Full wwPDB EM Validation Report ⓘ

Dec 11, 2022 – 01:54 pm GMT

PDB ID	:	5AI7
EMDB ID	:	EMD-2848
Title	:	ParM doublet model
Authors	:	Bharat, T.A.M.; Murshudov, G.N.; Sachse, C.; Lowe, J.
Deposited on	:	2015-02-12
Resolution	:	Not provided

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:

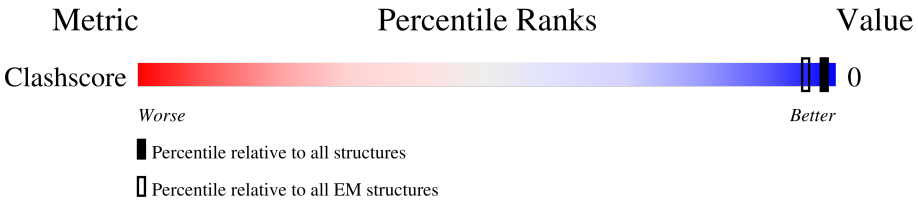
EMDB validation analysis	:	0.0.1.dev43
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.9
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.31.3

1 Overall quality at a glance (i)

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

The reported resolution of this entry is unknown.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297

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	318	100% 100%
1	B	318	100% 100%
1	C	318	100% 100%
1	D	318	100% 100%
1	E	318	100% 100%
1	F	318	100% 100%
1	G	318	100% 100%
1	H	318	100% 100%
1	I	318	100% 100%
1	J	318	100% 100%

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Mol	Chain	Length	Quality of chain
1	K	318	100% 100%
1	L	318	100% 100%
1	M	318	100% 100%
1	N	318	100% 100%

2 Entry composition (i)

There is only 1 type of molecule in this entry. The entry contains 4452 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 PLASMID SEGREGATION PROTEIN PARM.

Mol	Chain	Residues	Atoms	AltConf	Trace
1	A	318	Total C 318 318	0	318
1	B	318	Total C 318 318	0	318
1	C	318	Total C 318 318	0	318
1	D	318	Total C 318 318	0	318
1	E	318	Total C 318 318	0	318
1	F	318	Total C 318 318	0	318
1	G	318	Total C 318 318	0	318
1	H	318	Total C 318 318	0	318
1	I	318	Total C 318 318	0	318
1	J	318	Total C 318 318	0	318
1	K	318	Total C 318 318	0	318
1	L	318	Total C 318 318	0	318
1	M	318	Total C 318 318	0	318
1	N	318	Total C 318 318	0	318

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: PLASMID SEGREGATION PROTEIN PARM

Chain A:

M1 L2 V3 F4 I5 D6 D7 G8 S9 T10 N11 I12 K13 L14 Q15 W16 Q17 E18 S19 D20 G21 T22 I23 K24 Q25 H26 I27 S28 P29 N30 S31 F32 K33 R34 E35 W36 A37 V38 S39 F40 G41 D42 K43 K44 V45 F46 N47 Y48 T49 L50 N51 G52 E53 Q54 Y55 S56 F57 D58 P59 I60

S61 P62 D63 A64 V65 V66 T67 T68 N69 I70 A71 W72 Q73 Y74 S75 D76 V77 N78 V79 V80 A81 V82 H83 H84 A85 L86 L87 T88 S89 G90 L91 P92 V93 S94 E95 V96 D97 I98 V99 C100 T101 L102 P103 L104 T105 E106 Y107 Y108 D109 R110 N111 N112 Q113 P114 N115 T116 E117 N118 I119 E120

R121 K122 K123 A124 N125 F126 R127 K128 K129 I130 T131 L132 N133 G134 G135 D136 T137 F138 T139 I140 K141 D142 V143 K144 V145 M146 P147 E148 S149 I150 P151 A152 G153 Y154 E155 V156 L157 Q158 E159 L160 D161 E162 L163 D164 S165 L166 L167 I168 I169 D170 L171 G172 G173 T174 T175 L176 D177 I178 S179 Q180

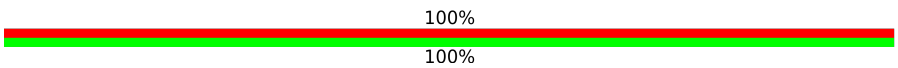
V181 M182 G183 K184 L185 S186 G187 I188 S189 K190 I191 Y192 G193 D194 S195 S196 L197 G198 V199 S200 L201 V202 T203 S204 A205 V206 K207 D208 A209 L210 S211 L212 A213 R214 T215 K216 G217 S218 S219 Y220 L221 A222 D223 D224 I225 I226 I227 H228 R229 K230 D231 N232 N233 Y234 L235 K236 Q237 R238 I239 N240

D241 E242 N243 K244 I245 S246 I247 V248 T249 E250 A251 M252 N253 E254 A255 L256 R257 K258 L259 E260 Q261 R262 V263 L264 N265 T266 L267 N268 E269 F270 S271 G272 Y273 T274 H275 V276 M277 V278 I279 G280 G281 G282 A283 E284 L285 I286 C287 D288 A289 V290 K291 K292 H293 T294 Q295 I296 R297 D298 E299 R300

F301 F302 K303 T304 N305 N306 S307 Q308 Y309 D310 L311 V312 N313 G314 M315 Y316 L317 I318

• Molecule 1: PLASMID SEGREGATION PROTEIN PARM

Chain B:



M1 L2 V3 F4 I5 D6 D7 G8 S9 T10 N11 I12 K13 L14 Q15 W16 Q17 E18 S19 D20 G21 T22 I23 K24 Q25 H26 I27 S28 P29 N30 S31 F32 K33 R34 E35 W36 A37 V38 S39 F40 G41 D42 K43 K44 V45 F46 N47 Y48 T49 L50 N51 G52 E53 Q54 Y55 S56 F57 D58 P59 I60

S61 P62 D63 A64 V65 V66 T67 T68 N69 I70 A71 W72 Q73 Y74 S75 D76 V77 N78 V79 V80 A81 V82 H83 H84 A85 L86 L87 T88 S89 G90 L91 P92 V93 S94 E95 V96 D97 I98 V99 C100 T101 L102 P103 L104 T105 E106 Y107 Y108 D109 R110 N111 N112 Q113 P114 N115 T116 E117 N118 I119 E120

R121 K122 K123 A124 N125 F126 R127 K128 K129 I130 T131 L132 N133 G134 G135 D136 T137 F138 T139 I140 K141 D142 V143 K144 V145 M146 P147 E148 S149 I150 P151 A152 G153 Y154 E155 V156 L157 Q158 E159 L160 D161 E162 L163 D164 S165 L166 L167 I168 I169 D170 L171 G172 G173 T174 T175 L176 D177 I178 S179 Q180

V181 M182 G183 K184 L185 S186 G187 I188 S189 K190 I191 Y192 G193 D194 S195 S196 L197 G198 V199 S200 L201 V202 T203 S204 A205 V206 K207 D208 A209 L210 S211 L212 A213 R214 T215 K216 G217 S218 S219 Y220 L221 A222 D223 D224 I225 I226 I227 H228 R229 K230 D231 N232 N233 Y234 L235 K236 Q237 R238 I239 N240

D241 E242 N243 K244 I245 S246 I247 V248 T249 E250 A251 M252 N253 E254 A255 L256 R257 K258 L259 E260 Q261 R262 V263 L264 N265 T266 L267 N268 E269 F270 S271 G272 Y273 T274 H275 V276 M277 V278 I279 G280 G281 G282 A283 E284 L285 I286 C287 D288 A289 V290 K291 K292 H293 T294 Q295 I296 R297 D298 E299 R300

F301 F302 K303 T304 N305 N306 S307 Q308 Y309 D310 L311 V312 N313 G314 M315 Y316 L317 I318

• Molecule 1: PLASMID SEGREGATION PROTEIN PARM

Chain C:

