WORLDWIDE PDB PROTEIN DATA BANK

wwPDB EM Validation Summary Report (i)

Dec 6, 2023 – 04:20 pm GMT

PDB ID	:	8AT3
EMDB ID	:	EMD-15632
Title	:	Structure of the augmin holocomplex in open conformation
Authors	:	Zupa, E.; Pfeffer, S.
Deposited on	:	2022-08-22
Resolution	:	33.00 Å(reported)

This is a wwPDB EM Validation Summary 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 (i) 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 (i)) were used in the production of this report:

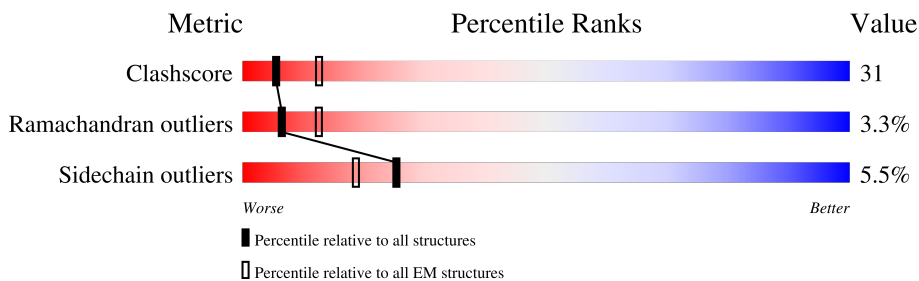|		
EMDB validation analysis	:	0.0.1.dev70
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	FAILED
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

1 Overall quality at a glance ⓘ

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

The reported resolution of this entry is 33.00 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	Percentile Ranks	Value
Clashscore		31
Ramachandran outliers		3.3%
Sidechain outliers		5.5%

Worse *Better*

▮ Percentile relative to all structures

▯ Percentile relative to all EM structures

Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5%

Mol	Chain	Length	Quality of chain
1	A	286	59% 28% 8% 5%
2	B	597	57% 27% 9% 7%
3	C	353	60% 33% 5% ·
4	D	666	56% 32% 6% 5%
5	E	222	48% 37% 9% · ·
6	F	978	22% 13% · · 60%
7	G	348	47% 36% 9% 5% ·
8	H	367	33% 18% · 45%

2 Entry composition ⓘ

There are 8 unique types of molecules in this entry. The entry contains 24599 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 HAUS augmin-like complex subunit 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	286	Total	C	N	O	S	0	0
			2282	1436	380	453	13		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	156	ARG	GLN	variant	UNP Q3B8L5

- Molecule 2 is a protein called HAUS augmin-like complex subunit 3.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	B	597	Total	C	N	O	S	0	0
			4771	2988	817	943	23		

- Molecule 3 is a protein called HAUS augmin like complex subunit 4 L homeolog.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	C	353	Total	C	N	O	S	0	0
			2885	1807	508	554	16		

- Molecule 4 is a protein called HAUS augmin-like complex subunit 5.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	D	666	Total	C	N	O	S	0	0
			5415	3362	1000	1022	31		

- Molecule 5 is a protein called HAUS augmin like complex subunit 2 L homeolog.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	E	217	Total	C	N	O	S	0	0
			1717	1075	296	334	12		

- Molecule 6 is a protein called HAUS augmin like complex subunit 6 L homeolog.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	F	387	3171	2020	574	558	19	0	0

- Molecule 7 is a protein called HAUS augmin like complex subunit 7 S homeolog.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
7	G	339	2687	1694	441	533	19	0	0

- Molecule 8 is a protein called HAUS augmin-like complex subunit 8.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
8	H	203	1671	1048	285	331	7	0	0

