Full wwPDB EM Validation Report ⓘ

Feb 4, 2026 – 09:31 PM JST

PDB ID	:	9WZ3 / pdb_00009wz3
EMDB ID	:	EMD-66380
Title	:	Cryo-EM structure of the PT domain of EvSS
Authors	:	Bai, L.; Lyu, R.Q.
Deposited on	:	2025-09-29
Resolution	:	3.19 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:

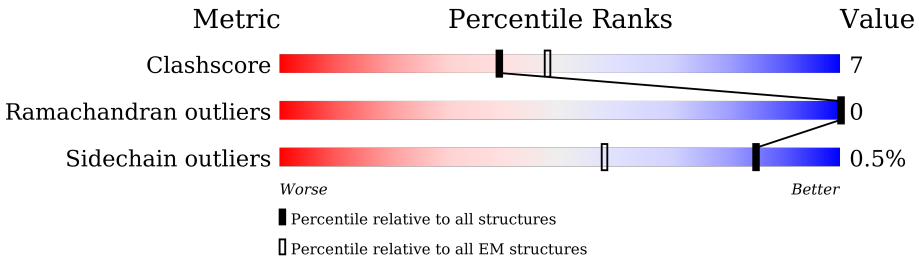
EMDB validation analysis	:	0.0.1.dev129
MolProbity	:	4-5-2 with Phenix2.0
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
EM percentile statistics	:	202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh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

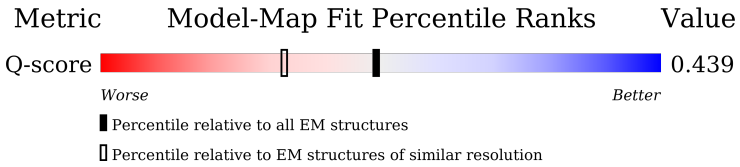
1 Overall quality at a glance

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

The reported resolution of this entry is 3.19 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	14455 (2.69 - 3.69)

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	A	714	21% 34% 8% 58%
1	B	714	21% 34% 8% 58%
1	C	714	12% 33% 9% 58%
1	D	714	11% 35% 7% 58%

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Mol	Chain	Length	Quality of chain
1	E	714	12% 32% 10% 58%
1	F	714	21% 34% 7% 58%
1	G	714	11% 33% 8% 58%
1	H	714	11% 35% 7% 58%
1	I	714	20% 35% 7% 58%
1	J	714	20% 34% 8% 58%
1	K	714	20% 34% 7% 58%
1	L	714	11% 33% 8% 58%
1	M	714	34% 8% 58%
1	N	714	36% 6% 58%
1	O	714	35% 7% 58%
1	P	714	37% 58%
1	Q	714	34% 8% 58%
1	R	714	35% 6% 58%

2 Entry composition (i)

There is only 1 type of molecule in this entry. The entry contains 43146 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 Stellatatriene synthase.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	298	Total	C	N	O	S	0	0
			2397	1524	412	450	11		
1	B	298	Total	C	N	O	S	0	0
			2397	1524	412	450	11		
1	C	298	Total	C	N	O	S	0	0
			2397	1524	412	450	11		
1	D	298	Total	C	N	O	S	0	0
			2397	1524	412	450	11		
1	E	298	Total	C	N	O	S	0	0
			2397	1524	412	450	11		
1	F	298	Total	C	N	O	S	0	0
			2397	1524	412	450	11		
1	G	298	Total	C	N	O	S	0	0
			2397	1524	412	450	11		
1	H	298	Total	C	N	O	S	0	0
			2397	1524	412	450	11		
1	I	298	Total	C	N	O	S	0	0
			2397	1524	412	450	11		
1	J	298	Total	C	N	O	S	0	0
			2397	1524	412	450	11		
1	K	298	Total	C	N	O	S	0	0
			2397	1524	412	450	11		
1	L	298	Total	C	N	O	S	0	0
			2397	1524	412	450	11		
1	M	298	Total	C	N	O	S	0	0
			2397	1524	412	450	11		
1	N	298	Total	C	N	O	S	0	0
			2397	1524	412	450	11		
1	O	298	Total	C	N	O	S	0	0
			2397	1524	412	450	11		
1	P	298	Total	C	N	O	S	0	0
			2397	1524	412	450	11		
1	Q	298	Total	C	N	O	S	0	0
			2397	1524	412	450	11		

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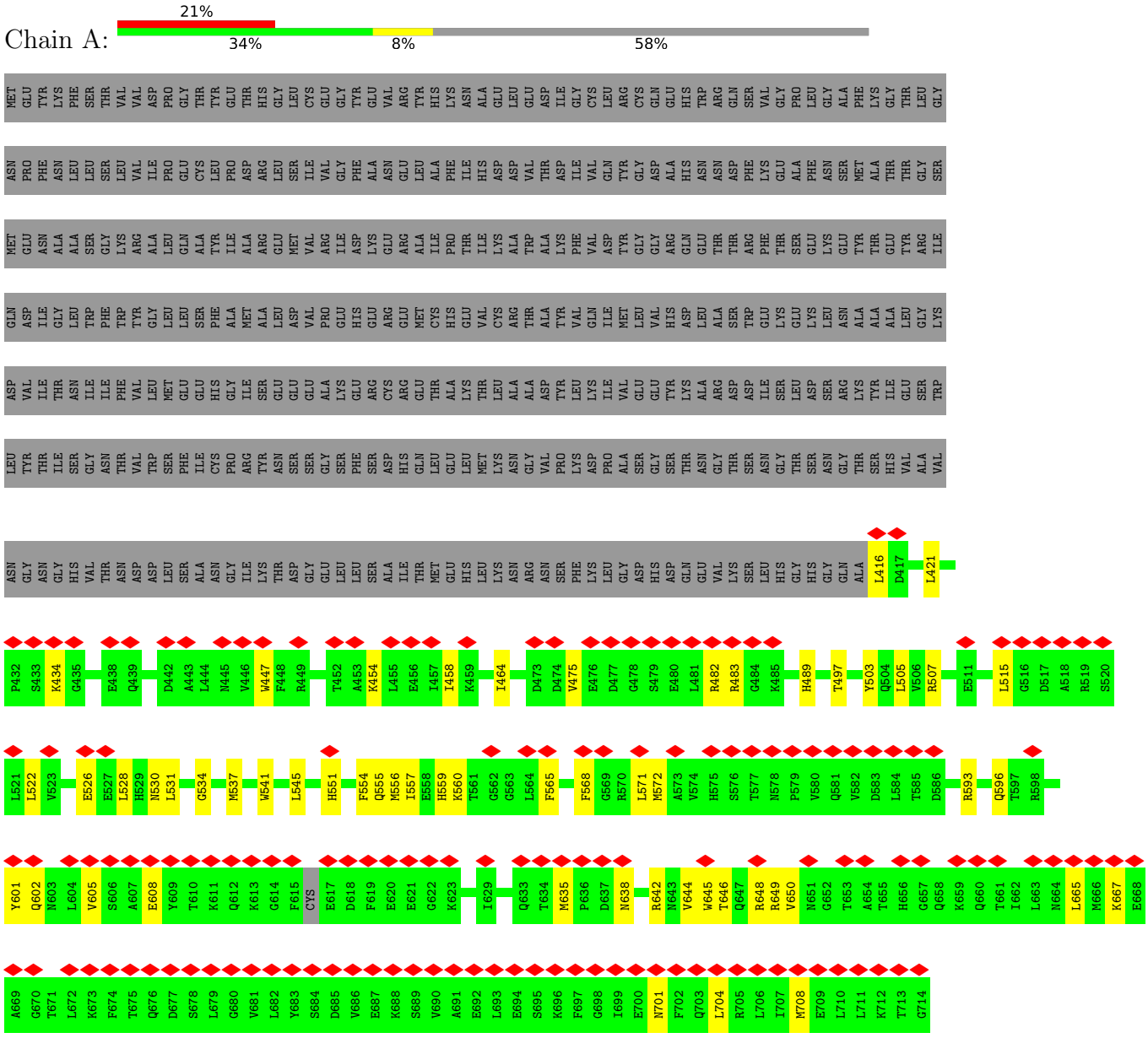
Mol	Chain	Residues	Atoms					AltConf	Trace
1	R	298	Total	C	N	O	S	0	0
			2397	1524	412	450	11		

3 Residue-property plots (i)

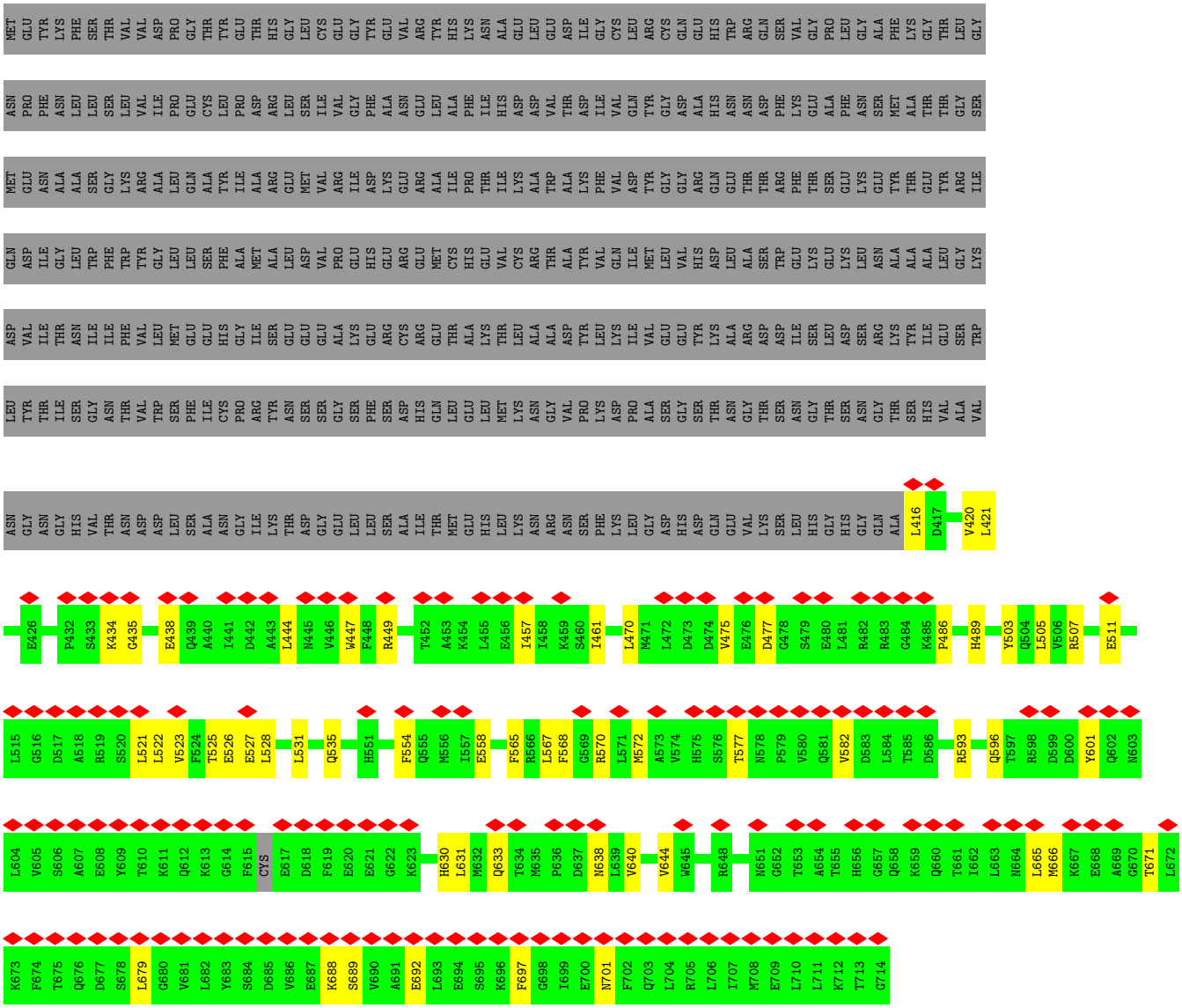
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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



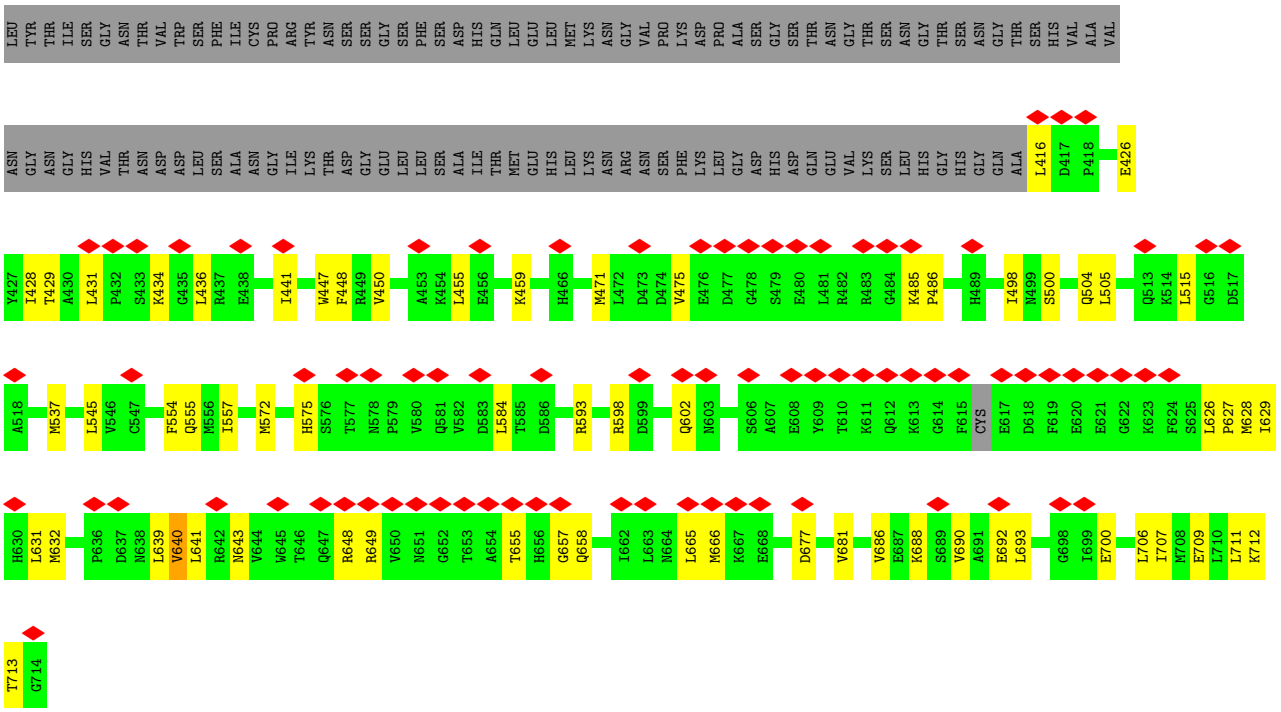
• Molecule 1: Stellatatriene synthase

Chain B:

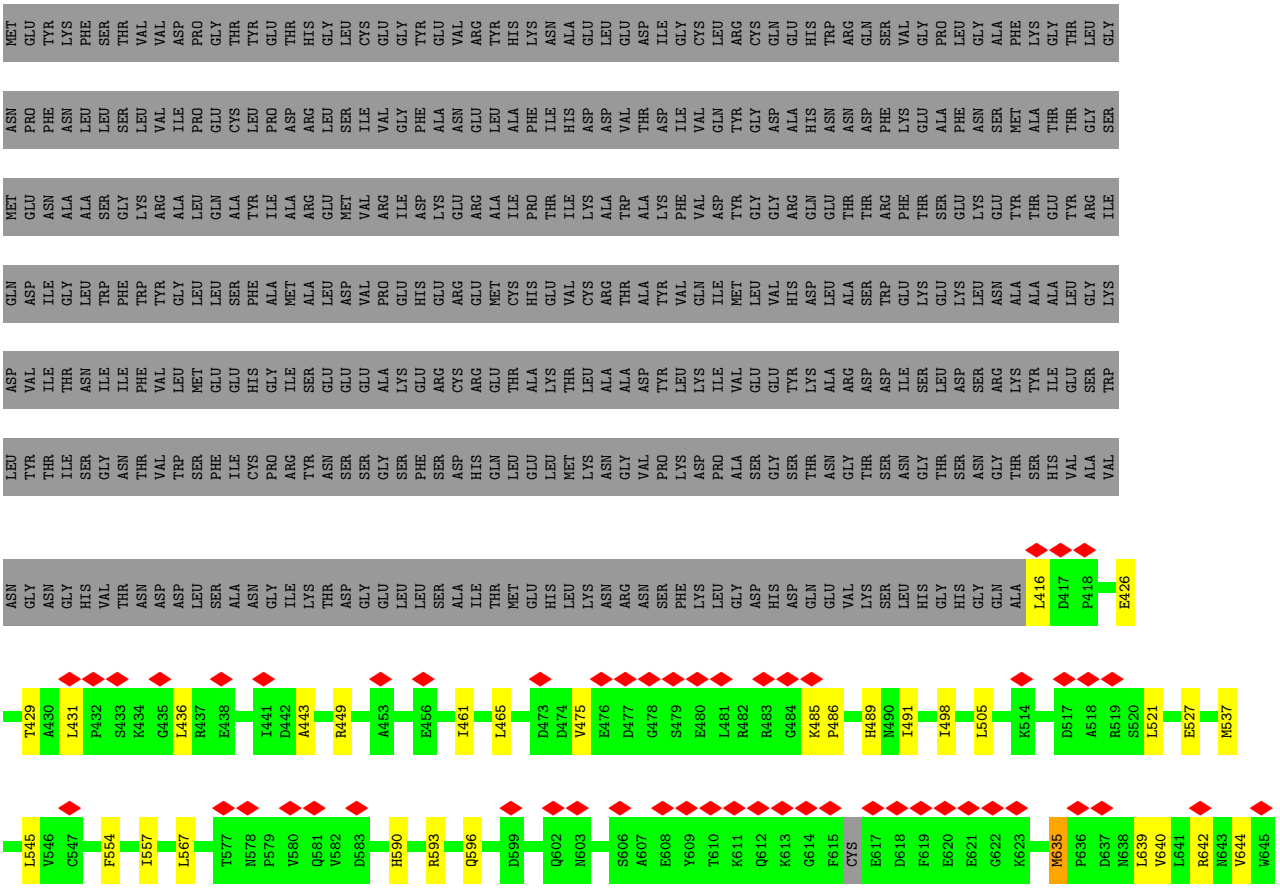


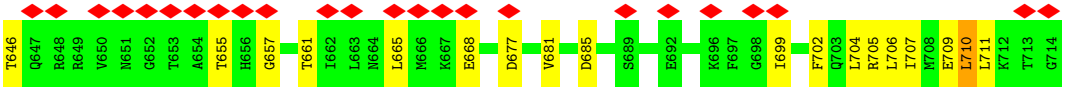
• Molecule 1: Stellatatriene synthase

Chain C:

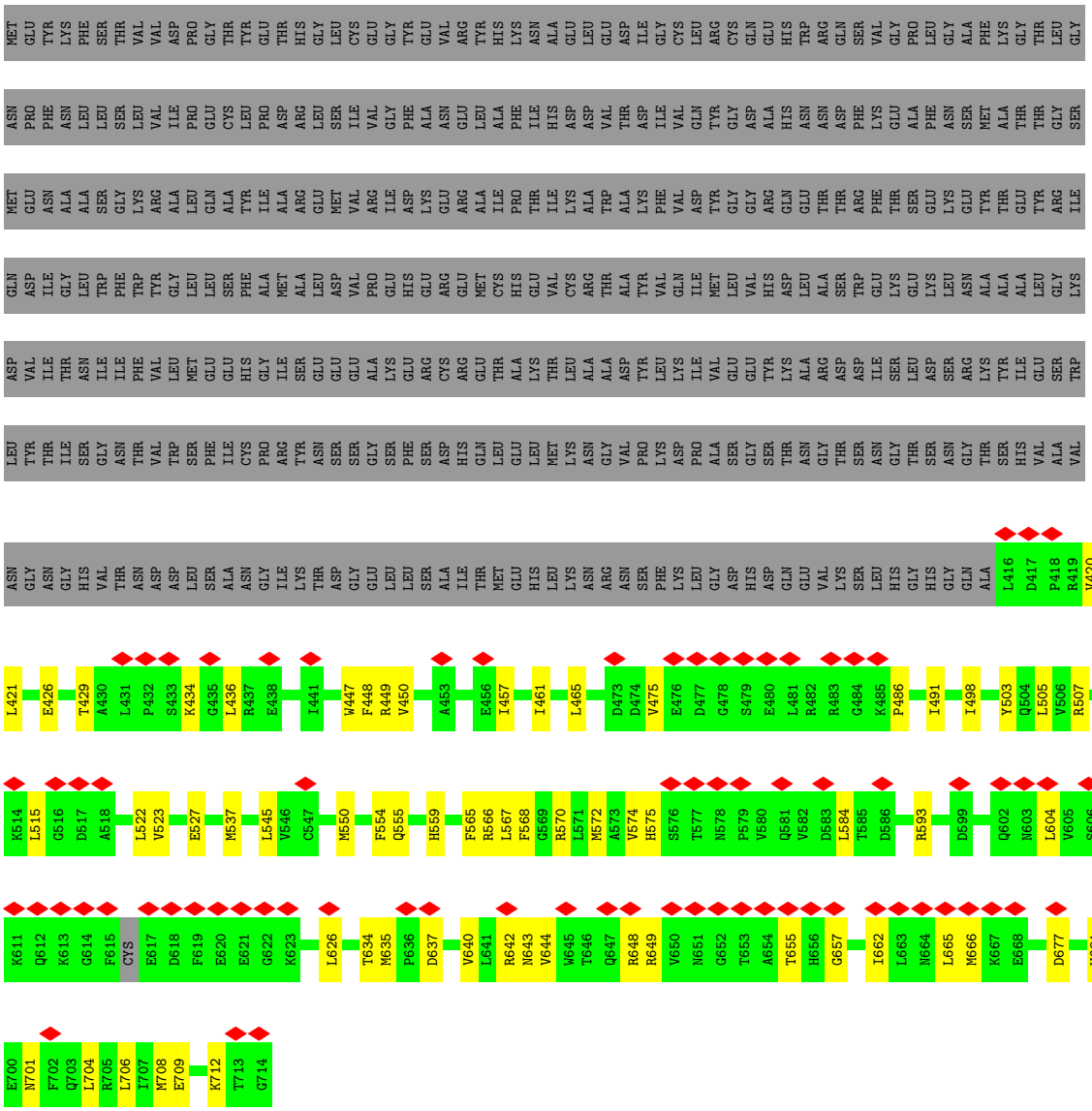


• Molecule 1: Stellatatriene synthase

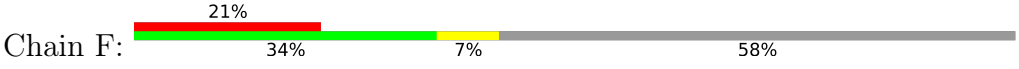


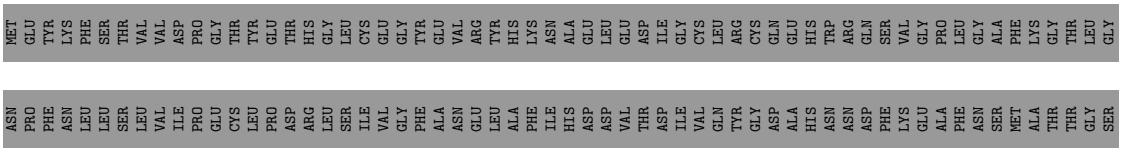


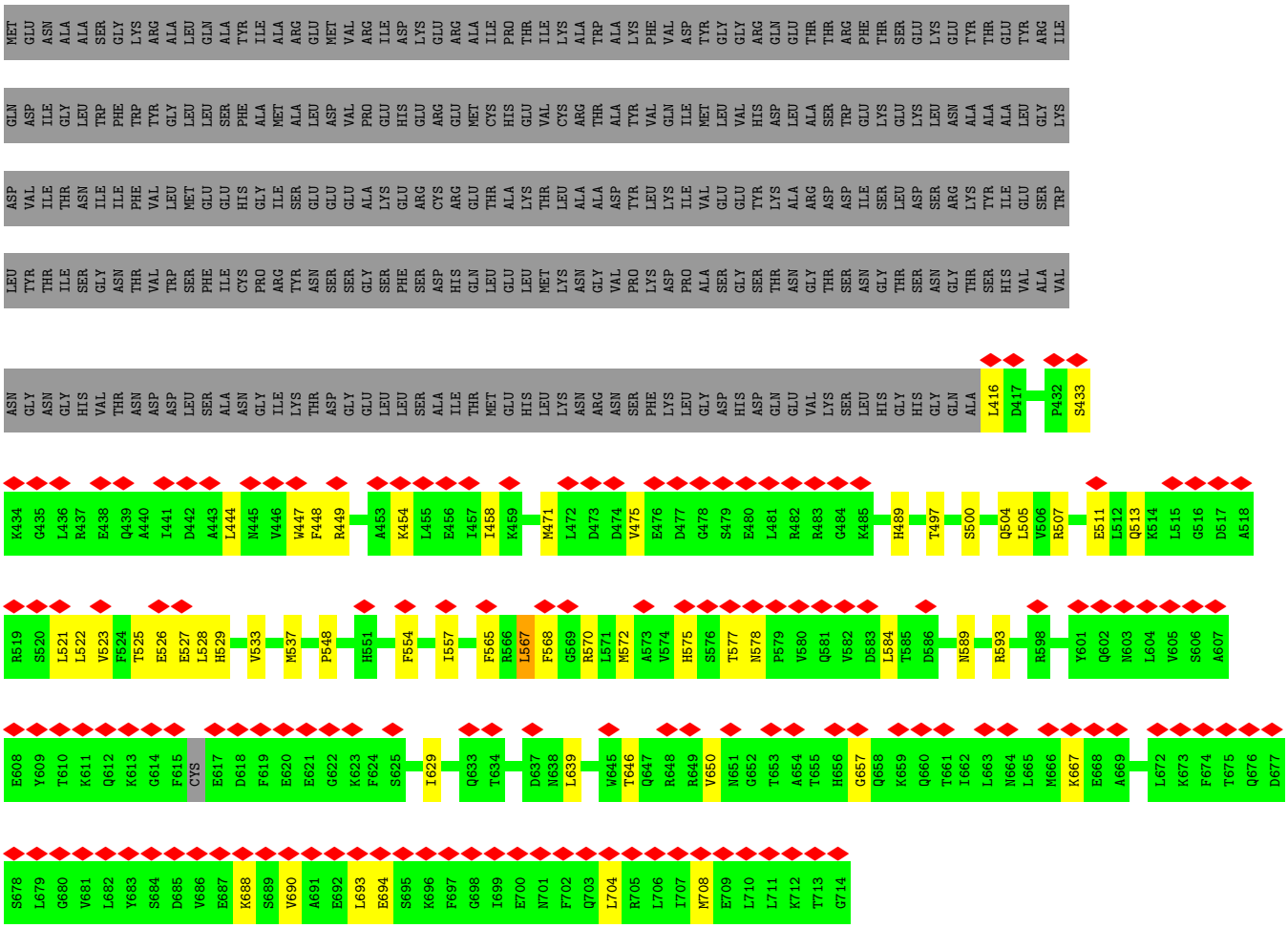
• Molecule 1: Stellatatriene synthase



• Molecule 1: Stellatatriene synthase

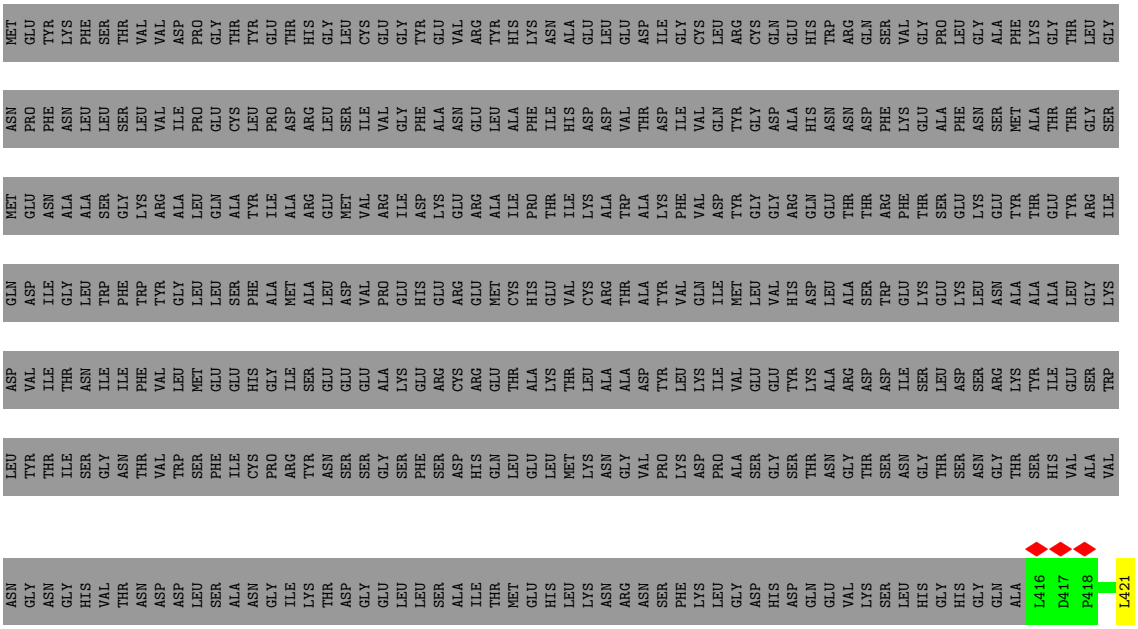


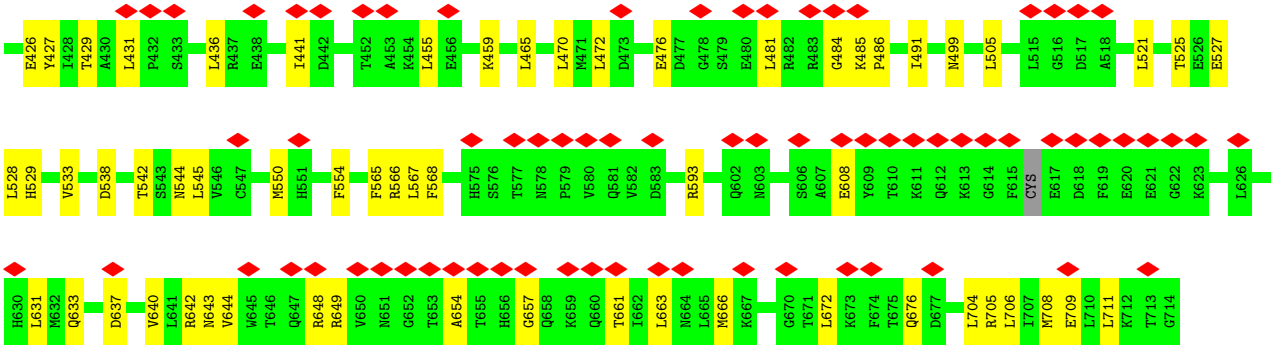




- Molecule 1: Stellatatriene synthase

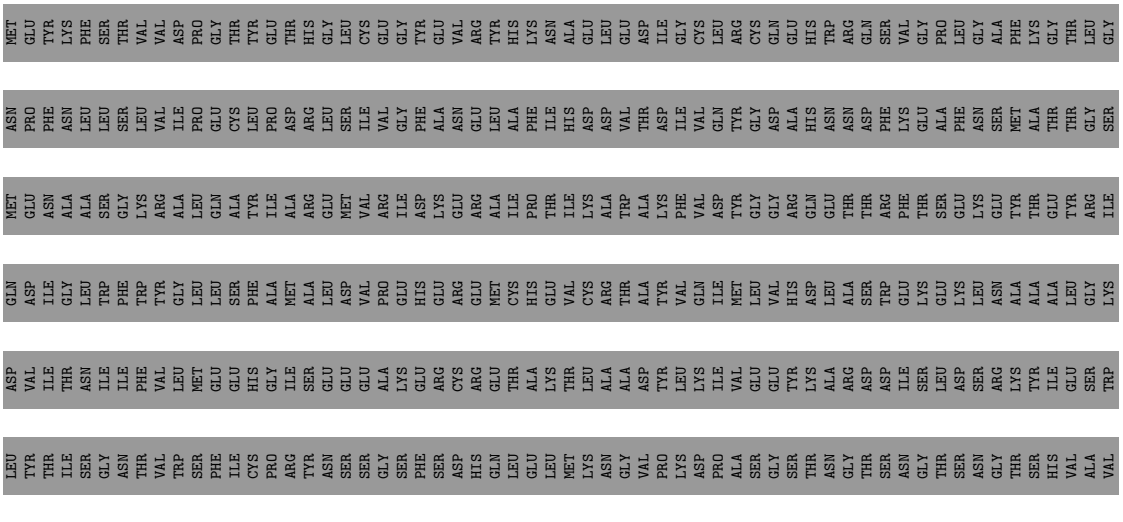
Chain G:

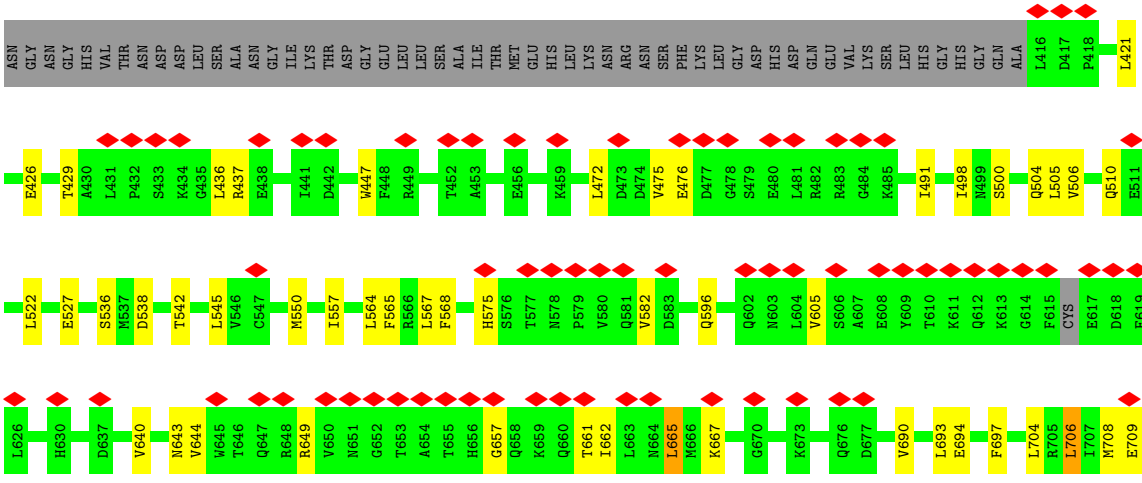




• Molecule 1: Stellatatriene synthase

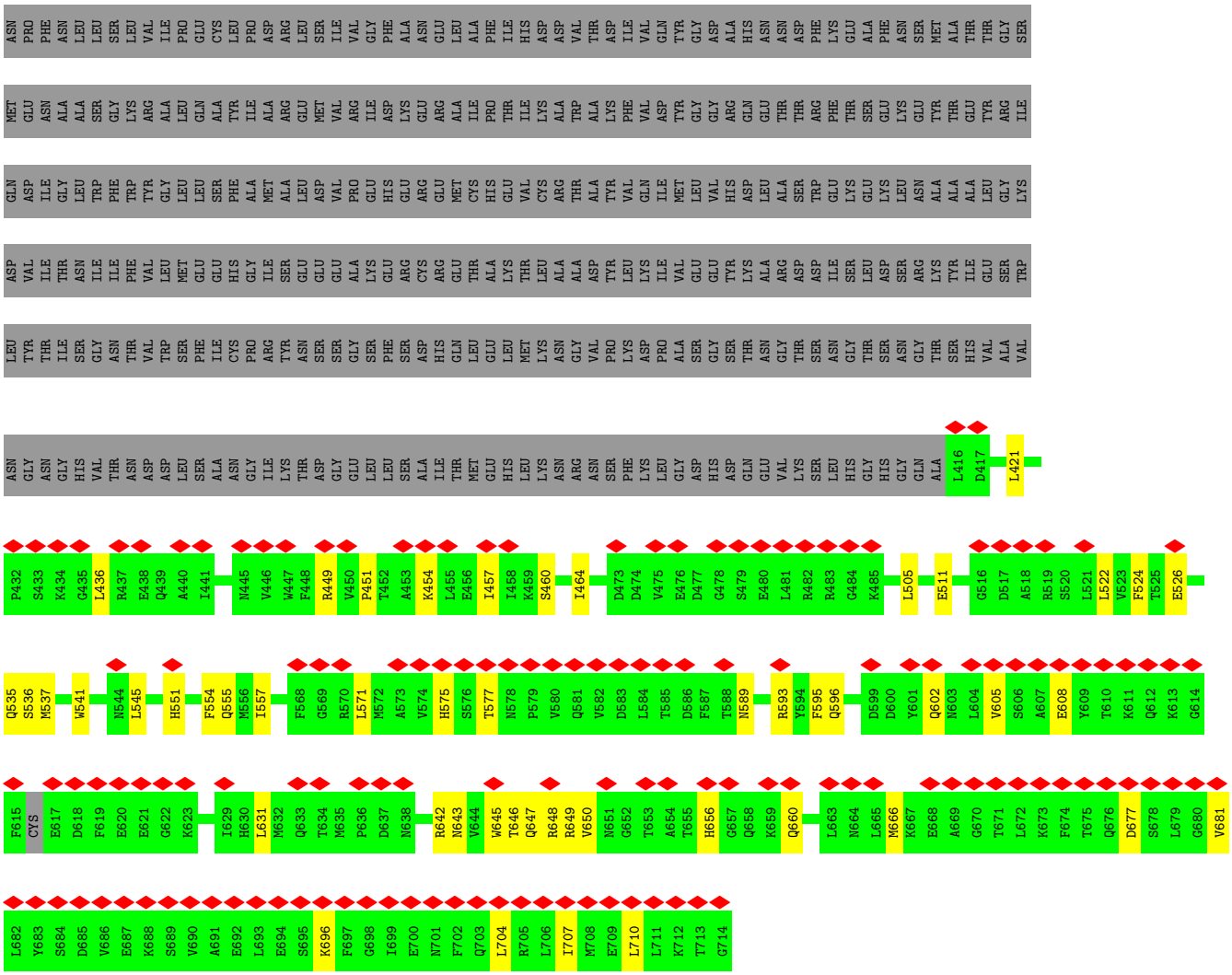
Chain H:





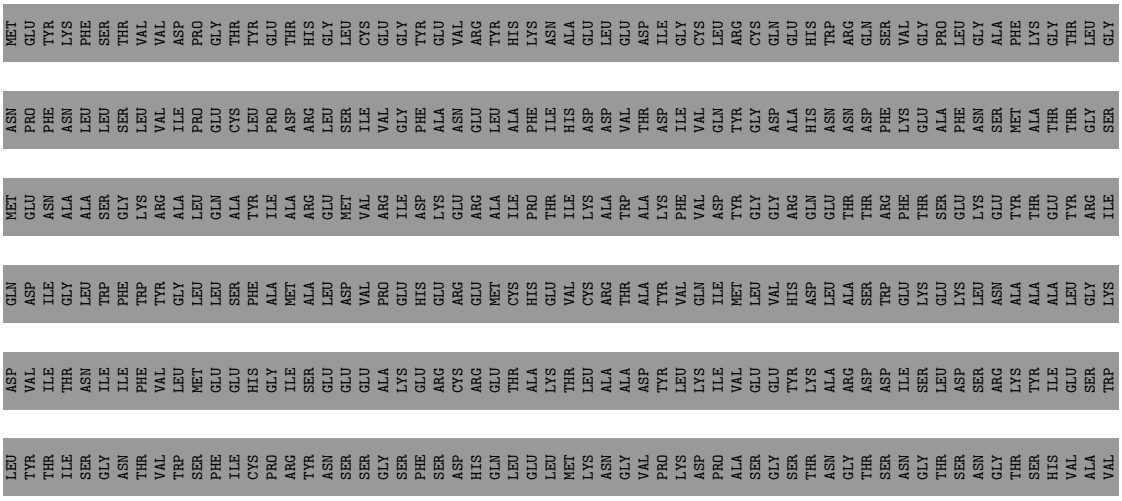
• Molecule 1: Stellatatriene synthase

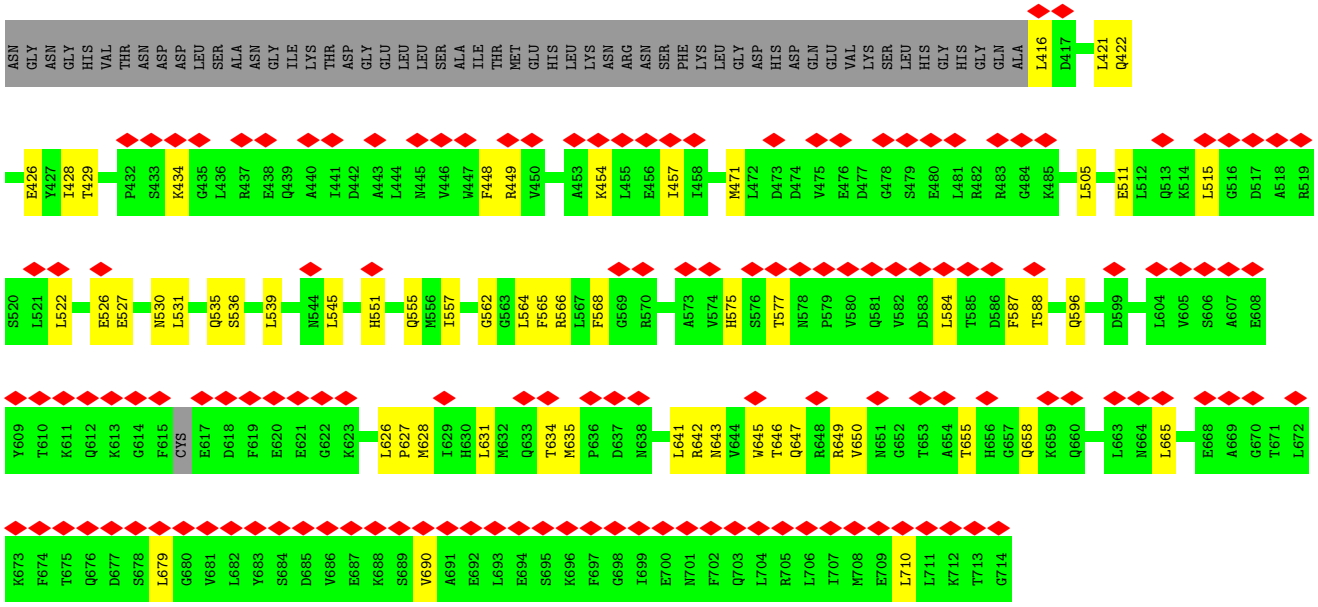
Chain I:



- Molecule 1: Stellatatriene synthase

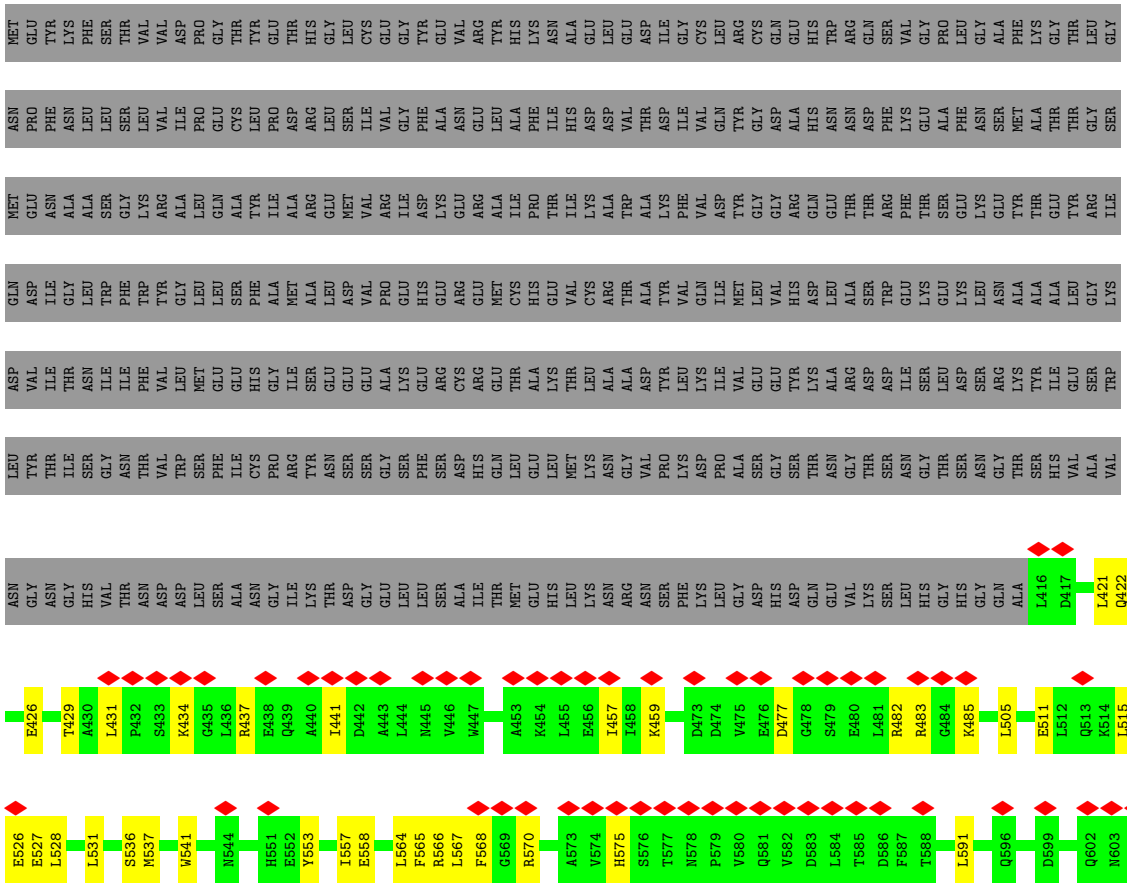
Chain J:

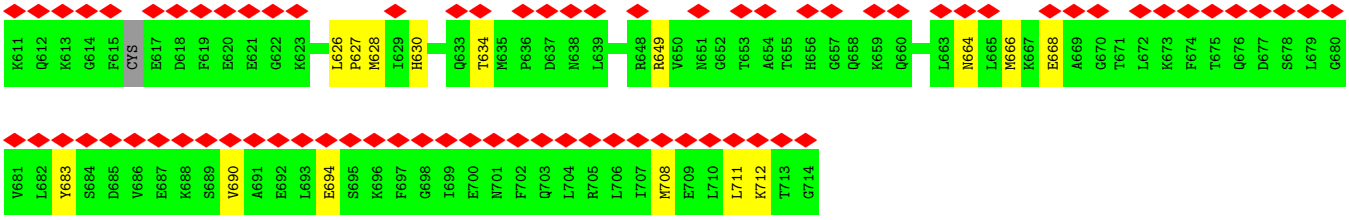




• Molecule 1: Stellatatriene synthase

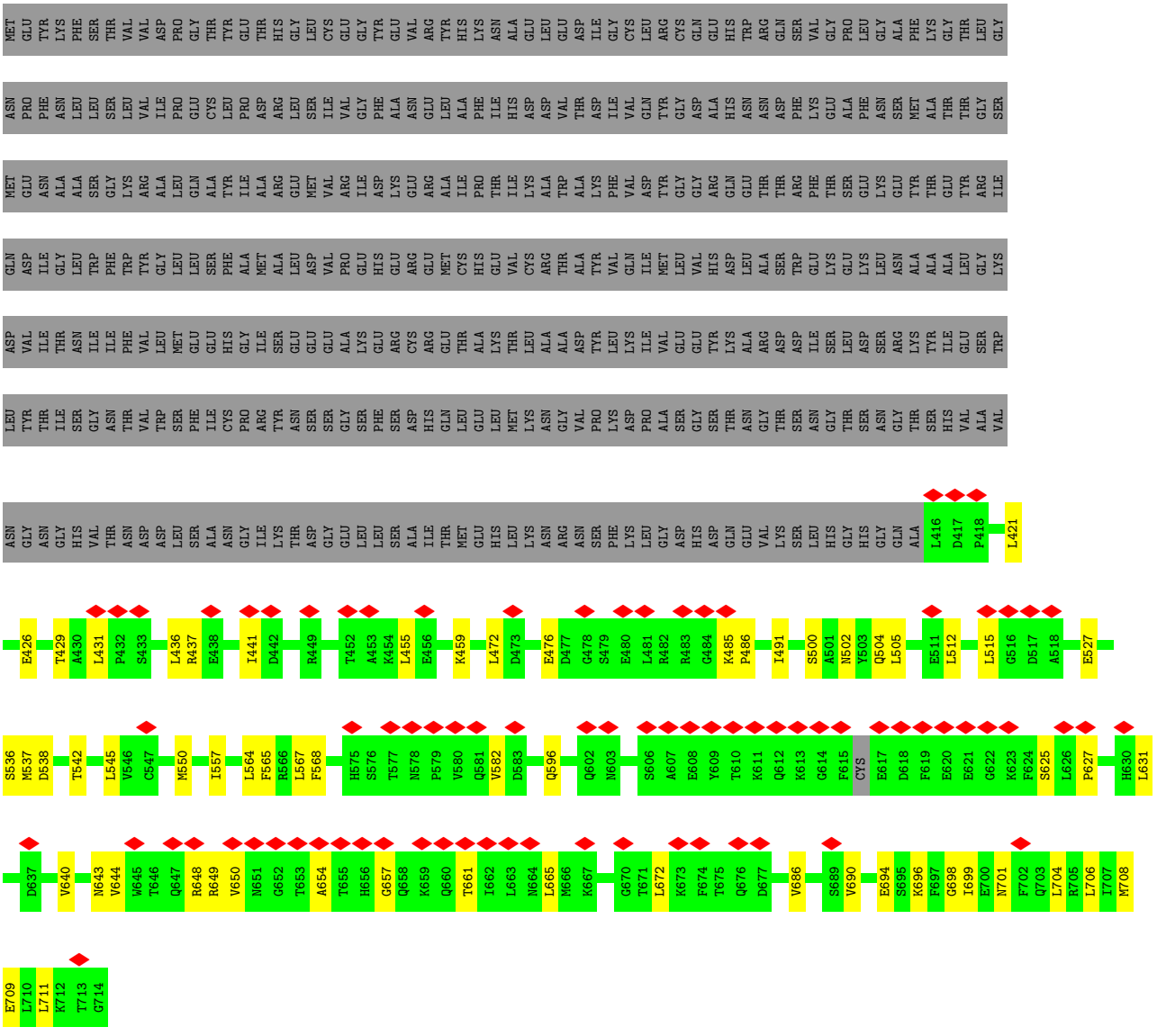
Chain K:





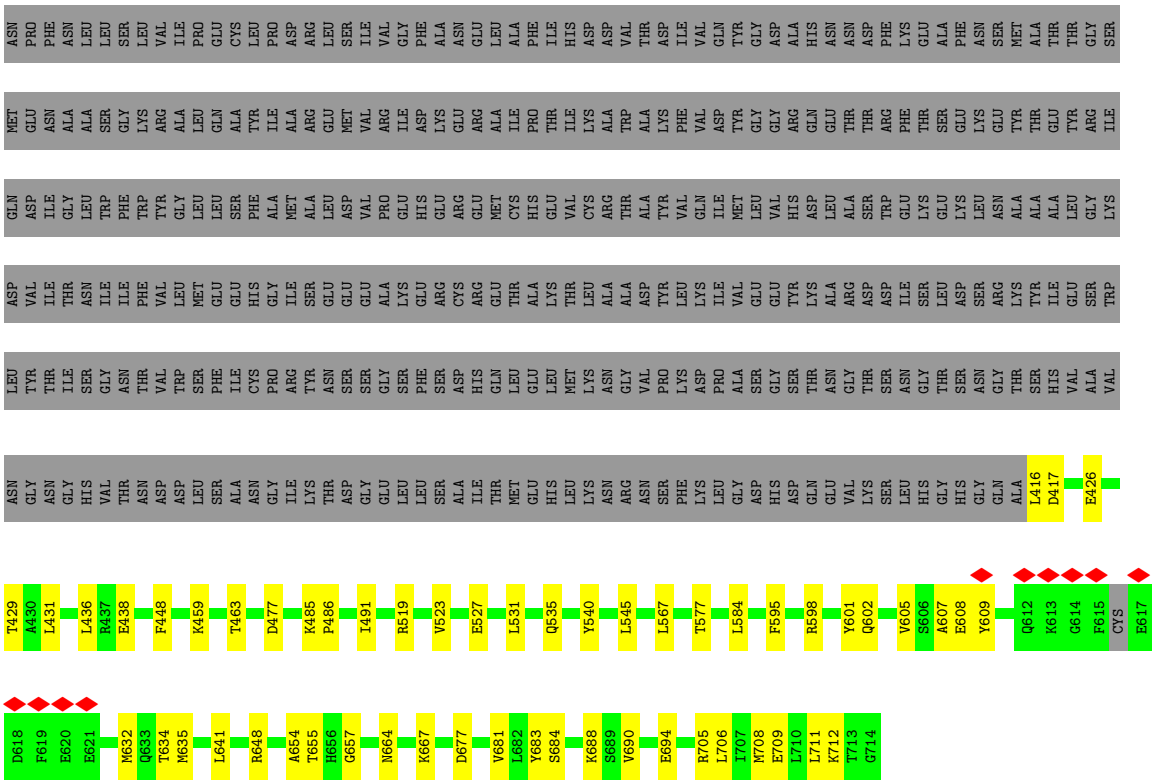
• Molecule 1: Stellatatriene synthase

Chain L:

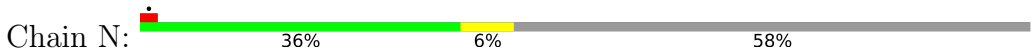


• Molecule 1: Stellatatriene synthase

Chain M:

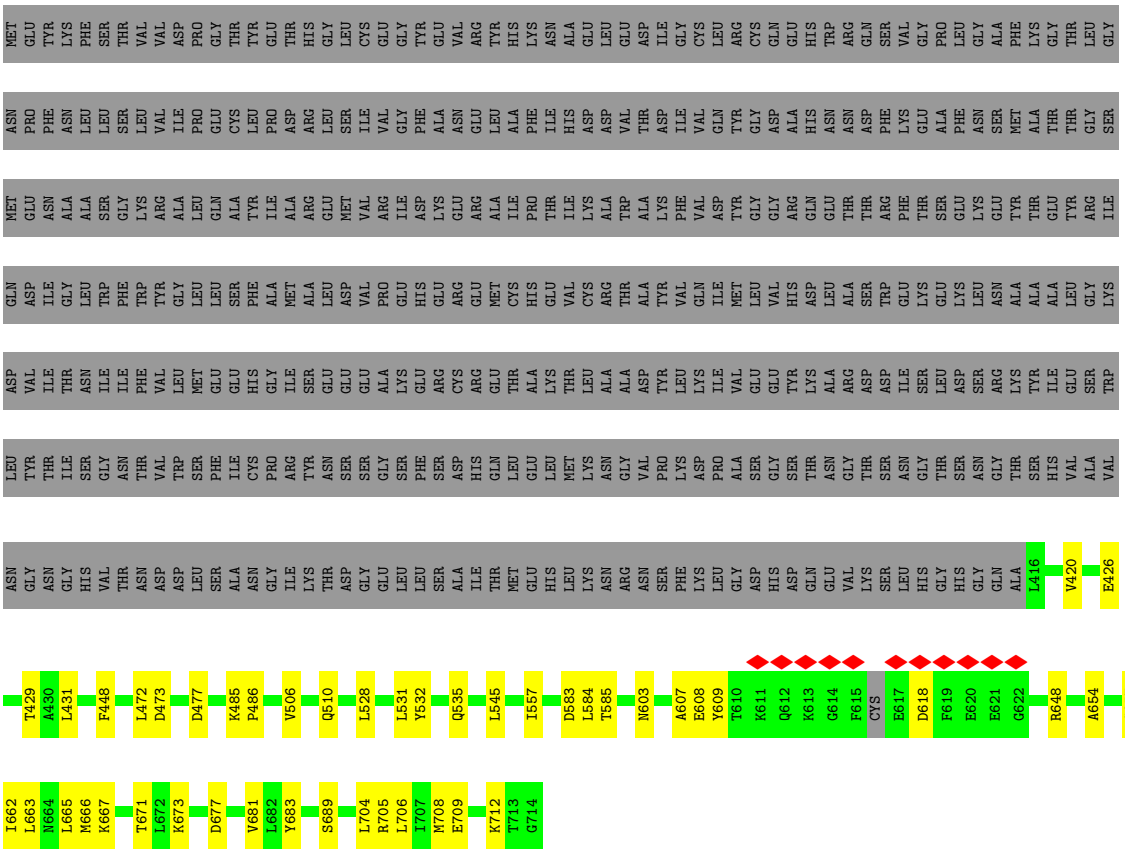


• Molecule 1: Stellatatriene synthase



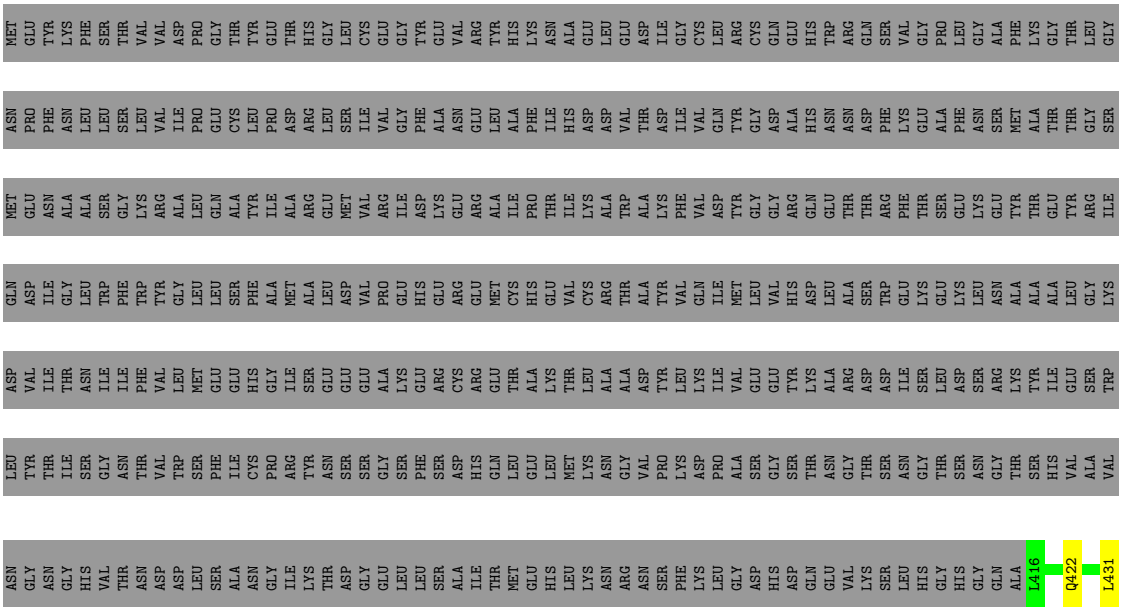
• Molecule 1: Stellatatriene synthase

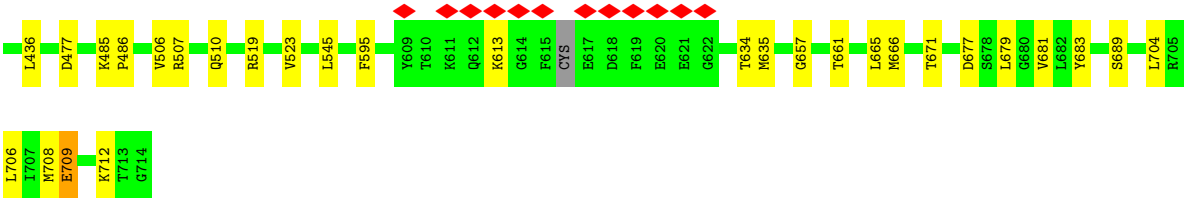
Chain O:



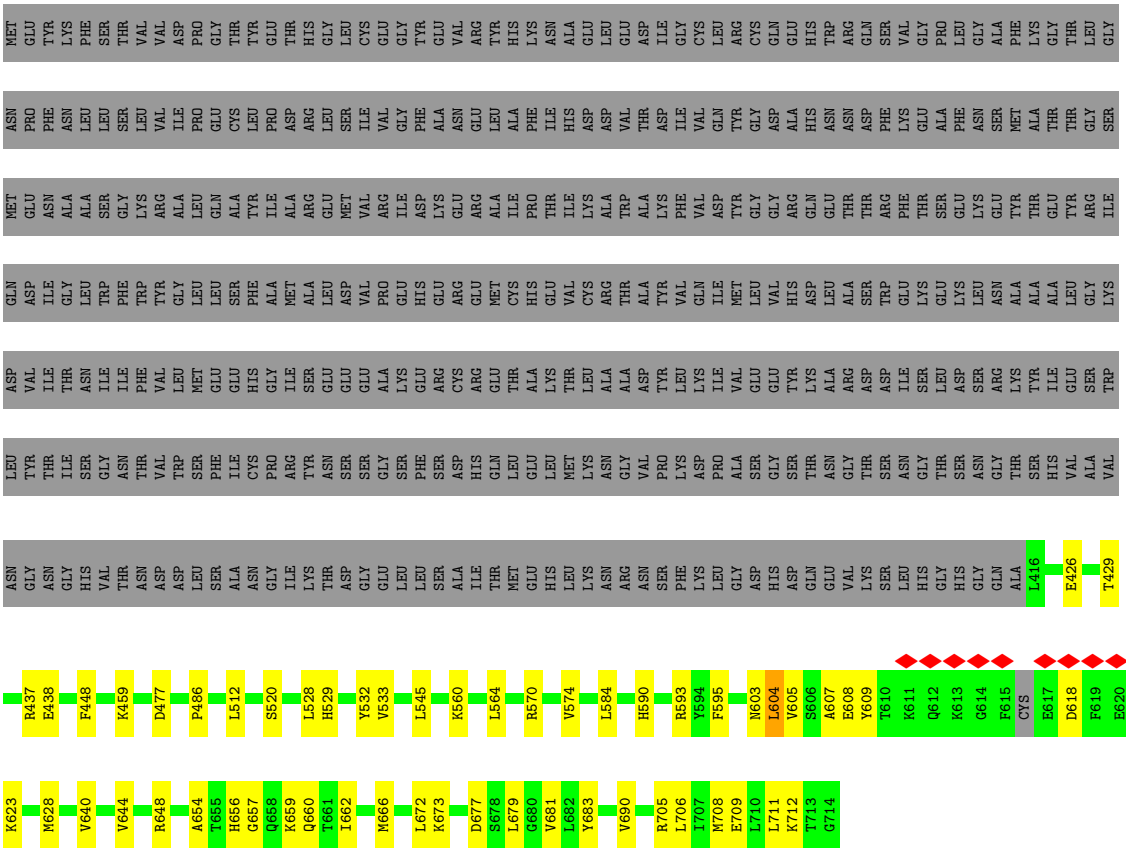
• Molecule 1: Stellatatriene synthase

Chain P:

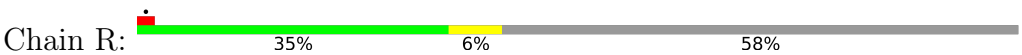


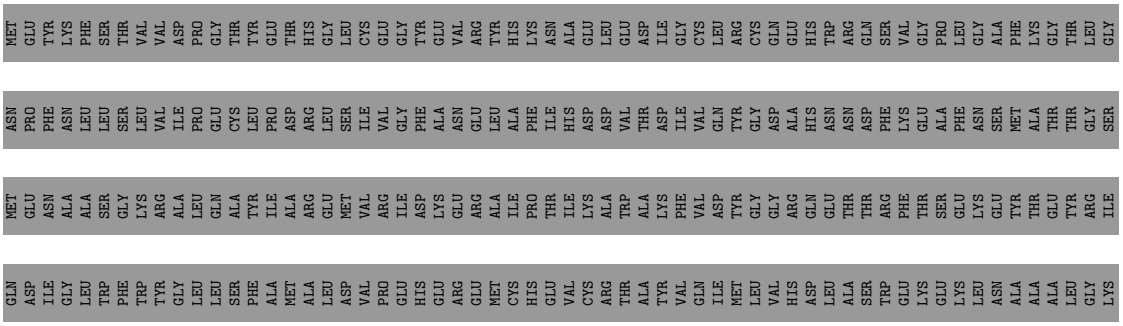


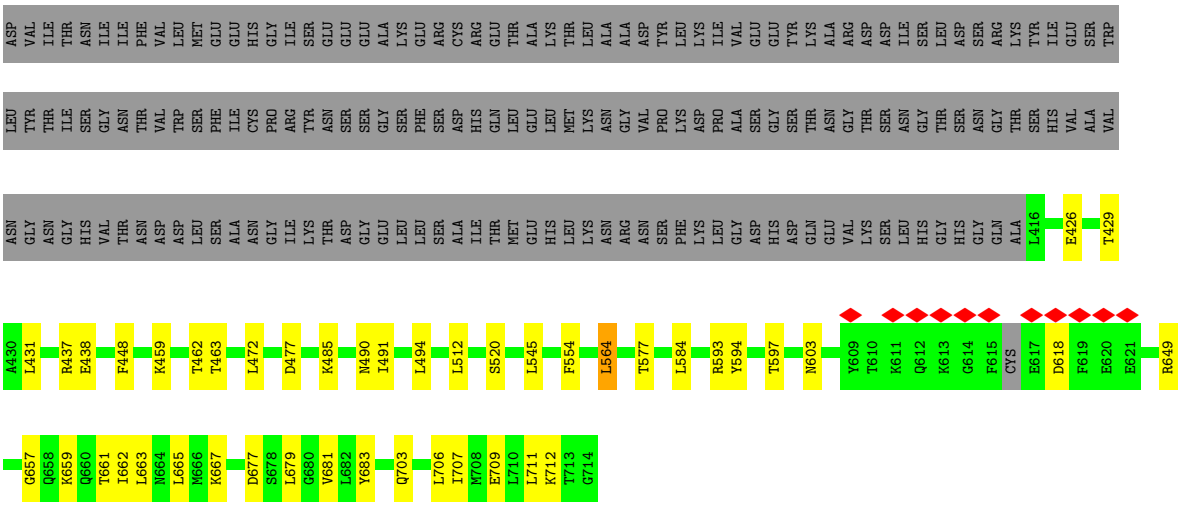
• Molecule 1: Stellatatriene synthase



• Molecule 1: Stellatatriene synthase






ASP VAL ILE THR ASN ILE ILE PHE VAL LEU MET GLU GLU HIS GLY ILE SER GLU GLU GLU ALA LYS GLU ARG CYS ARG GLU THR ALA LYS THR LEU ALA ALA ASP TYR LEU LYS ILE VAL GLU GLU TYR LYS ALA ARG ASP ASP ILE SER LEU ASP SER ARG LYS TYR ILE GLU SER TRP
LEU TYR THR ILE SER GLY ASN THR VAL TRP SER PHE ILE CYS PRO ARG TYR ASN SER SER GLY SER PHE SER ASP HIS GLN LEU GLU LEU MET LYS ASN GLY VAL PRO LYS ASP PRO ALA SER GLY SER THR ASN GLY THR SER ASN GLY THR SER HIS VAL ALA VAL
ASN GLY ASN GLY HIS VAL THR ASN ASP ASP LEU SER ALA ASN GLY ILE LYS THR ASP GLY GLU LEU LEU SER ALA ILE THR MET GLU HIS LEU LYS ASN ARG ASN SER PHE LYS LEU GLY ASP HIS ASP GLN GLU VAL LYS SER LEU HIS GLY HIS GLY GLN ALA L416 E426 T429
A430 L431 R437 E438 F448 K459 T462 T463 L472 D477 K485 N490 I491 L494 L512 S520 L545 F554 L564 T577 L584 R593 Y594 T597 N603 Y609 T610 K611 Q612 K613 G614 F615 CYS E617 D618 F619 E620 E621 R649
G657 Q658 K659 Q660 T661 I662 L663 N664 L665 M666 K667 D677 S678 L679 G680 V681 L682 Y683 Q703 L706 I707 M708 E709 L710 L711 K712 T713 G714

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	377521	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TECNAI F30	Depositor
Voltage (kV)	200	Depositor
Electron dose ($e^-/Å^2$)	40	Depositor
Minimum defocus (nm)	800	Depositor
Maximum defocus (nm)	1800	Depositor
Magnification	Not provided	
Image detector	FEI FALCON IV (4k x 4k)	Depositor
Maximum map value	1.144	Depositor
Minimum map value	-0.637	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.020	Depositor
Recommended contour level	0.08	Depositor
Map size (Å)	370.0, 370.0, 370.0	wwPDB
Map dimensions	500, 500, 500	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.74, 0.74, 0.74	Depositor

5 Model quality

5.1 Standard geometry

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|>5$	RMSZ	#$\|Z\|>5$
1	A	0.13	0/2443	0.33	0/3301
1	B	0.13	0/2443	0.32	0/3301
1	C	0.14	0/2443	0.32	0/3301
1	D	0.13	0/2443	0.32	0/3301
1	E	0.12	0/2443	0.31	0/3301
1	F	0.13	0/2443	0.30	0/3301
1	G	0.12	0/2443	0.29	0/3301
1	H	0.13	0/2443	0.30	0/3301
1	I	0.15	0/2443	0.35	0/3301
1	J	0.13	0/2443	0.33	0/3301
1	K	0.14	0/2443	0.31	0/3301
1	L	0.12	0/2443	0.31	0/3301
1	M	0.14	0/2443	0.31	0/3301
1	N	0.13	0/2443	0.31	0/3301
1	O	0.15	0/2443	0.32	0/3301
1	P	0.14	0/2443	0.34	0/3301
1	Q	0.15	0/2443	0.32	0/3301
1	R	0.15	0/2443	0.35	0/3301
All	All	0.14	0/43974	0.32	0/59418

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2397	0	2391	41	0
1	B	2397	0	2391	39	0
1	C	2397	0	2391	43	0
1	D	2397	0	2391	37	0
1	E	2397	0	2391	51	0
1	F	2397	0	2391	39	0
1	G	2397	0	2391	45	0
1	H	2397	0	2391	36	0
1	I	2397	0	2391	34	0
1	J	2397	0	2391	42	0
1	K	2397	0	2391	35	0
1	L	2397	0	2391	38	0
1	M	2397	0	2391	36	0
1	N	2397	0	2391	29	0
1	O	2397	0	2391	33	0
1	P	2397	0	2391	20	0
1	Q	2397	0	2391	41	0
1	R	2397	0	2391	29	0
All	All	43146	0	43038	606	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 7.

