

wwPDB X-ray Structure Validation Summary Report (i)

Jun 15, 2024 – 08:03 AM EDT

PDB ID : 1YLO

Title: Crystal Structure of Protein of Unknown Function (Possible Aminopeptidase)

S2589 from Shigella flexneri 2a str. 2457T

Authors: Nocek, B.P.; Midwest Center for Structural Genomics (MCSG)

Deposited on : 2005-01-19

Resolution : 2.15 Å(reported)

This is a wwPDB X-ray Structure 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/XrayValidationReportHelp 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 (1)) were used in the production of this report:

 $Mol Probity \quad : \quad 4.02b\text{--}467$

Mogul : 2022.3.0, CSD as543be (2022)

Xtriage (Phenix) : 1.20.1 EDS : 2.37.1

Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)

 $Refmac \quad : \quad 5.8.0158$

CCP4 : 7.0.044 (Gargrove) oteins) : Engh & Huber (2001)

Ideal geometry (proteins) : Engh & Huber (2001) Ideal geometry (DNA, RNA) : Parkinson et al. (1996)

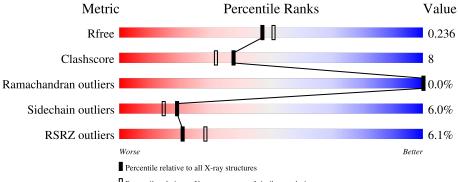
Validation Pipeline (wwPDB-VP) : 2.37.1

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 2.15 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.



Percentile relative to X-ray structures of similar resolution

Metric	Whole archive	Similar resolution
Metric	$(\# \mathrm{Entries})$	$(\# ext{Entries}, ext{ resolution range}(ext{Å}))$
R_{free}	130704	1479 (2.16-2.16)
Clashscore	141614	1585 (2.16-2.16)
Ramachandran outliers	138981	1560 (2.16-2.16)
Sidechain outliers	138945	1559 (2.16-2.16)
RSRZ outliers	127900	1456 (2.16-2.16)

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		
		2.40	6%		
1	A	348	80%	18%	• •
			6%		
1	В	348	82%	16%	• •
			5%		
1	С	348	84%	14%	• •
			7%		
1	D	348	84%	13%	• •
			5%		
1	Е	348	84%	13%	



Continued from previous page...

Mol	Chain	Length	Quality of chain		
1	F	348	84%	13%	



2 Entry composition (i)

There are 3 unique types of molecules in this entry. The entry contains 16577 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 hypothetical protein SF2450.

Mol	Chain	Residues		A	Atoms	5			ZeroOcc	AltConf	Trace
1	A	346	Total	С	N	О	S	Se	0	4	0
1	Λ	340	2648	1647	475	508	6	12	0	4	0
1	В	346	Total	С	N	О	S	Se	0	4	0
1	Ъ	340	2648	1647	475	508	6	12	0	4	0
1	С	346	Total	С	N	О	S	Se	0	4	0
1		340	2648	1647	475	508	6	12	0		
1	D	346	Total	С	N	О	S	Se	0	4	0
1	D	340	2648	1647	475	508	6	12	0	4	0
1	Е	346	Total	С	N	О	S	Se	0	4	0
1	<u> 1</u> 2	340	2648	1647	475	508	6	12	U	4	0
1	F	346	Total	С	N	О	S	Se	0	4	0
1	L'	540	2648	1647	475	508	6	12	U	4	U

There are 90 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-2	SER	-	CLONING ARTIFACT	UNP Q83K87
A	-1	ASN	-	CLONING ARTIFACT	UNP Q83K87
A	0	ALA	-	CLONING ARTIFACT	UNP Q83K87
A	1	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
A	58	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
A	63	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
A	69	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
A	89	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
A	123	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
A	136	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
A	161	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
A	244	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
A	277	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
A	300	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
A	322	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
В	-2	SER	-	CLONING ARTIFACT	UNP Q83K87
В	-1	ASN	-	CLONING ARTIFACT	UNP Q83K87