3　Residue-property plots ⓘ

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry. 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. 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: HAUS augmin-like complex subunit 1
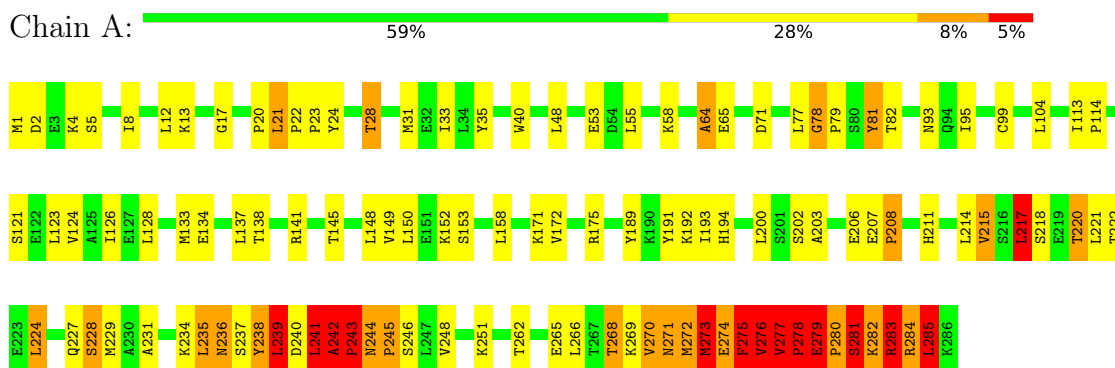
Chain A:

• Molecule 2: HAUS augmin-like complex subunit 3
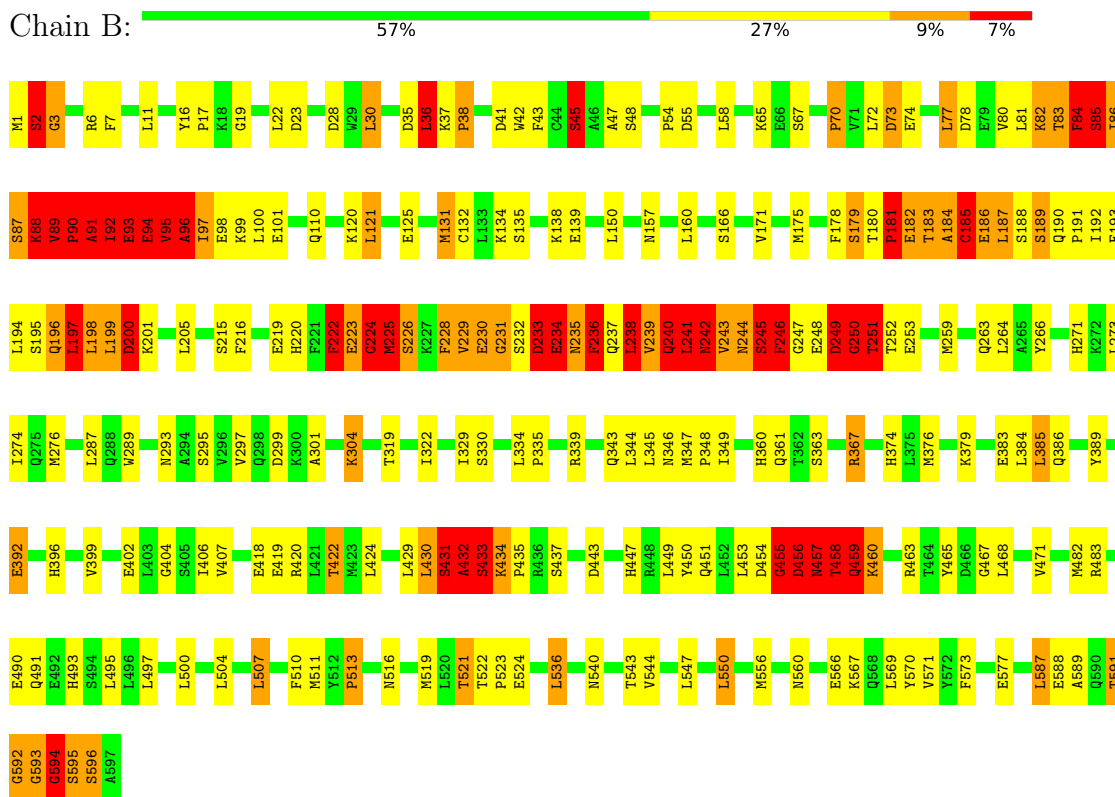
Chain B:

• Molecule 3: HAUS augmin like complex subunit 4 L homeolog

Chain C:

60%   33%   5% •

• Molecule 4: HAUS augmin-like complex subunit 5

Chain D:

56%   32%   6%   5%

• Molecule 5: HAUS augmin like complex subunit 2 L homeolog

Chain E:

