wwPDB X-ray Structure Validation Summary Report (i)

Jun 24, 2025 – 05:09 pm BST

PDB ID	:	7YZ8 / pdb_00007yz8
Title	:	Triclinic crystal structure of YTHDF1 YTH domain (544AVV546 mutant)
Authors	:	Dalle Vedove, A.; Cazzanelli, G.; Lolli, G.
Deposited on	:	2022-02-19
Resolution	:	2.50 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 (i)) were used in the production of this report:

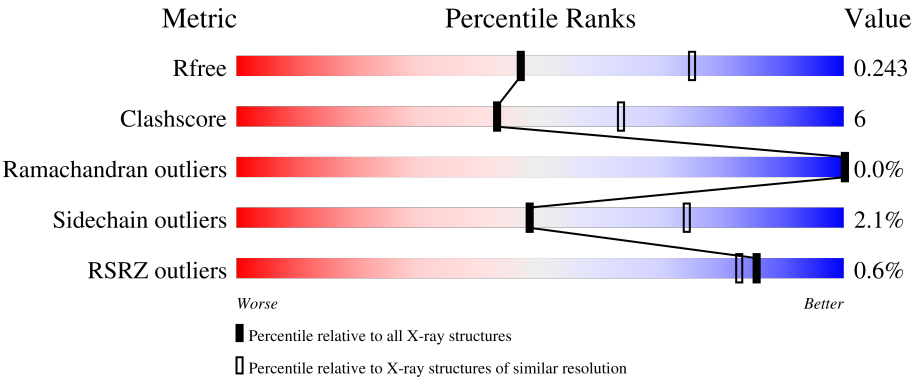
MolProbity	:	4-5-2 with Phenix2.0rc1
Mogul	:	1.8.4, CSD as541be (2020)
Xtriage (Phenix)	:	2.0rc1
EDS	:	3.0
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.003 (Gargrove)
Density-Fitness	:	1.0.11
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.44

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 2.50 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	164625	5504 (2.50-2.50)
Clashscore	180529	6282 (2.50-2.50)
Ramachandran outliers	177936	6191 (2.50-2.50)
Sidechain outliers	177891	6193 (2.50-2.50)
RSRZ outliers	164620	5504 (2.50-2.50)

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	200	82% 12% • 6%
1	B	200	82% 14% •
1	C	200	2% 82% 8% 8%
1	D	200	% 82% 10% 8%
1	E	200	80% 13% 7%

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Mol	Chain	Length	Quality of chain
1	F	200	
1	G	200	
1	H	200	
1	I	200	
1	J	200	
1	K	200	
1	L	200	

2 Entry composition (i)

There are 3 unique types of molecules in this entry. The entry contains 18773 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 YTH domain-containing family protein 1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	189	Total	C	N	O	S	0	1	0
			1564	991	281	287	5			
1	B	195	Total	C	N	O	S	0	1	0
			1609	1020	289	295	5			
1	C	183	Total	C	N	O	S	0	1	0
			1512	959	272	276	5			
1	D	184	Total	C	N	O	S	0	1	0
			1526	970	274	277	5			
1	E	186	Total	C	N	O	S	0	1	0
			1541	979	277	280	5			
1	F	185	Total	C	N	O	S	0	1	0
			1535	976	276	278	5			
1	G	184	Total	C	N	O	S	0	0	0
			1515	961	274	275	5			
1	H	186	Total	C	N	O	S	0	0	0
			1534	972	278	279	5			
1	I	186	Total	C	N	O	S	0	1	0
			1539	978	277	279	5			
1	J	184	Total	C	N	O	S	0	1	0
			1530	972	275	278	5			
1	K	185	Total	C	N	O	S	0	0	0
			1528	969	276	278	5			
1	L	182	Total	C	N	O	S	0	0	0
			1501	953	270	273	5			

There are 48 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	360	GLY	-	expression tag	UNP Q9BYJ9
A	544	ALA	GLU	engineered mutation	UNP Q9BYJ9
A	545	VAL	GLU	engineered mutation	UNP Q9BYJ9
A	546	VAL	GLU	engineered mutation	UNP Q9BYJ9
B	360	GLY	-	expression tag	UNP Q9BYJ9

