bb:246:TYR:HB3	1.76	0.66
1:Aj:225:ALA:HB1	1:Aj:228:ILE:HD11	1.76	0.66
3:Bf:208:VAL:HG22	3:Bf:213:THR:HG22	1.76	0.66
1:Af:361:ILE:HG22	1:Af:413:VAL:HB	1.77	0.66
3:Bb:371:TYR:CZ	3:Bj:363:TYR:HB3	2.31	0.66
1:Ak:383:ILE:HD13	1:Ak:409:LEU:HD13	1.78	0.66
3:Bh:15:PHE:HD2	3:Bh:174:THR:HG21	1.61	0.65
3:Bh:71:MET:HE3	3:Bl:450:GLN:HG3	1.78	0.65
1:Ad:372:LEU:HD21	1:Ad:406:ARG:HH12	1.59	0.65
1:Ag:365:PRO:HG3	3:Bf:207:TRP:CD2	2.32	0.65
3:Bt:562:GLY:HA3	3:Bt:565:VAL:HG22	1.76	0.65
1:Ae:27:ALA:HB1	1:Ae:386:VAL:HG23	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Bp:227:GLU:HA	3:Bp:274:ARG:HA	1.79	0.65
1:Ai:335:ALA:HB3	1:Ai:338:MET:HB3	1.77	0.65
3:Bd:323:THR:HG22	3:Bd:415:VAL:HG23	1.78	0.65
3:Bh:334:MET:HE3	3:Bh:405:LEU:HD21	1.78	0.65
3:Bp:475:PRO:HD2	3:Bx:93:VAL:HG11	1.78	0.65
1:Af:286:LYS:HE3	1:Af:328:ALA:HB3	1.79	0.65
1:Af:309:THR:OG1	1:Af:310:PRO:HD3	1.97	0.65
3:Bh:93:VAL:HG11	3:Bl:475:PRO:HD2	1.77	0.65
1:Ag:161:ASN:HD22	1:Ak:18:GLU:HB3	1.62	0.65
2:Av:40:LEU:HD13	2:Av:87:LEU:HD22	1.79	0.65
2:Ay:133:PRO:HA	2:Ay:147:HIS:HA	1.78	0.64
3:Bp:93:VAL:HG11	3:Br:475:PRO:HD2	1.79	0.64
3:Br:234:ILE:HG22	3:Br:266:ILE:HB	1.79	0.64
3:Bx:41:TRP:CE2	3:Bx:54:ARG:HB3	2.31	0.64
1:Af:161:ASN:HA	1:Aj:21:SER:HB2	1.79	0.64
1:Ah:299:ARG:HD2	1:Ah:301:VAL:HG12	1.79	0.64
3:Bj:511:ARG:HD3	3:Bj:513:ARG:HH21	1.61	0.64
3:Bn:110:ALA:HA	3:Bn:148:PRO:HB3	1.79	0.64
1:Af:367:PRO:HA	2:Au:143:LEU:HD22	1.79	0.64
3:Bd:79:LEU:HD22	3:Bd:81:ARG:HE	1.62	0.64
1:Ac:90:ARG:HG3	1:Ac:401:LEU:HD23	1.80	0.64
1:Aj:398:ILE:HD13	3:Br:49:THR:HA	1.79	0.64
1:Ak:386:VAL:HG23	1:Ak:388:LEU:H	1.63	0.64
3:Bb:242:GLU:H	3:Bb:243:PRO:HD2	1.62	0.64
1:Ag:360:ARG:HH11	1:Ag:416:THR:HG21	1.63	0.64
3:Bb:363:TYR:HE1	3:Bj:350:PHE:HE1	1.44	0.64
3:Bp:356:ILE:HG22	3:Bp:360:GLU:HG3	1.80	0.64
3:Bx:248:LYS:HE3	3:Bx:273:ARG:HE	1.62	0.64
3:Bd:71:MET:HE3	3:Bd:115:VAL:HG13	1.79	0.64
3:Bp:467:ILE:HG23	3:Bx:294:ALA:HB1	1.79	0.64
3:Br:273:ARG:HG2	3:Br:275:ARG:HG2	1.78	0.64
1:Af:190:ARG:HG3	1:Af:190:ARG:HH11	1.63	0.64
3:Bj:123:VAL:HG21	3:Bj:153:CYS:HB3	1.80	0.63
1:Ak:111:LEU:HD22	1:Ak:409:LEU:HD21	1.78	0.63
3:Bl:93:VAL:HG21	3:Bt:475:PRO:HD2	1.80	0.63
3:Bd:269:ARG:HE	3:Bd:271:ILE:HD11	1.63	0.63
3:Bf:376:ARG:HG2	3:Bf:377:THR:HG23	1.80	0.63
3:Bl:234:ILE:HD11	3:Bl:269:ARG:HG2	1.81	0.63
3:Bn:297:HIS:HB2	3:Bx:463:ILE:HD13	1.80	0.63
1:Ah:396:GLY:HA2	1:Ah:403:GLY:HA2	1.79	0.63
3:Bn:511:ARG:HH11	3:Bv:271:ILE:HD11	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Af:284:MET:HG3	1:Aj:22:ALA:HB2	1.80	0.63
1:Aj:370:HIS:CD2	1:Aj:372:LEU:H	2.14	0.63
1:Ai:261:LEU:HD12	1:Ai:267:MET:HE1	1.81	0.63
3:Bd:475:PRO:HD2	3:Bf:93:VAL:HG21	1.80	0.63
3:Bj:550:GLN:HE21	3:Bj:581:VAL:HG11	1.63	0.63
3:Bv:234:ILE:HG12	3:Bv:246:TYR:HE1	1.64	0.63
3:Bx:275:ARG:HD3	3:Bx:292:LEU:HD21	1.81	0.63
1:Ag:186:ASP:HA	1:Am:185:ARG:HG2	1.81	0.63
3:Bd:376:ARG:HG2	3:Bd:377:THR:HG23	1.80	0.63
3:Br:332:MET:HE2	3:Br:333:ILE:HD12	1.80	0.63
3:Bt:576:LEU:HB3	3:Bt:582:LYS:HB2	1.80	0.63
1:Ae:81:GLU:HB3	1:Ao:60:GLY:HA2	1.81	0.63
2:Ar:3:ILE:HG23	2:Ar:8:ASP:HB3	1.78	0.63
3:Bb:254:VAL:HG12	3:Bb:255:ILE:HD12	1.80	0.63
1:Af:161:ASN:HB3	1:Af:417:ARG:HH12	1.63	0.63
2:Ap:5:THR:HG22	2:Ap:7:GLY:H	1.63	0.63
3:Bx:324:LYS:HB3	3:Bx:328:ARG:HH21	1.64	0.63
1:Ab:23:ILE:HG23	1:Ab:25:PRO:HD3	1.81	0.62
2:Az:108:LYS:HD3	3:Bv:381:SER:HB3	1.81	0.62
1:Ao:234:GLN:HE22	1:Ao:259:VAL:HG13	1.63	0.62
3:Bp:127:ARG:HH22	3:Bp:175:VAL:HG11	1.64	0.62
2:Ap:17:LEU:HD13	2:Ap:88:ALA:HB1	1.80	0.62
2:Au:139:SER:HB3	3:Bx:51:LEU:HD12	1.81	0.62
3:Bx:356:ILE:HG22	3:Bx:360:GLU:HG3	1.80	0.62
1:Ag:191:ILE:HD13	1:Ak:193:GLU:HG2	1.81	0.62
1:Aj:100:TYR:HD2	2:Ba:143:LEU:HD12	1.64	0.62
1:Am:281:LEU:HD21	1:Am:331:ASN:HB3	1.80	0.62
2:Au:139:SER:HB3	3:Bx:51:LEU:HA	1.81	0.62
2:Ar:32:SER:HA	2:Ar:35:ASP:HB3	1.81	0.62
2:Au:128:TYR:HD2	2:Au:132:MET:HG3	1.65	0.62
2:Aw:58:TYR:HD1	2:Aw:75:LEU:HD21	1.65	0.62
3:Bv:229:LYS:HA	3:Bv:272:LYS:HA	1.82	0.62
2:Au:138:ASN:HA	3:Bx:54:ARG:H	1.65	0.62
2:Au:137:GLY:HA2	2:Au:141:ALA:HB2	1.82	0.62
3:Bd:352:TRP:HB2	3:Bd:355:GLN:HG3	1.80	0.62
3:Bn:15:PHE:HD1	3:Bn:174:THR:HG21	1.64	0.62
1:An:116:GLU:HG2	1:An:216:LYS:HD2	1.81	0.62
2:Aq:11:ARG:HD3	2:Aq:33:MET:HE1	1.80	0.62
3:Bb:578:GLN:HE21	3:Bb:596:ALA:HB2	1.65	0.62
3:Br:208:VAL:HG13	3:Br:209:PHE:H	1.65	0.62
1:An:383:ILE:HG13	1:An:409:LEU:HD13	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Bl:82:PRO:HG3	3:Bl:561:ASP:HB2	1.82	0.61
3:Bn:606:PRO:HD2	3:Bn:610:GLN:HB2	1.82	0.61
1:Am:79:MET:HE1	1:Am:364:GLN:HG3	1.81	0.61
3:Bp:323:THR:HG22	3:Bp:415:VAL:HG13	1.82	0.61
1:Ae:40:MET:HE1	1:Ae:410:TRP:HH2	1.66	0.61
1:Af:272:LYS:HE3	1:Af:423:VAL:HG11	1.83	0.61
3:Bn:76:ILE:HG22	3:Bx:457:MET:HG3	1.82	0.61
1:Ab:400:THR:HG23	1:Ab:402:SER:H	1.65	0.61
1:Ae:284:MET:HE2	1:Ai:20:ILE:HG21	1.82	0.61
3:Bl:164:LEU:HD12	3:Bl:169:ASP:HB2	1.82	0.61
1:Ag:309:THR:HB	1:Ag:310:PRO:HD3	1.83	0.61
1:Ag:417:ARG:HE	1:Ak:19:THR:HG22	1.66	0.61
1:Ai:13:VAL:HG21	3:Bn:45:LEU:HD11	1.83	0.61
1:Ao:81:GLU:HG2	1:Ao:82:PRO:HD2	1.83	0.61
2:Au:131:ARG:H	2:Au:131:ARG:HD3	1.64	0.61
3:Bb:94:LEU:HA	3:Bb:97:MET:HE2	1.82	0.61
3:Bf:254:VAL:HG23	3:Bf:255:ILE:HG23	1.82	0.61
3:Bp:134:ASP:HB2	3:Br:271:ILE:HG23	1.83	0.61
3:Bx:352:TRP:HB2	3:Bx:355:GLN:HG3	1.83	0.61
1:Ac:335:ALA:HB3	1:Ac:338:MET:HG3	1.83	0.61
3:Bn:24:GLU:HG3	3:Bv:211:TRP:HD1	1.66	0.61
3:Br:247:PHE:HB2	3:Br:252:LYS:HE3	1.82	0.61
1:Ac:104:ILE:HD12	1:Ac:407:ILE:HD11	1.83	0.61
1:Ak:9:VAL:HB	3:Bf:49:THR:HA	1.83	0.61
3:Bd:94:LEU:HD21	3:Bh:465:GLN:HG3	1.83	0.61
3:Bf:538:LEU:HD11	3:Br:559:LEU:HD21	1.82	0.61
3:Bl:246:TYR:HB2	3:Bt:511:ARG:HB3	1.83	0.61
3:Bn:165:MET:O	3:Bn:165:MET:HG2	1.99	0.61
1:Ab:374:ALA:HB1	1:Ad:377:LYS:HG3	1.82	0.60
3:Bf:221:GLU:HG2	3:Bf:280:ILE:HG12	1.83	0.60
3:Bp:40:GLN:HE22	3:Bp:58:ASP:HB2	1.66	0.60
1:Aa:295:PHE:HD1	1:Aa:310:PRO:HG2	1.66	0.60
2:As:40:LEU:HD13	2:As:87:LEU:HD22	1.82	0.60
1:Ad:205:VAL:HG13	1:Ad:211:VAL:HG21	1.83	0.60
1:Af:344:ASN:HA	1:Af:428:GLN:HE21	1.66	0.60
3:Bb:225:VAL:HG12	3:Bb:276:VAL:HG22	1.83	0.60
3:Bn:87:ARG:HG2	3:Bn:89:ASP:H	1.67	0.60
3:Bn:332:MET:HE2	3:Bn:333:ILE:HD13	1.83	0.60
1:Af:101:ARG:HD2	3:Bx:198:ILE:HD11	1.82	0.60
1:Ai:398:ILE:HG13	2:Az:149:PHE:HD2	1.67	0.60
3:Bd:574:LYS:O	3:Bd:578:GLN:HG2	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Bp:269:ARG:HH11	3:Bp:271:ILE:HD11	1.66	0.60
1:Af:148:VAL:HG11	1:Af:205:VAL:HG23	1.84	0.60
1:Af:366:ILE:HG21	1:Af:372:LEU:HD22	1.83	0.60
3:Bj:248:LYS:HD3	3:Bv:511:ARG:HE	1.64	0.60
3:Bn:510:ILE:HG23	3:Bv:246:TYR:H	1.64	0.60
1:Al:205:VAL:HG12	1:Al:211:VAL:HG21	1.84	0.60
2:Az:31:GLN:O	2:Az:35:ASP:HB2	2.02	0.60
2:At:128:TYR:HD2	2:At:132:MET:HG2	1.66	0.60
2:Au:140:PHE:HB2	2:Au:143:LEU:H	1.67	0.60
2:Av:43:MET:HE1	2:Av:86:ASN:HB3	1.83	0.60
3:Bh:614:VAL:HG21	3:Bl:616:LEU:HA	1.84	0.60
3:Bj:127:ARG:HB2	3:Bj:149:ILE:HD11	1.83	0.60
1:Af:23:ILE:HG13	1:Af:25:PRO:HD3	1.84	0.60
2:Av:128:TYR:HD2	2:Av:132:MET:HG2	1.67	0.60
2:Ax:17:LEU:HD13	2:Ax:88:ALA:HB1	1.84	0.60
3:Bf:323:THR:HG22	3:Bf:415:VAL:HG23	1.83	0.60
3:Bf:553:LEU:HD23	3:Bf:572:ALA:HA	1.83	0.60
3:Bj:225:VAL:HG12	3:Bj:276:VAL:HG22	1.83	0.60
3:Bj:248:LYS:HD3	3:Bv:511:ARG:NE	2.16	0.60
3:Bt:302:PRO:HB2	3:Bt:304:PHE:HE1	1.66	0.60
3:Bv:15:PHE:HD1	3:Bv:174:THR:HG21	1.67	0.60
1:Ae:221:THR:HA	1:Ae:347:ASP:HB3	1.84	0.60
1:Ag:171:ASN:HB2	1:Ag:349:ARG:HH11	1.67	0.60
3:Bf:546:THR:HG23	3:Bf:547:PRO:HD3	1.84	0.60
3:Bl:233:PHE:HZ	3:Bl:249:ARG:HH21	1.48	0.60
1:Aa:278:VAL:HG13	1:Aa:330:VAL:HG13	1.84	0.59
1:Ae:105:GLN:HB3	1:Ae:109:ARG:HH12	1.67	0.59
3:Bb:59:VAL:HG13	3:Bb:412:VAL:HG11	1.84	0.59
3:Bh:223:TYR:HB3	3:Bh:298:ILE:HD12	1.82	0.59
3:Bb:7:ARG:HH11	3:Bb:289:ASP:HB2	1.66	0.59
3:Bb:550:GLN:HB3	3:Bt:568:MET:HE1	1.84	0.59
3:Bj:281:ILE:HG22	3:Bj:286:VAL:HG13	1.84	0.59
1:Ae:405:CYS:HB2	1:Ah:372:LEU:HD11	1.84	0.59
1:An:257:ALA:HB2	1:An:311:LYS:HG3	1.85	0.59
2:Av:43:MET:HG3	2:Av:90:ARG:NE	2.18	0.59
3:Bb:606:PRO:HG2	3:Bb:609:VAL:HB	1.85	0.59
1:Ac:164:MET:HG3	1:Ac:357:ASP:HB3	1.84	0.59
1:Af:239:VAL:HG23	1:Af:252:VAL:HG11	1.84	0.59
3:Bb:246:TYR:HD1	3:Bj:511:ARG:HB3	1.67	0.59
3:Bf:466:SER:HB3	3:Br:296:GLU:H	1.67	0.59
1:Ab:164:MET:HA	1:Ab:164:MET:HE3	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Bd:467:ILE:HG23	3:Bf:294:ALA:HB1	1.84	0.59
3:Bl:618:GLY:HA2	3:Bt:623:ALA:HB2	1.84	0.59
3:Bx:154:SER:HB2	3:Bx:204:PRO:HB2	1.83	0.59
3:Bx:231:THR:HG23	3:Bx:268:GLU:OE2	2.03	0.59
2:Ar:104:ILE:HG23	3:Bh:380:ASN:HB2	1.85	0.59
3:Bn:281:ILE:HG22	3:Bn:286:VAL:HG12	1.84	0.59
3:Bp:30:LYS:HD2	3:Bp:154:SER:HB3	1.84	0.59
1:Ae:47:ILE:HB	1:Ae:77:VAL:HG22	1.85	0.59
1:Af:373:PHE:HZ	1:Af:408:ALA:HB3	1.68	0.59
1:Ah:205:VAL:HG12	1:Ah:206:ALA:H	1.68	0.59
3:Bf:280:ILE:HD12	3:Bf:288:LYS:HD2	1.84	0.59
1:Ao:335:ALA:HB3	1:Ao:338:MET:HG3	1.85	0.58
3:Bd:541:LYS:HD3	3:Bf:536:LEU:HD21	1.84	0.58
3:Bl:227:GLU:HA	3:Bl:274:ARG:HA	1.84	0.58
3:Bv:334:MET:HE2	3:Bv:405:LEU:HD11	1.84	0.58
3:Bx:532:ARG:HD3	3:Bx:559:LEU:HD23	1.84	0.58
1:Ab:130:VAL:HG21	1:Ab:272:LYS:HB3	1.84	0.58
1:Ag:51:VAL:HG22	1:Ak:17:ILE:HD11	1.85	0.58
3:Bh:236:GLN:HG3	3:Bh:243:PRO:HA	1.85	0.58
3:Bn:518:THR:HG23	3:Bv:78:VAL:HG13	1.85	0.58
3:Bt:310:VAL:HG13	3:Bt:311:GLU:H	1.68	0.58
3:Bb:248:LYS:HB2	3:Bb:251:ILE:HD12	1.84	0.58
3:Bv:157:ILE:HB	3:Bv:174:THR:HG23	1.85	0.58
3:Bx:157:ILE:HB	3:Bx:174:THR:HG23	1.84	0.58
1:Al:388:LEU:HD23	1:Al:409:LEU:HD11	1.84	0.58
2:Ap:113:LEU:HD23	2:Ap:116:LYS:HE3	1.85	0.58
1:Ag:205:VAL:HG22	1:Ag:211:VAL:HG11	1.85	0.58
3:Bb:527:MET:HE1	3:Bb:530:GLN:HE21	1.69	0.58
3:Bf:531:ASN:HB3	3:Br:563:LYS:HB2	1.85	0.58
3:Bn:510:ILE:HG22	3:Bn:512:GLY:H	1.68	0.58
1:Aj:377:LYS:HG2	3:Br:210:PRO:HA	1.86	0.58
1:Am:111:LEU:HD13	1:Am:409:LEU:HD22	1.85	0.58
3:Bh:255:ILE:HD13	3:Bh:258:LEU:HB2	1.86	0.58
3:Bj:87:ARG:HH11	3:Bj:87:ARG:HG3	1.67	0.58
1:Aa:369:ASN:ND2	3:Bh:46:SER:H	2.01	0.58
1:Aj:13:VAL:HG22	3:Bp:45:LEU:HG	1.85	0.58
3:Bn:458:ARG:HG2	3:Bn:518:THR:HG22	1.85	0.58
1:Ae:161:ASN:HA	1:Ai:21:SER:HB3	1.85	0.58
1:Af:403:GLY:HA3	1:Ai:372:LEU:HG	1.85	0.58
3:Br:221:GLU:HG2	3:Br:280:ILE:HD13	1.86	0.58
1:Aa:101:ARG:HG3	1:Aa:101:ARG:HH11	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Aa:257:ALA:HB2	1:Aa:311:LYS:HG3	1.84	0.58
1:Al:81:GLU:HG2	1:Al:82:PRO:HD2	1.85	0.58
2:As:108:LYS:HD2	3:Bt:381:SER:HB2	1.86	0.58
3:Bd:158:TRP:CG	3:Bd:167:LYS:HD2	2.38	0.58
3:Bp:52:GLN:HG2	3:Bp:53:TYR:N	2.19	0.58
1:Aj:191:ILE:HB	1:Aj:192:PRO:HD3	1.86	0.57
1:Ao:309:THR:HB	1:Ao:310:PRO:HD3	1.86	0.57
3:Bv:33:LEU:HD22	3:Bv:37:ARG:HH21	1.69	0.57
3:Bx:333:ILE:HG23	3:Bx:401:ASN:HD22	1.69	0.57
1:Aj:309:THR:HG23	1:Aj:310:PRO:HD3	1.87	0.57
3:Bh:193:LEU:HD21	3:Bh:287:LEU:HB3	1.86	0.57
3:Bj:110:ALA:HA	3:Bj:148:PRO:HB3	1.86	0.57
3:Bj:251:ILE:H	3:Bj:251:ILE:HD12	1.68	0.57
3:Bj:371:TYR:CE2	3:Bv:363:TYR:HB3	2.39	0.57
1:Ac:383:ILE:HD11	1:Ac:388:LEU:HB2	1.86	0.57
1:Ah:140:ASN:HB2	1:Ah:143:ASP:HB3	1.86	0.57
1:Am:126:MET:HG2	1:Am:309:THR:HG21	1.87	0.57
1:Ac:68:THR:H	1:Ad:87:PHE:HA	1.70	0.57
1:Ah:281:LEU:HD21	1:Ah:331:ASN:HB3	1.86	0.57
2:Av:10:VAL:HB	2:Av:33:MET:HE1	1.87	0.57
3:Bf:255:ILE:HD12	3:Bf:259:ALA:HB2	1.85	0.57
3:Bf:511:ARG:NH2	3:Br:248:LYS:HG2	2.19	0.57
3:Bj:212:LEU:HD22	3:Bv:313:LYS:HD2	1.85	0.57
3:Bl:205:ASN:HB3	3:Bt:311:GLU:HB3	1.86	0.57
3:Bl:394:ASN:HB2	3:Bt:398:PRO:HB3	1.85	0.57
1:Af:130:VAL:HG21	1:Af:272:LYS:HB3	1.86	0.57
2:As:89:CYS:HB3	2:Ay:102:LYS:HD3	1.85	0.57
3:Bp:466:SER:OG	3:Bx:296:GLU:HG3	2.04	0.57
3:Bt:574:LYS:O	3:Bt:578:GLN:HG2	2.05	0.57
1:Ag:40:MET:HE2	1:Ag:40:MET:O	2.05	0.57
1:Al:121:ASN:O	1:Al:125:GLU:HG3	2.05	0.57
3:Bp:614:VAL:HG21	3:Br:616:LEU:HD12	1.87	0.57
3:Bv:235:TYR:HE2	3:Bv:252:LYS:HZ3	1.51	0.57
1:Ak:89:LEU:HD22	3:Bd:44:TRP:HZ2	1.70	0.57
1:Al:131:ILE:HD11	1:Al:154:ILE:HG21	1.86	0.57
2:Ba:142:ASN:HB3	3:Br:27:ARG:HD2	1.87	0.57
3:Bd:500:ALA:HB3	3:Bd:503:GLU:HB2	1.86	0.57
3:Bh:275:ARG:HG2	3:Bh:292:LEU:HD11	1.87	0.57
3:Bh:587:PRO:HA	3:Bh:590:GLN:NE2	2.20	0.57
1:Aa:166:THR:HG22	1:Aa:355:ALA:HA	1.86	0.57
1:An:238:PRO:HD3	1:An:313:VAL:HG11	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Bf:199:PRO:HD2	3:Bf:217:ILE:HD11	1.87	0.57
3:Bj:362:MET:HE1	3:Bj:373:LEU:H	1.70	0.57
1:Af:71:LEU:HD22	1:Af:323:GLU:HB2	1.87	0.56
1:Af:257:ALA:HB2	1:Af:311:LYS:HG3	1.87	0.56
1:Ag:403:GLY:HA3	1:Aj:372:LEU:HG	1.87	0.56
2:Aq:3:ILE:HG23	2:Aq:8:ASP:HB3	1.87	0.56
1:Af:368:ALA:HB1	1:Af:373:PHE:H	1.70	0.56
2:Ap:108:LYS:HD3	3:Bp:381:SER:HB2	1.87	0.56
3:Bn:74:ASN:HB2	3:Bx:450:GLN:HE22	1.70	0.56
1:Ab:283:GLN:C	1:Ab:285:ALA:H	2.14	0.56
1:Ag:372:LEU:HD13	1:Am:62:ASP:H	1.71	0.56
1:Ai:398:ILE:HG13	2:Az:149:PHE:CD2	2.40	0.56
1:Al:137:ILE:HD11	1:Al:144:ALA:HA	1.87	0.56
3:Bb:97:MET:O	3:Bb:101:ASP:HB2	2.04	0.56
3:Bd:398:PRO:HB3	3:Bf:394:ASN:HB3	1.88	0.56
3:Bd:607:ALA:HB2	3:Bh:609:VAL:HA	1.88	0.56
3:Bn:584:PRO:HB3	3:Bn:589:GLU:HB3	1.88	0.56
1:Ag:257:ALA:HB2	1:Ag:311:LYS:HG3	1.86	0.56
1:Ah:256:PHE:HE1	1:Ah:298:VAL:HG11	1.70	0.56
1:Aj:128:SER:HB3	1:Aj:419:GLU:HA	1.87	0.56
1:Al:419:GLU:CD	1:Al:419:GLU:H	2.13	0.56
1:Am:158:ARG:HH12	1:Am:283:GLN:HE21	1.53	0.56
3:Bv:606:PRO:HB2	3:Bv:609:VAL:HG12	1.88	0.56
1:Ae:7:GLN:HG3	1:Ah:249:LYS:HD3	1.86	0.56
1:Af:360:ARG:HD2	1:Af:416:THR:HG21	1.88	0.56
1:Ai:396:GLY:HA3	2:Az:143:LEU:HD23	1.87	0.56
3:Bb:107:ALA:HB1	3:Bb:146:ARG:HH21	1.71	0.56
3:Bb:527:MET:HA	3:Bb:527:MET:HE3	1.88	0.56
3:Bf:511:ARG:HB3	3:Br:246:TYR:CE1	2.41	0.56
3:Bv:236:GLN:HA	3:Bv:243:PRO:HA	1.86	0.56
2:Az:3:ILE:HG23	2:Az:8:ASP:HB2	1.86	0.56
3:Bn:54:ARG:HH11	3:Bn:54:ARG:HG3	1.70	0.56
1:Al:219:VAL:HG22	1:Al:349:ARG:HD2	1.87	0.56
3:Bf:608:MET:HA	3:Bf:611:ALA:HB3	1.87	0.56
3:Bh:550:GLN:HE22	3:Bh:581:VAL:HG11	1.71	0.56
3:Bl:221:GLU:HG2	3:Bl:278:LYS:HD2	1.88	0.56
3:Bp:615:LEU:HD12	3:Br:619:GLN:NE2	2.21	0.56
1:Ae:189:GLY:O	1:Ae:193:GLU:HB2	2.06	0.56
1:Ag:70:LEU:HD21	1:Ak:103:ARG:HB2	1.88	0.55
1:Al:26:MET:HE3	1:Al:120:ALA:HA	1.87	0.55
3:Bd:176:ILE:HD11	3:Bd:204:PRO:HB3	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Bh:127:ARG:HB2	3:Bh:149:ILE:HD11	1.88	0.55
3:Br:546:THR:HG23	3:Br:547:PRO:HD3	1.89	0.55
3:Bx:323:THR:HG22	3:Bx:415:VAL:HG23	1.88	0.55
3:Bb:376:ARG:HH21	3:Bj:384:LEU:HD23	1.71	0.55
3:Bb:397:VAL:HG23	3:Bj:400:ALA:HA	1.88	0.55
3:Bl:332:MET:HE2	3:Bl:336:PHE:CE2	2.41	0.55
3:Bn:164:LEU:HD11	3:Bv:106:THR:HG23	1.89	0.55
3:Bp:258:LEU:HD22	3:Br:500:ALA:HA	1.87	0.55
2:Ar:5:THR:HG23	2:Ar:8:ASP:H	1.70	0.55
3:Bv:310:VAL:HG12	3:Bv:311:GLU:HG3	1.87	0.55
1:Al:47:ILE:HG22	1:Al:77:VAL:HB	1.88	0.55
3:Bb:297:HIS:HB2	3:Bj:463:ILE:HD13	1.88	0.55
3:Bn:255:ILE:HG13	3:Bx:506:VAL:HB	1.88	0.55
1:Ab:301:VAL:HG22	1:Ab:302:ASP:OD1	2.07	0.55
1:Ae:152:GLU:HG2	1:Ae:206:ALA:O	2.06	0.55
1:Ak:26:MET:HG2	1:Ak:354:TRP:CH2	2.42	0.55
1:Am:241:TRP:HZ3	1:Am:243:LEU:HG	1.71	0.55
2:Au:138:ASN:HA	3:Bx:54:ARG:N	2.21	0.55
2:Av:36:ALA:HB1	2:Av:91:ILE:HD11	1.88	0.55
3:Bf:110:ALA:HA	3:Bf:148:PRO:HB3	1.87	0.55
1:Aa:376:MET:HB3	1:Aa:395:GLN:HB2	1.87	0.55
1:Ai:115:VAL:HG21	1:Ai:388:LEU:HD11	1.87	0.55
3:Bd:273:ARG:HD2	3:Bd:275:ARG:HG2	1.89	0.55
3:Bl:229:LYS:HG3	3:Bl:272:LYS:HG3	1.87	0.55
1:Ai:230:VAL:HG11	1:Ai:334:LEU:HD12	1.89	0.55
3:Bb:40:GLN:HE21	3:Bb:331:ASN:HD21	1.54	0.55
1:Ab:368:ALA:HB3	1:Ab:378:THR:HG21	1.88	0.55
1:Ad:50:PRO:HG2	1:Ah:16:ILE:HG22	1.89	0.55
1:Am:128:SER:OG	1:Am:310:PRO:HG3	2.06	0.55
2:Aw:130:SER:HB2	2:Aw:150:PRO:HB3	1.88	0.55
3:Bf:275:ARG:HD3	3:Bf:292:LEU:HD21	1.88	0.55
3:Bp:397:VAL:HG23	3:Br:400:ALA:HA	1.89	0.55
1:An:220:LEU:HD23	1:An:425:LEU:HD11	1.88	0.55
2:Ax:126:ALA:N	3:Bl:364:ASP:HB2	2.22	0.55
2:Ax:128:TYR:CD1	3:Bt:343:ARG:HG3	2.42	0.55
3:Bf:523:SER:HB3	3:Br:75:PRO:HB2	1.89	0.55
3:Bn:199:PRO:HG3	3:Bn:219:ILE:HD12	1.89	0.55
1:Ai:397:ASP:HB3	1:Ai:400:THR:HG22	1.89	0.55
2:As:102:LYS:NZ	2:Ax:89:CYS:HB3	2.22	0.55
1:Aa:3:LEU:HD11	1:Aa:5:GLU:HG3	1.88	0.54
3:Bd:227:GLU:HA	3:Bd:274:ARG:HA	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Bj:184:TRP:HB2	3:Bj:217:ILE:HD11	1.88	0.54
3:Bl:574:LYS:O	3:Bl:578:GLN:HG2	2.07	0.54
3:Bn:102:MET:HE3	3:Bn:146:ARG:NH2	2.22	0.54
3:Bp:372:TYR:CD2	3:Br:348:LYS:HB2	2.43	0.54
3:Br:236:GLN:HB3	3:Br:264:ILE:HG13	1.89	0.54
1:Aa:309:THR:HB	1:Aa:310:PRO:HD3	1.89	0.54
1:Ac:161:ASN:HD22	1:Ad:18:GLU:HB2	1.71	0.54
2:Ax:40:LEU:HD13	2:Ax:87:LEU:HD22	1.89	0.54
3:Bj:232:ALA:HB3	3:Bj:269:ARG:HG2	1.89	0.54
3:Br:33:LEU:HD21	3:Br:117:GLU:HG2	1.89	0.54
3:Bx:244:VAL:HG23	3:Bx:246:TYR:CE2	2.42	0.54
1:Ae:281:LEU:HD21	1:Ae:315:LEU:HD22	1.90	0.54
1:An:335:ALA:H	1:An:338:MET:HE2	1.71	0.54
3:Bh:278:LYS:HE3	3:Bh:293:ILE:HD11	1.89	0.54
3:Bj:8:LEU:HD23	3:Bj:286:VAL:HG22	1.89	0.54
3:Bn:350:PHE:HE1	3:Bv:363:TYR:HE2	1.55	0.54
3:Bp:310:VAL:HG13	3:Bp:311:GLU:H	1.72	0.54
3:Bv:82:PRO:HB3	3:Bv:90:ALA:HB3	1.90	0.54
3:Bv:574:LYS:O	3:Bv:578:GLN:HG2	2.08	0.54
1:Ac:50:PRO:HG2	1:Ad:16:ILE:HD13	1.88	0.54
1:Ad:295:PHE:HB3	1:Ad:308:ILE:HG23	1.90	0.54
1:Al:23:ILE:HD12	1:Al:25:PRO:HD3	1.88	0.54
3:Bb:536:LEU:HD21	3:Bj:541:LYS:HE3	1.90	0.54
3:Bh:376:ARG:HG2	3:Bh:377:THR:HG23	1.89	0.54
1:Ah:11:LEU:HA	3:Bb:48:TYR:HB3	1.90	0.54
1:Ai:223:SER:HB3	1:Ai:342:ILE:HG21	1.89	0.54
3:Bn:24:GLU:HG3	3:Bv:211:TRP:CD1	2.42	0.54
3:Bt:244:VAL:HG23	3:Bt:246:TYR:CZ	2.42	0.54
1:Ak:288:VAL:HG13	1:Ak:331:ASN:HD22	1.72	0.54
3:Bb:238:PRO:HD3	3:Bb:263:PHE:HD1	1.72	0.54
3:Bf:480:ILE:HD12	3:Br:240:THR:HG22	1.89	0.54
3:Bj:234:ILE:HD12	3:Bj:246:TYR:CD1	2.42	0.54
3:Bl:355:GLN:NE2	3:Bl:386:THR:HB	2.22	0.54
3:Bv:476:ARG:HD2	3:Bv:510:ILE:HD13	1.90	0.54
1:Ad:23:ILE:HD12	1:Ad:25:PRO:HD3	1.89	0.54
1:Ad:24:THR:HG23	1:Ad:116:GLU:HB2	1.88	0.54
1:Ad:228:ILE:HG13	1:Ad:340:VAL:HG13	1.90	0.54
1:Ag:398:ILE:HD11	1:Aj:406:ARG:HB3	1.90	0.54
1:Aj:257:ALA:HB2	1:Aj:311:LYS:HG3	1.89	0.54
1:An:159:GLU:OE1	1:An:284:MET:HB3	2.07	0.54
1:Ao:286:LYS:HE3	1:Ao:328:ALA:HB3	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Bd:29:ALA:HB2	3:Bd:316:TYR:HE1	1.73	0.54
3:Bl:618:GLY:HA3	3:Bt:619:GLN:HG3	1.90	0.54
3:Bp:231:THR:HG21	3:Bp:249:ARG:HH21	1.72	0.54
3:Bp:458:ARG:HG3	3:Bp:518:THR:HG22	1.89	0.54
3:Bv:578:GLN:OE1	3:Bv:596:ALA:HB2	2.08	0.54
1:Aa:33:TYR:HD1	1:Aa:362:VAL:HG22	1.73	0.54
1:Ab:220:LEU:HD23	1:Ab:425:LEU:HD11	1.89	0.54
1:Ad:284:MET:HG3	1:Ah:113:ASN:HD22	1.73	0.54
1:Ai:14:ASP:HB2	3:Bn:27:ARG:NH2	2.22	0.54
1:An:84:ASN:HB3	1:An:408:ALA:HB2	1.90	0.54
2:Au:102:LYS:NZ	2:Az:89:CYS:HB3	2.23	0.54
3:Bb:227:GLU:HG2	3:Bb:274:ARG:HG2	1.90	0.54
3:Bh:255:ILE:HG13	3:Bl:506:VAL:HB	1.89	0.54
3:Bh:306:GLU:HB2	3:Bh:317:GLU:HG3	1.88	0.54
3:Br:278:LYS:HB2	3:Br:293:ILE:HD12	1.90	0.54
3:Br:376:ARG:HG2	3:Br:377:THR:HG23	1.88	0.54
1:Ae:96:ASP:HB3	1:Ah:41:GLN:NE2	2.23	0.54
2:Az:133:PRO:HA	2:Az:147:HIS:HA	1.88	0.54
3:Bb:500:ALA:HB2	3:Bt:255:ILE:HD11	1.90	0.54
3:Bd:252:LYS:HB2	3:Bd:252:LYS:NZ	2.22	0.54
3:Bj:234:ILE:HD11	3:Bj:269:ARG:HD2	1.88	0.54
1:Af:370:HIS:HA	1:Af:374:ALA:HB2	1.89	0.54
1:Ag:130:VAL:HG21	1:Ag:272:LYS:HB3	1.90	0.54
1:Ah:56:PRO:HG3	1:Ah:323:GLU:HA	1.90	0.54
3:Br:26:ARG:HD3	3:Br:154:SER:HA	1.90	0.54
1:Aa:115:VAL:HG21	1:Aa:388:LEU:HD11	1.90	0.53
1:Aa:161:ASN:HA	1:Ab:21:SER:HB3	1.89	0.53
1:Ah:97:GLU:HB2	2:As:149:PHE:HZ	1.73	0.53
1:Ah:230:VAL:HG12	1:Ah:338:MET:H	1.73	0.53
1:Ah:300:VAL:HG22	1:Ah:306:VAL:HG12	1.91	0.53
1:Am:237:LYS:HD3	1:Am:320:LEU:HD23	1.90	0.53
3:Bp:511:ARG:HH22	3:Bx:232:ALA:HB1	1.72	0.53
3:Bt:236:GLN:HB3	3:Bt:264:ILE:HG23	1.90	0.53
1:Aa:130:VAL:HG21	1:Aa:272:LYS:HB3	1.89	0.53
3:Bd:142:GLN:HE22	3:Bh:471:ILE:HD11	1.73	0.53
3:Bj:362:MET:HG2	3:Bj:369:TYR:CD1	2.43	0.53
3:Bx:15:PHE:HD1	3:Bx:174:THR:HG21	1.72	0.53
1:Ae:320:LEU:HD23	1:Ae:325:ARG:HA	1.91	0.53
1:Ak:373:PHE:HB3	1:Ak:376:MET:HE2	1.89	0.53
1:Ak:379:THR:HG21	3:Bd:212:LEU:HD13	1.89	0.53
1:Al:264:THR:HG23	1:Al:267:MET:HE2	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Bh:239:VAL:HG22	3:Bh:240:THR:HG23	1.89	0.53
3:Bt:239:VAL:HG22	3:Bt:240:THR:HG23	1.90	0.53
1:Ad:131:ILE:HD11	1:Ad:154:ILE:HG21	1.91	0.53
1:Af:19:THR:HG22	1:An:417:ARG:HD3	1.91	0.53
1:Ai:379:THR:HB	3:Bx:20:THR:HG23	1.90	0.53
3:Bj:550:GLN:HE22	3:Bj:579:MET:HE2	1.74	0.53
3:Bl:123:VAL:HG21	3:Bl:153:CYS:HB3	1.90	0.53
1:Aa:171:ASN:HD21	1:Aa:173:GLN:HB3	1.74	0.53
1:Ah:125:GLU:O	1:Ah:270:GLY:HA2	2.09	0.53
1:Ao:280:PHE:O	1:Ao:289:LEU:HB2	2.08	0.53
2:As:73:HIS:ND1	2:As:74:GLY:N	2.56	0.53
3:Bb:414:GLU:HG2	3:Bt:59:VAL:HG12	1.91	0.53
3:Bj:71:MET:HE3	3:Bj:115:VAL:HG13	1.90	0.53
3:Bn:232:ALA:HB2	3:Bn:271:ILE:HD12	1.90	0.53
3:Bn:577:ILE:HG21	3:Bn:592:TRP:HB3	1.90	0.53
3:Br:109:ILE:O	3:Br:113:ILE:HG13	2.07	0.53
3:Bv:59:VAL:HG13	3:Bv:412:VAL:HG11	1.91	0.53
3:Bx:92:ASP:OD1	3:Bx:562:GLY:HA2	2.08	0.53
1:Ac:278:VAL:HG13	1:Ac:338:MET:HE1	1.90	0.53
1:Ah:182:LEU:HD22	1:Ah:201:ILE:HD12	1.91	0.53
1:Aj:386:VAL:HG12	1:Aj:388:LEU:HG	1.90	0.53
1:Ak:66:LYS:NZ	1:Ak:66:LYS:HB3	2.24	0.53
2:At:16:LYS:HE2	2:Ay:39:ASP:OD2	2.09	0.53
3:Bb:237:ASP:OD2	3:Bb:238:PRO:HD2	2.09	0.53
3:Bb:475:PRO:HB2	3:Bb:493:MET:HE3	1.91	0.53
3:Bh:201:PHE:H	3:Bh:218:GLN:HB2	1.73	0.53
3:Bv:32:ASP:OD1	3:Bv:320:VAL:HG13	2.09	0.53
1:Ao:257:ALA:HB2	1:Ao:311:LYS:HG3	1.89	0.53
3:Bb:176:ILE:HD12	3:Bb:204:PRO:HG3	1.91	0.53
3:Bd:229:LYS:HD2	3:Bd:272:LYS:HG3	1.90	0.53
3:Bn:615:LEU:HB2	3:Bx:616:LEU:HD13	1.91	0.53
3:Br:113:ILE:HD13	3:Br:150:HIS:CE1	2.44	0.53
1:Ae:364:GLN:HG2	1:Ae:365:PRO:HD2	1.90	0.53
1:Ak:425:LEU:HB3	1:Ak:428:GLN:HE21	1.73	0.53
2:Au:138:ASN:CG	2:Au:139:SER:N	2.67	0.53
3:Bb:379:GLU:OE2	3:Bb:379:GLU:HA	2.09	0.53
3:Bd:363:TYR:HE2	3:Bh:350:PHE:HE1	1.57	0.53
3:Bf:95:MET:HA	3:Bf:95:MET:HE3	1.91	0.53
3:Bl:383:ASP:HB2	3:Bl:385:PRO:HG3	1.90	0.53
3:Bp:311:GLU:HG3	3:Bx:205:ASN:CG	2.33	0.53
1:Ag:94:LEU:HD11	1:Aj:372:LEU:HD23	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Ak:89:LEU:HD11	1:Ak:405:CYS:SG	2.49	0.53
3:Bd:459:ARG:O	3:Bd:463:ILE:HG12	2.08	0.53
3:Bj:229:LYS:HE2	3:Bj:272:LYS:HG3	1.91	0.53
3:Bp:71:MET:HE1	3:Br:449:PHE:HB3	1.90	0.53
3:Bp:255:ILE:HG21	3:Br:506:VAL:HG11	1.90	0.53
3:Bt:604:GLN:HG2	3:Bt:606:PRO:HD3	1.91	0.53
3:Bx:35:PHE:CZ	3:Bx:40:GLN:HG2	2.44	0.53
1:Ah:334:LEU:HA	1:Ah:338:MET:HE1	1.91	0.53
1:Al:12:ALA:HB1	1:Al:15:GLU:HG3	1.91	0.53
1:Am:228:ILE:HD13	1:Am:267:MET:HE2	1.91	0.53
2:Ax:128:TYR:CE1	3:Bt:343:ARG:HG3	2.44	0.53
2:Az:81:SER:HA	2:Az:84:PHE:CE2	2.44	0.53
3:Bb:511:ARG:HB2	3:Bt:246:TYR:HB2	1.90	0.53
3:Bl:94:LEU:HD21	3:Bt:465:GLN:HG3	1.89	0.53
3:Bl:181:GLN:O	3:Bl:185:GLU:HG3	2.09	0.53
3:Bp:223:TYR:CZ	3:Bp:278:LYS:HD3	2.44	0.53
1:Af:392:PHE:HB2	1:Af:407:ILE:HG23	1.91	0.52
1:Ah:364:GLN:HG3	1:Ah:365:PRO:HD2	1.90	0.52
1:Am:228:ILE:HD12	1:Am:342:ILE:HD11	1.91	0.52
3:Bd:510:ILE:HG13	3:Bf:245:SER:HA	1.91	0.52
3:Bd:538:LEU:HD11	3:Bf:559:LEU:HD11	1.90	0.52
3:Bn:310:VAL:HG13	3:Bn:311:GLU:H	1.73	0.52
3:Bv:37:ARG:HD2	3:Bv:116:ARG:HH12	1.74	0.52
1:Ae:54:GLU:HB3	1:Ae:326:ALA:HB1	1.92	0.52
1:Ag:26:MET:HE3	1:Ag:120:ALA:HA	1.90	0.52
2:Ar:149:PHE:HZ	3:Bt:45:LEU:HB2	1.75	0.52
3:Bh:372:TYR:CE2	3:Bl:348:LYS:HB2	2.44	0.52
3:Br:584:PRO:HG3	3:Br:593:LEU:HD13	1.91	0.52
1:Ab:386:VAL:HG12	1:Ab:388:LEU:HD12	1.91	0.52
1:Ac:261:LEU:HD11	1:Ac:340:VAL:HG21	1.91	0.52
1:Ad:257:ALA:HB2	1:Ad:311:LYS:HG3	1.91	0.52
1:Af:24:THR:HG23	1:Af:116:GLU:HB2	1.90	0.52
1:Ag:182:LEU:HD23	1:Ag:195:ALA:HB2	1.91	0.52
1:Ah:168:TYR:HB3	1:Ah:211:VAL:HG22	1.90	0.52
3:Bb:29:ALA:HB2	3:Bb:316:TYR:HE1	1.74	0.52
3:Bb:503:GLU:HB2	3:Bb:504:LYS:HG2	1.92	0.52
3:Bj:323:THR:HG22	3:Bj:415:VAL:HG23	1.90	0.52
3:Bl:507:LEU:O	3:Bl:507:LEU:HD13	2.09	0.52
3:Bn:307:TRP:HZ3	3:Bv:113:ILE:HD11	1.74	0.52
3:Bp:255:ILE:HG12	3:Br:506:VAL:HB	1.91	0.52
1:Ag:41:GLN:OE1	1:Ag:78:ASN:HA	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Ak:295:PHE:HA	1:Ak:310:PRO:HG2	1.91	0.52
1:An:68:THR:HB	1:An:323:GLU:OE1	2.09	0.52
2:Ar:144:ASN:HD21	3:Bt:208:VAL:HG22	1.74	0.52
3:Bj:76:ILE:HD11	3:Bv:453:LEU:HB3	1.91	0.52
3:Bn:394:ASN:HB3	3:Bx:398:PRO:HB3	1.92	0.52
3:Bp:11:ILE:HG21	3:Bp:281:ILE:HG21	1.92	0.52
3:Bx:81:ARG:HG2	3:Bx:81:ARG:HH11	1.73	0.52
1:Aa:46:THR:HG21	1:Ab:9:VAL:HG22	1.90	0.52
1:Ah:278:VAL:HG12	1:Ah:293:ALA:HB3	1.90	0.52
3:Bb:310:VAL:HG13	3:Bb:315:VAL:HG21	1.91	0.52
3:Bd:96:GLY:O	3:Bd:100:THR:HG23	2.10	0.52
3:Bj:255:ILE:HG12	3:Bv:506:VAL:HB	1.92	0.52
3:Bl:247:PHE:HB2	3:Bl:252:LYS:NZ	2.25	0.52
3:Bp:12:LEU:C	3:Bp:14:ARG:H	2.17	0.52
3:Bx:248:LYS:HE3	3:Bx:273:ARG:NE	2.25	0.52
1:Ad:354:TRP:HB3	1:Ad:421:ILE:HA	1.92	0.52
1:Ae:241:TRP:CD1	1:Ae:241:TRP:H	2.27	0.52
1:Ag:187:ILE:HG12	1:Am:186:ASP:OD1	2.10	0.52
1:Ak:166:THR:HG22	1:Ak:355:ALA:HA	1.90	0.52
3:Bb:255:ILE:HG22	3:Bb:255:ILE:O	2.09	0.52
3:Bd:372:TYR:CE2	3:Bh:348:LYS:HB2	2.44	0.52
3:Bj:273:ARG:NE	3:Bj:275:ARG:HE	2.07	0.52
3:Bl:281:ILE:HG22	3:Bl:286:VAL:HG22	1.92	0.52
3:Bt:349:PRO:HB2	3:Bt:389:LEU:HD11	1.91	0.52
2:Ax:142:ASN:HB2	3:Bt:47:GLN:HE22	1.74	0.52
1:Ac:187:ILE:HD11	1:Ac:196:TYR:HB2	1.91	0.52
3:Bj:517:TYR:CD1	3:Bt:103:ARG:HD2	2.45	0.52
3:Bp:271:ILE:HD13	3:Bx:134:ASP:HB3	1.92	0.52
1:Ag:115:VAL:HG11	1:Ag:386:VAL:HG11	1.91	0.52
1:Ai:23:ILE:HG12	1:Ai:25:PRO:HD3	1.92	0.52
1:Ao:182:LEU:HD22	1:Ao:201:ILE:HD13	1.92	0.52
3:Bb:357:ALA:HB3	3:Bb:375:ASN:HD21	1.74	0.52
3:Bb:479:THR:HB	3:Bb:489:ASP:HB3	1.91	0.52
3:Bf:510:ILE:HD13	3:Br:245:SER:HA	1.91	0.52
3:Bl:310:VAL:HG13	3:Bl:311:GLU:H	1.74	0.52
3:Br:410:SER:O	3:Br:414:GLU:HG3	2.10	0.52
1:Aa:295:PHE:HB3	1:Aa:308:ILE:HG23	1.91	0.52
1:Ae:147:PHE:HE2	1:Ae:351:ASN:HD22	1.58	0.52
1:Ah:278:VAL:HG13	1:Ah:330:VAL:HG21	1.92	0.52
1:Ao:350:THR:HG23	1:Ao:423:VAL:HG23	1.91	0.52
2:Au:108:LYS:HG3	3:Bn:380:ASN:HB2	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Aw:7:GLY:HA3	2:Aw:69:GLU:HG3	1.92	0.52
