WORLDWIDE wwPDB PROTEIN DATA BANK

wwPDB X-ray Structure Validation Summary Report ⓘ

Jan 30, 2024 – 09:55 AM EST

PDB ID : 1FOU
Title : CONNECTOR PROTEIN FROM BACTERIOPHAGE PHI29
Authors : Simpson, A.A.; Tao, Y.; Leiman, P.G.; Badasso, M.O.; He, Y.; Jardine, P.J.; Olson, N.H.; Morais, M.C.; Grimes, S.N.; Anderson, D.L.; Baker, T.S.; Rossmann, M.G.
Deposited on : 2000-08-28
Resolution : 3.20 Å(reported)

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

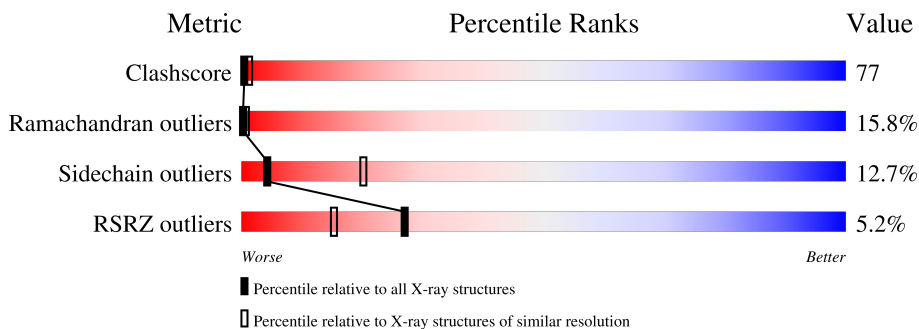|		
MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.13
EDS	:	2.36
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

1　Overall quality at a glance ⓘ

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 3.20 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		77
Ramachandran outliers		15.8%
Sidechain outliers		12.7%
RSRZ outliers		5.2%

Worse　　　　　　　　　　　　　*Better*

■ Percentile relative to all X-ray structures

▯ Percentile relative to X-ray structures of similar resolution

Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
Clashscore	141614	1253 (3.20-3.20)
Ramachandran outliers	138981	1234 (3.20-3.20)
Sidechain outliers	138945	1233 (3.20-3.20)
RSRZ outliers	127900	1095 (3.20-3.20)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower 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 electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	309	3% · 20% 46% 15% · 17%
1	B	309	4% · 17% 47% 16% · 17%
1	C	309	5% · 15% 51% 15% · 17%
1	D	309	2% · 13% 54% 14% · 17%
1	E	309	11% · 16% 49% 16% · 17%
1	F	309	6% · 20% 45% 14% · 17%
1	G	309	5% · 17% 49% 16% · 17%

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Mol	Chain	Length	Quality of chain
1	H	309	7% 17% 51% 15% · 17%
1	I	309	2% 19% 48% 14% · 17%
1	J	309	2% 16% 49% 16% · 17%
1	K	309	4% 17% 49% 14% · 17%
1	L	309	2% 22% 42% 15% · 17%

2 Entry composition (i)

There is only 1 type of molecule in this entry. The entry contains 25272 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, 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 UPPER COLLAR PROTEIN.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	257	Total	C	N	O	S	0	0	0
			2106	1350	348	401	7			
1	B	257	Total	C	N	O	S	0	0	0
			2106	1350	348	401	7			
1	C	257	Total	C	N	O	S	0	0	0
			2106	1350	348	401	7			
1	D	257	Total	C	N	O	S	0	0	0
			2106	1350	348	401	7			
1	E	257	Total	C	N	O	S	0	0	0
			2106	1350	348	401	7			
1	F	257	Total	C	N	O	S	0	0	0
			2106	1350	348	401	7			
1	G	257	Total	C	N	O	S	0	0	0
			2106	1350	348	401	7			
1	H	257	Total	C	N	O	S	0	0	0
			2106	1350	348	401	7			
1	I	257	Total	C	N	O	S	0	0	0
			2106	1350	348	401	7			
1	J	257	Total	C	N	O	S	0	0	0
			2106	1350	348	401	7			
1	K	257	Total	C	N	O	S	0	0	0
			2106	1350	348	401	7			
1	L	257	Total	C	N	O	S	0	0	0
			2106	1350	348	401	7			

There are 60 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	225	LYS	LEU	conflict	UNP P04332
A	226	LEU	GLY	conflict	UNP P04332
A	227	GLN	ILE	conflict	UNP P04332
A	228	THR	LYS	conflict	UNP P04332
A	251	ASP	GLU	conflict	UNP P04332