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Chain	Residue	Modelled	Actual	Comment	Reference
B	544	ALA	GLU	engineered mutation	UNP Q9BYJ9
B	545	VAL	GLU	engineered mutation	UNP Q9BYJ9
B	546	VAL	GLU	engineered mutation	UNP Q9BYJ9
C	360	GLY	-	expression tag	UNP Q9BYJ9
C	544	ALA	GLU	engineered mutation	UNP Q9BYJ9
C	545	VAL	GLU	engineered mutation	UNP Q9BYJ9
C	546	VAL	GLU	engineered mutation	UNP Q9BYJ9
D	360	GLY	-	expression tag	UNP Q9BYJ9
D	544	ALA	GLU	engineered mutation	UNP Q9BYJ9
D	545	VAL	GLU	engineered mutation	UNP Q9BYJ9
D	546	VAL	GLU	engineered mutation	UNP Q9BYJ9
E	360	GLY	-	expression tag	UNP Q9BYJ9
E	544	ALA	GLU	engineered mutation	UNP Q9BYJ9
E	545	VAL	GLU	engineered mutation	UNP Q9BYJ9
E	546	VAL	GLU	engineered mutation	UNP Q9BYJ9
F	360	GLY	-	expression tag	UNP Q9BYJ9
F	544	ALA	GLU	engineered mutation	UNP Q9BYJ9
F	545	VAL	GLU	engineered mutation	UNP Q9BYJ9
F	546	VAL	GLU	engineered mutation	UNP Q9BYJ9
G	360	GLY	-	expression tag	UNP Q9BYJ9
G	544	ALA	GLU	engineered mutation	UNP Q9BYJ9
G	545	VAL	GLU	engineered mutation	UNP Q9BYJ9
G	546	VAL	GLU	engineered mutation	UNP Q9BYJ9
H	360	GLY	-	expression tag	UNP Q9BYJ9
H	544	ALA	GLU	engineered mutation	UNP Q9BYJ9
H	545	VAL	GLU	engineered mutation	UNP Q9BYJ9
H	546	VAL	GLU	engineered mutation	UNP Q9BYJ9
I	360	GLY	-	expression tag	UNP Q9BYJ9
I	544	ALA	GLU	engineered mutation	UNP Q9BYJ9
I	545	VAL	GLU	engineered mutation	UNP Q9BYJ9
I	546	VAL	GLU	engineered mutation	UNP Q9BYJ9
J	360	GLY	-	expression tag	UNP Q9BYJ9
J	544	ALA	GLU	engineered mutation	UNP Q9BYJ9
J	545	VAL	GLU	engineered mutation	UNP Q9BYJ9
J	546	VAL	GLU	engineered mutation	UNP Q9BYJ9
K	360	GLY	-	expression tag	UNP Q9BYJ9
K	544	ALA	GLU	engineered mutation	UNP Q9BYJ9
K	545	VAL	GLU	engineered mutation	UNP Q9BYJ9
K	546	VAL	GLU	engineered mutation	UNP Q9BYJ9
L	360	GLY	-	expression tag	UNP Q9BYJ9
L	544	ALA	GLU	engineered mutation	UNP Q9BYJ9
L	545	VAL	GLU	engineered mutation	UNP Q9BYJ9