2:Ba:58:TYR:HD2	2:Ba:75:LEU:HD21	1.75	0.52
3:Bb:472:TYR:CD2	3:Bt:97:MET:HE2	2.45	0.52
3:Bd:69:SER:O	3:Bd:73:GLN:HG2	2.10	0.52
3:Bp:248:LYS:HZ2	3:Br:511:ARG:NH1	2.08	0.52
1:Ac:122:MET:SD	1:Ac:126:MET:HE3	2.50	0.51
1:Ag:19:THR:HG22	1:Am:52:GLU:HB3	1.92	0.51
3:Bx:59:VAL:HG23	3:Bx:412:VAL:HG11	1.93	0.51
1:Ad:366:ILE:HG21	1:Ad:372:LEU:HD23	1.91	0.51
1:Af:110:LYS:HA	1:An:284:MET:HE2	1.92	0.51
1:Ai:46:THR:HG22	1:Ai:78:ASN:HB3	1.91	0.51
3:Bp:615:LEU:CD2	3:Bx:615:LEU:HD22	2.40	0.51
1:Ag:148:VAL:HG11	1:Ag:205:VAL:HG23	1.91	0.51
2:As:108:LYS:HB3	3:Bl:377:THR:HG21	1.91	0.51
3:Br:28:GLU:HB3	3:Br:321:ARG:NH1	2.26	0.51
1:Ae:187:ILE:HG21	1:Ai:188:PHE:HB2	1.92	0.51
1:Af:359:ILE:HG12	1:Af:421:ILE:HD11	1.91	0.51
1:Aj:149:ALA:HA	1:Aj:206:ALA:HB1	1.93	0.51
1:Am:109:ARG:HD3	1:Am:109:ARG:H	1.75	0.51
3:Bd:110:ALA:HA	3:Bd:148:PRO:HB3	1.92	0.51
3:Bd:323:THR:HB	3:Bd:412:VAL:HG13	1.93	0.51
3:Bd:334:MET:HE1	3:Bh:407:ALA:HB1	1.93	0.51
3:Bn:511:ARG:CZ	3:Bv:232:ALA:HB1	2.40	0.51
1:Ab:159:GLU:HG3	1:Ab:159:GLU:O	2.10	0.51
1:Af:416:THR:HB	1:Aj:17:ILE:HD13	1.91	0.51
1:Aj:131:ILE:HD11	1:Aj:150:ASP:OD1	2.11	0.51
1:Aj:223:SER:OG	1:Aj:342:ILE:HG21	2.10	0.51
1:Aj:304:THR:HG23	1:Aj:305:HIS:CD2	2.45	0.51
1:Al:299:ARG:HH11	1:Al:299:ARG:HG3	1.76	0.51
2:Ay:81:SER:HA	2:Ay:84:PHE:CE2	2.46	0.51
3:Br:79:LEU:HA	3:Br:95:MET:HE2	1.92	0.51
1:Aa:142:ALA:HB3	1:Ab:180:TYR:HE1	1.76	0.51
1:Ad:284:MET:HG3	1:Ah:113:ASN:ND2	2.24	0.51
1:Ak:35:PRO:HD2	1:Ak:364:GLN:HE21	1.75	0.51
1:Ak:278:VAL:HG13	1:Ak:293:ALA:HB3	1.92	0.51
1:An:317:ASP:HB3	1:An:320:LEU:HG	1.93	0.51
3:Bj:471:ILE:HA	3:Bj:507:LEU:HD13	1.92	0.51
3:Bn:255:ILE:HD13	3:Bn:258:LEU:HD22	1.93	0.51
3:Bn:531:ASN:HD22	3:Bv:563:LYS:HE3	1.76	0.51
3:Bp:362:MET:HE1	3:Bp:373:LEU:H	1.76	0.51
1:Aa:128:SER:O	1:Aa:422:GLY:HA2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Af:27:ALA:HB1	1:Af:386:VAL:HG13	1.93	0.51
1:Af:382:SER:HB3	3:Bp:20:THR:HG21	1.92	0.51
1:Ah:101:ARG:NH1	3:Bj:206:ASP:HB3	2.26	0.51
1:Ak:97:GLU:HB3	3:Bd:45:LEU:HD22	1.93	0.51
1:An:234:GLN:HE22	1:An:260:THR:HB	1.75	0.51
3:Bh:481:THR:HB	3:Bh:488:LYS:HG2	1.92	0.51
1:Ac:78:ASN:H	1:Ac:414:ASN:ND2	2.08	0.51
1:Aj:368:ALA:HB3	1:Aj:378:THR:HG21	1.93	0.51
3:Bd:133:GLU:O	3:Bd:137:PRO:HB3	2.11	0.51
3:Bh:281:ILE:HG22	3:Bh:286:VAL:HG13	1.93	0.51
3:Bn:123:VAL:HG21	3:Bn:153:CYS:HB3	1.93	0.51
3:Bn:398:PRO:HB3	3:Bv:394:ASN:HB3	1.93	0.51
1:Af:398:ILE:HG13	1:Ai:395:GLN:HB3	1.93	0.51
1:Ao:130:VAL:HG21	1:Ao:272:LYS:HB3	1.91	0.51
2:Ax:132:MET:HE3	2:Ax:149:PHE:CZ	2.46	0.51
3:Bd:616:LEU:HD13	3:Bd:619:GLN:HE22	1.75	0.51
1:Ae:196:TYR:CE2	1:Ao:201:ILE:HD11	2.46	0.51
1:Af:295:PHE:HD1	1:Af:310:PRO:HD2	1.75	0.51
2:Ap:133:PRO:HA	2:Ap:147:HIS:HA	1.92	0.51
3:Bd:80:TYR:HE1	3:Bh:518:THR:HG22	1.76	0.51
3:Bj:61:ARG:HG2	3:Bj:61:ARG:HH11	1.75	0.51
3:Bl:128:LEU:HD11	3:Bt:460:ASP:OD2	2.10	0.51
3:Bn:158:TRP:CG	3:Bn:167:LYS:HD2	2.46	0.51
3:Bx:333:ILE:HG21	3:Bx:405:LEU:HB2	1.93	0.51
1:Aa:108:ALA:HB1	1:Aa:384:PRO:HD3	1.91	0.50
1:Af:8:ILE:HD13	1:Af:10:THR:HG23	1.93	0.50
1:Ag:63:LEU:HA	1:Ag:66:LYS:NZ	2.26	0.50
1:Ai:295:PHE:HA	1:Ai:310:PRO:HG2	1.94	0.50
1:Ao:126:MET:HG2	1:Ao:126:MET:O	2.11	0.50
2:Av:54:ILE:HG12	2:Av:114:LEU:HD23	1.91	0.50
3:Bj:561:ASP:HA	3:Bj:569:ARG:NH2	2.25	0.50
3:Bl:385:PRO:HA	3:Bt:352:TRP:CZ2	2.44	0.50
3:Bl:614:VAL:HG11	3:Bt:616:LEU:HD12	1.93	0.50
3:Bn:471:ILE:C	3:Bn:507:LEU:HD11	2.36	0.50
3:Bp:246:TYR:HD2	3:Br:511:ARG:HB3	1.76	0.50
1:Aa:156:PHE:HD1	1:Aa:162:ARG:HH22	1.58	0.50
1:Aa:171:ASN:ND2	1:Aa:174:ASP:H	2.08	0.50
3:Bb:255:ILE:HG13	3:Bb:258:LEU:HD13	1.93	0.50
3:Bj:199:PRO:HD2	3:Bj:217:ILE:HD12	1.93	0.50
3:Bn:54:ARG:HG3	3:Bn:54:ARG:NH1	2.24	0.50
1:Af:3:LEU:HD13	1:Ai:70:LEU:HB2	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Ag:4:ASN:HD21	1:Aj:241:TRP:NE1	2.10	0.50
1:Am:299:ARG:NH2	1:Am:301:VAL:HG22	2.26	0.50
2:Ap:56:THR:HG22	2:Ap:114:LEU:HD22	1.94	0.50
3:Bb:506:VAL:HB	3:Bt:255:ILE:HG12	1.93	0.50
3:Bj:345:PRO:HG2	3:Bj:392:TYR:CZ	2.46	0.50
3:Bn:94:LEU:HA	3:Bn:97:MET:HE2	1.93	0.50
3:Bv:612:GLN:NE2	3:Bv:616:LEU:HD11	2.26	0.50
1:Aa:6:GLY:HA3	1:Ak:74:ASN:HD21	1.77	0.50
1:Ae:36:PRO:HB3	3:Bv:210:PRO:HB2	1.93	0.50
2:Ax:126:ALA:H	3:Bl:364:ASP:HB2	1.76	0.50
3:Bb:404:MET:SD	3:Bt:337:ASN:HB3	2.51	0.50
3:Bf:37:ARG:HE	3:Bf:116:ARG:NH1	2.09	0.50
3:Bj:459:ARG:O	3:Bj:463:ILE:HG12	2.11	0.50
3:Bl:619:GLN:HA	3:Bl:622:LEU:HD13	1.94	0.50
3:Bp:525:GLN:OE1	3:Bx:103:ARG:HB2	2.12	0.50
3:Bv:546:THR:OG1	3:Bv:547:PRO:HD3	2.11	0.50
1:Aa:161:ASN:H	1:Aa:417:ARG:NH2	2.09	0.50
1:Ab:46:THR:C	1:Ab:47:ILE:HD13	2.37	0.50
1:Ab:239:VAL:HG13	1:Ab:252:VAL:HG21	1.94	0.50
1:Ai:286:LYS:H	1:Ai:286:LYS:HD2	1.76	0.50
1:Aj:182:LEU:HD12	1:Aj:201:ILE:HG22	1.93	0.50
1:Al:198:ASP:O	1:Al:200:THR:HG22	2.11	0.50
1:Am:309:THR:HB	1:Am:310:PRO:HD3	1.93	0.50
3:Bj:341:VAL:HG11	3:Bv:333:ILE:HD13	1.93	0.50
1:Ac:70:LEU:HD11	1:Ad:89:LEU:HD11	1.94	0.50
1:Ak:363:SER:HB3	1:Ak:388:LEU:HD22	1.93	0.50
1:Am:275:PHE:HB3	1:Am:338:MET:SD	2.51	0.50
2:At:33:MET:HE2	2:At:69:GLU:OE1	2.11	0.50
2:Aw:128:TYR:HD2	2:Aw:132:MET:HG2	1.77	0.50
3:Bh:599:ALA:HA	3:Bh:603:GLN:HB2	1.92	0.50
3:Bj:79:LEU:HD22	3:Bv:521:GLY:HA3	1.93	0.50
1:Ac:345:VAL:HG22	1:Ac:428:GLN:HG3	1.92	0.50
1:Ac:383:ILE:HD13	1:Ac:386:VAL:HB	1.93	0.50
1:Al:53:GLN:HB2	1:Al:327:TYR:OH	2.11	0.50
1:Al:255:ARG:HG2	1:Al:418:PRO:HG2	1.93	0.50
1:Aa:130:VAL:HB	1:Aa:343:LEU:HD23	1.94	0.50
1:Ad:130:VAL:HG21	1:Ad:272:LYS:HB3	1.94	0.50
1:Am:81:GLU:HG2	1:Am:82:PRO:HD2	1.94	0.50
3:Bb:259:ALA:HB1	3:Bb:263:PHE:HD2	1.77	0.50
3:Bd:281:ILE:HG22	3:Bd:286:VAL:HG13	1.94	0.50
3:Bh:88:PRO:HB2	3:Bh:561:ASP:OD2	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Bn:37:ARG:HH21	3:Bn:116:ARG:HG2	1.77	0.50
3:Br:317:GLU:OE2	3:Br:321:ARG:HB3	2.11	0.50
3:Bx:231:THR:HG21	3:Bx:249:ARG:HD3	1.94	0.50
1:Ac:70:LEU:HG	1:Ad:89:LEU:HD21	1.93	0.50
1:Ac:90:ARG:HA	1:Ac:401:LEU:HB2	1.94	0.50
1:Ah:221:THR:HA	1:Ah:347:ASP:HB3	1.94	0.50
1:Am:346:LYS:HB2	1:Am:346:LYS:NZ	2.25	0.50
3:Bn:538:LEU:HD21	3:Bv:559:LEU:HD21	1.93	0.50
1:Af:372:LEU:HD11	1:An:61:TRP:HE1	1.77	0.49
1:Aj:161:ASN:HB3	1:Aj:417:ARG:HH12	1.77	0.49
2:Ar:149:PHE:CZ	3:Bt:45:LEU:HB2	2.46	0.49
2:Ax:9:LEU:HD22	2:Ax:84:PHE:HB3	1.93	0.49
2:Ay:75:LEU:HD21	2:Ay:83:VAL:HG21	1.94	0.49
3:Bf:164:LEU:HD12	3:Bf:169:ASP:HB2	1.93	0.49
3:Bh:110:ALA:HA	3:Bh:148:PRO:HB3	1.93	0.49
3:Bh:607:ALA:HB1	3:Bl:608:MET:HB3	1.94	0.49
3:Bp:363:TYR:CZ	3:Bp:372:TYR:HB3	2.47	0.49
3:Br:158:TRP:CD2	3:Br:167:LYS:HG2	2.47	0.49
3:Bv:8:LEU:HD23	3:Bv:286:VAL:HG13	1.94	0.49
3:Bx:234:ILE:HD11	3:Bx:269:ARG:HD3	1.94	0.49
1:Aa:49:MET:HE1	1:Aa:77:VAL:HG13	1.94	0.49
1:Aa:255:ARG:HH11	1:Aa:416:THR:HA	1.78	0.49
1:Ab:90:ARG:HE	1:Ab:93:ASP:HB2	1.77	0.49
1:Af:138:GLY:H	1:Af:143:ASP:HB2	1.77	0.49
1:Am:386:VAL:HG22	1:Am:388:LEU:HG	1.94	0.49
2:As:133:PRO:HA	2:As:147:HIS:HA	1.94	0.49
1:Ah:377:LYS:HD2	3:Bj:211:TRP:HA	1.93	0.49
3:Bb:36:SER:HB2	3:Bb:320:VAL:HG11	1.93	0.49
3:Bb:246:TYR:CE1	3:Bj:511:ARG:HB3	2.47	0.49
3:Bb:362:MET:HE1	3:Bb:373:LEU:HB2	1.93	0.49
3:Bl:409:THR:O	3:Bl:413:LYS:HG2	2.12	0.49
1:Ae:40:MET:HE1	1:Ae:410:TRP:CH2	2.46	0.49
1:Aj:286:LYS:HD2	1:Aj:315:LEU:HD13	1.94	0.49
3:Bb:538:LEU:HD11	3:Bt:559:LEU:HD21	1.93	0.49
3:Bh:178:SER:HB3	3:Bl:312:ASP:OD1	2.12	0.49
3:Bn:334:MET:HA	3:Bn:334:MET:HE2	1.94	0.49
3:Bn:478:VAL:O	3:Bn:491:GLN:HG3	2.13	0.49
3:Bp:543:PRO:O	3:Bp:548:GLU:HB2	2.12	0.49
3:Br:454:ALA:HB1	3:Br:520:VAL:HG21	1.94	0.49
1:Aa:168:TYR:CD1	1:Aa:353:PHE:HB3	2.48	0.49
1:Ac:90:ARG:HG2	1:Ac:92:ASP:OD1	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Af:81:GLU:HB3	1:An:60:GLY:HA2	1.93	0.49
1:Ag:349:ARG:HH11	1:Ag:349:ARG:HG2	1.75	0.49
1:Am:109:ARG:HG2	1:Am:109:ARG:HH11	1.77	0.49
2:Ba:91:ILE:HG23	2:Ba:95:TYR:HE1	1.77	0.49
3:Bb:58:ASP:OD1	3:Bb:61:ARG:HB2	2.12	0.49
3:Bj:193:LEU:HD22	3:Bj:287:LEU:HB3	1.94	0.49
1:Ag:118:LYS:O	1:Ag:122:MET:HB2	2.13	0.49
1:Ah:295:PHE:HA	1:Ah:310:PRO:HG2	1.94	0.49
1:An:85:ASP:OD2	1:An:107:ALA:HB1	2.12	0.49
1:An:281:LEU:HD21	1:An:286:LYS:HD2	1.94	0.49
2:Au:122:ARG:HD2	3:Bn:360:GLU:OE1	2.13	0.49
3:Bb:110:ALA:HA	3:Bb:148:PRO:HB3	1.95	0.49
3:Bh:184:TRP:CE2	3:Bh:199:PRO:HD3	2.47	0.49
3:Bj:564:GLY:HA3	3:Bv:554:LEU:HD21	1.94	0.49
3:Bv:575:GLN:O	3:Bv:579:MET:HG2	2.13	0.49
1:Ac:86:PHE:CD1	1:Ac:406:ARG:HB2	2.48	0.49
1:Ad:236:PHE:CZ	1:Ad:259:VAL:HG12	2.48	0.49
1:Aj:275:PHE:HB3	1:Aj:338:MET:SD	2.52	0.49
1:Ak:302:ASP:OD1	1:Ak:305:HIS:HB2	2.13	0.49
1:Ao:112:ALA:O	1:Ao:115:VAL:HG12	2.13	0.49
2:Av:20:ALA:HB1	2:Av:28:VAL:HG12	1.93	0.49
3:Bh:164:LEU:HD13	3:Bh:169:ASP:HB2	1.95	0.49
3:Bh:252:LYS:HB2	3:Bh:255:ILE:HG22	1.95	0.49
3:Bj:214:GLN:HG3	3:Bv:313:LYS:NZ	2.23	0.49
3:Bn:469:ASN:HB3	3:Bn:513:ARG:HD2	1.94	0.49
3:Bx:234:ILE:HG12	3:Bx:246:TYR:HD1	1.77	0.49
1:Aa:269:ARG:HG3	1:Aa:298:VAL:O	2.13	0.49
1:Ac:239:VAL:HG23	1:Ac:252:VAL:HG11	1.93	0.49
3:Bd:27:ARG:HG2	3:Bd:27:ARG:HH11	1.78	0.49
3:Bf:511:ARG:CZ	3:Bf:511:ARG:HB2	2.43	0.49
3:Bj:255:ILE:HG21	3:Bv:506:VAL:HG11	1.95	0.49
3:Bv:252:LYS:O	3:Bv:252:LYS:HG3	2.11	0.49
1:Ab:31:LYS:HE2	1:Ab:357:ASP:HA	1.94	0.49
1:Ag:34:THR:O	1:Ag:36:PRO:HD3	2.13	0.49
1:Ag:86:PHE:CZ	1:Ag:404:LEU:HD22	2.47	0.49
1:Ah:220:LEU:HD22	1:Ah:425:LEU:HD11	1.95	0.49
1:An:81:GLU:HG2	1:An:82:PRO:HD2	1.95	0.49
2:Ay:91:ILE:HG23	2:Ay:95:TYR:HE1	1.78	0.49
3:Bb:44:TRP:HB3	3:Bb:209:PHE:HD2	1.78	0.49
3:Bf:379:GLU:HG2	3:Bf:380:ASN:H	1.78	0.49
1:Ah:96:ASP:HB2	1:Ah:98:THR:HG22	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Ak:354:TRP:CD1	1:Ak:354:TRP:C	2.91	0.49
1:Ao:238:PRO:HD2	1:Ao:324:GLN:HB3	1.95	0.49
2:Aq:81:SER:HB2	2:Av:42:ALA:HB1	1.95	0.49
2:Ax:26:THR:HG22	2:Ax:27:ASP:H	1.78	0.49
3:Bb:114:ALA:HB3	3:Bb:126:TRP:HE1	1.76	0.49
3:Bl:543:PRO:O	3:Bl:548:GLU:HB2	2.13	0.49
3:Bn:23:ASP:O	3:Bn:27:ARG:HG3	2.13	0.49
3:Bn:225:VAL:HG12	3:Bn:276:VAL:HG22	1.95	0.49
3:Bt:310:VAL:HG13	3:Bt:311:GLU:N	2.26	0.49
1:Ad:121:ASN:O	1:Ad:125:GLU:HG3	2.13	0.48
1:Ae:96:ASP:HB3	1:Ah:41:GLN:HE22	1.78	0.48
1:Am:269:ARG:HD2	1:Am:298:VAL:O	2.13	0.48
3:Bb:310:VAL:HG23	3:Bb:311:GLU:H	1.78	0.48
3:Bt:324:LYS:O	3:Bt:328:ARG:HG3	2.12	0.48
3:Bv:323:THR:HG22	3:Bv:415:VAL:HG23	1.95	0.48
3:Bx:123:VAL:HG11	3:Bx:153:CYS:HB3	1.95	0.48
1:Aa:82:PRO:HG2	1:Al:61:TRP:HB3	1.94	0.48
1:Aa:126:MET:HG3	1:Aa:309:THR:HG23	1.95	0.48
1:Ag:238:PRO:HD2	1:Ag:324:GLN:HB3	1.94	0.48
1:Aj:168:TYR:HB2	1:Aj:208:PHE:CD2	2.48	0.48
3:Bf:362:MET:HG2	3:Bf:369:TYR:CD1	2.49	0.48
3:Bj:313:LYS:HE2	3:Bj:313:LYS:HB2	1.64	0.48
3:Bl:15:PHE:HD1	3:Bl:174:THR:HG21	1.78	0.48
3:Br:97:MET:HA	3:Br:100:THR:HG22	1.94	0.48
3:Br:350:PHE:HB2	3:Br:390:ALA:O	2.13	0.48
1:Ab:118:LYS:O	1:Ab:122:MET:HB2	2.13	0.48
2:Ar:17:LEU:HD13	2:Ar:88:ALA:HB1	1.95	0.48
2:Av:108:LYS:HG3	3:Br:380:ASN:HB2	1.95	0.48
3:Bf:404:MET:HE2	3:Bf:404:MET:HA	1.94	0.48
3:Bh:342:ALA:HB2	3:Bl:332:MET:HE1	1.95	0.48
3:Bh:611:ALA:HA	3:Bl:616:LEU:HD21	1.95	0.48
3:Bl:15:PHE:HE1	3:Bl:157:ILE:HD13	1.79	0.48
3:Bt:254:VAL:HG23	3:Bt:255:ILE:HD13	1.95	0.48
1:Ac:285:ALA:HB2	1:Ad:216:LYS:HE3	1.96	0.48
1:Ad:86:PHE:CZ	1:Ad:404:LEU:HD22	2.48	0.48
1:Ad:346:LYS:HE3	1:Ad:346:LYS:HB2	1.59	0.48
1:Ag:419:GLU:CD	1:Ag:419:GLU:H	2.22	0.48
1:Am:74:ASN:ND2	1:Am:251:ASN:HD22	2.11	0.48
2:Ax:150:PRO:HD2	3:Bt:52:GLN:HA	1.95	0.48
2:Ay:130:SER:HB2	2:Ay:150:PRO:HB3	1.95	0.48
2:Ay:150:PRO:HG3	3:Bv:49:THR:HG22	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Bh:329:LEU:O	3:Bh:333:ILE:HG12	2.12	0.48
3:Bn:538:LEU:HD22	3:Bv:556:TYR:HE1	1.78	0.48
1:Aa:128:SER:OG	1:Aa:310:PRO:HG3	2.14	0.48
1:Aa:202:GLN:HB3	1:Ab:197:ARG:HH21	1.79	0.48
1:Ab:345:VAL:HB	1:Ab:430:ALA:HB3	1.96	0.48
1:Ag:84:ASN:ND2	1:Am:63:LEU:HD11	2.28	0.48
1:Ah:236:PHE:CZ	1:Ah:259:VAL:HG22	2.49	0.48
2:Ba:43:MET:HG3	2:Ba:90:ARG:CZ	2.44	0.48
3:Bb:530:GLN:OE1	3:Bt:79:LEU:HD11	2.13	0.48
3:Bb:608:MET:HE2	3:Bb:608:MET:HA	1.94	0.48
3:Bh:157:ILE:HB	3:Bh:174:THR:HG23	1.95	0.48
3:Bh:158:TRP:CD2	3:Bh:167:LYS:HG2	2.48	0.48
3:Bn:102:MET:HE3	3:Bn:146:ARG:HH21	1.77	0.48
3:Bn:586:THR:HG23	3:Bn:589:GLU:HG3	1.93	0.48
3:Bn:615:LEU:HA	3:Bx:616:LEU:HD22	1.96	0.48
3:Br:236:GLN:HB2	3:Br:266:ILE:HD11	1.94	0.48
3:Bx:458:ARG:HH11	3:Bx:458:ARG:HG3	1.78	0.48
1:Ae:237:LYS:HE2	1:Ae:237:LYS:HB2	1.73	0.48
1:Ae:321:SER:HB3	1:Ae:324:GLN:HE21	1.78	0.48
1:Ag:40:MET:HG2	3:Bf:47:GLN:HA	1.95	0.48
1:Ag:284:MET:HE2	1:Ak:20:ILE:HG21	1.96	0.48
1:Am:159:GLU:OE1	1:Am:284:MET:HB2	2.12	0.48
2:Ay:113:LEU:HD23	2:Ay:116:LYS:HE2	1.95	0.48
3:Bb:578:GLN:HG3	3:Bb:596:ALA:HB2	1.94	0.48
3:Bd:248:LYS:HG3	3:Bh:511:ARG:NH2	2.29	0.48
3:Bh:37:ARG:HE	3:Bh:116:ARG:NH1	2.05	0.48
3:Bl:278:LYS:HE3	3:Bl:293:ILE:HD11	1.96	0.48
3:Bn:15:PHE:CD1	3:Bn:174:THR:HG21	2.47	0.48
3:Bn:150:HIS:CD2	3:Bx:309:PHE:HB2	2.48	0.48
3:Bv:158:TRP:CG	3:Bv:167:LYS:HD2	2.49	0.48
1:Aa:19:THR:HG22	1:Al:417:ARG:HD3	1.94	0.48
1:Ac:115:VAL:HG11	1:Ac:386:VAL:HG11	1.94	0.48
2:Az:134:THR:HG22	2:Az:148:TYR:CZ	2.48	0.48
3:Bh:550:GLN:HE21	3:Bh:581:VAL:HG21	1.79	0.48
3:Bl:81:ARG:HB2	3:Bt:517:TYR:CZ	2.48	0.48
3:Bn:234:ILE:HG22	3:Bn:266:ILE:HB	1.96	0.48
3:Br:347:LYS:O	3:Br:348:LYS:HD3	2.14	0.48
3:Br:556:TYR:CE2	3:Br:567:MET:HE2	2.49	0.48
1:Ac:172:PRO:HD2	1:Ac:349:ARG:HH21	1.79	0.48
2:Ar:43:MET:HE3	2:Ar:90:ARG:HD3	1.96	0.48
2:Au:134:THR:HB	2:Au:138:ASN:OD1	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Bh:94:LEU:HA	3:Bh:97:MET:HE2	1.96	0.48
3:Bj:61:ARG:HG2	3:Bj:61:ARG:NH1	2.29	0.48
3:Bj:220:ALA:HB3	3:Bj:281:ILE:HG13	1.95	0.48
3:Bj:536:LEU:HD21	3:Bv:541:LYS:HE2	1.95	0.48
3:Bl:611:ALA:HB1	3:Bt:615:LEU:HD12	1.95	0.48
3:Bp:518:THR:HG23	3:Bx:78:VAL:HG13	1.94	0.48
1:Af:190:ARG:HG3	1:Af:190:ARG:NH1	2.29	0.48
1:Af:299:ARG:HH12	1:Af:301:VAL:HG22	1.79	0.48
1:Ao:168:TYR:HB3	1:Ao:211:VAL:HG22	1.96	0.48
2:At:15:ARG:HG3	2:Ay:94:ASP:OD1	2.14	0.48
2:At:90:ARG:O	2:At:93:PRO:HD2	2.14	0.48
3:Bj:376:ARG:HH21	3:Bv:384:LEU:HD12	1.79	0.48
3:Bj:469:ASN:HB3	3:Bj:513:ARG:HD2	1.95	0.48
3:Bn:47:GLN:HG2	3:Bn:50:THR:H	1.79	0.48
1:Al:182:LEU:HD23	1:Al:195:ALA:HB2	1.96	0.48
1:An:168:TYR:CD1	1:An:353:PHE:HB3	2.48	0.48
3:Bd:45:LEU:HD23	3:Bd:45:LEU:H	1.79	0.48
3:Bd:80:TYR:C	3:Bd:81:ARG:HD2	2.39	0.48
3:Bd:199:PRO:HG3	3:Bd:219:ILE:HD12	1.96	0.48
3:Bj:113:ILE:HD11	3:Bv:307:TRP:HZ3	1.77	0.48
3:Bp:309:PHE:HB2	3:Bx:150:HIS:ND1	2.29	0.48
3:Bv:259:ALA:HA	3:Bv:263:PHE:HD2	1.79	0.48
1:Aa:255:ARG:HD2	1:Aa:418:PRO:HG3	1.96	0.47
1:Ab:191:ILE:HB	1:Ab:192:PRO:HD3	1.96	0.47
1:Ac:161:ASN:HA	1:Ad:21:SER:HB3	1.95	0.47
1:Ad:379:THR:HG23	1:Ad:392:PHE:HB3	1.95	0.47
1:Ae:34:THR:HG21	1:Ae:362:VAL:HG13	1.94	0.47
1:Ak:354:TRP:HB2	1:Ak:421:ILE:HD13	1.95	0.47
1:Al:234:GLN:HE22	1:Al:259:VAL:HA	1.78	0.47
1:Am:40:MET:HE2	1:Am:45:ASN:HA	1.96	0.47
1:Am:106:SER:HA	1:Am:109:ARG:HE	1.79	0.47
2:Ap:36:ALA:HA	2:Ap:91:ILE:HD11	1.96	0.47
2:Ar:113:LEU:HD12	2:Aw:46:GLU:HG3	1.94	0.47
2:Ay:131:ARG:NH2	3:Bv:52:GLN:HB3	2.29	0.47
3:Bn:179:MET:HE2	3:Bn:179:MET:HB3	1.78	0.47
3:Bn:571:TYR:HB2	3:Bx:581:VAL:HG23	1.96	0.47
3:Bx:127:ARG:HG3	3:Bx:300:ILE:HD13	1.96	0.47
1:Ab:295:PHE:HA	1:Ab:310:PRO:HG2	1.96	0.47
1:Af:366:ILE:H	1:Af:366:ILE:HD12	1.78	0.47
1:Ag:51:VAL:HA	1:Ak:17:ILE:HG12	1.96	0.47
1:Ag:95:ARG:HB3	1:Aj:37:ALA:HB1	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Ag:171:ASN:HB2	1:Ag:349:ARG:NH1	2.28	0.47
1:Ak:275:PHE:O	1:Ak:278:VAL:HG12	2.14	0.47
1:Al:234:GLN:HE22	1:Al:260:THR:H	1.62	0.47
1:Am:295:PHE:CD1	1:Am:310:PRO:HB2	2.49	0.47
2:Av:43:MET:CE	2:Av:86:ASN:HB3	2.44	0.47
3:Bj:556:TYR:CE1	3:Bv:538:LEU:HD13	2.50	0.47
3:Bn:280:ILE:HG22	3:Bn:287:LEU:HD23	1.96	0.47
3:Br:79:LEU:HD23	3:Br:81:ARG:HD2	1.96	0.47
3:Bt:5:GLU:HG3	3:Bt:7:ARG:H	1.79	0.47
1:Ac:379:THR:HG22	1:Ac:380:SER:H	1.79	0.47
1:Ac:397:ASP:HB2	1:Ac:402:SER:HB2	1.96	0.47
1:Ad:71:LEU:HD21	1:Ad:238:PRO:HB2	1.96	0.47
1:Al:286:LYS:HA	1:Al:286:LYS:HD3	1.69	0.47
3:Bl:310:VAL:HG13	3:Bl:311:GLU:N	2.28	0.47
3:Bl:317:GLU:OE1	3:Bl:321:ARG:HG2	2.15	0.47
3:Bv:289:ASP:O	3:Bv:291:GLN:HG3	2.14	0.47
3:Bv:468:VAL:HG22	3:Bv:472:TYR:HD2	1.79	0.47
1:Af:6:GLY:CA	1:Ai:74:ASN:HD21	2.27	0.47
1:Ah:377:LYS:HD3	3:Bj:211:TRP:HD1	1.80	0.47
1:Ai:225:ALA:HB1	1:Ai:228:ILE:HD11	1.96	0.47
1:An:73:LEU:HD21	1:An:238:PRO:HB2	1.97	0.47
2:Ar:134:THR:HG22	2:Ar:148:TYR:CZ	2.50	0.47
2:Ay:102:LYS:HE3	3:Bt:380:ASN:ND2	2.29	0.47
3:Bh:6:ASN:OD1	3:Bh:9:GLU:HB2	2.13	0.47
3:Bh:248:LYS:HZ3	3:Bh:273:ARG:HD3	1.79	0.47
3:Bl:610:GLN:HB3	3:Bt:612:GLN:HB2	1.96	0.47
3:Bp:611:ALA:HB2	3:Br:612:GLN:HB2	1.96	0.47
3:Br:337:ASN:HD21	3:Br:401:ASN:HD22	1.61	0.47
3:Bv:79:LEU:HD23	3:Bv:81:ARG:HE	1.79	0.47
3:Bv:306:GLU:HB2	3:Bv:317:GLU:HG3	1.95	0.47
1:Ab:89:LEU:HD11	2:Ar:140:PHE:HE2	1.79	0.47
1:Ac:230:VAL:HA	1:Ac:261:LEU:HD13	1.96	0.47
1:Ae:125:GLU:O	1:Ae:270:GLY:HA2	2.15	0.47
1:Aj:191:ILE:HD12	1:Aj:202:GLN:HG3	1.96	0.47
1:Aj:261:LEU:HD12	1:Aj:264:THR:HG22	1.95	0.47
3:Bd:214:GLN:HG2	3:Bh:21:ALA:HB2	1.94	0.47
3:Bp:81:ARG:NH1	3:Bp:560:LEU:HD21	2.29	0.47
3:Bp:322:LEU:HD12	3:Bx:58:ASP:HB2	1.96	0.47
3:Bp:616:LEU:HD13	3:Bx:614:VAL:HG11	1.96	0.47
3:Bt:469:ASN:HB3	3:Bt:513:ARG:HD3	1.97	0.47
3:Bv:463:ILE:O	3:Bv:467:ILE:HG13	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Ab:236:PHE:CD2	1:Ab:312:PRO:HD2	2.50	0.47
1:Aj:205:VAL:HG12	1:Aj:211:VAL:HG11	1.97	0.47
1:An:26:MET:HE1	1:An:169:PHE:CD2	2.50	0.47
3:Bb:373:LEU:HA	3:Bj:351:PHE:O	2.15	0.47
3:Bb:510:ILE:HD11	3:Bt:244:VAL:HG22	1.96	0.47
3:Bd:619:GLN:HG3	3:Bf:619:GLN:HG3	1.97	0.47
3:Bf:248:LYS:HB2	3:Bf:251:ILE:HG12	1.97	0.47
3:Bl:311:GLU:O	3:Bl:313:LYS:HG2	2.14	0.47
3:Bp:248:LYS:HZ2	3:Br:511:ARG:HH11	1.62	0.47
3:Bt:79:LEU:HD12	3:Bt:79:LEU:HA	1.70	0.47
1:Aa:125:GLU:HB3	1:Aa:269:ARG:HE	1.79	0.47
1:Ac:5:GLU:HG2	1:Ac:6:GLY:N	2.30	0.47
1:Ac:156:PHE:CE2	1:Ad:215:PRO:HB3	2.50	0.47
1:Ae:203:ARG:HG3	3:Bn:4:ASN:HB3	1.97	0.47
1:Ae:376:MET:O	1:Ae:378:THR:HG23	2.14	0.47
1:Af:97:GLU:O	1:Af:101:ARG:HG3	2.14	0.47
1:Af:103:ARG:HB2	1:An:70:LEU:HD11	1.95	0.47
1:Af:378:THR:HG22	1:Af:393:ALA:HB2	1.96	0.47
1:Ah:275:PHE:HB2	1:Ah:278:VAL:HB	1.95	0.47
1:Al:77:VAL:HG11	1:Al:362:VAL:HG11	1.97	0.47
1:Al:298:VAL:HG22	1:Al:307:GLU:HG2	1.97	0.47
1:Al:309:THR:HB	1:Al:310:PRO:HD3	1.95	0.47
2:Au:86:ASN:C	2:Au:88:ALA:H	2.23	0.47
2:Ba:44:MET:HA	2:Ba:44:MET:HE3	1.96	0.47
3:Bb:322:LEU:HD13	3:Bt:58:ASP:OD2	2.14	0.47
3:Bd:60:VAL:HG11	3:Bd:320:VAL:HG13	1.97	0.47
3:Bf:184:TRP:CZ2	3:Bf:199:PRO:HD3	2.50	0.47
3:Bf:227:GLU:HG3	3:Bf:274:ARG:HD3	1.96	0.47
3:Bf:538:LEU:HD22	3:Br:556:TYR:HE1	1.79	0.47
3:Bh:100:THR:HG22	3:Bh:103:ARG:HH22	1.79	0.47
3:Bj:347:LYS:HG3	3:Bj:392:TYR:O	2.15	0.47
3:Bl:44:TRP:CD1	3:Bl:45:LEU:HG	2.47	0.47
3:Bl:66:LYS:HB3	3:Bl:66:LYS:HE3	1.67	0.47
3:Bp:184:TRP:HB2	3:Bp:217:ILE:HG21	1.97	0.47
3:Bp:457:MET:HG3	3:Bx:76:ILE:HG23	1.96	0.47
3:Bv:468:VAL:HG22	3:Bv:472:TYR:CD2	2.50	0.47
1:Ah:97:GLU:HB2	2:As:149:PHE:CZ	2.50	0.47
1:Ak:35:PRO:HB2	1:Ak:40:MET:HG3	1.96	0.47
1:Am:298:VAL:HB	1:Am:307:GLU:HB3	1.97	0.47
1:An:148:VAL:HG12	1:An:206:ALA:HB3	1.96	0.47
2:Au:80:VAL:O	2:Au:84:PHE:HB3	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Au:86:ASN:O	2:Au:87:LEU:HB3	2.14	0.47
2:Az:125:ARG:HG2	3:Bj:370:PRO:HD3	1.95	0.47
3:Bd:458:ARG:HG2	3:Bd:518:THR:HG23	1.96	0.47
3:Bj:275:ARG:NH1	3:Bj:292:LEU:HD21	2.29	0.47
3:Bl:130:THR:HG22	3:Bl:144:ILE:HG12	1.96	0.47
3:Bp:113:ILE:HD11	3:Br:307:TRP:HZ3	1.79	0.47
1:Aa:11:LEU:HD22	1:Aa:13:VAL:HG22	1.97	0.47
1:Ac:81:GLU:HG2	1:Ac:82:PRO:HD2	1.96	0.47
1:Ae:35:PRO:HB3	1:Ai:14:ASP:OD1	2.15	0.47
1:Ag:32:LYS:H	1:Ag:32:LYS:HD3	1.80	0.47
1:Ag:378:THR:H	2:Ap:143:LEU:HD11	1.80	0.47
1:Ah:378:THR:HG23	1:Ah:393:ALA:HB2	1.97	0.47
1:Ao:126:MET:HG3	1:Ao:309:THR:HG23	1.96	0.47
3:Bb:362:MET:HE3	3:Bb:373:LEU:H	1.80	0.47
3:Bd:457:MET:HG3	3:Bf:76:ILE:HG22	1.97	0.47
3:Bf:310:VAL:HG13	3:Bf:311:GLU:H	1.79	0.47
3:Bn:150:HIS:CG	3:Bx:309:PHE:HB2	2.50	0.47
1:Aa:119:VAL:HA	1:Aa:413:VAL:HG11	1.96	0.47
1:Ac:32:LYS:HE2	1:Ac:32:LYS:HB2	1.71	0.47
1:Ae:425:LEU:HB3	1:Ae:428:GLN:HE21	1.80	0.47
1:Ah:100:TYR:O	1:Ah:104:ILE:HG13	2.14	0.47
1:Ah:295:PHE:CE1	1:Ah:312:PRO:HG3	2.49	0.47
1:Ai:140:ASN:HB2	1:Ai:143:ASP:HB3	1.97	0.47
3:Bf:230:GLU:OE1	3:Bf:273:ARG:HB3	2.15	0.47
3:Bh:550:GLN:NE2	3:Bh:581:VAL:HG11	2.29	0.47
3:Bj:271:ILE:HG21	3:Bv:511:ARG:CZ	2.45	0.47
3:Bn:271:ILE:HG23	3:Bv:134:ASP:CB	2.41	0.47
3:Bp:110:ALA:HA	3:Bp:148:PRO:HB3	1.95	0.47
1:Aa:406:ARG:HH21	1:Al:63:LEU:HB2	1.80	0.46
1:Af:116:GLU:HA	1:Af:119:VAL:HG12	1.96	0.46
1:Ah:229:THR:HG22	1:Ah:339:ALA:HA	1.96	0.46
1:Al:191:ILE:HB	1:Al:192:PRO:HD3	1.97	0.46
3:Bb:40:GLN:NE2	3:Bb:331:ASN:HD21	2.12	0.46
3:Bd:517:TYR:CD1	3:Br:103:ARG:HD2	2.50	0.46
3:Bf:530:GLN:HB2	3:Br:99:ARG:HH12	1.80	0.46
3:Bj:111:VAL:HA	3:Bj:126:TRP:NE1	2.30	0.46
3:Bj:113:ILE:HD11	3:Bv:307:TRP:CZ3	2.50	0.46
3:Bj:246:TYR:HD2	3:Bv:511:ARG:HB3	1.80	0.46
3:Bl:549:TYR:O	3:Bl:553:LEU:HG	2.15	0.46
3:Bp:158:TRP:CD2	3:Bp:167:LYS:HG2	2.51	0.46
3:Br:259:ALA:O	3:Br:263:PHE:HB2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Br:451:ASP:O	3:Br:455:THR:HG23	2.15	0.46
1:Aa:55:SER:O	1:Ab:110:LYS:HD3	2.16	0.46
1:Aa:148:VAL:HG11	1:Aa:205:VAL:HG13	1.96	0.46
2:As:79:ALA:HA	2:As:114:LEU:HD11	1.97	0.46
2:Au:44:MET:HA	2:Au:44:MET:HE3	1.96	0.46
2:Au:102:LYS:HZ2	2:Az:89:CYS:HB3	1.80	0.46
3:Bb:77:ASP:OD1	3:Bj:523:SER:HA	2.15	0.46
3:Bb:88:PRO:O	3:Bb:561:ASP:HB2	2.15	0.46
3:Bf:351:PHE:CE1	3:Bf:388:PRO:HB3	2.50	0.46
3:Bl:333:ILE:HG21	3:Bl:405:LEU:HB2	1.97	0.46
3:Bx:184:TRP:CZ2	3:Bx:199:PRO:HD3	2.50	0.46
1:Ae:64:THR:HA	1:Af:399:SER:HB3	1.98	0.46
1:Af:191:ILE:HB	1:Af:192:PRO:HD3	1.96	0.46
1:Ah:151:ALA:O	1:Ah:154:ILE:HG22	2.15	0.46
1:Am:238:PRO:HG2	1:Am:324:GLN:HB3	1.97	0.46
3:Bb:119:ILE:HA	3:Bj:449:PHE:HE2	1.80	0.46
3:Bb:521:GLY:HA3	3:Bt:79:LEU:HD22	1.98	0.46
3:Bd:332:MET:HE2	3:Bd:336:PHE:CE2	2.50	0.46
3:Bd:373:LEU:HA	3:Bh:351:PHE:O	2.15	0.46
3:Bf:152:ALA:O	3:Bf:156:VAL:HG12	2.15	0.46
3:Bf:454:ALA:HB1	3:Bf:520:VAL:HG21	1.97	0.46
3:Bh:33:LEU:HD22	3:Bh:37:ARG:NH1	2.31	0.46
3:Bj:82:PRO:HD2	3:Bj:560:LEU:HD11	1.97	0.46
3:Bl:7:ARG:HH21	3:Bl:11:ILE:HD11	1.80	0.46
3:Bn:577:ILE:HD11	3:Bn:582:LYS:HG2	1.97	0.46
1:Ak:88:GLN:HG3	1:Ak:404:LEU:HD12	1.97	0.46
1:Al:182:LEU:HD22	1:Al:201:ILE:HG22	1.96	0.46
1:Am:90:ARG:HG2	1:Am:91:ALA:H	1.80	0.46
1:An:219:VAL:HA	1:An:349:ARG:HA	1.98	0.46
2:Az:125:ARG:HA	3:Bv:364:ASP:HB2	1.97	0.46
3:Bd:38:VAL:HG11	3:Bd:211:TRP:CH2	2.51	0.46
3:Bl:223:TYR:CE1	3:Bl:278:LYS:HD3	2.51	0.46
3:Bp:585:GLU:O	3:Bp:589:GLU:HB3	2.15	0.46
3:Br:71:MET:HE2	3:Br:71:MET:HB3	1.85	0.46
3:Br:167:LYS:HB2	3:Br:302:PRO:HG3	1.97	0.46
1:Aa:295:PHE:CD1	1:Aa:310:PRO:HG2	2.48	0.46
1:Ab:94:LEU:HD12	3:Bl:48:TYR:CE2	2.51	0.46
1:Ai:26:MET:HB2	1:Ai:116:GLU:OE2	2.15	0.46
1:Ak:116:GLU:HG2	1:Ak:216:LYS:HD3	1.97	0.46
1:Ak:191:ILE:HB	1:Ak:192:PRO:HD3	1.98	0.46
2:Aw:137:GLY:HA3	3:Bh:54:ARG:HB2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Ba:144:ASN:HD21	3:Br:207:TRP:CD1	2.34	0.46
3:Bb:134:ASP:OD2	3:Bj:271:ILE:HG23	2.14	0.46
3:Bd:20:THR:HG22	3:Bf:212:LEU:HD11	1.96	0.46
3:Bh:177:HIS:HB2	3:Bh:219:ILE:HG22	1.98	0.46
3:Bj:67:LEU:HB3	3:Bj:119:ILE:HD12	1.98	0.46
3:Bj:211:TRP:CD1	3:Bj:212:LEU:H	2.34	0.46
3:Bn:552:LEU:HD11	3:Bx:542:THR:HG22	1.98	0.46
3:Bv:587:PRO:HA	3:Bv:590:GLN:HB2	1.97	0.46
1:Af:281:LEU:HD23	1:Af:288:VAL:HA	1.97	0.46
1:Al:126:MET:HE2	1:Al:269:ARG:NH2	2.30	0.46
2:As:134:THR:HG22	2:As:148:TYR:CE1	2.51	0.46
3:Bd:348:LYS:HE2	3:Bf:369:TYR:O	2.16	0.46
3:Bn:511:ARG:HH21	3:Bv:247:PHE:H	1.64	0.46
3:Bp:507:LEU:HD21	3:Bx:140:ASN:HD21	1.80	0.46
3:Bp:585:GLU:HG3	3:Bp:586:THR:HG23	1.97	0.46
3:Bt:127:ARG:HG2	3:Bt:129:VAL:HG23	1.97	0.46
3:Bv:30:LYS:HD2	3:Bv:154:SER:HB3	1.98	0.46
3:Bx:352:TRP:HB2	3:Bx:355:GLN:HE21	1.81	0.46
3:Bx:363:TYR:N	3:Bx:363:TYR:CD1	2.84	0.46
1:Ab:78:ASN:H	1:Ab:414:ASN:ND2	2.14	0.46
1:Ag:41:GLN:OE1	1:Ag:46:THR:HA	2.15	0.46
1:An:148:VAL:HG22	1:An:168:TYR:CE2	2.51	0.46
1:Ao:23:ILE:HD12	1:Ao:24:THR:H	1.81	0.46
2:Au:90:ARG:O	2:Au:93:PRO:HD2	2.15	0.46
3:Bd:559:LEU:HD12	3:Bd:560:LEU:H	1.80	0.46
3:Bh:246:TYR:HB2	3:Bl:511:ARG:HB2	1.98	0.46
3:Bh:553:LEU:HD23	3:Bh:576:LEU:HD13	1.97	0.46
3:Bh:567:MET:HE2	3:Bl:554:LEU:HD22	1.97	0.46
3:Br:33:LEU:HG	3:Br:121:ALA:HB2	1.98	0.46
3:Br:98:TYR:CE1	3:Br:102:MET:HG3	2.51	0.46
3:Bv:174:THR:HB	3:Bv:222:PHE:HD1	1.80	0.46
3:Bv:177:HIS:HB3	3:Bv:179:MET:HE1	1.98	0.46
3:Bv:472:TYR:O	3:Bv:507:LEU:HD21	2.15	0.46
1:Aa:260:THR:HG22	1:Aa:305:HIS:CD2	2.50	0.46
1:Ai:168:TYR:CD1	1:Ai:353:PHE:HB3	2.51	0.46
1:Ak:131:ILE:O	1:Ak:131:ILE:HG13	2.15	0.46
1:An:298:VAL:HG23	1:An:307:GLU:HB3	1.98	0.46
2:Ba:128:TYR:HB2	2:Ba:149:PHE:O	2.16	0.46
3:Bd:242:GLU:HB2	3:Bd:244:VAL:HG22	1.98	0.46
3:Bd:349:PRO:HG2	3:Bf:371:TYR:HB3	1.97	0.46
3:Bj:155:HIS:HE2	3:Bj:204:PRO:HG3	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Bp:248:LYS:HZ3	3:Br:511:ARG:HD2	1.81	0.46
3:Br:615:LEU:HD21	3:Br:619:GLN:HE21	1.81	0.46
1:Ad:223:SER:HB2	1:Ad:271:ASP:OD1	2.16	0.46
1:Af:37:ALA:O	2:Au:145:GLU:HA	2.15	0.46
1:Ag:13:VAL:HA	1:Am:50:PRO:HG2	1.96	0.46
2:As:15:ARG:HD2	2:Ax:94:ASP:OD2	2.16	0.46
2:At:86:ASN:C	2:At:88:ALA:H	2.24	0.46
2:Ay:131:ARG:HD2	3:Bv:336:PHE:HE1	1.81	0.46
3:Bp:560:LEU:HA	3:Bp:560:LEU:HD23	1.75	0.46
3:Bx:99:ARG:O	3:Bx:103:ARG:HB3	2.16	0.46
1:Aa:41:GLN:HG2	1:Aa:43:SER:H	1.81	0.46
1:Aa:285:ALA:HB2	1:Ab:216:LYS:HZ2	1.80	0.46
1:Ad:401:LEU:HD23	1:Ad:401:LEU:HA	1.77	0.46
1:Ae:377:LYS:HG3	2:Ay:143:LEU:HD11	1.98	0.46
1:Af:84:ASN:HB3	1:Af:408:ALA:HB2	1.98	0.46
1:Af:90:ARG:HE	1:Af:92:ASP:CG	2.24	0.46
1:Aj:106:SER:HA	1:Aj:109:ARG:HH21	1.80	0.46
1:An:35:PRO:HB2	1:An:40:MET:HG3	1.97	0.46
2:Aq:86:ASN:C	2:Aq:88:ALA:H	2.24	0.46
2:Au:5:THR:HA	2:Au:72:ASP:HA	1.97	0.46