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Chain	Residue	Modelled	Actual	Comment	Reference
B	225	LYS	LEU	conflict	UNP P04332
B	226	LEU	GLY	conflict	UNP P04332
B	227	GLN	ILE	conflict	UNP P04332
B	228	THR	LYS	conflict	UNP P04332
B	251	ASP	GLU	conflict	UNP P04332
C	225	LYS	LEU	conflict	UNP P04332
C	226	LEU	GLY	conflict	UNP P04332
C	227	GLN	ILE	conflict	UNP P04332
C	228	THR	LYS	conflict	UNP P04332
C	251	ASP	GLU	conflict	UNP P04332
D	225	LYS	LEU	conflict	UNP P04332
D	226	LEU	GLY	conflict	UNP P04332
D	227	GLN	ILE	conflict	UNP P04332
D	228	THR	LYS	conflict	UNP P04332
D	251	ASP	GLU	conflict	UNP P04332
E	225	LYS	LEU	conflict	UNP P04332
E	226	LEU	GLY	conflict	UNP P04332
E	227	GLN	ILE	conflict	UNP P04332
E	228	THR	LYS	conflict	UNP P04332
E	251	ASP	GLU	conflict	UNP P04332
F	225	LYS	LEU	conflict	UNP P04332
F	226	LEU	GLY	conflict	UNP P04332
F	227	GLN	ILE	conflict	UNP P04332
F	228	THR	LYS	conflict	UNP P04332
F	251	ASP	GLU	conflict	UNP P04332
G	225	LYS	LEU	conflict	UNP P04332
G	226	LEU	GLY	conflict	UNP P04332
G	227	GLN	ILE	conflict	UNP P04332
G	228	THR	LYS	conflict	UNP P04332
G	251	ASP	GLU	conflict	UNP P04332
H	225	LYS	LEU	conflict	UNP P04332
H	226	LEU	GLY	conflict	UNP P04332
H	227	GLN	ILE	conflict	UNP P04332
H	228	THR	LYS	conflict	UNP P04332
H	251	ASP	GLU	conflict	UNP P04332
I	225	LYS	LEU	conflict	UNP P04332
I	226	LEU	GLY	conflict	UNP P04332
I	227	GLN	ILE	conflict	UNP P04332
I	228	THR	LYS	conflict	UNP P04332
I	251	ASP	GLU	conflict	UNP P04332
J	225	LYS	LEU	conflict	UNP P04332
J	226	LEU	GLY	conflict	UNP P04332

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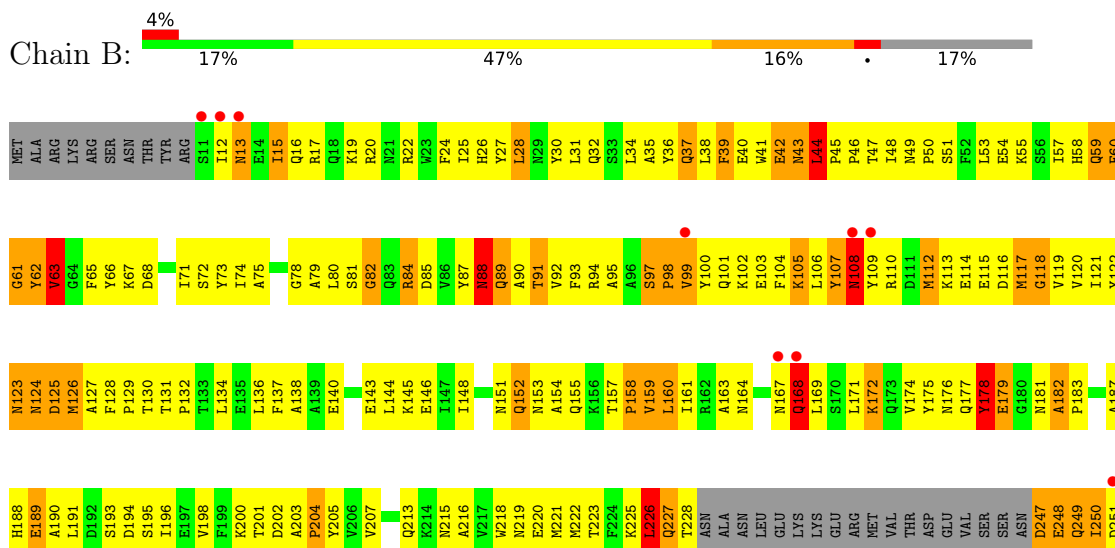| Chain	Residue	Modelled	Actual	Comment	Reference
J	227	GLN	ILE	conflict	UNP P04332
J	228	THR	LYS	conflict	UNP P04332
J	251	ASP	GLU	conflict	UNP P04332
K	225	LYS	LEU	conflict	UNP P04332
K	226	LEU	GLY	conflict	UNP P04332
K	227	GLN	ILE	conflict	UNP P04332
K	228	THR	LYS	conflict	UNP P04332
K	251	ASP	GLU	conflict	UNP P04332
L	225	LYS	LEU	conflict	UNP P04332
L	226	LEU	GLY	conflict	UNP P04332
L	227	GLN	ILE	conflict	UNP P04332
L	228	THR	LYS	conflict	UNP P04332
L	251	ASP	GLU	conflict	UNP P04332

