Full wwPDB X-ray Structure Validation Report (i)

Nov 22, 2023 – 02:22 PM JST

PDB ID	:	7XYS
Title	:	Crystal structure of ZER1 bound to SFLH degron
Authors	:	Dong, C.; Yan, X.; Li, Y.
Deposited on	:	2022-06-02
Resolution	:	1.70 Å(reported)

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

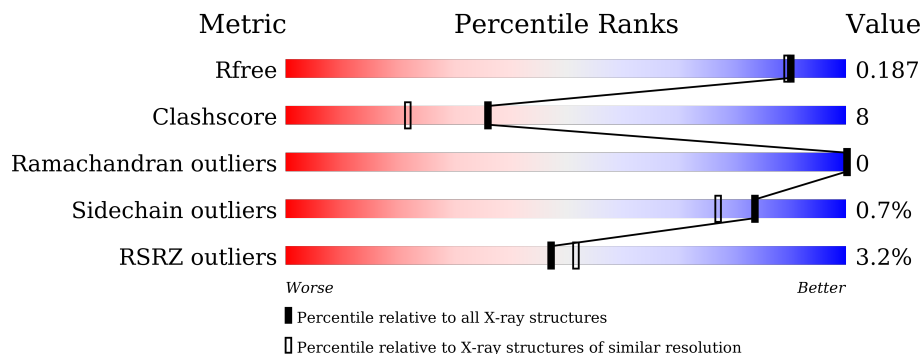|		
MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.13
EDS	:	2.36
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation 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 1.70 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
Rfree		0.187
Clashscore		8
Ramachandran outliers		0
Sidechain outliers		0.7%
RSRZ outliers		3.2%

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))
R_{free}	130704	4298 (1.70-1.70)
Clashscore	141614	4695 (1.70-1.70)
Ramachandran outliers	138981	4610 (1.70-1.70)
Sidechain outliers	138945	4610 (1.70-1.70)
RSRZ outliers	127900	4222 (1.70-1.70)

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	253	4% / 81% / 16% / •
1	B	253	3% / 83% / 15% / •
1	C	253	5% / 85% / 11% / •
1	D	253	83% / 14% / •

2 Entry composition ⓘ

There are 2 unique types of molecules in this entry. The entry contains 9586 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 Protein zer-1 homolog.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	246	Total	C	N	O	S	0	0	0
			1993	1277	335	362	19			
1	B	246	Total	C	N	O	S	0	0	0
			1989	1275	335	360	19			
1	C	244	Total	C	N	O	S	0	0	0
			1975	1266	332	358	19			
1	D	246	Total	C	N	O	S	0	0	0
			1989	1275	335	360	19			

There are 16 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	514	SER	-	expression tag	UNP Q7Z7L7
A	515	PHE	-	expression tag	UNP Q7Z7L7
A	516	LEU	-	expression tag	UNP Q7Z7L7
A	517	HIS	-	expression tag	UNP Q7Z7L7
B	514	SER	-	expression tag	UNP Q7Z7L7
B	515	PHE	-	expression tag	UNP Q7Z7L7
B	516	LEU	-	expression tag	UNP Q7Z7L7
B	517	HIS	-	expression tag	UNP Q7Z7L7
C	514	SER	-	expression tag	UNP Q7Z7L7
C	515	PHE	-	expression tag	UNP Q7Z7L7
C	516	LEU	-	expression tag	UNP Q7Z7L7
C	517	HIS	-	expression tag	UNP Q7Z7L7
D	514	SER	-	expression tag	UNP Q7Z7L7
D	515	PHE	-	expression tag	UNP Q7Z7L7
D	516	LEU	-	expression tag	UNP Q7Z7L7
D	517	HIS	-	expression tag	UNP Q7Z7L7

- Molecule 2 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	A	417	Total 417	O 417	0	0
2	B	429	Total 429	O 429	0	0
2	C	339	Total 339	O 339	0	0
2	D	455	Total 455	O 455	0	0