 $Continued\ from\ previous\ page...$

Chain	Residue	Modelled	Actual	Comment	Reference
В	0	ALA	-	CLONING ARTIFACT	UNP Q83K87
В	1	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
В	58	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
В	63	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
В	69	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
В	89	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
В	123	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
В	136	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
В	161	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
В	244	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
В	277	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
В	300	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
В	322	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
С	-2	SER	-	CLONING ARTIFACT	UNP Q83K87
С	-1	ASN	-	CLONING ARTIFACT	UNP Q83K87
С	0	ALA	-	CLONING ARTIFACT	UNP Q83K87
С	1	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
С	58	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
С	63	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
С	69	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
С	89	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
С	123	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
С	136	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
С	161	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
С	244	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
С	277	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
С	300	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
С	322	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
D	-2	SER	-	CLONING ARTIFACT	UNP Q83K87
D	-1	ASN	-	CLONING ARTIFACT	UNP Q83K87
D	0	ALA	-	CLONING ARTIFACT	UNP Q83K87
D	1	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
D	58	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
D	63	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
D	69	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
D	89	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
D	123	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
D	136	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
D	161	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
D	244	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
D	277	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
D	300	MSE	MET	MODIFIED RESIDUE	UNP Q83K87



Continued from previous page...

Chain	Residue	Modelled	Actual	Comment	Reference
D	322	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
Е	-2	SER	-	CLONING ARTIFACT	UNP Q83K87
Е	-1	ASN	-	CLONING ARTIFACT	UNP Q83K87
Е	0	ALA	-	CLONING ARTIFACT	UNP Q83K87
Е	1	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
Е	58	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
Е	63	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
Е	69	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
Е	89	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
Е	123	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
Е	136	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
Е	161	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
Е	244	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
Е	277	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
Е	300	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
Е	322	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
F	-2	SER	-	CLONING ARTIFACT	UNP Q83K87
F	-1	ASN	-	CLONING ARTIFACT	UNP Q83K87
F	0	ALA	-	CLONING ARTIFACT	UNP Q83K87
F	1	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
F	58	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
F	63	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
F	69	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
F	89	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
F	123	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
F	136	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
F	161	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
F	244	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
F	277	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
F	300	MSE	MET	MODIFIED RESIDUE	UNP Q83K87
F	322	MSE	MET	MODIFIED RESIDUE	UNP Q83K87

 \bullet Molecule 2 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	A	2	$\begin{array}{cc} \text{Total} & \text{Zn} \\ 2 & 2 \end{array}$	0	0
2	В	2	$\begin{array}{cc} \text{Total} & \text{Zn} \\ 2 & 2 \end{array}$	0	0
2	С	2	$\begin{array}{cc} \text{Total} & \text{Zn} \\ 2 & 2 \end{array}$	0	0
2	D	2	$\begin{array}{cc} \text{Total} & \text{Zn} \\ 2 & 2 \end{array}$	0	0



Continued from previous page...

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	Е	2	Total Zn 2 2	0	0
2	F	2	Total Zn 2 2	0	0

$\bullet\,$ Molecule 3 is water.

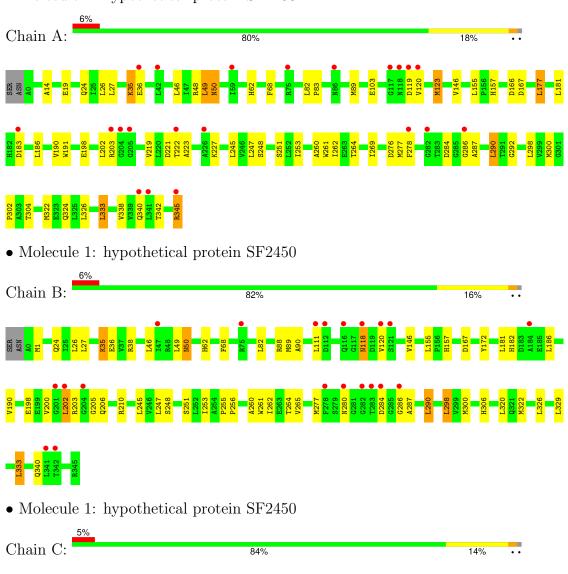
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	111	Total O 111 111	0	0
3	В	114	Total O 114 114	0	0
3	С	115	Total O 115 115	0	0
3	D	120	Total O 120 120	0	0
3	E	111	Total O 111 111	0	0
3	F	106	Total O 106 106	0	0