48%   37%   9% • •

T79 H80 P81 L82 Y83 L84 G85 Q86 K87 H88 A93 M94 N95 S96 H97 L98 L102 R103 E104 K105 R106 S107 L108 R109 Q110 R111 Q114 PRO VAL CYS GLN GLU N120 L121 E124 A125 S126 Y127 H128 R129 F130 E133 L134 L135 P136 L137 A138 V139 N140 F141 L145 Y148 I149

T154 I155 P156 K157 I158 D166 L175 E178 M179 E180 E181 V182 I186 W189 R190 S206 C207 I208 T209 T212 S213 S216 I217 E218 N219 L220 H221 P222
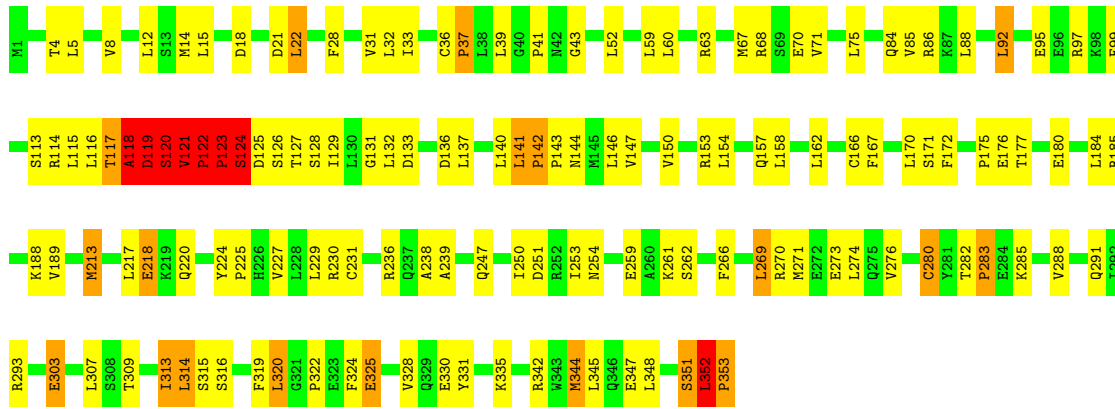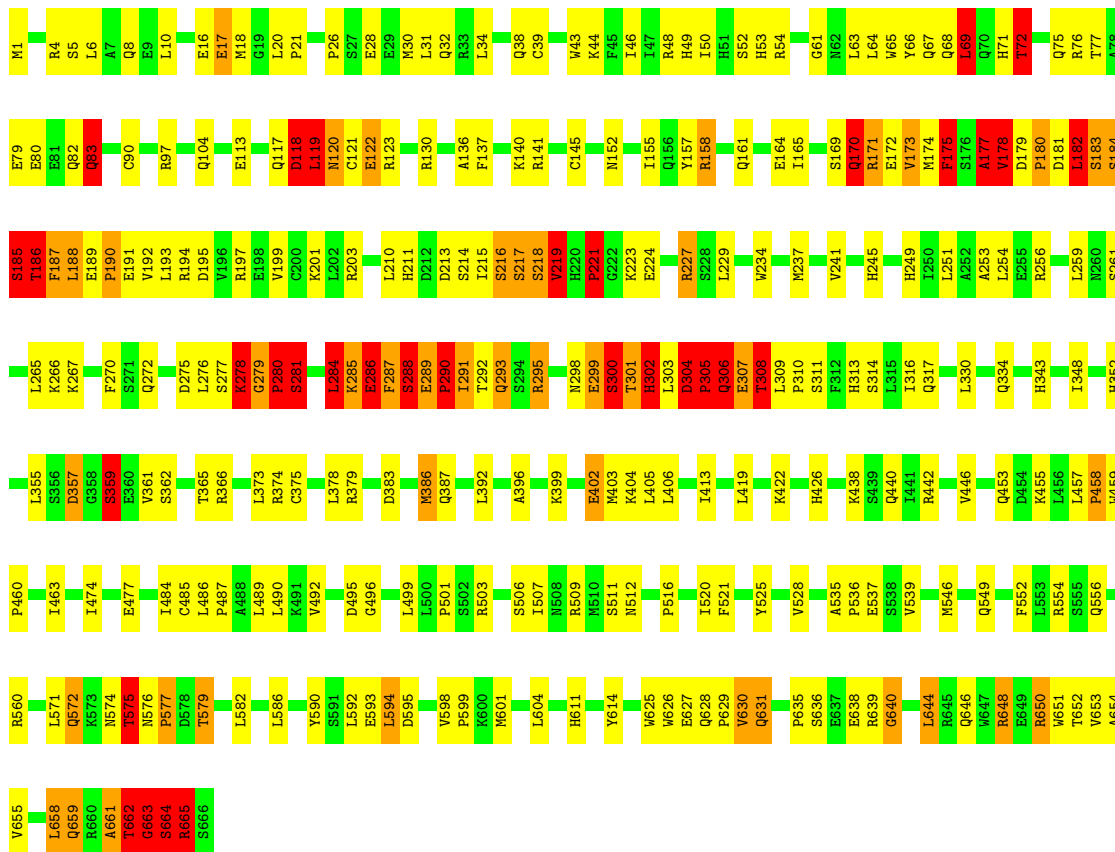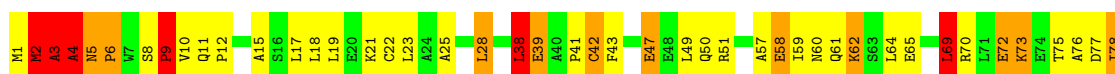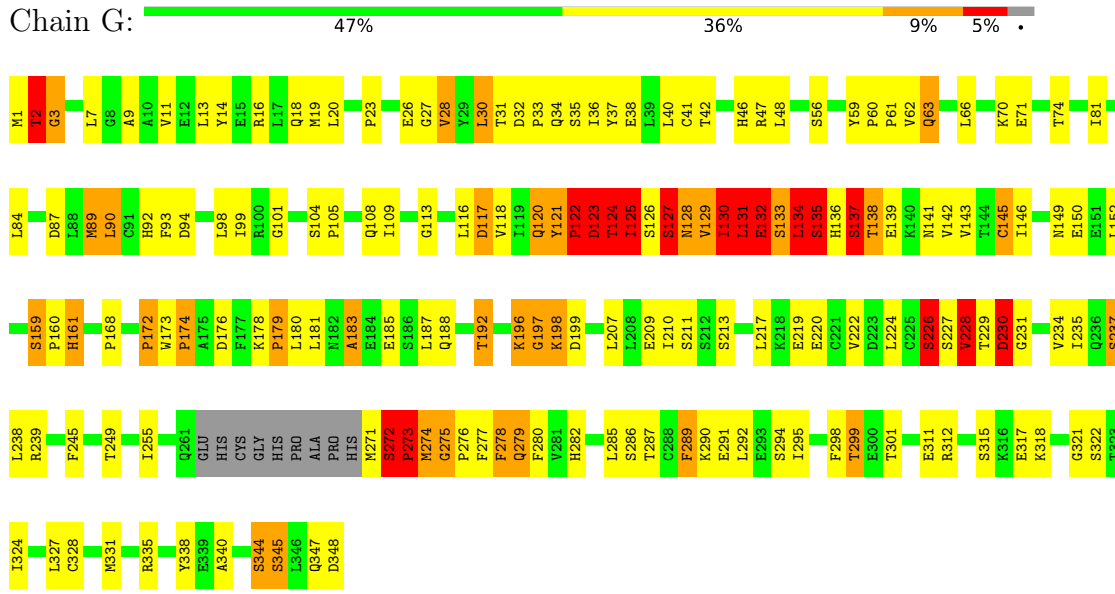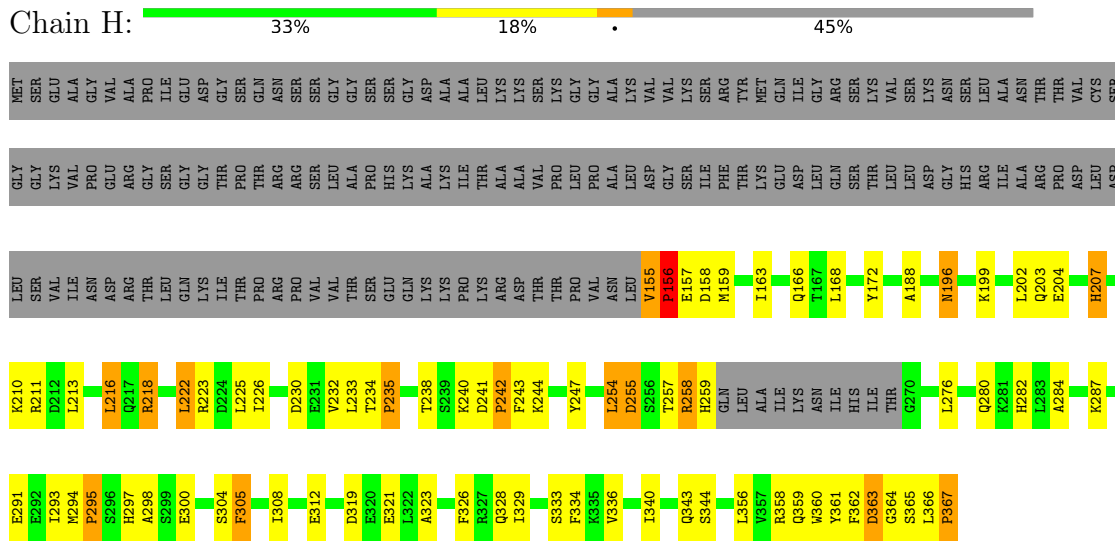
• Molecule 6: HAUS augmin like complex subunit 6 L homeolog