M1 L2 V3 F4 I5 D6 D7 G8 S9 T10 N11 I12 K13 L14 Q15 W16 Q17 E18 S19 D20 G21 T22 I23 K24 Q25 H26 I27 S28 P29 N30 S31 F32 K33 R34 E35 W36 A37 V38 S39 F40 G41 D42 K43 K44 V45 F46 N47 Y48 T49 L50 N51 G52 E53 Q54 Y55 S56 F57 D58 P59 I60

S61 P62 D63 A64 V65 V66 T67 T68 N69 I70 A71 W72 Q73 Y74 S75 D76 V77 N78 V79 V80 A81 V82 H83 H84 A85 L86 L87 T88 S89 G90 L91 P92 V93 S94 E95 V96 D97 I98 V99 C100 T101 L102 P103 L104 T105 E106 Y107 Y108 D109 R110 N111 N112 Q113 P114 N115 T116 E117 N118 I119 E120

R121 K122 K123 A124 N125 F126 R127 K128 K129 I130 T131 L132 N133 G134 G135 D136 T137 F138 T139 I140 K141 D142 V143 K144 V145 M146 P147 E148 S149 I150 P151 A152 G153 Y154 E155 V156 L157 Q158 E159 L160 D161 E162 L163 D164 S165 L166 L167 I168 I169 D170 L171 G172 G173 T174 T175 L176 D177 I178 S179 Q180

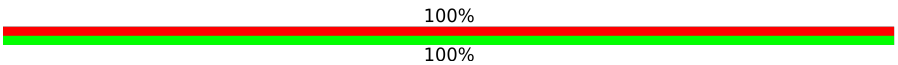
V181 M182 G183 K184 L185 S186 G187 I188 S189 K190 I191 Y192 G193 D194 S195 S196 L197 G198 V199 S200 L201 V202 T203 S204 A205 V206 K207 D208 A209 L210 S211 L212 A213 R214 T215 K216 G217 S218 S219 Y220 L221 A222 D223 D224 I225 I226 I227 H228 R229 K230 D231 N232 N233 Y234 L235 K236 Q237 R238 I239 N240

D241 E242 N243 K244 I245 S246 I247 V248 T249 E250 A251 M252 N253 E254 A255 L256 R257 K258 L259 E260 Q261 R262 V263 L264 N265 T266 L267 N268 E269 F270 S271 G272 Y273 T274 H275 V276 M277 V278 I279 G280 G281 G282 A283 E284 L285 I286 C287 D288 A289 V290 K291 K292 H293 T294 Q295 I296 R297 D298 E299 R300

F301 F302 K303 T304 N305 N306 S307 Q308 Y309 D310 L311 V312 N313 G314 M315 Y316 L317 I318

• Molecule 1: PLASMID SEGREGATION PROTEIN PARM

Chain D:



M1 L2 V3 F4 I5 D6 D7 G8 S9 T10 N11 I12 K13 L14 Q15 W16 Q17 E18 S19 D20 G21 T22 I23 K24 Q25 H26 I27 S28 P29 N30 S31 F32 K33 R34 E35 W36 A37 V38 S39 F40 G41 D42 K43 K44 V45 F46 N47 Y48 T49 L50 N51 G52 E53 Q54 Y55 S56 F57 D58 P59 I60

S61 P62 D63 A64 V65 V66 T67 T68 N69 I70 A71 W72 Q73 Y74 S75 D76 V77 N78 V79 V80 A81 V82 H83 H84 A85 L86 L87 T88 S89 G90 L91 P92 V93 S94 E95 V96 D97 I98 V99 C100 T101 L102 P103 L104 T105 E106 Y107 Y108 D109 R110 N111 N112 Q113 P114 N115 T116 E117 N118 I119 E120

R121 K122 K123 A124 N125 F126 R127 K128 K129 I130 T131 L132 N133 G134 G135 D136 T137 F138 T139 I140 K141 D142 V143 K144 V145 M146 P147 E148 S149 I150 P151 A152 G153 Y154 E155 V156 L157 Q158 E159 L160 D161 E162 L163 D164 S165 L166 L167 I168 I169 D170 L171 G172 G173 T174 T175 L176 D177 I178 S179 Q180

V181 M182 G183 K184 L185 S186 G187 I188 S189 K190 I191 Y192 G193 D194 S195 S196 L197 G198 V199 S200 L201 V202 T203 S204 A205 V206 K207 D208 A209 L210 S211 L212 A213 R214 T215 K216 G217 S218 S219 Y220 L221 A222 D223 D224 I225 I226 I227 H228 R229 K230 D231 N232 N233 Y234 L235 K236 Q237 R238 I239 N240

D241 E242 N243 K244 I245 S246 I247 V248 T249 E250 A251 M252 N253 E254 A255 L256 R257 K258 L259 E260 Q261 R262 V263 L264 N265 T266 L267 N268 E269 F270 S271 G272 Y273 T274 H275 V276 M277 V278 I279 G280 G281 G282 A283 E284 L285 I286 C287 D288 A289 V290 K291 K292 H293 T294 Q295 I296 R297 D298 E299 R300

F301 F302 K303 T304 N305 N306 S307 Q308 Y309 D310 L311 V312 N313 G314 M315 Y316 L317 I318

• Molecule 1: PLASMID SEGREGATION PROTEIN PARM

Chain E:

M1 L2 V3 F4 I5 D6 D7 G8 S9 T10 N11 I12 K13 L14 Q15 W16 Q17 E18 S19 D20 G21 T22 I23 K24 Q25 H26 I27 S28 P29 N30 S31 F32 K33 R34 E35 W36 A37 V38 S39 F40 G41 D42 K43 K44 V45 F46 N47 Y48 T49 L50 N51 G52 E53 Q54 Y55 S56 F57 D58 P59 I60

S61 P62 D63 A64 V65 V66 T67 T68 N69 I70 A71 W72 Q73 Y74 S75 D76 V77 N78 V79 V80 A81 V82 H83 H84 A85 L86 L87 T88 S89 G90 L91 P92 V93 S94 E95 V96 D97 I98 V99 C100 T101 L102 P103 L104 T105 E106 Y107 Y108 D109 R110 N111 N112 Q113 P114 N115 T116 E117 N118 I119 E120

R121 K122 K123 A124 N125 F126 R127 K128 K129 I130 T131 L132 N133 G134 G135 D136 T137 F138 T139 I140 K141 D142 V143 K144 V145 M146 P147 E148 S149 I150 P151 A152 G153 Y154 E155 V156 L157 Q158 E159 L160 D161 E162 L163 D164 S165 L166 L167 I168 I169 D170 L171 G172 G173 T174 T175 L176 D177 I178 S179 Q180

V181 M182 G183 K184 L185 S186 G187 I188 S189 K190 I191 Y192 G193 D194 S195 S196 L197 G198 V199 S200 L201 V202 T203 S204 A205 V206 K207 D208 A209 L210 S211 L212 A213 R214 T215 K216 G217 S218 S219 Y220 L221 A222 D223 D224 I225 I226 I227 H228 R229 K230 D231 N232 N233 Y234 L235 K236 Q237 R238 I239 N240

D241 E242 N243 K244 I245 S246 I247 V248 T249 E250 A251 M252 N253 E254 A255 L256 R257 K258 L259 E260 Q261 R262 V263 L264 N265 T266 L267 N268 E269 F270 S271 G272 Y273 T274 H275 V276 M277 V278 I279 G280 G281 G282 A283 E284 L285 I286 C287 D288 A289 V290 K291 K292 H293 T294 Q295 I296 R297 D298 E299 R300

F301 F302 K303 T304 N305 N306 S307 Q308 Y309 D310 L311 V312 N313 G314 M315 Y316 L317 I318

• Molecule 1: PLASMID SEGREGATION PROTEIN PARM

Chain F:

M1 L2 V3 F4 I5 D6 D7 G8 S9 T10 N11 I12 K13 L14 Q15 W16 Q17 E18 S19 D20 G21 T22 I23 K24 Q25 H26 I27 S28 P29 N30 S31 F32 K33 R34 E35 W36 A37 V38 S39 F40 G41 D42 K43 K44 V45 F46 N47 Y48 T49 L50 N51 G52 E53 Q54 Y55 S56 F57 D58 P59 I60

S61 P62 D63 A64 V65 V66 T67 T68 N69 I70 A71 W72 Q73 Y74 S75 D76 V77 N78 V79 V80 A81 V82 H83 H84 A85 L86 L87 T88 S89 G90 L91 P92 V93 S94 E95 V96 D97 I98 V99 C100 T101 L102 P103 L104 T105 E106 Y107 Y108 D109 R110 N111 N112 Q113 P114 N115 T116 E117 N118 I119 E120

R121 K122 K123 A124 N125 F126 R127 K128 K129 I130 T131 L132 N133 G134 G135 D136 T137 F138 T139 I140 K141 D142 V143 K144 V145 M146 P147 E148 S149 I150 P151 A152 G153 Y154 E155 V156 L157 Q158 E159 L160 D161 E162 L163 D164 S165 L166 L167 I168 I169 D170 L171 G172 G173 T174 T175 L176 D177 I178 S179 Q180

V181 M182 G183 K184 L185 S186 G187 I188 S189 K190 I191 Y192 G193 D194 S195 S196 L197 G198 V199 S200 L201 V202 T203 S204 A205 V206 K207 D208 A209 L210 S211 L212 A213 R214 T215 K216 G217 S218 S219 Y220 L221 A222 D223 D224 I225 I226 I227 H228 R229 K230 D231 N232 N233 Y234 L235 K236 Q237 R238 I239 N240

D241 E242 N243 K244 I245 S246 I247 V248 T249 E250 A251 M252 N253 E254 A255 L256 R257 K258 L259 E260 Q261 R262 V263 L264 N265 T266 L267 N268 E269 F270 S271 G272 Y273 T274 H275 V276 M277 V278 I279 G280 G281 G282 A283 E284 L285 I286 C287 D288 A289 V290 K291 K292 H293 T294 Q295 I296 R297 D298 E299 R300

F301 F302 K303 T304 N305 N306 S307 Q308 Y309 D310 L311 V312 N313 G314 M315 Y316 L317 I318

• Molecule 1: PLASMID SEGREGATION PROTEIN PARM

Chain G:

M1 L2 V3 F4 I5 D6 D7 G8 S9 T10 N11 I12 K13 L14 Q15 W16 Q17 E18 S19 D20 G21 T22 I23 K24 Q25 H26 I27 S28 P29 N30 S31 F32 K33 R34 E35 W36 A37 V38 S39 F40 G41 D42 K43 K44 V45 F46 N47 Y48 T49 L50 N51 G52 E53 Q54 Y55 S56 F57 D58 P59 I60

S61 P62 D63 A64 V65 V66 T67 T68 N69 I70 A71 W72 Q73 Y74 S75 D76 V77 N78 V79 V80 A81 V82 H83 H84 A85 L86 L87 T88 S89 G90 L91 P92 V93 S94 E95 V96 D97 I98 V99 C100 T101 L102 P103 L104 T105 E106 Y107 Y108 D109 R110 N111 N112 Q113 P114 N115 T116 E117 N118 I119 E120

R121 K122 K123 A124 N125 F126 R127 K128 K129 I130 T131 L132 N133 G134 G135 D136 T137 F138 T139 I140 K141 D142 V143 K144 V145 M146 P147 E148 S149 I150 P151 A152 G153 Y154 E155 V156 L157 Q158 E159 L160 D161 E162 L163 D164 S165 L166 L167 I168 I169 D170 L171 G172 G173 T174 T175 L176 D177 I178 S179 Q180

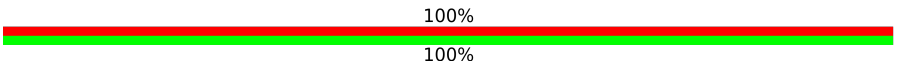
V181 M182 G183 K184 L185 S186 G187 I188 S189 K190 I191 Y192 G193 D194 S195 S196 L197 G198 V199 S200 L201 V202 T203 S204 A205 V206 K207 D208 A209 L210 S211 L212 A213 R214 T215 K216 G217 S218 S219 Y220 L221 A222 D223 D224 I225 I226 I227 H228 R229 K230 D231 N232 N233 Y234 L235 K236 Q237 R238 I239 N240

D241 E242 N243 K244 I245 S246 I247 V248 T249 E250 A251 M252 N253 E254 A255 L256 R257 K258 L259 E260 Q261 R262 V263 L264 N265 T266 L267 N268 E269 F270 S271 G272 Y273 T274 H275 V276 M277 V278 I279 G280 G281 G282 A283 E284 L285 I286 C287 D288 A289 V290 K291 K292 H293 T294 Q295 I296 R297 D298 E299 R300

F301 F302 K303 T304 N305 N306 S307 Q308 Y309 D310 L311 V312 N313 G314 M315 Y316 L317 I318

• Molecule 1: PLASMID SEGREGATION PROTEIN PARM

Chain H:



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S61 P62 D63 A64 V65 V66 T67 T68 N69 I70 A71 W72 Q73 Y74 S75 D76 V77 N78 V79 V80 A81 V82 H83 H84 A85 L86 L87 T88 S89 G90 L91 P92 V93 S94 E95 V96 D97 I98 V99 C100 T101 L102 P103 L104 T105 E106 Y107 Y108 D109 R110 N111 N112 Q113 P114 N115 T116 E117 N118 I119 E120

R121 K122 K123 A124 N125 F126 R127 K128 K129 I130 T131 L132 N133 G134 G135 D136 T137 F138 T139 I140 K141 D142 V143 K144 V145 M146 P147 E148 S149 I150 P151 A152 G153 Y154 E155 V156 L157 Q158 E159 L160 D161 E162 L163 D164 S165 L166 L167 I168 I169 D170 L171 G172 G173 T174 T175 L176 D177 I178 S179 Q180

V181 M182 G183 K184 L185 S186 G187 I188 S189 K190 I191 Y192 G193 D194 S195 S196 L197 G198 V199 S200 L201 V202 T203 S204 A205 V206 K207 D208 A209 L210 S211 L212 A213 R214 T215 K216 G217 S218 S219 Y220 L221 A222 D223 D224 I225 I226 I227 H228 R229 K230 D231 N232 N233 Y234 L235 K236 Q237 R238 I239 N240

D241 E242 N243 K244 I245 S246 I247 V248 T249 E250 A251 M252 N253 E254 A255 L256 R257 K258 L259 E260 Q261 R262 V263 L264 N265 T266 L267 N268 E269 F270 S271 G272 Y273 T274 H275 V276 M277 V278 I279 G280 G281 G282 A283 E284 L285 I286 C287 D288 A289 V290 K291 K292 H293 T294 Q295 I296 R297 D298 E299 R300

F301 F302 K303 T304 N305 N306 S307 Q308 Y309 D310 L311 V312 N313 G314 M315 Y316 L317 I318

• Molecule 1: PLASMID SEGREGATION PROTEIN PARM

Chain I:

M1 L2 V3 F4 I5 D6 D7 G8 S9 T10 N11 I12 K13 L14 Q15 W16 Q17 E18 S19 D20 G21 T22 I23 K24 Q25 H26 I27 S28 P29 N30 S31 F32 K33 R34 E35 W36 A37 V38 S39 F40 G41 D42 K43 K44 V45 F46 N47 Y48 T49 L50 N51 G52 E53 Q54 Y55 S56 F57 D58 P59 I60