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 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.

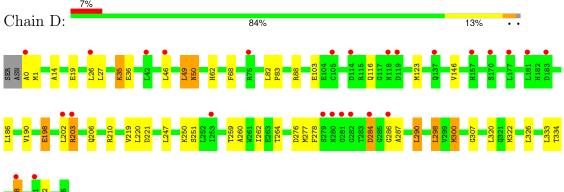
• Molecule 1: hypothetical protein SF2450





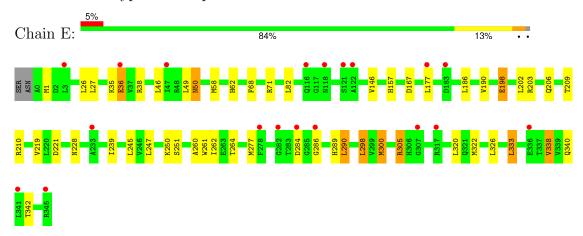


 \bullet Molecule 1: hypothetical protein SF2450

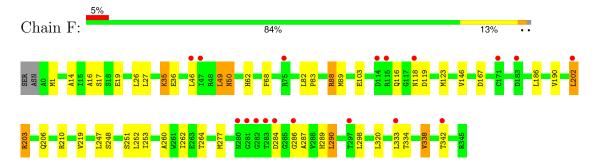


V338 L341 T342 R345

• Molecule 1: hypothetical protein SF2450



• Molecule 1: hypothetical protein SF2450





4 Data and refinement statistics (i)

Property	Value	Source
Space group	I 41	Depositor
Cell constants a, b, c, α , β , γ	161.83Å 161.83Å 228.57Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	$\begin{array}{r} 50.00 & - & 2.15 \\ 36.19 & - & 2.15 \end{array}$	Depositor EDS
% Data completeness	99.7 (50.00-2.15)	Depositor
(in resolution range)	99.4 (36.19-2.15)	EDS
R_{merge}	0.11	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) > 1$	1.95 (at 2.16Å)	Xtriage
Refinement program	REFMAC 5.2.0005	Depositor
R, R_{free}	0.190 , 0.229	Depositor
it, it free	0.200 , 0.236	DCC
R_{free} test set	7909 reflections (5.01%)	wwPDB-VP
Wilson B-factor (A^2)	33.7	Xtriage
Anisotropy	0.035	Xtriage
Bulk solvent $k_{sol}(e/Å^3)$, $B_{sol}(Å^2)$	0.34, 18.0	EDS
L-test for twinning ²	$< L > = 0.50, < L^2> = 0.33$	Xtriage
Estimated twinning fraction	$\begin{array}{c} 0.467 \text{ for } -1/2*\text{h}+1/2*\text{k}-1/2*\text{l},1/2*\text{h}-1/2*\text{k}-1/2*\text{l},-\text{h}-\text{k}} \\ 1/2*\text{l},-\text{h}-\text{k} \\ 0.467 \text{ for } -1/2*\text{h}+1/2*\text{k}+1/2*\text{l},1/2*\text{h}-1/2*\text{k}} \\ +1/2*\text{l},\text{h}+\text{k} \\ 0.469 \text{ for } -1/2*\text{h}-1/2*\text{k}+1/2*\text{l},-1/2*\text{h}-1/2*\text{k}-1/2*\text{l},-\text{h}-\text{k}} \\ 0.469 \text{ for } -1/2*\text{h}-1/2*\text{k}-1/2*\text{l},-1/2*\text{h}-1/2*\text{k}+1/2*\text{l},-1/2*\text{h}-1/2*\text{k}+1/2*\text{l},-\text{h}-\text{k}} \\ 0.469 \text{ for } -1/2*\text{h}-1/2*\text{k}-1/2*\text{l},-\text{h}-\text{k}} \\ 0.477 \text{ for } -\text{h},\text{k},-\text{l} \end{array}$	Xtriage
F_o, F_c correlation	0.94	EDS
Total number of atoms	16577	wwPDB-VP
Average B, all atoms (Å ²)	35.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: The largest off-origin peak in the Patterson function is 3.10% of the height of the origin peak. No significant pseudotranslation is detected.