All (606) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:554:PHE:HA	1:C:557:ILE:HG22	1.49	0.94
1:G:706:LEU:HD11	1:P:709:GLU:HG2	1.50	0.93
1:C:628:MET:HE1	1:C:648:ARG:HH22	1.41	0.84
1:H:706:LEU:HD11	1:O:709:GLU:HG3	1.60	0.82
1:H:709:GLU:HG2	1:O:706:LEU:HD21	1.62	0.81
1:B:523:VAL:HG12	1:B:570:ARG:HH21	1.47	0.80
1:C:436:LEU:HD11	1:C:711:LEU:HD21	1.65	0.79
1:L:709:GLU:HG2	1:Q:706:LEU:HD21	1.65	0.78
1:G:709:GLU:HG2	1:P:706:LEU:HD21	1.64	0.78
1:L:706:LEU:HD11	1:Q:709:GLU:HG3	1.67	0.77
1:P:431:LEU:HD22	1:P:485:LYS:HD2	1.66	0.77
1:N:471:MET:HG2	1:N:488:THR:HG21	1.65	0.77
1:J:416:LEU:HD13	1:L:537:MET:HG3	1.68	0.75
1:M:664:ASN:HA	1:M:667:LYS:HE2	1.68	0.75
1:E:515:LEU:HB3	1:E:575:HIS:HE1	1.50	0.75
1:E:475:VAL:HG11	1:E:498:ILE:HD11	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:706:LEU:HD21	1:M:709:GLU:HG3	1.71	0.73
1:F:449:ARG:HG3	1:F:577:THR:HB	1.72	0.71
1:E:683:TYR:HE2	1:E:712:LYS:HB2	1.57	0.69
1:D:537:MET:HE3	1:F:416:LEU:HB3	1.75	0.68
1:M:705:ARG:HA	1:M:708:MET:HE2	1.75	0.68
1:H:640:VAL:O	1:H:644:VAL:HG23	1.95	0.67
1:K:522:LEU:O	1:K:526:GLU:HG3	1.94	0.67
1:B:416:LEU:HB3	1:E:537:MET:HE3	1.76	0.66
1:B:420:VAL:HG13	1:F:639:LEU:HD21	1.78	0.65
1:A:537:MET:HE3	1:A:537:MET:HA	1.78	0.65
1:J:505:LEU:HD23	1:L:505:LEU:HD22	1.78	0.65
1:C:631:LEU:HD11	1:C:666:MET:HA	1.80	0.64
1:D:475:VAL:HG11	1:D:498:ILE:HD11	1.79	0.64
1:A:644:VAL:O	1:A:648:ARG:HG2	1.96	0.64
1:E:461:ILE:O	1:E:465:LEU:HD12	1.97	0.64
1:M:527:GLU:HB2	1:M:567:LEU:HD13	1.78	0.63
1:D:590:HIS:CE1	1:D:685:ASP:HB3	2.34	0.63
1:M:531:LEU:O	1:M:535:GLN:HG3	1.98	0.63
1:R:662:ILE:HD13	1:R:665:LEU:HD12	1.81	0.62
1:D:677:ASP:O	1:D:681:VAL:HG23	2.00	0.62
1:E:450:VAL:HG21	1:E:572:MET:HG3	1.82	0.62
1:D:642:ARG:O	1:D:646:THR:HG22	2.00	0.61
1:C:709:GLU:HG2	1:N:706:LEU:HD11	1.82	0.61
1:E:709:GLU:HG2	1:R:706:LEU:HD11	1.82	0.61
1:D:661:THR:O	1:D:665:LEU:HD12	2.01	0.61
1:C:706:LEU:HD11	1:N:709:GLU:HG3	1.81	0.60
1:P:661:THR:O	1:P:665:LEU:HD12	2.01	0.60
1:L:550:MET:HE3	1:L:550:MET:HA	1.82	0.60
1:N:640:VAL:O	1:N:644:VAL:HG22	2.01	0.60
1:D:640:VAL:O	1:D:644:VAL:HG12	2.01	0.60
1:G:505:LEU:HD22	1:I:505:LEU:HD23	1.83	0.60
1:I:524:PHE:CE1	1:I:571:LEU:HD11	2.37	0.59
1:F:537:MET:HE3	1:F:537:MET:HA	1.84	0.59
1:I:460:SER:O	1:I:464:ILE:HD12	2.02	0.59
1:I:551:HIS:O	1:I:555:GLN:HG2	2.01	0.59
1:E:677:ASP:O	1:E:681:VAL:HG23	2.01	0.59
1:J:454:LYS:NZ	1:J:575:HIS:HB3	2.18	0.59
1:M:491:ILE:HG23	1:N:644:VAL:HG13	1.84	0.59
1:H:690:VAL:O	1:H:694:GLU:HG3	2.03	0.59
1:G:431:LEU:HD22	1:G:485:LYS:HD2	1.83	0.58
1:M:459:LYS:O	1:M:463:THR:HG23	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:505:LEU:HD11	1:B:528:LEU:HD21	1.85	0.58
1:B:631:LEU:HD22	1:B:666:MET:HG3	1.84	0.58
1:J:631:LEU:HG	1:J:641:LEU:HD11	1.84	0.58
1:F:475:VAL:HG22	1:F:489:HIS:HB3	1.85	0.58
1:N:531:LEU:O	1:N:535:GLN:HG3	2.04	0.58
1:G:544:ASN:HA	1:J:646:THR:HG21	1.85	0.58
1:M:690:VAL:O	1:M:694:GLU:HG3	2.03	0.58
1:D:449:ARG:HH22	1:D:699:ILE:HD13	1.68	0.58
1:K:664:ASN:O	1:K:668:GLU:HG2	2.03	0.57
1:R:594:TYR:HE2	1:R:711:LEU:HD23	1.70	0.57
1:E:421:LEU:HD21	1:E:503:TYR:CD2	2.39	0.57
1:R:683:TYR:CE2	1:R:712:LYS:HB2	2.39	0.57
1:E:706:LEU:HD21	1:R:709:GLU:HG3	1.85	0.57
1:N:459:LYS:O	1:N:463:THR:HG23	2.04	0.57
1:E:704:LEU:O	1:E:708:MET:HG2	2.05	0.57
1:F:548:PRO:HG2	1:F:629:ILE:HD11	1.87	0.57
1:F:646:THR:O	1:F:650:VAL:HG23	2.03	0.57
1:G:527:GLU:HB2	1:G:567:LEU:HD13	1.86	0.57
1:K:527:GLU:HB2	1:K:567:LEU:HD12	1.85	0.57
1:O:506:VAL:O	1:O:510:GLN:HG3	2.05	0.57
1:Q:705:ARG:O	1:Q:709:GLU:HG2	2.04	0.57
1:D:527:GLU:HG3	1:D:567:LEU:HA	1.87	0.57
1:P:506:VAL:O	1:P:510:GLN:HG3	2.05	0.56
1:I:557:ILE:HD12	1:I:596:GLN:HG2	1.87	0.56
1:Q:595:PHE:HE1	1:Q:711:LEU:HD21	1.70	0.56
1:D:486:PRO:HG3	1:E:657:GLY:HA3	1.86	0.56
1:K:628:MET:HA	1:K:628:MET:HE2	1.87	0.56
1:M:683:TYR:CE2	1:M:712:LYS:HB2	2.41	0.56
1:M:545:LEU:HD12	1:P:545:LEU:HD12	1.87	0.56
1:A:505:LEU:HD22	1:C:505:LEU:HD13	1.88	0.56
1:C:639:LEU:HD22	1:E:420:VAL:HG13	1.88	0.56
1:C:657:GLY:HA3	1:E:486:PRO:HG3	1.87	0.56
1:I:643:ASN:O	1:I:647:GLN:HG2	2.07	0.56
1:C:426:GLU:HA	1:C:429:THR:HG22	1.88	0.55
1:H:437:ARG:HE	1:H:564:LEU:HD23	1.70	0.55
1:E:449:ARG:HH22	1:E:699:ILE:HD13	1.71	0.55
1:L:436:LEU:HD11	1:L:711:LEU:HD11	1.88	0.55
1:C:688:LYS:O	1:C:692:GLU:HG2	2.06	0.55
1:L:455:LEU:O	1:L:459:LYS:HG2	2.07	0.55
1:F:589:ASN:O	1:F:593:ARG:HG3	2.06	0.55
1:R:431:LEU:HD22	1:R:485:LYS:HD3	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:527:GLU:HB2	1:N:567:LEU:HD13	1.88	0.55
1:E:434:LYS:HD2	1:E:436:LEU:HG	1.87	0.55
1:J:628:MET:HE2	1:J:628:MET:HA	1.87	0.55
1:Q:545:LEU:HD12	1:R:545:LEU:HD12	1.87	0.55
1:N:426:GLU:HA	1:N:429:THR:HG22	1.89	0.55
1:R:448:PHE:HZ	1:R:584:LEU:HD11	1.72	0.55
1:D:461:ILE:O	1:D:465:LEU:HD12	2.06	0.55
1:F:448:PHE:O	1:F:449:ARG:HG2	2.07	0.55
1:J:551:HIS:O	1:J:555:GLN:HG3	2.07	0.55
1:N:663:LEU:O	1:N:667:LYS:HG3	2.07	0.55
1:G:527:GLU:OE1	1:G:566:ARG:HB3	2.07	0.55
1:G:631:LEU:HD12	1:G:666:MET:HG2	1.89	0.55
1:J:557:ILE:HD12	1:J:596:GLN:HG2	1.89	0.55
1:G:565:PHE:HA	1:G:568:PHE:CE2	2.42	0.54
1:L:426:GLU:HA	1:L:429:THR:HG22	1.88	0.54
1:B:457:ILE:O	1:B:461:ILE:HG13	2.07	0.54
1:J:449:ARG:HG3	1:J:577:THR:HB	1.88	0.54
1:O:448:PHE:HZ	1:O:584:LEU:HD11	1.72	0.54
1:R:459:LYS:O	1:R:463:THR:HG23	2.06	0.54
1:B:507:ARG:O	1:B:511:GLU:HG2	2.08	0.54
1:C:434:LYS:HD3	1:C:436:LEU:HD12	1.88	0.54
1:L:545:LEU:HD11	1:L:649:ARG:HG2	1.89	0.54
1:H:550:MET:HA	1:H:550:MET:HE3	1.88	0.54
1:P:704:LEU:O	1:P:708:MET:HG2	2.06	0.54
1:A:537:MET:HG3	1:C:416:LEU:HG	1.88	0.54
1:E:604:LEU:HD11	1:E:666:MET:SD	2.48	0.54
1:H:505:LEU:HD22	1:K:505:LEU:HD23	1.90	0.54
1:I:631:LEU:HD11	1:I:666:MET:HA	1.90	0.54
1:B:475:VAL:HG22	1:B:489:HIS:HB3	1.90	0.54
1:L:704:LEU:O	1:L:708:MET:HG2	2.08	0.54
1:G:455:LEU:O	1:G:459:LYS:HG2	2.08	0.53
1:O:657:GLY:HA3	1:Q:486:PRO:HG3	1.90	0.53
1:B:565:PHE:HA	1:B:568:PHE:CE2	2.43	0.53
1:F:505:LEU:HD11	1:F:528:LEU:HD21	1.90	0.53
1:H:565:PHE:HA	1:H:568:PHE:CE2	2.44	0.53
1:O:666:MET:HG3	1:O:671:THR:HG21	1.90	0.53
1:B:522:LEU:O	1:B:526:GLU:HG3	2.09	0.53
1:R:603:ASN:HD21	1:R:618:ASP:HB2	1.72	0.53
1:M:436:LEU:HD22	1:M:595:PHE:HZ	1.73	0.53
1:R:512:LEU:HD11	1:R:520:SER:HB3	1.90	0.53
1:R:554:PHE:CD1	1:R:593:ARG:HD2	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:R:603:ASN:ND2	1:R:618:ASP:HB2	2.23	0.53
1:C:486:PRO:HG3	1:D:657:GLY:HA3	1.89	0.53
1:M:684:SER:O	1:M:688:LYS:HG2	2.09	0.53
1:Q:448:PHE:HZ	1:Q:584:LEU:HD11	1.74	0.53
1:G:550:MET:HG2	1:G:633:GLN:HE22	1.73	0.53
1:H:436:LEU:HD11	1:H:711:LEU:HD11	1.90	0.53
1:Q:438:GLU:HG3	1:Q:459:LYS:HG2	1.89	0.53
1:G:499:ASN:HD21	1:I:535:GLN:CB	2.21	0.53
1:Q:528:LEU:HD12	1:Q:532:TYR:HE1	1.74	0.53
1:C:700:GLU:HG2	1:N:702:PHE:HE2	1.74	0.53
1:L:538:ASP:O	1:L:542:THR:HG23	2.09	0.53
1:K:426:GLU:HA	1:K:429:THR:HG22	1.91	0.52
1:J:643:ASN:O	1:J:647:GLN:HG2	2.09	0.52
1:D:436:LEU:HD11	1:D:711:LEU:HD11	1.90	0.52
1:F:449:ARG:HE	1:F:578:ASN:HB2	1.74	0.52
1:E:457:ILE:HG23	1:E:511:GLU:HG3	1.91	0.52
1:H:426:GLU:HA	1:H:429:THR:HG22	1.91	0.52
1:K:505:LEU:HD11	1:K:528:LEU:HD21	1.90	0.52
1:G:704:LEU:O	1:G:708:MET:HG2	2.10	0.52
1:K:708:MET:HA	1:K:708:MET:HE2	1.90	0.52
1:Q:590:HIS:HD2	1:Q:593:ARG:HH21	1.57	0.52
1:H:704:LEU:O	1:H:708:MET:HG2	2.09	0.52
1:D:416:LEU:HG	1:F:537:MET:HG3	1.91	0.52
1:E:527:GLU:HG3	1:E:567:LEU:HA	1.91	0.52
1:G:499:ASN:HD21	1:I:535:GLN:HB2	1.75	0.52
1:R:659:LYS:O	1:R:663:LEU:HG	2.10	0.52
1:R:703:GLN:O	1:R:707:ILE:HG13	2.10	0.52
1:A:530:ASN:HA	1:A:559:HIS:HE1	1.74	0.52
1:J:655:THR:HB	1:J:658:GLN:HG3	1.92	0.52
1:P:486:PRO:HG3	1:Q:657:GLY:HA3	1.92	0.52
1:D:707:ILE:O	1:D:711:LEU:HD13	2.11	0.51
1:G:436:LEU:HD11	1:G:711:LEU:HD21	1.92	0.51
1:G:538:ASP:O	1:G:542:THR:HG23	2.10	0.51
1:E:640:VAL:O	1:E:644:VAL:HG23	2.11	0.51
1:M:655:THR:HG22	1:M:657:GLY:H	1.76	0.51
1:O:677:ASP:O	1:O:681:VAL:HG22	2.11	0.51
1:Q:690:VAL:HG21	1:Q:708:MET:HE1	1.93	0.51
1:B:449:ARG:HG3	1:B:577:THR:HB	1.91	0.51
1:C:707:ILE:O	1:C:711:LEU:HD23	2.09	0.51
1:D:443:ALA:HB1	1:D:704:LEU:HG	1.92	0.51
1:F:565:PHE:HA	1:F:568:PHE:CE1	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Q:648:ARG:NH2	1:Q:662:ILE:HG13	2.26	0.51
1:Q:656:HIS:CE1	1:Q:660:GLN:HE21	2.28	0.51
1:R:437:ARG:HE	1:R:564:LEU:HD22	1.75	0.51
1:G:421:LEU:HD13	1:I:536:SER:HB2	1.92	0.51
1:A:646:THR:O	1:A:650:VAL:HG12	2.10	0.51
1:C:629:ILE:HA	1:C:632:MET:HE2	1.93	0.51
1:C:686:VAL:O	1:C:690:VAL:HG12	2.11	0.51
1:F:529:HIS:O	1:F:533:VAL:HG22	2.10	0.51
1:L:565:PHE:HA	1:L:568:PHE:CE2	2.46	0.51
1:L:690:VAL:O	1:L:694:GLU:HG3	2.11	0.51
1:B:531:LEU:O	1:B:535:GLN:HG2	2.11	0.51
1:N:486:PRO:HG3	1:R:657:GLY:HA3	1.93	0.51
1:A:556:MET:HG2	1:A:560:LYS:HE2	1.92	0.51
1:G:640:VAL:O	1:G:644:VAL:HG12	2.10	0.51
1:L:657:GLY:O	1:L:661:THR:HG23	2.10	0.51
1:O:431:LEU:HD22	1:O:485:LYS:HD2	1.92	0.51
1:K:482:ARG:HH11	1:K:483:ARG:HE	1.59	0.50
1:N:448:PHE:HZ	1:N:584:LEU:HD11	1.77	0.50
1:Q:590:HIS:CD2	1:Q:593:ARG:HH21	2.28	0.50
1:H:475:VAL:HG11	1:H:498:ILE:HD11	1.93	0.50
1:H:545:LEU:HD11	1:H:649:ARG:HG2	1.94	0.50
1:O:603:ASN:HD21	1:O:618:ASP:HB2	1.76	0.50
1:K:441:ILE:HG21	1:K:459:LYS:HD3	1.94	0.50
1:K:630:HIS:O	1:K:634:THR:HG22	2.12	0.50
1:E:683:TYR:HD1	1:E:683:TYR:O	1.94	0.50
1:J:457:ILE:HG23	1:J:511:GLU:OE2	2.12	0.50
1:Q:529:HIS:O	1:Q:533:VAL:HG13	2.11	0.50
1:D:426:GLU:HA	1:D:429:THR:HG22	1.94	0.50
1:B:527:GLU:HG3	1:B:567:LEU:HA	1.93	0.50
1:A:464:ILE:HD13	1:A:507:ARG:HG2	1.94	0.49
1:A:551:HIS:O	1:A:555:GLN:HG3	2.12	0.49
1:Q:604:LEU:HD23	1:Q:605:VAL:HG23	1.94	0.49
1:C:677:ASP:O	1:C:681:VAL:HG23	2.12	0.49
1:D:475:VAL:HG22	1:D:489:HIS:HB3	1.94	0.49
1:F:447:TRP:HZ2	1:F:694:GLU:HG2	1.76	0.49
1:A:475:VAL:HG21	1:A:497:THR:HG21	1.93	0.49
1:E:637:ASP:HA	1:E:642:ARG:HH21	1.77	0.49
1:M:601:TYR:O	1:M:605:VAL:HG23	2.13	0.49
1:M:664:ASN:HA	1:M:667:LYS:CE	2.41	0.49
1:A:565:PHE:HA	1:A:568:PHE:CE2	2.46	0.49
1:A:704:LEU:O	1:A:708:MET:HG2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:515:LEU:HD12	1:C:575:HIS:CE1	2.48	0.49
1:D:505:LEU:HD13	1:F:505:LEU:HD23	1.95	0.49
1:G:426:GLU:HA	1:G:429:THR:HG22	1.93	0.49
1:H:491:ILE:O	1:L:643:ASN:HB3	2.13	0.49
1:O:705:ARG:O	1:O:709:GLU:HG2	2.11	0.49
1:F:507:ARG:O	1:F:511:GLU:HG2	2.12	0.49
1:F:527:GLU:HB2	1:F:567:LEU:HD13	1.94	0.49
1:G:554:PHE:CD1	1:G:593:ARG:HD3	2.48	0.49
1:H:421:LEU:HD13	1:K:536:SER:HB2	1.94	0.49
1:Q:426:GLU:HA	1:Q:429:THR:HG22	1.94	0.49
1:Q:603:ASN:HD21	1:Q:618:ASP:CB	2.24	0.49
1:R:661:THR:O	1:R:665:LEU:HG	2.12	0.49
1:A:522:LEU:O	1:A:526:GLU:HG3	2.13	0.49
1:A:545:LEU:HD12	1:D:545:LEU:HD12	1.95	0.49
1:D:709:GLU:HG2	1:M:706:LEU:HD11	1.95	0.49
1:I:454:LYS:NZ	1:I:575:HIS:HB3	2.28	0.49
1:M:634:THR:HG22	1:M:635:MET:HG3	1.95	0.49
1:A:515:LEU:HD13	1:A:571:LEU:HD21	1.95	0.48
1:Q:654:ALA:HB3	1:Q:659:LYS:HE3	1.95	0.48
1:F:568:PHE:O	1:F:572:MET:HG3	2.13	0.48
1:J:536:SER:HB2	1:L:421:LEU:HD13	1.93	0.48
1:L:640:VAL:O	1:L:644:VAL:HG12	2.13	0.48
1:E:555:GLN:HG2	1:E:559:HIS:CE1	2.48	0.48
1:N:688:LYS:HA	1:N:688:LYS:HD3	1.71	0.48
1:L:431:LEU:HD22	1:L:485:LYS:HD2	1.95	0.48
1:O:648:ARG:NH2	1:O:662:ILE:HG13	2.28	0.48
1:Q:628:MET:HE2	1:Q:666:MET:HE1	1.94	0.48
1:B:521:LEU:O	1:B:525:THR:HG22	2.13	0.48
1:C:475:VAL:HG11	1:C:498:ILE:HD11	1.95	0.48
1:F:449:ARG:HB3	1:F:449:ARG:NH1	2.28	0.48
1:G:521:LEU:O	1:G:525:THR:HG22	2.13	0.48
1:N:683:TYR:CE2	1:N:712:LYS:HB2	2.49	0.48
1:J:454:LYS:HZ1	1:J:575:HIS:HB3	1.78	0.48
1:K:457:ILE:HG23	1:K:511:GLU:HG3	1.96	0.48
1:A:421:LEU:HD21	1:A:503:TYR:CD2	2.49	0.48
1:C:643:ASN:HB3	1:E:491:ILE:O	2.14	0.48
1:E:523:VAL:O	1:E:527:GLU:HG2	2.13	0.48
1:K:565:PHE:HA	1:K:568:PHE:CE2	2.49	0.48
1:L:701:ASN:HD22	1:L:704:LEU:HB2	1.79	0.48
1:B:447:TRP:NE1	1:B:701:ASN:HB2	2.29	0.48
1:D:557:ILE:HD12	1:D:596:GLN:HG2	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:441:ILE:O	1:C:572:MET:HE1	2.14	0.48
1:I:642:ARG:HH11	1:I:645:TRP:HD1	1.60	0.48
1:A:482:ARG:HD3	1:A:483:ARG:HH21	1.79	0.47
1:J:641:LEU:HG	1:J:665:LEU:HD23	1.96	0.47
1:Q:648:ARG:HH22	1:Q:662:ILE:HG13	1.78	0.47
1:L:698:GLY:C	1:L:699:ILE:HD13	2.39	0.47
1:E:648:ARG:HH22	1:E:662:ILE:HG13	1.78	0.47
1:H:538:ASP:O	1:H:542:THR:HG23	2.14	0.47
1:E:634:THR:HG22	1:E:635:MET:HG3	1.96	0.47
1:G:441:ILE:HG21	1:G:459:LYS:HD3	1.97	0.47
1:G:657:GLY:O	1:G:661:THR:HG23	2.13	0.47
1:J:565:PHE:HA	1:J:568:PHE:CE2	2.50	0.47
1:K:537:MET:HE2	1:K:541:TRP:NE1	2.29	0.47
1:O:673:LYS:HA	1:O:673:LYS:HD3	1.73	0.47
1:Q:677:ASP:O	1:Q:681:VAL:HG12	2.15	0.47
1:J:422:GLN:O	1:J:426:GLU:HG2	2.14	0.47
1:Q:595:PHE:CE1	1:Q:711:LEU:HD21	2.48	0.47
1:A:530:ASN:HA	1:A:559:HIS:CE1	2.50	0.47
1:H:447:TRP:CZ3	1:H:693:LEU:HD23	2.50	0.47
1:K:527:GLU:OE1	1:K:566:ARG:HB2	2.15	0.47
1:L:472:LEU:O	1:L:476:GLU:HG3	2.15	0.47
1:O:607:ALA:O	1:O:608:GLU:HB3	2.14	0.47
1:A:545:LEU:HD21	1:A:649:ARG:HG3	1.95	0.47
1:J:531:LEU:HD21	1:J:564:LEU:N	2.30	0.47
1:N:545:LEU:HD12	1:O:545:LEU:HD12	1.97	0.47
1:F:444:LEU:HD22	1:F:448:PHE:HE2	1.79	0.47
1:H:667:LYS:HD2	1:H:667:LYS:O	2.15	0.47
1:M:598:ARG:NH2	1:M:602:GLN:HE22	2.13	0.47
1:R:677:ASP:O	1:R:681:VAL:HG12	2.15	0.47
1:C:450:VAL:HG21	1:C:572:MET:HG2	1.97	0.46
1:M:431:LEU:HD22	1:M:485:LYS:HD3	1.97	0.46
1:I:589:ASN:O	1:I:593:ARG:HG2	2.15	0.46
1:R:545:LEU:HD21	1:R:649:ARG:HG2	1.98	0.46
1:B:447:TRP:HE1	1:B:701:ASN:HB2	1.80	0.46
1:C:428:ILE:HA	1:C:431:LEU:HG	1.97	0.46
1:D:639:LEU:HD12	1:D:639:LEU:H	1.79	0.46
1:F:667:LYS:HB3	1:F:667:LYS:HE2	1.65	0.46
1:C:428:ILE:HD13	1:C:471:MET:SD	2.55	0.46
1:F:704:LEU:O	1:F:708:MET:HG2	2.15	0.46
1:L:648:ARG:HD3	1:L:654:ALA:HB2	1.97	0.46
1:O:704:LEU:O	1:O:708:MET:HG2	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:P:634:THR:HG22	1:P:635:MET:HG3	1.97	0.46
1:G:657:GLY:HA3	1:L:486:PRO:HG3	1.97	0.46
1:M:705:ARG:O	1:M:709:GLU:HG2	2.15	0.46
1:E:426:GLU:HA	1:E:429:THR:HG22	1.96	0.46
1:I:524:PHE:HE1	1:I:571:LEU:HD21	1.80	0.46
1:Q:705:ARG:HA	1:Q:708:MET:HG2	1.98	0.46
1:J:426:GLU:HA	1:J:429:THR:HG22	1.97	0.46
1:K:557:ILE:O	1:K:558:GLU:C	2.58	0.46
1:O:528:LEU:HD12	1:O:532:TYR:HE1	1.80	0.46
1:F:688:LYS:HE3	1:F:688:LYS:HB3	1.62	0.46
1:H:657:GLY:O	1:H:661:THR:HG23	2.16	0.46
1:H:527:GLU:HB2	1:H:567:LEU:HD13	1.98	0.46
1:P:677:ASP:O	1:P:681:VAL:HG12	2.16	0.46
1:Q:512:LEU:HD11	1:Q:520:SER:HB3	1.97	0.46
1:G:637:ASP:HA	1:G:642:ARG:HH21	1.80	0.45
1:L:437:ARG:HE	1:L:564:LEU:HD23	1.81	0.45
1:L:557:ILE:HD12	1:L:596:GLN:HG2	1.98	0.45
1:M:519:ARG:O	1:M:523:VAL:HG13	2.16	0.45
1:O:683:TYR:CE2	1:O:712:LYS:HB2	2.51	0.45
1:P:436:LEU:HD22	1:P:595:PHE:HZ	1.80	0.45
1:B:582:VAL:HB	1:B:697:PHE:HE1	1.81	0.45
1:L:441:ILE:HG21	1:L:459:LYS:HD3	1.98	0.45
1:O:648:ARG:HH22	1:O:662:ILE:HG13	1.80	0.45
1:E:608:GLU:O	1:E:608:GLU:HG3	2.16	0.45
1:P:666:MET:HG2	1:P:671:THR:OG1	2.16	0.45
1:B:630:HIS:HD2	1:B:633:GLN:HE21	1.64	0.45
1:C:554:PHE:CD1	1:C:593:ARG:HD2	2.50	0.45
1:I:545:LEU:HD21	1:I:649:ARG:HG2	1.99	0.45
1:M:677:ASP:O	1:M:681:VAL:HG12	2.16	0.45
1:A:534:GLY:C	1:A:560:LYS:HD3	2.42	0.45
1:B:558:GLU:HG3	1:B:593:ARG:HH11	1.81	0.45
1:B:689:SER:O	1:B:692:GLU:HG3	2.16	0.45
1:O:661:THR:O	1:O:665:LEU:HD13	2.16	0.45
1:A:602:GLN:HA	1:A:605:VAL:HG22	1.98	0.45
1:I:554:PHE:HB3	1:I:593:ARG:HH22	1.80	0.45
1:J:642:ARG:HH11	1:J:645:TRP:HD1	1.64	0.45
1:M:648:ARG:HG3	1:M:654:ALA:HB2	1.99	0.45
1:N:634:THR:HG22	1:N:635:MET:HG3	1.98	0.45
1:F:448:PHE:HZ	1:F:584:LEU:HD11	1.81	0.45
1:I:449:ARG:HG3	1:I:577:THR:HB	1.98	0.45
1:E:683:TYR:CE2	1:E:712:LYS:HB2	2.44	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:491:ILE:HG12	1:H:644:VAL:HG22	1.99	0.45
1:I:436:LEU:HD11	1:I:595:PHE:CE2	2.52	0.45
1:M:608:GLU:HG3	1:M:608:GLU:O	2.16	0.45
1:B:601:TYR:CG	1:B:679:LEU:HD11	2.52	0.45
1:G:486:PRO:HG3	1:H:657:GLY:HA3	1.99	0.45
1:G:545:LEU:HD11	1:G:649:ARG:HG2	1.99	0.45
1:J:421:LEU:HD13	1:L:536:SER:OG	2.17	0.45
1:J:545:LEU:HD21	1:J:649:ARG:HG2	1.98	0.45
1:J:634:THR:HG22	1:J:635:MET:HG3	1.99	0.45
1:O:486:PRO:HG3	1:P:657:GLY:HA3	1.99	0.45
1:I:522:LEU:O	1:I:526:GLU:HG3	2.17	0.44
1:K:422:GLN:O	1:K:426:GLU:HG2	2.17	0.44
1:R:597:THR:HG22	1:R:679:LEU:HD22	1.98	0.44
1:E:708:MET:HA	1:E:708:MET:HE3	1.98	0.44
1:G:643:ASN:HB3	1:L:491:ILE:O	2.17	0.44
1:H:472:LEU:O	1:H:476:GLU:HG3	2.17	0.44
1:I:537:MET:HA	1:I:537:MET:HE3	1.98	0.44
1:J:522:LEU:O	1:J:526:GLU:HG2	2.17	0.44
1:A:645:TRP:HE3	1:A:648:ARG:HE	1.64	0.44
1:B:630:HIS:ND1	1:B:671:THR:HG22	2.33	0.44
1:C:554:PHE:HB3	1:C:593:ARG:HH11	1.81	0.44
1:F:690:VAL:O	1:F:694:GLU:HG3	2.17	0.44
1:A:557:ILE:HD12	1:A:596:GLN:HG3	1.99	0.44
1:E:545:LEU:HD11	1:E:649:ARG:HG2	1.99	0.44
1:R:472:LEU:HD23	1:R:472:LEU:HA	1.75	0.44
1:A:649:ARG:HD3	1:A:649:ARG:C	2.43	0.44
1:K:553:TYR:O	1:K:557:ILE:HG12	2.17	0.44
1:I:537:MET:HE2	1:I:541:TRP:NE1	2.31	0.44
1:J:457:ILE:HG21	1:J:515:LEU:HG	1.99	0.44
1:J:515:LEU:HB3	1:J:575:HIS:HE1	1.82	0.44
1:L:502:ASN:OD1	1:L:502:ASN:C	2.61	0.44
1:N:448:PHE:CZ	1:N:584:LEU:HD11	2.52	0.44
1:Q:607:ALA:O	1:Q:608:GLU:HB3	2.18	0.44
1:R:494:LEU:HD23	1:R:494:LEU:O	2.18	0.44
1:A:447:TRP:HE1	1:A:701:ASN:HB2	1.83	0.44
1:B:638:ASN:ND2	1:B:665:LEU:HD11	2.32	0.44
1:G:491:ILE:O	1:H:643:ASN:HB3	2.17	0.44
1:G:663:LEU:HD23	1:G:663:LEU:HA	1.88	0.44
1:O:472:LEU:HA	1:O:472:LEU:HD23	1.69	0.44
1:P:519:ARG:O	1:P:523:VAL:HG13	2.17	0.44
1:D:702:PHE:CD1	1:D:705:ARG:HD2	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:521:LEU:O	1:F:525:THR:HG22	2.18	0.44
1:J:646:THR:O	1:J:650:VAL:HG12	2.18	0.44
1:A:528:LEU:HD23	1:A:531:LEU:HD13	2.00	0.44
1:A:638:ASN:HD21	1:A:665:LEU:HD21	1.83	0.44
1:E:527:GLU:OE2	1:E:566:ARG:HB3	2.18	0.44
1:F:454:LYS:HD3	1:F:575:HIS:HB3	2.00	0.44
1:G:648:ARG:HG3	1:G:654:ALA:HB2	1.98	0.44
1:H:557:ILE:HD12	1:H:596:GLN:HG2	2.00	0.44
1:P:683:TYR:CE2	1:P:712:LYS:HB2	2.52	0.44
1:B:630:HIS:HA	1:B:633:GLN:HG2	1.98	0.43
1:D:527:GLU:HA	1:D:527:GLU:OE2	2.18	0.43
1:E:554:PHE:CD1	1:E:593:ARG:HD3	2.53	0.43
1:I:677:ASP:O	1:I:681:VAL:HG13	2.18	0.43
1:I:704:LEU:O	1:I:707:ILE:HG22	2.18	0.43
1:J:527:GLU:OE1	1:J:566:ARG:HB2	2.18	0.43
1:N:705:ARG:HA	1:N:708:MET:HE2	2.00	0.43
1:P:613:LYS:H	1:P:613:LYS:HG2	1.70	0.43
1:R:426:GLU:HA	1:R:429:THR:HG22	2.00	0.43
1:A:434:LYS:HB2	1:A:434:LYS:HE2	1.82	0.43
1:K:537:MET:HE3	1:K:537:MET:HA	1.99	0.43
1:K:690:VAL:O	1:K:694:GLU:HG2	2.18	0.43
1:B:477:ASP:OD1	1:B:477:ASP:C	2.61	0.43
1:B:527:GLU:HB2	1:B:567:LEU:HD12	2.00	0.43
1:D:710:LEU:HD13	1:D:710:LEU:HA	1.77	0.43
1:E:655:THR:HG22	1:E:657:GLY:H	1.83	0.43
1:F:523:VAL:HG12	1:F:570:ARG:NH2	2.34	0.43
1:J:641:LEU:HD23	1:J:641:LEU:HA	1.90	0.43
1:Q:477:ASP:OD1	1:Q:477:ASP:C	2.61	0.43
1:Q:640:VAL:O	1:Q:644:VAL:HG12	2.18	0.43
1:G:470:LEU:HD23	1:G:470:LEU:HA	1.89	0.43
1:G:529:HIS:O	1:G:533:VAL:HG23	2.18	0.43
1:K:591:LEU:HD12	1:K:591:LEU:HA	1.87	0.43
1:N:438:GLU:OE2	1:N:463:THR:HG22	2.19	0.43
1:C:598:ARG:O	1:C:602:GLN:HG2	2.18	0.43
1:E:555:GLN:HG2	1:E:559:HIS:HE1	1.82	0.43
1:G:631:LEU:CD1	1:G:666:MET:HG2	2.48	0.43
1:B:470:LEU:HD23	1:B:470:LEU:HA	1.82	0.43
1:B:535:GLN:HG2	1:B:535:GLN:H	1.68	0.43
1:B:582:VAL:HB	1:B:697:PHE:CE1	2.53	0.43
1:E:447:TRP:CZ2	1:E:701:ASN:HB2	2.53	0.43
1:Q:437:ARG:HE	1:Q:564:LEU:HD23	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:448:PHE:C	1:F:449:ARG:HG2	2.43	0.43
1:F:554:PHE:HB3	1:F:593:ARG:NH2	2.34	0.43
1:I:656:HIS:O	1:I:660:GLN:HG2	2.18	0.43
1:L:686:VAL:O	1:L:690:VAL:HG23	2.17	0.43
1:O:477:ASP:OD1	1:O:477:ASP:C	2.62	0.43
1:D:655:THR:HG22	1:D:657:GLY:H	1.84	0.43
1:E:574:VAL:HG12	1:E:575:HIS:HD2	1.84	0.43
1:I:642:ARG:HH11	1:I:645:TRP:CD1	2.36	0.43
1:K:531:LEU:HD21	1:K:564:LEU:N	2.33	0.43
1:N:635:MET:HE1	1:N:665:LEU:HD23	2.01	0.43
1:P:477:ASP:C	1:P:477:ASP:OD1	2.62	0.43
1:R:438:GLU:OE2	1:R:463:THR:HG22	2.19	0.43
1:H:536:SER:OG	1:K:421:LEU:HD13	2.19	0.43
1:I:451:PRO:HD2	1:I:454:LYS:HD3	2.01	0.43
1:K:434:LYS:HB2	1:K:434:LYS:HE2	1.85	0.43
1:M:632:MET:HG2	1:M:641:LEU:HD21	2.01	0.43
1:Q:604:LEU:HD11	1:Q:672:LEU:HD22	2.00	0.43
1:R:477:ASP:OD1	1:R:477:ASP:C	2.62	0.43
1:A:608:GLU:HG3	1:A:608:GLU:O	2.18	0.43
1:B:435:GLY:O	1:B:438:GLU:HG2	2.19	0.43
1:E:448:PHE:HZ	1:E:584:LEU:HD11	1.83	0.43
1:H:582:VAL:HG11	1:H:697:PHE:CE2	2.54	0.43
1:I:707:ILE:HD12	1:I:707:ILE:HA	1.88	0.43
1:A:447:TRP:NE1	1:A:701:ASN:HB2	2.33	0.42
1:A:667:LYS:HB3	1:A:667:LYS:HE2	1.70	0.42
1:B:421:LEU:HD21	1:B:503:TYR:CG	2.54	0.42
1:C:626:LEU:HB3	1:C:627:PRO:HD3	2.01	0.42
1:D:554:PHE:CD1	1:D:593:ARG:HD2	2.54	0.42
1:J:454:LYS:HB3	1:J:454:LYS:HE2	1.82	0.42
1:C:431:LEU:HD22	1:C:485:LYS:HD2	2.00	0.42
1:D:491:ILE:O	1:E:643:ASN:HB3	2.19	0.42
1:H:515:LEU:HB3	1:H:575:HIS:CE1	2.54	0.42
1:I:696:LYS:HB2	1:I:696:LYS:HE2	1.81	0.42
1:K:607:ALA:O	1:K:608:GLU:HB3	2.18	0.42
1:M:711:LEU:HD12	1:M:711:LEU:HA	1.86	0.42
1:Q:560:LYS:HB2	1:Q:560:LYS:HE2	1.79	0.42
1:C:545:LEU:HD11	1:C:649:ARG:HG2	2.00	0.42
1:H:708:MET:HE3	1:H:708:MET:HA	2.01	0.42
1:K:570:ARG:HG3	1:K:570:ARG:HH11	1.84	0.42
1:K:711:LEU:HD12	1:K:711:LEU:HA	1.88	0.42
1:L:672:LEU:HD23	1:L:672:LEU:HA	1.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:437:ARG:HD3	1:N:462:THR:CG2	2.50	0.42
1:Q:608:GLU:O	1:Q:608:GLU:HG3	2.17	0.42
1:C:448:PHE:HZ	1:C:584:LEU:HD11	1.84	0.42
1:M:448:PHE:HZ	1:M:584:LEU:HD11	1.84	0.42
1:R:663:LEU:O	1:R:667:LYS:HG3	2.18	0.42
1:J:562:GLY:O	1:J:566:ARG:HG3	2.20	0.42
1:B:444:LEU:HB2	1:B:572:MET:HE1	2.01	0.42
1:D:431:LEU:HD22	1:D:485:LYS:HD3	2.01	0.42
1:D:635:MET:HE1	1:D:665:LEU:HB3	2.01	0.42
1:I:608:GLU:O	1:I:608:GLU:HG3	2.20	0.42
1:Q:528:LEU:O	1:Q:532:TYR:HD1	2.03	0.42
1:A:416:LEU:HD12	1:C:555:GLN:HE22	1.84	0.42
1:A:635:MET:O	1:A:635:MET:HG2	2.18	0.42
1:M:438:GLU:OE2	1:M:463:THR:HG22	2.20	0.42
1:M:540:TYR:HB2	1:O:420:VAL:HG11	2.01	0.42
1:Q:570:ARG:O	1:Q:574:VAL:HG23	2.20	0.42
1:C:712:LYS:HG3	1:C:713:THR:HG23	2.02	0.42
1:G:472:LEU:O	1:G:476:GLU:HG3	2.19	0.42
1:G:528:LEU:HD23	1:G:528:LEU:HA	1.86	0.42
1:G:550:MET:HE3	1:G:550:MET:HA	2.01	0.42
1:G:708:MET:HE3	1:G:708:MET:HA	2.01	0.42
1:L:500:SER:O	1:L:504:GLN:HG2	2.20	0.42
1:A:458:ILE:HG12	1:A:571:LEU:HD22	2.02	0.42
1:A:554:PHE:HB3	1:A:593:ARG:NH1	2.35	0.42
1:B:505:LEU:HD23	1:E:505:LEU:HD22	2.02	0.42
1:B:554:PHE:HB3	1:B:593:ARG:NH1	2.35	0.42
1:F:500:SER:O	1:F:504:GLN:HG2	2.19	0.42
1:I:648:ARG:HE	1:I:648:ARG:C	2.28	0.42
1:K:683:TYR:CE2	1:K:712:LYS:HB2	2.55	0.42
1:N:694:GLU:OE2	1:N:700:GLU:HA	2.20	0.42
1:P:679:LEU:HD23	1:P:679:LEU:HA	1.88	0.42
1:Q:618:ASP:OD1	1:Q:623:LYS:HB2	2.20	0.42
1:C:554:PHE:HA	1:C:557:ILE:CG2	2.35	0.42
1:F:454:LYS:O	1:F:458:ILE:HG13	2.20	0.42
1:I:602:GLN:HA	1:I:605:VAL:HG12	2.01	0.42
1:J:448:PHE:HZ	1:J:584:LEU:HD21	1.85	0.42
1:Q:607:ALA:C	1:Q:609:TYR:H	2.28	0.42
1:C:655:THR:HB	1:C:658:GLN:HG3	2.02	0.41
1:C:665:LEU:HA	1:C:665:LEU:HD23	1.76	0.41
1:E:515:LEU:HB3	1:E:575:HIS:CE1	2.42	0.41
1:G:705:ARG:H	1:G:705:ARG:HG2	1.72	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:626:LEU:HB3	1:J:627:PRO:HD3	2.01	0.41
1:J:710:LEU:HD12	1:J:710:LEU:HA	1.88	0.41
1:K:477:ASP:C	1:K:477:ASP:OD1	2.63	0.41
1:M:477:ASP:OD1	1:M:477:ASP:C	2.62	0.41
1:A:454:LYS:O	1:A:458:ILE:HG13	2.20	0.41
1:A:475:VAL:HG22	1:A:489:HIS:HB3	2.01	0.41
1:A:541:TRP:HZ2	1:C:416:LEU:HD11	1.84	0.41
1:D:706:LEU:HD12	1:D:706:LEU:HA	1.86	0.41
1:E:503:TYR:CE2	1:E:507:ARG:HG3	2.55	0.41
1:G:427:TYR:CZ	1:G:491:ILE:HD12	2.55	0.41
1:G:436:LEU:HD11	1:G:711:LEU:HD11	2.02	0.41
1:H:506:VAL:O	1:H:510:GLN:HG3	2.21	0.41
1:I:646:THR:O	1:I:650:VAL:HG12	2.20	0.41
1:J:587:PHE:HE2	1:J:690:VAL:HG22	1.85	0.41
1:K:649:ARG:NH2	1:L:650:VAL:HG21	2.34	0.41
1:N:480:GLU:HG2	1:N:481:LEU:HD12	2.02	0.41
1:P:431:LEU:CD2	1:P:485:LYS:HD2	2.43	0.41
1:B:640:VAL:O	1:B:644:VAL:HG23	2.20	0.41
1:C:500:SER:O	1:C:504:GLN:HG2	2.19	0.41
1:C:640:VAL:HG13	1:C:641:LEU:H	1.85	0.41
1:E:565:PHE:HA	1:E:568:PHE:CE2	2.56	0.41
1:G:608:GLU:O	1:G:608:GLU:HG3	2.20	0.41
1:N:554:PHE:CD1	1:N:593:ARG:HG2	2.56	0.41
1:R:462:THR:HG23	1:R:564:LEU:HD21	2.02	0.41
1:H:447:TRP:HB3	1:H:697:PHE:CZ	2.56	0.41
1:N:494:LEU:HD23	1:N:494:LEU:O	2.21	0.41
1:N:522:LEU:HD23	1:N:522:LEU:HA	1.89	0.41
1:O:426:GLU:HA	1:O:429:THR:HG22	2.02	0.41
1:O:705:ARG:HD3	1:O:708:MET:HE2	2.02	0.41
1:A:642:ARG:HH11	1:A:645:TRP:HD1	1.68	0.41
1:F:557:ILE:HD13	1:F:557:ILE:HA	1.88	0.41
1:J:535:GLN:O	1:J:539:LEU:HD23	2.21	0.41
1:J:566:ARG:HG2	1:J:588:THR:OG1	2.20	0.41
1:K:626:LEU:HB3	1:K:627:PRO:HD3	2.02	0.41
1:L:512:LEU:HD12	1:L:515:LEU:HD12	2.03	0.41
1:L:582:VAL:HG23	1:L:696:LYS:NZ	2.35	0.41
1:L:665:LEU:HD12	1:L:665:LEU:HA	1.87	0.41
1:N:628:MET:O	1:N:632:MET:HG3	2.21	0.41
1:O:583:ASP:OD1	1:O:585:THR:HG22	2.20	0.41
1:D:491:ILE:HD12	1:E:644:VAL:HG22	2.01	0.41
1:D:665:LEU:HA	1:D:668:GLU:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:693:LEU:HD23	1:F:693:LEU:HA	1.86	0.41
1:G:481:LEU:HD11	1:G:484:GLY:O	2.21	0.41
1:J:428:ILE:HG21	1:J:471:MET:HE2	2.02	0.41
1:J:434:LYS:HB2	1:J:434:LYS:HE2	1.84	0.41
1:Q:683:TYR:CE2	1:Q:712:LYS:HB2	2.55	0.41
1:D:521:LEU:HD23	1:F:513:GLN:NE2	2.36	0.41
1:E:575:HIS:CD2	1:E:575:HIS:N	2.88	0.41
1:H:447:TRP:HZ2	1:H:694:GLU:HG2	1.85	0.41
1:I:457:ILE:HG23	1:I:511:GLU:OE2	2.21	0.41
1:M:607:ALA:O	1:M:608:GLU:HB3	2.20	0.41
1:A:568:PHE:O	1:A:572:MET:HG3	2.20	0.41
1:B:596:GLN:HE21	1:B:596:GLN:HA	1.86	0.41
1:C:447:TRP:CZ3	1:C:693:LEU:HD23	2.56	0.41
1:E:665:LEU:HD23	1:E:665:LEU:HA	1.82	0.41
1:H:500:SER:O	1:H:504:GLN:HG2	2.21	0.41
1:K:515:LEU:HB3	1:K:575:HIS:NE2	2.36	0.41
1:O:473:ASP:OD1	1:O:473:ASP:C	2.64	0.41
1:O:557:ILE:HD13	1:O:557:ILE:HA	1.82	0.41
1:O:648:ARG:HG3	1:O:654:ALA:HB2	2.02	0.41
1:P:422:GLN:HE22	1:P:507:ARG:NH1	2.17	0.41
1:Q:679:LEU:HD23	1:Q:679:LEU:HA	1.94	0.41
1:A:601:TYR:O	1:A:605:VAL:HG13	2.21	0.41
1:F:522:LEU:O	1:F:526:GLU:HG3	2.21	0.41
1:J:679:LEU:HD23	1:J:679:LEU:HA	1.89	0.41
1:M:416:LEU:HB3	1:M:417:ASP:H	1.62	0.41
1:M:485:LYS:HE2	1:M:485:LYS:HB3	1.72	0.41
1:M:486:PRO:HG3	1:N:657:GLY:HA3	2.03	0.41
1:O:528:LEU:O	1:O:532:TYR:HD1	2.04	0.41
1:O:607:ALA:C	1:O:609:TYR:H	2.28	0.41
1:B:688:LYS:HE3	1:B:688:LYS:HB3	1.82	0.40
1:C:455:LEU:O	1:C:459:LYS:HG3	2.21	0.40
1:E:523:VAL:HG12	1:E:570:ARG:NH2	2.36	0.40
1:H:662:ILE:HD13	1:H:662:ILE:HA	1.93	0.40
1:J:596:GLN:OE1	1:J:596:GLN:HA	2.22	0.40
1:K:437:ARG:HA	1:K:437:ARG:HD3	1.92	0.40
1:L:527:GLU:HB2	1:L:567:LEU:HD13	2.03	0.40
1:E:522:LEU:HD23	1:E:522:LEU:HA	1.95	0.40
1:H:665:LEU:HD12	1:H:665:LEU:HA	1.82	0.40
1:I:596:GLN:OE1	1:I:596:GLN:HA	2.20	0.40
1:O:663:LEU:O	1:O:667:LYS:HG3	2.21	0.40
1:Q:662:ILE:HD13	1:Q:662:ILE:HA	1.97	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:486:PRO:HG3	1:F:657:GLY:HA3	2.03	0.40
1:E:448:PHE:CZ	1:E:584:LEU:HD11	2.57	0.40
1:E:550:MET:HE1	1:E:626:LEU:HD11	2.03	0.40
1:H:522:LEU:HD23	1:H:522:LEU:HA	1.92	0.40
1:M:426:GLU:HA	1:M:429:THR:HG22	2.02	0.40
1:O:531:LEU:HG	1:O:535:GLN:OE1	2.21	0.40
1:Q:673:LYS:HA	1:Q:673:LYS:HD3	1.95	0.40
1:B:434:LYS:HB2	1:B:434:LYS:HE2	1.86	0.40
1:D:557:ILE:HD13	1:D:557:ILE:HA	1.86	0.40
1:F:471:MET:SD	1:F:497:THR:HG23	2.62	0.40
1:G:672:LEU:O	1:G:676:GLN:HG3	2.22	0.40
1:L:625:SER:HB2	1:L:627:PRO:HD2	2.03	0.40
1:R:490:ASN:C	1:R:491:ILE:HD13	2.46	0.40
1:J:530:ASN:HD22	1:J:566:ARG:HH21	1.69	0.40
1:K:431:LEU:HD22	1:K:485:LYS:HG3	2.04	0.40
1:M:607:ALA:C	1:M:609:TYR:H	2.29	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	294/714 (41%)	287 (98%)	7 (2%)	0	100	100
1	B	294/714 (41%)	289 (98%)	5 (2%)	0	100	100
1	C	294/714 (41%)	287 (98%)	7 (2%)	0	100	100
1	D	294/714 (41%)	288 (98%)	6 (2%)	0	100	100
1	E	294/714 (41%)	290 (99%)	4 (1%)	0	100	100
1	F	294/714 (41%)	287 (98%)	7 (2%)	0	100	100
1	G	294/714 (41%)	287 (98%)	7 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	H	294/714 (41%)	287 (98%)	7 (2%)	0	100	100
1	I	294/714 (41%)	292 (99%)	2 (1%)	0	100	100
1	J	294/714 (41%)	289 (98%)	5 (2%)	0	100	100
1	K	294/714 (41%)	287 (98%)	7 (2%)	0	100	100
1	L	294/714 (41%)	287 (98%)	7 (2%)	0	100	100
1	M	294/714 (41%)	286 (97%)	8 (3%)	0	100	100
1	N	294/714 (41%)	288 (98%)	6 (2%)	0	100	100
1	O	294/714 (41%)	291 (99%)	3 (1%)	0	100	100
1	P	294/714 (41%)	287 (98%)	7 (2%)	0	100	100
1	Q	294/714 (41%)	288 (98%)	6 (2%)	0	100	100
1	R	294/714 (41%)	289 (98%)	5 (2%)	0	100	100
All	All	5292/12852 (41%)	5186 (98%)	106 (2%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	264/616 (43%)	264 (100%)	0	100	100
1	B	264/616 (43%)	264 (100%)	0	100	100
1	C	264/616 (43%)	262 (99%)	2 (1%)	79	90
1	D	264/616 (43%)	262 (99%)	2 (1%)	79	90
1	E	264/616 (43%)	263 (100%)	1 (0%)	89	94
1	F	264/616 (43%)	262 (99%)	2 (1%)	79	90
1	G	264/616 (43%)	263 (100%)	1 (0%)	89	94
1	H	264/616 (43%)	261 (99%)	3 (1%)	70	86
1	I	264/616 (43%)	262 (99%)	2 (1%)	79	90
1	J	264/616 (43%)	264 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	K	264/616 (43%)	263 (100%)	1 (0%)	89 94
1	L	264/616 (43%)	263 (100%)	1 (0%)	89 94
1	M	264/616 (43%)	263 (100%)	1 (0%)	89 94
1	N	264/616 (43%)	262 (99%)	2 (1%)	79 90
1	O	264/616 (43%)	263 (100%)	1 (0%)	89 94
1	P	264/616 (43%)	262 (99%)	2 (1%)	79 90
1	Q	264/616 (43%)	263 (100%)	1 (0%)	89 94
1	R	264/616 (43%)	262 (99%)	2 (1%)	79 90
All	All	4752/11088 (43%)	4728 (100%)	24 (0%)	85 93