S61 P62 D63 A64 V65 V66 T67 T68 N69 I70 A71 W72 Q73 Y74 S75 D76 V77 N78 V79 V80 A81 V82 H83 H84 A85 L86 L87 T88 S89 G90 L91 P92 V93 S94 E95 V96 D97 I98 V99 C100 T101 L102 P103 L104 T105 E106 Y107 Y108 D109 R110 N111 N112 Q113 P114 N115 T116 E117 N118 I119 E120

R121 K122 K123 A124 N125 F126 R127 K128 K129 I130 T131 L132 N133 G134 G135 D136 T137 F138 T139 I140 K141 D142 V143 K144 V145 M146 P147 E148 S149 I150 P151 A152 G153 Y154 E155 V156 L157 Q158 E159 L160 D161 E162 L163 D164 S165 L166 L167 I168 I169 D170 L171 G172 G173 T174 T175 L176 D177 I178 S179 Q180

V181 M182 G183 K184 L185 S186 G187 I188 S189 K190 I191 Y192 G193 D194 S195 S196 L197 G198 V199 S200 L201 V202 T203 S204 A205 V206 K207 D208 A209 L210 S211 L212 A213 R214 T215 K216 G217 S218 S219 Y220 L221 A222 D223 D224 I225 I226 I227 H228 R229 K230 D231 N232 N233 Y234 L235 K236 Q237 R238 I239 N240

D241 E242 N243 K244 I245 S246 I247 V248 T249 E250 A251 M252 N253 E254 A255 L256 R257 K258 L259 E260 Q261 R262 V263 L264 N265 T266 L267 N268 E269 F270 S271 G272 Y273 T274 H275 V276 M277 V278 I279 G280 G281 G282 A283 E284 L285 I286 C287 D288 A289 V290 K291 K292 H293 T294 Q295 I296 R297 D298 E299 R300

F301 F302 K303 T304 N305 N306 S307 Q308 Y309 D310 L311 V312 N313 G314 M315 Y316 L317 I318

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Chain J:

M1 L2 V3 F4 I5 D6 D7 G8 S9 T10 N11 I12 K13 L14 Q15 W16 Q17 E18 S19 D20 G21 T22 I23 K24 Q25 H26 I27 S28 P29 N30 S31 F32 K33 R34 E35 W36 A37 V38 S39 F40 G41 D42 K43 K44 V45 F46 N47 Y48 T49 L50 N51 G52 E53 Q54 Y55 S56 F57 D58 P59 I60

S61 P62 D63 A64 V65 V66 T67 T68 N69 I70 A71 W72 Q73 Y74 S75 D76 V77 N78 V79 V80 A81 V82 H83 H84 A85 L86 L87 T88 S89 G90 L91 P92 V93 S94 E95 V96 D97 I98 V99 C100 T101 L102 P103 L104 T105 E106 Y107 Y108 D109 R110 N111 N112 Q113 P114 N115 T116 E117 N118 I119 E120

R121 K122 K123 A124 N125 F126 R127 K128 K129 I130 T131 L132 N133 G134 G135 D136 T137 F138 T139 I140 K141 D142 V143 K144 V145 M146 P147 E148 S149 I150 P151 A152 G153 Y154 E155 V156 L157 Q158 E159 L160 D161 E162 L163 D164 S165 L166 L167 I168 I169 D170 L171 G172 G173 T174 T175 L176 D177 I178 S179 Q180

V181 M182 G183 K184 L185 S186 G187 I188 S189 K190 I191 Y192 G193 D194 S195 S196 L197 G198 V199 S200 L201 V202 T203 S204 A205 V206 K207 D208 A209 L210 S211 L212 A213 R214 T215 K216 G217 S218 S219 Y220 L221 A222 D223 D224 I225 I226 I227 H228 R229 K230 D231 N232 N233 Y234 L235 K236 Q237 R238 I239 N240

D241 E242 N243 K244 I245 S246 I247 V248 T249 E250 A251 M252 N253 E254 A255 L256 R257 K258 L259 E260 Q261 R262 V263 L264 N265 T266 L267 N268 E269 F270 S271 G272 Y273 T274 H275 V276 M277 V278 I279 G280 G281 G282 A283 E284 L285 I286 C287 D288 A289 V290 K291 K292 H293 T294 Q295 I296 R297 D298 E299 R300

F301 F302 K303 T304 N305 N306 S307 Q308 Y309 D310 L311 V312 N313 G314 M315 Y316 L317 I318

• Molecule 1: PLASMID SEGREGATION PROTEIN PARM

Chain K:

M1 L2 V3 F4 I5 D6 D7 G8 S9 T10 N11 I12 K13 L14 Q15 W16 Q17 E18 S19 D20 G21 T22 I23 K24 Q25 H26 I27 S28 P29 N30 S31 F32 K33 R34 E35 W36 A37 V38 S39 F40 G41 D42 K43 K44 V45 F46 N47 Y48 T49 L50 N51 G52 E53 Q54 Y55 S56 F57 D58 P59 I60

S61 P62 D63 A64 V65 V66 T67 T68 N69 I70 A71 W72 Q73 Y74 S75 D76 V77 N78 V79 V80 A81 V82 H83 H84 A85 L86 L87 T88 S89 G90 L91 P92 V93 S94 E95 V96 D97 I98 V99 C100 T101 L102 P103 L104 T105 E106 Y107 Y108 D109 R110 N111 N112 Q113 P114 N115 T116 E117 N118 I119 E120

R121 K122 K123 A124 N125 F126 R127 K128 K129 I130 T131 L132 N133 G134 G135 D136 T137 F138 T139 I140 K141 D142 V143 K144 V145 M146 P147 E148 S149 I150 P151 A152 G153 Y154 E155 V156 L157 Q158 E159 L160 D161 E162 L163 D164 S165 L166 L167 I168 I169 D170 L171 G172 G173 T174 T175 L176 D177 I178 S179 Q180

V181 M182 G183 K184 L185 S186 G187 I188 S189 K190 I191 Y192 G193 D194 S195 S196 L197 G198 V199 S200 L201 V202 T203 S204 A205 V206 K207 D208 A209 L210 S211 L212 A213 R214 T215 K216 G217 S218 S219 Y220 L221 A222 D223 D224 I225 I226 I227 H228 R229 K230 D231 N232 N233 Y234 L235 K236 Q237 R238 I239 N240

D241 E242 N243 K244 I245 S246 I247 V248 T249 E250 A251 M252 N253 E254 A255 L256 R257 K258 L259 E260 Q261 R262 V263 L264 N265 T266 L267 N268 E269 F270 S271 G272 Y273 T274 H275 V276 M277 V278 I279 G280 G281 G282 A283 E284 L285 I286 C287 D288 A289 V290 K291 K292 H293 T294 Q295 I296 R297 D298 E299 R300

F301 F302 K303 T304 N305 N306 S307 Q308 Y309 D310 L311 V312 N313 G314 M315 Y316 L317 I318

• Molecule 1: PLASMID SEGREGATION PROTEIN PARM

Chain L:

M1 L2 V3 F4 I5 D6 D7 G8 S9 T10 N11 I12 K13 L14 Q15 W16 Q17 E18 S19 D20 G21 T22 I23 K24 Q25 H26 I27 S28 P29 N30 S31 F32 K33 R34 E35 W36 A37 V38 S39 F40 G41 D42 K43 K44 V45 F46 N47 Y48 T49 L50 N51 G52 E53 Q54 Y55 S56 F57 D58 P59 I60

S61 P62 D63 A64 V65 V66 T67 T68 N69 I70 A71 W72 Q73 Y74 S75 D76 V77 N78 V79 V80 A81 V82 H83 H84 A85 L86 L87 T88 S89 G90 L91 P92 V93 S94 E95 V96 D97 I98 V99 C100 T101 L102 P103 L104 T105 E106 Y107 Y108 D109 R110 N111 N112 Q113 P114 N115 T116 E117 N118 I119 E120