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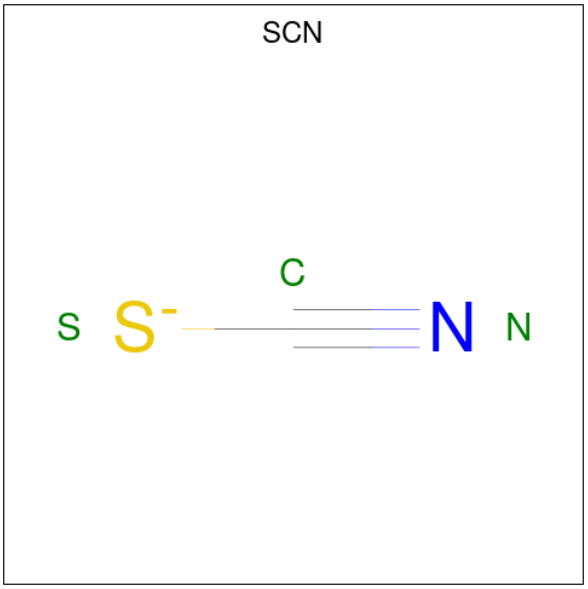
Chain	Residue	Modelled	Actual	Comment	Reference
L	546	VAL	GLU	engineered mutation	UNP Q9BYJ9

- Molecule 2 is THIOCYANATE ION (CCD ID: SCN) (formula: CNS).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
2	A	1	Total	C	N	S	0	0
			3	1	1	1		
2	B	1	Total	C	N	S	0	0
			3	1	1	1		
2	C	1	Total	C	N	S	0	0
			3	1	1	1		
2	D	1	Total	C	N	S	0	0
			3	1	1	1		
2	E	1	Total	C	N	S	0	0
			3	1	1	1		
2	F	1	Total	C	N	S	0	0
			3	1	1	1		
2	G	1	Total	C	N	S	0	0
			3	1	1	1		
2	H	1	Total	C	N	S	0	0
			3	1	1	1		
2	I	1	Total	C	N	S	0	0
			3	1	1	1		
2	J	1	Total	C	N	S	0	0
			3	1	1	1		
2	K	1	Total	C	N	S	0	0
			3	1	1	1		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	L	1	Total C N S 3 1 1 1	0	0

- Molecule 3 is water.

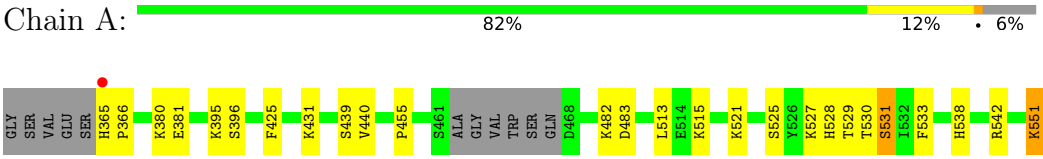
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	37	Total O 37 37	0	0
3	B	37	Total O 37 37	0	0
3	C	30	Total O 30 30	0	0
3	D	35	Total O 35 35	0	0
3	E	22	Total O 22 22	0	0
3	F	28	Total O 28 28	0	0
3	G	20	Total O 20 20	0	0
3	H	19	Total O 19 19	0	0
3	I	24	Total O 24 24	0	0
3	J	28	Total O 28 28	0	0
3	K	16	Total O 16 16	0	0
3	L	7	Total O 7 7	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.

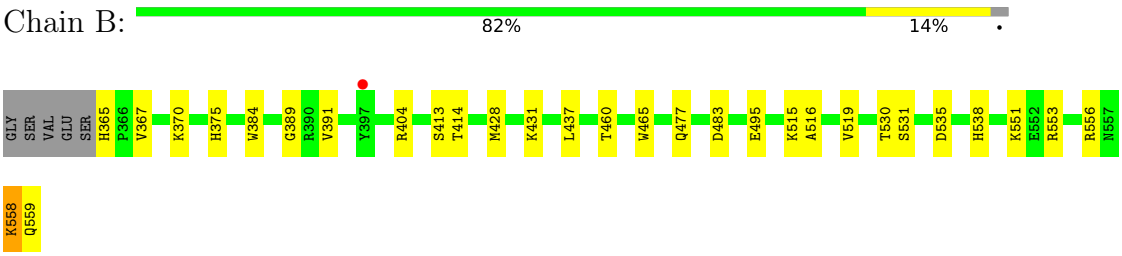
• Molecule 1: YTH domain-containing family protein 1

Chain A:



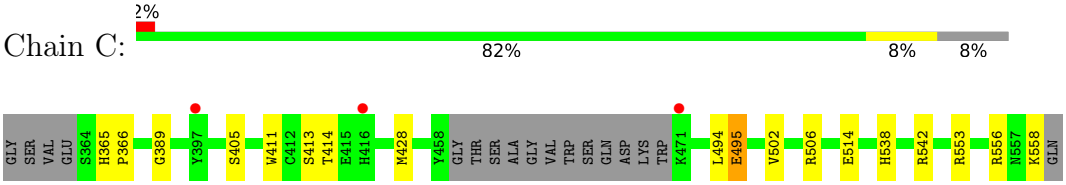
• Molecule 1: YTH domain-containing family protein 1

Chain B:



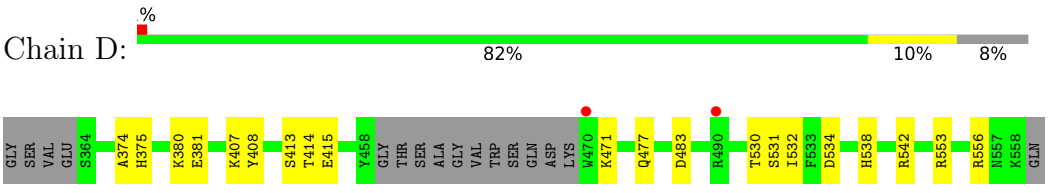
• Molecule 1: YTH domain-containing family protein 1

Chain C:



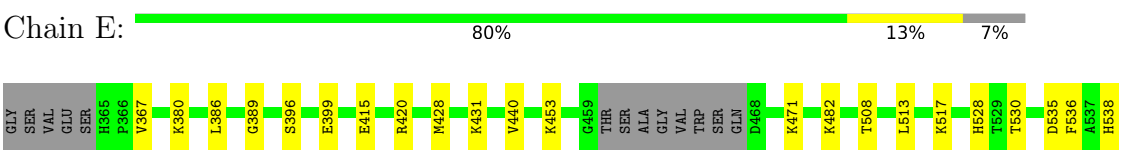
• Molecule 1: YTH domain-containing family protein 1

Chain D:



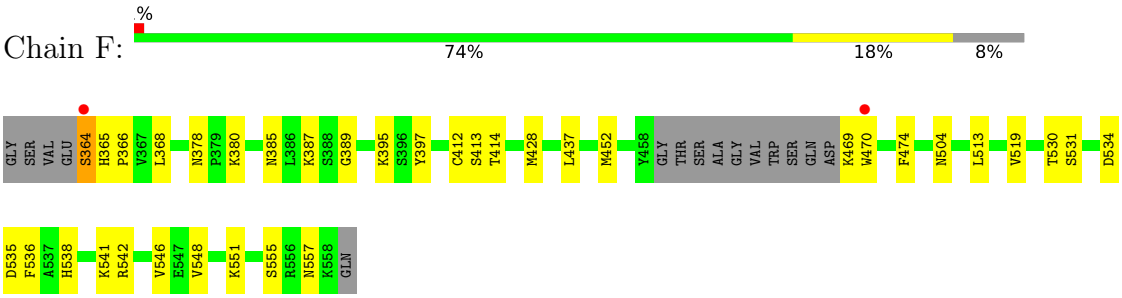
• Molecule 1: YTH domain-containing family protein 1

Chain E:



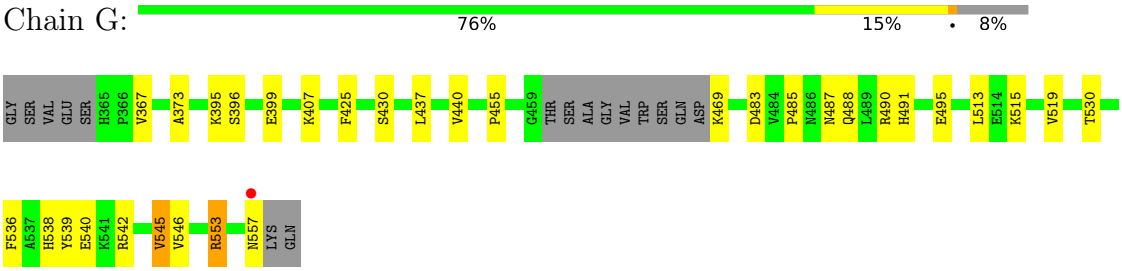
• Molecule 1: YTH domain-containing family protein 1