3:Bd:163:LYS:HB3	3:Bf:150:HIS:HD2	1.80	0.46
3:Bj:6:ASN:HB3	3:Bj:9:GLU:HB2	1.96	0.46
3:Bl:26:ARG:HD3	3:Bl:154:SER:HA	1.97	0.46
3:Bn:352:TRP:CE2	3:Bv:376:ARG:HG3	2.51	0.46
3:Bn:546:THR:HG23	3:Bn:547:PRO:HD3	1.97	0.46
3:Bn:614:VAL:HG11	3:Bx:617:GLN:HA	1.98	0.46
3:Bp:275:ARG:HD3	3:Bp:292:LEU:HD11	1.97	0.46
3:Bt:234:ILE:HD13	3:Bt:246:TYR:HD1	1.80	0.46
3:Bt:248:LYS:HZ3	3:Bt:273:ARG:HE	1.64	0.46
3:Bv:167:LYS:HG3	3:Bv:302:PRO:HG3	1.97	0.46
3:Bv:469:ASN:CG	3:Bv:513:ARG:HD3	2.41	0.46
3:Bx:67:LEU:HB3	3:Bx:119:ILE:HD12	1.98	0.46
3:Bx:615:LEU:HD12	3:Bx:616:LEU:HG	1.98	0.46
1:Ad:51:VAL:HG13	1:Ah:17:ILE:HG13	1.97	0.45
1:Af:6:GLY:HA3	1:Ai:74:ASN:HD21	1.80	0.45
1:Af:33:TYR:CE2	1:Af:35:PRO:HG3	2.52	0.45
1:Af:300:VAL:HA	1:Af:306:VAL:HG23	1.97	0.45
1:Ai:81:GLU:OE1	1:Ai:82:PRO:HD2	2.15	0.45
1:Aj:301:VAL:HG22	1:Aj:305:HIS:HB2	1.98	0.45
2:Ar:94:ASP:OD2	2:Ax:15:ARG:HD3	2.16	0.45
2:At:86:ASN:O	2:At:87:LEU:HB3	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Az:91:ILE:HG23	2:Az:95:TYR:HE1	1.81	0.45
2:Ba:17:LEU:HB3	2:Ba:97:LEU:HD11	1.98	0.45
3:Bd:51:LEU:HD12	3:Bd:51:LEU:HA	1.86	0.45
3:Bd:296:GLU:H	3:Bh:466:SER:HB3	1.82	0.45
3:Bf:459:ARG:O	3:Bf:463:ILE:HG12	2.17	0.45
3:Bf:528:LYS:HE2	3:Bf:558:THR:O	2.16	0.45
3:Br:459:ARG:O	3:Br:463:ILE:HG12	2.16	0.45
3:Bt:302:PRO:HB2	3:Bt:304:PHE:CE1	2.47	0.45
3:Bv:110:ALA:HA	3:Bv:148:PRO:HB3	1.98	0.45
3:Bv:229:LYS:HE2	3:Bv:229:LYS:HB2	1.77	0.45
1:Ah:46:THR:HG22	1:Ah:78:ASN:HB3	1.99	0.45
1:Ai:126:MET:HE2	1:Ai:415:ALA:HB3	1.98	0.45
1:Aj:167:SER:HA	1:Aj:210:ASP:O	2.17	0.45
1:Aj:317:ASP:HB3	1:Aj:320:LEU:HB2	1.98	0.45
1:Ak:122:MET:SD	1:Ak:126:MET:HE3	2.57	0.45
1:Ak:379:THR:HG21	3:Bd:212:LEU:CD1	2.46	0.45
1:Ak:392:PHE:CD1	1:Ak:407:ILE:HG12	2.52	0.45
3:Bb:376:ARG:HB2	3:Bj:352:TRP:CG	2.51	0.45
3:Bf:609:VAL:HG13	3:Br:607:ALA:HB2	1.97	0.45
3:Bl:235:TYR:CE2	3:Bl:265:LYS:HG3	2.51	0.45
3:Bp:66:LYS:HB3	3:Bp:66:LYS:HE2	1.75	0.45
3:Bp:621:GLU:HA	3:Bp:624:LYS:HD3	1.98	0.45
3:Bt:58:ASP:HA	3:Bt:327:GLN:NE2	2.31	0.45
3:Bx:288:LYS:HE3	3:Bx:288:LYS:HB3	1.72	0.45
1:Ac:11:LEU:HD23	1:Ac:13:VAL:HG12	1.97	0.45
1:Af:377:LYS:NZ	3:Bx:203:ASN:HD22	2.13	0.45
1:Ah:119:VAL:HA	1:Ah:413:VAL:HG11	1.98	0.45
1:Ai:200:THR:HG22	1:Ai:202:GLN:H	1.82	0.45
1:Aj:12:ALA:O	3:Bp:45:LEU:HA	2.16	0.45
1:Am:354:TRP:C	1:Am:354:TRP:CD1	2.94	0.45
2:Ap:5:THR:HB	2:Ap:8:ASP:OD1	2.16	0.45
2:Ba:150:PRO:HG2	3:Bp:51:LEU:HD23	1.97	0.45
3:Bb:349:PRO:HD2	3:Bt:371:TYR:HA	1.97	0.45
3:Bf:239:VAL:HG12	3:Bf:240:THR:HG23	1.97	0.45
3:Bl:252:LYS:CB	3:Bl:255:ILE:HB	2.44	0.45
3:Bn:510:ILE:H	3:Bn:510:ILE:HD12	1.82	0.45
3:Bn:574:LYS:O	3:Bn:578:GLN:HG2	2.17	0.45
3:Bp:538:LEU:HD21	3:Bx:559:LEU:HD11	1.98	0.45
3:Br:99:ARG:O	3:Br:103:ARG:HB2	2.16	0.45
3:Bx:254:VAL:C	3:Bx:255:ILE:HD13	2.42	0.45
1:Aa:371:GLU:HB3	1:Aa:373:PHE:HD1	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Ab:236:PHE:HD2	1:Ab:312:PRO:HD2	1.82	0.45
1:Ab:379:THR:HG23	3:Bt:202:GLN:NE2	2.31	0.45
1:Ad:16:ILE:HD11	1:Ad:102:ARG:CZ	2.46	0.45
1:Af:148:VAL:HG12	1:Af:206:ALA:HB3	1.98	0.45
2:Aq:81:SER:HA	2:Aq:84:PHE:CD2	2.51	0.45
2:Ar:16:LYS:HG3	2:Ar:103:ILE:HD11	1.98	0.45
2:Ar:43:MET:CE	2:Ar:86:ASN:HB3	2.45	0.45
3:Bb:613:GLY:O	3:Bb:616:LEU:HB2	2.16	0.45
3:Bd:332:MET:HE2	3:Bd:336:PHE:CZ	2.51	0.45
3:Bd:615:LEU:HD12	3:Bd:615:LEU:O	2.17	0.45
3:Bf:59:VAL:HG23	3:Bf:412:VAL:HG11	1.99	0.45
3:Bf:247:PHE:HB3	3:Bf:252:LYS:HD3	1.97	0.45
3:Bh:33:LEU:O	3:Bh:37:ARG:HB2	2.17	0.45
3:Bn:500:ALA:HA	3:Bv:258:LEU:HD11	1.99	0.45
3:Bp:69:SER:O	3:Bp:73:GLN:HG3	2.17	0.45
1:Ae:241:TRP:H	1:Ae:241:TRP:HD1	1.64	0.45
1:Ae:281:LEU:HD12	1:Ae:288:VAL:HA	1.98	0.45
1:Ai:269:ARG:HD2	1:Ai:298:VAL:O	2.17	0.45
1:An:354:TRP:CD1	1:An:354:TRP:C	2.95	0.45
2:Ap:6:LYS:HA	2:Ap:9:LEU:HD12	1.97	0.45
2:Aq:56:THR:HG22	2:Aq:75:LEU:HD22	1.98	0.45
2:Au:140:PHE:C	2:Au:142:ASN:H	2.24	0.45
2:Ax:128:TYR:CE2	3:Bt:342:ALA:HB3	2.51	0.45
3:Bd:257:ASP:OD1	3:Bd:258:LEU:HD22	2.15	0.45
3:Bh:33:LEU:HG	3:Bh:121:ALA:HB2	1.97	0.45
3:Bt:379:GLU:HG2	3:Bt:380:ASN:N	2.31	0.45
1:Ac:272:LYS:HE3	1:Ac:423:VAL:HG11	1.99	0.45
1:Af:50:PRO:HG2	1:Aj:16:ILE:HD13	1.99	0.45
1:Ah:49:MET:HE1	1:Ah:360:ARG:CZ	2.46	0.45
1:Ak:122:MET:HE2	1:Ak:122:MET:HB2	1.83	0.45
1:Ak:182:LEU:HD12	1:Ak:201:ILE:HG22	1.98	0.45
3:Bd:362:MET:CE	3:Bd:373:LEU:H	2.28	0.45
3:Bl:607:ALA:HB3	3:Bt:608:MET:HE3	1.97	0.45
1:Ab:66:LYS:HB2	1:Ab:66:LYS:NZ	2.32	0.45
1:Ac:314:ALA:HB3	1:Ac:317:ASP:HB2	1.98	0.45
1:Ag:353:PHE:CZ	1:Ag:422:GLY:HA3	2.51	0.45
1:Ah:129:LEU:HD13	1:Ah:154:ILE:HG23	1.98	0.45
1:Ak:279:LYS:HD2	1:Ak:292:ASP:HA	1.97	0.45
1:An:364:GLN:NE2	1:An:365:PRO:HD2	2.29	0.45
1:Ao:316:ASP:OD1	1:Ao:332:THR:HA	2.16	0.45
3:Bn:519:ASP:HB3	3:Bv:79:LEU:HB3	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Bp:127:ARG:NH2	3:Bp:175:VAL:HG11	2.30	0.45
3:Bt:61:ARG:O	3:Bt:65:ARG:HG3	2.17	0.45
3:Bv:66:LYS:HE3	3:Bv:66:LYS:HB3	1.72	0.45
3:Bx:165:MET:HG3	3:Bx:307:TRP:CD2	2.52	0.45
3:Bx:459:ARG:O	3:Bx:463:ILE:HG12	2.16	0.45
1:Ab:242:GLN:HG3	1:Ab:252:VAL:HG11	1.99	0.45
1:Af:122:MET:HG2	1:Af:413:VAL:HG22	1.98	0.45
1:Af:344:ASN:HA	1:Af:428:GLN:NE2	2.30	0.45
1:Ah:239:VAL:HG23	1:Ah:252:VAL:HG11	1.98	0.45
1:Ai:237:LYS:HG3	1:Ai:324:GLN:OE1	2.16	0.45
1:Ak:205:VAL:HB	1:Ak:211:VAL:HG11	1.99	0.45
2:Ar:126:ALA:HB2	3:Bh:364:ASP:CG	2.42	0.45
2:Ax:17:LEU:HB3	2:Ax:19:VAL:HG23	1.98	0.45
2:Ay:146:TRP:HZ3	3:Bv:45:LEU:HD21	1.81	0.45
3:Bh:59:VAL:HG23	3:Bh:412:VAL:HG11	1.99	0.45
3:Bj:133:GLU:HB3	3:Bj:143:VAL:HG22	1.99	0.45
3:Bn:30:LYS:HD3	3:Bn:154:SER:HB3	1.98	0.45
1:Ak:11:LEU:HB3	2:Av:140:PHE:CE2	2.52	0.45
1:Ak:26:MET:HG3	1:Ak:169:PHE:CE2	2.51	0.45
1:Ao:61:TRP:CD1	1:Ao:61:TRP:H	2.34	0.45
2:Ap:43:MET:HE1	2:Ap:86:ASN:HB3	1.99	0.45
2:Az:44:MET:HG3	2:Az:58:TYR:CE2	2.52	0.45
3:Bb:105:ASN:ND2	3:Bv:455:THR:HG23	2.31	0.45
3:Bb:459:ARG:NH2	3:Bt:168:SER:HA	2.32	0.45
3:Bh:233:PHE:CE2	3:Bh:265:LYS:HE3	2.51	0.45
3:Bh:550:GLN:OE1	3:Bh:550:GLN:HA	2.17	0.45
3:Bj:321:ARG:HG2	3:Bj:321:ARG:HH11	1.82	0.45
3:Bl:276:VAL:HG13	3:Bl:293:ILE:HB	1.99	0.45
3:Bn:611:ALA:HB1	3:Bx:616:LEU:HD12	1.99	0.45
3:Bp:404:MET:SD	3:Bx:337:ASN:HB3	2.57	0.45
3:Bt:588:GLU:H	3:Bt:588:GLU:HG3	1.61	0.45
3:Bx:451:ASP:O	3:Bx:455:THR:HG23	2.16	0.45
3:Bx:458:ARG:HG3	3:Bx:458:ARG:NH1	2.32	0.45
1:Aa:271:ASP:HA	1:Aa:344:ASN:HD22	1.82	0.45
1:Ab:273:ILE:HD11	1:Ab:308:ILE:HG21	1.98	0.45
1:Ad:386:VAL:HG12	1:Ad:388:LEU:HG	1.99	0.45
1:Af:24:THR:HA	1:Af:116:GLU:OE2	2.17	0.45
1:Aj:161:ASN:HB3	1:Aj:417:ARG:NH1	2.32	0.45
1:Am:239:VAL:HG13	1:Am:252:VAL:HG11	1.99	0.45
2:Aq:108:LYS:HD3	2:Aq:108:LYS:HA	1.45	0.45
2:Ay:40:LEU:HD13	2:Ay:87:LEU:HD22	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Bb:61:ARG:NH1	3:Bb:61:ARG:HG2	2.32	0.45
3:Bb:248:LYS:O	3:Bb:252:LYS:HG2	2.17	0.45
3:Bb:623:ALA:HB2	3:Bt:617:GLN:HE21	1.80	0.45
3:Bl:15:PHE:CD1	3:Bl:174:THR:HG21	2.50	0.45
3:Bl:337:ASN:HB3	3:Bt:404:MET:SD	2.57	0.45
3:Bn:114:ALA:HB3	3:Bn:126:TRP:HE1	1.82	0.45
3:Br:79:LEU:HA	3:Br:95:MET:CE	2.47	0.45
3:Br:179:MET:HE3	3:Br:179:MET:HB2	1.92	0.45
3:Br:352:TRP:HB2	3:Br:355:GLN:HG3	1.99	0.45
3:Bt:44:TRP:CE3	3:Bt:45:LEU:HG	2.52	0.45
3:Bv:93:VAL:O	3:Bv:97:MET:HG3	2.17	0.45
1:Aa:18:GLU:HA	1:Al:52:GLU:HB2	1.99	0.44
1:Ad:137:ILE:HD13	1:Ad:426:PRO:HB3	1.98	0.44
1:Ae:115:VAL:HG11	1:Ae:386:VAL:HG21	1.98	0.44
1:Ae:264:THR:HG23	1:Ae:267:MET:HE2	1.99	0.44
1:Ae:378:THR:HG22	1:Ae:393:ALA:HB2	1.98	0.44
1:Al:71:LEU:HD23	1:Al:327:TYR:HE2	1.82	0.44
1:An:129:LEU:HD13	1:An:154:ILE:HG23	1.99	0.44
3:Bd:510:ILE:HD11	3:Bf:244:VAL:HG23	1.99	0.44
3:Bh:51:LEU:HD12	3:Bh:51:LEU:HA	1.88	0.44
3:Bh:211:TRP:HA	3:Bl:24:GLU:OE1	2.17	0.44
3:Bl:188:ALA:HA	3:Bl:193:LEU:HB2	1.99	0.44
3:Bt:45:LEU:HA	3:Bt:48:TYR:CD1	2.52	0.44
3:Bv:349:PRO:HA	3:Bv:391:TYR:HA	1.97	0.44
3:Bx:95:MET:HA	3:Bx:95:MET:HE3	1.99	0.44
1:Ab:40:MET:HG3	1:Ab:45:ASN:HA	1.99	0.44
1:Ad:275:PHE:HB3	1:Ad:338:MET:HE3	1.98	0.44
1:Af:113:ASN:ND2	1:An:284:MET:HG2	2.33	0.44
1:Af:130:VAL:HB	1:Af:294:THR:HG21	2.00	0.44
1:Aj:130:VAL:HG21	1:Aj:272:LYS:HB3	1.99	0.44
1:An:40:MET:HG3	1:An:364:GLN:OE1	2.17	0.44
2:Aq:111:LYS:HE2	2:Aq:111:LYS:HB3	1.87	0.44
2:Ay:133:PRO:HG2	3:Bv:328:ARG:HB3	1.99	0.44
3:Bd:329:LEU:O	3:Bd:333:ILE:HG12	2.17	0.44
3:Bj:345:PRO:HG2	3:Bj:392:TYR:OH	2.17	0.44
3:Bl:221:GLU:HG3	3:Bl:280:ILE:HD13	1.98	0.44
3:Bn:234:ILE:HD13	3:Bn:246:TYR:CB	2.45	0.44
3:Bn:255:ILE:HG21	3:Bx:506:VAL:HG11	1.99	0.44
3:Br:116:ARG:HG2	3:Br:120:GLU:OE1	2.16	0.44
3:Br:610:GLN:O	3:Br:614:VAL:HG22	2.17	0.44
1:Ae:304:THR:HG23	1:Ae:305:HIS:ND1	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Ae:366:ILE:HG23	1:Ao:61:TRP:HZ3	1.81	0.44
1:Ai:234:GLN:HE22	1:Ai:259:VAL:HA	1.83	0.44
2:Ap:149:PHE:CD1	3:Bf:46:SER:HA	2.51	0.44
3:Bf:554:LEU:HD23	3:Bf:554:LEU:HA	1.84	0.44
3:Bj:550:GLN:NE2	3:Bj:581:VAL:HG11	2.30	0.44
3:Bx:298:ILE:HG22	3:Bx:300:ILE:HG12	2.00	0.44
1:Aa:49:MET:HE3	1:Aa:49:MET:HB2	1.83	0.44
1:Ab:184:LYS:HB2	1:Ab:184:LYS:NZ	2.33	0.44
1:Ae:215:PRO:HG2	1:Ae:216:LYS:NZ	2.32	0.44
1:Aj:173:GLN:O	1:Aj:177:LYS:HG2	2.17	0.44
1:Ak:49:MET:HE3	1:Ak:49:MET:HB3	1.78	0.44
1:An:128:SER:OG	1:An:310:PRO:HG3	2.17	0.44
2:As:86:ASN:C	2:As:88:ALA:H	2.24	0.44
2:As:95:TYR:HB2	2:As:97:LEU:HG	2.00	0.44
2:Ax:33:MET:O	2:Ax:33:MET:HE3	2.16	0.44
2:Ax:81:SER:HA	2:Ax:84:PHE:CE2	2.53	0.44
3:Bb:58:ASP:HA	3:Bb:327:GLN:HE22	1.83	0.44
3:Bb:59:VAL:HG23	3:Bj:414:GLU:OE1	2.17	0.44
3:Bb:245:SER:HA	3:Bj:510:ILE:HD12	1.99	0.44
3:Bb:623:ALA:HB2	3:Bt:617:GLN:NE2	2.32	0.44
3:Bd:111:VAL:HA	3:Bd:126:TRP:NE1	2.31	0.44
3:Bd:119:ILE:HA	3:Bh:449:PHE:HE2	1.82	0.44
3:Bl:97:MET:HE3	3:Bt:472:TYR:HD2	1.81	0.44
3:Bp:179:MET:C	3:Bp:215:ASP:HB3	2.42	0.44
3:Bp:274:ARG:HG2	3:Bp:274:ARG:HH11	1.81	0.44
3:Bt:231:THR:HG21	3:Bt:249:ARG:HH21	1.81	0.44
3:Bt:559:LEU:HD12	3:Bt:559:LEU:HA	1.82	0.44
3:Bv:198:ILE:HG22	3:Bv:198:ILE:O	2.17	0.44
1:Aa:278:VAL:HG12	1:Aa:293:ALA:HB3	1.98	0.44
1:Ab:37:ALA:HB1	1:Ad:95:ARG:HB3	1.99	0.44
1:Af:39:SER:C	1:Af:40:MET:HG2	2.42	0.44
1:Ag:168:TYR:HB3	1:Ag:211:VAL:HG12	2.00	0.44
1:Ai:275:PHE:CD2	1:Ai:340:VAL:HG12	2.53	0.44
1:Ai:392:PHE:HD2	1:Ai:407:ILE:HG12	1.83	0.44
2:Ay:104:ILE:O	2:Ay:108:LYS:HG3	2.16	0.44
3:Bd:84:ASP:OD1	3:Bd:527:MET:HB2	2.17	0.44
3:Bd:619:GLN:HE21	3:Bf:618:GLY:HA3	1.81	0.44
3:Bj:23:ASP:HA	3:Bj:26:ARG:NH2	2.32	0.44
3:Bj:69:SER:O	3:Bj:73:GLN:HG2	2.18	0.44
3:Bl:236:GLN:HB2	3:Bl:266:ILE:HD11	1.99	0.44
3:Bp:248:LYS:H	3:Br:511:ARG:HH22	1.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Bp:404:MET:HE1	3:Bx:334:MET:HE2	1.99	0.44
3:Bp:451:ASP:O	3:Bp:455:THR:HG23	2.16	0.44
3:Br:237:ASP:O	3:Br:241:GLY:HA2	2.17	0.44
3:Br:574:LYS:O	3:Br:578:GLN:HG2	2.17	0.44
3:Bt:78:VAL:O	3:Bt:95:MET:HE1	2.17	0.44
3:Bt:336:PHE:O	3:Bt:340:ILE:HG23	2.17	0.44
1:Ab:354:TRP:C	1:Ab:354:TRP:CD1	2.95	0.44
1:Ac:295:PHE:CD2	1:Ac:310:PRO:HB2	2.53	0.44
1:Ad:286:LYS:HE3	1:Ad:328:ALA:HB3	1.99	0.44
1:Af:95:ARG:HB3	1:Ai:37:ALA:HB1	2.00	0.44
1:Am:86:PHE:CE2	1:Am:404:LEU:HB3	2.53	0.44
1:Am:377:LYS:HB2	1:Am:377:LYS:HE2	1.60	0.44
2:Aq:63:ASP:O	2:Aq:64:GLU:HG2	2.18	0.44
2:Av:124:LYS:O	3:Bp:370:PRO:HD3	2.18	0.44
3:Bd:88:PRO:HB3	3:Bd:561:ASP:HB2	1.99	0.44
3:Bd:520:VAL:HG13	3:Bf:76:ILE:HG23	1.98	0.44
3:Bd:561:ASP:O	3:Bd:565:VAL:HG23	2.18	0.44
3:Bj:536:LEU:HD23	3:Bj:536:LEU:HA	1.85	0.44
3:Bn:554:LEU:HD21	3:Bv:564:GLY:O	2.17	0.44
3:Bp:178:SER:OG	3:Bp:215:ASP:HB2	2.17	0.44
3:Bt:23:ASP:O	3:Bt:27:ARG:HG3	2.17	0.44
3:Bt:236:GLN:HB2	3:Bt:266:ILE:HD11	2.00	0.44
3:Bv:236:GLN:HB2	3:Bv:266:ILE:HD11	1.99	0.44
1:Ab:286:LYS:HG2	1:Ab:315:LEU:HD13	1.99	0.44
1:Ac:142:ALA:HB3	1:Ad:180:TYR:HE1	1.81	0.44
1:Ad:79:MET:HG2	1:Ad:410:TRP:CE2	2.53	0.44
1:Ae:113:ASN:ND2	1:Ao:284:MET:HG2	2.32	0.44
1:Ag:40:MET:HG3	3:Bf:46:SER:O	2.17	0.44
1:Ag:118:LYS:HE2	1:Ag:118:LYS:HB2	1.78	0.44
1:Al:148:VAL:HG11	1:Al:205:VAL:HG13	1.99	0.44
2:Aw:14:LEU:HD23	2:Aw:14:LEU:HA	1.84	0.44
3:Bb:583:LYS:HD3	3:Bb:583:LYS:HA	1.87	0.44
3:Bd:288:LYS:HD3	3:Bd:288:LYS:HA	1.73	0.44
3:Bf:209:PHE:HD1	3:Bf:209:PHE:HA	1.68	0.44
3:Bv:71:MET:HE1	3:Bv:118:GLN:OE1	2.17	0.44
1:Ac:86:PHE:CE2	1:Ac:404:LEU:HD22	2.53	0.44
1:Ad:259:VAL:HG22	1:Ad:306:VAL:HG12	2.00	0.44
1:Ae:118:LYS:HE3	1:Ae:411:TYR:HE1	1.81	0.44
1:Ag:284:MET:HG3	1:Ak:113:ASN:ND2	2.32	0.44
1:Ah:118:LYS:HE2	1:Ah:118:LYS:HB2	1.79	0.44
2:Ap:135:GLY:HA3	3:Br:54:ARG:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:As:102:LYS:HZ2	2:Ax:89:CYS:HB3	1.82	0.44
2:Au:87:LEU:HD12	2:Au:91:ILE:HD13	1.99	0.44
2:Av:9:LEU:HD23	2:Av:40:LEU:HD21	2.00	0.44
2:Ay:12:ALA:O	2:Ay:16:LYS:HG2	2.18	0.44
3:Bb:127:ARG:HH12	3:Bb:175:VAL:HG11	1.82	0.44
3:Bl:107:ALA:HA	3:Bl:146:ARG:HB3	1.99	0.44
3:Bl:313:LYS:HB3	3:Bl:313:LYS:HE3	1.78	0.44
3:Bl:560:LEU:HA	3:Bl:560:LEU:HD23	1.82	0.44
3:Bn:450:GLN:NE2	3:Bv:74:ASN:HB2	2.32	0.44
3:Br:468:VAL:HG13	3:Br:472:TYR:HB2	2.00	0.44
3:Bv:577:ILE:HD13	3:Bv:582:LYS:HB3	1.99	0.44
1:Ac:372:LEU:HD23	1:Ac:372:LEU:HA	1.85	0.44
1:Ae:146:ASN:HB2	1:Ai:180:TYR:CE2	2.53	0.44
1:Af:354:TRP:CD1	1:Af:354:TRP:C	2.96	0.44
1:Ag:354:TRP:CD1	1:Ag:354:TRP:C	2.96	0.44
2:Ar:80:VAL:O	2:Ar:84:PHE:HB2	2.18	0.44
2:As:63:ASP:O	2:As:64:GLU:HG2	2.18	0.44
2:Aw:81:SER:HA	2:Aw:84:PHE:CE2	2.53	0.44
2:Ay:131:ARG:HH21	3:Bv:52:GLN:HB3	1.82	0.44
3:Bb:449:PHE:CD2	3:Bt:119:ILE:HD13	2.52	0.44
3:Bd:510:ILE:HG12	3:Bd:511:ARG:N	2.33	0.44
3:Bf:532:ARG:HE	3:Bf:558:THR:HG22	1.81	0.44
3:Bh:507:LEU:HG	3:Bh:507:LEU:O	2.18	0.44
3:Bj:390:ALA:C	3:Bj:391:TYR:HD1	2.26	0.44
3:Bl:79:LEU:HD23	3:Bl:81:ARG:NH1	2.33	0.44
3:Bp:59:VAL:HG23	3:Bp:412:VAL:HG11	2.00	0.44
3:Bt:71:MET:HE3	3:Bt:115:VAL:HG13	1.99	0.44
3:Bx:468:VAL:HG22	3:Bx:472:TYR:CD2	2.53	0.44
1:Aa:155:MET:HE3	1:Aa:160:LEU:HD12	1.99	0.43
1:Ab:350:THR:HG23	1:Ab:423:VAL:HG13	2.00	0.43
1:Ad:284:MET:HE2	1:Ah:20:ILE:HG21	1.99	0.43
1:Ag:239:VAL:HG23	1:Ag:252:VAL:HG21	2.00	0.43
1:Ag:365:PRO:HB2	3:Bf:44:TRP:CZ2	2.53	0.43
1:Ah:354:TRP:CD1	1:Ah:354:TRP:C	2.96	0.43
1:Aj:11:LEU:HD12	1:Aj:11:LEU:HA	1.66	0.43
1:An:37:ALA:O	1:An:41:GLN:HG2	2.17	0.43
1:An:280:PHE:O	1:An:289:LEU:HB2	2.18	0.43
2:At:40:LEU:HD13	2:At:87:LEU:HD22	1.99	0.43
2:Av:81:SER:HA	2:Av:84:PHE:CE2	2.53	0.43
2:Ay:108:LYS:HG2	3:Bb:380:ASN:HB2	2.00	0.43
3:Bb:255:ILE:HA	3:Bb:258:LEU:HD12	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Bd:332:MET:HE1	3:Bf:342:ALA:HB2	2.00	0.43
3:Bd:363:TYR:CZ	3:Bd:372:TYR:HB3	2.53	0.43
3:Bd:542:THR:HG21	3:Bd:547:PRO:HB2	2.00	0.43
3:Bh:99:ARG:HH21	3:Bl:530:GLN:HB2	1.83	0.43
3:Bh:145:ARG:NH1	3:Bh:145:ARG:HB3	2.33	0.43
3:Bp:116:ARG:NH2	3:Br:306:GLU:HG2	2.33	0.43
3:Bt:126:TRP:CD1	3:Bt:146:ARG:HG3	2.52	0.43
3:Bv:34:PHE:CE1	3:Bv:208:VAL:HG23	2.53	0.43
3:Bv:177:HIS:HB2	3:Bv:219:ILE:HG22	1.99	0.43
1:Aa:17:ILE:HD11	1:Al:49:MET:HE2	2.00	0.43
1:Aa:223:SER:HB3	1:Aa:342:ILE:HG21	2.00	0.43
1:Ac:354:TRP:CD1	1:Ac:354:TRP:C	2.97	0.43
1:Ae:95:ARG:HB3	1:Ah:37:ALA:HB1	2.00	0.43
1:Ah:90:ARG:HB2	1:Ah:93:ASP:HB2	1.99	0.43
1:Ak:241:TRP:CE3	1:Ak:249:LYS:HG2	2.53	0.43
1:Al:391:ILE:HD11	1:Al:408:ALA:HB3	1.99	0.43
3:Bb:11:ILE:HG21	3:Bb:281:ILE:HG21	2.00	0.43
3:Bb:255:ILE:HG23	3:Bb:258:LEU:HB2	2.00	0.43
3:Bd:606:PRO:O	3:Bd:610:GLN:HG2	2.18	0.43
3:Bh:583:LYS:HE3	3:Bh:583:LYS:HB3	1.82	0.43
3:Bj:144:ILE:HG12	3:Bv:472:TYR:OH	2.18	0.43
3:Bn:8:LEU:HD13	3:Bn:286:VAL:HG13	2.00	0.43
3:Bn:510:ILE:HD12	3:Bn:510:ILE:N	2.33	0.43
3:Br:481:THR:HG22	3:Br:489:ASP:HB3	2.00	0.43
3:Bt:89:ASP:HA	3:Bt:561:ASP:CG	2.43	0.43
3:Bt:311:GLU:O	3:Bt:313:LYS:HG2	2.18	0.43
3:Bx:184:TRP:CD1	3:Bx:198:ILE:HG22	2.53	0.43
3:Bx:471:ILE:HG13	3:Bx:472:TYR:CD1	2.53	0.43
1:Aa:236:PHE:CD1	1:Aa:312:PRO:HG2	2.53	0.43
1:Ad:84:ASN:HA	1:Ad:407:ILE:O	2.18	0.43
1:Ag:63:LEU:HA	1:Ag:66:LYS:HZ3	1.83	0.43
1:Ah:392:PHE:HD1	1:Ah:407:ILE:HG13	1.82	0.43
1:Aj:354:TRP:C	1:Aj:354:TRP:CD1	2.96	0.43
1:Al:23:ILE:CD1	1:Al:25:PRO:HD3	2.48	0.43
2:Aq:146:TRP:CE3	3:Bh:42:ASP:HB2	2.53	0.43
2:Av:47:TRP:HB3	2:Av:54:ILE:HG23	2.00	0.43
2:Aw:102:LYS:HE3	2:Aw:106:THR:OG1	2.19	0.43
2:Ax:25:LEU:HG	2:Ax:26:THR:H	1.83	0.43
3:Bd:255:ILE:HA	3:Bd:258:LEU:HD23	2.00	0.43
3:Bd:463:ILE:O	3:Bd:467:ILE:HG13	2.18	0.43
3:Bj:40:GLN:HG3	3:Bj:56:GLN:HG3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Bj:182:ASN:HA	3:Bj:185:GLU:HG2	2.00	0.43
3:Bl:277:TYR:CG	3:Bl:290:LYS:HE2	2.52	0.43
3:Bl:323:THR:HG22	3:Bl:415:VAL:HG23	2.01	0.43
3:Bn:578:GLN:OE1	3:Bn:596:ALA:HB2	2.19	0.43
3:Br:549:TYR:HD1	3:Br:549:TYR:HA	1.70	0.43
1:Aa:23:ILE:HG12	1:Aa:25:PRO:HD3	1.99	0.43
1:Ab:116:GLU:HG2	1:Ab:216:LYS:CD	2.48	0.43
1:Ae:10:THR:HG23	1:Ao:47:ILE:HG13	2.01	0.43
1:Ai:264:THR:HG22	1:Ai:267:MET:HE3	2.00	0.43
1:Ai:295:PHE:CE1	1:Ai:312:PRO:HG3	2.53	0.43
1:Al:97:GLU:HB2	1:Al:101:ARG:HH12	1.84	0.43
2:Ar:12:ALA:C	2:Ar:84:PHE:HE1	2.26	0.43
2:Au:87:LEU:O	2:Au:91:ILE:HB	2.19	0.43
2:Av:132:MET:HA	3:Bd:332:MET:HE3	2.01	0.43
2:Ax:126:ALA:HB2	3:Bl:364:ASP:CG	2.43	0.43
3:Bf:616:LEU:HD13	3:Br:615:LEU:HB2	2.00	0.43
3:Bh:77:ASP:OD1	3:Bh:77:ASP:N	2.52	0.43
3:Bh:373:LEU:HA	3:Bl:351:PHE:O	2.18	0.43
3:Bn:99:ARG:NH1	3:Bx:524:PHE:H	2.16	0.43
3:Bn:108:LYS:N	3:Bn:108:LYS:HD2	2.32	0.43
3:Bp:35:PHE:CE2	3:Bp:40:GLN:HG2	2.53	0.43
3:Bv:597:GLN:HA	3:Bv:600:LYS:HG2	2.01	0.43
1:Ad:136:ALA:O	1:Ad:139:THR:HG23	2.18	0.43
1:Ad:321:SER:OG	1:Ad:323:GLU:HG2	2.18	0.43
1:Ae:191:ILE:HB	1:Ae:192:PRO:HD3	2.00	0.43
1:Af:180:TYR:CE2	1:An:142:ALA:HB3	2.53	0.43
1:Ag:230:VAL:HA	1:Ag:261:LEU:HD23	1.99	0.43
1:Ah:267:MET:HE3	1:Ah:306:VAL:HG11	2.01	0.43
2:At:113:LEU:HD22	2:Ay:49:GLN:CD	2.44	0.43
2:At:128:TYR:CD2	2:At:132:MET:HG2	2.50	0.43
2:Ax:17:LEU:HD21	2:Ax:92:ALA:HA	2.01	0.43
2:Az:6:LYS:HD2	2:Az:71:ASP:HB2	2.00	0.43
3:Bd:296:GLU:HB2	3:Bh:466:SER:OG	2.18	0.43
3:Bd:546:THR:HB	3:Bd:547:PRO:HD3	2.00	0.43
3:Bf:108:LYS:HE3	3:Bf:108:LYS:HB3	1.69	0.43
3:Bf:401:ASN:OD1	3:Br:341:VAL:HG23	2.18	0.43
3:Bh:362:MET:HE1	3:Bh:373:LEU:HD12	2.00	0.43
3:Bh:511:ARG:HB2	3:Bh:511:ARG:CZ	2.49	0.43
3:Bj:546:THR:CG2	3:Bj:547:PRO:HD3	2.40	0.43
3:Bl:273:ARG:HH12	3:Bt:513:ARG:HH12	1.65	0.43
3:Bn:127:ARG:HH12	3:Bn:177:HIS:CE1	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Bv:69:SER:O	3:Bv:73:GLN:HG3	2.18	0.43
3:Bv:88:PRO:O	3:Bv:561:ASP:HB2	2.19	0.43
1:Aa:261:LEU:O	1:Aa:304:THR:HG23	2.18	0.43
1:Aa:383:ILE:HG21	1:Aa:386:VAL:HG22	1.99	0.43
1:Ab:89:LEU:HD11	2:Ar:140:PHE:CE2	2.53	0.43
1:Ae:17:ILE:HD11	1:Ao:49:MET:HB2	2.00	0.43
1:Ae:409:LEU:HG	1:Ae:411:TYR:HD2	1.84	0.43
1:Ag:369:ASN:OD1	3:Bf:45:LEU:HD13	2.19	0.43
1:Ah:29:LYS:HD3	1:Ah:167:SER:OG	2.19	0.43
1:Ah:286:LYS:HB2	1:Ah:286:LYS:HE2	1.86	0.43
1:Ai:35:PRO:HB2	1:Ai:40:MET:HG3	2.00	0.43
1:Ai:354:TRP:CD1	1:Ai:354:TRP:C	2.95	0.43
1:Ak:86:PHE:HZ	1:Ak:404:LEU:HD23	1.84	0.43
1:Am:34:THR:HG23	1:Am:34:THR:O	2.19	0.43
1:Am:136:ALA:O	1:Am:139:THR:HG23	2.18	0.43
1:An:361:ILE:HD12	1:An:413:VAL:HG22	1.99	0.43
2:As:128:TYR:CD1	2:As:132:MET:HG2	2.54	0.43
2:At:40:LEU:HB2	2:At:87:LEU:HD22	2.01	0.43
3:Bb:370:PRO:O	3:Bj:348:LYS:HG2	2.19	0.43
3:Bf:475:PRO:HD2	3:Br:93:VAL:HG11	1.99	0.43
3:Bh:81:ARG:HB2	3:Bl:517:TYR:CZ	2.52	0.43
3:Bj:59:VAL:O	3:Bj:62:PRO:HD2	2.19	0.43
3:Bj:214:GLN:HE21	3:Bv:313:LYS:HG2	1.82	0.43
3:Bj:373:LEU:HA	3:Bv:351:PHE:O	2.19	0.43
3:Bl:277:TYR:CD2	3:Bl:290:LYS:HE2	2.53	0.43
3:Bn:451:ASP:O	3:Bn:455:THR:HG23	2.18	0.43
3:Bv:209:PHE:CG	3:Bv:210:PRO:HD2	2.54	0.43
3:Bx:235:TYR:O	3:Bx:245:SER:HB2	2.19	0.43
1:Ab:151:ALA:O	1:Ab:155:MET:HG3	2.17	0.43
1:Ab:198:ASP:O	1:Ab:200:THR:HG23	2.18	0.43
1:Ad:151:ALA:O	1:Ad:155:MET:HG3	2.17	0.43
1:Ad:225:ALA:HB1	1:Ad:228:ILE:HD13	2.01	0.43
1:Ah:37:ALA:HA	1:Ah:364:GLN:HE21	1.82	0.43
1:Ah:217:LEU:HD11	1:Ah:352:VAL:HG22	2.00	0.43
1:Ak:98:THR:O	1:Ak:102:ARG:HG3	2.18	0.43
1:Ao:129:LEU:HD11	1:Ao:160:LEU:HD11	2.01	0.43
3:Bd:255:ILE:HD11	3:Bh:500:ALA:HB2	2.01	0.43
3:Bd:459:ARG:HH12	3:Bf:297:HIS:HD2	1.66	0.43
3:Bf:247:PHE:CB	3:Bf:252:LYS:HD3	2.49	0.43
3:Bn:155:HIS:HA	3:Bn:176:ILE:HD12	2.01	0.43
3:Bp:606:PRO:HB2	3:Bp:610:GLN:HB2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Bt:586:THR:HB	3:Bt:589:GLU:HG3	2.01	0.43
1:Ab:35:PRO:HG2	1:Ab:40:MET:HE1	2.00	0.43
1:Ae:171:ASN:HB2	1:Ae:349:ARG:HD3	2.01	0.43
1:Af:86:PHE:CD2	1:An:63:LEU:HD13	2.54	0.43
1:Af:368:ALA:HB3	3:Bx:209:PHE:CE1	2.54	0.43
1:Ag:223:SER:HB3	1:Ag:342:ILE:HG21	2.01	0.43
1:Al:33:TYR:CD1	1:Al:360:ARG:HG3	2.53	0.43
1:Al:132:THR:HG22	1:Al:425:LEU:HB2	2.00	0.43
1:Al:317:ASP:OD1	1:Al:320:LEU:HG	2.18	0.43
1:Am:260:THR:HG22	1:Am:305:HIS:CD2	2.53	0.43
1:An:148:VAL:HG13	1:An:168:TYR:HD2	1.83	0.43
1:An:261:LEU:HD13	1:An:267:MET:HE1	1.99	0.43
2:As:86:ASN:O	2:As:87:LEU:HB3	2.17	0.43
3:Bb:614:VAL:HG11	3:Bj:615:LEU:HD13	2.01	0.43
3:Bd:310:VAL:CG2	3:Bf:37:ARG:HD3	2.49	0.43
3:Bh:411:ALA:O	3:Bh:415:VAL:HG12	2.18	0.43
3:Bj:273:ARG:CZ	3:Bj:275:ARG:HE	2.32	0.43
3:Bn:616:LEU:HD13	3:Bv:614:VAL:HG11	2.01	0.43
3:Bp:81:ARG:HH11	3:Bp:560:LEU:HD21	1.83	0.43
3:Bp:362:MET:CE	3:Bp:373:LEU:H	2.32	0.43
3:Bp:567:MET:SD	3:Br:576:LEU:HD13	2.59	0.43
3:Br:181:GLN:OE1	3:Br:181:GLN:HA	2.19	0.43
3:Bx:53:TYR:O	3:Bx:335:SER:HB3	2.19	0.43
1:Ab:117:LEU:HD23	1:Ab:117:LEU:HA	1.82	0.43
1:Ab:372:LEU:HD13	1:Ad:100:TYR:HE1	1.83	0.43
1:Ad:241:TRP:CE3	1:Ad:249:LYS:HE2	2.53	0.43
1:Ae:25:PRO:HG2	1:Ae:214:SER:HA	2.00	0.43
1:Ah:161:ASN:HB3	1:Ah:417:ARG:HH12	1.84	0.43
1:Aj:128:SER:HB2	1:Aj:310:PRO:HG3	2.00	0.43
1:Al:123:ALA:HB1	1:Al:421:ILE:HG21	2.00	0.43
1:An:115:VAL:HG22	1:An:411:TYR:CZ	2.54	0.43
2:Au:140:PHE:C	2:Au:142:ASN:N	2.77	0.43
3:Bb:77:ASP:HA	3:Bj:457:MET:HE2	2.00	0.43
3:Bb:184:TRP:CE2	3:Bb:199:PRO:HD3	2.54	0.43
3:Bb:228:LYS:NZ	3:Bb:228:LYS:HB3	2.34	0.43
3:Bb:449:PHE:HD2	3:Bt:119:ILE:HD13	1.83	0.43
3:Bd:150:HIS:ND1	3:Bh:309:PHE:HB2	2.33	0.43
3:Bh:451:ASP:O	3:Bh:455:THR:HG23	2.18	0.43
3:Bj:87:ARG:HG3	3:Bj:87:ARG:NH1	2.33	0.43
3:Bj:329:LEU:HD23	3:Bj:329:LEU:HA	1.91	0.43
3:Bj:611:ALA:O	3:Bj:615:LEU:HB3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Bl:233:PHE:HD1	3:Bl:265:LYS:HD2	1.84	0.43
3:Bl:338:ALA:HB2	3:Bt:329:LEU:HD21	2.00	0.43
3:Bp:127:ARG:HG2	3:Bp:128:LEU:N	2.33	0.43
1:Ae:154:ILE:HD12	1:Ae:154:ILE:HA	1.82	0.43
1:Al:320:LEU:HD22	1:Al:324:GLN:HB2	2.01	0.43
1:Ao:306:VAL:HG13	1:Ao:308:ILE:HD11	2.00	0.43
3:Bb:400:ALA:HA	3:Bt:397:VAL:HG23	2.01	0.43
3:Bj:222:PHE:HB3	3:Bj:279:SER:OG	2.19	0.43
3:Bn:378:ASP:OD2	3:Bn:378:ASP:C	2.62	0.43
1:Ab:125:GLU:HG2	1:Ab:269:ARG:HG2	2.01	0.42
1:Ad:126:MET:O	1:Ad:126:MET:HG2	2.19	0.42
1:Af:5:GLU:HG3	1:An:42:ARG:NH1	2.34	0.42
1:Ah:130:VAL:HG21	1:Ah:343:LEU:HD12	2.00	0.42
1:Ak:175:TYR:CD1	1:Ak:213:ARG:HB3	2.54	0.42
1:Ak:366:ILE:O	1:Ak:391:ILE:HD12	2.19	0.42
2:Au:113:LEU:HD22	2:Az:49:GLN:CD	2.44	0.42
3:Bb:165:MET:HG3	3:Bb:307:TRP:CE3	2.54	0.42
3:Bb:274:ARG:HB2	3:Bb:296:GLU:HG3	2.01	0.42
3:Bd:309:PHE:HB2	3:Bf:150:HIS:ND1	2.33	0.42
3:Bf:11:ILE:HG21	3:Bf:281:ILE:HG21	1.99	0.42
3:Bf:236:GLN:HB3	3:Bf:264:ILE:HG13	2.00	0.42
3:Bf:610:GLN:O	3:Bf:614:VAL:HG22	2.19	0.42
3:Bn:81:ARG:HD3	3:Bx:517:TYR:OH	2.18	0.42
3:Bn:507:LEU:HD23	3:Bn:507:LEU:HA	1.78	0.42
3:Br:107:ALA:HA	3:Br:146:ARG:HB3	2.01	0.42
3:Bt:67:LEU:O	3:Bt:70:GLU:HG3	2.18	0.42
3:Bx:244:VAL:HG13	3:Bx:244:VAL:O	2.19	0.42
3:Bx:384:LEU:HG	3:Bx:385:PRO:HD3	2.01	0.42
1:Aa:220:LEU:HD23	1:Aa:220:LEU:HA	1.90	0.42
1:Ad:179:GLY:HA2	1:Ad:201:ILE:HD11	2.01	0.42
1:Ae:365:PRO:HD3	3:Bv:207:TRP:CZ2	2.54	0.42
1:An:308:ILE:HD11	1:An:312:PRO:HD3	2.00	0.42
1:Ao:126:MET:O	1:Ao:309:THR:HG21	2.20	0.42
3:Bb:345:PRO:HB3	3:Bt:372:TYR:OH	2.18	0.42
3:Bd:347:LYS:HE3	3:Bh:393:GLU:OE2	2.18	0.42
3:Bf:71:MET:HE3	3:Bf:71:MET:HB3	1.88	0.42
3:Bl:235:TYR:CZ	3:Bl:265:LYS:HG3	2.53	0.42
3:Bn:257:ASP:OD1	3:Bn:258:LEU:HD12	2.20	0.42
3:Bt:179:MET:HE3	3:Bt:179:MET:HB2	1.81	0.42
3:Bx:8:LEU:HG	3:Bx:12:LEU:HD22	2.01	0.42
3:Bx:181:GLN:O	3:Bx:185:GLU:HG2	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Bx:290:LYS:H	3:Bx:290:LYS:HG2	1.60	0.42
1:Ab:66:LYS:HB2	1:Ab:66:LYS:HZ3	1.84	0.42
1:Ab:116:GLU:HG2	1:Ab:216:LYS:HD2	2.01	0.42
1:Ab:281:LEU:HD11	1:Ab:331:ASN:HB3	2.01	0.42
1:Ab:316:ASP:OD2	1:Ab:316:ASP:C	2.62	0.42
1:Ah:182:LEU:HD23	1:Ah:195:ALA:HB2	2.01	0.42
1:Al:354:TRP:CD1	1:Al:354:TRP:C	2.97	0.42
1:Am:74:ASN:HD21	1:Am:251:ASN:HD22	1.67	0.42
1:Am:220:LEU:HD12	1:Am:220:LEU:HA	1.92	0.42
1:Ao:182:LEU:HD23	1:Ao:195:ALA:HB2	2.00	0.42
2:Ap:123:ALA:HB1	3:Bx:370:PRO:HD2	2.00	0.42
2:Ay:132:MET:HE1	3:Bj:338:ALA:HB1	2.01	0.42
2:Ba:149:PHE:CD1	2:Ba:149:PHE:C	2.97	0.42
3:Bb:134:ASP:HA	3:Bb:141:ASN:HB3	2.02	0.42
3:Bj:162:SER:HB2	3:Bj:170:ALA:HB2	2.00	0.42
3:Bj:568:MET:HE3	3:Bv:551:LEU:HD13	2.01	0.42
3:Bp:347:LYS:HB2	3:Bp:394:ASN:OD1	2.19	0.42
3:Bp:581:VAL:O	3:Bx:567:MET:HG3	2.18	0.42
3:Br:476:ARG:HE	3:Br:510:ILE:HD13	1.84	0.42
3:Bt:234:ILE:HB	3:Bt:267:ALA:H	1.83	0.42
1:Aa:94:LEU:HD23	1:Ak:370:HIS:CG	2.54	0.42
1:Ag:73:LEU:HG	1:Ag:327:TYR:HE2	1.84	0.42
1:Ag:372:LEU:H	1:Ag:372:LEU:HG	1.68	0.42
1:Ah:191:ILE:HB	1:Ah:192:PRO:HD3	2.00	0.42
1:Ak:269:ARG:HD2	1:Ak:298:VAL:O	2.20	0.42
2:Au:95:TYR:HB2	2:Au:97:LEU:HG	2.00	0.42
2:Av:48:TYR:HE1	2:Av:55:ILE:HG23	1.84	0.42
2:Ba:58:TYR:CD2	2:Ba:75:LEU:HD21	2.54	0.42
3:Bd:258:LEU:HG	3:Bh:500:ALA:HA	2.00	0.42
3:Bh:97:MET:HE1	3:Bl:468:VAL:HG11	2.00	0.42
3:Bh:179:MET:N	3:Bh:215:ASP:HB3	2.34	0.42
3:Bj:172:HIS:HB3	3:Bj:222:PHE:CE1	2.54	0.42
3:Bj:574:LYS:HG3	3:Bj:592:TRP:CD2	2.54	0.42
3:Bl:60:VAL:O	3:Bl:63:VAL:HG22	2.19	0.42
3:Bl:296:GLU:HG2	3:Bt:466:SER:OG	2.20	0.42
3:Bp:622:LEU:HB3	3:Bx:622:LEU:HD11	2.00	0.42
3:Br:49:THR:HG22	3:Br:50:THR:H	1.84	0.42
3:Br:313:LYS:HB3	3:Br:313:LYS:HE3	1.70	0.42
3:Bv:60:VAL:HG21	3:Bv:320:VAL:HG23	2.01	0.42
3:Bv:88:PRO:C	3:Bv:561:ASP:HB2	2.44	0.42
3:Bx:23:ASP:O	3:Bx:27:ARG:HG3	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Ae:241:TRP:HB2	1:Ae:249:LYS:HG3	2.02	0.42