R121 K122 K123 A124 N125 F126 R127 K128 K129 I130 T131 L132 N133 G134 G135 D136 T137 F138 T139 I140 K141 D142 V143 K144 V145 M146 P147 E148 S149 I150 P151 A152 G153 Y154 E155 V156 L157 Q158 E159 L160 D161 E162 L163 D164 S165 L166 L167 I168 I169 D170 L171 G172 G173 T174 T175 L176 D177 I178 S179 Q180

V181 M182 G183 K184 L185 S186 G187 I188 S189 K190 I191 Y192 G193 D194 S195 S196 L197 G198 V199 S200 L201 V202 T203 S204 A205 V206 K207 D208 A209 L210 S211 L212 A213 R214 T215 K216 G217 S218 S219 Y220 L221 A222 D223 D224 I225 I226 I227 H228 R229 K230 D231 N232 N233 Y234 L235 K236 Q237 R238 I239 N240

D241 E242 N243 K244 I245 S246 I247 V248 T249 E250 A251 M252 N253 E254 A255 L256 R257 K258 L259 E260 Q261 R262 V263 L264 N265 T266 L267 N268 E269 F270 S271 G272 Y273 T274 H275 V276 M277 V278 I279 G280 G281 G282 A283 E284 L285 I286 C287 D288 A289 V290 K291 K292 H293 T294 Q295 I296 R297 D298 E299 R300

F301 F302 K303 T304 N305 N306 S307 Q308 Y309 D310 L311 V312 N313 G314 M315 Y316 L317 I318

- Molecule 1: PLASMID SEGREGATION PROTEIN PARM

Chain M:

M1 L2 V3 F4 I5 D6 D7 G8 S9 T10 N11 I12 K13 L14 Q15 W16 Q17 E18 S19 D20 G21 T22 I23 K24 Q25 H26 I27 S28 P29 N30 S31 F32 K33 R34 E35 W36 A37 V38 S39 F40 G41 D42 K43 K44 V45 F46 N47 Y48 T49 L50 N51 G52 E53 Q54 Y55 S56 F57 D58 P59 I60

S61 P62 D63 A64 V65 V66 T67 T68 N69 I70 A71 W72 Q73 Y74 S75 D76 V77 N78 V79 V80 A81 V82 H83 H84 A85 L86 L87 T88 S89 G90 L91 P92 V93 S94 E95 V96 D97 I98 V99 C100 T101 L102 P103 L104 T105 E106 Y107 Y108 D109 R110 N111 N112 Q113 P114 N115 T116 E117 N118 I119 E120

R121 K122 K123 A124 N125 F126 R127 K128 K129 I130 T131 L132 N133 G134 G135 D136 T137 F138 T139 I140 K141 D142 V143 K144 V145 M146 P147 E148 S149 I150 P151 A152 G153 Y154 E155 V156 L157 Q158 E159 L160 D161 E162 L163 D164 S165 L166 L167 I168 I169 D170 L171 G172 G173 T174 T175 L176 D177 I178 S179 Q180

V181 M182 G183 K184 L185 S186 G187 I188 S189 K190 I191 Y192 G193 D194 S195 S196 L197 G198 V199 S200 L201 V202 T203 S204 A205 V206 K207 D208 A209 L210 S211 L212 A213 R214 T215 K216 G217 S218 S219 Y220 L221 A222 D223 D224 I225 I226 I227 H228 R229 K230 D231 N232 N233 Y234 L235 K236 Q237 R238 I239 N240

D241 E242 N243 K244 I245 S246 I247 V248 T249 E250 A251 M252 N253 E254 A255 L256 R257 K258 L259 E260 Q261 R262 V263 L264 N265 T266 L267 N268 E269 F270 S271 G272 Y273 T274 H275 V276 M277 V278 I279 G280 G281 G282 A283 E284 L285 I286 C287 D288 A289 V290 K291 K292 H293 T294 Q295 I296 R297 D298 E299 R300

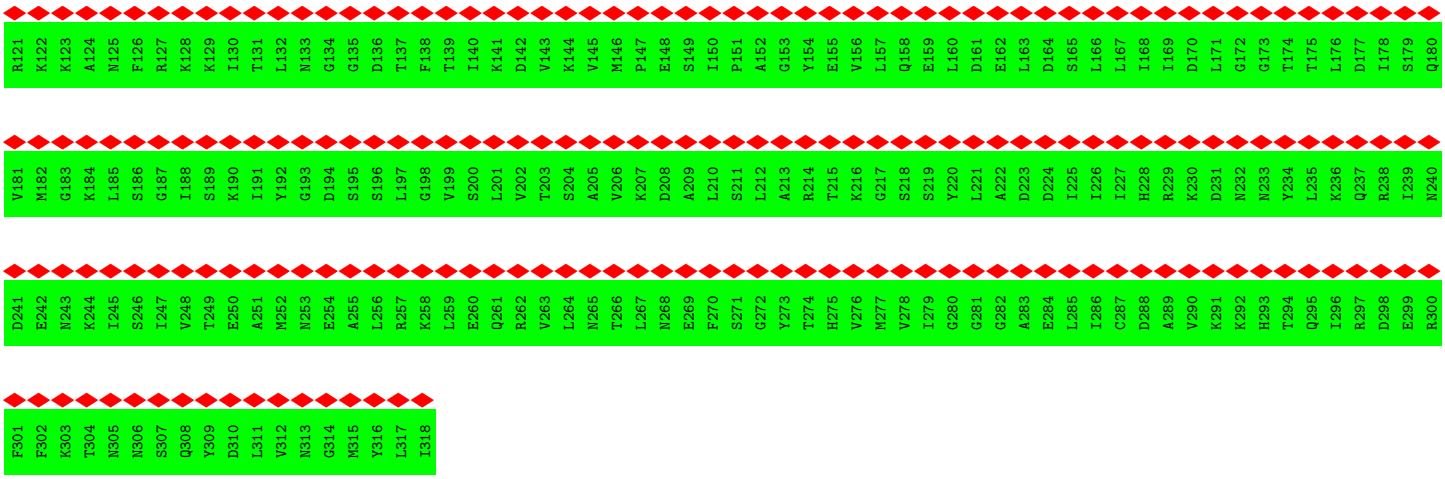
F301 F302 K303 T304 N305 N306 S307 Q308 Y309 D310 L311 V312 N313 G314 M315 Y316 L317 I318

- Molecule 1: PLASMID SEGREGATION PROTEIN PARM

Chain N:

M1 L2 V3 F4 I5 D6 D7 G8 S9 T10 N11 I12 K13 L14 Q15 W16 Q17 E18 S19 D20 G21 T22 I23 K24 Q25 H26 I27 S28 P29 N30 S31 F32 K33 R34 E35 W36 A37 V38 S39 F40 G41 D42 K43 K44 V45 F46 N47 Y48 T49 L50 N51 G52 E53 Q54 Y55 S56 F57 D58 P59 I60

S61 P62 D63 A64 V65 V66 T67 T68 N69 I70 A71 W72 Q73 Y74 S75 D76 V77 N78 V79 V80 A81 V82 H83 H84 A85 L86 L87 T88 S89 G90 L91 P92 V93 S94 E95 V96 D97 I98 V99 C100 T101 L102 P103 L104 T105 E106 Y107 Y108 D109 R110 N111 N112 Q113 P114 N115 T116 E117 N118 I119 E120