²Theoretical 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.



¹Intensities estimated from amplitudes.

5 Model quality (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: ZN

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		
IVIOI		RMSZ	# Z > 5	RMSZ	# Z > 5	
1	A	0.59	0/2685	0.68	1/3619 (0.0%)	
1	В	0.60	0/2685	0.67	0/3619	
1	С	0.60	0/2685	0.67	0/3619	
1	D	0.59	0/2685	0.67	1/3619 (0.0%)	
1	Е	0.58	0/2685	0.69	2/3619 (0.1%)	
1	F	0.60	0/2685	0.67	0/3619	
All	All	0.59	0/16110	0.67	4/21714 (0.0%)	

There are no bond length outliers.

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	$Observed(^o)$	$\operatorname{Ideal}({}^{o})$
1	A	221	ASP	CB-CG-OD1	6.55	124.20	118.30
1	Е	221	ASP	CB-CG-OD1	6.28	123.95	118.30
1	D	221	ASP	CB-CG-OD1	5.40	123.16	118.30
1	Е	305	ARG	NE-CZ-NH1	5.17	122.88	120.30

There are no chirality outliers.

There are no planarity outliers.

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	2648	0	2680	56	0



Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	В	2648	0	2680	42	0
1	С	2648	0	2680	43	0
1	D	2648	0	2680	41	0
1	Е	2648	0	2680	40	0
1	F	2648	0	2680	39	0
2	A	2	0	0	0	0
2	В	2	0	0	0	0
2	С	2	0	0	0	0
2	D	2	0	0	0	0
2	Е	2	0	0	0	0
2	F	2	0	0	0	0
3	A	111	0	0	3	0
3	В	114	0	0	2	0
3	С	115	0	0	2	0
3	D	120	0	0	3	0
3	Е	111	0	0	4	0
3	F	106	0	0	3	0
All	All	16577	0	16080	245	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 8.

The worst 5 of 245 close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	$\begin{array}{c} {\rm Interatomic} \\ {\rm distance} ({\rm \AA}) \end{array}$	$egin{array}{c} { m Clash} \\ { m overlap} \ ({ m \AA}) \end{array}$
1:A:89:MSE:CE	1:A:120:VAL:H	1.52	1.22
1:E:206:GLN:HE21	1:E:210:ARG:HH12	1.08	1.02
1:B:206:GLN:HE21	1:B:210:ARG:HH12	1.04	0.96
1:A:222:THR:HG21	1:A:304:THR:HG23	1.48	0.96
1:D:1:MSE:HE3	1:D:320:LEU:CD2	1.97	0.93

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 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	Percen	ntiles
1	A	348/348 (100%)	340 (98%)	8 (2%)	0	100	100
1	В	348/348 (100%)	342 (98%)	6 (2%)	0	100	100
1	С	348/348 (100%)	343 (99%)	5 (1%)	0	100	100
1	D	348/348 (100%)	342 (98%)	6 (2%)	0	100	100
1	E	348/348 (100%)	340 (98%)	8 (2%)	0	100	100
1	F	348/348 (100%)	342 (98%)	5 (1%)	1 (0%)	41	37
All	All	2088/2088 (100%)	2049 (98%)	38 (2%)	1 (0%)	100	100