All (24) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	C	537	MET
1	C	640	VAL
1	D	635	MET
1	D	710	LEU
1	E	510	GLN
1	F	433	SER
1	F	567	LEU
1	G	465	LEU
1	H	605	VAL
1	H	665	LEU
1	H	706	LEU
1	I	421	LEU
1	I	710	LEU
1	K	666	MET
1	L	631	LEU
1	M	577	THR
1	N	567	LEU
1	N	582	VAL
1	O	689	SER
1	P	689	SER
1	P	709	GLU
1	Q	604	LEU
1	R	564	LEU
1	R	577	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (64)

such sidechains are listed below:

Mol	Chain	Res	Type
1	A	504	GLN
1	A	602	GLN
1	A	656	HIS
1	B	633	GLN
1	B	656	HIS
1	C	555	GLN
1	C	559	HIS
1	C	575	HIS
1	C	660	GLN
1	D	445	ASN
1	D	466	HIS
1	D	499	ASN
1	D	559	HIS
1	D	656	HIS
1	E	513	GLN
1	E	575	HIS
1	E	656	HIS
1	F	490	ASN
1	F	535	GLN
1	F	544	ASN
1	F	656	HIS
1	F	660	GLN
1	G	499	ASN
1	G	633	GLN
1	H	489	HIS
1	H	490	ASN
1	H	676	GLN
1	I	551	HIS
1	I	643	ASN
1	I	660	GLN
1	J	496	GLN
1	J	530	ASN
1	J	535	GLN
1	J	544	ASN
1	J	555	GLN
1	J	638	ASN
1	K	490	ASN
1	K	496	GLN
1	K	643	ASN
1	L	489	HIS
1	L	490	ASN
1	L	544	ASN

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Mol	Chain	Res	Type
1	L	575	HIS
1	L	676	GLN
1	M	602	GLN
1	M	603	ASN
1	M	656	HIS
1	M	664	ASN
1	N	603	ASN
1	N	656	HIS
1	O	575	HIS
1	O	603	ASN
1	P	466	HIS
1	P	535	GLN
1	P	575	HIS
1	P	633	GLN
1	Q	559	HIS
1	Q	603	ASN
1	Q	660	GLN
1	R	513	GLN
1	R	603	ASN
1	R	660	GLN
1	R	664	ASN
1	R	703	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.