3   Residue-property plots ⓘ

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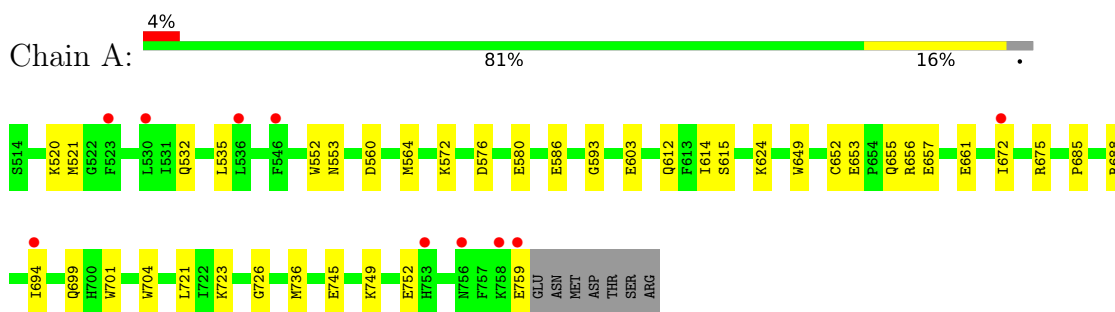
Chain A:

• Molecule 1: Protein zer-1 homolog

Chain B:

• Molecule 1: Protein zer-1 homolog

Chain C:

• Molecule 1: Protein zer-1 homolog

Chain D:

S514 K520 M521 V524 V525 T526 M527 L528 K529 D537 K538 Q542 W552 M564 K579 E580 K584 Q585 E586 R589 G593 L594 L595 N619 P654 Q655 R656 E657 E658 R675 N679 P685 R688 K716 R731 I734 K735 K749 E752
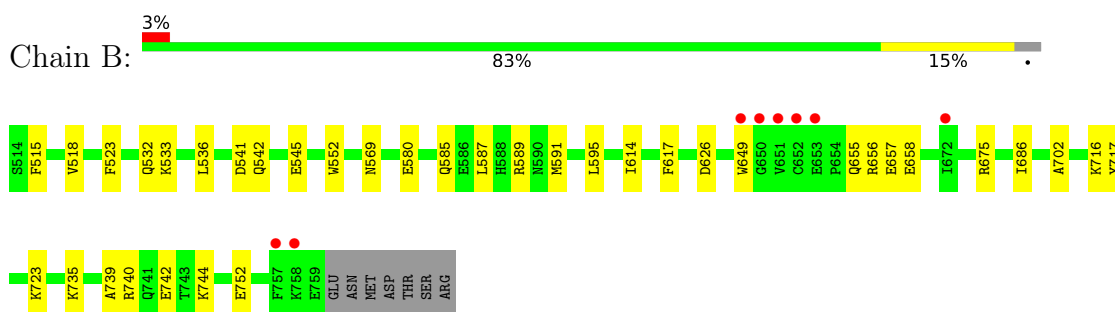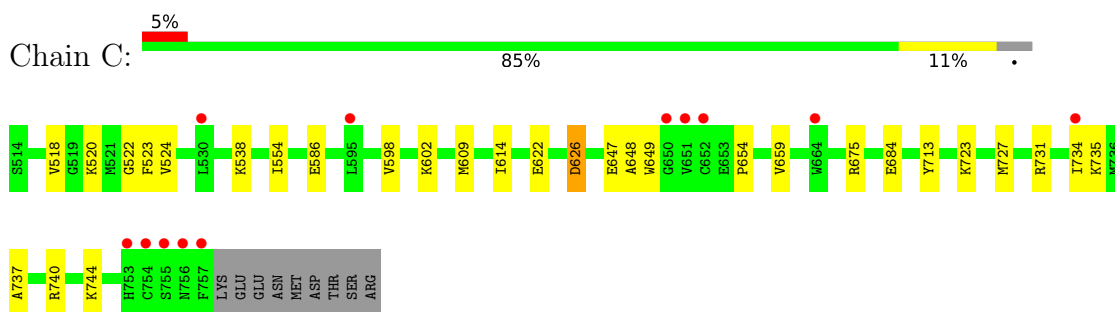
S755 N756 F757 K758 E759 GLU ASN MET ASP THR SER ARG
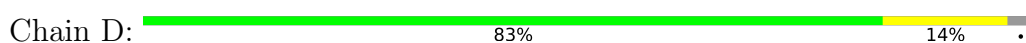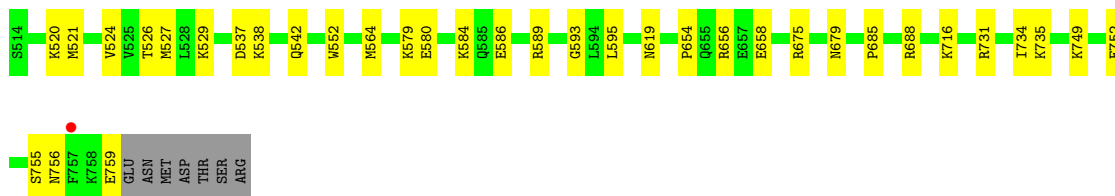
4   Data and refinement statistics   ⓘ