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 and electron 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 dot above a residue indicates a poor fit to the electron density (RSRZ > 2). 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.
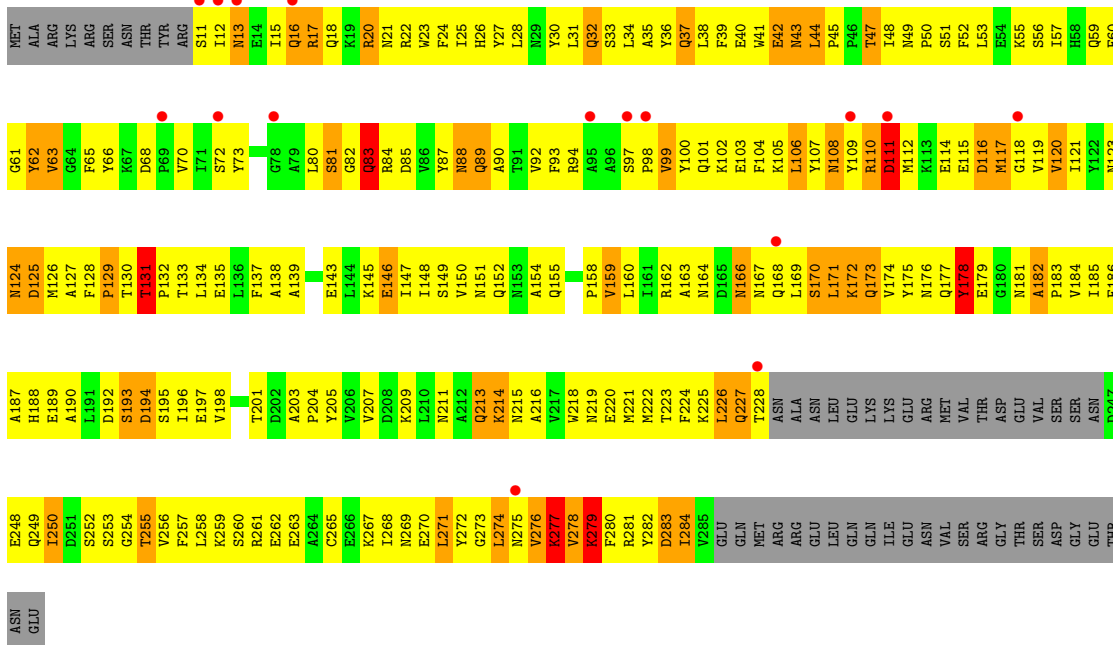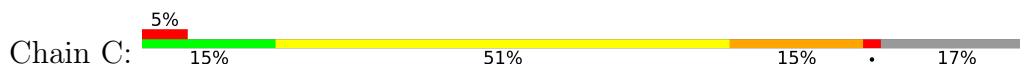
• Molecule 1: UPPER COLLAR PROTEIN
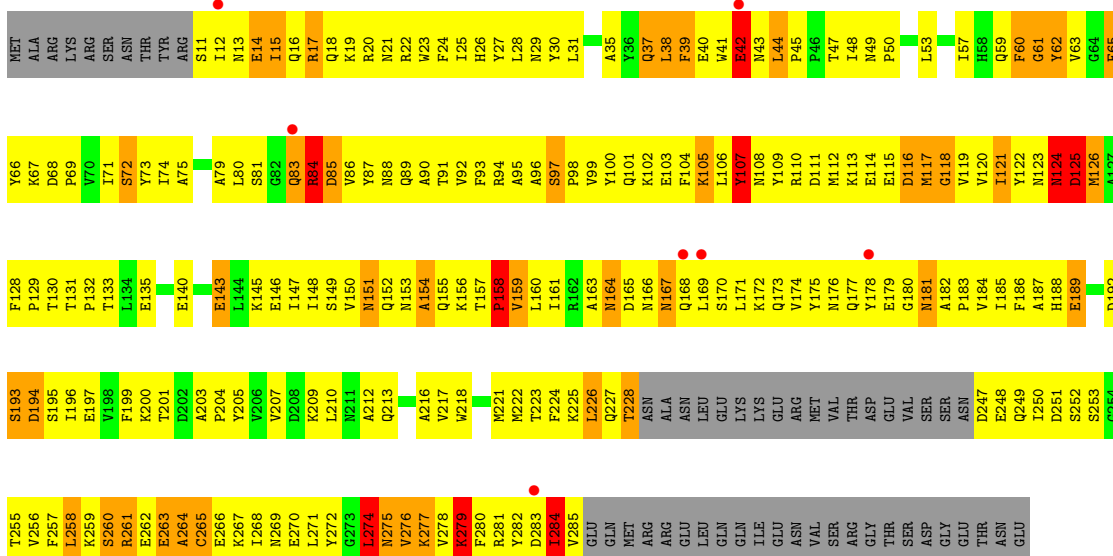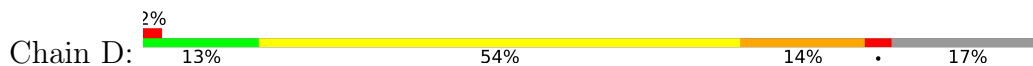
Chain A:
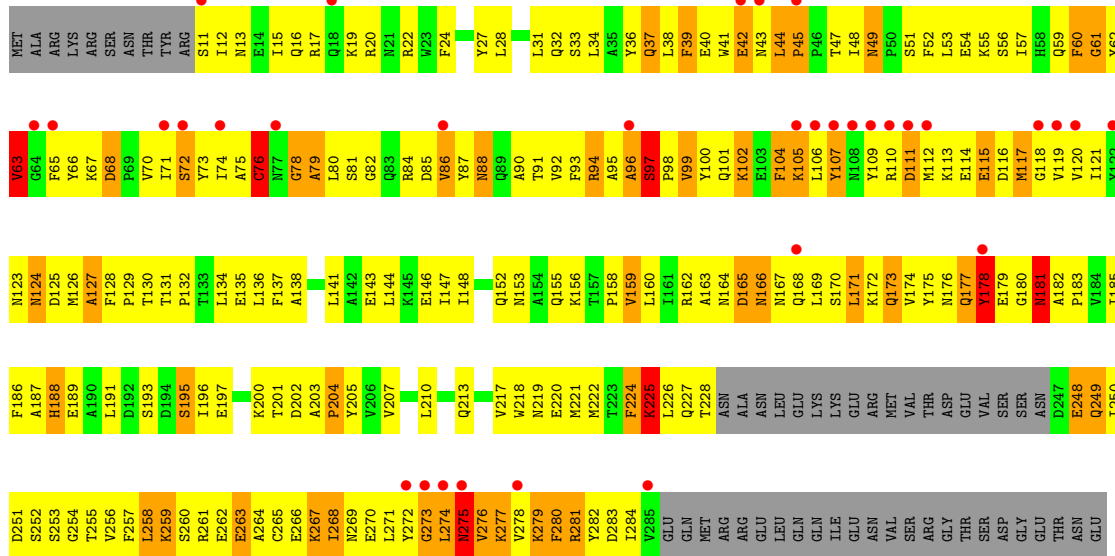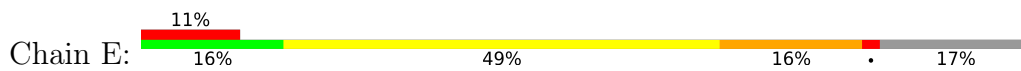