Chain F:



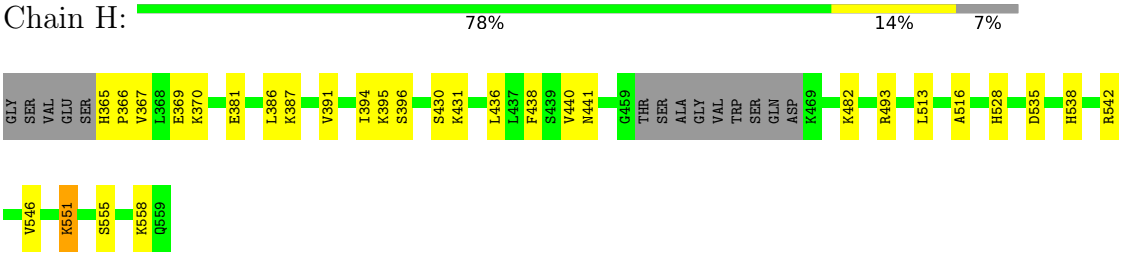
• Molecule 1: YTH domain-containing family protein 1

Chain G:



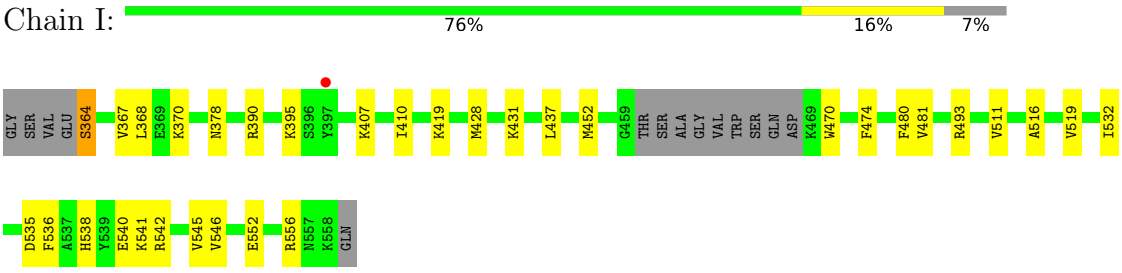
• Molecule 1: YTH domain-containing family protein 1

Chain H:



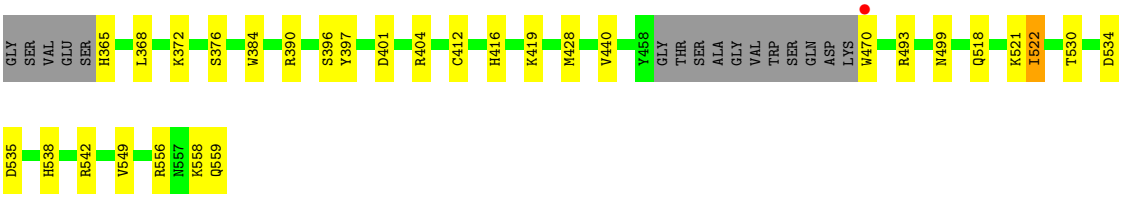
• Molecule 1: YTH domain-containing family protein 1

Chain I:



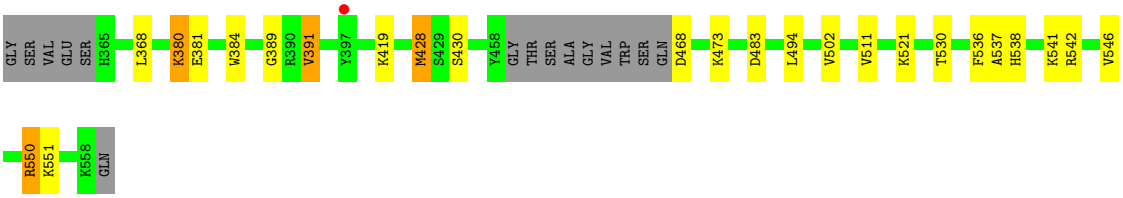
• Molecule 1: YTH domain-containing family protein 1