1:Af:11:LEU:HD13	1:An:74:ASN:HD22	1.84	0.42
1:Af:37:ALA:HB1	2:Au:145:GLU:H	1.84	0.42
1:Af:230:VAL:HG12	1:Af:338:MET:HG2	2.02	0.42
1:Ag:241:TRP:CZ3	1:Ag:249:LYS:HD2	2.55	0.42
1:Ak:111:LEU:HD22	1:Ak:409:LEU:CD2	2.48	0.42
1:Al:119:VAL:HG21	1:Al:361:ILE:HD11	2.00	0.42
2:Aq:43:MET:HE3	2:Aq:90:ARG:HG3	2.02	0.42
2:As:123:ALA:HB1	3:Bl:370:PRO:HD2	2.01	0.42
2:Ax:134:THR:HB	2:Ax:145:GLU:HA	2.01	0.42
2:Az:138:ASN:HD21	3:Bn:53:TYR:HA	1.84	0.42
2:Ba:33:MET:HB2	2:Ba:33:MET:HE2	1.87	0.42
2:Ba:136:SER:HB2	3:Br:325:ASP:OD2	2.20	0.42
3:Bb:45:LEU:HD12	3:Bb:45:LEU:HA	1.85	0.42
3:Bb:472:TYR:N	3:Bb:507:LEU:HD21	2.33	0.42
3:Bf:99:ARG:O	3:Bf:103:ARG:HB2	2.20	0.42
3:Bj:337:ASN:HB3	3:Bv:404:MET:SD	2.58	0.42
3:Bn:345:PRO:HG2	3:Bn:392:TYR:CZ	2.54	0.42
3:Bp:507:LEU:HD21	3:Bx:140:ASN:ND2	2.34	0.42
1:Ac:283:GLN:HG3	1:Ad:20:ILE:HD11	2.02	0.42
1:Ae:354:TRP:C	1:Ae:354:TRP:CD1	2.97	0.42
1:Af:417:ARG:HH21	1:Af:420:ALA:HB2	1.84	0.42
1:Ag:131:ILE:HD11	1:Ag:154:ILE:HG21	2.02	0.42
1:Aj:26:MET:HE3	1:Aj:354:TRP:CH2	2.54	0.42
1:Aj:154:ILE:HG13	1:Aj:291:GLN:OE1	2.19	0.42
1:Ak:175:TYR:CD2	1:Ak:213:ARG:HD3	2.54	0.42
1:An:280:PHE:HD1	1:An:280:PHE:HA	1.69	0.42
2:Aq:79:ALA:HA	2:Aq:114:LEU:HD11	2.02	0.42
2:At:35:ASP:OD2	2:Az:15:ARG:HD2	2.20	0.42
3:Bf:156:VAL:HG21	3:Bf:300:ILE:HG21	2.01	0.42
3:Bf:227:GLU:HG3	3:Bf:274:ARG:HB2	2.01	0.42
3:Bj:165:MET:HB2	3:Bj:307:TRP:CE3	2.54	0.42
3:Bj:229:LYS:HG2	3:Bj:272:LYS:HG2	2.02	0.42
3:Bl:231:THR:HG23	3:Bl:249:ARG:HG2	2.01	0.42
3:Bp:71:MET:CE	3:Br:449:PHE:HB3	2.48	0.42
3:Bp:356:ILE:HD12	3:Bp:363:TYR:CE2	2.55	0.42
3:Br:34:PHE:C	3:Br:34:PHE:CD2	2.97	0.42
3:Br:567:MET:HE3	3:Br:571:TYR:HB3	2.00	0.42
3:Bt:107:ALA:HA	3:Bt:146:ARG:HB3	2.02	0.42
1:Ag:283:GLN:OE1	1:Ag:283:GLN:HA	2.19	0.42
1:Ak:155:MET:HE1	1:Ak:166:THR:HG21	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Ak:185:ARG:H	1:Ak:185:ARG:HG2	1.63	0.42
2:Ax:5:THR:HG23	2:Ax:8:ASP:H	1.85	0.42
3:Bb:525:GLN:O	3:Bt:103:ARG:HD3	2.19	0.42
3:Bd:209:PHE:CD1	3:Bd:210:PRO:HD2	2.55	0.42
3:Bd:541:LYS:HE3	3:Bd:541:LYS:HB2	1.84	0.42
3:Bf:129:VAL:HG22	3:Bf:145:ARG:HG2	2.00	0.42
3:Bf:451:ASP:O	3:Bf:455:THR:HG23	2.20	0.42
3:Bj:252:LYS:HA	3:Bv:506:VAL:HG21	2.01	0.42
3:Bj:371:TYR:CZ	3:Bv:363:TYR:HB3	2.54	0.42
3:Bl:288:LYS:HD2	3:Bl:291:GLN:NE2	2.34	0.42
3:Bl:492:LEU:C	3:Bl:493:MET:HG2	2.44	0.42
3:Bn:165:MET:HB2	3:Bn:307:TRP:CD2	2.55	0.42
3:Bn:457:MET:HE3	3:Bn:457:MET:HB3	1.84	0.42
3:Br:458:ARG:HG3	3:Br:520:VAL:HG23	2.02	0.42
3:Br:539:LEU:HD23	3:Br:539:LEU:HA	1.86	0.42
3:Bt:43:ASP:O	3:Bt:46:SER:HB3	2.20	0.42
3:Bt:179:MET:HE1	3:Bt:184:TRP:HE3	1.85	0.42
3:Bx:177:HIS:HB3	3:Bx:179:MET:HE1	2.02	0.42
1:Ab:223:SER:HB2	1:Ab:266:GLY:O	2.20	0.42
1:Ad:309:THR:HB	1:Ad:310:PRO:HD3	2.02	0.42
1:Ag:228:ILE:HD13	1:Ag:267:MET:HE2	2.01	0.42
1:Aj:11:LEU:HD11	3:Bp:45:LEU:O	2.20	0.42
1:Al:234:GLN:NE2	1:Al:260:THR:H	2.17	0.42
1:Al:278:VAL:HG12	1:Al:332:THR:HG23	2.01	0.42
2:Aq:150:PRO:HG2	3:Bh:47:GLN:C	2.45	0.42
2:Au:46:GLU:O	2:Au:49:GLN:HG2	2.20	0.42
2:Ba:81:SER:HA	2:Ba:84:PHE:CE2	2.55	0.42
3:Bb:557:PHE:CE2	3:Bb:582:LYS:HE3	2.55	0.42
3:Bd:81:ARG:HH12	3:Bd:529:GLN:HE21	1.68	0.42
3:Bd:167:LYS:HG3	3:Bd:302:PRO:HG3	2.02	0.42
3:Bd:246:TYR:H	3:Bd:246:TYR:HD1	1.66	0.42
3:Bf:336:PHE:O	3:Bf:340:ILE:HG23	2.19	0.42
3:Bf:586:THR:HB	3:Bf:589:GLU:HG3	2.01	0.42
3:Bh:550:GLN:NE2	3:Bh:581:VAL:HG21	2.35	0.42
3:Bl:127:ARG:HG2	3:Bl:147:GLU:HG3	2.01	0.42
3:Bn:351:PHE:HZ	3:Bx:350:PHE:HZ	1.67	0.42
3:Bp:269:ARG:HD2	3:Bp:271:ILE:HD11	2.00	0.42
3:Bt:49:THR:HG22	3:Bt:50:THR:N	2.35	0.42
3:Bv:454:ALA:HB1	3:Bv:520:VAL:HG21	2.02	0.42
3:Bx:81:ARG:HG2	3:Bx:560:LEU:HD13	2.00	0.42
3:Bx:278:LYS:HE2	3:Bx:278:LYS:HB3	1.78	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Aa:217:LEU:HD11	1:Aa:352:VAL:HG13	2.02	0.42
1:Ab:268:LYS:HA	1:Ab:300:VAL:HG21	2.02	0.42
1:Ad:137:ILE:HG22	1:Ad:177:LYS:HB3	2.01	0.42
1:Ae:317:ASP:OD1	1:Ae:320:LEU:HD13	2.20	0.42
1:Af:189:GLY:C	1:Af:192:PRO:HD2	2.44	0.42
1:Ag:229:THR:HG22	1:Ag:339:ALA:HA	2.02	0.42
1:Am:316:ASP:OD1	1:Am:316:ASP:C	2.63	0.42
1:Ao:354:TRP:CD1	1:Ao:354:TRP:C	2.97	0.42
2:Aq:108:LYS:NZ	3:Bf:380:ASN:HB2	2.34	0.42
3:Bb:61:ARG:HG2	3:Bb:61:ARG:HH11	1.84	0.42
3:Bb:171:ARG:NH1	3:Bb:171:ARG:HB2	2.35	0.42
3:Bb:238:PRO:HD3	3:Bb:263:PHE:CD1	2.54	0.42
3:Bd:130:THR:HG21	3:Bh:471:ILE:HG12	2.01	0.42
3:Bd:247:PHE:HB3	3:Bd:252:LYS:HD3	2.02	0.42
3:Bj:183:GLY:HA2	3:Bv:161:ASN:ND2	2.34	0.42
3:Bj:510:ILE:HG12	3:Bj:512:GLY:H	1.85	0.42
3:Bp:248:LYS:NZ	3:Br:511:ARG:HD2	2.35	0.42
1:Ac:273:ILE:HD11	1:Ac:308:ILE:HG21	2.01	0.42
1:Ad:126:MET:HG2	1:Ad:418:PRO:HB3	2.01	0.42
1:Af:21:SER:HB2	1:An:161:ASN:HA	2.01	0.42
1:Ah:164:MET:HE3	1:Ah:356:ASP:OD1	2.19	0.42
1:Ai:396:GLY:HA2	1:Ai:403:GLY:HA2	2.02	0.42
1:Aj:391:ILE:HG12	1:Aj:408:ALA:HB3	2.01	0.42
1:Al:130:VAL:HG23	1:Al:294:THR:HB	2.01	0.42
1:Ao:38:ALA:O	1:Ao:42:ARG:HG2	2.19	0.42
2:At:31:GLN:O	2:At:35:ASP:HB2	2.19	0.42
2:Ba:40:LEU:HD13	2:Ba:87:LEU:HD22	2.00	0.42
3:Bd:309:PHE:HB2	3:Bf:150:HIS:CG	2.55	0.42
3:Bd:616:LEU:HD21	3:Bf:614:VAL:HG23	2.01	0.42
3:Bj:239:VAL:HG22	3:Bj:240:THR:HG23	2.01	0.42
3:Bl:451:ASP:O	3:Bl:455:THR:HG23	2.20	0.42
3:Bn:338:ALA:HA	3:Bn:341:VAL:HG12	2.02	0.42
3:Bp:329:LEU:O	3:Bp:333:ILE:HG12	2.19	0.42
3:Bv:493:MET:HE3	3:Bv:493:MET:HB2	1.95	0.42
1:Aa:104:ILE:HD13	1:Aa:407:ILE:HD11	2.02	0.41
1:Ac:5:GLU:HG2	1:Ac:6:GLY:H	1.85	0.41
1:Ad:175:TYR:CD2	1:Ad:213:ARG:HD3	2.55	0.41
1:Ad:275:PHE:CE1	1:Ad:340:VAL:HB	2.55	0.41
1:Ag:148:VAL:HA	1:Ag:168:TYR:CE2	2.55	0.41
1:Ak:298:VAL:HG12	1:Ak:299:ARG:HG2	2.02	0.41
1:Al:84:ASN:HD22	1:Al:406:ARG:NH1	2.18	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Al:97:GLU:HG3	1:Al:101:ARG:NH2	2.31	0.41
1:Am:137:ILE:HG22	1:Am:143:ASP:HB3	2.02	0.41
1:An:368:ALA:HB1	1:An:378:THR:HG21	2.01	0.41
2:As:4:LYS:HD2	2:As:4:LYS:HA	1.87	0.41
2:Aw:14:LEU:HD22	2:Aw:19:VAL:CG1	2.50	0.41
3:Bb:223:TYR:HB2	3:Bb:298:ILE:HD11	2.02	0.41
3:Bb:332:MET:HE2	3:Bb:333:ILE:HG13	2.02	0.41
3:Bf:136:SER:HB3	3:Bh:514:TYR:HB2	2.01	0.41
3:Bh:255:ILE:HG12	3:Bl:500:ALA:HB2	2.02	0.41
3:Bj:114:ALA:HB3	3:Bj:126:TRP:HE1	1.85	0.41
3:Bn:15:PHE:HE1	3:Bn:157:ILE:HD13	1.85	0.41
3:Bn:87:ARG:NH2	3:Bx:479:THR:HG21	2.34	0.41
3:Bn:356:ILE:O	3:Bn:360:GLU:HG3	2.20	0.41
3:Bp:370:PRO:HG2	3:Bp:371:TYR:CE2	2.54	0.41
3:Br:164:LEU:HD12	3:Br:169:ASP:HB2	2.02	0.41
3:Br:411:ALA:O	3:Br:415:VAL:HG22	2.20	0.41
1:Aa:84:ASN:HA	1:Aa:407:ILE:O	2.20	0.41
1:Ae:401:LEU:HD23	1:Ae:401:LEU:HA	1.85	0.41
1:Af:168:TYR:CD2	1:Af:353:PHE:HB3	2.55	0.41
1:Af:228:ILE:HG22	1:Af:340:VAL:HB	2.02	0.41
1:Ag:196:TYR:OH	1:Am:201:ILE:HG23	2.20	0.41
1:Aj:118:LYS:HD2	1:Aj:411:TYR:HE1	1.85	0.41
1:Aj:132:THR:HG22	1:Aj:425:LEU:HB2	2.02	0.41
1:Ak:182:LEU:HD23	1:Ak:185:ARG:HH11	1.85	0.41
1:An:364:GLN:HE21	1:An:364:GLN:HA	1.84	0.41
2:Au:44:MET:HG3	2:Au:58:TYR:CD2	2.55	0.41
2:Aw:56:THR:HG23	2:Aw:58:TYR:H	1.85	0.41
3:Bd:622:LEU:HB2	3:Bf:622:LEU:HD11	2.01	0.41
3:Bh:334:MET:HE1	3:Bl:407:ALA:HB1	2.03	0.41
3:Bl:479:THR:HG22	3:Bl:491:GLN:HG2	2.01	0.41
3:Bl:613:GLY:O	3:Bl:616:LEU:HB2	2.20	0.41
3:Bn:264:ILE:HD12	3:Bn:264:ILE:O	2.20	0.41
3:Bn:481:THR:O	3:Bn:487:GLU:HB2	2.20	0.41
3:Bn:573:ASN:O	3:Bn:577:ILE:HD13	2.20	0.41
3:Bn:621:GLU:O	3:Bn:624:LYS:HG2	2.20	0.41
3:Bp:353:PRO:HG3	3:Bx:373:LEU:HD22	2.02	0.41
3:Bp:372:TYR:OH	3:Br:345:PRO:HB3	2.19	0.41
3:Bp:506:VAL:HG11	3:Bx:255:ILE:HG21	2.01	0.41
3:Bp:567:MET:HE2	3:Bp:567:MET:HB3	1.88	0.41
3:Bp:608:MET:HE1	3:Bx:608:MET:HB3	2.02	0.41
1:Ad:176:LYS:HB3	1:Ad:176:LYS:HE2	1.91	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Ae:153:GLU:OE1	1:Ai:173:GLN:NE2	2.47	0.41
1:Ai:125:GLU:O	1:Ai:270:GLY:HA2	2.20	0.41
1:Ak:191:ILE:HD13	1:Ak:202:GLN:HG3	2.02	0.41
1:Am:82:PRO:HG3	1:Am:410:TRP:CD1	2.55	0.41
1:Am:100:TYR:O	1:Am:104:ILE:HG12	2.20	0.41
1:Am:184:LYS:HD3	1:Am:184:LYS:HA	1.95	0.41
1:An:191:ILE:HB	1:An:192:PRO:HD3	2.02	0.41
1:Ao:96:ASP:C	1:Ao:96:ASP:OD1	2.63	0.41
3:Bb:77:ASP:OD1	3:Bb:77:ASP:N	2.53	0.41
3:Bb:361:HIS:O	3:Bb:364:ASP:HB3	2.20	0.41
3:Bb:576:LEU:HD13	3:Bt:567:MET:HE1	2.01	0.41
3:Bh:81:ARG:HH21	3:Bh:560:LEU:HD21	1.86	0.41
3:Bj:231:THR:HB	3:Bj:249:ARG:HB2	2.03	0.41
3:Bj:479:THR:C	3:Bj:480:ILE:HD12	2.44	0.41
3:Bn:62:PRO:HD3	3:Bx:415:VAL:HG12	2.02	0.41
3:Bn:523:SER:HA	3:Bv:77:ASP:CG	2.45	0.41
3:Bn:557:PHE:HE2	3:Bv:563:LYS:HZ3	1.64	0.41
3:Bp:140:ASN:CG	3:Br:505:GLN:HE21	2.29	0.41
3:Bp:366:ASN:HB3	3:Bp:368:ASP:OD2	2.21	0.41
3:Bx:574:LYS:HE3	3:Bx:592:TRP:CE2	2.54	0.41
1:Aa:30:ALA:HA	1:Aa:354:TRP:HH2	1.85	0.41
1:Aa:126:MET:HG3	1:Aa:309:THR:CG2	2.50	0.41
1:Aa:140:ASN:HB2	1:Aa:143:ASP:HB2	2.02	0.41
1:Ae:264:THR:O	1:Ae:264:THR:HG22	2.20	0.41
1:Af:191:ILE:HD13	1:Af:202:GLN:HG3	2.02	0.41
1:Ag:392:PHE:HD1	1:Ag:407:ILE:HG22	1.85	0.41
1:Ah:372:LEU:HD12	1:Ah:372:LEU:HA	1.84	0.41
1:Ai:77:VAL:HG11	1:Ai:362:VAL:HG21	2.02	0.41
1:Aj:33:TYR:O	1:Aj:362:VAL:HA	2.20	0.41
1:Al:168:TYR:HB3	1:Al:211:VAL:HG22	2.02	0.41
1:An:219:VAL:HB	1:An:349:ARG:HG2	2.01	0.41
2:Aq:102:LYS:HA	2:Aq:102:LYS:HD2	1.86	0.41
3:Bb:24:GLU:HG2	3:Bt:211:TRP:NE1	2.36	0.41
3:Bd:209:PHE:HD1	3:Bd:209:PHE:HA	1.77	0.41
3:Bd:350:PHE:CE1	3:Bf:388:PRO:HG3	2.56	0.41
3:Bf:212:LEU:HD13	3:Bf:212:LEU:O	2.20	0.41
3:Bf:479:THR:OG1	3:Bf:489:ASP:HB3	2.20	0.41
3:Bf:583:LYS:HG3	3:Bf:584:PRO:HD2	2.02	0.41
3:Bh:223:TYR:CE1	3:Bh:278:LYS:HD3	2.55	0.41
3:Bj:226:VAL:O	3:Bj:274:ARG:HA	2.20	0.41
3:Bj:451:ASP:O	3:Bj:455:THR:HG23	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Bj:552:LEU:HD23	3:Bj:552:LEU:HA	1.79	0.41
3:Bl:111:VAL:HA	3:Bl:126:TRP:CZ3	2.56	0.41
3:Bl:185:GLU:HG3	3:Bl:185:GLU:H	1.70	0.41
3:Bn:577:ILE:HD11	3:Bn:589:GLU:OE1	2.21	0.41
3:Bp:21:ALA:HB1	3:Bx:214:GLN:HE22	1.85	0.41
3:Bp:236:GLN:HB3	3:Bp:264:ILE:HG12	2.02	0.41
3:Br:252:LYS:HB3	3:Br:252:LYS:NZ	2.36	0.41
3:Bv:198:ILE:HD13	3:Bv:198:ILE:HA	1.81	0.41
3:Bx:133:GLU:O	3:Bx:137:PRO:HB3	2.20	0.41
3:Bx:275:ARG:HB3	3:Bx:292:LEU:HD11	2.02	0.41
1:Aa:33:TYR:CD1	1:Aa:362:VAL:HG22	2.54	0.41
1:Ae:377:LYS:HB3	1:Ah:374:ALA:HB1	2.02	0.41
1:Aj:126:MET:HE2	1:Aj:269:ARG:HH22	1.86	0.41
1:Al:128:SER:HB3	1:Al:419:GLU:HA	2.02	0.41
1:Am:158:ARG:HD3	1:Am:280:PHE:HB3	2.03	0.41
2:At:22:ASP:HB3	2:Ay:31:GLN:HE21	1.83	0.41
2:At:89:CYS:SG	2:Az:102:LYS:HD3	2.60	0.41
2:Ax:150:PRO:HG2	3:Bt:52:GLN:HA	2.02	0.41
2:Ay:47:TRP:CZ2	2:Ay:111:LYS:HD3	2.55	0.41
2:Az:5:THR:HG23	2:Az:7:GLY:H	1.86	0.41
3:Bb:579:MET:HE2	3:Bb:579:MET:HB2	1.87	0.41
3:Bf:26:ARG:HG3	3:Bf:153:CYS:O	2.20	0.41
3:Bj:273:ARG:O	3:Bj:296:GLU:HG3	2.20	0.41
3:Bj:386:THR:HB	3:Bv:352:TRP:HZ2	1.85	0.41
3:Bl:209:PHE:CG	3:Bl:210:PRO:HD2	2.55	0.41
3:Bn:94:LEU:HD21	3:Bx:465:GLN:HG3	2.02	0.41
3:Bn:247:PHE:CE1	3:Bx:510:ILE:HG22	2.55	0.41
3:Br:78:VAL:HG22	3:Br:98:TYR:CE2	2.55	0.41
3:Bv:136:SER:HB2	3:Bx:514:TYR:HB2	2.02	0.41
3:Bv:612:GLN:HE22	3:Bv:616:LEU:HD11	1.85	0.41
1:Aa:302:ASP:OD2	1:Aa:302:ASP:C	2.63	0.41
1:Ae:309:THR:HB	1:Ae:310:PRO:HD3	2.02	0.41
1:Af:220:LEU:HD12	1:Af:220:LEU:HA	1.79	0.41
1:Af:245:ASN:HB3	1:Af:246:ASP:H	1.62	0.41
1:Af:353:PHE:CZ	1:Af:422:GLY:HA3	2.55	0.41
1:Af:364:GLN:OE1	1:Af:365:PRO:HD2	2.21	0.41
1:Af:401:LEU:HD23	1:Af:401:LEU:HA	1.89	0.41
1:Ag:180:TYR:O	1:Ag:184:LYS:HG3	2.20	0.41
1:Ah:41:GLN:HE21	1:Ah:41:GLN:HB3	1.63	0.41
1:Ah:151:ALA:O	1:Ah:155:MET:HG3	2.21	0.41
1:Aj:350:THR:HB	1:Aj:423:VAL:HG23	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Al:217:LEU:HB2	1:Al:349:ARG:HH21	1.86	0.41
1:Am:261:LEU:HD12	1:Am:267:MET:HE1	2.01	0.41
2:Aq:86:ASN:O	2:Aq:87:LEU:HB3	2.20	0.41
2:Ar:35:ASP:OD1	2:Ar:35:ASP:C	2.63	0.41
2:As:128:TYR:CE1	3:Bb:343:ARG:HD2	2.56	0.41
2:Av:110:GLY:O	2:Av:114:LEU:HB2	2.20	0.41
2:Ax:134:THR:HA	2:Ax:149:PHE:CE2	2.56	0.41
2:Az:33:MET:O	2:Az:37:VAL:HG23	2.20	0.41
3:Bd:221:GLU:HG2	3:Bd:280:ILE:HD13	2.03	0.41
3:Bf:233:PHE:HD2	3:Bf:235:TYR:HE2	1.68	0.41
3:Bf:608:MET:HB3	3:Bf:612:GLN:HG2	2.02	0.41
3:Bh:179:MET:HE1	3:Bh:187:PHE:CB	2.46	0.41
3:Bj:610:GLN:H	3:Bj:610:GLN:HG3	1.57	0.41
3:Bl:345:PRO:HG2	3:Bl:392:TYR:CZ	2.55	0.41
3:Bp:329:LEU:HD12	3:Bp:329:LEU:HA	1.83	0.41
3:Bv:29:ALA:HB1	3:Bv:121:ALA:HB1	2.03	0.41
3:Bx:254:VAL:O	3:Bx:255:ILE:HD13	2.20	0.41
3:Bx:313:LYS:HB2	3:Bx:313:LYS:HE3	1.78	0.41
3:Bx:576:LEU:HD23	3:Bx:576:LEU:HA	1.89	0.41
1:Aa:18:GLU:HG3	1:Al:52:GLU:HG2	2.01	0.41
1:Aa:87:PHE:CD1	1:Al:70:LEU:HD11	2.56	0.41
1:Ae:38:ALA:HB2	3:Bv:44:TRP:CZ3	2.55	0.41
1:Ae:215:PRO:HG2	1:Ae:216:LYS:HZ3	1.86	0.41
1:Ag:119:VAL:HA	1:Ag:413:VAL:HG11	2.03	0.41
1:Ag:128:SER:HB2	1:Ag:419:GLU:HA	2.02	0.41
1:Ai:369:ASN:HA	1:Ai:378:THR:HG21	2.02	0.41
1:Ak:168:TYR:CD1	1:Ak:353:PHE:HB3	2.56	0.41
1:Am:131:ILE:HD12	1:Am:150:ASP:HB3	2.03	0.41
2:Aq:16:LYS:HA	2:Aq:16:LYS:HD3	1.82	0.41
2:Ba:41:GLU:HG3	2:Ba:67:PRO:HG3	2.02	0.41
2:Ba:132:MET:HG2	2:Ba:149:PHE:CD2	2.42	0.41
3:Bb:58:ASP:HA	3:Bb:327:GLN:NE2	2.36	0.41
3:Bd:111:VAL:HA	3:Bd:126:TRP:HE1	1.85	0.41
3:Bf:87:ARG:HB3	3:Bf:87:ARG:CZ	2.51	0.41
3:Bf:463:ILE:HG21	3:Br:299:PRO:HA	2.03	0.41
3:Bh:158:TRP:CG	3:Bh:167:LYS:HG2	2.55	0.41
3:Bh:481:THR:HA	3:Bh:488:LYS:HB3	2.03	0.41
3:Bl:475:PRO:HG3	3:Bl:495:GLU:OE2	2.20	0.41
3:Bp:133:GLU:O	3:Bp:137:PRO:HB3	2.21	0.41
3:Bp:507:LEU:HA	3:Bp:507:LEU:HD23	1.76	0.41
3:Bp:574:LYS:O	3:Bp:578:GLN:HG2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Ab:130:VAL:C	1:Ab:131:ILE:HD13	2.46	0.41
1:Ab:182:LEU:HD23	1:Ab:182:LEU:HA	1.90	0.41
1:Ae:94:LEU:HG	1:Ah:370:HIS:NE2	2.35	0.41
1:Ae:127:GLY:H	1:Ae:272:LYS:NZ	2.19	0.41
1:Ag:33:TYR:CE1	3:Bf:212:LEU:HD23	2.56	0.41
1:Ah:311:LYS:O	1:Ah:311:LYS:HG3	2.20	0.41
1:Ai:353:PHE:CE2	1:Ai:422:GLY:HA3	2.56	0.41
1:Ai:388:LEU:HB3	1:Ai:409:LEU:HD21	2.02	0.41
1:Am:109:ARG:HG2	1:Am:109:ARG:NH1	2.35	0.41
1:Am:130:VAL:HG12	1:Am:132:THR:HG23	2.02	0.41
1:Ao:84:ASN:ND2	1:Ao:406:ARG:HH21	2.18	0.41
2:Ar:91:ILE:HD13	2:Ar:91:ILE:HA	1.91	0.41
2:As:33:MET:CE	2:As:69:GLU:HG3	2.51	0.41
2:As:118:THR:O	2:As:122:ARG:HG3	2.21	0.41
2:Au:42:ALA:HB1	2:Ba:81:SER:HB2	2.02	0.41
2:Ba:111:LYS:HD2	3:Bx:379:GLU:OE2	2.21	0.41
3:Bb:235:TYR:HE2	3:Bb:252:LYS:HE2	1.85	0.41
3:Bf:77:ASP:OD1	3:Bf:77:ASP:N	2.53	0.41
3:Bf:248:LYS:HE2	3:Bf:273:ARG:HB2	2.03	0.41
3:Bj:559:LEU:HD11	3:Bv:538:LEU:HD21	2.03	0.41
3:Bl:139:SER:HB3	3:Bt:472:TYR:CG	2.55	0.41
3:Bl:233:PHE:CD1	3:Bl:265:LYS:HD2	2.56	0.41
3:Bn:322:LEU:HD23	3:Bn:322:LEU:HA	1.83	0.41
3:Bn:393:GLU:HG3	3:Bv:391:TYR:CZ	2.55	0.41
3:Bn:397:VAL:HG11	3:Bx:403:TYR:CD2	2.56	0.41
3:Bp:246:TYR:CD2	3:Br:511:ARG:HB3	2.54	0.41
3:Bp:500:ALA:HB2	3:Bx:255:ILE:HD11	2.02	0.41
3:Bp:506:VAL:HB	3:Bx:255:ILE:HG13	2.02	0.41
3:Br:78:VAL:O	3:Br:95:MET:HE1	2.21	0.41
3:Bt:321:ARG:HE	3:Bt:321:ARG:HB2	1.65	0.41
1:Aa:96:ASP:HB3	1:Ak:41:GLN:OE1	2.21	0.41
1:Aa:113:ASN:CG	1:Al:284:MET:HE3	2.46	0.41
1:Ab:158:ARG:HA	1:Ab:282:GLY:HA2	2.03	0.41
1:Ab:255:ARG:HE	1:Ab:255:ARG:HB2	1.57	0.41
1:Ad:86:PHE:CD1	1:Ad:406:ARG:HD2	2.55	0.41
1:Ae:121:ASN:O	1:Ae:125:GLU:HG3	2.20	0.41
1:Ae:365:PRO:HB3	3:Bv:207:TRP:NE1	2.36	0.41
1:Ag:101:ARG:O	1:Ag:105:GLN:HG3	2.21	0.41
1:Ag:365:PRO:HG3	3:Bf:207:TRP:CE3	2.56	0.41
1:Ai:279:LYS:HE2	1:Ai:292:ASP:HA	2.02	0.41
1:Ak:401:LEU:HD12	1:Ak:401:LEU:HA	1.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Al:24:THR:O	1:Al:28:GLN:HG3	2.21	0.41
1:Al:68:THR:HB	1:Al:323:GLU:OE2	2.19	0.41
1:Al:236:PHE:CD1	1:Al:312:PRO:HG2	2.56	0.41
1:Al:299:ARG:HG3	1:Al:299:ARG:NH1	2.35	0.41
1:Al:404:LEU:HD23	1:Al:404:LEU:HA	1.81	0.41
1:Am:278:VAL:HG23	1:Am:293:ALA:HB3	2.01	0.41
1:An:184:LYS:HD2	1:An:184:LYS:HA	1.95	0.41
1:An:203:ARG:H	1:An:203:ARG:HG2	1.73	0.41
1:Ao:17:ILE:HG13	1:Ao:19:THR:HG23	2.03	0.41
2:At:131:ARG:O	3:Bn:332:MET:HG3	2.21	0.41
2:Av:43:MET:HE3	2:Av:90:ARG:HD3	2.03	0.41
2:Az:140:PHE:CZ	3:Bn:49:THR:HG23	2.56	0.41
2:Ba:15:ARG:HG3	2:Ba:21:SER:HB3	2.02	0.41
3:Bb:317:GLU:OE2	3:Bb:321:ARG:HG2	2.20	0.41
3:Bb:519:ASP:HB3	3:Bt:79:LEU:HB3	2.02	0.41
3:Bd:76:ILE:HG22	3:Bh:457:MET:HG3	2.03	0.41
3:Bd:578:GLN:HG2	3:Bd:578:GLN:H	1.68	0.41
3:Bf:63:VAL:O	3:Bf:67:LEU:HD13	2.21	0.41
3:Bh:80:TYR:HB2	3:Bh:95:MET:HG2	2.03	0.41
3:Bh:127:ARG:HH22	3:Bh:177:HIS:CE1	2.38	0.41
3:Bh:248:LYS:HD3	3:Bl:511:ARG:CZ	2.51	0.41
3:Bj:228:LYS:HB2	3:Bj:228:LYS:HE2	1.71	0.41
3:Bj:591:GLN:OE1	3:Bv:488:LYS:HE2	2.21	0.41
3:Bl:150:HIS:CD2	3:Bt:309:PHE:HB2	2.56	0.41
3:Bn:155:HIS:O	3:Bn:175:VAL:HA	2.20	0.41
3:Bn:463:ILE:HG22	3:Bn:467:ILE:HD12	2.02	0.41
3:Br:81:ARG:NH1	3:Br:560:LEU:HD11	2.35	0.41
3:Br:322:LEU:HA	3:Br:322:LEU:HD23	1.83	0.41
3:Br:329:LEU:O	3:Br:333:ILE:HD13	2.20	0.41
3:Br:536:LEU:HD23	3:Br:536:LEU:HA	1.87	0.41
3:Bt:613:GLY:O	3:Bt:616:LEU:HB3	2.20	0.41
3:Bx:10:SER:O	3:Bx:14:ARG:HD3	2.21	0.41
3:Bx:528:LYS:HB2	3:Bx:528:LYS:HE3	1.86	0.41
3:Bx:559:LEU:HD23	3:Bx:559:LEU:HA	1.83	0.41
1:Ad:241:TRP:HZ3	1:Ad:243:LEU:HD22	1.86	0.41
1:Ad:261:LEU:HD12	1:Ad:267:MET:HE1	2.03	0.41
1:Ad:284:MET:HG2	1:Ah:22:ALA:HB2	2.02	0.41
1:Ae:203:ARG:O	1:Ae:211:VAL:HG22	2.20	0.41
1:Ag:52:GLU:HG2	1:Ak:19:THR:H	1.86	0.41
1:Ag:191:ILE:HA	1:Ag:202:GLN:HE21	1.86	0.41
1:Aj:158:ARG:HD3	1:Aj:280:PHE:CG	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Ak:376:MET:HG2	1:Ak:395:GLN:HB2	2.02	0.41
2:Ap:81:SER:HA	2:Ap:84:PHE:CE2	2.56	0.41
3:Bb:236:GLN:HB2	3:Bb:266:ILE:HD11	2.03	0.41
3:Bb:468:VAL:HG22	3:Bb:472:TYR:CD2	2.55	0.41
3:Bb:506:VAL:HG11	3:Bt:255:ILE:HG21	2.03	0.41
3:Bb:567:MET:SD	3:Bj:554:LEU:HD13	2.61	0.41
3:Bd:479:THR:HB	3:Bd:489:ASP:HB3	2.03	0.41
3:Bh:568:MET:HE2	3:Bh:568:MET:HB2	1.75	0.41
3:Bl:36:SER:HB3	3:Bl:120:GLU:OE2	2.21	0.41
3:Bp:89:ASP:OD1	3:Bp:92:ASP:HB2	2.21	0.41
3:Bp:269:ARG:HG2	3:Bp:270:GLN:N	2.36	0.41
3:Br:362:MET:HE1	3:Br:373:LEU:H	1.85	0.41
3:Br:409:THR:O	3:Br:413:LYS:HD3	2.21	0.41
3:Bx:479:THR:HG22	3:Bx:490:VAL:O	2.21	0.41
1:Ac:371:GLU:H	1:Ac:371:GLU:HG3	1.57	0.40
1:Ad:278:VAL:HG13	1:Ad:330:VAL:HB	2.02	0.40
1:Ad:380:SER:HB2	3:Bb:23:ASP:OD2	2.20	0.40
1:Ai:235:SER:HB2	1:Ai:317:ASP:OD2	2.21	0.40
2:Aq:144:ASN:HB2	3:Bh:45:LEU:HD12	2.03	0.40
2:Au:140:PHE:HB2	2:Au:143:LEU:N	2.33	0.40
2:Au:146:TRP:HA	2:Au:146:TRP:CE3	2.56	0.40
2:Av:95:TYR:HB2	2:Av:97:LEU:HG	2.03	0.40
3:Bb:6:ASN:ND2	3:Bb:8:LEU:HB3	2.36	0.40
3:Bd:345:PRO:HB3	3:Bf:372:TYR:OH	2.22	0.40
3:Bf:362:MET:SD	3:Bf:373:LEU:HD12	2.61	0.40
3:Bj:248:LYS:HB2	3:Bj:251:ILE:CD1	2.51	0.40
3:Bl:30:LYS:HB3	3:Bl:30:LYS:HE3	1.86	0.40
3:Bl:606:PRO:HB2	3:Bl:609:VAL:HG12	2.03	0.40
3:Bn:209:PHE:HB3	3:Bn:210:PRO:HD3	2.03	0.40
3:Bn:459:ARG:NH2	3:Bv:297:HIS:HB3	2.35	0.40
3:Bn:511:ARG:HH11	3:Bv:271:ILE:CD1	2.30	0.40
3:Bn:521:GLY:HA3	3:Bv:79:LEU:HD22	2.01	0.40
3:Bp:310:VAL:HG13	3:Bp:311:GLU:N	2.35	0.40
3:Br:191:TYR:HB2	3:Br:193:LEU:HD12	2.03	0.40
3:Br:193:LEU:HD22	3:Br:287:LEU:HD13	2.03	0.40
3:Bv:298:ILE:HA	3:Bv:299:PRO:HD3	1.93	0.40
3:Bv:479:THR:HB	3:Bv:489:ASP:HB2	2.03	0.40
1:Aa:141:THR:OG1	1:Ab:184:LYS:HG3	2.21	0.40
1:Ab:37:ALA:HA	1:Ab:364:GLN:HE22	1.86	0.40
1:Ab:309:THR:HB	1:Ab:310:PRO:HD3	2.04	0.40
1:Ab:382:SER:HB3	3:Bt:16:ASP:OD2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Ad:274:SER:HB2	1:Ad:343:LEU:HD21	2.03	0.40
1:Ad:278:VAL:HG12	1:Ad:293:ALA:HB3	2.02	0.40
1:Ae:119:VAL:HA	1:Ae:413:VAL:HG11	2.03	0.40
1:Af:8:ILE:C	1:Af:8:ILE:HD12	2.46	0.40
1:Ag:82:PRO:HG3	1:Am:61:TRP:CE2	2.56	0.40
1:Ah:166:THR:O	1:Ah:209:ASP:HB2	2.21	0.40
1:Aj:117:LEU:HD23	1:Aj:216:LYS:HB3	2.03	0.40
1:Ak:279:LYS:HB2	1:Ak:331:ASN:ND2	2.36	0.40
1:Al:31:LYS:H	1:Al:31:LYS:HG2	1.46	0.40
1:Al:48:TRP:CH2	1:Al:76:ALA:HB2	2.57	0.40
1:An:26:MET:HB2	1:An:116:GLU:OE1	2.21	0.40
1:An:197:ARG:O	1:An:198:ASP:C	2.65	0.40
1:Ao:83:ASP:OD1	1:Ao:409:LEU:HB3	2.21	0.40
1:Ao:383:ILE:HD13	1:Ao:409:LEU:HD22	2.03	0.40
2:Aq:113:LEU:HD13	2:Aq:116:LYS:HE2	2.02	0.40
2:Au:102:LYS:HD2	2:Au:102:LYS:HA	1.76	0.40
2:Au:128:TYR:HB2	2:Au:148:TYR:CD2	2.56	0.40
3:Bb:404:MET:HE1	3:Bt:334:MET:HE2	2.03	0.40
3:Bf:235:TYR:O	3:Bf:245:SER:HB3	2.21	0.40
3:Bh:387:GLN:HB3	3:Bh:388:PRO:CD	2.49	0.40
3:Bh:469:ASN:HB3	3:Bh:513:ARG:HD3	2.02	0.40
3:Bh:614:VAL:O	3:Bh:617:GLN:HG3	2.20	0.40
3:Bj:211:TRP:O	3:Bj:212:LEU:HB3	2.22	0.40
3:Bj:575:GLN:O	3:Bj:579:MET:HG3	2.22	0.40
3:Bl:220:ALA:HB3	3:Bl:281:ILE:HG13	2.03	0.40
3:Bn:124:GLY:HA3	3:Bn:303:VAL:HG12	2.04	0.40
3:Bn:177:HIS:HB3	3:Bn:179:MET:HE3	2.04	0.40
3:Bn:459:ARG:O	3:Bn:463:ILE:HG13	2.20	0.40
3:Bp:99:ARG:O	3:Bp:103:ARG:HB3	2.21	0.40
3:Br:337:ASN:ND2	3:Br:401:ASN:HD22	2.18	0.40
3:Bt:232:ALA:HB3	3:Bt:269:ARG:HG2	2.04	0.40
3:Bx:185:GLU:HG2	3:Bx:185:GLU:H	1.65	0.40
3:Bx:247:PHE:CD2	3:Bx:252:LYS:HE2	2.56	0.40
3:Bx:290:LYS:HE2	3:Bx:290:LYS:HB3	1.93	0.40
3:Bx:332:MET:HE2	3:Bx:332:MET:HB3	1.96	0.40
1:Aa:358:ALA:HA	1:Aa:417:ARG:HB2	2.03	0.40
1:Ac:225:ALA:HB1	1:Ac:228:ILE:HD12	2.02	0.40
1:Ae:264:THR:HG21	1:Ae:300:VAL:HG13	2.03	0.40
1:Ah:189:GLY:O	1:Ah:193:GLU:HB2	2.21	0.40
1:Ah:220:LEU:HD21	1:Ah:344:ASN:OD1	2.20	0.40
1:Aj:79:MET:HE1	1:Aj:364:GLN:HG2	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Ao:279:LYS:HD2	1:Ao:279:LYS:HA	1.88	0.40
2:Aq:15:ARG:HD2	2:Av:35:ASP:OD1	2.22	0.40
2:As:126:ALA:HB2	3:Bt:364:ASP:OD2	2.21	0.40
2:Ay:126:ALA:HB2	3:Bb:364:ASP:OD2	2.21	0.40
2:Az:3:ILE:HG22	2:Az:73:HIS:HE2	1.86	0.40
2:Ba:149:PHE:HA	2:Ba:150:PRO:HD3	1.91	0.40
3:Bb:97:MET:HE2	3:Bb:97:MET:HB2	1.85	0.40
3:Bb:234:ILE:HG12	3:Bb:246:TYR:CB	2.46	0.40
3:Bb:398:PRO:HB3	3:Bt:394:ASN:HB3	2.03	0.40
3:Bb:463:ILE:HG12	3:Bt:297:HIS:HB2	2.03	0.40
3:Bd:363:TYR:CE2	3:Bd:372:TYR:HB3	2.56	0.40
3:Bf:296:GLU:HA	3:Bf:296:GLU:OE1	2.22	0.40
3:Bf:536:LEU:HD23	3:Bf:536:LEU:HA	1.82	0.40
3:Bf:559:LEU:HD23	3:Bf:559:LEU:HA	1.84	0.40
3:Bp:276:VAL:HG13	3:Bp:293:ILE:HB	2.04	0.40
3:Bv:578:GLN:OE1	3:Bv:578:GLN:HA	2.21	0.40
1:Aa:22:ALA:HB2	1:Al:284:MET:HE1	2.04	0.40
1:Aa:173:GLN:O	1:Aa:177:LYS:HG3	2.21	0.40
1:Ac:234:GLN:HE22	1:Ac:260:THR:H	1.68	0.40
1:Ad:35:PRO:HA	1:Ad:36:PRO:HD3	1.90	0.40
1:Ad:185:ARG:HD3	1:Ad:185:ARG:HA	1.79	0.40
1:Ae:205:VAL:HG12	1:Ae:211:VAL:HG11	2.04	0.40
1:Af:20:ILE:HD11	1:An:283:GLN:HG3	2.04	0.40
1:Ah:78:ASN:OD1	1:Ah:78:ASN:N	2.54	0.40
1:Ak:9:VAL:N	3:Bf:49:THR:HB	2.37	0.40
1:Am:108:ALA:HB1	1:Am:384:PRO:HD3	2.03	0.40
1:An:49:MET:HE2	1:An:49:MET:HB3	1.82	0.40
1:An:144:ALA:O	1:An:148:VAL:HG23	2.20	0.40
1:Ao:175:TYR:CZ	1:Ao:201:ILE:HG22	2.57	0.40
1:Ao:236:PHE:HB2	1:Ao:312:PRO:O	2.21	0.40
1:Ao:295:PHE:HD2	1:Ao:310:PRO:HD2	1.86	0.40
1:Ao:359:ILE:HD13	1:Ao:359:ILE:HA	1.92	0.40
2:Aq:2:GLN:HG3	2:Aq:4:LYS:HG2	2.03	0.40
2:Aq:107:ALA:HB1	3:Bf:380:ASN:ND2	2.36	0.40
2:Ba:16:LYS:HA	2:Ba:16:LYS:HD3	1.79	0.40
3:Bf:128:LEU:HD23	3:Bf:128:LEU:HA	1.93	0.40
3:Bl:80:TYR:CE2	3:Bl:94:LEU:HG	2.57	0.40
3:Bl:389:LEU:HD23	3:Bl:389:LEU:HA	1.98	0.40
3:Bl:557:PHE:CD2	3:Bl:558:THR:HG23	2.56	0.40
3:Bp:323:THR:HB	3:Bp:412:VAL:HG13	2.04	0.40
3:Br:93:VAL:O	3:Br:97:MET:HG3	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Aa:26:MET:HE2	1:Aa:169:PHE:CG	2.56	0.40
1:Aa:187:ILE:HD12	1:Aa:187:ILE:HA	1.87	0.40
1:Ac:24:THR:O	1:Ac:24:THR:HG22	2.21	0.40
1:Ac:309:THR:OG1	1:Ac:310:PRO:HD3	2.21	0.40
1:Ad:384:PRO:C	1:Ad:386:VAL:H	2.30	0.40
1:Ae:86:PHE:CD2	1:Ao:63:LEU:HD13	2.57	0.40
1:Ae:384:PRO:C	1:Ae:386:VAL:H	2.28	0.40
1:Af:161:ASN:HB3	1:Af:417:ARG:NH1	2.34	0.40
1:Ag:40:MET:HE1	1:Ag:45:ASN:CG	2.47	0.40
1:Ah:387:GLY:N	3:Bj:284:THR:HG21	2.36	0.40
1:Ai:137:ILE:HD12	1:Ai:174:ASP:OD2	2.21	0.40
1:Ak:368:ALA:HB3	1:Ak:391:ILE:HD13	2.03	0.40
1:Al:78:ASN:H	1:Al:414:ASN:HD21	1.70	0.40
1:Al:425:LEU:HB3	1:Al:428:GLN:NE2	2.37	0.40
1:Am:117:LEU:HD23	1:Am:117:LEU:HA	1.94	0.40
1:An:364:GLN:NE2	1:An:364:GLN:HA	2.37	0.40
2:As:136:SER:HB3	3:Bj:325:ASP:OD2	2.21	0.40
2:Au:15:ARG:HG3	2:Az:94:ASP:OD1	2.21	0.40
2:Av:43:MET:HE2	2:Av:47:TRP:CZ2	2.57	0.40
3:Bd:247:PHE:C	3:Bh:511:ARG:HH22	2.29	0.40
3:Bf:351:PHE:O	3:Br:373:LEU:HA	2.22	0.40
3:Bh:255:ILE:HG21	3:Bl:506:VAL:HG11	2.03	0.40
3:Bj:184:TRP:CZ2	3:Bj:199:PRO:HD3	2.56	0.40
3:Bl:360:GLU:H	3:Bl:360:GLU:HG2	1.52	0.40
3:Bl:559:LEU:HA	3:Bl:559:LEU:HD23	1.82	0.40
3:Bn:246:TYR:CZ	3:Bx:511:ARG:HB3	2.57	0.40
3:Bx:586:THR:O	3:Bx:589:GLU:HG2	2.22	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	Aa	427/430 (99%)	411 (96%)	15 (4%)	1 (0%)	44	63
1	Ab	420/430 (98%)	400 (95%)	20 (5%)	0	100	100
1	Ac	427/430 (99%)	417 (98%)	10 (2%)	0	100	100
1	Ad	427/430 (99%)	409 (96%)	17 (4%)	1 (0%)	44	63
1	Ae	427/430 (99%)	406 (95%)	20 (5%)	1 (0%)	44	63
1	Af	427/430 (99%)	398 (93%)	28 (7%)	1 (0%)	44	63
1	Ag	427/430 (99%)	405 (95%)	22 (5%)	0	100	100
1	Ah	418/430 (97%)	396 (95%)	22 (5%)	0	100	100
1	Ai	421/430 (98%)	405 (96%)	16 (4%)	0	100	100
1	Aj	419/430 (97%)	406 (97%)	13 (3%)	0	100	100
1	Ak	420/430 (98%)	394 (94%)	26 (6%)	0	100	100
1	Al	427/430 (99%)	414 (97%)	13 (3%)	0	100	100
1	Am	427/430 (99%)	407 (95%)	19 (4%)	1 (0%)	44	63
1	An	427/430 (99%)	408 (96%)	19 (4%)	0	100	100
1	Ao	426/430 (99%)	407 (96%)	19 (4%)	0	100	100
2	Ap	148/166 (89%)	141 (95%)	7 (5%)	0	100	100
2	Aq	148/166 (89%)	140 (95%)	8 (5%)	0	100	100
2	Ar	148/166 (89%)	139 (94%)	9 (6%)	0	100	100
2	As	148/166 (89%)	139 (94%)	8 (5%)	1 (1%)	19	32
2	At	148/166 (89%)	136 (92%)	12 (8%)	0	100	100
2	Au	148/166 (89%)	131 (88%)	17 (12%)	0	100	100
2	Av	147/166 (89%)	141 (96%)	6 (4%)	0	100	100
2	Aw	147/166 (89%)	141 (96%)	6 (4%)	0	100	100
2	Ax	146/166 (88%)	139 (95%)	7 (5%)	0	100	100
2	Ay	147/166 (89%)	144 (98%)	3 (2%)	0	100	100
2	Az	147/166 (89%)	142 (97%)	5 (3%)	0	100	100
2	Ba	146/166 (88%)	138 (94%)	8 (6%)	0	100	100
3	Bb	586/725 (81%)	544 (93%)	40 (7%)	2 (0%)	37	55
3	Bd	588/725 (81%)	535 (91%)	49 (8%)	4 (1%)	19	32
3	Bf	587/725 (81%)	529 (90%)	57 (10%)	1 (0%)	44	63
3	Bh	588/725 (81%)	544 (92%)	43 (7%)	1 (0%)	44	63
3	Bj	587/725 (81%)	539 (92%)	47 (8%)	1 (0%)	44	63