Chain F: 22%   13%   ••   60%

M1 Q2 S3 G4 S5 R6 P7 H8 L9 A10 R13 M16 L23 S27 G28 A34 G35 K36 T37 L38 V39 F43 G44 M47 F48 P51 N52 K53 Y57 F60 F64 G65 K66 L67 D68 W80 P81 P82 L83 D84 R87 D88 R92 W98 L99

S103 V106 G107 A108 G109 F110 P111 V114 A115 S116 I117 F118 L119 S120 P121 G122 G123 P124 L130 R135 M138 A146 D147 A148 A156 L157 Q158 S159 D163 P164 Q165 K166 A167 L168 A169 R170 N171 K172 I173 A174 R175 Q176 L179 K180 V181 L182 E185 N186 L187

E191 Y192 Q193 R194 K195 A196 Q197 Q202 D205 M206 E209 L213 Q216 L219 A220 E221 K222 V223 D224 R225 K226 I227 S228 D229 K230 I234 T237 R238 C239 M240 W241 I244 M245 Q246 M247 E250 M251 E252 K253 E254 V255 D256 V257 V258 D259 A260 V261 V262 R263

GLY ASN ILE ASP GLN TYR CYS LEU ASP GLY THR N275 A276 T277 L278 N279 I280 P281 N282 L283 L284 R287 I288 M292 H293 R294 L295 Q296 M297 Y301 G304 K305 V306 I309 Q313 L314 E317 A318 L319 K320 L321 E325 R326 Y329 D330 C331 K332 G333 V334 R335 L336

D337 L338 Q339 Y340 L341 K344 R359 H360 K363 D366 I370 R377 E380 W381 K384 L389 G390 K391 C392 P393 K398 GLY LEU ASN PRO ALA LEU GLU LEU ASN PRO PRO MET ALA PRO PHE SER PHE ASP PRO ALA SER GLU GLU VAL LEU LYS SER SER VAL

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

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

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

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

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

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

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

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

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

THR ASP GLU GLY PRO GLU GLN LEU ILE LYS LEU

• Molecule 7: HAUS augmin like complex subunit 7 S homeolog

Chain G: 47%   36%   9%   5%   •

M1 T2 G3 L7 G8 A9 A10 V11 E12 L13 Y14 E15 R16 L17 Q18 M19 L20 P23 E26 G27 V28 Y29 L30 T31 D32 P33 Q34 S35 I36 Y37 E38 L39 L40 C41 T42 H46 R47 L48 S56 Y59 P60 P61 V62 Q63 L66 K70 E71 T74 I81

L84 D87 L88 M89 L90 C91 H92 F93 D94 L98 I99 R100 G101 S104 P105 Q108 I109 G113 L116 D117 V118 I119 Q120 Y121 P122 D123 T124 I125 S126 S127 N128 V129 I130 L131 E132 S133 L134 S135 H136 S137 T138 E139 K140 N141 V142 V143 T144 C145 I146 N149 E150 E151 L152