Chain J:



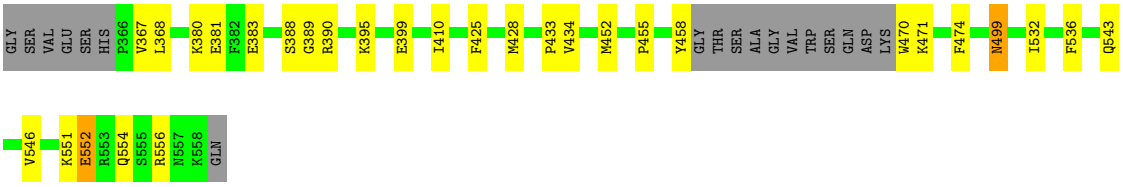
• Molecule 1: YTH domain-containing family protein 1

Chain K:



• Molecule 1: YTH domain-containing family protein 1

Chain L:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, α, β, γ	71.22Å 92.57Å 113.94Å 72.87° 79.05° 67.87°	Depositor
Resolution (Å)	48.09 – 2.50 48.09 – 2.50	Depositor EDS
% Data completeness (in resolution range)	98.2 (48.09-2.50) 98.3 (48.09-2.50)	Depositor EDS
R_{merge}	0.05	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.91 (at 2.51Å)	Xtriage
Refinement program	PHENIX 1.11.1	Depositor
R, R_{free}	0.184 , 0.243 0.188 , 0.243	Depositor DCC
R_{free} test set	4383 reflections (4.92%)	wwPDB-VP
Wilson B-factor (Å^2)	52.2	Xtriage
Anisotropy	0.305	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.30 , 47.0	EDS
L-test for twinning[2]	$< \|L\| > = 0.50$, $< L^2 > = 0.34$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.95	EDS
Total number of atoms	18773	wwPDB-VP
Average B, all atoms (Å^2)	62.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.27% of the height of the origin peak. No significant pseudotranslation is detected.*

[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

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

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	0.51	0/1605	0.75	0/2158
1	B	0.50	0/1653	0.78	3/2226 (0.1%)
1	C	0.47	0/1551	0.75	0/2086
1	D	0.44	0/1567	0.69	0/2109
1	E	0.45	0/1582	0.65	0/2128
1	F	0.48	0/1576	0.72	0/2120
1	G	0.46	0/1552	0.70	0/2088
1	H	0.44	0/1571	0.71	0/2111
1	I	0.42	0/1580	0.70	0/2125
1	J	0.46	0/1571	0.72	0/2113
1	K	0.44	0/1565	0.72	3/2105 (0.1%)
1	L	0.43	0/1537	0.69	0/2067
All	All	0.46	0/18910	0.71	6/25436 (0.0%)

There are no bond length outliers.

The worst 5 of 6 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	K	381	GLU	N-CA-C	5.79	120.08	112.89
1	B	558	LYS	CA-C-N	5.77	132.09	121.70
1	B	558	LYS	C-N-CA	5.77	132.09	121.70
1	K	428	MET	CA-C-N	5.58	129.19	120.82
1	K	428	MET	C-N-CA	5.58	129.19	120.82