R121 K122 K123 A124 N125 F126 R127 K128 K129 I130 T131 L132 N133 G134 G135 D136 T137 F138 T139 I140 K141 D142 V143 K144 V145 M146 P147 E148 S149 I150 P151 A152 G153 Y154 E155 V156 L157 Q158 E159 L160 D161 E162 L163 D164 S165 L166 L167 I168 I169 D170 L171 G172 G173 T174 T175 L176 D177 I178 S179 Q180
V181 M182 G183 K184 L185 S186 G187 I188 S189 K190 I191 Y192 G193 D194 S195 S196 L197 G198 V199 S200 L201 V202 T203 S204 A205 V206 K207 D208 A209 L210 S211 L212 A213 R214 T215 K216 G217 S218 S219 Y220 L221 A222 D223 D224 I225 I226 I227 H228 R229 K230 D231 N232 N233 Y234 L235 K236 Q237 R238 I239 N240
D241 E242 N243 K244 I245 S246 I247 V248 T249 E250 A251 M252 N253 E254 A255 L256 R257 K258 L259 E260 Q261 R262 V263 L264 N265 T266 L267 N268 E269 F270 S271 G272 Y273 T274 H275 V276 M277 V278 I279 G280 G281 G282 A283 E284 L285 I286 C287 D288 A289 V290 K291 K292 H293 T294 Q295 I296 R297 D298 E299 R300
F301 P302 K303 T304 N305 N306 S307 Q308 Y309 D310 L311 V312 N313 G314 M315 Y316 L317 I318

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	HELICAL	Depositor
Imposed symmetry	HELICAL, twist=Not provided°, rise=Not provided Å, axial sym=Not provided	Depositor
Number of segments used	Not provided	
Resolution determination method	Not provided	
CTF correction method	Not provided	
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	0.3	Depositor
Minimum defocus (nm)	3000	Depositor
Maximum defocus (nm)	6000	Depositor
Magnification	Not provided	
Image detector	FEI FALCON II (4k x 4k)	Depositor
Maximum map value	5.497	Depositor
Minimum map value	-2.327	Depositor
Average map value	0.000	Depositor
Map value standard deviation	1.000	Depositor
Recommended contour level	1.3	Depositor
Map size (Å)	104.0, 104.0, 312.0	wwPDB
Map dimensions	40, 40, 120	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	2.6, 2.6, 2.6	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).

There are no protein, RNA or DNA chains available to summarize Z scores of covalent bonds and angles.

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	318	0	0	0	0
1	B	318	0	0	0	0
1	C	318	0	0	0	0
1	D	318	0	0	0	0
1	E	318	0	0	1	0
1	F	318	0	0	0	0
1	G	318	0	0	0	0
1	H	318	0	0	1	0
1	I	318	0	0	0	0
1	J	318	0	0	0	0
1	K	318	0	0	0	0
1	L	318	0	0	0	0
1	M	318	0	0	0	0
1	N	318	0	0	0	0
All	All	4452	0	0	1	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 0.

All (1) 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:E:20:ASP:CA	1:H:160:LEU:CA	2.15	1.23

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone

There are no protein backbone outliers to report in this entry.

5.3.2 Protein sidechains

There are no protein residues with a non-rotameric sidechain to report in this entry.

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 (i)

There are no chain breaks in this entry.

6 Map visualisation

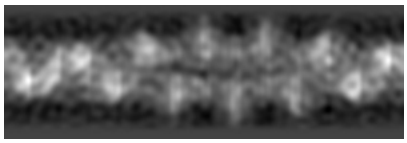
This section contains visualisations of the EMDB entry EMD-2848. These allow visual inspection of the internal detail of the map and identification of artifacts.

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

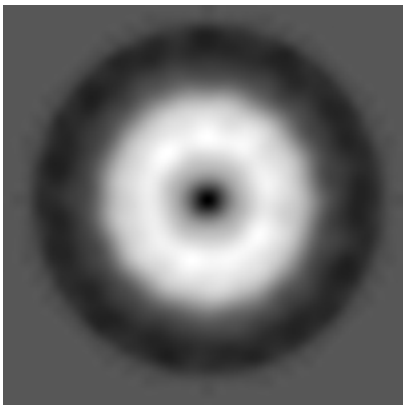
6.1 Orthogonal projections

6.1.1 Primary map

X



Y



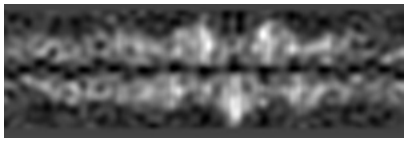
Z

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

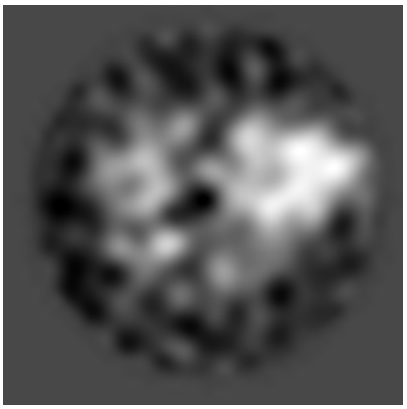
6.2 Central slices (i)

6.2.1 Primary map

X Index: 20



Y Index: 20



Z Index: 60

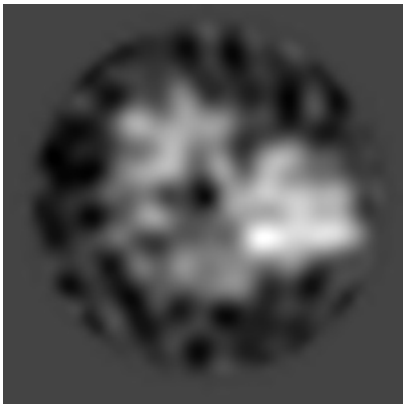
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

6.3.1 Primary map

X Index: 15

Y Index: 14



Z Index: 79

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

6.4 Orthogonal surface views (i)

6.4.1 Primary map

X Y Z

The images above show the 3D surface view of the map at the recommended contour level 1.3. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

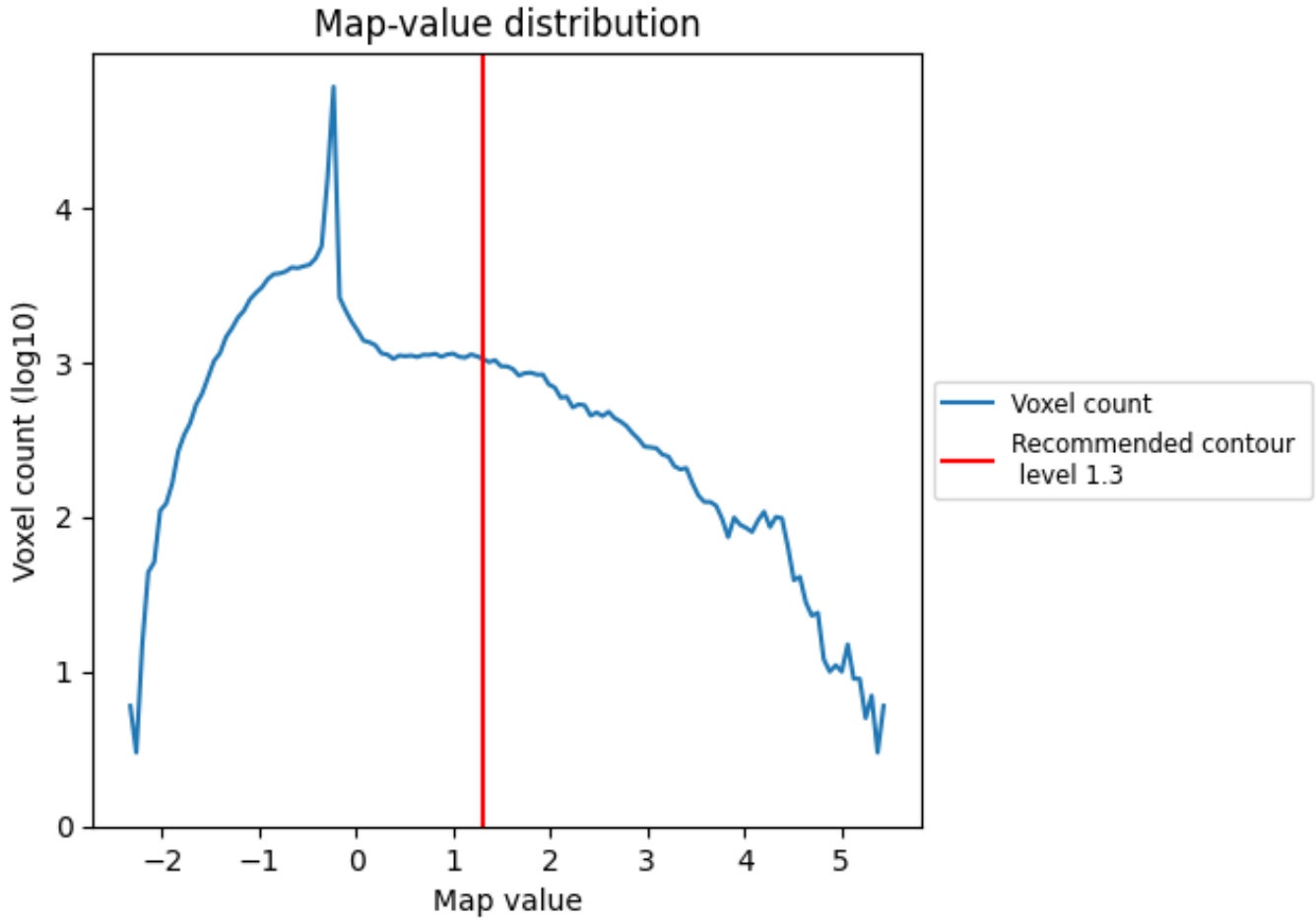
6.5 Mask visualisation (i)