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	64.14Å 137.19Å 69.48Å 90.00° 117.50° 90.00°	Depositor
Resolution (Å)	36.72 – 1.70 36.73 – 1.70	Depositor EDS
% Data completeness (in resolution range)	99.5 (36.72-1.70) 99.4 (36.73-1.70)	Depositor EDS
R_{merge}	0.10	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	173.37 (at 1.70Å)	Xtriage
Refinement program	PHENIX 1.19.2_4158	Depositor
R, R_{free}	0.147 , 0.183 0.150 , 0.187	Depositor DCC
R_{free} test set	1157 reflections (1.00%)	wwPDB-VP
Wilson B-factor (Å^2)	15.9	Xtriage
Anisotropy	0.420	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.29 , 23.7	EDS
L-test for twinning[2]	$< |L| > = 0.41, < L^2 > = 0.24$	Xtriage
Estimated twinning fraction	0.409 for h,-k,-h-l	Xtriage
Reported twinning fraction	0.420 for h,-k,-h-l	Depositor
Outliers	0 of 116008 reflections	Xtriage
F_o,F_c correlation	0.97	EDS
Total number of atoms	9586	wwPDB-VP
Average B, all atoms (Å^2)	17.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 5.51% 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 (i)

5.1 Standard geometry (i)

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	0.39	0/2039	0.58	0/2754
1	B	0.39	0/2035	0.54	0/2749
1	C	0.39	0/2021	0.58	0/2731
1	D	0.38	0/2035	0.58	0/2749
All	All	0.39	0/8130	0.57	0/10983

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 (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	1993	0	1987	38	0
1	B	1989	0	1983	32	0
1	C	1975	0	1968	30	1
1	D	1989	0	1983	30	0
2	A	417	0	0	23	5
2	B	429	0	0	18	2
2	C	339	0	0	20	7
2	D	455	0	0	21	5
All	All	9586	0	7921	127	10

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.