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	1564	0	1543	20	0
1	B	1609	0	1584	25	0
1	C	1512	0	1498	14	0
1	D	1526	0	1508	18	0
1	E	1541	0	1523	20	0
1	F	1535	0	1521	22	0
1	G	1515	0	1497	26	0
1	H	1534	0	1518	20	0
1	I	1539	0	1524	24	0
1	J	1530	0	1511	19	0
1	K	1528	0	1511	20	0
1	L	1501	0	1488	20	0
2	A	3	0	0	0	0
2	B	3	0	0	0	0
2	C	3	0	0	0	0
2	D	3	0	0	1	0
2	E	3	0	0	0	0
2	F	3	0	0	0	0
2	G	3	0	0	0	0
2	H	3	0	0	0	0
2	I	3	0	0	1	0
2	J	3	0	0	0	0
2	K	3	0	0	0	0
2	L	3	0	0	1	0
3	A	37	0	0	1	0
3	B	37	0	0	2	0
3	C	30	0	0	0	0
3	D	35	0	0	0	0
3	E	22	0	0	0	0
3	F	28	0	0	1	0
3	G	20	0	0	2	0
3	H	19	0	0	2	0
3	I	24	0	0	1	0
3	J	28	0	0	1	0
3	K	16	0	0	1	0
3	L	7	0	0	0	0
All	All	18773	0	18226	222	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 6.

The worst 5 of 222 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:G:553:ARG:HG3	1:G:553:ARG:HH21	1.26	0.97
1:K:550:ARG:HG2	1:K:550:ARG:HH11	1.34	0.92
1:I:378:ASN:HD21	1:I:481:VAL:H	1.18	0.91
1:J:390:ARG:HE	1:J:428:MET:HE3	1.41	0.85
1:A:380:LYS:HD2	1:H:381:GLU:HG2	1.60	0.83

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	Percentiles	
1	A	186/200 (93%)	178 (96%)	8 (4%)	0	100	100
1	B	194/200 (97%)	188 (97%)	6 (3%)	0	100	100
1	C	180/200 (90%)	175 (97%)	5 (3%)	0	100	100
1	D	181/200 (90%)	175 (97%)	6 (3%)	0	100	100
1	E	183/200 (92%)	177 (97%)	6 (3%)	0	100	100
1	F	182/200 (91%)	176 (97%)	5 (3%)	1 (0%)	25	44
1	G	180/200 (90%)	175 (97%)	5 (3%)	0	100	100
1	H	182/200 (91%)	179 (98%)	3 (2%)	0	100	100
1	I	183/200 (92%)	176 (96%)	7 (4%)	0	100	100
1	J	181/200 (90%)	176 (97%)	5 (3%)	0	100	100
1	K	181/200 (90%)	176 (97%)	5 (3%)	0	100	100
1	L	178/200 (89%)	174 (98%)	4 (2%)	0	100	100
All	All	2191/2400 (91%)	2125 (97%)	65 (3%)	1 (0%)	100	100

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	F	366	PRO

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	Percentiles	
1	A	175/182 (96%)	170 (97%)	5 (3%)	37	64
1	B	179/182 (98%)	177 (99%)	2 (1%)	70	87
1	C	170/182 (93%)	168 (99%)	2 (1%)	67	86
1	D	171/182 (94%)	169 (99%)	2 (1%)	67	86
1	E	172/182 (94%)	172 (100%)	0	100	100
1	F	172/182 (94%)	168 (98%)	4 (2%)	45	72
1	G	169/182 (93%)	164 (97%)	5 (3%)	36	63
1	H	171/182 (94%)	166 (97%)	5 (3%)	37	64
1	I	172/182 (94%)	168 (98%)	4 (2%)	45	72
1	J	171/182 (94%)	166 (97%)	5 (3%)	37	64
1	K	171/182 (94%)	166 (97%)	5 (3%)	37	64
1	L	168/182 (92%)	163 (97%)	5 (3%)	36	63
All	All	2061/2184 (94%)	2017 (98%)	44 (2%)	48	74

5 of 44 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	I	493	ARG
1	K	391	VAL
1	J	376	SER
1	J	558	LYS
1	K	473	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 53 such sidechains are listed below:

Mol	Chain	Res	Type
1	F	486	ASN
1	G	499	ASN
1	K	375	HIS
1	F	488	GLN
1	G	365	HIS

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 oligosaccharides in this entry.