• Molecule 1: UPPER COLLAR PROTEIN

Chain B:

S252 S253 G254 T255 V256 F257 L258 K259 S260 R261 E262 E263 A264 C265 E266 K267 I268 N269 E270 L271 Y272 G273 L274 N275 V276 K277 V278 K279 F280 R281 Y282 D283 I284 V285 GLU GLN MET ARG ARG GLU LEU GLN GLN ILE GLU ASN VAL SER ARG GLY THR SER ASP GLU THR ASN GLU

● Molecule 1: UPPER COLLAR PROTEIN

Chain C:

MET ALA ARG LYS ARG SER ASN THR TYR ARG S11 I12 N13 E14 I15 Q16 R17 Q18 K19 R20 N21 R22 W23 F24 I25 H26 Y27 L28 N29 Y30 L31 Q32 S33 L34 A35 Y36 Q37 L38 F39 E40 W41 E42 N43 L44 P45 P46 T47 I48 N49 P50 S51 F52 L53 E54 K55 S56 I57 H58 Q59 F60

G61 Y62 V63 G64 F65 Y66 K67 D68 P69 V70 I71 S72 Y73 G78 A79 L80 S81 G82 Q83 R84 D85 V86 Y87 N88 Q89 A90 T91 V92 F93 R94 A95 A96 S97 P98 V99 Y100 Q101 K102 E103 F104 K105 L106 Y107 N108 R109 R110 D111 M112 K113 E114 E115 D116 M117 G118 V119 V120 I121 Y122 N123

N124 D125 M126 A127 F128 P129 T130 T131 P132 T133 L134 E135 L136 F137 A138 A139 E143 L144 K145 E146 I147 I148 S149 V150 N151 Q152 N153 A154 Q155 P158 V159 L160 I161 R162 A163 N164 D165 N166 N167 Q168 L169 S170 L171 K172 Q173 V174 Y175 N176 Q177 Y178 E179 G180 N181 A182 P183 V184 I185 F186

A187 H188 E189 A190 L191 D192 S193 D194 S195 I196 E197 V198 T201 D202 A203 P204 Y205 V206 V207 D208 K209 L210 N211 A212 Q213 K214 N215 A216 V217 W218 N219 E220 M221 M222 T223 F224 K225 L226 Q227 T228 ASN ALA ASN LEU GLU LYS LYS GLU ARG MET VAL THR ASP GLU VAL SER SER ASN D247

E248 Q249 I250 D251 S252 S253 G254 T255 V256 F257 L258 K259 S260 R261 E262 E263 A264 C265 E266 K267 I268 N269 E270 L271 Y272 G273 L274 N275 V276 K277 V278 K279 F280 R281 Y282 D283 I284 V285 GLU GLN MET ARG GLU GLU LEU GLN GLN ILE GLU ASN VAL SER ARG GLY THR SER ASP GLY GLU THR.

ASN GLU

● Molecule 1: UPPER COLLAR PROTEIN

Chain D:

MET ALA ARG LYS ARG SER ASN THR TYR ARG S11 I12 N13 E14 I15 Q16 R17 Q18 K19 R20 N21 R22 W23 F24 I25 H26 Y27 L28 N29 Y30 L31 A35 Y36 Q37 L38 F39 E40 W41 E42 N43 L44 P45 P46 T47 I48 N49 P50 L53 I57 H58 Q59 F60 G61 Y62 V63 G64 F65

Y66 K67 D68 P69 V70 I71 S72 Y73 I74 A75 A79 L80 S81 G82 Q83 R84 D85 V86 Y87 N88 Q89 A90 T91 V92 F93 R94 A95 A96 S97 P98 V99 Y100 Q101 K102 E103 F104 K105 L106 Y107 N108 Y109 R110 D111 M112 K113 E114 E115 D116 M117 G118 V119 V120 I121 Y122 N123 N124 D125 M126 A127