WORLDWIDE
wwPDB
PROTEIN DATA BANK

All (127) 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:A:652:CYS:SG	2:A:872:HOH:O	2.23	0.97
1:A:580:GLU:OE2	2:A:801:HOH:O	1.85	0.93
1:C:518:VAL:O	2:C:801:HOH:O	1.93	0.86
1:B:585:GLN:O	2:B:801:HOH:O	1.99	0.80
1:A:656:ARG:NH1	2:A:807:HOH:O	2.11	0.80
1:D:756:ASN:ND2	2:D:807:HOH:O	2.16	0.79
1:D:752:GLU:OE2	2:D:801:HOH:O	2.01	0.78
1:A:672:ILE:HD12	1:A:672:ILE:H	1.50	0.77
1:D:579:LYS:NZ	2:D:806:HOH:O	2.15	0.76
1:C:675:ARG:NH2	2:C:805:HOH:O	2.17	0.76
1:D:521:MET:SD	2:D:832:HOH:O	2.44	0.74
1:A:657:GLU:OE1	2:A:803:HOH:O	2.05	0.74
1:B:580:GLU:OE2	2:B:802:HOH:O	2.05	0.73
1:A:661:GLU:OE2	2:A:804:HOH:O	2.07	0.72
1:C:626:ASP:OD1	2:C:802:HOH:O	2.07	0.72
1:A:721:LEU:O	2:A:805:HOH:O	2.08	0.71
1:B:752:GLU:OE1	2:B:804:HOH:O	2.08	0.71
1:B:742:GLU:OE2	2:B:803:HOH:O	2.08	0.71
1:D:749:LYS:NZ	2:D:811:HOH:O	2.23	0.70
1:D:658:GLU:OE2	2:D:804:HOH:O	2.10	0.70
1:D:619:ASN:OD1	2:D:803:HOH:O	2.10	0.68
1:A:759:GLU:OE2	2:A:806:HOH:O	2.11	0.68
1:D:734:ILE:HG23	2:D:1077:HOH:O	1.95	0.67
1:A:576:ASP:OD1	2:A:808:HOH:O	2.14	0.65
1:C:586:GLU:OE1	2:C:803:HOH:O	2.15	0.64
1:A:615:SER:OG	2:A:802:HOH:O	2.00	0.64
1:D:756:ASN:O	2:D:805:HOH:O	2.15	0.63
1:C:675:ARG:HD3	2:C:843:HOH:O	2.00	0.62
1:D:520:LYS:N	2:D:815:HOH:O	2.27	0.61
1:B:569:ASN:ND2	2:B:810:HOH:O	2.23	0.60
1:D:580:GLU:OE1	2:D:808:HOH:O	2.16	0.60
1:A:520:LYS:NZ	2:A:811:HOH:O	2.24	0.58
1:D:586:GLU:HG3	1:D:589:ARG:NH2	2.18	0.58
1:C:713:TYR:N	2:C:804:HOH:O	2.17	0.58
1:A:701:TRP:O	2:A:809:HOH:O	2.17	0.57
1:B:656:ARG:NH1	2:B:815:HOH:O	2.31	0.57
1:C:740:ARG:NH2	2:C:819:HOH:O	2.38	0.56
1:D:656:ARG:NH1	2:D:827:HOH:O	2.39	0.56
1:C:602:LYS:NZ	2:C:818:HOH:O	2.37	0.56
1:B:542:GLN:OE1	2:B:806:HOH:O	2.18	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:602:LYS:HE2	2:C:1044:HOH:O	2.05	0.55
1:A:532:GLN:HG2	2:A:1139:HOH:O	2.07	0.55
1:D:679:ASN:HD21	1:D:716:LYS:HE3	1.72	0.55
1:A:657:GLU:O	1:A:661:GLU:HG2	2.07	0.55
1:A:653:GLU:OE1	1:A:655:GLN:NE2	2.39	0.54
1:A:752:GLU:HG2	2:A:998:HOH:O	2.06	0.54
1:C:598:VAL:HG13	2:C:827:HOH:O	2.08	0.53
1:D:537:ASP:OD1	2:D:809:HOH:O	2.19	0.52
2:B:1067:HOH:O	1:C:622:GLU:HB3	2.10	0.52
1:C:648:ALA:N	2:C:820:HOH:O	2.39	0.52
1:B:541:ASP:O	1:B:545:GLU:HG3	2.10	0.51
1:A:586:GLU:HG2	2:A:857:HOH:O	2.09	0.51
1:C:523:PHE:N	2:C:801:HOH:O	2.15	0.51
1:B:716:LYS:HD2	1:B:717:TYR:CZ	2.45	0.51
1:C:744:LYS:NZ	2:C:812:HOH:O	2.29	0.51
1:A:736:MET:SD	2:A:1089:HOH:O	2.59	0.51
1:D:759:GLU:HA	2:D:1049:HOH:O	2.10	0.51
1:B:735:LYS:HD2	2:B:1108:HOH:O	2.11	0.50
1:A:576:ASP:OD2	2:A:810:HOH:O	2.19	0.50
1:D:524:VAL:HG11	1:D:564:MET:HB3	1.93	0.50
1:A:520:LYS:HD2	2:A:1108:HOH:O	2.11	0.50
1:A:685:PRO:O	1:A:688:ARG:HB2	2.12	0.50
1:B:740:ARG:NH2	2:B:805:HOH:O	2.11	0.50