5.6 Ligand geometry (i)

12 ligands are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. 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 $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
2	SCN	F	601	-	1,2,2	0.88	0	0,1,1	-	-
2	SCN	J	601	-	1,2,2	0.79	0	0,1,1	-	-
2	SCN	E	601	-	1,2,2	0.75	0	0,1,1	-	-
2	SCN	G	601	-	1,2,2	0.96	0	0,1,1	-	-
2	SCN	B	601	-	1,2,2	0.88	0	0,1,1	-	-
2	SCN	D	601	-	1,2,2	0.89	0	0,1,1	-	-
2	SCN	L	601	-	1,2,2	0.72	0	0,1,1	-	-
2	SCN	K	601	-	1,2,2	0.93	0	0,1,1	-	-
2	SCN	I	601	-	1,2,2	0.77	0	0,1,1	-	-
2	SCN	A	601	-	1,2,2	0.88	0	0,1,1	-	-

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
2	SCN	C	601	-	1,2,2	0.85	0	0,1,1	-	-
2	SCN	H	601	-	1,2,2	1.03	0	0,1,1	-	-

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.

3 monomers are involved in 3 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	D	601	SCN	1	0
2	L	601	SCN	1	0
2	I	601	SCN	1	0

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

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, 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>2	OWAB(Å^2)	Q<0.9
1	A	189/200 (94%)	-0.53	1 (0%) 87 85	29, 46, 80, 111	1 (0%)
1	B	195/200 (97%)	-0.41	1 (0%) 87 85	30, 51, 83, 95	1 (0%)
1	C	183/200 (91%)	-0.44	3 (1%) 70 67	35, 49, 86, 107	1 (0%)
1	D	184/200 (92%)	-0.39	2 (1%) 77 74	30, 55, 91, 102	1 (0%)
1	E	186/200 (93%)	-0.34	0 100 100	34, 59, 95, 119	1 (0%)
1	F	185/200 (92%)	-0.38	2 (1%) 77 74	32, 55, 92, 110	1 (0%)
1	G	184/200 (92%)	-0.23	1 (0%) 87 85	40, 60, 96, 119	0
1	H	186/200 (93%)	-0.17	0 100 100	41, 71, 98, 122	0
1	I	186/200 (93%)	-0.25	1 (0%) 87 85	40, 63, 96, 107	1 (0%)
1	J	184/200 (92%)	-0.38	1 (0%) 87 85	40, 58, 90, 105	1 (0%)
1	K	185/200 (92%)	-0.16	1 (0%) 87 85	44, 68, 94, 103	0
1	L	182/200 (91%)	-0.08	0 100 100	50, 73, 114, 128	0
All	All	2229/2400 (92%)	-0.31	13 (0%) 85 83	29, 59, 95, 128	8 (0%)

The worst 5 of 13 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	C	397[A]	TYR	3.7
1	B	397[A]	TYR	3.5
1	G	557	ASN	2.8
1	I	397[A]	TYR	2.8
1	D	470	TRP	2.7

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 (i)

There are no oligosaccharides 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	B-factors(Å^2)	Q<0.9
2	SCN	K	601	3/3	0.85	0.24	110,110,120,135	0
2	SCN	H	601	3/3	0.89	0.18	95,95,97,98	0
2	SCN	L	601	3/3	0.89	0.20	77,77,82,96	0
2	SCN	E	601	3/3	0.92	0.26	126,126,132,144	0
2	SCN	J	601	3/3	0.92	0.20	97,97,101,104	0
2	SCN	I	601	3/3	0.93	0.13	71,71,77,86	0
2	SCN	F	601	3/3	0.94	0.13	55,55,69,84	0
2	SCN	B	601	3/3	0.94	0.14	72,72,83,92	0
2	SCN	G	601	3/3	0.95	0.13	63,63,78,84	0
2	SCN	A	601	3/3	0.97	0.11	67,67,77,82	0
2	SCN	C	601	3/3	0.97	0.09	64,64,70,75	0
2	SCN	D	601	3/3	0.98	0.07	47,47,57,67	0

6.5 Other polymers (i)

There are no such residues in this entry.