F128 P129 T130 T131 P132 T133 L134 E135 E140 E143 L144 K145 E146 I147 I148 S149 V150 N151 Q152 N153 A154 Q155 K156 T157 P158 V159 L160 I161 R162 A163 N164 D165 N166 N167 Q168 L169 S170 L171 K172 Q173 V174 Y175 N176 Q177 Y178 E179 G180 N181 A182 P183 V184 I185 F186 A187 H188 E189 D192

S193 D194 S195 I196 E197 F199 V198 K200 T201 D202 A203 P204 Y205 V206 V207 D208 K209 L210 N211 A212 Q213 A216 V217 W218 M221 M222 T223 F224 K225 L226 Q227 T228 ASN ALA ASN LEU GLU LYS LYS GLU ARG MET VAL THR ASP GLU VAL SER SER ASN D247 E248 Q249 I250 D251 S252 S253 G254

T255 V256 F257 L258 K259 S260 R261 E262 E263 A264 C265 E266 K267 I268 N269 E270 L271 Y272 G273 L274 N275 V276 K277 V278 K279 F280 R281 Y282 D283 I284 V285 GLU GLN MET ARG ARG GLU LEU GLN GLN ILE GLU GLU ASN VAL SER ARG GLY THR SER ASP GLY GLU THR ASN GLU

● Molecule 1: UPPER COLLAR PROTEIN

Chain E:

11%

16%   49%   16%   •   17%

- Molecule 1: UPPER COLLAR PROTEIN

Chain F:

6%

20%   45%   14%   •   17%

- Molecule 1: UPPER COLLAR PROTEIN

Chain G:

5%

17%   49%   16%   •   17%

• Molecule 1: UPPER COLLAR PROTEIN
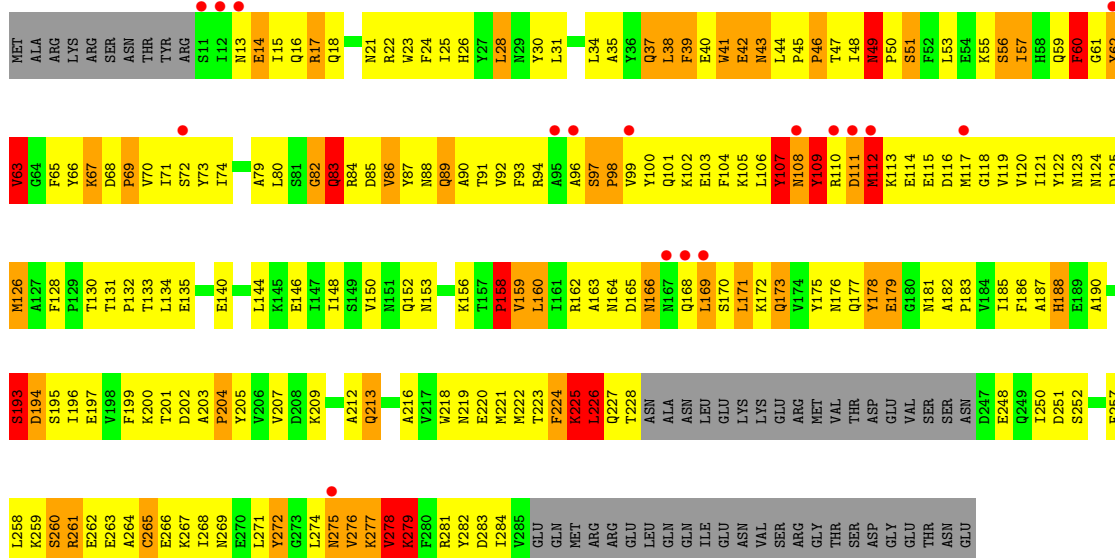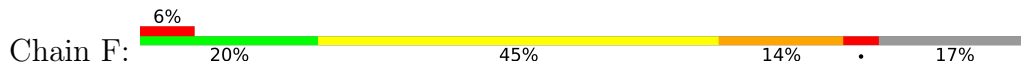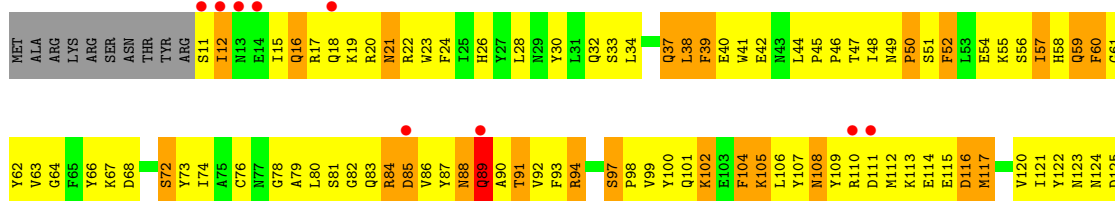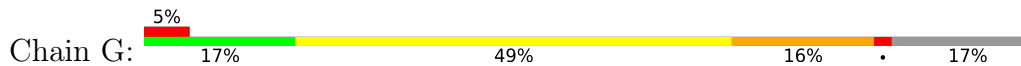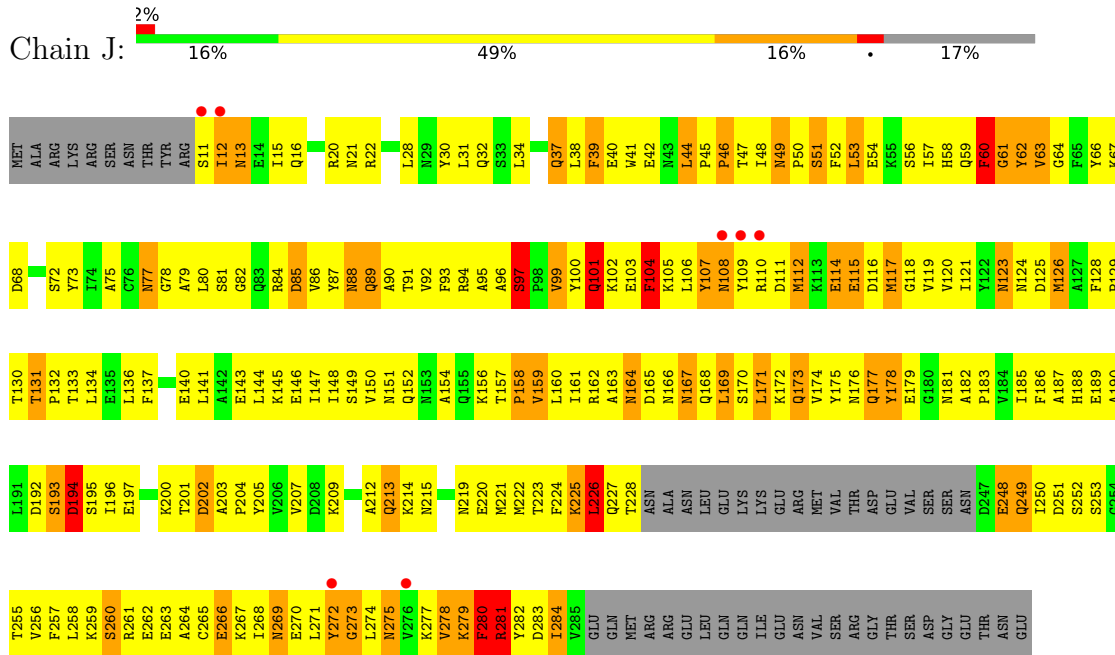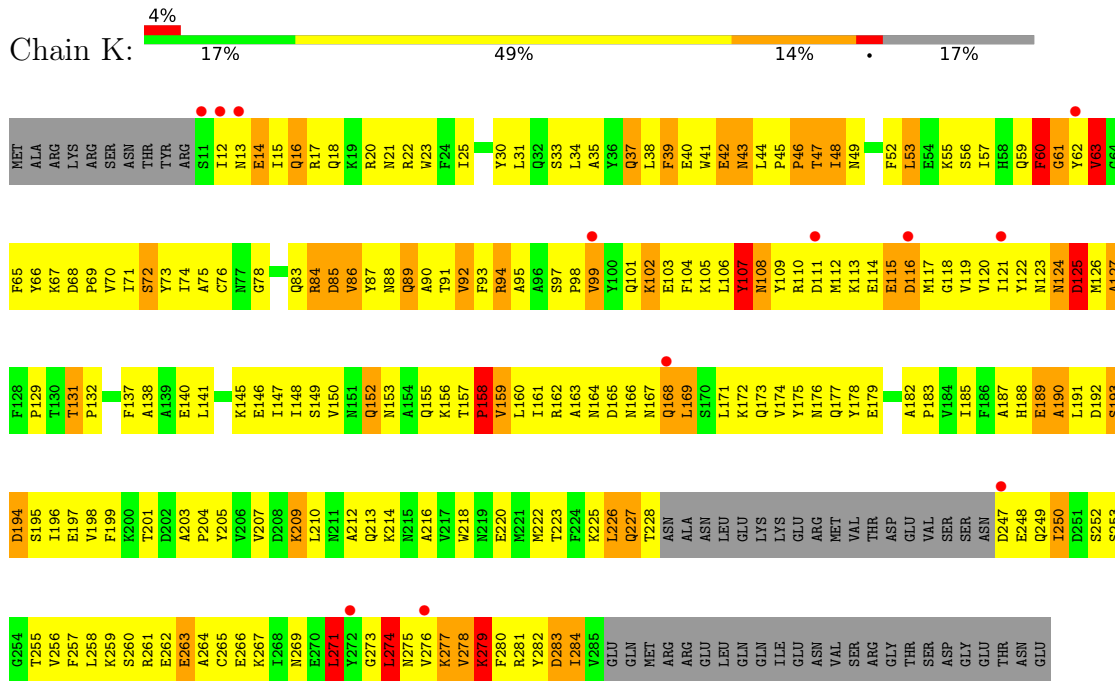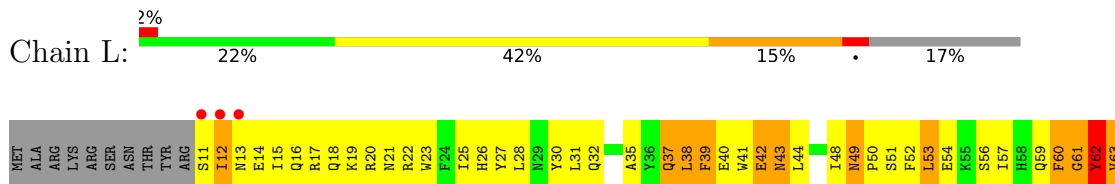
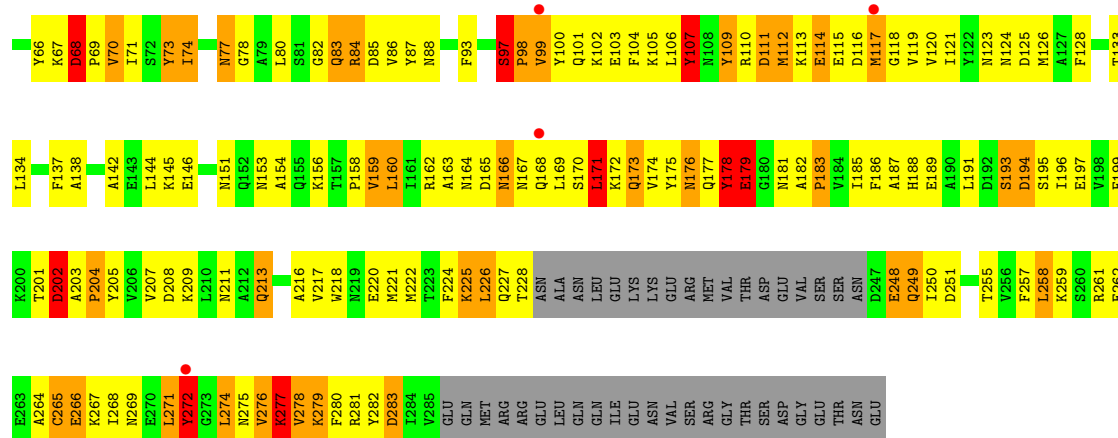Chain H:

• Molecule 1: UPPER COLLAR PROTEIN

Chain I:

• Molecule 1: UPPER COLLAR PROTEIN

Chain J:

• Molecule 1: UPPER COLLAR PROTEIN

Chain K:

• Molecule 1: UPPER COLLAR PROTEIN

Chain L:

4 Data and refinement statistics ⓘ

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α, β, γ	177.16Å 169.24Å 185.44Å 90.00° 114.10° 90.00°	Depositor
Resolution (Å)	9.00 – 3.20 48.53 – 3.50	Depositor EDS
% Data completeness (in resolution range)	99.5 (9.00-3.20) 99.0 (48.53-3.50)	Depositor EDS
R_{merge}	0.03	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	14.94 (at 3.48Å)	Xtriage
Refinement program	CNS	Depositor
R, R_{free}	0.290 , 0.360 0.277 , (Not available)	Depositor DCC
R_{free} test set	No test flags present.	wwPDB-VP
Wilson B-factor (Å^2)	56.7	Xtriage
Anisotropy	0.434	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.29 , 42.0	EDS
L-test for twinning[2]	$< |L| > = 0.50, < L^2 > = 0.33$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.80	EDS
Total number of atoms	25272	wwPDB-VP
Average B, all atoms (Å^2)	15.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.95% of the height of the origin peak. No significant pseudotranslation is detected.*

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[1]Intensities estimated from amplitudes.
[2]Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

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	0.47	0/2153	0.73	2/2918 (0.1%)
1	B	0.46	0/2153	0.74	2/2918 (0.1%)
1	C	0.46	0/2153	0.73	0/2918
1	D	0.44	0/2153	0.75	0/2918
1	E	0.43	0/2153	0.71	1/2918 (0.0%)
1	F	0.45	0/2153	0.70	1/2918 (0.0%)
1	G	0.44	0/2153	0.71	1/2918 (0.0%)
1	H	0.43	0/2153	0.70	2/2918 (0.1%)
1	I	0.49	0/2153	0.77	2/2918 (0.1%)
1	J	0.46	0/2153	0.78	4/2918 (0.1%)
1	K	0.45	0/2153	0.71	0/2918
1	L	0.49	0/2153	0.72	2/2918 (0.1%)
All	All	0.46	0/25836	0.73	17/35016 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	D	0	1
1	L	0	1
All	All	0	2

There are no bond length outliers.

The worst 5 of 17 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	B	44	LEU	CA-CB-CG	6.78	130.90	115.30
1	E	177	GLN	N-CA-C	-6.53	93.38	111.00
1	G	38	LEU	CA-CB-CG	6.40	130.03	115.30
1	H	38	LEU	CA-CB-CG	6.34	129.88	115.30
1	H	177	GLN	N-CA-C	-6.27	94.06	111.00

There are no chirality outliers.

All (2) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	D	107	TYR	Sidechain
1	L	62	TYR	Sidechain

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2106	0	2051	310	0
1	B	2106	0	2051	346	0
1	C	2106	0	2051	373	0
1	D	2106	0	2051	395	0
1	E	2106	0	2051	375	0
1	F	2106	0	2051	332	0
1	G	2106	0	2051	364	0
1	H	2106	0	2051	332	0
1	I	2106	0	2051	343	0
1	J	2106	0	2051	370	0
1	K	2106	0	2051	359	0
1	L	2106	0	2051	314	0
All	All	25272	0	24612	3838	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 77.