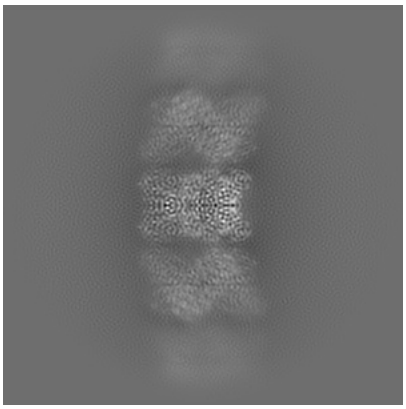
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-66380. These allow visual inspection of the internal detail of the map and identification of artifacts.

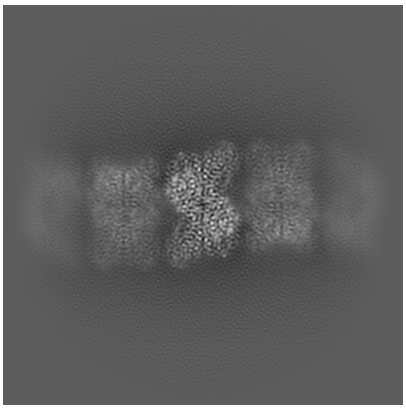
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

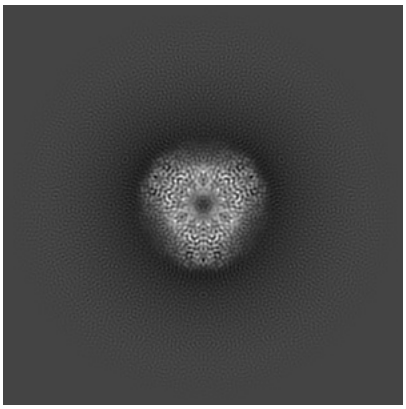
6.1.1 Primary map



X

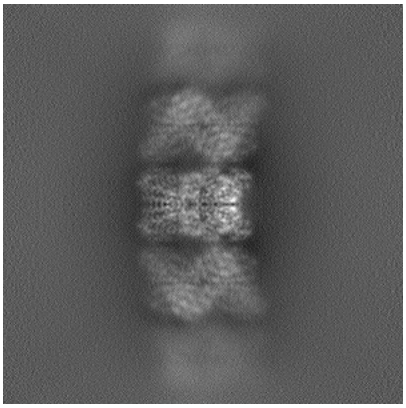


Y

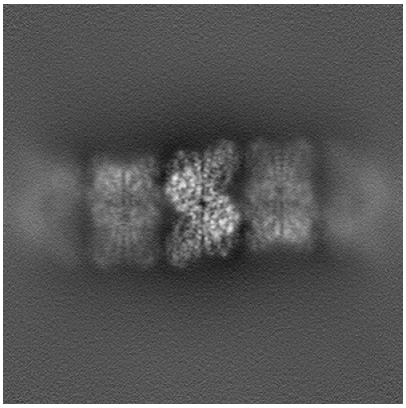


Z

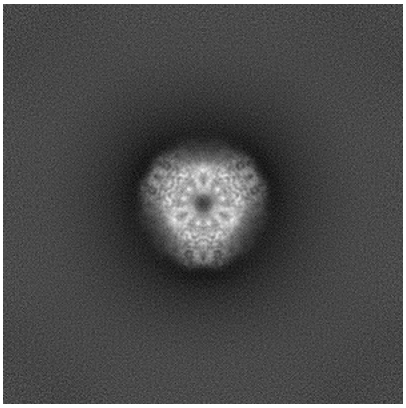
6.1.2 Raw map



X



Y

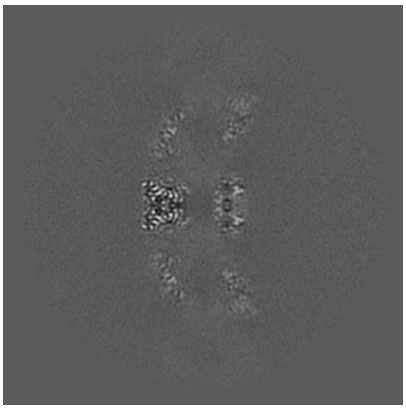


Z

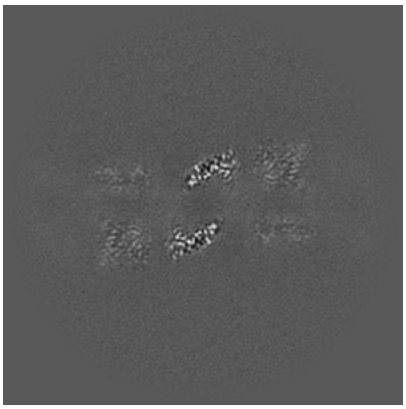
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

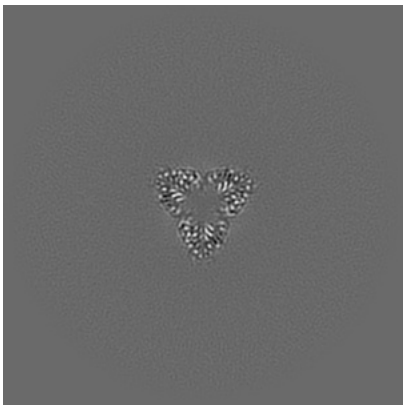
6.2.1 Primary map



X Index: 250

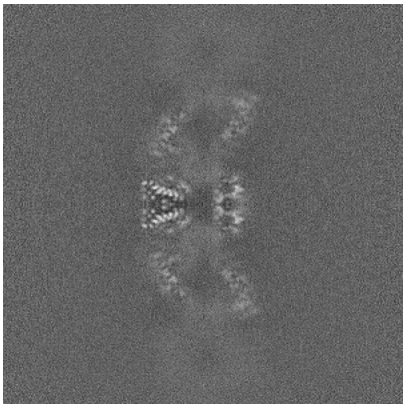


Y Index: 250

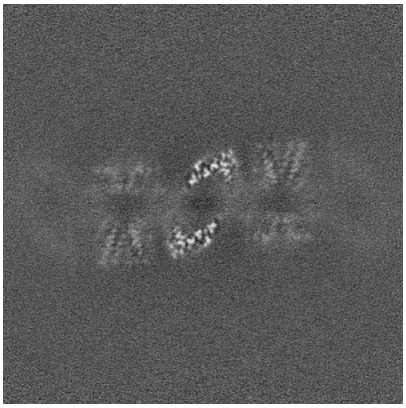


Z Index: 250

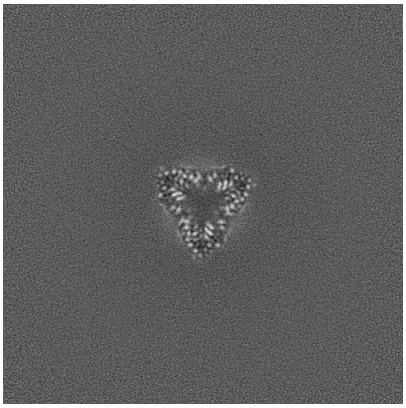
6.2.2 Raw map



X Index: 250



Y Index: 250

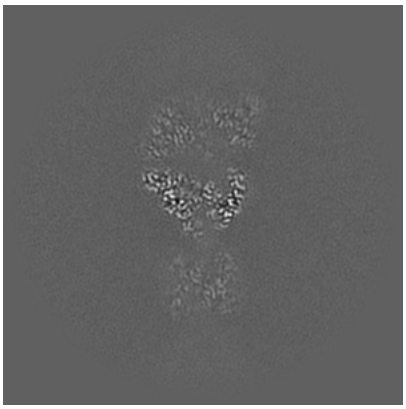


Z Index: 250

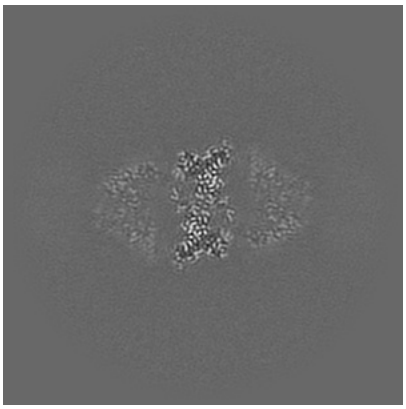
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

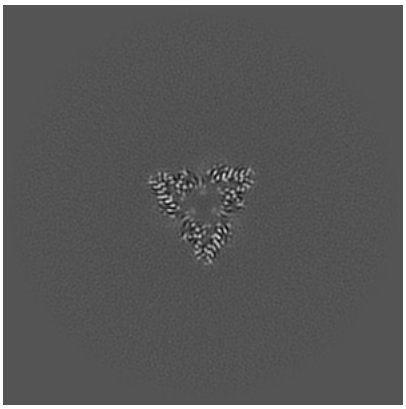
6.3.1 Primary map



X Index: 226

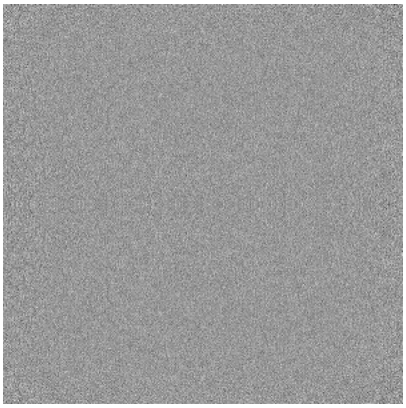


Y Index: 279

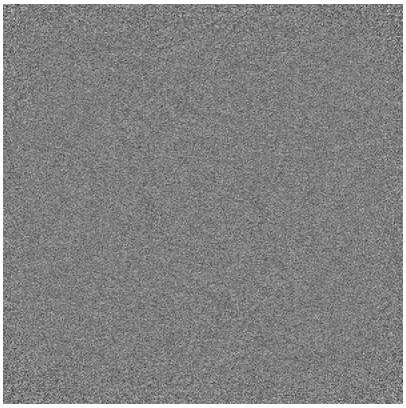


Z Index: 242

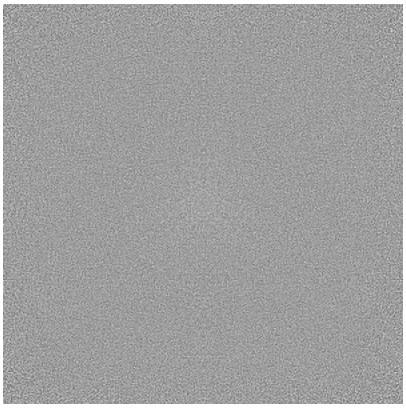
6.3.2 Raw map



X Index: 0



Y Index: 0

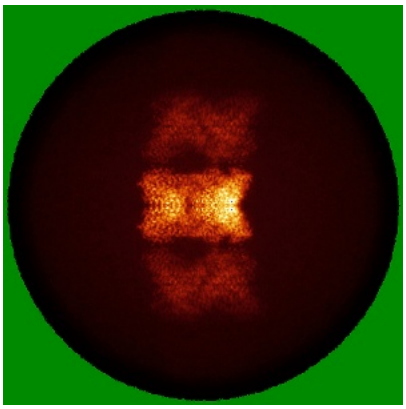


Z Index: 499

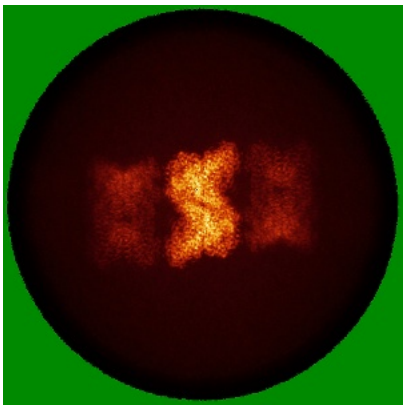
The images above show the largest variance slices of the map in three orthogonal directions.

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

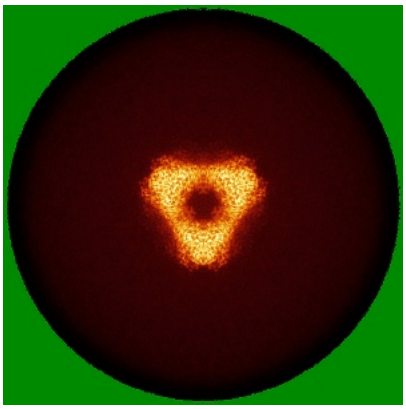
6.4.1 Primary map



X

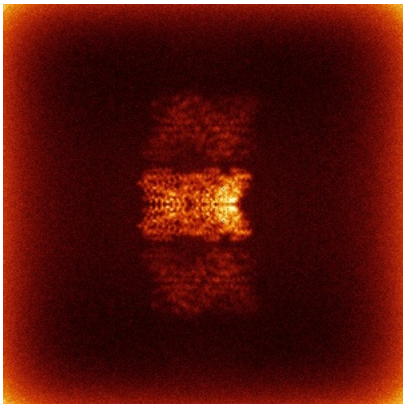


Y

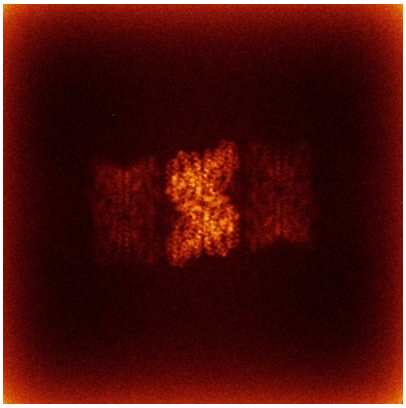


Z

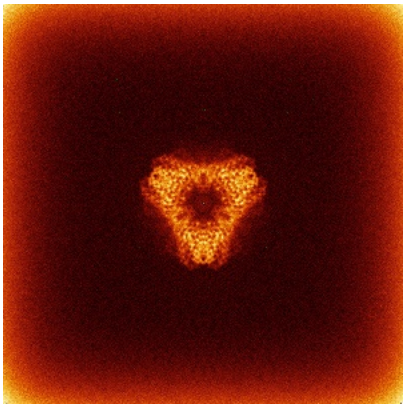
6.4.2 Raw map



X



Y

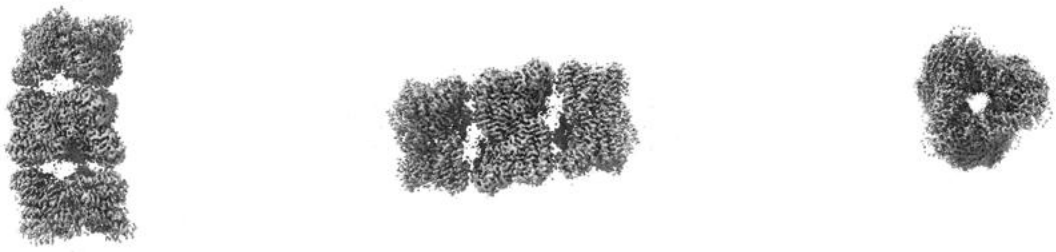


Z

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)

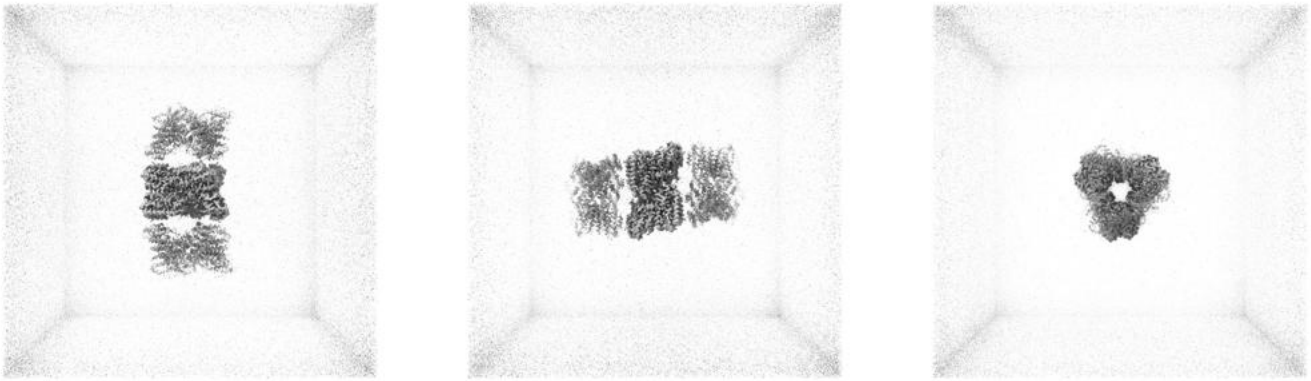
6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.08. 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.

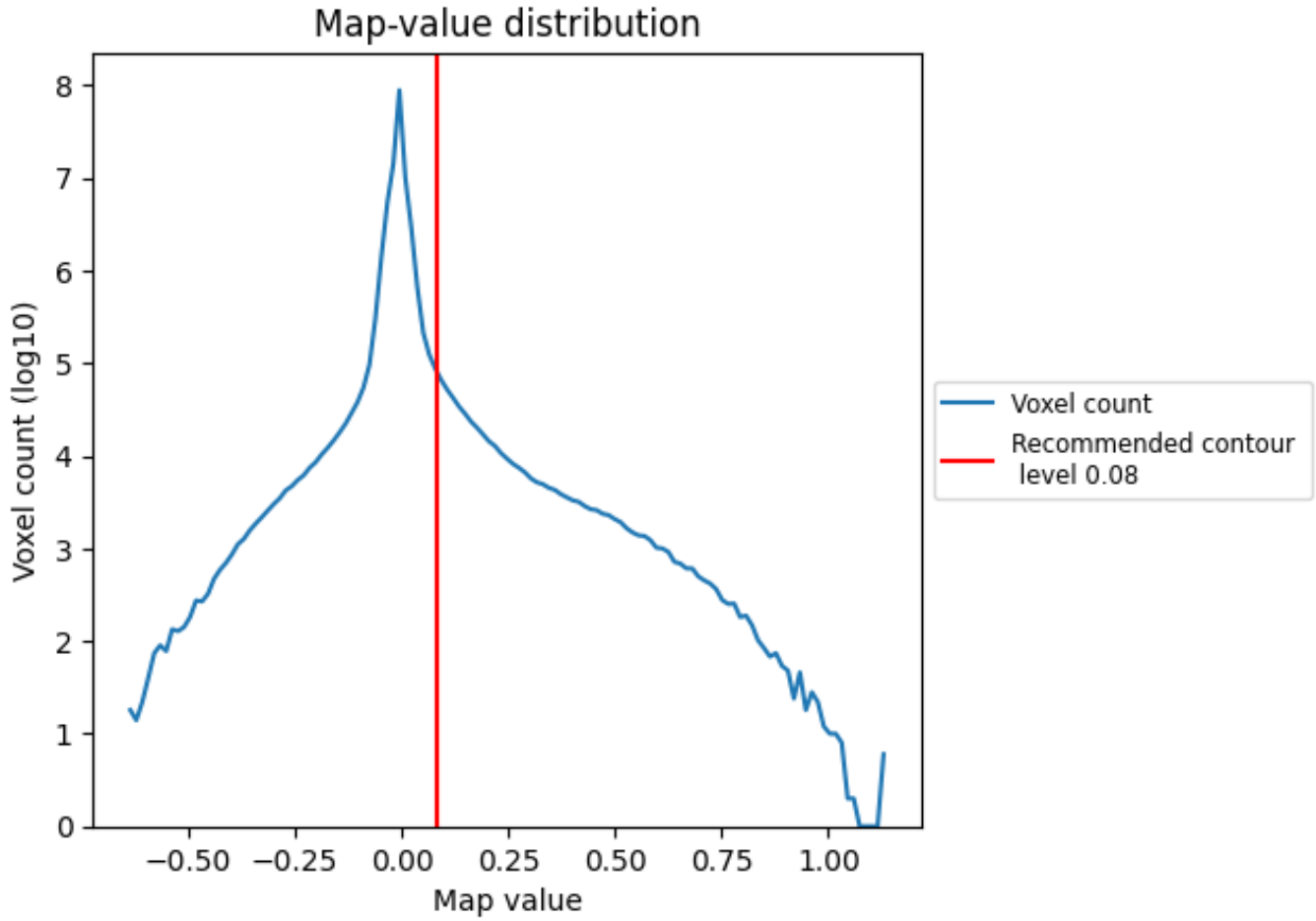
6.6 Mask visualisation (i)