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	Bl	588/725 (81%)	531 (90%)	56 (10%)	1 (0%)	44	63
3	Bn	589/725 (81%)	524 (89%)	64 (11%)	1 (0%)	44	63
3	Bp	586/725 (81%)	530 (90%)	55 (9%)	1 (0%)	44	63
3	Br	587/725 (81%)	544 (93%)	42 (7%)	1 (0%)	44	63
3	Bt	587/725 (81%)	543 (92%)	41 (7%)	3 (0%)	25	41
3	Bv	587/725 (81%)	552 (94%)	34 (6%)	1 (0%)	44	63
3	Bx	590/725 (81%)	549 (93%)	40 (7%)	1 (0%)	44	63
All	All	15185/17142 (89%)	14218 (94%)	943 (6%)	24 (0%)	45	63

All (24) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	As	124	LYS
3	Bl	389	LEU
3	Br	208	VAL
3	Bt	23	ASP
1	Af	39	SER
3	Bb	242	GLU
3	Bt	84	ASP
3	Bv	47	GLN
1	Ad	370	HIS
3	Bb	44	TRP
3	Bd	80	TYR
3	Bd	207	TRP
1	Am	385	ASP
3	Bh	503	GLU
3	Bx	216	THR
1	Ae	43	SER
3	Bp	228	LYS
3	Bd	208	VAL
3	Bd	380	ASN
3	Bt	294	ALA
1	Aa	47	ILE
3	Bf	583	LYS
3	Bj	122	GLY
3	Bn	210	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	Aa	350/352 (99%)	335 (96%)	15 (4%)	25 44
1	Ab	346/352 (98%)	329 (95%)	17 (5%)	21 38
1	Ac	351/352 (100%)	337 (96%)	14 (4%)	27 47
1	Ad	350/352 (99%)	329 (94%)	21 (6%)	16 29
1	Ae	350/352 (99%)	333 (95%)	17 (5%)	21 38
1	Af	350/352 (99%)	336 (96%)	14 (4%)	27 47
1	Ag	350/352 (99%)	339 (97%)	11 (3%)	35 56
1	Ah	344/352 (98%)	327 (95%)	17 (5%)	21 38
1	Ai	347/352 (99%)	332 (96%)	15 (4%)	25 44
1	Aj	345/352 (98%)	328 (95%)	17 (5%)	21 38
1	Ak	346/352 (98%)	327 (94%)	19 (6%)	18 33
1	Al	351/352 (100%)	338 (96%)	13 (4%)	29 50
1	Am	351/352 (100%)	335 (95%)	16 (5%)	23 41
1	An	351/352 (100%)	331 (94%)	20 (6%)	17 32
1	Ao	351/352 (100%)	334 (95%)	17 (5%)	21 39
2	Ap	118/131 (90%)	115 (98%)	3 (2%)	42 64
2	Aq	118/131 (90%)	117 (99%)	1 (1%)	79 88
2	Ar	118/131 (90%)	115 (98%)	3 (2%)	42 64
2	As	118/131 (90%)	109 (92%)	9 (8%)	11 19
2	At	118/131 (90%)	114 (97%)	4 (3%)	32 54
2	Au	118/131 (90%)	113 (96%)	5 (4%)	25 44
2	Av	117/131 (89%)	112 (96%)	5 (4%)	25 44
2	Aw	117/131 (89%)	115 (98%)	2 (2%)	56 74
2	Ax	117/131 (89%)	113 (97%)	4 (3%)	32 54
2	Ay	117/131 (89%)	111 (95%)	6 (5%)	20 36
2	Az	117/131 (89%)	115 (98%)	2 (2%)	56 74