S159 P160 H161 P168 P172 W173 P174 A175 D176 F177 K178 P179 L180 L181 N182 A183 E184 E185 S186 L187 Q188 T192 K196 G197 K198 D199 L207 L208 E209 I210 S211 S212 S213 L217 K218 E219 E220 C221 V222 D223 L224 C225 S226 S227 V228 T229 D230 G231 V234 I235 Q236 S237

L238 R239 F245 T249 I255 Q261 GLU HIS CYS GLY HIS PRO ALA PRO HIS M271 S272 P273 M274 G275 P276 F277 P278 Q279 F280 V281 H282 L285 S286 T287 C288 F289 K290 E291 L292 E293 S294 I295 F298 T299 E300 T301 E311 R312 S315 K316 E317 K318 G321 S322 T323

I324 L327 C328 M331 R335 Y338 E339 A340 S344 S345 L346 Q347 D348

• Molecule 8: HAUS augmin-like complex subunit 8

Chain H: 33%   18%   •   45%

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

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

LEU SER VAL ILE ASN ASP ARG THR LEU GLN LYS ILE THR PRO ARG VAL VAL THR SER GLU GLN LYS LYS PRO LYS ARG ASP THR THR PRO VAL ASN LEU V155 P156 E157 D158 M159 I163 Q166 T167 L168 Y172 A188 N196 K199 L202 Q203 E204 H207

K210 R211 D212 L213 L216 Q217 R218 L222 R223 D224 L225 I226 D230 E231 V232 L233 T234 P235 T238 S239 K240 D241 P242 F243 K244 Y247 L254 D255 S256 T257 R258 H259 GLN LEU ALA ILE LYS ASN ILE HIS ILE THR G270 L276 Q280 K281 H282 L283 A284 K287

E291 E292 I293 M294 P295 S296 H297 A298 S299 E300 S304 F305 I308 E312 D319 E320 E321 L322 A323 F326 R327 Q328 I329 S333 F334 K335 V336 I340 Q343 S344 L356 V357 R358 Q359 W360 Y361 F362 D363 G364 S365 L366 P367

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	11969	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS TALOS L120C	Depositor
Voltage (kV)	120	Depositor
Electron dose $(e^-/\text{Å}^2)$	101.8	Depositor
Minimum defocus (nm)	2000	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	Not provided	
Image detector	FEI CETA (4k x 4k)	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	1.47	38/2309 (1.6%)	1.41	48/3102 (1.5%)
2	B	1.19	41/4836 (0.8%)	1.36	76/6496 (1.2%)
3	C	0.99	23/2920 (0.8%)	1.18	29/3925 (0.7%)
4	D	1.10	55/5502 (1.0%)	1.24	61/7397 (0.8%)
5	E	1.34	40/1743 (2.3%)	1.08	17/2359 (0.7%)
6	F	1.22	55/3229 (1.7%)	1.12	34/4333 (0.8%)
7	G	1.19	48/2736 (1.8%)	1.31	37/3698 (1.0%)
8	H	1.12	19/1692 (1.1%)	0.95	6/2278 (0.3%)
All	All	1.19	319/24967 (1.3%)	1.24	308/33588 (0.9%)

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	A	0	14
2	B	0	68
3	C	0	11
4	D	0	39
5	E	0	11
6	F	0	19
7	G	0	27
8	H	0	1
All	All	0	190

The worst 5 of 319 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	223	GLU	C-N	26.97	1.81	1.33
1	A	277	VAL	C-N	24.03	1.79	1.34
4	D	288	SER	C-N	19.16	1.78	1.34
2	B	591	THR	C-N	18.66	1.66	1.33

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	280	PRO	C-N	17.83	1.75	1.34

The worst 5 of 308 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
7	G	130	ILE	O-C-N	-21.95	87.58	122.70
4	D	286	GLU	O-C-N	-21.61	88.13	122.70
3	C	117	THR	O-C-N	-21.59	88.16	122.70
2	B	392	GLU	O-C-N	-21.40	88.46	122.70
3	C	122	PRO	O-C-N	-21.14	80.94	121.10

There are no chirality outliers.