The worst 5 of 3838 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:F:119:VAL:HG11	1:F:268:ILE:HB	1.31	1.11
1:I:275:ASN:HB2	1:I:277:LYS:HE3	1.18	1.11
1:C:43:ASN:HB2	1:C:277:LYS:HD2	1.33	1.10
1:D:163:ALA:HB3	1:E:187:ALA:HB2	1.26	1.10
1:K:278:VAL:HG23	1:K:279:LYS:H	1.14	1.10

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 X-ray entries followed by that with respect to entries of similar resolution.

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	253/309 (82%)	170 (67%)	48 (19%)	35 (14%)	0	1
1	B	253/309 (82%)	160 (63%)	49 (19%)	44 (17%)	0	0
1	C	253/309 (82%)	172 (68%)	45 (18%)	36 (14%)	0	1
1	D	253/309 (82%)	150 (59%)	60 (24%)	43 (17%)	0	0
1	E	253/309 (82%)	151 (60%)	50 (20%)	52 (21%)	0	0
1	F	253/309 (82%)	166 (66%)	47 (19%)	40 (16%)	0	1
1	G	253/309 (82%)	160 (63%)	53 (21%)	40 (16%)	0	1
1	H	253/309 (82%)	176 (70%)	41 (16%)	36 (14%)	0	1
1	I	253/309 (82%)	187 (74%)	34 (13%)	32 (13%)	0	1
1	J	253/309 (82%)	175 (69%)	39 (15%)	39 (15%)	0	1
1	K	253/309 (82%)	169 (67%)	46 (18%)	38 (15%)	0	1
1	L	253/309 (82%)	163 (64%)	46 (18%)	44 (17%)	0	0
All	All	3036/3708 (82%)	1999 (66%)	558 (18%)	479 (16%)	0	1

5 of 479 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	12	ILE
1	A	42	GLU
1	A	92	VAL
1	A	97	SER
1	A	105	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 X-ray entries followed by that with respect to entries of similar resolution.

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	230/278 (83%)	198 (86%)	32 (14%)	3	16
1	B	230/278 (83%)	201 (87%)	29 (13%)	4	21
1	C	230/278 (83%)	199 (86%)	31 (14%)	4	18
1	D	230/278 (83%)	201 (87%)	29 (13%)	4	21
1	E	230/278 (83%)	209 (91%)	21 (9%)	9	34
1	F	230/278 (83%)	196 (85%)	34 (15%)	3	14
1	G	230/278 (83%)	200 (87%)	30 (13%)	4	19
1	H	230/278 (83%)	203 (88%)	27 (12%)	5	23
1	I	230/278 (83%)	202 (88%)	28 (12%)	5	22
1	J	230/278 (83%)	197 (86%)	33 (14%)	3	15
1	K	230/278 (83%)	200 (87%)	30 (13%)	4	19
1	L	230/278 (83%)	203 (88%)	27 (12%)	5	23
All	All	2760/3336 (83%)	2409 (87%)	351 (13%)	4	20

5 of 351 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	H	278	VAL
1	J	213	GLN
1	I	88	ASN
1	I	274	LEU
1	K	85	ASP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 154 such sidechains are listed below:

Mol	Chain	Res	Type
1	I	164	ASN
1	L	29	ASN
1	J	37	GLN
1	K	37	GLN
1	L	123	ASN

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 ⓘ

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q< 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å²)	Q<0.9
1	A	257/309 (83%)	0.01	8 (3%)	49	32	1, 7, 33, 38	0
1	B	257/309 (83%)	0.17	11 (4%)	35	22	1, 13, 32, 46	0
1	C	257/309 (83%)	0.27	16 (6%)	20	11	1, 13, 32, 39	0
1	D	257/309 (83%)	0.06	7 (2%)	54	39	1, 16, 35, 43	0
1	E	257/309 (83%)	0.56	33 (12%)	3	2	1, 21, 35, 42	0
1	F	257/309 (83%)	0.22	17 (6%)	18	11	1, 16, 35, 40	0
1	G	257/309 (83%)	0.22	15 (5%)	23	13	1, 14, 36, 51	0
1	H	257/309 (83%)	0.41	21 (8%)	11	6	1, 16, 34, 41	0
1	I	257/309 (83%)	0.00	7 (2%)	54	39	1, 9, 32, 43	0
1	J	257/309 (83%)	-0.01	7 (2%)	54	39	1, 9, 30, 43	0
1	K	257/309 (83%)	0.21	12 (4%)	31	19	1, 13, 33, 47	0
1	L	257/309 (83%)	0.01	7 (2%)	54	39	1, 11, 32, 41	0
All	All	3084/3708 (83%)	0.18	161 (5%)	27	15	1, 13, 34, 51	0

The worst 5 of 161 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	H	11	SER	7.4
1	B	108	ASN	6.1
1	A	11	SER	6.1
1	C	11	SER	5.6
1	H	12	ILE	5.5

6.2 Non-standard residues in protein, DNA, RNA chains ⓘ

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

6.3 Carbohydrates ⓘ

There are no monosaccharides in this entry.

6.4 Ligands ⓘ

There are no ligands in this entry.

6.5 Other polymers ⓘ

There are no such residues in this entry.