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	Ba	117/131 (89%)	113 (97%)	4 (3%)	32	54
3	Bb	517/630 (82%)	494 (96%)	23 (4%)	24	43
3	Bd	519/630 (82%)	495 (95%)	24 (5%)	23	41
3	Bf	518/630 (82%)	499 (96%)	19 (4%)	29	50
3	Bh	519/630 (82%)	495 (95%)	24 (5%)	23	41
3	Bj	518/630 (82%)	499 (96%)	19 (4%)	29	50
3	Bl	519/630 (82%)	496 (96%)	23 (4%)	24	43
3	Bn	520/630 (82%)	502 (96%)	18 (4%)	31	52
3	Bp	517/630 (82%)	493 (95%)	24 (5%)	23	41
3	Br	518/630 (82%)	494 (95%)	24 (5%)	23	41
3	Bt	518/630 (82%)	499 (96%)	19 (4%)	29	50
3	Bv	518/630 (82%)	498 (96%)	20 (4%)	27	48
3	Bx	521/630 (83%)	495 (95%)	26 (5%)	20	37
All	All	12865/14412 (89%)	12311 (96%)	554 (4%)	27	44

All (554) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	Aa	16	ILE
1	Aa	58	GLN
1	Aa	115	VAL
1	Aa	118	LYS
1	Aa	164	MET
1	Aa	171	ASN
1	Aa	194	GLU
1	Aa	212	LEU
1	Aa	229	THR
1	Aa	237	LYS
1	Aa	280	PHE
1	Aa	283	GLN
1	Aa	373	PHE
1	Aa	382	SER
1	Aa	428	GLN
1	Ab	31	LYS
1	Ab	64	THR
1	Ab	72	GLU
1	Ab	84	ASN