1:C:675:ARG:N	2:C:825:HOH:O	2.45	0.49
1:A:723:LYS:NZ	2:B:817:HOH:O	2.44	0.49
1:C:520:LYS:HD3	1:D:675:ARG:HH21	1.76	0.49
1:A:614:ILE:HG21	1:A:649:TRP:CZ2	2.48	0.49
1:C:554:ILE:HG23	2:D:866:HOH:O	2.13	0.49
1:C:649:TRP:O	2:C:807:HOH:O	2.20	0.49
1:B:655:GLN:HB3	1:B:657:GLU:OE1	2.12	0.49
1:C:727:MET:O	1:C:731:ARG:HG3	2.13	0.48
1:D:526:THR:HG22	1:D:527:MET:HE3	1.96	0.48
1:B:716:LYS:HD2	1:B:717:TYR:CE2	2.48	0.48
1:A:612:GLN:HG3	2:A:954:HOH:O	2.14	0.48
1:B:657:GLU:H	1:B:657:GLU:CD	2.17	0.48
1:D:542:GLN:HG3	2:D:1005:HOH:O	2.12	0.48
1:A:535:LEU:HD21	1:A:576:ASP:CB	2.44	0.48
1:A:694:ILE:H	1:A:694:ILE:HD12	1.78	0.47
1:A:736:MET:HG2	2:A:1052:HOH:O	2.13	0.47
1:C:520:LYS:HD3	1:D:675:ARG:NH2	2.30	0.47
1:A:553:ASN:HB2	1:B:515:PHE:CE1	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:614:ILE:HG22	1:C:654:PRO:HD2	1.96	0.47
1:C:684:GLU:OE2	2:C:808:HOH:O	2.20	0.47
1:C:735:LYS:HG3	2:C:822:HOH:O	2.15	0.47
1:C:609:MET:HG2	1:C:648:ALA:O	2.15	0.47
1:B:744:LYS:NZ	2:B:831:HOH:O	2.48	0.47
1:D:755:SER:OG	2:D:802:HOH:O	2.09	0.46
1:C:654:PRO:HG2	1:C:659:VAL:CG2	2.46	0.46
1:B:657:GLU:OE2	2:B:807:HOH:O	2.21	0.46
1:C:737:ALA:HA	2:C:812:HOH:O	2.15	0.46
1:B:686:ILE:HG23	1:B:702:ALA:HB1	1.97	0.46
1:A:535:LEU:HD21	1:A:576:ASP:HB3	1.97	0.46
1:B:552:TRP:CZ3	1:B:589:ARG:HD2	2.51	0.46
1:B:739:ALA:HB3	1:B:744:LYS:HE3	1.98	0.46
1:B:589:ARG:HG3	1:B:626:ASP:OD2	2.16	0.46
1:B:723:LYS:HE2	2:B:1094:HOH:O	2.16	0.45
1:B:589:ARG:HG2	2:B:874:HOH:O	2.16	0.45
1:D:529:LYS:HE3	2:D:1133:HOH:O	2.16	0.45
1:C:522:GLY:N	2:C:801:HOH:O	2.50	0.44
1:A:560:ASP:O	1:A:564:MET:HG3	2.17	0.44
1:A:704:TRP:HB3	2:A:809:HOH:O	2.17	0.44
1:B:518:VAL:HG13	1:B:523:PHE:HB3	1.99	0.44
1:A:552:TRP:CE2	1:A:593:GLY:HA3	2.53	0.43
1:A:699:GLN:NE2	2:A:831:HOH:O	2.49	0.43
1:B:532:GLN:HE21	1:B:536:LEU:HG	1.82	0.43
1:B:657:GLU:HA	2:B:816:HOH:O	2.17	0.43
1:B:587:LEU:O	1:B:591:MET:HG3	2.20	0.42
1:A:672:ILE:H	1:A:672:ILE:CD1	2.23	0.42
1:A:603:GLU:HG3	2:A:881:HOH:O	2.18	0.42
1:B:626:ASP:HB2	2:B:801:HOH:O	2.19	0.42
1:C:538:LYS:NZ	2:C:834:HOH:O	2.52	0.42
1:C:723:LYS:HB3	1:C:723:LYS:HE3	1.80	0.42
1:B:675:ARG:O	2:B:808:HOH:O	2.22	0.41
1:D:552:TRP:CE2	1:D:593:GLY:HA3	2.55	0.41
1:B:595:LEU:HD13	1:B:617:PHE:CE1	2.54	0.41
1:D:654:PRO:HD3	2:D:1055:HOH:O	2.20	0.41
1:B:614:ILE:HG21	1:B:649:TRP:CZ2	2.56	0.41
1:A:726:GLY:N	2:A:805:HOH:O	2.51	0.41
1:B:533:LYS:HB2	1:B:533:LYS:HE2	1.82	0.41
1:D:584:LYS:HB3	2:D:979:HOH:O	2.20	0.41
1:A:572:LYS:NZ	1:A:576:ASP:OD2	2.54	0.41
1:A:745:GLU:OE2	1:A:749:LYS:HE3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:595:LEU:HD23	1:D:595:LEU:HA	1.92	0.41
1:D:685:PRO:O	1:D:688:ARG:HB2	2.21	0.40
1:D:731:ARG:O	1:D:735:LYS:HD3	2.21	0.40
1:C:524:VAL:HG22	1:C:554:ILE:CD1	2.52	0.40
1:D:538:LYS:NZ	2:D:838:HOH:O	2.52	0.40