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	F	203	ARG

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 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	Perce	ntiles
1	A	$286/272 \ (105\%)$	267 (93%)	19 (7%)	16	11
1	В	$286/272\ (105\%)$	267 (93%)	19 (7%)	16	11
1	С	$286/272 \ (105\%)$	269 (94%)	17 (6%)	19	15
1	D	$286/272\ (105\%)$	269 (94%)	17 (6%)	19	15
1	E	$286/272 \ (105\%)$	268 (94%)	18 (6%)	18	13
1	F	$286/272 \ (105\%)$	272 (95%)	14 (5%)	25	21
All	All	1716/1632 (105%)	1612 (94%)	104 (6%)	19	14

5 of 104 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	D	35	LYS
1	D	338	VAL



Continued from previous page...

Mol	Chain	Res	Type
1	F	202	LEU
1	D	49	LEU
1	D	247	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 34 such sidechains are listed below:

Mol	Chain	Res	Type
1	Е	206	GLN
1	F	50	ASN
1	F	182	HIS
1	С	50	ASN
1	В	206	GLN

5.3.3 RNA (i)

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains (i)

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

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

Of 12 ligands modelled in this entry, 12 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.



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 Fit of model and data (i)

6.1 Protein, DNA and RNA chains (i)

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, 95^{th} 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>	$\# \mathrm{RSRZ}{>}2$	$OWAB(Å^2)$	Q<0.9
1	A	334/348 (95%)	0.69	21 (6%) 20 27	25, 33, 54, 64	2 (0%)
1	В	334/348 (95%)	0.68	20 (5%) 21 29	24, 33, 54, 65	1 (0%)
1	С	334/348 (95%)	0.67	19 (5%) 23 32	24, 33, 54, 65	1 (0%)
1	D	334/348 (95%)	0.70	26 (7%) 13 18	25, 33, 53, 65	1 (0%)
1	E	334/348 (95%)	0.68	19 (5%) 23 32	25, 33, 54, 65	1 (0%)
1	F	334/348 (95%)	0.71	18 (5%) 25 34	25, 33, 54, 65	1 (0%)
All	All	2004/2088 (95%)	0.69	123 (6%) 21 28	24, 33, 54, 65	7 (0%)

The worst 5 of 123 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	286	GLY	7.0
1	С	118	ASN	6.4
1	F	282	GLY	5.9
1	С	282	GLY	5.6
1	F	202	LEU	5.6

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

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

6.3 Carbohydrates (i)

There are no monosaccharides in this entry.



6.4 Ligands (i)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	$\mathbf{B} ext{-}\mathbf{factors}(\mathbf{\mathring{A}}^2)$	Q<0.9
2	ZN	D	1747	1/1	0.56	0.10	48,48,48,48	1
2	ZN	В	1546	1/1	0.74	0.09	36,36,36,36	1
2	ZN	F	1947	1/1	0.76	0.08	49,49,49,49	1
2	ZN	F	1946	1/1	0.79	0.07	36,36,36,36	1
2	ZN	Е	1846	1/1	0.81	0.07	36,36,36,36	1
2	ZN	В	1547	1/1	0.82	0.07	49,49,49,49	1
2	ZN	С	1647	1/1	0.82	0.10	47,47,47,47	1
2	ZN	A	1447	1/1	0.87	0.08	47,47,47,47	1
2	ZN	A	1446	1/1	0.88	0.06	37,37,37,37	1
2	ZN	D	1746	1/1	0.89	0.06	37,37,37,37	1
2	ZN	Е	1847	1/1	0.96	0.10	49,49,49,49	1
2	ZN	С	1646	1/1	0.98	0.03	38,38,38,38	1

6.5 Other polymers (i)

There are no such residues in this entry.