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Mol	Chain	Res	Type
1	Ab	90	ARG
1	Ab	113	ASN
1	Ab	122	MET
1	Ab	170	PHE
1	Ab	187	ILE
1	Ab	205	VAL
1	Ab	212	LEU
1	Ab	234	GLN
1	Ab	250	VAL
1	Ab	343	LEU
1	Ab	371	GLU
1	Ab	401	LEU
1	Ab	409	LEU
1	Ac	26	MET
1	Ac	84	ASN
1	Ac	117	LEU
1	Ac	153	GLU
1	Ac	219	VAL
1	Ac	245	ASN
1	Ac	252	VAL
1	Ac	260	THR
1	Ac	280	PHE
1	Ac	298	VAL
1	Ac	309	THR
1	Ac	333	SER
1	Ac	372	LEU
1	Ac	423	VAL
1	Ad	18	GLU
1	Ad	33	TYR
1	Ad	51	VAL
1	Ad	53	GLN
1	Ad	55	SER
1	Ad	118	LYS
1	Ad	161	ASN
1	Ad	186	ASP
1	Ad	197	ARG
1	Ad	205	VAL
1	Ad	221	THR
1	Ad	251	ASN
1	Ad	252	VAL
1	Ad	260	THR
1	Ad	264	THR

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Mol	Chain	Res	Type
1	Ad	301	VAL
1	Ad	306	VAL
1	Ad	307	GLU
1	Ad	340	VAL
1	Ad	359	ILE
1	Ad	382	SER
1	Ae	54	GLU
1	Ae	63	LEU
1	Ae	77	VAL
1	Ae	84	ASN
1	Ae	94	LEU
1	Ae	130	VAL
1	Ae	177	LYS
1	Ae	214	SER
1	Ae	216	LYS
1	Ae	234	GLN
1	Ae	280	PHE
1	Ae	281	LEU
1	Ae	318	VAL
1	Ae	320	LEU
1	Ae	340	VAL
1	Ae	416	THR
1	Ae	423	VAL
1	Af	16	ILE
1	Af	23	ILE
1	Af	26	MET
1	Af	47	ILE
1	Af	90	ARG
1	Af	109	ARG
1	Af	147	PHE
1	Af	212	LEU
1	Af	252	VAL
1	Af	279	LYS
1	Af	284	MET
1	Af	373	PHE
1	Af	379	THR
1	Af	392	PHE
1	Ag	10	THR
1	Ag	28	GLN
1	Ag	29	LYS
1	Ag	31	LYS
1	Ag	32	LYS

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Mol	Chain	Res	Type
1	Ag	70	LEU
1	Ag	221	THR
1	Ag	237	LYS
1	Ag	249	LYS
1	Ag	330	VAL
1	Ag	340	VAL
1	Ah	17	ILE
1	Ah	74	ASN
1	Ah	159	GLU
1	Ah	182	LEU
1	Ah	193	GLU
1	Ah	205	VAL
1	Ah	214	SER
1	Ah	220	LEU
1	Ah	271	ASP
1	Ah	286	LYS
1	Ah	301	VAL
1	Ah	340	VAL
1	Ah	346	LYS
1	Ah	347	ASP
1	Ah	371	GLU
1	Ah	409	LEU
1	Ah	419	GLU
1	Ai	11	LEU
1	Ai	14	ASP
1	Ai	15	GLU
1	Ai	23	ILE
1	Ai	51	VAL
1	Ai	55	SER
1	Ai	68	THR
1	Ai	73	LEU
1	Ai	204	GLN
1	Ai	211	VAL
1	Ai	222	LYS
1	Ai	307	GLU
1	Ai	338	MET
1	Ai	351	ASN
1	Ai	359	ILE
1	Aj	18	GLU
1	Aj	63	LEU
1	Aj	78	ASN
1	Aj	86	PHE

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Mol	Chain	Res	Type
1	Aj	97	GLU
1	Aj	105	GLN
1	Aj	173	GLN
1	Aj	194	GLU
1	Aj	220	LEU
1	Aj	234	GLN
1	Aj	252	VAL
1	Aj	281	LEU
1	Aj	301	VAL
1	Aj	309	THR
1	Aj	318	VAL
1	Aj	341	ASN
1	Aj	401	LEU
1	Ak	9	VAL
1	Ak	20	ILE
1	Ak	49	MET
1	Ak	65	ASP
1	Ak	98	THR
1	Ak	101	ARG
1	Ak	153	GLU
1	Ak	220	LEU
1	Ak	229	THR
1	Ak	234	GLN
1	Ak	267	MET
1	Ak	268	LYS
1	Ak	287	ASN
1	Ak	300	VAL
1	Ak	333	SER
1	Ak	334	LEU
1	Ak	359	ILE
1	Ak	401	LEU
1	Ak	425	LEU
1	Al	11	LEU
1	Al	31	LYS
1	Al	61	TRP
1	Al	86	PHE
1	Al	180	TYR
1	Al	208	PHE
1	Al	223	SER
1	Al	252	VAL
1	Al	279	LYS
1	Al	298	VAL

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Mol	Chain	Res	Type
1	Al	313	VAL
1	Al	379	THR
1	Al	423	VAL
1	Am	7	GLN
1	Am	9	VAL
1	Am	10	THR
1	Am	19	THR
1	Am	51	VAL
1	Am	84	ASN
1	Am	105	GLN
1	Am	135	ASP
1	Am	137	ILE
1	Am	194	GLU
1	Am	208	PHE
1	Am	219	VAL
1	Am	260	THR
1	Am	309	THR
1	Am	316	ASP
1	Am	386	VAL
1	An	5	GLU
1	An	40	MET
1	An	47	ILE
1	An	49	MET
1	An	52	GLU
1	An	63	LEU
1	An	86	PHE
1	An	87	PHE
1	An	132	THR
1	An	135	ASP
1	An	137	ILE
1	An	153	GLU
1	An	212	LEU
1	An	219	VAL
1	An	250	VAL
1	An	280	PHE
1	An	309	THR
1	An	379	THR
1	An	401	LEU
1	An	428	GLN
1	Ao	21	SER
1	Ao	61	TRP
1	Ao	63	LEU

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Mol	Chain	Res	Type
1	Ao	72	GLU
1	Ao	111	LEU
1	Ao	122	MET
1	Ao	208	PHE
1	Ao	212	LEU
1	Ao	237	LYS
1	Ao	280	PHE
1	Ao	284	MET
1	Ao	299	ARG
1	Ao	359	ILE
1	Ao	362	VAL
1	Ao	366	ILE
1	Ao	371	GLU
1	Ao	376	MET
2	Ap	81	SER
2	Ap	130	SER
2	Ap	140	PHE
2	Aq	33	MET
2	Ar	77	SER
2	Ar	117	GLN
2	Ar	140	PHE
2	As	26	THR
2	As	28	VAL
2	As	54	ILE
2	As	73	HIS
2	As	84	PHE
2	As	91	ILE
2	As	114	LEU
2	As	142	ASN
2	As	145	GLU
2	At	9	LEU
2	At	80	VAL
2	At	84	PHE
2	At	87	LEU
2	Au	33	MET
2	Au	64	GLU
2	Au	72	ASP
2	Au	84	PHE
2	Au	91	ILE
2	Av	9	LEU
2	Av	16	LYS
2	Av	54	ILE

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Mol	Chain	Res	Type
2	Av	55	ILE
2	Av	130	SER
2	Aw	28	VAL
2	Aw	149	PHE
2	Ax	28	VAL
2	Ax	94	ASP
2	Ax	149	PHE
2	Ax	150	PRO
2	Ay	28	VAL
2	Ay	39	ASP
2	Ay	72	ASP
2	Ay	76	ARG
2	Ay	91	ILE
2	Ay	114	LEU
2	Az	5	THR
2	Az	16	LYS
2	Ba	73	HIS
2	Ba	91	ILE
2	Ba	100	THR
2	Ba	143	LEU
3	Bb	12	LEU
3	Bb	50	THR
3	Bb	74	ASN
3	Bb	78	VAL
3	Bb	97	MET
3	Bb	147	GLU
3	Bb	149	ILE
3	Bb	171	ARG
3	Bb	231	THR
3	Bb	269	ARG
3	Bb	272	LYS
3	Bb	301	VAL
3	Bb	350	PHE
3	Bb	414	GLU
3	Bb	474	VAL
3	Bb	495	GLU
3	Bb	503	GLU
3	Bb	504	LYS
3	Bb	510	ILE
3	Bb	515	GLU
3	Bb	542	THR
3	Bb	546	THR

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Mol	Chain	Res	Type
3	Bb	593	LEU
3	Bd	42	ASP
3	Bd	47	GLN
3	Bd	48	TYR
3	Bd	76	ILE
3	Bd	102	MET
3	Bd	127	ARG
3	Bd	176	ILE
3	Bd	209	PHE
3	Bd	211	TRP
3	Bd	212	LEU
3	Bd	218	GLN
3	Bd	231	THR
3	Bd	246	TYR
3	Bd	255	ILE
3	Bd	293	ILE
3	Bd	310	VAL
3	Bd	311	GLU
3	Bd	399	GLN
3	Bd	471	ILE
3	Bd	510	ILE
3	Bd	520	VAL
3	Bd	578	GLN
3	Bd	586	THR
3	Bd	626	GLN
3	Bf	56	GLN
3	Bf	67	LEU
3	Bf	74	ASN
3	Bf	129	VAL
3	Bf	149	ILE
3	Bf	205	ASN
3	Bf	209	PHE
3	Bf	217	ILE
3	Bf	264	ILE
3	Bf	291	GLN
3	Bf	310	VAL
3	Bf	317	GLU
3	Bf	546	THR
3	Bf	550	GLN
3	Bf	553	LEU
3	Bf	593	LEU
3	Bf	608	MET

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Mol	Chain	Res	Type
3	Bf	610	GLN
3	Bf	619	GLN
3	Bh	8	LEU
3	Bh	24	GLU
3	Bh	42	ASP
3	Bh	45	LEU
3	Bh	47	GLN
3	Bh	48	TYR
3	Bh	70	GLU
3	Bh	160	SER
3	Bh	233	PHE
3	Bh	255	ILE
3	Bh	258	LEU
3	Bh	288	LYS
3	Bh	311	GLU
3	Bh	312	ASP
3	Bh	317	GLU
3	Bh	389	LEU
3	Bh	406	GLU
3	Bh	450	GLN
3	Bh	503	GLU
3	Bh	504	LYS
3	Bh	546	THR
3	Bh	566	GLU
3	Bh	576	LEU
3	Bh	608	MET
3	Bj	44	TRP
3	Bj	49	THR
3	Bj	51	LEU
3	Bj	101	ASP
3	Bj	135	GLN
3	Bj	171	ARG
3	Bj	172	HIS
3	Bj	174	THR
3	Bj	179	MET
3	Bj	255	ILE
3	Bj	283	CYS
3	Bj	293	ILE
3	Bj	405	LEU
3	Bj	462	GLU
3	Bj	493	MET
3	Bj	505	GLN

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Mol	Chain	Res	Type
3	Bj	520	VAL
3	Bj	546	THR
3	Bj	608	MET
3	Bl	42	ASP
3	Bl	52	GLN
3	Bl	61	ARG
3	Bl	63	VAL
3	Bl	76	ILE
3	Bl	123	VAL
3	Bl	149	ILE
3	Bl	160	SER
3	Bl	161	ASN
3	Bl	171	ARG
3	Bl	221	GLU
3	Bl	228	LYS
3	Bl	231	THR
3	Bl	244	VAL
3	Bl	249	ARG
3	Bl	268	GLU
3	Bl	301	VAL
3	Bl	319	VAL
3	Bl	320	VAL
3	Bl	332	MET
3	Bl	478	VAL
3	Bl	549	TYR
3	Bl	565	VAL
3	Bn	12	LEU
3	Bn	14	ARG
3	Bn	42	ASP
3	Bn	97	MET
3	Bn	120	GLU
3	Bn	123	VAL
3	Bn	149	ILE
3	Bn	205	ASN
3	Bn	252	LYS
3	Bn	255	ILE
3	Bn	301	VAL
3	Bn	354	GLU
3	Bn	516	CYS
3	Bn	526	SER
3	Bn	559	LEU
3	Bn	560	LEU

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Mol	Chain	Res	Type
3	Bn	576	LEU
3	Bn	586	THR
3	Bp	56	GLN
3	Bp	76	ILE
3	Bp	78	VAL
3	Bp	92	ASP
3	Bp	123	VAL
3	Bp	171	ARG
3	Bp	182	ASN
3	Bp	229	LYS
3	Bp	240	THR
3	Bp	246	TYR
3	Bp	264	ILE
3	Bp	286	VAL
3	Bp	311	GLU
3	Bp	315	VAL
3	Bp	329	LEU
3	Bp	340	ILE
3	Bp	354	GLU
3	Bp	378	ASP
3	Bp	414	GLU
3	Bp	473	ASP
3	Bp	510	ILE
3	Bp	520	VAL
3	Bp	536	LEU
3	Bp	546	THR
3	Br	48	TYR
3	Br	49	THR
3	Br	51	LEU
3	Br	76	ILE
3	Br	78	VAL
3	Br	89	ASP
3	Br	92	ASP
3	Br	225	VAL
3	Br	228	LYS
3	Br	246	TYR
3	Br	249	ARG
3	Br	264	ILE
3	Br	273	ARG
3	Br	366	ASN
3	Br	462	GLU
3	Br	499	LEU

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Mol	Chain	Res	Type
3	Br	508	ASN
3	Br	511	ARG
3	Br	546	THR
3	Br	549	TYR
3	Br	552	LEU
3	Br	568	MET
3	Br	577	ILE
3	Br	582	LYS
3	Bt	12	LEU
3	Bt	51	LEU
3	Bt	208	VAL
3	Bt	216	THR
3	Bt	246	TYR
3	Bt	258	LEU
3	Bt	292	LEU
3	Bt	312	ASP
3	Bt	343	ARG
3	Bt	384	LEU
3	Bt	413	LYS
3	Bt	450	GLN
3	Bt	474	VAL
3	Bt	481	THR
3	Bt	504	LYS
3	Bt	548	GLU
3	Bt	567	MET
3	Bt	597	GLN
3	Bt	612	GLN
3	Bv	42	ASP
3	Bv	43	ASP
3	Bv	45	LEU
3	Bv	50	THR
3	Bv	133	GLU
3	Bv	135	GLN
3	Bv	174	THR
3	Bv	283	CYS
3	Bv	368	ASP
3	Bv	405	LEU
3	Bv	413	LYS
3	Bv	453	LEU
3	Bv	455	THR
3	Bv	511	ARG
3	Bv	551	LEU

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Mol	Chain	Res	Type
3	Bv	557	PHE
3	Bv	563	LYS
3	Bv	566	GLU
3	Bv	585	GLU
3	Bv	617	GLN
3	Bx	60	VAL
3	Bx	72	ARG
3	Bx	134	ASP
3	Bx	141	ASN
3	Bx	174	THR
3	Bx	206	ASP
3	Bx	217	ILE
3	Bx	221	GLU
3	Bx	248	LYS
3	Bx	264	ILE
3	Bx	270	GLN
3	Bx	350	PHE
3	Bx	393	GLU
3	Bx	473	ASP
3	Bx	505	GLN
3	Bx	510	ILE
3	Bx	511	ARG
3	Bx	520	VAL
3	Bx	525	GLN
3	Bx	548	GLU
3	Bx	549	TYR
3	Bx	560	LEU
3	Bx	563	LYS
3	Bx	566	GLU
3	Bx	569	ARG
3	Bx	577	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (154) such sidechains are listed below:

Mol	Chain	Res	Type
1	Aa	4	ASN
1	Aa	283	GLN
1	Aa	341	ASN
1	Ab	291	GLN
1	Ac	121	ASN
1	Ac	364	GLN
1	Ac	395	GLN

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Mol	Chain	Res	Type
1	Ac	414	ASN
1	Ae	7	GLN
1	Ae	45	ASN
1	Ae	88	GLN
1	Ae	113	ASN
1	Ae	351	ASN
1	Af	173	GLN
1	Af	202	GLN
1	Af	242	GLN
1	Af	291	GLN
1	Af	341	ASN
1	Af	414	ASN
1	Ag	4	ASN
1	Ag	28	GLN
1	Ag	84	ASN
1	Ah	45	ASN
1	Ah	53	GLN
1	Ah	113	ASN
1	Ah	114	ASN
1	Ai	248	ASN
1	Ai	291	GLN
1	Ai	305	HIS
1	Aj	114	ASN
1	Aj	204	GLN
1	Aj	254	ASN
1	Aj	341	ASN
1	Aj	369	ASN
1	Aj	370	HIS
1	Ak	41	GLN
1	Ak	113	ASN
1	Ak	146	ASN
1	Ak	324	GLN
1	Al	45	ASN
1	Al	78	ASN
1	Al	84	ASN
1	Al	105	GLN
1	Al	234	GLN
1	Al	245	ASN
1	Al	324	GLN
1	Am	78	ASN
1	Am	84	ASN
1	Am	113	ASN

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Mol	Chain	Res	Type
1	Am	251	ASN
1	Am	283	GLN
1	Am	414	ASN
1	An	74	ASN
1	An	364	GLN
1	Ao	58	GLN
1	Ao	84	ASN
1	Ao	341	ASN
2	Ap	34	GLN
2	Ap	85	HIS
2	Ap	86	ASN
2	Ap	138	ASN
2	As	34	GLN
2	As	138	ASN
2	At	31	GLN
2	Au	49	GLN
2	Aw	49	GLN
2	Aw	147	HIS
2	Ay	144	ASN
2	Ba	117	GLN
2	Ba	142	ASN
3	Bb	6	ASN
3	Bb	40	GLN
3	Bb	142	GLN
3	Bb	155	HIS
3	Bb	327	GLN
3	Bb	394	ASN
3	Bb	578	GLN
3	Bb	610	GLN
3	Bd	142	GLN
3	Bd	399	GLN
3	Bd	525	GLN
3	Bd	591	GLN
3	Bd	619	GLN
3	Bf	40	GLN
3	Bf	56	GLN
3	Bf	135	GLN
3	Bf	142	GLN
3	Bf	181	GLN
3	Bf	270	GLN
3	Bf	297	HIS
3	Bh	135	GLN

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Mol	Chain	Res	Type
3	Bh	177	HIS
3	Bh	505	GLN
3	Bh	508	ASN
3	Bh	550	GLN
3	Bh	598	GLN
3	Bh	604	GLN
3	Bh	626	GLN
3	Bj	104	HIS
3	Bj	140	ASN
3	Bj	161	ASN
3	Bj	214	GLN
3	Bj	508	ASN
3	Bj	525	GLN
3	Bj	550	GLN
3	Bj	601	GLN
3	Bl	40	GLN
3	Bl	140	ASN
3	Bl	155	HIS
3	Bl	177	HIS
3	Bl	205	ASN
3	Bl	327	GLN
3	Bl	508	ASN
3	Bl	612	GLN
3	Bn	531	ASN
3	Bn	598	GLN
3	Bp	142	GLN
3	Bp	172	HIS
3	Bp	205	ASN
3	Bp	270	GLN
3	Bp	337	ASN
3	Bp	387	GLN
3	Bp	401	ASN
3	Bp	531	ASN
3	Bp	550	GLN
3	Br	104	HIS
3	Br	141	ASN
3	Br	218	GLN
3	Br	291	GLN
3	Br	337	ASN
3	Br	366	ASN
3	Br	477	ASN
3	Br	505	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
3	Br	619	GLN
3	Bt	47	GLN
3	Bt	150	HIS
3	Bt	380	ASN
3	Bt	529	GLN
3	Bt	544	GLN
3	Bt	578	GLN
3	Bt	603	GLN
3	Bv	291	GLN
3	Bv	375	ASN
3	Bv	469	ASN
3	Bv	491	GLN
3	Bv	591	GLN
3	Bv	598	GLN
3	Bv	612	GLN
3	Bx	31	ASN
3	Bx	52	GLN
3	Bx	135	GLN
3	Bx	355	GLN
3	Bx	477	ASN
3	Bx	505	GLN

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates

There are no oligosaccharides in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

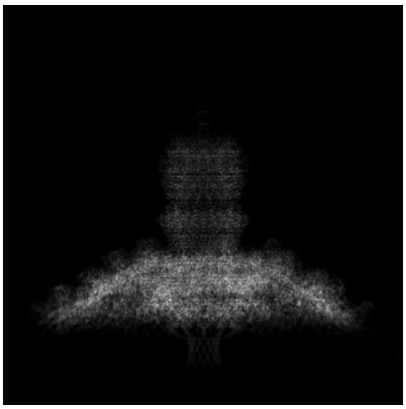
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-71631. These allow visual inspection of the internal detail of the map and identification of artifacts.

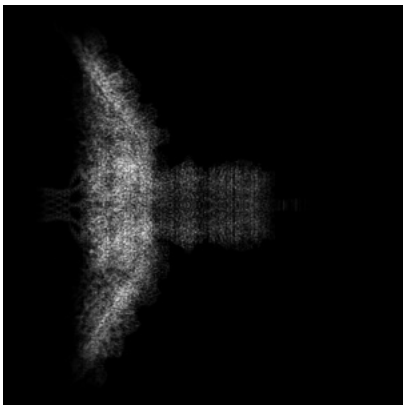
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

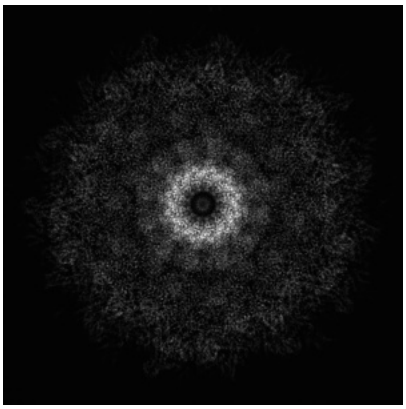
6.1.1 Primary map



X

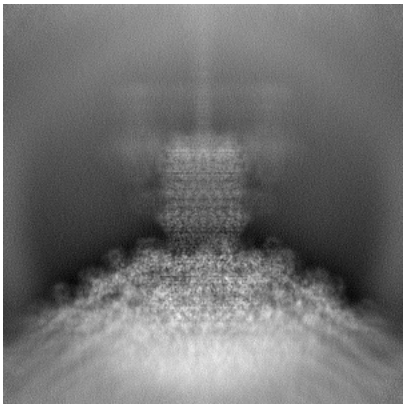


Y

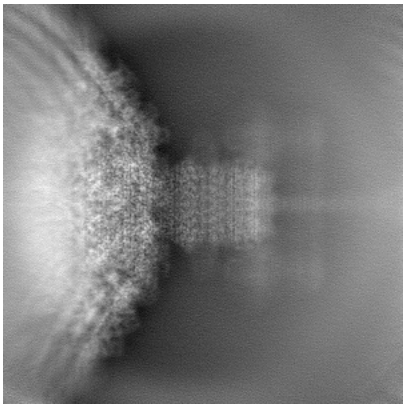


Z

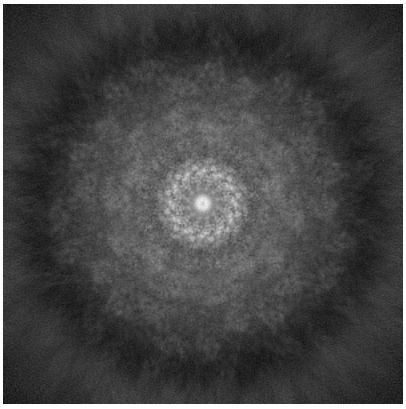
6.1.2 Raw map



X



Y

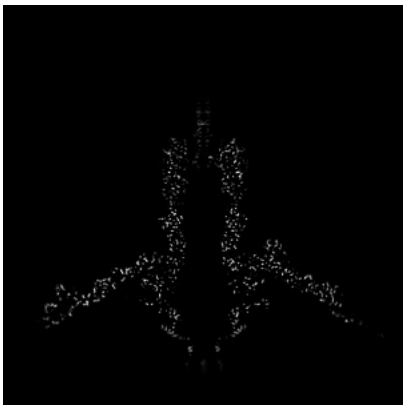


Z

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

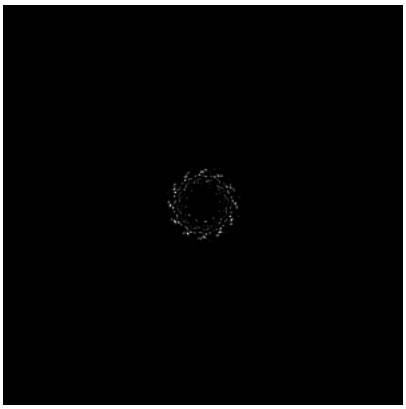
6.2 Central slices (i)

6.2.1 Primary map



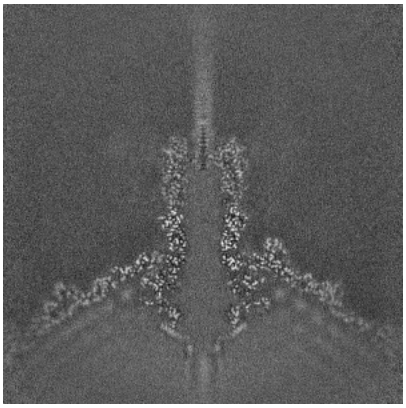
X Index: 224

Y Index: 224

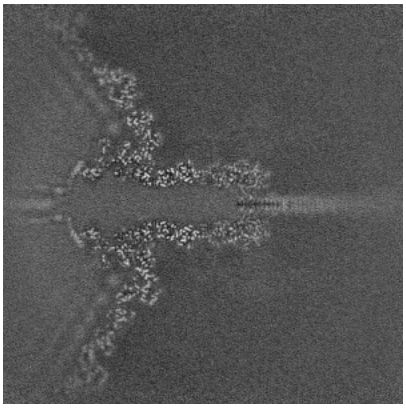


Z Index: 224

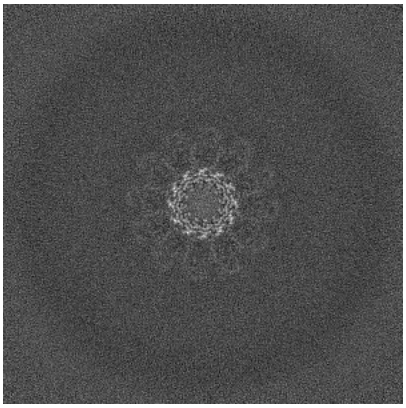
6.2.2 Raw map



X Index: 224



Y Index: 224

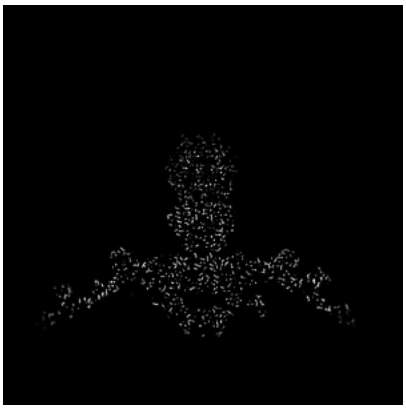


Z Index: 224

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

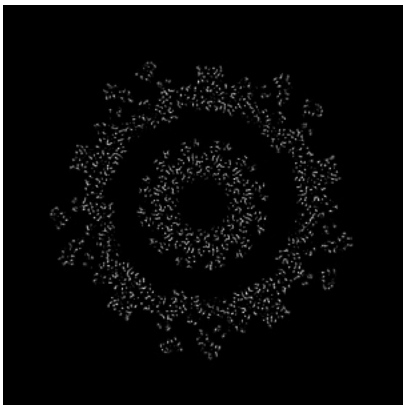
6.3 Largest variance slices (i)

6.3.1 Primary map



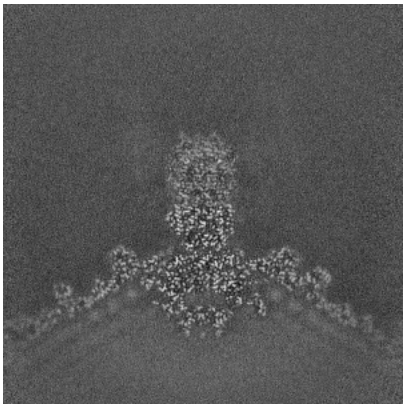
X Index: 192

Y Index: 253

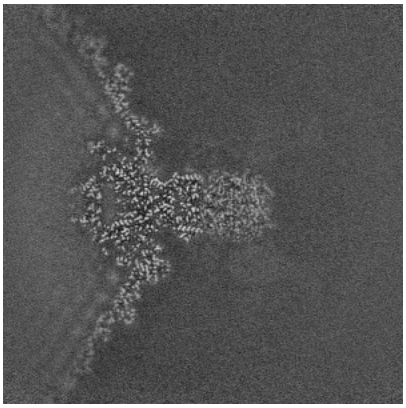


Z Index: 128

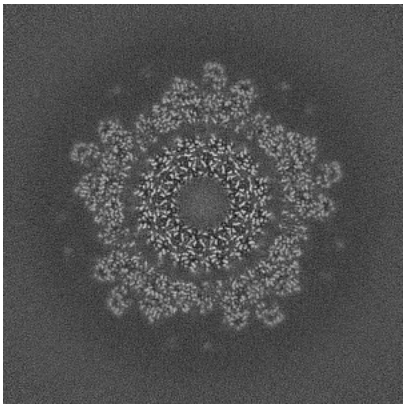
6.3.2 Raw map



X Index: 193



Y Index: 253

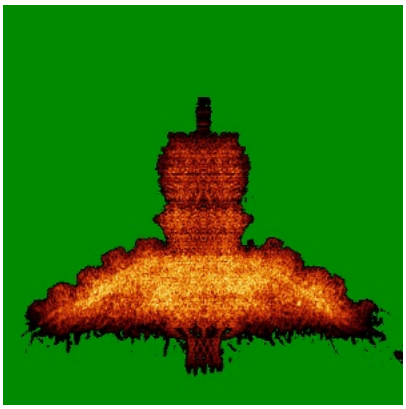


Z Index: 137

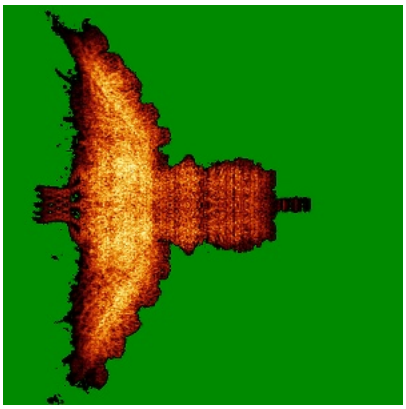
The images above show the largest variance slices of the map in three orthogonal directions.