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

7 Map analysis

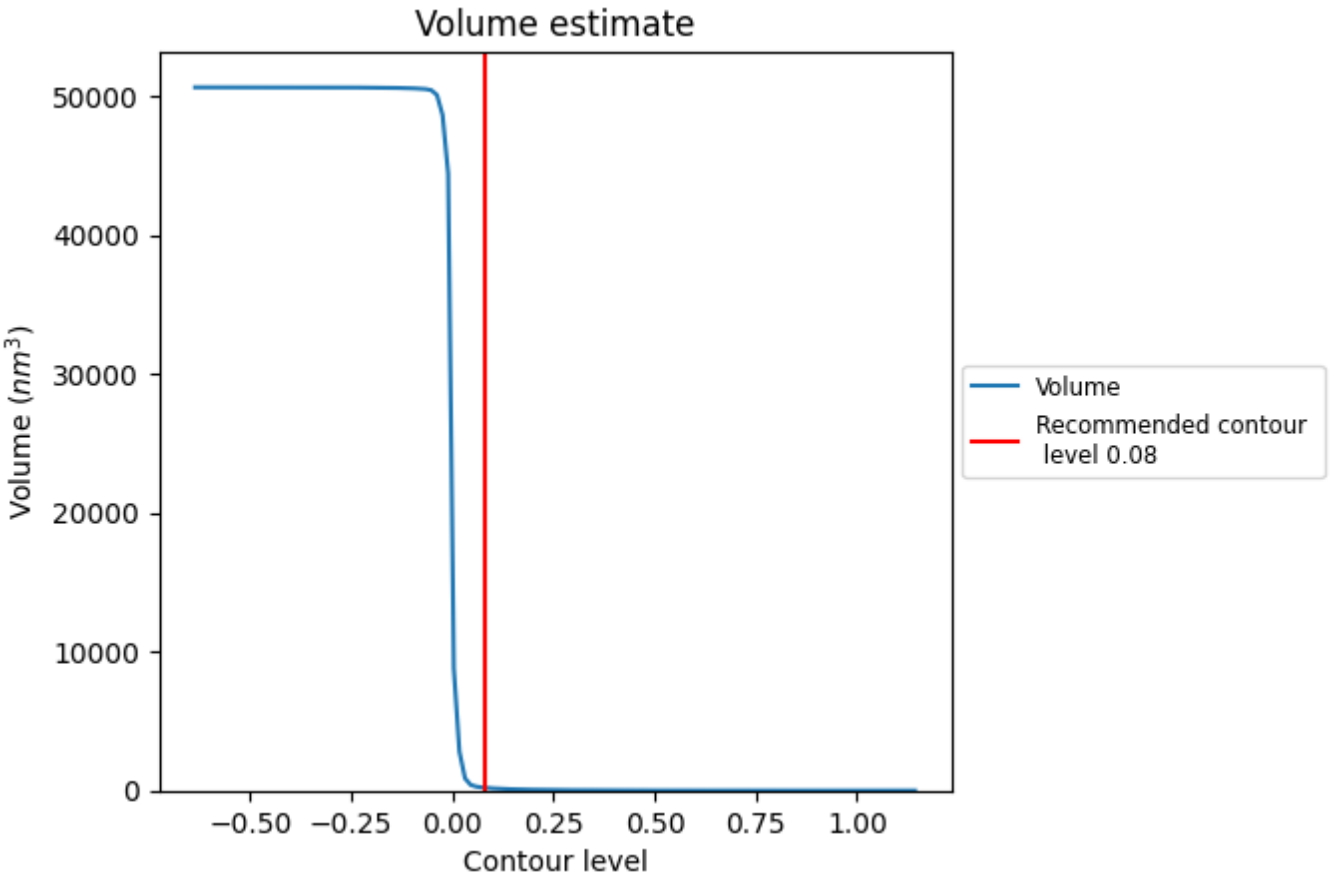
This section contains the results of statistical analysis of the map.

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.

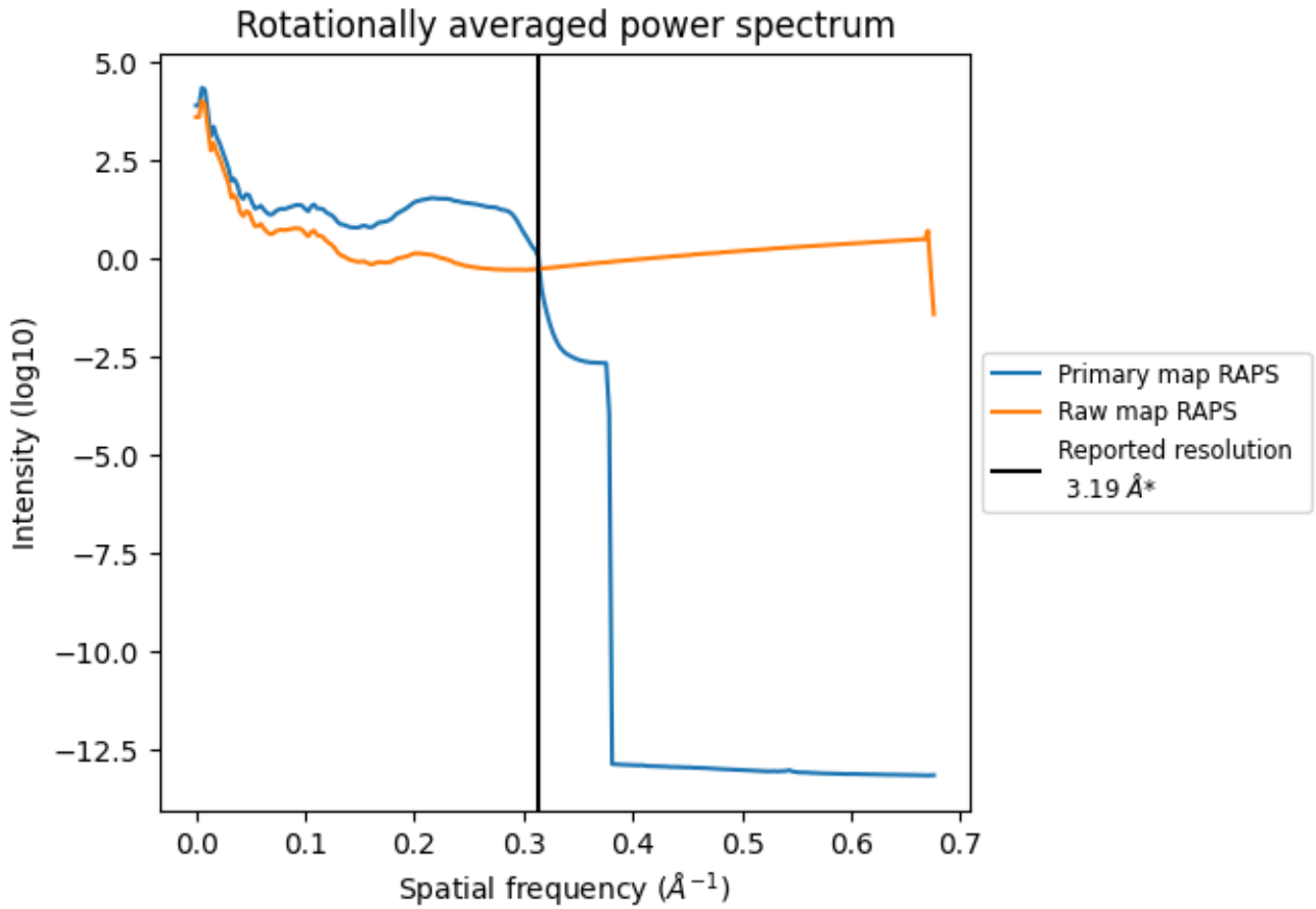
7.2 Volume estimate



The volume at the recommended contour level is 205 nm^3; this corresponds to an approximate mass of 185 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)

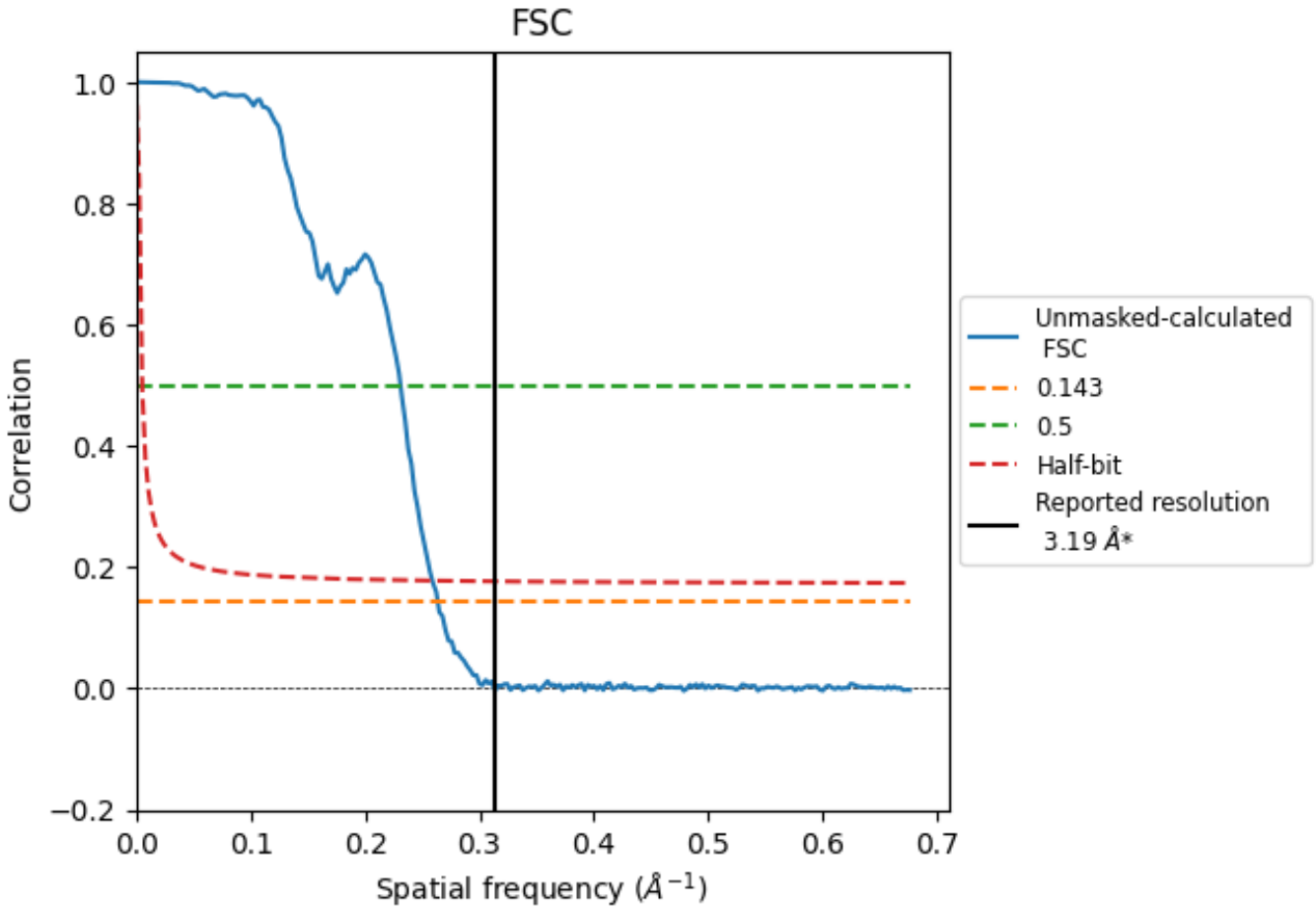


*Reported resolution corresponds to spatial frequency of 0.313 $Å^{-1}$

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 0.313 Å^{-1}

8.2 Resolution estimates (i)

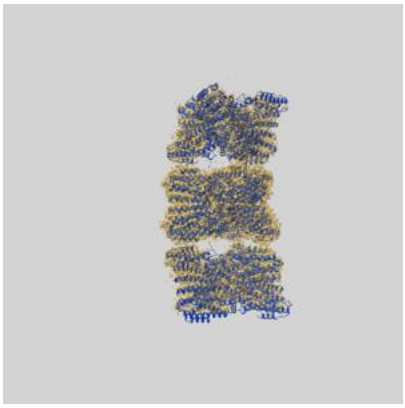
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.19	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	3.80	4.33	3.86

*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 3.80 differs from the reported value 3.19 by more than 10 %

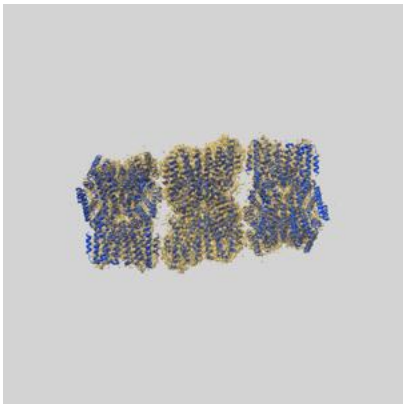
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-66380 and PDB model 9WZ3. Per-residue inclusion information can be found in section 3 on page 6.

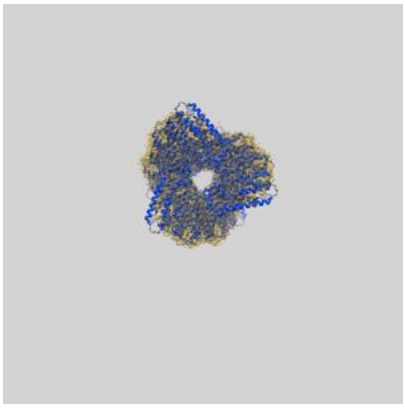
9.1 Map-model overlay



X



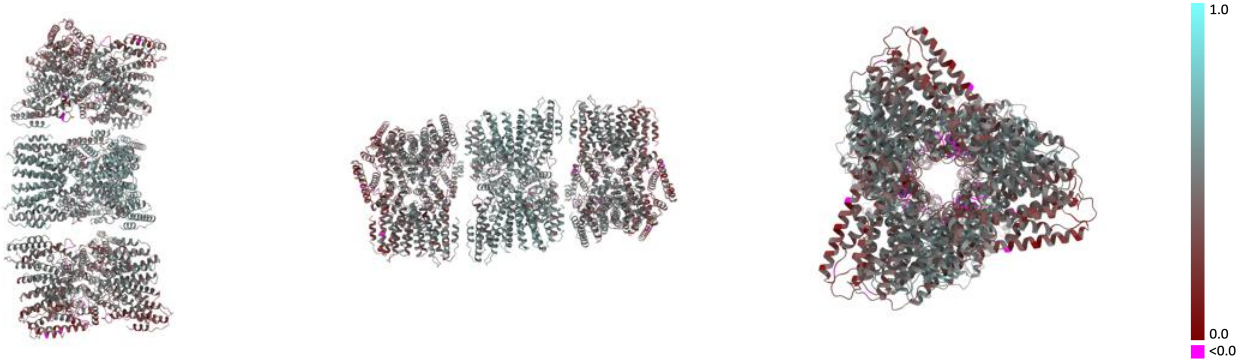
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.08 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

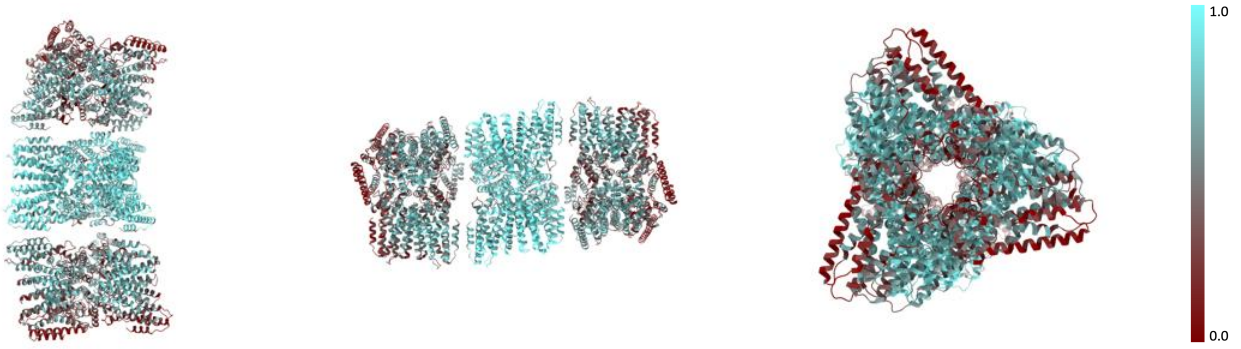
9.2 Q-score mapped to coordinate model (i)



X Y Z

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

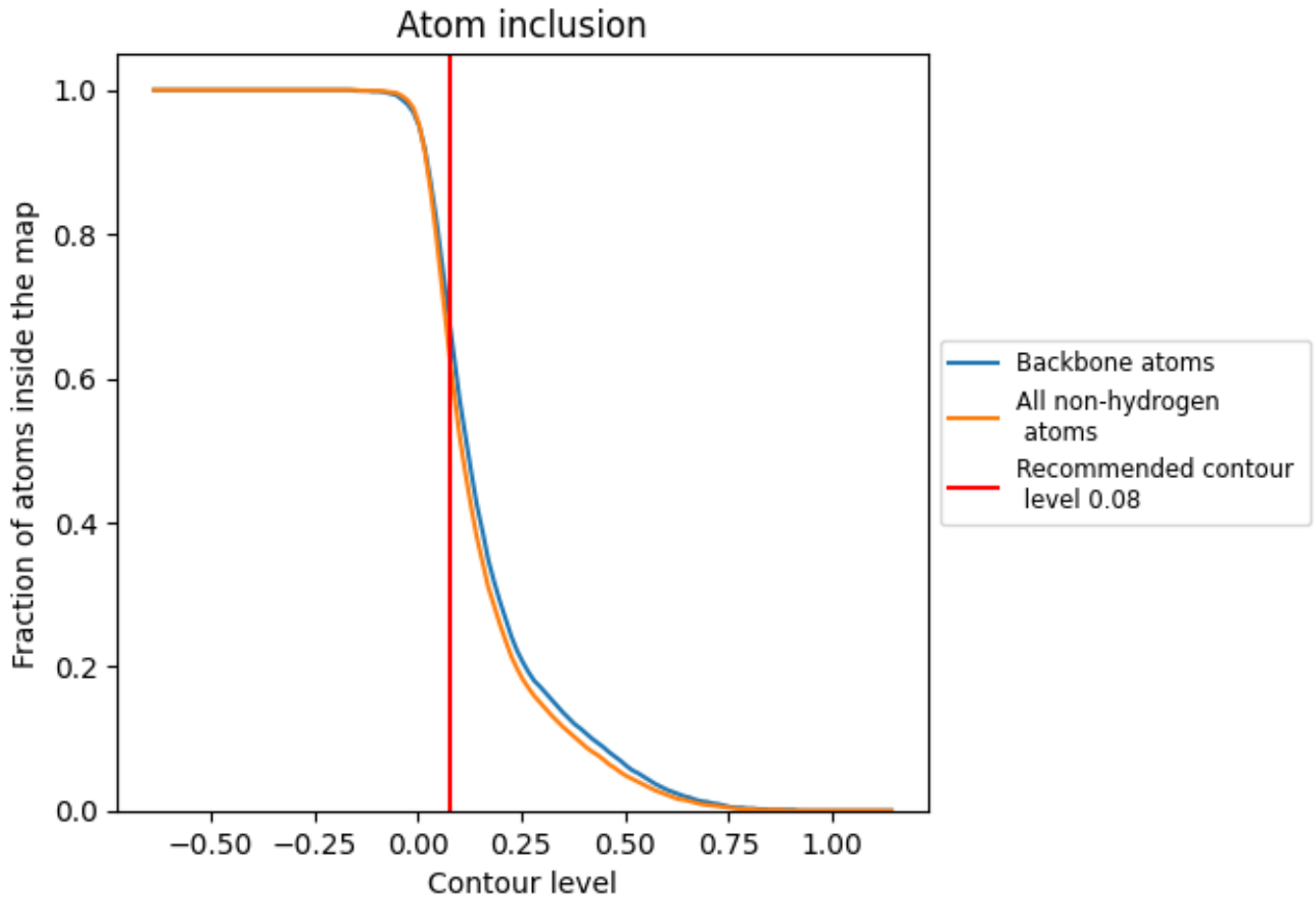
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.08).

9.4 Atom inclusion (i)



At the recommended contour level, 66% of all backbone atoms, 62% 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 (0.08) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.6150	0.4390
A	0.4090	0.3480
B	0.4140	0.3580
C	0.5700	0.4260
D	0.5720	0.4340
E	0.5670	0.4270
F	0.4130	0.3580
G	0.5740	0.4390
H	0.5740	0.4350
I	0.4210	0.3700
J	0.4270	0.3740
K	0.4120	0.3660
L	0.5680	0.4360
M	0.8550	0.5200
N	0.8610	0.5230
O	0.8540	0.5210
P	0.8600	0.5210
Q	0.8590	0.5200
R	0.8550	0.5230