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

7 Map analysis

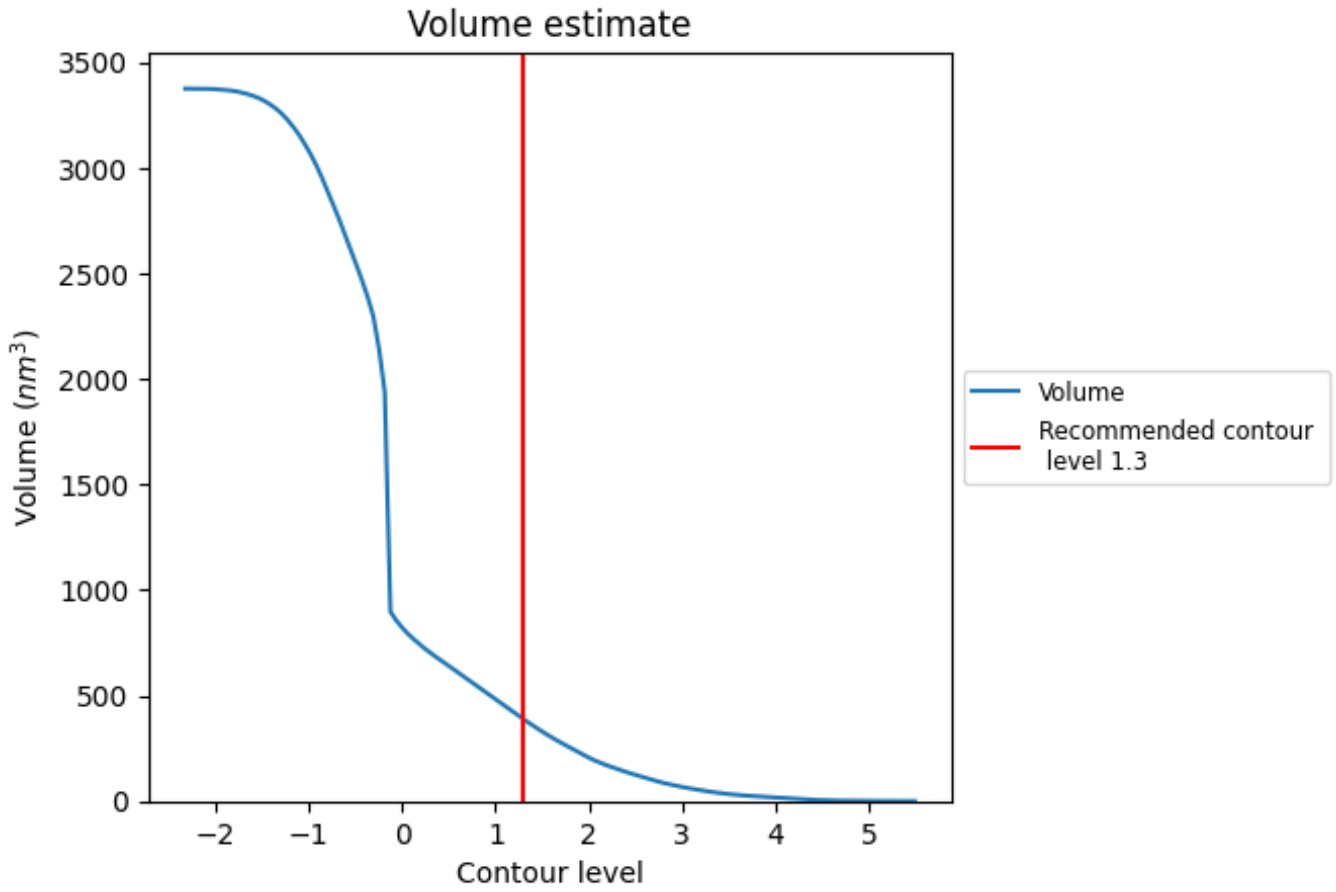
This section contains the results of statistical analysis of the map.

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 (i)



The volume at the recommended contour level is 388 nm^3; this corresponds to an approximate mass of 351 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)

This section was not generated. The rotationally averaged power spectrum is only generated for cubic maps.

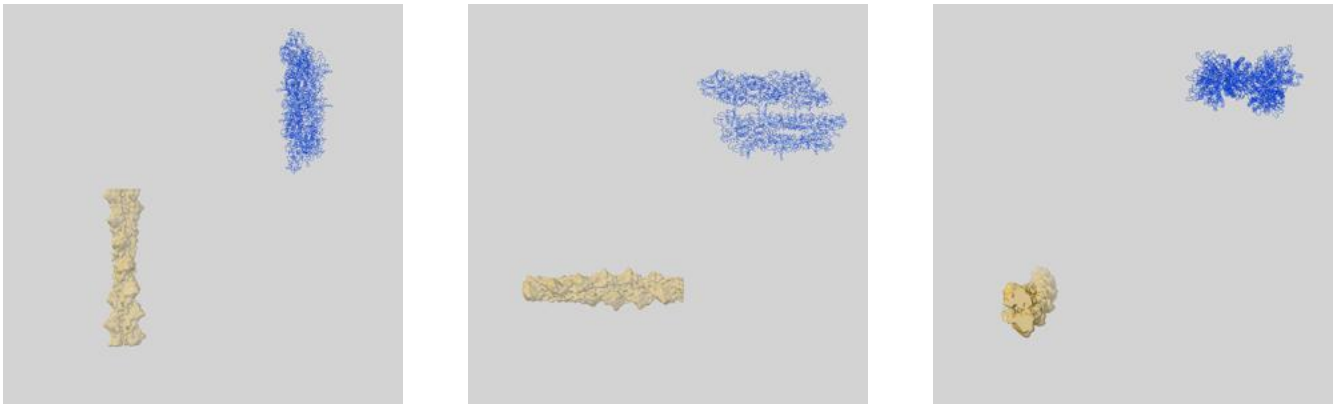
8 Fourier-Shell correlation (i)

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

9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-2848 and PDB model 5AI7. Per-residue inclusion information can be found in section 3 on page 5.