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

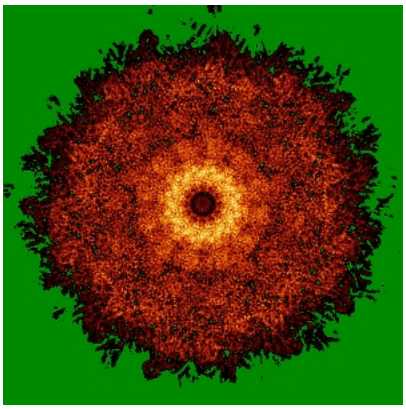
6.4.1 Primary map



X

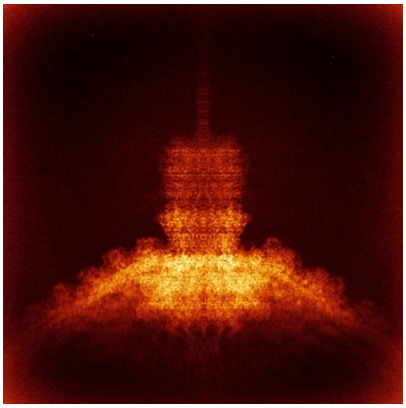


Y

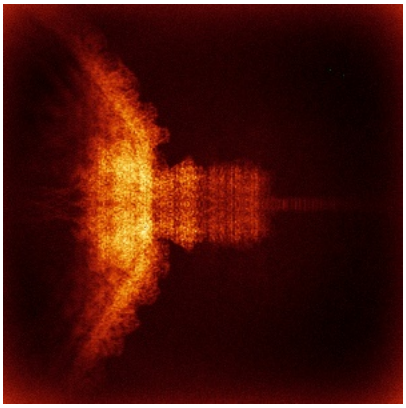


Z

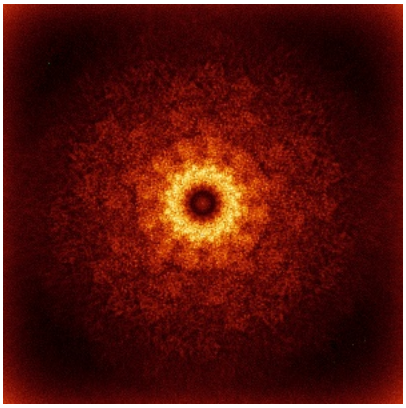
6.4.2 Raw map



X



Y

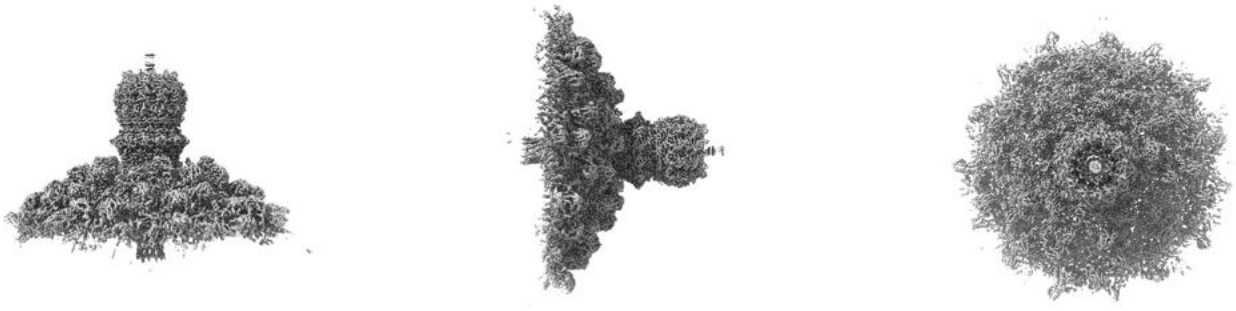


Z

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

6.5 Orthogonal surface views (i)

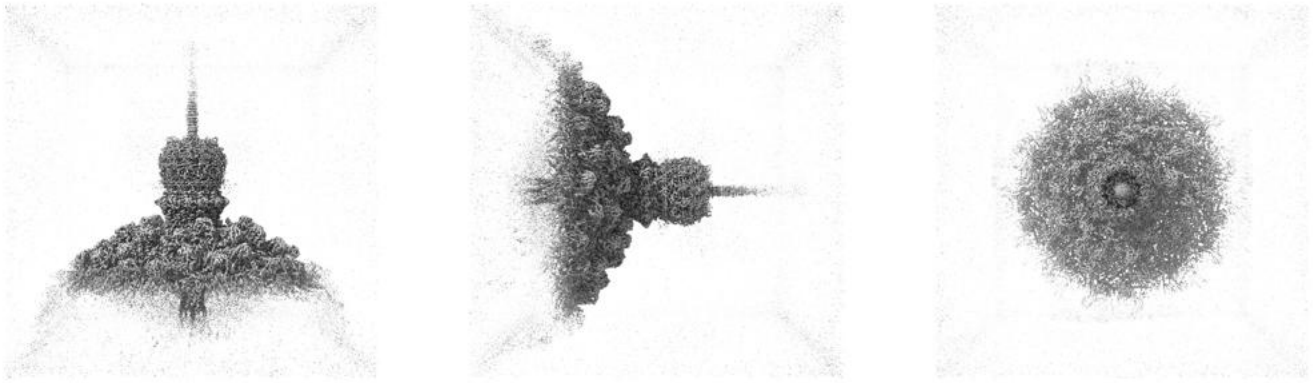
6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.15. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



X Y Z

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

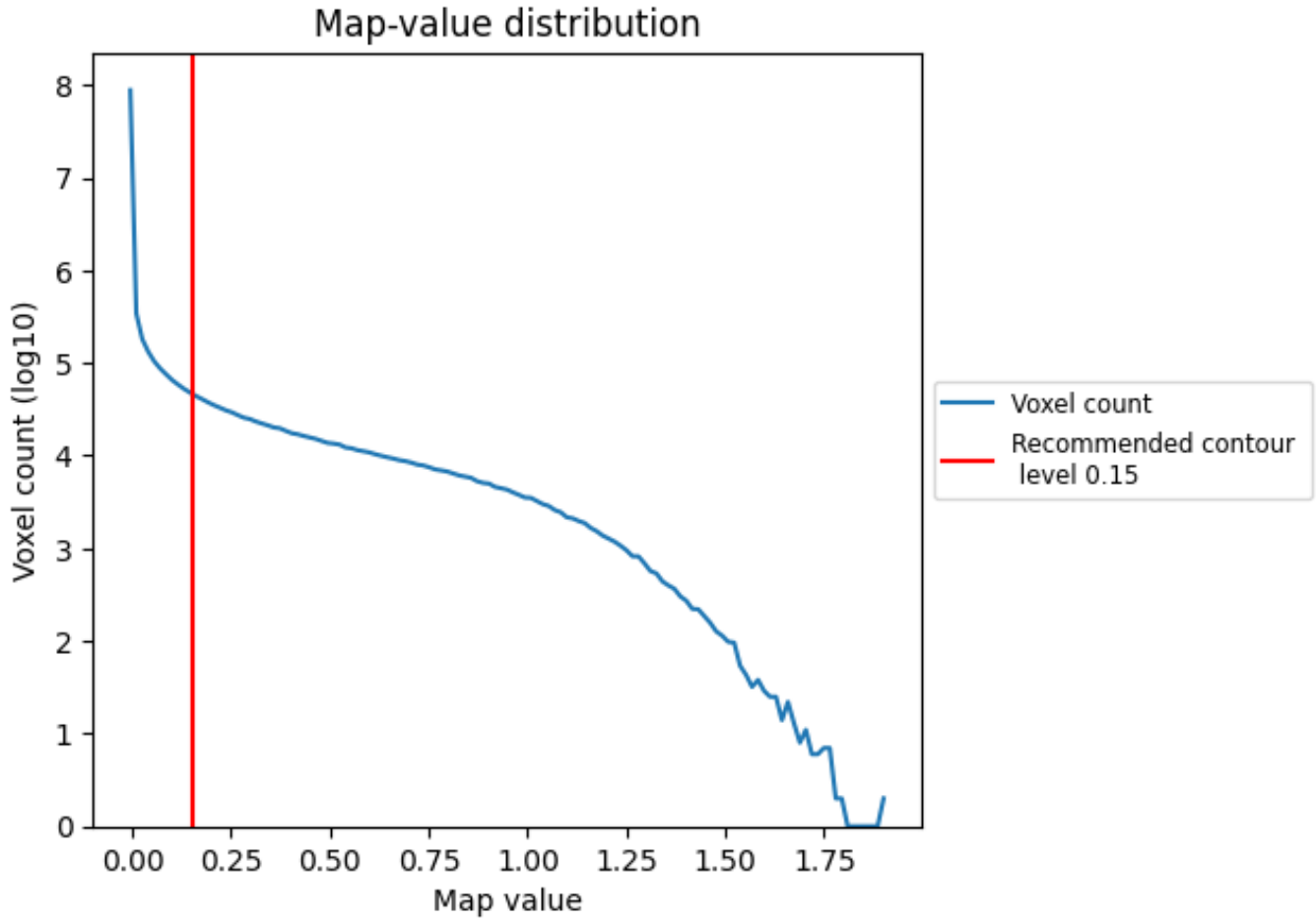
6.6 Mask visualisation (i)

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

7 Map analysis

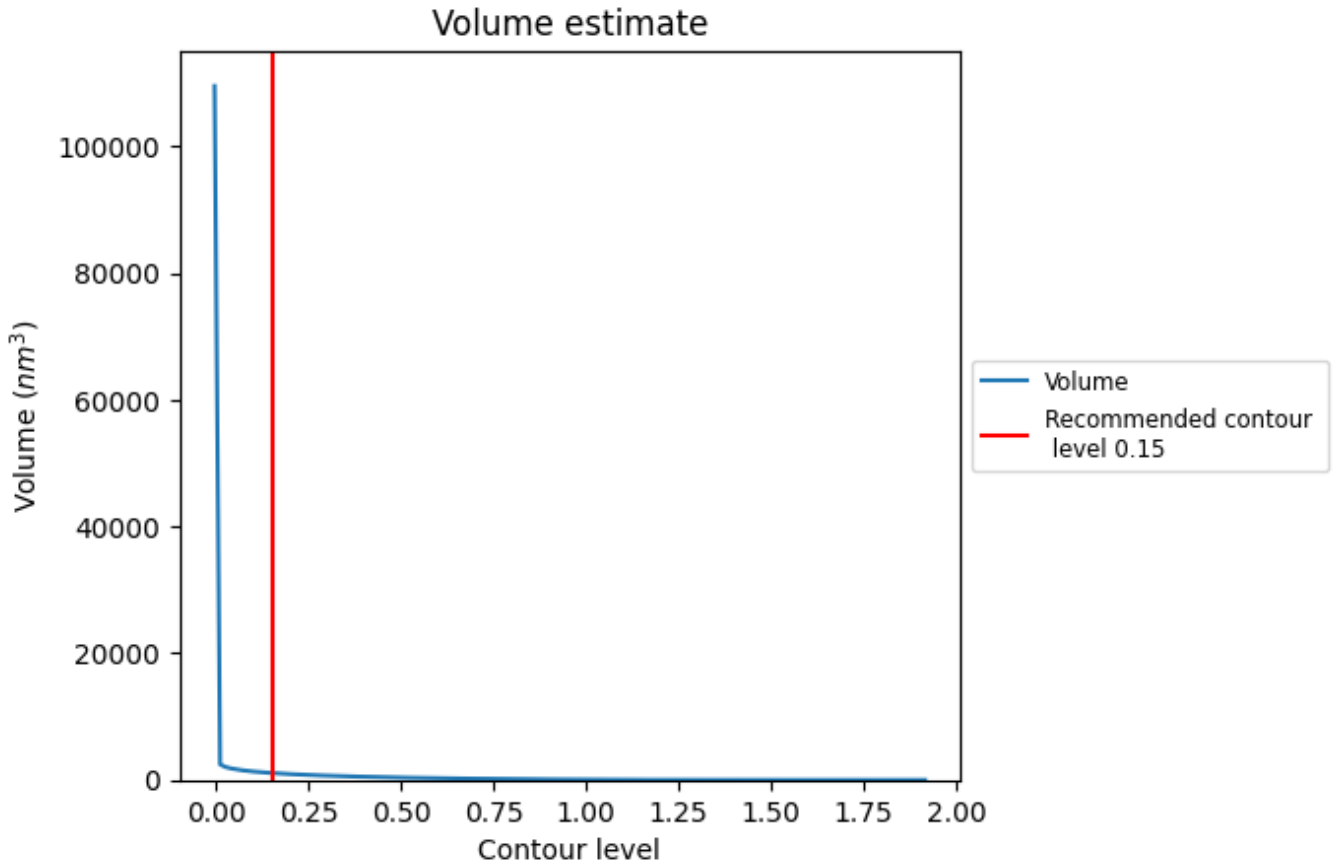
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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

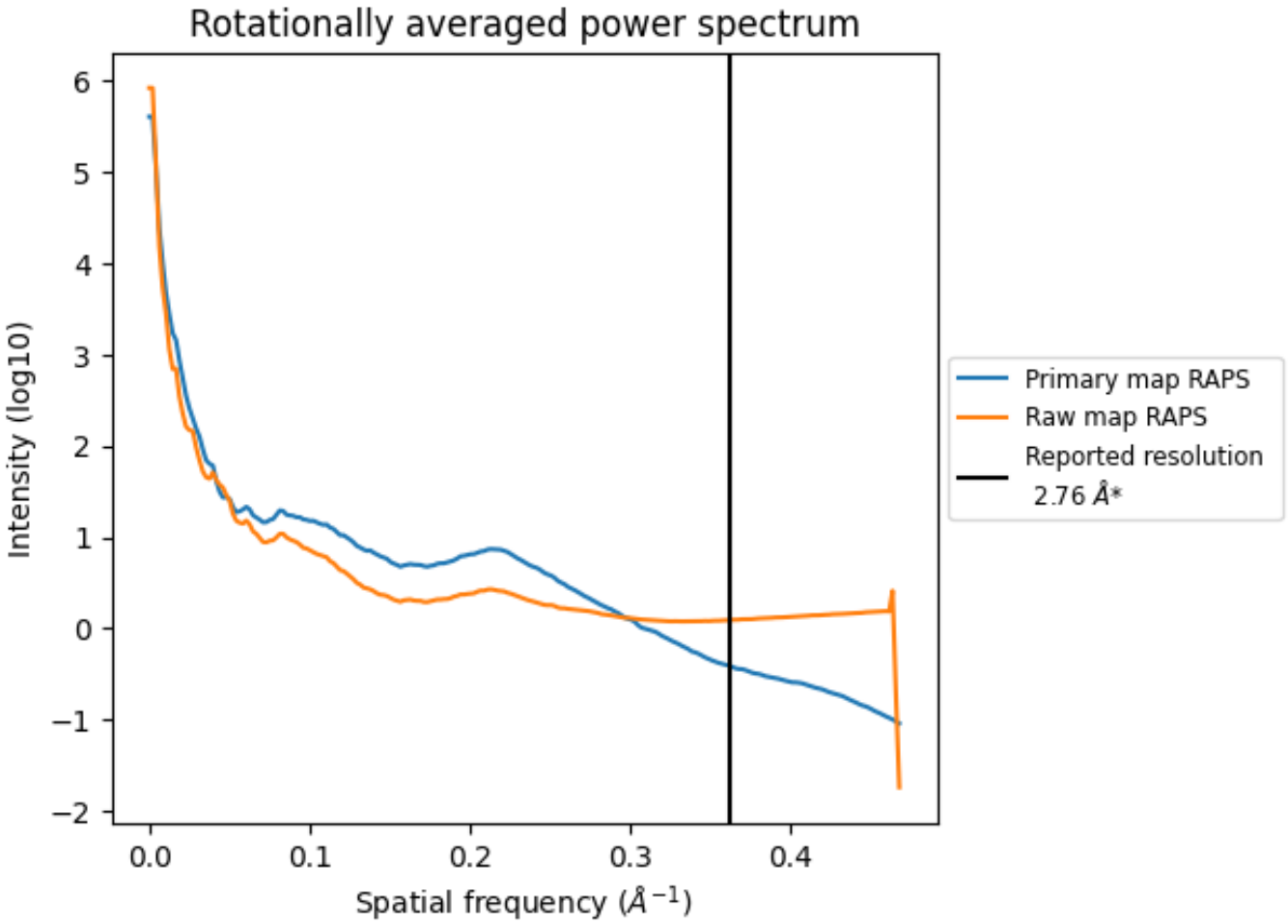
7.2 Volume estimate



The volume at the recommended contour level is 1095 nm^3; this corresponds to an approximate mass of 989 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)

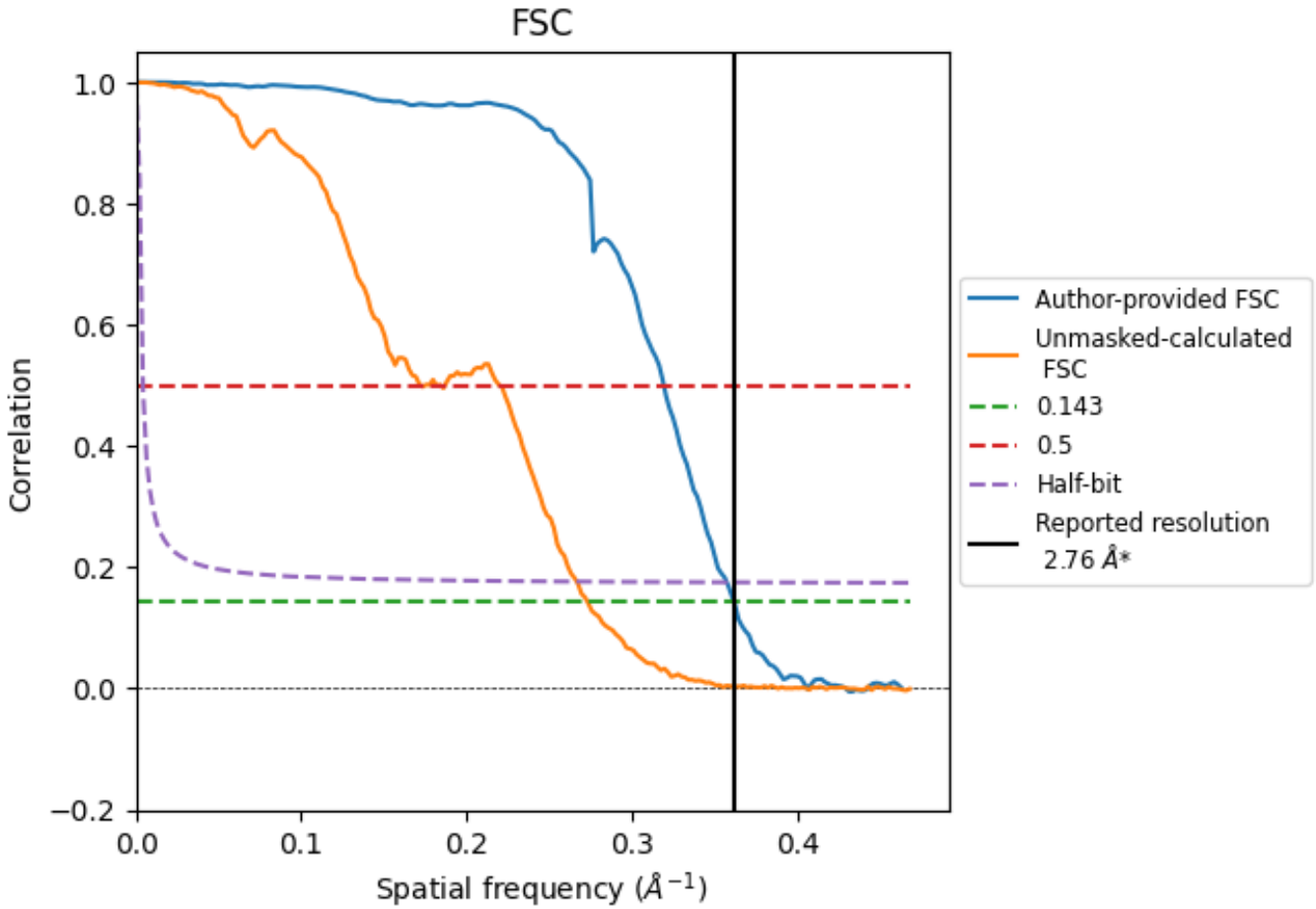


*Reported resolution corresponds to spatial frequency of 0.362 Å^{-1}

8 Fourier-Shell correlation

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

8.1 FSC



*Reported resolution corresponds to spatial frequency of 0.362 Å^{-1}

8.2 Resolution estimates (i)

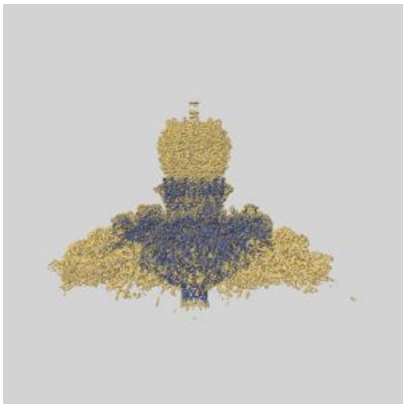
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.76	-	-
Author-provided FSC curve	2.76	3.13	2.80
Unmasked-calculated*	3.66	5.80	3.75

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 3.66 differs from the reported value 2.76 by more than 10 %

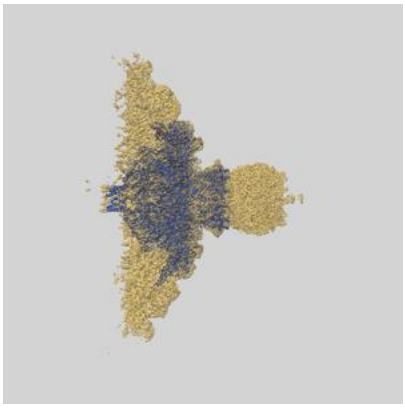
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-71631 and PDB model 9PGG. Per-residue inclusion information can be found in section 3 on page 8.

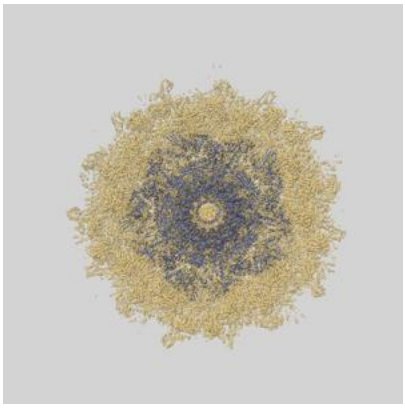
9.1 Map-model overlay



X



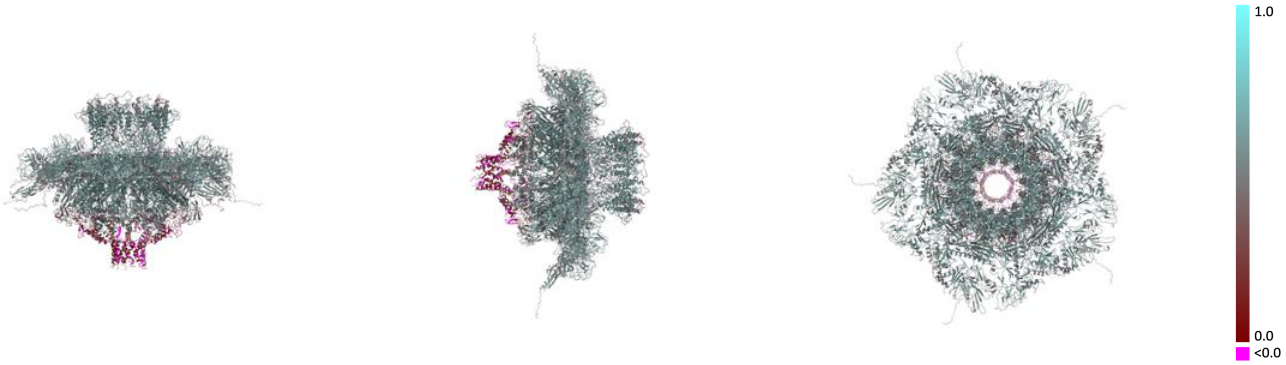
Y



Z

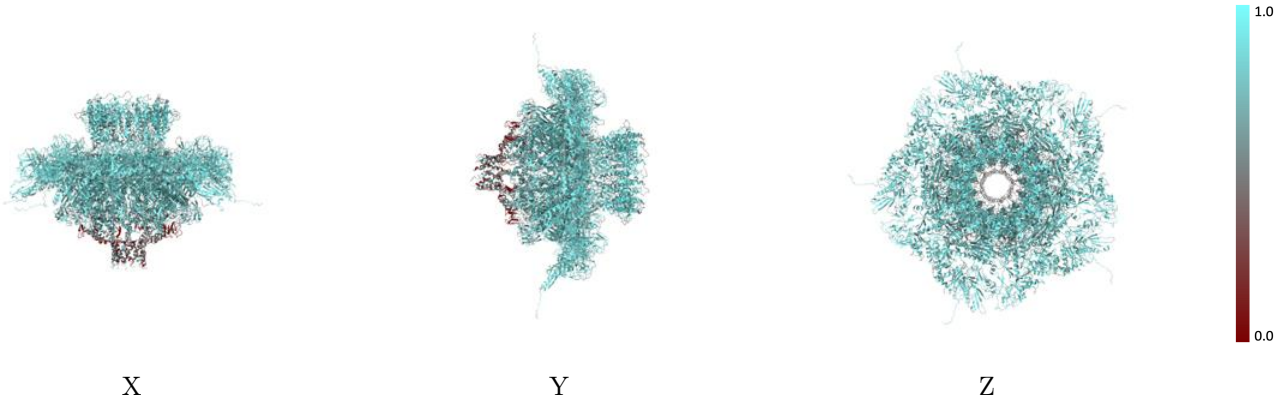
The images above show the 3D surface view of the map at the recommended contour level 0.15 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model (i)



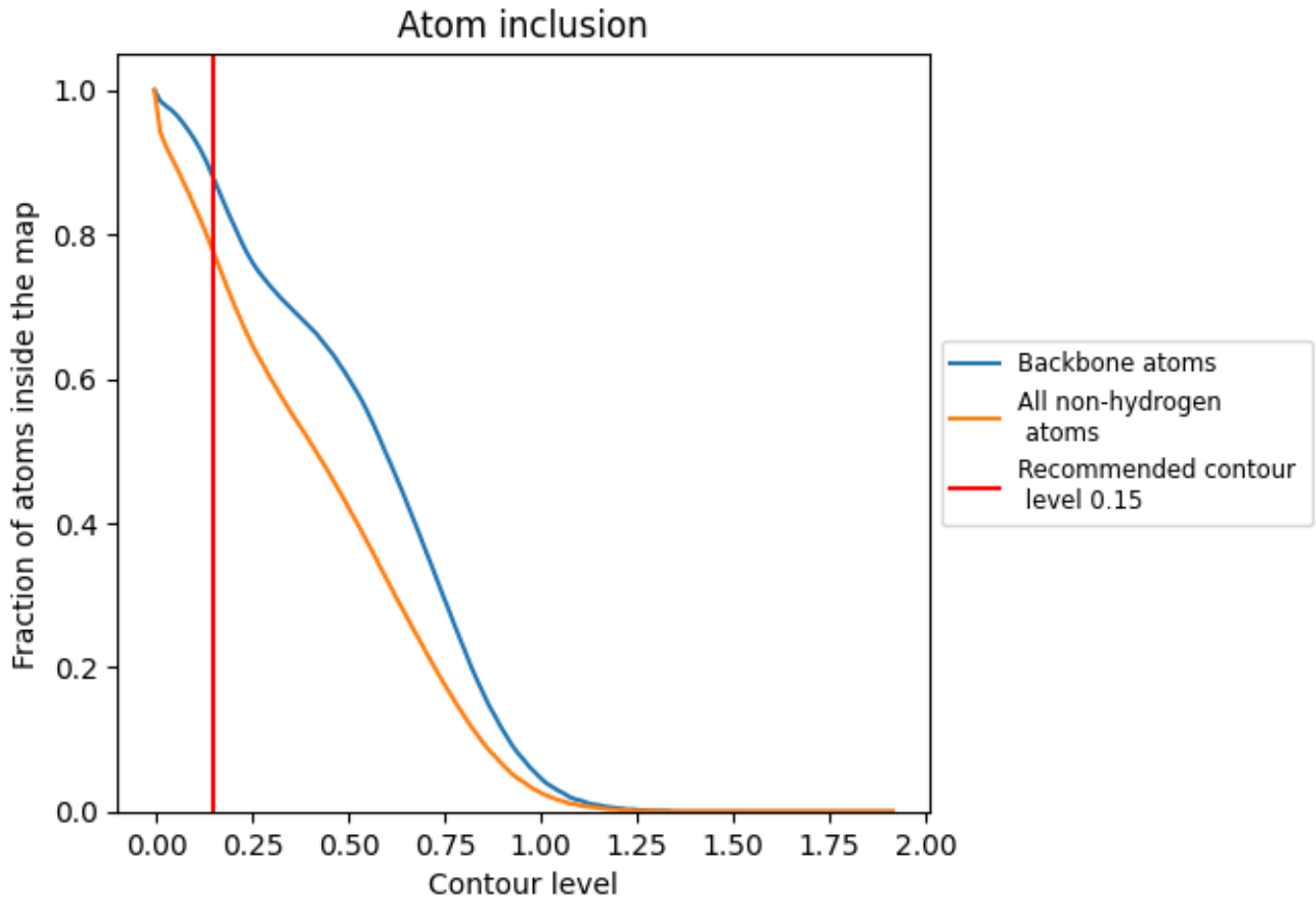
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.15).

9.4 Atom inclusion (i)



At the recommended contour level, 88% of all backbone atoms, 77% 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 (0.15) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.7730	0.5110
Aa	0.7910	0.5330
Ab	0.8080	0.5460
Ac	0.7970	0.5270
Ad	0.8090	0.5610
Ae	0.7960	0.5280
Af	0.7910	0.5380
Ag	0.8010	0.5380
Ah	0.7890	0.5170
Ai	0.8050	0.5320
Aj	0.8020	0.5410
Ak	0.7770	0.5130
Al	0.7800	0.5140
Am	0.7990	0.5340
An	0.7960	0.5260
Ao	0.7880	0.5110
Ap	0.7960	0.5280
Aq	0.7870	0.5180
Ar	0.8050	0.5180
As	0.7740	0.5090
At	0.8020	0.5180
Au	0.7540	0.4810
Av	0.8220	0.5350
Aw	0.8210	0.5300
Ax	0.8200	0.5220
Ay	0.8100	0.5280
Az	0.8230	0.5290
Ba	0.8080	0.5190
Bb	0.7500	0.4890
Bd	0.7320	0.4850
Bf	0.7360	0.4840
Bh	0.7490	0.4940
Bj	0.7360	0.4810
Bl	0.7520	0.4990
Bn	0.7450	0.4830

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Chain	Atom inclusion	Q-score
Bp	0.7550	0.4990
Br	0.7500	0.5010
Bt	0.7570	0.5040
Bv	0.7460	0.4930
Bx	0.7490	0.4950