5 of 190 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	241	LEU	Mainchain
1	A	242	ALA	Mainchain
1	A	243	PRO	Mainchain
1	A	273	MET	Peptide
1	A	274	GLU	Mainchain

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	2282	0	2354	224	0
2	B	4771	0	4777	438	0
3	C	2885	0	2950	242	0
4	D	5415	0	5436	545	0
5	E	1717	0	1709	197	0
6	F	3171	0	3232	260	0
7	G	2687	0	2641	264	0
8	H	1671	0	1673	218	0
All	All	24599	0	24772	1532	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 31.

The worst 5 of 1532 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)
5:E:155:ILE:CG2	6:F:334:VAL:HG21	1.33	1.58
1:A:278:PRO:HB2	1:A:279:GLU:CB	1.32	1.57
2:B:490:GLU:CA	4:D:560:ARG:NH2	1.71	1.51
1:A:281:SER:CB	1:A:283:ARG:HD2	1.41	1.48
1:A:284:ARG:C	1:A:285:LEU:N	1.69	1.45

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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	284/286 (99%)	273 (96%)	4 (1%)	7 (2%)	5	32
2	B	595/597 (100%)	542 (91%)	18 (3%)	35 (6%)	1	17
3	C	351/353 (99%)	338 (96%)	7 (2%)	6 (2%)	9	42
4	D	662/666 (99%)	622 (94%)	19 (3%)	21 (3%)	4	26
5	E	213/222 (96%)	203 (95%)	5 (2%)	5 (2%)	6	34
6	F	383/978 (39%)	365 (95%)	9 (2%)	9 (2%)	6	34
7	G	335/348 (96%)	311 (93%)	9 (3%)	15 (4%)	2	22
8	H	199/367 (54%)	197 (99%)	1 (0%)	1 (0%)	29	69
All	All	3022/3817 (79%)	2851 (94%)	72 (2%)	99 (3%)	6	26

5 of 99 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	272	MET
1	A	277	VAL
1	A	278	PRO

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	279	GLU
1	A	282	LYS

5.3.2   Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	260/260 (100%)	248 (95%)	12 (5%)	27	52
2	B	541/541 (100%)	506 (94%)	35 (6%)	17	42
3	C	326/326 (100%)	312 (96%)	14 (4%)	29	53
4	D	605/605 (100%)	570 (94%)	35 (6%)	20	45
5	E	190/195 (97%)	176 (93%)	14 (7%)	13	38
6	F	343/882 (39%)	327 (95%)	16 (5%)	26	51
7	G	313/320 (98%)	295 (94%)	18 (6%)	20	45
8	H	192/328 (58%)	184 (96%)	8 (4%)	30	54
All	All	2770/3457 (80%)	2618 (94%)	152 (6%)	25	47

5 of 152 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
6	F	173	LEU
7	G	344	SER
6	F	278	LEU
7	G	48	LEU
8	H	363	ASP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 35 such sidechains are listed below:

Mol	Chain	Res	Type
7	G	18	GLN
7	G	92	HIS
8	H	196	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
4	D	68	GLN
4	D	49	HIS

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 monosaccharides in this entry.

5.6 Ligand geometry ⓘ

There are no ligands in this entry.

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

The following chains have linkage breaks:

Mol	Chain	Number of breaks
5	E	18
6	F	17
4	D	14
2	B	13
1	A	13
7	G	9
8	H	7
3	C	6

The worst 5 of 97 chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	D	298:ASN	C	299:GLU	N	4.29
1	B	223:GLU	C	224:GLY	N	1.81
1	A	277:VAL	C	278:PRO	N	1.79
1	D	288:SER	C	289:GLU	N	1.78
1	A	280:PRO	C	281:SER	N	1.75

6 Map visualisation ⓘ

This section contains visualisations of the EMDB entry EMD-15632. 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 ⓘ

This section was not generated.

6.2 Central slices ⓘ

This section was not generated.

6.3 Largest variance slices ⓘ

This section was not generated.

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

This section was not generated.

6.5 Orthogonal surface views ⓘ

This section was not generated.

6.6 Mask visualisation ⓘ

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 ⓘ

This section was not generated.

7.2   Volume estimate versus contour level ⓘ

This section was not generated.

7.3   Rotationally averaged power spectrum ⓘ

This section was not generated. The rotationally averaged power spectrum had issues being displayed.

8   Fourier-Shell correlation (i)

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

9 Map-model fit (i)

This section was not generated.