All (10) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:1089:HOH:O	2:B:1146:HOH:O[1_656]	1.93	0.27
2:B:949:HOH:O	2:D:1179:HOH:O[2_545]	1.96	0.24
2:C:841:HOH:O	2:D:1180:HOH:O[1_454]	1.98	0.22
2:C:1122:HOH:O	2:D:1219:HOH:O[1_454]	2.04	0.16
2:A:815:HOH:O	2:C:921:HOH:O[2_645]	2.05	0.15
2:C:812:HOH:O	2:D:967:HOH:O[1_454]	2.07	0.13
2:A:1177:HOH:O	2:C:1134:HOH:O[2_645]	2.10	0.10
2:A:916:HOH:O	2:C:1002:HOH:O[2_645]	2.13	0.07
1:C:734:ILE:O	2:D:803:HOH:O[1_454]	2.13	0.07
2:A:1171:HOH:O	2:C:1068:HOH:O[2_645]	2.17	0.03

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	244/253 (96%)	236 (97%)	8 (3%)	0	100	100
1	B	244/253 (96%)	236 (97%)	8 (3%)	0	100	100
1	C	242/253 (96%)	234 (97%)	8 (3%)	0	100	100
1	D	244/253 (96%)	236 (97%)	8 (3%)	0	100	100
All	All	974/1012 (96%)	942 (97%)	32 (3%)	0	100	100

There are no Ramachandran outliers to report.

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	222/229 (97%)	219 (99%)	3 (1%)	67	53
1	B	221/229 (96%)	220 (100%)	1 (0%)	88	83
1	C	220/229 (96%)	218 (99%)	2 (1%)	78	70
1	D	221/229 (96%)	221 (100%)	0	100	100
All	All	884/916 (96%)	878 (99%)	6 (1%)	84	77

All (6) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	521	MET
1	A	624	LYS
1	A	675	ARG
1	B	658	GLU
1	C	626	ASP
1	C	647	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (2) such sidechains are listed below:

Mol	Chain	Res	Type
1	D	679	ASN
1	D	756	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(Å^2)	Q<0.9
1	A	246/253 (97%)	0.52	10 (4%)	37	41	7, 13, 23, 36	0
1	B	246/253 (97%)	0.67	8 (3%)	46	51	7, 15, 26, 45	0
1	C	244/253 (96%)	0.80	12 (4%)	29	33	8, 16, 30, 51	0
1	D	246/253 (97%)	0.56	1 (0%)	92	93	8, 14, 23, 26	0
All	All	982/1012 (97%)	0.64	31 (3%)	47	52	7, 15, 25, 51	0

All (31) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	652	CYS	7.1
1	B	651	VAL	6.3
1	C	756	ASN	5.9
1	B	757	PHE	5.7
1	C	652	CYS	5.7
1	B	758	LYS	4.8
1	C	651	VAL	4.3
1	C	757	PHE	4.1
1	A	536	LEU	3.8
1	A	759	GLU	3.7
1	C	755	SER	3.7
1	C	650	GLY	3.2
1	B	653	GLU	3.1
1	A	758	LYS	3.0
1	D	757	PHE	3.0
1	C	753	HIS	2.9
1	A	523	PHE	2.8
1	A	753	HIS	2.7
1	C	754	CYS	2.7
1	B	650	GLY	2.5
1	B	649	TRP	2.5

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Mol	Chain	Res	Type	RSRZ
1	C	734	ILE	2.4
1	A	530	LEU	2.3
1	C	664	TRP	2.3
1	A	694	ILE	2.3
1	C	530	LEU	2.3
1	B	672	ILE	2.2
1	A	756	ASN	2.2
1	A	672	ILE	2.2
1	C	595	LEU	2.1
1	A	546	PHE	2.0

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.