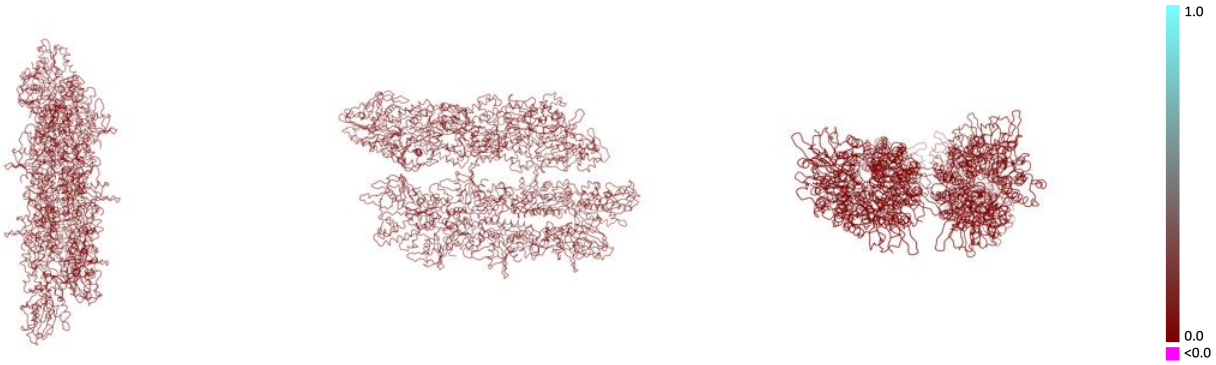
9.1 Map-model overlay



X Y Z

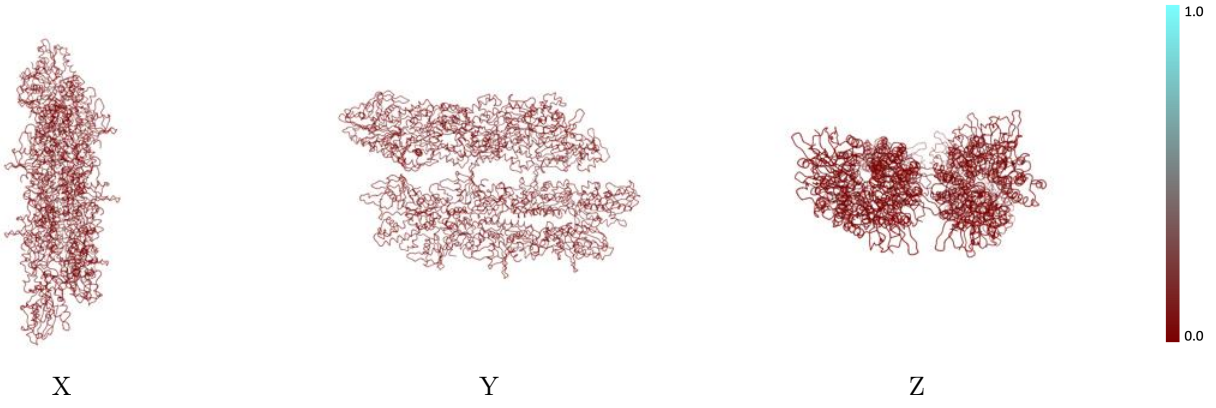
The images above show the 3D surface view of the map at the recommended contour level 1.3 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model



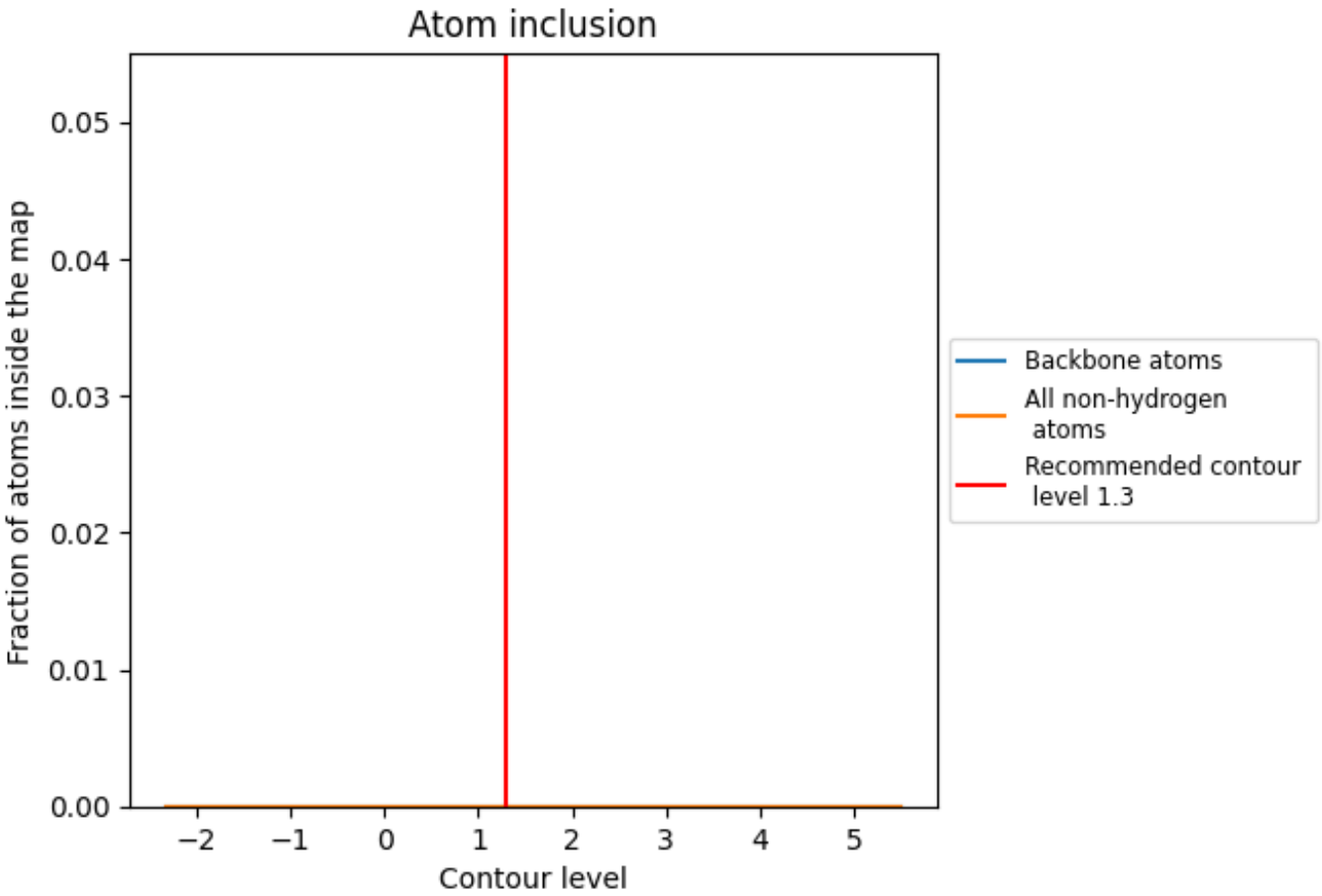
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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



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 (1.3).

9.4 Atom inclusion (i)



At the recommended contour level, 0% of all backbone atoms, 0% 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 (1.3) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.0000	0.0000
A	0.0000	0.0000
B	0.0000	0.0000
C	0.0000	0.0000
D	0.0000	0.0000
E	0.0000	0.0000
F	0.0000	0.0000
G	0.0000	0.0000
H	0.0000	0.0000
I	0.0000	0.0000
J	0.0000	0.0000
K	0.0000	0.0000
L	0.0000	0.0000
M	0.0000	0.0000
N	0.0000	0.0000